

FCC SAR TEST REPORT

FCC ID : B94HNI61KLR
Equipment : Notebook Computer
Brand Name : HP
Model Name : HSN-I61C
Applicant : HP Inc.
1501 Page Mill Road, Palo Alto CA 94304 USA
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Sep. 18, 2024 and testing was started from Oct. 04, 2024 and completed on Oct. 29, 2024. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.


Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA490504A	01	Initial issue of report	Nov. 19, 2024



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for HP Inc., Notebook Computer, HSN-I61C, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary	Highest Simultaneous Transmission 1g SAR (W/kg)
		Body (Separation 0mm)	
		1g SAR (W/kg)	
Licensed	WCDMA II	0.74	1.18
	WCDMA IV	0.73	
	WCDMA V	0.71	
	LTE Band 7	0.74	
	LTE Band 12/17	0.74	
	LTE Band 13	0.75	
	LTE Band 14	0.74	
	LTE Band 2/25	0.73	
	LTE Band 5/26	0.71	
	LTE Band 30	0.76	
	LTE Band 4/66	0.72	
	LTE Band 71	0.74	
	LTE Band 38/41	0.74	
	LTE Band 42	0.74	
	LTE Band 43	0.74	
	LTE Band 48	0.73	
	FR1 n7	0.71	
	FR1 n12	0.73	
	FR1 n14	0.74	
	FR1 n2/n25	0.73	
	FR1 n5/n26	0.75	
	FR1 n30	0.72	
	FR1 n66	0.73	
	FR1 n71	0.75	
	FR1 n38/n41	0.74	
	FR1 n48	0.71	
	FR1 n77/n78	0.74	
Date of Testing:		2024/10/4 ~ 2024/10/29	

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang

Report Producer: Paula Chen

2. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05



3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Notebook Computer
Brand Name	HP
Model Name	HSN-I61C
FCC ID	B94HNI61KLR
Integrated WWAN Module	Brand Name: Rolling Wireless Model Name: RW350R-GL
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM
EUT Stage	Production Unit
Remark: 1. There are two antenna vendors, RF exposure evaluation selects Vendor 2 as the main test, Vendor 1 spot check worst case found in Vendor 2. 2. This device is convertible type notebook PC, and there have Laptop and Tablet two usage way, when end user is used different mode which the device will according current mode to limit different maximum power.	

WLAN Module Information	
Integrated WLAN Module	Brand Name: Intel Model Name: BE201NGW
Integrated NFC Module	Brand Name: WNC Model Name: XRAV-1
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 5.9 GHz Band: 5850 MHz ~ 5895 MHz WLAN 6E: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC: 13.56 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax/be HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160/EHT20/EHT40/EHT80/EHT160/EHT320 Bluetooth BR/EDR/LE NFC: ASK
EUT Stage	Production Unit
Remark: 1. The Intel BE201NGW WLAN/Bluetooth module is also integrated into this host, WLAN/Bluetooth power and WLAN SAR testing data, which can be referred to Intel SAR Report, Report No.: 240813-01.TR03 / 231109-06.TR01 / 231109-06.TR07 (FCC ID: PD9BE201NG) and these results are used simultaneous transmission analysis.	

<WWAN Antenna Information_Laptop mode >

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
5G NR FR1	2	1850	1910	Ant5 : 6036B0361401 (00-350270155N)	Vendor 1	PIFA	-0.5
WCDMA/ LTE/5G NR FR1	5	824	849				0.71
LTE/5G NR FR1	12	699	716				0.47
LTE	13	777	787				1.45
LTE/5G NR FR1	14	788	798				1.43
LTE	17	704	716				0.47
5G NR FR1	25	1850	1915				-0.5
LTE/5G NR FR1	26	814	849				0.47
LTE/5G NR FR1	41	2496	2690				-0.66
LTE	42	3400	3600				0.06
LTE/5G NR FR1	48	3550	3700				-0.87
LTE/5G NR FR1	71	663	698				-2.93
5G NR FR1	77	3300	4200				0.85
5G NR FR1	78	3300	3800				0.35

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
WCDMA/LTE/5G NR FR1	2	1850	1910	Ant8 : 6036B0361401 (00-350270155N)	Vendor 1	PIFA	0.86
WCDMA/LTE	4	1710	1755				1.26
LTE/5G NR FR1	7	2500	2570				1.00
LTE/5G NR FR1	25	1850	1915				0.86
LTE/5G NR FR1	30	2305	2315				-1.15
LTE/5G NR FR1	38	2570	2620				1.15
LTE/5G NR FR1	41	2496	2690				0.87
LTE	42	3400	3600				0.31
LTE	43	3600	3800				0.71
LTE/5G NR FR1	48	3550	3700				0.96
LTE/5G NR FR1	66	1710	1780				1.32
5G NR FR1	77	3300	4200				0.87
5G NR FR1	78	3300	3800				0.96

<WWAN Antenna Information_Tablet mode >

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
5G NR FR1	2	1850	1910	Ant5 : 6036B0361401 (00-350270155N)	Vendor 1	PIFA	-1.68
WCDMA/ LTE/5G NR FR1	5	824	849				-3.33
LTE/5G NR FR1	12	699	716				-4.67
LTE	13	777	787				-4.66
LTE/5G NR FR1	14	788	798				-4.66
LTE	17	704	716				-4.67
5G NR FR1	25	1850	1915				-1.68
LTE/5G NR FR1	26	814	849				-3.87
LTE/5G NR FR1	41	2496	2690				-2.72
LTE	42	3400	3600				-1.02
LTE/5G NR FR1	48	3550	3700				-1
LTE/5G NR FR1	71	663	698				-5.35
5G NR FR1	77	3300	4200				-1.18
5G NR FR1	78	3300	3800				-1.27

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
WCDMA/LTE/5G NR FR1	2	1850	1910	Ant8 : 6036B0361401 (00-350270155N)	Vendor 1	PIFA	-1.36
WCDMA/LTE	4	1710	1755				-0.69
LTE/5G NR FR1	7	2500	2570				-1.58
LTE/5G NR FR1	25	1850	1915				-1.36
LTE/5G NR FR1	30	2305	2315				-1.08
LTE/5G NR FR1	38	2570	2620				-0.65
LTE/5G NR FR1	41	2496	2690				-0.87
LTE	42	3400	3600				-1.09
LTE	43	3600	3800				-2.16
LTE/5G NR FR1	48	3550	3700				-2.23
LTE/5G NR FR1	66	1710	1780				-0.86
5G NR FR1	77	3300	4200				-1.04
5G NR FR1	78	3300	3800				-1.47

<WWAN Antenna Information_Laptop mode >

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
5G NR FR1	2	1850	1910	Ant5 : 81ELBF15.G04	Vendor 2	PIFA	0.43
WCDMA/ LTE/5G NR FR1	5	824	849				-2.74
LTE/5G NR FR1	12	699	716				-0.62
LTE	13	777	787				-1.43
LTE/5G NR FR1	14	788	798				-2.55
LTE	17	704	716				-0.62
5G NR FR1	25	1850	1915				0.43
LTE/5G NR FR1	26	814	849				-2.71
LTE/5G NR FR1	41	2496	2690				-1.87
LTE	42	3400	3600				-0.23
LTE/5G NR FR1	48	3550	3700				-1.03
LTE/5G NR FR1	71	663	698				-1.52
5G NR FR1	77	3300	4200				-0.23
5G NR FR1	78	3300	3800				-0.23

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
WCDMA/LTE/5G NR FR1	2	1850	1910	Ant8 : 81ELBF15.G04	Vendor 2	PIFA	-0.04
WCDMA/LTE	4	1710	1755				-0.15
LTE/5G NR FR1	7	2500	2570				-0.88
LTE/5G NR FR1	25	1850	1915				-0.04
LTE/5G NR FR1	30	2305	2315				-3.63
LTE/5G NR FR1	38	2570	2620				-0.38
LTE/5G NR FR1	41	2496	2690				-0.38
LTE	42	3400	3600				-0.35
LTE	43	3600	3800				-0.72
LTE/5G NR FR1	48	3550	3700				-2
LTE/5G NR FR1	66	1710	1780				-0.15
5G NR FR1	77	3300	4200				-0.35
5G NR FR1	78	3300	3800				-0.35

<WWAN Antenna Information_Tablet mode >

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
5G NR FR1	2	1850	1910	Ant5 : 81ELBF15.G04	Vendor 2	PIFA	-1.32
WCDMA/ LTE/5G NR FR1	5	824	849				-4.14
LTE/5G NR FR1	12	699	716				-5.88
LTE	13	777	787				-4.25
LTE/5G NR FR1	14	788	798				-5.14
LTE	17	704	716				-5.88
5G NR FR1	25	1850	1915				-1.32
LTE/5G NR FR1	26	814	849				-4.14
LTE/5G NR FR1	41	2496	2690				-2.26
LTE	42	3400	3600				-0.64
LTE/5G NR FR1	48	3550	3700				0.06
LTE/5G NR FR1	71	663	698				-2.87
5G NR FR1	77	3300	4200				0.06
5G NR FR1	78	3300	3800				0.06

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
WCDMA/LTE/5G NR FR1	2	1850	1910	Ant8 : 81ELBF15.G04	Vendor 2	PIFA	-2.76
WCDMA/LTE	4	1710	1755				-1.45
LTE/5G NR FR1	7	2500	2570				-3.65
LTE/5G NR FR1	25	1850	1915				-2.76
LTE/5G NR FR1	30	2305	2315				-3.95
LTE/5G NR FR1	38	2570	2620				-3.08
LTE/5G NR FR1	41	2496	2690				-3.08
LTE	42	3400	3600				-2.52
LTE	43	3600	3800				0.68
LTE/5G NR FR1	48	3550	3700				-2.55
LTE/5G NR FR1	66	1710	1780				-0.81
5G NR FR1	77	3300	4200				0.68
5G NR FR1	78	3300	3800				0.68

WLAN Antenna Information									
NB mode Main/TX2 Antenna Vendor 1 81ELBF15.G03 (6036B0361101)	Ant. Type	PIFA	connector		NB mode Aux/TX1 Antenna Vendor 1 81ELBF15.G03 (6036B0361101)	Ant. Type	PIFA	connector	
	Peak Gain (dBi)					Peak Gain (dBi)			
	2400~2483.5MHz	0.92	5725~5850MHz	-1.06		2400~2483.5MHz	1.83	5725~5850MHz	0.14
	5150~5250MHz	-0.7	5850~5895MHz	-1.06		5150~5250MHz	-1.07	5850~5895MHz	0.14
	5250~5350MHz	-0.3	5925~6425MHz	-1.79		5250~5350MHz	-0.07	5925~6425MHz	0.05
	5470~5725MHz	-0.62	6425~7125MHz	-0.75		5470~5725MHz	-0.83	6425~7125MHz	1.33
NB mode Main/TX2 Antenna Vendor 2 6036B0361501 (00-350270165N)	Ant. Type	PIFA	connector		NB mode Aux/TX1 Antenna Vendor 2 6036B0361501 (00-350270165N)	Ant. Type	PIFA	connector	
	Peak Gain (dBi)					Peak Gain (dBi)			
	2400~2483.5MHz	0.69	5725~5850MHz	-0.84		2400~2483.5MHz	1.53	5725~5850MHz	2.03
	5150~5250MHz	-1.47	5850~5895MHz	-0.84		5150~5250MHz	1.3	5850~5895MHz	2.03
	5250~5350MHz	-1.47	5925~6425MHz	-0.84		5250~5350MHz	1.16	5925~6425MHz	2.3
	5470~5725MHz	-0.56	6425~7125MHz	0.36		5470~5725MHz	1.83	6425~7125MHz	2.19
TB mode Main/TX2 Antenna Vendor 1 81ELBF15.G03 (6036B0361101)	Ant. Type	PIFA	connector		TB mode Aux/TX1 Antenna Vendor 1 81ELBF15.G03 (6036B0361101)	Ant. Type	PIFA	connector	
	Peak Gain (dBi)					Peak Gain (dBi)			
	2400~2483.5MHz	0.48	5725~5850MHz	-1.57		2400~2483.5MHz	0.12	5725~5850MHz	-0.42
	5150~5250MHz	1.07	5850~5895MHz	-1.98		5150~5250MHz	0.16	5850~5895MHz	-0.42
	5250~5350MHz	-0.64	5925~6425MHz	-1.8		5250~5350MHz	0.78	5925~6425MHz	-0.15
	5470~5725MHz	-0.85	6425~7125MHz	-0.48		5470~5725MHz	-0.31	6425~7125MHz	-0.37
TB mode Main/TX2 Antenna Vendor 2 6036B0361501 (00-350270165N)	Ant. Type	PIFA	connector		TB mode Aux/TX1 Antenna Vendor 2 6036B0361501 (00-350270165N)	Ant. Type	PIFA	connector	
	Peak Gain (dBi)					Peak Gain (dBi)			
	2400~2483.5MHz	-0.99	5725~5850MHz	-0.93		2400~2483.5MHz	-1.16	5725~5850MHz	-0.71
	5150~5250MHz	-0.1	5850~5895MHz	-1.15		5150~5250MHz	-0.18	5850~5895MHz	-0.71
	5250~5350MHz	-0.51	5925~6425MHz	0.02		5250~5350MHz	-1.22	5925~6425MHz	1.33
	5470~5725MHz	-1.26	6425~7125MHz	0.97		5470~5725MHz	0.23	6425~7125MHz	-1.25



3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05								
FCC ID	B94HNI61KLR							
Equipment Name	Notebook Computer							
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz							
	LTE Band 4: 1710 MHz ~ 1755 MHz							
	LTE Band 5: 824 MHz ~ 849 MHz							
	LTE Band 7: 2500 MHz ~ 2570 MHz							
	LTE Band 12: 699 MHz ~ 716 MHz							
	LTE Band 13: 777 MHz ~ 787 MHz							
	LTE Band 14: 788 MHz ~ 798 MHz							
	LTE Band 17: 704 MHz ~ 716 MHz							
	LTE Band 25: 1850 MHz ~ 1915 MHz							
	LTE Band 26: 814 MHz ~ 849 MHz							
	LTE Band 30: 2305 MHz ~ 2315 MHz							
	LTE Band 38: 2570 MHz ~ 2620 MHz							
	LTE Band 41: 2496 MHz ~ 2690 MHz							
	LTE Band 42: 3450 MHz ~ 3600 MHz							
	LTE Band 43: 3600 MHz ~ 3700 MHz							
	LTE Band 48: 3550 MHz ~ 3700 MHz							
LTE Band 66: 1710 MHz ~ 1780 MHz								
LTE Band 71: 663 MHz ~ 698 MHz								
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz							
	LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz							
	LTE Band 13: 5MHz, 10MHz							
	LTE Band 14: 5MHz, 10MHz							
	LTE Band 17: 5MHz, 10MHz							
	LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz							
	LTE Band 30: 5MHz, 10MHz							
	LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 43: 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz							
	LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz							
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM							
LTE Voice / Data requirements	Data only							
LTE MPR permanently built-in by design	Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3							
	Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)
		1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
	256 QAM	≥ 1						≤ 5
	LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)						
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.							
Power reduction applied to satisfy SAR compliance	Yes, G-Sensor.							

Transmission (H, M, L) channel numbers and frequencies in each LTE band														
LTE Band 2														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860		
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880		
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900		
LTE Band 4														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720		
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5		
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745		
LTE Band 5														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	20407	824.7	20415	825.5	20425	826.5	20450	829						
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5						
H	20643	848.3	20635	847.5	20625	846.5	20600	844						
LTE Band 7														
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510						
M	21100	2535	21100	2535	21100	2535	21100	2535						
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560						
LTE Band 12														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	23017	699.7	23025	700.5	23035	701.5	23060	704						
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5						
H	23173	715.3	23165	714.5	23155	713.5	23130	711						
LTE Band 13														
	Bandwidth 5 MHz				Bandwidth 10 MHz									
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)							
L	23205		779.5		23230		782							
M	23230		782											
H	23255		784.5											
LTE Band 14														
	Bandwidth 5 MHz				Bandwidth 10 MHz									
	Channel #		Channel #		Channel #		Freq.(MHz)							
L	23305		790.5		23330		793							
M	23330		793											
H	23355		795.5											
LTE Band 17														
	Bandwidth 5 MHz				Bandwidth 10 MHz									
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)							
L	23755		706.5		23780		709							
M	23790		710		23790		710							
H	23825		713.5		23800		711							

LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		
LTE Band 30												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #			Freq.(MHz)		Channel #			Freq.(MHz)			
L	27685			2307.5		27710			2310			
M	27710			2310								
H	27735			2312.5								
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 42_Part 96												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	43315	3552.5	43140	3555	43165	3557.5	43190	3560				
M	43340	3575	43340	3575	43340	3575	43340	3575				
H	43565	3597.5	43540	3595	43515	3592.5	43490	3590				
LTE Band 42_Part 27Q												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460				
M	42590	3500	42590	3500	42590	3500	42590	3500				
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540				

LTE Band 43												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	43615	3602.5	43640	3605	43665	3607.5	43690	3610				
M	44090	3650	44090	3650	44090	3650	44090	3650				
H	44565	3697.5	44540	3695	44515	3692.5	44490	3690				
LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
LM	55810	3607	55815	3607.5	55820	3608	55830	3609				
	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690				
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	133147	665.5	133172	668	133197	670.5	133222	673				
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5				
H	133447	695.5	133422	693	133397	690.5	133372	688				

3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
FCC ID	B94HNI61KLR
Equipment Name	Notebook Computer
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n14: 5MHz, 10MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz, 45MHz 5G NR n26: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz, 45MHz 5G NR n71: 10MHz, 15MHz, 20MHz 5G NR n77/n78: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B5/12/13
LTE Anchor Bands for n5	LTE B2/30/48/66
LTE Anchor Bands for n41	LTE B41
LTE Anchor Bands for n66	LTE B5/12/13/48
LTE Anchor Bands for n77	LTE B41
LTE Anchor Bands for n78	LTE B2/5/38



NR Band 38												
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	515000	2575	515500	2577.5	516000	2580	516500	2582.5	517000	2585	518000	2590
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	523000	2615	522500	2612.5	522000	2610	521500	2607.5	521000	2605	520000	2600
NR Band 41												
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	500202	2501.01	500700	2503.5	501204	2506.02	501702	2508.51	502200	2511	503202	2516.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	535500	2677.5	534996	2674.98	534000	2670
NR Band 48												
Bandwidth10MHz		Bandwidth15MHz		Bandwidth20MHz		Bandwidth30MHz		Bandwidth40MHz		Bandwidth50MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570		
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99		
H	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645332	3679.98		
NR Band 66												
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765
NR Band 71												
Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz				
Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		
L		133600		668		13410		670.5		134600		673
M		136100		680.5		136100		680.5		136100		680.5
H		138600		693		13810		690.5		137600		688
NR Band 77_Part 27O												
Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99
NR Band 78_Part 27O												
Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99
NR Band 77/78_Part 27Q												
Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525
NR Band 77/78_Part 96												
Bandwidth10MHz		Bandwidth15MHz		Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570	638334	3575.01
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645332	3679.98	645000	3675



3.4 Sensor Triggering angle and power verification

General Note:

1. The following guidance should be applied to laptops/tablets that use Hall Effect or gravity sensors to detect lid angle for the purpose of power reduction:

Step 1: With the lid is in closed mode (0 degrees), open the screen in 10 degree steps until laptop mode is obtained
Step 2: Lower the screen 5 degrees. Closed mode should be reobtained. If not keep lowering in 5 degree steps
Step 3: Open the screen in 1 degree steps until laptop mode is reobtained
Step 4: Continue opening the screen in 1 degree steps until at least 5 degrees past where laptop mode was obtained
Step 5: Then continue opening the screen in 10 degree steps until tablet mode is obtained
Step 6: Power measurements should be taken at each step
Step 7: Reverse this procedure going from tablet mode back down to closed mode

when the screen angle is from 0 degree to 360 degree																	
Screen angle (degree) v.s. power	Wireless		WWAN Ant 5														
	Band		WCDMA V	LTE Band 12/17	LTE Band 13	LTE Band 14	LTE Band 26/5	LTE Band 71	FR1 n12	FR1 n14	FR1 n25	FR1 n26/5	FR1 n71	FR1 n41	FR1 n48	FR1 n77/78	
	Lid Close	0	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		10	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		20	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		25	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		26	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		27	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		28	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		29	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
	Notebook	30	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		31	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		32	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		33	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		34	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		35	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		40	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		50	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		60	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		70	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		80	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		90	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		100	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		110	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		120	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
		125	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20	
	126	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20		
	127	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20		
	128	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20		
	129	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20		
Tablet	130	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	131	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	132	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	133	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	134	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	135	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	140	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	150	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	160	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	170	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	180	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		
	190	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90		



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		110	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		120	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		130	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		140	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		150	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		160	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		170	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		180	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		190	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		195	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		196	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		197	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		198	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		199	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		200	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
	Tablet	201	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		202	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		203	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		204	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		205	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		210	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		220	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		230	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		240	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		250	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		260	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		270	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		280	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		290	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		300	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		310	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		320	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		330	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		340	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		350	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		360	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90



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		130	16.83	17.58	19.35	17.62	16.10	18.20	17.12	18.26	13.58	17.77	16.13	14.56	11.88	11.90
		120	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		110	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		100	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		90	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		80	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		70	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		60	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		50	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		40	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		35	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		34	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		33	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		32	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		31	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
		30	23.41	22.86	22.86	23.00	22.53	22.90	23.14	23.23	22.55	22.68	23.20	22.78	21.00	23.20
	Lid Close	29	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		25	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		27	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		26	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		25	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		20	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		10	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		0	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby

4. RF Exposure Limits

4.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

4.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

4.3 RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm² per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

5. Specific Absorption Rate (SAR)

5.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

5.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

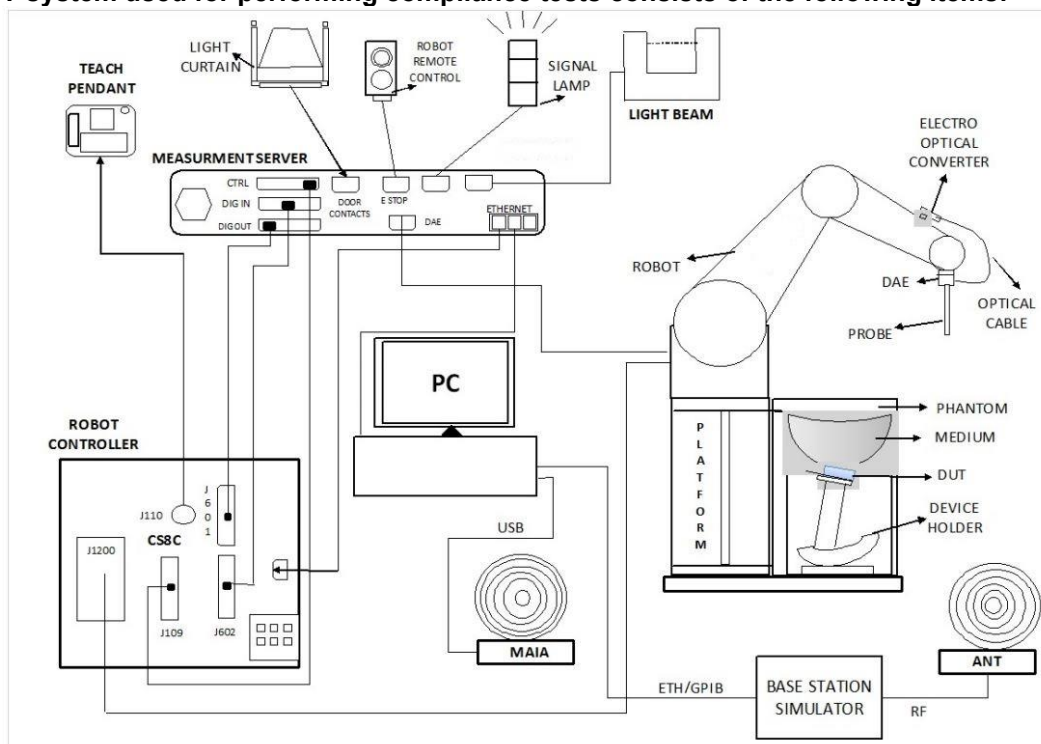
SAR is expressed in units of Watts per kilogram (W/kg)

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

6. System Description and Setup

The DASY system used for performing compliance tests consists of the following items:



- The DASY system in SAR Configuration is shown above
- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running windows software and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

6.1 Test Site Location

The SAR measurement facilities used to collect data are within both Sporton Lab list below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 3786) and the FCC designation No. TW1190 and TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.

Laboratory	EMC & Wireless Communications Laboratory		Wensan Laboratory				
Test Site Location	TW1190 No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		TW3786 No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan				
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY	SAR18-HY	SAR21-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY	SAR19-HY	SAR22-HY
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY	SAR20-HY	

6.2 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 4 GHz; Linearity: ± 0.2 dB (30 MHz – 4 GHz)	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 $\mu\text{W/g}$ – >100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – >6 GHz Linearity: ± 0.2 dB (30 MHz – 6 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 $\mu\text{W/g}$ – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 $\mu\text{W/g}$)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

6.3 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

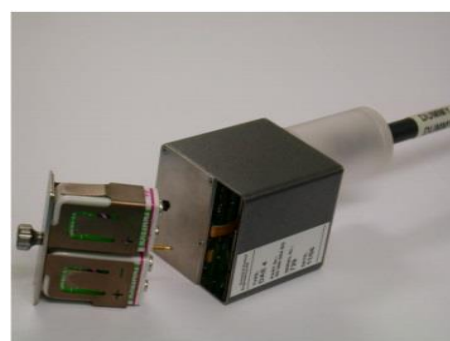


Fig 5.1 Photo of DAE

6.4 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)	
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm	

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

6.5 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.



Mounting Device for Laptops

7. Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

7.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

7.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

7.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

7.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm $2 - 3$ GHz: ≤ 5 mm*	$3 - 4$ GHz: ≤ 5 mm* $4 - 6$ GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	$3 - 4$ GHz: ≤ 4 mm $4 - 5$ GHz: ≤ 3 mm $5 - 6$ GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	$3 - 4$ GHz: ≤ 3 mm $4 - 5$ GHz: ≤ 2.5 mm $5 - 6$ GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	$3 - 4$ GHz: ≥ 28 mm $4 - 5$ GHz: ≥ 25 mm $5 - 6$ GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

7.5 Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

7.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASy measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit ⁽²⁾	D750V3	1117	Mar. 24, 2022	Mar. 21, 2025
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d060	Mar. 24, 2022	Mar. 21, 2025
SPEAG	1750MHz System Validation Kit ⁽²⁾	D1750V2	1068	Nov. 21, 2022	Nov. 18, 2025
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Aug. 15, 2024	Aug. 14, 2025
SPEAG	2300MHz System Validation Kit	D2300V2	1088	Jul. 10, 2024	Jul. 09, 2025
SPEAG	2450MHz System Validation Kit	D2450V2	736	Aug. 15, 2024	Aug. 14, 2025
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 15, 2024	Aug. 14, 2025
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1036	Mar. 23, 2022	Mar. 20, 2025
SPEAG	3700MHz System Validation Kit	D3700V2	1022	Jul. 10, 2024	Jul. 09, 2025
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1017	Apr. 22, 2022	Apr. 19, 2025
SPEAG	Data Acquisition Electronics	DAE4ip	1823	Jul. 15, 2024	Jul. 14, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7822	Sep. 03, 2024	Sep. 02, 2025
Testo	Hygro meter	608-H1	45196600	Nov. 02, 2023	Nov. 01, 2024
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Nov. 13, 2023	Nov. 12, 2024
Keysight	5G Wireless Test Platform	E7515B	MY58300712	Apr. 22, 2024	Apr. 21, 2025
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3692C	212506	Nov. 07, 2023	Nov. 06, 2024
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 30, 2023	Oct. 29, 2024
SPEAG	Dielectric Probe Kit	DAK-3.5	1146	Jul. 15, 2024	Jul. 14, 2025
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3690	Aug. 07, 2024	Aug. 06, 2025
Anritsu	Power Meter	ML2495A	1419002	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Power Sensor	MA2411B	1911176	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 09, 2024	Jul. 08, 2025
Mini-Circuits	Power Amplifier	ZHL-42W+	715701915	May. 17, 2024	May. 16, 2025
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

9. System Verification

9.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18°C to 25°C, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

The liquid tissue depth was at least 15cm in the phantom for all SAR testing

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.5	0.874	42.200	0.89	41.90	-1.80	0.72	± 5	2024/10/4
750	22.7	0.875	41.800	0.89	41.90	-1.69	-0.24	± 5	2024/10/5
835	22.5	0.906	41.300	0.90	41.50	0.67	-0.48	± 5	2024/10/6
835	22.3	0.909	41.700	0.90	41.50	1.00	0.48	± 5	2024/10/7
1750	22.3	1.380	40.100	1.37	40.10	0.73	0.00	± 5	2024/10/7
1900	22.5	1.390	39.800	1.40	40.00	-0.71	-0.50	± 5	2024/10/8
2300	22.3	1.680	40.100	1.67	39.50	0.60	1.52	± 5	2024/10/9
2450	22.5	1.850	39.100	1.80	39.20	2.78	-0.26	± 5	2024/10/29
2600	22.2	2.030	38.700	1.96	39.00	3.57	-0.77	± 5	2024/10/10
2600	22.4	2.030	38.500	1.96	39.00	3.57	-1.28	± 5	2024/10/11
3500	22.6	2.910	37.900	2.91	37.90	0.00	0.00	± 5	2024/10/13
3500	22.3	2.900	37.900	2.91	37.90	-0.34	0.00	± 5	2024/10/14
3500	22.5	2.900	37.800	2.91	37.90	-0.34	-0.26	± 5	2024/10/15
3500	22.6	2.890	37.500	2.91	37.90	-0.69	-1.06	± 5	2024/10/16
3500	22.4	2.920	37.600	2.91	37.90	0.34	-0.79	± 5	2024/10/17
3700	22.6	3.120	37.700	3.12	37.70	0.00	0.00	± 5	2024/10/13
3700	22.3	3.110	37.700	3.12	37.70	-0.32	0.00	± 5	2024/10/14
3700	22.5	3.110	37.600	3.12	37.70	-0.32	-0.27	± 5	2024/10/15
3700	22.6	3.100	37.600	3.12	37.70	-0.64	-0.27	± 5	2024/10/16
3700	22.4	3.100	37.500	3.12	37.70	-0.64	-0.53	± 5	2024/10/17
3900	22.5	3.320	37.500	3.33	37.51	-0.30	-0.03	± 5	2024/10/15
3900	22.6	3.310	37.400	3.33	37.51	-0.60	-0.29	± 5	2024/10/16
3900	22.4	3.310	37.600	3.33	37.51	-0.60	0.24	± 5	2024/10/17

9.2 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
SAR-04	2024/10/4	750	50	D750V3-1117	EX3DV4 - SN7822	DAE4ip Sn1823	0.430	8.520	8.6	0.94
SAR-04	2024/10/5	750	50	D750V3-1117	EX3DV4 - SN7822	DAE4ip Sn1823	0.422	8.520	8.44	-0.94
SAR-04	2024/10/6	835	50	D835V2-4d060	EX3DV4 - SN7822	DAE4ip Sn1823	0.510	9.730	10.2	4.83
SAR-04	2024/10/7	835	50	D835V2-4d060	EX3DV4 - SN7822	DAE4ip Sn1823	0.512	9.730	10.24	5.24
SAR-04	2024/10/7	1750	50	D1750V2-1068	EX3DV4 - SN7822	DAE4ip Sn1823	1.960	36.700	39.2	6.81
SAR-04	2024/10/8	1900	50	D1900V2-5d041	EX3DV4 - SN7822	DAE4ip Sn1823	2.030	39.200	40.6	3.57
SAR-04	2024/10/9	2300	50	D2300V2-1088	EX3DV4 - SN7822	DAE4ip Sn1823	2.400	48.200	48	-0.41
SAR-04	2024/10/29	2450	50	D2450V2-736	EX3DV4 - SN7822	DAE4ip Sn1823	2.620	51.400	52.4	1.95
SAR-04	2024/10/10	2600	50	D2600V2-1008	EX3DV4 - SN7822	DAE4ip Sn1823	2.940	55.700	58.8	5.57
SAR-04	2024/10/11	2600	50	D2600V2-1008	EX3DV4 - SN7822	DAE4ip Sn1823	2.920	55.700	58.4	4.85
SAR-04	2024/10/13	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.480	67.400	69.6	3.26
SAR-04	2024/10/14	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.600	67.400	72	6.82
SAR-04	2024/10/15	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.580	67.400	71.6	6.23
SAR-04	2024/10/16	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.560	67.400	71.2	5.64
SAR-04	2024/10/17	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.610	67.400	72.2	7.12
SAR-04	2024/10/13	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.470	68.100	69.4	1.91
SAR-04	2024/10/14	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.480	68.100	69.6	2.20
SAR-04	2024/10/15	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.460	68.100	69.2	1.62
SAR-04	2024/10/16	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.480	68.100	69.6	2.20
SAR-04	2024/10/17	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.470	68.100	69.4	1.91
SAR-04	2024/10/15	3900	50	D3900V2-1017-3900	EX3DV4 - SN7822	DAE4ip Sn1823	3.580	68.700	71.6	4.22
SAR-04	2024/10/16	3900	50	D3900V2-1017-3900	EX3DV4 - SN7822	DAE4ip Sn1823	3.570	68.700	71.4	3.93
SAR-04	2024/10/17	3900	50	D3900V2-1017-3900	EX3DV4 - SN7822	DAE4ip Sn1823	3.540	68.700	70.8	3.06

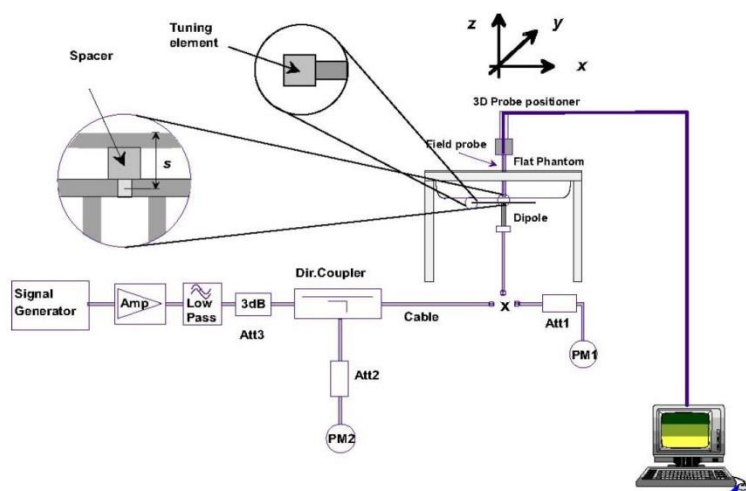


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

10. RF Exposure Positions

10.1 SAR Testing for Tablet

This device can be used also in full sized tablet exposure conditions, due to its size. Per FCC KDB 616217, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR exclusion threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

11. UMTS/LTE Output Power (Unit: dBm)

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set Gain Factors (β_c and β_d) and parameters were set according to each
 - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - iii. Set RMC 12.2Kbps + HSDPA mode.
 - iv. Set Cell Power = -86 dBm
 - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
 - vi. Select HSDPA Uplink Parameters
 - vii. Set Delta ACK, Delta NACK and Delta CQI = 8
 - viii. Set Ack-Nack Repetition Factor to 3
 - ix. Set CQI Feedback Cycle (k) to 4 ms
 - x. Set CQI Repetition Factor to 2
 - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
 - iii. Set Cell Power = -86 dBm
 - iv. Set Channel Type = 12.2k + HSPA
 - v. Set UE Target Power
 - vi. Power Ctrl Mode= Alternating bits
 - vii. Set and observe the E-TFCI
 - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_d/\beta_c = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_d/β_c ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

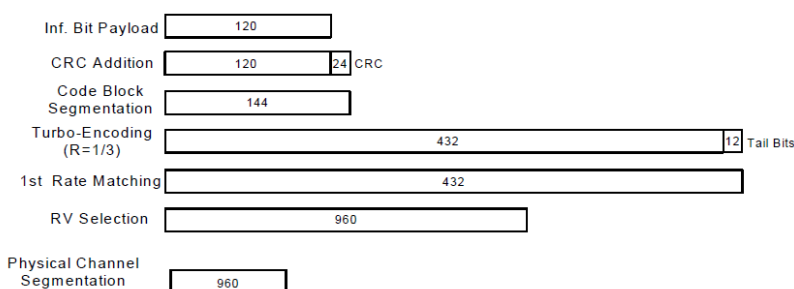
DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12
Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)
Setup Configuration

HSPA+ 3GPP release 7 (uplink category 7) 16QAM, Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2E:HSPA+:UL with 16QAM
 - ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.4, quoted from the TS 34.121-1 s5.2E
 - iii. Set Channel Parms
 - iv. Set Cell Power = -86 dBm
 - v. Set Channel Type = HSPA
 - vi. Set UE Target Power =21 dBm
 - vii. Power Ctrl Mode= All Up Bits
 - viii. Set Manual Uplink DPCH Bc/Bd = Manual
 - ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
 - x. Set HSPA Conn DL Channel Levels
 - xi. Set HS-SCCH Configs
 - xii. Set RB Test Mode Setup
 - xiii. Set Common HSUPA Parameters
 - xiv. Set Serving Grant
 - xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.
 Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
 Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.
 Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
 Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

Setup Configuration

<WCDMA Conducted Power>
General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

Band		WCDMA II_Ant 8_Laptop Mode			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Rx Channel		9662	9800	9938	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	23.37	23.53	23.43	24.50
3GPP Rel 6	HSDPA Subtest-1	23.39	23.52	23.51	24.50
3GPP Rel 6	HSDPA Subtest-2	23.38	23.40	23.44	24.50
3GPP Rel 6	HSDPA Subtest-3	22.90	22.91	22.98	24.00
3GPP Rel 6	HSDPA Subtest-4	22.87	22.87	22.93	24.00
3GPP Rel 8	DC-HSDPA Subtest-1	23.02	23.09	22.87	24.50
3GPP Rel 8	DC-HSDPA Subtest-2	23.00	23.03	22.85	24.50
3GPP Rel 8	DC-HSDPA Subtest-3	22.67	22.79	22.38	24.00
3GPP Rel 8	DC-HSDPA Subtest-4	22.62	22.80	22.32	24.00
3GPP Rel 6	HSUPA Subtest-1	20.86	20.85	20.45	21.00
3GPP Rel 6	HSUPA Subtest-2	20.37	20.40	20.46	21.00
3GPP Rel 6	HSUPA Subtest-3	21.34	21.41	21.48	22.00
3GPP Rel 6	HSUPA Subtest-4	20.37	20.43	20.47	21.00
3GPP Rel 6	HSUPA Subtest-5	22.30	22.53	22.40	23.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.82	20.81	20.42	22.00

Band		WCDMA II_Ant 8_Tablet Mode			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Rx Channel		9662	9800	9938	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	17.20	17.21	17.18	17.50
3GPP Rel 6	HSDPA Subtest-1	17.06	17.19	17.17	17.50
3GPP Rel 6	HSDPA Subtest-2	17.12	17.07	17.10	17.50
3GPP Rel 6	HSDPA Subtest-3	16.94	16.91	16.95	17.00
3GPP Rel 6	HSDPA Subtest-4	16.91	16.84	16.89	17.00
3GPP Rel 8	DC-HSDPA Subtest-1	17.07	17.05	16.91	17.50
3GPP Rel 8	DC-HSDPA Subtest-2	17.01	17.01	16.83	17.50
3GPP Rel 8	DC-HSDPA Subtest-3	16.92	16.08	16.65	17.00
3GPP Rel 8	DC-HSDPA Subtest-4	16.90	16.10	16.63	17.00
3GPP Rel 6	HSUPA Subtest-1	14.44	14.82	14.88	16.00
3GPP Rel 6	HSUPA Subtest-2	14.45	14.36	14.40	15.00
3GPP Rel 6	HSUPA Subtest-3	14.40	14.52	14.00	16.00
3GPP Rel 6	HSUPA Subtest-4	14.45	13.95	13.90	15.00
3GPP Rel 6	HSUPA Subtest-5	16.50	16.30	16.40	17.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	14.15	14.07	13.75	15.00



FCC SAR TEST REPORT

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Band		WCDMA IV_Ant 8_Laptop Mode			Tune-up Limit (dBm)
TX Channel		1312	1413	1513	
Rx Channel		1537	1638	1738	
Frequency (MHz)		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	23.06	23.08	22.85	24.50
3GPP Rel 6	HSDPA Subtest-1	23.03	23.07	22.79	24.50
3GPP Rel 6	HSDPA Subtest-2	23.04	22.87	22.78	24.50
3GPP Rel 6	HSDPA Subtest-3	22.58	22.39	22.26	24.00
3GPP Rel 6	HSDPA Subtest-4	22.55	22.38	22.24	24.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.54	22.69	22.58	24.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.60	22.58	22.52	24.50
3GPP Rel 8	DC-HSDPA Subtest-3	22.09	22.14	22.11	24.00
3GPP Rel 8	DC-HSDPA Subtest-4	22.11	22.12	22.02	24.00
3GPP Rel 6	HSUPA Subtest-1	20.06	20.19	19.78	21.00
3GPP Rel 6	HSUPA Subtest-2	20.07	20.11	19.79	21.00
3GPP Rel 6	HSUPA Subtest-3	21.02	20.86	20.74	22.00
3GPP Rel 6	HSUPA Subtest-4	20.07	20.21	19.77	21.00
3GPP Rel 6	HSUPA Subtest-5	22.00	22.08	21.70	23.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.60	20.70	20.16	22.00

Band		WCDMA IV_Ant 8_Tablet Mode			Tune-up Limit (dBm)
TX Channel		1312	1413	1513	
Rx Channel		1537	1638	1738	
Frequency (MHz)		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	15.77	15.80	15.64	16.50
3GPP Rel 6	HSDPA Subtest-1	15.75	15.70	15.60	16.50
3GPP Rel 6	HSDPA Subtest-2	15.62	15.71	15.62	16.50
3GPP Rel 6	HSDPA Subtest-3	15.42	15.40	15.34	16.00
3GPP Rel 6	HSDPA Subtest-4	15.41	15.32	15.28	16.00
3GPP Rel 8	DC-HSDPA Subtest-1	15.73	15.64	15.60	16.50
3GPP Rel 8	DC-HSDPA Subtest-2	15.70	15.64	15.60	16.50
3GPP Rel 8	DC-HSDPA Subtest-3	15.41	15.38	15.32	16.00
3GPP Rel 8	DC-HSDPA Subtest-4	15.39	15.31	15.27	16.00
3GPP Rel 6	HSUPA Subtest-1	13.43	13.36	13.35	14.00
3GPP Rel 6	HSUPA Subtest-2	12.30	12.36	12.33	13.00
3GPP Rel 6	HSUPA Subtest-3	12.95	12.90	12.86	14.00
3GPP Rel 6	HSUPA Subtest-4	12.99	13.89	13.85	14.00
3GPP Rel 6	HSUPA Subtest-5	14.80	14.80	14.70	15.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	12.44	12.55	12.02	14.00

Band		WCDMA V_Ant 5_Laptop Mode			Tune-up Limit (dBm)
TX Channel		4132	4182	4233	
Rx Channel		4357	4407	4458	
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	23.40	23.41	23.30	24.50
3GPP Rel 6	HSDPA Subtest-1	23.38	23.36	23.28	24.50
3GPP Rel 6	HSDPA Subtest-2	23.37	23.33	23.25	24.50
3GPP Rel 6	HSDPA Subtest-3	22.87	22.74	22.77	24.00
3GPP Rel 6	HSDPA Subtest-4	22.86	22.71	22.74	24.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.87	22.90	22.78	24.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.85	22.91	22.81	24.50
3GPP Rel 8	DC-HSDPA Subtest-3	22.34	22.42	22.32	24.00
3GPP Rel 8	DC-HSDPA Subtest-4	22.31	22.40	22.30	24.00
3GPP Rel 6	HSUPA Subtest-1	20.81	20.83	20.80	21.00
3GPP Rel 6	HSUPA Subtest-2	20.28	20.35	20.27	21.00
3GPP Rel 6	HSUPA Subtest-3	21.34	21.49	21.26	22.00
3GPP Rel 6	HSUPA Subtest-4	20.33	20.32	20.25	21.00
3GPP Rel 6	HSUPA Subtest-5	22.30	22.40	22.20	23.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.80	20.86	20.75	22.00

Band		WCDMA V_Ant 5_Tablet Mode			Tune-up Limit (dBm)
TX Channel		4132	4182	4233	
Rx Channel		4357	4407	4458	
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	16.78	16.83	16.75	17.50
3GPP Rel 6	HSDPA Subtest-1	16.65	16.80	16.63	17.50
3GPP Rel 6	HSDPA Subtest-2	16.60	16.75	16.65	17.50
3GPP Rel 6	HSDPA Subtest-3	16.37	16.22	16.19	17.00
3GPP Rel 6	HSDPA Subtest-4	16.30	16.21	16.24	17.00
3GPP Rel 8	DC-HSDPA Subtest-1	16.46	16.43	16.31	17.50
3GPP Rel 8	DC-HSDPA Subtest-2	16.46	16.46	16.40	17.50
3GPP Rel 8	DC-HSDPA Subtest-3	16.17	16.33	16.23	17.00
3GPP Rel 8	DC-HSDPA Subtest-4	16.19	16.29	16.11	17.00
3GPP Rel 6	HSUPA Subtest-1	13.51	13.37	13.35	15.00
3GPP Rel 6	HSUPA Subtest-2	14.07	13.87	13.78	15.00
3GPP Rel 6	HSUPA Subtest-3	13.53	13.91	14.69	16.00
3GPP Rel 6	HSUPA Subtest-4	13.55	13.41	13.75	15.00
3GPP Rel 6	HSUPA Subtest-5	16.00	15.82	15.68	17.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	14.28	14.32	14.18	16.00

<LTE Conducted Power>**General Note:**

1. A Base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

**<LTE Band 2_Ant 8_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	22.63	22.90	22.66	
20	QPSK	1	49	22.40	22.89	22.63	24.00
20	QPSK	1	99	22.48	22.65	22.61	
20	QPSK	50	0	21.82	21.91	21.62	
20	QPSK	50	24	21.74	21.86	21.55	23.00
20	QPSK	50	50	21.80	21.76	21.58	
20	QPSK	100	0	21.76	21.79	21.58	
20	16QAM	1	0	21.72	22.05	21.85	23.00
20	16QAM	1	49	21.99	22.09	21.82	
20	16QAM	1	99	21.92	21.84	21.77	
20	16QAM	50	0	20.72	20.86	20.57	22.00
20	16QAM	50	24	20.79	20.84	20.57	
20	16QAM	50	50	20.74	20.70	20.56	
20	16QAM	100	0	20.72	20.76	20.53	22.00
20	64QAM	1	0	20.66	20.93	20.76	
20	64QAM	1	49	20.88	21.02	20.74	
20	64QAM	1	99	20.80	20.74	20.69	21.00
20	64QAM	50	0	19.75	19.91	19.63	
20	64QAM	50	24	19.81	19.87	19.62	
20	64QAM	50	50	19.80	19.76	19.61	19.00
20	64QAM	100	0	19.78	19.83	19.63	
20	256QAM	1	0	17.59	17.86	17.79	
20	256QAM	1	49	17.84	18.00	17.81	19.00
20	256QAM	1	99	17.77	17.76	17.80	
20	256QAM	50	0	17.70	17.85	17.64	
20	256QAM	50	24	17.77	17.90	17.69	19.00
20	256QAM	50	50	17.78	17.76	17.62	
20	256QAM	100	0	17.74	17.80	17.63	
Channel				18675	18900	19125	
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.55	22.80	22.58	
15	QPSK	1	37	22.35	22.89	22.56	24.00
15	QPSK	1	74	22.43	22.64	22.58	
15	QPSK	36	0	21.75	21.87	21.55	23.00
15	QPSK	36	20	21.74	21.84	21.55	
15	QPSK	36	39	21.78	21.71	21.48	
15	QPSK	75	0	21.72	21.72	21.53	23.00
15	16QAM	1	0	21.65	21.95	21.76	
15	16QAM	1	37	21.92	22.07	21.77	
15	16QAM	1	74	21.86	21.75	21.69	22.00
15	16QAM	36	0	20.72	20.80	20.57	
15	16QAM	36	20	20.73	20.84	20.57	
15	16QAM	36	39	20.72	20.60	20.56	22.00
15	16QAM	75	0	20.66	20.70	20.52	
15	64QAM	1	0	20.59	20.83	20.66	
15	64QAM	1	37	20.81	20.94	20.74	21.00
15	64QAM	1	74	20.75	20.74	20.60	
15	64QAM	36	0	19.74	19.91	19.55	
15	64QAM	36	20	19.77	19.84	19.58	19.00
15	64QAM	36	39	19.80	19.66	19.52	
15	64QAM	75	0	19.68	19.83	19.60	
15	256QAM	1	0	17.54	17.78	17.78	19.00
15	256QAM	1	37	17.83	17.90	17.79	
15	256QAM	1	74	17.72	17.75	17.80	
15	256QAM	36	0	17.69	17.75	17.63	19.00
15	256QAM	36	20	17.74	17.83	17.63	



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15	256QAM	36	39	17.77	17.73	17.59	
15	256QAM	75	0	17.74	17.79	17.62	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.58	22.81	22.63	24.00
10	QPSK	1	25	22.31	22.84	22.59	
10	QPSK	1	49	22.42	22.57	22.56	
10	QPSK	25	0	21.78	21.84	21.59	23.00
10	QPSK	25	12	21.68	21.81	21.52	
10	QPSK	25	25	21.70	21.73	21.52	
10	QPSK	50	0	21.67	21.78	21.58	
10	16QAM	1	0	21.72	22.01	21.83	23.00
10	16QAM	1	25	21.89	22.04	21.82	
10	16QAM	1	49	21.92	21.80	21.67	
10	16QAM	25	0	20.71	20.85	20.51	22.00
10	16QAM	25	12	20.71	20.76	20.55	
10	16QAM	25	25	20.67	20.63	20.54	
10	16QAM	50	0	20.62	20.70	20.47	
10	64QAM	1	0	20.61	20.89	20.67	22.00
10	64QAM	1	25	20.79	20.96	20.74	
10	64QAM	1	49	20.77	20.69	20.62	
10	64QAM	25	0	19.65	19.86	19.61	21.00
10	64QAM	25	12	19.79	19.77	19.62	
10	64QAM	25	25	19.70	19.71	19.56	
10	64QAM	50	0	19.75	19.76	19.61	
10	256QAM	1	0	17.55	17.77	17.70	19.00
10	256QAM	1	25	17.81	17.94	17.81	
10	256QAM	1	49	17.72	17.70	17.73	
10	256QAM	25	0	17.60	17.85	17.56	19.00
10	256QAM	25	12	17.74	17.84	17.62	
10	256QAM	25	25	17.71	17.69	17.60	
10	256QAM	50	0	17.64	17.79	17.53	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.54	22.89	22.62	24.00
5	QPSK	1	12	22.32	22.82	22.54	
5	QPSK	1	24	22.40	22.62	22.59	
5	QPSK	12	0	21.79	21.91	21.54	23.00
5	QPSK	12	7	21.70	21.79	21.51	
5	QPSK	12	13	21.72	21.66	21.54	
5	QPSK	25	0	21.72	21.76	21.56	
5	16QAM	1	0	21.65	22.01	21.77	23.00
5	16QAM	1	12	21.94	22.09	21.72	
5	16QAM	1	24	21.84	21.79	21.77	
5	16QAM	12	0	20.62	20.85	20.57	22.00
5	16QAM	12	7	20.70	20.74	20.54	
5	16QAM	12	13	20.69	20.69	20.46	
5	16QAM	25	0	20.71	20.76	20.46	
5	64QAM	1	0	20.60	20.92	20.71	22.00
5	64QAM	1	12	20.87	20.97	20.67	
5	64QAM	1	24	20.72	20.71	20.64	
5	64QAM	12	0	19.71	19.81	19.53	21.00
5	64QAM	12	7	19.75	19.87	19.58	
5	64QAM	12	13	19.73	19.68	19.52	
5	64QAM	25	0	19.78	19.81	19.55	
5	256QAM	1	0	17.52	17.77	17.72	19.00
5	256QAM	1	12	17.80	18.00	17.76	
5	256QAM	1	24	17.67	17.71	17.73	
5	256QAM	12	0	17.65	17.78	17.58	19.00
5	256QAM	12	7	17.68	17.87	17.69	
5	256QAM	12	13	17.70	17.74	17.61	
5	256QAM	25	0	17.66	17.72	17.57	



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Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.57	22.87	22.58	24.00
3	QPSK	1	8	22.35	22.88	22.53	
3	QPSK	1	14	22.43	22.62	22.54	
3	QPSK	8	0	21.80	21.85	21.62	23.00
3	QPSK	8	4	21.70	21.83	21.50	
3	QPSK	8	7	21.74	21.73	21.52	
3	QPSK	15	0	21.71	21.70	21.51	
3	16QAM	1	0	21.65	22.05	21.84	23.00
3	16QAM	1	8	21.99	22.05	21.82	
3	16QAM	1	14	21.92	21.83	21.73	
3	16QAM	8	0	20.62	20.84	20.54	22.00
3	16QAM	8	4	20.79	20.84	20.47	
3	16QAM	8	7	20.74	20.70	20.53	
3	16QAM	15	0	20.72	20.71	20.52	
3	64QAM	1	0	20.62	20.85	20.70	22.00
3	64QAM	1	8	20.81	20.98	20.69	
3	64QAM	1	14	20.72	20.74	20.65	
3	64QAM	8	0	19.66	19.81	19.60	21.00
3	64QAM	8	4	19.80	19.78	19.53	
3	64QAM	8	7	19.73	19.71	19.54	
3	64QAM	15	0	19.69	19.78	19.56	
3	256QAM	1	0	17.53	17.86	17.79	19.00
3	256QAM	1	8	17.82	17.90	17.74	
3	256QAM	1	14	17.69	17.74	17.79	
3	256QAM	8	0	17.62	17.80	17.56	19.00
3	256QAM	8	4	17.69	17.82	17.67	
3	256QAM	8	7	17.69	17.74	17.60	
3	256QAM	15	0	17.66	17.76	17.59	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.57	22.90	22.61	24.00
1.4	QPSK	1	3	22.33	22.88	22.60	
1.4	QPSK	1	5	22.40	22.57	22.59	
1.4	QPSK	3	0	22.49	22.89	22.53	
1.4	QPSK	3	1	22.31	22.88	22.57	
1.4	QPSK	3	3	22.37	22.48	22.51	
1.4	QPSK	6	0	21.68	21.72	21.54	23.00
1.4	16QAM	1	0	21.65	21.95	21.76	23.00
1.4	16QAM	1	3	21.91	22.01	21.81	
1.4	16QAM	1	5	21.65	21.62	21.49	
1.4	16QAM	3	0	21.57	21.91	21.69	
1.4	16QAM	3	1	21.86	21.91	21.78	
1.4	16QAM	3	3	21.63	21.64	21.53	22.00
1.4	16QAM	6	0	20.66	20.76	20.51	
1.4	64QAM	1	0	20.65	20.84	20.71	22.00
1.4	64QAM	1	3	20.88	20.92	20.74	
1.4	64QAM	1	5	20.78	20.64	20.64	
1.4	64QAM	3	0	20.61	20.68	20.45	
1.4	64QAM	3	1	20.64	20.74	20.71	
1.4	64QAM	3	3	20.80	20.82	20.74	21.00
1.4	64QAM	6	0	19.74	19.78	19.69	
1.4	256QAM	1	0	17.84	17.97	17.76	19.00
1.4	256QAM	1	3	17.72	17.70	17.78	
1.4	256QAM	1	5	17.64	17.81	17.55	
1.4	256QAM	3	0	17.68	17.88	17.69	
1.4	256QAM	3	1	17.75	17.67	17.54	
1.4	256QAM	3	3	17.66	17.77	17.59	19.00
1.4	256QAM	6	0	17.84	17.96	17.74	



<LTE Band 2_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	16.50
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	15.88	16.00	15.85	
20	QPSK	1	49	15.61	15.75	15.66	16.50
20	QPSK	1	99	15.63	15.83	15.80	
20	QPSK	50	0	15.54	15.81	15.68	
20	QPSK	50	24	15.51	15.80	15.60	16.50
20	QPSK	50	50	15.68	15.76	15.69	
20	QPSK	100	0	15.58	15.74	15.61	
20	16QAM	1	0	15.53	15.80	15.73	16.50
20	16QAM	1	49	15.61	15.79	15.69	
20	16QAM	1	99	15.45	15.57	15.42	
20	16QAM	50	0	15.52	15.82	15.63	16.50
20	16QAM	50	24	15.48	15.65	15.48	
20	16QAM	50	50	15.43	15.73	15.58	
20	16QAM	100	0	15.40	15.58	15.60	16.50
20	64QAM	1	0	15.70	15.73	15.63	
20	64QAM	1	49	15.46	15.69	15.59	
20	64QAM	1	99	15.49	15.73	15.51	16.50
20	64QAM	50	0	15.34	15.57	15.46	
20	64QAM	50	24	15.35	15.57	15.41	
20	64QAM	50	50	15.52	15.66	15.54	16.50
20	64QAM	100	0	15.32	15.56	15.42	
20	256QAM	1	0	15.40	15.45	15.47	
20	256QAM	1	49	15.42	15.57	15.46	16.50
20	256QAM	1	99	15.40	15.45	15.40	
20	256QAM	50	0	15.37	15.38	15.30	
20	256QAM	50	24	15.34	15.38	15.39	16.50
20	256QAM	50	50	15.22	15.29	15.32	
20	256QAM	100	0	15.11	15.13	15.20	
Channel				18675	18900	19125	16.50
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	15.74	15.90	15.88	
15	QPSK	1	37	15.56	15.64	15.49	16.50
15	QPSK	1	74	15.48	15.67	15.69	
15	QPSK	36	0	15.44	15.70	15.61	
15	QPSK	36	20	15.44	15.72	15.46	16.50
15	QPSK	36	39	15.56	15.70	15.59	
15	QPSK	75	0	15.46	15.62	15.51	
15	16QAM	1	0	15.43	15.63	15.71	16.50
15	16QAM	1	37	15.55	15.71	15.56	
15	16QAM	1	74	15.26	15.56	15.38	
15	16QAM	36	0	15.41	15.75	15.43	16.50
15	16QAM	36	20	15.42	15.55	15.35	
15	16QAM	36	39	15.38	15.67	15.47	
15	16QAM	75	0	15.36	15.50	15.54	16.50
15	64QAM	1	0	15.58	15.62	15.57	
15	64QAM	1	37	15.36	15.57	15.46	
15	64QAM	1	74	15.40	15.66	15.42	16.50
15	64QAM	36	0	15.27	15.57	15.38	
15	64QAM	36	20	15.16	15.49	15.31	
15	64QAM	36	39	15.38	15.62	15.42	16.50
15	64QAM	75	0	15.24	15.46	15.35	
15	256QAM	1	0	15.32	15.34	15.38	
15	256QAM	1	37	15.37	15.47	15.39	16.50
15	256QAM	1	74	15.32	15.36	15.23	
15	256QAM	36	0	15.19	15.33	15.25	
15	256QAM	36	20	15.32	15.28	15.31	16.50



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15	256QAM	36	39	15.17	15.20	15.25	Tune-up limit (dBm)
15	256QAM	75	0	15.01	15.05	15.15	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	15.76	15.90	15.82	16.50
10	QPSK	1	25	15.54	15.58	15.52	
10	QPSK	1	49	15.63	15.69	15.74	
10	QPSK	25	0	15.51	15.68	15.48	16.50
10	QPSK	25	12	15.45	15.69	15.45	
10	QPSK	25	25	15.62	15.64	15.61	
10	QPSK	50	0	15.52	15.68	15.52	
10	16QAM	1	0	15.43	15.71	15.58	16.50
10	16QAM	1	25	15.51	15.69	15.52	
10	16QAM	1	49	15.43	15.54	15.28	
10	16QAM	25	0	15.37	15.68	15.48	16.50
10	16QAM	25	12	15.32	15.62	15.31	
10	16QAM	25	25	15.32	15.59	15.56	
10	16QAM	50	0	15.34	15.52	15.50	
10	64QAM	1	0	15.65	15.66	15.43	16.50
10	64QAM	1	25	15.39	15.54	15.45	
10	64QAM	1	49	15.37	15.72	15.36	
10	64QAM	25	0	15.25	15.49	15.41	16.50
10	64QAM	25	12	15.33	15.46	15.30	
10	64QAM	25	25	15.51	15.52	15.39	
10	64QAM	50	0	15.19	15.37	15.27	
10	256QAM	1	0	15.30	15.35	15.41	16.50
10	256QAM	1	25	15.37	15.47	15.26	
10	256QAM	1	49	15.37	15.31	15.31	
10	256QAM	25	0	15.25	15.29	15.19	16.50
10	256QAM	25	12	15.21	15.24	15.30	
10	256QAM	25	25	15.19	15.18	15.20	
10	256QAM	50	0	15.05	15.08	15.20	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	15.81	15.96	15.88	16.50
5	QPSK	1	12	15.48	15.67	15.49	
5	QPSK	1	24	15.60	15.70	15.68	
5	QPSK	12	0	15.41	15.70	15.52	16.50
5	QPSK	12	7	15.38	15.76	15.48	
5	QPSK	12	13	15.62	15.63	15.60	
5	QPSK	25	0	15.46	15.67	15.49	
5	16QAM	1	0	15.49	15.69	15.63	16.50
5	16QAM	1	12	15.46	15.65	15.50	
5	16QAM	1	24	15.41	15.52	15.32	
5	16QAM	12	0	15.42	15.74	15.53	16.50
5	16QAM	12	7	15.45	15.47	15.40	
5	16QAM	12	13	15.25	15.64	15.49	
5	16QAM	25	0	15.35	15.46	15.49	
5	64QAM	1	0	15.57	15.64	15.54	16.50
5	64QAM	1	12	15.36	15.67	15.51	
5	64QAM	1	24	15.43	15.72	15.50	
5	64QAM	12	0	15.31	15.49	15.40	16.50
5	64QAM	12	7	15.22	15.50	15.31	
5	64QAM	12	13	15.47	15.63	15.36	
5	64QAM	25	0	15.19	15.49	15.33	
5	256QAM	1	0	15.25	15.29	15.43	16.50
5	256QAM	1	12	15.29	15.53	15.26	
5	256QAM	1	24	15.35	15.35	15.34	
5	256QAM	12	0	15.21	15.32	15.11	16.50
5	256QAM	12	7	15.26	15.36	15.29	
5	256QAM	12	13	15.10	15.25	15.20	
5	256QAM	25	0	15.03	15.10	15.05	



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Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	15.76	15.91	15.84	16.50
3	QPSK	1	8	15.59	15.64	15.55	
3	QPSK	1	14	15.48	15.71	15.79	
3	QPSK	8	0	15.47	15.71	15.56	16.50
3	QPSK	8	4	15.40	15.66	15.47	
3	QPSK	8	7	15.58	15.63	15.63	
3	QPSK	15	0	15.47	15.69	15.56	
3	16QAM	1	0	15.48	15.73	15.57	16.50
3	16QAM	1	8	15.42	15.65	15.54	
3	16QAM	1	14	15.31	15.48	15.33	
3	16QAM	8	0	15.41	15.76	15.52	16.50
3	16QAM	8	4	15.42	15.57	15.34	
3	16QAM	8	7	15.39	15.63	15.41	
3	16QAM	15	0	15.27	15.50	15.50	
3	64QAM	1	0	15.62	15.61	15.54	16.50
3	64QAM	1	8	15.37	15.63	15.43	
3	64QAM	1	14	15.37	15.60	15.42	
3	64QAM	8	0	15.28	15.55	15.31	16.50
3	64QAM	8	4	15.24	15.54	15.31	
3	64QAM	8	7	15.39	15.57	15.49	
3	64QAM	15	0	15.16	15.46	15.40	
3	256QAM	1	0	15.37	15.38	15.30	16.50
3	256QAM	1	8	15.37	15.41	15.39	
3	256QAM	1	14	15.37	15.37	15.30	
3	256QAM	8	0	15.26	15.29	15.15	16.50
3	256QAM	8	4	15.19	15.23	15.28	
3	256QAM	8	7	15.13	15.28	15.29	
3	256QAM	15	0	15.12	15.00	15.11	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	15.74	15.91	15.82	16.50
1.4	QPSK	1	3	15.55	15.68	15.55	
1.4	QPSK	1	5	15.54	15.67	15.70	
1.4	QPSK	3	0	15.36	15.72	15.61	
1.4	QPSK	3	1	15.37	15.63	15.47	
1.4	QPSK	3	3	15.59	15.65	15.59	
1.4	QPSK	6	0	15.48	15.56	15.50	16.50
1.4	16QAM	1	0	15.44	15.66	15.71	16.50
1.4	16QAM	1	3	15.51	15.68	15.61	
1.4	16QAM	1	5	15.41	15.38	15.34	
1.4	16QAM	3	0	15.40	15.72	15.53	
1.4	16QAM	3	1	15.37	15.57	15.31	
1.4	16QAM	3	3	15.40	15.63	15.58	16.50
1.4	16QAM	6	0	15.22	15.39	15.55	
1.4	64QAM	1	0	15.59	15.59	15.52	16.50
1.4	64QAM	1	3	15.36	15.64	15.44	
1.4	64QAM	1	5	15.35	15.57	15.40	
1.4	64QAM	3	0	15.23	15.45	15.28	
1.4	64QAM	3	1	15.21	15.46	15.30	
1.4	64QAM	3	3	15.50	15.52	15.42	16.50
1.4	64QAM	6	0	15.29	15.50	15.34	
1.4	256QAM	1	0	15.30	15.32	15.36	16.50
1.4	256QAM	1	3	15.35	15.41	15.38	
1.4	256QAM	1	5	15.34	15.31	15.21	
1.4	256QAM	3	0	15.29	15.35	15.20	
1.4	256QAM	3	1	15.27	15.22	15.29	
1.4	256QAM	3	3	15.18	15.21	15.21	16.50
1.4	256QAM	6	0	15.10	15.03	15.05	



<LTE Band 4_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	22.71	22.72	22.54	
20	QPSK	1	49	22.65	22.61	22.59	24.00
20	QPSK	1	99	22.43	22.35	22.31	
20	QPSK	50	0	21.72	21.73	21.53	
20	QPSK	50	24	21.62	21.54	21.52	23.00
20	QPSK	50	50	21.50	21.50	21.47	
20	QPSK	100	0	21.60	21.61	21.50	
20	16QAM	1	0	21.89	21.67	21.70	23.00
20	16QAM	1	49	21.81	21.77	21.80	
20	16QAM	1	99	21.59	21.53	21.53	
20	16QAM	50	0	20.69	20.58	20.51	22.00
20	16QAM	50	24	20.58	20.56	20.47	
20	16QAM	50	50	20.46	20.47	20.44	
20	16QAM	100	0	20.59	20.51	20.46	22.00
20	64QAM	1	0	20.77	20.60	20.59	
20	64QAM	1	49	20.73	20.67	20.69	
20	64QAM	1	99	20.47	20.43	20.39	21.00
20	64QAM	50	0	19.78	19.63	19.54	
20	64QAM	50	24	19.64	19.56	19.59	
20	64QAM	50	50	19.57	19.54	19.48	19.00
20	64QAM	100	0	19.64	19.60	19.51	
20	256QAM	1	0	17.86	17.68	17.66	
20	256QAM	1	49	17.79	17.80	17.81	19.00
20	256QAM	1	99	17.54	17.57	17.61	
20	256QAM	50	0	17.76	17.73	17.61	
20	256QAM	50	24	17.70	17.66	17.65	19.00
20	256QAM	50	50	17.60	17.68	17.62	
20	256QAM	100	0	17.67	17.69	17.67	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.63	22.65	22.52	
15	QPSK	1	37	22.60	22.55	22.54	24.00
15	QPSK	1	74	22.34	22.25	22.27	
15	QPSK	36	0	21.65	21.65	21.49	23.00
15	QPSK	36	20	21.58	21.49	21.49	
15	QPSK	36	39	21.44	21.44	21.46	
15	QPSK	75	0	21.58	21.52	21.42	23.00
15	16QAM	1	0	21.83	21.65	21.63	
15	16QAM	1	37	21.71	21.71	21.80	
15	16QAM	1	74	21.56	21.44	21.43	22.00
15	16QAM	36	0	20.60	20.58	20.46	
15	16QAM	36	20	20.49	20.46	20.44	
15	16QAM	36	39	20.38	20.38	20.44	22.00
15	16QAM	75	0	20.58	20.48	20.37	
15	64QAM	1	0	20.77	20.52	20.55	
15	64QAM	1	37	20.72	20.59	20.62	21.00
15	64QAM	1	74	20.47	20.42	20.34	
15	64QAM	36	0	19.75	19.53	19.45	
15	64QAM	36	20	19.56	19.53	19.54	19.00
15	64QAM	36	39	19.49	19.48	19.46	
15	64QAM	75	0	19.58	19.52	19.50	
15	256QAM	1	0	17.84	17.65	17.62	19.00
15	256QAM	1	37	17.73	17.71	17.72	
15	256QAM	1	74	17.50	17.55	17.54	
15	256QAM	36	0	17.75	17.66	17.57	19.00
15	256QAM	36	20	17.62	17.63	17.60	



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15	256QAM	36	39	17.56	17.63	17.52	
15	256QAM	75	0	17.61	17.65	17.57	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.67	22.68	22.46	24.00
10	QPSK	1	25	22.60	22.51	22.52	
10	QPSK	1	49	22.34	22.31	22.28	
10	QPSK	25	0	21.72	21.69	21.51	23.00
10	QPSK	25	12	21.57	21.52	21.46	
10	QPSK	25	25	21.50	21.41	21.40	
10	QPSK	50	0	21.57	21.54	21.46	
10	16QAM	1	0	21.86	21.66	21.68	23.00
10	16QAM	1	25	21.75	21.68	21.78	
10	16QAM	1	49	21.51	21.52	21.48	
10	16QAM	25	0	20.66	20.58	20.43	22.00
10	16QAM	25	12	20.53	20.46	20.44	
10	16QAM	25	25	20.40	20.42	20.34	
10	16QAM	50	0	20.54	20.47	20.39	
10	64QAM	1	0	20.72	20.54	20.53	22.00
10	64QAM	1	25	20.67	20.65	20.60	
10	64QAM	1	49	20.37	20.36	20.39	
10	64QAM	25	0	19.78	19.61	19.53	21.00
10	64QAM	25	12	19.62	19.46	19.59	
10	64QAM	25	25	19.50	19.52	19.46	
10	64QAM	50	0	19.55	19.52	19.44	
10	256QAM	1	0	17.77	17.62	17.66	19.00
10	256QAM	1	25	17.70	17.74	17.80	
10	256QAM	1	49	17.44	17.51	17.60	
10	256QAM	25	0	17.66	17.71	17.53	19.00
10	256QAM	25	12	17.63	17.60	17.63	
10	256QAM	25	25	17.52	17.68	17.58	
10	256QAM	50	0	17.57	17.68	17.60	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.69	22.68	22.52	24.00
5	QPSK	1	12	22.64	22.58	22.50	
5	QPSK	1	24	22.33	22.25	22.25	
5	QPSK	12	0	21.71	21.66	21.46	23.00
5	QPSK	12	7	21.52	21.54	21.48	
5	QPSK	12	13	21.41	21.41	21.40	
5	QPSK	25	0	21.60	21.61	21.45	
5	16QAM	1	0	21.83	21.65	21.69	23.00
5	16QAM	1	12	21.77	21.67	21.73	
5	16QAM	1	24	21.57	21.50	21.51	
5	16QAM	12	0	20.64	20.55	20.47	22.00
5	16QAM	12	7	20.57	20.46	20.39	
5	16QAM	12	13	20.43	20.47	20.39	
5	16QAM	25	0	20.54	20.44	20.38	
5	64QAM	1	0	20.69	20.59	20.59	22.00
5	64QAM	1	12	20.67	20.59	20.65	
5	64QAM	1	24	20.46	20.36	20.34	
5	64QAM	12	0	19.74	19.56	19.51	21.00
5	64QAM	12	7	19.60	19.50	19.56	
5	64QAM	12	13	19.56	19.54	19.40	
5	64QAM	25	0	19.54	19.51	19.48	
5	256QAM	1	0	17.78	17.63	17.63	19.00
5	256QAM	1	12	17.75	17.72	17.79	
5	256QAM	1	24	17.50	17.51	17.55	
5	256QAM	12	0	17.67	17.65	17.58	19.00
5	256QAM	12	7	17.67	17.56	17.55	
5	256QAM	12	13	17.59	17.65	17.54	
5	256QAM	25	0	17.60	17.67	17.62	



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Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.63	22.68	22.54	24.00
3	QPSK	1	8	22.61	22.55	22.49	
3	QPSK	1	14	22.43	22.35	22.23	
3	QPSK	8	0	21.70	21.66	21.43	23.00
3	QPSK	8	4	21.56	21.44	21.44	
3	QPSK	8	7	21.50	21.46	21.44	
3	QPSK	15	0	21.58	21.52	21.45	
3	16QAM	1	0	21.84	21.61	21.70	23.00
3	16QAM	1	8	21.76	21.67	21.72	
3	16QAM	1	14	21.57	21.44	21.52	
3	16QAM	8	0	20.59	20.57	20.49	22.00
3	16QAM	8	4	20.54	20.55	20.47	
3	16QAM	8	7	20.37	20.40	20.38	
3	16QAM	15	0	20.52	20.51	20.37	
3	64QAM	1	0	20.71	20.58	20.50	22.00
3	64QAM	1	8	20.66	20.61	20.68	
3	64QAM	1	14	20.41	20.40	20.32	
3	64QAM	8	0	19.71	19.58	19.54	21.00
3	64QAM	8	4	19.54	19.51	19.54	
3	64QAM	8	7	19.57	19.54	19.45	
3	64QAM	15	0	19.60	19.58	19.51	
3	256QAM	1	0	17.78	17.65	17.64	19.00
3	256QAM	1	8	17.77	17.70	17.77	
3	256QAM	1	14	17.47	17.50	17.61	
3	256QAM	8	0	17.69	17.67	17.53	19.00
3	256QAM	8	4	17.61	17.57	17.64	
3	256QAM	8	7	17.56	17.64	17.61	
3	256QAM	15	0	17.63	17.64	17.64	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.62	22.62	22.50	24.00
1.4	QPSK	1	3	22.60	22.55	22.52	
1.4	QPSK	1	5	22.40	22.27	22.21	
1.4	QPSK	3	0	22.62	22.62	22.45	
1.4	QPSK	3	1	22.53	22.47	22.49	
1.4	QPSK	3	3	22.40	22.19	22.12	
1.4	QPSK	6	0	21.55	21.51	21.44	23.00
1.4	16QAM	1	0	21.88	21.62	21.68	23.00
1.4	16QAM	1	3	21.79	21.73	21.77	
1.4	16QAM	1	5	21.50	21.43	21.34	
1.4	16QAM	3	0	21.84	21.55	21.62	
1.4	16QAM	3	1	21.72	21.67	21.76	
1.4	16QAM	3	3	21.51	21.48	21.36	22.00
1.4	16QAM	6	0	20.49	20.45	20.46	
1.4	64QAM	1	0	20.72	20.50	20.52	22.00
1.4	64QAM	1	3	20.68	20.67	20.63	
1.4	64QAM	1	5	20.46	20.37	20.38	
1.4	64QAM	3	0	20.48	20.39	20.43	
1.4	64QAM	3	1	20.72	20.48	20.48	
1.4	64QAM	3	3	20.61	20.66	20.58	
1.4	64QAM	6	0	19.55	19.64	19.48	21.00
1.4	256QAM	1	0	17.79	17.73	17.77	19.00
1.4	256QAM	1	3	17.45	17.56	17.59	
1.4	256QAM	1	5	17.68	17.73	17.54	
1.4	256QAM	3	0	17.70	17.64	17.63	
1.4	256QAM	3	1	17.53	17.61	17.60	
1.4	256QAM	3	3	17.65	17.66	17.67	
1.4	256QAM	6	0	17.76	17.73	17.73	19.00



<LTE Band 4_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	15.89	16.10	15.85	
20	QPSK	1	49	15.94	15.99	15.70	16.50
20	QPSK	1	99	15.80	15.82	15.86	
20	QPSK	50	0	15.95	15.91	15.91	
20	QPSK	50	24	15.70	15.98	15.63	16.50
20	QPSK	50	50	15.69	16.08	15.63	
20	QPSK	100	0	15.82	15.93	15.69	
20	16QAM	1	0	15.68	15.99	15.82	16.50
20	16QAM	1	49	15.64	16.04	15.84	
20	16QAM	1	99	15.81	15.75	15.47	
20	16QAM	50	0	15.68	15.88	15.48	16.50
20	16QAM	50	24	15.50	15.89	15.40	
20	16QAM	50	50	15.59	15.76	15.45	
20	16QAM	100	0	15.80	15.78	15.72	16.50
20	64QAM	1	0	15.90	15.97	15.82	
20	64QAM	1	49	15.82	15.88	15.43	
20	64QAM	1	99	15.50	15.99	15.58	16.50
20	64QAM	50	0	15.67	15.76	15.68	
20	64QAM	50	24	15.79	15.74	15.55	
20	64QAM	50	50	15.49	15.87	15.44	16.50
20	64QAM	100	0	15.41	15.65	15.55	
20	256QAM	1	0	15.39	15.47	15.35	
20	256QAM	1	49	15.61	15.83	15.54	16.50
20	256QAM	1	99	15.59	15.72	15.35	
20	256QAM	50	0	15.82	15.73	15.23	
20	256QAM	50	24	15.47	15.57	15.51	16.50
20	256QAM	50	50	15.63	15.47	15.34	
20	256QAM	100	0	15.18	15.48	15.09	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	15.90	15.94	16.01	
15	QPSK	1	37	15.65	15.67	15.53	16.50
15	QPSK	1	74	15.96	16.00	15.51	
15	QPSK	36	0	15.60	15.72	15.60	
15	QPSK	36	20	15.80	15.89	15.61	16.50
15	QPSK	36	39	15.72	15.89	15.54	
15	QPSK	75	0	16.01	15.96	15.65	
15	16QAM	1	0	15.89	15.78	15.82	16.50
15	16QAM	1	37	15.99	16.01	15.81	
15	16QAM	1	74	15.77	15.52	15.47	
15	16QAM	36	0	15.93	15.58	15.63	16.50
15	16QAM	36	20	15.86	15.56	15.42	
15	16QAM	36	39	15.63	15.86	15.57	
15	16QAM	75	0	15.55	15.99	15.56	16.50
15	64QAM	1	0	15.80	15.97	15.64	
15	64QAM	1	37	15.52	15.77	15.63	
15	64QAM	1	74	15.61	15.83	15.66	16.50
15	64QAM	36	0	15.73	15.63	15.47	
15	64QAM	36	20	15.80	15.53	15.49	
15	64QAM	36	39	15.83	15.77	15.72	16.50
15	64QAM	75	0	15.66	15.43	15.26	
15	256QAM	1	0	15.59	15.55	15.61	
15	256QAM	1	37	15.64	15.85	15.33	16.50
15	256QAM	1	74	15.50	15.72	15.26	
15	256QAM	36	0	15.54	15.51	15.23	
15	256QAM	36	20	15.39	15.51	15.53	16.50



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15	256QAM	36	39	15.68	15.49	15.31	
15	256QAM	75	0	15.41	15.18	15.45	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	15.95	15.75	15.93	16.50
10	QPSK	1	25	15.72	15.59	15.42	
10	QPSK	1	49	15.77	15.94	15.87	
10	QPSK	25	0	15.73	15.90	15.56	16.50
10	QPSK	25	12	15.62	15.83	15.75	
10	QPSK	25	25	15.81	15.99	15.71	
10	QPSK	50	0	15.89	15.95	15.52	
10	16QAM	1	0	15.76	16.07	15.65	16.50
10	16QAM	1	25	15.87	16.07	15.77	
10	16QAM	1	49	15.83	15.75	15.44	
10	16QAM	25	0	15.64	15.86	15.50	16.50
10	16QAM	25	12	15.78	15.78	15.55	
10	16QAM	25	25	15.51	15.78	15.80	
10	16QAM	50	0	15.52	15.88	15.43	
10	64QAM	1	0	15.81	16.00	15.59	16.50
10	64QAM	1	25	15.56	16.02	15.45	
10	64QAM	1	49	15.47	15.63	15.74	
10	64QAM	25	0	15.48	15.56	15.47	16.50
10	64QAM	25	12	15.48	15.91	15.66	
10	64QAM	25	25	15.75	15.58	15.78	
10	64QAM	50	0	15.60	15.76	15.39	
10	256QAM	1	0	15.75	15.58	15.42	16.50
10	256QAM	1	25	15.79	15.59	15.39	
10	256QAM	1	49	15.72	15.52	15.49	
10	256QAM	25	0	15.84	15.44	15.28	16.50
10	256QAM	25	12	15.66	15.57	15.37	
10	256QAM	25	25	15.64	15.54	15.33	
10	256QAM	50	0	15.23	15.26	15.31	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	15.94	15.95	15.97	16.50
5	QPSK	1	12	15.77	15.68	15.84	
5	QPSK	1	24	15.98	15.59	15.82	
5	QPSK	12	0	15.81	15.95	15.63	16.50
5	QPSK	12	7	15.57	15.88	15.57	
5	QPSK	12	13	15.74	15.80	15.59	
5	QPSK	25	0	16.00	15.70	15.72	
5	16QAM	1	0	15.90	15.84	15.89	16.50
5	16QAM	1	12	15.98	15.80	15.89	
5	16QAM	1	24	15.61	15.76	15.65	
5	16QAM	12	0	15.73	15.92	15.63	16.50
5	16QAM	12	7	15.46	15.91	15.60	
5	16QAM	12	13	15.67	15.80	15.55	
5	16QAM	25	0	15.70	15.81	15.75	
5	64QAM	1	0	16.03	16.08	15.54	16.50
5	64QAM	1	12	15.79	15.74	15.44	
5	64QAM	1	24	15.59	15.75	15.59	
5	64QAM	12	0	15.74	15.50	15.48	16.50
5	64QAM	12	7	15.67	15.81	15.51	
5	64QAM	12	13	15.51	15.84	15.59	
5	64QAM	25	0	15.59	15.60	15.52	
5	256QAM	1	0	15.42	15.43	15.49	16.50
5	256QAM	1	12	15.82	15.77	15.45	
5	256QAM	1	24	15.49	15.73	15.45	
5	256QAM	12	0	15.61	15.39	15.27	16.50
5	256QAM	12	7	15.76	15.64	15.33	
5	256QAM	12	13	15.57	15.42	15.20	
5	256QAM	25	0	15.57	15.10	15.29	



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Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	15.85	15.93	15.90	16.50
3	QPSK	1	8	15.77	15.88	15.89	
3	QPSK	1	14	15.94	15.79	15.99	
3	QPSK	8	0	15.58	16.02	15.91	16.50
3	QPSK	8	4	15.67	15.96	15.61	
3	QPSK	8	7	15.99	15.75	15.70	
3	QPSK	15	0	15.83	15.84	15.54	16.50
3	16QAM	1	0	15.85	15.75	15.72	
3	16QAM	1	8	15.89	16.00	15.87	
3	16QAM	1	14	15.80	15.88	15.73	16.50
3	16QAM	8	0	15.74	15.77	15.53	
3	16QAM	8	4	15.56	15.83	15.47	
3	16QAM	8	7	15.66	15.67	15.60	16.50
3	16QAM	15	0	15.73	15.73	15.52	
3	64QAM	1	0	15.98	16.08	15.63	
3	64QAM	1	8	15.67	15.88	15.52	16.50
3	64QAM	1	14	15.80	15.82	15.70	
3	64QAM	8	0	15.58	15.60	15.43	
3	64QAM	8	4	15.72	15.68	15.41	16.50
3	64QAM	8	7	15.51	15.84	15.55	
3	64QAM	15	0	15.76	15.69	15.59	
3	256QAM	1	0	15.63	15.70	15.48	16.50
3	256QAM	1	8	15.68	15.56	15.68	
3	256QAM	1	14	15.53	15.82	15.40	
3	256QAM	8	0	15.80	15.37	15.51	16.50
3	256QAM	8	4	15.43	15.49	15.33	
3	256QAM	8	7	15.34	15.46	15.18	
3	256QAM	15	0	15.41	15.22	15.08	16.50
Channel				19957	20175	20393	
Frequency (MHz)				1710.7	1732.5	1754.3	Tune-up limit (dBm)
1.4	QPSK	1	0	15.63	15.86	15.53	
1.4	QPSK	1	3	15.42	15.79	15.56	16.50
1.4	QPSK	1	5	15.70	15.48	15.56	
1.4	QPSK	3	0	15.86	16.01	15.82	
1.4	QPSK	3	1	15.72	16.07	15.64	16.50
1.4	QPSK	3	3	15.97	16.02	15.76	
1.4	QPSK	6	0	15.83	15.69	15.63	
1.4	16QAM	1	0	15.64	15.96	15.90	16.50
1.4	16QAM	1	3	15.84	16.01	15.85	
1.4	16QAM	1	5	15.59	15.73	15.52	
1.4	16QAM	3	0	15.79	15.55	15.54	16.50
1.4	16QAM	3	1	15.65	15.72	15.65	
1.4	16QAM	3	3	15.52	15.76	15.46	
1.4	16QAM	6	0	15.59	15.75	15.58	16.50
1.4	64QAM	1	0	16.06	16.01	15.49	
1.4	64QAM	1	3	15.90	15.83	15.42	
1.4	64QAM	1	5	15.77	15.98	15.38	16.50
1.4	64QAM	3	0	15.58	15.87	15.64	
1.4	64QAM	3	1	15.64	15.77	15.62	
1.4	64QAM	3	3	15.66	15.92	15.54	16.50
1.4	64QAM	6	0	15.62	15.42	15.38	
1.4	256QAM	1	0	15.71	15.53	15.41	
1.4	256QAM	1	3	15.58	15.74	15.48	16.50
1.4	256QAM	1	5	15.61	15.51	15.23	
1.4	256QAM	3	0	15.58	15.62	15.51	
1.4	256QAM	3	1	15.60	15.50	15.55	16.50
1.4	256QAM	3	3	15.59	15.41	15.44	
1.4	256QAM	6	0	15.24	15.50	15.31	

**<LTE Band 5_Ant 5_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	22.79	22.80	22.78	24.00
10	QPSK	1	25	22.70	22.74	22.70	
10	QPSK	1	49	22.74	22.72	22.69	
10	QPSK	25	0	21.75	21.83	21.80	23.00
10	QPSK	25	12	21.73	21.69	21.78	
10	QPSK	25	25	21.74	21.70	21.71	
10	QPSK	50	0	21.77	21.81	21.79	23.00
10	16QAM	1	0	21.92	21.91	21.93	
10	16QAM	1	25	21.97	21.99	22.00	
10	16QAM	1	49	21.98	21.93	22.01	22.00
10	16QAM	25	0	20.75	20.69	20.80	
10	16QAM	25	12	20.71	20.75	20.79	
10	16QAM	25	25	20.72	20.71	20.73	22.00
10	16QAM	50	0	20.73	20.72	20.78	
10	64QAM	1	0	21.82	20.83	20.80	
10	64QAM	1	25	21.89	20.86	20.85	22.00
10	64QAM	1	49	21.90	20.81	20.86	
10	64QAM	25	0	20.74	19.64	19.76	
10	64QAM	25	12	20.72	19.70	19.79	21.00
10	64QAM	25	25	20.71	19.68	19.72	
10	64QAM	50	0	20.74	19.70	19.76	
10	256QAM	1	0	18.00	18.03	17.98	19.00
10	256QAM	1	25	18.04	18.01	18.00	
10	256QAM	1	49	18.01	17.93	17.95	
10	256QAM	25	0	18.01	17.91	18.00	19.00
10	256QAM	25	12	17.91	17.92	17.95	
10	256QAM	25	25	17.92	17.89	17.90	
10	256QAM	50	0	17.96	17.91	17.93	24.00
Channel				20425	20525	20625	
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	22.71	22.74	22.77	24.00
5	QPSK	1	12	22.67	22.71	22.63	
5	QPSK	1	24	22.70	22.71	22.59	
5	QPSK	12	0	21.68	21.81	21.78	23.00
5	QPSK	12	7	21.63	21.62	21.78	
5	QPSK	12	13	21.68	21.68	21.64	
5	QPSK	25	0	21.77	21.74	21.74	23.00
5	16QAM	1	0	21.85	21.83	21.92	
5	16QAM	1	12	21.89	21.99	21.95	
5	16QAM	1	24	21.93	21.89	22.01	22.00
5	16QAM	12	0	20.66	20.65	20.70	
5	16QAM	12	7	20.69	20.72	20.72	
5	16QAM	12	13	20.62	20.71	20.68	22.00
5	16QAM	25	0	20.69	20.70	20.71	
5	64QAM	1	0	21.72	20.83	20.75	
5	64QAM	1	12	21.88	20.79	20.82	22.00
5	64QAM	1	24	21.87	20.81	20.80	
5	64QAM	12	0	20.73	19.59	19.74	
5	64QAM	12	7	20.66	19.61	19.74	21.00
5	64QAM	12	13	20.62	19.60	19.64	
5	64QAM	25	0	20.72	19.69	19.67	
5	256QAM	1	0	17.94	18.03	17.98	19.00
5	256QAM	1	12	17.94	17.95	17.91	
5	256QAM	1	24	18.01	17.84	17.89	
5	256QAM	12	0	17.96	17.87	17.99	19.00
5	256QAM	12	7	17.86	17.85	17.92	
5	256QAM	12	13	17.86	17.83	17.84	



FCC SAR TEST REPORT

Report No. : FA490504A

5	256QAM	25	0	17.93	17.82	17.84	Tune-up limit (dBm)
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	22.77	22.70	22.78	24.00
3	QPSK	1	8	22.60	22.67	22.64	
3	QPSK	1	14	22.73	22.67	22.59	
3	QPSK	8	0	21.68	21.73	21.76	23.00
3	QPSK	8	4	21.69	21.59	21.69	
3	QPSK	8	7	21.66	21.66	21.69	
3	QPSK	15	0	21.74	21.73	21.79	23.00
3	16QAM	1	0	21.89	21.85	21.87	
3	16QAM	1	8	21.97	21.90	21.96	
3	16QAM	1	14	21.98	21.86	21.91	22.00
3	16QAM	8	0	20.71	20.64	20.78	
3	16QAM	8	4	20.62	20.67	20.71	
3	16QAM	8	7	20.62	20.69	20.67	22.00
3	16QAM	15	0	20.69	20.66	20.71	
3	64QAM	1	0	21.75	20.81	20.76	
3	64QAM	1	8	21.83	20.80	20.83	22.00
3	64QAM	1	14	21.81	20.81	20.77	
3	64QAM	8	0	20.67	19.62	19.75	
3	64QAM	8	4	20.67	19.63	19.70	21.00
3	64QAM	8	7	20.66	19.65	19.66	
3	64QAM	15	0	20.68	19.60	19.69	
3	256QAM	1	0	17.90	17.96	17.96	19.00
3	256QAM	1	8	17.97	17.92	17.94	
3	256QAM	1	14	17.94	17.93	17.88	
3	256QAM	8	0	17.93	17.91	17.97	19.00
3	256QAM	8	4	17.81	17.83	17.90	
3	256QAM	8	7	17.83	17.87	17.82	
3	256QAM	15	0	17.95	17.90	17.87	Tune-up limit (dBm)
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	22.70	22.75	22.72	24.00
1.4	QPSK	1	3	22.67	22.67	22.70	
1.4	QPSK	1	5	22.65	22.70	22.65	
1.4	QPSK	3	0	22.69	22.71	22.67	23.00
1.4	QPSK	3	1	22.59	22.67	22.69	
1.4	QPSK	3	3	22.64	22.61	22.63	
1.4	QPSK	6	0	21.76	21.80	21.74	23.00
1.4	16QAM	1	0	21.83	21.87	21.86	
1.4	16QAM	1	3	21.96	21.95	21.99	
1.4	16QAM	1	5	21.68	21.72	21.64	22.00
1.4	16QAM	3	0	21.77	21.82	21.84	
1.4	16QAM	3	1	21.86	21.87	21.90	
1.4	16QAM	3	3	21.66	21.79	21.72	22.00
1.4	16QAM	6	0	20.66	20.68	20.68	
1.4	64QAM	1	0	21.74	20.80	20.80	
1.4	64QAM	1	3	21.84	20.76	20.82	22.00
1.4	64QAM	1	5	21.81	20.79	20.77	
1.4	64QAM	3	0	20.64	20.60	20.58	
1.4	64QAM	3	1	21.66	20.72	20.73	21.00
1.4	64QAM	3	3	21.83	20.71	20.75	
1.4	64QAM	6	0	20.78	19.62	19.65	
1.4	256QAM	1	0	18.04	17.92	17.95	19.00
1.4	256QAM	1	3	17.96	17.88	17.93	
1.4	256QAM	1	5	17.95	17.84	17.91	
1.4	256QAM	3	0	17.82	17.85	17.85	19.00
1.4	256QAM	3	1	17.87	17.82	17.88	
1.4	256QAM	3	3	17.91	17.87	17.85	
1.4	256QAM	6	0	18.02	17.90	17.91	19.00



<LTE Band 5_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	16.01	16.09	16.04	17.00
10	QPSK	1	25	15.90	16.04	15.94	
10	QPSK	1	49	15.95	16.05	15.97	
10	QPSK	25	0	15.89	16.04	15.98	17.00
10	QPSK	25	12	15.81	15.97	15.82	
10	QPSK	25	25	15.89	16.00	15.87	
10	QPSK	50	0	15.87	15.98	15.93	17.00
10	16QAM	1	0	15.85	16.00	15.94	
10	16QAM	1	25	15.88	15.97	15.87	
10	16QAM	1	49	15.72	15.81	15.71	17.00
10	16QAM	25	0	15.85	15.96	15.88	
10	16QAM	25	12	15.77	15.88	15.75	
10	16QAM	25	25	15.72	15.85	15.80	17.00
10	16QAM	50	0	15.74	15.86	15.75	
10	64QAM	1	0	15.92	16.02	15.88	
10	64QAM	1	25	15.79	15.94	15.86	17.00
10	64QAM	1	49	15.76	15.88	15.79	
10	64QAM	25	0	15.64	15.82	15.70	
10	64QAM	25	12	15.63	15.80	15.65	17.00
10	64QAM	25	25	15.75	15.86	15.80	
10	64QAM	50	0	15.61	15.77	15.66	
10	256QAM	1	0	15.65	15.65	15.66	17.00
10	256QAM	1	25	15.68	15.72	15.68	
10	256QAM	1	49	15.65	15.68	15.60	
10	256QAM	25	0	15.64	15.62	15.59	17.00
10	256QAM	25	12	15.63	15.59	15.60	
10	256QAM	25	25	15.59	15.54	15.50	
10	256QAM	50	0	15.48	15.44	15.47	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	15.91	16.00	15.98	17.00
5	QPSK	1	12	15.84	16.03	15.78	
5	QPSK	1	24	15.88	15.94	15.87	
5	QPSK	12	0	15.74	16.03	15.81	17.00
5	QPSK	12	7	15.70	15.92	15.70	
5	QPSK	12	13	15.80	15.80	15.71	
5	QPSK	25	0	15.70	15.85	15.82	17.00
5	16QAM	1	0	15.74	15.80	15.81	
5	16QAM	1	12	15.75	15.85	15.75	
5	16QAM	1	24	15.62	15.73	15.58	17.00
5	16QAM	12	0	15.78	15.92	15.82	
5	16QAM	12	7	15.64	15.71	15.66	
5	16QAM	12	13	15.62	15.82	15.78	17.00
5	16QAM	25	0	15.58	15.82	15.71	
5	64QAM	1	0	15.77	15.93	15.74	
5	64QAM	1	12	15.64	15.91	15.81	17.00
5	64QAM	1	24	15.69	15.69	15.69	
5	64QAM	12	0	15.55	15.72	15.62	
5	64QAM	12	7	15.62	15.66	15.54	17.00
5	64QAM	12	13	15.61	15.81	15.66	
5	64QAM	25	0	15.51	15.63	15.54	
5	256QAM	1	0	15.54	15.50	15.58	17.00
5	256QAM	1	12	15.65	15.67	15.53	
5	256QAM	1	24	15.53	15.58	15.49	
5	256QAM	12	0	15.61	15.46	15.50	17.00
5	256QAM	12	7	15.62	15.48	15.42	
5	256QAM	12	13	15.54	15.41	15.37	



FCC SAR TEST REPORT

Report No. : FA490504A

5	256QAM	25	0	15.37	15.33	15.40	Tune-up limit (dBm)
Channel				20415	20525	20635	
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	15.98	16.08	16.02	17.00
3	QPSK	1	8	15.87	15.94	15.76	
3	QPSK	1	14	15.85	16.02	15.85	
3	QPSK	8	0	15.82	16.04	15.84	17.00
3	QPSK	8	4	15.71	15.83	15.71	
3	QPSK	8	7	15.72	15.86	15.73	
3	QPSK	15	0	15.86	15.94	15.78	17.00
3	16QAM	1	0	15.78	15.92	15.84	
3	16QAM	1	8	15.81	15.79	15.68	
3	16QAM	1	14	15.56	15.68	15.57	17.00
3	16QAM	8	0	15.71	15.87	15.86	
3	16QAM	8	4	15.71	15.78	15.66	
3	16QAM	8	7	15.63	15.74	15.69	17.00
3	16QAM	15	0	15.68	15.78	15.62	
3	64QAM	1	0	15.78	15.92	15.76	
3	64QAM	1	8	15.68	15.84	15.71	17.00
3	64QAM	1	14	15.67	15.78	15.59	
3	64QAM	8	0	15.53	15.74	15.62	
3	64QAM	8	4	15.57	15.65	15.59	17.00
3	64QAM	8	7	15.60	15.78	15.69	
3	64QAM	15	0	15.51	15.69	15.57	
3	256QAM	1	0	15.59	15.55	15.63	17.00
3	256QAM	1	8	15.63	15.71	15.56	
3	256QAM	1	14	15.51	15.59	15.41	
3	256QAM	8	0	15.54	15.58	15.53	17.00
3	256QAM	8	4	15.47	15.47	15.55	
3	256QAM	8	7	15.50	15.45	15.43	
3	256QAM	15	0	15.31	15.37	15.42	Tune-up limit (dBm)
Channel				20407	20525	20643	
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	15.96	16.03	15.98	17.00
1.4	QPSK	1	3	15.82	15.95	15.84	
1.4	QPSK	1	5	15.81	16.00	15.88	
1.4	QPSK	3	0	15.79	15.93	15.89	17.00
1.4	QPSK	3	1	15.65	15.96	15.77	
1.4	QPSK	3	3	15.84	15.95	15.72	
1.4	QPSK	6	0	15.71	15.87	15.86	17.00
1.4	16QAM	1	0	15.81	15.80	15.85	17.00
1.4	16QAM	1	3	15.75	15.93	15.79	
1.4	16QAM	1	5	15.66	15.63	15.58	
1.4	16QAM	3	0	15.77	15.91	15.74	17.00
1.4	16QAM	3	1	15.70	15.84	15.64	
1.4	16QAM	3	3	15.64	15.67	15.61	
1.4	16QAM	6	0	15.68	15.80	15.58	17.00
1.4	64QAM	1	0	15.88	15.87	15.80	17.00
1.4	64QAM	1	3	15.70	15.85	15.81	
1.4	64QAM	1	5	15.68	15.77	15.67	
1.4	64QAM	3	0	15.50	15.70	15.56	17.00
1.4	64QAM	3	1	15.48	15.75	15.58	
1.4	64QAM	3	3	15.61	15.84	15.73	
1.4	64QAM	6	0	15.51	15.70	15.62	17.00
1.4	256QAM	1	0	15.54	15.57	15.47	17.00
1.4	256QAM	1	3	15.61	15.64	15.58	
1.4	256QAM	1	5	15.60	15.64	15.45	
1.4	256QAM	3	0	15.49	15.54	15.39	17.00
1.4	256QAM	3	1	15.51	15.39	15.45	
1.4	256QAM	3	3	15.51	15.44	15.33	
1.4	256QAM	6	0	15.33	15.44	15.39	17.00



<LTE Band 7_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.01	22.50	22.20	
20	QPSK	1	49	22.18	22.48	22.38	24.00
20	QPSK	1	99	22.18	22.41	22.22	
20	QPSK	50	0	21.21	21.46	21.41	
20	QPSK	50	24	21.19	21.43	21.38	23.00
20	QPSK	50	50	21.06	21.45	21.35	
20	QPSK	100	0	21.13	21.38	21.36	
20	16QAM	1	0	21.19	21.39	21.21	23.00
20	16QAM	1	49	21.33	21.60	21.41	
20	16QAM	1	99	21.27	21.58	21.29	
20	16QAM	50	0	20.07	20.41	20.39	22.00
20	16QAM	50	24	20.15	20.45	20.38	
20	16QAM	50	50	20.17	20.42	20.37	
20	16QAM	100	0	20.11	20.35	20.35	22.00
20	64QAM	1	0	20.09	20.32	20.12	
20	64QAM	1	49	20.27	20.57	20.36	
20	64QAM	1	99	20.23	20.51	20.34	21.00
20	64QAM	50	0	19.11	19.34	19.40	
20	64QAM	50	24	19.20	19.41	19.39	
20	64QAM	50	50	19.17	19.41	19.38	19.00
20	64QAM	100	0	19.17	19.33	19.39	
20	256QAM	1	0	17.17	17.51	17.60	
20	256QAM	1	49	17.15	17.71	17.61	19.00
20	256QAM	1	99	17.25	17.71	17.38	
20	256QAM	50	0	17.03	17.61	17.64	
20	256QAM	50	24	17.08	17.61	17.52	19.00
20	256QAM	50	50	17.11	17.60	17.42	
20	256QAM	100	0	17.03	17.59	17.52	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	22.00	22.48	22.11	
15	QPSK	1	37	22.16	22.39	22.32	24.00
15	QPSK	1	74	22.15	22.31	22.19	
15	QPSK	36	0	21.12	21.39	21.36	23.00
15	QPSK	36	20	21.18	21.37	21.30	
15	QPSK	36	39	21.05	21.42	21.32	
15	QPSK	75	0	21.04	21.34	21.26	23.00
15	16QAM	1	0	21.10	21.38	21.14	
15	16QAM	1	37	21.32	21.54	21.33	
15	16QAM	1	74	21.26	21.49	21.22	22.00
15	16QAM	36	0	20.00	20.35	20.34	
15	16QAM	36	20	20.06	20.43	20.36	
15	16QAM	36	39	20.07	20.36	20.36	22.00
15	16QAM	75	0	20.10	20.25	20.34	
15	64QAM	1	0	20.00	20.25	20.08	
15	64QAM	1	37	20.18	20.53	20.30	21.00
15	64QAM	1	74	20.13	20.41	20.25	
15	64QAM	36	0	19.09	19.27	19.40	
15	64QAM	36	20	19.12	19.35	19.30	19.00
15	64QAM	36	39	19.09	19.39	19.37	
15	64QAM	75	0	19.16	19.24	19.29	
15	256QAM	1	0	17.09	17.49	17.55	19.00
15	256QAM	1	37	17.14	17.64	17.61	
15	256QAM	1	74	17.21	17.63	17.35	
15	256QAM	36	0	17.00	17.57	17.57	19.00
15	256QAM	36	20	17.01	17.53	17.46	
15	256QAM	36	39	17.10	17.56	17.42	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	17.00	17.53	17.51	Tune-up limit (dBm)
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	22.00	22.46	22.20	24.00
10	QPSK	1	25	22.15	22.45	22.33	
10	QPSK	1	49	22.08	22.34	22.22	
10	QPSK	25	0	21.19	21.36	21.39	23.00
10	QPSK	25	12	21.12	21.42	21.33	
10	QPSK	25	25	21.00	21.39	21.25	
10	QPSK	50	0	21.04	21.34	21.31	
10	16QAM	1	0	21.15	21.39	21.20	23.00
10	16QAM	1	25	21.23	21.57	21.40	
10	16QAM	1	49	21.27	21.54	21.27	
10	16QAM	25	0	20.04	20.40	20.33	22.00
10	16QAM	25	12	20.10	20.37	20.29	
10	16QAM	25	25	20.07	20.39	20.32	
10	16QAM	50	0	20.04	20.32	20.33	
10	64QAM	1	0	20.09	20.22	20.03	22.00
10	64QAM	1	25	20.20	20.54	20.28	
10	64QAM	1	49	20.14	20.49	20.26	
10	64QAM	25	0	19.06	19.29	19.30	21.00
10	64QAM	25	12	19.10	19.41	19.31	
10	64QAM	25	25	19.08	19.33	19.32	
10	64QAM	50	0	19.14	19.27	19.37	
10	256QAM	1	0	17.08	17.42	17.60	19.00
10	256QAM	1	25	17.07	17.66	17.51	
10	256QAM	1	49	17.24	17.64	17.30	
10	256QAM	25	0	17.02	17.55	17.61	19.00
10	256QAM	25	12	17.00	17.59	17.52	
10	256QAM	25	25	17.07	17.54	17.40	
10	256QAM	50	0	17.00	17.59	17.45	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.00	22.41	22.15	24.00
5	QPSK	1	12	22.18	22.45	22.34	
5	QPSK	1	24	22.13	22.40	22.13	
5	QPSK	12	0	21.12	21.36	21.31	23.00
5	QPSK	12	7	21.13	21.35	21.33	
5	QPSK	12	13	21.00	21.38	21.28	
5	QPSK	25	0	21.08	21.36	21.32	
5	16QAM	1	0	21.15	21.29	21.12	23.00
5	16QAM	1	12	21.29	21.60	21.35	
5	16QAM	1	24	21.25	21.54	21.26	
5	16QAM	12	0	20.07	20.41	20.37	22.00
5	16QAM	12	7	20.14	20.40	20.36	
5	16QAM	12	13	20.09	20.37	20.30	
5	16QAM	25	0	20.08	20.28	20.27	
5	64QAM	1	0	20.08	20.27	20.11	22.00
5	64QAM	1	12	20.26	20.56	20.26	
5	64QAM	1	24	20.23	20.51	20.30	
5	64QAM	12	0	19.05	19.34	19.34	21.00
5	64QAM	12	7	19.15	19.31	19.33	
5	64QAM	12	13	19.14	19.35	19.32	
5	64QAM	25	0	19.12	19.23	19.29	
5	256QAM	1	0	17.17	17.47	17.57	19.00
5	256QAM	1	12	17.12	17.61	17.57	
5	256QAM	1	24	17.17	17.63	17.30	
5	256QAM	12	0	17.00	17.55	17.57	19.00
5	256QAM	12	7	17.00	17.53	17.45	
5	256QAM	12	13	17.10	17.55	17.33	
5	256QAM	25	0	17.00	17.52	17.43	



<LTE Band 7_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	13.75	13.88	13.68	
20	QPSK	1	49	13.43	13.64	13.48	14.00
20	QPSK	1	99	13.58	13.60	13.48	
20	QPSK	50	0	13.38	13.66	13.49	
20	QPSK	50	24	13.33	13.60	13.36	14.00
20	QPSK	50	50	13.48	13.62	13.39	
20	QPSK	100	0	13.51	13.58	13.37	
20	16QAM	1	0	13.47	13.59	13.44	14.00
20	16QAM	1	49	13.39	13.57	13.41	
20	16QAM	1	99	13.29	13.36	13.22	
20	16QAM	50	0	13.36	13.62	13.41	14.00
20	16QAM	50	24	13.35	13.42	13.18	
20	16QAM	50	50	13.23	13.49	13.28	
20	16QAM	100	0	13.35	13.51	13.33	14.00
20	64QAM	1	0	13.48	13.60	13.31	
20	64QAM	1	49	13.34	13.57	13.28	
20	64QAM	1	99	13.33	13.57	13.27	14.00
20	64QAM	50	0	13.21	13.35	13.21	
20	64QAM	50	24	13.22	13.40	13.13	
20	64QAM	50	50	13.41	13.53	13.28	14.00
20	64QAM	100	0	13.15	13.35	13.14	
20	256QAM	1	0	13.20	13.25	13.21	
20	256QAM	1	49	13.29	13.40	13.09	14.00
20	256QAM	1	99	13.20	13.31	13.11	
20	256QAM	50	0	13.20	13.26	13.06	
20	256QAM	50	24	13.27	13.25	13.11	14.00
20	256QAM	50	50	13.09	13.11	13.04	
20	256QAM	100	0	12.99	13.03	12.86	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	13.66	13.76	13.63	14.00
15	QPSK	1	37	13.28	13.52	13.31	
15	QPSK	1	74	13.38	13.61	13.41	
15	QPSK	36	0	13.20	13.59	13.28	14.00
15	QPSK	36	20	13.28	13.54	13.18	
15	QPSK	36	39	13.54	13.55	13.33	
15	QPSK	75	0	13.38	13.47	13.23	14.00
15	16QAM	1	0	13.31	13.49	13.35	
15	16QAM	1	37	13.38	13.54	13.30	
15	16QAM	1	74	13.28	13.38	13.02	14.00
15	16QAM	36	0	13.26	13.51	13.20	
15	16QAM	36	20	13.21	13.36	13.12	
15	16QAM	36	39	13.19	13.43	13.29	14.00
15	16QAM	75	0	13.19	13.30	13.22	
15	64QAM	1	0	13.48	13.53	13.22	
15	64QAM	1	37	13.21	13.44	13.26	14.00
15	64QAM	1	74	13.17	13.46	13.09	
15	64QAM	36	0	13.09	13.31	13.14	
15	64QAM	36	20	13.09	13.26	13.05	14.00
15	64QAM	36	39	13.38	13.45	13.15	
15	64QAM	75	0	13.06	13.36	13.12	
15	256QAM	1	0	13.15	13.16	13.08	14.00
15	256QAM	1	37	13.25	13.32	13.02	
15	256QAM	1	74	13.16	13.28	13.04	
15	256QAM	36	0	13.21	13.17	12.97	14.00
15	256QAM	36	20	13.14	13.08	13.00	
15	256QAM	36	39	13.02	13.01	12.96	



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15	256QAM	75	0	12.80	12.83	12.80	Tune-up limit (dBm)
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	13.64	13.71	13.59	14.00
10	QPSK	1	25	13.32	13.49	13.30	
10	QPSK	1	49	13.41	13.60	13.39	
10	QPSK	25	0	13.36	13.50	13.29	14.00
10	QPSK	25	12	13.29	13.60	13.27	
10	QPSK	25	25	13.43	13.58	13.30	
10	QPSK	50	0	13.39	13.47	13.27	
10	16QAM	1	0	13.23	13.58	13.31	14.00
10	16QAM	1	25	13.35	13.56	13.29	
10	16QAM	1	49	13.22	13.30	13.05	
10	16QAM	25	0	13.26	13.48	13.28	14.00
10	16QAM	25	12	13.27	13.32	13.03	
10	16QAM	25	25	13.25	13.52	13.15	
10	16QAM	50	0	13.19	13.33	13.21	
10	64QAM	1	0	13.47	13.41	13.27	14.00
10	64QAM	1	25	13.22	13.40	13.25	
10	64QAM	1	49	13.23	13.45	13.05	
10	64QAM	25	0	13.06	13.27	13.14	14.00
10	64QAM	25	12	13.14	13.33	13.11	
10	64QAM	25	25	13.27	13.42	13.12	
10	64QAM	50	0	13.14	13.33	13.01	
10	256QAM	1	0	13.15	13.12	13.15	14.00
10	256QAM	1	25	13.10	13.29	13.04	
10	256QAM	1	49	13.17	13.21	13.03	
10	256QAM	25	0	13.16	13.03	12.94	14.00
10	256QAM	25	12	13.13	13.16	12.94	
10	256QAM	25	25	12.92	13.02	12.96	
10	256QAM	50	0	12.93	12.86	12.79	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	13.67	13.75	13.62	14.00
5	QPSK	1	12	13.39	13.56	13.18	
5	QPSK	1	24	13.38	13.54	13.38	
5	QPSK	12	0	13.29	13.52	13.23	14.00
5	QPSK	12	7	13.31	13.53	13.19	
5	QPSK	12	13	13.43	13.42	13.29	
5	QPSK	25	0	13.32	13.50	13.23	
5	16QAM	1	0	13.30	13.60	13.36	14.00
5	16QAM	1	12	13.36	13.56	13.27	
5	16QAM	1	24	13.19	13.30	12.99	
5	16QAM	12	0	13.28	13.58	13.22	14.00
5	16QAM	12	7	13.30	13.34	13.05	
5	16QAM	12	13	13.26	13.45	13.25	
5	16QAM	25	0	13.19	13.38	13.21	
5	64QAM	1	0	13.46	13.41	13.28	14.00
5	64QAM	1	12	13.22	13.37	13.23	
5	64QAM	1	24	13.21	13.43	13.16	
5	64QAM	12	0	13.14	13.34	13.09	14.00
5	64QAM	12	7	13.09	13.36	13.00	
5	64QAM	12	13	13.33	13.43	13.07	
5	64QAM	25	0	13.08	13.36	13.03	
5	256QAM	1	0	13.15	13.21	13.08	14.00
5	256QAM	1	12	13.15	13.36	13.06	
5	256QAM	1	24	13.09	13.14	13.03	
5	256QAM	12	0	13.16	13.09	12.94	14.00
5	256QAM	12	7	13.14	13.11	12.97	
5	256QAM	12	13	12.92	13.06	12.99	
5	256QAM	25	0	12.87	12.88	12.80	



<LTE Band 12_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	22.83	22.86	22.85	
10	QPSK	1	25	22.80	22.76	22.72	24.00
10	QPSK	1	49	22.80	22.73	22.73	
10	QPSK	25	0	21.75	21.79	21.78	
10	QPSK	25	12	21.69	21.71	21.69	23.00
10	QPSK	25	25	21.69	21.69	21.75	
10	QPSK	50	0	21.70	21.77	21.75	
10	16QAM	1	0	22.01	21.90	21.90	23.00
10	16QAM	1	25	21.94	21.94	21.93	
10	16QAM	1	49	22.02	22.02	22.01	
10	16QAM	25	0	20.70	20.75	20.73	22.00
10	16QAM	25	12	20.76	20.73	20.71	
10	16QAM	25	25	20.67	20.69	20.73	
10	16QAM	50	0	20.67	20.73	20.75	22.00
10	64QAM	1	0	20.85	20.80	20.83	
10	64QAM	1	25	20.85	20.85	20.81	
10	64QAM	1	49	20.88	20.87	20.92	21.00
10	64QAM	25	0	19.72	19.78	19.76	
10	64QAM	25	12	19.83	19.75	19.73	
10	64QAM	25	25	19.75	19.70	19.81	19.00
10	64QAM	50	0	19.71	19.76	19.80	
10	256QAM	1	0	17.96	17.93	17.97	
10	256QAM	1	25	17.91	17.92	17.88	19.00
10	256QAM	1	49	17.89	17.85	17.92	
10	256QAM	25	0	17.82	17.93	17.91	
10	256QAM	25	12	17.87	17.83	17.86	19.00
10	256QAM	25	25	17.78	17.74	17.82	
10	256QAM	50	0	17.80	17.83	17.90	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	22.78	22.82	22.81	24.00
5	QPSK	1	12	22.74	22.66	22.68	
5	QPSK	1	24	22.71	22.73	22.65	
5	QPSK	12	0	21.65	21.69	21.78	23.00
5	QPSK	12	7	21.65	21.65	21.67	
5	QPSK	12	13	21.62	21.63	21.65	
5	QPSK	25	0	21.70	21.68	21.66	23.00
5	16QAM	1	0	21.91	21.89	21.88	
5	16QAM	1	12	21.85	21.84	21.91	
5	16QAM	1	24	21.97	21.99	22.01	22.00
5	16QAM	12	0	20.67	20.72	20.70	
5	16QAM	12	7	20.71	20.63	20.62	
5	16QAM	12	13	20.65	20.59	20.73	22.00
5	16QAM	25	0	20.59	20.72	20.66	
5	64QAM	1	0	20.76	20.78	20.78	
5	64QAM	1	12	20.85	20.80	20.77	21.00
5	64QAM	1	24	20.88	20.83	20.91	
5	64QAM	12	0	19.67	19.73	19.67	
5	64QAM	12	7	19.73	19.72	19.69	19.00
5	64QAM	12	13	19.67	19.70	19.77	
5	64QAM	25	0	19.71	19.70	19.76	
5	256QAM	1	0	17.96	17.89	17.93	19.00
5	256QAM	1	12	17.90	17.87	17.82	
5	256QAM	1	24	17.88	17.76	17.91	
5	256QAM	12	0	17.75	17.85	17.88	19.00
5	256QAM	12	7	17.79	17.81	17.83	
5	256QAM	12	13	17.70	17.66	17.77	



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5	256QAM	25	0	17.77	17.77	17.87	Tune-up limit (dBm)
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	22.83	22.83	22.77	24.00
3	QPSK	1	8	22.73	22.69	22.72	
3	QPSK	1	14	22.77	22.70	22.72	
3	QPSK	8	0	21.66	21.73	21.73	23.00
3	QPSK	8	4	21.59	21.66	21.64	
3	QPSK	8	7	21.65	21.60	21.73	
3	QPSK	15	0	21.61	21.77	21.66	23.00
3	16QAM	1	0	21.91	21.87	21.80	
3	16QAM	1	8	21.87	21.92	21.87	
3	16QAM	1	14	22.01	21.97	21.99	22.00
3	16QAM	8	0	20.66	20.71	20.73	
3	16QAM	8	4	20.75	20.65	20.71	
3	16QAM	8	7	20.58	20.66	20.70	22.00
3	16QAM	15	0	20.67	20.67	20.73	
3	64QAM	1	0	20.82	20.74	20.83	
3	64QAM	1	8	20.84	20.77	20.76	22.00
3	64QAM	1	14	20.79	20.84	20.90	
3	64QAM	8	0	19.63	19.69	19.76	
3	64QAM	8	4	19.76	19.73	19.67	21.00
3	64QAM	8	7	19.68	19.65	19.78	
3	64QAM	15	0	19.68	19.68	19.77	
3	256QAM	1	0	17.86	17.84	17.95	19.00
3	256QAM	1	8	17.85	17.89	17.80	
3	256QAM	1	14	17.82	17.75	17.88	
3	256QAM	8	0	17.75	17.91	17.91	19.00
3	256QAM	8	4	17.85	17.83	17.79	
3	256QAM	8	7	17.71	17.73	17.73	
3	256QAM	15	0	17.74	17.77	17.84	Tune-up limit (dBm)
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	22.73	22.78	22.78	24.00
1.4	QPSK	1	3	22.80	22.72	22.66	
1.4	QPSK	1	5	22.70	22.72	22.66	
1.4	QPSK	3	0	22.63	22.77	22.72	23.00
1.4	QPSK	3	1	22.77	22.66	22.57	
1.4	QPSK	3	3	22.67	22.66	22.65	
1.4	QPSK	6	0	21.66	21.71	21.69	23.00
1.4	16QAM	1	0	21.92	21.85	21.88	
1.4	16QAM	1	3	21.88	21.91	21.90	
1.4	16QAM	1	5	21.59	21.71	21.61	22.00
1.4	16QAM	3	0	21.83	21.80	21.82	
1.4	16QAM	3	1	21.83	21.91	21.81	
1.4	16QAM	3	3	21.59	21.64	21.67	22.00
1.4	16QAM	6	0	20.60	20.64	20.72	
1.4	64QAM	1	0	20.83	20.76	20.74	
1.4	64QAM	1	3	20.75	20.82	20.72	22.00
1.4	64QAM	1	5	20.81	20.81	20.91	
1.4	64QAM	3	0	20.55	20.64	20.68	
1.4	64QAM	3	1	20.77	20.75	20.72	21.00
1.4	64QAM	3	3	20.71	20.73	20.68	
1.4	64QAM	6	0	19.61	19.69	19.68	
1.4	256QAM	1	0	17.83	17.86	17.87	19.00
1.4	256QAM	1	3	17.84	17.80	17.87	
1.4	256QAM	1	5	17.77	17.85	17.90	
1.4	256QAM	3	0	17.79	17.81	17.81	19.00
1.4	256QAM	3	1	17.73	17.70	17.79	
1.4	256QAM	3	3	17.70	17.77	17.85	
1.4	256QAM	6	0	17.80	17.83	17.87	19.00



<LTE Band 12_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	17.54	17.58	17.53	
10	QPSK	1	25	17.41	17.49	17.42	18.00
10	QPSK	1	49	17.40	17.54	17.47	
10	QPSK	25	0	17.38	17.54	17.48	
10	QPSK	25	12	17.33	17.49	17.28	18.00
10	QPSK	25	25	17.37	17.47	17.31	
10	QPSK	50	0	17.30	17.46	17.46	
10	16QAM	1	0	17.35	17.52	17.38	18.00
10	16QAM	1	25	17.36	17.47	17.35	
10	16QAM	1	49	17.15	17.26	17.21	
10	16QAM	25	0	17.31	17.39	17.32	18.00
10	16QAM	25	12	17.29	17.35	17.23	
10	16QAM	25	25	17.17	17.29	17.29	
10	16QAM	50	0	17.19	17.38	17.19	18.00
10	64QAM	1	0	17.39	17.52	17.40	
10	64QAM	1	25	17.30	17.40	17.39	
10	64QAM	1	49	17.25	17.32	17.28	18.00
10	64QAM	25	0	17.11	17.31	17.14	
10	64QAM	25	12	17.07	17.32	17.15	
10	64QAM	25	25	17.24	17.28	17.25	18.00
10	64QAM	50	0	17.11	17.24	17.17	
10	256QAM	1	0	17.09	17.17	17.11	
10	256QAM	1	25	17.14	17.19	17.16	18.00
10	256QAM	1	49	17.13	17.17	17.09	
10	256QAM	25	0	17.14	17.13	17.04	
10	256QAM	25	12	17.36	17.34	17.36	18.00
10	256QAM	25	25	17.34	17.29	17.30	
10	256QAM	50	0	17.21	17.25	17.21	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	17.45	17.55	17.56	18.00
5	QPSK	1	12	17.28	17.50	17.47	
5	QPSK	1	24	17.33	17.50	17.46	
5	QPSK	12	0	17.39	17.45	17.48	18.00
5	QPSK	12	7	17.29	17.38	17.28	
5	QPSK	12	13	17.29	17.49	17.30	
5	QPSK	25	0	17.26	17.42	17.42	18.00
5	16QAM	1	0	17.29	17.42	17.44	
5	16QAM	1	12	17.38	17.37	17.31	
5	16QAM	1	24	17.18	17.27	17.15	18.00
5	16QAM	12	0	17.28	17.37	17.34	
5	16QAM	12	7	17.15	17.36	17.20	
5	16QAM	12	13	17.14	17.24	17.26	18.00
5	16QAM	25	0	17.11	17.29	17.25	
5	64QAM	1	0	17.30	17.47	17.35	
5	64QAM	1	12	17.15	17.43	17.29	18.00
5	64QAM	1	24	17.11	17.26	17.24	
5	64QAM	12	0	17.10	17.33	17.14	
5	64QAM	12	7	17.38	17.53	17.43	18.00
5	64QAM	12	13	17.40	17.55	17.51	
5	64QAM	25	0	17.32	17.41	17.35	
5	256QAM	1	0	17.32	17.32	17.35	18.00
5	256QAM	1	12	17.40	17.53	17.40	
5	256QAM	1	24	17.43	17.47	17.26	
5	256QAM	12	0	17.31	17.42	17.32	18.00
5	256QAM	12	7	17.35	17.31	17.36	
5	256QAM	12	13	17.29	17.27	17.27	



FCC SAR TEST REPORT

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5	256QAM	25	0	17.21	17.19	17.21	Tune-up limit (dBm)
Channel				23025	23095	23165	
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	17.47	17.57	17.55	18.00
3	QPSK	1	8	17.30	17.44	17.40	
3	QPSK	1	14	17.32	17.48	17.44	
3	QPSK	8	0	17.32	17.44	17.41	18.00
3	QPSK	8	4	17.26	17.42	17.25	
3	QPSK	8	7	17.39	17.42	17.33	
3	QPSK	15	0	17.24	17.41	17.29	18.00
3	16QAM	1	0	17.35	17.39	17.37	
3	16QAM	1	8	17.34	17.45	17.30	
3	16QAM	1	14	17.25	17.25	17.18	18.00
3	16QAM	8	0	17.20	17.36	17.23	
3	16QAM	8	4	17.18	17.30	17.12	
3	16QAM	8	7	17.21	17.18	17.20	18.00
3	16QAM	15	0	17.22	17.31	17.16	
3	64QAM	1	0	17.32	17.45	17.41	
3	64QAM	1	8	17.21	17.36	17.21	18.00
3	64QAM	1	14	17.12	17.22	17.23	
3	64QAM	8	0	17.07	17.24	17.14	
3	64QAM	8	4	17.07	17.23	17.09	18.00
3	64QAM	8	7	17.24	17.31	17.20	
3	64QAM	15	0	17.03	17.24	17.18	
3	256QAM	1	0	17.04	17.05	17.20	18.00
3	256QAM	1	8	17.13	17.16	17.08	
3	256QAM	1	14	17.11	17.18	17.15	
3	256QAM	8	0	17.15	17.08	17.10	18.00
3	256QAM	8	4	17.11	17.12	17.09	
3	256QAM	8	7	17.12	17.05	16.96	
3	256QAM	15	0	17.04	16.98	17.05	Tune-up limit (dBm)
Channel				23017	23095	23173	
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	17.54	17.53	17.50	18.00
1.4	QPSK	1	3	17.35	17.42	17.39	
1.4	QPSK	1	5	17.38	17.47	17.41	
1.4	QPSK	3	0	17.33	17.43	17.39	18.00
1.4	QPSK	3	1	17.15	17.40	17.30	
1.4	QPSK	3	3	17.30	17.39	17.37	
1.4	QPSK	6	0	17.36	17.45	17.36	18.00
1.4	16QAM	1	0	17.28	17.40	17.36	18.00
1.4	16QAM	1	3	17.22	17.38	17.36	
1.4	16QAM	1	5	17.20	17.20	17.09	
1.4	16QAM	3	0	17.36	17.31	17.40	18.00
1.4	16QAM	3	1	17.23	17.26	17.13	
1.4	16QAM	3	3	17.12	17.29	17.20	
1.4	16QAM	6	0	17.16	17.32	17.17	18.00
1.4	64QAM	1	0	17.33	17.40	17.31	18.00
1.4	64QAM	1	3	17.32	17.38	17.30	
1.4	64QAM	1	5	17.15	17.23	17.15	
1.4	64QAM	3	0	17.08	17.29	17.09	18.00
1.4	64QAM	3	1	17.07	17.27	17.07	
1.4	64QAM	3	3	17.16	17.27	17.23	
1.4	64QAM	6	0	17.12	17.20	17.15	18.00
1.4	256QAM	1	0	17.16	17.10	17.22	18.00
1.4	256QAM	1	3	17.18	17.17	17.21	
1.4	256QAM	1	5	17.14	17.15	17.20	
1.4	256QAM	3	0	17.16	17.19	17.14	18.00
1.4	256QAM	3	1	17.17	17.06	17.15	
1.4	256QAM	3	3	17.08	17.09	17.10	
1.4	256QAM	6	0	17.02	16.95	16.96	18.00



<LTE Band 13_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		22.86		24.00
10	QPSK	1	25		22.85		
10	QPSK	1	49		22.85		
10	QPSK	25	0		21.87		23.00
10	QPSK	25	12		21.78		
10	QPSK	25	25		21.60		
10	QPSK	50	0		21.75		23.00
10	16QAM	1	0		21.83		
10	16QAM	1	25		22.05		
10	16QAM	1	49		22.05		22.00
10	16QAM	25	0		20.62		
10	16QAM	25	12		20.79		
10	16QAM	25	25		20.89		22.00
10	16QAM	50	0		20.71		
10	64QAM	1	0		20.74		
10	64QAM	1	25		20.92		22.00
10	64QAM	1	49		20.94		
10	64QAM	25	0		19.59		
10	64QAM	25	12		19.77		21.00
10	64QAM	25	25		19.86		
10	64QAM	50	0		19.70		
10	256QAM	1	0		17.85		19.00
10	256QAM	1	25		17.99		
10	256QAM	1	49		17.97		
10	256QAM	25	0		17.68		19.00
10	256QAM	25	12		17.82		
10	256QAM	25	25		17.89		
10	256QAM	50	0		17.79		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	22.78	22.76	22.76	24.00
5	QPSK	1	12	22.85	22.79	22.77	
5	QPSK	1	24	22.78	22.81	22.79	
5	QPSK	12	0	21.85	21.86	21.86	23.00
5	QPSK	12	7	21.72	21.69	21.76	
5	QPSK	12	13	21.52	21.54	21.58	
5	QPSK	25	0	21.68	21.67	21.70	23.00
5	16QAM	1	0	21.76	21.80	21.73	
5	16QAM	1	12	22.03	21.99	22.02	
5	16QAM	1	24	22.04	22.01	21.95	22.00
5	16QAM	12	0	20.52	20.58	20.60	
5	16QAM	12	7	20.79	20.69	20.71	
5	16QAM	12	13	20.89	20.79	20.85	22.00
5	16QAM	25	0	20.67	20.64	20.63	
5	64QAM	1	0	20.72	20.74	20.65	
5	64QAM	1	12	20.88	20.91	20.90	22.00
5	64QAM	1	24	20.84	20.91	20.86	
5	64QAM	12	0	19.58	19.59	19.49	
5	64QAM	12	7	19.71	19.77	19.73	21.00
5	64QAM	12	13	19.84	19.82	19.85	
5	64QAM	25	0	19.66	19.68	19.68	
5	256QAM	1	0	17.81	17.81	17.80	19.00
5	256QAM	1	12	17.92	17.89	17.92	
5	256QAM	1	24	17.91	17.95	17.91	
5	256QAM	12	0	17.63	17.67	17.58	19.00
5	256QAM	12	7	17.76	17.75	17.80	
5	256QAM	12	13	17.89	17.85	17.80	
5	256QAM	25	0	17.79	17.77	17.74	

**<LTE Band 13_Ant 5_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		19.35		19.50
10	QPSK	1	25		19.25		
10	QPSK	1	49		19.28		
10	QPSK	25	0		19.25		19.50
10	QPSK	25	12		19.15		
10	QPSK	25	25		19.22		
10	QPSK	50	0		19.19		19.50
10	16QAM	1	0		19.19		
10	16QAM	1	25		19.19		
10	16QAM	1	49		19.06		19.50
10	16QAM	25	0		19.16		
10	16QAM	25	12		19.09		
10	16QAM	25	25		19.10		19.50
10	16QAM	50	0		19.06		
10	64QAM	1	0		19.27		
10	64QAM	1	25		19.19		19.50
10	64QAM	1	49		19.05		
10	64QAM	25	0		19.06		
10	64QAM	25	12		19.04		19.50
10	64QAM	25	25		19.05		
10	64QAM	50	0		19.01		
10	256QAM	1	0		18.86		19.50
10	256QAM	1	25		18.95		
10	256QAM	1	49		18.87		
10	256QAM	25	0		18.82		19.50
10	256QAM	25	12		18.84		
10	256QAM	25	25		18.76		
10	256QAM	50	0		18.65		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	19.21	19.34	19.22	19.50
5	QPSK	1	12	18.95	19.20	19.03	
5	QPSK	1	24	19.08	19.16	19.12	
5	QPSK	12	0	19.06	19.14	19.15	19.50
5	QPSK	12	7	18.98	19.11	18.94	
5	QPSK	12	13	18.93	19.13	18.97	
5	QPSK	25	0	18.94	19.11	19.18	19.50
5	16QAM	1	0	18.92	19.15	19.02	
5	16QAM	1	12	19.02	19.11	19.09	
5	16QAM	1	24	18.85	19.02	18.81	19.50
5	16QAM	12	0	18.88	19.10	19.08	
5	16QAM	12	7	18.92	18.99	18.85	
5	16QAM	12	13	18.83	18.95	18.92	19.50
5	16QAM	25	0	18.80	19.05	18.91	
5	64QAM	1	0	19.05	19.12	19.11	
5	64QAM	1	12	18.99	19.05	19.02	19.50
5	64QAM	1	24	18.85	19.04	18.96	
5	64QAM	12	0	18.72	19.01	18.87	
5	64QAM	12	7	18.70	18.93	18.70	19.50
5	64QAM	12	13	18.80	19.04	18.93	
5	64QAM	25	0	18.75	18.85	18.81	
5	256QAM	1	0	18.77	18.86	18.88	19.50
5	256QAM	1	12	18.80	18.88	18.82	
5	256QAM	1	24	18.78	18.79	18.82	
5	256QAM	12	0	18.74	18.76	18.66	19.50
5	256QAM	12	7	18.70	18.74	18.75	
5	256QAM	12	13	18.73	18.75	18.62	
5	256QAM	25	0	18.60	18.59	18.63	

**<LTE Band 14_Ant 5_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23330			
Frequency (MHz)				793			
10	QPSK	1	0		23.00		24.00
10	QPSK	1	25		22.95		
10	QPSK	1	49		22.85		
10	QPSK	25	0		22.00		23.00
10	QPSK	25	12		21.86		
10	QPSK	25	25		21.94		
10	QPSK	50	0		21.92		23.00
10	16QAM	1	0		22.01		
10	16QAM	1	25		22.13		
10	16QAM	1	49		22.08		22.00
10	16QAM	25	0		20.86		
10	16QAM	25	12		20.88		
10	16QAM	25	25		20.94		22.00
10	16QAM	50	0		20.88		
10	64QAM	1	0		20.93		
10	64QAM	1	25		21.04		22.00
10	64QAM	1	49		20.99		
10	64QAM	25	0		19.84		
10	64QAM	25	12		19.87		21.00
10	64QAM	25	25		19.92		
10	64QAM	50	0		19.88		
10	256QAM	1	0		18.07		19.00
10	256QAM	1	25		18.13		
10	256QAM	1	49		18.08		
10	256QAM	25	0		18.01		19.00
10	256QAM	25	12		18.05		
10	256QAM	25	25		18.10		
10	256QAM	50	0		17.99		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	22.97	22.94	22.91	24.00
5	QPSK	1	12	22.89	22.91	22.94	
5	QPSK	1	24	22.81	22.83	22.81	
5	QPSK	12	0	21.98	21.97	22.00	23.00
5	QPSK	12	7	21.83	21.80	21.77	
5	QPSK	12	13	21.86	21.85	21.87	
5	QPSK	25	0	21.92	21.87	21.92	23.00
5	16QAM	1	0	21.95	21.92	22.01	
5	16QAM	1	12	22.05	22.09	22.04	
5	16QAM	1	24	22.07	22.05	22.03	22.00
5	16QAM	12	0	20.81	20.82	20.77	
5	16QAM	12	7	20.83	20.80	20.88	
5	16QAM	12	13	20.88	20.91	20.90	22.00
5	16QAM	25	0	20.79	20.78	20.86	
5	64QAM	1	0	20.89	20.88	20.92	
5	64QAM	1	12	21.02	20.95	20.95	22.00
5	64QAM	1	24	20.93	20.95	20.97	
5	64QAM	12	0	19.78	19.79	19.80	
5	64QAM	12	7	19.83	19.83	19.81	21.00
5	64QAM	12	13	19.85	19.85	19.92	
5	64QAM	25	0	19.83	19.81	19.81	
5	256QAM	1	0	18.02	18.05	18.06	19.00
5	256QAM	1	12	18.12	18.11	18.11	
5	256QAM	1	24	18.05	18.01	18.04	
5	256QAM	12	0	17.99	17.94	17.92	19.00
5	256QAM	12	7	18.02	17.95	18.05	
5	256QAM	12	13	18.10	18.06	18.07	
5	256QAM	25	0	17.95	17.99	17.90	

**<LTE Band 14_Ant 5_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23330			
Frequency (MHz)				793			
10	QPSK	1	0		17.62		18.50
10	QPSK	1	25		17.61		
10	QPSK	1	49		17.60		
10	QPSK	25	0		17.58		18.50
10	QPSK	25	12		17.53		
10	QPSK	25	25		17.55		
10	QPSK	50	0		17.53		18.50
10	16QAM	1	0		17.56		
10	16QAM	1	25		17.50		
10	16QAM	1	49		17.39		18.50
10	16QAM	25	0		17.53		
10	16QAM	25	12		17.49		
10	16QAM	25	25		17.45		18.50
10	16QAM	50	0		17.47		
10	64QAM	1	0		17.57		
10	64QAM	1	25		17.48		18.50
10	64QAM	1	49		17.43		
10	64QAM	25	0		17.38		
10	64QAM	25	12		17.42		18.50
10	64QAM	25	25		17.38		
10	64QAM	50	0		17.34		
10	256QAM	1	0		17.17		18.50
10	256QAM	1	25		17.30		
10	256QAM	1	49		17.22		
10	256QAM	25	0		17.23		18.50
10	256QAM	25	12		17.13		
10	256QAM	25	25		17.07		
10	256QAM	50	0		16.99		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	17.49	17.58	17.49	18.50
5	QPSK	1	12	17.33	17.41	17.45	
5	QPSK	1	24	17.42	17.47	17.41	
5	QPSK	12	0	17.29	17.48	17.43	18.50
5	QPSK	12	7	17.26	17.42	17.33	
5	QPSK	12	13	17.25	17.49	17.28	
5	QPSK	25	0	17.28	17.41	17.47	18.50
5	16QAM	1	0	17.24	17.49	17.42	
5	16QAM	1	12	17.22	17.43	17.34	
5	16QAM	1	24	17.13	17.21	17.09	18.50
5	16QAM	12	0	17.21	17.48	17.37	
5	16QAM	12	7	17.22	17.41	17.15	
5	16QAM	12	13	17.06	17.38	17.26	18.50
5	16QAM	25	0	17.19	17.35	17.15	
5	64QAM	1	0	17.38	17.46	17.40	
5	64QAM	1	12	17.21	17.35	17.38	18.50
5	64QAM	1	24	17.12	17.35	17.24	
5	64QAM	12	0	17.05	17.26	17.21	
5	64QAM	12	7	16.97	17.29	17.09	18.50
5	64QAM	12	13	17.17	17.40	17.31	
5	64QAM	25	0	17.08	17.29	17.03	
5	256QAM	1	0	17.04	17.15	17.08	18.50
5	256QAM	1	12	17.07	17.18	17.11	
5	256QAM	1	24	17.12	17.12	17.08	
5	256QAM	12	0	17.05	17.14	16.96	18.50
5	256QAM	12	7	17.04	17.06	17.06	
5	256QAM	12	13	17.00	17.01	17.03	
5	256QAM	25	0	16.88	16.97	16.96	

**<LTE Band 17_Ant 5_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	22.82	22.85	22.83	
10	QPSK	1	25	22.78	22.75	22.75	24.00
10	QPSK	1	49	22.79	22.78	22.72	
10	QPSK	25	0	21.76	21.80	21.77	
10	QPSK	25	12	21.70	21.69	21.70	23.00
10	QPSK	25	25	21.71	21.77	21.76	
10	QPSK	50	0	21.78	21.78	21.76	
10	16QAM	1	0	21.87	21.85	21.90	23.00
10	16QAM	1	25	21.99	21.98	21.99	
10	16QAM	1	49	22.01	21.98	22.00	
10	16QAM	25	0	20.78	20.74	20.75	22.00
10	16QAM	25	12	20.71	20.69	20.71	
10	16QAM	25	25	20.72	20.75	20.77	
10	16QAM	50	0	20.75	20.76	20.76	22.00
10	64QAM	1	0	20.84	20.78	20.83	
10	64QAM	1	25	20.93	20.86	20.85	
10	64QAM	1	49	20.93	20.87	20.92	21.00
10	64QAM	25	0	19.81	19.79	19.78	
10	64QAM	25	12	19.76	19.75	19.77	
10	64QAM	25	25	19.73	19.79	19.82	19.00
10	64QAM	50	0	19.76	19.83	19.78	
10	256QAM	1	0	17.96	17.94	17.94	
10	256QAM	1	25	17.98	17.97	17.96	19.00
10	256QAM	1	49	17.90	17.91	17.90	
10	256QAM	25	0	17.98	17.96	17.95	
10	256QAM	25	12	17.84	17.83	17.82	19.00
10	256QAM	25	25	17.80	17.81	17.86	
10	256QAM	50	0	17.89	17.92	17.86	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	22.74	22.78	22.75	
5	QPSK	1	12	22.77	22.73	22.67	24.00
5	QPSK	1	24	22.76	22.77	22.65	
5	QPSK	12	0	21.69	21.80	21.76	
5	QPSK	12	7	21.70	21.67	21.66	23.00
5	QPSK	12	13	21.70	21.72	21.75	
5	QPSK	25	0	21.72	21.69	21.67	
5	16QAM	1	0	21.78	21.81	21.81	23.00
5	16QAM	1	12	21.89	21.96	21.90	
5	16QAM	1	24	21.92	21.90	21.92	
5	16QAM	12	0	20.74	20.69	20.69	22.00
5	16QAM	12	7	20.70	20.62	20.66	
5	16QAM	12	13	20.64	20.68	20.73	
5	16QAM	25	0	20.68	20.75	20.72	22.00
5	64QAM	1	0	20.80	20.71	20.80	
5	64QAM	1	12	20.90	20.80	20.76	
5	64QAM	1	24	20.87	20.77	20.87	21.00
5	64QAM	12	0	19.72	19.70	19.72	
5	64QAM	12	7	19.75	19.71	19.77	
5	64QAM	12	13	19.63	19.76	19.77	19.00
5	64QAM	25	0	19.67	19.76	19.77	
5	256QAM	1	0	17.92	17.92	17.92	
5	256QAM	1	12	17.98	17.87	17.87	19.00
5	256QAM	1	24	17.85	17.83	17.84	
5	256QAM	12	0	17.92	17.88	17.93	
5	256QAM	12	7	17.84	17.83	17.78	19.00
5	256QAM	12	13	17.79	17.79	17.83	
5	256QAM	25	0	17.86	17.83	17.77	

**<LTE Band 17_Ant 5_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	17.45	17.52	17.43	18.00
10	QPSK	1	25	17.30	17.43	17.30	
10	QPSK	1	49	17.31	17.38	17.32	
10	QPSK	25	0	17.29	17.38	17.35	18.00
10	QPSK	25	12	17.17	17.32	17.15	
10	QPSK	25	25	17.33	17.35	17.22	
10	QPSK	50	0	17.25	17.34	17.25	18.00
10	16QAM	1	0	17.19	17.36	17.24	
10	16QAM	1	25	17.32	17.38	17.20	
10	16QAM	1	49	17.12	17.24	17.00	18.00
10	16QAM	25	0	17.23	17.35	17.18	
10	16QAM	25	12	17.14	17.22	17.07	
10	16QAM	25	25	17.15	17.27	17.17	18.00
10	16QAM	50	0	17.13	17.23	17.06	
10	64QAM	1	0	17.29	17.44	17.17	
10	64QAM	1	25	17.16	17.30	17.21	18.00
10	64QAM	1	49	17.20	17.24	17.12	
10	64QAM	25	0	17.08	17.21	17.01	
10	64QAM	25	12	17.06	17.20	16.98	18.00
10	64QAM	25	25	17.09	17.24	17.19	
10	64QAM	50	0	16.99	17.18	16.98	
10	256QAM	1	0	17.05	17.07	17.05	18.00
10	256QAM	1	25	17.12	17.06	17.07	
10	256QAM	1	49	17.03	17.11	16.99	
10	256QAM	25	0	17.08	17.03	16.92	18.00
10	256QAM	25	12	16.98	16.93	16.91	
10	256QAM	25	25	16.95	16.91	16.84	
10	256QAM	50	0	16.82	16.77	16.78	18.00
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	17.36	17.43	17.36	18.00
5	QPSK	1	12	17.27	17.31	17.24	
5	QPSK	1	24	17.24	17.30	17.30	
5	QPSK	12	0	17.29	17.30	17.29	18.00
5	QPSK	12	7	17.14	17.29	17.04	
5	QPSK	12	13	17.16	17.18	17.15	
5	QPSK	25	0	17.17	17.27	17.23	18.00
5	16QAM	1	0	16.99	17.31	17.09	
5	16QAM	1	12	17.19	17.27	17.14	
5	16QAM	1	24	16.94	17.20	16.81	18.00
5	16QAM	12	0	17.09	17.22	17.08	
5	16QAM	12	7	17.06	17.06	16.96	
5	16QAM	12	13	17.04	17.08	17.05	18.00
5	16QAM	25	0	17.02	17.13	16.96	
5	64QAM	1	0	17.19	17.36	17.08	
5	64QAM	1	12	17.12	17.24	17.04	18.00
5	64QAM	1	24	17.03	17.15	17.02	
5	64QAM	12	0	16.97	17.20	16.92	
5	64QAM	12	7	16.90	17.05	16.85	18.00
5	64QAM	12	13	17.02	17.12	17.05	
5	64QAM	25	0	16.87	17.04	16.88	
5	256QAM	1	0	16.89	16.99	17.03	18.00
5	256QAM	1	12	17.07	16.91	17.01	
5	256QAM	1	24	17.01	17.03	16.85	
5	256QAM	12	0	17.05	16.94	16.89	18.00
5	256QAM	12	7	16.90	16.86	16.76	
5	256QAM	12	13	16.79	16.87	16.78	
5	256QAM	25	0	16.72	16.64	16.74	



<LTE Band 25_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	22.55	22.90	22.57	
20	QPSK	1	49	22.76	22.89	22.66	24.00
20	QPSK	1	99	22.71	22.62	22.66	
20	QPSK	50	0	21.77	21.88	21.62	
20	QPSK	50	24	21.76	21.84	21.56	23.00
20	QPSK	50	50	21.71	21.72	21.53	
20	QPSK	100	0	21.71	21.79	21.56	
20	16QAM	1	0	21.77	22.08	21.83	23.00
20	16QAM	1	49	22.01	22.11	21.88	
20	16QAM	1	99	21.97	21.81	21.89	
20	16QAM	50	0	20.69	20.88	20.53	22.00
20	16QAM	50	24	20.74	20.80	20.61	
20	16QAM	50	50	20.74	20.67	20.51	
20	16QAM	100	0	20.68	20.77	20.50	22.00
20	64QAM	1	0	20.63	20.97	20.69	
20	64QAM	1	49	20.87	20.98	20.76	
20	64QAM	1	99	20.82	20.72	20.77	21.00
20	64QAM	50	0	19.72	19.88	19.60	
20	64QAM	50	24	19.77	19.86	19.66	
20	64QAM	50	50	19.80	19.72	19.58	19.00
20	64QAM	100	0	19.75	19.81	19.56	
20	256QAM	1	0	17.56	17.86	17.66	
20	256QAM	1	49	17.86	17.98	17.82	19.00
20	256QAM	1	99	17.85	17.73	17.77	
20	256QAM	50	0	17.63	17.83	17.59	
20	256QAM	50	24	17.71	17.86	17.71	19.00
20	256QAM	50	50	17.75	17.75	17.60	
20	256QAM	100	0	17.69	17.81	17.63	
Channel				26115	26340	26615	
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	22.48	22.84	22.55	
15	QPSK	1	37	22.73	22.81	22.64	24.00
15	QPSK	1	74	22.61	22.52	22.62	
15	QPSK	36	0	21.76	21.88	21.61	
15	QPSK	36	20	21.67	21.84	21.50	23.00
15	QPSK	36	39	21.65	21.71	21.48	
15	QPSK	75	0	21.64	21.69	21.55	
15	16QAM	1	0	21.74	22.08	21.76	23.00
15	16QAM	1	37	21.93	22.10	21.84	
15	16QAM	1	74	21.94	21.72	21.89	
15	16QAM	36	0	20.61	20.82	20.45	22.00
15	16QAM	36	20	20.69	20.75	20.55	
15	16QAM	36	39	20.69	20.57	20.44	
15	16QAM	75	0	20.60	20.70	20.40	22.00
15	64QAM	1	0	20.57	20.89	20.64	
15	64QAM	1	37	20.81	20.97	20.70	
15	64QAM	1	74	20.82	20.69	20.67	21.00
15	64QAM	36	0	19.69	19.79	19.51	
15	64QAM	36	20	19.68	19.77	19.66	
15	64QAM	36	39	19.77	19.68	19.49	19.00
15	64QAM	75	0	19.70	19.73	19.51	
15	256QAM	1	0	17.49	17.86	17.65	
15	256QAM	1	37	17.78	17.94	17.75	19.00
15	256QAM	1	74	17.77	17.66	17.73	
15	256QAM	36	0	17.58	17.75	17.54	
15	256QAM	36	20	17.61	17.81	17.71	19.00



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15	256QAM	36	39	17.74	17.71	17.57	
15	256QAM	75	0	17.61	17.75	17.62	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	22.53	22.84	22.48	24.00
10	QPSK	1	25	22.71	22.80	22.58	
10	QPSK	1	49	22.68	22.60	22.57	
10	QPSK	25	0	21.75	21.81	21.56	23.00
10	QPSK	25	12	21.67	21.79	21.47	
10	QPSK	25	25	21.64	21.68	21.43	
10	QPSK	50	0	21.66	21.73	21.47	
10	16QAM	1	0	21.76	22.03	21.77	23.00
10	16QAM	1	25	21.96	22.03	21.88	
10	16QAM	1	49	21.96	21.72	21.82	
10	16QAM	25	0	20.62	20.85	20.45	22.00
10	16QAM	25	12	20.66	20.75	20.58	
10	16QAM	25	25	20.64	20.57	20.42	
10	16QAM	50	0	20.67	20.70	20.42	
10	64QAM	1	0	20.54	20.96	20.65	22.00
10	64QAM	1	25	20.83	20.89	20.72	
10	64QAM	1	49	20.72	20.69	20.75	
10	64QAM	25	0	19.70	19.88	19.56	21.00
10	64QAM	25	12	19.72	19.85	19.65	
10	64QAM	25	25	19.77	19.69	19.48	
10	64QAM	50	0	19.69	19.76	19.51	
10	256QAM	1	0	17.47	17.82	17.59	19.00
10	256QAM	1	25	17.76	17.89	17.77	
10	256QAM	1	49	17.76	17.64	17.71	
10	256QAM	25	0	17.60	17.75	17.53	19.00
10	256QAM	25	12	17.66	17.80	17.71	
10	256QAM	25	25	17.74	17.72	17.54	
10	256QAM	50	0	17.61	17.75	17.55	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	22.49	22.89	22.49	24.00
5	QPSK	1	12	22.68	22.84	22.59	
5	QPSK	1	24	22.70	22.60	22.60	
5	QPSK	12	0	21.70	21.86	21.56	23.00
5	QPSK	12	7	21.76	21.77	21.47	
5	QPSK	12	13	21.61	21.66	21.52	
5	QPSK	25	0	21.68	21.77	21.54	
5	16QAM	1	0	21.68	22.06	21.81	23.00
5	16QAM	1	12	21.99	22.04	21.85	
5	16QAM	1	24	21.87	21.72	21.86	
5	16QAM	12	0	20.65	20.88	20.47	22.00
5	16QAM	12	7	20.64	20.77	20.61	
5	16QAM	12	13	20.66	20.64	20.49	
5	16QAM	25	0	20.63	20.72	20.40	
5	64QAM	1	0	20.53	20.90	20.63	22.00
5	64QAM	1	12	20.84	20.97	20.72	
5	64QAM	1	24	20.72	20.65	20.77	
5	64QAM	12	0	19.63	19.80	19.59	21.00
5	64QAM	12	7	19.73	19.82	19.65	
5	64QAM	12	13	19.74	19.62	19.55	
5	64QAM	25	0	19.74	19.78	19.48	
5	256QAM	1	0	17.51	17.76	17.60	19.00
5	256QAM	1	12	17.77	17.94	17.81	
5	256QAM	1	24	17.80	17.66	17.68	
5	256QAM	12	0	17.62	17.76	17.53	19.00
5	256QAM	12	7	17.68	17.76	17.71	
5	256QAM	12	13	17.65	17.70	17.58	
5	256QAM	25	0	17.68	17.71	17.62	



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Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	22.46	22.86	22.48	24.00
3	QPSK	1	8	22.73	22.84	22.63	
3	QPSK	1	14	22.63	22.62	22.62	
3	QPSK	8	0	21.72	21.86	21.54	23.00
3	QPSK	8	4	21.76	21.79	21.52	
3	QPSK	8	7	21.68	21.69	21.50	
3	QPSK	15	0	21.69	21.74	21.49	
3	16QAM	1	0	21.73	22.00	21.78	23.00
3	16QAM	1	8	22.01	22.07	21.80	
3	16QAM	1	14	21.90	21.75	21.85	
3	16QAM	8	0	20.60	20.78	20.50	22.00
3	16QAM	8	4	20.67	20.77	20.60	
3	16QAM	8	7	20.66	20.61	20.44	
3	16QAM	15	0	20.61	20.71	20.42	
3	64QAM	1	0	20.63	20.89	20.69	22.00
3	64QAM	1	8	20.85	20.91	20.66	
3	64QAM	1	14	20.81	20.67	20.73	
3	64QAM	8	0	19.63	19.78	19.60	21.00
3	64QAM	8	4	19.69	19.79	19.60	
3	64QAM	8	7	19.78	19.72	19.50	
3	64QAM	15	0	19.67	19.71	19.50	
3	256QAM	1	0	17.50	17.76	17.56	19.00
3	256QAM	1	8	17.79	17.97	17.81	
3	256QAM	1	14	17.80	17.71	17.70	
3	256QAM	8	0	17.63	17.76	17.58	19.00
3	256QAM	8	4	17.63	17.78	17.69	
3	256QAM	8	7	17.65	17.65	17.59	
3	256QAM	15	0	17.68	17.80	17.62	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	22.45	22.89	22.47	24.00
1.4	QPSK	1	3	22.73	22.81	22.63	
1.4	QPSK	1	5	22.67	22.56	22.59	
1.4	QPSK	3	0	22.36	22.85	22.46	
1.4	QPSK	3	1	22.69	22.80	22.53	
1.4	QPSK	3	3	22.61	22.49	22.50	
1.4	QPSK	6	0	21.70	21.77	21.47	23.00
1.4	16QAM	1	0	21.70	22.02	21.83	23.00
1.4	16QAM	1	3	21.94	22.05	21.79	
1.4	16QAM	1	5	21.66	21.75	21.43	
1.4	16QAM	3	0	21.60	22.01	21.75	
1.4	16QAM	3	1	21.91	21.98	21.73	
1.4	16QAM	3	3	21.62	21.77	21.47	22.00
1.4	16QAM	6	0	20.64	20.72	20.47	
1.4	64QAM	1	0	20.59	20.88	20.69	22.00
1.4	64QAM	1	3	20.81	20.89	20.76	
1.4	64QAM	1	5	20.76	20.70	20.73	
1.4	64QAM	3	0	20.58	20.66	20.40	
1.4	64QAM	3	1	20.52	20.88	20.61	
1.4	64QAM	3	3	20.75	20.88	20.72	
1.4	64QAM	6	0	19.75	19.81	19.66	21.00
1.4	256QAM	1	0	17.84	17.96	17.76	19.00
1.4	256QAM	1	3	17.81	17.64	17.71	
1.4	256QAM	1	5	17.57	17.74	17.58	
1.4	256QAM	3	0	17.70	17.84	17.70	
1.4	256QAM	3	1	17.66	17.68	17.50	
1.4	256QAM	3	3	17.62	17.74	17.54	19.00
1.4	256QAM	6	0	17.77	17.86	17.71	

**<LTE Band 25_Ant 8_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	15.87	16.05	15.75	
20	QPSK	1	49	15.77	15.80	15.63	16.50
20	QPSK	1	99	15.75	15.76	15.73	
20	QPSK	50	0	15.66	15.83	15.67	
20	QPSK	50	24	15.58	15.81	15.55	16.50
20	QPSK	50	50	15.77	15.79	15.62	
20	QPSK	100	0	15.79	15.73	15.60	
20	16QAM	1	0	15.64	15.76	15.71	16.50
20	16QAM	1	49	15.67	15.76	15.70	
20	16QAM	1	99	15.53	15.61	15.43	
20	16QAM	50	0	15.72	15.75	15.58	16.50
20	16QAM	50	24	15.61	15.62	15.39	
20	16QAM	50	50	15.49	15.65	15.49	
20	16QAM	100	0	15.59	15.63	15.54	16.50
20	64QAM	1	0	15.75	15.77	15.64	
20	64QAM	1	49	15.59	15.77	15.53	
20	64QAM	1	99	15.58	15.67	15.54	16.50
20	64QAM	50	0	15.44	15.58	15.48	
20	64QAM	50	24	15.51	15.63	15.41	
20	64QAM	50	50	15.68	15.71	15.47	16.50
20	64QAM	100	0	15.44	15.53	15.37	
20	256QAM	1	0	15.47	15.43	15.37	
20	256QAM	1	49	15.56	15.60	15.41	16.50
20	256QAM	1	99	15.50	15.48	15.39	
20	256QAM	50	0	15.48	15.46	15.25	
20	256QAM	50	24	15.53	15.39	15.35	16.50
20	256QAM	50	50	15.41	15.26	15.26	
20	256QAM	100	0	15.31	15.21	15.19	
Channel				26115	26340	26615	
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	15.92	15.92	15.82	
15	QPSK	1	37	15.68	15.65	15.49	16.50
15	QPSK	1	74	15.67	15.68	15.69	
15	QPSK	36	0	15.62	15.66	15.55	
15	QPSK	36	20	15.49	15.76	15.40	16.50
15	QPSK	36	39	15.72	15.68	15.61	
15	QPSK	75	0	15.57	15.70	15.50	
15	16QAM	1	0	15.50	15.64	15.65	16.50
15	16QAM	1	37	15.70	15.72	15.45	
15	16QAM	1	74	15.47	15.45	15.33	
15	16QAM	36	0	15.49	15.74	15.48	16.50
15	16QAM	36	20	15.48	15.51	15.35	
15	16QAM	36	39	15.43	15.61	15.42	
15	16QAM	75	0	15.45	15.57	15.45	16.50
15	64QAM	1	0	15.73	15.64	15.54	
15	64QAM	1	37	15.43	15.59	15.46	
15	64QAM	1	74	15.50	15.65	15.33	16.50
15	64QAM	36	0	15.33	15.54	15.27	
15	64QAM	36	20	15.40	15.51	15.24	
15	64QAM	36	39	15.49	15.62	15.40	16.50
15	64QAM	75	0	15.38	15.41	15.28	
15	256QAM	1	0	15.33	15.40	15.42	
15	256QAM	1	37	15.51	15.46	15.35	16.50
15	256QAM	1	74	15.43	15.36	15.33	
15	256QAM	36	0	15.37	15.28	15.15	
15	256QAM	36	20	15.29	15.21	15.25	16.50



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15	256QAM	36	39	15.28	15.19	15.18	
15	256QAM	75	0	15.18	15.10	15.06	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	15.94	15.91	15.83	16.50
10	QPSK	1	25	15.66	15.60	15.55	
10	QPSK	1	49	15.71	15.67	15.60	
10	QPSK	25	0	15.55	15.68	15.51	16.50
10	QPSK	25	12	15.57	15.68	15.51	
10	QPSK	25	25	15.71	15.68	15.57	
10	QPSK	50	0	15.62	15.64	15.55	
10	16QAM	1	0	15.60	15.66	15.61	16.50
10	16QAM	1	25	15.67	15.67	15.53	
10	16QAM	1	49	15.49	15.59	15.36	
10	16QAM	25	0	15.51	15.80	15.48	16.50
10	16QAM	25	12	15.52	15.57	15.29	
10	16QAM	25	25	15.46	15.59	15.47	
10	16QAM	50	0	15.39	15.44	15.56	
10	64QAM	1	0	15.76	15.71	15.47	16.50
10	64QAM	1	25	15.57	15.54	15.43	
10	64QAM	1	49	15.50	15.70	15.36	
10	64QAM	25	0	15.30	15.44	15.35	16.50
10	64QAM	25	12	15.37	15.51	15.23	
10	64QAM	25	25	15.55	15.65	15.39	
10	64QAM	50	0	15.33	15.52	15.21	
10	256QAM	1	0	15.42	15.37	15.29	16.50
10	256QAM	1	25	15.45	15.49	15.36	
10	256QAM	1	49	15.44	15.34	15.30	
10	256QAM	25	0	15.40	15.30	15.19	16.50
10	256QAM	25	12	15.32	15.38	15.26	
10	256QAM	25	25	15.23	15.15	15.19	
10	256QAM	50	0	15.09	15.10	15.09	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	15.86	15.91	15.86	16.50
5	QPSK	1	12	15.63	15.66	15.48	
5	QPSK	1	24	15.61	15.74	15.60	
5	QPSK	12	0	15.61	15.67	15.55	16.50
5	QPSK	12	7	15.57	15.69	15.50	
5	QPSK	12	13	15.68	15.67	15.59	
5	QPSK	25	0	15.67	15.63	15.46	
5	16QAM	1	0	15.56	15.78	15.67	16.50
5	16QAM	1	12	15.73	15.71	15.53	
5	16QAM	1	24	15.45	15.50	15.21	
5	16QAM	12	0	15.56	15.71	15.49	16.50
5	16QAM	12	7	15.44	15.62	15.34	
5	16QAM	12	13	15.43	15.57	15.47	
5	16QAM	25	0	15.50	15.47	15.46	
5	64QAM	1	0	15.76	15.60	15.42	16.50
5	64QAM	1	12	15.46	15.67	15.35	
5	64QAM	1	24	15.55	15.72	15.36	
5	64QAM	12	0	15.37	15.44	15.35	16.50
5	64QAM	12	7	15.39	15.54	15.29	
5	64QAM	12	13	15.48	15.57	15.40	
5	64QAM	25	0	15.33	15.44	15.34	
5	256QAM	1	0	15.35	15.35	15.37	16.50
5	256QAM	1	12	15.46	15.49	15.35	
5	256QAM	1	24	15.44	15.42	15.22	
5	256QAM	12	0	15.34	15.29	15.14	16.50
5	256QAM	12	7	15.34	15.23	15.22	
5	256QAM	12	13	15.29	15.24	15.16	
5	256QAM	25	0	15.10	15.11	15.01	



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Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	15.91	15.96	15.87	16.50
3	QPSK	1	8	15.60	15.69	15.56	
3	QPSK	1	14	15.67	15.83	15.65	
3	QPSK	8	0	15.60	15.67	15.56	16.50
3	QPSK	8	4	15.58	15.67	15.46	
3	QPSK	8	7	15.63	15.66	15.58	
3	QPSK	15	0	15.61	15.70	15.49	
3	16QAM	1	0	15.54	15.75	15.52	16.50
3	16QAM	1	8	15.60	15.62	15.60	
3	16QAM	1	14	15.51	15.48	15.27	
3	16QAM	8	0	15.59	15.75	15.43	16.50
3	16QAM	8	4	15.53	15.55	15.40	
3	16QAM	8	7	15.43	15.65	15.45	
3	16QAM	15	0	15.42	15.50	15.43	
3	64QAM	1	0	15.67	15.65	15.52	16.50
3	64QAM	1	8	15.53	15.59	15.47	
3	64QAM	1	14	15.58	15.66	15.42	
3	64QAM	8	0	15.36	15.55	15.28	16.50
3	64QAM	8	4	15.33	15.42	15.29	
3	64QAM	8	7	15.48	15.57	15.34	
3	64QAM	15	0	15.40	15.48	15.23	
3	256QAM	1	0	15.47	15.41	15.29	16.50
3	256QAM	1	8	15.46	15.44	15.37	
3	256QAM	1	14	15.36	15.32	15.18	
3	256QAM	8	0	15.38	15.22	15.13	16.50
3	256QAM	8	4	15.36	15.30	15.34	
3	256QAM	8	7	15.21	15.18	15.15	
3	256QAM	15	0	15.13	15.04	15.05	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	15.92	15.91	15.78	16.50
1.4	QPSK	1	3	15.62	15.60	15.54	
1.4	QPSK	1	5	15.71	15.73	15.67	
1.4	QPSK	3	0	15.60	15.71	15.57	
1.4	QPSK	3	1	15.59	15.73	15.47	
1.4	QPSK	3	3	15.71	15.72	15.56	
1.4	QPSK	6	0	15.60	15.70	15.50	16.50
1.4	16QAM	1	0	15.58	15.72	15.61	16.50
1.4	16QAM	1	3	15.61	15.67	15.56	
1.4	16QAM	1	5	15.52	15.39	15.29	
1.4	16QAM	3	0	15.58	15.82	15.52	
1.4	16QAM	3	1	15.53	15.60	15.40	
1.4	16QAM	3	3	15.45	15.63	15.49	16.50
1.4	16QAM	6	0	15.42	15.53	15.48	
1.4	64QAM	1	0	15.68	15.71	15.48	16.50
1.4	64QAM	1	3	15.48	15.60	15.47	
1.4	64QAM	1	5	15.56	15.65	15.31	
1.4	64QAM	3	0	15.35	15.46	15.34	
1.4	64QAM	3	1	15.46	15.47	15.34	
1.4	64QAM	3	3	15.59	15.61	15.48	16.50
1.4	64QAM	6	0	15.43	15.44	15.26	
1.4	256QAM	1	0	15.40	15.34	15.36	16.50
1.4	256QAM	1	3	15.48	15.47	15.31	
1.4	256QAM	1	5	15.40	15.33	15.32	
1.4	256QAM	3	0	15.44	15.33	15.11	
1.4	256QAM	3	1	15.35	15.26	15.27	
1.4	256QAM	3	3	15.18	15.21	15.25	16.50
1.4	256QAM	6	0	15.18	15.09	15.07	



<LTE Band 26_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	22.52	22.53	22.50	
15	QPSK	1	37	22.45	22.42	22.43	24.00
15	QPSK	1	74	22.43	22.34	22.33	
15	QPSK	36	0	21.42	21.45	21.40	
15	QPSK	36	20	21.38	21.35	21.40	23.00
15	QPSK	36	39	21.41	21.38	21.38	
15	QPSK	75	0	21.32	21.40	21.34	
15	16QAM	1	0	21.78	21.60	21.59	23.00
15	16QAM	1	37	21.68	21.67	21.63	
15	16QAM	1	74	21.59	21.67	21.76	
15	16QAM	36	0	20.41	20.41	20.39	22.00
15	16QAM	36	20	20.46	20.35	20.44	
15	16QAM	36	39	20.45	20.36	20.40	
15	16QAM	75	0	20.39	20.40	20.39	22.00
15	64QAM	1	0	20.62	20.49	20.49	
15	64QAM	1	37	20.58	20.53	20.55	
15	64QAM	1	74	20.49	20.49	20.65	21.00
15	64QAM	36	0	19.38	19.40	19.35	
15	64QAM	36	20	19.42	19.34	19.40	
15	64QAM	36	39	19.43	19.36	19.37	19.00
15	64QAM	75	0	19.38	19.37	19.36	
15	256QAM	1	0	17.80	17.68	17.61	
15	256QAM	1	37	17.77	17.74	17.66	19.00
15	256QAM	1	74	17.66	17.64	17.69	
15	256QAM	36	0	17.63	17.70	17.56	
15	256QAM	36	20	17.67	17.61	17.57	19.00
15	256QAM	36	39	17.69	17.59	17.54	
15	256QAM	75	0	17.64	17.64	17.56	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	22.49	22.52	22.45	
10	QPSK	1	25	22.43	22.34	22.39	24.00
10	QPSK	1	49	22.43	22.29	22.32	
10	QPSK	25	0	21.34	21.44	21.37	
10	QPSK	25	12	21.34	21.34	21.40	23.00
10	QPSK	25	25	21.32	21.28	21.30	
10	QPSK	50	0	21.25	21.39	21.31	
10	16QAM	1	0	21.74	21.53	21.50	23.00
10	16QAM	1	25	21.64	21.64	21.53	
10	16QAM	1	49	21.57	21.65	21.70	
10	16QAM	25	0	20.34	20.33	20.35	22.00
10	16QAM	25	12	20.37	20.30	20.35	
10	16QAM	25	25	20.42	20.30	20.30	
10	16QAM	50	0	20.38	20.37	20.33	22.00
10	64QAM	1	0	20.58	20.47	20.48	
10	64QAM	1	25	20.52	20.51	20.51	
10	64QAM	1	49	20.44	20.48	20.56	21.00
10	64QAM	25	0	19.31	19.31	19.27	
10	64QAM	25	12	19.37	19.26	19.31	
10	64QAM	25	25	19.37	19.29	19.30	19.00
10	64QAM	50	0	19.32	19.29	19.36	
10	256QAM	1	0	17.73	17.61	17.54	
10	256QAM	1	25	17.67	17.71	17.63	19.00
10	256QAM	1	49	17.64	17.55	17.66	
10	256QAM	25	0	17.53	17.66	17.56	
10	256QAM	25	12	17.64	17.60	17.50	19.00



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10	256QAM	25	25	17.60	17.59	17.46	
10	256QAM	50	0	17.60	17.58	17.49	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	22.46	22.43	22.45	24.00
5	QPSK	1	12	22.45	22.39	22.35	
5	QPSK	1	24	22.41	22.32	22.24	
5	QPSK	12	0	21.39	21.40	21.34	23.00
5	QPSK	12	7	21.31	21.32	21.31	
5	QPSK	12	13	21.32	21.34	21.30	
5	QPSK	25	0	21.25	21.36	21.33	
5	16QAM	1	0	21.78	21.53	21.51	23.00
5	16QAM	1	12	21.63	21.62	21.63	
5	16QAM	1	24	21.56	21.63	21.67	
5	16QAM	12	0	20.35	20.36	20.38	22.00
5	16QAM	12	7	20.37	20.29	20.35	
5	16QAM	12	13	20.36	20.35	20.35	
5	16QAM	25	0	20.32	20.35	20.36	
5	64QAM	1	0	20.59	20.44	20.45	22.00
5	64QAM	1	12	20.51	20.47	20.54	
5	64QAM	1	24	20.39	20.46	20.56	
5	64QAM	12	0	19.30	19.37	19.35	21.00
5	64QAM	12	7	19.40	19.31	19.32	
5	64QAM	12	13	19.33	19.27	19.30	
5	64QAM	25	0	19.33	19.34	19.31	
5	256QAM	1	0	17.74	17.64	17.61	19.00
5	256QAM	1	12	17.74	17.72	17.60	
5	256QAM	1	24	17.61	17.55	17.66	
5	256QAM	12	0	17.60	17.60	17.55	19.00
5	256QAM	12	7	17.57	17.51	17.51	
5	256QAM	12	13	17.61	17.58	17.44	
5	256QAM	25	0	17.64	17.64	17.50	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	22.45	22.50	22.40	24.00
3	QPSK	1	8	22.41	22.34	22.33	
3	QPSK	1	14	22.38	22.26	22.31	
3	QPSK	8	0	21.34	21.39	21.30	23.00
3	QPSK	8	4	21.31	21.32	21.31	
3	QPSK	8	7	21.39	21.32	21.33	
3	QPSK	15	0	21.31	21.30	21.27	
3	16QAM	1	0	21.73	21.59	21.58	23.00
3	16QAM	1	8	21.63	21.62	21.62	
3	16QAM	1	14	21.53	21.59	21.72	
3	16QAM	8	0	20.41	20.37	20.30	22.00
3	16QAM	8	4	20.40	20.27	20.40	
3	16QAM	8	7	20.42	20.30	20.34	
3	16QAM	15	0	20.37	20.32	20.29	
3	64QAM	1	0	20.62	20.40	20.46	22.00
3	64QAM	1	8	20.57	20.52	20.55	
3	64QAM	1	14	20.48	20.42	20.55	
3	64QAM	8	0	19.33	19.40	19.30	21.00
3	64QAM	8	4	19.39	19.33	19.39	
3	64QAM	8	7	19.36	19.36	19.27	
3	64QAM	15	0	19.29	19.28	19.30	
3	256QAM	1	0	17.80	17.67	17.52	19.00
3	256QAM	1	8	17.68	17.74	17.66	
3	256QAM	1	14	17.59	17.62	17.69	
3	256QAM	8	0	17.56	17.64	17.47	19.00
3	256QAM	8	4	17.63	17.54	17.53	
3	256QAM	8	7	17.59	17.53	17.54	
3	256QAM	15	0	17.62	17.59	17.53	



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Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	22.49	22.51	22.45	24.00
1.4	QPSK	1	3	22.35	22.34	22.36	
1.4	QPSK	1	5	22.40	22.34	22.24	
1.4	QPSK	3	0	22.44	22.46	22.40	
1.4	QPSK	3	1	22.30	22.30	22.35	
1.4	QPSK	3	3	22.33	22.31	22.18	
1.4	QPSK	6	0	21.24	21.37	21.31	23.00
1.4	16QAM	1	0	21.72	21.53	21.51	23.00
1.4	16QAM	1	3	21.62	21.67	21.56	
1.4	16QAM	1	5	21.14	21.28	21.21	
1.4	16QAM	3	0	21.72	21.48	21.42	
1.4	16QAM	3	1	21.53	21.66	21.52	
1.4	16QAM	3	3	21.15	21.29	21.31	
1.4	16QAM	6	0	20.34	20.39	20.36	22.00
1.4	64QAM	1	0	20.56	20.43	20.39	22.00
1.4	64QAM	1	3	20.54	20.45	20.49	
1.4	64QAM	1	5	20.49	20.46	20.62	
1.4	64QAM	3	0	20.24	20.36	20.26	
1.4	64QAM	3	1	20.56	20.39	20.29	
1.4	64QAM	3	3	20.48	20.44	20.41	
1.4	64QAM	6	0	19.40	19.41	19.32	21.00
1.4	256QAM	1	0	17.77	17.65	17.65	19.00
1.4	256QAM	1	3	17.61	17.61	17.68	
1.4	256QAM	1	5	17.56	17.64	17.54	
1.4	256QAM	3	0	17.65	17.59	17.56	
1.4	256QAM	3	1	17.60	17.53	17.44	
1.4	256QAM	3	3	17.54	17.56	17.49	
1.4	256QAM	6	0	17.74	17.56	17.61	19.00



<LTE Band 26_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	16.08	16.10	16.05	
15	QPSK	1	37	15.89	16.02	15.85	17.00
15	QPSK	1	74	15.95	16.05	15.93	
15	QPSK	36	0	15.93	15.98	15.91	
15	QPSK	36	20	15.87	15.91	15.77	17.00
15	QPSK	36	39	15.92	15.93	15.83	
15	QPSK	75	0	15.88	15.91	15.85	
15	16QAM	1	0	15.91	15.98	15.89	17.00
15	16QAM	1	37	15.86	15.94	15.86	
15	16QAM	1	74	15.78	15.75	15.72	
15	16QAM	36	0	15.85	15.95	15.84	17.00
15	16QAM	36	20	15.77	15.79	15.70	
15	16QAM	36	39	15.75	15.82	15.75	
15	16QAM	75	0	15.71	15.84	15.75	17.00
15	64QAM	1	0	15.94	16.01	15.83	
15	64QAM	1	37	15.86	15.89	15.82	
15	64QAM	1	74	15.74	15.81	15.79	17.00
15	64QAM	36	0	15.70	15.74	15.71	
15	64QAM	36	20	15.61	15.79	15.61	
15	64QAM	36	39	15.82	15.77	15.77	17.00
15	64QAM	75	0	15.66	15.78	15.57	
15	256QAM	1	0	15.66	15.58	15.59	
15	256QAM	1	37	15.73	15.72	15.60	17.00
15	256QAM	1	74	15.71	15.63	15.54	
15	256QAM	36	0	15.69	15.61	15.50	
15	256QAM	36	20	15.60	15.59	15.59	17.00
15	256QAM	36	39	15.60	15.47	15.44	
15	256QAM	75	0	15.55	15.41	15.42	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	16.00	16.06	15.99	
10	QPSK	1	25	15.82	15.88	15.84	17.00
10	QPSK	1	49	15.94	15.88	15.85	
10	QPSK	25	0	15.82	15.80	15.89	
10	QPSK	25	12	15.68	15.84	15.75	17.00
10	QPSK	25	25	15.90	15.84	15.73	
10	QPSK	50	0	15.75	15.74	15.75	
10	16QAM	1	0	15.76	15.87	15.69	17.00
10	16QAM	1	25	15.93	15.84	15.75	
10	16QAM	1	49	15.69	15.65	15.59	
10	16QAM	25	0	15.71	15.74	15.72	17.00
10	16QAM	25	12	15.72	15.68	15.54	
10	16QAM	25	25	15.63	15.72	15.75	
10	16QAM	50	0	15.64	15.67	15.59	17.00
10	64QAM	1	0	15.82	15.91	15.75	
10	64QAM	1	25	15.68	15.79	15.80	
10	64QAM	1	49	15.67	15.80	15.66	17.00
10	64QAM	25	0	15.58	15.76	15.52	
10	64QAM	25	12	15.61	15.72	15.47	
10	64QAM	25	25	15.62	15.69	15.71	17.00
10	64QAM	50	0	15.52	15.63	15.49	
10	256QAM	1	0	15.58	15.51	15.56	
10	256QAM	1	25	15.59	15.58	15.68	17.00
10	256QAM	1	49	15.56	15.59	15.55	
10	256QAM	25	0	15.67	15.48	15.37	
10	256QAM	25	12	15.58	15.37	15.43	17.00



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10	256QAM	25	25	15.50	15.41	15.45	Tune-up limit (dBm)
10	256QAM	50	0	15.26	15.26	15.31	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	15.98	16.09	16.05	17.00
5	QPSK	1	12	15.82	15.99	15.77	
5	QPSK	1	24	15.80	15.93	15.91	
5	QPSK	12	0	15.75	15.84	15.88	17.00
5	QPSK	12	7	15.75	15.75	15.75	
5	QPSK	12	13	15.90	15.83	15.81	
5	QPSK	25	0	15.78	15.83	15.79	
5	16QAM	1	0	15.77	15.90	15.70	17.00
5	16QAM	1	12	15.89	15.92	15.64	
5	16QAM	1	24	15.68	15.68	15.59	
5	16QAM	12	0	15.76	15.90	15.62	17.00
5	16QAM	12	7	15.61	15.68	15.61	
5	16QAM	12	13	15.68	15.72	15.64	
5	16QAM	25	0	15.65	15.68	15.57	
5	64QAM	1	0	15.82	15.91	15.72	17.00
5	64QAM	1	12	15.62	15.86	15.77	
5	64QAM	1	24	15.77	15.81	15.55	
5	64QAM	12	0	15.67	15.66	15.54	17.00
5	64QAM	12	7	15.54	15.66	15.46	
5	64QAM	12	13	15.59	15.65	15.66	
5	64QAM	25	0	15.56	15.65	15.50	
5	256QAM	1	0	15.58	15.52	15.58	17.00
5	256QAM	1	12	15.70	15.54	15.57	
5	256QAM	1	24	15.55	15.60	15.59	
5	256QAM	12	0	15.52	15.44	15.51	17.00
5	256QAM	12	7	15.49	15.45	15.43	
5	256QAM	12	13	15.47	15.48	15.42	
5	256QAM	25	0	15.28	15.21	15.29	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	16.00	16.07	15.95	17.00
3	QPSK	1	8	15.91	15.98	15.83	
3	QPSK	1	14	15.84	15.76	15.81	
3	QPSK	8	0	15.88	15.96	15.85	17.00
3	QPSK	8	4	15.67	15.81	15.62	
3	QPSK	8	7	15.91	15.84	15.81	
3	QPSK	15	0	15.72	15.78	15.77	
3	16QAM	1	0	15.70	15.79	15.78	17.00
3	16QAM	1	8	15.90	15.76	15.71	
3	16QAM	1	14	15.66	15.64	15.49	
3	16QAM	8	0	15.84	15.86	15.71	17.00
3	16QAM	8	4	15.64	15.73	15.62	
3	16QAM	8	7	15.67	15.73	15.63	
3	16QAM	15	0	15.59	15.72	15.58	
3	64QAM	1	0	15.81	15.97	15.66	17.00
3	64QAM	1	8	15.64	15.81	15.75	
3	64QAM	1	14	15.72	15.80	15.68	
3	64QAM	8	0	15.65	15.74	15.56	17.00
3	64QAM	8	4	15.68	15.70	15.57	
3	64QAM	8	7	15.58	15.76	15.78	
3	64QAM	15	0	15.56	15.71	15.51	
3	256QAM	1	0	15.54	15.52	15.57	17.00
3	256QAM	1	8	15.62	15.50	15.54	
3	256QAM	1	14	15.52	15.58	15.43	
3	256QAM	8	0	15.52	15.59	15.41	17.00
3	256QAM	8	4	15.52	15.46	15.34	
3	256QAM	8	7	15.42	15.44	15.36	
3	256QAM	15	0	15.41	15.23	15.39	



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Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	16.00	16.05	16.01	17.00
1.4	QPSK	1	3	15.85	15.93	15.88	
1.4	QPSK	1	5	15.76	15.89	15.84	
1.4	QPSK	3	0	15.85	15.81	15.88	
1.4	QPSK	3	1	15.68	15.74	15.62	
1.4	QPSK	3	3	15.80	15.93	15.73	
1.4	QPSK	6	0	15.82	15.90	15.78	17.00
1.4	16QAM	1	0	15.69	15.82	15.81	17.00
1.4	16QAM	1	3	15.91	15.87	15.74	
1.4	16QAM	1	5	15.58	15.77	15.47	
1.4	16QAM	3	0	15.75	15.77	15.65	
1.4	16QAM	3	1	15.68	15.66	15.54	
1.4	16QAM	3	3	15.69	15.77	15.69	
1.4	16QAM	6	0	15.66	15.77	15.56	17.00
1.4	64QAM	1	0	15.75	15.91	15.71	17.00
1.4	64QAM	1	3	15.66	15.77	15.70	
1.4	64QAM	1	5	15.70	15.71	15.65	
1.4	64QAM	3	0	15.53	15.68	15.56	
1.4	64QAM	3	1	15.58	15.68	15.48	
1.4	64QAM	3	3	15.66	15.68	15.75	
1.4	64QAM	6	0	15.57	15.66	15.52	17.00
1.4	256QAM	1	0	15.58	15.54	15.58	17.00
1.4	256QAM	1	3	15.65	15.58	15.63	
1.4	256QAM	1	5	15.46	15.60	15.50	
1.4	256QAM	3	0	15.60	15.44	15.41	
1.4	256QAM	3	1	15.54	15.45	15.47	
1.4	256QAM	3	3	15.49	15.33	15.29	
1.4	256QAM	6	0	15.41	15.25	15.33	17.00



<LTE Band 30_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				27710			
Frequency (MHz)				2310			
10	QPSK	1	0		21.60		23.00
10	QPSK	1	25		21.58		
10	QPSK	1	49		21.43		
10	QPSK	25	0		20.57		22.00
10	QPSK	25	12		20.49		
10	QPSK	25	25		20.40		
10	QPSK	50	0		20.47		22.00
10	16QAM	1	0		20.63		
10	16QAM	1	25		20.64		
10	16QAM	1	49		20.52		21.00
10	16QAM	25	0		19.62		
10	16QAM	25	12		19.53		
10	16QAM	25	25		19.46		21.00
10	16QAM	50	0		19.52		
10	64QAM	1	0		19.64		
10	64QAM	1	25		19.65		21.00
10	64QAM	1	49		19.52		
10	64QAM	25	0		18.62		
10	64QAM	25	12		18.50		20.00
10	64QAM	25	25		18.44		
10	64QAM	50	0		18.51		
10	256QAM	1	0		16.60		18.00
10	256QAM	1	25		16.56		
10	256QAM	1	49		16.43		
10	256QAM	25	0		16.59		18.00
10	256QAM	25	12		16.46		
10	256QAM	25	25		16.37		
10	256QAM	50	0		16.47		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	21.52	21.55	21.54	23.00
5	QPSK	1	12	21.51	21.50	21.50	
5	QPSK	1	24	21.36	21.34	21.41	
5	QPSK	12	0	20.53	20.52	20.51	22.00
5	QPSK	12	7	20.39	20.47	20.39	
5	QPSK	12	13	20.35	20.40	20.30	
5	QPSK	25	0	20.44	20.38	20.44	22.00
5	16QAM	1	0	20.59	20.56	20.63	
5	16QAM	1	12	20.59	20.59	20.60	
5	16QAM	1	24	20.42	20.48	20.46	21.00
5	16QAM	12	0	19.62	19.53	19.59	
5	16QAM	12	7	19.48	19.43	19.49	
5	16QAM	12	13	19.45	19.39	19.43	21.00
5	16QAM	25	0	19.46	19.51	19.51	
5	64QAM	1	0	19.58	19.60	19.59	
5	64QAM	1	12	19.60	19.59	19.62	21.00
5	64QAM	1	24	19.50	19.43	19.43	
5	64QAM	12	0	18.55	18.61	18.53	
5	64QAM	12	7	18.47	18.46	18.40	20.00
5	64QAM	12	13	18.42	18.34	18.41	
5	64QAM	25	0	18.44	18.48	18.51	
5	256QAM	1	0	16.54	16.57	16.51	18.00
5	256QAM	1	12	16.46	16.50	16.54	
5	256QAM	1	24	16.38	16.42	16.34	
5	256QAM	12	0	16.52	16.51	16.55	18.00
5	256QAM	12	7	16.36	16.44	16.46	
5	256QAM	12	13	16.32	16.30	16.33	
5	256QAM	25	0	16.41	16.44	16.42	

**<LTE Band 30_Ant 8_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				27710			
Frequency (MHz)				2310			
10	QPSK	1	0		16.05		16.50
10	QPSK	1	25		15.84		
10	QPSK	1	49		15.90		
10	QPSK	25	0		15.90		16.50
10	QPSK	25	12		15.82		
10	QPSK	25	25		15.82		
10	QPSK	50	0		15.82		16.50
10	16QAM	1	0		15.81		
10	16QAM	1	25		15.81		
10	16QAM	1	49		15.65		16.50
10	16QAM	25	0		15.90		
10	16QAM	25	12		15.67		
10	16QAM	25	25		15.79		16.50
10	16QAM	50	0		15.73		
10	64QAM	1	0		15.83		
10	64QAM	1	25		15.76		16.50
10	64QAM	1	49		15.76		
10	64QAM	25	0		15.62		
10	64QAM	25	12		15.67		16.50
10	64QAM	25	25		15.73		
10	64QAM	50	0		15.61		
10	256QAM	1	0		15.52		16.50
10	256QAM	1	25		15.57		
10	256QAM	1	49		15.59		
10	256QAM	25	0		15.55		16.50
10	256QAM	25	12		15.46		
10	256QAM	25	25		15.39		
10	256QAM	50	0		15.28		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	15.85	15.97	15.98	16.50
5	QPSK	1	12	15.58	15.78	15.64	
5	QPSK	1	24	15.61	15.78	15.86	
5	QPSK	12	0	15.54	15.80	15.64	16.50
5	QPSK	12	7	15.58	15.79	15.58	
5	QPSK	12	13	15.65	15.75	15.64	
5	QPSK	25	0	15.62	15.68	15.60	16.50
5	16QAM	1	0	15.58	15.81	15.72	
5	16QAM	1	12	15.61	15.75	15.69	
5	16QAM	1	24	15.52	15.56	15.33	16.50
5	16QAM	12	0	15.57	15.80	15.60	
5	16QAM	12	7	15.48	15.66	15.43	
5	16QAM	12	13	15.47	15.65	15.53	16.50
5	16QAM	25	0	15.43	15.64	15.61	
5	64QAM	1	0	15.74	15.73	15.63	
5	64QAM	1	12	15.43	15.67	15.51	16.50
5	64QAM	1	24	15.45	15.67	15.56	
5	64QAM	12	0	15.40	15.59	15.47	
5	64QAM	12	7	15.32	15.49	15.35	16.50
5	64QAM	12	13	15.57	15.55	15.55	
5	64QAM	25	0	15.38	15.48	15.35	
5	256QAM	1	0	15.39	15.42	15.50	16.50
5	256QAM	1	12	15.44	15.56	15.42	
5	256QAM	1	24	15.44	15.34	15.35	
5	256QAM	12	0	15.34	15.36	15.29	16.50
5	256QAM	12	7	15.31	15.30	15.37	
5	256QAM	12	13	15.16	15.30	15.26	
5	256QAM	25	0	15.19	15.09	15.08	



<LTE Band 66_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	22.74	22.77	22.47	
20	QPSK	1	49	22.76	22.69	22.44	24.00
20	QPSK	1	99	22.57	22.40	22.21	
20	QPSK	50	0	21.79	21.80	21.57	
20	QPSK	50	24	21.76	21.66	21.47	23.00
20	QPSK	50	50	21.65	21.60	21.41	
20	QPSK	100	0	21.68	21.70	21.46	
20	16QAM	1	0	21.99	21.82	21.69	23.00
20	16QAM	1	49	21.95	21.93	21.68	
20	16QAM	1	99	21.77	21.63	21.43	
20	16QAM	50	0	20.75	20.65	20.54	22.00
20	16QAM	50	24	20.70	20.60	20.45	
20	16QAM	50	50	20.61	20.53	20.39	
20	16QAM	100	0	20.66	20.57	20.45	22.00
20	64QAM	1	0	20.89	20.74	20.56	
20	64QAM	1	49	20.90	20.83	20.55	
20	64QAM	1	99	20.68	20.54	20.30	21.00
20	64QAM	50	0	19.80	19.67	19.55	
20	64QAM	50	24	19.72	19.70	19.50	
20	64QAM	50	50	19.64	19.58	19.45	19.00
20	64QAM	100	0	19.68	19.61	19.47	
20	256QAM	1	0	17.84	17.76	17.66	
20	256QAM	1	49	17.87	17.89	17.74	19.00
20	256QAM	1	99	17.70	17.67	17.61	
20	256QAM	50	0	17.80	17.77	17.74	
20	256QAM	50	24	17.78	17.76	17.67	19.00
20	256QAM	50	50	17.68	17.69	17.68	
20	256QAM	100	0	17.77	17.76	17.71	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.66	22.69	22.41	
15	QPSK	1	37	22.72	22.68	22.36	24.00
15	QPSK	1	74	22.54	22.30	22.17	
15	QPSK	36	0	21.71	21.76	21.50	23.00
15	QPSK	36	20	21.68	21.62	21.45	
15	QPSK	36	39	21.59	21.51	21.41	
15	QPSK	75	0	21.63	21.70	21.42	23.00
15	16QAM	1	0	21.92	21.76	21.67	
15	16QAM	1	37	21.94	21.86	21.66	
15	16QAM	1	74	21.74	21.60	21.33	22.00
15	16QAM	36	0	20.74	20.64	20.54	
15	16QAM	36	20	20.62	20.58	20.41	
15	16QAM	36	39	20.56	20.44	20.34	22.00
15	16QAM	75	0	20.57	20.48	20.42	
15	64QAM	1	0	20.79	20.65	20.54	
15	64QAM	1	37	20.84	20.81	20.48	21.00
15	64QAM	1	74	20.63	20.51	20.22	
15	64QAM	36	0	19.79	19.67	19.47	
15	64QAM	36	20	19.71	19.67	19.48	19.00
15	64QAM	36	39	19.59	19.57	19.37	
15	64QAM	75	0	19.61	19.53	19.40	
15	256QAM	1	0	17.83	17.75	17.57	19.00
15	256QAM	1	37	17.78	17.83	17.68	
15	256QAM	1	74	17.64	17.61	17.56	
15	256QAM	36	0	17.70	17.75	17.74	19.00
15	256QAM	36	20	17.77	17.73	17.65	



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15	256QAM	36	39	17.60	17.62	17.60	
15	256QAM	75	0	17.77	17.71	17.68	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.72	22.74	22.41	24.00
10	QPSK	1	25	22.72	22.62	22.38	
10	QPSK	1	49	22.56	22.30	22.14	
10	QPSK	25	0	21.76	21.71	21.55	23.00
10	QPSK	25	12	21.67	21.59	21.47	
10	QPSK	25	25	21.61	21.58	21.36	
10	QPSK	50	0	21.68	21.65	21.41	
10	16QAM	1	0	21.96	21.81	21.67	23.00
10	16QAM	1	25	21.89	21.86	21.64	
10	16QAM	1	49	21.67	21.53	21.34	
10	16QAM	25	0	20.70	20.59	20.48	22.00
10	16QAM	25	12	20.68	20.52	20.37	
10	16QAM	25	25	20.51	20.49	20.38	
10	16QAM	50	0	20.59	20.56	20.35	
10	64QAM	1	0	20.88	20.66	20.53	22.00
10	64QAM	1	25	20.89	20.82	20.48	
10	64QAM	1	49	20.59	20.53	20.24	
10	64QAM	25	0	19.72	19.63	19.52	21.00
10	64QAM	25	12	19.70	19.64	19.43	
10	64QAM	25	25	19.57	19.57	19.41	
10	64QAM	50	0	19.68	19.52	19.42	
10	256QAM	1	0	17.78	17.67	17.61	19.00
10	256QAM	1	25	17.87	17.84	17.64	
10	256QAM	1	49	17.67	17.65	17.55	
10	256QAM	25	0	17.74	17.68	17.73	19.00
10	256QAM	25	12	17.77	17.76	17.67	
10	256QAM	25	25	17.65	17.66	17.64	
10	256QAM	50	0	17.75	17.68	17.71	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.65	22.75	22.38	24.00
5	QPSK	1	12	22.76	22.60	22.43	
5	QPSK	1	24	22.47	22.34	22.14	
5	QPSK	12	0	21.73	21.79	21.54	23.00
5	QPSK	12	7	21.66	21.60	21.42	
5	QPSK	12	13	21.56	21.53	21.38	
5	QPSK	25	0	21.66	21.69	21.39	
5	16QAM	1	0	21.98	21.78	21.62	23.00
5	16QAM	1	12	21.86	21.84	21.61	
5	16QAM	1	24	21.76	21.59	21.43	
5	16QAM	12	0	20.70	20.58	20.46	22.00
5	16QAM	12	7	20.63	20.54	20.38	
5	16QAM	12	13	20.51	20.50	20.30	
5	16QAM	25	0	20.66	20.47	20.36	
5	64QAM	1	0	20.85	20.67	20.56	22.00
5	64QAM	1	12	20.87	20.81	20.49	
5	64QAM	1	24	20.65	20.47	20.29	
5	64QAM	12	0	19.74	19.65	19.51	21.00
5	64QAM	12	7	19.65	19.68	19.50	
5	64QAM	12	13	19.58	19.58	19.44	
5	64QAM	25	0	19.62	19.57	19.40	
5	256QAM	1	0	17.75	17.72	17.59	19.00
5	256QAM	1	12	17.86	17.79	17.64	
5	256QAM	1	24	17.64	17.59	17.59	
5	256QAM	12	0	17.80	17.71	17.68	19.00
5	256QAM	12	7	17.75	17.76	17.59	
5	256QAM	12	13	17.59	17.67	17.62	
5	256QAM	25	0	17.74	17.67	17.61	



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Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.73	22.69	22.38	24.00
3	QPSK	1	8	22.70	22.63	22.36	
3	QPSK	1	14	22.52	22.40	22.13	
3	QPSK	8	0	21.77	21.78	21.50	23.00
3	QPSK	8	4	21.70	21.58	21.37	
3	QPSK	8	7	21.65	21.53	21.33	
3	QPSK	15	0	21.64	21.70	21.37	
3	16QAM	1	0	21.96	21.80	21.64	23.00
3	16QAM	1	8	21.92	21.88	21.59	
3	16QAM	1	14	21.67	21.53	21.43	
3	16QAM	8	0	20.73	20.62	20.52	22.00
3	16QAM	8	4	20.62	20.55	20.36	
3	16QAM	8	7	20.56	20.48	20.34	
3	16QAM	15	0	20.64	20.47	20.36	
3	64QAM	1	0	20.89	20.65	20.55	22.00
3	64QAM	1	8	20.83	20.81	20.48	
3	64QAM	1	14	20.59	20.54	20.29	
3	64QAM	8	0	19.79	19.67	19.53	21.00
3	64QAM	8	4	19.66	19.66	19.42	
3	64QAM	8	7	19.62	19.53	19.45	
3	64QAM	15	0	19.58	19.60	19.40	
3	256QAM	1	0	17.79	17.73	17.66	19.00
3	256QAM	1	8	17.81	17.85	17.74	
3	256QAM	1	14	17.66	17.67	17.56	
3	256QAM	8	0	17.80	17.69	17.64	19.00
3	256QAM	8	4	17.72	17.70	17.64	
3	256QAM	8	7	17.62	17.66	17.65	
3	256QAM	15	0	17.70	17.76	17.69	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	22.66	22.76	22.42	24.00
1.4	QPSK	1	3	22.71	22.59	22.37	
1.4	QPSK	1	5	22.49	22.31	22.14	
1.4	QPSK	3	0	22.57	22.76	22.41	
1.4	QPSK	3	1	22.65	22.51	22.36	
1.4	QPSK	3	3	22.39	22.30	22.10	
1.4	QPSK	6	0	21.65	21.63	21.38	23.00
1.4	16QAM	1	0	21.97	21.74	21.69	23.00
1.4	16QAM	1	3	21.87	21.92	21.60	
1.4	16QAM	1	5	21.64	21.58	21.38	
1.4	16QAM	3	0	21.90	21.68	21.60	
1.4	16QAM	3	1	21.85	21.89	21.53	
1.4	16QAM	3	3	21.63	21.53	21.29	22.00
1.4	16QAM	6	0	20.60	20.50	20.38	
1.4	64QAM	1	0	20.80	20.67	20.53	22.00
1.4	64QAM	1	3	20.87	20.78	20.52	
1.4	64QAM	1	5	20.67	20.50	20.28	
1.4	64QAM	3	0	20.54	20.47	20.32	
1.4	64QAM	3	1	20.71	20.65	20.49	
1.4	64QAM	3	3	20.79	20.72	20.44	
1.4	64QAM	6	0	19.79	19.70	19.40	21.00
1.4	256QAM	1	0	17.81	17.84	17.70	19.00
1.4	256QAM	1	3	17.63	17.66	17.55	
1.4	256QAM	1	5	17.71	17.72	17.65	
1.4	256QAM	3	0	17.71	17.67	17.62	
1.4	256QAM	3	1	17.64	17.59	17.63	
1.4	256QAM	3	3	17.69	17.66	17.62	19.00
1.4	256QAM	6	0	17.76	17.82	17.66	

**<LTE Band 66_Ant 8_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	16.50
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	16.05	16.12	15.95	
20	QPSK	1	49	15.86	15.92	15.79	16.50
20	QPSK	1	99	15.91	15.91	15.81	
20	QPSK	50	0	15.75	16.01	15.74	
20	QPSK	50	24	15.75	15.91	15.64	16.50
20	QPSK	50	50	15.86	15.92	15.72	
20	QPSK	100	0	15.83	15.84	15.68	
20	16QAM	1	0	15.77	15.94	15.83	16.50
20	16QAM	1	49	15.81	15.88	15.75	
20	16QAM	1	99	15.68	15.72	15.53	
20	16QAM	50	0	15.80	15.97	15.68	16.50
20	16QAM	50	24	15.66	15.73	15.49	
20	16QAM	50	50	15.58	15.83	15.65	
20	16QAM	100	0	15.70	15.80	15.62	16.50
20	64QAM	1	0	15.91	15.98	15.67	
20	64QAM	1	49	15.71	15.85	15.59	
20	64QAM	1	99	15.67	15.82	15.54	16.50
20	64QAM	50	0	15.54	15.70	15.50	
20	64QAM	50	24	15.60	15.73	15.47	
20	64QAM	50	50	15.69	15.78	15.60	16.50
20	64QAM	100	0	15.57	15.62	15.46	
20	256QAM	1	0	15.57	15.55	15.44	
20	256QAM	1	49	15.63	15.70	15.51	16.50
20	256QAM	1	99	15.59	15.62	15.43	
20	256QAM	50	0	15.65	15.57	15.35	
20	256QAM	50	24	15.57	15.54	15.49	16.50
20	256QAM	50	50	15.51	15.43	15.35	
20	256QAM	100	0	15.37	15.30	15.25	
Channel				132047	132322	132597	16.50
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	16.01	16.08	15.87	
15	QPSK	1	37	15.73	15.77	15.54	16.50
15	QPSK	1	74	15.72	15.87	15.76	
15	QPSK	36	0	15.70	15.87	15.65	
15	QPSK	36	20	15.63	15.90	15.59	16.50
15	QPSK	36	39	15.74	15.86	15.64	
15	QPSK	75	0	15.70	15.71	15.61	
15	16QAM	1	0	15.73	15.87	15.61	16.50
15	16QAM	1	37	15.64	15.86	15.55	
15	16QAM	1	74	15.60	15.63	15.39	
15	16QAM	36	0	15.57	15.79	15.59	16.50
15	16QAM	36	20	15.60	15.66	15.37	
15	16QAM	36	39	15.53	15.85	15.52	
15	16QAM	75	0	15.42	15.68	15.58	16.50
15	64QAM	1	0	15.80	15.81	15.60	
15	64QAM	1	37	15.57	15.74	15.51	
15	64QAM	1	74	15.61	15.73	15.46	16.50
15	64QAM	36	0	15.43	15.52	15.41	
15	64QAM	36	20	15.51	15.60	15.34	
15	64QAM	36	39	15.57	15.66	15.47	16.50
15	64QAM	75	0	15.46	15.59	15.35	
15	256QAM	1	0	15.53	15.44	15.37	
15	256QAM	1	37	15.58	15.56	15.41	16.50
15	256QAM	1	74	15.49	15.50	15.37	
15	256QAM	36	0	15.47	15.53	15.26	
15	256QAM	36	20	15.38	15.46	15.31	16.50



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15	256QAM	36	39	15.35	15.40	15.23	
15	256QAM	75	0	15.26	16.00	15.14	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	15.96	16.07	15.94	16.50
10	QPSK	1	25	15.76	15.50	15.56	
10	QPSK	1	49	15.68	15.80	15.81	
10	QPSK	25	0	15.70	15.92	15.62	16.50
10	QPSK	25	12	15.67	15.93	15.54	
10	QPSK	25	25	15.83	15.83	15.64	
10	QPSK	50	0	15.69	15.79	15.59	
10	16QAM	1	0	15.68	15.91	15.73	16.50
10	16QAM	1	25	15.69	15.83	15.60	
10	16QAM	1	49	15.64	15.61	15.41	
10	16QAM	25	0	15.59	15.96	15.55	16.50
10	16QAM	25	12	15.61	15.70	15.42	
10	16QAM	25	25	15.60	15.79	15.54	
10	16QAM	50	0	15.47	15.63	15.52	
10	64QAM	1	0	15.78	15.80	15.60	16.50
10	64QAM	1	25	15.57	15.67	15.48	
10	64QAM	1	49	15.58	15.81	15.44	
10	64QAM	25	0	15.43	15.64	15.37	16.50
10	64QAM	25	12	15.51	15.57	15.28	
10	64QAM	25	25	15.65	15.68	15.53	
10	64QAM	50	0	15.39	15.56	15.41	
10	256QAM	1	0	15.56	15.53	15.41	16.50
10	256QAM	1	25	15.53	15.59	15.48	
10	256QAM	1	49	15.53	15.56	15.30	
10	256QAM	25	0	15.57	15.39	15.24	16.50
10	256QAM	25	12	15.52	15.34	15.32	
10	256QAM	25	25	15.40	15.25	15.33	
10	256QAM	50	0	15.15	15.14	15.12	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	16.01	16.10	15.92	16.50
5	QPSK	1	12	15.70	15.74	15.60	
5	QPSK	1	24	15.69	15.86	15.76	
5	QPSK	12	0	15.75	15.81	15.62	16.50
5	QPSK	12	7	15.65	15.76	15.58	
5	QPSK	12	13	15.72	15.81	15.65	
5	QPSK	25	0	15.67	15.88	15.60	
5	16QAM	1	0	15.55	15.82	15.65	16.50
5	16QAM	1	12	15.74	15.93	15.57	
5	16QAM	1	24	15.57	15.67	15.37	
5	16QAM	12	0	15.64	15.84	15.61	16.50
5	16QAM	12	7	15.53	15.67	15.43	
5	16QAM	12	13	15.52	15.75	15.48	
5	16QAM	25	0	15.50	15.65	15.61	
5	64QAM	1	0	15.76	15.78	15.56	16.50
5	64QAM	1	12	15.54	15.70	15.47	
5	64QAM	1	24	15.59	15.85	15.50	
5	64QAM	12	0	15.47	15.61	15.30	16.50
5	64QAM	12	7	15.49	15.62	15.37	
5	64QAM	12	13	15.68	15.66	15.54	
5	64QAM	25	0	15.39	15.60	15.39	
5	256QAM	1	0	15.60	15.49	15.41	16.50
5	256QAM	1	12	15.62	15.63	15.39	
5	256QAM	1	24	15.59	15.50	15.32	
5	256QAM	12	0	15.53	15.47	15.19	16.50
5	256QAM	12	7	15.43	15.53	15.35	
5	256QAM	12	13	15.36	15.31	15.23	
5	256QAM	25	0	15.18	15.12	15.21	



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Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	16.00	16.10	15.89	16.50
3	QPSK	1	8	15.72	15.76	15.67	
3	QPSK	1	14	15.69	15.83	15.66	
3	QPSK	8	0	15.68	15.91	15.60	16.50
3	QPSK	8	4	15.53	15.75	15.58	
3	QPSK	8	7	15.70	15.81	15.69	
3	QPSK	15	0	15.72	15.84	15.56	
3	16QAM	1	0	15.66	15.87	15.63	16.50
3	16QAM	1	8	15.73	15.85	15.67	
3	16QAM	1	14	15.59	15.61	15.35	
3	16QAM	8	0	15.62	15.86	15.59	16.50
3	16QAM	8	4	15.55	15.77	15.38	
3	16QAM	8	7	15.54	15.79	15.56	
3	16QAM	15	0	15.61	15.62	15.55	
3	64QAM	1	0	15.89	15.77	15.53	16.50
3	64QAM	1	8	15.58	15.71	15.51	
3	64QAM	1	14	15.63	15.79	15.44	
3	64QAM	8	0	15.50	15.58	15.40	16.50
3	64QAM	8	4	15.52	15.64	15.30	
3	64QAM	8	7	15.63	15.71	15.51	
3	64QAM	15	0	15.44	15.66	15.40	
3	256QAM	1	0	15.57	15.44	15.33	16.50
3	256QAM	1	8	15.54	15.71	15.34	
3	256QAM	1	14	15.44	15.44	15.34	
3	256QAM	8	0	15.52	15.46	15.19	16.50
3	256QAM	8	4	15.49	15.43	15.26	
3	256QAM	8	7	15.40	15.31	15.26	
3	256QAM	15	0	15.24	15.20	15.22	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	16.01	16.05	15.86	16.50
1.4	QPSK	1	3	15.70	15.75	15.65	
1.4	QPSK	1	5	15.70	15.89	15.75	
1.4	QPSK	3	0	15.70	15.84	15.61	
1.4	QPSK	3	1	15.61	15.84	15.54	
1.4	QPSK	3	3	15.79	15.89	15.56	
1.4	QPSK	6	0	15.70	15.80	15.57	16.50
1.4	16QAM	1	0	15.63	15.86	15.66	16.50
1.4	16QAM	1	3	15.71	15.91	15.63	
1.4	16QAM	1	5	15.58	15.59	15.28	
1.4	16QAM	3	0	15.62	15.93	15.63	
1.4	16QAM	3	1	15.63	15.76	15.42	
1.4	16QAM	3	3	15.56	15.85	15.53	16.50
1.4	16QAM	6	0	15.49	15.55	15.64	
1.4	64QAM	1	0	15.76	15.76	15.51	16.50
1.4	64QAM	1	3	15.55	15.75	15.60	
1.4	64QAM	1	5	15.59	15.77	15.45	
1.4	64QAM	3	0	15.38	15.61	15.40	
1.4	64QAM	3	1	15.48	15.67	15.34	
1.4	64QAM	3	3	15.65	15.63	15.47	16.50
1.4	64QAM	6	0	15.50	15.60	15.37	
1.4	256QAM	1	0	15.53	15.50	15.36	16.50
1.4	256QAM	1	3	15.55	15.68	15.40	
1.4	256QAM	1	5	15.49	15.42	15.34	
1.4	256QAM	3	0	15.56	15.36	15.30	
1.4	256QAM	3	1	15.46	15.47	15.31	
1.4	256QAM	3	3	15.40	15.37	15.32	16.50
1.4	256QAM	6	0	15.26	15.14	15.09	



<LTE Band 71_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	22.84	22.90	22.88	
20	QPSK	1	49	22.82	22.89	22.76	24.00
20	QPSK	1	99	22.64	22.69	22.65	
20	QPSK	50	0	21.77	21.94	21.85	
20	QPSK	50	24	21.57	21.88	21.76	23.00
20	QPSK	50	50	21.69	21.89	21.74	
20	QPSK	100	0	21.61	21.86	21.74	
20	16QAM	1	0	21.80	21.89	22.02	23.00
20	16QAM	1	49	22.05	22.05	22.01	
20	16QAM	1	99	21.83	21.87	21.87	
20	16QAM	50	0	20.55	20.87	20.71	22.00
20	16QAM	50	24	20.76	20.81	20.79	
20	16QAM	50	50	20.65	20.83	20.73	
20	16QAM	100	0	20.58	20.84	20.71	22.00
20	64QAM	1	0	20.76	20.81	20.84	
20	64QAM	1	49	20.95	20.95	20.94	
20	64QAM	1	99	20.70	20.77	20.73	21.00
20	64QAM	50	0	19.61	19.98	19.79	
20	64QAM	50	24	19.83	19.89	19.85	
20	64QAM	50	50	19.78	19.92	19.78	19.00
20	64QAM	100	0	19.66	19.89	19.81	
20	256QAM	1	0	17.82	17.82	17.83	
20	256QAM	1	49	17.92	17.94	17.95	19.00
20	256QAM	1	99	17.76	17.76	17.76	
20	256QAM	50	0	17.58	17.91	17.71	
20	256QAM	50	24	17.81	17.86	17.82	19.00
20	256QAM	50	50	17.66	17.85	17.75	
20	256QAM	100	0	17.62	17.90	17.73	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	22.82	22.86	22.78	
15	QPSK	1	37	22.75	22.83	22.73	24.00
15	QPSK	1	74	22.64	22.69	22.56	
15	QPSK	36	0	21.70	21.90	21.85	23.00
15	QPSK	36	20	21.51	21.87	21.67	
15	QPSK	36	39	21.60	21.82	21.71	
15	QPSK	75	0	21.58	21.80	21.67	23.00
15	16QAM	1	0	21.79	21.83	21.98	
15	16QAM	1	37	21.98	22.02	21.91	
15	16QAM	1	74	21.73	21.82	21.77	22.00
15	16QAM	36	0	20.46	20.78	20.67	
15	16QAM	36	20	20.66	20.71	20.73	
15	16QAM	36	39	20.56	20.82	20.71	22.00
15	16QAM	75	0	20.51	20.84	20.62	
15	64QAM	1	0	20.67	20.71	20.76	
15	64QAM	1	37	20.91	20.90	20.94	22.00
15	64QAM	1	74	20.62	20.71	20.67	
15	64QAM	36	0	19.59	19.98	19.74	
15	64QAM	36	20	19.80	19.89	19.79	21.00
15	64QAM	36	39	19.74	19.91	19.73	
15	64QAM	75	0	19.56	19.85	19.74	
15	256QAM	1	0	17.80	17.72	17.79	19.00
15	256QAM	1	37	17.92	17.92	17.85	
15	256QAM	1	74	17.71	17.68	17.72	
15	256QAM	36	0	17.55	17.86	17.67	19.00
15	256QAM	36	20	17.73	17.83	17.75	
15	256QAM	36	39	17.60	17.78	17.74	



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15	256QAM	75	0	17.57	17.85	17.66	Tune-up limit (dBm)
Channel				133172	133297	133422	
Frequency (MHz)				668	680.5	693	
10	QPSK	1	0	22.77	22.87	22.88	24.00
10	QPSK	1	25	22.77	22.80	22.71	
10	QPSK	1	49	22.56	22.62	22.63	
10	QPSK	25	0	21.68	21.84	21.77	23.00
10	QPSK	25	12	21.54	21.78	21.74	
10	QPSK	25	25	21.65	21.79	21.73	
10	QPSK	50	0	21.60	21.84	21.70	
10	16QAM	1	0	21.76	21.80	22.02	23.00
10	16QAM	1	25	22.05	21.95	21.94	
10	16QAM	1	49	21.77	21.79	21.77	
10	16QAM	25	0	20.52	20.83	20.65	22.00
10	16QAM	25	12	20.74	20.81	20.70	
10	16QAM	25	25	20.59	20.73	20.69	
10	16QAM	50	0	20.58	20.77	20.67	
10	64QAM	1	0	20.66	20.79	20.80	22.00
10	64QAM	1	25	20.88	20.95	20.85	
10	64QAM	1	49	20.61	20.73	20.70	
10	64QAM	25	0	19.61	19.96	19.77	21.00
10	64QAM	25	12	19.80	19.84	19.77	
10	64QAM	25	25	19.69	19.84	19.72	
10	64QAM	50	0	19.64	19.81	19.79	
10	256QAM	1	0	17.76	17.82	17.75	19.00
10	256QAM	1	25	17.83	17.90	17.95	
10	256QAM	1	49	17.73	17.70	17.76	
10	256QAM	25	0	17.53	17.89	17.68	19.00
10	256QAM	25	12	17.71	17.78	17.78	
10	256QAM	25	25	17.61	17.83	17.68	
10	256QAM	50	0	17.59	17.80	17.67	
Channel				133147	133297	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	QPSK	1	0	22.80	22.82	22.78	24.00
5	QPSK	1	12	22.75	22.89	22.75	
5	QPSK	1	24	22.63	22.64	22.63	
5	QPSK	12	0	21.71	21.92	21.77	23.00
5	QPSK	12	7	21.55	21.84	21.74	
5	QPSK	12	13	21.64	21.87	21.69	
5	QPSK	25	0	21.58	21.81	21.69	
5	16QAM	1	0	21.73	21.82	21.98	23.00
5	16QAM	1	12	22.00	21.96	22.00	
5	16QAM	1	24	21.73	21.80	21.87	
5	16QAM	12	0	20.54	20.77	20.70	22.00
5	16QAM	12	7	20.74	20.80	20.75	
5	16QAM	12	13	20.58	20.77	20.69	
5	16QAM	25	0	20.56	20.79	20.67	
5	64QAM	1	0	20.66	20.75	20.78	22.00
5	64QAM	1	12	20.92	20.94	20.84	
5	64QAM	1	24	20.61	20.74	20.73	
5	64QAM	12	0	19.54	19.90	19.71	21.00
5	64QAM	12	7	19.79	19.85	19.76	
5	64QAM	12	13	19.71	19.84	19.71	
5	64QAM	25	0	19.61	19.88	19.75	
5	256QAM	1	0	17.76	17.81	17.79	19.00
5	256QAM	1	12	17.83	17.84	17.92	
5	256QAM	1	24	17.71	17.76	17.74	
5	256QAM	12	0	17.56	17.88	17.71	19.00
5	256QAM	12	7	17.76	17.78	17.79	
5	256QAM	12	13	17.64	17.83	17.72	
5	256QAM	25	0	17.55	17.84	17.66	

**<LTE Band 71_Ant 5_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	18.09	18.20	18.13	
20	QPSK	1	49	17.91	18.06	17.98	18.50
20	QPSK	1	99	17.99	18.06	18.04	
20	QPSK	50	0	17.88	18.11	18.00	
20	QPSK	50	24	17.81	18.04	17.90	18.50
20	QPSK	50	50	17.94	18.06	17.92	
20	QPSK	100	0	17.94	18.00	17.92	
20	16QAM	1	0	17.87	18.06	18.01	18.50
20	16QAM	1	49	17.87	18.04	17.96	
20	16QAM	1	99	17.73	17.82	17.74	
20	16QAM	50	0	17.86	18.05	17.93	18.50
20	16QAM	50	24	17.80	17.91	17.75	
20	16QAM	50	50	17.71	17.96	17.84	
20	16QAM	100	0	17.75	17.90	17.83	18.50
20	64QAM	1	0	17.98	18.06	17.91	
20	64QAM	1	49	17.80	18.01	17.87	
20	64QAM	1	99	17.80	17.96	17.80	18.50
20	64QAM	50	0	17.65	17.83	17.77	
20	64QAM	50	24	17.66	17.89	17.67	
20	64QAM	50	50	17.82	17.94	17.83	18.50
20	64QAM	100	0	17.63	17.79	17.65	
20	256QAM	1	0	17.66	17.72	17.71	
20	256QAM	1	49	17.75	17.81	17.69	18.50
20	256QAM	1	99	17.68	17.75	17.68	
20	256QAM	50	0	17.69	17.70	17.61	
20	256QAM	50	24	17.70	17.70	17.67	18.50
20	256QAM	50	50	17.57	17.55	17.56	
20	256QAM	100	0	17.46	17.46	17.46	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	18.05	18.10	18.10	18.50
15	QPSK	1	37	17.80	18.03	17.99	
15	QPSK	1	74	17.91	17.98	17.93	
15	QPSK	36	0	17.79	17.98	17.98	18.50
15	QPSK	36	20	17.67	17.86	17.80	
15	QPSK	36	39	17.79	17.89	17.84	
15	QPSK	75	0	17.83	17.84	17.94	18.50
15	16QAM	1	0	17.77	17.94	17.74	
15	16QAM	1	37	17.86	18.00	17.76	
15	16QAM	1	74	17.68	17.81	17.57	18.50
15	16QAM	36	0	17.68	17.99	17.83	
15	16QAM	36	20	17.60	17.80	17.65	
15	16QAM	36	39	17.71	17.89	17.72	18.50
15	16QAM	75	0	17.74	17.73	17.75	
15	64QAM	1	0	17.79	18.01	17.78	
15	64QAM	1	37	17.70	17.84	17.81	18.50
15	64QAM	1	74	17.73	17.85	17.82	
15	64QAM	36	0	17.67	17.74	17.61	
15	64QAM	36	20	17.59	17.75	17.60	18.50
15	64QAM	36	39	17.59	17.83	17.78	
15	64QAM	75	0	17.54	17.77	17.50	
15	256QAM	1	0	17.63	17.57	17.63	18.50
15	256QAM	1	37	17.63	17.61	17.70	
15	256QAM	1	74	17.58	17.67	17.68	
15	256QAM	36	0	17.67	17.60	17.47	18.50
15	256QAM	36	20	17.54	17.52	17.47	
15	256QAM	36	39	17.43	17.49	17.50	



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15	256QAM	75	0	17.30	17.34	17.36	Tune-up limit (dBm)
Channel				133172	133297	133422	
Frequency (MHz)				668	680.5	693	
10	QPSK	1	0	18.09	18.13	18.07	18.50
10	QPSK	1	25	17.79	18.03	17.89	
10	QPSK	1	49	17.87	17.92	17.95	
10	QPSK	25	0	17.83	17.90	17.90	18.50
10	QPSK	25	12	17.73	17.89	17.74	
10	QPSK	25	25	17.88	17.87	17.81	
10	QPSK	50	0	17.80	17.92	17.90	
10	16QAM	1	0	17.75	17.89	17.92	18.50
10	16QAM	1	25	17.83	17.99	17.80	
10	16QAM	1	49	17.67	17.84	17.62	
10	16QAM	25	0	17.82	17.96	17.75	18.50
10	16QAM	25	12	17.72	17.82	17.64	
10	16QAM	25	25	17.73	17.87	17.81	
10	16QAM	50	0	17.75	17.74	17.63	
10	64QAM	1	0	17.76	18.06	17.77	18.50
10	64QAM	1	25	17.65	17.88	17.81	
10	64QAM	1	49	17.73	17.88	17.82	
10	64QAM	25	0	17.68	17.80	17.64	18.50
10	64QAM	25	12	17.59	17.83	17.58	
10	64QAM	25	25	17.60	17.77	17.78	
10	64QAM	50	0	17.54	17.68	17.60	
10	256QAM	1	0	17.50	17.63	17.68	18.50
10	256QAM	1	25	17.66	17.64	17.76	
10	256QAM	1	49	17.54	17.68	17.56	
10	256QAM	25	0	17.60	17.63	17.55	18.50
10	256QAM	25	12	17.53	17.45	17.45	
10	256QAM	25	25	17.45	17.50	17.45	
10	256QAM	50	0	17.30	17.42	17.28	
Channel				133147	133297	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	QPSK	1	0	18.07	18.17	18.05	18.50
5	QPSK	1	12	17.85	18.04	17.90	
5	QPSK	1	24	17.83	18.00	17.88	
5	QPSK	12	0	17.81	17.95	17.94	18.50
5	QPSK	12	7	17.65	17.91	17.78	
5	QPSK	12	13	17.85	17.99	17.78	
5	QPSK	25	0	17.84	17.93	17.83	
5	16QAM	1	0	17.75	17.97	17.82	18.50
5	16QAM	1	12	17.88	18.04	17.81	
5	16QAM	1	24	17.65	17.85	17.61	
5	16QAM	12	0	17.70	17.95	17.82	18.50
5	16QAM	12	7	17.72	17.88	17.68	
5	16QAM	12	13	17.72	17.81	17.80	
5	16QAM	25	0	17.65	17.75	17.65	
5	64QAM	1	0	17.83	18.04	17.71	18.50
5	64QAM	1	12	17.70	17.90	17.86	
5	64QAM	1	24	17.74	17.78	17.72	
5	64QAM	12	0	17.59	17.81	17.59	18.50
5	64QAM	12	7	17.62	17.81	17.64	
5	64QAM	12	13	17.54	17.81	17.71	
5	64QAM	25	0	17.48	17.82	17.62	
5	256QAM	1	0	17.53	17.60	17.61	18.50
5	256QAM	1	12	17.68	17.61	17.60	
5	256QAM	1	24	17.53	17.68	17.64	
5	256QAM	12	0	17.65	17.66	17.58	18.50
5	256QAM	12	7	17.56	17.52	17.50	
5	256QAM	12	13	17.53	17.48	17.40	
5	256QAM	25	0	17.39	17.37	17.35	

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
- Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Base station simulator was used for LTE output power measurements and SAR testing.

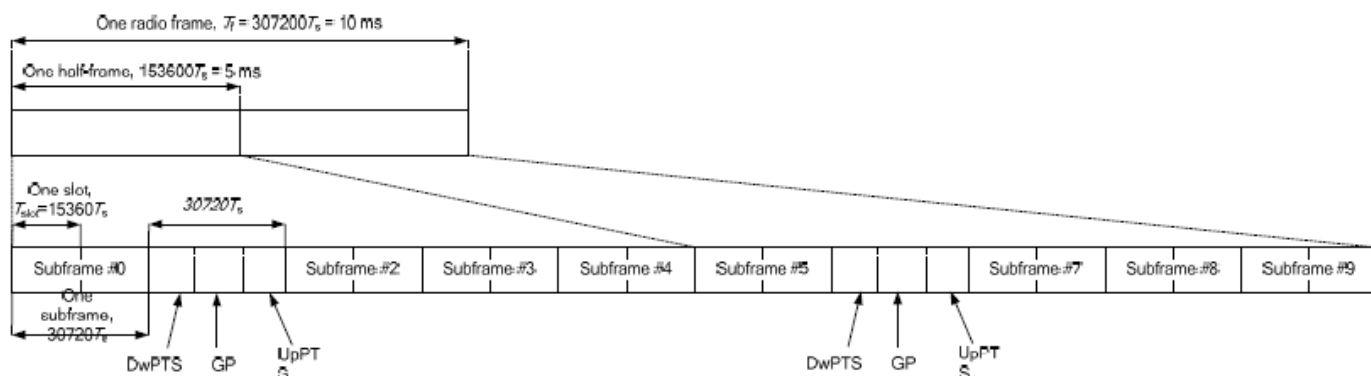


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$	-	-
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		

Special subframe (30720·T _s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~4	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T _s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

- i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- vi. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41.
- vii. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition.

**<LTE Band 38_Ant 8_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	22.75	22.84	22.83	
20	QPSK	1	49	22.69	22.83	22.73	24.00
20	QPSK	1	99	22.45	22.77	22.76	
20	QPSK	50	0	21.69	21.85	21.83	
20	QPSK	50	24	21.66	21.80	21.81	23.00
20	QPSK	50	50	21.58	21.82	21.81	
20	QPSK	100	0	21.62	21.79	21.78	
20	16QAM	1	0	21.40	21.58	21.71	23.00
20	16QAM	1	49	21.68	21.82	21.81	
20	16QAM	1	99	21.71	21.77	21.75	
20	16QAM	50	0	20.60	20.79	20.81	22.00
20	16QAM	50	24	20.69	20.84	20.84	
20	16QAM	50	50	20.70	20.83	20.81	
20	16QAM	100	0	20.61	20.77	20.79	22.00
20	64QAM	1	0	20.16	20.33	20.49	
20	64QAM	1	49	20.45	20.60	20.57	
20	64QAM	1	99	20.50	20.51	20.48	21.00
20	64QAM	50	0	19.58	19.76	19.80	
20	64QAM	50	24	19.64	19.79	19.83	
20	64QAM	50	50	19.66	19.79	19.78	19.00
20	64QAM	100	0	19.60	19.76	19.77	
20	256QAM	1	0	17.45	17.46	17.60	
20	256QAM	1	49	17.56	17.62	17.66	19.00
20	256QAM	1	99	17.46	17.47	17.55	
20	256QAM	50	0	17.68	17.79	17.90	
20	256QAM	50	24	17.71	17.79	17.89	19.00
20	256QAM	50	50	17.69	17.74	17.83	
20	256QAM	100	0	17.66	17.72	17.81	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	22.75	22.80	22.81	
15	QPSK	1	37	22.64	22.73	22.68	24.00
15	QPSK	1	74	22.36	22.71	22.73	
15	QPSK	36	0	21.63	21.76	21.75	23.00
15	QPSK	36	20	21.60	21.73	21.78	
15	QPSK	36	39	21.48	21.75	21.80	
15	QPSK	75	0	21.62	21.72	21.73	23.00
15	16QAM	1	0	21.38	21.57	21.64	
15	16QAM	1	37	21.58	21.74	21.80	
15	16QAM	1	74	21.71	21.74	21.73	22.00
15	16QAM	36	0	20.50	20.72	20.74	
15	16QAM	36	20	20.65	20.81	20.76	
15	16QAM	36	39	20.61	20.75	20.74	22.00
15	16QAM	75	0	20.56	20.71	20.78	
15	64QAM	1	0	20.14	20.27	20.45	
15	64QAM	1	37	20.38	20.60	20.47	21.00
15	64QAM	1	74	20.47	20.49	20.44	
15	64QAM	36	0	19.50	19.68	19.76	
15	64QAM	36	20	19.54	19.69	19.77	19.00
15	64QAM	36	39	19.59	19.72	19.75	
15	64QAM	75	0	19.57	19.76	19.72	
15	256QAM	1	0	17.41	17.43	17.53	19.00
15	256QAM	1	37	17.46	17.60	17.59	
15	256QAM	1	74	17.37	17.41	17.46	
15	256QAM	36	0	17.62	17.76	17.88	19.00
15	256QAM	36	20	17.70	17.73	17.85	
15	256QAM	36	39	17.61	17.65	17.83	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	17.65	17.67	17.79	Tune-up limit (dBm)
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	22.70	22.80	22.82	24.00
10	QPSK	1	25	22.60	22.73	22.66	
10	QPSK	1	49	22.42	22.70	22.70	
10	QPSK	25	0	21.66	21.80	21.77	23.00
10	QPSK	25	12	21.56	21.79	21.77	
10	QPSK	25	25	21.49	21.76	21.76	
10	QPSK	50	0	21.59	21.77	21.73	
10	16QAM	1	0	21.36	21.54	21.64	23.00
10	16QAM	1	25	21.61	21.81	21.78	
10	16QAM	1	49	21.61	21.68	21.67	
10	16QAM	25	0	20.58	20.74	20.78	22.00
10	16QAM	25	12	20.67	20.75	20.77	
10	16QAM	25	25	20.69	20.74	20.78	
10	16QAM	50	0	20.57	20.73	20.75	
10	64QAM	1	0	20.12	20.23	20.39	22.00
10	64QAM	1	25	20.40	20.55	20.53	
10	64QAM	1	49	20.40	20.46	20.42	
10	64QAM	25	0	19.52	19.69	19.73	21.00
10	64QAM	25	12	19.62	19.72	19.78	
10	64QAM	25	25	19.59	19.75	19.76	
10	64QAM	50	0	19.52	19.67	19.74	
10	256QAM	1	0	17.39	17.41	17.59	19.00
10	256QAM	1	25	17.50	17.60	17.59	
10	256QAM	1	49	17.41	17.39	17.48	
10	256QAM	25	0	17.64	17.74	17.81	19.00
10	256QAM	25	12	17.61	17.77	17.80	
10	256QAM	25	25	17.60	17.73	17.75	
10	256QAM	50	0	17.62	17.65	17.80	
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	22.70	22.81	22.83	24.00
5	QPSK	1	12	22.65	22.76	22.71	
5	QPSK	1	24	22.41	22.75	22.75	
5	QPSK	12	0	21.60	21.75	21.78	23.00
5	QPSK	12	7	21.58	21.77	21.76	
5	QPSK	12	13	21.51	21.80	21.73	
5	QPSK	25	0	21.62	21.73	21.74	
5	16QAM	1	0	21.37	21.58	21.64	23.00
5	16QAM	1	12	21.64	21.76	21.75	
5	16QAM	1	24	21.65	21.69	21.75	
5	16QAM	12	0	20.53	20.77	20.80	22.00
5	16QAM	12	7	20.63	20.83	20.79	
5	16QAM	12	13	20.65	20.81	20.74	
5	16QAM	25	0	20.52	20.76	20.71	
5	64QAM	1	0	20.08	20.28	20.45	22.00
5	64QAM	1	12	20.41	20.55	20.51	
5	64QAM	1	24	20.42	20.48	20.40	
5	64QAM	12	0	19.58	19.68	19.73	
5	64QAM	12	7	19.60	19.74	19.83	21.00
5	64QAM	12	13	19.65	19.74	19.71	
5	64QAM	25	0	19.59	19.74	19.69	
5	256QAM	1	0	17.38	17.43	17.58	
5	256QAM	1	12	17.51	17.60	17.60	19.00
5	256QAM	1	24	17.40	17.46	17.46	
5	256QAM	12	0	17.66	17.72	17.84	
5	256QAM	12	7	17.66	17.77	17.81	
5	256QAM	12	13	17.63	17.67	17.75	19.00
5	256QAM	25	0	17.62	17.62	17.72	

**<LTE Band 38_Ant 8_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	16.49	16.56	16.51	
20	QPSK	1	49	16.25	16.39	16.30	17.50
20	QPSK	1	99	16.35	16.39	16.42	
20	QPSK	50	0	16.24	16.44	16.28	
20	QPSK	50	24	16.15	16.40	16.20	17.50
20	QPSK	50	50	16.32	16.41	16.28	
20	QPSK	100	0	16.28	16.29	16.25	
20	16QAM	1	0	16.24	16.36	16.38	17.50
20	16QAM	1	49	16.19	16.31	16.24	
20	16QAM	1	99	16.06	16.15	16.11	
20	16QAM	50	0	16.16	16.41	16.21	17.50
20	16QAM	50	24	16.17	16.25	16.05	
20	16QAM	50	50	16.06	16.31	16.18	
20	16QAM	100	0	16.07	16.26	16.12	17.50
20	64QAM	1	0	16.28	16.33	16.25	
20	64QAM	1	49	16.13	16.32	16.25	
20	64QAM	1	99	16.19	16.29	16.18	17.50
20	64QAM	50	0	15.99	16.13	16.07	
20	64QAM	50	24	15.97	16.25	16.04	
20	64QAM	50	50	16.12	16.30	16.21	17.50
20	64QAM	100	0	15.96	16.05	15.93	
20	256QAM	1	0	15.98	15.98	16.07	
20	256QAM	1	49	16.06	16.16	16.00	17.50
20	256QAM	1	99	16.07	16.08	16.04	
20	256QAM	50	0	16.07	16.06	15.90	
20	256QAM	50	24	16.09	16.05	15.99	17.50
20	256QAM	50	50	15.97	15.82	15.85	
20	256QAM	100	0	15.85	15.78	15.74	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	16.39	16.41	16.36	
15	QPSK	1	37	16.14	16.25	16.17	17.50
15	QPSK	1	74	16.24	16.31	16.28	
15	QPSK	36	0	16.13	16.34	16.19	17.50
15	QPSK	36	20	16.07	16.24	16.11	
15	QPSK	36	39	16.22	16.31	16.14	
15	QPSK	75	0	16.14	16.16	16.16	17.50
15	16QAM	1	0	16.11	16.26	16.22	
15	16QAM	1	37	16.03	16.20	16.11	
15	16QAM	1	74	15.98	16.02	16.00	17.50
15	16QAM	36	0	16.07	16.26	16.13	
15	16QAM	36	20	16.04	16.11	15.90	
15	16QAM	36	39	15.94	16.16	16.05	17.50
15	16QAM	75	0	15.96	16.11	16.01	
15	64QAM	1	0	16.20	16.23	16.15	
15	64QAM	1	37	15.98	16.19	16.16	17.50
15	64QAM	1	74	16.08	16.14	16.08	
15	64QAM	36	0	15.88	16.00	15.98	
15	64QAM	36	20	15.84	16.10	15.91	17.50
15	64QAM	36	39	15.99	16.22	16.05	
15	64QAM	75	0	15.83	15.92	15.78	
15	256QAM	1	0	15.89	15.84	15.98	17.50
15	256QAM	1	37	15.90	16.03	15.84	
15	256QAM	1	74	15.97	15.99	15.89	
15	256QAM	36	0	15.96	15.93	15.81	17.50
15	256QAM	36	20	15.98	15.96	15.83	
15	256QAM	36	39	15.89	15.68	15.75	



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15	256QAM	75	0	15.74	15.62	15.61	Tune-up limit (dBm)
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	16.40	16.42	16.41	17.50
10	QPSK	1	25	16.16	16.27	16.20	
10	QPSK	1	49	16.19	16.24	16.32	
10	QPSK	25	0	16.16	16.36	16.17	17.50
10	QPSK	25	12	16.02	16.32	16.08	
10	QPSK	25	25	16.20	16.30	16.16	
10	QPSK	50	0	16.13	16.16	16.11	
10	16QAM	1	0	16.10	16.22	16.30	17.50
10	16QAM	1	25	16.08	16.21	16.14	
10	16QAM	1	49	15.94	15.99	15.95	
10	16QAM	25	0	16.05	16.31	16.11	17.50
10	16QAM	25	12	16.01	16.17	15.96	
10	16QAM	25	25	15.92	16.20	16.03	
10	16QAM	50	0	15.91	16.17	16.02	
10	64QAM	1	0	16.14	16.20	16.13	17.50
10	64QAM	1	25	16.00	16.20	16.11	
10	64QAM	1	49	16.09	16.15	16.06	
10	64QAM	25	0	15.90	15.97	15.93	17.50
10	64QAM	25	12	15.89	16.12	15.94	
10	64QAM	25	25	16.00	16.21	16.05	
10	64QAM	50	0	15.87	15.91	15.79	
10	256QAM	1	0	15.85	15.89	15.96	17.50
10	256QAM	1	25	15.94	16.05	15.92	
10	256QAM	1	49	15.96	15.97	15.96	
10	256QAM	25	0	15.96	15.97	15.77	17.50
10	256QAM	25	12	15.94	15.93	15.85	
10	256QAM	25	25	15.81	15.68	15.71	
10	256QAM	50	0	15.69	15.68	15.59	
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	16.38	16.45	16.43	17.50
5	QPSK	1	12	16.09	16.30	16.18	
5	QPSK	1	24	16.26	16.25	16.26	
5	QPSK	12	0	16.14	16.32	16.13	17.50
5	QPSK	12	7	16.00	16.32	16.06	
5	QPSK	12	13	16.20	16.25	16.13	
5	QPSK	25	0	16.14	16.18	16.10	
5	16QAM	1	0	16.13	16.26	16.24	17.50
5	16QAM	1	12	16.04	16.20	16.14	
5	16QAM	1	24	15.96	16.05	15.99	
5	16QAM	12	0	16.07	16.25	16.07	17.50
5	16QAM	12	7	16.04	16.17	15.90	
5	16QAM	12	13	15.90	16.23	16.05	
5	16QAM	25	0	15.97	16.10	16.04	
5	64QAM	1	0	16.20	16.19	16.13	17.50
5	64QAM	1	12	15.98	16.19	16.13	
5	64QAM	1	24	16.07	16.14	16.07	
5	64QAM	12	0	15.87	15.99	15.94	17.50
5	64QAM	12	7	15.83	16.14	15.90	
5	64QAM	12	13	15.97	16.17	16.06	
5	64QAM	25	0	15.81	15.95	15.83	
5	256QAM	1	0	15.88	15.86	15.98	17.50
5	256QAM	1	12	15.90	16.05	15.84	
5	256QAM	1	24	15.98	15.94	15.90	
5	256QAM	12	0	15.99	15.98	15.77	17.50
5	256QAM	12	7	15.99	15.91	15.83	
5	256QAM	12	13	15.86	15.73	15.71	
5	256QAM	25	0	15.76	15.64	15.59	



<LTE Band 41_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	22.44	22.50	22.90	22.88	22.63	24.00
20	QPSK	1	49	22.26	22.35	22.79	22.52	22.53	
20	QPSK	1	99	22.34	22.33	22.70	22.71	22.51	
20	QPSK	50	0	21.42	21.48	21.90	21.85	21.60	23.00
20	QPSK	50	24	21.43	21.38	21.69	21.84	21.56	
20	QPSK	50	50	21.40	21.47	21.83	21.71	21.55	
20	QPSK	100	0	21.44	21.52	21.89	21.85	21.61	23.00
20	16QAM	1	0	21.13	21.35	21.68	21.65	21.53	
20	16QAM	1	49	21.32	21.39	21.79	21.89	21.58	
20	16QAM	1	99	21.43	21.39	21.73	21.70	21.43	22.00
20	16QAM	50	0	20.32	20.48	20.78	20.67	20.52	
20	16QAM	50	24	20.43	20.38	20.76	20.80	20.55	
20	16QAM	50	50	20.25	20.45	20.75	20.87	20.54	22.00
20	16QAM	100	0	20.23	20.50	20.64	20.72	20.47	
20	64QAM	1	0	20.04	20.08	20.39	20.48	20.20	
20	64QAM	1	49	20.17	20.13	20.47	20.49	20.27	22.00
20	64QAM	1	99	20.07	20.21	20.40	20.60	20.15	
20	64QAM	50	0	19.36	19.51	19.85	19.72	19.59	
20	64QAM	50	24	19.40	19.41	19.68	19.73	19.59	21.00
20	64QAM	50	50	19.31	19.34	19.62	19.85	19.40	
20	64QAM	100	0	19.33	19.42	19.66	19.84	19.45	
20	256QAM	1	0	17.32	17.43	17.39	17.65	17.51	19.00
20	256QAM	1	49	17.22	17.42	17.46	17.82	17.58	
20	256QAM	1	99	17.16	17.24	17.33	17.55	17.31	
20	256QAM	50	0	17.23	17.81	17.79	17.95	17.70	19.00
20	256QAM	50	24	17.18	17.80	17.67	17.93	17.73	
20	256QAM	50	50	17.16	17.56	17.67	17.93	17.71	
20	256QAM	100	0	17.26	17.65	17.72	17.88	17.64	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	22.25	22.33	22.74	22.61	22.43	24.00
15	QPSK	1	37	22.05	22.06	22.66	22.32	22.39	
15	QPSK	1	74	22.11	22.13	22.37	22.58	22.10	
15	QPSK	36	0	21.21	21.31	21.61	21.66	21.38	23.00
15	QPSK	36	20	21.22	21.23	21.52	21.72	21.33	
15	QPSK	36	39	21.05	21.32	21.39	21.65	21.32	
15	QPSK	75	0	21.25	21.41	21.64	21.65	21.44	23.00
15	16QAM	1	0	21.05	21.06	21.52	21.33	21.31	
15	16QAM	1	37	21.29	21.25	21.65	21.73	21.37	
15	16QAM	1	74	21.32	21.04	21.62	21.70	21.41	22.00
15	16QAM	36	0	20.08	20.29	20.59	20.54	20.31	
15	16QAM	36	20	20.08	20.13	20.58	20.69	20.33	
15	16QAM	36	39	20.14	20.21	20.53	20.45	20.26	22.00
15	16QAM	75	0	20.23	20.26	20.50	20.71	20.30	
15	64QAM	1	0	20.22	20.00	20.20	20.35	20.16	
15	64QAM	1	37	20.16	20.12	20.35	20.31	20.24	21.00
15	64QAM	1	74	20.10	20.14	20.25	20.17	20.11	
15	64QAM	36	0	19.12	19.37	19.73	19.56	19.37	
15	64QAM	36	20	19.17	19.26	19.74	19.70	19.43	19.00
15	64QAM	36	39	19.12	19.33	19.44	19.47	19.11	
15	64QAM	75	0	19.07	19.08	19.58	19.58	19.17	
15	256QAM	1	0	17.22	17.40	17.39	17.37	17.32	19.00
15	256QAM	1	37	17.15	17.36	17.28	17.41	17.21	
15	256QAM	1	74	17.10	17.21	17.36	17.49	17.10	
15	256QAM	36	0	17.05	17.63	17.60	17.73	17.38	19.00
15	256QAM	36	20	17.07	17.34	17.58	17.70	17.69	
15	256QAM	36	39	17.01	17.28	17.55	17.70	17.42	



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15	256QAM	75	0	17.14	17.41	17.57	17.82	17.38	Tune-up limit (dBm)
Channel				39700	40160	40620	41080	41540	
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	22.29	22.20	22.78	22.63	22.34	24.00
10	QPSK	1	25	22.15	22.06	22.69	22.51	22.17	
10	QPSK	1	49	22.01	22.25	22.44	22.38	22.05	
10	QPSK	25	0	21.25	21.34	21.65	21.55	21.32	23.00
10	QPSK	25	12	21.12	21.10	21.60	21.57	21.45	
10	QPSK	25	25	21.30	21.16	21.58	21.61	21.18	
10	QPSK	50	0	21.27	21.36	21.64	21.65	21.47	
10	16QAM	1	0	21.21	21.27	21.52	21.52	21.21	23.00
10	16QAM	1	25	21.22	21.26	21.70	21.61	21.40	
10	16QAM	1	49	21.24	21.25	21.53	21.67	21.28	
10	16QAM	25	0	20.13	20.19	20.64	20.44	20.51	22.00
10	16QAM	25	12	20.26	20.11	20.48	20.64	20.33	
10	16QAM	25	25	20.23	20.10	20.55	20.69	20.36	
10	16QAM	50	0	20.31	20.23	20.47	20.67	20.38	
10	64QAM	1	0	20.07	20.08	20.26	20.23	20.08	22.00
10	64QAM	1	25	20.16	20.13	20.34	20.32	20.03	
10	64QAM	1	49	20.13	20.10	20.17	20.30	20.05	
10	64QAM	25	0	19.10	19.17	19.46	19.52	19.38	21.00
10	64QAM	25	12	19.00	19.19	19.57	19.57	19.31	
10	64QAM	25	25	19.08	19.28	19.64	19.44	19.30	
10	64QAM	50	0	19.03	19.28	19.52	19.64	19.26	
10	256QAM	1	0	17.22	17.32	17.20	17.28	17.30	19.00
10	256QAM	1	25	17.03	17.14	17.19	17.53	17.20	
10	256QAM	1	49	17.06	17.12	17.25	17.38	17.04	
10	256QAM	25	0	17.04	17.70	17.63	17.79	17.61	19.00
10	256QAM	25	12	17.03	17.53	17.64	17.78	17.37	
10	256QAM	25	25	17.11	17.62	17.46	17.57	17.57	
10	256QAM	50	0	17.02	17.53	17.62	17.74	17.33	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	22.22	22.28	22.67	22.68	22.38	24.00
5	QPSK	1	12	22.13	22.13	22.76	22.51	22.44	
5	QPSK	1	24	22.24	22.13	22.45	22.66	22.22	
5	QPSK	12	0	21.26	21.33	21.72	21.56	21.45	23.00
5	QPSK	12	7	21.29	21.23	21.57	21.61	21.49	
5	QPSK	12	13	21.22	21.15	21.64	21.68	21.23	
5	QPSK	25	0	21.30	21.22	21.59	21.60	21.35	
5	16QAM	1	0	21.16	21.24	21.32	21.58	21.22	23.00
5	16QAM	1	12	21.01	21.25	21.58	21.51	21.50	
5	16QAM	1	24	21.10	21.23	21.52	21.58	21.34	
5	16QAM	12	0	20.25	20.28	20.62	20.52	20.28	22.00
5	16QAM	12	7	20.18	20.11	20.60	20.62	20.36	
5	16QAM	12	13	20.04	20.10	20.40	20.60	20.36	
5	16QAM	25	0	20.04	20.31	20.65	20.73	20.34	
5	64QAM	1	0	20.03	20.22	20.06	20.13	20.00	22.00
5	64QAM	1	12	20.10	20.03	20.36	20.28	20.11	
5	64QAM	1	24	20.06	20.04	20.38	20.25	20.11	
5	64QAM	12	0	19.13	19.28	19.44	19.70	19.45	
5	64QAM	12	7	19.14	19.11	19.52	19.54	19.41	21.00
5	64QAM	12	13	19.15	19.13	19.57	19.65	19.35	
5	64QAM	25	0	19.03	19.22	19.55	19.47	19.29	
5	256QAM	1	0	17.32	17.34	17.11	17.40	17.19	19.00
5	256QAM	1	12	17.00	17.31	17.26	17.40	17.36	
5	256QAM	1	24	17.12	17.23	17.24	17.44	17.03	
5	256QAM	12	0	17.10	17.33	17.64	17.88	17.53	19.00
5	256QAM	12	7	17.07	17.40	17.51	17.85	17.38	
5	256QAM	12	13	17.06	17.30	17.49	17.55	17.27	
5	256QAM	25	0	17.04	17.49	17.41	17.68	17.44	

**<LTE Band 41_Ant 8_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	22.44	22.50	22.90	22.88	22.63	24.00
20	QPSK	1	49	22.34	22.44	22.89	22.71	22.61	
20	QPSK	1	99	22.39	22.45	22.81	22.84	22.51	
20	QPSK	50	0	21.48	21.55	21.90	21.89	21.67	23.00
20	QPSK	50	24	21.47	21.53	21.87	21.88	21.66	
20	QPSK	50	50	21.44	21.52	21.84	21.86	21.63	
20	QPSK	100	0	21.44	21.52	21.89	21.85	21.61	
20	16QAM	1	0	21.32	21.50	21.73	21.77	21.66	23.00
20	16QAM	1	49	21.45	21.53	21.93	21.91	21.70	
20	16QAM	1	99	21.43	21.48	21.84	21.89	21.56	
20	16QAM	50	0	20.44	20.55	20.88	20.87	20.67	22.00
20	16QAM	50	24	20.47	20.53	20.90	20.91	20.67	
20	16QAM	50	50	20.45	20.52	20.84	20.89	20.61	
20	16QAM	100	0	20.42	20.52	20.80	20.88	20.61	
20	64QAM	1	0	20.13	20.24	20.47	20.48	20.38	22.00
20	64QAM	1	49	20.20	20.26	20.65	20.63	20.41	
20	64QAM	1	99	20.16	20.22	20.58	20.60	20.26	
20	64QAM	50	0	19.40	19.52	19.85	19.85	19.64	21.00
20	64QAM	50	24	19.44	19.51	19.86	19.87	19.64	
20	64QAM	50	50	19.41	19.49	19.81	19.86	19.59	
20	64QAM	100	0	19.40	19.49	19.79	19.84	19.59	
20	256QAM	1	0	17.04	17.57	17.57	17.73	17.58	19.00
20	256QAM	1	49	17.13	17.60	17.63	17.83	17.58	
20	256QAM	1	99	17.15	17.42	17.49	17.75	17.44	
20	256QAM	50	0	17.31	17.83	17.90	18.08	17.84	19.00
20	256QAM	50	24	17.35	17.80	17.84	18.09	17.83	
20	256QAM	50	50	17.34	17.75	17.75	18.03	17.77	
20	256QAM	100	0	17.31	17.73	17.75	18.03	17.76	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	22.38	22.40	22.90	22.87	22.56	24.00
15	QPSK	1	37	22.26	22.36	22.86	22.63	22.58	
15	QPSK	1	74	22.34	22.39	22.72	22.84	22.50	
15	QPSK	36	0	21.48	21.53	21.86	21.83	21.59	23.00
15	QPSK	36	20	21.45	21.53	21.77	21.79	21.65	
15	QPSK	36	39	21.35	21.51	21.81	21.78	21.63	
15	QPSK	75	0	21.40	21.46	21.88	21.78	21.56	
15	16QAM	1	0	21.23	21.49	21.66	21.73	21.60	23.00
15	16QAM	1	37	21.43	21.45	21.88	21.83	21.65	
15	16QAM	1	74	21.37	21.42	21.84	21.79	21.52	
15	16QAM	36	0	20.39	20.49	20.84	20.77	20.61	22.00
15	16QAM	36	20	20.39	20.46	20.89	20.88	20.57	
15	16QAM	36	39	20.45	20.44	20.80	20.84	20.51	
15	16QAM	75	0	20.36	20.48	20.78	20.83	20.55	
15	64QAM	1	0	20.05	20.19	20.37	20.45	20.32	22.00
15	64QAM	1	37	20.16	20.21	20.62	20.59	20.36	
15	64QAM	1	74	20.08	20.15	20.51	20.59	20.21	
15	64QAM	36	0	19.40	19.48	19.83	19.77	19.54	21.00
15	64QAM	36	20	19.35	19.42	19.81	19.77	19.54	
15	64QAM	36	39	19.37	19.40	19.72	19.83	19.49	
15	64QAM	75	0	19.36	19.44	19.71	19.84	19.56	
15	256QAM	1	0	17.04	17.48	17.55	17.66	17.53	19.00
15	256QAM	1	37	17.04	17.54	17.60	17.78	17.49	
15	256QAM	1	74	17.11	17.34	17.41	17.74	17.39	
15	256QAM	36	0	17.22	17.74	17.88	17.99	17.75	19.00
15	256QAM	36	20	17.33	17.74	17.79	18.08	17.81	
15	256QAM	36	39	17.24	17.75	17.65	17.93	17.71	
15	256QAM	75	0	17.23	17.69	17.70	18.01	17.67	



FCC SAR TEST REPORT

Report No. : FA490504A

Channel				39700	40160	40620	41080	41540	Tune-up limit
Frequency (MHz)				2501	2547	2593	2639	2685	(dBm)
10	QPSK	1	0	22.42	22.44	22.87	22.87	22.53	24.00
10	QPSK	1	25	22.32	22.41	22.85	22.67	22.52	
10	QPSK	1	49	22.35	22.38	22.73	22.83	22.45	
10	QPSK	25	0	21.45	21.51	21.87	21.79	21.65	23.00
10	QPSK	25	12	21.41	21.44	21.84	21.86	21.61	
10	QPSK	25	25	21.41	21.51	21.80	21.81	21.60	
10	QPSK	50	0	21.34	21.44	21.79	21.78	21.57	23.00
10	16QAM	1	0	21.32	21.47	21.72	21.72	21.57	
10	16QAM	1	25	21.45	21.46	21.84	21.91	21.70	
10	16QAM	1	49	21.33	21.43	21.84	21.88	21.53	22.00
10	16QAM	25	0	20.43	20.50	20.86	20.85	20.63	
10	16QAM	25	12	20.41	20.44	20.84	20.89	20.57	
10	16QAM	25	25	20.38	20.42	20.81	20.84	20.55	22.00
10	16QAM	50	0	20.37	20.43	20.72	20.78	20.56	
10	64QAM	1	0	20.08	20.14	20.37	20.43	20.31	
10	64QAM	1	25	20.17	20.21	20.62	20.61	20.31	21.00
10	64QAM	1	49	20.15	20.22	20.52	20.51	20.16	
10	64QAM	25	0	19.37	19.50	19.75	19.85	19.55	
10	64QAM	25	12	19.42	19.50	19.78	19.82	19.54	19.00
10	64QAM	25	25	19.34	19.41	19.75	19.84	19.58	
10	64QAM	50	0	19.34	19.48	19.72	19.75	19.57	
10	256QAM	1	0	17.02	17.54	17.54	17.71	17.55	19.00
10	256QAM	1	25	17.05	17.59	17.57	17.77	17.52	
10	256QAM	1	49	17.11	17.32	17.44	17.74	17.38	
10	256QAM	25	0	17.21	17.82	17.87	18.03	17.76	19.00
10	256QAM	25	12	17.33	17.79	17.80	18.01	17.81	
10	256QAM	25	25	17.32	17.70	17.74	17.96	17.75	
10	256QAM	50	0	17.22	17.66	17.65	17.94	17.68	
Channel				39675	40148	40620	41093	41565	Tune-up limit
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	(dBm)
5	QPSK	1	0	22.42	22.49	22.80	22.81	22.56	24.00
5	QPSK	1	12	22.24	22.34	22.89	22.61	22.53	
5	QPSK	1	24	22.37	22.40	22.74	22.82	22.51	
5	QPSK	12	0	21.48	21.52	21.90	21.89	21.67	23.00
5	QPSK	12	7	21.42	21.43	21.80	21.80	21.56	
5	QPSK	12	13	21.35	21.52	21.75	21.84	21.62	
5	QPSK	25	0	21.36	21.50	21.81	21.85	21.60	23.00
5	16QAM	1	0	21.27	21.44	21.70	21.72	21.60	
5	16QAM	1	12	21.37	21.50	21.93	21.82	21.66	
5	16QAM	1	24	21.38	21.46	21.77	21.81	21.55	22.00
5	16QAM	12	0	20.43	20.49	20.80	20.86	20.67	
5	16QAM	12	7	20.41	20.46	20.88	20.86	20.57	
5	16QAM	12	13	20.41	20.43	20.75	20.81	20.61	22.00
5	16QAM	25	0	20.32	20.45	20.79	20.81	20.60	
5	64QAM	1	0	20.07	20.22	20.47	20.42	20.37	
5	64QAM	1	12	20.15	20.20	20.56	20.53	20.34	21.00
5	64QAM	1	24	20.14	20.21	20.56	20.56	20.20	
5	64QAM	12	0	19.31	19.48	19.84	19.85	19.61	
5	64QAM	12	7	19.35	19.41	19.79	19.87	19.59	19.00
5	64QAM	12	13	19.38	19.42	19.80	19.84	19.53	
5	64QAM	25	0	19.34	19.39	19.76	19.81	19.54	
5	256QAM	1	0	17.00	17.56	17.47	17.68	17.53	19.00
5	256QAM	1	12	17.11	17.53	17.63	17.79	17.54	
5	256QAM	1	24	17.12	17.32	17.46	17.75	17.38	
5	256QAM	12	0	17.29	17.77	17.86	18.06	17.78	19.00
5	256QAM	12	7	17.30	17.72	17.80	18.00	17.80	
5	256QAM	12	13	17.34	17.67	17.68	17.99	17.74	
5	256QAM	25	0	17.23	17.65	17.74	18.00	17.69	

**<LTE Band 41_Ant 5_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	16.69	16.57	16.95	16.66	16.72	17.50
20	QPSK	1	49	16.44	16.53	16.83	16.37	16.56	
20	QPSK	1	99	16.65	16.41	16.88	16.63	16.59	
20	QPSK	50	0	16.55	16.44	16.92	16.43	16.54	17.50
20	QPSK	50	24	16.68	16.64	16.90	16.69	16.68	
20	QPSK	50	50	16.81	16.65	16.86	16.76	16.76	
20	QPSK	100	0	16.54	16.51	16.91	16.49	16.69	17.50
20	16QAM	1	0	16.45	16.40	16.70	16.49	16.49	
20	16QAM	1	49	16.65	16.49	16.80	16.65	16.63	
20	16QAM	1	99	16.59	16.68	16.78	16.52	16.81	17.50
20	16QAM	50	0	16.88	16.59	16.86	16.80	16.76	
20	16QAM	50	24	16.75	16.69	16.87	16.58	16.69	
20	16QAM	50	50	16.65	16.63	16.83	16.65	16.59	17.50
20	16QAM	100	0	16.72	16.64	16.87	16.74	16.67	
20	64QAM	1	0	16.51	16.46	16.84	16.43	16.65	
20	64QAM	1	49	16.37	16.30	16.70	16.43	16.39	17.50
20	64QAM	1	99	16.62	16.43	16.76	16.60	16.53	
20	64QAM	50	0	16.57	16.60	16.70	16.48	16.77	
20	64QAM	50	24	16.85	16.49	16.85	16.72	16.71	17.50
20	64QAM	50	50	16.71	16.66	16.80	16.48	16.63	
20	64QAM	100	0	16.63	16.56	16.76	16.64	16.56	
20	256QAM	1	0	16.71	16.62	16.77	16.68	16.61	17.50
20	256QAM	1	49	16.48	16.43	16.84	16.35	16.61	
20	256QAM	1	99	16.33	16.22	16.64	16.40	16.36	
20	256QAM	50	0	16.53	16.39	16.70	16.52	16.49	17.50
20	256QAM	50	24	16.47	16.59	16.65	16.46	16.72	
20	256QAM	50	50	16.82	16.45	16.79	16.63	16.71	
20	256QAM	100	0	16.66	16.60	16.70	16.39	16.59	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	16.59	16.47	16.85	16.56	16.62	17.50
15	QPSK	1	37	16.59	16.68	16.73	16.52	16.71	
15	QPSK	1	74	16.80	16.56	16.78	16.78	16.74	
15	QPSK	36	0	16.70	16.59	16.82	16.58	16.69	17.50
15	QPSK	36	20	16.58	16.54	16.80	16.59	16.58	
15	QPSK	36	39	16.71	16.55	16.76	16.66	16.66	
15	QPSK	75	0	16.44	16.41	16.81	16.39	16.59	17.50
15	16QAM	1	0	16.35	16.30	16.60	16.39	16.39	
15	16QAM	1	37	16.55	16.39	16.70	16.55	16.53	
15	16QAM	1	74	16.49	16.58	16.68	16.42	16.71	17.50
15	16QAM	36	0	16.78	16.49	16.76	16.70	16.66	
15	16QAM	36	20	16.65	16.59	16.77	16.48	16.59	
15	16QAM	36	39	16.55	16.53	16.73	16.55	16.49	17.50
15	16QAM	75	0	16.62	16.54	16.77	16.64	16.57	
15	64QAM	1	0	16.41	16.36	16.74	16.33	16.55	
15	64QAM	1	37	16.27	16.20	16.60	16.33	16.29	17.50
15	64QAM	1	74	16.52	16.33	16.66	16.50	16.43	
15	64QAM	36	0	16.47	16.50	16.60	16.38	16.67	
15	64QAM	36	20	16.75	16.39	16.75	16.62	16.61	17.50
15	64QAM	36	39	16.61	16.56	16.70	16.38	16.53	
15	64QAM	75	0	16.53	16.46	16.66	16.54	16.46	
15	256QAM	1	0	16.61	16.52	16.67	16.58	16.51	17.50
15	256QAM	1	37	16.38	16.33	16.74	16.25	16.51	
15	256QAM	1	74	16.23	16.12	16.54	16.30	16.26	
15	256QAM	36	0	16.43	16.29	16.60	16.42	16.39	17.50
15	256QAM	36	20	16.37	16.49	16.55	16.36	16.62	
15	256QAM	36	39	16.72	16.35	16.69	16.53	16.61	
15	256QAM	75	0	16.56	16.50	16.60	16.29	16.49	



FCC SAR TEST REPORT

Report No. : FA490504A

Channel				39700	40160	40620	41080	41540	Tune-up limit
Frequency (MHz)				2501	2547	2593	2639	2685	(dBm)
10	QPSK	1	0	16.62	16.50	16.88	16.59	16.65	17.50
10	QPSK	1	25	16.62	16.71	16.76	16.55	16.74	
10	QPSK	1	49	16.83	16.59	16.81	16.81	16.77	
10	QPSK	25	0	16.73	16.62	16.85	16.61	16.72	17.50
10	QPSK	25	12	16.61	16.57	16.83	16.62	16.61	
10	QPSK	25	25	16.74	16.58	16.79	16.69	16.69	
10	QPSK	50	0	16.47	16.44	16.84	16.42	16.62	17.50
10	16QAM	1	0	16.38	16.33	16.63	16.42	16.42	
10	16QAM	1	25	16.58	16.42	16.73	16.58	16.56	
10	16QAM	1	49	16.52	16.61	16.71	16.45	16.74	17.50
10	16QAM	25	0	16.81	16.52	16.79	16.73	16.69	
10	16QAM	25	12	16.68	16.62	16.80	16.51	16.62	
10	16QAM	25	25	16.58	16.56	16.76	16.58	16.52	17.50
10	16QAM	50	0	16.65	16.57	16.80	16.67	16.60	
10	64QAM	1	0	16.44	16.39	16.77	16.36	16.58	
10	64QAM	1	25	16.30	16.23	16.63	16.36	16.32	17.50
10	64QAM	1	49	16.55	16.36	16.69	16.53	16.46	
10	64QAM	25	0	16.50	16.53	16.63	16.41	16.70	
10	64QAM	25	12	16.78	16.42	16.78	16.65	16.64	17.50
10	64QAM	25	25	16.64	16.59	16.73	16.41	16.56	
10	64QAM	50	0	16.56	16.49	16.69	16.57	16.49	
10	256QAM	1	0	16.64	16.55	16.70	16.61	16.54	17.50
10	256QAM	1	25	16.41	16.36	16.77	16.28	16.54	
10	256QAM	1	49	16.26	16.15	16.57	16.33	16.29	
10	256QAM	25	0	16.46	16.32	16.63	16.45	16.42	17.50
10	256QAM	25	12	16.40	16.52	16.58	16.39	16.65	
10	256QAM	25	25	16.75	16.38	16.72	16.56	16.64	
10	256QAM	50	0	16.59	16.53	16.63	16.32	16.52	
Channel				39675	40148	40620	41093	41565	Tune-up limit
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	(dBm)
5	QPSK	1	0	16.58	16.46	16.84	16.55	16.61	17.50
5	QPSK	1	12	16.58	16.67	16.72	16.51	16.70	
5	QPSK	1	24	16.79	16.55	16.77	16.77	16.73	
5	QPSK	12	0	16.69	16.58	16.81	16.57	16.68	17.50
5	QPSK	12	7	16.57	16.53	16.79	16.58	16.57	
5	QPSK	12	13	16.70	16.54	16.75	16.65	16.65	
5	QPSK	25	0	16.43	16.40	16.80	16.38	16.58	17.50
5	16QAM	1	0	16.34	16.29	16.59	16.38	16.38	
5	16QAM	1	12	16.54	16.38	16.69	16.54	16.52	
5	16QAM	1	24	16.48	16.57	16.67	16.41	16.70	17.50
5	16QAM	12	0	16.77	16.48	16.75	16.69	16.65	
5	16QAM	12	7	16.64	16.58	16.76	16.47	16.58	
5	16QAM	12	13	16.54	16.52	16.72	16.54	16.48	17.50
5	16QAM	25	0	16.61	16.53	16.76	16.63	16.56	
5	64QAM	1	0	16.40	16.35	16.73	16.32	16.54	
5	64QAM	1	12	16.26	16.19	16.59	16.32	16.28	17.50
5	64QAM	1	24	16.51	16.32	16.65	16.49	16.42	
5	64QAM	12	0	16.46	16.49	16.59	16.37	16.66	
5	64QAM	12	7	16.74	16.38	16.74	16.61	16.60	17.50
5	64QAM	12	13	16.60	16.55	16.69	16.37	16.52	
5	64QAM	25	0	16.52	16.45	16.65	16.53	16.45	
5	256QAM	1	0	16.60	16.51	16.66	16.57	16.50	17.50
5	256QAM	1	12	16.37	16.32	16.73	16.24	16.50	
5	256QAM	1	24	16.22	16.11	16.53	16.29	16.25	
5	256QAM	12	0	16.42	16.28	16.59	16.41	16.38	17.50
5	256QAM	12	7	16.36	16.48	16.54	16.35	16.61	
5	256QAM	12	13	16.71	16.34	16.68	16.52	16.60	
5	256QAM	25	0	16.55	16.49	16.59	16.28	16.48	



<LTE Band 41_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	16.10	16.37	16.57	16.44	16.55	17.50
20	QPSK	1	49	15.89	16.09	15.97	16.22	16.33	
20	QPSK	1	99	15.86	16.20	16.08	16.27	16.36	
20	QPSK	50	0	15.88	16.05	16.06	16.28	16.23	17.50
20	QPSK	50	24	15.86	15.98	15.89	16.28	16.18	
20	QPSK	50	50	15.87	16.05	16.30	16.21	16.20	
20	QPSK	100	0	15.78	16.10	16.05	16.07	16.23	17.50
20	16QAM	1	0	15.84	16.19	15.97	16.15	16.33	
20	16QAM	1	49	15.79	16.07	15.97	16.15	16.26	
20	16QAM	1	99	15.69	15.89	15.83	15.94	16.09	17.50
20	16QAM	50	0	15.95	16.04	15.93	16.23	16.16	
20	16QAM	50	24	15.77	15.82	15.96	16.12	16.08	
20	16QAM	50	50	15.85	16.01	15.78	16.13	16.20	17.50
20	16QAM	100	0	15.74	15.94	15.84	16.07	16.16	
20	64QAM	1	0	15.81	16.10	16.06	16.12	16.21	
20	64QAM	1	49	15.81	16.10	15.92	16.15	16.29	17.50
20	64QAM	1	99	15.80	16.04	15.96	16.07	16.16	
20	64QAM	50	0	15.67	15.84	15.71	15.95	16.07	
20	64QAM	50	24	15.78	15.85	15.75	16.08	16.08	17.50
20	64QAM	50	50	15.74	16.02	15.86	16.08	16.17	
20	64QAM	100	0	15.80	15.73	15.71	15.83	15.90	
20	256QAM	1	0	15.77	15.90	15.69	15.79	16.06	17.50
20	256QAM	1	49	15.98	15.80	15.80	16.02	16.00	
20	256QAM	1	99	15.85	15.80	15.81	15.91	15.98	
20	256QAM	50	0	15.80	15.76	15.79	15.85	15.85	17.50
20	256QAM	50	24	15.89	15.83	15.82	15.91	15.99	
20	256QAM	50	50	15.59	15.63	15.76	15.67	15.87	
20	256QAM	100	0	15.53	15.53	15.64	15.62	15.70	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	16.01	16.23	16.17	16.33	16.47	17.50
15	QPSK	1	37	15.75	15.98	15.81	16.09	16.16	
15	QPSK	1	74	15.69	16.12	15.92	16.14	16.25	
15	QPSK	36	0	15.78	15.90	15.91	16.13	16.14	17.50
15	QPSK	36	20	15.69	15.81	15.74	16.20	16.03	
15	QPSK	36	39	15.78	15.94	15.93	16.06	16.14	
15	QPSK	75	0	15.61	16.00	15.93	15.92	16.14	17.50
15	16QAM	1	0	15.68	16.02	15.80	16.07	16.20	
15	16QAM	1	37	15.64	15.99	15.82	16.04	16.17	
15	16QAM	1	74	15.57	15.73	15.73	15.79	15.94	17.50
15	16QAM	36	0	15.84	15.87	15.80	16.12	16.03	
15	16QAM	36	20	15.64	15.70	15.81	16.04	15.94	
15	16QAM	36	39	15.69	15.86	15.61	15.96	16.07	17.50
15	16QAM	75	0	15.60	15.81	15.75	15.99	16.03	
15	64QAM	1	0	15.71	15.95	15.97	16.00	16.04	
15	64QAM	1	37	15.64	15.97	15.79	16.01	16.17	17.50
15	64QAM	1	74	15.64	15.96	15.88	15.90	16.08	
15	64QAM	36	0	15.50	15.73	15.62	15.85	15.91	
15	64QAM	36	20	15.69	15.73	15.59	15.93	16.00	17.50
15	64QAM	36	39	15.57	15.85	15.73	15.93	16.05	
15	64QAM	75	0	15.66	15.60	15.61	15.68	15.73	
15	256QAM	1	0	15.60	15.77	15.58	15.70	15.93	17.50
15	256QAM	1	37	15.83	15.70	15.65	15.88	15.83	
15	256QAM	1	74	15.77	15.63	15.73	15.83	15.88	
15	256QAM	36	0	15.68	15.60	15.62	15.75	15.69	17.50
15	256QAM	36	20	15.74	15.72	15.70	15.79	15.90	
15	256QAM	36	39	15.60	15.64	15.60	15.53	15.70	
15	256QAM	75	0	15.55	15.57	15.51	15.53	15.62	



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Channel				39700	40160	40620	41080	41540	Tune-up limit
Frequency (MHz)				2501	2547	2593	2639	2685	(dBm)
10	QPSK	1	0	15.98	16.21	16.15	16.27	16.38	17.50
10	QPSK	1	25	15.80	16.00	15.89	16.05	16.25	
10	QPSK	1	49	15.73	16.07	15.96	16.16	16.21	
10	QPSK	25	0	15.73	15.97	15.95	16.15	16.10	17.50
10	QPSK	25	12	15.69	15.87	15.79	16.12	16.07	
10	QPSK	25	25	15.71	15.95	15.91	16.08	16.18	
10	QPSK	50	0	15.66	15.95	15.97	15.94	16.13	17.50
10	16QAM	1	0	15.75	16.10	15.88	16.05	16.20	
10	16QAM	1	25	15.63	15.99	15.82	16.07	16.16	
10	16QAM	1	49	15.58	15.78	15.68	15.86	15.93	17.50
10	16QAM	25	0	15.80	15.96	15.83	16.07	16.02	
10	16QAM	25	12	15.63	15.65	15.80	15.95	16.00	
10	16QAM	25	25	15.72	15.90	15.63	16.00	16.11	17.50
10	16QAM	50	0	15.59	15.79	15.70	15.97	16.08	
10	64QAM	1	0	15.66	15.97	15.97	15.99	16.10	
10	64QAM	1	25	15.71	15.99	15.80	16.07	16.18	17.50
10	64QAM	1	49	15.66	15.87	15.87	15.95	16.06	
10	64QAM	25	0	15.54	15.76	15.58	15.80	15.97	
10	64QAM	25	12	15.70	15.77	15.62	15.94	15.92	17.50
10	64QAM	25	25	15.87	15.93	15.69	15.99	16.00	
10	64QAM	50	0	15.68	15.57	15.54	15.72	15.74	
10	256QAM	1	0	15.64	15.77	15.59	15.63	15.92	17.50
10	256QAM	1	25	15.87	15.71	15.66	15.90	15.92	
10	256QAM	1	49	15.70	15.69	15.69	15.82	15.87	
10	256QAM	25	0	15.67	15.63	15.64	15.73	15.68	17.50
10	256QAM	25	12	15.72	15.70	15.66	15.80	15.91	
10	256QAM	25	25	15.55	15.52	15.64	15.57	15.75	
10	256QAM	50	0	15.57	15.52	15.51	15.53	15.60	
Channel				39675	40148	40620	41093	41565	Tune-up limit
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	(dBm)
5	QPSK	1	0	15.97	16.26	16.17	16.36	16.40	17.50
5	QPSK	1	12	15.75	15.97	15.88	16.09	16.21	
5	QPSK	1	24	15.78	16.10	15.98	16.18	16.24	
5	QPSK	12	0	15.73	15.91	15.91	16.14	16.15	17.50
5	QPSK	12	7	15.77	15.82	15.79	16.12	16.09	
5	QPSK	12	13	15.76	15.94	15.92	16.06	16.16	
5	QPSK	25	0	15.69	15.96	15.90	15.91	16.07	17.50
5	16QAM	1	0	15.73	16.05	15.82	16.07	16.20	
5	16QAM	1	12	15.63	15.94	15.83	16.07	16.16	
5	16QAM	1	24	15.57	15.76	15.66	15.80	16.00	17.50
5	16QAM	12	0	15.85	15.90	15.79	16.14	16.05	
5	16QAM	12	7	15.69	15.68	15.81	15.97	15.93	
5	16QAM	12	13	15.75	15.84	15.70	16.00	16.10	17.50
5	16QAM	25	0	15.61	15.82	15.71	15.99	16.01	
5	64QAM	1	0	15.65	15.94	15.98	16.02	16.09	
5	64QAM	1	12	15.67	15.95	15.83	15.99	16.17	17.50
5	64QAM	1	24	15.65	15.90	15.85	15.96	16.02	
5	64QAM	12	0	15.51	15.73	15.60	15.80	15.93	
5	64QAM	12	7	15.62	15.75	15.62	15.99	15.99	17.50
5	64QAM	12	13	15.93	15.89	15.72	15.93	16.03	
5	64QAM	25	0	15.65	15.65	15.60	15.74	15.78	
5	256QAM	1	0	15.60	15.82	15.59	15.62	15.95	17.50
5	256QAM	1	12	15.87	15.66	15.64	15.90	15.92	
5	256QAM	1	24	15.69	15.72	15.73	15.78	15.86	
5	256QAM	12	0	15.70	15.59	15.71	15.75	15.74	17.50
5	256QAM	12	7	15.75	15.69	15.68	15.75	15.82	
5	256QAM	12	13	15.50	15.52	15.67	15.59	15.76	
5	256QAM	25	0	15.67	15.54	15.66	15.50	15.54	



<LTE Band 42_Ant 8_Laptop Mode> Part 96

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				43190	43340	43490	
Frequency (MHz)				3560	3575	3590	
20	QPSK	1	0	21.12	21.19	21.17	22.00
20	QPSK	1	49	21.01	21.04	21.07	
20	QPSK	1	99	20.96	21.10	21.08	
20	QPSK	50	0	20.98	21.08	21.02	22.00
20	QPSK	50	24	20.83	21.02	20.85	
20	QPSK	50	50	20.95	21.01	20.93	
20	QPSK	100	0	20.98	21.02	21.03	22.00
20	16QAM	1	0	20.89	21.08	21.04	
20	16QAM	1	49	20.99	20.99	20.95	
20	16QAM	1	99	20.81	20.88	20.82	22.00
20	16QAM	50	0	20.88	21.01	21.01	
20	16QAM	50	24	20.84	20.90	20.84	
20	16QAM	50	50	20.83	20.91	20.87	22.00
20	16QAM	100	0	20.80	20.89	20.88	
20	64QAM	1	0	21.03	21.02	20.98	
20	64QAM	1	49	20.84	21.00	20.93	22.00
20	64QAM	1	99	20.77	20.97	20.82	
20	64QAM	50	0	20.66	20.91	20.77	22.00
20	64QAM	50	24	20.66	20.80	20.76	
20	64QAM	50	50	20.83	20.95	20.93	
20	64QAM	100	0	20.71	20.81	20.79	19.00
20	256QAM	1	0	18.00	17.96	17.96	
20	256QAM	1	49	18.04	18.03	18.09	
20	256QAM	1	99	17.92	17.92	17.97	19.00
20	256QAM	50	0	17.99	18.01	18.09	
20	256QAM	50	24	17.89	18.00	17.94	
20	256QAM	50	50	17.87	17.88	17.99	19.00
20	256QAM	100	0	17.88	17.87	17.83	
Channel				43165	43340	43515	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3575	3592.5	
15	QPSK	1	0	21.08	21.09	21.07	
15	QPSK	1	37	20.87	20.91	21.03	22.00
15	QPSK	1	74	20.82	20.95	20.96	
15	QPSK	36	0	20.92	21.03	20.93	22.00
15	QPSK	36	20	20.70	20.93	20.81	
15	QPSK	36	39	20.86	20.99	20.85	
15	QPSK	75	0	20.86	20.92	20.93	22.00
15	16QAM	1	0	20.79	21.03	20.97	
15	16QAM	1	37	20.91	20.95	20.84	
15	16QAM	1	74	20.64	20.71	20.66	22.00
15	16QAM	36	0	20.77	20.93	20.85	
15	16QAM	36	20	20.70	20.80	20.72	
15	16QAM	36	39	20.69	20.88	20.78	22.00
15	16QAM	75	0	20.66	20.70	20.72	
15	64QAM	1	0	20.95	20.96	20.92	
15	64QAM	1	37	20.70	20.96	20.79	22.00
15	64QAM	1	74	20.75	20.86	20.78	
15	64QAM	36	0	20.54	20.83	20.59	
15	64QAM	36	20	20.60	20.65	20.63	22.00
15	64QAM	36	39	20.77	20.94	20.87	
15	64QAM	75	0	20.61	20.73	20.70	
15	256QAM	1	0	17.92	17.85	17.85	19.00
15	256QAM	1	37	17.96	17.97	18.00	
15	256QAM	1	74	17.85	17.83	17.97	
15	256QAM	36	0	17.82	17.81	18.04	19.00
15	256QAM	36	20	17.83	17.81	17.87	
15	256QAM	36	39	17.85	17.84	17.90	



FCC SAR TEST REPORT

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15	256QAM	75	0	17.76	17.77	17.73	Tune-up limit (dBm)
Channel				43140	43340	43540	
Frequency (MHz)				3555	3575	3595	
10	QPSK	1	0	21.09	21.18	21.15	22.00
10	QPSK	1	25	20.86	20.89	21.00	
10	QPSK	1	49	20.83	20.93	21.01	
10	QPSK	25	0	20.90	21.01	20.86	22.00
10	QPSK	25	12	20.68	20.92	20.72	
10	QPSK	25	25	20.81	20.86	20.79	
10	QPSK	50	0	20.87	20.90	20.93	
10	16QAM	1	0	20.87	21.06	20.93	22.00
10	16QAM	1	25	20.86	20.81	20.87	
10	16QAM	1	49	20.74	20.85	20.70	
10	16QAM	25	0	20.82	20.82	20.87	22.00
10	16QAM	25	12	20.70	20.74	20.79	
10	16QAM	25	25	20.65	20.83	20.77	
10	16QAM	50	0	20.68	20.75	20.85	
10	64QAM	1	0	20.96	21.01	20.88	22.00
10	64QAM	1	25	20.71	20.90	20.85	
10	64QAM	1	49	20.64	20.87	20.73	
10	64QAM	25	0	20.66	20.80	20.67	22.00
10	64QAM	25	12	20.53	20.71	20.60	
10	64QAM	25	25	20.74	20.78	20.83	
10	64QAM	50	0	20.58	20.71	20.73	
10	256QAM	1	0	17.89	17.87	17.86	19.00
10	256QAM	1	25	17.94	17.95	18.06	
10	256QAM	1	49	17.75	17.82	17.80	
10	256QAM	25	0	17.92	17.95	18.02	19.00
10	256QAM	25	12	17.81	17.87	17.84	
10	256QAM	25	25	17.75	17.81	17.85	
10	256QAM	50	0	17.73	17.80	17.81	
Channel				43115	43340	43565	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3575	3597.5	
5	QPSK	1	0	21.12	21.17	21.13	22.00
5	QPSK	1	12	20.92	20.98	20.96	
5	QPSK	1	24	20.85	20.93	20.96	
5	QPSK	12	0	20.83	21.00	20.95	22.00
5	QPSK	12	7	20.74	20.93	20.73	
5	QPSK	12	13	20.89	20.94	20.79	
5	QPSK	25	0	20.87	20.93	20.87	
5	16QAM	1	0	20.78	20.94	20.99	22.00
5	16QAM	1	12	20.91	20.86	20.84	
5	16QAM	1	24	20.65	20.72	20.75	
5	16QAM	12	0	20.74	20.94	20.91	22.00
5	16QAM	12	7	20.69	20.77	20.79	
5	16QAM	12	13	20.77	20.81	20.73	
5	16QAM	25	0	20.74	20.86	20.79	
5	64QAM	1	0	20.91	20.95	20.87	22.00
5	64QAM	1	12	20.72	20.95	20.88	
5	64QAM	1	24	20.71	20.92	20.76	
5	64QAM	12	0	20.61	20.80	20.75	22.00
5	64QAM	12	7	20.57	20.68	20.67	
5	64QAM	12	13	20.76	20.91	20.85	
5	64QAM	25	0	20.64	20.73	20.68	
5	256QAM	1	0	17.94	17.84	17.87	19.00
5	256QAM	1	12	17.85	17.85	18.00	
5	256QAM	1	24	17.72	17.83	17.90	
5	256QAM	12	0	17.91	17.89	17.91	19.00
5	256QAM	12	7	17.72	17.86	17.79	
5	256QAM	12	13	17.83	17.79	17.89	
5	256QAM	25	0	17.78	17.75	17.78	

**<LTE Band 42_Ant 8_Tablet Mode> Part 96**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				43190	43340	43490	
Frequency (MHz)				3560	3575	3590	
20	QPSK	1	0	14.84	15.05	14.93	15.50
20	QPSK	1	49	14.59	14.80	14.62	
20	QPSK	1	99	14.67	14.88	14.81	
20	QPSK	50	0	14.52	14.91	14.67	15.50
20	QPSK	50	24	14.40	14.82	14.60	
20	QPSK	50	50	14.59	14.82	14.69	
20	QPSK	100	0	14.63	14.68	14.58	15.50
20	16QAM	1	0	14.58	14.82	14.79	
20	16QAM	1	49	14.49	14.80	14.60	
20	16QAM	1	99	14.38	14.62	14.47	15.50
20	16QAM	50	0	14.45	14.82	14.62	
20	16QAM	50	24	14.51	14.69	14.42	
20	16QAM	50	50	14.35	14.75	14.52	15.50
20	16QAM	100	0	14.33	14.68	14.45	
20	64QAM	1	0	14.59	14.77	14.65	
20	64QAM	1	49	14.44	14.76	14.62	15.50
20	64QAM	1	99	14.48	14.71	14.54	
20	64QAM	50	0	14.29	14.59	14.39	
20	64QAM	50	24	14.31	14.72	14.36	15.50
20	64QAM	50	50	14.47	14.69	14.53	
20	64QAM	100	0	14.26	14.52	14.25	
20	256QAM	1	0	14.29	14.43	14.44	15.50
20	256QAM	1	49	14.37	14.65	14.40	
20	256QAM	1	99	14.33	14.57	14.44	
20	256QAM	50	0	14.38	14.52	14.28	15.50
20	256QAM	50	24	14.35	14.51	14.34	
20	256QAM	50	50	14.23	14.29	14.22	
20	256QAM	100	0	14.15	14.27	14.08	Tune-up limit (dBm)
Channel				43165	43340	43515	
Frequency (MHz)				3557.5	3575	3592.5	
15	QPSK	1	0	14.68	14.92	14.80	15.50
15	QPSK	1	37	14.48	14.67	14.49	
15	QPSK	1	74	14.59	14.73	14.66	
15	QPSK	36	0	14.41	14.78	14.55	15.50
15	QPSK	36	20	14.24	14.72	14.51	
15	QPSK	36	39	14.47	14.66	14.55	
15	QPSK	75	0	14.48	14.53	14.42	15.50
15	16QAM	1	0	14.48	14.68	14.66	
15	16QAM	1	37	14.34	14.68	14.51	
15	16QAM	1	74	14.27	14.52	14.39	15.50
15	16QAM	36	0	14.29	14.68	14.49	
15	16QAM	36	20	14.35	14.57	14.30	
15	16QAM	36	39	14.24	14.66	14.38	15.50
15	16QAM	75	0	14.21	14.57	14.34	
15	64QAM	1	0	14.49	14.65	14.56	
15	64QAM	1	37	14.36	14.60	14.50	15.50
15	64QAM	1	74	14.32	14.56	14.40	
15	64QAM	36	0	14.13	14.51	14.25	
15	64QAM	36	20	14.15	14.64	14.20	15.50
15	64QAM	36	39	14.39	14.53	14.45	
15	64QAM	75	0	14.14	14.39	14.17	
15	256QAM	1	0	14.21	14.31	14.29	15.50
15	256QAM	1	37	14.24	14.55	14.27	
15	256QAM	1	74	14.23	14.47	14.33	
15	256QAM	36	0	14.29	14.44	14.15	15.50
15	256QAM	36	20	14.26	14.38	14.24	
15	256QAM	36	39	14.11	14.15	14.06	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	14.04	14.14	14.10	Tune-up limit (dBm)
Channel				43140	43340	43540	
Frequency (MHz)				3555	3575	3595	
10	QPSK	1	0	14.68	14.92	14.77	15.50
10	QPSK	1	25	14.51	14.65	14.46	
10	QPSK	1	49	14.57	14.76	14.66	
10	QPSK	25	0	14.44	14.78	14.58	15.50
10	QPSK	25	12	14.30	14.69	14.47	
10	QPSK	25	25	14.51	14.71	14.59	
10	QPSK	50	0	14.47	14.54	14.43	
10	16QAM	1	0	14.47	14.71	14.70	15.50
10	16QAM	1	25	14.36	14.69	14.47	
10	16QAM	1	49	14.29	14.49	14.37	
10	16QAM	25	0	14.36	14.67	14.51	15.50
10	16QAM	25	12	14.37	14.57	14.32	
10	16QAM	25	25	14.25	14.59	14.41	
10	16QAM	50	0	14.19	14.56	14.29	
10	64QAM	1	0	14.48	14.64	14.51	15.50
10	64QAM	1	25	14.32	14.63	14.46	
10	64QAM	1	49	14.35	14.59	14.44	
10	64QAM	25	0	14.16	14.50	14.24	15.50
10	64QAM	25	12	14.16	14.56	14.20	
10	64QAM	25	25	14.31	14.60	14.42	
10	64QAM	50	0	14.17	14.39	14.16	
10	256QAM	1	0	14.15	14.32	14.35	15.50
10	256QAM	1	25	14.24	14.49	14.31	
10	256QAM	1	49	14.18	14.47	14.30	
10	256QAM	25	0	14.28	14.44	14.16	15.50
10	256QAM	25	12	14.26	14.39	14.25	
10	256QAM	25	25	14.07	14.18	14.09	
10	256QAM	50	0	14.01	14.11	14.15	
Channel				43115	43340	43565	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3575	3597.5	
5	QPSK	1	0	14.74	14.94	14.84	15.50
5	QPSK	1	12	14.48	14.65	14.50	
5	QPSK	1	24	14.56	14.78	14.73	
5	QPSK	12	0	14.40	14.80	14.53	15.50
5	QPSK	12	7	14.28	14.67	14.45	
5	QPSK	12	13	14.45	14.67	14.56	
5	QPSK	25	0	14.48	14.53	14.48	
5	16QAM	1	0	14.43	14.71	14.68	15.50
5	16QAM	1	12	14.39	14.70	14.51	
5	16QAM	1	24	14.25	14.51	14.37	
5	16QAM	12	0	14.33	14.71	14.51	15.50
5	16QAM	12	7	14.38	14.57	14.27	
5	16QAM	12	13	14.19	14.67	14.39	
5	16QAM	25	0	14.18	14.58	14.29	
5	64QAM	1	0	14.46	14.62	14.57	15.50
5	64QAM	1	12	14.34	14.66	14.49	
5	64QAM	1	24	14.32	14.56	14.40	
5	64QAM	12	0	14.21	14.44	14.28	15.50
5	64QAM	12	7	14.15	14.63	14.28	
5	64QAM	12	13	14.33	14.55	14.42	
5	64QAM	25	0	14.13	14.40	14.10	
5	256QAM	1	0	14.19	14.32	14.34	15.50
5	256QAM	1	12	14.28	14.50	14.32	
5	256QAM	1	24	14.17	14.42	14.32	
5	256QAM	12	0	14.25	14.39	14.20	15.50
5	256QAM	12	7	14.24	14.43	14.19	
5	256QAM	12	13	14.14	14.13	14.13	
5	256QAM	25	0	13.99	14.18	14.00	

**<LTE Band 42_Ant 8_Laptop Mode> Part 27Q**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	21.10	21.12	21.09	
20	QPSK	1	49	20.93	20.95	20.96	22.00
20	QPSK	1	99	20.92	20.93	20.95	
20	QPSK	50	0	20.90	20.96	20.93	
20	QPSK	50	24	20.72	20.90	20.73	22.00
20	QPSK	50	50	20.92	20.88	20.75	
20	QPSK	100	0	20.90	20.92	20.92	
20	16QAM	1	0	20.84	20.91	20.88	22.00
20	16QAM	1	49	20.93	20.82	20.81	
20	16QAM	1	99	20.72	20.73	20.73	
20	16QAM	50	0	20.76	20.87	20.91	22.00
20	16QAM	50	24	20.78	20.79	20.69	
20	16QAM	50	50	20.76	20.81	20.74	
20	16QAM	100	0	20.72	20.80	20.75	22.00
20	64QAM	1	0	20.98	20.94	20.88	
20	64QAM	1	49	20.72	20.87	20.81	
20	64QAM	1	99	20.68	20.88	20.72	22.00
20	64QAM	50	0	20.64	20.75	20.68	
20	64QAM	50	24	20.61	20.73	20.67	
20	64QAM	50	50	20.71	20.85	20.85	22.00
20	64QAM	100	0	20.59	20.73	20.66	
20	256QAM	1	0	17.88	17.82	17.85	
20	256QAM	1	49	17.94	17.89	17.94	19.00
20	256QAM	1	99	17.86	17.76	17.80	
20	256QAM	50	0	17.95	17.89	18.00	
20	256QAM	50	24	17.81	17.86	17.81	19.00
20	256QAM	50	50	17.75	17.77	17.81	
20	256QAM	100	0	17.80	17.75	17.75	
Channel				42165	42590	43015	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	21.04	21.04	21.01	
15	QPSK	1	37	20.87	20.84	20.80	22.00
15	QPSK	1	74	20.84	20.91	20.82	
15	QPSK	36	0	20.86	20.89	20.82	22.00
15	QPSK	36	20	20.80	20.80	20.71	
15	QPSK	36	39	20.91	20.86	20.79	
15	QPSK	75	0	20.90	20.80	20.84	22.00
15	16QAM	1	0	20.78	20.89	20.86	
15	16QAM	1	37	20.92	20.88	20.80	
15	16QAM	1	74	20.73	20.77	20.67	22.00
15	16QAM	36	0	20.70	20.88	20.77	
15	16QAM	36	20	20.73	20.77	20.65	
15	16QAM	36	39	20.71	20.70	20.69	22.00
15	16QAM	75	0	20.61	20.69	20.68	
15	64QAM	1	0	20.83	20.81	20.75	
15	64QAM	1	37	20.73	20.76	20.71	22.00
15	64QAM	1	74	20.67	20.78	20.66	
15	64QAM	36	0	20.47	20.67	20.60	
15	64QAM	36	20	20.58	20.67	20.57	22.00
15	64QAM	36	39	20.69	20.77	20.83	
15	64QAM	75	0	20.62	20.68	20.63	
15	256QAM	1	0	17.87	17.70	17.86	19.00
15	256QAM	1	37	17.89	17.90	17.94	
15	256QAM	1	74	17.85	17.82	17.85	
15	256QAM	36	0	17.89	17.81	17.83	19.00
15	256QAM	36	20	17.79	17.79	17.77	
15	256QAM	36	39	17.84	17.73	17.82	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	17.71	17.65	17.62	Tune-up limit (dBm)
Channel				42140	42590	43040	
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	21.08	21.07	21.08	22.00
10	QPSK	1	25	20.86	20.94	20.91	
10	QPSK	1	49	20.80	20.94	20.86	
10	QPSK	25	0	20.84	20.97	20.87	22.00
10	QPSK	25	12	20.69	20.89	20.65	
10	QPSK	25	25	20.85	20.81	20.75	
10	QPSK	50	0	20.95	20.87	20.91	
10	16QAM	1	0	20.72	20.94	20.82	22.00
10	16QAM	1	25	20.80	20.80	20.73	
10	16QAM	1	49	20.69	20.74	20.64	
10	16QAM	25	0	20.68	20.84	20.83	22.00
10	16QAM	25	12	20.71	20.74	20.66	
10	16QAM	25	25	20.73	20.73	20.62	
10	16QAM	50	0	20.68	20.73	20.68	
10	64QAM	1	0	20.84	20.88	20.73	22.00
10	64QAM	1	25	20.76	20.73	20.68	
10	64QAM	1	49	20.59	20.80	20.61	
10	64QAM	25	0	20.47	20.69	20.59	22.00
10	64QAM	25	12	20.48	20.71	20.62	
10	64QAM	25	25	20.68	20.77	20.83	
10	64QAM	50	0	20.52	20.63	20.64	
10	256QAM	1	0	17.87	17.77	17.77	19.00
10	256QAM	1	25	17.94	17.81	17.88	
10	256QAM	1	49	17.73	17.70	17.80	
10	256QAM	25	0	17.83	17.79	17.92	19.00
10	256QAM	25	12	17.78	17.82	17.78	
10	256QAM	25	25	17.71	17.78	17.81	
10	256QAM	50	0	17.71	17.72	17.63	
Channel				42115	42590	43065	Tune-up limit (dBm)
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	21.09	21.10	21.09	22.00
5	QPSK	1	12	20.82	20.87	20.94	
5	QPSK	1	24	20.85	20.98	20.93	
5	QPSK	12	0	20.94	20.87	20.82	22.00
5	QPSK	12	7	20.70	20.85	20.70	
5	QPSK	12	13	20.89	20.90	20.72	
5	QPSK	25	0	20.77	20.83	20.76	
5	16QAM	1	0	20.80	20.91	20.84	22.00
5	16QAM	1	12	20.82	20.78	20.82	
5	16QAM	1	24	20.70	20.64	20.69	
5	16QAM	12	0	20.73	20.86	20.81	22.00
5	16QAM	12	7	20.68	20.79	20.65	
5	16QAM	12	13	20.74	20.72	20.65	
5	16QAM	25	0	20.67	20.75	20.64	
5	64QAM	1	0	20.93	20.75	20.86	22.00
5	64QAM	1	12	20.73	20.79	20.76	
5	64QAM	1	24	20.68	20.79	20.60	
5	64QAM	12	0	20.56	20.70	20.64	22.00
5	64QAM	12	7	20.56	20.59	20.54	
5	64QAM	12	13	20.63	20.70	20.74	
5	64QAM	25	0	20.63	20.67	20.63	
5	256QAM	1	0	17.95	17.79	17.83	19.00
5	256QAM	1	12	17.90	17.83	17.91	
5	256QAM	1	24	17.78	17.76	17.78	
5	256QAM	12	0	17.87	17.80	17.94	19.00
5	256QAM	12	7	17.71	17.83	17.74	
5	256QAM	12	13	17.72	17.70	17.78	
5	256QAM	25	0	17.68	17.64	17.60	



<LTE Band 42_Ant 8_Tablet Mode> Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	14.90	15.34	15.24	
20	QPSK	1	49	14.56	15.14	14.99	15.50
20	QPSK	1	99	14.76	15.12	15.15	
20	QPSK	50	0	14.65	15.16	14.96	
20	QPSK	50	24	14.47	15.10	14.90	15.50
20	QPSK	50	50	14.72	15.13	14.94	
20	QPSK	100	0	14.63	15.02	14.90	
20	16QAM	1	0	14.58	15.14	15.06	15.50
20	16QAM	1	49	14.57	15.01	14.89	
20	16QAM	1	99	14.44	14.91	14.79	
20	16QAM	50	0	14.50	15.11	14.90	15.50
20	16QAM	50	24	14.52	14.97	14.69	
20	16QAM	50	50	14.46	15.09	14.91	
20	16QAM	100	0	14.47	14.94	14.76	15.50
20	64QAM	1	0	14.63	15.02	14.89	
20	64QAM	1	49	14.52	15.05	14.89	
20	64QAM	1	99	14.52	14.99	14.85	15.50
20	64QAM	50	0	14.38	14.88	14.77	
20	64QAM	50	24	14.31	14.99	14.70	
20	64QAM	50	50	14.52	15.04	14.85	15.50
20	64QAM	100	0	14.33	14.83	14.60	
20	256QAM	1	0	14.36	14.72	14.71	
20	256QAM	1	49	14.45	14.93	14.70	15.50
20	256QAM	1	99	14.44	14.76	14.71	
20	256QAM	50	0	14.44	14.81	14.56	
20	256QAM	50	24	14.47	14.78	14.63	15.50
20	256QAM	50	50	14.33	14.57	14.51	
20	256QAM	100	0	14.25	14.55	14.39	
Channel				42165	42590	43015	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	14.74	15.21	15.11	
15	QPSK	1	37	14.40	14.96	14.82	15.50
15	QPSK	1	74	14.62	14.99	15.05	
15	QPSK	36	0	14.51	14.98	14.81	
15	QPSK	36	20	14.32	14.98	14.71	15.50
15	QPSK	36	39	14.61	14.95	14.75	
15	QPSK	75	0	14.47	14.83	14.74	
15	16QAM	1	0	14.38	14.94	14.87	15.50
15	16QAM	1	37	14.37	14.87	14.75	
15	16QAM	1	74	14.32	14.72	14.59	
15	16QAM	36	0	14.31	14.92	14.72	15.50
15	16QAM	36	20	14.33	14.83	14.56	
15	16QAM	36	39	14.33	14.99	14.79	
15	16QAM	75	0	14.30	14.81	14.62	15.50
15	64QAM	1	0	14.44	14.90	14.73	
15	64QAM	1	37	14.38	14.89	14.70	
15	64QAM	1	74	14.41	14.87	14.68	15.50
15	64QAM	36	0	14.22	14.72	14.63	
15	64QAM	36	20	14.11	14.87	14.51	
15	64QAM	36	39	14.38	14.94	14.73	15.50
15	64QAM	75	0	14.16	14.66	14.47	
15	256QAM	1	0	14.19	14.55	14.54	
15	256QAM	1	37	14.29	14.73	14.54	15.50
15	256QAM	1	74	14.27	14.63	14.53	
15	256QAM	36	0	14.27	14.70	14.39	
15	256QAM	36	20	14.31	14.68	14.52	15.50
15	256QAM	36	39	14.21	14.45	14.39	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	14.05	14.43	14.29	Tune-up limit (dBm)
Channel				42140	42590	43040	
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	14.79	15.19	15.14	15.50
10	QPSK	1	25	14.38	14.94	14.86	
10	QPSK	1	49	14.59	15.00	15.05	
10	QPSK	25	0	14.46	14.99	14.84	15.50
10	QPSK	25	12	14.35	14.92	14.73	
10	QPSK	25	25	14.52	15.02	14.79	
10	QPSK	50	0	14.44	14.82	14.79	
10	16QAM	1	0	14.44	15.01	14.86	15.50
10	16QAM	1	25	14.46	14.81	14.77	
10	16QAM	1	49	14.26	14.74	14.65	
10	16QAM	25	0	14.31	14.97	14.75	15.50
10	16QAM	25	12	14.37	14.86	14.50	
10	16QAM	25	25	14.29	14.98	14.74	
10	16QAM	50	0	14.30	14.74	14.66	
10	64QAM	1	0	14.43	14.85	14.70	15.50
10	64QAM	1	25	14.32	14.94	14.74	
10	64QAM	1	49	14.35	14.88	14.74	
10	64QAM	25	0	14.22	14.69	14.67	15.50
10	64QAM	25	12	14.11	14.80	14.60	
10	64QAM	25	25	14.36	14.92	14.70	
10	64QAM	50	0	14.22	14.66	14.48	
10	256QAM	1	0	14.22	14.58	14.52	15.50
10	256QAM	1	25	14.33	14.75	14.54	
10	256QAM	1	49	14.31	14.62	14.51	
10	256QAM	25	0	14.32	14.66	14.45	15.50
10	256QAM	25	12	14.30	14.65	14.53	
10	256QAM	25	25	14.17	14.40	14.37	
10	256QAM	50	0	14.07	14.39	14.26	
Channel				42115	42590	43065	Tune-up limit (dBm)
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	14.71	15.21	15.06	15.50
5	QPSK	1	12	14.42	15.01	14.80	
5	QPSK	1	24	14.66	14.99	15.01	
5	QPSK	12	0	14.48	15.03	14.79	15.50
5	QPSK	12	7	14.37	14.92	14.73	
5	QPSK	12	13	14.54	14.96	14.78	
5	QPSK	25	0	14.50	14.86	14.76	
5	16QAM	1	0	14.40	15.00	14.93	15.50
5	16QAM	1	12	14.43	14.82	14.76	
5	16QAM	1	24	14.28	14.74	14.67	
5	16QAM	12	0	14.38	14.94	14.76	15.50
5	16QAM	12	7	14.40	14.86	14.51	
5	16QAM	12	13	14.33	14.90	14.81	
5	16QAM	25	0	14.32	14.84	14.64	
5	64QAM	1	0	14.51	14.87	14.79	15.50
5	64QAM	1	12	14.38	14.88	14.71	
5	64QAM	1	24	14.38	14.85	14.71	
5	64QAM	12	0	14.26	14.70	14.57	15.50
5	64QAM	12	7	14.12	14.86	14.51	
5	64QAM	12	13	14.36	14.86	14.74	
5	64QAM	25	0	14.19	14.65	14.48	
5	256QAM	1	0	14.16	14.53	14.59	15.50
5	256QAM	1	12	14.26	14.81	14.56	
5	256QAM	1	24	14.28	14.65	14.54	
5	256QAM	12	0	14.27	14.69	14.36	15.50
5	256QAM	12	7	14.33	14.60	14.52	
5	256QAM	12	13	14.15	14.37	14.36	
5	256QAM	25	0	14.09	14.44	14.26	

**<LTE Band 43_Ant 8_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				43690	44090	44490	
Frequency (MHz)				3610	3650	3690	
20	QPSK	1	0	20.91	21.09	20.96	
20	QPSK	1	49	20.73	20.87	20.78	22.00
20	QPSK	1	99	20.65	20.98	20.79	
20	QPSK	50	0	20.68	20.91	20.73	
20	QPSK	50	24	20.55	20.83	20.59	22.00
20	QPSK	50	50	20.73	20.86	20.66	
20	QPSK	100	0	20.71	20.88	20.72	
20	16QAM	1	0	20.62	20.97	20.75	22.00
20	16QAM	1	49	20.68	20.84	20.71	
20	16QAM	1	99	20.60	20.74	20.60	
20	16QAM	50	0	20.59	20.87	20.71	22.00
20	16QAM	50	24	20.56	20.76	20.53	
20	16QAM	50	50	20.54	20.72	20.61	
20	16QAM	100	0	20.52	20.78	20.61	22.00
20	64QAM	1	0	20.72	20.91	20.69	
20	64QAM	1	49	20.60	20.81	20.68	
20	64QAM	1	99	20.53	20.84	20.52	22.00
20	64QAM	50	0	20.37	20.80	20.47	
20	64QAM	50	24	20.43	20.68	20.52	
20	64QAM	50	50	20.62	20.77	20.70	22.00
20	64QAM	100	0	20.45	20.67	20.53	
20	256QAM	1	0	17.77	17.77	17.69	
20	256QAM	1	49	17.77	17.90	17.79	19.00
20	256QAM	1	99	17.71	17.78	17.71	
20	256QAM	50	0	17.77	17.87	17.84	
20	256QAM	50	24	17.61	17.88	17.63	19.00
20	256QAM	50	50	17.65	17.75	17.68	
20	256QAM	100	0	17.60	17.67	17.59	
Channel				43665	44090	44515	Tune-up limit (dBm)
Frequency (MHz)				3607.5	3650	3692.5	
15	QPSK	1	0	20.88	21.08	20.93	
15	QPSK	1	37	20.70	20.84	20.85	22.00
15	QPSK	1	74	20.63	20.93	20.80	
15	QPSK	36	0	20.67	20.85	20.73	22.00
15	QPSK	36	20	20.51	20.80	20.57	
15	QPSK	36	39	20.70	20.84	20.63	
15	QPSK	75	0	20.67	20.77	20.79	22.00
15	16QAM	1	0	20.60	20.87	20.75	
15	16QAM	1	37	20.69	20.74	20.61	
15	16QAM	1	74	20.50	20.63	20.47	22.00
15	16QAM	36	0	20.62	20.83	20.78	
15	16QAM	36	20	20.54	20.65	20.46	
15	16QAM	36	39	20.50	20.64	20.59	22.00
15	16QAM	75	0	20.46	20.75	20.62	
15	64QAM	1	0	20.75	20.90	20.64	
15	64QAM	1	37	20.49	20.79	20.60	22.00
15	64QAM	1	74	20.55	20.78	20.51	
15	64QAM	36	0	20.34	20.67	20.54	
15	64QAM	36	20	20.33	20.61	20.39	22.00
15	64QAM	36	39	20.44	20.70	20.59	
15	64QAM	75	0	20.43	20.69	20.48	
15	256QAM	1	0	17.68	17.85	17.61	19.00
15	256QAM	1	37	17.78	17.85	17.70	
15	256QAM	1	74	17.67	17.74	17.67	
15	256QAM	36	0	17.75	17.87	17.77	19.00
15	256QAM	36	20	17.67	17.81	17.65	
15	256QAM	36	39	17.58	17.64	17.74	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	17.58	17.76	17.48	Tune-up limit (dBm)
Channel				43640	44090	44540	
Frequency (MHz)				3605	3650	3695	
10	QPSK	1	0	20.90	21.01	20.91	22.00
10	QPSK	1	25	20.67	20.81	20.80	
10	QPSK	1	49	20.73	20.87	20.81	
10	QPSK	25	0	20.67	20.90	20.73	22.00
10	QPSK	25	12	20.52	20.84	20.57	
10	QPSK	25	25	20.66	20.82	20.60	
10	QPSK	50	0	20.70	20.88	20.71	22.00
10	16QAM	1	0	20.51	20.79	20.71	
10	16QAM	1	25	20.60	20.77	20.69	
10	16QAM	1	49	20.44	20.77	20.52	22.00
10	16QAM	25	0	20.61	20.83	20.62	
10	16QAM	25	12	20.51	20.76	20.56	
10	16QAM	25	25	20.51	20.71	20.53	22.00
10	16QAM	50	0	20.55	20.67	20.53	
10	64QAM	1	0	20.68	20.75	20.63	
10	64QAM	1	25	20.52	20.81	20.58	22.00
10	64QAM	1	49	20.47	20.79	20.53	
10	64QAM	25	0	20.28	20.76	20.45	
10	64QAM	25	12	20.37	20.66	20.39	22.00
10	64QAM	25	25	20.45	20.70	20.54	
10	64QAM	50	0	20.45	20.59	20.42	
10	256QAM	1	0	17.64	17.80	17.68	19.00
10	256QAM	1	25	17.63	17.89	17.71	
10	256QAM	1	49	17.66	17.80	17.65	
10	256QAM	25	0	17.71	17.72	17.78	19.00
10	256QAM	25	12	17.55	17.89	17.60	
10	256QAM	25	25	17.58	17.61	17.71	
10	256QAM	50	0	17.61	17.75	17.56	Tune-up limit (dBm)
Channel				43615	44090	44565	
Frequency (MHz)				3602.5	3650	3697.5	
5	QPSK	1	0	20.81	21.05	20.95	22.00
5	QPSK	1	12	20.63	20.78	20.71	
5	QPSK	1	24	20.61	20.86	20.69	
5	QPSK	12	0	20.68	20.85	20.68	22.00
5	QPSK	12	7	20.48	20.78	20.53	
5	QPSK	12	13	20.68	20.76	20.66	
5	QPSK	25	0	20.72	20.75	20.67	22.00
5	16QAM	1	0	20.51	20.81	20.78	
5	16QAM	1	12	20.74	20.78	20.67	
5	16QAM	1	24	20.48	20.67	20.48	22.00
5	16QAM	12	0	20.61	20.77	20.73	
5	16QAM	12	7	20.46	20.79	20.49	
5	16QAM	12	13	20.53	20.65	20.51	22.00
5	16QAM	25	0	20.51	20.69	20.63	
5	64QAM	1	0	20.72	20.76	20.60	
5	64QAM	1	12	20.56	20.84	20.62	22.00
5	64QAM	1	24	20.48	20.83	20.60	
5	64QAM	12	0	20.40	20.69	20.41	
5	64QAM	12	7	20.42	20.66	20.46	22.00
5	64QAM	12	13	20.60	20.76	20.57	
5	64QAM	25	0	20.37	20.60	20.55	
5	256QAM	1	0	17.61	17.71	17.66	19.00
5	256QAM	1	12	17.75	17.83	17.76	
5	256QAM	1	24	17.67	17.78	17.70	
5	256QAM	12	0	17.62	17.83	17.75	19.00
5	256QAM	12	7	17.60	17.73	17.61	
5	256QAM	12	13	17.51	17.67	17.64	
5	256QAM	25	0	17.50	17.62	17.55	

**<LTE Band 43_Ant 8_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				43690	44090	44490	
Frequency (MHz)				3610	3650	3690	
20	QPSK	1	0	15.32	15.53	15.43	16.00
20	QPSK	1	49	15.04	15.26	15.18	
20	QPSK	1	99	15.16	15.32	15.28	
20	QPSK	50	0	15.00	15.39	15.19	16.00
20	QPSK	50	24	14.94	15.32	15.07	
20	QPSK	50	50	15.15	15.33	15.16	
20	QPSK	100	0	15.04	15.22	15.17	16.00
20	16QAM	1	0	15.05	15.26	15.26	
20	16QAM	1	49	14.95	15.28	15.07	
20	16QAM	1	99	14.85	15.05	14.99	16.00
20	16QAM	50	0	14.91	15.28	15.05	
20	16QAM	50	24	14.90	15.15	14.91	
20	16QAM	50	50	14.87	15.25	15.00	16.00
20	16QAM	100	0	14.81	15.23	15.00	
20	64QAM	1	0	15.11	15.22	15.09	
20	64QAM	1	49	14.92	15.28	15.17	16.00
20	64QAM	1	99	14.93	15.19	15.09	
20	64QAM	50	0	14.77	15.04	14.95	
20	64QAM	50	24	14.80	15.18	14.86	16.00
20	64QAM	50	50	14.90	15.21	15.03	
20	64QAM	100	0	14.69	14.95	14.80	
20	256QAM	1	0	14.78	14.89	14.99	16.00
20	256QAM	1	49	14.79	15.03	14.82	
20	256QAM	1	99	14.83	14.99	14.94	
20	256QAM	50	0	14.87	14.95	14.80	16.00
20	256QAM	50	24	14.88	14.94	14.82	
20	256QAM	50	50	14.77	14.74	14.75	
20	256QAM	100	0	14.61	14.70	14.62	Tune-up limit (dBm)
Channel				43665	44090	44515	
Frequency (MHz)				3607.5	3650	3692.5	
15	QPSK	1	0	15.16	15.40	15.28	16.00
15	QPSK	1	37	14.89	15.11	14.98	
15	QPSK	1	74	15.03	15.13	15.14	
15	QPSK	36	0	14.86	15.20	15.04	16.00
15	QPSK	36	20	14.78	15.19	14.92	
15	QPSK	36	39	14.95	15.13	14.96	
15	QPSK	75	0	14.91	15.10	15.01	16.00
15	16QAM	1	0	14.86	15.11	15.13	
15	16QAM	1	37	14.81	15.09	14.95	
15	16QAM	1	74	14.72	14.95	14.81	16.00
15	16QAM	36	0	14.72	15.10	14.86	
15	16QAM	36	20	14.75	14.97	14.74	
15	16QAM	36	39	14.76	15.07	14.80	16.00
15	16QAM	75	0	14.61	15.08	14.88	
15	64QAM	1	0	14.95	15.09	14.95	
15	64QAM	1	37	14.78	15.08	15.06	16.00
15	64QAM	1	74	14.73	15.00	14.93	
15	64QAM	36	0	14.65	14.85	14.79	
15	64QAM	36	20	14.68	15.03	14.74	16.00
15	64QAM	36	39	14.77	15.10	14.83	
15	64QAM	75	0	14.59	14.77	14.64	
15	256QAM	1	0	14.67	14.72	14.79	16.00
15	256QAM	1	37	14.66	14.88	14.71	
15	256QAM	1	74	14.63	14.86	14.75	
15	256QAM	36	0	14.71	14.76	14.64	16.00
15	256QAM	36	20	14.68	14.83	14.63	
15	256QAM	36	39	14.67	14.54	14.65	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	14.49	14.54	14.51	Tune-up limit (dBm)
Channel				43640	44090	44540	
Frequency (MHz)				3605	3650	3695	
10	QPSK	1	0	15.18	15.41	15.33	16.00
10	QPSK	1	25	14.84	15.07	15.04	
10	QPSK	1	49	14.96	15.18	15.11	
10	QPSK	25	0	14.80	15.21	15.03	16.00
10	QPSK	25	12	14.76	15.14	14.94	
10	QPSK	25	25	14.98	15.19	14.96	
10	QPSK	50	0	14.93	15.04	14.97	
10	16QAM	1	0	14.92	15.09	15.15	16.00
10	16QAM	1	25	14.82	15.14	14.94	
10	16QAM	1	49	14.71	14.89	14.88	
10	16QAM	25	0	14.72	15.18	14.90	16.00
10	16QAM	25	12	14.80	14.98	14.78	
10	16QAM	25	25	14.68	15.06	14.90	
10	16QAM	50	0	14.63	15.08	14.83	
10	64QAM	1	0	14.97	15.07	14.93	16.00
10	64QAM	1	25	14.82	15.11	15.00	
10	64QAM	1	49	14.81	15.01	14.91	
10	64QAM	25	0	14.57	14.84	14.79	16.00
10	64QAM	25	12	14.64	15.03	14.74	
10	64QAM	25	25	14.78	15.06	14.91	
10	64QAM	50	0	14.57	14.81	14.65	
10	256QAM	1	0	14.64	14.74	14.81	16.00
10	256QAM	1	25	14.61	14.83	14.67	
10	256QAM	1	49	14.65	14.79	14.74	
10	256QAM	25	0	14.69	14.77	14.64	16.00
10	256QAM	25	12	14.71	14.78	14.72	
10	256QAM	25	25	14.59	14.55	14.61	
10	256QAM	50	0	14.41	14.56	14.44	
Channel				43615	44090	44565	Tune-up limit (dBm)
Frequency (MHz)				3602.5	3650	3697.5	
5	QPSK	1	0	15.18	15.35	15.30	16.00
5	QPSK	1	12	14.86	15.14	15.06	
5	QPSK	1	24	14.98	15.18	15.08	
5	QPSK	12	0	14.83	15.27	15.09	16.00
5	QPSK	12	7	14.78	15.19	14.91	
5	QPSK	12	13	14.97	15.16	15.05	
5	QPSK	25	0	14.84	15.05	15.00	
5	16QAM	1	0	14.87	15.09	15.13	16.00
5	16QAM	1	12	14.76	15.14	14.94	
5	16QAM	1	24	14.69	14.93	14.86	
5	16QAM	12	0	14.71	15.08	14.92	16.00
5	16QAM	12	7	14.78	15.03	14.78	
5	16QAM	12	13	14.69	15.07	14.86	
5	16QAM	25	0	14.64	15.04	14.84	
5	64QAM	1	0	14.98	15.09	14.98	16.00
5	64QAM	1	12	14.75	15.09	14.98	
5	64QAM	1	24	14.78	14.99	14.96	
5	64QAM	12	0	14.61	14.87	14.84	16.00
5	64QAM	12	7	14.70	15.05	14.75	
5	64QAM	12	13	14.80	15.06	14.88	
5	64QAM	25	0	14.52	14.76	14.65	
5	256QAM	1	0	14.65	14.78	14.81	16.00
5	256QAM	1	12	14.68	14.92	14.63	
5	256QAM	1	24	14.63	14.81	14.80	
5	256QAM	12	0	14.68	14.75	14.61	16.00
5	256QAM	12	7	14.70	14.83	14.62	
5	256QAM	12	13	14.60	14.58	14.64	
5	256QAM	25	0	14.48	14.57	14.49	



<LTE Band 48_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	56150	56640	
Frequency (MHz)				3560	3609	3641	3690	
20	QPSK	1	0	20.68	20.70	20.74	20.97	22.00
20	QPSK	1	49	20.65	20.66	20.68	20.96	
20	QPSK	1	99	20.44	20.53	20.58	20.71	
20	QPSK	50	0	19.72	19.73	19.74	20.00	21.00
20	QPSK	50	24	19.68	19.72	19.73	19.92	
20	QPSK	50	50	19.59	19.64	19.65	19.84	
20	QPSK	100	0	19.66	19.67	19.69	19.86	21.00
20	16QAM	1	0	19.70	19.70	19.78	19.97	
20	16QAM	1	49	19.72	19.76	19.75	20.00	
20	16QAM	1	99	19.44	19.54	19.59	19.70	20.00
20	16QAM	50	0	18.71	18.69	18.71	18.95	
20	16QAM	50	24	18.67	18.70	18.72	18.92	
20	16QAM	50	50	18.59	18.63	18.63	18.83	20.00
20	16QAM	100	0	18.63	18.65	18.66	18.86	
20	64QAM	1	0	18.43	18.44	18.51	18.73	
20	64QAM	1	49	18.45	18.46	18.46	18.73	19.00
20	64QAM	1	99	18.18	18.28	18.35	18.46	
20	64QAM	50	0	17.64	17.65	17.67	17.90	
20	64QAM	50	24	17.62	17.65	17.66	17.84	17.00
20	64QAM	50	50	17.55	17.60	17.59	17.78	
20	64QAM	100	0	17.53	17.62	17.62	17.82	
20	256QAM	1	0	15.64	15.39	15.55	15.82	17.00
20	256QAM	1	49	15.73	15.55	15.70	15.94	
20	256QAM	1	99	15.52	15.48	15.70	15.80	
20	256QAM	50	0	15.94	15.73	15.84	16.08	17.00
20	256QAM	50	24	15.93	15.75	15.89	16.09	
20	256QAM	50	50	15.88	15.75	15.90	16.07	
20	256QAM	100	0	15.86	15.69	15.83	16.03	Tune-up limit (dBm)
Channel				55315	55820	56160	56665	
Frequency (MHz)				3557.5	3608	3642	3692.5	22.00
15	QPSK	1	0	20.61	20.62	20.65	20.88	
15	QPSK	1	37	20.62	20.56	20.60	20.88	21.00
15	QPSK	1	74	20.39	20.53	20.52	20.66	
15	QPSK	36	0	19.69	19.63	19.66	19.91	
15	QPSK	36	20	19.67	19.69	19.72	19.88	21.00
15	QPSK	36	39	19.49	19.60	19.55	19.83	
15	QPSK	75	0	19.58	19.59	19.69	19.84	
15	16QAM	1	0	19.61	19.68	19.71	19.94	21.00
15	16QAM	1	37	19.69	19.74	19.71	19.95	
15	16QAM	1	74	19.34	19.46	19.52	19.65	
15	16QAM	36	0	18.69	18.64	18.63	18.91	20.00
15	16QAM	36	20	18.66	18.61	18.65	18.87	
15	16QAM	36	39	18.51	18.55	18.56	18.73	
15	16QAM	75	0	18.63	18.59	18.57	18.76	20.00
15	64QAM	1	0	18.36	18.44	18.50	18.63	
15	64QAM	1	37	18.44	18.45	18.45	18.69	
15	64QAM	1	74	18.18	18.22	18.25	18.42	19.00
15	64QAM	36	0	17.59	17.64	17.63	17.84	
15	64QAM	36	20	17.56	17.60	17.66	17.76	
15	64QAM	36	39	17.51	17.55	17.51	17.78	17.00
15	64QAM	75	0	17.52	17.60	17.53	17.75	
15	256QAM	1	0	15.57	15.32	15.47	15.74	
15	256QAM	1	37	15.67	15.45	15.67	15.92	17.00
15	256QAM	1	74	15.49	15.40	15.67	15.73	
15	256QAM	36	0	15.89	15.73	15.80	16.04	
15	256QAM	36	20	15.84	15.67	15.89	15.99	17.00
15	256QAM	36	39	15.83	15.74	15.80	16.02	



FCC SAR TEST REPORT

Report No. : FA490504A

15	256QAM	75	0	15.79	15.62	15.74	15.99	Tune-up limit (dBm)
Channel				55290	55815	56165	56690	
Frequency (MHz)				3555	3607.5	3642.5	3695	
10	QPSK	1	0	20.58	20.61	20.72	20.87	22.00
10	QPSK	1	25	20.55	20.64	20.67	20.92	
10	QPSK	1	49	20.35	20.52	20.52	20.65	
10	QPSK	25	0	19.62	19.66	19.74	19.95	21.00
10	QPSK	25	12	19.61	19.63	19.67	19.88	
10	QPSK	25	25	19.57	19.57	19.61	19.77	
10	QPSK	50	0	19.63	19.67	19.69	19.77	
10	16QAM	1	0	19.63	19.69	19.68	19.93	21.00
10	16QAM	1	25	19.72	19.71	19.71	19.95	
10	16QAM	1	49	19.40	19.53	19.56	19.63	
10	16QAM	25	0	18.65	18.68	18.71	18.94	20.00
10	16QAM	25	12	18.58	18.66	18.72	18.84	
10	16QAM	25	25	18.51	18.63	18.63	18.77	
10	16QAM	50	0	18.59	18.60	18.61	18.82	
10	64QAM	1	0	18.37	18.41	18.50	18.65	20.00
10	64QAM	1	25	18.43	18.40	18.41	18.71	
10	64QAM	1	49	18.13	18.27	18.35	18.43	
10	64QAM	25	0	17.58	17.65	17.65	17.89	19.00
10	64QAM	25	12	17.53	17.61	17.66	17.82	
10	64QAM	25	25	17.47	17.59	17.56	17.68	
10	64QAM	50	0	17.43	17.53	17.58	17.73	
10	256QAM	1	0	15.58	15.39	15.49	15.75	17.00
10	256QAM	1	25	15.71	15.51	15.62	15.89	
10	256QAM	1	49	15.43	15.45	15.63	15.72	
10	256QAM	25	0	15.84	15.73	15.79	16.02	17.00
10	256QAM	25	12	15.87	15.73	15.85	16.05	
10	256QAM	25	25	15.78	15.67	15.90	16.02	
10	256QAM	50	0	15.81	15.67	15.83	16.02	
Channel				55265	55810	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3643	3697.5	
5	QPSK	1	0	20.64	20.61	20.70	20.88	22.00
5	QPSK	1	12	20.61	20.56	20.66	20.91	
5	QPSK	1	24	20.41	20.53	20.50	20.70	
5	QPSK	12	0	19.70	19.65	19.71	19.97	21.00
5	QPSK	12	7	19.64	19.66	19.63	19.91	
5	QPSK	12	13	19.53	19.64	19.58	19.81	
5	QPSK	25	0	19.64	19.64	19.59	19.77	
5	16QAM	1	0	19.64	19.63	19.77	19.91	21.00
5	16QAM	1	12	19.68	19.73	19.65	19.98	
5	16QAM	1	24	19.38	19.48	19.54	19.65	
5	16QAM	12	0	18.67	18.65	18.70	18.91	20.00
5	16QAM	12	7	18.63	18.69	18.72	18.91	
5	16QAM	12	13	18.57	18.53	18.55	18.74	
5	16QAM	25	0	18.62	18.59	18.57	18.81	
5	64QAM	1	0	18.33	18.37	18.45	18.72	20.00
5	64QAM	1	12	18.42	18.40	18.44	18.71	
5	64QAM	1	24	18.13	18.24	18.32	18.41	
5	64QAM	12	0	17.58	17.56	17.57	17.86	19.00
5	64QAM	12	7	17.56	17.57	17.63	17.74	
5	64QAM	12	13	17.53	17.54	17.49	17.74	
5	64QAM	25	0	17.52	17.52	17.57	17.74	
5	256QAM	1	0	15.56	15.29	15.50	15.72	17.00
5	256QAM	1	12	15.71	15.49	15.67	15.88	
5	256QAM	1	24	15.47	15.39	15.69	15.75	
5	256QAM	12	0	15.85	15.72	15.83	16.00	17.00
5	256QAM	12	7	15.93	15.70	15.89	15.99	
5	256QAM	12	13	15.88	15.72	15.89	16.03	
5	256QAM	25	0	15.76	15.62	15.82	16.03	

**<LTE Band 48_Ant 8_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	56150	56640	
Frequency (MHz)				3560	3609	3641	3690	
20	QPSK	1	0	13.83	13.93	14.13	14.22	14.50
20	QPSK	1	49	13.53	13.66	13.91	13.97	
20	QPSK	1	99	13.68	13.74	13.88	14.05	
20	QPSK	50	0	13.53	13.77	13.93	13.98	14.50
20	QPSK	50	24	13.48	13.75	13.90	13.88	
20	QPSK	50	50	13.62	13.74	13.88	13.90	
20	QPSK	100	0	13.62	13.59	13.85	13.88	14.50
20	16QAM	1	0	13.53	13.66	13.87	14.08	
20	16QAM	1	49	13.47	13.59	13.86	13.93	
20	16QAM	1	99	13.34	13.43	13.65	13.79	14.50
20	16QAM	50	0	13.41	13.72	13.95	13.85	
20	16QAM	50	24	13.45	13.61	13.80	13.69	
20	16QAM	50	50	13.40	13.62	13.84	13.89	14.50
20	16QAM	100	0	13.34	13.59	13.80	13.76	
20	64QAM	1	0	13.61	13.69	13.82	13.86	
20	64QAM	1	49	13.37	13.60	13.79	13.87	14.50
20	64QAM	1	99	13.45	13.56	13.83	13.81	
20	64QAM	50	0	13.27	13.44	13.61	13.76	
20	64QAM	50	24	13.22	13.57	13.78	13.68	14.50
20	64QAM	50	50	13.46	13.58	13.83	13.89	
20	64QAM	100	0	13.27	13.42	13.54	13.54	
20	256QAM	1	0	13.28	13.34	13.51	13.71	14.50
20	256QAM	1	49	13.31	13.52	13.66	13.62	
20	256QAM	1	99	13.41	13.42	13.58	13.66	
20	256QAM	50	0	13.31	13.41	13.53	13.58	14.50
20	256QAM	50	24	13.35	13.36	13.54	13.69	
20	256QAM	50	50	13.27	13.15	13.33	13.48	
20	256QAM	100	0	13.18	13.12	13.35	13.43	Tune-up limit (dBm)
Channel				55315	55820	56160	56665	
Frequency (MHz)				3557.5	3608	3642	3692.5	
15	QPSK	1	0	13.70	13.82	13.93	14.03	14.50
15	QPSK	1	37	13.39	13.51	13.77	13.77	
15	QPSK	1	74	13.53	13.62	13.76	13.94	
15	QPSK	36	0	13.41	13.67	13.80	13.79	14.50
15	QPSK	36	20	13.31	13.59	13.72	13.71	
15	QPSK	36	39	13.47	13.59	13.75	13.77	
15	QPSK	75	0	13.44	13.49	13.67	13.70	14.50
15	16QAM	1	0	13.41	13.48	13.76	13.97	
15	16QAM	1	37	13.29	13.42	13.72	13.77	
15	16QAM	1	74	13.24	13.26	13.55	13.68	14.50
15	16QAM	36	0	13.22	13.61	13.79	13.65	
15	16QAM	36	20	13.25	13.49	13.60	13.51	
15	16QAM	36	39	13.27	13.48	13.72	13.77	14.50
15	16QAM	75	0	13.16	13.40	13.67	13.62	
15	64QAM	1	0	13.45	13.54	13.64	13.75	
15	64QAM	1	37	13.20	13.48	13.63	13.70	14.50
15	64QAM	1	74	13.30	13.39	13.64	13.63	
15	64QAM	36	0	13.10	13.28	13.42	13.61	
15	64QAM	36	20	13.12	13.44	13.62	13.50	14.50
15	64QAM	36	39	13.31	13.45	13.69	13.72	
15	64QAM	75	0	13.07	13.22	13.43	13.41	
15	256QAM	1	0	13.11	13.19	13.34	13.53	14.50
15	256QAM	1	37	13.16	13.34	13.55	13.51	
15	256QAM	1	74	13.29	13.30	13.46	13.54	
15	256QAM	36	0	13.19	13.26	13.35	13.44	14.50
15	256QAM	36	20	13.23	13.20	13.43	13.54	
15	256QAM	36	39	13.08	13.01	13.16	13.38	



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15	256QAM	75	0	13.07	12.96	13.25	13.33	Tune-up limit (dBm)
Channel				55290	55815	56165	56690	
Frequency (MHz)				3555	3607.5	3642.5	3695	
10	QPSK	1	0	13.71	13.80	14.03	14.05	14.50
10	QPSK	1	25	13.35	13.48	13.79	13.87	
10	QPSK	1	49	13.54	13.64	13.76	13.89	
10	QPSK	25	0	13.40	13.62	13.75	13.80	14.50
10	QPSK	25	12	13.32	13.65	13.79	13.74	
10	QPSK	25	25	13.50	13.63	13.74	13.75	
10	QPSK	50	0	13.51	13.44	13.75	13.68	14.50
10	16QAM	1	0	13.37	13.50	13.68	13.88	
10	16QAM	1	25	13.27	13.42	13.74	13.80	
10	16QAM	1	49	13.19	13.31	13.49	13.64	14.50
10	16QAM	25	0	13.29	13.52	13.79	13.74	
10	16QAM	25	12	13.32	13.41	13.62	13.56	
10	16QAM	25	25	13.30	13.50	13.64	13.73	14.50
10	16QAM	50	0	13.14	13.48	13.66	13.65	
10	64QAM	1	0	13.44	13.55	13.62	13.69	
10	64QAM	1	25	13.21	13.49	13.64	13.73	14.50
10	64QAM	1	49	13.25	13.44	13.64	13.61	
10	64QAM	25	0	13.07	13.27	13.45	13.56	
10	64QAM	25	12	13.09	13.44	13.60	13.50	14.50
10	64QAM	25	25	13.36	13.43	13.65	13.75	
10	64QAM	50	0	13.15	13.23	13.39	13.39	
10	256QAM	1	0	13.09	13.17	13.34	13.53	14.50
10	256QAM	1	25	13.12	13.33	13.52	13.42	
10	256QAM	1	49	13.29	13.29	13.44	13.47	
10	256QAM	25	0	13.11	13.29	13.43	13.44	14.50
10	256QAM	25	12	13.25	13.25	13.39	13.49	
10	256QAM	25	25	13.13	13.02	13.14	13.32	
10	256QAM	50	0	13.04	12.92	13.19	13.27	Tune-up limit (dBm)
Channel				55265	55810	56170	56715	
Frequency (MHz)				3552.5	3607	3643	3697.5	
5	QPSK	1	0	13.65	13.78	13.93	14.05	14.50
5	QPSK	1	12	13.43	13.51	13.81	13.80	
5	QPSK	1	24	13.48	13.58	13.78	13.92	
5	QPSK	12	0	13.36	13.65	13.83	13.81	14.50
5	QPSK	12	7	13.32	13.57	13.73	13.71	
5	QPSK	12	13	13.46	13.61	13.70	13.79	
5	QPSK	25	0	13.44	13.40	13.72	13.78	14.50
5	16QAM	1	0	13.42	13.48	13.73	13.92	
5	16QAM	1	12	13.31	13.41	13.76	13.73	
5	16QAM	1	24	13.18	13.29	13.46	13.64	14.50
5	16QAM	12	0	13.28	13.54	13.83	13.68	
5	16QAM	12	7	13.27	13.42	13.63	13.52	
5	16QAM	12	13	13.21	13.45	13.66	13.76	14.50
5	16QAM	25	0	13.24	13.40	13.67	13.56	
5	64QAM	1	0	13.48	13.52	13.63	13.66	
5	64QAM	1	12	13.24	13.40	13.68	13.68	14.50
5	64QAM	1	24	13.26	13.43	13.66	13.66	
5	64QAM	12	0	13.07	13.31	13.44	13.62	
5	64QAM	12	7	13.12	13.45	13.67	13.51	14.50
5	64QAM	12	13	13.28	13.47	13.64	13.74	
5	64QAM	25	0	13.07	13.32	13.35	13.40	
5	256QAM	1	0	13.15	13.19	13.39	13.61	14.50
5	256QAM	1	12	13.12	13.34	13.51	13.42	
5	256QAM	1	24	13.27	13.23	13.39	13.49	
5	256QAM	12	0	13.16	13.30	13.39	13.38	14.50
5	256QAM	12	7	13.17	13.21	13.42	13.51	
5	256QAM	12	13	13.17	13.00	13.14	13.38	
5	256QAM	25	0	13.01	13.02	13.15	13.30	

12. 5G NR Output Power (Unit: dBm)

General Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for Pi/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for Pi/2 BPSK SAR testing using 1RB Pi/2 BPSK allocation procedure
 - d. For Pi/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device.
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission.

<3GPP 38.101 MPR for EN-DC>

Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$ $\leq 0.5^2$	$\leq 1.2^1$ $\leq 0.5^2$	$\leq 0.2^1$ 0^2
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

Table 6.2.2-2 Maximum power reduction (MPR) for power class 2

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5	≤ 0.5	0
	QPSK	≤ 3.5	≤ 1	0
	16 QAM	≤ 3.5	≤ 2	≤ 1
	64 QAM	≤ 3.5	≤ 2.5	
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3.5	≤ 3	≤ 1.5
	16 QAM	≤ 3.5	≤ 3	≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		



<FR1 n2_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				373000	376000	379000	24.00
Frequency (MHz)				1865	1880	1895	
30	PI/2 BPSK	1	1	22.26	22.54	22.26	
30	PI/2 BPSK	1	80	22.10	22.45	22.21	24.00
30	PI/2 BPSK	1	158	22.00	22.37	22.05	
30	PI/2 BPSK	80	0	21.60	22.47	21.63	
30	PI/2 BPSK	80	40	22.14	21.92	22.12	24.00
30	PI/2 BPSK	80	80	21.70	21.72	21.58	23.50
30	PI/2 BPSK	160	0	21.66	21.96	21.65	
30	QPSK	1	1	22.07	22.38	22.16	
30	QPSK	1	80	22.30	22.40	22.01	24.00
30	QPSK	1	158	22.05	22.21	22.07	
30	QPSK	80	0	21.32	21.39	21.06	
30	QPSK	80	40	22.01	22.42	22.14	24.00
30	QPSK	80	80	21.01	21.18	21.06	23.00
30	QPSK	160	0	21.10	21.35	21.01	
30	16QAM	1	1	21.09	21.41	21.09	
30	64QAM	1	1	19.48	19.65	19.62	21.50
30	256QAM	1	1	17.58	18.04	17.67	19.50
Channel				372500	376000	379500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1880	1897.5	
25	PI/2 BPSK	1	1	22.12	22.18	22.20	
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	22.21	22.50	22.23	
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	22.04	22.22	22.15	
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	22.29	22.52	22.24	
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	22.25	22.50	22.23	



<FR1 n2_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				373000	376000	379000	
Frequency (MHz)				1865	1880	1895	
30	PI/2 BPSK	1	1	22.39	22.45	22.36	
30	PI/2 BPSK	1	80	22.32	22.44	22.34	24.00
30	PI/2 BPSK	1	158	22.16	22.29	22.18	
30	PI/2 BPSK	80	0	21.84	22.40	21.77	23.50
30	PI/2 BPSK	80	40	22.35	22.38	22.22	24.00
30	PI/2 BPSK	80	80	21.64	21.76	21.65	23.50
30	PI/2 BPSK	160	0	21.77	21.92	21.78	
30	QPSK	1	1	22.18	22.27	22.16	24.00
30	QPSK	1	80	22.28	22.38	22.23	
30	QPSK	1	158	22.14	22.21	22.04	
30	QPSK	80	0	21.30	21.36	21.21	23.00
30	QPSK	80	40	22.31	22.43	22.26	24.00
30	QPSK	80	80	21.08	21.22	21.11	23.00
30	QPSK	160	0	21.22	21.36	21.17	
30	16QAM	1	1	21.15	21.22	21.11	23.00
30	64QAM	1	1	19.54	19.51	19.50	21.50
30	256QAM	1	1	17.88	17.96	17.86	19.50
Channel				372500	376000	379500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1880	1897.5	
25	PI/2 BPSK	1	1	22.22	22.32	22.25	24.00
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	22.39	22.40	22.36	24.00
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	22.34	22.43	22.33	24.00
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	22.32	22.36	22.34	24.00
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	22.38	22.43	22.31	24.00



<FR1 n2_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				373000	376000	379000	14.00
Frequency (MHz)				1865	1880	1895	
30	PI/2 BPSK	1	1	13.50	13.55	13.48	
30	PI/2 BPSK	1	80	13.26	13.47	13.34	13.50
30	PI/2 BPSK	1	158	13.31	13.52	13.39	
30	PI/2 BPSK	80	0	13.24	13.49	13.32	
30	PI/2 BPSK	80	40	13.28	13.45	13.36	14.00
30	PI/2 BPSK	80	80	13.23	13.44	13.31	
30	PI/2 BPSK	160	0	13.26	13.47	13.34	
30	QPSK	1	1	13.12	13.33	13.20	14.00
30	QPSK	1	80	13.33	13.54	13.41	
30	QPSK	1	158	13.20	13.41	13.28	
30	QPSK	80	0	13.08	13.29	13.16	13.00
30	QPSK	80	40	12.86	13.07	12.94	
30	QPSK	80	80	13.01	13.22	13.09	
30	QPSK	160	0	13.33	13.54	13.41	13.00
30	16QAM	1	1	13.22	13.43	13.30	
30	64QAM	1	1	12.89	13.10	12.97	
30	256QAM	1	1	13.12	13.33	13.20	9.50
Channel				372500	376000	379500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1880	1897.5	
25	PI/2 BPSK	1	1	13.20	13.34	13.17	14.00
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	13.15	13.25	13.27	14.00
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	13.19	13.25	13.28	14.00
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	13.17	13.19	13.31	14.00
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	13.21	13.15	13.18	14.00



<FR1 n2_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				373000	376000	379000	
Frequency (MHz)				1865	1880	1895	
30	PI/2 BPSK	1	1	16.40	16.58	16.49	
30	PI/2 BPSK	1	108	16.15	16.47	16.27	17.50
30	PI/2 BPSK	1	214	16.16	16.47	16.28	
30	PI/2 BPSK	108	0	16.06	16.38	16.26	
30	PI/2 BPSK	108	54	16.24	16.37	16.21	17.50
30	PI/2 BPSK	108	108	16.20	16.26	16.29	17.50
30	PI/2 BPSK	216	0	16.06	16.26	16.19	
30	QPSK	1	1	16.19	16.19	16.17	
30	QPSK	1	108	16.12	16.18	16.12	17.50
30	QPSK	1	214	15.83	16.05	15.98	
30	QPSK	108	0	15.90	16.19	16.09	
30	QPSK	108	54	15.93	16.16	15.96	17.50
30	QPSK	108	108	15.94	16.07	16.02	17.50
30	QPSK	216	0	15.93	16.15	16.02	
30	16QAM	1	1	15.93	16.24	16.11	
30	64QAM	1	1	15.67	15.98	15.87	17.50
30	256QAM	1	1	15.77	15.94	15.75	17.50
Channel				372500	376000	379500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1880	1897.5	
25	PI/2 BPSK	1	1	16.38	16.55	16.45	
Channel				372000	376000	380000	Tune-up limit (dBm)
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	16.38	16.57	16.44	
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	16.35	16.51	16.39	
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	16.37	16.50	16.43	
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	16.33	16.55	16.45	



<FR1 n5_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				167300	167300	167300	
Frequency (MHz)				836.5	836.5	836.5	
25	PI/2 BPSK	1	1		22.79		
25	PI/2 BPSK	1	64		22.75		24.00
25	PI/2 BPSK	1	131		22.68		
25	PI/2 BPSK	64	0		22.72		
25	PI/2 BPSK	64	32		22.27		23.50
25	PI/2 BPSK	64	64		22.15		24.00
25	PI/2 BPSK	128	0		22.21		
25	QPSK	1	1		22.57		
25	QPSK	1	64		22.69		24.00
25	QPSK	1	131		22.63		
25	QPSK	64	0		21.67		
25	QPSK	64	32		22.71		23.00
25	QPSK	64	64		21.56		24.00
25	QPSK	128	0		21.66		
25	16QAM	1	1		21.44		
25	64QAM	1	1		19.65		23.00
25	256QAM	1	1		18.10		21.50
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	22.62	22.74	22.52	
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	22.55	22.75	22.57	
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	22.55	22.70	22.59	

**<FR1 n5_Ant 5_Tablet Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				167300	167300	167300	18.50
Frequency (MHz)				836.5	836.5	836.5	
25	PI/2 BPSK	1	1		17.77		
25	PI/2 BPSK	1	64		17.73		18.50
25	PI/2 BPSK	1	131		17.70		
25	PI/2 BPSK	64	0		17.74		
25	PI/2 BPSK	64	32		17.69		18.50
25	PI/2 BPSK	64	64		17.70		18.50
25	PI/2 BPSK	128	0		17.68		
25	QPSK	1	1		17.65		
25	QPSK	1	64		17.61		18.50
25	QPSK	1	131		17.48		
25	QPSK	64	0		17.56		
25	QPSK	64	32		17.56		18.50
25	QPSK	64	64		17.49		18.50
25	QPSK	128	0		17.51		
25	16QAM	1	1		17.60		
25	64QAM	1	1		17.31		18.50
25	256QAM	1	1		17.23		18.50
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	17.65	17.71	17.63	
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	17.68	17.69	17.66	
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	17.67	17.71	17.70	



<FR1 n7_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				505000	507000	509000	
Frequency (MHz)				2525	2535	2545	
50	PI/2 BPSK	1	1	22.70	23.00	22.79	
50	PI/2 BPSK	1	135	22.45	22.81	22.58	24.00
50	PI/2 BPSK	1	268	22.42	22.79	22.57	
50	PI/2 BPSK	135	0	22.02	22.97	22.15	
50	PI/2 BPSK	135	68	22.61	22.95	22.75	24.00
50	PI/2 BPSK	135	135	21.98	22.32	22.04	23.50
50	PI/2 BPSK	270	0	22.02	22.37	22.12	
50	QPSK	1	1	22.35	22.71	22.50	
50	QPSK	1	135	22.52	22.83	22.60	24.00
50	QPSK	1	268	22.34	22.72	22.44	
50	QPSK	135	0	21.41	21.80	21.54	
50	QPSK	135	68	22.52	22.90	22.63	24.00
50	QPSK	135	135	21.41	21.75	21.47	23.00
50	QPSK	270	0	21.43	21.80	21.54	
50	16QAM	1	1	21.18	21.49	21.23	
50	64QAM	1	1	19.86	20.18	19.89	21.50
50	256QAM	1	1	17.85	18.18	17.93	19.50
Channel				504000	507000	510000	Tune-up limit (dBm)
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	22.62	22.91	22.77	
Channel				503000	507000	511000	Tune-up limit (dBm)
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	22.64	22.99	22.73	
Channel				502500	507000	511500	Tune-up limit (dBm)
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	22.64	22.99	22.79	
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	22.52	22.58	22.67	
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	22.66	22.98	22.70	
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	22.67	22.91	22.79	



<FR1 n7_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				505000	507000	509000	14.50
Frequency (MHz)				2525	2535	2545	
50	PI/2 BPSK	1	1	14.08	14.21	14.14	
50	PI/2 BPSK	1	135	13.83	14.12	14.00	14.50
50	PI/2 BPSK	1	268	13.93	14.07	13.87	
50	PI/2 BPSK	135	0	13.81	14.05	13.91	
50	PI/2 BPSK	135	68	13.90	14.03	13.81	14.50
50	PI/2 BPSK	135	135	13.89	13.87	13.96	14.50
50	PI/2 BPSK	270	0	13.74	13.97	13.84	
50	QPSK	1	1	13.87	13.84	13.82	
50	QPSK	1	135	13.80	13.90	13.82	14.50
50	QPSK	1	268	13.59	13.69	13.67	
50	QPSK	135	0	13.67	13.81	13.75	
50	QPSK	135	68	13.63	13.83	13.63	14.50
50	QPSK	135	135	13.69	13.76	13.59	14.50
50	QPSK	270	0	13.61	13.84	13.65	
50	16QAM	1	1	13.61	13.95	13.66	
50	64QAM	1	1	13.37	13.65	13.50	14.50
50	256QAM	1	1	13.43	13.54	13.35	14.50
Channel				504000	507000	510000	14.50
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	14.02	14.17	14.10	
Channel				503000	507000	511000	14.50
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	14.04	14.18	14.08	
Channel				502500	507000	511500	14.5
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	14.03	14.19	14.10	
Channel				502000	507000	512000	14.50
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	14.05	14.20	14.11	
Channel				501500	507000	512500	14.50
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	13.96	14.03	14.02	
Channel				501000	507000	513000	14.50
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	13.94	14.04	13.99	



<FR1 n12_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				141300	141500	141700	
Frequency (MHz)				706.5	707.5	708.5	
15	PI/2 BPSK	1	1	23.07	23.14	23.03	
15	PI/2 BPSK	1	40	22.92	22.99	22.79	24.00
15	PI/2 BPSK	1	77	22.79	22.95	22.81	
15	PI/2 BPSK	36	0	22.35	22.92	22.28	
15	PI/2 BPSK	36	22	22.79	22.46	22.74	24.00
15	PI/2 BPSK	36	43	22.34	22.44	22.23	23.50
15	PI/2 BPSK	75	0	22.34	22.48	22.33	
15	QPSK	1	1	22.84	22.96	22.81	24.00
15	QPSK	1	40	22.69	22.86	22.71	
15	QPSK	1	77	22.79	22.92	22.80	
15	QPSK	36	0	21.79	21.89	21.77	23.00
15	QPSK	36	22	22.73	22.88	22.69	24.00
15	QPSK	36	43	21.75	21.92	21.73	23.00
15	QPSK	75	0	21.83	21.95	21.80	
15	16QAM	1	1	21.67	21.79	21.63	23.00
15	64QAM	1	1	19.86	19.99	19.88	21.50
	256QAM	1	1	18.40	18.51	18.32	19.50
Channel				140800	141500	142200	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	PI/2 BPSK	1	1	23.01	23.04	22.96	24.00
Channel				140300	141500	142700	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	PI/2 BPSK	1	1	23.03	23.05	22.99	24.00

<FR1 n12_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				141300	141500	141700	
Frequency (MHz)				706.5	707.5	708.5	
15	PI/2 BPSK	1	1	17.04	17.12	17.00	17.50
15	PI/2 BPSK	1	40	16.96	17.08	16.90	
15	PI/2 BPSK	1	77	16.90	17.05	16.86	
15	PI/2 BPSK	36	0	16.87	17.02	16.90	17.50
15	PI/2 BPSK	36	22	16.93	16.98	16.86	17.50
15	PI/2 BPSK	36	43	16.93	16.97	16.86	17.50
15	PI/2 BPSK	75	0	16.79	16.93	16.87	
15	QPSK	1	1	16.86	16.93	16.77	17.50
15	QPSK	1	40	16.85	16.90	16.75	
15	QPSK	1	77	16.57	16.74	16.62	
15	QPSK	36	0	16.73	16.89	16.73	17.50
15	QPSK	36	22	16.71	16.81	16.65	17.50
15	QPSK	36	43	16.67	16.78	16.61	17.50
15	QPSK	75	0	16.66	16.79	16.67	
15	16QAM	1	1	16.68	16.95	16.71	17.50
15	64QAM	1	1	16.43	16.64	16.50	17.50
	256QAM	1	1	16.48	16.58	16.30	17.50
Channel				140800	141500	142200	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	PI/2 BPSK	1	1	17.01	17.10	16.93	17.50
Channel				140300	141500	142700	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	PI/2 BPSK	1	1	16.95	17.09	16.97	17.50

**<FR1 n14_Ant 5_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					158600		
Frequency (MHz)					793		
10	PI/2 BPSK	1	1		23.23		
10	PI/2 BPSK	1	26		23.17		24.00
10	PI/2 BPSK	1	50		23.19		
10	PI/2 BPSK	25	0		23.15		
10	PI/2 BPSK	25	14		23.10		23.50
10	PI/2 BPSK	25	27		22.70		24.00
10	PI/2 BPSK	50	0		22.74		
10	QPSK	1	1		23.06		
10	QPSK	1	26		23.12		24.00
10	QPSK	1	50		23.15		
10	QPSK	25	0		22.11		
10	QPSK	25	14		23.09		23.00
10	QPSK	25	27		22.15		24.00
10	QPSK	50	0		22.19		
10	16QAM	1	1		21.98		
10	64QAM	1	1		20.23		23.00
10	256QAM	1	1		18.69		21.50
Channel				158100	158600	159100	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	PI/2 BPSK	1	1	23.22	23.16	23.20	

<FR1 n14_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					158600		
Frequency (MHz)					793		
10	PI/2 BPSK	1	1		18.26		
10	PI/2 BPSK	1	26		18.15		19.00
10	PI/2 BPSK	1	50		18.09		
10	PI/2 BPSK	25	0		18.14		
10	PI/2 BPSK	25	14		18.05		19.00
10	PI/2 BPSK	25	27		18.08		19.00
10	PI/2 BPSK	50	0		18.05		
10	QPSK	1	1		18.00		
10	QPSK	1	26		18.01		19.00
10	QPSK	1	50		17.79		
10	QPSK	25	0		17.95		
10	QPSK	25	14		17.85		19.00
10	QPSK	25	27		17.88		19.00
10	QPSK	50	0		17.93		
10	16QAM	1	1		18.03		
10	64QAM	1	1		17.74		19.00
10	256QAM	1	1		17.65		19.00
Channel				158100	158600	159100	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	PI/2 BPSK	1	1	18.12	18.17	18.10	



<FR1 n25_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374500	376500	378500	24.00
Frequency (MHz)				1872.5	1882.5	1892.5	
45	PI/2 BPSK	1	1	22.22	22.55	22.20	
45	PI/2 BPSK	1	120	22.11	22.38	22.04	24.00
45	PI/2 BPSK	1	240	22.04	22.23	22.02	
45	PI/2 BPSK	120	0	21.62	22.54	21.57	
45	PI/2 BPSK	120	60	22.06	22.03	22.04	24.00
45	PI/2 BPSK	120	120	21.57	21.69	21.52	23.50
45	PI/2 BPSK	240	0	21.57	21.96	21.52	
45	QPSK	1	1	22.20	22.27	22.13	
45	QPSK	1	120	22.04	22.44	22.06	24.00
45	QPSK	1	240	22.05	22.29	22.06	
45	QPSK	120	0	21.07	21.47	21.01	
45	QPSK	120	60	22.05	22.49	22.07	24.00
45	QPSK	120	120	21.20	21.22	21.16	23.00
45	QPSK	240	0	21.22	21.37	21.25	
45	16QAM	1	1	21.16	21.23	21.05	
45	64QAM	1	1	19.52	19.50	19.58	21.50
45	256QAM	1	1	18.04	18.01	17.63	19.50
Channel				374000	376500	379000	24.00
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	22.04	22.42	22.01	
Channel				373500	376500	379500	24.00
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	22.11	22.35	22.04	
Channel				373000	376500	380000	24.00
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	22.04	22.38	22.09	
Channel				372000	376500	381000	24.00
Frequency (MHz)				1860	1882.5	1905	
25	PI/2 BPSK	1	1	22.02	22.39	22.08	
Channel				372000	376500	381000	24.00
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	22.16	22.43	22.10	
Channel				371500	376500	381500	24.00
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	22.10	22.39	22.12	
Channel				371000	376500	382000	24.00
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	22.15	22.48	22.20	
Channel				370500	376500	382500	24.00
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	22.10	22.42	22.18	



<FR1 n25_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374500	376500	378500	
Frequency (MHz)				1872.5	1882.5	1892.5	
45	PI/2 BPSK	1	1	22.22	22.55	22.20	
45	PI/2 BPSK	1	120	22.11	22.49	22.06	24.00
45	PI/2 BPSK	1	240	22.03	22.38	22.03	
45	PI/2 BPSK	120	0	21.62	22.54	21.57	
45	PI/2 BPSK	120	60	22.14	22.00	22.09	24.00
45	PI/2 BPSK	120	120	21.57	21.80	21.50	23.50
45	PI/2 BPSK	240	0	21.57	21.96	21.52	
45	QPSK	1	1	22.02	22.36	22.08	24.00
45	QPSK	1	120	22.07	22.44	22.09	
45	QPSK	1	240	22.03	22.30	22.01	
45	QPSK	120	0	21.13	21.47	21.05	23.00
45	QPSK	120	60	22.08	22.50	22.12	24.00
45	QPSK	120	120	21.04	21.27	21.04	23.00
45	QPSK	240	0	21.07	21.45	21.01	
45	16QAM	1	1	21.02	21.31	21.07	23.00
45	64QAM	1	1	19.53	19.60	19.59	21.50
45	256QAM	1	1	17.62	18.05	17.63	19.50
Channel				374000	376500	379000	Tune-up limit (dBm)
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	22.03	22.42	22.05	24.00
Channel				373500	376500	379500	Tune-up limit (dBm)
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	22.07	22.45	22.08	24.00
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	22.07	22.35	22.02	24.00
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
25	PI/2 BPSK	1	1	22.03	22.43	22.02	24.00
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	22.22	22.53	22.13	24.00
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	22.15	22.51	22.15	24.00
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	22.14	22.52	22.19	24.00



<FR1 n25_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374500	376500	378500	14.00
Frequency (MHz)				1872.5	1882.5	1892.5	
45	PI/2 BPSK	1	1	13.34	13.58	13.42	
45	PI/2 BPSK	1	120	13.33	13.57	13.41	14.00
45	PI/2 BPSK	1	240	13.31	13.55	13.39	
45	PI/2 BPSK	120	0	13.28	13.54	13.36	
45	PI/2 BPSK	120	60	13.30	13.52	13.38	14.00
45	PI/2 BPSK	120	120	13.29	13.53	13.37	14.00
45	PI/2 BPSK	240	0	13.23	13.47	13.31	
45	QPSK	1	1	13.20	13.44	13.28	
45	QPSK	1	120	13.32	13.56	13.40	14.00
45	QPSK	1	240	13.19	13.43	13.27	
45	QPSK	120	0	13.05	13.29	13.13	
45	QPSK	120	60	13.01	13.25	13.09	14.00
45	QPSK	120	120	13.18	13.42	13.26	14.00
45	QPSK	240	0	13.30	13.54	13.38	
45	16QAM	1	1	13.22	13.46	13.30	
45	64QAM	1	1	12.95	13.19	13.03	14.00
45	256QAM	1	1	13.18	13.42	13.26	14.00
Channel				374000	376500	379000	Tune-up limit (dBm)
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	13.16	13.17	13.34	
Channel				373500	376500	379500	Tune-up limit (dBm)
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	13.16	13.24	13.26	
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	13.19	13.34	13.21	
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
25	PI/2 BPSK	1	1	13.19	13.30	13.26	
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	13.30	13.52	13.40	
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	13.32	13.54	13.41	
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	13.34	13.52	13.40	



<FR1 n25_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374500	376500	378500	17.50
Frequency (MHz)				1872.5	1882.5	1892.5	
45	PI/2 BPSK	1	1	16.55	16.63	16.51	
45	PI/2 BPSK	1	120	16.33	16.50	16.30	17.50
45	PI/2 BPSK	1	240	16.40	16.48	16.27	
45	PI/2 BPSK	120	0	16.22	16.47	16.33	
45	PI/2 BPSK	120	60	16.43	16.43	16.24	17.50
45	PI/2 BPSK	120	120	16.28	16.28	16.30	17.50
45	PI/2 BPSK	240	0	16.23	16.37	16.18	
45	QPSK	1	1	16.37	16.24	16.23	
45	QPSK	1	120	16.27	16.31	16.20	17.50
45	QPSK	1	240	16.02	16.12	16.01	
45	QPSK	120	0	16.06	16.21	16.08	
45	QPSK	120	60	16.14	16.23	16.04	17.50
45	QPSK	120	120	16.08	16.17	16.01	17.50
45	QPSK	240	0	16.02	16.19	16.06	
45	16QAM	1	1	16.00	16.38	16.04	
45	64QAM	1	1	15.80	16.04	15.87	17.50
45	256QAM	1	1	15.85	15.93	15.78	17.50
Channel				374000	376500	379000	Tune-up limit (dBm)
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	16.54	16.61	16.48	
Channel				373500	376500	379500	Tune-up limit (dBm)
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	16.54	16.60	16.50	
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	16.53	16.60	16.48	
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
25	PI/2 BPSK	1	1	16.54	16.62	16.48	
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	16.47	16.53	16.43	
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	16.50	16.56	16.49	
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	16.54	16.56	16.51	



<FR1 n26_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				164800	166300	167800	24.00
Frequency (MHz)				824	831.5	839	
20	PI/2 BPSK	1	1	22.66	22.68	22.51	
20	PI/2 BPSK	1	53	22.45	22.52	22.27	23.50
20	PI/2 BPSK	1	104	22.54	22.59	22.42	
20	PI/2 BPSK	50	0	22.20	22.67	21.99	
20	PI/2 BPSK	50	28	22.57	22.23	22.49	23.50
20	PI/2 BPSK	50	56	22.09	22.19	21.94	
20	PI/2 BPSK	100	0	22.13	22.18	22.01	
20	QPSK	1	1	22.37	22.49	22.28	24.00
20	QPSK	1	53	22.44	22.56	22.29	
20	QPSK	1	104	22.55	22.57	22.37	
20	QPSK	50	0	21.57	21.68	21.50	23.00
20	QPSK	50	28	22.55	22.64	22.42	
20	QPSK	50	56	21.59	21.71	21.44	
20	QPSK	100	0	21.59	21.65	21.41	21.50
20	16QAM	1	1	21.41	21.48	21.31	
20	64QAM	1	1	19.68	19.72	19.50	
20	256QAM	1	1	18.04	18.13	17.88	19.50
Channel				164300	166300	168300	Tune-up limit (dBm)
Frequency (MHz)				821.5	831.5	841.5	
15	PI/2 BPSK	1	1	22.61	22.60	22.47	24.00
Channel				163800	166300	168800	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	PI/2 BPSK	1	1	22.64	22.63	22.48	24.00
Channel				163300	166300	169300	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	PI/2 BPSK	1	1	22.60	22.64	22.50	24.00



<FR1 n26_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				164800	166300	167800	19.00
Frequency (MHz)				824	831.5	839	
20	PI/2 BPSK	1	1	17.71	17.77	17.73	
20	PI/2 BPSK	1	53	17.60	17.70	17.56	19.00
20	PI/2 BPSK	1	104	17.53	17.63	17.58	
20	PI/2 BPSK	50	0	17.49	17.64	17.61	
20	PI/2 BPSK	50	28	17.56	17.60	17.54	19.00
20	PI/2 BPSK	50	56	17.58	17.52	17.54	19.00
20	PI/2 BPSK	100	0	17.44	17.56	17.60	
20	QPSK	1	1	17.52	17.55	17.49	
20	QPSK	1	53	17.47	17.45	17.40	19.00
20	QPSK	1	104	17.16	17.38	17.27	
20	QPSK	50	0	17.34	17.50	17.44	
20	QPSK	50	28	17.30	17.42	17.38	19.00
20	QPSK	50	56	17.26	17.35	17.30	19.00
20	QPSK	100	0	17.28	17.39	17.30	
20	16QAM	1	1	17.28	17.53	17.39	
20	64QAM	1	1	17.10	17.29	17.21	19.00
20	256QAM	1	1	17.05	17.13	17.10	19.00
Channel				164300	166300	168300	Tune-up limit (dBm)
Frequency (MHz)				821.5	831.5	841.5	
15	PI/2 BPSK	1	1	17.67	17.71	17.71	19.00
Channel				163800	166300	168800	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	PI/2 BPSK	1	1	17.64	17.70	17.63	19.00
Channel				163300	166300	169300	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	PI/2 BPSK	1	1	17.71	17.72	17.63	19.00

**<FR1 n30_Ant 8_Laptop Mode>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					462000		
Frequency (MHz)					2310		
10	PI/2 BPSK	1	1		22.14		
10	PI/2 BPSK	1	26		22.12		23.00
10	PI/2 BPSK	1	50		22.11		
10	PI/2 BPSK	25	0		21.80		
10	PI/2 BPSK	25	14		21.35		22.50
10	PI/2 BPSK	25	27		21.24		23.00
10	PI/2 BPSK	50	0		21.40		
10	QPSK	1	1		21.94		
10	QPSK	1	26		22.00		23.00
10	QPSK	1	50		21.95		
10	QPSK	25	0		20.79		
10	QPSK	25	14		21.73		22.00
10	QPSK	25	27		20.68		23.00
10	QPSK	50	0		20.81		
10	16QAM	1	1		20.58		
10	64QAM	1	1		18.81		22.00
10	256QAM	1	1		17.31		20.50
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	22.05	22.12	22.13	

<FR1 n30_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					462000		
Frequency (MHz)					2310		
10	PI/2 BPSK	1	1		15.46		
10	PI/2 BPSK	1	26		15.28		16.50
10	PI/2 BPSK	1	50		15.30		
10	PI/2 BPSK	25	0		15.23		
10	PI/2 BPSK	25	14		15.20		16.50
10	PI/2 BPSK	25	27		15.15		16.50
10	PI/2 BPSK	50	0		15.20		
10	QPSK	1	1		15.13		
10	QPSK	1	26		15.08		16.50
10	QPSK	1	50		14.93		
10	QPSK	25	0		15.03		
10	QPSK	25	14		15.07		16.50
10	QPSK	25	27		14.95		16.50
10	QPSK	50	0		15.09		
10	16QAM	1	1		15.15		
10	64QAM	1	1		14.85		16.50
10	256QAM	1	1		14.86		16.50
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	15.32	15.40	15.35	



<FR1 n66_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346500	349000	351500	24.00
Frequency (MHz)				1732.5	1745	1757.5	
45	PI/2 BPSK	1	1	23.12	23.34	23.25	
45	PI/2 BPSK	1	120	22.98	23.28	23.10	23.50
45	PI/2 BPSK	1	240	22.49	22.80	22.67	
45	PI/2 BPSK	120	0	22.45	23.20	22.56	
45	PI/2 BPSK	120	60	22.98	23.15	23.11	23.50
45	PI/2 BPSK	120	120	22.43	22.66	22.49	
45	PI/2 BPSK	240	0	22.32	22.63	22.46	
45	QPSK	1	1	22.45	22.68	22.53	24.00
45	QPSK	1	120	22.97	23.23	23.11	
45	QPSK	1	240	22.41	22.70	22.55	
45	QPSK	120	0	21.92	22.15	22.04	23.00
45	QPSK	120	60	23.00	23.32	23.14	24.00
45	QPSK	120	120	21.87	22.14	21.96	23.00
45	QPSK	240	0	21.80	22.12	22.01	
45	16QAM	1	1	21.28	21.55	21.37	
45	64QAM	1	1	19.53	19.84	19.65	21.50
45	256QAM	1	1	18.05	18.33	18.18	19.50
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	23.07	23.31	23.22	24.00
Channel				345500	349000	352500	Tune-up limit (dBm)
Frequency (MHz)				1727.5	1745	1762.5	
35	PI/2 BPSK	1	1	23.02	23.29	23.16	24.00
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	PI/2 BPSK	1	1	23.12	23.31	23.18	24.00
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
25	PI/2 BPSK	1	1	23.02	23.26	23.23	24.00
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	23.10	23.27	23.20	24.00
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	23.12	23.33	23.20	24.00
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	23.12	23.34	23.23	24.00



<FR1 n66_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346500	349000	351500	16.50
Frequency (MHz)				1732.5	1745	1757.5	
45	PI/2 BPSK	1	1	15.62	15.81	15.67	
45	PI/2 BPSK	1	108	15.40	15.64	15.45	16.50
45	PI/2 BPSK	1	214	15.38	15.67	15.37	
45	PI/2 BPSK	108	0	15.28	15.59	15.52	
45	PI/2 BPSK	108	54	15.42	15.58	15.35	16.50
45	PI/2 BPSK	108	108	15.36	15.52	15.49	16.50
45	PI/2 BPSK	216	0	15.28	15.52	15.36	
45	QPSK	1	1	15.35	15.42	15.39	
45	QPSK	1	108	15.42	15.49	15.38	16.50
45	QPSK	1	214	15.05	15.34	15.20	
45	QPSK	108	0	15.21	15.43	15.23	
45	QPSK	108	54	15.16	15.42	15.17	16.50
45	QPSK	108	108	15.18	15.31	15.11	16.50
45	QPSK	216	0	15.08	15.47	15.22	
45	16QAM	1	1	15.10	15.47	15.24	
45	64QAM	1	1	14.91	15.23	15.04	16.50
45	256QAM	1	1	14.99	15.14	14.94	16.50
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	15.55	15.76	15.60	
Channel				345500	349000	352500	Tune-up limit (dBm)
Frequency (MHz)				1727.5	1745	1762.5	
35	PI/2 BPSK	1	1	15.54	15.74	15.59	
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	PI/2 BPSK	1	1	15.54	15.75	15.58	
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
25	PI/2 BPSK	1	1	15.52	15.77	15.63	
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	15.58	15.76	15.62	
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	15.55	15.79	15.63	
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	15.57	15.75	15.65	



<FR1 n71_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	23.16	23.20	23.02	
20	PI/2 BPSK	1	53	22.88	22.99	22.77	24.00
20	PI/2 BPSK	1	104	22.86	22.94	22.68	
20	PI/2 BPSK	50	0	22.56	23.04	22.50	
20	PI/2 BPSK	50	28	22.92	23.00	22.76	24.00
20	PI/2 BPSK	50	56	22.56	22.67	22.40	23.50
20	PI/2 BPSK	100	0	22.59	22.65	22.41	
20	QPSK	1	1	22.83	22.93	22.73	24.00
20	QPSK	1	53	22.86	22.92	22.71	
20	QPSK	1	104	22.76	22.88	22.69	
20	QPSK	50	0	22.04	22.14	21.96	23.00
20	QPSK	50	28	23.01	23.13	22.93	24.00
20	QPSK	50	56	22.02	22.11	21.84	23.00
20	QPSK	100	0	22.08	22.15	21.91	
20	16QAM	1	1	21.74	21.82	21.59	23.00
20	64QAM	1	1	20.05	20.15	19.96	21.50
20	256QAM	1	1	18.45	18.58	18.32	19.50
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	23.08	23.18	22.99	24.00
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	23.13	23.11	22.96	24.00



<FR1 n71_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	16.06	16.13	16.00	
20	PI/2 BPSK	1	53	15.91	16.04	15.87	17.00
20	PI/2 BPSK	1	104	15.92	16.05	15.79	
20	PI/2 BPSK	50	0	15.79	16.03	15.87	17.00
20	PI/2 BPSK	50	28	15.95	16.00	15.77	17.00
20	PI/2 BPSK	50	56	15.89	15.88	15.83	17.00
20	PI/2 BPSK	100	0	15.74	15.89	15.77	
20	QPSK	1	1	15.88	15.84	15.75	17.00
20	QPSK	1	53	15.86	15.82	15.73	
20	QPSK	1	104	15.58	15.68	15.56	
20	QPSK	50	0	15.66	15.80	15.64	17.00
20	QPSK	50	28	15.69	15.79	15.57	17.00
20	QPSK	50	56	15.68	15.69	15.53	17.00
20	QPSK	100	0	15.61	15.79	15.59	
20	16QAM	1	1	15.60	15.89	15.62	17.00
20	64QAM	1	1	15.41	15.60	15.40	17.00
20	256QAM	1	1	15.46	15.53	15.27	17.00
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	16.01	16.04	15.87	17.00
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	16.03	16.03	15.95	17.00



<FR1 n38_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	24.00
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	22.33	22.76	22.35	
40	PI/2 BPSK	1	53	22.27	22.57	22.21	24.00
40	PI/2 BPSK	1	104	22.17	22.45	22.11	
40	PI/2 BPSK	50	0	21.77	22.56	21.71	
40	PI/2 BPSK	50	28	22.30	22.40	22.33	24.00
40	PI/2 BPSK	50	56	21.85	22.05	21.65	23.50
40	PI/2 BPSK	100	0	21.85	22.06	21.74	
40	QPSK	1	1	22.00	22.30	22.10	
40	QPSK	1	53	22.10	22.38	22.10	24.00
40	QPSK	1	104	22.06	22.26	22.07	
40	QPSK	50	0	21.28	21.44	21.18	
40	QPSK	50	28	22.32	22.52	22.23	24.00
40	QPSK	50	56	21.27	21.51	21.14	23.00
40	QPSK	100	0	21.26	21.58	21.30	
40	16QAM	1	1	21.01	21.18	21.01	
40	64QAM	1	1	19.56	19.53	19.58	21.50
40	256QAM	1	1	17.78	18.08	17.73	19.50
Channel				517000	519000	521000	24.00
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	22.07	22.41	22.10	
Channel				516500	519000	521500	24.00
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	22.11	22.39	22.03	
Channel				516000	519000	522000	24.00
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	22.10	22.39	22.02	
Channel				515500	519000	522500	24.00
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	22.11	22.46	22.07	
Channel				515000	519000	523000	24.00
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	22.11	22.39	22.10	



<FR1 n38_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	24.00
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	22.53	22.74	22.49	
40	PI/2 BPSK	1	53	22.42	22.67	22.38	23.50
40	PI/2 BPSK	1	104	22.29	22.56	22.24	
40	PI/2 BPSK	50	0	21.94	22.70	21.83	
40	PI/2 BPSK	50	28	22.46	22.68	22.46	23.50
40	PI/2 BPSK	50	56	21.96	22.17	21.84	
40	PI/2 BPSK	100	0	21.96	22.23	21.94	
40	QPSK	1	1	22.15	22.44	22.12	24.00
40	QPSK	1	53	22.24	22.53	22.27	
40	QPSK	1	104	22.21	22.43	22.18	
40	QPSK	50	0	21.42	21.64	21.36	23.00
40	QPSK	50	28	22.43	22.68	22.40	
40	QPSK	50	56	21.38	21.64	21.30	
40	QPSK	100	0	21.42	21.70	21.41	23.00
40	16QAM	1	1	21.17	21.38	21.11	
40	64QAM	1	1	19.59	19.63	19.58	
40	256QAM	1	1	17.91	18.18	17.88	19.50
Channel				517000	519000	521000	Tune-up limit (dBm)
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	22.48	22.68	22.47	24.00
Channel				516500	519000	521500	Tune-up limit (dBm)
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	22.59	22.64	22.45	24.00
Channel				516000	519000	522000	Tune-up limit (dBm)
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	22.53	22.70	22.49	24.00
Channel				515500	519000	522500	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	22.44	22.65	22.49	24.00
Channel				515000	519000	523000	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	22.44	22.64	22.49	24.00



<FR1 n38_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	15.50
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	14.54	14.55	14.17	
40	PI/2 BPSK	1	53	14.33	14.39	13.76	15.50
40	PI/2 BPSK	1	104	14.16	14.39	13.84	
40	PI/2 BPSK	50	0	14.28	14.35	13.79	
40	PI/2 BPSK	50	28	14.25	14.33	13.84	15.50
40	PI/2 BPSK	50	56	14.26	14.33	13.75	15.50
40	PI/2 BPSK	100	0	14.19	14.31	13.78	
40	QPSK	1	1	14.12	14.30	13.68	
40	QPSK	1	53	14.20	14.31	13.73	15.50
40	QPSK	1	104	14.00	14.13	13.52	
40	QPSK	50	0	13.97	14.14	14.07	
40	QPSK	50	28	14.02	14.07	13.54	15.50
40	QPSK	50	56	13.91	14.14	14.10	15.50
40	QPSK	100	0	14.08	14.24	13.56	
40	16QAM	1	1	14.04	14.15	13.66	
40	64QAM	1	1	13.92	14.10	14.05	15.50
40	256QAM	1	1	13.91	14.08	14.05	15.50
Channel				517000	519000	521000	15.50
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	14.53	14.54	14.15	
Channel				516500	519000	521500	15.50
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	14.53	14.54	14.16	
Channel				516000	519000	522000	15.50
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	14.52	14.54	14.16	
Channel				515500	519000	522500	15.50
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	14.53	14.54	14.15	
Channel				515000	519000	523000	15.50
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	14.52	14.54	14.16	



<FR1 n38_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	14.00
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	13.36	13.47	13.41	
40	PI/2 BPSK	1	53	13.17	13.37	13.11	14.00
40	PI/2 BPSK	1	104	13.12	13.28	13.09	
40	PI/2 BPSK	50	0	13.10	13.37	13.18	
40	PI/2 BPSK	50	28	13.22	13.25	13.17	14.00
40	PI/2 BPSK	50	56	13.15	13.33	13.10	14.00
40	PI/2 BPSK	100	0	13.11	13.30	13.18	
40	QPSK	1	1	13.19	13.23	13.05	
40	QPSK	1	53	13.05	13.25	12.98	14.00
40	QPSK	1	104	12.97	13.12	12.84	
40	QPSK	50	0	12.88	13.16	12.84	
40	QPSK	50	28	12.86	13.13	12.94	14.00
40	QPSK	50	56	13.02	13.39	12.88	14.00
40	QPSK	100	0	12.92	13.39	12.91	
40	16QAM	1	1	12.84	13.41	12.93	
40	64QAM	1	1	12.86	13.41	12.72	14.00
40	256QAM	1	1	12.82	13.32	12.74	14.00
Channel				517000	519000	521000	14.00
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	13.34	13.30	13.40	
Channel				516500	519000	521500	14.00
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	13.32	13.31	13.38	
Channel				516000	519000	522000	14.00
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	13.36	13.47	13.41	
Channel				515500	519000	522500	14.00
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	13.26	13.39	13.24	
Channel				515000	519000	523000	14.00
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	13.31	13.40	13.26	



<FR1 n41_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	24.00
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.34	22.78	22.15	
100	PI/2 BPSK	1	137	22.10	22.22	22.01	23.50
100	PI/2 BPSK	1	271	22.08	22.46	22.11	
100	PI/2 BPSK	135	0	22.19	22.76	22.00	
100	PI/2 BPSK	135	69	22.36	22.52	22.13	24.00
100	PI/2 BPSK	135	138	22.36	22.53	22.08	
100	PI/2 BPSK	270	0	22.31	22.59	22.06	
100	QPSK	1	1	22.14	22.50	22.08	23.00
100	QPSK	1	137	22.10	22.06	22.05	
100	QPSK	1	271	22.00	22.31	22.01	
100	QPSK	135	0	22.22	22.49	21.93	24.00
100	QPSK	135	69	22.16	22.53	22.03	
100	QPSK	135	138	22.15	22.47	21.99	
100	QPSK	270	0	22.17	22.47	21.94	23.00
100	16QAM	1	1	21.87	22.12	21.61	
100	64QAM	1	1	20.99	21.26	20.76	
100	256QAM	1	1	18.94	19.37	18.85	19.50
Channel				508200	518598	528996	24.00
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	22.21	22.65	22.10	
Channel				507204	518598	529998	24.00
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.23	22.62	22.06	
Channel				506202	518598	531000	24.00
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	22.19	22.64	22.05	
Channel				505200	518598	531996	24.00
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	22.22	22.62	22.00	
Channel				504204	518598	532998	24.00
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.20	22.64	22.03	
Channel				503202	518598	534000	24.00
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.21	22.60	22.03	
Channel				502200	518598	534996	24.00
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	22.16	22.61	22.01	
Channel				501702	518598	535500	24.00
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	22.14	22.60	22.03	
Channel				501204	518598	535998	24.00
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	22.19	22.61	22.17	
Channel				500700	518598	536496	24.00
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	22.22	22.64	22.11	
Channel				500202	518598	537000	24.00
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	22.23	22.74	22.25	



<FR1 n41_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.52	22.78	22.32	
100	PI/2 BPSK	1	137	22.04	22.39	22.11	24.00
100	PI/2 BPSK	1	271	22.24	22.56	22.10	
100	PI/2 BPSK	135	0	22.38	22.75	22.11	
100	PI/2 BPSK	135	69	22.49	22.70	22.29	24.00
100	PI/2 BPSK	135	138	22.47	22.73	22.22	23.50
100	PI/2 BPSK	270	0	22.46	22.73	22.23	
100	QPSK	1	1	22.34	22.69	22.18	24.00
100	QPSK	1	137	22.02	22.24	22.00	
100	QPSK	1	271	22.10	22.45	22.08	
100	QPSK	135	0	22.34	22.62	22.13	23.00
100	QPSK	135	69	22.36	22.65	22.11	24.00
100	QPSK	135	138	22.26	22.62	22.16	23.00
100	QPSK	270	0	22.34	22.67	22.11	
100	16QAM	1	1	21.98	22.29	21.78	23.00
100	64QAM	1	1	21.15	21.41	20.95	21.50
100	256QAM	1	1	19.13	19.48	19.02	19.50
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	22.49	22.75	22.31	24.00
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.52	22.71	22.29	24.00
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	22.52	22.71	22.22	24.00
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	22.47	22.77	22.28	24.00
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.42	22.71	22.30	24.00
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.44	22.74	22.32	24.00
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	22.49	22.72	22.24	24.00
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	22.46	22.74	22.28	24.00
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	22.44	22.77	22.22	24.00
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	22.48	22.71	22.32	24.00
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	22.43	22.75	22.22	24.00



<FR1 n41_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	15.50
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	14.55	14.56	14.20	
100	PI/2 BPSK	1	137	14.35	14.41	13.78	15.50
100	PI/2 BPSK	1	271	14.19	14.40	13.85	
100	PI/2 BPSK	135	0	14.29	14.38	13.80	
100	PI/2 BPSK	135	69	14.28	14.37	13.87	15.50
100	PI/2 BPSK	135	138	14.28	14.35	13.76	
100	PI/2 BPSK	270	0	14.21	14.32	13.81	
100	QPSK	1	1	14.14	14.31	13.71	15.50
100	QPSK	1	137	14.21	14.34	13.74	
100	QPSK	1	271	14.01	14.16	13.53	
100	QPSK	135	0	14.00	14.17	14.10	15.50
100	QPSK	135	69	14.04	14.08	13.55	
100	QPSK	135	138	13.93	14.16	13.51	
100	QPSK	270	0	14.11	14.25	13.57	15.50
100	16QAM	1	1	14.07	14.16	13.67	
100	64QAM	1	1	13.95	14.11	14.08	
100	256QAM	1	1	13.92	14.09	13.50	15.50
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	14.31	14.37	13.91	15.50
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	14.34	14.41	13.91	15.50
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	14.30	14.40	13.90	15.50
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	14.33	14.44	13.89	15.50
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	14.35	14.42	13.90	15.50
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	14.33	14.38	13.93	15.50
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	14.38	14.43	13.87	15.50
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	14.37	14.38	13.92	15.50
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	14.32	14.38	13.90	15.50
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	14.32	14.37	13.90	15.50
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	14.35	14.43	13.89	15.50



<FR1 n41_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	14.00
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	13.61	13.64	13.45	
100	PI/2 BPSK	1	137	13.09	13.15	12.78	14.00
100	PI/2 BPSK	1	271	13.00	13.05	12.70	
100	PI/2 BPSK	135	0	12.98	13.12	12.73	
100	PI/2 BPSK	135	69	13.02	13.10	12.72	14.00
100	PI/2 BPSK	135	138	13.06	13.05	12.69	14.00
100	PI/2 BPSK	270	0	12.98	13.02	12.65	
100	QPSK	1	1	13.04	13.09	12.60	
100	QPSK	1	137	12.92	13.02	12.58	14.00
100	QPSK	1	271	12.86	12.82	12.44	
100	QPSK	135	0	12.75	12.92	12.43	
100	QPSK	135	69	12.76	12.91	12.45	14.00
100	QPSK	135	138	12.81	12.91	12.40	14.00
100	QPSK	270	0	12.71	12.96	12.48	
100	16QAM	1	1	12.69	12.86	12.46	
100	64QAM	1	1	12.78	12.84	12.35	14.00
100	256QAM	1	1	12.73	12.86	12.30	14.00
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	13.09	13.18	12.80	
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	13.12	13.13	12.74	
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	13.10	13.11	13.73	
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	13.11	13.16	12.80	
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	13.11	13.20	12.80	
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	12.60	12.61	12.82	
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	13.17	13.11	12.84	
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	13.14	13.19	12.80	
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	13.08	13.12	12.79	
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	13.10	13.15	12.78	
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	13.12	13.16	12.78	



<FR1 n41_HPUE_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	27.00
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.60	25.85	25.33	
100	PI/2 BPSK	1	137	25.00	25.33	25.00	26.50
100	PI/2 BPSK	1	271	25.17	25.49	25.01	
100	PI/2 BPSK	135	0	25.35	25.73	25.10	
100	PI/2 BPSK	135	69	25.42	25.68	25.18	26.50
100	PI/2 BPSK	135	138	25.39	25.64	25.03	
100	PI/2 BPSK	270	0	25.47	25.72	25.19	
100	QPSK	1	1	25.35	25.69	25.12	27.00
100	QPSK	1	137	25.02	25.23	25.00	
100	QPSK	1	271	25.11	25.44	25.04	
100	QPSK	135	0	25.31	25.59	24.98	26.00
100	QPSK	135	69	25.36	25.65	25.07	
100	QPSK	135	138	25.21	25.55	24.95	
100	QPSK	270	0	25.33	25.61	25.01	26.00
100	16QAM	1	1	24.97	25.22	24.61	
100	64QAM	1	1	24.13	24.40	23.81	
100	256QAM	1	1	22.15	22.46	21.86	22.50
Channel				508200	518598	528996	27.00
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	25.51	25.78	25.24	
Channel				507204	518598	529998	27.00
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	25.58	25.83	25.33	
Channel				506202	518598	531000	27.00
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	25.60	25.81	25.23	
Channel				505200	518598	531996	27.00
Frequency (MHz)				2511	2592.99	2659.98	
60	PI/2 BPSK	1	1	25.56	25.80	25.25	
Channel				504204	518598	532998	27.00
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	25.55	25.83	25.25	
Channel				503202	518598	534000	27.00
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	25.59	25.84	25.26	
Channel				502200	518598	534996	27.00
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	25.56	25.80	25.24	
Channel				501702	518598	535500	27.00
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	25.53	25.75	25.28	
Channel				501204	518598	535998	27.00
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	25.52	25.82	25.25	
Channel				500700	518598	536496	27.00
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	25.53	25.80	25.33	
Channel				500202	518598	537000	27.00
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	25.57	25.80	25.25	



<FR1 n41_HPUE_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	17.00
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	16.60	16.70	16.52	
100	PI/2 BPSK	1	137	16.61	16.67	16.30	17.00
100	PI/2 BPSK	1	271	16.52	16.57	16.22	
100	PI/2 BPSK	135	0	16.50	16.64	16.25	
100	PI/2 BPSK	135	69	16.54	16.60	16.24	17.00
100	PI/2 BPSK	135	138	16.58	16.57	16.21	17.00
100	PI/2 BPSK	270	0	16.50	16.54	16.17	
100	QPSK	1	1	16.56	16.61	16.12	
100	QPSK	1	137	16.44	16.54	16.10	17.00
100	QPSK	1	271	16.38	16.34	15.96	
100	QPSK	135	0	16.27	16.44	15.95	
100	QPSK	135	69	16.28	16.43	15.97	17.00
100	QPSK	135	138	16.33	16.43	15.92	17.00
100	QPSK	270	0	16.23	16.48	16.00	
100	16QAM	1	1	16.21	16.38	15.98	
100	64QAM	1	1	16.30	16.36	15.87	17.00
100	256QAM	1	1	16.25	16.38	15.82	17.00
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	16.61	16.67	16.32	
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	16.64	16.65	16.26	
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	16.60	16.62	16.23	
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	16.63	16.68	16.32	
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	16.63	16.68	16.32	
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	16.62	16.63	16.34	
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	16.69	16.63	16.36	
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	16.66	16.67	16.32	
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	16.60	16.64	16.31	
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	16.62	16.67	16.30	
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	16.64	16.68	16.30	



<FR1 n48_Ant 5_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	22.00
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	20.65	21.00	20.39	
40	PI/2 BPSK	1	53	20.57	20.87	20.21	21.50
40	PI/2 BPSK	1	104	20.11	20.38	20.15	
40	PI/2 BPSK	50	0	20.01	20.94	19.74	
40	PI/2 BPSK	50	28	20.49	20.79	20.21	22.00
40	PI/2 BPSK	50	56	19.84	20.23	19.63	
40	PI/2 BPSK	100	0	19.96	20.36	19.68	
40	QPSK	1	1	20.18	20.49	20.08	21.00
40	QPSK	1	53	20.50	20.86	20.27	
40	QPSK	1	104	20.07	20.35	20.03	
40	QPSK	50	0	19.47	19.81	19.28	22.00
40	QPSK	50	28	20.58	20.87	20.31	
40	QPSK	50	56	19.39	19.74	19.05	
40	QPSK	100	0	19.40	19.80	19.13	21.00
40	16QAM	1	1	19.15	19.50	19.00	
40	64QAM	1	1	17.54	17.71	17.60	
40	256QAM	1	1	15.79	16.14	15.54	17.50
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	20.55	20.94	20.30	22.00
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	20.58	20.92	20.29	22.00
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	20.57	20.93	20.31	22.00
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	20.59	20.91	20.30	22.00



<FR1 n48_Ant 8_Laptop Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	20.71	21.00	20.44	
40	PI/2 BPSK	1	53	20.63	20.95	20.29	22.00
40	PI/2 BPSK	1	104	20.07	20.44	20.00	
40	PI/2 BPSK	50	0	20.09	20.94	19.83	21.50
40	PI/2 BPSK	50	28	20.58	20.85	20.29	22.00
40	PI/2 BPSK	50	56	19.94	20.30	19.71	21.50
40	PI/2 BPSK	100	0	20.03	20.41	19.75	
40	QPSK	1	1	20.28	20.57	20.17	22.00
40	QPSK	1	53	20.57	20.92	20.35	
40	QPSK	1	104	20.06	20.43	20.00	
40	QPSK	50	0	19.53	19.91	19.35	21.00
40	QPSK	50	28	20.65	20.96	20.36	22.00
40	QPSK	50	56	19.49	19.79	19.15	21.00
40	QPSK	100	0	19.50	19.89	19.23	
40	16QAM	1	1	19.25	19.56	19.05	21.00
40	64QAM	1	1	17.64	17.78	17.50	19.50
40	256QAM	1	1	15.87	16.19	15.59	17.50
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	20.69	20.94	20.34	22.00
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	20.63	20.97	20.44	22.00
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	20.65	20.94	20.38	22.00
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	20.68	20.97	20.37	22.00



<FR1 n48_Ant 5_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	12.00
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	11.80	11.88	11.27	
40	PI/2 BPSK	1	53	11.72	11.72	11.17	12.00
40	PI/2 BPSK	1	104	11.62	11.71	11.14	
40	PI/2 BPSK	50	0	11.61	11.68	11.13	
40	PI/2 BPSK	50	28	11.62	11.64	11.20	12.00
40	PI/2 BPSK	50	56	11.56	11.60	11.13	12.00
40	PI/2 BPSK	100	0	11.54	11.58	11.24	
40	QPSK	1	1	11.49	11.61	11.00	
40	QPSK	1	53	11.45	11.61	11.04	12.00
40	QPSK	1	104	11.36	11.43	10.93	
40	QPSK	50	0	11.39	11.43	10.79	
40	QPSK	50	28	11.44	11.38	10.93	12.00
40	QPSK	50	56	11.27	11.49	10.84	12.00
40	QPSK	100	0	11.46	11.50	10.91	
40	16QAM	1	1	11.42	11.35	10.95	
40	64QAM	1	1	11.26	11.37	10.79	12.00
40	256QAM	1	1	11.20	11.29	10.76	12.00
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	11.68	11.71	11.25	
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	11.69	11.70	11.26	
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	11.67	11.68	11.27	
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	11.65	11.66	11.23	



<FR1 n48_Ant 8_Tablet Mode>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	12.00
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	11.72	11.80	11.29	
40	PI/2 BPSK	1	53	11.75	11.75	11.19	12.00
40	PI/2 BPSK	1	104	11.63	11.65	11.27	
40	PI/2 BPSK	50	0	11.65	11.79	11.24	
40	PI/2 BPSK	50	28	11.64	11.68	11.23	12.00
40	PI/2 BPSK	50	56	11.64	11.72	11.22	12.00
40	PI/2 BPSK	100	0	11.56	11.68	11.19	
40	QPSK	1	1	11.66	11.62	11.09	
40	QPSK	1	53	11.56	11.58	11.07	12.00
40	QPSK	1	104	11.47	11.50	10.98	
40	QPSK	50	0	11.36	11.54	10.93	
40	QPSK	50	28	11.36	11.49	11.01	12.00
40	QPSK	50	56	11.54	11.50	10.96	12.00
40	QPSK	100	0	11.34	11.53	11.04	
40	16QAM	1	1	11.34	11.42	10.97	
40	64QAM	1	1	11.40	11.45	10.80	12.00
40	256QAM	1	1	11.32	11.45	10.81	12.00
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	11.75	11.76	11.32	
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	11.74	11.77	11.35	
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	11.80	11.72	11.30	
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	11.77	11.77	11.25	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	24.00
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.52	22.53	22.31	
100	PI/2 BPSK	1	137	22.30	22.23	22.17	23.50
100	PI/2 BPSK	1	271	22.08	22.09	22.02	
100	PI/2 BPSK	135	0	22.47	22.49	22.09	
100	PI/2 BPSK	135	69	22.35	22.38	22.31	23.50
100	PI/2 BPSK	135	138	22.24	22.13	22.12	
100	PI/2 BPSK	270	0	22.26	22.19	22.09	
100	QPSK	1	1	22.40	22.32	22.26	24.00
100	QPSK	1	137	22.23	22.16	22.17	
100	QPSK	1	271	22.05	22.05	22.11	
100	QPSK	135	0	22.27	22.23	22.15	23.00
100	QPSK	135	69	22.38	22.34	22.27	24.00
100	QPSK	135	138	22.18	22.13	22.06	23.00
100	QPSK	270	0	22.16	22.08	22.05	
100	16QAM	1	1	22.12	22.02	21.96	
100	64QAM	1	1	21.36	21.28	21.22	21.50
100	256QAM	1	1	19.36	19.33	19.29	19.50
Channel				649668	656000	662332	24.00
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	22.40	22.34	22.28	
Channel				649334	656000	662666	24.00
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.35	22.29	22.21	
Channel				649000	656000	663000	24.00
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	22.31	22.25	22.19	
Channel				648668	656000	663332	24.00
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.35	22.26	22.21	
Channel				648334	656000	663666	24.00
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.32	22.27	22.21	
Channel				648000	656000	664000	24.00
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.34	22.26	22.18	
Channel				647668	656000	664332	24.00
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	22.34	22.25	22.19	
Channel				647334	656000	664666	24.00
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.31	22.25	22.20	
Channel				647168	656000	664832	24.00
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.30	22.26	22.21	
Channel				647000	656000	665000	24.00
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.32	22.27	22.22	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	24.00
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.47	22.55	22.40	
100	PI/2 BPSK	1	137	22.40	22.32	22.26	23.50
100	PI/2 BPSK	1	271	22.16	22.08	22.09	
100	PI/2 BPSK	135	0	22.21	22.52	22.15	
100	PI/2 BPSK	135	69	22.50	22.44	22.39	24.00
100	PI/2 BPSK	135	138	22.31	22.23	22.17	
100	PI/2 BPSK	270	0	22.34	22.26	22.17	
100	QPSK	1	1	22.45	22.37	22.33	24.00
100	QPSK	1	137	22.33	22.25	22.24	
100	QPSK	1	271	22.10	22.02	22.00	
100	QPSK	135	0	22.36	22.28	22.24	23.00
100	QPSK	135	69	22.47	22.39	22.35	
100	QPSK	135	138	22.28	22.20	22.15	
100	QPSK	270	0	22.23	22.15	22.13	23.00
100	16QAM	1	1	22.17	22.09	22.03	
100	64QAM	1	1	21.45	21.37	21.29	
100	256QAM	1	1	19.46	19.38	19.34	19.50
Channel				649668	656000	662332	24.00
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	22.49	22.40	22.38	
Channel				649334	656000	662666	24.00
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.54	22.40	22.30	
Channel				649000	656000	663000	24.00
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	22.47	22.39	22.38	
Channel				648668	656000	663332	24.00
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.51	22.38	22.31	
Channel				648334	656000	663666	24.00
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.50	22.41	22.36	
Channel				648000	656000	664000	24.00
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.52	22.46	22.36	
Channel				647668	656000	664332	24.00
Frequency (MHz)				3715.02	3840	3964.98	
30	PI/2 BPSK	1	1	22.49	22.39	22.34	
Channel				647334	656000	664666	24.00
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.53	22.41	22.38	
Channel				647168	656000	664832	24.00
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.55	22.42	22.30	
Channel				647000	656000	665000	24.00
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.51	22.37	22.33	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	12.50
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	11.80	11.84	11.56	
100	PI/2 BPSK	1	137	11.66	11.73	11.38	12.50
100	PI/2 BPSK	1	271	11.62	11.76	11.36	
100	PI/2 BPSK	135	0	11.69	11.75	11.33	
100	PI/2 BPSK	135	69	11.71	11.74	11.43	12.50
100	PI/2 BPSK	135	138	11.63	11.67	11.37	
100	PI/2 BPSK	270	0	11.64	11.67	11.36	
100	QPSK	1	1	11.47	11.65	11.32	12.50
100	QPSK	1	137	11.53	11.66	11.30	
100	QPSK	1	271	11.43	11.47	11.29	
100	QPSK	135	0	11.38	11.44	11.32	12.50
100	QPSK	135	69	11.45	11.40	11.30	
100	QPSK	135	138	11.34	11.49	11.32	
100	QPSK	270	0	11.52	11.49	11.34	12.50
100	16QAM	1	1	11.46	11.41	11.30	
100	64QAM	1	1	11.36	11.44	11.29	
100	256QAM	1	1	11.33	11.34	11.38	12.50
Channel				649668	656000	662332	12.50
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	11.50	11.42	11.28	
Channel				649334	656000	662666	12.50
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	11.51	11.47	11.29	
Channel				649000	656000	663000	12.50
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	11.50	11.42	11.20	
Channel				648668	656000	663332	12.50
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	11.40	11.52	11.30	
Channel				648334	656000	663666	12.50
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	11.41	11.42	11.22	
Channel				648000	656000	664000	12.50
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	11.49	11.48	11.28	
Channel				647668	656000	664332	12.50
Frequency (MHz)				3715.02	3840	3964.98	
30	PI/2 BPSK	1	1	11.45	11.44	11.24	
Channel				647334	656000	664666	12.50
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	11.43	11.47	11.23	
Channel				647168	656000	664832	12.50
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	11.43	11.61	11.25	
Channel				647000	656000	665000	12.50
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	11.48	11.44	11.31	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	12.00
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	11.35	11.40	11.25	
100	PI/2 BPSK	1	137	11.37	11.28	11.10	12.00
100	PI/2 BPSK	1	271	11.27	11.25	11.08	
100	PI/2 BPSK	135	0	11.18	11.32	11.07	
100	PI/2 BPSK	135	69	11.27	11.24	11.14	12.00
100	PI/2 BPSK	135	138	11.28	11.29	11.13	12.00
100	PI/2 BPSK	270	0	11.23	11.23	11.13	
100	QPSK	1	1	11.22	11.30	11.01	
100	QPSK	1	137	11.19	11.19	10.97	12.00
100	QPSK	1	271	11.01	11.07	10.85	
100	QPSK	135	0	10.96	11.11	10.82	
100	QPSK	135	69	10.99	11.03	10.93	12.00
100	QPSK	135	138	11.08	11.16	10.76	12.00
100	QPSK	270	0	11.00	11.15	10.90	
100	16QAM	1	1	10.88	11.06	10.83	
100	64QAM	1	1	10.99	11.11	10.74	12.00
100	256QAM	1	1	10.92	11.04	10.73	12.00
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	10.91	10.87	10.90	
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	10.90	10.94	10.92	
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	15.28	15.25	15.15	
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	10.84	10.87	10.65	
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	10.87	10.85	10.67	
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	10.83	10.89	10.68	
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	PI/2 BPSK	1	1	10.88	10.84	10.72	
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	10.91	10.86	10.65	
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	10.90	10.90	10.73	
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	10.89	10.89	10.73	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	27.00
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.51	25.24	25.12	
100	PI/2 BPSK	1	137	25.31	25.08	25.14	26.50
100	PI/2 BPSK	1	271	25.01	25.02	25.04	
100	PI/2 BPSK	135	0	25.46	24.98	25.07	
100	PI/2 BPSK	135	69	25.31	25.18	25.29	27.00
100	PI/2 BPSK	135	138	25.17	25.00	25.06	
100	PI/2 BPSK	270	0	25.21	25.01	25.09	
100	QPSK	1	1	25.31	25.12	25.19	26.00
100	QPSK	1	137	25.25	25.05	25.16	
100	QPSK	1	271	25.17	25.04	25.00	
100	QPSK	135	0	25.30	25.04	25.12	27.00
100	QPSK	135	69	25.35	25.09	25.19	
100	QPSK	135	138	25.11	24.89	24.98	
100	QPSK	270	0	25.14	24.91	25.07	26.00
100	16QAM	1	1	25.01	24.78	24.95	
100	64QAM	1	1	24.32	24.09	24.22	
100	256QAM	1	1	22.39	22.17	22.20	22.50
Channel				649668	656000	662332	27.00
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.33	25.19	25.10	
Channel				649334	656000	662666	27.00
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.23	25.11	25.05	
Channel				649000	656000	663000	27.00
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.24	25.12	25.00	
Channel				648668	656000	663332	27.00
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.28	25.14	25.01	
Channel				648334	656000	663666	27.00
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.23	25.10	25.01	
Channel				648000	656000	664000	27.00
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.27	25.09	25.05	
Channel				647668	656000	664332	27.00
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	25.28	25.09	25.00	
Channel				647334	656000	664666	27.00
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.28	25.11	25.02	
Channel				647168	656000	664832	27.00
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.25	25.11	25.02	
Channel				647000	656000	665000	27.00
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.27	25.11	25.04	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	27.00
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.51	25.29	25.22	
100	PI/2 BPSK	1	137	25.37	25.15	25.23	26.50
100	PI/2 BPSK	1	271	25.08	25.06	25.00	
100	PI/2 BPSK	135	0	25.46	25.04	25.13	
100	PI/2 BPSK	135	69	25.26	25.24	25.35	26.50
100	PI/2 BPSK	135	138	25.27	25.05	25.13	
100	PI/2 BPSK	270	0	25.30	25.08	25.19	
100	QPSK	1	1	25.39	25.17	25.25	27.00
100	QPSK	1	137	25.34	25.12	25.25	
100	QPSK	1	271	25.07	25.05	25.05	
100	QPSK	135	0	25.36	25.14	25.22	26.00
100	QPSK	135	69	25.41	25.19	25.25	
100	QPSK	135	138	25.19	24.97	25.05	
100	QPSK	270	0	25.22	25.00	25.14	26.00
100	16QAM	1	1	25.09	24.87	25.00	
100	64QAM	1	1	24.39	24.17	24.28	
100	256QAM	1	1	22.45	22.23	22.29	22.50
Channel				649668	656000	662332	27.00
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.41	25.28	25.19	
Channel				649334	656000	662666	27.00
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.45	25.21	25.15	
Channel				649000	656000	663000	27.00
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.46	25.22	25.19	
Channel				648668	656000	663332	27.00
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.41	25.26	25.20	
Channel				648334	656000	663666	27.00
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.43	25.25	25.18	
Channel				648000	656000	664000	27.00
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.51	25.22	25.18	
Channel				647668	656000	664332	27.00
Frequency (MHz)				3715.02	3840	3964.98	
30	PI/2 BPSK	1	1	25.48	25.22	25.17	
Channel				647334	656000	664666	27.00
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.41	25.26	25.16	
Channel				647168	656000	664832	27.00
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.41	25.27	25.14	
Channel				647000	656000	665000	27.00
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.44	25.22	25.19	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	15.50
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	14.23	14.35	14.17	
100	PI/2 BPSK	1	137	14.17	14.03	13.85	15.50
100	PI/2 BPSK	1	271	14.12	14.05	13.94	
100	PI/2 BPSK	135	0	14.11	14.25	14.00	
100	PI/2 BPSK	135	69	14.10	14.14	13.95	15.50
100	PI/2 BPSK	135	138	14.21	14.02	13.89	
100	PI/2 BPSK	270	0	14.16	14.16	14.06	
100	QPSK	1	1	14.07	14.22	13.85	15.50
100	QPSK	1	137	14.10	13.93	13.76	
100	QPSK	1	271	13.79	13.96	13.62	
100	QPSK	135	0	13.80	13.90	13.73	15.50
100	QPSK	135	69	13.92	13.96	13.71	
100	QPSK	135	138	13.88	14.02	13.65	
100	QPSK	270	0	13.81	14.02	13.71	15.50
100	16QAM	1	1	13.72	13.92	13.75	
100	64QAM	1	1	13.92	13.85	13.63	
100	256QAM	1	1	13.70	13.80	13.52	15.50
Channel				649668	656000	662332	15.50
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	14.22	14.16	14.05	
Channel				649334	656000	662666	15.50
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	14.21	14.27	14.11	
Channel				649000	656000	663000	15.50
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	14.50	14.23	14.20	
Channel				648668	656000	663332	15.50
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	14.20	14.30	14.11	
Channel				648334	656000	663666	15.50
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	14.25	14.25	14.12	
Channel				648000	656000	664000	15.50
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	14.23	14.27	14.10	
Channel				647668	656000	664332	15.50
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	14.21	14.23	14.16	
Channel				647334	656000	664666	15.50
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	14.17	14.15	14.12	
Channel				647168	656000	664832	15.50
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	14.18	14.10	14.06	
Channel				647000	656000	665000	15.50
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	14.20	14.03	14.05	



FCC SAR TEST REPORT

Report No. : FA490504A

<FR1 n77_HPUE_Ant 8_Tablet Mode>Part 270

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	15.00
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	14.23	14.35	13.70	
100	PI/2 BPSK	1	137	14.30	14.21	14.03	15.00
100	PI/2 BPSK	1	271	14.20	14.18	14.01	
100	PI/2 BPSK	135	0	14.11	14.24	14.00	
100	PI/2 BPSK	135	69	14.20	14.17	14.07	15.00
100	PI/2 BPSK	135	138	14.21	14.22	14.06	
100	PI/2 BPSK	270	0	14.16	14.16	14.06	
100	QPSK	1	1	14.15	14.23	13.94	15.00
100	QPSK	1	137	14.12	14.12	13.90	
100	QPSK	1	271	13.94	14.00	13.78	
100	QPSK	135	0	13.89	14.04	13.75	15.00
100	QPSK	135	69	13.92	13.96	13.86	
100	QPSK	135	138	14.01	14.09	13.69	
100	QPSK	270	0	13.93	14.08	13.83	15.00
100	16QAM	1	1	13.81	13.99	13.76	
100	64QAM	1	1	13.92	14.04	13.67	
100	256QAM	1	1	13.85	13.97	13.66	15.00
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	14.34	14.30	14.09	15.00
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	14.33	14.29	14.09	15.00
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	14.30	14.25	14.05	15.00
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	14.27	14.34	14.08	15.00
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	14.30	14.28	14.12	15.00
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	14.26	14.32	14.11	15.00
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	PI/2 BPSK	1	1	14.31	14.27	14.15	15.00
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	14.34	14.29	14.09	15.00
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	14.33	14.33	14.16	15.00
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	14.32	14.32	14.16	15.00



<FR1 n77_Ant 5_Laptop Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		24.00
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.12		
100	PI/2 BPSK	1	137		22.96		24.00
100	PI/2 BPSK	1	271		22.35		
100	PI/2 BPSK	135	0		22.98		
100	PI/2 BPSK	135	69		22.94		24.00
100	PI/2 BPSK	135	138		22.83		23.50
100	PI/2 BPSK	270	0		22.90		
100	QPSK	1	1		22.90		
100	QPSK	1	137		22.87		24.00
100	QPSK	1	271		22.29		
100	QPSK	135	0		22.78		
100	QPSK	135	69		23.07		24.00
100	QPSK	135	138		22.83		23.00
100	QPSK	270	0		22.89		
100	16QAM	1	1		22.81		
100	64QAM	1	1		21.42		21.50
100	256QAM	1	1		19.44		19.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.08	23.10	23.08	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.01	23.01	22.98	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.03	23.00	22.98	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.03	23.00	23.01	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.99	23.03	23.00	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.01	23.00	22.98	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.00	23.05	23.01	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.99	23.05	23.02	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.01	23.03	22.98	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.03	23.02	23.00	



<FR1 n77_Ant 8_Laptop Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.20		
100	PI/2 BPSK	1	137		23.06		24.00
100	PI/2 BPSK	1	271		22.41		
100	PI/2 BPSK	135	0		23.08		
100	PI/2 BPSK	135	69		22.86		24.00
100	PI/2 BPSK	135	138		22.89		23.50
100	PI/2 BPSK	270	0		22.97		
100	QPSK	1	1		23.00		24.00
100	QPSK	1	137		22.97		
100	QPSK	1	271		22.35		
100	QPSK	135	0		22.85		23.00
100	QPSK	135	69		23.15		24.00
100	QPSK	135	138		22.90		23.00
100	QPSK	270	0		22.95		
100	16QAM	1	1		22.91		23.00
100	64QAM	1	1		21.47		21.50
100	256QAM	1	1		19.49		19.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.17	23.17	23.13	24.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.12	23.09	23.17	24.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.07	23.08	23.16	24.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.17	23.07	23.11	24.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.12	23.17	23.12	24.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.12	23.15	23.13	24.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.12	23.14	23.11	24.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.13	23.16	23.14	24.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.14	23.15	23.16	24.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.14	23.08	23.11	24.00



<FR1 n77_Ant 5_Tablet Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		12.50
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		11.80		
100	PI/2 BPSK	1	137		11.67		12.50
100	PI/2 BPSK	1	271		11.65		
100	PI/2 BPSK	135	0		11.64		
100	PI/2 BPSK	135	69		11.63		12.50
100	PI/2 BPSK	135	138		11.63		12.50
100	PI/2 BPSK	270	0		11.57		
100	QPSK	1	1		11.57		
100	QPSK	1	137		11.55		12.50
100	QPSK	1	271		11.41		
100	QPSK	135	0		11.40		
100	QPSK	135	69		11.41		12.50
100	QPSK	135	138		11.46		12.50
100	QPSK	270	0		11.50		
100	16QAM	1	1		11.42		
100	64QAM	1	1		11.47		12.50
100	256QAM	1	1		11.35		12.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	11.47	11.70	11.69	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	11.57	11.58	11.56	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	11.50	11.52	11.54	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	11.57	11.64	11.59	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	11.62	11.62	11.52	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	11.56	11.59	11.51	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	11.54	11.60	11.52	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	11.70	11.65	11.63	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	11.61	11.59	11.63	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	11.58	11.66	11.59	



<FR1 n77_Ant 8_Tablet Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		11.29		
100	PI/2 BPSK	1	137		11.15		12.00
100	PI/2 BPSK	1	271		11.14		
100	PI/2 BPSK	135	0		11.20		
100	PI/2 BPSK	135	69		11.14		12.00
100	PI/2 BPSK	135	138		11.19		12.00
100	PI/2 BPSK	270	0		11.14		
100	QPSK	1	1		11.08		
100	QPSK	1	137		11.10		12.00
100	QPSK	1	271		11.15		
100	QPSK	135	0		11.01		
100	QPSK	135	69		11.00		12.00
100	QPSK	135	138		11.01		12.00
100	QPSK	270	0		11.06		
100	16QAM	1	1		11.03		
100	64QAM	1	1		11.07		12.00
100	256QAM	1	1		11.13		12.00
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	11.02	11.05	11.08	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	11.01	11.12	11.16	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	11.02	11.11	11.14	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	11.00	11.11	11.17	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	11.15	11.13	11.08	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	11.07	11.09	11.05	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	11.10	11.17	11.07	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	11.05	11.13	11.08	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	10.99	11.21	11.17	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	11.07	11.16	11.12	



<FR1 n77_HPUE_Ant 5_Laptop Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		26.11		27.00
100	PI/2 BPSK	1	137		25.95		
100	PI/2 BPSK	1	271		25.30		
100	PI/2 BPSK	135	0		25.98		26.50
100	PI/2 BPSK	135	69		25.90		27.00
100	PI/2 BPSK	135	138		25.77		26.50
100	PI/2 BPSK	270	0		25.89		
100	QPSK	1	1		25.83		27.00
100	QPSK	1	137		25.83		
100	QPSK	1	271		25.20		
100	QPSK	135	0		25.71		26.00
100	QPSK	135	69		25.99		27.00
100	QPSK	135	138		25.75		26.00
100	QPSK	270	0		25.85		
100	16QAM	1	1		25.80		26.00
100	64QAM	1	1		24.33		24.50
100	256QAM	1	1		22.37		22.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	26.02	26.03	26.10	27.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.94	25.97	26.00	27.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.93	25.93	26.05	27.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.92	25.93	26.05	27.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.96	25.96	26.05	27.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.92	25.93	26.04	27.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.95	25.98	26.05	27.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.92	25.98	26.04	27.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.94	25.94	26.05	27.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.92	25.95	26.04	27.00



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<FR1 n77_HPUE_Ant 8_Laptop Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		26.20		
100	PI/2 BPSK	1	137		26.01		27.00
100	PI/2 BPSK	1	271		25.38		
100	PI/2 BPSK	135	0		26.04		
100	PI/2 BPSK	135	69		26.00		26.50
100	PI/2 BPSK	135	138		25.86		27.00
100	PI/2 BPSK	270	0		25.98		
100	QPSK	1	1		25.92		
100	QPSK	1	137		25.90		26.00
100	QPSK	1	271		25.26		
100	QPSK	135	0		25.80		
100	QPSK	135	69		26.07		27.00
100	QPSK	135	138		25.81		26.00
100	QPSK	270	0		25.93		
100	16QAM	1	1		25.89		
100	64QAM	1	1		24.42		24.50
100	256QAM	1	1		22.46		22.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	26.08	26.13	26.16	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	26.15	26.13	26.10	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	26.12	26.08	26.09	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	26.18	26.11	26.09	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	26.13	26.17	26.10	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	26.09	26.11	26.10	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	26.12	26.17	26.12	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	26.14	26.09	26.12	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	26.15	26.13	26.14	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	26.10	26.14	26.10	



<FR1 n77_HPUE_Ant 5_Tablet Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.20		15.50
100	PI/2 BPSK	1	137		14.08		
100	PI/2 BPSK	1	271		14.06		
100	PI/2 BPSK	135	0		14.13		15.50
100	PI/2 BPSK	135	69		14.07		15.50
100	PI/2 BPSK	135	138		13.92		15.50
100	PI/2 BPSK	270	0		14.07		
100	QPSK	1	1		13.96		15.50
100	QPSK	1	137		13.89		
100	QPSK	1	271		13.80		
100	QPSK	135	0		13.85		15.50
100	QPSK	135	69		13.89		15.50
100	QPSK	135	138		13.86		15.50
100	QPSK	270	0		13.81		
100	16QAM	1	1		13.75		15.50
100	64QAM	1	1		13.72		15.50
100	256QAM	1	1		13.72		15.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	14.11	14.12	14.06	15.50
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	14.12	14.10	14.03	15.50
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	14.06	14.05	14.03	15.50
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	14.02	14.10	14.05	15.50
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	14.06	14.08	14.11	15.50
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	14.03	14.07	14.10	15.50
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	14.02	14.09	14.11	15.50
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	14.03	14.10	14.10	15.50
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	14.05	14.05	14.12	15.50
Channel				630333	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3454.9965	3499.98	3544.98	
10	PI/2 BPSK	1	1	14.05	14.06	14.10	15.50



<FR1 n77_HPUE_Ant 8_Tablet Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.20		15.00
100	PI/2 BPSK	1	137		14.08		
100	PI/2 BPSK	1	271		14.07		
100	PI/2 BPSK	135	0		14.13		15.00
100	PI/2 BPSK	135	69		14.10		15.00
100	PI/2 BPSK	135	138		14.12		15.00
100	PI/2 BPSK	270	0		14.07		
100	QPSK	1	1		14.01		15.00
100	QPSK	1	137		14.03		
100	QPSK	1	271		13.87		
100	QPSK	135	0		13.94		15.00
100	QPSK	135	69		13.93		15.00
100	QPSK	135	138		13.94		15.00
100	QPSK	270	0		13.89		
100	16QAM	1	1		13.86		15.00
100	64QAM	1	1		13.90		15.00
100	256QAM	1	1		13.80		15.00
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	14.00	14.16	14.11	15.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	14.04	14.15	14.09	15.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	14.03	14.12	14.05	15.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	14.03	14.14	14.09	15.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	14.08	14.16	14.11	15.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	14.06	14.12	14.08	15.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	14.03	14.00	14.10	15.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	14.08	14.16	14.11	15.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	14.02	14.14	14.13	15.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	14.10	13.95	14.15	15.00



<FR1 n78_Ant 5_Laptop Mode>Part 270

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.64		24.00
100	PI/2 BPSK	1	137		22.51		
100	PI/2 BPSK	1	271		22.14		
100	PI/2 BPSK	135	0		22.53		23.50
100	PI/2 BPSK	135	69		22.50		24.00
100	PI/2 BPSK	135	138		22.08		23.50
100	PI/2 BPSK	270	0		22.18		
100	QPSK	1	1		22.50		24.00
100	QPSK	1	137		22.53		
100	QPSK	1	271		22.15		
100	QPSK	135	0		22.01		23.00
100	QPSK	135	69		22.50		24.00
100	QPSK	135	138		21.95		23.00
100	QPSK	270	0		21.85		
100	16QAM	1	1		21.93		23.00
100	64QAM	1	1		21.37		21.50
100	256QAM	1	1		19.34		19.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	22.61	22.47	22.56	24.00
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.55	22.38	22.51	24.00
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	22.56	22.42	22.47	24.00
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.53	22.40	22.46	24.00
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.55	22.42	22.50	24.00
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.53	22.39	22.47	24.00
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	22.52	22.41	22.47	24.00
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.55	22.40	22.51	24.00
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.53	22.41	22.46	24.00
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.51	22.39	22.51	24.00



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.70		
100	PI/2 BPSK	1	137		22.58		24.00
100	PI/2 BPSK	1	271		22.22		
100	PI/2 BPSK	135	0		22.65		
100	PI/2 BPSK	135	69		22.61		23.50
100	PI/2 BPSK	135	138		22.16		24.00
100	PI/2 BPSK	270	0		22.26		
100	QPSK	1	1		22.56		
100	QPSK	1	137		22.62		24.00
100	QPSK	1	271		22.20		
100	QPSK	135	0		22.06		
100	QPSK	135	69		22.57		23.00
100	QPSK	135	138		22.01		24.00
100	QPSK	270	0		21.95		
100	16QAM	1	1		22.01		
100	64QAM	1	1		21.45		23.00
100	256QAM	1	1		19.42		21.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	22.67	22.57	22.64	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.64	22.63	22.65	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	22.64	22.58	22.57	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.59	22.62	22.62	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.61	22.64	22.62	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.62	22.66	22.59	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	22.65	22.63	22.61	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.58	22.57	22.59	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.61	22.65	22.59	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.63	22.62	22.61	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		11.52		
100	PI/2 BPSK	1	137		11.44		12.50
100	PI/2 BPSK	1	271		11.39		
100	PI/2 BPSK	135	0		11.42		
100	PI/2 BPSK	135	69		11.40		12.50
100	PI/2 BPSK	135	138		11.32		12.50
100	PI/2 BPSK	270	0		11.37		
100	QPSK	1	1		11.36		
100	QPSK	1	137		11.33		12.50
100	QPSK	1	271		11.11		
100	QPSK	135	0		11.16		
100	QPSK	135	69		11.07		12.50
100	QPSK	135	138		11.25		12.50
100	QPSK	270	0		11.22		
100	16QAM	1	1		11.12		
100	64QAM	1	1		11.16		12.50
100	256QAM	1	1		11.01		12.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	11.46	11.41	11.42	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	11.40	11.36	11.31	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	11.36	11.33	11.43	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	11.38	11.44	11.30	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	11.39	11.42	11.35	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	11.37	11.45	11.31	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	11.41	11.43	11.28	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	11.37	11.43	11.32	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	11.39	11.38	11.28	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	11.41	11.43	11.32	



<FR1 n78_Ant 8_Tablet Mode>Part 270

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		11.25		
100	PI/2 BPSK	1	137		11.20		12.00
100	PI/2 BPSK	1	271		11.22		
100	PI/2 BPSK	135	0		11.21		
100	PI/2 BPSK	135	69		11.20		12.00
100	PI/2 BPSK	135	138		11.17		12.00
100	PI/2 BPSK	270	0		11.11		
100	QPSK	1	1		11.16		
100	QPSK	1	137		11.10		12.00
100	QPSK	1	271		11.10		
100	QPSK	135	0		11.19		
100	QPSK	135	69		11.07		12.00
100	QPSK	135	138		11.01		12.00
100	QPSK	270	0		11.03		
100	16QAM	1	1		11.05		
100	64QAM	1	1		11.11		12.00
100	256QAM	1	1		11.13		12.00
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	10.82	10.80	10.85	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	10.67	10.80	10.70	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	10.62	10.76	10.65	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	10.69	10.78	10.75	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	10.72	10.77	10.71	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780.00	
40	PI/2 BPSK	1	1	10.72	10.79	10.71	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	10.67	10.82	10.77	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	10.70	10.75	10.71	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	10.68	10.78	10.72	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	10.73	10.82	10.73	



<FR1 n78_HPUE_Ant 5_Laptop Mode>Part 270

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.47		27.00
100	PI/2 BPSK	1	137		25.44		
100	PI/2 BPSK	1	271		25.08		
100	PI/2 BPSK	135	0		25.40		26.50
100	PI/2 BPSK	135	69		25.32		27.00
100	PI/2 BPSK	135	138		25.03		26.50
100	PI/2 BPSK	270	0		25.05		
100	QPSK	1	1		25.36		27.00
100	QPSK	1	137		25.39		
100	QPSK	1	271		25.05		
100	QPSK	135	0		24.87		26.00
100	QPSK	135	69		25.40		27.00
100	QPSK	135	138		24.89		26.00
100	QPSK	270	0		24.76		
100	16QAM	1	1		24.84		26.00
100	64QAM	1	1		24.20		24.50
100	256QAM	1	1		22.24		22.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.43	25.40	25.39	27.00
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.35	25.33	25.33	27.00
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.37	25.34	25.34	27.00
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.37	25.33	25.34	27.00
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.37	25.33	25.33	27.00
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.37	25.32	25.30	27.00
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.38	25.33	25.29	27.00
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.37	25.32	25.33	27.00
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.33	25.31	25.30	27.00
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.38	25.35	25.31	27.00



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.55		
100	PI/2 BPSK	1	137		25.52		27.00
100	PI/2 BPSK	1	271		25.14		
100	PI/2 BPSK	135	0		25.45		
100	PI/2 BPSK	135	69		25.40		26.50
100	PI/2 BPSK	135	138		25.09		27.00
100	PI/2 BPSK	270	0		25.12		
100	QPSK	1	1		25.46		
100	QPSK	1	137		25.48		27.00
100	QPSK	1	271		25.12		
100	QPSK	135	0		24.93		
100	QPSK	135	69		25.47		26.00
100	QPSK	135	138		24.94		27.00
100	QPSK	270	0		24.84		
100	16QAM	1	1		24.89		
100	64QAM	1	1		24.30		26.00
100	256QAM	1	1		22.32		24.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.52	25.50	25.44	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.51	25.48	25.45	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.45	25.49	25.49	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.43	25.42	25.46	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.45	25.50	25.51	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.46	25.48	25.48	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	25.45	25.49	25.46	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.47	25.49	25.52	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.43	25.42	25.46	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.52	25.44	25.51	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		14.20		
100	PI/2 BPSK	1	137		14.08		15.50
100	PI/2 BPSK	1	271		14.07		
100	PI/2 BPSK	135	0		14.13		
100	PI/2 BPSK	135	69		14.10		15.50
100	PI/2 BPSK	135	138		14.12		15.50
100	PI/2 BPSK	270	0		14.07		
100	QPSK	1	1		14.01		
100	QPSK	1	137		14.03		15.50
100	QPSK	1	271		13.87		
100	QPSK	135	0		13.94		
100	QPSK	135	69		13.93		15.50
100	QPSK	135	138		13.94		15.50
100	QPSK	270	0		13.89		
100	16QAM	1	1		13.86		
100	64QAM	1	1		13.90		15.50
100	256QAM	1	1		13.80		15.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	14.05	14.10	14.08	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	13.90	14.03	13.93	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	13.88	13.96	13.91	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	13.92	14.01	13.98	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	13.95	14.02	13.94	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	13.95	14.03	13.94	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	13.90	14.05	14.00	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	13.93	13.98	13.94	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	13.91	14.01	13.95	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	13.96	14.05	13.96	



<FR1 n78_HPUE_Ant 8_Tablet Mode>Part 270

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		14.20		
100	PI/2 BPSK	1	137		14.03		15.00
100	PI/2 BPSK	1	271		14.05		
100	PI/2 BPSK	135	0		14.05		
100	PI/2 BPSK	135	69		14.04		15.00
100	PI/2 BPSK	135	138		14.00		15.00
100	PI/2 BPSK	270	0		13.94		
100	QPSK	1	1		13.99		
100	QPSK	1	137		13.93		15.00
100	QPSK	1	271		13.73		
100	QPSK	135	0		13.82		
100	QPSK	135	69		13.70		15.00
100	QPSK	135	138		13.84		15.00
100	QPSK	270	0		13.86		
100	16QAM	1	1		13.74		
100	64QAM	1	1		13.73		15.00
100	256QAM	1	1		13.75		15.00
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	14.05	14.13	14.08	15.00
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	13.90	14.03	13.93	15.00
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	13.84	14.02	13.90	15.00
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	13.92	14.01	13.98	15.00
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	13.95	14.02	13.94	15.00
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	13.95	14.03	13.94	15.00
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	13.90	14.05	14.00	15.00
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	13.93	13.98	13.94	15.00
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	13.91	14.01	13.95	15.00
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	13.96	14.05	13.96	15.00



<FR1 n78_Ant 5_Laptop Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.95		24.00
100	PI/2 BPSK	1	137		22.82		
100	PI/2 BPSK	1	271		22.16		
100	PI/2 BPSK	135	0		22.92		23.50
100	PI/2 BPSK	135	69		22.29		24.00
100	PI/2 BPSK	135	138		22.21		23.50
100	PI/2 BPSK	270	0		22.27		
100	QPSK	1	1		22.90		24.00
100	QPSK	1	137		22.84		
100	QPSK	1	271		22.38		
100	QPSK	135	0		22.20		23.00
100	QPSK	135	69		22.84		24.00
100	QPSK	135	138		22.19		23.00
100	QPSK	270	0		22.20		
100	16QAM	1	1		22.37		23.00
100	64QAM	1	1		21.39		21.50
100	256QAM	1	1		19.44		19.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.84	22.88	22.82	24.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.77	22.79	22.74	24.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.76	22.82	22.72	24.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.79	22.83	22.72	24.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.75	22.83	22.77	24.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.76	22.83	22.72	24.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.76	22.81	22.72	24.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.75	22.78	22.72	24.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.78	22.80	22.74	24.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.90	22.91	22.90	24.00



<FR1 n78_Ant 8_Laptop Mode>Part 27Q

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.05		
100	PI/2 BPSK	1	137		22.90		24.00
100	PI/2 BPSK	1	271		22.25		
100	PI/2 BPSK	135	0		22.60		
100	PI/2 BPSK	135	69		22.55		24.00
100	PI/2 BPSK	135	138		22.28		23.50
100	PI/2 BPSK	270	0		22.34		
100	QPSK	1	1		22.95		24.00
100	QPSK	1	137		22.90		
100	QPSK	1	271		22.45		
100	QPSK	135	0		22.28		23.00
100	QPSK	135	69		22.93		24.00
100	QPSK	135	138		22.29		23.00
100	QPSK	270	0		22.25		
100	16QAM	1	1		22.45		23.00
100	64QAM	1	1		21.47		21.50
100	256QAM	1	1		19.49		19.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.90	22.97	22.91	24.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.93	22.95	22.90	24.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.94	22.94	22.91	24.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.99	23.00	22.92	24.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.92	22.92	22.92	24.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.99	22.96	22.95	24.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.00	22.97	22.91	24.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.91	22.93	22.98	24.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.00	22.91	22.94	24.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.93	22.97	23.00	24.00