



FCC SAR TEST REPORT

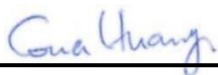
FCC ID : MCLT77W968-D7
Equipment : LTE M.2 Module
Brand Name : FOXCOON
Model Name : T77W968
Applicant : HON HAI Precision Ind. Co., Ltd.
5F-1, 5, Hsin-An Road Hsinchu
Science-Based Industrial Park
Standard : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2013

The product was installed into Portable Computer (Brand Name DELL, Model Name: P34S) during test.

The product was received on Mar. 02, 2020. and testing was started from Mar. 03, 2020 and completed on Mar. 08, 2020. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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
FA9N2619-08	01	Initial issue of report	Apr. 13, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for HON HAI Precision Ind. Co., Ltd., LTE M.2 Module, T77W968, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary	Highest Simultaneous Transmission 1g SAR (W/kg)
		Body	
		1g SAR (W/kg)	
Licensed	WCDMA II	1.01	1.59
	WCDMA IV	1.16	
	WCDMA V	0.28	
	LTE Band 2	0.98	
	LTE Band 7	0.87	
	LTE Band 12 / 17	0.66	
	LTE Band 13	0.32	
	LTE Band 14	0.27	
	LTE Band 25	1.02	
	LTE Band 5 / 26	0.32	
	LTE Band 30	0.73	
	LTE Band 38 / 41	1.19	
	LTE Band 4 / 66	1.11	
Date of Testing:		2020/3/3 ~ 2020/3/8	

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) 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) 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: Wan Liu

2. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- 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
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02



3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	LTE M.2 Module
Brand Name	FOXCOON
Model Name	T77W968
FCC ID	MCLT77W968-D7
Wireless Technology and Frequency Range	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 30: 2307.5 MHz ~ 2312.5 MHz LTE Band 38 : 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM, 64QAM
Remark: 1. The Intel 9560D2W / Intel AX201D2W WLAN/Bluetooth module is also integrated into this host, WLAN/Bluetooth power and WLAN SAR testing data, which can be referred to RF Exposure Lab SAR Test Report, Report No.: SAR.20200310 (FCC ID: PD99560D2) / SAR.20200311 (FCC ID: PD9AX201D2) and these results are used simultaneous transmission analysis. 2. This device is convertible type notebook PC, and there are two mode as usage way, one is laptop mode, another is tablet mode. 3. Three battery options for this product, the RF exposure is choose battery 1 as the main tested, other battery 2/3 found worst case from battery 1 perform. 4. This product has two antenna vendors for WWAN, three antenna vendors for WLAN, after pre-scan to found the worst case antenna is WNC for WWAN, HB for WLAN, therefore, RF exposure evaluation is select worst case antenna to be tested.	

Host Information		
Equipment Name		Portable Computer
Brand Name		DELL
Model Name		P34S
Integrated WLAN Module 1	Brand Name	Intel
	Model Name	9560D2W
	Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
	Mode	802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80/VHT160 Bluetooth BR/EDR/LE
Integrated WLAN Module 2	Brand Name	Intel
	Model Name	AX201D2W
	Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
	Mode	802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/H160 Bluetooth BR/EDR/LE
Integrated RFID Module	Brand Name	DELL
	Model Name	DWRFID1902
	Wireless Technology and Frequency Range	NFC : 13.56 MHz
	Mode	NFC:ASK
EUT Stage		Production Unit

Battery Information				
Battery 1	Brand Name	DELL	Model Name	35J09
	Power Rating	13.29_Vdc, 3255_mAh	Type	Li-ion,
Battery 2	Brand Name	DELL	Model Name	JHT2H
	Power Rating	8.8_Vdc, 6500_mAh	Type	Li-ion,
Battery 3	Brand Name	DELL	Model Name	Y7HR3
	Power Rating	13.2_Vdc, 5667_mAh	Type	Li-ion,



WWAN Antenna Information P34S_NB Mode			
Antenna Part Number	Manufacture	Antenna Type	Peak Gain (dBi)
F.0G.FH-6104-006-00 (DC33002EI0L) Tx1/ Rx1 Main Antenna	Speedwire	PIFA	698-821MHz-1.70dBi(peak)
			824-960MHz-2.64dBi(peak)
			1425-1515MHz-3.12dBi(peak)
			1710-2200MHz-2.23dBi(peak)
			2300-2690MHz-0.59dBi(peak)
			3400-3800MHz-0.01dBi(peak)
			5150-5925MHz-8.31dBi(peak)
F.0G.FH-6104-002-00 (DC33002EI1L) Rx2 Aux. Antenna	Speedwire	PIFA	716-821MHz-0.22dBi(peak)
			824-960MHz-1.82 dBi(peak)
			1425-1515MHz-1.50dBi(peak)
			1557-1610 MHz-1.38 dBi(peak)
			1805-2200MHz-0.15 dBi(peak)
			2300-2690MHz-0.17 dBi(peak)
			3400-3800MHz-0.02 dBi(peak)
			5150-5925MHz-0.82dBi(peak)

WWAN Antenna Information P34S_TB Mode			
Antenna Part Number	Manufacture	Antenna Type	Peak Gain (dBi)
F.0G.FH-6104-006-00 (DC33002EI0L) Tx1/ Rx1 Main Antenna	Speedwire	PIFA	698-821MHz-3.17dBi(peak)
			824-960MHz-4.06dBi(peak)
			1425-1515MHz-4.20dBi(peak)
			1710-2200MHz-1.99dBi(peak)
			2300-2690MHz-0.70dBi(peak)
			3400-3800MHz-3.02dBi(peak)
			5150-5925MHz-8.16dBi(peak)
F.0G.FH-6104-002-00 (DC33002EI1L) Tx1/ Rx1 Aux. Antenna	Speedwire	PIFA	716-821MHz-11.67dBi(peak)
			824-960MHz-9.56 dBi(peak)
			1425-1515MHz-5.43dBi(peak)
			1557-1610 MHz-8.72 dBi(peak)
			1805-2200MHz-0.09 dBi(peak)
			2300-2690MHz-1.01 dBi(peak)
			3400-3800MHz-1.07 dBi(peak)
			5150-5925MHz-0.22 dBi(peak)

WWAN Antenna Information P34S_NB Mode			
Antenna Part Number	Manufacture	Antenna Type	Peak Gain (dBi)
(P/N: 81ELAS15.G53 / DC33002EM0L) Tx1/ Rx1 Main Antenna	Wistron NeWeb Corporation	PIFA	698-821MHz-1.16dBi(peak)
			824-960MHz-1.16dBi(peak)
			1425-1515MHz-1.49dBi(peak)
			1710-2200MHz-1.57dBi(peak)
			2300-2690MHz-1.31dBi(peak)
			3400-3800MHz-0.81dBi(peak)
			5150-5925MHz-1.07dBi(peak)
(P/N: 81ELAS15.G06 / DC33002EM1L) Rx2 Aux. Antenna	Wistron NeWeb Corporation	PIFA	716-821MHz-1.32dBi(peak)
			824-960MHz-0.83dBi(peak)
			1425-1515MHz-0.39dBi(peak)
			1557-1610 MHz-1.16dBi(peak)
			1805-2200MHz-0.25dBi(peak)
			2300-2690MHz-0.10dBi(peak)
			3400-3800MHz-0.09dBi(peak)
			5150-5925MHz-1.47dBi(peak)

WWAN Antenna Information P34S_TB Mode			
Antenna Part Number	Manufacture	Antenna Type	Peak Gain (dBi)
(P/N: 81ELAS15.G53 / DC33002EM0L) Tx1/ Rx1 Main Antenna	Wistron NeWeb Corporation	PIFA	698-821MHz-2.20dBi(peak)
			824-960MHz-3.05dBi(peak)
			1425-1515MHz-2.46dBi(peak)
			1710-2200MHz-0.97 dBi(peak)
			2300-2690MHz-0.37dBi(peak)
			3400-3800MHz-1.45dBi(peak)
			5150-5925MHz-7.54dBi(peak)
(P/N: 81ELAS15.G06 / DC33002EM1L) Tx2/ Rx2 Aux. Antenna	Wistron NeWeb Corporation	PIFA	716-821MHz-4.46dBi(peak)
			824-960MHz-4.73dBi(peak)
			1425-1515MHz-4.27dBi(peak)
			1557-1610 MHz-4.35dBi(peak)
			1805-2200MHz-0.67dBi(peak)
			2300-2690MHz-4.74dBi(peak)
			3400-3800MHz-2.19dBi(peak)
			5150-5925MHz-1.19dBi(peak)

WLAN Antenna Information P34S											
1 HB WLAN on base_AL	Ant. Type	PIFA		connector		2 HB WLAN on base_CF	Ant. Type	PIFA		connector	
	Model No.	Main:260-24297(DC33002EE0L) Aux:260-24297(DC33002EE0L)					Model No.	Main:260-24297(DC33002EE0L) Aux:260-24297(DC33002EE0L)			
	Peak Gain						Peak Gain				
	2400~2483.5MHz	Main:2.51 Aux:1.83		5470~5725MHz	Main:1.71 Aux:-2.61		2400~2483.5MHz	Main:2.37 Aux:1.76		5470~5725MHz	Main:1.46 Aux:-2.48
	5150~5250MHz	Main:1.69 Aux:1.87		5725~5850MHz	Main:1.35 Aux:-2.68		5150~5250MHz	Main:1.94 Aux:1.56		5725~5850MHz	Main:1.06 Aux:-2.67
	5250~5350MHz	Main:1.69 Aux:1.19					5250~5350MHz	Main:1.94 Aux:1.1			
3 Speedwire WLAN on base_AL	Ant. Type	PIFA		connector		4 Speedwire WLAN on base_CF	Ant. Type	PIFA		connector	
	Model No.	Main:F.0G.FH-6106-001-00(DC33002EI2L) Aux:F.0G.FH-6106-001-00(DC33002EI2L)					Model No.	Main:F.0G.FH-6106-001-00(DC33002EI2L) Aux:F.0G.FH-6106-001-00(DC33002EI2L)			
	Peak Gain						Peak Gain				
	2400~2483.5MHz	open mode Main:-0.04 Aux:1.99 Tablet mode Main:-1.34 Aux:-2.42		5470~5725MHz	open mode Main:-2.14 Aux:-1.59 Tablet mode Main:-1.18 Aux:-1		2400~2483.5MHz	open mode Main:-0.11 Aux:0.37 Tablet mode Main:-1.98 Aux:-2.53		5470~5725MHz	open mode Main:-0.01 Aux:-2.77 Tablet mode Main:-2.09 Aux:-2.67
	5150~5250MHz	open mode Main:-0.58 Aux:-2.97 Tablet mode Main:-1.8 Aux:-4.46		5725~5850MHz	open mode Main:-2.66 Aux:-1.59 Tablet mode Main:-0.52 Aux:-1.03		5150~5250MHz	open mode Main:-1.02 Aux:-1.21 Tablet mode Main:-1.31 Aux:-1.76		5725~5850MHz	open mode Main:-1.24 Aux:-0.89 Tablet mode Main:-2.15 Aux:-3.9
	5250~5350MHz	open mode Main:-0.3 Aux:-2.97 Tablet mode Main:-1.8 Aux:-3.24					5250~5350MHz	open mode Main:-1.11 Aux:-1.85 Tablet mode Main:-0.67 Aux:-1.76			
6 WNC WLAN on base_AL	Ant. Type	PIFA		connector		7 WNC WLAN on base_CF	Ant. Type	PIFA		connector	
	Model No.	Main:81ELAS15.G03(DC33002EM2L) Aux:81ELAS15.G03(DC33002EM2L)					Model No.	Main:81ELAS15.G03(DC33002EM2L) Aux:81ELAS15.G03(DC33002EM2L)			
	Main Peak Gain						Aux Peak Gain				
	2400~2483.5MHz	open mode Main:0.04 Aux:0.61 Tablet mode Main:-0.62 Aux:-3.43		5470~5725MHz	open mode Main:0.05 Aux:-0.08 Tablet mode Main:-2.13 Aux:0.06		2400~2483.5MHz	open mode Main:-2.81 Aux:-1.42 Tablet mode Main:0.1 Aux:-4.39		5470~5725MHz	open mode Main:-1.06 Aux:-1.83 Tablet mode Main:-0.98 Aux:-3.38
	5150~5250MHz	open mode Main:-0.04 Aux:-1.5 Tablet mode Main:-0.7 Aux:-3.05		5725~5850MHz	open mode Main:-2.9 Aux:-0.08 Tablet mode Main:-2.03 Aux:-1.46		5150~5250MHz	open mode Main:-0.13 Aux:-0.02 Tablet mode Main:-1.63 Aux:-4.54		5725~5850MHz	open mode Main:-1.33 Aux:-1.59 Tablet mode Main:0.11 Aux:-2.69
	5250~5350MHz	open mode Main:1.08 Aux:-1.81 Tablet mode Main:-0.7 Aux:-2.75					5250~5350MHz	open mode Main:-0.13 Aux:-1.03 Tablet mode Main:-1.63 Aux:-4.16			



3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05									
FCC ID		MCLT77W968-D7							
Equipment Name		LTE M.2 Module							
Operating Frequency Range of each LTE transmission band		LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 30: 2307.5 MHz ~ 2312.5 MHz LTE Band 38 : 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz							
Channel Bandwidth		LTE Band 02:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 04:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 05:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 07: 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, Bandwidth: 5 M/10 M/15 M/20 M LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz							
uplink modulations used		QPSK / 16QAM / 64QAM							
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, Proximity Sensor.							
LTE Carrier Aggregation Combinations		Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 12.							
LTE Carrier Aggregation Additional Information		This device supports maximum of 5 carriers in the downlink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.							

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)		
	27685			2307.5			27710			2310		
27710			2310									
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 M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H M	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
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

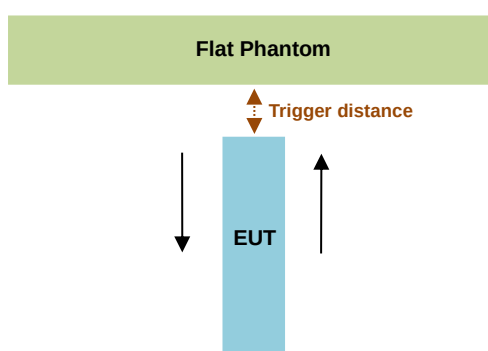
4. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance (KDB 616217 D04 section 6.2)>:

For the device is fully integrated, touch sensing capacitive sensor. It uses a charge transfer capacitive acquisition method that is capable of near range proximity detection. In this device offers a state of the art capacitive sensing engine with an embedded sampling capacitor and voltage regulator allowing the overall solution cost to be reduced and improving system immunity in noisy environments.

Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed. The details are illustrated as following, and the shortest triggering distances were reported and used for SAR assessment.

In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering distance than that for 1900MHz, and the tissue-equivalent medium for 1900MHz was used for formal proximity sensor triggering testing.



Proximity Sensor Trigger Distance (mm) for WWAN Main ANT						
Position	Bottom Face		Edge 1		Back of Display Screen	
Minimum (mm)	Move Toward	Move Away	Move Toward	Move Away	Move Toward	Move Away
	7	9	31	35	33	39

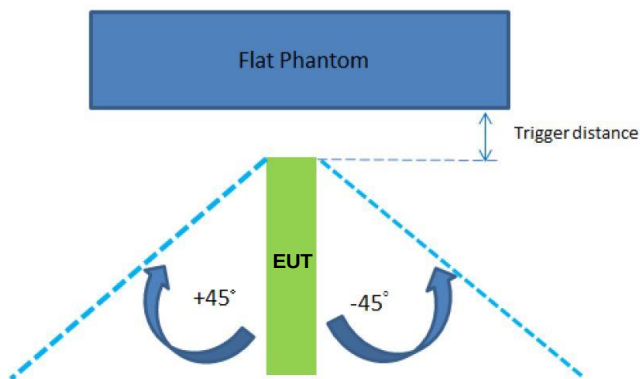
Proximity Sensor Trigger Distance (mm) for WWAN Aux ANT						
Position	Bottom Face		Edge 2		Bottom of Laptop	
Minimum (mm)	Move Toward	Move Away	Move Toward	Move Away	Move Toward	Move Away
	23	26	56	59	25	28

<Proximity Sensor Triggering Coverage (KDB 616217 D04 section 6.3)>:

Illustrated the sensor pad in the test setup photo exhibit, Since the antenna and sensor are collocated and all of the peak SAR location is overlapping with the sensor pad for this device, therefore, According to KDB 616217 section 6.3, these procedures do not apply and are not required for bottom face, Back of Display Screen, Edge 1 and Edge 2 due to the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor on this device.

<Tablet Tilt angle influences to proximity sensor triggering (KDB 616217 D04 section 6.4)>:

The influence of table tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom, at above separation distance. Rotating the tablet around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ from the vertical position at 0° , and the maximum output power remains in the reduced mode.



The Sensor Trigger Distance (mm) for WWAN Main ANT		
Position	Edge 1	
Minimum (mm)	Move Toward	Move Away
	28	14

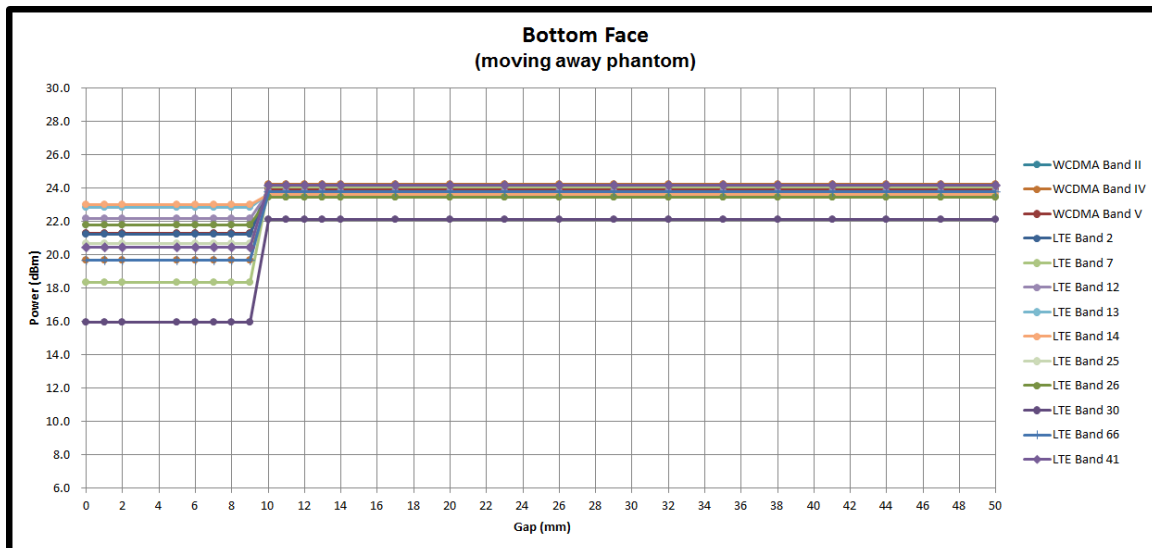
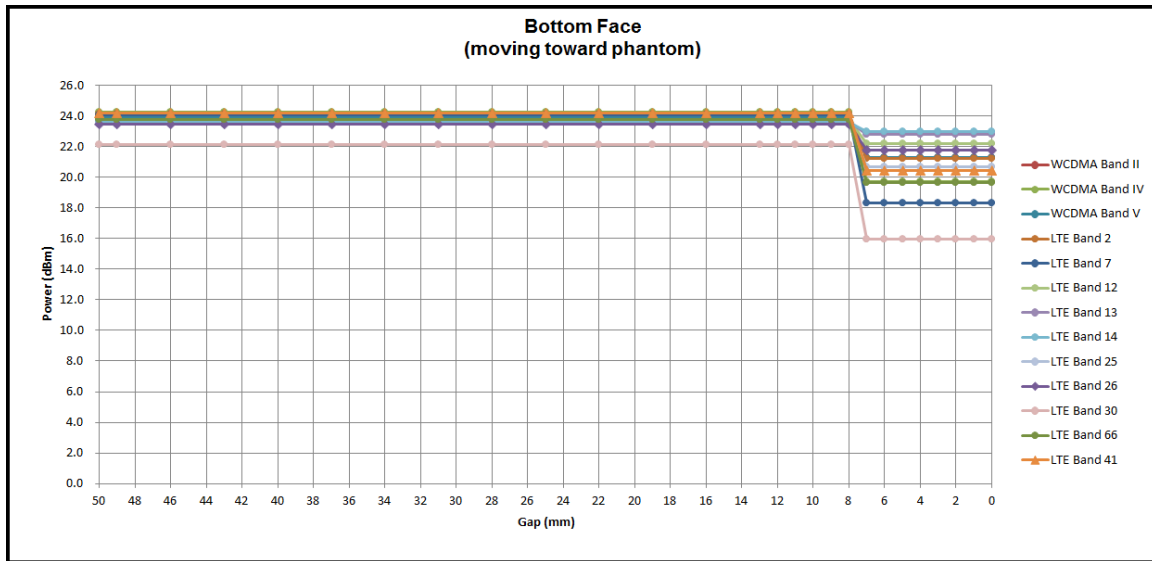
The Sensor Trigger Distance (mm) for WWAN Aux ANT		
Position	Edge 2	
Minimum (mm)	Move Toward	Move Away
	6	22

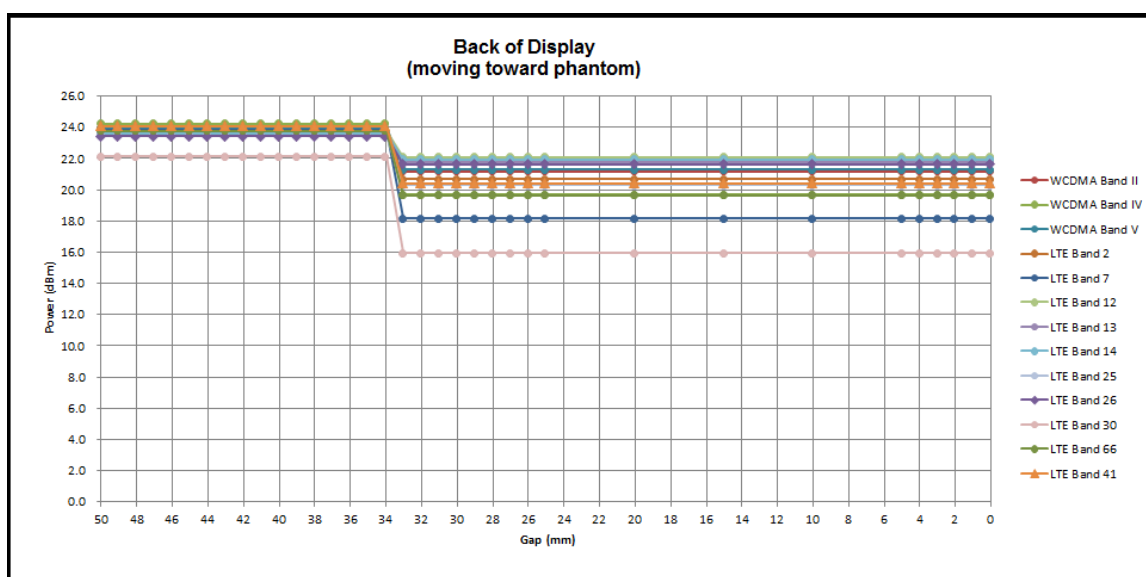
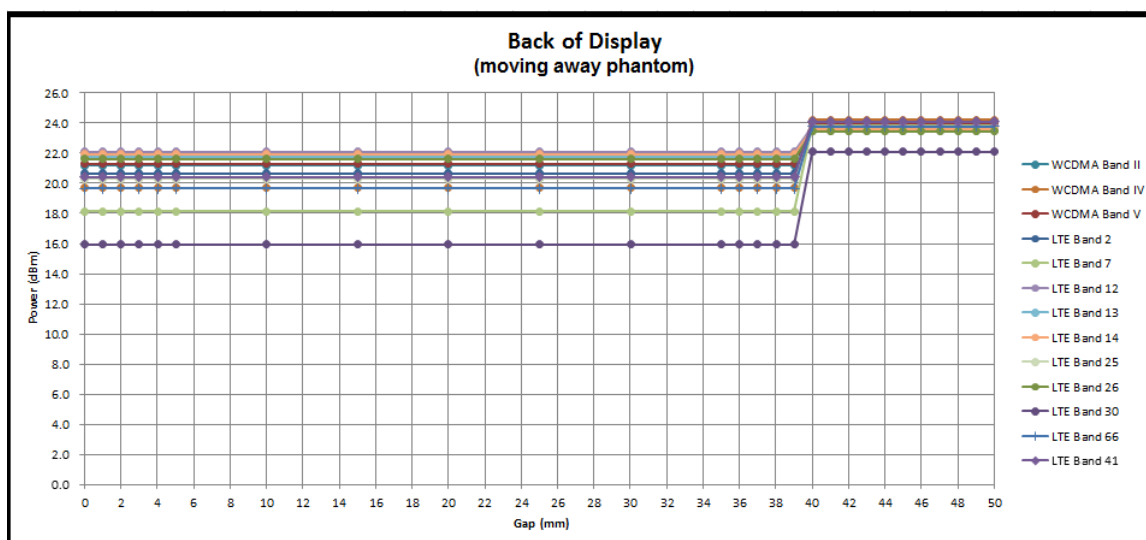
Proximity sensor power reduction

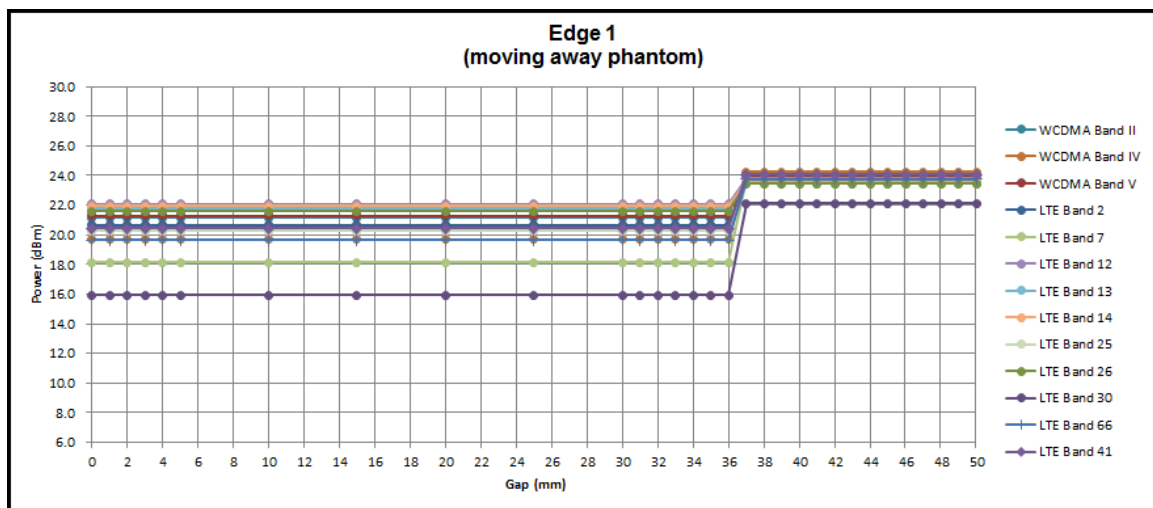
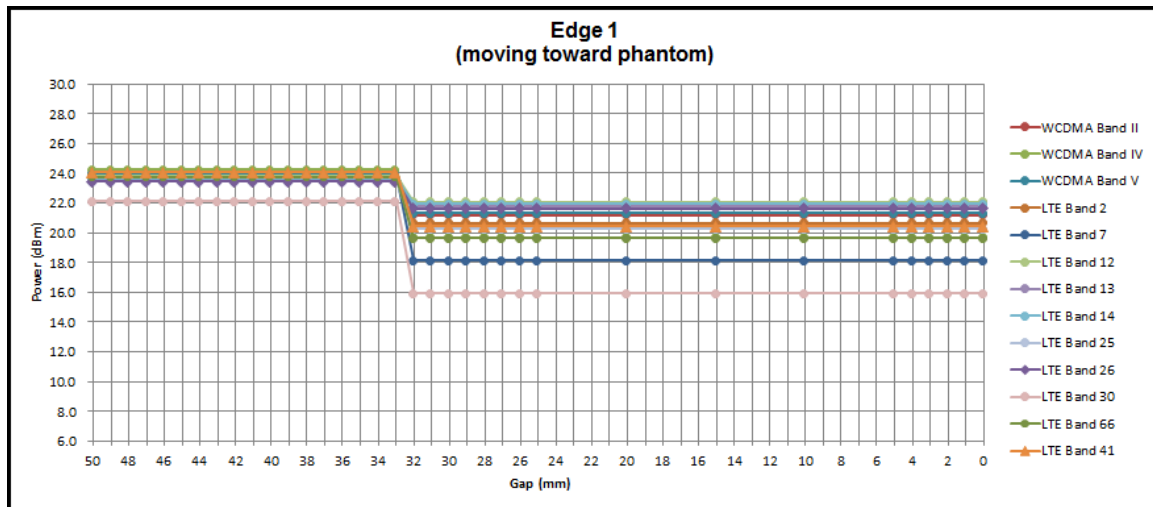
Exposure Position / wireless mode	Bottom of laptop ⁽¹⁾	Bottom Face ⁽¹⁾	Edge 1 ⁽¹⁾	Edge 2 ⁽¹⁾	Edge 3	Edge 4
WCDMA Band II	0 dB	2.5dB	2.5dB	0 dB	0 dB	0 dB
WCDMA Band IV	0 dB	4.5dB	4.5dB	0 dB	0 dB	0 dB
WCDMA Band V	0 dB	1.5dB	0 dB	1.5dB	0 dB	0 dB
LTE Band 2	0 dB	2.5dB	2.5dB	0 dB	0 dB	0 dB
LTE Band 4/66	0 dB	4dB	4dB	0 dB	0 dB	0 dB
LTE Band 5/26	0 dB	1.5dB	0 dB	1.5dB	0 dB	0 dB
LTE Band 7	0 dB	5.5dB	5.5dB	0 dB	0 dB	0 dB
LTE Band 12/17	0 dB	1.5dB	1.5dB	0 dB	0 dB	0 dB
LTE Band 13	0 dB	1.5dB	0 dB	1.5dB	0 dB	0 dB
LTE Band 14	0 dB	1.5dB	0 dB	1.5dB	0 dB	0 dB
LTE Band 25	0 dB	3dB	3dB	0 dB	0 dB	0 dB
LTE Band 30	0 dB	6dB	6dB	0 dB	0 dB	0 dB
LTE Band 41	0 dB	3.5dB	3.5dB	0 dB	0 dB	0 dB

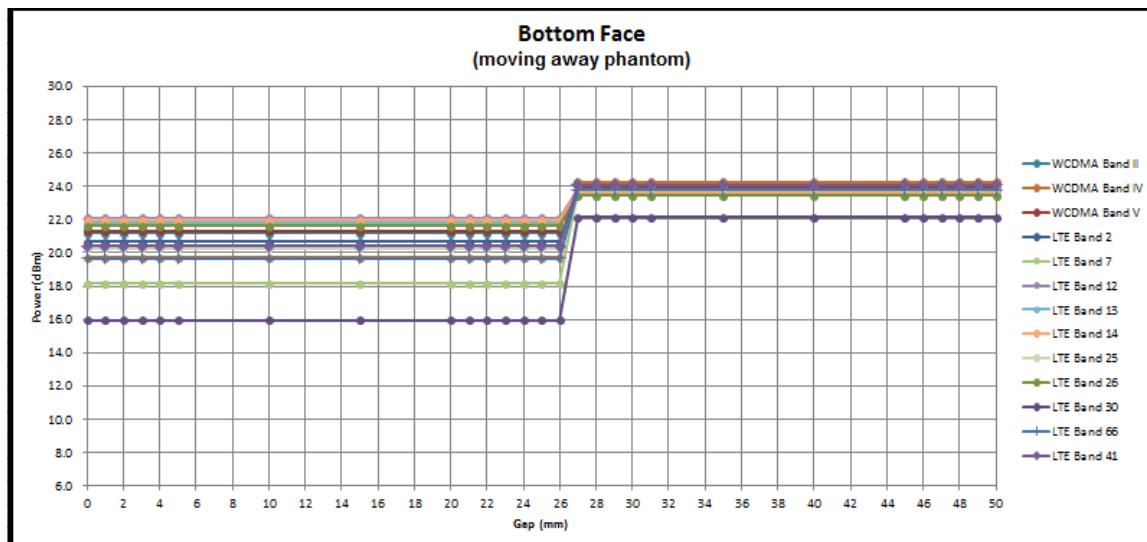
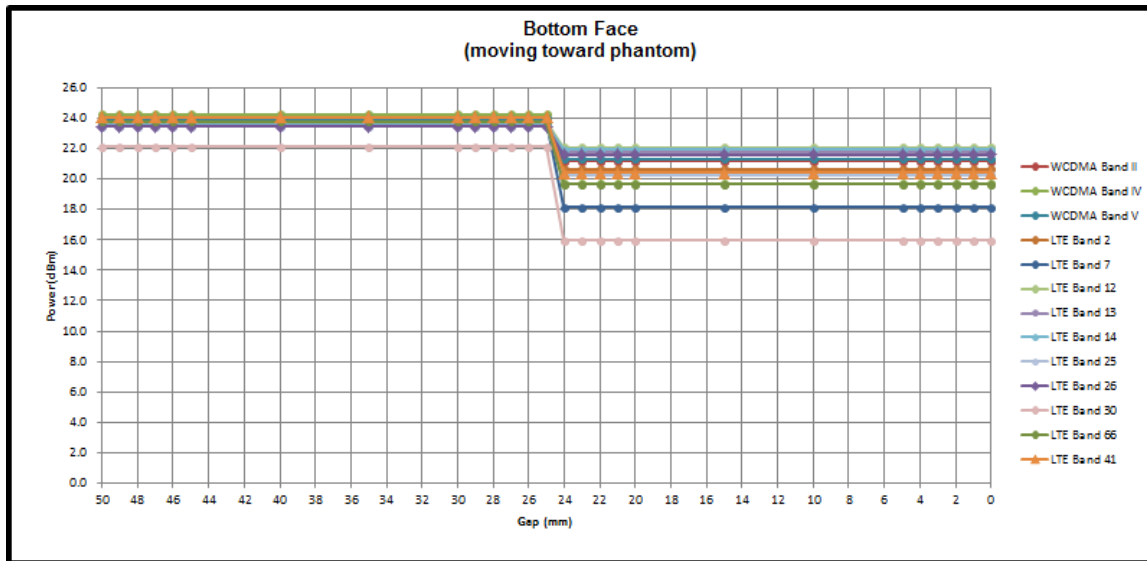
Remark:

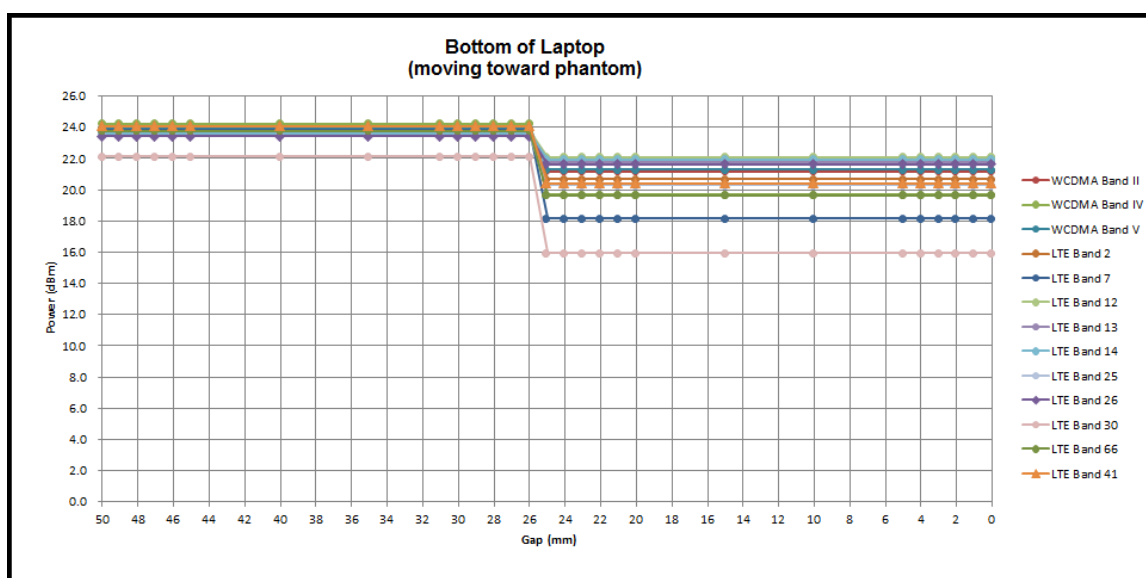
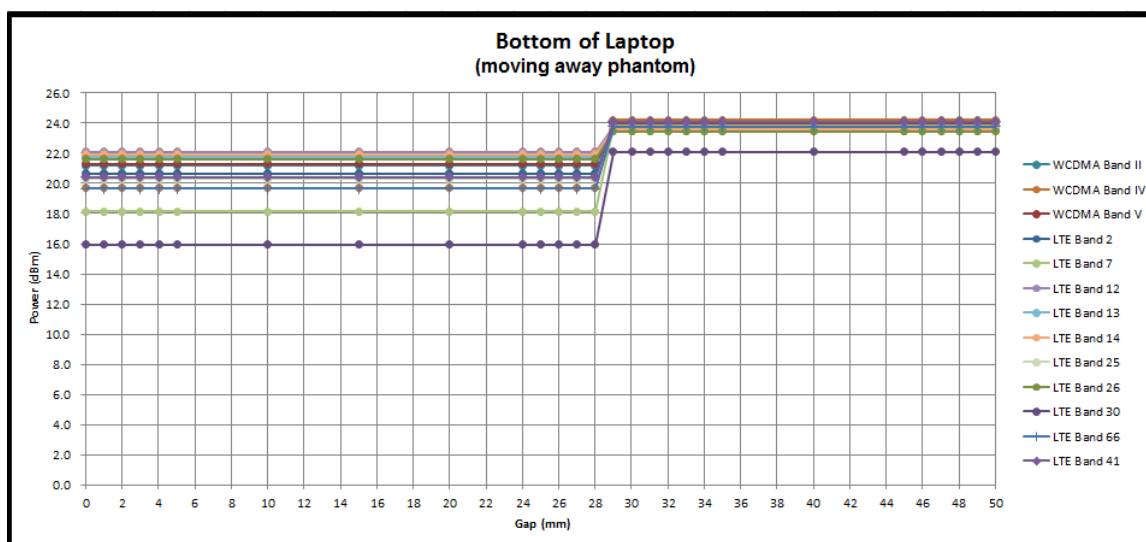
- ⁽¹⁾: Reduced maximum limit applied by activation of proximity sensor.
- Power reduction is not applicable for WLAN and Bluetooth.
- Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown and described in exhibit
- For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:
 - Bottom of Laptop: [24mm](#)
 - Bottom Face: [7mm & 23mm](#)
 - Edge1: [13mm](#)
 - Edge2: [5mm](#)

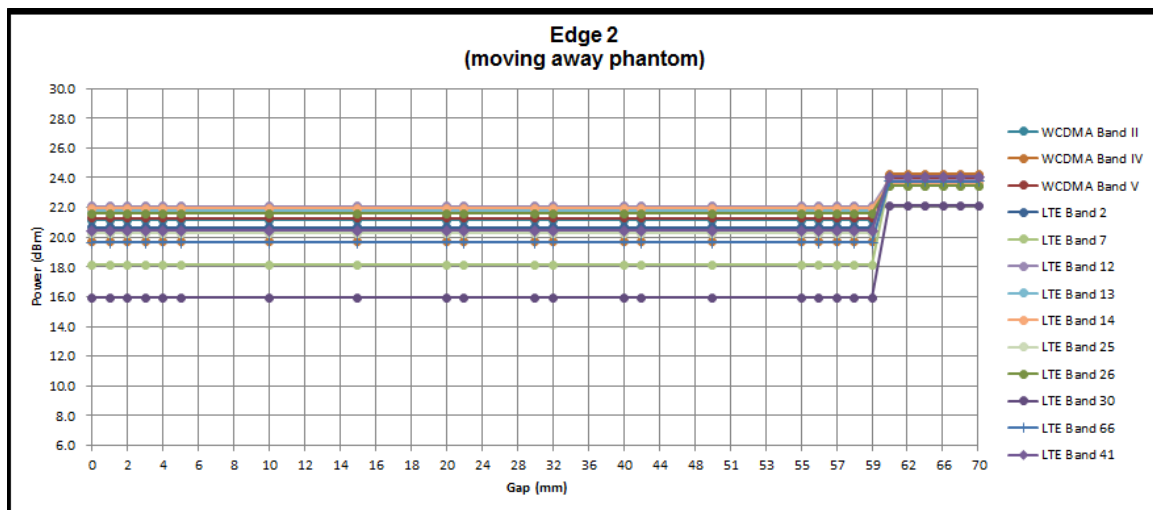
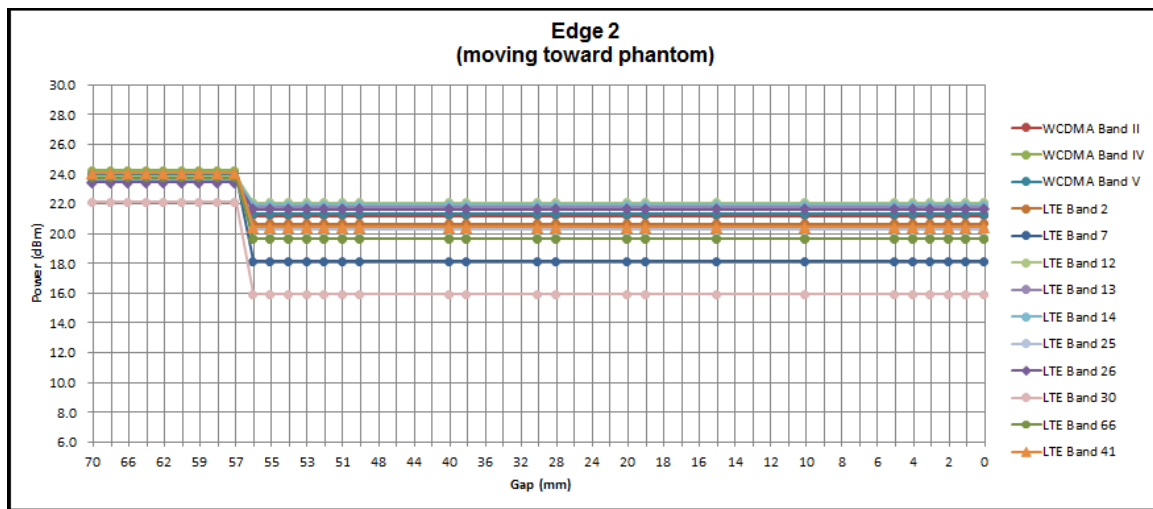
Power Measurement during Sensor Trigger distance testing for WWAN Main ANT






Power Measurement during Sensor Trigger distance testing for WWAN Aux ANT






5. RF Exposure Limits

5.1 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.

5.2 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.

6. Specific Absorption Rate (SAR)

6.1 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.

6.2 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:

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

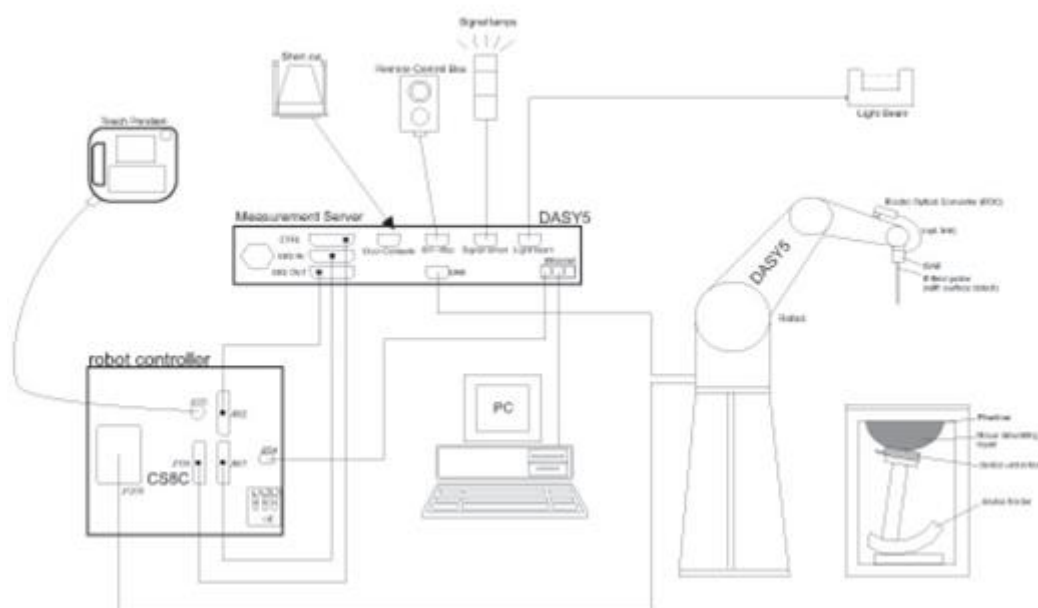
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

7. System Description and Setup

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



- 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 WinXP or Win7 and the DASY5 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.

7.1 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	10 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 μ 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	10 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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ 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	

7.2 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

7.3 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.

7.4 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

8. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

- (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

8.1 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

8.2 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.

8.3 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.	

8.4 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.				

8.5 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.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASYS 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.

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1107	Mar. 08, 2019	Mar. 07, 2020
SPEAG	835MHz System Validation Kit	D835V2	4d167	Nov. 25, 2019	Nov. 24, 2020
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 19, 2018	Nov. 17, 2020
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Mar. 07, 2019	Mar. 05, 2021
SPEAG	2300MHz System Validation Kit	D2300V2	1006	Jan. 28, 2019	Jan. 26, 2021
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 31, 2018	Aug. 29, 2020
SPEAG	Data Acquisition Electronics	DAE3	495	May. 21, 2019	May. 20, 2020
SPEAG	Data Acquisition Electronics	DAE3	577	Sep. 17, 2019	Sep. 16, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3728	Feb. 04, 2020	Feb. 03, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	7306	Jul. 22, 2019	Jul. 21, 2020
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 12, 2019	Nov. 11, 2020
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 12, 2019	Nov. 11, 2020
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 31, 2019	Oct. 30, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50267236	Apr. 01, 2019	Mar. 31, 2020
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Nov. 20, 2019	Nov. 19, 2020
Agilent	ENA Network Analyzer	E5071C	MY46104758	Sep. 06, 2019	Sep. 05, 2020
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 18, 2019	Sep. 17, 2020
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3169	Sep. 10, 2019	Sep. 09, 2020
Anritsu	Power Meter	ML2495A	1036004	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Sensor	MA2411B	1027253	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Meter	ML2495A	1419002	May. 29, 2019	May. 28, 2020
Anritsu	Power Sensor	MA2411B	1339124	May. 29, 2019	May. 28, 2020
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 27, 2019	Aug. 26, 2020
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 27, 2019	Jun. 26, 2020
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 16, 2019	Oct. 15, 2020
Mini-Circuits	Power Amplifier	ZVE-8G+	6382	Aug. 12, 2019	Aug. 11, 2020
ATM	Dual Directional Coupler	C122H-10	P610410z-02	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. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D750V3, SN: 1107, D1750V2, SN: 1068, D1900V2, SN: 5d185, D2300V2, SN: 1006, D2600V2, SN: 1008, can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

10. System Verification

10.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.2.

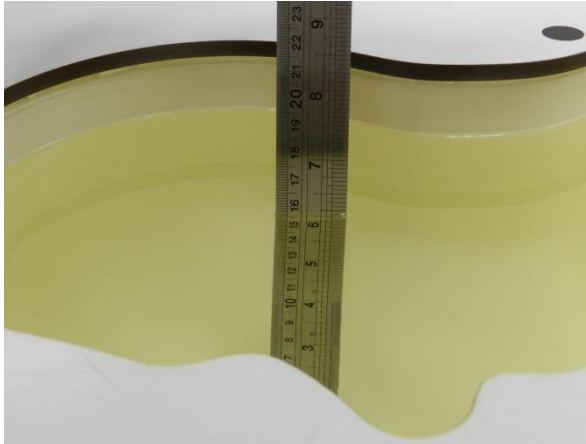


Fig 10.1Photo of Liquid Height for Head SAR

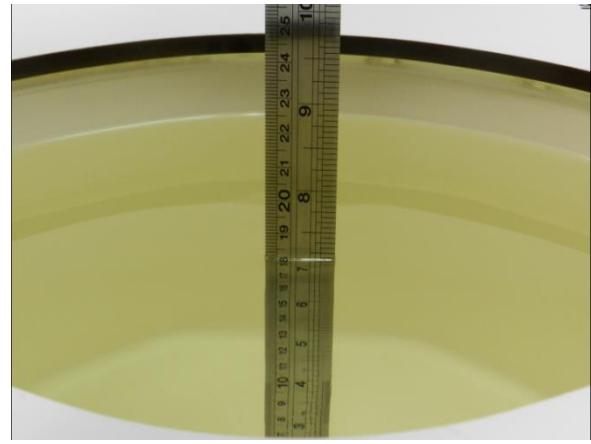


Fig 10.2 Photo of Liquid Height for Body SAR

10.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<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	0.904	41.980	0.89	41.90	1.57	0.19	±5	2020/3/4
750	22.6	0.899	43.706	0.89	41.90	1.01	4.31	±5	2020/3/5
835	22.5	0.869	42.487	0.90	41.50	-3.44	2.38	±5	2020/3/4
1750	22.3	1.369	40.600	1.37	40.10	-0.07	1.25	±5	2020/3/6
1750	22.4	1.389	39.447	1.37	40.10	1.39	-1.63	±5	2020/3/7
1900	22.3	1.415	39.184	1.40	40.00	1.07	-2.04	±5	2020/3/6
1900	22.4	1.402	40.779	1.40	40.00	0.14	1.95	±5	2020/3/7
2300	22.4	1.613	40.443	1.67	39.50	-3.41	2.39	±5	2020/3/3
2600	22.4	1.961	39.409	1.96	39.00	0.05	1.05	±5	2020/3/3
2600	22.4	1.961	39.409	1.96	39.00	0.05	1.05	±5	2020/3/3
2600	22.2	1.959	38.329	1.96	39.00	-0.05	-1.72	±5	2020/3/8

10.3 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.

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 (%)
2020/3/4	750	250	D750V3-1107	EX3DV4 - SN3278	DAE3 Sn495	2.16	8.32	8.64	3.85
2020/3/5	750	250	D750V3-1107	EX3DV4 - SN3278	DAE3 Sn495	2.12	8.32	8.48	1.92
2020/3/4	835	250	D835V2-4d167	EX3DV4 - SN3278	DAE3 Sn495	2.31	9.55	9.24	-3.25
2020/3/6	1750	250	D1750V2-1068	EX3DV4 - SN3278	DAE3 Sn495	9.14	37.10	36.56	-1.46
2020/3/7	1750	250	D1750V2-1068	EX3DV4 - SN3278	DAE3 Sn495	8.76	37.10	35.04	-5.55
2020/3/6	1900	250	D1900V2-5d185	EX3DV4 - SN3278	DAE3 Sn495	9.81	39.40	39.24	-0.41
2020/3/7	1900	250	D1900V2-5d185	EX3DV4 - SN3278	DAE3 Sn495	9.88	39.40	39.52	0.30
2020/3/3	2300	250	D2300V2-1006	EX3DV4 - SN3278	DAE3 Sn495	12.00	48.70	48	-1.44
2020/3/3	2600	250	D2600V2-1008	EX3DV4 - SN3278	DAE3 Sn495	14.60	56.40	58.4	3.55
2020/3/3	2600	250	D2600V2-1008	EX3DV4 - SN7306	DAE3 Sn577	14.80	56.40	59.2	4.96
2020/3/8	2600	250	D2600V2-1008	EX3DV4 - SN3278	DAE3 Sn495	14.40	56.40	57.6	2.13

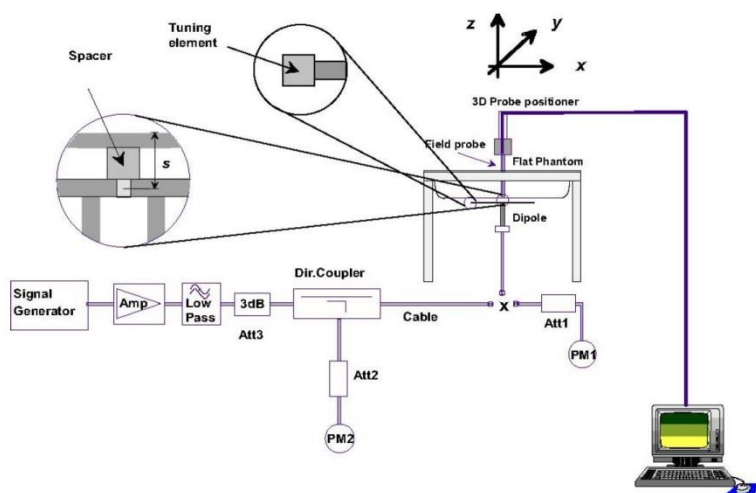


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

11. RF Exposure Positions

11.1 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.

12. GSM/UMTS/CDMA/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 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_c/β_d 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

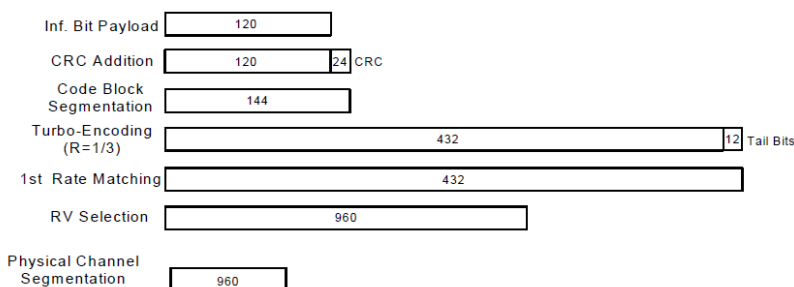
DC-HSDPA 3GPP release 8 Setup Configuration:

- 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 Cycle 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

<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.

<Default Power Mode>

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	23.74	23.82	23.99	24.50	23.64	24.23	23.73	24.50	23.80	23.97	23.79	24.50
3GPP Rel 6	HSDPA Subtest-1	22.69	22.97	22.93	23.50	22.64	23.18	22.67	23.50	22.74	22.91	22.78	23.50
3GPP Rel 6	HSDPA Subtest-2	22.67	23.02	22.97	23.50	22.65	23.17	22.67	23.50	22.76	22.94	22.81	23.50
3GPP Rel 6	HSDPA Subtest-3	22.19	22.52	22.46	23.00	22.14	22.69	22.17	23.00	22.26	22.46	22.29	23.00
3GPP Rel 6	HSDPA Subtest-4	22.21	22.44	22.48	23.00	22.13	22.68	22.17	23.00	22.27	22.30	22.29	23.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.67	22.94	22.91	23.50	22.66	23.18	22.66	23.50	22.82	22.91	22.78	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.65	22.92	22.87	23.50	22.64	23.15	22.65	23.50	22.72	22.77	22.89	23.50
3GPP Rel 8	DC-HSDPA Subtest-3	22.18	22.52	22.46	23.00	22.15	22.58	22.17	23.00	22.10	22.20	22.20	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	22.20	22.50	22.45	23.00	22.11	22.58	22.19	23.00	22.14	22.12	22.23	23.00
3GPP Rel 6	HSUPA Subtest-1	22.76	22.87	23.02	23.50	22.75	23.32	22.80	23.50	22.73	22.89	22.77	23.50
3GPP Rel 6	HSUPA Subtest-2	20.79	20.86	21.03	21.50	20.76	21.30	20.80	21.50	20.71	20.91	20.76	21.50
3GPP Rel 6	HSUPA Subtest-3	21.79	21.87	22.02	22.50	21.75	22.32	21.81	22.50	21.69	21.92	21.78	22.50
3GPP Rel 6	HSUPA Subtest-4	20.78	20.85	21.03	21.50	20.76	21.32	20.80	21.50	20.72	20.88	20.74	21.50
3GPP Rel 6	HSUPA Subtest-5	22.80	22.90	23.00	23.50	22.80	23.30	22.80	23.50	22.80	22.90	22.80	23.50

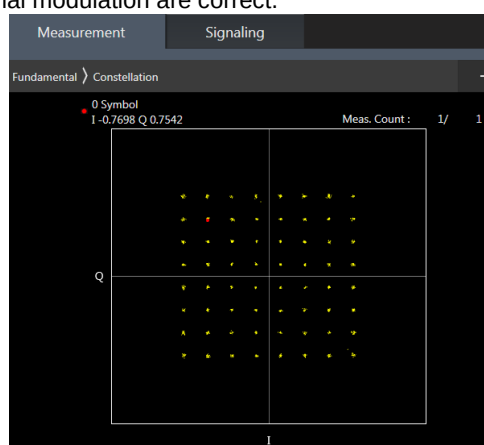
<Reduced Power Mode>

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	21.15	21.18	21.26	22.00	19.10	19.69	19.26	20.00	21.16	21.30	21.26	23.00
3GPP Rel 6	HSDPA Subtest-1	20.12	20.18	20.27	21.00	18.12	18.73	18.26	19.00	20.20	20.33	20.16	22.00
3GPP Rel 6	HSDPA Subtest-2	20.15	20.21	20.29	21.00	18.13	18.72	18.26	19.00	20.22	20.35	20.19	22.00
3GPP Rel 6	HSDPA Subtest-3	19.66	19.69	19.79	20.50	17.61	18.21	17.76	18.50	19.70	19.83	19.68	21.50
3GPP Rel 6	HSDPA Subtest-4	19.64	19.68	19.79	20.50	17.61	18.25	17.73	18.50	19.69	19.84	19.69	21.50
3GPP Rel 8	DC-HSDPA Subtest-1	20.10	20.12	20.20	21.00	18.14	18.70	18.24	19.00	20.15	20.30	20.17	22.00
3GPP Rel 8	DC-HSDPA Subtest-2	20.13	20.13	20.18	21.00	18.12	18.68	18.23	19.00	20.18	20.32	20.17	22.00
3GPP Rel 8	DC-HSDPA Subtest-3	19.55	19.65	19.74	20.50	17.65	18.24	17.75	18.50	19.70	19.81	19.67	21.50
3GPP Rel 8	DC-HSDPA Subtest-4	19.61	19.67	19.77	20.50	17.61	18.23	17.71	18.50	19.65	19.82	19.65	21.50
3GPP Rel 6	HSUPA Subtest-1	19.83	19.72	20.05	21.00	17.27	18.33	17.68	19.00	20.19	20.34	20.16	22.00
3GPP Rel 6	HSUPA Subtest-2	17.92	17.66	17.93	19.00	15.34	16.21	15.54	17.00	18.18	18.33	18.18	20.00
3GPP Rel 6	HSUPA Subtest-3	18.86	18.69	18.77	20.00	16.46	17.15	16.60	18.00	19.19	19.34	19.18	21.00
3GPP Rel 6	HSUPA Subtest-4	17.61	17.86	17.73	19.00	15.39	16.38	15.39	17.00	18.19	18.34	18.17	20.00
3GPP Rel 6	HSUPA Subtest-5	19.80	19.90	19.90	21.00	17.40	18.20	17.60	19.00	20.20	20.40	20.20	22.00

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C 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 B12 / B26 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 4/5/17 SAR test was covered by Band 66/26/12; 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
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.


64QAM

16QAM

<Default Power Mode>
<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	23.40	23.64	24.11	24.5	0
20	QPSK	1	49	23.24	23.53	23.84		
20	QPSK	1	99	23.36	23.57	23.93		
20	QPSK	50	0	22.48	22.69	23.02	23.5	1
20	QPSK	50	24	22.42	22.60	22.94		
20	QPSK	50	50	22.45	22.52	22.89		
20	QPSK	100	0	22.43	22.63	22.95	23.5	1
20	16QAM	1	0	22.75	22.89	23.41		
20	16QAM	1	49	22.54	22.87	23.17		
20	16QAM	1	99	22.67	22.91	23.28	22.5	2
20	16QAM	50	0	21.54	21.79	22.12		
20	16QAM	50	24	21.49	21.70	22.03		
20	16QAM	50	50	21.58	21.66	21.99	22.5	2
20	16QAM	100	0	21.52	21.70	22.02		
20	64QAM	1	0	21.70	21.83	22.35		
20	64QAM	1	49	21.49	21.82	22.08	22.5	2
20	64QAM	1	99	21.61	21.87	22.21		
20	64QAM	50	0	20.53	20.79	21.13		
20	64QAM	50	24	20.50	20.72	21.05	21.5	3
20	64QAM	50	50	20.57	20.66	20.99		
20	64QAM	100	0	20.54	20.73	21.05		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	23.38	23.75	23.95	24.5	0
15	QPSK	1	37	23.25	23.64	23.84		
15	QPSK	1	74	23.33	23.64	23.87		
15	QPSK	36	0	22.37	22.77	22.86	23.5	1
15	QPSK	36	20	22.31	22.70	22.81		
15	QPSK	36	39	22.32	22.65	22.88		
15	QPSK	75	0	22.30	22.70	22.82	23.5	1
15	16QAM	1	0	22.73	23.14	23.31		
15	16QAM	1	37	22.50	22.97	23.16		
15	16QAM	1	74	22.60	23.02	23.24	22.5	2
15	16QAM	36	0	21.49	21.88	21.97		
15	16QAM	36	20	21.38	21.85	21.90		
15	16QAM	36	39	21.41	21.77	21.95	22.5	2
15	16QAM	75	0	21.42	21.82	21.91		
15	64QAM	1	0	21.65	22.03	22.22		
15	64QAM	1	37	21.48	21.89	22.09	22.5	2
15	64QAM	1	74	21.51	21.91	22.14		
15	64QAM	36	0	20.51	20.88	21.01		
15	64QAM	36	20	20.40	20.85	20.95	21.5	3
15	64QAM	36	39	20.45	20.79	21.01		
15	64QAM	75	0	20.41	20.84	20.92		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	23.13	23.50	23.79	24.5	0
10	QPSK	1	25	23.12	23.52	23.78		
10	QPSK	1	49	23.06	23.47	23.74		
10	QPSK	25	0	22.22	22.57	22.79	23.5	1



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10	QPSK	25	12	22.18	22.55	22.83		
10	QPSK	25	25	22.13	22.52	22.79		
10	QPSK	50	0	22.18	22.55	22.75		
10	16QAM	1	0	22.50	22.88	23.17	23.5	1
10	16QAM	1	25	22.52	22.85	23.15		
10	16QAM	1	49	22.40	22.82	23.14		
10	16QAM	25	0	21.34	21.69	21.84	22.5	2
10	16QAM	25	12	21.28	21.65	21.93		
10	16QAM	25	25	21.23	21.61	21.88		
10	16QAM	50	0	21.28	21.62	21.85	22.5	2
10	64QAM	1	0	21.36	21.72	22.02		
10	64QAM	1	25	21.35	21.73	22.02		
10	64QAM	1	49	21.27	21.68	21.98	21.5	3
10	64QAM	25	0	20.30	20.67	20.89		
10	64QAM	25	12	20.29	20.66	20.95		
10	64QAM	25	25	20.21	20.62	20.88	20.8	
10	64QAM	50	0	20.28	20.64	20.86		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	23.11	23.56	23.85	24.5	0
5	QPSK	1	12	23.03	23.53	23.79		
5	QPSK	1	24	23.01	23.55	23.80		
5	QPSK	12	0	22.07	22.54	22.81	23.5	1
5	QPSK	12	7	22.10	22.56	22.84		
5	QPSK	12	13	22.04	22.53	22.79		
5	QPSK	25	0	22.05	22.55	22.82	23.5	1
5	16QAM	1	0	22.43	22.88	23.19		
5	16QAM	1	12	22.40	22.88	23.12		
5	16QAM	1	24	22.35	22.82	23.15	22.5	2
5	16QAM	12	0	21.24	21.70	21.93		
5	16QAM	12	7	21.17	21.67	21.92		
5	16QAM	12	13	21.18	21.67	21.89	22.5	2
5	16QAM	25	0	21.17	21.63	21.92		
5	64QAM	1	0	21.34	21.84	22.15		
5	64QAM	1	12	21.31	21.80	22.07	22.5	2
5	64QAM	1	24	21.31	21.77	22.04		
5	64QAM	12	0	20.23	20.73	20.98		
5	64QAM	12	7	20.24	20.72	20.99	21.5	3
5	64QAM	12	13	20.18	20.69	20.95		
5	64QAM	25	0	20.17	20.63	20.92		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	23.24	23.63	23.91	24.5	0
3	QPSK	1	8	23.20	23.62	23.88		
3	QPSK	1	14	23.10	23.60	23.87		
3	QPSK	8	0	22.16	22.66	22.91	23.5	1
3	QPSK	8	4	22.19	22.68	22.92		
3	QPSK	8	7	22.15	22.65	22.89		
3	QPSK	15	0	22.14	22.66	22.92	23.5	1
3	16QAM	1	0	22.49	22.92	23.24		
3	16QAM	1	8	22.49	22.98	23.22		
3	16QAM	1	14	22.43	22.89	23.15	22.5	2
3	16QAM	8	0	21.30	21.79	22.07		
3	16QAM	8	4	21.32	21.81	22.08		
3	16QAM	8	7	21.27	21.78	22.03	22.0	
3	16QAM	15	0	21.24	21.75	22.00		



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3	64QAM	1	0	21.43	21.87	22.18	22.5	2
3	64QAM	1	8	21.40	21.86	22.16		
3	64QAM	1	14	21.39	21.85	22.16		
3	64QAM	8	0	20.30	20.81	21.05	21.5	3
3	64QAM	8	4	20.32	20.82	21.07		
3	64QAM	8	7	20.29	20.80	21.03		
3	64QAM	15	0	20.24	20.74	21.01		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	23.65	23.57	23.81	24.5	0
1.4	QPSK	1	3	23.73	23.63	23.86		
1.4	QPSK	1	5	23.65	23.55	23.80		
1.4	QPSK	3	0	23.67	23.56	23.87		
1.4	QPSK	3	1	23.72	23.63	23.88		
1.4	QPSK	3	3	23.70	23.61	23.85		
1.4	QPSK	6	0	22.69	22.57	22.84	23.5	1
1.4	16QAM	1	0	23.02	22.91	23.14	23.5	1
1.4	16QAM	1	3	23.00	22.96	23.22		
1.4	16QAM	1	5	22.89	22.87	23.11		
1.4	16QAM	3	0	22.73	22.68	22.96		
1.4	16QAM	3	1	22.77	22.74	22.98		
1.4	16QAM	3	3	22.70	22.67	22.93		
1.4	16QAM	6	0	21.75	21.75	22.01	22.5	2
1.4	64QAM	1	0	21.86	21.85	22.12	22.5	2
1.4	64QAM	1	3	21.93	21.90	22.14		
1.4	64QAM	1	5	21.85	21.79	22.08		
1.4	64QAM	3	0	21.82	21.83	22.08		
1.4	64QAM	3	1	21.88	21.85	22.10		
1.4	64QAM	3	3	21.84	21.82	22.06		
1.4	64QAM	6	0	20.68	20.68	20.94	21.5	3



<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300	24.5	0
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	23.49	23.73	23.71		
20	QPSK	1	49	23.45	23.55	23.41	23.5	1
20	QPSK	1	99	23.64	23.44	23.26		
20	QPSK	50	0	22.53	22.75	22.71		
20	QPSK	50	24	22.45	22.64	22.50	23.5	1
20	QPSK	50	50	22.41	22.60	22.44		
20	QPSK	100	0	22.56	22.65	22.55		
20	16QAM	1	0	22.84	23.02	23.17	23.5	1
20	16QAM	1	49	22.74	22.91	22.82		
20	16QAM	1	99	22.96	22.79	22.62		
20	16QAM	50	0	21.66	21.86	21.81	22.5	2
20	16QAM	50	24	21.63	21.77	21.63		
20	16QAM	50	50	21.77	21.69	21.52		
20	16QAM	100	0	21.67	21.77	21.60	22.5	2
20	64QAM	1	0	21.76	21.92	22.08		
20	64QAM	1	49	21.64	21.78	21.70		
20	64QAM	1	99	21.85	21.70	21.57	21.5	3
20	64QAM	50	0	20.64	20.88	20.81		
20	64QAM	50	24	20.65	20.76	20.62		
20	64QAM	50	50	20.79	20.71	20.56	21.5	3
20	64QAM	50	50	20.79	20.71	20.56		
20	64QAM	100	0	20.67	20.80	20.62		
Channel				20025	20175	20325	24.5	0
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	23.47	23.56	23.67		
15	QPSK	1	37	23.37	23.67	23.48	23.5	1
15	QPSK	1	74	23.59	23.59	23.39		
15	QPSK	36	0	22.56	22.74	22.56		
15	QPSK	36	20	22.57	22.68	22.49	23.5	1
15	QPSK	36	39	22.59	22.64	22.41		
15	QPSK	75	0	22.58	22.72	22.51		
15	16QAM	1	0	22.81	23.20	23.02	23.5	1
15	16QAM	1	37	22.70	22.91	22.76		
15	16QAM	1	74	22.89	22.86	22.66		
15	16QAM	36	0	21.65	21.86	21.67	22.5	2
15	16QAM	36	20	21.68	21.78	21.57		
15	16QAM	36	39	21.70	21.71	21.54		
15	16QAM	75	0	21.66	21.79	21.58	22.5	2
15	64QAM	1	0	21.74	21.97	21.94		
15	64QAM	1	37	21.62	21.91	21.69		
15	64QAM	1	74	21.79	21.81	21.56	21.5	3
15	64QAM	36	0	20.69	20.89	20.73		
15	64QAM	36	20	20.68	20.79	20.60		
15	64QAM	36	39	20.72	20.74	20.55	21.5	3
15	64QAM	36	39	20.72	20.74	20.55		
15	64QAM	75	0	20.68	20.87	20.60		
Channel				20000	20175	20350	24.5	0
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	23.28	23.54	23.67		
10	QPSK	1	25	23.27	23.53	23.41	24.5	0
10	QPSK	1	49	23.43	23.46	23.36		
10	QPSK	25	0	22.35	22.63	22.53		
10	QPSK	25	12	22.40	22.55	22.47	23.5	1



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10	QPSK	25	25	22.45	22.50	22.33		
10	QPSK	50	0	22.41	22.60	22.48		
10	16QAM	1	0	22.61	22.92	22.92		
10	16QAM	1	25	22.59	22.90	22.64	23.5	1
10	16QAM	1	49	22.73	22.87	22.65		
10	16QAM	25	0	21.47	21.73	21.64		
10	16QAM	25	12	21.49	21.70	21.61	22.5	2
10	16QAM	25	25	21.58	21.67	21.45		
10	16QAM	50	0	21.49	21.70	21.57		
10	64QAM	1	0	21.46	21.76	21.84	22.5	2
10	64QAM	1	25	21.45	21.76	21.63		
10	64QAM	1	49	21.60	21.79	21.66		
10	64QAM	25	0	20.49	20.71	20.74	21.5	3
10	64QAM	25	12	20.49	20.68	20.66		
10	64QAM	25	25	20.56	20.64	20.55		
10	64QAM	50	0	20.53	20.71	20.70		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	23.31	23.67	23.42	24.5	0
5	QPSK	1	12	23.32	23.57	23.34		
5	QPSK	1	24	23.34	23.57	23.35		
5	QPSK	12	0	22.39	22.65	22.42	23.5	1
5	QPSK	12	7	22.40	22.62	22.41		
5	QPSK	12	13	22.34	22.61	22.31		
5	QPSK	25	0	22.35	22.61	22.30	23.5	1
5	16QAM	1	0	22.57	23.00	22.64		
5	16QAM	1	12	22.64	22.95	22.64		
5	16QAM	1	24	22.64	22.95	22.64	22.5	2
5	16QAM	12	0	21.52	21.75	21.41		
5	16QAM	12	7	21.50	21.75	21.39		
5	16QAM	12	13	21.47	21.70	21.37	22.5	2
5	16QAM	25	0	21.49	21.72	21.44		
5	64QAM	1	0	21.57	21.94	21.67		
5	64QAM	1	12	21.57	21.87	21.58	22.5	2
5	64QAM	1	24	21.59	21.84	21.58		
5	64QAM	12	0	20.54	20.80	20.57		
5	64QAM	12	7	20.54	20.82	20.55	21.5	3
5	64QAM	12	13	20.50	20.85	20.53		
5	64QAM	25	0	20.46	20.81	20.49		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	23.30	23.61	23.30	24.5	0
3	QPSK	1	8	23.25	23.57	23.25		
3	QPSK	1	14	23.34	23.57	23.24		
3	QPSK	8	0	22.29	22.62	22.31	23.5	1
3	QPSK	8	4	22.40	22.63	22.31		
3	QPSK	8	7	22.33	22.60	22.30		
3	QPSK	15	0	22.38	22.60	22.32	23.5	1
3	16QAM	1	0	22.57	22.96	22.58		
3	16QAM	1	8	22.58	22.94	22.58		
3	16QAM	1	14	22.60	22.90	22.56	22.5	2
3	16QAM	8	0	21.44	21.77	21.45		
3	16QAM	8	4	21.54	21.78	21.49		
3	16QAM	8	7	21.48	21.73	21.42	22.5	2
3	16QAM	15	0	21.47	21.71	21.42		
3	64QAM	1	0	21.53	21.88	21.54	22.5	2



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3	64QAM	1	8	21.48	21.86	21.55	21.5	3
3	64QAM	1	14	21.55	21.87	21.50		
3	64QAM	8	0	20.44	20.75	20.44		
3	64QAM	8	4	20.52	20.78	20.47		
3	64QAM	8	7	20.49	20.74	20.46		
3	64QAM	15	0	20.45	20.72	20.42		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	23.21	23.49	23.20	24.5	0
1.4	QPSK	1	3	23.26	23.61	23.26		
1.4	QPSK	1	5	23.16	23.49	23.18		
1.4	QPSK	3	0	23.22	23.55	23.26		
1.4	QPSK	3	1	23.28	23.59	23.27		
1.4	QPSK	3	3	23.24	23.56	23.26		
1.4	QPSK	6	0	22.23	22.54	22.25	23.5	1
1.4	16QAM	1	0	22.48	22.88	22.55	23.5	1
1.4	16QAM	1	3	22.56	22.92	22.61		
1.4	16QAM	1	5	22.46	22.84	22.50		
1.4	16QAM	3	0	22.29	22.66	22.34		
1.4	16QAM	3	1	22.32	22.69	22.34		
1.4	16QAM	3	3	22.28	22.64	22.31		
1.4	16QAM	6	0	21.36	21.72	21.39	22.5	2
1.4	64QAM	1	0	21.44	21.83	21.50	22.5	2
1.4	64QAM	1	3	21.50	21.88	21.55		
1.4	64QAM	1	5	21.44	21.77	21.43		
1.4	64QAM	3	0	21.44	21.81	21.49		
1.4	64QAM	3	1	21.47	21.82	21.51		
1.4	64QAM	3	3	21.46	21.78	21.44		
1.4	64QAM	6	0	20.33	20.65	20.33	21.5	3



<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600	24.5	0
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	23.28	23.47	23.37		
10	QPSK	1	25	23.27	23.27	23.25	23.5	1
10	QPSK	1	49	23.24	23.31	23.32		
10	QPSK	25	0	22.33	22.36	22.35		
10	QPSK	25	12	22.24	22.34	22.33	23.5	1
10	QPSK	25	25	22.30	22.29	22.27		
10	QPSK	50	0	22.21	22.32	22.30		
10	16QAM	1	0	22.64	22.62	22.73	23.5	1
10	16QAM	1	25	22.60	22.62	22.58		
10	16QAM	1	49	22.76	22.64	22.66		
10	16QAM	25	0	21.43	21.44	21.42	22.5	2
10	16QAM	25	12	21.52	21.40	21.42		
10	16QAM	25	25	21.45	21.37	21.37		
10	16QAM	50	0	21.49	21.39	21.41	22.5	2
10	64QAM	1	0	21.53	21.50	21.60		
10	64QAM	1	25	21.52	21.55	21.51		
10	64QAM	1	49	21.72	21.53	21.60	21.5	3
10	64QAM	25	0	20.43	20.43	20.43		
10	64QAM	25	12	20.54	20.41	20.40		
10	64QAM	25	25	20.48	20.34	20.36	21.5	3
10	64QAM	50	0	20.50	20.38	20.39		
Channel				20425	20525	20625	24.5	0
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	23.34	23.36	23.45		
5	QPSK	1	12	23.35	23.31	23.46	23.5	1
5	QPSK	1	24	23.33	23.40	23.46		
5	QPSK	12	0	22.42	22.37	22.42		
5	QPSK	12	7	22.41	22.35	22.54	23.5	1
5	QPSK	12	13	22.36	22.31	22.49		
5	QPSK	25	0	22.40	22.33	22.42		
5	16QAM	1	0	22.69	22.70	22.73	23.5	1
5	16QAM	1	12	22.68	22.66	22.78		
5	16QAM	1	24	22.66	22.74	22.78		
5	16QAM	12	0	21.46	21.47	21.50	22.5	2
5	16QAM	12	7	21.50	21.45	21.62		
5	16QAM	12	13	21.45	21.41	21.57		
5	16QAM	25	0	21.49	21.41	21.50	22.5	2
5	64QAM	1	0	21.60	21.63	21.68		
5	64QAM	1	12	21.60	21.55	21.70		
5	64QAM	1	24	21.57	21.60	21.70	21.5	3
5	64QAM	12	0	20.52	20.46	20.55		
5	64QAM	12	7	20.55	20.48	20.64		
5	64QAM	12	13	20.48	20.44	20.62	21.5	3
5	64QAM	25	0	20.49	20.40	20.47		
Channel				20415	20525	20635	24.5	0
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	23.38	23.44	23.34		
3	QPSK	1	8	23.37	23.41	23.44	24.5	0
3	QPSK	1	14	23.43	23.39	23.42		
3	QPSK	8	0	22.38	22.41	22.58		
3	QPSK	8	4	22.53	22.46	22.60	23.5	1



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3	QPSK	8	7	22.48	22.43	22.56		
3	QPSK	15	0	22.50	22.42	22.57		
3	16QAM	1	0	22.74	22.75	22.90		
3	16QAM	1	8	22.71	22.72	22.89	23.5	1
3	16QAM	1	14	22.78	22.70	22.88		
3	16QAM	8	0	21.53	21.55	21.71		
3	16QAM	8	4	21.63	21.57	21.71	22.5	2
3	16QAM	8	7	21.59	21.53	21.70		
3	16QAM	15	0	21.59	21.51	21.68		
3	64QAM	1	0	21.68	21.67	21.81	22.5	2
3	64QAM	1	8	21.63	21.63	21.79		
3	64QAM	1	14	21.71	21.66	21.76		
3	64QAM	8	0	20.50	20.53	20.69	21.5	3
3	64QAM	8	4	20.62	20.55	20.72		
3	64QAM	8	7	20.57	20.53	20.68		
3	64QAM	15	0	20.58	20.51	20.69		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	23.31	23.36	23.38	24.5	0
1.4	QPSK	1	3	23.41	23.40	23.34		
1.4	QPSK	1	5	23.30	23.31	23.44		
1.4	QPSK	3	0	23.38	23.37	23.41		
1.4	QPSK	3	1	23.40	23.41	23.31		
1.4	QPSK	3	3	23.36	23.37	23.25		
1.4	QPSK	6	0	22.35	22.38	22.53	23.5	1
1.4	16QAM	1	0	22.65	22.66	22.80	23.5	1
1.4	16QAM	1	3	22.70	22.74	22.85		
1.4	16QAM	1	5	22.61	22.65	22.76		
1.4	16QAM	3	0	22.47	22.50	22.61		
1.4	16QAM	3	1	22.52	22.52	22.63		
1.4	16QAM	3	3	22.42	22.47	22.57		
1.4	16QAM	6	0	21.48	21.49	21.64	22.5	2
1.4	64QAM	1	0	21.57	21.56	21.73	22.5	2
1.4	64QAM	1	3	21.64	21.67	21.78		
1.4	64QAM	1	5	21.55	21.59	21.68		
1.4	64QAM	3	0	21.57	21.59	21.71		
1.4	64QAM	3	1	21.64	21.64	21.74		
1.4	64QAM	3	3	21.57	21.58	21.70		
1.4	64QAM	6	0	20.42	20.46	20.59	21.5	3



<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	24.06	23.80	23.73		
20	QPSK	1	49	23.55	23.62	23.60	24.5	0
20	QPSK	1	99	23.65	23.63	23.71		
20	QPSK	50	0	22.86	22.75	22.72		
20	QPSK	50	24	22.72	22.73	22.70	23.5	1
20	QPSK	50	50	22.66	22.67	22.64		
20	QPSK	100	0	22.81	22.71	22.70		
20	16QAM	1	0	23.35	23.11	23.04	23.5	1
20	16QAM	1	49	22.88	22.93	22.93		
20	16QAM	1	99	23.00	22.99	22.99		
20	16QAM	50	0	21.96	21.81	21.72	22.5	2
20	16QAM	50	24	21.80	21.79	21.76		
20	16QAM	50	50	21.78	21.76	21.76		
20	16QAM	100	0	21.92	21.79	21.75	22.5	2
20	64QAM	1	0	22.31	22.09	21.97		
20	64QAM	1	49	21.86	21.87	21.87		
20	64QAM	1	99	21.95	21.89	21.93	21.5	3
20	64QAM	50	0	21.00	20.88	20.71		
20	64QAM	50	24	20.84	20.79	20.79		
20	64QAM	50	50	20.78	20.74	20.74	21.5	3
20	64QAM	100	0	20.93	20.80	20.79		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	24.01	23.79	23.76		
15	QPSK	1	37	23.68	23.63	23.59	24.5	0
15	QPSK	1	74	23.67	23.65	23.70		
15	QPSK	36	0	22.85	22.69	22.69		
15	QPSK	36	20	22.75	22.67	22.68	23.5	1
15	QPSK	36	39	22.67	22.67	22.61		
15	QPSK	75	0	22.81	22.67	22.68		
15	16QAM	1	0	23.33	23.08	23.09	23.5	1
15	16QAM	1	37	23.00	22.94	22.93		
15	16QAM	1	74	23.04	22.97	23.03		
15	16QAM	36	0	21.94	21.80	21.78	22.5	2
15	16QAM	36	20	21.84	21.76	21.77		
15	16QAM	36	39	21.78	21.74	21.68		
15	16QAM	75	0	21.93	21.78	21.72	22.5	2
15	64QAM	1	0	22.29	22.03	21.98		
15	64QAM	1	37	21.94	21.86	21.81		
15	64QAM	1	74	21.97	21.90	21.90	21.5	3
15	64QAM	36	0	20.99	20.85	20.81		
15	64QAM	36	20	20.90	20.84	20.77		
15	64QAM	36	39	20.83	20.81	20.77	21.5	3
15	64QAM	75	0	20.92	20.76	20.74		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	23.88	23.61	23.58		
10	QPSK	1	25	23.68	23.54	23.61	24.5	0
10	QPSK	1	49	23.47	23.51	23.60		
10	QPSK	25	0	22.72	22.57	22.60		
10	QPSK	25	12	22.72	22.55	22.55	23.5	1



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10	QPSK	25	25	22.59	22.55	22.62		
10	QPSK	50	0	22.77	22.60	22.54		
10	16QAM	1	0	23.24	22.92	22.95		
10	16QAM	1	25	23.08	22.88	22.95	23.5	1
10	16QAM	1	49	22.86	22.85	22.88		
10	16QAM	25	0	21.83	21.72	21.63		
10	16QAM	25	12	21.87	21.68	21.65	22.5	2
10	16QAM	25	25	21.71	21.66	21.72		
10	16QAM	50	0	21.85	21.69	21.63		
10	64QAM	1	0	22.10	21.88	21.82	22.5	2
10	64QAM	1	25	21.97	21.77	21.83		
10	64QAM	1	49	21.75	21.75	21.82		
10	64QAM	25	0	20.85	20.70	20.64	21.5	3
10	64QAM	25	12	20.79	20.68	20.68		
10	64QAM	25	25	20.72	20.70	20.73		
10	64QAM	50	0	20.78	20.71	20.66		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	23.90	23.58	23.62	24.5	0
5	QPSK	1	12	23.75	23.59	23.59		
5	QPSK	1	24	23.73	23.56	23.56		
5	QPSK	12	0	22.78	22.63	22.61	23.5	1
5	QPSK	12	7	22.85	22.62	22.64		
5	QPSK	12	13	22.77	22.58	22.58		
5	QPSK	25	0	22.76	22.59	22.60	23.5	1
5	16QAM	1	0	23.18	22.88	22.92		
5	16QAM	1	12	23.07	22.87	22.91		
5	16QAM	1	24	23.05	22.86	22.85	22.5	2
5	16QAM	12	0	21.88	21.72	21.71		
5	16QAM	12	7	21.89	21.73	21.73		
5	16QAM	12	13	21.86	21.69	21.69	22.5	2
5	16QAM	25	0	21.87	21.69	21.71		
5	64QAM	1	0	22.14	21.84	21.84		
5	64QAM	1	12	22.00	21.80	21.83	22.5	2
5	64QAM	1	24	22.01	21.80	21.79		
5	64QAM	12	0	20.94	20.73	20.80		
5	64QAM	12	7	20.95	20.79	20.78	21.5	3
5	64QAM	12	13	20.90	20.71	20.77		
5	64QAM	25	0	20.87	20.71	20.72		



<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130	24.5	0
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	23.55	23.79	23.73		
10	QPSK	1	25	23.39	23.33	23.58	23.5	1
10	QPSK	1	49	23.36	23.78	23.66		
10	QPSK	25	0	22.49	22.48	22.41		
10	QPSK	25	12	22.47	22.42	22.42	23.5	1
10	QPSK	25	25	22.42	22.38	22.38		
10	QPSK	50	0	22.36	22.42	22.40		
10	16QAM	1	0	22.88	22.80	22.75	23.5	1
10	16QAM	1	25	22.72	22.66	22.89		
10	16QAM	1	49	22.71	22.84	23.12		
10	16QAM	25	0	21.54	21.48	21.56	22.5	2
10	16QAM	25	12	21.53	21.47	21.67		
10	16QAM	25	25	21.53	21.48	21.72		
10	16QAM	50	0	21.53	21.47	21.64	22.5	2
10	64QAM	1	0	21.75	21.70	21.66		
10	64QAM	1	25	21.62	21.57	21.80		
10	64QAM	1	49	21.60	21.75	21.98	21.5	3
10	64QAM	25	0	20.58	20.51	20.59		
10	64QAM	25	12	20.55	20.51	20.68		
10	64QAM	25	25	20.51	20.44	20.77	21.5	3
10	64QAM	50	0	20.52	20.47	20.66		
Channel				23035	23095	23155	24.5	0
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	23.63	23.41	23.63		
5	QPSK	1	12	23.57	23.39	23.70	23.5	1
5	QPSK	1	24	23.50	23.50	23.69		
5	QPSK	12	0	22.72	22.44	22.67		
5	QPSK	12	7	22.72	22.48	22.68	23.5	1
5	QPSK	12	13	22.52	22.43	22.77		
5	QPSK	25	0	22.51	22.45	22.68		
5	16QAM	1	0	22.93	22.74	22.91	23.5	1
5	16QAM	1	12	22.89	22.68	22.98		
5	16QAM	1	24	22.79	22.82	23.10		
5	16QAM	12	0	21.75	21.51	21.77	22.5	2
5	16QAM	12	7	21.78	21.54	21.77		
5	16QAM	12	13	21.59	21.51	21.83		
5	16QAM	25	0	21.61	21.51	21.76	22.5	2
5	64QAM	1	0	21.86	21.65	21.82		
5	64QAM	1	12	21.80	21.61	21.88		
5	64QAM	1	24	21.70	21.72	21.99	21.5	3
5	64QAM	12	0	20.83	20.53	20.82		
5	64QAM	12	7	20.82	20.60	20.81		
5	64QAM	12	13	20.67	20.55	20.89	21.5	3
5	64QAM	25	0	20.62	20.50	20.75		
Channel				23025	23095	23165	24.5	0
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	23.68	23.45	23.75		
3	QPSK	1	8	23.63	23.46	23.74	24.5	0
3	QPSK	1	14	23.64	23.44	23.62		
3	QPSK	8	0	22.76	22.49	22.81	23.5	1
3	QPSK	8	4	22.76	22.52	22.80		



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3	QPSK	8	7	22.72	22.49	22.80		
3	QPSK	15	0	22.73	22.48	22.82		
3	16QAM	1	0	22.97	22.78	23.07		
3	16QAM	1	8	22.98	22.78	23.04	23.5	1
3	16QAM	1	14	22.96	22.77	23.13		
3	16QAM	8	0	21.82	21.61	21.91		
3	16QAM	8	4	21.86	21.63	21.91	22.5	2
3	16QAM	8	7	21.84	21.61	21.89		
3	16QAM	15	0	21.83	21.57	21.89		
3	64QAM	1	0	21.90	21.68	21.94	22.5	2
3	64QAM	1	8	21.86	21.69	21.94		
3	64QAM	1	14	21.86	21.67	22.07		
3	64QAM	8	0	20.85	20.62	20.91	21.5	3
3	64QAM	8	4	20.86	20.63	20.94		
3	64QAM	8	7	20.83	20.58	20.91		
3	64QAM	15	0	20.83	20.58	20.88		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	23.30	23.39	23.36	24.5	0
1.4	QPSK	1	3	23.37	23.44	23.53		
1.4	QPSK	1	5	23.29	23.38	23.45		
1.4	QPSK	3	0	23.35	23.43	23.41		
1.4	QPSK	3	1	23.37	23.46	23.53		
1.4	QPSK	3	3	23.34	23.42	23.50		
1.4	QPSK	6	0	22.38	22.43	22.42	23.5	1
1.4	16QAM	1	0	22.60	22.70	22.67	23.5	1
1.4	16QAM	1	3	22.66	22.75	22.83		
1.4	16QAM	1	5	22.59	22.68	22.75		
1.4	16QAM	3	0	22.43	22.48	22.49		
1.4	16QAM	3	1	22.45	22.52	22.62		
1.4	16QAM	3	3	22.39	22.47	22.58		
1.4	16QAM	6	0	21.53	21.56	21.56	22.5	2
1.4	64QAM	1	0	21.52	21.63	21.59	22.5	2
1.4	64QAM	1	3	21.57	21.70	21.77		
1.4	64QAM	1	5	21.54	21.61	21.69		
1.4	64QAM	3	0	21.51	21.63	21.58		
1.4	64QAM	3	1	21.57	21.66	21.70		
1.4	64QAM	3	3	21.54	21.60	21.69		
1.4	64QAM	6	0	20.47	20.51	20.52	21.5	3

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23230			24.5	0
Frequency (MHz)				782				
10	QPSK	1	0		23.65		24.5	0
10	QPSK	1	25		23.48			
10	QPSK	1	49		23.04			
10	QPSK	25	0		22.60		23.5	1
10	QPSK	25	12		22.58			
10	QPSK	25	25		22.51			
10	QPSK	50	0		22.53		23.5	1
10	16QAM	1	0		22.80			
10	16QAM	1	25		22.77			
10	16QAM	1	49		22.31		22.5	2
10	16QAM	25	0		21.67			
10	16QAM	25	12		21.63			
10	16QAM	25	25		21.56		22.5	2
10	16QAM	50	0		21.62			
10	64QAM	1	0		21.72			
10	64QAM	1	25		21.70		22.5	2
10	64QAM	1	49		21.51			
10	64QAM	25	0		20.66			
10	64QAM	25	12		20.64		21.5	3
10	64QAM	25	25		20.58			
10	64QAM	50	0		20.62			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5	24.5	0
5	QPSK	1	0	23.52	23.59	23.64		
5	QPSK	1	12	23.46	23.51	23.61		
5	QPSK	1	24	23.53	23.50	23.63	23.5	1
5	QPSK	12	0	22.57	22.61	22.66		
5	QPSK	12	7	22.63	22.61	22.66		
5	QPSK	12	13	22.59	22.58	22.74	23.5	1
5	QPSK	25	0	22.61	22.57	22.64		
5	16QAM	1	0	22.84	22.90	22.95		
5	16QAM	1	12	22.78	22.82	23.05	23.5	1
5	16QAM	1	24	22.84	22.77	22.99		
5	16QAM	12	0	21.64	21.70	21.73		
5	16QAM	12	7	21.73	21.68	21.75	22.5	2
5	16QAM	12	13	21.68	21.64	21.81		
5	16QAM	25	0	21.69	21.64	21.73		
5	64QAM	1	0	21.76	21.82	21.87	22.5	2
5	64QAM	1	12	21.71	21.73	21.95		
5	64QAM	1	24	21.73	21.70	21.87		
5	64QAM	12	0	20.67	20.73	20.75	21.5	3
5	64QAM	12	7	20.75	20.70	20.81		
5	64QAM	12	13	20.72	20.69	20.86		
5	64QAM	25	0	20.70	20.65	20.72		

<LTE Band 14>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23330				
Frequency (MHz)				793				
10	QPSK	1	0		23.60		24.5	0
10	QPSK	1	25		23.38			
10	QPSK	1	49		23.30			
10	QPSK	25	0		22.51		23.5	1
10	QPSK	25	12		22.50			
10	QPSK	25	25		22.42			
10	QPSK	50	0		22.45		23.5	1
10	16QAM	1	0		22.87			
10	16QAM	1	25		22.80			
10	16QAM	1	49		22.60		22.5	2
10	16QAM	25	0		21.64			
10	16QAM	25	12		21.59			
10	16QAM	25	25		21.51		22.5	2
10	16QAM	50	0		21.58			
10	64QAM	1	0		21.79			
10	64QAM	1	25		21.70			
10	64QAM	1	49		21.56			
10	64QAM	25	0		20.62		21.5	3
10	64QAM	25	12		20.60			
10	64QAM	25	25		20.51			
10	64QAM	50	0		20.59			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	23.53	23.52	23.45	24.5	0
5	QPSK	1	12	23.47	23.44	23.40		
5	QPSK	1	24	23.44	23.40	23.38		
5	QPSK	12	0	22.59	22.54	22.50	23.5	1
5	QPSK	12	7	22.55	22.53	22.49		
5	QPSK	12	13	22.52	22.49	22.43		
5	QPSK	25	0	22.54	22.51	22.45	23.5	1
5	16QAM	1	0	22.90	22.88	22.85		
5	16QAM	1	12	22.86	22.80	22.71		
5	16QAM	1	24	22.82	22.67	22.69	22.5	2
5	16QAM	12	0	21.69	21.67	21.61		
5	16QAM	12	7	21.67	21.63	21.57		
5	16QAM	12	13	21.64	21.57	21.50	22.5	2
5	16QAM	25	0	21.65	21.60	21.56		
5	64QAM	1	0	21.79	21.81	21.74		
5	64QAM	1	12	21.75	21.74	21.59	22.5	2
5	64QAM	1	24	21.72	21.60	21.60		
5	64QAM	12	0	20.72	20.69	20.65		
5	64QAM	12	7	20.72	20.69	20.62	21.5	3
5	64QAM	12	13	20.68	20.64	20.55		
5	64QAM	25	0	20.63	20.59	20.54		

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800	24.5	0
Frequency (MHz)				709	710	711		
10	QPSK	1	0	23.71	23.87	23.75		
10	QPSK	1	25	23.66	23.75	23.72	23.5	1
10	QPSK	1	49	23.63	23.61	23.61		
10	QPSK	25	0	22.73	22.77	22.74		
10	QPSK	25	12	22.62	22.62	22.61	23.5	1
10	QPSK	25	25	22.66	22.67	22.66		
10	QPSK	50	0	22.71	22.78	22.76		
10	16QAM	1	0	22.84	22.90	22.91	23.5	1
10	16QAM	1	25	23.10	23.09	23.07		
10	16QAM	1	49	23.21	23.13	23.12		
10	16QAM	25	0	21.79	21.80	21.85	22.5	2
10	16QAM	25	12	21.91	21.86	21.85		
10	16QAM	25	25	21.89	21.83	21.82		
10	16QAM	50	0	21.90	21.86	21.84	22.5	2
10	64QAM	1	0	21.76	21.84	21.86		
10	64QAM	1	25	22.00	22.06	22.04		
10	64QAM	1	49	22.09	22.12	22.09	21.5	3
10	64QAM	25	0	20.84	20.83	20.86		
10	64QAM	25	12	20.93	20.87	20.87		
10	64QAM	25	25	20.91	20.85	20.84	21.5	3
10	64QAM	50	0	20.90	20.90	20.86		
Channel				23755	23790	23825	24.5	0
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	23.50	23.65	23.70		
5	QPSK	1	12	23.56	23.74	23.77	23.5	1
5	QPSK	1	24	23.68	23.72	23.78		
5	QPSK	12	0	22.65	22.77	22.71		
5	QPSK	12	7	22.73	22.78	22.74	23.5	1
5	QPSK	12	13	22.70	22.76	22.79		
5	QPSK	25	0	22.72	22.76	22.69		
5	16QAM	1	0	22.89	23.02	23.06	23.5	1
5	16QAM	1	12	22.93	23.11	23.13		
5	16QAM	1	24	23.03	23.09	23.15		
5	16QAM	12	0	21.71	21.85	21.82	22.5	2
5	16QAM	12	7	21.83	21.88	21.80		
5	16QAM	12	13	21.80	21.84	21.87		
5	16QAM	25	0	21.80	21.83	21.78	22.5	2
5	64QAM	1	0	21.78	21.91	22.00		
5	64QAM	1	12	21.84	21.99	22.03		
5	64QAM	1	24	21.96	21.97	22.04	21.5	3
5	64QAM	12	0	20.77	20.89	20.83		
5	64QAM	12	7	20.90	20.93	20.89		
5	64QAM	12	13	20.85	20.88	20.93	21.5	3
5	64QAM	25	0	20.80	20.83	20.81		



<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	23.21	23.46	23.34	24.5	0
20	QPSK	1	49	23.16	23.27	23.33		
20	QPSK	1	99	23.15	23.43	23.42		
20	QPSK	50	0	22.20	22.38	22.34	23.5	1
20	QPSK	50	24	22.17	22.35	22.31		
20	QPSK	50	50	22.14	22.35	22.29		
20	QPSK	100	0	22.30	22.37	22.36	23.5	1
20	16QAM	1	0	22.45	22.73	23.16		
20	16QAM	1	49	22.36	22.54	22.73		
20	16QAM	1	99	22.50	22.76	22.75	22.5	2
20	16QAM	50	0	21.30	21.45	21.65		
20	16QAM	50	24	21.36	21.48	21.39		
20	16QAM	50	50	21.36	21.48	21.35	22.5	2
20	16QAM	100	0	21.41	21.46	21.47		
20	64QAM	1	0	21.38	21.61	22.03	22.5	2
20	64QAM	1	49	21.32	21.48	21.64		
20	64QAM	1	99	21.46	21.63	21.59		
20	64QAM	50	0	20.29	20.48	20.67	21.5	3
20	64QAM	50	24	20.38	20.46	20.42		
20	64QAM	50	50	20.35	20.50	20.39		
20	64QAM	100	0	20.41	20.49	20.47		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	23.11	23.36	23.31	24.5	0
15	QPSK	1	37	23.09	23.27	23.25		
15	QPSK	1	74	23.20	23.43	23.42		
15	QPSK	36	0	22.17	22.34	22.46	23.5	1
15	QPSK	36	20	22.13	22.38	22.28		
15	QPSK	36	39	22.21	22.39	22.28		
15	QPSK	75	0	22.13	22.37	22.30	23.5	1
15	16QAM	1	0	22.49	22.75	22.98		
15	16QAM	1	37	22.38	22.55	22.48		
15	16QAM	1	74	22.53	22.73	22.78	22.5	2
15	16QAM	36	0	21.26	21.45	21.55		
15	16QAM	36	20	21.24	21.46	21.33		
15	16QAM	36	39	21.32	21.50	21.33	22.5	2
15	16QAM	75	0	21.21	21.48	21.40		
15	64QAM	1	0	21.36	21.59	21.86		
15	64QAM	1	37	21.31	21.50	21.50	22.5	2
15	64QAM	1	74	21.46	21.64	21.64		
15	64QAM	36	0	20.27	20.46	20.58		
15	64QAM	36	20	20.25	20.47	20.37	21.5	3
15	64QAM	36	39	20.32	20.57	20.36		
15	64QAM	75	0	20.23	20.46	20.44		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	22.90	23.19	23.35	24.5	0
10	QPSK	1	25	22.91	23.15	23.13		
10	QPSK	1	49	22.93	23.25	23.36		
10	QPSK	25	0	22.00	22.20	22.18	23.5	1
10	QPSK	25	12	22.02	22.26	22.18		



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10	QPSK	25	25	21.96	22.23	22.23		
10	QPSK	50	0	21.96	22.23	22.22		
10	16QAM	1	0	22.21	22.43	22.77		
10	16QAM	1	25	22.23	22.45	22.36	23.5	1
10	16QAM	1	49	22.22	22.50	22.67		
10	16QAM	25	0	21.09	21.31	21.29		
10	16QAM	25	12	21.09	21.36	21.26	22.5	2
10	16QAM	25	25	21.08	21.30	21.30		
10	16QAM	50	0	21.09	21.35	21.30		
10	64QAM	1	0	21.14	21.38	21.65	22.5	2
10	64QAM	1	25	21.17	21.40	21.27		
10	64QAM	1	49	21.18	21.46	21.56		
10	64QAM	25	0	20.09	20.33	20.28	21.5	3
10	64QAM	25	12	20.12	20.33	20.26		
10	64QAM	25	25	20.05	20.30	20.31		
10	64QAM	50	0	20.08	20.34	20.34		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	22.88	23.24	23.21	24.5	0
5	QPSK	1	12	22.81	23.19	23.24		
5	QPSK	1	24	22.94	23.34	23.38		
5	QPSK	12	0	21.92	22.29	22.22	23.5	1
5	QPSK	12	7	21.94	22.29	22.27		
5	QPSK	12	13	22.02	22.28	22.31		
5	QPSK	25	0	21.97	22.24	22.04	23.5	1
5	16QAM	1	0	22.21	22.56	22.54		
5	16QAM	1	12	22.19	22.54	22.57		
5	16QAM	1	24	22.30	22.61	22.70	22.5	2
5	16QAM	12	0	21.01	21.40	21.26		
5	16QAM	12	7	20.99	21.36	21.32		
5	16QAM	12	13	21.10	21.36	21.35	22.5	2
5	16QAM	25	0	21.08	21.38	20.53		
5	64QAM	1	0	21.13	21.50	21.40		
5	64QAM	1	12	21.08	21.39	21.43	22.5	2
5	64QAM	1	24	21.18	21.53	21.59		
5	64QAM	12	0	20.04	20.45	20.32		
5	64QAM	12	7	20.04	20.40	20.36	21.5	3
5	64QAM	12	13	20.12	20.36	20.39		
5	64QAM	25	0	20.06	20.35	20.53		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	22.89	23.26	23.30	24.5	0
3	QPSK	1	8	22.88	23.24	23.36		
3	QPSK	1	14	22.87	23.23	23.43		
3	QPSK	8	0	21.93	22.32	22.31	23.5	1
3	QPSK	8	4	21.96	22.32	22.40		
3	QPSK	8	7	21.94	22.27	22.38		
3	QPSK	15	0	21.93	22.31	22.35	23.5	1
3	16QAM	1	0	22.20	22.57	22.60		
3	16QAM	1	8	22.18	22.55	22.68		
3	16QAM	1	14	22.19	22.48	22.73	22.5	2
3	16QAM	8	0	21.04	21.46	21.40		
3	16QAM	8	4	21.04	21.44	21.48		
3	16QAM	8	7	20.99	21.44	21.50	22.5	2
3	16QAM	15	0	21.01	21.38	21.42		
3	64QAM	1	0	21.11	21.47	21.50	22.5	2



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3	64QAM	1	8	21.09	21.49	21.56	21.5	3
3	64QAM	1	14	21.06	21.43	21.64		
3	64QAM	8	0	20.05	20.47	20.38		
3	64QAM	8	4	20.06	20.44	20.48		
3	64QAM	8	7	20.03	20.45	20.51		
3	64QAM	15	0	20.00	20.39	20.42		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	22.82	23.19	23.29	24.5	0
1.4	QPSK	1	3	22.86	23.24	23.42		
1.4	QPSK	1	5	22.80	23.15	23.34		
1.4	QPSK	3	0	22.82	23.21	23.35		
1.4	QPSK	3	1	22.87	23.25	23.39		
1.4	QPSK	3	3	22.85	23.22	23.38		
1.4	QPSK	6	0	21.83	22.24	22.32	23.5	1
1.4	16QAM	1	0	22.08	22.48	22.63	23.5	1
1.4	16QAM	1	3	22.18	22.53	22.75		
1.4	16QAM	1	5	22.11	22.46	22.70		
1.4	16QAM	3	0	21.93	22.29	22.42		
1.4	16QAM	3	1	21.97	22.35	22.47		
1.4	16QAM	3	3	21.92	22.26	22.45		
1.4	16QAM	6	0	20.98	21.40	21.47	22.5	2
1.4	64QAM	1	0	21.06	21.43	21.51	22.5	2
1.4	64QAM	1	3	21.12	21.49	21.66		
1.4	64QAM	1	5	21.03	21.42	21.57		
1.4	64QAM	3	0	21.01	21.40	21.54		
1.4	64QAM	3	1	21.06	21.47	21.58		
1.4	64QAM	3	3	21.01	21.39	21.57		
1.4	64QAM	6	0	19.92	20.32	20.40	21.5	3

<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	23.41	23.45	23.37		
15	QPSK	1	37	23.34	23.29	23.31	24.5	0
15	QPSK	1	74	23.23	23.28	23.33		
15	QPSK	36	0	22.43	22.27	22.33		
15	QPSK	36	20	22.37	22.24	22.38	23.5	1
15	QPSK	36	39	22.28	22.24	22.30		
15	QPSK	75	0	22.36	22.18	22.36		
15	16QAM	1	0	22.82	22.64	22.70	23.5	1
15	16QAM	1	37	22.71	22.62	22.62		
15	16QAM	1	74	22.57	22.63	22.67		
15	16QAM	36	0	21.51	21.34	21.39	22.5	2
15	16QAM	36	20	21.48	21.32	21.47		
15	16QAM	36	39	21.40	21.31	21.36		
15	16QAM	75	0	21.44	21.30	21.44	22.5	2
15	64QAM	1	0	21.70	21.58	21.64		
15	64QAM	1	37	21.61	21.54	21.54		
15	64QAM	1	74	21.49	21.53	21.58	21.5	3
15	64QAM	36	0	20.53	20.39	20.45		
15	64QAM	36	20	20.51	20.35	20.47		
15	64QAM	36	39	20.42	20.38	20.37	20.4	0
15	64QAM	75	0	20.43	20.28	20.44		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	23.32	23.13	23.27		
10	QPSK	1	25	23.24	23.14	23.27	24.5	0
10	QPSK	1	49	23.20	23.19	23.22		
10	QPSK	25	0	22.29	22.15	22.27		
10	QPSK	25	12	22.26	22.10	22.25	23.5	1
10	QPSK	25	25	22.22	22.19	22.31		
10	QPSK	50	0	22.25	22.12	22.24		
10	16QAM	1	0	22.68	22.50	22.65	23.5	1
10	16QAM	1	25	22.60	22.52	22.61		
10	16QAM	1	49	22.56	22.55	22.58		
10	16QAM	25	0	21.41	21.22	21.35	22.5	2
10	16QAM	25	12	21.38	21.20	21.31		
10	16QAM	25	25	21.33	21.25	21.39		
10	16QAM	50	0	21.37	21.18	21.30	22.5	2
10	64QAM	1	0	21.58	21.41	21.55		
10	64QAM	1	25	21.52	21.42	21.50		
10	64QAM	1	49	21.48	21.47	21.49	21.5	3
10	64QAM	25	0	20.40	20.23	20.34		
10	64QAM	25	12	20.40	20.23	20.31		
10	64QAM	25	25	20.35	20.24	20.40	20.3	0
10	64QAM	50	0	20.38	20.18	20.31		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	23.34	23.14	23.32		
5	QPSK	1	12	23.29	23.16	23.29	24.5	0
5	QPSK	1	24	23.28	23.16	23.27		
5	QPSK	12	0	22.34	22.12	22.37		
5	QPSK	12	7	22.36	22.25	22.35	23.5	1



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5	QPSK	12	13	22.29	22.21	22.35		
5	QPSK	25	0	22.31	22.10	22.36		
5	16QAM	1	0	22.69	22.50	22.64		
5	16QAM	1	12	22.65	22.52	22.60	23.5	1
5	16QAM	1	24	22.67	22.54	22.60		
5	16QAM	12	0	21.44	21.24	21.45		
5	16QAM	12	7	21.45	21.31	21.47	22.5	2
5	16QAM	12	13	21.41	21.29	21.43		
5	16QAM	25	0	21.42	21.19	21.44		
5	64QAM	1	0	21.59	21.41	21.57	22.5	2
5	64QAM	1	12	21.51	21.41	21.52		
5	64QAM	1	24	21.53	21.45	21.51		
5	64QAM	12	0	20.48	20.26	20.49	21.5	3
5	64QAM	12	7	20.47	20.39	20.49		
5	64QAM	12	13	20.44	20.33	20.46		
5	64QAM	25	0	20.42	20.23	20.45		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	23.40	23.29	23.41	24.5	0
3	QPSK	1	8	23.43	23.25	23.36		
3	QPSK	1	14	23.42	23.25	23.36		
3	QPSK	8	0	22.47	22.32	22.45	23.5	1
3	QPSK	8	4	22.46	22.34	22.44		
3	QPSK	8	7	22.44	22.32	22.41		
3	QPSK	15	0	22.45	22.31	22.44	23.5	1
3	16QAM	1	0	22.81	22.67	22.70		
3	16QAM	1	8	22.83	22.63	22.72		
3	16QAM	1	14	22.75	22.63	22.70	22.5	2
3	16QAM	8	0	21.60	21.45	21.57		
3	16QAM	8	4	21.59	21.47	21.61		
3	16QAM	8	7	21.59	21.45	21.56	22.5	2
3	16QAM	15	0	21.55	21.40	21.55		
3	64QAM	1	0	21.69	21.55	21.66		
3	64QAM	1	8	21.69	21.52	21.60	22.5	2
3	64QAM	1	14	21.71	21.52	21.61		
3	64QAM	8	0	20.59	20.43	20.54		
3	64QAM	8	4	20.60	20.46	20.59	21.5	3
3	64QAM	8	7	20.55	20.44	20.54		
3	64QAM	15	0	20.56	20.41	20.54		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	23.37	23.22	23.30	24.5	0
1.4	QPSK	1	3	23.44	23.27	23.38		
1.4	QPSK	1	5	23.37	23.21	23.28		
1.4	QPSK	3	0	23.35	23.25	23.35		
1.4	QPSK	3	1	23.44	23.29	23.36		
1.4	QPSK	3	3	23.41	23.25	23.33	23.5	1
1.4	QPSK	6	0	22.42	22.26	22.37		
1.4	16QAM	1	0	22.73	22.58	22.64	23.5	1
1.4	16QAM	1	3	22.82	22.65	22.73		
1.4	16QAM	1	5	22.76	22.55	22.64		
1.4	16QAM	3	0	22.56	22.38	22.44		
1.4	16QAM	3	1	22.56	22.40	22.49		
1.4	16QAM	3	3	22.52	22.36	22.44	22.5	2
1.4	16QAM	6	0	21.59	21.42	21.51		
1.4	64QAM	1	0	21.66	21.48	21.58	22.5	2



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1.4	64QAM	1	3	21.74	21.57	21.63		
1.4	64QAM	1	5	21.65	21.46	21.55		
1.4	64QAM	3	0	21.63	21.47	21.57		
1.4	64QAM	3	1	21.67	21.52	21.61		
1.4	64QAM	3	3	21.63	21.45	21.54		
1.4	64QAM	6	0	20.51	20.32	20.46	21.5	3

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				27710				
Frequency (MHz)				2310				
10	QPSK	1	0		22.11		23	0
10	QPSK	1	25		22.03			
10	QPSK	1	49		22.02			
10	QPSK	25	0		21.10		22	1
10	QPSK	25	12		21.06			
10	QPSK	25	25		21.05			
10	QPSK	50	0		21.08		22	1
10	16QAM	1	0		21.35			
10	16QAM	1	25		21.30			
10	16QAM	1	49		21.33		21	2
10	16QAM	25	0		20.19			
10	16QAM	25	12		20.16			
10	16QAM	25	25		20.10		21	2
10	16QAM	50	0		20.18			
10	64QAM	1	0		20.24			
10	64QAM	1	25		20.25			
10	64QAM	1	49		20.28			
10	64QAM	25	0		19.18		20	3
10	64QAM	25	12		19.17			
10	64QAM	25	25		19.13			
10	64QAM	50	0		19.17			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	22.02	22.09	22.08	23	0
5	QPSK	1	12	21.97	22.04	22.06		
5	QPSK	1	24	21.96	22.05	22.09		
5	QPSK	12	0	20.98	21.11	21.15	22	1
5	QPSK	12	7	21.10	21.11	21.11		
5	QPSK	12	13	21.06	21.07	21.09		
5	QPSK	25	0	21.09	21.08	21.11	22	1
5	16QAM	1	0	21.30	21.42	21.38		
5	16QAM	1	12	21.36	21.33	21.36		
5	16QAM	1	24	21.28	21.32	21.36	21	2
5	16QAM	12	0	20.06	20.21	20.21		
5	16QAM	12	7	20.18	20.22	20.23		
5	16QAM	12	13	20.15	20.17	20.21	21	2
5	16QAM	25	0	20.16	20.16	20.19		
5	64QAM	1	0	20.25	20.37	20.33		
5	64QAM	1	12	20.28	20.27	20.30	21	2
5	64QAM	1	24	20.28	20.31	20.32		
5	64QAM	12	0	19.12	19.24	19.26		
5	64QAM	12	7	19.24	19.25	19.28		
5	64QAM	12	13	19.20	19.23	19.23		
5	64QAM	25	0	19.16	19.17	19.20		



<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572	24.5	0
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	23.62	23.77	23.75		
20	QPSK	1	49	23.36	23.59	23.47	23.5	1
20	QPSK	1	99	23.44	23.55	23.45		
20	QPSK	50	0	22.56	22.74	22.64		
20	QPSK	50	24	22.56	22.64	22.50	23.5	1
20	QPSK	50	50	22.49	22.56	22.44		
20	QPSK	100	0	22.58	22.66	22.55		
20	16QAM	1	0	23.02	23.09	23.17	23.5	1
20	16QAM	1	49	22.65	22.92	22.77		
20	16QAM	1	99	22.81	23.01	22.82		
20	16QAM	50	0	21.69	21.83	21.76	22.5	2
20	16QAM	50	24	21.68	21.71	21.65		
20	16QAM	50	50	21.59	21.68	21.55		
20	16QAM	100	0	21.69	21.74	21.61	22.5	2
20	64QAM	1	0	21.92	21.99	22.05		
20	64QAM	1	49	21.56	21.82	21.69		
20	64QAM	1	99	21.69	21.93	21.74	21.5	3
20	64QAM	50	0	20.70	20.87	20.75		
20	64QAM	50	24	20.68	20.75	20.64		
20	64QAM	50	50	20.59	20.70	20.56	21.5	3
20	64QAM	100	0	20.71	20.78	20.67		
Channel				132047	132322	132597	24.5	0
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	23.59	23.70	23.69		
15	QPSK	1	37	23.38	23.53	23.52	23.5	1
15	QPSK	1	74	23.49	23.55	23.48		
15	QPSK	36	0	22.56	22.69	22.57		
15	QPSK	36	20	22.45	22.58	22.47	23.5	1
15	QPSK	36	39	22.49	22.55	22.52		
15	QPSK	75	0	22.48	22.62	22.49		
15	16QAM	1	0	22.98	23.02	23.07	23.5	1
15	16QAM	1	37	22.68	22.88	22.87		
15	16QAM	1	74	22.85	22.93	22.82		
15	16QAM	36	0	21.65	21.78	21.68	22.5	2
15	16QAM	36	20	21.54	21.72	21.62		
15	16QAM	36	39	21.61	21.67	21.62		
15	16QAM	75	0	21.57	21.73	21.60	22.5	2
15	64QAM	1	0	21.92	21.99	22.03		
15	64QAM	1	37	21.59	21.86	21.77		
15	64QAM	1	74	21.77	21.87	21.78	21.5	3
15	64QAM	36	0	20.68	20.83	20.72		
15	64QAM	36	20	20.57	20.75	20.61		
15	64QAM	36	39	20.65	20.72	20.62	21.5	3
15	64QAM	75	0	20.58	20.73	20.58		
Channel				132022	132322	132622	24.5	0
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.49	23.59	23.55		
10	QPSK	1	25	23.42	23.53	23.49	24.5	0
10	QPSK	1	49	23.39	23.52	23.45		
10	QPSK	25	0	22.54	22.66	22.50		
10	QPSK	25	12	22.49	22.59	22.55	23.5	1



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10	QPSK	25	25	22.41	22.57	22.49		
10	QPSK	50	0	22.46	22.61	22.47		
10	16QAM	1	0	22.88	22.92	22.92		
10	16QAM	1	25	22.72	22.91	22.85	23.5	1
10	16QAM	1	49	22.74	22.89	22.80		
10	16QAM	25	0	21.64	21.76	21.61		
10	16QAM	25	12	21.58	21.71	21.63	22.5	2
10	16QAM	25	25	21.51	21.67	21.61		
10	16QAM	50	0	21.58	21.71	21.55		
10	64QAM	1	0	21.73	21.80	21.82	22.5	2
10	64QAM	1	25	21.61	21.82	21.73		
10	64QAM	1	49	21.60	21.76	21.71		
10	64QAM	25	0	20.63	20.75	20.61	21.5	3
10	64QAM	25	12	20.58	20.74	20.66		
10	64QAM	25	25	20.53	20.68	20.60		
10	64QAM	50	0	20.59	20.72	20.58		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.35	23.53	23.50	24.5	0
5	QPSK	1	12	23.29	23.48	23.40		
5	QPSK	1	24	23.34	23.44	23.39		
5	QPSK	12	0	22.34	22.52	22.47	23.5	1
5	QPSK	12	7	22.32	22.53	22.46		
5	QPSK	12	13	22.37	22.43	22.42		
5	QPSK	25	0	22.39	22.51	22.43	23.5	1
5	16QAM	1	0	22.65	22.87	22.83		
5	16QAM	1	12	22.55	22.82	22.75		
5	16QAM	1	24	22.63	22.82	22.72	22.5	2
5	16QAM	12	0	21.41	21.62	21.59		
5	16QAM	12	7	21.43	21.63	21.56		
5	16QAM	12	13	21.46	21.58	21.55	22.5	2
5	16QAM	25	0	21.48	21.59	21.54		
5	64QAM	1	0	21.64	21.80	21.76		
5	64QAM	1	12	21.52	21.77	21.70	22.5	2
5	64QAM	1	24	21.58	21.73	21.63		
5	64QAM	12	0	20.48	20.68	20.63		
5	64QAM	12	7	20.47	20.68	20.62	21.5	3
5	64QAM	12	13	20.51	20.64	20.57		
5	64QAM	25	0	20.49	20.60	20.56		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.27	23.47	23.42	24.5	0
3	QPSK	1	8	23.27	23.44	23.39		
3	QPSK	1	14	23.23	23.40	23.37		
3	QPSK	8	0	22.33	22.46	22.42	23.5	1
3	QPSK	8	4	22.32	22.51	22.42		
3	QPSK	8	7	22.28	22.45	22.39		
3	QPSK	15	0	22.28	22.47	22.43	23.5	1
3	16QAM	1	0	22.53	22.84	22.73		
3	16QAM	1	8	22.50	22.80	22.74		
3	16QAM	1	14	22.49	22.77	22.69	22.5	2
3	16QAM	8	0	21.43	21.64	21.56		
3	16QAM	8	4	21.43	21.65	21.55		
3	16QAM	8	7	21.38	21.61	21.55	22.5	2
3	16QAM	15	0	21.39	21.58	21.53		
3	64QAM	1	0	21.51	21.73	21.65	22.5	2



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3	64QAM	1	8	21.46	21.72	21.65	21.5	3
3	64QAM	1	14	21.44	21.71	21.66		
3	64QAM	8	0	20.44	20.63	20.59		
3	64QAM	8	4	20.43	20.64	20.60		
3	64QAM	8	7	20.41	20.61	20.57		
3	64QAM	15	0	20.41	20.62	20.54		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	23.21	23.38	23.32	24.5	0
1.4	QPSK	1	3	23.29	23.46	23.38		
1.4	QPSK	1	5	23.19	23.37	23.29		
1.4	QPSK	3	0	23.25	23.40	23.38		
1.4	QPSK	3	1	23.27	23.48	23.39		
1.4	QPSK	3	3	23.24	23.43	23.36		
1.4	QPSK	6	0	22.24	22.40	22.35	23.5	1
1.4	16QAM	1	0	22.46	22.73	22.68	23.5	1
1.4	16QAM	1	3	22.63	22.82	22.73		
1.4	16QAM	1	5	22.46	22.74	22.66		
1.4	16QAM	3	0	22.36	22.52	22.45		
1.4	16QAM	3	1	22.35	22.55	22.48		
1.4	16QAM	3	3	22.27	22.51	22.44		
1.4	16QAM	6	0	21.40	21.60	21.50	22.5	2
1.4	64QAM	1	0	21.46	21.66	21.60	22.5	2
1.4	64QAM	1	3	21.54	21.71	21.67		
1.4	64QAM	1	5	21.39	21.64	21.58		
1.4	64QAM	3	0	21.42	21.67	21.61		
1.4	64QAM	3	1	21.50	21.70	21.63		
1.4	64QAM	3	3	21.47	21.66	21.60		
1.4	64QAM	6	0	20.34	20.51	20.47	21.5	3

<Reduced Power Mode>
<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	20.48	20.66	21.25	22	0
20	QPSK	1	49	20.37	20.63	20.93		
20	QPSK	1	99	20.37	20.60	20.91		
20	QPSK	50	0	19.53	19.77	20.09	21	1
20	QPSK	50	24	19.50	19.70	19.98		
20	QPSK	50	50	19.52	19.61	19.89		
20	QPSK	100	0	19.50	19.71	19.99	21	1
20	16QAM	1	0	19.89	20.04	20.51		
20	16QAM	1	49	19.72	19.94	20.27		
20	16QAM	1	99	19.66	19.98	20.31	20	2
20	16QAM	50	0	18.64	18.89	19.18		
20	16QAM	50	24	18.62	18.80	19.10		
20	16QAM	50	50	18.61	18.70	19.01	20	2
20	16QAM	100	0	18.61	18.80	19.07		
20	64QAM	1	0	18.78	18.95	19.46		
20	64QAM	1	49	18.61	18.87	19.23	20	2
20	64QAM	1	99	18.57	18.87	19.23		
20	64QAM	50	0	17.68	17.92	18.21		
20	64QAM	50	24	17.64	17.80	18.13	19	3
20	64QAM	50	50	17.64	17.71	18.02		
20	64QAM	100	0	17.63	17.84	18.10		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	20.43	20.81	21.13	22	0
15	QPSK	1	37	20.30	20.71	20.95		
15	QPSK	1	74	20.34	20.65	20.96		
15	QPSK	36	0	19.46	19.79	20.01	21	1
15	QPSK	36	20	19.37	19.72	19.92		
15	QPSK	36	39	19.39	19.65	19.96		
15	QPSK	75	0	19.34	19.73	19.94	21	1
15	16QAM	1	0	19.82	20.15	20.37		
15	16QAM	1	37	19.64	20.05	20.30		
15	16QAM	1	74	19.68	19.96	20.20	20	2
15	16QAM	36	0	18.55	18.90	18.99		
15	16QAM	36	20	18.47	18.85	18.93		
15	16QAM	36	39	18.49	18.79	19.09	20	2
15	16QAM	75	0	18.43	18.85	18.92		
15	64QAM	1	0	18.71	19.06	19.31		
15	64QAM	1	37	18.57	18.96	19.24	20	2
15	64QAM	1	74	18.57	18.90	19.18		
15	64QAM	36	0	17.59	17.94	18.02		
15	64QAM	36	20	17.51	17.90	18.09	19	3
15	64QAM	36	39	17.52	17.81	18.05		
15	64QAM	75	0	17.45	17.86	17.94		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	20.33	20.69	20.97	22	0
10	QPSK	1	25	20.34	20.68	20.94		
10	QPSK	1	49	20.28	20.61	20.89		
10	QPSK	25	0	19.41	19.76	19.96	21	1



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10	QPSK	25	12	19.37	19.75	20.01		
10	QPSK	25	25	19.29	19.65	19.94		
10	QPSK	50	0	19.38	19.72	19.90		
10	16QAM	1	0	19.67	20.03	20.29	21	1
10	16QAM	1	25	19.65	20.00	20.31		
10	16QAM	1	49	19.61	19.92	20.25		
10	16QAM	25	0	18.52	18.84	19.07	20	2
10	16QAM	25	12	18.48	18.82	19.10		
10	16QAM	25	25	18.41	18.76	19.03		
10	16QAM	50	0	18.45	18.81	19.03	20	2
10	64QAM	1	0	18.60	18.92	19.20		
10	64QAM	1	25	18.61	18.92	19.19		
10	64QAM	1	49	18.52	18.86	19.16	19	3
10	64QAM	25	0	17.53	17.89	18.06		
10	64QAM	25	12	17.50	17.83	18.10		
10	64QAM	25	25	17.41	17.78	18.05	19	3
10	64QAM	25	25	17.41	17.78	18.05		
10	64QAM	50	0	17.47	17.81	18.01		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	20.27	20.77	21.00	22	0
5	QPSK	1	12	20.20	20.69	20.89		
5	QPSK	1	24	20.17	20.66	20.90		
5	QPSK	12	0	19.31	19.73	19.97	21	1
5	QPSK	12	7	19.27	19.68	19.96		
5	QPSK	12	13	19.25	19.66	19.94		
5	QPSK	25	0	19.28	19.69	19.96	21	1
5	16QAM	1	0	19.65	20.03	20.36		
5	16QAM	1	12	19.54	20.00	20.27		
5	16QAM	1	24	19.47	19.94	20.25	20	2
5	16QAM	12	0	18.43	18.84	19.06		
5	16QAM	12	7	18.38	18.80	19.09		
5	16QAM	12	13	18.34	18.79	19.03	20	2
5	16QAM	25	0	18.38	18.79	19.06		
5	64QAM	1	0	18.58	19.01	19.29		
5	64QAM	1	12	18.49	18.92	19.20	20	2
5	64QAM	1	24	18.43	18.88	19.18		
5	64QAM	12	0	17.46	17.91	18.14		
5	64QAM	12	7	17.44	17.85	18.14	19	3
5	64QAM	12	13	17.39	17.84	18.09		
5	64QAM	25	0	17.36	17.81	18.06		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	20.27	20.77	20.96	22	0
3	QPSK	1	8	20.23	20.72	20.93		
3	QPSK	1	14	20.20	20.69	20.90		
3	QPSK	8	0	19.29	19.71	19.96	21	1
3	QPSK	8	4	19.34	19.72	19.99		
3	QPSK	8	7	19.30	19.68	19.93		
3	QPSK	15	0	19.30	19.70	19.95	21	1
3	16QAM	1	0	19.63	20.03	20.30		
3	16QAM	1	8	19.61	20.04	20.27		
3	16QAM	1	14	19.57	19.98	20.25	20	2
3	16QAM	8	0	18.44	18.86	19.11		
3	16QAM	8	4	18.46	18.86	19.12		
3	16QAM	8	7	18.45	18.81	19.09	20	2
3	16QAM	15	0	18.40	18.80	19.07		



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3	64QAM	1	0	18.54	18.99	19.22	20	2
3	64QAM	1	8	18.53	18.96	19.21		
3	64QAM	1	14	18.44	18.92	19.16		
3	64QAM	8	0	17.46	17.87	18.11	19	3
3	64QAM	8	4	17.48	17.88	18.15		
3	64QAM	8	7	17.44	17.86	18.08		
3	64QAM	15	0	17.42	17.82	18.07		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	20.83	20.66	20.86	22	0
1.4	QPSK	1	3	20.89	20.73	20.92		
1.4	QPSK	1	5	20.79	20.64	20.82		
1.4	QPSK	3	0	20.88	20.69	20.91		
1.4	QPSK	3	1	20.89	20.72	20.94		
1.4	QPSK	3	3	20.74	20.67	20.91		
1.4	QPSK	6	0	19.73	19.64	19.88	21	1
1.4	16QAM	1	0	20.04	19.94	20.23	21	1
1.4	16QAM	1	3	20.11	19.99	20.29		
1.4	16QAM	1	5	20.03	19.93	20.19		
1.4	16QAM	3	0	19.82	19.73	20.01		
1.4	16QAM	3	1	19.88	19.79	20.03		
1.4	16QAM	3	3	19.80	19.72	19.99		
1.4	16QAM	6	0	18.89	18.81	19.04	20	2
1.4	64QAM	1	0	18.99	18.93	19.15	20	2
1.4	64QAM	1	3	19.04	18.94	19.20		
1.4	64QAM	1	5	18.98	18.87	19.12		
1.4	64QAM	3	0	18.96	18.91	19.13		
1.4	64QAM	3	1	19.02	18.93	19.17		
1.4	64QAM	3	3	18.95	18.85	19.11		
1.4	64QAM	6	0	17.84	17.76	17.99	19	3



<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300	20.5	0
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	19.46	19.72	19.84		
20	QPSK	1	49	19.41	19.60	19.46	19.5	1
20	QPSK	1	99	19.53	19.46	19.25		
20	QPSK	50	0	18.72	18.82	18.76		
20	QPSK	50	24	18.50	18.70	18.55	19.5	1
20	QPSK	50	50	18.61	18.62	18.49		
20	QPSK	100	0	18.52	18.73	18.56		
20	16QAM	1	0	18.81	19.02	19.20	19.5	1
20	16QAM	1	49	18.74	18.97	18.83		
20	16QAM	1	99	18.78	18.83	18.69		
20	16QAM	50	0	17.61	17.91	17.83	18.5	2
20	16QAM	50	24	17.62	17.82	17.67		
20	16QAM	50	50	17.73	17.74	17.60		
20	16QAM	100	0	17.70	17.80	17.65	18.5	2
20	64QAM	1	0	17.73	17.96	18.09		
20	64QAM	1	49	17.66	17.85	17.75		
20	64QAM	1	99	17.81	17.73	17.60	17.5	3
20	64QAM	50	0	16.72	16.92	16.83		
20	64QAM	50	24	16.71	16.80	16.66		
20	64QAM	50	50	16.79	16.72	16.58	17.5	3
20	64QAM	100	0	16.72	16.81	16.66		
Channel				20025	20175	20325	20.5	0
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	19.47	19.75	19.67		
15	QPSK	1	37	19.37	19.58	19.41	19.5	1
15	QPSK	1	74	19.56	19.46	19.29		
15	QPSK	36	0	18.55	18.74	18.57		
15	QPSK	36	20	18.56	18.67	18.52	19.5	1
15	QPSK	36	39	18.62	18.60	18.43		
15	QPSK	75	0	18.57	18.66	18.50		
15	16QAM	1	0	18.86	19.00	19.03	19.5	1
15	16QAM	1	37	18.73	18.93	18.75		
15	16QAM	1	74	18.88	18.84	18.63		
15	16QAM	36	0	17.67	17.82	17.66	18.5	2
15	16QAM	36	20	17.68	17.77	17.62		
15	16QAM	36	39	17.72	17.67	17.55		
15	16QAM	75	0	17.67	17.76	17.59	18.5	2
15	64QAM	1	0	17.76	17.94	17.99		
15	64QAM	1	37	17.66	17.85	17.73		
15	64QAM	1	74	17.75	17.78	17.62	17.5	3
15	64QAM	36	0	16.71	16.87	16.68		
15	64QAM	36	20	16.70	16.78	16.62		
15	64QAM	36	39	16.72	16.70	16.53	17.5	3
15	64QAM	75	0	16.69	16.78	16.61		
Channel				20000	20175	20350	20.5	0
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	19.37	19.59	19.51		
10	QPSK	1	25	19.32	19.59	19.28	19.5	1
10	QPSK	1	49	19.45	19.51	19.21		
10	QPSK	25	0	18.43	18.72	18.52		
10	QPSK	25	12	18.50	18.64	18.50	19.5	1



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10	QPSK	25	25	18.51	18.60	18.31		
10	QPSK	50	0	18.47	18.64	18.46		
10	16QAM	1	0	18.71	18.86	18.85		
10	16QAM	1	25	18.68	18.94	18.65	19.5	1
10	16QAM	1	49	18.81	18.89	18.55		
10	16QAM	25	0	17.50	17.76	17.61		
10	16QAM	25	12	17.56	17.75	17.59	18.5	2
10	16QAM	25	25	17.60	17.66	17.41		
10	16QAM	50	0	17.56	17.74	17.57		
10	64QAM	1	0	17.61	17.85	17.80	18.5	2
10	64QAM	1	25	17.54	17.86	17.57		
10	64QAM	1	49	17.68	17.80	17.50		
10	64QAM	25	0	16.50	16.78	16.60	17.5	3
10	64QAM	25	12	16.61	16.77	16.57		
10	64QAM	25	25	16.65	16.69	16.43		
10	64QAM	50	0	16.59	16.77	16.56		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	19.37	19.73	19.46	20.5	0
5	QPSK	1	12	19.36	19.66	19.36		
5	QPSK	1	24	19.34	19.62	19.34		
5	QPSK	12	0	18.41	18.70	18.47	19.5	1
5	QPSK	12	7	18.44	18.72	18.44		
5	QPSK	12	13	18.38	18.65	18.39		
5	QPSK	25	0	18.41	18.69	18.47	19.5	1
5	16QAM	1	0	18.69	19.09	18.79		
5	16QAM	1	12	18.71	19.01	18.69		
5	16QAM	1	24	18.68	18.96	18.71	18.5	2
5	16QAM	12	0	17.55	17.82	17.56		
5	16QAM	12	7	17.51	17.81	17.53		
5	16QAM	12	13	17.49	17.76	17.49	18.5	2
5	16QAM	25	0	17.47	17.78	17.51		
5	64QAM	1	0	17.62	18.00	17.71		
5	64QAM	1	12	17.62	17.96	17.44	18.5	2
5	64QAM	1	24	17.59	17.90	17.62		
5	64QAM	12	0	16.57	16.84	16.59		
5	64QAM	12	7	16.58	16.85	16.57	17.5	3
5	64QAM	12	13	16.50	16.79	16.55		
5	64QAM	25	0	16.49	16.77	16.54		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	19.30	19.68	19.43	20.5	0
3	QPSK	1	8	19.29	19.65	19.36		
3	QPSK	1	14	19.34	19.62	19.34		
3	QPSK	8	0	18.36	18.69	18.44	19.5	1
3	QPSK	8	4	18.45	18.73	18.42		
3	QPSK	8	7	18.38	18.69	18.43		
3	QPSK	15	0	18.37	18.70	18.42	19.5	1
3	16QAM	1	0	18.68	19.02	18.74		
3	16QAM	1	8	18.63	18.99	18.76		
3	16QAM	1	14	18.70	18.94	18.68	18.5	2
3	16QAM	8	0	17.47	17.84	17.57		
3	16QAM	8	4	17.58	17.87	17.59		
3	16QAM	8	7	17.58	17.83	17.56		
3	16QAM	15	0	17.51	17.79	17.53	18.5	2
3	64QAM	1	0	17.57	17.96	17.69		



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3	64QAM	1	8	17.57	17.95	17.65	17.5	3
3	64QAM	1	14	17.62	17.92	17.62		
3	64QAM	8	0	16.49	16.80	16.38		
3	64QAM	8	4	16.57	16.85	16.78		
3	64QAM	8	7	16.54	16.81	16.56		
3	64QAM	15	0	16.50	16.79	16.52		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	19.20	19.71	19.43	20.5	0
1.4	QPSK	1	3	19.36	19.79	19.51		
1.4	QPSK	1	5	19.03	19.69	19.41		
1.4	QPSK	3	0	19.40	19.78	19.49		
1.4	QPSK	3	1	19.44	19.77	19.52		
1.4	QPSK	3	3	19.40	19.76	19.47		
1.4	QPSK	6	0	18.38	18.75	18.49	19.5	1
1.4	16QAM	1	0	18.69	19.05	18.78	19.5	1
1.4	16QAM	1	3	18.73	19.10	18.84		
1.4	16QAM	1	5	18.67	19.05	18.76		
1.4	16QAM	3	0	18.49	18.87	18.59		
1.4	16QAM	3	1	18.54	18.90	18.61		
1.4	16QAM	3	3	18.46	18.87	18.57		
1.4	16QAM	6	0	17.53	17.93	17.66	18.5	2
1.4	64QAM	1	0	17.63	18.00	17.70	18.5	2
1.4	64QAM	1	3	17.67	18.01	17.33		
1.4	64QAM	1	5	17.60	17.96	17.34		
1.4	64QAM	3	0	17.61	17.98	17.41		
1.4	64QAM	3	1	17.65	18.02	17.43		
1.4	64QAM	3	3	17.59	17.95	17.38		
1.4	64QAM	6	0	16.49	16.86	16.57	17.5	3



<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	21.64	21.70	21.85	23	0
10	QPSK	1	25	21.61	21.64	21.77		
10	QPSK	1	49	21.60	21.67	21.80		
10	QPSK	25	0	20.78	20.76	20.85	22	1
10	QPSK	25	12	20.72	20.74	20.83		
10	QPSK	25	25	20.75	20.65	20.78		
10	QPSK	50	0	20.81	20.69	20.83	22	1
10	16QAM	1	0	21.01	20.96	21.20		
10	16QAM	1	25	20.99	21.02	21.11		
10	16QAM	1	49	21.11	21.01	21.14	21	2
10	16QAM	25	0	19.83	19.80	19.93		
10	16QAM	25	12	19.91	19.79	19.91		
10	16QAM	25	25	19.83	19.73	19.86	21	2
10	16QAM	50	0	19.87	19.76	19.91		
10	64QAM	1	0	19.93	19.85	20.12		
10	64QAM	1	25	19.92	19.89	20.00	21	2
10	64QAM	1	49	20.03	19.89	20.03		
10	64QAM	25	0	18.83	18.81	18.97	20	3
10	64QAM	25	12	18.93	18.79	18.94		
10	64QAM	25	25	18.84	18.73	18.89		
10	64QAM	50	0	18.89	18.79	18.89		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	21.67	21.72	21.80	23	0
5	QPSK	1	12	21.70	21.65	21.81		
5	QPSK	1	24	21.67	21.71	21.78		
5	QPSK	12	0	20.76	20.78	20.81	22	1
5	QPSK	12	7	20.81	20.72	20.90		
5	QPSK	12	13	20.75	20.71	20.86		
5	QPSK	25	0	20.76	20.69	20.79	22	1
5	16QAM	1	0	21.03	21.05	21.11		
5	16QAM	1	12	21.05	20.93	21.14		
5	16QAM	1	24	21.00	21.01	21.14	21	2
5	16QAM	12	0	19.90	19.85	19.90		
5	16QAM	12	7	19.89	19.81	19.99		
5	16QAM	12	13	19.82	19.81	19.95	21	2
5	16QAM	25	0	19.84	19.80	19.86		
5	64QAM	1	0	19.97	20.00	20.06		
5	64QAM	1	12	19.97	19.94	20.09	21	2
5	64QAM	1	24	19.95	20.00	20.06		
5	64QAM	12	0	18.94	18.90	18.93		
5	64QAM	12	7	18.93	18.88	19.05	20	3
5	64QAM	12	13	18.89	18.86	18.99		
5	64QAM	25	0	18.87	18.84	18.91		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	21.67	21.71	21.84	23	0
3	QPSK	1	8	21.65	21.68	21.80		
3	QPSK	1	14	21.69	21.66	21.78		
3	QPSK	8	0	20.66	20.74	20.89	22	1
3	QPSK	8	4	20.79	20.72	20.89		



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3	QPSK	8	7	20.77	20.69	20.86		
3	QPSK	15	0	20.82	20.72	20.85		
3	16QAM	1	0	20.99	21.09	21.19		
3	16QAM	1	8	21.00	20.98	21.18	22	1
3	16QAM	1	14	21.08	20.92	21.12		
3	16QAM	8	0	19.79	19.84	19.98		
3	16QAM	8	4	19.93	19.85	20.00	21	2
3	16QAM	8	7	19.90	19.81	20.00		
3	16QAM	15	0	19.89	19.81	19.98		
3	64QAM	1	0	19.94	19.96	20.09	21	2
3	64QAM	1	8	19.90	19.87	20.07		
3	64QAM	1	14	19.96	19.88	20.06		
3	64QAM	8	0	18.83	18.85	19.01	20	3
3	64QAM	8	4	18.93	18.86	19.02		
3	64QAM	8	7	18.90	18.83	19.00		
3	64QAM	15	0	18.88	18.79	18.95		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	21.64	21.61	21.75	23	0
1.4	QPSK	1	3	21.68	21.70	21.83		
1.4	QPSK	1	5	21.63	21.61	21.73		
1.4	QPSK	3	0	21.66	21.66	21.80		
1.4	QPSK	3	1	21.71	21.70	21.81		
1.4	QPSK	3	3	21.66	21.65	21.81		
1.4	QPSK	6	0	20.64	20.68	20.79	22	1
1.4	16QAM	1	0	20.97	20.88	21.08	22	1
1.4	16QAM	1	3	21.00	20.97	21.14		
1.4	16QAM	1	5	20.95	20.87	21.06		
1.4	16QAM	3	0	20.76	20.70	20.89		
1.4	16QAM	3	1	20.77	20.75	20.92		
1.4	16QAM	3	3	20.75	20.69	20.88		
1.4	16QAM	6	0	19.80	19.80	19.95	21	2
1.4	64QAM	1	0	19.88	19.84	20.01	21	2
1.4	64QAM	1	3	19.93	19.91	20.06		
1.4	64QAM	1	5	19.81	19.81	20.00		
1.4	64QAM	3	0	19.87	19.88	19.99		
1.4	64QAM	3	1	19.92	19.90	20.04		
1.4	64QAM	3	3	19.89	19.85	19.99		
1.4	64QAM	6	0	18.74	18.76	18.89	20	3

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	18.35	18.15	18.03		
20	QPSK	1	49	17.89	17.96	17.94	19	0
20	QPSK	1	99	17.94	17.95	18.04		
20	QPSK	50	0	17.21	17.10	17.05		
20	QPSK	50	24	17.07	17.06	17.02	18	1
20	QPSK	50	50	17.02	17.00	16.98		
20	QPSK	100	0	17.14	17.03	17.01		
20	16QAM	1	0	17.64	17.47	17.40	18	1
20	16QAM	1	49	17.17	17.26	17.28		
20	16QAM	1	99	17.33	17.29	17.36		
20	16QAM	50	0	16.29	16.19	16.09	17	2
20	16QAM	50	24	16.17	16.18	16.13		
20	16QAM	50	50	16.11	16.10	16.06		
20	16QAM	100	0	16.25	16.14	16.13	17	2
20	64QAM	1	0	16.61	16.39	16.29		
20	64QAM	1	49	16.18	16.15	16.17		
20	64QAM	1	99	16.21	16.17	16.26	16	3
20	64QAM	50	0	15.32	15.20	15.11		
20	64QAM	50	24	15.20	15.15	15.14		
20	64QAM	50	50	15.12	15.09	15.09	16	3
20	64QAM	100	0	15.26	15.13	15.15		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	18.30	18.09	18.05		
15	QPSK	1	37	17.98	17.93	17.91	19	0
15	QPSK	1	74	17.95	17.94	18.01		
15	QPSK	36	0	17.15	17.03	17.00		
15	QPSK	36	20	17.03	17.04	17.03	18	1
15	QPSK	36	39	17.00	16.98	16.95		
15	QPSK	75	0	17.11	17.02	17.00		
15	16QAM	1	0	17.59	17.38	17.43	18	1
15	16QAM	1	37	17.27	17.20	17.22		
15	16QAM	1	74	17.23	17.24	17.31		
15	16QAM	36	0	16.25	16.17	16.10	17	2
15	16QAM	36	20	16.12	16.11	16.10		
15	16QAM	36	39	16.11	16.04	16.05		
15	16QAM	75	0	16.23	16.11	16.07	17	2
15	64QAM	1	0	16.54	16.34	16.31		
15	64QAM	1	37	16.26	16.17	16.17		
15	64QAM	1	74	16.22	16.18	16.24	16	3
15	64QAM	36	0	15.28	15.17	15.15		
15	64QAM	36	20	15.18	15.14	15.13		
15	64QAM	36	39	15.14	15.07	15.05	16	3
15	64QAM	75	0	15.23	15.10	15.09		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	18.25	18.03	17.97		
10	QPSK	1	25	18.09	17.96	18.04	19	0
10	QPSK	1	49	17.85	17.93	18.00		
10	QPSK	25	0	17.12	17.01	16.94		
10	QPSK	25	12	17.13	17.00	16.97	18	1



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10	QPSK	25	25	17.02	16.98	16.99		
10	QPSK	50	0	17.14	16.99	16.96		
10	16QAM	1	0	17.56	17.31	17.30		
10	16QAM	1	25	17.43	17.28	17.35	18	1
10	16QAM	1	49	17.16	17.24	17.26		
10	16QAM	25	0	16.24	16.08	16.07		
10	16QAM	25	12	16.25	16.08	16.03	17	2
10	16QAM	25	25	16.11	16.06	16.12		
10	16QAM	50	0	16.20	16.05	16.04		
10	64QAM	1	0	16.48	16.25	16.21	17	2
10	64QAM	1	25	16.33	16.17	16.26		
10	64QAM	1	49	16.09	16.17	16.20		
10	64QAM	25	0	15.22	15.09	15.08	16	3
10	64QAM	25	12	15.26	15.08	15.05		
10	64QAM	25	25	15.10	15.05	15.09		
10	64QAM	50	0	15.23	15.09	15.05		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	18.21	18.01	18.01	19	0
5	QPSK	1	12	18.12	17.97	18.02		
5	QPSK	1	24	18.08	17.94	17.95		
5	QPSK	12	0	17.12	17.00	17.07	18	1
5	QPSK	12	7	17.17	17.01	17.06		
5	QPSK	12	13	17.09	16.96	17.02		
5	QPSK	25	0	17.12	16.98	17.01	18	1
5	16QAM	1	0	17.53	17.25	17.30		
5	16QAM	1	12	17.45	17.22	17.30		
5	16QAM	1	24	17.38	17.21	17.25	17	2
5	16QAM	12	0	16.24	16.08	16.11		
5	16QAM	12	7	16.22	16.09	16.14		
5	16QAM	12	13	16.18	16.03	16.09	17	2
5	16QAM	25	0	16.24	16.06	16.12		
5	64QAM	1	0	16.47	16.23	16.30		
5	64QAM	1	12	16.36	16.16	16.23	16	3
5	64QAM	1	24	16.31	16.18	16.23		
5	64QAM	12	0	15.27	15.15	15.19		
5	64QAM	12	7	15.28	15.12	15.19	16	3
5	64QAM	12	13	15.26	15.12	15.13		
5	64QAM	25	0	15.20	15.06	15.11		

<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130	23	0
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	21.96	22.09	22.17		
10	QPSK	1	25	21.81	21.76	22.01	22	1
10	QPSK	1	49	21.78	21.92	22.08		
10	QPSK	25	0	20.90	20.87	21.06		
10	QPSK	25	12	20.89	20.85	20.99	22	1
10	QPSK	25	25	20.86	20.81	21.04		
10	QPSK	50	0	20.85	20.81	20.95		
10	16QAM	1	0	21.28	21.26	21.20	22	1
10	16QAM	1	25	21.11	21.03	21.29		
10	16QAM	1	49	21.02	21.22	21.48		
10	16QAM	25	0	19.98	19.94	19.95	21	2
10	16QAM	25	12	19.97	19.92	20.08		
10	16QAM	25	25	19.93	19.89	20.13		
10	16QAM	50	0	19.96	19.88	20.04	21	2
10	64QAM	1	0	20.20	20.11	20.12		
10	64QAM	1	25	20.02	19.97	20.23		
10	64QAM	1	49	19.98	20.16	20.40	20	3
10	64QAM	25	0	18.98	18.92	18.98		
10	64QAM	25	12	18.96	18.93	19.10		
10	64QAM	25	25	18.91	18.87	19.14	20	3
10	64QAM	25	25	18.91	18.87	19.14		
10	64QAM	50	0	18.95	18.94	19.07		
Channel				23035	23095	23155	23	0
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	21.93	21.73	21.97		
5	QPSK	1	12	21.87	21.71	21.99	22	1
5	QPSK	1	24	21.78	21.82	22.12		
5	QPSK	12	0	20.96	20.76	20.99		
5	QPSK	12	7	20.96	20.80	21.03	22	1
5	QPSK	12	13	20.84	20.77	21.05		
5	QPSK	25	0	20.85	20.76	20.98		
5	16QAM	1	0	21.28	21.05	21.19	22	1
5	16QAM	1	12	21.16	20.97	21.26		
5	16QAM	1	24	21.05	21.08	21.39		
5	16QAM	12	0	20.03	19.85	20.08	21	2
5	16QAM	12	7	20.03	19.85	20.08		
5	16QAM	12	13	19.90	19.82	20.13		
5	16QAM	25	0	19.93	19.84	20.08	21	2
5	64QAM	1	0	20.17	19.98	20.18		
5	64QAM	1	12	20.10	19.93	20.23		
5	64QAM	1	24	19.98	20.01	20.29	20	3
5	64QAM	12	0	19.07	18.90	19.14		
5	64QAM	12	7	19.06	18.92	19.10		
5	64QAM	12	13	18.97	18.88	19.16	20	3
5	64QAM	12	13	18.97	18.88	19.16		
5	64QAM	25	0	18.92	18.87	19.06		
Channel				23025	23095	23165	23	0
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	21.94	21.72	22.04		
3	QPSK	1	8	21.89	21.70	22.01	23	0
3	QPSK	1	14	21.88	21.68	22.10		
3	QPSK	8	0	20.92	20.74	21.04		
3	QPSK	8	4	20.96	20.80	21.07	22	1



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3	QPSK	8	7	20.94	20.73	21.04		
3	QPSK	15	0	20.92	20.75	21.06		
3	16QAM	1	0	21.22	20.97	21.29		
3	16QAM	1	8	21.18	20.98	21.30	22	1
3	16QAM	1	14	21.12	20.96	21.38		
3	16QAM	8	0	20.07	19.88	20.19		
3	16QAM	8	4	20.09	19.87	20.19	21	2
3	16QAM	8	7	20.07	19.86	20.17		
3	16QAM	15	0	20.03	19.83	20.13		
3	64QAM	1	0	20.13	19.92	20.24	21	2
3	64QAM	1	8	20.13	19.91	20.21		
3	64QAM	1	14	20.11	19.93	20.31		
3	64QAM	8	0	19.03	18.86	19.15	20	3
3	64QAM	8	4	19.09	18.91	19.19		
3	64QAM	8	7	19.03	18.85	19.14		
3	64QAM	15	0	19.02	18.84	19.14		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	21.89	21.64	21.94	23	0
1.4	QPSK	1	3	21.92	21.71	22.12		
1.4	QPSK	1	5	21.84	21.61	22.04		
1.4	QPSK	3	0	21.91	21.68	21.99		
1.4	QPSK	3	1	21.94	21.71	22.09		
1.4	QPSK	3	3	21.91	21.67	22.09		
1.4	QPSK	6	0	20.90	20.70	20.98	22	1
1.4	16QAM	1	0	21.20	20.92	21.22	22	1
1.4	16QAM	1	3	21.22	20.99	21.41		
1.4	16QAM	1	5	21.14	20.88	21.31		
1.4	16QAM	3	0	20.99	20.75	21.06		
1.4	16QAM	3	1	21.04	20.78	21.18		
1.4	16QAM	3	3	21.00	20.73	21.15		
1.4	16QAM	6	0	20.05	19.84	20.13	21	2
1.4	64QAM	1	0	20.10	19.87	20.16	21	2
1.4	64QAM	1	3	20.15	19.91	20.30		
1.4	64QAM	1	5	20.07	19.84	20.21		
1.4	64QAM	3	0	20.11	19.86	20.19		
1.4	64QAM	3	1	20.15	19.91	20.30		
1.4	64QAM	3	3	20.09	19.87	20.28		
1.4	64QAM	6	0	18.99	18.78	19.08	20	3

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23230				
Frequency (MHz)				782				
10	QPSK	1	0		21.78		23	0
10	QPSK	1	25		21.71			
10	QPSK	1	49		21.70			
10	QPSK	25	0		20.78		22	1
10	QPSK	25	12		20.73			
10	QPSK	25	25		20.68			
10	QPSK	50	0		20.69		22	1
10	16QAM	1	0		20.95			
10	16QAM	1	25		20.87			
10	16QAM	1	49		21.10		21	2
10	16QAM	25	0		19.78			
10	16QAM	25	12		19.74			
10	16QAM	25	25		19.69		21	2
10	16QAM	50	0		19.73			
10	64QAM	1	0		19.88			
10	64QAM	1	25		19.85		21	2
10	64QAM	1	49		19.93			
10	64QAM	25	0		18.79			
10	64QAM	25	12		18.75		20	3
10	64QAM	25	25		18.69			
10	64QAM	50	0		18.74			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	21.73	21.76	21.75	23	0
5	QPSK	1	12	21.67	21.73	21.77		
5	QPSK	1	24	21.73	21.69	21.75		
5	QPSK	12	0	20.73	20.76	20.72	22	1
5	QPSK	12	7	20.81	20.75	20.71		
5	QPSK	12	13	20.78	20.73	20.78		
5	QPSK	25	0	20.79	20.73	20.74	22	1
5	16QAM	1	0	21.04	21.11	21.12		
5	16QAM	1	12	21.00	21.02	21.19		
5	16QAM	1	24	21.03	21.03	21.20	21	2
5	16QAM	12	0	19.84	19.88	19.81		
5	16QAM	12	7	19.89	19.84	19.87		
5	16QAM	12	13	19.86	19.82	19.93	21	2
5	16QAM	25	0	19.88	19.83	19.81		
5	64QAM	1	0	19.97	20.02	20.10		
5	64QAM	1	12	19.95	19.94	20.15	21	2
5	64QAM	1	24	20.01	19.99	20.09		
5	64QAM	12	0	18.89	18.91	18.79		
5	64QAM	12	7	18.95	18.90	18.93	20	3
5	64QAM	12	13	18.92	18.88	18.90		
5	64QAM	25	0	18.87	18.84	18.82		

<LTE Band 14>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23330			23	0
Frequency (MHz)				793				
10	QPSK	1	0		21.94		23	0
10	QPSK	1	25		21.83			
10	QPSK	1	49		21.82			
10	QPSK	25	0		20.90		22	1
10	QPSK	25	12		20.85			
10	QPSK	25	25		20.80			
10	QPSK	50	0		20.82		22	1
10	16QAM	1	0		21.20			
10	16QAM	1	25		21.19			
10	16QAM	1	49		21.06		21	2
10	16QAM	25	0		20.01			
10	16QAM	25	12		19.99			
10	16QAM	25	25		19.89		21	2
10	16QAM	50	0		19.94			
10	64QAM	1	0		20.20			
10	64QAM	1	25		20.09		21	2
10	64QAM	1	49		20.00			
10	64QAM	25	0		19.01			
10	64QAM	25	12		18.93		20	3
10	64QAM	25	25		18.87			
10	64QAM	50	0		18.95			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5	23	0
5	QPSK	1	0	21.92	21.92	21.88		
5	QPSK	1	12	21.90	21.83	21.81		
5	QPSK	1	24	21.86	21.82	21.79	22	1
5	QPSK	12	0	20.94	20.91	20.88		
5	QPSK	12	7	20.96	20.90	20.86		
5	QPSK	12	13	20.91	20.87	20.83	22	1
5	QPSK	25	0	20.94	20.88	20.83		
5	16QAM	1	0	21.26	21.23	21.21		
5	16QAM	1	12	21.21	21.20	21.15	22	1
5	16QAM	1	24	21.18	21.17	21.14		
5	16QAM	12	0	20.03	20.02	19.99		
5	16QAM	12	7	20.05	20.03	19.99	21	2
5	16QAM	12	13	20.01	19.97	19.94		
5	16QAM	25	0	20.03	19.98	19.94		
5	64QAM	1	0	20.20	20.14	20.14	21	2
5	64QAM	1	12	20.12	20.12	20.06		
5	64QAM	1	24	20.12	20.08	20.02		
5	64QAM	12	0	19.11	19.08	19.02	20	3
5	64QAM	12	7	19.11	19.06	19.02		
5	64QAM	12	13	19.05	19.01	18.97		
5	64QAM	25	0	19.02	19.00	18.96		

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	21.94	22.29	22.03		
10	QPSK	1	25	21.91	22.07	21.99	23	0
10	QPSK	1	49	21.93	22.15	21.93		
10	QPSK	25	0	21.17	21.21	21.20		
10	QPSK	25	12	21.12	21.15	21.18	22	1
10	QPSK	25	25	21.14	21.10	21.10		
10	QPSK	50	0	21.15	21.18	21.12		
10	16QAM	1	0	21.17	21.20	21.21	22	1
10	16QAM	1	25	21.42	21.41	21.40		
10	16QAM	1	49	21.47	21.42	21.42		
10	16QAM	25	0	20.15	20.18	20.27	21	2
10	16QAM	25	12	20.29	20.26	20.29		
10	16QAM	25	25	20.26	20.22	20.20		
10	16QAM	50	0	20.26	20.26	20.23	21	2
10	64QAM	1	0	20.12	20.16	20.16		
10	64QAM	1	25	20.37	20.35	20.32		
10	64QAM	1	49	20.41	20.39	20.38	21	2
10	64QAM	25	0	19.18	19.14	19.28		
10	64QAM	25	12	19.31	19.28	19.25		
10	64QAM	25	25	19.27	19.21	19.21	20	3
10	64QAM	50	0	19.27	19.27	19.25		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	21.82	21.95	22.03		
5	QPSK	1	12	21.91	22.03	22.07	23	0
5	QPSK	1	24	21.97	22.02	22.07		
5	QPSK	12	0	20.98	21.13	21.06		
5	QPSK	12	7	21.08	21.10	21.09	22	1
5	QPSK	12	13	21.07	21.09	21.13		
5	QPSK	25	0	21.04	21.08	21.08		
5	16QAM	1	0	21.19	21.28	21.39	22	1
5	16QAM	1	12	21.24	21.38	21.42		
5	16QAM	1	24	21.30	21.33	21.38		
5	16QAM	12	0	20.06	20.22	20.17	21	2
5	16QAM	12	7	20.15	20.19	20.17		
5	16QAM	12	13	20.11	20.21	20.22		
5	16QAM	25	0	20.13	20.17	20.15	21	2
5	64QAM	1	0	20.07	20.21	20.31		
5	64QAM	1	12	20.12	20.29	20.37		
5	64QAM	1	24	20.22	20.27	20.30	21	2
5	64QAM	12	0	19.09	19.27	19.20		
5	64QAM	12	7	19.23	19.26	19.23		
5	64QAM	12	13	19.18	19.25	19.28	20	3
5	64QAM	25	0	19.16	19.22	19.16		

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	20.02	20.28	20.68	21.5	0
20	QPSK	1	49	19.93	20.16	20.20		
20	QPSK	1	99	19.97	20.27	20.16		
20	QPSK	50	0	19.11	19.23	19.41	20.5	1
20	QPSK	50	24	19.11	19.23	19.12		
20	QPSK	50	50	19.05	19.20	19.05		
20	QPSK	100	0	19.15	19.21	19.22	20.5	1
20	16QAM	1	0	19.42	19.67	20.03		
20	16QAM	1	49	19.30	19.55	19.66		
20	16QAM	1	99	19.40	19.56	19.46	19.5	2
20	16QAM	50	0	18.21	18.36	18.51		
20	16QAM	50	24	18.25	18.34	18.25		
20	16QAM	50	50	18.16	18.34	18.17	19.5	2
20	16QAM	100	0	18.25	18.33	18.30		
20	64QAM	1	0	18.26	18.55	18.90	19.5	2
20	64QAM	1	49	18.20	18.49	18.48		
20	64QAM	1	99	18.26	18.44	18.36		
20	64QAM	50	0	17.21	17.34	17.55	18.5	3
20	64QAM	50	24	17.21	17.36	17.26		
20	64QAM	50	50	17.17	17.34	17.18		
20	64QAM	100	0	17.25	17.33	17.29		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	19.97	20.24	20.42	21.5	0
15	QPSK	1	37	19.93	20.14	20.09		
15	QPSK	1	74	19.98	20.25	20.18		
15	QPSK	36	0	19.00	19.17	19.29	20.5	1
15	QPSK	36	20	18.98	19.19	19.06		
15	QPSK	36	39	19.03	19.22	19.05		
15	QPSK	75	0	19.01	19.18	19.09	20.5	1
15	16QAM	1	0	19.37	19.62	19.82		
15	16QAM	1	37	19.29	19.48	19.47		
15	16QAM	1	74	19.37	19.55	19.48	19.5	2
15	16QAM	36	0	18.13	18.28	18.42		
15	16QAM	36	20	18.09	18.32	18.17		
15	16QAM	36	39	18.11	18.32	18.12	19.5	2
15	16QAM	75	0	18.07	18.31	18.20		
15	64QAM	1	0	18.27	18.54	18.72		
15	64QAM	1	37	18.24	18.45	18.41	19.5	2
15	64QAM	1	74	18.28	18.49	18.37		
15	64QAM	36	0	17.17	17.32	17.45		
15	64QAM	36	20	17.11	17.32	17.21	18.5	3
15	64QAM	36	39	17.12	17.34	17.13		
15	64QAM	75	0	17.11	17.31	17.20		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	19.86	20.10	20.19	21.5	0
10	QPSK	1	25	19.89	20.10	20.02		
10	QPSK	1	49	19.86	20.13	20.11		
10	QPSK	25	0	18.95	19.07	19.06	20.5	1
10	QPSK	25	12	18.96	19.14	19.01		



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10	QPSK	25	25	18.89	19.07	19.05		
10	QPSK	50	0	18.92	19.13	19.05		
10	16QAM	1	0	19.19	19.42	19.62		
10	16QAM	1	25	19.20	19.45	19.22	20.5	1
10	16QAM	1	49	19.17	19.43	19.44		
10	16QAM	25	0	18.08	18.19	18.15		
10	16QAM	25	12	18.02	18.25	18.10	19.5	2
10	16QAM	25	25	17.98	18.19	18.12		
10	16QAM	50	0	18.03	18.24	18.17		
10	64QAM	1	0	18.10	18.37	18.54	19.5	2
10	64QAM	1	25	18.15	18.37	18.16		
10	64QAM	1	49	18.09	18.40	18.39		
10	64QAM	25	0	17.04	17.19	17.18	18.5	3
10	64QAM	25	12	17.02	17.27	17.11		
10	64QAM	25	25	16.99	17.17	17.13		
10	64QAM	50	0	17.02	17.23	17.18		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	19.85	20.19	20.10	21.5	0
5	QPSK	1	12	19.81	20.12	20.10		
5	QPSK	1	24	19.89	20.21	20.19		
5	QPSK	12	0	18.90	19.18	19.08	20.5	1
5	QPSK	12	7	18.88	19.17	19.12		
5	QPSK	12	13	18.93	19.14	19.12		
5	QPSK	25	0	18.94	19.12	19.93		
5	16QAM	1	0	19.20	19.53	19.43	20.5	1
5	16QAM	1	12	19.16	19.51	19.45		
5	16QAM	1	24	19.25	19.56	19.54		
5	16QAM	12	0	17.97	18.29	18.14	19.5	2
5	16QAM	12	7	17.94	18.25	18.18		
5	16QAM	12	13	18.01	18.22	18.20		
5	16QAM	25	0	18.01	18.26	18.14		
5	64QAM	1	0	18.12	18.50	18.34	19.5	2
5	64QAM	1	12	18.08	18.37	18.31		
5	64QAM	1	24	18.16	18.46	18.43		
5	64QAM	12	0	16.99	17.35	17.20	18.5	3
5	64QAM	12	7	17.00	17.30	17.21		
5	64QAM	12	13	17.07	17.25	17.23		
5	64QAM	25	0	17.03	17.26	17.39		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	19.83	20.16	20.10	21.5	0
3	QPSK	1	8	19.81	20.12	20.14		
3	QPSK	1	14	19.80	20.11	20.18		
3	QPSK	8	0	18.88	19.14	19.09	20.5	1
3	QPSK	8	4	18.87	19.15	19.17		
3	QPSK	8	7	18.84	19.14	19.17		
3	QPSK	15	0	18.81	19.13	19.12		
3	16QAM	1	0	19.17	19.49	19.39	20.5	1
3	16QAM	1	8	19.11	19.49	19.45		
3	16QAM	1	14	19.12	19.41	19.50		
3	16QAM	8	0	17.99	18.29	18.18	19.5	2
3	16QAM	8	4	17.97	18.30	18.28		
3	16QAM	8	7	17.94	18.29	18.28		
3	16QAM	15	0	17.93	18.23	18.22		
3	64QAM	1	0	18.09	18.44	18.34	19.5	2



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3	64QAM	1	8	18.06	18.40	18.39	18.5	3
3	64QAM	1	14	18.06	18.39	18.45		
3	64QAM	8	0	16.98	17.34	17.19		
3	64QAM	8	4	17.00	17.30	17.27		
3	64QAM	8	7	16.97	17.30	17.29		
3	64QAM	15	0	16.94	17.27	17.21		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	19.78	20.10	20.10	21.5	0
1.4	QPSK	1	3	19.81	20.14	20.21		
1.4	QPSK	1	5	19.75	20.05	20.11		
1.4	QPSK	3	0	19.79	20.12	20.14		
1.4	QPSK	3	1	19.66	20.16	20.18		
1.4	QPSK	3	3	19.80	20.10	20.17		
1.4	QPSK	6	0	18.80	19.10	19.11	20.5	1
1.4	16QAM	1	0	19.09	19.41	19.39	20.5	1
1.4	16QAM	1	3	19.15	19.39	19.50		
1.4	16QAM	1	5	19.09	19.38	19.42		
1.4	16QAM	3	0	18.90	19.20	19.23		
1.4	16QAM	3	1	18.94	19.25	19.26		
1.4	16QAM	3	3	18.90	19.17	19.24		
1.4	16QAM	6	0	17.93	18.25	18.28	19.5	2
1.4	64QAM	1	0	18.01	18.41	18.34	19.5	2
1.4	64QAM	1	3	18.07	18.36	18.42		
1.4	64QAM	1	5	18.01	18.35	18.37		
1.4	64QAM	3	0	17.98	18.33	18.29		
1.4	64QAM	3	1	18.04	18.35	18.36		
1.4	64QAM	3	3	18.02	18.28	18.35		
1.4	64QAM	6	0	16.89	17.17	17.18	18.5	3



<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965	23	0
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	21.77	21.62	21.64		
15	QPSK	1	37	21.66	21.60	21.61	22	1
15	QPSK	1	74	21.49	21.57	21.56		
15	QPSK	36	0	20.72	20.59	20.71		
15	QPSK	36	20	20.69	20.57	20.69	22	1
15	QPSK	36	39	20.59	20.55	20.57		
15	QPSK	75	0	20.67	20.52	20.66		
15	16QAM	1	0	21.10	20.97	21.01	22	1
15	16QAM	1	37	21.02	20.92	20.95		
15	16QAM	1	74	20.85	20.91	20.94		
15	16QAM	36	0	19.86	19.69	19.72	21	2
15	16QAM	36	20	19.83	19.67	19.77		
15	16QAM	36	39	19.70	19.65	19.67		
15	16QAM	75	0	19.77	19.63	19.74	21	2
15	64QAM	1	0	20.06	19.91	19.91		
15	64QAM	1	37	19.92	19.86	19.87		
15	64QAM	1	74	19.76	19.83	19.83	20	3
15	64QAM	36	0	18.86	18.70	18.75		
15	64QAM	36	20	18.83	18.65	18.83		
15	64QAM	36	39	18.70	18.67	18.70	20	3
15	64QAM	75	0	18.74	18.60	18.74		
Channel				26740	26865	26990	23	0
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	21.70	21.53	21.64		
10	QPSK	1	25	21.62	21.54	21.64	22	1
10	QPSK	1	49	21.53	21.56	21.54		
10	QPSK	25	0	20.71	20.55	20.63		
10	QPSK	25	12	20.64	20.48	20.62	22	1
10	QPSK	25	25	20.59	20.56	20.65		
10	QPSK	50	0	20.63	20.51	20.61		
10	16QAM	1	0	21.06	20.89	21.01	22	1
10	16QAM	1	25	20.94	20.90	20.96		
10	16QAM	1	49	20.89	20.88	20.91		
10	16QAM	25	0	19.80	19.60	19.73	21	2
10	16QAM	25	12	19.78	19.61	19.69		
10	16QAM	25	25	19.73	19.63	19.70		
10	16QAM	50	0	19.74	19.59	19.70	21	2
10	64QAM	1	0	19.99	19.79	19.90		
10	64QAM	1	25	19.91	19.81	19.87		
10	64QAM	1	49	19.85	19.83	19.82	20	3
10	64QAM	25	0	18.79	18.60	18.72		
10	64QAM	25	12	18.76	18.59	18.68		
10	64QAM	25	25	18.73	18.62	18.76	20	3
10	64QAM	50	0	18.79	18.60	18.69		
Channel				26715	26865	27015	23	0
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	21.74	21.64	21.67		
5	QPSK	1	12	21.71	21.56	21.63	22	1
5	QPSK	1	24	21.65	21.53	21.60		
5	QPSK	12	0	20.78	20.62	20.73		
5	QPSK	12	7	20.77	20.64	20.70	22	1



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5	QPSK	12	13	20.71	20.58	20.67		
5	QPSK	25	0	20.74	20.59	20.70		
5	16QAM	1	0	21.15	21.00	20.99		
5	16QAM	1	12	21.09	20.91	20.99	22	1
5	16QAM	1	24	21.04	20.91	20.97		
5	16QAM	12	0	19.85	19.73	19.79		
5	16QAM	12	7	19.88	19.72	19.80	21	2
5	16QAM	12	13	19.82	19.69	19.78		
5	16QAM	25	0	19.82	19.69	19.78		
5	64QAM	1	0	20.04	19.89	19.92	21	2
5	64QAM	1	12	19.99	19.83	19.88		
5	64QAM	1	24	19.94	19.80	19.85		
5	64QAM	12	0	18.92	18.79	18.84	20	3
5	64QAM	12	7	18.89	18.78	18.86		
5	64QAM	12	13	18.88	18.72	18.83		
5	64QAM	25	0	18.82	18.72	18.80		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	21.76	21.62	21.67	23	0
3	QPSK	1	8	21.70	21.56	21.63		
3	QPSK	1	14	21.71	21.57	21.61		
3	QPSK	8	0	20.77	20.65	20.70	22	1
3	QPSK	8	4	20.74	20.65	20.72		
3	QPSK	8	7	20.74	20.62	20.68		
3	QPSK	15	0	20.75	20.60	20.69	22	1
3	16QAM	1	0	21.06	20.96	20.99		
3	16QAM	1	8	21.05	20.94	20.96		
3	16QAM	1	14	21.04	20.90	20.92	21	2
3	16QAM	8	0	19.91	19.78	19.81		
3	16QAM	8	4	19.90	19.78	19.85		
3	16QAM	8	7	19.88	19.78	19.81	21	2
3	16QAM	15	0	19.85	19.72	19.79		
3	64QAM	1	0	20.02	19.89	19.92		
3	64QAM	1	8	20.01	19.87	19.88	21	2
3	64QAM	1	14	19.99	19.84	19.88		
3	64QAM	8	0	18.89	18.78	18.82		
3	64QAM	8	4	18.90	18.78	18.85	20	3
3	64QAM	8	7	18.88	18.77	18.82		
3	64QAM	15	0	18.86	18.73	18.81		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	21.70	21.57	21.59	23	0
1.4	QPSK	1	3	21.74	21.62	21.63		
1.4	QPSK	1	5	21.69	21.53	21.56		
1.4	QPSK	3	0	21.72	21.62	21.62		
1.4	QPSK	3	1	21.76	21.60	21.66		
1.4	QPSK	3	3	21.71	21.56	21.62		
1.4	QPSK	6	0	20.71	20.56	20.62	22	1
1.4	16QAM	1	0	21.06	20.92	20.93	22	1
1.4	16QAM	1	3	21.09	20.97	21.03		
1.4	16QAM	1	5	21.00	20.88	20.91		
1.4	16QAM	3	0	20.84	20.67	20.73		
1.4	16QAM	3	1	20.86	20.73	20.74		
1.4	16QAM	3	3	20.81	20.65	20.70		
1.4	16QAM	6	0	19.87	19.77	19.80	21	2
1.4	64QAM	1	0	19.96	19.81	19.87	21	2



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1.4	64QAM	1	3	20.03	19.86	19.90		
1.4	64QAM	1	5	19.91	19.77	19.82		
1.4	64QAM	3	0	19.94	19.80	19.85		
1.4	64QAM	3	1	19.97	19.85	19.90		
1.4	64QAM	3	3	19.93	19.79	19.84		
1.4	64QAM	6	0	18.82	18.68	18.72	20	3

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				27710				
Frequency (MHz)				2310				
10	QPSK	1	0		15.94		17	0
10	QPSK	1	25		15.89			
10	QPSK	1	49		15.84			
10	QPSK	25	0		14.96		16	1
10	QPSK	25	12		14.95			
10	QPSK	25	25		14.91			
10	QPSK	50	0		14.94			
10	16QAM	1	0		15.32		16	1
10	16QAM	1	25		15.48			
10	16QAM	1	49		15.41			
10	16QAM	25	0		14.14		15	2
10	16QAM	25	12		14.17			
10	16QAM	25	25		14.13			
10	16QAM	50	0		14.12			
10	64QAM	1	0		14.30		15	2
10	64QAM	1	25		14.42			
10	64QAM	1	49		14.40			
10	64QAM	25	0		13.17		14	3
10	64QAM	25	12		13.14			
10	64QAM	25	25		13.13			
10	64QAM	50	0		13.18			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	15.70	15.81	15.85	17	0
5	QPSK	1	12	15.68	15.71	15.79		
5	QPSK	1	24	15.73	15.80	15.82		
5	QPSK	12	0	14.73	14.88	14.89	16	1
5	QPSK	12	7	14.83	14.87	14.87		
5	QPSK	12	13	14.81	14.82	14.88		
5	QPSK	25	0	14.75	14.81	14.82		
5	16QAM	1	0	15.15	15.33	15.30	16	1
5	16QAM	1	12	15.22	15.26	15.30		
5	16QAM	1	24	15.26	15.32	15.33		
5	16QAM	12	0	13.96	14.11	14.07	15	2
5	16QAM	12	7	14.03	14.10	14.16		
5	16QAM	12	13	13.99	14.04	14.09		
5	16QAM	25	0	13.95	13.98	14.00		
5	64QAM	1	0	14.15	14.32	14.39	15	2
5	64QAM	1	12	14.28	14.24	14.30		
5	64QAM	1	24	14.24	14.27	14.34		
5	64QAM	12	0	13.04	13.17	13.20	14	3
5	64QAM	12	7	13.09	13.20	13.19		
5	64QAM	12	13	13.08	13.14	13.18		
5	64QAM	25	0	13.00	13.01	13.07		



<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572	20.5	0
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	19.56	19.66	19.67		
20	QPSK	1	49	19.30	19.47	19.31	19.5	1
20	QPSK	1	99	19.34	19.50	19.29		
20	QPSK	50	0	18.54	18.59	18.67		
20	QPSK	50	24	18.50	18.58	18.42	19.5	1
20	QPSK	50	50	18.45	18.48	18.35		
20	QPSK	100	0	18.44	18.47	18.56		
20	16QAM	1	0	18.91	19.01	19.07	19.5	1
20	16QAM	1	49	18.61	18.88	18.63		
20	16QAM	1	99	18.65	18.87	18.62		
20	16QAM	50	0	17.64	17.78	17.68	18.5	2
20	16QAM	50	24	17.61	17.70	17.54		
20	16QAM	50	50	17.52	17.62	17.44		
20	16QAM	100	0	17.61	17.69	17.56	18.5	2
20	64QAM	1	0	17.86	17.99	17.98		
20	64QAM	1	49	17.56	17.84	17.51		
20	64QAM	1	99	17.51	17.76	17.54	17.5	3
20	64QAM	50	0	16.66	16.79	16.67		
20	64QAM	50	24	16.62	16.68	16.56		
20	64QAM	50	50	16.51	16.59	16.45	17.5	3
20	64QAM	100	0	16.62	16.68	16.55		
Channel				132047	132322	132597	20.5	0
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	19.49	19.56	19.64		
15	QPSK	1	37	19.29	19.44	19.41	19.5	1
15	QPSK	1	74	19.36	19.39	19.37		
15	QPSK	36	0	18.50	18.61	18.54		
15	QPSK	36	20	18.42	18.53	18.46	19.5	1
15	QPSK	36	39	18.40	18.44	18.47		
15	QPSK	75	0	18.41	18.55	18.42		
15	16QAM	1	0	18.85	18.92	18.99	19.5	1
15	16QAM	1	37	18.54	18.85	18.75		
15	16QAM	1	74	18.69	18.81	18.66		
15	16QAM	36	0	17.61	17.70	17.64	18.5	2
15	16QAM	36	20	17.51	17.65	17.53		
15	16QAM	36	39	17.50	17.56	17.53		
15	16QAM	75	0	17.51	17.63	17.54	18.5	2
15	64QAM	1	0	17.75	17.86	17.90		
15	64QAM	1	37	17.50	17.74	17.69		
15	64QAM	1	74	17.59	17.69	17.62	17.5	3
15	64QAM	36	0	16.63	16.73	16.67		
15	64QAM	36	20	16.54	16.67	16.54		
15	64QAM	36	39	16.54	16.59	16.57	17.5	3
15	64QAM	75	0	16.50	16.63	16.56		
Channel				132022	132322	132622	20.5	0
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	19.34	19.43	19.46		
10	QPSK	1	25	19.30	19.41	19.38	19.5	1
10	QPSK	1	49	19.23	19.35	19.30		
10	QPSK	25	0	18.42	18.53	18.44		
10	QPSK	25	12	18.38	18.47	18.46	19.5	1



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10	QPSK	25	25	18.32	18.44	18.41		
10	QPSK	50	0	18.39	18.48	18.38		
10	16QAM	1	0	18.66	18.78	18.77		
10	16QAM	1	25	18.54	18.77	18.67	19.5	1
10	16QAM	1	49	18.45	18.70	18.60		
10	16QAM	25	0	17.52	17.62	17.50		
10	16QAM	25	12	17.47	17.60	17.59	18.5	2
10	16QAM	25	25	17.37	17.53	17.49		
10	16QAM	50	0	17.45	17.59	17.47		
10	64QAM	1	0	17.61	17.74	17.71	18.5	2
10	64QAM	1	25	17.53	17.69	17.65		
10	64QAM	1	49	17.45	17.64	17.59		
10	64QAM	25	0	16.54	16.61	16.54	17.5	3
10	64QAM	25	12	16.47	16.57	16.57		
10	64QAM	25	25	16.38	16.53	16.51		
10	64QAM	50	0	16.46	16.60	16.46		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	19.35	19.61	19.59	20.5	0
5	QPSK	1	12	19.28	19.54	19.50		
5	QPSK	1	24	19.35	19.49	19.47		
5	QPSK	12	0	18.35	18.61	18.61	19.5	1
5	QPSK	12	7	18.35	18.60	18.57		
5	QPSK	12	13	18.41	18.56	18.55		
5	QPSK	25	0	18.43	18.56	18.60		
5	16QAM	1	0	18.69	18.90	18.93	19.5	1
5	16QAM	1	12	18.62	18.86	18.84		
5	16QAM	1	24	18.60	18.85	18.81		
5	16QAM	12	0	17.48	17.69	17.72	18.5	2
5	16QAM	12	7	17.43	17.69	17.69		
5	16QAM	12	13	17.52	17.64	17.64		
5	16QAM	25	0	17.52	17.67	17.64		
5	64QAM	1	0	17.64	17.84	17.85	18.5	2
5	64QAM	1	12	17.48	17.78	17.78		
5	64QAM	1	24	17.56	17.78	17.73		
5	64QAM	12	0	16.52	16.72	16.74	17.5	3
5	64QAM	12	7	16.49	16.72	16.75		
5	64QAM	12	13	16.54	16.70	16.70		
5	64QAM	25	0	16.55	16.70	16.66		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	19.31	19.54	19.52	20.5	0
3	QPSK	1	8	19.27	19.51	19.47		
3	QPSK	1	14	19.25	19.50	19.42		
3	QPSK	8	0	18.34	18.55	18.55	19.5	1
3	QPSK	8	4	18.35	18.60	18.57		
3	QPSK	8	7	18.30	18.55	18.53		
3	QPSK	15	0	18.31	18.58	18.56	19.5	1
3	16QAM	1	0	18.69	18.86	18.82		
3	16QAM	1	8	18.65	18.86	18.84		
3	16QAM	1	14	18.52	18.83	18.79	18.5	2
3	16QAM	8	0	17.48	17.72	17.67		
3	16QAM	8	4	17.50	17.73	17.71		
3	16QAM	8	7	17.46	17.69	17.68		
3	16QAM	15	0	17.45	17.68	17.65	18.5	2
3	64QAM	1	0	17.58	17.79	17.78		



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3	64QAM	1	8	17.49	17.77	17.76	17.5	3
3	64QAM	1	14	17.47	17.76	17.73		
3	64QAM	8	0	16.48	16.72	16.69		
3	64QAM	8	4	16.47	16.74	16.72		
3	64QAM	8	7	16.43	16.69	16.69		
3	64QAM	15	0	16.44	16.67	16.63		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	19.24	19.47	19.46	20.5	0
1.4	QPSK	1	3	19.29	19.54	19.52		
1.4	QPSK	1	5	19.21	19.43	19.41		
1.4	QPSK	3	0	19.28	19.53	19.48		
1.4	QPSK	3	1	19.31	19.52	19.51		
1.4	QPSK	3	3	19.30	19.49	19.47		
1.4	QPSK	6	0	18.28	18.52	18.51	19.5	1
1.4	16QAM	1	0	18.59	18.79	18.78	19.5	1
1.4	16QAM	1	3	18.65	18.90	18.86		
1.4	16QAM	1	5	18.59	18.80	18.78		
1.4	16QAM	3	0	18.38	18.58	18.58		
1.4	16QAM	3	1	18.41	18.62	18.59		
1.4	16QAM	3	3	18.35	18.62	18.58		
1.4	16QAM	6	0	17.46	17.71	17.68	18.5	2
1.4	64QAM	1	0	17.54	17.72	17.70	18.5	2
1.4	64QAM	1	3	17.58	17.81	17.75		
1.4	64QAM	1	5	17.48	17.72	17.67		
1.4	64QAM	3	0	17.52	17.74	17.71		
1.4	64QAM	3	1	17.55	17.75	17.73		
1.4	64QAM	3	3	17.49	17.73	17.70		
1.4	64QAM	6	0	16.36	16.62	16.60	17.5	3

<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 Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

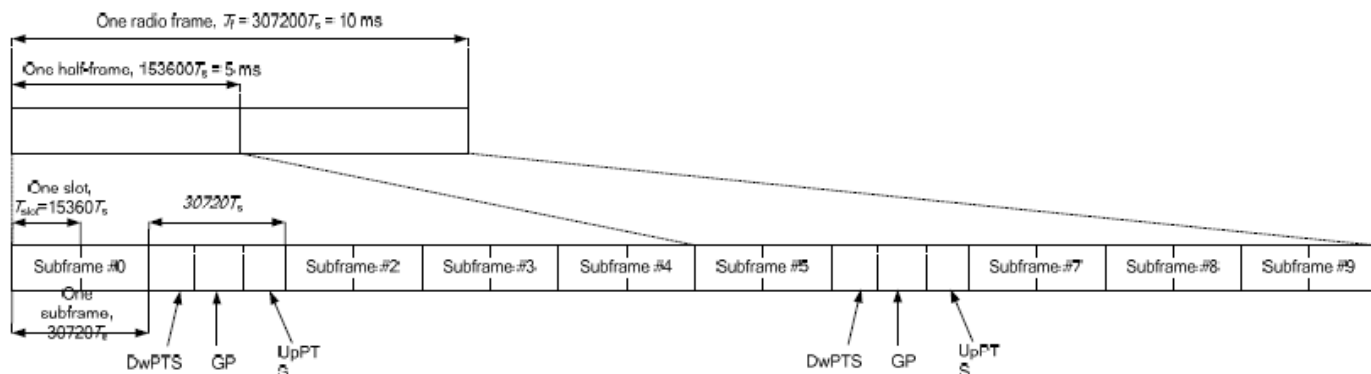


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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.

<Default Power Mode>
<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	23.86	23.96	23.86	24.5	0
20	QPSK	1	49	23.80	23.77	23.53		
20	QPSK	1	99	23.73	23.55	23.39		
20	QPSK	50	0	22.87	22.93	22.80	23.5	1
20	QPSK	50	24	22.86	22.82	22.73		
20	QPSK	50	50	22.85	22.76	22.54		
20	QPSK	100	0	22.83	22.84	22.72		
20	16QAM	1	0	23.01	23.12	23.00	23.5	1
20	16QAM	1	49	22.86	22.85	22.67		
20	16QAM	1	99	22.87	22.60	22.48		
20	16QAM	50	0	21.96	22.03	21.90	22.5	2
20	16QAM	50	24	21.97	21.93	21.80		
20	16QAM	50	50	21.98	21.83	21.63		
20	16QAM	100	0	21.93	21.95	21.83		
20	64QAM	1	0	21.76	21.82	21.74	22.5	2
20	64QAM	1	49	21.63	21.59	21.39		
20	64QAM	1	99	21.58	21.41	21.21		
20	64QAM	50	0	20.95	21.01	20.91	21.5	3
20	64QAM	50	24	20.94	20.97	20.83		
20	64QAM	50	50	20.94	20.85	20.61		
20	64QAM	100	0	20.95	20.94	20.83		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	23.80	23.82	23.75	24.5	0
15	QPSK	1	37	23.68	23.71	23.50		
15	QPSK	1	74	23.67	23.51	23.35		
15	QPSK	36	0	22.79	22.81	22.66	23.5	1
15	QPSK	36	20	22.84	22.78	22.57		
15	QPSK	36	39	22.74	22.67	22.46		
15	QPSK	75	0	22.81	22.75	22.56		
15	16QAM	1	0	22.91	22.95	22.85	23.5	1
15	16QAM	1	37	22.79	22.78	22.61		
15	16QAM	1	74	22.80	22.62	22.46		
15	16QAM	36	0	21.82	21.87	21.73	22.5	2
15	16QAM	36	20	21.90	21.85	21.57		
15	16QAM	36	39	21.76	21.74	21.52		
15	16QAM	75	0	21.91	21.84	21.62		
15	64QAM	1	0	21.66	21.69	21.61	22.5	2
15	64QAM	1	37	21.53	21.56	21.34		
15	64QAM	1	74	21.53	21.36	21.21		
15	64QAM	36	0	20.86	20.91	20.77	21.5	3
15	64QAM	36	20	20.90	20.87	20.63		
15	64QAM	36	39	20.79	20.78	20.56		
15	64QAM	75	0	20.91	20.87	20.61		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	23.67	23.70	23.56	24.5	0
10	QPSK	1	25	23.69	23.69	23.50		
10	QPSK	1	49	23.62	23.53	23.32		
10	QPSK	25	0	22.76	22.76	22.51	23.5	1



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10	QPSK	25	12	22.69	22.71	22.50		
10	QPSK	25	25	22.63	22.65	22.43		
10	QPSK	50	0	22.70	22.72	22.51		
10	16QAM	1	0	22.83	22.84	22.65	23.5	1
10	16QAM	1	25	22.84	22.82	22.59		
10	16QAM	1	49	22.72	22.62	22.41		
10	16QAM	25	0	21.84	21.85	21.61	22.5	2
10	16QAM	25	12	21.81	21.86	21.62		
10	16QAM	25	25	21.74	21.79	21.54		
10	16QAM	50	0	21.78	21.82	21.59	22.5	2
10	64QAM	1	0	21.59	21.56	21.43		
10	64QAM	1	25	21.55	21.54	21.35		
10	64QAM	1	49	21.48	21.36	21.14	21.5	3
10	64QAM	25	0	20.86	20.88	20.66		
10	64QAM	25	12	20.84	20.91	20.62		
10	64QAM	25	25	20.82	20.82	20.61		
10	64QAM	50	0	20.84	20.84	20.60		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	23.63	23.69	23.48	24.5	0
5	QPSK	1	12	23.62	23.66	23.35		
5	QPSK	1	24	23.62	23.60	23.27		
5	QPSK	12	0	22.66	22.76	22.50	23.5	1
5	QPSK	12	7	22.72	22.73	22.38		
5	QPSK	12	13	22.67	22.68	22.36		
5	QPSK	25	0	22.72	22.69	22.43	23.5	1
5	16QAM	1	0	22.76	22.82	22.53		
5	16QAM	1	12	22.73	22.83	22.45		
5	16QAM	1	24	22.81	22.78	22.39	22.5	2
5	16QAM	12	0	21.69	21.79	21.53		
5	16QAM	12	7	21.79	21.77	21.40		
5	16QAM	12	13	21.75	21.73	21.33	22.5	2
5	16QAM	25	0	21.83	21.81	21.53		
5	64QAM	1	0	21.52	21.58	21.29		
5	64QAM	1	12	21.45	21.53	21.20	22.5	2
5	64QAM	1	24	21.55	21.53	21.13		
5	64QAM	12	0	20.72	20.84	20.57	21.5	3
5	64QAM	12	7	20.83	20.84	20.44		
5	64QAM	12	13	20.80	20.76	20.42		
5	64QAM	25	0	20.86	20.85	20.55		



<LTE Band 41>

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490	24.5	0
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	24.18	23.96	24.08	23.74	23.83		
20	QPSK	1	49	23.93	23.73	23.77	23.53	23.76	24.5	0
20	QPSK	1	99	23.78	23.75	23.52	23.60	23.61		
20	QPSK	50	0	23.07	22.90	22.90	22.65	22.79		
20	QPSK	50	24	23.00	22.89	22.79	22.63	22.69	23.5	1
20	QPSK	50	50	22.96	22.84	22.73	22.57	22.65		
20	QPSK	100	0	23.01	22.90	22.81	22.63	22.66		
20	16QAM	1	0	23.35	23.11	23.22	22.86	22.98	23.5	1
20	16QAM	1	49	23.10	22.87	22.91	22.68	22.87		
20	16QAM	1	99	22.91	22.88	22.66	22.69	22.72		
20	16QAM	50	0	22.17	21.98	22.04	21.68	21.89	22.5	2
20	16QAM	50	24	22.14	22.05	21.90	21.71	21.78		
20	16QAM	50	50	22.08	21.92	21.79	21.65	21.74		
20	16QAM	100	0	22.09	21.99	21.91	21.70	21.75	22.5	2
20	64QAM	1	0	22.07	21.83	21.95	21.60	21.71		
20	64QAM	1	49	21.83	21.62	21.65	21.39	21.62		
20	64QAM	1	99	21.64	21.62	21.41	21.46	21.42	21.5	3
20	64QAM	50	0	21.18	21.00	21.00	20.68	20.88		
20	64QAM	50	24	21.10	21.04	20.95	20.71	20.77		
20	64QAM	50	50	21.05	20.96	20.80	20.66	20.73	21.5	3
20	64QAM	100	0	21.12	21.01	20.89	20.71	20.78		
Channel				39725	40173	40620	41068	41515	24.5	0
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	24.10	23.86	23.93	23.72	23.83		
15	QPSK	1	37	23.88	23.67	23.70	23.53	23.67	24.5	0
15	QPSK	1	74	23.90	23.74	23.49	23.62	23.58		
15	QPSK	36	0	22.99	22.79	22.81	22.58	22.71		
15	QPSK	36	20	22.95	22.76	22.71	22.56	22.72	23.5	1
15	QPSK	36	39	22.89	22.76	22.62	22.54	22.64		
15	QPSK	75	0	22.93	22.84	22.73	22.56	22.61		
15	16QAM	1	0	23.24	23.00	23.07	22.86	22.95	23.5	1
15	16QAM	1	37	23.04	22.85	22.84	22.67	22.81		
15	16QAM	1	74	23.03	22.87	22.65	22.73	22.73		
15	16QAM	36	0	22.07	21.82	21.82	21.66	21.75	22.5	2
15	16QAM	36	20	22.02	21.79	21.81	21.60	21.78		
15	16QAM	36	39	21.94	21.80	21.71	21.57	21.70		
15	16QAM	75	0	22.03	21.95	21.82	21.65	21.71	22.5	2
15	64QAM	1	0	21.99	21.74	21.83	21.58	21.69		
15	64QAM	1	37	21.75	21.55	21.58	21.42	21.55		
15	64QAM	1	74	21.74	21.60	21.39	21.49	21.47	21.5	3
15	64QAM	36	0	21.12	20.87	20.88	20.73	20.79		
15	64QAM	36	20	21.07	20.85	20.84	20.66	20.83		
15	64QAM	36	39	20.98	20.84	20.75	20.64	20.75	21.5	3
15	64QAM	75	0	21.03	20.95	20.83	20.65	20.73		
Channel				39700	40160	40620	41080	41540	24.5	0
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	23.97	23.76	23.83	23.58	23.80		
10	QPSK	1	25	23.90	23.68	23.70	23.53	23.66	24.5	0
10	QPSK	1	49	23.83	23.62	23.50	23.31	23.57		
10	QPSK	25	0	22.94	22.75	22.73	22.54	22.66		
10	QPSK	25	12	22.93	22.72	22.69	22.52	22.66	23.5	1



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10	QPSK	25	25	22.85	22.68	22.65	22.51	22.61		
10	QPSK	50	0	22.90	22.71	22.69	22.55	22.67		
10	16QAM	1	0	23.13	22.90	22.95	22.74	22.94		
10	16QAM	1	25	23.05	22.81	22.85	22.65	22.80	23.5	1
10	16QAM	1	49	22.98	22.74	22.60	22.60	22.71		
10	16QAM	25	0	22.08	21.86	21.84	21.63	21.80		
10	16QAM	25	12	22.05	21.84	21.80	21.64	21.79	22.5	2
10	16QAM	25	25	21.95	21.78	21.75	21.59	21.70		
10	16QAM	50	0	22.02	21.81	21.82	21.64	21.77		
10	64QAM	1	0	21.90	21.67	21.69	21.49	21.70	22.5	2
10	64QAM	1	25	21.81	21.58	21.58	21.42	21.54		
10	64QAM	1	49	21.72	21.50	21.35	21.36	21.44		
10	64QAM	25	0	21.11	20.87	20.88	20.66	20.84	21.5	3
10	64QAM	25	12	21.08	20.84	20.84	20.65	20.81		
10	64QAM	25	25	21.02	20.82	20.80	20.46	20.76		
10	64QAM	50	0	21.03	20.83	20.78	20.63	20.78		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	23.92	23.71	23.71	23.50	23.64	24.5	0
5	QPSK	1	12	23.91	23.69	23.69	23.53	23.63		
5	QPSK	1	24	23.79	23.58	23.59	23.43	23.50		
5	QPSK	12	0	22.96	22.69	22.71	22.49	22.66	23.5	1
5	QPSK	12	7	22.94	22.71	22.67	22.53	22.66		
5	QPSK	12	13	22.89	22.71	22.66	22.50	22.60		
5	QPSK	25	0	22.89	22.66	22.64	22.49	22.61	23.5	1
5	16QAM	1	0	23.05	22.81	22.86	22.61	22.78		
5	16QAM	1	12	23.07	22.83	22.82	22.67	22.77		
5	16QAM	1	24	22.99	22.75	22.79	22.62	22.67	22.5	2
5	16QAM	12	0	22.02	21.77	21.74	21.57	21.71		
5	16QAM	12	7	22.02	21.77	21.76	21.57	21.70		
5	16QAM	12	13	21.97	21.72	21.72	21.55	21.63	22.5	2
5	16QAM	25	0	22.03	21.79	21.80	21.60	21.72		
5	64QAM	1	0	21.82	21.57	21.61	21.39	21.52		
5	64QAM	1	12	21.83	21.56	21.58	21.41	21.52	22.5	2
5	64QAM	1	24	21.76	21.54	21.54	21.37	21.45		
5	64QAM	12	0	21.06	20.79	20.79	20.61	20.74		
5	64QAM	12	7	21.05	20.85	20.80	20.65	20.74	21.5	3
5	64QAM	12	13	21.02	20.80	20.74	20.60	20.68		
5	64QAM	25	0	21.09	20.84	20.80	20.62	20.75		

<Reduced Power Mode>
<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	20.15	20.28	20.15	21	0
20	QPSK	1	49	20.08	20.11	19.90		
20	QPSK	1	99	20.07	19.94	19.72		
20	QPSK	50	0	19.12	19.22	19.07	20	1
20	QPSK	50	24	19.11	19.14	19.03		
20	QPSK	50	50	19.09	19.05	18.86		
20	QPSK	100	0	19.10	19.13	19.00	20	1
20	16QAM	1	0	19.38	19.50	19.39		
20	16QAM	1	49	19.21	19.20	19.00		
20	16QAM	1	99	19.23	19.06	18.86	19	2
20	16QAM	50	0	18.23	18.35	18.20		
20	16QAM	50	24	18.26	18.27	18.16		
20	16QAM	50	50	18.21	18.18	17.97	19	2
20	16QAM	100	0	18.22	18.26	18.15		
20	64QAM	1	0	18.10	18.19	18.12		
20	64QAM	1	49	17.94	17.98	17.74	19	2
20	64QAM	1	99	17.91	17.79	17.58		
20	64QAM	50	0	17.22	17.33	17.21		
20	64QAM	50	24	17.24	17.26	17.16	18	3
20	64QAM	50	50	17.23	17.18	16.97		
20	64QAM	100	0	17.23	17.25	17.15		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	20.15	20.21	20.15	21	0
15	QPSK	1	37	20.00	20.13	19.87		
15	QPSK	1	74	20.04	19.95	19.75		
15	QPSK	36	0	19.11	19.19	19.04	20	1
15	QPSK	36	20	19.15	19.14	18.92		
15	QPSK	36	39	19.07	19.05	18.87		
15	QPSK	75	0	19.13	19.10	18.89	20	1
15	16QAM	1	0	19.30	19.38	19.33		
15	16QAM	1	37	19.14	19.21	19.02		
15	16QAM	1	74	19.18	19.07	18.86	19	2
15	16QAM	36	0	18.17	18.26	18.13		
15	16QAM	36	20	18.25	18.24	18.01		
15	16QAM	36	39	18.14	18.15	17.94	19	2
15	16QAM	75	0	18.26	18.23	18.01		
15	64QAM	1	0	18.03	18.12	18.04		
15	64QAM	1	37	17.92	18.00	17.76	19	2
15	64QAM	1	74	17.92	17.84	17.61		
15	64QAM	36	0	17.23	17.32	17.17		
15	64QAM	36	20	17.28	17.28	17.06	18	3
15	64QAM	36	39	17.19	17.21	16.96		
15	64QAM	75	0	17.23	17.23	17.02		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	20.05	20.12	19.98	21	0
10	QPSK	1	25	20.05	20.14	19.89		
10	QPSK	1	49	19.97	19.96	19.72		
10	QPSK	25	0	19.07	19.15	18.93	20	1



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10	QPSK	25	12	19.10	19.14	18.89		
10	QPSK	25	25	19.01	19.09	18.84		
10	QPSK	50	0	19.10	19.16	18.88		
10	16QAM	1	0	19.20	19.19	19.04	20	1
10	16QAM	1	25	19.12	19.22	19.00		
10	16QAM	1	49	19.01	19.03	18.80		
10	16QAM	25	0	18.18	18.27	18.03	19	2
10	16QAM	25	12	18.19	18.23	17.97		
10	16QAM	25	25	18.14	18.15	17.92		
10	16QAM	50	0	18.15	18.24	17.98	19	2
10	64QAM	1	0	17.92	17.94	17.80		
10	64QAM	1	25	17.90	17.98	17.73		
10	64QAM	1	49	17.78	17.76	17.58	18	3
10	64QAM	25	0	17.21	17.28	17.07		
10	64QAM	25	12	17.24	17.28	17.01		
10	64QAM	25	25	17.15	17.23	16.96	18	3
10	64QAM	50	0	17.14	17.23	16.96		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	20.03	20.10	19.89	21	0
5	QPSK	1	12	19.99	20.13	19.77		
5	QPSK	1	24	19.99	20.02	19.64		
5	QPSK	12	0	19.00	19.17	18.89	20	1
5	QPSK	12	7	19.12	19.15	18.80		
5	QPSK	12	13	19.05	19.13	18.73		
5	QPSK	25	0	19.09	19.12	18.87	20	1
5	16QAM	1	0	19.11	19.18	18.97		
5	16QAM	1	12	19.08	19.21	18.86		
5	16QAM	1	24	19.14	19.14	18.80	19	2
5	16QAM	12	0	18.09	18.20	17.91		
5	16QAM	12	7	18.16	18.18	17.82		
5	16QAM	12	13	18.09	18.15	17.77	19	2
5	16QAM	25	0	18.20	18.21	17.97		
5	64QAM	1	0	17.91	17.95	17.74		
5	64QAM	1	12	17.84	17.98	17.60	19	2
5	64QAM	1	24	17.88	17.93	17.60		
5	64QAM	12	0	17.08	17.26	16.95		
5	64QAM	12	7	17.23	17.25	16.86	18	3
5	64QAM	12	13	17.18	17.22	16.84		
5	64QAM	25	0	17.23	17.26	17.01		



<LTE Band 41>

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490	21	0
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	20.44	20.23	20.42	20.14	20.23	21	0
20	QPSK	1	49	20.20	20.04	20.12	19.96	20.14		
20	QPSK	1	99	20.05	20.08	19.95	20.00	19.97		
20	QPSK	50	0	19.31	19.15	19.29	19.00	19.18	20	1
20	QPSK	50	24	19.25	19.19	19.19	19.00	19.06		
20	QPSK	50	50	19.20	19.11	19.09	18.93	19.03		
20	QPSK	100	0	19.25	19.18	19.17	19.02	19.02	20	1
20	16QAM	1	0	19.68	19.39	19.59	19.25	19.40		
20	16QAM	1	49	19.29	19.15	19.27	19.07	19.25		
20	16QAM	1	99	19.15	19.18	19.08	18.93	19.08	19	2
20	16QAM	50	0	18.43	18.26	18.37	18.11	18.27		
20	16QAM	50	24	18.38	18.30	18.28	18.12	18.16		
20	16QAM	50	50	18.33	18.25	18.20	18.02	18.13	19	2
20	16QAM	100	0	18.37	18.30	18.30	18.12	18.14		
20	64QAM	1	0	18.37	18.14	18.39	18.00	18.14		
20	64QAM	1	49	18.10	17.88	18.01	17.82	17.99	19	2
20	64QAM	1	99	17.91	17.92	17.81	17.65	17.81		
20	64QAM	50	0	17.43	17.24	17.37	16.92	17.28		
20	64QAM	50	24	17.35	17.30	17.30	17.11	17.16	18	3
20	64QAM	50	50	17.30	17.23	17.20	17.03	17.15		
20	64QAM	100	0	17.37	17.30	17.31	17.11	17.15		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	20.36	20.16	20.29	20.14	20.21	21	0
15	QPSK	1	37	20.19	19.98	20.05	19.92	20.05		
15	QPSK	1	74	20.16	20.07	19.89	20.02	19.96		
15	QPSK	36	0	19.27	19.09	19.15	19.03	19.11	20	1
15	QPSK	36	20	19.22	19.05	19.10	18.99	19.13		
15	QPSK	36	39	19.17	19.08	19.02	18.90	19.01		
15	QPSK	75	0	19.18	19.13	19.09	18.96	19.01	20	1
15	16QAM	1	0	19.49	19.28	19.40	19.23	19.31		
15	16QAM	1	37	19.32	19.11	19.19	19.08	19.17		
15	16QAM	1	74	19.31	19.17	19.06	19.12	19.08	19	2
15	16QAM	36	0	18.34	18.14	18.26	18.08	18.15		
15	16QAM	36	20	18.30	18.11	18.18	18.05	18.18		
15	16QAM	36	39	18.24	18.13	18.09	17.98	18.09	19	2
15	16QAM	75	0	18.34	18.25	18.20	18.08	18.10		
15	64QAM	1	0	18.24	18.03	18.16	18.02	18.15		
15	64QAM	1	37	18.07	17.88	17.95	17.78	17.92	19	2
15	64QAM	1	74	18.02	17.91	17.79	17.88	17.81		
15	64QAM	36	0	17.37	17.18	17.27	17.14	17.21		
15	64QAM	36	20	17.34	17.15	17.23	17.08	17.24	18	3
15	64QAM	36	39	17.26	17.19	17.14	17.03	17.15		
15	64QAM	75	0	17.33	17.23	17.21	17.07	17.13		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	20.28	20.06	20.17	20.01	20.23	21	0
10	QPSK	1	25	20.22	20.01	20.09	19.96	20.04		
10	QPSK	1	49	20.15	19.97	19.93	19.93	20.00		
10	QPSK	25	0	19.23	19.07	19.13	19.01	19.10	20	1
10	QPSK	25	12	19.22	19.05	19.11	18.97	19.06		



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10	QPSK	25	25	19.17	19.01	19.07	18.93	19.04		
10	QPSK	50	0	19.22	19.05	19.11	18.95	19.08		
10	16QAM	1	0	19.42	19.18	19.29	19.18	19.35		
10	16QAM	1	25	19.30	19.11	19.20	19.06	19.16	20	1
10	16QAM	1	49	19.21	19.04	18.99	19.00	19.12		
10	16QAM	25	0	18.37	18.14	18.22	18.05	18.19		
10	16QAM	25	12	18.36	18.16	18.20	18.07	18.15	19	2
10	16QAM	25	25	18.27	18.10	18.17	18.07	18.13		
10	16QAM	50	0	18.32	18.12	18.20	18.06	18.21		
10	64QAM	1	0	18.18	17.94	18.09	17.92	18.09	19	2
10	64QAM	1	25	18.06	17.89	17.95	17.83	17.89		
10	64QAM	1	49	17.99	17.77	17.73	17.79	17.83		
10	64QAM	25	0	17.39	17.19	17.29	17.10	17.28	18	3
10	64QAM	25	12	17.38	17.17	17.27	17.10	17.21		
10	64QAM	25	25	17.31	17.10	17.21	17.08	17.14		
10	64QAM	50	0	17.31	17.12	17.21	17.07	17.16	Tune-up limit (dBm)	MPR (dB)
Channel				39675	40148	40620	41093	41565		
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	20.22	20.00	20.12	19.91	20.03	21	0
5	QPSK	1	12	20.22	20.02	20.09	19.99	20.04		
5	QPSK	1	24	20.13	19.93	20.02	19.91	19.92		
5	QPSK	12	0	19.27	19.10	19.12	18.98	19.07	20	1
5	QPSK	12	7	19.28	19.06	19.10	18.98	19.09		
5	QPSK	12	13	19.20	19.04	19.05	18.78	19.03		
5	QPSK	25	0	19.21	19.01	19.08	18.95	19.04	20	1
5	16QAM	1	0	19.34	19.10	19.20	19.01	19.13		
5	16QAM	1	12	19.36	19.14	19.20	19.07	19.15		
5	16QAM	1	24	19.30	19.08	19.16	19.06	19.07	19	2
5	16QAM	12	0	18.34	18.10	18.14	17.98	18.08		
5	16QAM	12	7	18.30	18.11	18.13	18.04	18.08		
5	16QAM	12	13	18.29	18.08	18.11	18.01	18.06	19	2
5	16QAM	25	0	18.35	18.15	18.17	18.06	18.11		
5	64QAM	1	0	18.12	17.88	17.98	17.82	17.88		
5	64QAM	1	12	18.09	17.88	17.95	17.83	17.89	19	2
5	64QAM	1	24	18.06	17.82	17.91	17.81	17.84		
5	64QAM	12	0	17.33	17.13	17.21	17.06	17.10		
5	64QAM	12	7	17.37	17.13	17.21	17.04	17.12	18	3
5	64QAM	12	13	17.32	17.13	17.13	17.03	17.11		
5	64QAM	25	0	17.37	17.15	17.21	17.09	17.13		



<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band, Uplink CA is not supported. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation			5CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	12A-30A	37	37	12A-30A-66A	79	79	12A-30A-66A-66A		110	2A-5B-30A-66A	
2	12A-66A	38	38	12A-66A-66A	79	80	2A-12A-30A-66A		111	2A-5B-66A-66A	
3	14A-30A	42	39	14A-66A-66A		81	2A-12A-66A-66A		112	5B-30A-66A-66A	
4	14A-66A	39	40	2A-12A-66A	80	82	2A-2A-12A-66A		113	2A-2A-5A-66C	
5	2A-12A	40	41	2A-12A-30A	80	83	2A-2A-12A-30A		114	2A-2A-5A-66B	113
6	2A-14A	42	42	2A-14A-30A		84	2A-2A-30A-66A		115	2A-5B-66C	
7	2A-29A		43	2A-2A-30A	84	85	2A-2A-5A-30A		116	2A-13A-46D	
8	2A-30A	43	44	2A-2A-5A	85	86	2A-2A-5A-66A	113	117	2A-46D-66A	
9	2A-5A	44	45	2A-2A-66A	86	87	2A-2A-5B		118	13A-46D-66A	
10	2A-66A	45	46	2A-5A-66A	86	88	2A-2A-66A-66A				
11	29A-30A	B29 RX Only	47	2A-5A-30A	85	89	2A-30A-66A-66A				
12	29A-66A	B29 RX Only	48	2A-5B	87	90	2A-5A-30A-66A	110			
13	30A-66A	49	49	2A-30A-66A	89	91	2A-5A-66A-66A	111			
14	5A-30A	47	50	2A-66A-66A	88	92	2A-5B-30A	110			
15	5A-66A	46	51	30A-66A-66A	89	93	2A-5B-66A	111			
16	5B	48	52	5A-30A-66A	90	94	5A-30A-66A-66A	112			
17	13A-66A	56	53	5A-66A-66A	91	95	5B-30A-66A	112			
18	2A-13A	58	54	5B-30A	92	96	5B-66A-66A	111			
19	2A-2A	59	55	5B-66A	93	97	2A-2A-5A-66A	113			
20	2A-4A	62	56	13A-66A-66A	112						
21	2A-5A	61	57	13A-66C	114	99	2A-46D	117			
22	2A-66A	62	58	2A-13A-66A	103	100	2A-13A-66A-66A				
23	4A-13A	63	59	2A-2A-13A	103	101	2A-13A-66B	102			
24	4A-4A	64	60	2A-2A-4A		102	2A-13A-66C				
25	4A-5A	65	61	2A-2A-5A	110	103	2A-2A-13A-66A				
26	5A-66A	67	62	2A-2A-66A	111	104	2A-2A-66B	105			
27	66A-66A	68	63	2A-4A-13A		105	2A-2A-66C	113			
28	66B	73	64	2A-4A-4A		106	2A-5A-66C	113			
29	66C	74	65	4A-4A-5A		107	2A-5A-66B	106			
30	2A-46A	99	66	2A-4A-5A		108	5B-66A-66A	111			
31	4A-46A		67	2A-5A-66A	86	109	5B-66C	115			
32	13A-46A	127	68	2A-66A-66A	88						
33	46A-66A	126	69	2A-66C	105						
34	25A-25A										
35	25A-26A		71	5A-66A-66A	108						
36	41C		72	5A-66C	106						
			73	66A-66B	74						
			74	66A-66C							
			75	66D							
			76	13A-66B	101						
			77	2A-66B	104						
			78	5A-66B	107						

<Power verification when LTE Carrier Aggregation Active>
General Note:

- According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.
- Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.
- The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
- Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.
- For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lceil \frac{BW_{\text{Channel}(1)} + BW_{\text{Channel}(2)} - 0.1 |BW_{\text{Channel}(1)} - BW_{\text{Channel}(2)}|}{0.6} \right\rceil 0.3 \text{ [MHz]}$$

<Two Carrier power verification>

Configure		CA Configuration (BCS)	PCC						SCC				Power		
			LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2A-29A	2	20	1900	19100	QPSK	1	0	29	10	722.5	9715	24.08	24.11
		4A-46A	4	20	1732.5	20175	QPSK	1	0	46	20	5537.5	50665	23.75	23.73
		25A-26A	25	20	1880	26340	QPSK	1	0	26	15	876.5	8865	23.64	23.46
Intra-Band	Non-Contiguous	25A-25A	25	20	1880	26340	QPSK	1	0	25	20	1985	8590	23.58	23.46
	Contiguous	41C	41	20	2506	39750	QPSK	1	0	41	20	2525.8	39948	24.33	24.18

<Three Carrier power verification>

Configure		CA Configuration (BCS)	PCC							SCC				SCC2				Power	
			LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2A-2A-4A	2	20	1900	19100	QPSK	1	0	2	20	1940	700	4	20	2132.5	2175	24.16	24.11
		2A-4A-4A	2	20	1900	19100	QPSK	1	0	4	20	2132.5	2175	4	20	2145	2300	24.09	24.11
		2A-4A-5A	2	20	1900	19100	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	24.13	24.11
		2A-4A-13A	2	20	1900	19100	QPSK	1	0	4	20	2132.5	2175	13	10	751	5230	24.24	24.11
		2A-14A-30A	2	20	1900	19100	QPSK	1	0	14	10	763	5330	30	10	2355	9820	24.18	24.11
		4A-4A-5A	4	20	1732.5	20175	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	23.64	23.73
		14A-66A-66A	14	10	793	23330	QPSK	1	0	66	20	2155	66886	66	20	2190	67236	23.55	23.60
Intra-Band	Non-Contiguous	66A-66C	66	20	1745	132322	QPSK	1	0	66	20	2190	67236	66	20	2170.2	67038	23.85	23.77
	Contiguous	66D	66	20	1745	132322	QPSK	1	0	66	20	2164.8	66984	66	20	2184.6	67182	23.71	23.77



<Four Carrier power verification>

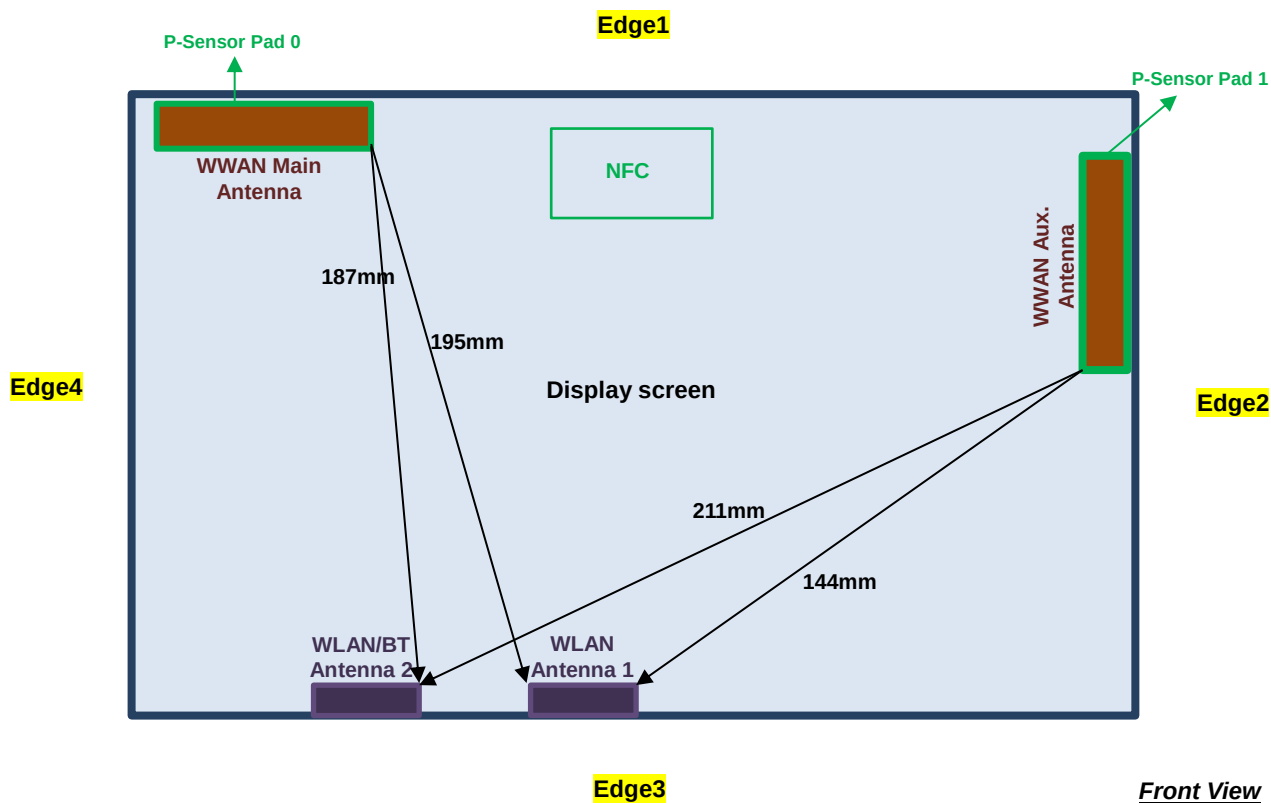
Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				SCC3				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2A-2A-5B	2	20	1900	19100	QPSK	1	0	2	20	1960	900	5	10	881.5	2525	5	10	891.4	2624	24.12	24.11
	2A-2A-5A-30A	2	20	1900	19100	QPSK	1	0	2	20	1960	900	5	10	881.5	2525	30	10	2355	9820	24.00	24.11
	2A-2A-12A-30A	2	20	1900	19100	QPSK	1	0	2	20	1960	900	12	10	737.5	5095	30	10	2355	9820	24.17	24.11
	2A-2A-12A-66A	2	20	1900	19100	QPSK	1	0	2	20	1960	900	12	10	737.5	5095	66	20	2155	66886	24.05	24.11
	2A-2A-13A-66A	2	20	1900	19100	QPSK	1	0	2	20	1960	900	13	10	751	5230	66	20	2155	66886	24.10	24.11
	2A-2A-30A-66A	2	20	1900	19100	QPSK	1	0	2	20	1960	900	30	10	2355	9820	66	20	2155	66886	23.99	24.11
	2A-2A-66A-66A	2	20	1900	19100	QPSK	1	0	2	20	1960	900	66	20	2155	66886	66	20	2190	67236	24.15	24.11
	2A-12A-30A-66A	2	20	1900	19100	QPSK	1	0	12	10	737.5	5095	30	10	2355	9820	66	20	2155	66886	24.16	24.11
	2A-12A-66A-66A	2	20	1900	19100	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	66	20	2190	67236	24.07	24.11
	2A-13A-66A-66A	2	20	1900	19100	QPSK	1	0	13	10	751	5230	66	20	2155	66886	66	20	2190	67236	23.97	24.11
	2A-13A-66C	2	20	1900	19100	QPSK	1	0	13	10	751	5230	66	20	2155	66886	66	20	2174.8	67084	24.20	24.11
	2A-30A-66A-66A	2	20	1900	19100	QPSK	1	0	30	10	2355	9820	66	20	2155	66886	66	20	2190	67236	24.16	24.11
	12A-30A-66A-66A	12	10	707.5	23095	QPSK	1	0	30	10	2355	9820	66	20	2155	66886	66	20	2190	67236	23.91	23.79

<Five Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				SCC3				SCC4				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2A-2A-5A-66C	2	20	1900	19100	QPSK	1	0	2	20	1960	900	5	10	881.5	2525	66	20	2155	66886	66	20	2174.8	67084	24.15	24.11
	2A-5B-30A-66A	2	20	1900	19100	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	66	20	2155	66886	24.22	24.11
	2A-5B-66A-66A	2	20	1900	19100	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	66	20	2155	66886	66	20	2190	67236	24.07	24.11
	2A-5B-66C	2	20	1900	19100	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	66	20	2155	66886	66	20	2174.8	67084	24.13	24.11
	2A-13A-46D	2	20	1900	19100	QPSK	1	0	13	10	751	5230	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	24.02	24.11
	2A-46D-66A	2	20	1900	19100	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	66	20	2155	66886	23.98	24.11
	5B-30A-66A-66A	5	10	836.5	20525	QPSK	1	0	5	10	891.4	2624	30	10	2355	9820	66	20	2155	66886	66	20	2174.8	67084	23.59	23.47
	13A-46D-66A	13	10	782	23230	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	66	20	2155	66886	23.54	23.65

13. Antenna Location

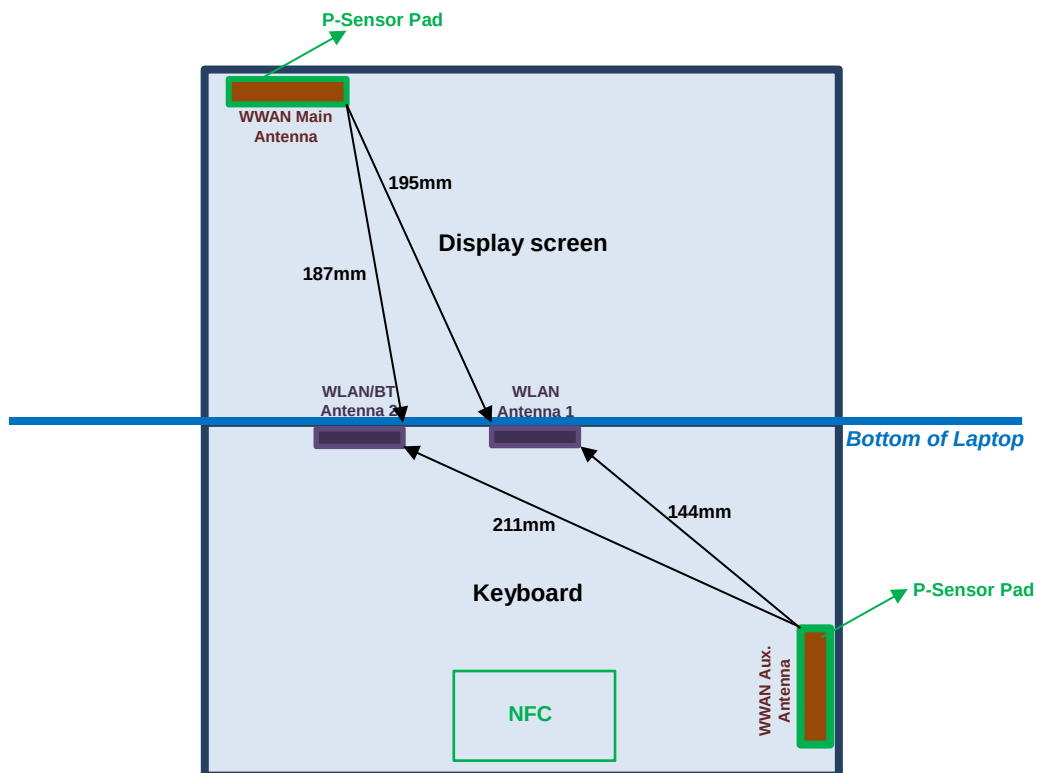
<For Tablet Mode>



Front View

Antenna distance to surface edge (mm)				
Tablet Mode	Edge 1	Edge 2	Edge 3	Edge 4
WWAN Main	5	214	193	12
WWAN Aux	15	3	106	279

<For Laptop Mode>



Antenna distance to surface edge (mm)	
Laptop Mode	Bottom of laptop
WWAN Main	198.1

**<SAR test exclusion table>****General Note:**

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
- Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
- Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

<WWAN Main>

Exposure Position	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 14	LTE Band 12	LTE Band 17	LTE Band 13	LTE Band 5	LTE Band 26	LTE Band 4	LTE Band 66	LTE Band 2	LTE Band 25	LTE Band 30	LTE Band 7	LTE Band 38	LTE Band 41
	Calculated Frequency	846MHz	1750MHz	1907MHz	796MHz	715MHz	713MHz	784MHz	848MHz	848MHz	1754MHz	1779MHz	1909MHz	1914MHz	2312MHz	2567MHz	2617MHz	2687MHz
	Maximum power (dBm)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	23	24.5	24.5	24.5
	Maximum rated power(mW)	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	200.0	282.0	282.0	282.0
Bottom Face	Separation distance(mm)	5.0																
	exclusion threshold	51.9	74.6	77.9	50.3	47.7	47.6	49.9	51.9	51.9	74.7	75.2	77.9	78.0	60.8	90.4	91.2	92.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	5.0																
	exclusion threshold	51.9	74.6	77.9	50.3	47.7	47.6	49.9	51.9	51.9	74.7	75.2	77.9	78.0	60.8	90.4	91.2	92.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	214.0																
	exclusion threshold	1088.0	1753.0	1749.0	928.0	959.0	957.0	1027.0	1090.0	1090.0	1753.0	1752.0	1749.0	1748.0	1739.0	1734.0	1733.0	1732.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 3	Separation distance(mm)	193.0																
	exclusion threshold	970.0	1543.0	1539.0	831.0	859.0	857.0	917.0	971.0	971.0	1543.0	1542.0	1539.0	1538.0	1529.0	1524.0	1523.0	1522.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	12.0																
	exclusion threshold	21.6	31.1	32.5	21.0	19.9	19.8	20.8	21.6	21.6	31.1	31.3	32.5	32.5	25.3	37.7	38.0	38.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom of Laptop	Separation distance(mm)	198.1																
	exclusion threshold	998.0	1594.0	1589.0	854.0	883.0	881.0	943.0	1000.0	1000.0	1594.0	1593.0	1589.0	1589.0	1579.0	1574.0	1573.0	1572.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No



<WWAN Aux>

Exposure Position	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 14	LTE Band 12	LTE Band 17	LTE Band 13	LTE Band 5	LTE Band 26	LTE Band 4	LTE Band 66	LTE Band 2	LTE Band 25	LTE Band 30	LTE Band 7	LTE Band 38	LTE Band 41
	Calculated Frequency	846MHz	1750MHz	1907MHz	796MHz	715MHz	713MHz	784MHz	848MHz	848MHz	1754MHz	1779MHz	1909MHz	1914MHz	2312MHz	2567MHz	2617MHz	2687MHz
	Maximum power (dBm)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	23	24.5	24.5	24.5
	Maximum rated power(mW)	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	200.0	282.0	282.0	282.0
Bottom Face	Separation distance(mm)	5.0																
	exclusion threshold	51.9	74.6	77.9	50.3	47.7	47.6	49.9	51.9	51.9	74.7	75.2	77.9	78.0	60.8	90.4	91.2	92.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	15.0																
	exclusion threshold	17.3	24.9	26.0	16.8	15.9	15.9	16.7	17.3	17.3	24.9	25.1	26.0	26.0	20.3	30.1	30.4	30.8
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	3.0																
	exclusion threshold	51.9	74.6	77.9	50.3	47.7	47.6	49.9	51.9	51.9	74.7	75.2	77.9	78.0	60.8	90.4	91.2	92.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 3	Separation distance(mm)	106.0																
	exclusion threshold	479.0	673.0	669.0	428.0	444.0	444.0	462.0	479.0	479.0	673.0	672.0	669.0	668.0	659.0	654.0	653.0	652.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	279.0																
	exclusion threshold	1455.0	2403.0	2399.0	1229.0	1269.0	1266.0	1366.0	1458.0	1458.0	2403.0	2402.0	2399.0	2398.0	2389.0	2384.0	2383.0	2382.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Bottom of Laptop	Separation distance(mm)	5.0																
	exclusion threshold	51.9	74.6	77.9	50.3	47.7	47.6	49.9	51.9	51.9	74.7	75.2	77.9	78.0	60.8	90.4	91.2	92.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

14. Power reduction mechanism

General Note:

1. The device is to optimize and keep the better and suitable WWAN performance for different user scenario and operating modes accordingly by using GMR sensor and Proximity sensor and Tx switch.
2. Tablet Mode and NB mode:
 - Condition 1:
 - a. When proximity sensor is triggered by Main antenna human proximity, WWAN Tx swapping to Aux1 antenna, and vice versa.
 - b. Either WWAN main or Aux 1 antenna can be as TX transmission, but only 1 antenna can transmit at the same time.
 - Condition 2:
 - a. When proximity sensor is triggered by both Main and Aux1 antenna human proximity at the same time, Tx power will be reduced for SAR consideration.
3. The table below are showing different P-sensor trigger configuration what the transmit antenna is active, due to the device is according to P-sensor trigger to define the antenna switch to get better performance, below case1 to 4, only case 1 to be consider SAR testing at 0mm distance for required test position, due to in this condition the device is connect the human body and both sensor pad is trigger, for other case even either one P-sensor is trigger which the transmit antenna will be switch and away human body, therefore, according to KDB 616217 to verify EUT transmitting full power at trigger distance -1mm.
4. For NB mode SAR testing is not necessary, due to in normal usage which the P-sensor 1 will always trigger and the transmit antenna switch to LTE main antenna and the antenna to bottom of laptop distance is higher than 200mm.
5. When the P-sensor 1 is triggered and LTE main is transmitting which edge 4 is consider full power mode SAR testing, due to the P-sensor 0 at edge 4 was not triggered, when the P-sensor 0 is triggered and LTE aux1 is transmitting which edge 1 is consider full power mode SAR testing, due to the P-sensor 1 at edge 1 was not triggered
6. When the P-sensor 0 and 1 is trigger at the same time(case1), the LTE main and Aux 1 supports different bands are list below
 - a. LTE Main: WCDMA B2/4, LTE B2/4/7/12/17/25/30/38/41/66
 - b. LTE Aux1: WCDMA B5, LTE B5/13/14/26

Configuration		Tx switch	Proximity Sensor 0 DPR 1	Proximity Sensor 1 DPR2	Tx location	Output power state
Tablet / NB Mode	Case 1	Activate	on	on	Main or Aux1	Reduce
	Case 2	Activate	on	off	Main	Full
	Case 3	Activate	off	on	Aux	Full
	Case 4	Activate	off	off	Main	Full

SAR Test consideration		
Tablet	Case 1	1. Bottom Face, Edge1/4 for LTE Main at reduced power, Edge 1 for LTE aux1 at full power 2. Bottom Face. Edge1/2 for LTE aux1 at reduced power,, Edge 4 for LTE Main at full power
	Case 2	according to KDB 616217 to verify EUT transmitting full power at trigger distance -1mm ⁽³⁾
	Case 3	according to KDB 616217 to verify EUT transmitting full power at trigger distance -1mm ⁽³⁾
	Case 4	according to KDB 616217 to verify EUT transmitting full power at trigger distance -1mm ⁽³⁾

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - d. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - e. 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 Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
4. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in normal mode was performed; 24mm for Bottom of Laptop, 7mm for WWAN Main ANT bottom face, 23mm for WWAN Aux ANT bottom face, 13mm for edge1 and 5mm for edge2.

UMTS 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 $\leq 1/4$ 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 $1/4$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

LTE Note:

1. 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.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. 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.
4. 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.
5. 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.
6. For LTE B12/B26 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.
7. LTE band 4/5/17 SAR test was covered by Band 66/26/12; according to 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.

15.1 Body SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II	RMC 12.2Kbps	Back of Display Screen	32mm	Main	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	0.06	0.033	0.037
	WCDMA II	RMC 12.2Kbps	Bottom Face	7mm	Main	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	-0.14	0.125	0.141
	WCDMA II	RMC 12.2Kbps	Edge 1	13mm	Main	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	0.15	0.105	0.118
	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	Main	Battery1	ON	9538	1907.6	21.26	22.00	1.186	0.03	0.243	0.288
	WCDMA II	RMC 12.2Kbps	Edge 1	0mm	Main	Battery1	ON	9538	1907.6	21.26	22.00	1.186	-0.04	0.465	0.551
	WCDMA II	RMC 12.2Kbps	Edge 4	0mm	Main	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	0.06	0.376	0.423
	WCDMA II	RMC 12.2Kbps	Bottom of Laptop	24mm	Aux	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	0.03	0.141	0.159
	WCDMA II	RMC 12.2Kbps	Bottom Face	23mm	Aux	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	0.05	0.068	0.076
	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	0.16	0.724	0.814
01	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	9262	1852.4	23.74	24.50	1.191	0.12	0.847	1.009
	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	9400	1880	23.82	24.50	1.169	0.15	0.775	0.906
	WCDMA II	RMC 12.2Kbps	Edge 1	0mm	Aux	Battery1	OFF	9538	1907.6	23.99	24.50	1.125	-0.11	0.035	0.039
	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery2	OFF	9262	1852.4	23.74	24.50	1.191	0.06	0.836	0.996
	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery3	OFF	9262	1852.4	23.74	24.50	1.191	-0.04	0.834	0.993

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA IV	RMC 12.2Kbps	Back of Display Screen	32mm	Main	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	-0.05	0.047	0.050
	WCDMA IV	RMC 12.2Kbps	Bottom Face	7mm	Main	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	0.14	0.145	0.154
	WCDMA IV	RMC 12.2Kbps	Edge 1	13mm	Main	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	0.18	0.144	0.153
	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	Main	Battery1	ON	1413	1732.6	19.69	20.00	1.074	0.05	0.205	0.220
	WCDMA IV	RMC 12.2Kbps	Edge 1	0mm	Main	Battery1	ON	1413	1732.6	19.69	20.00	1.074	-0.11	0.519	0.557
	WCDMA IV	RMC 12.2Kbps	Edge 4	0mm	Main	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	-0.01	0.387	0.412
	WCDMA IV	RMC 12.2Kbps	Bottom of Laptop	24mm	Aux	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	0.13	0.177	0.188
	WCDMA IV	RMC 12.2Kbps	Bottom Face	23mm	Aux	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	-0.07	0.089	0.095
	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	0.17	0.957	1.018
02	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	1312	1712.4	23.64	24.50	1.219	0.17	0.954	1.163
	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	1513	1752.6	23.73	24.50	1.194	0.18	0.839	1.002
	WCDMA IV	RMC 12.2Kbps	Edge 1	0mm	Aux	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	0.06	0.043	0.046
	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery2	OFF	1312	1712.4	23.64	24.50	1.219	0.02	0.947	1.154
	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery3	OFF	1312	1712.4	23.64	24.50	1.219	-0.04	0.923	1.125

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V	RMC 12.2Kbps	Back of Display Screen	32mm	Main	Battery1	OFF	4182	836.4	23.97	24.50	1.130	-0.19	0.010	0.011
	WCDMA V	RMC 12.2Kbps	Bottom Face	7mm	Main	Battery1	OFF	4182	836.4	23.97	24.50	1.130	-0.03	0.167	0.189
	WCDMA V	RMC 12.2Kbps	Edge 1	13mm	Main	Battery1	OFF	4182	836.4	23.97	24.50	1.130	0.11	0.136	0.154
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Main	Battery1	OFF	4182	836.4	23.97	24.50	1.130	0.18	0.228	0.258
03	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Main	Battery1	OFF	4132	826.4	23.80	24.50	1.175	0.11	0.238	0.280
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Main	Battery1	OFF	4233	846.6	23.79	24.50	1.178	0.16	0.190	0.224
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Main	Battery2	OFF	4132	826.4	23.80	24.50	1.175	0.17	0.233	0.274
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Main	Battery3	OFF	4132	826.4	23.80	24.50	1.175	0.09	0.201	0.236
	WCDMA V	RMC 12.2Kbps	Bottom of Laptop	24mm	Aux	Battery1	OFF	4182	836.4	23.97	24.50	1.130	0.14	0.022	0.025
	WCDMA V	RMC 12.2Kbps	Bottom Face	23mm	Aux	Battery1	OFF	4182	836.4	23.97	24.50	1.130	-0.09	0.011	0.012
	WCDMA V	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	4182	836.4	23.97	24.50	1.130	0.03	0.031	0.035
	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	Aux	Battery1	ON	4182	836.4	21.30	23.00	1.479	0.06	0.112	0.166
	WCDMA V	RMC 12.2Kbps	Edge 1	0mm	Aux	Battery1	OFF	4182	836.4	23.97	24.50	1.130	-0.01	0.001	0.001
	WCDMA V	RMC 12.2Kbps	Edge 2	0mm	Aux	Battery1	ON	4182	836.4	21.30	23.00	1.479	0	0.147	0.217



FCC SAR TEST REPORT

Report No. : FA9N2619-08

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2	20M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	19100	1900	24.11	24.50	1.094	0.01	0.052	0.057
	LTE Band 2	20M	QPSK	50	0	Back of Display Screen	32mm	Main	Battery1	OFF	19100	1900	23.02	23.50	1.117	-0.07	0.048	0.054
	LTE Band 2	20M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	19100	1900	24.11	24.50	1.094	0.01	0.099	0.108
	LTE Band 2	20M	QPSK	50	0	Bottom Face	7mm	Main	Battery1	OFF	19100	1900	23.02	23.50	1.117	-0.15	0.081	0.090
	LTE Band 2	20M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	19100	1900	24.11	24.50	1.094	-0.19	0.109	0.119
	LTE Band 2	20M	QPSK	50	0	Edge 1	13mm	Main	Battery1	OFF	19100	1900	23.02	23.50	1.117	0.02	0.082	0.092
	LTE Band 2	20M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	19100	1900	21.25	22.00	1.189	0.19	0.118	0.140
	LTE Band 2	20M	QPSK	50	0	Bottom Face	0mm	Main	Battery1	ON	19100	1900	20.09	21.00	1.233	0.15	0.100	0.123
	LTE Band 2	20M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	19100	1900	21.25	22.00	1.189	-0.06	0.393	0.467
	LTE Band 2	20M	QPSK	50	0	Edge 1	0mm	Main	Battery1	ON	19100	1900	20.09	21.00	1.233	-0.08	0.300	0.370
	LTE Band 2	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	19100	1900	24.11	24.50	1.094	-0.1	0.169	0.185
	LTE Band 2	20M	QPSK	50	0	Edge 4	0mm	Main	Battery1	OFF	19100	1900	23.02	23.50	1.117	-0.06	0.143	0.160
	LTE Band 2	20M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	19100	1900	24.11	24.50	1.094	0.06	0.301	0.329
	LTE Band 2	20M	QPSK	50	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	19100	1900	23.02	23.50	1.117	0.01	0.233	0.260
	LTE Band 2	20M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	19100	1900	24.11	24.50	1.094	0	0.077	0.084
	LTE Band 2	20M	QPSK	50	0	Bottom Face	23mm	Aux	Battery1	OFF	19100	1900	23.02	23.50	1.117	0.03	0.059	0.066
	LTE Band 2	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	19100	1900	24.11	24.50	1.094	0.03	0.763	0.835
04	LTE Band 2	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	18700	1860	23.40	24.50	1.288	0.04	0.760	0.979
	LTE Band 2	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	18900	1880	23.64	24.50	1.219	0.01	0.723	0.881
	LTE Band 2	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	19100	1900	23.02	23.50	1.117	0.02	0.592	0.661
	LTE Band 2	20M	QPSK	100	0	Edge 2	5mm	Aux	Battery1	OFF	19100	1900	22.95	23.50	1.135	0.06	0.572	0.649
	LTE Band 2	20M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	19100	1900	24.11	24.50	1.094	0	0.001	0.001
	LTE Band 2	20M	QPSK	50	0	Edge 1	0mm	Aux	Battery1	OFF	19100	1900	23.02	23.50	1.117	0	0.001	0.001
	LTE Band 2	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery2	OFF	18700	1860	23.40	24.50	1.288	0.07	0.754	0.971
	LTE Band 2	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery3	OFF	18700	1860	23.40	24.50	1.288	-0.02	0.735	0.947
	LTE Band 7	20M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	20850	2510	24.06	24.50	1.107	0	0.054	0.060
	LTE Band 7	20M	QPSK	50	0	Back of Display Screen	32mm	Main	Battery1	OFF	20850	2510	22.86	23.50	1.159	-0.08	0.036	0.042
	LTE Band 7	20M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	20850	2510	24.06	24.50	1.107	0.12	0.165	0.183
	LTE Band 7	20M	QPSK	50	0	Bottom Face	7mm	Main	Battery1	OFF	20850	2510	22.86	23.50	1.159	0.07	0.130	0.151
	LTE Band 7	20M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	20850	2510	24.06	24.50	1.107	0.01	0.197	0.218
	LTE Band 7	20M	QPSK	50	0	Edge 1	13mm	Main	Battery1	OFF	20850	2510	22.86	23.50	1.159	-0.02	0.154	0.178
	LTE Band 7	20M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	20850	2510	18.35	19.00	1.161	0.05	0.144	0.167
	LTE Band 7	20M	QPSK	50	0	Bottom Face	0mm	Main	Battery1	ON	20850	2510	17.21	18.00	1.199	0.01	0.113	0.136
	LTE Band 7	20M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	20850	2510	18.35	19.00	1.161	-0.06	0.385	0.447
	LTE Band 7	20M	QPSK	50	0	Edge 1	0mm	Main	Battery1	ON	20850	2510	17.21	18.00	1.199	-0.1	0.303	0.363
	LTE Band 7	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	20850	2510	24.06	24.50	1.107	0.08	0.731	0.809
	LTE Band 7	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	21100	2535	23.80	24.50	1.175	0.06	0.660	0.775
05	LTE Band 7	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	21350	2560	23.73	24.50	1.194	0.08	0.729	0.870
	LTE Band 7	20M	QPSK	50	0	Edge 4	0mm	Main	Battery1	OFF	20850	2510	22.86	23.50	1.159	0.07	0.591	0.685
	LTE Band 7	20M	QPSK	100	0	Edge 4	0mm	Main	Battery1	OFF	20850	2510	22.81	23.50	1.172	0.03	0.457	0.536
	LTE Band 7	20M	QPSK	1	0	Edge 4	0mm	Main	Battery2	OFF	21350	2560	23.73	24.50	1.194	0.02	0.712	0.850
	LTE Band 7	20M	QPSK	1	0	Edge 4	0mm	Main	Battery3	OFF	21350	2560	23.73	24.50	1.194	-0.01	0.705	0.842
	LTE Band 7	20M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	20850	2510	24.06	24.50	1.107	-0.12	0.125	0.138
	LTE Band 7	20M	QPSK	50	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	20850	2510	22.86	23.50	1.159	-0.11	0.109	0.126
	LTE Band 7	20M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	20850	2510	24.06	24.50	1.107	0.05	0.122	0.135
	LTE Band 7	20M	QPSK	50	0	Bottom Face	23mm	Aux	Battery1	OFF	20850	2510	22.86	23.50	1.159	0.13	0.088	0.102
	LTE Band 7	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	20850	2510	24.06	24.50	1.107	0.011	0.672	0.744
	LTE Band 7	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	20850	2510	22.86	23.50	1.159	-0.06	0.532	0.616
	LTE Band 7	20M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	20850	2510	24.06	24.50	1.107	0.13	0.072	0.080
	LTE Band 7	20M	QPSK	50	0	Edge 1	0mm	Aux	Battery1	OFF	20850	2510	22.86	23.50	1.159	-0.13	0.056	0.065



FCC SAR TEST REPORT

Report No. : FA9N2619-08

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12	10M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	23095	707.5	23.79	24.50	1.178	-0.17	0.060	0.071
	LTE Band 12	10M	QPSK	25	0	Back of Display Screen	32mm	Main	Battery1	OFF	23095	707.5	22.48	23.50	1.265	-0.09	0.047	0.059
	LTE Band 12	10M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	23095	707.5	23.79	24.50	1.178	-0.08	0.150	0.177
	LTE Band 12	10M	QPSK	25	0	Bottom Face	7mm	Main	Battery1	OFF	23095	707.5	22.48	23.50	1.265	-0.12	0.120	0.152
	LTE Band 12	10M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	23095	707.5	23.79	24.50	1.178	0.12	0.131	0.154
	LTE Band 12	10M	QPSK	25	0	Edge 1	13mm	Main	Battery1	OFF	23095	707.5	22.48	23.50	1.265	0.07	0.107	0.135
	LTE Band 12	10M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	23095	707.5	22.09	23.00	1.233	-0.07	0.274	0.338
	LTE Band 12	10M	QPSK	25	0	Bottom Face	0mm	Main	Battery1	ON	23095	707.5	20.87	22.00	1.297	-0.03	0.216	0.280
06	LTE Band 12	10M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	23095	707.5	22.09	23.00	1.233	-0.04	0.536	0.661
	LTE Band 12	10M	QPSK	25	0	Edge 1	0mm	Main	Battery1	ON	23095	707.5	20.87	22.00	1.297	0	0.444	0.576
	LTE Band 12	10M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	23095	707.5	23.79	24.50	1.178	0.12	0.096	0.113
	LTE Band 12	10M	QPSK	25	0	Edge 4	0mm	Main	Battery1	OFF	23095	707.5	22.48	23.50	1.265	0.1	0.089	0.113
	LTE Band 12	10M	QPSK	1	0	Edge 1	0mm	Main	Battery2	ON	23095	707.5	22.09	23.00	1.233	-0.01	0.522	0.644
	LTE Band 12	10M	QPSK	1	0	Edge 1	0mm	Main	Battery3	ON	23095	707.5	22.09	23.00	1.233	0.03	0.489	0.603
	LTE Band 12	10M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	23095	707.5	23.79	24.50	1.178	0	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	23095	707.5	22.48	23.50	1.265	0	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	23095	707.5	23.79	24.50	1.178	0.07	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	Bottom Face	23mm	Aux	Battery1	OFF	23095	707.5	22.48	23.50	1.265	0	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	23095	707.5	23.79	24.50	1.178	0	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	Edge 2	5mm	Aux	Battery1	OFF	23095	707.5	22.48	23.50	1.265	0	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	23095	707.5	23.79	24.50	1.178	0	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	Edge 1	0mm	Aux	Battery1	OFF	23095	707.5	22.48	23.50	1.265	0	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	23230	782	23.65	24.50	1.216	0.17	0.056	0.068
	LTE Band 13	10M	QPSK	25	0	Back of Display Screen	32mm	Main	Battery1	OFF	23230	782	22.60	23.50	1.230	0.15	0.045	0.055
	LTE Band 13	10M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	23230	782	23.65	24.50	1.216	-0.09	0.180	0.219
	LTE Band 13	10M	QPSK	25	0	Bottom Face	7mm	Main	Battery1	OFF	23230	782	22.60	23.50	1.230	0	0.153	0.188
	LTE Band 13	10M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	23230	782	23.65	24.50	1.216	0.06	0.165	0.201
	LTE Band 13	10M	QPSK	25	0	Edge 1	13mm	Main	Battery1	OFF	23230	782	22.60	23.50	1.230	0.07	0.148	0.182
07	LTE Band 13	10M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	23230	782	23.65	24.50	1.216	0.19	0.259	0.315
	LTE Band 13	10M	QPSK	25	0	Edge 4	0mm	Main	Battery1	OFF	23230	782	22.60	23.50	1.230	0.02	0.214	0.263
	LTE Band 13	10M	QPSK	1	0	Edge 4	0mm	Main	Battery2	OFF	23230	782	23.65	24.50	1.216	0.05	0.244	0.297
	LTE Band 13	10M	QPSK	1	0	Edge 4	0mm	Main	Battery3	OFF	23230	782	23.65	24.50	1.216	-0.01	0.253	0.308
	LTE Band 13	10M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	23230	782	23.65	24.50	1.216	0	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	23230	782	22.60	23.50	1.230	0	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	23230	782	23.65	24.50	1.216	0	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	Bottom Face	23mm	Aux	Battery1	OFF	23230	782	22.60	23.50	1.230	0	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	23230	782	23.65	24.50	1.216	0	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	Edge 2	5mm	Aux	Battery1	OFF	23230	782	22.60	23.50	1.230	0	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	Bottom Face	0mm	Aux	Battery1	ON	23230	782	21.78	23.00	1.324	-0.02	0.133	0.176
	LTE Band 13	10M	QPSK	25	0	Bottom Face	0mm	Aux	Battery1	ON	23230	782	20.78	22.00	1.324	0.06	0.111	0.147
	LTE Band 13	10M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	23230	782	23.65	24.50	1.216	-0.11	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	Edge 1	0mm	Aux	Battery1	OFF	23230	782	22.60	23.50	1.230	0.14	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	Edge 2	0mm	Aux	Battery1	ON	23230	782	21.78	23.00	1.324	0.05	0.164	0.217
	LTE Band 13	10M	QPSK	25	0	Edge 2	0mm	Aux	Battery1	ON	23230	782	20.78	22.00	1.324	-0.03	0.130	0.172



FCC SAR TEST REPORT

Report No. : FA9N2619-08

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 14	10M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	23330	793	23.60	24.50	1.230	-0.06	0.044	0.054
	LTE Band 14	10M	QPSK	25	0	Back of Display Screen	32mm	Main	Battery1	OFF	23330	793	22.51	23.50	1.256	-0.1	0.031	0.039
	LTE Band 14	10M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	23330	793	23.60	24.50	1.230	-0.09	0.145	0.178
	LTE Band 14	10M	QPSK	25	0	Bottom Face	7mm	Main	Battery1	OFF	23330	793	22.51	23.50	1.256	-0.09	0.112	0.141
	LTE Band 14	10M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	23330	793	23.60	24.50	1.230	0.11	0.092	0.113
	LTE Band 14	10M	QPSK	25	0	Edge 1	13mm	Main	Battery1	OFF	23330	793	22.51	23.50	1.256	0.07	0.071	0.089
08	LTE Band 14	10M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	23330	793	23.60	24.50	1.230	0.08	0.220	0.271
	LTE Band 14	10M	QPSK	25	0	Edge 4	0mm	Main	Battery1	OFF	23330	793	22.51	23.50	1.256	0.19	0.168	0.211
	LTE Band 14	10M	QPSK	1	0	Edge 4	0mm	Main	Battery2	OFF	23330	793	23.60	24.50	1.230	0.03	0.209	0.257
	LTE Band 14	10M	QPSK	1	0	Edge 4	0mm	Main	Battery3	OFF	23330	793	23.60	24.50	1.230	0.08	0.194	0.239
	LTE Band 14	10M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	23330	793	23.60	24.50	1.230	0	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	23330	793	22.51	23.50	1.256	0	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	23330	793	23.60	24.50	1.230	0	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	Bottom Face	23mm	Aux	Battery1	OFF	23330	793	22.51	23.50	1.256	0	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	23330	793	23.60	24.50	1.230	0	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	Edge 2	5mm	Aux	Battery1	OFF	23330	793	22.51	23.50	1.256	0	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	Bottom Face	0mm	Aux	Battery1	ON	23330	793	21.94	23.00	1.276	-0.06	0.151	0.193
	LTE Band 14	10M	QPSK	25	0	Bottom Face	0mm	Aux	Battery1	ON	23330	793	20.90	22.00	1.288	-0.02	0.118	0.152
	LTE Band 14	10M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	23330	793	23.60	24.50	1.230	0	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	Edge 1	0mm	Aux	Battery1	OFF	23330	793	22.51	23.50	1.256	0	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	Edge 2	0mm	Aux	Battery1	ON	23330	793	21.94	23.00	1.276	0.18	0.132	0.168
	LTE Band 14	10M	QPSK	25	0	Edge 2	0mm	Aux	Battery1	ON	23330	793	20.90	22.00	1.288	0.11	0.111	0.143
	LTE Band 25	20M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	26340	1880	23.46	24.50	1.271	0.04	0.055	0.070
	LTE Band 25	20M	QPSK	50	0	Back of Display Screen	32mm	Main	Battery1	OFF	26340	1880	22.38	23.50	1.294	-0.01	0.043	0.056
	LTE Band 25	20M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	26340	1880	23.46	24.50	1.271	-0.01	0.099	0.126
	LTE Band 25	20M	QPSK	50	0	Bottom Face	7mm	Main	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.17	0.095	0.123
	LTE Band 25	20M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	26340	1880	23.46	24.50	1.271	-0.02	0.115	0.146
	LTE Band 25	20M	QPSK	50	0	Edge 1	13mm	Main	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.07	0.085	0.110
	LTE Band 25	20M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	26590	1905	20.68	21.50	1.208	0.11	0.118	0.143
	LTE Band 25	20M	QPSK	50	0	Bottom Face	0mm	Main	Battery1	ON	26590	1905	19.41	20.50	1.285	0.06	0.092	0.118
	LTE Band 25	20M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	26590	1905	20.68	21.50	1.208	-0.14	0.357	0.431
	LTE Band 25	20M	QPSK	50	0	Edge 1	0mm	Main	Battery1	ON	26590	1905	19.41	20.50	1.285	-0.03	0.273	0.351
	LTE Band 25	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	26340	1880	23.46	24.50	1.271	-0.14	0.167	0.212
	LTE Band 25	20M	QPSK	50	0	Edge 4	0mm	Main	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.17	0.139	0.180
	LTE Band 25	20M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	26340	1880	23.46	24.50	1.271	0.08	0.251	0.319
	LTE Band 25	20M	QPSK	50	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.11	0.187	0.242
	LTE Band 25	20M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	26340	1880	23.46	24.50	1.271	0.14	0.082	0.104
	LTE Band 25	20M	QPSK	50	0	Bottom Face	23mm	Aux	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.05	0.065	0.084
	LTE Band 25	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	26340	1880	23.46	24.50	1.271	0.03	0.741	0.941
09	LTE Band 25	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	26140	1860	23.21	24.50	1.346	0.01	0.754	1.015
	LTE Band 25	20M	QPSK	1	99	Edge 2	5mm	Aux	Battery1	OFF	26590	1905	23.42	24.50	1.282	-0.01	0.698	0.895
	LTE Band 25	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.01	0.594	0.769
	LTE Band 25	20M	QPSK	100	0	Edge 2	5mm	Aux	Battery1	OFF	26340	1880	22.37	23.50	1.297	0.02	0.568	0.737
	LTE Band 25	20M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	26340	1880	23.46	24.50	1.271	-0.01	0.006	0.008
	LTE Band 25	20M	QPSK	50	0	Edge 1	0mm	Aux	Battery1	OFF	26340	1880	22.38	23.50	1.294	0.09	0.005	0.006
	LTE Band 25	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery2	OFF	26140	1860	23.21	24.50	1.346	0.09	0.746	1.004
	LTE Band 25	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery3	OFF	26140	1860	23.21	24.50	1.346	-0.11	0.737	0.992



FCC SAR TEST REPORT

Report No. : FA9N2619-08

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26	15M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	26865	831.5	23.45	24.50	1.274	0.17	0.058	0.074
	LTE Band 26	15M	QPSK	36	0	Back of Display Screen	32mm	Main	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0.19	0.042	0.056
	LTE Band 26	15M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	26865	831.5	23.45	24.50	1.274	-0.12	0.155	0.197
	LTE Band 26	15M	QPSK	36	0	Bottom Face	7mm	Main	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0.04	0.119	0.158
	LTE Band 26	15M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	26865	831.5	23.45	24.50	1.274	0.11	0.081	0.103
	LTE Band 26	15M	QPSK	36	0	Edge 1	13mm	Main	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0.15	0.064	0.085
10	LTE Band 26	15M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	26865	831.5	23.45	24.50	1.274	0.15	0.252	0.321
	LTE Band 26	15M	QPSK	36	0	Edge 4	0mm	Main	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0.18	0.192	0.255
	LTE Band 26	15M	QPSK	1	0	Edge 4	0mm	Main	Battery2	OFF	26865	831.5	23.45	24.50	1.274	0.11	0.243	0.309
	LTE Band 26	15M	QPSK	1	0	Edge 4	0mm	Main	Battery3	OFF	26865	831.5	23.45	24.50	1.274	0.09	0.217	0.276
	LTE Band 26	15M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	26865	831.5	23.45	24.50	1.274	0	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	26865	831.5	23.45	24.50	1.274	0	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	Bottom Face	23mm	Aux	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	26865	831.5	23.45	24.50	1.274	0	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	Edge 2	5mm	Aux	Battery1	OFF	26865	831.5	22.27	23.50	1.327	0	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	Bottom Face	0mm	Aux	Battery1	ON	26865	831.5	21.62	23.00	1.374	0.01	0.164	0.225
	LTE Band 26	15M	QPSK	36	0	Bottom Face	0mm	Aux	Battery1	ON	26865	831.5	20.59	22.00	1.384	0.09	0.124	0.172
	LTE Band 26	15M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	26865	831.5	23.45	24.50	1.274	-0.08	0.012	0.015
	LTE Band 26	15M	QPSK	36	0	Edge 1	0mm	Aux	Battery1	OFF	26865	831.5	22.27	23.50	1.327	-0.13	0.008	0.011
	LTE Band 26	15M	QPSK	1	0	Edge 2	0mm	Aux	Battery1	ON	26865	831.5	21.62	23.00	1.374	-0.14	0.154	0.212
	LTE Band 26	15M	QPSK	36	0	Edge 2	0mm	Aux	Battery1	ON	26865	831.5	20.59	22.00	1.384	-0.01	0.123	0.170
	LTE Band 30	10M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.01	0.054	0.066
	LTE Band 30	10M	QPSK	25	0	Back of Display Screen	32mm	Main	Battery1	OFF	27710	2310	21.10	22.00	1.230	-0.12	0.043	0.053
	LTE Band 30	10M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.15	0.165	0.203
	LTE Band 30	10M	QPSK	25	0	Bottom Face	7mm	Main	Battery1	OFF	27710	2310	21.10	22.00	1.230	0.18	0.132	0.162
	LTE Band 30	10M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	27710	2310	22.11	23.00	1.227	-0.09	0.267	0.328
	LTE Band 30	10M	QPSK	25	0	Edge 1	13mm	Main	Battery1	OFF	27710	2310	21.10	22.00	1.230	-0.08	0.205	0.252
	LTE Band 30	10M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	27710	2310	15.94	17.00	1.276	0.03	0.124	0.158
	LTE Band 30	10M	QPSK	25	0	Bottom Face	0mm	Main	Battery1	ON	27710	2310	14.96	16.00	1.271	-0.11	0.106	0.135
	LTE Band 30	10M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	27710	2310	15.94	17.00	1.276	-0.18	0.385	0.491
	LTE Band 30	10M	QPSK	25	0	Edge 1	0mm	Main	Battery1	ON	27710	2310	14.96	16.00	1.271	-0.14	0.311	0.395
	LTE Band 30	10M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.01	0.486	0.597
	LTE Band 30	10M	QPSK	25	0	Edge 4	0mm	Main	Battery1	OFF	27710	2310	21.10	22.00	1.230	0.08	0.395	0.486
	LTE Band 30	10M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.04	0.058	0.071
	LTE Band 30	10M	QPSK	25	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	27710	2310	21.10	22.00	1.230	0.07	0.041	0.050
	LTE Band 30	10M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.11	0.013	0.016
	LTE Band 30	10M	QPSK	25	0	Bottom Face	23mm	Aux	Battery1	OFF	27710	2310	21.10	22.00	1.230	-0.17	0.008	0.010
11	LTE Band 30	10M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.08	0.598	0.734
	LTE Band 30	10M	QPSK	25	0	Edge 2	5mm	Aux	Battery1	OFF	27710	2310	21.10	22.00	1.230	0.07	0.482	0.593
	LTE Band 30	10M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	27710	2310	22.11	23.00	1.227	0.02	0.012	0.015
	LTE Band 30	10M	QPSK	25	0	Edge 1	0mm	Aux	Battery1	OFF	27710	2310	21.10	22.00	1.230	-0.06	0.008	0.010
	LTE Band 30	10M	QPSK	1	0	Edge 2	5mm	Aux	Battery2	OFF	27710	2310	22.11	23.00	1.227	0.11	0.586	0.719
	LTE Band 30	10M	QPSK	25	0	Edge 2	5mm	Aux	Battery3	OFF	27710	2310	22.11	23.00	1.227	0.11	0.574	0.705



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Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66	20M	QPSK	1	0	Back of Display Screen	32mm	Main	Battery1	OFF	132322	1745	23.77	24.50	1.183	0.08	0.058	0.069
	LTE Band 66	20M	QPSK	50	0	Back of Display Screen	32mm	Main	Battery1	OFF	132322	1745	22.74	23.50	1.191	-0.12	0.021	0.025
	LTE Band 66	20M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	132322	1745	23.77	24.50	1.183	0.02	0.125	0.148
	LTE Band 66	20M	QPSK	50	0	Bottom Face	7mm	Main	Battery1	OFF	132322	1745	22.74	23.50	1.191	-0.06	0.096	0.114
	LTE Band 66	20M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	132322	1745	23.77	24.50	1.183	-0.16	0.218	0.258
	LTE Band 66	20M	QPSK	50	0	Edge 1	13mm	Main	Battery1	OFF	132322	1745	22.74	23.50	1.191	0.05	0.179	0.213
	LTE Band 66	20M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	132572	1770	19.67	20.50	1.211	0.03	0.084	0.102
	LTE Band 66	20M	QPSK	50	0	Bottom Face	0mm	Main	Battery1	ON	132572	1770	18.67	19.50	1.211	-0.14	0.068	0.082
	LTE Band 66	20M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	132572	1770	19.67	20.50	1.211	-0.03	0.456	0.552
	LTE Band 66	20M	QPSK	50	0	Edge 1	0mm	Main	Battery1	ON	132572	1770	18.67	19.50	1.211	-0.11	0.351	0.425
	LTE Band 66	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	132322	1745	23.77	24.50	1.183	-0.02	0.335	0.396
	LTE Band 66	20M	QPSK	50	0	Edge 4	0mm	Main	Battery1	OFF	132322	1745	22.74	23.50	1.191	0.13	0.262	0.312
	LTE Band 66	20M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	132322	1745	23.77	24.50	1.183	0.09	0.177	0.209
	LTE Band 66	20M	QPSK	50	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	132322	1745	22.74	23.50	1.191	0.15	0.134	0.160
	LTE Band 66	20M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	132322	1745	23.77	24.50	1.183	0.07	0.100	0.118
	LTE Band 66	20M	QPSK	50	0	Bottom Face	23mm	Aux	Battery1	OFF	132322	1745	22.74	23.50	1.191	0.08	0.071	0.085
	LTE Band 66	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	132322	1745	23.77	24.50	1.183	0.19	0.927	1.097
12	LTE Band 66	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	132072	1720	23.62	24.50	1.225	0.15	0.905	1.108
	LTE Band 66	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	132572	1770	23.75	24.50	1.189	0.17	0.870	1.034
	LTE Band 66	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	132322	1745	22.74	23.50	1.191	0.02	0.651	0.775
	LTE Band 66	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	132072	1720	22.56	23.50	1.242	0.04	0.734	0.911
	LTE Band 66	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	132572	1770	22.64	23.50	1.219	0.18	0.689	0.840
	LTE Band 66	20M	QPSK	100	0	Edge 2	5mm	Aux	Battery1	OFF	132322	1745	22.66	23.50	1.213	0.02	0.599	0.727
	LTE Band 66	20M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	132322	1745	23.77	24.50	1.183	0.06	0.008	0.009
	LTE Band 66	20M	QPSK	50	0	Edge 1	0mm	Aux	Battery1	OFF	132322	1745	22.74	23.50	1.191	0	0.006	0.007
	LTE Band 66	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery2	OFF	132072	1720	23.62	24.50	1.225	0.03	0.901	1.103
	LTE Band 66	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery3	OFF	132072	1720	23.62	24.50	1.225	-0.04	0.884	1.083

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Bottom Face	7mm	Main	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	-0.06	0.083	0.090
	LTE Band 41	20M	QPSK	50	0	Bottom Face	7mm	Main	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	-0.09	0.065	0.072
	LTE Band 41	20M	QPSK	1	0	Edge 1	13mm	Main	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	0.04	0.085	0.092
	LTE Band 41	20M	QPSK	50	0	Edge 1	13mm	Main	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	0.07	0.064	0.071
	LTE Band 41	20M	QPSK	1	0	Bottom Face	0mm	Main	Battery1	ON	39750	2506	20.44	21.00	1.138	62.9	1.006	0.07	0.056	0.064
	LTE Band 41	20M	QPSK	50	0	Bottom Face	0mm	Main	Battery1	ON	39750	2506	19.31	20.00	1.172	62.9	1.006	-0.11	0.032	0.038
	LTE Band 41	20M	QPSK	1	0	Edge 1	0mm	Main	Battery1	ON	39750	2506	20.44	21.00	1.138	62.9	1.006	-0.15	0.310	0.355
	LTE Band 41	20M	QPSK	50	0	Edge 1	0mm	Main	Battery1	ON	39750	2506	19.31	20.00	1.172	62.9	1.006	0.17	0.276	0.325
	LTE Band 41	20M	QPSK	1	0	Edge 4	0mm	Main	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	-0.11	0.336	0.364
	LTE Band 41	20M	QPSK	50	0	Edge 4	0mm	Main	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	0.13	0.260	0.289
	LTE Band 41	20M	QPSK	1	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	0.17	0.059	0.064
	LTE Band 41	20M	QPSK	50	0	Bottom of Laptop	24mm	Aux	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	0.1	0.046	0.051
	LTE Band 41	20M	QPSK	1	0	Bottom Face	23mm	Aux	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	-0.11	0.049	0.053
	LTE Band 41	20M	QPSK	50	0	Bottom Face	23mm	Aux	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	-0.18	0.031	0.034
	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	-0.16	1.050	1.137
	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	40185	2549.5	23.96	24.50	1.132	62.9	1.006	-0.18	1.030	1.173
	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	40620	2593	24.08	24.50	1.102	62.9	1.006	-0.12	0.806	0.893
	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	41055	2636.5	23.74	24.50	1.191	62.9	1.006	-0.01	0.451	0.540
13	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery1	OFF	41490	2680	23.83	24.50	1.167	62.9	1.006	-0.17	1.010	1.186
	LTE Band 41	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	-0.11	0.786	0.873
	LTE Band 41	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	40185	2549.5	22.90	23.50	1.148	62.9	1.006	-0.19	0.814	0.940
	LTE Band 41	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	40620	2593	22.90	23.50	1.148	62.9	1.006	-0.18	0.604	0.698
	LTE Band 41	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	41055	2636.5	22.65	23.50	1.216	62.9	1.006	-0.14	0.537	0.657
	LTE Band 41	20M	QPSK	50	0	Edge 2	5mm	Aux	Battery1	OFF	41490	2680	22.79	23.50	1.178	62.9	1.006	-0.14	0.641	0.759
	LTE Band 41	20M	QPSK	100	0	Edge 2	5mm	Aux	Battery1	OFF	39750	2506	23.01	23.50	1.119	62.9	1.006	-0.17	0.781	0.880
	LTE Band 41	20M	QPSK	1	0	Edge 1	0mm	Aux	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	0.06	0.005	0.005
	LTE Band 41	20M	QPSK	50	0	Edge 1	0mm	Aux	Battery1	OFF	39750	2506	23.07	23.50	1.104	62.9	1.006	0.05	0.003	0.003
	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery2	OFF	41490	2680	23.83	24.50	1.167	62.9	1.006	0.02	0.994	1.167
	LTE Band 41	20M	QPSK	1	0	Edge 2	5mm	Aux	Battery3	OFF	41490	2680	23.83	24.50	1.167	62.9	1.006	-0.03	0.995	1.168

15.2 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Battery	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	9262	1852.4	23.74	24.50	1.191	-	1.000	0.12	0.847	-	1.009
2nd	WCDMA II	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	9262	1852.4	23.74	24.50	1.191	-	1.000	0.13	0.845	1.00	1.007
1st	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	-	1.000	0.17	0.957	-	1.018
2nd	WCDMA IV	RMC 12.2Kbps	Edge 2	5mm	Aux	Battery1	OFF	1413	1732.6	24.23	24.50	1.064	-	1.000	0.17	0.927	1.03	0.986
1st	LTE Band 41	20M_QPSK_1_0	Edge 2	5mm	Aux	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	-0.16	1.050	-	1.137
2nd	LTE Band 41	20M_QPSK_1_0	Edge 2	5mm	Aux	Battery1	OFF	39750	2506	24.18	24.50	1.076	62.9	1.006	-0.06	1.020	1.03	1.105

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR < 1.45 W/kg, only one repeated measurement is required.
- The ratio is the difference in percentage between original and repeated *measured SAR*.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN + 2.4GHz WLAN ANT 1 + 2.4GHz WLAN ANT 2	Yes
2.	WWAN + 5GHz WLAN ANT 1 + 5GHz WLAN ANT 2	Yes
3.	WWAN + 2.4GHz WLAN ANT 1 + Bluetooth ANT 2	Yes
4.	WWAN + 5GHz WLAN ANT 1 + Bluetooth ANT 2	Yes
5.	WWAN + 5GHz WLAN ANT 1 + 5GHz WLAN ANT 2 + Bluetooth ANT 2	Yes

General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - v) The SPLSR calculated results please refer to section 16.2.



16.1 Body Exposure Conditions

<WWAN + Intel 9560D2W>

WWAN Band	Exposure Position	1	2	3	4	7	1+3+7 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)	2+3+7 Summed 1g SAR (W/kg)	2+3+4 Summed 1g SAR (W/kg)	1+3+4 Case No	1+3+4 SPLSR	2+3+4 Case No	2+3+4 SPLSR
		WWAN Ant Main 1g SAR (W/kg)	WWAN Ant Aux 1g SAR (W/kg)	2.4GHz WLAN Ant 1 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)	Bluetooth Ant 2 1g SAR (W/kg)								
WCDMA II	Bottom of Laptop at 24mm Aux		0.159	0.780	0.600	0.110	0.890	1.380	1.049	1.539				
	Bottom Face at 7mm Main	0.141		0.770	0.710	0.120	1.031	1.621	0.890	1.480	Case 3	0.03		
	Bottom Face at 23mm Aux		0.076	0.770	0.710	0.120	0.890	1.480	0.966	1.556				
	Edge 1 at 13mm Main	0.118					0.118	0.118	0.000	0.000				
	Edge 2 at 5mm Aux		1.009				0.000	0.000	1.009	1.009				
	Bottom Face at 0mm Main	0.288		0.770	0.710	0.120	1.178	1.768	0.890	1.480	Case 6	0.03		
	Edge 1 at 0mm Main	0.551					0.551	0.551	0.000	0.000				
	Edge 1 at 0mm Aux		0.039				0.000	0.000	0.039	0.039				
	Edge 4 at 0mm Main	0.423					0.423	0.423	0.000	0.000				
WCDMA IV	Bottom of Laptop at 24mm Aux		0.188	0.780	0.600	0.110	0.890	1.380	1.078	1.568				
	Bottom Face at 7mm Main	0.154		0.770	0.710	0.120	1.044	1.634	0.890	1.480	Case 9	0.03		
	Bottom Face at 23mm Aux		0.095	0.770	0.710	0.120	0.890	1.480	0.985	1.575				
	Edge 1 at 13mm Main	0.153					0.153	0.153	0.000	0.000				
	Edge 2 at 5mm Aux		1.163				0.000	0.000	1.163	1.163				
	Bottom Face at 0mm Main	0.220		0.770	0.710	0.120	1.110	1.700	0.890	1.480	Case 12	0.03		
	Edge 1 at 0mm Main	0.557					0.557	0.557	0.000	0.000				
	Edge 1 at 0mm Aux		0.046				0.000	0.000	0.046	0.046				
	Edge 4 at 0mm Main	0.412					0.412	0.412	0.000	0.000				
WCDMA V	Bottom of Laptop at 24mm Aux		0.025	0.780	0.600	0.110	0.890	1.380	0.915	1.405				
	Bottom Face at 7mm Main	0.189		0.770	0.710	0.120	1.079	1.669	0.890	1.480	Case 15	0.03		
	Bottom Face at 23mm Aux		0.012	0.770	0.710	0.120	0.890	1.480	0.902	1.492				
	Edge 1 at 13mm Main	0.154					0.154	0.154	0.000	0.000				
	Edge 2 at 5mm Aux		0.035				0.000	0.000	0.035	0.035				
	Bottom Face at 0mm Aux		0.166	0.770	0.710	0.120	0.890	1.480	1.056	1.646			Case 17	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.000	0.001	0.001				
	Edge 2 at 0mm Aux		0.217				0.000	0.000	0.217	0.217				
	Edge 4 at 0mm Main	0.280					0.280	0.280	0.000	0.000				
LTE Band 2	Bottom of Laptop at 24mm Aux		0.329	0.780	0.600	0.110	0.890	1.380	1.219	1.709			Case 19	0.04
	Bottom Face at 7mm Main	0.108		0.770	0.710	0.120	0.998	1.588	0.890	1.480				
	Bottom Face at 23mm Aux		0.084	0.770	0.710	0.120	0.890	1.480	0.974	1.564				
	Edge 1 at 13mm Main	0.119					0.119	0.119	0.000	0.000				
	Edge 2 at 5mm Aux		0.979				0.000	0.000	0.979	0.979				
	Bottom Face at 0mm Main	0.140		0.770	0.710	0.120	1.030	1.620	0.890	1.480	Case 23	0.03		
	Edge 1 at 0mm Main	0.467					0.467	0.467	0.000	0.000				
	Edge 1 at 0mm Aux		0.001				0.000	0.000	0.001	0.001				
	Edge 4 at 0mm Main	0.185					0.185	0.185	0.000	0.000				
LTE Band 7	Bottom of Laptop at 24mm Aux		0.138	0.780	0.600	0.110	0.890	1.380	1.028	1.518				
	Bottom Face at 7mm Main	0.183		0.770	0.710	0.120	1.073	1.663	0.890	1.480	Case 26	0.03		
	Bottom Face at 23mm Aux		0.135	0.770	0.710	0.120	0.890	1.480	1.025	1.615			Case 28	0.03
	Edge 1 at 13mm Main	0.218					0.218	0.218	0.000	0.000				
	Edge 2 at 5mm Aux		0.744				0.000	0.000	0.744	0.744				
	Bottom Face at 0mm Main	0.167		0.770	0.710	0.120	1.057	1.647	0.890	1.480	Case 30	0.03		
	Edge 1 at 0mm Main	0.447					0.447	0.447	0.000	0.000				
	Edge 1 at 0mm Aux		0.080				0.000	0.000	0.080	0.080				
	Edge 4 at 0mm Main	0.870					0.870	0.870	0.000	0.000				
LTE Band 12	Bottom of Laptop at 24mm Aux		0.001	0.780	0.600	0.110	0.890	1.380	0.891	1.381				
	Bottom Face at 7mm Main	0.177		0.770	0.710	0.120	1.067	1.657	0.890	1.480	Case 33	0.03		
	Bottom Face at 23mm Aux		0.001	0.770	0.710	0.120	0.890	1.480	0.891	1.481				
	Edge 1 at 13mm Main	0.154					0.154	0.154	0.000	0.000				



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	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001				
	Bottom Face at 0mm Main	0.338		0.770	0.710	0.120	1.228	1.818	0.890	1.480	Case 35	0.03		
	Edge 1 at 0mm Main	0.661					0.661	0.661	0.000	0.000				
	Edge 1 at 0mm Aux		0.001				0.000	0.000	0.001	0.001				
	Edge 4 at 0mm Main	0.113					0.113	0.113	0.000	0.000				
LTE Band 13	Bottom of Laptop at 24mm Aux		0.001	0.780	0.600	0.110	0.890	1.380	0.891	1.381				
	Bottom Face at 7mm Main	0.219		0.770	0.710	0.120	1.109	1.699	0.890	1.480	Case 38	0.03		
	Bottom Face at 23mm Aux		0.001	0.770	0.710	0.120	0.890	1.480	0.891	1.481				
	Edge 1 at 13mm Main	0.201					0.201	0.201	0.000	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001				
	Bottom Face at 0mm Aux		0.176	0.770	0.710	0.120	0.890	1.480	1.066	1.656			Case 40	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.000	0.001	0.001				
	Edge 2 at 0mm Aux		0.217				0.000	0.000	0.217	0.217				
	Edge 4 at 0mm Main	0.315					0.315	0.315	0.000	0.000				
LTE Band 14	Bottom of Laptop at 24mm Aux		0.001	0.780	0.600	0.110	0.890	1.380	0.891	1.381				
	Bottom Face at 7mm Main	0.178		0.770	0.710	0.120	1.068	1.658	0.890	1.480	Case 43	0.03		
	Bottom Face at 23mm Aux		0.001	0.770	0.710	0.120	0.890	1.480	0.891	1.481				
	Edge 1 at 13mm Main	0.113					0.113	0.113	0.000	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001				
	Bottom Face at 0mm Aux		0.193	0.770	0.710	0.120	0.890	1.480	1.083	1.673			Case 45	0.02
	Edge 1 at 0mm Aux		0.001				0.000	0.000	0.001	0.001				
	Edge 2 at 0mm Aux		0.168				0.000	0.000	0.168	0.168				
	Edge 4 at 0mm Main	0.271					0.271	0.271	0.000	0.000				
LTE Band 25	Bottom of Laptop at 24mm Aux		0.319	0.780	0.600	0.110	0.890	1.380	1.209	1.699			Case 47	0.02
	Bottom Face at 7mm Main	0.126		0.770	0.710	0.120	1.016	1.606	0.890	1.480	Case 49	0.03		
	Bottom Face at 23mm Aux		0.104	0.770	0.710	0.120	0.890	1.480	0.994	1.584				
	Edge 1 at 13mm Main	0.146					0.146	0.146	0.000	0.000				
	Edge 2 at 5mm Aux		1.015				0.000	0.000	1.015	1.015				
	Bottom Face at 0mm Main	0.143		0.770	0.710	0.120	1.033	1.623	0.890	1.480	Case 52	0.03		
	Edge 1 at 0mm Main	0.431					0.431	0.431	0.000	0.000				
	Edge 1 at 0mm Aux		0.008				0.000	0.000	0.008	0.008				
	Edge 4 at 0mm Main	0.212					0.212	0.212	0.000	0.000				
LTE Band 26	Bottom of Laptop at 24mm Aux		0.001	0.780	0.600	0.110	0.890	1.380	0.891	1.381				
	Bottom Face at 7mm Main	0.197		0.770	0.710	0.120	1.087	1.677	0.890	1.480	Case 55	0.03		
	Bottom Face at 23mm Aux		0.001	0.770	0.710	0.120	0.890	1.480	0.891	1.481				
	Edge 1 at 13mm Main	0.103					0.103	0.103	0.000	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001				
	Bottom Face at 0mm Aux		0.225	0.770	0.710	0.120	0.890	1.480	1.115	1.705			Case 57	0.03
	Edge 1 at 0mm Aux		0.015				0.000	0.000	0.015	0.015				
	Edge 2 at 0mm Aux		0.212				0.000	0.000	0.212	0.212				
	Edge 4 at 0mm Main	0.321					0.321	0.321	0.000	0.000				
LTE Band 30	Bottom of Laptop at 24mm Aux		0.071	0.780	0.600	0.110	0.890	1.380	0.961	1.451				
	Bottom Face at 7mm Main	0.203		0.770	0.710	0.120	1.093	1.683	0.890	1.480	Case 60	0.03		
	Bottom Face at 23mm Aux		0.016	0.770	0.710	0.120	0.890	1.480	0.906	1.496				
	Edge 1 at 13mm Main	0.328					0.328	0.328	0.000	0.000				
	Edge 2 at 5mm Aux		0.734				0.000	0.000	0.734	0.734				
	Bottom Face at 0mm Main	0.158		0.770	0.710	0.120	1.048	1.638	0.890	1.480	Case 62	0.03		
	Edge 1 at 0mm Main	0.491					0.491	0.491	0.000	0.000				
	Edge 1 at 0mm Aux		0.015				0.000	0.000	0.015	0.015				
	Edge 4 at 0mm Main	0.597					0.597	0.597	0.000	0.000				
LTE Band 41	Bottom of Laptop at 24mm Aux		0.064	0.780	0.600	0.110	0.890	1.380	0.954	1.444				
	Bottom Face at 7mm Main	0.090		0.770	0.710	0.120	0.980	1.570	0.890	1.480				
	Bottom Face at 23mm Aux		0.053	0.770	0.710	0.120	0.890	1.480	0.943	1.533				
	Edge 1 at 13mm Main	0.092					0.092	0.092	0.000	0.000				
	Edge 2 at 5mm Aux		1.186				0.000	0.000	1.186	1.186				
	Bottom Face at 0mm Main	0.064		0.770	0.710	0.120	0.954	1.544	0.890	1.480				



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	Edge 1 at 0mm Main	0.355					0.355	0.355	0.000	0.000				
	Edge 1 at 0mm Aux		0.005				0.000	0.000	0.005	0.005				
	Edge 4 at 0mm Main	0.364					0.364	0.364	0.000	0.000				
LTE Band 66	Bottom of Laptop at 24mm Aux		0.209	0.780	0.600	0.110	0.890	1.380	1.099	1.589				
	Bottom Face at 7mm Main	0.148		0.770	0.710	0.120	1.038	1.628	0.890	1.480	Case 67	0.03		
	Bottom Face at 23mm Aux		0.118	0.770	0.710	0.120	0.890	1.480	1.008	1.598			Case 69	0.03
	Edge 1 at 13mm Main	0.258					0.258	0.258	0.000	0.000				
	Edge 2 at 5mm Aux		1.108				0.000	0.000	1.108	1.108				
	Bottom Face at 0mm Main	0.102		0.770	0.710	0.120	0.992	1.582	0.890	1.480				
	Edge 1 at 0mm Main	0.552					0.552	0.552	0.000	0.000				
	Edge 1 at 0mm Aux		0.009				0.000	0.000	0.009	0.009				
	Edge 4 at 0mm Main	0.396					0.396	0.396	0.000	0.000				



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WWAN Band	Exposure Position	1	2	5	6	7	1+5+6+7 Summed 1g SAR (W/kg)	2+5+6+7 Summed 1g SAR (W/kg)	1+5+6+7 Case No	1+5+6+7 SPLSR	2+5+6+7 Case No	2+5+6+7 SPLSR
		WWAN Ant Main	WWAN Ant Aux	5GHz WLAN Ant 1	5GHz WLAN Ant 2	Bluetooth Ant 2						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
WCDMA II	Bottom of Laptop at 24mm Aux		0.159	0.930	0.860	0.110	1.900	2.059	Case 1	0.04	Case 2	0.04
	Bottom Face at 7mm Main	0.141		0.720	0.690	0.120	1.671	1.530	Case 4	0.03		
	Bottom Face at 23mm Aux		0.076	0.720	0.690	0.120	1.530	1.606			Case 5	0.03
	Edge 1 at 13mm Main	0.118					0.118	0.000				
	Edge 2 at 5mm Aux		1.009				0.000	1.009				
	Bottom Face at 0mm Main	0.288		0.720	0.690	0.120	1.818	1.530	Case 7	0.03		
	Edge 1 at 0mm Main	0.551					0.551	0.000				
	Edge 1 at 0mm Aux		0.039				0.000	0.039				
WCDMA IV	Bottom of Laptop at 24mm Aux		0.188	0.930	0.860	0.110	1.900	2.088	Case 1	0.04	Case 8	0.04
	Bottom Face at 7mm Main	0.154		0.720	0.690	0.120	1.684	1.530	Case 10	0.03		
	Bottom Face at 23mm Aux		0.095	0.720	0.690	0.120	1.530	1.625			Case 11	0.03
	Edge 1 at 13mm Main	0.153					0.153	0.000				
	Edge 2 at 5mm Aux		1.163				0.000	1.163				
	Bottom Face at 0mm Main	0.220		0.720	0.690	0.120	1.750	1.530	Case 13	0.03		
	Edge 1 at 0mm Main	0.557					0.557	0.000				
	Edge 1 at 0mm Aux		0.046				0.000	0.046				
WCDMA V	Bottom of Laptop at 24mm Aux		0.025	0.930	0.860	0.110	1.900	1.925	Case 1	0.04	Case 14	0.04
	Bottom Face at 7mm Main	0.189		0.720	0.690	0.120	1.719	1.530	Case 16	0.03		
	Bottom Face at 23mm Aux		0.012	0.720	0.690	0.120	1.530	1.542				
	Edge 1 at 13mm Main	0.154					0.154	0.000				
	Edge 2 at 5mm Aux		0.035				0.000	0.035				
	Bottom Face at 0mm Aux		0.166	0.720	0.690	0.120	1.530	1.696			Case 18	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 2 at 0mm Aux		0.217				0.000	0.217				
LTE Band 2	Bottom of Laptop at 24mm Aux		0.329	0.930	0.860	0.110	1.900	2.229	Case 1	0.04	Case 20	0.04
	Bottom Face at 7mm Main	0.108		0.720	0.690	0.120	1.638	1.530	Case 21	0.03		
	Bottom Face at 23mm Aux		0.084	0.720	0.690	0.120	1.530	1.614			Case 22	0.03
	Edge 1 at 13mm Main	0.119					0.119	0.000				
	Edge 2 at 5mm Aux		0.979				0.000	0.979				
	Bottom Face at 0mm Main	0.140		0.720	0.690	0.120	1.670	1.530	Case 24	0.03		
	Edge 1 at 0mm Main	0.467					0.467	0.000				
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
LTE Band 7	Bottom of Laptop at 24mm Aux		0.138	0.930	0.860	0.110	1.900	2.038	Case 1	0.04	Case 25	0.04
	Bottom Face at 7mm Main	0.183		0.720	0.690	0.120	1.713	1.530	Case 27	0.03		
	Bottom Face at 23mm Aux		0.135	0.720	0.690	0.120	1.530	1.665			Case 29	0.03
	Edge 1 at 13mm Main	0.218					0.218	0.000				
	Edge 2 at 5mm Aux		0.744				0.000	0.744				
	Bottom Face at 0mm Main	0.167		0.720	0.690	0.120	1.697	1.530	Case 31	0.03		
	Edge 1 at 0mm Main	0.447					0.447	0.000				
	Edge 1 at 0mm Aux		0.080				0.000	0.080				
LTE Band 12	Bottom of Laptop at 24mm Aux		0.001	0.930	0.860	0.110	1.900	1.901	Case 1	0.04	Case 32	0.04
	Bottom Face at 7mm Main	0.177		0.720	0.690	0.120	1.707	1.530	Case 34	0.03		
	Bottom Face at 23mm Aux		0.001	0.720	0.690	0.120	1.530	1.531				
	Edge 1 at 13mm Main	0.154					0.154	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				



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	Bottom Face at 0mm Main	0.338		0.720	0.690	0.120	1.868	1.530	Case 36	0.03		
	Edge 1 at 0mm Main	0.661					0.661	0.000				
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 4 at 0mm Main	0.113					0.113	0.000				
LTE Band 13	Bottom of Laptop at 24mm Aux		0.001	0.930	0.860	0.110	1.900	1.901	Case 1	0.04	Case 37	0.04
	Bottom Face at 7mm Main	0.219		0.720	0.690	0.120	1.749	1.530	Case 39	0.03		
	Bottom Face at 23mm Aux		0.001	0.720	0.690	0.120	1.530	1.531				
	Edge 1 at 13mm Main	0.201					0.201	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Aux		0.176	0.720	0.690	0.120	1.530	1.706			Case 41	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 2 at 0mm Aux		0.217				0.000	0.217				
	Edge 4 at 0mm Main	0.315					0.315	0.000				
LTE Band 14	Bottom of Laptop at 24mm Aux		0.001	0.930	0.860	0.110	1.900	1.901	Case 1	0.04	Case 42	0.04
	Bottom Face at 7mm Main	0.178		0.720	0.690	0.120	1.708	1.530	Case 44	0.03		
	Bottom Face at 23mm Aux		0.001	0.720	0.690	0.120	1.530	1.531				
	Edge 1 at 13mm Main	0.113					0.113	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Aux		0.193	0.720	0.690	0.120	1.530	1.723			Case 46	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 2 at 0mm Aux		0.168				0.000	0.168				
	Edge 4 at 0mm Main	0.271					0.271	0.000				
LTE Band 25	Bottom of Laptop at 24mm Aux		0.319	0.930	0.860	0.110	1.900	2.219	Case 1	0.04	Case 48	0.04
	Bottom Face at 7mm Main	0.126		0.720	0.690	0.120	1.656	1.530	Case 50	0.03		
	Bottom Face at 23mm Aux		0.104	0.720	0.690	0.120	1.530	1.634			Case 51	0.03
	Edge 1 at 13mm Main	0.146					0.146	0.000				
	Edge 2 at 5mm Aux		1.015				0.000	1.015				
	Bottom Face at 0mm Main	0.143		0.720	0.690	0.120	1.673	1.530	Case 53	0.03		
	Edge 1 at 0mm Main	0.431					0.431	0.000				
	Edge 1 at 0mm Aux		0.008				0.000	0.008				
	Edge 4 at 0mm Main	0.212					0.212	0.000				
LTE Band 26	Bottom of Laptop at 24mm Aux		0.001	0.930	0.860	0.110	1.900	1.901	Case 1	0.04	Case 54	0.04
	Bottom Face at 7mm Main	0.197		0.720	0.690	0.120	1.727	1.530	Case 56	0.03		
	Bottom Face at 23mm Aux		0.001	0.720	0.690	0.120	1.530	1.531				
	Edge 1 at 13mm Main	0.103					0.103	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Aux		0.225	0.720	0.690	0.120	1.530	1.755			Case 58	0.03
	Edge 1 at 0mm Aux		0.015				0.000	0.015				
	Edge 2 at 0mm Aux		0.212				0.000	0.212				
	Edge 4 at 0mm Main	0.321					0.321	0.000				
LTE Band 30	Bottom of Laptop at 24mm Aux		0.071	0.930	0.860	0.110	1.900	1.971	Case 1	0.04	Case 59	0.04
	Bottom Face at 7mm Main	0.203		0.720	0.690	0.120	1.733	1.530	Case 61	0.03		
	Bottom Face at 23mm Aux		0.016	0.720	0.690	0.120	1.530	1.546				
	Edge 1 at 13mm Main	0.328					0.328	0.000				
	Edge 2 at 5mm Aux		0.734				0.000	0.734				
	Bottom Face at 0mm Main	0.158		0.720	0.690	0.120	1.688	1.530	Case 63	0.03		
	Edge 1 at 0mm Main	0.491					0.491	0.000				
	Edge 1 at 0mm Aux		0.015				0.000	0.015				
	Edge 4 at 0mm Main	0.597					0.597	0.000				
LTE Band 41	Bottom of Laptop at 24mm Aux		0.064	0.930	0.860	0.110	1.900	1.964	Case 1	0.04	Case 64	0.04
	Bottom Face at 7mm Main	0.090		0.720	0.690	0.120	1.620	1.530	Case 65	0.03		
	Bottom Face at 23mm Aux		0.053	0.720	0.690	0.120	1.530	1.583				
	Edge 1 at 13mm Main	0.092					0.092	0.000				
	Edge 2 at 5mm Aux		1.186				0.000	1.186				
	Bottom Face at 0mm Main	0.064		0.720	0.690	0.120	1.594	1.530				
	Edge 1 at 0mm Main	0.355					0.355	0.000				



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	Edge 1 at 0mm Aux		0.005				0.000	0.005				
	Edge 4 at 0mm Main	0.364					0.364	0.000				
LTE Band 66	Bottom of Laptop at 24mm Aux		0.209	0.930	0.860	0.110	1.900	2.109	Case 1	0.04	Case 66	0.04
	Bottom Face at 7mm Main	0.148		0.720	0.690	0.120	1.678	1.530	Case 68	0.03		
	Bottom Face at 23mm Aux		0.118	0.720	0.690	0.120	1.530	1.648			Case 70	0.03
	Edge 1 at 13mm Main	0.258					0.258	0.000				
	Edge 2 at 5mm Aux		1.108				0.000	1.108				
	Bottom Face at 0mm Main	0.102		0.720	0.690	0.120	1.632	1.530	Case 71	0.03		
	Edge 1 at 0mm Main	0.552					0.552	0.000				
	Edge 1 at 0mm Aux		0.009				0.000	0.009				
	Edge 4 at 0mm Main	0.396					0.396	0.000				



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<WWAN + Intel AX201D2W>

WWAN Band	Exposure Position	1	2	3	4	7	1+3+7	1+3+4	2+3+7	2+3+4	1+3+7 Case No	1+3+7 SPLSR	1+3+4 Case No	1+3+4 SPLSR	2+3+4 Case No	2+3+4 SPLSR
		WWAN Ant Main	WWAN Ant Aux	2.4GHz WLAN Ant 1	2.4GHz WLAN Ant 2	Bluetooth Ant 2	Summed	Summed	Summed	Summed						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
WCDMA II	Bottom of Laptop at 24mm Aux		0.159	0.850	0.740	0.090	0.940	1.590	1.099	1.749					Case 4	0.02
	Bottom Face at 7mm Main	0.141		1.180	1.030	0.110	1.431	2.351	1.290	2.210			Case 7	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.076	1.180	1.030	0.110	1.290	2.210	1.366	2.286			Case 2	0.04	Case 7	0.04
	Edge 1 at 13mm Main	0.118				0.000	0.118	0.118	0.000	0.000						
	Edge 2 at 5mm Aux		1.009				0.000	0.000	1.009	1.009						
	Bottom Face at 0mm Main	0.288		1.180	1.030	0.110	1.578	2.498	1.290	2.210			Case 9	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.551				0.000	0.551	0.551	0.000	0.000						
	Edge 1 at 0mm Aux		0.039			0.000	0.000	0.000	0.039	0.039						
	Edge 4 at 0mm Main	0.423				0.000	0.423	0.423	0.000	0.000						
WCDMA IV	Bottom of Laptop at 24mm Aux		0.188	0.850	0.740	0.090	0.940	1.590	1.128	1.778					Case 11	0.02
	Bottom Face at 7mm Main	0.154		1.180	1.030	0.110	1.444	2.364	1.290	2.210			Case 13	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.095	1.180	1.030	0.110	1.290	2.210	1.385	2.305			Case 2	0.04	Case 15	0.04
	Edge 1 at 13mm Main	0.153				0.000	0.153	0.153	0.000	0.000						
	Edge 2 at 5mm Aux		1.163				0.000	0.000	1.163	1.163						
	Bottom Face at 0mm Main	0.220		1.180	1.030	0.110	1.510	2.430	1.290	2.210			Case 17	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.557				0.000	0.557	0.557	0.000	0.000						
	Edge 1 at 0mm Aux		0.046			0.000	0.000	0.000	0.046	0.046						
	Edge 4 at 0mm Main	0.412				0.000	0.412	0.412	0.000	0.000						
WCDMA V	Bottom of Laptop at 24mm Aux		0.025	0.850	0.740	0.090	0.940	1.590	0.965	1.615					Case 19	0.02
	Bottom Face at 7mm Main	0.189		1.180	1.030	0.110	1.479	2.399	1.290	2.210			Case 21	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.012	1.180	1.030	0.110	1.290	2.210	1.302	2.222			Case 2	0.04	Case 23	0.04
	Edge 1 at 13mm Main	0.154				0.000	0.154	0.154	0.000	0.000						
	Edge 2 at 5mm Aux		0.035				0.000	0.000	0.035	0.035						
	Bottom Face at 0mm Aux		0.166	1.180	1.030	0.110	1.290	2.210	1.456	2.376			Case 2	0.04	Case 25	0.04
	Edge 1 at 0mm Aux		0.001			0.000	0.000	0.000	0.001	0.001						
	Edge 2 at 0mm Aux		0.217			0.000	0.000	0.000	0.217	0.217						
	Edge 4 at 0mm Main	0.280				0.000	0.280	0.280	0.000	0.000						
LTE Band 2	Bottom of Laptop at 24mm Aux		0.329	0.850	0.740	0.090	0.940	1.590	1.269	1.919					Case 27	0.02
	Bottom Face at 7mm Main	0.108		1.180	1.030	0.110	1.398	2.318	1.290	2.210			Case 29	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.084	1.180	1.030	0.110	1.290	2.210	1.374	2.294			Case 2	0.04	Case 31	0.04
	Edge 1 at 13mm Main	0.119				0.000	0.119	0.119	0.000	0.000						
	Edge 2 at 5mm Aux		0.979				0.000	0.000	0.979	0.979						
	Bottom Face at 0mm Main	0.140		1.180	1.030	0.110	1.430	2.350	1.290	2.210			Case 33	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.467				0.000	0.467	0.467	0.000	0.000						
	Edge 1 at 0mm Aux		0.001			0.000	0.000	0.000	0.001	0.001						
	Edge 4 at 0mm Main	0.185				0.000	0.185	0.185	0.000	0.000						
LTE Band 7	Bottom of Laptop at 24mm Aux		0.138	0.850	0.740	0.090	0.940	1.590	1.078	1.728					Case 35	0.02
	Bottom Face at 7mm Main	0.183		1.180	1.030	0.110	1.473	2.393	1.290	2.210			Case 37	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.135	1.180	1.030	0.110	1.290	2.210	1.425	2.345			Case 2	0.04	Case 39	0.04
	Edge 1 at 13mm Main	0.218				0.000	0.218	0.218	0.000	0.000						
	Edge 2 at 5mm Aux		0.744				0.000	0.000	0.744	0.744						
	Bottom Face at 0mm Main	0.167		1.180	1.030	0.110	1.457	2.377	1.290	2.210			Case 41	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.447				0.000	0.447	0.447	0.000	0.000						
	Edge 1 at 0mm Aux		0.080			0.000	0.000	0.000	0.080	0.080						
	Edge 4 at 0mm Main	0.870				0.000	0.870	0.870	0.000	0.000						
LTE Band 12	Bottom of Laptop at 24mm Aux		0.001	0.850	0.740	0.090	0.940	1.590	0.941	1.591						
	Bottom Face at 7mm Main	0.177		1.180	1.030	0.110	1.467	2.387	1.290	2.210			Case 44	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.001	1.180	1.030	0.110	1.290	2.210	1.291	2.211			Case 2	0.04	Case 46	0.04
	Edge 1 at 13mm Main	0.154				0.000	0.154	0.154	0.000	0.000						
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001						
	Bottom Face at 0mm Main	0.338		1.180	1.030	0.110	1.628	2.548	1.290	2.210	Case 65	0.02	Case 48	0.04	Case 2	0.04



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	Edge 1 at 0mm Main	0.661				0.000	0.661	0.661	0.000	0.000						
	Edge 1 at 0mm Aux		0.001			0.000	0.000	0.000	0.001	0.001						
	Edge 4 at 0mm Main	0.113				0.000	0.113	0.113	0.000	0.000						
LTE Band 13	Bottom of Laptop at 24mm Aux		0.001	0.850	0.740	0.090	0.940	1.590	0.941	1.591						
	Bottom Face at 7mm Main	0.219		1.180	1.030	0.110	1.509	2.429	1.290	2.210			Case 51	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.001	1.180	1.030	0.110	1.290	2.210	1.291	2.211			Case 2	0.04	Case 53	0.04
	Edge 1 at 13mm Main	0.201				0.000	0.201	0.201	0.000	0.000						
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001						
	Bottom Face at 0mm Aux		0.176	1.180	1.030	0.110	1.290	2.210	1.466	2.386			Case 2	0.04	Case 55	0.04
	Edge 1 at 0mm Aux		0.001			0.000	0.000	0.000	0.001	0.001						
	Edge 2 at 0mm Aux		0.217			0.000	0.000	0.000	0.217	0.217						
	Edge 4 at 0mm Main	0.315				0.000	0.315	0.315	0.000	0.000						
LTE Band 14	Bottom of Laptop at 24mm Aux		0.001	0.850	0.740	0.090	0.940	1.590	0.941	1.591						
	Bottom Face at 7mm Main	0.178		1.180	1.030	0.110	1.468	2.388	1.290	2.210			Case 58	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.001	1.180	1.030	0.110	1.290	2.210	1.291	2.211			Case 2	0.04	Case 60	0.04
	Edge 1 at 13mm Main	0.113				0.000	0.113	0.113	0.000	0.000						
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001						
	Bottom Face at 0mm Aux		0.193	1.180	1.030	0.110	1.290	2.210	1.483	2.403			Case 2	0.04	Case 62	0.04
	Edge 1 at 0mm Aux		0.001			0.000	0.000	0.000	0.001	0.001						
	Edge 2 at 0mm Aux		0.168			0.000	0.000	0.000	0.168	0.168						
	Edge 4 at 0mm Main	0.271				0.000	0.271	0.271	0.000	0.000						
LTE Band 25	Bottom of Laptop at 24mm Aux		0.319	0.850	0.740	0.090	0.940	1.590	1.259	1.909					Case 64	0.02
	Bottom Face at 7mm Main	0.126		1.180	1.030	0.110	1.416	2.336	1.290	2.210			Case 66	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.104	1.180	1.030	0.110	1.290	2.210	1.394	2.314			Case 2	0.04	Case 68	0.04
	Edge 1 at 13mm Main	0.146				0.000	0.146	0.146	0.000	0.000						
	Edge 2 at 5mm Aux		1.015				0.000	0.000	1.015	1.015						
	Bottom Face at 0mm Main	0.143		1.180	1.030	0.110	1.433	2.353	1.290	2.210			Case 70	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.431				0.000	0.431	0.431	0.000	0.000						
	Edge 1 at 0mm Aux		0.008			0.000	0.000	0.000	0.008	0.008						
	Edge 4 at 0mm Main	0.212				0.000	0.212	0.212	0.000	0.000						
LTE Band 26	Bottom of Laptop at 24mm Aux		0.001	0.850	0.740	0.090	0.940	1.590	0.941	1.591						
	Bottom Face at 7mm Main	0.197		1.180	1.030	0.110	1.487	2.407	1.290	2.210			Case 73	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.001	1.180	1.030	0.110	1.290	2.210	1.291	2.211			Case 2	0.04	Case 75	0.04
	Edge 1 at 13mm Main	0.103				0.000	0.103	0.103	0.000	0.000						
	Edge 2 at 5mm Aux		0.001				0.000	0.000	0.001	0.001						
	Bottom Face at 0mm Aux		0.225	1.180	1.030	0.110	1.290	2.210	1.515	2.435			Case 2	0.04	Case 77	0.04
	Edge 1 at 0mm Aux		0.015			0.000	0.000	0.000	0.015	0.015						
	Edge 2 at 0mm Aux		0.212			0.000	0.000	0.000	0.212	0.212						
	Edge 4 at 0mm Main	0.321				0.000	0.321	0.321	0.000	0.000						
LTE Band 30	Bottom of Laptop at 24mm Aux		0.071	0.850	0.740	0.090	0.940	1.590	1.011	1.661					Case 79	0.02
	Bottom Face at 7mm Main	0.203		1.180	1.030	0.110	1.493	2.413	1.290	2.210			Case 81	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.016	1.180	1.030	0.110	1.290	2.210	1.306	2.226			Case 2	0.04	Case 83	0.04
	Edge 1 at 13mm Main	0.328				0.000	0.328	0.328	0.000	0.000						
	Edge 2 at 5mm Aux		0.734				0.000	0.000	0.734	0.734						
	Bottom Face at 0mm Main	0.158		1.180	1.030	0.110	1.448	2.368	1.290	2.210			Case 85	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.491				0.000	0.491	0.491	0.000	0.000						
	Edge 1 at 0mm Aux		0.015			0.000	0.000	0.000	0.015	0.015						
	Edge 4 at 0mm Main	0.597				0.000	0.597	0.597	0.000	0.000						
LTE Band 41	Bottom of Laptop at 24mm Aux		0.064	0.850	0.740	0.090	0.940	1.590	1.004	1.654					Case 87	0.02
	Bottom Face at 7mm Main	0.090		1.180	1.030	0.110	1.380	2.300	1.290	2.210			Case 89	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.053	1.180	1.030	0.110	1.290	2.210	1.343	2.263			Case 2	0.04	Case 91	0.04
	Edge 1 at 13mm Main	0.092				0.000	0.092	0.092	0.000	0.000						
	Edge 2 at 5mm Aux		1.186				0.000	0.000	1.186	1.186						
	Bottom Face at 0mm Main	0.064		1.180	1.030	0.110	1.354	2.274	1.290	2.210			Case 93	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.355				0.000	0.355	0.355	0.000	0.000						
	Edge 1 at 0mm Aux		0.005			0.000	0.000	0.000	0.005	0.005						



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	Edge 4 at 0mm Main	0.364				0.000	0.364	0.364	0.000	0.000						
LTE Band 66	Bottom of Laptop at 24mm Aux		0.209	0.850	0.740	0.090	0.940	1.590	1.149	1.799					Case 95	0.02
	Bottom Face at 7mm Main	0.148		1.180	1.030	0.110	1.438	2.358	1.290	2.210			Case 97	0.04	Case 2	0.04
	Bottom Face at 23mm Aux		0.118	1.180	1.030	0.110	1.290	2.210	1.408	2.328			Case 2	0.04	Case 99	0.04
	Edge 1 at 13mm Main	0.258				0.000	0.258	0.258	0.000	0.000						
	Edge 2 at 5mm Aux		1.108				0.000	0.000	1.108	1.108						
	Bottom Face at 0mm Main	0.102		1.180	1.030	0.110	1.392	2.312	1.290	2.210			Case 101	0.04	Case 2	0.04
	Edge 1 at 0mm Main	0.552				0.000	0.552	0.552	0.000	0.000						
	Edge 1 at 0mm Aux		0.009			0.000	0.000	0.000	0.009	0.009						
	Edge 4 at 0mm Main	0.396				0.000	0.396	0.396	0.000	0.000						



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WWAN Band	Exposure Position	1	2	5	6	7	1+5+6+7	2+5+6+7	1+5+6+7 Case No	1+5+6+7 SPLSR	2+5+6+7 Case No	2+5+6+7 SPLSR
		WWAN Ant Main	WWAN Ant Aux	5GHz WLAN Ant 1	5GHz WLAN Ant 2	Bluetooth Ant 2	Summed	Summed				
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)				
WCDMA II	Bottom of Laptop at 24mm Aux		0.159	1.050	1.030	0.090	2.170	2.329	Case 1	0.04	Case 5	0.04
	Bottom Face at 7mm Main	0.141		0.840	0.760	0.110	1.851	1.710	Case 6	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.076	0.840	0.760	0.110	1.710	1.786	Case 3	0.03	Case 8	0.03
	Edge 1 at 13mm Main	0.118					0.118	0.000				
	Edge 2 at 5mm Aux		1.009				0.000	1.009				
	Bottom Face at 0mm Main	0.288		0.840	0.760	0.110	1.998	1.710	Case 10	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.551					0.551	0.000				
	Edge 1 at 0mm Aux		0.039				0.000	0.039				
	Edge 4 at 0mm Main	0.423					0.423	0.000				
WCDMA IV	Bottom of Laptop at 24mm Aux		0.188	1.050	1.030	0.090	2.170	2.358	Case 1	0.04	Case 12	0.04
	Bottom Face at 7mm Main	0.154		0.840	0.760	0.110	1.864	1.710	Case 14	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.095	0.840	0.760	0.110	1.710	1.805	Case 3	0.03	Case 16	0.03
	Edge 1 at 13mm Main	0.153					0.153	0.000				
	Edge 2 at 5mm Aux		1.163				0.000	1.163				
	Bottom Face at 0mm Main	0.220		0.840	0.760	0.110	1.930	1.710	Case 18	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.557					0.557	0.000				
	Edge 1 at 0mm Aux		0.046				0.000	0.046				
	Edge 4 at 0mm Main	0.412					0.412	0.000				
WCDMA V	Bottom of Laptop at 24mm Aux		0.025	1.050	1.030	0.090	2.170	2.195	Case 1	0.04	Case 20	0.04
	Bottom Face at 7mm Main	0.189		0.840	0.760	0.110	1.899	1.710	Case 22	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.012	0.840	0.760	0.110	1.710	1.722	Case 3	0.03	Case 24	0.03
	Edge 1 at 13mm Main	0.154					0.154	0.000				
	Edge 2 at 5mm Aux		0.035				0.000	0.035				
	Bottom Face at 0mm Aux		0.166	0.840	0.760	0.110	1.710	1.876	Case 3	0.03	Case 26	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 2 at 0mm Aux		0.217				0.000	0.217				
	Edge 4 at 0mm Main	0.280					0.280	0.000				
LTE Band 2	Bottom of Laptop at 24mm Aux		0.329	1.050	1.030	0.090	2.170	2.499	Case 1	0.04	Case 28	0.04
	Bottom Face at 7mm Main	0.108		0.840	0.760	0.110	1.818	1.710	Case 30	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.084	0.840	0.760	0.110	1.710	1.794	Case 3	0.03	Case 32	0.03
	Edge 1 at 13mm Main	0.119					0.119	0.000				
	Edge 2 at 5mm Aux		0.979				0.000	0.979				
	Bottom Face at 0mm Main	0.140		0.840	0.760	0.110	1.850	1.710	Case 34	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.467					0.467	0.000				
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 4 at 0mm Main	0.185					0.185	0.000				
LTE Band 7	Bottom of Laptop at 24mm Aux		0.138	1.050	1.030	0.090	2.170	2.308	Case 1	0.04	Case 36	0.04
	Bottom Face at 7mm Main	0.183		0.840	0.760	0.110	1.893	1.710	Case 38	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.135	0.840	0.760	0.110	1.710	1.845	Case 3	0.03	Case 40	0.03
	Edge 1 at 13mm Main	0.218					0.218	0.000				
	Edge 2 at 5mm Aux		0.744				0.000	0.744				
	Bottom Face at 0mm Main	0.167		0.840	0.760	0.110	1.877	1.710	Case 42	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.447					0.447	0.000				
	Edge 1 at 0mm Aux		0.080				0.000	0.080				
	Edge 4 at 0mm Main	0.870					0.870	0.000				
LTE Band 12	Bottom of Laptop at 24mm Aux		0.001	1.050	1.030	0.090	2.170	2.171	Case 1	0.04	Case 43	0.04
	Bottom Face at 7mm Main	0.177		0.840	0.760	0.110	1.887	1.710	Case 45	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.001	0.840	0.760	0.110	1.710	1.711	Case 3	0.03	Case 47	0.03
	Edge 1 at 13mm Main	0.154					0.154	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Main	0.338		0.840	0.760	0.110	2.048	1.710	Case 49	0.03	Case 3	0.03



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	Edge 1 at 0mm Main	0.661					0.661	0.000				
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 4 at 0mm Main	0.113					0.113	0.000				
LTE Band 13	Bottom of Laptop at 24mm Aux		0.001	1.050	1.030	0.090	2.170	2.171	Case 1	0.04	Case 50	0.04
	Bottom Face at 7mm Main	0.219		0.840	0.760	0.110	1.929	1.710	Case 52	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.001	0.840	0.760	0.110	1.710	1.711	Case 3	0.03	Case 54	0.03
	Edge 1 at 13mm Main	0.201					0.201	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Aux		0.176	0.840	0.760	0.110	1.710	1.886	Case 3	0.03	Case 56	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 2 at 0mm Aux		0.217				0.000	0.217				
	Edge 4 at 0mm Main	0.315					0.315	0.000				
LTE Band 14	Bottom of Laptop at 24mm Aux		0.001	1.050	1.030	0.090	2.170	2.171	Case 1	0.04	Case 57	0.04
	Bottom Face at 7mm Main	0.178		0.840	0.760	0.110	1.888	1.710	Case 59	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.001	0.840	0.760	0.110	1.710	1.711	Case 3	0.03	Case 61	0.03
	Edge 1 at 13mm Main	0.113					0.113	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Aux		0.193	0.840	0.760	0.110	1.710	1.903	Case 3	0.03	Case 63	0.03
	Edge 1 at 0mm Aux		0.001				0.000	0.001				
	Edge 2 at 0mm Aux		0.168				0.000	0.168				
	Edge 4 at 0mm Main	0.271					0.271	0.000				
LTE Band 25	Bottom of Laptop at 24mm Aux		0.319	1.050	1.030	0.090	2.170	2.489	Case 1	0.04	Case 65	0.04
	Bottom Face at 7mm Main	0.126		0.840	0.760	0.110	1.836	1.710	Case 67	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.104	0.840	0.760	0.110	1.710	1.814	Case 3	0.03	Case 69	0.03
	Edge 1 at 13mm Main	0.146					0.146	0.000				
	Edge 2 at 5mm Aux		1.015				0.000	1.015				
	Bottom Face at 0mm Main	0.143		0.840	0.760	0.110	1.853	1.710	Case 71	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.431					0.431	0.000				
	Edge 1 at 0mm Aux		0.008				0.000	0.008				
	Edge 4 at 0mm Main	0.212					0.212	0.000				
LTE Band 26	Bottom of Laptop at 24mm Aux		0.001	1.050	1.030	0.090	2.170	2.171	Case 1	0.04	Case 72	0.04
	Bottom Face at 7mm Main	0.197		0.840	0.760	0.110	1.907	1.710	Case 74	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.001	0.840	0.760	0.110	1.710	1.711	Case 3	0.03	Case 76	0.03
	Edge 1 at 13mm Main	0.103					0.103	0.000				
	Edge 2 at 5mm Aux		0.001				0.000	0.001				
	Bottom Face at 0mm Aux		0.225	0.840	0.760	0.110	1.710	1.935	Case 3	0.03	Case 78	0.03
	Edge 1 at 0mm Aux		0.015				0.000	0.015				
	Edge 2 at 0mm Aux		0.212				0.000	0.212				
	Edge 4 at 0mm Main	0.321					0.321	0.000				
LTE Band 30	Bottom of Laptop at 24mm Aux		0.071	1.050	1.030	0.090	2.170	2.241	Case 1	0.04	Case 80	0.04
	Bottom Face at 7mm Main	0.203		0.840	0.760	0.110	1.913	1.710	Case 82	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.016	0.840	0.760	0.110	1.710	1.726	Case 3	0.03	Case 84	0.03
	Edge 1 at 13mm Main	0.328					0.328	0.000				
	Edge 2 at 5mm Aux		0.734				0.000	0.734				
	Bottom Face at 0mm Main	0.158		0.840	0.760	0.110	1.868	1.710	Case 86	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.491					0.491	0.000				
	Edge 1 at 0mm Aux		0.015				0.000	0.015				
	Edge 4 at 0mm Main	0.597					0.597	0.000				
LTE Band 41	Bottom of Laptop at 24mm Aux		0.064	1.050	1.030	0.090	2.170	2.234	Case 1	0.04	Case 88	0.04
	Bottom Face at 7mm Main	0.090		0.840	0.760	0.110	1.800	1.710	Case 90	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.053	0.840	0.760	0.110	1.710	1.763	Case 3	0.03	Case 92	0.03
	Edge 1 at 13mm Main	0.092					0.092	0.000				
	Edge 2 at 5mm Aux		1.186				0.000	1.186				
	Bottom Face at 0mm Main	0.064		0.840	0.760	0.110	1.774	1.710	Case 94	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.355					0.355	0.000				
	Edge 1 at 0mm Aux		0.005				0.000	0.005				



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	Edge 4 at 0mm Main	0.364					0.364	0.000				
LTE Band 66	Bottom of Laptop at 24mm Aux		0.209	1.050	1.030	0.090	2.170	2.379	Case 1	0.04	Case 96	0.04
	Bottom Face at 7mm Main	0.148		0.840	0.760	0.110	1.858	1.710	Case 98	0.03	Case 3	0.03
	Bottom Face at 23mm Aux		0.118	0.840	0.760	0.110	1.710	1.828	Case 3	0.03	Case 100	0.03
	Edge 1 at 13mm Main	0.258					0.258	0.000				
	Edge 2 at 5mm Aux		1.108				0.000	1.108				
	Bottom Face at 0mm Main	0.102		0.840	0.760	0.110	1.812	1.710	Case 102	0.03	Case 3	0.03
	Edge 1 at 0mm Main	0.552					0.552	0.000				
	Edge 1 at 0mm Aux		0.009				0.000	0.009				
	Edge 4 at 0mm Main	0.396					0.396	0.000				

16.2 SPLSR Evaluation and Analysis

General Note:

- According to section 13 antenna location, the minimum distance between each transmit antenna if used for SPLSR analysis, $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary

<WWAN + Intel 9560D2W>

Case 1	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 2	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Aux	Bottom of Laptop	0.159	24	144.0	1.09	0.01	Not required
	5G_Ant 1		0.93	0				
	3G B2_Aux	Bottom of Laptop	0.159	24	211.0	1.13	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 3	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Main	Bottom Face	0.141	7	195.0	0.91	0.00	Not required
	2.4G_Ant 1		0.77	0				
	3G B2_Main	Bottom Face	0.141	7	187.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 4	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Main	Bottom Face	0.141	7	195.0	0.86	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B2_Main	Bottom Face	0.141	7	187.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 5	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Aux	Bottom Face	0.076	23	144.0	0.80	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B2_Aux	Bottom Face	0.076	23	211.0	0.89	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 6	3G B2_Main	Bottom Face	0.288	0	195.0	1.06	0.01	Not required
	2.4G_Ant 1		0.77	0				
	3G B2_Main	Bottom Face	0.288	0	187.0	1.00	0.01	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 7	3G B2_Main	Bottom Face	0.288	0	195.0	1.01	0.01	Not required
	5G_Ant 1		0.72	0				
	3G B2_Main	Bottom Face	0.288	0	187.0	0.98	0.01	Not required
	BT_Ant 2+ 5G_Ant 2		0.69	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				

	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 8	3G B4_Aux	Bottom of Laptop	0.188	24	144.0	1.12	0.01	Not required
	5G_Ant 1		0.93	0				
	3G B4_Aux	Bottom of Laptop	0.188	24	211.0	1.16	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 9	3G B4_Main	Bottom Face	0.154	7	195.0	0.92	0.00	Not required
	2.4G_Ant 1		0.77	0				
	3G B4_Main	Bottom Face	0.154	7	187.0	0.86	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 10	3G B4_Main	Bottom Face	0.154	7	195.0	0.87	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B4_Main	Bottom Face	0.154	7	187.0	0.96	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 11	3G B4_Aux	Bottom Face	0.095	23	144.0	0.82	0.01	Not required
	5G_Ant 1		0.72	0				
	3G B4_Aux	Bottom Face	0.095	23	211.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 12	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Main	Bottom Face	0.22	0	195.0	0.99	0.01	Not required
	2.4G_Ant 1		0.77	0				
	3G B4_Main	Bottom Face	0.22	0	187.0	0.93	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 13	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Main	Bottom Face	0.22	0	195.0	0.94	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B4_Main	Bottom Face	0.22	0	187.0	1.03	0.01	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				

Case 14	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Aux	Bottom of Laptop	0.025	24	144.0	0.96	0.01	Not required
	5G_Ant 1		0.93	0				
	3G B5_Aux	Bottom of Laptop	0.025	24	211.0	1.00	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 15	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Main	Bottom Face	0.189	7	195.0	0.96	0.00	Not required
	2.4G_Ant 1		0.77	0				
	3G B5_Main	Bottom Face	0.189	7	187.0	0.90	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 16	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Main	Bottom Face	0.189	7	195.0	0.91	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B5_Main	Bottom Face	0.189	7	187.0	1.00	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 17	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Aux	Bottom Face	0.166	0	144.0	0.94	0.01	Not required
	2.4G_Ant 1		0.77	0				
	3G B5_Aux	Bottom Face	0.166	0	211.0	0.88	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 18	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Aux	Bottom Face	0.166	0	144.0	0.89	0.01	Not required
	5G_Ant 1		0.72	0				
	3G B5_Aux	Bottom Face	0.166	0	211.0	0.98	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 19	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Aux	Bottom of Laptop	0.329	24	144.0	1.26	0.01	Not required
	2.4G_Ant 1		0.93	0				
	4G B2_Aux	Bottom of Laptop	0.329	24	211.0	1.19	0.01	Not required
	2.4G_Ant 2		0.86	0				
	2.4G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.79	0.04	Not required
	2.4G_Ant 2		0.86	0				

Case 20	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Aux	Bottom of Laptop	0.329	24	144.0	1.26	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B2_Aux	Bottom of Laptop	0.329	24	211.0	1.30	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 21	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Main	Bottom Face	0.108	7	195.0	0.83	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B2_Main	Bottom Face	0.108	7	187.0	0.92	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 22	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Aux	Bottom Face	0.084	23	144.0	0.80	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B2_Aux	Bottom Face	0.084	23	211.0	0.89	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 23	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Main	Bottom Face	0.14	7	195.0	0.91	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B2_Main	Bottom Face	0.14	7	187.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 24	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Main	Bottom Face	0.14	0	195.0	0.86	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B2_Main	Bottom Face	0.14	0	187.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 25	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Aux	Bottom of Laptop	0.138	24	144.0	1.07	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B7_Aux	Bottom of Laptop	0.138	24	211.0	1.11	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 26	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.183	7	195.0	0.95	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B7_Main	Bottom Face	0.183	7	187.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 27	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.183	23	195.0	0.90	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B7_Main	Bottom Face	0.183	23	187.0	0.99	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 28	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Aux	Bottom Face	0.135	23	144.0	0.91	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B7_Aux	Bottom Face	0.135	23	211.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 29	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Aux	Bottom Face	0.135	23	144.0	0.86	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B7_Aux	Bottom Face	0.135	23	211.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 30	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.167	23	195.0	0.94	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B7_Main	Bottom Face	0.167	23	187.0	0.88	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 31	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.167	23	195.0	0.89	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B7_Main	Bottom Face	0.167	23	187.0	0.98	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 32	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B12_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 33	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.177	7	195.0	0.95	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B12_Main	Bottom Face	0.177	7	187.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 34	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.177	23	195.0	0.90	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B12_Main	Bottom Face	0.177	23	187.0	0.99	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 35	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.338	23	195.0	1.11	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B12_Main	Bottom Face	0.338	23	187.0	1.05	0.01	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 36	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.338	23	195.0	1.06	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B12_Main	Bottom Face	0.338	23	187.0	1.15	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 37	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B13_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 38	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Main	Bottom Face	0.219	7	195.0	0.99	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B13_Main	Bottom Face	0.219	7	187.0	0.93	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 39	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Main	Bottom Face	0.219	23	195.0	0.94	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B13_Main	Bottom Face	0.219	23	187.0	1.03	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 40	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Aux	Bottom Face	0.176	0	144.0	0.95	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B13_Aux	Bottom Face	0.176	0	211.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 41	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Aux	Bottom Face	0.176	0	144.0	0.90	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B13_Aux	Bottom Face	0.176	0	211.0	0.87	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.69	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 42	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B14_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 43	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Main	Bottom Face	0.178	7	195.0	0.95	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B14_Main	Bottom Face	0.178	7	187.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 44	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Main	Bottom Face	0.178	23	195.0	0.90	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B14_Main	Bottom Face	0.178	23	187.0	0.99	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 45	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Aux	Bottom Face	0.193	0	144.0	0.96	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B14_Aux	Bottom Face	0.193	0	211.0	0.90	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	83.0	1.48	0.02	Not required
	2.4G_Ant 2		0.71	0				

Case 46	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Aux	Bottom Face	0.193	0	144.0	0.91	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B14_Aux	Bottom Face	0.193	0	211.0	0.88	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.69	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 47	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Aux	Bottom of Laptop	0.319	24	144.0	1.10	0.01	Not required
	2.4G_Ant 1		0.78	0				
	4G B25_Aux	Bottom of Laptop	0.319	24	211.0	0.92	0.00	Not required
	2.4G_Ant 2		0.6	0				
	2.4G_Ant 1	Bottom of Laptop	0.78	0	65.9	1.38	0.02	Not required
	2.4G_Ant 2		0.6	0				

Case 48	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Aux	Bottom of Laptop	0.319	24	144.0	1.25	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B25_Aux	Bottom of Laptop	0.319	24	211.0	1.29	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 49	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.126	7	195.0	0.90	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B25_Main	Bottom Face	0.126	7	187.0	0.84	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 50	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.126	7	195.0	0.85	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B25_Main	Bottom Face	0.126	7	187.0	0.94	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 51	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Aux	Bottom Face	0.104	23	144.0	0.82	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B25_Aux	Bottom Face	0.104	23	211.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 52	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.143	0	195.0	0.91	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B25_Main	Bottom Face	0.143	0	187.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 53	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.143	0	195.0	0.86	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B25_Main	Bottom Face	0.143	0	187.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 54	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B26_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 55	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Main	Bottom Face	0.197	7	195.0	0.97	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B26_Main	Bottom Face	0.197	7	187.0	0.91	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 56	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Main	Bottom Face	0.197	7	195.0	0.92	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B26_Main	Bottom Face	0.197	7	187.0	1.01	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 57	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Aux	Bottom Face	0.225	0	144.0	1.00	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B26_Aux	Bottom Face	0.225	0	211.0	0.94	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 58	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Aux	Bottom Face	0.225	0	144.0	0.95	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B26_Aux	Bottom Face	0.225	0	211.0	1.04	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 59	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Aux	Bottom of Laptop	0.071	24	144.0	1.00	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B30_Aux	Bottom of Laptop	0.071	24	211.0	1.04	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 60	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.203	7	195.0	0.97	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B30_Main	Bottom Face	0.203	7	187.0	0.91	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 61	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.203	7	195.0	0.92	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B30_Main	Bottom Face	0.203	7	187.0	1.01	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 62	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.158	0	195.0	0.93	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B30_Main	Bottom Face	0.158	0	187.0	0.87	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 63	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.158	0	195.0	0.88	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B30_Main	Bottom Face	0.158	0	187.0	0.97	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 64	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B41_Aux	Bottom of Laptop	0.064	24	144.0	0.99	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B41_Aux	Bottom of Laptop	0.064	24	211.0	1.03	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 65	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B41_Main	Bottom Face	0.09	7	195.0	0.81	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B41_Main	Bottom Face	0.09	7	187.0	0.90	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 66	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B66_Aux	Bottom of Laptop	0.209	24	144.0	1.14	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B66_Aux	Bottom of Laptop	0.209	24	211.0	1.18	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 67	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B66_Main	Bottom Face	0.148	7	195.0	0.92	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B66_Main	Bottom Face	0.148	7	187.0	0.86	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 68	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B66_Main	Bottom Face	0.148	7	195.0	0.87	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B66_Main	Bottom Face	0.148	7	187.0	0.96	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 69	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B66_Aux	Bottom Face	0.118	23	144.0	0.89	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B66_Aux	Bottom Face	0.118	23	211.0	0.83	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 70	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B66_Aux	Bottom Face	0.118	23	144.0	0.84	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B66_Aux	Bottom Face	0.118	23	211.0	0.93	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 71	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B66_Main	Bottom Face	0.102	0	195.0	0.82	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B66_Main	Bottom Face	0.102	0	187.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

<WWAN + Intel AX201D2W>

Case 1	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 2	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Aux	Bottom of Laptop	0.159	24	144.0	1.09	0.01	Not required
	5G_Ant 1		0.93	0				
	3G B2_Aux	Bottom of Laptop	0.159	24	211.0	1.13	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 3	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Main	Bottom Face	0.141	7	195.0	0.91	0.00	Not required
	2.4G_Ant 1		0.77	0				
	3G B2_Main	Bottom Face	0.141	7	187.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 4	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Main	Bottom Face	0.141	7	195.0	0.86	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B2_Main	Bottom Face	0.141	7	187.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 5	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Aux	Bottom Face	0.076	23	144.0	0.80	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B2_Aux	Bottom Face	0.076	23	211.0	0.89	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 6	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Main	Bottom Face	0.288	0	195.0	1.06	0.01	Not required
	2.4G_Ant 1		0.77	0				
	3G B2_Main	Bottom Face	0.288	0	187.0	1.00	0.01	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 7	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B2_Main	Bottom Face	0.288	0	195.0	1.01	0.01	Not required
	5G_Ant 1		0.72	0				
	3G B2_Main	Bottom Face	0.288	0	187.0	0.98	0.01	Not required
	BT_Ant 2+ 5G_Ant 2		0.69	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				

Case 8	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Aux	Bottom of Laptop	0.188	24	144.0	1.12	0.01	Not required
	5G_Ant 1		0.93	0				
	3G B4_Aux	Bottom of Laptop	0.188	24	211.0	1.16	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 9	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Main	Bottom Face	0.154	7	195.0	0.92	0.00	Not required
	2.4G_Ant 1		0.77	0				
	3G B4_Main	Bottom Face	0.154	7	187.0	0.86	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 10	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Main	Bottom Face	0.154	7	195.0	0.87	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B4_Main	Bottom Face	0.154	7	187.0	0.96	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 11	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Aux	Bottom Face	0.095	23	144.0	0.82	0.01	Not required
	5G_Ant 1		0.72	0				
	3G B4_Aux	Bottom Face	0.095	23	211.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 12	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Main	Bottom Face	0.22	0	195.0	0.99	0.01	Not required
	2.4G_Ant 1		0.77	0				
	3G B4_Main	Bottom Face	0.22	0	187.0	0.93	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 13	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B4_Main	Bottom Face	0.22	0	195.0	0.94	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B4_Main	Bottom Face	0.22	0	187.0	1.03	0.01	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				

Case 14	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Aux	Bottom of Laptop	0.025	24	144.0	0.96	0.01	Not required
	5G_Ant 1		0.93	0				
	3G B5_Aux	Bottom of Laptop	0.025	24	211.0	1.00	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 15	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Main	Bottom Face	0.189	7	195.0	0.96	0.00	Not required
	2.4G_Ant 1		0.77	0				
	3G B5_Main	Bottom Face	0.189	7	187.0	0.90	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 16	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Main	Bottom Face	0.189	7	195.0	0.91	0.00	Not required
	5G_Ant 1		0.72	0				
	3G B5_Main	Bottom Face	0.189	7	187.0	1.00	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 17	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Aux	Bottom Face	0.166	0	144.0	0.94	0.01	Not required
	2.4G_Ant 1		0.77	0				
	3G B5_Aux	Bottom Face	0.166	0	211.0	0.88	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 18	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	3G B5_Aux	Bottom Face	0.166	0	144.0	0.89	0.01	Not required
	5G_Ant 1		0.72	0				
	3G B5_Aux	Bottom Face	0.166	0	211.0	0.98	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 19	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Aux	Bottom of Laptop	0.329	24	144.0	1.26	0.01	Not required
	2.4G_Ant 1		0.93	0				
	4G B2_Aux	Bottom of Laptop	0.329	24	211.0	1.19	0.01	Not required
	2.4G_Ant 2		0.86	0				
	2.4G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.79	0.04	Not required
	2.4G_Ant 2		0.86	0				

Case 20	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Aux	Bottom of Laptop	0.329	24	144.0	1.26	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B2_Aux	Bottom of Laptop	0.329	24	211.0	1.30	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 21	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Main	Bottom Face	0.108	7	195.0	0.83	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B2_Main	Bottom Face	0.108	7	187.0	0.92	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 22	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Aux	Bottom Face	0.084	23	144.0	0.80	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B2_Aux	Bottom Face	0.084	23	211.0	0.89	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 23	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Main	Bottom Face	0.14	7	195.0	0.91	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B2_Main	Bottom Face	0.14	7	187.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 24	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B2_Main	Bottom Face	0.14	0	195.0	0.86	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B2_Main	Bottom Face	0.14	0	187.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 25	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Aux	Bottom of Laptop	0.138	24	144.0	1.07	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B7_Aux	Bottom of Laptop	0.138	24	211.0	1.11	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 26	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.183	7	195.0	0.95	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B7_Main	Bottom Face	0.183	7	187.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 27	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.183	23	195.0	0.90	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B7_Main	Bottom Face	0.183	23	187.0	0.99	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 28	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Aux	Bottom Face	0.135	23	144.0	0.91	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B7_Aux	Bottom Face	0.135	23	211.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 29	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Aux	Bottom Face	0.135	23	144.0	0.86	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B7_Aux	Bottom Face	0.135	23	211.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 30	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.167	23	195.0	0.94	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B7_Main	Bottom Face	0.167	23	187.0	0.88	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 31	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B7_Main	Bottom Face	0.167	23	195.0	0.89	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B7_Main	Bottom Face	0.167	23	187.0	0.98	0.01	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2+ 5G_Ant 2		0.81	0				

Case 32	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B12_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 33	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.177	7	195.0	0.95	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B12_Main	Bottom Face	0.177	7	187.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 34	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.177	23	195.0	0.90	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B12_Main	Bottom Face	0.177	23	187.0	0.99	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 35	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.338	23	195.0	1.11	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B12_Main	Bottom Face	0.338	23	187.0	1.05	0.01	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 36	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B12_Main	Bottom Face	0.338	23	195.0	1.06	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B12_Main	Bottom Face	0.338	23	187.0	1.15	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 37	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B13_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 38	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Main	Bottom Face	0.219	7	195.0	0.99	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B13_Main	Bottom Face	0.219	7	187.0	0.93	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 39	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Main	Bottom Face	0.219	23	195.0	0.94	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B13_Main	Bottom Face	0.219	23	187.0	1.03	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 40	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Aux	Bottom Face	0.176	0	144.0	0.95	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B13_Aux	Bottom Face	0.176	0	211.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 41	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B13_Aux	Bottom Face	0.176	0	144.0	0.90	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B13_Aux	Bottom Face	0.176	0	211.0	0.87	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.69	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 42	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B14_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 43	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Main	Bottom Face	0.178	7	195.0	0.95	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B14_Main	Bottom Face	0.178	7	187.0	0.89	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 44	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Main	Bottom Face	0.178	23	195.0	0.90	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B14_Main	Bottom Face	0.178	23	187.0	0.99	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 45	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Aux	Bottom Face	0.193	0	144.0	0.96	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B14_Aux	Bottom Face	0.193	0	211.0	0.90	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	83.0	1.48	0.02	Not required
	2.4G_Ant 2		0.71	0				

Case 46	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B14_Aux	Bottom Face	0.193	0	144.0	0.91	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B14_Aux	Bottom Face	0.193	0	211.0	0.88	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.69	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 47	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Aux	Bottom of Laptop	0.319	24	144.0	1.10	0.01	Not required
	2.4G_Ant 1		0.78	0				
	4G B25_Aux	Bottom of Laptop	0.319	24	211.0	0.92	0.00	Not required
	2.4G_Ant 2		0.6	0				
	2.4G_Ant 1	Bottom of Laptop	0.78	0	65.9	1.38	0.02	Not required
	2.4G_Ant 2		0.6	0				

Case 48	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Aux	Bottom of Laptop	0.319	24	144.0	1.25	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B25_Aux	Bottom of Laptop	0.319	24	211.0	1.29	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 49	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.126	7	195.0	0.90	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B25_Main	Bottom Face	0.126	7	187.0	0.84	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 50	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.126	7	195.0	0.85	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B25_Main	Bottom Face	0.126	7	187.0	0.94	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 51	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Aux	Bottom Face	0.104	23	144.0	0.82	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B25_Aux	Bottom Face	0.104	23	211.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 52	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.143	0	195.0	0.91	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B25_Main	Bottom Face	0.143	0	187.0	0.85	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 53	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B25_Main	Bottom Face	0.143	0	195.0	0.86	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B25_Main	Bottom Face	0.143	0	187.0	0.95	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 54	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Aux	Bottom of Laptop	0.001	24	144.0	0.93	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B26_Aux	Bottom of Laptop	0.001	24	211.0	0.97	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 55	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Main	Bottom Face	0.197	7	195.0	0.97	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B26_Main	Bottom Face	0.197	7	187.0	0.91	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 56	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Main	Bottom Face	0.197	7	195.0	0.92	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B26_Main	Bottom Face	0.197	7	187.0	1.01	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 57	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Aux	Bottom Face	0.225	0	144.0	1.00	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B26_Aux	Bottom Face	0.225	0	211.0	0.94	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 58	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B26_Aux	Bottom Face	0.225	0	144.0	0.95	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B26_Aux	Bottom Face	0.225	0	211.0	1.04	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 59	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Aux	Bottom of Laptop	0.071	24	144.0	1.00	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B30_Aux	Bottom of Laptop	0.071	24	211.0	1.04	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 60	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.203	7	195.0	0.97	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B30_Main	Bottom Face	0.203	7	187.0	0.91	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 61	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.203	7	195.0	0.92	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B30_Main	Bottom Face	0.203	7	187.0	1.01	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 62	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.158	0	195.0	0.93	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B30_Main	Bottom Face	0.158	0	187.0	0.87	0.00	Not required
	2.4G_Ant 2		0.71	0				
	2.4G_Ant 1	Bottom Face	0.77	0	65.9	1.48	0.03	Not required
	2.4G_Ant 2		0.71	0				

Case 63	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B30_Main	Bottom Face	0.158	0	195.0	0.88	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B30_Main	Bottom Face	0.158	0	187.0	0.97	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case 64	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B41_Aux	Bottom of Laptop	0.064	24	144.0	0.99	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B41_Aux	Bottom of Laptop	0.064	24	211.0	1.03	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				

Case 65	Band	Position	SAR (W/kg)	Gap (mm)	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	4G B41_Main	Bottom Face	0.09	7	195.0	0.81	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B41_Main	Bottom Face	0.09	7	187.0	0.90	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
	5G_Ant 1	Bottom Face	0.72	0	65.9	1.53	0.03	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

Case	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 66	4G B66_Aux	Bottom of Laptop	0.209	24	144.0	1.14	0.01	Not required
	5G_Ant 1		0.93	0				
	4G B66_Aux	Bottom of Laptop	0.209	24	211.0	1.18	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
	5G_Ant 1	Bottom of Laptop	0.93	0	65.9	1.90	0.04	Not required
	BT_Ant 2 + 5G_Ant 2		0.97	0				
Case 67	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Main	Bottom Face	0.148	7	195.0	0.92	0.00	Not required
	2.4G_Ant 1		0.77	0				
	4G B66_Main	Bottom Face	0.148	7	187.0	0.86	0.00	Not required
	2.4G_Ant 2		0.71	0				
Case 68	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Main	Bottom Face	0.148	7	195.0	0.87	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B66_Main	Bottom Face	0.148	7	187.0	0.96	0.01	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
Case 69	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Aux	Bottom Face	0.118	23	144.0	0.89	0.01	Not required
	2.4G_Ant 1		0.77	0				
	4G B66_Aux	Bottom Face	0.118	23	211.0	0.83	0.00	Not required
	2.4G_Ant 2		0.71	0				
Case 70	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Aux	Bottom Face	0.118	23	144.0	0.84	0.01	Not required
	5G_Ant 1		0.72	0				
	4G B66_Aux	Bottom Face	0.118	23	211.0	0.93	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
Case 71	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Main	Bottom Face	0.102	0	195.0	0.82	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B66_Main	Bottom Face	0.102	0	187.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
Case 72	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Main	Bottom Face	0.102	0	195.0	0.82	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B66_Main	Bottom Face	0.102	0	187.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				
Case 73	Band	Position	SAR (W/kg)	Gap	Minimum Distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
	4G B66_Main	Bottom Face	0.102	0	195.0	0.82	0.00	Not required
	5G_Ant 1		0.72	0				
	4G B66_Main	Bottom Face	0.102	0	187.0	0.91	0.00	Not required
	BT_Ant 2 + 5G_Ant 2		0.81	0				

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17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg. Therefore, the measurement uncertainty table is not required in this report.

18. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
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- [4] SPEAG DASY System Handbook
- [5] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [6] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [7] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
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- [9] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [10] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [11] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.