

FCC SAR Test Report

APPLICANT : Viavi Solutions Inc.
EQUIPMENT : 5G Sub-6 GHz M.2 Module with
WCDMA and LTE
BRAND NAME : VIAVI
MODEL NAME : RM520N-GL
FCC ID : WUW-RM520NGL
STANDARD : FCC 47 CFR Part 2 (2.1093)

The product was tested inside of a host (Brand Name: VIAVI, Model Name: NXE-DEVICE-4M).

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.



Approved by: Si Zhang

Sporton International Inc. (Kunshan)

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People's Republic of China**



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA452001	Rev. 01	Initial issue of report	Dec. 18, 2024

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Viavi Solutions Inc., 5G Sub-6 GHz M.2 Module with WCDMA and LTE, RM520N-GL**, are as follows.

Highest 1g SAR Summary				
Equipment Class	Frequency Band		Body (Separation 25mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)	
Licensed	WCDMA	WCDMA II	0.43	1.59
		WCDMA IV	0.36	
		WCDMA V	<0.10	
	LTE	LTE Band 7	0.49	
		LTE Band 12(17)	0.10	
		LTE Band 13	0.11	
		LTE Band 14	0.17	
		LTE Band 25(2)	0.42	
		LTE Band 26(5)	<0.10	
		LTE Band 30	<0.10	
		LTE Band 41(38)	0.29	
		LTE Band 42	0.45	
		LTE Band 48	0.55	
		LTE Band 66(4)	0.47	
		LTE Band 71	0.10	
	FR1	FR1 n7	0.29	
		FR1 n12	0.20	
		FR1 n13	0.20	
		FR1 n14	0.12	
		FR1 n25(2)	0.39	
		FR1 n26(5)	<0.10	
		FR1 n30	<0.10	
		FR1 n41(38)	0.22	
		FR1 n48	0.77	
		FR1 n66	0.36	
		FR1 n70	0.29	
		FR1 n71	0.20	
		FR1 n77(78)	0.65	
DTS	WLAN	2.4GHz WLAN	<0.10	1.59
NII		5GHz WLAN	0.34	1.59

Highest 10g SAR Summary					
Equipment Class	Frequency Band		Extremity (W/kg)	Highest Simultaneous Transmission 10g SAR (W/kg)	
			(Separation 0mm)		
Licensed	WCDMA	WCDMA II	<0.10	2.40	
		WCDMA IV	<0.10		
		WCDMA V	<0.10		
	LTE	LTE Band 7	1.53		
		LTE Band 12(17)	<0.10		
		LTE Band 13	<0.10		
		LTE Band 14	<0.10		
		LTE Band 25(2)	1.27		
		LTE Band 26(5)	<0.10		
		LTE Band 30	0.14		
		LTE Band 41(38)	<0.10		
		LTE Band 42	0.84		
		LTE Band 48	0.80		
		LTE Band 66(4)	1.41		
		LTE Band 71	<0.10		
		FR1	FR1 n7		0.93
			FR1 n12		<0.10
			FR1 n13		<0.10
	FR1 n14		<0.10		
	FR1 n25(2)		1.00		
	FR1 n26(5)		<0.10		
	FR1 n30		0.13		
	FR1 n41(38)		1.04		
	FR1 n48		1.14		
	FR1 n66		1.33		
	FR1 n70		1.29		
	FR1 n71		<0.10		
	FR1 n77(78)	1.06			
DTS	WLAN	2.4GHz WLAN	<0.10	2.40	
NII		5GHz WLAN	0.41	2.40	
Date of Testing:			2024/7/16 ~ 2024/9/7		
Remark:					
1. This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B4 / B17 / B38 falls completely within the supports frequency span for LTE B66 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66 / B12 / B41.					
2. This device supports 5GNR n2 / n5 / n38 /n78 and 5GNR n25 / n26 / n41 / n77. Since the supported frequency span for 5GNR n2 / n5 / n38 /n78 falls completely within the supports frequency span for 5GNR n25 / n26 / n41 / n77, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for 5GNR n25 / n26 / n41 / n77.					

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR06-KS	CN1257	314309

Applicant	
Company Name	Viavi Solutions Inc.
Address	1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

Manufacturer	
Company Name	Viavi Solutions Inc.
Address	1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

3. 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 248227 D01 802.11 Wi-Fi SAR v02r02
- 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



4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	5G Sub-6 GHz M.2 Module with WCDMA and LTE
Brand Name	VIAVI
Model Name	RM520N-GL
FCC ID	WUW-RM520NGL
IMEI Code	IMEI A: 868371051635346 IMEI B: 868371051120257 IMEI C: 868371051635908 IMEI D: 868371051633424
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Mode	RMC 12.2Kbps HSDPA/HSUPA/DC-HSDPA HSPA+(16QAM uplink is supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM
EUT Stage	Identical Prototype
Remark: 1. This device does not support voice function. 2. This device has no hotspot function. 3. The four modems support Co-located and do not support MIMO. 4. This device supports HPUE for LTE band 38/41/42 with class 2 level, HPUE power have been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and	

class 3 is almost the same,so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.

5. For 5GNR n38/n41/n77/n78 HPUE, 5GNR n38/n41/n77/n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
6. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40
	n12	FDD	15	5, 10, 15
	n14	FDD	15	5, 10
	n25	FDD	15	5, 10, 15, 20, 25, 30, 40
	n30	FDD	15	5, 10
	n66	FDD	15	5, 10, 15, 20, 30, 40
	n71	FDD	15	5, 10, 15, 20
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 20, 40
	n77	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
SA	n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40
	n12	FDD	15	5, 10, 15
	n13	FDD	15	5, 10
	n14	FDD	15	5, 10
	n25	FDD	15	5, 10, 15, 20, 25, 30, 40
	n26	FDD	15	5, 10, 15, 20
	n30	FDD	15	5, 10
	n66	FDD	15	5, 10, 15, 20, 30, 40
	n70	FDD	15	5, 10, 15
	n71	FDD	15	5, 10, 15, 20
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 20, 40
	n77	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100

Host Information

Equipment Name	XEDGE 2.0
Brand Name	VIAVI
Model Name	NXE-DEVICE-4M

Contain WLAN Module Information

Brand Name	VIAVI
FCC ID	WUW-SXPCEAC2
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
Mode	WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																										
FCC ID		WUW-RM520NGL																																																																								
Equipment Name		5G Sub-6 GHz M.2 Module with WCDMA and LTE																																																																								
Operating Frequency Range of each LTE transmission band		LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																																								
Channel Bandwidth		LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz																																																																								
Uplink Modulations used		QPSK / 16QAM / 64QAM / 256QAM																																																																								
LTE Voice / Data requirements		Data only																																																																								
LTE Release Version		R13																																																																								
CA Support		Supported, Uplink and Downlink																																																																								
LTE MPR permanently built-in by design		<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr><tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>			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
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	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.																																																																								
LTE Carrier Aggregation Combinations		Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.																																																																								
LTE Carrier Aggregation Additional Information		1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band and inter-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 5 carriers in the downlink and 2 carriers in the uplink.																																																																								

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

LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		
LTE Band 30												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #			Freq.(MHz)		Channel #			Freq.(MHz)			
L	27685			2307.5		27710			2310			
M	27710			2310								
H	27735			2312.5								
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
HM	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
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673				
M	133247	675.5	133272	678	133297	680.5	133322	683				
H	133447	695.5	133422	693	133397	690.5	133372	688				

LTE Band 42								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540
LTE Band 48								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560
LM	55810	3607	55815	3607.5	55820	3608	55830	3609
MH	56170	3643	56165	3642.5	56160	3642	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 2	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 25	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes



2) LTE Bands tune up:

Band	Antenna	Body-worn	Extremity	Default
		Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 25(2)	A Ant 0	23.5	23.5	23.5
LTE Band 25(2)	B Ant 0	23.5	23.5	23.5
LTE Band 25(2)	C Ant 0	23.5	23.5	23.5
LTE Band 25(2)	D Ant 0	23.5	23.5	23.5
LTE Band 25(2)	A Ant 2	23.5	23.5	23.5
LTE Band 25(2)	B Ant 2	23.5	23.5	23.5
LTE Band 25(2)	C Ant 2	23.5	23.5	23.5
LTE Band 25(2)	D Ant 2	23.5	23.5	23.5
LTE Band 66(4)	A Ant 0	20.5	20.5	20.5
LTE Band 66(4)	B Ant 0	20.5	20.5	20.5
LTE Band 66(4)	C Ant 0	20.5	20.5	20.5
LTE Band 66(4)	D Ant 0	20.5	20.5	20.5
LTE Band 66(4)	A Ant 2	20.5	20.5	20.5
LTE Band 66(4)	B Ant 2	20.5	20.5	20.5
LTE Band 66(4)	C Ant 2	20.5	20.5	20.5
LTE Band 66(4)	D Ant 2	20.5	20.5	20.5
LTE Band 26(5)	A Ant 0	24.5	24.5	24.5
LTE Band 26(5)	B Ant 0	24.5	24.5	24.5
LTE Band 26(5)	C Ant 0	24.5	24.5	24.5
LTE Band 26(5)	D Ant 0	24.5	24.5	24.5
LTE Band 12(17)	A Ant 0	24.5	24.5	24.5
LTE Band 12(17)	B Ant 0	24.5	24.5	24.5
LTE Band 12(17)	C Ant 0	24.5	24.5	24.5
LTE Band 12(17)	D Ant 0	24.5	24.5	24.5
LTE Band 41(38) PC3	A Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC3	B Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC3	C Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC3	D Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC2	A Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC2	B Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC2	C Ant 0	23.5	23.5	23.5
LTE Band 41(38) PC2	D Ant 0	23.5	23.5	23.5

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information														
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz													
	5G NR n5: 824 MHz ~ 849 MHz													
	5G NR n7: 2500 MHz ~ 2570 MHz													
	5G NR n12: 699 MHz ~ 716 MHz													
	5G NR n13: 777 MHz ~ 787 MHz													
	5G NR n14: 788 MHz ~ 798 MHz													
	5G NR n25: 1850 MHz ~ 1915 MHz													
	5G NR n26: 814 MHz ~ 849 MHz													
	5G NR n30: 2305 MHz ~ 2315 MHz													
	5G NR n38: 2570 MHz ~ 2620 MHz													
	5G NR n41: 2496 MHz ~ 2690 MHz													
	5G NR n48: 3550 MHz ~ 3700 MHz													
	5G NR n66: 1710 MHz ~ 1780 MHz													
	5G NR n70: 1695 MHz ~ 1710 MHz													
	5G NR n71: 663 MHz ~ 698 MHz													
5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz														
5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz														
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.													
SCS	FDD: SCS15KHz, TDD: SCS30KHz													
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM													
A-MPR (Additional MPR) disabled for SAR Testing?	Yes													
LTE Anchor Bands for n2	LTE B4/5/7/12/13/14/30/66/71													
LTE Anchor Bands for n5	LTE B2/7/30/66/48													
LTE Anchor Bands for n7	LTE B2/4/5/12/13/66/71													
LTE Anchor Bands for n12	LTE B2/7/30/66/48													
LTE Anchor Bands for n14	LTE B2/30/66													
LTE Anchor Bands for n25	LTE B5/7/12/13/26/66/71/48													
LTE Anchor Bands for n30	LTE B2/5/12/14/66													
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/30/71/48													
LTE Anchor Bands for n71	LTE B2/7/66/48													
LTE Anchor Bands for n38	LTE B2/4/5/12/66/71													
LTE Anchor Bands for n41	LTE B2/4/5/12/25/26/66/71													
LTE Anchor Bands for n48	LTE B2/5/13/66													
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/25/30/41/66/71													
LTE Anchor Bands for n78	LTE B2/4/5/7/12/13/25/26/38/41/66/71													
Transmission (H, M, L) channel numbers and frequencies in each 5G NR band														
NR Band 2														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860						
M	376000	1880	376000	1880	376000	1880	376000	1880						
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900						
NR Band 5														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	165300	826.5	165800	829	166300	831.5	166800	834						
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5						
H	169300	846.5	168800	844	168300	841.5	167800	839						
NR Band 7														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550
NR Band 12														
	Bandwidth 5MHz		Bandwidth 10MHz				Bandwidth 15MHz							
	Ch. #	Freq. (MHz)	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)					
L	140300	701.5	140800		704		141300		706.5					
M	141500	707.5	141500		707.5		141500		707.5					
H	142700	713.5	142200		711		141700		708.5					



NR Band 13					
Bandwidth 5MHz			Bandwidth 10MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	155900	779.5	156400	782	
M	156400	782			
H	156900	784.5			

NR Band 14					
Bandwidth 5MHz			Bandwidth 10MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	158100	790.5	158600	793	
M	158600	793			
H	159100	795.5			

NR Band 25													
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000

NR Band 26									
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	163300	816.5	163800	819	164300	821.5	164800	824	
M	166300	831.5	166300	831.5	166300	831.5	166300	831.5	
H	169300	846.5	168800	844	168300	841.5	167800	839	

NR Band 30					
Bandwidth 5MHz			Bandwidth 10MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	461500	2307.5	462000	2310	
M	462000	2310			
H	462500	2312.5			

NR Band 66													
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	345000	1725	346000	1730	
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353000	1765	352000	1760	

NR Band 70							
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	339500	1697.5	340000	1700	340500	1702.5	
M	340500	1702.5	340500	1702.5			
H	341500	1707.5	341000	1705			

NR Band 71							
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	133100	665.5	133600	668	134100	670.5	134600
M	136100	680.5	136100	680.5	136100	680.5	136100
H	139100	695.5	138600	693	138100	690.5	137600

NR Band 38 SCS30KHz									
Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #
L	515004	2575.02	515502	2577.51	516000	2580	517002	2585.01	518004
M	519000	2595	519000	2595	519000	2595	519000	2595	519000
H	522996	2614.98	522498	2612.49	522000	2610	520998	2604.99	519996

NR Band 41															
Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	500202	2501.01	507204	2536.02	508200
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	537000	2685	529998	2649.99	528996



NR Band48						
	Bandwidth 10MHz		Bandwidth 20MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637334	3560.01	638000	3570
M	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646000	3690	645332	3679.98

NR Band 77																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930

NR Band 78																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750.00	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652334	3785.01	652000	3780	651668	3775.02	651334	3770.01	651000	3765	650668	3760.02	650334	3755.01		

For <3450 MHz ~ 3550 MHz >

NR Band 77																						
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

NR Band 78																						
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

**<For NR Overlap Bands Description>****1) NR Bands BW**

Band	5 MHz	10 MHz	15 MHz	20 MHz	25 MHz	30 MHz	35MHz	40MHz	45 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100 MHz
FR1 n2	Yes	Yes	Yes	Yes											
FR1 n25	Yes	Yes	Yes	Yes	Yes	Yes		Yes							
FR1 n5	Yes	Yes	Yes	Yes											
FR1 n26	Yes	Yes	Yes	Yes											
FR1 n38		Yes	Yes	Yes		Yes		Yes							
FR1 n41				Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes
FR1 n77		Yes	Yes	Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes
FR1 n78		Yes	Yes	Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes

2) NR Bands Tune up:

Band	Antenna	Body-worn Tune-up Limit	Extremity Tune-up Limit	Default Tune-up Limit
FR1 n25(2)	A Ant 0	23.50	23.50	23.50
FR1 n25(2)	B Ant 0	23.50	23.50	23.50
FR1 n25(2)	C Ant 0	23.50	23.50	23.50
FR1 n25(2)	D Ant 0	23.50	23.50	23.50
FR1 n25(2)	A Ant 2	23.50	23.50	23.50
FR1 n25(2)	B Ant 2	23.50	23.50	23.50
FR1 n25(2)	C Ant 2	23.50	23.50	23.50
FR1 n25(2)	D Ant 2	24.00	24.00	24.00
FR1 n26(5)	A Ant 0	24.50	24.50	24.50
FR1 n26(5)	B Ant 0	24.50	24.50	24.50
FR1 n26(5)	C Ant 0	24.50	24.50	24.50
FR1 n26(5)	D Ant 0	24.50	24.50	24.50
FR1 n41(38)	A Ant 0	21.00	21.00	21.00
FR1 n41(38)	B Ant 0	21.00	21.00	21.00
FR1 n41(38)	C Ant 0	21.00	21.00	21.00
FR1 n41(38)	D Ant 0	21.00	21.00	21.00
FR1 n41(38)HPUE	A Ant 0	21.00	21.00	21.00
FR1 n41(38)HPUE	B Ant 0	21.00	21.00	21.00
FR1 n41(38)HPUE	C Ant 0	21.00	21.00	21.00
FR1 n41(38)HPUE	D Ant 0	21.00	21.00	21.00
FR1 n41(38)	A Ant 2	21.00	21.00	21.00
FR1 n41(38)	B Ant 2	21.00	21.00	21.00
FR1 n41(38)	C Ant 2	21.00	21.00	21.00
FR1 n41(38)	D Ant 2	21.00	21.00	21.00
FR1 n41(38)HPUE	A Ant 2	21.00	21.00	21.00
FR1 n41(38)HPUE	B Ant 2	21.00	21.00	21.00
FR1 n41(38)HPUE	C Ant 2	21.00	21.00	21.00
FR1 n41(38)HPUE	D Ant 2	21.00	21.00	21.00
FR1 n77(78)	A Ant 2	24.00	24.00	24.00
FR1 n77(78)	B Ant 2	24.00	24.00	24.00
FR1 n77(78)	C Ant 2	24.00	24.00	24.00
FR1 n77(78)	D Ant 2	24.00	24.00	24.00
FR1 n77(78) PC2	A Ant 2	24.00	24.00	24.00
FR1 n77(78) PC2	B Ant 2	24.00	24.00	24.00
FR1 n77(78) PC2	C Ant 2	24.00	24.00	24.00
FR1 n77(78) PC2	D Ant 2	24.00	24.00	24.00

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

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:

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

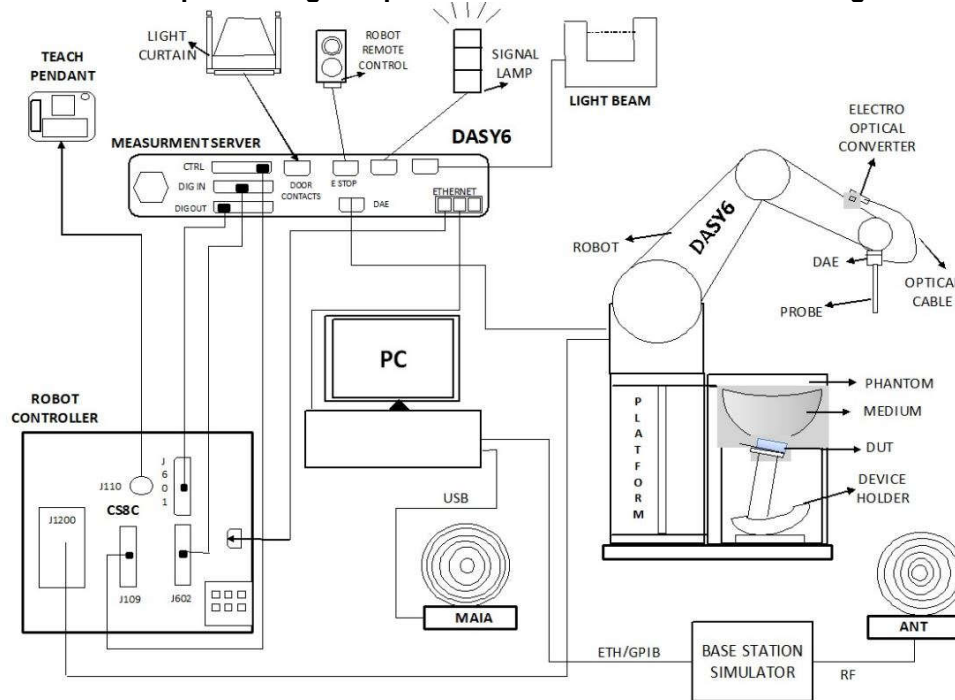
SAR is expressed in units of Watts per kilogram (W/kg)

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

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 Win7 or Win10 and the DASY5 or DASY6 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.

<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.



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 or for evaluating transmitters operating at low frequencies. ELI 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 power measurement, use engineering software to configure EUT WLAN 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 output power

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN 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 dB) 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 DASy measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2022/2/24	2025/2/22
SPEAG	835MHz System Validation Kit	D835V2	4d091	2022/8/19	2025/8/18
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2025/2/22
SPEAG	1900MHz System Validation Kit	D1900V2	5d118	2022/3/30	2025/3/28
SPEAG	2300MHz System Validation Kit	D2300V2	1055	2023/8/21	2026/8/20
SPEAG	2450MHz System Validation Kit	D2450V2	1095	2024/2/8	2025/2/7
SPEAG	2600MHz System Validation Kit	D2600V2	1112	2023/12/18	2024/12/17
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2023/11/20	2024/11/19
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2023/11/20	2024/11/19
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2023/3/9	2026/3/8
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2025/9/21
SPEAG	Data Acquisition Electronics	DAE4	1691	2024/4/19	2025/4/18
SPEAG	Dosimetric E-Field Probe	EX3DV4	7729	2024/1/22	2025/1/21
SPEAG	ELI Phantom	ELI V8.0	TP-2151	NCR	NCR
CHIGO	Thermo-Hygrometer	HTC-1	55009	2024/1/4	2025/1/3
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2024/7/4	2025/7/3
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	2024/7/4	2025/7/3
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2024/2/16	2025/2/15
Anritsu	Vector Signal Generator	MG3710A	6201682672	2024/1/2	2025/1/1
Rohde & Schwarz	Power Meter	NRVD	102081	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2024/7/4	2025/7/3
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2023/10/11	2024/10/10
TES	DIGITAC THERMOMETER	TYPE-K	220305411	2024/1/4	2025/1/3
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	

Note:

- 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.
- The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

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 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. 10.1.

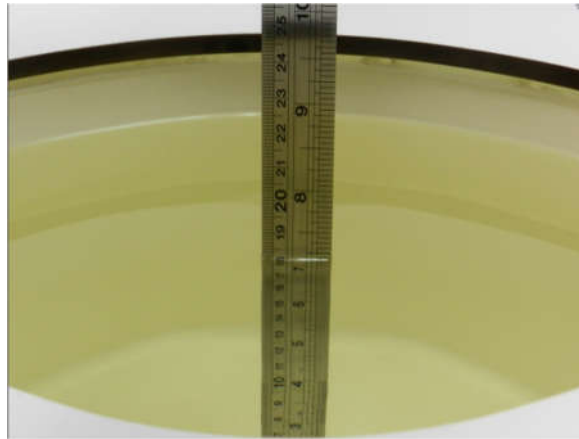


Fig 10.1 Photo of Liquid Height for Body SAR

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)
For Head								
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
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)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	Head	22.7	0.926	42.500	0.89	41.90	4.04	1.43	±5	2024/7/16
835	Head	22.6	0.956	42.100	0.90	41.50	6.22	1.45	±5	2024/7/18
1750	Head	22.9	1.380	40.300	1.37	40.10	0.73	0.50	±5	2024/7/20
1900	Head	22.8	1.450	40.000	1.40	40.00	3.57	0.00	±5	2024/7/22
2300	Head	22.6	1.710	39.500	1.67	39.50	2.40	0.00	±5	2024/7/24
2600	Head	22.8	1.940	39.100	1.96	39.00	-1.02	0.26	±5	2024/7/26
3500	Head	22.8	2.830	39.000	2.91	37.90	-2.75	2.90	±5	2024/7/28
3700	Head	22.7	3.020	38.700	3.12	37.70	-3.21	2.65	±5	2024/7/30
3900	Head	22.9	3.220	38.400	3.32	37.50	-3.01	2.40	±5	2024/8/1
750	Head	22.6	0.915	41.900	0.89	41.90	2.81	0.00	±5	2024/8/10
835	Head	22.8	0.945	41.600	0.90	41.50	4.96	0.24	±5	2024/8/12
1750	Head	22.7	1.400	40.500	1.37	40.10	2.19	1.00	±5	2024/8/14
1900	Head	22.9	1.430	38.600	1.40	40.00	2.14	-3.50	±5	2024/8/16
2300	Head	22.6	1.720	39.400	1.67	39.50	2.99	-0.25	±5	2024/8/18
2600	Head	22.8	1.930	39.000	1.96	39.00	-1.53	0.00	±5	2024/8/20
3500	Head	22.8	2.790	39.600	2.91	37.90	-4.12	4.49	±5	2024/8/22
3700	Head	22.7	3.000	38.700	3.12	37.70	-3.85	2.65	±5	2024/8/24
3900	Head	22.7	3.190	38.400	3.32	37.50	-3.92	2.40	±5	2024/8/26
2450	Head	22.9	1.820	39.200	1.80	39.20	1.11	0.00	±5	2024/9/1
5250	Head	22.7	4.560	35.000	4.71	35.90	-3.18	-2.51	±5	2024/9/3
5600	Head	22.6	4.950	34.400	5.07	35.50	-2.37	-3.10	±5	2024/9/5
5750	Head	22.8	5.120	34.100	5.22	35.40	-1.92	-3.67	±5	2024/9/7

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.

<1g SAR>

Date	Frequency (MHz)	Tissue Type	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 (%)
2024/7/16	750	Head	50	1087	7729	1691	0.463	8.58	9.26	7.93
2024/7/18	835	Head	50	4d091	7729	1691	0.505	9.45	10.1	6.88
2024/7/20	1750	Head	50	1090	7729	1691	1.990	37.00	39.8	7.57
2024/7/22	1900	Head	50	5d118	7729	1691	2.110	39.30	42.2	7.38
2024/7/24	2300	Head	50	1055	7729	1691	2.530	48.40	50.6	4.55
2024/7/26	2600	Head	50	1112	7729	1691	2.920	55.10	58.4	5.99
2024/7/28	3500	Head	50	1037	7729	1691	3.440	65.40	68.8	5.20
2024/7/30	3700	Head	50	1008	7729	1691	3.610	67.20	72.2	7.44
2024/8/1	3900	Head	50	1048	7729	1691	3.240	69.10	64.8	-6.22
2024/8/10	750	Head	50	1087	7729	1691	0.460	8.58	9.2	7.23
2024/8/12	835	Head	50	4d091	7729	1691	0.510	9.45	10.2	7.94
2024/8/14	1750	Head	50	1090	7729	1691	1.980	37.00	39.6	7.03
2024/8/16	1900	Head	50	5d118	7729	1691	2.100	39.30	42	6.87
2024/8/18	2300	Head	50	1055	7729	1691	2.540	48.40	50.8	4.96
2024/8/20	2600	Head	50	1112	7729	1691	2.870	55.10	57.4	4.17
2024/8/22	3500	Head	50	1037	7729	1691	3.320	65.40	66.4	1.53
2024/8/24	3700	Head	50	1008	7729	1691	3.570	67.20	71.4	6.25
2024/8/26	3900	Head	50	1048	7729	1691	3.260	69.10	65.2	-5.64
2024/9/1	2450	Head	50	1095	7729	1691	2.760	52.60	55.2	4.94
2024/9/3	5250	Head	50	1113	7729	1691	4.400	81.50	88	7.98
2024/9/5	5600	Head	50	1113	7729	1691	4.460	82.60	89.2	7.99
2024/9/7	5750	Head	50	1113	7729	1691	4.320	80.80	86.4	6.93

<10g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2024/7/16	750	Head	50	1087	7729	1691	0.305	5.65	6.1	7.96
2024/7/18	835	Head	50	4d091	7729	1691	0.333	6.22	6.66	7.07
2024/7/20	1750	Head	50	1090	7729	1691	1.050	19.50	21	7.69
2024/7/22	1900	Head	50	5d118	7729	1691	1.100	20.40	22	7.84
2024/7/24	2300	Head	50	1055	7729	1691	1.250	23.70	25	5.49
2024/7/26	2600	Head	50	1112	7729	1691	1.320	24.80	26.4	6.45
2024/7/28	3500	Head	50	1037	7729	1691	1.300	24.70	26	5.26
2024/7/30	3700	Head	50	1008	7729	1691	1.310	24.40	26.2	7.38
2024/8/1	3900	Head	50	1048	7729	1691	1.190	24.10	23.8	-1.24
2024/8/10	750	Head	50	1087	7729	1691	0.305	5.65	6.1	7.96
2024/8/12	835	Head	50	4d091	7729	1691	0.335	6.22	6.7	7.72
2024/8/14	1750	Head	50	1090	7729	1691	1.050	19.50	21	7.69
2024/8/16	1900	Head	50	5d118	7729	1691	1.090	20.40	21.8	6.86
2024/8/18	2300	Head	50	1055	7729	1691	1.260	23.70	25.2	6.33
2024/8/20	2600	Head	50	1112	7729	1691	1.320	24.80	26.4	6.45
2024/8/22	3500	Head	50	1037	7729	1691	1.320	24.70	26.4	6.88
2024/8/24	3700	Head	50	1008	7729	1691	1.290	24.40	25.8	5.74
2024/8/26	3900	Head	50	1048	7729	1691	1.200	24.10	24	-0.41
2024/9/1	2450	Head	50	1095	7729	1691	1.330	24.70	26.6	7.69
2024/9/3	5250	Head	50	1113	7729	1691	1.240	23.30	24.8	6.44
2024/9/5	5600	Head	50	1113	7729	1691	1.270	23.70	25.4	7.17
2024/9/7	5750	Head	50	1113	7729	1691	1.240	23.00	24.8	7.83

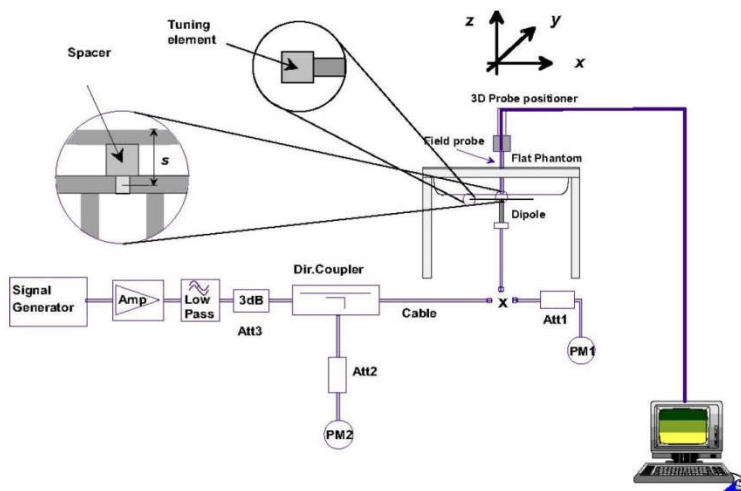

Fig 10.3.1 System Performance Check Setup

Fig 10.3.2 Setup Photo

11. RF Exposure Positions

11.1 Body SAR Testing for Device

- (a) To position the device parallel to the phantom surface with all surfaces of the device, and the detailed please refer to KDB inquiry with the FCC.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 25 mm.

11.2 Extremity SAR Testing for Device

- (b) To position the device parallel to the phantom surface with left and right surfaces of the device, and the detailed please refer to KDB inquiry with the FCC.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 0 mm.

Please refer to Appendix D for the test setup photos.

12. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

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

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

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCCH, 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:

- The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- The RF path losses were compensated into the measurements.
- A call was established between EUT and Base Station with following setting * :
 - Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - 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
 - Set Cell Power = -86 dBm
 - Set Channel Type = 12.2k + HSPA
 - Set UE Target Power
 - Power Ctrl Mode= Alternating bits
 - Set and observe the E-TFCI
 - Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- 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 $\beta_{tx} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{tx} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{tx}/\beta_c = 24/15$. 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 Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

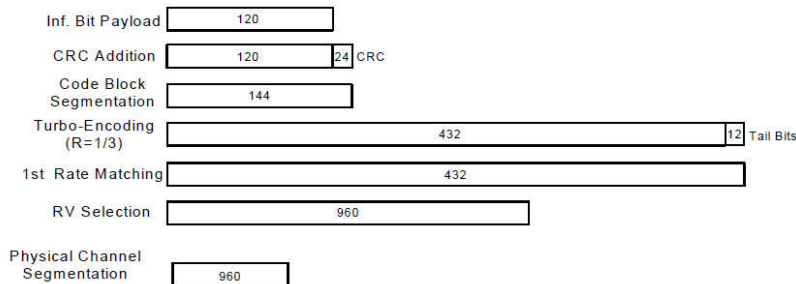


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

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

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

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

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

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

Setup Configuration
<WCDMA Conducted Power>
General Note:

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

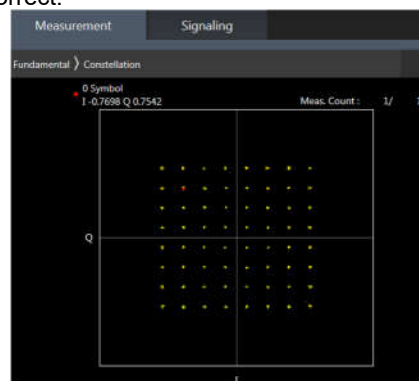
<LTE Conducted Power>

General Note:

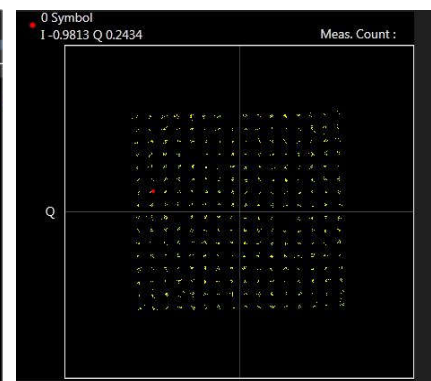
1. Anritsu MT8821C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested 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/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 17 / 2 / 4 / 5 / 38 SAR test was covered by Band 12 / 25 / 66 / 26 / 41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to May 2017 TCB workshop, for 16QAM and 64QAM, 256QAM 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 256QAM, 64QAM and 16QAM signal modulation are correct.



16QAM



64QAM



256QAM

<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.

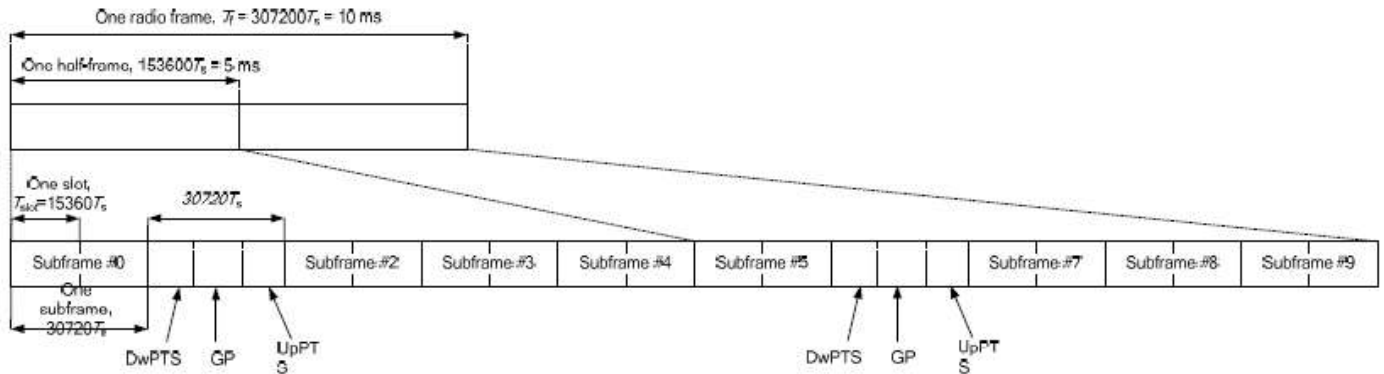


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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:

For LTE TDD Power class 2

- Uplink-downlink configuration: 1. In a half-frame consisted of 5 subframes, uplink operation is in 2 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.167)/5 = 43.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.143)/5 = 42.9\%$
- For TDD LTE SAR measurement, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $43.3\%/42.9\% = 1.009$ 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.

For LTE TDD Power class 3

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- 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.

The device can adjust uplink/downlink configuration automatically according to the transmitting power class level, as followings:

LTE TDD Band	Power Class level	support uplink/downlink configuration
LTE Band 41	> 23	1,2,3,4,5
	=23	0,1,2,3,4,5,6
	< 23	0,1,2,3,4,5,6

<LTE Carrier Aggregation>

The detailed LTE Carrier Aggregation conducted power table can refer to Appendix F.

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. All permutations exist. No restrictions on Pcell & Scell combinations. Only LTE Band 29A is limited to Scell.
4. Per Oct. 2024 TCB workshop, Manufacturer declares that TX power measurement for multiple DL CA configurations is deemed not required as the DL CA has no impact on the TX power according to preliminary scan. TX power measured in LTE standalone operation represents the worst case.

2CC Downlink Carrier Aggregation				3CC Downlink Carrier Aggregation			
Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset
1	CA_12A-12A	-	3CC-18	1	CA_12A-30A-66A	30A-66A	4CC-1
2	CA_12A-25A	25A		2	CA_12A-66A-66A	66A-66A	4CC-1
3	CA_12A-30A	30A	3CC-1	3	CA_12A-66C	66C	4CC-17
4	CA_12A-66A	66A	3CC-2	4	CA_13A-48A-48A	48A-48A	
5	CA_13A-48A	48A	3CC-4	5	CA_13A-48A-66A	48A-66A	4CC-113
6	CA_13A-66A	66A	3CC-5	6	CA_13A-48C	48C	4CC-5
7	CA_14A-30A	30A	3CC-10	7	CA_13A-66A-66A	66A-66A	4CC-19
8	CA_14A-66A	66A	3CC-11	8	CA_13A-66B	66B	4CC-20
9	CA_25A-25A	25A-25A	3CC-12	9	CA_13A-66C	66C	4CC-21
10	CA_25A-26A	25A	3CC-13	10	CA_14A-30A-66A	30A-66A	4CC-10
11	CA_25A-41A	25A-41A	3CC-14	11	CA_14A-66A-66A	66A-66A	4CC-11
12	CA_26A-41A	41A	3CC-15	12	CA_25A-25A-25A	25A-25A-25A	
13	CA_2A-12A	2A	3CC-18	13	CA_25A-25A-26A	25A-25A	4CC-12
14	CA_2A-13A	2A	3CC-21	14	CA_25A-25A-41A	25A-25A-41A	4CC-12
15	CA_2A-14A	2A	3CC-23	15	CA_25A-26A-41A	25A-41A	4CC-12
16	CA_2A-17A	2A		16	CA_25A-41C	25A-41C	4CC-13
17	CA_2A-2A	2A-2A	3CC-25	17	CA_26A-41C	41C	4CC-14
18	CA_2A-30A	2A-30A	3CC-28	18	CA_2A-12A-12A	2A	4CC-23
19	CA_2A-48A	2A-48A	3CC-35	19	CA_2A-12A-30A	2A-30A	4CC-24
20	CA_2A-4A	2A-4A	3CC-38	20	CA_2A-12A-66A	2A-66A	4CC-25
21	CA_2A-5A	2A	3CC-42	21	CA_2A-13A-48A	2A-48A	
22	CA_2A-66A	2A-66A	3CC-47	22	CA_2A-13A-66A	2A-66A	4CC-26
23	CA_2A-71A	2A	3CC-43	23	CA_2A-14A-30A	2A-30A	4CC-27
24	CA_2A-7A	2A-7A	3CC-44	24	CA_2A-14A-66A	2A-66A	4CC-28
25	CA_2C	2C	3CC-59	25	CA_2A-2A-12A	2A-2A	4CC-25
26	CA_30A-66A	30A-66A	3CC-63	26	CA_2A-2A-13A	2A-2A	4CC-26
27	CA_38C	38C		27	CA_2A-2A-14A	2A-2A	4CC-27
28	CA_41A-41A	41A-41A	3CC-64	28	CA_2A-2A-30A	2A-2A-30A	4CC-29
29	CA_41A-48A	41A-48A		29	CA_2A-2A-4A	2A-2A-4A	4CC-30
30	CA_41C	41C	3CC-131	30	CA_2A-2A-5A	2A-2A	4CC-34
				31	CA_2A-2A-66A	2A-2A-66A	4CC-37
				32	CA_2A-2A-71A	2A-2A	4CC-33
33	CA_48A-48A	48A-48A	3CC-67	33	CA_2A-2A-7A	2A-2A-7A	4CC-41
34	CA_48A-66A	48A-66A	3CC-70	34	CA_2A-30A-66A	2A-30A	4CC-43
35	CA_48A-71A	48A		35	CA_2A-48A-48A	2A-48A, 48A-48A	
36	CA_48B	48B		36	CA_2A-48A-66A	2A-48A, 2A-66A, 48A-66A	4CC-45



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37	CA_48C	48C	3CC-73	37	CA_2A-48C	2A-48C	4CC-46
38	CA_4A-12A	4A	3CC-76	38	CA_2A-4A-12A	2A-4A	4CC-30
39	CA_4A-13A	4A		39	CA_2A-4A-13A	2A-4A	
40	CA_4A-17A	4A		40	CA_2A-4A-30A	2A-4A, 2A-30A, 4A-30A	
41	CA_4A-30A	4A-30A		41	CA_2A-4A-4A	2A-4A-4A	4CC-31
42	CA_4A-48A	4A-48A		42	CA_2A-4A-5A	2A-4A	4CC-32
43	CA_4A-4A	4A-4A	3CC-79	43	CA_2A-4A-71A	2A-4A	4CC-33
44	CA_4A-5A	4A	3CC-85	44	CA_2A-4A-7A	2A-4A, 2A-7A, 4A-7A	4CC-51
45	CA_4A-71A	4A		45	CA_2A-5A-30A	2A-30A	4CC-34
46	CA_4A-7A	4A-7A	3CC-87	46	CA_2A-5A-48A	2A-48A	
47	CA_5A-25A	25A		47	CA_2A-5A-66A	2A-66A	4CC-35
48	CA_5A-30A	30A	3CC-90	48	CA_2A-5A-7A	2A-7A	4CC-56
49	CA_5A-38A	38A		49	CA_2A-5B	2A	4CC-36
50	CA_5A-41A	41A		50	CA_2A-66A-66A	2A-66A-66A	4CC-37
51	CA_5A-48A	48A	3CC-91	51	CA_2A-66A-71A	2A-66A	4CC-38
52	CA_5A-5A	-	3CC-92	52	CA_2A-66B	2A-66B	4CC-39
53	CA_5A-66A	66A	3CC-93	53	CA_2A-66C	2A-66C	4CC-40
54	CA_5A-7A	7A	3CC-96	54	CA_2A-7A-12A	2A-7A	4CC-12
55	CA_5B	-	3CC-99	55	CA_2A-7A-13A	2A-7A	4CC-133
56	CA_66A-66A	66A-66A	3CC-101	56	CA_2A-7A-66A	2A-7A, 2A-66A, 7A-66A	4CC-42
57	CA_66A-71A	66A	3CC-51	57	CA_2A-7A-7A	2A-7A-7A	4CC-67
58	CA_66B	66B	3CC-8	58	CA_2A-7C	2A-7C	4CC-69
59	CA_66C	66C	3CC-105	59	CA_2C-12A	2C	4CC-71
60	CA_7A-12A	7A	3CC-54	60	CA_2C-30A	2C-30A	4CC-71
61	CA_7A-13A	7A	3CC-55	61	CA_2C-5A	2C	4CC-72
62	CA_7A-26A	7A	3CC-114	62	CA_2C-66A	2C-66A	4CC-73
63	CA_7A-42A	7A-42A	3CC-109	63	CA_30A-66A-66A	30A-66A-66A	4CC-43
64	CA_7A-66A	7A-66A	3CC-56	64	CA_41A-41A-41A	-	
65	CA_7A-7A	7A-7A	3CC-57	65	CA_41A-41C	41A-41C	4CC-74
66	CA_7B	7B		66	CA_41D	41D	4CC-75
67	CA_7C	7C	3CC-58	67	CA_48A-48A-66A	48A-48A, 48A-66A	4CC-78
68	CA_2A-26A	2A	3CC-122	68	CA_48A-48A-71A	48A-48A	
69	CA_25A-66A	25A-66A	3CC-125	69	CA_48A-48C	48A-48C	4CC-81
70	CA_7A-25A	7A-25A	3CC-126	70	CA_48A-66A-66A	48A-66A-66A	4CC-78
71	CA_41A-42A	41A-42A	4CC-131	71	CA_48A-66B	48A-66B	4CC-79
72	CA_42A-42A	42A-42A		72	CA_48A-66C	48A-66C	4CC-80
73	CA_42C	42C	4CC-131	73	CA_48C-66A	48C-66A	4CC-81
74	CA_29A-30A	30A	3CC-135	74	CA_48C-71A	48C	
75	CA_29A-66A	66A	3CC-136	75	CA_48D	48D	4CC-47
76	CA_2A-29A	2A	3CC-137	76	CA_4A-12A-12A	4A	4CC-90
77	CA_4A-29A	4A	3CC-140	77	CA_4A-12A-30A	4A-30A	4CC-91
78	CA_7A-29A	7A	3CC-141	78	CA_4A-48C	4A-48C	
				79	CA_4A-4A-12A	4A-4A	4CC-90
				80	CA_4A-4A-13A	4A-4A	
				81	CA_4A-4A-30A	4A-4A-30A	4CC-91
				82	CA_4A-4A-5A	4A-4A	4CC-92
				83	CA_4A-4A-71A	4A-4A	
				84	CA_4A-4A-7A	4A-4A-7A	
				85	CA_4A-5A-30A	4A-30A	4CC-92
				86	CA_4A-5B	4A	4CC-93
				87	CA_4A-7A-12A	4A-7A	
				88	CA_4A-7A-7A	4A-7A-7A	4CC-51
				89	CA_4A-7C	4A-7C	4CC-52
				90	CA_5A-30A-66A	30A-66A	4CC-95
				91	CA_5A-48A-66A	48A-66A	4CC-114
				92	CA_5A-5A-66A	66A	4CC-97



				93	CA_5A-66A-66A	66A-66A	4CC-97
				94	CA_5A-66B	66B	4CC-98
				95	CA_5A-66C	66C	4CC-99
				96	CA_5A-7A-66A	7A-66A	4CC-103
				97	CA_5A-7A-7A	7A-7A	4CC-134
				98	CA_5A-7C	7C	4CC-104
				99	CA_5B-30A	30A	4CC-105
				100	CA_5B-66A	66A	4CC-106
				101	CA_66A-66A-66A	66A-66A-66A	4CC-60
				102	CA_66A-66A-71A	66A-66A	4CC-61
				103	CA_66A-66B	66A-66B	4CC-62
				104	CA_66A-66C	66A-66C	4CC-63
				105	CA_66C-71A	66C	4CC-64
				106	CA_66D	66D	4CC-65
				107	CA_7A-12A-66A	7A-66A	4CC-109
				112	CA_7A-66A-66A	7A-66A-66A	4CC-111
				113	CA_7A-7A-13A	7A-7A	4CC-136
				114	CA_7A-7A-26A	7A-7A	
				117	CA_7A-7A-66A	7A-7A-66A	4CC-111
				118	CA_7C-13A	7C	4CC-115
				119	CA_7C-66A	7C-66A	4CC-112
				120	CA_7A-13A-66A	7A-66A	4CC-136
				121	CA_2A-7A-26A	2A-7A	
				122	CA_2A-26A-66A	2A-66A	
				123	CA_7A-26A-66A	7A-66A	
				125	CA_25A-25A-66A	25A-25A-66A	4CC-135
				126	CA_7A-25A-25A	7A-25A-25A	4CC-135
				127	CA_7A-25A-66A	7A-66A, 25A-66A, 7A-25A	4CC-137
				128	CA_7A-7A-25A	7A-7A-25A	4CC-137
				129	CA_7C-25A	7C-25A	4CC-138
				130	CA_41A-42C	41A-42C	4CC-131
				131	CA_41C-42A	41C-42A	
				132	CA_42A-42C	42A-42C	4CC-131
				133	CA_42D	42D	4CC-126
				134	CA_5A-48C	48C	4CC-128
				135	CA_29A-30A-66A	30A-66A	4CC-139
				136	CA_29A-66A-66A	66A-66A	4CC-139
				137	CA_2A-29A-30A	2A-30A	4CC-140
				138	CA_2A-29A-66A	2A-66A	4CC-147
				139	CA_2A-2A-29A	2A-2A	4CC-148
				140	CA_2A-4A-29A	2A-4A	
				141	CA_2A-7A-29A	2A-7A	4CC-141
				142	CA_2C-29A	2C	4CC-143
				143	CA_4A-29A-30A	4A-30A	4CC-144
				144	CA_4A-4A-29A	4A-4A	4CC-144
				145	CA_7A-29A-66A	7A-66A	4CC-145
				146	CA_7A-7A-29A	7A-7A	4CC-145
				147	CA_7C-29A	7C	4CC-146



4CC Downlink Carrier Aggregation				5CC Downlink Carrier Aggregation			
Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset
1	CA_12A-30A-66A-66A	30A-66A-66A		1	CA_13A-48A-48D	48D	
2	CA_13A-48A-48C	48A-48C		2	CA_13A-48C-48C	48C	
3	CA_13A-48A-66B	48A-66B		3	CA_13A-48D-66A	66A, 48D	
4	CA_13A-48A-66C	48A-66C		4	CA_13A-48E	-	
5	CA_13A-48C-66A	48C-66A		5	CA_25A-25A-26A-41C	25A-25A, 25A-41C	
6	CA_13A-48D	48D	5CC-8	6	CA_25A-25A-41D	25A-25A, 41D	
7	CA_13A-66A-66B	66A-66B	5CC-9	7	CA_25A-41E	25A	
8	CA_13A-66A-66C	66A-66C	5CC-10	8	CA_2A-13A-48D	2A,48D	
9	CA_13A-66D	66D	5CC-11	9	CA_2A-13A-66A-66B	2A,66A-66B	
10	CA_14A-30A-66A-66A	30A-66A-66A		10	CA_2A-13A-66A-66C	2A,66A-66C	
11	CA_14A-66A-66A-66A	66A-66A-66A		11	CA_2A-13A-66D	2A,66D	
12	CA_25A-25A-26A-41A	25A-25A-41A		12	CA_2A-2A-12A-66A-66A	2A-2A-66A, 2A-66A-66A	
13	CA_25A-25A-41C	25A-25A-41C	5CC-5	13	CA_2A-2A-13A-66A-66A	2A-2A-66A, 2A-66A-66A	
14	CA_25A-26A-41C	25A-41C	5CC-5	14	CA_2A-2A-13A-66B	2A-2A,66B	
15	CA_25A-41D	25A-41D	5CC-6	15	CA_2A-2A-14A-66A-66A	2A-2A-66A, 2A-66A-66A	
16	CA_2A-12A-66A-66A	2A-66A-66A	5CC-12	16	CA_2A-2A-5A-66A-66A	2A-2A-66A, 2A-66A-66A	
17	CA_2A-12A-66C	2A-66C		17	CA_2A-2A-5A-66B	2A-2A, 2A-66B	
18	CA_2A-13A-48C	2A-48C		18	CA_2A-2A-5A-66C	2A-2A, 2A-66C	
19	CA_2A-13A-66A-66A	2A-66A-66A	5CC-13	19	CA_2A-2A-5B-66A	2A-2A-66A	
20	CA_2A-13A-66B	2A-66B	5CC-14	20	CA_2A-2A-66A-66B	2A-2A-66A, 2A-66B, 66A-66B	
21	CA_2A-13A-66C	2A-66C	5CC-10	21	CA_2A-2A-66A-66C	2A-2A-66A, 2A-66C, 66A-66C	
22	CA_2A-14A-66A-66A	2A-66A-66A	5CC-15	22	CA_2A-48A-48D	2A-48A, 48D	
23	CA_2A-2A-12A-12A	2A-2A		23	CA_2A-48C-48C	2A-48C	
24	CA_2A-2A-12A-30A	2A-2A-30A		24	CA_2A-48D-66A	2A-66A, 48D	
25	CA_2A-2A-12A-66A	2A-2A-66A	5CC-12	25	CA_2A-48E	2A	
26	CA_2A-2A-13A-66A	2A-2A-66A	5CC-13	26	CA_2A-5B-66A-66A	2A-66A-66A	
27	CA_2A-2A-14A-30A	2A-2A-30A		27	CA_2A-5B-66B	2A-66B	
28	CA_2A-2A-14A-66A	2A-2A-66A	5CC-15	28	CA_2A-5B-66C	2A-66C	
29	CA_2A-2A-30A-66A	2A-2A-30A, 2A-2A-66A, 30A-66A		29	CA_2A-7A-7A-66A-66A	2A-7A-7A, 2A-66A-66A, 7A-7A-66A, 7A-66A-66A	
30	CA_2A-2A-4A-12A	2A-2A-4A		30	CA_2A-7C-66A-66A	2A-66A-66A, 7C-66A	
31	CA_2A-2A-4A-4A	2A-2A-4A-4A		31	CA_2C-5B-30A	2C-30A	
32	CA_2A-2A-4A-5A	2A-2A-4A		32	CA_41C-41D	41C, 41D	
33	CA_2A-2A-4A-71A	2A-2A-4A		33	CA_48A-48C-66B	48A-48C, 48A-66B	
34	CA_2A-2A-5A-30A	2A-2A-30A		34	CA_48A-48C-66C	48A-48C, 48A-66C	
35	CA_2A-2A-5A-66A	2A-2A-66A	5CC-16	35	CA_48A-48D-66A	48A-66A, 48D	
36	CA_2A-2A-5B	2A-2A	5CC-19	36	CA_48A-48E	48A	
37	CA_2A-2A-66A-66A	2A-2A-66A-66A	5CC-16	37	CA_48C-48C-66A	48C-66A	
38	CA_2A-2A-66A-71A	2A-2A-66A		38	CA_48C-48D	48C, 48D	
39	CA_2A-2A-66B	2A-2A-66B	5CC-14	39	CA_48E-66A	66A	
40	CA_2A-2A-66C	2A-2A-66C	5CC-21	40	CA_4A-48E	4A	
41	CA_2A-2A-7A-12A	2A-2A-7A		41	CA_4A-4A-5B-30A	4A-4A-30A	
42	CA_2A-2A-7A-66A	2A-2A-7A, 2A-2A-66A, 7A-66A	5CC-30	42	CA_5A-7C-66A-66A	66A-66A,7C	
43	CA_2A-30A-66A-66A	2A-30A, 2A-66A-66A		43	CA_5B-30A-66A-66A	30A-66A-66A	
44	CA_2A-48A-48C	2A-48A, 2A-48C, 48A-48C		44	CA_5B-66A-66B	66A-66B	
45	CA_2A-48A-66A-66A	2A-48A, 2A-66A-66A, 48A-66A-66A		45	CA_5B-66A-66C	66A-66C	
46	CA_2A-48C-66A	2A-48C, 2A-66A, 48C-66A		48	CA_2A-5A-48D	2A, 48D	
47	CA_2A-48D	2A-48D	5CC-24	49	CA_41A-42C-42C	41A-42C	
48	CA_2A-4A-4A-12A	2A-4A-4A		50	CA_41C-42A-42C	41C-42A, 41A-42C, 42A-42C	
49	CA_2A-4A-4A-5A	2A-4A-4A		51	CA_5A-48D-66A	48D, 66A	
50	CA_2A-4A-5B	2A-4A		52	CA_48F	-	
51	CA_2A-4A-7A-7A	2A-7A-7A, 4A-7A-7A, 2A-4A		54	CA_7A-7A-25A-25A-66A	7A-7A-66A, 25A-25A-66A	
52	CA_2A-4A-7C	2A-4A, 2A-7C, 4A-7C		55	CA_2A-2A-7A-7A-13A	2A-2A-7A, 2A-7A-7A	



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53	CA_2A-5A-66A-66A	2A-66A-66A	5CC-16	56	CA_2A-2A-7C-13A	2A-7C, 2A-2A, 7C	
54	CA_2A-5A-66B	2A-66B	5CC-17	57	CA_7C-25A-25A-66A	7C-66A, 25A-25A-66A	
55	CA_2A-5A-66C	2A-66C	5CC-18	58	CA_2A-2A-29A-66A-66A	2A-2A-66A, 2A-66A-66A	
56	CA_2A-5A-7A-7A	2A-7A-7A					
57	CA_2A-5A-7C	2A-7C					
58	CA_2A-5B-30A	2A-30A					
59	CA_2A-5B-66A	2A-66A	5CC-26				
60	CA_2A-66A-66A-66A	2A-66A-66A, 66A-66A-66A					
61	CA_2A-66A-66A-71A	2A-66A-66A					
62	CA_2A-66A-66B	2A-66A, 2A-66B, 66A-66B	5CC-20				
63	CA_2A-66A-66C	2A-66A, 2A-66C, 66A-66C	5CC-21				
64	CA_2A-66C-71A	2A-66C					
65	CA_2A-66D	2A-66D	5CC-11				
66	CA_2A-7A-66A-66A	2A-7A, 2A-66A-66A, 7A-66A-66A	5CC-29				
67	CA_2A-7A-7A-13A	2A-7A-7A					
68	CA_2A-7A-7A-66A	2A-7A-7A, 7A-7A-66A, 2A-66A	5CC-29				
69	CA_2A-7C-13A	2A-7C					
70	CA_2A-7C-66A	2A-7C, 2A-66A, 7C-66A	5CC-30				
71	CA_2C-12A-30A	2C-30A					
72	CA_2C-5A-30A	2C-30A					
73	CA_2C-66A-66A	2C-66A-66A					
74	CA_41A-41A-41C	-					
75	CA_41A-41D	41A-41D					
76	CA_41C-41C	41C-41C					
77	CA_41E	41E	5CC-7				
78	CA_48A-48A-66A-66A	48A-48A, 48A-66A-66A					
79	CA_48A-48A-66B	48A-48A, 48A-66B					
80	CA_48A-48A-66C	48A-48A, 48A-66C					
81	CA_48A-48C-66A	48A-48C, 48A-66A, 48C-66A					
82	CA_48A-48D	48A-48D	5CC-35				
83	CA_48C-48C	48C-48C	5CC-23				
84	CA_48C-66A-66A	48C-66A-66A					
85	CA_48C-66B	48C-66B	5CC-33				
86	CA_48C-66C	48C-66C	5CC-34				
87	CA_48D-66A	48D-66A	5CC-35				
88	CA_48E	48E	5CC-36				
89	CA_4A-4A-48D	4A-48D					
90	CA_4A-4A-12A-12A	4A-4A					
91	CA_4A-4A-12A-30A	4A-4A-30A					
92	CA_4A-4A-5A-30A	4A-4A-30A					
93	CA_4A-4A-5B	4A-4A	5CC-41				
94	CA_4A-5B-30A	4A-30A	5CC-41				
95	CA_5A-30A-66A-66A	30A-66A-66A					
96	CA_5A-48D	48D	5CC-48				
97	CA_5A-5A-66A-66A	66A-66A					
98	CA_5A-5A-66B	66B					
99	CA_5A-5A-66C	66C					
100	CA_5A-66A-66B	66A-66B					
101	CA_5A-66A-66C	66A-66C					
102	CA_5A-66D	66D					
103	CA_5A-7A-66A-66A	7A-66A-66A					
104	CA_5A-7C-66A	7C-66A	5CC-42				
105	CA_5B-30A-66A	30A-66A	5CC-43				
106	CA_5B-66A-66A	66A-66A	5CC-26				
107	CA_5B-66B	66B	5CC-27				
108	CA_5B-66C	66C	5CC-28				



109	CA_7A-12A-66A-66A	7A-66A-66A				
111	CA_7A-7A-66A-66A	7A-7A-66A-66A				
112	CA_7C-66A-66A	7C-66A-66A	5CC-42			
113	CA_13A-48A-66A-66A	48A-66A-66A				
114	CA_5A-48A-66A-66A	48A-66A-66A				
115	CA_7C-13A-66A	7C-66A				
118	CA_2A-2A-7A-7A	2A-2A-7A-7A	5CC-55			
119	CA_2A-2A-7C	2A-2A-7C	5CC-56			
120	CA_7A-7A-25A-25A	7A-7A-25A-25A	5CC-54			
121	CA_7C-25A-25A	7C-25A-25A	5CC-57			
122	CA_2A-5A-48C	2A-48C				
123	CA_41A-42D	41A-42D				
124	CA_41C-42C	41C-42C	5CC-50			
125	CA_41D-42A	41D-42A				
126	CA_42A-42D	42A-42D				
127	CA_42C-42C	42C-42C				
128	CA_5A-48C-66A	48C-66A				
131	CA_41A-42A-42C	41A-42A, 41A-42C, 42A-42C				
132	CA_42E	42E				
133	CA_2A-2A-7A-13A	2A-2A-7A	5CC-55			
134	CA_5A-7A-7A-66A	7A-7A-66A				
135	CA_7A-25A-25A-66A	7A-66A, 25A-25A-66A	5CC-54			
136	CA_7A-7A-13A-66A	7A-7A-66A				
137	CA_7A-7A-25A-66A	7A-7A-66A, 25A-66A	5CC-54			
138	CA_7C-25A-66A	7C-66A, 25A-66A	5CC-57			
139	CA_29A-30A-66A-66A	30A-66A-66A				
140	CA_2A-2A-29A-30A	2A-2A-30A				
141	CA_2A-7A-7A-29A	2A-7A-7A				
142	CA_2A-7C-29A	2A-7C				
143	CA_2C-29A-30A	2C-30A				
144	CA_4A-4A-29A-30A	4A-4A-30A				
145	CA_7A-7A-29A-66A	7A-7A-66A				
146	CA_7C-29A-66A	7C-66A				
147	CA_2A-29A-66A-66A	2A-66A-66A	5CC-58			
148	CA_2A-2A-29A-66A	2A-2A-66A	5CC-58			
150	CA_2A-29A-66A-66A	2A-66A-66A	5CC-58			

LTE Carrier Aggregation Conducted Power (Downlink)

- i. 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.
- ii. 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.
- iii. The device supports downlink five 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.
- iv. 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.
- v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.
- vi. 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.
- vii. 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.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Band 2/4/7/25/30/38/41/42/48/66 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC Guidance, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive. When carrier aggregation is applicable, power measurements were performed with the downlink carrier aggregation and 4x4 DL MIMO active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

4X4 MIMO	Band
	LTE Band 2/4/7/25/30/38/41/42/48/66

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	
CA_2C	ANT0
CA_7C	ANT0
CA_38C	ANT0
CA_41C	ANT0
CA_42C	ANT2
CA_48C	ANT2
CA_66C	ANT0
CA_5B	ANT0
CA_66B	ANT0

<Intra-band>
General Note:

- The device supports intra-band uplink carrier aggregation for LTE B2/7/66/38/41/42/48 with a maximum of two component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
- The device supports uplink carrier aggregation with a maximum of two component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.
- According Nov. 2017 TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
- Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.
- LTE CA_66B test was covered by CA_66C; therefore, SAR was only assessed for CA_66C.

<Inter-band>

UL_CA	PCC	SCC	UL_CA	PCC	SCC
CA_30A-12A	ANT2	ANT0	CA_12A-30A	ANT0	ANT2
CA_66A-12A	ANT2	ANT0	CA_12A-66A	ANT0	ANT2
CA_66A-30A	ANT2	ANT0	CA_30A-66A	ANT0	ANT2
CA_66A-13A	ANT2	ANT0	CA_13A-66A	ANT0	ANT2
CA_30A-14A	ANT2	ANT0	CA_14A-30A	ANT0	ANT2
CA_7A-5A	ANT2	ANT0	CA_5A-7A	ANT0	ANT2
CA_12A-2A	ANT0	ANT2	CA_2A-12A	ANT2	ANT0
CA_30A-2A	ANT0	ANT2	CA_2A-30A	ANT2	ANT0
CA_13A-2A	ANT0	ANT2	CA_2A-13A	ANT2	ANT0
CA_66A-2A	ANT2	ANT0	CA_2A-66A	ANT0	ANT2
CA_12A-4A	ANT0	ANT2	CA_4A-12A	ANT2	ANT0
CA_4A-2A	ANT2	ANT0	CA_2A-4A	ANT0	ANT2
CA_13A-4A	ANT0	ANT2	CA_4A-13A	ANT2	ANT0
CA_5A-2A	ANT0	ANT2	CA_2A-5A	ANT2	ANT0
CA_7A-2A	ANT0	ANT2	CA_2A-7A	ANT2	ANT0
CA_30A-4A	ANT0	ANT2	CA_4A-30A	ANT2	ANT0
CA_5A-4A	ANT0	ANT2	CA_4A-5A	ANT2	ANT0
CA_7A-4A	ANT0	ANT2	CA_4A-7A	ANT2	ANT0
CA_30A-5A	ANT2	ANT0	CA_5A-30A	ANT0	ANT2
CA_66A-5A	ANT2	ANT0	CA_5A-66A	ANT0	ANT2

General Note:

1. The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level.
2. For Inter-band CA co-located SAR analysis is performed using standalone SAR summed together and they are more conservatively for inter band CA.

5G NR Output Power (Unit: dBm)**General Note:**

1. 5G NR n2/n5/n7/n12/n14/n25/n30/n66/n71/n38/n41/n48/n77/n78 is NSA mode.
2. 5G NR n2/n5/n7/n12/n13/n14/n25/n26/n30/n66/n70/n71/n38/n41/n48/n77/n78 is SA mode.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
 - b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
 - c. SAR testing 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
 - d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - e. 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
 - f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM /64QAM/256QAM SAR testing are not required.
 - g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. For 5G NR n38/n41/n77/n78 HPUE, 5G NR n38/n41/n77/n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform SAR testing.
5. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
6. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
7. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
8. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
9. For 5G NR EN-DC mode, standalone SAR performed for 5G NR NSA band with the maximum power, EN-DC SAR summed EN-DC mode 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.

<3GPP 38.101 MPR for EN-DC>
Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

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

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

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

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

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

<EN-DC combination>:

ENDC	LTE	NR	ENDC	LTE	NR
DC_13A_n66A	ANT0	ANT2	DC_13A_n77A	ANT0	ANT2
DC_5A_n2A	ANT0	ANT2	DC_14A_n77A	ANT0	ANT2
DC_14A_n2A	ANT0	ANT2	DC_26A_n78A	ANT0	ANT2
DC_30A_n2A	ANT0	ANT2	DC_2A_n78A	ANT0	ANT2
DC_2A_n5A	ANT2	ANT0	DC_26A_n41A	ANT0	ANT2
DC_30A_n5A	ANT2	ANT0	DC_2A_n41A	ANT2	ANT0
DC_66A_n5A	ANT2	ANT0	DC_7A_n5A	ANT2	ANT0
DC_2A_n12A	ANT2	ANT0	DC_38A_n78A	ANT0	ANT2
DC_66A_n12A	ANT2	ANT0	DC_7A_n71A	ANT2	ANT0
DC_2A_n66A	ANT0	ANT2	DC_41A_n78A	ANT0	ANT2
DC_5A_n66A	ANT0	ANT2	DC_5A_n7A	ANT0	ANT2
DC_12A_n66A	ANT0	ANT2	DC_12A_n7A	ANT0	ANT2
DC_14A_n66A	ANT0	ANT2	DC_66A_n7A	ANT2	ANT0
DC_30A_n66A	ANT0	ANT2	DC_13A_n2A	ANT0	ANT2
DC_12A_n2A	ANT0	ANT2	DC_48A_n5A	ANT2	ANT0
DC_66A_n2A	ANT0	ANT2	DC_48A_n66A	ANT2	ANT0
DC_71A_n2A	ANT0	ANT2	DC_7A_n66A	ANT0	ANT2
DC_12A_n41A	ANT0	ANT2	DC_2A_n48A	ANT0	ANT2
DC_71A_n66A	ANT0	ANT2	DC_5A_n48A	ANT0	ANT2
DC_2A_n71A	ANT2	ANT0	DC_13A_n48A	ANT0	ANT2
DC_66A_n71A	ANT2	ANT0	DC_66A_n48A	ANT0	ANT2
DC_66A_n25A	ANT0	ANT2	DC_4A_n78A	ANT0	ANT2
DC_25A_n41A	ANT2	ANT0	DC_5A_n78A	ANT0	ANT2
DC_12A_n78A	ANT0	ANT2	DC_4A_n41A	ANT2	ANT0
DC_13A_n78A	ANT0	ANT2	DC_66A_n38A	ANT2	ANT0
DC_25A_n78A	ANT0	ANT2	DC_2A_n38A	ANT2	ANT0
DC_12A_n77A	ANT0	ANT2	DC_12A_n38A	ANT0	ANT2



ENDC	LTE	NR	ENDC	LTE	NR
DC_4A_n38A	ANT2	ANT0	DC_71A_n7A	ANT0	ANT2
DC_5A_n38A	ANT0	ANT2	DC_7A_n12A	ANT2	ANT0
DC_66A_n78A	ANT0	ANT2	DC_5A_n77A	ANT0	ANT2
DC_12A_n25A	ANT0	ANT2	DC_66A_n77A	ANT0	ANT2
DC_25A_n77A	ANT0	ANT2	DC_71A_n77A	ANT0	ANT2
DC_2A_n77A	ANT0	ANT2	DC_4A_n2A	ANT0	ANT2
DC_71A_n78A	ANT0	ANT2	DC_7A_n25A	ANT0	ANT2
DC_71A_n38A	ANT0	ANT2	DC_71A_n25A	ANT0	ANT2
DC_13A_n7A	ANT0	ANT2	DC_5A_n25A	ANT0	ANT2
DC_5A_n41A	ANT0	ANT2	DC_26A_n25A	ANT0	ANT2
DC_66A_n41A	ANT2	ANT0	DC_4A_n7A	ANT2	ANT0
DC_2A_n7A	ANT2	ANT0	DC_13A_n25A	ANT0	ANT2
DC_7A_n2A	ANT0	ANT2	DC_7A_n77A	ANT0	ANT2
DC_30A_n77A	ANT0	ANT2	DC_48A_n71A	ANT2	ANT0
DC_41A_n77A	ANT0	ANT2	DC_48A_n12A	ANT2	ANT0
DC_7A_n78A	ANT0	ANT2			
DC_48A_n25A	ANT2	ANT0			
DC_71A_n41A	ANT0	ANT2			
DC_30A_n12A	ANT2	ANT0			
DC_2A_n14A	ANT2	ANT0			
DC_30A_n14A	ANT2	ANT0			
DC_66A_n14A	ANT2	ANT0			
DC_2A_n30A	ANT2	ANT0			
DC_5A_n30A	ANT0	ANT2			
DC_12A_n30A	ANT0	ANT2			
DC_14A_n30A	ANT0	ANT2			
DC_66A_n30A	ANT2	ANT0			

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

1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration. Additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.



13. Antenna Location

The detailed antenna location information can refer to SAR Test Setup Photos.

14. 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: 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 (W/kg) = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
 - f. For TDD LTE SAR measurement of power class 2, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = 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 SAR testing, only performed within a transmitting antenna located within 25mm from that surface or edge.
5. A non-standard setup was used for SAR testing based on guidance from the FCC and the detailed please refer to KDB inquiry with the FCC.
6. The "X' Ant 'y'" means antenna y of Modem X in this report. For example: A ant 0 means ant 0 of Modem A.

WCDMA 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 / HSPA+ 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 / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

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 $> \text{not } \frac{1}{2}$ 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/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ 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 B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 17 / 2 / 4 / 5 / 38 SAR test was covered by Band 12 / 25 / 66 / 26 / 41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. SAR testing 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.
 - b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - c. 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.
 - d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not $\frac{1}{2}$ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
 - e. Smaller bandwidth output power for each RB allocation configuration for this device will 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, smaller bandwidth SAR testing is not required for this device
 - f. For 5G FR1 n5 /n7/ n12/ n25 /n26 /n66 /n71 / n38/ n41 / n48 /n77 the maximum bandwidth does not support three non-overlapping channels, 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.

WLAN Note:

2. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
3. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
4. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closest/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
5. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
6. During SAR testing the WLAN transmission was verified using a spectrum analyzer.



14.1 Body SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
750MHz																			
	LTE Band 71	20M	QPSK	1	0	-	Front	25mm	A Ant 0	133297	680.5	22.89	24.50	1.449	-	-	0.01	0.039	0.057
	LTE Band 71	20M	QPSK	50	0	-	Front	25mm	A Ant 0	133297	680.5	21.97	23.50	1.422	-	-	0.08	0.028	0.040
	LTE Band 71	20M	QPSK	1	0	-	Right side	25mm	A Ant 0	133297	680.5	22.89	24.50	1.449	-	-	0.01	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Right side	25mm	A Ant 0	133297	680.5	21.97	23.50	1.422	-	-	0.03	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Top side	25mm	A Ant 0	133297	680.5	22.89	24.50	1.449	-	-	0.1	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Top side	25mm	A Ant 0	133297	680.5	21.97	23.50	1.422	-	-	-0.08	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Front	25mm	B Ant 0	133297	680.5	22.79	24.50	1.483	-	-	-0.08	0.056	0.083
	LTE Band 71	20M	QPSK	50	0	-	Front	25mm	B Ant 0	133297	680.5	21.88	23.50	1.452	-	-	-0.18	0.042	0.061
	LTE Band 71	20M	QPSK	1	0	-	Top side	25mm	B Ant 0	133297	680.5	22.79	24.50	1.483	-	-	0.1	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Top side	25mm	B Ant 0	133297	680.5	21.88	23.50	1.452	-	-	0.12	0.001	0.001
01	LTE Band 71	20M	QPSK	1	0	-	Front	25mm	C Ant 0	133297	680.5	22.83	24.50	1.469	-	-	-0.07	0.071	0.104
	LTE Band 71	20M	QPSK	50	0	-	Front	25mm	C Ant 0	133297	680.5	21.86	23.50	1.459	-	-	-0.17	0.056	0.082
	LTE Band 71	20M	QPSK	1	0	-	Top side	25mm	C Ant 0	133297	680.5	22.83	24.50	1.469	-	-	-0.18	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Top side	25mm	C Ant 0	133297	680.5	21.86	23.50	1.459	-	-	0.08	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Front	25mm	D Ant 0	133297	680.5	22.83	24.50	1.469	-	-	0.1	0.049	0.072
	LTE Band 71	20M	QPSK	50	0	-	Front	25mm	D Ant 0	133297	680.5	21.79	23.50	1.483	-	-	-0.03	0.037	0.055
	LTE Band 71	20M	QPSK	1	0	-	Left side	25mm	D Ant 0	133297	680.5	22.83	24.50	1.469	-	-	0.12	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Left side	25mm	D Ant 0	133297	680.5	21.79	23.50	1.483	-	-	0.14	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Top side	25mm	D Ant 0	133297	680.5	22.83	24.50	1.469	-	-	0.08	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Top side	25mm	D Ant 0	133297	680.5	21.79	23.50	1.483	-	-	0.11	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Front	25mm	A Ant 0	23095	707.5	23.48	24.50	1.265	-	-	-0.17	0.069	0.087
	LTE Band 12	10M	QPSK	25	0	-	Front	25mm	A Ant 0	23095	707.5	22.55	23.50	1.245	-	-	-0.05	0.051	0.063
	LTE Band 12	10M	QPSK	1	0	-	Right side	25mm	A Ant 0	23095	707.5	23.48	24.50	1.265	-	-	-0.03	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	-	Right side	25mm	A Ant 0	23095	707.5	22.55	23.50	1.245	-	-	0.18	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Top side	25mm	A Ant 0	23095	707.5	23.48	24.50	1.265	-	-	0.14	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	-	Top side	25mm	A Ant 0	23095	707.5	22.55	23.50	1.245	-	-	0.14	0.001	0.001
02	LTE Band 12	10M	QPSK	1	0	-	Front	25mm	B Ant 0	23095	707.5	23.83	24.50	1.167	-	-	-0.19	0.084	0.098
	LTE Band 12	10M	QPSK	25	0	-	Front	25mm	B Ant 0	23095	707.5	22.91	23.50	1.146	-	-	-0.17	0.062	0.071
	LTE Band 12	10M	QPSK	1	0	-	Top side	25mm	B Ant 0	23095	707.5	23.83	24.50	1.167	-	-	-0.05	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	-	Top side	25mm	B Ant 0	23095	707.5	22.91	23.50	1.146	-	-	0.17	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Front	25mm	C Ant 0	23095	707.5	23.40	24.50	1.288	-	-	-0.13	0.062	0.080
	LTE Band 12	10M	QPSK	25	0	-	Front	25mm	C Ant 0	23095	707.5	22.39	23.50	1.291	-	-	-0.05	0.047	0.061
	LTE Band 12	10M	QPSK	1	0	-	Top side	25mm	C Ant 0	23095	707.5	23.40	24.50	1.288	-	-	0.14	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	-	Top side	25mm	C Ant 0	23095	707.5	22.39	23.50	1.291	-	-	0.01	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Front	25mm	D Ant 0	23095	707.5	23.67	24.50	1.211	-	-	0.17	0.070	0.085
	LTE Band 12	10M	QPSK	25	0	-	Front	25mm	D Ant 0	23095	707.5	22.64	23.50	1.219	-	-	0.1	0.052	0.063
	LTE Band 12	10M	QPSK	1	0	-	Left side	25mm	D Ant 0	23095	707.5	23.67	24.50	1.211	-	-	-0.05	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	-	Left side	25mm	D Ant 0	23095	707.5	22.64	23.50	1.219	-	-	-0.17	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Top side	25mm	D Ant 0	23095	707.5	23.67	24.50	1.211	-	-	0.01	0.001	0.001
	LTE Band 12	10M	QPSK	25	0	-	Top side	25mm	D Ant 0	23095	707.5	22.64	23.50	1.219	-	-	0.04	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Front	25mm	A Ant 0	23230	782	23.12	24.50	1.374	-	-	0.1	0.065	0.089
	LTE Band 13	10M	QPSK	25	0	-	Front	25mm	A Ant 0	23230	782	22.55	23.50	1.245	-	-	0.12	0.050	0.062
	LTE Band 13	10M	QPSK	1	0	-	Right side	25mm	A Ant 0	23230	782	23.12	24.50	1.374	-	-	-0.17	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	-	Right side	25mm	A Ant 0	23230	782	22.55	23.50	1.245	-	-	0.03	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Top side	25mm	A Ant 0	23230	782	23.12	24.50	1.374	-	-	0.04	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	-	Top side	25mm	A Ant 0	23230	782	22.55	23.50	1.245	-	-	0.18	0.001	0.001
03	LTE Band 13	10M	QPSK	1	0	-	Front	25mm	B Ant 0	23230	782	23.40	24.50	1.288	-	-	0.06	0.087	0.112
	LTE Band 13	10M	QPSK	25	0	-	Front	25mm	B Ant 0	23230	782	22.42	23.50	1.282	-	-	-0.08	0.065	0.083
	LTE Band 13	10M	QPSK	1	0	-	Top side	25mm	B Ant 0	23230	782	23.40	24.50	1.288	-	-	-0.01	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	-	Top side	25mm	B Ant 0	23230	782	22.42	23.50	1.282	-	-	0.13	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Front	25mm	C Ant 0	23230	782	23.25	24.50	1.334	-	-	0.04	0.074	0.099



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	LTE Band 13	10M	QPSK	25	0	-	Front	25mm	C Ant 0	23230	782	22.61	23.50	1.227	-	-	0.06	0.058	0.071
	LTE Band 13	10M	QPSK	1	0	-	Top side	25mm	C Ant 0	23230	782	23.25	24.50	1.334	-	-	-0.08	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	-	Top side	25mm	C Ant 0	23230	782	22.61	23.50	1.227	-	-	-0.09	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Front	25mm	D Ant 0	23230	782	23.06	24.50	1.393	-	-	0.02	0.076	0.106
	LTE Band 13	10M	QPSK	25	0	-	Front	25mm	D Ant 0	23230	782	22.03	23.50	1.403	-	-	-0.01	0.057	0.080
	LTE Band 13	10M	QPSK	1	0	-	Left side	25mm	D Ant 0	23230	782	23.06	24.50	1.393	-	-	0.01	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	-	Left side	25mm	D Ant 0	23230	782	22.03	23.50	1.403	-	-	-0.08	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Top side	25mm	D Ant 0	23230	782	23.06	24.50	1.393	-	-	0.09	0.001	0.001
	LTE Band 13	10M	QPSK	25	0	-	Top side	25mm	D Ant 0	23230	782	22.03	23.50	1.403	-	-	0.05	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	-	Front	25mm	A Ant 0	23330	793	23.23	24.50	1.340	-	-	-0.08	0.064	0.086
	LTE Band 14	10M	QPSK	25	0	-	Front	25mm	A Ant 0	23330	793	22.88	23.50	1.153	-	-	0.16	0.052	0.060
	LTE Band 14	10M	QPSK	1	0	-	Right side	25mm	A Ant 0	23330	793	23.23	24.50	1.340	-	-	0.13	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	-	Right side	25mm	A Ant 0	23330	793	22.88	23.50	1.153	-	-	-0.1	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	-	Top side	25mm	A Ant 0	23330	793	23.23	24.50	1.340	-	-	0.12	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	-	Top side	25mm	A Ant 0	23330	793	22.88	23.50	1.153	-	-	0.07	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	-	Front	25mm	B Ant 0	23330	793	23.32	24.50	1.312	-	-	0.03	0.067	0.088
	LTE Band 14	10M	QPSK	25	0	-	Front	25mm	B Ant 0	23330	793	22.38	23.50	1.294	-	-	0.18	0.050	0.065
	LTE Band 14	10M	QPSK	1	0	-	Top side	25mm	B Ant 0	23330	793	23.32	24.50	1.312	-	-	0.18	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	-	Top side	25mm	B Ant 0	23330	793	22.38	23.50	1.294	-	-	-0.1	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	-	Front	25mm	C Ant 0	23330	793	23.13	24.50	1.371	-	-	0.02	0.082	0.112
	LTE Band 14	10M	QPSK	25	0	-	Front	25mm	C Ant 0	23330	793	23.07	23.50	1.104	-	-	0.01	0.065	0.072
	LTE Band 14	10M	QPSK	1	0	-	Top side	25mm	C Ant 0	23330	793	23.13	24.50	1.371	-	-	0.16	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	-	Top side	25mm	C Ant 0	23330	793	23.07	23.50	1.104	-	-	-0.15	0.001	0.001
04	LTE Band 14	10M	QPSK	1	0	-	Front	25mm	D Ant 0	23330	793	23.28	24.50	1.324	-	-	0.05	0.128	0.170
	LTE Band 14	10M	QPSK	25	0	-	Front	25mm	D Ant 0	23330	793	22.25	23.50	1.334	-	-	0.19	0.097	0.129
	LTE Band 14	10M	QPSK	1	0	-	Left side	25mm	D Ant 0	23330	793	23.28	24.50	1.324	-	-	-0.1	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	-	Left side	25mm	D Ant 0	23330	793	22.25	23.50	1.334	-	-	0.07	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	-	Top side	25mm	D Ant 0	23330	793	23.28	24.50	1.324	-	-	0.07	0.001	0.001
	LTE Band 14	10M	QPSK	25	0	-	Top side	25mm	D Ant 0	23330	793	22.25	23.50	1.334	-	-	-0.18	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	A Ant 0	136100	680.5	22.97	24.50	1.422	-	-	0.18	0.080	0.114
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	A Ant 0	136100	680.5	22.88	24.50	1.452	-	-	0.03	0.077	0.112
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 0	136100	680.5	22.97	24.50	1.422	-	-	-0.1	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right side	25mm	A Ant 0	136100	680.5	22.88	24.50	1.452	-	-	-0.15	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 0	136100	680.5	22.97	24.50	1.422	-	-	0.01	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	A Ant 0	136100	680.5	22.88	24.50	1.452	-	-	-0.15	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	B Ant 0	136100	680.5	23.01	24.50	1.409	-	-	-0.15	0.099	0.140
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	B Ant 0	136100	680.5	23.00	24.50	1.413	-	-	0.11	0.092	0.130
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	B Ant 0	136100	680.5	23.01	24.50	1.409	-	-	0.19	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	B Ant 0	136100	680.5	23.00	24.50	1.413	-	-	-0.08	0.001	0.001
05	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	C Ant 0	136100	680.5	22.94	24.50	1.432	-	-	0.02	0.137	0.196
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	C Ant 0	136100	680.5	22.87	24.50	1.455	-	-	-0.17	0.121	0.176
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	C Ant 0	136100	680.5	22.94	24.50	1.432	-	-	0.07	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	C Ant 0	136100	680.5	22.87	24.50	1.455	-	-	-0.08	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 0	136100	680.5	22.83	24.50	1.469	-	-	-0.18	0.073	0.107
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	D Ant 0	136100	680.5	22.78	24.50	1.486	-	-	-0.04	0.072	0.107
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left side	25mm	D Ant 0	136100	680.5	22.83	24.50	1.469	-	-	0.03	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left side	25mm	D Ant 0	136100	680.5	22.78	24.50	1.486	-	-	-0.08	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 0	136100	680.5	22.83	24.50	1.469	-	-	-0.15	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	D Ant 0	136100	680.5	22.78	24.50	1.486	-	-	0.17	0.001	0.001
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	A Ant 0	141500	707.5	22.87	24.50	1.455	-	-	-0.15	0.065	0.095
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Front	25mm	A Ant 0	141500	707.5	22.81	24.50	1.476	-	-	0.18	0.061	0.090
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 0	141500	707.5	22.87	24.50	1.455	-	-	0.11	0.001	0.001
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	25mm	A Ant 0	141500	707.5	22.81	24.50	1.476	-	-	-0.04	0.001	0.001
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 0	141500	707.5	22.87	24.50	1.455	-	-	-0.08	0.001	0.001
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Top side	25mm	A Ant 0	141500	707.5	22.81	24.50	1.476	-	-	-0.13	0.001	0.001
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	B Ant 0	141500	707.5	22.85	24.50	1.462	-	-	-0.17	0.081	0.118



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	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top side	25mm	A Ant 0	4182	836.4	23.22	24.50	1.343	-	-	-0.08	0.001	0.001
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	25mm	B Ant 0	4182	836.4	23.26	24.50	1.330	-	-	0.08	0.042	0.056
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top side	25mm	B Ant 0	4182	836.4	23.26	24.50	1.330	-	-	0.01	0.003	0.004
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	25mm	C Ant 0	4182	836.4	23.61	24.50	1.227	-	-	-0.08	0.042	0.052
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top side	25mm	C Ant 0	4182	836.4	23.61	24.50	1.227	-	-	0.1	0.007	0.009
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	25mm	D Ant 0	4182	836.4	23.54	24.50	1.247	-	-	-0.18	0.066	0.082
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left side	25mm	D Ant 0	4182	836.4	23.54	24.50	1.247	-	-	0.1	0.001	0.001
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top side	25mm	D Ant 0	4182	836.4	23.54	24.50	1.247	-	-	0.12	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Front	25mm	A Ant 0	26865	831.5	23.45	24.50	1.274	-	-	0.04	0.038	0.048
	LTE Band 5B	10M	QPSK	1	49	-	Front	25mm	A Ant 0	20475+20574	831.5+841.4	23.12	24.50	1.374	-	-	-0.01	0.027	0.037
	LTE Band 26	15M	QPSK	36	0	-	Front	25mm	A Ant 0	26865	831.5	22.47	23.50	1.268	-	-	-0.05	0.027	0.034
	LTE Band 26	15M	QPSK	1	0	-	Right side	25mm	A Ant 0	26865	831.5	23.45	24.50	1.274	-	-	0.08	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Right side	25mm	A Ant 0	26865	831.5	22.47	23.50	1.268	-	-	-0.04	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Top side	25mm	A Ant 0	26865	831.5	23.45	24.50	1.274	-	-	0.01	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Top side	25mm	A Ant 0	26865	831.5	22.47	23.50	1.268	-	-	-0.13	0.001	0.001
10	LTE Band 26	15M	QPSK	1	0	-	Front	25mm	B Ant 0	26865	831.5	23.78	24.50	1.180	-	-	0.06	0.053	0.063
	LTE Band 5B	10M	QPSK	1	49	-	Front	25mm	B Ant 0	20475+20574	831.5+841.4	23.70	24.50	1.202	-	-	0.03	0.048	0.058
	LTE Band 26	15M	QPSK	36	0	-	Front	25mm	B Ant 0	26865	831.5	22.82	23.50	1.169	-	-	-0.01	0.041	0.048
	LTE Band 26	15M	QPSK	1	0	-	Top side	25mm	B Ant 0	26865	831.5	23.78	24.50	1.180	-	-	-0.05	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Top side	25mm	B Ant 0	26865	831.5	22.82	23.50	1.169	-	-	-0.09	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Front	25mm	C Ant 0	26865	831.5	23.34	24.50	1.306	-	-	0.14	0.046	0.060
	LTE Band 5B	10M	QPSK	1	49	-	Front	25mm	C Ant 0	20475+20574	831.5+841.4	23.15	24.50	1.365	-	-	0.01	0.041	0.056
	LTE Band 26	15M	QPSK	36	0	-	Front	25mm	C Ant 0	26865	831.5	22.22	23.50	1.343	-	-	0.05	0.035	0.047
	LTE Band 26	15M	QPSK	1	0	-	Top side	25mm	C Ant 0	26865	831.5	23.34	24.50	1.306	-	-	0.11	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Top side	25mm	C Ant 0	26865	831.5	22.22	23.50	1.343	-	-	0.02	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Front	25mm	D Ant 0	26865	831.5	23.48	24.50	1.265	-	-	0.08	0.047	0.059
	LTE Band 5B	10M	QPSK	1	49	-	Front	25mm	D Ant 0	20475+20574	831.5+841.4	23.42	24.50	1.282	-	-	0.08	0.042	0.054
	LTE Band 26	15M	QPSK	36	0	-	Front	25mm	D Ant 0	26865	831.5	22.46	23.50	1.271	-	-	-0.13	0.038	0.048
	LTE Band 26	15M	QPSK	1	0	-	Left side	25mm	D Ant 0	26865	831.5	23.48	24.50	1.265	-	-	-0.17	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Left side	25mm	D Ant 0	26865	831.5	22.46	23.50	1.271	-	-	0.17	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Top side	25mm	D Ant 0	26865	831.5	23.48	24.50	1.265	-	-	-0.03	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Top side	25mm	D Ant 0	26865	831.5	22.46	23.50	1.271	-	-	0.06	0.001	0.001
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	A Ant 0	167800	839	22.98	24.50	1.419	-	-	0.07	0.042	0.060
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	A Ant 0	167800	839	22.89	24.50	1.449	-	-	-0.03	0.037	0.054
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 0	167800	839	22.98	24.50	1.419	-	-	-0.05	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right side	25mm	A Ant 0	167800	839	22.89	24.50	1.449	-	-	0.07	0.001	0.001
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 0	167800	839	22.98	24.50	1.419	-	-	0.01	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	A Ant 0	167800	839	22.89	24.50	1.449	-	-	-0.01	0.001	0.001
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	B Ant 0	167800	839	22.93	24.50	1.435	-	-	0.18	0.048	0.069
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	B Ant 0	167800	839	22.84	24.50	1.466	-	-	-0.06	0.042	0.062
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	B Ant 0	167800	839	22.93	24.50	1.435	-	-	0.14	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	B Ant 0	167800	839	22.84	24.50	1.466	-	-	-0.04	0.001	0.001
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	C Ant 0	167800	839	22.92	24.50	1.439	-	-	0.1	0.057	0.082
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	C Ant 0	167800	839	22.86	24.50	1.459	-	-	-0.09	0.052	0.076
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	C Ant 0	167800	839	22.92	24.50	1.439	-	-	-0.17	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	C Ant 0	167800	839	22.86	24.50	1.459	-	-	-0.1	0.001	0.001
11	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 0	167800	839	22.89	24.50	1.449	-	-	0.01	0.061	0.088
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	25mm	D Ant 0	167800	839	22.88	24.50	1.452	-	-	0.18	0.057	0.083
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left side	25mm	D Ant 0	167800	839	22.89	24.50	1.449	-	-	-0.17	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left side	25mm	D Ant 0	167800	839	22.88	24.50	1.452	-	-	-0.17	0.001	0.001
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 0	167800	839	22.89	24.50	1.449	-	-	0.17	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top side	25mm	D Ant 0	167800	839	22.88	24.50	1.452	-	-	-0.04	0.001	0.001
1750MHz																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	25mm	A Ant 0	1413	1732.6	18.94	20.50	1.432	-	-	0.06	0.241	0.345
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right side	25mm	A Ant 0	1413	1732.6	18.94	20.50	1.432	-	-	-0.09	0.051	0.073



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	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top side	25mm	A Ant 0	1413	1732.6	18.94	20.50	1.432	-	-	-0.08	0.001	0.001
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	25mm	B Ant 0	1413	1732.6	18.96	20.50	1.426	-	-	-0.07	0.220	0.314
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top side	25mm	B Ant 0	1413	1732.6	18.96	20.50	1.426	-	-	-0.07	0.025	0.036
12	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	25mm	C Ant 0	1413	1732.6	19.21	20.50	1.346	-	-	0.06	0.270	0.363
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top side	25mm	C Ant 0	1413	1732.6	19.21	20.50	1.346	-	-	0.07	0.015	0.020
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	25mm	D Ant 0	1413	1732.6	19.33	20.50	1.309	-	-	0.08	0.242	0.317
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left side	25mm	D Ant 0	1413	1732.6	19.33	20.50	1.309	-	-	-0.03	0.032	0.042
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top side	25mm	D Ant 0	1413	1732.6	19.33	20.50	1.309	-	-	0.16	0.010	0.013
	LTE Band 66	20M	QPSK	1	0	-	Front	25mm	A Ant 0	132322	1745	18.88	20.50	1.452	-	-	-0.05	0.146	0.212
	LTE Band 66C	20M	QPSK	1	99	-	Front	25mm	A Ant 0	132322+132520	1745+1764.8	18.76	20.50	1.493	-	-	0.01	0.127	0.190
	LTE Band 66	20M	QPSK	50	0	-	Front	25mm	A Ant 0	132322	1745	18.78	20.50	1.486	-	-	-0.15	0.131	0.195
	LTE Band 66	20M	QPSK	1	0	-	Right side	25mm	A Ant 0	132322	1745	18.88	20.50	1.452	-	-	-0.15	0.001	0.001
	LTE Band 66	20M	QPSK	50	0	-	Right side	25mm	A Ant 0	132322	1745	18.78	20.50	1.486	-	-	0.11	0.001	0.001
	LTE Band 66	20M	QPSK	1	0	-	Top side	25mm	A Ant 0	132322	1745	18.88	20.50	1.452	-	-	0.19	0.001	0.001
	LTE Band 66	20M	QPSK	50	0	-	Top side	25mm	A Ant 0	132322	1745	18.78	20.50	1.486	-	-	-0.02	0.001	0.001
	LTE Band 66	20M	QPSK	1	0	-	Front	25mm	B Ant 0	132322	1745	19.02	20.50	1.406	-	-	-0.07	0.261	0.367
	LTE Band 66C	20M	QPSK	1	99	-	Front	25mm	B Ant 0	132322+132520	1745+1764.8	18.84	20.50	1.466	-	-	0.01	0.250	0.366
	LTE Band 66	20M	QPSK	50	0	-	Front	25mm	B Ant 0	132322	1745	18.99	20.50	1.416	-	-	0.1	0.247	0.350
	LTE Band 66	20M	QPSK	1	0	-	Top side	25mm	B Ant 0	132322	1745	19.02	20.50	1.406	-	-	-0.01	0.017	0.024
	LTE Band 66	20M	QPSK	50	0	-	Top side	25mm	B Ant 0	132322	1745	18.99	20.50	1.416	-	-	0.04	0.012	0.017
	LTE Band 66	20M	QPSK	1	0	-	Front	25mm	C Ant 0	132322	1745	18.92	20.50	1.439	-	-	-0.08	0.276	0.397
	LTE Band 66C	20M	QPSK	1	99	-	Front	25mm	C Ant 0	132322+132520	1745+1764.8	18.73	20.50	1.503	-	-	0.07	0.261	0.392
	LTE Band 66	20M	QPSK	50	0	-	Front	25mm	C Ant 0	132322	1745	18.87	20.50	1.455	-	-	0.13	0.262	0.381
	LTE Band 66	20M	QPSK	1	0	-	Top side	25mm	C Ant 0	132322	1745	18.92	20.50	1.439	-	-	0.16	0.010	0.014
	LTE Band 66	20M	QPSK	50	0	-	Top side	25mm	C Ant 0	132322	1745	18.87	20.50	1.455	-	-	-0.18	0.008	0.012
	LTE Band 66	20M	QPSK	1	0	-	Front	25mm	D Ant 0	132322	1745	18.89	20.50	1.449	-	-	-0.07	0.084	0.122
	LTE Band 66C	20M	QPSK	1	99	-	Front	25mm	D Ant 0	132322+132520	1745+1764.8	18.76	20.50	1.493	-	-	0.05	0.072	0.107
	LTE Band 66	20M	QPSK	50	0	-	Front	25mm	D Ant 0	132322	1745	18.79	20.50	1.483	-	-	-0.11	0.077	0.114
	LTE Band 66	20M	QPSK	1	0	-	Left side	25mm	D Ant 0	132322	1745	18.89	20.50	1.449	-	-	0.12	0.011	0.016
	LTE Band 66	20M	QPSK	50	0	-	Left side	25mm	D Ant 0	132322	1745	18.79	20.50	1.483	-	-	-0.16	0.008	0.012
	LTE Band 66	20M	QPSK	1	0	-	Top side	25mm	D Ant 0	132322	1745	18.89	20.50	1.449	-	-	-0.06	0.011	0.016
	LTE Band 66	20M	QPSK	50	0	-	Top side	25mm	D Ant 0	132322	1745	18.79	20.50	1.483	-	-	-0.15	0.010	0.015
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Back	25mm	A Ant 2	132322	1745	19.06	20.50	1.393	-	-	0.08	0.208	0.290
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Back	25mm	A Ant 2	132322	1745	18.95	20.50	1.429	-	-	-0.06	0.200	0.286
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	25mm	A Ant 2	132322	1745	19.06	20.50	1.393	-	-	0.01	0.051	0.071
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	25mm	A Ant 2	132322	1745	18.95	20.50	1.429	-	-	-0.14	0.045	0.064
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Top side	25mm	A Ant 2	132322	1745	19.06	20.50	1.393	-	-	0.03	0.001	0.001
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Top side	25mm	A Ant 2	132322	1745	18.95	20.50	1.429	-	-	-0.19	0.001	0.001
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Back	25mm	B Ant 2	132322	1745	19.25	20.50	1.334	-	-	0.03	0.102	0.136
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Back	25mm	B Ant 2	132322	1745	19.14	20.50	1.368	-	-	0.01	0.100	0.137
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	25mm	B Ant 2	132322	1745	19.25	20.50	1.334	-	-	-0.06	0.104	0.139
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	25mm	B Ant 2	132322	1745	19.14	20.50	1.368	-	-	0.06	0.099	0.135
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Top side	25mm	B Ant 2	132322	1745	19.25	20.50	1.334	-	-	-0.08	0.013	0.017
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Top side	25mm	B Ant 2	132322	1745	19.14	20.50	1.368	-	-	0.02	0.011	0.015
13	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	25mm	C Ant 2	132322	1745	19.04	20.50	1.400	-	-	0.03	0.335	0.469
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	25mm	C Ant 2	132322	1745	18.95	20.50	1.429	-	-	0.12	0.327	0.467
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Top side	25mm	C Ant 2	132322	1745	19.04	20.50	1.400	-	-	-0.02	0.017	0.024
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Top side	25mm	C Ant 2	132322	1745	18.95	20.50	1.429	-	-	-0.16	0.012	0.017
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Front	25mm	D Ant 2	132322	1745	19.09	20.50	1.384	-	-	-0.12	0.100	0.138
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Front	25mm	D Ant 2	132322	1745	18.96	20.50	1.426	-	-	-0.12	0.088	0.125
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	25mm	D Ant 2	132322	1745	19.09	20.50	1.384	-	-	-0.08	0.112	0.155
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	25mm	D Ant 2	132322	1745	18.96	20.50	1.426	-	-	0.07	0.107	0.153
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Top side	25mm	D Ant 2	132322	1745	19.09	20.50	1.384	-	-	0.14	0.017	0.024
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Top side	25mm	D Ant 2	132322	1745	18.96	20.50	1.426	-	-	-0.02	0.014	0.020
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	A Ant 0	349000	1745	19.24	21.00	1.500	-	-	-0.07	0.142	0.213



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	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Top side	25mm	C Ant 2	340500	1702.5	19.44	21.00	1.432	-	-	-0.1	0.005	0.007
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 2	340500	1702.5	19.38	21.00	1.452	-	-	-0.07	0.085	0.123
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Front	25mm	D Ant 2	340500	1702.5	19.26	21.00	1.493	-	-	-0.01	0.078	0.116
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	D Ant 2	340500	1702.5	19.38	21.00	1.452	-	-	0.03	0.042	0.061
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	25mm	D Ant 2	340500	1702.5	19.26	21.00	1.493	-	-	-0.09	0.037	0.055
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 2	340500	1702.5	19.38	21.00	1.452	-	-	0.01	0.007	0.010
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Top side	25mm	D Ant 2	340500	1702.5	19.26	21.00	1.493	-	-	-0.06	0.008	0.012
1900MHz																			
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	25mm	A Ant 0	9400	1880	22.86	24.50	1.459	-	-	0.13	0.277	0.404
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right side	25mm	A Ant 0	9400	1880	22.86	24.50	1.459	-	-	0.12	0.069	0.101
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top side	25mm	A Ant 0	9400	1880	22.86	24.50	1.459	-	-	0.03	0.001	0.001
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	25mm	B Ant 0	9400	1880	22.88	24.50	1.452	-	-	0.07	0.227	0.330
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top side	25mm	B Ant 0	9400	1880	22.88	24.50	1.452	-	-	0.007	0.017	0.025
16	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	25mm	C Ant 0	9400	1880	23.17	24.50	1.358	-	-	-0.01	0.318	0.432
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top side	25mm	C Ant 0	9400	1880	23.17	24.50	1.358	-	-	-0.07	0.012	0.016
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	25mm	D Ant 0	9400	1880	23.28	24.50	1.324	-	-	-0.05	0.239	0.317
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left side	25mm	D Ant 0	9400	1880	23.28	24.50	1.324	-	-	0.12	0.062	0.082
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top side	25mm	D Ant 0	9400	1880	23.28	24.50	1.324	-	-	0.08	0.013	0.017
	LTE Band 25	20M	QPSK	1	0	-	Front	25mm	A Ant 0	26340	1880	22.05	23.50	1.396	-	-	0.18	0.223	0.311
	LTE Band 2C	20M	QPSK	1	99	-	Front	25mm	A Ant 0	18900+19098	1880+1899.8	21.69	23.50	1.517	-	-	-0.01	0.203	0.308
	LTE Band 25	20M	QPSK	50	0	-	Front	25mm	A Ant 0	26340	1880	22.03	23.50	1.403	-	-	-0.06	0.217	0.304
	LTE Band 25	20M	QPSK	1	0	-	Right side	25mm	A Ant 0	26340	1880	22.05	23.50	1.396	-	-	0.16	0.030	0.042
	LTE Band 25	20M	QPSK	50	0	-	Right side	25mm	A Ant 0	26340	1880	22.03	23.50	1.403	-	-	0.02	0.029	0.041
	LTE Band 25	20M	QPSK	1	0	-	Top side	25mm	A Ant 0	26340	1880	22.05	23.50	1.396	-	-	-0.1	0.001	0.001
	LTE Band 25	20M	QPSK	50	0	-	Top side	25mm	A Ant 0	26340	1880	22.03	23.50	1.403	-	-	-0.16	0.001	0.001
	LTE Band 25	20M	QPSK	1	0	-	Front	25mm	B Ant 0	26340	1880	22.01	23.50	1.409	-	-	-0.04	0.254	0.358
	LTE Band 2C	20M	QPSK	1	99	-	Front	25mm	B Ant 0	18900+19098	1880+1899.8	21.64	23.50	1.535	-	-	-0.01	0.231	0.354
	LTE Band 25	20M	QPSK	50	0	-	Front	25mm	B Ant 0	26340	1880	21.95	23.50	1.429	-	-	0.1	0.247	0.353
	LTE Band 25	20M	QPSK	1	0	-	Top side	25mm	B Ant 0	26340	1880	22.01	23.50	1.409	-	-	-0.01	0.021	0.030
	LTE Band 25	20M	QPSK	50	0	-	Top side	25mm	B Ant 0	26340	1880	21.95	23.50	1.429	-	-	0.16	0.019	0.027
17	LTE Band 25	20M	QPSK	1	0	-	Front	25mm	C Ant 0	26340	1880	22.23	23.50	1.340	-	-	-0.01	0.315	0.422
	LTE Band 2C	20M	QPSK	1	99	-	Front	25mm	C Ant 0	18900+19098	1880+1899.8	21.61	23.50	1.545	-	-	-0.01	0.270	0.417
	LTE Band 25	20M	QPSK	50	0	-	Front	25mm	C Ant 0	26340	1880	22.18	23.50	1.355	-	-	0.14	0.304	0.412
	LTE Band 25	20M	QPSK	1	0	-	Top side	25mm	C Ant 0	26340	1880	22.23	23.50	1.340	-	-	0.16	0.020	0.027
	LTE Band 25	20M	QPSK	50	0	-	Top side	25mm	C Ant 0	26340	1880	22.18	23.50	1.355	-	-	0.03	0.019	0.026
	LTE Band 25	20M	QPSK	1	0	-	Front	25mm	D Ant 0	26340	1880	21.88	23.50	1.452	-	-	0.03	0.177	0.257
	LTE Band 2C	20M	QPSK	1	99	-	Front	25mm	D Ant 0	18900+19098	1880+1899.8	21.66	23.50	1.528	-	-	-0.01	0.167	0.255
	LTE Band 25	20M	QPSK	50	0	-	Front	25mm	D Ant 0	26340	1880	21.85	23.50	1.462	-	-	-0.17	0.171	0.250
	LTE Band 25	20M	QPSK	1	0	-	Left side	25mm	D Ant 0	26340	1880	21.88	23.50	1.452	-	-	0.09	0.045	0.065
	LTE Band 25	20M	QPSK	50	0	-	Left side	25mm	D Ant 0	26340	1880	21.85	23.50	1.462	-	-	-0.01	0.041	0.060
	LTE Band 25	20M	QPSK	1	0	-	Top side	25mm	D Ant 0	26340	1880	21.88	23.50	1.452	-	-	-0.16	0.014	0.020
	LTE Band 25	20M	QPSK	50	0	-	Top side	25mm	D Ant 0	26340	1880	21.85	23.50	1.462	-	-	-0.11	0.012	0.018
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Back	25mm	A Ant 2	26340	1880	22.16	23.50	1.361	-	-	-0.08	0.113	0.154
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Back	25mm	A Ant 2	26340	1880	22.11	23.50	1.377	-	-	0.05	0.107	0.147
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	25mm	A Ant 2	26340	1880	22.16	23.50	1.361	-	-	-0.08	0.001	0.001
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Right side	25mm	A Ant 2	26340	1880	22.11	23.50	1.377	-	-	-0.03	0.001	0.001
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Top side	25mm	A Ant 2	26340	1880	22.16	23.50	1.361	-	-	0.1	0.001	0.001
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Top side	25mm	A Ant 2	26340	1880	22.11	23.50	1.377	-	-	0.17	0.001	0.001
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Back	25mm	B Ant 2	26340	1880	22.41	23.50	1.285	-	-	-0.06	0.108	0.139
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Back	25mm	B Ant 2	26340	1880	22.38	23.50	1.294	-	-	-0.15	0.100	0.129
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	25mm	B Ant 2	26340	1880	22.41	23.50	1.285	-	-	0.03	0.089	0.114
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Right side	25mm	B Ant 2	26340	1880	22.38	23.50	1.294	-	-	0.16	0.085	0.110
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Top side	25mm	B Ant 2	26340	1880	22.41	23.50	1.285	-	-	0.01	0.009	0.012
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Top side	25mm	B Ant 2	26340	1880	22.38	23.50	1.294	-	-	0.05	0.007	0.009
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	25mm	C Ant 2	26340	1880	21.80	23.50	1.479	-	-	0.06	0.187	0.277



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	LTE Band 30	10M	QPSK	1	0	-	Top side	25mm	A Ant 0	27710	2310	13.35	14.50	1.303	-	-	0.18	0.001	0.001
	LTE Band 30	10M	QPSK	25	0	-	Top side	25mm	A Ant 0	27710	2310	13.10	14.50	1.380	-	-	0.05	0.001	0.001
	LTE Band 30	10M	QPSK	1	0	-	Front	25mm	B Ant 0	27710	2310	13.26	14.50	1.330	-	-	-0.07	0.045	0.060
	LTE Band 30	10M	QPSK	25	0	-	Front	25mm	B Ant 0	27710	2310	13.21	14.50	1.346	-	-	0	0.044	0.059
	LTE Band 30	10M	QPSK	1	0	-	Top side	25mm	B Ant 0	27710	2310	13.26	14.50	1.330	-	-	-0.07	0.002	0.003
	LTE Band 30	10M	QPSK	25	0	-	Top side	25mm	B Ant 0	27710	2310	13.21	14.50	1.346	-	-	0.07	0.001	0.001
19	LTE Band 30	10M	QPSK	1	0	-	Front	25mm	C Ant 0	27710	2310	13.24	14.50	1.337	-	-	0.03	0.046	0.061
	LTE Band 30	10M	QPSK	25	0	-	Front	25mm	C Ant 0	27710	2310	13.18	14.50	1.355	-	-	0.15	0.044	0.060
	LTE Band 30	10M	QPSK	1	0	-	Top side	25mm	C Ant 0	27710	2310	13.24	14.50	1.337	-	-	-0.06	0.002	0.003
	LTE Band 30	10M	QPSK	25	0	-	Top side	25mm	C Ant 0	27710	2310	13.18	14.50	1.355	-	-	-0.05	0.002	0.003
	LTE Band 30	10M	QPSK	1	0	-	Front	25mm	D Ant 0	27710	2310	13.24	14.50	1.337	-	-	0.18	0.041	0.055
	LTE Band 30	10M	QPSK	25	0	-	Front	25mm	D Ant 0	27710	2310	13.14	14.50	1.368	-	-	-0.08	0.030	0.041
	LTE Band 30	10M	QPSK	1	0	-	Left side	25mm	D Ant 0	27710	2310	13.24	14.50	1.337	-	-	-0.14	0.007	0.009
	LTE Band 30	10M	QPSK	25	0	-	Left side	25mm	D Ant 0	27710	2310	13.14	14.50	1.368	-	-	-0.08	0.005	0.007
	LTE Band 30	10M	QPSK	1	0	-	Top side	25mm	D Ant 0	27710	2310	13.24	14.50	1.337	-	-	0.08	0.014	0.019
	LTE Band 30	10M	QPSK	25	0	-	Top side	25mm	D Ant 0	27710	2310	13.14	14.50	1.368	-	-	-0.13	0.011	0.015
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Back	25mm	A Ant 2	27710	2310	13.31	14.50	1.315	-	-	0.06	0.037	0.049
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Back	25mm	A Ant 2	27710	2310	13.16	14.50	1.361	-	-	0.01	0.036	0.049
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	25mm	A Ant 2	27710	2310	13.31	14.50	1.315	-	-	-0.03	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	25mm	A Ant 2	27710	2310	13.16	14.50	1.361	-	-	-0.11	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Top side	25mm	A Ant 2	27710	2310	13.31	14.50	1.315	-	-	0.01	0.000	0.000
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Top side	25mm	A Ant 2	27710	2310	13.16	14.50	1.361	-	-	0.03	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Back	25mm	B Ant 2	27710	2310	13.29	14.50	1.321	-	-	-0.07	0.011	0.015
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Back	25mm	B Ant 2	27710	2310	13.25	14.50	1.334	-	-	-0.05	0.009	0.012
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	25mm	B Ant 2	27710	2310	13.29	14.50	1.321	-	-	-0.07	0.011	0.015
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	25mm	B Ant 2	27710	2310	13.25	14.50	1.334	-	-	0.14	0.010	0.013
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Top side	25mm	B Ant 2	27710	2310	13.29	14.50	1.321	-	-	-0.02	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Top side	25mm	B Ant 2	27710	2310	13.25	14.50	1.334	-	-	-0.01	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	25mm	C Ant 2	27710	2310	13.36	14.50	1.300	-	-	-0.07	0.032	0.042
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	25mm	C Ant 2	27710	2310	13.07	14.50	1.390	-	-	-0.12	0.029	0.040
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Top side	25mm	C Ant 2	27710	2310	13.36	14.50	1.300	-	-	-0.02	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Top side	25mm	C Ant 2	27710	2310	13.07	14.50	1.390	-	-	0.07	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Front	25mm	D Ant 2	27710	2310	13.42	14.50	1.282	-	-	0.06	0.027	0.035
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Front	25mm	D Ant 2	27710	2310	13.29	14.50	1.321	-	-	0.09	0.026	0.034
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	25mm	D Ant 2	27710	2310	13.42	14.50	1.282	-	-	-0.07	0.034	0.044
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	25mm	D Ant 2	27710	2310	13.29	14.50	1.321	-	-	0.04	0.033	0.044
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Top side	25mm	D Ant 2	27710	2310	13.42	14.50	1.282	-	-	-0.07	0.002	0.003
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Top side	25mm	D Ant 2	27710	2310	13.29	14.50	1.321	-	-	0.11	0.003	0.004
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	A Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.04	0.030	0.041
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	25mm	A Ant 0	462000	2310	13.05	14.50	1.396	-	-	-0.13	0.028	0.039
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 0	462000	2310	13.14	14.50	1.368	-	-	0.07	0.002	0.003
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	25mm	A Ant 0	462000	2310	13.05	14.50	1.396	-	-	0.12	0.002	0.003
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 0	462000	2310	13.14	14.50	1.368	-	-	0.17	0.001	0.001
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	A Ant 0	462000	2310	13.05	14.50	1.396	-	-	-0.11	0.001	0.001
20	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	B Ant 0	462000	2310	13.16	14.50	1.361	-	-	0.05	0.034	0.046
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	25mm	B Ant 0	462000	2310	13.10	14.50	1.380	-	-	0.17	0.032	0.044
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	B Ant 0	462000	2310	13.16	14.50	1.361	-	-	-0.06	0.002	0.003
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	B Ant 0	462000	2310	13.10	14.50	1.380	-	-	-0.16	0.002	0.003
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	C Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.05	0.032	0.044
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	25mm	C Ant 0	462000	2310	13.06	14.50	1.393	-	-	-0.17	0.031	0.043
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	C Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.18	0.000	0.000
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	C Ant 0	462000	2310	13.06	14.50	1.393	-	-	0.11	0.001	0.001
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 0	462000	2310	13.17	14.50	1.358	-	-	-0.07	0.025	0.034
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	25mm	D Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.05	0.023	0.031
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	25mm	D Ant 0	462000	2310	13.17	14.50	1.358	-	-	0.11	0.001	0.001
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left side	25mm	D Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.01	0.001	0.001



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FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 0	462000	2310	13.17	14.50	1.358	-	-	0.08	0.001	0.001
FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	D Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.14	0.001	0.001
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Back	25mm	A Ant 2	462000	2310	13.11	14.50	1.377	-	-	0.01	0.029	0.040
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Back	25mm	A Ant 2	462000	2310	13.00	14.50	1.413	-	-	-0.15	0.026	0.037
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 2	462000	2310	13.11	14.50	1.377	-	-	-0.09	0.006	0.008
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	25mm	A Ant 2	462000	2310	13.00	14.50	1.413	-	-	-0.12	0.008	0.011
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 2	462000	2310	13.11	14.50	1.377	-	-	0.12	0.005	0.007
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	A Ant 2	462000	2310	13.00	14.50	1.413	-	-	-0.17	0.005	0.007
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Back	25mm	B Ant 2	462000	2310	13.18	14.50	1.355	-	-	-0.06	0.008	0.011
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Back	25mm	B Ant 2	462000	2310	13.00	14.50	1.413	-	-	0.08	0.008	0.011
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	B Ant 2	462000	2310	13.18	14.50	1.355	-	-	0.01	0.012	0.016
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	25mm	B Ant 2	462000	2310	13.00	14.50	1.413	-	-	0.01	0.011	0.016
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	B Ant 2	462000	2310	13.18	14.50	1.355	-	-	0.07	0.001	0.001
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	B Ant 2	462000	2310	13.00	14.50	1.413	-	-	0.02	0.001	0.001
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	C Ant 2	462000	2310	13.12	14.50	1.374	-	-	-0.02	0.033	0.045
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	25mm	C Ant 2	462000	2310	13.04	14.50	1.400	-	-	-0.11	0.031	0.043
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	C Ant 2	462000	2310	13.12	14.50	1.374	-	-	-0.14	0.001	0.001
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	C Ant 2	462000	2310	13.04	14.50	1.400	-	-	-0.01	0.001	0.001
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 2	462000	2310	13.25	14.50	1.334	-	-	-0.04	0.012	0.016
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Front	25mm	D Ant 2	462000	2310	13.17	14.50	1.358	-	-	0.09	0.011	0.015
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	D Ant 2	462000	2310	13.25	14.50	1.334	-	-	0.08	0.002	0.003
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	25mm	D Ant 2	462000	2310	13.17	14.50	1.358	-	-	0.1	0.002	0.003
FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 2	462000	2310	13.25	14.50	1.334	-	-	0.01	0.000	0.000
FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Top side	25mm	D Ant 2	462000	2310	13.17	14.50	1.358	-	-	-0.04	0.001	0.001
2600MHz																		
LTE Band 7	20M	QPSK	1	0	-	Front	25mm	A Ant 0	21100	2535	19.16	20.50	1.361	-	-	0.07	0.203	0.276
LTE Band 7C	20M	QPSK	1	99	-	Front	25mm	A Ant 0	21100+ 21298	2535+ 2554.8	19.00	20.50	1.413	-	-	-0.01	0.189	0.267
LTE Band 7	20M	QPSK	50	0	-	Front	25mm	A Ant 0	21100	2535	18.77	20.50	1.489	-	-	0.15	0.172	0.256
LTE Band 7	20M	QPSK	1	0	-	Right side	25mm	A Ant 0	21100	2535	19.16	20.50	1.361	-	-	-0.05	0.037	0.050
LTE Band 7	20M	QPSK	50	0	-	Right side	25mm	A Ant 0	21100	2535	18.77	20.50	1.489	-	-	0.09	0.031	0.046
LTE Band 7	20M	QPSK	1	0	-	Top side	25mm	A Ant 0	21100	2535	19.16	20.50	1.361	-	-	0.03	0.021	0.029
LTE Band 7	20M	QPSK	50	0	-	Top side	25mm	A Ant 0	21100	2535	18.77	20.50	1.489	-	-	-0.16	0.018	0.027
LTE Band 7	20M	QPSK	1	0	-	Front	25mm	B Ant 0	21100	2535	19.12	20.50	1.374	-	-	0.03	0.097	0.133
LTE Band 7C	20M	QPSK	1	99	-	Front	25mm	B Ant 0	21100+ 21298	2535+ 2554.8	18.99	20.50	1.416	-	-	-0.01	0.087	0.123
LTE Band 7	20M	QPSK	50	0	-	Front	25mm	B Ant 0	21100	2535	18.63	20.50	1.538	-	-	-0.18	0.087	0.134
LTE Band 7	20M	QPSK	1	0	-	Top side	25mm	B Ant 0	21100	2535	19.12	20.50	1.374	-	-	0.06	0.019	0.026
LTE Band 7	20M	QPSK	50	0	-	Top side	25mm	B Ant 0	21100	2535	18.63	20.50	1.538	-	-	-0.03	0.017	0.026
LTE Band 7	20M	QPSK	1	0	-	Front	25mm	C Ant 0	21100	2535	19.26	20.50	1.330	-	-	0.06	0.213	0.283
LTE Band 7C	20M	QPSK	1	99	-	Front	25mm	C Ant 0	21100+ 21298	2535+ 2554.8	19.09	20.50	1.384	-	-	-0.07	0.201	0.278
LTE Band 7	20M	QPSK	50	0	-	Front	25mm	C Ant 0	21100	2535	19.07	20.50	1.390	-	-	-0.04	0.201	0.279
LTE Band 7	20M	QPSK	1	0	-	Top side	25mm	C Ant 0	21100	2535	19.26	20.50	1.330	-	-	0.12	0.029	0.039
LTE Band 7	20M	QPSK	50	0	-	Top side	25mm	C Ant 0	21100	2535	19.07	20.50	1.390	-	-	-0.09	0.025	0.035
LTE Band 7	20M	QPSK	1	0	-	Front	25mm	D Ant 0	21100	2535	19.13	20.50	1.371	-	-	0.02	0.102	0.140
LTE Band 7C	20M	QPSK	1	99	-	Front	25mm	D Ant 0	21100+ 21298	2535+ 2554.8	18.95	20.50	1.429	-	-	0.07	0.097	0.139
LTE Band 7	20M	QPSK	50	0	-	Front	25mm	D Ant 0	21100	2535	18.73	20.50	1.503	-	-	0.18	0.097	0.146
LTE Band 7	20M	QPSK	1	0	-	Left side	25mm	D Ant 0	21100	2535	19.13	20.50	1.371	-	-	-0.08	0.050	0.069
LTE Band 7	20M	QPSK	50	0	-	Left side	25mm	D Ant 0	21100	2535	18.73	20.50	1.503	-	-	0.11	0.042	0.063
LTE Band 7	20M	QPSK	1	0	-	Top side	25mm	D Ant 0	21100	2535	19.13	20.50	1.371	-	-	0.16	0.018	0.025
LTE Band 7	20M	QPSK	50	0	-	Top side	25mm	D Ant 0	21100	2535	18.73	20.50	1.503	-	-	0.07	0.014	0.021
LTE Band 7_ENDC	20M	QPSK	1	0	-	Back	25mm	A Ant 2	21100	2535	19.42	20.50	1.282	-	-	-0.04	0.275	0.353
LTE Band 7_ENDC	20M	QPSK	50	0	-	Back	25mm	A Ant 2	21100	2535	19.17	20.50	1.358	-	-	-0.03	0.261	0.355
LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	25mm	A Ant 2	21100	2535	19.42	20.50	1.282	-	-	-0.03	0.035	0.045
LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	25mm	A Ant 2	21100	2535	19.17	20.50	1.358	-	-	0.09	0.027	0.037
LTE Band 7_ENDC	20M	QPSK	1	0	-	Top side	25mm	A Ant 2	21100	2535	19.42	20.50	1.282	-	-	0.08	0.017	0.022
LTE Band 7_ENDC	20M	QPSK	50	0	-	Top side	25mm	A Ant 2	21100	2535	19.17	20.50	1.358	-	-	-0.08	0.012	0.016



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	LTE Band 7_ENDC	20M	QPSK	1	0	-	Back	25mm	B Ant 2	21100	2535	19.17	20.50	1.358	-	-	-0.05	0.013	0.018
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Back	25mm	B Ant 2	21100	2535	19.10	20.50	1.380	-	-	-0.05	0.011	0.015
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	25mm	B Ant 2	21100	2535	19.17	20.50	1.358	-	-	0.01	0.002	0.003
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	25mm	B Ant 2	21100	2535	19.10	20.50	1.380	-	-	-0.03	0.004	0.006
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Top side	25mm	B Ant 2	21100	2535	19.17	20.50	1.358	-	-	0.03	0.005	0.007
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Top side	25mm	B Ant 2	21100	2535	19.10	20.50	1.380	-	-	0.17	0.007	0.010
21	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	25mm	C Ant 2	21100	2535	19.18	20.50	1.355	-	-	0.08	0.359	0.487
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	25mm	C Ant 2	21100	2535	19.17	20.50	1.358	-	-	-0.14	0.342	0.465
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Top side	25mm	C Ant 2	21100	2535	19.18	20.50	1.355	-	-	-0.15	0.016	0.022
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Top side	25mm	C Ant 2	21100	2535	19.17	20.50	1.358	-	-	0.06	0.012	0.016
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Front	25mm	D Ant 2	21100	2535	19.33	20.50	1.309	-	-	-0.05	0.066	0.086
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Front	25mm	D Ant 2	21100	2535	19.02	20.50	1.406	-	-	-0.06	0.057	0.080
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	25mm	D Ant 2	21100	2535	19.33	20.50	1.309	-	-	0.02	0.043	0.056
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	25mm	D Ant 2	21100	2535	19.02	20.50	1.406	-	-	-0.15	0.037	0.052
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Top side	25mm	D Ant 2	21100	2535	19.33	20.50	1.309	-	-	-0.05	0.129	0.169
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Top side	25mm	D Ant 2	21100	2535	19.02	20.50	1.406	-	-	-0.12	0.117	0.165
	LTE Band 41	20M	QPSK	1	0	-	Front	25mm	A Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	0.09	0.140	0.205
	LTE Band 41C	20M	QPSK	1	99		Front	25mm	A Ant 0	40620+ 40818	2593+ 2612	21.77	23.50	1.489	62.9	1.006	0.07	0.117	0.175
	LTE Band 41	20M	QPSK	50	0	-	Front	25mm	A Ant 0	40620	2593	21.85	23.50	1.462	62.9	1.006	-0.16	0.137	0.202
	LTE Band 41	20M	QPSK	1	0	-	Right side	25mm	A Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	-0.1	0.031	0.045
	LTE Band 41	20M	QPSK	50	0	-	Right side	25mm	A Ant 0	40620	2593	21.85	23.50	1.462	62.9	1.006	-0.03	0.027	0.040
	LTE Band 41	20M	QPSK	1	0	-	Top side	25mm	A Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	0.01	0.012	0.018
	LTE Band 41	20M	QPSK	50	0	-	Top side	25mm	A Ant 0	40620	2593	21.85	23.50	1.462	62.9	1.006	0.17	0.011	0.016
	LTE Band 41 PC2	20M	QPSK	1	0		Front	25mm	A Ant 0	40620	2593	21.87	23.50	1.455	42.9	1.009	-0.04	0.095	0.140
	LTE Band 41	20M	QPSK	1	0	-	Front	25mm	B Ant 0	40620	2593	22.31	23.50	1.315	62.9	1.006	-0.05	0.182	0.241
	LTE Band 41C	20M	QPSK	1	99		Front	25mm	B Ant 0	40620+ 40818	2593+ 2612	22.21	23.50	1.346	62.9	1.006	-0.07	0.177	0.240
	LTE Band 41	20M	QPSK	50	0	-	Front	25mm	B Ant 0	40620	2593	22.27	23.50	1.327	62.9	1.006	0.02	0.174	0.232
	LTE Band 41	20M	QPSK	1	0	-	Top side	25mm	B Ant 0	40620	2593	22.31	23.50	1.315	62.9	1.006	-0.04	0.037	0.049
	LTE Band 41	20M	QPSK	50	0	-	Top side	25mm	B Ant 0	40620	2593	22.27	23.50	1.327	62.9	1.006	0	0.035	0.047
	LTE Band 41 PC2	20M	QPSK	1	0		Front	25mm	B Ant 0	40620	2593	22.31	23.50	1.315	42.9	1.009	-0.07	0.136	0.180
	LTE Band 41	20M	QPSK	1	0	-	Front	25mm	C Ant 0	40620	2593	21.91	23.50	1.442	62.9	1.006	0.04	0.188	0.273
	LTE Band 41C	20M	QPSK	1	99		Front	25mm	C Ant 0	40620+ 40818	2593+ 2612	21.78	23.50	1.486	62.9	1.006	-0.02	0.171	0.256
	LTE Band 41	20M	QPSK	50	0	-	Front	25mm	C Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	0.18	0.172	0.252
	LTE Band 41	20M	QPSK	1	0	-	Top side	25mm	C Ant 0	40620	2593	21.91	23.50	1.442	62.9	1.006	-0.07	0.036	0.052
	LTE Band 41	20M	QPSK	50	0	-	Top side	25mm	C Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	-0.11	0.035	0.051
	LTE Band 41 PC2	20M	QPSK	1	0		Front	25mm	C Ant 0	40620	2593	21.91	23.50	1.442	42.9	1.009	-0.03	0.122	0.178
22	LTE Band 41	20M	QPSK	1	0	-	Front	25mm	D Ant 0	40620	2593	21.81	23.50	1.476	62.9	1.006	-0.03	0.196	0.291
	LTE Band 41C	20M	QPSK	1	99		Front	25mm	D Ant 0	40620+ 40818	2593+ 2612	21.62	23.50	1.542	62.9	1.006	-0.07	0.184	0.285
	LTE Band 41	20M	QPSK	50	0	-	Front	25mm	D Ant 0	40620	2593	21.75	23.50	1.496	62.9	1.006	-0.05	0.191	0.287
	LTE Band 41	20M	QPSK	1	0	-	Left side	25mm	D Ant 0	40620	2593	21.81	23.50	1.476	62.9	1.006	0.11	0.034	0.050
	LTE Band 41	20M	QPSK	50	0	-	Left side	25mm	D Ant 0	40620	2593	21.75	23.50	1.496	62.9	1.006	-0.04	0.031	0.047
	LTE Band 41	20M	QPSK	1	0	-	Top side	25mm	D Ant 0	40620	2593	21.81	23.50	1.476	62.9	1.006	-0.07	0.010	0.015
	LTE Band 41	20M	QPSK	50	0	-	Top side	25mm	D Ant 0	40620	2593	21.75	23.50	1.496	62.9	1.006	-0.08	0.009	0.014
	LTE Band 41 PC2	20M	QPSK	1	0		Front	25mm	D Ant 0	40620	2593	21.81	23.50	1.476	42.9	1.009	-0.04	0.142	0.211
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	A Ant 0	507000	2535	19.04	20.50	1.400	-	-	0.09	0.157	0.220
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	25mm	A Ant 0	507000	2535	19.01	20.50	1.409	-	-	0	0.151	0.213
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 0	507000	2535	19.04	20.50	1.400	-	-	0.06	0.037	0.052
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	25mm	A Ant 0	507000	2535	19.01	20.50	1.409	-	-	-0.14	0.031	0.044
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 0	507000	2535	19.04	20.50	1.400	-	-	-0.08	0.016	0.022
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	A Ant 0	507000	2535	19.01	20.50	1.409	-	-	0.01	0.012	0.017
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	B Ant 0	507000	2535	18.86	20.50	1.459	-	-	-0.02	0.142	0.207
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	25mm	B Ant 0	507000	2535	18.84	20.50	1.466	-	-	-0.13	0.013	0.020
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	B Ant 0	507000	2535	18.86	20.50	1.459	-	-	0.18	0.033	0.048
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	B Ant 0	507000	2535	18.84	20.50	1.466	-	-	-0.01	0.028	0.041
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	C Ant 0	507000	2535	18.80	20.50	1.479	-	-	-0.01	0.148	0.219



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	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	25mm	C Ant 0	507000	2535	18.77	20.50	1.489	-	-	-0.05	0.136	0.203
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	C Ant 0	507000	2535	18.80	20.50	1.479	-	-	0.12	0.029	0.043
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	C Ant 0	507000	2535	18.77	20.50	1.489	-	-	0	0.024	0.036
23	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 0	507000	2535	18.72	20.50	1.507	-	-	-0.07	0.195	0.294
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	25mm	D Ant 0	507000	2535	18.69	20.50	1.517	-	-	0.18	0.182	0.276
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	25mm	D Ant 0	507000	2535	18.72	20.50	1.507	-	-	-0.02	0.040	0.060
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	25mm	D Ant 0	507000	2535	18.69	20.50	1.517	-	-	-0.17	0.036	0.055
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 0	507000	2535	18.72	20.50	1.507	-	-	0.09	0.018	0.027
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	D Ant 0	507000	2535	18.69	20.50	1.517	-	-	-0.04	0.012	0.018
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Back	25mm	A Ant 2	507000	2535	19.82	20.50	1.169	-	-	-0.06	0.201	0.235
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Back	25mm	A Ant 2	507000	2535	19.75	20.50	1.189	-	-	-0.04	0.197	0.234
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	A Ant 2	507000	2535	19.82	20.50	1.169	-	-	0.08	0.031	0.036
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	25mm	A Ant 2	507000	2535	19.75	20.50	1.189	-	-	-0.17	0.023	0.027
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	A Ant 2	507000	2535	19.82	20.50	1.169	-	-	0.12	0.016	0.019
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	A Ant 2	507000	2535	19.75	20.50	1.189	-	-	-0.1	0.011	0.013
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Back	25mm	B Ant 2	507000	2535	19.71	20.50	1.199	-	-	0.08	0.088	0.106
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Back	25mm	B Ant 2	507000	2535	19.70	20.50	1.202	-	-	-0.06	0.078	0.094
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	B Ant 2	507000	2535	19.71	20.50	1.199	-	-	0.03	0.114	0.137
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	25mm	B Ant 2	507000	2535	19.70	20.50	1.202	-	-	-0.04	0.102	0.123
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	B Ant 2	507000	2535	19.71	20.50	1.199	-	-	0.15	0.012	0.014
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	B Ant 2	507000	2535	19.70	20.50	1.202	-	-	-0.09	0.009	0.011
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	C Ant 2	507000	2535	19.61	20.50	1.227	-	-	0.03	0.204	0.250
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	25mm	C Ant 2	507000	2535	19.59	20.50	1.233	-	-	0.01	0.195	0.240
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	C Ant 2	507000	2535	19.61	20.50	1.227	-	-	0.08	0.012	0.015
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	C Ant 2	507000	2535	19.59	20.50	1.233	-	-	-0.01	0.009	0.011
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Front	25mm	D Ant 2	507000	2535	19.55	20.50	1.245	-	-	0.12	0.096	0.119
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Front	25mm	D Ant 2	507000	2535	19.53	20.50	1.250	-	-	-0.03	0.086	0.108
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	25mm	D Ant 2	507000	2535	19.55	20.50	1.245	-	-	0.03	0.115	0.143
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	25mm	D Ant 2	507000	2535	19.53	20.50	1.250	-	-	0.07	0.103	0.129
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Top side	25mm	D Ant 2	507000	2535	19.55	20.50	1.245	-	-	-0.16	0.013	0.016
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Top side	25mm	D Ant 2	507000	2535	19.53	20.50	1.250	-	-	0	0.007	0.009
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	A Ant 0	518598	2592.99	19.56	21.00	1.393	-	-	0.06	0.129	0.180
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	A Ant 0	518598	2592.99	19.49	21.00	1.416	-	-	-0.18	0.110	0.156
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	A Ant 0	518598	2592.99	19.56	21.00	1.393	-	-	-0.03	0.032	0.045
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	A Ant 0	518598	2592.99	19.49	21.00	1.416	-	-	0.02	0.022	0.031
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	A Ant 0	518598	2592.99	19.56	21.00	1.393	-	-	-0.12	0.013	0.018
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	A Ant 0	518598	2592.99	19.49	21.00	1.416	-	-	0.16	0.010	0.014
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	A Ant 0	518598	2592.99	19.56	21.00	1.393	-	-	0.06	0.068	0.095
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	B Ant 0	518598	2592.99	19.75	21.00	1.334	-	-	-0.05	0.124	0.165
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	B Ant 0	518598	2592.99	19.74	21.00	1.337	-	-	0.16	0.121	0.162
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	B Ant 0	518598	2592.99	19.75	21.00	1.334	-	-	0.06	0.032	0.043
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	B Ant 0	518598	2592.99	19.74	21.00	1.337	-	-	0.13	0.028	0.037
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	B Ant 0	518598	2592.99	19.75	21.00	1.334	-	-	-0.05	0.057	0.076
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	C Ant 0	518598	2592.99	19.43	21.00	1.435	-	-	0.16	0.124	0.178
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	C Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	0.02	0.112	0.163
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	C Ant 0	518598	2592.99	19.43	21.00	1.435	-	-	-0.05	0.030	0.043
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	C Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	0.07	0.024	0.035
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	C Ant 0	518598	2592.99	19.43	21.00	1.435	-	-	0.16	0.057	0.082
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	D Ant 0	518598	2592.99	19.45	21.00	1.429	-	-	0.03	0.144	0.206
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	D Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	0.05	0.132	0.193
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left side	25mm	D Ant 0	518598	2592.99	19.45	21.00	1.429	-	-	0.03	0.029	0.041
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left side	25mm	D Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	-0.03	0.013	0.019
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	D Ant 0	518598	2592.99	19.45	21.00	1.429	-	-	0.09	0.014	0.020
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	D Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	-0.15	0.011	0.016
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	D Ant 0	518598	2592.99	19.45	21.00	1.429	-	-	0.03	0.071	0.101
24	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	A Ant 2	518598	2592.99	19.69	21.00	1.352	-	-	0.03	0.166	0.224



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	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Back	25mm	A Ant 2	518598	2592.99	19.67	21.00	1.358	-	-	-0.08	0.152	0.206
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	A Ant 2	518598	2592.99	19.69	21.00	1.352	-	-	-0.03	0.031	0.042
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	A Ant 2	518598	2592.99	19.67	21.00	1.358	-	-	0.16	0.025	0.034
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	A Ant 2	518598	2592.99	19.69	21.00	1.352	-	-	0.06	0.015	0.020
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	A Ant 2	518598	2592.99	19.67	21.00	1.358	-	-	0.05	0.012	0.016
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	A Ant 2	518598	2592.99	19.69	21.00	1.352	-	-	0.03	0.087	0.118
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	B Ant 2	518598	2592.99	19.48	21.00	1.419	-	-	0.08	0.013	0.018
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Back	25mm	B Ant 2	518598	2592.99	19.39	21.00	1.449	-	-	-0.09	0.009	0.013
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	B Ant 2	518598	2592.99	19.48	21.00	1.419	-	-	0.01	0.093	0.132
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	B Ant 2	518598	2592.99	19.39	21.00	1.449	-	-	0.11	0.086	0.125
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	B Ant 2	518598	2592.99	19.48	21.00	1.419	-	-	-0.13	0.012	0.017
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	B Ant 2	518598	2592.99	19.39	21.00	1.449	-	-	-0.05	0.008	0.012
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	B Ant 2	518598	2592.99	19.48	21.00	1.419	-	-	0.01	0.047	0.067
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	518598	2592.99	19.83	21.00	1.309	-	-	0.02	0.165	0.216
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	C Ant 2	518598	2592.99	19.81	21.00	1.315	-	-	-0.02	0.153	0.201
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	C Ant 2	518598	2592.99	19.83	21.00	1.309	-	-	0.08	0.011	0.014
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	C Ant 2	518598	2592.99	19.81	21.00	1.315	-	-	0.15	0.008	0.011
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	518598	2592.99	19.83	21.00	1.309	-	-	0.02	0.082	0.107
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	D Ant 2	518598	2592.99	19.50	21.00	1.413	-	-	-0.11	0.085	0.120
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	D Ant 2	518598	2592.99	19.49	21.00	1.416	-	-	-0.12	0.067	0.095
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	518598	2592.99	19.50	21.00	1.413	-	-	0.01	0.087	0.123
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	D Ant 2	518598	2592.99	19.49	21.00	1.416	-	-	0.03	0.072	0.102
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	D Ant 2	518598	2592.99	19.50	21.00	1.413	-	-	0.06	0.012	0.017
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	D Ant 2	518598	2592.99	19.49	21.00	1.416	-	-	-0.16	0.008	0.011
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	518598	2592.99	19.50	21.00	1.413	-	-	0.01	0.041	0.058
3500MHz																			
25	LTE Band 42	20M	QPSK	1	0	-	Back	25mm	A Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.03	0.309	0.452
	LTE Band 42C	20M	QPSK	1	99	-	Back	25mm	A Ant 2	42190+42388	3460+3479.8	21.79	23.50	1.483	62.9	1.006	-0.01	0.297	0.443
	LTE Band 42	20M	QPSK	50	0	-	Back	25mm	A Ant 2	42190	3460	21.80	23.50	1.479	62.9	1.006	-0.07	0.293	0.436
	LTE Band 42	20M	QPSK	1	0	-	Right side	25mm	A Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	0.02	0.044	0.064
	LTE Band 42	20M	QPSK	50	0	-	Right side	25mm	A Ant 2	42190	3460	21.80	23.50	1.479	62.9	1.006	0.05	0.038	0.057
	LTE Band 42	20M	QPSK	1	0	-	Top side	25mm	A Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	0.16	0.048	0.070
	LTE Band 42	20M	QPSK	50	0	-	Top side	25mm	A Ant 2	42190	3460	21.80	23.50	1.479	62.9	1.006	-0.11	0.045	0.067
	LTE Band 42 PC2	20M	QPSK	1	0	-	Back	25mm	A Ant 2	42190	3460	21.87	23.50	1.455	42.9	1.009	-0.01	0.221	0.325
	LTE Band 42	20M	QPSK	1	0	-	Back	25mm	B Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.07	0.157	0.230
	LTE Band 42	20M	QPSK	50	0	-	Back	25mm	B Ant 2	42190	3460	21.84	23.50	1.466	62.9	1.006	-0.03	0.147	0.217
	LTE Band 42	20M	QPSK	1	0	-	Right side	25mm	B Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	0.13	0.180	0.264
	LTE Band 42C	20M	QPSK	1	99	-	Right side	25mm	B Ant 2	42190+42388	3460+3479.8	21.74	23.50	1.500	62.9	1.006	0.01	0.171	0.258
	LTE Band 42	20M	QPSK	50	0	-	Right side	25mm	B Ant 2	42190	3460	21.84	23.50	1.466	62.9	1.006	-0.03	0.175	0.258
	LTE Band 42	20M	QPSK	1	0	-	Top side	25mm	B Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	0.12	0.039	0.057
	LTE Band 42	20M	QPSK	50	0	-	Top side	25mm	B Ant 2	42190	3460	21.84	23.50	1.466	62.9	1.006	0.08	0.037	0.055
	LTE Band 42 PC2	20M	QPSK	1	0	-	Right side	25mm	B Ant 2	42190	3460	21.87	23.50	1.455	42.9	1.009	0.07	0.131	0.192
	LTE Band 42	20M	QPSK	1	0	-	Right side	25mm	C Ant 2	42190	3460	22.21	23.50	1.346	62.9	1.006	0.08	0.286	0.387
	LTE Band 42C	20M	QPSK	1	99	-	Right side	25mm	C Ant 2	42190+42388	3460+3479.8	22.12	23.50	1.374	62.9	1.006	0.07	0.271	0.375
	LTE Band 42	20M	QPSK	50	0	-	Right side	25mm	C Ant 2	42190	3460	22.12	23.50	1.374	62.9	1.006	-0.13	0.275	0.380
	LTE Band 42	20M	QPSK	1	0	-	Top side	25mm	C Ant 2	42190	3460	22.21	23.50	1.346	62.9	1.006	0.01	0.044	0.060
	LTE Band 42	20M	QPSK	50	0	-	Top side	25mm	C Ant 2	42190	3460	22.12	23.50	1.374	62.9	1.006	0.06	0.041	0.057
	LTE Band 42 PC2	20M	QPSK	1	0	-	Right side	25mm	C Ant 2	42190	3460	22.21	23.50	1.346	42.9	1.009	-0.07	0.211	0.287
	LTE Band 42	20M	QPSK	1	0	-	Front	25mm	D Ant 2	42190	3460	21.91	23.50	1.442	62.9	1.006	0	0.242	0.351
	LTE Band 42	20M	QPSK	50	0	-	Front	25mm	D Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.04	0.237	0.347
	LTE Band 42	20M	QPSK	1	0	-	Right side	25mm	D Ant 2	42190	3460	21.91	23.50	1.442	62.9	1.006	-0.03	0.248	0.360
	LTE Band 42C	20M	QPSK	1	99	-	Right side	25mm	D Ant 2	42190+42388	3460+3479.8	21.78	23.50	1.486	62.9	1.006	-0.07	0.231	0.345
	LTE Band 42	20M	QPSK	50	0	-	Right side	25mm	D Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.08	0.217	0.318
	LTE Band 42	20M	QPSK	1	0	-	Top side	25mm	D Ant 2	42190	3460	21.91	23.50	1.442	62.9	1.006	0.07	0.035	0.051
	LTE Band 42	20M	QPSK	50	0	-	Top side	25mm	D Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.13	0.031	0.045



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	LTE Band 42 PC2	20M	QPSK	1	0		Right side	25mm	D Ant 2	42190	3460	21.91	23.50	1.442	42.9	1.009	-0.08	0.177	0.258
27	LTE Band 48	20M	QPSK	1	0	-	Back	25mm	A Ant 2	55830	3609	14.95	16.50	1.429	62.9	1.006	0.08	0.385	0.553
	LTE Band 48C	20M	QPSK	1	99	-	Back	25mm	A Ant 2	55830+ 56028	3609+ 3628.8	14.85	16.50	1.462	62.9	1.006	-0.01	0.373	0.549
	LTE Band 48	20M	QPSK	50	0	-	Back	25mm	A Ant 2	55830	3609	14.90	16.50	1.445	62.9	1.006	0.19	0.364	0.529
	LTE Band 48	20M	QPSK	1	0	-	Right side	25mm	A Ant 2	55830	3609	14.95	16.50	1.429	62.9	1.006	0.08	0.044	0.063
	LTE Band 48	20M	QPSK	50	0	-	Right side	25mm	A Ant 2	55830	3609	14.90	16.50	1.445	62.9	1.006	0.07	0.035	0.051
	LTE Band 48	20M	QPSK	1	0	-	Top side	25mm	A Ant 2	55830	3609	14.95	16.50	1.429	62.9	1.006	0.01	0.047	0.068
	LTE Band 48	20M	QPSK	50	0	-	Top side	25mm	A Ant 2	55830	3609	14.90	16.50	1.445	62.9	1.006	-0.18	0.039	0.057
	LTE Band 48	20M	QPSK	1	0	-	Back	25mm	B Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	-0.07	0.131	0.189
	LTE Band 48	20M	QPSK	50	0	-	Back	25mm	B Ant 2	55830	3609	14.88	16.50	1.452	62.9	1.006	-0.1	0.123	0.180
	LTE Band 48	20M	QPSK	1	0	-	Right side	25mm	B Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	0.03	0.220	0.318
	LTE Band 48C	20M	QPSK	1	99	-	Right side	25mm	B Ant 2	55830+ 56028	3609+ 3628.8	14.81	16.50	1.476	62.9	1.006	-0.07	0.217	0.322
	LTE Band 48	20M	QPSK	50	0	-	Right side	25mm	B Ant 2	55830	3609	14.88	16.50	1.452	62.9	1.006	0.01	0.205	0.299
	LTE Band 48	20M	QPSK	1	0	-	Top side	25mm	B Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	-0.07	0.042	0.061
	LTE Band 48	20M	QPSK	50	0	-	Top side	25mm	B Ant 2	55830	3609	14.88	16.50	1.452	62.9	1.006	-0.15	0.032	0.047
	LTE Band 48	20M	QPSK	1	0	-	Right side	25mm	C Ant 2	55830	3609	14.99	16.50	1.416	62.9	1.006	0.1	0.284	0.404
	LTE Band 48C	20M	QPSK	1	99	-	Right side	25mm	C Ant 2	55830+ 56028	3609+ 3628.8	14.91	16.50	1.442	62.9	1.006	0.07	0.271	0.393
	LTE Band 48	20M	QPSK	50	0	-	Right side	25mm	C Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	0.07	0.275	0.397
	LTE Band 48	20M	QPSK	1	0	-	Top side	25mm	C Ant 2	55830	3609	14.99	16.50	1.416	62.9	1.006	0.1	0.045	0.064
	LTE Band 48	20M	QPSK	50	0	-	Top side	25mm	C Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	0.18	0.036	0.052
	LTE Band 48	20M	QPSK	1	0	-	Front	25mm	D Ant 2	55830	3609	14.92	16.50	1.439	62.9	1.006	-0.07	0.188	0.272
	LTE Band 48	20M	QPSK	50	0	-	Front	25mm	D Ant 2	55830	3609	14.84	16.50	1.466	62.9	1.006	0.18	0.172	0.254
	LTE Band 48	20M	QPSK	1	0	-	Right side	25mm	D Ant 2	55830	3609	14.92	16.50	1.439	62.9	1.006	-0.12	0.249	0.360
	LTE Band 48C	20M	QPSK	1	99	-	Right side	25mm	D Ant 2	55830+ 56028	3609+ 3628.8	14.81	16.50	1.476	62.9	1.006	0.07	0.231	0.343
	LTE Band 48	20M	QPSK	50	0	-	Right side	25mm	D Ant 2	55830	3609	14.84	16.50	1.466	62.9	1.006	0.16	0.228	0.336
	LTE Band 48	20M	QPSK	1	0	-	Top side	25mm	D Ant 2	55830	3609	14.92	16.50	1.439	62.9	1.006	-0.05	0.047	0.068
	LTE Band 48	20M	QPSK	50	0	-	Top side	25mm	D Ant 2	55830	3609	14.84	16.50	1.466	62.9	1.006	-0.1	0.039	0.057
28	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	A Ant 2	641666	3624.99	15.32	17.00	1.472	-	-	-0.12	0.520	0.766
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	25mm	A Ant 2	641666	3624.99	15.24	17.00	1.500	-	-	0.13	0.472	0.708
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	A Ant 2	641666	3624.99	15.32	17.00	1.472	-	-	0.08	0.053	0.078
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	25mm	A Ant 2	641666	3624.99	15.24	17.00	1.500	-	-	0.12	0.042	0.063
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	A Ant 2	641666	3624.99	15.32	17.00	1.472	-	-	-0.07	0.055	0.081
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Top side	25mm	A Ant 2	641666	3624.99	15.24	17.00	1.500	-	-	0.03	0.042	0.063
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	B Ant 2	641666	3624.99	15.63	17.00	1.371	-	-	0.02	0.191	0.262
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Back	25mm	B Ant 2	641666	3624.99	15.58	17.00	1.387	-	-	0.06	0.186	0.258
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	B Ant 2	641666	3624.99	15.63	17.00	1.371	-	-	0.08	0.236	0.324
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	25mm	B Ant 2	641666	3624.99	15.58	17.00	1.387	-	-	-0.09	0.212	0.294
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	B Ant 2	641666	3624.99	15.63	17.00	1.371	-	-	-0.07	0.066	0.090
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Top side	25mm	B Ant 2	641666	3624.99	15.58	17.00	1.387	-	-	-0.08	0.059	0.082
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	641666	3624.99	15.78	17.00	1.324	-	-	-0.08	0.343	0.454
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	25mm	C Ant 2	641666	3624.99	15.69	17.00	1.352	-	-	-0.08	0.312	0.422
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	C Ant 2	641666	3624.99	15.78	17.00	1.324	-	-	-0.04	0.072	0.095
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Top side	25mm	C Ant 2	641666	3624.99	15.69	17.00	1.352	-	-	0.05	0.067	0.091
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	D Ant 2	641666	3624.99	15.41	17.00	1.442	-	-	-0.16	0.170	0.245
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Front	25mm	D Ant 2	641666	3624.99	15.33	17.00	1.469	-	-	-0.17	0.141	0.207
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	641666	3624.99	15.41	17.00	1.442	-	-	0.03	0.275	0.397
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	25mm	D Ant 2	641666	3624.99	15.33	17.00	1.469	-	-	0.04	0.253	0.372
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	D Ant 2	641666	3624.99	15.41	17.00	1.442	-	-	-0.07	0.060	0.087
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Top side	25mm	D Ant 2	641666	3624.99	15.33	17.00	1.469	-	-	-0.01	0.051	0.075
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	A Ant 2	656000	3840	22.58	24.00	1.387	-	-	-0.01	0.025	0.035
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	25mm	A Ant 2	656000	3840	22.51	24.00	1.409	-	-	-0.05	0.021	0.030
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	A Ant 2	656000	3840	22.58	24.00	1.387	-	-	-0.09	0.029	0.040
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	A Ant 2	656000	3840	22.51	24.00	1.409	-	-	0.01	0.023	0.032
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	A Ant 2	656000	3840	22.58	24.00	1.387	-	-	-0.06	0.048	0.067
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	A Ant 2	656000	3840	22.51	24.00	1.409	-	-	0.1	0.039	0.055



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	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	A Ant 2	656000	3840	22.58	24.00	1.387	50	1.000	-0.17	0.024	0.033
29	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	A Ant 2	633334	3500.01	22.47	24.00	1.422	-	-	0.1	0.454	0.646
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	25mm	A Ant 2	633334	3500.01	22.43	24.00	1.435	-	-	0.14	0.432	0.620
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	A Ant 2	633334	3500.01	22.47	24.00	1.422	-	-	-0.01	0.023	0.033
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	A Ant 2	633334	3500.01	22.43	24.00	1.435	-	-	-0.17	0.021	0.030
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	A Ant 2	633334	3500.01	22.47	24.00	1.422	-	-	-0.11	0.056	0.080
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	A Ant 2	633334	3500.01	22.43	24.00	1.435	-	-	0.17	0.049	0.070
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	A Ant 2	633334	3500.01	22.47	24.00	1.422	50	1.000	0.14	0.212	0.302
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	B Ant 2	656000	3840	22.53	24.00	1.403	-	-	0.03	0.012	0.017
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	25mm	B Ant 2	656000	3840	22.44	24.00	1.432	-	-	0.11	0.010	0.014
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	B Ant 2	656000	3840	22.53	24.00	1.403	-	-	0.1	0.119	0.167
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	B Ant 2	656000	3840	22.44	24.00	1.432	-	-	-0.05	0.102	0.146
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	B Ant 2	656000	3840	22.53	24.00	1.403	-	-	0.16	0.034	0.048
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	B Ant 2	656000	3840	22.44	24.00	1.432	-	-	0.18	0.029	0.042
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	B Ant 2	656000	3840	22.53	24.00	1.403	50	1.000	-0.06	0.056	0.079
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	B Ant 2	633334	3500.01	22.46	24.00	1.426	-	-	0.02	0.245	0.349
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	25mm	B Ant 2	633334	3500.01	22.31	24.00	1.476	-	-	-0.17	0.225	0.332
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	B Ant 2	633334	3500.01	22.46	24.00	1.426	-	-	-0.16	0.184	0.262
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	B Ant 2	633334	3500.01	22.31	24.00	1.476	-	-	-0.03	0.168	0.248
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	B Ant 2	633334	3500.01	22.46	24.00	1.426	-	-	0.05	0.041	0.058
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	B Ant 2	633334	3500.01	22.31	24.00	1.476	-	-	0.14	0.038	0.056
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	25mm	B Ant 2	633334	3500.01	22.46	24.00	1.426	50	1.000	-0.03	0.123	0.175
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	656000	3840	22.46	24.00	1.426	-	-	-0.07	0.139	0.198
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	C Ant 2	656000	3840	22.25	24.00	1.496	-	-	0.12	0.131	0.196
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	C Ant 2	656000	3840	22.46	24.00	1.426	-	-	0.16	0.060	0.086
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	C Ant 2	656000	3840	22.25	24.00	1.496	-	-	0.08	0.052	0.078
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	656000	3840	22.46	24.00	1.426	50	1.000	-0.15	0.066	0.094
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	-0.04	0.286	0.397
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	C Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	-0.18	0.267	0.376
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	C Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	0.16	0.035	0.049
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	C Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	0.1	0.023	0.032
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	C Ant 2	633334	3500.01	22.58	24.00	1.387	50	1.000	0.05	0.135	0.187
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	D Ant 2	656000	3840	22.57	24.00	1.390	-	-	-0.06	0.175	0.243
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	D Ant 2	656000	3840	22.47	24.00	1.422	-	-	-0.08	0.163	0.232
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	656000	3840	22.57	24.00	1.390	-	-	-0.13	0.207	0.288
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	D Ant 2	656000	3840	22.47	24.00	1.422	-	-	-0.08	0.199	0.283
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	D Ant 2	656000	3840	22.57	24.00	1.390	-	-	-0.01	0.044	0.061
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	D Ant 2	656000	3840	22.47	24.00	1.422	-	-	0.1	0.035	0.050
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	656000	3840	22.57	24.00	1.390	50	1.000	-0.11	0.101	0.140
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	25mm	D Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	0.19	0.177	0.245
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	25mm	D Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	0.08	0.171	0.241
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	-0.14	0.255	0.354
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	25mm	D Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	0.01	0.243	0.342
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top side	25mm	D Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	-0.18	0.039	0.054
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top side	25mm	D Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	0.03	0.023	0.032
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	25mm	D Ant 2	633334	3500.01	22.58	24.00	1.387	50	1.000	-0.06	0.120	0.166

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
2450MHz															
	WLAN2.4GHz	802.11b 1Mbps	Front	25mm	Ant 1	6	2437	19.80	20.00	1.047	99.07	1.009	-0.18	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Back	25mm	Ant 1	6	2437	19.80	20.00	1.047	99.07	1.009	0.1	0.001	0.001
30	WLAN2.4GHz	802.11b 1Mbps	Left side	25mm	Ant 1	6	2437	19.80	20.00	1.047	99.07	1.009	0.04	0.017	0.018
	WLAN2.4GHz	802.11b 1Mbps	Top side	25mm	Ant 1	6	2437	19.80	20.00	1.047	99.07	1.009	0.08	0.001	0.001
5000MHz															
	WLAN5.3GHz	802.11a 6Mbps	Front	25mm	Ant 1	60	5300	19.72	20.00	1.067	95.03	1.052	-0.17	0.001	0.001
	WLAN5.3GHz	802.11a 6Mbps	Back	25mm	Ant 1	60	5300	19.72	20.00	1.067	95.03	1.052	-0.03	0.137	0.154
31	WLAN5.3GHz	802.11a 6Mbps	Left side	25mm	Ant 1	60	5300	19.72	20.00	1.067	95.03	1.052	-0.18	0.245	0.275
	WLAN5.3GHz	802.11a 6Mbps	Top side	25mm	Ant 1	60	5300	19.72	20.00	1.067	95.03	1.052	0.11	0.001	0.001
	WLAN5.5GHz	802.11a 6Mbps	Front	25mm	Ant 1	112	5560	19.77	20.00	1.054	95.03	1.052	-0.05	0.001	0.001
	WLAN5.5GHz	802.11a 6Mbps	Back	25mm	Ant 1	112	5560	19.77	20.00	1.054	95.03	1.052	0.18	0.133	0.148
32	WLAN5.5GHz	802.11a 6Mbps	Left side	25mm	Ant 1	112	5560	19.77	20.00	1.054	95.03	1.052	0.03	0.275	0.305
	WLAN5.5GHz	802.11a 6Mbps	Top side	25mm	Ant 1	112	5560	19.77	20.00	1.054	95.03	1.052	-0.17	0.001	0.001
	WLAN5.8GHz	802.11a 6Mbps	Front	25mm	Ant 1	149	5745	19.70	20.00	1.072	95.03	1.052	0.17	0.001	0.001
	WLAN5.8GHz	802.11a 6Mbps	Back	25mm	Ant 1	149	5745	19.70	20.00	1.072	95.03	1.052	-0.05	0.113	0.127
33	WLAN5.8GHz	802.11a 6Mbps	Left side	25mm	Ant 1	149	5745	19.70	20.00	1.072	95.03	1.052	0.02	0.298	0.336
	WLAN5.8GHz	802.11a 6Mbps	Top side	25mm	Ant 1	149	5745	19.70	20.00	1.072	95.03	1.052	0.1	0.001	0.001



14.2 Extremity SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
750MHz																			
	LTE Band 71	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	133297	680.5	22.89	24.50	1.449	-	-	-0.02	0.012	0.017
	LTE Band 71	20M	QPSK	50	0	-	Right side	0mm	A Ant 0	133297	680.5	21.97	23.50	1.422	-	-	0.01	0.007	0.010
	LTE Band 71	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	133297	680.5	22.79	24.50	1.483	-	-	0.01	0.002	0.003
	LTE Band 71	20M	QPSK	50	0	-	Right side	0mm	B Ant 0	133297	680.5	21.88	23.50	1.452	-	-	0.03	0.001	0.001
	LTE Band 71	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	133297	680.5	22.83	24.50	1.469	-	-	0.08	0.001	0.001
	LTE Band 71	20M	QPSK	50	0	-	Left side	0mm	C Ant 0	133297	680.5	21.86	23.50	1.459	-	-	0.06	0.001	0.001
34	LTE Band 71	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	133297	680.5	22.83	24.50	1.469	-	-	0.01	0.019	0.028
	LTE Band 71	20M	QPSK	50	0	-	Left side	0mm	D Ant 0	133297	680.5	21.79	23.50	1.483	-	-	0.02	0.015	0.022
	LTE Band 12	10M	QPSK	1	0	-	Right side	0mm	A Ant 0	23095	707.5	23.48	24.50	1.265	-	-	0.03	0.010	0.013
	LTE Band 12	10M	QPSK	25	0	-	Right side	0mm	A Ant 0	23095	707.5	22.55	23.50	1.245	-	-	0.05	0.007	0.009
	LTE Band 12	10M	QPSK	1	0	-	Right side	0mm	B Ant 0	23095	707.5	23.83	24.50	1.167	-	-	0.03	0.003	0.004
	LTE Band 12	10M	QPSK	25	0	-	Right side	0mm	B Ant 0	23095	707.5	22.91	23.50	1.146	-	-	0.01	0.001	0.001
	LTE Band 12	10M	QPSK	1	0	-	Left side	0mm	C Ant 0	23095	707.5	23.40	24.50	1.288	-	-	-0.08	0.003	0.004
	LTE Band 12	10M	QPSK	25	0	-	Left side	0mm	C Ant 0	23095	707.5	22.39	23.50	1.291	-	-	0.06	0.001	0.001
35	LTE Band 12	10M	QPSK	1	0	-	Left side	0mm	D Ant 0	23095	707.5	23.67	24.50	1.211	-	-	-0.08	0.016	0.019
	LTE Band 12	10M	QPSK	25	0	-	Left side	0mm	D Ant 0	23095	707.5	22.64	23.50	1.219	-	-	0.06	0.012	0.015
36	LTE Band 13	10M	QPSK	1	0	-	Right side	0mm	A Ant 0	23230	782	23.12	24.50	1.374	-	-	-0.11	0.037	0.051
	LTE Band 13	10M	QPSK	25	0	-	Right side	0mm	A Ant 0	23230	782	22.55	23.50	1.245	-	-	0.01	0.023	0.029
	LTE Band 13	10M	QPSK	1	0	-	Right side	0mm	B Ant 0	23230	782	23.40	24.50	1.288	-	-	0.1	0.005	0.006
	LTE Band 13	10M	QPSK	25	0	-	Right side	0mm	B Ant 0	23230	782	22.42	23.50	1.282	-	-	0.06	0.003	0.004
	LTE Band 13	10M	QPSK	1	0	-	Left side	0mm	C Ant 0	23230	782	23.25	24.50	1.334	-	-	-0.18	0.000	0.000
	LTE Band 13	10M	QPSK	25	0	-	Left side	0mm	C Ant 0	23230	782	22.61	23.50	1.227	-	-	0.09	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Left side	0mm	D Ant 0	23230	782	23.06	24.50	1.393	-	-	0.1	0.010	0.014
	LTE Band 13	10M	QPSK	25	0	-	Left side	0mm	D Ant 0	23230	782	22.03	23.50	1.403	-	-	0.07	0.007	0.010
37	LTE Band 14	10M	QPSK	1	0	-	Right side	0mm	A Ant 0	23330	793	23.23	24.50	1.340	-	-	-0.19	0.039	0.052
	LTE Band 14	10M	QPSK	25	0	-	Right side	0mm	A Ant 0	23330	793	22.88	23.50	1.153	-	-	0.08	0.031	0.036
	LTE Band 14	10M	QPSK	1	0	-	Right side	0mm	B Ant 0	23330	793	23.32	24.50	1.312	-	-	-0.07	0.005	0.007
	LTE Band 14	10M	QPSK	25	0	-	Right side	0mm	B Ant 0	23330	793	22.38	23.50	1.294	-	-	0.06	0.003	0.004
	LTE Band 14	10M	QPSK	1	0	-	Left side	0mm	C Ant 0	23330	793	23.13	24.50	1.371	-	-	0.01	0.000	0.000
	LTE Band 14	10M	QPSK	25	0	-	Left side	0mm	C Ant 0	23330	793	23.07	23.50	1.104	-	-	0.01	0.001	0.001
	LTE Band 14	10M	QPSK	1	0	-	Left side	0mm	D Ant 0	23330	793	23.28	24.50	1.324	-	-	0.01	0.015	0.020
	LTE Band 14	10M	QPSK	25	0	-	Left side	0mm	D Ant 0	23330	793	22.25	23.50	1.334	-	-	0.07	0.011	0.015
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	136100	680.5	22.97	24.50	1.422	-	-	0.03	0.011	0.016
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right side	0mm	A Ant 0	136100	680.5	22.88	24.50	1.452	-	-	0.01	0.010	0.015
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	136100	680.5	23.01	24.50	1.409	-	-	-0.01	0.001	0.001
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right side	0mm	B Ant 0	136100	680.5	23.00	24.50	1.413	-	-	-0.06	0.001	0.001
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	136100	680.5	22.94	24.50	1.432	-	-	0.01	0.000	0.000
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left side	0mm	C Ant 0	136100	680.5	22.87	24.50	1.455	-	-	0.06	0.001	0.001
38	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	136100	680.5	22.83	24.50	1.469	-	-	-0.05	0.016	0.024
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left side	0mm	D Ant 0	136100	680.5	22.78	24.50	1.486	-	-	0.18	0.013	0.019
39	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	141500	707.5	22.87	24.50	1.455	-	-	0.09	0.025	0.036
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	0mm	A Ant 0	141500	707.5	22.81	24.50	1.476	-	-	0.06	0.023	0.034
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	141500	707.5	22.85	24.50	1.462	-	-	-0.07	0.002	0.003
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	0mm	B Ant 0	141500	707.5	22.82	24.50	1.472	-	-	-0.03	0.001	0.001
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	141500	707.5	22.93	24.50	1.435	-	-	-0.02	0.000	0.000
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left side	0mm	C Ant 0	141500	707.5	22.90	24.50	1.445	-	-	0.05	0.001	0.001
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	141500	707.5	22.96	24.50	1.426	-	-	-0.07	0.019	0.027
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left side	0mm	D Ant 0	141500	707.5	22.93	24.50	1.435	-	-	0.06	0.016	0.023
40	FR1 n13	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	156400	782	22.55	24.00	1.396	-	-	-0.08	0.039	0.054
	FR1 n13	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	A Ant 0	156400	782	22.45	24.00	1.429	-	-	0.07	0.036	0.051
	FR1 n13	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	156400	782	22.57	24.00	1.390	-	-	-0.07	0.003	0.004



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	FR1 n13	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	B Ant 0	156400	782	22.52	24.00	1.406	-	-	-0.03	0.002	0.003
	FR1 n13	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	156400	782	22.67	24.00	1.358	-	-	-0.04	0.000	0.000
	FR1 n13	10M	QPSK	25	14	DFT-SCS-15KHz	Left side	0mm	C Ant 0	156400	782	22.55	24.00	1.396	-	-	-0.08	0.001	0.001
	FR1 n13	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	156400	782	22.68	24.00	1.355	-	-	-0.07	0.013	0.018
	FR1 n13	10M	QPSK	25	14	DFT-SCS-15KHz	Left side	0mm	D Ant 0	156400	782	22.54	24.00	1.400	-	-	0.02	0.012	0.017
41	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	158600	793	22.82	24.50	1.472	-	-	-0.02	0.039	0.057
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	A Ant 0	158600	793	22.79	24.50	1.483	-	-	0.01	0.035	0.052
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	158600	793	22.86	24.50	1.459	-	-	-0.02	0.003	0.004
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	B Ant 0	158600	793	22.76	24.50	1.493	-	-	0.06	0.002	0.003
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	158600	793	23.06	24.50	1.393	-	-	-0.02	0.000	0.000
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left side	0mm	C Ant 0	158600	793	22.89	24.50	1.449	-	-	-0.08	0.001	0.001
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	158600	793	22.81	24.50	1.476	-	-	0.07	0.013	0.019
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left side	0mm	D Ant 0	158600	793	22.66	24.50	1.528	-	-	0.16	0.011	0.017
42	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right side	0mm	A Ant 0	4182	836.4	23.22	24.50	1.343	-	-	0.01	0.010	0.013
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right side	0mm	B Ant 0	4182	836.4	23.26	24.50	1.330	-	-	-0.07	0.002	0.003
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left side	0mm	C Ant 0	4182	836.4	23.61	24.50	1.227	-	-	0.07	0.001	0.001
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left side	0mm	D Ant 0	4182	836.4	23.54	24.50	1.247	-	-	-0.07	0.004	0.005
43	LTE Band 26	15M	QPSK	1	0	-	Right side	0mm	A Ant 0	26865	831.5	23.45	24.50	1.274	-	-	0.14	0.020	0.025
	LTE Band 5B	10M	QPSK	1	49	-	Right side	0mm	A Ant 0	20475+ 20574	831.5+ 841.4	23.12	24.50	1.374	-	-	-0.18	0.017	0.023
	LTE Band 26	15M	QPSK	36	0	-	Right side	0mm	A Ant 0	26865	831.5	22.47	23.50	1.268	-	-	0.07	0.015	0.019
	LTE Band 26	15M	QPSK	1	0	-	Right side	0mm	B Ant 0	26865	831.5	23.78	24.50	1.180	-	-	0.05	0.003	0.004
	LTE Band 5B	10M	QPSK	1	49	-	Right side	0mm	B Ant 0	20475+ 20574	831.5+ 841.4	23.70	24.50	1.202	-	-	0.1	0.002	0.002
	LTE Band 26	15M	QPSK	36	0	-	Right side	0mm	B Ant 0	26865	831.5	22.82	23.50	1.169	-	-	0.03	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Left side	0mm	C Ant 0	26865	831.5	23.34	24.50	1.306	-	-	0.12	0.002	0.003
	LTE Band 5B	10M	QPSK	1	49	-	Left side	0mm	C Ant 0	20475+ 20574	831.5+ 841.4	23.15	24.50	1.365	-	-	-0.08	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Left side	0mm	C Ant 0	26865	831.5	22.22	23.50	1.343	-	-	0.01	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Left side	0mm	D Ant 0	26865	831.5	23.48	24.50	1.265	-	-	-0.06	0.007	0.009
	LTE Band 5B	10M	QPSK	1	49	-	Left side	0mm	D Ant 0	20475+ 20574	831.5+ 841.4	23.42	24.50	1.282	-	-	-0.08	0.004	0.005
	LTE Band 26	15M	QPSK	36	0	-	Left side	0mm	D Ant 0	26865	831.5	22.46	23.50	1.271	-	-	0.03	0.004	0.005
44	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	167800	839	22.98	24.50	1.419	-	-	0.09	0.009	0.013
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right side	0mm	A Ant 0	167800	839	22.89	24.50	1.449	-	-	0.06	0.007	0.010
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	167800	839	22.93	24.50	1.435	-	-	-0.07	0.002	0.003
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right side	0mm	B Ant 0	167800	839	22.84	24.50	1.466	-	-	0.06	0.001	0.001
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	167800	839	22.92	24.50	1.439	-	-	-0.07	0.003	0.004
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left side	0mm	C Ant 0	167800	839	22.86	24.50	1.459	-	-	-0.01	0.002	0.003
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	167800	839	22.89	24.50	1.449	-	-	0.04	0.008	0.012
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left side	0mm	D Ant 0	167800	839	22.88	24.50	1.452	-	-	-0.02	0.005	0.007
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right side	0mm	A Ant 0	1413	1732.6	18.94	20.50	1.432	-	-	-0.04	0.032	0.046
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right side	0mm	B Ant 0	1413	1732.6	18.96	20.50	1.426	-	-	-0.07	0.005	0.007
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left side	0mm	C Ant 0	1413	1732.6	19.21	20.50	1.346	-	-	-0.04	0.007	0.009
45	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left side	0mm	D Ant 0	1413	1732.6	19.33	20.50	1.309	-	-	-0.04	0.062	0.081
	LTE Band 66	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	132322	1745	18.88	20.50	1.452	-	-	-0.01	0.029	0.042
	LTE Band 66C	20M	QPSK	1	99	-	Right side	0mm	A Ant 0	132322+ 132520	1745+ 1764.8	18.76	20.50	1.493	-	-	-0.04	0.022	0.033
	LTE Band 66	20M	QPSK	50	0	-	Right side	0mm	A Ant 0	132322	1745	18.78	20.50	1.486	-	-	0.07	0.025	0.037
	LTE Band 66	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	132322	1745	19.02	20.50	1.406	-	-	0.06	0.007	0.010
	LTE Band 66C	20M	QPSK	1	99	-	Right side	0mm	B Ant 0	132322+ 132520	1745+ 1764.8	18.84	20.50	1.466	-	-	-0.04	0.005	0.007
	LTE Band 66	20M	QPSK	50	0	-	Right side	0mm	B Ant 0	132322	1745	18.99	20.50	1.416	-	-	0.01	0.005	0.007
	LTE Band 66	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	132322	1745	18.92	20.50	1.439	-	-	-0.18	0.005	0.007
	LTE Band 66C	20M	QPSK	1	99	-	Left side	0mm	C Ant 0	132322+ 132520	1745+ 1764.8	18.73	20.50	1.503	-	-	-0.07	0.004	0.006
	LTE Band 66	20M	QPSK	50	0	-	Left side	0mm	C Ant 0	132322	1745	18.87	20.50	1.455	-	-	0.07	0.003	0.004
	LTE Band 66	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	132322	1745	18.89	20.50	1.449	-	-	0.08	0.066	0.096
	LTE Band 66C	20M	QPSK	1	99	-	Left side	0mm	D Ant 0	132322+ 132520	1745+ 1764.8	18.76	20.50	1.493	-	-	-0.03	0.061	0.091
	LTE Band 66	20M	QPSK	50	0	-	Left side	0mm	D Ant 0	132322	1745	18.79	20.50	1.483	-	-	0.03	0.059	0.087
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	132322	1745	19.06	20.50	1.393	-	-	0.04	0.057	0.079



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	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	0mm	A Ant 2	132322	1745	18.95	20.50	1.429	-	-	0.07	0.051	0.073
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	132322	1745	19.25	20.50	1.334	-	-	0.02	0.185	0.247
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	0mm	B Ant 2	132322	1745	19.14	20.50	1.368	-	-	0.05	0.178	0.243
46	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	132322	1745	19.04	20.50	1.400	-	-	0.01	1.01	1.414
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	0mm	C Ant 2	132322	1745	18.95	20.50	1.429	-	-	0.09	0.922	1.317
	LTE Band 66_ENDC	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	132322	1745	19.09	20.50	1.384	-	-	-0.07	0.268	0.371
	LTE Band 66_ENDC	20M	QPSK	50	0	-	Right side	0mm	D Ant 2	132322	1745	18.96	20.50	1.426	-	-	0.06	0.259	0.369
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	349000	1745	19.24	21.00	1.500	-	-	0.08	0.029	0.043
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	A Ant 0	349000	1745	19.17	21.00	1.524	-	-	-0.09	0.026	0.040
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	349000	1745	19.34	21.00	1.466	-	-	-0.04	0.007	0.010
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	B Ant 0	349000	1745	19.25	21.00	1.496	-	-	0.05	0.006	0.009
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	349000	1745	19.42	21.00	1.439	-	-	-0.07	0.008	0.012
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	0mm	C Ant 0	349000	1745	19.30	21.00	1.479	-	-	0.06	0.006	0.009
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	349000	1745	19.22	21.00	1.507	-	-	-0.18	0.066	0.099
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	0mm	D Ant 0	349000	1745	19.09	21.00	1.552	-	-	0.07	0.053	0.082
	FR1 n66_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 2	349000	1745	19.40	21.00	1.445	-	-	-0.16	0.076	0.110
	FR1 n66_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	A Ant 2	349000	1745	19.39	21.00	1.449	-	-	-0.08	0.072	0.104
	FR1 n66_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 2	349000	1745	19.50	21.00	1.413	-	-	-0.07	0.222	0.314
	FR1 n66_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	B Ant 2	349000	1745	19.44	21.00	1.432	-	-	0.05	0.213	0.305
47	FR1 n66_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	C Ant 2	349000	1745	19.55	21.00	1.396	-	-	0.08	0.949	1.325
	FR1 n66_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	C Ant 2	349000	1745	19.42	21.00	1.439	-	-	0.06	0.905	1.302
	FR1 n66_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	D Ant 2	349000	1745	19.31	21.00	1.476	-	-	-0.07	0.222	0.328
	FR1 n66_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	D Ant 2	349000	1745	19.19	21.00	1.517	-	-	-0.17	0.218	0.331
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 2	340500	1702.5	19.43	21.00	1.435	-	-	-0.13	0.050	0.072
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	0mm	A Ant 2	340500	1702.5	19.40	21.00	1.445	-	-	0.01	0.042	0.061
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 2	340500	1702.5	19.27	21.00	1.489	-	-	-0.04	0.175	0.261
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	0mm	B Ant 2	340500	1702.5	19.20	21.00	1.514	-	-	0.03	0.169	0.256
48	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	C Ant 2	340500	1702.5	19.54	21.00	1.400	-	-	0.06	0.919	1.286
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	0mm	C Ant 2	340500	1702.5	19.44	21.00	1.432	-	-	0.02	0.886	1.269
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	D Ant 2	340500	1702.5	19.38	21.00	1.452	-	-	-0.07	0.224	0.325
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right side	0mm	D Ant 2	340500	1702.5	19.26	21.00	1.493	-	-	0.1	0.218	0.325
49	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right side	0mm	A Ant 0	9400	1880	22.86	24.50	1.459	-	-	-0.03	0.061	0.089
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right side	0mm	B Ant 0	9400	1880	22.88	24.50	1.452	-	-	-0.04	0.004	0.006
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left side	0mm	C Ant 0	9400	1880	23.17	24.50	1.358	-	-	-0.07	0.003	0.004
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left side	0mm	D Ant 0	9400	1880	23.28	24.50	1.324	-	-	-0.05	0.034	0.045
	LTE Band 25	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	26340	1880	22.05	23.50	1.396	-	-	-0.15	0.073	0.102
	LTE Band 2C	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	18900+19098	1880+1899.8	21.69	23.50	1.517	-	-	-0.02	0.068	0.103
	LTE Band 25	20M	QPSK	50	0	-	Right side	0mm	A Ant 0	26340	1880	22.03	23.50	1.403	-	-	0.06	0.070	0.098
	LTE Band 25	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	26340	1880	22.01	23.50	1.409	-	-	-0.02	0.004	0.006
	LTE Band 2C	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	18900+19098	1880+1899.8	21.64	23.50	1.535	-	-	0.08	0.003	0.005
	LTE Band 25	20M	QPSK	50	0	-	Right side	0mm	B Ant 0	26340	1880	21.95	23.50	1.429	-	-	0.01	0.003	0.004
	LTE Band 25	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	26340	1880	22.23	23.50	1.340	-	-	0.07	0.003	0.004
	LTE Band 2C	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	18900+19098	1880+1899.8	21.61	23.50	1.545	-	-	0.01	0.002	0.003
	LTE Band 25	20M	QPSK	50	0	-	Left side	0mm	C Ant 0	26340	1880	22.18	23.50	1.355	-	-	0.05	0.002	0.003
	LTE Band 25	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	26340	1880	21.88	23.50	1.452	-	-	0.12	0.081	0.118
	LTE Band 2C	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	18900+19098	1880+1899.8	21.66	23.50	1.528	-	-	0.03	0.072	0.110
	LTE Band 25	20M	QPSK	50	0	-	Left side	0mm	D Ant 0	26340	1880	21.85	23.50	1.462	-	-	0.08	0.075	0.110
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	26340	1880	22.16	23.50	1.361	-	-	0.04	0.030	0.041
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Right side	0mm	A Ant 2	26340	1880	22.11	23.50	1.377	-	-	0.07	0.029	0.040
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	26340	1880	22.41	23.50	1.285	-	-	0.07	0.124	0.159
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Right side	0mm	B Ant 2	26340	1880	22.38	23.50	1.294	-	-	0.04	0.121	0.157
50	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	26340	1880	21.80	23.50	1.479	-	-	0.01	0.856	1.266
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Right side	0mm	C Ant 2	26340	1880	21.77	23.50	1.489	-	-	0.05	0.841	1.253
	LTE Band 25_ENDC	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	26340	1880	21.86	23.50	1.459	-	-	-0.02	0.202	0.295
	LTE Band 25_ENDC	20M	QPSK	50	0	-	Right side	0mm	D Ant 2	26340	1880	21.80	23.50	1.479	-	-	0.07	0.196	0.290



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	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	376500	1882.5	21.74	23.50	1.500	-	-	-0.06	0.050	0.075
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	A Ant 0	376500	1882.5	21.65	23.50	1.531	-	-	0.05	0.043	0.066
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	376500	1882.5	22.24	23.50	1.337	-	-	-0.07	0.010	0.013
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	B Ant 0	376500	1882.5	22.23	23.50	1.340	-	-	-0.09	0.007	0.009
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	376500	1882.5	21.92	23.50	1.439	-	-	-0.07	0.009	0.013
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	0mm	C Ant 0	376500	1882.5	21.89	23.50	1.449	-	-	0.08	0.005	0.007
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	376500	1882.5	22.27	23.50	1.327	-	-	-0.15	0.062	0.082
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	0mm	D Ant 0	376500	1882.5	22.25	23.50	1.334	-	-	0	0.059	0.079
	FR1 n25_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 2	376500	1882.5	22.69	23.50	1.205	-	-	0.07	0.037	0.045
	FR1 n25_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	A Ant 2	376500	1882.5	22.64	23.50	1.219	-	-	0.01	0.035	0.043
	FR1 n25_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 2	376500	1882.5	22.68	23.50	1.208	-	-	-0.05	0.130	0.157
	FR1 n25_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	B Ant 2	376500	1882.5	22.66	23.50	1.213	-	-	-0.01	0.123	0.149
51	FR1 n25_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	C Ant 2	376500	1882.5	22.75	23.50	1.189	-	-	-0.02	0.845	1.004
	FR1 n25_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	C Ant 2	376500	1882.5	22.73	23.50	1.194	-	-	-0.1	0.823	0.983
	FR1 n25_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	D Ant 2	376500	1882.5	22.72	23.50	1.197	-	-	-0.07	0.201	0.241
	FR1 n25_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	D Ant 2	376500	1882.5	22.71	23.50	1.199	-	-	-0.13	0.196	0.235
	LTE Band 30	10M	QPSK	1	0	-	Right side	0mm	A Ant 0	27710	2310	13.35	14.50	1.303	-	-	-0.08	0.006	0.008
	LTE Band 30	10M	QPSK	25	0	-	Right side	0mm	A Ant 0	27710	2310	13.10	14.50	1.380	-	-	0.09	0.006	0.008
	LTE Band 30	10M	QPSK	1	0	-	Right side	0mm	B Ant 0	27710	2310	13.26	14.50	1.330	-	-	0.02	0.005	0.007
	LTE Band 30	10M	QPSK	25	0	-	Right side	0mm	B Ant 0	27710	2310	13.21	14.50	1.346	-	-	0.06	0.005	0.007
	LTE Band 30	10M	QPSK	1	0	-	Left side	0mm	C Ant 0	27710	2310	13.24	14.50	1.337	-	-	0.09	0.002	0.003
	LTE Band 30	10M	QPSK	25	0	-	Left side	0mm	C Ant 0	27710	2310	13.18	14.50	1.355	-	-	0.03	0.002	0.003
	LTE Band 30	10M	QPSK	1	0	-	Left side	0mm	D Ant 0	27710	2310	13.24	14.50	1.337	-	-	0.03	0.001	0.001
	LTE Band 30	10M	QPSK	25	0	-	Left side	0mm	D Ant 0	27710	2310	13.14	14.50	1.368	-	-	0.07	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	0mm	A Ant 2	27710	2310	13.31	14.50	1.315	-	-	-0.07	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	0mm	A Ant 2	27710	2310	13.16	14.50	1.361	-	-	0.09	0.001	0.001
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	0mm	B Ant 2	27710	2310	13.29	14.50	1.321	-	-	-0.07	0.018	0.024
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	0mm	B Ant 2	27710	2310	13.25	14.50	1.334	-	-	0.09	0.017	0.023
52	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	0mm	C Ant 2	27710	2310	13.36	14.50	1.300	-	-	-0.01	0.108	0.140
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	0mm	C Ant 2	27710	2310	13.07	14.50	1.390	-	-	0.05	0.100	0.139
	LTE Band 30_ENDC	10M	QPSK	1	0	-	Right side	0mm	D Ant 2	27710	2310	13.42	14.50	1.282	-	-	-0.01	0.016	0.021
	LTE Band 30_ENDC	10M	QPSK	25	0	-	Right side	0mm	D Ant 2	27710	2310	13.29	14.50	1.321	-	-	0.06	0.015	0.020
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.06	0.002	0.003
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	A Ant 0	462000	2310	13.05	14.50	1.396	-	-	0.04	0.002	0.003
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	462000	2310	13.16	14.50	1.361	-	-	-0.04	0.001	0.001
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	B Ant 0	462000	2310	13.10	14.50	1.380	-	-	0.09	0.001	0.001
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	462000	2310	13.14	14.50	1.368	-	-	-0.05	0.001	0.001
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left side	0mm	C Ant 0	462000	2310	13.06	14.50	1.393	-	-	-0.07	0.001	0.001
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	462000	2310	13.17	14.50	1.358	-	-	-0.15	0.006	0.008
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	462000	2310	13.14	14.50	1.368	-	-	0.11	0.005	0.007
	FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 2	462000	2310	13.11	14.50	1.377	-	-	0.08	0.001	0.001
	FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	A Ant 2	462000	2310	13.00	14.50	1.413	-	-	0.06	0.001	0.001
	FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 2	462000	2310	13.18	14.50	1.355	-	-	-0.04	0.018	0.024
	FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	B Ant 2	462000	2310	13.00	14.50	1.413	-	-	-0.09	0.017	0.024
53	FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	C Ant 2	462000	2310	13.12	14.50	1.374	-	-	-0.02	0.095	0.131
	FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	C Ant 2	462000	2310	13.04	14.50	1.400	-	-	-0.17	0.092	0.129
	FR1 n30_ENDC	10M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	D Ant 2	462000	2310	13.25	14.50	1.334	-	-	-0.01	0.018	0.024
	FR1 n30_ENDC	10M	QPSK	25	14	DFT-SCS-15KHz	Right side	0mm	D Ant 2	462000	2310	13.17	14.50	1.358	-	-	0.01	0.017	0.023
	LTE Band 7	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	21100	2535	19.16	20.50	1.361	-	-	-0.07	0.059	0.080
	LTE Band 7C	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	21100+21298	2535+2554.8	19.00	20.50	1.413	-	-	0.11	0.051	0.072
	LTE Band 7	20M	QPSK	50	0	-	Right side	0mm	A Ant 0	21100	2535	18.77	20.50	1.489	-	-	0.05	0.052	0.077
	LTE Band 7	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	21100	2535	19.12	20.50	1.374	-	-	0.16	0.030	0.041
	LTE Band 7C	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	21100+21298	2535+2554.8	18.99	20.50	1.416	-	-	-0.15	0.026	0.037
	LTE Band 7	20M	QPSK	50	0	-	Right side	0mm	B Ant 0	21100	2535	18.63	20.50	1.538	-	-	0.08	0.021	0.032
	LTE Band 7	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	21100	2535	19.26	20.50	1.330	-	-	0.03	0.010	0.013



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	LTE Band 7C	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	21100+21298	2535+2554.8	19.09	20.50	1.384	-	-	-0.15	0.008	0.011
	LTE Band 7	20M	QPSK	50	0	-	Left side	0mm	C Ant 0	21100	2535	19.07	20.50	1.390	-	-	0.01	0.008	0.011
	LTE Band 7	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	21100	2535	19.13	20.50	1.371	-	-	-0.06	0.109	0.149
	LTE Band 7C	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	21100+21298	2535+2554.8	18.95	20.50	1.429	-	-	0.03	0.101	0.144
	LTE Band 7	20M	QPSK	50	0	-	Left side	0mm	D Ant 0	21100	2535	18.73	20.50	1.503	-	-	0.07	0.097	0.146
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	21100	2535	19.42	20.50	1.282	-	-	0.04	0.030	0.038
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	0mm	A Ant 2	21100	2535	19.17	20.50	1.358	-	-	0.01	0.026	0.035
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	21100	2535	19.17	20.50	1.358	-	-	-0.07	0.202	0.274
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	0mm	B Ant 2	21100	2535	19.10	20.50	1.380	-	-	0.06	0.193	0.266
54	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	21100	2535	19.18	20.50	1.355	-	-	-0.05	1.13	1.531
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	0mm	C Ant 2	21100	2535	19.17	20.50	1.358	-	-	-0.02	1.04	1.413
	LTE Band 7_ENDC	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	21100	2535	19.33	20.50	1.309	-	-	-0.07	0.157	0.206
	LTE Band 7_ENDC	20M	QPSK	50	0	-	Right side	0mm	D Ant 2	21100	2535	19.02	20.50	1.406	-	-	0.05	0.148	0.208
	LTE Band 41	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	0.07	0.034	0.050
	LTE Band 41C	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	40620+40818	2593+2612	21.77	23.50	1.489	62.9	1.006	-0.18	0.029	0.043
	LTE Band 41	20M	QPSK	50	0	-	Right side	0mm	A Ant 0	40620	2593	21.85	23.50	1.462	62.9	1.006	0.03	0.031	0.046
	LTE Band 41 PC2	20M	QPSK	1	0	-	Right side	0mm	A Ant 0	40620	2593	21.87	23.50	1.455	42.9	1.009	-0.07	0.025	0.037
	LTE Band 41	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	40620	2593	22.31	23.50	1.315	62.9	1.006	-0.05	0.024	0.032
	LTE Band 41C	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	40620+40818	2593+2612	22.21	23.50	1.346	62.9	1.006	0.07	0.021	0.028
	LTE Band 41	20M	QPSK	50	0	-	Right side	0mm	B Ant 0	40620	2593	22.27	23.50	1.327	62.9	1.006	0.03	0.021	0.028
	LTE Band 41 PC2	20M	QPSK	1	0	-	Right side	0mm	B Ant 0	40620	2593	22.31	23.50	1.315	42.9	1.009	-0.04	0.017	0.023
	LTE Band 41	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	40620	2593	21.91	23.50	1.442	62.9	1.006	0.12	0.003	0.004
	LTE Band 41C	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	40620+40818	2593+2612	21.78	23.50	1.486	62.9	1.006	0.19	0.002	0.003
	LTE Band 41	20M	QPSK	50	0	-	Left side	0mm	C Ant 0	40620	2593	21.87	23.50	1.455	62.9	1.006	0.07	0.002	0.003
	LTE Band 41 PC2	20M	QPSK	1	0	-	Left side	0mm	C Ant 0	40620	2593	21.91	23.50	1.442	42.9	1.009	-0.04	0.002	0.003
55	LTE Band 41	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	40620	2593	21.81	23.50	1.476	62.9	1.006	-0.03	0.042	0.062
	LTE Band 41C	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	40620+40818	2593+2612	21.62	23.50	1.542	62.9	1.006	-0.15	0.039	0.060
	LTE Band 41	20M	QPSK	50	0	-	Left side	0mm	D Ant 0	40620	2593	21.75	23.50	1.496	62.9	1.006	-0.01	0.040	0.060
	LTE Band 41 PC2	20M	QPSK	1	0	-	Left side	0mm	D Ant 0	40620	2593	21.81	23.50	1.476	42.9	1.009	-0.05	0.031	0.046
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 0	507000	2535	19.04	20.50	1.400	-	-	0.03	0.038	0.053
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	A Ant 0	507000	2535	19.01	20.50	1.409	-	-	0.05	0.035	0.049
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 0	507000	2535	18.86	20.50	1.459	-	-	-0.07	0.018	0.026
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	B Ant 0	507000	2535	18.84	20.50	1.466	-	-	0.05	0.015	0.022
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	C Ant 0	507000	2535	18.80	20.50	1.479	-	-	-0.07	0.014	0.021
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	0mm	C Ant 0	507000	2535	18.77	20.50	1.489	-	-	0.1	0.011	0.016
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left side	0mm	D Ant 0	507000	2535	18.72	20.50	1.507	-	-	-0.03	0.028	0.042
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left side	0mm	D Ant 0	507000	2535	18.69	20.50	1.517	-	-	0.11	0.025	0.038
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	A Ant 2	507000	2535	19.82	20.50	1.169	-	-	-0.02	0.036	0.042
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	A Ant 2	507000	2535	19.75	20.50	1.189	-	-	0.01	0.033	0.039
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	B Ant 2	507000	2535	19.71	20.50	1.199	-	-	-0.07	0.125	0.150
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	B Ant 2	507000	2535	19.70	20.50	1.202	-	-	0.06	0.113	0.136
56	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	C Ant 2	507000	2535	19.61	20.50	1.227	-	-	0.08	0.754	0.925
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	C Ant 2	507000	2535	19.59	20.50	1.233	-	-	-0.07	0.736	0.908
	FR1 n7_ENDC	40M	QPSK	1	1	DFT-SCS-15KHz	Right side	0mm	D Ant 2	507000	2535	19.55	20.50	1.245	-	-	-0.05	0.147	0.183
	FR1 n7_ENDC	40M	QPSK	108	54	DFT-SCS-15KHz	Right side	0mm	D Ant 2	507000	2535	19.53	20.50	1.250	-	-	0.18	0.135	0.169
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 0	518598	2592.99	19.56	21.00	1.393	-	-	-0.07	0.030	0.042
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	A Ant 0	518598	2592.99	19.49	21.00	1.416	-	-	0.05	0.025	0.035
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 0	518598	2592.99	19.56	21.00	1.393	-	-	-0.07	0.016	0.022
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 0	518598	2592.99	19.75	21.00	1.334	-	-	-0.04	0.013	0.017
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	B Ant 0	518598	2592.99	19.74	21.00	1.337	-	-	0.01	0.011	0.015
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 0	518598	2592.99	19.75	21.00	1.334	-	-	-0.04	0.006	0.008
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left side	0mm	C Ant 0	518598	2592.99	19.43	21.00	1.435	-	-	-0.05	0.011	0.016
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left side	0mm	C Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	0.07	0.009	0.013
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left side	0mm	C Ant 0	518598	2592.99	19.43	21.00	1.435	-	-	-0.05	0.005	0.007
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left side	0mm	D Ant 0	518598	2592.99	19.45	21.00	1.429	-	-	-0.07	0.032	0.046



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	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left side	0mm	D Ant 0	518598	2592.99	19.36	21.00	1.459	-	-	0.12	0.026	0.038
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left side	0mm	D Ant 0	518598	2592.99	19.45	21.00	1.429	-	-	-0.07	0.017	0.024
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	518598	2592.99	19.69	21.00	1.352	-	-	-0.01	0.026	0.035
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	A Ant 2	518598	2592.99	19.67	21.00	1.358	-	-	0.02	0.025	0.034
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	518598	2592.99	19.69	21.00	1.352	-	-	-0.01	0.014	0.019
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	518598	2592.99	19.48	21.00	1.419	-	-	-0.05	0.100	0.142
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	B Ant 2	518598	2592.99	19.39	21.00	1.449	-	-	-0.08	0.081	0.117
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	518598	2592.99	19.48	21.00	1.419	-	-	-0.05	0.052	0.074
57	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	518598	2592.99	19.83	21.00	1.309	-	-	0.07	0.796	1.042
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	C Ant 2	518598	2592.99	19.81	21.00	1.315	-	-	0.15	0.622	0.818
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	518598	2592.99	19.83	21.00	1.309	-	-	0.07	0.401	0.525
	FR1 n41_ENDC	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	518598	2592.99	19.50	21.00	1.413	-	-	-0.01	0.118	0.167
	FR1 n41_ENDC	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	D Ant 2	518598	2592.99	19.49	21.00	1.416	-	-	0.14	0.103	0.146
	FR1 n41_ENDC PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	518598	2592.99	19.50	21.00	1.413	-	-	-0.01	0.061	0.086
	LTE Band 42	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.07	0.026	0.038
	LTE Band 42C	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	42190+ 42388	3460+ 3479.8	21.79	23.50	1.483	62.9	1.006	0.01	0.023	0.034
	LTE Band 42	20M	QPSK	50	0	-	Right side	0mm	A Ant 2	42190	3460	21.80	23.50	1.479	62.9	1.006	0.03	0.025	0.037
	LTE Band 42 PC2	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	42190	3460	21.87	23.50	1.455	42.9	1.009	-0.04	0.018	0.026
	LTE Band 42	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	-0.07	0.097	0.142
	LTE Band 42C	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	42190+ 42388	3460+ 3479.8	21.74	23.50	1.500	62.9	1.006	-0.1	0.093	0.140
	LTE Band 42	20M	QPSK	50	0	-	Right side	0mm	B Ant 2	42190	3460	21.84	23.50	1.466	62.9	1.006	0.07	0.092	0.136
	LTE Band 42 PC2	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	42190	3460	21.87	23.50	1.455	42.9	1.009	-0.02	0.071	0.104
58	LTE Band 42	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	42190	3460	22.21	23.50	1.346	62.9	1.006	0.02	0.618	0.837
	LTE Band 42C	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	42190+ 42388	3460+ 3479.8	22.12	23.50	1.374	62.9	1.006	0.18	0.602	0.832
	LTE Band 42	20M	QPSK	50	0	-	Right side	0mm	C Ant 2	42190	3460	22.12	23.50	1.374	62.9	1.006	0.04	0.601	0.831
	LTE Band 42 PC2	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	42190	3460	22.21	23.50	1.346	42.9	1.009	-0.01	0.457	0.621
	LTE Band 42	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	42190	3460	21.91	23.50	1.442	62.9	1.006	-0.05	0.122	0.177
	LTE Band 42C	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	42190+ 42388	3460+ 3479.8	21.78	23.50	1.486	62.9	1.006	0.07	0.112	0.167
	LTE Band 42	20M	QPSK	50	0	-	Right side	0mm	D Ant 2	42190	3460	21.87	23.50	1.455	62.9	1.006	0.04	0.113	0.165
	LTE Band 42 PC2	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	42190	3460	21.91	23.50	1.442	42.9	1.009	-0.07	0.085	0.124
	LTE Band 48	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	55830	3609	14.95	16.50	1.429	62.9	1.006	-0.01	0.006	0.009
	LTE Band 48C	20M	QPSK	1	0	-	Right side	0mm	A Ant 2	55830+ 56028	3609+ 3628.8	14.85	16.50	1.462	62.9	1.006	0.06	0.004	0.006
	LTE Band 48	20M	QPSK	50	0	-	Right side	0mm	A Ant 2	55830	3609	14.90	16.50	1.445	62.9	1.006	0.07	0.005	0.007
	LTE Band 48	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	0.05	0.018	0.026
	LTE Band 48C	20M	QPSK	1	0	-	Right side	0mm	B Ant 2	55830+ 56028	3609+ 3628.8	14.81	16.50	1.476	62.9	1.006	0.05	0.016	0.024
	LTE Band 48	20M	QPSK	50	0	-	Right side	0mm	B Ant 2	55830	3609	14.88	16.50	1.452	62.9	1.006	0.07	0.016	0.023
60	LTE Band 48	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	55830	3609	14.99	16.50	1.416	62.9	1.006	-0.01	0.564	0.803
	LTE Band 48C	20M	QPSK	1	0	-	Right side	0mm	C Ant 2	55830+ 56028	3609+ 3628.8	14.91	16.50	1.442	62.9	1.006	-0.08	0.552	0.801
	LTE Band 48	20M	QPSK	50	0	-	Right side	0mm	C Ant 2	55830	3609	14.93	16.50	1.435	62.9	1.006	0.04	0.551	0.796
	LTE Band 48	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	55830	3609	14.92	16.50	1.439	62.9	1.006	-0.07	0.017	0.025
	LTE Band 48C	20M	QPSK	1	0	-	Right side	0mm	D Ant 2	55830+ 56028	3609+ 3628.8	14.81	16.50	1.476	62.9	1.006	-0.01	0.013	0.019
	LTE Band 48	20M	QPSK	50	0	-	Right side	0mm	D Ant 2	55830	3609	14.84	16.50	1.466	62.9	1.006	0.06	0.015	0.022
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	641666	3624.99	15.32	17.00	1.472	-	-	-0.14	0.033	0.049
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	0mm	A Ant 2	641666	3624.99	15.24	17.00	1.500	-	-	-0.11	0.031	0.046
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	641666	3624.99	15.63	17.00	1.371	-	-	-0.07	0.239	0.328
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	0mm	B Ant 2	641666	3624.99	15.58	17.00	1.387	-	-	0.09	0.231	0.320
61	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	641666	3624.99	15.78	17.00	1.324	-	-	-0.06	0.863	1.143
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	0mm	C Ant 2	641666	3624.99	15.69	17.00	1.352	-	-	-0.14	0.842	1.138
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	641666	3624.99	15.41	17.00	1.442	-	-	-0.04	0.257	0.371
	FR1 n48	40M	QPSK	50	28	DFT-SCS-30KHz	Right side	0mm	D Ant 2	641666	3624.99	15.33	17.00	1.469	-	-	-0.03	0.245	0.360
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	656000	3840	22.58	24.00	1.387	-	-	0.03	0.029	0.040
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	A Ant 2	656000	3840	22.51	24.00	1.409	-	-	0.01	0.027	0.038
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	656000	3840	22.58	24.00	1.387	50	1.000	0.05	0.015	0.021
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	633334	3500.01	22.47	24.00	1.422	-	-	-0.09	0.018	0.026



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	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	A Ant 2	633334	3500.01	22.43	24.00	1.435	-	-	0.05	0.017	0.024
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	A Ant 2	633334	3500.01	22.47	24.00	1.422	50	1.000	-0.14	0.010	0.014
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	656000	3840	22.53	24.00	1.403	-	-	-0.02	0.150	0.210
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	B Ant 2	656000	3840	22.44	24.00	1.432	-	-	-0.09	0.141	0.202
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	656000	3840	22.53	24.00	1.403	50	1.000	0.06	0.081	0.114
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	633334	3500.01	22.46	24.00	1.426	-	-	0.02	0.216	0.308
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	B Ant 2	633334	3500.01	22.33	24.00	1.469	-	-	0.07	0.203	0.298
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	B Ant 2	633334	3500.01	22.46	24.00	1.426	50	1.000	-0.05	0.103	0.147
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	656000	3840	22.46	24.00	1.426	-	-	-0.03	0.402	0.573
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	C Ant 2	656000	3840	22.25	24.00	1.496	-	-	0.17	0.353	0.528
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	656000	3840	22.46	24.00	1.426	50	1.000	0.08	0.219	0.312
62	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	-0.04	0.762	1.057
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	C Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	0.11	0.746	1.051
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	C Ant 2	633334	3500.01	22.58	24.00	1.387	50	1.000	0.08	0.402	0.557
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	656000	3840	22.57	24.00	1.390	-	-	-0.07	0.196	0.272
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	D Ant 2	656000	3840	22.47	24.00	1.422	-	-	0.07	0.185	0.263
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	656000	3840	22.57	24.00	1.390	50	1.000	0.08	0.103	0.143
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	633334	3500.01	22.58	24.00	1.387	-	-	-0.04	0.280	0.388
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right side	0mm	D Ant 2	633334	3500.01	22.51	24.00	1.409	-	-	-0.04	0.271	0.382
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right side	0mm	D Ant 2	633334	3500.01	22.58	24.00	1.387	50	1.000	-0.05	0.129	0.179

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
2450MHz															
63	WLAN2.4GHz	802.11b 1Mbps	Left side	0mm	Ant 1	6	2437	19.80	20.00	1.047	99.07	1.009	-0.01	0.084	0.089
5000MHz															
64	WLAN5.3GHz	802.11a 6Mbps	Left side	0mm	Ant 1	60	5300	19.72	20.00	1.067	95.03	1.052	-0.11	0.308	0.346
65	WLAN5.5GHz	802.11a 6Mbps	Left side	0mm	Ant 1	112	5560	19.77	20.00	1.054	95.03	1.052	-0.08	0.359	0.398
66	WLAN5.8GHz	802.11a 6Mbps	Left side	0mm	Ant 1	149	5745	19.70	20.00	1.072	95.03	1.052	0.03	0.362	0.408

14.3 LTE and NR Linearity Data Analysis

General Note:

This device support Power Class 2 and Power Class 3 operations for LTE B38/41/42 and 5GNR n77. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg for 1g and < 3.5 W/kg for 10g, Separate SAR testing for Power Class 2 is not required.

LTE Band 41 (PC2)-Linearity Data for Body-worn A Ant 0			LTE Band 41 (PC2)-Linearity Data for Body-worn B Ant 0		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 1g SAR (W/kg)	0.205	0.140	Reported 1g SAR (W/kg)	0.241	0.180
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.140		Linearity SAR (W/kg)	0.165	
% deviation from expected linearity		-0.16%	% deviation from expected linearity		9.19%
LTE Band 41 (PC2)-Linearity Data for Extremity A Ant 0			LTE Band 41 (PC2)-Linearity Data for Extremity B Ant 0		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 10g SAR (W/kg)	0.050	0.037	Reported 10g SAR (W/kg)	0.032	0.023
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.034		Linearity SAR (W/kg)	0.022	
% deviation from expected linearity		8.18%	% deviation from expected linearity		5.07%
LTE Band 42 (PC2)-Linearity Data for Body-worn A Ant 2			LTE Band 42 (PC2)-Linearity Data for Body-worn B Ant 2		
	LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)		LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 1g SAR (W/kg)	0.452	0.325	Reported 1g SAR (W/kg)	0.264	0.192
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.309		Linearity SAR (W/kg)	0.181	
% deviation from expected linearity		5.11%	% deviation from expected linearity		6.32%
LTE Band 42 (PC2)-Linearity Data for Extremity A Ant 2			LTE Band 42 (PC2)-Linearity Data for Extremity B Ant 2		
	LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)		LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 10g SAR (W/kg)	0.038	0.026	Reported 10g SAR (W/kg)	0.142	0.104
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.026		Linearity SAR (W/kg)	0.097	
% deviation from expected linearity		0.02%	% deviation from expected linearity		7.07%

LTE Band 41 (PC2)-Linearity Data for Body-worn C Ant 0			LTE Band 41 (PC2)-Linearity Data for Body-worn D Ant 0		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 1g SAR (W/kg)	0.273	0.178	Reported 1g SAR (W/kg)	0.291	0.211
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.187		Linearity SAR (W/kg)	0.199	
% deviation from expected linearity		-4.68%	% deviation from expected linearity		6.00%
LTE Band 41 (PC2)-Linearity Data for Extremity C Ant 0			LTE Band 41 (PC2)-Linearity Data for Extremity D Ant 0		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 10g SAR (W/kg)	0.004	0.003	Reported 10g SAR (W/kg)	0.062	0.046
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.003		Linearity SAR (W/kg)	0.042	
% deviation from expected linearity		9.64%	% deviation from expected linearity		8.46%
LTE Band 42 (PC2)-Linearity Data for Body-worn C Ant 2			LTE Band 42 (PC2)-Linearity Data for Body-worn D Ant 2		
	LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)		LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 1g SAR (W/kg)	0.387	0.287	Reported 1g SAR (W/kg)	0.360	0.258
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.265		Linearity SAR (W/kg)	0.246	
% deviation from expected linearity		8.41%	% deviation from expected linearity		4.77%
LTE Band 42 (PC2)-Linearity Data for Extremity C Ant 2			LTE Band 42 (PC2)-Linearity Data for Extremity D Ant 2		
	LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)		LTE Band 42 (Power Class 3)	LTE Band 42 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	23.50	Maximum Tune up Power (dBm)	23.50	23.50
Reported 10g SAR (W/kg)	0.837	0.621	Reported 10g SAR (W/kg)	0.177	0.124
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	96.94	Frame Averaged (mW)	141.71	96.94
Linearity SAR (W/kg)	0.573		Linearity SAR (W/kg)	0.121	
% deviation from expected linearity		8.46%	% deviation from expected linearity		2.42%



NR n77 Part270 (HPUE)-Linearity Data for Body-worn A Ant 2			NR n77 Part270 (HPUE)-Linearity Data for Body-worn B Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 1g SAR (W/kg)	0.067	0.033	Reported 1g SAR (W/kg)	0.167	0.079
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.034		Linearity SAR (W/kg)	0.084	
% deviation from expected linearity		-1.49%	% deviation from expected linearity		-5.39%
NR n77 Part27Q (HPUE)-Linearity Data for Body-worn A Ant 2			NR n77 Part27Q (HPUE)-Linearity Data for Body-worn B Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 1g SAR (W/kg)	0.646	0.302	Reported 1g SAR (W/kg)	0.349	0.175
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.323		Linearity SAR (W/kg)	0.175	
% deviation from expected linearity		-6.50%	% deviation from expected linearity		0.29%
NR n77 Part270 (HPUE)-Linearity Data for Extremity A Ant 2			NR n77 Part270 (HPUE)-Linearity Data for Extremity B Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 10g SAR (W/kg)	0.040	0.021	Reported 10g SAR (W/kg)	0.210	0.114
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.020		Linearity SAR (W/kg)	0.105	
% deviation from expected linearity		5.00%	% deviation from expected linearity		8.57%
NR n77 Part27Q (HPUE)-Linearity Data for Extremity A Ant 2			NR n77 Part27Q (HPUE)-Linearity Data for Extremity B Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 10g SAR (W/kg)	0.026	0.014	Reported 10g SAR (W/kg)	0.308	0.147
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.013		Linearity SAR (W/kg)	0.154	
% deviation from expected linearity		7.69%	% deviation from expected linearity		-4.55%
NR n77 Part270 (HPUE)-Linearity Data for Body-worn C Ant 2			NR n77 Part270 (HPUE)-Linearity Data for Body-worn D Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 1g SAR (W/kg)	0.198	0.094	Reported 1g SAR (W/kg)	0.288	0.140
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.099		Linearity SAR (W/kg)	0.144	
% deviation from expected linearity		-5.05%	% deviation from expected linearity		-2.78%
NR n77 Part27Q (HPUE)-Linearity Data for Body-worn C Ant 2			NR n77 Part27Q (HPUE)-Linearity Data for Body-worn D Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 1g SAR (W/kg)	0.397	0.187	Reported 1g SAR (W/kg)	0.354	0.166
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.199		Linearity SAR (W/kg)	0.177	
% deviation from expected linearity		-5.79%	% deviation from expected linearity		-6.21%
NR n77 Part270 (HPUE)-Linearity Data for Extremity C Ant 2			NR n77 Part270 (HPUE)-Linearity Data for Extremity D Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 10g SAR (W/kg)	0.573	0.312	Reported 10g SAR (W/kg)	0.272	0.143



Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.287		Linearity SAR (W/kg)	0.136	
% deviation from expected linearity		8.90%	% deviation from expected linearity		5.15%
NR n77 Part27Q (HPUE)-Linearity Data for Extremity C Ant 2			NR n77 Part27Q (HPUE)-Linearity Data for Extremity D Ant 2		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	24.00	Maximum Tune up Power (dBm)	24.00	24.00
Reported 10g SAR (W/kg)	1.057	0.557	Reported 10g SAR (W/kg)	0.388	0.179
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	125.59	Frame Averaged (mW)	251.19	125.59
Linearity SAR (W/kg)	0.529		Linearity SAR (W/kg)	0.194	
% deviation from expected linearity		5.39%	% deviation from expected linearity		-7.73%

NR n41(38) (HPUE)-Linearity Data for Body-worn A Ant 0			NR n41(38) (HPUE)-Linearity Data for Body-worn B Ant 0		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 1g SAR (W/kg)	0.180	0.095	Reported 1g SAR (W/kg)	0.165	0.076
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.090		Linearity SAR (W/kg)	0.083	
% deviation from expected linearity		5.56%	% deviation from expected linearity		-7.88%
NR n41(38) (HPUE)-Linearity Data for Body-worn A Ant 2			NR n41(38) (HPUE)-Linearity Data for Body-worn B Ant 2		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 1g SAR (W/kg)	0.224	0.118	Reported 1g SAR (W/kg)	0.132	0.067
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.112		Linearity SAR (W/kg)	0.066	
% deviation from expected linearity		5.36%	% deviation from expected linearity		1.52%
NR n41(38) (HPUE)-Linearity Data for Extremity A Ant 0			NR n41(38) (HPUE)-Linearity Data for Extremity B Ant 0		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 10g SAR (W/kg)	0.042	0.022	Reported 10g SAR (W/kg)	0.017	0.008
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.021		Linearity SAR (W/kg)	0.009	
% deviation from expected linearity		4.76%	% deviation from expected linearity		-5.88%
NR n41(38) (HPUE)-Linearity Data for Extremity A Ant 2			NR n41(38) (HPUE)-Linearity Data for Extremity B Ant 2		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 10g SAR (W/kg)	0.035	0.019	Reported 10g SAR (W/kg)	0.142	0.074
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.018		Linearity SAR (W/kg)	0.071	
% deviation from expected linearity		8.57%	% deviation from expected linearity		4.23%

NR n41(38) (HPUE)-Linearity Data for Body-worn C Ant 0			NR n41(38) (HPUE)-Linearity Data for Body-worn D Ant 0		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 1g SAR (W/kg)	0.178	0.082	Reported 1g SAR (W/kg)	0.206	0.101
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.089		Linearity SAR (W/kg)	0.103	
% deviation from expected linearity		-7.87%	% deviation from expected linearity		-1.94%
NR n41(38) (HPUE)-Linearity Data for Body-worn C Ant 2			NR n41(38) (HPUE)-Linearity Data for Body-worn D Ant 2		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 1g SAR (W/kg)	0.216	0.107	Reported 1g SAR (W/kg)	0.123	0.058
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.108		Linearity SAR (W/kg)	0.062	
% deviation from expected linearity		-0.93%	% deviation from expected linearity		-5.69%
NR n41(38) (HPUE)-Linearity Data for Extremity C Ant 0			NR n41(38) (HPUE)-Linearity Data for Extremity D Ant 0		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 10g SAR (W/kg)	0.016	0.007	Reported 10g SAR (W/kg)	0.046	0.024
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.008		Linearity SAR (W/kg)	0.023	
% deviation from expected linearity		-7.50%	% deviation from expected linearity		4.35%
NR n41(38) (HPUE)-Linearity Data for Extremity C Ant 2			NR n41(38) (HPUE)-Linearity Data for Extremity D Ant 2		
	NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)		NR n41(38) (Power Class 3)	NR n41(38) (Power Class 2)
Maximum Tune up Power (dBm)	21.00	21.00	Maximum Tune up Power (dBm)	21.00	21.00
Reported 10g SAR (W/kg)	1.042	0.525	Reported 10g SAR (W/kg)	0.167	0.086
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	62.95	Frame Averaged (mW)	125.89	62.95
Linearity SAR (W/kg)	0.521		Linearity SAR (W/kg)	0.084	
% deviation from expected linearity		0.77%	% deviation from expected linearity		2.99%

15. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Body	Extremity SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes

General Note:

- EUT will choose each WCDMA, LTE and NR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- WWAN above includes 5G NR bands and EN-DC combination.
- EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment though they have independent antenna.
- According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz cannot transmit simultaneously.
- For simultaneously analysis, since the SAR summation of 3 transmitters can cover others combination of 2 transmitters, therefore in this section did not additional to evaluate 2TX combination of simultaneously transmission.
- For standalone WWAN, always choose the highest SAR among the selected WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN. This is the worst co-located analysis and can represent each band.
- For inter-band ULCA SAR co-located with WLAN, chose the worst SAR among the selected LTE bands within the selected antenna per each test position to do co-located with WLAN. This is the worst co-located analysis and can represent each LTE band.
- For EN-DC SAR co-located with WLAN, chose the worst SAR among the selected LTE bands within the selected antenna per each test position and also the worst SAR of the selected 5GNR Bands within the selected antenna to do co-located with WLAN. This is the worst co-located analysis and can represent each LTE bands and each 5GNR band.
- The four modems support Co-located and do not support MIMO.
- All licensed modes share the same antenna part and cannot transmit simultaneously.
- The reported SAR summation is calculated based on the same configuration and test position
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, 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.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.

15.1 Body Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3+4+5	1+2+3+4+6
		WWAN Modem A-0 1g SAR (W/kg)	WWAN Modem B-0 1g SAR (W/kg)	WWAN Modem C-0 1g SAR (W/kg)	WWAN Modem D-0 1g SAR (W/kg)	WLAN2.4GHz Ant 1 1g SAR (W/kg)	WLAN5GHz Ant 1 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
WWAN All Bands (except WCDMA II ,LTE:B25(2),30,FR1:25(2),30) Ant0	Front	0.345	0.367	0.397	0.317	0.001	0.001	1.43	1.43
	Back					0.001	0.154	0.00	0.15
	Left side				0.069	0.018	0.336	0.09	0.41
	Right side	0.073						0.07	0.07
	Top side	0.029	0.049	0.052	0.027	0.001	0.001	0.16	0.16
WCDMA II Ant0	Front	0.404	0.330	0.432	0.317	0.001	0.001	1.48	1.48
	Back					0.001	0.154	0.00	0.15
	Left side				0.082	0.018	0.336	0.10	0.42
	Right side	0.101						0.10	0.10
	Top side	0.001	0.025	0.016	0.017	0.001	0.001	0.06	0.06
LTE Band 25(2) Ant0	Front	0.311	0.358	0.422	0.257	0.001	0.001	1.35	1.35
	Back					0.001	0.154	0.00	0.15
	Left side				0.065	0.018	0.336	0.08	0.40
	Right side	0.042						0.04	0.04
	Top side	0.001	0.030	0.027	0.020	0.001	0.001	0.08	0.08
FR1 n25(2) Ant0	Front	0.243	0.392	0.391	0.247	0.001	0.001	1.27	1.27
	Back					0.001	0.154	0.00	0.15
	Left side				0.065	0.018	0.336	0.08	0.40
	Right side	0.090						0.09	0.09
	Top side	0.015	0.012	0.017	0.011	0.001	0.001	0.06	0.06
LTE Band 30 Ant0	Front	0.060	0.060	0.061	0.055	0.001	0.001	0.24	0.24
	Back					0.001	0.154	0.00	0.15
	Left side				0.009	0.018	0.336	0.03	0.35
	Right side	0.003						0.00	0.00
	Top side	0.001	0.003	0.003	0.019	0.001	0.001	0.03	0.03
FR1 n30 Ant0	Front	0.041	0.046	0.044	0.034	0.001	0.001	0.17	0.17
	Back					0.001	0.154	0.00	0.15
	Left side				0.001	0.018	0.336	0.02	0.34
	Right side	0.003						0.00	0.00
	Top side	0.001	0.003	0.001	0.001	0.001	0.001	0.01	0.01

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3+4+5	1+2+3+4+6
		WWAN Modem A-2 1g SAR (W/kg)	WWAN Modem B-2 1g SAR (W/kg)	WWAN Modem C-2 1g SAR (W/kg)	WWAN Modem D-2 1g SAR (W/kg)	WLAN2.4GHz Ant 1 1g SAR (W/kg)	WLAN5GHz Ant 1 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
WWAN All Bands Ant2	Front				0.351	0.001	0.001	0.35	0.35
	Back	0.766	0.349			0.001	0.154	1.12	1.27
	Left side					0.018	0.336	0.02	0.34
	Right side	0.078	0.324	0.487	0.397			1.29	1.29
	Top side	0.081	0.090	0.095	0.169	0.001	0.001	0.44	0.44



WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	9	10	1+5+2+6+3+7+4+8+9	1+5+2+6+3+7+4+8+10
			WWAN Modem A-0	WWAN Modem B-0	WWAN Modem C-0	WWAN Modem D-0	WWAN Modem A-2	WWAN Modem B-2	WWAN Modem C-2	WWAN Modem D-2	WLAN2.4GHz Ant 1	WLAN5GHz Ant 1	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)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE All Bands (except LTE:B17,71,41(38),25(2)) Ant0	LTE All Bands (except LTE:B42,48) Ant2	Front	0.276	0.367	0.397	0.170				0.210	0.001	0.001	1.42	1.42
		Back					0.355	0.139			0.001	0.154	0.50	0.65
		Left side				0.069					0.018	0.336	0.09	0.41
		Right side	0.050				0.071	0.139	0.487	0.155			0.90	0.90
		Top side	0.029	0.026	0.039	0.025	0.022	0.017	0.024	0.169	0.001	0.001	0.35	0.35
LTE Band25(2) Ant0	LTE Band66(4) Ant2	Front	0.311	0.358	0.422	0.257				0.138	0.001	0.001	1.49	1.49
		Back					0.290	0.137			0.001	0.154	0.43	0.58
		Left side				0.065					0.018	0.336	0.08	0.40
		Right side	0.042				0.071	0.139	0.469	0.155			0.88	0.88
		Top side	0.001	0.030	0.027	0.020	0.001	0.017	0.024	0.024	0.001	0.001	0.15	0.15

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	8	9	10	1+5+2+6+3+7+4+8+9	1+5+2+6+3+7+4+8+10
			WWAN Modem A	WWAN Modem B	WWAN Modem C	WWAN Modem D	FR1 Modem A	FR1 Modem B	FR1 Modem C	FR1 Modem D	WLAN2.4GHz Ant 1	WLAN5GHz Ant 1	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)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Bands (B4,5,7,12,13,14, 26,66,71,38,41) Ant0	FR1 Bands (n2,7,25,30,38,41, 48,66,77,78) Ant2	Front	0.276	0.367	0.397	0.291				0.245	0.001	0.001	1.58	1.58
		Back					0.766	0.349			0.001	0.154	1.12	1.27
		Left side				0.069	0.078	0.324			0.018	0.336	0.49	0.81
		Right side	0.050						0.454	0.397			0.90	0.90
		Top side	0.029	0.049	0.052	0.025	0.081	0.090	0.095	0.103	0.001	0.001	0.53	0.53
LTE Bands (B2,4,7,25,30,66,48) Ant2	FR1 Bands (n2,5,7,12,14,25, 38,41,66,71) Ant0	Front				0.272	0.243	0.392	0.361	0.316	0.001	0.001	1.59	1.59
		Back	0.553	0.189							0.001	0.154	0.74	0.90
		Left side								0.065	0.018	0.336	0.08	0.40
		Right side	0.071	0.318	0.487	0.360	0.090						1.33	1.33
		Top side	0.068	0.061	0.064	0.169	0.022	0.048	0.043	0.027	0.001	0.001	0.50	0.50
LTE Band25(2) Ant0	FR1 Bands (n66,48,77,78) Ant2	Front	0.311	0.358	0.422	0.257				0.245	0.001	0.001	1.59	1.59
		Back					0.766	0.349			0.001	0.154	1.12	1.27
		Left side				0.065					0.018	0.336	0.08	0.40
		Right side	0.042				0.078	0.324	0.454	0.397			1.30	1.30
		Top side	0.001	0.030	0.027	0.020	0.081	0.090	0.095	0.103	0.001	0.001	0.45	0.45
LTE Band 30 Ant0	FR1 Bands (n25(2),66,77) Ant2	Front	0.060	0.060	0.061	0.055				0.245	0.001	0.001	0.48	0.48
		Back					0.646	0.349			0.001	0.154	1.00	1.15
		Left side				0.009					0.018	0.336	0.03	0.35
		Right side	0.003				0.050	0.262	0.397	0.354			1.07	1.07
		Top side	0.001	0.003	0.003	0.019	0.080	0.058	0.086	0.103	0.001	0.001	0.35	0.35
LTE Band (2,66) Ant2	FR1 Band n30 Ant0	Front		0.139		0.210	0.041	0.046	0.044	0.034	0.001	0.001	0.52	0.52
		Back	0.290								0.001	0.154	0.29	0.44
		Left side								0.001	0.018	0.336	0.02	0.34
		Right side	0.071	0.139	0.469	0.155	0.003						0.84	0.84
		Top side	0.001	0.017	0.024	0.024	0.001	0.003	0.001	0.001	0.001	0.001	0.07	0.07

15.2 Extremity Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3+4+5	1+2+3+4+6
		WWAN Modem A	WWAN Modem B	WWAN Modem C	WWAN Modem D	WLAN2.4GHz Ant 1	WLAN5GHz Ant 1	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
WWAN All Bands	Left side			0.021	0.149	0.089	0.408	0.26	0.58
	Right side	0.102	0.328	1.474	0.388			2.29	2.29

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	9	10	1+5+2+6+3+7+4+8+9	1+5+2+6+3+7+4+8+10
			WWAN Modem A-0	WWAN Modem B-0	WWAN Modem C-0	WWAN Modem D-0	WWAN Modem A-2	WWAN Modem B-2	WWAN Modem C-2	WWAN Modem D-2	WLAN2.4GHz Ant 1	WLAN5GHz Ant 1	Summed	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE All Bands Ant0	LTE All Bands Ant2	Left side			0.013	0.149					0.089	0.408	0.25	0.57
		Right side	0.102	0.041			0.079	0.274	1.531	0.371			2.40	2.40

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	9	10	1+5+2+6+3+7+4+8+9	1+5+2+6+3+7+4+8+10
			WWAN Modem A	WWAN Modem B	WWAN Modem C	WWAN Modem D	FR1 Modem A	FR1 Modem B	FR1 Modem C	FR1 Modem D	WLAN2.4GHz Ant 1	WLAN5GHz Ant 1	Summed	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Bands Ant0 (B2/4/5/7/12/13/14/25/26/30/66/71/38/41)	FR1 Bands Ant2 (n2/7/25/30/38/41/48/66/77/78)	Left side			0.013	0.149					0.089	0.408	0.25	0.57
		Right side	0.102	0.041			0.110	0.328	1.325	0.388			2.29	2.29
LTE Bands Ant2 (B2/4/7/25/30/66/48)	FR1 Bands Ant0 (n2/5/7/12/14/25/30/38/41/66/71)	Left side							0.021	0.099	0.089	0.408	0.21	0.53
		Right side	0.079	0.274	1.531	0.371	0.057	0.026					2.34	2.34

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16. 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 and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

17. 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
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [6] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [7] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [8] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [9] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", 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.

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