FCC SAR TEST REPORT

FCC ID	:	**B94HNI32CTKR**
Equipment	:	**Notebook Computer**
Brand Name	:	**HP**
Model Name	:	**HSN-I32C**
Applicant	:	**HP Inc. 3390 East Harmony Road, Fort Collins, Colorado, United States 80528**
Standard	:	**FCC 47 CFR Part 2 (2.1093) ANSI/IEEE C95.1-1992 IEEE 1528-2013**

The product was received on Apr. 21, 2020 and testing was started from May 06, 2020 and completed on Jun. 01, 2020. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

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

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA041438-01	01	Initial issue of report	Jun. 18, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for HP Inc., Notebook Computer, HSN-I32C, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary Body (Separation 0mm) 1g SAR (W/kg)	Highest Simultaneous Transmission 1g SAR (W/kg)
Licensed	WCDMA II	1.18	1.57
	WCDMA IV	1.18	
	WCDMA V	1.18	
	LTE Band 2	0.54	
	LTE Band 7	1.14	
	LTE Band 12 / 17	1.18	
	LTE Band 13	1.18	
	LTE Band 14	1.18	
	LTE Band 25	1.07	
	LTE Band 5 / 26	1.15	
	LTE Band 30	1.18	
	LTE Band 38 / 41	1.18	
	LTE Band 42	0.54	
	LTE Band 48	0.54	
	LTE Band 4 / 66	1.08	
	LTE Band 71	1.11	
	FR1 n2	1.13	
	FR1 n5	1.12	
	FR1 n7	0.54	
	FR1 n12	1.19	
	FR1 n41	0.54	
	FR1 n66	1.14	
Date of Testing:		2020/5/6 ~ 2020/6/1	

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: Wan Liu

2. Guidance Applied

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

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

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Notebook Computer
Brand Name	HP
Model Name	HSN-I32C
FCC ID	B94HNI32CTKR
Integrated WWAN Module	Brand Name: Foxconn Model Name: T99W175
Integrated WLAN Module	Brand Name: Intel Model Name: AX200D2WL
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3550 MHz ~ 3600 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 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 ~ 5825 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM, 64QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
EUT Stage	Production Unit

Remark:

1. The Intel AX200D2WL WLAN/Bluetooth module is also integrated into this host, WLAN/Bluetooth power and WLAN SAR testing data, which can be referred to RF Exposure Lab SAR Test Report, Report No.: SAR.20190703 (FCC ID: B94-AX200D2LP) and these results are used simultaneous transmission analysis.
2. The device implements the power management for SAR compliance at different exposure conditions (Notebook and Tablet mode) and the Qualcomm smart transmit will manage to ensure the averaged power level not exceeding the associated power table. G+H sensors are used to detect the lid angle to define the laptop and tablet exposure conditions.

WWAN Antenna Information NB Mode			
Antenna Part Number	**Manufacture**	**Antenna Type**	**Peak Gain (dBi)**
Tx1/ Rx1 Antenna AUF6Y-100023 (6036B0269201)	AWAN	PIFA	699-715MHz -4.53 dBi (peak)
			703-748MHz -2.93 dBi (peak)
			758-803MHz -2.38 dBi (peak)
			814-849MHz -0.89 dBi (peak)
			1710-1785MHz 2.45 dBi (peak)
			1850-1915MHz 1.79 dBi (peak)
			2300-2400MHz 2.04 dBi (peak)
			2500-2570MHz 0.18 dBi (peak)
			2496-2690MHz 0.41 dBi (peak)
			3300~4200MHz -2.06 dBi (peak)
Tx2/ Rx4 Antenna AUP6Y-100063 (6036B0269401)	AWAN	PIFA	1710-1785MHz 1.68 dBi (peak)
			1850-1915MHz 1.77 dBi (peak)
			2300-2400MHz -4.02 dBi (peak)
			2500-2570MHz -2.50 dBi (peak)
			2496-2690MHz 0.07 dBi (peak)
			3300~4200MHz 0.28 dBi (peak)

WWAN Antenna Information Tablet Mode			
Antenna Part Number	**Manufacture**	**Antenna Type**	**Peak Gain (dBi)**
Tx1/ Rx1 Antenna AUF6Y-100023 (6036B0269201)	AWAN	PIFA	699-715MHz -7.42 dBi (peak)
			703-748MHz -5.99 dBi (peak)
			758-803MHz -5.25 dBi (peak)
			814-849MHz -3.38 dBi (peak)
			1710-1785MHz -1.40 dBi (peak)
			1850-1915MHz -1.15 dBi (peak)
			2300-2400MHz -4.79 dBi (peak)
			2500-2570MHz -5.30 dBi (peak)
			2496-2690MHz -5.71 dBi (peak)
			3300~4200MHz -1.18 dBi (peak)
Tx2/ Rx4 Antenna AUP6Y-100063 (6036B0269401)	AWAN	PIFA	1710-1785MHz 0.41 dBi (peak)
			1850-1915MHz 0.36 dBi (peak)
			2300-2400MHz –6.56 dBi (peak)
			2500-2570MHz -6.15dBi (peak)
			2496-2690MHz -6.47 dBi (peak)
			3300~4200MHz -3.25 dBi (peak)

3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	B94HNI32CTKR
Equipment Name	Notebook Computer
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3550 MHz ~ 3600 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz
uplink modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Data only
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.
Power reduction applied to satisfy SAR compliance	Yes, the device implements the power management for SAR compliance
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 13.
LTE Carrier Aggregation Additional Information	This device supports maximum of 6 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.

Transmission (H, M, L) channel numbers and frequencies in each LTE band

LTE Band 2

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900

LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745

LTE Band 5								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844

LTE Band 7								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560

LTE Band 12								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711

LTE Band 13				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		

LTE Band 14				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Channel #	Channel #	Freq.(MHz)
L	23305	790.5	23330	793
M	23330	793		
H	23355	795.5		

LTE Band 17				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq. (MHz)
L	23755	706.5	23780	709
M	23790	710	23790	710
H	23825	713.5	23800	711

LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905

LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

LTE Band 30				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	27685	2307.5	27710	2310
M	27710	2310		
H	27735	2312.5		

LTE Band 38								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610

LTE Band 41								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
L M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
H M	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 42								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	43315	3552.5	43140	3555	43165	3557.5	43190	3560
M	43340	3575	43340	3575	43340	3575	43340	3575
H	43565	3597.5	43540	3595	43515	3592.5	43490	3590

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

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

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

4. Lid angle power verification

General Note:

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

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

when the screen angle is from 0 degree to 360 degree																												
Screen angle (degree) v.s. power	Wireless		3G WCDMA			4G LTE										4G LTE_Aux					5G NR FR1				5G NR FR1_Aux			
	Band		B2	B4	B5	B2/25	B4/66	B5/26	B7	B12/17	B13	B14	B30	B38/41	B71	B2	B7	B42	B48	B66	N2	N5	N12	N66	N2	N7	N66	N41
	Lid Close	0	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		10	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		20	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		30	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		31	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		32	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		33	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		34	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
	Laptop	35	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		36	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		37	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		38	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		39	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		40	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		50	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		60	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		70	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		80	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		90	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		100	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		110	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		120	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		125	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		126	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		127	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		128	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		129	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
	Tablet	130	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		131	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		132	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		133	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		134	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		135	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		140	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		150	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		160	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		170	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6

		180	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		190	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		200	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		210	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		220	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		230	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		240	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		250	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		260	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		270	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		280	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		290	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		300	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		310	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		320	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		330	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		340	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		350	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		360	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	Stand mode (Screen orientation is set to 0° and base is horizontal)	195	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		196	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		197	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		198	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		199	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		200	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		201	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		202	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		203	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		204	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		205	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		210	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		220	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		230	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		240	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		250	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		260	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		270	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		280	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		290	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		300	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		310	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		320	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		330	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		335	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		336	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		337	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		338	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		339	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		340	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		341	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		342	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		343	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		344	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		345	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		350	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		360	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6

		195	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		196	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		197	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		198	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		199	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		200	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		201	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		202	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		203	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		204	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		205	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		210	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		220	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		230	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		240	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	Tent mode (Screen orientation is set to 180° and base is not horizontal)	250	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		260	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		270	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		280	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		290	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		300	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		310	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		320	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		330	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		335	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		336	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		337	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		338	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		339	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		340	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		341	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		342	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		343	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		344	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		345	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		350	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		360	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6

when the screen angle is from 0 degree to 360 degree

	Wireless		3G WCDMA			4G LTE										4G LTE_Aux					5G NR FR1				5G NR FR1_Aux			
	Band		B2	B4	B5	B2/25	B4/66	B5/26	B7	B12/17	B13	B14	B30	B38/41	B71	B2	B7	B42	B48	B66	N2	N5	N12	N66	N2	N7	N66	N41
Screen angle (degree) v.s. power	Tablet Mode	360	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		350	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		340	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		330	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		320	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		310	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		300	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		290	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		280	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		270	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		260	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		250	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		240	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		230	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		220	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		210	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		200	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		190	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		180	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		170	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		160	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		150	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		140	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		135	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		134	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		133	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		132	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		131	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
		130	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	22.3	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	24.0
	Notebook	129	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		128	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		127	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		126	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		125	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		120	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		110	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		100	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		90	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		80	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		70	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		60	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		50	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		40	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		39	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		38	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		37	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		36	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
		35	18.4	18.0	23.0	17.8	17.7	22.9	16.9	22.9	22.0	22.3	18.8	18.6	24.5	24.0	24.0	24.0	22.0	24.0	17.5	22.6	21.6	17.7	24.0	24.0	24.0	24.0
	Lid Close	34	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		33	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		32	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
		31	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby

	30	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
	20	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
	10	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
	0	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby	standby
Stand mode (Screen orientation is set to 0° and base is horizontal)	360	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	350	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	345	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	344	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	343	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	342	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	341	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	340	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	339	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	338	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	337	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	336	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	335	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	330	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	320	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	310	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	300	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	290	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	280	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	270	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	260	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	250	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	240	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	230	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	220	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	210	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	205	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	204	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	203	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	202	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	201	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	200	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	199	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	198	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	197	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	196	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	195	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
Tent mode (Screen orientation is set to 180° and base is not horizontal)	360	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	350	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	345	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	344	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	343	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	342	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	341	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	340	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	339	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	338	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	337	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	336	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	335	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	330	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
	320	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6

		310	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		300	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		290	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		280	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		270	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		260	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		250	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		240	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		230	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		220	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		210	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		205	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		204	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		203	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		202	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		201	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		200	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		199	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		198	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		197	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		196	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6
		195	13.5	14.2	19.6	13.5	14.3	19.7	12.7	18.1	19.8	19.9	14.3	15.0	18.5	16.8	11.9	16.2	16.6	16.5	14.2	19.7	17.6	14.3	15.7	13.8	16.3	12.6

5. Smart Transmit feature for RF Exposure compliance

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter sto ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement. Cannot operate without SAR characterization at the device level, beforehand.

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR_design_targer.
P_{max}	Maximum tune-up power level
SAR_design_target:	The design target for SAR compliance. It should be less than regulatory power density limit to account for all device design related uncertainties.
SAR char	P_{limit} for all the technologies/bands for all applicable DSI

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for Smart Transmit to control and manage RF exposure for f < 6 GHz.

<SAR design target and uncertainty>

Exposure conditions	DSI	SAR design target	Antenna	Frequency Band	W/kg
Laptop Mode	1	1g SAR design target	-	-	0.95
Tablet Mode	2	1g SAR design target	Main	UMTS B2	0.95
				UMTS B4	0.95
				UMTS B5	0.95
				LTE B2	0.95
				LTE B4	0.95
				LTE B5	0.95
				LTE B7	0.95
				LTE B12	0.95
				LTE B13	0.95
				LTE B14	0.95
				LTE B17	0.95
				LTE B25	0.95
				LTE B26	0.95
				LTE B30	0.95
				LTE B38	0.95
				LTE B41	0.95
				LTE B66	0.95
				LTE B71	0.95
				5G NR n2	0.95
				5G NR n5	0.95
				5G NR n12	0.95
				5G NR n66	0.95
			Aux	LTE B2	0.47
				LTE B7	0.47
				LTE B42	0.47
				LTE B48	0.47
				LTE B66	0.47
				5G NR n2	0.47
				5G NR n7	0.47
				5G NR n41	0.47
				5G NR n66	0.47

	Uncertainty dB (k=2)
Total uncertainty	1.0

To account for total uncertainty, SAR_design_target should be determined as:

$$SAR_design_target < SAR_{regulatory_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band.

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

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

Mode/Band	DSI=1	DSI=2	Pmax*
	Laptop Mode	Table Mode	
	PLimit	PLimit	
	(dBm)	(dBm)	(dBm)
WCDMA B2	17.4	12.5	23.5
WCDMA B4	17.0	13.2	23.5
WCDMA B5	22.0	18.6	23.5
LTE B2(Aux)	24.0	15.8	23
LTE B7	15.9	11.7	23
LTE B7(Aux)	50.0	10.9	23
LTE B12(17)	21.9	17.1	23.5
LTE B13	21.0	18.8	23.5
LTE B14	21.3	18.9	23.5
LTE B25(2)	16.8	12.5	23
LTE B26(5)	21.9	18.7	23.5
LTE B30	17.8	13.3	22
LTE B66(4)	16.7	13.3	23
LTE B66(Aux)	24.0	15.5	23
LTE B71	23.9	17.5	23.5
LTE B41(38)**	15.6	12.0	21
LTE B41(HPUE)**	18.1	15.0	24.5
LTE B42(Aux)**	24.0	13.2	21
LTE B48(Aux)**	24.0	13.6	19
FR1 n2	16.5	13.2	23
FR1 n2(Aux)	24.0	14.7	23
FR1 n5	21.6	18.7	23
FR1 n7(Aux)	45.1	12.8	23
FR1 n12	20.6	16.6	23
FR1 n66	16.7	13.3	23
FR1 n66(Aux)	24.0	15.3	23
FR1 n41(Aux)	26.0	11.6	23

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

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

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

6. RF Exposure Limits

6.1 Uncontrolled Environment

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

6.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

7. Specific Absorption Rate (SAR)

7.1 Introduction

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

7.2 SAR Definition

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

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

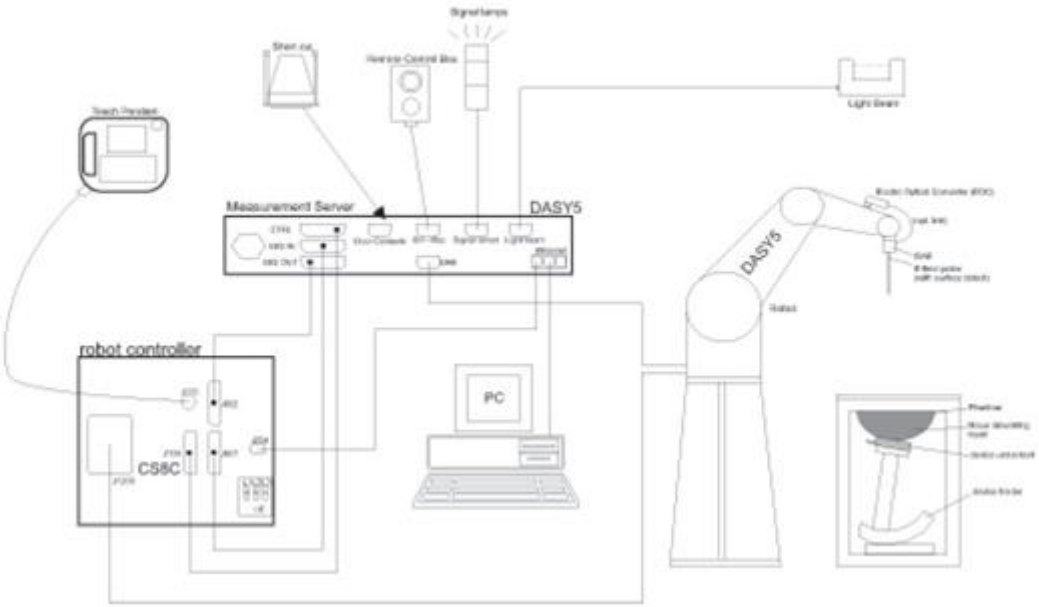
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. System Description and Setup

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



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

8.1 E-Field Probe

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

<ES3DV3 Probe>

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

<EX3DV4 Probe>

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

8.2 Data Acquisition Electronics (DAE)

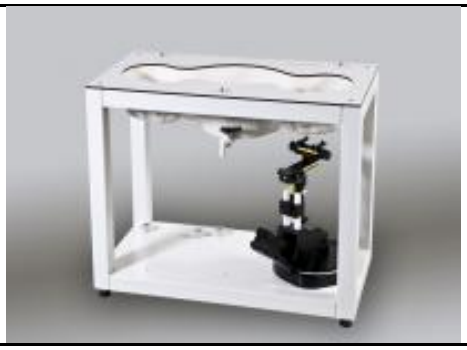
The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an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

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

Fig 5.1 Photo of DAE

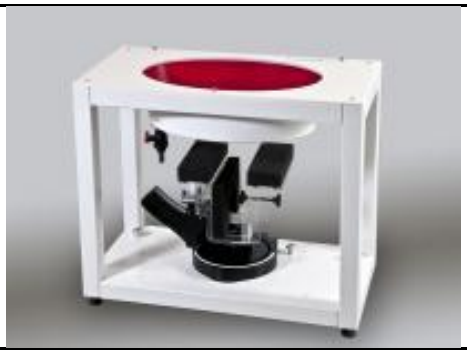
8.3 Phantom

<SAM Twin Phantom>

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

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

<ELI Phantom>

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

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

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

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

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

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

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

Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

9.1 Spatial Peak SAR Evaluation

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

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

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

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

9.2 Power Reference Measurement

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

9.3 Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
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.

9.5 Volume Scan Procedures

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

9.6 Power Drift Monitoring

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

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1107	Mar. 08, 2019	Mar. 06, 2021
SPEAG	835MHz System Validation Kit	D835V2	4d167	Nov. 25, 2019	Nov. 24, 2020
SPEAG	1750MHz System Validation Kit	D1750V2	1112	Mar. 07, 2019	Mar. 05, 2021
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Sep. 11, 2018	Sep. 09, 2020
SPEAG	2300MHz System Validation Kit	D2300V2	1006	Jan. 28, 2019	Jan. 26, 2021
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Mar. 06, 2019	Mar. 04, 2021
SPEAG	3500MHz System Validation Kit	D3500V2	1014	Jan. 29, 2019	Jan. 27, 2021
SPEAG	3700MHz System Validation Kit	D3700V2	1006	Mar. 05, 2019	Mar. 03, 2021
SPEAG	Data Acquisition Electronics	DAE4	316	Dec. 20, 2019	Dec. 19, 2020
SPEAG	Data Acquisition Electronics	DAE4	778	May. 21, 2019	May. 20, 2020
SPEAG	Data Acquisition Electronics	DAE4	1311	Aug. 27, 2019	Aug. 26, 2020
SPEAG	Dosimetric E-Field Probe	ES3DV3	3124	Dec. 18, 2019	Dec. 17, 2020
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 25, 2019	Sep. 24, 2020
SPEAG	Dosimetric E-Field Probe	EX3DV4	3642	Apr. 29, 2020	Apr. 28, 2021
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 12, 2019	Nov. 11, 2020
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 12, 2019	Nov. 11, 2020
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 31, 2019	Oct. 30, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50267236	Mar. 18, 2020	Mar. 17, 2021
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Nov. 20, 2019	Nov. 19, 2020
Agilent	ENA Network Analyzer	E5071C	MY46104758	Sep. 06, 2019	Sep. 05, 2020
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 18, 2019	Sep. 17, 2020
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3169	Sep. 10, 2019	Sep. 09, 2020
Anritsu	Power Meter	ML2495A	1036004	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Sensor	MA2411B	1027253	Aug. 08, 2019	Aug. 07, 2020
Anritsu	Power Meter	ML2495A	1218006	Oct. 14, 2019	Oct. 13, 2020
Anritsu	Power Sensor	MA2411B	1207363	Oct. 14, 2019	Oct. 13, 2020
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 27, 2019	Aug. 26, 2020
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 27, 2019	Jun. 26, 2020
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 16, 2019	Oct. 15, 2020
Mini-Circuits	Power Amplifier	ZVE-8G+	6382	Aug. 12, 2019	Aug. 11, 2020
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D750V3, SN: 1107, D1750V2, SN: 1112, D1900V2, SN: 5d041, D2300V2, SN: 1006, D2600V2, SN: 1078, D3500V2, SN: 1014, D3700V2, SN: 1006 can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

11. System Verification

11.1 Tissue Simulating Liquids

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

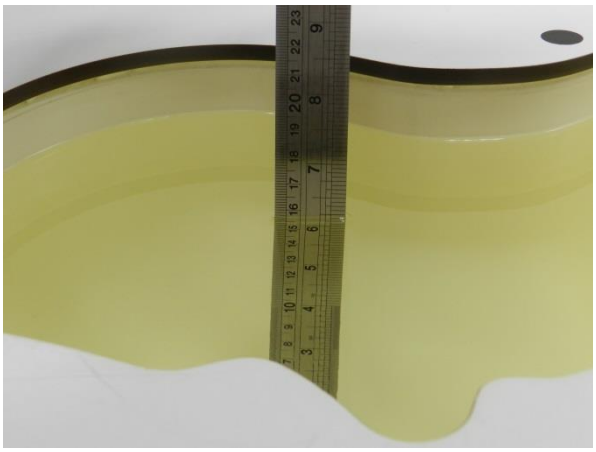


Fig 10.1Photo of Liquid Height for Head SAR

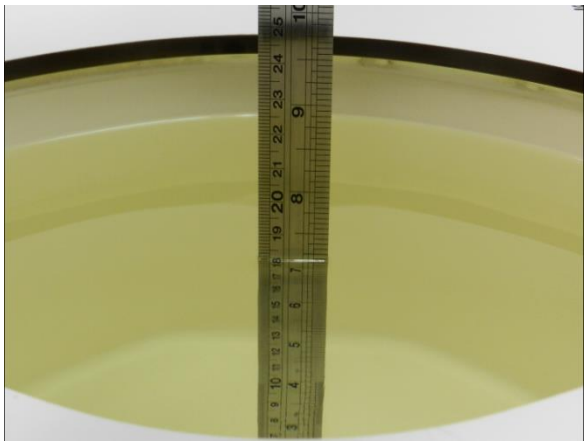


Fig 10.2 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

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

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

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	22.4	0.908	43.474	0.89	41.90	2.02	3.76	±5	2020/5/7
750	22.6	0.910	43.528	0.89	41.90	2.25	3.89	±5	2020/5/10
835	22.4	0.889	42.429	0.90	41.50	-1.22	2.24	±5	2020/5/7
835	22.6	0.877	41.829	0.90	41.50	-2.56	0.79	±5	2020/5/10
835	22.8	0.932	42.842	0.90	41.50	3.56	3.23	±5	2020/5/31
1750	22.4	1.369	40.600	1.37	40.10	-0.07	1.25	±5	2020/5/6
1750	22.5	1.349	40.000	1.37	40.10	-1.53	-0.25	±5	2020/5/9
1750	22.8	1.365	40.708	1.37	40.10	-0.36	1.52	±5	2020/5/31
1900	22.4	1.415	39.184	1.40	40.00	1.07	-2.04	±5	2020/5/6
1900	22.5	1.393	38.584	1.40	40.00	-0.50	-3.54	±5	2020/5/9
2300	22.4	1.642	39.361	1.67	39.50	-1.68	-0.35	±5	2020/5/11
2600	22.4	1.996	38.325	1.96	39.00	1.84	-1.73	±5	2020/5/8
2600	22.8	2.028	38.094	1.96	39.00	3.47	-2.32	±5	2020/5/31
3500	22.5	2.936	38.612	2.91	37.90	0.89	1.88	±5	2020/6/1
3700	22.5	3.092	38.395	3.12	37.70	-0.90	1.84	±5	2020/6/1

11.3 System Performance Check Results

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

Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2020/5/7	750	250	D750V3-1107	ES3DV3 - SN3270	DAE4 Sn778	2.16	8.32	8.64	3.85
2020/5/10	750	250	D750V3-1107	ES3DV3 - SN3270	DAE4 Sn778	2.16	8.32	8.64	3.85
2020/5/7	835	250	D835V2-4d167	ES3DV3 - SN3270	DAE4 Sn778	2.28	9.55	9.12	-4.50
2020/5/10	835	250	D835V2-4d167	ES3DV3 - SN3270	DAE4 Sn778	2.37	9.55	9.48	-0.73
2020/5/31	835	250	D835V2-4d167	EX3DV4 - SN3642	DAE4 Sn1311	2.36	9.55	9.44	-1.15
2020/5/6	1750	250	D1750V2-1112	ES3DV3 - SN3270	DAE4 Sn778	9.42	36.70	37.68	2.67
2020/5/9	1750	250	D1750V2-1112	ES3DV3 - SN3270	DAE4 Sn778	8.74	36.70	34.96	-4.74
2020/5/31	1750	250	D1750V2-1112	EX3DV4 - SN3642	DAE4 Sn1311	9.68	36.70	38.72	5.50
2020/5/6	1900	250	D1900V2-5d041	ES3DV3 - SN3270	DAE4 Sn778	10.20	40.20	40.8	1.49
2020/5/9	1900	250	D1900V2-5d041	ES3DV3 - SN3270	DAE4 Sn778	9.62	40.20	38.48	-4.28
2020/5/11	2300	250	D2300V2-1006	ES3DV3 - SN3124	DAE4 Sn316	11.70	48.70	46.8	-3.90
2020/5/8	2600	250	D2600V2-1078	ES3DV3 - SN3270	DAE4 Sn778	14.10	57.60	56.4	-2.08
2020/5/31	2600	250	D2600V2-1078	EX3DV4 - SN3642	DAE4 Sn1311	14.50	57.60	58	0.69
2020/6/1	3500	100	D3500V2-1014	EX3DV4 - SN3642	DAE4 Sn1311	6.48	67.90	64.8	-4.57
2020/6/1	3700	100	D3700V2-1006	EX3DV4 - SN3642	DAE4 Sn1311	6.32	67.30	63.2	-6.09

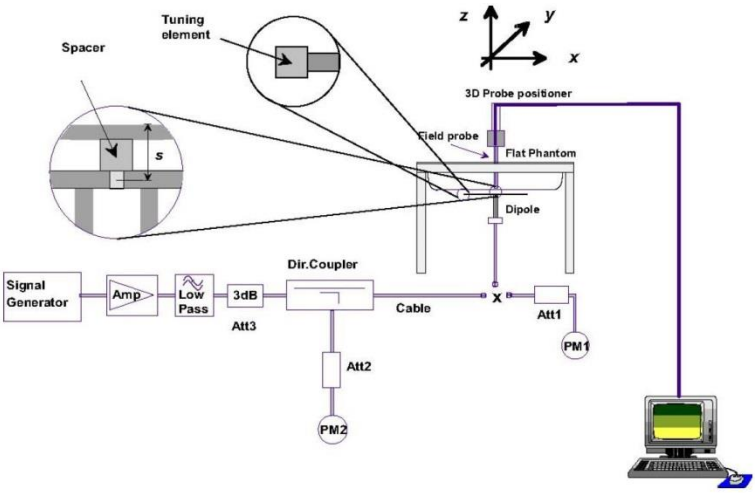


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

12. RF Exposure Positions

12.1 SAR Testing for Tablet

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

13. UMTS/CDMA/LTE Output Power (Unit: dBm)

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

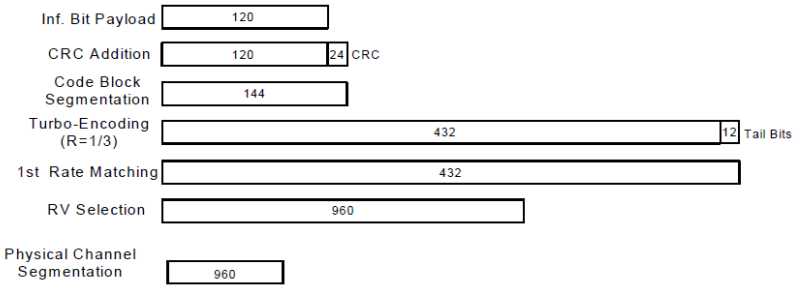


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ 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.

Notebook Power Mode

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	18.12	18.04	18.26	18.40	17.50	17.44	17.45	18.00	22.70	22.68	22.75	23.00
3GPP Rel 6	HSDPA Subtest-1	17.10	16.97	17.16	17.40	16.46	16.50	16.35	17.00	21.66	21.64	21.70	22.00
3GPP Rel 6	HSDPA Subtest-2	17.14	16.99	17.12	17.40	16.53	16.53	16.52	17.00	21.68	21.62	21.70	22.00
3GPP Rel 6	HSDPA Subtest-3	16.64	16.52	16.62	16.90	15.94	15.84	15.97	16.50	21.20	21.13	21.29	21.50
3GPP Rel 6	HSDPA Subtest-4	16.30	16.54	16.62	16.90	16.06	15.84	15.96	16.50	21.16	21.13	21.25	21.50
3GPP Rel 8	DC-HSDPA Subtest-1	17.09	17.03	17.20	17.40	16.47	16.47	16.48	17.00	21.66	21.57	21.76	22.00
3GPP Rel 8	DC-HSDPA Subtest-2	17.07	16.99	17.18	17.40	16.50	16.46	16.48	17.00	21.59	21.66	21.66	22.00
3GPP Rel 8	DC-HSDPA Subtest-3	16.61	16.53	16.62	16.90	15.92	15.91	16.03	16.50	21.17	21.09	21.33	21.50
3GPP Rel 8	DC-HSDPA Subtest-4	16.22	16.57	16.72	16.90	16.08	16.04	15.93	16.50	21.19	21.03	21.31	21.50
3GPP Rel 6	HSUPA Subtest-1	16.08	16.96	17.13	17.40	16.59	16.41	16.35	17.00	21.68	21.58	21.66	22.00
3GPP Rel 6	HSUPA Subtest-2	14.88	14.62	14.89	15.40	14.54	14.45	14.54	15.00	19.63	19.56	19.66	20.00
3GPP Rel 6	HSUPA Subtest-3	15.92	15.65	15.92	16.40	15.47	15.38	15.43	16.00	20.62	20.57	20.69	21.00
3GPP Rel 6	HSUPA Subtest-4	14.88	14.66	14.92	15.40	14.57	14.37	14.47	15.00	19.60	19.58	19.64	20.00
3GPP Rel 6	HSUPA Subtest-5	16.90	16.70	16.90	17.40	16.56	16.44	16.53	17.00	21.60	21.60	21.60	22.00

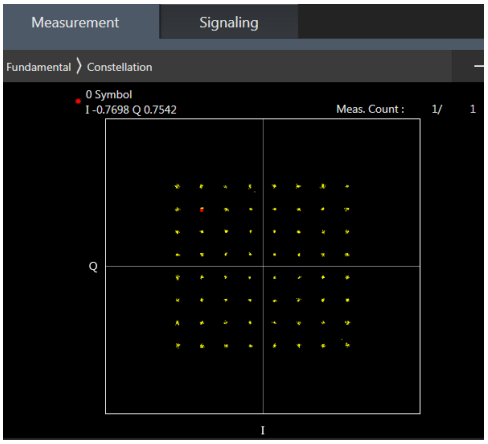
Tablet Power Mode

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	12.86	12.74	12.94	13.50	13.39	12.35	13.38	14.20	18.75	18.82	18.83	19.60
3GPP Rel 6	HSDPA Subtest-1	11.84	12.04	11.99	12.50	12.20	11.47	12.51	13.20	18.08	18.11	17.99	18.60
3GPP Rel 6	HSDPA Subtest-2	11.89	12.05	11.82	12.50	12.35	11.89	12.49	13.20	18.11	18.01	18.06	18.60
3GPP Rel 6	HSDPA Subtest-3	11.45	11.52	11.31	12.00	11.65	11.29	12.30	12.70	17.68	17.59	17.53	18.10
3GPP Rel 6	HSDPA Subtest-4	11.48	11.54	11.34	12.00	11.71	11.32	12.27	12.70	17.65	17.58	17.71	18.10
3GPP Rel 8	DC-HSDPA Subtest-1	11.91	12.04	12.07	12.50	12.29	11.41	12.50	13.20	18.07	18.03	18.00	18.60
3GPP Rel 8	DC-HSDPA Subtest-2	11.82	12.14	11.77	12.50	12.36	11.88	12.52	13.20	18.03	18.11	17.98	18.60
3GPP Rel 8	DC-HSDPA Subtest-3	11.35	11.53	11.33	12.00	11.62	11.24	12.29	12.70	17.64	17.62	17.44	18.10
3GPP Rel 8	DC-HSDPA Subtest-4	11.51	11.52	11.34	12.00	11.68	11.23	12.17	12.70	17.65	17.58	17.61	18.10
3GPP Rel 6	HSUPA Subtest-1	11.86	12.02	11.96	12.50	12.26	11.51	12.45	13.20	18.05	18.17	18.06	18.60
3GPP Rel 6	HSUPA Subtest-2	9.88	10.13	10.07	10.50	10.12	9.57	10.53	11.20	16.16	16.17	15.98	16.60
3GPP Rel 6	HSUPA Subtest-3	10.75	11.00	11.00	11.50	11.21	10.46	11.43	12.20	16.98	17.18	16.96	17.60
3GPP Rel 6	HSUPA Subtest-4	9.85	10.02	9.92	10.50	10.26	9.50	10.52	11.20	15.99	16.20	16.06	16.60
3GPP Rel 6	HSUPA Subtest-5	11.74	12.03	12.06	12.50	12.17	11.39	12.59	13.20	18.08	18.04	17.93	18.60

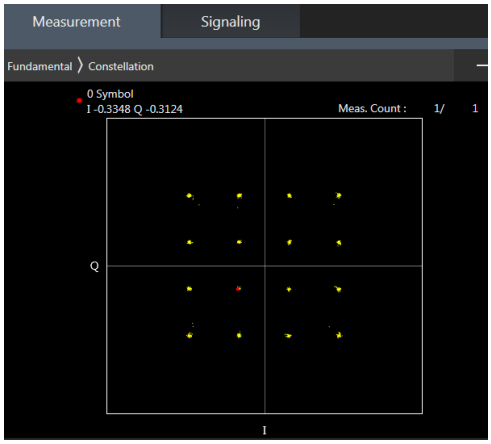
<LTE Conducted Power>

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. If the LTE was not tested, 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
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

Notebook Power Mode

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	17.56	17.26	17.41	17.8	0
20	QPSK	1	49	17.46	17.24	17.38		
20	QPSK	1	99	17.31	17.16	17.36		
20	QPSK	50	0	17.51	17.31	17.50	17.8	0
20	QPSK	50	24	17.49	17.27	17.49		
20	QPSK	50	50	17.43	17.27	17.46		
20	QPSK	100	0	17.55	17.26	17.47		
20	16QAM	1	0	17.44	17.47	17.51	17.8	0
20	16QAM	1	49	17.34	17.40	17.43		
20	16QAM	1	99	17.27	17.51	17.41		
20	16QAM	50	0	17.49	17.28	17.45	17.8	0
20	16QAM	50	24	17.49	17.31	17.55		
20	16QAM	50	50	17.47	17.25	17.51		
20	16QAM	100	0	17.48	17.29	17.38		
20	64QAM	1	0	17.47	17.55	17.49	17.8	0
20	64QAM	1	49	17.41	17.41	17.47		
20	64QAM	1	99	17.48	17.45	17.41		
20	64QAM	50	0	17.46	17.37	17.39	17.8	0
20	64QAM	50	24	17.46	17.38	17.53		
20	64QAM	50	50	17.42	17.36	17.49		
20	64QAM	100	0	17.44	17.35	17.36		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	17.46	17.20	17.31	17.8	0
15	QPSK	1	37	17.41	17.18	17.33		
15	QPSK	1	74	17.30	17.10	17.31		
15	QPSK	36	0	17.51	17.29	17.46	17.8	0
15	QPSK	36	20	17.46	17.25	17.49		
15	QPSK	36	39	17.35	17.23	17.43		
15	QPSK	75	0	17.45	17.21	17.39		
15	16QAM	1	0	17.43	17.42	17.45	17.8	0
15	16QAM	1	37	17.31	17.40	17.43		
15	16QAM	1	74	17.17	17.42	17.32		
15	16QAM	36	0	17.48	17.20	17.45	17.8	0
15	16QAM	36	20	17.43	17.27	17.45		
15	16QAM	36	39	17.42	17.24	17.51		
15	16QAM	75	0	17.44	17.22	17.34		
15	64QAM	1	0	17.41	17.46	17.42	17.8	0
15	64QAM	1	37	17.33	17.40	17.42		
15	64QAM	1	74	17.47	17.44	17.35		
15	64QAM	36	0	17.41	17.27	17.39	17.8	0
15	64QAM	36	20	17.38	17.34	17.46		
15	64QAM	36	39	17.32	17.27	17.42		
15	64QAM	75	0	17.43	17.31	17.32		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	17.52	17.26	17.33	17.8	0
10	QPSK	1	25	17.44	17.22	17.29		
10	QPSK	1	49	17.29	17.15	17.35		
10	QPSK	25	0	17.48	17.21	17.43	17.8	0

10	QPSK	25	12	17.39	17.25	17.40		
10	QPSK	25	25	17.33	17.26	17.36		
10	QPSK	50	0	17.49	17.23	17.46		
10	16QAM	1	0	17.34	17.43	17.49	17.8	0
10	16QAM	1	25	17.33	17.34	17.39		
10	16QAM	1	49	17.19	17.44	17.31		
10	16QAM	25	0	17.41	17.24	17.39	17.8	0
10	16QAM	25	12	17.46	17.30	17.55		
10	16QAM	25	25	17.41	17.16	17.47		
10	16QAM	50	0	17.47	17.23	17.38		
10	64QAM	1	0	17.46	17.50	17.40	17.8	0
10	64QAM	1	25	17.38	17.39	17.45		
10	64QAM	1	49	17.45	17.44	17.34		
10	64QAM	25	0	17.43	17.36	17.36	17.8	0
10	64QAM	25	12	17.43	17.37	17.49		
10	64QAM	25	25	17.38	17.33	17.46		
10	64QAM	50	0	17.36	17.26	17.31		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	17.46	17.23	17.32	17.8	0
5	QPSK	1	12	17.45	17.20	17.38		
5	QPSK	1	24	17.22	17.14	17.34		
5	QPSK	12	0	17.45	17.21	17.40	17.8	0
5	QPSK	12	7	17.44	17.21	17.42		
5	QPSK	12	13	17.37	17.23	17.38		
5	QPSK	25	0	17.47	17.19	17.39		
5	16QAM	1	0	17.36	17.38	17.44	17.8	0
5	16QAM	1	12	17.28	17.39	17.42		
5	16QAM	1	24	17.22	17.45	17.34		
5	16QAM	12	0	17.40	17.28	17.42	17.8	0
5	16QAM	12	7	17.46	17.31	17.54		
5	16QAM	12	13	17.38	17.18	17.43		
5	16QAM	25	0	17.45	17.21	17.34		
5	64QAM	1	0	17.44	17.51	17.46	17.8	0
5	64QAM	1	12	17.37	17.32	17.37		
5	64QAM	1	24	17.41	17.35	17.35		
5	64QAM	12	0	17.41	17.29	17.30	17.8	0
5	64QAM	12	7	17.38	17.37	17.52		
5	64QAM	12	13	17.33	17.30	17.39		
5	64QAM	25	0	17.40	17.32	17.30		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	17.46	17.20	17.31	17.8	0
3	QPSK	1	8	17.39	17.24	17.32		
3	QPSK	1	14	17.23	17.08	17.32		
3	QPSK	8	0	17.47	17.26	17.48	17.8	0
3	QPSK	8	4	17.47	17.19	17.41		
3	QPSK	8	7	17.33	17.25	17.36		
3	QPSK	15	0	17.45	17.16	17.40		
3	16QAM	1	0	17.40	17.40	17.45	17.8	0
3	16QAM	1	8	17.28	17.32	17.39		
3	16QAM	1	14	17.25	17.46	17.37		
3	16QAM	8	0	17.41	17.22	17.45	17.8	0
3	16QAM	8	4	17.48	17.30	17.50		
3	16QAM	8	7	17.38	17.16	17.46		
3	16QAM	15	0	17.47	17.25	17.35		

3	64QAM	1	0	17.45	17.48	17.43	17.8	0
3	64QAM	1	8	17.40	17.36	17.42		
3	64QAM	1	14	17.48	17.35	17.40		
3	64QAM	8	0	17.45	17.36	17.31	17.8	0
3	64QAM	8	4	17.39	17.38	17.47		
3	64QAM	8	7	17.32	17.27	17.48		
3	64QAM	15	0	17.43	17.31	17.31		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	17.53	17.21	17.39	17.8	0
1.4	QPSK	1	3	17.38	17.23	17.29		
1.4	QPSK	1	5	17.25	17.13	17.27		
1.4	QPSK	3	0	17.43	17.29	17.47		
1.4	QPSK	3	1	17.45	17.20	17.47		
1.4	QPSK	3	3	17.43	17.27	17.37		
1.4	QPSK	6	0	17.48	17.23	17.46	17.8	0
1.4	16QAM	1	0	17.44	17.42	17.41	17.8	0
1.4	16QAM	1	3	17.29	17.31	17.42		
1.4	16QAM	1	5	17.21	17.44	17.34		
1.4	16QAM	3	0	17.44	17.21	17.43		
1.4	16QAM	3	1	17.45	17.22	17.54		
1.4	16QAM	3	3	17.40	17.21	17.46		
1.4	16QAM	6	0	17.40	17.23	17.33	17.8	0
1.4	64QAM	1	0	17.47	17.49	17.49	17.8	0
1.4	64QAM	1	3	17.37	17.31	17.45		
1.4	64QAM	1	5	17.39	17.36	17.41		
1.4	64QAM	3	0	17.45	17.28	17.30		
1.4	64QAM	3	1	17.39	17.28	17.52		
1.4	64QAM	3	3	17.33	17.36	17.48		
1.4	64QAM	6	0	17.44	17.30	17.33	17.8	0

<LTE Band 2 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	22.28	22.23	22.55	24	0
20	QPSK	1	49	22.24	22.21	22.51		
20	QPSK	1	99	22.24	22.17	22.51		
20	QPSK	50	0	22.05	22.06	22.40	23	1
20	QPSK	50	24	21.98	22.00	22.50		
20	QPSK	50	50	22.01	21.99	22.48		
20	QPSK	100	0	21.98	22.02	22.52		
20	16QAM	1	0	22.00	21.99	22.50	23	1
20	16QAM	1	49	22.01	21.97	22.45		
20	16QAM	1	99	22.01	22.03	22.45		
20	16QAM	50	0	20.91	20.89	21.43	22	2
20	16QAM	50	24	20.98	20.90	21.35		
20	16QAM	50	50	20.97	20.99	21.40		
20	16QAM	100	0	20.85	20.89	21.33		
20	64QAM	1	0	20.87	20.82	21.40	22	2
20	64QAM	1	49	20.92	20.80	21.27		
20	64QAM	1	99	20.87	20.90	21.35		
20	64QAM	50	0	19.90	19.88	20.42	21	3
20	64QAM	50	24	19.89	19.81	20.34		
20	64QAM	50	50	19.91	19.98	20.39		
20	64QAM	100	0	19.81	19.89	20.31		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	22.23	22.18	22.54	24	0
15	QPSK	1	37	22.20	22.20	22.46		
15	QPSK	1	74	22.20	22.10	22.50		
15	QPSK	36	0	21.97	22.03	22.39	23	1
15	QPSK	36	20	21.95	21.92	22.41		
15	QPSK	36	39	22.00	21.97	22.39		
15	QPSK	75	0	21.98	21.92	22.46		
15	16QAM	1	0	21.94	21.93	22.43	23	1
15	16QAM	1	37	21.97	21.89	22.38		
15	16QAM	1	74	21.95	21.98	22.35		
15	16QAM	36	0	20.88	20.80	21.35	22	2
15	16QAM	36	20	20.88	20.88	21.31		
15	16QAM	36	39	20.94	20.94	21.32		
15	16QAM	75	0	20.79	20.88	21.25		
15	64QAM	1	0	20.82	20.82	21.38	22	2
15	64QAM	1	37	20.88	20.74	21.19		
15	64QAM	1	74	20.83	20.84	21.35		
15	64QAM	36	0	19.82	19.83	20.42	21	3
15	64QAM	36	20	19.85	19.72	20.30		
15	64QAM	36	39	19.84	19.93	20.34		
15	64QAM	75	0	19.77	19.79	20.30		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	22.23	22.23	22.49	24	0
10	QPSK	1	25	22.24	22.18	22.48		
10	QPSK	1	49	22.21	22.10	22.45		
10	QPSK	25	0	21.95	22.05	22.33	23	1
10	QPSK	25	12	21.92	21.95	22.50		

10	QPSK	25	25	21.98	21.95	22.43		
10	QPSK	50	0	21.93	21.99	22.46		
10	16QAM	1	0	21.93	21.89	22.49	23	1
10	16QAM	1	25	21.93	21.96	22.38		
10	16QAM	1	49	21.95	22.02	22.42		
10	16QAM	25	0	20.83	20.80	21.39	22	2
10	16QAM	25	12	20.97	20.88	21.31		
10	16QAM	25	25	20.91	20.99	21.38		
10	16QAM	50	0	20.79	20.80	21.31		
10	64QAM	1	0	20.77	20.77	21.31	22	2
10	64QAM	1	25	20.85	20.72	21.24		
10	64QAM	1	49	20.81	20.82	21.33		
10	64QAM	25	0	19.88	19.80	20.38	21	3
10	64QAM	25	12	19.87	19.74	20.24		
10	64QAM	25	25	19.90	19.92	20.37		
10	64QAM	50	0	19.74	19.85	20.21		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	22.25	22.16	22.52	24	0
5	QPSK	1	12	22.21	22.14	22.51		
5	QPSK	1	24	22.21	22.13	22.48		
5	QPSK	12	0	22.00	22.03	22.35	23	1
5	QPSK	12	7	21.94	21.99	22.48		
5	QPSK	12	13	21.95	21.98	22.43		
5	QPSK	25	0	21.96	21.93	22.47		
5	16QAM	1	0	21.94	21.98	22.41	23	1
5	16QAM	1	12	21.92	21.91	22.41		
5	16QAM	1	24	21.97	22.01	22.42		
5	16QAM	12	0	20.81	20.81	21.40	22	2
5	16QAM	12	7	20.94	20.89	21.29		
5	16QAM	12	13	20.88	20.98	21.32		
5	16QAM	25	0	20.83	20.82	21.33		
5	64QAM	1	0	20.83	20.73	21.30	22	2
5	64QAM	1	12	20.84	20.72	21.19		
5	64QAM	1	24	20.81	20.84	21.31		
5	64QAM	12	0	19.83	19.79	20.36	21	3
5	64QAM	12	7	19.88	19.74	20.25		
5	64QAM	12	13	19.81	19.98	20.33		
5	64QAM	25	0	19.79	19.82	20.24		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	22.18	22.13	22.45	24	0
3	QPSK	1	8	22.14	22.21	22.43		
3	QPSK	1	14	22.16	22.07	22.49		
3	QPSK	8	0	21.95	22.00	22.40	23	1
3	QPSK	8	4	21.97	21.98	22.43		
3	QPSK	8	7	21.94	21.89	22.38		
3	QPSK	15	0	21.89	21.93	22.47		
3	16QAM	1	0	21.97	21.99	22.50	23	1
3	16QAM	1	8	21.96	21.91	22.39		
3	16QAM	1	14	22.01	21.97	22.40		
3	16QAM	8	0	20.83	20.88	21.34	22	2
3	16QAM	8	4	20.93	20.87	21.34		
3	16QAM	8	7	20.90	20.95	21.35		
3	16QAM	15	0	20.80	20.88	21.31		
3	64QAM	1	0	20.79	20.79	21.31	22	2

3	64QAM	1	8	20.90	20.80	21.18		
3	64QAM	1	14	20.87	20.84	21.31		
3	64QAM	8	0	19.86	19.79	20.36	21	3
3	64QAM	8	4	19.82	19.72	20.24		
3	64QAM	8	7	19.89	19.90	20.31		
3	64QAM	15	0	19.78	19.89	20.21		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	22.27	22.21	22.51	24	0
1.4	QPSK	1	3	22.24	22.12	22.49		
1.4	QPSK	1	5	22.20	22.17	22.43		
1.4	QPSK	3	0	22.04	22.12	22.32		
1.4	QPSK	3	1	22.08	22.08	22.49		
1.4	QPSK	3	3	22.00	22.05	22.43		
1.4	QPSK	6	0	21.92	21.92	22.45	23	1
1.4	16QAM	1	0	21.92	21.98	22.50	23	1
1.4	16QAM	1	3	22.01	21.97	22.37		
1.4	16QAM	1	5	21.98	21.94	22.36		
1.4	16QAM	3	0	21.82	21.84	22.38		
1.4	16QAM	3	1	21.88	21.83	22.36		
1.4	16QAM	3	3	21.86	21.77	22.29		
1.4	16QAM	6	0	20.77	20.85	21.23	22	2
1.4	64QAM	1	0	20.83	20.72	21.32	22	2
1.4	64QAM	1	3	20.85	20.71	21.17		
1.4	64QAM	1	5	20.86	20.82	21.32		
1.4	64QAM	3	0	20.90	20.84	21.40		
1.4	64QAM	3	1	20.80	20.79	21.24		
1.4	64QAM	3	3	20.71	20.92	21.29		
1.4	64QAM	6	0	19.74	19.84	20.22	21	3

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	17.15	17.12	17.09	17.7	0
20	QPSK	1	49	16.98	16.86	16.94		
20	QPSK	1	99	16.94	16.92	17.00		
20	QPSK	50	0	17.12	17.10	17.11	17.7	0
20	QPSK	50	24	17.07	17.09	17.10		
20	QPSK	50	50	17.04	17.00	17.09		
20	QPSK	100	0	17.08	17.06	17.07		
20	16QAM	1	0	17.13	17.10	17.10	17.7	0
20	16QAM	1	49	17.09	17.12	17.05		
20	16QAM	1	99	17.05	17.13	17.13		
20	16QAM	50	0	17.09	17.11	17.09	17.7	0
20	16QAM	50	24	17.14	17.13	17.13		
20	16QAM	50	50	17.06	17.07	17.14		
20	16QAM	100	0	17.08	17.09	17.09		
20	64QAM	1	0	17.07	17.07	17.03	17.7	0
20	64QAM	1	49	17.05	17.11	17.12		
20	64QAM	1	99	17.08	17.09	17.11		
20	64QAM	50	0	17.10	17.13	17.12	17.7	0
20	64QAM	50	24	17.13	17.06	17.06		
20	64QAM	50	50	17.08	17.08	17.08		
20	64QAM	100	0	17.12	17.07	17.06		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	17.08	17.11	17.06	17.7	0
15	QPSK	1	37	16.93	16.83	16.92		
15	QPSK	1	74	16.94	16.91	17.00		
15	QPSK	36	0	17.12	17.02	17.04	17.7	0
15	QPSK	36	20	16.97	17.02	17.10		
15	QPSK	36	39	17.04	16.96	17.04		
15	QPSK	75	0	16.98	16.97	17.01		
15	16QAM	1	0	17.12	17.00	17.10	17.7	0
15	16QAM	1	37	17.00	17.02	17.00		
15	16QAM	1	74	17.00	17.09	17.04		
15	16QAM	36	0	17.08	17.03	17.07	17.7	0
15	16QAM	36	20	17.14	17.03	17.05		
15	16QAM	36	39	17.05	16.99	17.13		
15	16QAM	75	0	16.99	16.99	17.08		
15	64QAM	1	0	17.05	16.97	17.00	17.7	0
15	64QAM	1	37	17.00	17.05	17.08		
15	64QAM	1	74	17.08	17.02	17.06		
15	64QAM	36	0	17.05	17.12	17.10	17.7	0
15	64QAM	36	20	17.07	16.98	17.00		
15	64QAM	36	39	17.05	17.04	16.99		
15	64QAM	75	0	17.08	17.05	16.98		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	17.09	17.07	17.06	17.7	0
10	QPSK	1	25	16.97	16.79	16.87		
10	QPSK	1	49	16.87	16.84	16.99		
10	QPSK	25	0	17.04	17.06	17.09	17.7	0
10	QPSK	25	12	16.98	17.04	17.09		

10	QPSK	25	25	17.04	16.94	17.05		
10	QPSK	50	0	16.99	17.03	17.03		
10	16QAM	1	0	17.11	17.08	17.09	17.7	0
10	16QAM	1	25	16.99	17.09	17.02		
10	16QAM	1	49	16.96	17.10	17.07		
10	16QAM	25	0	17.08	17.09	17.05	17.7	0
10	16QAM	25	12	17.10	17.06	17.08		
10	16QAM	25	25	17.03	17.04	17.12		
10	16QAM	50	0	17.03	17.07	17.09		
10	64QAM	1	0	16.97	16.99	17.01	17.7	0
10	64QAM	1	25	17.00	17.08	17.09		
10	64QAM	1	49	17.00	17.03	17.02		
10	64QAM	25	0	17.00	17.10	17.10	17.7	0
10	64QAM	25	12	17.13	16.99	17.03		
10	64QAM	25	25	17.04	17.06	16.99		
10	64QAM	50	0	17.09	17.03	16.98		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	17.10	17.07	17.06	17.7	0
5	QPSK	1	12	16.96	16.83	16.86		
5	QPSK	1	24	16.87	16.86	16.99		
5	QPSK	12	0	17.05	17.09	17.04	17.7	0
5	QPSK	12	7	17.06	17.01	17.00		
5	QPSK	12	13	16.99	16.96	17.09		
5	QPSK	25	0	17.06	17.02	17.07		
5	16QAM	1	0	17.04	17.00	17.06	17.7	0
5	16QAM	1	12	17.04	17.11	17.03		
5	16QAM	1	24	17.01	17.08	17.05		
5	16QAM	12	0	17.08	17.11	17.04	17.7	0
5	16QAM	12	7	17.11	17.12	17.06		
5	16QAM	12	13	17.00	17.01	17.10		
5	16QAM	25	0	17.05	17.04	17.02		
5	64QAM	1	0	17.05	17.04	16.99	17.7	0
5	64QAM	1	12	17.02	17.05	17.12		
5	64QAM	1	24	17.03	17.04	17.03		
5	64QAM	12	0	17.04	17.07	17.02	17.7	0
5	64QAM	12	7	17.09	16.99	17.03		
5	64QAM	12	13	17.06	17.02	16.98		
5	64QAM	25	0	17.09	17.05	17.00		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	17.12	17.07	17.06	17.7	0
3	QPSK	1	8	16.94	16.82	16.84		
3	QPSK	1	14	16.93	16.89	16.99		
3	QPSK	8	0	17.10	17.06	17.01	17.7	0
3	QPSK	8	4	17.07	17.09	17.06		
3	QPSK	8	7	16.96	16.90	16.99		
3	QPSK	15	0	17.07	17.06	17.02		
3	16QAM	1	0	17.13	17.07	17.06	17.7	0
3	16QAM	1	8	17.02	17.10	17.00		
3	16QAM	1	14	17.00	17.12	17.10		
3	16QAM	8	0	17.05	17.04	17.01	17.7	0
3	16QAM	8	4	17.07	17.10	17.08		
3	16QAM	8	7	17.03	17.04	17.06		
3	16QAM	15	0	17.07	17.02	17.09		
3	64QAM	1	0	17.00	16.97	16.98	17.7	0

3	64QAM	1	8	17.03	17.03	17.04		
3	64QAM	1	14	17.06	17.06	17.04		
3	64QAM	8	0	17.04	17.08	17.05	17.7	0
3	64QAM	8	4	17.05	17.02	16.96		
3	64QAM	8	7	17.00	17.05	17.03		
3	64QAM	15	0	17.07	17.00	17.00		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	17.12	17.11	17.04	17.7	0
1.4	QPSK	1	3	16.91	16.76	16.89		
1.4	QPSK	1	5	16.91	16.87	16.93		
1.4	QPSK	3	0	17.10	17.07	17.08		
1.4	QPSK	3	1	16.98	17.07	17.00		
1.4	QPSK	3	3	16.99	17.00	17.08		
1.4	QPSK	6	0	16.98	17.04	17.04	17.7	0
1.4	16QAM	1	0	17.04	17.04	17.02	17.7	0
1.4	16QAM	1	3	17.05	17.02	17.00		
1.4	16QAM	1	5	16.95	17.12	17.06		
1.4	16QAM	3	0	17.02	17.04	17.08		
1.4	16QAM	3	1	17.14	17.12	17.10		
1.4	16QAM	3	3	17.04	17.03	17.07		
1.4	16QAM	6	0	17.03	17.05	16.99	17.7	0
1.4	64QAM	1	0	17.07	16.98	16.96	17.7	0
1.4	64QAM	1	3	16.98	17.07	17.07		
1.4	64QAM	1	5	17.05	17.06	17.10		
1.4	64QAM	3	0	17.00	17.08	17.03		
1.4	64QAM	3	1	17.10	17.01	16.98		
1.4	64QAM	3	3	17.08	17.00	17.03		
1.4	64QAM	6	0	17.05	17.01	16.98	17.7	0

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	21.99	22.05	22.11	22.9	0
10	QPSK	1	25	21.88	22.05	22.10		
10	QPSK	1	49	21.96	22.05	22.01		
10	QPSK	25	0	22.10	22.07	22.07	22.9	0
10	QPSK	25	12	22.09	22.06	22.02		
10	QPSK	25	25	21.99	22.03	22.02		
10	QPSK	50	0	22.01	22.05	22.05		
10	16QAM	1	0	22.02	22.09	22.08	22.9	0
10	16QAM	1	25	22.10	22.06	22.02		
10	16QAM	1	49	22.10	22.08	22.01		
10	16QAM	25	0	21.62	21.79	21.81	22.5	0.4
10	16QAM	25	12	21.72	21.86	21.89		
10	16QAM	25	25	21.69	21.80	21.90		
10	16QAM	50	0	21.71	21.83	21.86		
10	64QAM	1	0	21.81	21.96	21.94	22.5	0.4
10	64QAM	1	25	21.87	22.00	22.00		
10	64QAM	1	49	21.82	22.00	21.54		
10	64QAM	25	0	20.63	20.80	20.88	21.5	1.4
10	64QAM	25	12	20.74	20.91	20.92		
10	64QAM	25	25	20.71	20.85	20.96		
10	64QAM	50	0	20.73	20.88	20.88		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	21.94	21.97	22.03	22.9	0
5	QPSK	1	12	21.78	21.95	22.08		
5	QPSK	1	24	21.96	21.96	21.93		
5	QPSK	12	0	22.09	22.00	22.01	22.9	0
5	QPSK	12	7	22.02	22.03	21.95		
5	QPSK	12	13	21.90	22.01	21.96		
5	QPSK	25	0	22.01	21.95	22.03		
5	16QAM	1	0	22.02	22.07	22.02	22.9	0
5	16QAM	1	12	22.03	21.97	21.95		
5	16QAM	1	24	22.01	22.08	21.97		
5	16QAM	12	0	21.62	21.72	21.72	22.5	0.4
5	16QAM	12	7	21.64	21.84	21.87		
5	16QAM	12	13	21.65	21.78	21.87		
5	16QAM	25	0	21.67	21.74	21.86		
5	64QAM	1	0	21.78	21.93	21.91	22.5	0.4
5	64QAM	1	12	21.81	21.97	21.98		
5	64QAM	1	24	21.80	21.92	21.49		
5	64QAM	12	0	20.63	20.77	20.85	21.5	1.4
5	64QAM	12	7	20.70	20.86	20.84		
5	64QAM	12	13	20.70	20.76	20.95		
5	64QAM	25	0	20.71	20.84	20.86		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	21.89	21.96	22.10	22.9	0
3	QPSK	1	8	21.78	21.95	22.05		
3	QPSK	1	14	21.94	22.03	21.98		
3	QPSK	8	0	22.09	22.01	21.98	22.9	0
3	QPSK	8	4	22.08	22.05	22.01		

3	QPSK	8	7	21.94	22.01	22.01		
3	QPSK	15	0	21.96	21.98	22.00		
3	16QAM	1	0	21.98	22.03	22.06	22.9	0
3	16QAM	1	8	22.06	22.03	21.97		
3	16QAM	1	14	22.04	21.99	21.97		
3	16QAM	8	0	21.59	21.79	21.73	22.5	0.4
3	16QAM	8	4	21.68	21.85	21.79		
3	16QAM	8	7	21.63	21.79	21.88		
3	16QAM	15	0	21.70	21.79	21.76		
3	64QAM	1	0	21.81	21.90	21.84	22.5	0.4
3	64QAM	1	8	21.83	21.93	21.99		
3	64QAM	1	14	21.73	21.92	21.45		
3	64QAM	8	0	20.53	20.80	20.86	21.5	1.4
3	64QAM	8	4	20.72	20.81	20.92		
3	64QAM	8	7	20.63	20.83	20.87		
3	64QAM	15	0	20.63	20.85	20.85		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	21.93	21.95	22.02	22.9	0
1.4	QPSK	1	3	21.84	22.01	22.09		
1.4	QPSK	1	5	21.94	22.04	21.98		
1.4	QPSK	3	0	22.03	21.98	21.99		
1.4	QPSK	3	1	22.05	21.97	21.93		
1.4	QPSK	3	3	21.92	21.95	21.98		
1.4	QPSK	6	0	21.91	21.96	22.05	22.9	0
1.4	16QAM	1	0	22.02	22.00	22.01	22.9	0
1.4	16QAM	1	3	22.01	22.03	21.95		
1.4	16QAM	1	5	22.01	21.98	21.99		
1.4	16QAM	3	0	21.56	21.76	21.76		
1.4	16QAM	3	1	21.70	21.78	21.79		
1.4	16QAM	3	3	21.65	21.75	21.82		
1.4	16QAM	6	0	21.66	21.81	21.78	22.5	0.4
1.4	64QAM	1	0	21.72	21.95	21.90	22.5	0.4
1.4	64QAM	1	3	21.83	21.90	21.90		
1.4	64QAM	1	5	21.74	21.95	21.45		
1.4	64QAM	3	0	21.74	21.96	21.89		
1.4	64QAM	3	1	21.86	21.97	21.93		
1.4	64QAM	3	3	21.72	21.97	21.50		
1.4	64QAM	6	0	20.67	20.80	20.88	21.5	1.4

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	16.18	16.25	16.26	16.9	0
20	QPSK	1	49	16.16	16.25	16.21		
20	QPSK	1	99	16.16	16.24	16.20		
20	QPSK	50	0	16.24	16.21	16.25	16.9	0
20	QPSK	50	24	16.23	16.20	16.24		
20	QPSK	50	50	16.17	16.16	16.21		
20	QPSK	100	0	16.21	16.23	16.24		
20	16QAM	1	0	16.25	16.19	16.24	16.9	0
20	16QAM	1	49	16.19	16.22	16.24		
20	16QAM	1	99	16.18	16.23	16.17		
20	16QAM	50	0	16.18	16.16	16.17	16.9	0
20	16QAM	50	24	16.19	16.22	16.19		
20	16QAM	50	50	16.16	16.21	16.25		
20	16QAM	100	0	16.16	16.18	16.25		
20	64QAM	1	0	16.19	16.19	16.18	16.9	0
20	64QAM	1	49	16.20	16.21	16.24		
20	64QAM	1	99	16.20	16.17	16.25		
20	64QAM	50	0	16.25	16.24	16.21	16.9	0
20	64QAM	50	24	16.17	16.22	16.17		
20	64QAM	50	50	16.23	16.19	16.22		
20	64QAM	100	0	16.16	16.17	16.23		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	16.15	16.24	16.16	16.9	0
15	QPSK	1	37	16.16	16.25	16.20		
15	QPSK	1	74	16.12	16.18	16.13		
15	QPSK	36	0	16.17	16.19	16.24	16.9	0
15	QPSK	36	20	16.17	16.14	16.18		
15	QPSK	36	39	16.12	16.12	16.14		
15	QPSK	75	0	16.13	16.13	16.18		
15	16QAM	1	0	16.19	16.17	16.20	16.9	0
15	16QAM	1	37	16.15	16.12	16.21		
15	16QAM	1	74	16.10	16.14	16.17		
15	16QAM	36	0	16.15	16.10	16.16	16.9	0
15	16QAM	36	20	16.18	16.17	16.17		
15	16QAM	36	39	16.07	16.15	16.18		
15	16QAM	75	0	16.14	16.11	16.18		
15	64QAM	1	0	16.09	16.16	16.09	16.9	0
15	64QAM	1	37	16.15	16.17	16.17		
15	64QAM	1	74	16.18	16.12	16.19		
15	64QAM	36	0	16.15	16.17	16.15	16.9	0
15	64QAM	36	20	16.12	16.18	16.13		
15	64QAM	36	39	16.22	16.13	16.21		
15	64QAM	75	0	16.11	16.09	16.18		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	16.10	16.20	16.17	16.9	0
10	QPSK	1	25	16.15	16.18	16.20		
10	QPSK	1	49	16.12	16.24	16.13		
10	QPSK	25	0	16.21	16.19	16.25	16.9	0
10	QPSK	25	12	16.13	16.20	16.21		

10	QPSK	25	25	16.13	16.12	16.16		
10	QPSK	50	0	16.21	16.22	16.23		
10	16QAM	1	0	16.20	16.18	16.21	16.9	0
10	16QAM	1	25	16.19	16.12	16.17		
10	16QAM	1	49	16.10	16.13	16.07		
10	16QAM	25	0	16.17	16.12	16.11	16.9	0
10	16QAM	25	12	16.16	16.13	16.12		
10	16QAM	25	25	16.07	16.14	16.17		
10	16QAM	50	0	16.06	16.08	16.19		
10	64QAM	1	0	16.19	16.14	16.14	16.9	0
10	64QAM	1	25	16.13	16.20	16.17		
10	64QAM	1	49	16.17	16.14	16.18		
10	64QAM	25	0	16.22	16.21	16.20	16.9	0
10	64QAM	25	12	16.10	16.18	16.13		
10	64QAM	25	25	16.22	16.11	16.16		
10	64QAM	50	0	16.06	16.17	16.14		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	16.18	16.22	16.21	16.9	0
5	QPSK	1	12	16.10	16.18	16.11		
5	QPSK	1	24	16.06	16.24	16.20		
5	QPSK	12	0	16.21	16.14	16.24	16.9	0
5	QPSK	12	7	16.17	16.16	16.16		
5	QPSK	12	13	16.08	16.07	16.15		
5	QPSK	25	0	16.18	16.19	16.20		
5	16QAM	1	0	16.22	16.19	16.24	16.9	0
5	16QAM	1	12	16.16	16.17	16.17		
5	16QAM	1	24	16.09	16.22	16.15		
5	16QAM	12	0	16.15	16.13	16.10	16.9	0
5	16QAM	12	7	16.18	16.15	16.13		
5	16QAM	12	13	16.09	16.15	16.16		
5	16QAM	25	0	16.12	16.08	16.25		
5	64QAM	1	0	16.14	16.15	16.12	16.9	0
5	64QAM	1	12	16.18	16.11	16.20		
5	64QAM	1	24	16.15	16.16	16.22		
5	64QAM	12	0	16.17	16.23	16.11	16.9	0
5	64QAM	12	7	16.15	16.17	16.08		
5	64QAM	12	13	16.22	16.10	16.13		
5	64QAM	25	0	16.06	16.17	16.21		

<LTE Band 7 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	22.48	22.63	22.78	24	0
20	QPSK	1	49	22.44	22.62	22.72		
20	QPSK	1	99	22.44	22.53	22.68		
20	QPSK	50	0	21.94	22.06	22.25	23	1
20	QPSK	50	24	21.95	22.04	22.21		
20	QPSK	50	50	21.98	22.03	22.24		
20	QPSK	100	0	21.92	22.06	22.25		
20	16QAM	1	0	21.94	22.09	22.24	23	1
20	16QAM	1	49	21.89	22.09	22.25		
20	16QAM	1	99	21.88	22.06	22.26		
20	16QAM	50	0	21.26	21.39	21.49	22	2
20	16QAM	50	24	21.24	21.33	21.50		
20	16QAM	50	50	21.28	21.35	21.48		
20	16QAM	100	0	21.19	21.41	21.55		
20	64QAM	1	0	21.23	21.41	21.52	22	2
20	64QAM	1	49	21.19	21.43	21.54		
20	64QAM	1	99	21.22	21.42	21.49		
20	64QAM	50	0	20.24	20.13	20.22	21	3
20	64QAM	50	24	20.24	20.08	20.22		
20	64QAM	50	50	20.18	20.05	20.19		
20	64QAM	100	0	20.22	20.11	20.19		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	22.44	22.58	22.77	24	0
15	QPSK	1	37	22.43	22.56	22.67		
15	QPSK	1	74	22.35	22.50	22.59		
15	QPSK	36	0	21.88	22.05	22.15	23	1
15	QPSK	36	20	21.89	21.94	22.17		
15	QPSK	36	39	21.97	22.02	22.24		
15	QPSK	75	0	21.83	22.05	22.18		
15	16QAM	1	0	21.93	22.08	22.20	23	1
15	16QAM	1	37	21.84	22.02	22.25		
15	16QAM	1	74	21.84	21.98	22.26		
15	16QAM	36	0	21.19	21.29	21.44	22	2
15	16QAM	36	20	21.21	21.26	21.50		
15	16QAM	36	39	21.20	21.35	21.48		
15	16QAM	75	0	21.16	21.37	21.45		
15	64QAM	1	0	21.16	21.34	21.45	22	2
15	64QAM	1	37	21.18	21.38	21.50		
15	64QAM	1	74	21.15	21.35	21.46		
15	64QAM	36	0	20.23	20.10	20.17	21	3
15	64QAM	36	20	20.17	20.05	20.12		
15	64QAM	36	39	20.08	19.97	20.09		
15	64QAM	75	0	20.19	20.05	20.19		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	22.43	22.57	22.74	24	0
10	QPSK	1	25	22.34	22.62	22.71		
10	QPSK	1	49	22.37	22.51	22.63		
10	QPSK	25	0	21.91	22.03	22.25	23	1
10	QPSK	25	12	21.88	21.94	22.12		

10	QPSK	25	25	21.95	21.93	22.16		
10	QPSK	50	0	21.88	22.01	22.20		
10	16QAM	1	0	21.88	21.99	22.19	23	1
10	16QAM	1	25	21.83	22.03	22.22		
10	16QAM	1	49	21.84	21.99	22.19		
10	16QAM	25	0	21.18	21.33	21.47	22	2
10	16QAM	25	12	21.19	21.24	21.43		
10	16QAM	25	25	21.23	21.25	21.38		
10	16QAM	50	0	21.11	21.39	21.45		
10	64QAM	1	0	21.22	21.33	21.47	22	2
10	64QAM	1	25	21.15	21.37	21.51		
10	64QAM	1	49	21.17	21.36	21.41		
10	64QAM	25	0	20.20	20.06	20.20	21	3
10	64QAM	25	12	20.15	20.01	20.13		
10	64QAM	25	25	20.11	20.02	20.12		
10	64QAM	50	0	20.14	20.07	20.11		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	22.41	22.60	22.76	24	0
5	QPSK	1	12	22.36	22.57	22.68		
5	QPSK	1	24	22.36	22.49	22.62		
5	QPSK	12	0	21.87	22.04	22.23	23	1
5	QPSK	12	7	21.93	21.96	22.13		
5	QPSK	12	13	21.93	21.96	22.22		
5	QPSK	25	0	21.84	21.97	22.23		
5	16QAM	1	0	21.93	22.01	22.22	23	1
5	16QAM	1	12	21.80	22.07	22.15		
5	16QAM	1	24	21.87	21.99	22.20		
5	16QAM	12	0	21.19	21.33	21.48	22	2
5	16QAM	12	7	21.15	21.30	21.49		
5	16QAM	12	13	21.28	21.29	21.47		
5	16QAM	25	0	21.12	21.31	21.53		
5	64QAM	1	0	21.16	21.35	21.42	22	2
5	64QAM	1	12	21.13	21.42	21.44		
5	64QAM	1	24	21.14	21.38	21.43		
5	64QAM	12	0	20.19	20.09	20.16	21	3
5	64QAM	12	7	20.18	20.01	20.15		
5	64QAM	12	13	20.09	20.00	20.11		
5	64QAM	25	0	20.17	20.10	20.14		

<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130		
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	22.01	22.02	21.96	22.9	0
10	QPSK	1	25	21.97	21.98	21.92		
10	QPSK	1	49	21.92	22.00	21.91		
10	QPSK	25	0	21.92	22.00	21.94	22.9	0
10	QPSK	25	12	21.98	21.96	21.92		
10	QPSK	25	25	21.93	21.93	21.97		
10	QPSK	50	0	21.98	22.00	21.93		
10	16QAM	1	0	22.00	21.97	22.00	22.9	0
10	16QAM	1	25	21.97	21.96	21.96		
10	16QAM	1	49	21.99	21.93	21.99		
10	16QAM	25	0	21.71	21.71	21.61	22.5	0.4
10	16QAM	25	12	21.77	21.67	21.70		
10	16QAM	25	25	21.74	21.69	21.68		
10	16QAM	50	0	21.78	21.67	21.68		
10	64QAM	1	0	21.85	21.82	21.73	22.5	0.4
10	64QAM	1	25	21.41	21.84	21.77		
10	64QAM	1	49	21.85	21.80	21.73		
10	64QAM	25	0	20.71	20.71	20.67	21.5	1.4
10	64QAM	25	12	20.79	20.72	20.73		
10	64QAM	25	25	20.76	20.75	20.68		
10	64QAM	50	0	20.81	20.70	20.70		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	21.94	21.93	21.90	22.9	0
5	QPSK	1	12	21.94	21.98	21.86		
5	QPSK	1	24	21.91	21.99	21.83		
5	QPSK	12	0	21.88	21.98	21.84	22.9	0
5	QPSK	12	7	21.92	21.86	21.88		
5	QPSK	12	13	21.93	21.85	21.91		
5	QPSK	25	0	21.96	21.95	21.91		
5	16QAM	1	0	21.97	21.91	22.00	22.9	0
5	16QAM	1	12	21.90	21.96	21.95		
5	16QAM	1	24	21.91	21.85	21.99		
5	16QAM	12	0	21.61	21.69	21.57	22.5	0.4
5	16QAM	12	7	21.76	21.60	21.64		
5	16QAM	12	13	21.66	21.66	21.58		
5	16QAM	25	0	21.70	21.66	21.68		
5	64QAM	1	0	21.81	21.72	21.72	22.5	0.4
5	64QAM	1	12	21.37	21.74	21.67		
5	64QAM	1	24	21.81	21.70	21.70		
5	64QAM	12	0	20.69	20.61	20.64	21.5	1.4
5	64QAM	12	7	20.76	20.66	20.71		
5	64QAM	12	13	20.69	20.73	20.64		
5	64QAM	25	0	20.80	20.70	20.70		
Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	21.98	21.95	21.87	22.9	0
3	QPSK	1	8	21.91	21.95	21.83		
3	QPSK	1	14	21.85	21.91	21.90		
3	QPSK	8	0	21.89	21.98	21.90	22.9	0
3	QPSK	8	4	21.94	21.90	21.85		

3	QPSK	8	7	21.84	21.90	21.87		
3	QPSK	15	0	21.94	21.95	21.85		
3	16QAM	1	0	21.91	21.89	21.94	22.9	0
3	16QAM	1	8	21.96	21.92	21.89		
3	16QAM	1	14	21.97	21.87	21.93		
3	16QAM	8	0	21.70	21.62	21.58	22.5	0.4
3	16QAM	8	4	21.72	21.59	21.63		
3	16QAM	8	7	21.74	21.64	21.59		
3	16QAM	15	0	21.70	21.61	21.65		
3	64QAM	1	0	21.83	21.81	21.66	22.5	0.4
3	64QAM	1	8	21.35	21.83	21.71		
3	64QAM	1	14	21.82	21.73	21.68		
3	64QAM	8	0	20.62	20.71	20.61	21.5	1.4
3	64QAM	8	4	20.72	20.65	20.70		
3	64QAM	8	7	20.70	20.72	20.59		
3	64QAM	15	0	20.73	20.68	20.67		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	21.95	21.98	21.90	22.9	0
1.4	QPSK	1	3	21.87	21.96	21.88		
1.4	QPSK	1	5	21.90	21.90	21.85		
1.4	QPSK	3	0	21.83	21.88	21.90		
1.4	QPSK	3	1	21.90	21.90	21.89		
1.4	QPSK	3	3	21.83	21.91	21.94		
1.4	QPSK	6	0	21.90	21.91	21.83	22.9	0
1.4	16QAM	1	0	21.99	21.91	21.94	22.9	0
1.4	16QAM	1	3	21.95	21.88	21.86		
1.4	16QAM	1	5	21.89	21.86	21.96		
1.4	16QAM	3	0	21.69	21.67	21.58		
1.4	16QAM	3	1	21.71	21.65	21.62		
1.4	16QAM	3	3	21.68	21.69	21.62		
1.4	16QAM	6	0	21.72	21.59	21.66	22.5	0.4
1.4	64QAM	1	0	21.81	21.79	21.72	22.5	0.4
1.4	64QAM	1	3	21.39	21.77	21.67		
1.4	64QAM	1	5	21.80	21.74	21.63		
1.4	64QAM	3	0	21.77	21.79	21.70		
1.4	64QAM	3	1	21.38	21.83	21.71		
1.4	64QAM	3	3	21.75	21.80	21.69		
1.4	64QAM	6	0	20.80	20.63	20.63	21.5	1.4

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23230			
Frequency (MHz)					782			
10	QPSK	1	0		21.04		22	0
10	QPSK	1	25		20.89			
10	QPSK	1	49		20.88			
10	QPSK	25	0		21.03		22	0
10	QPSK	25	12		21.00			
10	QPSK	25	25		21.01			
10	QPSK	50	0		20.94			
10	16QAM	1	0		20.84		22	0
10	16QAM	1	25		20.85			
10	16QAM	1	49		20.83			
10	16QAM	25	0		21.02		22	0
10	16QAM	25	12		21.03			
10	16QAM	25	25		20.85			
10	16QAM	50	0		20.85			
10	64QAM	1	0		20.88		22	0
10	64QAM	1	25		20.88			
10	64QAM	1	49		20.86			
10	64QAM	25	0		20.56		21.5	0.5
10	64QAM	25	12		20.55			
10	64QAM	25	25		20.55			
10	64QAM	50	0		20.55			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	20.96	21.02	21.01	22	0
5	QPSK	1	12	20.83	20.79	20.87		
5	QPSK	1	24	20.82	20.83	20.84		
5	QPSK	12	0	20.96	21.01	20.93	22	0
5	QPSK	12	7	20.99	20.98	20.91		
5	QPSK	12	13	20.99	21.01	20.91		
5	QPSK	25	0	20.94	20.92	20.93		
5	16QAM	1	0	20.76	20.83	20.79	22	0
5	16QAM	1	12	20.81	20.79	20.81		
5	16QAM	1	24	20.75	20.83	20.80		
5	16QAM	12	0	20.99	21.02	20.96	22	0
5	16QAM	12	7	21.02	20.95	20.95		
5	16QAM	12	13	20.82	20.85	20.77		
5	16QAM	25	0	20.82	20.76	20.82		
5	64QAM	1	0	20.79	20.80	20.87	22	0
5	64QAM	1	12	20.86	20.81	20.86		
5	64QAM	1	24	20.79	20.83	20.77		
5	64QAM	12	0	20.54	20.50	20.46	21.5	0.5
5	64QAM	12	7	20.47	20.46	20.48		
5	64QAM	12	13	20.54	20.47	20.49		
5	64QAM	25	0	20.51	20.52	20.49		

<LTE Band 14>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23330			
Frequency (MHz)					793			
10	QPSK	1	0		21.44		22.3	0
10	QPSK	1	25		21.28			
10	QPSK	1	49		21.25			
10	QPSK	25	0		21.39		22.3	0
10	QPSK	25	12		21.38			
10	QPSK	25	25		21.36			
10	QPSK	50	0		21.38			
10	16QAM	1	0		21.42		22.3	0
10	16QAM	1	25		21.38			
10	16QAM	1	49		21.34			
10	16QAM	25	0		21.33		22.3	0
10	16QAM	25	12		21.35			
10	16QAM	25	25		21.41			
10	16QAM	50	0		21.36			
10	64QAM	1	0		21.40		22.3	0
10	64QAM	1	25		21.34			
10	64QAM	1	49		21.33			
10	64QAM	25	0		20.58		21.5	0.8
10	64QAM	25	12		20.60			
10	64QAM	25	25		20.64			
10	64QAM	50	0		20.58			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	21.42	21.43	21.39	22.3	0
5	QPSK	1	12	21.23	21.19	21.19		
5	QPSK	1	24	21.17	21.22	21.25		
5	QPSK	12	0	21.30	21.30	21.29	22.3	0
5	QPSK	12	7	21.30	21.38	21.31		
5	QPSK	12	13	21.31	21.33	21.28		
5	QPSK	25	0	21.30	21.38	21.36		
5	16QAM	1	0	21.40	21.42	21.38	22.3	0
5	16QAM	1	12	21.31	21.35	21.38		
5	16QAM	1	24	21.34	21.34	21.31		
5	16QAM	12	0	21.29	21.29	21.26	22.3	0
5	16QAM	12	7	21.30	21.31	21.34		
5	16QAM	12	13	21.39	21.41	21.37		
5	16QAM	25	0	21.29	21.30	21.26		
5	64QAM	1	0	21.32	21.40	21.34	22.3	0
5	64QAM	1	12	21.25	21.24	21.34		
5	64QAM	1	24	21.29	21.26	21.27		
5	64QAM	12	0	20.57	20.53	20.58	21.5	0.8
5	64QAM	12	7	20.55	20.60	20.53		
5	64QAM	12	13	20.63	20.54	20.58		
5	64QAM	25	0	20.58	20.54	20.53		

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	21.79	21.96	21.79	22.9	0
10	QPSK	1	25	21.78	21.75	21.75		
10	QPSK	1	49	21.77	21.71	21.78		
10	QPSK	25	0	21.95	21.95	21.94	22.9	0
10	QPSK	25	12	21.95	21.93	21.89		
10	QPSK	25	25	21.80	21.80	21.85		
10	QPSK	50	0	21.95	21.94	21.83		
10	16QAM	1	0	21.92	21.94	21.93	22.9	0
10	16QAM	1	25	21.92	21.94	21.94		
10	16QAM	1	49	21.94	21.94	21.94		
10	16QAM	25	0	21.39	21.39	21.40	22.5	0.4
10	16QAM	25	12	21.53	21.53	21.45		
10	16QAM	25	25	21.50	21.51	21.47		
10	16QAM	50	0	21.51	21.51	21.42		
10	64QAM	1	0	21.60	21.60	21.54	22.5	0.4
10	64QAM	1	25	21.66	21.64	21.67		
10	64QAM	1	49	21.67	21.66	21.65		
10	64QAM	25	0	20.44	20.44	20.44	21.5	1.4
10	64QAM	25	12	20.58	20.57	20.50		
10	64QAM	25	25	20.56	20.59	20.55		
10	64QAM	50	0	20.52	20.52	20.44		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	21.76	21.87	21.79	22.9	0
5	QPSK	1	12	21.68	21.65	21.73		
5	QPSK	1	24	21.68	21.71	21.73		
5	QPSK	12	0	21.94	21.85	21.84	22.9	0
5	QPSK	12	7	21.86	21.93	21.86		
5	QPSK	12	13	21.79	21.77	21.85		
5	QPSK	25	0	21.89	21.87	21.75		
5	16QAM	1	0	21.82	21.89	21.85	22.9	0
5	16QAM	1	12	21.87	21.91	21.91		
5	16QAM	1	24	21.88	21.89	21.92		
5	16QAM	12	0	21.35	21.35	21.30	22.5	0.4
5	16QAM	12	7	21.53	21.50	21.35		
5	16QAM	12	13	21.40	21.42	21.41		
5	16QAM	25	0	21.46	21.42	21.32		
5	64QAM	1	0	21.59	21.60	21.52	22.5	0.4
5	64QAM	1	12	21.61	21.55	21.60		
5	64QAM	1	24	21.66	21.65	21.56		
5	64QAM	12	0	20.43	20.38	20.38	21.5	1.4
5	64QAM	12	7	20.53	20.55	20.48		
5	64QAM	12	13	20.55	20.59	20.47		
5	64QAM	25	0	20.44	20.44	20.35		

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	17.46	17.27	17.21	17.8	0
20	QPSK	1	49	17.30	17.17	17.09		
20	QPSK	1	99	17.16	17.15	17.07		
20	QPSK	50	0	17.42	17.40	17.33	17.8	0
20	QPSK	50	24	17.38	17.39	17.30		
20	QPSK	50	50	17.36	17.38	17.22		
20	QPSK	100	0	17.39	17.32	17.24		
20	16QAM	1	0	17.42	17.43	17.40	17.8	0
20	16QAM	1	49	17.39	17.45	17.37		
20	16QAM	1	99	17.44	17.42	17.37		
20	16QAM	50	0	17.44	17.30	17.37	17.8	0
20	16QAM	50	24	17.44	17.30	17.29		
20	16QAM	50	50	17.37	17.31	17.44		
20	16QAM	100	0	17.45	17.29	17.35		
20	64QAM	1	0	17.37	17.41	17.37	17.8	0
20	64QAM	1	49	17.42	17.33	17.41		
20	64QAM	1	99	17.39	17.32	17.43		
20	64QAM	50	0	17.44	17.35	17.39	17.8	0
20	64QAM	50	24	17.39	17.31	17.42		
20	64QAM	50	50	17.36	17.28	17.45		
20	64QAM	100	0	17.45	17.30	17.34		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	17.43	17.24	17.21	17.8	0
15	QPSK	1	37	17.27	17.07	17.05		
15	QPSK	1	74	17.10	17.13	16.99		
15	QPSK	36	0	17.40	17.36	17.27	17.8	0
15	QPSK	36	20	17.35	17.32	17.30		
15	QPSK	36	39	17.34	17.32	17.16		
15	QPSK	75	0	17.30	17.32	17.19		
15	16QAM	1	0	17.42	17.35	17.30	17.8	0
15	16QAM	1	37	17.34	17.37	17.36		
15	16QAM	1	74	17.40	17.34	17.27		
15	16QAM	36	0	17.39	17.21	17.35	17.8	0
15	16QAM	36	20	17.38	17.25	17.20		
15	16QAM	36	39	17.35	17.29	17.41		
15	16QAM	75	0	17.38	17.29	17.32		
15	64QAM	1	0	17.28	17.35	17.27	17.8	0
15	64QAM	1	37	17.34	17.30	17.32		
15	64QAM	1	74	17.36	17.29	17.42		
15	64QAM	36	0	17.34	17.30	17.35	17.8	0
15	64QAM	36	20	17.31	17.25	17.34		
15	64QAM	36	39	17.27	17.24	17.35		
15	64QAM	75	0	17.41	17.21	17.28		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	17.36	17.26	17.14	17.8	0
10	QPSK	1	25	17.30	17.15	17.09		
10	QPSK	1	49	17.10	17.05	17.05		
10	QPSK	25	0	17.38	17.32	17.32	17.8	0
10	QPSK	25	12	17.28	17.31	17.20		

10	QPSK	25	25	17.30	17.33	17.13		
10	QPSK	50	0	17.33	17.22	17.17		
10	16QAM	1	0	17.38	17.33	17.36	17.8	0
10	16QAM	1	25	17.37	17.41	17.33		
10	16QAM	1	49	17.42	17.40	17.33		
10	16QAM	25	0	17.41	17.23	17.31	17.8	0
10	16QAM	25	12	17.37	17.24	17.26		
10	16QAM	25	25	17.33	17.29	17.36		
10	16QAM	50	0	17.43	17.20	17.26		
10	64QAM	1	0	17.37	17.38	17.30	17.8	0
10	64QAM	1	25	17.33	17.25	17.39		
10	64QAM	1	49	17.37	17.29	17.40		
10	64QAM	25	0	17.41	17.28	17.37	17.8	0
10	64QAM	25	12	17.32	17.25	17.42		
10	64QAM	25	25	17.30	17.18	17.40		
10	64QAM	50	0	17.40	17.28	17.29		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	17.39	17.18	17.13	17.8	0
5	QPSK	1	12	17.30	17.08	16.99		
5	QPSK	1	24	17.09	17.09	17.03		
5	QPSK	12	0	17.39	17.37	17.31	17.8	0
5	QPSK	12	7	17.35	17.38	17.24		
5	QPSK	12	13	17.35	17.35	17.15		
5	QPSK	25	0	17.34	17.27	17.20		
5	16QAM	1	0	17.40	17.41	17.40	17.8	0
5	16QAM	1	12	17.37	17.36	17.32		
5	16QAM	1	24	17.36	17.38	17.32		
5	16QAM	12	0	17.35	17.28	17.31	17.8	0
5	16QAM	12	7	17.42	17.21	17.27		
5	16QAM	12	13	17.31	17.24	17.40		
5	16QAM	25	0	17.36	17.21	17.29		
5	64QAM	1	0	17.34	17.39	17.31	17.8	0
5	64QAM	1	12	17.36	17.25	17.36		
5	64QAM	1	24	17.35	17.27	17.42		
5	64QAM	12	0	17.44	17.31	17.34	17.8	0
5	64QAM	12	7	17.34	17.31	17.42		
5	64QAM	12	13	17.36	17.18	17.41		
5	64QAM	25	0	17.39	17.29	17.25		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	17.40	17.18	17.16	17.8	0
3	QPSK	1	8	17.23	17.08	17.08		
3	QPSK	1	14	17.07	17.08	17.03		
3	QPSK	8	0	17.41	17.40	17.28	17.8	0
3	QPSK	8	4	17.28	17.33	17.20		
3	QPSK	8	7	17.36	17.31	17.21		
3	QPSK	15	0	17.31	17.23	17.24		
3	16QAM	1	0	17.35	17.39	17.40	17.8	0
3	16QAM	1	8	17.29	17.37	17.36		
3	16QAM	1	14	17.34	17.36	17.34		
3	16QAM	8	0	17.34	17.29	17.32	17.8	0
3	16QAM	8	4	17.38	17.27	17.29		
3	16QAM	8	7	17.33	17.28	17.37		
3	16QAM	15	0	17.45	17.26	17.27		
3	64QAM	1	0	17.33	17.38	17.27	17.8	0

3	64QAM	1	8	17.32	17.32	17.34		
3	64QAM	1	14	17.31	17.30	17.38		
3	64QAM	8	0	17.38	17.32	17.33	17.8	0
3	64QAM	8	4	17.30	17.29	17.40		
3	64QAM	8	7	17.27	17.18	17.44		
3	64QAM	15	0	17.42	17.20	17.33		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	17.46	17.24	17.19	17.8	0
1.4	QPSK	1	3	17.28	17.15	17.01		
1.4	QPSK	1	5	17.10	17.06	17.04		
1.4	QPSK	3	0	17.37	17.32	17.33		
1.4	QPSK	3	1	17.34	17.34	17.29		
1.4	QPSK	3	3	17.36	17.32	17.16		
1.4	QPSK	6	0	17.32	17.25	17.17	17.8	0
1.4	16QAM	1	0	17.37	17.39	17.40	17.8	0
1.4	16QAM	1	3	17.31	17.40	17.34		
1.4	16QAM	1	5	17.39	17.41	17.33		
1.4	16QAM	3	0	17.42	17.22	17.35		
1.4	16QAM	3	1	17.41	17.24	17.19		
1.4	16QAM	3	3	17.28	17.30	17.42		
1.4	16QAM	6	0	17.41	17.27	17.25	17.8	0
1.4	64QAM	1	0	17.35	17.37	17.34	17.8	0
1.4	64QAM	1	3	17.40	17.23	17.39		
1.4	64QAM	1	5	17.33	17.29	17.40		
1.4	64QAM	3	0	17.40	17.34	17.39		
1.4	64QAM	3	1	17.30	17.24	17.33		
1.4	64QAM	3	3	17.28	17.20	17.41		
1.4	64QAM	6	0	17.39	17.26	17.30	17.8	0

<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	22.18	22.20	22.30	22.9	0
15	QPSK	1	37	22.09	22.11	22.22		
15	QPSK	1	74	22.13	22.10	22.27		
15	QPSK	36	0	22.27	22.27	22.29	22.9	0
15	QPSK	36	20	22.22	22.24	22.29		
15	QPSK	36	39	22.24	22.21	22.22		
15	QPSK	75	0	22.20	22.21	22.29		
15	16QAM	1	0	22.27	22.21	22.20	22.9	0
15	16QAM	1	37	22.21	22.25	22.22		
15	16QAM	1	74	22.24	22.26	22.29		
15	16QAM	36	0	21.81	21.85	22.00	22.5	0.4
15	16QAM	36	20	21.88	21.89	21.99		
15	16QAM	36	39	21.84	21.96	21.95		
15	16QAM	75	0	21.89	21.91	21.94		
15	64QAM	1	0	21.98	21.89	21.98	22.5	0.4
15	64QAM	1	37	21.93	21.99	21.91		
15	64QAM	1	74	21.96	21.92	20.97		
15	64QAM	36	0	20.89	20.88	20.98	21.5	1.4
15	64QAM	36	20	20.91	20.94	20.96		
15	64QAM	36	39	20.90	20.92	20.87		
15	64QAM	75	0	20.89	20.93	20.87		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	22.17	22.17	22.29	22.9	0
10	QPSK	1	25	22.08	22.02	22.22		
10	QPSK	1	49	22.13	22.07	22.24		
10	QPSK	25	0	22.23	22.17	22.27	22.9	0
10	QPSK	25	12	22.15	22.19	22.27		
10	QPSK	25	25	22.17	22.21	22.19		
10	QPSK	50	0	22.14	22.17	22.22		
10	16QAM	1	0	22.25	22.16	22.20	22.9	0
10	16QAM	1	25	22.11	22.17	22.22		
10	16QAM	1	49	22.14	22.19	22.22		
10	16QAM	25	0	21.79	21.78	21.96	22.5	0.4
10	16QAM	25	12	21.83	21.80	21.96		
10	16QAM	25	25	21.83	21.87	21.85		
10	16QAM	50	0	21.88	21.86	21.84		
10	64QAM	1	0	21.90	21.83	21.93	22.5	0.4
10	64QAM	1	25	21.93	21.93	21.85		
10	64QAM	1	49	21.93	21.85	20.89		
10	64QAM	25	0	20.86	20.86	20.91	21.5	1.4
10	64QAM	25	12	20.82	20.93	20.87		
10	64QAM	25	25	20.88	20.88	20.80		
10	64QAM	50	0	20.86	20.93	20.77		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	22.15	22.18	22.27	22.9	0
5	QPSK	1	12	22.00	22.07	22.18		
5	QPSK	1	24	22.07	22.08	22.19		
5	QPSK	12	0	22.18	22.25	22.26	22.9	0
5	QPSK	12	7	22.13	22.16	22.19		

5	QPSK	12	13	22.17	22.15	22.20		
5	QPSK	25	0	22.18	22.14	22.25		
5	16QAM	1	0	22.19	22.20	22.15	22.9	0
5	16QAM	1	12	22.17	22.23	22.22		
5	16QAM	1	24	22.24	22.18	22.27		
5	16QAM	12	0	21.78	21.85	21.95	22.5	0.4
5	16QAM	12	7	21.87	21.86	21.99		
5	16QAM	12	13	21.84	21.88	21.92		
5	16QAM	25	0	21.86	21.86	21.94		
5	64QAM	1	0	21.88	21.88	21.97	22.5	0.4
5	64QAM	1	12	21.92	21.97	21.88		
5	64QAM	1	24	21.86	21.90	20.97		
5	64QAM	12	0	20.80	20.88	20.89	21.5	1.4
5	64QAM	12	7	20.82	20.88	20.86		
5	64QAM	12	13	20.85	20.88	20.77		
5	64QAM	25	0	20.84	20.92	20.77		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	22.18	22.16	22.26	22.9	0
3	QPSK	1	8	22.08	22.05	22.20		
3	QPSK	1	14	22.06	22.02	22.27		
3	QPSK	8	0	22.25	22.26	22.20	22.9	0
3	QPSK	8	4	22.13	22.14	22.21		
3	QPSK	8	7	22.18	22.13	22.18		
3	QPSK	15	0	22.20	22.13	22.19		
3	16QAM	1	0	22.22	22.17	22.13	22.9	0
3	16QAM	1	8	22.19	22.25	22.22		
3	16QAM	1	14	22.18	22.24	22.26		
3	16QAM	8	0	21.73	21.84	21.96	22.5	0.4
3	16QAM	8	4	21.83	21.80	21.91		
3	16QAM	8	7	21.74	21.93	21.90		
3	16QAM	15	0	21.86	21.84	21.88		
3	64QAM	1	0	21.90	21.81	21.94	22.5	0.4
3	64QAM	1	8	21.89	21.90	21.83		
3	64QAM	1	14	21.95	21.82	20.97		
3	64QAM	8	0	20.85	20.88	20.90	21.5	1.4
3	64QAM	8	4	20.87	20.88	20.90		
3	64QAM	8	7	20.87	20.91	20.85		
3	64QAM	15	0	20.81	20.84	20.84		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	22.13	22.15	22.26	22.9	0
1.4	QPSK	1	3	22.00	22.05	22.13		
1.4	QPSK	1	5	22.13	22.08	22.20		
1.4	QPSK	3	0	22.22	22.17	22.25		
1.4	QPSK	3	1	22.13	22.24	22.22		
1.4	QPSK	3	3	22.16	22.14	22.12		
1.4	QPSK	6	0	22.13	22.16	22.22	22.9	0
1.4	16QAM	1	0	22.25	22.14	22.20	22.9	0
1.4	16QAM	1	3	22.14	22.23	22.18		
1.4	16QAM	1	5	22.17	22.23	22.24		
1.4	16QAM	3	0	21.72	21.77	22.00		
1.4	16QAM	3	1	21.78	21.83	21.89		
1.4	16QAM	3	3	21.77	21.94	21.85		
1.4	16QAM	6	0	21.88	21.82	21.93	22.5	0.4
1.4	64QAM	1	0	21.95	21.87	21.98	22.5	0.4

1.4	64QAM	1	3	21.91	21.99	21.87		
1.4	64QAM	1	5	21.93	21.84	20.90		
1.4	64QAM	3	0	20.85	20.86	20.89		
1.4	64QAM	3	1	20.91	20.88	20.94		
1.4	64QAM	3	3	20.87	20.89	20.78		
1.4	64QAM	6	0	20.83	20.83	20.84	21.5	1.4

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					27710			
Frequency (MHz)					2310			
10	QPSK	1	0		17.96		18.8	0
10	QPSK	1	25		17.90			
10	QPSK	1	49		17.87			
10	QPSK	25	0		17.94		18.8	0
10	QPSK	25	12		17.93			
10	QPSK	25	25		17.86			
10	QPSK	50	0		17.94			
10	16QAM	1	0		17.90		18.8	0
10	16QAM	1	25		17.89			
10	16QAM	1	49		17.89			
10	16QAM	25	0		17.92		18.8	0
10	16QAM	25	12		17.89			
10	16QAM	25	25		17.94			
10	16QAM	50	0		17.88			
10	64QAM	1	0		17.87		18.8	0
10	64QAM	1	25		17.95			
10	64QAM	1	49		17.90			
10	64QAM	25	0		17.88		18.8	0
10	64QAM	25	12		17.90			
10	64QAM	25	25		17.90			
10	64QAM	50	0		17.89			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	17.89	17.94	17.89	18.8	0
5	QPSK	1	12	17.82	17.86	17.85		
5	QPSK	1	24	17.87	17.85	17.86		
5	QPSK	12	0	17.85	17.87	17.88	18.8	0
5	QPSK	12	7	17.87	17.91	17.86		
5	QPSK	12	13	17.78	17.79	17.81		
5	QPSK	25	0	17.84	17.89	17.84		
5	16QAM	1	0	17.81	17.84	17.85	18.8	0
5	16QAM	1	12	17.84	17.80	17.83		
5	16QAM	1	24	17.79	17.87	17.87		
5	16QAM	12	0	17.88	17.87	17.90	18.8	0
5	16QAM	12	7	17.80	17.80	17.89		
5	16QAM	12	13	17.86	17.90	17.94		
5	16QAM	25	0	17.87	17.81	17.82		
5	64QAM	1	0	17.79	17.78	17.79	18.8	0
5	64QAM	1	12	17.87	17.90	17.86		
5	64QAM	1	24	17.80	17.81	17.90		
5	64QAM	12	0	17.83	17.85	17.87	18.8	0
5	64QAM	12	7	17.80	17.82	17.90		
5	64QAM	12	13	17.85	17.87	17.85		
5	64QAM	25	0	17.82	17.88	17.85		

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	16.94	17.02	17.02	17.7	0
20	QPSK	1	49	16.89	16.93	16.88		
20	QPSK	1	99	16.87	16.89	16.82		
20	QPSK	50	0	17.01	17.02	17.02	17.7	0
20	QPSK	50	24	16.97	17.01	17.01		
20	QPSK	50	50	16.94	16.94	16.99		
20	QPSK	100	0	16.98	16.95	16.94		
20	16QAM	1	0	16.99	16.92	16.98	17.7	0
20	16QAM	1	49	16.96	16.98	16.92		
20	16QAM	1	99	16.94	16.94	16.99		
20	16QAM	50	0	17.01	16.84	16.85	17.7	0
20	16QAM	50	24	16.88	16.84	16.83		
20	16QAM	50	50	16.83	16.86	16.83		
20	16QAM	100	0	16.85	16.99	17.01		
20	64QAM	1	0	16.95	16.97	16.96	17.7	0
20	64QAM	1	49	16.89	16.98	16.98		
20	64QAM	1	99	16.82	16.97	16.81		
20	64QAM	50	0	17.00	16.97	16.97	17.7	0
20	64QAM	50	24	16.89	16.84	16.83		
20	64QAM	50	50	16.86	16.86	16.84		
20	64QAM	100	0	16.86	17.01	17.01		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	16.86	17.00	17.00	17.7	0
15	QPSK	1	37	16.81	16.85	16.78		
15	QPSK	1	74	16.81	16.88	16.79		
15	QPSK	36	0	16.99	16.98	17.01	17.7	0
15	QPSK	36	20	16.91	16.95	17.01		
15	QPSK	36	39	16.93	16.94	16.95		
15	QPSK	75	0	16.97	16.95	16.87		
15	16QAM	1	0	16.97	16.92	16.90	17.7	0
15	16QAM	1	37	16.94	16.88	16.89		
15	16QAM	1	74	16.88	16.90	16.97		
15	16QAM	36	0	16.99	16.77	16.80	17.7	0
15	16QAM	36	20	16.84	16.79	16.78		
15	16QAM	36	39	16.78	16.82	16.83		
15	16QAM	75	0	16.85	16.99	17.00		
15	64QAM	1	0	16.94	16.91	16.88	17.7	0
15	64QAM	1	37	16.88	16.95	16.95		
15	64QAM	1	74	16.76	16.94	16.74		
15	64QAM	36	0	16.99	16.90	16.87	17.7	0
15	64QAM	36	20	16.79	16.82	16.80		
15	64QAM	36	39	16.86	16.81	16.75		
15	64QAM	75	0	16.86	17.00	17.01		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	16.91	17.00	16.96	17.7	0
10	QPSK	1	25	16.87	16.83	16.80		
10	QPSK	1	49	16.79	16.85	16.72		
10	QPSK	25	0	16.98	16.97	17.00	17.7	0
10	QPSK	25	12	16.88	16.92	16.99		

10	QPSK	25	25	16.90	16.92	16.96		
10	QPSK	50	0	16.96	16.89	16.92		
10	16QAM	1	0	16.92	16.92	16.92	17.7	0
10	16QAM	1	25	16.94	16.96	16.83		
10	16QAM	1	49	16.94	16.85	16.92		
10	16QAM	25	0	16.95	16.80	16.82	17.7	0
10	16QAM	25	12	16.78	16.80	16.80		
10	16QAM	25	25	16.77	16.85	16.76		
10	16QAM	50	0	16.75	16.97	16.97		
10	64QAM	1	0	16.93	16.88	16.95	17.7	0
10	64QAM	1	25	16.88	16.90	16.89		
10	64QAM	1	49	16.74	16.95	16.73		
10	64QAM	25	0	16.93	16.87	16.91	17.7	0
10	64QAM	25	12	16.82	16.79	16.77		
10	64QAM	25	25	16.77	16.81	16.74		
10	64QAM	50	0	16.80	16.97	17.01		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	16.90	17.01	16.94	17.7	0
5	QPSK	1	12	16.84	16.90	16.86		
5	QPSK	1	24	16.81	16.83	16.72		
5	QPSK	12	0	16.95	17.01	17.01	17.7	0
5	QPSK	12	7	16.94	16.91	16.93		
5	QPSK	12	13	16.94	16.86	16.89		
5	QPSK	25	0	16.91	16.90	16.91		
5	16QAM	1	0	16.96	16.92	16.95	17.7	0
5	16QAM	1	12	16.93	16.90	16.89		
5	16QAM	1	24	16.90	16.87	16.98		
5	16QAM	12	0	16.91	16.80	16.81	17.7	0
5	16QAM	12	7	16.86	16.77	16.78		
5	16QAM	12	13	16.81	16.82	16.74		
5	16QAM	25	0	16.76	16.96	16.93		
5	64QAM	1	0	16.95	16.94	16.95	17.7	0
5	64QAM	1	12	16.88	16.93	16.91		
5	64QAM	1	24	16.72	16.87	16.72		
5	64QAM	12	0	16.97	16.96	16.96	17.7	0
5	64QAM	12	7	16.84	16.74	16.78		
5	64QAM	12	13	16.85	16.77	16.77		
5	64QAM	25	0	16.78	16.95	16.96		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	16.86	17.01	16.92	17.7	0
3	QPSK	1	8	16.80	16.84	16.81		
3	QPSK	1	14	16.78	16.83	16.81		
3	QPSK	8	0	16.99	16.99	16.97	17.7	0
3	QPSK	8	4	16.97	17.01	16.93		
3	QPSK	8	7	16.88	16.90	16.94		
3	QPSK	15	0	16.92	16.87	16.88		
3	16QAM	1	0	16.89	16.87	16.96	17.7	0
3	16QAM	1	8	16.95	16.91	16.84		
3	16QAM	1	14	16.86	16.88	16.97		
3	16QAM	8	0	16.95	16.78	16.82	17.7	0
3	16QAM	8	4	16.80	16.79	16.82		
3	16QAM	8	7	16.79	16.82	16.82		
3	16QAM	15	0	16.83	16.95	16.91		
3	64QAM	1	0	16.91	16.88	16.86	17.7	0

3	64QAM	1	8	16.87	16.91	16.91		
3	64QAM	1	14	16.74	16.97	16.80		
3	64QAM	8	0	16.93	16.94	16.89	17.7	0
3	64QAM	8	4	16.82	16.84	16.81		
3	64QAM	8	7	16.77	16.85	16.76		
3	64QAM	15	0	16.85	16.92	16.99		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	16.87	16.93	16.96	17.7	0
1.4	QPSK	1	3	16.86	16.91	16.85		
1.4	QPSK	1	5	16.87	16.88	16.81		
1.4	QPSK	3	0	17.00	16.92	16.99		
1.4	QPSK	3	1	16.88	16.99	16.94		
1.4	QPSK	3	3	16.92	16.92	16.99		
1.4	QPSK	6	0	16.92	16.92	16.86	17.7	0
1.4	16QAM	1	0	16.96	16.91	16.95	17.7	0
1.4	16QAM	1	3	16.96	16.92	16.91		
1.4	16QAM	1	5	16.92	16.88	16.91		
1.4	16QAM	3	0	16.97	16.76	16.75		
1.4	16QAM	3	1	16.88	16.81	16.81		
1.4	16QAM	3	3	16.77	16.78	16.81		
1.4	16QAM	6	0	16.78	16.90	16.93	17.7	0
1.4	64QAM	1	0	16.86	16.93	16.96	17.7	0
1.4	64QAM	1	3	16.81	16.93	16.98		
1.4	64QAM	1	5	16.80	16.92	16.78		
1.4	64QAM	3	0	16.98	16.88	16.91		
1.4	64QAM	3	1	16.87	16.84	16.82		
1.4	64QAM	3	3	16.80	16.85	16.76		
1.4	64QAM	6	0	16.78	16.96	16.99	17.7	0

<LTE Band 66 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	23.55	23.23	23.05	24	0
20	QPSK	1	49	23.49	23.19	23.01		
20	QPSK	1	99	23.54	23.22	22.96		
20	QPSK	50	0	23.00	22.70	22.52	23	1
20	QPSK	50	24	22.93	22.65	22.51		
20	QPSK	50	50	22.98	22.70	22.52		
20	QPSK	100	0	22.91	22.65	22.52		
20	16QAM	1	0	22.99	22.67	22.45	23	1
20	16QAM	1	49	22.95	22.64	22.55		
20	16QAM	1	99	22.95	22.72	22.53		
20	16QAM	50	0	21.99	21.72	21.52	22	2
20	16QAM	50	24	21.91	21.71	21.50		
20	16QAM	50	50	21.98	21.69	21.54		
20	16QAM	100	0	21.96	21.72	21.52		
20	64QAM	1	0	21.97	21.64	21.52	22	2
20	64QAM	1	49	21.94	21.67	21.45		
20	64QAM	1	99	21.95	21.71	21.45		
20	64QAM	50	0	20.93	20.73	20.45	21	3
20	64QAM	50	24	20.95	20.64	20.46		
20	64QAM	50	50	20.97	20.72	20.51		
20	64QAM	100	0	20.91	20.64	20.47		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	23.54	23.17	22.96	24	0
15	QPSK	1	37	23.44	23.15	22.93		
15	QPSK	1	74	23.46	23.22	22.95		
15	QPSK	36	0	22.98	22.64	22.43	23	1
15	QPSK	36	20	22.92	22.64	22.44		
15	QPSK	36	39	22.90	22.64	22.44		
15	QPSK	75	0	22.81	22.57	22.44		
15	16QAM	1	0	22.92	22.61	22.41	23	1
15	16QAM	1	37	22.88	22.55	22.51		
15	16QAM	1	74	22.85	22.70	22.53		
15	16QAM	36	0	21.91	21.70	21.49	22	2
15	16QAM	36	20	21.85	21.68	21.48		
15	16QAM	36	39	21.94	21.60	21.51		
15	16QAM	75	0	21.96	21.71	21.43		
15	64QAM	1	0	21.88	21.55	21.48	22	2
15	64QAM	1	37	21.92	21.61	21.41		
15	64QAM	1	74	21.87	21.64	21.41		
15	64QAM	36	0	20.86	20.63	20.41	21	3
15	64QAM	36	20	20.86	20.64	20.41		
15	64QAM	36	39	20.90	20.66	20.47		
15	64QAM	75	0	20.83	20.54	20.37		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.50	23.14	23.04	24	0
10	QPSK	1	25	23.39	23.17	23.00		
10	QPSK	1	49	23.47	23.17	22.96		
10	QPSK	25	0	23.00	22.60	22.45	23	1
10	QPSK	25	12	22.85	22.59	22.41		

10	QPSK	25	25	22.93	22.64	22.43		
10	QPSK	50	0	22.81	22.64	22.44		
10	16QAM	1	0	22.89	22.64	22.37	23	1
10	16QAM	1	25	22.85	22.64	22.47		
10	16QAM	1	49	22.95	22.72	22.44		
10	16QAM	25	0	21.90	21.62	21.45	22	2
10	16QAM	25	12	21.87	21.64	21.41		
10	16QAM	25	25	21.96	21.59	21.48		
10	16QAM	50	0	21.89	21.69	21.49		
10	64QAM	1	0	21.87	21.57	21.45	22	2
10	64QAM	1	25	21.91	21.63	21.36		
10	64QAM	1	49	21.90	21.66	21.42		
10	64QAM	25	0	20.89	20.72	20.43	21	3
10	64QAM	25	12	20.89	20.60	20.43		
10	64QAM	25	25	20.95	20.65	20.41		
10	64QAM	50	0	20.83	20.63	20.39		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.54	23.22	23.02	24	0
5	QPSK	1	12	23.45	23.14	22.94		
5	QPSK	1	24	23.51	23.12	22.88		
5	QPSK	12	0	22.93	22.60	22.50	23	1
5	QPSK	12	7	22.92	22.58	22.43		
5	QPSK	12	13	22.95	22.63	22.42		
5	QPSK	25	0	22.84	22.55	22.44		
5	16QAM	1	0	22.93	22.57	22.39	23	1
5	16QAM	1	12	22.85	22.57	22.53		
5	16QAM	1	24	22.85	22.66	22.44		
5	16QAM	12	0	21.96	21.64	21.48	22	2
5	16QAM	12	7	21.86	21.71	21.42		
5	16QAM	12	13	21.97	21.67	21.45		
5	16QAM	25	0	21.87	21.66	21.42		
5	64QAM	1	0	21.88	21.56	21.51	22	2
5	64QAM	1	12	21.86	21.62	21.37		
5	64QAM	1	24	21.88	21.65	21.40		
5	64QAM	12	0	20.85	20.63	20.42	21	3
5	64QAM	12	7	20.93	20.57	20.41		
5	64QAM	12	13	20.87	20.72	20.50		
5	64QAM	25	0	20.88	20.57	20.47		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.48	23.14	22.95	24	0
3	QPSK	1	8	23.41	23.18	22.96		
3	QPSK	1	14	23.53	23.18	22.90		
3	QPSK	8	0	22.90	22.63	22.46	23	1
3	QPSK	8	4	22.83	22.64	22.45		
3	QPSK	8	7	22.90	22.65	22.42		
3	QPSK	15	0	22.84	22.60	22.47		
3	16QAM	1	0	22.93	22.57	22.36	23	1
3	16QAM	1	8	22.87	22.62	22.47		
3	16QAM	1	14	22.89	22.71	22.53		
3	16QAM	8	0	21.97	21.65	21.47	22	2
3	16QAM	8	4	21.84	21.64	21.42		
3	16QAM	8	7	21.95	21.64	21.47		
3	16QAM	15	0	21.93	21.64	21.44		
3	64QAM	1	0	21.96	21.64	21.45	22	2

3	64QAM	1	8	21.85	21.61	21.41		
3	64QAM	1	14	21.95	21.69	21.39		
3	64QAM	8	0	20.87	20.70	20.35	21	3
3	64QAM	8	4	20.91	20.54	20.38		
3	64QAM	8	7	20.90	20.66	20.46		
3	64QAM	15	0	20.87	20.64	20.38		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	23.46	23.18	23.04	24	0
1.4	QPSK	1	3	23.49	23.17	22.97		
1.4	QPSK	1	5	23.54	23.18	22.96		
1.4	QPSK	3	0	23.45	23.18	22.95		
1.4	QPSK	3	1	23.42	23.17	23.00		
1.4	QPSK	3	3	23.51	23.20	22.95		
1.4	QPSK	6	0	22.85	22.56	22.52	23	1
1.4	16QAM	1	0	22.96	22.57	22.37	23	1
1.4	16QAM	1	3	22.85	22.54	22.53		
1.4	16QAM	1	5	22.89	22.62	22.43		
1.4	16QAM	3	0	22.97	22.65	22.42		
1.4	16QAM	3	1	22.85	22.60	22.49		
1.4	16QAM	3	3	22.89	22.71	22.48		
1.4	16QAM	6	0	21.89	21.67	21.44	22	2
1.4	64QAM	1	0	21.96	21.58	21.51	22	2
1.4	64QAM	1	3	21.94	21.67	21.37		
1.4	64QAM	1	5	21.95	21.65	21.43		
1.4	64QAM	3	0	21.93	21.54	21.44		
1.4	64QAM	3	1	21.84	21.61	21.42		
1.4	64QAM	3	3	21.86	21.69	21.39		
1.4	64QAM	6	0	20.86	20.60	20.38	21	3

<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)	MPR (dB)
Channel				133222	133322	133372		
Frequency (MHz)				673	683	688		
20	QPSK	1	0	23.27	23.14	23.51	24.5	0
20	QPSK	1	49	23.31	22.71	23.31		
20	QPSK	1	99	23.46	22.94	23.49		
20	QPSK	50	0	22.19	21.93	22.36	23.5	1
20	QPSK	50	24	22.42	21.83	22.44		
20	QPSK	50	50	22.39	21.90	22.45		
20	QPSK	100	0	22.33	21.82	22.51		
20	16QAM	1	0	22.83	22.20	22.67	23.5	1
20	16QAM	1	49	22.72	22.45	22.91		
20	16QAM	1	99	22.79	22.35	22.81		
20	16QAM	50	0	21.15	20.84	21.34	22.5	2
20	16QAM	50	24	21.23	20.83	21.37		
20	16QAM	50	50	21.29	20.95	21.53		
20	16QAM	100	0	21.20	20.86	21.42		
20	64QAM	1	0	21.22	20.83	21.28	22.5	2
20	64QAM	1	49	21.24	21.05	21.45		
20	64QAM	1	99	20.68	21.17	21.19		
20	64QAM	50	0	19.93	19.87	20.43	21.5	3
20	64QAM	50	24	20.18	19.98	20.32		
20	64QAM	50	50	20.16	20.04	20.52		
20	64QAM	100	0	20.23	19.91	20.44		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	23.23	22.73	23.31	24.5	0
15	QPSK	1	37	23.15	22.75	23.29		
15	QPSK	1	74	23.29	23.02	23.43		
15	QPSK	36	0	22.24	21.69	22.37	23.5	1
15	QPSK	36	20	22.27	21.88	22.38		
15	QPSK	36	39	22.28	21.93	22.60		
15	QPSK	75	0	22.26	21.85	22.35		
15	16QAM	1	0	22.81	22.23	22.70	23.5	1
15	16QAM	1	37	22.74	22.20	22.37		
15	16QAM	1	74	22.32	22.49	22.85		
15	16QAM	36	0	21.10	20.81	21.41	22.5	2
15	16QAM	36	20	21.12	20.98	21.51		
15	16QAM	36	39	21.14	21.00	21.66		
15	16QAM	75	0	21.10	20.91	21.55		
15	64QAM	1	0	21.32	20.47	21.11	22.5	2
15	64QAM	1	37	21.18	20.86	21.20		
15	64QAM	1	74	21.36	20.79	21.13		
15	64QAM	36	0	19.78	19.91	20.32	21.5	3
15	64QAM	36	20	20.17	19.97	20.53		
15	64QAM	36	39	20.13	20.04	20.66		
15	64QAM	75	0	20.17	19.88	20.46		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	23.25	22.52	23.07	24.5	0
10	QPSK	1	25	23.09	22.45	23.14		
10	QPSK	1	49	23.20	22.55	23.13		
10	QPSK	25	0	22.09	21.57	22.27	23.5	1
10	QPSK	25	12	22.04	21.72	22.31		

10	QPSK	25	25	22.11	21.78	22.36		
10	QPSK	50	0	22.08	21.77	22.33		
10	16QAM	1	0	22.46	22.05	22.82	23.5	1
10	16QAM	1	25	22.29	22.16	22.69		
10	16QAM	1	49	22.41	22.05	22.80		
10	16QAM	25	0	20.92	20.54	21.27	22.5	2
10	16QAM	25	12	20.93	20.74	21.16		
10	16QAM	25	25	20.89	20.54	21.31		
10	16QAM	50	0	20.87	20.77	21.22		
10	64QAM	1	0	21.33	20.84	21.69	22.5	2
10	64QAM	1	25	20.97	20.95	21.42		
10	64QAM	1	49	21.36	20.90	21.34		
10	64QAM	25	0	19.50	19.67	20.32	21.5	3
10	64QAM	25	12	19.73	19.71	20.31		
10	64QAM	25	25	19.93	19.78	20.39		
10	64QAM	50	0	19.99	19.69	20.33		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	23.16	22.49	23.16	24.5	0
5	QPSK	1	12	23.03	22.51	23.20		
5	QPSK	1	24	22.99	22.62	23.11		
5	QPSK	12	0	22.19	21.52	22.32	23.5	1
5	QPSK	12	7	22.11	21.62	22.31		
5	QPSK	12	13	22.00	21.60	22.25		
5	QPSK	25	0	22.12	21.42	22.30		
5	16QAM	1	0	22.56	21.74	22.47	23.5	1
5	16QAM	1	12	22.14	21.64	22.44		
5	16QAM	1	24	22.14	22.05	22.30		
5	16QAM	12	0	21.14	20.62	21.36	22.5	2
5	16QAM	12	7	21.14	20.64	21.36		
5	16QAM	12	13	21.01	20.64	21.34		
5	16QAM	25	0	20.96	20.66	21.23		
5	64QAM	1	0	21.01	20.68	21.52	22.5	2
5	64QAM	1	12	20.55	20.60	21.43		
5	64QAM	1	24	20.57	20.67	21.10		
5	64QAM	12	0	19.60	19.64	20.34	21.5	3
5	64QAM	12	7	19.36	19.72	20.34		
5	64QAM	12	13	19.52	19.66	20.13		
5	64QAM	25	0	19.53	19.63	20.10		

Tablet Power Mode

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	12.94	12.78	12.84	13.5	0
20	QPSK	1	49	12.82	12.77	12.79		
20	QPSK	1	99	12.82	12.75	12.75		
20	QPSK	50	0	13.11	12.95	13.03	13.5	0
20	QPSK	50	24	12.98	12.93	13.03		
20	QPSK	50	50	12.90	12.90	13.02		
20	QPSK	100	0	13.04	12.95	13.02		
20	16QAM	1	0	13.16	13.09	13.08	13.5	0
20	16QAM	1	49	13.18	13.06	13.12		
20	16QAM	1	99	13.05	13.10	13.12		
20	16QAM	50	0	13.10	12.86	13.06	13.5	0
20	16QAM	50	24	13.03	12.90	13.11		
20	16QAM	50	50	12.88	12.93	13.14		
20	16QAM	100	0	12.94	12.92	13.02		
20	64QAM	1	0	13.17	12.96	13.08	13.5	0
20	64QAM	1	49	13.03	13.00	13.08		
20	64QAM	1	99	13.08	13.07	13.09		
20	64QAM	50	0	13.15	13.02	13.09	13.5	0
20	64QAM	50	24	13.02	12.96	13.16		
20	64QAM	50	50	12.97	12.94	13.12		
20	64QAM	100	0	13.01	12.94	13.09		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	12.87	12.78	12.79	13.5	0
15	QPSK	1	37	12.74	12.72	12.73		
15	QPSK	1	74	12.76	12.69	12.70		
15	QPSK	36	0	13.06	12.93	13.02	13.5	0
15	QPSK	36	20	12.97	12.85	12.93		
15	QPSK	36	39	12.86	12.87	13.01		
15	QPSK	75	0	12.98	12.92	12.98		
15	16QAM	1	0	13.14	13.04	12.99	13.5	0
15	16QAM	1	37	13.12	12.99	13.11		
15	16QAM	1	74	13.02	13.08	13.09		
15	16QAM	36	0	13.00	12.76	12.96	13.5	0
15	16QAM	36	20	12.97	12.87	13.11		
15	16QAM	36	39	12.79	12.85	13.04		
15	16QAM	75	0	12.85	12.83	12.94		
15	64QAM	1	0	13.09	12.86	13.03	13.5	0
15	64QAM	1	37	12.99	12.96	13.01		
15	64QAM	1	74	13.08	13.04	13.05		
15	64QAM	36	0	13.14	12.93	13.06	13.5	0
15	64QAM	36	20	12.92	12.87	13.08		
15	64QAM	36	39	12.91	12.89	13.07		
15	64QAM	75	0	12.91	12.85	13.09		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	12.84	12.69	12.75	13.5	0
10	QPSK	1	25	12.74	12.72	12.78		
10	QPSK	1	49	12.82	12.68	12.66		
10	QPSK	25	0	13.02	12.93	12.98	13.5	0

10	QPSK	25	12	12.92	12.86	12.97		
10	QPSK	25	25	12.82	12.88	12.98		
10	QPSK	50	0	12.99	12.90	12.96		
10	16QAM	1	0	13.15	13.00	13.07	13.5	0
10	16QAM	1	25	13.15	12.97	13.11		
10	16QAM	1	49	13.05	13.08	13.11		
10	16QAM	25	0	13.01	12.77	13.02	13.5	0
10	16QAM	25	12	12.98	12.81	13.11		
10	16QAM	25	25	12.78	12.89	13.04		
10	16QAM	50	0	12.86	12.92	13.02		
10	64QAM	1	0	13.09	12.91	13.07	13.5	0
10	64QAM	1	25	13.00	12.96	13.01		
10	64QAM	1	49	13.07	13.04	12.99		
10	64QAM	25	0	13.06	12.93	12.99	13.5	0
10	64QAM	25	12	12.98	12.89	13.08		
10	64QAM	25	25	12.94	12.92	13.07		
10	64QAM	50	0	13.01	12.90	13.09		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	12.92	12.73	12.82	13.5	0
5	QPSK	1	12	12.77	12.76	12.72		
5	QPSK	1	24	12.73	12.66	12.69		
5	QPSK	12	0	13.07	12.95	13.03	13.5	0
5	QPSK	12	7	12.92	12.93	13.01		
5	QPSK	12	13	12.90	12.88	12.96		
5	QPSK	25	0	12.97	12.90	12.97		
5	16QAM	1	0	13.14	13.07	13.02	13.5	0
5	16QAM	1	12	13.12	13.01	13.11		
5	16QAM	1	24	12.95	13.02	13.05		
5	16QAM	12	0	13.05	12.80	13.05	13.5	0
5	16QAM	12	7	13.03	12.84	13.08		
5	16QAM	12	13	12.84	12.88	13.11		
5	16QAM	25	0	12.90	12.85	13.00		
5	64QAM	1	0	13.09	12.93	13.04	13.5	0
5	64QAM	1	12	12.99	12.94	13.04		
5	64QAM	1	24	13.08	13.04	13.08		
5	64QAM	12	0	13.06	13.01	13.05	13.5	0
5	64QAM	12	7	12.93	12.94	13.11		
5	64QAM	12	13	12.94	12.91	13.04		
5	64QAM	25	0	12.95	12.93	13.02		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	12.93	12.69	12.74	13.5	0
3	QPSK	1	8	12.76	12.76	12.76		
3	QPSK	1	14	12.78	12.68	12.72		
3	QPSK	8	0	13.06	12.91	13.01	13.5	0
3	QPSK	8	4	12.96	12.88	12.98		
3	QPSK	8	7	12.83	12.90	12.92		
3	QPSK	15	0	12.94	12.86	12.92		
3	16QAM	1	0	13.11	13.01	12.99	13.5	0
3	16QAM	1	8	13.11	13.06	13.10		
3	16QAM	1	14	13.05	13.00	13.06		
3	16QAM	8	0	13.09	12.76	13.00	13.5	0
3	16QAM	8	4	12.94	12.86	13.09		
3	16QAM	8	7	12.80	12.86	13.04		
3	16QAM	15	0	12.86	12.91	12.95		

3	64QAM	1	0	13.08	12.91	13.05	13.5	0
3	64QAM	1	8	13.00	13.00	13.02		
3	64QAM	1	14	13.08	13.02	13.08		
3	64QAM	8	0	13.08	12.92	13.06	13.5	0
3	64QAM	8	4	12.97	12.90	13.13		
3	64QAM	8	7	12.96	12.85	13.11		
3	64QAM	15	0	12.98	12.94	13.09		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	12.85	12.70	12.81	13.5	0
1.4	QPSK	1	3	12.76	12.72	12.79		
1.4	QPSK	1	5	12.80	12.65	12.66		
1.4	QPSK	3	0	13.06	12.86	12.95		
1.4	QPSK	3	1	12.90	12.87	12.98		
1.4	QPSK	3	3	12.89	12.90	13.02		
1.4	QPSK	6	0	12.96	12.88	12.92	13.5	0
1.4	16QAM	1	0	13.12	13.04	13.05	13.5	0
1.4	16QAM	1	3	13.13	13.02	13.07		
1.4	16QAM	1	5	12.99	13.10	13.11		
1.4	16QAM	3	0	13.04	12.82	13.02		
1.4	16QAM	3	1	12.99	12.89	13.09		
1.4	16QAM	3	3	12.83	12.83	13.11		
1.4	16QAM	6	0	12.94	12.89	12.99	13.5	0
1.4	64QAM	1	0	13.08	12.96	12.98	13.5	0
1.4	64QAM	1	3	13.03	12.99	12.98		
1.4	64QAM	1	5	13.03	12.98	13.02		
1.4	64QAM	3	0	13.12	12.99	13.03		
1.4	64QAM	3	1	12.98	12.92	13.11		
1.4	64QAM	3	3	12.93	12.85	13.11		
1.4	64QAM	6	0	12.99	12.85	13.04	13.5	0

<LTE Band 2 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	16.25	16.32	16.57	16.8	0
20	QPSK	1	49	16.25	16.23	16.54		
20	QPSK	1	99	16.19	16.24	16.43		
20	QPSK	50	0	16.15	16.28	16.51	16.8	0
20	QPSK	50	24	16.15	16.24	16.50		
20	QPSK	50	50	16.14	16.23	16.40		
20	QPSK	100	0	16.19	16.24	16.49		
20	16QAM	1	0	16.22	16.22	16.54	16.8	0
20	16QAM	1	49	16.17	16.27	16.52		
20	16QAM	1	99	16.18	16.25	16.55		
20	16QAM	50	0	16.20	16.24	16.47	16.8	0
20	16QAM	50	24	16.20	16.32	16.37		
20	16QAM	50	50	16.18	16.31	16.28		
20	16QAM	100	0	16.19	16.24	16.51		
20	64QAM	1	0	16.17	16.29	16.53	16.8	0
20	64QAM	1	49	16.17	16.26	16.52		
20	64QAM	1	99	16.18	16.28	16.51		
20	64QAM	50	0	16.18	16.32	16.52	16.8	0
20	64QAM	50	24	16.18	16.29	16.56		
20	64QAM	50	50	16.21	16.31	16.55		
20	64QAM	100	0	16.24	16.23	16.54		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	16.20	16.30	16.49	16.8	0
15	QPSK	1	37	16.23	16.23	16.48		
15	QPSK	1	74	16.19	16.19	16.33		
15	QPSK	36	0	16.05	16.24	16.44	16.8	0
15	QPSK	36	20	16.12	16.20	16.42		
15	QPSK	36	39	16.18	16.16	16.38		
15	QPSK	75	0	16.11	16.17	16.46		
15	16QAM	1	0	16.22	16.16	16.45	16.8	0
15	16QAM	1	37	16.07	16.21	16.47		
15	16QAM	1	74	16.17	16.17	16.48		
15	16QAM	36	0	16.17	16.15	16.38	16.8	0
15	16QAM	36	20	16.20	16.22	16.29		
15	16QAM	36	39	16.10	16.31	16.21		
15	16QAM	75	0	16.15	16.15	16.47		
15	64QAM	1	0	16.13	16.24	16.51	16.8	0
15	64QAM	1	37	16.17	16.23	16.42		
15	64QAM	1	74	16.16	16.22	16.45		
15	64QAM	36	0	16.08	16.27	16.52	16.8	0
15	64QAM	36	20	16.17	16.25	16.56		
15	64QAM	36	39	16.18	16.21	16.55		
15	64QAM	75	0	16.18	16.13	16.48		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	16.20	16.23	16.56	16.8	0
10	QPSK	1	25	16.17	16.13	16.54		
10	QPSK	1	49	16.15	16.14	16.42		
10	QPSK	25	0	16.12	16.18	16.48	16.8	0
10	QPSK	25	12	16.13	16.21	16.47		

10	QPSK	25	25	16.14	16.18	16.39		
10	QPSK	50	0	16.15	16.16	16.43		
10	16QAM	1	0	16.18	16.22	16.48	16.8	0
10	16QAM	1	25	16.11	16.24	16.46		
10	16QAM	1	49	16.13	16.15	16.54		
10	16QAM	25	0	16.11	16.21	16.44	16.8	0
10	16QAM	25	12	16.11	16.24	16.30		
10	16QAM	25	25	16.08	16.27	16.18		
10	16QAM	50	0	16.16	16.15	16.46		
10	64QAM	1	0	16.15	16.21	16.51	16.8	0
10	64QAM	1	25	16.16	16.26	16.45		
10	64QAM	1	49	16.14	16.28	16.49		
10	64QAM	25	0	16.15	16.26	16.49	16.8	0
10	64QAM	25	12	16.15	16.25	16.46		
10	64QAM	25	25	16.14	16.30	16.52		
10	64QAM	50	0	16.23	16.19	16.45		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	16.24	16.22	16.55	16.8	0
5	QPSK	1	12	16.15	16.19	16.44		
5	QPSK	1	24	16.18	16.20	16.39		
5	QPSK	12	0	16.06	16.28	16.43	16.8	0
5	QPSK	12	7	16.08	16.23	16.40		
5	QPSK	12	13	16.22	16.20	16.36		
5	QPSK	25	0	16.17	16.17	16.49		
5	16QAM	1	0	16.22	16.20	16.44	16.8	0
5	16QAM	1	12	16.16	16.25	16.46		
5	16QAM	1	24	16.12	16.15	16.46		
5	16QAM	12	0	16.10	16.23	16.42	16.8	0
5	16QAM	12	7	16.16	16.32	16.33		
5	16QAM	12	13	16.17	16.27	16.20		
5	16QAM	25	0	16.18	16.24	16.43		
5	64QAM	1	0	16.16	16.20	16.52	16.8	0
5	64QAM	1	12	16.10	16.20	16.45		
5	64QAM	1	24	16.08	16.27	16.51		
5	64QAM	12	0	16.08	16.27	16.51	16.8	0
5	64QAM	12	7	16.08	16.22	16.47		
5	64QAM	12	13	16.18	16.23	16.50		
5	64QAM	25	0	16.20	16.23	16.44		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	16.19	16.22	16.56	16.8	0
3	QPSK	1	8	16.17	16.18	16.52		
3	QPSK	1	14	16.12	16.20	16.37		
3	QPSK	8	0	16.14	16.20	16.49	16.8	0
3	QPSK	8	4	16.08	16.18	16.42		
3	QPSK	8	7	16.17	16.22	16.36		
3	QPSK	15	0	16.17	16.20	16.42		
3	16QAM	1	0	16.14	16.16	16.50	16.8	0
3	16QAM	1	8	16.17	16.21	16.52		
3	16QAM	1	14	16.09	16.20	16.48		
3	16QAM	8	0	16.17	16.19	16.39	16.8	0
3	16QAM	8	4	16.19	16.24	16.32		
3	16QAM	8	7	16.10	16.21	16.27		
3	16QAM	15	0	16.14	16.17	16.45		
3	64QAM	1	0	16.13	16.26	16.50	16.8	0

3	64QAM	1	8	16.07	16.20	16.45		
3	64QAM	1	14	16.17	16.28	16.43		
3	64QAM	8	0	16.09	16.29	16.47	16.8	0
3	64QAM	8	4	16.09	16.28	16.47		
3	64QAM	8	7	16.17	16.23	16.50		
3	64QAM	15	0	16.14	16.23	16.46		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	16.17	16.28	16.49	16.8	0
1.4	QPSK	1	3	16.22	16.16	16.50		
1.4	QPSK	1	5	16.17	16.24	16.40		
1.4	QPSK	3	0	16.06	16.21	16.51		
1.4	QPSK	3	1	16.12	16.23	16.42		
1.4	QPSK	3	3	16.16	16.17	16.33		
1.4	QPSK	6	0	16.13	16.21	16.45	16.8	0
1.4	16QAM	1	0	16.20	16.21	16.47	16.8	0
1.4	16QAM	1	3	16.09	16.20	16.50		
1.4	16QAM	1	5	16.14	16.22	16.45		
1.4	16QAM	3	0	16.12	16.18	16.39		
1.4	16QAM	3	1	16.18	16.32	16.35		
1.4	16QAM	3	3	16.12	16.22	16.27		
1.4	16QAM	6	0	16.19	16.14	16.46	16.8	0
1.4	64QAM	1	0	16.13	16.24	16.43	16.8	0
1.4	64QAM	1	3	16.13	16.21	16.47		
1.4	64QAM	1	5	16.12	16.18	16.50		
1.4	64QAM	3	0	16.15	16.27	16.52		
1.4	64QAM	3	1	16.15	16.25	16.51		
1.4	64QAM	3	3	16.13	16.27	16.48		
1.4	64QAM	6	0	16.20	16.20	16.51	16.8	0

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	13.72	13.66	13.56	14.3	0
20	QPSK	1	49	13.71	13.54	13.49		
20	QPSK	1	99	13.63	13.52	13.54		
20	QPSK	50	0	13.90	13.76	13.74	14.3	0
20	QPSK	50	24	13.87	13.72	13.73		
20	QPSK	50	50	13.73	13.69	13.70		
20	QPSK	100	0	13.84	13.78	13.69		
20	16QAM	1	0	14.10	14.04	14.01	14.3	0
20	16QAM	1	49	14.01	13.91	13.93		
20	16QAM	1	99	13.94	13.84	13.73		
20	16QAM	50	0	13.84	13.75	13.33	14.3	0
20	16QAM	50	24	13.85	13.75	13.17		
20	16QAM	50	50	13.77	13.70	13.28		
20	16QAM	100	0	13.83	13.76	13.71		
20	64QAM	1	0	14.17	14.03	14.02	14.3	0
20	64QAM	1	49	13.72	13.73	13.75		
20	64QAM	1	99	13.32	13.35	13.66		
20	64QAM	50	0	13.97	13.88	13.86	14.3	0
20	64QAM	50	24	13.90	13.79	13.80		
20	64QAM	50	50	13.73	13.72	13.77		
20	64QAM	100	0	13.91	13.80	13.80		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	13.62	13.60	13.54	14.3	0
15	QPSK	1	37	13.65	13.47	13.47		
15	QPSK	1	74	13.59	13.45	13.51		
15	QPSK	36	0	13.89	13.70	13.65	14.3	0
15	QPSK	36	20	13.81	13.71	13.71		
15	QPSK	36	39	13.65	13.59	13.63		
15	QPSK	75	0	13.77	13.70	13.59		
15	16QAM	1	0	14.00	13.95	14.00	14.3	0
15	16QAM	1	37	13.91	13.85	13.92		
15	16QAM	1	74	13.93	13.84	13.65		
15	16QAM	36	0	13.75	13.72	13.29	14.3	0
15	16QAM	36	20	13.75	13.68	13.13		
15	16QAM	36	39	13.68	13.66	13.26		
15	16QAM	75	0	13.76	13.67	13.66		
15	64QAM	1	0	14.08	13.96	13.96	14.3	0
15	64QAM	1	37	13.66	13.70	13.65		
15	64QAM	1	74	13.27	13.30	13.56		
15	64QAM	36	0	13.95	13.83	13.78	14.3	0
15	64QAM	36	20	13.80	13.76	13.74		
15	64QAM	36	39	13.67	13.71	13.68		
15	64QAM	75	0	13.84	13.70	13.78		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	13.65	13.58	13.48	14.3	0
10	QPSK	1	25	13.69	13.46	13.48		
10	QPSK	1	49	13.53	13.52	13.51		
10	QPSK	25	0	13.87	13.72	13.68	14.3	0
10	QPSK	25	12	13.80	13.67	13.67		

10	QPSK	25	25	13.73	13.64	13.67		
10	QPSK	50	0	13.75	13.70	13.64		
10	16QAM	1	0	14.06	13.94	13.95	14.3	0
10	16QAM	1	25	13.94	13.89	13.83		
10	16QAM	1	49	13.90	13.80	13.68		
10	16QAM	25	0	13.83	13.67	13.32	14.3	0
10	16QAM	25	12	13.76	13.67	13.07		
10	16QAM	25	25	13.70	13.61	13.27		
10	16QAM	50	0	13.82	13.68	13.64		
10	64QAM	1	0	14.16	14.00	13.92	14.3	0
10	64QAM	1	25	13.70	13.63	13.68		
10	64QAM	1	49	13.30	13.33	13.64		
10	64QAM	25	0	13.93	13.82	13.79	14.3	0
10	64QAM	25	12	13.85	13.78	13.70		
10	64QAM	25	25	13.69	13.72	13.75		
10	64QAM	50	0	13.88	13.79	13.77		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	13.67	13.61	13.49	14.3	0
5	QPSK	1	12	13.69	13.44	13.49		
5	QPSK	1	24	13.61	13.51	13.44		
5	QPSK	12	0	13.80	13.69	13.71	14.3	0
5	QPSK	12	7	13.83	13.64	13.67		
5	QPSK	12	13	13.66	13.63	13.60		
5	QPSK	25	0	13.83	13.74	13.69		
5	16QAM	1	0	14.03	14.01	13.96	14.3	0
5	16QAM	1	12	13.98	13.84	13.89		
5	16QAM	1	24	13.87	13.80	13.66		
5	16QAM	12	0	13.75	13.73	13.29	14.3	0
5	16QAM	12	7	13.77	13.74	13.17		
5	16QAM	12	13	13.72	13.67	13.24		
5	16QAM	25	0	13.83	13.75	13.70		
5	64QAM	1	0	14.11	13.98	14.02	14.3	0
5	64QAM	1	12	13.67	13.68	13.68		
5	64QAM	1	24	13.28	13.25	13.60		
5	64QAM	12	0	13.90	13.87	13.83	14.3	0
5	64QAM	12	7	13.81	13.75	13.74		
5	64QAM	12	13	13.69	13.66	13.74		
5	64QAM	25	0	13.90	13.80	13.73		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	13.70	13.62	13.46	14.3	0
3	QPSK	1	8	13.66	13.48	13.49		
3	QPSK	1	14	13.55	13.49	13.52		
3	QPSK	8	0	13.88	13.76	13.70	14.3	0
3	QPSK	8	4	13.79	13.72	13.68		
3	QPSK	8	7	13.66	13.68	13.65		
3	QPSK	15	0	13.78	13.78	13.66		
3	16QAM	1	0	14.04	14.01	14.01	14.3	0
3	16QAM	1	8	13.95	13.83	13.88		
3	16QAM	1	14	13.92	13.77	13.67		
3	16QAM	8	0	13.82	13.72	13.30	14.3	0
3	16QAM	8	4	13.85	13.67	13.07		
3	16QAM	8	7	13.72	13.67	13.25		
3	16QAM	15	0	13.80	13.73	13.65		
3	64QAM	1	0	14.12	14.02	14.00	14.3	0

3	64QAM	1	8	13.66	13.72	13.73		
3	64QAM	1	14	13.23	13.34	13.66		
3	64QAM	8	0	13.91	13.82	13.79	14.3	0
3	64QAM	8	4	13.87	13.69	13.79		
3	64QAM	8	7	13.72	13.68	13.73		
3	64QAM	15	0	13.87	13.75	13.78		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	13.67	13.56	13.47	14.3	0
1.4	QPSK	1	3	13.63	13.53	13.45		
1.4	QPSK	1	5	13.53	13.46	13.50		
1.4	QPSK	3	0	13.86	13.68	13.66		
1.4	QPSK	3	1	13.85	13.68	13.73		
1.4	QPSK	3	3	13.70	13.68	13.61		
1.4	QPSK	6	0	13.76	13.77	13.60	14.3	0
1.4	16QAM	1	0	14.07	13.98	14.00	14.3	0
1.4	16QAM	1	3	13.99	13.86	13.87		
1.4	16QAM	1	5	13.89	13.76	13.71		
1.4	16QAM	3	0	13.81	13.71	13.23		
1.4	16QAM	3	1	13.84	13.73	13.11		
1.4	16QAM	3	3	13.76	13.66	13.25		
1.4	16QAM	6	0	13.77	13.68	13.66	14.3	0
1.4	64QAM	1	0	14.07	13.99	13.94	14.3	0
1.4	64QAM	1	3	13.67	13.73	13.65		
1.4	64QAM	1	5	13.23	13.32	13.63		
1.4	64QAM	3	0	13.95	13.86	13.77		
1.4	64QAM	3	1	13.84	13.76	13.78		
1.4	64QAM	3	3	13.70	13.67	13.70		
1.4	64QAM	6	0	13.84	13.75	13.78	14.3	0

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	18.93	18.91	19.01	19.7	0
10	QPSK	1	25	18.79	18.86	19.00		
10	QPSK	1	49	18.88	18.90	18.98		
10	QPSK	25	0	19.04	19.14	19.19	19.7	0
10	QPSK	25	12	19.03	19.13	19.14		
10	QPSK	25	25	19.02	19.08	19.16		
10	QPSK	50	0	19.04	19.12	19.14		
10	16QAM	1	0	19.26	19.30	19.35	19.7	0
10	16QAM	1	25	19.24	19.32	19.39		
10	16QAM	1	49	19.27	19.37	19.38		
10	16QAM	25	0	18.92	19.01	19.08	19.7	0
10	16QAM	25	12	19.03	19.11	19.14		
10	16QAM	25	25	18.99	19.09	19.18		
10	16QAM	50	0	18.98	19.10	19.13		
10	64QAM	1	0	19.10	19.17	19.21	19.7	0
10	64QAM	1	25	19.12	19.27	19.35		
10	64QAM	1	49	19.13	19.28	19.27		
10	64QAM	25	0	18.92	19.07	19.15	19.7	0
10	64QAM	25	12	19.03	19.17	19.19		
10	64QAM	25	25	18.99	19.12	19.22		
10	64QAM	50	0	19.04	19.15	19.13		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	18.87	18.88	18.93	19.7	0
5	QPSK	1	12	18.70	18.79	18.99		
5	QPSK	1	24	18.84	18.81	18.89		
5	QPSK	12	0	18.96	19.08	19.16	19.7	0
5	QPSK	12	7	18.97	19.07	19.08		
5	QPSK	12	13	18.97	19.04	19.11		
5	QPSK	25	0	19.02	19.12	19.07		
5	16QAM	1	0	19.26	19.23	19.30	19.7	0
5	16QAM	1	12	19.21	19.24	19.29		
5	16QAM	1	24	19.19	19.27	19.37		
5	16QAM	12	0	18.86	18.91	19.06	19.7	0
5	16QAM	12	7	18.99	19.04	19.10		
5	16QAM	12	13	18.97	19.07	19.08		
5	16QAM	25	0	18.89	19.05	19.05		
5	64QAM	1	0	19.00	19.10	19.11	19.7	0
5	64QAM	1	12	19.06	19.27	19.35		
5	64QAM	1	24	19.10	19.18	19.27		
5	64QAM	12	0	18.82	19.03	19.10	19.7	0
5	64QAM	12	7	19.00	19.07	19.17		
5	64QAM	12	13	18.94	19.09	19.21		
5	64QAM	25	0	19.02	19.14	19.11		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	18.85	18.81	18.97	19.7	0
3	QPSK	1	8	18.79	18.77	18.90		
3	QPSK	1	14	18.84	18.84	18.94		
3	QPSK	8	0	18.98	19.08	19.14	19.7	0
3	QPSK	8	4	19.01	19.07	19.07		

3	QPSK	8	7	19.01	19.03	19.16		
3	QPSK	15	0	19.04	19.03	19.09		
3	16QAM	1	0	19.25	19.20	19.33	19.7	0
3	16QAM	1	8	19.14	19.24	19.35		
3	16QAM	1	14	19.19	19.31	19.36		
3	16QAM	8	0	18.89	18.98	19.08	19.7	0
3	16QAM	8	4	18.97	19.05	19.12		
3	16QAM	8	7	18.96	19.09	19.12		
3	16QAM	15	0	18.89	19.09	19.05		
3	64QAM	1	0	19.06	19.17	19.21	19.7	0
3	64QAM	1	8	19.10	19.26	19.25		
3	64QAM	1	14	19.08	19.23	19.23		
3	64QAM	8	0	18.89	19.00	19.14	19.7	0
3	64QAM	8	4	19.01	19.09	19.13		
3	64QAM	8	7	18.89	19.02	19.13		
3	64QAM	15	0	19.04	19.12	19.10		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	18.83	18.91	18.93	19.7	0
1.4	QPSK	1	3	18.76	18.82	18.94		
1.4	QPSK	1	5	18.80	18.80	18.94		
1.4	QPSK	3	0	19.02	19.11	19.18		
1.4	QPSK	3	1	18.97	19.03	19.13		
1.4	QPSK	3	3	19.01	19.05	19.09		
1.4	QPSK	6	0	18.95	19.07	19.10	19.7	0
1.4	16QAM	1	0	19.24	19.27	19.25	19.7	0
1.4	16QAM	1	3	19.18	19.26	19.35		
1.4	16QAM	1	5	19.25	19.29	19.38		
1.4	16QAM	3	0	18.92	18.95	19.00		
1.4	16QAM	3	1	19.03	19.05	19.04		
1.4	16QAM	3	3	18.95	19.03	19.16		
1.4	16QAM	6	0	18.92	19.10	19.07	19.7	0
1.4	64QAM	1	0	19.10	19.15	19.13	19.7	0
1.4	64QAM	1	3	19.10	19.22	19.33		
1.4	64QAM	1	5	19.13	19.26	19.19		
1.4	64QAM	3	0	18.92	19.05	19.15		
1.4	64QAM	3	1	18.98	19.09	19.14		
1.4	64QAM	3	3	18.90	19.04	19.21		
1.4	64QAM	6	0	19.04	19.06	19.11	19.7	0

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	12.10	12.20	12.22	12.7	0
20	QPSK	1	49	12.06	12.18	12.19		
20	QPSK	1	99	12.09	12.17	12.21		
20	QPSK	50	0	12.42	12.43	12.44	12.7	0
20	QPSK	50	24	12.38	12.39	12.39		
20	QPSK	50	50	12.37	12.37	12.42		
20	QPSK	100	0	12.35	12.32	12.38		
20	16QAM	1	0	12.40	12.49	12.44	12.7	0
20	16QAM	1	49	12.46	12.55	12.50		
20	16QAM	1	99	12.52	12.60	12.65		
20	16QAM	50	0	12.05	12.32	12.33	12.7	0
20	16QAM	50	24	11.93	12.36	12.34		
20	16QAM	50	50	12.17	12.44	12.44		
20	16QAM	100	0	12.35	12.34	12.31		
20	64QAM	1	0	12.22	12.34	12.32	12.7	0
20	64QAM	1	49	12.33	12.44	12.44		
20	64QAM	1	99	12.46	12.53	12.45		
20	64QAM	50	0	12.28	12.39	12.35	12.7	0
20	64QAM	50	24	12.41	12.44	12.39		
20	64QAM	50	50	12.45	12.52	12.46		
20	64QAM	100	0	12.41	12.37	12.33		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	12.06	12.20	12.15	12.7	0
15	QPSK	1	37	12.06	12.17	12.18		
15	QPSK	1	74	12.05	12.08	12.19		
15	QPSK	36	0	12.42	12.39	12.44	12.7	0
15	QPSK	36	20	12.38	12.31	12.38		
15	QPSK	36	39	12.30	12.30	12.38		
15	QPSK	75	0	12.34	12.28	12.31		
15	16QAM	1	0	12.37	12.41	12.40	12.7	0
15	16QAM	1	37	12.43	12.54	12.49		
15	16QAM	1	74	12.44	12.51	12.58		
15	16QAM	36	0	12.03	12.26	12.29	12.7	0
15	16QAM	36	20	11.91	12.29	12.33		
15	16QAM	36	39	12.10	12.43	12.43		
15	16QAM	75	0	12.28	12.32	12.30		
15	64QAM	1	0	12.18	12.34	12.31	12.7	0
15	64QAM	1	37	12.31	12.41	12.35		
15	64QAM	1	74	12.37	12.44	12.42		
15	64QAM	36	0	12.23	12.37	12.25	12.7	0
15	64QAM	36	20	12.41	12.43	12.37		
15	64QAM	36	39	12.40	12.48	12.41		
15	64QAM	75	0	12.38	12.33	12.26		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	12.02	12.20	12.18	12.7	0
10	QPSK	1	25	11.98	12.18	12.11		
10	QPSK	1	49	12.06	12.08	12.16		
10	QPSK	25	0	12.35	12.36	12.37	12.7	0
10	QPSK	25	12	12.35	12.37	12.30		

10	QPSK	25	25	12.37	12.32	12.42		
10	QPSK	50	0	12.26	12.30	12.32		
10	16QAM	1	0	12.35	12.48	12.40	12.7	0
10	16QAM	1	25	12.37	12.54	12.50		
10	16QAM	1	49	12.49	12.57	12.58		
10	16QAM	25	0	12.05	12.32	12.27	12.7	0
10	16QAM	25	12	11.85	12.34	12.34		
10	16QAM	25	25	12.08	12.36	12.38		
10	16QAM	50	0	12.29	12.24	12.30		
10	64QAM	1	0	12.20	12.34	12.30	12.7	0
10	64QAM	1	25	12.28	12.41	12.34		
10	64QAM	1	49	12.37	12.43	12.41		
10	64QAM	25	0	12.28	12.35	12.25	12.7	0
10	64QAM	25	12	12.31	12.38	12.39		
10	64QAM	25	25	12.42	12.48	12.37		
10	64QAM	50	0	12.36	12.27	12.24		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	12.01	12.19	12.22	12.7	0
5	QPSK	1	12	11.96	12.17	12.09		
5	QPSK	1	24	12.01	12.16	12.18		
5	QPSK	12	0	12.32	12.33	12.35	12.7	0
5	QPSK	12	7	12.37	12.39	12.36		
5	QPSK	12	13	12.28	12.35	12.36		
5	QPSK	25	0	12.30	12.25	12.32		
5	16QAM	1	0	12.33	12.41	12.41	12.7	0
5	16QAM	1	12	12.44	12.49	12.46		
5	16QAM	1	24	12.51	12.54	12.58		
5	16QAM	12	0	12.01	12.26	12.28	12.7	0
5	16QAM	12	7	11.86	12.33	12.33		
5	16QAM	12	13	12.17	12.44	12.36		
5	16QAM	25	0	12.33	12.27	12.23		
5	64QAM	1	0	12.16	12.26	12.28	12.7	0
5	64QAM	1	12	12.31	12.37	12.35		
5	64QAM	1	24	12.44	12.43	12.45		
5	64QAM	12	0	12.26	12.31	12.34	12.7	0
5	64QAM	12	7	12.32	12.44	12.32		
5	64QAM	12	13	12.38	12.43	12.44		
5	64QAM	25	0	12.33	12.28	12.26		

<LTE Band 7 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	10.65	10.87	10.97	11.9	0
20	QPSK	1	49	10.62	10.79	10.88		
20	QPSK	1	99	10.58	10.79	10.91		
20	QPSK	50	0	10.67	10.81	10.95	11.9	0
20	QPSK	50	24	10.61	10.80	10.94		
20	QPSK	50	50	10.62	10.78	10.92		
20	QPSK	100	0	10.58	10.83	10.95		
20	16QAM	1	0	10.65	10.82	10.94	11.9	0
20	16QAM	1	49	10.57	10.86	10.93		
20	16QAM	1	99	10.58	10.86	10.88		
20	16QAM	50	0	10.57	10.81	10.88	11.9	0
20	16QAM	50	24	10.60	10.85	10.87		
20	16QAM	50	50	10.55	10.77	10.90		
20	16QAM	100	0	10.55	10.79	10.95		
20	64QAM	1	0	10.58	10.82	10.93	11.9	0
20	64QAM	1	49	10.57	10.77	10.92		
20	64QAM	1	99	10.62	10.86	10.87		
20	64QAM	50	0	10.59	10.80	10.96	11.9	0
20	64QAM	50	24	10.56	10.87	10.95		
20	64QAM	50	50	10.57	10.80	10.93		
20	64QAM	100	0	10.64	10.82	10.93		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	10.60	10.86	10.96	11.9	0
15	QPSK	1	37	10.52	10.73	10.84		
15	QPSK	1	74	10.49	10.78	10.90		
15	QPSK	36	0	10.48	10.79	10.94	11.9	0
15	QPSK	36	20	10.59	10.78	10.93		
15	QPSK	36	39	10.61	10.76	10.92		
15	QPSK	75	0	10.54	10.74	10.95		
15	16QAM	1	0	10.57	10.73	10.86	11.9	0
15	16QAM	1	37	10.50	10.86	10.91		
15	16QAM	1	74	10.56	10.81	10.82		
15	16QAM	36	0	10.53	10.80	10.78	11.9	0
15	16QAM	36	20	10.50	10.80	10.77		
15	16QAM	36	39	10.53	10.71	10.86		
15	16QAM	75	0	10.51	10.78	10.93		
15	64QAM	1	0	10.58	10.77	10.88	11.9	0
15	64QAM	1	37	10.56	10.77	10.88		
15	64QAM	1	74	10.52	10.79	10.85		
15	64QAM	36	0	10.59	10.74	10.91	11.9	0
15	64QAM	36	20	10.50	10.81	10.87		
15	64QAM	36	39	10.49	10.74	10.87		
15	64QAM	75	0	10.55	10.73	10.87		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	10.61	10.77	10.93	11.9	0
10	QPSK	1	25	10.58	10.71	10.79		
10	QPSK	1	49	10.50	10.76	10.87		
10	QPSK	25	0	10.54	10.80	10.95	11.9	0
10	QPSK	25	12	10.58	10.70	10.91		

10	QPSK	25	25	10.62	10.77	10.88		
10	QPSK	50	0	10.58	10.75	10.86		
10	16QAM	1	0	10.56	10.81	10.84	11.9	0
10	16QAM	1	25	10.57	10.82	10.90		
10	16QAM	1	49	10.51	10.83	10.80		
10	16QAM	25	0	10.51	10.78	10.83	11.9	0
10	16QAM	25	12	10.50	10.75	10.84		
10	16QAM	25	25	10.45	10.70	10.85		
10	16QAM	50	0	10.52	10.73	10.89		
10	64QAM	1	0	10.50	10.74	10.87	11.9	0
10	64QAM	1	25	10.52	10.70	10.87		
10	64QAM	1	49	10.53	10.85	10.81		
10	64QAM	25	0	10.55	10.72	10.90	11.9	0
10	64QAM	25	12	10.50	10.83	10.90		
10	64QAM	25	25	10.53	10.74	10.93		
10	64QAM	50	0	10.59	10.76	10.90		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	10.63	10.81	10.93	11.9	0
5	QPSK	1	12	10.52	10.71	10.79		
5	QPSK	1	24	10.49	10.72	10.88		
5	QPSK	12	0	10.47	10.73	10.95	11.9	0
5	QPSK	12	7	10.55	10.76	10.93		
5	QPSK	12	13	10.52	10.75	10.92		
5	QPSK	25	0	10.48	10.78	10.86		
5	16QAM	1	0	10.65	10.78	10.93	11.9	0
5	16QAM	1	12	10.47	10.86	10.86		
5	16QAM	1	24	10.56	10.79	10.79		
5	16QAM	12	0	10.56	10.73	10.80	11.9	0
5	16QAM	12	7	10.54	10.77	10.87		
5	16QAM	12	13	10.54	10.69	10.85		
5	16QAM	25	0	10.55	10.76	10.86		
5	64QAM	1	0	10.52	10.80	10.91	11.9	0
5	64QAM	1	12	10.52	10.68	10.88		
5	64QAM	1	24	10.58	10.77	10.80		
5	64QAM	12	0	10.56	10.75	10.87	11.9	0
5	64QAM	12	7	10.53	10.86	10.85		
5	64QAM	12	13	10.52	10.72	10.93		
5	64QAM	25	0	10.54	10.79	10.88		

<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130		
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	17.19	17.14	17.10	18.1	0
10	QPSK	1	25	17.04	17.05	17.02		
10	QPSK	1	49	17.08	17.05	16.99		
10	QPSK	25	0	17.28	17.26	17.19	18.1	0
10	QPSK	25	12	17.24	17.13	17.17		
10	QPSK	25	25	17.21	17.20	17.14		
10	QPSK	50	0	17.25	17.17	17.19		
10	16QAM	1	0	17.47	17.46	17.40	18.1	0
10	16QAM	1	25	17.44	17.47	17.36		
10	16QAM	1	49	17.45	17.41	17.40		
10	16QAM	25	0	17.18	17.16	17.13	18.1	0
10	16QAM	25	12	17.25	17.16	17.18		
10	16QAM	25	25	17.23	17.16	17.11		
10	16QAM	50	0	17.25	17.16	17.17		
10	64QAM	1	0	17.32	17.28	17.28	18.1	0
10	64QAM	1	25	17.35	17.36	17.33		
10	64QAM	1	49	17.35	17.33	17.28		
10	64QAM	25	0	17.22	17.21	17.16	18.1	0
10	64QAM	25	12	17.28	17.21	17.24		
10	64QAM	25	25	17.26	17.24	17.20		
10	64QAM	50	0	17.29	17.18	17.23		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	17.15	17.05	17.00	18.1	0
5	QPSK	1	12	17.04	17.00	16.97		
5	QPSK	1	24	17.08	16.97	16.90		
5	QPSK	12	0	17.26	17.16	17.17	18.1	0
5	QPSK	12	7	17.20	17.08	17.07		
5	QPSK	12	13	17.12	17.11	17.06		
5	QPSK	25	0	17.15	17.17	17.16		
5	16QAM	1	0	17.46	17.46	17.38	18.1	0
5	16QAM	1	12	17.39	17.43	17.30		
5	16QAM	1	24	17.38	17.32	17.30		
5	16QAM	12	0	17.18	17.15	17.05	18.1	0
5	16QAM	12	7	17.21	17.12	17.12		
5	16QAM	12	13	17.20	17.10	17.09		
5	16QAM	25	0	17.25	17.12	17.09		
5	64QAM	1	0	17.25	17.26	17.26	18.1	0
5	64QAM	1	12	17.27	17.36	17.26		
5	64QAM	1	24	17.34	17.29	17.20		
5	64QAM	12	0	17.15	17.14	17.15	18.1	0
5	64QAM	12	7	17.26	17.19	17.20		
5	64QAM	12	13	17.16	17.20	17.20		
5	64QAM	25	0	17.20	17.11	17.17		
Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	17.16	17.13	17.05	18.1	0
3	QPSK	1	8	16.96	17.04	16.92		
3	QPSK	1	14	16.99	16.98	16.92		
3	QPSK	8	0	17.25	17.23	17.14	18.1	0
3	QPSK	8	4	17.21	17.09	17.13		

3	QPSK	8	7	17.18	17.17	17.12		
3	QPSK	15	0	17.19	17.09	17.09		
3	16QAM	1	0	17.41	17.42	17.35	18.1	0
3	16QAM	1	8	17.34	17.43	17.29		
3	16QAM	1	14	17.36	17.38	17.35		
3	16QAM	8	0	17.15	17.12	17.10	18.1	0
3	16QAM	8	4	17.16	17.07	17.18		
3	16QAM	8	7	17.17	17.13	17.01		
3	16QAM	15	0	17.23	17.11	17.14		
3	64QAM	1	0	17.29	17.22	17.20	18.1	0
3	64QAM	1	8	17.25	17.35	17.31		
3	64QAM	1	14	17.28	17.23	17.19		
3	64QAM	8	0	17.17	17.15	17.09	18.1	0
3	64QAM	8	4	17.26	17.17	17.17		
3	64QAM	8	7	17.17	17.16	17.17		
3	64QAM	15	0	17.23	17.12	17.20		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	17.14	17.11	17.06	18.1	0
1.4	QPSK	1	3	17.03	17.03	17.01		
1.4	QPSK	1	5	17.08	16.97	16.92		
1.4	QPSK	3	0	17.23	17.19	17.09		
1.4	QPSK	3	1	17.16	17.03	17.07		
1.4	QPSK	3	3	17.19	17.14	17.14		
1.4	QPSK	6	0	17.23	17.15	17.19	18.1	0
1.4	16QAM	1	0	17.44	17.41	17.40	18.1	0
1.4	16QAM	1	3	17.35	17.46	17.26		
1.4	16QAM	1	5	17.35	17.35	17.35		
1.4	16QAM	3	0	17.13	17.15	17.05		
1.4	16QAM	3	1	17.19	17.08	17.10		
1.4	16QAM	3	3	17.18	17.09	17.05		
1.4	16QAM	6	0	17.21	17.06	17.08	18.1	0
1.4	64QAM	1	0	17.31	17.24	17.20	18.1	0
1.4	64QAM	1	3	17.25	17.36	17.23		
1.4	64QAM	1	5	17.26	17.24	17.27		
1.4	64QAM	3	0	17.12	17.20	17.13		
1.4	64QAM	3	1	17.26	17.15	17.24		
1.4	64QAM	3	3	17.17	17.14	17.17		
1.4	64QAM	6	0	17.20	17.15	17.21	18.1	0

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23230			
Frequency (MHz)					782			
10	QPSK	1	0		18.85		19.8	0
10	QPSK	1	25		18.74			
10	QPSK	1	49		18.82			
10	QPSK	25	0		18.95		19.8	0
10	QPSK	25	12		18.88			
10	QPSK	25	25		18.94			
10	QPSK	50	0		18.87			
10	16QAM	1	0		19.08		19.8	0
10	16QAM	1	25		19.12			
10	16QAM	1	49		19.19			
10	16QAM	25	0		18.86		19.8	0
10	16QAM	25	12		18.87			
10	16QAM	25	25		18.94			
10	16QAM	50	0		18.92			
10	64QAM	1	0		18.95		19.8	0
10	64QAM	1	25		19.05			
10	64QAM	1	49		19.13			
10	64QAM	25	0		18.90		19.8	0
10	64QAM	25	12		18.92			
10	64QAM	25	25		18.87			
10	64QAM	50	0		18.79			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	18.74	18.84	18.78	19.8	0
5	QPSK	1	12	18.62	18.66	18.57		
5	QPSK	1	24	18.66	18.76	18.73		
5	QPSK	12	0	18.86	18.86	18.80	19.8	0
5	QPSK	12	7	18.72	18.80	18.78		
5	QPSK	12	13	18.81	18.91	18.84		
5	QPSK	25	0	18.77	18.82	18.72		
5	16QAM	1	0	18.93	19.02	18.96	19.8	0
5	16QAM	1	12	18.99	19.09	19.05		
5	16QAM	1	24	19.13	19.17	19.07		
5	16QAM	12	0	18.67	18.76	18.73	19.8	0
5	16QAM	12	7	18.77	18.82	18.72		
5	16QAM	12	13	18.78	18.85	18.82		
5	16QAM	25	0	18.81	18.87	18.84		
5	64QAM	1	0	18.91	18.95	18.90	19.8	0
5	64QAM	1	12	19.00	19.00	18.93		
5	64QAM	1	24	19.02	19.12	19.12		
5	64QAM	12	0	18.78	18.86	18.86	19.8	0
5	64QAM	12	7	18.80	18.87	18.80		
5	64QAM	12	13	18.76	18.83	18.81		
5	64QAM	25	0	18.73	18.78	18.77		

<LTE Band 14>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23330			
Frequency (MHz)					793			
10	QPSK	1	0		19.07		19.9	0
10	QPSK	1	25		19.02			
10	QPSK	1	49		19.03			
10	QPSK	25	0		19.22		19.9	0
10	QPSK	25	12		19.18			
10	QPSK	25	25		19.15			
10	QPSK	50	0		19.30			
10	16QAM	1	0		19.02		19.9	0
10	16QAM	1	25		18.95			
10	16QAM	1	49		18.93			
10	16QAM	25	0		19.14		19.9	0
10	16QAM	25	12		19.11			
10	16QAM	25	25		19.13			
10	16QAM	50	0		19.14			
10	64QAM	1	0		18.96		19.9	0
10	64QAM	1	25		18.94			
10	64QAM	1	49		18.90			
10	64QAM	25	0		19.13		19.9	0
10	64QAM	25	12		19.13			
10	64QAM	25	25		19.16			
10	64QAM	50	0		19.14			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	18.90	18.99	18.95	19.9	0
5	QPSK	1	12	18.82	18.92	18.87		
5	QPSK	1	24	19.01	19.02	18.95		
5	QPSK	12	0	19.18	19.18	19.08	19.9	0
5	QPSK	12	7	19.12	19.18	19.13		
5	QPSK	12	13	19.03	19.06	18.97		
5	QPSK	25	0	19.24	19.27	19.20		
5	16QAM	1	0	18.95	18.98	18.90	19.9	0
5	16QAM	1	12	18.82	18.90	18.84		
5	16QAM	1	24	18.87	18.88	18.79		
5	16QAM	12	0	19.04	19.14	19.05	19.9	0
5	16QAM	12	7	18.94	19.03	18.93		
5	16QAM	12	13	18.99	19.04	18.94		
5	16QAM	25	0	18.99	19.06	19.00		
5	64QAM	1	0	18.79	18.86	18.82	19.9	0
5	64QAM	1	12	18.75	18.85	18.78		
5	64QAM	1	24	18.75	18.85	18.80		
5	64QAM	12	0	19.02	19.09	18.99	19.9	0
5	64QAM	12	7	18.96	19.05	18.95		
5	64QAM	12	13	19.05	19.15	19.08		
5	64QAM	25	0	19.10	19.14	19.11		

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	17.03	17.05	17.07	18.1	0
10	QPSK	1	25	17.02	17.02	17.05		
10	QPSK	1	49	17.00	17.02	17.05		
10	QPSK	25	0	17.25	17.26	17.27	18.1	0
10	QPSK	25	12	17.22	17.20	17.14		
10	QPSK	25	25	17.24	17.21	17.21		
10	QPSK	50	0	17.21	17.19	17.22		
10	16QAM	1	0	17.46	17.48	17.47	18.1	0
10	16QAM	1	25	17.44	17.44	17.42		
10	16QAM	1	49	17.45	17.45	17.42		
10	16QAM	25	0	17.10	17.10	17.08	18.1	0
10	16QAM	25	12	17.23	17.23	17.12		
10	16QAM	25	25	17.21	17.19	17.25		
10	16QAM	50	0	17.21	17.19	17.11		
10	64QAM	1	0	17.31	17.30	17.28	18.1	0
10	64QAM	1	25	17.37	17.38	17.38		
10	64QAM	1	49	17.35	17.34	17.33		
10	64QAM	25	0	17.13	17.12	17.13	18.1	0
10	64QAM	25	12	17.28	17.27	17.22		
10	64QAM	25	25	17.29	17.27	17.27		
10	64QAM	50	0	17.26	17.24	17.18		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	17.01	16.95	16.97	18.1	0
5	QPSK	1	12	16.96	16.96	17.00		
5	QPSK	1	24	16.94	16.93	16.95		
5	QPSK	12	0	17.23	17.25	17.22	18.1	0
5	QPSK	12	7	17.19	17.15	17.12		
5	QPSK	12	13	17.14	17.21	17.16		
5	QPSK	25	0	17.19	17.16	17.18		
5	16QAM	1	0	17.39	17.35	17.44	18.1	0
5	16QAM	1	12	17.39	17.43	17.36		
5	16QAM	1	24	17.44	17.44	17.40		
5	16QAM	12	0	17.04	17.01	17.03	18.1	0
5	16QAM	12	7	17.13	17.21	17.05		
5	16QAM	12	13	17.13	17.16	17.22		
5	16QAM	25	0	17.21	17.12	17.02		
5	64QAM	1	0	17.28	17.21	17.25	18.1	0
5	64QAM	1	12	17.35	17.33	17.30		
5	64QAM	1	24	17.34	17.29	17.24		
5	64QAM	12	0	17.10	17.03	17.13	18.1	0
5	64QAM	12	7	17.26	17.17	17.20		
5	64QAM	12	13	17.25	17.25	17.18		
5	64QAM	25	0	17.21	17.14	17.08		

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	12.94	12.86	12.83	13.5	0
20	QPSK	1	49	12.83	12.82	12.78		
20	QPSK	1	99	12.79	12.81	12.74		
20	QPSK	50	0	12.99	12.98	12.97	13.5	0
20	QPSK	50	24	12.94	12.95	12.96		
20	QPSK	50	50	12.90	12.91	12.91		
20	QPSK	100	0	13.05	12.95	13.02		
20	16QAM	1	0	13.32	13.21	13.27	13.5	0
20	16QAM	1	49	13.19	13.23	13.27		
20	16QAM	1	99	13.14	13.19	13.22		
20	16QAM	50	0	13.04	12.99	12.96	13.5	0
20	16QAM	50	24	13.03	12.87	13.08		
20	16QAM	50	50	12.95	12.92	13.02		
20	16QAM	100	0	12.91	12.92	13.02		
20	64QAM	1	0	13.24	13.13	13.07	13.5	0
20	64QAM	1	49	13.13	13.04	13.09		
20	64QAM	1	99	13.01	13.07	13.17		
20	64QAM	50	0	13.09	12.99	12.96	13.5	0
20	64QAM	50	24	13.00	12.95	13.03		
20	64QAM	50	50	12.92	12.94	13.06		
20	64QAM	100	0	12.93	12.91	13.04		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	12.94	12.80	12.79	13.5	0
15	QPSK	1	37	12.73	12.82	12.74		
15	QPSK	1	74	12.79	12.81	12.73		
15	QPSK	36	0	12.90	12.88	12.89	13.5	0
15	QPSK	36	20	12.90	12.89	12.87		
15	QPSK	36	39	12.88	12.87	12.85		
15	QPSK	75	0	12.99	12.95	13.01		
15	16QAM	1	0	13.29	13.11	13.26	13.5	0
15	16QAM	1	37	13.12	13.19	13.27		
15	16QAM	1	74	13.09	13.11	13.21		
15	16QAM	36	0	12.97	12.93	12.88	13.5	0
15	16QAM	36	20	13.01	12.85	13.08		
15	16QAM	36	39	12.86	12.86	12.94		
15	16QAM	75	0	12.88	12.89	12.98		
15	64QAM	1	0	13.15	13.04	12.99	13.5	0
15	64QAM	1	37	13.03	13.04	13.03		
15	64QAM	1	74	12.98	13.04	13.12		
15	64QAM	36	0	12.99	12.94	12.87	13.5	0
15	64QAM	36	20	12.90	12.85	13.02		
15	64QAM	36	39	12.90	12.89	12.98		
15	64QAM	75	0	12.84	12.91	13.02		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	12.84	12.79	12.82	13.5	0
10	QPSK	1	25	12.81	12.79	12.72		
10	QPSK	1	49	12.78	12.72	12.72		
10	QPSK	25	0	12.98	12.95	12.90	13.5	0
10	QPSK	25	12	12.90	12.87	12.89		

10	QPSK	25	25	12.90	12.83	12.85		
10	QPSK	50	0	13.02	12.94	12.97		
10	16QAM	1	0	13.22	13.15	13.25	13.5	0
10	16QAM	1	25	13.10	13.14	13.20		
10	16QAM	1	49	13.04	13.16	13.14		
10	16QAM	25	0	12.94	12.89	12.88	13.5	0
10	16QAM	25	12	12.99	12.85	12.98		
10	16QAM	25	25	12.92	12.83	13.02		
10	16QAM	50	0	12.84	12.82	12.98		
10	64QAM	1	0	13.21	13.10	13.05	13.5	0
10	64QAM	1	25	13.08	12.94	13.02		
10	64QAM	1	49	13.00	13.04	13.17		
10	64QAM	25	0	13.08	12.99	12.89	13.5	0
10	64QAM	25	12	12.95	12.89	13.02		
10	64QAM	25	25	12.82	12.86	12.99		
10	64QAM	50	0	12.83	12.84	12.97		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	12.93	12.84	12.74	13.5	0
5	QPSK	1	12	12.78	12.82	12.74		
5	QPSK	1	24	12.70	12.79	12.74		
5	QPSK	12	0	12.99	12.92	12.95	13.5	0
5	QPSK	12	7	12.90	12.89	12.92		
5	QPSK	12	13	12.83	12.84	12.91		
5	QPSK	25	0	13.00	12.90	13.02		
5	16QAM	1	0	13.24	13.17	13.25	13.5	0
5	16QAM	1	12	13.12	13.17	13.23		
5	16QAM	1	24	13.08	13.12	13.21		
5	16QAM	12	0	12.99	12.90	12.90	13.5	0
5	16QAM	12	7	12.97	12.79	13.06		
5	16QAM	12	13	12.87	12.89	12.97		
5	16QAM	25	0	12.90	12.83	12.95		
5	64QAM	1	0	13.17	13.04	13.04	13.5	0
5	64QAM	1	12	13.06	13.02	13.05		
5	64QAM	1	24	12.94	12.97	13.17		
5	64QAM	12	0	13.09	12.95	12.94	13.5	0
5	64QAM	12	7	12.91	12.86	12.94		
5	64QAM	12	13	12.84	12.88	13.02		
5	64QAM	25	0	12.91	12.91	12.97		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	12.94	12.84	12.79	13.5	0
3	QPSK	1	8	12.82	12.77	12.74		
3	QPSK	1	14	12.73	12.71	12.68		
3	QPSK	8	0	12.98	12.97	12.92	13.5	0
3	QPSK	8	4	12.91	12.93	12.96		
3	QPSK	8	7	12.88	12.90	12.87		
3	QPSK	15	0	13.02	12.95	12.94		
3	16QAM	1	0	13.30	13.18	13.24	13.5	0
3	16QAM	1	8	13.15	13.20	13.25		
3	16QAM	1	14	13.13	13.12	13.14		
3	16QAM	8	0	13.04	12.98	12.92	13.5	0
3	16QAM	8	4	12.98	12.86	13.08		
3	16QAM	8	7	12.94	12.84	12.93		
3	16QAM	15	0	12.88	12.83	12.94		
3	64QAM	1	0	13.14	13.05	13.00	13.5	0

3	64QAM	1	8	13.10	12.98	13.07		
3	64QAM	1	14	13.01	13.03	13.16		
3	64QAM	8	0	13.06	12.98	12.89	13.5	0
3	64QAM	8	4	12.99	12.88	13.00		
3	64QAM	8	7	12.90	12.86	13.04		
3	64QAM	15	0	12.89	12.84	12.99		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	12.86	12.81	12.74	13.5	0
1.4	QPSK	1	3	12.76	12.72	12.75		
1.4	QPSK	1	5	12.76	12.78	12.65		
1.4	QPSK	3	0	12.96	12.96	12.87		
1.4	QPSK	3	1	12.93	12.91	12.94		
1.4	QPSK	3	3	12.80	12.88	12.84		
1.4	QPSK	6	0	12.97	12.91	13.00	13.5	0
1.4	16QAM	1	0	13.22	13.20	13.24	13.5	0
1.4	16QAM	1	3	13.16	13.15	13.25		
1.4	16QAM	1	5	13.05	13.12	13.17		
1.4	16QAM	3	0	12.94	12.92	12.86		
1.4	16QAM	3	1	12.98	12.77	13.00		
1.4	16QAM	3	3	12.94	12.92	12.96		
1.4	16QAM	6	0	12.88	12.83	13.00	13.5	0
1.4	64QAM	1	0	13.17	13.10	12.99	13.5	0
1.4	64QAM	1	3	13.05	12.95	13.06		
1.4	64QAM	1	5	12.96	13.06	13.09		
1.4	64QAM	3	0	13.00	12.95	12.89		
1.4	64QAM	3	1	12.90	12.93	12.99		
1.4	64QAM	3	3	12.88	12.88	13.00		
1.4	64QAM	6	0	12.91	12.88	12.97	13.5	0

<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	19.01	18.89	19.02	19.7	0
15	QPSK	1	37	18.98	18.78	18.96		
15	QPSK	1	74	18.97	18.82	18.97		
15	QPSK	36	0	19.10	18.99	19.13	19.7	0
15	QPSK	36	20	19.05	18.88	19.08		
15	QPSK	36	39	19.06	18.90	19.05		
15	QPSK	75	0	19.03	19.02	19.09		
15	16QAM	1	0	19.01	18.98	19.05	19.7	0
15	16QAM	1	37	19.01	18.86	19.00		
15	16QAM	1	74	18.99	18.86	19.02		
15	16QAM	36	0	18.95	18.96	19.08	19.7	0
15	16QAM	36	20	19.00	18.88	18.97		
15	16QAM	36	39	18.98	18.79	18.91		
15	16QAM	75	0	18.94	18.79	18.96		
15	64QAM	1	0	18.95	18.91	19.00	19.7	0
15	64QAM	1	37	19.00	18.85	18.87		
15	64QAM	1	74	18.91	18.72	18.91		
15	64QAM	36	0	18.92	18.69	18.92	19.7	0
15	64QAM	36	20	18.86	18.91	18.93		
15	64QAM	36	39	19.00	18.78	18.80		
15	64QAM	75	0	18.81	18.63	18.82		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	18.91	18.88	18.99	19.7	0
10	QPSK	1	25	18.92	18.77	18.94		
10	QPSK	1	49	18.92	18.74	18.91		
10	QPSK	25	0	19.08	18.98	19.10	19.7	0
10	QPSK	25	12	18.98	18.88	19.00		
10	QPSK	25	25	19.06	18.86	18.96		
10	QPSK	50	0	18.98	18.96	19.02		
10	16QAM	1	0	18.95	18.92	18.95	19.7	0
10	16QAM	1	25	19.00	18.81	18.90		
10	16QAM	1	49	18.91	18.79	19.02		
10	16QAM	25	0	18.87	18.87	19.07	19.7	0
10	16QAM	25	12	18.96	18.80	18.89		
10	16QAM	25	25	18.98	18.75	18.82		
10	16QAM	50	0	18.89	18.70	18.88		
10	64QAM	1	0	18.85	18.82	18.93	19.7	0
10	64QAM	1	25	18.93	18.79	18.85		
10	64QAM	1	49	18.91	18.66	18.81		
10	64QAM	25	0	18.84	18.66	18.92	19.7	0
10	64QAM	25	12	18.83	18.81	18.92		
10	64QAM	25	25	19.00	18.72	18.78		
10	64QAM	50	0	18.71	18.56	18.73		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	18.90	18.84	18.93	19.7	0
5	QPSK	1	12	18.90	18.75	18.84		
5	QPSK	1	24	18.84	18.73	18.91		
5	QPSK	12	0	19.08	18.94	19.07	19.7	0
5	QPSK	12	7	18.97	18.84	18.92		

5	QPSK	12	13	19.06	18.79	18.87		
5	QPSK	25	0	18.95	18.93	19.00		
5	16QAM	1	0	18.91	18.86	18.85	19.7	0
5	16QAM	1	12	18.94	18.71	18.90		
5	16QAM	1	24	18.90	18.77	18.94		
5	16QAM	12	0	18.79	18.85	19.03	19.7	0
5	16QAM	12	7	18.92	18.75	18.83		
5	16QAM	12	13	18.96	18.73	18.79		
5	16QAM	25	0	18.88	18.60	18.79		
5	64QAM	1	0	18.78	18.80	18.84	19.7	0
5	64QAM	1	12	18.86	18.77	18.76		
5	64QAM	1	24	18.84	18.63	18.77		
5	64QAM	12	0	18.78	18.62	18.83	19.7	0
5	64QAM	12	7	18.76	18.74	18.91		
5	64QAM	12	13	18.94	18.65	18.72		
5	64QAM	25	0	18.61	18.54	18.65		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	18.87	18.83	18.83	19.7	0
3	QPSK	1	8	18.83	18.65	18.76		
3	QPSK	1	14	18.77	18.64	18.82		
3	QPSK	8	0	19.05	18.94	19.03	19.7	0
3	QPSK	8	4	18.95	18.79	18.91		
3	QPSK	8	7	19.02	18.69	18.80		
3	QPSK	15	0	18.88	18.86	18.99		
3	16QAM	1	0	18.84	18.76	18.83	19.7	0
3	16QAM	1	8	18.90	18.70	18.87		
3	16QAM	1	14	18.84	18.71	18.92		
3	16QAM	8	0	18.76	18.76	18.94	19.7	0
3	16QAM	8	4	18.89	18.74	18.80		
3	16QAM	8	7	18.94	18.68	18.74		
3	16QAM	15	0	18.83	18.55	18.69		
3	64QAM	1	0	18.69	18.77	18.75	19.7	0
3	64QAM	1	8	18.83	18.77	18.70		
3	64QAM	1	14	18.74	18.54	18.76		
3	64QAM	8	0	18.75	18.56	18.78	19.7	0
3	64QAM	8	4	18.71	18.70	18.89		
3	64QAM	8	7	18.93	18.55	18.64		
3	64QAM	15	0	18.52	18.54	18.57		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	18.84	18.67	18.85	19.7	0
1.4	QPSK	1	3	18.81	18.61	18.84		
1.4	QPSK	1	5	18.80	18.54	18.82		
1.4	QPSK	3	0	18.91	18.79	18.88		
1.4	QPSK	3	1	18.95	18.73	18.89		
1.4	QPSK	3	3	18.74	18.72	18.81		
1.4	QPSK	6	0	18.81	18.79	18.92	19.7	0
1.4	16QAM	1	0	18.78	18.81	18.78	19.7	0
1.4	16QAM	1	3	18.92	18.69	18.79		
1.4	16QAM	1	5	18.72	18.68	18.89		
1.4	16QAM	3	0	18.78	18.81	18.89		
1.4	16QAM	3	1	18.79	18.66	18.88		
1.4	16QAM	3	3	18.96	18.42	18.72		
1.4	16QAM	6	0	18.85	18.47	18.89	19.7	0
1.4	64QAM	1	0	18.68	18.82	18.73	19.7	0

1.4	64QAM	1	3	18.77	18.70	18.69		
1.4	64QAM	1	5	18.71	18.47	18.72		
1.4	64QAM	3	0	18.70	18.42	18.79		
1.4	64QAM	3	1	18.64	18.74	18.68		
1.4	64QAM	3	3	18.81	18.69	18.55		
1.4	64QAM	6	0	18.64	18.40	18.61	19.7	0

<LTE Band 30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					27710			
Frequency (MHz)					2310			
10	QPSK	1	0		13.75		14.3	0
10	QPSK	1	25		13.66			
10	QPSK	1	49		13.65			
10	QPSK	25	0		13.66		14.3	0
10	QPSK	25	12		13.63			
10	QPSK	25	25		13.61			
10	QPSK	50	0		13.77			
10	16QAM	1	0		13.73		14.3	0
10	16QAM	1	25		13.64			
10	16QAM	1	49		13.64			
10	16QAM	25	0		13.52		14.3	0
10	16QAM	25	12		13.54			
10	16QAM	25	25		13.57			
10	16QAM	50	0		13.42			
10	64QAM	1	0		13.62		14.3	0
10	64QAM	1	25		13.66			
10	64QAM	1	49		13.53			
10	64QAM	25	0		13.40		14.3	0
10	64QAM	25	12		13.49			
10	64QAM	25	25		13.50			
10	64QAM	50	0		13.49			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0		13.45		14.3	0
5	QPSK	1	12		13.40			
5	QPSK	1	24		13.46			
5	QPSK	12	0		13.61		14.3	0
5	QPSK	12	7		13.41			
5	QPSK	12	13		13.62			
5	QPSK	25	0		13.49			
5	16QAM	1	0		13.81		14.3	0
5	16QAM	1	12		13.75			
5	16QAM	1	24		13.77			
5	16QAM	12	0		13.52		14.3	0
5	16QAM	12	7		13.51			
5	16QAM	12	13		13.50			
5	16QAM	25	0		13.38			
5	64QAM	1	0		13.59		14.3	0
5	64QAM	1	12		13.56			
5	64QAM	1	24		13.44			
5	64QAM	12	0		13.35		14.3	0
5	64QAM	12	7		13.43			
5	64QAM	12	13		13.48			
5	64QAM	25	0		13.49			

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	13.71	13.66	13.59	14.3	0
20	QPSK	1	49	13.46	13.41	13.51		
20	QPSK	1	99	13.52	13.47	13.45		
20	QPSK	50	0	13.90	13.77	13.84	14.3	0
20	QPSK	50	24	13.83	13.71	13.77		
20	QPSK	50	50	13.87	13.71	13.81		
20	QPSK	100	0	13.80	13.64	13.67		
20	16QAM	1	0	14.09	13.94	13.95	14.3	0
20	16QAM	1	49	13.94	13.70	13.83		
20	16QAM	1	99	13.96	13.73	13.76		
20	16QAM	50	0	13.87	13.63	13.73	14.3	0
20	16QAM	50	24	13.80	13.52	13.66		
20	16QAM	50	50	13.77	13.57	13.54		
20	16QAM	100	0	13.79	13.65	13.55		
20	64QAM	1	0	13.85	13.78	13.65	14.3	0
20	64QAM	1	49	13.75	13.67	13.60		
20	64QAM	1	99	13.71	13.62	13.49		
20	64QAM	50	0	13.53	13.68	13.49	14.3	0
20	64QAM	50	24	13.58	13.46	13.47		
20	64QAM	50	50	13.54	13.47	13.45		
20	64QAM	100	0	13.59	13.46	13.44		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	13.67	13.61	13.55	14.3	0
15	QPSK	1	37	13.42	13.35	13.49		
15	QPSK	1	74	13.50	13.38	13.37		
15	QPSK	36	0	13.90	13.69	13.75	14.3	0
15	QPSK	36	20	13.73	13.64	13.75		
15	QPSK	36	39	13.82	13.70	13.80		
15	QPSK	75	0	13.74	13.57	13.58		
15	16QAM	1	0	14.01	13.94	13.94	14.3	0
15	16QAM	1	37	13.86	13.69	13.80		
15	16QAM	1	74	13.90	13.71	13.72		
15	16QAM	36	0	13.80	13.61	13.68	14.3	0
15	16QAM	36	20	13.73	13.46	13.61		
15	16QAM	36	39	13.73	13.49	13.52		
15	16QAM	75	0	13.75	13.60	13.53		
15	64QAM	1	0	13.76	13.77	13.58	14.3	0
15	64QAM	1	37	13.74	13.58	13.55		
15	64QAM	1	74	13.66	13.62	13.44		
15	64QAM	36	0	13.51	13.63	13.49	14.3	0
15	64QAM	36	20	13.50	13.39	13.43		
15	64QAM	36	39	13.52	13.43	13.41		
15	64QAM	75	0	13.50	13.43	13.42		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	13.69	13.66	13.53	14.3	0
10	QPSK	1	25	13.45	13.35	13.41		
10	QPSK	1	49	13.48	13.47	13.40		
10	QPSK	25	0	13.85	13.74	13.79	14.3	0
10	QPSK	25	12	13.83	13.63	13.69		

10	QPSK	25	25	13.80	13.63	13.80		
10	QPSK	50	0	13.75	13.56	13.65		
10	16QAM	1	0	14.07	13.92	13.90	14.3	0
10	16QAM	1	25	13.86	13.70	13.74		
10	16QAM	1	49	13.90	13.72	13.66		
10	16QAM	25	0	13.82	13.61	13.68	14.3	0
10	16QAM	25	12	13.78	13.47	13.61		
10	16QAM	25	25	13.76	13.52	13.52		
10	16QAM	50	0	13.69	13.62	13.55		
10	64QAM	1	0	13.85	13.70	13.60	14.3	0
10	64QAM	1	25	13.74	13.59	13.57		
10	64QAM	1	49	13.70	13.54	13.42		
10	64QAM	25	0	13.49	13.59	13.46	14.3	0
10	64QAM	25	12	13.50	13.38	13.40		
10	64QAM	25	25	13.54	13.47	13.38		
10	64QAM	50	0	13.59	13.45	13.38		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	13.67	13.56	13.56	14.3	0
5	QPSK	1	12	13.45	13.35	13.46		
5	QPSK	1	24	13.49	13.42	13.37		
5	QPSK	12	0	13.88	13.74	13.79	14.3	0
5	QPSK	12	7	13.77	13.69	13.71		
5	QPSK	12	13	13.82	13.61	13.81		
5	QPSK	25	0	13.73	13.54	13.57		
5	16QAM	1	0	14.08	13.84	13.90	14.3	0
5	16QAM	1	12	13.93	13.68	13.79		
5	16QAM	1	24	13.89	13.63	13.68		
5	16QAM	12	0	13.82	13.54	13.71	14.3	0
5	16QAM	12	7	13.73	13.43	13.66		
5	16QAM	12	13	13.68	13.48	13.44		
5	16QAM	25	0	13.70	13.60	13.52		
5	64QAM	1	0	13.80	13.75	13.56	14.3	0
5	64QAM	1	12	13.74	13.66	13.56		
5	64QAM	1	24	13.66	13.62	13.43		
5	64QAM	12	0	13.43	13.60	13.41	14.3	0
5	64QAM	12	7	13.54	13.39	13.39		
5	64QAM	12	13	13.54	13.45	13.37		
5	64QAM	25	0	13.52	13.43	13.38		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	13.67	13.56	13.54	14.3	0
3	QPSK	1	8	13.46	13.34	13.45		
3	QPSK	1	14	13.51	13.46	13.39		
3	QPSK	8	0	13.81	13.72	13.83	14.3	0
3	QPSK	8	4	13.76	13.68	13.77		
3	QPSK	8	7	13.85	13.68	13.78		
3	QPSK	15	0	13.74	13.55	13.67		
3	16QAM	1	0	14.08	13.87	13.85	14.3	0
3	16QAM	1	8	13.93	13.60	13.82		
3	16QAM	1	14	13.89	13.65	13.74		
3	16QAM	8	0	13.83	13.54	13.70	14.3	0
3	16QAM	8	4	13.75	13.44	13.58		
3	16QAM	8	7	13.75	13.48	13.52		
3	16QAM	15	0	13.76	13.65	13.52		
3	64QAM	1	0	13.84	13.68	13.56	14.3	0

3	64QAM	1	8	13.74	13.62	13.59		
3	64QAM	1	14	13.69	13.53	13.48		
3	64QAM	8	0	13.52	13.61	13.42	14.3	0
3	64QAM	8	4	13.55	13.38	13.38		
3	64QAM	8	7	13.48	13.40	13.40		
3	64QAM	15	0	13.58	13.37	13.37		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	13.67	13.59	13.52	14.3	0
1.4	QPSK	1	3	13.37	13.35	13.47		
1.4	QPSK	1	5	13.45	13.43	13.37		
1.4	QPSK	3	0	13.80	13.70	13.78		
1.4	QPSK	3	1	13.75	13.71	13.69		
1.4	QPSK	3	3	13.86	13.66	13.80		
1.4	QPSK	6	0	13.75	13.60	13.57	14.3	0
1.4	16QAM	1	0	14.04	13.89	13.92	14.3	0
1.4	16QAM	1	3	13.87	13.66	13.73		
1.4	16QAM	1	5	13.93	13.69	13.74		
1.4	16QAM	3	0	13.82	13.56	13.73		
1.4	16QAM	3	1	13.75	13.46	13.65		
1.4	16QAM	3	3	13.75	13.51	13.54		
1.4	16QAM	6	0	13.76	13.59	13.54	14.3	0
1.4	64QAM	1	0	13.78	13.75	13.58	14.3	0
1.4	64QAM	1	3	13.70	13.66	13.55		
1.4	64QAM	1	5	13.63	13.54	13.42		
1.4	64QAM	3	0	13.46	13.67	13.43		
1.4	64QAM	3	1	13.57	13.40	13.46		
1.4	64QAM	3	3	13.46	13.47	13.40		
1.4	64QAM	6	0	13.55	13.44	13.35	14.3	0

<LTE Band 66 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	15.33	15.26	15.08	16.5	0
20	QPSK	1	49	15.29	15.26	15.03		
20	QPSK	1	99	15.26	15.24	15.03		
20	QPSK	50	0	15.28	15.24	15.06	16.5	0
20	QPSK	50	24	15.27	15.23	14.99		
20	QPSK	50	50	15.23	15.21	15.03		
20	QPSK	100	0	15.27	15.23	15.02		
20	16QAM	1	0	15.24	15.25	15.01	16.5	0
20	16QAM	1	49	15.23	15.26	15.06		
20	16QAM	1	99	15.15	15.25	15.08		
20	16QAM	50	0	15.25	15.20	15.03	16.5	0
20	16QAM	50	24	15.30	15.26	15.08		
20	16QAM	50	50	15.26	15.25	15.06		
20	16QAM	100	0	15.31	15.17	15.08		
20	64QAM	1	0	15.25	15.20	15.00	16.5	0
20	64QAM	1	49	15.23	15.21	15.00		
20	64QAM	1	99	15.23	15.20	15.05		
20	64QAM	50	0	15.28	15.23	15.04	16.5	0
20	64QAM	50	24	15.32	15.23	15.04		
20	64QAM	50	50	15.26	15.19	15.01		
20	64QAM	100	0	15.26	15.25	15.05		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	15.26	15.21	14.99	16.5	0
15	QPSK	1	37	15.28	15.21	14.96		
15	QPSK	1	74	15.20	15.22	14.97		
15	QPSK	36	0	15.28	15.18	14.97	16.5	0
15	QPSK	36	20	15.20	15.22	14.95		
15	QPSK	36	39	15.23	15.17	15.03		
15	QPSK	75	0	15.22	15.18	14.94		
15	16QAM	1	0	15.24	15.25	14.98	16.5	0
15	16QAM	1	37	15.23	15.24	15.04		
15	16QAM	1	74	15.07	15.24	15.04		
15	16QAM	36	0	15.22	15.19	14.99	16.5	0
15	16QAM	36	20	15.24	15.23	15.04		
15	16QAM	36	39	15.19	15.20	14.99		
15	16QAM	75	0	15.29	15.15	14.98		
15	64QAM	1	0	15.25	15.18	14.90	16.5	0
15	64QAM	1	37	15.16	15.14	14.95		
15	64QAM	1	74	15.16	15.15	15.03		
15	64QAM	36	0	15.28	15.18	15.02	16.5	0
15	64QAM	36	20	15.32	15.16	15.04		
15	64QAM	36	39	15.22	15.09	14.95		
15	64QAM	75	0	15.22	15.20	14.98		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	15.25	15.17	15.07	16.5	0
10	QPSK	1	25	15.28	15.24	14.96		
10	QPSK	1	49	15.18	15.15	14.97		
10	QPSK	25	0	15.27	15.23	14.97	16.5	0
10	QPSK	25	12	15.19	15.18	14.99		

10	QPSK	25	25	15.18	15.12	15.02		
10	QPSK	50	0	15.17	15.20	14.93		
10	16QAM	1	0	15.18	15.21	14.91	16.5	0
10	16QAM	1	25	15.23	15.23	15.01		
10	16QAM	1	49	15.06	15.25	15.06		
10	16QAM	25	0	15.20	15.12	15.02	16.5	0
10	16QAM	25	12	15.22	15.17	15.02		
10	16QAM	25	25	15.24	15.18	14.96		
10	16QAM	50	0	15.22	15.10	15.04		
10	64QAM	1	0	15.21	15.20	14.90	16.5	0
10	64QAM	1	25	15.16	15.19	14.92		
10	64QAM	1	49	15.21	15.14	15.02		
10	64QAM	25	0	15.21	15.15	15.01	16.5	0
10	64QAM	25	12	15.29	15.13	14.97		
10	64QAM	25	25	15.19	15.17	14.94		
10	64QAM	50	0	15.26	15.20	14.96		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	15.26	15.21	15.01	16.5	0
5	QPSK	1	12	15.25	15.23	15.03		
5	QPSK	1	24	15.25	15.18	14.99		
5	QPSK	12	0	15.21	15.20	15.06	16.5	0
5	QPSK	12	7	15.27	15.14	14.94		
5	QPSK	12	13	15.16	15.12	14.98		
5	QPSK	25	0	15.20	15.20	14.95		
5	16QAM	1	0	15.22	15.22	14.95	16.5	0
5	16QAM	1	12	15.16	15.25	14.99		
5	16QAM	1	24	15.05	15.16	15.06		
5	16QAM	12	0	15.18	15.10	15.00	16.5	0
5	16QAM	12	7	15.28	15.23	15.02		
5	16QAM	12	13	15.22	15.22	15.01		
5	16QAM	25	0	15.26	15.09	14.98		
5	64QAM	1	0	15.15	15.17	14.94	16.5	0
5	64QAM	1	12	15.16	15.20	14.91		
5	64QAM	1	24	15.19	15.15	14.98		
5	64QAM	12	0	15.28	15.14	15.01	16.5	0
5	64QAM	12	7	15.27	15.16	14.97		
5	64QAM	12	13	15.24	15.09	14.92		
5	64QAM	25	0	15.17	15.20	15.03		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	15.26	15.23	15.02	16.5	0
3	QPSK	1	8	15.20	15.24	14.95		
3	QPSK	1	14	15.23	15.19	15.03		
3	QPSK	8	0	15.18	15.16	14.99	16.5	0
3	QPSK	8	4	15.19	15.16	14.95		
3	QPSK	8	7	15.15	15.21	14.95		
3	QPSK	15	0	15.20	15.13	14.95		
3	16QAM	1	0	15.20	15.23	14.99	16.5	0
3	16QAM	1	8	15.22	15.25	14.96		
3	16QAM	1	14	15.11	15.24	15.01		
3	16QAM	8	0	15.19	15.14	14.94	16.5	0
3	16QAM	8	4	15.24	15.21	14.98		
3	16QAM	8	7	15.19	15.22	15.06		
3	16QAM	15	0	15.21	15.12	15.01		
3	64QAM	1	0	15.19	15.16	14.97	16.5	0

3	64QAM	1	8	15.23	15.12	14.95		
3	64QAM	1	14	15.21	15.11	15.03		
3	64QAM	8	0	15.23	15.15	15.03	16.5	0
3	64QAM	8	4	15.27	15.20	14.95		
3	64QAM	8	7	15.16	15.19	14.91		
3	64QAM	15	0	15.22	15.16	14.95		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	15.28	15.25	14.98	16.5	0
1.4	QPSK	1	3	15.20	15.22	14.99		
1.4	QPSK	1	5	15.20	15.14	14.94		
1.4	QPSK	3	0	15.23	15.20	14.96		
1.4	QPSK	3	1	15.26	15.23	14.90		
1.4	QPSK	3	3	15.21	15.20	14.94		
1.4	QPSK	6	0	15.22	15.19	15.02	16.5	0
1.4	16QAM	1	0	15.17	15.19	14.95	16.5	0
1.4	16QAM	1	3	15.21	15.26	14.96		
1.4	16QAM	1	5	15.09	15.22	14.98		
1.4	16QAM	3	0	15.24	15.11	14.93		
1.4	16QAM	3	1	15.22	15.22	15.05		
1.4	16QAM	3	3	15.16	15.19	14.99		
1.4	16QAM	6	0	15.28	15.08	15.06	16.5	0
1.4	64QAM	1	0	15.15	15.13	15.00	16.5	0
1.4	64QAM	1	3	15.20	15.17	14.90		
1.4	64QAM	1	5	15.16	15.18	15.00		
1.4	64QAM	3	0	15.23	15.17	15.02		
1.4	64QAM	3	1	15.22	15.15	15.04		
1.4	64QAM	3	3	15.23	15.15	14.97		
1.4	64QAM	6	0	15.21	15.20	15.00	16.5	0

<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)	MPR (dB)
Channel				133222	133322	133372		
Frequency (MHz)				673	683	688		
20	QPSK	1	0	17.86	17.79	17.63	18.5	0
20	QPSK	1	49	17.84	17.73	17.58		
20	QPSK	1	99	17.81	17.69	17.56		
20	QPSK	50	0	18.14	18.05	18.05	18.5	0
20	QPSK	50	24	18.10	18.02	17.97		
20	QPSK	50	50	18.10	18.00	17.92		
20	QPSK	100	0	18.15	18.02	17.98		
20	16QAM	1	0	18.15	18.20	18.09	18.5	0
20	16QAM	1	49	18.22	18.18	18.07		
20	16QAM	1	99	18.23	18.17	18.06		
20	16QAM	50	0	18.10	18.07	18.01	18.5	0
20	16QAM	50	24	18.14	18.05	18.00		
20	16QAM	50	50	18.15	18.04	17.97		
20	16QAM	100	0	18.16	18.05	18.00		
20	64QAM	1	0	18.13	17.99	17.92	18.5	0
20	64QAM	1	49	18.16	18.05	17.95		
20	64QAM	1	99	18.17	18.04	17.94		
20	64QAM	50	0	18.14	18.06	18.01	18.5	0
20	64QAM	50	24	18.22	18.08	18.02		
20	64QAM	50	50	18.23	18.05	17.99		
20	64QAM	100	0	18.22	18.06	18.00		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	17.79	17.76	17.61	18.5	0
15	QPSK	1	37	17.78	17.65	17.55		
15	QPSK	1	74	17.77	17.60	17.55		
15	QPSK	36	0	18.09	18.05	18.04	18.5	0
15	QPSK	36	20	18.10	17.94	17.89		
15	QPSK	36	39	18.00	17.96	17.83		
15	QPSK	75	0	18.10	17.92	17.91		
15	16QAM	1	0	18.08	18.13	18.07	18.5	0
15	16QAM	1	37	18.21	18.16	18.06		
15	16QAM	1	74	18.14	18.14	18.02		
15	16QAM	36	0	18.04	17.97	17.97	18.5	0
15	16QAM	36	20	18.12	18.05	17.99		
15	16QAM	36	39	18.06	17.96	17.87		
15	16QAM	75	0	18.11	18.02	17.92		
15	64QAM	1	0	18.03	17.99	17.84	18.5	0
15	64QAM	1	37	18.09	18.04	17.94		
15	64QAM	1	74	18.08	18.02	17.88		
15	64QAM	36	0	18.08	18.01	17.98	18.5	0
15	64QAM	36	20	18.13	18.07	17.92		
15	64QAM	36	39	18.23	17.98	17.93		
15	64QAM	75	0	18.12	18.02	17.94		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	17.78	17.77	17.56	18.5	0
10	QPSK	1	25	17.81	17.64	17.55		
10	QPSK	1	49	17.73	17.60	17.49		
10	QPSK	25	0	18.05	18.02	17.98	18.5	0
10	QPSK	25	12	18.02	18.01	17.87		

10	QPSK	25	25	18.00	17.98	17.88		
10	QPSK	50	0	18.12	17.99	17.98		
10	16QAM	1	0	18.10	18.17	17.99	18.5	0
10	16QAM	1	25	18.13	18.16	18.00		
10	16QAM	1	49	18.16	18.14	18.06		
10	16QAM	25	0	18.00	18.07	17.99	18.5	0
10	16QAM	25	12	18.09	17.96	17.90		
10	16QAM	25	25	18.06	18.03	17.97		
10	16QAM	50	0	18.11	17.99	17.94		
10	64QAM	1	0	18.05	17.92	17.83	18.5	0
10	64QAM	1	25	18.10	18.05	17.87		
10	64QAM	1	49	18.13	18.01	17.86		
10	64QAM	25	0	18.07	17.98	17.97	18.5	0
10	64QAM	25	12	18.22	18.01	18.00		
10	64QAM	25	25	18.17	18.05	17.93		
10	64QAM	50	0	18.19	18.03	17.95		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	17.81	17.76	17.55	18.5	0
5	QPSK	1	12	17.74	17.71	17.49		
5	QPSK	1	24	17.77	17.66	17.56		
5	QPSK	12	0	18.08	17.96	17.99	18.5	0
5	QPSK	12	7	18.08	17.99	17.91		
5	QPSK	12	13	18.09	17.97	17.84		
5	QPSK	25	0	18.09	18.01	17.94		
5	16QAM	1	0	18.09	18.10	18.04	18.5	0
5	16QAM	1	12	18.19	18.18	18.07		
5	16QAM	1	24	18.13	18.17	18.06		
5	16QAM	12	0	18.09	18.06	17.95	18.5	0
5	16QAM	12	7	18.07	18.04	17.95		
5	16QAM	12	13	18.12	17.97	17.97		
5	16QAM	25	0	18.14	17.97	17.95		
5	64QAM	1	0	18.04	17.95	17.91	18.5	0
5	64QAM	1	12	18.10	17.98	17.86		
5	64QAM	1	24	18.17	17.96	17.91		
5	64QAM	12	0	18.13	18.01	17.96	18.5	0
5	64QAM	12	7	18.14	17.99	17.92		
5	64QAM	12	13	18.14	18.05	17.92		
5	64QAM	25	0	18.15	18.00	17.92		

<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.

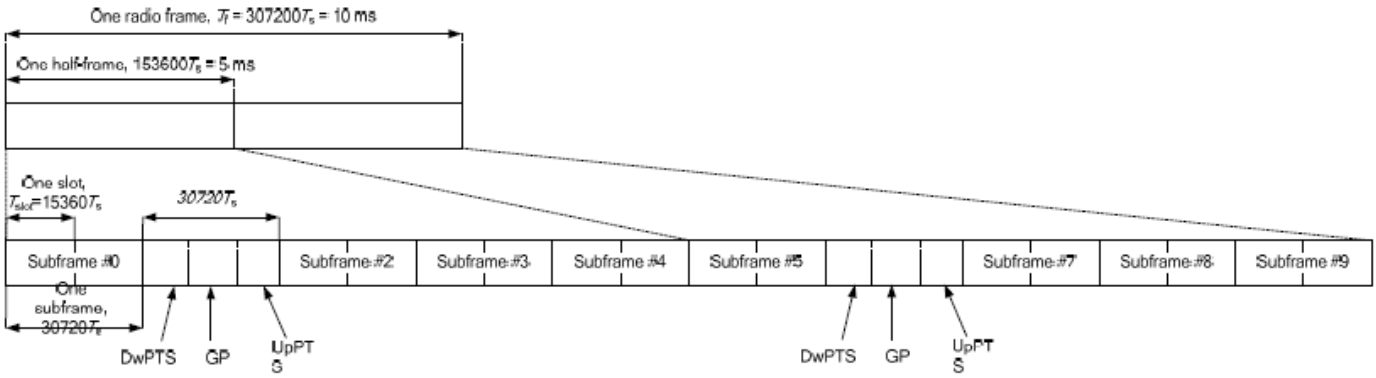


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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.

Notebook Power Mode

<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	18.27	18.21	18.16	18.6	0
20	QPSK	1	49	18.26	18.20	18.13		
20	QPSK	1	99	18.17	18.18	18.14		
20	QPSK	50	0	18.14	18.12	17.98	18.6	0
20	QPSK	50	24	18.10	18.10	17.95		
20	QPSK	50	50	18.06	18.09	17.99		
20	QPSK	100	0	18.26	18.20	18.14		
20	16QAM	1	0	18.22	18.24	18.14	18.6	0
20	16QAM	1	49	18.18	18.23	18.08		
20	16QAM	1	99	18.24	18.22	18.09		
20	16QAM	50	0	18.21	18.25	18.21	18.6	0
20	16QAM	50	24	18.21	18.24	18.17		
20	16QAM	50	50	18.20	18.22	18.15		
20	16QAM	100	0	18.18	18.22	18.16		
20	64QAM	1	0	17.94	17.88	17.84	18.6	0
20	64QAM	1	49	17.93	17.95	17.85		
20	64QAM	1	99	17.97	17.98	17.88		
20	64QAM	50	0	18.23	18.23	18.19	18.6	0
20	64QAM	50	24	18.22	18.25	18.19		
20	64QAM	50	50	18.21	18.23	18.16		
20	64QAM	100	0	18.19	18.23	18.17		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	18.26	18.13	18.09	18.6	0
15	QPSK	1	37	18.26	18.10	18.05		
15	QPSK	1	74	18.15	18.10	18.09		
15	QPSK	36	0	18.10	18.11	17.91	18.6	0
15	QPSK	36	20	18.05	18.01	17.85		
15	QPSK	36	39	18.06	18.04	17.96		
15	QPSK	75	0	18.19	18.15	18.06		
15	16QAM	1	0	18.20	18.17	18.04	18.6	0
15	16QAM	1	37	18.11	18.19	18.03		
15	16QAM	1	74	18.22	18.18	18.07		
15	16QAM	36	0	18.12	18.25	18.16	18.6	0
15	16QAM	36	20	18.12	18.15	18.17		
15	16QAM	36	39	18.18	18.16	18.07		
15	16QAM	75	0	18.14	18.13	18.10		
15	64QAM	1	0	17.93	17.83	17.76	18.6	0
15	64QAM	1	37	17.90	17.89	17.81		
15	64QAM	1	74	17.96	17.95	17.80		
15	64QAM	36	0	18.22	18.17	18.13	18.6	0
15	64QAM	36	20	18.22	18.25	18.16		
15	64QAM	36	39	18.11	18.17	18.14		
15	64QAM	75	0	18.15	18.22	18.11		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	18.26	18.20	18.13	18.6	0
10	QPSK	1	25	18.20	18.13	18.03		
10	QPSK	1	49	18.17	18.15	18.07		
10	QPSK	25	0	18.09	18.11	17.93	18.6	0

10	QPSK	25	12	18.03	18.04	17.95		
10	QPSK	25	25	18.04	17.99	17.90		
10	QPSK	50	0	18.17	18.14	18.13		
10	16QAM	1	0	18.12	18.15	18.04	18.6	0
10	16QAM	1	25	18.08	18.19	17.99		
10	16QAM	1	49	18.21	18.20	18.06		
10	16QAM	25	0	18.19	18.15	18.14	18.6	0
10	16QAM	25	12	18.16	18.22	18.11		
10	16QAM	25	25	18.14	18.20	18.15		
10	16QAM	50	0	18.18	18.22	18.10		
10	64QAM	1	0	17.93	17.80	17.77	18.6	0
10	64QAM	1	25	17.90	17.89	17.79		
10	64QAM	1	49	17.90	17.97	17.87		
10	64QAM	25	0	18.20	18.16	18.13	18.6	0
10	64QAM	25	12	18.15	18.24	18.14		
10	64QAM	25	25	18.14	18.15	18.06		
10	64QAM	50	0	18.11	18.16	18.10		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	18.26	18.21	18.13	18.6	0
5	QPSK	1	12	18.25	18.19	18.09		
5	QPSK	1	24	18.13	18.09	18.06		
5	QPSK	12	0	18.11	18.08	17.95	18.6	0
5	QPSK	12	7	18.02	18.04	17.95		
5	QPSK	12	13	18.02	18.01	17.93		
5	QPSK	25	0	18.24	18.20	18.08		
5	16QAM	1	0	18.12	18.16	18.09	18.6	0
5	16QAM	1	12	18.08	18.21	18.01		
5	16QAM	1	24	18.20	18.17	18.06		
5	16QAM	12	0	18.18	18.17	18.13	18.6	0
5	16QAM	12	7	18.12	18.22	18.11		
5	16QAM	12	13	18.10	18.13	18.12		
5	16QAM	25	0	18.10	18.13	18.10		
5	64QAM	1	0	17.84	17.81	17.74	18.6	0
5	64QAM	1	12	17.91	17.92	17.84		
5	64QAM	1	24	17.94	17.98	17.87		
5	64QAM	12	0	18.20	18.22	18.14	18.6	0
5	64QAM	12	7	18.18	18.23	18.15		
5	64QAM	12	13	18.16	18.13	18.16		
5	64QAM	25	0	18.18	18.21	18.15		

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	18.27	18.27	18.19	17.94	17.98	18.6	0
20	QPSK	1	49	18.26	18.26	18.18	17.92	17.95		
20	QPSK	1	99	18.26	18.24	18.16	17.92	17.90		
20	QPSK	50	0	18.09	18.08	18.08	17.86	17.87	18.6	0
20	QPSK	50	24	18.07	18.06	18.03	17.84	17.85		
20	QPSK	50	50	18.07	18.06	18.02	17.80	17.86		
20	QPSK	100	0	18.25	18.25	18.20	17.94	17.97		
20	16QAM	1	0	18.17	18.19	18.13	17.93	18.00	18.6	0
20	16QAM	1	49	18.22	18.15	18.07	17.85	17.96		
20	16QAM	1	99	18.18	18.18	18.11	17.89	18.00		
20	16QAM	50	0	18.22	18.19	18.24	17.95	17.95	18.6	0
20	16QAM	50	24	18.20	18.22	18.22	17.93	18.01		
20	16QAM	50	50	18.19	18.22	18.23	17.92	18.00		
20	16QAM	100	0	18.21	18.19	18.21	17.91	18.01		
20	64QAM	1	0	17.88	17.92	17.80	17.61	17.60	18.6	0
20	64QAM	1	49	17.96	17.85	17.81	17.62	17.65		
20	64QAM	1	99	18.11	17.89	17.90	17.61	17.73		
20	64QAM	50	0	18.19	18.18	18.20	17.94	17.89	18.6	0
20	64QAM	50	24	18.19	18.19	18.21	17.96	17.97		
20	64QAM	50	50	18.17	18.18	18.20	17.94	17.96		
20	64QAM	100	0	18.17	18.17	18.21	17.93	17.96		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	18.26	18.22	18.10	17.92	17.89	18.6	0
15	QPSK	1	37	18.19	18.17	18.15	17.82	17.92		
15	QPSK	1	74	18.24	18.20	18.06	17.90	17.89		
15	QPSK	36	0	18.09	18.08	18.01	17.82	17.82	18.6	0
15	QPSK	36	20	18.04	18.02	17.97	17.83	17.79		
15	QPSK	36	39	17.97	18.04	17.98	17.74	17.80		
15	QPSK	75	0	18.25	18.23	18.11	17.86	17.96		
15	16QAM	1	0	18.16	18.18	18.07	17.91	17.90	18.6	0
15	16QAM	1	37	18.16	18.05	18.02	17.75	17.88		
15	16QAM	1	74	18.08	18.08	18.01	17.85	17.92		
15	16QAM	36	0	18.19	18.17	18.15	17.92	17.94	18.6	0
15	16QAM	36	20	18.17	18.20	18.14	17.88	17.99		
15	16QAM	36	39	18.12	18.13	18.19	17.92	17.90		
15	16QAM	75	0	18.19	18.12	18.12	17.89	17.97		
15	64QAM	1	0	17.83	17.82	17.72	17.54	17.53	18.6	0
15	64QAM	1	37	17.87	17.78	17.76	17.57	17.65		
15	64QAM	1	74	18.10	17.86	17.83	17.59	17.69		
15	64QAM	36	0	18.16	18.15	18.14	17.88	17.82	18.6	0
15	64QAM	36	20	18.18	18.11	18.11	17.92	17.95		
15	64QAM	36	39	18.09	18.09	18.11	17.88	17.86		
15	64QAM	75	0	18.15	18.14	18.13	17.89	17.92		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	18.22	18.18	18.19	17.86	17.98	18.6	0
10	QPSK	1	25	18.22	18.22	18.08	17.89	17.94		
10	QPSK	1	49	18.25	18.21	18.07	17.89	17.86		
10	QPSK	25	0	18.09	18.05	17.98	17.85	17.79	18.6	0
10	QPSK	25	12	18.06	17.98	17.96	17.74	17.83		

10	QPSK	25	25	17.98	18.04	18.02	17.79	17.84		
10	QPSK	50	0	18.17	18.23	18.16	17.87	17.93		
10	16QAM	1	0	18.15	18.19	18.06	17.85	17.92	18.6	0
10	16QAM	1	25	18.17	18.08	18.06	17.84	17.88		
10	16QAM	1	49	18.10	18.14	18.04	17.88	17.96		
10	16QAM	25	0	18.17	18.14	18.24	17.87	17.89	18.6	0
10	16QAM	25	12	18.12	18.17	18.20	17.85	17.97		
10	16QAM	25	25	18.14	18.19	18.17	17.91	17.98		
10	16QAM	50	0	18.14	18.13	18.16	17.83	17.97		
10	64QAM	1	0	17.78	17.84	17.75	17.58	17.51	18.6	0
10	64QAM	1	25	17.92	17.80	17.77	17.54	17.56		
10	64QAM	1	49	18.03	17.89	17.83	17.61	17.72		
10	64QAM	25	0	18.10	18.12	18.18	17.88	17.79	18.6	0
10	64QAM	25	12	18.18	18.12	18.18	17.86	17.88		
10	64QAM	25	25	18.10	18.16	18.11	17.85	17.87		
10	64QAM	50	0	18.17	18.09	18.19	17.92	17.92		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	18.23	18.18	18.19	17.93	17.91	18.6	0
5	QPSK	1	12	18.24	18.21	18.13	17.86	17.89		
5	QPSK	1	24	18.19	18.23	18.16	17.85	17.89		
5	QPSK	12	0	18.00	18.04	17.99	17.86	17.82	18.6	0
5	QPSK	12	7	18.06	17.98	17.93	17.76	17.80		
5	QPSK	12	13	17.98	17.97	17.94	17.75	17.77		
5	QPSK	25	0	18.21	18.18	18.13	17.87	17.87		
5	16QAM	1	0	18.08	18.09	18.12	17.86	17.91	18.6	0
5	16QAM	1	12	18.19	18.10	18.01	17.78	17.89		
5	16QAM	1	24	18.12	18.17	18.06	17.82	17.97		
5	16QAM	12	0	18.14	18.10	18.21	17.93	17.87	18.6	0
5	16QAM	12	7	18.14	18.16	18.12	17.88	17.95		
5	16QAM	12	13	18.10	18.17	18.23	17.87	17.99		
5	16QAM	25	0	18.17	18.14	18.15	17.83	18.00		
5	64QAM	1	0	17.88	17.82	17.71	17.57	17.57	18.6	0
5	64QAM	1	12	17.93	17.79	17.81	17.53	17.57		
5	64QAM	1	24	18.03	17.82	17.81	17.57	17.71		
5	64QAM	12	0	18.09	18.13	18.15	17.90	17.80	18.6	0
5	64QAM	12	7	18.19	18.18	18.11	17.96	17.96		
5	64QAM	12	13	18.13	18.13	18.14	17.94	17.87		
5	64QAM	25	0	18.12	18.12	18.13	17.88	17.96		

<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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	19.43	19.43	19.47	19.22	19.34	21.1	0
20	QPSK	1	49	19.37	19.42	19.31	19.06	19.11		
20	QPSK	1	99	19.38	19.39	19.39	19.13	19.19		
20	QPSK	50	0	19.66	19.66	19.68	19.34	19.31	21.1	0
20	QPSK	50	24	19.63	19.63	19.60	19.31	19.29		
20	QPSK	50	50	19.65	19.58	19.60	19.29	19.26		
20	QPSK	100	0	19.56	19.59	19.60	19.37	19.37		
20	16QAM	1	0	19.78	19.73	19.75	19.50	19.59	21.1	0
20	16QAM	1	49	19.76	19.78	19.67	19.49	19.55		
20	16QAM	1	99	19.83	19.74	19.72	19.51	19.59		
20	16QAM	50	0	19.68	19.68	19.64	19.38	19.31	21.1	0
20	16QAM	50	24	19.70	19.71	19.63	19.36	19.40		
20	16QAM	50	50	19.68	19.71	19.64	19.37	19.39		
20	16QAM	100	0	19.69	19.71	19.62	19.37	19.40		
20	64QAM	1	0	19.66	19.60	19.55	19.25	19.27	21.1	0
20	64QAM	1	49	19.65	19.56	19.52	19.34	19.33		
20	64QAM	1	99	19.78	19.57	19.62	19.22	19.37		
20	64QAM	50	0	19.70	19.67	19.64	19.36	19.36	21	0.1
20	64QAM	50	24	19.70	19.72	19.65	19.39	19.41		
20	64QAM	50	50	19.70	19.70	19.64	19.39	19.41		
20	64QAM	100	0	19.71	19.70	19.66	19.36	19.42		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	19.37	19.33	19.45	19.22	19.25	21.1	0
15	QPSK	1	37	19.29	19.34	19.29	19.06	19.02		
15	QPSK	1	74	19.32	19.35	19.32	19.04	19.18		
15	QPSK	36	0	19.58	19.57	19.60	19.26	19.28	21.1	0
15	QPSK	36	20	19.61	19.59	19.50	19.23	19.23		
15	QPSK	36	39	19.63	19.57	19.56	19.26	19.24		
15	QPSK	75	0	19.55	19.58	19.54	19.37	19.32		
15	16QAM	1	0	19.76	19.65	19.68	19.42	19.58	21.1	0
15	16QAM	1	37	19.67	19.72	19.64	19.39	19.49		
15	16QAM	1	74	19.80	19.68	19.70	19.43	19.57		
15	16QAM	36	0	19.64	19.68	19.56	19.32	19.28	21.1	0
15	16QAM	36	20	19.67	19.62	19.59	19.36	19.32		
15	16QAM	36	39	19.65	19.66	19.59	19.28	19.32		
15	16QAM	75	0	19.60	19.63	19.62	19.32	19.31		
15	64QAM	1	0	19.56	19.50	19.47	19.20	19.23	21.1	0
15	64QAM	1	37	19.62	19.51	19.42	19.33	19.33		
15	64QAM	1	74	19.69	19.47	19.60	19.17	19.30		
15	64QAM	36	0	19.63	19.64	19.54	19.28	19.31	21	0.1
15	64QAM	36	20	19.67	19.69	19.56	19.37	19.31		
15	64QAM	36	39	19.68	19.70	19.58	19.35	19.36		
15	64QAM	75	0	19.62	19.64	19.56	19.30	19.33		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	19.42	19.35	19.38	19.21	19.29	21.1	0
10	QPSK	1	25	19.35	19.38	19.28	18.96	19.02		
10	QPSK	1	49	19.37	19.37	19.39	19.13	19.11		
10	QPSK	25	0	19.62	19.63	19.62	19.27	19.27	21.1	0
10	QPSK	25	12	19.62	19.56	19.60	19.25	19.23		

10	QPSK	25	25	19.55	19.57	19.60	19.24	19.20		
10	QPSK	50	0	19.55	19.54	19.58	19.35	19.29		
10	16QAM	1	0	19.69	19.68	19.68	19.50	19.59	21.1	0
10	16QAM	1	25	19.75	19.73	19.60	19.41	19.45		
10	16QAM	1	49	19.80	19.70	19.68	19.50	19.59		
10	16QAM	25	0	19.63	19.63	19.55	19.37	19.26	21.1	0
10	16QAM	25	12	19.67	19.61	19.62	19.34	19.31		
10	16QAM	25	25	19.59	19.61	19.62	19.36	19.37		
10	16QAM	50	0	19.68	19.62	19.60	19.27	19.37		
10	64QAM	1	0	19.59	19.50	19.50	19.23	19.21	21.1	0
10	64QAM	1	25	19.63	19.54	19.47	19.25	19.27		
10	64QAM	1	49	19.74	19.56	19.56	19.19	19.34		
10	64QAM	25	0	19.64	19.64	19.60	19.28	19.32	21	0.1
10	64QAM	25	12	19.62	19.64	19.64	19.32	19.31		
10	64QAM	25	25	19.69	19.69	19.56	19.33	19.37		
10	64QAM	50	0	19.63	19.68	19.58	19.32	19.40		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	19.35	19.40	19.40	19.14	19.30	21.1	0
5	QPSK	1	12	19.31	19.32	19.21	19.00	19.03		
5	QPSK	1	24	19.37	19.35	19.34	19.06	19.13		
5	QPSK	12	0	19.59	19.64	19.68	19.32	19.22	21.1	0
5	QPSK	12	7	19.56	19.55	19.53	19.24	19.26		
5	QPSK	12	13	19.64	19.50	19.54	19.23	19.25		
5	QPSK	25	0	19.51	19.54	19.53	19.37	19.35		
5	16QAM	1	0	19.71	19.64	19.71	19.42	19.56	21.1	0
5	16QAM	1	12	19.70	19.72	19.57	19.41	19.47		
5	16QAM	1	24	19.80	19.65	19.69	19.51	19.56		
5	16QAM	12	0	19.61	19.65	19.54	19.31	19.29	21.1	0
5	16QAM	12	7	19.69	19.62	19.55	19.35	19.37		
5	16QAM	12	13	19.66	19.67	19.60	19.32	19.37		
5	16QAM	25	0	19.60	19.61	19.58	19.37	19.38		
5	64QAM	1	0	19.62	19.51	19.52	19.19	19.20	21.1	0
5	64QAM	1	12	19.59	19.54	19.49	19.29	19.25		
5	64QAM	1	24	19.70	19.56	19.56	19.21	19.28		
5	64QAM	12	0	19.61	19.65	19.58	19.29	19.26	21	0.1
5	64QAM	12	7	19.64	19.71	19.58	19.36	19.33		
5	64QAM	12	13	19.62	19.68	19.59	19.38	19.33		
5	64QAM	25	0	19.70	19.63	19.57	19.33	19.40		

<LTE Band 42 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				43190	43340	43490		
Frequency (MHz)				3560	3575	3590		
20	QPSK	1	0	22.38	22.38	22.64	24	0
20	QPSK	1	49	22.38	22.32	22.47		
20	QPSK	1	99	22.26	22.28	22.40		
20	QPSK	50	0	21.57	21.50	21.58	23	1
20	QPSK	50	24	21.41	21.39	21.56		
20	QPSK	50	50	21.33	21.32	21.56		
20	QPSK	100	0	21.47	21.49	21.55		
20	16QAM	1	0	21.46	21.42	21.51	23	1
20	16QAM	1	49	21.41	21.31	21.57		
20	16QAM	1	99	21.40	21.44	21.60		
20	16QAM	50	0	20.47	20.46	20.59	22	2
20	16QAM	50	24	20.51	20.46	20.60		
20	16QAM	50	50	20.38	20.42	20.64		
20	16QAM	100	0	20.51	20.53	20.54		
20	64QAM	1	0	20.31	20.24	20.29	22	2
20	64QAM	1	49	20.17	20.17	20.33		
20	64QAM	1	99	20.11	20.13	20.24		
20	64QAM	50	0	19.59	19.51	19.57	21	3
20	64QAM	50	24	19.46	19.46	19.56		
20	64QAM	50	50	19.37	19.40	19.60		
20	64QAM	100	0	19.45	19.41	19.61		
Channel				43165	43340	43515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3575	3592.5		
15	QPSK	1	0	22.50	22.25	22.49	24	0
15	QPSK	1	37	22.44	22.45	22.62		
15	QPSK	1	74	22.25	22.35	22.41		
15	QPSK	36	0	21.58	21.43	21.57	23	1
15	QPSK	36	20	21.51	21.45	21.54		
15	QPSK	36	39	21.43	21.36	21.64		
15	QPSK	75	0	21.44	21.48	21.59		
15	16QAM	1	0	21.58	21.48	21.60	23	1
15	16QAM	1	37	21.35	21.21	21.38		
15	16QAM	1	74	21.47	21.41	21.65		
15	16QAM	36	0	20.46	20.35	20.53	22	2
15	16QAM	36	20	20.46	20.39	20.57		
15	16QAM	36	39	20.32	20.43	20.55		
15	16QAM	75	0	20.53	20.50	20.56		
15	64QAM	1	0	20.32	20.24	20.32	22	2
15	64QAM	1	37	20.20	20.13	20.33		
15	64QAM	1	74	20.12	20.23	20.35		
15	64QAM	36	0	19.57	19.47	19.60	21	3
15	64QAM	36	20	19.52	19.52	19.63		
15	64QAM	36	39	19.42	19.47	19.62		
15	64QAM	75	0	19.51	19.41	19.63		
Channel				43140	43340	43540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3575	3595		
10	QPSK	1	0	22.42	22.23	22.33	24	0
10	QPSK	1	25	22.32	22.41	22.47		
10	QPSK	1	49	22.12	22.15	22.27		
10	QPSK	25	0	21.39	21.27	21.56	23	1
10	QPSK	25	12	21.40	21.35	21.48		

10	QPSK	25	25	21.25	21.28	21.50		
10	QPSK	50	0	21.33	21.39	21.57		
10	16QAM	1	0	21.49	21.46	21.47	23	1
10	16QAM	1	25	21.33	21.10	21.30		
10	16QAM	1	49	21.39	21.35	21.63		
10	16QAM	25	0	20.36	20.26	20.36	22	2
10	16QAM	25	12	20.26	20.35	20.37		
10	16QAM	25	25	20.27	20.36	20.39		
10	16QAM	50	0	20.51	20.36	20.54		
10	64QAM	1	0	20.25	20.13	20.32	22	2
10	64QAM	1	25	20.01	20.08	20.29		
10	64QAM	1	49	20.02	20.22	20.22		
10	64QAM	25	0	19.54	19.42	19.54	21	3
10	64QAM	25	12	19.36	19.49	19.53		
10	64QAM	25	25	19.28	19.44	19.42		
10	64QAM	50	0	19.44	19.30	19.48		
Channel				43115	43340	43565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3575	3597.5		
5	QPSK	1	0	22.28	22.14	22.35	24	0
5	QPSK	1	12	22.31	22.14	22.46		
5	QPSK	1	24	22.14	22.14	22.38		
5	QPSK	12	0	21.30	21.30	21.41	23	1
5	QPSK	12	7	21.31	21.30	21.48		
5	QPSK	12	13	21.27	21.23	21.46		
5	QPSK	25	0	21.30	21.27	21.44		
5	16QAM	1	0	21.45	21.42	21.47	23	1
5	16QAM	1	12	21.51	21.51	21.54		
5	16QAM	1	24	21.19	21.35	21.59		
5	16QAM	12	0	20.25	20.25	20.46	22	2
5	16QAM	12	7	20.32	20.24	20.48		
5	16QAM	12	13	20.24	20.24	20.46		
5	16QAM	25	0	20.32	20.32	20.49		
5	64QAM	1	0	20.05	20.10	20.26	22	2
5	64QAM	1	12	20.10	20.15	20.23		
5	64QAM	1	24	20.09	20.10	20.29		
5	64QAM	12	0	19.39	19.34	19.50	21	3
5	64QAM	12	7	19.37	19.27	19.54		
5	64QAM	12	13	19.35	19.31	19.52		
5	64QAM	25	0	19.36	19.36	19.54		

<LTE Band 48 Aux>

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)	MPR (dB)
Channel				55340	55830	56150	56640		
Frequency (MHz)				3560	3609	3641	3690		
20	QPSK	1	0	20.54	20.76	20.37	20.50	22	0
20	QPSK	1	49	20.40	20.69	20.27	20.48		
20	QPSK	1	99	20.50	20.75	20.50	20.65		
20	QPSK	50	0	19.65	19.87	19.45	19.62	21	1
20	QPSK	50	24	19.66	19.78	19.52	19.57		
20	QPSK	50	50	19.52	19.84	19.50	19.59		
20	QPSK	100	0	19.56	19.68	19.47	19.67		
20	16QAM	1	0	19.79	19.63	19.46	19.56	21	1
20	16QAM	1	49	19.68	19.65	19.47	19.45		
20	16QAM	1	99	19.62	19.90	19.55	19.61		
20	16QAM	50	0	18.60	18.65	18.44	18.55	20	2
20	16QAM	50	24	18.61	18.70	18.45	18.66		
20	16QAM	50	50	18.58	18.78	18.48	18.51		
20	16QAM	100	0	18.57	18.76	18.56	18.64		
20	64QAM	1	0	18.48	18.37	18.21	18.44	20	2
20	64QAM	1	49	18.37	18.40	18.17	18.27		
20	64QAM	1	99	18.37	18.63	18.20	18.45		
20	64QAM	50	0	17.71	17.77	17.40	17.65	19	3
20	64QAM	50	24	17.65	17.80	17.48	17.69		
20	64QAM	50	50	17.63	17.82	17.50	17.65		
20	64QAM	100	0	17.57	17.76	17.55	17.74		
Channel				55315	55820	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3642	3692.5		
15	QPSK	1	0	20.50	20.54	20.33	20.54	22	0
15	QPSK	1	37	20.48	20.52	20.29	20.47		
15	QPSK	1	74	20.42	20.63	20.42	20.61		
15	QPSK	36	0	19.68	19.62	19.46	19.69	21	1
15	QPSK	36	20	19.55	19.67	19.52	19.69		
15	QPSK	36	39	19.51	19.76	19.43	19.64		
15	QPSK	75	0	19.56	19.70	19.47	19.63		
15	16QAM	1	0	19.74	19.67	19.45	19.58	21	1
15	16QAM	1	37	19.34	19.43	19.32	19.58		
15	16QAM	1	74	19.50	19.88	19.58	19.67		
15	16QAM	36	0	18.56	18.71	18.51	18.70	20	2
15	16QAM	36	20	18.48	18.69	18.49	18.61		
15	16QAM	36	39	18.54	18.74	18.41	18.68		
15	16QAM	75	0	18.59	18.75	18.47	18.72		
15	64QAM	1	0	18.44	18.40	18.19	18.41	20	2
15	64QAM	1	37	18.26	18.46	18.14	18.35		
15	64QAM	1	74	18.33	18.60	18.33	18.47		
15	64QAM	36	0	17.60	17.76	17.51	17.62	19	3
15	64QAM	36	20	17.53	17.73	17.54	17.68		
15	64QAM	36	39	17.55	17.72	17.51	17.69		
15	64QAM	75	0	17.57	17.79	17.53	17.67		
Channel				55290	55815	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3642.5	3695		
10	QPSK	1	0	20.31	20.27	20.20	20.32	22	0
10	QPSK	1	25	20.25	20.31	20.08	20.32		
10	QPSK	1	49	20.15	20.35	20.13	20.53		
10	QPSK	25	0	19.37	19.45	19.23	19.52	21	1
10	QPSK	25	12	19.31	19.40	19.11	19.37		

10	QPSK	25	25	19.21	19.37	19.17	19.49		
10	QPSK	50	0	19.21	19.41	19.22	19.52		
10	16QAM	1	0	19.43	19.33	19.31	19.47	21	1
10	16QAM	1	25	19.27	19.33	19.23	19.31		
10	16QAM	1	49	19.35	19.44	19.47	19.57		
10	16QAM	25	0	18.19	18.37	18.08	18.39	20	2
10	16QAM	25	12	18.31	18.28	18.31	18.47		
10	16QAM	25	25	18.23	18.35	18.25	18.50		
10	16QAM	50	0	18.33	18.34	18.26	18.36		
10	64QAM	1	0	18.24	18.28	18.06	18.31	20	2
10	64QAM	1	25	18.03	18.06	18.09	18.11		
10	64QAM	1	49	17.99	18.26	18.16	18.28		
10	64QAM	25	0	17.40	17.37	17.35	17.40	19	3
10	64QAM	25	12	17.18	17.51	17.28	17.49		
10	64QAM	25	25	17.35	17.36	17.26	17.44		
10	64QAM	50	0	17.49	17.40	17.31	17.45		
Channel				55265	55810	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3643	3697.5		
5	QPSK	1	0	20.35	20.31	20.26	20.49	22	0
5	QPSK	1	12	20.27	20.37	20.14	20.38		
5	QPSK	1	24	20.27	20.48	20.28	20.53		
5	QPSK	12	0	19.43	19.45	19.31	19.56	21	1
5	QPSK	12	7	19.35	19.46	19.30	19.52		
5	QPSK	12	13	19.33	19.49	19.33	19.52		
5	QPSK	25	0	19.31	19.43	19.40	19.55		
5	16QAM	1	0	19.44	19.49	19.32	19.61	21	1
5	16QAM	1	12	19.32	19.45	19.25	19.47		
5	16QAM	1	24	19.41	19.53	19.58	19.61		
5	16QAM	12	0	18.34	18.47	18.27	18.52	20	2
5	16QAM	12	7	18.33	18.46	18.33	18.48		
5	16QAM	12	13	18.36	18.45	18.30	18.58		
5	16QAM	25	0	18.36	18.51	18.38	18.53		
5	64QAM	1	0	18.25	18.28	18.13	18.32	20	2
5	64QAM	1	12	18.04	18.16	18.05	18.26		
5	64QAM	1	24	18.17	18.34	18.18	18.38		
5	64QAM	12	0	17.50	17.54	17.35	17.60	19	3
5	64QAM	12	7	17.36	17.53	17.36	17.57		
5	64QAM	12	13	17.35	17.52	17.35	17.62		
5	64QAM	25	0	17.49	17.52	17.36	17.59		

Tablet Power Mode

<LTE Band 38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	14.72	14.84	14.90	15	0
20	QPSK	1	49	14.68	14.79	14.86		
20	QPSK	1	99	14.65	14.71	14.80		
20	QPSK	50	0	14.74	14.84	14.92	15	0
20	QPSK	50	24	14.70	14.81	14.85		
20	QPSK	50	50	14.73	14.73	14.83		
20	QPSK	100	0	14.73	14.82	14.88		
20	16QAM	1	0	14.68	14.85	14.84	15	0
20	16QAM	1	49	14.78	14.87	14.83		
20	16QAM	1	99	14.65	14.69	14.76		
20	16QAM	50	0	14.82	14.88	14.85	15	0
20	16QAM	50	24	14.75	14.80	14.82		
20	16QAM	50	50	14.63	14.72	14.88		
20	16QAM	100	0	14.78	14.73	14.83		
20	64QAM	1	0	14.63	14.83	14.82	15	0
20	64QAM	1	49	14.58	14.79	14.86		
20	64QAM	1	99	14.66	14.76	14.76		
20	64QAM	50	0	14.83	14.88	14.83	15	0
20	64QAM	50	24	14.74	14.78	14.87		
20	64QAM	50	50	14.83	14.71	14.91		
20	64QAM	100	0	14.69	14.77	14.88		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	14.67	14.75	14.89	15	0
15	QPSK	1	37	14.58	14.75	14.77		
15	QPSK	1	74	14.64	14.67	14.78		
15	QPSK	36	0	14.70	14.78	14.85	15	0
15	QPSK	36	20	14.67	14.81	14.78		
15	QPSK	36	39	14.70	14.64	14.83		
15	QPSK	75	0	14.65	14.79	14.81		
15	16QAM	1	0	14.63	14.80	14.83	15	0
15	16QAM	1	37	14.75	14.82	14.81		
15	16QAM	1	74	14.64	14.69	14.76		
15	16QAM	36	0	14.76	14.84	14.80	15	0
15	16QAM	36	20	14.67	14.70	14.82		
15	16QAM	36	39	14.56	14.65	14.88		
15	16QAM	75	0	14.74	14.67	14.76		
15	64QAM	1	0	14.60	14.80	14.81	15	0
15	64QAM	1	37	14.53	14.77	14.83		
15	64QAM	1	74	14.61	14.73	14.71		
15	64QAM	36	0	14.75	14.86	14.82	15	0
15	64QAM	36	20	14.67	14.70	14.85		
15	64QAM	36	39	14.77	14.68	14.85		
15	64QAM	75	0	14.61	14.69	14.81		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	14.63	14.83	14.88	15	0
10	QPSK	1	25	14.62	14.71	14.84		
10	QPSK	1	49	14.65	14.67	14.75		
10	QPSK	25	0	14.64	14.82	14.91	15	0

10	QPSK	25	12	14.68	14.73	14.83		
10	QPSK	25	25	14.63	14.72	14.80		
10	QPSK	50	0	14.73	14.81	14.81		
10	16QAM	1	0	14.58	14.76	14.82	15	0
10	16QAM	1	25	14.71	14.84	14.77		
10	16QAM	1	49	14.59	14.60	14.76		
10	16QAM	25	0	14.82	14.88	14.82	15	0
10	16QAM	25	12	14.66	14.74	14.77		
10	16QAM	25	25	14.58	14.68	14.78		
10	16QAM	50	0	14.71	14.70	14.82		
10	64QAM	1	0	14.60	14.77	14.76	15	0
10	64QAM	1	25	14.51	14.79	14.76		
10	64QAM	1	49	14.64	14.74	14.73		
10	64QAM	25	0	14.78	14.80	14.73	15	0
10	64QAM	25	12	14.67	14.70	14.81		
10	64QAM	25	25	14.77	14.62	14.91		
10	64QAM	50	0	14.64	14.74	14.87		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	14.67	14.78	14.84	15	0
5	QPSK	1	12	14.59	14.72	14.86		
5	QPSK	1	24	14.65	14.66	14.70		
5	QPSK	12	0	14.74	14.79	14.91	15	0
5	QPSK	12	7	14.68	14.73	14.83		
5	QPSK	12	13	14.73	14.63	14.83		
5	QPSK	25	0	14.67	14.81	14.80		
5	16QAM	1	0	14.63	14.75	14.79	15	0
5	16QAM	1	12	14.78	14.81	14.75		
5	16QAM	1	24	14.59	14.59	14.75		
5	16QAM	12	0	14.74	14.80	14.76	15	0
5	16QAM	12	7	14.69	14.70	14.82		
5	16QAM	12	13	14.61	14.62	14.87		
5	16QAM	25	0	14.78	14.64	14.80		
5	64QAM	1	0	14.53	14.81	14.75	15	0
5	64QAM	1	12	14.55	14.79	14.80		
5	64QAM	1	24	14.61	14.75	14.74		
5	64QAM	12	0	14.73	14.80	14.77	15	0
5	64QAM	12	7	14.72	14.69	14.79		
5	64QAM	12	13	14.76	14.70	14.86		
5	64QAM	25	0	14.67	14.70	14.85		

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	14.84	14.86	14.87	14.74	14.82	15	0
20	QPSK	1	49	14.83	14.77	14.84	14.74	14.73		
20	QPSK	1	99	14.83	14.71	14.75	14.72	14.66		
20	QPSK	50	0	14.98	14.92	15.00	14.88	14.97	15	0
20	QPSK	50	24	14.94	14.91	14.98	14.81	14.96		
20	QPSK	50	50	14.91	14.90	14.97	14.73	14.96		
20	QPSK	100	0	14.94	14.85	14.96	14.86	14.93		
20	16QAM	1	0	14.76	14.74	14.86	14.69	14.80	15	0
20	16QAM	1	49	14.78	14.68	14.83	14.66	14.69		
20	16QAM	1	99	14.79	14.65	14.73	14.68	14.60		
20	16QAM	50	0	14.94	14.92	14.92	14.79	14.88	15	0
20	16QAM	50	24	14.84	14.88	14.93	14.75	14.93		
20	16QAM	50	50	14.88	14.88	14.92	14.65	14.94		
20	16QAM	100	0	14.86	14.82	14.96	14.86	14.84		
20	64QAM	1	0	14.68	14.65	14.82	14.66	14.78	15	0
20	64QAM	1	49	14.76	14.59	14.75	14.59	14.66		
20	64QAM	1	99	14.79	14.57	14.67	14.65	14.60		
20	64QAM	50	0	14.90	14.84	14.84	14.71	14.88	15	0
20	64QAM	50	24	14.78	14.81	14.90	14.73	14.86		
20	64QAM	50	50	14.87	14.80	14.87	14.63	14.91		
20	64QAM	100	0	14.85	14.76	14.86	14.78	14.82		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	14.83	14.83	14.84	14.64	14.81	15	0
15	QPSK	1	37	14.82	14.77	14.79	14.70	14.71		
15	QPSK	1	74	14.79	14.65	14.70	14.72	14.57		
15	QPSK	36	0	14.92	14.86	14.93	14.88	14.87	15	0
15	QPSK	36	20	14.90	14.89	14.98	14.81	14.92		
15	QPSK	36	39	14.86	14.83	14.91	14.70	14.92		
15	QPSK	75	0	14.86	14.80	14.95	14.76	14.85		
15	16QAM	1	0	14.69	14.74	14.77	14.63	14.72	15	0
15	16QAM	1	37	14.72	14.63	14.77	14.65	14.66		
15	16QAM	1	74	14.78	14.65	14.72	14.66	14.60		
15	16QAM	36	0	14.91	14.86	14.88	14.74	14.85	15	0
15	16QAM	36	20	14.82	14.85	14.89	14.70	14.83		
15	16QAM	36	39	14.79	14.83	14.87	14.65	14.90		
15	16QAM	75	0	14.80	14.74	14.88	14.83	14.82		
15	64QAM	1	0	14.63	14.55	14.78	14.59	14.75	15	0
15	64QAM	1	37	14.72	14.57	14.66	14.58	14.63		
15	64QAM	1	74	14.69	14.52	14.58	14.64	14.54		
15	64QAM	36	0	14.83	14.81	14.76	14.66	14.82	15	0
15	64QAM	36	20	14.72	14.81	14.86	14.71	14.78		
15	64QAM	36	39	14.77	14.80	14.84	14.61	14.91		
15	64QAM	75	0	14.84	14.75	14.86	14.75	14.76		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	14.80	14.82	14.87	14.70	14.80	15	0
10	QPSK	1	25	14.82	14.73	14.76	14.72	14.67		
10	QPSK	1	49	14.82	14.65	14.71	14.70	14.64		
10	QPSK	25	0	14.91	14.87	14.97	14.79	14.91	15	0
10	QPSK	25	12	14.85	14.81	14.91	14.75	14.93		

10	QPSK	25	25	14.91	14.88	14.97	14.63	14.87		
10	QPSK	50	0	14.90	14.85	14.91	14.79	14.83		
10	16QAM	1	0	14.66	14.73	14.76	14.68	14.75	15	0
10	16QAM	1	25	14.68	14.64	14.76	14.56	14.62		
10	16QAM	1	49	14.75	14.62	14.72	14.61	14.60		
10	16QAM	25	0	14.88	14.88	14.92	14.72	14.84	15	0
10	16QAM	25	12	14.82	14.79	14.87	14.70	14.88		
10	16QAM	25	25	14.88	14.83	14.84	14.58	14.84		
10	16QAM	50	0	14.81	14.79	14.92	14.82	14.77		
10	64QAM	1	0	14.68	14.56	14.72	14.62	14.76	15	0
10	64QAM	1	25	14.66	14.54	14.67	14.57	14.63		
10	64QAM	1	49	14.78	14.49	14.67	14.63	14.52		
10	64QAM	25	0	14.81	14.78	14.75	14.61	14.85	15	0
10	64QAM	25	12	14.77	14.71	14.80	14.65	14.80		
10	64QAM	25	25	14.82	14.70	14.86	14.57	14.91		
10	64QAM	50	0	14.83	14.73	14.76	14.77	14.81		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	14.74	14.76	14.80	14.70	14.74	15	0
5	QPSK	1	12	14.80	14.74	14.75	14.73	14.65		
5	QPSK	1	24	14.78	14.68	14.71	14.63	14.57		
5	QPSK	12	0	14.90	14.84	14.93	14.87	14.96	15	0
5	QPSK	12	7	14.93	14.90	14.95	14.81	14.90		
5	QPSK	12	13	14.91	14.81	14.94	14.65	14.95		
5	QPSK	25	0	14.94	14.79	14.88	14.83	14.88		
5	16QAM	1	0	14.67	14.65	14.79	14.61	14.72	15	0
5	16QAM	1	12	14.78	14.68	14.79	14.65	14.65		
5	16QAM	1	24	14.78	14.56	14.71	14.68	14.56		
5	16QAM	12	0	14.90	14.87	14.92	14.72	14.82	15	0
5	16QAM	12	7	14.82	14.84	14.87	14.65	14.88		
5	16QAM	12	13	14.88	14.87	14.91	14.57	14.93		
5	16QAM	25	0	14.81	14.72	14.90	14.76	14.75		
5	64QAM	1	0	14.66	14.58	14.76	14.58	14.76	15	0
5	64QAM	1	12	14.72	14.54	14.66	14.50	14.66		
5	64QAM	1	24	14.79	14.56	14.64	14.59	14.59		
5	64QAM	12	0	14.86	14.77	14.80	14.62	14.83	15	0
5	64QAM	12	7	14.77	14.79	14.87	14.70	14.82		
5	64QAM	12	13	14.84	14.80	14.83	14.56	14.88		
5	64QAM	25	0	14.79	14.66	14.79	14.72	14.73		

<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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	17.60	17.66	17.66	17.30	17.41	18	0
20	QPSK	1	49	17.56	17.51	17.63	17.25	17.32		
20	QPSK	1	99	17.57	17.54	17.60	17.23	17.38		
20	QPSK	50	0	17.92	17.91	17.93	17.66	17.61	18	0
20	QPSK	50	24	17.90	17.88	17.92	17.57	17.60		
20	QPSK	50	50	17.85	17.86	17.89	17.57	17.58		
20	QPSK	100	0	17.90	17.92	17.93	17.57	17.60		
20	16QAM	1	0	17.96	17.96	17.89	17.75	17.67	18	0
20	16QAM	1	49	17.95	17.95	17.82	17.69	17.70		
20	16QAM	1	99	17.94	17.90	17.86	17.68	17.76		
20	16QAM	50	0	17.94	17.94	17.83	17.58	17.56	18	0
20	16QAM	50	24	17.95	17.95	17.83	17.58	17.62		
20	16QAM	50	50	17.95	17.94	17.82	17.56	17.59		
20	16QAM	100	0	17.95	17.93	17.83	17.57	17.61		
20	64QAM	1	0	17.98	17.81	17.69	17.48	17.47	18	0
20	64QAM	1	49	17.89	17.86	17.65	17.55	17.57		
20	64QAM	1	99	17.98	17.82	17.71	17.54	17.63		
20	64QAM	50	0	17.93	17.91	17.83	17.58	17.54	18	0
20	64QAM	50	24	17.95	17.95	17.85	17.58	17.62		
20	64QAM	50	50	17.93	17.94	17.83	17.58	17.59		
20	64QAM	100	0	17.98	17.94	17.83	17.57	17.59		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	17.58	17.48	17.56	17.26	17.33	18	0
15	QPSK	1	37	17.52	17.48	17.55	17.25	17.30		
15	QPSK	1	74	17.56	17.49	17.57	17.22	17.34		
15	QPSK	36	0	17.86	17.81	17.91	17.65	17.52	18	0
15	QPSK	36	20	17.80	17.80	17.83	17.52	17.52		
15	QPSK	36	39	17.80	17.80	17.84	17.57	17.50		
15	QPSK	75	0	17.87	17.88	17.93	17.49	17.51		
15	16QAM	1	0	17.87	17.87	17.87	17.71	17.65	18	0
15	16QAM	1	37	17.88	17.90	17.81	17.65	17.68		
15	16QAM	1	74	17.88	17.82	17.79	17.64	17.74		
15	16QAM	36	0	17.90	17.86	17.77	17.50	17.52	18	0
15	16QAM	36	20	17.86	17.95	17.76	17.48	17.58		
15	16QAM	36	39	17.86	17.93	17.82	17.46	17.53		
15	16QAM	75	0	17.89	17.87	17.77	17.54	17.59		
15	64QAM	1	0	17.89	17.80	17.64	17.43	17.40	18	0
15	64QAM	1	37	17.85	17.86	17.59	17.47	17.48		
15	64QAM	1	74	17.93	17.81	17.66	17.50	17.53		
15	64QAM	36	0	17.85	17.85	17.73	17.53	17.48	18	0
15	64QAM	36	20	17.91	17.88	17.79	17.49	17.58		
15	64QAM	36	39	17.85	17.90	17.79	17.53	17.51		
15	64QAM	75	0	17.98	17.94	17.81	17.48	17.49		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	17.51	17.52	17.54	17.21	17.40	18	0
10	QPSK	1	25	17.56	17.46	17.58	17.19	17.22		
10	QPSK	1	49	17.51	17.54	17.60	17.23	17.38		
10	QPSK	25	0	17.89	17.86	17.86	17.57	17.53	18	0
10	QPSK	25	12	17.80	17.84	17.83	17.55	17.58		

10	QPSK	25	25	17.78	17.85	17.87	17.53	17.53		
10	QPSK	50	0	17.82	17.92	17.88	17.51	17.52		
10	16QAM	1	0	17.89	17.88	17.82	17.70	17.67	18	0
10	16QAM	1	25	17.90	17.95	17.81	17.67	17.61		
10	16QAM	1	49	17.86	17.81	17.80	17.64	17.70		
10	16QAM	25	0	17.90	17.85	17.73	17.50	17.55	18	0
10	16QAM	25	12	17.95	17.89	17.80	17.50	17.54		
10	16QAM	25	25	17.94	17.93	17.81	17.55	17.59		
10	16QAM	50	0	17.92	17.86	17.73	17.50	17.60		
10	64QAM	1	0	17.94	17.72	17.66	17.40	17.44	18	0
10	64QAM	1	25	17.81	17.80	17.65	17.46	17.52		
10	64QAM	1	49	17.90	17.82	17.64	17.49	17.55		
10	64QAM	25	0	17.90	17.86	17.83	17.48	17.48	18	0
10	64QAM	25	12	17.92	17.92	17.84	17.50	17.58		
10	64QAM	25	25	17.85	17.91	17.73	17.53	17.59		
10	64QAM	50	0	17.93	17.84	17.80	17.48	17.58		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	17.52	17.51	17.61	17.25	17.37	18	0
5	QPSK	1	12	17.53	17.45	17.54	17.15	17.23		
5	QPSK	1	24	17.54	17.54	17.59	17.20	17.35		
5	QPSK	12	0	17.88	17.86	17.87	17.61	17.59	18	0
5	QPSK	12	7	17.84	17.82	17.88	17.47	17.52		
5	QPSK	12	13	17.78	17.79	17.88	17.57	17.55		
5	QPSK	25	0	17.89	17.88	17.87	17.54	17.52		
5	16QAM	1	0	17.89	17.88	17.87	17.68	17.63	18	0
5	16QAM	1	12	17.87	17.92	17.77	17.63	17.66		
5	16QAM	1	24	17.94	17.83	17.77	17.58	17.75		
5	16QAM	12	0	17.89	17.86	17.78	17.57	17.46	18	0
5	16QAM	12	7	17.90	17.90	17.76	17.52	17.56		
5	16QAM	12	13	17.90	17.88	17.82	17.46	17.57		
5	16QAM	25	0	17.85	17.83	17.75	17.56	17.54		
5	64QAM	1	0	17.98	17.73	17.60	17.41	17.40	18	0
5	64QAM	1	12	17.82	17.86	17.59	17.51	17.55		
5	64QAM	1	24	17.91	17.75	17.71	17.46	17.55		
5	64QAM	12	0	17.84	17.81	17.80	17.48	17.48	18	0
5	64QAM	12	7	17.93	17.93	17.85	17.56	17.62		
5	64QAM	12	13	17.83	17.94	17.74	17.55	17.58		
5	64QAM	25	0	17.97	17.84	17.76	17.55	17.53		

<LTE Band 42 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				43190	43340	43490		
Frequency (MHz)				3560	3575	3590		
20	QPSK	1	0	15.52	15.62	15.69	16.2	0
20	QPSK	1	49	15.48	15.61	15.63		
20	QPSK	1	99	15.41	15.51	15.55		
20	QPSK	50	0	15.53	15.63	15.68	16.2	0
20	QPSK	50	24	15.55	15.63	15.66		
20	QPSK	50	50	15.57	15.59	15.66		
20	QPSK	100	0	15.55	15.65	15.67		
20	16QAM	1	0	15.54	15.59	15.63	16.2	0
20	16QAM	1	49	15.59	15.68	15.61		
20	16QAM	1	99	15.67	15.66	15.63		
20	16QAM	50	0	15.59	15.66	15.61	16.2	0
20	16QAM	50	24	15.62	15.61	15.61		
20	16QAM	50	50	15.61	15.62	15.61		
20	16QAM	100	0	15.58	15.68	15.60		
20	64QAM	1	0	15.28	15.38	15.38	16.2	0
20	64QAM	1	49	15.36	15.45	15.47		
20	64QAM	1	99	15.41	15.50	15.49		
20	64QAM	50	0	15.61	15.63	15.66	16.2	0
20	64QAM	50	24	15.66	15.64	15.66		
20	64QAM	50	50	15.65	15.66	15.64		
20	64QAM	100	0	15.63	15.61	15.65		
Channel				43165	43340	43515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3575	3592.5		
15	QPSK	1	0	15.52	15.62	15.64	16.2	0
15	QPSK	1	37	15.42	15.53	15.60		
15	QPSK	1	74	15.41	15.48	15.53		
15	QPSK	36	0	15.52	15.61	15.67	16.2	0
15	QPSK	36	20	15.54	15.60	15.59		
15	QPSK	36	39	15.49	15.53	15.56		
15	QPSK	75	0	15.50	15.60	15.66		
15	16QAM	1	0	15.50	15.59	15.59	16.2	0
15	16QAM	1	37	15.59	15.60	15.52		
15	16QAM	1	74	15.65	15.61	15.57		
15	16QAM	36	0	15.49	15.62	15.55	16.2	0
15	16QAM	36	20	15.61	15.59	15.54		
15	16QAM	36	39	15.60	15.57	15.61		
15	16QAM	75	0	15.50	15.59	15.60		
15	64QAM	1	0	15.26	15.29	15.38	16.2	0
15	64QAM	1	37	15.29	15.43	15.44		
15	64QAM	1	74	15.39	15.42	15.43		
15	64QAM	36	0	15.56	15.60	15.58	16.2	0
15	64QAM	36	20	15.62	15.62	15.65		
15	64QAM	36	39	15.61	15.59	15.54		
15	64QAM	75	0	15.59	15.60	15.56		
Channel				43140	43340	43540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3575	3595		
10	QPSK	1	0	15.49	15.62	15.62	16.2	0
10	QPSK	1	25	15.38	15.51	15.62		
10	QPSK	1	49	15.36	15.46	15.51		
10	QPSK	25	0	15.53	15.53	15.59	16.2	0
10	QPSK	25	12	15.49	15.54	15.61		

10	QPSK	25	25	15.54	15.57	15.65		
10	QPSK	50	0	15.47	15.56	15.59		
10	16QAM	1	0	15.51	15.55	15.58	16.2	0
10	16QAM	1	25	15.53	15.68	15.53		
10	16QAM	1	49	15.65	15.60	15.58		
10	16QAM	25	0	15.54	15.61	15.57	16.2	0
10	16QAM	25	12	15.57	15.59	15.56		
10	16QAM	25	25	15.61	15.57	15.53		
10	16QAM	50	0	15.58	15.64	15.50		
10	64QAM	1	0	15.25	15.38	15.34	16.2	0
10	64QAM	1	25	15.34	15.35	15.47		
10	64QAM	1	49	15.34	15.42	15.43		
10	64QAM	25	0	15.57	15.60	15.58	16.2	0
10	64QAM	25	12	15.63	15.64	15.66		
10	64QAM	25	25	15.58	15.60	15.55		
10	64QAM	50	0	15.54	15.61	15.55		
Channel				43115	43340	43565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3575	3597.5		
5	QPSK	1	0	15.44	15.58	15.60	16.2	0
5	QPSK	1	12	15.47	15.61	15.58		
5	QPSK	1	24	15.41	15.51	15.50		
5	QPSK	12	0	15.49	15.57	15.58	16.2	0
5	QPSK	12	7	15.47	15.57	15.66		
5	QPSK	12	13	15.51	15.54	15.65		
5	QPSK	25	0	15.51	15.62	15.64		
5	16QAM	1	0	15.54	15.49	15.62	16.2	0
5	16QAM	1	12	15.54	15.63	15.58		
5	16QAM	1	24	15.58	15.66	15.63		
5	16QAM	12	0	15.57	15.59	15.56	16.2	0
5	16QAM	12	7	15.60	15.51	15.54		
5	16QAM	12	13	15.53	15.57	15.61		
5	16QAM	25	0	15.57	15.66	15.53		
5	64QAM	1	0	15.27	15.36	15.38	16.2	0
5	64QAM	1	12	15.36	15.36	15.42		
5	64QAM	1	24	15.36	15.46	15.49		
5	64QAM	12	0	15.58	15.62	15.59	16.2	0
5	64QAM	12	7	15.61	15.61	15.57		
5	64QAM	12	13	15.63	15.59	15.62		
5	64QAM	25	0	15.63	15.54	15.57		

<LTE Band 48 Aux>

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)	MPR (dB)
Channel				55340	55830	56150	56640		
Frequency (MHz)				3560	3609	3641	3690		
20	QPSK	1	0	15.81	16.01	15.80	15.77	16.6	0
20	QPSK	1	49	15.73	15.82	15.68	15.70		
20	QPSK	1	99	15.85	15.88	15.71	15.76		
20	QPSK	50	0	15.87	16.00	15.82	15.83	16.6	0
20	QPSK	50	24	15.90	15.98	15.82	15.85		
20	QPSK	50	50	15.92	15.95	15.72	15.84		
20	QPSK	100	0	15.88	15.96	15.81	15.81		
20	16QAM	1	0	15.93	15.99	15.91	15.89	16.6	0
20	16QAM	1	49	15.87	15.96	15.80	15.80		
20	16QAM	1	99	15.93	15.95	15.88	15.90		
20	16QAM	50	0	15.92	15.94	15.89	15.88	16.6	0
20	16QAM	50	24	15.92	15.94	15.88	15.88		
20	16QAM	50	50	15.94	15.91	15.79	15.88		
20	16QAM	100	0	15.93	15.91	15.88	15.89		
20	64QAM	1	0	15.63	15.77	15.62	15.62	16.6	0
20	64QAM	1	49	15.57	15.63	15.49	15.52		
20	64QAM	1	99	15.77	15.74	15.56	15.61		
20	64QAM	50	0	15.94	15.95	15.91	15.89	16.6	0
20	64QAM	50	24	15.95	15.96	15.89	15.93		
20	64QAM	50	50	15.99	15.91	15.81	15.91		
20	64QAM	100	0	15.96	15.97	15.90	15.93		
Channel				55315	55820	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3642	3692.5		
15	QPSK	1	0	15.73	15.93	15.73	15.73	16.6	0
15	QPSK	1	37	15.73	15.81	15.65	15.62		
15	QPSK	1	74	15.82	15.81	15.61	15.68		
15	QPSK	36	0	15.84	15.95	15.74	15.81	16.6	0
15	QPSK	36	20	15.84	15.96	15.79	15.79		
15	QPSK	36	39	15.83	15.89	15.64	15.84		
15	QPSK	75	0	15.86	15.92	15.81	15.72		
15	16QAM	1	0	15.87	15.99	15.83	15.82	16.6	0
15	16QAM	1	37	15.84	15.89	15.71	15.77		
15	16QAM	1	74	15.90	15.93	15.81	15.88		
15	16QAM	36	0	15.88	15.86	15.85	15.78	16.6	0
15	16QAM	36	20	15.85	15.90	15.88	15.87		
15	16QAM	36	39	15.93	15.91	15.72	15.85		
15	16QAM	75	0	15.93	15.82	15.83	15.87		
15	64QAM	1	0	15.58	15.72	15.62	15.60	16.6	0
15	64QAM	1	37	15.54	15.63	15.40	15.49		
15	64QAM	1	74	15.73	15.73	15.49	15.51		
15	64QAM	36	0	15.91	15.87	15.90	15.88	16.6	0
15	64QAM	36	20	15.88	15.88	15.81	15.85		
15	64QAM	36	39	15.99	15.81	15.72	15.91		
15	64QAM	75	0	15.88	15.93	15.80	15.89		
Channel				55290	55815	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3642.5	3695		
10	QPSK	1	0	15.71	15.96	15.71	15.71	16.6	0
10	QPSK	1	25	15.66	15.75	15.63	15.68		
10	QPSK	1	49	15.75	15.78	15.66	15.67		
10	QPSK	25	0	15.82	15.90	15.75	15.81	16.6	0
10	QPSK	25	12	15.80	15.97	15.80	15.80		

10	QPSK	25	25	15.90	15.85	15.68	15.78		
10	QPSK	50	0	15.79	15.87	15.79	15.74		
10	16QAM	1	0	15.88	15.95	15.88	15.89	16.6	0
10	16QAM	1	25	15.81	15.96	15.77	15.76		
10	16QAM	1	49	15.84	15.86	15.87	15.89		
10	16QAM	25	0	15.85	15.88	15.85	15.79	16.6	0
10	16QAM	25	12	15.92	15.85	15.83	15.84		
10	16QAM	25	25	15.91	15.88	15.74	15.79		
10	16QAM	50	0	15.93	15.89	15.83	15.85		
10	64QAM	1	0	15.62	15.71	15.62	15.53	16.6	0
10	64QAM	1	25	15.49	15.59	15.41	15.48		
10	64QAM	1	49	15.75	15.66	15.56	15.61		
10	64QAM	25	0	15.88	15.94	15.86	15.79	16.6	0
10	64QAM	25	12	15.92	15.90	15.89	15.90		
10	64QAM	25	25	15.90	15.89	15.79	15.82		
10	64QAM	50	0	15.94	15.90	15.80	15.84		
Channel				55265	55810	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3643	3697.5		
5	QPSK	1	0	15.74	15.91	15.74	15.77	16.6	0
5	QPSK	1	12	15.66	15.82	15.59	15.63		
5	QPSK	1	24	15.77	15.79	15.62	15.69		
5	QPSK	12	0	15.77	15.91	15.80	15.80	16.6	0
5	QPSK	12	7	15.87	15.90	15.74	15.79		
5	QPSK	12	13	15.91	15.90	15.69	15.83		
5	QPSK	25	0	15.81	15.86	15.81	15.81		
5	16QAM	1	0	15.87	15.89	15.82	15.83	16.6	0
5	16QAM	1	12	15.78	15.94	15.73	15.72		
5	16QAM	1	24	15.90	15.89	15.78	15.80		
5	16QAM	12	0	15.88	15.91	15.86	15.85	16.6	0
5	16QAM	12	7	15.89	15.87	15.81	15.88		
5	16QAM	12	13	15.94	15.89	15.72	15.88		
5	16QAM	25	0	15.93	15.83	15.88	15.80		
5	64QAM	1	0	15.57	15.71	15.59	15.61	16.6	0
5	64QAM	1	12	15.47	15.56	15.49	15.45		
5	64QAM	1	24	15.73	15.64	15.48	15.58		
5	64QAM	12	0	15.94	15.90	15.87	15.88	16.6	0
5	64QAM	12	7	15.92	15.90	15.82	15.88		
5	64QAM	12	13	15.91	15.83	15.76	15.89		
5	64QAM	25	0	15.92	15.87	15.83	15.86		

<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band, and Uplink CA. 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.
3. All permutations exist. No restrictions on Pcell & Scell combinations. Only LTE Band 29A is limited to Scell.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	12A-12A	3CC-87	69	12A-30A-66A	4CC-191
2	12A-25A		70	12A-66A-66A	4CC-192
3	12A-30A	3CC-69	71	12A-66C	4CC-210
4	12A-66A	3CC-70	72	12B-66A	4CC-192
5	12B	3CC-72	73	13A-48A-48A	4CC-194
6	13A-48A	3CC-73	74	13A-48A-66A	4CC-196
7	13A-66A	3CC-76	75	13A-48C	4CC-197
8	14A-30A	3CC-79	76	13A-66A-66A	4CC-199
9	14A-66A	3CC-80	77	13A-66B	4CC-195
10	25A-25A	3CC-81	78	13A-66C	4CC-196
11	25A-26A	3CC-82	79	14A-30A-66A	4CC-203
12	25A-41A	3CC-83	80	14A-66A-66A	4CC-204
13	26A-41A	3CC-86	81	25A-25A-25A	
14	2A-12A	3CC-87	82	25A-25A-26A	
15	2A-13A	3CC-91	83	25A-25A-41A	
16	2A-14A	3CC-93	84	25A-26A-41A	
17	2A-2A	3CC-95	85	25A-41C	4CC-205
18	2A-30A	3CC-98	86	26A-41C	4CC-206
19	2A-48A	3CC-105	87	2A-12A-12A	4CC-219
20	2A-4A	3CC-108	88	2A-12A-30A	4CC-220
21	2A-5A	3CC-115	89	2A-12A-66A	4CC-210
22	2A-66A	3CC-120	90	2A-12B	4CC-222
23	2A-71A	3CC-102	91	2A-13A-48A	4CC-211
24	2A-7A	3CC-126	92	2A-13A-66A	4CC-214
25	2C	3CC-128	93	2A-14A-30A	4CC-217
26	30A-66A	3CC-132	94	2A-14A-66A	4CC-218
27	38A-40A	3CC-133	95	2A-2A-12A	4CC-219
28	38C		96	2A-2A-13A	4CC-223
29	41A-41A	3CC-134	97	2A-2A-14A	4CC-224
30	41A-42A	3CC-137	98	2A-2A-30A	4CC-226
31	41A-48A		99	2A-2A-4A	4CC-228
32	41C	5CC-380	100	2A-2A-5A	4CC-231
33	42A-42A	3CC-136	101	2A-2A-66A	4CC-234
34	42C	5CC-379	102	2A-2A-71A	4CC-235
35	48A-48A	3CC-142	103	2A-2A-7A	4CC-238
36	48A-66A	3CC-142	104	2A-30A-66A	4CC-226
37	48A-71A	3CC-149	105	2A-48A-48A	4CC-240
38	48C	3CC-107	106	2A-48A-66A	4CC-240
39	4A-12A	3CC-108	107	2A-48C	4CC-242
40	4A-13A	3CC-109	108	2A-4A-12A	4CC-244
41	4A-30A	3CC-110	109	2A-4A-13A	
42	4A-48A		110	2A-4A-30A	4CC-249
43	4A-4A	3CC-111	111	2A-4A-4A	4CC-247
44	4A-5A	3CC-112	112	2A-4A-5A	4CC-249

45	4A-71A	3CC-113	113	2A-4A-71A	4CC-230
46	4A-7A	3CC-114	114	2A-4A-7A	4CC-251
47	5A-25A		115	2A-5A-30A	4CC-254
48	5A-30A	3CC-115	116	2A-5A-48A	4CC-255
49	5A-38A		117	2A-5A-66A	4CC-256
50	5A-40A	3CC-166	118	2A-5A-7A	
51	5A-41A		119	2A-5B	4CC-233
52	5A-48A	3CC-116	120	2A-66A-66A	4CC-234
53	5A-5A	3CC-169	121	2A-66A-71A	4CC-235
54	5A-66A	3CC-170	122	2A-66B	4CC-236
55	5A-7A	3CC-173	123	2A-66C	4CC-237
56	5B	3CC-119	124	2A-7A-12A	4CC-251
57	66A-66A	3CC-132	125	2A-7A-66A	4CC-238
58	66A-71A	3CC-121	126	2A-7A-7A	4CC-252
59	66B	3CC-145	127	2A-7C	4CC-253
60	66C	3CC-146	128	2C-12A	4CC-272
61	7A-12A	3CC-124	129	2C-30A	4CC-261
62	7A-42A		130	2C-5A	4CC-273
63	7A-66A	3CC-125	131	2C-66A	4CC-274
64	7A-7A	3CC-126	132	30A-66A-66A	4CC-239
65	7B		133	41A-41A-41A	4CC-275
66	7C	3CC-127	134	41A-41C	4CC-275
67	4A-17A		135	41A-42A-42A	4CC-277
68	2A-17A		136	41A-42C	4CC-277
			137	41C-42A	4CC-280
			138	41D	4CC-276
			139	42A-42C	4CC-277
			140	42D	4CC-278
			141	48A-48A-66A	4CC-286
			142	48A-48A-71A	
			143	48A-48C	4CC-289
			144	48A-66A-66A	4CC-286
			145	48A-66B	4CC-287
			146	48A-66C	4CC-288
			147	48C-66A	4CC-289
			148	48C-71A	
			149	48D	4CC-290
			150	4A-12A-12A	4CC-299
			151	4A-12A-30A	4CC-300
			152	4A-12B	4CC-301
			153	4A-48C	
			154	4A-4A-12A	4CC-299
			155	4A-4A-13A	
			156	4A-4A-30A	4CC-300
			157	4A-4A-5A	4CC-303
			158	4A-4A-71A	
			159	4A-4A-7A	
			160	4A-5A-30A	4CC-302
			161	4A-5B	4CC-303
			162	4A-7A-12A	4CC-251
			163	4A-7A-7A	4CC-252
			164	4A-7C	4CC-253
			165	5A-30A-66A	4CC-305
			166	5A-48A-48A	4CC-306
			167	5A-48A-66A	4CC-306
			168	5A-48C	4CC-308

			169	5A-5A-66A	4CC-310
			170	5A-66A-66A	4CC-310
			171	5A-66B	4CC-311
			172	5A-66C	4CC-312
			173	5A-7A-7A	
			174	5A-7C	
			175	5B-30A	4CC-316
			176	5B-66A	4CC-317
			177	66A-66A-66A	4CC-263
			178	66A-66A-71A	4CC-264
			179	66A-66B	4CC-313
			180	66A-66C	4CC-314
			181	66C-71A	4CC-267
			182	66D	4CC-268
			183	7A-12A-66A	4CC-269
			184	7A-12B	4CC-320
			185	7A-66A-66A	4CC-326
			186	7C-66A	4CC-321
			187	2A-48A-66A	4CC-325
			188	48A-66B	4CC-195
			189	7A-7A-66A	4CC-326
			190	7A-7A-13A	4CC-328

4CC Downlink Carrier Aggregation			5CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Covered by Measurement Superset	Combination	Covered by Measurement Superset
191	12A-30A-66A-66A	5CC-338	329	13A-48A-48C-66A	
192	12B-66A-66A	5CC-402	330	13A-48A-48D	
193	13A-48A-48A-66A	5CC-339	331	13A-48C-48C	
194	13A-48A-48C	5CC-329	332	13A-48C-66B	
195	13A-48A-66B		333	13A-48C-66C	
196	13A-48A-66C		334	13A-48D-66A	
197	13A-48C-66A	5CC-341	335	13A-48E	5CC-407
198	13A-48D	5CC-334	336	25A-25A-41D	
199	13A-66A-66A-66A		337	25A-41E	
200	13A-66A-66B	5CC-343	338	2A-12A-30A-66A-66A	
201	13A-66A-66C	5CC-344	339	2A-13A-48A-48A-66A	
202	13A-66D	5CC-345	340	2A-13A-48A-48C	
203	14A-30A-66A-66A	5CC-346	341	2A-13A-48C-66A	
204	14A-66A-66A-66A	5CC-347	342	2A-13A-48D	
205	25A-25A-41C		343	2A-13A-66A-66B	
206	25A-26A-41C		344	2A-13A-66A-66C	
207	25A-41D	5CC-336	345	2A-13A-66D	
208	2A-12A-30A-66A	5CC-338	346	2A-14A-30A-66A-66A	
209	2A-12A-66A-66A	5CC-349	347	2A-14A-66A-66A-66A	
210	2A-12A-66C		348	2A-2A-12A-30A-66A	
211	2A-13A-48A-48A	5CC-339	349	2A-2A-12A-66A-66A	
212	2A-13A-48A-66A	5CC-339	350	2A-2A-12B-66A	
213	2A-13A-48C	5CC-341	351	2A-2A-13A-66A-66A	
214	2A-13A-66A-66A	5CC-351	352	2A-2A-13A-66B	
215	2A-13A-66B	5CC-352	353	2A-2A-14A-30A-66A	
216	2A-13A-66C	5CC-344	354	2A-2A-14A-66A-66A	
217	2A-14A-30A-66A	5CC-346	355	2A-2A-5A-30A-66A	
218	2A-14A-66A-66A	5CC-347	356	2A-2A-5A-66A-66A	
219	2A-2A-12A-12A		357	2A-2A-5A-66B	
220	2A-2A-12A-30A	5CC-348	358	2A-2A-5A-66C	

221	2A-2A-12A-66A	5CC-349	359	2A-2A-5B-66A	
222	2A-2A-12B	5CC-350	360	2A-2A-66A-66B	
223	2A-2A-13A-66A	5CC-351	361	2A-2A-66A-66C	
224	2A-2A-14A-30A	5CC-353	362	2A-2A-7A-12A-66A	
225	2A-2A-14A-66A	5CC-354	363	2A-48A-48C-66A	
226	2A-2A-30A-66A	5CC-355	364	2A-48A-48D	
227	2A-2A-4A-12A		365	2A-48C-48C	
228	2A-2A-4A-4A		366	2A-48D-66A	
229	2A-2A-4A-5A		367	2A-48E	5CC-405
230	2A-2A-4A-71A		368	2A-4A-5B-30A	
231	2A-2A-5A-30A	5CC-355	369	2A-5A-30A-66A-66A	
232	2A-2A-5A-66A	5CC-356	370	2A-5A-48A-48A-66A	
233	2A-2A-5B	5CC-359	371	2A-5A-48A-48C	
234	2A-2A-66A-66A		372	2A-5A-48C-66A	
235	2A-2A-66A-71A		373	2A-5A-48D	
236	2A-2A-66B	5CC-360	374	2A-5B-30A-66A	
237	2A-2A-66C	5CC-361	375	2A-5B-66A-66A	
238	2A-2A-7A-66A	5CC-362	376	2A-5B-66B	
239	2A-30A-66A-66A	5CC-338	377	2A-5B-66C	
240	2A-48A-48A-66A	5CC-370	378	2A-7A-12B-66A	
241	2A-48A-48C	5CC-363	379	2C-5B-30A	
242	2A-48C-66A	5CC-363	380	41A-42C-42C	
243	2A-48D	5CC-366	381	41C-41D	
244	2A-4A-12A-12A		382	41C-42A-42C	
245	2A-4A-12A-30A		383	41D-42C	
246	2A-4A-12B		384	48A-48C-66B	
247	2A-4A-4A-12A		385	48A-48C-66C	
248	2A-4A-4A-5A		386	48A-48D-66A	
249	2A-4A-5A-30A		387	48C-48C-66A	
250	2A-4A-5B	5CC-368	388	48C-48D	
251	2A-4A-7A-12A		389	48C-66A-66A-66A	
252	2A-4A-7A-7A		390	48E-66A	
253	2A-4A-7C		391	48F	
254	2A-5A-30A-66A	5CC-369	392	4A-48E	
255	2A-5A-48A-48A	5CC-370	393	4A-4A-5B-30A	
256	2A-5A-48A-66A	5CC-370	394	5A-48A-48C-66A	
257	2A-5A-48C	5CC-372	395	5A-48C-48C	
258	2A-5A-66A-66A	5CC-356	396	5A-48E	
259	2A-5A-66B	5CC-357	397	5B-30A-66A-66A	
260	2A-5A-66C	5CC-358	398	5B-66A-66B	
261	2A-5B-30A	5CC-374	399	5B-66A-66C	
262	2A-5B-66A	5CC-375	400	5A-48A-48D	
263	2A-66A-66A-66A	5CC-347	401	5A-48D-66A	
264	2A-66A-66A-71A		402	2A-12B-66A-66A	
265	2A-66A-66B	5CC-360	403	2A-7C-66A-66A	
266	2A-66A-66C	5CC-361	404	2A-7A-7A-66A-66A	
267	2A-66C-71A				
268	2A-66D	5CC-345			
269	2A-7A-12A-66A	5CC-362			
270	2A-7A-12B	5CC-378	6CC Downlink Carrier Aggregation		
271	2A-7A-66A-66A	5CC-404	Number	Combination	Covered by Measurement Superset
272	2C-12A-30A				
273	2C-5A-30A		405	2A-48E-66A	
274	2C-66A-66A		406	41C-42C-42C	
275	41A-41A-41C		407	13A-48E-66A	
276	41A-41D				

277	41A-42A-42C				
278	41A-42D				
279	41C-41C				
280	41C-42C	5CC-382			
281	41D-42A				
282	41E	5CC-337			
283	42A-42D				
284	42C-42C	5CC-380			
285	42E				
286	48A-48A-66A-66A				
287	48A-48A-66B				
288	48A-48A-66C				
289	48A-48C-66A	5CC-394			
290	48A-48D	5CC-400			
291	48A-66A-66A-66A				
292	48C-48C	5CC-395			
293	48C-66A-66A				
294	48C-66B	5CC-384			
295	48C-66C	5CC-385			
296	48D-66A	5CC-401			
297	48E	5CC-396			
298	4A-48D				
299	4A-4A-12A-12A				
300	4A-4A-12A-30A				
301	4A-4A-12B				
302	4A-4A-5A-30A				
303	4A-4A-5B	5CC-393			
304	4A-5B-30A	5CC-393			
305	5A-30A-66A-66A	5CC-369			
306	5A-48A-48A-66A	5CC-370			
307	5A-48A-48C	5CC-371			
308	5A-48C-66A	5CC-372			
309	5A-48D	5CC-373			
310	5A-5A-66A-66A				
311	5A-5A-66B				
312	5A-5A-66C				
313	5A-66A-66B				
314	5A-66A-66C				
315	5A-66D				
316	5B-30A-66A	5CC-397			
317	5B-66A-66A	5CC-397			
318	5B-66B	5CC-376			
319	5B-66C	5CC-377			
320	7A-12B-66A	5CC-378			
321	7C-66A-66A	5CC-403			
322	2A-12B-66A	5CC-350			
323	2A-7A-7A-66A	5CC-404			
324	2A-7C-66A	5CC-403			
325	2A-48A-66A-66A				
326	7A-7A-66A-66A	5CC-404			
327	2A-2A-7A-12A	5CC-362			
328	2A-7A-7A-13A				

<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		2	20	1860	18700	QPSK	1	0	17	10	740	5790	17.48	17.56
		4	20	1720	20050	QPSK	1	0	17	10	740	5790	17.05	17.15
		4	20	1720	20050	QPSK	1	0	48	20	3609	55830	17.11	17.15
		5	10	844	20600	QPSK	1	0	25	20	1960	8340	22.08	22.11
		5	10	844	20600	QPSK	1	0	38	20	2595	38000	22.06	22.11
		5	10	844	20600	QPSK	1	0	41	20	2593	40620	22.10	22.11
		7	20	2560	21350	QPSK	1	0	42	20	3575	43340	16.23	16.26
		12	10	707.5	23095	QPSK	1	0	25	20	1960	8340	22.01	22.02
		41	20	2549.5	40185	QPSK	1	0	48	20	3609	55830	18.19	18.27
Intra-Band	Contiguous	7	15	2535	21100	QPSK	1	0	7	5	2664.30	3193	16.17	16.25
		38	20	2580	37850	QPSK	1	0	38	20	2599.80	38048	18.24	18.27

<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	1860	18700	QPSK	1	0	4	20	2132.5	2175	13	10	751	5230	17.52	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	7	20	2655	3100	17.53	17.56
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	7	20	2655	3100	17.11	17.15
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	13	10	751	5230	17.12	17.15
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	71	20	637	68786	17.05	17.15
	4	20	1720	20050	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	17.11	17.15
	5	10	844	20600	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	22.07	22.11
	5	10	844	20600	QPSK	1	0	7	20	2655	3100	7	20	2674.8	3298	22.03	22.11
	25	20	1860	26140	QPSK	1	0	25	5	1992.5	8665	25	20	1985	8590	17.43	17.46
	25	20	1860	26140	QPSK	1	0	25	5	1992.5	8665	26	15	876.5	8865	17.36	17.46
	25	20	1860	26140	QPSK	1	0	25	5	1992.5	8665	41	20	2593	40620	17.40	17.46
	25	20	1860	26140	QPSK	1	0	26	15	876.5	8865	41	20	2593	40620	17.46	17.46
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	71	20	637	68786	20.70	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	71	20	637	68786	20.76	20.76

<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	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	12	10	737.5	5095	17.46	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	4	5	2112.5	1975	17.54	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	5	10	881.5	2525	17.47	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	71	20	637	68786	17.49	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	12	5	737.5	5095	12	5	731.5	5035	17.47	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	66	5	2112.5	66461	17.47	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	71	20	637	68786	17.46	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	4	5	2112.5	1975	5	10	881.5	2525	17.55	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	4	5	2112.5	1975	12	10	737.5	5095	17.51	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	30	10	9820	2355	17.47	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	7	5	2622.5	2775	17.56	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	12	10	737.5	5095	17.49	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	7	20	2674.8	3298	17.54	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	12	5	737.5	5095	12	5	731.5	5035	17.51	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	12	10	737.5	5095	30	10	9820	2355	17.52	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	12	5	737.5	5095	12	10	744.7	5167	17.49	17.56
	2	20	1860	18700	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	66	20	2174.8	67084	17.56	17.56
	2	20	1860	18700	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	13	10	751	5230	17.53	17.56
	2	20	1860	18700	QPSK	1	0	48	20	3697.5	56715	66	20	2155	66886	66	5	2112.5	66461	17.53	17.56
	2	20	1860	18700	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	71	20	637	68786	17.53	17.56
	2	20	1860	18700	QPSK	1	0	66	20	2155	66886	66	20	2174.8	67084	71	20	637	68786	17.50	17.56
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	5	10	881.5	2525	30	10	9820	2355	17.46	17.56
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	12	10	737.5	5095	30	10	9820	2355	17.53	17.56
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	66	20	2155	66886	66	5	2112.5	66461	17.48	17.56
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	5	10	881.5	2525	30	10	9820	2355	17.12	17.15
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	12	5	737.5	5095	12	5	731.5	5035	17.12	17.15
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	12	10	737.5	5095	30	10	9820	2355	17.14	17.15
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	12	5	737.5	5095	12	10	744.7	5167	17.08	17.15
	4	20	1720	20050	QPSK	1	0	48	20	3697.5	56715	48	20	3717.3	56913	48	20	3737.1	57111	17.07	17.15
	5	10	844	20600	QPSK	1	0	5	5	871.5	2425	66	20	2155	66886	66	5	2112.5	66461	22.04	22.11
	5	10	844	20600	QPSK	1	0	5	5	871.5	2425	66	15	2155	66886	66	5	2164.3	66979	22.01	22.11
	5	10	844	20600	QPSK	1	0	5	5	871.5	2425	66	20	2155	66886	66	20	2174.8	67084	22.11	22.11

	5	10	844	20600	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	15	2121.8	66554	22.04	22.11
	5	10	844	20600	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	20	2124.2	66578	22.05	22.11
	5	10	844	20600	QPSK	1	0	66	20	2155	66886	66	20	2174.8	67084	66	20	2194.6	67282	22.01	22.11
	13	10	782	23230	QPSK	1	0	48	20	3697.5	56715	66	15	2155	66886	66	5	2164.3	66979	20.94	21.04
	13	10	782	23230	QPSK	1	0	48	20	3697.5	56715	66	20	2155	66886	66	20	2174.8	67084	21.00	21.04
	13	10	782	23230	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	20.98	21.04
	25	20	1860	26140	QPSK	1	0	25	5	1992.5	8665	41	20	2593	40620	41	20	2612.8	40818	17.41	17.46
	25	20	1860	26140	QPSK	1	0	26	15	1960	8340	41	20	2593	40620	41	20	2612.8	40818	17.43	17.46
	41	20	2549.5	40185	QPSK	1	0	41	5	2687.5	41565	41	20	2506	39750	41	20	2525.8	39948	18.20	18.27
	41	20	2549.5	40185	QPSK	1	0	41	5	2687.5	41565	41	20	2699.2	41682	41	20	2719	41880	18.17	18.27
	41	20	2549.5	40185	QPSK	1	0	42	20	3575	43340	42	5	3552.5	43115	42	20	3564.2	43232	18.24	18.27
	41	20	2549.5	40185	QPSK	1	0	42	20	3575	43340	42	20	3594.8	43538	42	20	3614.6	43736	18.27	18.27
	41	20	2549.5	40185	QPSK	1	0	41	20	2569.3	40383	41	5	2687.5	41565	41	20	2699.2	41682	18.25	18.27
	41	20	2549.5	40185	QPSK	1	0	41	20	2569.3	40383	41	20	2589.1	40581	42	20	3575	43340	18.26	18.27
	42	20	3590	43490	QPSK	1	0	42	5	3552.5	43115	42	20	3564.2	43232	42	20	3584	43430	22.56	22.64
	42	20	3590	43490	QPSK	1	0	42	20	3570.2	43292	42	20	3550.4	43094	42	20	3530.6	42896	22.55	22.64
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	66	20	2155	66886	66	5	2112.5	66461	20.69	20.76
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	66	15	2155	66886	66	5	2164.3	66979	20.71	20.76
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	66	20	2155	66886	66	20	2174.8	67084	20.69	20.76
	48	20	3609	55830	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	20.72	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	66	20	2155	66886	66	5	2112.5	66461	20.66	20.76

<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	1860	18700	QPSK	1	0	2	5	1987.5	1175	12	10	737.5	5095	30	10	2355	9820	66	20	2155	66886	17.47	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	12	10	737.5	5095	66	20	2155	66886	66	5	2112.5	66461	17.49	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	12	5	737.5	5095	12	10	744.7	5167	66	20	2155	66886	17.54	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	13	10	751	5230	66	20	2155	66886	66	5	2112.5	66461	17.53	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	13	10	751	5230	66	15	2155	66886	66	5	2164.3	66979	17.56	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	14	10	763	5330	30	10	2355	9820	66	20	2155	66886	17.54	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	14	10	763	5330	66	20	2155	66886	66	5	2112.5	66461	17.48	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	5	10	881.5	2525	30	10	2355	9820	66	20	2155	66886	17.48	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	5	10	881.5	2525	66	20	2155	66886	66	5	2112.5	66461	17.46	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	5	10	881.5	2525	66	15	2155	66886	66	5	2164.3	66979	17.52	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	5	10	881.5	2525	66	20	2155	66886	66	20	2174.8	67084	17.48	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	5	10	881.5	2525	5	10	891.4	2624	66	20	2155	66886	17.49	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	66	5	2112.5	66461	66	15	2121.8	66554	17.53	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	66	5	2112.5	66461	66	20	2124.2	66578	17.53	17.56
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	7	20	2655	3100	12	10	737.5	5095	66	20	2155	66886	17.53	17.56
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	17.56	17.56
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	17.56	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	17.53	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	48	20	3609	55830	48	5	3697.5	56715	66	20	2155	66886	17.56	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	17.55	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	48	20	3609	55830	48	20	3628.8	56028	66	20	2155	66886	17.55	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	17.49	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	66	20	2155	66886	17.47	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	66	20	2155	66886	66	5	2112.5	66461	17.56	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	66	15	2155	66886	66	5	2164.3	66979	17.51	17.56
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	66	20	2155	66886	66	20	2174.8	67084	17.56	17.56
	2	20	1860	18700	QPSK	1	0	7	20	2655	3100	12	5	737.5	5095	12	10	744.7	5167	66	20	2155	66886	17.46	17.56
	2	20	1860	18700	QPSK	1	0	7	20	2655	3100	7	20	2674.8	3298	66	20	2155	66886	66	5	2112.5	66461	17.46	17.56
	2	20	1860	18700	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	66	20	2155	66886	66	5	2112.5	66461	17.50	17.56
	2	20	1860	18700	QPSK	1	0	12	5	737.5	5095	12	10	744.7	5167	66	20	2155	66886	66	5	2112.5	66461	17.53	17.56

	2	20	1860	18700	QPSK	1	0	12	10	737.5	5095	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	17.50	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	48	20	3609	55830	48	5	3697.5	56715	66	20	2155	66886	17.55	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	17.53	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	48	20	3609	55830	48	20	3628.8	56028	66	20	2155	66886	17.47	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	17.51	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	66	20	2155	66886	66	5	2112.5	66461	66	15	2121.8	66554	17.48	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	66	20	2155	66886	66	5	2112.5	66461	66	20	2124.2	66578	17.54	17.56
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	66	20	2155	66886	66	20	2174.8	67084	66	20	2194.6	67282	17.52	17.56
	2	20	1860	18700	QPSK	1	0	14	10	763	5330	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	17.55	17.56
	2	20	1860	18700	QPSK	1	0	14	10	763	5330	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	17.56	17.56
	2	20	1860	18700	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	66	20	2155	66886	17.46	17.56
	2	20	1860	18700	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	48	20	3729	57030	17.52	17.56
	2	20	1860	18700	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	5	3697.5	56715	48	20	3709.2	56832	17.50	17.56
	2	20	1860	18700	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	66	20	2155	66886	17.56	17.56
	4	20	1720	20050	QPSK	1	0	4	5	2112.5	1975	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	17.05	17.15
	4	20	1720	20050	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3668.4	56424	17.09	17.15
	5	10	844	20600	QPSK	1	0	5	10	891.4	2624	66	20	2155	66886	66	5	2112.5	66461	66	15	2121.8	66554	22.06	22.11
	5	10	844	20600	QPSK	1	0	5	10	891.4	2624	66	20	2155	66886	66	5	2112.5	66461	66	20	2124.2	66578	22.07	22.11
	5	10	844	20600	QPSK	1	0	5	10	891.4	2624	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	22.02	22.11
	5	10	844	20600	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	66	20	2155	66886	22.05	22.11
	5	10	844	20600	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	5	3697.5	56715	48	20	3709.2	56832	22.06	22.11
	5	10	844	20600	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3668.4	56424	22.06	22.11
	5	10	844	20600	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	48	20	3729	57030	22.02	22.11
	5	10	844	20600	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	66	20	2155	66886	22.05	22.11
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	66	20	2155	66886	20.99	21.04
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	48	20	3729	57030	21.03	21.04
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	5	3697.5	56715	48	20	3709.2	56832	20.97	21.04
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	66	15	2155	66886	66	5	2164.3	66979	20.99	21.04
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	66	20	2155	66886	66	20	2174.8	67084	20.95	21.04
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	66	20	2155	66886	20.97	21.04
	25	20	1860	26140	QPSK	1	0	25	5	1932.5	8065	41	20	2593	40620	41	20	2612.8	40818	41	20	2632.6	41016	17.36	17.46
	25	20	1860	26140	QPSK	1	0	41	20	2593	40620	41	20	2612.8	40818	41	20	2632.6	41016	41	20	2652.4	41214	17.41	17.46
	41	20	2549.5	40185	QPSK	1	0	41	20	2569.3	40383	41	5	2687.5	41565	41	20	2667.7	41367	41	20	2647.9	41169	18.24	18.27
	41	20	2549.5	40185	QPSK	1	0	41	20	2569.3	40383	42	20	3575	43340	42	5	3552.5	43115	42	20	3564.2	43232	18.20	18.27
	41	20	2549.5	40185	QPSK	1	0	41	20	2569.3	40383	41	20	2589.1	40581	42	20	3575	43340	42	20	3594.8	43538	18.25	18.27
	41	20	2549.5	40185	QPSK	1	0	42	20	3575	43340	42	20	3594.8	43538	42	5	3552.5	43115	42	20	3564.2	43232	18.26	18.27
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	48	20	3709.2	56832	66	15	2155	66886	66	5	2164.3	66979	20.69	20.76
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	48	20	3709.2	56832	66	20	2155	66886	66	20	2174.8	67084	20.69	20.76
	48	20	3609	55830	QPSK	1	0	48	5	3697.5	56715	48	20	3709.2	56832	48	20	3729	57030	66	20	2155	66886	20.69	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	48	5	3697.5	56715	48	20	3709.2	56832	66	20	2155	66886	20.70	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	48	5	3697.5	56715	48	20	3709.2	56832	48	20	3729	57030	20.74	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	20.76	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3668.4	56424	66	20	2155	66886	20.73	20.76
	48	20	3609	55830	QPSK	1	0	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3668.4	56424	48	20	3688.2	56622	20.70	20.76

<Six Carrier power verification>

Configure	PCC							SCC1				SCC2				SCC3				SCC4				SCC5				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	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	2	20	1860	18700	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3648.6	56226	66	20	2155	66886	17.47	17.56
	13	10	782	23230	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3648.6	56226	66	20	2155	66886	20.99	21.04
	41	20	2549.5	40185	QPSK	1	0	41	20	2569.3	40383	42	20	3575	43340	42	20	3594.8	43538	42	5	3552.5	43115	42	20	3564.2	43232	18.23	18.27

<LTE Uplink carrier aggregation>

2CC Uplink Carrier Aggregation	
Number	Combination
1	5B
2	7C
3	66B
4	66C
5	38C
6	41C
7	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.

<Notebook Mode Power>

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	22.23	22.9
20525	20426	QPSK	1	0	1	49	2	0	22.36	22.9
20600	20501	QPSK	1	0	1	49	2	0	22.35	22.9

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	14.33	16.9
21100	20902	QPSK	1	0	1	99	2	0	14.47	16.9
21350	21152	QPSK	1	0	1	99	2	0	14.43	16.9

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	16.83	17.7
132322	132229	QPSK	1	0	1	24	2	0	16.95	17.7
132572	132479	QPSK	1	0	1	24	2	0	17.07	17.7

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	17.43	17.7
132322	132124	QPSK	1	0	1	99	2	0	17.49	17.7
132572	132374	QPSK	1	0	1	99	2	0	17.56	17.7

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	18.12	18.6
37901	38099	QPSK	1	0	0	0	1	0	18.03	18.6
38150	37952	QPSK	1	0	1	99	2	0	18.14	18.6

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	18.28	18.6
40185	39987	QPSK	1	0	1	99	2	0	18.38	18.6
40620	40422	QPSK	1	0	1	99	2	0	18.45	18.6
41055	40857	QPSK	1	0	1	99	2	0	18.58	18.6
41490	41292	QPSK	1	0	1	99	2	0	18.56	18.6

CA_48C_Aux										
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	21.74	22
55830	55632	QPSK	1	0	1	99	2	0	21.65	22
56150	55952	QPSK	1	0	1	99	2	0	21.75	22
56640	56442	QPSK	1	0	1	99	2	0	21.78	22

<Tablet Mode Power>

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	17.78	19.7
20525	20426	QPSK	1	0	1	49	2	0	17.95	19.7
20600	20501	QPSK	1	0	1	49	2	0	17.94	19.7

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	12.26	12.7
21100	20902	QPSK	1	0	1	99	2	0	12.37	12.7
21350	21152	QPSK	1	0	1	99	2	0	12.61	12.7

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	13.45	14.3
132322	132229	QPSK	1	0	1	24	2	0	13.49	14.3
132572	132479	QPSK	1	0	1	24	2	0	13.56	14.3

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	13.84	14.3
132322	132124	QPSK	1	0	1	99	2	0	13.95	14.3
132572	132374	QPSK	1	0	1	99	2	0	13.92	14.3

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	14.62	15
37901	38099	QPSK	1	0	0	0	1	0	14.68	15
38150	37952	QPSK	1	0	1	99	2	0	14.73	15

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	14.63	15
40185	39987	QPSK	1	0	1	99	2	0	14.67	15
40620	40422	QPSK	1	0	1	99	2	0	14.58	15
41055	40857	QPSK	1	0	1	99	2	0	14.62	15
41490	41292	QPSK	1	0	1	99	2	0	14.66	15

CA_48C_Aux										
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	16.08	16.6
55830	55632	QPSK	1	0	1	99	2	0	16.23	16.6
56150	55952	QPSK	1	0	1	99	2	0	16.03	16.6
56640	56442	QPSK	1	0	1	99	2	0	16.22	16.6

14. 5G NR Output Power (Unit: dBm)

General Note:

1. NR implementation of n2, n5, n7, n12, n41 and n66 is limited to EN-DC operations only (NSA), with LTE Bands 2/5/7/12/13/41/48/66/71 acting as anchor bands, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors. The detail EN-DC combination as below.
2. Following 5G NR support SCS 15KHz / 30KHz, DFT-s/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM/256QAM and support Bandwidth include as below EN-DC combination.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM measurement is unnecessary.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, full measurement on Pi/2 BPSK and QPSK, for16QAM/64QMA/256QAM spot check 1RB 1offset configuration to ensure the output power will not ½ dB higher than Pi/2 BPSK and QPSK, for smaller bandwidth output power will spot check 1RB 1offset configuration at Pi/2 BPSK to ensure output power will not ½ dB higher than largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   d. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   e. PI/2 BPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   f. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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

<EN-DC Combination>

	5G FR1	LTE Anchors Bands
ENDC	n2 (SCS: 15kHz), BW: 5/10/15/20	5/12/13/30/48/66
	n5 (SCS: 15kHz), BW: 5/10/15/20	2/7/12/48/66
	n7 (SCS: 15kHz), BW: 5/10/15/20	5/12
	n12 (SCS: 15kHz), BW: 5/10/15	2/66
	n41 (SCS: 30kHz), BW: 20/40/50/60/80/90/100	2/25/26/41/66
	66 (SCS: 15kHz), BW: 5/10/15/20	5/12/13/30/48/71

<Notebook Mode Power>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	16.78	16.73	16.61	17.5	0.0
20	PI/2 BPSK	1	53	16.72	16.63	16.60		
20	PI/2 BPSK	1	104	16.71	16.63	16.58		
20	PI/2 BPSK	50	0	16.78	16.69	16.57	17.5	0.0
20	PI/2 BPSK	50	28	16.71	16.67	16.57		
20	PI/2 BPSK	50	56	16.71	16.65	16.54		
20	PI/2 BPSK	100	0	16.71	16.64	16.54	17.5	0.0
20	QPSK	1	1	16.76	16.73	16.67	17.5	0.0
20	QPSK	1	53	16.71	16.62	16.57		
20	QPSK	1	104	16.68	16.63	16.59		
20	QPSK	50	0	16.69	16.62	16.58	17.5	0.0
20	QPSK	50	28	16.65	16.66	16.59		
20	QPSK	50	56	16.70	16.65	16.54		
20	QPSK	100	0	16.60	16.59	16.52	17.5	0.0
20	16QAM	1	1	16.57	16.57	16.48	17.5	0.0
20	64QAM	1	1	16.63	16.54	16.42	17.5	0.0
20	256QAM	1	1	16.69	16.65	16.52	17.5	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	16.86	16.71	16.67	17.5	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	16.71	16.54	16.53	17.5	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	16.62	16.56	16.48	17.5	0.0

<n2 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	23.70	23.26	23.59	24.0	0.0
20	PI/2 BPSK	1	53	23.69	23.19	23.50		
20	PI/2 BPSK	1	104	23.65	23.24	23.56		
20	PI/2 BPSK	50	0	23.67	23.26	23.51	24.0	0.0
20	PI/2 BPSK	50	28	23.62	23.22	23.59		
20	PI/2 BPSK	50	56	23.60	23.23	23.58		
20	PI/2 BPSK	100	0	23.07	22.67	22.99	23.5	0.5
20	QPSK	1	1	23.68	23.26	23.53	24.0	0.0
20	QPSK	1	53	23.63	23.16	23.46		
20	QPSK	1	104	23.58	23.24	23.55		
20	QPSK	50	0	23.65	23.24	23.45	24.0	0.0
20	QPSK	50	28	23.60	23.17	23.52		
20	QPSK	50	56	23.53	23.15	23.50		
20	QPSK	100	0	22.50	22.06	22.50	23.0	1.0
20	16QAM	1	1	22.52	22.14	22.50	23.0	1.0
20	64QAM	1	1	20.93	20.56	20.97	21.5	2.5
20	256QAM	1	1	18.93	18.56	18.97	19.5	4.5
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	23.63	23.26	23.55	24.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	23.68	23.21	23.49	24.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	23.67	23.24	23.53	24.0	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	21.95	21.98	21.91	22.6	0.0
20	PI/2 BPSK	1	53	21.83	21.94	21.85		
20	PI/2 BPSK	1	104	21.55	21.68	21.60		
20	PI/2 BPSK	50	0	21.75	21.87	21.73	22.6	0.0
20	PI/2 BPSK	50	28	21.69	21.82	21.70		
20	PI/2 BPSK	50	56	21.67	21.74	21.63		
20	PI/2 BPSK	100	0	21.64	21.76	21.59	22.6	0.0
20	QPSK	1	1	21.85	21.94	21.82	22.6	0.0
20	QPSK	1	53	21.89	21.92	21.78		
20	QPSK	1	104	21.55	21.65	21.57		
20	QPSK	50	0	21.72	21.84	21.77	22.6	0.0
20	QPSK	50	28	21.66	21.75	21.68		
20	QPSK	50	56	21.61	21.66	21.57		
20	QPSK	100	0	21.61	21.74	21.62	22.6	0.0
20	16QAM	1	1	21.56	21.64	21.47	22.6	0.0
20	64QAM	1	1	20.38	20.45	20.30	21.5	1.1
20	256QAM	1	1	18.95	19.02	18.89	19.5	3.1
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	21.88	21.80	21.74	22.6	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	21.75	21.63	21.48	22.6	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	21.81	21.68	21.57	22.6	0.0

<n7_Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI/2 BPSK	1	1	22.83	22.64	22.58	24.0	0.0
20	PI/2 BPSK	1	53	22.83	22.60	22.55		
20	PI/2 BPSK	1	104	22.77	22.58	22.52		
20	PI/2 BPSK	50	0	22.80	22.62	22.50	24.0	0.0
20	PI/2 BPSK	50	28	22.82	22.56	22.56		
20	PI/2 BPSK	50	56	22.79	22.57	22.55		
20	PI/2 BPSK	100	0	22.27	22.07	22.04	23.5	0.5
20	QPSK	1	1	22.79	22.57	22.52	24.0	0.0
20	QPSK	1	53	22.78	22.59	22.56		
20	QPSK	1	104	22.78	22.54	22.57		
20	QPSK	50	0	22.77	22.64	22.48	24.0	0.0
20	QPSK	50	28	22.83	22.55	22.57		
20	QPSK	50	56	22.81	22.55	22.56		
20	QPSK	100	0	21.80	21.53	21.46	23.0	1.0
20	16QAM	1	1	21.74	21.48	21.46	23.0	1.0
20	64QAM	1	1	20.28	19.96	20.04	21.5	2.5
20	256QAM	1	1	18.26	18.01	18.00	19.5	4.5
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI/2 BPSK	1	1	22.77	22.57	22.58	24.0	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	22.81	22.61	22.56	24.0	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI/2 BPSK	1	1	22.79	22.56	22.52	24.0	0.0

<n12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				141300	141500	141700		
Frequency (MHz)				706.5	707.5	708.5		
15	PI/2 BPSK	1	1	20.55	20.53	20.50	21.6	0.0
15	PI/2 BPSK	1	40	20.33	20.33	20.26		
15	PI/2 BPSK	1	77	20.22	20.25	20.20		
15	PI/2 BPSK	36	0	20.40	20.41	20.32	21.6	0.0
15	PI/2 BPSK	36	22	20.40	20.38	20.26		
15	PI/2 BPSK	36	43	20.32	20.33	20.25		
15	PI/2 BPSK	75	0	20.30	20.35	20.32	21.6	0.0
15	QPSK	1	1	20.48	20.51	20.38	21.6	0.0
15	QPSK	1	40	20.28	20.34	20.27		
15	QPSK	1	77	20.28	20.26	20.23		
15	QPSK	36	0	20.42	20.41	20.28	21.6	0.0
15	QPSK	36	22	20.32	20.37	20.33		
15	QPSK	36	43	20.24	20.31	20.23		
15	QPSK	75	0	20.31	20.31	20.20	21.6	0.0
15	16QAM	1	1	20.51	20.52	20.39	21.6	0.0
15	64QAM	1	1	20.55	20.55	20.45	21.6	0.1
15	256QAM	1	1	18.48	18.54	18.50	19.5	2.1
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	20.32	20.35	20.27	21.6	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	20.33	20.45	20.30	21.6	0.0

<n41_Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	22.92	23.91	23.98	24.0	0.0
100	PI/2 BPSK	1	137	22.84	23.89	23.89		
100	PI/2 BPSK	1	271	22.83	23.85	23.88		
100	PI/2 BPSK	135	0	22.89	23.84	23.92	24.0	0.0
100	PI/2 BPSK	135	69	22.87	23.87	23.94		
100	PI/2 BPSK	135	138	22.85	23.83	23.96		
100	PI/2 BPSK	270	0	22.32	23.31	23.36	23.5	0.5
100	QPSK	1	1	22.86	23.87	23.94	24.0	0.0
100	QPSK	1	137	22.84	23.79	23.79		
100	QPSK	1	271	22.75	23.81	23.79		
100	QPSK	135	0	22.83	23.75	23.88	24.0	0.0
100	QPSK	135	69	22.79	23.85	23.88		
100	QPSK	135	138	22.79	23.83	23.92		
100	QPSK	270	0	21.69	22.76	22.91	23.0	1.0
100	16QAM	1	1	21.74	22.73	22.90	23.0	1.0
100	64QAM	1	1	20.26	21.24	21.34	21.5	2.5
100	256QAM	1	1	18.26	19.24	19.34	19.5	4.5
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI/2 BPSK	1	1	22.86	23.82	23.93	24.0	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI/2 BPSK	1	1	22.91	23.89	23.91	24.0	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	PI/2 BPSK	1	1	22.86	23.88	23.89	24.0	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI/2 BPSK	1	1	22.91	23.84	23.96	24.0	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI/2 BPSK	1	1	22.87	23.84	23.93	24.0	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI/2 BPSK	1	1	22.84	23.85	23.95	24.0	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	17.03	17.15	17.05	17.7	0.0
20	PI/2 BPSK	1	53	16.87	17.08	16.95		
20	PI/2 BPSK	1	104	16.84	17.02	16.91		
20	PI/2 BPSK	50	0	16.90	17.07	16.95	17.7	0.0
20	PI/2 BPSK	50	28	16.87	17.06	16.90		
20	PI/2 BPSK	50	56	16.85	17.05	16.88		
20	PI/2 BPSK	100	0	16.85	17.02	16.92	17.7	0.0
20	QPSK	1	1	16.95	17.12	17.00	17.7	0.0
20	QPSK	1	53	16.91	17.05	16.93		
20	QPSK	1	104	16.91	17.03	16.89		
20	QPSK	50	0	16.84	17.05	16.87	17.7	0.0
20	QPSK	50	28	16.94	17.08	16.97		
20	QPSK	50	56	16.87	17.06	16.94		
20	QPSK	100	0	16.80	17.01	16.81	17.7	0.0
20	16QAM	1	1	16.93	17.06	16.94	17.7	0.0
20	64QAM	1	1	16.87	17.05	16.91	17.7	0.0
20	256QAM	1	1	16.80	17.02	16.85	17.7	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	17.02	17.09	17.03	17.7	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	16.88	16.93	16.90	17.7	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	16.90	16.92	16.88	17.7	0.0

<n66 Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	23.25	23.12	23.45	24.0	0.0
20	PI/2 BPSK	1	53	23.17	23.03	23.39		
20	PI/2 BPSK	1	104	23.23	23.11	23.38		
20	PI/2 BPSK	50	0	23.25	23.09	23.37	24.0	0.0
20	PI/2 BPSK	50	28	23.22	23.08	23.37		
20	PI/2 BPSK	50	56	23.18	23.02	23.40		
20	PI/2 BPSK	100	0	22.68	22.43	22.87	23.5	0.5
20	QPSK	1	1	23.19	23.09	23.44	24.0	0.0
20	QPSK	1	53	23.10	22.99	23.30		
20	QPSK	1	104	23.14	23.06	23.37		
20	QPSK	50	0	23.17	23.01	23.37	24.0	0.0
20	QPSK	50	28	23.21	22.98	23.30		
20	QPSK	50	56	23.10	22.97	23.30		
20	QPSK	100	0	22.03	21.92	22.20	23.0	1.0
20	16QAM	1	1	22.01	21.93	22.29	23.0	1.0
20	64QAM	1	1	20.58	20.39	20.78	21.5	2.5
20	256QAM	1	1	18.58	18.39	18.78	19.5	4.5
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	23.23	23.05	23.40	24.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	23.21	23.12	23.42	24.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	23.25	23.09	23.43	24.0	0.0

<Tablet Mode Power>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	13.77	13.70	13.63	14.2	0.0
20	PI/2 BPSK	1	53	13.67	13.65	13.51		
20	PI/2 BPSK	1	104	13.74	13.61	13.52		
20	PI/2 BPSK	50	0	13.84	13.79	13.72	14.2	0.0
20	PI/2 BPSK	50	28	13.80	13.75	13.61		
20	PI/2 BPSK	50	56	13.28	13.30	13.22		
20	PI/2 BPSK	100	0	13.51	13.45	13.38	14.2	0.0
20	QPSK	1	1	14.01	14.03	13.86	14.2	0.0
20	QPSK	1	53	13.78	13.77	13.70		
20	QPSK	1	104	13.86	13.80	13.64		
20	QPSK	50	0	13.86	13.81	13.67	14.2	0.0
20	QPSK	50	28	13.84	13.82	13.66		
20	QPSK	50	56	13.72	13.74	13.58		
20	QPSK	100	0	13.73	13.76	13.64	14.2	0.0
20	16QAM	1	1	13.62	13.60	13.45	14.2	0.0
20	64QAM	1	1	13.76	13.71	13.55	14.2	0.0
20	256QAM	1	1	13.81	13.74	13.61	14.2	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	13.73	13.70	13.55	14.2	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	13.77	13.70	13.62	14.2	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	13.74	13.65	13.63	14.2	0.0

<n2_Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	15.47	15.34	15.55	15.7	0.0
20	PI/2 BPSK	1	53	15.43	15.37	15.52		
20	PI/2 BPSK	1	104	15.41	15.30	15.47		
20	PI/2 BPSK	50	0	15.47	15.34	15.54	15.7	0.0
20	PI/2 BPSK	50	28	15.40	15.33	15.50		
20	PI/2 BPSK	50	56	15.37	15.30	15.41		
20	PI/2 BPSK	100	0	15.32	15.28	15.45	15.7	0.0
20	QPSK	1	1	15.47	15.36	15.54	15.7	0.0
20	QPSK	1	53	15.43	15.36	15.48		
20	QPSK	1	104	15.42	15.32	15.45		
20	QPSK	50	0	15.34	15.29	15.49	15.7	0.0
20	QPSK	50	28	15.34	15.31	15.49		
20	QPSK	50	56	15.32	15.28	15.48		
20	QPSK	100	0	15.34	15.25	15.42	15.7	0.0
20	16QAM	1	1	15.46	15.35	15.56	15.7	0.0
20	64QAM	1	1	15.41	15.36	15.52	15.7	0.0
20	256QAM	1	1	15.45	15.32	15.50	15.7	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	15.42	15.30	15.50	15.7	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	15.38	15.25	15.45	15.7	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	15.39	15.23	15.48	15.7	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	19.06	18.96	18.90	19.7	0.0
20	PI/2 BPSK	1	53	18.99	18.88	18.83		
20	PI/2 BPSK	1	104	18.57	18.52	18.45		
20	PI/2 BPSK	50	0	18.78	18.71	18.57	19.7	0.0
20	PI/2 BPSK	50	28	18.78	18.69	18.56		
20	PI/2 BPSK	50	56	18.71	18.64	18.56		
20	PI/2 BPSK	100	0	18.79	18.69	18.54	19.7	0.0
20	QPSK	1	1	18.77	18.75	18.63	19.7	0.0
20	QPSK	1	53	18.99	18.93	18.87		
20	QPSK	1	104	18.69	18.63	18.53		
20	QPSK	50	0	18.86	18.75	18.67	19.7	0.0
20	QPSK	50	28	18.73	18.71	18.64		
20	QPSK	50	56	18.53	18.51	18.38		
20	QPSK	100	0	18.64	18.63	18.49	19.7	0.0
20	16QAM	1	1	18.96	18.92	18.82	19.7	0.0
20	64QAM	1	1	18.85	18.74	18.68	19.7	0.0
20	256QAM	1	1	18.71	18.61	18.48	19.5	0.2
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	18.87	18.80	18.76	19.7	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	18.71	18.65	18.49	19.7	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	18.75	18.67	18.58	19.7	0.0

<n7_Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000		
Frequency (MHz)				2510	2535	2560		
20	PI/2 BPSK	1	1	13.40	13.45	13.39	13.8	0.0
20	PI/2 BPSK	1	53	13.37	13.39	13.36		
20	PI/2 BPSK	1	104	13.34	13.43	13.38		
20	PI/2 BPSK	50	0	13.34	13.39	13.34	13.8	0.0
20	PI/2 BPSK	50	28	13.28	13.38	13.27		
20	PI/2 BPSK	50	56	13.27	13.35	13.27		
20	PI/2 BPSK	100	0	13.29	13.37	13.34	13.8	0.0
20	QPSK	1	1	13.37	13.44	13.40	13.8	0.0
20	QPSK	1	53	13.38	13.41	13.29		
20	QPSK	1	104	13.34	13.40	13.30		
20	QPSK	50	0	13.24	13.35	13.31	13.8	0.0
20	QPSK	50	28	13.30	13.33	13.25		
20	QPSK	50	56	13.23	13.34	13.29		
20	QPSK	100	0	13.26	13.35	13.23	13.8	0.0
20	16QAM	1	1	13.27	13.38	13.27	13.8	0.0
20	64QAM	1	1	13.26	13.36	13.25	13.8	0.0
20	256QAM	1	1	13.32	13.34	13.23	13.8	0.0
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI/2 BPSK	1	1	13.30	13.35	13.35	13.8	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	13.28	13.30	13.25	13.8	0.0
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	PI/2 BPSK	1	1	13.25	13.31	13.29	13.8	0.0

<n12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				141300	141500	141700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	707.5	708.5		
15	PI/2 BPSK	1	1	16.55	16.54	16.51	17.6	0.0
15	PI/2 BPSK	1	40	16.24	16.23	16.14		
15	PI/2 BPSK	1	77	16.09	16.10	16.07		
15	PI/2 BPSK	36	0	16.22	16.23	16.10	17.6	0.0
15	PI/2 BPSK	36	22	16.16	16.20	16.08		
15	PI/2 BPSK	36	43	16.15	16.15	16.07		
15	PI/2 BPSK	75	0	16.19	16.21	16.11	17.6	0.0
15	QPSK	1	1	16.41	16.41	16.33	17.6	0.0
15	QPSK	1	40	16.24	16.25	16.21		
15	QPSK	1	77	16.11	16.12	16.07		
15	QPSK	36	0	16.20	16.22	16.17	17.6	0.0
15	QPSK	36	22	16.15	16.19	16.11		
15	QPSK	36	43	16.06	16.12	16.04		
15	QPSK	75	0	16.15	16.16	16.09	17.6	0.0
15	16QAM	1	1	16.32	16.36	16.31	17.6	0.0
15	64QAM	1	1	16.08	16.14	16.03	17.6	0.0
15	256QAM	1	1	15.86	15.88	15.82	17.6	0.0
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	16.39	16.41	16.36	17.6	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	16.42	16.48	16.39	17.6	0.0

<n41_Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	11.18	11.56	11.63	12.6	0.0
100	PI/2 BPSK	1	137	11.16	11.55	11.62		
100	PI/2 BPSK	1	271	11.15	11.52	11.58		
100	PI/2 BPSK	135	0	11.08	11.55	11.62	12.6	0.0
100	PI/2 BPSK	135	69	11.08	11.53	11.59		
100	PI/2 BPSK	135	138	11.03	11.52	11.56		
100	PI/2 BPSK	270	0	11.07	11.53	11.54	12.6	0.0
100	QPSK	1	1	11.06	11.54	11.51	12.6	0.0
100	QPSK	1	137	11.14	11.58	11.56		
100	QPSK	1	271	11.05	11.53	11.50		
100	QPSK	135	0	11.18	11.56	11.54	12.6	0.0
100	QPSK	135	69	11.06	11.50	11.52		
100	QPSK	135	138	11.13	11.51	11.55		
100	QPSK	270	0	11.09	11.52	11.55	12.6	0.0
100	16QAM	1	1	11.07	11.53	11.51	12.6	0.0
100	64QAM	1	1	11.15	11.56	11.54	12.6	0.0
100	256QAM	1	1	11.14	11.54	11.53	12.6	0.0
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	PI/2 BPSK	1	1	11.15	11.55	11.56	12.6	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	PI/2 BPSK	1	1	11.25	11.50	11.53	12.6	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	PI/2 BPSK	1	1	11.22	11.52	11.48	12.6	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	PI/2 BPSK	1	1	11.15	11.48	11.53	12.6	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	PI/2 BPSK	1	1	11.13	11.49	11.51	12.6	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	PI/2 BPSK	1	1	11.10	11.45	11.52	12.6	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	13.77	14.00	13.77	14.3	0.0
20	PI/2 BPSK	1	53	13.50	13.65	13.51		
20	PI/2 BPSK	1	104	13.63	13.80	13.60		
20	PI/2 BPSK	50	0	13.60	13.78	13.56	14.3	0.0
20	PI/2 BPSK	50	28	13.46	13.71	13.54		
20	PI/2 BPSK	50	56	13.53	13.73	13.57		
20	PI/2 BPSK	100	0	13.57	13.73	13.56	14.3	0.0
20	QPSK	1	1	13.63	13.78	13.61	14.3	0.0
20	QPSK	1	53	13.67	13.87	13.72		
20	QPSK	1	104	13.58	13.81	13.60		
20	QPSK	50	0	13.51	13.70	13.52	14.3	0.0
20	QPSK	50	28	13.52	13.75	13.59		
20	QPSK	50	56	13.54	13.70	13.53		
20	QPSK	100	0	13.52	13.67	13.50	14.3	0.0
20	16QAM	1	1	13.64	13.89	13.67	14.3	0.0
20	64QAM	1	1	13.51	13.66	13.44	14.3	0.0
20	256QAM	1	1	13.40	13.65	13.44	14.3	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	13.48	13.56	13.46	14.3	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	13.45	13.51	13.42	14.3	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	13.49	13.52	13.45	14.3	0.0

<n66_Aux>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				344000	349000	354000	
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	15.55	15.70	15.40	16.3
20	PI/2 BPSK	1	53	15.54	15.62	15.37	
20	PI/2 BPSK	1	104	15.60	15.65	15.42	
20	PI/2 BPSK	50	0	15.57	15.65	15.35	16.3
20	PI/2 BPSK	50	28	15.47	15.62	15.29	
20	PI/2 BPSK	50	56	15.46	15.63	15.36	
20	PI/2 BPSK	100	0	15.50	15.59	15.25	16.3
20	QPSK	1	1	15.53	15.68	15.40	16.3
20	QPSK	1	53	15.55	15.71	15.45	
20	QPSK	1	104	15.59	15.72	15.41	
20	QPSK	50	0	15.51	15.60	15.25	16.3
20	QPSK	50	28	15.45	15.58	15.23	
20	QPSK	50	56	15.42	15.57	15.24	
20	QPSK	100	0	15.43	15.55	15.28	16.3
20	16QAM	1	1	15.52	15.60	15.26	16.3
20	64QAM	1	1	15.48	15.62	15.28	16.3
20	256QAM	1	1	15.44	15.62	15.31	16.3
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	15.51	15.60	15.48	16.3
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	15.41	15.55	15.45	16.3
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	15.42	15.53	15.47	16.3

15. Antenna Location

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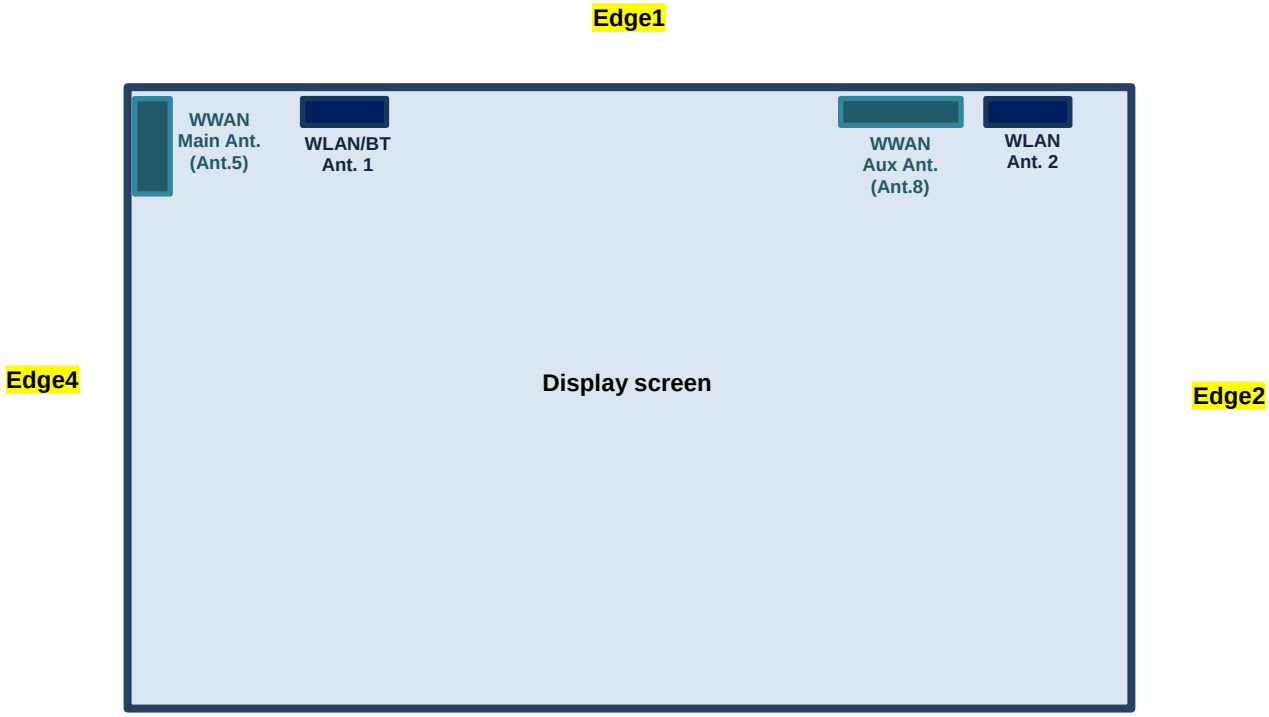

Front View

WWAN Antennas	Support Bands
WWAN Main	WCDMA II/IV/V, LTE B2/4/5/7/12/13/14/17/25/26/30/38/41/66/71 5GNR n2/n5/n12/n66
WWAN Aux.	LTE B2/7/42/48/66 5GNR n2/n7/n41/n66

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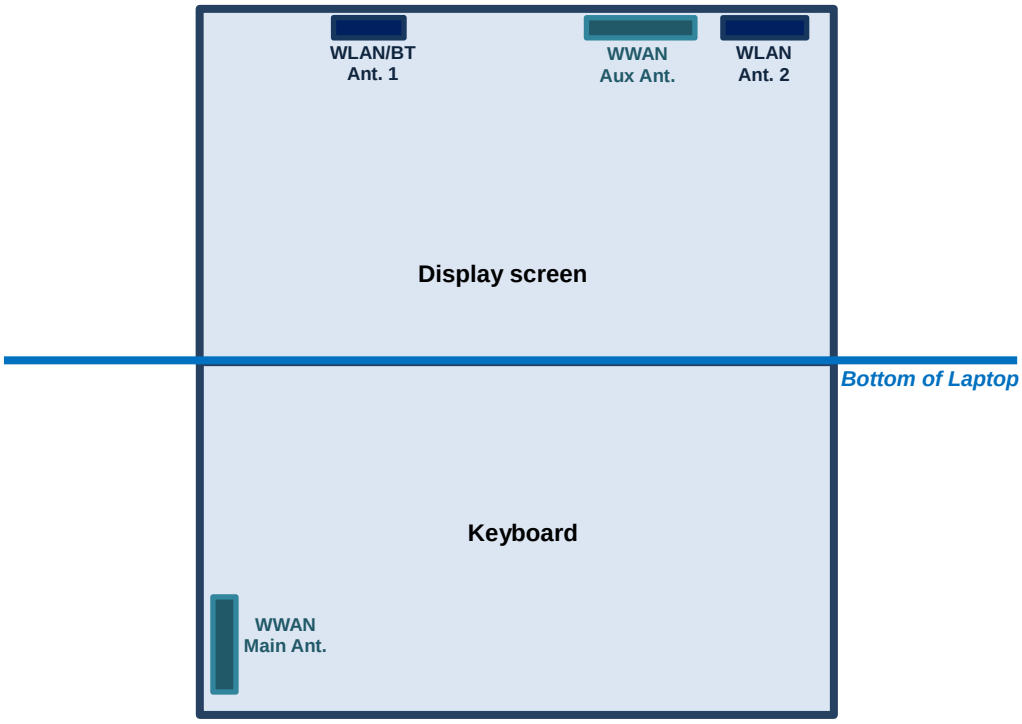

The separation distance for antenna to edge :

Antenna	To Bottom of Laptop (mm)
WWAN Main Ant.	<25
WWAN Aux Ant.	>25

WWAN Antennas	Support Bands
WWAN Main	WCDMA II/IV/V, LTE B2/4/5/7/12/13/14/17/25/26/30/38/41/66/71 5GNR n2/n5/n12/n66
WWAN Aux.	LTE B2/7/42/48/66 5GNR n2/n7/n41/n66

<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

<Main Ant>

	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 14	LTE Band 71	LTE Band 12/17	LTE Band 13	LTE Band 5/26	LTE Band 4/66	LTE Band 2	LTE Band 25	LTE Band 30	LTE Band 7	LTE Band 38/41	FR1 n2	FR1 n5	FR1 n12	FR1 n66
Exposure Position	Calculated Frequency	846MHz	1750MHz	1907MHz	795MHz	695MHz	715MHz	784MHz	848MHz	1779MHz	1909MHz	1914MHz	2312MHz	2567MHz	2687MHz	1907MHz	847MHz	713MHz	1778MHz
	Maximum power (dBm)	23.0	18	18.4	22.3	24.5	22.9	22	22.9	17.7	17.8	17.8	18.8	16.9	18.6	17.5	22.6	21.6	17.7
	Maximum rated power(mW)	200.0	63.0	69.0	170.0	282.0	195.0	158.0	195.0	59.0	60.0	60.0	76.0	49.0	72.0	56.0	182.0	145.0	59.0
Bottom Face	Separation distance(mm)	5.0																	
	exclusion threshold	36.8	16.7	19.1	30.3	47.0	33.0	28.0	35.9	15.7	16.6	16.6	23.1	15.7	23.6	15.5	33.5	24.5	15.7
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	5.0																	
	exclusion threshold	36.8	16.7	19.1	30.3	47.0	33.0	28.0	35.9	15.7	16.6	16.6	23.1	15.7	23.6	15.5	33.5	24.5	15.7
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	290.0																	
	exclusion threshold	1517.0	2513.0	2509.0	1525.0	1292.0	1321.0	1310.0	1417.0	1469.0	1465.0	2508.0	2499.0	2494.0	2492.0	2509.0	2563.0	2578.0	2512.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 3	Separation distance(mm)	122.0																	
	exclusion threshold	569.0	833.0	829.0	575.0	514.0	521.0	512.0	539.0	520.0	516.0	828.0	819.0	814.0	812.0	829.0	883.0	898.0	832.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	5.0																	
	exclusion threshold	36.8	16.7	19.1	30.3	47.0	33.0	28.0	35.9	15.7	16.6	16.6	23.1	15.7	23.6	15.5	33.5	24.5	15.7
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom of Laptop	Separation distance(mm)	5.0																	
	exclusion threshold	36.8	16.7	19.1	30.3	47.0	33.0	28.0	35.9	15.7	16.6	16.6	23.1	15.7	23.6	15.5	33.5	24.5	15.7
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

<Aux Ant>

Exposure Position	Wireless Interface	LTE Band 42	LTE Band 48	LTE Band 66	LTE Band 2	LTE Band 7	FR1 n2	FR1 n7	FR1 n41	FR1 n66
	Calculated Frequency	3597MHz	3697MHz	1779MHz	1909MHz	2567MHz	1907MHz	2567MHz	2680MHz	1778MHz
	Maximum power (dBm)	24	22	24	24	24	24	24	24	24
	Maximum rated power(mW)	251.0	158.0	251.0	251.0	251.0	251.0	251.0	251.0	251.0
Bottom Face	Separation distance(mm)	13.5								
	exclusion threshold	35.3	22.5	24.8	25.7	29.8	25.7	29.8	30.4	24.8
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	5.0								
	exclusion threshold	95.2	60.8	67.0	69.4	80.4	69.3	80.4	82.2	66.9
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	49.4								
	exclusion threshold	9.6	6.2	6.8	7.0	8.1	7.0	8.1	8.3	6.8
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 3	Separation distance(mm)	188.6								
	exclusion threshold	1465.0	1464.0	1498.0	1495.0	1480.0	1495.0	1480.0	1478.0	1498.0
	Testing required?	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	203.5								
	exclusion threshold	1614.0	1613.0	1647.0	1644.0	1629.0	1644.0	1629.0	1627.0	1647.0
	Testing required?	No	No	No	No	No	No	No	No	No
Bottom of Laptop	Separation distance(mm)	198.0								
	exclusion threshold	1559.0	1558.0	1592.0	1589.0	1574.0	1589.0	1574.0	1572.0	1592.0
	Testing required?	No	No	No	No	No	No	No	No	No

16. 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.

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. If the LTE band was not tested, 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.

NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   c. PI/2 BPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   d. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device

16.1 Body SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Configure	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)
01	WCDMA II	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	9538	1907.6	18.26	18.40	1.033	-0.12	1.140	1.177
	WCDMA II	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	9262	1852.4	18.12	18.40	1.067	-0.09	0.989	1.055
	WCDMA II	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	9400	1880	18.04	18.40	1.086	-0.09	1.020	1.108
	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	Tablet	9538	1907.6	12.94	13.50	1.138	-0.07	0.718	0.817
	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	Tablet	9262	1852.4	12.86	13.50	1.159	-0.01	0.767	0.889
	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	Tablet	9400	1880	12.74	13.50	1.191	-0.01	0.940	1.120
	WCDMA II	RMC 12.2Kbps	Edge 1	0mm	Tablet	9538	1907.6	12.94	13.50	1.138	0.02	0.054	0.061
	WCDMA II	RMC 12.2Kbps	Edge 4	0mm	Tablet	9538	1907.6	12.94	13.50	1.138	-0.08	0.231	0.263
	WCDMA IV	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	1312	1712.4	17.50	18.00	1.122	-0.1	0.722	0.810
	WCDMA IV	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	1413	1732.6	17.44	18.00	1.138	-0.01	0.774	0.881
	WCDMA IV	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	1513	1752.6	17.45	18.00	1.135	-0.03	0.907	1.029
02	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	Tablet	1312	1712.4	13.39	14.20	1.205	-0.09	0.975	1.175
	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	Tablet	1413	1732.6	12.35	14.20	1.531	-0.05	0.752	1.151
	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	Tablet	1513	1752.6	13.38	14.20	1.208	-0.08	0.954	1.152
	WCDMA IV	RMC 12.2Kbps	Edge 1	0mm	Tablet	1312	1712.4	13.39	14.20	1.205	-0.04	0.052	0.063
	WCDMA IV	RMC 12.2Kbps	Edge 4	0mm	Tablet	1312	1712.4	13.39	14.20	1.205	-0.1	0.628	0.757
	WCDMA V	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	4233	846.6	22.75	23.00	1.059	-0.09	0.977	1.035
	WCDMA V	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	4132	826.4	22.70	23.00	1.072	-0.1	0.921	0.987
	WCDMA V	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	4182	836.4	22.68	23.00	1.076	-0.1	0.940	1.012
	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	Tablet	4233	846.6	18.83	19.60	1.194	-0.01	0.983	1.174
	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	Tablet	4132	826.4	18.75	19.60	1.216	-0.1	0.965	1.174
03	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	Tablet	4182	836.4	18.82	19.60	1.197	-0.02	0.988	1.182
	WCDMA V	RMC 12.2Kbps	Edge 1	0mm	Tablet	4233	846.6	18.83	19.60	1.194	-0.09	0.020	0.024
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Tablet	4233	846.6	18.83	19.60	1.194	-0.04	0.853	1.018
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Tablet	4132	826.4	18.75	19.60	1.216	-0.08	0.745	0.906
	WCDMA V	RMC 12.2Kbps	Edge 4	0mm	Tablet	4182	836.4	18.82	19.60	1.197	-0.07	0.762	0.912

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Configure	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Aux	20M	QPSK	1	0	Bottom Face	0mm	Tablet	19100	1900	16.57	16.80	1.054	-0.05	0.102	0.108
	LTE Band 2_Aux	20M	QPSK	50	0	Bottom Face	0mm	Tablet	19100	1900	16.51	16.80	1.069	0.03	0.098	0.105
	LTE Band 2_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	19100	1900	16.57	16.80	1.054	-0.03	0.458	0.483
	LTE Band 2_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	18700	1860	16.25	16.80	1.135	0.02	0.449	0.510
04	LTE Band 2_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	18900	1880	16.32	16.80	1.117	-0.01	0.483	0.539
	LTE Band 2_Aux	20M	QPSK	50	0	Edge 1	0mm	Tablet	19100	1900	16.51	16.80	1.069	0.06	0.451	0.482
	LTE Band 2_Aux	20M	QPSK	1	0	Edge 2	0mm	Tablet	19100	1900	16.57	16.80	1.054	0.06	0.059	0.062
	LTE Band 2_Aux	20M	QPSK	50	0	Edge 2	0mm	Tablet	19100	1900	16.51	16.80	1.069	0.01	0.043	0.046
	LTE Band 7	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	21350	2560	16.26	16.90	1.159	-0.09	0.774	0.897
	LTE Band 7	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	20850	2510	16.18	16.90	1.180	-0.06	0.945	1.115
05	LTE Band 7	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	21100	2535	16.25	16.90	1.161	0.02	0.985	1.144
	LTE Band 7	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	21350	2560	16.25	16.90	1.161	-0.1	0.804	0.934
	LTE Band 7	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	20850	2510	16.24	16.90	1.164	-0.09	0.944	1.099
	LTE Band 7	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	21100	2535	16.21	16.90	1.172	-0.07	0.950	1.114
	LTE Band 7	20M	QPSK	100	0	Bottom of Laptop	0mm	Laptop	21350	2560	16.24	16.90	1.164	-0.16	0.788	0.917
	LTE Band 7	20M	QPSK	1	0	Bottom Face	0mm	Tablet	21350	2560	12.22	12.70	1.117	-0.01	1.020	1.139
	LTE Band 7	20M	QPSK	1	0	Bottom Face	0mm	Tablet	20850	2510	12.10	12.70	1.148	-0.03	0.969	1.113
	LTE Band 7	20M	QPSK	1	0	Bottom Face	0mm	Tablet	21100	2535	12.20	12.70	1.122	0.01	0.981	1.101
	LTE Band 7	20M	QPSK	50	0	Bottom Face	0mm	Tablet	21350	2560	12.44	12.70	1.062	0.09	0.984	1.045
	LTE Band 7	20M	QPSK	50	0	Bottom Face	0mm	Tablet	20850	2510	12.42	12.70	1.067	0.05	0.939	1.002
	LTE Band 7	20M	QPSK	50	0	Bottom Face	0mm	Tablet	21100	2535	12.43	12.70	1.064	0.01	0.962	1.024
	LTE Band 7	20M	QPSK	100	0	Bottom Face	0mm	Tablet	21350	2560	12.38	12.70	1.076	0.09	1.000	1.076
	LTE Band 7	20M	QPSK	1	0	Edge 1	0mm	Tablet	21350	2560	12.22	12.70	1.117	-0.06	0.048	0.054
	LTE Band 7	20M	QPSK	50	0	Edge 1	0mm	Tablet	21350	2560	12.44	12.70	1.062	-0.08	0.052	0.055
	LTE Band 7	20M	QPSK	1	0	Edge 4	0mm	Tablet	21350	2560	12.22	12.70	1.117	0.03	0.366	0.409
	LTE Band 7	20M	QPSK	50	0	Edge 4	0mm	Tablet	21350	2560	12.44	12.70	1.062	0.11	0.387	0.411
	LTE Band 7C	20M	QPSK	1	0	Bottom Face	0mm	Laptop	21100	2535	14.47	16.90	1.750	-0.12	0.619	1.083
	LTE Band 7_Aux	20M	QPSK	1	0	Bottom Face	0mm	Tablet	21350	2560	10.97	11.90	1.239	0.02	0.026	0.032
	LTE Band 7_Aux	20M	QPSK	50	0	Bottom Face	0mm	Tablet	21350	2560	10.95	11.90	1.245	0.05	0.021	0.026
	LTE Band 7_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	21350	2560	10.97	11.90	1.239	0.06	0.434	0.538
	LTE Band 7_Aux	20M	QPSK	50	0	Edge 1	0mm	Tablet	21350	2560	10.95	11.90	1.245	0.16	0.428	0.533
	LTE Band 7_Aux	20M	QPSK	1	0	Edge 2	0mm	Tablet	21350	2560	10.97	11.90	1.239	0.08	0.019	0.024
	LTE Band 7_Aux	20M	QPSK	50	0	Edge 2	0mm	Tablet	21350	2560	10.95	11.90	1.245	0.13	0.014	0.017
06	LTE Band 12	10M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	23095	707.5	22.02	22.90	1.225	-0.05	0.962	1.178
	LTE Band 12	10M	QPSK	25	0	Bottom of Laptop	0mm	Laptop	23095	707.5	22.00	22.90	1.230	-0.06	0.956	1.176
	LTE Band 12	10M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	23095	707.5	22.00	22.90	1.230	-0.15	0.938	1.154
	LTE Band 12	10M	QPSK	1	0	Bottom Face	0mm	Tablet	23095	707.5	17.14	18.10	1.247	-0.08	0.835	1.042
	LTE Band 12	10M	QPSK	25	0	Bottom Face	0mm	Tablet	23095	707.5	17.26	18.10	1.213	-0.06	0.857	1.040
	LTE Band 12	10M	QPSK	50	0	Bottom Face	0mm	Tablet	23095	707.5	17.17	18.10	1.239	-0.05	0.830	1.028
	LTE Band 12	10M	QPSK	1	0	Edge 1	0mm	Tablet	23095	707.5	17.14	18.10	1.247	-0.06	0.017	0.021
	LTE Band 12	10M	QPSK	25	0	Edge 1	0mm	Tablet	23095	707.5	17.26	18.10	1.213	-0.03	0.018	0.022
	LTE Band 12	10M	QPSK	1	0	Edge 4	0mm	Tablet	23095	707.5	17.14	18.10	1.247	-0.02	0.911	1.136
	LTE Band 12	10M	QPSK	25	0	Edge 4	0mm	Tablet	23095	707.5	17.26	18.10	1.213	-0.09	0.951	1.154
	LTE Band 12	10M	QPSK	50	0	Edge 4	0mm	Tablet	23095	707.5	17.17	18.10	1.239	0.02	0.920	1.140
	LTE Band 13	10M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	23230	782	21.04	22.00	1.247	-0.08	0.800	0.998
	LTE Band 13	10M	QPSK	25	0	Bottom of Laptop	0mm	Laptop	23230	782	21.03	22.00	1.250	-0.08	0.820	1.025
	LTE Band 13	10M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	23230	782	20.94	22.00	1.276	-0.14	0.830	1.059
07	LTE Band 13	10M	QPSK	1	0	Bottom Face	0mm	Tablet	23230	782	18.85	19.80	1.245	-0.06	0.951	1.184
	LTE Band 13	10M	QPSK	25	0	Bottom Face	0mm	Tablet	23230	782	18.95	19.80	1.216	-0.06	0.964	1.172
	LTE Band 13	10M	QPSK	50	0	Bottom Face	0mm	Tablet	23230	782	18.87	19.80	1.239	-0.03	0.948	1.174
	LTE Band 13	10M	QPSK	1	0	Edge 1	0mm	Tablet	23230	782	18.85	19.80	1.245	-0.1	0.032	0.040

	LTE Band 13	10M	QPSK	25	0	Edge 1	0mm	Tablet	23230	782	18.95	19.80	1.216	-0.02	0.031	0.038
	LTE Band 13	10M	QPSK	1	0	Edge 4	0mm	Tablet	23230	782	18.85	19.80	1.245	-0.02	0.882	1.098
	LTE Band 13	10M	QPSK	25	0	Edge 4	0mm	Tablet	23230	782	18.95	19.80	1.216	-0.01	0.941	1.144
	LTE Band 13	10M	QPSK	50	0	Edge 4	0mm	Tablet	23230	782	18.87	19.80	1.239	-0.05	0.878	1.088
	LTE Band 14	10M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	23330	793	21.44	22.30	1.219	-0.12	0.828	1.009
	LTE Band 14	10M	QPSK	25	0	Bottom of Laptop	0mm	Laptop	23330	793	21.39	22.30	1.233	0.06	0.828	1.021
	LTE Band 14	10M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	23330	793	21.38	22.30	1.236	-0.06	0.830	1.026
08	LTE Band 14	10M	QPSK	1	0	Bottom Face	0mm	Tablet	23330	793	19.07	19.90	1.211	-0.03	0.976	1.182
	LTE Band 14	10M	QPSK	25	0	Bottom Face	0mm	Tablet	23330	793	19.22	19.90	1.169	-0.08	1.010	1.181
	LTE Band 14	10M	QPSK	50	0	Bottom Face	0mm	Tablet	23330	793	19.30	19.90	1.148	-0.17	1.020	1.171
	LTE Band 14	10M	QPSK	1	0	Edge 1	0mm	Tablet	23330	793	19.07	19.90	1.211	-0.05	0.110	0.133
	LTE Band 14	10M	QPSK	25	0	Edge 1	0mm	Tablet	23330	793	19.22	19.90	1.169	0.06	0.102	0.119
	LTE Band 14	10M	QPSK	1	0	Edge 4	0mm	Tablet	23330	793	19.07	19.90	1.211	0.01	0.603	0.730
	LTE Band 14	10M	QPSK	25	0	Edge 4	0mm	Tablet	23330	793	19.22	19.90	1.169	-0.12	0.570	0.667
	LTE Band 25	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	26140	1860	17.46	17.80	1.081	-0.14	0.853	0.922
	LTE Band 25	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	26340	1880	17.27	17.80	1.130	-0.06	0.854	0.965
09	LTE Band 25	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	26590	1905	17.21	17.80	1.146	-0.16	0.930	1.065
	LTE Band 25	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	26140	1860	17.42	17.80	1.091	-0.1	0.869	0.948
	LTE Band 25	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	26340	1880	17.40	17.80	1.096	-0.03	0.881	0.966
	LTE Band 25	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	26590	1905	17.33	17.80	1.114	-0.1	0.946	1.054
	LTE Band 25	20M	QPSK	100	0	Bottom of Laptop	0mm	Laptop	26140	1860	17.39	17.80	1.099	-0.02	0.867	0.953
	LTE Band 25	20M	QPSK	1	0	Bottom Face	0mm	Tablet	26140	1860	12.94	13.50	1.138	-0.06	0.868	0.987
	LTE Band 25	20M	QPSK	1	0	Bottom Face	0mm	Tablet	26340	1880	12.86	13.50	1.159	-0.1	0.849	0.984
	LTE Band 25	20M	QPSK	1	0	Bottom Face	0mm	Tablet	26590	1905	12.83	13.50	1.167	-0.1	0.890	1.038
	LTE Band 25	20M	QPSK	50	0	Bottom Face	0mm	Tablet	26140	1860	12.99	13.50	1.125	0.01	0.913	1.027
	LTE Band 25	20M	QPSK	50	0	Bottom Face	0mm	Tablet	26340	1880	12.98	13.50	1.127	-0.09	0.882	0.994
	LTE Band 25	20M	QPSK	50	0	Bottom Face	0mm	Tablet	26590	1905	12.97	13.50	1.130	0.03	0.908	1.026
	LTE Band 25	20M	QPSK	100	0	Bottom Face	0mm	Tablet	26140	1860	13.05	13.50	1.109	-0.07	0.855	0.948
	LTE Band 25	20M	QPSK	1	0	Edge 1	0mm	Tablet	26140	1860	12.94	13.50	1.138	0.07	0.066	0.075
	LTE Band 25	20M	QPSK	50	0	Edge 1	0mm	Tablet	26140	1860	12.99	13.50	1.125	0.02	0.066	0.074
	LTE Band 25	20M	QPSK	1	0	Edge 4	0mm	Tablet	26140	1860	12.94	13.50	1.138	-0.02	0.420	0.478
	LTE Band 25	20M	QPSK	50	0	Edge 4	0mm	Tablet	26140	1860	12.99	13.50	1.125	-0.02	0.427	0.480
	LTE Band 26	15M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	26865	831.5	22.20	22.90	1.175	-0.1	0.885	1.040
	LTE Band 26	15M	QPSK	36	0	Bottom of Laptop	0mm	Laptop	26865	831.5	22.27	22.90	1.156	-0.09	0.926	1.071
	LTE Band 26	15M	QPSK	75	0	Bottom of Laptop	0mm	Laptop	26865	831.5	22.21	22.90	1.172	-0.14	0.962	1.128
	LTE Band 26	15M	QPSK	1	0	Bottom Face	0mm	Tablet	26865	831.5	18.89	19.70	1.205	-0.07	0.918	1.106
	LTE Band 26	15M	QPSK	36	0	Bottom Face	0mm	Tablet	26865	831.5	18.99	19.70	1.178	-0.08	0.974	1.147
10	LTE Band 26	15M	QPSK	75	0	Bottom Face	0mm	Tablet	26865	831.5	19.02	19.70	1.169	-0.09	0.986	1.153
	LTE Band 26	15M	QPSK	1	0	Edge 1	0mm	Tablet	26865	831.5	18.89	19.70	1.205	0.03	0.045	0.054
	LTE Band 26	15M	QPSK	36	0	Edge 1	0mm	Tablet	26865	831.5	18.99	19.70	1.178	-0.05	0.043	0.051
	LTE Band 26	15M	QPSK	1	0	Edge 4	0mm	Tablet	26865	831.5	18.89	19.70	1.205	0.02	0.774	0.933
	LTE Band 26	15M	QPSK	36	0	Edge 4	0mm	Tablet	26865	831.5	18.99	19.70	1.178	0.01	0.782	0.921
	LTE Band 26	15M	QPSK	75	0	Edge 4	0mm	Tablet	26865	831.5	19.02	19.70	1.169	0.09	0.770	0.901
	LTE Band 5B	10M	QPSK	1	0	Bottom Face	0mm	Tablet	20525	836.5	17.95	19.70	1.496	-0.02	0.731	1.094
	LTE Band 30	10M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	27710	2310	17.96	18.80	1.213	-0.04	0.944	1.145
	LTE Band 30	10M	QPSK	25	0	Bottom of Laptop	0mm	Laptop	27710	2310	17.94	18.80	1.219	-0.08	0.962	1.173
	LTE Band 30	10M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	27710	2310	17.94	18.80	1.219	-0.04	0.947	1.154
	LTE Band 30	10M	QPSK	1	0	Bottom Face	0mm	Tablet	27710	2310	13.75	14.30	1.135	0.01	1.000	1.135
	LTE Band 30	10M	QPSK	25	0	Bottom Face	0mm	Tablet	27710	2310	13.66	14.30	1.159	-0.16	1.000	1.159
11	LTE Band 30	10M	QPSK	50	0	Bottom Face	0mm	Tablet	27710	2310	13.77	14.30	1.130	0.18	1.040	1.175
	LTE Band 30	10M	QPSK	1	0	Edge 1	0mm	Tablet	27710	2310	13.75	14.30	1.135	-0.09	0.051	0.058
	LTE Band 30	10M	QPSK	25	0	Edge 1	0mm	Tablet	27710	2310	13.66	14.30	1.159	-0.08	0.051	0.059
	LTE Band 30	10M	QPSK	1	0	Edge 4	0mm	Tablet	27710	2310	13.75	14.30	1.135	-0.05	0.257	0.292
	LTE Band 30	10M	QPSK	25	0	Edge 4	0mm	Tablet	27710	2310	13.66	14.30	1.159	-0.1	0.261	0.302
	LTE Band 66	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	132322	1745	17.02	17.70	1.169	0.04	0.777	0.909
	LTE Band 66	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	132072	1720	16.94	17.70	1.191	-0.07	0.636	0.758

12	LTE Band 66	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	132572	1770	17.02	17.70	1.169	0.06	0.926	1.083
	LTE Band 66	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	132322	1745	17.02	17.70	1.169	0.06	0.818	0.957
	LTE Band 66	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	132072	1720	17.01	17.70	1.172	-0.08	0.672	0.788
	LTE Band 66	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	132572	1770	17.02	17.70	1.169	0.1	0.925	1.082
	LTE Band 66	20M	QPSK	100	0	Bottom of Laptop	0mm	Laptop	132572	1770	16.98	17.70	1.180	0	0.711	0.839
	LTE Band 66	20M	QPSK	1	0	Bottom Face	0mm	Tablet	132072	1720	13.71	14.30	1.146	-0.03	0.886	1.015
	LTE Band 66	20M	QPSK	1	0	Bottom Face	0mm	Tablet	132322	1745	13.66	14.30	1.159	-0.04	0.895	1.037
	LTE Band 66	20M	QPSK	1	0	Bottom Face	0mm	Tablet	132572	1770	13.59	14.30	1.178	-0.06	0.883	1.040
	LTE Band 66	20M	QPSK	50	0	Bottom Face	0mm	Tablet	132072	1720	13.90	14.30	1.096	0.13	0.952	1.044
	LTE Band 66	20M	QPSK	50	0	Bottom Face	0mm	Tablet	132322	1745	13.77	14.30	1.130	-0.1	0.875	0.989
	LTE Band 66	20M	QPSK	50	0	Bottom Face	0mm	Tablet	132572	1770	13.84	14.30	1.112	-0.19	0.903	1.004
	LTE Band 66	20M	QPSK	100	0	Bottom Face	0mm	Tablet	132072	1720	13.80	14.30	1.122	-0.02	0.901	1.011
	LTE Band 66	20M	QPSK	1	0	Edge 1	0mm	Tablet	132072	1720	13.71	14.30	1.146	-0.03	0.046	0.053
	LTE Band 66	20M	QPSK	50	0	Edge 1	0mm	Tablet	132072	1720	13.90	14.30	1.096	0.05	0.049	0.054
	LTE Band 66	20M	QPSK	1	0	Edge 4	0mm	Tablet	132072	1720	13.71	14.30	1.146	-0.09	0.559	0.640
	LTE Band 66	20M	QPSK	50	0	Edge 4	0mm	Tablet	132072	1720	13.90	14.30	1.096	-0.12	0.587	0.644
	LTE Band 66B	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	132572	1770	17.07	17.70	1.156	0.06	0.849	0.982
	LTE Band 66C	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	132572	1770	17.56	17.70	1.033	-0.16	0.905	0.935
	LTE Band 66_Aux	20M	QPSK	1	0	Bottom Face	0mm	Tablet	132072	1720	15.33	16.50	1.309	-0.05	0.049	0.064
	LTE Band 66_Aux	20M	QPSK	50	0	Bottom Face	0mm	Tablet	132072	1720	15.28	16.50	1.324	0	0.043	0.057
	LTE Band 66_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	132072	1720	15.33	16.50	1.309	-0.05	0.414	0.542
	LTE Band 66_Aux	20M	QPSK	50	0	Edge 1	0mm	Tablet	132072	1720	15.28	16.50	1.324	0.1	0.314	0.416
	LTE Band 66_Aux	20M	QPSK	1	0	Edge 2	0mm	Tablet	132072	1720	15.33	16.50	1.309	0.04	0.026	0.034
	LTE Band 66_Aux	20M	QPSK	50	0	Edge 2	0mm	Tablet	132072	1720	15.28	16.50	1.324	0.03	0.014	0.019
	LTE Band 71	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	133322	683	23.14	24.50	1.368	-0.06	0.717	0.981
	LTE Band 71	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	133322	683	21.93	23.50	1.435	-0.06	0.714	1.025
	LTE Band 71	20M	QPSK	100	0	Bottom of Laptop	0mm	Laptop	133322	683	21.82	23.50	1.472	-0.12	0.741	1.091
	LTE Band 71	20M	QPSK	1	0	Bottom Face	0mm	Tablet	133322	683	17.79	18.50	1.178	-0.05	0.876	1.032
	LTE Band 71	20M	QPSK	50	0	Bottom Face	0mm	Tablet	133322	683	18.05	18.50	1.109	-0.08	0.936	1.038
	LTE Band 71	20M	QPSK	100	0	Bottom Face	0mm	Tablet	133322	683	18.02	18.50	1.117	-0.03	0.921	1.029
	LTE Band 71	20M	QPSK	1	0	Edge 1	0mm	Tablet	133322	683	17.79	18.50	1.178	-0.02	0.011	0.013
	LTE Band 71	20M	QPSK	50	0	Edge 1	0mm	Tablet	133322	683	18.05	18.50	1.109	-0.07	0.012	0.013
	LTE Band 71	20M	QPSK	1	0	Edge 4	0mm	Tablet	133322	683	17.79	18.50	1.178	-0.05	0.861	1.014
13	LTE Band 71	20M	QPSK	50	0	Edge 4	0mm	Tablet	133322	683	18.05	18.50	1.109	-0.09	0.999	1.108
	LTE Band 71	20M	QPSK	100	0	Edge 4	0mm	Tablet	133322	683	18.02	18.50	1.117	0.05	0.982	1.097

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Configure	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	39750	2506	18.27	18.60	1.079	62.9	1.006	-0.14	0.837	0.908
	LTE Band 41	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	40185	2549.5	18.27	18.60	1.079	62.9	1.006	-0.08	0.731	0.793
	LTE Band 41	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	40620	2593	18.19	18.60	1.099	62.9	1.006	-0.03	0.624	0.690
	LTE Band 41	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	41055	2636.5	17.94	18.60	1.164	62.9	1.006	-0.17	0.531	0.622
	LTE Band 41	20M	QPSK	1	0	Bottom of Laptop	0mm	Laptop	41490	2680	17.98	18.60	1.153	62.9	1.006	-0.03	0.375	0.435
	LTE Band 41	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	39750	2506	18.09	18.60	1.125	62.9	1.006	0.1	0.841	0.951
	LTE Band 41	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	40185	2549.5	18.08	18.60	1.127	62.9	1.006	0.05	0.744	0.844
	LTE Band 41	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	40620	2593	18.08	18.60	1.127	62.9	1.006	0.04	0.628	0.712
	LTE Band 41	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	41055	2636.5	17.86	18.60	1.186	62.9	1.006	0.02	0.534	0.637
	LTE Band 41	20M	QPSK	50	0	Bottom of Laptop	0mm	Laptop	41490	2680	17.87	18.60	1.183	62.9	1.006	-0.02	0.356	0.424
	LTE Band 41	20M	QPSK	100	0	Bottom of Laptop	0mm	Laptop	39750	2506	18.25	18.60	1.084	62.9	1.006	-0.04	0.865	0.943
	LTE Band 41	20M	QPSK	1	0	Bottom Face	0mm	Tablet	40620	2593	14.87	15.00	1.030	62.9	1.006	0.07	0.823	0.853
	LTE Band 41	20M	QPSK	1	0	Bottom Face	0mm	Tablet	39750	2506	14.84	15.00	1.038	62.9	1.006	0.08	0.885	0.924
	LTE Band 41	20M	QPSK	1	0	Bottom Face	0mm	Tablet	40185	2549.5	14.86	15.00	1.033	62.9	1.006	-0.02	0.920	0.956
	LTE Band 41	20M	QPSK	1	0	Bottom Face	0mm	Tablet	41055	2636.5	14.74	15.00	1.062	62.9	1.006	0.09	0.762	0.814
	LTE Band 41	20M	QPSK	1	0	Bottom Face	0mm	Tablet	41490	2680	14.82	15.00	1.042	62.9	1.006	0.07	0.759	0.796
	LTE Band 41	20M	QPSK	50	0	Bottom Face	0mm	Tablet	40620	2593	15.00	15.00	1.000	62.9	1.006	0.16	0.833	0.838
	LTE Band 41	20M	QPSK	50	0	Bottom Face	0mm	Tablet	39750	2506	14.98	15.00	1.005	62.9	1.006	0.05	0.769	0.777
	LTE Band 41	20M	QPSK	50	0	Bottom Face	0mm	Tablet	40185	2549.5	14.92	15.00	1.019	62.9	1.006	0.08	0.805	0.825
	LTE Band 41	20M	QPSK	50	0	Bottom Face	0mm	Tablet	41055	2636.5	14.88	15.00	1.028	62.9	1.006	0.02	0.725	0.750
	LTE Band 41	20M	QPSK	50	0	Bottom Face	0mm	Tablet	41490	2680	14.97	15.00	1.007	62.9	1.006	0.09	0.803	0.813
	LTE Band 41	20M	QPSK	100	0	Bottom Face	0mm	Tablet	40620	2593	14.96	15.00	1.009	62.9	1.006	0.01	0.844	0.857
	LTE Band 41	20M	QPSK	1	0	Edge 1	0mm	Tablet	40620	2593	14.87	15.00	1.030	62.9	1.006	0.03	0.034	0.035
	LTE Band 41	20M	QPSK	50	0	Edge 1	0mm	Tablet	40620	2593	15.00	15.00	1.000	62.9	1.006	-0.02	0.032	0.032
	LTE Band 41	20M	QPSK	1	0	Edge 4	0mm	Tablet	40620	2593	14.87	15.00	1.030	62.9	1.006	-0.06	0.396	0.410
	LTE Band 41	20M	QPSK	50	0	Edge 4	0mm	Tablet	40620	2593	15.00	15.00	1.000	62.9	1.006	0.01	0.384	0.386
14	LTE Band 41_HPUE	20M	QPSK	1	0	Bottom Face	0mm	Tablet	40185	2549.5	17.66	18.00	1.081	42.9	1.009	0.09	1.080	1.178
	LTE Band 41C	20M	QPSK	1	0	Bottom Face	0mm	Tablet	40185	2549.5	14.67	15.00	1.079	62.9	1.006	0	0.961	1.043
	LTE Band 42_Aux	20M	QPSK	1	0	Bottom Face	0mm	Tablet	43340	3575	15.62	16.20	1.143	62.9	1.006	-0.18	0.025	0.029
	LTE Band 42_Aux	20M	QPSK	50	0	Bottom Face	0mm	Tablet	43340	3575	15.63	16.20	1.140	62.9	1.006	0.14	0.020	0.023
15	LTE Band 42_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	43340	3575	15.62	16.20	1.143	62.9	1.006	-0.08	0.471	0.542
	LTE Band 42_Aux	20M	QPSK	50	0	Edge 1	0mm	Tablet	43340	3575	15.63	16.20	1.140	62.9	1.006	0.18	0.465	0.533
	LTE Band 42_Aux	20M	QPSK	1	0	Edge 2	0mm	Tablet	43340	3575	15.62	16.20	1.143	62.9	1.006	-0.12	0.006	0.007
	LTE Band 42_Aux	20M	QPSK	50	0	Edge 2	0mm	Tablet	43340	3575	15.63	16.20	1.140	62.9	1.006	0.13	0.002	0.002
	LTE Band 48_Aux	20M	QPSK	1	0	Bottom Face	0mm	Tablet	55830	3609	16.01	16.60	1.146	62.9	1.006	0.1	0.042	0.048
	LTE Band 48_Aux	20M	QPSK	50	0	Bottom Face	0mm	Tablet	55830	3609	16.00	16.60	1.148	62.9	1.006	0.09	0.041	0.047
16	LTE Band 48_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	55830	3609	16.01	16.60	1.146	62.9	1.006	-0.02	0.470	0.542
	LTE Band 48_Aux	20M	QPSK	50	0	Edge 1	0mm	Tablet	55830	3609	16.00	16.60	1.148	62.9	1.006	0.18	0.461	0.532
	LTE Band 48_Aux	20M	QPSK	1	0	Edge 2	0mm	Tablet	55830	3609	16.01	16.60	1.146	62.9	1.006	0.15	0.002	0.002
	LTE Band 48_Aux	20M	QPSK	50	0	Edge 2	0mm	Tablet	55830	3609	16.00	16.60	1.148	62.9	1.006	0.17	0.002	0.002
	LTE Band 48C_Aux	20M	QPSK	1	0	Edge 1	0mm	Tablet	55830	3609	16.23	16.60	1.089	62.9	1.006	-0.02	0.497	0.544

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Configure	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	372000	1860	16.78	17.50	1.180	-0.05	0.808	0.954
	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	376000	1880	16.73	17.50	1.194	0.02	0.846	1.010
17	FR1 n2	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	380000	1900	16.61	17.50	1.227	-0.1	0.917	1.126
	FR1 n2	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	372000	1860	16.78	17.50	1.180	0.08	0.851	1.004
	FR1 n2	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	376000	1880	16.69	17.50	1.205	-0.1	0.863	1.040
	FR1 n2	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	380000	1900	16.57	17.50	1.239	0.03	0.905	1.121
	FR1 n2	20M	BPSK	100	0	Bottom of Laptop	0mm	Laptop	372000	1860	16.71	17.50	1.199	0	0.888	1.065
	FR1 n2	20M	BPSK	1	1	Bottom Face	0mm	Tablet	372000	1860	13.77	14.20	1.104	0.03	0.975	1.076
	FR1 n2	20M	BPSK	1	1	Bottom Face	0mm	Tablet	376000	1880	13.70	14.20	1.122	-0.07	0.987	1.107
	FR1 n2	20M	BPSK	1	1	Bottom Face	0mm	Tablet	380000	1900	13.63	14.20	1.140	-0.1	0.960	1.095
	FR1 n2	20M	BPSK	50	0	Bottom Face	0mm	Tablet	372000	1860	13.84	14.20	1.086	0.05	0.935	1.016
	FR1 n2	20M	BPSK	50	0	Bottom Face	0mm	Tablet	376000	1880	13.79	14.20	1.099	0.16	0.951	1.045
	FR1 n2	20M	BPSK	50	0	Bottom Face	0mm	Tablet	380000	1900	13.72	14.20	1.117	-0.17	0.948	1.059
	FR1 n2	20M	BPSK	100	0	Bottom Face	0mm	Tablet	372000	1860	13.51	14.20	1.172	0.02	0.827	0.969
	FR1 n2	20M	BPSK	1	1	Edge 1	0mm	Tablet	372000	1860	13.77	14.20	1.104	0.05	0.067	0.074
	FR1 n2	20M	BPSK	50	0	Edge 1	0mm	Tablet	372000	1860	13.84	14.20	1.086	0.04	0.054	0.059
	FR1 n2	20M	BPSK	1	1	Edge 4	0mm	Tablet	372000	1860	13.77	14.20	1.104	0.15	0.546	0.603
	FR1 n2	20M	BPSK	50	0	Edge 4	0mm	Tablet	372000	1860	13.84	14.20	1.086	-0.05	0.535	0.581
	FR1 n2_Aux	20M	BPSK	1	1	Bottom Face	0mm	Tablet	380000	1900	15.55	15.70	1.035	0.02	0.115	0.119
	FR1 n2_Aux	20M	BPSK	50	0	Bottom Face	0mm	Tablet	380000	1900	15.54	15.70	1.038	0.03	0.108	0.112
	FR1 n2_Aux	20M	BPSK	1	1	Edge 1	0mm	Tablet	380000	1900	15.55	15.70	1.035	-0.09	0.518	0.536
	FR1 n2_Aux	20M	BPSK	50	0	Edge 1	0mm	Tablet	380000	1900	15.54	15.70	1.038	0.08	0.456	0.473
	FR1 n2_Aux	20M	BPSK	1	1	Edge 2	0mm	Tablet	380000	1900	15.55	15.70	1.035	0.09	0.039	0.040
	FR1 n2_Aux	20M	BPSK	50	0	Edge 2	0mm	Tablet	380000	1900	15.54	15.70	1.038	0.11	0.028	0.029
	FR1 n5	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	167300	836.5	21.98	22.60	1.153	-0.01	0.896	1.033
	FR1 n5	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	167300	836.5	21.87	22.60	1.183	-0.05	0.870	1.029
	FR1 n5	20M	BPSK	100	0	Bottom of Laptop	0mm	Laptop	167300	836.5	21.76	22.60	1.213	0.03	0.842	1.022
18	FR1 n5	20M	BPSK	1	1	Bottom Face	0mm	Tablet	167300	836.5	18.96	19.70	1.186	-0.04	0.945	1.121
	FR1 n5	20M	BPSK	50	0	Bottom Face	0mm	Tablet	167300	836.5	18.71	19.70	1.256	0.08	0.870	1.093
	FR1 n5	20M	BPSK	100	0	Bottom Face	0mm	Tablet	167300	836.5	18.69	19.70	1.262	0.02	0.870	1.098
	FR1 n5	20M	BPSK	1	1	Edge 1	0mm	Tablet	167300	836.5	18.96	19.70	1.186	0.03	0.020	0.024
	FR1 n5	20M	BPSK	50	0	Edge 1	0mm	Tablet	167300	836.5	18.71	19.70	1.256	-0.05	0.015	0.019
	FR1 n5	20M	BPSK	1	1	Edge 4	0mm	Tablet	167300	836.5	18.96	19.70	1.186	0.08	0.890	1.055
	FR1 n5	20M	BPSK	50	0	Edge 4	0mm	Tablet	167300	836.5	18.71	19.70	1.256	0.03	0.865	1.086
	FR1 n5	20M	BPSK	100	0	Edge 4	0mm	Tablet	167300	836.5	18.69	19.70	1.262	0.08	0.830	1.047
	FR1 n7_Aux	20M	BPSK	1	1	Bottom Face	0mm	Tablet	507000	2535	13.45	13.80	1.084	-0.05	0.034	0.037
	FR1 n7_Aux	20M	BPSK	50	0	Bottom Face	0mm	Tablet	507000	2535	13.39	13.80	1.099	-0.03	0.028	0.031
	FR1 n7_Aux	20M	BPSK	1	1	Edge 1	0mm	Tablet	507000	2535	13.45	13.80	1.084	0.02	0.465	0.504
	FR1 n7_Aux	20M	BPSK	1	1	Edge 1	0mm	Tablet	502000	2510	13.40	13.80	1.096	0.03	0.475	0.521
19	FR1 n7_Aux	20M	BPSK	1	1	Edge 1	0mm	Tablet	512000	2560	13.39	13.80	1.099	-0.05	0.493	0.542
	FR1 n7_Aux	20M	BPSK	50	0	Edge 1	0mm	Tablet	507000	2535	13.39	13.80	1.099	0.06	0.486	0.534
	FR1 n7_Aux	20M	BPSK	1	1	Edge 2	0mm	Tablet	507000	2535	13.45	13.80	1.084	0.09	0.019	0.021
	FR1 n7_Aux	20M	BPSK	50	0	Edge 2	0mm	Tablet	507000	2535	13.39	13.80	1.099	0.13	0.015	0.016
	FR1 n12	15M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	141500	707.5	20.53	21.60	1.279	0	0.931	1.191
	FR1 n12	15M	BPSK	36	0	Bottom of Laptop	0mm	Laptop	141500	707.5	20.41	21.60	1.315	-0.01	0.901	1.185
	FR1 n12	15M	BPSK	75	0	Bottom of Laptop	0mm	Laptop	141500	707.5	20.35	21.60	1.334	0.12	0.876	1.168
	FR1 n12	15M	BPSK	1	1	Bottom Face	0mm	Tablet	141500	707.5	16.54	17.60	1.276	-0.01	0.662	0.845
	FR1 n12	15M	BPSK	36	0	Bottom Face	0mm	Tablet	141500	707.5	16.23	17.60	1.371	0.03	0.620	0.850
	FR1 n12	15M	BPSK	75	0	Bottom Face	0mm	Tablet	141500	707.5	16.21	17.60	1.377	-0.02	0.603	0.830
	FR1 n12	15M	BPSK	1	1	Edge 1	0mm	Tablet	141500	707.5	16.54	17.60	1.276	0	0.001	0.001
	FR1 n12	15M	BPSK	36	0	Edge 1	0mm	Tablet	141500	707.5	16.23	17.60	1.371	0	0.001	0.001

20	FR1 n12	15M	BPSK	1	1	Edge 4	0mm	Tablet	141500	707.5	16.54	17.60	1.276	0.14	0.934	1.192
	FR1 n12	15M	BPSK	36	0	Edge 4	0mm	Tablet	141500	707.5	16.23	17.60	1.371	0.12	0.850	1.165
	FR1 n12	15M	BPSK	75	0	Edge 4	0mm	Tablet	141500	707.5	16.21	17.60	1.377	-0.04	0.843	1.161
	FR1 n41_Aux	100M	BPSK	1	1	Bottom Face	0mm	Tablet	528000	2640	11.63	12.60	1.250	-0.02	0.011	0.014
	FR1 n41_Aux	100M	BPSK	135	0	Bottom Face	0mm	Tablet	528000	2640	11.62	12.60	1.253	-0.02	0.008	0.010
	FR1 n41_Aux	100M	BPSK	1	1	Edge 1	0mm	Tablet	528000	2640	11.63	12.60	1.250	0.05	0.430	0.538
	FR1 n41_Aux	100M	BPSK	1	1	Edge 1	0mm	Tablet	509202	2546.01	11.18	12.60	1.387	0.03	0.388	0.538
21	FR1 n41_Aux	100M	BPSK	1	1	Edge 1	0mm	Tablet	518598	2592.99	11.56	12.60	1.271	-0.1	0.426	0.541
	FR1 n41_Aux	100M	BPSK	135	0	Edge 1	0mm	Tablet	528000	2640	11.62	12.60	1.253	-0.02	0.366	0.459
	FR1 n41_Aux	100M	BPSK	1	1	Edge 2	0mm	Tablet	528000	2640	11.63	12.60	1.250	0.09	0.008	0.010
	FR1 n41_Aux	100M	BPSK	135	0	Edge 2	0mm	Tablet	528000	2640	11.62	12.60	1.253	0.02	0.006	0.008
	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	349000	1745	17.15	17.70	1.135	0.09	0.882	1.001
	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	344000	1720	17.03	17.70	1.167	0.05	0.798	0.931
22	FR1 n66	20M	BPSK	1	1	Bottom of Laptop	0mm	Laptop	354000	1770	17.05	17.70	1.161	-0.15	0.982	1.141
	FR1 n66	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	349000	1745	17.07	17.70	1.156	0.08	0.963	1.113
	FR1 n66	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	344000	1720	16.90	17.70	1.202	0.13	0.786	0.945
	FR1 n66	20M	BPSK	50	0	Bottom of Laptop	0mm	Laptop	354000	1770	16.95	17.70	1.189	-0.05	0.877	1.042
	FR1 n66	20M	BPSK	100	0	Bottom of Laptop	0mm	Laptop	349000	1745	17.02	17.70	1.169	-0.09	0.912	1.067
	FR1 n66	20M	BPSK	1	1	Bottom Face	0mm	Tablet	349000	1745	14.00	14.30	1.072	-0.08	1.010	1.082
	FR1 n66	20M	BPSK	1	1	Bottom Face	0mm	Tablet	344000	1720	13.77	14.30	1.130	-0.05	0.950	1.073
	FR1 n66	20M	BPSK	1	1	Bottom Face	0mm	Tablet	354000	1770	13.77	14.30	1.130	0.01	0.970	1.096
	FR1 n66	20M	BPSK	50	0	Bottom Face	0mm	Tablet	349000	1745	13.78	14.30	1.127	-0.05	0.994	1.121
	FR1 n66	20M	BPSK	50	0	Bottom Face	0mm	Tablet	344000	1720	13.60	14.30	1.175	0.13	0.938	1.102
	FR1 n66	20M	BPSK	50	0	Bottom Face	0mm	Tablet	354000	1770	13.56	14.30	1.186	0.08	0.955	1.133
	FR1 n66	20M	BPSK	100	0	Bottom Face	0mm	Tablet	349000	1745	13.73	14.30	1.140	-0.09	0.958	1.092
	FR1 n66	20M	BPSK	1	1	Edge 1	0mm	Tablet	349000	1745	14.00	14.30	1.072	0.01	0.057	0.061
	FR1 n66	20M	BPSK	50	0	Edge 1	0mm	Tablet	349000	1745	13.78	14.30	1.127	0.08	0.043	0.048
	FR1 n66	20M	BPSK	1	1	Edge 4	0mm	Tablet	349000	1745	14.00	14.30	1.072	0.04	0.460	0.493
	FR1 n66	20M	BPSK	50	0	Edge 4	0mm	Tablet	349000	1745	13.78	14.30	1.127	0.08	0.441	0.497
	FR1 n66_Aux	20M	BPSK	1	1	Bottom Face	0mm	Tablet	349000	1745	15.70	16.30	1.148	-0.02	0.049	0.056
	FR1 n66_Aux	20M	BPSK	50	0	Bottom Face	0mm	Tablet	349000	1745	15.65	16.30	1.161	-0.02	0.042	0.049
	FR1 n66_Aux	20M	BPSK	1	1	Edge 1	0mm	Tablet	349000	1745	15.70	16.30	1.148	-0.1	0.471	0.541
	FR1 n66_Aux	20M	BPSK	50	0	Edge 1	0mm	Tablet	349000	1745	15.65	16.30	1.161	-0.02	0.452	0.525
	FR1 n66_Aux	20M	BPSK	1	1	Edge 2	0mm	Tablet	349000	1745	15.70	16.30	1.148	-0.02	0.049	0.056
	FR1 n66_Aux	20M	BPSK	50	0	Edge 2	0mm	Tablet	349000	1745	15.65	16.30	1.161	-0.02	0.042	0.049

16.2 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Configure (Tablet / Laptop)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WCDMA II	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	9538	1907.6	18.26	18.40	1.033	-	1.000	-0.12	1.140	-	1.177
2nd	WCDMA II	RMC 12.2Kbps	Bottom of Laptop	0mm	Laptop	9538	1907.6	18.26	18.40	1.033	-	1.000	-0.06	1.080	1.06	1.115
1st	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	Tablet	4182	836.4	18.82	19.60	1.197	-	1.000	-0.02	0.988	-	1.182
2nd	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	Tablet	4182	836.4	18.82	19.60	1.197	-	1.000	-0.08	0.974	1.01	1.166
1st	LTE Band 14	10M_QPSK_50_0	Bottom Face	0mm	Tablet	23330	793	19.30	19.90	1.148	-	1.000	-0.17	1.020	-	1.171
2nd	LTE Band 14	10M_QPSK_50_0	Bottom Face	0mm	Tablet	23330	793	19.30	19.90	1.148	-	1.000	-0.17	0.995	1.03	1.142
1st	LTE Band 30	10M_QPSK_50_0	Bottom Face	0mm	Tablet	27710	2310	13.77	14.30	1.130	-	1.000	0.18	1.040	-	1.175
2nd	LTE Band 30	10M_QPSK_50_0	Bottom Face	0mm	Tablet	27710	2310	13.77	14.30	1.130	-	1.000	0.08	0.993	1.05	1.122
1st	LTE Band 41_HPUE	20M_QPSK_1_0	Bottom Face	0mm	Tablet	40185	2549.5	17.66	18.00	1.081	42.9	1.009	0.09	1.080	-	1.178
2nd	LTE Band 41_HPUE	20M_QPSK_1_0	Bottom Face	0mm	Tablet	40185	2549.5	17.66	18.00	1.081	42.9	1.009	0.04	1.050	1.03	1.146
1st	FR1 n66	20M_QPSK_1_0	Bottom Face	0mm	Tablet	349000	1745	14.00	14.30	1.072	-	1.000	-0.08	1.010	-	1.082
2nd	FR1 n66	20M_QPSK_1_0	Bottom Face	0mm	Tablet	349000	1745	14.00	14.30	1.072	-	1.000	0.04	0.994	1.02	1.065

General Note:

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

16.3 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

	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15	18
Reported 1g SAR (W/kg)	0.956	1.178
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	20.02	27.32
Linearity SAR(W/kg)	1.30	
% deviation from expected linearity		-9.72%

17. Simultaneous Transmission Analysis

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

General Note:

1. The Intel AX200D2WL WLAN/Bluetooth module is also integrated into this host, WLAN/Bluetooth power and WLAN SAR testing data, which can be referred to RF Exposure Lab SAR Test Report, Report No.: SAR.20190703 (FCC ID: B94-AX200D2LP) and these results are used simultaneous transmission analysis.
2. According to Intel SAR report, the test positions and 1g SAR result used for the testing below are based on the SISO standalone WLAN SAR result. When the MIMO operation active wii be reduced by 3dB within each SISO operation, therefore the MIMO SAR was estimated based on SISO standalone results to performed sim-Tx analysis with WWAN operation
3. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment.
4. The Scaled SAR summation is calculated based on the same configuration and test position.
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.

17.1 Body Exposure Conditions

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 1 1g SAR (W/kg)	3 2.4GHz WLAN Ant 2 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	5 5GHz WLAN Ant 2 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	7 2.4GHz WLAN Ant 1+2 1g SAR (W/kg)	8 5GHz WLAN Ant 1+2 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
WCDMA II	Bottom Face at 0mm	1.120	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.480**	**1.510**	**1.280**	**1.470**	**1.300**	**1.230**
	Edge 1 at 0mm	0.061	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.926**	**1.061**	**0.931**	**0.841**	**1.051**	**0.606**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.263								**0.263**	**0.263**	**0.263**	**0.263**	**0.263**	**0.263**
	Bottom of Laptop at 0mm	1.177								**1.177**	**1.177**	**1.177**	**1.177**	**1.177**	**1.177**
WCDMA IV	Bottom Face at 0mm	1.175	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.535**	**1.565**	**1.335**	**1.525**	**1.355**	**1.285**
	Edge 1 at 0mm	0.063	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.928**	**1.063**	**0.933**	**0.843**	**1.053**	**0.608**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.757								**0.757**	**0.757**	**0.757**	**0.757**	**0.757**	**0.757**
	Bottom of Laptop at 0mm	1.029								**1.029**	**1.029**	**1.029**	**1.029**	**1.029**	**1.029**
WCDMA V	Bottom Face at 0mm	1.182	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.542**	**1.572**	**1.342**	**1.532**	**1.362**	**1.292**
	Edge 1 at 0mm	0.024	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.889**	**1.024**	**0.894**	**0.804**	**1.014**	**0.569**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	1.018								**1.018**	**1.018**	**1.018**	**1.018**	**1.018**	**1.018**
	Bottom of Laptop at 0mm	1.035								**1.035**	**1.035**	**1.035**	**1.035**	**1.035**	**1.035**
LTE Band 2_Aux	Bottom Face at 0mm	0.108	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.468**	**0.498**	**0.268**	**0.458**	**0.288**	**0.218**
	Edge 1 at 0mm	0.539	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.404**	**1.539**	**1.409**	**1.319**	**1.529**	**1.084**
	Edge 2 at 0mm	0.062	0.100		0.200			0.050	0.100	**0.112**	**0.162**	**0.262**	**0.062**	**0.062**	**0.162**
LTE Band 7	Bottom Face at 0mm	1.139	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.499**	**1.529**	**1.299**	**1.489**	**1.319**	**1.249**
	Edge 1 at 0mm	0.055	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.920**	**1.055**	**0.925**	**0.835**	**1.045**	**0.600**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.411								**0.411**	**0.411**	**0.411**	**0.411**	**0.411**	**0.411**
	Bottom of Laptop at 0mm	1.144								**1.144**	**1.144**	**1.144**	**1.144**	**1.144**	**1.144**
LTE Band 7_Aux	Bottom Face at 0mm	0.032	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.392**	**0.422**	**0.192**	**0.382**	**0.212**	**0.142**
	Edge 1 at 0mm	0.538	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.403**	**1.538**	**1.408**	**1.318**	**1.528**	**1.083**
	Edge 2 at 0mm	0.024	0.100		0.200			0.050	0.100	**0.074**	**0.124**	**0.224**	**0.024**	**0.024**	**0.124**
LTE Band 12	Bottom Face at 0mm	1.042	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.402**	**1.432**	**1.202**	**1.392**	**1.222**	**1.152**
	Edge 1 at 0mm	0.022	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.887**	**1.022**	**0.892**	**0.802**	**1.012**	**0.567**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	1.154								**1.154**	**1.154**	**1.154**	**1.154**	**1.154**	**1.154**
	Bottom of Laptop at 0mm	1.178								**1.178**	**1.178**	**1.178**	**1.178**	**1.178**	**1.178**
LTE Band 13	Bottom Face at 0mm	1.184	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.544**	**1.574**	**1.344**	**1.534**	**1.364**	**1.294**
	Edge 1 at 0mm	0.040	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.905**	**1.040**	**0.910**	**0.820**	**1.030**	**0.585**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	1.144								**1.144**	**1.144**	**1.144**	**1.144**	**1.144**	**1.144**
	Bottom of Laptop at 0mm	1.059								**1.059**	**1.059**	**1.059**	**1.059**	**1.059**	**1.059**
LTE Band 14	Bottom Face at 0mm	1.182	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.542**	**1.572**	**1.342**	**1.532**	**1.362**	**1.292**
	Edge 1 at 0mm	0.133	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.998**	**1.133**	**1.003**	**0.913**	**1.123**	**0.678**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.730								**0.730**	**0.730**	**0.730**	**0.730**	**0.730**	**0.730**
	Bottom of Laptop at 0mm	1.026								**1.026**	**1.026**	**1.026**	**1.026**	**1.026**	**1.026**
LTE Band 25	Bottom Face at 0mm	1.038	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.398**	**1.428**	**1.198**	**1.388**	**1.218**	**1.148**
	Edge 1 at 0mm	0.075	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.940**	**1.075**	**0.945**	**0.855**	**1.065**	**0.620**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.480								**0.480**	**0.480**	**0.480**	**0.480**	**0.480**	**0.480**
	Bottom of Laptop at 0mm	1.065								**1.065**	**1.065**	**1.065**	**1.065**	**1.065**	**1.065**
LTE Band 26	Bottom Face at 0mm	1.153	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.513**	**1.543**	**1.313**	**1.503**	**1.333**	**1.263**
	Edge 1 at 0mm	0.054	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.919**	**1.054**	**0.924**	**0.834**	**1.044**	**0.599**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.933								**0.933**	**0.933**	**0.933**	**0.933**	**0.933**	**0.933**

	Bottom of Laptop at 0mm	1.128								**1.128**	**1.128**	**1.128**	**1.128**	**1.128**	**1.128**
LTE Band 30	Bottom Face at 0mm	1.175	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.535**	**1.565**	**1.335**	**1.525**	**1.355**	**1.285**
	Edge 1 at 0mm	0.059	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.924**	**1.059**	**0.929**	**0.839**	**1.049**	**0.604**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.302								**0.302**	**0.302**	**0.302**	**0.302**	**0.302**	**0.302**
	Bottom of Laptop at 0mm	1.173								**1.173**	**1.173**	**1.173**	**1.173**	**1.173**	**1.173**
LTE Band 41	Bottom Face at 0mm	1.178	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.538**	**1.568**	**1.338**	**1.528**	**1.358**	**1.288**
	Edge 1 at 0mm	0.035	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.900**	**1.035**	**0.905**	**0.815**	**1.025**	**0.580**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.410								**0.410**	**0.410**	**0.410**	**0.410**	**0.410**	**0.410**
	Bottom of Laptop at 0mm	0.951								**0.951**	**0.951**	**0.951**	**0.951**	**0.951**	**0.951**
LTE Band 42_Aux	Bottom Face at 0mm	0.029	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.389**	**0.419**	**0.189**	**0.379**	**0.209**	**0.139**
	Edge 1 at 0mm	0.542	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.407**	**1.542**	**1.412**	**1.322**	**1.532**	**1.087**
	Edge 2 at 0mm	0.007	0.100		0.200			0.050	0.100	**0.057**	**0.107**	**0.207**	**0.007**	**0.007**	**0.107**
LTE Band 48_Aux	Bottom Face at 0mm	0.048	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.408**	**0.438**	**0.208**	**0.398**	**0.228**	**0.158**
	Edge 1 at 0mm	0.542	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.407**	**1.542**	**1.412**	**1.322**	**1.532**	**1.087**
	Edge 2 at 0mm	0.002	0.100		0.200			0.050	0.100	**0.052**	**0.102**	**0.202**	**0.002**	**0.002**	**0.102**
LTE Band 66	Bottom Face at 0mm	1.044	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.404**	**1.434**	**1.204**	**1.394**	**1.224**	**1.154**
	Edge 1 at 0mm	0.054	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.919**	**1.054**	**0.924**	**0.834**	**1.044**	**0.599**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.644								**0.644**	**0.644**	**0.644**	**0.644**	**0.644**	**0.644**
	Bottom of Laptop at 0mm	1.083								**1.083**	**1.083**	**1.083**	**1.083**	**1.083**	**1.083**
LTE Band 66_Aux	Bottom Face at 0mm	0.064	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.424**	**0.454**	**0.224**	**0.414**	**0.244**	**0.174**
	Edge 1 at 0mm	0.542	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.407**	**1.542**	**1.412**	**1.322**	**1.532**	**1.087**
	Edge 2 at 0mm	0.034	0.100		0.200			0.050	0.100	**0.084**	**0.134**	**0.234**	**0.034**	**0.034**	**0.134**
LTE Band 71	Bottom Face at 0mm	1.038	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.398**	**1.428**	**1.198**	**1.388**	**1.218**	**1.148**
	Edge 1 at 0mm	0.013	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.878**	**1.013**	**0.883**	**0.793**	**1.003**	**0.558**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	1.108								**1.108**	**1.108**	**1.108**	**1.108**	**1.108**	**1.108**
	Bottom of Laptop at 0mm	1.091								**1.091**	**1.091**	**1.091**	**1.091**	**1.091**	**1.091**

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+7 Summed 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 1	2.4GHz WLAN Ant 2	5GHz WLAN Ant 1	5GHz WLAN Ant 2	Bluetooth Ant 1	2.4GHz WLAN Ant 1+2	5GHz WLAN Ant 1+2						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
FR1 n2	Bottom Face at 0mm	1.107	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.467**	**1.497**	**1.267**	**1.457**	**1.287**	**1.217**
	Edge 1 at 0mm	0.074	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.939**	**1.074**	**0.944**	**0.854**	**1.064**	**0.619**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.603								**0.603**	**0.603**	**0.603**	**0.603**	**0.603**	**0.603**
	Bottom of Laptop at 0mm	1.126								**1.126**	**1.126**	**1.126**	**1.126**	**1.126**	**1.126**
FR1 n2_Aux	Bottom Face at 0mm	0.119	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.479**	**0.509**	**0.279**	**0.469**	**0.299**	**0.229**
	Edge 1 at 0mm	0.536	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.401**	**1.536**	**1.406**	**1.316**	**1.526**	**1.081**
	Edge 2 at 0mm	0.040	0.100		0.200			0.050	0.100	**0.090**	**0.140**	**0.240**	**0.040**	**0.040**	**0.140**
FR1 n5	Bottom Face at 0mm	1.121	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.481**	**1.511**	**1.281**	**1.471**	**1.301**	**1.231**
	Edge 1 at 0mm	0.024	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.889**	**1.024**	**0.894**	**0.804**	**1.014**	**0.569**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	1.086								**1.086**	**1.086**	**1.086**	**1.086**	**1.086**	**1.086**
	Bottom of Laptop at 0mm	1.033								**1.033**	**1.033**	**1.033**	**1.033**	**1.033**	**1.033**
FR1 n7_Aux	Bottom Face at 0mm	0.037	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.397**	**0.427**	**0.197**	**0.387**	**0.217**	**0.147**
	Edge 1 at 0mm	0.542	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.407**	**1.542**	**1.412**	**1.322**	**1.532**	**1.087**
	Edge 2 at 0mm	0.021	0.100		0.200			0.050	0.100	**0.071**	**0.121**	**0.221**	**0.021**	**0.021**	**0.121**
FR1 n12	Bottom Face at 0mm	0.850	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.210**	**1.240**	**1.010**	**1.200**	**1.030**	**0.960**
	Edge 1 at 0mm	0.001	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.866**	**1.001**	**0.871**	**0.781**	**0.991**	**0.546**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	1.192								**1.192**	**1.192**	**1.192**	**1.192**	**1.192**	**1.192**
	Bottom of Laptop at 0mm	1.191								**1.191**	**1.191**	**1.191**	**1.191**	**1.191**	**1.191**
FR1 n41_Aux	Bottom Face at 0mm	0.014	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.374**	**0.404**	**0.174**	**0.364**	**0.194**	**0.124**
	Edge 1 at 0mm	0.541	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.406**	**1.541**	**1.411**	**1.321**	**1.531**	**1.086**
	Edge 2 at 0mm	0.010	0.100		0.200			0.050	0.100	**0.060**	**0.110**	**0.210**	**0.010**	**0.010**	**0.110**
FR1 n66	Bottom Face at 0mm	1.133	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**1.493**	**1.523**	**1.293**	**1.483**	**1.313**	**1.243**
	Edge 1 at 0mm	0.061	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**0.926**	**1.061**	**0.931**	**0.841**	**1.051**	**0.606**
	Edge 2 at 0mm		0.100		0.200			0.050	0.100	**0.050**	**0.100**	**0.200**	**0.000**	**0.000**	**0.100**
	Edge 4 at 0mm	0.497								**0.497**	**0.497**	**0.497**	**0.497**	**0.497**	**0.497**
	Bottom of Laptop at 0mm	1.141								**1.141**	**1.141**	**1.141**	**1.141**	**1.141**	**1.141**
FR1 n66_Aux	Bottom Face at 0mm	0.056	0.390	0.330	0.160	0.160	0.020	0.360	0.090	**0.416**	**0.446**	**0.216**	**0.406**	**0.236**	**0.166**
	Edge 1 at 0mm	0.541	1.000	0.730	0.870	0.940	0.050	0.865	0.495	**1.406**	**1.541**	**1.411**	**1.321**	**1.531**	**1.086**
	Edge 2 at 0mm	0.056	0.100		0.200			0.050	0.100	**0.106**	**0.156**	**0.256**	**0.056**	**0.056**	**0.156**

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18. 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.

19. 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 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

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

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

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