FCC SAR TEST REPORT

FCC ID	:	**2AJN7-TP00130CU**
Equipment	:	**Notebook Computer**
Brand Name	:	**Lenovo**
Model Name	:	**TP00130C; TP00130D**
Applicant	:	**LC Future Center Limited Taiwan Branch 7F., No.780, Beian Rd., Zhongshan Dist., Taipei 104, Taiwan**
Manufacturer	:	**LCFC (HeFei) Electronics Technology Co., Ltd. No. 3188-1, Yungu Road (Hefei Export Processing Zone), Hefei Economics & Technology Development Area, Anhui, CHINA**
Standard	:	**FCC 47 CFR Part 2 (2.1093)**

Equipment: Fibocom FM350-GL, Intel AX211D2W and Qualcomm QCNFA725 tested inside of Lenovo Notebook Computer.

The product was received on Nov. 18, 2021 and testing was started from Dec. 04, 2021 and completed on Jan. 09, 2022. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

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

Cona Huang

Approved by: Cona Huang / Deputy Manager

Sporton International Inc. EMC & Wireless Communications Laboratory

Table of Contents

1. Statement of Compliance **4**
2. Guidance Applied **4**
3. Equipment Under Test (EUT) Information **5**
3.1 General Information 5
3.2 General LTE SAR Test and Reporting Considerations 7
3.3 General 5G NR SAR Test and Reporting Considerations 10
4. Proximity Sensor Triggering Test **12**
5. RF Exposure Limits **15**
5.1 Uncontrolled Environment 15
5.2 Controlled Environment 15
6. Specific Absorption Rate (SAR) **16**
6.1 Introduction 16
6.2 SAR Definition 16
7. System Description and Setup **17**
7.1 Test Site Location 17
7.2 E-Field Probe 18
7.3 Data Acquisition Electronics (DAE) 18
7.4 Phantom 19
7.5 Device Holder 20
8. Measurement Procedures **21**
8.1 Spatial Peak SAR Evaluation 21
8.2 Power Reference Measurement 22
8.3 Area Scan 22
8.4 Zoom Scan 23
8.5 Volume Scan Procedures 23
8.6 Power Drift Monitoring 23
9. Test Equipment List **24**
10. System Verification **25**
10.1 Tissue Verification 25
10.2 System Performance Check Results 26
11. UMTS/LTE Output Power (Unit: dBm) **27**
12. 5G NR Output Power (Unit: dBm) **142**
13. SAR Test Results **207**
13.1 Body SAR 209
13.2 Repeated SAR Measurement 215
13.3 LTE Band 41 Power Class 2 and Power Class 3 Linearity 216
13.4 FR1 n41/n77 Power Class 2 and Power Class 3 Linearity 216
14. Simultaneous Transmission Analysis **217**
14.1 Body Exposure Conditions 218
14.2 SPLSR Evaluation and Analysis 219
15. Uncertainty Assessment **221**
16. References **221**
Appendix A. Plots of System Performance Check
Appendix B. Plots of High SAR Measurement
Appendix C. DASY Calibration Certificate
Appendix D. Test Setup Photos and Antenna Location

History of this test report

Report No.	Version	Description	Issued Date
FA1O2302	01	Initial issue of report	Mar. 11, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for LC Future Center Limited Taiwan Branch, Notebook Computer, TP00130C; TP00130D, are as follows.

Equipment Class	Frequency Band		Highest SAR Summary Body 1g SAR (W/kg)	Highest Simultaneous Transmission 1g SAR (W/kg)
Licensed	WCDMA	WCDMA II	0.96	1.20
		WCDMA IV	1.14	
		WCDMA V	1.05	
	LTE	LTE Band 7	1.08	
		LTE Band 12 / 17	1.13	
		LTE Band 13	1.12	
		LTE Band 14	1.15	
		LTE Band 2 / 25	1.00	
		LTE Band 5 / 26	0.95	
		LTE Band 30	1.04	
		LTE Band 38	0.95	
		LTE Band 41	1.02	
		LTE Band 48	0.44	
		LTE Band 4 / 66	1.03	
		LTE Band 71	0.84	
	FR1	FR1 n5	1.16	
		FR1 n7	1.18	
		FR1 n2 / n25	1.18	
		FR1 n30	1.19	
		FR1 n38	1.07	
		FR1 n41	1.01	
		FR1 n66	1.08	
		FR1 n71	1.13	
		FR1 n77 / n78	1.19	
Date of Testing:			2021/12/4 ~ 2022/1/9	

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 for Partial-Body 1g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Carlie Tsai

2. Guidance Applied

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

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- 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	TP00130C; TP00130D
FCC ID	2AJN7-TP00130CU
Integrated WWAN Module	Brand Name: Fibocom Model Name: FM350-GL
Integrated NFC Module	Brand Name: Foxconn Model Name: T77H747
Integrated UWB Module	Brand Name: Novelda AS Model Name: X4C007
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz NFC : 13.56 MHz UWB: 7490 MHz ~ 8450 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM NFC: ASK UWB: Pulsed Tx with pseudo random bi-phase
EUT Stage	Production Unit

Remark:

1. This device had two antenna vendors, RF exposure evaluation is selected Speed as the main tested, Amphenol was spot check worst case found in Speed.
2. When the EN-DC is active only operating at WWAN main and MIMO antenna combination and the Sim-Tx analysis include in section14.
3. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the antenna can be found in the operational description.
4. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds.
5. The UWB output power is -15 dBm was referring to FCC ID: 2AD9Q-X4C007, test report no.: 2711ERM.002, that the UWB output power is less than 1mW and exempt from RF Exposure testing
6. The WLAN module list below, only either one module is integrated in the host at the same time
7. The device support uplink MIMO for 5G n41/n77/n78 when WWAN main and MIMO 2 antenna is transmitting, for uplink MIMO assessment is separate antenna to do SAR testing then do the Sim-Tx analysis to show the uplink MIMO is compliance.

WLAN Module Information	
Integrated WLAN Module 1	Brand Name: Intel Model Name: AX211D2W
Integrated WLAN Module 2	Brand Name: Qualcomm Model Name: QCNFA725
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8GHz Band: 5725 MHz ~ 5850Hz WLAN 6GHz: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
Remark: 1. The FCC ID: PD9AX211D2, Intel AX211D2W WLAN/BT module is integrated into this host. Since the WLAN/BT transmit antenna to bottom of laptop is higher than 200mm, when the separation distance is > 50mm, an estimated 1g SAR 0.4W/kg for each transmit antenna is using for Sim-Tx analysis. 2. The FCC ID: A5M-QCNFA725, Qualcomm QCNFA725 WLAN/BT module is integrated into this host. Since the WLAN/BT transmit antenna to bottom of laptop is higher than 200mm, when the separation distance is > 50mm, an estimated 1g SAR 0.4W/kg for each transmit antenna is using for Sim-Tx analysis.	

WWAN Antenna Information				
Main Antenna	Manufacturer	Amphenol	Peak gain(dBi)	1.9
	Part number	DC33001VG40	Type	PIFA
	Manufacturer	Speed	Peak gain(dBi)	1.9
	Part number	DC33001VH40	Type	PIFA
MIMO 2 Antenna	Manufacturer	Amphenol	Peak gain(dBi)	1.9
	Part number	DC33001VG30	Type	PIFA
	Manufacturer	Speed	Peak gain(dBi)	1.9
	Part number	DC33001VH30	Type	PIFA

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>2AJN7-TP00130CU</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 MHz ~ 1910 MHz
LTE Band 4: 1710 MHz ~ 1755 MHz
LTE Band 5: 824 MHz ~ 849 MHz
LTE Band 7: 2500 MHz ~ 2570 MHz
LTE Band 12: 699 MHz ~ 716 MHz
LTE Band 13: 777 MHz ~ 787 MHz
LTE Band 14: 788 MHz ~ 798 MHz
LTE Band 17: 704 MHz ~ 716 MHz
LTE Band 25: 1850 MHz ~ 1915 MHz
LTE Band 26: 814 MHz ~ 849 MHz
LTE Band 30: 2305 MHz ~ 2315 MHz
LTE Band 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 48: 3550 MHz ~ 3700 MHz
LTE Band 66: 1710 MHz ~ 1780 MHz
LTE Band 71: 663 MHz ~ 698 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 13: 5MHz, 10MHz
LTE Band 14: 5MHz, 10MHz
LTE Band 17: 5MHz, 10MHz
LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 30: 5MHz, 10MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 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 / 256QAM</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 section 11.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>This device supports maximum of 5 carriers in the downlink and 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.</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
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 48								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560
LM	55810	3607	55815	3607.5	55820	3608	55830	3609
MH	56170	3643	56165	3642.5	56160	3642	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690

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

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

3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
FCC ID	2AJN7-TP00130CU
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 n25: 1850 MHz ~ 1915 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n41: 10MHz, 15MHz, 40MHz, 50MHz, 80MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 100MHz
SCS	FDD/TDD: SCS15KHz and 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 B5/12/13/14
LTE Anchor Bands for n5	LTE B2/7/30/48/66
LTE Anchor Bands for n41	LTE B2/41/66
LTE Anchor Bands for n66	LTE B5/12/13/48
LTE Anchor Bands for n71	LTE B2/66
LTE Anchor Bands for n77	LTE B2/5/12/13/14/30/41/66
LTE Anchor Bands for n78	LTE B2/5/7/38

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 25

	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	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905

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

NR Band 38								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	514500	2572.5	515004	2575.02	515502	2577.51	516000	2580
M	519000	2595	519000	2595	519000	2595	519000	2595
H	523500	2617.5	522996	2614.98	522498	2612.49	522000	2610

NR Band 41												
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 80MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Ch. #	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	503202	2516.01	504204	2521.02	507204	2536.02	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	534000	2670	532998	2664.99	529998	2649.99	528000	2640

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

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

NR Band 77 (3700 MHz – 3980MHz)																
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	648000	3720	648334	3725.01	648668	3730.02	649334	3740.01	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664000	3960	663666	3954.99	663332	3949.98	662666	3939.99	662000	3930

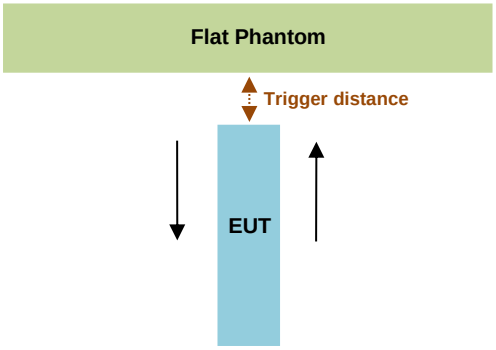
NR Band 78 (3700 MHz – 3800MHz)																
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	648000	3720	648334	3725.01	648668	3730.02	649334	3740.01	650000	3750
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652000	3780	651666	3774.99	651332	3769.98	650666	3759.99	650000	3750

NR Band 77/78(3450MHz ~ 3550MHz)																
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631334	3470.01	631668	3475.02	632000	3480	632668	3490.02	633332	3499.98
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635332	3529.98	635000	3525	634666	3519.99	634000	3510	633332	3499.98

4. Proximity Sensor Triggering Test

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

For the device is fully integrated, touch sensing capacitive sensor. It uses a charge transfer capacitive acquisition method that is capable of near range proximity detection. In this device offers a state of the art capacitive sensing engine with an embedded sampling capacitor and voltage regulator allowing the overall solution cost to be reduced and improving system immunity in noisy environments.
Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed. The details are illustrated as following, and the shortest triggering distances were reported and used for SAR assessment.
In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering distance than that for 1900MHz, and the tissue-equivalent medium for 1900MHz was used for formal proximity sensor triggering testing.



Proximity Sensor Trigger Distance (mm)		
Main Antenna		
Position	Bottom of Laptop	
	moving toward	moving away
Minimum	26	27

<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 this device, due to the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor on this device.

Proximity sensor power reduction

Exposure Position / wireless mode	Bottom of Laptop (1)
WCDMA Band II Main	5.0 dB
WCDMA Band IV Main	3.5 dB
WCDMA Band V Main	2.5 dB
LTE Band 7 Main	5.5 dB
LTE Band 13 Main	0.5 dB
LTE Band 14 Main	0.5 dB
LTE Band 2 Main / 25 Main	4.0 dB
LTE Band 5 Main / 26 Main	2.5 dB
LTE Band 30 Main	6.5 dB
LTE Band 38 Main	2.5 dB
LTE Band 41 Main	0.5 dB
LTE Band 41_HPUE Main	0.5 dB
LTE Band 4 Main / 66 Main	3.0 dB
FR1 n2 Main / n25 Main	4.0 dB
FR1 n5 Main	2.0 dB
FR1 n7 Main	6.0 dB
FR1 n30 Main	6.5 dB
FR1 n38 Main	4.5 dB
FR1 n41 Main	6.0 dB
FR1 n41_HPUE Main	4.0 dB
FR1 n66 Main	2.5 dB
FR1 n77 Main / n78 Main	5.0 dB
FR1 n77_HPUE Main / n78_HPUE Main	4.5 dB

Remark:

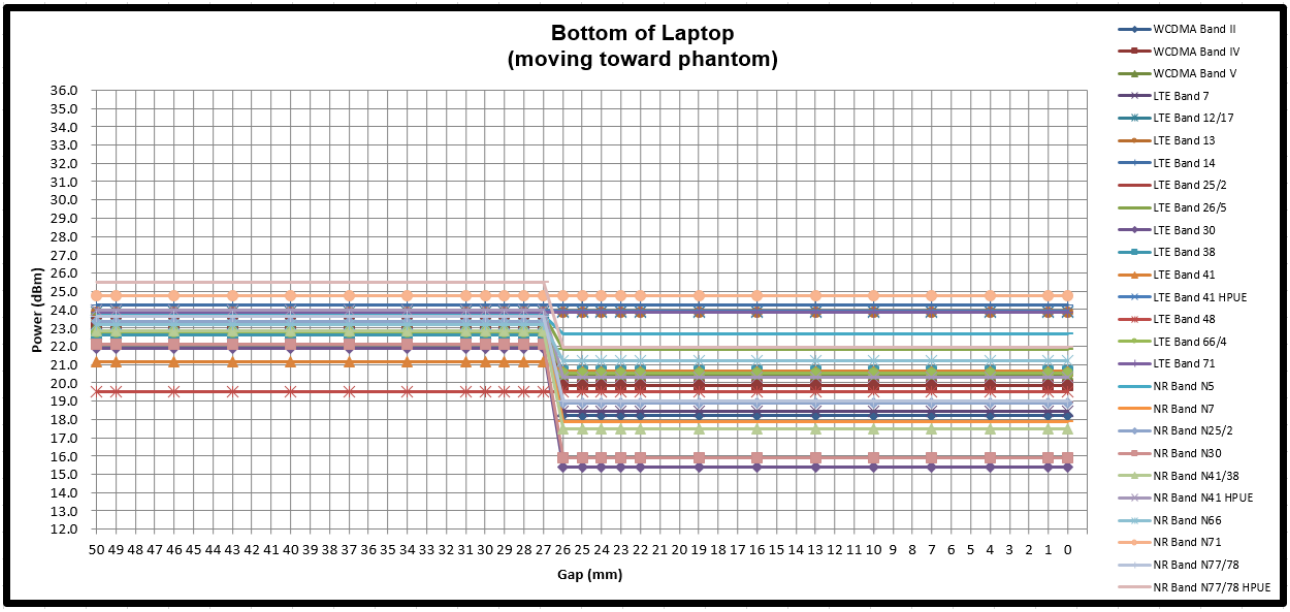
1. (1): Reduced maximum limit applied by activation of proximity and G-sensor.
2. Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown as below
3. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:

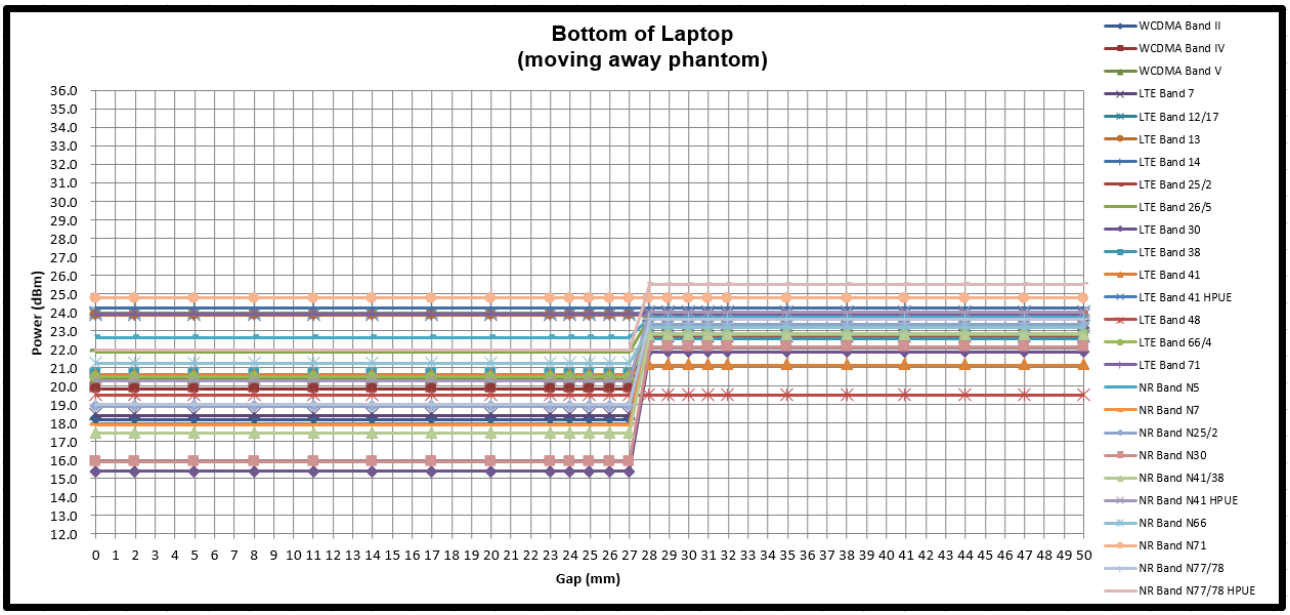
   Main Antenna:

   - Bottom of Laptop: 25 mm

Power Measurement during Sensor Trigger distance testing

Main Antenna





5. RF Exposure Limits

5.1 Uncontrolled Environment

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

5.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

6. Specific Absorption Rate (SAR)

6.1 Introduction

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

6.2 SAR Definition

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

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

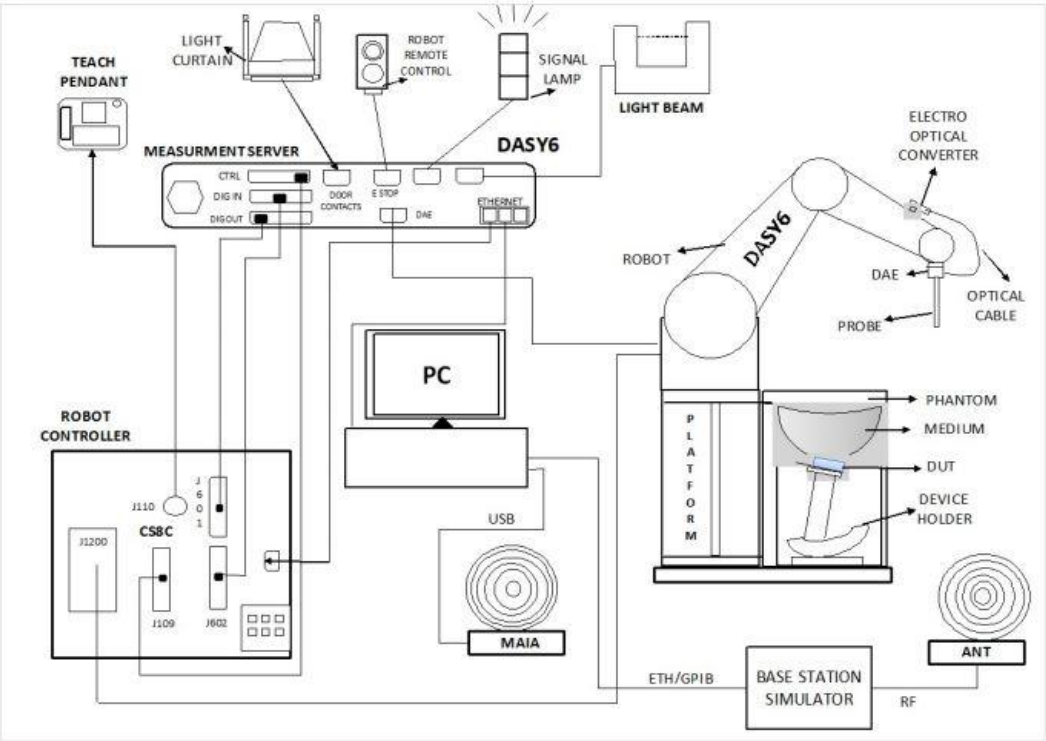
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

7. System Description and Setup

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



- The DASY system in DASY6/DASY5 V5.2 SAR Configuration is shown above
- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running windows software and the DASY5/DASY6 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

7.1 Test Site Location

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

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

7.2 E-Field Probe

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

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	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	

7.3 Data Acquisition Electronics (DAE)

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

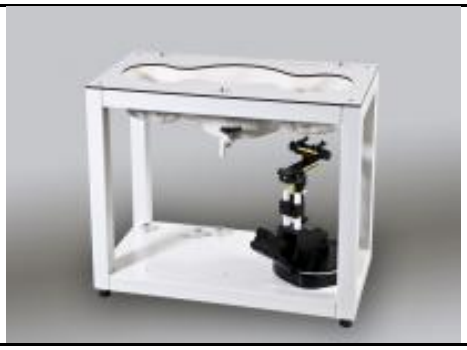
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.1 Photo of DAE

7.4 Phantom

<SAM Twin Phantom>

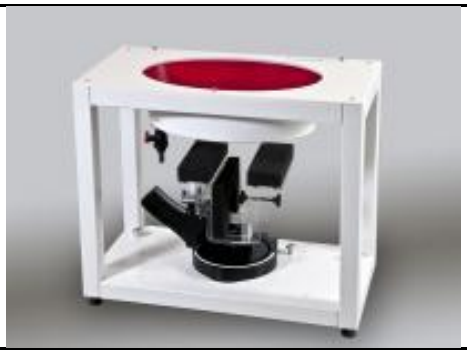
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

<ELI Phantom>

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



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

7.5 Device Holder

<Mounting Device for Hand-Held Transmitter>

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

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

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

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

Mounting Device for Laptops

8. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

8.1 Spatial Peak SAR Evaluation

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

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

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

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values 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

8.2 Power Reference Measurement

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

8.3 Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	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.	

8.4 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	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
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.

8.5 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.

8.6 Power Drift Monitoring

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

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit(2)	D750V3	1107	Mar. 08, 2019	Mar. 05, 2022
SPEAG	835MHz System Validation Kit(2)	D835V2	4d167	Nov. 25, 2019	Nov. 22, 2022
SPEAG	1750MHz System Validation Kit(2)	D1750V2	1112	Mar. 07, 2019	Mar. 04, 2022
SPEAG	1900MHz System Validation Kit(2)	D1900V2	5d185	Mar. 07, 2019	Mar. 04, 2022
SPEAG	2300MHz System Validation Kit(2)	D2300V2	1006	Jan. 28, 2019	Jan. 25, 2022
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 17, 2021	Aug. 16, 2022
SPEAG	2600MHz System Validation Kit(2)	D2600V2	1078	Mar. 06, 2019	Mar. 03, 2022
SPEAG	3500MHz System Validation Kit(2)	D3500V2	1014	Jan. 29, 2019	Jan. 26, 2022
SPEAG	3700MHz System Validation Kit(2)	D3700V2	1006	Mar. 05, 2019	Mar. 02, 2022
SPEAG	3900MHz System Validation Kit(2)	D3900V2	1017	Apr. 29, 2019	Apr. 26, 2022
SPEAG	Data Acquisition Electronics	DAE3	528	Jul. 26, 2021	Jul. 25, 2022
SPEAG	Data Acquisition Electronics	DAE4	1399	Feb. 16, 2021	Feb. 15, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3169	May. 28, 2021	May. 27, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3578	Jun. 23, 2021	Jun. 22, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 27, 2021	Jan. 26, 2022
RCPTWN	Thermometer	HTC-1	TM685-1	Oct. 28, 2021	Oct. 27, 2022
RCPTWN	Thermometer	HTC-1	TM560-2	Oct. 28, 2021	Oct. 27, 2022
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 21, 2021	Oct. 20, 2022
Keysight	Wireless Communication Test Set	E5515C	MY50267236	Mar. 21, 2021	Mar. 20, 2022
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Oct. 24, 2021	Oct. 23, 2022
Keysight	ENA Network Analyzer	E5071C	MY46104758	Sep. 07, 2021	Sep. 06, 2022
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 24, 2021	Sep. 23, 2022
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Oct. 26, 2021	Oct. 25, 2022
Anritsu	Power Meter	ML2495A	1419002	Aug. 18, 2021	Aug. 17, 2022
Anritsu	Power Sensor	MA2411B	1911176	Aug. 18, 2021	Aug. 17, 2022
Anritsu	Power Meter	ML2496A	2119003	Jun. 09, 2021	Jun. 08, 2022
Anritsu	Power Sensor	MA2411B	1726150	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Jan. 15, 2021	Jan. 14, 2022
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 19, 2021	Aug. 18, 2022
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 12, 2021	Oct. 11, 2022
Mini-Circuits	Power Amplifier	ZVE-8G+	479102029	Sep. 06, 2021	Sep. 05, 2022
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.

10. System Verification

10.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18℃ to 25℃, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18℃ to 25℃ and within ± 2℃ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.
The liquid tissue depth was at least 15cm in the phantom for all SAR testing

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	22.5	0.881	42.976	0.89	41.90	-1.01	2.57	±5	2021/12/5
750	22.5	0.881	42.976	0.89	41.90	-1.01	2.57	±5	2021/12/5
835	22.5	0.910	42.380	0.90	41.50	1.11	2.12	±5	2021/12/5
1750	22.4	1.389	40.296	1.37	40.10	1.39	0.49	±5	2021/12/4
1750	22.5	1.397	40.396	1.37	40.10	1.97	0.74	±5	2021/12/8
1750	22.5	1.381	40.804	1.37	40.10	0.80	1.76	±5	2022/1/4
1900	22.4	1.405	40.193	1.40	40.00	0.36	0.48	±5	2021/12/4
1900	22.5	1.413	40.293	1.40	40.00	0.93	0.73	±5	2021/12/8
1900	22.5	1.397	40.552	1.40	40.00	-0.21	1.38	±5	2022/1/4
2300	22.6	1.633	39.605	1.67	39.50	-2.22	0.27	±5	2021/12/6
2300	22.6	1.644	39.755	1.67	39.50	-1.56	0.65	±5	2021/12/9
2300	22.5	1.609	39.073	1.67	39.50	-3.65	-1.08	±5	2022/1/5
2600	22.6	1.965	38.261	1.96	39.00	0.26	-1.89	±5	2021/12/6
2600	22.6	1.977	38.411	1.96	39.00	0.87	-1.51	±5	2021/12/9
2600	22.5	1.954	37.838	1.96	39.00	-0.31	-2.98	±5	2022/1/5
2600	22.3	1.979	38.596	1.96	39.00	0.97	-1.04	±5	2022/1/9
3500	22.3	2.899	36.515	2.91	37.90	-0.38	-3.65	±5	2022/1/8
3700	22.3	3.032	36.314	3.12	37.70	-2.82	-3.68	±5	2022/1/8
3900	22.3	3.174	36.121	3.33	37.51	-4.68	-3.70	±5	2022/1/8

10.2 System Performance Check Results

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

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
SAR01	2021/12/5	750	250	D750V3-1107	ES3DV3 - SN3169	DAE4 Sn1399	1.97	8.32	7.88	-5.29
SAR04	2021/12/5	750	50	D750V3-1107	EX3DV4 - SN3976	DAE4 Sn1399	0.389	8.32	7.78	-6.49
SAR01	2021/12/5	835	250	D835V2-4d167	ES3DV3 - SN3169	DAE4 Sn1399	2.22	9.55	8.88	-7.02
SAR04	2021/12/4	1750	50	D1750V2-1112	EX3DV4 - SN3976	DAE4 Sn1399	1.89	36.70	37.8	3.00
SAR01	2021/12/8	1750	250	D1750V2-1112	ES3DV3 - SN3169	DAE4 Sn1399	8.58	36.70	34.32	-6.49
SAR05	2022/1/4	1750	50	D1750V2-1112	EX3DV4 - SN3578	DAE3 Sn528	1.86	36.70	37.2	1.36
SAR04	2021/12/4	1900	50	D1900V2-5d185	EX3DV4 - SN3976	DAE4 Sn1399	1.91	39.40	38.2	-3.05
SAR01	2021/12/8	1900	250	D1900V2-5d185	ES3DV3 - SN3169	DAE4 Sn1399	9.52	39.40	38.08	-3.35
SAR05	2022/1/4	1900	50	D1900V2-5d185	EX3DV4 - SN3578	DAE3 Sn528	1.94	39.40	38.8	-1.52
SAR01	2021/12/6	2300	250	D2300V2-1006	ES3DV3 - SN3169	DAE4 Sn1399	12.10	48.70	48.4	-0.62
SAR04	2021/12/9	2300	50	D2300V2-1006	EX3DV4 - SN3976	DAE4 Sn1399	2.38	48.70	47.6	-2.26
SAR05	2022/1/5	2300	50	D2300V2-1006	EX3DV4 - SN3578	DAE3 Sn528	2.47	48.70	49.4	1.44
SAR01	2021/12/6	2600	50	D2600V2-1008	ES3DV3 - SN3169	DAE4 Sn1399	2.68	58.00	53.6	-7.59
SAR04	2021/12/9	2600	50	D2600V2-1008	EX3DV4 - SN3976	DAE4 Sn1399	2.93	58.00	58.6	1.03
SAR05	2022/1/5	2600	50	D2600V2-1078	EX3DV4 - SN3578	DAE3 Sn528	2.79	57.60	55.8	-3.13
SAR05	2022/1/9	2600	50	D2600V2-1078	EX3DV4 - SN3578	DAE3 Sn528	2.84	57.60	56.8	-1.39
SAR05	2022/1/8	3500	100	D3500V2-1014	EX3DV4 - SN3578	DAE3 Sn528	6.27	67.90	62.7	-7.66
SAR05	2022/1/8	3700	100	D3700V2-1006	EX3DV4 - SN3578	DAE3 Sn528	6.44	67.30	64.4	-4.31
SAR05	2022/1/8	3900	50	D3900V2-1017-3900	EX3DV4 - SN3578	DAE3 Sn528	3.55	69.50	71	2.16

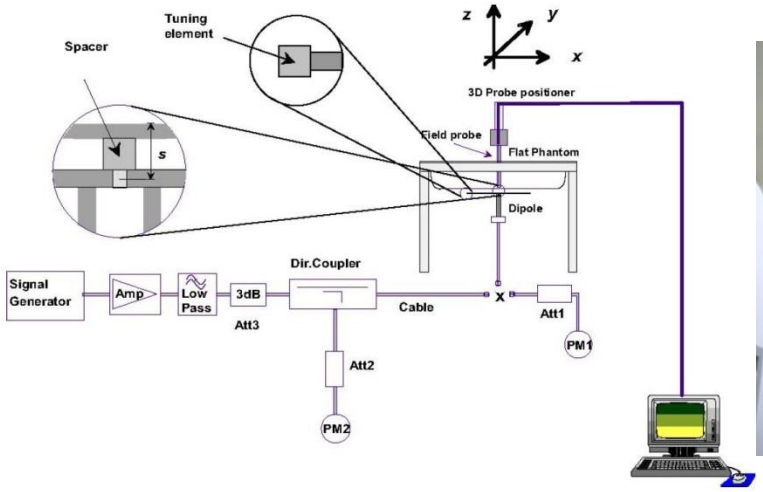


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

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

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

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

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

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

Setup Configuration

HSUPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

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

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

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

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

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

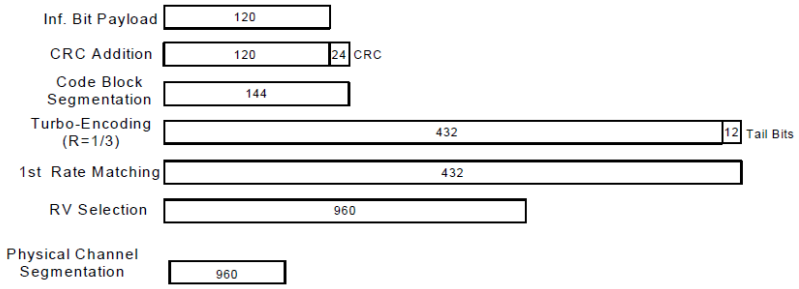


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

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

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

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

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

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

Setup Configuration

<WCDMA Conducted Power>

General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

Default Power Mode (Main)

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.4	
3GPP Rel 99	RMC 12.2Kbps	23.16	23.12	23.12	24.50	23.30	23.19	23.29	24.50	23.19	23.20	23.18	24.50
3GPP Rel 6	HSDPA Subtest-1	22.25	22.30	22.37	23.50	22.29	22.30	22.40	23.50	22.30	22.09	22.32	23.50
3GPP Rel 6	HSDPA Subtest-2	22.26	22.32	22.33	23.50	22.35	22.29	22.39	23.50	22.28	22.05	22.26	23.50
3GPP Rel 6	HSDPA Subtest-3	21.79	21.84	21.87	23.00	21.80	21.81	21.91	23.00	21.81	21.60	21.82	23.00
3GPP Rel 6	HSDPA Subtest-4	21.75	21.82	21.80	23.00	21.87	21.85	21.96	23.00	21.75	21.53	21.79	23.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.18	22.24	22.27	23.50	22.28	22.25	22.32	23.50	22.29	22.06	22.23	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.18	22.23	22.25	23.50	22.26	22.22	22.36	23.50	22.23	21.96	22.16	23.50
3GPP Rel 8	DC-HSDPA Subtest-3	21.77	21.74	21.82	23.00	21.72	21.76	21.84	23.00	21.74	21.60	21.73	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	21.67	21.75	21.71	23.00	21.83	21.82	21.87	23.00	21.75	21.49	21.78	23.00
3GPP Rel 6	HSUPA Subtest-1	20.51	20.54	20.56	21.50	20.60	20.55	20.52	21.50	20.34	20.25	20.41	21.50
3GPP Rel 6	HSUPA Subtest-2	20.24	20.29	20.33	21.50	20.41	20.30	20.44	21.50	20.26	20.05	20.22	21.50
3GPP Rel 6	HSUPA Subtest-3	21.27	21.27	21.33	22.50	21.35	21.35	21.42	22.50	21.26	21.06	21.27	22.50
3GPP Rel 6	HSUPA Subtest-4	19.92	19.82	19.88	21.50	20.14	20.09	20.17	21.50	19.81	19.59	19.76	21.50
3GPP Rel 6	HSUPA Subtest-5	21.56	21.58	21.53	22.50	21.61	21.53	21.54	22.50	21.18	21.08	21.26	22.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	21.17	21.16	21.25	22.50	21.38	21.29	21.34	22.50	21.31	21.14	21.34	22.50

Default Power Mode (MIMO)

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513	
Rx Channel		9662	9800	9938		1537	1638	1738	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	23.06	23.00	23.01	24.00	23.07	23.03	23.06	24.00
3GPP Rel 6	HSDPA Subtest-1	21.87	22.07	22.14	23.00	21.95	21.91	22.09	23.00
3GPP Rel 6	HSDPA Subtest-2	22.01	22.09	22.05	23.00	22.05	21.91	22.06	23.00
3GPP Rel 6	HSDPA Subtest-3	21.54	21.46	21.58	22.50	21.50	21.44	21.67	22.50
3GPP Rel 6	HSDPA Subtest-4	21.36	21.46	21.53	22.50	21.59	21.46	21.58	22.50
3GPP Rel 8	DC-HSDPA Subtest-1	21.98	22.02	21.91	23.00	21.91	22.01	22.04	23.00
3GPP Rel 8	DC-HSDPA Subtest-2	21.80	21.90	21.98	23.00	22.02	21.89	22.13	23.00
3GPP Rel 8	DC-HSDPA Subtest-3	21.39	21.53	21.62	22.50	21.43	21.37	21.52	22.50
3GPP Rel 8	DC-HSDPA Subtest-4	21.34	21.43	21.39	22.50	21.57	21.47	21.47	22.50
3GPP Rel 6	HSUPA Subtest-1	19.74	19.93	19.56	21.50	20.06	20.07	20.35	21.50
3GPP Rel 6	HSUPA Subtest-2	19.95	20.06	19.95	21.50	20.18	19.98	20.21	21.50
3GPP Rel 6	HSUPA Subtest-3	21.01	21.02	20.94	22.50	20.97	21.06	21.08	22.50
3GPP Rel 6	HSUPA Subtest-4	19.68	19.57	19.51	21.50	19.82	19.76	19.88	21.50
3GPP Rel 6	HSUPA Subtest-5	20.75	20.76	20.78	22.50	21.09	21.06	21.00	22.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.95	20.85	20.95	22.50	21.07	20.94	21.01	22.50

Reduced Power Mode (Main)

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	18.21	18.15	18.14	19.50	19.87	19.71	19.77	21.00	20.41	20.46	20.35	22.00
3GPP Rel 6	HSDPA Subtest-1	17.41	17.23	17.12	18.50	18.70	18.54	18.76	20.00	19.33	19.52	19.48	21.00
3GPP Rel 6	HSDPA Subtest-2	17.10	17.22	17.24	18.50	19.07	18.73	18.68	20.00	19.61	19.39	19.41	21.00
3GPP Rel 6	HSDPA Subtest-3	16.63	16.47	16.67	18.00	18.46	18.28	18.12	19.50	18.80	19.04	18.99	20.50
3GPP Rel 6	HSDPA Subtest-4	16.73	16.65	16.64	18.00	18.33	18.02	18.29	19.50	18.83	19.10	18.65	20.50
3GPP Rel 8	DC-HSDPA Subtest-1	17.40	17.22	17.15	18.50	18.74	18.61	18.77	20.00	19.31	19.44	19.47	21.00
3GPP Rel 8	DC-HSDPA Subtest-2	17.08	17.17	17.19	18.50	19.14	18.81	18.69	20.00	19.70	19.34	19.47	21.00
3GPP Rel 8	DC-HSDPA Subtest-3	16.66	16.41	16.74	18.00	18.53	18.28	18.17	19.50	18.77	19.00	19.04	20.50
3GPP Rel 8	DC-HSDPA Subtest-4	16.68	16.72	16.57	18.00	18.27	17.95	18.26	19.50	18.88	19.15	18.69	20.50
3GPP Rel 6	HSUPA Subtest-1	15.35	15.29	15.00	16.50	16.74	16.73	16.79	18.00	17.37	17.41	17.35	19.00
3GPP Rel 6	HSUPA Subtest-2	15.14	15.08	15.00	16.50	16.86	16.60	16.87	18.00	17.50	17.61	17.50	19.00
3GPP Rel 6	HSUPA Subtest-3	16.15	16.04	16.33	17.50	17.92	17.87	17.87	19.00	18.60	18.36	18.38	20.00
3GPP Rel 6	HSUPA Subtest-4	14.78	14.59	14.57	16.50	16.52	16.30	16.07	18.00	16.78	17.00	16.91	19.00
3GPP Rel 6	HSUPA Subtest-5	16.19	16.05	15.94	17.50	17.92	17.67	17.83	19.00	18.40	18.57	18.40	20.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	16.20	16.32	16.27	17.50	17.80	17.91	17.90	19.00	18.33	18.58	18.55	20.00

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not 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. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17 SAR test was covered by Band 25/66/26/12; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
    a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
    b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

Default Power Mode (Main)

<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)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	22.57	22.64	22.59	24
20	QPSK	1	49	22.44	22.46	22.48	
20	QPSK	1	99	22.41	22.52	22.52	
20	QPSK	50	0	21.61	21.63	21.39	23
20	QPSK	50	24	21.52	21.59	21.57	
20	QPSK	50	50	21.48	21.60	21.54	
20	QPSK	100	0	21.49	21.51	21.53	
20	16QAM	1	0	21.49	21.71	21.70	23
20	16QAM	1	49	21.71	21.80	21.73	
20	16QAM	1	99	21.58	21.79	21.64	
20	16QAM	50	0	20.60	20.39	20.63	22
20	16QAM	50	24	20.58	20.58	20.56	
20	16QAM	50	50	20.44	20.59	20.56	
20	16QAM	100	0	20.48	20.49	20.55	
20	64QAM	1	0	20.53	20.59	20.61	22
20	64QAM	1	49	20.69	20.72	20.70	
20	64QAM	1	99	20.55	20.65	20.65	
20	64QAM	50	0	19.63	19.36	19.57	21
20	64QAM	50	24	19.51	19.63	19.58	
20	64QAM	50	50	19.46	19.56	19.53	
20	64QAM	100	0	19.48	19.46	19.54	
20	256QAM	1	0	17.71	17.67	17.52	19
20	256QAM	1	49	17.66	17.67	17.45	
20	256QAM	1	99	17.57	17.57	17.42	
20	256QAM	50	0	17.83	17.66	17.67	19
20	256QAM	50	24	17.73	17.63	17.61	
20	256QAM	50	50	17.65	17.54	17.60	
20	256QAM	100	0	17.63	17.52	17.56	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.47	22.55	22.58	24
15	QPSK	1	37	22.35	22.38	22.42	
15	QPSK	1	74	22.32	22.49	22.49	
15	QPSK	36	0	21.52	21.31	21.55	23
15	QPSK	36	20	21.49	21.49	21.57	
15	QPSK	36	39	21.38	21.56	21.48	
15	QPSK	75	0	21.43	21.48	21.45	
15	16QAM	1	0	21.44	21.66	21.66	23
15	16QAM	1	37	21.67	21.75	21.69	
15	16QAM	1	74	21.50	21.70	21.55	
15	16QAM	36	0	20.53	20.34	20.63	22
15	16QAM	36	20	20.49	20.52	20.52	
15	16QAM	36	39	20.35	20.52	20.52	
15	16QAM	75	0	20.48	20.45	20.49	
15	64QAM	1	0	20.43	20.59	20.53	22
15	64QAM	1	37	20.67	20.62	20.62	
15	64QAM	1	74	20.51	20.62	20.55	
15	64QAM	36	0	19.54	19.31	19.52	21
15	64QAM	36	20	19.42	19.59	19.55	
15	64QAM	36	39	19.46	19.52	19.46	

15	64QAM	75	0	19.48	19.39	19.44	
15	256QAM	1	0	17.68	17.64	17.43	19
15	256QAM	1	37	17.66	17.59	17.42	
15	256QAM	1	74	17.56	17.48	17.39	
15	256QAM	36	0	17.80	17.66	17.58	19
15	256QAM	36	20	17.70	17.60	17.56	
15	256QAM	36	39	17.57	17.54	17.57	
15	256QAM	75	0	17.59	17.52	17.49	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.56	22.61	22.52	24
10	QPSK	1	25	22.34	22.36	22.48	
10	QPSK	1	49	22.39	22.51	22.51	
10	QPSK	25	0	21.53	21.38	21.55	23
10	QPSK	25	12	21.51	21.58	21.55	
10	QPSK	25	25	21.48	21.52	21.52	
10	QPSK	50	0	21.42	21.44	21.49	
10	16QAM	1	0	21.48	21.63	21.60	23
10	16QAM	1	25	21.70	21.78	21.73	
10	16QAM	1	49	21.55	21.76	21.56	
10	16QAM	25	0	20.57	20.39	20.56	22
10	16QAM	25	12	20.54	20.57	20.48	
10	16QAM	25	25	20.39	20.52	20.53	
10	16QAM	50	0	20.47	20.44	20.47	
10	64QAM	1	0	20.45	20.50	20.58	22
10	64QAM	1	25	20.59	20.70	20.64	
10	64QAM	1	49	20.52	20.57	20.55	
10	64QAM	25	0	19.55	19.32	19.53	21
10	64QAM	25	12	19.47	19.58	19.56	
10	64QAM	25	25	19.39	19.51	19.43	
10	64QAM	50	0	19.46	19.45	19.47	
10	256QAM	1	0	17.63	17.59	17.43	19
10	256QAM	1	25	17.59	17.66	17.43	
10	256QAM	1	49	17.53	17.54	17.41	
10	256QAM	25	0	17.73	17.63	17.61	19
10	256QAM	25	12	17.70	17.60	17.55	
10	256QAM	25	25	17.61	17.54	17.50	
10	256QAM	50	0	17.59	17.50	17.49	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.54	22.58	22.59	24
5	QPSK	1	12	22.35	22.42	22.38	
5	QPSK	1	24	22.38	22.42	22.51	
5	QPSK	12	0	21.54	21.32	21.54	23
5	QPSK	12	7	21.45	21.50	21.55	
5	QPSK	12	13	21.43	21.50	21.49	
5	QPSK	25	0	21.45	21.44	21.49	
5	16QAM	1	0	21.49	21.65	21.66	23
5	16QAM	1	12	21.63	21.80	21.71	
5	16QAM	1	24	21.48	21.77	21.54	
5	16QAM	12	0	20.56	20.37	20.61	22
5	16QAM	12	7	20.52	20.50	20.48	
5	16QAM	12	13	20.44	20.53	20.51	
5	16QAM	25	0	20.39	20.39	20.49	
5	64QAM	1	0	20.43	20.57	20.51	22
5	64QAM	1	12	20.65	20.62	20.64	

5	64QAM	1	24	20.52	20.65	20.57	
5	64QAM	12	0	19.58	19.33	19.56	21
5	64QAM	12	7	19.48	19.54	19.48	
5	64QAM	12	13	19.39	19.50	19.48	
5	64QAM	25	0	19.45	19.38	19.50	
5	256QAM	1	0	17.65	17.63	17.45	19
5	256QAM	1	12	17.58	17.61	17.36	
5	256QAM	1	24	17.50	17.55	17.33	
5	256QAM	12	0	17.74	17.56	17.59	19
5	256QAM	12	7	17.72	17.61	17.51	
5	256QAM	12	13	17.61	17.52	17.60	
5	256QAM	25	0	17.54	17.47	17.54	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.51	22.58	22.59	24
3	QPSK	1	8	22.42	22.38	22.46	
3	QPSK	1	14	22.34	22.49	22.47	
3	QPSK	8	0	21.55	21.38	21.60	23
3	QPSK	8	4	21.43	21.50	21.52	
3	QPSK	8	7	21.38	21.52	21.44	
3	QPSK	15	0	21.40	21.45	21.47	
3	16QAM	1	0	21.39	21.71	21.66	23
3	16QAM	1	8	21.70	21.75	21.67	
3	16QAM	1	14	21.52	21.77	21.59	
3	16QAM	8	0	20.53	20.31	20.56	22
3	16QAM	8	4	20.49	20.57	20.56	
3	16QAM	8	7	20.36	20.56	20.50	
3	16QAM	15	0	20.40	20.48	20.46	
3	64QAM	1	0	20.44	20.58	20.60	22
3	64QAM	1	8	20.66	20.68	20.62	
3	64QAM	1	14	20.53	20.64	20.59	
3	64QAM	8	0	19.58	19.36	19.50	21
3	64QAM	8	4	19.44	19.54	19.58	
3	64QAM	8	7	19.40	19.53	19.53	
3	64QAM	15	0	19.42	19.36	19.52	
3	256QAM	1	0	17.63	17.66	17.44	19
3	256QAM	1	8	17.65	17.60	17.43	
3	256QAM	1	14	17.50	17.54	17.39	
3	256QAM	8	0	17.74	17.58	17.66	19
3	256QAM	8	4	17.63	17.62	17.58	
3	256QAM	8	7	17.65	17.44	17.56	
3	256QAM	15	0	17.53	17.43	17.56	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.53	22.55	22.50	24
1.4	QPSK	1	3	22.34	22.36	22.47	
1.4	QPSK	1	5	22.31	22.51	22.44	
1.4	QPSK	3	0	22.55	22.55	22.49	
1.4	QPSK	3	1	22.43	22.40	22.44	
1.4	QPSK	3	3	22.38	22.47	22.51	
1.4	QPSK	6	0	21.48	21.48	21.52	23
1.4	16QAM	1	0	21.42	21.71	21.68	23
1.4	16QAM	1	3	21.70	21.78	21.72	
1.4	16QAM	1	5	21.56	21.71	21.62	
1.4	16QAM	3	0	21.39	21.66	21.67	
1.4	16QAM	3	1	21.62	21.79	21.72	

1.4	16QAM	3	3	21.57	21.77	21.55	
1.4	16QAM	6	0	20.47	20.45	20.55	22
1.4	64QAM	1	0	20.49	20.52	20.52	22
1.4	64QAM	1	3	20.60	20.68	20.67	
1.4	64QAM	1	5	20.46	20.60	20.62	
1.4	64QAM	3	0	20.51	20.53	20.52	
1.4	64QAM	3	1	20.65	20.67	20.66	
1.4	64QAM	3	3	20.51	20.60	20.57	
1.4	64QAM	6	0	19.44	19.43	19.54	21
1.4	256QAM	1	0	17.71	17.59	17.48	19
1.4	256QAM	1	3	17.65	17.59	17.41	
1.4	256QAM	1	5	17.51	17.55	17.41	
1.4	256QAM	3	0	17.65	17.59	17.44	
1.4	256QAM	3	1	17.63	17.57	17.45	
1.4	256QAM	3	3	17.53	17.48	17.41	
1.4	256QAM	6	0	17.57	17.46	17.56	19

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	22.78	22.79	22.72	24
20	QPSK	1	49	22.63	22.68	22.75	
20	QPSK	1	99	22.72	22.59	22.59	
20	QPSK	50	0	21.70	21.86	21.80	23
20	QPSK	50	24	21.84	21.85	21.77	
20	QPSK	50	50	21.83	21.81	21.69	
20	QPSK	100	0	21.78	21.80	21.77	
20	16QAM	1	0	21.90	21.96	22.04	23
20	16QAM	1	49	22.08	22.14	22.10	
20	16QAM	1	99	22.00	21.91	21.88	
20	16QAM	50	0	20.71	20.80	20.77	22
20	16QAM	50	24	20.83	20.81	20.80	
20	16QAM	50	50	20.82	20.78	20.71	
20	16QAM	100	0	20.79	20.78	20.75	
20	64QAM	1	0	20.78	20.86	20.94	22
20	64QAM	1	49	20.96	20.97	20.97	
20	64QAM	1	99	20.83	20.81	20.81	
20	64QAM	50	0	19.69	19.79	19.79	21
20	64QAM	50	24	19.81	19.80	19.77	
20	64QAM	50	50	19.84	19.80	19.70	
20	64QAM	100	0	19.77	19.79	19.75	
20	256QAM	1	0	17.68	17.79	17.83	19
20	256QAM	1	49	17.68	17.73	17.74	
20	256QAM	1	99	17.59	17.67	17.65	
20	256QAM	50	0	17.84	17.86	17.89	19
20	256QAM	50	24	17.79	17.82	17.81	
20	256QAM	50	50	17.70	17.73	17.75	
20	256QAM	100	0	17.69	17.71	17.73	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.68	22.75	22.72	24
15	QPSK	1	37	22.56	22.67	22.67	

15	QPSK	1	74	22.67	22.54	22.50	
15	QPSK	36	0	21.60	21.82	21.73	23
15	QPSK	36	20	21.74	21.85	21.69	
15	QPSK	36	39	21.76	21.74	21.59	
15	QPSK	75	0	21.73	21.71	21.75	
15	16QAM	1	0	21.86	21.95	21.98	23
15	16QAM	1	37	22.01	22.09	22.10	
15	16QAM	1	74	21.91	21.85	21.84	
15	16QAM	36	0	20.71	20.75	20.76	22
15	16QAM	36	20	20.74	20.78	20.78	
15	16QAM	36	39	20.79	20.68	20.65	
15	16QAM	75	0	20.69	20.76	20.69	
15	64QAM	1	0	20.70	20.76	20.85	22
15	64QAM	1	37	20.96	20.89	20.92	
15	64QAM	1	74	20.78	20.72	20.79	
15	64QAM	36	0	19.61	19.70	19.77	21
15	64QAM	36	20	19.73	19.78	19.72	
15	64QAM	36	39	19.75	19.79	19.65	
15	64QAM	75	0	19.69	19.72	19.75	
15	256QAM	1	0	17.68	17.76	17.80	19
15	256QAM	1	37	17.67	17.67	17.65	
15	256QAM	1	74	17.54	17.66	17.58	
15	256QAM	36	0	17.81	17.82	17.88	19
15	256QAM	36	20	17.72	17.77	17.71	
15	256QAM	36	39	17.64	17.70	17.68	
15	256QAM	75	0	17.64	17.68	17.70	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.71	22.73	22.77	24
10	QPSK	1	25	22.56	22.66	22.68	
10	QPSK	1	49	22.68	22.59	22.50	
10	QPSK	25	0	21.60	21.78	21.71	23
10	QPSK	25	12	21.75	21.81	21.70	
10	QPSK	25	25	21.79	21.76	21.63	
10	QPSK	50	0	21.74	21.79	21.67	
10	16QAM	1	0	21.85	21.92	21.96	23
10	16QAM	1	25	22.00	22.12	22.01	
10	16QAM	1	49	21.97	21.83	21.79	
10	16QAM	25	0	20.65	20.73	20.68	22
10	16QAM	25	12	20.81	20.81	20.73	
10	16QAM	25	25	20.82	20.77	20.71	
10	16QAM	50	0	20.71	20.68	20.74	
10	64QAM	1	0	20.73	20.84	20.93	22
10	64QAM	1	25	20.87	20.89	20.95	
10	64QAM	1	49	20.74	20.72	20.71	
10	64QAM	25	0	19.65	19.79	19.78	21
10	64QAM	25	12	19.71	19.70	19.77	
10	64QAM	25	25	19.76	19.78	19.62	
10	64QAM	50	0	19.76	19.70	19.69	
10	256QAM	1	0	17.65	17.70	17.76	19
10	256QAM	1	25	17.63	17.63	17.64	
10	256QAM	1	49	17.50	17.65	17.56	
10	256QAM	25	0	17.81	17.79	17.87	19
10	256QAM	25	12	17.73	17.78	17.78	
10	256QAM	25	25	17.64	17.63	17.68	
10	256QAM	50	0	17.60	17.65	17.65	

Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.72	22.77	22.77	24
5	QPSK	1	12	22.60	22.63	22.70	
5	QPSK	1	24	22.65	22.55	22.49	
5	QPSK	12	0	21.70	21.85	21.70	23
5	QPSK	12	7	21.75	21.77	21.76	
5	QPSK	12	13	21.74	21.77	21.59	
5	QPSK	25	0	21.68	21.75	21.74	
5	16QAM	1	0	21.82	21.96	21.96	23
5	16QAM	1	12	22.08	22.04	22.07	
5	16QAM	1	24	21.93	21.81	21.78	
5	16QAM	12	0	20.61	20.80	20.72	22
5	16QAM	12	7	20.76	20.78	20.77	
5	16QAM	12	13	20.74	20.75	20.69	
5	16QAM	25	0	20.70	20.76	20.65	
5	64QAM	1	0	20.72	20.78	20.93	22
5	64QAM	1	12	20.96	20.88	20.95	
5	64QAM	1	24	20.82	20.80	20.78	
5	64QAM	12	0	19.69	19.70	19.70	21
5	64QAM	12	7	19.80	19.77	19.72	
5	64QAM	12	13	19.81	19.73	19.69	
5	64QAM	25	0	19.73	19.71	19.72	
5	256QAM	1	0	17.68	17.72	17.80	19
5	256QAM	1	12	17.68	17.70	17.71	
5	256QAM	1	24	17.56	17.64	17.58	
5	256QAM	12	0	17.82	17.76	17.87	19
5	256QAM	12	7	17.70	17.76	17.71	
5	256QAM	12	13	17.69	17.72	17.66	
5	256QAM	25	0	17.69	17.63	17.65	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.74	22.77	22.77	24
3	QPSK	1	8	22.61	22.58	22.65	
3	QPSK	1	14	22.62	22.50	22.53	
3	QPSK	8	0	21.62	21.80	21.80	23
3	QPSK	8	4	21.82	21.80	21.75	
3	QPSK	8	7	21.81	21.73	21.66	
3	QPSK	15	0	21.73	21.78	21.76	
3	16QAM	1	0	21.89	21.89	21.94	23
3	16QAM	1	8	22.01	22.12	22.02	
3	16QAM	1	14	21.93	21.85	21.88	
3	16QAM	8	0	20.68	20.80	20.68	22
3	16QAM	8	4	20.75	20.75	20.77	
3	16QAM	8	7	20.74	20.69	20.62	
3	16QAM	15	0	20.70	20.71	20.65	
3	64QAM	1	0	20.74	20.80	20.89	22
3	64QAM	1	8	20.94	20.92	20.94	
3	64QAM	1	14	20.83	20.76	20.76	
3	64QAM	8	0	19.68	19.77	19.76	21
3	64QAM	8	4	19.71	19.71	19.75	
3	64QAM	8	7	19.74	19.80	19.70	
3	64QAM	15	0	19.68	19.75	19.67	
3	256QAM	1	0	17.61	17.76	17.77	19
3	256QAM	1	8	17.67	17.64	17.69	
3	256QAM	1	14	17.50	17.63	17.61	

3	256QAM	8	0	17.76	17.76	17.84	19
3	256QAM	8	4	17.77	17.76	17.77	
3	256QAM	8	7	17.67	17.63	17.73	
3	256QAM	15	0	17.63	17.64	17.67	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.77	22.76	22.79	24
1.4	QPSK	1	3	22.56	22.67	22.68	
1.4	QPSK	1	5	22.65	22.51	22.51	
1.4	QPSK	3	0	22.72	22.70	22.78	
1.4	QPSK	3	1	22.62	22.67	22.65	
1.4	QPSK	3	3	22.68	22.55	22.59	
1.4	QPSK	6	0	21.73	21.70	21.68	23
1.4	16QAM	1	0	21.85	21.95	21.99	23
1.4	16QAM	1	3	22.05	22.14	22.10	
1.4	16QAM	1	5	21.90	21.81	21.80	
1.4	16QAM	3	0	21.83	21.89	21.94	
1.4	16QAM	3	1	22.05	22.06	22.09	
1.4	16QAM	3	3	21.95	21.87	21.83	
1.4	16QAM	6	0	20.74	20.78	20.68	22
1.4	64QAM	1	0	20.68	20.85	20.87	22
1.4	64QAM	1	3	20.92	20.88	20.96	
1.4	64QAM	1	5	20.75	20.76	20.79	
1.4	64QAM	3	0	20.71	20.83	20.94	
1.4	64QAM	3	1	20.91	20.94	20.94	
1.4	64QAM	3	3	20.79	20.75	20.75	
1.4	64QAM	6	0	19.69	19.71	19.72	21
1.4	256QAM	1	0	17.67	17.74	17.75	19
1.4	256QAM	1	3	17.63	17.72	17.64	
1.4	256QAM	1	5	17.57	17.61	17.65	
1.4	256QAM	3	0	17.59	17.74	17.78	
1.4	256QAM	3	1	17.65	17.67	17.65	
1.4	256QAM	3	3	17.50	17.58	17.62	
1.4	256QAM	6	0	17.68	17.61	17.68	19

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	23.74	23.79	23.82	25
10	QPSK	1	25	23.81	23.80	23.76	
10	QPSK	1	49	23.71	23.75	23.72	
10	QPSK	25	0	22.83	22.78	22.85	24
10	QPSK	25	12	22.82	22.83	22.78	
10	QPSK	25	25	22.80	22.74	22.76	
10	QPSK	50	0	22.81	22.81	22.81	
10	16QAM	1	0	22.93	22.94	22.91	24
10	16QAM	1	25	22.98	22.97	22.93	
10	16QAM	1	49	22.93	22.95	22.91	
10	16QAM	25	0	21.85	21.79	21.80	23
10	16QAM	25	12	21.80	21.78	21.84	
10	16QAM	25	25	21.84	21.73	21.76	
10	16QAM	50	0	21.81	21.80	21.78	

10	64QAM	1	0	21.89	21.91	21.87	23
10	64QAM	1	25	21.97	21.96	21.91	
10	64QAM	1	49	21.90	21.92	21.89	
10	64QAM	25	0	20.80	20.78	20.78	22
10	64QAM	25	12	20.76	20.78	20.82	
10	64QAM	25	25	20.82	20.73	20.77	
10	64QAM	50	0	20.80	20.79	20.74	
10	256QAM	1	0	18.90	18.93	18.87	20
10	256QAM	1	25	18.82	18.87	18.77	
10	256QAM	1	49	18.74	18.78	18.73	
10	256QAM	25	0	18.90	18.96	18.88	20
10	256QAM	25	12	18.86	18.86	18.85	
10	256QAM	25	25	18.78	18.77	18.79	
10	256QAM	50	0	18.76	18.76	18.75	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	23.69	23.70	23.78	25
5	QPSK	1	12	23.77	23.72	23.73	
5	QPSK	1	24	23.68	23.65	23.62	
5	QPSK	12	0	22.80	22.68	22.71	24
5	QPSK	12	7	22.79	22.83	22.75	
5	QPSK	12	13	22.75	22.64	22.72	
5	QPSK	25	0	22.74	22.71	22.78	
5	16QAM	1	0	22.87	22.86	22.85	24
5	16QAM	1	12	22.89	22.97	22.90	
5	16QAM	1	24	22.86	22.86	22.81	
5	16QAM	12	0	21.76	21.74	21.78	23
5	16QAM	12	7	21.75	21.70	21.82	
5	16QAM	12	13	21.79	21.71	21.73	
5	16QAM	25	0	21.71	21.70	21.68	
5	64QAM	1	0	21.80	21.87	21.79	23
5	64QAM	1	12	21.89	21.89	21.91	
5	64QAM	1	24	21.82	21.82	21.89	
5	64QAM	12	0	20.79	20.68	20.68	22
5	64QAM	12	7	20.69	20.77	20.74	
5	64QAM	12	13	20.81	20.68	20.68	
5	64QAM	25	0	20.80	20.75	20.74	
5	256QAM	1	0	18.83	18.91	18.78	20
5	256QAM	1	12	18.77	18.80	18.67	
5	256QAM	1	24	18.66	18.68	18.63	
5	256QAM	12	0	18.86	18.87	18.85	20
5	256QAM	12	7	18.80	18.79	18.75	
5	256QAM	12	13	18.68	18.73	18.75	
5	256QAM	25	0	18.72	18.76	18.68	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	23.69	23.76	23.80	25
3	QPSK	1	8	23.77	23.78	23.72	
3	QPSK	1	14	23.65	23.70	23.72	
3	QPSK	8	0	22.73	22.74	22.80	24
3	QPSK	8	4	22.75	22.80	22.75	
3	QPSK	8	7	22.79	22.73	22.73	
3	QPSK	15	0	22.74	22.71	22.75	
3	16QAM	1	0	22.84	22.93	22.91	24
3	16QAM	1	8	22.96	22.94	22.87	
3	16QAM	1	14	22.91	22.88	22.86	

3	16QAM	8	0	21.84	21.78	21.77	23
3	16QAM	8	4	21.71	21.69	21.84	
3	16QAM	8	7	21.78	21.70	21.76	
3	16QAM	15	0	21.78	21.75	21.69	
3	64QAM	1	0	21.81	21.91	21.82	23
3	64QAM	1	8	21.87	21.95	21.87	
3	64QAM	1	14	21.85	21.83	21.79	
3	64QAM	8	0	20.73	20.68	20.73	22
3	64QAM	8	4	20.74	20.74	20.75	
3	64QAM	8	7	20.82	20.70	20.73	
3	64QAM	15	0	20.80	20.69	20.69	
3	256QAM	1	0	18.82	18.88	18.78	20
3	256QAM	1	8	18.74	18.82	18.69	
3	256QAM	1	14	18.67	18.71	18.70	
3	256QAM	8	0	18.83	18.91	18.84	20
3	256QAM	8	4	18.77	18.82	18.83	
3	256QAM	8	7	18.71	18.69	18.76	
3	256QAM	15	0	18.66	18.70	18.68	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	23.74	23.76	23.72	25
1.4	QPSK	1	3	23.74	23.80	23.73	
1.4	QPSK	1	5	23.62	23.73	23.63	
1.4	QPSK	3	0	23.68	23.70	23.75	
1.4	QPSK	3	1	23.77	23.78	23.69	
1.4	QPSK	3	3	23.70	23.69	23.69	
1.4	QPSK	6	0	22.71	22.81	22.77	24
1.4	16QAM	1	0	22.89	22.88	22.89	24
1.4	16QAM	1	3	22.91	22.91	22.90	
1.4	16QAM	1	5	22.83	22.93	22.84	
1.4	16QAM	3	0	22.91	22.91	22.90	
1.4	16QAM	3	1	22.91	22.87	22.88	
1.4	16QAM	3	3	22.92	22.88	22.90	
1.4	16QAM	6	0	21.72	21.74	21.75	23
1.4	64QAM	1	0	21.79	21.81	21.77	23
1.4	64QAM	1	3	21.90	21.87	21.82	
1.4	64QAM	1	5	21.90	21.83	21.88	
1.4	64QAM	3	0	21.86	21.81	21.78	
1.4	64QAM	3	1	21.88	21.91	21.88	
1.4	64QAM	3	3	21.80	21.84	21.89	
1.4	64QAM	6	0	20.78	20.76	20.67	22
1.4	256QAM	1	0	18.82	18.89	18.81	20
1.4	256QAM	1	3	18.76	18.84	18.76	
1.4	256QAM	1	5	18.72	18.72	18.63	
1.4	256QAM	3	0	18.88	18.87	18.84	
1.4	256QAM	3	1	18.73	18.85	18.68	
1.4	256QAM	3	3	18.71	18.72	18.67	
1.4	256QAM	6	0	18.76	18.75	18.70	20

<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)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.66	22.70	22.68	24
20	QPSK	1	49	22.53	22.44	22.48	
20	QPSK	1	99	22.58	22.63	22.67	
20	QPSK	50	0	21.68	21.76	21.74	23
20	QPSK	50	24	21.66	21.56	21.66	
20	QPSK	50	50	21.67	21.72	21.73	
20	QPSK	100	0	21.65	21.69	21.68	
20	16QAM	1	0	21.86	21.74	21.79	23
20	16QAM	1	49	22.01	22.00	21.96	
20	16QAM	1	99	21.95	21.96	21.89	
20	16QAM	50	0	20.62	20.62	20.68	22
20	16QAM	50	24	20.66	20.73	20.71	
20	16QAM	50	50	20.63	20.69	20.73	
20	16QAM	100	0	20.63	20.65	20.65	
20	64QAM	1	0	20.71	20.61	20.67	22
20	64QAM	1	49	20.85	20.86	20.82	
20	64QAM	1	99	20.79	20.88	20.85	
20	64QAM	50	0	19.54	19.63	19.66	21
20	64QAM	50	24	19.61	19.62	19.65	
20	64QAM	50	50	19.64	19.72	19.68	
20	64QAM	100	0	19.61	19.64	19.66	
20	256QAM	1	0	18.31	18.19	18.25	19
20	256QAM	1	49	18.30	18.11	18.24	
20	256QAM	1	99	18.28	18.02	18.18	
20	256QAM	50	0	18.09	18.13	18.21	19
20	256QAM	50	24	18.08	18.13	18.17	
20	256QAM	50	50	18.04	18.11	18.16	
20	256QAM	100	0	18.04	18.09	18.06	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	22.56	22.63	22.62	24
15	QPSK	1	37	22.47	22.34	22.47	
15	QPSK	1	74	22.53	22.61	22.62	
15	QPSK	36	0	21.53	21.56	21.71	23
15	QPSK	36	20	21.65	21.75	21.56	
15	QPSK	36	39	21.68	21.72	21.65	
15	QPSK	75	0	21.59	21.63	21.59	
15	16QAM	1	0	21.84	21.69	21.75	23
15	16QAM	1	37	21.92	21.97	21.87	
15	16QAM	1	74	21.88	21.88	21.88	
15	16QAM	36	0	20.62	20.59	20.62	22
15	16QAM	36	20	20.65	20.64	20.71	
15	16QAM	36	39	20.56	20.64	20.65	
15	16QAM	75	0	20.55	20.58	20.61	
15	64QAM	1	0	20.69	20.51	20.64	22
15	64QAM	1	37	20.82	20.84	20.72	
15	64QAM	1	74	20.77	20.79	20.76	
15	64QAM	36	0	19.52	19.54	19.61	21
15	64QAM	36	20	19.52	19.60	19.62	
15	64QAM	36	39	19.64	19.64	19.63	
15	64QAM	75	0	19.56	19.54	19.65	

15	256QAM	1	0	18.31	18.13	18.24	19
15	256QAM	1	37	18.21	18.08	18.17	
15	256QAM	1	74	18.24	17.96	18.11	
15	256QAM	36	0	18.02	18.13	18.12	19
15	256QAM	36	20	17.99	18.06	18.16	
15	256QAM	36	39	18.01	18.05	18.14	
15	256QAM	75	0	18.02	18.08	17.99	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	22.60	22.60	22.57	24
10	QPSK	1	25	22.43	22.44	22.45	
10	QPSK	1	49	22.50	22.54	22.67	
10	QPSK	25	0	21.57	21.59	21.71	23
10	QPSK	25	12	21.62	21.76	21.62	
10	QPSK	25	25	21.63	21.67	21.67	
10	QPSK	50	0	21.57	21.67	21.65	
10	16QAM	1	0	21.79	21.72	21.73	23
10	16QAM	1	25	21.96	21.99	21.86	
10	16QAM	1	49	21.88	21.87	21.86	
10	16QAM	25	0	20.54	20.60	20.61	22
10	16QAM	25	12	20.60	20.71	20.71	
10	16QAM	25	25	20.53	20.60	20.63	
10	16QAM	50	0	20.57	20.60	20.62	
10	64QAM	1	0	20.70	20.55	20.64	22
10	64QAM	1	25	20.84	20.80	20.80	
10	64QAM	1	49	20.75	20.82	20.79	
10	64QAM	25	0	19.53	19.59	19.60	21
10	64QAM	25	12	19.61	19.56	19.60	
10	64QAM	25	25	19.59	19.64	19.60	
10	64QAM	50	0	19.51	19.62	19.61	
10	256QAM	1	0	18.25	18.09	18.18	19
10	256QAM	1	25	18.26	18.05	18.24	
10	256QAM	1	49	18.21	17.96	18.13	
10	256QAM	25	0	18.08	18.11	18.16	19
10	256QAM	25	12	18.04	18.05	18.11	
10	256QAM	25	25	17.98	18.10	18.10	
10	256QAM	50	0	18.02	18.06	17.99	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.57	22.64	22.65	24
5	QPSK	1	12	22.51	22.36	22.46	
5	QPSK	1	24	22.49	22.55	22.57	
5	QPSK	12	0	21.50	21.55	21.70	23
5	QPSK	12	7	21.57	21.66	21.59	
5	QPSK	12	13	21.66	21.62	21.70	
5	QPSK	25	0	21.61	21.61	21.64	
5	16QAM	1	0	21.83	21.71	21.75	23
5	16QAM	1	12	21.97	21.92	21.92	
5	16QAM	1	24	21.90	21.94	21.80	
5	16QAM	12	0	20.58	20.52	20.61	22
5	16QAM	12	7	20.62	20.63	20.71	
5	16QAM	12	13	20.55	20.67	20.68	
5	16QAM	25	0	20.57	20.65	20.63	
5	64QAM	1	0	20.67	20.58	20.67	22
5	64QAM	1	12	20.79	20.79	20.79	
5	64QAM	1	24	20.69	20.78	20.82	

5	64QAM	12	0	19.54	19.60	19.60	21
5	64QAM	12	7	19.58	19.56	19.56	
5	64QAM	12	13	19.55	19.72	19.67	
5	64QAM	25	0	19.52	19.55	19.56	
5	256QAM	1	0	18.25	18.15	18.18	19
5	256QAM	1	12	18.26	18.05	18.22	
5	256QAM	1	24	18.19	18.00	18.17	
5	256QAM	12	0	18.07	18.09	18.15	19
5	256QAM	12	7	18.03	18.13	18.13	
5	256QAM	12	13	17.99	18.10	18.06	
5	256QAM	25	0	18.03	17.99	17.97	

<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.82	23.82	23.85	25
10	QPSK	1	25	23.79	23.79	23.79	
10	QPSK	1	49	23.79	23.69	23.72	
10	QPSK	25	0	22.86	22.80	22.88	24
10	QPSK	25	12	22.80	22.77	22.74	
10	QPSK	25	25	22.71	22.79	22.77	
10	QPSK	50	0	22.75	22.79	22.80	
10	16QAM	1	0	22.98	22.99	22.97	24
10	16QAM	1	25	22.95	22.94	22.96	
10	16QAM	1	49	22.96	22.97	22.98	
10	16QAM	25	0	21.88	21.70	21.70	23
10	16QAM	25	12	21.83	21.75	21.74	
10	16QAM	25	25	21.93	21.83	21.77	
10	16QAM	50	0	21.80	21.76	21.76	
10	64QAM	1	0	21.97	21.88	21.92	23
10	64QAM	1	25	21.97	21.95	21.95	
10	64QAM	1	49	22.00	21.95	21.97	
10	64QAM	25	0	20.86	20.75	20.69	22
10	64QAM	25	12	20.80	20.78	20.76	
10	64QAM	25	25	20.92	20.84	20.76	
10	64QAM	50	0	20.78	20.76	20.77	
10	256QAM	1	0	18.87	18.96	18.92	20
10	256QAM	1	25	18.78	18.94	18.85	
10	256QAM	1	49	18.70	18.91	18.85	
10	256QAM	25	0	18.86	18.97	18.89	20
10	256QAM	25	12	18.85	18.92	18.83	
10	256QAM	25	25	18.81	18.83	18.73	
10	256QAM	50	0	18.71	18.77	18.63	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	23.74	23.79	23.83	25
5	QPSK	1	12	23.72	23.77	23.74	
5	QPSK	1	24	23.76	23.62	23.71	
5	QPSK	12	0	22.85	22.60	22.68	24
5	QPSK	12	7	22.72	22.76	22.64	
5	QPSK	12	13	22.85	22.75	22.77	
5	QPSK	25	0	22.77	22.79	22.71	

5	16QAM	1	0	22.90	22.98	22.88	24
5	16QAM	1	12	22.93	22.93	22.90	
5	16QAM	1	24	22.95	22.89	22.93	
5	16QAM	12	0	21.83	21.60	21.63	23
5	16QAM	12	7	21.77	21.68	21.64	
5	16QAM	12	13	21.92	21.75	21.68	
5	16QAM	25	0	21.78	21.71	21.76	
5	64QAM	1	0	21.92	21.83	21.92	23
5	64QAM	1	12	21.91	21.95	21.94	
5	64QAM	1	24	21.97	21.94	21.87	
5	64QAM	12	0	20.86	20.75	20.60	22
5	64QAM	12	7	20.80	20.68	20.72	
5	64QAM	12	13	20.86	20.84	20.70	
5	64QAM	25	0	20.71	20.68	20.72	
5	256QAM	1	0	18.82	18.88	18.92	20
5	256QAM	1	12	18.72	18.93	18.80	
5	256QAM	1	24	18.67	18.85	18.79	
5	256QAM	12	0	18.76	18.97	18.82	20
5	256QAM	12	7	18.81	18.89	18.76	
5	256QAM	12	13	18.78	18.80	18.69	
5	256QAM	25	0	18.64	18.70	18.63	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	23.78	23.77	23.83	25
3	QPSK	1	8	23.71	23.75	23.79	
3	QPSK	1	14	23.76	23.59	23.63	
3	QPSK	8	0	22.78	22.62	22.61	24
3	QPSK	8	4	22.72	22.68	22.64	
3	QPSK	8	7	22.86	22.73	22.68	
3	QPSK	15	0	22.76	22.71	22.72	
3	16QAM	1	0	22.96	22.92	22.89	24
3	16QAM	1	8	22.93	22.85	22.91	
3	16QAM	1	14	22.91	22.94	22.98	
3	16QAM	8	0	21.86	21.63	21.63	23
3	16QAM	8	4	21.80	21.70	21.70	
3	16QAM	8	7	21.83	21.75	21.73	
3	16QAM	15	0	21.76	21.69	21.74	
3	64QAM	1	0	21.87	21.83	21.92	23
3	64QAM	1	8	21.90	21.94	21.90	
3	64QAM	1	14	21.97	21.95	21.89	
3	64QAM	8	0	20.84	20.70	20.60	22
3	64QAM	8	4	20.74	20.76	20.69	
3	64QAM	8	7	20.84	20.80	20.67	
3	64QAM	15	0	20.69	20.75	20.70	
3	256QAM	1	0	18.85	18.92	18.92	20
3	256QAM	1	8	18.73	18.89	18.75	
3	256QAM	1	14	18.70	18.87	18.75	
3	256QAM	8	0	18.79	18.97	18.87	20
3	256QAM	8	4	18.82	18.82	18.73	
3	256QAM	8	7	18.75	18.82	18.66	
3	256QAM	15	0	18.67	18.73	18.63	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	23.74	23.75	23.83	25
1.4	QPSK	1	3	23.78	23.78	23.71	
1.4	QPSK	1	5	23.69	23.69	23.71	

1.4	QPSK	3	0	23.79	23.77	23.77	
1.4	QPSK	3	1	23.69	23.69	23.77	
1.4	QPSK	3	3	23.78	23.59	23.71	
1.4	QPSK	6	0	22.78	22.75	22.79	24
1.4	16QAM	1	0	22.96	22.95	22.94	
1.4	16QAM	1	3	22.86	22.92	22.90	
1.4	16QAM	1	5	22.92	22.92	22.96	24
1.4	16QAM	3	0	22.92	22.99	22.91	
1.4	16QAM	3	1	22.92	22.92	22.86	
1.4	16QAM	3	3	22.86	22.92	22.98	
1.4	16QAM	6	0	21.76	21.73	21.74	23
1.4	64QAM	1	0	21.89	21.87	21.86	
1.4	64QAM	1	3	21.96	21.92	21.89	
1.4	64QAM	1	5	21.99	21.89	21.93	23
1.4	64QAM	3	0	21.89	21.80	21.86	
1.4	64QAM	3	1	21.89	21.93	21.95	
1.4	64QAM	3	3	22.00	21.95	21.90	
1.4	64QAM	6	0	20.74	20.67	20.77	22
1.4	256QAM	1	0	18.86	18.86	18.84	
1.4	256QAM	1	3	18.71	18.93	18.81	
1.4	256QAM	1	5	18.70	18.91	18.85	20
1.4	256QAM	3	0	18.85	18.93	18.89	
1.4	256QAM	3	1	18.72	18.88	18.80	
1.4	256QAM	3	3	18.61	18.84	18.79	
1.4	256QAM	6	0	18.66	18.71	18.60	20

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)							
10	QPSK	1	0		23.85		25
10	QPSK	1	25		23.81		
10	QPSK	1	49		23.80		
10	QPSK	25	0		22.81		24
10	QPSK	25	12		22.80		
10	QPSK	25	25		22.72		
10	QPSK	50	0		22.83		
10	16QAM	1	0		22.92		24
10	16QAM	1	25		22.91		
10	16QAM	1	49		22.93		
10	16QAM	25	0		21.75		23
10	16QAM	25	12		21.81		
10	16QAM	25	25		21.85		
10	16QAM	50	0		21.82		
10	64QAM	1	0		21.92		23
10	64QAM	1	25		21.98		
10	64QAM	1	49		21.90		
10	64QAM	25	0		20.72		22
10	64QAM	25	12		20.79		
10	64QAM	25	25		20.81		
10	64QAM	50	0		20.83		
10	256QAM	1	0		18.94		20
10	256QAM	1	25		18.91		

10	256QAM	1	49		18.86		
10	256QAM	25	0		18.93		20
10	256QAM	25	12		18.91		
10	256QAM	25	25		18.86		
10	256QAM	50	0		18.76		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	23.84	23.83	23.76	25
5	QPSK	1	12	23.81	23.80	23.69	
5	QPSK	1	24	23.62	23.71	23.55	
5	QPSK	12	0	22.60	22.63	22.54	24
5	QPSK	12	7	22.73	22.76	22.61	
5	QPSK	12	13	22.66	22.75	22.59	
5	QPSK	25	0	22.79	22.80	22.64	
5	16QAM	1	0	22.82	22.87	22.79	24
5	16QAM	1	12	22.76	22.83	22.74	
5	16QAM	1	24	22.81	22.85	22.69	
5	16QAM	12	0	21.60	21.68	21.57	23
5	16QAM	12	7	21.73	21.76	21.66	
5	16QAM	12	13	21.80	21.85	21.73	
5	16QAM	25	0	21.80	21.82	21.65	
5	64QAM	1	0	21.92	21.92	21.80	23
5	64QAM	1	12	21.79	21.88	21.73	
5	64QAM	1	24	21.82	21.86	21.74	
5	64QAM	12	0	20.61	20.66	20.49	22
5	64QAM	12	7	20.79	20.78	20.61	
5	64QAM	12	13	20.72	20.80	20.65	
5	64QAM	25	0	20.76	20.75	20.64	
5	256QAM	1	0	18.90	18.94	18.79	20
5	256QAM	1	12	18.84	18.89	18.79	
5	256QAM	1	24	18.83	18.86	18.73	
5	256QAM	12	0	18.88	18.93	18.81	20
5	256QAM	12	7	18.79	18.87	18.71	
5	256QAM	12	13	18.79	18.83	18.68	
5	256QAM	25	0	18.69	18.72	18.55	

<LTE Band 14>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23330		
Frequency (MHz)					793		
10	QPSK	1	0		24.23		25
10	QPSK	1	25		24.18		
10	QPSK	1	49		24.16		
10	QPSK	25	0		22.80		24
10	QPSK	25	12		22.72		
10	QPSK	25	25		22.79		
10	QPSK	50	0		22.80		
10	16QAM	1	0		22.99		24
10	16QAM	1	25		22.91		
10	16QAM	1	49		22.85		
10	16QAM	25	0		21.74		23
10	16QAM	25	12		21.81		
10	16QAM	25	25		21.80		

10	16QAM	50	0		21.78		
10	64QAM	1	0		21.90		23
10	64QAM	1	25		21.99		
10	64QAM	1	49		21.89		
10	64QAM	25	0		20.76		22
10	64QAM	25	12		20.80		
10	64QAM	25	25		20.78		
10	64QAM	50	0		20.77		
10	256QAM	1	0		18.93		20
10	256QAM	1	25		18.84		
10	256QAM	1	49		18.84		
10	256QAM	25	0		18.95		20
10	256QAM	25	12		18.85		
10	256QAM	25	25		18.76		
10	256QAM	50	0		18.67		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	24.21	24.16	24.20	25
5	QPSK	1	12	24.18	24.10	24.18	
5	QPSK	1	24	24.12	24.16	24.14	
5	QPSK	12	0	22.55	22.75	22.63	24
5	QPSK	12	7	22.65	22.69	22.62	
5	QPSK	12	13	22.66	22.79	22.72	
5	QPSK	25	0	22.62	22.76	22.64	
5	16QAM	1	0	22.85	22.94	22.90	24
5	16QAM	1	12	22.69	22.83	22.78	
5	16QAM	1	24	22.68	22.77	22.73	
5	16QAM	12	0	21.51	21.69	21.62	23
5	16QAM	12	7	21.58	21.79	21.61	
5	16QAM	12	13	21.67	21.71	21.68	
5	16QAM	25	0	21.68	21.78	21.71	
5	64QAM	1	0	21.77	21.86	21.80	23
5	64QAM	1	12	21.86	21.93	21.97	
5	64QAM	1	24	21.70	21.86	21.81	
5	64QAM	12	0	20.68	20.73	20.67	22
5	64QAM	12	7	20.63	20.74	20.78	
5	64QAM	12	13	20.64	20.73	20.75	
5	64QAM	25	0	20.59	20.72	20.63	
5	256QAM	1	0	18.80	18.87	18.76	20
5	256QAM	1	12	18.67	18.75	18.73	
5	256QAM	1	24	18.66	18.84	18.71	
5	256QAM	12	0	18.74	18.92	18.85	20
5	256QAM	12	7	18.70	18.75	18.79	
5	256QAM	12	13	18.63	18.69	18.68	
5	256QAM	25	0	18.44	18.63	18.47	

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	23.80	23.78	23.82	25
10	QPSK	1	25	23.81	23.80	23.78	
10	QPSK	1	49	23.74	23.74	23.75	

10	QPSK	25	0	22.67	22.63	22.79	24
10	QPSK	25	12	22.65	22.77	22.75	
10	QPSK	25	25	22.73	22.73	22.74	
10	QPSK	50	0	22.83	22.79	22.80	
10	16QAM	1	0	22.92	22.93	22.92	24
10	16QAM	1	25	22.95	22.98	22.90	
10	16QAM	1	49	22.92	22.97	22.91	
10	16QAM	25	0	21.68	21.67	21.68	23
10	16QAM	25	12	21.75	21.74	21.76	
10	16QAM	25	25	21.69	21.71	21.73	
10	16QAM	50	0	21.78	21.78	21.81	
10	64QAM	1	0	21.90	21.95	21.92	23
10	64QAM	1	25	21.97	21.91	21.89	
10	64QAM	1	49	21.89	21.84	21.96	
10	64QAM	25	0	20.70	20.67	20.68	22
10	64QAM	25	12	20.76	20.76	20.75	
10	64QAM	25	25	20.73	20.68	20.75	
10	64QAM	50	0	20.76	20.76	20.77	
10	256QAM	1	0	18.89	18.92	18.90	20
10	256QAM	1	25	18.88	18.82	18.83	
10	256QAM	1	49	18.87	18.73	18.83	
10	256QAM	25	0	18.87	18.85	18.88	20
10	256QAM	25	12	18.84	18.80	18.82	
10	256QAM	25	25	18.83	18.80	18.77	
10	256QAM	50	0	18.83	18.72	18.70	
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.71	23.73	23.79	25
5	QPSK	1	12	23.74	23.72	23.73	
5	QPSK	1	24	23.67	23.65	23.66	
5	QPSK	12	0	22.65	22.54	22.58	24
5	QPSK	12	7	22.69	22.75	22.73	
5	QPSK	12	13	22.72	22.69	22.69	
5	QPSK	25	0	22.75	22.78	22.73	
5	16QAM	1	0	22.92	22.89	22.82	24
5	16QAM	1	12	22.89	22.95	22.85	
5	16QAM	1	24	22.92	22.92	22.88	
5	16QAM	12	0	21.61	21.66	21.68	23
5	16QAM	12	7	21.75	21.70	21.68	
5	16QAM	12	13	21.64	21.65	21.65	
5	16QAM	25	0	21.68	21.74	21.80	
5	64QAM	1	0	21.88	21.91	21.84	23
5	64QAM	1	12	21.97	21.82	21.83	
5	64QAM	1	24	21.87	21.78	21.88	
5	64QAM	12	0	20.65	20.64	20.60	22
5	64QAM	12	7	20.73	20.68	20.74	
5	64QAM	12	13	20.63	20.62	20.74	
5	64QAM	25	0	20.73	20.75	20.73	
5	256QAM	1	0	18.87	18.90	18.85	20
5	256QAM	1	12	18.84	18.75	18.77	
5	256QAM	1	24	18.82	18.66	18.82	
5	256QAM	12	0	18.78	18.79	18.81	20
5	256QAM	12	7	18.75	18.74	18.79	
5	256QAM	12	13	18.73	18.73	18.70	
5	256QAM	25	0	18.82	18.66	18.60	

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	22.58	22.71	22.67	24
20	QPSK	1	49	22.54	22.56	22.59	
20	QPSK	1	99	22.50	22.57	22.61	
20	QPSK	50	0	21.65	21.74	21.61	23
20	QPSK	50	24	21.57	21.69	21.56	
20	QPSK	50	50	21.60	21.70	21.54	
20	QPSK	100	0	21.61	21.66	21.65	
20	16QAM	1	0	21.81	21.86	21.88	23
20	16QAM	1	49	21.94	21.96	21.92	
20	16QAM	1	99	21.86	21.90	21.88	
20	16QAM	50	0	20.67	20.53	20.68	22
20	16QAM	50	24	20.61	20.70	20.67	
20	16QAM	50	50	20.58	20.68	20.60	
20	16QAM	100	0	20.59	20.65	20.63	
20	64QAM	1	0	20.72	20.71	20.77	22
20	64QAM	1	49	20.76	20.83	20.78	
20	64QAM	1	99	20.66	20.73	20.75	
20	64QAM	50	0	19.70	19.52	19.69	21
20	64QAM	50	24	19.63	19.67	19.65	
20	64QAM	50	50	19.60	19.69	19.60	
20	64QAM	100	0	19.59	19.66	19.63	
20	256QAM	1	0	17.89	17.88	17.87	19
20	256QAM	1	49	17.85	17.84	17.84	
20	256QAM	1	99	17.83	17.84	17.76	
20	256QAM	50	0	17.85	17.75	17.83	19
20	256QAM	50	24	17.81	17.67	17.79	
20	256QAM	50	50	17.72	17.67	17.73	
20	256QAM	100	0	17.62	17.58	17.67	
Channel				26115	26340	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	22.56	22.66	22.65	24
15	QPSK	1	37	22.50	22.49	22.56	
15	QPSK	1	74	22.40	22.52	22.54	
15	QPSK	36	0	21.63	21.62	21.65	23
15	QPSK	36	20	21.59	21.67	21.56	
15	QPSK	36	39	21.57	21.61	21.56	
15	QPSK	75	0	21.51	21.62	21.62	
15	16QAM	1	0	21.79	21.84	21.78	23
15	16QAM	1	37	21.86	21.95	21.84	
15	16QAM	1	74	21.82	21.82	21.86	
15	16QAM	36	0	20.59	20.52	20.68	22
15	16QAM	36	20	20.51	20.61	20.64	
15	16QAM	36	39	20.53	20.60	20.59	
15	16QAM	75	0	20.57	20.62	20.56	
15	64QAM	1	0	20.67	20.68	20.74	22
15	64QAM	1	37	20.70	20.77	20.71	
15	64QAM	1	74	20.57	20.68	20.73	
15	64QAM	36	0	19.63	19.47	19.62	21
15	64QAM	36	20	19.57	19.64	19.58	
15	64QAM	36	39	19.52	19.67	19.58	
15	64QAM	75	0	19.58	19.56	19.61	

15	256QAM	1	0	17.87	17.85	17.80	19
15	256QAM	1	37	17.85	17.77	17.81	
15	256QAM	1	74	17.75	17.83	17.75	
15	256QAM	36	0	17.81	17.74	17.77	19
15	256QAM	36	20	17.75	17.65	17.72	
15	256QAM	36	39	17.69	17.66	17.72	
15	256QAM	75	0	17.58	17.57	17.62	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	22.51	22.62	22.60	24
10	QPSK	1	25	22.46	22.47	22.59	
10	QPSK	1	49	22.48	22.48	22.52	
10	QPSK	25	0	21.63	21.52	21.65	23
10	QPSK	25	12	21.62	21.62	21.57	
10	QPSK	25	25	21.60	21.63	21.61	
10	QPSK	50	0	21.57	21.62	21.56	
10	16QAM	1	0	21.72	21.85	21.78	23
10	16QAM	1	25	21.93	21.91	21.86	
10	16QAM	1	49	21.85	21.88	21.83	
10	16QAM	25	0	20.57	20.46	20.58	22
10	16QAM	25	12	20.56	20.60	20.67	
10	16QAM	25	25	20.48	20.58	20.54	
10	16QAM	50	0	20.58	20.62	20.57	
10	64QAM	1	0	20.70	20.61	20.73	22
10	64QAM	1	25	20.67	20.77	20.75	
10	64QAM	1	49	20.61	20.72	20.67	
10	64QAM	25	0	19.61	19.45	19.59	21
10	64QAM	25	12	19.55	19.67	19.62	
10	64QAM	25	25	19.57	19.67	19.52	
10	64QAM	50	0	19.56	19.65	19.59	
10	256QAM	1	0	17.83	17.82	17.84	19
10	256QAM	1	25	17.81	17.83	17.77	
10	256QAM	1	49	17.79	17.74	17.66	
10	256QAM	25	0	17.76	17.73	17.75	19
10	256QAM	25	12	17.77	17.63	17.75	
10	256QAM	25	25	17.71	17.67	17.70	
10	256QAM	50	0	17.54	17.58	17.64	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	22.51	22.70	22.62	24
5	QPSK	1	12	22.46	22.54	22.58	
5	QPSK	1	24	22.46	22.57	22.59	
5	QPSK	12	0	21.59	21.57	21.68	23
5	QPSK	12	7	21.61	21.63	21.61	
5	QPSK	12	13	21.55	21.68	21.55	
5	QPSK	25	0	21.54	21.64	21.58	
5	16QAM	1	0	21.72	21.81	21.78	23
5	16QAM	1	12	21.84	21.87	21.86	
5	16QAM	1	24	21.84	21.85	21.79	
5	16QAM	12	0	20.58	20.52	20.67	22
5	16QAM	12	7	20.59	20.63	20.62	
5	16QAM	12	13	20.52	20.65	20.50	
5	16QAM	25	0	20.51	20.56	20.58	
5	64QAM	1	0	20.62	20.64	20.75	22
5	64QAM	1	12	20.72	20.81	20.70	
5	64QAM	1	24	20.56	20.72	20.68	

5	64QAM	12	0	19.68	19.42	19.63	21
5	64QAM	12	7	19.63	19.62	19.57	
5	64QAM	12	13	19.58	19.59	19.55	
5	64QAM	25	0	19.49	19.64	19.63	
5	256QAM	1	0	17.89	17.87	17.85	19
5	256QAM	1	12	17.79	17.74	17.74	
5	256QAM	1	24	17.74	17.84	17.76	
5	256QAM	12	0	17.84	17.69	17.82	19
5	256QAM	12	7	17.72	17.60	17.74	
5	256QAM	12	13	17.67	17.67	17.66	
5	256QAM	25	0	17.55	17.52	17.66	
Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	22.56	22.62	22.62	24
3	QPSK	1	8	22.49	22.53	22.52	
3	QPSK	1	14	22.49	22.48	22.54	
3	QPSK	8	0	21.60	21.59	21.70	23
3	QPSK	8	4	21.66	21.59	21.57	
3	QPSK	8	7	21.55	21.60	21.60	
3	QPSK	15	0	21.59	21.58	21.55	
3	16QAM	1	0	21.77	21.81	21.87	23
3	16QAM	1	8	21.86	21.90	21.91	
3	16QAM	1	14	21.84	21.84	21.78	
3	16QAM	8	0	20.59	20.50	20.68	22
3	16QAM	8	4	20.55	20.67	20.63	
3	16QAM	8	7	20.57	20.64	20.53	
3	16QAM	15	0	20.58	20.56	20.61	
3	64QAM	1	0	20.71	20.71	20.75	22
3	64QAM	1	8	20.74	20.78	20.77	
3	64QAM	1	14	20.65	20.73	20.73	
3	64QAM	8	0	19.65	19.49	19.62	21
3	64QAM	8	4	19.60	19.67	19.57	
3	64QAM	8	7	19.56	19.64	19.51	
3	64QAM	15	0	19.59	19.60	19.58	
3	256QAM	1	0	17.80	17.86	17.80	19
3	256QAM	1	8	17.81	17.84	17.78	
3	256QAM	1	14	17.78	17.77	17.75	
3	256QAM	8	0	17.81	17.70	17.80	19
3	256QAM	8	4	17.79	17.62	17.77	
3	256QAM	8	7	17.67	17.61	17.66	
3	256QAM	15	0	17.54	17.51	17.59	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	22.56	22.67	22.63	24
1.4	QPSK	1	3	22.53	22.49	22.54	
1.4	QPSK	1	5	22.40	22.50	22.59	
1.4	QPSK	3	0	22.55	22.66	22.62	
1.4	QPSK	3	1	22.52	22.49	22.57	
1.4	QPSK	3	3	22.44	22.50	22.59	
1.4	QPSK	6	0	21.61	21.61	21.56	23
1.4	16QAM	1	0	21.72	21.86	21.81	23
1.4	16QAM	1	3	21.85	21.90	21.87	
1.4	16QAM	1	5	21.86	21.88	21.80	
1.4	16QAM	3	0	21.79	21.81	21.87	
1.4	16QAM	3	1	21.94	21.94	21.83	
1.4	16QAM	3	3	21.83	21.84	21.80	

1.4	16QAM	6	0	20.58	20.61	20.54	22
1.4	64QAM	1	0	20.66	20.67	20.77	22
1.4	64QAM	1	3	20.67	20.82	20.78	
1.4	64QAM	1	5	20.59	20.64	20.70	
1.4	64QAM	3	0	20.70	20.66	20.75	
1.4	64QAM	3	1	20.74	20.81	20.75	
1.4	64QAM	3	3	20.61	20.72	20.72	
1.4	64QAM	6	0	19.50	19.63	19.55	21
1.4	256QAM	1	0	17.81	17.78	17.80	19
1.4	256QAM	1	3	17.77	17.82	17.74	
1.4	256QAM	1	5	17.78	17.78	17.72	
1.4	256QAM	3	0	17.89	17.88	17.77	
1.4	256QAM	3	1	17.78	17.83	17.75	
1.4	256QAM	3	3	17.82	17.76	17.71	
1.4	256QAM	6	0	17.55	17.54	17.65	19

<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	23.71	23.75	23.74	25
15	QPSK	1	37	23.70	23.74	23.71	
15	QPSK	1	74	23.65	23.67	23.62	
15	QPSK	36	0	22.70	22.74	22.70	24
15	QPSK	36	20	22.65	22.73	22.65	
15	QPSK	36	39	22.64	22.71	22.63	
15	QPSK	75	0	22.77	22.78	22.77	
15	16QAM	1	0	22.98	23.00	22.95	24
15	16QAM	1	37	22.95	22.94	22.98	
15	16QAM	1	74	22.98	22.98	22.93	
15	16QAM	36	0	21.73	21.73	21.70	23
15	16QAM	36	20	21.80	21.76	21.76	
15	16QAM	36	39	21.74	21.77	21.77	
15	16QAM	75	0	21.77	21.72	21.77	
15	64QAM	1	0	21.86	21.85	21.80	23
15	64QAM	1	37	21.90	21.88	21.89	
15	64QAM	1	74	21.92	21.83	21.85	
15	64QAM	36	0	20.72	20.72	20.71	22
15	64QAM	36	20	20.79	20.72	20.72	
15	64QAM	36	39	20.82	20.73	20.79	
15	64QAM	75	0	20.74	20.72	20.70	
15	256QAM	1	0	18.87	18.85	18.83	20
15	256QAM	1	37	18.77	18.84	18.80	
15	256QAM	1	74	18.69	18.83	18.75	
15	256QAM	36	0	18.85	18.91	18.87	20
15	256QAM	36	20	18.76	18.80	18.83	
15	256QAM	36	39	18.74	18.73	18.78	
15	256QAM	75	0	18.70	18.81	18.66	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	23.71	23.72	23.71	25
10	QPSK	1	25	23.75	23.64	23.68	
10	QPSK	1	49	23.69	23.60	23.61	

10	QPSK	25	0	22.74	22.63	22.65	24
10	QPSK	25	12	22.67	22.64	22.74	
10	QPSK	25	25	22.71	22.67	22.73	
10	QPSK	50	0	22.68	22.75	22.78	
10	16QAM	1	0	22.93	22.94	22.93	24
10	16QAM	1	25	22.92	22.94	22.93	
10	16QAM	1	49	22.96	22.97	22.85	
10	16QAM	25	0	21.70	21.67	21.61	23
10	16QAM	25	12	21.75	21.70	21.76	
10	16QAM	25	25	21.72	21.71	21.77	
10	16QAM	50	0	21.69	21.65	21.68	
10	64QAM	1	0	21.83	21.77	21.79	23
10	64QAM	1	25	21.89	21.84	21.81	
10	64QAM	1	49	21.88	21.76	21.81	
10	64QAM	25	0	20.68	20.67	20.64	22
10	64QAM	25	12	20.78	20.70	20.70	
10	64QAM	25	25	20.77	20.67	20.72	
10	64QAM	50	0	20.73	20.63	20.68	
10	256QAM	1	0	18.79	18.81	18.79	20
10	256QAM	1	25	18.74	18.82	18.74	
10	256QAM	1	49	18.67	18.74	18.73	
10	256QAM	25	0	18.85	18.85	18.87	20
10	256QAM	25	12	18.73	18.81	18.75	
10	256QAM	25	25	18.77	18.75	18.77	
10	256QAM	50	0	18.65	18.72	18.70	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	23.73	23.69	23.72	25
5	QPSK	1	12	23.69	23.67	23.65	
5	QPSK	1	24	23.65	23.61	23.54	
5	QPSK	12	0	22.65	22.68	22.66	24
5	QPSK	12	7	22.66	22.64	22.75	
5	QPSK	12	13	22.77	22.69	22.63	
5	QPSK	25	0	22.75	22.70	22.78	
5	16QAM	1	0	22.98	22.91	22.95	24
5	16QAM	1	12	22.85	22.94	22.88	
5	16QAM	1	24	22.92	22.97	22.83	
5	16QAM	12	0	21.73	21.71	21.66	23
5	16QAM	12	7	21.76	21.69	21.66	
5	16QAM	12	13	21.67	21.70	21.73	
5	16QAM	25	0	21.67	21.62	21.69	
5	64QAM	1	0	21.86	21.77	21.74	23
5	64QAM	1	12	21.84	21.85	21.88	
5	64QAM	1	24	21.92	21.78	21.75	
5	64QAM	12	0	20.72	20.67	20.70	22
5	64QAM	12	7	20.78	20.65	20.68	
5	64QAM	12	13	20.76	20.66	20.77	
5	64QAM	25	0	20.64	20.63	20.66	
5	256QAM	1	0	18.81	18.85	18.81	20
5	256QAM	1	12	18.68	18.76	18.71	
5	256QAM	1	24	18.66	18.79	18.65	
5	256QAM	12	0	18.81	18.90	18.81	20
5	256QAM	12	7	18.80	18.79	18.80	
5	256QAM	12	13	18.74	18.78	18.82	
5	256QAM	25	0	18.65	18.80	18.70	
Channel				26705	26865	27025	Tune-up limit

Frequency (MHz)				815.5	831.5	847.5	(dBm)
3	QPSK	1	0	23.74	23.65	23.73	25
3	QPSK	1	8	23.73	23.71	23.61	
3	QPSK	1	14	23.65	23.67	23.60	
3	QPSK	8	0	22.67	22.67	22.69	24
3	QPSK	8	4	22.73	22.64	22.67	
3	QPSK	8	7	22.71	22.61	22.67	
3	QPSK	15	0	22.77	22.70	22.76	
3	16QAM	1	0	22.93	22.91	22.89	24
3	16QAM	1	8	22.87	22.91	22.92	
3	16QAM	1	14	22.88	22.91	22.91	
3	16QAM	8	0	21.68	21.68	21.61	23
3	16QAM	8	4	21.72	21.75	21.73	
3	16QAM	8	7	21.69	21.71	21.73	
3	16QAM	15	0	21.74	21.70	21.73	
3	64QAM	1	0	21.80	21.82	21.80	23
3	64QAM	1	8	21.83	21.86	21.81	
3	64QAM	1	14	21.88	21.73	21.75	
3	64QAM	8	0	20.66	20.62	20.71	22
3	64QAM	8	4	20.74	20.64	20.71	
3	64QAM	8	7	20.81	20.65	20.74	
3	64QAM	15	0	20.73	20.72	20.67	
3	256QAM	1	0	18.81	18.84	18.73	20
3	256QAM	1	8	18.67	18.82	18.70	
3	256QAM	1	14	18.68	18.77	18.73	
3	256QAM	8	0	18.87	18.91	18.81	20
3	256QAM	8	4	18.78	18.78	18.76	
3	256QAM	8	7	18.77	18.74	18.79	
3	256QAM	15	0	18.61	18.72	18.69	
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	23.74	23.66	23.64	25
1.4	QPSK	1	3	23.67	23.70	23.61	
1.4	QPSK	1	5	23.70	23.57	23.54	
1.4	QPSK	3	0	23.67	23.63	23.68	
1.4	QPSK	3	1	23.68	23.73	23.61	
1.4	QPSK	3	3	23.65	23.66	23.52	
1.4	QPSK	6	0	22.73	22.68	22.77	24
1.4	16QAM	1	0	22.93	22.96	22.90	24
1.4	16QAM	1	3	22.89	22.86	22.91	
1.4	16QAM	1	5	22.91	22.90	22.91	
1.4	16QAM	3	0	22.95	22.99	22.94	
1.4	16QAM	3	1	22.87	22.88	22.90	
1.4	16QAM	3	3	22.88	22.96	22.89	
1.4	16QAM	6	0	21.73	21.69	21.70	23
1.4	64QAM	1	0	21.77	21.84	21.71	23
1.4	64QAM	1	3	21.87	21.84	21.88	
1.4	64QAM	1	5	21.86	21.74	21.79	
1.4	64QAM	3	0	21.86	21.77	21.70	
1.4	64QAM	3	1	21.86	21.83	21.80	
1.4	64QAM	3	3	21.90	21.79	21.81	
1.4	64QAM	6	0	20.69	20.62	20.64	22
1.4	256QAM	1	0	18.83	18.81	18.73	20
1.4	256QAM	1	3	18.76	18.79	18.80	
1.4	256QAM	1	5	18.65	18.76	18.65	
1.4	256QAM	3	0	18.87	18.85	18.73	

1.4	256QAM	3	1	18.68	18.84	18.71	
1.4	256QAM	3	3	18.63	18.76	18.65	
1.4	256QAM	6	0	18.66	18.78	18.72	20

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					27710		
Frequency (MHz)					2310		
10	QPSK	1	0		21.86		23
10	QPSK	1	25		21.83		
10	QPSK	1	49		21.85		
10	QPSK	25	0		20.77		22
10	QPSK	25	12		20.69		
10	QPSK	25	25		20.70		
10	QPSK	50	0		20.86		
10	16QAM	1	0		21.16		22
10	16QAM	1	25		21.10		
10	16QAM	1	49		21.16		
10	16QAM	25	0		19.70		21
10	16QAM	25	12		19.80		
10	16QAM	25	25		19.64		
10	16QAM	50	0		19.85		
10	64QAM	1	0		19.95		21
10	64QAM	1	25		19.98		
10	64QAM	1	49		19.98		
10	64QAM	25	0		18.68		20
10	64QAM	25	12		18.80		
10	64QAM	25	25		18.67		
10	64QAM	50	0		18.82		
10	256QAM	1	0		17.42		18
10	256QAM	1	25		17.37		
10	256QAM	1	49		17.28		
10	256QAM	25	0		17.10		18
10	256QAM	25	12		17.07		
10	256QAM	25	25		17.02		
10	256QAM	50	0		16.98		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	21.72	21.76	21.71	23
5	QPSK	1	12	21.67	21.73	21.65	
5	QPSK	1	24	21.71	21.83	21.68	
5	QPSK	12	0	20.53	20.66	20.52	22
5	QPSK	12	7	20.60	20.74	20.60	
5	QPSK	12	13	20.55	20.70	20.57	
5	QPSK	25	0	20.65	20.84	20.65	
5	16QAM	1	0	21.05	21.11	20.97	22
5	16QAM	1	12	20.99	21.05	20.97	
5	16QAM	1	24	21.01	21.08	20.99	
5	16QAM	12	0	19.57	19.60	19.61	21
5	16QAM	12	7	19.67	19.78	19.69	
5	16QAM	12	13	19.50	19.54	19.48	
5	16QAM	25	0	19.77	19.80	19.76	
5	64QAM	1	0	19.77	19.88	19.82	21

5	64QAM	1	12	19.90	19.92	19.92	
5	64QAM	1	24	19.88	19.96	19.83	
5	64QAM	12	0	18.47	18.62	18.48	20
5	64QAM	12	7	18.61	18.76	18.55	
5	64QAM	12	13	18.54	18.64	18.50	
5	64QAM	25	0	18.71	18.74	18.65	
5	256QAM	1	0	17.31	17.34	17.23	18
5	256QAM	1	12	17.20	17.33	17.14	
5	256QAM	1	24	17.21	17.19	17.20	
5	256QAM	12	0	16.97	17.05	17.02	18
5	256QAM	12	7	16.97	17.05	16.92	
5	256QAM	12	13	16.90	17.01	16.86	
5	256QAM	25	0	16.80	16.98	16.82	

<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)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	22.80	22.77	22.71	24
20	QPSK	1	49	22.67	22.69	22.62	
20	QPSK	1	99	22.71	22.62	22.50	
20	QPSK	50	0	21.79	21.77	21.73	23
20	QPSK	50	24	21.75	21.77	21.73	
20	QPSK	50	50	21.68	21.68	21.69	
20	QPSK	100	0	21.76	21.75	21.71	
20	16QAM	1	0	21.86	21.97	21.86	23
20	16QAM	1	49	22.05	22.00	21.89	
20	16QAM	1	99	21.94	21.89	21.66	
20	16QAM	50	0	20.69	20.76	20.70	22
20	16QAM	50	24	20.78	20.78	20.74	
20	16QAM	50	50	20.74	20.65	20.69	
20	16QAM	100	0	20.71	20.73	20.71	
20	64QAM	1	0	20.76	20.86	20.78	22
20	64QAM	1	49	20.94	20.93	20.83	
20	64QAM	1	99	20.78	20.81	20.65	
20	64QAM	50	0	19.66	19.79	19.69	21
20	64QAM	50	24	19.76	19.74	19.75	
20	64QAM	50	50	19.74	19.65	19.71	
20	64QAM	100	0	19.72	19.71	19.69	
20	256QAM	1	0	18.06	18.05	18.08	19
20	256QAM	1	49	17.97	18.03	17.98	
20	256QAM	1	99	17.88	17.96	17.92	
20	256QAM	50	0	17.96	18.06	17.99	19
20	256QAM	50	24	17.94	18.05	17.95	
20	256QAM	50	50	17.87	18.03	17.93	
20	256QAM	100	0	17.87	17.96	17.92	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.78	22.71	22.62	24
15	QPSK	1	37	22.62	22.60	22.58	
15	QPSK	1	74	22.66	22.60	22.41	
15	QPSK	36	0	21.60	21.76	21.67	23
15	QPSK	36	20	21.71	21.76	21.66	

15	QPSK	36	39	21.73	21.65	21.59	
15	QPSK	75	0	21.66	21.69	21.65	
15	16QAM	1	0	21.84	21.97	21.76	23
15	16QAM	1	37	22.03	21.95	21.83	
15	16QAM	1	74	21.93	21.86	21.65	
15	16QAM	36	0	20.64	20.71	20.60	22
15	16QAM	36	20	20.73	20.68	20.72	
15	16QAM	36	39	20.64	20.65	20.64	
15	16QAM	75	0	20.63	20.72	20.61	
15	64QAM	1	0	20.76	20.76	20.71	22
15	64QAM	1	37	20.89	20.93	20.76	
15	64QAM	1	74	20.77	20.76	20.58	
15	64QAM	36	0	19.60	19.75	19.63	21
15	64QAM	36	20	19.75	19.66	19.66	
15	64QAM	36	39	19.74	19.58	19.62	
15	64QAM	75	0	19.66	19.69	19.61	
15	256QAM	1	0	17.96	18.05	18.06	19
15	256QAM	1	37	17.91	18.03	17.94	
15	256QAM	1	74	17.80	17.94	17.90	
15	256QAM	36	0	17.93	18.03	17.91	19
15	256QAM	36	20	17.92	17.95	17.85	
15	256QAM	36	39	17.82	18.00	17.86	
15	256QAM	75	0	17.85	17.90	17.83	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.72	22.69	22.68	24
10	QPSK	1	25	22.57	22.61	22.59	
10	QPSK	1	49	22.64	22.61	22.45	
10	QPSK	25	0	21.66	21.71	21.63	23
10	QPSK	25	12	21.72	21.75	21.73	
10	QPSK	25	25	21.72	21.61	21.62	
10	QPSK	50	0	21.67	21.66	21.64	
10	16QAM	1	0	21.82	21.96	21.77	23
10	16QAM	1	25	22.05	21.90	21.84	
10	16QAM	1	49	21.86	21.89	21.59	
10	16QAM	25	0	20.61	20.69	20.70	22
10	16QAM	25	12	20.76	20.74	20.70	
10	16QAM	25	25	20.65	20.57	20.60	
10	16QAM	50	0	20.64	20.65	20.63	
10	64QAM	1	0	20.66	20.81	20.76	22
10	64QAM	1	25	20.90	20.87	20.78	
10	64QAM	1	49	20.76	20.75	20.58	
10	64QAM	25	0	19.64	19.77	19.67	21
10	64QAM	25	12	19.74	19.72	19.72	
10	64QAM	25	25	19.70	19.57	19.64	
10	64QAM	50	0	19.66	19.68	19.63	
10	256QAM	1	0	18.06	18.02	18.03	19
10	256QAM	1	25	17.95	17.97	17.89	
10	256QAM	1	49	17.86	17.95	17.89	
10	256QAM	25	0	17.91	18.04	17.89	19
10	256QAM	25	12	17.94	17.97	17.95	
10	256QAM	25	25	17.86	17.99	17.92	
10	256QAM	50	0	17.82	17.94	17.83	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.78	22.70	22.61	24

5	QPSK	1	12	22.61	22.66	22.52	
5	QPSK	1	24	22.70	22.55	22.42	
5	QPSK	12	0	21.66	21.68	21.69	23
5	QPSK	12	7	21.73	21.77	21.67	
5	QPSK	12	13	21.69	21.59	21.68	
5	QPSK	25	0	21.74	21.74	21.65	
5	16QAM	1	0	21.85	21.89	21.83	23
5	16QAM	1	12	21.95	21.92	21.83	
5	16QAM	1	24	21.86	21.79	21.66	
5	16QAM	12	0	20.67	20.70	20.60	22
5	16QAM	12	7	20.75	20.77	20.73	
5	16QAM	12	13	20.65	20.55	20.60	
5	16QAM	25	0	20.67	20.65	20.71	
5	64QAM	1	0	20.75	20.84	20.78	22
5	64QAM	1	12	20.90	20.87	20.82	
5	64QAM	1	24	20.68	20.77	20.56	
5	64QAM	12	0	19.64	19.73	19.64	21
5	64QAM	12	7	19.66	19.74	19.70	
5	64QAM	12	13	19.64	19.65	19.61	
5	64QAM	25	0	19.68	19.62	19.66	
5	256QAM	1	0	18.03	18.02	18.06	19
5	256QAM	1	12	17.90	17.95	17.90	
5	256QAM	1	24	17.81	17.87	17.89	
5	256QAM	12	0	17.95	18.03	17.94	19
5	256QAM	12	7	17.85	18.04	17.90	
5	256QAM	12	13	17.87	17.98	17.83	
5	256QAM	25	0	17.83	17.89	17.92	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.78	22.76	22.70	24
3	QPSK	1	8	22.59	22.68	22.61	
3	QPSK	1	14	22.70	22.61	22.44	
3	QPSK	8	0	21.64	21.67	21.67	23
3	QPSK	8	4	21.74	21.75	21.64	
3	QPSK	8	7	21.79	21.63	21.59	
3	QPSK	15	0	21.67	21.72	21.66	
3	16QAM	1	0	21.84	21.96	21.86	23
3	16QAM	1	8	22.01	21.99	21.89	
3	16QAM	1	14	21.87	21.87	21.57	
3	16QAM	8	0	20.62	20.70	20.70	22
3	16QAM	8	4	20.75	20.72	20.71	
3	16QAM	8	7	20.69	20.59	20.62	
3	16QAM	15	0	20.67	20.65	20.67	
3	64QAM	1	0	20.74	20.77	20.72	22
3	64QAM	1	8	20.86	20.92	20.77	
3	64QAM	1	14	20.73	20.77	20.64	
3	64QAM	8	0	19.62	19.77	19.67	21
3	64QAM	8	4	19.76	19.65	19.73	
3	64QAM	8	7	19.71	19.62	19.70	
3	64QAM	15	0	19.65	19.69	19.61	
3	256QAM	1	0	17.99	18.04	18.03	19
3	256QAM	1	8	17.89	18.02	17.89	
3	256QAM	1	14	17.87	17.89	17.88	
3	256QAM	8	0	17.93	18.05	17.98	19
3	256QAM	8	4	17.86	17.97	17.90	
3	256QAM	8	7	17.84	18.03	17.89	

3	256QAM	15	0	17.83	17.92	17.87	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	22.76	22.70	22.64	24
1.4	QPSK	1	3	22.56	22.61	22.54	
1.4	QPSK	1	5	22.62	22.59	22.34	
1.4	QPSK	3	0	22.71	22.73	22.70	
1.4	QPSK	3	1	22.53	22.65	22.61	
1.4	QPSK	3	3	22.64	22.52	22.35	
1.4	QPSK	6	0	21.66	21.65	21.59	23
1.4	16QAM	1	0	21.82	21.86	21.78	23
1.4	16QAM	1	3	21.98	21.99	21.79	
1.4	16QAM	1	5	21.86	21.81	21.51	
1.4	16QAM	3	0	21.75	21.86	21.77	
1.4	16QAM	3	1	21.94	21.91	21.86	
1.4	16QAM	3	3	21.86	21.80	21.48	
1.4	16QAM	6	0	20.63	20.56	20.59	22
1.4	64QAM	1	0	20.71	20.71	20.66	22
1.4	64QAM	1	3	20.76	20.82	20.69	
1.4	64QAM	1	5	20.71	20.67	20.58	
1.4	64QAM	3	0	20.64	20.70	20.70	
1.4	64QAM	3	1	20.83	20.90	20.67	
1.4	64QAM	3	3	20.70	20.75	20.63	
1.4	64QAM	6	0	19.63	19.68	19.56	21
1.4	256QAM	1	0	17.97	17.99	17.95	19
1.4	256QAM	1	3	17.79	17.97	17.88	
1.4	256QAM	1	5	17.79	17.84	17.84	
1.4	256QAM	3	0	17.93	17.95	17.97	
1.4	256QAM	3	1	17.82	17.93	17.85	
1.4	256QAM	3	3	17.83	17.81	17.78	
1.4	256QAM	6	0	17.78	17.82	17.80	19

<LTE Band 71>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	23.85	23.88	23.87	25
20	QPSK	1	49	23.74	23.75	23.78	
20	QPSK	1	99	23.81	23.71	23.75	
20	QPSK	50	0	22.84	22.97	22.88	24
20	QPSK	50	24	22.84	22.91	22.84	
20	QPSK	50	50	22.77	22.86	22.81	
20	QPSK	100	0	22.86	22.91	22.87	
20	16QAM	1	0	22.98	22.91	22.93	24
20	16QAM	1	49	22.94	22.95	22.98	
20	16QAM	1	99	22.96	22.94	22.93	
20	16QAM	50	0	21.82	21.99	21.88	23
20	16QAM	50	24	21.83	21.96	21.88	
20	16QAM	50	50	21.80	21.92	21.81	
20	16QAM	100	0	21.82	21.90	21.81	
20	64QAM	1	0	21.88	21.87	21.87	23
20	64QAM	1	49	21.91	21.92	21.99	
20	64QAM	1	99	21.99	21.90	21.88	

20	64QAM	50	0	20.80	20.98	20.89	22
20	64QAM	50	24	20.88	20.88	20.87	
20	64QAM	50	50	20.76	20.94	20.80	
20	64QAM	100	0	20.76	20.92	20.82	
20	256QAM	1	0	18.92	18.98	18.97	20
20	256QAM	1	49	18.86	18.95	18.94	
20	256QAM	1	99	18.82	18.93	18.87	
20	256QAM	50	0	18.90	18.93	18.91	20
20	256QAM	50	24	18.86	18.90	18.85	
20	256QAM	50	50	18.77	18.88	18.82	
20	256QAM	100	0	18.76	18.88	18.78	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	23.79	23.79	23.87	25
15	QPSK	1	37	23.70	23.65	23.75	
15	QPSK	1	74	23.76	23.63	23.67	
15	QPSK	36	0	22.84	22.93	22.81	24
15	QPSK	36	20	22.75	22.87	22.90	
15	QPSK	36	39	22.72	22.84	22.72	
15	QPSK	75	0	22.82	22.88	22.85	
15	16QAM	1	0	22.90	22.91	22.92	24
15	16QAM	1	37	22.91	22.90	22.93	
15	16QAM	1	74	22.89	22.94	22.85	
15	16QAM	36	0	21.74	21.98	21.78	23
15	16QAM	36	20	21.78	21.88	21.86	
15	16QAM	36	39	21.79	21.92	21.80	
15	16QAM	75	0	21.76	21.89	21.72	
15	64QAM	1	0	21.81	21.87	21.77	23
15	64QAM	1	37	21.83	21.90	21.97	
15	64QAM	1	74	21.98	21.81	21.84	
15	64QAM	36	0	20.72	20.93	20.88	22
15	64QAM	36	20	20.79	20.88	20.80	
15	64QAM	36	39	20.69	20.92	20.74	
15	64QAM	75	0	20.73	20.90	20.75	
15	256QAM	1	0	18.91	18.94	18.94	20
15	256QAM	1	37	18.85	18.92	18.94	
15	256QAM	1	74	18.82	18.86	18.78	
15	256QAM	36	0	18.89	18.85	18.89	20
15	256QAM	36	20	18.83	18.84	18.84	
15	256QAM	36	39	18.77	18.82	18.77	
15	256QAM	75	0	18.70	18.85	18.71	
Channel				133172	133297	133422	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	QPSK	1	0	23.83	23.82	23.77	25
10	QPSK	1	25	23.68	23.75	23.69	
10	QPSK	1	49	23.80	23.65	23.67	
10	QPSK	25	0	22.78	22.87	22.82	24
10	QPSK	25	12	22.76	22.88	22.85	
10	QPSK	25	25	22.77	22.81	22.75	
10	QPSK	50	0	22.80	22.84	22.87	
10	16QAM	1	0	22.97	22.81	22.90	24
10	16QAM	1	25	22.89	22.86	22.90	
10	16QAM	1	49	22.86	22.84	22.92	
10	16QAM	25	0	21.79	21.96	21.78	23
10	16QAM	25	12	21.75	21.95	21.79	
10	16QAM	25	25	21.70	21.86	21.73	

10	16QAM	50	0	21.74	21.88	21.74	
10	64QAM	1	0	21.88	21.82	21.77	23
10	64QAM	1	25	21.83	21.90	21.98	
10	64QAM	1	49	21.93	21.87	21.84	
10	64QAM	25	0	20.70	20.92	20.80	22
10	64QAM	25	12	20.85	20.79	20.79	
10	64QAM	25	25	20.71	20.90	20.77	
10	64QAM	50	0	20.74	20.83	20.77	
10	256QAM	1	0	18.89	18.97	18.92	20
10	256QAM	1	25	18.81	18.94	18.86	
10	256QAM	1	49	18.79	18.83	18.82	
10	256QAM	25	0	18.80	18.92	18.91	20
10	256QAM	25	12	18.83	18.85	18.77	
10	256QAM	25	25	18.72	18.86	18.72	
10	256QAM	50	0	18.76	18.81	18.72	
Channel				133147	133297	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	QPSK	1	0	23.76	23.84	23.85	25
5	QPSK	1	12	23.71	23.70	23.68	
5	QPSK	1	24	23.80	23.68	23.72	
5	QPSK	12	0	22.83	22.92	22.80	24
5	QPSK	12	7	22.79	22.89	22.87	
5	QPSK	12	13	22.71	22.82	22.74	
5	QPSK	25	0	22.83	22.91	22.85	
5	16QAM	1	0	22.89	22.81	22.84	24
5	16QAM	1	12	22.91	22.94	22.89	
5	16QAM	1	24	22.88	22.91	22.91	
5	16QAM	12	0	21.76	21.96	21.85	23
5	16QAM	12	7	21.76	21.95	21.87	
5	16QAM	12	13	21.75	21.89	21.71	
5	16QAM	25	0	21.77	21.87	21.76	
5	64QAM	1	0	21.79	21.84	21.77	23
5	64QAM	1	12	21.86	21.84	21.89	
5	64QAM	1	24	21.89	21.85	21.84	
5	64QAM	12	0	20.77	20.91	20.84	22
5	64QAM	12	7	20.78	20.88	20.83	
5	64QAM	12	13	20.75	20.93	20.80	
5	64QAM	25	0	20.71	20.88	20.78	
5	256QAM	1	0	18.85	18.90	18.92	20
5	256QAM	1	12	18.81	18.86	18.85	
5	256QAM	1	24	18.77	18.83	18.85	
5	256QAM	12	0	18.90	18.90	18.86	20
5	256QAM	12	7	18.78	18.82	18.85	
5	256QAM	12	13	18.67	18.81	18.80	
5	256QAM	25	0	18.71	18.88	18.77	

Default Power Mode (MIMO)

<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)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	22.61	22.65	22.62	24
20	QPSK	1	49	22.60	22.55	22.56	
20	QPSK	1	99	22.42	22.49	22.51	
20	QPSK	50	0	21.62	21.57	21.69	23
20	QPSK	50	24	21.65	21.68	21.67	
20	QPSK	50	50	21.57	21.65	21.56	
20	QPSK	100	0	21.60	21.58	21.65	
20	16QAM	1	0	21.70	21.86	21.76	23
20	16QAM	1	49	21.80	21.89	21.78	
20	16QAM	1	99	21.64	21.73	21.62	
20	16QAM	50	0	20.64	20.52	20.63	22
20	16QAM	50	24	20.65	20.63	20.65	
20	16QAM	50	50	20.56	20.61	20.58	
20	16QAM	100	0	20.60	20.60	20.61	
20	64QAM	1	0	20.68	20.76	20.68	22
20	64QAM	1	49	20.74	20.80	20.76	
20	64QAM	1	99	20.57	20.68	20.61	
20	64QAM	50	0	19.65	19.56	19.65	21
20	64QAM	50	24	19.68	19.63	19.66	
20	64QAM	50	50	19.57	19.61	19.56	
20	64QAM	100	0	19.60	19.61	19.64	
20	256QAM	1	0	18.03	17.89	17.90	19
20	256QAM	1	49	17.39	17.61	17.54	
20	256QAM	1	99	17.33	17.43	17.41	
20	256QAM	50	0	17.36	17.48	17.41	19
20	256QAM	50	24	17.59	17.58	17.50	
20	256QAM	50	50	17.64	17.62	17.37	
20	256QAM	100	0	17.65	17.54	17.34	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.54	22.58	22.45	24
15	QPSK	1	37	22.52	22.35	22.40	
15	QPSK	1	74	22.42	22.35	22.33	
15	QPSK	36	0	21.44	21.53	21.53	23
15	QPSK	36	20	21.45	21.67	21.65	
15	QPSK	36	39	21.50	21.48	21.39	
15	QPSK	75	0	21.42	21.51	21.65	
15	16QAM	1	0	21.51	21.68	21.58	23
15	16QAM	1	37	21.65	21.77	21.76	
15	16QAM	1	74	21.53	21.69	21.43	
15	16QAM	36	0	20.53	20.32	20.49	22
15	16QAM	36	20	20.61	20.52	20.52	
15	16QAM	36	39	20.37	20.49	20.55	
15	16QAM	75	0	20.46	20.54	20.50	
15	64QAM	1	0	20.52	20.65	20.51	22
15	64QAM	1	37	20.68	20.61	20.61	
15	64QAM	1	74	20.41	20.62	20.49	
15	64QAM	36	0	19.54	19.53	19.55	21
15	64QAM	36	20	19.68	19.59	19.53	
15	64QAM	36	39	19.57	19.53	19.53	

15	64QAM	75	0	19.42	19.47	19.59	
15	256QAM	1	0	17.88	17.83	17.73	19
15	256QAM	1	37	17.31	17.43	17.34	
15	256QAM	1	74	17.33	17.35	17.30	
15	256QAM	36	0	17.35	17.40	17.41	19
15	256QAM	36	20	17.53	17.58	17.45	
15	256QAM	36	39	17.47	17.42	17.33	
15	256QAM	75	0	17.53	17.36	17.23	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.60	22.52	22.56	24
10	QPSK	1	25	22.41	22.53	22.40	
10	QPSK	1	49	22.25	22.39	22.44	
10	QPSK	25	0	21.43	21.43	21.66	23
10	QPSK	25	12	21.63	21.60	21.49	
10	QPSK	25	25	21.45	21.51	21.39	
10	QPSK	50	0	21.51	21.44	21.53	
10	16QAM	1	0	21.69	21.74	21.73	23
10	16QAM	1	25	21.74	21.81	21.70	
10	16QAM	1	49	21.54	21.64	21.54	
10	16QAM	25	0	20.56	20.40	20.58	22
10	16QAM	25	12	20.56	20.63	20.45	
10	16QAM	25	25	20.44	20.61	20.38	
10	16QAM	50	0	20.44	20.58	20.45	
10	64QAM	1	0	20.48	20.75	20.50	22
10	64QAM	1	25	20.54	20.66	20.57	
10	64QAM	1	49	20.50	20.60	20.43	
10	64QAM	25	0	19.61	19.43	19.55	21
10	64QAM	25	12	19.53	19.58	19.46	
10	64QAM	25	25	19.46	19.45	19.42	
10	64QAM	50	0	19.56	19.52	19.64	
10	256QAM	1	0	17.90	17.69	17.73	19
10	256QAM	1	25	17.19	17.56	17.37	
10	256QAM	1	49	17.26	17.28	17.30	
10	256QAM	25	0	17.29	17.29	17.28	19
10	256QAM	25	12	17.56	17.44	17.34	
10	256QAM	25	25	17.61	17.58	17.35	
10	256QAM	50	0	17.50	17.51	17.22	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.46	22.50	22.42	24
5	QPSK	1	12	22.54	22.51	22.41	
5	QPSK	1	24	22.31	22.30	22.37	
5	QPSK	12	0	21.50	21.54	21.55	23
5	QPSK	12	7	21.49	21.68	21.61	
5	QPSK	12	13	21.37	21.51	21.50	
5	QPSK	25	0	21.46	21.40	21.49	
5	16QAM	1	0	21.52	21.66	21.63	23
5	16QAM	1	12	21.79	21.72	21.74	
5	16QAM	1	24	21.60	21.61	21.43	
5	16QAM	12	0	20.52	20.49	20.59	22
5	16QAM	12	7	20.45	20.45	20.62	
5	16QAM	12	13	20.36	20.47	20.48	
5	16QAM	25	0	20.49	20.41	20.50	
5	64QAM	1	0	20.58	20.71	20.49	22
5	64QAM	1	12	20.62	20.80	20.74	

5	64QAM	1	24	20.48	20.53	20.53	
5	64QAM	12	0	19.57	19.39	19.64	21
5	64QAM	12	7	19.67	19.57	19.48	
5	64QAM	12	13	19.57	19.47	19.52	
5	64QAM	25	0	19.52	19.42	19.52	
5	256QAM	1	0	17.88	17.76	17.72	19
5	256QAM	1	12	17.30	17.61	17.42	
5	256QAM	1	24	17.23	17.43	17.35	
5	256QAM	12	0	17.25	17.37	17.35	19
5	256QAM	12	7	17.49	17.41	17.50	
5	256QAM	12	13	17.56	17.48	17.21	
5	256QAM	25	0	17.52	17.47	17.22	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.49	22.54	22.57	24
3	QPSK	1	8	22.44	22.51	22.50	
3	QPSK	1	14	22.24	22.49	22.43	
3	QPSK	8	0	21.49	21.55	21.53	23
3	QPSK	8	4	21.54	21.56	21.50	
3	QPSK	8	7	21.38	21.45	21.55	
3	QPSK	15	0	21.57	21.51	21.50	
3	16QAM	1	0	21.55	21.84	21.71	23
3	16QAM	1	8	21.76	21.72	21.59	
3	16QAM	1	14	21.64	21.62	21.42	
3	16QAM	8	0	20.44	20.36	20.58	22
3	16QAM	8	4	20.55	20.52	20.55	
3	16QAM	8	7	20.43	20.57	20.38	
3	16QAM	15	0	20.57	20.59	20.52	
3	64QAM	1	0	20.65	20.57	20.48	22
3	64QAM	1	8	20.57	20.72	20.75	
3	64QAM	1	14	20.48	20.54	20.59	
3	64QAM	8	0	19.51	19.39	19.50	21
3	64QAM	8	4	19.59	19.50	19.51	
3	64QAM	8	7	19.54	19.47	19.41	
3	64QAM	15	0	19.60	19.45	19.53	
3	256QAM	1	0	17.88	17.86	17.82	19
3	256QAM	1	8	17.27	17.48	17.36	
3	256QAM	1	14	17.25	17.41	17.38	
3	256QAM	8	0	17.21	17.39	17.35	19
3	256QAM	8	4	17.48	17.51	17.47	
3	256QAM	8	7	17.62	17.50	17.19	
3	256QAM	15	0	17.61	17.45	17.15	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.53	22.51	22.46	24
1.4	QPSK	1	3	22.41	22.53	22.51	
1.4	QPSK	1	5	22.24	22.40	22.36	
1.4	QPSK	3	0	22.42	22.48	22.44	
1.4	QPSK	3	1	22.46	22.38	22.44	
1.4	QPSK	3	3	22.25	22.47	22.46	
1.4	QPSK	6	0	21.61	21.49	21.61	23
1.4	16QAM	1	0	21.49	21.51	21.57	23
1.4	16QAM	1	3	21.45	21.65	21.39	
1.4	16QAM	1	5	21.60	21.49	21.56	
1.4	16QAM	3	0	21.69	21.67	21.67	
1.4	16QAM	3	1	21.72	21.86	21.65	

1.4	16QAM	3	3	21.45	21.58	21.61	
1.4	16QAM	6	0	20.64	20.41	20.43	22
1.4	64QAM	1	0	20.55	20.58	20.51	22
1.4	64QAM	1	3	20.50	20.52	20.49	
1.4	64QAM	1	5	20.54	20.58	20.44	
1.4	64QAM	3	0	20.52	20.66	20.67	
1.4	64QAM	3	1	20.67	20.60	20.61	
1.4	64QAM	3	3	20.46	20.49	20.49	
1.4	64QAM	6	0	19.44	19.49	19.53	21
1.4	256QAM	1	0	17.83	17.70	17.88	19
1.4	256QAM	1	3	17.37	17.47	17.51	
1.4	256QAM	1	5	17.15	17.23	17.26	
1.4	256QAM	3	0	17.18	17.34	17.37	
1.4	256QAM	3	1	17.59	17.54	17.45	
1.4	256QAM	3	3	17.49	17.57	17.27	
1.4	256QAM	6	0	17.46	17.43	17.27	19

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	22.53	22.59	22.56	24
20	QPSK	1	49	22.43	22.46	22.51	
20	QPSK	1	99	22.45	22.39	22.32	
20	QPSK	50	0	21.38	21.64	21.52	23
20	QPSK	50	24	21.56	21.60	21.56	
20	QPSK	50	50	21.46	21.56	21.53	
20	QPSK	100	0	21.43	21.56	21.52	
20	16QAM	1	0	21.72	21.71	21.84	23
20	16QAM	1	49	21.84	21.88	21.80	
20	16QAM	1	99	21.74	21.65	21.59	
20	16QAM	50	0	20.36	20.65	20.52	22
20	16QAM	50	24	20.56	20.56	20.54	
20	16QAM	50	50	20.46	20.57	20.50	
20	16QAM	100	0	20.43	20.55	20.50	
20	64QAM	1	0	20.60	20.61	20.70	22
20	64QAM	1	49	20.70	20.76	20.66	
20	64QAM	1	99	20.63	20.55	20.46	
20	64QAM	50	0	19.35	19.67	19.52	21
20	64QAM	50	24	19.54	19.59	19.51	
20	64QAM	50	50	19.46	19.59	19.52	
20	64QAM	100	0	19.42	19.53	19.51	
20	256QAM	1	0	18.03	17.99	17.99	19
20	256QAM	1	49	18.08	18.01	18.06	
20	256QAM	1	99	17.76	17.96	17.79	
20	256QAM	50	0	17.35	17.59	17.73	19
20	256QAM	50	24	17.49	17.55	17.69	
20	256QAM	50	50	17.61	17.58	17.60	
20	256QAM	100	0	17.54	17.52	17.36	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.38	22.52	22.55	24
15	QPSK	1	37	22.42	22.40	22.32	

15	QPSK	1	74	22.41	22.25	22.15	
15	QPSK	36	0	21.31	21.48	21.44	23
15	QPSK	36	20	21.41	21.52	21.43	
15	QPSK	36	39	21.37	21.52	21.39	
15	QPSK	75	0	21.24	21.56	21.51	
15	16QAM	1	0	21.70	21.68	21.76	23
15	16QAM	1	37	21.82	21.88	21.72	
15	16QAM	1	74	21.55	21.59	21.51	
15	16QAM	36	0	20.22	20.52	20.37	22
15	16QAM	36	20	20.41	20.39	20.41	
15	16QAM	36	39	20.34	20.55	20.34	
15	16QAM	75	0	20.41	20.40	20.44	
15	64QAM	1	0	20.48	20.52	20.57	22
15	64QAM	1	37	20.64	20.65	20.59	
15	64QAM	1	74	20.57	20.49	20.37	
15	64QAM	36	0	19.27	19.60	19.44	21
15	64QAM	36	20	19.37	19.40	19.40	
15	64QAM	36	39	19.38	19.42	19.37	
15	64QAM	75	0	19.32	19.39	19.33	
15	256QAM	1	0	17.98	17.99	17.86	19
15	256QAM	1	37	18.06	18.01	17.89	
15	256QAM	1	74	17.76	17.81	17.66	
15	256QAM	36	0	17.17	17.49	17.71	19
15	256QAM	36	20	17.42	17.50	17.56	
15	256QAM	36	39	17.42	17.44	17.49	
15	256QAM	75	0	17.41	17.33	17.22	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.53	22.49	22.46	24
10	QPSK	1	25	22.39	22.40	22.31	
10	QPSK	1	49	22.33	22.29	22.21	
10	QPSK	25	0	21.24	21.59	21.48	23
10	QPSK	25	12	21.56	21.55	21.54	
10	QPSK	25	25	21.38	21.39	21.40	
10	QPSK	50	0	21.36	21.43	21.48	
10	16QAM	1	0	21.58	21.57	21.66	23
10	16QAM	1	25	21.83	21.71	21.61	
10	16QAM	1	49	21.55	21.63	21.49	
10	16QAM	25	0	20.22	20.64	20.34	22
10	16QAM	25	12	20.40	20.43	20.52	
10	16QAM	25	25	20.35	20.42	20.32	
10	16QAM	50	0	20.23	20.36	20.34	
10	64QAM	1	0	20.42	20.44	20.55	22
10	64QAM	1	25	20.68	20.76	20.58	
10	64QAM	1	49	20.57	20.55	20.41	
10	64QAM	25	0	19.23	19.58	19.34	21
10	64QAM	25	12	19.36	19.41	19.44	
10	64QAM	25	25	19.39	19.49	19.39	
10	64QAM	50	0	19.33	19.50	19.37	
10	256QAM	1	0	17.96	17.90	17.87	19
10	256QAM	1	25	18.03	17.87	17.87	
10	256QAM	1	49	17.67	17.91	17.77	
10	256QAM	25	0	17.34	17.40	17.60	19
10	256QAM	25	12	17.49	17.55	17.55	
10	256QAM	25	25	17.49	17.49	17.49	
10	256QAM	50	0	17.40	17.42	17.20	

Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.44	22.58	22.48	24
5	QPSK	1	12	22.28	22.35	22.33	
5	QPSK	1	24	22.41	22.32	22.20	
5	QPSK	12	0	21.30	21.45	21.41	23
5	QPSK	12	7	21.40	21.51	21.53	
5	QPSK	12	13	21.27	21.43	21.42	
5	QPSK	25	0	21.32	21.39	21.49	
5	16QAM	1	0	21.63	21.60	21.78	23
5	16QAM	1	12	21.81	21.70	21.61	
5	16QAM	1	24	21.65	21.49	21.44	
5	16QAM	12	0	20.27	20.55	20.35	22
5	16QAM	12	7	20.39	20.48	20.52	
5	16QAM	12	13	20.46	20.51	20.39	
5	16QAM	25	0	20.35	20.41	20.30	
5	64QAM	1	0	20.59	20.60	20.65	22
5	64QAM	1	12	20.64	20.60	20.64	
5	64QAM	1	24	20.45	20.36	20.44	
5	64QAM	12	0	19.30	19.48	19.45	21
5	64QAM	12	7	19.46	19.59	19.37	
5	64QAM	12	13	19.42	19.46	19.44	
5	64QAM	25	0	19.38	19.44	19.45	
5	256QAM	1	0	17.83	17.79	17.93	19
5	256QAM	1	12	17.96	18.01	17.97	
5	256QAM	1	24	17.57	17.83	17.59	
5	256QAM	12	0	17.31	17.44	17.63	19
5	256QAM	12	7	17.39	17.44	17.53	
5	256QAM	12	13	17.57	17.55	17.53	
5	256QAM	25	0	17.45	17.41	17.32	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.39	22.54	22.44	24
3	QPSK	1	8	22.32	22.44	22.49	
3	QPSK	1	14	22.42	22.23	22.20	
3	QPSK	8	0	21.36	21.63	21.45	23
3	QPSK	8	4	21.42	21.51	21.43	
3	QPSK	8	7	21.38	21.48	21.43	
3	QPSK	15	0	21.43	21.40	21.52	
3	16QAM	1	0	21.71	21.66	21.77	23
3	16QAM	1	8	21.84	21.88	21.65	
3	16QAM	1	14	21.73	21.64	21.46	
3	16QAM	8	0	20.29	20.53	20.50	22
3	16QAM	8	4	20.47	20.49	20.42	
3	16QAM	8	7	20.32	20.49	20.40	
3	16QAM	15	0	20.24	20.47	20.34	
3	64QAM	1	0	20.41	20.56	20.61	22
3	64QAM	1	8	20.62	20.67	20.57	
3	64QAM	1	14	20.61	20.35	20.33	
3	64QAM	8	0	19.25	19.52	19.47	21
3	64QAM	8	4	19.40	19.54	19.44	
3	64QAM	8	7	19.45	19.50	19.41	
3	64QAM	15	0	19.33	19.51	19.38	
3	256QAM	1	0	17.83	17.97	17.91	19
3	256QAM	1	8	18.02	17.87	18.06	
3	256QAM	1	14	17.63	17.90	17.76	

3	256QAM	8	0	17.34	17.40	17.70	19
3	256QAM	8	4	17.33	17.48	17.55	
3	256QAM	8	7	17.53	17.38	17.44	
3	256QAM	15	0	17.48	17.43	17.34	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.45	22.50	22.54	24
1.4	QPSK	1	3	22.28	22.42	22.42	
1.4	QPSK	1	5	22.27	22.25	22.16	
1.4	QPSK	3	0	22.41	22.46	22.37	
1.4	QPSK	3	1	22.29	22.28	22.31	
1.4	QPSK	3	3	22.40	22.28	22.13	
1.4	QPSK	6	0	21.31	21.47	21.48	23
1.4	16QAM	1	0	21.42	21.53	21.39	23
1.4	16QAM	1	3	21.34	21.43	21.41	
1.4	16QAM	1	5	21.26	21.39	21.34	
1.4	16QAM	3	0	21.54	21.56	21.84	
1.4	16QAM	3	1	21.79	21.75	21.71	
1.4	16QAM	3	3	21.56	21.45	21.42	
1.4	16QAM	6	0	20.24	20.53	20.45	22
1.4	64QAM	1	0	20.43	20.54	20.45	22
1.4	64QAM	1	3	20.41	20.51	20.30	
1.4	64QAM	1	5	20.23	20.55	20.47	
1.4	64QAM	3	0	20.47	20.43	20.68	
1.4	64QAM	3	1	20.61	20.73	20.52	
1.4	64QAM	3	3	20.45	20.39	20.35	
1.4	64QAM	6	0	19.35	19.54	19.48	21
1.4	256QAM	1	0	17.94	17.93	17.79	19
1.4	256QAM	1	3	18.00	17.92	17.89	
1.4	256QAM	1	5	17.74	17.90	17.63	
1.4	256QAM	3	0	17.16	17.59	17.59	
1.4	256QAM	3	1	17.32	17.54	17.67	
1.4	256QAM	3	3	17.48	17.44	17.56	
1.4	256QAM	6	0	17.40	17.38	17.30	19

<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)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.38	22.39	22.33	24
20	QPSK	1	49	22.37	22.35	22.28	
20	QPSK	1	99	22.34	22.28	22.25	
20	QPSK	50	0	21.51	21.53	21.42	23
20	QPSK	50	24	21.42	21.43	21.38	
20	QPSK	50	50	21.49	21.42	21.25	
20	QPSK	100	0	21.37	21.40	21.31	
20	16QAM	1	0	21.56	21.44	21.48	23
20	16QAM	1	49	21.73	21.71	21.62	
20	16QAM	1	99	21.67	21.63	21.50	
20	16QAM	50	0	20.29	20.40	20.35	22
20	16QAM	50	24	20.38	20.38	20.33	
20	16QAM	50	50	20.47	20.37	20.24	
20	16QAM	100	0	20.35	20.31	20.28	

20	64QAM	1	0	21.40	20.33	20.34	22
20	64QAM	1	49	21.57	20.56	20.48	
20	64QAM	1	99	21.51	20.49	20.43	
20	64QAM	50	0	20.29	19.36	19.33	21
20	64QAM	50	24	20.34	19.32	19.38	
20	64QAM	50	50	20.43	19.37	19.27	
20	64QAM	100	0	20.36	19.31	19.31	
20	256QAM	1	0	18.16	17.78	17.86	19
20	256QAM	1	49	17.95	17.94	17.82	
20	256QAM	1	99	17.77	17.83	17.48	
20	256QAM	50	0	17.62	17.65	17.49	19
20	256QAM	50	24	18.01	17.49	17.54	
20	256QAM	50	50	18.05	17.50	17.58	
20	256QAM	100	0	17.78	17.68	17.57	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	22.28	22.18	22.13	24
15	QPSK	1	37	22.22	22.15	22.26	
15	QPSK	1	74	22.15	22.28	22.18	
15	QPSK	36	0	21.47	21.37	21.31	23
15	QPSK	36	20	21.25	21.35	21.29	
15	QPSK	36	39	21.46	21.35	21.14	
15	QPSK	75	0	21.23	21.28	21.12	
15	16QAM	1	0	21.40	21.44	21.29	23
15	16QAM	1	37	21.69	21.59	21.48	
15	16QAM	1	74	21.56	21.61	21.36	
15	16QAM	36	0	20.22	20.24	20.34	22
15	16QAM	36	20	20.29	20.29	20.32	
15	16QAM	36	39	20.36	20.24	20.20	
15	16QAM	75	0	20.19	20.20	20.15	
15	64QAM	1	0	21.40	20.32	20.32	22
15	64QAM	1	37	21.41	20.36	20.42	
15	64QAM	1	74	21.43	20.46	20.42	
15	64QAM	36	0	20.29	19.16	19.16	21
15	64QAM	36	20	20.17	19.31	19.20	
15	64QAM	36	39	20.24	19.27	19.24	
15	64QAM	75	0	20.16	19.26	19.28	
15	256QAM	1	0	18.13	17.72	17.78	19
15	256QAM	1	37	17.85	17.83	17.64	
15	256QAM	1	74	17.64	17.79	17.33	
15	256QAM	36	0	17.55	17.54	17.33	19
15	256QAM	36	20	17.82	17.29	17.52	
15	256QAM	36	39	18.01	17.31	17.56	
15	256QAM	75	0	17.60	17.59	17.50	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	22.23	22.23	22.25	24
10	QPSK	1	25	22.21	22.16	22.17	
10	QPSK	1	49	22.28	22.27	22.10	
10	QPSK	25	0	21.31	21.44	21.28	23
10	QPSK	25	12	21.34	21.41	21.34	
10	QPSK	25	25	21.44	21.33	21.05	
10	QPSK	50	0	21.18	21.31	21.20	
10	16QAM	1	0	21.36	21.31	21.43	23
10	16QAM	1	25	21.54	21.63	21.61	
10	16QAM	1	49	21.55	21.48	21.45	

10	16QAM	25	0	20.14	20.29	20.24	22
10	16QAM	25	12	20.23	20.20	20.13	
10	16QAM	25	25	20.36	20.21	20.17	
10	16QAM	50	0	20.28	20.19	20.22	
10	64QAM	1	0	21.29	20.15	20.28	22
10	64QAM	1	25	21.53	20.56	20.34	
10	64QAM	1	49	21.51	20.38	20.26	
10	64QAM	25	0	20.29	19.17	19.28	21
10	64QAM	25	12	20.33	19.14	19.19	
10	64QAM	25	25	20.43	19.26	19.14	
10	64QAM	50	0	20.35	19.18	19.16	
10	256QAM	1	0	18.04	17.67	17.82	19
10	256QAM	1	25	17.89	17.82	17.70	
10	256QAM	1	49	17.75	17.73	17.41	
10	256QAM	25	0	17.56	17.45	17.44	19
10	256QAM	25	12	17.95	17.41	17.38	
10	256QAM	25	25	17.92	17.32	17.51	
10	256QAM	50	0	17.62	17.54	17.48	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.29	22.36	22.16	24
5	QPSK	1	12	22.17	22.34	22.18	
5	QPSK	1	24	22.19	22.08	22.22	
5	QPSK	12	0	21.36	21.33	21.36	23
5	QPSK	12	7	21.41	21.32	21.38	
5	QPSK	12	13	21.43	21.23	21.24	
5	QPSK	25	0	21.34	21.28	21.14	
5	16QAM	1	0	21.55	21.30	21.31	23
5	16QAM	1	12	21.58	21.64	21.58	
5	16QAM	1	24	21.48	21.52	21.39	
5	16QAM	12	0	20.24	20.22	20.33	22
5	16QAM	12	7	20.29	20.32	20.30	
5	16QAM	12	13	20.35	20.17	20.17	
5	16QAM	25	0	20.35	20.14	20.08	
5	64QAM	1	0	21.33	20.33	20.29	22
5	64QAM	1	12	21.49	20.47	20.31	
5	64QAM	1	24	21.47	20.30	20.23	
5	64QAM	12	0	20.21	19.30	19.29	21
5	64QAM	12	7	20.21	19.26	19.24	
5	64QAM	12	13	20.32	19.36	19.26	
5	64QAM	25	0	20.16	19.28	19.25	
5	256QAM	1	0	17.97	17.69	17.70	19
5	256QAM	1	12	17.86	17.80	17.80	
5	256QAM	1	24	17.76	17.72	17.34	
5	256QAM	12	0	17.54	17.53	17.44	19
5	256QAM	12	7	17.90	17.44	17.46	
5	256QAM	12	13	18.00	17.39	17.47	
5	256QAM	25	0	17.63	17.57	17.57	

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	22.61	22.66	22.63	24
20	QPSK	1	49	22.48	22.50	22.48	
20	QPSK	1	99	22.51	22.49	22.51	
20	QPSK	50	0	21.54	21.59	21.54	23
20	QPSK	50	24	21.53	21.52	21.51	
20	QPSK	50	50	21.46	21.58	21.52	
20	QPSK	100	0	21.47	21.57	21.45	
20	16QAM	1	0	21.73	21.81	21.78	23
20	16QAM	1	49	21.81	21.78	21.77	
20	16QAM	1	99	21.63	21.62	21.67	
20	16QAM	50	0	20.48	20.59	20.52	22
20	16QAM	50	24	20.51	20.47	20.52	
20	16QAM	50	50	20.45	20.45	20.51	
20	16QAM	100	0	20.46	20.43	20.46	
20	64QAM	1	0	20.60	20.60	20.59	22
20	64QAM	1	49	20.63	20.64	20.65	
20	64QAM	1	99	20.49	20.50	20.53	
20	64QAM	50	0	19.47	19.57	19.52	21
20	64QAM	50	24	19.49	19.48	19.55	
20	64QAM	50	50	19.43	19.46	19.48	
20	64QAM	100	0	19.45	19.45	19.46	
20	256QAM	1	0	18.33	18.39	18.17	19
20	256QAM	1	49	17.96	18.25	18.18	
20	256QAM	1	99	17.88	17.74	18.13	
20	256QAM	50	0	17.53	17.59	17.46	19
20	256QAM	50	24	17.58	17.64	17.71	
20	256QAM	50	50	17.69	17.49	17.81	
20	256QAM	100	0	17.69	17.76	17.65	
Channel				26115	26340	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	22.42	22.52	22.48	24
15	QPSK	1	37	22.38	22.48	22.42	
15	QPSK	1	74	22.33	22.45	22.40	
15	QPSK	36	0	21.37	21.50	21.40	23
15	QPSK	36	20	21.38	21.34	21.36	
15	QPSK	36	39	21.39	21.47	21.41	
15	QPSK	75	0	21.31	21.55	21.44	
15	16QAM	1	0	21.69	21.81	21.73	23
15	16QAM	1	37	21.66	21.72	21.77	
15	16QAM	1	74	21.46	21.57	21.57	
15	16QAM	36	0	20.45	20.41	20.48	22
15	16QAM	36	20	20.40	20.47	20.34	
15	16QAM	36	39	20.37	20.43	20.45	
15	16QAM	75	0	20.33	20.40	20.43	
15	64QAM	1	0	20.41	20.44	20.43	22
15	64QAM	1	37	20.57	20.48	20.49	
15	64QAM	1	74	20.44	20.32	20.40	
15	64QAM	36	0	19.44	19.39	19.52	21
15	64QAM	36	20	19.40	19.46	19.44	
15	64QAM	36	39	19.43	19.32	19.41	
15	64QAM	75	0	19.42	19.38	19.46	

15	256QAM	1	0	18.33	18.34	18.00	19
15	256QAM	1	37	17.77	18.16	18.17	
15	256QAM	1	74	17.69	17.59	18.06	
15	256QAM	36	0	17.39	17.48	17.30	19
15	256QAM	36	20	17.38	17.59	17.55	
15	256QAM	36	39	17.68	17.31	17.64	
15	256QAM	75	0	17.60	17.63	17.57	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	22.57	22.63	22.45	24
10	QPSK	1	25	22.34	22.43	22.39	
10	QPSK	1	49	22.38	22.44	22.45	
10	QPSK	25	0	21.40	21.54	21.43	23
10	QPSK	25	12	21.52	21.46	21.49	
10	QPSK	25	25	21.40	21.40	21.39	
10	QPSK	50	0	21.34	21.35	21.30	
10	16QAM	1	0	21.54	21.67	21.78	23
10	16QAM	1	25	21.75	21.59	21.60	
10	16QAM	1	49	21.54	21.48	21.64	
10	16QAM	25	0	20.30	20.50	20.48	22
10	16QAM	25	12	20.32	20.40	20.52	
10	16QAM	25	25	20.31	20.32	20.40	
10	16QAM	50	0	20.36	20.37	20.45	
10	64QAM	1	0	20.55	20.54	20.44	22
10	64QAM	1	25	20.49	20.61	20.58	
10	64QAM	1	49	20.31	20.38	20.40	
10	64QAM	25	0	19.33	19.44	19.35	21
10	64QAM	25	12	19.49	19.37	19.46	
10	64QAM	25	25	19.27	19.33	19.28	
10	64QAM	50	0	19.27	19.43	19.35	
10	256QAM	1	0	18.25	18.19	18.15	19
10	256QAM	1	25	17.87	18.20	18.00	
10	256QAM	1	49	17.82	17.60	18.00	
10	256QAM	25	0	17.49	17.46	17.46	19
10	256QAM	25	12	17.40	17.59	17.69	
10	256QAM	25	25	17.51	17.39	17.70	
10	256QAM	50	0	17.60	17.76	17.57	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	22.53	22.61	22.55	24
5	QPSK	1	12	22.45	22.48	22.48	
5	QPSK	1	24	22.51	22.43	22.37	
5	QPSK	12	0	21.52	21.58	21.45	23
5	QPSK	12	7	21.36	21.45	21.32	
5	QPSK	12	13	21.36	21.40	21.51	
5	QPSK	25	0	21.40	21.51	21.35	
5	16QAM	1	0	21.56	21.79	21.63	23
5	16QAM	1	12	21.69	21.72	21.75	
5	16QAM	1	24	21.58	21.58	21.52	
5	16QAM	12	0	20.35	20.45	20.51	22
5	16QAM	12	7	20.44	20.33	20.50	
5	16QAM	12	13	20.34	20.30	20.39	
5	16QAM	25	0	20.42	20.43	20.31	
5	64QAM	1	0	20.56	20.42	20.39	22
5	64QAM	1	12	20.45	20.56	20.56	
5	64QAM	1	24	20.33	20.32	20.41	

5	64QAM	12	0	19.42	19.55	19.40	21
5	64QAM	12	7	19.47	19.36	19.47	
5	64QAM	12	13	19.40	19.27	19.36	
5	64QAM	25	0	19.44	19.40	19.36	
5	256QAM	1	0	18.15	18.36	18.01	19
5	256QAM	1	12	17.86	18.16	18.03	
5	256QAM	1	24	17.74	17.70	17.94	
5	256QAM	12	0	17.42	17.50	17.44	19
5	256QAM	12	7	17.46	17.55	17.65	
5	256QAM	12	13	17.61	17.48	17.67	
5	256QAM	25	0	17.57	17.59	17.54	
Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	22.41	22.60	22.54	24
3	QPSK	1	8	22.47	22.41	22.39	
3	QPSK	1	14	22.37	22.49	22.41	
3	QPSK	8	0	21.33	21.43	21.42	23
3	QPSK	8	4	21.37	21.52	21.42	
3	QPSK	8	7	21.33	21.56	21.59	
3	QPSK	15	0	21.34	21.52	21.37	
3	16QAM	1	0	21.53	21.76	21.59	23
3	16QAM	1	8	21.66	21.60	21.66	
3	16QAM	1	14	21.48	21.52	21.67	
3	16QAM	8	0	20.37	20.55	20.51	22
3	16QAM	8	4	20.47	20.37	20.46	
3	16QAM	8	7	20.33	20.39	20.44	
3	16QAM	15	0	20.38	20.31	20.39	
3	64QAM	1	0	20.47	20.48	20.46	22
3	64QAM	1	8	20.54	20.53	20.54	
3	64QAM	1	14	20.49	20.49	20.42	
3	64QAM	8	0	19.44	19.47	19.33	21
3	64QAM	8	4	19.43	19.28	19.38	
3	64QAM	8	7	19.38	19.32	19.28	
3	64QAM	15	0	19.28	19.27	19.31	
3	256QAM	1	0	18.23	18.39	18.05	19
3	256QAM	1	8	17.77	18.11	17.99	
3	256QAM	1	14	17.72	17.57	18.08	
3	256QAM	8	0	17.36	17.49	17.36	19
3	256QAM	8	4	17.48	17.48	17.71	
3	256QAM	8	7	17.50	17.41	17.69	
3	256QAM	15	0	17.62	17.69	17.65	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	22.45	22.53	22.58	24
1.4	QPSK	1	3	22.37	22.47	22.40	
1.4	QPSK	1	5	22.41	22.43	22.35	
1.4	QPSK	3	0	22.61	22.53	22.53	
1.4	QPSK	3	1	22.38	22.39	22.34	
1.4	QPSK	3	3	22.46	22.48	22.32	
1.4	QPSK	6	0	21.44	21.51	21.52	23
1.4	16QAM	1	0	21.49	21.42	21.40	23
1.4	16QAM	1	3	21.41	21.57	21.55	
1.4	16QAM	1	5	21.37	21.56	21.46	
1.4	16QAM	3	0	21.71	21.76	21.61	
1.4	16QAM	3	1	21.78	21.65	21.60	
1.4	16QAM	3	3	21.44	21.46	21.67	

1.4	16QAM	6	0	20.35	20.39	20.38	22
1.4	64QAM	1	0	20.50	20.55	20.55	22
1.4	64QAM	1	3	20.48	20.59	20.64	
1.4	64QAM	1	5	20.32	20.42	20.37	
1.4	64QAM	3	0	20.52	20.47	20.58	
1.4	64QAM	3	1	20.47	20.47	20.50	
1.4	64QAM	3	3	20.45	20.31	20.42	
1.4	64QAM	6	0	19.43	19.45	19.39	21
1.4	256QAM	1	0	18.20	18.27	18.00	19
1.4	256QAM	1	3	17.82	18.21	18.09	
1.4	256QAM	1	5	17.68	17.73	18.06	
1.4	256QAM	3	0	17.49	17.48	17.46	
1.4	256QAM	3	1	17.58	17.57	17.58	
1.4	256QAM	3	3	17.69	17.45	17.67	
1.4	256QAM	6	0	17.62	17.61	17.59	19

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					27710		
Frequency (MHz)					2310		
10	QPSK	1	0		21.32		23
10	QPSK	1	25		21.27		
10	QPSK	1	49		21.23		
10	QPSK	25	0		20.27		22
10	QPSK	25	12		20.22		
10	QPSK	25	25		20.10		
10	QPSK	50	0		20.23		
10	16QAM	1	0		20.48		22
10	16QAM	1	25		20.52		
10	16QAM	1	49		20.46		
10	16QAM	25	0		19.28		21
10	16QAM	25	12		19.22		
10	16QAM	25	25		19.07		
10	16QAM	50	0		19.22		
10	64QAM	1	0		19.32		21
10	64QAM	1	25		19.39		
10	64QAM	1	49		19.33		
10	64QAM	25	0		18.28		20
10	64QAM	25	12		18.23		
10	64QAM	25	25		18.06		
10	64QAM	50	0		18.21		
10	256QAM	1	0		17.09		18
10	256QAM	1	25		16.94		
10	256QAM	1	49		16.87		
10	256QAM	25	0		16.83		18
10	256QAM	25	12		16.59		
10	256QAM	25	25		16.82		
10	256QAM	50	0		16.58		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	21.02	21.21	21.17	23
5	QPSK	1	12	21.03	21.22	21.15	
5	QPSK	1	24	21.02	21.03	21.07	

5	QPSK	12	0	20.01	20.21	20.15	22
5	QPSK	12	7	20.05	20.22	20.04	
5	QPSK	12	13	20.16	20.03	20.02	
5	QPSK	25	0	20.13	20.03	20.10	
5	16QAM	1	0	20.24	20.40	20.36	22
5	16QAM	1	12	20.33	20.41	20.22	
5	16QAM	1	24	20.25	20.45	20.39	
5	16QAM	12	0	19.26	19.26	19.23	21
5	16QAM	12	7	19.05	19.03	19.03	
5	16QAM	12	13	19.10	19.12	19.05	
5	16QAM	25	0	19.00	19.02	19.10	
5	64QAM	1	0	19.21	19.25	19.18	21
5	64QAM	1	12	19.08	19.20	19.18	
5	64QAM	1	24	19.22	19.25	19.06	
5	64QAM	12	0	18.12	18.19	18.14	20
5	64QAM	12	7	18.11	18.15	18.06	
5	64QAM	12	13	18.07	18.18	18.08	
5	64QAM	25	0	18.19	18.19	18.04	
5	256QAM	1	0	16.99	17.09	16.93	18
5	256QAM	1	12	16.79	16.81	16.67	
5	256QAM	1	24	16.64	16.76	16.74	
5	256QAM	12	0	16.82	16.82	16.63	18
5	256QAM	12	7	16.39	16.54	16.54	
5	256QAM	12	13	16.58	16.72	16.65	
5	256QAM	25	0	16.32	16.51	16.33	

<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)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	22.60	22.44	22.38	24
20	QPSK	1	49	22.57	22.37	22.31	
20	QPSK	1	99	22.38	22.27	22.23	
20	QPSK	50	0	21.65	21.54	21.48	23
20	QPSK	50	24	21.64	21.47	21.45	
20	QPSK	50	50	21.63	21.30	21.39	
20	QPSK	100	0	21.59	21.43	21.44	
20	16QAM	1	0	21.82	21.65	21.62	23
20	16QAM	1	49	21.85	21.69	21.55	
20	16QAM	1	99	21.66	21.56	21.39	
20	16QAM	50	0	20.63	20.51	20.37	22
20	16QAM	50	24	20.59	20.49	20.43	
20	16QAM	50	50	20.58	20.31	20.33	
20	16QAM	100	0	20.56	20.41	20.40	
20	64QAM	1	0	20.72	20.57	20.50	22
20	64QAM	1	49	20.71	20.57	20.52	
20	64QAM	1	99	20.55	20.46	20.35	
20	64QAM	50	0	19.61	19.49	19.32	21
20	64QAM	50	24	19.60	19.47	19.41	
20	64QAM	50	50	19.56	19.28	19.31	
20	64QAM	100	0	19.53	19.37	19.39	
20	256QAM	1	0	17.75	17.65	17.74	19
20	256QAM	1	49	18.14	17.85	18.01	

20	256QAM	1	99	17.64	17.71	17.52	
20	256QAM	50	0	17.32	17.80	17.49	19
20	256QAM	50	24	17.78	17.52	17.50	
20	256QAM	50	50	17.32	17.35	17.34	
20	256QAM	100	0	17.20	17.43	17.38	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.41	22.31	22.22	24
15	QPSK	1	37	22.42	22.31	22.23	
15	QPSK	1	74	22.38	22.18	22.15	
15	QPSK	36	0	21.63	21.40	21.37	23
15	QPSK	36	20	21.46	21.41	21.27	
15	QPSK	36	39	21.48	21.17	21.34	
15	QPSK	75	0	21.47	21.35	21.40	
15	16QAM	1	0	21.68	21.65	21.57	23
15	16QAM	1	37	21.71	21.53	21.43	
15	16QAM	1	74	21.46	21.54	21.22	
15	16QAM	36	0	20.55	20.44	20.17	22
15	16QAM	36	20	20.51	20.29	20.39	
15	16QAM	36	39	20.47	20.24	20.22	
15	16QAM	75	0	20.53	20.35	20.21	
15	64QAM	1	0	20.72	20.52	20.49	22
15	64QAM	1	37	20.70	20.47	20.52	
15	64QAM	1	74	20.50	20.26	20.25	
15	64QAM	36	0	19.58	19.41	19.25	21
15	64QAM	36	20	19.57	19.41	19.35	
15	64QAM	36	39	19.45	19.28	19.15	
15	64QAM	75	0	19.45	19.23	19.29	
15	256QAM	1	0	17.60	17.49	17.67	19
15	256QAM	1	37	18.05	17.66	17.81	
15	256QAM	1	74	17.60	17.63	17.43	
15	256QAM	36	0	17.23	17.67	17.49	19
15	256QAM	36	20	17.67	17.47	17.35	
15	256QAM	36	39	17.18	17.25	17.26	
15	256QAM	75	0	17.03	17.23	17.22	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.43	22.39	22.30	24
10	QPSK	1	25	22.54	22.42	22.41	
10	QPSK	1	49	22.26	22.21	22.19	
10	QPSK	25	0	21.48	21.39	21.32	23
10	QPSK	25	12	21.61	21.46	21.36	
10	QPSK	25	25	21.60	21.26	21.38	
10	QPSK	50	0	21.55	21.23	21.37	
10	16QAM	1	0	21.69	21.65	21.60	23
10	16QAM	1	25	21.70	21.51	21.55	
10	16QAM	1	49	21.49	21.51	21.22	
10	16QAM	25	0	20.52	20.44	20.31	22
10	16QAM	25	12	20.39	20.42	20.28	
10	16QAM	25	25	20.54	20.15	20.24	
10	16QAM	50	0	20.50	20.29	20.26	
10	64QAM	1	0	20.60	20.43	20.42	22
10	64QAM	1	25	20.52	20.54	20.33	
10	64QAM	1	49	20.42	20.36	20.26	
10	64QAM	25	0	19.60	19.37	19.22	21
10	64QAM	25	12	19.55	19.45	19.26	

10	64QAM	25	25	19.42	19.18	19.31	
10	64QAM	50	0	19.42	19.31	19.28	
10	256QAM	1	0	17.73	17.52	17.58	19
10	256QAM	1	25	18.07	17.66	17.94	
10	256QAM	1	49	17.57	17.53	17.37	
10	256QAM	25	0	17.21	17.72	17.47	19
10	256QAM	25	12	17.61	17.42	17.30	
10	256QAM	25	25	17.32	17.19	17.34	
10	256QAM	50	0	17.19	17.24	17.32	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.44	22.39	22.18	24
5	QPSK	1	12	22.57	22.38	22.35	
5	QPSK	1	24	22.20	22.26	22.07	
5	QPSK	12	0	21.55	21.49	21.38	23
5	QPSK	12	7	21.44	21.45	21.37	
5	QPSK	12	13	21.60	21.14	21.35	
5	QPSK	25	0	21.41	21.35	21.38	
5	16QAM	1	0	21.79	21.57	21.49	23
5	16QAM	1	12	21.76	21.53	21.55	
5	16QAM	1	24	21.46	21.54	21.28	
5	16QAM	12	0	20.48	20.40	20.30	22
5	16QAM	12	7	20.48	20.43	20.42	
5	16QAM	12	13	20.53	20.22	20.15	
5	16QAM	25	0	20.47	20.25	20.37	
5	64QAM	1	0	20.66	20.49	20.33	22
5	64QAM	1	12	20.67	20.40	20.39	
5	64QAM	1	24	20.43	20.35	20.30	
5	64QAM	12	0	19.59	19.45	19.30	21
5	64QAM	12	7	19.50	19.46	19.41	
5	64QAM	12	13	19.44	19.13	19.30	
5	64QAM	25	0	19.35	19.36	19.25	
5	256QAM	1	0	17.63	17.61	17.71	19
5	256QAM	1	12	17.99	17.73	17.92	
5	256QAM	1	24	17.44	17.55	17.32	
5	256QAM	12	0	17.15	17.72	17.48	19
5	256QAM	12	7	17.62	17.36	17.45	
5	256QAM	12	13	17.29	17.23	17.34	
5	256QAM	25	0	17.15	17.37	17.22	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	22.43	22.26	22.28	24
3	QPSK	1	8	22.45	22.41	22.28	
3	QPSK	1	14	22.32	22.15	22.05	
3	QPSK	8	0	21.59	21.51	21.20	23
3	QPSK	8	4	21.49	21.30	21.42	
3	QPSK	8	7	21.54	21.22	21.25	
3	QPSK	15	0	21.54	21.23	21.30	
3	16QAM	1	0	21.65	21.62	21.54	23
3	16QAM	1	8	21.65	21.64	21.39	
3	16QAM	1	14	21.54	21.52	21.20	
3	16QAM	8	0	20.56	20.50	20.20	22
3	16QAM	8	4	20.55	20.43	20.41	
3	16QAM	8	7	20.52	20.16	20.19	
3	16QAM	15	0	20.45	20.40	20.38	
3	64QAM	1	0	20.63	20.48	20.37	22

3	64QAM	1	8	20.56	20.45	20.48	
3	64QAM	1	14	20.55	20.46	20.25	
3	64QAM	8	0	19.52	19.40	19.18	21
3	64QAM	8	4	19.50	19.41	19.22	
3	64QAM	8	7	19.52	19.20	19.30	
3	64QAM	15	0	19.47	19.24	19.30	
3	256QAM	1	0	17.67	17.51	17.63	19
3	256QAM	1	8	18.05	17.68	18.00	
3	256QAM	1	14	17.51	17.56	17.34	
3	256QAM	8	0	17.27	17.77	17.46	19
3	256QAM	8	4	17.70	17.38	17.48	
3	256QAM	8	7	17.27	17.32	17.17	
3	256QAM	15	0	17.10	17.40	17.33	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	22.42	22.29	22.32	24
1.4	QPSK	1	3	22.38	22.36	22.41	
1.4	QPSK	1	5	22.38	22.19	22.04	
1.4	QPSK	3	0	22.44	22.42	22.33	
1.4	QPSK	3	1	22.45	22.42	22.28	
1.4	QPSK	3	3	22.38	22.10	22.16	
1.4	QPSK	6	0	21.47	21.39	21.43	23
1.4	16QAM	1	0	21.62	21.55	21.55	23
1.4	16QAM	1	3	21.77	21.53	21.55	
1.4	16QAM	1	5	21.52	21.48	21.29	
1.4	16QAM	3	0	21.79	21.53	21.47	
1.4	16QAM	3	1	21.72	21.55	21.46	
1.4	16QAM	3	3	21.64	21.42	21.34	
1.4	16QAM	6	0	20.43	20.30	20.30	22
1.4	64QAM	1	0	20.61	20.44	20.39	22
1.4	64QAM	1	3	20.65	20.41	20.48	
1.4	64QAM	1	5	20.50	20.42	20.30	
1.4	64QAM	3	0	20.56	20.54	20.42	
1.4	64QAM	3	1	20.64	20.48	20.49	
1.4	64QAM	3	3	20.49	20.30	20.33	
1.4	64QAM	6	0	19.47	19.37	19.20	21
1.4	256QAM	1	0	17.61	17.52	17.57	19
1.4	256QAM	1	3	18.10	17.68	17.85	
1.4	256QAM	1	5	17.59	17.66	17.45	
1.4	256QAM	3	0	17.18	17.62	17.45	
1.4	256QAM	3	1	17.65	17.48	17.37	
1.4	256QAM	3	3	17.19	17.21	17.19	
1.4	256QAM	6	0	17.04	17.31	17.22	19

Reduced Power Mode (Main)

<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)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	18.34	18.90	18.65	20
20	QPSK	1	49	18.59	18.87	18.60	
20	QPSK	1	99	18.66	18.87	18.50	
20	QPSK	50	0	18.70	18.71	18.70	20
20	QPSK	50	24	18.64	18.70	18.65	
20	QPSK	50	50	18.60	18.69	18.57	
20	QPSK	100	0	18.63	18.64	18.61	
20	16QAM	1	0	18.05	18.52	18.53	20
20	16QAM	1	49	18.22	18.66	18.60	
20	16QAM	1	99	18.26	18.50	18.51	
20	16QAM	50	0	18.57	18.53	18.68	20
20	16QAM	50	24	18.61	18.66	18.67	
20	16QAM	50	50	18.70	18.63	18.60	
20	16QAM	100	0	18.65	18.62	18.63	
20	64QAM	1	0	18.66	18.78	18.71	20
20	64QAM	1	49	18.74	18.85	18.78	
20	64QAM	1	99	18.72	18.77	18.71	
20	64QAM	50	0	18.68	18.50	18.68	20
20	64QAM	50	24	18.63	18.65	18.64	
20	64QAM	50	50	18.69	18.66	18.63	
20	64QAM	100	0	18.64	18.56	18.62	
20	256QAM	1	0	17.90	17.92	17.67	19
20	256QAM	1	49	17.79	17.95	17.56	
20	256QAM	1	99	17.87	17.67	17.72	
20	256QAM	50	0	17.94	17.86	17.83	19
20	256QAM	50	24	18.02	17.90	17.79	
20	256QAM	50	50	17.89	17.78	17.86	
20	256QAM	100	0	17.80	17.69	17.76	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	18.31	18.78	18.58	20
15	QPSK	1	37	18.55	18.83	18.51	
15	QPSK	1	74	18.56	18.86	18.36	
15	QPSK	36	0	18.50	18.65	18.59	20
15	QPSK	36	20	18.56	18.55	18.54	
15	QPSK	36	39	18.57	18.67	18.44	
15	QPSK	75	0	18.54	18.61	18.56	
15	16QAM	1	0	18.09	18.45	18.45	20
15	16QAM	1	37	18.08	18.48	18.47	
15	16QAM	1	74	18.17	18.45	18.37	
15	16QAM	36	0	18.41	18.33	18.60	20
15	16QAM	36	20	18.50	18.51	18.50	
15	16QAM	36	39	18.50	18.61	18.56	
15	16QAM	75	0	18.52	18.49	18.63	
15	64QAM	1	0	18.53	18.76	18.69	20
15	64QAM	1	37	18.55	18.85	18.60	
15	64QAM	1	74	18.65	18.73	18.52	
15	64QAM	36	0	18.52	18.37	18.63	20
15	64QAM	36	20	18.44	18.53	18.45	
15	64QAM	36	39	18.57	18.59	18.59	

15	64QAM	75	0	18.62	18.41	18.52	
15	256QAM	1	0	17.88	17.89	17.62	19
15	256QAM	1	37	17.66	17.77	17.46	
15	256QAM	1	74	17.76	17.54	17.66	
15	256QAM	36	0	17.84	17.86	17.69	19
15	256QAM	36	20	17.83	17.70	17.59	
15	256QAM	36	39	17.74	17.64	17.75	
15	256QAM	75	0	17.66	17.63	17.60	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	18.25	18.80	18.63	20
10	QPSK	1	25	18.48	18.81	18.54	
10	QPSK	1	49	18.66	18.77	18.43	
10	QPSK	25	0	18.56	18.57	18.52	20
10	QPSK	25	12	18.44	18.52	18.52	
10	QPSK	25	25	18.41	18.68	18.41	
10	QPSK	50	0	18.52	18.62	18.55	
10	16QAM	1	0	18.04	18.34	18.38	20
10	16QAM	1	25	18.07	18.54	18.58	
10	16QAM	1	49	18.11	18.49	18.41	
10	16QAM	25	0	18.43	18.37	18.55	20
10	16QAM	25	12	18.53	18.46	18.50	
10	16QAM	25	25	18.69	18.48	18.47	
10	16QAM	50	0	18.61	18.50	18.59	
10	64QAM	1	0	18.54	18.62	18.64	20
10	64QAM	1	25	18.66	18.84	18.71	
10	64QAM	1	49	18.66	18.58	18.52	
10	64QAM	25	0	18.57	18.33	18.56	20
10	64QAM	25	12	18.51	18.53	18.59	
10	64QAM	25	25	18.61	18.59	18.45	
10	64QAM	50	0	18.62	18.49	18.61	
10	256QAM	1	0	17.89	17.91	17.67	19
10	256QAM	1	25	17.60	17.78	17.36	
10	256QAM	1	49	17.75	17.61	17.67	
10	256QAM	25	0	17.92	17.81	17.70	19
10	256QAM	25	12	17.91	17.87	17.72	
10	256QAM	25	25	17.70	17.73	17.78	
10	256QAM	50	0	17.69	17.61	17.64	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	18.24	18.70	18.51	20
5	QPSK	1	12	18.43	18.76	18.48	
5	QPSK	1	24	18.53	18.80	18.32	
5	QPSK	12	0	18.50	18.53	18.70	20
5	QPSK	12	7	18.50	18.65	18.56	
5	QPSK	12	13	18.59	18.56	18.50	
5	QPSK	25	0	18.54	18.45	18.56	
5	16QAM	1	0	18.02	18.44	18.37	20
5	16QAM	1	12	18.15	18.48	18.49	
5	16QAM	1	24	18.21	18.30	18.44	
5	16QAM	12	0	18.56	18.34	18.61	20
5	16QAM	12	7	18.53	18.57	18.60	
5	16QAM	12	13	18.58	18.62	18.56	
5	16QAM	25	0	18.59	18.45	18.60	
5	64QAM	1	0	18.53	18.58	18.56	20
5	64QAM	1	12	18.55	18.81	18.68	

5	64QAM	1	24	18.54	18.59	18.62	
5	64QAM	12	0	18.57	18.40	18.61	20
5	64QAM	12	7	18.54	18.48	18.62	
5	64QAM	12	13	18.66	18.60	18.55	
5	64QAM	25	0	18.55	18.50	18.44	
5	256QAM	1	0	17.80	17.92	17.49	19
5	256QAM	1	12	17.62	17.78	17.54	
5	256QAM	1	24	17.76	17.55	17.68	
5	256QAM	12	0	17.81	17.86	17.70	19
5	256QAM	12	7	17.84	17.87	17.78	
5	256QAM	12	13	17.87	17.73	17.69	
5	256QAM	25	0	17.80	17.55	17.72	
Channel				18615	18900	19185	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	18.27	18.87	18.49	20
3	QPSK	1	8	18.41	18.80	18.50	
3	QPSK	1	14	18.63	18.82	18.50	
3	QPSK	8	0	18.51	18.59	18.64	20
3	QPSK	8	4	18.55	18.67	18.55	
3	QPSK	8	7	18.60	18.65	18.47	
3	QPSK	15	0	18.48	18.51	18.46	
3	16QAM	1	0	18.04	18.35	18.51	20
3	16QAM	1	8	18.06	18.47	18.56	
3	16QAM	1	14	18.22	18.39	18.44	
3	16QAM	8	0	18.55	18.45	18.66	20
3	16QAM	8	4	18.58	18.63	18.62	
3	16QAM	8	7	18.56	18.47	18.59	
3	16QAM	15	0	18.62	18.49	18.57	
3	64QAM	1	0	18.49	18.62	18.53	20
3	64QAM	1	8	18.68	18.75	18.70	
3	64QAM	1	14	18.57	18.66	18.70	
3	64QAM	8	0	18.63	18.30	18.67	20
3	64QAM	8	4	18.49	18.48	18.44	
3	64QAM	8	7	18.69	18.51	18.50	
3	64QAM	15	0	18.45	18.41	18.56	
3	256QAM	1	0	17.76	17.92	17.47	19
3	256QAM	1	8	17.59	17.75	17.36	
3	256QAM	1	14	17.87	17.61	17.64	
3	256QAM	8	0	17.85	17.74	17.72	19
3	256QAM	8	4	17.83	17.88	17.79	
3	256QAM	8	7	17.84	17.62	17.85	
3	256QAM	15	0	17.69	17.54	17.56	
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	18.19	18.80	18.65	20
1.4	QPSK	1	3	18.52	18.70	18.52	
1.4	QPSK	1	5	18.48	18.71	18.45	
1.4	QPSK	3	0	18.54	18.55	18.57	
1.4	QPSK	3	1	18.45	18.63	18.60	
1.4	QPSK	3	3	18.44	18.65	18.38	
1.4	QPSK	6	0	18.54	18.47	18.50	20
1.4	16QAM	1	0	18.04	18.35	18.34	20
1.4	16QAM	1	3	18.18	18.53	18.40	
1.4	16QAM	1	5	18.20	18.50	18.50	
1.4	16QAM	3	0	18.48	18.49	18.66	
1.4	16QAM	3	1	18.47	18.49	18.52	

1.4	16QAM	3	3	18.54	18.58	18.45	
1.4	16QAM	6	0	18.63	18.44	18.56	20
1.4	64QAM	1	0	18.49	18.74	18.69	20
1.4	64QAM	1	3	18.64	18.81	18.77	
1.4	64QAM	1	5	18.70	18.74	18.70	
1.4	64QAM	3	0	18.55	18.50	18.56	
1.4	64QAM	3	1	18.43	18.47	18.47	
1.4	64QAM	3	3	18.69	18.51	18.62	
1.4	64QAM	6	0	18.63	18.38	18.45	20
1.4	256QAM	1	0	17.89	17.86	17.59	19
1.4	256QAM	1	3	17.71	17.86	17.46	
1.4	256QAM	1	5	17.86	17.50	17.55	
1.4	256QAM	3	0	17.85	17.80	17.79	
1.4	256QAM	3	1	17.90	17.76	17.79	
1.4	256QAM	3	3	17.71	17.76	17.74	
1.4	256QAM	6	0	17.73	17.69	17.76	19

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	20.42	20.39	20.38	21
20	QPSK	1	49	20.41	20.39	20.33	
20	QPSK	1	99	20.28	20.33	20.29	
20	QPSK	50	0	20.23	20.23	20.25	21
20	QPSK	50	24	20.18	20.16	20.24	
20	QPSK	50	50	20.17	20.14	20.17	
20	QPSK	100	0	20.27	20.20	20.18	
20	16QAM	1	0	20.17	19.93	20.02	21
20	16QAM	1	49	20.10	20.05	20.17	
20	16QAM	1	99	20.01	20.02	20.00	
20	16QAM	50	0	20.12	20.23	20.23	21
20	16QAM	50	24	20.13	20.22	20.21	
20	16QAM	50	50	20.17	20.25	20.13	
20	16QAM	100	0	20.17	20.18	20.17	
20	64QAM	1	0	20.38	20.33	20.23	21
20	64QAM	1	49	20.34	20.31	20.33	
20	64QAM	1	99	20.15	20.26	20.17	
20	64QAM	50	0	19.65	19.72	19.73	21
20	64QAM	50	24	19.67	19.72	19.72	
20	64QAM	50	50	19.66	19.70	19.70	
20	64QAM	100	0	19.64	19.69	19.68	
20	256QAM	1	0	17.74	17.69	17.74	19
20	256QAM	1	49	17.63	17.69	17.69	
20	256QAM	1	99	17.61	17.65	17.59	
20	256QAM	50	0	17.94	17.78	17.88	19
20	256QAM	50	24	17.85	17.85	17.79	
20	256QAM	50	50	17.72	17.68	17.66	
20	256QAM	100	0	17.73	17.75	17.82	
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	20.37	20.20	20.15	21
15	QPSK	1	37	20.35	20.36	20.30	

15	QPSK	1	74	20.12	20.29	20.13	
15	QPSK	36	0	20.03	20.13	20.07	21
15	QPSK	36	20	20.03	20.11	20.11	
15	QPSK	36	39	20.06	20.04	20.03	
15	QPSK	75	0	20.10	20.01	20.12	
15	16QAM	1	0	19.99	19.81	20.01	21
15	16QAM	1	37	20.04	20.04	20.11	
15	16QAM	1	74	19.87	19.90	19.97	
15	16QAM	36	0	20.03	20.09	20.15	21
15	16QAM	36	20	20.05	20.10	20.06	
15	16QAM	36	39	20.17	20.24	20.11	
15	16QAM	75	0	20.16	20.15	19.97	
15	64QAM	1	0	20.19	20.17	20.15	21
15	64QAM	1	37	20.25	20.13	20.33	
15	64QAM	1	74	20.15	20.14	20.07	
15	64QAM	36	0	19.53	19.54	19.71	21
15	64QAM	36	20	19.59	19.53	19.66	
15	64QAM	36	39	19.49	19.61	19.51	
15	64QAM	75	0	19.56	19.63	19.54	
15	256QAM	1	0	17.56	17.50	17.68	19
15	256QAM	1	37	17.54	17.50	17.68	
15	256QAM	1	74	17.46	17.63	17.58	
15	256QAM	36	0	17.90	17.58	17.84	19
15	256QAM	36	20	17.68	17.69	17.78	
15	256QAM	36	39	17.59	17.49	17.47	
15	256QAM	75	0	17.56	17.69	17.80	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	20.36	20.25	20.11	21
10	QPSK	1	25	20.39	20.25	20.29	
10	QPSK	1	49	20.13	20.33	20.21	
10	QPSK	25	0	19.96	20.20	20.18	21
10	QPSK	25	12	20.18	20.13	20.13	
10	QPSK	25	25	19.99	20.12	19.98	
10	QPSK	50	0	20.17	20.19	20.12	
10	16QAM	1	0	20.15	19.73	19.82	21
10	16QAM	1	25	20.08	20.03	20.03	
10	16QAM	1	49	20.01	19.96	19.85	
10	16QAM	25	0	19.93	20.19	20.16	21
10	16QAM	25	12	20.12	20.12	20.17	
10	16QAM	25	25	20.16	20.10	19.96	
10	16QAM	50	0	19.99	20.02	20.14	
10	64QAM	1	0	20.36	20.24	20.06	21
10	64QAM	1	25	20.22	20.30	20.20	
10	64QAM	1	49	20.01	20.11	20.11	
10	64QAM	25	0	19.60	19.62	19.70	21
10	64QAM	25	12	19.61	19.62	19.62	
10	64QAM	25	25	19.58	19.68	19.65	
10	64QAM	50	0	19.54	19.59	19.56	
10	256QAM	1	0	17.64	17.51	17.55	19
10	256QAM	1	25	17.63	17.50	17.52	
10	256QAM	1	49	17.44	17.59	17.42	
10	256QAM	25	0	17.82	17.58	17.70	19
10	256QAM	25	12	17.66	17.80	17.70	
10	256QAM	25	25	17.53	17.54	17.53	
10	256QAM	50	0	17.56	17.57	17.75	

Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	20.26	20.39	20.09	21
5	QPSK	1	12	20.28	20.27	20.19	
5	QPSK	1	24	20.21	20.31	20.15	
5	QPSK	12	0	19.98	20.06	20.08	21
5	QPSK	12	7	20.18	20.07	20.20	
5	QPSK	12	13	20.05	20.22	20.12	
5	QPSK	25	0	20.09	20.20	20.13	
5	16QAM	1	0	20.16	19.88	19.94	21
5	16QAM	1	12	20.03	20.02	20.13	
5	16QAM	1	24	19.85	19.89	19.81	
5	16QAM	12	0	20.05	20.06	20.15	21
5	16QAM	12	7	19.95	20.10	20.06	
5	16QAM	12	13	20.06	20.12	20.09	
5	16QAM	25	0	20.09	20.05	20.07	
5	64QAM	1	0	20.35	20.16	20.06	21
5	64QAM	1	12	20.32	20.30	20.18	
5	64QAM	1	24	20.12	20.20	20.04	
5	64QAM	12	0	19.49	19.53	19.69	21
5	64QAM	12	7	19.53	19.64	19.71	
5	64QAM	12	13	19.54	19.59	19.60	
5	64QAM	25	0	19.46	19.49	19.50	
5	256QAM	1	0	17.66	17.63	17.72	19
5	256QAM	1	12	17.55	17.55	17.52	
5	256QAM	1	24	17.42	17.53	17.59	
5	256QAM	12	0	17.78	17.73	17.74	19
5	256QAM	12	7	17.69	17.70	17.65	
5	256QAM	12	13	17.70	17.48	17.53	
5	256QAM	25	0	17.73	17.70	17.64	
Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	20.25	20.30	20.08	21
3	QPSK	1	8	20.24	20.21	20.28	
3	QPSK	1	14	20.22	20.17	20.24	
3	QPSK	8	0	20.10	20.10	20.20	21
3	QPSK	8	4	20.15	20.18	20.12	
3	QPSK	8	7	20.17	20.06	20.00	
3	QPSK	15	0	20.11	20.06	20.05	
3	16QAM	1	0	20.15	19.73	19.89	21
3	16QAM	1	8	20.05	19.94	20.03	
3	16QAM	1	14	19.81	19.95	19.89	
3	16QAM	8	0	20.04	20.11	20.23	21
3	16QAM	8	4	20.07	20.12	20.18	
3	16QAM	8	7	20.16	20.18	19.97	
3	16QAM	15	0	20.07	20.06	20.07	
3	64QAM	1	0	20.35	20.21	20.14	21
3	64QAM	1	8	20.27	20.20	20.29	
3	64QAM	1	14	20.09	20.10	20.03	
3	64QAM	8	0	19.49	19.65	19.58	21
3	64QAM	8	4	19.65	19.54	19.65	
3	64QAM	8	7	19.56	19.52	19.66	
3	64QAM	15	0	19.53	19.64	19.67	
3	256QAM	1	0	17.54	17.66	17.64	19
3	256QAM	1	8	17.45	17.64	17.54	
3	256QAM	1	14	17.48	17.55	17.58	

3	256QAM	8	0	17.74	17.67	17.72	19
3	256QAM	8	4	17.84	17.75	17.71	
3	256QAM	8	7	17.61	17.56	17.63	
3	256QAM	15	0	17.65	17.60	17.69	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	20.33	20.27	20.14	21
1.4	QPSK	1	3	20.33	20.40	20.24	
1.4	QPSK	1	5	20.12	20.13	20.22	
1.4	QPSK	3	0	20.01	20.16	20.25	
1.4	QPSK	3	1	20.12	20.10	20.16	
1.4	QPSK	3	3	20.09	20.23	20.05	
1.4	QPSK	6	0	19.97	20.01	20.04	21
1.4	16QAM	1	0	20.01	19.91	19.95	21
1.4	16QAM	1	3	20.09	19.90	20.06	
1.4	16QAM	1	5	19.86	19.85	19.89	
1.4	16QAM	3	0	20.09	20.23	20.11	
1.4	16QAM	3	1	20.03	20.07	20.04	
1.4	16QAM	3	3	20.05	20.08	19.95	
1.4	16QAM	6	0	20.07	20.16	19.98	21
1.4	64QAM	1	0	20.30	20.29	20.09	21
1.4	64QAM	1	3	20.18	20.14	20.31	
1.4	64QAM	1	5	20.12	20.16	20.17	
1.4	64QAM	3	0	19.49	19.61	19.56	
1.4	64QAM	3	1	19.47	19.66	19.69	
1.4	64QAM	3	3	19.61	19.69	19.53	
1.4	64QAM	6	0	19.47	19.64	19.62	21
1.4	256QAM	1	0	17.71	17.63	17.55	19
1.4	256QAM	1	3	17.43	17.57	17.65	
1.4	256QAM	1	5	17.44	17.65	17.55	
1.4	256QAM	3	0	17.80	17.75	17.70	
1.4	256QAM	3	1	17.83	17.70	17.73	
1.4	256QAM	3	3	17.58	17.53	17.56	
1.4	256QAM	6	0	17.56	17.69	17.66	19

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	21.82	21.83	21.81	22.5
10	QPSK	1	25	21.75	21.81	21.76	
10	QPSK	1	49	21.77	21.82	21.80	
10	QPSK	25	0	21.75	21.81	21.77	22.5
10	QPSK	25	12	21.78	21.80	21.75	
10	QPSK	25	25	21.76	21.74	21.75	
10	QPSK	50	0	21.78	21.82	21.81	
10	16QAM	1	0	21.44	21.55	21.48	22.5
10	16QAM	1	25	21.48	21.48	21.44	
10	16QAM	1	49	21.54	21.53	21.38	
10	16QAM	25	0	21.31	21.43	21.23	22.5
10	16QAM	25	12	21.22	21.26	21.22	
10	16QAM	25	25	21.30	21.29	21.25	
10	16QAM	50	0	21.77	21.82	21.80	

10	64QAM	1	0	21.40	21.52	21.45	22.5
10	64QAM	1	25	21.43	21.48	21.41	
10	64QAM	1	49	21.51	21.47	21.44	
10	64QAM	25	0	21.26	21.30	21.31	22
10	64QAM	25	12	21.27	21.32	21.31	
10	64QAM	25	25	21.31	21.26	21.25	
10	64QAM	50	0	21.29	21.31	21.29	
10	256QAM	1	0	18.45	18.55	18.60	20
10	256QAM	1	25	18.46	18.52	18.48	
10	256QAM	1	49	18.54	18.59	18.52	
10	256QAM	25	0	18.50	18.60	18.43	20
10	256QAM	25	12	18.47	18.59	18.52	
10	256QAM	25	25	18.41	18.50	18.48	
10	256QAM	50	0	18.52	18.55	18.51	
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	21.62	21.82	21.77	22.5
5	QPSK	1	12	21.74	21.65	21.75	
5	QPSK	1	24	21.66	21.81	21.72	
5	QPSK	12	0	21.56	21.75	21.64	22.5
5	QPSK	12	7	21.70	21.68	21.58	
5	QPSK	12	13	21.59	21.70	21.73	
5	QPSK	25	0	21.72	21.76	21.68	
5	16QAM	1	0	21.44	21.54	21.42	22.5
5	16QAM	1	12	21.34	21.39	21.28	
5	16QAM	1	24	21.50	21.42	21.28	
5	16QAM	12	0	21.12	21.23	21.15	22.5
5	16QAM	12	7	21.09	21.14	21.07	
5	16QAM	12	13	21.17	21.26	21.22	
5	16QAM	25	0	21.73	21.75	21.66	
5	64QAM	1	0	21.28	21.39	21.34	22.5
5	64QAM	1	12	21.23	21.40	21.30	
5	64QAM	1	24	21.31	21.41	21.25	
5	64QAM	12	0	21.17	21.17	21.22	22
5	64QAM	12	7	21.16	21.22	21.12	
5	64QAM	12	13	21.11	21.08	21.06	
5	64QAM	25	0	21.09	21.11	21.27	
5	256QAM	1	0	18.27	18.49	18.57	20
5	256QAM	1	12	18.28	18.47	18.32	
5	256QAM	1	24	18.44	18.39	18.38	
5	256QAM	12	0	18.36	18.60	18.34	20
5	256QAM	12	7	18.47	18.46	18.49	
5	256QAM	12	13	18.37	18.47	18.34	
5	256QAM	25	0	18.36	18.43	18.36	
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	21.81	21.82	21.81	22.5
3	QPSK	1	8	21.61	21.64	21.59	
3	QPSK	1	14	21.72	21.71	21.78	
3	QPSK	8	0	21.65	21.69	21.57	22.5
3	QPSK	8	4	21.64	21.74	21.55	
3	QPSK	8	7	21.59	21.71	21.60	
3	QPSK	15	0	21.71	21.76	21.71	
3	16QAM	1	0	21.40	21.52	21.36	22.5
3	16QAM	1	8	21.34	21.31	21.28	
3	16QAM	1	14	21.34	21.44	21.35	

3	16QAM	8	0	21.25	21.35	21.16	22.5
3	16QAM	8	4	21.10	21.06	21.03	
3	16QAM	8	7	21.11	21.29	21.18	
3	16QAM	15	0	21.63	21.77	21.60	
3	64QAM	1	0	21.22	21.36	21.42	22.5
3	64QAM	1	8	21.36	21.48	21.28	
3	64QAM	1	14	21.39	21.30	21.34	
3	64QAM	8	0	21.22	21.10	21.11	22
3	64QAM	8	4	21.21	21.30	21.11	
3	64QAM	8	7	21.24	21.11	21.13	
3	64QAM	15	0	21.20	21.21	21.14	
3	256QAM	1	0	18.45	18.45	18.55	20
3	256QAM	1	8	18.41	18.50	18.37	
3	256QAM	1	14	18.54	18.56	18.52	
3	256QAM	8	0	18.36	18.49	18.28	20
3	256QAM	8	4	18.33	18.53	18.40	
3	256QAM	8	7	18.39	18.42	18.30	
3	256QAM	15	0	18.36	18.52	18.43	
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	21.80	21.73	21.77	22.5
1.4	QPSK	1	3	21.65	21.79	21.67	
1.4	QPSK	1	5	21.77	21.76	21.80	
1.4	QPSK	3	0	21.75	21.69	21.62	
1.4	QPSK	3	1	21.73	21.63	21.74	
1.4	QPSK	3	3	21.72	21.69	21.65	
1.4	QPSK	6	0	21.71	21.70	21.74	22.5
1.4	16QAM	1	0	21.24	21.38	21.41	22.5
1.4	16QAM	1	3	21.40	21.42	21.26	
1.4	16QAM	1	5	21.47	21.49	21.32	
1.4	16QAM	3	0	21.24	21.24	21.23	
1.4	16QAM	3	1	21.11	21.21	21.11	
1.4	16QAM	3	3	21.16	21.26	21.10	
1.4	16QAM	6	0	21.74	21.77	21.70	22.5
1.4	64QAM	1	0	21.32	21.43	21.41	22.5
1.4	64QAM	1	3	21.25	21.31	21.21	
1.4	64QAM	1	5	21.36	21.35	21.30	
1.4	64QAM	3	0	21.66	21.78	21.70	
1.4	64QAM	3	1	21.65	21.74	21.70	
1.4	64QAM	3	3	21.68	21.68	21.57	
1.4	64QAM	6	0	20.55	20.59	20.63	22
1.4	256QAM	1	0	18.37	18.43	18.51	20
1.4	256QAM	1	3	18.39	18.37	18.34	
1.4	256QAM	1	5	18.42	18.40	18.36	
1.4	256QAM	3	0	18.47	18.50	18.30	
1.4	256QAM	3	1	18.32	18.47	18.39	
1.4	256QAM	3	3	18.40	18.40	18.32	
1.4	256QAM	6	0	18.33	18.50	18.47	20

<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)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	18.35	18.43	18.39	18.5
20	QPSK	1	49	18.29	18.25	18.37	
20	QPSK	1	99	18.33	18.37	18.35	
20	QPSK	50	0	18.35	18.38	18.34	18.5
20	QPSK	50	24	18.34	18.30	18.33	
20	QPSK	50	50	18.20	18.25	18.26	
20	QPSK	100	0	18.23	18.26	18.24	
20	16QAM	1	0	18.13	17.98	18.03	18.5
20	16QAM	1	49	18.30	18.20	18.17	
20	16QAM	1	99	18.31	18.17	18.11	
20	16QAM	50	0	18.24	18.29	18.27	18.5
20	16QAM	50	24	18.31	18.34	18.29	
20	16QAM	50	50	18.33	18.38	18.29	
20	16QAM	100	0	18.29	18.27	18.27	
20	64QAM	1	0	18.15	18.04	18.05	18.5
20	64QAM	1	49	18.30	18.25	18.22	
20	64QAM	1	99	18.31	18.22	18.25	
20	64QAM	50	0	18.22	18.28	18.30	18.5
20	64QAM	50	24	18.36	18.36	18.30	
20	64QAM	50	50	18.37	18.37	18.23	
20	64QAM	100	0	18.33	18.27	18.27	
20	256QAM	1	0	17.78	17.70	17.87	18.5
20	256QAM	1	49	18.02	18.16	17.98	
20	256QAM	1	99	18.04	18.14	18.24	
20	256QAM	50	0	17.82	17.91	18.28	18.5
20	256QAM	50	24	18.30	18.12	18.05	
20	256QAM	50	50	18.11	17.98	17.95	
20	256QAM	100	0	18.25	17.94	18.10	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	18.23	18.31	18.37	18.5
15	QPSK	1	37	18.12	18.14	18.18	
15	QPSK	1	74	18.28	18.36	18.21	
15	QPSK	36	0	18.18	18.32	18.31	18.5
15	QPSK	36	20	18.19	18.25	18.14	
15	QPSK	36	39	18.07	18.25	18.12	
15	QPSK	75	0	18.09	18.21	18.18	
15	16QAM	1	0	17.97	17.86	17.87	18.5
15	16QAM	1	37	18.16	18.07	18.00	
15	16QAM	1	74	18.15	18.14	17.96	
15	16QAM	36	0	18.22	18.15	18.11	18.5
15	16QAM	36	20	18.11	18.31	18.28	
15	16QAM	36	39	18.17	18.33	18.26	
15	16QAM	75	0	18.26	18.07	18.17	
15	64QAM	1	0	18.13	17.91	17.92	18.5
15	64QAM	1	37	18.19	18.17	18.21	
15	64QAM	1	74	18.24	18.22	18.12	
15	64QAM	36	0	18.11	18.27	18.29	18.5
15	64QAM	36	20	18.21	18.28	18.12	
15	64QAM	36	39	18.27	18.26	18.15	
15	64QAM	75	0	18.26	18.24	18.21	

15	256QAM	1	0	17.77	17.55	17.71	18.5
15	256QAM	1	37	18.00	18.14	17.86	
15	256QAM	1	74	17.98	18.04	18.10	
15	256QAM	36	0	17.70	17.91	18.27	18.5
15	256QAM	36	20	18.26	17.99	17.94	
15	256QAM	36	39	18.01	17.85	17.92	
15	256QAM	75	0	18.10	17.88	17.90	
Channel				20800	21100	21400	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	18.27	18.42	18.20	18.5
10	QPSK	1	25	18.24	18.14	18.25	
10	QPSK	1	49	18.13	18.26	18.22	
10	QPSK	25	0	18.25	18.20	18.30	18.5
10	QPSK	25	12	18.28	18.21	18.27	
10	QPSK	25	25	18.14	18.05	18.14	
10	QPSK	50	0	18.20	18.12	18.11	
10	16QAM	1	0	17.93	17.95	17.88	18.5
10	16QAM	1	25	18.16	18.20	18.06	
10	16QAM	1	49	18.29	18.06	18.05	
10	16QAM	25	0	18.22	18.11	18.08	18.5
10	16QAM	25	12	18.20	18.28	18.18	
10	16QAM	25	25	18.21	18.21	18.28	
10	16QAM	50	0	18.15	18.22	18.21	
10	64QAM	1	0	17.99	18.01	17.89	18.5
10	64QAM	1	25	18.27	18.11	18.18	
10	64QAM	1	49	18.24	18.18	18.22	
10	64QAM	25	0	18.04	18.11	18.26	18.5
10	64QAM	25	12	18.23	18.34	18.25	
10	64QAM	25	25	18.31	18.24	18.12	
10	64QAM	50	0	18.20	18.09	18.12	
10	256QAM	1	0	17.78	17.54	17.77	18.5
10	256QAM	1	25	17.87	18.00	17.89	
10	256QAM	1	49	17.86	18.11	18.08	
10	256QAM	25	0	17.67	17.87	18.11	18.5
10	256QAM	25	12	18.17	18.09	17.89	
10	256QAM	25	25	18.06	17.85	17.94	
10	256QAM	50	0	18.24	17.89	17.98	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	18.26	18.38	18.38	18.5
5	QPSK	1	12	18.24	18.20	18.32	
5	QPSK	1	24	18.23	18.17	18.18	
5	QPSK	12	0	18.19	18.22	18.30	18.5
5	QPSK	12	7	18.18	18.29	18.17	
5	QPSK	12	13	18.11	18.18	18.15	
5	QPSK	25	0	18.09	18.24	18.07	
5	16QAM	1	0	17.98	17.88	17.85	18.5
5	16QAM	1	12	18.23	18.19	18.04	
5	16QAM	1	24	18.14	18.10	18.01	
5	16QAM	12	0	18.06	18.19	18.17	18.5
5	16QAM	12	7	18.25	18.15	18.18	
5	16QAM	12	13	18.21	18.20	18.20	
5	16QAM	25	0	18.23	18.08	18.27	
5	64QAM	1	0	17.96	17.90	18.01	18.5
5	64QAM	1	12	18.14	18.08	18.07	
5	64QAM	1	24	18.26	18.18	18.11	

5	64QAM	12	0	18.16	18.28	18.17	18.5
5	64QAM	12	7	18.27	18.32	18.22	
5	64QAM	12	13	18.20	18.35	18.03	
5	64QAM	25	0	18.31	18.14	18.23	
5	256QAM	1	0	17.66	17.65	17.78	18.5
5	256QAM	1	12	17.95	18.10	17.80	
5	256QAM	1	24	17.99	18.03	18.24	
5	256QAM	12	0	17.75	17.76	18.28	18.5
5	256QAM	12	7	18.29	18.03	18.02	
5	256QAM	12	13	17.94	17.93	17.87	
5	256QAM	25	0	18.25	17.80	17.92	

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23230		
Frequency (MHz)					782		
10	QPSK	1	0		23.85		24.5
10	QPSK	1	25		23.81		
10	QPSK	1	49		23.80		
10	QPSK	25	0		22.81		24
10	QPSK	25	12		22.80		
10	QPSK	25	25		22.72		
10	QPSK	50	0		22.83		
10	16QAM	1	0		22.92		24
10	16QAM	1	25		22.91		
10	16QAM	1	49		22.93		
10	16QAM	25	0		21.75		23
10	16QAM	25	12		21.81		
10	16QAM	25	25		21.85		
10	16QAM	50	0		21.82		
10	64QAM	1	0		21.92		23
10	64QAM	1	25		21.98		
10	64QAM	1	49		21.90		
10	64QAM	25	0		20.72		22
10	64QAM	25	12		20.79		
10	64QAM	25	25		20.81		
10	64QAM	50	0		20.83		
10	256QAM	1	0		18.94		20
10	256QAM	1	25		18.91		
10	256QAM	1	49		18.86		
10	256QAM	25	0		18.93		20
10	256QAM	25	12		18.91		
10	256QAM	25	25		18.86		
10	256QAM	50	0		18.76		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	23.84	23.83	23.76	24.5
5	QPSK	1	12	23.81	23.80	23.69	
5	QPSK	1	24	23.62	23.71	23.55	
5	QPSK	12	0	22.60	22.63	22.54	24
5	QPSK	12	7	22.73	22.76	22.61	
5	QPSK	12	13	22.66	22.75	22.59	
5	QPSK	25	0	22.79	22.80	22.64	

5	16QAM	1	0	22.82	22.87	22.79	24
5	16QAM	1	12	22.76	22.83	22.74	
5	16QAM	1	24	22.81	22.85	22.69	
5	16QAM	12	0	21.60	21.68	21.57	23
5	16QAM	12	7	21.73	21.76	21.66	
5	16QAM	12	13	21.80	21.85	21.73	
5	16QAM	25	0	21.80	21.82	21.65	
5	64QAM	1	0	21.92	21.92	21.80	23
5	64QAM	1	12	21.79	21.88	21.73	
5	64QAM	1	24	21.82	21.86	21.74	
5	64QAM	12	0	20.61	20.66	20.49	22
5	64QAM	12	7	20.79	20.78	20.61	
5	64QAM	12	13	20.72	20.80	20.65	
5	64QAM	25	0	20.76	20.75	20.64	
5	256QAM	1	0	18.90	18.94	18.79	20
5	256QAM	1	12	18.84	18.89	18.79	
5	256QAM	1	24	18.83	18.86	18.73	
5	256QAM	12	0	18.88	18.93	18.81	20
5	256QAM	12	7	18.79	18.87	18.71	
5	256QAM	12	13	18.79	18.83	18.68	
5	256QAM	25	0	18.69	18.72	18.55	

<LTE Band 14>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23330		
Frequency (MHz)					793		
10	QPSK	1	0		24.23		24.5
10	QPSK	1	25		24.18		
10	QPSK	1	49		24.16		
10	QPSK	25	0		22.80		24
10	QPSK	25	12		22.72		
10	QPSK	25	25		22.79		
10	QPSK	50	0		22.80		
10	16QAM	1	0		22.99		24
10	16QAM	1	25		22.91		
10	16QAM	1	49		22.85		
10	16QAM	25	0		21.74		23
10	16QAM	25	12		21.81		
10	16QAM	25	25		21.80		
10	16QAM	50	0		21.78		
10	64QAM	1	0		21.90		23
10	64QAM	1	25		21.99		
10	64QAM	1	49		21.89		
10	64QAM	25	0		20.76		22
10	64QAM	25	12		20.80		
10	64QAM	25	25		20.78		
10	64QAM	50	0		20.77		
10	256QAM	1	0		18.93		20
10	256QAM	1	25		18.84		
10	256QAM	1	49		18.84		
10	256QAM	25	0		18.95		20
10	256QAM	25	12		18.85		
10	256QAM	25	25		18.76		

10	256QAM	50	0		18.67		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	24.21	24.16	24.20	24.5
5	QPSK	1	12	24.18	24.10	24.18	
5	QPSK	1	24	24.12	24.16	24.14	
5	QPSK	12	0	22.55	22.75	22.63	24
5	QPSK	12	7	22.65	22.69	22.62	
5	QPSK	12	13	22.66	22.79	22.72	
5	QPSK	25	0	22.62	22.76	22.64	
5	16QAM	1	0	22.85	22.94	22.90	24
5	16QAM	1	12	22.69	22.83	22.78	
5	16QAM	1	24	22.68	22.77	22.73	
5	16QAM	12	0	21.51	21.69	21.62	23
5	16QAM	12	7	21.58	21.79	21.61	
5	16QAM	12	13	21.67	21.71	21.68	
5	16QAM	25	0	21.68	21.78	21.71	
5	64QAM	1	0	21.77	21.86	21.80	23
5	64QAM	1	12	21.86	21.93	21.97	
5	64QAM	1	24	21.70	21.86	21.81	
5	64QAM	12	0	20.68	20.73	20.67	22
5	64QAM	12	7	20.63	20.74	20.78	
5	64QAM	12	13	20.64	20.73	20.75	
5	64QAM	25	0	20.59	20.72	20.63	
5	256QAM	1	0	18.80	18.87	18.76	20
5	256QAM	1	12	18.67	18.75	18.73	
5	256QAM	1	24	18.66	18.84	18.71	
5	256QAM	12	0	18.74	18.92	18.85	20
5	256QAM	12	7	18.70	18.75	18.79	
5	256QAM	12	13	18.63	18.69	18.68	
5	256QAM	25	0	18.44	18.63	18.47	

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	18.87	18.89	18.94	20
20	QPSK	1	49	18.86	18.88	18.90	
20	QPSK	1	99	18.76	18.84	18.87	
20	QPSK	50	0	18.91	18.91	18.92	20
20	QPSK	50	24	18.78	18.78	18.79	
20	QPSK	50	50	18.78	18.78	18.75	
20	QPSK	100	0	18.86	18.88	18.89	
20	16QAM	1	0	18.62	18.70	18.69	20
20	16QAM	1	49	18.70	18.79	18.76	
20	16QAM	1	99	18.61	18.68	18.75	
20	16QAM	50	0	18.80	18.62	18.79	20
20	16QAM	50	24	18.76	18.80	18.87	
20	16QAM	50	50	18.77	18.78	18.77	
20	16QAM	100	0	18.73	18.77	18.81	
20	64QAM	1	0	18.86	18.85	18.87	20
20	64QAM	1	49	18.89	18.80	18.84	
20	64QAM	1	99	18.81	18.91	18.89	

20	64QAM	50	0	18.82	18.64	18.80	20
20	64QAM	50	24	18.80	18.79	18.81	
20	64QAM	50	50	18.77	18.77	18.72	
20	64QAM	100	0	18.75	18.77	18.73	
20	256QAM	1	0	18.05	17.98	17.80	19
20	256QAM	1	49	17.77	17.89	17.76	
20	256QAM	1	99	17.74	17.83	17.69	
20	256QAM	50	0	17.71	17.50	17.75	19
20	256QAM	50	24	17.70	17.64	17.96	
20	256QAM	50	50	17.78	17.63	17.69	
20	256QAM	100	0	17.57	17.93	17.68	
Channel				26115	26340	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	18.82	18.75	18.74	20
15	QPSK	1	37	18.68	18.86	18.71	
15	QPSK	1	74	18.65	18.64	18.83	
15	QPSK	36	0	18.90	18.89	18.82	20
15	QPSK	36	20	18.67	18.72	18.78	
15	QPSK	36	39	18.77	18.70	18.62	
15	QPSK	75	0	18.75	18.88	18.79	
15	16QAM	1	0	18.47	18.70	18.53	20
15	16QAM	1	37	18.54	18.63	18.60	
15	16QAM	1	74	18.46	18.57	18.69	
15	16QAM	36	0	18.68	18.43	18.59	20
15	16QAM	36	20	18.59	18.64	18.82	
15	16QAM	36	39	18.58	18.77	18.59	
15	16QAM	75	0	18.68	18.71	18.77	
15	64QAM	1	0	18.81	18.73	18.73	20
15	64QAM	1	37	18.69	18.75	18.71	
15	64QAM	1	74	18.66	18.84	18.81	
15	64QAM	36	0	18.82	18.64	18.76	20
15	64QAM	36	20	18.80	18.71	18.78	
15	64QAM	36	39	18.72	18.64	18.60	
15	64QAM	75	0	18.55	18.69	18.60	
15	256QAM	1	0	18.01	17.96	17.62	19
15	256QAM	1	37	17.64	17.76	17.67	
15	256QAM	1	74	17.67	17.71	17.53	
15	256QAM	36	0	17.57	17.50	17.60	19
15	256QAM	36	20	17.54	17.47	17.79	
15	256QAM	36	39	17.69	17.46	17.49	
15	256QAM	75	0	17.41	17.84	17.61	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	18.87	18.76	18.92	20
10	QPSK	1	25	18.74	18.70	18.87	
10	QPSK	1	49	18.74	18.69	18.84	
10	QPSK	25	0	18.77	18.81	18.88	20
10	QPSK	25	12	18.69	18.73	18.59	
10	QPSK	25	25	18.67	18.72	18.68	
10	QPSK	50	0	18.78	18.73	18.77	
10	16QAM	1	0	18.47	18.61	18.63	20
10	16QAM	1	25	18.53	18.71	18.70	
10	16QAM	1	49	18.51	18.58	18.73	
10	16QAM	25	0	18.68	18.54	18.70	20
10	16QAM	25	12	18.65	18.77	18.85	
10	16QAM	25	25	18.61	18.77	18.76	

10	16QAM	50	0	18.56	18.59	18.77	
10	64QAM	1	0	18.78	18.74	18.85	20
10	64QAM	1	25	18.74	18.68	18.72	
10	64QAM	1	49	18.68	18.82	18.69	
10	64QAM	25	0	18.81	18.64	18.64	20
10	64QAM	25	12	18.60	18.64	18.63	
10	64QAM	25	25	18.68	18.65	18.54	
10	64QAM	50	0	18.66	18.64	18.56	
10	256QAM	1	0	18.01	17.89	17.76	19
10	256QAM	1	25	17.68	17.70	17.65	
10	256QAM	1	49	17.65	17.64	17.68	
10	256QAM	25	0	17.62	17.39	17.75	19
10	256QAM	25	12	17.55	17.62	17.91	
10	256QAM	25	25	17.75	17.45	17.60	
10	256QAM	50	0	17.40	17.87	17.58	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	18.78	18.81	18.76	20
5	QPSK	1	12	18.71	18.73	18.80	
5	QPSK	1	24	18.73	18.66	18.87	
5	QPSK	12	0	18.81	18.78	18.90	20
5	QPSK	12	7	18.62	18.70	18.78	
5	QPSK	12	13	18.59	18.73	18.55	
5	QPSK	25	0	18.68	18.73	18.85	
5	16QAM	1	0	18.54	18.65	18.66	20
5	16QAM	1	12	18.65	18.70	18.70	
5	16QAM	1	24	18.60	18.56	18.74	
5	16QAM	12	0	18.71	18.44	18.66	20
5	16QAM	12	7	18.66	18.80	18.68	
5	16QAM	12	13	18.75	18.70	18.71	
5	16QAM	25	0	18.65	18.74	18.74	
5	64QAM	1	0	18.76	18.79	18.71	20
5	64QAM	1	12	18.86	18.79	18.65	
5	64QAM	1	24	18.70	18.78	18.82	
5	64QAM	12	0	18.75	18.56	18.75	20
5	64QAM	12	7	18.69	18.69	18.78	
5	64QAM	12	13	18.74	18.61	18.55	
5	64QAM	25	0	18.57	18.68	18.58	
5	256QAM	1	0	17.94	17.93	17.69	19
5	256QAM	1	12	17.58	17.77	17.56	
5	256QAM	1	24	17.71	17.67	17.52	
5	256QAM	12	0	17.64	17.34	17.69	19
5	256QAM	12	7	17.62	17.61	17.88	
5	256QAM	12	13	17.72	17.63	17.55	
5	256QAM	25	0	17.56	17.85	17.64	
Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	18.69	18.74	18.82	20
3	QPSK	1	8	18.83	18.79	18.84	
3	QPSK	1	14	18.71	18.80	18.84	
3	QPSK	8	0	18.75	18.73	18.85	20
3	QPSK	8	4	18.67	18.66	18.67	
3	QPSK	8	7	18.64	18.70	18.60	
3	QPSK	15	0	18.81	18.72	18.76	
3	16QAM	1	0	18.44	18.58	18.62	20
3	16QAM	1	8	18.69	18.63	18.57	

3	16QAM	1	14	18.48	18.48	18.67	
3	16QAM	8	0	18.71	18.51	18.66	20
3	16QAM	8	4	18.59	18.60	18.82	
3	16QAM	8	7	18.64	18.66	18.61	
3	16QAM	15	0	18.63	18.76	18.62	
3	64QAM	1	0	18.70	18.76	18.75	20
3	64QAM	1	8	18.78	18.66	18.65	
3	64QAM	1	14	18.65	18.79	18.89	
3	64QAM	8	0	18.74	18.54	18.68	20
3	64QAM	8	4	18.62	18.70	18.70	
3	64QAM	8	7	18.73	18.77	18.54	
3	64QAM	15	0	18.71	18.60	18.56	
3	256QAM	1	0	17.94	17.96	17.70	19
3	256QAM	1	8	17.74	17.89	17.68	
3	256QAM	1	14	17.71	17.67	17.58	
3	256QAM	8	0	17.54	17.32	17.59	19
3	256QAM	8	4	17.56	17.63	17.86	
3	256QAM	8	7	17.70	17.54	17.49	
3	256QAM	15	0	17.52	17.83	17.67	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	18.69	18.78	18.89	20
1.4	QPSK	1	3	18.80	18.82	18.76	
1.4	QPSK	1	5	18.71	18.82	18.69	
1.4	QPSK	3	0	18.82	18.80	18.83	
1.4	QPSK	3	1	18.67	18.61	18.72	
1.4	QPSK	3	3	18.66	18.76	18.66	
1.4	QPSK	6	0	18.82	18.68	18.85	20
1.4	16QAM	1	0	18.48	18.64	18.50	20
1.4	16QAM	1	3	18.62	18.75	18.74	
1.4	16QAM	1	5	18.57	18.56	18.64	
1.4	16QAM	3	0	18.67	18.50	18.73	
1.4	16QAM	3	1	18.68	18.67	18.79	
1.4	16QAM	3	3	18.61	18.58	18.59	
1.4	16QAM	6	0	18.57	18.58	18.62	20
1.4	64QAM	1	0	18.79	18.65	18.79	20
1.4	64QAM	1	3	18.71	18.74	18.64	
1.4	64QAM	1	5	18.71	18.74	18.77	
1.4	64QAM	3	0	18.78	18.46	18.61	
1.4	64QAM	3	1	18.76	18.60	18.73	
1.4	64QAM	3	3	18.77	18.62	18.69	
1.4	64QAM	6	0	18.55	18.65	18.68	20
1.4	256QAM	1	0	18.02	17.79	17.71	19
1.4	256QAM	1	3	17.73	17.74	17.76	
1.4	256QAM	1	5	17.63	17.64	17.56	
1.4	256QAM	3	0	17.60	17.37	17.61	
1.4	256QAM	3	1	17.51	17.59	17.86	
1.4	256QAM	3	3	17.67	17.43	17.58	
1.4	256QAM	6	0	17.52	17.87	17.62	19

<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	21.75	21.84	21.80	22.5
15	QPSK	1	37	21.71	21.76	21.79	
15	QPSK	1	74	21.72	21.77	21.74	
15	QPSK	36	0	21.75	21.78	21.76	22.5
15	QPSK	36	20	21.69	21.76	21.74	
15	QPSK	36	39	21.70	21.72	21.73	
15	QPSK	75	0	21.72	21.81	21.74	
15	16QAM	1	0	21.38	21.42	21.40	22.5
15	16QAM	1	37	21.46	21.51	21.46	
15	16QAM	1	74	21.52	21.51	21.40	
15	16QAM	36	0	21.13	21.14	21.14	22.5
15	16QAM	36	20	21.19	21.24	21.22	
15	16QAM	36	39	21.25	21.25	21.22	
15	16QAM	75	0	21.72	21.75	21.70	
15	64QAM	1	0	21.31	21.35	21.34	22.5
15	64QAM	1	37	21.36	21.47	21.41	
15	64QAM	1	74	21.44	21.44	21.35	
15	64QAM	36	0	21.21	21.28	21.26	22
15	64QAM	36	20	21.24	21.27	21.28	
15	64QAM	36	39	21.26	21.27	21.31	
15	64QAM	75	0	21.20	21.22	21.27	
15	256QAM	1	0	19.06	18.72	19.01	20
15	256QAM	1	37	18.85	18.79	18.86	
15	256QAM	1	74	18.74	18.65	18.78	
15	256QAM	36	0	18.98	18.88	18.79	20
15	256QAM	36	20	18.57	19.00	18.69	
15	256QAM	36	39	18.85	18.88	18.92	
15	256QAM	75	0	18.72	18.96	18.67	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	21.71	21.64	21.74	22.5
10	QPSK	1	25	21.57	21.62	21.67	
10	QPSK	1	49	21.62	21.69	21.64	
10	QPSK	25	0	21.69	21.62	21.65	22.5
10	QPSK	25	12	21.49	21.58	21.56	
10	QPSK	25	25	21.63	21.64	21.66	
10	QPSK	50	0	21.67	21.70	21.68	
10	16QAM	1	0	21.28	21.31	21.40	22.5
10	16QAM	1	25	21.45	21.45	21.28	
10	16QAM	1	49	21.37	21.33	21.36	
10	16QAM	25	0	21.04	21.08	20.96	22.5
10	16QAM	25	12	21.19	21.16	21.18	
10	16QAM	25	25	21.06	21.13	21.06	
10	16QAM	50	0	21.61	21.69	21.54	
10	64QAM	1	0	21.26	21.33	21.31	22.5
10	64QAM	1	25	21.24	21.27	21.26	
10	64QAM	1	49	21.24	21.33	21.16	
10	64QAM	25	0	21.14	21.23	21.24	22
10	64QAM	25	12	21.12	21.18	21.20	
10	64QAM	25	25	21.23	21.12	21.12	
10	64QAM	50	0	21.04	21.15	21.17	

10	256QAM	1	0	19.01	18.53	18.90	20
10	256QAM	1	25	18.69	18.78	18.78	
10	256QAM	1	49	18.70	18.53	18.59	
10	256QAM	25	0	18.78	18.75	18.75	20
10	256QAM	25	12	18.52	18.90	18.50	
10	256QAM	25	25	18.81	18.81	18.74	
10	256QAM	50	0	18.69	18.95	18.55	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	21.72	21.79	21.76	22.5
5	QPSK	1	12	21.60	21.71	21.66	
5	QPSK	1	24	21.54	21.72	21.61	
5	QPSK	12	0	21.73	21.68	21.64	22.5
5	QPSK	12	7	21.61	21.63	21.67	
5	QPSK	12	13	21.64	21.62	21.66	
5	QPSK	25	0	21.63	21.81	21.70	
5	16QAM	1	0	21.33	21.41	21.25	22.5
5	16QAM	1	12	21.37	21.39	21.43	
5	16QAM	1	24	21.45	21.36	21.25	
5	16QAM	12	0	21.10	21.07	21.00	22.5
5	16QAM	12	7	21.19	21.16	21.12	
5	16QAM	12	13	21.23	21.05	21.03	
5	16QAM	25	0	21.71	21.61	21.64	
5	64QAM	1	0	21.26	21.29	21.28	22.5
5	64QAM	1	12	21.36	21.43	21.29	
5	64QAM	1	24	21.26	21.42	21.34	
5	64QAM	12	0	21.17	21.08	21.07	22
5	64QAM	12	7	21.18	21.09	21.13	
5	64QAM	12	13	21.17	21.09	21.22	
5	64QAM	25	0	21.00	21.10	21.11	
5	256QAM	1	0	19.01	18.64	18.84	20
5	256QAM	1	12	18.69	18.79	18.69	
5	256QAM	1	24	18.70	18.59	18.61	
5	256QAM	12	0	18.87	18.71	18.79	20
5	256QAM	12	7	18.37	18.94	18.53	
5	256QAM	12	13	18.85	18.70	18.80	
5	256QAM	25	0	18.68	18.76	18.62	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	21.65	21.68	21.60	22.5
3	QPSK	1	8	21.65	21.64	21.76	
3	QPSK	1	14	21.65	21.68	21.74	
3	QPSK	8	0	21.71	21.70	21.66	22.5
3	QPSK	8	4	21.59	21.66	21.67	
3	QPSK	8	7	21.68	21.71	21.53	
3	QPSK	15	0	21.62	21.70	21.63	
3	16QAM	1	0	21.19	21.23	21.37	22.5
3	16QAM	1	8	21.40	21.50	21.31	
3	16QAM	1	14	21.46	21.47	21.32	
3	16QAM	8	0	20.95	21.12	21.12	22.5
3	16QAM	8	4	21.05	21.07	21.07	
3	16QAM	8	7	21.10	21.25	21.04	
3	16QAM	15	0	21.64	21.62	21.70	
3	64QAM	1	0	21.18	21.31	21.31	22.5
3	64QAM	1	8	21.27	21.28	21.33	
3	64QAM	1	14	21.40	21.43	21.29	

3	64QAM	8	0	21.07	21.21	21.13	22
3	64QAM	8	4	21.16	21.14	21.08	
3	64QAM	8	7	21.22	21.19	21.13	
3	64QAM	15	0	21.02	21.16	21.16	
3	256QAM	1	0	18.91	18.64	18.92	20
3	256QAM	1	8	18.85	18.61	18.86	
3	256QAM	1	14	18.54	18.60	18.58	
3	256QAM	8	0	18.78	18.88	18.65	20
3	256QAM	8	4	18.40	18.96	18.51	
3	256QAM	8	7	18.82	18.70	18.82	
3	256QAM	15	0	18.57	18.76	18.64	
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	21.67	21.73	21.80	22.5
1.4	QPSK	1	3	21.70	21.67	21.77	
1.4	QPSK	1	5	21.55	21.73	21.69	
1.4	QPSK	3	0	21.62	21.70	21.56	
1.4	QPSK	3	1	21.49	21.68	21.68	
1.4	QPSK	3	3	21.57	21.52	21.68	
1.4	QPSK	6	0	21.63	21.71	21.66	22.5
1.4	16QAM	1	0	21.38	21.33	21.37	22.5
1.4	16QAM	1	3	21.42	21.46	21.44	
1.4	16QAM	1	5	21.41	21.45	21.39	
1.4	16QAM	3	0	20.99	21.06	20.94	
1.4	16QAM	3	1	21.18	21.20	21.15	
1.4	16QAM	3	3	21.12	21.06	21.22	
1.4	16QAM	6	0	21.66	21.64	21.59	22.5
1.4	64QAM	1	0	21.11	21.26	21.17	22.5
1.4	64QAM	1	3	21.31	21.40	21.40	
1.4	64QAM	1	5	21.42	21.28	21.31	
1.4	64QAM	3	0	21.56	21.72	21.80	
1.4	64QAM	3	1	21.62	21.73	21.75	
1.4	64QAM	3	3	21.65	21.67	21.69	
1.4	64QAM	6	0	20.75	20.72	20.62	22
1.4	256QAM	1	0	18.95	18.57	18.87	20
1.4	256QAM	1	3	18.70	18.64	18.74	
1.4	256QAM	1	5	18.55	18.49	18.71	
1.4	256QAM	3	0	18.85	18.75	18.72	
1.4	256QAM	3	1	18.50	18.94	18.67	
1.4	256QAM	3	3	18.69	18.84	18.73	
1.4	256QAM	6	0	18.72	18.78	18.65	20

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					27710		
Frequency (MHz)					2310		
10	QPSK	1	0		15.42		16.5
10	QPSK	1	25		15.41		
10	QPSK	1	49		15.39		
10	QPSK	25	0		15.33		16.5
10	QPSK	25	12		15.26		
10	QPSK	25	25		15.12		
10	QPSK	50	0		15.35		

10	16QAM	1	0		15.39		16.5
10	16QAM	1	25		15.41		
10	16QAM	1	49		15.40		
10	16QAM	25	0		15.31		16.5
10	16QAM	25	12		15.27		
10	16QAM	25	25		15.13		
10	16QAM	50	0		15.25		
10	64QAM	1	0		15.39		16.5
10	64QAM	1	25		15.34		
10	64QAM	1	49		15.34		
10	64QAM	25	0		15.32		16.5
10	64QAM	25	12		15.25		
10	64QAM	25	25		15.14		
10	64QAM	50	0		15.24		
10	256QAM	1	0		15.35		16.5
10	256QAM	1	25		15.29		
10	256QAM	1	49		15.28		
10	256QAM	25	0		15.28		16.5
10	256QAM	25	12		15.16		
10	256QAM	25	25		15.14		
10	256QAM	50	0		15.14		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	15.23	15.41	15.40	16.5
5	QPSK	1	12	15.40	15.25	15.30	
5	QPSK	1	24	15.34	15.24	15.35	
5	QPSK	12	0	15.26	15.19	15.21	16.5
5	QPSK	12	7	15.21	15.22	15.24	
5	QPSK	12	13	15.06	15.11	15.10	
5	QPSK	25	0	15.15	15.17	15.19	
5	16QAM	1	0	15.26	15.26	15.26	16.5
5	16QAM	1	12	15.41	15.27	15.37	
5	16QAM	1	24	15.20	15.24	15.34	
5	16QAM	12	0	15.14	15.26	15.26	16.5
5	16QAM	12	7	15.19	15.17	15.12	
5	16QAM	12	13	15.06	15.09	15.07	
5	16QAM	25	0	15.15	15.08	15.20	
5	64QAM	1	0	15.21	15.20	15.34	16.5
5	64QAM	1	12	15.25	15.14	15.16	
5	64QAM	1	24	15.22	15.26	15.31	
5	64QAM	12	0	15.14	15.12	15.28	16.5
5	64QAM	12	7	15.17	15.22	15.13	
5	64QAM	12	13	15.06	14.95	15.02	
5	64QAM	25	0	15.20	15.17	15.24	
5	256QAM	1	0	15.21	15.33	15.15	16.5
5	256QAM	1	12	15.21	15.20	15.18	
5	256QAM	1	24	15.08	15.21	15.08	
5	256QAM	12	0	15.27	15.09	15.20	16.5
5	256QAM	12	7	14.97	15.08	15.07	
5	256QAM	12	13	15.14	15.13	14.94	
5	256QAM	25	0	15.02	14.99	15.13	

<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)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	20.47	20.51	20.42	21
20	QPSK	1	49	20.43	20.47	20.39	
20	QPSK	1	99	20.31	20.40	20.24	
20	QPSK	50	0	20.25	20.27	20.24	21
20	QPSK	50	24	20.23	20.21	20.19	
20	QPSK	50	50	20.13	20.13	20.21	
20	QPSK	100	0	20.19	20.22	20.21	
20	16QAM	1	0	20.19	20.20	20.14	21
20	16QAM	1	49	20.19	20.25	20.17	
20	16QAM	1	99	20.04	20.13	20.06	
20	16QAM	50	0	20.17	20.20	20.21	21
20	16QAM	50	24	20.19	20.26	20.22	
20	16QAM	50	50	20.15	20.19	20.24	
20	16QAM	100	0	20.17	20.19	20.21	
20	64QAM	1	0	20.34	20.31	20.34	21
20	64QAM	1	49	20.29	20.35	20.37	
20	64QAM	1	99	20.17	20.23	20.12	
20	64QAM	50	0	20.21	20.20	20.22	21
20	64QAM	50	24	20.24	20.25	20.19	
20	64QAM	50	50	20.16	20.15	20.19	
20	64QAM	100	0	20.18	20.21	20.20	
20	256QAM	1	0	17.94	18.01	18.15	19
20	256QAM	1	49	18.16	18.09	18.14	
20	256QAM	1	99	18.05	17.97	17.74	
20	256QAM	50	0	17.96	18.05	18.15	19
20	256QAM	50	24	17.78	18.12	17.90	
20	256QAM	50	50	17.69	18.11	18.03	
20	256QAM	100	0	17.80	18.06	17.98	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	20.43	20.48	20.42	21
15	QPSK	1	37	20.37	20.40	20.37	
15	QPSK	1	74	20.31	20.39	20.05	
15	QPSK	36	0	20.11	20.11	20.14	21
15	QPSK	36	20	20.21	20.05	20.16	
15	QPSK	36	39	20.12	20.09	20.11	
15	QPSK	75	0	20.19	20.04	20.10	
15	16QAM	1	0	20.07	20.11	20.10	21
15	16QAM	1	37	20.10	20.08	20.11	
15	16QAM	1	74	20.04	20.06	20.00	
15	16QAM	36	0	20.07	20.08	20.11	21
15	16QAM	36	20	20.05	20.07	20.05	
15	16QAM	36	39	20.09	20.03	20.15	
15	16QAM	75	0	19.99	20.12	20.06	
15	64QAM	1	0	20.25	20.14	20.24	21
15	64QAM	1	37	20.22	20.29	20.17	
15	64QAM	1	74	20.14	20.03	19.94	
15	64QAM	36	0	20.02	20.18	20.05	21
15	64QAM	36	20	20.12	20.12	20.15	
15	64QAM	36	39	20.02	20.08	20.19	
15	64QAM	75	0	20.01	20.05	20.12	
15	256QAM	1	0	17.91	17.99	18.04	19

15	256QAM	1	37	17.96	17.91	18.06	
15	256QAM	1	74	17.85	17.80	17.56	
15	256QAM	36	0	17.90	17.90	18.15	19
15	256QAM	36	20	17.70	18.08	17.72	
15	256QAM	36	39	17.66	18.11	17.92	
15	256QAM	75	0	17.61	17.92	17.89	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	20.45	20.31	20.42	21
10	QPSK	1	25	20.33	20.39	20.37	
10	QPSK	1	49	20.28	20.29	20.12	
10	QPSK	25	0	20.09	20.27	20.09	21
10	QPSK	25	12	20.09	20.15	20.01	
10	QPSK	25	25	20.07	20.01	20.10	
10	QPSK	50	0	20.09	20.15	20.18	
10	16QAM	1	0	20.10	20.15	20.03	21
10	16QAM	1	25	20.07	20.12	20.16	
10	16QAM	1	49	19.85	20.12	19.98	
10	16QAM	25	0	19.97	20.01	20.19	21
10	16QAM	25	12	20.03	20.14	20.06	
10	16QAM	25	25	20.12	20.00	20.15	
10	16QAM	50	0	20.10	20.05	20.08	
10	64QAM	1	0	20.19	20.17	20.25	21
10	64QAM	1	25	20.29	20.24	20.29	
10	64QAM	1	49	20.14	20.15	20.12	
10	64QAM	25	0	20.05	20.06	20.15	21
10	64QAM	25	12	20.15	20.21	20.04	
10	64QAM	25	25	19.97	20.07	20.18	
10	64QAM	50	0	20.06	20.06	20.07	
10	256QAM	1	0	17.86	17.96	18.00	19
10	256QAM	1	25	18.04	18.03	18.03	
10	256QAM	1	49	17.91	17.81	17.65	
10	256QAM	25	0	17.82	17.96	18.09	19
10	256QAM	25	12	17.58	17.96	17.88	
10	256QAM	25	25	17.66	17.91	17.93	
10	256QAM	50	0	17.68	18.04	17.95	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	20.35	20.33	20.36	21
5	QPSK	1	12	20.32	20.29	20.35	
5	QPSK	1	24	20.13	20.36	20.08	
5	QPSK	12	0	20.19	20.08	20.10	21
5	QPSK	12	7	20.09	20.07	20.05	
5	QPSK	12	13	20.12	20.00	20.07	
5	QPSK	25	0	20.12	20.22	20.09	
5	16QAM	1	0	20.12	20.12	20.09	21
5	16QAM	1	12	20.16	20.05	20.02	
5	16QAM	1	24	19.92	20.07	20.02	
5	16QAM	12	0	20.06	20.19	20.06	21
5	16QAM	12	7	20.04	20.07	20.11	
5	16QAM	12	13	20.03	20.10	20.09	
5	16QAM	25	0	20.15	20.09	20.08	
5	64QAM	1	0	20.18	20.22	20.14	21
5	64QAM	1	12	20.20	20.22	20.30	
5	64QAM	1	24	20.01	20.21	20.12	
5	64QAM	12	0	20.05	20.05	20.08	21
5	64QAM	12	7	20.18	20.20	20.02	

5	64QAM	12	13	20.00	20.02	19.99	
5	64QAM	25	0	20.06	20.08	20.12	
5	256QAM	1	0	17.87	17.99	18.13	19
5	256QAM	1	12	18.01	18.05	18.14	
5	256QAM	1	24	17.96	17.81	17.62	
5	256QAM	12	0	17.85	17.94	18.13	19
5	256QAM	12	7	17.75	18.05	17.78	
5	256QAM	12	13	17.51	18.10	18.01	
5	256QAM	25	0	17.60	17.91	17.90	
Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	20.45	20.50	20.27	21
3	QPSK	1	8	20.35	20.27	20.21	
3	QPSK	1	14	20.15	20.33	20.17	
3	QPSK	8	0	20.12	20.08	20.13	21
3	QPSK	8	4	20.13	20.08	20.04	
3	QPSK	8	7	20.10	19.98	20.07	
3	QPSK	15	0	20.11	20.18	20.17	
3	16QAM	1	0	20.05	20.10	20.02	21
3	16QAM	1	8	20.02	20.07	20.14	
3	16QAM	1	14	19.97	20.12	20.02	
3	16QAM	8	0	20.10	20.06	20.19	21
3	16QAM	8	4	20.05	20.06	20.03	
3	16QAM	8	7	20.08	20.02	20.13	
3	16QAM	15	0	20.17	20.02	20.07	
3	64QAM	1	0	20.15	20.20	20.17	21
3	64QAM	1	8	20.24	20.32	20.30	
3	64QAM	1	14	20.01	20.16	20.05	
3	64QAM	8	0	20.12	20.02	20.20	21
3	64QAM	8	4	20.12	20.11	20.05	
3	64QAM	8	7	20.09	19.99	20.02	
3	64QAM	15	0	20.00	20.17	20.08	
3	256QAM	1	0	17.76	17.89	18.01	19
3	256QAM	1	8	18.01	17.90	18.01	
3	256QAM	1	14	17.86	17.96	17.58	
3	256QAM	8	0	17.77	17.98	18.13	19
3	256QAM	8	4	17.60	17.95	17.70	
3	256QAM	8	7	17.66	17.95	18.00	
3	256QAM	15	0	17.69	17.86	17.97	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	20.42	20.32	20.23	21
1.4	QPSK	1	3	20.43	20.43	20.19	
1.4	QPSK	1	5	20.12	20.34	20.11	
1.4	QPSK	3	0	20.18	20.26	20.04	
1.4	QPSK	3	1	20.08	20.09	20.10	
1.4	QPSK	3	3	20.13	20.04	20.14	
1.4	QPSK	6	0	20.17	20.05	20.20	21
1.4	16QAM	1	0	20.02	20.17	20.14	21
1.4	16QAM	1	3	20.01	20.11	20.02	
1.4	16QAM	1	5	19.86	20.04	20.05	
1.4	16QAM	3	0	20.16	20.04	20.11	
1.4	16QAM	3	1	20.14	20.12	20.21	
1.4	16QAM	3	3	20.03	20.09	20.05	
1.4	16QAM	6	0	20.14	20.15	20.20	21
1.4	64QAM	1	0	20.28	20.18	20.23	21
1.4	64QAM	1	3	20.10	20.23	20.20	

1.4	64QAM	1	5	20.17	20.08	20.09	
1.4	64QAM	3	0	20.09	20.00	20.13	
1.4	64QAM	3	1	20.23	20.20	20.01	
1.4	64QAM	3	3	19.97	20.06	20.02	
1.4	64QAM	6	0	20.16	20.08	20.05	21
1.4	256QAM	1	0	17.92	17.85	18.05	
1.4	256QAM	1	3	17.99	17.97	18.03	
1.4	256QAM	1	5	18.05	17.91	17.64	19
1.4	256QAM	3	0	17.76	17.89	18.03	
1.4	256QAM	3	1	17.59	18.00	17.80	
1.4	256QAM	3	3	17.49	18.02	17.94	
1.4	256QAM	6	0	17.75	17.90	17.83	19

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

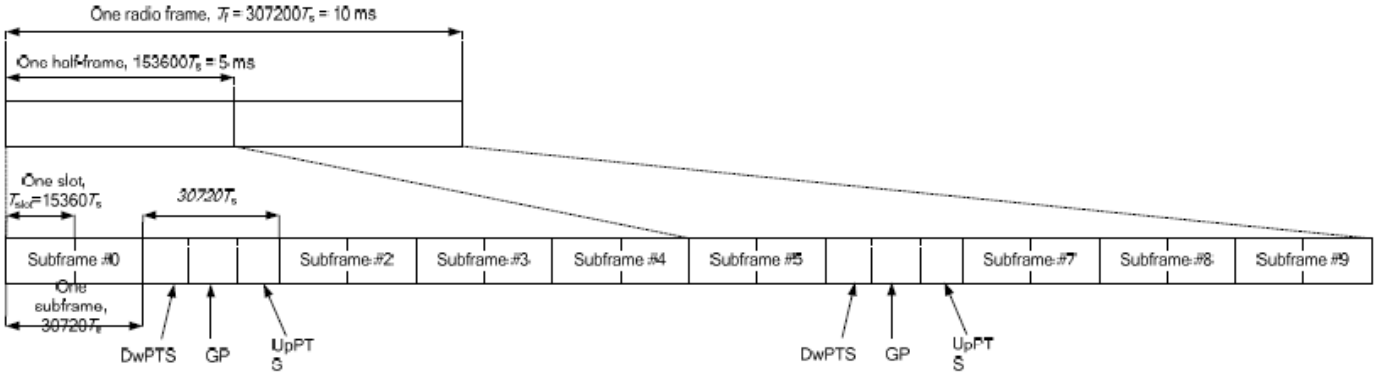


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.

ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink

iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%

iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%

v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

vi. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41.

vii. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition.

Default Power Mode (Main)

<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	22.57	22.59	22.57	24
20	QPSK	1	49	22.46	22.46	22.44	
20	QPSK	1	99	22.52	22.53	22.55	
20	QPSK	50	0	21.56	21.57	21.56	23
20	QPSK	50	24	21.55	21.51	21.49	
20	QPSK	50	50	21.46	21.50	21.48	
20	QPSK	100	0	21.48	21.50	21.48	
20	16QAM	1	0	21.61	21.63	21.70	23
20	16QAM	1	49	21.52	21.57	21.55	
20	16QAM	1	99	21.52	21.56	21.63	
20	16QAM	50	0	20.54	20.54	20.65	22
20	16QAM	50	24	20.49	20.56	20.63	
20	16QAM	50	50	20.51	20.52	20.59	
20	16QAM	100	0	20.22	20.29	20.21	
20	64QAM	1	0	20.38	20.35	20.39	22
20	64QAM	1	49	20.24	20.28	20.21	
20	64QAM	1	99	20.48	20.54	20.59	
20	64QAM	50	0	19.51	19.57	19.59	21
20	64QAM	50	24	19.50	19.49	19.58	
20	64QAM	50	50	19.46	19.51	19.56	
20	64QAM	100	0	19.45	19.52	19.53	
20	256QAM	1	0	17.78	17.75	17.79	19
20	256QAM	1	49	17.77	17.68	17.73	
20	256QAM	1	99	17.72	17.67	17.66	
20	256QAM	50	0	17.88	17.93	17.96	19
20	256QAM	50	24	17.85	17.86	17.93	
20	256QAM	50	50	17.78	17.85	17.91	
20	256QAM	100	0	17.72	17.81	17.90	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	22.49	22.56	22.54	24
15	QPSK	1	37	22.43	22.37	22.44	
15	QPSK	1	74	22.50	22.45	22.51	
15	QPSK	36	0	21.52	21.47	21.61	23
15	QPSK	36	20	21.53	21.43	21.58	
15	QPSK	36	39	21.36	21.43	21.48	
15	QPSK	75	0	21.39	21.48	21.45	
15	16QAM	1	0	21.57	21.55	21.60	23
15	16QAM	1	37	21.46	21.55	21.45	
15	16QAM	1	74	21.44	21.51	21.59	
15	16QAM	36	0	20.45	20.53	20.57	22
15	16QAM	36	20	20.49	20.47	20.54	
15	16QAM	36	39	20.49	20.50	20.59	
15	16QAM	75	0	20.22	20.23	20.19	
15	64QAM	1	0	20.32	20.34	20.34	22
15	64QAM	1	37	20.19	20.24	20.19	
15	64QAM	1	74	20.44	20.53	20.58	
15	64QAM	36	0	19.48	19.54	19.58	21
15	64QAM	36	20	19.47	19.49	19.48	
15	64QAM	36	39	19.43	19.51	19.46	

15	64QAM	75	0	19.42	19.48	19.50	
15	256QAM	1	0	17.72	17.67	17.70	19
15	256QAM	1	37	17.68	17.67	17.68	
15	256QAM	1	74	17.66	17.62	17.58	
15	256QAM	36	0	17.84	17.91	17.95	19
15	256QAM	36	20	17.78	17.86	17.88	
15	256QAM	36	39	17.76	17.80	17.88	
15	256QAM	75	0	17.64	17.76	17.81	
Channel				37800	38000	38200	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	22.53	22.48	22.55	24
10	QPSK	1	25	22.39	22.42	22.35	
10	QPSK	1	49	22.52	22.46	22.53	
10	QPSK	25	0	21.49	21.46	21.58	23
10	QPSK	25	12	21.50	21.49	21.56	
10	QPSK	25	25	21.44	21.49	21.56	
10	QPSK	50	0	21.38	21.41	21.42	
10	16QAM	1	0	21.53	21.55	21.61	23
10	16QAM	1	25	21.47	21.51	21.54	
10	16QAM	1	49	21.42	21.51	21.58	
10	16QAM	25	0	20.47	20.49	20.57	22
10	16QAM	25	12	20.41	20.53	20.53	
10	16QAM	25	25	20.51	20.43	20.56	
10	16QAM	50	0	20.15	20.25	20.13	
10	64QAM	1	0	20.29	20.31	20.32	22
10	64QAM	1	25	20.24	20.18	20.11	
10	64QAM	1	49	20.41	20.54	20.54	
10	64QAM	25	0	19.44	19.48	19.56	21
10	64QAM	25	12	19.50	19.47	19.55	
10	64QAM	25	25	19.44	19.46	19.51	
10	64QAM	50	0	19.35	19.42	19.46	
10	256QAM	1	0	17.75	17.69	17.69	19
10	256QAM	1	25	17.70	17.66	17.65	
10	256QAM	1	49	17.72	17.59	17.57	
10	256QAM	25	0	17.81	17.92	17.93	19
10	256QAM	25	12	17.79	17.81	17.86	
10	256QAM	25	25	17.71	17.77	17.89	
10	256QAM	50	0	17.69	17.73	17.85	
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	22.49	22.56	22.54	24
5	QPSK	1	12	22.43	22.37	22.44	
5	QPSK	1	24	22.50	22.45	22.51	
5	QPSK	12	0	21.52	21.47	21.61	23
5	QPSK	12	7	21.53	21.43	21.58	
5	QPSK	12	13	21.36	21.43	21.48	
5	QPSK	25	0	21.39	21.48	21.45	
5	16QAM	1	0	21.57	21.55	21.60	23
5	16QAM	1	12	21.46	21.55	21.45	
5	16QAM	1	24	21.44	21.51	21.59	
5	16QAM	12	0	20.45	20.53	20.57	22
5	16QAM	12	7	20.49	20.47	20.54	
5	16QAM	12	13	20.49	20.50	20.59	
5	16QAM	25	0	20.22	20.23	20.19	
5	64QAM	1	0	20.32	20.34	20.34	22
5	64QAM	1	12	20.19	20.24	20.19	

5	64QAM	1	24	20.44	20.53	20.58	
5	64QAM	12	0	19.48	19.54	19.58	21
5	64QAM	12	7	19.47	19.49	19.48	
5	64QAM	12	13	19.43	19.51	19.46	
5	64QAM	25	0	19.42	19.48	19.50	
5	256QAM	1	0	17.72	17.67	17.70	19
5	256QAM	1	12	17.68	17.67	17.68	
5	256QAM	1	24	17.66	17.62	17.58	
5	256QAM	12	0	17.84	17.91	17.95	19
5	256QAM	12	7	17.78	17.86	17.88	
5	256QAM	12	13	17.76	17.80	17.88	
5	256QAM	25	0	17.64	17.76	17.81	

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	21.15	20.20	20.30	20.89	20.35	22
20	QPSK	1	49	20.82	20.18	20.20	20.69	20.30	
20	QPSK	1	99	20.70	20.16	20.26	20.75	20.31	
20	QPSK	50	0	20.07	20.05	19.70	19.95	20.05	21
20	QPSK	50	24	19.84	19.96	19.65	19.76	19.81	
20	QPSK	50	50	19.88	20.04	19.54	19.84	20.01	
20	QPSK	100	0	19.76	19.70	19.71	19.73	19.51	
20	16QAM	1	0	20.15	20.18	20.21	19.95	20.30	21
20	16QAM	1	49	20.18	20.23	20.20	20.04	20.02	
20	16QAM	1	99	20.10	20.28	20.18	20.10	20.28	
20	16QAM	50	0	18.91	18.74	19.10	19.08	19.03	20
20	16QAM	50	24	18.89	18.95	18.81	18.80	18.87	
20	16QAM	50	50	18.80	18.91	18.81	18.64	18.66	
20	16QAM	100	0	18.68	18.75	18.79	18.80	18.72	
20	64QAM	1	0	18.84	19.02	18.86	19.02	18.89	20
20	64QAM	1	49	18.76	18.87	18.73	18.76	18.59	
20	64QAM	1	99	18.82	18.90	18.83	18.80	18.99	
20	64QAM	50	0	17.68	17.88	17.59	17.63	17.57	19
20	64QAM	50	24	17.75	17.61	17.80	17.66	17.59	
20	64QAM	50	50	17.54	17.47	17.63	17.46	17.46	
20	64QAM	100	0	17.66	17.73	17.59	17.64	17.49	
20	256QAM	1	0	16.01	16.11	16.00	16.13	15.89	17
20	256QAM	1	49	15.89	15.74	16.07	15.75	15.99	
20	256QAM	1	99	15.88	15.79	15.69	15.99	15.90	
20	256QAM	50	0	15.87	15.74	16.04	15.84	15.95	17
20	256QAM	50	24	15.90	15.83	15.83	15.72	16.09	
20	256QAM	50	50	15.93	16.11	16.06	16.01	15.89	
20	256QAM	100	0	15.97	16.17	15.96	15.97	16.08	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	21.14	20.01	20.24	20.80	20.17	22
15	QPSK	1	37	20.66	20.08	20.03	20.60	20.20	
15	QPSK	1	74	20.62	20.08	20.08	20.64	20.18	
15	QPSK	36	0	20.03	19.95	19.68	19.93	19.94	21
15	QPSK	36	20	19.78	19.79	19.53	19.73	19.64	
15	QPSK	36	39	19.82	20.02	19.38	19.69	19.83	

15	QPSK	75	0	19.75	19.63	19.58	19.53	19.49	
15	16QAM	1	0	19.99	19.99	20.03	19.90	20.29	21
15	16QAM	1	37	20.03	20.12	20.19	20.02	19.83	
15	16QAM	1	74	19.99	20.25	20.05	20.05	20.14	
15	16QAM	36	0	18.84	18.74	18.97	18.99	19.02	20
15	16QAM	36	20	18.87	18.82	18.75	18.69	18.69	
15	16QAM	36	39	18.60	18.73	18.80	18.54	18.55	
15	16QAM	75	0	18.66	18.59	18.60	18.68	18.71	
15	64QAM	1	0	18.82	18.93	18.67	18.92	18.69	20
15	64QAM	1	37	18.75	18.77	18.55	18.76	18.59	
15	64QAM	1	74	18.74	18.85	18.67	18.70	18.99	
15	64QAM	36	0	17.52	17.70	17.57	17.55	17.54	19
15	64QAM	36	20	17.71	17.52	17.60	17.63	17.47	
15	64QAM	36	39	17.34	17.31	17.54	17.44	17.30	
15	64QAM	75	0	17.56	17.56	17.56	17.58	17.45	
15	256QAM	1	0	15.96	16.02	15.92	16.05	15.75	17
15	256QAM	1	37	15.80	15.69	15.95	15.64	15.80	
15	256QAM	1	74	15.86	15.63	15.61	15.96	15.88	
15	256QAM	36	0	15.86	15.74	16.02	15.78	15.77	17
15	256QAM	36	20	15.83	15.69	15.63	15.59	15.92	
15	256QAM	36	39	15.88	15.96	16.03	16.00	15.79	
15	256QAM	75	0	15.79	16.11	15.78	15.92	16.04	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	21.08	20.09	20.12	20.81	20.33	22
10	QPSK	1	25	20.71	20.03	20.03	20.55	20.10	
10	QPSK	1	49	20.68	20.05	20.08	20.56	20.17	
10	QPSK	25	0	20.06	19.96	19.61	19.94	19.95	21
10	QPSK	25	12	19.66	19.82	19.59	19.68	19.61	
10	QPSK	25	25	19.71	19.91	19.48	19.84	19.95	
10	QPSK	50	0	19.62	19.58	19.63	19.56	19.31	
10	16QAM	1	0	20.09	20.10	20.10	19.88	20.21	21
10	16QAM	1	25	20.03	20.16	20.14	19.99	19.99	
10	16QAM	1	49	20.09	20.25	19.98	20.03	20.24	
10	16QAM	25	0	18.74	18.54	19.02	18.93	18.87	20
10	16QAM	25	12	18.89	18.76	18.67	18.74	18.84	
10	16QAM	25	25	18.65	18.81	18.75	18.54	18.64	
10	16QAM	50	0	18.52	18.57	18.78	18.80	18.57	
10	64QAM	1	0	18.78	18.84	18.73	18.98	18.76	20
10	64QAM	1	25	18.58	18.75	18.65	18.68	18.58	
10	64QAM	1	49	18.80	18.80	18.83	18.72	18.91	
10	64QAM	25	0	17.48	17.72	17.39	17.59	17.49	19
10	64QAM	25	12	17.69	17.47	17.80	17.66	17.49	
10	64QAM	25	25	17.47	17.39	17.53	17.34	17.33	
10	64QAM	50	0	17.49	17.65	17.44	17.59	17.34	
10	256QAM	1	0	15.89	16.11	15.85	15.97	15.70	17
10	256QAM	1	25	15.80	15.69	15.87	15.69	15.97	
10	256QAM	1	49	15.83	15.65	15.54	15.92	15.86	
10	256QAM	25	0	15.69	15.65	16.04	15.73	15.91	17
10	256QAM	25	12	15.75	15.70	15.69	15.53	16.03	
10	256QAM	25	25	15.76	15.94	16.01	15.86	15.69	
10	256QAM	50	0	15.85	16.08	15.79	15.90	16.04	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	20.97	20.13	20.11	20.74	20.17	22
5	QPSK	1	12	20.76	20.03	20.12	20.58	20.17	

5	QPSK	1	24	20.55	20.06	20.15	20.70	20.25	
5	QPSK	12	0	19.97	19.87	19.62	19.78	19.86	21
5	QPSK	12	7	19.68	19.76	19.57	19.69	19.66	
5	QPSK	12	13	19.70	20.04	19.44	19.73	19.89	
5	QPSK	25	0	19.61	19.66	19.63	19.68	19.37	
5	16QAM	1	0	20.02	20.13	20.18	19.90	20.17	21
5	16QAM	1	12	20.18	20.12	20.00	19.93	19.96	
5	16QAM	1	24	20.08	20.14	20.06	20.04	20.11	
5	16QAM	12	0	18.75	18.69	19.00	19.02	18.98	20
5	16QAM	12	7	18.84	18.85	18.73	18.66	18.81	
5	16QAM	12	13	18.74	18.79	18.66	18.48	18.49	
5	16QAM	25	0	18.60	18.56	18.73	18.78	18.62	
5	64QAM	1	0	18.66	18.92	18.77	18.82	18.69	20
5	64QAM	1	12	18.76	18.75	18.62	18.56	18.42	
5	64QAM	1	24	18.70	18.74	18.75	18.77	18.89	
5	64QAM	12	0	17.63	17.78	17.40	17.54	17.38	19
5	64QAM	12	7	17.57	17.44	17.70	17.62	17.52	
5	64QAM	12	13	17.37	17.45	17.46	17.28	17.27	
5	64QAM	25	0	17.58	17.71	17.45	17.57	17.35	
5	256QAM	1	0	15.82	15.96	15.91	15.93	15.72	17
5	256QAM	1	12	15.87	15.62	16.05	15.67	15.86	
5	256QAM	1	24	15.74	15.73	15.51	15.97	15.72	
5	256QAM	12	0	15.85	15.63	15.88	15.67	15.78	17
5	256QAM	12	7	15.87	15.78	15.65	15.63	16.02	
5	256QAM	12	13	15.92	15.95	15.90	15.90	15.82	
5	256QAM	25	0	15.88	16.05	15.77	15.79	16.06	

<LTE Band 41_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	23.92	23.15	23.34	24.00	23.43	25
20	QPSK	1	49	23.81	23.10	23.51	23.71	23.23	
20	QPSK	1	99	23.19	23.08	23.66	23.62	23.30	
20	QPSK	50	0	23.00	22.20	22.75	23.15	22.35	24
20	QPSK	50	24	22.84	22.17	22.57	23.14	22.31	
20	QPSK	50	50	22.62	22.05	22.64	23.09	22.18	
20	QPSK	100	0	22.81	22.03	22.52	23.12	22.25	
20	16QAM	1	0	23.29	22.18	22.39	23.01	22.52	24
20	16QAM	1	49	22.86	22.15	22.54	23.06	22.34	
20	16QAM	1	99	22.23	22.10	22.69	22.91	22.16	
20	16QAM	50	0	22.05	21.03	21.47	22.18	21.39	23
20	16QAM	50	24	21.88	21.05	21.56	22.18	21.35	
20	16QAM	50	50	21.63	21.02	21.62	22.11	21.23	
20	16QAM	100	0	21.83	21.56	21.54	22.08	21.28	
20	64QAM	1	0	21.97	21.34	21.13	21.79	21.25	23
20	64QAM	1	49	21.62	21.23	21.30	21.90	21.08	
20	64QAM	1	99	21.10	21.15	21.46	21.69	21.15	
20	64QAM	50	0	20.99	20.38	20.45	21.11	20.35	22
20	64QAM	50	24	20.84	20.22	20.56	21.10	20.35	
20	64QAM	50	50	20.65	20.20	20.60	21.06	20.24	
20	64QAM	100	0	20.79	20.21	20.52	21.10	20.29	
20	256QAM	1	0	18.59	18.82	18.48	18.62	18.79	20

20	256QAM	1	49	18.26	18.36	18.01	18.21	18.38	
20	256QAM	1	99	18.86	18.96	18.48	18.69	18.83	
20	256QAM	50	0	18.65	18.73	18.41	18.65	18.86	20
20	256QAM	50	24	18.32	18.36	18.23	18.34	18.38	
20	256QAM	50	50	18.74	18.89	18.58	18.72	18.88	
20	256QAM	100	0	18.68	18.78	18.35	18.69	18.85	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.81	23.05	23.23	23.87	23.38	25
15	QPSK	1	37	23.69	23.06	23.37	23.57	23.06	
15	QPSK	1	74	23.06	23.02	23.57	23.44	23.20	
15	QPSK	36	0	22.90	22.13	22.50	22.97	22.30	24
15	QPSK	36	20	22.68	22.10	22.41	23.13	22.11	
15	QPSK	36	39	22.44	22.40	22.56	22.89	22.02	
15	QPSK	75	0	22.79	22.03	22.38	23.10	22.18	
15	16QAM	1	0	23.28	22.12	22.30	22.81	22.34	24
15	16QAM	1	37	22.70	22.14	22.48	23.00	22.32	
15	16QAM	1	74	22.19	22.21	22.55	22.84	22.31	
15	16QAM	36	0	22.04	21.20	21.47	22.00	21.23	23
15	16QAM	36	20	21.73	21.18	21.54	22.00	21.15	
15	16QAM	36	39	21.58	21.15	21.50	22.07	21.07	
15	16QAM	75	0	21.81	21.53	21.46	22.08	21.15	
15	64QAM	1	0	21.92	21.27	21.09	21.79	21.23	23
15	64QAM	1	37	21.45	21.06	21.28	21.80	21.20	
15	64QAM	1	74	21.02	21.05	21.34	21.65	21.12	
15	64QAM	36	0	20.84	20.21	20.30	21.00	20.25	22
15	64QAM	36	20	20.70	20.18	20.49	20.97	20.23	
15	64QAM	36	39	20.61	20.06	20.43	20.99	20.21	
15	64QAM	75	0	20.79	20.07	20.51	20.96	20.11	
15	256QAM	1	0	18.48	18.77	18.45	18.50	18.59	20
15	256QAM	1	37	18.14	18.21	18.30	18.10	18.20	
15	256QAM	1	74	18.86	18.76	18.36	18.58	18.68	
15	256QAM	36	0	18.60	18.55	18.24	18.45	18.77	20
15	256QAM	36	20	18.12	18.31	18.15	18.18	18.32	
15	256QAM	36	39	18.68	18.85	18.54	18.69	18.80	
15	256QAM	75	0	18.62	18.65	18.32	18.51	18.69	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	23.75	23.12	23.31	23.96	23.36	25
10	QPSK	1	25	23.65	23.09	23.41	23.71	23.10	
10	QPSK	1	49	23.15	23.10	23.52	23.62	23.14	
10	QPSK	25	0	22.81	22.00	22.42	23.04	22.17	24
10	QPSK	25	12	22.67	22.06	22.41	23.14	22.20	
10	QPSK	25	25	22.57	22.12	22.61	22.95	22.05	
10	QPSK	50	0	22.81	22.03	22.32	23.01	22.08	
10	16QAM	1	0	23.24	22.18	22.23	22.93	22.41	24
10	16QAM	1	25	22.75	22.10	22.51	22.89	22.33	
10	16QAM	1	49	22.20	22.03	22.63	22.81	22.05	
10	16QAM	25	0	22.05	22.05	21.34	22.05	21.20	23
10	16QAM	25	12	21.87	21.00	21.54	22.03	21.32	
10	16QAM	25	25	21.51	21.23	21.46	21.98	21.18	
10	16QAM	50	0	21.63	21.40	21.46	21.96	21.26	
10	64QAM	1	0	21.83	21.21	21.30	21.79	21.17	23
10	64QAM	1	25	21.48	21.21	21.28	21.72	21.03	
10	64QAM	1	49	21.30	21.09	21.38	21.59	21.11	
10	64QAM	25	0	20.94	20.30	20.43	21.09	20.30	22

10	64QAM	25	12	20.77	20.18	20.41	21.05	20.16	
10	64QAM	25	25	20.64	20.04	20.57	20.88	20.13	
10	64QAM	50	0	20.62	20.04	20.51	21.07	20.11	
10	256QAM	1	0	18.44	18.67	18.42	18.61	18.61	20
10	256QAM	1	25	18.17	18.26	18.30	18.21	18.25	
10	256QAM	1	49	18.82	18.90	18.34	18.50	18.66	
10	256QAM	25	0	18.55	18.70	18.25	18.48	18.86	20
10	256QAM	25	12	18.22	18.29	18.21	18.22	18.36	
10	256QAM	25	25	18.57	18.71	18.57	18.59	18.73	
10	256QAM	50	0	18.68	18.72	18.21	18.50	18.81	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	23.77	23.14	23.26	23.97	23.35	25
5	QPSK	1	12	23.70	23.08	23.51	23.71	23.14	
5	QPSK	1	24	23.16	23.14	23.63	23.42	23.14	
5	QPSK	12	0	22.82	22.03	22.46	23.06	22.28	24
5	QPSK	12	7	22.74	22.02	22.55	23.11	22.23	
5	QPSK	12	13	22.62	22.15	22.59	22.90	22.10	
5	QPSK	25	0	22.68	22.23	22.41	23.00	22.11	
5	16QAM	1	0	23.11	22.00	22.28	22.98	22.50	24
5	16QAM	1	12	22.80	22.11	22.34	23.06	22.18	
5	16QAM	1	24	22.14	22.14	22.65	22.73	22.01	
5	16QAM	12	0	21.96	21.20	21.41	22.17	21.27	23
5	16QAM	12	7	21.87	21.22	21.50	22.01	21.28	
5	16QAM	12	13	21.49	21.02	21.48	22.04	21.09	
5	16QAM	25	0	21.76	21.43	21.41	22.06	21.18	
5	64QAM	1	0	21.87	21.26	21.06	21.62	21.19	23
5	64QAM	1	12	21.53	21.17	21.25	21.70	21.02	
5	64QAM	1	24	21.20	21.20	21.42	21.62	21.01	
5	64QAM	12	0	20.93	20.23	20.39	20.97	20.26	22
5	64QAM	12	7	20.77	20.08	20.53	21.06	20.18	
5	64QAM	12	13	20.52	20.04	20.49	21.05	20.23	
5	64QAM	25	0	20.62	20.09	20.41	21.02	20.14	
5	256QAM	1	0	18.48	18.63	18.39	18.47	18.60	20
5	256QAM	1	12	18.22	18.21	18.20	18.12	18.33	
5	256QAM	1	24	18.80	18.94	18.43	18.57	18.70	
5	256QAM	12	0	18.49	18.71	18.38	18.65	18.78	20
5	256QAM	12	7	18.31	18.31	18.09	18.22	18.36	
5	256QAM	12	13	18.70	18.81	18.55	18.68	18.84	
5	256QAM	25	0	18.55	18.68	18.27	18.68	18.84	

<LTE Band 48>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	56150	56640	
Frequency (MHz)				3560	3609	3641	3690	
20	QPSK	1	0	19.19	19.32	19.51	19.53	21
20	QPSK	1	49	19.18	19.28	19.49	19.35	
20	QPSK	1	99	19.07	19.15	19.36	19.20	
20	QPSK	50	0	18.23	18.39	18.63	18.66	20
20	QPSK	50	24	18.20	18.32	18.61	18.65	
20	QPSK	50	50	18.19	18.33	18.55	18.24	
20	QPSK	100	0	18.22	18.30	18.57	18.65	
20	16QAM	1	0	18.19	18.33	18.52	18.55	20

20	16QAM	1	49	18.27	18.30	18.50	18.33	
20	16QAM	1	99	18.18	18.17	18.37	18.23	
20	16QAM	50	0	17.25	17.34	17.62	17.55	19
20	16QAM	50	24	17.21	17.36	17.63	17.41	
20	16QAM	50	50	17.19	17.34	17.55	17.18	
20	16QAM	100	0	17.20	17.30	17.57	17.35	
20	64QAM	1	0	17.15	17.11	17.33	17.36	19
20	64QAM	1	49	17.20	17.09	17.32	17.15	
20	64QAM	1	99	17.18	17.12	17.20	17.23	
20	64QAM	50	0	16.21	16.35	16.56	16.51	18
20	64QAM	50	24	16.17	16.33	16.59	16.37	
20	64QAM	50	50	16.16	16.28	16.51	16.18	
20	64QAM	100	0	16.18	16.30	16.58	16.30	
20	256QAM	1	0	14.32	14.37	14.69	14.56	16
20	256QAM	1	49	14.30	14.43	14.79	14.47	
20	256QAM	1	99	14.27	14.42	14.66	14.29	
20	256QAM	50	0	14.22	14.48	14.66	14.33	16
20	256QAM	50	24	14.22	14.38	14.76	14.71	
20	256QAM	50	50	14.35	14.40	14.72	14.48	
20	256QAM	100	0	14.33	14.33	14.56	14.21	
Channel				55315	55820	56160	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3642	3692.5	
15	QPSK	1	0	19.04	19.23	19.38	19.35	21
15	QPSK	1	37	19.07	19.23	19.48	19.34	
15	QPSK	1	74	19.06	19.12	19.25	19.09	
15	QPSK	36	0	18.13	18.22	18.55	18.36	20
15	QPSK	36	20	18.10	18.12	18.49	18.50	
15	QPSK	36	39	18.03	18.26	18.44	18.05	
15	QPSK	75	0	18.05	18.29	18.44	18.28	
15	16QAM	1	0	18.00	18.16	18.47	18.44	20
15	16QAM	1	37	18.24	18.22	18.50	18.30	
15	16QAM	1	74	18.04	18.15	18.26	18.08	
15	16QAM	36	0	17.24	17.20	17.44	17.37	19
15	16QAM	36	20	17.19	17.24	17.51	17.30	
15	16QAM	36	39	17.04	17.34	17.42	17.11	
15	16QAM	75	0	17.12	17.22	17.45	17.19	
15	64QAM	1	0	17.13	17.03	17.33	17.18	19
15	64QAM	1	37	17.16	17.20	17.12	17.12	
15	64QAM	1	74	17.00	17.18	17.12	17.16	
15	64QAM	36	0	16.16	16.34	16.50	16.41	18
15	64QAM	36	20	16.13	16.22	16.42	16.30	
15	64QAM	36	39	16.13	16.28	16.43	16.03	
15	64QAM	75	0	16.11	16.13	16.57	16.17	
15	256QAM	1	0	14.27	14.29	14.66	14.40	16
15	256QAM	1	37	14.29	14.29	14.68	14.37	
15	256QAM	1	74	14.20	14.27	14.48	14.14	
15	256QAM	36	0	14.18	14.35	14.50	14.32	16
15	256QAM	36	20	14.02	14.31	14.66	14.69	
15	256QAM	36	39	14.27	14.28	14.60	14.47	
15	256QAM	75	0	14.15	14.23	14.44	14.06	
Channel				55290	55815	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3642.5	3695	
10	QPSK	1	0	19.01	19.24	19.45	19.36	21
10	QPSK	1	25	19.05	19.25	19.36	19.26	
10	QPSK	1	49	19.03	19.03	19.21	19.13	
10	QPSK	25	0	18.20	18.30	18.51	18.36	20

10	QPSK	25	12	18.04	18.15	18.48	18.63	
10	QPSK	25	25	18.15	18.26	18.38	18.14	
10	QPSK	50	0	18.04	18.17	18.51	18.29	
10	16QAM	1	0	18.15	18.33	18.47	18.54	20
10	16QAM	1	25	18.08	18.30	18.36	18.17	
10	16QAM	1	49	18.05	18.13	18.36	18.04	
10	16QAM	25	0	17.19	17.26	17.51	17.44	19
10	16QAM	25	12	17.21	17.32	17.62	17.35	
10	16QAM	25	25	17.07	17.18	17.39	17.12	
10	16QAM	50	0	17.13	17.20	17.50	17.32	
10	64QAM	1	0	17.18	17.10	17.18	17.33	19
10	64QAM	1	25	17.04	17.05	17.18	17.20	
10	64QAM	1	49	17.12	17.07	17.15	17.04	
10	64QAM	25	0	16.18	16.29	16.36	16.49	18
10	64QAM	25	12	16.12	16.21	16.51	16.26	
10	64QAM	25	25	16.12	16.20	16.32	16.13	
10	64QAM	50	0	16.16	16.30	16.39	16.22	
10	256QAM	1	0	14.29	14.29	14.68	14.36	16
10	256QAM	1	25	14.20	14.39	14.62	14.43	
10	256QAM	1	49	14.24	14.32	14.56	14.29	
10	256QAM	25	0	14.11	14.30	14.53	14.16	16
10	256QAM	25	12	14.22	14.26	14.69	14.66	
10	256QAM	25	25	14.34	14.29	14.55	14.48	
10	256QAM	50	0	14.20	14.24	14.47	14.06	
Channel				55265	55810	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3643	3697.5	
5	QPSK	1	0	19.00	19.13	19.28	19.46	21
5	QPSK	1	12	19.10	19.20	19.48	19.30	
5	QPSK	1	24	19.07	19.03	19.21	19.14	
5	QPSK	12	0	18.16	18.26	18.50	18.56	20
5	QPSK	12	7	18.06	18.17	18.56	18.45	
5	QPSK	12	13	18.16	18.24	18.37	18.08	
5	QPSK	25	0	18.16	18.13	18.39	18.33	
5	16QAM	1	0	18.15	18.17	18.32	18.41	20
5	16QAM	1	12	18.15	18.22	18.48	18.32	
5	16QAM	1	24	18.11	18.20	18.19	18.12	
5	16QAM	12	0	17.06	17.23	17.56	17.51	19
5	16QAM	12	7	17.17	17.19	17.58	17.29	
5	16QAM	12	13	17.12	17.19	17.46	17.07	
5	16QAM	25	0	17.04	17.24	17.41	17.21	
5	64QAM	1	0	17.00	17.04	17.21	17.17	19
5	64QAM	1	12	17.17	17.05	17.32	17.15	
5	64QAM	1	24	17.03	17.11	17.05	17.16	
5	64QAM	12	0	16.17	16.35	16.51	16.49	18
5	64QAM	12	7	16.07	16.13	16.42	16.22	
5	64QAM	12	13	16.01	16.13	16.50	16.15	
5	64QAM	25	0	16.15	16.14	16.57	16.24	
5	256QAM	1	0	14.30	14.29	14.66	14.56	16
5	256QAM	1	12	14.29	14.41	14.60	14.42	
5	256QAM	1	24	14.23	14.32	14.53	14.23	
5	256QAM	12	0	14.20	14.29	14.56	14.13	16
5	256QAM	12	7	14.15	14.31	14.62	14.54	
5	256QAM	12	13	14.18	14.33	14.64	14.28	
5	256QAM	25	0	14.24	14.15	14.48	14.20	

Default Power Mode (MIMO)

<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	22.57	22.40	22.39	24
20	QPSK	1	49	22.56	22.48	22.50	
20	QPSK	1	99	22.45	22.42	22.48	
20	QPSK	50	0	21.66	21.54	21.51	23
20	QPSK	50	24	21.63	21.46	21.59	
20	QPSK	50	50	21.46	21.46	21.59	
20	QPSK	100	0	21.48	21.44	21.57	
20	16QAM	1	0	21.52	21.47	21.49	23
20	16QAM	1	49	21.59	21.56	21.61	
20	16QAM	1	99	21.49	21.45	21.61	
20	16QAM	50	0	20.58	20.55	20.56	22
20	16QAM	50	24	20.63	20.48	20.60	
20	16QAM	50	50	20.53	20.47	20.61	
20	16QAM	100	0	20.52	20.47	20.59	
20	64QAM	1	0	20.31	20.23	20.22	22
20	64QAM	1	49	20.36	20.31	20.29	
20	64QAM	1	99	20.24	20.18	20.29	
20	64QAM	50	0	19.59	19.53	19.49	21
20	64QAM	50	24	19.59	19.47	19.56	
20	64QAM	50	50	19.53	19.50	19.54	
20	64QAM	100	0	19.50	19.53	19.52	
20	256QAM	1	0	17.63	17.65	17.65	19
20	256QAM	1	49	17.57	17.65	17.70	
20	256QAM	1	99	17.69	17.61	17.54	
20	256QAM	50	0	17.71	17.91	17.84	19
20	256QAM	50	24	17.75	17.80	17.90	
20	256QAM	50	50	17.66	17.73	17.71	
20	256QAM	100	0	17.69	17.72	17.72	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	22.45	22.38	22.33	24
15	QPSK	1	37	22.38	22.34	22.35	
15	QPSK	1	74	22.40	22.31	22.36	
15	QPSK	36	0	21.49	21.43	21.37	23
15	QPSK	36	20	21.56	21.35	21.54	
15	QPSK	36	39	21.43	21.40	21.53	
15	QPSK	75	0	21.43	21.37	21.56	
15	16QAM	1	0	21.45	21.32	21.46	23
15	16QAM	1	37	21.52	21.52	21.56	
15	16QAM	1	74	21.41	21.43	21.43	
15	16QAM	36	0	20.52	20.53	20.50	22
15	16QAM	36	20	20.43	20.44	20.50	
15	16QAM	36	39	20.41	20.33	20.58	
15	16QAM	75	0	20.52	20.45	20.49	
15	64QAM	1	0	20.21	20.13	20.07	22
15	64QAM	1	37	20.28	20.31	20.29	
15	64QAM	1	74	20.17	20.04	20.16	
15	64QAM	36	0	19.47	19.45	19.36	21
15	64QAM	36	20	19.53	19.40	19.47	
15	64QAM	36	39	19.48	19.34	19.43	

15	64QAM	75	0	19.35	19.49	19.39	
15	256QAM	1	0	17.53	17.48	17.63	19
15	256QAM	1	37	17.40	17.56	17.70	
15	256QAM	1	74	17.67	17.43	17.49	
15	256QAM	36	0	17.63	17.88	17.78	19
15	256QAM	36	20	17.61	17.67	17.85	
15	256QAM	36	39	17.53	17.63	17.70	
15	256QAM	75	0	17.52	17.58	17.54	
Channel				37800	38000	38200	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	22.38	22.34	22.25	24
10	QPSK	1	25	22.44	22.46	22.34	
10	QPSK	1	49	22.35	22.27	22.45	
10	QPSK	25	0	21.63	21.54	21.43	23
10	QPSK	25	12	21.45	21.43	21.51	
10	QPSK	25	25	21.33	21.41	21.46	
10	QPSK	50	0	21.36	21.41	21.56	
10	16QAM	1	0	21.45	21.41	21.34	23
10	16QAM	1	25	21.45	21.51	21.56	
10	16QAM	1	49	21.47	21.37	21.49	
10	16QAM	25	0	20.56	20.39	20.36	22
10	16QAM	25	12	20.44	20.41	20.41	
10	16QAM	25	25	20.37	20.44	20.51	
10	16QAM	50	0	20.35	20.35	20.44	
10	64QAM	1	0	20.18	20.05	20.13	22
10	64QAM	1	25	20.28	20.28	20.23	
10	64QAM	1	49	20.13	20.17	20.25	
10	64QAM	25	0	19.43	19.47	19.31	21
10	64QAM	25	12	19.40	19.42	19.42	
10	64QAM	25	25	19.47	19.46	19.36	
10	64QAM	50	0	19.39	19.45	19.35	
10	256QAM	1	0	17.45	17.50	17.62	19
10	256QAM	1	25	17.38	17.65	17.63	
10	256QAM	1	49	17.62	17.57	17.52	
10	256QAM	25	0	17.53	17.76	17.65	19
10	256QAM	25	12	17.65	17.72	17.81	
10	256QAM	25	25	17.63	17.60	17.52	
10	256QAM	50	0	17.50	17.70	17.65	
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	22.44	22.24	22.36	24
5	QPSK	1	12	22.54	22.43	22.31	
5	QPSK	1	24	22.35	22.38	22.40	
5	QPSK	12	0	21.62	21.52	21.43	23
5	QPSK	12	7	21.49	21.44	21.58	
5	QPSK	12	13	21.31	21.42	21.42	
5	QPSK	25	0	21.48	21.42	21.41	
5	16QAM	1	0	21.37	21.31	21.46	23
5	16QAM	1	12	21.55	21.39	21.49	
5	16QAM	1	24	21.29	21.44	21.52	
5	16QAM	12	0	20.55	20.51	20.56	22
5	16QAM	12	7	20.57	20.44	20.42	
5	16QAM	12	13	20.46	20.47	20.45	
5	16QAM	25	0	20.32	20.47	20.43	
5	64QAM	1	0	20.20	20.12	20.16	22
5	64QAM	1	12	20.26	20.11	20.29	

5	64QAM	1	24	20.16	20.10	20.16	
5	64QAM	12	0	19.49	19.38	19.44	21
5	64QAM	12	7	19.55	19.38	19.42	
5	64QAM	12	13	19.53	19.40	19.48	
5	64QAM	25	0	19.46	19.46	19.39	
5	256QAM	1	0	17.60	17.53	17.55	19
5	256QAM	1	12	17.54	17.48	17.67	
5	256QAM	1	24	17.62	17.53	17.42	
5	256QAM	12	0	17.54	17.80	17.80	19
5	256QAM	12	7	17.59	17.72	17.87	
5	256QAM	12	13	17.52	17.63	17.55	
5	256QAM	25	0	17.69	17.69	17.61	

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	22.74	22.59	22.78	22.54	22.44	24
20	QPSK	1	49	22.67	22.51	22.54	22.53	22.37	
20	QPSK	1	99	22.48	22.54	22.53	22.44	22.25	
20	QPSK	50	0	21.74	21.68	21.77	21.59	21.48	23
20	QPSK	50	24	21.71	21.63	21.61	21.56	21.45	
20	QPSK	50	50	21.69	21.58	21.57	21.44	21.38	
20	QPSK	100	0	21.65	21.58	21.66	21.52	21.44	
20	16QAM	1	0	21.73	21.57	21.63	21.62	21.51	23
20	16QAM	1	49	21.75	21.62	21.72	21.57	21.50	
20	16QAM	1	99	21.55	21.57	21.62	21.45	21.35	
20	16QAM	50	0	20.71	20.59	20.68	20.59	20.49	22
20	16QAM	50	24	20.78	20.64	20.71	20.57	20.48	
20	16QAM	50	50	20.64	20.59	20.70	20.43	20.53	
20	16QAM	100	0	20.66	20.61	20.70	20.50	20.42	
20	64QAM	1	0	20.44	20.31	20.38	20.36	20.24	22
20	64QAM	1	49	20.48	20.35	20.48	20.32	20.25	
20	64QAM	1	99	20.25	20.30	20.36	20.20	20.16	
20	64QAM	50	0	19.73	19.58	19.66	19.60	19.49	21
20	64QAM	50	24	19.71	19.57	19.66	19.58	19.53	
20	64QAM	50	50	19.68	19.56	19.69	19.46	19.47	
20	64QAM	100	0	19.65	19.57	19.67	19.49	19.46	
20	256QAM	1	0	17.43	17.33	17.94	17.36	17.34	19
20	256QAM	1	49	17.37	17.25	17.90	17.31	17.33	
20	256QAM	1	99	17.29	17.16	17.87	17.28	17.24	
20	256QAM	50	0	18.75	18.60	18.26	18.59	18.53	19
20	256QAM	50	24	18.75	18.52	18.23	18.49	18.50	
20	256QAM	50	50	18.66	18.44	18.16	18.46	18.42	
20	256QAM	100	0	18.63	18.34	18.09	18.42	18.38	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	22.70	22.58	22.64	22.54	22.40	24
15	QPSK	1	37	22.57	22.43	22.46	22.43	22.42	
15	QPSK	1	74	22.38	22.51	22.50	22.44	22.24	
15	QPSK	36	0	21.73	21.51	21.66	21.50	21.42	23
15	QPSK	36	20	21.68	21.57	21.68	21.53	21.44	
15	QPSK	36	39	21.67	21.53	21.66	21.41	21.43	

15	QPSK	75	0	21.61	21.55	21.61	21.46	21.38	
15	16QAM	1	0	21.71	21.50	21.55	21.57	21.47	23
15	16QAM	1	37	21.75	21.56	21.70	21.51	21.45	
15	16QAM	1	74	21.54	21.49	21.56	21.40	21.29	
15	16QAM	36	0	20.67	20.58	20.62	20.49	20.48	22
15	16QAM	36	20	20.68	20.58	20.71	20.55	20.41	
15	16QAM	36	39	20.62	20.58	20.61	20.41	20.49	
15	16QAM	75	0	20.57	20.61	20.64	20.50	20.41	
15	64QAM	1	0	20.43	20.25	20.32	20.32	20.24	22
15	64QAM	1	37	20.39	20.29	20.41	20.29	20.17	
15	64QAM	1	74	20.17	20.28	20.33	20.15	20.07	
15	64QAM	36	0	19.65	19.56	19.56	19.58	19.47	21
15	64QAM	36	20	19.64	19.56	19.65	19.52	19.51	
15	64QAM	36	39	19.61	19.53	19.64	19.46	19.37	
15	64QAM	75	0	19.62	19.50	19.64	19.41	19.40	
15	256QAM	1	0	17.39	17.25	17.84	17.33	17.24	19
15	256QAM	1	37	17.35	17.16	17.86	17.30	17.33	
15	256QAM	1	74	17.23	17.16	17.83	17.26	17.20	
15	256QAM	36	0	18.75	18.54	18.23	18.55	18.43	19
15	256QAM	36	20	18.72	18.52	18.16	18.43	18.45	
15	256QAM	36	39	18.58	18.34	18.13	18.36	18.41	
15	256QAM	75	0	18.59	18.27	18.00	18.32	18.38	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	22.71	22.51	22.62	22.53	22.44	24
10	QPSK	1	25	22.61	22.47	22.52	22.50	22.45	
10	QPSK	1	49	22.40	22.48	22.48	22.43	22.20	
10	QPSK	25	0	21.71	21.58	21.57	21.54	21.44	23
10	QPSK	25	12	21.70	21.61	21.67	21.46	21.39	
10	QPSK	25	25	21.60	21.49	21.63	21.35	21.46	
10	QPSK	50	0	21.61	21.51	21.59	21.43	21.42	
10	16QAM	1	0	21.71	21.51	21.55	21.61	21.45	23
10	16QAM	1	25	21.70	21.56	21.66	21.51	21.44	
10	16QAM	1	49	21.50	21.55	21.52	21.41	21.27	
10	16QAM	25	0	20.62	20.58	20.59	20.52	20.42	22
10	16QAM	25	12	20.72	20.64	20.66	20.56	20.41	
10	16QAM	25	25	20.60	20.52	20.65	20.34	20.47	
10	16QAM	50	0	20.59	20.51	20.60	20.48	20.32	
10	64QAM	1	0	20.36	20.25	20.38	20.29	20.23	22
10	64QAM	1	25	20.45	20.33	20.39	20.26	20.21	
10	64QAM	1	49	20.15	20.28	20.33	20.15	20.10	
10	64QAM	25	0	19.73	19.53	19.66	19.53	19.48	21
10	64QAM	25	12	19.68	19.52	19.58	19.53	19.44	
10	64QAM	25	25	19.59	19.55	19.65	19.43	19.37	
10	64QAM	50	0	19.58	19.51	19.58	19.42	19.36	
10	256QAM	1	0	17.40	17.32	17.92	17.31	17.32	19
10	256QAM	1	25	17.29	17.15	17.87	17.26	17.29	
10	256QAM	1	49	17.28	17.11	17.81	17.28	17.22	
10	256QAM	25	0	18.75	18.54	18.26	18.56	18.50	19
10	256QAM	25	12	18.75	18.49	18.20	18.43	18.49	
10	256QAM	25	25	18.62	18.39	18.11	18.44	18.32	
10	256QAM	50	0	18.55	18.24	18.03	18.39	18.37	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	22.65	22.50	22.60	22.50	22.36	24
5	QPSK	1	12	22.63	22.47	22.47	22.53	22.43	

5	QPSK	1	24	22.38	22.49	22.45	22.38	22.17	
5	QPSK	12	0	21.73	21.48	21.62	21.52	21.45	23
5	QPSK	12	7	21.68	21.61	21.68	21.49	21.36	
5	QPSK	12	13	21.65	21.48	21.59	21.35	21.45	
5	QPSK	25	0	21.65	21.57	21.60	21.46	21.36	
5	16QAM	1	0	21.63	21.47	21.62	21.53	21.42	23
5	16QAM	1	12	21.70	21.59	21.64	21.57	21.44	
5	16QAM	1	24	21.47	21.54	21.62	21.40	21.26	
5	16QAM	12	0	20.69	20.55	20.65	20.49	20.49	22
5	16QAM	12	7	20.78	20.55	20.61	20.57	20.47	
5	16QAM	12	13	20.56	20.59	20.63	20.41	20.47	
5	16QAM	25	0	20.64	20.57	20.63	20.43	20.33	
5	64QAM	1	0	20.37	20.27	20.28	20.34	20.19	22
5	64QAM	1	12	20.45	20.30	20.39	20.24	20.21	
5	64QAM	1	24	20.17	20.20	20.28	20.12	20.15	
5	64QAM	12	0	19.66	19.51	19.62	19.50	19.48	21
5	64QAM	12	7	19.71	19.47	19.65	19.54	19.45	
5	64QAM	12	13	19.65	19.47	19.63	19.39	19.41	
5	64QAM	25	0	19.56	19.47	19.66	19.48	19.42	
5	256QAM	1	0	17.43	17.26	17.94	17.33	17.32	19
5	256QAM	1	12	17.33	17.17	17.81	17.30	17.28	
5	256QAM	1	24	17.21	17.11	17.87	17.23	17.19	
5	256QAM	12	0	18.65	18.52	18.25	18.51	18.49	19
5	256QAM	12	7	18.70	18.44	18.17	18.48	18.42	
5	256QAM	12	13	18.56	18.36	18.08	18.37	18.35	
5	256QAM	25	0	18.61	18.30	18.07	18.40	18.31	

<LTE Band 41_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	25.62	25.48	25.63	25.49	25.35	27
20	QPSK	1	49	25.58	25.41	25.50	25.48	25.37	
20	QPSK	1	99	25.32	25.47	25.46	25.41	25.11	
20	QPSK	50	0	24.73	24.61	24.69	24.59	24.44	26
20	QPSK	50	24	24.72	24.62	24.69	24.60	24.53	
20	QPSK	50	50	24.68	24.63	24.74	24.49	24.49	
20	QPSK	100	0	24.71	24.63	24.69	24.55	24.47	
20	16QAM	1	0	24.84	24.63	24.80	24.75	24.65	26
20	16QAM	1	49	24.88	24.70	24.89	24.71	24.64	
20	16QAM	1	99	24.58	24.71	24.73	24.63	24.36	
20	16QAM	50	0	23.77	23.63	23.72	23.64	23.51	25
20	16QAM	50	24	23.78	23.61	23.72	23.60	23.54	
20	16QAM	50	50	23.72	23.62	23.72	23.57	23.53	
20	16QAM	100	0	23.71	23.61	23.67	23.54	23.47	
20	64QAM	1	0	23.74	23.58	23.62	23.61	23.52	25
20	64QAM	1	49	23.78	23.59	23.77	23.59	23.50	
20	64QAM	1	99	23.51	23.58	23.56	23.51	23.30	
20	64QAM	50	0	22.74	22.63	22.70	22.59	22.49	24
20	64QAM	50	24	22.76	22.59	22.72	22.57	22.46	
20	64QAM	50	50	22.64	22.59	22.73	22.49	22.50	
20	64QAM	100	0	22.67	22.65	22.69	22.50	22.43	
20	256QAM	1	0	21.74	21.60	21.13	21.61	21.58	22

20	256QAM	1	49	21.65	21.52	21.06	21.52	21.51	
20	256QAM	1	99	21.60	21.49	20.97	21.49	21.44	
20	256QAM	50	0	21.73	21.64	21.24	21.62	21.65	22
20	256QAM	50	24	21.73	21.56	21.19	21.61	21.63	
20	256QAM	50	50	21.72	21.52	21.10	21.51	21.63	
20	256QAM	100	0	21.67	21.51	21.00	21.44	21.57	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	25.54	25.44	25.54	25.43	25.26	27
15	QPSK	1	37	25.50	25.32	25.46	25.40	25.36	
15	QPSK	1	74	25.31	25.42	25.41	25.34	25.05	
15	QPSK	36	0	24.64	24.61	24.66	24.50	24.37	26
15	QPSK	36	20	24.67	24.57	24.65	24.54	24.48	
15	QPSK	36	39	24.58	24.56	24.65	24.47	24.46	
15	QPSK	75	0	24.62	24.54	24.60	24.45	24.38	
15	16QAM	1	0	24.80	24.59	24.76	24.71	24.62	26
15	16QAM	1	37	24.87	24.69	24.85	24.71	24.61	
15	16QAM	1	74	24.51	24.65	24.73	24.56	24.32	
15	16QAM	36	0	23.75	23.60	23.63	23.60	23.44	25
15	16QAM	36	20	23.78	23.58	23.67	23.60	23.54	
15	16QAM	36	39	23.69	23.60	23.65	23.53	23.49	
15	16QAM	75	0	23.71	23.57	23.63	23.49	23.42	
15	64QAM	1	0	23.64	23.50	23.58	23.59	23.42	25
15	64QAM	1	37	23.78	23.49	23.71	23.59	23.49	
15	64QAM	1	74	23.41	23.54	23.53	23.50	23.24	
15	64QAM	36	0	22.65	22.53	22.68	22.59	22.47	24
15	64QAM	36	20	22.69	22.53	22.72	22.49	22.36	
15	64QAM	36	39	22.59	22.52	22.72	22.44	22.46	
15	64QAM	75	0	22.62	22.65	22.68	22.46	22.38	
15	256QAM	1	0	21.71	21.57	21.13	21.59	21.51	22
15	256QAM	1	37	21.55	21.44	20.96	21.43	21.42	
15	256QAM	1	74	21.57	21.49	20.94	21.44	21.39	
15	256QAM	36	0	21.68	21.57	21.15	21.60	21.63	22
15	256QAM	36	20	21.69	21.48	21.15	21.61	21.54	
15	256QAM	36	39	21.67	21.47	21.00	21.51	21.61	
15	256QAM	75	0	21.62	21.44	20.95	21.38	21.50	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	25.57	25.41	25.58	25.40	25.35	27
10	QPSK	1	25	25.55	25.36	25.48	25.43	25.36	
10	QPSK	1	49	25.22	25.39	25.46	25.40	25.01	
10	QPSK	25	0	24.68	24.59	24.62	24.58	24.43	26
10	QPSK	25	12	24.71	24.54	24.64	24.58	24.48	
10	QPSK	25	25	24.62	24.55	24.68	24.42	24.47	
10	QPSK	50	0	24.66	24.54	24.67	24.47	24.47	
10	16QAM	1	0	24.84	24.60	24.71	24.72	24.60	26
10	16QAM	1	25	24.86	24.68	24.84	24.63	24.58	
10	16QAM	1	49	24.51	24.61	24.71	24.61	24.28	
10	16QAM	25	0	23.70	23.57	23.72	23.61	23.44	25
10	16QAM	25	12	23.75	23.57	23.71	23.60	23.45	
10	16QAM	25	25	23.68	23.55	23.66	23.55	23.51	
10	16QAM	50	0	23.68	23.51	23.66	23.53	23.46	
10	64QAM	1	0	23.64	23.50	23.56	23.51	23.46	25
10	64QAM	1	25	23.78	23.58	23.72	23.58	23.50	
10	64QAM	1	49	23.47	23.55	23.49	23.50	23.21	
10	64QAM	25	0	22.74	22.56	22.63	22.51	22.47	24

10	64QAM	25	12	22.71	22.52	22.66	22.51	22.36	
10	64QAM	25	25	22.63	22.58	22.63	22.41	22.42	
10	64QAM	50	0	22.62	22.59	22.67	22.40	22.41	
10	256QAM	1	0	21.70	21.52	21.13	21.57	21.53	22
10	256QAM	1	25	21.63	21.49	20.98	21.50	21.51	
10	256QAM	1	49	21.52	21.44	20.96	21.47	21.39	
10	256QAM	25	0	21.66	21.55	21.20	21.59	21.56	22
10	256QAM	25	12	21.68	21.56	21.18	21.58	21.61	
10	256QAM	25	25	21.66	21.50	21.03	21.43	21.58	
10	256QAM	50	0	21.66	21.46	20.99	21.42	21.53	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	25.53	25.41	25.53	25.47	25.35	27
5	QPSK	1	12	25.49	25.36	25.49	25.47	25.29	
5	QPSK	1	24	25.24	25.40	25.42	25.33	25.02	
5	QPSK	12	0	24.71	24.56	24.64	24.54	24.42	26
5	QPSK	12	7	24.65	24.58	24.59	24.60	24.44	
5	QPSK	12	13	24.68	24.54	24.74	24.47	24.49	
5	QPSK	25	0	24.62	24.54	24.66	24.50	24.47	
5	16QAM	1	0	24.82	24.62	24.72	24.69	24.55	26
5	16QAM	1	12	24.82	24.70	24.88	24.63	24.61	
5	16QAM	1	24	24.55	24.71	24.65	24.57	24.33	
5	16QAM	12	0	23.75	23.56	23.62	23.55	23.51	25
5	16QAM	12	7	23.72	23.52	23.64	23.60	23.49	
5	16QAM	12	13	23.68	23.56	23.72	23.50	23.49	
5	16QAM	25	0	23.69	23.51	23.59	23.46	23.41	
5	64QAM	1	0	23.69	23.51	23.52	23.52	23.45	25
5	64QAM	1	12	23.72	23.51	23.77	23.54	23.46	
5	64QAM	1	24	23.45	23.51	23.54	23.49	23.30	
5	64QAM	12	0	22.68	22.57	22.68	22.56	22.39	24
5	64QAM	12	7	22.72	22.58	22.66	22.52	22.46	
5	64QAM	12	13	22.57	22.49	22.70	22.45	22.44	
5	64QAM	25	0	22.61	22.60	22.63	22.44	22.34	
5	256QAM	1	0	21.65	21.56	21.10	21.54	21.56	22
5	256QAM	1	12	21.55	21.48	20.97	21.46	21.47	
5	256QAM	1	24	21.52	21.45	20.93	21.48	21.44	
5	256QAM	12	0	21.66	21.62	21.23	21.56	21.59	22
5	256QAM	12	7	21.70	21.46	21.19	21.53	21.60	
5	256QAM	12	13	21.62	21.48	21.03	21.47	21.60	
5	256QAM	25	0	21.67	21.43	20.97	21.34	21.51	

<LTE Band 48>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	56150	56640	
Frequency (MHz)				3560	3609	3641	3690	
20	QPSK	1	0	20.69	20.84	20.87	20.78	22
20	QPSK	1	49	20.65	20.81	20.72	20.65	
20	QPSK	1	99	20.53	20.63	20.56	20.34	
20	QPSK	50	0	19.77	19.84	19.88	19.79	21
20	QPSK	50	24	19.72	19.81	19.79	19.67	
20	QPSK	50	50	19.63	19.82	19.68	19.60	
20	QPSK	100	0	19.68	19.82	19.85	19.66	
20	16QAM	1	0	19.72	19.81	19.92	19.83	21

20	16QAM	1	49	19.72	19.91	19.78	19.72	
20	16QAM	1	99	19.58	19.70	19.64	19.43	
20	16QAM	50	0	18.71	18.88	18.82	18.78	20
20	16QAM	50	24	18.69	18.87	18.79	18.69	
20	16QAM	50	50	18.65	18.84	18.69	18.64	
20	16QAM	100	0	18.67	18.80	18.73	18.65	
20	64QAM	1	0	18.50	18.52	18.63	18.60	20
20	64QAM	1	49	18.46	18.65	18.52	18.46	
20	64QAM	1	99	18.31	18.43	18.31	18.15	
20	64QAM	50	0	17.64	17.84	17.85	17.76	19
20	64QAM	50	24	17.66	17.83	17.73	17.67	
20	64QAM	50	50	17.53	17.81	17.63	17.57	
20	64QAM	100	0	17.64	17.77	17.73	17.63	
20	256QAM	1	0	15.51	15.52	15.87	15.60	17
20	256QAM	1	49	15.42	15.49	15.86	15.55	
20	256QAM	1	99	15.34	15.47	15.76	15.50	
20	256QAM	50	0	16.65	16.66	16.08	16.77	17
20	256QAM	50	24	16.57	16.59	15.98	16.73	
20	256QAM	50	50	16.51	16.51	15.96	16.69	
20	256QAM	100	0	16.46	16.42	15.87	16.64	
Channel				55315	55820	56160	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3642	3692.5	
15	QPSK	1	0	20.59	20.65	20.86	20.69	22
15	QPSK	1	37	20.55	20.73	20.68	20.58	
15	QPSK	1	74	20.49	20.61	20.48	20.29	
15	QPSK	36	0	19.77	19.79	19.79	19.79	21
15	QPSK	36	20	19.67	19.79	19.73	19.66	
15	QPSK	36	39	19.56	19.72	19.59	19.54	
15	QPSK	75	0	19.63	19.78	19.70	19.59	
15	16QAM	1	0	19.66	19.79	19.84	19.83	21
15	16QAM	1	37	19.70	19.84	19.78	19.71	
15	16QAM	1	74	19.50	19.68	19.58	19.39	
15	16QAM	36	0	18.68	18.82	18.79	18.75	20
15	16QAM	36	20	18.65	18.85	18.69	18.60	
15	16QAM	36	39	18.63	18.80	18.59	18.61	
15	16QAM	75	0	18.59	18.73	18.69	18.60	
15	64QAM	1	0	18.46	18.47	18.58	18.54	20
15	64QAM	1	37	18.37	18.63	18.42	18.38	
15	64QAM	1	74	18.22	18.37	18.26	18.06	
15	64QAM	36	0	17.56	17.77	17.79	17.67	19
15	64QAM	36	20	17.57	17.76	17.64	17.64	
15	64QAM	36	39	17.52	17.81	17.56	17.57	
15	64QAM	75	0	17.57	17.76	17.63	17.59	
15	256QAM	1	0	15.47	15.48	15.79	15.60	17
15	256QAM	1	37	15.37	15.39	15.81	15.47	
15	256QAM	1	74	15.30	15.39	15.73	15.48	
15	256QAM	36	0	16.60	16.63	16.01	16.68	17
15	256QAM	36	20	16.52	16.59	15.95	16.63	
15	256QAM	36	39	16.47	16.42	15.94	16.59	
15	256QAM	75	0	16.39	16.41	15.86	16.58	
Channel				55290	55815	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3642.5	3695	
10	QPSK	1	0	20.65	20.68	20.84	20.78	22
10	QPSK	1	25	20.61	20.78	20.65	20.62	
10	QPSK	1	49	20.45	20.60	20.47	20.30	
10	QPSK	25	0	19.72	19.80	19.83	19.79	21

10	QPSK	25	12	19.71	19.82	19.74	19.57	
10	QPSK	25	25	19.55	19.79	19.63	19.57	
10	QPSK	50	0	19.59	19.80	19.74	19.64	
10	16QAM	1	0	19.69	19.78	19.88	19.82	21
10	16QAM	1	25	19.67	19.85	19.74	19.65	
10	16QAM	1	49	19.48	19.69	19.55	19.35	
10	16QAM	25	0	18.70	18.81	18.82	18.75	20
10	16QAM	25	12	18.61	18.79	18.76	18.65	
10	16QAM	25	25	18.64	18.84	18.67	18.57	
10	16QAM	50	0	18.58	18.76	18.63	18.58	
10	64QAM	1	0	18.40	18.45	18.61	18.58	20
10	64QAM	1	25	18.36	18.57	18.49	18.45	
10	64QAM	1	49	18.30	18.39	18.26	18.08	
10	64QAM	25	0	17.61	17.82	17.80	17.75	19
10	64QAM	25	12	17.65	17.82	17.63	17.59	
10	64QAM	25	25	17.51	17.72	17.58	17.47	
10	64QAM	50	0	17.60	17.69	17.66	17.57	
10	256QAM	1	0	15.49	15.49	15.86	15.51	17
10	256QAM	1	25	15.38	15.40	15.86	15.46	
10	256QAM	1	49	15.30	15.47	15.69	15.45	
10	256QAM	25	0	16.58	16.66	16.01	16.70	17
10	256QAM	25	12	16.56	16.52	15.90	16.70	
10	256QAM	25	25	16.45	16.45	15.93	16.59	
10	256QAM	50	0	16.43	16.40	15.82	16.62	
Channel				55265	55810	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3643	3697.5	
5	QPSK	1	0	20.62	20.70	20.79	20.77	22
5	QPSK	1	12	20.55	20.81	20.67	20.60	
5	QPSK	1	24	20.52	20.60	20.47	20.25	
5	QPSK	12	0	19.69	19.81	19.79	19.75	21
5	QPSK	12	7	19.65	19.82	19.77	19.64	
5	QPSK	12	13	19.60	19.75	19.61	19.56	
5	QPSK	25	0	19.58	19.81	19.68	19.56	
5	16QAM	1	0	19.70	19.77	19.86	19.73	21
5	16QAM	1	12	19.63	19.85	19.70	19.71	
5	16QAM	1	24	19.56	19.70	19.55	19.35	
5	16QAM	12	0	18.69	18.78	18.79	18.72	20
5	16QAM	12	7	18.68	18.77	18.71	18.67	
5	16QAM	12	13	18.58	18.79	18.65	18.63	
5	16QAM	25	0	18.57	18.71	18.65	18.55	
5	64QAM	1	0	18.42	18.44	18.54	18.53	20
5	64QAM	1	12	18.40	18.55	18.51	18.43	
5	64QAM	1	24	18.23	18.33	18.24	18.06	
5	64QAM	12	0	17.63	17.79	17.77	17.73	19
5	64QAM	12	7	17.65	17.75	17.68	17.63	
5	64QAM	12	13	17.47	17.78	17.57	17.51	
5	64QAM	25	0	17.62	17.74	17.66	17.57	
5	256QAM	1	0	15.48	15.48	15.79	15.58	17
5	256QAM	1	12	15.37	15.43	15.84	15.46	
5	256QAM	1	24	15.26	15.37	15.76	15.43	
5	256QAM	12	0	16.56	16.56	16.08	16.71	17
5	256QAM	12	7	16.49	16.51	15.96	16.66	
5	256QAM	12	13	16.47	16.47	15.94	16.60	
5	256QAM	25	0	16.39	16.35	15.85	16.62	

Reduced Power Mode (Main)

<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	20.52	20.63	20.57	21.5
20	QPSK	1	49	20.32	20.39	20.40	
20	QPSK	1	99	20.34	20.33	20.41	
20	QPSK	50	0	20.40	20.42	20.35	21.5
20	QPSK	50	24	20.31	20.37	20.39	
20	QPSK	50	50	20.39	20.32	20.34	
20	QPSK	100	0	20.26	20.31	20.30	
20	16QAM	1	0	20.23	20.17	20.16	21.5
20	16QAM	1	49	20.31	20.31	20.33	
20	16QAM	1	99	20.26	20.27	20.31	
20	16QAM	50	0	20.34	20.38	20.38	21.5
20	16QAM	50	24	20.38	20.37	20.48	
20	16QAM	50	50	20.29	20.36	20.39	
20	16QAM	100	0	20.26	20.36	20.39	
20	64QAM	1	0	20.53	20.58	20.55	21.5
20	64QAM	1	49	20.58	20.54	20.61	
20	64QAM	1	99	20.54	20.56	20.57	
20	64QAM	50	0	19.80	19.87	19.84	21
20	64QAM	50	24	19.82	19.89	19.91	
20	64QAM	50	50	19.85	19.82	19.91	
20	64QAM	100	0	19.76	19.82	19.88	
20	256QAM	1	0	17.71	17.58	17.60	19
20	256QAM	1	49	17.72	17.66	17.73	
20	256QAM	1	99	17.66	17.63	17.51	
20	256QAM	50	0	17.84	17.93	17.79	19
20	256QAM	50	24	17.68	17.75	17.87	
20	256QAM	50	50	17.59	17.85	17.82	
20	256QAM	100	0	17.67	17.69	17.75	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	20.24	20.30	20.27	21.5
15	QPSK	1	37	20.23	20.19	20.36	
15	QPSK	1	74	20.19	20.16	20.34	
15	QPSK	36	0	20.24	20.36	20.32	21.5
15	QPSK	36	20	20.13	20.29	20.26	
15	QPSK	36	39	20.28	20.20	20.30	
15	QPSK	75	0	20.09	20.19	20.29	
15	16QAM	1	0	20.06	19.98	20.08	21.5
15	16QAM	1	37	20.19	20.19	20.23	
15	16QAM	1	74	20.18	20.15	20.29	
15	16QAM	36	0	20.26	20.37	20.31	21.5
15	16QAM	36	20	20.26	20.21	20.34	
15	16QAM	36	39	20.27	20.32	20.35	
15	16QAM	75	0	20.16	20.35	20.19	
15	64QAM	1	0	20.49	20.57	20.49	21.5
15	64QAM	1	37	20.42	20.60	20.57	
15	64QAM	1	74	20.36	20.37	20.50	
15	64QAM	36	0	19.75	19.68	19.71	21
15	64QAM	36	20	19.82	19.88	19.74	
15	64QAM	36	39	19.84	19.77	19.82	

15	64QAM	75	0	19.56	19.81	19.83	
15	256QAM	1	0	17.68	17.47	17.54	19
15	256QAM	1	37	17.60	17.63	17.54	
15	256QAM	1	74	17.57	17.50	17.34	
15	256QAM	36	0	17.80	17.83	17.68	19
15	256QAM	36	20	17.58	17.56	17.72	
15	256QAM	36	39	17.54	17.66	17.77	
15	256QAM	75	0	17.53	17.69	17.75	
Channel				37800	38000	38200	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	20.42	20.31	20.18	21.5
10	QPSK	1	25	20.31	20.34	20.29	
10	QPSK	1	49	20.18	20.28	20.38	
10	QPSK	25	0	20.33	20.24	20.25	21.5
10	QPSK	25	12	20.27	20.37	20.29	
10	QPSK	25	25	20.36	20.31	20.21	
10	QPSK	50	0	20.12	20.26	20.23	
10	16QAM	1	0	20.06	20.06	20.14	21.5
10	16QAM	1	25	20.21	20.29	20.33	
10	16QAM	1	49	20.13	20.14	20.26	
10	16QAM	25	0	20.42	20.54	20.42	21.5
10	16QAM	25	12	20.39	20.37	20.54	
10	16QAM	25	25	20.40	20.47	20.49	
10	16QAM	50	0	20.34	20.48	20.41	
10	64QAM	1	0	20.45	20.56	20.42	21.5
10	64QAM	1	25	20.52	20.43	20.59	
10	64QAM	1	49	20.53	20.45	20.51	
10	64QAM	25	0	19.72	19.72	19.68	21
10	64QAM	25	12	19.63	19.79	19.81	
10	64QAM	25	25	19.75	19.70	19.73	
10	64QAM	50	0	19.70	19.76	19.85	
10	256QAM	1	0	17.66	17.46	17.40	19
10	256QAM	1	25	17.67	17.53	17.62	
10	256QAM	1	49	17.61	17.52	17.31	
10	256QAM	25	0	17.81	17.93	17.75	19
10	256QAM	25	12	17.64	17.70	17.84	
10	256QAM	25	25	17.40	17.73	17.65	
10	256QAM	50	0	17.52	17.52	17.56	
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	20.36	20.39	20.35	21.5
5	QPSK	1	12	20.18	20.36	20.39	
5	QPSK	1	24	20.19	20.33	20.34	
5	QPSK	12	0	20.20	20.41	20.26	21.5
5	QPSK	12	7	20.14	20.21	20.31	
5	QPSK	12	13	20.24	20.15	20.17	
5	QPSK	25	0	20.17	20.26	20.18	
5	16QAM	1	0	20.07	20.17	19.96	21.5
5	16QAM	1	12	20.18	20.18	20.33	
5	16QAM	1	24	20.21	20.20	20.15	
5	16QAM	12	0	20.38	20.55	20.55	21.5
5	16QAM	12	7	20.44	20.42	20.58	
5	16QAM	12	13	20.47	20.44	20.59	
5	16QAM	25	0	20.45	20.52	20.43	
5	64QAM	1	0	20.42	20.54	20.55	21.5
5	64QAM	1	12	20.55	20.48	20.51	

5	64QAM	1	24	20.45	20.43	20.46	
5	64QAM	12	0	19.65	19.87	19.68	21
5	64QAM	12	7	19.73	19.70	19.89	
5	64QAM	12	13	19.70	19.72	19.76	
5	64QAM	25	0	19.70	19.62	19.80	
5	256QAM	1	0	17.71	17.57	17.60	19
5	256QAM	1	12	17.65	17.47	17.63	
5	256QAM	1	24	17.49	17.45	17.32	
5	256QAM	12	0	17.71	17.84	17.65	19
5	256QAM	12	7	17.49	17.72	17.79	
5	256QAM	12	13	17.56	17.78	17.64	
5	256QAM	25	0	17.62	17.53	17.65	

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	20.59	20.34	20.64	20.48	20.32	21.5
20	QPSK	1	49	20.55	20.30	20.59	20.43	20.26	
20	QPSK	1	99	20.56	20.27	20.55	20.45	20.20	
20	QPSK	50	0	20.59	20.33	20.60	20.51	20.34	21
20	QPSK	50	24	20.53	20.31	20.58	20.48	20.30	
20	QPSK	50	50	20.49	20.29	20.57	20.39	20.18	
20	QPSK	100	0	20.49	20.32		20.38	20.19	
20	16QAM	1	0	20.57	20.20	20.53	20.50	20.37	21
20	16QAM	1	49	20.54	20.24	20.58	20.42	20.27	
20	16QAM	1	99	20.46	20.28	20.46	20.37	20.04	
20	16QAM	50	0	18.88	18.68	19.09	19.00	18.90	20
20	16QAM	50	24	18.69	18.77	18.75	18.79	18.79	
20	16QAM	50	50	18.75	18.91	18.63	18.50	18.61	
20	16QAM	100	0	18.61	18.69	18.69	18.71	18.55	
20	64QAM	1	0	18.81	18.91	18.78	19.01	18.86	20
20	64QAM	1	49	18.62	18.79	18.65	18.65	18.56	
20	64QAM	1	99	18.67	18.76	18.81	18.63	18.79	
20	64QAM	50	0	17.63	17.80	17.56	17.52	17.42	19
20	64QAM	50	24	17.60	17.45	17.73	17.63	17.58	
20	64QAM	50	50	17.46	17.32	17.53	17.33	17.27	
20	64QAM	100	0	17.47	17.67	17.50	17.46	17.34	
20	256QAM	1	0	15.89	16.05	15.86	15.93	15.89	17
20	256QAM	1	49	15.79	15.72	16.07	15.71	15.89	
20	256QAM	1	99	15.74	15.64	15.69	15.91	15.71	
20	256QAM	50	0	15.76	15.66	16.02	15.81	15.91	17
20	256QAM	50	24	15.90	15.80	15.65	15.55	15.98	
20	256QAM	50	50	15.93	15.97	16.02	15.93	15.83	
20	256QAM	100	0	15.86	16.07	15.88	15.86	15.88	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	20.56	20.14	20.41	20.42	20.26	21.5
15	QPSK	1	37	20.42	20.27	20.50	20.24	20.20	
15	QPSK	1	74	20.44	20.13	20.37	20.26	20.04	
15	QPSK	36	0	20.48	20.26	20.53	20.38	20.15	21
15	QPSK	36	20	20.44	20.22	20.42	20.40	20.13	
15	QPSK	36	39	20.47	20.15	20.57	20.24	20.01	

15	QPSK	75	0	20.34	20.13	20.37	20.38	20.11	
15	16QAM	1	0	20.46	20.03	20.52	20.33	20.22	21
15	16QAM	1	37	20.47	20.06	20.50	20.25	20.24	
15	16QAM	1	74	20.34	20.22	20.40	20.36	19.96	
15	16QAM	36	0	18.72	18.63	19.03	18.84	18.88	20
15	16QAM	36	20	18.50	18.61	18.55	18.72	18.74	
15	16QAM	36	39	18.62	18.84	18.44	18.34	18.53	
15	16QAM	75	0	18.54	18.61	18.63	18.58	18.50	
15	64QAM	1	0	18.61	18.91	18.60	18.89	18.82	20
15	64QAM	1	37	18.61	18.60	18.57	18.58	18.50	
15	64QAM	1	74	18.57	18.76	18.74	18.63	18.61	
15	64QAM	36	0	17.57	17.66	17.44	17.51	17.36	19
15	64QAM	36	20	17.43	17.27	17.54	17.50	17.56	
15	64QAM	36	39	17.29	17.16	17.46	17.27	17.16	
15	64QAM	75	0	17.32	17.67	17.40	17.27	17.27	
15	256QAM	1	0	15.83	15.93	15.79	15.78	15.73	17
15	256QAM	1	37	15.78	15.71	16.07	15.62	15.72	
15	256QAM	1	74	15.63	15.48	15.69	15.71	15.61	
15	256QAM	36	0	15.56	15.60	15.90	15.77	15.88	17
15	256QAM	36	20	15.84	15.69	15.64	15.37	15.90	
15	256QAM	36	39	15.84	15.78	15.97	15.81	15.71	
15	256QAM	75	0	15.69	16.05	15.74	15.81	15.68	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	20.41	20.21	20.48	20.30	20.20	21.5
10	QPSK	1	25	20.52	20.15	20.55	20.28	20.08	
10	QPSK	1	49	20.44	20.25	20.38	20.31	20.07	
10	QPSK	25	0	20.57	20.17	20.59	20.51	20.15	21
10	QPSK	25	12	20.41	20.26	20.45	20.43	20.13	
10	QPSK	25	25	20.48	20.18	20.39	20.24	20.01	
10	QPSK	50	0	20.37	20.15	20.45	20.27	20.11	
10	16QAM	1	0	20.39	20.05	20.41	20.48	20.30	21
10	16QAM	1	25	20.45	20.08	20.40	20.37	20.19	
10	16QAM	1	49	20.38	20.11	20.38	20.36	19.99	
10	16QAM	25	0	18.70	18.59	19.09	18.89	18.84	20
10	16QAM	25	12	18.54	18.62	18.68	18.71	18.69	
10	16QAM	25	25	18.64	18.71	18.46	18.42	18.53	
10	16QAM	50	0	18.44	18.52	18.55	18.65	18.39	
10	64QAM	1	0	18.80	18.83	18.65	18.86	18.80	20
10	64QAM	1	25	18.49	18.79	18.65	18.59	18.51	
10	64QAM	1	49	18.59	18.65	18.68	18.58	18.62	
10	64QAM	25	0	17.43	17.72	17.52	17.48	17.25	19
10	64QAM	25	12	17.54	17.29	17.65	17.53	17.47	
10	64QAM	25	25	17.46	17.13	17.39	17.22	17.16	
10	64QAM	50	0	17.47	17.59	17.37	17.42	17.15	
10	256QAM	1	0	15.79	15.93	15.81	15.76	15.83	17
10	256QAM	1	25	15.68	15.60	16.03	15.60	15.69	
10	256QAM	1	49	15.68	15.50	15.59	15.88	15.64	
10	256QAM	25	0	15.71	15.64	15.94	15.71	15.76	17
10	256QAM	25	12	15.88	15.76	15.48	15.51	15.87	
10	256QAM	25	25	15.81	15.86	15.83	15.78	15.65	
10	256QAM	50	0	15.85	16.04	15.72	15.85	15.77	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	20.41	20.21	20.55	20.30	20.23	21.5
5	QPSK	1	12	20.42	20.11	20.53	20.33	20.15	

5	QPSK	1	24	20.38	20.18	20.42	20.37	20.06	
5	QPSK	12	0	20.57	20.29	20.45	20.45	20.34	21
5	QPSK	12	7	20.43	20.24	20.52	20.31	20.21	
5	QPSK	12	13	20.36	20.11	20.46	20.35	20.11	
5	QPSK	25	0	20.42	20.20	20.49	20.36	20.00	
5	16QAM	1	0	20.43	20.04	20.44	20.36	20.19	21
5	16QAM	1	12	20.35	20.06	20.55	20.34	20.26	
5	16QAM	1	24	20.29	20.10	20.43	20.27	20.02	
5	16QAM	12	0	18.82	18.50	18.89	18.96	18.82	20
5	16QAM	12	7	18.62	18.66	18.72	18.62	18.68	
5	16QAM	12	13	18.72	18.73	18.44	18.36	18.51	
5	16QAM	25	0	18.43	18.69	18.58	18.51	18.50	
5	64QAM	1	0	18.70	18.81	18.61	19.00	18.69	20
5	64QAM	1	12	18.62	18.66	18.54	18.47	18.54	
5	64QAM	1	24	18.59	18.74	18.72	18.48	18.74	
5	64QAM	12	0	17.50	17.73	17.53	17.52	17.36	19
5	64QAM	12	7	17.42	17.35	17.64	17.60	17.56	
5	64QAM	12	13	17.41	17.20	17.40	17.26	17.23	
5	64QAM	25	0	17.41	17.55	17.40	17.29	17.14	
5	256QAM	1	0	15.82	16.00	15.77	15.83	15.76	17
5	256QAM	1	12	15.74	15.61	15.97	15.65	15.76	
5	256QAM	1	24	15.70	15.44	15.49	15.87	15.71	
5	256QAM	12	0	15.68	15.46	15.82	15.69	15.87	17
5	256QAM	12	7	15.81	15.75	15.60	15.39	15.84	
5	256QAM	12	13	15.73	15.81	15.82	15.73	15.76	
5	256QAM	25	0	15.80	15.89	15.82	15.71	15.72	

<LTE Band 41_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	23.79	23.07	23.31	23.92	23.38	24.5
20	QPSK	1	49	23.71	23.04	23.30	23.55	23.04	
20	QPSK	1	99	23.15	23.05	23.25	23.53	23.27	
20	QPSK	50	0	22.90	22.27	22.71	22.99	22.30	24
20	QPSK	50	24	22.82	22.17	22.48	22.97	22.28	
20	QPSK	50	50	22.52	22.12	22.56	22.97	22.03	
20	QPSK	100	0	22.79	22.01	22.44	22.99	22.05	
20	16QAM	1	0	23.21	22.03	22.38	23.00	22.49	24
20	16QAM	1	49	22.81	22.06	22.45	22.97	22.30	
20	16QAM	1	99	22.15	22.10	22.66	22.79	22.13	
20	16QAM	50	0	21.87	21.23	21.37	22.00	21.38	23
20	16QAM	50	24	21.80	21.20	21.52	22.15	21.20	
20	16QAM	50	50	21.48	21.23	21.51	22.04	21.06	
20	16QAM	100	0	21.77	21.38	21.47	21.93	21.13	
20	64QAM	1	0	21.85	21.26	21.00	21.71	21.17	23
20	64QAM	1	49	21.54	21.14	21.29	21.82	21.18	
20	64QAM	1	99	21.05	21.16	21.44	21.50	21.07	
20	64QAM	50	0	20.93	20.20	20.30	20.91	20.22	22
20	64QAM	50	24	20.80	20.13	20.45	21.02	20.34	
20	64QAM	50	50	20.48	20.19	20.44	20.86	20.05	
20	64QAM	100	0	20.71	20.15	20.35	20.93	20.10	
20	256QAM	1	0	18.56	18.69	18.33	18.60	18.63	20

20	256QAM	1	49	18.14	18.22	18.20	18.03	18.26	
20	256QAM	1	99	18.77	18.92	18.30	18.58	18.66	
20	256QAM	50	0	18.48	18.62	18.25	18.64	18.80	20
20	256QAM	50	24	18.19	18.23	18.23	18.25	18.22	
20	256QAM	50	50	18.69	18.89	18.38	18.52	18.75	
20	256QAM	100	0	18.51	18.61	18.28	18.52	18.75	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.71	23.07	23.24	23.85	23.32	24.50
15	QPSK	1	37	23.74	22.97	23.35	23.51	23.04	
15	QPSK	1	74	23.09	22.96	23.47	23.47	23.20	
15	QPSK	36	0	22.84	22.01	22.64	22.96	22.28	24
15	QPSK	36	20	22.74	22.12	22.44	22.95	22.24	
15	QPSK	36	39	22.44	22.03	22.54	22.90	22.40	
15	QPSK	75	0	22.76	22.00	22.44	22.93	22.03	
15	16QAM	1	0	23.11	22.26	22.38	22.94	22.43	24
15	16QAM	1	37	22.74	22.01	22.36	22.97	22.29	
15	16QAM	1	74	22.08	22.09	22.65	22.73	22.08	
15	16QAM	36	0	21.83	21.19	21.30	21.91	21.31	23
15	16QAM	36	20	21.80	21.14	21.52	22.10	21.14	
15	16QAM	36	39	21.40	21.16	21.42	22.01	21.01	
15	16QAM	75	0	21.70	21.31	21.46	21.88	21.09	
15	64QAM	1	0	21.76	21.25	21.22	21.63	21.16	23
15	64QAM	1	37	21.44	21.14	21.24	21.76	21.18	
15	64QAM	1	74	21.03	21.14	21.35	21.45	21.23	
15	64QAM	36	0	20.93	20.18	20.26	20.91	20.12	22
15	64QAM	36	20	20.73	20.12	20.39	20.94	20.27	
15	64QAM	36	39	20.46	20.17	20.36	20.86	20.05	
15	64QAM	75	0	20.64	20.13	20.33	20.83	20.00	
15	256QAM	1	0	18.46	18.68	18.31	18.56	18.56	20
15	256QAM	1	37	18.10	18.12	18.14	18.23	18.19	
15	256QAM	1	74	18.70	18.90	18.27	18.57	18.58	
15	256QAM	36	0	18.46	18.53	18.15	18.54	18.76	20
15	256QAM	36	20	18.12	18.15	18.23	18.20	18.14	
15	256QAM	36	39	18.67	18.88	18.28	18.52	18.71	
15	256QAM	75	0	18.44	18.55	18.24	18.43	18.71	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	23.73	23.00	23.26	23.83	23.30	24.50
10	QPSK	1	25	23.76	23.00	23.34	23.51	22.96	
10	QPSK	1	49	23.15	23.04	23.50	23.45	23.27	
10	QPSK	25	0	22.89	22.03	22.66	22.99	22.21	24
10	QPSK	25	12	22.74	22.07	22.42	22.94	22.25	
10	QPSK	25	25	22.46	22.07	22.49	22.88	22.23	
10	QPSK	50	0	22.73	22.20	22.36	22.96	22.03	
10	16QAM	1	0	23.15	22.20	22.33	22.99	22.49	24
10	16QAM	1	25	22.81	22.10	22.37	22.90	22.21	
10	16QAM	1	49	22.09	22.15	22.56	22.73	22.12	
10	16QAM	25	0	21.87	21.19	21.33	21.93	21.33	23
10	16QAM	25	12	21.74	21.10	21.44	22.05	21.15	
10	16QAM	25	25	21.45	21.14	21.44	21.97	21.04	
10	16QAM	50	0	21.75	21.28	21.41	21.84	21.11	
10	64QAM	1	0	21.79	21.17	21.23	21.64	21.14	23
10	64QAM	1	25	21.54	21.11	21.19	21.81	21.10	
10	64QAM	1	49	21.33	21.15	21.37	21.49	21.07	
10	64QAM	25	0	20.84	20.19	20.28	20.89	20.20	22

10	64QAM	25	12	20.72	20.13	20.42	20.94	20.24	
10	64QAM	25	25	20.41	20.18	20.42	20.79	20.02	
10	64QAM	50	0	20.67	20.13	20.30	20.92	20.07	
10	256QAM	1	0	18.56	18.66	18.30	18.52	18.61	20
10	256QAM	1	25	18.10	18.18	18.20	18.01	18.19	
10	256QAM	1	49	18.75	18.87	18.30	18.58	18.60	
10	256QAM	25	0	18.39	18.58	18.25	18.60	18.74	20
10	256QAM	25	12	18.16	18.21	18.16	18.23	18.15	
10	256QAM	25	25	18.63	18.83	18.30	18.52	18.67	
10	256QAM	50	0	18.48	18.60	18.18	18.51	18.67	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	23.74	23.06	23.22	23.90	23.31	24.50
5	QPSK	1	12	23.80	23.03	23.35	23.51	23.03	
5	QPSK	1	24	23.10	23.01	23.42	23.46	23.23	
5	QPSK	12	0	22.88	22.03	22.70	22.94	22.30	24
5	QPSK	12	7	22.75	22.13	22.42	22.96	22.24	
5	QPSK	12	13	22.52	22.07	22.56	22.89	22.10	
5	QPSK	25	0	22.69	22.00	22.39	22.96	22.01	
5	16QAM	1	0	23.11	22.25	22.28	22.98	22.41	24
5	16QAM	1	12	22.80	22.30	22.38	22.87	22.20	
5	16QAM	1	24	22.13	22.10	22.58	22.79	22.09	
5	16QAM	12	0	21.77	21.17	21.28	21.93	21.35	23
5	16QAM	12	7	21.80	21.20	21.51	22.11	21.17	
5	16QAM	12	13	21.47	21.13	21.49	22.03	21.20	
5	16QAM	25	0	21.72	21.37	21.40	21.93	21.13	
5	64QAM	1	0	21.83	21.26	21.23	21.71	21.07	23
5	64QAM	1	12	21.44	21.14	21.29	21.78	21.16	
5	64QAM	1	24	21.20	21.16	21.40	21.48	21.12	
5	64QAM	12	0	20.87	20.11	20.29	20.86	20.17	22
5	64QAM	12	7	20.74	20.07	20.37	21.01	20.29	
5	64QAM	12	13	20.47	20.14	20.44	20.84	20.20	
5	64QAM	25	0	20.61	20.15	20.32	20.90	20.08	
5	256QAM	1	0	18.52	18.66	18.26	18.57	18.63	20
5	256QAM	1	12	18.10	18.15	18.10	18.00	18.23	
5	256QAM	1	24	18.72	18.89	18.24	18.55	18.62	
5	256QAM	12	0	18.38	18.60	18.24	18.54	18.76	20
5	256QAM	12	7	18.09	18.13	18.19	18.19	18.12	
5	256QAM	12	13	18.67	18.85	18.31	18.43	18.68	
5	256QAM	25	0	18.48	18.57	18.19	18.42	18.65	

<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation			5CC Downlink Carrier Aggregation		
NO.	Combination	Covered by measurement superset	NO.	Combination	Covered by measurement superset	NO.	Combination	Covered by measurement superset	NO.	Combination	Covered by measurement superset
	2A-2A			2A-2A-4A			2A-2A-4A-4A			2A-2A-5A-66A-66A	
	2A-4A			2A-2A-5A			2A-2A-4A-5A			2A-2A-5A-66B	
	2A-5A			2A-2A-12A			2A-2A-4A-12A			2A-2A-5A-66C	
	2A-7A			2A-2A-13A			2A-2A-4A-71A			2A-2A-12A-30A-66A	
	2A-12A			2A-2A-14A			2A-2A-5A-66A			2A-2A-12A-66A-66A	
	2A-13A			2A-2A-30A			2A-2A-12A-30A			2A-2A-13A-66A-66A	
	2A-14A			2A-2A-66A			2A-2A-12A-66A			2A-2A-13A-66B	
	2A-30A			2A-2A-71A			2A-2A-13A-66A			2A-2A-14A-30A-66A	
	2A-48A			2A-4A-4A			2A-2A-14A-30A			2A-2A-14A-66A-66A	
	2A-66A			2A-4A-5A			2A-2A-14A-66A			2A-5A-48A-48A-66A	
	2A-71A			2A-4A-7A			2A-2A-30A-66A			2A-5A-48A-48C	
	4A-4A			2A-4A-12A			2A-2A-66A-66A			2A-5A-48C-66A	
	4A-5A			2A-4A-13A			2A-2A-66A-71A			2A-5A-48D	
	4A-7A			2A-4A-30A			2A-2A-66B			2A-5B-30A-66A	
	4A-12A			2A-4A-71A			2A-2A-66C			2A-5B-66A-66A	
	4A-13A			2A-5A-30A			2A-4A-4A-5A			2A-5B-66B	
	4A-30A			2A-5A-48A			2A-4A-4A-12A			2A-5B-66C	
	4A-71A			2A-5A-66A			2A-4A-5A-30A			2A-12A-30A-66A-66A	
	5A-5A			2A-5B			2A-4A-5B			2A-13A-48A-48A-66A	
	5A-7A			2A-12A-30A			2A-4A-12A-30A			2A-13A-48A-48C	
	5A-30A			2A-12A-66A			2A-5A-30A-66A			2A-13A-48C-66A	
	5A-48A			2A-13A-48A			2A-5A-48A-48A			2A-13A-48D	
	5A-66A			2A-13A-66A			2A-5A-48A-66A			2A-14A-30A-66A-66A	
	7A-7A			2A-14A-30A			2A-5A-48C			2A-14A-66A-66A-66A	
	12A-30A			2A-14A-66A			2A-5A-66A-66A			2A-48A-48C-66A	
	12A-66A			2A-30A-66A			2A-5A-66B			2A-48A-48D	
	13A-48A			2A-48A-48A			2A-5A-66C			2A-48C-48C	
	13A-66A			2A-48A-66A			2A-5B-30A			2A-48D-66A	
	14A-30A			2A-48C			2A-5B-66A			2A-48E	
	14A-66A			2A-66A-66A			2A-12A-30A-66A			5A-48A-48C-66A	
	25A-25A			2A-66A-71A			2A-12A-66A-66A			5A-48A-48D	
	25A-26A			2A-66B			2A-12A-66C			5A-48C-48C	
	26A-41A			2A-66C			2A-13A-48A-48A			5A-48D-66A	
	30A-66A			2C-66A			2A-13A-48A-66A			5A-48E	
	38C			4A-4A-5A			2A-13A-48C			13A-48A-48C-66A	
	41A-41A			4A-4A-12A			2A-13A-66A-66A			13A-48C-48C	
	41C			4A-4A-13A			2A-13A-66B			13A-48C-66B	
	48A-48A			4A-4A-30A			2A-13A-66C			13A-48C-66C	
	48A-66A			4A-4A-71A			2A-14A-30A-66A			13A-48D-66A	
	48C			4A-5A-30A			2A-14A-66A-66A			13A-48E	
	66A-66A			4A-5B			2A-30A-66A-66A			41F	
	66A-71A			4A-12A-30A			2A-48A-48A-66A			48A-48A-48D	
	66B			5A-5A-66A			2A-48A-48C			48A-48C-48C	
	66C			5A-7A-7A			2A-48C-66A			48A-48C-66B	
	25A-41A			5A-30A-66A			2A-48D			48A-48C-66C	

	4A-17A			5A-48A-48A			2A-66A-66A-66A			48A-48D-66A		
				5A-48A-66A			2A-66A-66A-71A			48C-48C-66A		
				5A-48C			2A-66C-71A			48C-66A-66A-66A		
				5A-66A-66A			2C-66A-66A			48E-66A		
				5A-66B			4A-4A-5B			48F		
				5A-66C			4A-4A-12A-30A			2A-5A-5A-66A-66A		
				5B-30A			5A-5A-66A-66A			2A-2A-5B-66A		
				5B-66A			5A-5A-66B					
				12A-30A-66A			5A-5A-66C					
				12A-66A-66A			5A-48A-48A-66A					
				13A-48A-48A			5A-48A-48C					
				13A-48A-66A			5A-48C-66A					
				13A-48C			5A-48D					
				13A-66A-66A			5B-30A-66A					
				13A-66B			5B-66A-66A					
				13A-66C			5B-66B					
				14A-30A-66A			5B-66C					
				14A-66A-66A			12A-30A-66A-66A					
				26A-41C			12A-66C					
				30A-66A-66A			13A-48A-48A-66A					
				41A-41C			13A-48A-48C					
				41D			13A-48A-66B					
				48A-48A-48A			13A-48A-66C					
				48A-48A-66A			13A-48C-66A					
				48A-48C			13A-48D					
				48A-66A-66A			14A-30A-66A-66A					
				48A-66B			14A-66A-66A-66A					
				48A-66C			30A-66A-66A-66A					
				48C-66A			41A-41D					
				48D			41C-41C					
				66A-66A-66A			41E					
				66A-66A-71A			48A-48A-48C					
				66A-66C			48A-48A-66A-66A					
				66C-71A			48A-48A-66B					
				2A-5A-5A			48A-48A-66C					
				25A-41C			48A-48C-66A					
							48A-48D					
							48A-66A-66A-66A					
							48C-48C					
							48C-66A-66A					
							48C-66B					
							48C-66C					
							48D-66A					
							48E					
							2A-2A-5A-30A					
							2A-5A-5A-66A					
							5A-30A-66A-66A					
							13A-66A-66A-66A					
							25A-41D					
							2A-2A-5B					

<Power verification when LTE Carrier Aggregation Active>

General Note:

i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

iii. The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.

vi. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

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

<Two Carrier power verification>

Configure		PCC							SCC				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		25	20	1880	26340	QPSK	1	0	26	15	876.5	8865	22.65	22.71
		4	20	1732.5	20175	QPSK	1	0	17	10	740	5790	22.75	22.83
Intra-Band	Contiguous	38	20	2610	38000	QPSK	1	0	38	20	2629.80	38198	22.51	22.59

<Three Carrier power verification>

Configure	PCC							SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	22.81	22.84
	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	13	10	751	5230	22.81	22.84
	5	10	844	20600	QPSK	1	0	7	20	2655	3100	7	5	2687.5	3425	23.75	23.82
	26	15	831.5	26865	QPSK	1	0	41	20	2593	40620	41	20	2612.8	40818	23.68	23.75

<Four Carrier power verification>

Configure	PCC							SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2	20	1880	18900	QPSK	1	0	2	5	1980	1100	4	20	2132.5	2175	71	20	634.5	68761	22.81	22.84
	2	20	1880	18900	QPSK	1	0	2	5	1980	1100	66	20	2155	66886	71	20	634.5	68761	22.81	22.84
	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	30	10	2355	9820	22.81	22.84
	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	12	10	737.5	5095	30	10	2355	9820	22.81	22.84
	2	20	1880	18900	QPSK	1	0	66	20	2155	66886	66	20	2139.8	66734	71	20	634.5	68761	22.81	22.84
	48	20	3690	6640	QPSK	1	0	48	20	3670.2	56244	66	20	2155	66886	66	20	2164.8	67084	19.45	19.53
	48	20	3690	6640	QPSK	1	0	48	20	3670.2	56244	48	20	3650.4	56244	66	20	2155	66886	19.47	19.53
	25	20	3641	56150	QPSK	1	0	41	20	2593	40620	41	20	2612.8	2175	41	20	2636.2	41052	22.65	22.71

<Five Carrier power verification>

Configure	PCC							SCC1				SCC2				SCC3				SCC4				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2	20	1880	18900	QPSK	1	0	2	5	1980	1100	12	10	737.5	5095	30	10	2355	9820	66	20	2155	66886	22.81	22.84
	2	20	1880	18900	QPSK	1	0	2	5	1980	1100	14	10	763	5330	30	10	2355	9820	66	20	2155	66886	22.81	22.84
	2	20	1880	18900	QPSK	1	0	5	10	881.5	2525	48	20	3625	55990	48	20	3644.8	56188	66	20	2155	66886	22.81	22.84
	2	20	1880	18900	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	66	20	2155	66886	22.81	22.84
	2	20	1880	18900	QPSK	1	0	12	10	737.5	5095	30	10	2355	9820	66	20	2139.8	66734	66	5	2197.5	67311	22.81	22.84
	2	20	1880	18900	QPSK	1	0	13	10	751	5230	48	20	3625	55990	48	20	3648.6	56226	66	20	2139.8	66734	22.81	22.84
	2	20	1880	18900	QPSK	1	0	14	10	763	5330	30	10	2355	9820	66	20	2155	66886	66	20	2164.8	67084	22.81	22.84

<LTE Uplink carrier aggregation>

2CC Uplink Carrier Aggregation		
Number	Combination	
	Main_ Ant	MIMO_ Ant
1	5B	
2	7C	7C
3	66B	66B
4	66C	66C
5	38C	38C
6	41C	41C
7	48C	48C

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B5/B7/B66/B38/B41/B48 with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

ii. The device supports uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.

iii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

iv. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

v. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

Default Power Mode (Main)

CA_5B										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	23.37	25
20575	20476	QPSK	1	0	1	49	2	0	23.48	25
20600	20501	QPSK	1	0	1	49	2	0	23.23	25

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	22.58	24
21100	20902	QPSK	1	0	1	99	2	0	22.56	24
21350	21152	QPSK	1	0	1	99	2	0	22.48	24

CA_66B									
Combination 15MHz+5MHz (75RB+25RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	22.19	24
132322	132229	QPSK	1	0	1	24	2	0	22.25	24
132597	132504	QPSK	1	0	1	24	2	0	22.21	24

CA_66C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	22.25	24
132322	132124	QPSK	1	0	1	99	2	0	22.36	24
132572	132374	QPSK	1	0	1	99	2	0	22.18	24

CA_38C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.27	24
37901	38099	QPSK	1	0	0	0	1	0	22.25	24
38150	37952	QPSK	1	0	1	99	2	0	22.2	24

CA_41C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	21.01	22
40185	39987	QPSK	1	0	0	0	1	0	20.87	22
40620	40422	QPSK	1	0	0	0	1	0	20.75	22
41055	40857	QPSK	1	0	0	0	1	0	20.86	22
41490	41292	QPSK	1	0	0	0	1	0	20.88	22

CA_41C_HPUE									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	23.56	25
40185	39987	QPSK	1	0	0	0	1	0	23.67	25
40620	40422	QPSK	1	0	0	0	1	0	23.98	25
41055	40857	QPSK	1	0	0	0	1	0	23.47	25
41490	41292	QPSK	1	0	0	0	1	0	23.61	25

CA_48C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	19.18	21
55830	55632	QPSK	1	0	1	99	2	0	19.15	21
56150	55952	QPSK	1	0	1	99	2	0	19.16	21
56640	56442	QPSK	1	0	1	99	2	0	19.16	21

Default Power Mode (MIMO)

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	22.14	24
21100	20902	QPSK	1	0	1	99	2	0	22.18	24
21350	21152	QPSK	1	0	1	99	2	0	22.1	24

CA_66B										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	22.25	24
132322	132229	QPSK	1	0	1	24	2	0	22.32	24
132597	132504	QPSK	1	0	1	24	2	0	22.21	24

CA_66C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	22.22	24
132322	132124	QPSK	1	0	1	99	2	0	22.35	24
132572	132374	QPSK	1	0	1	99	2	0	22.24	24

CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.4	24
37901	38099	QPSK	1	0	0	0	1	0	22.31	24
38150	37952	QPSK	1	0	1	99	2	0	22.38	24

CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	22.55	24
40185	39987	QPSK	1	0	0	0	1	0	22.47	24
40620	40422	QPSK	1	0	0	0	1	0	22.58	24
41055	40857	QPSK	1	0	0	0	1	0	22.5	24
41490	41292	QPSK	1	0	0	0	1	0	22.31	24

CA_41C_HPUE										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	25.52	27
40185	39987	QPSK	1	0	0	0	1	0	25.44	27
40620	40422	QPSK	1	0	0	0	1	0	25.63	27
41055	40857	QPSK	1	0	0	0	1	0	25.47	27
41490	41292	QPSK	1	0	0	0	1	0	25.28	27

CA_48C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	20.78	22
55830	55632	QPSK	1	0	1	99	2	0	20.79	22
56150	55952	QPSK	1	0	1	99	2	0	20.65	22
56640	56442	QPSK	1	0	1	99	2	0	20.66	22

Reduced Power Mode (Main)

CA_5B										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	20.91	22.5
20575	20476	QPSK	1	0	1	49	2	0	21.16	22.5
20600	20501	QPSK	1	0	1	49	2	0	21.1	22.5

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	17.99	18.5
21100	20902	QPSK	1	0	1	99	2	0	17.97	18.5
21350	21152	QPSK	1	0	1	99	2	0	17.8	18.5

CA_66B										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	19.15	21
132322	132229	QPSK	1	0	1	24	2	0	19.19	21
132597	132504	QPSK	1	0	1	24	2	0	19.16	21

CA_66C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	19.2	21
132322	132124	QPSK	1	0	1	99	2	0	19.22	21
132572	132374	QPSK	1	0	1	99	2	0	19.23	21

CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	19.96	21.5
37901	38099	QPSK	1	0	0	0	1	0	19.91	21.5
38150	37952	QPSK	1	0	1	99	2	0	19.9	21.5

CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	20.19	21.5
40185	39987	QPSK	1	0	0	0	1	0	20.23	21.5
40620	40422	QPSK	1	0	0	0	1	0	20.16	21.5
41055	40857	QPSK	1	0	0	0	1	0	20.03	21.5
41490	41292	QPSK	1	0	0	0	1	0	20.03	21.5

CA_41C (HPUE)										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	19.98	21.5
40185	39987	QPSK	1	0	0	0	1	0	20.2	21.5
40620	40422	QPSK	1	0	0	0	1	0	20.06	21.5
41055	40857	QPSK	1	0	0	0	1	0	19.88	21.5
41490	41292	QPSK	1	0	0	0	1	0	19.94	21.5

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

General Note:

1. The device support SCS 15KHz and 30KHz for NR FDD and TDD and have the same maximum power, in this report only select SCS 15KHz for NR FDD and SCS 30KHz for NR TDD power measurement, due to SCS 15KHz for FDD and SCS 30KHz for TDD have highest support bandwidth, and the NR SAR is < 1g SAR 1.45W/kg. Output power and SAR measurement for SCS30KHz for FDD and SCS15KHz for TDD shall be not necessary.
2. Referencing the procedure in KDB 941225, the test procedures are outlined as below
   a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
   b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
   c. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
   d. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   g. The NR n5/41/66/71/77 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth.
   h. The NR n2/38 SAR test was covered by NR n25/41; due to SAR test for overlapping NR bands can be reduced if the maximum power including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion and the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
3. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission

<3GPP 38.101 MPR for EN-DC>

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

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 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		

Default Power Mode (Main)

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	23.06	22.87	23.07	24.0
20	PI/2 BPSK	1	53	23.10	23.13	23.11	
20	PI/2 BPSK	1	104	23.05	22.91	23.01	
20	PI/2 BPSK	50	0	22.22	22.09	22.23	23.5
20	PI/2 BPSK	50	28	23.03	23.05	23.02	24.0
20	PI/2 BPSK	50	56	22.64	22.49	22.62	23.5
20	PI/2 BPSK	100	0	22.63	22.65	22.58	
20	QPSK	1	1	22.78	22.59	22.78	24.0
20	QPSK	1	53	23.06	22.90	23.07	
20	QPSK	1	104	22.98	22.85	22.98	
20	QPSK	50	0	21.74	21.57	21.71	23.0
20	QPSK	50	28	23.09	22.93	23.06	24.0
20	QPSK	50	56	22.12	21.97	22.13	23.0
20	QPSK	100	0	21.99	21.88	22.05	
20	16QAM	1	1	21.86	21.70	21.82	23.0
20	64QAM	1	1	20.11	19.96	20.15	21.5
20	256QAM	1	1	18.50	18.32	18.51	19.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	23.02	22.77	23.04	24.0
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	23.02	22.78	23.00	24.0
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	23.04	22.82	23.04	24.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	23.44	23.43	23.45	25.0
20	PI/2 BPSK	1	53	23.62	23.71	23.63	
20	PI/2 BPSK	1	104	23.57	23.54	23.59	
20	PI/2 BPSK	50	0	23.49	23.56	23.49	24.5
20	PI/2 BPSK	50	28	23.57	23.67	23.66	25.0
20	PI/2 BPSK	50	56	23.57	23.62	23.59	24.5
20	PI/2 BPSK	100	0	23.53	23.57	23.56	
20	QPSK	1	1	23.24	23.33	23.33	25.0
20	QPSK	1	53	23.45	23.54	23.56	
20	QPSK	1	104	23.52	23.52	23.54	
20	QPSK	50	0	23.54	23.57	23.50	24.0
20	QPSK	50	28	23.61	23.62	23.58	25.0
20	QPSK	50	56	22.52	22.57	22.53	24.0
20	QPSK	100	0	22.53	22.54	22.55	
20	16QAM	1	1	22.34	22.35	22.31	24.0
20	64QAM	1	1	21.09	21.10	21.04	22.5
20	256QAM	1	1	19.42	19.48	19.43	20.5
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	23.40	23.34	23.41	25.0
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	23.40	23.41	23.45	25.0
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	23.42	23.34	23.35	25.0

<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				502000	507000	512000	
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	23.20	23.19	23.11	24.0
20	PI/2 BPSK	1	53	23.21	23.33	23.15	
20	PI/2 BPSK	1	104	23.14	23.18	23.11	
20	PI/2 BPSK	50	0	22.89	22.89	22.77	23.5
20	PI/2 BPSK	50	28	23.26	23.29	23.23	24.0
20	PI/2 BPSK	50	56	22.79	22.85	22.71	23.5
20	PI/2 BPSK	100	0	22.81	22.85	22.69	
20	QPSK	1	1	23.15	23.17	23.02	24.0
20	QPSK	1	53	23.21	23.23	23.06	
20	QPSK	1	104	23.04	23.12	23.03	
20	QPSK	50	0	22.31	22.37	22.20	23.0
20	QPSK	50	28	23.23	23.29	23.29	24.0
20	QPSK	50	56	22.31	22.36	22.24	23.0
20	QPSK	100	0	22.30	22.36	22.24	
20	16QAM	1	1	22.20	22.22	22.12	23.0
20	64QAM	1	1	20.37	20.42	20.32	21.5
20	256QAM	1	1	18.90	18.97	18.85	19.5
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	23.12	23.10	23.03	24.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	23.11	23.15	23.01	24.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	23.18	23.10	23.04	24.0

<n25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376500	381000	
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	23.20	23.00	23.11	24.0
20	PI/2 BPSK	1	53	23.21	23.36	23.27	
20	PI/2 BPSK	1	104	23.17	23.22	23.23	
20	PI/2 BPSK	50	0	22.58	22.44	22.49	23.5
20	PI/2 BPSK	50	28	23.30	23.31	23.28	24.0
20	PI/2 BPSK	50	56	22.80	22.65	22.67	23.5
20	PI/2 BPSK	100	0	22.87	22.89	22.77	
20	QPSK	1	1	23.12	22.98	23.02	24.0
20	QPSK	1	53	23.28	23.23	23.28	
20	QPSK	1	104	23.29	23.14	23.13	
20	QPSK	50	0	22.11	21.96	22.06	23.0
20	QPSK	50	28	23.33	23.22	23.33	24.0
20	QPSK	50	56	22.23	22.12	22.23	23.0
20	QPSK	100	0	22.18	22.08	22.15	
20	16QAM	1	1	22.08	21.97	22.02	23.0
20	64QAM	1	1	20.37	20.19	20.25	21.5
20	256QAM	1	1	18.64	18.52	18.56	19.5
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	23.10	22.99	23.04	24.0
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	23.18	22.92	23.09	24.0
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	23.15	22.94	23.06	24.0

<n30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				462000			
Frequency (MHz)				2310			
10	PI/2 BPSK	1	1	21.92			23.0
10	PI/2 BPSK	1	26	22.12			
10	PI/2 BPSK	1	50	22.08			
10	PI/2 BPSK	25	0	21.52			22.5
10	PI/2 BPSK	25	14	22.06			23.0
10	PI/2 BPSK	25	27	21.50			22.5
10	PI/2 BPSK	50	0	21.56			
10	QPSK	1	1	21.89			23.0
10	QPSK	1	26	22.07			
10	QPSK	1	50	22.01			
10	QPSK	25	0	21.05			22.0
10	QPSK	25	14	22.04			23.0
10	QPSK	25	27	21.00			22.0
10	QPSK	50	0	21.04			
10	16QAM	1	1	20.92			22.0
10	64QAM	1	1	19.10			20.5
10	256QAM	1	1	17.60			18.5
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	21.89	21.90	21.84	23.0

<n38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				516000	519000	522000	
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	22.21	22.50	22.24	24.0
20	PI/2 BPSK	1	26	22.38	22.77	22.44	
20	PI/2 BPSK	1	49	22.00	22.49	22.11	
20	PI/2 BPSK	25	0	22.34	22.60	22.20	23.5
20	PI/2 BPSK	25	13	22.39	22.65	22.35	24.0
20	PI/2 BPSK	25	26	22.24	22.64	22.33	23.5
20	PI/2 BPSK	50	0	22.23	22.67	22.39	
20	QPSK	1	1	22.10	22.34	22.08	24.0
20	QPSK	1	26	22.18	22.33	22.18	
20	QPSK	1	49	22.00	22.32	22.06	
20	QPSK	25	0	22.15	22.46	22.11	24.0
20	QPSK	25	13	22.13	22.54	22.21	
20	QPSK	25	26	22.05	22.51	22.19	
20	QPSK	50	0	22.12	22.59	22.22	23.0
20	16QAM	1	1	22.02	22.48	22.11	23.0
20	64QAM	1	1	21.33	21.42	21.40	21.5
20	256QAM	1	1	18.93	19.11	19.10	19.5
Channel				515502	519000	522498	Tune-up limit (dBm)
Frequency (MHz)				2577.51	2595	2612.49	
15	PI/2 BPSK	1	1	22.26	22.50	22.30	24.0
Channel				515004	519000	522996	Tune-up limit (dBm)
Frequency (MHz)				2575.02	2595	2614.98	
10	PI/2 BPSK	1	1	22.36	22.50	22.44	24.0
Channel				514500	519000	523500	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	PI/2 BPSK	1	1	22.31	22.48	22.49	24.0

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.58	22.67	22.57	24.0
100	PI/2 BPSK	1	137	22.66	22.85	22.67	
100	PI/2 BPSK	1	271	22.39	22.53	22.42	
100	PI/2 BPSK	135	0	22.82	22.83	22.79	23.5
100	PI/2 BPSK	135	69	22.52	22.57	22.53	24.0
100	PI/2 BPSK	135	138	22.63	22.70	22.61	23.5
100	PI/2 BPSK	270	0	22.70	22.77	22.64	
100	QPSK	1	1	22.01	22.06	22.02	24.0
100	QPSK	1	137	22.02	22.12	22.07	
100	QPSK	1	271	22.31	22.45	22.45	
100	QPSK	135	0	22.08	22.13	22.05	24.0
100	QPSK	135	69	22.44	22.58	22.33	
100	QPSK	135	138	22.49	22.51	22.47	
100	QPSK	270	0	22.48	22.60	22.52	23.0
100	16QAM	1	1	21.78	21.93	21.90	23.0
100	64QAM	1	1	21.22	21.33	21.25	21.5
100	256QAM	1	1	18.85	18.93	18.95	20.5
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.48	22.61	22.56	24.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.44	22.66	22.54	24.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.57	22.63	22.47	24.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	22.44	22.62	22.44	24.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	22.38	22.47	22.48	24.0

<n41_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	23.48	23.87	23.53	25.0
100	PI/2 BPSK	1	137	23.83	24.00	23.55	
100	PI/2 BPSK	1	271	23.29	23.50	23.24	
100	PI/2 BPSK	135	0	23.84	23.98	23.85	24.5
100	PI/2 BPSK	135	69	23.71	23.47	23.73	25.0
100	PI/2 BPSK	135	138	23.66	23.74	23.70	24.5
100	PI/2 BPSK	270	0	23.86	23.60	23.82	
100	QPSK	1	1	23.01	23.20	23.15	25.0
100	QPSK	1	137	23.22	23.32	23.20	
100	QPSK	1	271	23.49	23.28	23.31	
100	QPSK	135	0	23.11	23.09	23.08	25.0
100	QPSK	135	69	23.57	23.61	23.45	
100	QPSK	135	138	23.62	23.55	23.65	
100	QPSK	270	0	23.44	23.71	23.43	24.0
100	16QAM	1	1	22.64	23.05	22.91	24.0
100	64QAM	1	1	22.18	22.43	22.13	22.5
100	256QAM	1	1	19.74	19.87	19.90	21.5
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	23.42	23.67	23.50	25.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	23.41	23.68	23.48	25.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	23.43	23.80	23.50	25.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	23.32	23.78	23.47	25.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	23.36	23.84	23.51	25.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	22.34	22.45	22.55	24.0
40	PI/2 BPSK	1	108	22.88	23.18	23.07	
40	PI/2 BPSK	1	214	22.43	22.57	22.57	
40	PI/2 BPSK	108	0	22.26	22.45	22.50	23.5
40	PI/2 BPSK	108	54	23.06	23.13	23.12	24.0
40	PI/2 BPSK	108	108	22.31	22.52	22.58	23.5
40	PI/2 BPSK	216	0	22.40	22.62	22.61	
40	QPSK	1	1	22.34	22.54	22.58	24.0
40	QPSK	1	108	22.90	23.10	23.16	
40	QPSK	1	214	22.41	22.57	22.61	
40	QPSK	108	0	21.87	22.00	22.02	23.0
40	QPSK	108	54	23.02	23.08	23.12	24.0
40	QPSK	108	108	21.79	21.99	21.99	23.0
40	QPSK	216	0	21.90	22.05	22.06	
40	16QAM	1	1	21.38	21.59	21.66	23.0
40	64QAM	1	1	19.69	19.80	19.82	21.5
40	256QAM	1	1	18.21	18.33	18.43	19.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	22.28	22.43	22.49	24.0
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	22.32	22.36	22.51	24.0
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	22.33	22.42	22.47	24.0
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	22.33	22.39	22.55	24.0

<n71>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	24.45	24.52	24.47	25.0
20	PI/2 BPSK	1	53	24.50	24.78	24.71	
20	PI/2 BPSK	1	104	24.47	24.63	24.53	
20	PI/2 BPSK	50	0	24.02	24.05	24.17	24.5
20	PI/2 BPSK	50	28	24.49	24.73	24.68	25.0
20	PI/2 BPSK	50	56	23.97	24.15	24.06	24.5
20	PI/2 BPSK	100	0	24.06	24.14	24.08	
20	QPSK	1	1	24.43	24.41	24.48	25.0
20	QPSK	1	53	24.45	24.62	24.58	
20	QPSK	1	104	24.44	24.61	24.48	
20	QPSK	50	0	23.51	23.53	23.68	24.0
20	QPSK	50	28	24.52	24.62	24.58	25.0
20	QPSK	50	56	23.42	23.65	23.51	24.0
20	QPSK	100	0	23.51	23.55	23.55	
20	16QAM	1	1	23.27	23.36	23.50	24.0
20	64QAM	1	1	21.52	21.62	21.78	22.5
20	256QAM	1	1	19.99	20.01	19.88	20.5
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	24.55	24.62	24.65	25.0
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	24.59	24.63	24.66	25.0
Channel				133100	136100	139100	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	24.61	24.60	24.67	25.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.22	22.35	22.16	24.0
100	PI/2 BPSK	1	137	22.31	22.41	22.25	
100	PI/2 BPSK	1	271	22.15	22.28	22.16	
100	PI/2 BPSK	135	0	21.91	22.01	21.99	23.5
100	PI/2 BPSK	135	69	22.13	22.23	22.21	24.0
100	PI/2 BPSK	135	138	22.10	22.10	22.05	23.5
100	PI/2 BPSK	270	0	22.05	22.15	22.12	
100	QPSK	1	1	22.22	22.23	22.13	24.0
100	QPSK	1	137	22.21	22.16	22.20	
100	QPSK	1	271	22.15	22.31	22.23	
100	QPSK	135	0	22.16	22.15	22.03	24.0
100	QPSK	135	69	22.29	22.27	22.19	
100	QPSK	135	138	22.12	22.20	22.17	
100	QPSK	270	0	22.07	22.07	22.02	23.0
100	16QAM	1	1	21.55	21.48	21.50	23.0
100	64QAM	1	1	21.21	21.24	21.34	22.5
100	256QAM	1	1	19.75	19.85	19.77	21.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.17	22.32	22.22	24.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.18	22.28	22.15	24.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.20	22.30	22.17	24.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.21	22.34	22.20	24.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.15	22.28	22.20	24.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.22	22.34	22.25	24.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.21	22.30	22.24	24.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.89		24.0
100	PI/2 BPSK	1	137		23.64		
100	PI/2 BPSK	1	271		23.46		
100	PI/2 BPSK	135	0		23.26		23.5
100	PI/2 BPSK	135	69		23.50		24.0
100	PI/2 BPSK	135	138		22.31		23.5
100	PI/2 BPSK	270	0		23.18		
100	QPSK	1	1		22.70		24.0
100	QPSK	1	137		23.31		
100	QPSK	1	271		23.36		
100	QPSK	135	0		22.55		24.0
100	QPSK	135	69		23.39		
100	QPSK	135	138		22.34		
100	QPSK	270	0		22.55		23.0
100	16QAM	1	1		22.59		23.0
100	64QAM	1	1		20.77		22.5
100	256QAM	1	1		19.94		21.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.32	22.43	22.20	24.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.28	22.35	22.15	24.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.22	22.28	22.16	24.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.25	22.28	22.17	24.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.30	22.32	22.25	24.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.25	22.30	22.18	24.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.27	22.30	22.20	24.0

<n77_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	24.67	24.68	24.54	26.5
100	PI/2 BPSK	1	137	24.94	25.52	24.99	
100	PI/2 BPSK	1	271	24.71	24.58	24.53	
100	PI/2 BPSK	135	0	24.70	25.26	24.92	26.0
100	PI/2 BPSK	135	69	25.14	25.33	24.88	26.5
100	PI/2 BPSK	135	138	24.62	25.23	24.75	26.0
100	PI/2 BPSK	270	0	25.11	25.19	24.96	
100	QPSK	1	1	24.66	24.55	24.52	26.5
100	QPSK	1	137	24.70	24.94	24.82	
100	QPSK	1	271	24.57	24.50	24.66	
100	QPSK	135	0	25.00	25.12	24.75	26.5
100	QPSK	135	69	24.83	25.00	25.08	
100	QPSK	135	138	24.83	24.84	24.88	
100	QPSK	270	0	24.78	25.33	25.01	25.5
100	16QAM	1	1	24.18	24.47	24.30	25.5
100	64QAM	1	1	22.49	22.81	22.52	24.0
100	256QAM	1	1	20.60	21.00	20.85	22.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	24.63	24.75	24.57	26.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	24.75	24.67	24.57	26.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	24.69	24.74	24.56	26.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	24.65	24.76	24.60	26.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	24.64	24.73	24.57	26.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	24.57	24.78	24.53	26.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	24.67	24.77	24.51	26.5

<n77_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		24.60		26.5
100	PI/2 BPSK	1	137		25.21		
100	PI/2 BPSK	1	271		24.78		
100	PI/2 BPSK	135	0		24.66		26.0
100	PI/2 BPSK	135	69		25.21		26.5
100	PI/2 BPSK	135	138		24.56		26.0
100	PI/2 BPSK	270	0		24.50		
100	QPSK	1	1		24.61		26.5
100	QPSK	1	137		24.99		
100	QPSK	1	271		24.87		
100	QPSK	135	0		24.79		26.5
100	QPSK	135	69		24.84		
100	QPSK	135	138		25.04		
100	QPSK	270	0		24.10		25.5
100	16QAM	1	1		23.76		25.5
100	64QAM	1	1		22.51		24.0
100	256QAM	1	1		21.22		22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	24.82	24.83	24.73	26.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	24.71	24.69	24.73	26.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	24.85	24.79	24.81	26.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	24.72	24.88	24.74	26.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	24.85	24.78	24.73	26.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	24.72	24.86	24.79	26.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	24.82	24.76	24.73	26.5

<n78>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.40		24.0
100	PI/2 BPSK	1	137		22.22		
100	PI/2 BPSK	1	271		22.34		
100	PI/2 BPSK	135	0		22.06		23.5
100	PI/2 BPSK	135	69		22.32		24.0
100	PI/2 BPSK	135	138		22.11		23.5
100	PI/2 BPSK	270	0		22.06		
100	QPSK	1	1		22.30		24.0
100	QPSK	1	137		22.26		
100	QPSK	1	271		22.24		
100	QPSK	135	0		22.05		24.0
100	QPSK	135	69		22.35		
100	QPSK	135	138		22.28		
100	QPSK	270	0		22.10		23.0
100	16QAM	1	1		21.54		23.0
100	64QAM	1	1		21.17		21.5
100	256QAM	1	1		18.78		19.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.27	22.39	22.21	24.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.26	22.35	22.26	24.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.20	22.38	22.28	24.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.21	22.28	22.26	24.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.26	22.30	22.23	24.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.30	22.34	22.30	24.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.23	22.19	22.28	24.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.37		24.0
100	PI/2 BPSK	1	137		22.22		
100	PI/2 BPSK	1	271		22.32		
100	PI/2 BPSK	135	0		21.97		23.5
100	PI/2 BPSK	135	69		22.26		24.0
100	PI/2 BPSK	135	138		22.02		23.5
100	PI/2 BPSK	270	0		22.02		
100	QPSK	1	1		22.24		24.0
100	QPSK	1	137		22.19		
100	QPSK	1	271		22.17		
100	QPSK	135	0		22.04		23.0
100	QPSK	135	69		22.30		24.0
100	QPSK	135	138		22.25		23.0
100	QPSK	270	0		22.03		
100	16QAM	1	1		21.47		23.0
100	64QAM	1	1		21.08		21.5
100	256QAM	1	1		18.69		19.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.22	22.35	22.30	24.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.25	22.34	22.21	24.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.19	22.22	22.29	24.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.25	22.30	22.19	24.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.36	22.33	22.34	24.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.30	22.25	22.24	24.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.18	22.26	22.27	24.0

<n78_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		24.69		26.5
100	PI/2 BPSK	1	137		25.42		
100	PI/2 BPSK	1	271		25.26		
100	PI/2 BPSK	135	0		25.36		26.0
100	PI/2 BPSK	135	69		25.36		26.5
100	PI/2 BPSK	135	138		25.31		26.0
100	PI/2 BPSK	270	0		25.31		
100	QPSK	1	1		24.64		26.5
100	QPSK	1	137		25.35		
100	QPSK	1	271		25.03		
100	QPSK	135	0		25.20		26.5
100	QPSK	135	69		25.29		
100	QPSK	135	138		25.40		
100	QPSK	270	0		25.34		25.5
100	16QAM	1	1		24.54		25.5
100	64QAM	1	1		23.75		24.0
100	256QAM	1	1		21.92		22.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	24.94	24.87	24.99	26.5
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	24.86	24.89	24.86	26.5
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	24.98	24.96	24.96	26.5
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	24.86	24.99	24.90	26.5
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.04	24.93	24.96	26.5
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.05	25.05	25.03	26.5
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.01	24.95	24.93	26.5

<n78_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		24.66		26.5
100	PI/2 BPSK	1	137		25.36		
100	PI/2 BPSK	1	271		25.16		
100	PI/2 BPSK	135	0		25.35		26.0
100	PI/2 BPSK	135	69		25.34		26.5
100	PI/2 BPSK	135	138		25.30		26.0
100	PI/2 BPSK	270	0		25.30		
100	QPSK	1	1		24.58		26.5
100	QPSK	1	137		25.27		
100	QPSK	1	271		25.03		
100	QPSK	135	0		25.16		25.5
100	QPSK	135	69		25.29		26.5
100	QPSK	135	138		25.32		25.5
100	QPSK	270	0		25.34		
100	16QAM	1	1		24.46		25.5
100	64QAM	1	1		23.65		24.0
100	256QAM	1	1		21.90		22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	24.93	24.88	24.93	26.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	24.85	24.89	24.87	26.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	24.98	24.96	24.91	26.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	24.82	24.89	24.88	26.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.08	25.01	25.03	26.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	24.98	25.00	24.88	26.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	24.99	24.89	25.04	26.5

Default Power Mode (MIMO)

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	22.98	22.82	22.99	24.0
20	PI/2 BPSK	1	53	23.10	22.91	23.07	
20	PI/2 BPSK	1	104	23.07	22.84	23.01	
20	PI/2 BPSK	50	0	22.15	22.00	22.20	23.5
20	PI/2 BPSK	50	28	23.04	22.95	23.02	24.0
20	PI/2 BPSK	50	56	22.59	22.40	22.56	23.5
20	PI/2 BPSK	100	0	22.62	22.36	22.54	
20	QPSK	1	1	22.76	22.59	22.68	24.0
20	QPSK	1	53	22.98	22.83	23.03	
20	QPSK	1	104	23.04	22.81	22.97	
20	QPSK	50	0	21.71	21.47	21.61	23.0
20	QPSK	50	28	23.08	22.86	23.05	24.0
20	QPSK	50	56	22.06	21.93	22.13	23.0
20	QPSK	100	0	21.96	21.79	22.04	
20	16QAM	1	1	21.83	21.60	21.75	23.0
20	64QAM	1	1	20.09	19.86	20.13	21.5
20	256QAM	1	1	18.42	18.26	18.48	19.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	22.93	22.78	22.92	24.0
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	22.97	22.76	22.89	24.0
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	22.89	22.79	22.95	24.0

<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				502000	507000	512000	
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	22.82	22.96	22.57	24.0
20	PI/2 BPSK	1	53	22.85	22.97	22.65	
20	PI/2 BPSK	1	104	22.74	22.86	22.55	
20	PI/2 BPSK	50	0	22.67	22.84	22.48	23.5
20	PI/2 BPSK	50	28	22.76	22.85	22.51	24.0
20	PI/2 BPSK	50	56	22.54	22.76	22.50	23.5
20	PI/2 BPSK	100	0	22.81	22.89	22.71	
20	QPSK	1	1	22.55	22.82	22.47	24.0
20	QPSK	1	53	22.48	22.63	22.50	
20	QPSK	1	104	22.51	22.68	22.55	
20	QPSK	50	0	22.60	22.65	22.58	23.0
20	QPSK	50	28	22.64	22.84	22.57	24.0
20	QPSK	50	56	22.65	22.90	22.54	23.0
20	QPSK	100	0	22.67	22.80	22.63	
20	16QAM	1	1	22.46	22.81	22.53	23.0
20	64QAM	1	1	20.47	20.56	20.46	21.5
20	256QAM	1	1	19.15	19.20	19.11	19.5
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	22.71	22.80	22.63	24.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	22.66	22.74	22.54	24.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	22.68	22.79	22.65	24.0

<n25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376500	381000	
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	22.65	22.88	22.64	24.0
20	PI/2 BPSK	1	53	22.74	22.92	22.69	
20	PI/2 BPSK	1	104	22.58	22.76	22.63	
20	PI/2 BPSK	50	0	22.51	22.55	22.50	23.5
20	PI/2 BPSK	50	28	22.66	22.83	22.64	24.0
20	PI/2 BPSK	50	56	22.52	22.80	22.59	23.5
20	PI/2 BPSK	100	0	22.58	22.91	22.57	
20	QPSK	1	1	22.65	22.57	22.55	24.0
20	QPSK	1	53	22.57	22.80	22.57	
20	QPSK	1	104	22.59	22.78	22.53	
20	QPSK	50	0	22.42	22.62	22.58	23.0
20	QPSK	50	28	22.46	22.80	22.60	24.0
20	QPSK	50	56	22.50	22.84	22.63	23.0
20	QPSK	100	0	22.48	22.71	22.52	
20	16QAM	1	1	22.36	22.50	22.42	23.0
20	64QAM	1	1	21.20	21.25	21.23	21.5
20	256QAM	1	1	19.16	19.20	19.18	19.5
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	22.59	22.64	22.60	24.0
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	22.63	22.66	22.56	24.0
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	22.60	22.63	22.48	24.0

<n30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				462000			
Frequency (MHz)				2310			
10	PI/2 BPSK	1	1	22.52			23.0
10	PI/2 BPSK	1	26	22.61			
10	PI/2 BPSK	1	50	22.38			
10	PI/2 BPSK	25	0	21.72			22.5
10	PI/2 BPSK	25	14	22.43			23.0
10	PI/2 BPSK	25	27	21.70			22.5
10	PI/2 BPSK	50	0	21.65			
10	QPSK	1	1	22.42			23.0
10	QPSK	1	26	22.45			
10	QPSK	1	50	22.41			
10	QPSK	25	0	21.48			22.0
10	QPSK	25	14	22.36			23.0
10	QPSK	25	27	21.42			22.0
10	QPSK	50	0	21.33			
10	16QAM	1	1	21.23			22.0
10	64QAM	1	1	20.43			20.5
10	256QAM	1	1	18.46			18.5
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	22.39	22.48	22.41	23.0

<n38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				516000	519000	522000	
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	23.44	23.45	23.37	24.0
20	PI/2 BPSK	1	26	23.49	23.52	23.41	
20	PI/2 BPSK	1	49	23.04	23.02	22.99	
20	PI/2 BPSK	25	0	23.24	23.23	23.30	23.5
20	PI/2 BPSK	25	13	23.44	23.47	23.42	24.0
20	PI/2 BPSK	25	26	23.43	23.43	23.40	23.5
20	PI/2 BPSK	50	0	23.35	23.42	23.37	
20	QPSK	1	1	23.16	23.23	23.21	24.0
20	QPSK	1	26	23.51	23.48	23.46	
20	QPSK	1	49	23.43	23.51	23.41	
20	QPSK	25	0	22.51	22.56	22.60	24.0
20	QPSK	25	13	23.14	23.20	23.16	
20	QPSK	25	26	22.39	22.36	22.42	
20	QPSK	50	0	22.33	22.31	22.39	23.0
20	16QAM	1	1	22.19	22.28	22.27	23.0
20	64QAM	1	1	20.95	20.89	20.97	21.5
20	256QAM	1	1	18.77	18.83	18.77	19.5
Channel				515502	519000	522498	Tune-up limit (dBm)
Frequency (MHz)				2577.51	2595	2612.49	
15	PI/2 BPSK	1	1	23.48	23.48	23.35	24.0
Channel				515004	519000	522996	Tune-up limit (dBm)
Frequency (MHz)				2575.02	2595	2614.98	
10	PI/2 BPSK	1	1	23.34	23.40	23.36	24.0
Channel				514500	519000	523500	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	PI/2 BPSK	1	1	23.28	23.31	23.35	24.0

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.85	22.74	23.01	24.0
100	PI/2 BPSK	1	137	23.15	23.09	23.34	
100	PI/2 BPSK	1	271	22.78	22.77	22.95	
100	PI/2 BPSK	135	0	22.73	22.63	22.83	23.5
100	PI/2 BPSK	135	69	23.16	23.07	23.33	24.0
100	PI/2 BPSK	135	138	22.93	22.86	23.21	23.5
100	PI/2 BPSK	270	0	22.95	22.91	23.17	
100	QPSK	1	1	22.64	22.55	22.76	24.0
100	QPSK	1	137	23.16	23.14	23.13	
100	QPSK	1	271	22.73	22.71	22.89	
100	QPSK	135	0	22.66	22.56	22.82	24.0
100	QPSK	135	69	22.88	22.86	23.06	
100	QPSK	135	138	22.79	22.70	22.91	
100	QPSK	270	0	23.00	22.99	22.92	23.0
100	16QAM	1	1	22.16	22.12	22.37	23.0
100	64QAM	1	1	21.41	21.35	21.50	21.5
100	256QAM	1	1	20.04	20.02	20.03	20.5
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.25	22.15	22.55	24.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.23	22.04	22.40	24.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.22	22.05	22.47	24.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	22.29	22.21	22.32	24.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	22.31	22.04	22.51	24.0

<n41_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.78	25.80	25.98	27.0
100	PI/2 BPSK	1	137	26.35	26.29	26.54	
100	PI/2 BPSK	1	271	25.75	25.78	25.98	
100	PI/2 BPSK	135	0	25.97	25.97	26.17	26.5
100	PI/2 BPSK	135	69	26.25	26.19	26.37	27.0
100	PI/2 BPSK	135	138	26.07	26.05	26.25	26.5
100	PI/2 BPSK	270	0	26.17	26.12	26.33	
100	QPSK	1	1	25.67	25.70	25.88	27.0
100	QPSK	1	137	26.29	26.28	26.53	
100	QPSK	1	271	25.74	25.73	25.97	
100	QPSK	135	0	25.98	25.97	26.14	27.0
100	QPSK	135	69	26.18	26.14	26.34	
100	QPSK	135	138	26.03	26.04	26.23	
100	QPSK	270	0	25.95	25.92	26.00	26.0
100	16QAM	1	1	25.34	25.35	25.55	26.0
100	64QAM	1	1	23.70	23.64	23.88	24.5
100	256QAM	1	1	22.99	22.98	23.20	23.5
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	25.67	25.75	25.84	27.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	25.65	25.72	25.86	27.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	25.69	25.77	25.84	27.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	25.63	25.73	25.85	27.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	25.66	25.75	25.89	27.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	22.32	22.39	22.54	24.0
40	PI/2 BPSK	1	108	22.85	23.18	23.08	
40	PI/2 BPSK	1	214	22.34	22.51	22.56	
40	PI/2 BPSK	108	0	22.18	22.45	22.42	23.5
40	PI/2 BPSK	108	54	23.05	23.16	23.14	24.0
40	PI/2 BPSK	108	108	22.24	22.49	22.50	23.5
40	PI/2 BPSK	216	0	22.35	22.52	22.46	
40	QPSK	1	1	22.31	22.49	22.56	24.0
40	QPSK	1	108	22.89	23.02	23.12	
40	QPSK	1	214	22.33	22.55	22.54	
40	QPSK	108	0	21.82	21.92	21.93	23.0
40	QPSK	108	54	23.02	23.17	23.15	24.0
40	QPSK	108	108	21.72	21.94	21.94	23.0
40	QPSK	216	0	21.83	22.02	22.04	
40	16QAM	1	1	21.34	21.49	21.62	23.0
40	64QAM	1	1	19.69	19.71	19.74	21.5
40	256QAM	1	1	18.16	18.24	18.42	19.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	22.32	22.38	22.51	24.0
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	22.31	22.38	22.50	24.0
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	22.24	22.33	22.54	24.0
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	22.23	22.30	22.53	24.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.40	22.61	22.91	24.0
100	PI/2 BPSK	1	137	23.10	23.37	23.64	
100	PI/2 BPSK	1	271	22.28	22.59	22.87	
100	PI/2 BPSK	135	0	22.89	23.14	23.44	23.5
100	PI/2 BPSK	135	69	23.09	23.33	23.62	24.0
100	PI/2 BPSK	135	138	22.85	23.10	23.32	23.5
100	PI/2 BPSK	270	0	22.96	23.20	23.48	
100	QPSK	1	1	22.37	22.59	22.85	24.0
100	QPSK	1	137	22.89	23.20	23.50	
100	QPSK	1	271	22.23	22.52	22.78	
100	QPSK	135	0	22.85	23.13	23.41	24.0
100	QPSK	135	69	22.97	23.28	23.53	
100	QPSK	135	138	22.79	23.08	23.31	
100	QPSK	270	0	22.88	22.97	22.91	23.0
100	16QAM	1	1	22.24	22.46	22.72	23.0
100	64QAM	1	1	21.48	21.72	21.95	22.5
100	256QAM	1	1	20.33	20.54	20.75	21.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.31	22.54	22.89	24.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.35	22.52	22.85	24.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.21	22.54	22.78	24.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.24	22.59	22.81	24.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.26	22.48	22.72	24.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.39	22.43	22.72	24.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.36	22.46	22.86	24.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.89		24.0
100	PI/2 BPSK	1	137		23.58		
100	PI/2 BPSK	1	271		23.30		
100	PI/2 BPSK	135	0		23.13		23.5
100	PI/2 BPSK	135	69		23.39		24.0
100	PI/2 BPSK	135	138		23.16		23.5
100	PI/2 BPSK	270	0		23.14		
100	QPSK	1	1		22.70		24.0
100	QPSK	1	137		23.56		
100	QPSK	1	271		23.43		
100	QPSK	135	0		22.66		24.0
100	QPSK	135	69		23.20		
100	QPSK	135	138		22.40		
100	QPSK	270	0		22.42		23.0
100	16QAM	1	1		22.49		23.0
100	64QAM	1	1		21.79		22.5
100	256QAM	1	1		20.83		21.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.34	22.33	22.30	24.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.26	22.36	22.31	24.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.30	22.37	22.31	24.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.32	22.40	22.23	24.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.23	22.36	22.30	24.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.28	22.34	22.25	24.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.23	22.25	22.30	24.0

<n77_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.34	25.47	25.73	27.0
100	PI/2 BPSK	1	137	26.10	26.19	26.57	
100	PI/2 BPSK	1	271	25.16	25.46	25.79	
100	PI/2 BPSK	135	0	25.86	26.04	26.26	26.5
100	PI/2 BPSK	135	69	25.95	26.16	26.50	27.0
100	PI/2 BPSK	135	138	25.83	25.93	26.15	26.5
100	PI/2 BPSK	270	0	25.81	26.12	26.42	
100	QPSK	1	1	25.27	25.48	25.79	27.0
100	QPSK	1	137	25.81	26.00	26.46	
100	QPSK	1	271	25.19	25.47	25.73	
100	QPSK	135	0	25.68	26.10	26.39	27.0
100	QPSK	135	69	25.92	26.19	26.34	
100	QPSK	135	138	25.63	25.99	26.22	
100	QPSK	270	0	25.81	25.92	25.79	26.0
100	16QAM	1	1	25.16	25.36	25.59	26.0
100	64QAM	1	1	24.38	24.72	24.83	25.5
100	256QAM	1	1	23.16	23.44	23.67	24.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.05	25.18	25.43	27.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.06	25.22	25.48	27.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.10	25.09	25.36	27.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.08	25.24	25.50	27.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.04	25.12	25.42	27.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.03	25.25	25.41	27.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.07	25.22	25.43	27.0

<n77_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.80		27.0
100	PI/2 BPSK	1	137		26.46		
100	PI/2 BPSK	1	271		26.18		
100	PI/2 BPSK	135	0		26.04		26.5
100	PI/2 BPSK	135	69		26.33		27.0
100	PI/2 BPSK	135	138		26.15		26.5
100	PI/2 BPSK	270	0		25.95		
100	QPSK	1	1		25.61		27.0
100	QPSK	1	137		26.44		
100	QPSK	1	271		26.23		
100	QPSK	135	0		25.54		27.0
100	QPSK	135	69		26.07		
100	QPSK	135	138		25.27		
100	QPSK	270	0		25.42		26.0
100	16QAM	1	1		25.36		26.0
100	64QAM	1	1		24.64		25.5
100	256QAM	1	1		23.76		24.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.48	25.52	25.54	27.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.56	25.40	25.44	27.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.42	25.41	25.59	27.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.47	25.46	25.47	27.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.59	25.45	25.42	27.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.46	25.58	25.49	27.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.50	25.60	25.42	27.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.71		24.0
100	PI/2 BPSK	1	137		23.46		
100	PI/2 BPSK	1	271		23.37		
100	PI/2 BPSK	135	0		23.08		23.5
100	PI/2 BPSK	135	69		23.39		24.0
100	PI/2 BPSK	135	138		23.20		23.5
100	PI/2 BPSK	270	0		23.22		
100	QPSK	1	1		22.74		24.0
100	QPSK	1	137		23.37		
100	QPSK	1	271		23.41		
100	QPSK	135	0		23.07		24.0
100	QPSK	135	69		23.23		
100	QPSK	135	138		23.32		
100	QPSK	270	0		22.97		23.0
100	16QAM	1	1		22.46		23.0
100	64QAM	1	1		22.21		22.5
100	256QAM	1	1		21.15		21.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.23	22.41	22.31	24.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.40	22.42	22.27	24.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.35	22.31	22.25	24.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.34	22.39	22.43	24.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.25	22.46	22.37	24.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.33	22.45	22.41	24.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.32	22.51	22.35	24.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.63		24.0
100	PI/2 BPSK	1	137		23.43		
100	PI/2 BPSK	1	271		23.31		
100	PI/2 BPSK	135	0		23.06		23.5
100	PI/2 BPSK	135	69		23.36		24.0
100	PI/2 BPSK	135	138		23.18		23.5
100	PI/2 BPSK	270	0		23.22		
100	QPSK	1	1		22.65		24.0
100	QPSK	1	137		23.27		
100	QPSK	1	271		23.41		
100	QPSK	135	0		23.04		23.0
100	QPSK	135	69		23.21		24.0
100	QPSK	135	138		23.22		23.0
100	QPSK	270	0		22.91		
100	16QAM	1	1		22.41		23.0
100	64QAM	1	1		22.21		22.5
100	256QAM	1	1		21.10		21.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.43	22.47	22.41	24.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.39	22.46	22.43	24.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.37	22.40	22.38	24.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.42	22.41	22.45	24.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.36	22.33	22.37	24.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.46	22.35	22.38	24.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.46	22.38	22.46	24.0

<n78_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.51		27.0
100	PI/2 BPSK	1	137		26.26		
100	PI/2 BPSK	1	271		26.08		
100	PI/2 BPSK	135	0		25.80		26.5
100	PI/2 BPSK	135	69		26.11		27.0
100	PI/2 BPSK	135	138		26.00		26.5
100	PI/2 BPSK	270	0		25.96		
100	QPSK	1	1		25.48		27.0
100	QPSK	1	137		26.10		
100	QPSK	1	271		26.15		
100	QPSK	135	0		25.87		27.0
100	QPSK	135	69		25.93		
100	QPSK	135	138		26.05		
100	QPSK	270	0		25.72		26.0
100	16QAM	1	1		25.24		26.0
100	64QAM	1	1		24.99		25.5
100	256QAM	1	1		23.87		24.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.28	25.18	25.12	27.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.25	25.12	25.31	27.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.11	25.17	25.26	27.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.14	25.23	25.29	27.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.15	25.25	25.28	27.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.30	25.27	25.24	27.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.29	25.26	25.27	27.0

<n78_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.47		27.0
100	PI/2 BPSK	1	137		26.17		
100	PI/2 BPSK	1	271		26.08		
100	PI/2 BPSK	135	0		25.75		26.5
100	PI/2 BPSK	135	69		26.09		27.0
100	PI/2 BPSK	135	138		25.95		26.5
100	PI/2 BPSK	270	0		25.89		
100	QPSK	1	1		25.39		27.0
100	QPSK	1	137		26.03		
100	QPSK	1	271		26.11		
100	QPSK	135	0		25.85		26.0
100	QPSK	135	69		25.92		27.0
100	QPSK	135	138		26.03		26.0
100	QPSK	270	0		25.71		
100	16QAM	1	1		25.14		26.0
100	64QAM	1	1		24.93		25.5
100	256QAM	1	1		23.87		24.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.12	25.10	25.11	27.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.15	25.18	25.09	27.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.15	25.11	25.03	27.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.05	25.12	25.03	27.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.09	25.13	25.03	27.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.15	25.13	25.08	27.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.06	25.10	25.04	27.0

Default Power Mode (MIMO 2)

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.70	22.60	22.92	24.0
100	PI/2 BPSK	1	137	23.14	22.98	23.29	
100	PI/2 BPSK	1	271	22.71	22.66	22.76	
100	PI/2 BPSK	135	0	22.70	22.54	22.75	23.5
100	PI/2 BPSK	135	69	23.04	22.87	23.15	24.0
100	PI/2 BPSK	135	138	22.75	22.79	23.07	23.5
100	PI/2 BPSK	270	0	22.88	22.87	22.98	
100	QPSK	1	1	22.52	22.50	22.74	24.0
100	QPSK	1	137	23.05	23.10	22.99	
100	QPSK	1	271	22.73	22.67	22.82	
100	QPSK	135	0	22.50	22.41	22.64	24.0
100	QPSK	135	69	22.75	22.78	22.93	
100	QPSK	135	138	22.65	22.55	22.84	
100	QPSK	270	0	22.96	22.92	22.75	23.0
100	16QAM	1	1	21.98	22.04	22.26	23.0
100	64QAM	1	1	21.26	21.27	21.40	21.5
100	256QAM	1	1	20.04	19.88	20.02	20.5
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.25	22.31	22.54	24.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.11	22.09	22.35	24.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.12	22.05	22.39	24.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	22.29	22.07	22.19	24.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	22.16	22.05	22.47	24.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.32	22.59	22.75	24.0
100	PI/2 BPSK	1	137	23.00	23.29	23.63	
100	PI/2 BPSK	1	271	22.12	22.43	22.81	
100	PI/2 BPSK	135	0	22.77	23.06	23.31	23.5
100	PI/2 BPSK	135	69	22.93	23.29	23.62	24.0
100	PI/2 BPSK	135	138	22.66	23.07	23.14	23.5
100	PI/2 BPSK	270	0	22.93	23.06	23.45	
100	QPSK	1	1	22.20	22.57	22.71	24.0
100	QPSK	1	137	22.85	23.16	23.34	
100	QPSK	1	271	22.11	22.45	22.73	
100	QPSK	135	0	22.78	23.06	23.33	24.0
100	QPSK	135	69	22.81	23.16	23.42	
100	QPSK	135	138	22.72	22.89	23.23	
100	QPSK	270	0	22.87	22.93	22.81	23.0
100	16QAM	1	1	22.13	22.44	22.65	23.0
100	64QAM	1	1	21.37	21.69	21.78	22.5
100	256QAM	1	1	20.19	20.45	20.72	21.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.27	22.42	22.70	24.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.29	22.45	22.69	24.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.07	22.49	22.71	24.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.10	22.50	22.79	24.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.11	22.17	22.43	24.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.22	22.23	22.37	24.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.06	22.24	22.51	24.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.81		24.0
100	PI/2 BPSK	1	137		23.39		
100	PI/2 BPSK	1	271		23.19		
100	PI/2 BPSK	135	0		23.09		23.5
100	PI/2 BPSK	135	69		23.38		24.0
100	PI/2 BPSK	135	138		23.12		23.5
100	PI/2 BPSK	270	0		23.00		
100	QPSK	1	1		22.52		24.0
100	QPSK	1	137		23.36		
100	QPSK	1	271		23.27		
100	QPSK	135	0		22.49		24.0
100	QPSK	135	69		23.01		
100	QPSK	135	138		22.34		
100	QPSK	270	0		22.37		23.0
100	16QAM	1	1		22.33		23.0
100	64QAM	1	1		21.72		22.5
100	256QAM	1	1		20.77		21.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.20	22.23	22.30	24.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.25	22.32	22.15	24.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.22	22.21	22.26	24.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.32	22.40	22.21	24.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.03	22.29	22.26	24.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.15	22.23	22.06	24.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.07	22.10	22.19	24.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.71		24.0
100	PI/2 BPSK	1	137		23.27		
100	PI/2 BPSK	1	271		23.29		
100	PI/2 BPSK	135	0		23.06		23.5
100	PI/2 BPSK	135	69		23.34		24.0
100	PI/2 BPSK	135	138		23.02		23.5
100	PI/2 BPSK	270	0		23.21		
100	QPSK	1	1		22.65		24.0
100	QPSK	1	137		23.27		
100	QPSK	1	271		23.28		
100	QPSK	135	0		22.94		24.0
100	QPSK	135	69		23.08		
100	QPSK	135	138		23.12		
100	QPSK	270	0		22.84		23.0
100	16QAM	1	1		22.35		23.0
100	64QAM	1	1		22.09		22.5
100	256QAM	1	1		21.01		21.5
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.15	22.38	22.25	24.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.33	22.42	22.26	24.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.18	22.17	22.18	24.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.20	22.21	22.42	24.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.23	22.46	22.24	24.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.15	22.36	22.27	24.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.15	22.51	22.16	24.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.62		24.0
100	PI/2 BPSK	1	137		23.18		
100	PI/2 BPSK	1	271		23.27		
100	PI/2 BPSK	135	0		23.01		23.5
100	PI/2 BPSK	135	69		23.28		24.0
100	PI/2 BPSK	135	138		22.92		23.5
100	PI/2 BPSK	270	0		23.16		
100	QPSK	1	1		22.65		24.0
100	QPSK	1	137		23.25		
100	QPSK	1	271		23.20		
100	QPSK	135	0		22.84		23.0
100	QPSK	135	69		23.04		24.0
100	QPSK	135	138		23.07		23.0
100	QPSK	270	0		22.79		
100	16QAM	1	1		22.34		23.0
100	64QAM	1	1		22.03		22.5
100	256QAM	1	1		20.98		21.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.43	22.47	22.41	24.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.39	22.48	22.43	24.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.38	22.40	22.38	24.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.42	22.41	22.47	24.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.36	22.41	22.37	24.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.46	22.48	22.38	24.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.46	22.49	22.46	24.0

Default Power Mode (Aux)

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	18.73	18.73	19.00	
100	PI/2 BPSK	1	137	19.31	19.41	19.47	20.0
100	PI/2 BPSK	1	271	18.63	18.65	18.89	
100	PI/2 BPSK	135	0	19.05	18.89	19.15	20.0
100	PI/2 BPSK	135	69	19.16	19.22	19.36	20.0
100	PI/2 BPSK	135	138	19.08	18.88	19.26	
100	PI/2 BPSK	270	0	19.29	19.35	19.38	20.0
100	QPSK	1	1	18.58	18.46	18.61	
100	QPSK	1	137	19.10	19.10	19.02	20.0
100	QPSK	1	271	18.58	18.59	18.74	
100	QPSK	135	0	18.48	18.45	18.69	
100	QPSK	135	69	18.86	18.69	19.00	20.0
100	QPSK	135	138	18.79	18.60	18.84	
100	QPSK	270	0	18.77	18.79	18.75	20.0
100	16QAM	1	1	18.08	19.02	18.36	20.0
100	64QAM	1	1	18.41	18.83	18.49	20.0
100	256QAM	1	1	18.50	18.52	18.86	20.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	18.51	18.64	18.75	20.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	18.13	18.02	18.36	20.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	18.07	18.07	18.42	20.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	18.09	18.08	18.23	20.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	18.12	18.04	18.35	20.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	19.40	19.59	19.86	
100	PI/2 BPSK	1	137	20.28	20.51	20.62	21.0
100	PI/2 BPSK	1	271	19.20	19.40	19.74	
100	PI/2 BPSK	135	0	20.20	20.29	20.55	21.0
100	PI/2 BPSK	135	69	20.21	20.54	20.65	21.0
100	PI/2 BPSK	135	138	20.17	20.40	20.61	
100	PI/2 BPSK	270	0	20.33	20.62	20.90	21.0
100	QPSK	1	1	19.18	19.48	19.84	
100	QPSK	1	137	19.89	20.10	20.40	21.0
100	QPSK	1	271	19.21	19.40	19.72	
100	QPSK	135	0	19.72	19.98	20.24	
100	QPSK	135	69	19.93	20.24	20.47	21.0
100	QPSK	135	138	19.62	19.88	20.22	
100	QPSK	270	0	20.68	20.88	20.75	21.0
100	16QAM	1	1	20.11	20.39	20.56	21.0
100	64QAM	1	1	19.87	20.13	20.26	21.0
100	256QAM	1	1	19.69	19.97	20.12	21.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	19.19	19.41	19.70	21.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	19.26	19.37	19.75	21.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	19.03	19.39	19.59	21.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	19.19	19.44	19.63	21.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	19.19	19.40	19.67	21.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	19.35	19.28	19.58	21.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	19.22	19.35	19.81	21.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.83		21.0
100	PI/2 BPSK	1	137		20.55		
100	PI/2 BPSK	1	271		20.12		
100	PI/2 BPSK	135	0		20.48		21.0
100	PI/2 BPSK	135	69		20.52		21.0
100	PI/2 BPSK	135	138		20.47		21.0
100	PI/2 BPSK	270	0		20.51		
100	QPSK	1	1		19.59		21.0
100	QPSK	1	137		20.42		
100	QPSK	1	271		20.26		
100	QPSK	135	0		19.65		21.0
100	QPSK	135	69		20.10		
100	QPSK	135	138		19.32		
100	QPSK	270	0		20.23		21.0
100	16QAM	1	1		20.45		21.0
100	64QAM	1	1		20.24		21.0
100	256QAM	1	1		20.17		21.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.32	19.18	19.27	21.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.19	19.36	19.26	21.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.24	19.21	19.21	21.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.15	19.22	19.10	21.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.14	19.25	19.21	21.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.13	19.16	19.22	21.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.21	19.05	19.18	21.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		19.65		21.0
100	PI/2 BPSK	1	137		20.65		
100	PI/2 BPSK	1	271		20.31		
100	PI/2 BPSK	135	0		20.55		21.0
100	PI/2 BPSK	135	69		20.22		21.0
100	PI/2 BPSK	135	138		20.57		21.0
100	PI/2 BPSK	270	0		20.49		
100	QPSK	1	1		19.70		21.0
100	QPSK	1	137		20.21		
100	QPSK	1	271		20.24		
100	QPSK	135	0		20.01		21.0
100	QPSK	135	69		20.06		
100	QPSK	135	138		20.22		
100	QPSK	270	0		20.37		21.0
100	16QAM	1	1		20.37		21.0
100	64QAM	1	1		20.40		21.0
100	256QAM	1	1		20.46		21.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	19.21	19.36	19.26	21.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	19.31	19.36	19.27	21.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	19.25	19.24	19.19	21.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	19.15	19.23	19.36	21.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	19.14	19.28	19.35	21.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	19.23	19.41	19.23	21.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	19.20	19.48	19.27	21.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.57		21.0
100	PI/2 BPSK	1	137		20.64		
100	PI/2 BPSK	1	271		20.30		
100	PI/2 BPSK	135	0		20.45		21.0
100	PI/2 BPSK	135	69		20.15		21.0
100	PI/2 BPSK	135	138		20.54		21.0
100	PI/2 BPSK	270	0		20.42		
100	QPSK	1	1		19.66		21.0
100	QPSK	1	137		20.20		
100	QPSK	1	271		20.16		
100	QPSK	135	0		19.94		20.0
100	QPSK	135	69		20.01		21.0
100	QPSK	135	138		20.22		20.0
100	QPSK	270	0		20.36		
100	16QAM	1	1		20.36		21.0
100	64QAM	1	1		20.37		21.0
100	256QAM	1	1		20.46		21.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.22	19.36	19.25	21.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.30	19.35	19.22	21.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.24	19.22	19.18	21.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.15	19.23	19.34	21.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.14	19.28	19.33	21.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.22	19.41	19.23	21.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.23	19.48	19.22	21.0

Reduced Power Mode (Main)

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	18.56	18.77	18.85	20.0
20	PI/2 BPSK	1	53	18.62	19.11	18.96	
20	PI/2 BPSK	1	104	18.53	18.90	18.78	
20	PI/2 BPSK	50	0	18.38	18.70	18.73	20.0
20	PI/2 BPSK	50	28	18.73	19.04	18.97	20.0
20	PI/2 BPSK	50	56	18.68	19.03	18.86	20.0
20	PI/2 BPSK	100	0	18.77	19.00	18.97	
20	QPSK	1	1	18.38	18.68	18.74	20.0
20	QPSK	1	53	18.69	18.98	19.05	
20	QPSK	1	104	18.70	18.94	18.85	
20	QPSK	50	0	18.44	18.71	18.68	20.0
20	QPSK	50	28	18.61	18.95	18.87	20.0
20	QPSK	50	56	18.74	19.00	19.07	20.0
20	QPSK	100	0	18.67	18.90	18.83	
20	16QAM	1	1	18.46	18.72	18.66	20.0
20	64QAM	1	1	18.10	18.46	18.38	20.0
20	256QAM	1	1	18.58	18.90	18.85	19.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	18.43	18.73	18.71	20.0
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	18.53	18.70	18.85	20.0
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	18.38	18.73	18.67	20.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	22.47	22.45	22.45	23.0
20	PI/2 BPSK	1	53	22.54	22.65	22.51	
20	PI/2 BPSK	1	104	22.41	22.56	22.41	
20	PI/2 BPSK	50	0	22.42	22.56	22.38	23.0
20	PI/2 BPSK	50	28	22.55	22.62	22.61	23.0
20	PI/2 BPSK	50	56	22.46	22.59	22.49	23.0
20	PI/2 BPSK	100	0	22.46	22.53	22.40	
20	QPSK	1	1	22.31	22.43	22.40	23.0
20	QPSK	1	53	22.47	22.52	22.49	
20	QPSK	1	104	22.38	22.47	22.40	
20	QPSK	50	0	22.48	22.57	22.43	23.0
20	QPSK	50	28	22.45	22.59	22.56	23.0
20	QPSK	50	56	22.44	22.52	22.50	23.0
20	QPSK	100	0	22.49	22.53	22.37	
20	16QAM	1	1	22.23	22.41	22.26	23.0
20	64QAM	1	1	21.98	22.12	21.92	22.5
20	256QAM	1	1	20.47	20.45	20.30	20.5
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	22.38	22.29	22.41	23.0
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	22.32	22.38	22.44	23.0
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	22.29	22.33	22.43	23.0

<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				502000	507000	512000	
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	17.76	17.86	17.61	18.0
20	PI/2 BPSK	1	53	17.78	17.89	17.74	
20	PI/2 BPSK	1	104	17.61	17.82	17.60	
20	PI/2 BPSK	50	0	17.68	17.83	17.63	18.0
20	PI/2 BPSK	50	28	17.74	17.88	17.73	18.0
20	PI/2 BPSK	50	56	17.62	17.82	17.67	18.0
20	PI/2 BPSK	100	0	17.72	17.81	17.73	
20	QPSK	1	1	17.71	17.83	17.51	18.0
20	QPSK	1	53	17.73	17.86	17.63	
20	QPSK	1	104	17.68	17.80	17.68	
20	QPSK	50	0	17.76	17.75	17.71	18.0
20	QPSK	50	28	17.76	17.73	17.68	18.0
20	QPSK	50	56	17.77	17.73	17.69	18.0
20	QPSK	100	0	17.77	17.71	17.66	
20	16QAM	1	1	17.59	17.86	17.65	18.0
20	64QAM	1	1	17.34	17.54	17.23	18.0
20	256QAM	1	1	17.33	17.49	17.35	18.0
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	17.58	17.80	17.71	18.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	17.73	17.76	17.61	18.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	17.71	17.76	17.54	18.0

<n25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376500	381000	
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	18.65	18.74	18.73	20.0
20	PI/2 BPSK	1	53	18.79	18.89	18.86	
20	PI/2 BPSK	1	104	18.72	18.82	18.71	
20	PI/2 BPSK	50	0	18.61	18.72	18.61	20.0
20	PI/2 BPSK	50	28	18.75	18.87	18.86	20.0
20	PI/2 BPSK	50	56	18.74	18.83	18.82	20.0
20	PI/2 BPSK	100	0	18.74	18.78	18.77	
20	QPSK	1	1	18.60	18.71	18.64	20.0
20	QPSK	1	53	18.69	18.73	18.82	
20	QPSK	1	104	18.53	18.81	18.76	
20	QPSK	50	0	18.45	18.73	18.68	20.0
20	QPSK	50	28	18.74	18.76	18.81	20.0
20	QPSK	50	56	18.75	18.73	18.69	20.0
20	QPSK	100	0	18.81	18.73	18.88	
20	16QAM	1	1	18.41	18.67	18.53	20.0
20	64QAM	1	1	18.22	18.44	18.41	20.0
20	256QAM	1	1	18.70	18.87	18.81	19.5
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	18.49	18.60	18.61	20.0
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	18.57	18.66	18.62	20.0
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	18.48	18.59	18.63	20.0

<n30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				462000			
Frequency (MHz)				2310			
10	PI/2 BPSK	1	1	15.69			16.5
10	PI/2 BPSK	1	26	15.92			
10	PI/2 BPSK	1	50	15.85			
10	PI/2 BPSK	25	0	15.77			16.5
10	PI/2 BPSK	25	14	15.79			16.5
10	PI/2 BPSK	25	27	15.63			16.5
10	PI/2 BPSK	50	0	15.83			
10	QPSK	1	1	15.71			16.5
10	QPSK	1	26	15.79			
10	QPSK	1	50	15.88			
10	QPSK	25	0	15.78			16.5
10	QPSK	25	14	15.78			16.5
10	QPSK	25	27	15.64			16.5
10	QPSK	50	0	15.72			
10	16QAM	1	1	15.64			16.5
10	64QAM	1	1	15.36			16.5
10	256QAM	1	1	15.81			16.5
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	15.25	15.31	15.43	16.5

<n38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				516000	519000	522000	
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	18.66	18.78	18.68	19.5
20	PI/2 BPSK	1	26	18.60	18.72	18.66	
20	PI/2 BPSK	1	49	18.58	18.70	18.45	
20	PI/2 BPSK	25	0	18.31	18.60	18.37	19.5
20	PI/2 BPSK	25	13	18.47	18.72	18.54	19.5
20	PI/2 BPSK	25	26	18.58	18.71	18.63	19.5
20	PI/2 BPSK	50	0	18.44	18.69	18.49	
20	QPSK	1	1	18.49	18.63	18.40	19.5
20	QPSK	1	26	18.41	18.64	18.36	
20	QPSK	1	49	18.57	18.72	18.43	
20	QPSK	25	0	18.40	18.65	18.46	19.5
20	QPSK	25	13	18.51	18.73	18.56	
20	QPSK	25	26	18.48	18.67	18.56	
20	QPSK	50	0	18.56	18.73	18.52	19.5
20	16QAM	1	1	18.40	18.56	18.26	19.5
20	64QAM	1	1	18.15	18.30	18.14	19.5
20	256QAM	1	1	18.37	18.54	18.25	19.5
Channel				515502	519000	522498	Tune-up limit (dBm)
Frequency (MHz)				2577.51	2595	2612.49	
15	PI/2 BPSK	1	1	18.42	18.45	18.40	19.5
Channel				515004	519000	522996	Tune-up limit (dBm)
Frequency (MHz)				2575.02	2595	2614.98	
10	PI/2 BPSK	1	1	18.34	18.50	18.43	19.5
Channel				514500	519000	523500	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	PI/2 BPSK	1	1	18.39	18.48	18.41	19.5

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	16.99	16.99	16.62	
100	PI/2 BPSK	1	137	17.09	17.15	17.47	18.0
100	PI/2 BPSK	1	271	16.73	16.78	16.72	
100	PI/2 BPSK	135	0	16.47	16.47	16.42	18.0
100	PI/2 BPSK	135	69	16.95	16.97	16.94	18.0
100	PI/2 BPSK	135	138	16.92	16.93	16.85	
100	PI/2 BPSK	270	0	16.79	16.87	16.86	18.0
100	QPSK	1	1	16.78	16.86	16.86	
100	QPSK	1	137	16.86	16.95	16.88	18.0
100	QPSK	1	271	16.55	16.64	16.58	
100	QPSK	135	0	16.47	16.55	16.52	
100	QPSK	135	69	16.93	16.93	16.86	18.0
100	QPSK	135	138	16.88	16.90	16.89	
100	QPSK	270	0	16.98	16.98	16.94	18.0
100	16QAM	1	1	16.75	16.81	16.79	18.0
100	64QAM	1	1	16.53	17.05	16.58	18.0
100	256QAM	1	1	16.97	17.02	16.95	18.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	16.91	16.84	16.98	18.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	16.87	16.85	16.90	18.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	16.89	16.87	16.89	18.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	16.85	16.95	16.91	18.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	16.88	16.94	16.87	18.0

<n41_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	19.84	19.64	19.58	21.0
100	PI/2 BPSK	1	137	20.07	20.12	20.11	
100	PI/2 BPSK	1	271	19.67	19.72	19.64	
100	PI/2 BPSK	135	0	19.34	19.27	19.31	21.0
100	PI/2 BPSK	135	69	19.78	19.87	19.84	21.0
100	PI/2 BPSK	135	138	19.73	19.75	19.74	21.0
100	PI/2 BPSK	270	0	19.76	19.79	19.78	
100	QPSK	1	1	19.34	19.25	19.41	21.0
100	QPSK	1	137	19.85	19.85	19.73	
100	QPSK	1	271	19.46	19.49	19.44	
100	QPSK	135	0	19.35	19.53	19.37	21.0
100	QPSK	135	69	19.87	19.88	19.68	
100	QPSK	135	138	19.88	19.70	19.71	
100	QPSK	270	0	19.92	19.82	19.83	21.0
100	16QAM	1	1	19.64	19.74	19.64	21.0
100	64QAM	1	1	19.41	19.62	19.54	21.0
100	256QAM	1	1	19.23	19.34	19.45	21.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	19.87	19.81	19.66	21.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	19.80	19.73	19.46	21.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	19.75	19.62	19.41	21.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	19.65	19.60	19.43	21.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	19.74	19.77	19.40	21.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	20.66	20.90	20.92	21.5
40	PI/2 BPSK	1	108	21.06	21.23	21.20	
40	PI/2 BPSK	1	214	20.12	20.39	20.41	
40	PI/2 BPSK	108	0	20.65	20.81	20.84	21.5
40	PI/2 BPSK	108	54	20.81	21.15	21.08	21.5
40	PI/2 BPSK	108	108	20.68	20.81	20.82	21.5
40	PI/2 BPSK	216	0	20.57	20.94	20.87	
40	QPSK	1	1	20.15	20.40	20.29	21.5
40	QPSK	1	108	20.74	20.91	20.96	
40	QPSK	1	214	20.25	20.37	20.41	
40	QPSK	108	0	20.58	20.84	20.81	21.5
40	QPSK	108	54	20.95	21.03	20.96	21.5
40	QPSK	108	108	20.67	20.86	20.88	21.5
40	QPSK	216	0	20.68	20.86	20.86	
40	16QAM	1	1	20.26	20.42	20.43	21.5
40	64QAM	1	1	20.07	20.17	20.17	21.5
40	256QAM	1	1	19.39	19.43	19.49	19.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	20.92	21.03	21.16	21.5
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	21.00	21.03	21.06	21.5
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	20.89	20.95	21.17	21.5
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	21.01	21.03	21.13	21.5

<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	18.27	18.04	18.42	19.0
100	PI/2 BPSK	1	137	18.52	18.99	18.92	
100	PI/2 BPSK	1	271	18.42	18.51	18.36	
100	PI/2 BPSK	135	0	18.36	18.51	18.53	19.0
100	PI/2 BPSK	135	69	18.70	18.77	18.63	19.0
100	PI/2 BPSK	135	138	18.43	18.62	18.58	19.0
100	PI/2 BPSK	270	0	18.52	18.60	18.50	
100	QPSK	1	1	17.93	18.00	17.97	19.0
100	QPSK	1	137	18.58	18.62	18.62	
100	QPSK	1	271	18.34	18.42	18.41	
100	QPSK	135	0	18.43	18.53	18.48	19.0
100	QPSK	135	69	18.55	18.61	18.55	
100	QPSK	135	138	18.76	18.80	18.72	
100	QPSK	270	0	18.62	18.71	18.69	19.0
100	16QAM	1	1	17.91	17.96	17.92	19.0
100	64QAM	1	1	17.83	17.83	17.82	19.0
100	256QAM	1	1	18.07	18.16	18.09	19.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	17.82	17.98	18.21	19.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	17.93	18.03	18.11	19.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	18.01	18.10	18.03	19.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	18.03	18.06	18.05	19.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	17.98	17.93	17.98	19.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	17.96	17.85	18.01	19.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	17.92	17.99	18.05	19.0

<n77>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		18.31		19.0
100	PI/2 BPSK	1	137		18.94		
100	PI/2 BPSK	1	271		18.74		
100	PI/2 BPSK	135	0		18.81		19.0
100	PI/2 BPSK	135	69		18.83		19.0
100	PI/2 BPSK	135	138		18.82		19.0
100	PI/2 BPSK	270	0		18.86		
100	QPSK	1	1		18.30		19.0
100	QPSK	1	137		18.85		
100	QPSK	1	271		18.72		
100	QPSK	135	0		18.81		19.0
100	QPSK	135	69		18.86		
100	QPSK	135	138		18.80		
100	QPSK	270	0		18.93		19.0
100	16QAM	1	1		18.19		19.0
100	64QAM	1	1		18.03		19.0
100	256QAM	1	1		18.37		19.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	18.19	18.30	18.11	19.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	18.22	18.23	18.21	19.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	18.27	18.11	18.19	19.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	18.13	18.29	18.24	19.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	18.26	18.21	18.30	19.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	18.11	18.24	18.30	19.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	18.26	18.27	18.15	19.0

<n77_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	21.09	20.99	21.38	22.0
100	PI/2 BPSK	1	137	21.44	21.95	21.75	
100	PI/2 BPSK	1	271	21.60	21.50	21.43	
100	PI/2 BPSK	135	0	21.23	21.63	21.51	22.0
100	PI/2 BPSK	135	69	21.78	21.81	21.65	22.0
100	PI/2 BPSK	135	138	21.55	21.45	21.47	22.0
100	PI/2 BPSK	270	0	21.66	21.68	21.36	
100	QPSK	1	1	21.04	21.07	21.07	22.0
100	QPSK	1	137	21.77	21.57	21.60	
100	QPSK	1	271	21.41	21.43	21.56	
100	QPSK	135	0	21.43	21.69	21.29	22.0
100	QPSK	135	69	21.58	21.72	21.64	
100	QPSK	135	138	21.90	21.75	21.57	
100	QPSK	270	0	21.78	21.83	21.86	22.0
100	16QAM	1	1	20.86	20.91	21.00	22.0
100	64QAM	1	1	20.77	20.78	20.81	22.0
100	256QAM	1	1	21.27	21.33	21.11	22.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	21.09	20.97	21.27	22.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	20.96	20.80	21.21	22.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	21.08	20.96	21.25	22.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	20.97	20.81	21.34	22.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	20.98	20.90	21.34	22.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	21.04	20.79	21.19	22.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	21.04	20.86	21.28	22.0

<n77_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		21.39		22.0
100	PI/2 BPSK	1	137		21.94		
100	PI/2 BPSK	1	271		21.59		
100	PI/2 BPSK	135	0		21.74		22.0
100	PI/2 BPSK	135	69		21.78		22.0
100	PI/2 BPSK	135	138		21.70		22.0
100	PI/2 BPSK	270	0		21.93		
100	QPSK	1	1		21.43		22.0
100	QPSK	1	137		21.86		
100	QPSK	1	271		21.91		
100	QPSK	135	0		21.85		22.0
100	QPSK	135	69		21.84		
100	QPSK	135	138		21.93		
100	QPSK	270	0		21.92		22.0
100	16QAM	1	1		21.06		22.0
100	64QAM	1	1		21.17		22.0
100	256QAM	1	1		21.24		22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	21.36	21.24	21.22	22.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	21.31	21.29	21.38	22.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	21.33	21.31	21.39	22.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	21.19	21.38	21.21	22.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	21.33	21.22	21.38	22.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	21.25	21.38	21.27	22.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	21.25	21.32	21.27	22.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		17.96		19.0
100	PI/2 BPSK	1	137		18.48		
100	PI/2 BPSK	1	271		18.10		
100	PI/2 BPSK	135	0		18.47		19.0
100	PI/2 BPSK	135	69		18.47		19.0
100	PI/2 BPSK	135	138		18.44		19.0
100	PI/2 BPSK	270	0		18.43		
100	QPSK	1	1		17.99		19.0
100	QPSK	1	137		18.41		
100	QPSK	1	271		18.01		
100	QPSK	135	0		18.47		19.0
100	QPSK	135	69		18.47		
100	QPSK	135	138		18.40		
100	QPSK	270	0		18.44		19.0
100	16QAM	1	1		17.90		19.0
100	64QAM	1	1		17.70		19.0
100	256QAM	1	1		18.13		19.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	17.88	17.93	17.89	19.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	17.91	17.99	17.85	19.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	17.86	17.88	17.75	19.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	17.88	17.90	17.79	19.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	17.89	17.93	17.86	19.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	17.75	17.86	17.73	19.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	17.89	17.93	17.90	19.0

<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		17.96		19.0
100	PI/2 BPSK	1	137		18.39		
100	PI/2 BPSK	1	271		18.06		
100	PI/2 BPSK	135	0		18.37		19.0
100	PI/2 BPSK	135	69		18.37		19.0
100	PI/2 BPSK	135	138		18.44		19.0
100	PI/2 BPSK	270	0		18.37		
100	QPSK	1	1		17.92		19.0
100	QPSK	1	137		18.38		
100	QPSK	1	271		18.00		
100	QPSK	135	0		18.44		19.0
100	QPSK	135	69		18.40		19.0
100	QPSK	135	138		18.37		19.0
100	QPSK	270	0		18.36		
100	16QAM	1	1		17.82		19.0
100	64QAM	1	1		17.67		19.0
100	256QAM	1	1		18.12		19.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	17.88	17.93	17.89	19.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	17.90	17.99	17.86	19.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	17.86	17.89	17.75	19.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	17.84	17.86	17.75	19.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	17.85	17.92	17.86	19.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	17.74	17.76	17.74	19.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	17.89	17.88	17.84	19.0

<n78_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		21.10		22.0
100	PI/2 BPSK	1	137		21.58		
100	PI/2 BPSK	1	271		20.97		
100	PI/2 BPSK	135	0		21.48		22.0
100	PI/2 BPSK	135	69		21.51		22.0
100	PI/2 BPSK	135	138		21.25		22.0
100	PI/2 BPSK	270	0		21.57		
100	QPSK	1	1		20.87		22.0
100	QPSK	1	137		21.57		
100	QPSK	1	271		21.01		
100	QPSK	135	0		21.45		22.0
100	QPSK	135	69		21.36		
100	QPSK	135	138		21.50		
100	QPSK	270	0		21.54		22.0
100	16QAM	1	1		20.75		22.0
100	64QAM	1	1		20.62		22.0
100	256QAM	1	1		21.23		22.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	21.07	21.07	20.97	22.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	21.06	21.02	20.98	22.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	20.94	21.07	21.01	22.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	21.02	20.94	21.00	22.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	21.06	21.04	20.97	22.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	21.04	20.94	21.04	22.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	21.07	21.04	21.04	22.0

<n78_HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		21.09		22.0
100	PI/2 BPSK	1	137		21.57		
100	PI/2 BPSK	1	271		20.97		
100	PI/2 BPSK	135	0		21.47		22.0
100	PI/2 BPSK	135	69		21.42		22.0
100	PI/2 BPSK	135	138		21.22		22.0
100	PI/2 BPSK	270	0		21.49		
100	QPSK	1	1		20.87		22.0
100	QPSK	1	137		21.56		
100	QPSK	1	271		20.95		
100	QPSK	135	0		21.36		22.0
100	QPSK	135	69		21.28		22.0
100	QPSK	135	138		21.40		22.0
100	QPSK	270	0		21.54		
100	16QAM	1	1		20.65		22.0
100	64QAM	1	1		20.53		22.0
100	256QAM	1	1		21.19		22.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	21.00	21.05	21.02	22.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	20.99	20.98	21.01	22.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	20.94	20.96	20.98	22.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	21.03	21.00	21.01	22.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	20.98	21.03	21.00	22.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	20.96	20.97	21.00	22.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	21.00	20.97	20.94	22.0

<SAR test exclusion table>

General Note:

1. The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
2. Maximum power is the source-based time-average power and represents the maximum RF output power among production units
3. Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
4. Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
5. Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:
   [(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   - f(GHz) is the RF channel transmit frequency in GHz
   - Power and distance are rounded to the nearest mW and mm before calculation
   - The result is rounded to one decimal place for comparison
6. Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
   a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
   b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

<WWAN Main Antenna>

	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71/n71	LTE Band 12	LTE Band 13	LTE Band 14	LTE Band 17	LTE Band 5/n5	LTE Band 26	LTE Band 4	LTE Band 66/n66	LTE Band 2/n2	LTE Band 25/n25	LTE Band 30/n30	LTE Band 7/n7	LTE Band 38/n38	LTE Band 41/n41	LTE Band 48	LTE Band n77/n78
Exposure Position	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	713	848	848	1754	1779	1909	1914	2312	2567	2617.5	2687	3697	3975
	Maximum power (dBm)	24.5	24.5	24.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	23.0	24.0	24.0	24.0	21.0	24.0
	Maximum rated power(mW)	281.84	281.84	281.84	316.23	316.23	316.23	316.23	316.23	316.23	316.23	251.19	251.19	251.19	251.19	199.53	251.19	251.19	251.19	125.89	251.19
Bottom of Laptop	Separation distance(mm)	5.0																			
	exclusion threshold	51.9	74.6	77.8	52.7	53.5	56.0	56.4	53.4	58.2	58.2	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	48.4	100.2
	Testing required?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

<WWAN MIMO Antenna>

Exposure Position	Wireless Interface	WCDMA Band IV	WCDMA Band II	LTE Band 4	LTE Band 66/n66	LTE Band 2/n2	LTE Band 25/n25	LTE Band 30/n30	LTE Band 7/n7	LTE Band 38/n38	LTE Band 41/n41	LTE Band 48	LTE Band n77/n78
	Calculated Frequency (MHz)	1750	1907	1754	1779	1909	1914	2312	2567	2617	2687	3697	3975
	Maximum power (dBm)	24.0	24.0	24.0	24.0	24.0	24.0	23.0	24.0	24.0	24.0	21.0	24.0
	Maximum rated power(mW)	251.19	251.19	251.19	251.19	251.19	251.19	199.53	251.19	251.19	251.19	125.89	251.19
Bottom of Laptop	Separation distance(mm)	210.0											
	exclusion threshold	1713.0	1709.0	1713.0	1712.0	1709.0	1708.0	1699.0	1694.0	1693.0	1692.0	1678.0	1675.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No

<WWAN MIMO 2 Antenna>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77/n78
	Calculated Frequency (MHz)	2687	3975
	Maximum power (dBm)	24.0	24.0
	Maximum rated power(mW)	251.19	251.19
Bottom of Laptop	Separation distance(mm)	210.0	
	exclusion threshold	1692.0	1675.0
	Testing required?	No	No

<WWAN Aux Antenna>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77/n78
	Calculated Frequency (MHz)	2687	3975
	Maximum power (dBm)	20.0	21.0
	Maximum rated power(mW)	100.00	125.89
Bottom of Laptop	Separation distance(mm)	5.0	
	exclusion threshold	32.8	50.2
	Testing required?	Yes	Yes

13. 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
   c. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
4. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in sensor trigger distance was performed according to section 4. The test results just verification the sensor trigger distance to meet KDB 616217 requirement, when in normal usage will not operate at trigger distance, therefore, these results were not using performed Sim-Tx analysis

UMTS Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not 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.
6. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17 SAR test was covered by Band 25/66/26/12; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. The maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion.
   b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

5G NR Note:

1. The device support SCS 15KHz and 30KHz for NR FDD and TDD and have the same maximum power, in this report only select SCS 15KHz for NR FDD and SCS 30KHz for NR TDD power measurement, due to SCS 15KHz for FDD and SCS 30KHz for TDD have highest support bandwidth, and the NR SAR is < 1g SAR 1.45W/kg. Output power and SAR measurement for SCS30KHz for FDD and SCS15KHz for TDD shall be not necessary.
2. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
   a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
   b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   d. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   e. For 5G FR1 n5//n41/n66/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
   f. The NR n2/38 SAR test was covered by NR n25/41; due to SAR test for overlapping NR bands can be reduced if the maximum power including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion and the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
   g. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission

13.1 Body SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	25mm	SPEED	OFF	9262	1852.4	23.16	24.50	1.361	0.03	0.095	0.129
	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	9262	1852.4	18.21	19.50	1.346	-0.03	0.673	0.906
	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	9400	1880	18.15	19.50	1.365	0.12	0.681	0.929
01	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	9538	1907.6	18.14	19.50	1.368	0.04	0.705	0.964
	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	9538	1907.6	18.14	19.50	1.368	0.18	0.324	0.443
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	25mm	SPEED	OFF	1312	1712.4	23.30	24.50	1.318	0.05	0.091	0.120
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	1312	1712.4	19.87	21.00	1.297	-0.15	0.720	0.934
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	1413	1732.6	19.71	21.00	1.346	0	0.760	1.023
02	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	1513	1752.6	19.77	21.00	1.327	0.01	0.862	1.144
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	1513	1752.6	19.77	21.00	1.327	0.02	0.804	1.067
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	1312	1712.4	19.87	21.00	1.297	-0.19	0.675	0.876
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	1413	1732.6	19.71	21.00	1.346	0.04	0.699	0.941
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	25mm	SPEED	OFF	4182	836.4	23.20	24.50	1.349	0.03	0.094	0.127
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	4182	836.4	20.46	22.00	1.426	-0.01	0.554	0.790
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	4132	826.4	20.41	22.00	1.442	0.05	0.612	0.883
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	SPEED	ON	4233	846.6	20.35	22.00	1.462	0.08	0.452	0.661
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	4132	826.4	20.41	22.00	1.442	0.19	0.729	1.051
03	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	4182	836.4	20.46	22.00	1.426	0.02	0.739	1.054
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	4233	846.6	20.35	22.00	1.462	0.14	0.712	1.041

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	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_Main	20M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	21100	2535	22.70	24.00	1.349	0.05	0.008	0.011
	LTE Band 7_Main	20M	QPSK	50	0	Bottom of Laptop	25mm	SPEED	OFF	21100	2535	21.76	23.00	1.330	-0.08	0.006	0.008
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	21100	2535	18.43	18.50	1.016	-0.18	0.865	0.879
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	20850	2510	18.35	18.50	1.035	0.07	0.960	0.994
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	21350	2560	18.39	18.50	1.026	-0.14	0.778	0.798
	LTE Band 7_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	21100	2535	18.38	18.50	1.028	0.05	0.855	0.879
	LTE Band 7_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	20850	2510	18.35	18.50	1.035	0.06	0.951	0.984
	LTE Band 7_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	21350	2560	18.34	18.50	1.038	0.12	0.909	0.943
	LTE Band 7_Main	20M	QPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	21100	2535	18.26	18.50	1.057	-0.11	0.778	0.822
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	20850	2510	17.99	18.50	1.125	0.04	0.881	0.991
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	21100	2535	17.97	18.50	1.130	0.03	0.867	0.980
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	21350	2560	17.80	18.50	1.175	-0.08	0.838	0.985
04	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	20850	2510	18.35	18.50	1.035	0.13	1.040	1.077
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	21100	2535	18.43	18.50	1.016	-0.07	1.000	1.016
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	21350	2560	18.39	18.50	1.026	-0.13	0.836	0.857
05	LTE Band 12_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	23095	707.5	23.82	25.00	1.312	0	0.858	1.126
	LTE Band 12_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	SPEED	OFF	23095	707.5	22.80	24.00	1.318	0.15	0.746	0.983
	LTE Band 12_Main	10M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	OFF	23095	707.5	22.79	24.00	1.321	-0.07	0.723	0.955
	LTE Band 12_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	-0.1	0.793	1.041
	LTE Band 13_Main	10M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	23230	782	23.85	25.00	1.303	0.06	0.060	0.078
	LTE Band 13_Main	10M	QPSK	25	0	Bottom of Laptop	25mm	SPEED	OFF	23230	782	22.81	24.00	1.315	0.04	0.052	0.068
	LTE Band 13_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	23230	782	23.85	24.50	1.161	-0.09	0.803	0.933
	LTE Band 13_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	SPEED	ON	23230	782	22.81	24.00	1.315	0.13	0.760	1.000
	LTE Band 13_Main	10M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	23230	782	22.83	24.00	1.309	-0.18	0.790	1.034
06	LTE Band 13_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	23230	782	23.85	24.50	1.161	-0.05	0.960	1.115
	LTE Band 14_Main	10M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	23330	793	24.23	25.00	1.194	-0.15	0.069	0.082
	LTE Band 14_Main	10M	QPSK	25	0	Bottom of Laptop	25mm	SPEED	OFF	23330	793	22.80	24.00	1.318	0.07	0.056	0.074
07	LTE Band 14_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	23330	793	24.23	24.50	1.064	0.13	1.080	1.149
	LTE Band 14_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	SPEED	ON	23330	793	22.80	24.00	1.318	0.05	0.869	1.146
	LTE Band 14_Main	10M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	23330	793	22.80	24.00	1.318	0.07	0.865	1.140
	LTE Band 14_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	23330	793	24.23	24.50	1.064	-0.09	1.040	1.107
	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	26340	1880	22.71	24.00	1.346	-0.06	0.089	0.120
	LTE Band 25_Main	20M	QPSK	50	0	Bottom of Laptop	25mm	SPEED	OFF	26340	1880	21.74	23.00	1.337	0.05	0.073	0.098
08	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	26590	1905	18.94	20.00	1.276	-0.03	0.786	1.003
	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	26340	1880	18.89	20.00	1.291	0.08	0.739	0.954
	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	26140	1860	18.87	20.00	1.297	-0.12	0.730	0.947
	LTE Band 25_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	26590	1905	18.92	20.00	1.282	0.09	0.744	0.954
	LTE Band 25_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	26340	1880	18.91	20.00	1.285	-0.1	0.718	0.923
	LTE Band 25_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	26140	1860	18.91	20.00	1.285	0.05	0.721	0.927
	LTE Band 25_Main	20M	QPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	26590	1905	18.89	20.00	1.291	-0.1	0.740	0.956
	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	26590	1905	18.94	20.00	1.276	-0.11	0.411	0.525
	LTE Band 26_Main	15M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	26865	831.5	23.75	25.00	1.334	-0.03	0.106	0.141
	LTE Band 26_Main	15M	QPSK	36	0	Bottom of Laptop	25mm	SPEED	OFF	26865	831.5	22.74	24.00	1.337	0.09	0.087	0.116
	LTE Band 26_Main	15M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	26865	831.5	21.84	22.50	1.164	0.04	0.739	0.860
	LTE Band 26_Main	15M	QPSK	36	0	Bottom of Laptop	0mm	SPEED	ON	26865	831.5	21.78	22.50	1.180	-0.1	0.702	0.829
	LTE Band 26_Main	15M	QPSK	75	0	Bottom of Laptop	0mm	SPEED	ON	26865	831.5	21.81	22.50	1.172	0.09	0.711	0.833
	LTE Band 5B_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	20575	841.5	21.16	22.50	1.361	0.06	0.617	0.840
09	LTE Band 26_Main	15M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	26865	831.5	21.84	22.50	1.164	0.05	0.813	0.946

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	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 30_Main	10M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	27710	2310	21.86	23.00	1.300	0.08	0.085	0.111
	LTE Band 30_Main	10M	QPSK	25	0	Bottom of Laptop	25mm	SPEED	OFF	27710	2310	20.77	22.00	1.327	-0.04	0.069	0.092
	LTE Band 30_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	27710	2310	15.42	16.50	1.282	0.04	0.547	0.701
	LTE Band 30_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	SPEED	ON	27710	2310	15.33	16.50	1.309	-0.13	0.306	0.401
10	LTE Band 30_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	27710	2310	15.42	16.50	1.282	0.11	0.807	1.035
	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	132072	1720	22.80	24.00	1.318	-0.06	0.075	0.099
	LTE Band 66_Main	20M	QPSK	50	0	Bottom of Laptop	25mm	SPEED	OFF	132072	1720	21.79	23.00	1.321	0.07	0.063	0.083
	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132322	1745	20.51	21.00	1.119	0	0.799	0.894
	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132072	1720	20.47	21.00	1.130	-0.02	0.729	0.824
11	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132572	1770	20.42	21.00	1.143	0.07	0.900	1.029
	LTE Band 66_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	132322	1745	20.27	21.00	1.183	-0.01	0.619	0.732
	LTE Band 66_Main	20M	QPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	132322	1745	20.22	21.00	1.197	0.03	0.621	0.743
	LTE Band 66B_Main	15M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132322	1745	19.19	21.00	1.517	0.01	0.647	0.982
	LTE Band 66B_Main	15M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132047	1717.5	19.15	21.00	1.531	0.04	0.599	0.917
	LTE Band 66B_Main	15M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132597	1772.5	19.16	21.00	1.528	0.13	0.623	0.952
	LTE Band 66C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132072	1720	19.20	21.00	1.514	0.06	0.663	1.003
	LTE Band 66C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132322	1745	19.22	21.00	1.507	-0.08	0.616	0.928
	LTE Band 66C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	132572	1770	19.23	21.00	1.503	0.11	0.639	0.961
	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	132572	1770	20.42	21.00	1.143	-0.09	0.695	0.794
12	LTE Band 71_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	133322	683	23.88	25.00	1.294	0.01	0.650	0.841
	LTE Band 71_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	OFF	133322	683	22.97	24.00	1.268	0.15	0.547	0.693
	LTE Band 71_Main	20M	QPSK	100	0	Bottom of Laptop	0mm	SPEED	OFF	133322	683	22.91	24.00	1.285	-0.1	0.546	0.702
	LTE Band 71_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	-0.08	0.549	0.711

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 38_Main	20M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	38000	2595	22.59	24.00	1.384	62.9	1.006	0.03	0.007	0.010
	LTE Band 38_Main	20M	QPSK	50	0	Bottom of Laptop	25mm	SPEED	OFF	38000	2595	21.57	23.00	1.390	62.9	1.006	-0.02	0.005	0.007
	LTE Band 38_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	38000	2595	20.63	21.50	1.222	62.9	1.006	-0.05	0.737	0.906
	LTE Band 38_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	38000	2595	20.42	21.50	1.282	62.9	1.006	-0.16	0.685	0.884
	LTE Band 38_Main	20M	QPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	38000	2595	20.31	21.50	1.315	62.9	1.006	0.04	0.674	0.892
13	LTE Band 38_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	38000	2595	20.63	21.50	1.222	62.9	1.006	-0.04	0.770	0.946
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	25mm	SPEED	OFF	39750	2506	21.15	22.00	1.216	62.9	1.006	-0.06	0.007	0.009
	LTE Band 41_Main	20M	QPSK	50	0	Bottom of Laptop	25mm	SPEED	OFF	39750	2506	20.07	21.00	1.239	62.9	1.006	-0.02	0.004	0.005
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	40620	2593	20.64	21.50	1.219	62.9	1.006	0.08	0.664	0.814
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	39750	2506	20.59	21.50	1.233	62.9	1.006	0	0.640	0.794
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	40185	2549.5	20.34	21.50	1.306	62.9	1.006	-0.06	0.508	0.668
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	41055	2636.5	20.48	21.50	1.265	62.9	1.006	0.01	0.499	0.635
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	41490	2680	20.32	21.50	1.312	62.9	1.006	0.01	0.507	0.669
	LTE Band 41_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	40620	2593	20.60	21.00	1.096	62.9	1.006	0.09	0.540	0.596
	LTE Band 41_Main	20M	QPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	40620	2593	20.53	21.00	1.114	62.9	1.006	0.04	0.530	0.594
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	40185	2549.5	20.23	21.50	1.340	62.9	1.006	0.06	0.589	0.794
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	41055	2636.5	23.92	24.50	1.143	42.9	1.009	-0.08	0.844	0.973
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	39750	2506	23.79	24.50	1.178	42.9	1.009	-0.19	0.798	0.948
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	40185	2549.5	23.07	24.50	1.390	42.9	1.009	-0.06	0.702	0.985
14	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	40620	2593	23.31	24.50	1.315	42.9	1.009	0.05	0.769	1.021
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	41490	2680	23.38	24.50	1.294	42.9	1.009	-0.1	0.755	0.986
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	40620	2593	20.64	21.50	1.219	62.9	1.006	-0.02	0.653	0.801
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	39750	2506	20.59	21.50	1.233	62.9	1.006	0.11	0.639	0.793
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	39790	2510	20.56	21.50	1.242	62.9	1.006	0.06	0.635	0.793
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	41055	2636.5	20.48	21.50	1.265	62.9	1.006	-0.06	0.560	0.713
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	41490	2680	20.32	21.50	1.312	62.9	1.006	-0.13	0.484	0.639
	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	56640	3690	19.53	21.00	1.403	62.9	1.006	-0.08	0.241	0.340
	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	56150	3641	19.51	21.00	1.409	62.9	1.006	0.1	0.301	0.427
15	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	55340	3560	19.19	21.00	1.517	62.9	1.006	-0.13	0.288	0.440
	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	55830	3609	19.32	21.00	1.472	62.9	1.006	-0.07	0.262	0.388
	LTE Band 48_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	SPEED	OFF	56640	3690	18.66	20.00	1.361	62.9	1.006	0.03	0.272	0.373
	LTE Band 48C_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	OFF	55340	3560	19.18	21.00	1.521	62.9	1.006	0.02	0.281	0.430
	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	OFF	55340	3560	19.19	21.00	1.517	62.9	1.006	-0.03	0.274	0.418

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	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_Main	20M	BPSK	1	53	Bottom of Laptop	25mm	SPEED	OFF	167300	836.5	23.71	25.00	1.346	0.05	0.093	0.125
	FR1 n5_Main	20M	BPSK	50	28	Bottom of Laptop	25mm	SPEED	OFF	167300	836.5	23.67	25.00	1.358	-0.04	0.090	0.122
	FR1 n5_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	167300	836.5	22.65	23.00	1.084	-0.19	1.000	1.084
	FR1 n5_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	167300	836.5	22.62	23.00	1.091	-0.07	0.863	0.942
	FR1 n5_Main	20M	BPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	167300	836.5	22.53	23.00	1.114	0.03	0.829	0.924
16	FR1 n5_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	Amphenol	ON	167300	836.5	22.65	23.00	1.084	0.01	1.070	1.160
	FR1 n7_Main	20M	BPSK	1	53	Bottom of Laptop	25mm	SPEED	OFF	507000	2535	23.33	24.00	1.167	-0.07	0.010	0.012
	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	25mm	SPEED	OFF	507000	2535	23.29	24.00	1.178	-0.04	0.009	0.011
	FR1 n7_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	507000	2535	17.89	18.00	1.026	-0.01	0.904	0.927
	FR1 n7_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	502000	2510	17.78	18.00	1.052	0.14	0.996	1.048
	FR1 n7_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	512000	2560	17.74	18.00	1.062	-0.06	0.839	0.891
	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	507000	2535	17.88	18.00	1.028	-0.18	0.950	0.977
	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	502000	2510	17.74	18.00	1.062	0.02	1.050	1.115
	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	512000	2560	17.73	18.00	1.064	0.07	0.754	0.802
	FR1 n7_Main	20M	BPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	507000	2535	17.81	18.00	1.045	-0.05	0.943	0.985
17	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	502000	2510	17.74	18.00	1.062	-0.03	1.110	1.178
	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	507000	2535	17.88	18.00	1.028	0.08	0.976	1.003
	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	512000	2560	17.73	18.00	1.064	-0.03	0.875	0.931
	FR1 n25_Main	20M	BPSK	1	53	Bottom of Laptop	25mm	SPEED	OFF	381000	1905	23.27	24.00	1.183	-0.05	0.085	0.101
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	25mm	SPEED	OFF	381000	1905	23.28	24.00	1.180	-0.11	0.081	0.096
	FR1 n25_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	376500	1882.5	18.89	20.00	1.291	0.13	0.888	1.147
	FR1 n25_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	372000	1860	18.79	20.00	1.321	0.06	0.877	1.159
	FR1 n25_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	ON	381000	1905	18.86	20.00	1.300	0.07	0.891	1.158
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	376500	1882.5	18.87	20.00	1.297	0.01	0.898	1.165
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	372000	1860	18.75	20.00	1.334	-0.09	0.878	1.171
18	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	381000	1905	18.86	20.00	1.300	-0.08	0.908	1.181
	FR1 n25_Main	20M	BPSK	100	0	Bottom of Laptop	0mm	SPEED	ON	376500	1882.5	18.78	20.00	1.324	0.07	0.884	1.171
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	381000	1905	18.86	20.00	1.300	-0.1	0.747	0.971
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	376500	1882.5	18.87	20.00	1.297	-0.08	0.869	1.127
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	372000	1860	18.75	20.00	1.334	0	0.724	0.965
	FR1 n30_Main	10M	BPSK	1	26	Bottom of Laptop	25mm	SPEED	OFF	462000	2310	22.12	23.00	1.225	0.08	0.069	0.084
	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	25mm	SPEED	OFF	462000	2310	22.06	23.00	1.242	-0.04	0.068	0.084
	FR1 n30_Main	10M	BPSK	1	26	Bottom of Laptop	0mm	SPEED	ON	462000	2310	15.92	16.50	1.143	0.02	0.989	1.130
	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	0mm	SPEED	ON	462000	2310	15.79	16.50	1.178	-0.05	0.967	1.139
	FR1 n30_Main	10M	BPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	462000	2310	15.83	16.50	1.167	0.01	0.922	1.076
19	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	15.79	16.50	1.178	0	1.010	1.189
	FR1 n38_Main	20M	BPSK	1	1	Bottom of Laptop	25mm	SPEED	OFF	519000	2595	22.50	24.00	1.413	0.18	0.007	0.010
	FR1 n38_Main	20M	BPSK	25	13	Bottom of Laptop	25mm	SPEED	OFF	519000	2595	22.65	23.50	1.216	0.11	0.003	0.004
	FR1 n38_Main	20M	BPSK	1	1	Bottom of Laptop	0mm	SPEED	ON	519000	2595	18.78	19.50	1.180	0.02	0.894	1.055
	FR1 n38_Main	20M	BPSK	25	13	Bottom of Laptop	0mm	SPEED	ON	519000	2595	18.72	19.50	1.197	0.02	0.832	0.996
	FR1 n38_Main	20M	BPSK	50	0	Bottom of Laptop	0mm	SPEED	ON	519000	2595	18.69	19.50	1.205	-0.04	0.832	1.003
20	FR1 n38_Main	20M	BPSK	1	1	Bottom of Laptop	0mm	Amphenol	ON	519000	2595	18.78	19.50	1.180	0.15	0.906	1.069

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	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 n41_Main	100M	BPSK	1	137	Bottom of Laptop	25mm	SPEED	OFF	518598	2592.99	22.85	24.00	1.303	-0.03	0.008	0.010
	FR1 n41_Main	100M	BPSK	135	69	Bottom of Laptop	25mm	SPEED	OFF	518598	2592.99	22.57	24.00	1.390	0.05	0.003	0.004
	FR1 n41_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	ON	518598	2592.99	17.15	18.00	1.216	0.09	0.455	0.553
	FR1 n41_Main	100M	BPSK	135	69	Bottom of Laptop	0mm	SPEED	ON	518598	2592.99	16.97	18.00	1.268	-0.04	0.425	0.539
	FR1 n41_HPUE_Main	100M	BPSK	1	108	Bottom of Laptop	0mm	SPEED	ON	518598	2592.99	20.12	21.00	1.225	-0.05	0.445	0.545
	FR1 n41_Main	100M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	518598	2592.99	17.15	18.00	1.216	0.14	0.475	0.578
	FR1 n41_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	OFF	518598	2592.99	19.41	20.00	1.146	-0.18	0.859	0.984
	FR1 n41_Aux	100M	BPSK	135	69	Bottom of Laptop	0mm	SPEED	OFF	518598	2592.99	19.22	20.00	1.197	0.1	0.815	0.975
	FR1 n41_Aux	100M	BPSK	270	0	Bottom of Laptop	0mm	SPEED	OFF	518598	2592.99	19.35	20.00	1.161	-0.08	0.816	0.948
21	FR1 n41_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	518598	2592.99	19.41	20.00	1.146	-0.06	0.880	1.008
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	25mm	SPEED	OFF	349000	1745	23.18	24.00	1.208	0.08	0.071	0.086
	FR1 n66_Main	40M	BPSK	108	54	Bottom of Laptop	25mm	SPEED	OFF	349000	1745	23.13	24.00	1.222	-0.06	0.069	0.084
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	SPEED	ON	349000	1745	21.23	21.50	1.064	-0.14	1.000	1.064
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	SPEED	ON	346000	1730	21.06	21.50	1.107	0.09	0.892	0.987
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	SPEED	ON	352000	1760	21.20	21.50	1.072	-0.13	0.817	0.875
	FR1 n66_Main	40M	BPSK	108	54	Bottom of Laptop	0mm	SPEED	ON	349000	1745	21.15	21.50	1.084	0.07	0.980	1.062
	FR1 n66_Main	40M	BPSK	108	54	Bottom of Laptop	0mm	SPEED	ON	346000	1730	20.81	21.50	1.172	0.04	0.864	1.013
	FR1 n66_Main	40M	BPSK	108	54	Bottom of Laptop	0mm	SPEED	ON	352000	1760	21.08	21.50	1.102	-0.01	0.863	0.951
	FR1 n66_Main	40M	BPSK	216	0	Bottom of Laptop	0mm	SPEED	ON	349000	1745	20.94	21.50	1.138	0.06	0.830	0.944
22	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	21.23	21.50	1.064	0.04	1.010	1.075
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	346000	1730	21.06	21.50	1.107	-0.05	0.959	1.061
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	352000	1760	21.20	21.50	1.072	-0.17	0.990	1.061
	FR1 n71_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	SPEED	OFF	136100	680.5	24.78	25.00	1.052	-0.12	0.932	0.980
	FR1 n71_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	OFF	136100	680.5	24.73	25.00	1.064	-0.15	0.926	0.985
	FR1 n71_Main	20M	BPSK	100	0	Bottom of Laptop	0mm	SPEED	OFF	136100	680.5	24.14	24.50	1.086	0.08	0.825	0.896
23	FR1 n71_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	OFF	136100	680.5	24.73	25.00	1.064	0.1	1.060	1.128
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	25mm	SPEED	OFF	656000	3840	22.41	24.00	1.442	-0.01	0.044	0.063
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	25mm	SPEED	OFF	656000	3840	22.23	24.00	1.503	0.03	0.039	0.059
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	ON	656000	3840	18.99	19.00	1.002	-0.01	0.303	0.304
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	0mm	SPEED	ON	656000	3840	18.77	19.00	1.054	-0.09	0.284	0.299
	FR1 n77_HPUE_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	ON	656000	3840	21.95	22.00	1.012	-0.05	0.301	0.304
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	ON	656000	3840	18.99	19.00	1.002	-0.16	0.285	0.286
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	25mm	SPEED	OFF	633332	3499.98	23.64	24.00	1.086	0.01	0.050	0.054
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	25mm	SPEED	OFF	633332	3499.98	23.50	24.00	1.122	0.06	0.043	0.048
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	ON	633332	3499.98	18.94	19.00	1.014	0.07	0.419	0.425
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	0mm	SPEED	ON	633332	3499.98	18.83	19.00	1.040	0.08	0.385	0.400
	FR1 n77_HPUE_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	ON	633332	3499.98	21.94	22.00	1.014	0.04	0.410	0.416
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	ON	633332	3499.98	18.94	19.00	1.014	-0.05	0.381	0.386
	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	OFF	656000	3840	20.51	21.00	1.119	-0.07	0.586	0.656
	FR1 n77_Aux	100M	BPSK	135	69	Bottom of Laptop	0mm	SPEED	OFF	656000	3840	20.54	21.00	1.112	-0.08	0.535	0.595
	FR1 n77_Aux	100M	BPSK	270	0	Bottom of Laptop	0mm	SPEED	OFF	656000	3840	20.62	21.00	1.091	-0.18	0.521	0.569
24	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	20.51	21.00	1.119	0.09	1.060	1.187
	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	SPEED	OFF	633332	3499.98	20.55	21.00	1.109	-0.08	0.125	0.139
	FR1 n77_Aux	100M	BPSK	135	69	Bottom of Laptop	0mm	SPEED	OFF	633332	3499.98	20.52	21.00	1.117	-0.1	0.111	0.124
	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	633332	3499.98	20.55	21.00	1.109	-0.06	0.216	0.240

13.2 Repeated SAR Measurement

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	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 14_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	23330	793	24.23	24.50	1.064	0.13	1.080	-	1.149
2nd	LTE Band 14_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	SPEED	ON	23330	793	24.23	24.50	1.064	0.02	1.020	1.06	1.085
1st	FR1 n5_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	Amphenol	ON	167300	836.5	22.65	23.00	1.084	0.01	1.070	-	1.160
2nd	FR1 n5_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	Amphenol	ON	167300	836.5	22.65	23.00	1.084	0.08	1.020	1.05	1.106
1st	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	502000	2510	17.74	18.00	1.062	-0.03	1.110	-	1.178
2nd	FR1 n7_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	502000	2510	17.74	18.00	1.062	0.08	1.050	1.06	1.115
1st	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	381000	1905	18.86	20.00	1.300	-0.08	0.908	-	1.181
2nd	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	SPEED	ON	381000	1905	18.86	20.00	1.300	0.07	0.869	1.04	1.130
1st	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	15.79	16.50	1.178	0	1.010	-	1.189
2nd	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	15.79	16.50	1.178	0.02	0.992	1.02	1.168
1st	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	21.23	21.50	1.064	0.04	1.010	-	1.075
2nd	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	21.23	21.50	1.064	-0.08	0.989	1.02	1.052
1st	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	20.51	21.00	1.119	0.09	1.060	-	1.187
2nd	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	20.51	21.00	1.119	-0.05	1.020	1.04	1.142

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.

13.3 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required
Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

LTE Band 41_Main Ant	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	21.5	24.5
Reported 1g SAR (W/kg)	0.814	1.021
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	89.41	122.04
Linearity SAR(W/kg)	1.11	
% deviation from expected linearity		-8.10%

13.4 FR1 n41/n77 Power Class 2 and Power Class 3 Linearity

This device support Power Class 2 and Power Class 3 operations for FR1 n41/n77. The highest available duty cycle for Power Class 2 operation is 50% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each FR1 configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required.
Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

FR1 n41_Main Ant	FR1 n41	FR1 n41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	18	21
Reported 1g SAR (W/kg)	0.553	0.545
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	63.10	62.95
Linearity SAR(W/kg)	0.55	
% deviation from expected linearity		-1.21%

FR1 n77_Main Ant	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	19	22
Reported 1g SAR (W/kg)	0.425	0.416
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24
Linearity SAR(W/kg)	0.42	
% deviation from expected linearity		-1.89%

14. Simultaneous Transmission Analysis

	NO.	Simultaneous Transmission Configurations	Body
<AX211D2W>	1.	WWAN Main + WWAN MIMO + 2.4GHz WLAN Ant 1 + 2.4GHz WLAN Ant 2	Yes
	2.	WWAN Main + WWAN MIMO + 2.4GHz WLAN Ant 1 + Bluetooth Ant 2	Yes
	3.	WWAN Main + WWAN MIMO + 5G/6GHz WLAN Ant 1 + 5G/6GHz WLAN Ant 2 + Bluetooth Ant 2	Yes
	4.	WWAN MIMO 2 + 2.4GHz WLAN Ant 1 + 2.4GHz WLAN Ant 2	Yes
	5.	WWAN MIMO 2 + 2.4GHz WLAN Ant 1 + Bluetooth Ant 2	Yes
	6.	WWAN MIMO 2 + 5G/6GHz WLAN Ant 1 + 5G/6GHz WLAN Ant 2 + Bluetooth Ant 2	Yes
	7.	WWAN Aux + 2.4GHz WLAN Ant 1 + 2.4GHz WLAN Ant 2	Yes
	8.	WWAN Aux + 2.4GHz WLAN Ant 1 + Bluetooth Ant 2	Yes
	9.	WWAN Aux + 5G/6GHz WLAN Ant 1 + 5G/6GHz WLAN Ant 2 + Bluetooth Ant 2	Yes

	NO.	Simultaneous Transmission Configurations	Body
<QCNFA725>	1.	WWAN MIMO + 2.4GHz WLAN Ant 1+2 + 5G/6GHz WLAN Ant 1+2	Yes
	2.	WWAN MIMO + 5G/6GHz WLAN Ant 1+2 + Bluetooth Ant 2	Yes
	3.	WWAN MIMO 2 + 2.4GHz WLAN Ant 1+2 + 5G/6GHz WLAN Ant 1+2	Yes
	4.	WWAN MIMO 2 + 5G/6GHz WLAN Ant 1+2 + Bluetooth Ant 2	Yes
	5.	WWAN Aux + 2.4GHz WLAN Ant 1+2 + 5G/6GHz WLAN Ant 1+2	Yes
	6.	WWAN Aux + 5G/6GHz WLAN Ant 1+2 + Bluetooth Ant 2	Yes

General Note:

1. The FCC ID: PD9AX211D2, Intel AX211D2W WLAN/BT module is integrated into this host. Since the WLAN/BT transmit antenna to bottom of laptop is higher than 200mm, when the separation distance is > 50mm, an estimated 1g SAR 0.4W/kg for each transmit antenna is using for Sim-Tx analysis.
2. The FCC ID: A5M-QCNFA725, Qualcomm QCNFA725 WLAN/BT module is integrated into this host. Since the WLAN/BT transmit antenna to bottom of laptop is higher than 200mm, when the separation distance is > 50mm, an estimated 1g SAR 0.4W/kg for each transmit antenna is using for Sim-Tx analysis.
3. For WWAN MIMO and MIMO2 transmit antenna to bottom of laptop is higher than 200mm, when the separation distance is > 50mm, an estimated 1g SAR 0.4W/kg for each transmit antenna is using for Sim-Tx analysis
4. The Sim-Tx analysis for EN-DC active is choose the worst case standalone SAR from the WWAN main and MIMO antenna within the exposure positions, regardless of whether the EN-DC combinations. Therefore, the following summations represent the absolute worst cases for simultaneous transmission for this device and it is conservative.
5. 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 14.2.

14.1 Body Exposure Conditions

<AX211D2W>

Exposure Position	0	1	2	3	4	5	6	0+1+2+3 Summed 1g SAR (W/kg)	0+1+2+6 Summed 1g SAR (W/kg)	0+1+4+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Main Ant	Maximum WWAN MIMO Ant	WLAN2.4GHz Ant 1	WLAN2.4GHz Ant 2	WLAN5/6GHz Ant 1	WLAN5/6GHz Ant 2	Bluetooth Ant 2					
	1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)					
Bottom of Laptop at 0mm	1.189	0.400	0.400	0.400	0.400	0.400	0.400	2.389	2.389	2.789	0.02	Case 1

Exposure Position	1	2	3	4	5	6	1+2+3 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN MIMO 2 Ant	WLAN2.4GHz Ant 1	WLAN2.4GHz Ant 2	WLAN5/6GHz Ant 1	WLAN5/6GHz Ant 2	Bluetooth Ant 2					
	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)					
Bottom of Laptop at 0mm	0.400	0.400	0.400	0.400	0.400	0.400	1.200	1.200	1.600	0.01	Case 2

Exposure Position	1	2	3	4	5	6	1+2+3 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Aux Ant	WLAN2.4GHz Ant 1	WLAN2.4GHz Ant 2	WLAN5/6GHz Ant 1	WLAN5/6GHz Ant 2	Bluetooth Ant 2					
	1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)					
Bottom of Laptop at 0mm	1.187	0.400	0.400	0.400	0.400	0.400	1.987	1.987	2.387	0.01	Case 3

<QCNFA725>

Exposure Position	0	1	2	3	4	0+1+2+3 Summed 1g SAR (W/kg)	0+1+3+4 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Main Ant	Maximum WWAN MIMO Ant	WLAN2.4GHz Ant 1+2	WLAN5/6GHz Ant 1+2	Bluetooth Ant 2				
	1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)				
Bottom of Laptop at 0mm	1.189	0.400	0.400	0.400	0.400	2.389	2.389	0.02	Case 4

Exposure Position	1	2	3	4	1+2+3 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
	Maximum WWAN MIMO 2 Ant	WLAN2.4GHz Ant 1+2	WLAN5/6GHz Ant 1+2	Bluetooth Ant 2		
	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
Bottom of Laptop at 0mm	0.400	0.400	0.400	0.400	1.200	1.200

Exposure Position	1	2	3	4	1+2+3 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Aux Ant	WLAN2.4GHz Ant 1+2	WLAN5/6GHz Ant 1+2	Bluetooth Ant 2				
	1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)				
Bottom of Laptop at 0mm	1.187	0.400	0.400	0.400	1.987	1.987	0.01	Case 5

14.2 SPLSR Evaluation and Analysis

1. According to antenna location of appendix D, the minimum distance between each WWAN/WLAN/BT transmit antenna is using for SPLSR analysis
2. Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Therefore, the adjacent transmit antennas will be summed first, and then the SPLSR calculation will be evaluated with the farther transmitted antennas.
3. For SPLSR analysis is selected highest standalone SAR from each WWAN transmit antenna to be evaluated and it is conservative.
4. SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (*min. separation distance, mm*). If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary

	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 1	Maximum WWAN Main Ant	Bottom of Laptop	1.189	0	180.0	1.99	0.02	Not required
	Maximum WWAN MIMO Ant + WLAN2.4GHz Ant 2		0.8	0				
	Maximum WWAN Main Ant	Bottom of Laptop	1.189	0	250.0	1.59	0.01	Not required
	WLAN2.4GHz Ant 1		0.4	0				
	Maximum WWAN MIMO Ant	Bottom of Laptop	0.4	0	155.0	0.80	0.00	Not required
	WLAN2.4GHz Ant 1		0.4	0				
	WLAN2.4GHz Ant 1	Bottom of Laptop	0.4	0	155.0	0.80	0.00	Not required
	WLAN2.4GHz Ant 2		0.4	0				
	Maximum WWAN Main Ant	Bottom of Laptop	1.189	0	180.0	2.39	0.02	Not required
	Maximum WWAN MIMO Ant + WLAN5/6GHz Ant 2 + Bluetooth Ant 2		1.2	0				
	WLAN2.4GHz Ant 1	Bottom of Laptop	0.4	0	155.0	0.80	0.00	Not required
	Bluetooth Ant 2		0.4	0				
	Maximum WWAN Main Ant	Bottom of Laptop	1.189	0	250.0	1.59	0.01	Not required
	WLAN5/6GHz Ant 1		0.4	0				
	Maximum WWAN MIMO Ant	Bottom of Laptop	0.4	0	155.0	0.80	0.00	Not required
	WLAN5/6GHz Ant 1		0.4	0				
	WLAN5/6GHz Ant 1	Bottom of Laptop	0.4	0	155.0	1.20	0.01	Not required
	WLAN5/6GHz Ant 2 + Bluetooth Ant 2		0.8	0				
Case 2	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	Maximum WWAN MIMO 2 Ant + WLAN5/6GHz Ant 1	Bottom of Laptop	0.8	0	155.0	1.60	0.01	Not required
	WLAN5/6GHz Ant 2 + Bluetooth Ant 2		0.8	0				
Case 3	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	Maximum WWAN Aux Ant	Bottom of Laptop	1.187	0	210.0	1.59	0.01	Not required
	WLAN2.4GHz Ant 1		0.4	0				
	Maximum WWAN Aux Ant	Bottom of Laptop	1.187	0	250.0	1.59	0.01	Not required
	WLAN2.4GHz Ant 2		0.4	0				
	WLAN2.4GHz Ant 1	Bottom of Laptop	0.4	0	155.0	0.80	0.00	Not required
	WLAN2.4GHz Ant 2		0.4	0				
	WLAN2.4GHz Ant 1	Bottom of Laptop	0.4	0	155.0	0.80	0.00	Not required
	Bluetooth Ant 2		0.4	0				
	Maximum WWAN Aux Ant	Bottom of Laptop	1.187	0	210.0	1.59	0.01	Not required
	WLAN5/6GHz Ant 1		0.4	0				
	Maximum WWAN Aux Ant	Bottom of Laptop	1.187	0	250.0	1.99	0.01	Not required
	WLAN5/6GHz Ant 2 + Bluetooth Ant 2		0.8	0				
	WLAN5/6GHz Ant 1	Bottom of Laptop	0.4	0	155.0	1.20	0.01	Not required
	WLAN5/6GHz Ant 2 + Bluetooth Ant 2		0.8	0				

	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 4	Maximum WWAN Main Ant	Bottom of Laptop	1.189	0	180.0	2.39	0.02	Not required
	Maximum WWAN MIMO Ant + WLAN2.4GHz Ant 1+2 + WLAN5/6GHz Ant 1+2		1.2	0				
	Maximum WWAN Main Ant	Bottom of Laptop	1.189	0	180.0	2.39	0.02	Not required
	Maximum WWAN MIMO Ant + WLAN5/6GHz Ant 1+2 + Bluetooth Ant 2		1.2	0				
Case 5	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	Maximum WWAN Aux Ant	Bottom of Laptop	1.187	0	210.0	1.99	0.01	Not required
	WLAN2.4GHz Ant 1+2 + WLAN5/6GHz Ant 1+2		0.8	0				
	Maximum WWAN Aux Ant	Bottom of Laptop	1.187	0	210.0	1.99	0.01	Not required
	WLAN5/6GHz Ant 1+2 + Bluetooth Ant 2		0.8	0				

Test Engineer： Bevis Chang and Mood Huang

15. 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.

16. 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 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

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

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

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

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

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

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