FCC SAR TEST REPORT

FCC ID	:	**O57FLEX5G14X05**
Equipment	:	**Notebook Computer**
Brand Name	:	**Lenovo**
Model Name	:	**Lenovo Flex 5G 14Q8CX05********, 82AK********, Yoga 5G 14Q8CX05********, 81XE******** (* = 0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)**
Applicant	:	**Lenovo (Shanghai) Electronics Technology Co., Ltd. Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone, Shanghai**
Manufacturer	:	**Lenovo PC HK Limited 23/F, Lincoln House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong**
Standard	:	**FCC 47 CFR Part 2 (2.1093)**

The product was received on Dec. 12, 2019 and testing was started from Sep. 27, 2020 and completed on Oct. 03, 2020. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

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

Approved by: Cona Huang / Deputy Manager

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FA9N2705-01	01	Initial issue of report	Oct. 16, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Lenovo (Shanghai) Electronics Technology Co., Ltd., Notebook Computer, Lenovo Flex 5G 14Q8CX05********, 82AK********, Yoga 5G 14Q8CX05********, 81XE******** (* = 0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product), are as follows.

Equipment Class	Frequency Band	Highest SAR Summary Body 1g SAR (W/kg)	Highest Simultaneous Transmission 1g SAR (W/kg)
Licensed	LTE Band 2	1.17	1.58
	LTE Band 7	1.18	
	LTE Band 66	1.18	
	FR1 n2	1.20	
	FR1 n5	1.17	
	FR1 n7	1.17	
	FR1 n12	1.16	
	FR1 n41	1.19	
	FR1 n66	1.19	
	FR1 n71	1.14	
Date of Testing:		2020/9/27 ~ 2020/10/3	

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.(This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Daisy Peng

2. Guidance Applied

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

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Notebook Computer
Brand Name	Lenovo
Model Name	Lenovo Flex 5G 14Q8CX05********, 82AK********, Yoga 5G 14Q8CX05********, 81XE******** (* = 0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)
FCC ID	O57FLEX5G14X05
Wireless Technology and Frequency Range	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 30: 2307.5 MHz ~ 2312.5 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 48: 3552.5 MHz ~ 3697.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 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 n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n260: 37GHz~40GHz 5G NR n261: 27.5GHz~28.35GHz WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ LTE: QPSK, 16QAM, 64QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac HT20 / HT40 / VHT20 / VHT40 / VHT80 Bluetooth BR/EDR/LE
EUT Stage	Production Unit

Remark:

1. This device is convertible type notebook PC, and there have Laptop and Tablet two usage way, when end user is used different mode which the device will according current mode to limit different maximum power.
2. For this report is enabled 5G FR1 by software, there is no hardware change, all the 3G, 4G, WLAN and Bluetooth SAR test case is referred to Sporton SAR Test Report, Report No: FA9N2705.

Antenna Information									
1 NB Mode	Ant. Type	PIFA			2 TB Mode	Ant. Type	PIFA		
	Model No.	Main:AML6Y-100089 (AM2RC000600) Aux:AML6Y-100090 (AM2RC000700)				Model No.	Main:AML6Y-100089 (AM2RC000600) Aux:AML6Y-100090 (AM2RC000700)		
	Peak Gain (dBi)					Peak Gain (dBi)			
	2400~2483.5MHz	Main:-1.34 Aux:-1.89	5470~5725MHz	Main:0.23 Aux:-1.74		2400~2483.5MHz	Main:-1.73 Aux:-0.52	5470~5725MHz	Main:1.93 Aux:1.88
	5150~5250MHz	Main:-1.93 Aux:-1.98	5725~5850MHz	Main:0.26 Aux:-1.74		5150~5250MHz	Main:1.9 Aux:1.81	5725~5850MHz	Main:1.9 Aux:1.88
	5250~5350MHz	Main:-2.18 Aux:-1.98				5250~5350MHz	Main:1.95 Aux:0.89		

3.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>O57FLEX5G14X05</td></tr>
<tr><td>Equipment Name</td><td>Notebook Computer</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>LTE Band 2: 1850.7 MHz ~ 1909.3 MHz
LTE Band 4: 1710.7 MHz ~ 1754.3 MHz
LTE Band 5: 824.7 MHz ~ 848.3 MHz
LTE Band 7: 2502.5 MHz ~ 2567.5 MHz
LTE Band 12: 699.7 MHz ~ 715.3 MHz
LTE Band 13: 779.5 MHz ~ 784.5 MHz
LTE Band 14: 790.5 MHz ~ 795.5 MHz
LTE Band 17: 706.5 MHz ~ 713.5 MHz
LTE Band 25: 1850.7 MHz ~ 1914.3 MHz
LTE Band 26: 814.7 MHz ~ 848.3 MHz
LTE Band 30: 2307.5 MHz ~ 2312.5 MHz
LTE Band 38: 2572.5 MHz ~ 2617.5 MHz
LTE Band 41: 2498.5 MHz ~ 2687.5 MHz
LTE Band 48: 3552.5 MHz ~ 3697.5 MHz
LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
LTE Band 71: 665.5 MHz ~ 695.5 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 02:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 04:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 05:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 07: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 13: 5MHz, 10MHz
LTE Band 14: 5MHz, 10MHz
LTE Band 17: 5MHz, 10MHz
LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 30: 5MHz, 10MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 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</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Data only</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<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>
</td></tr>
<tr><td>LTE A-MPR</td><td>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)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>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.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes, Proximity Sensor</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to FA9N2705.</td></tr>
</table>

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)
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)
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)
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)
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)
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)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
L M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
H M	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

LTE Band 71								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5
H	133447	695.5	133422	693	133397	690.5	133372	688

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
L M	55810	3607	55815	3607.5	55820	3608	55830	3609
M H	56170	3643	56165	3642.5	56160	3642	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690

3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
FCC	O57FLEX5G14X05
Equipment Name	Notebook Computer
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n41: 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B5/12/13/30/48/66
LTE Anchor Bands for n5	LTE B2/7/12/48/66
LTE Anchor Bands for n7	LTE B5/12
LTE Anchor Bands for n12	LTE B2/66
LTE Anchor Bands for n41	LTE B2/25/26/66/41
LTE Anchor Bands for n66	LTE B5/12/13/30/48/71
LTE Anchor Bands for n71	LTE B2/7/66

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	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560

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 38						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580
M	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610

NR Band 41														
	Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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)
L	501204	2506.02	503202	2516.01	504204	2521.02	505200	2526	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	535998	2679.99	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640

NR Band 66								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720
M	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770

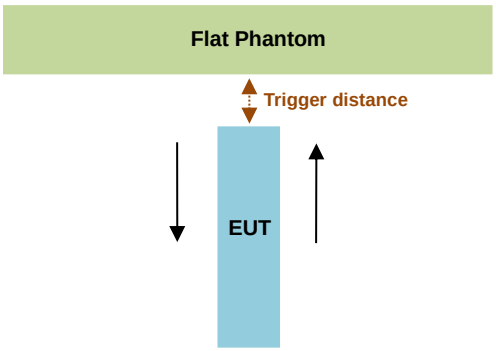
NR Band 71								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	13410	670.5	134600	673
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5
H	139100	695.5	138600	693	13810	690.5	137600	688

4. Sensor Triggering Test

4.1 Proximity sensor triggering Considerations

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

Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed. The details list as below and the shortest triggering distances were reported and used for SAR assessment. In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering distance than that for 1900MHz, and the tissue-equivalent medium for 1900MHz was used for formal proximity sensor triggering testing.



Proximity Sensor Trigger Distance (mm) for WWAN ANT 1						
Position	Bottom Face		Bottom of Laptop		Edge 2	
Minimum (mm)	Move Toward	Move Away	Move Toward	Move Away	Move Toward	Move Away
	27	31	25	29	25	29

Proximity Sensor Trigger Distance (mm) for WWAN ANT 3						
Position	Bottom Face		Bottom of Laptop		Edge 1	
Minimum (mm)	Move Toward	Move Away	Move Toward	Move Away	Move Toward	Move Away
	21	25	23	27	15	17

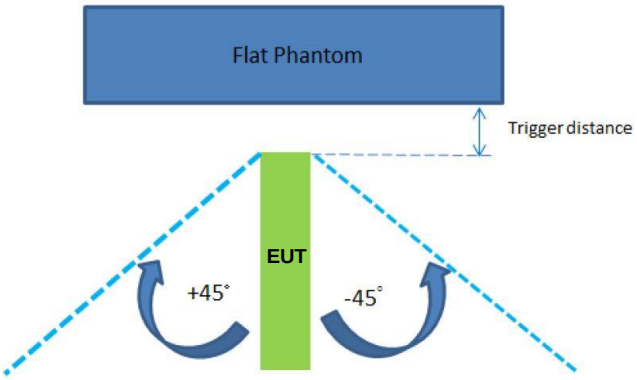
Antennas Support Bands	
WWAN Antenna 0	WCDMA II/IV/V, LTE B2/4/5/7/12/13/14/17/25/26/30/38/41/66/71, 5GNR n2/n5/n12/n66/n71
WWAN Antenna 2	LTE B2/7/48/66, 5GNR n2/n7/n41/n66

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

Since the antenna and sensor are collocated and all of the peak SAR location is overlapping with the sensor pad for this device, therefore, According to KDB 616217 section6.3, these procedures do not apply and are not required for bottom of laptop, bottom face, Edge1 and Edge2, due to the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor on this device

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

The influence of table tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom, at 13 mm separation.
Rotating the tablet around the edge next to the phantom in ≤ 10° increments until the tablet is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.



Proximity Sensor Trigger Distance (mm) for WWAN ANT 1		
Position	Edge 2	
Minimum (mm)	Move Toward	Move Away
	22	38

Proximity Sensor Trigger Distance (mm) for WWAN ANT 3		
Position	Edge 1	
Minimum (mm)	Move Toward	Move Away
	13	26

Proximity sensor power reduction

Exposure Position / wireless mode	Bottom of laptop(1)	Bottom Face(1)	Edge 1(1)	Edge 2(1)	Edge 3	Edge 4
LTE Band 2_Ant2	7.7 dB	10.8 dB	10.8 dB	0 dB	0 dB	0 dB
LTE Band 7_Ant2	7.3 dB	10.3 dB	10.3 dB	0 dB	0 dB	0 dB
LTE Band 66_Ant2	8.7 dB	10.3 dB	10.3 dB	0 dB	0 dB	0 dB
FR1 n2_Ant0	7.5 dB	10 dB	0 dB	10 dB	0 dB	0 dB
FR1 n2_Ant2	7.8 dB	10.1 dB	10.1 dB	0 dB	0 dB	0 dB
FR1 n5_Ant0	4.9 dB	6.3 dB	0 dB	6.3 dB	0 dB	0 dB
FR1 n7_Ant2	6.5 dB	9.4 dB	9.4 dB	0 dB	0 dB	0 dB
FR1 n12_Ant0	3.4 dB	5.9 dB	0 dB	5.9 dB	0 dB	0 dB
FR1 n41_Ant2	8.2 dB	10.5 dB	10.5 dB	0 dB	0 dB	0 dB
FR1 n66_Ant0	6.4 dB	9.5 dB	0 dB	9.5 dB	0 dB	0 dB
FR1 n66_Ant2	7.7 dB	8.8 dB	8.8 dB	0 dB	0 dB	0 dB
FR1 n71_Ant0	3.2 dB	7.4 dB	0 dB	7.4 dB	0 dB	0 dB

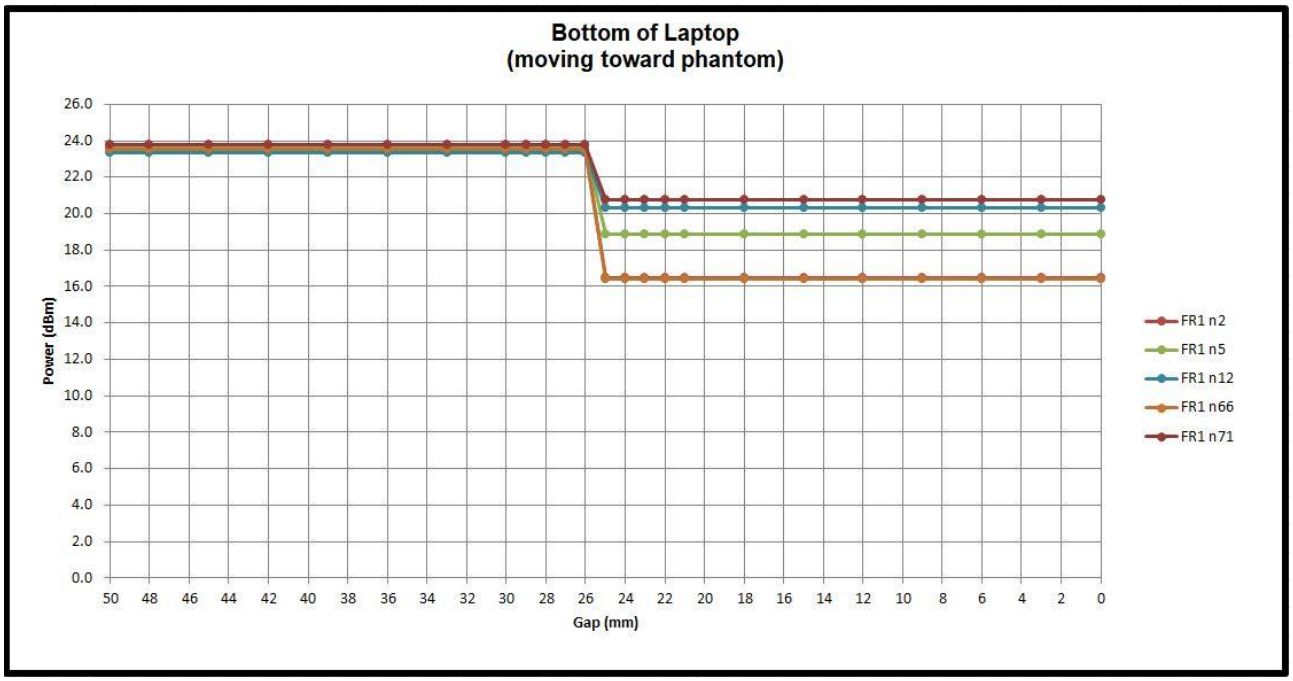
Remark:

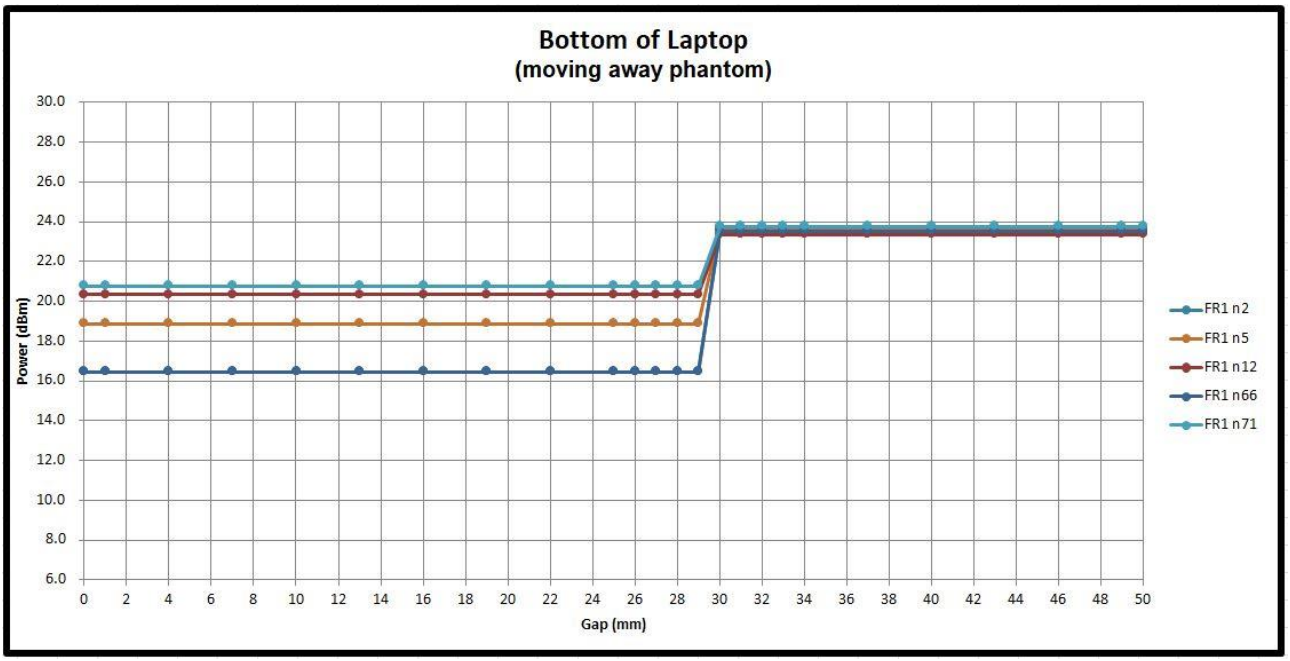
1. (1): Reduced maximum limit applied by activation of proximity sensor.
2. Power reduction is not applicable for WLAN and Bluetooth.
3. Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown as below
4. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:

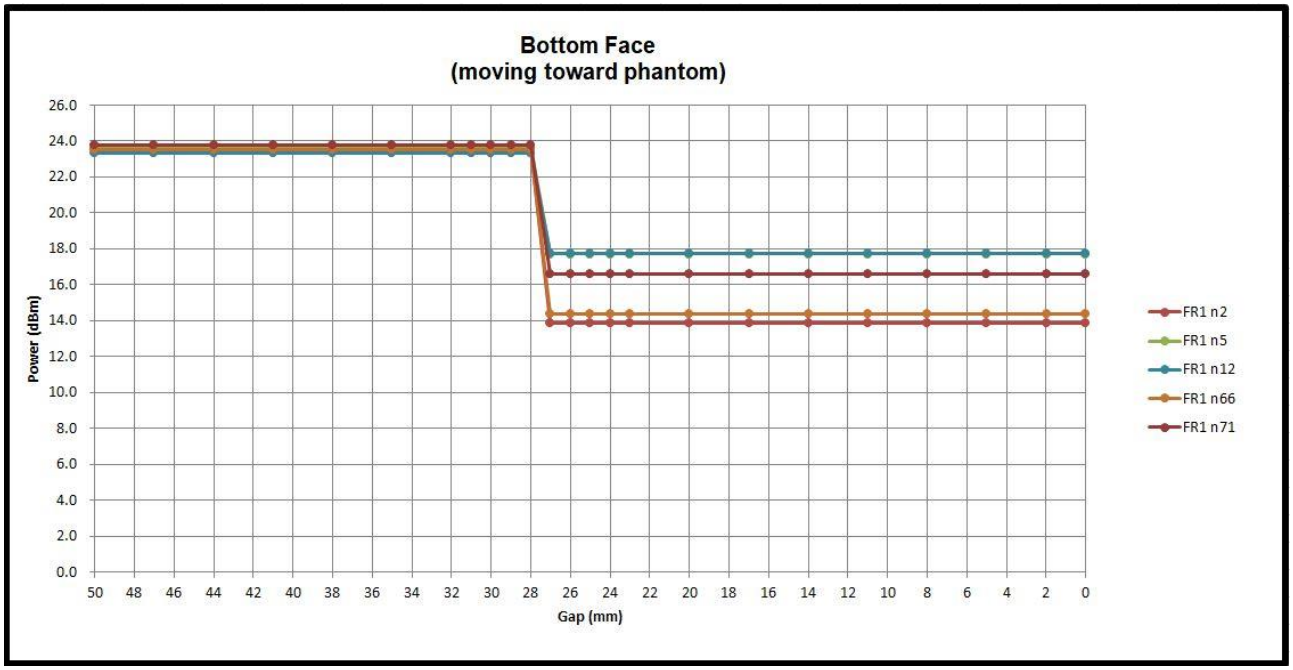
   For WWAN Ant 0:
   - Bottom of Laptop: 20 mm
   - Bottom Face: 20 mm
   - Edge2: 20 mm

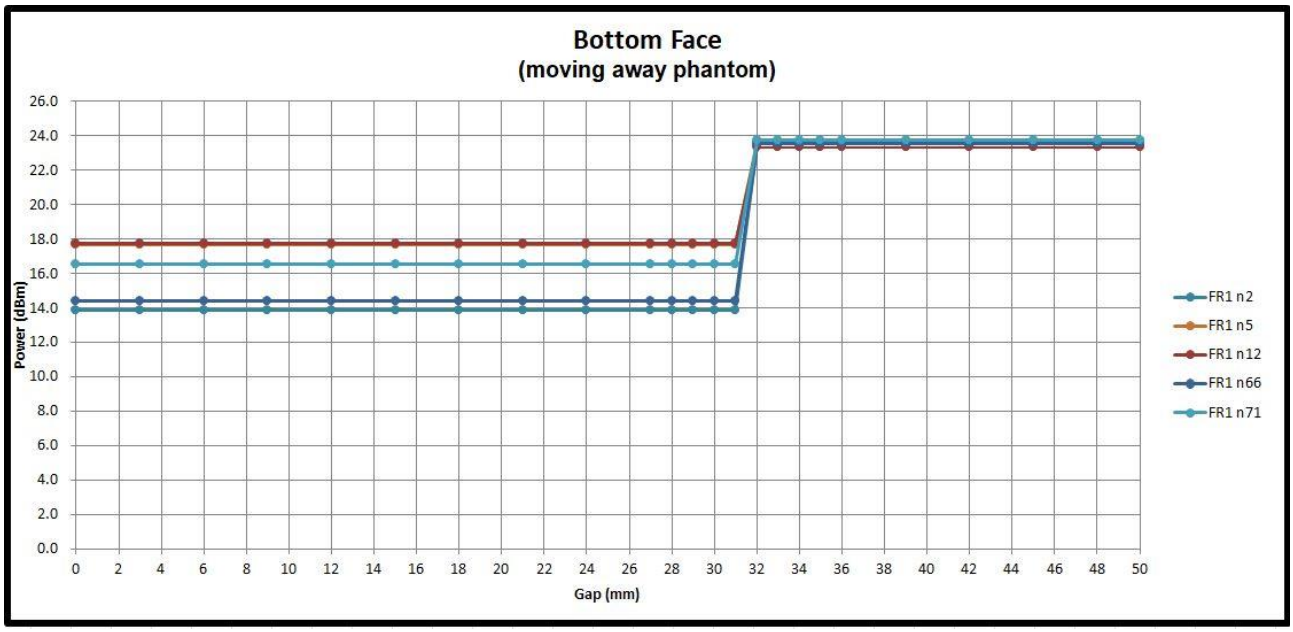
   For WWAN Ant 2:
   - Bottom of Laptop: 20 mm
   - Bottom Face: 20 mm
   - Edge1: 12 mm

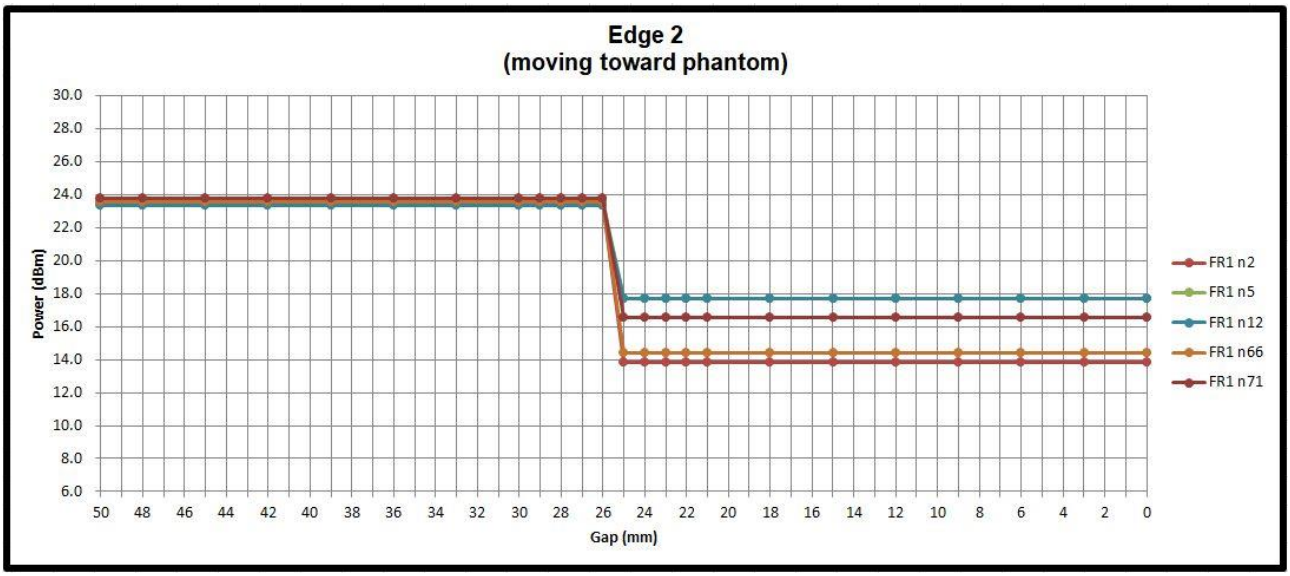
Power Measurement during Sensor Trigger distance testing for WWAN Ant 0

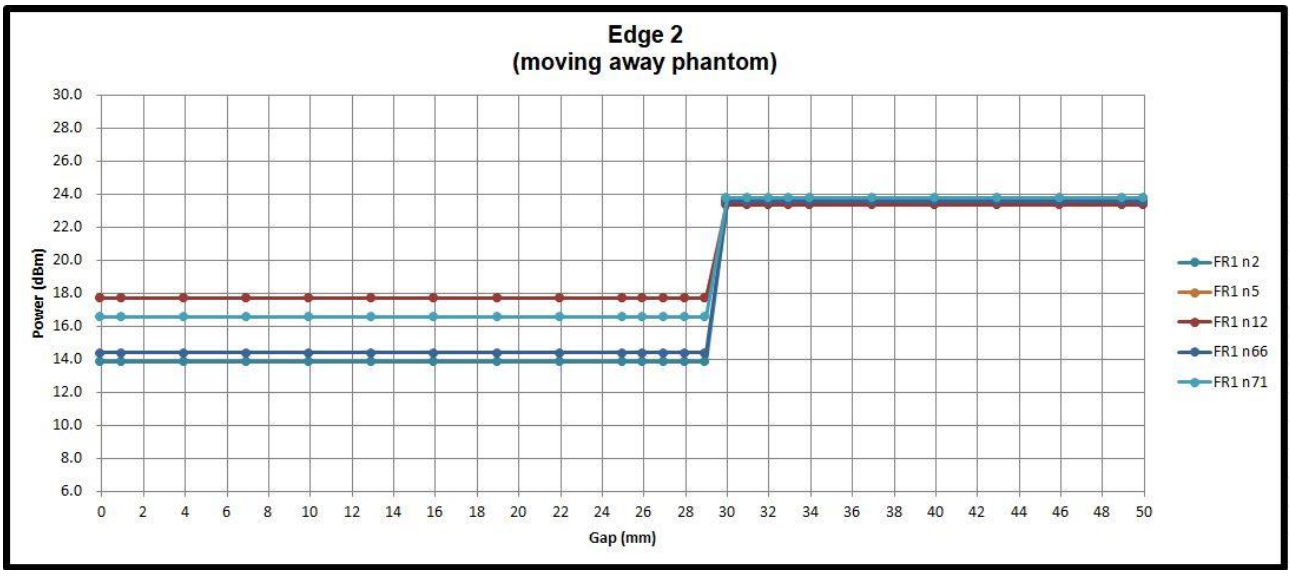




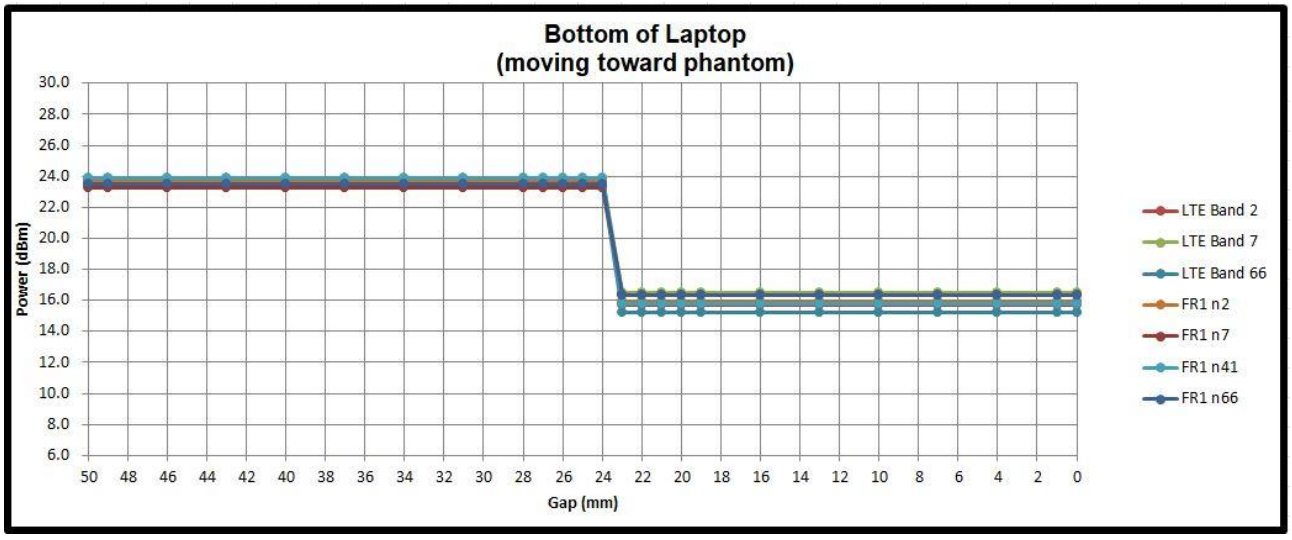

Bottom Face
(moving toward phantom)
Power (dBm)
Gap (mm)
FR1 n2
FR1 n5
FR1 n12
FR1 n66
FR1 n71

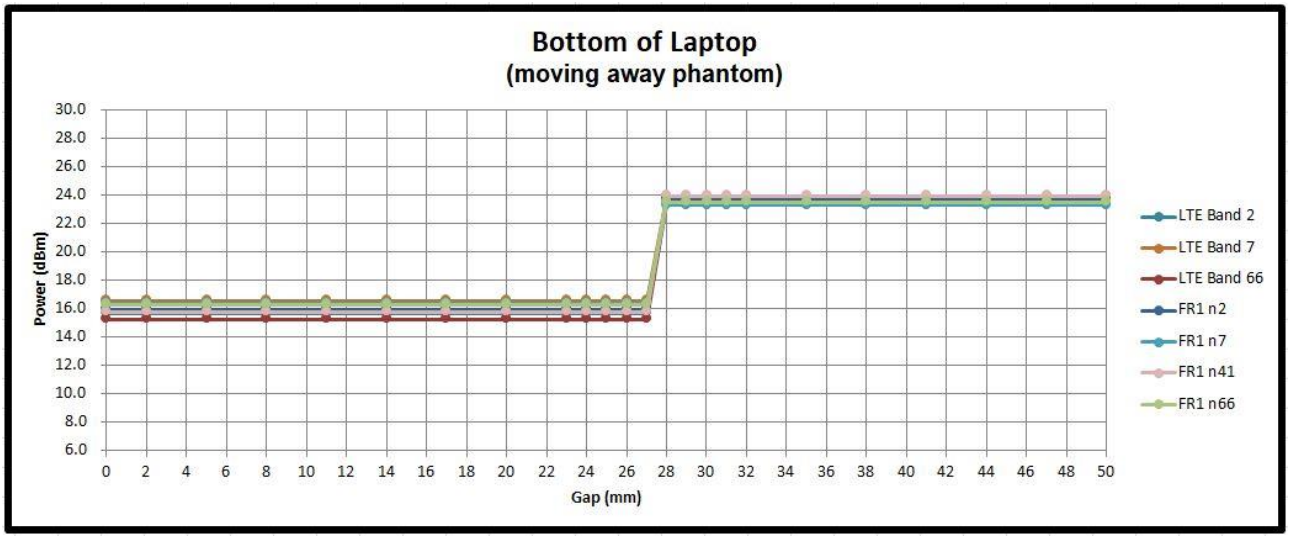

Bottom Face
(moving away phantom)
Power (dBm)
Gap (mm)
FR1 n2
FR1 n5
FR1 n12
FR1 n66
FR1 n71

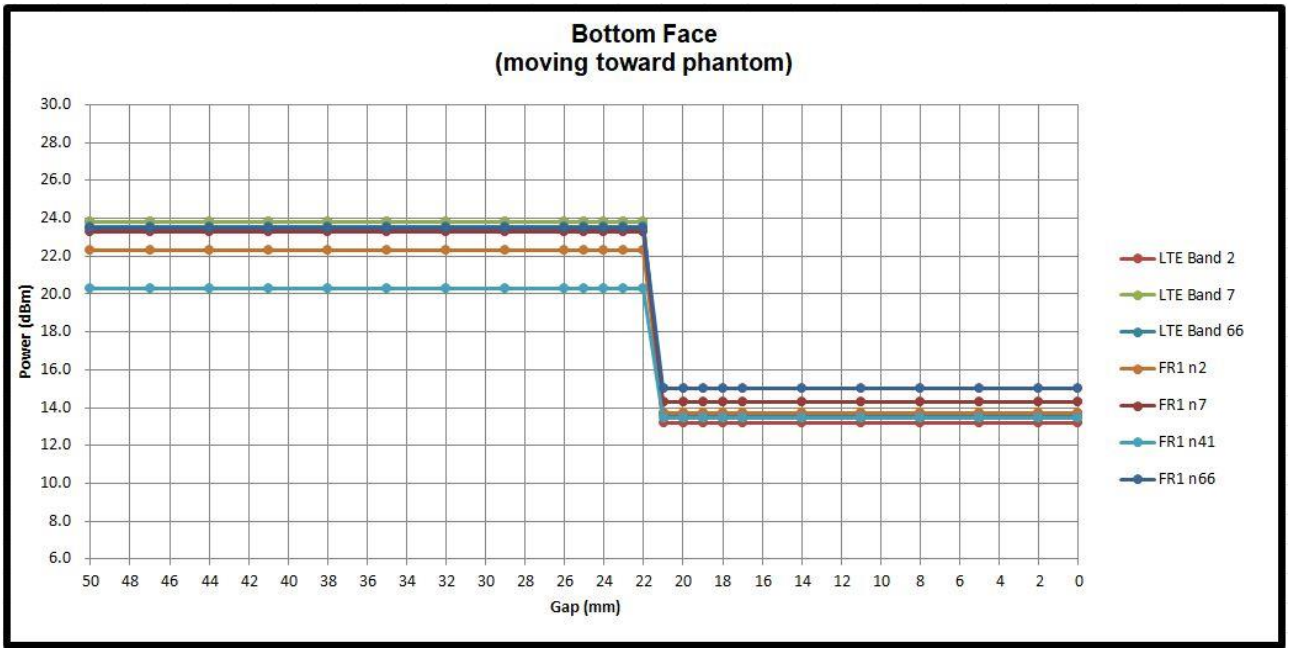

Edge 2
(moving toward phantom)
Power (dBm)
Gap (mm)
FR1 n2
FR1 n5
FR1 n12
FR1 n66
FR1 n71

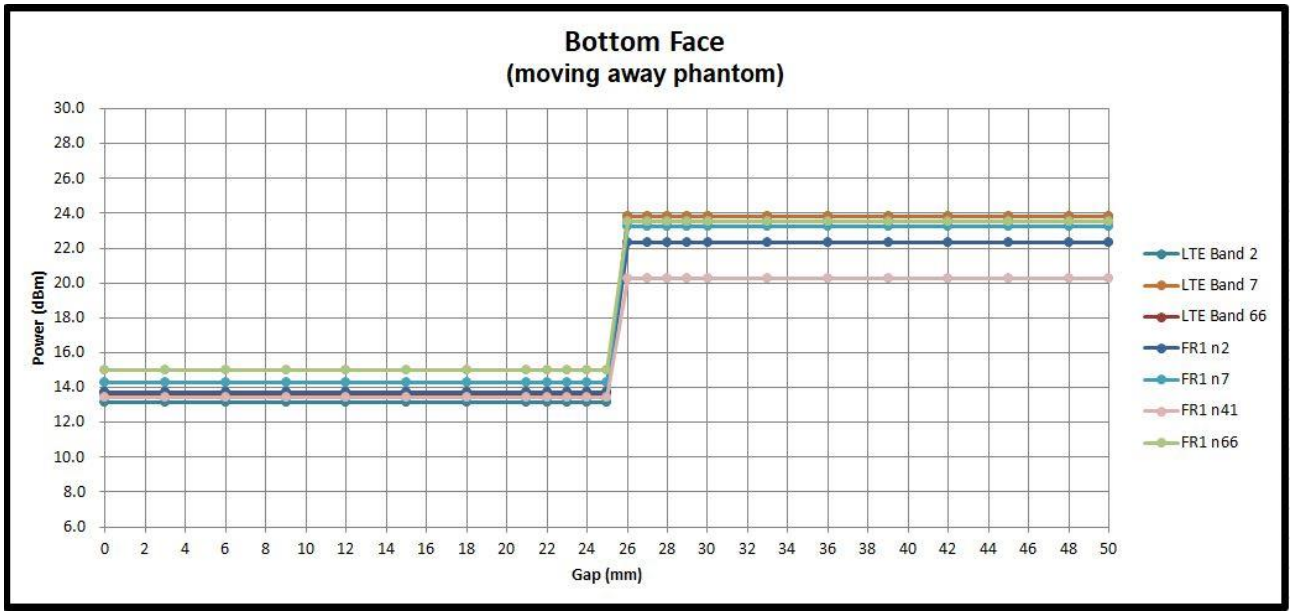

Edge 2
(moving away phantom)
Power (dBm)
Gap (mm)
FR1 n2
FR1 n5
FR1 n12
FR1 n66
FR1 n71

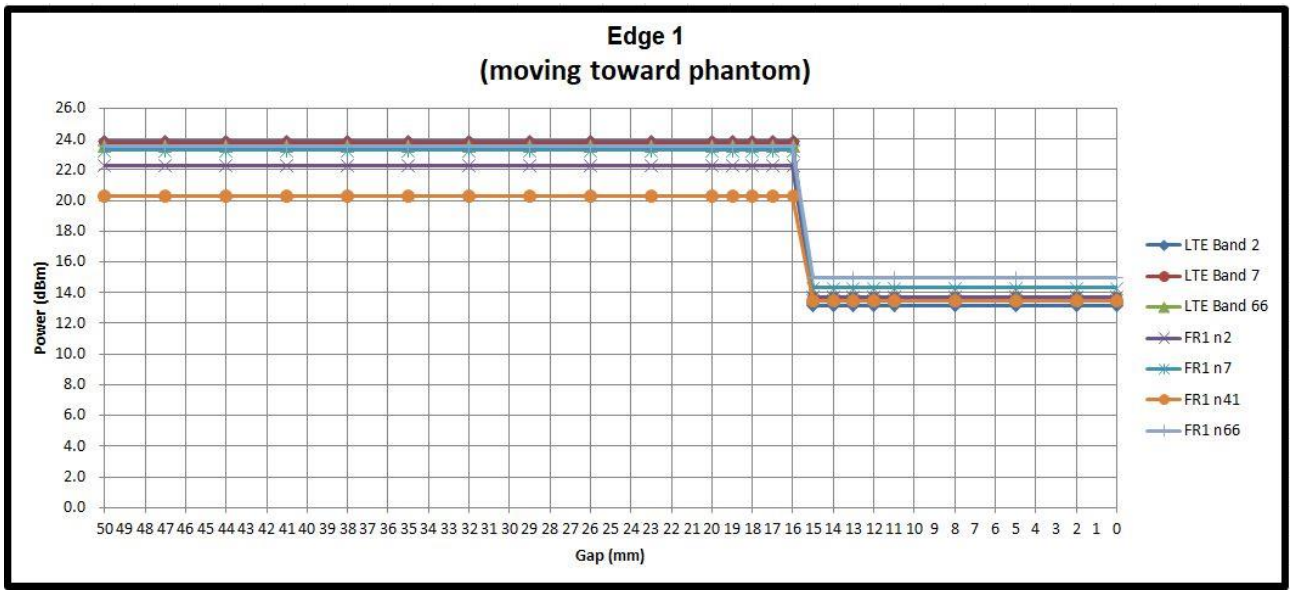
Power Measurement during Sensor Trigger distance testing for WWAN Ant 2

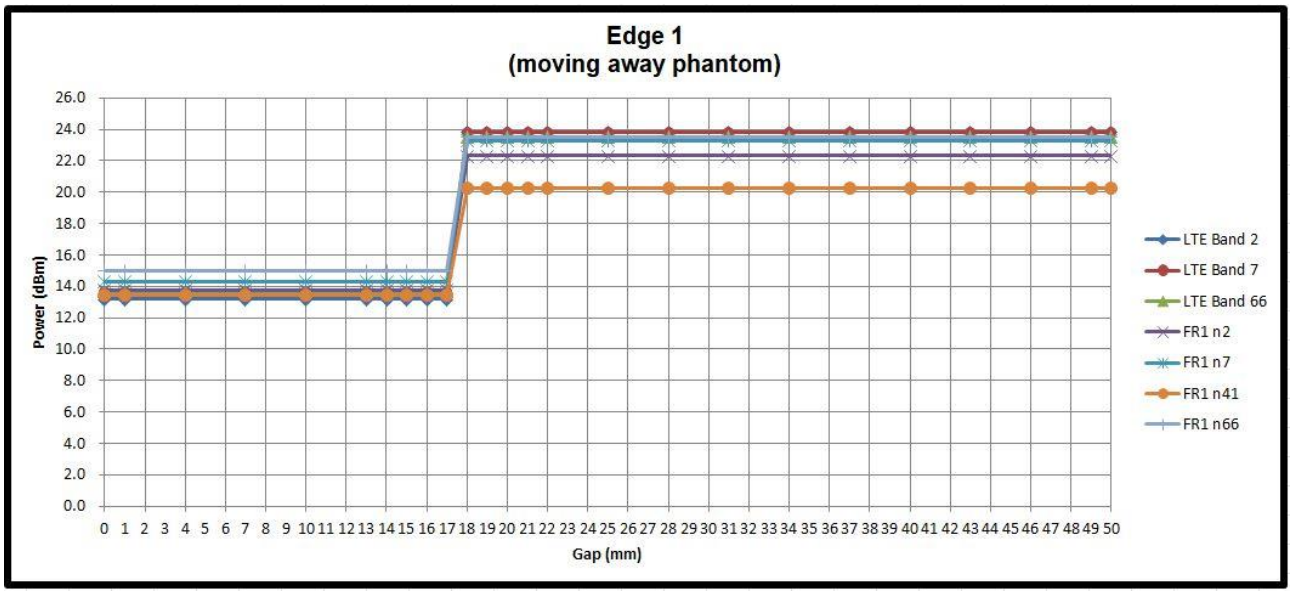





Bottom Face
(moving toward phantom)
Power (dBm)
Gap (mm)
LTE Band 2
LTE Band 7
LTE Band 66
FR1 n2
FR1 n7
FR1 n41
FR1 n66


Bottom Face
(moving away phantom)
Power (dBm)
Gap (mm)
LTE Band 2
LTE Band 7
LTE Band 66
FR1 n2
FR1 n7
FR1 n41
FR1 n66


Edge 1
(moving toward phantom)
Power (dBm)
Gap (mm)
LTE Band 2
LTE Band 7
LTE Band 66
FR1 n2
FR1 n7
FR1 n41
FR1 n66


Edge 1
(moving away phantom)
Power (dBm)
Gap (mm)
LTE Band 2
LTE Band 7
LTE Band 66
FR1 n2
FR1 n7
FR1 n41
FR1 n66

4.2 Lid angle power verification

General Note:

1. For lid angle power verification based on P-sensor is triggered.
2. This device is convertible type notebook PC, and there have Laptop and Tablet two usage way, when end user is used different mode which the device will according current mode to limit different maximum power, according to 201911 TCBC workshop Hall effect and Gravity sensor guidance to detect lid angle for the power verification in different usage mode was following below step:

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

when the screen angle is from 0 degree to 360 degree													
Screen angle (degree)	Wireless		LTE Ant 2			FR1 Ant 0					FR1 Ant 2			
	Band		B2	B7	B66	N2	N5	N12	N66	N71	N2	N7	N41/38	N66
	Notebook	0	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		10	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		20	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		30	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		40	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		50	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		60	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		70	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		80	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		90	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		100	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		110	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		120	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		130	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		140	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		150	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		160	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		170	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		175	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		176	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		177	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		178	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
		179	16.3	16.7	15.3	16.5	19.1	20.6	17.6	20.8	16.2	17.5	15.8	16.3
	Tablet	180	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		181	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		182	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		183	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		184	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		185	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		190	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		200	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		210	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		220	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		230	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		240	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		250	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		260	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		270	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		280	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		290	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		300	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		310	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		320	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		330	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		340	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		350	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2
		360	13.2	13.7	13.7	14	17.7	18.1	14.5	16.6	13.9	14.6	13.5	15.2

5. Smart Transmit feature for RF Exposure compliance

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target or PD_design_target, below the predefined time-averaged power limit (i.e., input.power.limit for 5G mmW NR), for each characterized technology and band (refer to RF exposure part0 report)

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

<P_{limit} for supported technologies and bands (P_{limit} in EFS file)>

Band	Antenna	NB Sensor off	NB Sensor on	Tablet Sensor off	Tablet Sensor on	Pmax*
		(DSI1)	(DSI2)	(DSI:3)	(DSI4)	
LTE B2	2	27.2	15.3	22.9	12.2	23
LTE B7	2	28.5	15.7	25.6	12.7	23
LTE B66	2	24.3	14.3	24.5	12.7	23
n2	0	27.2	15.5	26.6	13	23
n5	0	28.7	18.1	29.4	16.7	23
n12	0	29.7	19.6	30.6	17.1	23
n66	0	26.8	16.6	26.8	13.5	23
n71	0	27.3	19.8	30.4	15.6	23
n2	2	26.2	15.2	21.7	12.9	23
n71	2	27	16.5	25	13.6	23
n41	2	27.3	14.8	19.6	12.5	23
n66	2	25.4	15.3	25	14.2	23

Remark: LTE Band 2/7/66 of antenna 2 only for 5G FR1 EN-DC combinations.

*P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1dB uncertainty.

**All P_{limit} power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).

The max allowed output power is the P_{limit} + 1dB device uncertainty, and if P_{limit} is higher than P_{max}, the device output power will be P_{max} instead.

6. RF Exposure Limits

6.1 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.

6.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

7. Specific Absorption Rate (SAR)

7.1 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.

7.2 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:

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

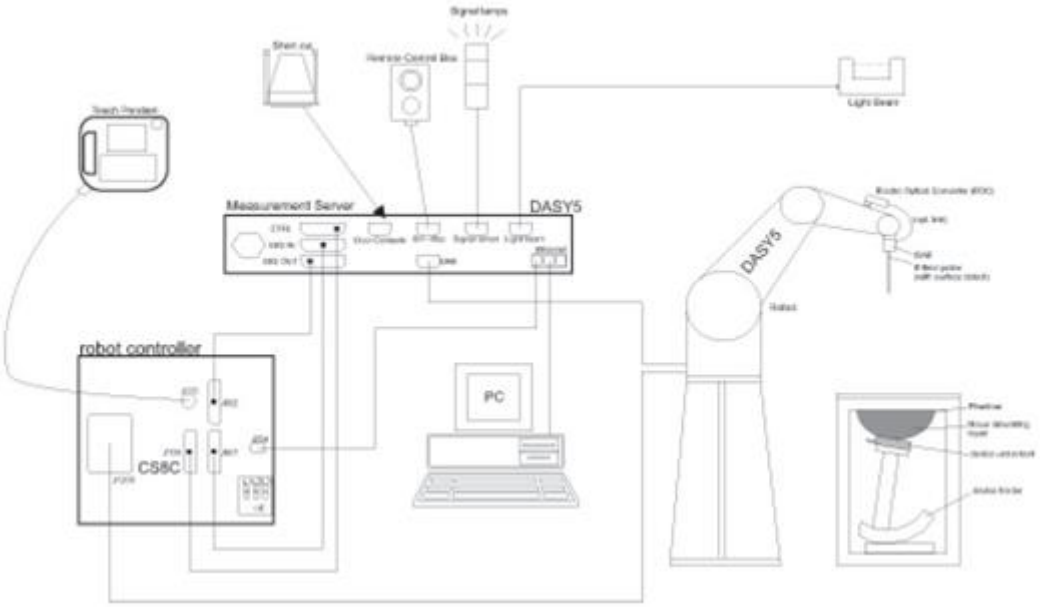
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. System Description and Setup

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8.1 E-Field Probe

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

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz – 4 GHz; Linearity: ±0.2 dB (30 MHz – 4 GHz)	
Directivity	±0.2 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 µW/g – >100 mW/g; Linearity: ±0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)	
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/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	

8.2 Data Acquisition Electronics (DAE)

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

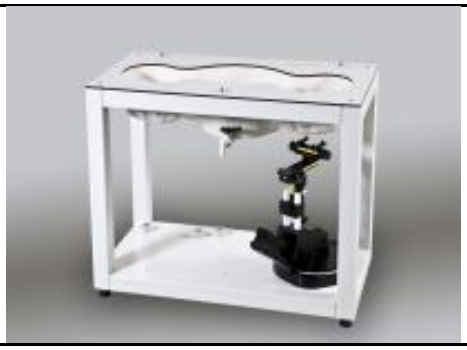
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.1 Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

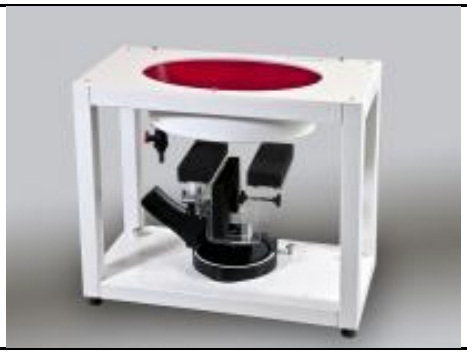
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

<ELI Phantom>

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



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

8.4 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

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

9.1 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 form 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

9.2 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.

9.3 Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
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 ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

Zoom scans are used 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 shoes 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: Δx_{Zoom}, Δy_{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: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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 *reported* SAR from the *area scan based 1-g SAR estimation* 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.

9.5 Volume Scan Procedures

The volume scan is used for 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.

9.6 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.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit(2)	D750V3	1107	Mar. 08, 2019	Mar. 06, 2021
SPEAG	835MHz System Validation Kit	D835V2	4d167	Nov. 25, 2019	Nov. 24, 2020
SPEAG	1750MHz System Validation Kit(2)	D1750V2	1112	Mar. 07, 2019	Mar. 05, 2021
SPEAG	1900MHz System Validation Kit(2)	D1900V2	5d041	Sep. 11, 2018	Sep. 08, 2021
SPEAG	2600MHz System Validation Kit(2)	D2600V2	1008	Aug. 31, 2018	Aug. 28, 2021
SPEAG	Data Acquisition Electronics	DAE4	1399	Feb. 18, 2020	Feb. 17, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	7306	Jul. 24, 2020	Jul. 23, 2021
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 12, 2019	Nov. 11, 2020
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 31, 2019	Oct. 30, 2020
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Nov. 20, 2019	Nov. 19, 2020
Keysight	ENA Network Analyzer	E5071C	MY46101588	Jun. 10, 2020	Jun. 09, 2021
SPEAG	Dielectric Probe Kit	DAK-3.5	1146	Jul. 22, 2020	Jul. 21, 2021
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Nov. 18, 2019	Nov. 17, 2020
Anritsu	Power Meter	ML2495A	1419002	Aug. 19, 2020	Aug. 18, 2021
Anritsu	Power Sensor	MA2411B	1911176	Aug. 18, 2020	Aug. 17, 2021
Anritsu	Power Meter	ML2495A	1218006	Oct. 14, 2019	Oct. 13, 2020
Anritsu	Power Sensor	MA2411B	1207363	Oct. 14, 2019	Oct. 13, 2020
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 30, 2020	Jun. 29, 2021
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Mar. 12, 2020	Mar. 11, 2021
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 16, 2019	Oct. 15, 2020
Mini-Circuits	Power Amplifier	ZVE-8G+	479102029	Aug. 26, 2020	Aug. 25, 2021
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. 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.

11. System Verification

11.1 Tissue Simulating Liquids

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

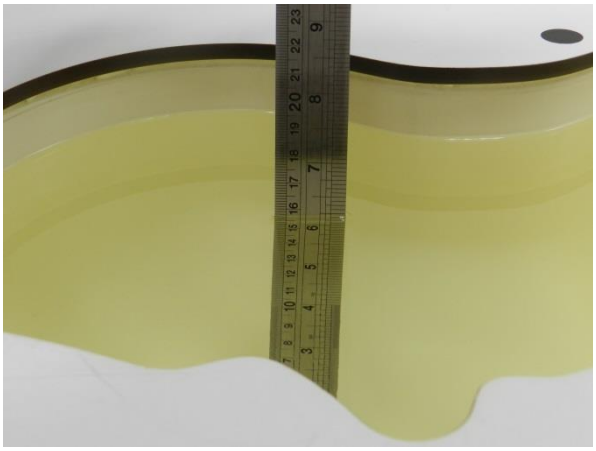


Fig 10.1Photo of Liquid Height for Head SAR

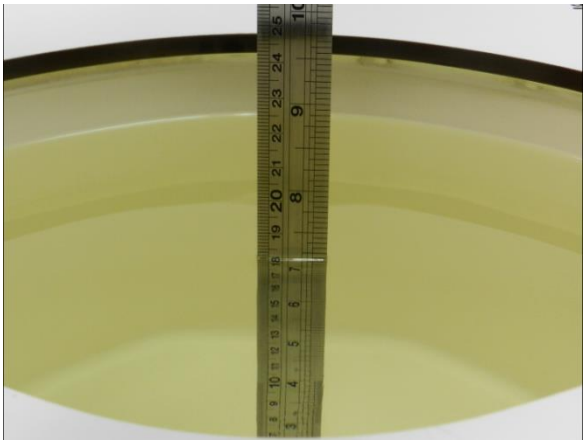


Fig 10.2 Photo of Liquid Height for Body SAR

11.2 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 (εr)
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	22.6	0.886	42.805	0.89	41.90	-0.45	2.16	±5	2020/9/30
835	22.6	0.920	42.509	0.90	41.50	2.22	2.43	±5	2020/9/30
1750	22.6	1.349	40.368	1.37	40.10	-1.53	0.67	±5	2020/9/29
1750	22.6	1.352	40.458	1.37	40.10	-1.31	0.89	±5	2020/10/3
1900	22.5	1.415	39.184	1.40	40.00	1.07	-2.04	±5	2020/9/27
1900	22.5	1.446	38.895	1.40	40.00	3.29	-2.76	±5	2020/10/1
2600	22.6	2.006	38.438	1.96	39.00	2.35	-1.44	±5	2020/9/28
2600	22.6	2.001	38.044	1.96	39.00	2.09	-2.45	±5	2020/10/2

11.3 System Performance Check Results

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

Date	Frequency (MHz)2	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2020/9/30	750	250	D750V3-1107	EX3DV4 - SN7306	DAE4 Sn1399	2.20	8.32	8.8	5.77
2020/9/30	835	250	D835V2-4d167	EX3DV4 - SN7306	DAE4 Sn1399	2.57	9.55	10.28	7.64
2020/9/29	1750	250	D1750V2-1112	EX3DV4 - SN7306	DAE4 Sn1399	9.85	36.70	39.4	7.36
2020/10/3	1750	250	D1750V2-1112	EX3DV4 - SN7306	DAE4 Sn1399	9.87	36.70	39.48	7.57
2020/9/27	1900	250	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn1399	10.40	40.20	41.6	3.48
2020/10/1	1900	250	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn1399	10.70	40.20	42.8	6.47
2020/9/28	2600	250	D2600V2-1008	EX3DV4 - SN7306	DAE4 Sn1399	15.10	56.40	60.4	7.09
2020/10/2	2600	250	D2600V2-1008	EX3DV4 - SN7306	DAE4 Sn1399	15.10	56.40	60.4	7.09

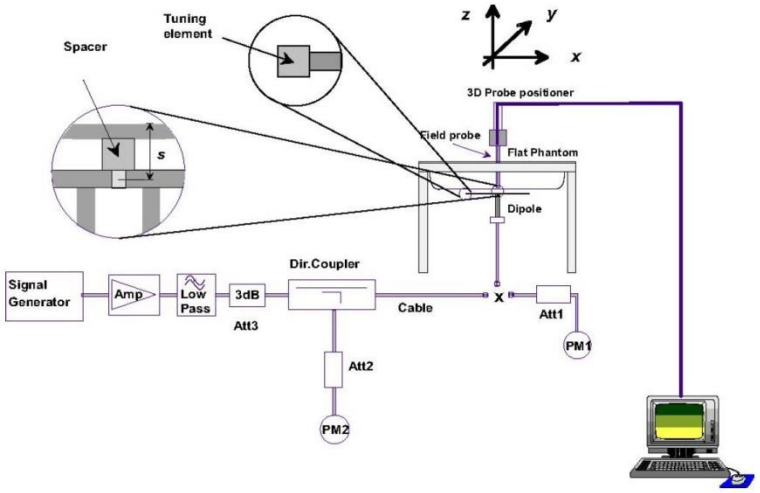


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

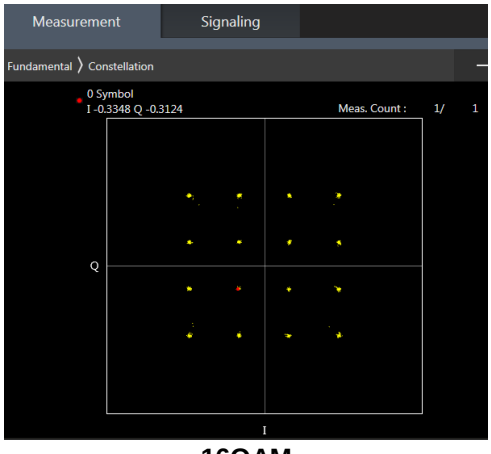
12. LTE Output Power (Unit: dBm)

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not 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; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.

64QAM



16QAM

<Default Power Mode Ant 2>

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	23.32	22.88	23.11	24	0
20	QPSK	1	49	23.83	23.53	23.48		
20	QPSK	1	99	22.59	22.32	22.80		
20	QPSK	50	0	22.73	22.28	22.37	23	1
20	QPSK	50	24	22.86	22.57	22.70		
20	QPSK	50	50	22.40	22.24	22.19		
20	QPSK	100	0	22.38	22.10	22.26		
20	16QAM	1	0	22.23	21.98	21.90	23	1
20	16QAM	1	49	22.84	22.54	22.76		
20	16QAM	1	99	22.03	21.72	21.92		
20	16QAM	50	0	21.55	21.42	21.54	22	2
20	16QAM	50	24	21.72	21.71	21.74		
20	16QAM	50	50	21.44	21.31	21.53		
20	16QAM	100	0	21.35	21.06	21.14		
20	64QAM	1	0	21.26	20.97	21.06	22	2
20	64QAM	1	49	21.70	21.69	21.43		
20	64QAM	1	99	21.07	20.77	20.95		
20	64QAM	50	0	20.69	20.28	20.68	21	3
20	64QAM	50	24	20.91	20.65	20.75		
20	64QAM	50	50	20.43	20.20	20.40		
20	64QAM	100	0	20.39	20.15	20.23		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	23.12	22.71	23.00	24	0
15	QPSK	1	37	23.69	23.55	23.54		
15	QPSK	1	74	22.61	22.45	22.77		
15	QPSK	36	0	22.66	22.21	22.54	23	1
15	QPSK	36	20	22.75	22.60	22.80		
15	QPSK	36	39	22.53	22.28	22.29		
15	QPSK	75	0	22.47	22.16	22.23		
15	16QAM	1	0	22.21	22.00	21.99	23	1
15	16QAM	1	37	22.74	22.56	22.66		
15	16QAM	1	74	21.95	21.84	22.02		
15	16QAM	36	0	21.59	21.35	21.40	22	2
15	16QAM	36	20	21.88	21.73	21.78		
15	16QAM	36	39	21.41	21.26	21.46		
15	16QAM	75	0	21.37	21.15	21.27		
15	64QAM	1	0	21.19	20.87	21.13	22	2
15	64QAM	1	37	21.72	21.68	21.52		
15	64QAM	1	74	21.17	20.68	20.92		
15	64QAM	36	0	20.63	20.33	20.75	21	3
15	64QAM	36	20	20.79	20.68	20.74		
15	64QAM	36	39	20.50	20.13	20.49		
15	64QAM	75	0	20.55	20.22	20.25		

Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	23.31	22.75	23.05	24	0
10	QPSK	1	25	23.67	23.53	23.51		
10	QPSK	1	49	22.71	22.27	22.66		
10	QPSK	25	0	22.65	22.29	22.39	23	1
10	QPSK	25	12	22.76	22.56	22.76		
10	QPSK	25	25	22.55	22.08	22.16		
10	QPSK	50	0	22.37	22.18	22.28		
10	16QAM	1	0	22.11	21.91	22.03	23	1
10	16QAM	1	25	22.86	22.56	22.74		
10	16QAM	1	49	22.15	21.80	21.91		
10	16QAM	25	0	21.49	21.33	21.54	22	2
10	16QAM	25	12	21.72	21.82	21.82		
10	16QAM	25	25	21.40	21.18	21.43		
10	16QAM	50	0	21.50	21.11	21.17		
10	64QAM	1	0	21.18	21.03	21.13	22	2
10	64QAM	1	25	21.75	21.56	21.41		
10	64QAM	1	49	21.14	20.66	20.95		
10	64QAM	25	0	20.73	20.28	20.70	21	3
10	64QAM	25	12	20.82	20.61	20.83		
10	64QAM	25	25	20.42	20.22	20.55		
10	64QAM	50	0	20.39	20.13	20.22		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	23.22	22.84	23.10	24	0
5	QPSK	1	12	23.81	23.60	23.51		
5	QPSK	1	24	22.67	22.42	22.67		
5	QPSK	12	0	22.61	22.23	22.50	23	1
5	QPSK	12	7	22.68	22.47	22.66		
5	QPSK	12	13	22.46	22.28	22.22		
5	QPSK	25	0	22.38	22.12	22.27		
5	16QAM	1	0	22.22	21.90	21.95	23	1
5	16QAM	1	12	22.72	22.50	22.63		
5	16QAM	1	24	21.96	21.75	21.90		
5	16QAM	12	0	21.53	21.36	21.44	22	2
5	16QAM	12	7	21.70	21.73	21.65		
5	16QAM	12	13	21.51	21.29	21.52		
5	16QAM	25	0	21.39	21.18	21.27		
5	64QAM	1	0	21.27	20.91	21.19	22	2
5	64QAM	1	12	21.72	21.67	21.59		
5	64QAM	1	24	21.24	20.79	21.01		
5	64QAM	12	0	20.63	20.27	20.66	21	3
5	64QAM	12	7	20.76	20.50	20.85		
5	64QAM	12	13	20.45	20.23	20.55		
5	64QAM	25	0	20.39	20.19	20.36		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	23.13	22.81	22.98	24	0
3	QPSK	1	8	23.82	23.46	23.48		

3	QPSK	1	14	22.66	22.36	22.76		
3	QPSK	8	0	22.57	22.20	22.44	23	1
3	QPSK	8	4	22.68	22.42	22.80		
3	QPSK	8	7	22.48	22.10	22.29		
3	QPSK	15	0	22.35	22.01	22.30		
3	16QAM	1	0	22.19	21.86	22.05	23	1
3	16QAM	1	8	22.66	22.49	22.72		
3	16QAM	1	14	22.05	21.72	22.09		
3	16QAM	8	0	21.51	21.37	21.56	22	2
3	16QAM	8	4	21.82	21.80	21.83		
3	16QAM	8	7	21.47	21.27	21.56		
3	16QAM	15	0	21.42	21.22	21.18		
3	64QAM	1	0	21.12	20.86	21.05	22	2
3	64QAM	1	8	21.60	21.53	21.46		
3	64QAM	1	14	21.20	20.75	21.01		
3	64QAM	8	0	20.70	20.42	20.72	21	3
3	64QAM	8	4	20.82	20.59	20.80		
3	64QAM	8	7	20.47	20.17	20.52		
3	64QAM	15	0	20.57	20.20	20.18		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	23.32	22.78	23.11	24	0
1.4	QPSK	1	3	23.67	23.47	23.49		
1.4	QPSK	1	5	22.65	22.26	22.78		
1.4	QPSK	3	0	22.73	22.30	22.54		
1.4	QPSK	3	1	22.76	22.43	22.68		
1.4	QPSK	3	3	22.38	22.22	22.19		
1.4	QPSK	6	0	22.46	22.06	22.38	23	1
1.4	16QAM	1	0	22.29	21.93	22.04	23	1
1.4	16QAM	1	3	22.82	22.55	22.82		
1.4	16QAM	1	5	22.02	21.77	22.09		
1.4	16QAM	3	0	21.55	21.37	21.51		
1.4	16QAM	3	1	21.71	21.77	21.79		
1.4	16QAM	3	3	21.53	21.13	21.39		
1.4	16QAM	6	0	21.35	21.16	21.18	22	2
1.4	64QAM	1	0	21.14	21.02	21.03	22	2
1.4	64QAM	1	3	21.73	21.65	21.43		
1.4	64QAM	1	5	21.11	20.74	20.84		
1.4	64QAM	3	0	20.71	20.36	20.70		
1.4	64QAM	3	1	20.90	20.66	20.81		
1.4	64QAM	3	3	20.36	20.20	20.60		
1.4	64QAM	6	0	20.38	20.21	20.29	21	3

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	23.22	22.76	22.33	24	0
20	QPSK	1	49	23.75	23.79	23.39		
20	QPSK	1	99	23.70	23.60	23.20		
20	QPSK	50	0	22.82	22.72	22.32	23	1
20	QPSK	50	24	22.90	22.80	22.40		
20	QPSK	50	50	22.93	22.83	22.49		
20	QPSK	100	0	22.98	22.88	22.48		
20	16QAM	1	0	22.09	21.99	21.59	23	1
20	16QAM	1	49	22.99	22.89	22.49		
20	16QAM	1	99	22.94	22.84	22.44		
20	16QAM	50	0	21.87	21.77	21.37	22	2
20	16QAM	50	24	21.95	21.85	21.45		
20	16QAM	50	50	21.96	21.86	21.46		
20	16QAM	100	0	21.99	21.89	21.49		
20	64QAM	1	0	21.13	21.03	20.63	22	2
20	64QAM	1	49	21.84	21.74	21.34		
20	64QAM	1	99	21.80	21.70	21.30		
20	64QAM	50	0	20.55	20.45	20.05	21	3
20	64QAM	50	24	20.92	20.82	20.42		
20	64QAM	50	50	20.98	20.88	20.48		
20	64QAM	100	0	20.77	20.67	20.27		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	23.13	22.56	22.23	24	0
15	QPSK	1	37	23.72	23.67	23.24		
15	QPSK	1	74	23.52	23.43	23.18		
15	QPSK	36	0	22.71	22.65	22.32	23	1
15	QPSK	36	20	22.72	22.60	22.27		
15	QPSK	36	39	22.73	22.66	22.40		
15	QPSK	75	0	22.96	22.76	22.31		
15	16QAM	1	0	22.07	21.80	21.46	23	1
15	16QAM	1	37	22.97	22.72	22.36		
15	16QAM	1	74	22.87	22.77	22.41		
15	16QAM	36	0	21.71	21.60	21.30	22	2
15	16QAM	36	20	21.89	21.70	21.44		
15	16QAM	36	39	21.81	21.70	21.32		
15	16QAM	75	0	21.99	21.81	21.39		
15	64QAM	1	0	21.05	20.92	20.58	22	2
15	64QAM	1	37	21.82	21.60	21.24		
15	64QAM	1	74	21.63	21.50	21.18		
15	64QAM	36	0	20.39	20.31	19.95	21	3
15	64QAM	36	20	20.79	20.81	20.27		
15	64QAM	36	39	20.93	20.82	20.31		
15	64QAM	75	0	20.59	20.56	20.22		

Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	23.11	22.56	22.30	24	0
10	QPSK	1	25	23.65	23.61	23.26		
10	QPSK	1	49	23.61	23.58	23.19		
10	QPSK	25	0	22.81	22.58	22.21	23	1
10	QPSK	25	12	22.71	22.75	22.35		
10	QPSK	25	25	22.93	22.76	22.38		
10	QPSK	50	0	22.91	22.73	22.41		
10	16QAM	1	0	21.92	21.94	21.45	23	1
10	16QAM	1	25	22.80	22.89	22.36		
10	16QAM	1	49	22.79	22.83	22.39		
10	16QAM	25	0	21.80	21.75	21.36	22	2
10	16QAM	25	12	21.89	21.84	21.36		
10	16QAM	25	25	21.80	21.83	21.42		
10	16QAM	50	0	21.90	21.69	21.40		
10	64QAM	1	0	21.13	20.95	20.58	22	2
10	64QAM	1	25	21.81	21.74	21.32		
10	64QAM	1	49	21.66	21.70	21.16		
10	64QAM	25	0	20.41	20.41	20.03	21	3
10	64QAM	25	12	20.76	20.68	20.41		
10	64QAM	25	25	20.87	20.80	20.46		
10	64QAM	50	0	20.57	20.63	20.27		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	23.13	22.68	22.31	24	0
5	QPSK	1	12	23.66	23.71	23.39		
5	QPSK	1	24	23.67	23.52	23.07		
5	QPSK	12	0	22.66	22.61	22.30	23	1
5	QPSK	12	7	22.82	22.64	22.28		
5	QPSK	12	13	22.81	22.68	22.31		
5	QPSK	25	0	22.94	22.82	22.35		
5	16QAM	1	0	22.05	21.79	21.57	23	1
5	16QAM	1	12	22.82	22.79	22.39		
5	16QAM	1	24	22.92	22.82	22.26		
5	16QAM	12	0	21.70	21.61	21.35	22	2
5	16QAM	12	7	21.77	21.82	21.37		
5	16QAM	12	13	21.89	21.71	21.35		
5	16QAM	25	0	21.95	21.69	21.39		
5	64QAM	1	0	20.99	21.00	20.46	22	2
5	64QAM	1	12	21.66	21.69	21.25		
5	64QAM	1	24	21.76	21.53	21.24		
5	64QAM	12	0	20.43	20.29	19.85	21	3
5	64QAM	12	7	20.91	20.73	20.29		
5	64QAM	12	13	20.91	20.72	20.41		
5	64QAM	25	0	20.63	20.55	20.13		

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	23.15	23.52	22.87	24	0
20	QPSK	1	49	22.88	23.28	22.64		
20	QPSK	1	99	22.92	23.36	22.80		
20	QPSK	50	0	21.99	22.31	21.79	23	1
20	QPSK	50	24	22.20	22.61	21.92		
20	QPSK	50	50	22.52	22.83	22.18		
20	QPSK	100	0	22.27	22.47	21.96		
20	16QAM	1	0	22.12	22.44	21.83	23	1
20	16QAM	1	49	22.16	22.52	21.84		
20	16QAM	1	99	22.46	22.85	22.17		
20	16QAM	50	0	21.12	21.39	20.88	22	2
20	16QAM	50	24	21.25	21.57	21.13		
20	16QAM	50	50	21.30	21.76	21.05		
20	16QAM	100	0	21.21	21.71	21.05		
20	64QAM	1	0	20.91	21.24	20.70	22	2
20	64QAM	1	49	21.25	21.54	20.88		
20	64QAM	1	99	21.49	21.78	21.08		
20	64QAM	50	0	19.99	20.36	19.88	21	3
20	64QAM	50	24	20.17	20.59	19.92		
20	64QAM	50	50	20.38	20.67	20.19		
20	64QAM	100	0	20.20	20.53	19.95		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	22.96	23.44	22.74	24	0
15	QPSK	1	37	22.74	23.14	22.54		
15	QPSK	1	74	22.77	23.22	22.63		
15	QPSK	36	0	21.86	22.30	21.71	23	1
15	QPSK	36	20	22.13	22.42	21.91		
15	QPSK	36	39	22.32	22.79	22.09		
15	QPSK	75	0	22.18	22.38	21.83		
15	16QAM	1	0	22.00	22.33	21.67	23	1
15	16QAM	1	37	22.11	22.35	21.69		
15	16QAM	1	74	22.39	22.74	22.17		
15	16QAM	36	0	20.92	21.35	20.70	22	2
15	16QAM	36	20	21.05	21.43	21.02		
15	16QAM	36	39	21.25	21.64	21.03		
15	16QAM	75	0	21.12	21.59	20.86		
15	64QAM	1	0	20.89	21.19	20.54	22	2
15	64QAM	1	37	21.25	21.41	20.88		
15	64QAM	1	74	21.36	21.65	20.95		
15	64QAM	36	0	19.79	20.32	19.71	21	3
15	64QAM	36	20	20.03	20.55	19.79		
15	64QAM	36	39	20.29	20.66	20.17		
15	64QAM	75	0	20.06	20.44	19.90		

Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.10	23.38	22.73	24	0
10	QPSK	1	25	22.78	23.21	22.47		
10	QPSK	1	49	22.74	23.34	22.60		
10	QPSK	25	0	21.83	22.25	21.61	23	1
10	QPSK	25	12	22.04	22.43	21.83		
10	QPSK	25	25	22.42	22.63	21.98		
10	QPSK	50	0	22.11	22.37	21.96		
10	16QAM	1	0	22.07	22.29	21.70	23	1
10	16QAM	1	25	22.12	22.39	21.71		
10	16QAM	1	49	22.29	22.67	22.17		
10	16QAM	25	0	21.11	21.22	20.74	22	2
10	16QAM	25	12	21.19	21.45	21.01		
10	16QAM	25	25	21.28	21.58	20.96		
10	16QAM	50	0	21.19	21.60	20.95		
10	64QAM	1	0	20.86	21.11	20.69	22	2
10	64QAM	1	25	21.20	21.39	20.74		
10	64QAM	1	49	21.31	21.70	20.96		
10	64QAM	25	0	19.80	20.27	19.78	21	3
10	64QAM	25	12	20.03	20.56	19.79		
10	64QAM	25	25	20.29	20.66	20.05		
10	64QAM	50	0	20.08	20.38	19.82		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.15	23.34	22.82	24	0
5	QPSK	1	12	22.87	23.14	22.47		
5	QPSK	1	24	22.91	23.17	22.76		
5	QPSK	12	0	21.98	22.25	21.78	23	1
5	QPSK	12	7	22.16	22.53	21.84		
5	QPSK	12	13	22.35	22.68	22.14		
5	QPSK	25	0	22.26	22.47	21.85		
5	16QAM	1	0	22.00	22.39	21.73	23	1
5	16QAM	1	12	22.02	22.44	21.70		
5	16QAM	1	24	22.43	22.79	21.98		
5	16QAM	12	0	21.12	21.19	20.73	22	2
5	16QAM	12	7	21.15	21.50	21.00		
5	16QAM	12	13	21.17	21.68	21.00		
5	16QAM	25	0	21.16	21.53	21.05		
5	64QAM	1	0	20.80	21.12	20.66	22	2
5	64QAM	1	12	21.18	21.51	20.71		
5	64QAM	1	24	21.29	21.74	21.07		
5	64QAM	12	0	19.99	20.27	19.75	21	3
5	64QAM	12	7	20.12	20.57	19.89		
5	64QAM	12	13	20.24	20.54	20.06		
5	64QAM	25	0	20.08	20.34	19.76		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.07	23.37	22.72	24	0
3	QPSK	1	8	22.91	23.12	22.52		

3	QPSK	1	14	23.01	23.21	22.75		
3	QPSK	8	0	22.00	22.36	21.87	23	1
3	QPSK	8	4	22.20	22.68	22.07		
3	QPSK	8	7	22.50	22.73	22.09		
3	QPSK	15	0	22.12	22.64	21.96		
3	16QAM	1	0	21.99	22.27	21.82	23	1
3	16QAM	1	8	22.06	22.55	21.87		
3	16QAM	1	14	22.49	22.75	22.22		
3	16QAM	8	0	21.14	21.55	20.86	22	2
3	16QAM	8	4	21.35	21.65	21.06		
3	16QAM	8	7	21.46	21.68	21.14		
3	16QAM	15	0	21.36	21.63	20.93		
3	64QAM	1	0	21.01	21.18	20.75	22	2
3	64QAM	1	8	21.13	21.56	20.89		
3	64QAM	1	14	21.46	21.66	21.05		
3	64QAM	8	0	20.13	20.43	19.86	21	3
3	64QAM	8	4	20.27	20.66	19.98		
3	64QAM	8	7	20.33	20.81	20.12		
3	64QAM	15	0	20.29	20.70	20.13		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	23.11	23.41	22.83	24	0
1.4	QPSK	1	3	22.78	23.13	22.53		
1.4	QPSK	1	5	22.98	23.24	22.69		
1.4	QPSK	3	0	23.06	23.40	22.71		
1.4	QPSK	3	1	22.86	23.12	22.57		
1.4	QPSK	3	3	22.91	23.41	22.61		
1.4	QPSK	6	0	22.29	22.65	21.92	23	1
1.4	16QAM	1	0	22.04	22.46	21.86	23	1
1.4	16QAM	1	3	22.25	22.43	21.84		
1.4	16QAM	1	5	22.47	22.71	22.26		
1.4	16QAM	3	0	22.12	22.41	21.78		
1.4	16QAM	3	1	22.20	22.50	21.91		
1.4	16QAM	3	3	22.48	22.78	22.24		
1.4	16QAM	6	0	21.36	21.65	20.93	22	2
1.4	64QAM	1	0	20.99	21.27	20.72	22	2
1.4	64QAM	1	3	21.19	21.55	20.91		
1.4	64QAM	1	5	21.44	21.79	21.06		
1.4	64QAM	3	0	20.91	21.33	20.78		
1.4	64QAM	3	1	21.16	21.56	20.86		
1.4	64QAM	3	3	21.37	21.70	21.10		
1.4	64QAM	6	0	20.36	20.64	20.00	21	3

<Reduced Power Mode for NB Mode Ant 2>

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	15.02	15.57	15.38	16.3	0
20	QPSK	1	49	14.75	15.02	15.02		
20	QPSK	1	99	14.52	14.89	14.99		
20	QPSK	50	0	15.29	15.11	15.42	16.3	0
20	QPSK	50	24	14.77	14.51	14.81		
20	QPSK	50	50	14.69	14.37	14.76		
20	QPSK	100	0	15.16	15.17	15.70		
20	16QAM	1	0	14.98	15.49	15.38	16.3	0
20	16QAM	1	49	14.72	14.97	14.94		
20	16QAM	1	99	14.43	14.79	14.98		
20	16QAM	50	0	15.21	15.06	15.36	16.3	0
20	16QAM	50	24	14.72	14.41	14.78		
20	16QAM	50	50	14.59	14.37	14.66		
20	16QAM	100	0	15.11	15.10	15.66		
20	64QAM	1	0	14.98	15.52	15.29	16.3	0
20	64QAM	1	49	14.72	14.95	14.94		
20	64QAM	1	99	14.48	14.89	14.97		
20	64QAM	50	0	15.27	15.10	15.34	16.3	0
20	64QAM	50	24	14.75	14.50	14.75		
20	64QAM	50	50	14.65	14.30	14.67		
20	64QAM	100	0	15.08	15.14	15.64		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	14.92	15.54	15.32	16.3	0
15	QPSK	1	37	14.70	14.93	14.98		
15	QPSK	1	74	14.43	14.89	14.95		
15	QPSK	36	0	15.29	15.02	15.34	16.3	0
15	QPSK	36	20	14.75	14.49	14.71		
15	QPSK	36	39	14.63	14.35	14.75		
15	QPSK	75	0	15.08	15.11	15.60		
15	16QAM	1	0	14.96	15.41	14.38	16.3	0
15	16QAM	1	37	14.67	14.91	14.91		
15	16QAM	1	74	14.34	14.75	14.93		
15	16QAM	36	0	15.20	15.01	15.30	16.3	0
15	16QAM	36	20	14.63	14.38	14.69		
15	16QAM	36	39	14.56	14.31	14.62		
15	16QAM	75	0	15.01	15.01	15.59		
15	64QAM	1	0	14.98	15.48	15.25	16.3	0
15	64QAM	1	37	14.65	14.86	14.90		
15	64QAM	1	74	14.44	14.79	14.90		
15	64QAM	36	0	15.22	15.03	15.25	16.3	0
15	64QAM	36	20	14.72	14.41	14.67		
15	64QAM	36	39	14.62	14.30	14.58		
15	64QAM	75	0	15.05	15.12	15.61		

Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	14.99	15.53	14.35	16.3	0
10	QPSK	1	25	14.70	15.01	14.93		
10	QPSK	1	49	14.43	14.85	14.95		
10	QPSK	25	0	15.20	15.09	15.32	16.3	0
10	QPSK	25	12	14.77	14.41	14.74		
10	QPSK	25	25	14.69	14.34	14.76		
10	QPSK	50	0	15.07	15.08	15.66		
10	16QAM	1	0	14.98	15.48	14.32	16.3	0
10	16QAM	1	25	14.65	14.92	14.94		
10	16QAM	1	49	14.41	14.79	14.97		
10	16QAM	25	0	15.17	15.00	15.29	16.3	0
10	16QAM	25	12	14.70	14.33	14.78		
10	16QAM	25	25	14.54	14.31	14.59		
10	16QAM	50	0	15.01	15.01	15.59		
10	64QAM	1	0	14.89	15.43	15.20	16.3	0
10	64QAM	1	25	14.66	14.88	14.88		
10	64QAM	1	49	14.45	14.80	14.87		
10	64QAM	25	0	15.19	15.06	15.34	16.3	0
10	64QAM	25	12	14.70	14.44	14.72		
10	64QAM	25	25	14.61	15.21	14.61		
10	64QAM	50	0	15.02	15.04	15.55		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	14.99	15.50	14.38	16.3	0
5	QPSK	1	12	14.75	14.93	14.93		
5	QPSK	1	24	14.47	14.85	14.94		
5	QPSK	12	0	15.22	15.03	15.41	16.3	0
5	QPSK	12	7	14.70	14.48	14.79		
5	QPSK	12	13	14.62	14.79	14.69		
5	QPSK	25	0	15.13	15.15	15.67		
5	16QAM	1	0	14.93	15.40	14.35	16.3	0
5	16QAM	1	12	14.64	14.91	14.85		
5	16QAM	1	24	14.35	14.70	14.91		
5	16QAM	12	0	15.12	15.01	15.33	16.3	0
5	16QAM	12	7	14.63	14.37	14.78		
5	16QAM	12	13	14.49	14.37	14.60		
5	16QAM	25	0	15.11	15.10	15.61		
5	64QAM	1	0	14.96	15.52	15.22	16.3	0
5	64QAM	1	12	14.67	14.90	14.90		
5	64QAM	1	24	14.41	14.86	14.88		
5	64QAM	12	0	15.23	15.09	15.28	16.3	0
5	64QAM	12	7	14.66	14.45	14.65		
5	64QAM	12	13	14.60	14.76	14.64		
5	64QAM	25	0	15.01	15.14	15.57		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	14.97	15.56	14.34	16.3	0
3	QPSK	1	8	14.74	14.98	14.93		

3	QPSK	1	14	14.49	14.81	14.98		
3	QPSK	8	0	15.24	15.08	15.37	16.3	0
3	QPSK	8	4	14.77	14.51	14.78		
3	QPSK	8	7	14.65	14.33	14.71		
3	QPSK	15	0	15.15	15.17	15.67		
3	16QAM	1	0	14.90	15.44	14.32	16.3	0
3	16QAM	1	8	14.71	14.87	14.86		
3	16QAM	1	14	14.35	14.78	14.90		
3	16QAM	8	0	15.20	14.96	15.33	16.3	0
3	16QAM	8	4	14.64	14.35	14.71		
3	16QAM	8	7	14.51	14.59	14.56		
3	16QAM	15	0	15.09	15.08	15.65		
3	64QAM	1	0	14.93	15.45	14.72	16.3	0
3	64QAM	1	8	14.69	14.87	14.84		
3	64QAM	1	14	14.38	14.83	14.96		
3	64QAM	8	0	15.27	15.03	15.30	16.3	0
3	64QAM	8	4	14.71	14.45	14.67		
3	64QAM	8	7	14.63	14.77	14.61		
3	64QAM	15	0	15.05	15.13	15.60		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	15.02	15.49	14.35	16.3	0
1.4	QPSK	1	3	14.70	15.00	14.92		
1.4	QPSK	1	5	14.46	14.85	14.98		
1.4	QPSK	3	0	15.25	15.07	15.42		
1.4	QPSK	3	1	14.68	14.45	14.75		
1.4	QPSK	3	3	14.62	14.34	14.70		
1.4	QPSK	6	0	15.06	15.07	15.68	16.3	0
1.4	16QAM	1	0	14.98	15.43	14.79	16.3	0
1.4	16QAM	1	3	14.72	14.91	14.38		
1.4	16QAM	1	5	14.38	14.78	14.97		
1.4	16QAM	3	0	15.20	14.98	15.36		
1.4	16QAM	3	1	14.62	14.36	14.71		
1.4	16QAM	3	3	14.49	14.35	14.66		
1.4	16QAM	6	0	15.09	15.10	15.58	16.3	0
1.4	64QAM	1	0	14.91	15.42	15.19	16.3	0
1.4	64QAM	1	3	14.69	14.95	14.94		
1.4	64QAM	1	5	14.48	14.85	14.97		
1.4	64QAM	3	0	15.19	15.08	15.31		
1.4	64QAM	3	1	14.72	14.45	14.72		
1.4	64QAM	3	3	14.64	14.77	14.65		
1.4	64QAM	6	0	14.99	15.09	15.59	16.3	0

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	16.35	15.85	15.91	16.7	0
20	QPSK	1	49	16.50	16.14	16.15		
20	QPSK	1	99	15.61	15.75	15.70		
20	QPSK	50	0	15.60	15.51	15.35	16.7	0
20	QPSK	50	24	16.43	16.45	16.36		
20	QPSK	50	50	15.73	15.60	15.11		
20	QPSK	100	0	16.30	16.49	16.24		
20	16QAM	1	0	16.30	15.77	15.84	16.7	0
20	16QAM	1	49	16.47	16.13	16.13		
20	16QAM	1	99	15.61	15.67	15.67		
20	16QAM	50	0	15.60	15.50	15.27	16.7	0
20	16QAM	50	24	16.41	16.43	16.29		
20	16QAM	50	50	15.71	15.56	15.07		
20	16QAM	100	0	16.20	16.41	16.14		
20	64QAM	1	0	16.25	15.78	15.89	16.7	0
20	64QAM	1	49	16.47	16.08	16.05		
20	64QAM	1	99	15.58	15.73	15.66		
20	64QAM	50	0	15.59	15.46	15.28	16.7	0
20	64QAM	50	24	16.49	16.47	16.28		
20	64QAM	50	50	15.71	15.59	15.08		
20	64QAM	100	0	16.27	16.40	16.19		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	16.34	15.80	15.87	16.7	0
15	QPSK	1	37	16.40	16.09	16.07		
15	QPSK	1	74	15.54	15.65	15.60		
15	QPSK	36	0	15.51	15.44	15.35	16.7	0
15	QPSK	36	20	16.48	16.42	16.32		
15	QPSK	36	39	15.67	15.53	15.01		
15	QPSK	75	0	16.29	16.43	16.20		
15	16QAM	1	0	16.29	15.73	15.79	16.7	0
15	16QAM	1	37	16.43	16.03	16.09		
15	16QAM	1	74	15.52	15.57	15.67		
15	16QAM	36	0	15.55	15.42	15.24	16.7	0
15	16QAM	36	20	16.35	16.41	16.23		
15	16QAM	36	39	15.71	15.51	15.07		
15	16QAM	75	0	16.12	16.31	16.09		
15	64QAM	1	0	16.19	15.71	15.81	16.7	0
15	64QAM	1	37	16.43	16.04	15.97		
15	64QAM	1	74	15.53	15.68	15.63		
15	64QAM	36	0	15.55	15.45	15.21	16.7	0
15	64QAM	36	20	16.39	16.40	16.45		
15	64QAM	36	39	15.66	15.50	15.03		
15	64QAM	75	0	16.18	16.37	16.12		

Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	16.30	15.81	15.86	16.7	0
10	QPSK	1	25	16.40	16.07	16.09		
10	QPSK	1	49	15.59	15.73	15.64		
10	QPSK	25	0	15.60	15.48	15.33	16.7	0
10	QPSK	25	12	16.45	16.47	16.29		
10	QPSK	25	25	15.71	15.58	15.01		
10	QPSK	50	0	16.26	16.46	16.17		
10	16QAM	1	0	16.26	15.73	15.84	16.7	0
10	16QAM	1	25	16.41	16.04	15.12		
10	16QAM	1	49	15.51	15.58	15.59		
10	16QAM	25	0	15.56	15.48	15.26	16.7	0
10	16QAM	25	12	16.33	16.41	15.28		
10	16QAM	25	25	15.63	15.46	14.98		
10	16QAM	50	0	16.16	16.39	16.11		
10	64QAM	1	0	16.22	15.76	15.80	16.7	0
10	64QAM	1	25	16.38	16.05	15.95		
10	64QAM	1	49	15.55	15.67	15.61		
10	64QAM	25	0	15.58	15.45	15.22	16.7	0
10	64QAM	25	12	16.47	16.39	16.18		
10	64QAM	25	25	15.64	15.52	15.07		
10	64QAM	50	0	16.19	16.30	16.15		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	16.25	15.77	15.82	16.7	0
5	QPSK	1	12	16.49	16.10	16.07		
5	QPSK	1	24	15.53	15.75	15.69		
5	QPSK	12	0	15.59	15.49	15.30	16.7	0
5	QPSK	12	7	16.48	16.46	16.34		
5	QPSK	12	13	15.64	15.50	15.07		
5	QPSK	25	0	16.27	16.41	16.23		
5	16QAM	1	0	16.25	15.68	15.79	16.7	0
5	16QAM	1	12	16.47	16.10	16.09		
5	16QAM	1	24	15.59	15.63	15.57		
5	16QAM	12	0	15.53	15.48	15.25	16.7	0
5	16QAM	12	7	16.35	16.39	16.26		
5	16QAM	12	13	15.69	15.48	15.07		
5	16QAM	25	0	16.12	16.40	16.08		
5	64QAM	1	0	16.22	15.75	15.88	16.7	0
5	64QAM	1	12	16.43	15.98	16.01		
5	64QAM	1	24	15.56	15.67	15.66		
5	64QAM	12	0	15.52	15.46	15.25	16.7	0
5	64QAM	12	7	16.46	16.38	16.25		
5	64QAM	12	13	15.61	15.54	15.08		
5	64QAM	25	0	16.27	16.33	16.15		

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	14.71	14.40	14.16	15.3	0
20	QPSK	1	49	15.20	14.73	14.40		
20	QPSK	1	99	13.72	13.99	13.81		
20	QPSK	50	0	14.27	13.63	13.65	15.3	0
20	QPSK	50	24	14.35	13.71	13.40		
20	QPSK	50	50	14.74	14.64	14.12		
20	QPSK	100	0	14.45	14.72	13.44		
20	16QAM	1	0	14.70	14.36	14.14	15.3	0
20	16QAM	1	49	15.15	14.65	14.36		
20	16QAM	1	99	13.66	13.95	13.75		
20	16QAM	50	0	14.21	13.62	13.56	15.3	0
20	16QAM	50	24	14.33	13.63	13.38		
20	16QAM	50	50	14.67	14.63	13.98		
20	16QAM	100	0	14.42	14.70	13.45		
20	64QAM	1	0	14.71	14.34	14.15	15.3	0
20	64QAM	1	49	15.15	14.71	14.35		
20	64QAM	1	99	13.69	13.99	13.74		
20	64QAM	50	0	14.25	13.61	13.63	15.3	0
20	64QAM	50	24	14.35	13.64	13.51		
20	64QAM	50	50	14.74	14.54	13.92		
20	64QAM	100	0	14.39	14.72	13.43		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	14.65	14.30	14.13	15.3	0
15	QPSK	1	37	15.15	14.68	14.33		
15	QPSK	1	74	13.64	13.93	13.74		
15	QPSK	36	0	14.20	13.61	13.57	15.3	0
15	QPSK	36	20	14.34	13.65	13.38		
15	QPSK	36	39	14.71	14.62	13.92		
15	QPSK	75	0	14.39	14.69	13.39		
15	16QAM	1	0	14.63	14.28	14.07	15.3	0
15	16QAM	1	37	15.13	14.65	14.32		
15	16QAM	1	74	13.59	13.87	13.65		
15	16QAM	36	0	14.19	13.62	13.46	15.3	0
15	16QAM	36	20	14.28	13.60	13.37		
15	16QAM	36	39	14.67	14.58	13.90		
15	16QAM	75	0	14.35	14.62	13.35		
15	64QAM	1	0	14.67	14.29	14.13	15.3	0
15	64QAM	1	37	15.13	14.64	14.35		
15	64QAM	1	74	13.64	13.95	13.64		
15	64QAM	36	0	14.19	13.61	13.54	15.3	0
15	64QAM	36	20	14.32	13.59	13.34		
15	64QAM	36	39	14.65	14.47	13.88		
15	64QAM	75	0	14.38	14.66	13.34		

Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	14.64	14.31	14.16	15.3	0
10	QPSK	1	25	15.12	14.70	14.35		
10	QPSK	1	49	13.64	13.94	13.80		
10	QPSK	25	0	14.25	13.62	13.61	15.3	0
10	QPSK	25	12	14.25	13.68	13.30		
10	QPSK	25	25	14.66	14.59	14.00		
10	QPSK	50	0	14.40	14.70	13.42		
10	16QAM	1	0	14.65	14.31	14.14	15.3	0
10	16QAM	1	25	15.14	14.60	14.34		
10	16QAM	1	49	13.65	13.90	13.69		
10	16QAM	25	0	14.14	13.55	13.50	15.3	0
10	16QAM	25	12	14.26	13.54	13.33		
10	16QAM	25	25	14.58	14.61	13.92		
10	16QAM	50	0	14.33	14.69	13.31		
10	64QAM	1	0	14.70	14.32	14.15	15.3	0
10	64QAM	1	25	15.11	14.61	14.30		
10	64QAM	1	49	13.64	13.91	13.69		
10	64QAM	25	0	14.23	13.56	13.58	15.3	0
10	64QAM	25	12	14.29	13.61	13.35		
10	64QAM	25	25	14.65	14.44	13.88		
10	64QAM	50	0	14.38	14.62	13.43		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	14.67	14.36	14.06	15.3	0
5	QPSK	1	12	15.17	14.69	14.34		
5	QPSK	1	24	13.70	13.92	13.78		
5	QPSK	12	0	14.21	13.53	13.63	15.3	0
5	QPSK	12	7	14.25	13.69	13.30		
5	QPSK	12	13	14.69	14.55	13.96		
5	QPSK	25	0	14.43	14.72	13.38		
5	16QAM	1	0	14.60	14.34	14.11	15.3	0
5	16QAM	1	12	15.10	14.57	14.34		
5	16QAM	1	24	13.61	13.90	13.73		
5	16QAM	12	0	14.19	13.53	13.52	15.3	0
5	16QAM	12	7	14.25	13.58	13.30		
5	16QAM	12	13	14.60	14.53	13.88		
5	16QAM	25	0	14.38	14.65	13.50		
5	64QAM	1	0	14.61	14.34	14.15	15.3	0
5	64QAM	1	12	15.15	14.64	14.34		
5	64QAM	1	24	13.66	13.90	13.68		
5	64QAM	12	0	14.24	13.60	13.63	15.3	0
5	64QAM	12	7	14.34	13.58	13.37		
5	64QAM	12	13	14.65	14.46	13.84		
5	64QAM	25	0	14.39	14.69	13.39		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	14.71	14.35	14.11	15.3	0
3	QPSK	1	8	15.13	14.65	14.39		

3	QPSK	1	14	13.68	13.93	13.74		
3	QPSK	8	0	14.26	13.55	13.63	15.3	0
3	QPSK	8	4	14.25	13.71	13.39		
3	QPSK	8	7	14.71	14.54	13.99		
3	QPSK	15	0	14.45	14.69	13.37		
3	16QAM	1	0	14.62	14.31	14.04	15.3	0
3	16QAM	1	8	15.06	14.65	14.33		
3	16QAM	1	14	13.59	13.88	13.72		
3	16QAM	8	0	14.19	13.56	13.51	15.3	0
3	16QAM	8	4	14.32	13.62	13.38		
3	16QAM	8	7	14.60	14.62	13.95		
3	16QAM	15	0	14.41	14.64	13.34		
3	64QAM	1	0	14.67	14.27	14.12	15.3	0
3	64QAM	1	8	15.13	14.66	14.34		
3	64QAM	1	14	13.62	13.95	13.65		
3	64QAM	8	0	14.21	13.57	13.61	15.3	0
3	64QAM	8	4	14.26	13.58	13.31		
3	64QAM	8	7	14.68	14.50	13.89		
3	64QAM	15	0	14.31	14.69	13.42		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	14.61	14.36	14.11	15.3	0
1.4	QPSK	1	3	15.15	14.63	14.31		
1.4	QPSK	1	5	13.68	13.93	13.78		
1.4	QPSK	3	0	14.25	13.60	13.61		
1.4	QPSK	3	1	14.35	13.66	13.34		
1.4	QPSK	3	3	14.69	14.59	13.98		
1.4	QPSK	6	0	14.36	14.62	13.37	15.3	0
1.4	16QAM	1	0	14.61	14.30	14.04	15.3	0
1.4	16QAM	1	3	15.14	14.65	14.36		
1.4	16QAM	1	5	13.63	13.92	13.74		
1.4	16QAM	3	0	14.13	13.61	13.52		
1.4	16QAM	3	1	14.33	13.62	13.31		
1.4	16QAM	3	3	14.67	14.60	13.89		
1.4	16QAM	6	0	14.42	14.67	13.34	15.3	0
1.4	64QAM	1	0	14.67	14.30	14.08	15.3	0
1.4	64QAM	1	3	15.14	14.66	14.25		
1.4	64QAM	1	5	13.69	13.96	13.70		
1.4	64QAM	3	0	14.20	13.58	13.60		
1.4	64QAM	3	1	14.33	13.57	13.39		
1.4	64QAM	3	3	14.69	14.49	13.82		
1.4	64QAM	6	0	14.30	14.68	13.37	15.3	0

<Reduced Power Mode for Tablet Mode Ant 2>

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	12.41	12.42	12.31	13.2	0
20	QPSK	1	49	12.40	12.34	12.52		
20	QPSK	1	99	12.42	12.50	12.95		
20	QPSK	50	0	12.40	13.10	12.56	13.2	0
20	QPSK	50	24	12.42	13.15	12.53		
20	QPSK	50	50	12.48	13.17	12.90		
20	QPSK	100	0	12.45	13.18	12.47		
20	16QAM	1	0	12.32	12.36	12.27	13.2	0
20	16QAM	1	49	12.34	12.36	12.50		
20	16QAM	1	99	12.33	12.43	12.90		
20	16QAM	50	0	12.40	13.01	12.55	13.2	0
20	16QAM	50	24	12.42	13.11	12.43		
20	16QAM	50	50	12.41	13.17	12.80		
20	16QAM	100	0	12.30	13.15	12.45		
20	64QAM	1	0	12.35	12.41	12.27	13.2	0
20	64QAM	1	49	12.32	12.31	12.49		
20	64QAM	1	99	12.36	12.43	12.89		
20	64QAM	50	0	12.37	13.08	12.49	13.2	0
20	64QAM	50	24	12.35	13.05	12.52		
20	64QAM	50	50	12.44	13.17	12.82		
20	64QAM	100	0	12.37	13.15	12.40		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	12.33	12.34	12.25	13.2	0
15	QPSK	1	37	12.33	12.29	12.44		
15	QPSK	1	74	12.33	12.46	12.86		
15	QPSK	36	0	12.30	13.01	12.49	13.2	0
15	QPSK	36	20	12.32	13.15	12.50		
15	QPSK	36	39	12.40	13.18	12.89		
15	QPSK	75	0	12.42	13.11	12.45		
15	16QAM	1	0	12.27	12.31	12.22	13.2	0
15	16QAM	1	37	12.34	12.36	12.50		
15	16QAM	1	74	12.31	12.36	12.86		
15	16QAM	36	0	12.35	12.91	12.49	13.2	0
15	16QAM	36	20	12.42	13.05	12.38		
15	16QAM	36	39	12.35	13.15	12.74		
15	16QAM	75	0	12.25	13.11	12.35		
15	64QAM	1	0	12.34	12.31	12.17	13.2	0
15	64QAM	1	37	12.23	12.25	12.44		
15	64QAM	1	74	12.34	12.33	12.87		
15	64QAM	36	0	12.33	13.07	12.40	13.2	0
15	64QAM	36	20	12.30	13.04	12.44		
15	64QAM	36	39	12.38	13.12	12.82		
15	64QAM	75	0	12.34	13.09	12.37		

Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	12.39	12.32	12.27	13.2	0
10	QPSK	1	25	12.32	12.26	12.46		
10	QPSK	1	49	12.42	12.41	12.92		
10	QPSK	25	0	12.34	13.07	12.49	13.2	0
10	QPSK	25	12	12.36	13.07	12.44		
10	QPSK	25	25	12.46	13.17	12.89		
10	QPSK	50	0	12.38	13.29	12.40		
10	16QAM	1	0	12.23	12.31	12.18	13.2	0
10	16QAM	1	25	12.31	12.27	12.45		
10	16QAM	1	49	12.31	12.33	12.90		
10	16QAM	25	0	12.31	12.91	12.49	13.2	0
10	16QAM	25	12	12.42	13.08	12.35		
10	16QAM	25	25	12.34	13.15	12.80		
10	16QAM	50	0	12.29	13.10	12.44		
10	64QAM	1	0	12.29	12.41	12.27	13.2	0
10	64QAM	1	25	12.30	12.30	12.48		
10	64QAM	1	49	12.34	12.33	12.88		
10	64QAM	25	0	12.28	13.00	12.46	13.2	0
10	64QAM	25	12	12.33	13.01	12.51		
10	64QAM	25	25	12.40	13.15	12.74		
10	64QAM	50	0	12.28	13.16	12.40		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	12.37	12.41	12.22	13.2	0
5	QPSK	1	12	12.32	12.34	12.45		
5	QPSK	1	24	12.37	12.40	12.90		
5	QPSK	12	0	12.35	13.09	12.48	13.2	0
5	QPSK	12	7	12.39	13.07	12.46		
5	QPSK	12	13	12.47	13.04	12.90		
5	QPSK	25	0	12.43	13.11	12.40		
5	16QAM	1	0	12.26	12.34	12.24	13.2	0
5	16QAM	1	12	12.26	12.31	12.43		
5	16QAM	1	24	12.31	12.36	12.80		
5	16QAM	12	0	12.34	12.92	12.55	13.2	0
5	16QAM	12	7	12.41	13.05	12.42		
5	16QAM	12	13	12.32	13.09	12.74		
5	16QAM	25	0	12.24	13.18	12.37		
5	64QAM	1	0	12.30	12.38	12.24	13.2	0
5	64QAM	1	12	12.31	12.24	12.42		
5	64QAM	1	24	12.30	12.36	12.81		
5	64QAM	12	0	12.30	13.08	12.46	13.2	0
5	64QAM	12	7	12.27	12.95	12.50		
5	64QAM	12	13	12.36	13.08	12.81		
5	64QAM	25	0	12.32	13.10	12.31		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	12.40	12.34	12.24	13.2	0
3	QPSK	1	8	12.40	12.28	12.52		

3	QPSK	1	14	12.37	12.42	12.86		
3	QPSK	8	0	12.35	13.10	12.56	13.2	0
3	QPSK	8	4	12.37	13.14	12.44		
3	QPSK	8	7	12.40	13.19	12.81		
3	QPSK	15	0	12.38	13.14	12.38		
3	16QAM	1	0	12.32	12.26	12.24	13.2	0
3	16QAM	1	8	12.31	12.32	12.44		
3	16QAM	1	14	12.28	12.41	12.88		
3	16QAM	8	0	12.37	12.95	12.53	13.2	0
3	16QAM	8	4	12.35	13.07	12.33		
3	16QAM	8	7	12.37	13.18	12.78		
3	16QAM	15	0	12.30	13.10	12.38		
3	64QAM	1	0	12.27	12.38	12.20	13.2	0
3	64QAM	1	8	12.28	12.23	12.48		
3	64QAM	1	14	12.30	12.34	12.80		
3	64QAM	8	0	12.34	13.07	12.40	13.2	0
3	64QAM	8	4	12.31	12.95	12.48		
3	64QAM	8	7	12.37	13.12	12.78		
3	64QAM	15	0	12.31	13.11	12.31		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	12.33	12.32	12.31	13.2	0
1.4	QPSK	1	3	12.33	12.24	12.45		
1.4	QPSK	1	5	12.36	12.43	12.95		
1.4	QPSK	3	0	12.33	13.06	12.48		
1.4	QPSK	3	1	12.32	13.13	12.53		
1.4	QPSK	3	3	12.40	13.17	12.80		
1.4	QPSK	6	0	12.39	13.17	12.40	13.2	0
1.4	16QAM	1	0	12.24	12.28	12.17	13.2	0
1.4	16QAM	1	3	12.25	12.34	12.44		
1.4	16QAM	1	5	12.32	12.36	12.86		
1.4	16QAM	3	0	12.40	12.99	12.53		
1.4	16QAM	3	1	12.42	13.07	12.36		
1.4	16QAM	3	3	12.36	13.17	12.78		
1.4	16QAM	6	0	12.23	13.08	12.40	13.2	0
1.4	64QAM	1	0	12.31	12.33	12.18	13.2	0
1.4	64QAM	1	3	12.25	12.23	12.46		
1.4	64QAM	1	5	12.32	12.34	12.79		
1.4	64QAM	3	0	12.29	13.05	12.39		
1.4	64QAM	3	1	12.25	12.98	12.50		
1.4	64QAM	3	3	12.38	13.07	12.78		
1.4	64QAM	6	0	12.37	13.19	12.33	13.2	0

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	12.82	12.62	12.63	13.7	0
20	QPSK	1	49	13.70	13.40	13.30		
20	QPSK	1	99	12.51	13.16	12.60		
20	QPSK	50	0	13.44	13.05	13.20	13.7	0
20	QPSK	50	24	13.26	12.87	12.94		
20	QPSK	50	50	13.20	12.92	13.07		
20	QPSK	100	0	13.37	13.35	12.93		
20	16QAM	1	0	12.74	12.60	12.53	13.7	0
20	16QAM	1	49	13.66	13.39	13.20		
20	16QAM	1	99	12.44	13.13	12.60		
20	16QAM	50	0	13.35	12.98	13.16	13.7	0
20	16QAM	50	24	13.25	12.86	12.85		
20	16QAM	50	50	13.11	12.91	13.02		
20	16QAM	100	0	13.32	13.31	12.92		
20	64QAM	1	0	12.74	12.54	12.54	13.7	0
20	64QAM	1	49	13.62	13.33	12.78		
20	64QAM	1	99	12.44	13.16	12.59		
20	64QAM	50	0	13.39	13.01	13.14	13.7	0
20	64QAM	50	24	13.22	12.81	12.85		
20	64QAM	50	50	13.12	12.87	12.98		
20	64QAM	100	0	13.33	13.25	12.84		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	12.81	12.60	12.57	13.7	0
15	QPSK	1	37	13.61	13.35	13.30		
15	QPSK	1	74	12.47	13.12	12.58		
15	QPSK	36	0	13.35	12.95	13.19	13.7	0
15	QPSK	36	20	13.21	12.84	12.94		
15	QPSK	36	39	13.15	12.91	13.02		
15	QPSK	75	0	13.27	13.30	12.84		
15	16QAM	1	0	12.64	12.58	12.49	13.7	0
15	16QAM	1	37	13.68	13.38	13.17		
15	16QAM	1	74	12.43	13.03	12.50		
15	16QAM	36	0	13.32	12.97	13.11	13.7	0
15	16QAM	36	20	13.22	12.82	12.77		
15	16QAM	36	39	13.05	12.83	13.01		
15	16QAM	75	0	13.30	13.31	12.92		
15	64QAM	1	0	12.70	12.49	12.48	13.7	0
15	64QAM	1	37	13.64	13.31	13.26		
15	64QAM	1	74	12.37	13.07	12.58		
15	64QAM	36	0	13.38	12.91	13.14	13.7	0
15	64QAM	36	20	13.13	12.75	12.78		
15	64QAM	36	39	13.09	12.82	12.94		
15	64QAM	75	0	13.25	13.15	12.75		

Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	12.76	12.60	12.63	13.7	0
10	QPSK	1	25	13.65	13.34	13.25		
10	QPSK	1	49	12.51	13.08	12.59		
10	QPSK	25	0	13.39	13.03	13.10	13.7	0
10	QPSK	25	12	13.22	12.81	12.91		
10	QPSK	25	25	13.13	12.83	13.04		
10	QPSK	50	0	13.34	13.25	12.83		
10	16QAM	1	0	12.70	12.59	12.52	13.7	0
10	16QAM	1	25	13.70	13.31	12.67		
10	16QAM	1	49	12.38	13.06	12.55		
10	16QAM	25	0	13.31	12.98	13.11	13.7	0
10	16QAM	25	12	13.20	12.86	12.85		
10	16QAM	25	25	13.08	12.84	12.95		
10	16QAM	50	0	13.31	13.28	12.91		
10	64QAM	1	0	12.70	12.47	12.46	13.7	0
10	64QAM	1	25	13.62	13.32	13.21		
10	64QAM	1	49	12.44	13.11	12.54		
10	64QAM	25	0	13.31	12.98	13.08	13.7	0
10	64QAM	25	12	13.13	12.77	12.84		
10	64QAM	25	25	13.05	12.86	12.90		
10	64QAM	50	0	13.31	13.20	13.29		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	12.74	12.61	12.58	13.7	0
5	QPSK	1	12	13.63	13.32	13.30		
5	QPSK	1	24	12.46	13.08	12.58		
5	QPSK	12	0	13.36	13.05	13.11	13.7	0
5	QPSK	12	7	13.23	12.78	12.93		
5	QPSK	12	13	13.18	12.88	13.04		
5	QPSK	25	0	13.30	13.33	12.83		
5	16QAM	1	0	12.73	12.56	12.45	13.7	0
5	16QAM	1	12	13.70	13.32	13.11		
5	16QAM	1	24	12.39	13.12	12.57		
5	16QAM	12	0	13.33	12.92	13.09	13.7	0
5	16QAM	12	7	13.23	12.78	12.83		
5	16QAM	12	13	13.02	12.82	12.97		
5	16QAM	25	0	13.31	13.26	12.89		
5	64QAM	1	0	12.74	12.48	12.51	13.7	0
5	64QAM	1	12	13.62	13.28	13.23		
5	64QAM	1	24	12.43	13.10	12.58		
5	64QAM	12	0	13.29	12.98	13.11	13.7	0
5	64QAM	12	7	13.21	12.74	12.81		
5	64QAM	12	13	13.06	12.82	12.88		
5	64QAM	25	0	13.32	13.20	13.31		

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	12.51	13.12	13.20	13.7	0
20	QPSK	1	49	12.35	12.86	12.54		
20	QPSK	1	99	12.69	13.67	13.47		
20	QPSK	50	0	13.09	12.88	12.61	13.7	0
20	QPSK	50	24	13.21	12.78	12.39		
20	QPSK	50	50	13.66	13.52	13.40		
20	QPSK	100	0	13.60	12.68	12.87		
20	16QAM	1	0	12.50	13.07	13.19	13.7	0
20	16QAM	1	49	12.28	12.84	12.49		
20	16QAM	1	99	12.68	13.63	13.39		
20	16QAM	50	0	13.01	12.83	12.55	13.7	0
20	16QAM	50	24	13.21	12.74	12.29		
20	16QAM	50	50	13.60	13.48	13.36		
20	16QAM	100	0	13.53	12.58	12.83		
20	64QAM	1	0	12.45	13.09	13.20	13.7	0
20	64QAM	1	49	12.27	12.85	12.50		
20	64QAM	1	99	12.61	13.61	13.43		
20	64QAM	50	0	12.99	12.82	12.54	13.7	0
20	64QAM	50	24	13.20	12.68	12.35		
20	64QAM	50	50	13.58	13.47	13.39		
20	64QAM	100	0	13.52	12.61	12.83		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	12.48	13.09	13.11	13.7	0
15	QPSK	1	37	12.32	12.85	12.52		
15	QPSK	1	74	12.65	13.63	13.43		
15	QPSK	36	0	13.08	12.79	12.53	13.7	0
15	QPSK	36	20	13.13	12.73	12.37		
15	QPSK	36	39	13.61	13.50	13.39		
15	QPSK	75	0	13.55	12.62	12.83		
15	16QAM	1	0	12.50	13.04	13.17	13.7	0
15	16QAM	1	37	12.20	12.76	12.43		
15	16QAM	1	74	12.60	13.56	13.36		
15	16QAM	36	0	13.00	12.79	12.53	13.7	0
15	16QAM	36	20	13.19	12.64	12.25		
15	16QAM	36	39	13.54	13.44	13.26		
15	16QAM	75	0	13.47	12.54	12.78		
15	64QAM	1	0	12.44	13.03	13.10	13.7	0
15	64QAM	1	37	12.27	12.75	12.40		
15	64QAM	1	74	12.59	13.52	13.33		
15	64QAM	36	0	12.95	12.76	12.52	13.7	0
15	64QAM	36	20	13.16	12.66	12.28		
15	64QAM	36	39	13.69	13.44	13.36		
15	64QAM	75	0	13.50	12.59	12.74		

Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	12.45	13.10	13.17	13.7	0
10	QPSK	1	25	12.26	12.81	12.47		
10	QPSK	1	49	12.64	13.67	13.39		
10	QPSK	25	0	13.04	12.88	12.58	13.7	0
10	QPSK	25	12	13.17	12.70	12.35		
10	QPSK	25	25	13.64	13.45	13.36		
10	QPSK	50	0	13.54	12.67	12.84		
10	16QAM	1	0	12.46	13.07	13.12	13.7	0
10	16QAM	1	25	12.18	12.76	12.39		
10	16QAM	1	49	12.58	13.59	13.39		
10	16QAM	25	0	12.97	12.75	12.47	13.7	0
10	16QAM	25	12	13.19	12.74	12.24		
10	16QAM	25	25	13.52	13.48	13.32		
10	16QAM	50	0	13.46	12.53	12.80		
10	64QAM	1	0	12.38	13.05	13.13	13.7	0
10	64QAM	1	25	12.19	12.84	12.49		
10	64QAM	1	49	12.56	13.59	13.43		
10	64QAM	25	0	12.92	12.72	12.49	13.7	0
10	64QAM	25	12	13.13	12.68	12.32		
10	64QAM	25	25	13.56	13.38	13.33		
10	64QAM	50	0	13.45	12.55	12.80		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	12.49	13.09	13.15	13.7	0
5	QPSK	1	12	12.29	12.78	12.44		
5	QPSK	1	24	12.64	13.64	13.43		
5	QPSK	12	0	13.00	12.81	12.54	13.7	0
5	QPSK	12	7	13.20	12.77	12.39		
5	QPSK	12	13	13.64	13.45	13.37		
5	QPSK	25	0	13.51	12.58	12.80		
5	16QAM	1	0	12.46	12.97	13.17	13.7	0
5	16QAM	1	12	12.24	12.81	12.47		
5	16QAM	1	24	12.67	13.56	13.36		
5	16QAM	12	0	12.94	12.73	12.45	13.7	0
5	16QAM	12	7	13.18	12.69	12.23		
5	16QAM	12	13	13.57	13.44	13.35		
5	16QAM	25	0	13.44	12.50	12.83		
5	64QAM	1	0	12.45	13.04	13.16	13.7	0
5	64QAM	1	12	12.18	12.79	12.41		
5	64QAM	1	24	12.55	13.53	13.42		
5	64QAM	12	0	12.94	12.81	12.54	13.7	0
5	64QAM	12	7	13.11	12.68	12.30		
5	64QAM	12	13	13.53	13.43	13.37		
5	64QAM	25	0	13.44	12.52	12.82		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	12.41	13.05	13.17	13.7	0
3	QPSK	1	8	12.32	12.84	12.53		

3	QPSK	1	14	12.66	13.64	13.44		
3	QPSK	8	0	13.06	12.81	12.60	13.7	0
3	QPSK	8	4	13.17	12.71	12.34		
3	QPSK	8	7	13.56	13.46	13.39		
3	QPSK	15	0	13.53	12.68	12.84		
3	16QAM	1	0	12.45	13.07	13.10	13.7	0
3	16QAM	1	8	12.27	12.76	12.43		
3	16QAM	1	14	12.64	13.56	13.29		
3	16QAM	8	0	12.95	12.73	12.47	13.7	0
3	16QAM	8	4	13.16	12.67	12.20		
3	16QAM	8	7	13.57	13.48	13.33		
3	16QAM	15	0	13.46	12.49	12.75		
3	64QAM	1	0	12.38	13.02	13.16	13.7	0
3	64QAM	1	8	12.25	12.79	12.50		
3	64QAM	1	14	12.56	13.54	13.36		
3	64QAM	8	0	12.92	12.73	12.50	13.7	0
3	64QAM	8	4	13.16	12.59	12.34		
3	64QAM	8	7	13.68	13.42	13.30		
3	64QAM	15	0	13.45	12.51	12.73		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	12.47	13.03	13.10	13.7	0
1.4	QPSK	1	3	12.28	12.79	12.44		
1.4	QPSK	1	5	12.66	13.61	13.44		
1.4	QPSK	3	0	13.02	12.82	12.54		
1.4	QPSK	3	1	13.15	12.72	12.36		
1.4	QPSK	3	3	13.59	13.48	13.37		
1.4	QPSK	6	0	13.56	12.63	12.86	13.7	0
1.4	16QAM	1	0	12.47	13.03	13.15	13.7	0
1.4	16QAM	1	3	12.23	12.84	12.41		
1.4	16QAM	1	5	12.61	13.53	13.32		
1.4	16QAM	3	0	12.96	12.78	12.52		
1.4	16QAM	3	1	13.15	12.66	12.27		
1.4	16QAM	3	3	13.70	13.48	13.28		
1.4	16QAM	6	0	13.51	12.56	12.83	13.7	0
1.4	64QAM	1	0	12.44	13.08	13.20	13.7	0
1.4	64QAM	1	3	12.23	12.80	12.40		
1.4	64QAM	1	5	12.60	13.53	13.36		
1.4	64QAM	3	0	12.95	12.80	12.49		
1.4	64QAM	3	1	13.10	12.65	12.30		
1.4	64QAM	3	3	13.52	13.38	13.32		
1.4	64QAM	6	0	13.46	12.54	12.83	13.7	0

13. 5G NR Output Power (Unit: dBm)

General Note:

1. 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 class 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 measurement is unnecessary.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, full measurement on Pi/2 BPSK and QPSK, for16QAM/64QMA/256QAM spot check 1RB 1offset configuration to ensure the output power will not ½ dB higher than Pi/2 BPSK and QPSK, for smaller bandwidth output power will spot check 1RB 1offset configuration at Pi/2 BPSK to ensure output power will not ½ dB higher than largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   d. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   e. PI/2 BPSK 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. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   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
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

<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	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]	≤ 0.5[2]	0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

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

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

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

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

Ant 0

<Default Power Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	23.57	23.20	23.27	24.0	0.0
20	PI/2 BPSK	1	53	23.54	23.38	23.29		
20	PI/2 BPSK	1	104	23.37	23.08	23.32		
20	PI/2 BPSK	50	0	23.01	22.70	22.83	24.0	0.0
20	PI/2 BPSK	50	28	23.33	23.23	23.30		
20	PI/2 BPSK	50	56	23.06	22.69	22.81		
20	PI/2 BPSK	100	0	23.10	22.78	22.88	23.5	0.5
20	QPSK	1	1	23.24	23.06	23.23	24.0	0.0
20	QPSK	1	53	23.42	23.12	23.19		
20	QPSK	1	104	23.41	23.07	23.26		
20	QPSK	50	0	22.52	22.37	22.24	24.0	0.0
20	QPSK	50	28	23.36	23.18	23.26		
20	QPSK	50	56	22.44	22.18	22.38		
20	QPSK	100	0	22.47	22.25	22.32	23.0	1.0
20	16QAM	1	1	22.74	22.44	22.54	23.0	1.0
20	64QAM	1	1	20.93	20.80	20.85	21.5	2.5
20	256QAM	1	1	19.02	18.84	18.84	19.5	4.5
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	23.40	23.10	23.23	24.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	23.36	23.19	23.17	24.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	23.37	23.19	23.20	24.0	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	23.55	23.64	23.56	24.0	0.0
20	PI/2 BPSK	1	53	23.46	23.57	23.43		
20	PI/2 BPSK	1	104	23.01	23.26	23.12		
20	PI/2 BPSK	50	0	22.90	23.14	23.00	24.0	0.0
20	PI/2 BPSK	50	28	23.13	23.31	23.11		
20	PI/2 BPSK	50	56	22.72	22.97	22.88		
20	PI/2 BPSK	100	0	22.76	23.00	22.86	23.5	0.5
20	QPSK	1	1	23.28	23.57	23.43	24.0	0.0
20	QPSK	1	53	23.13	23.36	23.27		
20	QPSK	1	104	23.06	23.22	23.04		
20	QPSK	50	0	22.52	22.63	22.36	24.0	0.0
20	QPSK	50	28	23.22	23.40	23.32		
20	QPSK	50	56	22.34	22.48	22.39		
20	QPSK	100	0	22.39	22.53	22.38	23.0	1.0
20	16QAM	1	1	22.71	22.93	22.84	23.0	1.0
20	64QAM	1	1	20.92	21.12	20.93	21.5	2.5
20	256QAM	1	1	19.06	19.23	19.03	19.5	4.5
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	23.44	23.60	23.46	24.0	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	23.38	23.49	23.39	24.0	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	23.55	23.53	23.44	24.0	0.0

<n12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				141300	141500	141700		
Frequency (MHz)				706.5	707.5	708.5		
15	PI/2 BPSK	1	1	23.29	23.33	23.26	24.0	0.0
15	PI/2 BPSK	1	40	23.06	23.20	22.98		
15	PI/2 BPSK	1	77	22.92	23.06	22.98		
15	PI/2 BPSK	36	0	22.81	22.88	22.67	24.0	0.0
15	PI/2 BPSK	36	22	22.91	23.09	22.96		
15	PI/2 BPSK	36	43	22.70	22.78	22.69		
15	PI/2 BPSK	75	0	22.68	22.86	22.71	23.5	0.5
15	QPSK	1	1	23.26	23.30	23.15	24.0	0.0
15	QPSK	1	40	23.07	23.15	23.05		
15	QPSK	1	77	22.77	23.01	22.74		
15	QPSK	36	0	22.18	22.37	22.21	24.0	0.0
15	QPSK	36	22	22.89	23.12	22.93		
15	QPSK	36	43	22.16	22.32	22.17		
15	QPSK	75	0	22.15	22.33	22.12	23.0	1.0
15	16QAM	1	1	22.63	22.81	22.65	23.0	1.0
15	64QAM	1	1	20.85	20.95	20.68	21.5	2.5
15	256QAM	1	1	18.87	19.05	18.98	19.5	4.5
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	23.26	23.29	23.24	24.0	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	23.16	23.30	23.20	24.0	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	23.54	23.38	23.30	24.0	0.0
20	PI/2 BPSK	1	53	23.34	23.36	23.27		
20	PI/2 BPSK	1	104	23.40	23.32	23.13		
20	PI/2 BPSK	50	0	23.25	23.18	23.16	24.0	0.0
20	PI/2 BPSK	50	28	23.45	23.38	23.26		
20	PI/2 BPSK	50	56	23.21	23.17	23.13		
20	PI/2 BPSK	100	0	22.96	22.94	22.66	23.5	0.5
20	QPSK	1	1	23.39	23.25	23.16	24.0	0.0
20	QPSK	1	53	23.39	23.26	23.02		
20	QPSK	1	104	23.25	23.25	23.11		
20	QPSK	50	0	22.54	22.39	22.20	24.0	0.0
20	QPSK	50	28	23.43	23.28	23.08		
20	QPSK	50	56	22.41	22.44	22.20		
20	QPSK	100	0	22.56	22.47	22.22	23.0	1.0
20	16QAM	1	1	22.43	22.33	22.15	23.0	1.0
20	64QAM	1	1	20.79	20.82	20.74	21.5	2.5
20	256QAM	1	1	19.15	18.99	18.81	19.5	4.5
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	23.50	23.38	23.11	24.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	23.42	23.21	23.29	24.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	23.40	23.23	23.18	24.0	0.0

<n71>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	23.76	23.64	23.55	24.0	0.0
20	PI/2 BPSK	1	53	23.14	23.47	23.33		
20	PI/2 BPSK	1	104	23.23	23.29	23.21		
20	PI/2 BPSK	50	0	23.11	23.21	23.18	24.0	0.0
20	PI/2 BPSK	50	28	23.66	23.57	23.53		
20	PI/2 BPSK	50	56	23.13	23.18	23.16		
20	PI/2 BPSK	100	0	22.78	23.14	22.90	23.5	0.5
20	QPSK	1	1	23.27	23.57	23.29	24.0	0.0
20	QPSK	1	53	23.17	23.38	23.16		
20	QPSK	1	104	22.99	23.25	23.01		
20	QPSK	50	0	22.46	22.81	22.69	24.0	0.0
20	QPSK	50	28	23.23	23.45	23.29		
20	QPSK	50	56	22.35	22.62	22.34		
20	QPSK	100	0	22.47	22.77	22.50	23.0	1.0
20	16QAM	1	1	22.80	23.00	22.82	23.0	1.0
20	64QAM	1	1	21.06	21.25	21.02	21.5	2.5
20	256QAM	1	1	19.11	19.30	19.01	19.5	4.5
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	23.64	23.59	23.48	24.0	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	23.67	23.57	23.54	24.0	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	23.65	23.61	23.51	24.0	0.0

<Reduced Power Mode for NB Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	16.32	16.45	16.34	16.5	0.0
20	PI/2 BPSK	1	53	16.16	16.26	16.17		
20	PI/2 BPSK	1	104	16.15	16.25	16.19		
20	PI/2 BPSK	50	0	16.22	16.36	16.22	16.5	0.0
20	PI/2 BPSK	50	28	16.17	16.25	16.13		
20	PI/2 BPSK	50	56	16.20	16.29	16.21		
20	PI/2 BPSK	100	0	16.14	16.28	16.22	16.5	0.0
20	QPSK	1	1	16.17	16.33	16.14	16.5	0.0
20	QPSK	1	53	16.12	16.25	16.12		
20	QPSK	1	104	16.13	16.25	16.13		
20	QPSK	50	0	16.22	16.32	16.15	16.5	0.0
20	QPSK	50	28	16.30	16.32	16.27		
20	QPSK	50	56	16.19	16.35	16.17		
20	QPSK	100	0	16.19	16.25	16.17	16.5	0.0
20	16QAM	1	1	16.17	16.21	16.15	16.5	0.0
20	64QAM	1	1	16.18	16.34	16.23	16.5	0.0
20	256QAM	1	1	16.19	16.28	16.17	16.5	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	16.24	16.43	16.29	16.5	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	16.22	16.35	16.34	16.5	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	16.32	16.44	16.34	16.5	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	18.86	18.88	18.81	19.1	0.0
20	PI/2 BPSK	1	53	18.68	18.78	18.63		
20	PI/2 BPSK	1	104	18.52	18.54	18.40		
20	PI/2 BPSK	50	0	18.78	18.83	18.72	19.1	0.0
20	PI/2 BPSK	50	28	18.64	18.70	18.65		
20	PI/2 BPSK	50	56	18.58	18.63	18.53		
20	PI/2 BPSK	100	0	18.61	18.65	18.60	19.1	0.0
20	QPSK	1	1	18.81	18.80	18.75	19.1	0.0
20	QPSK	1	53	18.74	18.77	18.71		
20	QPSK	1	104	18.51	18.62	18.50		
20	QPSK	50	0	18.76	18.74	18.70	19.1	0.0
20	QPSK	50	28	18.69	18.77	18.64		
20	QPSK	50	56	18.50	18.55	18.46		
20	QPSK	100	0	18.69	18.75	18.64	19.1	0.0
20	16QAM	1	1	18.75	18.74	18.69	19.1	0.0
20	64QAM	1	1	18.73	18.84	18.74	19.1	0.0
20	256QAM	1	1	18.81	18.82	18.76	19.1	0.0
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	18.82	18.88	18.74	19.1	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	18.84	18.81	18.72	19.1	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	18.86	18.89	18.72	19.1	0.0

<n12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				141300	141500	141700		
Frequency (MHz)				706.5	707.5	708.5		
15	PI/2 BPSK	1	1	20.33	20.29	20.15	20.6	0.0
15	PI/2 BPSK	1	40	20.14	20.15	19.96		
15	PI/2 BPSK	1	77	20.02	20.04	19.88		
15	PI/2 BPSK	36	0	20.19	20.17	20.00	20.6	0.0
15	PI/2 BPSK	36	22	20.06	19.97	19.90		
15	PI/2 BPSK	36	43	20.01	19.99	19.91		
15	PI/2 BPSK	75	0	20.09	20.12	19.95	20.6	0.0
15	QPSK	1	1	20.29	20.29	20.15	20.6	0.0
15	QPSK	1	40	20.11	20.07	19.91		
15	QPSK	1	77	19.93	19.86	19.75		
15	QPSK	36	0	20.19	20.14	20.04	20.6	0.0
15	QPSK	36	22	20.05	19.99	19.92		
15	QPSK	36	43	20.05	20.04	19.88		
15	QPSK	75	0	20.12	20.11	19.94	20.6	0.0
15	16QAM	1	1	20.18	20.17	20.01	20.6	0.0
15	64QAM	1	1	20.20	20.26	20.04	20.6	0.0
15	256QAM	1	1	20.26	20.19	20.05	20.6	0.0
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	20.31	20.28	20.14	20.6	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	20.31	20.23	20.09	20.6	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	16.38	16.42	16.22	17.6	0.0
20	PI/2 BPSK	1	53	16.32	16.30	16.19		
20	PI/2 BPSK	1	104	16.29	16.28	16.15		
20	PI/2 BPSK	50	0	16.35	16.36	16.20	17.6	0.0
20	PI/2 BPSK	50	28	16.24	16.34	16.13		
20	PI/2 BPSK	50	56	16.29	16.31	16.11		
20	PI/2 BPSK	100	0	16.20	16.31	16.19	17.6	0.0
20	QPSK	1	1	16.31	16.31	16.24	17.6	0.0
20	QPSK	1	53	16.23	16.26	16.21		
20	QPSK	1	104	16.18	16.28	16.18		
20	QPSK	50	0	16.22	16.29	16.17	17.6	0.0
20	QPSK	50	28	16.23	16.25	16.13		
20	QPSK	50	56	16.25	16.27	16.16		
20	QPSK	100	0	16.20	16.18	16.15	17.6	0.0
20	16QAM	1	1	16.17	16.20	16.11	17.6	0.0
20	64QAM	1	1	16.21	16.27	16.08	17.6	0.0
20	256QAM	1	1	16.26	16.30	16.14	17.6	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	16.36	16.37	16.28	17.6	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	16.28	16.41	16.20	17.6	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	16.29	16.41	16.21	17.6	0.0

<n71>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	20.77	20.68	20.60	20.8	0.0
20	PI/2 BPSK	1	53	20.63	20.49	20.48		
20	PI/2 BPSK	1	104	20.58	20.68	20.47		
20	PI/2 BPSK	50	0	20.64	20.61	20.53	20.8	0.0
20	PI/2 BPSK	50	28	20.61	20.59	20.48		
20	PI/2 BPSK	50	56	20.59	20.57	20.45		
20	PI/2 BPSK	100	0	20.63	20.68	20.57	20.8	0.0
20	QPSK	1	1	20.58	20.51	20.56	20.8	0.0
20	QPSK	1	53	20.58	20.66	20.55		
20	QPSK	1	104	20.65	20.49	20.43		
20	QPSK	50	0	20.73	20.66	20.52	20.8	0.0
20	QPSK	50	28	20.63	20.64	20.58		
20	QPSK	50	56	20.73	20.58	20.58		
20	QPSK	100	0	20.73	20.65	20.55	20.8	0.0
20	16QAM	1	1	20.71	20.61	20.47	20.8	0.0
20	64QAM	1	1	20.64	20.63	20.55	20.8	0.0
20	256QAM	1	1	19.45	19.22	19.13	19.5	1.3
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	20.63	20.57	20.44	20.8	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	20.60	20.48	20.44	20.8	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	20.62	20.66	20.52	20.8	0.0

<Reduced Power Mode for Tablet Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	13.79	13.86	13.80	14.0	0.0
20	PI/2 BPSK	1	53	13.63	13.71	13.61		
20	PI/2 BPSK	1	104	13.67	13.74	13.67		
20	PI/2 BPSK	50	0	13.72	13.74	13.71	14.0	0.0
20	PI/2 BPSK	50	28	13.59	13.68	13.63		
20	PI/2 BPSK	50	56	13.61	13.65	13.64		
20	PI/2 BPSK	100	0	13.66	13.73	13.72	14.0	0.0
20	QPSK	1	1	13.71	13.76	13.71	14.0	0.0
20	QPSK	1	53	13.58	13.71	13.62		
20	QPSK	1	104	13.65	13.73	13.60		
20	QPSK	50	0	13.68	13.78	13.70	14.0	0.0
20	QPSK	50	28	13.66	13.72	13.73		
20	QPSK	50	56	13.65	13.69	13.68		
20	QPSK	100	0	13.72	13.76	13.69	14.0	0.0
20	16QAM	1	1	13.74	13.75	13.69	14.0	0.0
20	64QAM	1	1	13.72	13.78	13.69	14.0	0.0
20	256QAM	1	1	13.59	13.61	13.54	14.0	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	13.73	13.85	13.74	14.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	13.79	13.81	13.79	14.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	13.74	13.79	13.71	14.0	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	17.67	17.70	17.62	17.7	0.0
20	PI/2 BPSK	1	53	17.51	17.53	17.51		
20	PI/2 BPSK	1	104	17.37	17.36	17.35		
20	PI/2 BPSK	50	0	17.61	17.64	17.58	17.7	0.0
20	PI/2 BPSK	50	28	17.57	17.58	17.46		
20	PI/2 BPSK	50	56	17.45	17.42	17.39		
20	PI/2 BPSK	100	0	17.53	17.55	17.46	17.7	0.0
20	QPSK	1	1	17.64	17.67	17.59	17.7	0.0
20	QPSK	1	53	17.51	17.50	17.43		
20	QPSK	1	104	17.38	17.43	17.36		
20	QPSK	50	0	17.59	17.56	17.51	17.7	0.0
20	QPSK	50	28	17.57	17.55	17.46		
20	QPSK	50	56	17.57	17.54	17.47		
20	QPSK	100	0	17.53	17.55	17.43	17.7	0.0
20	16QAM	1	1	17.64	17.62	17.66	17.7	0.0
20	64QAM	1	1	17.68	17.65	17.64	17.7	0.0
20	256QAM	1	1	17.49	17.49	17.39	17.7	0.0
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	17.62	17.61	17.63	17.7	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	17.61	17.65	17.66	17.7	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	17.67	17.64	17.69	17.7	0.0

<n12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				141300	141500	141700		
Frequency (MHz)				706.5	707.5	708.5		
15	PI/2 BPSK	1	1	17.72	17.68	17.51	18.1	0.0
15	PI/2 BPSK	1	40	17.48	17.49	17.26		
15	PI/2 BPSK	1	77	17.39	17.41	17.20		
15	PI/2 BPSK	36	0	17.61	17.60	17.34	18.1	0.0
15	PI/2 BPSK	36	22	17.58	17.53	17.36		
15	PI/2 BPSK	36	43	17.46	17.39	17.25		
15	PI/2 BPSK	75	0	17.50	17.49	17.37	18.1	0.0
15	QPSK	1	1	17.60	17.53	17.41	18.1	0.0
15	QPSK	1	40	17.43	17.48	17.26		
15	QPSK	1	77	17.41	17.37	17.17		
15	QPSK	36	0	17.61	17.54	17.43	18.1	0.0
15	QPSK	36	22	17.55	17.55	17.37		
15	QPSK	36	43	17.54	17.47	17.31		
15	QPSK	75	0	17.54	17.50	17.39	18.1	0.0
15	16QAM	1	1	17.56	17.53	17.38	18.1	0.0
15	64QAM	1	1	17.54	17.55	17.33	18.1	0.0
15	256QAM	1	1	17.41	17.41	17.22	18.1	0.0
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	17.67	17.67	17.44	18.1	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	17.67	17.68	17.48	18.1	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	14.37	14.38	14.26	14.5	0.0
20	PI/2 BPSK	1	53	14.12	14.15	14.01		
20	PI/2 BPSK	1	104	14.21	14.15	14.08		
20	PI/2 BPSK	50	0	14.18	14.20	14.04	14.5	0.0
20	PI/2 BPSK	50	28	14.21	14.24	14.19		
20	PI/2 BPSK	50	56	14.12	14.15	14.01		
20	PI/2 BPSK	100	0	14.24	14.14	14.09	14.5	0.0
20	QPSK	1	1	14.19	14.23	14.10	14.5	0.0
20	QPSK	1	53	14.08	14.12	14.00		
20	QPSK	1	104	14.16	14.16	14.00		
20	QPSK	50	0	14.19	14.17	14.03	14.5	0.0
20	QPSK	50	28	14.14	14.22	14.06		
20	QPSK	50	56	14.22	14.20	14.03		
20	QPSK	100	0	14.19	14.22	14.12	14.5	0.0
20	16QAM	1	1	14.28	14.30	14.14	14.5	0.0
20	64QAM	1	1	14.30	14.29	14.19	14.5	0.0
20	256QAM	1	1	14.31	14.28	14.19	14.5	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	14.33	14.35	14.24	14.5	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	14.32	14.32	14.18	14.5	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	14.33	14.32	14.25	14.5	0.0

<n71>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	16.57	16.41	16.35	16.6	0.0
20	PI/2 BPSK	1	53	16.42	16.19	16.19		
20	PI/2 BPSK	1	104	16.21	16.05	15.97		
20	PI/2 BPSK	50	0	16.38	16.26	16.18	16.6	0.0
20	PI/2 BPSK	50	28	16.30	16.13	16.07		
20	PI/2 BPSK	50	56	16.20	16.03	15.91		
20	PI/2 BPSK	100	0	16.31	16.14	16.10	16.6	0.0
20	QPSK	1	1	16.41	16.26	16.23	16.6	0.0
20	QPSK	1	53	16.33	16.16	16.05		
20	QPSK	1	104	16.04	15.97	15.92		
20	QPSK	50	0	16.44	16.24	16.22	16.6	0.0
20	QPSK	50	28	16.27	16.08	16.08		
20	QPSK	50	56	16.13	16.04	15.93		
20	QPSK	100	0	16.34	16.11	16.13	16.6	0.0
20	16QAM	1	1	16.36	16.24	16.19	16.6	0.0
20	64QAM	1	1	16.44	16.23	16.25	16.6	0.0
20	256QAM	1	1	16.36	16.25	16.16	16.6	0.0
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	16.52	16.31	16.33	16.6	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	16.51	16.40	16.31	16.6	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	16.49	16.33	16.27	16.6	0.0

Ant 2

<Default Power Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	23.55	23.64	23.48	24.0	0.0
20	PI/2 BPSK	1	53	23.49	23.41	23.31		
20	PI/2 BPSK	1	104	23.46	23.34	23.28		
20	PI/2 BPSK	50	0	23.57	23.59	23.47	24.0	0.0
20	PI/2 BPSK	50	28	23.49	23.36	23.30		
20	PI/2 BPSK	50	56	23.48	23.43	23.30		
20	PI/2 BPSK	100	0	22.98	23.00	22.64	23.5	0.5
20	QPSK	1	1	23.53	23.22	23.29	24.0	0.0
20	QPSK	1	53	23.40	23.24	23.20		
20	QPSK	1	104	23.36	23.42	23.07		
20	QPSK	50	0	23.41	23.34	23.15	24.0	0.0
20	QPSK	50	28	23.51	23.28	23.13		
20	QPSK	50	56	23.53	23.47	23.37		
20	QPSK	100	0	22.45	22.35	22.11	23.0	1.0
20	16QAM	1	1	22.35	22.30	22.21	23.0	1.0
20	64QAM	1	1	21.18	20.93	20.85	21.5	2.5
20	256QAM	1	1	18.97	18.84	18.91	19.5	4.5
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	23.55	23.60	23.42	24.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	23.60	23.60	23.46	24.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	23.55	23.57	23.47	24.0	0.0

<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI/2 BPSK	1	1	23.27	23.13	23.05	24.0	0.0
20	PI/2 BPSK	1	53	22.86	23.03	22.72		
20	PI/2 BPSK	1	104	23.04	23.11	22.71		
20	PI/2 BPSK	50	0	22.20	22.16	22.15	24.0	0.0
20	PI/2 BPSK	50	28	22.11	22.23	22.19		
20	PI/2 BPSK	50	56	22.92	22.91	22.52		
20	PI/2 BPSK	100	0	21.82	21.80	21.69	23.5	0.5
20	QPSK	1	1	22.15	22.19	22.17	24.0	0.0
20	QPSK	1	53	22.88	23.00	22.68		
20	QPSK	1	104	22.84	23.02	22.55		
20	QPSK	50	0	22.39	22.47	22.12	24.0	0.0
20	QPSK	50	28	22.42	22.63	22.18		
20	QPSK	50	56	22.16	22.22	22.19		
20	QPSK	100	0	21.17	21.17	21.20	23.0	1.0
20	16QAM	1	1	21.06	21.32	21.16	23.0	1.0
20	64QAM	1	1	20.32	20.38	20.07	21.5	2.5
20	256QAM	1	1	18.64	18.72	18.34	19.5	4.5
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI/2 BPSK	1	1	23.21	22.14	22.92	24.0	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	23.18	22.16	22.95	24.0	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI/2 BPSK	1	1	23.16	22.31	23.05	24.0	0.0

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	23.39	23.65	23.90	24.0	0.0
100	PI/2 BPSK	1	137	23.18	23.64	23.57		
100	PI/2 BPSK	1	271	23.02	23.63	23.48		
100	PI/2 BPSK	135	0	23.21	23.51	23.58	24.0	0.0
100	PI/2 BPSK	135	69	23.29	23.57	23.59		
100	PI/2 BPSK	135	138	23.08	23.56	23.37		
100	PI/2 BPSK	270	0	22.80	23.06	22.78	23.5	0.5
100	QPSK	1	1	23.20	23.56	23.31	24.0	0.0
100	QPSK	1	137	23.31	23.59	23.46		
100	QPSK	1	271	23.22	23.52	23.45		
100	QPSK	135	0	23.26	23.55	23.37	24.0	0.0
100	QPSK	135	69	23.36	23.63	23.47		
100	QPSK	135	138	23.17	23.57	23.24		
100	QPSK	270	0	22.18	22.56	22.41	23.0	1.0
100	16QAM	1	1	22.07	22.64	22.29	23.0	1.0
100	64QAM	1	1	20.51	20.77	20.73	21.5	2.5
100	256QAM	1	1	18.11	18.75	18.41	19.5	4.5
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI/2 BPSK	1	1	23.33	23.72	23.73	24.0	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI/2 BPSK	1	1	23.49	23.52	23.63	24.0	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	PI/2 BPSK	1	1	23.49	23.68	23.73	24.0	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI/2 BPSK	1	1	23.51	23.58	23.59	24.0	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI/2 BPSK	1	1	23.35	23.54	23.76	24.0	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI/2 BPSK	1	1	23.36	23.72	23.61	24.0	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	22.84	22.35	23.51	24.0	0.0
20	PI/2 BPSK	1	53	22.60	22.08	22.91		
20	PI/2 BPSK	1	104	22.71	22.24	23.18		
20	PI/2 BPSK	50	0	22.37	22.03	22.80	24.0	0.0
20	PI/2 BPSK	50	28	23.21	22.68	23.41		
20	PI/2 BPSK	50	56	23.16	22.58	23.12		
20	PI/2 BPSK	100	0	21.96	21.56	22.49	23.5	0.5
20	QPSK	1	1	22.42	22.25	22.73	24.0	0.0
20	QPSK	1	53	22.77	22.11	23.07		
20	QPSK	1	104	23.00	22.29	23.15		
20	QPSK	50	0	22.27	22.18	22.62	24.0	0.0
20	QPSK	50	28	22.78	22.37	23.19		
20	QPSK	50	56	23.03	22.54	23.37		
20	QPSK	100	0	22.29	22.04	22.79	23.0	1.0
20	16QAM	1	1	21.56	21.16	21.98	23.0	1.0
20	64QAM	1	1	20.84	20.18	20.89	21.5	2.5
20	256QAM	1	1	19.17	18.97	19.14	19.5	4.5
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	22.74	22.24	23.38	24.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	22.77	22.32	23.37	24.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	22.80	22.32	23.31	24.0	0.0

<Default Power Mode for Tablet Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	22.27	22.31	22.20	22.7	0.0
20	PI/2 BPSK	1	53	22.24	22.21	22.02		
20	PI/2 BPSK	1	104	22.17	22.07	21.98		
20	PI/2 BPSK	50	0	22.19	22.23	22.18	22.7	0.0
20	PI/2 BPSK	50	28	22.18	22.01	22.06		
20	PI/2 BPSK	50	56	22.13	22.15	22.00		
20	PI/2 BPSK	100	0	22.13	22.16	21.88	22.7	0.0
20	QPSK	1	1	22.13	21.99	21.98	22.7	0.0
20	QPSK	1	53	22.18	22.03	21.91		
20	QPSK	1	104	22.10	22.02	21.84		
20	QPSK	50	0	22.07	21.99	21.91	22.7	0.0
20	QPSK	50	28	22.11	21.99	21.89		
20	QPSK	50	56	22.21	22.09	22.02		
20	QPSK	100	0	22.09	21.98	21.83	22.7	0.0
20	16QAM	1	1	22.11	21.97	21.89	22.7	0.0
20	64QAM	1	1	21.09	20.99	20.90	21.5	1.2
20	256QAM	1	1	19.07	18.88	18.81	19.5	3.2
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	22.17	22.28	22.01	22.7	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	22.21	22.22	21.99	22.7	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	22.16	22.22	22.01	22.7	0.0

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	20.03	20.22	20.27	20.6	0.0
100	PI/2 BPSK	1	137	19.82	20.22	20.11		
100	PI/2 BPSK	1	271	19.71	20.16	20.14		
100	PI/2 BPSK	135	0	19.82	20.20	20.20	20.6	0.0
100	PI/2 BPSK	135	69	19.91	20.16	20.25		
100	PI/2 BPSK	135	138	19.77	20.21	20.00		
100	PI/2 BPSK	270	0	19.80	20.20	19.98	20.6	0.0
100	QPSK	1	1	19.87	20.25	19.99	20.6	0.0
100	QPSK	1	137	19.88	20.23	19.99		
100	QPSK	1	271	19.80	20.19	19.98		
100	QPSK	135	0	19.80	20.23	19.98	20.6	0.0
100	QPSK	135	69	19.87	20.28	20.04		
100	QPSK	135	138	19.69	20.16	19.92		
100	QPSK	270	0	19.75	20.19	20.04	20.6	0.0
100	16QAM	1	1	19.75	20.14	19.89	20.6	0.0
100	64QAM	1	1	19.51	19.94	19.74	20.6	0.0
100	256QAM	1	1	18.20	18.70	18.45	19.5	1.1
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI/2 BPSK	1	1	20.00	20.35	20.20	20.6	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI/2 BPSK	1	1	20.01	20.42	20.16	20.6	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	PI/2 BPSK	1	1	19.99	20.35	20.21	20.6	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI/2 BPSK	1	1	19.93	20.35	20.13	20.6	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI/2 BPSK	1	1	20.01	20.38	20.14	20.6	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI/2 BPSK	1	1	19.93	20.35	20.13	20.6	0.0

<Reduced Power Mode for NB Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	15.85	15.93	15.92	16.2	0.0
20	PI/2 BPSK	1	53	15.74	15.82	15.84		
20	PI/2 BPSK	1	104	15.77	15.87	15.86		
20	PI/2 BPSK	50	0	15.75	15.81	15.80	16.2	0.0
20	PI/2 BPSK	50	28	15.68	15.75	15.79		
20	PI/2 BPSK	50	56	15.62	15.77	15.75		
20	PI/2 BPSK	100	0	15.70	15.80	15.79	16.2	0.0
20	QPSK	1	1	15.71	15.81	15.82	16.2	0.0
20	QPSK	1	53	15.80	15.81	15.80		
20	QPSK	1	104	15.62	15.78	15.75		
20	QPSK	50	0	15.77	15.85	15.79	16.2	0.0
20	QPSK	50	28	15.73	15.78	15.77		
20	QPSK	50	56	15.69	15.84	15.81		
20	QPSK	100	0	15.68	15.75	15.82	16.2	0.0
20	16QAM	1	1	15.65	15.70	15.70	16.2	0.0
20	64QAM	1	1	15.34	15.35	15.43	16.2	0.0
20	256QAM	1	1	15.61	15.70	15.68	16.2	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	15.75	15.89	15.83	16.2	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	15.77	15.88	15.83	16.2	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	15.76	15.91	15.84	16.2	0.0

<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI/2 BPSK	1	1	16.32	16.31	16.25	17.5	0.0
20	PI/2 BPSK	1	53	16.12	16.13	16.15		
20	PI/2 BPSK	1	104	16.25	16.18	16.17		
20	PI/2 BPSK	50	0	16.21	16.19	16.20	17.5	0.0
20	PI/2 BPSK	50	28	16.13	16.18	16.14		
20	PI/2 BPSK	50	56	16.12	16.16	16.06		
20	PI/2 BPSK	100	0	15.97	15.91	15.93	17.5	0.0
20	QPSK	1	1	16.23	16.26	16.21	17.5	0.0
20	QPSK	1	53	16.17	16.13	16.09		
20	QPSK	1	104	16.08	16.09	16.04		
20	QPSK	50	0	16.20	16.10	16.11	17.5	0.0
20	QPSK	50	28	16.09	16.14	16.10		
20	QPSK	50	56	16.06	16.11	16.05		
20	QPSK	100	0	16.12	16.18	16.10	17.5	0.0
20	16QAM	1	1	16.06	16.02	15.96	17.5	0.0
20	64QAM	1	1	15.92	15.88	15.92	17.5	0.0
20	256QAM	1	1	16.10	16.08	16.05	17.5	0.0
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI/2 BPSK	1	1	16.22	16.22	16.21	17.5	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	16.30	16.24	16.19	17.5	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI/2 BPSK	1	1	16.25	16.31	16.21	17.5	0.0

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	15.64	15.74	15.57	15.8	0.0
100	PI/2 BPSK	1	137	15.55	15.56	15.42		
100	PI/2 BPSK	1	271	15.44	15.60	15.46		
100	PI/2 BPSK	135	0	15.46	15.56	15.42	15.8	0.0
100	PI/2 BPSK	135	69	15.42	15.55	15.40		
100	PI/2 BPSK	135	138	15.42	15.55	15.38		
100	PI/2 BPSK	270	0	15.42	15.59	15.37	15.8	0.0
100	QPSK	1	1	15.51	15.63	15.47	15.8	0.0
100	QPSK	1	137	15.52	15.54	15.44		
100	QPSK	1	271	15.49	15.62	15.41		
100	QPSK	135	0	15.52	15.57	15.45	15.8	0.0
100	QPSK	135	69	15.50	15.56	15.41		
100	QPSK	135	138	15.45	15.54	15.43		
100	QPSK	270	0	15.49	15.56	15.46	15.8	0.0
100	16QAM	1	1	15.59	15.69	15.45	15.8	0.0
100	64QAM	1	1	15.51	15.60	15.43	15.8	0.0
100	256QAM	1	1	15.35	15.41	15.34	15.8	0.0
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI/2 BPSK	1	1	15.63	15.70	15.55	15.8	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI/2 BPSK	1	1	15.59	15.67	15.54	15.8	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	PI/2 BPSK	1	1	15.58	15.64	15.54	15.8	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI/2 BPSK	1	1	15.64	15.00	15.57	15.8	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI/2 BPSK	1	1	15.62	15.66	15.55	15.8	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI/2 BPSK	1	1	15.55	15.66	15.54	15.8	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	16.30	16.28	16.24	16.3	0.0
20	PI/2 BPSK	1	53	16.19	16.14	16.16		
20	PI/2 BPSK	1	104	16.18	16.09	16.06		
20	PI/2 BPSK	50	0	16.18	16.17	16.14	16.3	0.0
20	PI/2 BPSK	50	28	16.11	16.09	16.10		
20	PI/2 BPSK	50	56	16.13	16.12	16.10		
20	PI/2 BPSK	100	0	16.12	16.09	16.06	16.3	0.0
20	QPSK	1	1	16.18	16.18	16.14	16.3	0.0
20	QPSK	1	53	16.08	16.00	16.06		
20	QPSK	1	104	16.11	16.19	16.05		
20	QPSK	50	0	16.09	16.06	16.05	16.3	0.0
20	QPSK	50	28	16.13	16.16	16.14		
20	QPSK	50	56	16.22	16.14	16.14		
20	QPSK	100	0	16.19	16.16	16.20	16.3	0.0
20	16QAM	1	1	16.11	16.04	16.02	16.3	0.0
20	64QAM	1	1	15.90	15.96	15.86	16.3	0.0
20	256QAM	1	1	16.03	16.01	15.92	16.3	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	16.12	16.16	16.13	16.3	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	16.26	16.28	16.22	16.3	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	16.29	16.24	16.17	16.3	0.0

<Reduced Power Mode for Tablet Mode>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	13.69	13.73	13.72	13.9	0.0
20	PI/2 BPSK	1	53	13.47	13.48	13.48		
20	PI/2 BPSK	1	104	13.65	13.61	13.61		
20	PI/2 BPSK	50	0	13.60	13.63	13.56	13.9	0.0
20	PI/2 BPSK	50	28	13.60	13.59	13.55		
20	PI/2 BPSK	50	56	13.56	13.59	13.56		
20	PI/2 BPSK	100	0	13.60	13.67	13.63	13.9	0.0
20	QPSK	1	1	13.52	13.56	13.53	13.9	0.0
20	QPSK	1	53	13.61	13.67	13.57		
20	QPSK	1	104	13.52	13.52	13.54		
20	QPSK	50	0	13.52	13.55	13.61	13.9	0.0
20	QPSK	50	28	13.55	13.63	13.64		
20	QPSK	50	56	13.61	13.63	13.61		
20	QPSK	100	0	13.36	13.34	13.31	13.9	0.0
20	16QAM	1	1	13.47	13.42	13.44	13.9	0.0
20	64QAM	1	1	13.26	13.21	13.28	13.9	0.0
20	256QAM	1	1	13.49	13.50	13.50	13.9	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	13.67	13.66	13.65	13.9	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	13.61	13.63	13.66	13.9	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	13.65	13.63	13.68	13.9	0.0

<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI/2 BPSK	1	1	14.22	14.15	14.09	14.6	0.0
20	PI/2 BPSK	1	53	14.08	14.03	13.99		
20	PI/2 BPSK	1	104	13.94	13.92	13.86		
20	PI/2 BPSK	50	0	14.00	14.00	13.94	14.6	0.0
20	PI/2 BPSK	50	28	14.00	13.95	13.86		
20	PI/2 BPSK	50	56	13.99	13.98	13.90		
20	PI/2 BPSK	100	0	14.30	14.18	14.17	14.6	0.0
20	QPSK	1	1	14.15	14.05	13.93	14.6	0.0
20	QPSK	1	53	14.06	14.00	13.87		
20	QPSK	1	104	14.09	13.98	13.98		
20	QPSK	50	0	14.04	13.96	13.90	14.6	0.0
20	QPSK	50	28	13.99	13.98	13.82		
20	QPSK	50	56	14.02	14.01	13.94		
20	QPSK	100	0	14.12	14.06	13.97	14.6	0.0
20	16QAM	1	1	13.93	13.82	13.75	14.6	0.0
20	64QAM	1	1	13.84	13.76	13.62	14.6	0.0
20	256QAM	1	1	13.96	13.92	13.76	14.6	0.0
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI/2 BPSK	1	1	14.12	14.15	14.00	14.6	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	14.18	14.07	14.00	14.6	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI/2 BPSK	1	1	14.19	14.05	14.06	14.6	0.0

<n41>

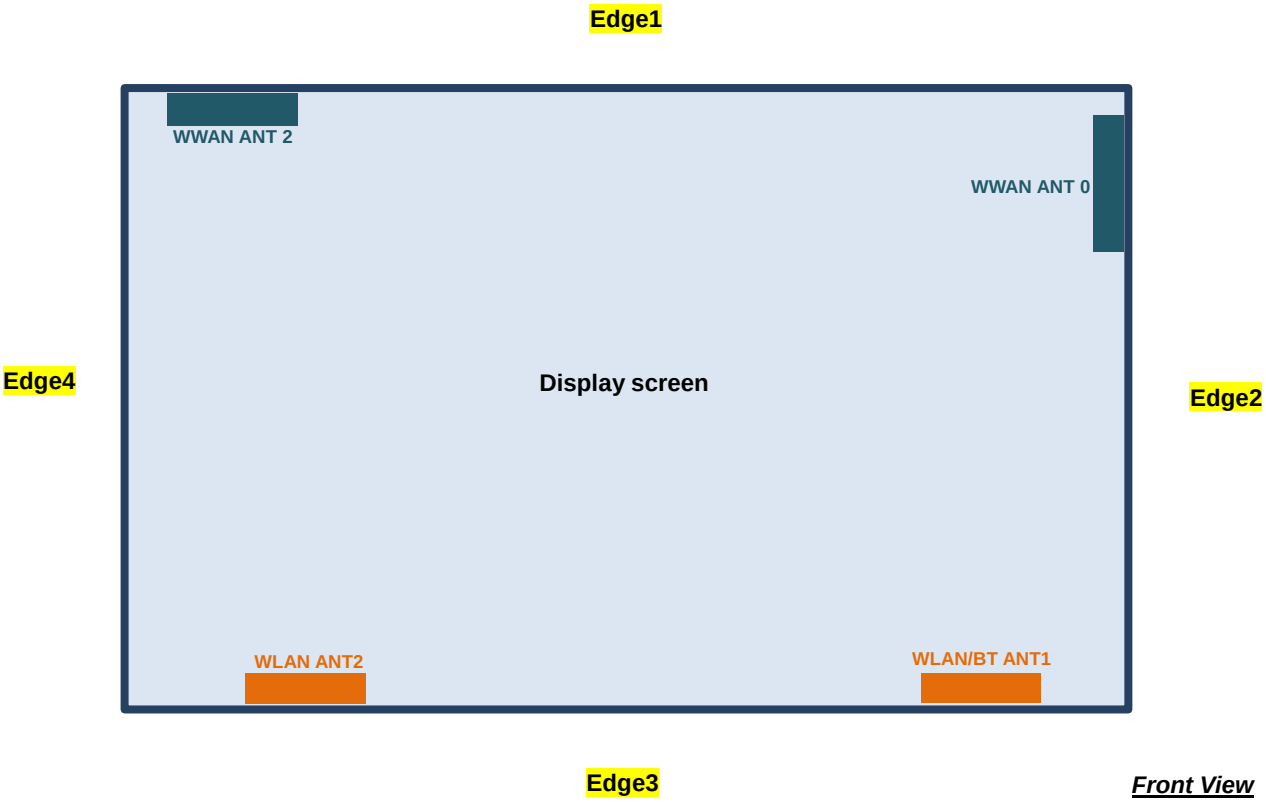
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	13.37	13.44	13.41	13.5	0.0
100	PI/2 BPSK	1	137	13.17	13.22	13.14		
100	PI/2 BPSK	1	271	13.21	13.25	13.19		
100	PI/2 BPSK	135	0	13.22	13.33	13.29	13.5	0.0
100	PI/2 BPSK	135	69	13.07	13.15	13.11		
100	PI/2 BPSK	135	138	13.22	13.32	13.28		
100	PI/2 BPSK	270	0	13.20	13.27	13.26	13.5	0.0
100	QPSK	1	1	13.30	13.34	13.28	13.5	0.0
100	QPSK	1	137	13.11	13.21	13.18		
100	QPSK	1	271	13.12	13.21	13.17		
100	QPSK	135	0	13.08	13.22	13.21	13.5	0.0
100	QPSK	135	69	13.16	13.18	13.18		
100	QPSK	135	138	13.30	13.35	13.35		
100	QPSK	270	0	13.25	13.29	13.24	13.5	0.0
100	16QAM	1	1	13.19	13.25	13.22	13.5	0.0
100	64QAM	1	1	13.27	13.32	13.32	13.5	0.0
100	256QAM	1	1	13.27	13.33	13.37	13.5	0.0
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI/2 BPSK	1	1	13.35	13.38	13.34	13.5	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI/2 BPSK	1	1	13.29	13.40	13.40	13.5	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	PI/2 BPSK	1	1	13.31	13.40	13.35	13.5	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI/2 BPSK	1	1	13.28	13.34	13.32	13.5	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI/2 BPSK	1	1	13.28	13.35	13.36	13.5	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI/2 BPSK	1	1	13.37	13.36	13.32	13.5	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	15.00	14.99	14.96	15.2	0.0
20	PI/2 BPSK	1	53	14.83	14.91	14.92		
20	PI/2 BPSK	1	104	14.79	14.79	14.82		
20	PI/2 BPSK	50	0	14.85	14.84	14.78	15.2	0.0
20	PI/2 BPSK	50	28	14.83	14.78	14.75		
20	PI/2 BPSK	50	56	14.84	14.79	14.76		
20	PI/2 BPSK	100	0	14.82	14.80	14.79	15.2	0.0
20	QPSK	1	1	14.93	14.92	14.92	15.2	0.0
20	QPSK	1	53	14.84	14.86	14.81		
20	QPSK	1	104	14.82	14.82	14.82		
20	QPSK	50	0	14.75	14.74	14.75	15.2	0.0
20	QPSK	50	28	14.80	14.70	14.72		
20	QPSK	50	56	14.80	14.73	14.79		
20	QPSK	100	0	14.86	14.87	14.85	15.2	0.0
20	16QAM	1	1	14.68	14.64	14.68	15.2	0.0
20	64QAM	1	1	14.63	14.60	14.59	15.2	0.0
20	256QAM	1	1	14.80	14.76	14.83	15.2	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	14.93	14.96	14.94	15.2	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	14.97	14.99	14.95	15.2	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	14.91	14.93	14.96	15.2	0.0

14. Antenna Location

<For Tablet>

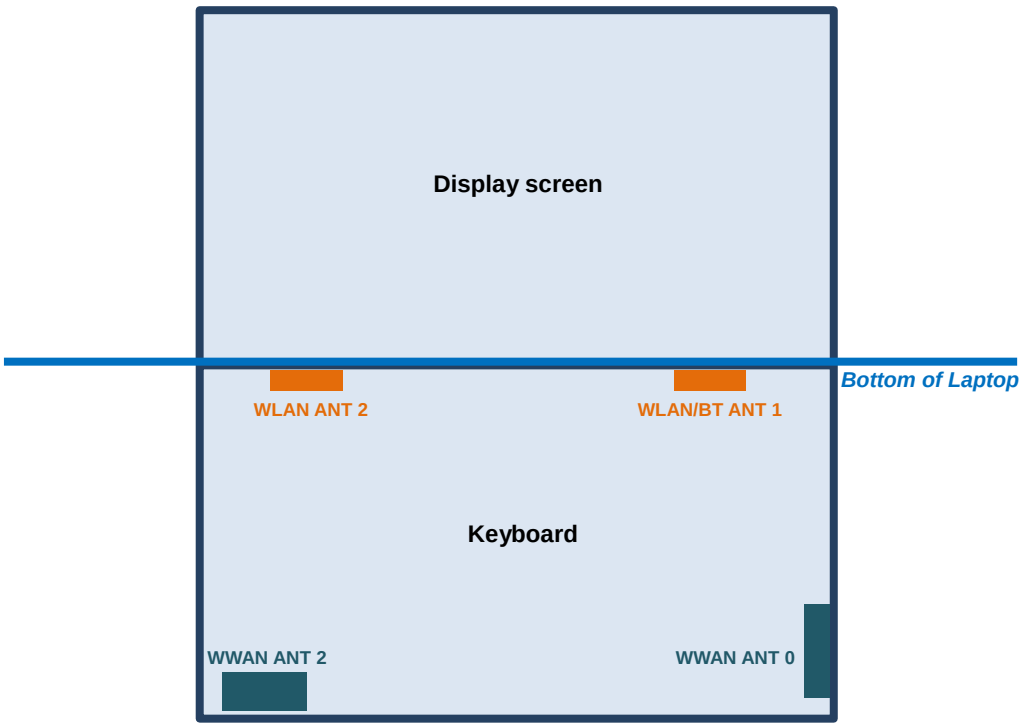


Front View

The separation distance for antenna to edge:

Antenna	To Edge1 (mm)	To Edge2 (mm)	To Edge3 (mm)	To Edge4 (mm)
WWAN Antenna 0	≤ 25mm	≤ 25mm	>25mm	>25mm
WWAN Antenna 2	≤ 25mm	>25mm	>25mm	≤ 25mm
WLAN/BT Antenna 1	>25mm	>25mm	≤ 25mm	>25mm
WLAN Antenna 2	>25mm	>25mm	≤ 25mm	>25mm

Antennas Support Bands	
WWAN Antenna 0	WCDMA II/IV/V, LTE B2/4/5/7/12/13/14/17/25/26/30/38/41/66/71, 5GNR n2/n5/n12/n66/n71
WWAN Antenna 2	LTE B2/7/48/66, 5GNR n2/n7/n41/n66



The separation distance for antenna to edge :

Antenna	To Bottom of Laptop (mm)
WWAN Antenna 0	≤ 25mm
WWAN Antenna 2	≤ 25mm
WLAN/BT Antenna 1	≤ 25mm
WLAN Antenna 2	≤ 25mm

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
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. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in normal mode was performed:
   For WWAN Ant 0:
   - Bottom of Laptop: 20 mm
   - Bottom Face: 20 mm
   - Edge2: 20 mm

   For WWAN Ant 2:
   - Bottom of Laptop: 20 mm
   - Bottom Face: 20 mm
   - Edge1: 12 mm

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not 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; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.

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 PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   c. PI/2 BPSK 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. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   e. 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
   f. For 5G FR1 n5/n12/n41/n71 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.

15.1 Body SAR

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 2	20M	QPSK	1	0	Bottom of Laptop	0mm	ON	18900	1880	15.57	16.30	1.183	0.06	0.780	0.923
	LTE Band 2_Ant 2	20M	QPSK	1	0	Bottom of Laptop	0mm	ON	18700	1860	15.02	16.30	1.343	0.07	0.866	1.163
	LTE Band 2_Ant 2	20M	QPSK	1	0	Bottom of Laptop	0mm	ON	19100	1900	15.38	16.30	1.236	0.01	0.568	0.702
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom of Laptop	0mm	ON	18900	1880	15.11	16.30	1.315	0.04	0.863	1.135
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom of Laptop	0mm	ON	18700	1860	15.29	16.30	1.262	0.01	0.928	1.171
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom of Laptop	0mm	ON	19100	1900	15.42	16.30	1.225	0.02	0.951	1.165
	LTE Band 2_Ant 2	20M	QPSK	100	0	Bottom of Laptop	0mm	ON	19100	1900	15.70	16.30	1.148	0.06	1.000	1.148
	LTE Band 2_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	19100	1900	12.95	13.20	1.059	-0.19	1.100	1.165
	LTE Band 2_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	18900	1880	12.50	13.20	1.175	-0.17	0.996	1.170
01	LTE Band 2_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	18700	1860	12.42	13.20	1.197	-0.02	0.980	1.173
	LTE Band 2_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	18900	1880	13.17	13.20	1.007	-0.12	1.150	1.158
	LTE Band 2_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	18700	1860	12.48	13.20	1.180	-0.04	0.970	1.145
	LTE Band 2_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	19100	1900	12.90	13.20	1.072	-0.02	1.060	1.136
	LTE Band 2_Ant 2	20M	QPSK	100	0	Bottom Face	0mm	ON	18900	1880	13.18	13.20	1.005	-0.1	0.986	0.991
	LTE Band 2_Ant 2	20M	QPSK	1	99	Edge 1	0mm	ON	19100	1900	12.95	13.20	1.059	0.02	0.623	0.660
	LTE Band 2_Ant 2	20M	QPSK	50	50	Edge 1	0mm	ON	18900	1880	13.17	13.20	1.007	0.08	0.599	0.603
	LTE Band 2_Ant 2	20M	QPSK	1	49	Bottom of Laptop	20mm	OFF	18700	1860	23.83	24.00	1.040	0.09	0.478	0.497
	LTE Band 2_Ant 2	20M	QPSK	50	24	Bottom of Laptop	20mm	OFF	18700	1860	22.86	23.00	1.033	0.11	0.406	0.419
	LTE Band 2_Ant 2	20M	QPSK	1	49	Bottom Face	20mm	OFF	18700	1860	23.83	23.90	1.016	-0.06	0.529	0.538
	LTE Band 2_Ant 2	20M	QPSK	50	24	Bottom Face	20mm	OFF	18700	1860	22.86	23.00	1.033	0.05	0.460	0.475
	LTE Band 2_Ant 2	20M	QPSK	1	49	Edge 1	12mm	OFF	18700	1860	23.83	23.90	1.016	0.08	0.955	0.971
	LTE Band 2_Ant 2	20M	QPSK	1	49	Edge 1	12mm	OFF	18900	1880	23.53	23.90	1.089	0.01	1.030	1.122
	LTE Band 2_Ant 2	20M	QPSK	1	49	Edge 1	12mm	OFF	19100	1900	23.48	23.90	1.102	0.16	1.060	1.168
	LTE Band 2_Ant 2	20M	QPSK	50	24	Edge 1	12mm	OFF	18700	1860	22.86	23.00	1.033	0.01	0.831	0.858
	LTE Band 2_Ant 2	20M	QPSK	50	24	Edge 1	12mm	OFF	18900	1880	22.57	23.00	1.104	0.19	0.877	0.968
	LTE Band 2_Ant 2	20M	QPSK	50	24	Edge 1	12mm	OFF	19100	1900	22.70	23.00	1.072	0.01	1.020	1.093
	LTE Band 2_Ant 2	20M	QPSK	100	0	Edge 1	12mm	OFF	18700	1860	22.38	23.00	1.153	0.02	0.834	0.962
	LTE Band 2_Ant 2	20M	QPSK	1	49	Edge 4	0mm	OFF	18700	1860	23.83	23.90	1.016	-0.02	0.731	0.743
	LTE Band 2_Ant 2	20M	QPSK	50	24	Edge 4	0mm	OFF	18700	1860	22.86	23.00	1.033	-0.07	0.522	0.539

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom of Laptop	0mm	ON	20850	2510	16.50	16.70	1.047	0.02	0.943	0.987
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom of Laptop	0mm	ON	21100	2535	16.14	16.70	1.138	-0.03	0.669	0.761
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom of Laptop	0mm	ON	21350	2560	16.15	16.70	1.135	0.06	0.950	1.078
	LTE Band 7_Ant 2	20M	QPSK	50	24	Bottom of Laptop	0mm	ON	21100	2535	16.45	16.70	1.059	0.01	0.737	0.781
	LTE Band 7_Ant 2	20M	QPSK	50	24	Bottom of Laptop	0mm	ON	20850	2510	16.43	16.70	1.064	0.02	1.090	1.160
	LTE Band 7_Ant 2	20M	QPSK	50	24	Bottom of Laptop	0mm	ON	21350	2560	16.36	16.70	1.081	0.01	1.090	1.179
	LTE Band 7_Ant 2	20M	QPSK	100	0	Bottom of Laptop	0mm	ON	21100	2535	16.49	16.70	1.050	0.02	0.747	0.784
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom Face	0mm	ON	20850	2510	13.70	13.70	1.000	-0.03	0.958	0.958
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom Face	0mm	ON	21100	2535	13.40	13.70	1.072	-0.1	0.895	0.959
02	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom Face	0mm	ON	21350	2560	13.30	13.70	1.096	-0.1	1.080	1.184
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Face	0mm	ON	20850	2510	13.44	13.70	1.062	-0.16	1.070	1.136
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Face	0mm	ON	21100	2535	13.05	13.70	1.161	-0.07	0.935	1.086
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Face	0mm	ON	21350	2560	13.20	13.70	1.122	-0.1	1.000	1.122
	LTE Band 7_Ant 2	20M	QPSK	100	0	Bottom Face	0mm	ON	20850	2510	13.37	13.70	1.079	-0.12	0.935	1.009
	LTE Band 7_Ant 2	20M	QPSK	1	49	Edge 1	0mm	ON	20850	2510	13.70	13.70	1.000	0.01	0.598	0.598
	LTE Band 7_Ant 2	20M	QPSK	50	0	Edge 1	0mm	ON	20850	2510	13.44	13.70	1.062	0.01	0.459	0.487
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom of Laptop	20mm	OFF	21100	2535	23.79	24.00	1.050	0.05	0.336	0.353
	LTE Band 7_Ant 2	20M	QPSK	50	50	Bottom of Laptop	20mm	OFF	20850	2510	22.93	23.00	1.016	0.18	0.173	0.176
	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom Face	20mm	OFF	21100	2535	23.79	24.00	1.050	-0.18	0.129	0.135
	LTE Band 7_Ant 2	20M	QPSK	50	50	Bottom Face	20mm	OFF	20850	2510	22.93	23.00	1.016	-0.08	0.087	0.088
	LTE Band 7_Ant 2	20M	QPSK	1	49	Edge 1	12mm	OFF	21100	2535	23.79	24.00	1.050	0.08	0.308	0.323
	LTE Band 7_Ant 2	20M	QPSK	50	50	Edge 1	12mm	OFF	20850	2510	22.93	23.00	1.016	0.16	0.200	0.203
	LTE Band 7_Ant 2	20M	QPSK	1	49	Edge 4	0mm	OFF	21100	2535	23.79	24.00	1.050	0.1	0.662	0.695
	LTE Band 7_Ant 2	20M	QPSK	50	50	Edge 4	0mm	OFF	20850	2510	22.93	23.00	1.016	-0.11	0.421	0.428
	LTE Band 66_Ant 2	20M	QPSK	1	49	Bottom of Laptop	0mm	ON	132072	1720	15.20	15.30	1.023	0.09	1.020	1.044
	LTE Band 66_Ant 2	20M	QPSK	1	49	Bottom of Laptop	0mm	ON	132322	1745	14.73	15.30	1.140	0.09	0.592	0.675
	LTE Band 66_Ant 2	20M	QPSK	1	49	Bottom of Laptop	0mm	ON	132572	1770	14.40	15.30	1.230	0.1	0.925	1.138
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom of Laptop	0mm	ON	132072	1720	14.74	15.30	1.138	0.03	0.826	0.940
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom of Laptop	0mm	ON	132322	1745	14.64	15.30	1.164	0.06	0.820	0.955
03	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom of Laptop	0mm	ON	132572	1770	14.12	15.30	1.312	0.04	0.902	1.184
	LTE Band 66_Ant 2	20M	QPSK	100	0	Bottom of Laptop	0mm	ON	132322	1745	14.72	15.30	1.143	0.07	0.629	0.719
	LTE Band 66_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	132322	1745	13.67	13.70	1.007	-0.05	1.150	1.158
	LTE Band 66_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	132072	1720	12.69	13.70	1.262	-0.1	0.744	0.939
	LTE Band 66_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	132572	1770	13.47	13.70	1.054	-0.14	1.120	1.181
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	132072	1720	13.66	13.70	1.009	-0.06	1.120	1.130
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	132322	1745	13.52	13.70	1.042	-0.03	0.978	1.019
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	132572	1770	13.40	13.70	1.072	-0.04	0.941	1.008
	LTE Band 66_Ant 2	20M	QPSK	100	0	Bottom Face	0mm	ON	132072	1720	13.60	13.70	1.023	-0.02	0.979	1.002
	LTE Band 66_Ant 2	20M	QPSK	1	99	Edge 1	0mm	ON	132322	1745	13.67	13.70	1.007	0.09	0.368	0.371
	LTE Band 66_Ant 2	20M	QPSK	50	50	Edge 1	0mm	ON	132072	1720	13.66	13.70	1.009	0.03	0.287	0.290
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom of Laptop	20mm	OFF	132322	1745	23.52	24.00	1.117	0.11	0.542	0.605
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom of Laptop	20mm	OFF	132322	1745	22.83	23.00	1.040	0.11	0.508	0.528
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom Face	20mm	OFF	132322	1745	23.52	24.00	1.117	-0.19	0.305	0.341
	LTE Band 66_Ant 2	20M	QPSK	50	50	Bottom Face	20mm	OFF	132322	1745	22.83	23.00	1.040	-0.12	0.232	0.241
	LTE Band 66_Ant 2	20M	QPSK	1	0	Edge 1	12mm	OFF	132322	1745	23.52	24.00	1.117	0.18	0.533	0.595
	LTE Band 66_Ant 2	20M	QPSK	50	50	Edge 1	12mm	OFF	132322	1745	22.83	23.00	1.040	0.01	0.450	0.468
	LTE Band 66_Ant 2	20M	QPSK	1	0	Edge 4	0mm	OFF	132322	1745	23.52	24.00	1.117	-0.03	0.633	0.707
	LTE Band 66_Ant 2	20M	QPSK	50	50	Edge 4	0mm	OFF	132322	1745	22.83	23.00	1.040	-0.15	0.524	0.545

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	376000	1880	16.45	16.50	1.012	-0.15	0.934	0.945
	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	372000	1860	16.32	16.50	1.042	-0.1	0.887	0.925
	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	380000	1900	16.34	16.50	1.038	-0.15	1.000	1.038
	FR1 n2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	376000	1880	16.36	16.50	1.033	0.09	0.912	0.942
	FR1 n2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	372000	1860	16.22	16.50	1.067	0.05	0.891	0.950
	FR1 n2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	380000	1900	16.22	16.50	1.067	-0.1	0.922	0.983
	FR1 n2	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	376000	1880	16.28	16.50	1.052	0.08	0.905	0.952
	FR1 n2	20M	BPSK	1	1	Bottom Face	0mm	ON	376000	1880	13.86	14.00	1.033	-0.01	0.996	1.029
	FR1 n2	20M	BPSK	1	1	Bottom Face	0mm	ON	372000	1860	13.79	14.00	1.050	-0.01	0.936	0.982
	FR1 n2	20M	BPSK	1	1	Bottom Face	0mm	ON	380000	1900	13.80	14.00	1.047	-0.19	1.110	1.162
	FR1 n2	20M	BPSK	50	0	Bottom Face	0mm	ON	376000	1880	13.74	14.00	1.062	0.13	0.922	0.979
	FR1 n2	20M	BPSK	50	0	Bottom Face	0mm	ON	372000	1860	13.72	14.00	1.067	0.08	0.987	1.053
	FR1 n2	20M	BPSK	50	0	Bottom Face	0mm	ON	380000	1900	13.71	14.00	1.069	-0.05	1.080	1.155
	FR1 n2	20M	BPSK	100	0	Bottom Face	0mm	ON	376000	1880	13.73	14.00	1.064	0.02	0.914	0.973
	FR1 n2	20M	BPSK	1	1	Edge 2	0mm	ON	376000	1880	13.86	14.00	1.033	-0.12	0.240	0.248
	FR1 n2	20M	BPSK	50	0	Edge 2	0mm	ON	376000	1880	13.74	14.00	1.062	0.05	0.218	0.231
	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	372000	1860	23.57	24.00	1.104	0.19	0.538	0.594
	FR1 n2	20M	BPSK	50	28	Bottom of Laptop	20mm	OFF	372000	1860	23.33	24.00	1.167	-0.11	0.405	0.473
	FR1 n2	20M	BPSK	1	1	Bottom Face	20mm	OFF	372000	1860	23.57	24.00	1.104	-0.15	0.518	0.572
	FR1 n2	20M	BPSK	50	28	Bottom Face	20mm	OFF	372000	1860	23.33	24.00	1.167	-0.18	0.492	0.574
	FR1 n2	20M	BPSK	1	1	Edge 1	0mm	OFF	372000	1860	23.57	24.00	1.104	-0.19	0.460	0.508
	FR1 n2	20M	BPSK	50	28	Edge 1	0mm	OFF	372000	1860	23.33	24.00	1.167	0.09	0.445	0.519
	FR1 n2	20M	BPSK	1	1	Edge 2	20mm	OFF	372000	1860	23.57	24.00	1.104	-0.06	0.289	0.319
	FR1 n2	20M	BPSK	50	28	Edge 2	20mm	OFF	372000	1860	23.33	24.00	1.167	0.02	0.263	0.307
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	376000	1880	15.93	16.20	1.064	0.19	0.905	0.963
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	372000	1860	15.85	16.20	1.084	0.03	0.939	1.018
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	380000	1900	15.92	16.20	1.067	0.18	0.889	0.948
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	376000	1880	15.81	16.20	1.094	0.04	0.897	0.981
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	372000	1860	15.75	16.20	1.109	0.05	0.936	1.038
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	380000	1900	15.80	16.20	1.096	-0.08	0.902	0.989
	FR1 n2_Ant 2	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	376000	1880	15.80	16.20	1.096	0.15	0.915	1.003
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	376000	1880	13.73	13.90	1.040	-0.02	1.130	1.175
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	372000	1860	13.69	13.90	1.050	-0.08	1.060	1.113
04	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	380000	1900	13.72	13.90	1.042	-0.07	1.150	1.199
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	376000	1880	13.63	13.90	1.064	0.05	1.020	1.085
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	372000	1860	13.60	13.90	1.072	-0.05	1.090	1.168
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	380000	1900	13.56	13.90	1.081	-0.1	1.100	1.190
	FR1 n2_Ant 2	20M	BPSK	100	0	Bottom Face	0mm	ON	376000	1880	13.67	13.90	1.054	0.04	0.993	1.047
	FR1 n2_Ant 2	20M	BPSK	1	1	Edge 1	0mm	ON	376000	1880	13.73	13.90	1.040	0.04	0.539	0.561
	FR1 n2_Ant 2	20M	BPSK	50	0	Edge 1	0mm	ON	376000	1880	13.63	13.90	1.064	0.05	0.503	0.535
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	376000	1880	23.64	24.00	1.086	0.14	0.489	0.531
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom of Laptop	20mm	OFF	376000	1880	23.59	24.00	1.099	0.13	0.422	0.464
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom Face	20mm	OFF	376000	1880	22.31	22.70	1.094	-0.12	0.496	0.543
	FR1 n2_Ant 2	20M	BPSK	50	0	Bottom Face	20mm	OFF	376000	1880	22.23	22.70	1.114	-0.15	0.483	0.538
	FR1 n2_Ant 2	20M	BPSK	1	1	Edge 1	12mm	OFF	376000	1880	22.31	22.70	1.094	0.16	0.987	1.080
	FR1 n2_Ant 2	20M	BPSK	1	1	Edge 1	12mm	OFF	372000	1860	22.27	22.70	1.104	0.13	1.000	1.104
	FR1 n2_Ant 2	20M	BPSK	1	1	Edge 1	12mm	OFF	380000	1900	22.20	22.70	1.122	0.16	1.020	1.144
	FR1 n2_Ant 2	20M	BPSK	50	0	Edge 1	12mm	OFF	376000	1880	22.23	22.70	1.114	0.12	1.040	1.159
	FR1 n2_Ant 2	20M	BPSK	50	0	Edge 1	12mm	OFF	372000	1860	22.19	22.70	1.125	0.1	1.020	1.147
	FR1 n2_Ant 2	20M	BPSK	50	0	Edge 1	12mm	OFF	380000	1900	22.18	22.70	1.127	0.16	1.060	1.195
	FR1 n2_Ant 2	20M	BPSK	100	0	Edge 1	12mm	OFF	376000	1880	22.16	22.70	1.132	0.15	0.950	1.076
	FR1 n2_Ant 2	20M	BPSK	1	1	Edge 4	0mm	OFF	376000	1880	22.31	22.70	1.094	-0.06	0.651	0.712
	FR1 n2_Ant 2	20M	BPSK	50	0	Edge 4	0mm	OFF	376000	1880	22.23	22.70	1.114	0.01	0.555	0.618

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	167300	836.5	18.88	19.10	1.052	-0.1	0.972	1.023
	FR1 n5	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	167300	836.5	18.83	19.10	1.064	0	0.956	1.017
	FR1 n5	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	167300	836.5	18.65	19.10	1.109	-0.04	0.918	1.018
	FR1 n5	20M	BPSK	1	1	Bottom Face	0mm	ON	167300	836.5	17.70	17.70	1.000	-0.11	1.140	1.140
05	FR1 n5	20M	BPSK	50	0	Bottom Face	0mm	ON	167300	836.5	17.64	17.70	1.014	-0.12	1.150	1.166
	FR1 n5	20M	BPSK	100	0	Bottom Face	0mm	ON	167300	836.5	17.55	17.70	1.035	-0.03	1.070	1.108
	FR1 n5	20M	BPSK	1	1	Edge 2	0mm	ON	167300	836.5	17.70	17.70	1.000	-0.04	0.473	0.473
	FR1 n5	20M	BPSK	50	0	Edge 2	0mm	ON	167300	836.5	17.64	17.70	1.014	0	0.443	0.449
	FR1 n5	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	167300	836.5	23.64	24.00	1.086	-0.02	0.252	0.274
	FR1 n5	20M	BPSK	50	28	Bottom of Laptop	20mm	OFF	167300	836.5	23.31	24.00	1.172	0	0.282	0.331
	FR1 n5	20M	BPSK	1	1	Bottom Face	20mm	OFF	167300	836.5	23.64	24.00	1.086	-0.04	0.409	0.444
	FR1 n5	20M	BPSK	50	28	Bottom Face	20mm	OFF	167300	836.5	23.31	24.00	1.172	-0.04	0.364	0.427
	FR1 n5	20M	BPSK	1	1	Edge 1	0mm	OFF	167300	836.5	23.64	24.00	1.086	0	0.176	0.191
	FR1 n5	20M	BPSK	50	28	Edge 1	0mm	OFF	167300	836.5	23.31	24.00	1.172	0.04	0.157	0.184
	FR1 n5	20M	BPSK	1	1	Edge 2	20mm	OFF	167300	836.5	23.64	24.00	1.086	-0.15	0.116	0.126
	FR1 n5	20M	BPSK	50	28	Edge 2	20mm	OFF	167300	836.5	23.31	24.00	1.172	-0.05	0.102	0.120
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	502000	2510	16.32	17.50	1.312	-0.06	0.702	0.921
06	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	507000	2535	16.31	17.50	1.315	0.13	0.891	1.172
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	512000	2560	16.25	17.50	1.334	0.08	0.775	1.033
	FR1 n7_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	502000	2510	16.21	17.50	1.346	0.05	0.728	0.980
	FR1 n7_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	507000	2535	16.19	17.50	1.352	0.05	0.734	0.992
	FR1 n7_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	512000	2560	16.20	17.50	1.349	0.03	0.772	1.041
	FR1 n7_Ant 2	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	502000	2510	15.97	17.50	1.422	-0.01	0.713	1.014
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	502000	2510	14.22	14.60	1.091	-0.01	0.830	0.906
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	507000	2535	14.15	14.60	1.109	-0.14	0.869	0.964
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	512000	2560	14.09	14.60	1.125	-0.13	0.992	1.116
	FR1 n7_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	502000	2510	14.00	14.60	1.148	0.03	0.843	0.968
	FR1 n7_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	507000	2535	14.00	14.60	1.148	0.03	0.861	0.989
	FR1 n7_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	512000	2560	13.94	14.60	1.164	-0.04	0.972	1.132
	FR1 n7_Ant 2	20M	BPSK	100	0	Bottom Face	0mm	ON	502000	2510	14.30	14.60	1.072	0.05	1.080	1.157
	FR1 n7_Ant 2	20M	BPSK	1	1	Edge 1	0mm	ON	502000	2510	14.22	14.60	1.091	0.08	0.406	0.443
	FR1 n7_Ant 2	20M	BPSK	50	0	Edge 1	0mm	ON	502000	2510	14.00	14.60	1.148	0.04	0.299	0.343
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	502000	2510	23.27	24.00	1.183	0.05	0.299	0.354
	FR1 n7_Ant 2	20M	BPSK	50	56	Bottom of Laptop	20mm	OFF	502000	2510	22.92	24.00	1.282	0.05	0.233	0.299
	FR1 n7_Ant 2	20M	BPSK	1	1	Bottom Face	20mm	OFF	502000	2510	23.27	24.00	1.183	0.09	0.157	0.186
	FR1 n7_Ant 2	20M	BPSK	50	56	Bottom Face	20mm	OFF	502000	2510	22.92	24.00	1.282	0.03	0.111	0.142
	FR1 n7_Ant 2	20M	BPSK	1	1	Edge 1	12mm	OFF	502000	2510	23.27	24.00	1.183	0.13	0.423	0.500
	FR1 n7_Ant 2	20M	BPSK	50	56	Edge 1	12mm	OFF	502000	2510	22.92	24.00	1.282	0.14	0.387	0.496
	FR1 n7_Ant 2	20M	BPSK	1	1	Edge 4	0mm	OFF	502000	2510	23.27	24.00	1.183	0.13	0.673	0.796
	FR1 n7_Ant 2	20M	BPSK	50	56	Edge 4	0mm	OFF	502000	2510	22.92	24.00	1.282	-0.15	0.876	1.123

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n12	15M	BPSK	1	1	Bottom of Laptop	0mm	ON	141500	707.5	20.29	20.60	1.074	-0.02	0.946	1.016
	FR1 n12	15M	BPSK	36	0	Bottom of Laptop	0mm	ON	141500	707.5	20.17	20.60	1.104	-0.01	0.905	0.999
	FR1 n12	15M	BPSK	75	0	Bottom of Laptop	0mm	ON	141500	707.5	20.12	20.60	1.117	-0.03	0.886	0.990
	FR1 n12	15M	BPSK	1	1	Bottom Face	0mm	ON	141500	707.5	17.68	18.10	1.102	-0.03	1.000	1.102
	FR1 n12	15M	BPSK	36	0	Bottom Face	0mm	ON	141500	707.5	17.60	18.10	1.122	-0.07	1.030	1.156
07	FR1 n12	15M	BPSK	75	0	Bottom Face	0mm	ON	141500	707.5	17.49	18.10	1.151	0	1.010	1.162
	FR1 n12	15M	BPSK	1	1	Edge 2	0mm	ON	141500	707.5	17.68	18.10	1.102	0.07	0.595	0.655
	FR1 n12	15M	BPSK	36	0	Edge 2	0mm	ON	141500	707.5	17.60	18.10	1.122	-0.11	0.590	0.662
	FR1 n12	15M	BPSK	1	1	Bottom of Laptop	20mm	OFF	141500	707.5	23.33	24.00	1.167	-0.15	0.229	0.267
	FR1 n12	15M	BPSK	36	0	Bottom of Laptop	20mm	OFF	141500	707.5	23.09	24.00	1.233	-0.12	0.222	0.274
	FR1 n12	15M	BPSK	1	1	Bottom Face	20mm	OFF	141500	707.5	23.33	24.00	1.167	-0.05	0.268	0.313
	FR1 n12	15M	BPSK	36	0	Bottom Face	20mm	OFF	141500	707.5	23.09	24.00	1.233	-0.05	0.242	0.298
	FR1 n12	15M	BPSK	1	1	Edge 1	0mm	OFF	141500	707.5	23.33	24.00	1.167	0.07	0.219	0.256
	FR1 n12	15M	BPSK	36	0	Edge 1	0mm	OFF	141500	707.5	23.09	24.00	1.233	0.1	0.198	0.244
	FR1 n12	15M	BPSK	1	1	Edge 2	20mm	OFF	141500	707.5	23.33	24.00	1.167	0.07	0.073	0.085
	FR1 n12	15M	BPSK	36	0	Edge 2	20mm	OFF	141500	707.5	23.09	24.00	1.233	-0.09	0.067	0.083
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom of Laptop	0mm	ON	518598	2592.99	15.74	15.80	1.014	0.13	0.882	0.894
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom of Laptop	0mm	ON	509202	2546.01	15.64	15.80	1.038	0.11	0.719	0.746
08	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom of Laptop	0mm	ON	528000	2640	15.57	15.80	1.054	0.12	1.130	1.191
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom of Laptop	0mm	ON	518598	2592.99	15.56	15.80	1.057	-0.05	0.952	1.006
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom of Laptop	0mm	ON	509202	2546.01	15.46	15.80	1.081	0.08	0.971	1.050
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom of Laptop	0mm	ON	528000	2640	15.42	15.80	1.091	0.16	1.050	1.146
	FR1 n41_Ant 2	100M	BPSK	270	0	Bottom of Laptop	0mm	ON	518598	2592.99	15.59	15.80	1.050	0.15	0.987	1.036
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Face	0mm	ON	518598	2592.99	13.44	13.50	1.014	-0.08	1.060	1.075
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Face	0mm	ON	509202	2546.01	13.37	13.50	1.030	-0.07	0.839	0.864
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Face	0mm	ON	528000	2640	13.41	13.50	1.021	-0.12	1.000	1.021
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom Face	0mm	ON	518598	2592.99	13.33	13.50	1.040	-0.19	1.120	1.165
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom Face	0mm	ON	509202	2546.01	13.22	13.50	1.067	-0.18	0.755	0.805
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom Face	0mm	ON	528000	2640	13.29	13.50	1.050	-0.15	1.070	1.123
	FR1 n41_Ant 2	100M	BPSK	270	0	Bottom Face	0mm	ON	518598	2592.99	13.27	13.50	1.054	-0.03	0.946	0.997
	FR1 n41_Ant 2	100M	BPSK	1	1	Edge 1	0mm	ON	518598	2592.99	13.44	13.50	1.014	0.17	0.370	0.375
	FR1 n41_Ant 2	100M	BPSK	135	0	Edge 1	0mm	ON	518598	2592.99	13.33	13.50	1.040	0.14	0.392	0.408
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom of Laptop	20mm	OFF	528000	2640	23.90	24.00	1.023	-0.01	0.501	0.513
	FR1 n41_Ant 2	100M	BPSK	135	69	Bottom of Laptop	20mm	OFF	528000	2640	23.59	24.00	1.099	0.06	0.368	0.404
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Face	20mm	OFF	528000	2640	20.27	20.60	1.079	-0.12	0.107	0.115
	FR1 n41_Ant 2	100M	BPSK	135	69	Bottom Face	20mm	OFF	528000	2640	20.25	20.60	1.084	-0.19	0.118	0.128
	FR1 n41_Ant 2	100M	BPSK	1	1	Edge 1	12mm	OFF	528000	2640	20.27	20.60	1.079	0.18	0.650	0.701
	FR1 n41_Ant 2	100M	BPSK	135	69	Edge 1	12mm	OFF	528000	2640	20.25	20.60	1.084	0.18	0.718	0.778
	FR1 n41_Ant 2	100M	BPSK	1	1	Edge 4	0mm	OFF	528000	2640	20.27	20.60	1.079	-0.04	0.699	0.754
	FR1 n41_Ant 2	100M	BPSK	135	69	Edge 4	0mm	OFF	528000	2640	20.25	20.60	1.084	-0.1	0.518	0.561

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	349000	1745	16.42	17.60	1.312	-0.09	0.821	1.077
	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	344000	1720	16.38	17.60	1.324	-0.17	0.760	1.006
	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	354000	1770	16.22	17.60	1.374	-0.11	0.865	1.189
	FR1 n66	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	349000	1745	16.36	17.60	1.330	-0.11	0.800	1.064
	FR1 n66	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	344000	1720	16.35	17.60	1.334	-0.09	0.736	0.981
	FR1 n66	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	354000	1770	16.20	17.60	1.380	-0.11	0.860	1.187
	FR1 n66	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	349000	1720	16.31	17.60	1.346	-0.1	0.780	1.050
	FR1 n66	20M	BPSK	1	1	Bottom Face	0mm	ON	349000	1745	14.38	14.50	1.028	-0.02	0.967	0.994
	FR1 n66	20M	BPSK	1	1	Bottom Face	0mm	ON	344000	1720	14.37	14.50	1.030	-0.1	1.040	1.072
	FR1 n66	20M	BPSK	1	1	Bottom Face	0mm	ON	354000	1770	14.26	14.50	1.057	-0.08	0.932	0.985
	FR1 n66	20M	BPSK	50	28	Bottom Face	0mm	ON	349000	1745	14.24	14.50	1.062	-0.06	0.924	0.981
	FR1 n66	20M	BPSK	50	28	Bottom Face	0mm	ON	344000	1720	14.21	14.50	1.069	-0.17	1.000	1.069
	FR1 n66	20M	BPSK	50	28	Bottom Face	0mm	ON	354000	1770	14.19	14.50	1.074	-0.1	0.980	1.053
	FR1 n66	20M	BPSK	100	0	Bottom Face	0mm	ON	344000	1720	14.24	14.50	1.062	-0.15	1.000	1.062
	FR1 n66	20M	BPSK	1	1	Edge 2	0mm	ON	349000	1745	14.38	14.50	1.028	-0.1	0.428	0.440
	FR1 n66	20M	BPSK	50	28	Edge 2	0mm	ON	349000	1745	14.24	14.50	1.062	-0.08	0.419	0.445
	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	344000	1720	23.54	24.00	1.112	-0.04	0.415	0.461
	FR1 n66	20M	BPSK	50	28	Bottom of Laptop	20mm	OFF	344000	1720	23.45	24.00	1.135	-0.04	0.432	0.490
	FR1 n66	20M	BPSK	1	1	Bottom Face	20mm	OFF	344000	1720	23.54	24.00	1.112	0.17	0.511	0.568
	FR1 n66	20M	BPSK	50	28	Bottom Face	20mm	OFF	344000	1720	23.45	24.00	1.135	-0.13	0.498	0.565
	FR1 n66	20M	BPSK	1	1	Edge 1	0mm	OFF	344000	1720	23.54	24.00	1.112	-0.1	0.143	0.159
	FR1 n66	20M	BPSK	50	28	Edge 1	0mm	OFF	344000	1720	23.45	24.00	1.135	-0.19	0.136	0.154
	FR1 n66	20M	BPSK	1	1	Edge 2	20mm	OFF	344000	1720	23.54	24.00	1.112	-0.01	0.234	0.260
	FR1 n66	20M	BPSK	50	28	Edge 2	20mm	OFF	344000	1720	23.45	24.00	1.135	0.01	0.219	0.249
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	344000	1720	16.30	16.30	1.000	0.02	1.140	1.140
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	349000	1745	16.28	16.30	1.005	0.08	0.941	0.945
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	354000	1770	16.24	16.30	1.014	0.02	1.030	1.044
	FR1 n66_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	344000	1720	16.18	16.30	1.028	0.08	1.090	1.121
	FR1 n66_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	349000	1745	16.17	16.30	1.030	-0.13	1.020	1.051
	FR1 n66_Ant 2	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	354000	1770	16.14	16.30	1.038	-0.1	0.993	1.030
	FR1 n66_Ant 2	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	354000	1770	16.12	16.30	1.042	0.02	1.010	1.053
09	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	344000	1720	15.00	15.20	1.047	-0.09	1.140	1.194
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	349000	1745	14.99	15.20	1.050	-0.09	1.020	1.071
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom Face	0mm	ON	354000	1770	14.96	15.20	1.057	-0.08	1.020	1.078
	FR1 n66_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	344000	1720	14.85	15.20	1.084	-0.11	1.060	1.149
	FR1 n66_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	349000	1745	14.84	15.20	1.086	-0.08	1.010	1.097
	FR1 n66_Ant 2	20M	BPSK	50	0	Bottom Face	0mm	ON	354000	1770	14.78	15.20	1.102	-0.03	1.030	1.135
	FR1 n66_Ant 2	20M	BPSK	100	0	Bottom Face	0mm	ON	344000	1720	14.82	15.20	1.091	-0.08	1.020	1.113
	FR1 n66_Ant 2	20M	BPSK	1	1	Edge 1	0mm	ON	344000	1720	15.00	15.20	1.047	0.1	0.329	0.345
	FR1 n66_Ant 2	20M	BPSK	50	0	Edge 1	0mm	ON	344000	1720	14.85	15.20	1.084	0.1	0.310	0.336
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	354000	1770	23.51	24.00	1.119	0.11	0.681	0.762
	FR1 n66_Ant 2	20M	BPSK	50	28	Bottom of Laptop	20mm	OFF	354000	1770	23.41	24.00	1.146	0.19	0.569	0.652
	FR1 n66_Ant 2	20M	BPSK	1	1	Bottom Face	20mm	OFF	354000	1770	23.51	24.00	1.119	-0.13	0.267	0.299
	FR1 n66_Ant 2	20M	BPSK	50	28	Bottom Face	20mm	OFF	354000	1770	23.41	24.00	1.146	-0.12	0.176	0.202
	FR1 n66_Ant 2	20M	BPSK	1	1	Edge 1	12mm	OFF	354000	1770	23.51	24.00	1.119	0.16	0.557	0.624
	FR1 n66_Ant 2	20M	BPSK	50	28	Edge 1	12mm	OFF	354000	1770	23.41	24.00	1.146	0.17	0.437	0.501
	FR1 n66_Ant 2	20M	BPSK	1	1	Edge 4	0mm	OFF	354000	1770	23.51	24.00	1.119	-0.03	0.663	0.742
	FR1 n66_Ant 2	20M	BPSK	50	28	Edge 4	0mm	OFF	354000	1770	23.41	24.00	1.146	0.02	0.640	0.733

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n71	20M	BPSK	1	1	Bottom of Laptop	0mm	ON	136100	680.5	20.68	20.80	1.028	-0.02	1.040	1.069
10	FR1 n71	20M	BPSK	50	0	Bottom of Laptop	0mm	ON	136100	680.5	20.61	20.80	1.045	0.08	1.090	1.139
	FR1 n71	20M	BPSK	100	0	Bottom of Laptop	0mm	ON	136100	680.5	20.68	20.80	1.028	0.03	1.050	1.079
	FR1 n71	20M	BPSK	1	1	Bottom Face	0mm	ON	136100	680.5	16.41	16.60	1.045	-0.06	0.890	0.930
	FR1 n71	20M	BPSK	50	0	Bottom Face	0mm	ON	136100	680.5	16.26	16.60	1.081	-0.17	0.873	0.944
	FR1 n71	20M	BPSK	100	0	Bottom Face	0mm	ON	136100	680.5	16.14	16.60	1.112	-0.09	0.863	0.959
	FR1 n71	20M	BPSK	1	1	Edge 2	0mm	ON	136100	680.5	16.41	16.60	1.045	0.07	0.614	0.641
	FR1 n71	20M	BPSK	50	0	Edge 2	0mm	ON	136100	680.5	16.26	16.60	1.081	-0.05	0.569	0.615
	FR1 n71	20M	BPSK	1	1	Bottom of Laptop	20mm	OFF	136100	680.5	23.64	24.00	1.086	-0.11	0.187	0.203
	FR1 n71	20M	BPSK	50	28	Bottom of Laptop	20mm	OFF	136100	680.5	23.57	24.00	1.104	-0.13	0.210	0.232
	FR1 n71	20M	BPSK	1	1	Bottom Face	20mm	OFF	136100	680.5	23.64	24.00	1.086	-0.06	0.214	0.232
	FR1 n71	20M	BPSK	50	28	Bottom Face	20mm	OFF	136100	680.5	23.57	24.00	1.104	0.01	0.205	0.226
	FR1 n71	20M	BPSK	1	1	Edge 1	0mm	OFF	136100	680.5	23.64	24.00	1.086	0.1	0.223	0.242
	FR1 n71	20M	BPSK	50	28	Edge 1	0mm	OFF	136100	680.5	23.57	24.00	1.104	0.15	0.212	0.234
	FR1 n71	20M	BPSK	1	1	Edge 2	20mm	OFF	136100	680.5	23.64	24.00	1.086	-0.02	0.061	0.066
	FR1 n71	20M	BPSK	50	28	Edge 2	20mm	OFF	136100	680.5	23.57	24.00	1.104	-0.01	0.057	0.063

15.2 Repeated SAR Measurement

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 2_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	18900	1880	13.17	13.20	1.007	-0.12	1.150		1.158
2nd	LTE Band 2_Ant 2	20M	QPSK	50	50	Bottom Face	0mm	ON	18900	1880	13.17	13.20	1.007	-0.02	1.130	1.02	1.138
1st	LTE Band 66_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	132322	1745	13.67	13.70	1.007	-0.05	1.150		1.158
2nd	LTE Band 66_Ant 2	20M	QPSK	1	99	Bottom Face	0mm	ON	132322	1745	13.67	13.70	1.007	-0.02	1.140	1.01	1.148
1st	FR1 n5	20M	BPSK	50	0	Bottom Face	0mm	ON	167300	836.5	17.64	17.70	1.014	-0.12	1.150		1.166
2nd	FR1 n5	20M	BPSK	50	0	Bottom Face	0mm	ON	167300	836.5	17.64	17.70	1.014	0	1.140	1.01	1.156

General Note:

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

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN + WLAN2.4GHz Ant 1 + WLAN 2.4GHz Ant 2 + FR1	Yes
2.	WWAN + WLAN2.4GHz Ant 1 + Bluetooth Ant 2 + FR1	Yes
3.	WWAN + WLAN5GHz Ant 1 + WLAN 5GHz Ant 2 + FR1	Yes
4.	WWAN + WLAN5GHz Ant 1 + WLAN 5GHz Ant 2 + Bluetooth Ant 2 + FR1	Yes

General Note:

1. 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.
2. The Scaled SAR summation is calculated based on the same configuration and test position.
3. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
   i) Scalar SAR summation < 1.6W/kg.
   ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
   iii) If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.
   iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
   v) The SPLSR calculated results please refer to section 16.3.
4. For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01v06 based on the formula below.
   i) (*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)]·[√f(GHz)/*x*] W/kg for *test separation distances* ≤ 50 mm; where *x* = 7.5 for 1-g SAR, and *x* = 18.75 for 10-g SAR.
   ii) When the minimum separation distance is < 5mm, the distance is used 5mm to determine SAR test exclusion.
   iii) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the *test separation distances* is > 50 mm.
   iv) Bluetooth estimated SAR is conservatively determined by 5mm separation, for all applicable exposure positions.

Bluetooth Max Power	Exposure Position	All Positions
6.5 dBm	Estimated SAR (W/kg)	0.188 W/kg

16.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

In 5G NR + LTE + WLAN + BT simultaneous transmission, 5G NR and LTE transmission are managed and controlled by Qualcomm® Smart Transmit, while the RF exposure from WLAN and BT radios is managed using legacy approach, i.e., through a fixed power back-off if needed.

Since WLAN and BT do not employ time-averaging, 1gSAR and 10gSAR measurement for WLAN and BT need to be conducted at their corresponding rated power following current FCC test procedures to determine reported SAR values.

Smart Transmit current implementation assumes hotspots from 5G NR and LTE are collocated. Therefore, for a total of 100% exposure margin, if LTE uses x%, then the exposure margin left for 5G NR is capped to (100-x)%. Thus, the compliance equation for LTE + 5G NR is

*x% * A + (100-x)% * B ≤ 1.0,*

Where, A is normalized reported time-averaged SAR exposure ratio from LTE, and A ≤ 1.0; B is normalized reported time-averaged exposure ratio from 5G NR (i.e., PD exposure for mmW NR or SAR exposure for sub6 NR), and B ≤1.0.

Let C = normalized reported SAR exposure ratio from WLAN+BT, then for compliance,

*x% * A + (100-x)% * B + C ≤ 1.0* (1)

x% * A + (100-x)% * B ≤ x% * max(A, B) + (100-x)% * max(A, B) ≤ max(A, B)

*x% * A + (100-x)% * B + C ≤ max(A, B) + C ≤ 1.0* (2)

if A + C ≤ 1.0 and B + C ≤ 1.0 can be proven, then “x% * A + (100-x)% * B + C ≤ 1.0”. Therefore simultaneous transmission analysis for 5G NR + LTE + WLAN + BT can be performed in two steps

Step 1: Prove total exposure ratio (TER) of LTE + WLAN + BT < 1
Step 2: Prove total exposure ratio (TER) of 5G NR + WLAN + BT < 1

Else, if A + C > 1.0 and/or B + C > 1.0, then the followings need to hold true for compliance:

i. A and C are decoupled based on the SPLSR criteria , and
ii. (100-x)% * B + C ≤ 1.0, and
iii. x% * A + (100-x)% * B ≤ 1.0

Note iii. is covered in Part 2 report; i. and ii. should be addressed in Part 2 report.

Step 1 and Step 2 : it’s justified in section 16.2.

16.2 Body Exposure Conditions

<Laptop Mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
		FR1	2.4GHz WLAN Ant 1	2.4GHz WLAN Ant 2	5GHz WLAN Ant 1	5GHz WLAN Ant 2	Bluetooth Ant 2								
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)								
LTE Band 2_Ant 2	Bottom of Laptop at 20mm	0.497	0.542	0.707	1.182	0.707	0.188	**1.746**	**2.386**	**1.227**	**1.867**	**2.574**	**1.392**	**0.01**	**Case 13**
	Bottom of Laptop at 0mm	1.171	0.542	0.707	1.182	0.707	0.188	**2.420**	**3.060**	**1.901**	**2.541**	**3.248**	**2.066**	**0.01**	**Case 1**
LTE Band 7_Ant 2	Bottom of Laptop at 20mm	0.353	0.542	0.707	1.182	0.707	0.188	**1.602**	**2.242**	**1.083**	**1.723**	**2.430**	**1.248**	**0.01**	**Case 14**
	Bottom of Laptop at 0mm	1.179	0.542	0.707	1.182	0.707	0.188	**2.428**	**3.068**	**1.909**	**2.549**	**3.256**	**2.074**	**0.01**	**Case 2**
LTE Band 66_Ant 2	Bottom of Laptop at 20mm	0.605	0.542	0.707	1.182	0.707	0.188	**1.854**	**2.494**	**1.335**	**1.975**	**2.682**	**1.500**	**0.01**	**Case 15**
	Bottom of Laptop at 0mm	1.184	0.542	0.707	1.182	0.707	0.188	**2.433**	**3.073**	**1.914**	**2.554**	**3.261**	**2.079**	**0.01**	**Case 3**
FR1 n2	Bottom of Laptop at 20mm	0.594	0.542	0.707	1.182	0.707	0.188	**1.843**	**2.483**	**1.324**	**1.964**	**2.671**	**1.489**	**0.01**	**Case 16**
	Bottom of Laptop at 0mm	1.038	0.542	0.707	1.182	0.707	0.188	**2.287**	**2.927**	**1.768**	**2.408**	**3.115**	**1.933**	**0.02**	**Case 4**
FR1 n2 _Ant 2	Bottom of Laptop at 20mm	0.531	0.542	0.707	1.182	0.707	0.188	**1.780**	**2.420**	**1.261**	**1.901**	**2.608**	**1.426**	**0.01**	**Case 17**
	Bottom of Laptop at 0mm	1.038	0.542	0.707	1.182	0.707	0.188	**2.287**	**2.927**	**1.768**	**2.408**	**3.115**	**1.933**	**0.01**	**Case 5**
FR1 n5	Bottom of Laptop at 20mm	0.331	0.542	0.707	1.182	0.707	0.188	**1.580**	**2.220**	**1.061**	**1.701**	**2.408**	**1.226**	**0.01**	**Case 18**
	Bottom of Laptop at 0mm	1.023	0.542	0.707	1.182	0.707	0.188	**2.272**	**2.912**	**1.753**	**2.393**	**3.100**	**1.918**	**0.02**	**Case 6**
FR1 n7_Ant 2	Bottom of Laptop at 20mm	0.354	0.542	0.707	1.182	0.707	0.188	**1.603**	**2.243**	**1.084**	**1.724**	**2.431**	**1.249**	**0.01**	**Case 19**
	Bottom of Laptop at 0mm	1.172	0.542	0.707	1.182	0.707	0.188	**2.421**	**3.061**	**1.902**	**2.542**	**3.249**	**2.067**	**0.01**	**Case 7**
FR1 n12	Bottom of Laptop at 20mm	0.274	0.542	0.707	1.182	0.707	0.188	**1.523**	**2.163**	**1.004**	**1.644**	**2.351**	**1.169**	**0.01**	**Case 20**
	Bottom of Laptop at 0mm	1.016	0.542	0.707	1.182	0.707	0.188	**2.265**	**2.905**	**1.746**	**2.386**	**3.093**	**1.911**	**0.02**	**Case 8**
FR1 n66	Bottom of Laptop at 20mm	0.490	0.542	0.707	1.182	0.707	0.188	**1.739**	**2.379**	**1.220**	**1.860**	**2.567**	**1.385**	**0.01**	**Case 21**
	Bottom of Laptop at 0mm	1.189	0.542	0.707	1.182	0.707	0.188	**2.438**	**3.078**	**1.919**	**2.559**	**3.266**	**2.084**	**0.02**	**Case 9**
FR1 n66_Ant 2	Bottom of Laptop at 20mm	0.762	0.542	0.707	1.182	0.707	0.188	**2.011**	**2.651**	**1.492**	**2.132**	**2.839**	**1.657**	**0.01**	**Case 22**
	Bottom of Laptop at 0mm	1.140	0.542	0.707	1.182	0.707	0.188	**2.389**	**3.029**	**1.870**	**2.510**	**3.217**	**2.035**	**0.01**	**Case 10**
FR1 n71	Bottom of Laptop at 20mm	0.232	0.542	0.707	1.182	0.707	0.188	**1.481**	**2.121**	**0.962**	**1.602**	**2.309**	**1.127**	**0.01**	**Case 23**
	Bottom of Laptop at 0mm	1.139	0.542	0.707	1.182	0.707	0.188	**2.388**	**3.028**	**1.869**	**2.509**	**3.216**	**2.034**	**0.02**	**Case 11**
FR1 n41_Ant 2	Bottom of Laptop at 20mm	0.513	0.542	0.707	1.182	0.707	0.188	**1.762**	**2.402**	**1.243**	**1.883**	**2.590**	**1.408**	**0.01**	**Case 24**
	Bottom of Laptop at 0mm	1.191	0.542	0.707	1.182	0.707	0.188	**2.440**	**3.080**	**1.921**	**2.561**	**3.268**	**2.086**	**0.01**	**Case 12**

<Tablet Mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
		WWAN	2.4GHz WLAN Ant 1	2.4GHz WLAN Ant 2	5GHz WLAN Ant 1	5GHz WLAN Ant 2	Bluetooth Ant 2								
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)								
LTE Band 2_Ant 2	Bottom Face at 20mm	0.538	0.587	0.425	0.583	0.544	0.188	1.550	1.665	1.313	1.309	1.853	1.270	0.01	Case 13
	Edge 1 at 12mm	1.168						1.168	1.168	1.168	1.168	1.168	1.168		
	Bottom Face at 0mm	1.173	0.587	0.425	0.583	0.544	0.188	2.185	2.300	1.948	1.944	2.488	1.905	0.01	Case 1
	Edge 1 at 0mm	0.660						0.660	0.660	0.660	0.660	0.660	0.660		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
	Edge 4 at 0mm	0.743						0.743	0.743	0.743	0.743	0.743	0.743		
LTE Band 7_Ant 2	Bottom Face at 20mm	0.135	0.587	0.425	0.583	0.544	0.188	1.147	1.262	0.910	0.906	1.450	0.867		
	Edge 1 at 12mm	0.323						0.323	0.323	0.323	0.323	0.323	0.323		
	Bottom Face at 0mm	1.184	0.587	0.425	0.583	0.544	0.188	2.196	2.311	1.959	1.955	2.499	1.916	0.01	Case 2
	Edge 1 at 0mm	0.598						0.598	0.598	0.598	0.598	0.598	0.598		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
	Edge 4 at 0mm	0.695						0.695	0.695	0.695	0.695	0.695	0.695		
LTE Band 66_Ant 2	Bottom Face at 20mm	0.341	0.587	0.425	0.583	0.544	0.188	1.353	1.468	1.116	1.112	1.656	1.073	0.01	Case 14
	Edge 1 at 12mm	0.595						0.595	0.595	0.595	0.595	0.595	0.595		
	Bottom Face at 0mm	1.181	0.587	0.425	0.583	0.544	0.188	2.193	2.308	1.956	1.952	2.496	1.913	0.01	Case 3
	Edge 1 at 0mm	0.371						0.371	0.371	0.371	0.371	0.371	0.371		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
	Edge 4 at 0mm	0.707						0.707	0.707	0.707	0.707	0.707	0.707		
FR1 n2	Bottom Face at 20mm	0.572	0.587	0.425	0.583	0.544	0.188	1.584	1.699	1.347	1.343	1.887	1.304	0.01	Case 15
	Edge 2 at 20mm	0.319						0.319	0.319	0.319	0.319	0.319	0.319		
	Bottom Face at 0mm	1.162	0.587	0.425	0.583	0.544	0.188	2.174	2.289	1.937	1.933	2.477	1.894	0.01	Case 4
	Edge 1 at 0mm	0.519						0.519	0.519	0.519	0.519	0.519	0.519		
	Edge 2 at 0mm	0.248						0.248	0.248	0.248	0.248	0.248	0.248		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
FR1 n2_Ant 2	Bottom Face at 20mm	0.543	0.587	0.425	0.583	0.544	0.188	1.555	1.670	1.318	1.314	1.858	1.275	0.01	Case 16
	Edge 1 at 12mm	1.195						1.195	1.195	1.195	1.195	1.195	1.195		
	Bottom Face at 0mm	1.199	0.587	0.425	0.583	0.544	0.188	2.211	2.326	1.974	1.970	2.514	1.931	0.01	Case 5
	Edge 1 at 0mm	0.561						0.561	0.561	0.561	0.561	0.561	0.561		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
	Edge 4 at 0mm	0.712						0.712	0.712	0.712	0.712	0.712	0.712		
FR1 n5	Bottom Face at 20mm	0.444	0.587	0.425	0.583	0.544	0.188	1.456	1.571	1.219	1.215	1.759	1.176	0.01	Case 17
	Edge 2 at 20mm	0.126						0.126	0.126	0.126	0.126	0.126	0.126		
	Bottom Face at 0mm	1.166	0.587	0.425	0.583	0.544	0.188	2.178	2.293	1.941	1.937	2.481	1.898	0.02	Case 6
	Edge 1 at 0mm	0.191						0.191	0.191	0.191	0.191	0.191	0.191		
	Edge 2 at 0mm	0.473						0.473	0.473	0.473	0.473	0.473	0.473		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
FR1 n7_Ant 2	Bottom Face at 20mm	0.186	0.587	0.425	0.583	0.544	0.188	1.198	1.313	0.961	0.957	1.501	0.918		
	Edge 1 at 12mm	0.500						0.500	0.500	0.500	0.500	0.500	0.500		
	Bottom Face at 0mm	1.157	0.587	0.425	0.583	0.544	0.188	2.169	2.284	1.932	1.928	2.472	1.889	0.01	Case 7
	Edge 1 at 0mm	0.443						0.443	0.443	0.443	0.443	0.443	0.443		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	1.088	1.756	0.749	0.881	1.944	1.251	0.01	Case 21
	Edge 4 at 0mm	1.123						1.123	1.123	1.123	1.123	1.123	1.123		

WWAN Band	Exposure Position	1	2	3	4	5	6	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
		WWAN	2.4GHz WLAN Ant 1	2.4GHz WLAN Ant 2	5GHz WLAN Ant 1	5GHz WLAN Ant 2	Bluetooth Ant 2								
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)								
FR1 n12	Bottom Face at 20mm	0.313	0.587	0.425	0.583	0.544	0.188	**1.325**	**1.440**	**1.088**	**1.084**	**1.628**	**1.045**	**0.01**	**Case 18**
	Edge 2 at 20mm	0.085						**0.085**	**0.085**	**0.085**	**0.085**	**0.085**	**0.085**		
	Bottom Face at 0mm	1.162	0.587	0.425	0.583	0.544	0.188	**2.174**	**2.289**	**1.937**	**1.933**	**2.477**	**1.894**	**0.02**	**Case 8**
	Edge 1 at 0mm	0.256						**0.256**	**0.256**	**0.256**	**0.256**	**0.256**	**0.256**		
	Edge 2 at 0mm	0.662						**0.662**	**0.662**	**0.662**	**0.662**	**0.662**	**0.662**		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	**1.088**	**1.756**	**0.749**	**0.881**	**1.944**	**1.251**	**0.01**	**Case 21**
FR1 n66	Bottom Face at 20mm	0.568	0.587	0.425	0.583	0.544	0.188	**1.580**	**1.695**	**1.343**	**1.339**	**1.883**	**1.300**	**0.01**	**Case 19**
	Edge 2 at 20mm	0.260						**0.260**	**0.260**	**0.260**	**0.260**	**0.260**	**0.260**		
	Bottom Face at 0mm	1.072	0.587	0.425	0.583	0.544	0.188	**2.084**	**2.199**	**1.847**	**1.843**	**2.387**	**1.804**	**0.01**	**Case 9**
	Edge 1 at 0mm	0.159						**0.159**	**0.159**	**0.159**	**0.159**	**0.159**	**0.159**		
	Edge 2 at 0mm	0.445						**0.445**	**0.445**	**0.445**	**0.445**	**0.445**	**0.445**		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	**1.088**	**1.756**	**0.749**	**0.881**	**1.944**	**1.251**	**0.01**	**Case 21**
FR1 n66_Ant 2	Bottom Face at 20mm	0.299	0.587	0.425	0.583	0.544	0.188	**1.311**	**1.426**	**1.074**	**1.070**	**1.614**	**1.031**	**0.01**	**Case 20**
	Edge 1 at 12mm	0.624						**0.624**	**0.624**	**0.624**	**0.624**	**0.624**	**0.624**		
	Bottom Face at 0mm	1.194	0.587	0.425	0.583	0.544	0.188	**2.206**	**2.321**	**1.969**	**1.965**	**2.509**	**1.926**	**0.01**	**Case 10**
	Edge 1 at 0mm	0.345						**0.345**	**0.345**	**0.345**	**0.345**	**0.345**	**0.345**		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	**1.088**	**1.756**	**0.749**	**0.881**	**1.944**	**1.251**	**0.01**	**Case 21**
	Edge 4 at 0mm	0.742						**0.742**	**0.742**	**0.742**	**0.742**	**0.742**	**0.742**		
FR1 n71	Bottom Face at 20mm	0.232	0.587	0.425	0.583	0.544	0.188	**1.244**	**1.359**	**1.007**	**1.003**	**1.547**	**0.964**		
	Edge 2 at 20mm	0.066						**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**		
	Bottom Face at 0mm	0.959	0.587	0.425	0.583	0.544	0.188	**1.971**	**2.086**	**1.734**	**1.730**	**2.274**	**1.691**	**0.01**	**Case 11**
	Edge 1 at 0mm	0.242						**0.242**	**0.242**	**0.242**	**0.242**	**0.242**	**0.242**		
	Edge 2 at 0mm	0.641						**0.641**	**0.641**	**0.641**	**0.641**	**0.641**	**0.641**		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	**1.088**	**1.756**	**0.749**	**0.881**	**1.944**	**1.251**	**0.01**	**Case 21**
FR1 n41_Ant 2	Bottom Face at 20mm	0.128	0.587	0.425	0.583	0.544	0.188	**1.140**	**1.255**	**0.903**	**0.899**	**1.443**	**0.860**		
	Edge 1 at 12mm	0.778						**0.778**	**0.778**	**0.778**	**0.778**	**0.778**	**0.778**		
	Bottom Face at 0mm	1.165	0.587	0.425	0.583	0.544	0.188	**2.177**	**2.292**	**1.940**	**1.936**	**2.480**	**1.897**	**0.01**	**Case 12**
	Edge 1 at 0mm	0.408						**0.408**	**0.408**	**0.408**	**0.408**	**0.408**	**0.408**		
	Edge 3 at 0mm		0.561	0.527	0.693	1.063	0.188	**1.088**	**1.756**	**0.749**	**0.881**	**1.944**	**1.251**	**0.01**	**Case 21**
	Edge 4 at 0mm	0.754						**0.754**	**0.754**	**0.754**	**0.754**	**0.754**	**0.754**		

16.3 SPLSR Evaluation and Analysis

General Note:

1. SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (*min. separation distance, mm*). If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary
2. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.

<Laptop Mode>

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 1	LTE Band 2 _Ant 2	Bottom of Laptop	1.171	0mm	-97	-110	7.61	290.3	1.71	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	LTE Band 2 _Ant 2	Bottom of Laptop	1.171	0mm	-97	-110	7.61	197.7	1.88	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	LTE Band 2 _Ant 2	Bottom of Laptop	1.171	0mm	-97	-110	7.61	291.9	2.35	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	LTE Band 2 _Ant 2	Bottom of Laptop	1.171	0mm	-97	-110	7.61	208.7	2.07	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 2	LTE Band 7 _Ant 2	Bottom of Laptop	1.179	0mm	-95.6	-118.8	7.62	295.9	1.72	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	LTE Band 7 _Ant 2	Bottom of Laptop	1.179	0mm	-95.6	-118.8	7.62	195.7	1.89	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	LTE Band 7 _Ant 2	Bottom of Laptop	1.179	0mm	-95.6	-118.8	7.62	297.5	2.36	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	LTE Band 7 _Ant 3	Bottom of Laptop	1.179	0mm	-95.6	-118.8	7.62	207.6	2.07	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 3	LTE Band 66 _Ant 2	Bottom of Laptop	1.184	0mm	-97	-99.2	7.57	282.5	1.73	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	LTE Band 66 _Ant 2	Bottom of Laptop	1.184	0mm	-97	-99.2	7.57	198.9	1.89	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				

	LTE Band 66 _Ant 2	Bottom of Laptop	1.184	0mm	-97	-99.2	7.57	284.2	2.37	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	LTE Band 66 _Ant 2	Bottom of Laptop	1.184	0mm	-97	-99.2	7.57	208.7	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 4	FR1 n2	Bottom of Laptop	1.038	0mm	-66	148.5	7.28	173.5	1.58	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n2	Bottom of Laptop	1.038	0mm	-66	148.5	7.28	321.8	1.75	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n2	Bottom of Laptop	1.038	0mm	-66	148.5	7.28	175.2	2.22	0.02	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n2	Bottom of Laptop	1.038	0mm	-66	148.5	7.28	310.2	1.93	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 5	FR1 n2 _Ant 2	Bottom of Laptop	1.038	0mm	-97	-104.1	7.04	286.0	1.58	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n2 _Ant 2	Bottom of Laptop	1.038	0mm	-97	-104.1	7.04	198.3	1.75	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n2 _Ant 2	Bottom of Laptop	1.038	0mm	-97	-104.1	7.04	287.7	2.22	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n2 _Ant 2	Bottom of Laptop	1.038	0mm	-97	-104.1	7.04	208.6	1.93	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 6	FR1 n5	Bottom of Laptop	1.023	0mm	-62	154.6	7.04	171.4	1.57	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n5	Bottom of Laptop	1.023	0mm	-62	154.6	7.04	325.0	1.73	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n5	Bottom of Laptop	1.023	0mm	-62	154.6	7.04	173.1	2.21	0.02	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				

	FR1 n5	Bottom of Laptop	1.023	0mm	-62	154.6	7.04	313.0	1.92	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 7	FR1 n7 _Ant 2	Bottom of Laptop	1.172	0mm	-96.8	-116.4	7.1	294.9	1.71	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n7 _Ant 2	Bottom of Laptop	1.172	0mm	-96.8	-116.4	7.1	197.0	1.88	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n7 _Ant 2	Bottom of Laptop	1.172	0mm	-96.8	-116.4	7.1	296.5	2.35	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n7 _Ant 2	Bottom of Laptop	1.172	0mm	-96.8	-116.4	7.1	208.7	2.07	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 8	FR1 n12	Bottom of Laptop	1.016	0mm	-49	156.4	6.98	159.7	1.56	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n12	Bottom of Laptop	1.016	0mm	-49	156.4	6.98	320.3	1.72	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n12	Bottom of Laptop	1.016	0mm	-49	156.4	6.98	161.3	2.20	0.02	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n12	Bottom of Laptop	1.016	0mm	-49	156.4	6.98	307.5	1.91	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 9	FR1 n66	Bottom of Laptop	1.189	0mm	-71.2	148.5	7.35	178.5	1.73	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n66	Bottom of Laptop	1.189	0mm	-71.2	148.5	7.35	324.5	1.90	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n66	Bottom of Laptop	1.189	0mm	-71.2	148.5	7.35	180.2	2.37	0.02	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n66	Bottom of Laptop	1.189	0mm	-71.2	148.5	7.35	313.2	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 10	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	FR1 n66 _Ant 2	Bottom of Laptop	1.14	0mm	-96.5	-99	6.99	282.0	1.68	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n66 _Ant 2	Bottom of Laptop	1.14	0mm	-96.5	-99	6.99	198.4	1.85	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n66 _Ant 2	Bottom of Laptop	1.14	0mm	-96.5	-99	6.99	283.7	2.32	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n66 _Ant 2	Bottom of Laptop	1.14	0mm	-96.5	-99	6.99	208.2	2.04	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 11	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	FR1 n71	Bottom of Laptop	1.16	0mm	-57	156.4	7.35	167.2	1.70	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n71	Bottom of Laptop	1.16	0mm	-57	156.4	7.35	324.1	1.87	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n71	Bottom of Laptop	1.16	0mm	-57	156.4	7.35	168.9	2.34	0.02	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n71	Bottom of Laptop	1.16	0mm	-57	156.4	7.35	311.7	2.06	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 12	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	FR1 n41 _Ant 2	Bottom of Laptop	1.191	0mm	-95.8	-118.4	7.11	295.7	1.73	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n41 _Ant 2	Bottom of Laptop	1.191	0mm	-95.8	-118.4	7.11	195.9	1.90	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	208.3	0.73	0.00	Not required
	BT Ant 2		0.188	0mm	111.6	-105.8	4.71				
	FR1 n41 _Ant 2	Bottom of Laptop	1.191	0mm	-95.8	-118.4	7.11	297.3	2.37	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n41 _Ant 3	Bottom of Laptop	1.191	0mm	-95.8	-118.4	7.11	207.8	2.09	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 13	LTE Band 2 _Ant 2	Bottom of Laptop	0.497	20mm	-101.5	-104	6.76	289.1	1.04	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	LTE Band 2 _Ant 3	Bottom of Laptop	0.497	20mm	-101.5	-104	6.76	202.8	1.20	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	LTE Band 2 _Ant 3	Bottom of Laptop	0.497	20mm	-101.5	-104	6.76	290.7	1.68	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	LTE Band 2 _Ant 3	Bottom of Laptop	0.497	20mm	-101.5	-104	6.76	213.1	1.39	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 14	LTE Band 7 _Ant 2	Bottom of Laptop	0.353	20mm	-101.8	-117.8	6.91	299.3	0.90	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	LTE Band 7 _Ant 2	Bottom of Laptop	0.353	20mm	-101.8	-117.8	6.91	201.9	1.06	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	LTE Band 7 _Ant 2	Bottom of Laptop	0.353	20mm	-101.8	-117.8	6.91	300.9	1.54	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	LTE Band 7 _Ant 2	Bottom of Laptop	0.353	20mm	-101.8	-117.8	6.91	213.7	1.25	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 15	LTE Band 66 _Ant 2	Bottom of Laptop	0.605	20mm	-101.5	-107.1	6.79	291.3	1.15	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	LTE Band 66 _Ant 2	Bottom of Laptop	0.605	20mm	-101.5	-107.1	6.79	202.4	1.31	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	LTE Band 66 _Ant 2	Bottom of Laptop	0.605	20mm	-101.5	-107.1	6.79	292.9	1.79	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	LTE Band 66 _Ant 2	Bottom of Laptop	0.605	20mm	-101.5	-107.1	6.79	213.1	1.50	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 16	FR1 n2	Bottom of Laptop	0.594	20mm	-66.2	150.2	6.59	174.1	1.14	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n2	Bottom of Laptop	0.594	20mm	-66.2	150.2	6.59	323.3	1.30	0.00	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				

	FR1 n2	Bottom of Laptop	0.594	20mm	-66.2	150.2	6.59	175.8	1.78	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n2	Bottom of Laptop	0.594	20mm	-66.2	150.2	6.59	311.7	1.49	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 17	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	FR1 n2 _Ant 2	Bottom of Laptop	0.531	20mm	-101.5	-104	6.76	289.1	1.07	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n2 _Ant 2	Bottom of Laptop	0.531	20mm	-101.5	-104	6.76	202.8	1.24	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n2 _Ant 2	Bottom of Laptop	0.531	20mm	-101.5	-104	6.76	290.7	1.71	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n2 _Ant 2	Bottom of Laptop	0.531	20mm	-101.5	-104	6.76	213.1	1.43	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 18	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	FR1 n5	Bottom of Laptop	0.331	20mm	-80	138.1	6.64	184.7	0.87	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n5	Bottom of Laptop	0.331	20mm	-80	138.1	6.64	320.6	1.04	0.00	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n5	Bottom of Laptop	0.331	20mm	-80	138.1	6.64	186.5	1.51	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n5	Bottom of Laptop	0.331	20mm	-80	138.1	6.64	310.2	1.23	0.00	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 19	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	FR1 n7 _Ant 2	Bottom of Laptop	0.354	20mm	-92.6	-107.8	6.63	285.7	0.90	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n7 _Ant 2	Bottom of Laptop	0.354	20mm	-92.6	-107.8	6.63	193.5	1.06	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n7 _Ant 2	Bottom of Laptop	0.354	20mm	-92.6	-107.8	6.63	287.3	1.54	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n7 _Ant 2	Bottom of Laptop	0.354	20mm	-92.6	-107.8	6.63	204.2	1.25	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 20	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR

	FR1 n12	Bottom of Laptop	0.274	20mm	-77	136.6	6.58	181.4	0.82	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n12	Bottom of Laptop	0.274	20mm	-77	136.6	6.58	317.6	0.98	0.00	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n12	Bottom of Laptop	0.274	20mm	-77	136.6	6.58	183.2	1.46	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n12	Bottom of Laptop	0.274	20mm	-77	136.6	6.58	307.1	1.17	0.00	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 21	FR1 n66	Bottom of Laptop	0.49	20mm	-51.4	154.4	6.47	161.2	1.03	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n66	Bottom of Laptop	0.49	20mm	-51.4	154.4	6.47	319.7	1.20	0.00	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n66	Bottom of Laptop	0.49	20mm	-51.4	154.4	6.47	162.9	1.67	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n66	Bottom of Laptop	0.49	20mm	-51.4	154.4	6.47	307.0	1.39	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 22	FR1 n66 _Ant 2	Bottom of Laptop	0.762	20mm	-99.9	-107.1	6.73	290.2	1.30	0.01	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n66 _Ant 2	Bottom of Laptop	0.762	20mm	-99.9	-107.1	6.73	200.8	1.47	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n66 _Ant 2	Bottom of Laptop	0.762	20mm	-99.9	-107.1	6.73	291.8	1.94	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n66 _Ant 2	Bottom of Laptop	0.762	20mm	-99.9	-107.1	6.73	211.5	1.66	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 23	FR1 n71	Bottom of Laptop	0.232	20mm	-75.5	138.1	6.55	180.2	0.77	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n71	Bottom of Laptop	0.232	20mm	-75.5	138.1	6.55	318.1	0.94	0.00	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n71	Bottom of Laptop	0.232	20mm	-75.5	138.1	6.55	182.0	1.41	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				

	FR1 n71	Bottom of Laptop	0.232	20mm	-75.5	138.1	6.55	307.4	1.13	0.00	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
Case 24	**Band**	**Position**	**SAR (W/kg)**	**Gap (mm)**	**SAR peak location (mm) X**	**Y**	**Z**	**3D distance (mm)**	**Summed SAR (W/kg)**	**SPLSR Results**	**Simultaneous SAR**
	FR1 n41 _Ant 2	Bottom of Laptop	0.513	20mm	-100.6	-141.2	7.16	316.1	1.06	0.00	Not required
	WLAN 2.4G Ant 1		0.542	0mm	101	102.2	-0.22				
	FR1 n41 _Ant 2	Bottom of Laptop	0.513	20mm	-100.6	-141.2	7.16	201.0	1.22	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-127.2	-0.26				
	WLAN 2.4G Ant 1	Bottom of Laptop	0.542	0mm	101	102.2	-0.22	204.2	1.25	0.01	Not required
	WLAN 2.4G Ant 2		0.707	0mm	99.8	-102	-0.26				
	FR1 n41 _Ant 2	Bottom of Laptop	0.513	20mm	-100.6	-141.2	7.16	317.7	1.70	0.01	Not required
	WLAN 5G Ant 1		1.182	0mm	103	102.6	2.12				
	FR1 n41 _Ant 2	Bottom of Laptop	0.513	20mm	-100.6	-141.2	7.16	215.1	1.41	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				
	WLAN 5G Ant 1	Bottom of Laptop	1.182	0mm	103	102.6	2.12	208.6	2.08	0.01	Not required
	WLAN 5G + BT Ant 2		0.895	0mm	111.6	-105.8	4.71				

<Tablet Mode>

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 1	LTE Band 2 _Ant2	Bottom Face	1.173	0mm	101.6	-104.1	7.33	289.2	1.76	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	LTE Band 2 _Ant 2	Bottom Face	1.173	0mm	101.6	-104.1	7.33	205.3	1.60	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	LTE Band 2 _Ant 2	Bottom Face	1.173	0mm	101.6	-104.1	7.33	282.3	1.76	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	LTE Band 2 _Ant 2	Bottom Face	1.173	0mm	101.6	-104.1	7.33	204.3	1.91	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 2	LTE Band 7 _Ant 2	Bottom Face	1.184	0mm	97.6	-114.4	7.34	293.8	1.77	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	LTE Band 7 _Ant 2	Bottom Face	1.184	0mm	97.6	-114.4	7.34	201.7	1.61	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	LTE Band 7 _Ant 2	Bottom Face	1.184	0mm	97.6	-114.4	7.34	286.7	1.77	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	LTE Band 7 _Ant 2	Bottom Face	1.184	0mm	97.6	-114.4	7.34	200.3	1.92	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 3	LTE Band 66 _Ant 2	Bottom Face	1.181	0mm	103.1	-94.6	7.31	283.6	1.77	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	LTE Band 66 _Ant 2	Bottom Face	1.181	0mm	103.1	-94.6	7.31	207.0	1.61	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	LTE Band 66 _Ant 2	Bottom Face	1.181	0mm	103.1	-94.6	7.31	277.0	1.76	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	LTE Band 66 _Ant 2	Bottom Face	1.181	0mm	103.1	-94.6	7.31	206.3	1.91	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 4	FR1 n2	Bottom Face	1.162	0mm	71.5	151.6	7.54	181.8	1.75	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n2	Bottom Face	1.162	0mm	71.5	151.6	7.54	308.3	1.59	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n2	Bottom Face	1.162	0mm	71.5	151.6	7.54	184.5	1.75	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n2	Bottom Face	1.162	0mm	71.5	151.6	7.54	314.6	1.89	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 5	FR1 n2 _Ant 2	Bottom Face	1.199	0mm	101.9	-103.8	7.45	289.2	1.79	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n2 _Ant 2	Bottom Face	1.199	0mm	101.9	-103.8	7.45	205.6	1.62	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n2 _Ant 2	Bottom Face	1.199	0mm	101.9	-103.8	7.45	282.3	1.78	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n2 _Ant 2	Bottom Face	1.199	0mm	101.9	-103.8	7.45	204.6	1.93	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 6	FR1 n5	Bottom Face	1.166	0mm	33.6	153	7.74	146.3	1.75	0.02	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n5	Bottom Face	1.166	0mm	33.6	153	7.74	289.7	1.59	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n5	Bottom Face	1.166	0mm	33.6	153	7.74	149.8	1.75	0.02	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n5	Bottom Face	1.166	0mm	33.6	153	7.74	296.6	1.90	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 7	FR1 n7 _Ant 2	Bottom Face	1.157	0mm	100.2	-114.8	7.34	295.9	1.74	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n7 _Ant 2	Bottom Face	1.157	0mm	100.2	-114.8	7.34	204.3	1.58	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n7 _Ant 2	Bottom Face	1.157	0mm	100.2	-114.8	7.34	288.8	1.74	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n7 _Ant 2	Bottom Face	1.157	0mm	100.2	-114.8	7.34	202.9	1.89	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 8	FR1 n12	Bottom Face	1.162	0mm	33.6	153.1	7.69	146.4	1.75	0.02	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n12	Bottom Face	1.162	0mm	33.6	153.1	7.69	289.8	1.59	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n12	Bottom Face	1.162	0mm	33.6	153.1	7.69	149.9	1.75	0.02	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n12	Bottom Face	1.162	0mm	33.6	153.1	7.69	296.6	1.89	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 9	FR1 n66	Bottom Face	1.072	0mm	71.6	148.6	7.7	181.0	1.66	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n66	Bottom Face	1.072	0mm	71.6	148.6	7.7	305.9	1.50	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n66	Bottom Face	1.072	0mm	71.6	148.6	7.7	183.6	1.66	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n66	Bottom Face	1.072	0mm	71.6	148.6	7.7	312.2	1.80	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 10	FR1 n66 _Ant 2	Bottom Face	1.194	0mm	103.2	-96.2	7.32	284.8	1.78	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n66 _Ant 2	Bottom Face	1.194	0mm	103.2	-96.2	7.32	207.0	1.62	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n66 _Ant 2	Bottom Face	1.194	0mm	103.2	-96.2	7.32	278.1	1.78	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n66 _Ant 2	Bottom Face	1.194	0mm	103.2	-96.2	7.32	206.3	1.93	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 11	FR1 n71	Bottom Face	0.959	0mm	33.7	154.7	7.74	147.0	1.55	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n71	Bottom Face	0.959	0mm	33.7	154.7	7.74	291.2	1.38	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n71	Bottom Face	0.959	0mm	33.7	154.7	7.74	150.6	1.54	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n71	Bottom Face	0.959	0mm	33.7	154.7	7.74	298.1	1.69	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 12	FR1 n41 _Ant 2	Bottom Face	1.165	0mm	96.6	-114.4	7.32	293.1	1.75	0.01	Not required
	WLAN 2.4G Ant 1		0.587	0mm	-102.8	100.4	1.6				
	FR1 n41 _Ant 2	Bottom Face	1.165	0mm	96.6	-114.4	7.32	200.7	1.59	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	202.4	1.01	0.01	Not required
	WLAN 2.4G Ant 2		0.425	0mm	-103.6	-102	0.17				
	WLAN 2.4G Ant 1	Bottom Face	0.587	0mm	-102.8	100.4	1.6	210.8	0.78	0.00	Not required
	BT Ant 2		0.188	0mm	-102.6	-110.4	3.46				
	FR1 n41 _Ant 2	Bottom Face	1.165	0mm	96.6	-114.4	7.32	286.0	1.75	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n41 _Ant 2	Bottom Face	1.165	0mm	96.6	-114.4	7.32	199.3	1.90	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 13	LTE Band 2 _Ant 2	Bottom Face	0.538	20mm	107.6	-98	6.82	282.6	1.12	0.00	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	LTE Band 2 _Ant 2	Bottom Face	0.538	20mm	107.6	-98	6.82	210.6	1.27	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
Case 14	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 66 _Ant 2	Bottom Face	0.341	20mm	106	-96.5	6.84	280.4	0.92	0.00	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	LTE Band 66 _Ant 2	Bottom Face	0.341	20mm	106	-96.5	6.84	209.1	1.07	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
Case 15	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	FR1 n2	Bottom Face	0.583	20mm	65.8	151.4	6.76	179.0	1.17	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n2	Bottom Face	0.583	20mm	65.8	151.4	6.76	311.3	1.32	0.00	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
Case 16	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	FR1 n2 _Ant 2	Bottom Face	0.543	20mm	107.6	-101.1	6.85	284.7	1.13	0.00	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n2 _Ant 2	Bottom Face	0.543	20mm	107.6	-101.1	6.85	210.4	1.28	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
Case 17	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	FR1 n5	Bottom Face	0.444	20mm	64	155.9	6.63	178.9	1.03	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n5	Bottom Face	0.444	20mm	64	155.9	6.63	314.1	1.18	0.00	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
Case 18	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	FR1 n12	Bottom Face	0.313	20mm	63.9	154.7	6.65	178.4	0.90	0.00	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n12	Bottom Face	0.313	20mm	63.9	154.7	6.65	313.1	1.05	0.00	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 19	FR1 n66	Bottom Face	0.568	20mm	55	159	6.63	171.8	1.15	0.01	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n66	Bottom Face	0.568	20mm	55	159	6.63	312.1	1.30	0.00	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 20	FR1 n66 _Ant 2	Bottom Face	0.299	20mm	106	-99.5	6.78	282.4	0.88	0.00	Not required
	WLAN 5G Ant 1		0.583	0mm	-102.6	90.8	2.05				
	FR1 n66 _Ant 2	Bottom Face	0.299	20mm	106	-99.5	6.78	208.9	1.03	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 21	WLAN 5G Ant 1	Bottom Face	0.583	0mm	-102.6	90.8	2.05	201.2	1.32	0.01	Not required
	WLAN 5G + BT Ant 2		0.732	0mm	-102.6	-110.4	3.46				

Test Engineer： Bevis Chang, Tom Jiang, Bob Cheng and Jacky Chen

17. Uncertainty Assessment

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

Declaration of Conformity:

The test results with all measurement uncertainty excluded is 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.

18. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[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 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[8] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[9] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[10] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[11] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[12] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[13] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.