FCC SAR TEST REPORT

FCC ID	:	**2AJN7-TP00122AUC**
Equipment	:	**Notebook Computer/Foldable PC**
Brand Name	:	**Lenovo**
Model Name	:	**TP00122A**
Applicant	:	**LC Future Center Limited Taiwan Branch 7F., No. 780, Bei'an Rd., Zhongshan Dist., Taipei City 104, Taiwan**
Standard	:	**FCC 47 CFR Part 2 (2.1093) ANSI/IEEE C95.1-1992 IEEE 1528-2013**

Equipment：Foxconn T99W175 tested inside of Notebook Computer/Foldable PC.

The product was received on Aug. 06, 2020 and testing was started from Aug. 25, 2020 and completed on Spt. 03, 2020. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Approved by: Cona Huang / Deputy Manager

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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History of this test report

Report No.	Version	Description	Issued Date
FA072019A	01	Initial issue of report	Oct. 05, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for LC Future Center Limited Taiwan Branch, Notebook Computer/Foldable PC, TP00122A, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary Body 1g SAR (W/kg)	Highest Simultaneous Transmission 1g SAR (W/kg)
Licensed	WCDMA II	1.16	1.592
	WCDMA IV	1.19	
	WCDMA V	1.19	
	LTE Band 2	0.69	
	LTE Band 7	1.20	
	LTE Band 12 / 17	1.14	
	LTE Band 13	1.18	
	LTE Band 14	1.18	
	LTE Band 25	1.17	
	LTE Band 5 / 26	1.18	
	LTE Band 30	1.15	
	LTE Band 38 / 41	1.16	
	LTE Band 48	1.00	
	LTE Band 4/ 66	1.18	
	LTE Band 71	1.09	
	FR1 n2	0.69	
	FR1 n5	0.65	
	FR1 n7	1.14	
	FR1 n12	0.63	
	FR1 n41	1.09	
	FR1 n66	0.68	
	FR1 n71	0.67	
Date of Testing:		2020/8/25 ~ 2020/9/3	

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

Reviewed by: Jason Wang
Report Producer: 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 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Notebook Computer/Foldable PC
Brand Name	Lenovo
Model Name	TP00122A
FCC ID	2AJN7-TP00122AUC
Integrated WWAN Module	Brand Name: Foxconn Model Name: T99W175
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz
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
EUT Stage	Production Unit

WLAN Module information	
Integrated WLAN Module	Brand Name: Intel Model Name: AX200D2WL
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8GHz Band: 5725 MHz ~ 5825 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE

Remark:

1. The Intel AX200D2WL is also integrated into this host, the WLAN and Bluetooth SAR results are referenced to FCC ID: PD9AX200D2L, report no.: 200525-03.TR01 and the results are used to perform simultaneous transmission analysis.

WWAN Antenna Information				
Main Antenna	Manufacturer	Amphenol	Peak gain(dBi)	1.94
	Part number	LXA494-16-000-C	Type	PIFA
MIMO 2 Antenna	Manufacturer	Amphenol	Peak gain(dBi)	1.44
	Part number	LXA493-16-000-C	Type	PIFA

3.2 General 5GNR and LTE SAR Test and Reporting Considerations

LTE Information	
FCC ID	2AJN7-TP00122AUC
Equipment Name	Notebook Computer/Foldable PC
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 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz
Channel Bandwidth	LTE Band 02:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 04:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 05:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 07: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz
uplink modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Data only
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**

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

LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.
Power reduction applied to satisfy SAR compliance	Yes, Proximity Sensor.
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 12
LTE Carrier Aggregation Additional Information	This device supports maximum of 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 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

5G NR Information	
FCC	2AJN7-TP00122AUC
Equipment Name	Notebook Computer/Foldable PC
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n41: 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B5/12/13/30/48/66
LTE Anchor Bands for n5	LTE B2/7/12/48/66
LTE Anchor Bands for n7	LTE B5/12
LTE Anchor Bands for n12	LTE B2/66
LTE Anchor Bands for n41	LTE B2/25/26/66
LTE Anchor Bands for n66	LTE B5/12/13/30/48/71
LTE Anchor Bands for n71	LTE B2/7/66

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band

NR Band 2

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900

NR Band 5

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839

NR Band 7

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560

NR Band 12

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	140300	701.5	140800	704	141300	706.5
M	141500	707.5	141500	707.5	141500	707.5
H	142700	713.5	142200	711	141700	708.5

NR Band 41														
	Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	501204	2506.02	503202	2516.01	504204	2521.02	505200	2526	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	535998	2679.99	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640

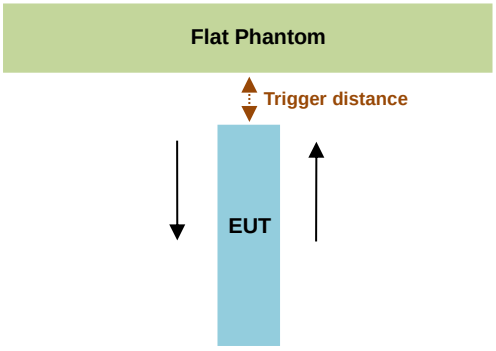
NR Band 66								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720
M	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5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

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

4. Proximity Sensor Triggering Test

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

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



Proximity Sensor Trigger Distance (mm)		
Position	Main antenna	
	Bottom Face	Edge 1
Minimum	13	27

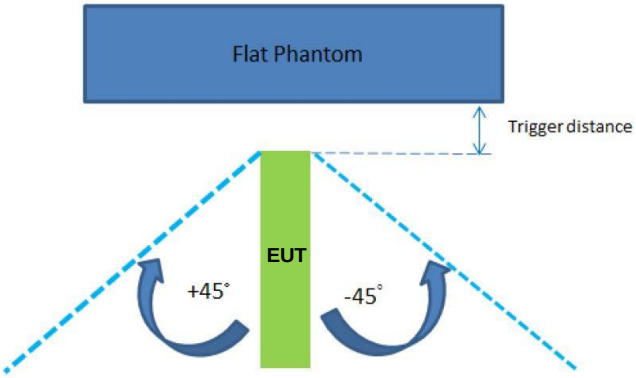
Proximity Sensor Trigger Distance (mm)		
Position	MIMO2 antenna	
	Bottom Face	Edge 3
Minimum	16	24

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

Since the antenna and sensor are collocated and all of the peak SAR location is overlapping with the sensor pad for this device, therefore, According to KDB 616217 section6.3, these procedures do not apply and are not required for bottom face, Edge1 and Edge3, due to the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor on this device.

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

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



The Sensor Trigger Distance for WWAN (mm)				
Position	Main Ant		MIMO2 Ant	
	Edge 1		Edge3	
	+45	-45	+45	-45
Minimum	27	26	26	23

Proximity sensor power reduction

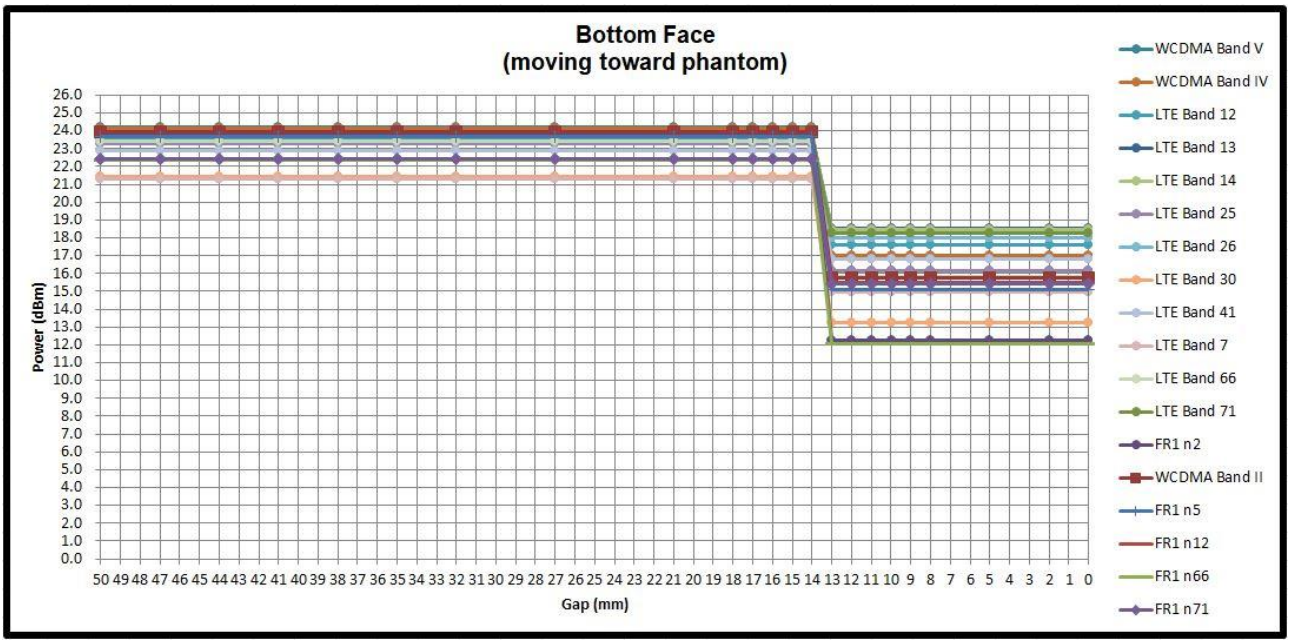
Exposure Position / wireless mode	Bottom face[1]
WCDMA Band II Main	7.5 dB
WCDMA Band IV Main	7.5 dB
WCDMA Band V Main	7 dB
LTE Band 2 MIMO2	8.5 dB
LTE Band 7 Main	7 dB
LTE Band 7 MIMO2	13.5 dB
LTE Band 12 Main / 17 Main	6 dB
LTE Band 13 Main	5 dB
LTE Band 14 Main	5 dB
LTE Band 2 Main / 25 Main	7 dB
LTE Band 5 Main / 26 Main	5.5 dB
LTE Band 30 Main	9 dB
LTE Band 38 Main / 41 Main	6 dB
LTE Band 41_HPUE	5 dB
LTE Band 48 MIMO2	6 dB
LTE Band 4 Main / 66 Main	7 dB
LTE Band 66 MIMO2	9 dB
LTE Band 71 Main	5.5 dB
FR1 n2 Main	10 dB
FR1 n2 MIMO 2	8.5 dB
FR1 n5 Main	8 dB
FR1 n7 MIMO 2	14 dB
FR1 n12 Main	8 dB
FR1 n41 MIMO 2	14 dB
FR1 n66 Main	10.5 dB
FR1 n66 MIMO 2	10 dB
FR1 n71 Main	7.5 dB

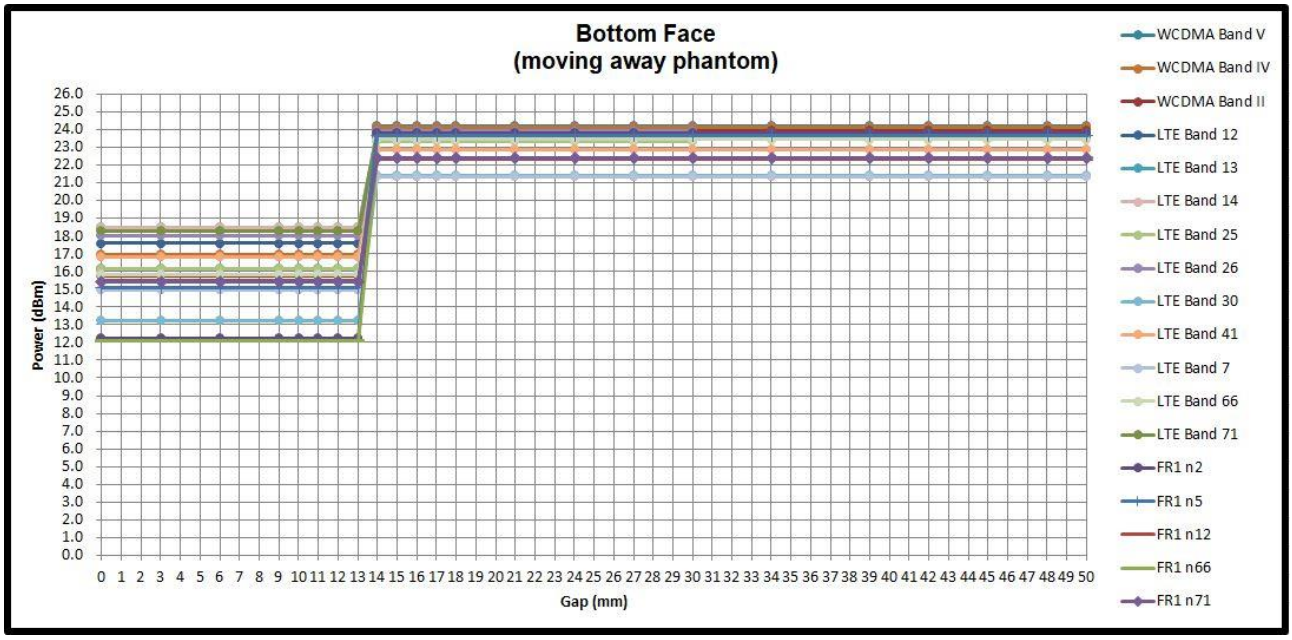
Remark:

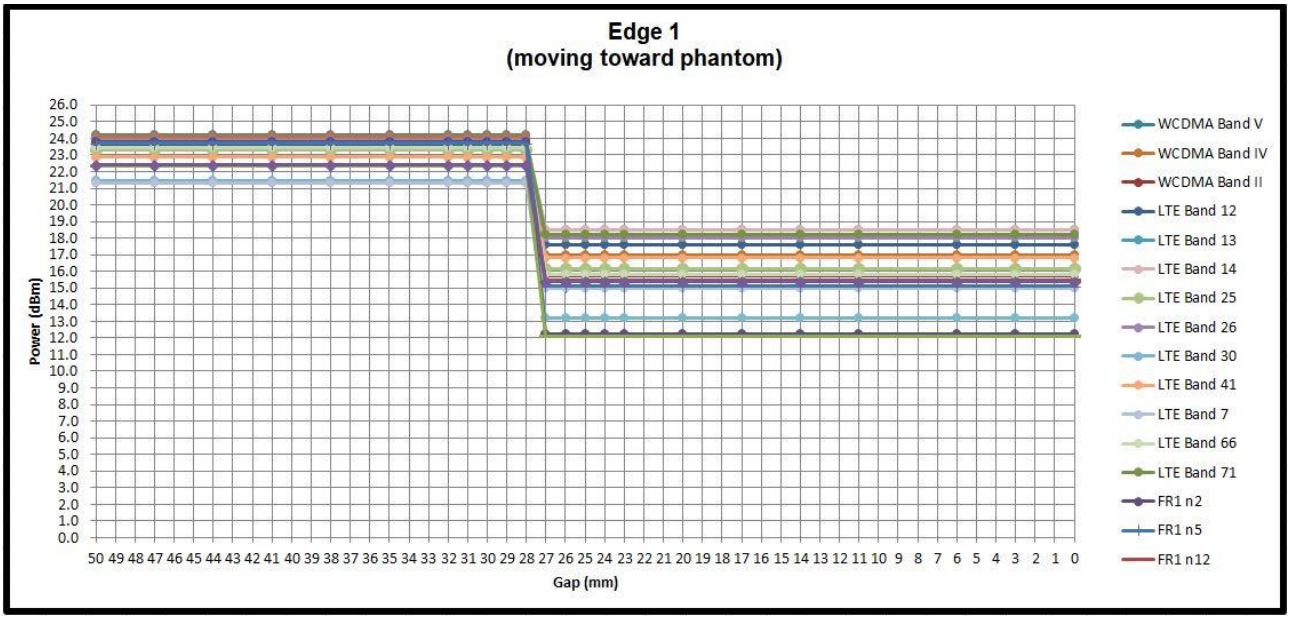
1. [1]: Reduced maximum limit applied by activation of proximity sensor.
2. Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown as below.
3. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:
   ・Bottom face: 15 mm for MIMO2 antenna and 12mm for Main antenna
   ・Edge1: 25mm for Main antenna
   ・Edge3: 22mm for MIMO2 antenna

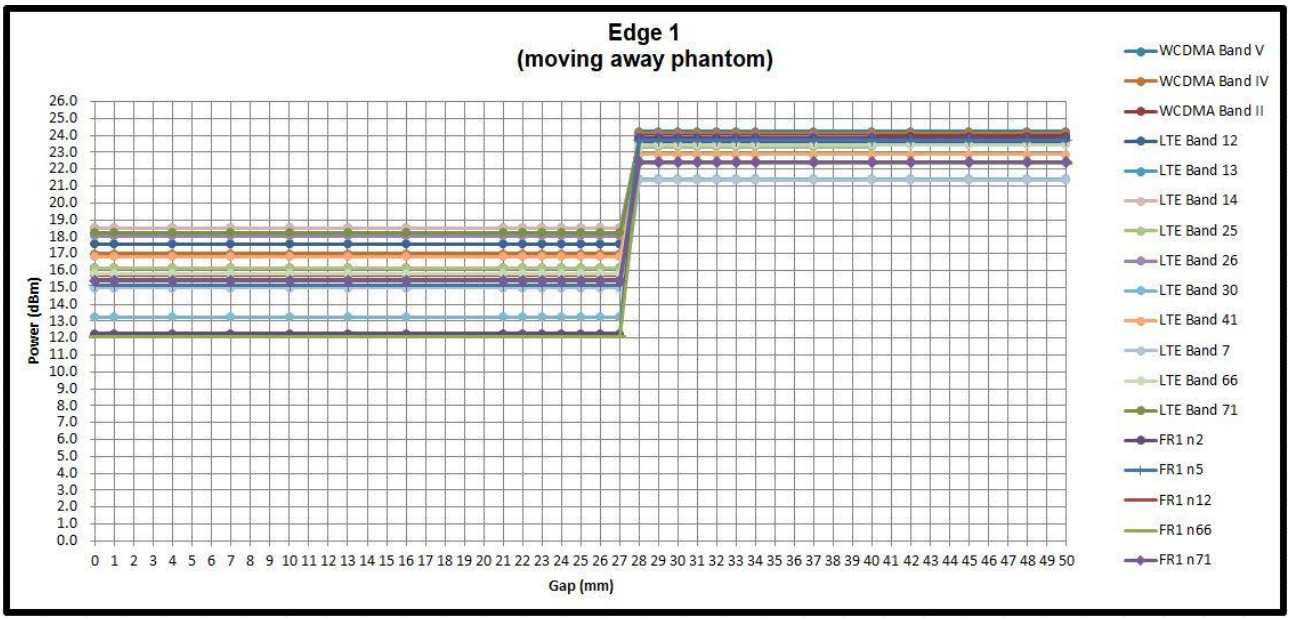
Power Measurement during Sensor Trigger distance testing

Main Antenna

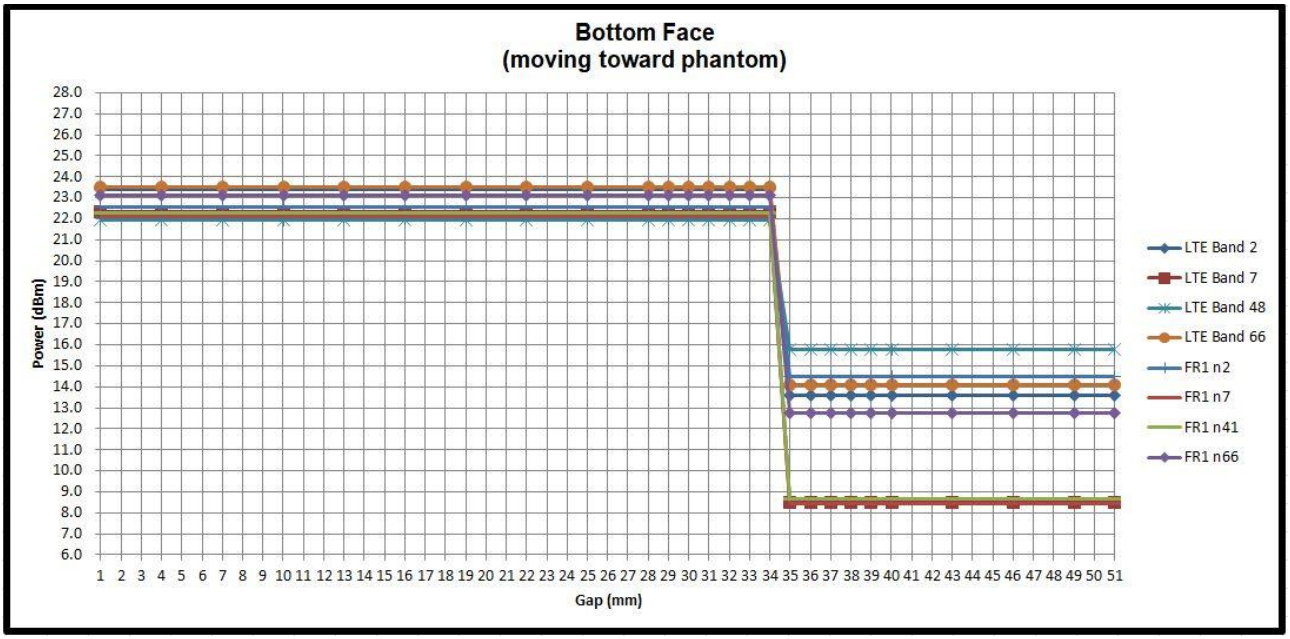


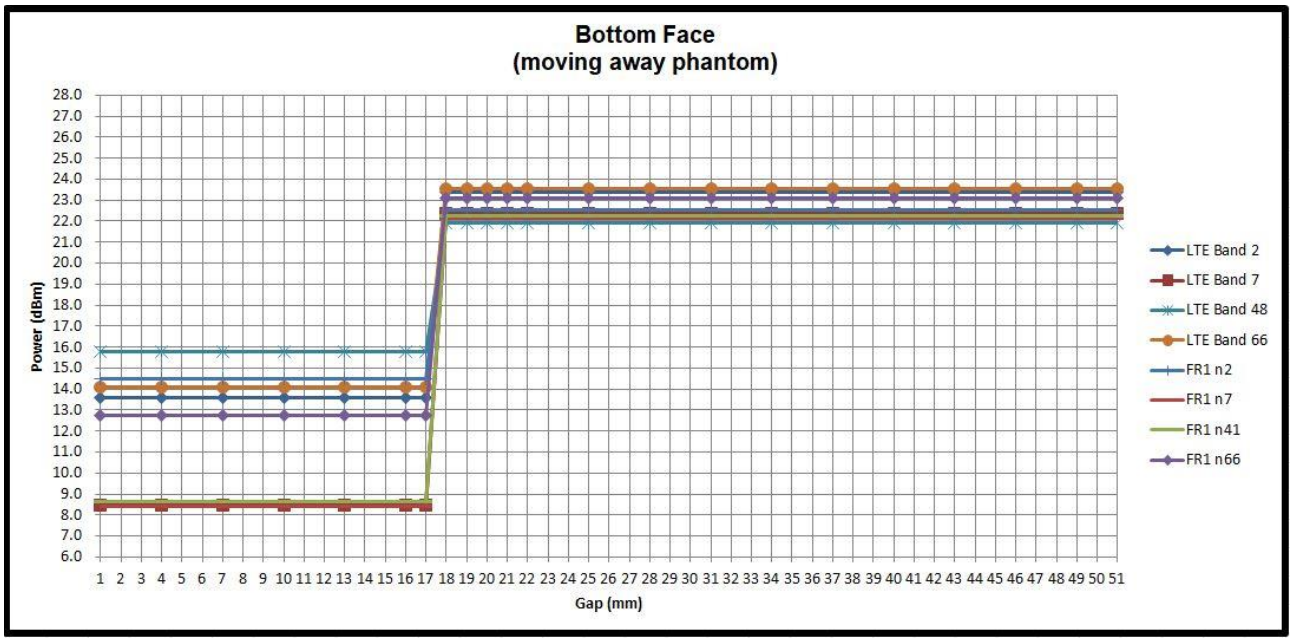


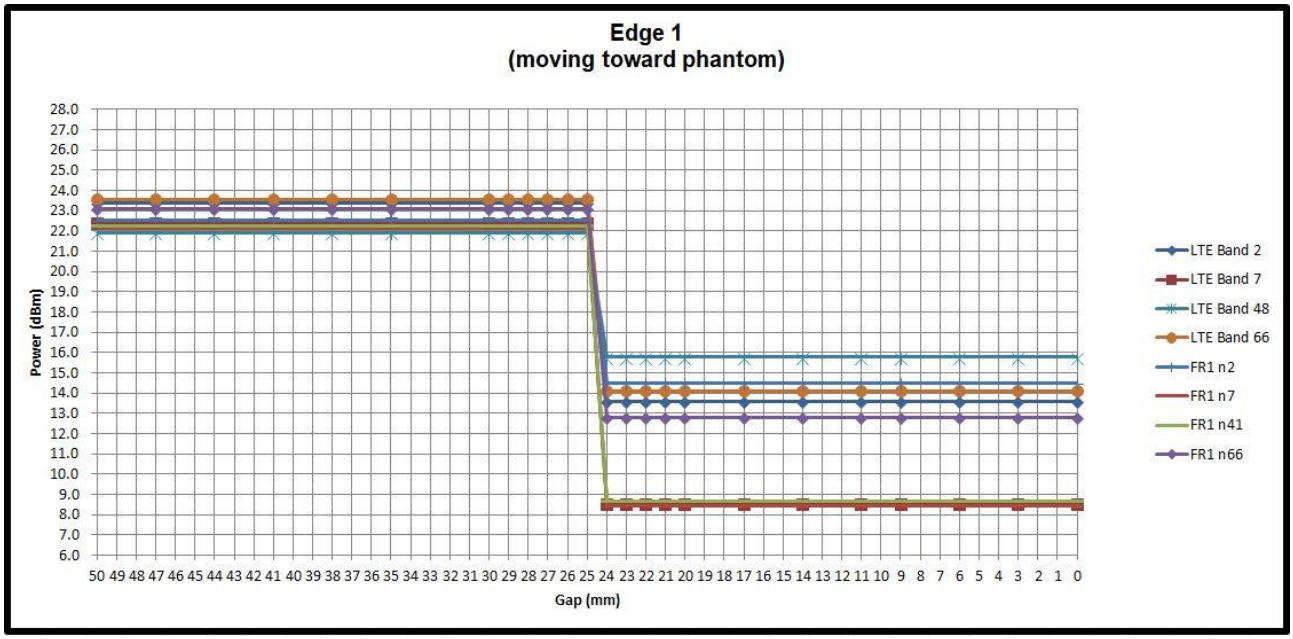

Edge 1
(moving toward phantom)
Power (dBm)
Gap (mm)
WCDMA Band V
WCDMA Band IV
WCDMA Band II
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 25
LTE Band 26
LTE Band 30
LTE Band 41
LTE Band 7
LTE Band 66
LTE Band 71
FR1 n2
FR1 n5
FR1 n12

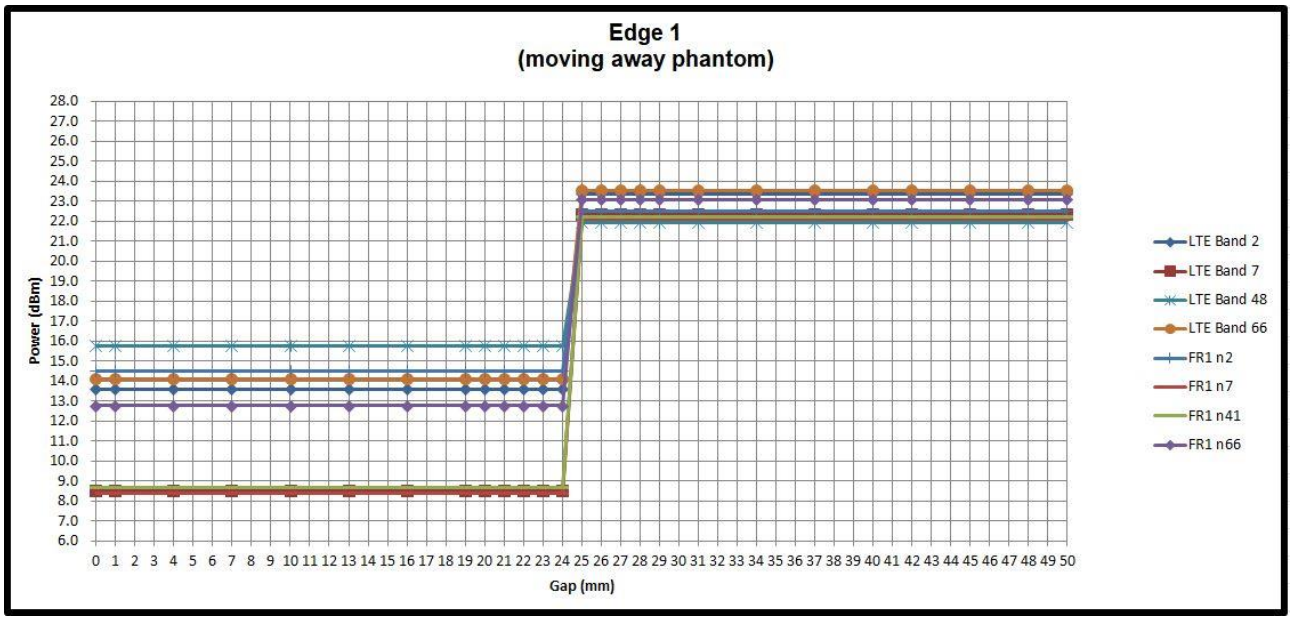

Edge 1
(moving away phantom)
Power (dBm)
Gap (mm)
WCDMA Band V
WCDMA Band IV
WCDMA Band II
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 25
LTE Band 26
LTE Band 30
LTE Band 41
LTE Band 7
LTE Band 66
LTE Band 71
FR1 n2
FR1 n5
FR1 n12
FR1 n66
FR1 n71

MIMO2 Antenna






Edge 1
(moving toward phantom)
Power (dBm)
Gap (mm)
LTE Band 2
LTE Band 7
LTE Band 48
LTE Band 66
FR1 n2
FR1 n7
FR1 n41
FR1 n66


Edge 1
(moving away phantom)
Power (dBm)
Gap (mm)
LTE Band 2
LTE Band 7
LTE Band 48
LTE Band 66
FR1 n2
FR1 n7
FR1 n41
FR1 n66

5. RF Exposure Limits

5.1 Uncontrolled Environment

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

5.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

6. Specific Absorption Rate (SAR)

6.1 Introduction

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

6.2 SAR Definition

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

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

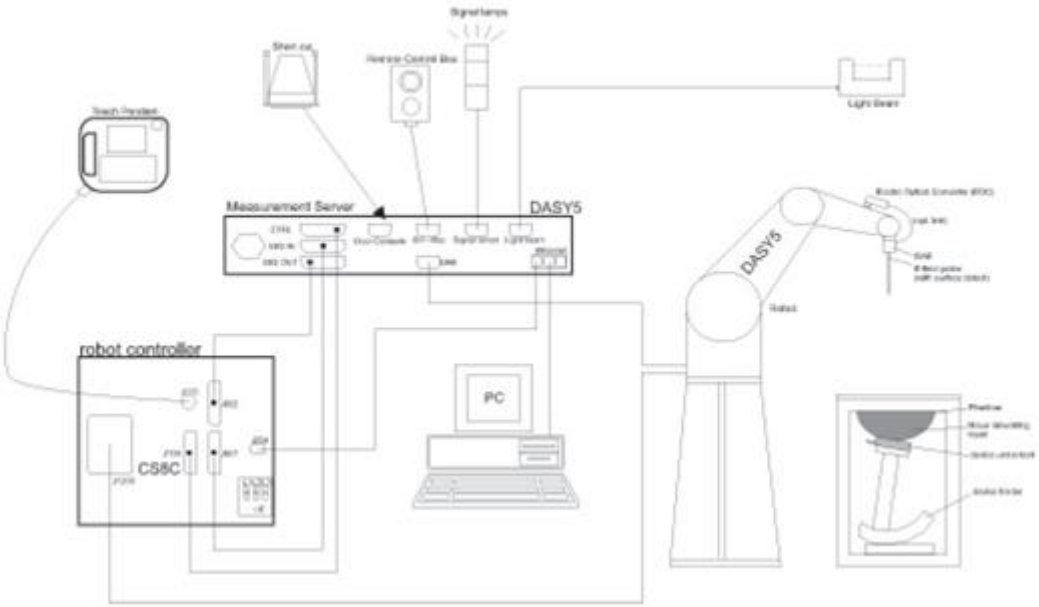
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

7. System Description and Setup

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



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

7.1 Test Side Location

Sporton Lab and below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 0007) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.

Test Side	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory			
Test Site Location	TW1190 No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, CHINESE TAIPEI		TW0007 No. 58, Aly. 75, Ln. 564, Wehnua 3rd, Rd., Guishan Dist., Taoyuan City, CHINESE TAIPEI	
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY
	SAR06-HY	SAR10-HY		

7.2 E-Field Probe

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

<ES3DV3 Probe>

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

<EX3DV4 Probe>

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

7.3 Data Acquisition Electronics (DAE)

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

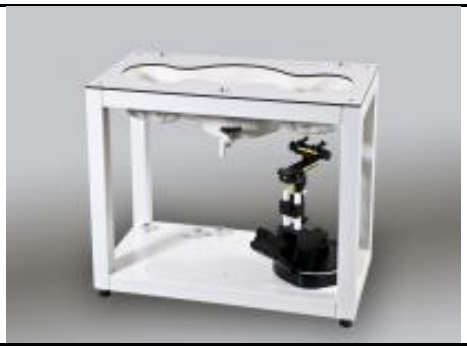
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.1 Photo of DAE

7.4 Phantom

<SAM Twin Phantom>

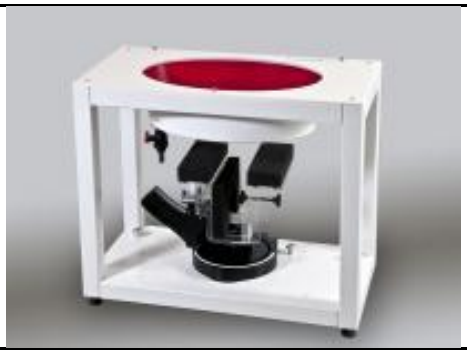
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

<ELI Phantom>

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



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

7.5 Device Holder

<Mounting Device for Hand-Held Transmitter>

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

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

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

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

Mounting Device for Laptops

8. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

8.1 Spatial Peak SAR Evaluation

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

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

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

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

8.2 Power Reference Measurement

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

8.3 Area Scan

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

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

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

8.4 Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

8.5 Volume Scan Procedures

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

8.6 Power Drift Monitoring

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

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit(2)	D750V3	1107	Mar. 08, 2019	Mar. 06, 2021
SPEAG	835MHz System Validation Kit	D835V2	4d167	Nov. 25, 2019	Nov. 24, 2020
SPEAG	1750MHz System Validation Kit(2)	D1750V2	1112	Mar. 07, 2019	Mar. 05, 2021
SPEAG	1900MHz System Validation Kit(2)	D1900V2	5d041	Sep. 11, 2018	Sep. 09, 2020
SPEAG	2300MHz System Validation Kit(2)	D2300V2	1006	Jan. 28, 2019	Jan. 26, 2021
SPEAG	2600MHz System Validation Kit(2)	D2600V2	1008	Aug. 31, 2018	Aug. 29, 2020
SPEAG	2600MHz System Validation Kit(2)	D2600V2	1078	Mar. 06, 2019	Mar. 04, 2021
SPEAG	3500MHz System Validation Kit(2)	D3500V2	1014	Jan. 29, 2019	Jan. 27, 2021
SPEAG	3700MHz System Validation Kit(2)	D3700V2	1006	Mar. 05, 2019	Mar. 03, 2021
SPEAG	Data Acquisition Electronics	DAE4	699	Feb. 26, 2020	Feb. 25, 2021
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 23, 2020	Jul. 22, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	3728	Feb. 04, 2020	Feb. 03, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Sep. 26, 2019	Sep. 25, 2020
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 12, 2019	Nov. 11, 2020
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 12, 2019	Nov. 11, 2020
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 31, 2019	Oct. 30, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50267236	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	MY46101588	Jun. 10, 2020	Jun. 09, 2021
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 18, 2019	Sep. 17, 2020
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Nov. 18, 2019	Nov. 17, 2020
Anritsu	Power Meter	ML2495A	0932001	Oct. 03, 2019	Oct. 02, 2020
Anritsu	Power Sensor	MA2411B	0846202	Oct. 03, 2019	Oct. 02, 2020
Anritsu	Power Meter	ML2495A	1218006	Oct. 14, 2019	Oct. 13, 2020
Anritsu	Power Sensor	MA2411B	1207363	Oct. 14, 2019	Oct. 13, 2020
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 30, 2020	Jun. 29, 2021
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Mar. 12, 2020	Mar. 11, 2021
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 16, 2019	Oct. 15, 2020
Mini-Circuits	Power Amplifier	ZHL-42W+	321501827	Aug. 06, 2020	Aug. 05, 2021
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

10. System Verification

10.1 Tissue Simulating Liquids

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

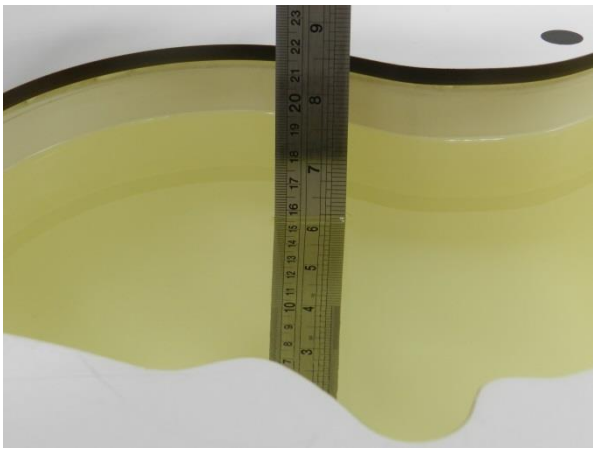


Fig 10.1Photo of Liquid Height for Head SAR

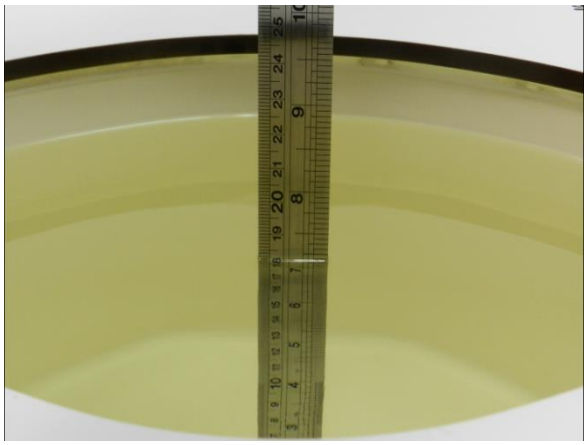


Fig 10.2 Photo of Liquid Height for Body SAR

10.2 Tissue Verification

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

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (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	22.2	0.894	41.410	0.89	41.90	0.45	-1.17	±5	2020/8/25
750	22.7	0.897	41.539	0.89	41.90	0.79	-0.86	±5	2020/8/27
835	22.2	0.910	40.673	0.90	41.50	1.11	-1.99	±5	2020/8/25
835	22.7	0.938	40.799	0.90	41.50	4.22	-1.69	±5	2020/8/27
1750	22.2	1.377	41.436	1.37	40.10	0.51	3.33	±5	2020/8/25
1750	22.2	1.384	41.829	1.37	40.10	1.02	4.31	±5	2020/8/26
1750	22.5	1.377	41.846	1.37	40.10	0.51	4.35	±5	2020/9/1
1900	22.2	1.424	39.547	1.40	40.00	1.71	-1.13	±5	2020/8/25
1900	22.2	1.418	40.495	1.40	40.00	1.29	1.24	±5	2020/8/26
1900	22.6	1.414	40.426	1.40	40.00	1.00	1.07	±5	2020/8/31
1900	22.9	1.422	40.581	1.40	40.00	1.57	1.45	±5	2020/9/3
2300	22.6	1.643	39.585	1.67	39.50	-1.62	0.22	±5	2020/8/31
2600	22.2	2.007	37.967	1.96	39.00	2.40	-2.65	±5	2020/8/25
2600	22.6	1.995	38.963	1.96	39.00	1.79	-0.09	±5	2020/8/28
2600	22.5	2.018	38.966	1.96	39.00	2.96	-0.09	±5	2020/9/1
2600	22.9	2.036	39.100	1.96	39.00	3.88	0.26	±5	2020/9/3
3500	22.4	2.932	37.477	2.91	37.90	0.76	-1.12	±5	2020/8/30
3700	22.4	3.117	37.178	3.12	37.70	-0.10	-1.38	±5	2020/8/30

10.3 System Performance Check Results

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

Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2020/8/25	750	250	D750V3-1107	EX3DV4 - SN3728	DAE4 Sn699	2.10	8.32	8.4	0.96
2020/8/27	750	250	D750V3-1107	EX3DV4 - SN3728	DAE4 Sn699	2.14	8.32	8.56	2.88
2020/8/25	835	250	D835V2-4d167	EX3DV4 - SN3728	DAE4 Sn699	2.39	9.55	9.56	0.10
2020/8/27	835	250	D835V2-4d167	EX3DV4 - SN3728	DAE4 Sn699	2.49	9.55	9.96	4.29
2020/8/25	1750	250	D1750V2-1112	EX3DV4 - SN3728	DAE4 Sn699	8.64	36.70	34.56	-5.83
2020/8/26	1750	250	D1750V2-1112	EX3DV4 - SN3728	DAE4 Sn699	8.83	36.70	35.32	-3.76
2020/9/1	1750	250	D1750V2-1112	EX3DV4 - SN3728	DAE4 Sn699	8.81	36.70	35.24	-3.98
2020/8/25	1900	250	D1900V2-5d041	EX3DV4 - SN3728	DAE4 Sn699	9.99	40.20	39.96	-0.60
2020/8/26	1900	250	D1900V2-5d041	EX3DV4 - SN3728	DAE4 Sn699	9.62	40.20	38.48	-4.28
2020/8/31	1900	250	D1900V2-5d041	EX3DV4 - SN3728	DAE4 Sn699	9.92	40.20	39.68	-1.29
2020/9/3	1900	250	D1900V2-5d041	EX3DV4 - SN3728	DAE4 Sn699	9.98	40.20	39.92	-0.70
2020/8/31	2300	250	D2300V2-1006	EX3DV4 - SN3728	DAE4 Sn699	12.20	48.70	48.8	0.21
2020/8/25	2600	250	D2600V2-1008	EX3DV4 - SN3728	DAE4 Sn699	14.90	56.40	59.6	5.67
2020/8/28	2600	250	D2600V2-1008	EX3DV4 - SN3728	DAE4 Sn699	14.80	56.40	59.2	4.96
2020/9/1	2600	250	D2600V2-1078	EX3DV4 - SN3728	DAE4 Sn699	15.00	57.60	60	4.17
2020/9/3	2600	250	D2600V2-1078	EX3DV4 - SN3728	DAE4 Sn699	15.10	57.60	60.4	4.86
2020/8/30	3500	100	D3500V2-1014	EX3DV4 - SN3931	DAE4 Sn853	6.66	67.90	66.6	-1.91
2020/8/30	3700	100	D3700V2-1006	EX3DV4 - SN3931	DAE4 Sn853	7.25	67.30	72.5	7.73

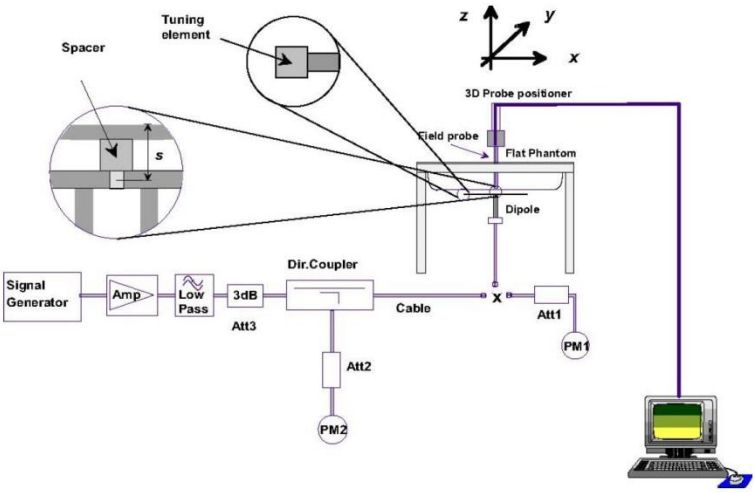


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

11. Measurement procedure for output power and SAR

<WCDMA Note>

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA 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.
3. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
4. 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.
5. 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.		

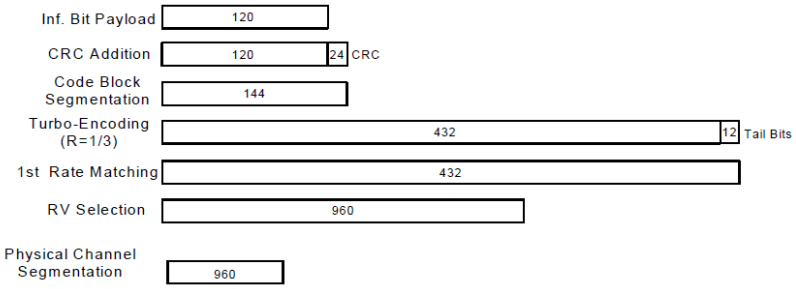


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<Default Power Mode>

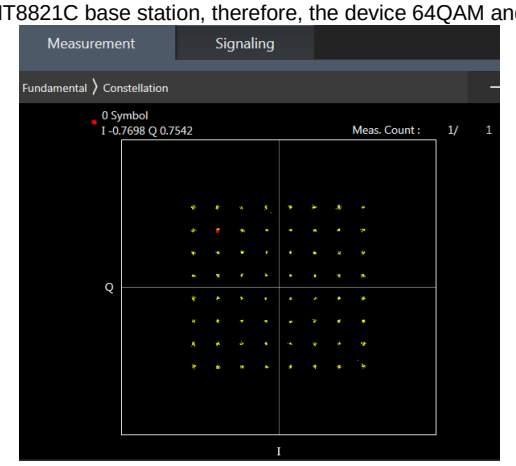
Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	23.94	23.87	23.81	24.50	24.08	24.06	24.14	24.50	24.21	24.11	24.11	24.50
3GPP Rel 6	HSDPA Subtest-1	23.76	23.66	23.68	24.50	23.21	23.12	23.16	24.50	23.24	23.08	23.02	24.50
3GPP Rel 6	HSDPA Subtest-2	23.76	23.69	23.68	24.50	22.70	22.60	22.64	24.50	22.73	22.60	22.52	24.50
3GPP Rel 6	HSDPA Subtest-3	23.62	23.70	23.67	24.00	23.23	23.13	23.14	24.00	23.22	23.09	22.99	24.00
3GPP Rel 6	HSDPA Subtest-4	23.63	23.65	23.68	24.00	23.19	23.11	23.19	24.00	23.24	23.10	23.02	24.00
3GPP Rel 8	DC-HSDPA Subtest-1	23.70	23.61	23.70	24.50	23.12	23.12	23.09	24.50	23.22	23.05	22.97	24.50
3GPP Rel 8	DC-HSDPA Subtest-2	23.72	23.71	23.61	24.50	22.76	22.53	22.59	24.50	22.68	22.67	22.50	24.50
3GPP Rel 8	DC-HSDPA Subtest-3	23.56	23.63	23.69	24.00	23.28	23.03	23.13	24.00	23.17	23.06	22.95	24.00
3GPP Rel 8	DC-HSDPA Subtest-4	23.69	23.67	23.70	24.00	23.27	23.03	23.09	24.00	23.14	23.08	22.93	24.00
3GPP Rel 6	HSUPA Subtest-1	22.76	22.55	22.70	24.50	23.24	23.13	23.16	24.50	23.24	23.05	23.03	24.50
3GPP Rel 6	HSUPA Subtest-2	20.59	20.53	20.52	22.50	20.98	20.89	20.97	22.50	21.26	21.05	21.02	22.50
3GPP Rel 6	HSUPA Subtest-3	21.62	21.54	21.56	23.50	21.94	21.88	21.99	23.50	22.25	22.05	22.01	23.50
3GPP Rel 6	HSUPA Subtest-4	20.61	20.51	20.53	22.50	20.96	20.88	20.94	22.50	21.21	21.02	21.02	22.50
3GPP Rel 6	HSUPA Subtest-5	22.60	22.50	22.60	24.50	23.00	22.90	22.90	24.50	23.20	23.10	23.00	24.50

<Reduced Power Mode>

Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)	WCDMA V			Tune-up Limit (dBm)
TX Channel		9262	9400	9538		1312	1413	1513		4132	4182	4233	
Rx Channel		9662	9800	9938		1537	1638	1738		4357	4407	4458	
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	15.75	15.78	15.80	17.00	17.00	17.00	16.98	17.00	16.15	16.39	16.69	17.50
3GPP Rel 6	HSDPA Subtest-1	14.77	14.81	14.82	16.00	15.96	15.91	15.96	16.00	15.21	15.48	15.70	16.50
3GPP Rel 6	HSDPA Subtest-2	14.79	14.79	14.78	16.00	16.00	15.97	15.97	16.00	15.23	15.46	15.66	16.50
3GPP Rel 6	HSDPA Subtest-3	14.29	14.28	14.26	15.50	15.41	15.48	15.42	15.50	14.73	14.93	15.22	16.00
3GPP Rel 6	HSDPA Subtest-4	14.25	14.26	14.32	15.50	15.49	15.47	15.40	15.50	14.67	14.93	15.19	16.00
3GPP Rel 8	DC-HSDPA Subtest-1	14.73	14.77	14.77	16.00	15.98	15.99	15.91	16.00	15.18	15.44	15.69	16.50
3GPP Rel 8	DC-HSDPA Subtest-2	14.69	14.77	14.74	16.00	15.91	15.96	15.95	16.00	15.19	15.42	15.57	16.50
3GPP Rel 8	DC-HSDPA Subtest-3	14.19	14.23	14.20	15.50	15.50	15.46	15.42	15.50	14.72	14.87	15.16	16.00
3GPP Rel 8	DC-HSDPA Subtest-4	14.19	14.16	14.24	15.50	15.45	15.49	15.40	15.50	14.62	14.93	15.12	16.00
3GPP Rel 6	HSUPA Subtest-1	14.74	14.83	14.85	16.00	15.93	15.97	15.91	16.00	14.27	14.42	14.76	16.50
3GPP Rel 6	HSUPA Subtest-2	12.76	12.76	12.72	14.00	13.97	13.94	13.95	14.00	13.20	13.42	13.62	14.50
3GPP Rel 6	HSUPA Subtest-3	13.75	13.69	13.97	15.00	14.96	14.92	14.98	15.00	15.26	15.48	15.50	15.50
3GPP Rel 6	HSUPA Subtest-4	12.76	12.76	12.90	14.00	13.91	13.97	13.95	14.00	13.26	13.40	13.69	14.50
3GPP Rel 6	HSUPA Subtest-5	14.80	14.80	14.76	16.00	15.93	15.94	15.99	16.00	15.20	15.40	15.80	16.50

<LTE Note>

1. Anritsu MT8821C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not 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 B12/B26/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B4/B5/B17/B38 SAR test was covered by B12/B26/B66/B41; 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
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM

16QAM

<Default Power Mode>

<LTE Band 2 Main>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	23.20	23.00	23.12	24	0
20	QPSK	1	49	23.11	22.97	23.08		
20	QPSK	1	99	22.88	22.98	23.00		
20	QPSK	50	0	22.32	22.21	22.29	23	1
20	QPSK	50	24	22.27	22.18	22.21		
20	QPSK	50	50	22.26	22.19	22.28		
20	QPSK	100	0	22.21	22.13	22.19		
20	16QAM	1	0	22.65	22.43	22.51	23	1
20	16QAM	1	49	22.49	22.39	22.40		
20	16QAM	1	99	22.30	22.32	22.34		
20	16QAM	50	0	21.35	21.26	21.30	22	2
20	16QAM	50	24	21.34	21.23	21.24		
20	16QAM	50	50	21.29	21.20	21.28		
20	16QAM	100	0	21.32	21.19	21.22		
20	64QAM	1	0	21.40	21.28	21.26	22	2
20	64QAM	1	49	21.36	21.14	20.91		
20	64QAM	1	99	21.18	21.22	21.19		
20	64QAM	50	0	20.37	20.16	20.22	21	3
20	64QAM	50	24	20.32	20.22	20.21		
20	64QAM	50	50	20.30	20.19	20.24		
20	64QAM	100	0	20.30	20.20	20.22		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	23.19	23.09	23.13	24	0
15	QPSK	1	37	23.09	23.05	23.10		
15	QPSK	1	74	23.13	23.06	23.08		
15	QPSK	36	0	22.34	22.12	22.19	23	1
15	QPSK	36	20	22.32	22.19	22.22		
15	QPSK	36	39	22.27	22.19	22.30		
15	QPSK	75	0	22.28	22.17	22.21		
15	16QAM	1	0	22.38	22.27	22.36	23	1
15	16QAM	1	37	22.36	22.34	22.32		
15	16QAM	1	74	22.28	22.31	22.31		
15	16QAM	36	0	21.33	21.12	21.21	22	2
15	16QAM	36	20	21.31	21.19	21.22		
15	16QAM	36	39	21.25	21.18	21.30		
15	16QAM	75	0	21.29	21.21	21.24		
15	64QAM	1	0	21.52	21.31	21.35	22	2
15	64QAM	1	37	21.39	21.39	21.25		
15	64QAM	1	74	21.34	21.18	21.37		
15	64QAM	36	0	20.34	20.13	20.27	21	3
15	64QAM	36	20	20.31	20.23	20.25		
15	64QAM	36	39	20.32	20.22	20.30		
15	64QAM	75	0	20.30	20.26	20.25		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	23.01	22.77	23.00	24	0
10	QPSK	1	25	22.97	22.82	22.99		
10	QPSK	1	49	22.96	22.81	22.99		
10	QPSK	25	0	22.19	21.92	22.03	23	1

10	QPSK	25	12	22.12	22.05	22.06		
10	QPSK	25	25	22.16	21.99	22.16		
10	QPSK	50	0	22.14	22.08	22.09		
10	16QAM	1	0	22.45	22.22	22.42	23	1
10	16QAM	1	25	22.36	22.21	22.22		
10	16QAM	1	49	22.33	22.19	22.32		
10	16QAM	25	0	21.18	20.92	21.03	22	2
10	16QAM	25	12	21.16	21.01	21.10		
10	16QAM	25	25	21.18	21.06	21.12		
10	16QAM	50	0	21.15	21.07	21.04		
10	64QAM	1	0	21.40	21.11	21.29	22	2
10	64QAM	1	25	21.37	21.18	21.23		
10	64QAM	1	49	21.33	21.21	21.25		
10	64QAM	25	0	20.26	20.00	20.06	21	3
10	64QAM	25	12	20.24	20.12	20.11		
10	64QAM	25	25	20.15	20.09	20.22		
10	64QAM	50	0	20.22	20.10	20.09		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	23.07	22.80	22.97	24	0
5	QPSK	1	12	22.96	22.88	23.03		
5	QPSK	1	24	23.06	22.97	23.04		
5	QPSK	12	0	22.17	21.93	22.10	23	1
5	QPSK	12	7	22.15	22.01	22.12		
5	QPSK	12	13	22.12	22.03	22.10		
5	QPSK	25	0	22.11	21.99	22.08		
5	16QAM	1	0	22.38	22.16	22.26	23	1
5	16QAM	1	12	22.32	22.27	22.24		
5	16QAM	1	24	22.35	22.27	22.37		
5	16QAM	12	0	21.19	20.97	21.15	22	2
5	16QAM	12	7	21.17	21.07	21.15		
5	16QAM	12	13	21.12	21.04	21.18		
5	16QAM	25	0	21.15	21.07	21.12		
5	64QAM	1	0	21.34	21.18	21.25	22	2
5	64QAM	1	12	21.29	21.20	21.18		
5	64QAM	1	24	21.15	21.21	21.22		
5	64QAM	12	0	20.24	19.99	20.16	21	3
5	64QAM	12	7	20.22	20.10	20.20		
5	64QAM	12	13	20.18	20.08	20.17		
5	64QAM	25	0	20.20	20.04	20.15		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	23.13	22.83	22.98	24	0
3	QPSK	1	8	23.10	22.97	23.08		
3	QPSK	1	14	23.05	22.93	23.01		
3	QPSK	8	0	22.17	21.94	22.09	23	1
3	QPSK	8	4	22.13	22.01	22.15		
3	QPSK	8	7	22.10	21.99	22.09		
3	QPSK	15	0	22.12	21.99	22.11		
3	16QAM	1	0	22.38	22.08	22.32	23	1
3	16QAM	1	8	22.32	22.35	22.34		
3	16QAM	1	14	22.36	22.24	22.31		
3	16QAM	8	0	21.19	21.00	21.15	22	2
3	16QAM	8	4	21.17	21.11	21.17		
3	16QAM	8	7	21.18	21.07	21.16		
3	16QAM	15	0	21.15	21.05	21.14		

3	64QAM	1	0	21.34	21.07	21.20	22	2
3	64QAM	1	8	21.29	21.18	21.32		
3	64QAM	1	14	21.24	21.12	21.10		
3	64QAM	8	0	20.28	20.08	20.12	21	3
3	64QAM	8	4	20.25	20.06	20.25		
3	64QAM	8	7	20.23	20.09	20.18		
3	64QAM	15	0	20.17	20.02	20.12		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	23.04	22.80	22.86	24	0
1.4	QPSK	1	3	22.96	22.88	22.93		
1.4	QPSK	1	5	22.96	22.80	22.93		
1.4	QPSK	3	0	22.98	22.82	22.90		
1.4	QPSK	3	1	23.01	22.88	22.95		
1.4	QPSK	3	3	22.99	22.85	22.90		
1.4	QPSK	6	0	22.06	21.90	22.01	23	1
1.4	16QAM	1	0	22.34	22.06	22.16	23	1
1.4	16QAM	1	3	22.30	22.16	22.29		
1.4	16QAM	1	5	22.20	22.04	22.19		
1.4	16QAM	3	0	22.15	21.99	22.05		
1.4	16QAM	3	1	22.19	22.03	22.12		
1.4	16QAM	3	3	22.18	22.02	22.07		
1.4	16QAM	6	0	21.15	20.99	21.07	22	2
1.4	64QAM	1	0	21.36	21.13	21.03	22	2
1.4	64QAM	1	3	21.25	21.09	21.28		
1.4	64QAM	1	5	21.34	21.18	21.24		
1.4	64QAM	3	0	21.19	21.03	21.13		
1.4	64QAM	3	1	21.34	21.18	21.19		
1.4	64QAM	3	3	21.31	21.15	21.18		
1.4	64QAM	6	0	20.11	20.00	20.06	21	3

<LTE Band 2 MIMO2>

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	22.64	22.82	23.38	24	0
20	QPSK	1	49	22.62	22.79	23.30		
20	QPSK	1	99	22.62	22.77	23.28		
20	QPSK	50	0	22.61	22.78	23.34	24	0
20	QPSK	50	24	22.59	22.74	23.29		
20	QPSK	50	50	22.52	22.69	23.22		
20	QPSK	100	0	22.60	22.80	23.35		
20	16QAM	1	0	22.59	22.69	23.20	24	0
20	16QAM	1	49	22.55	22.74	23.22		
20	16QAM	1	99	22.58	22.80	23.28		
20	16QAM	50	0	22.61	22.73	23.21	24	0
20	16QAM	50	24	22.53	22.75	23.26		
20	16QAM	50	50	22.64	22.76	23.31		
20	16QAM	100	0	22.62	22.78	23.29		
20	64QAM	1	0	22.52	22.72	23.22	24	0
20	64QAM	1	49	22.63	22.80	23.36		
20	64QAM	1	99	22.61	22.79	23.28		
20	64QAM	50	0	22.56	22.68	23.20	24	0
20	64QAM	50	24	22.58	22.75	23.34		
20	64QAM	50	50	22.58	22.77	23.22		
20	64QAM	100	0	22.54	22.73	23.22		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	22.60	22.76	23.30	24	0
15	QPSK	1	37	22.52	22.71	23.21		
15	QPSK	1	74	22.54	22.76	23.28		
15	QPSK	36	0	22.57	22.68	23.34	24	0
15	QPSK	36	20	22.55	22.74	23.19		
15	QPSK	36	39	22.49	22.63	23.16		
15	QPSK	75	0	22.53	22.73	23.35		
15	16QAM	1	0	22.57	22.60	23.14	24	0
15	16QAM	1	37	22.54	22.71	23.15		
15	16QAM	1	74	22.51	22.70	23.21		
15	16QAM	36	0	22.61	22.63	23.15	24	0
15	16QAM	36	20	22.44	22.67	23.17		
15	16QAM	36	39	22.56	22.71	23.29		
15	16QAM	75	0	22.55	22.71	23.21		
15	64QAM	1	0	22.49	22.67	23.22	24	0
15	64QAM	1	37	22.59	22.80	23.33		
15	64QAM	1	74	22.61	22.79	23.25		
15	64QAM	36	0	22.49	22.61	23.19	24	0
15	64QAM	36	20	22.55	22.65	23.29		
15	64QAM	36	39	22.49	22.76	23.22		
15	64QAM	75	0	22.45	22.68	23.20		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	22.63	22.77	23.35	24	0
10	QPSK	1	25	22.56	22.78	23.27		
10	QPSK	1	49	22.57	22.68	23.27		
10	QPSK	25	0	22.58	22.72	23.27	24	0
10	QPSK	25	12	22.59	22.69	23.29		

10	QPSK	25	25	22.46	22.64	23.20		
10	QPSK	50	0	22.53	22.70	23.32		
10	16QAM	1	0	22.56	22.61	23.10	24	0
10	16QAM	1	25	22.46	22.65	23.13		
10	16QAM	1	49	22.57	22.72	23.27		
10	16QAM	25	0	22.61	22.65	23.16	24	0
10	16QAM	25	12	22.49	22.67	23.23		
10	16QAM	25	25	22.54	22.69	23.31		
10	16QAM	50	0	22.52	22.75	23.23		
10	64QAM	1	0	22.44	22.69	23.21	24	0
10	64QAM	1	25	22.57	22.74	23.34		
10	64QAM	1	49	22.56	22.76	23.23		
10	64QAM	25	0	22.47	22.58	23.16	24	0
10	64QAM	25	12	22.56	22.69	23.31		
10	64QAM	25	25	22.48	22.72	23.22		
10	64QAM	50	0	22.50	22.65	23.17		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	22.56	22.76	23.37	24	0
5	QPSK	1	12	22.53	22.78	23.25		
5	QPSK	1	24	22.57	22.70	23.26		
5	QPSK	12	0	22.56	22.70	23.31	24	0
5	QPSK	12	7	22.58	22.68	23.24		
5	QPSK	12	13	22.42	22.63	23.20		
5	QPSK	25	0	22.50	22.78	23.31		
5	16QAM	1	0	22.49	22.62	23.17	24	0
5	16QAM	1	12	22.54	22.70	23.14		
5	16QAM	1	24	22.56	22.79	23.26		
5	16QAM	12	0	22.52	22.65	23.16	24	0
5	16QAM	12	7	22.53	22.67	23.24		
5	16QAM	12	13	22.55	22.76	23.26		
5	16QAM	25	0	22.55	22.70	23.22		
5	64QAM	1	0	22.44	22.70	23.12	24	0
5	64QAM	1	12	22.61	22.80	23.33		
5	64QAM	1	24	22.55	22.78	23.27		
5	64QAM	12	0	22.56	22.63	23.19	24	0
5	64QAM	12	7	22.48	22.74	23.25		
5	64QAM	12	13	22.54	22.72	23.22		
5	64QAM	25	0	22.44	22.63	23.15		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	22.64	22.74	23.37	24	0
3	QPSK	1	8	22.55	22.73	23.28		
3	QPSK	1	14	22.61	22.70	23.23		
3	QPSK	8	0	22.58	22.72	23.31	24	0
3	QPSK	8	4	22.56	22.68	23.29		
3	QPSK	8	7	22.49	22.68	23.14		
3	QPSK	15	0	22.51	22.75	23.32		
3	16QAM	1	0	22.58	22.64	23.17	24	0
3	16QAM	1	8	22.53	22.74	23.20		
3	16QAM	1	14	22.54	22.73	23.20		
3	16QAM	8	0	22.57	22.63	23.20	24	0
3	16QAM	8	4	22.51	22.74	23.20		
3	16QAM	8	7	22.57	22.71	23.31		
3	16QAM	15	0	22.62	22.71	23.26		
3	64QAM	1	0	22.49	22.62	23.18	24	0

3	64QAM	1	8	22.59	22.73	23.28		
3	64QAM	1	14	22.58	22.69	23.19		
3	64QAM	8	0	22.53	22.64	23.14	24	0
3	64QAM	8	4	22.49	22.69	23.29		
3	64QAM	8	7	22.54	22.70	23.21		
3	64QAM	15	0	22.50	22.71	23.12		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	22.63	22.74	23.32	24	0
1.4	QPSK	1	3	22.54	22.73	23.30		
1.4	QPSK	1	5	22.54	22.71	23.21		
1.4	QPSK	3	0	22.57	22.76	23.24		
1.4	QPSK	3	1	22.53	22.64	23.22		
1.4	QPSK	3	3	22.42	22.68	23.22		
1.4	QPSK	6	0	22.50	22.76	23.28	24	0
1.4	16QAM	1	0	22.57	22.61	23.12	24	0
1.4	16QAM	1	3	22.47	22.73	23.16		
1.4	16QAM	1	5	22.49	22.75	23.24		
1.4	16QAM	3	0	22.57	22.73	23.21		
1.4	16QAM	3	1	22.44	22.70	23.25		
1.4	16QAM	3	3	22.61	22.66	23.28		
1.4	16QAM	6	0	22.58	22.70	23.26	24	0
1.4	64QAM	1	0	22.51	22.64	23.16	24	0
1.4	64QAM	1	3	22.61	22.74	23.32		
1.4	64QAM	1	5	22.52	22.71	23.25		
1.4	64QAM	3	0	22.54	22.63	23.11		
1.4	64QAM	3	1	22.57	22.74	23.31		
1.4	64QAM	3	3	22.56	22.67	23.22		
1.4	64QAM	6	0	22.49	22.68	23.12	24	0

<LTE Band 4 Main>

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	23.40	23.34	23.35	24	0
20	QPSK	1	49	23.19	23.18	23.14		
20	QPSK	1	99	23.18	23.06	23.11		
20	QPSK	50	0	22.48	22.43	22.36	23	1
20	QPSK	50	24	22.43	22.30	22.30		
20	QPSK	50	50	22.36	22.31	22.28		
20	QPSK	100	0	22.38	22.33	22.27		
20	16QAM	1	0	22.73	22.70	22.65	23	1
20	16QAM	1	49	22.57	22.49	22.54		
20	16QAM	1	99	22.57	22.36	22.45		
20	16QAM	50	0	21.47	21.44	21.43	22	2
20	16QAM	50	24	21.45	21.38	21.32		
20	16QAM	50	50	21.40	21.35	21.34		
20	16QAM	100	0	21.40	21.34	21.34		
20	64QAM	1	0	21.49	21.47	21.37	22	2
20	64QAM	1	49	21.36	21.32	21.32		
20	64QAM	1	99	21.49	21.21	21.27		
20	64QAM	50	0	20.52	20.44	20.44	21	3
20	64QAM	50	24	20.48	20.37	20.35		
20	64QAM	50	50	20.40	20.38	20.38		
20	64QAM	100	0	20.46	20.38	20.35		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	23.39	23.35	23.33	24	0
15	QPSK	1	37	23.22	23.18	23.22		
15	QPSK	1	74	23.23	23.15	23.12		
15	QPSK	36	0	22.53	22.42	22.39	23	1
15	QPSK	36	20	22.41	22.30	22.35		
15	QPSK	36	39	22.37	22.33	22.31		
15	QPSK	75	0	22.48	22.34	22.37		
15	16QAM	1	0	22.67	22.57	22.62	23	1
15	16QAM	1	37	22.63	22.38	22.32		
15	16QAM	1	74	22.43	22.40	22.47		
15	16QAM	36	0	21.54	21.40	21.39	22	2
15	16QAM	36	20	21.45	21.33	21.36		
15	16QAM	36	39	21.40	21.34	21.29		
15	16QAM	75	0	21.43	21.35	21.43		
15	64QAM	1	0	21.65	21.62	21.47	22	2
15	64QAM	1	37	21.54	21.43	21.44		
15	64QAM	1	74	21.47	21.28	21.36		
15	64QAM	36	0	20.52	20.44	20.38	21	3
15	64QAM	36	20	20.41	20.41	20.41		
15	64QAM	36	39	20.45	20.39	20.34		
15	64QAM	75	0	20.47	20.36	20.41		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	23.22	23.04	23.03	24	0
10	QPSK	1	25	23.04	23.01	22.97		
10	QPSK	1	49	23.19	23.01	23.03		
10	QPSK	25	0	22.36	22.17	22.08	23	1
10	QPSK	25	12	22.30	22.20	22.16		

10	QPSK	25	25	22.33	22.25	22.22		
10	QPSK	50	0	22.27	22.17	22.14		
10	16QAM	1	0	22.60	22.49	22.55	23	1
10	16QAM	1	25	22.46	22.46	22.53		
10	16QAM	1	49	22.52	22.40	22.44		
10	16QAM	25	0	21.29	21.12	21.09	22	2
10	16QAM	25	12	21.31	21.18	21.21		
10	16QAM	25	25	21.31	21.27	21.22		
10	16QAM	50	0	21.29	21.19	21.18		
10	64QAM	1	0	21.46	21.41	21.45	22	2
10	64QAM	1	25	21.42	21.40	21.47		
10	64QAM	1	49	21.44	21.37	21.38		
10	64QAM	25	0	20.31	20.25	20.20	21	3
10	64QAM	25	12	20.34	20.28	20.23		
10	64QAM	25	25	20.32	20.32	20.29		
10	64QAM	50	0	20.35	20.26	20.23		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	23.19	23.07	23.05	24	0
5	QPSK	1	12	23.25	23.17	23.14		
5	QPSK	1	24	23.23	23.18	23.13		
5	QPSK	12	0	22.32	22.19	22.17	23	1
5	QPSK	12	7	22.33	22.26	22.21		
5	QPSK	12	13	22.34	22.22	22.25		
5	QPSK	25	0	22.30	22.18	22.18		
5	16QAM	1	0	22.52	22.41	22.44	23	1
5	16QAM	1	12	22.47	22.56	22.43		
5	16QAM	1	24	22.61	22.53	22.52		
5	16QAM	12	0	21.34	21.17	21.25	22	2
5	16QAM	12	7	21.40	21.30	21.24		
5	16QAM	12	13	21.36	21.26	21.25		
5	16QAM	25	0	21.35	21.19	21.28		
5	64QAM	1	0	21.37	21.35	21.36	22	2
5	64QAM	1	12	21.40	21.32	21.26		
5	64QAM	1	24	21.39	21.37	21.27		
5	64QAM	12	0	20.36	20.19	20.28	21	3
5	64QAM	12	7	20.39	20.26	20.31		
5	64QAM	12	13	20.44	20.27	20.31		
5	64QAM	25	0	20.35	20.23	20.26		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	23.19	23.06	23.09	24	0
3	QPSK	1	8	23.26	23.18	23.18		
3	QPSK	1	14	23.20	23.13	23.14		
3	QPSK	8	0	22.30	22.18	22.21	23	1
3	QPSK	8	4	22.33	22.22	22.23		
3	QPSK	8	7	22.27	22.23	22.21		
3	QPSK	15	0	22.31	22.20	22.18		
3	16QAM	1	0	22.50	22.31	22.47	23	1
3	16QAM	1	8	22.61	22.50	22.54		
3	16QAM	1	14	22.57	22.53	22.46		
3	16QAM	8	0	21.37	21.20	21.27	22	2
3	16QAM	8	4	21.37	21.28	21.31		
3	16QAM	8	7	21.37	21.25	21.29		
3	16QAM	15	0	21.31	21.17	21.24		
3	64QAM	1	0	21.51	21.23	21.27	22	2

3	64QAM	1	8	21.59	21.46	21.36		
3	64QAM	1	14	21.55	21.40	21.23		
3	64QAM	8	0	20.35	20.20	20.27	21	3
3	64QAM	8	4	20.38	20.31	20.33		
3	64QAM	8	7	20.38	20.29	20.25		
3	64QAM	15	0	20.30	20.21	20.25		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	23.07	23.02	22.99	24	0
1.4	QPSK	1	3	23.16	23.11	23.10		
1.4	QPSK	1	5	23.11	23.05	23.00		
1.4	QPSK	3	0	23.14	23.06	23.00		
1.4	QPSK	3	1	23.18	23.11	23.07		
1.4	QPSK	3	3	23.12	23.02	23.08		
1.4	QPSK	6	0	22.25	22.16	22.16	23	1
1.4	16QAM	1	0	22.36	22.30	22.48	23	1
1.4	16QAM	1	3	22.41	22.35	22.50		
1.4	16QAM	1	5	22.35	22.31	22.43		
1.4	16QAM	3	0	22.28	22.10	22.13		
1.4	16QAM	3	1	22.29	22.19	22.17		
1.4	16QAM	3	3	22.25	22.12	22.10		
1.4	16QAM	6	0	21.28	21.27	21.28	22	2
1.4	64QAM	1	0	21.44	21.33	21.25	22	2
1.4	64QAM	1	3	21.50	21.39	21.38		
1.4	64QAM	1	5	21.43	21.25	21.30		
1.4	64QAM	3	0	21.30	21.35	21.28		
1.4	64QAM	3	1	21.41	21.32	21.34		
1.4	64QAM	3	3	21.34	21.27	21.27		
1.4	64QAM	6	0	20.21	20.19	20.17	21	3

<LTE Band 5 Main >

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	23.85	23.78	23.68	24.5	0
10	QPSK	1	25	23.77	23.74	23.65		
10	QPSK	1	49	23.71	23.62	23.53		
10	QPSK	25	0	22.91	22.88	22.80	23.5	1
10	QPSK	25	12	22.83	22.80	22.79		
10	QPSK	25	25	22.87	22.86	22.77		
10	QPSK	50	0	22.94	22.88	22.80		
10	16QAM	1	0	23.16	23.11	23.11	23.5	1
10	16QAM	1	25	23.15	23.10	23.02		
10	16QAM	1	49	23.20	23.15	22.96		
10	16QAM	25	0	21.93	21.91	21.79	22.5	2
10	16QAM	25	12	21.97	21.88	21.78		
10	16QAM	25	25	21.88	21.88	21.83		
10	16QAM	50	0	21.89	21.85	21.74		
10	64QAM	1	0	21.94	21.85	21.97	22.5	2
10	64QAM	1	25	21.97	21.84	21.89		
10	64QAM	1	49	21.93	21.92	21.91		
10	64QAM	25	0	20.96	20.94	20.76	21.5	3
10	64QAM	25	12	20.92	20.91	20.79		
10	64QAM	25	25	20.88	20.91	20.84		
10	64QAM	50	0	20.91	20.90	20.78		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	23.80	23.79	23.72	24.5	0
5	QPSK	1	12	23.78	23.75	23.72		
5	QPSK	1	24	23.76	23.77	23.64		
5	QPSK	12	0	22.94	22.90	22.74	23.5	1
5	QPSK	12	7	22.90	22.91	22.72		
5	QPSK	12	13	22.85	22.87	22.68		
5	QPSK	25	0	22.82	22.90	22.70		
5	16QAM	1	0	23.24	23.17	22.88	23.5	1
5	16QAM	1	12	23.05	23.05	22.97		
5	16QAM	1	24	23.14	23.09	22.97		
5	16QAM	12	0	21.95	21.97	21.74	22.5	2
5	16QAM	12	7	21.96	21.89	21.78		
5	16QAM	12	13	21.88	21.94	21.68		
5	16QAM	25	0	21.91	21.87	21.71		
5	64QAM	1	0	22.15	22.16	22.00	22.5	2
5	64QAM	1	12	22.03	22.15	21.97		
5	64QAM	1	24	22.10	22.11	21.92		
5	64QAM	12	0	20.98	20.99	20.88	21.5	3
5	64QAM	12	7	20.95	20.93	20.85		
5	64QAM	12	13	20.91	20.95	20.78		
5	64QAM	25	0	20.87	20.85	20.71		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	23.75	23.75	23.71	24.5	0
3	QPSK	1	8	23.81	23.81	23.67		
3	QPSK	1	14	23.74	23.76	23.53		
3	QPSK	8	0	22.86	22.87	22.75	23.5	1
3	QPSK	8	4	22.93	22.86	22.74		

3	QPSK	8	7	22.88	22.87	22.68		
3	QPSK	15	0	22.85	22.83	22.73		
3	16QAM	1	0	23.17	23.09	23.06	23.5	1
3	16QAM	1	8	23.18	23.14	23.07		
3	16QAM	1	14	23.15	23.07	22.95		
3	16QAM	8	0	21.96	21.87	21.82	22.5	2
3	16QAM	8	4	21.94	21.95	21.80		
3	16QAM	8	7	21.89	21.91	21.73		
3	16QAM	15	0	21.90	21.89	21.76		
3	64QAM	1	0	22.04	22.04	22.00	22.5	2
3	64QAM	1	8	22.07	22.10	21.82		
3	64QAM	1	14	21.91	22.04	21.82		
3	64QAM	8	0	20.92	20.91	20.79	21.5	3
3	64QAM	8	4	20.91	20.92	20.80		
3	64QAM	8	7	20.86	20.89	20.81		
3	64QAM	15	0	20.85	20.89	20.76		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	23.67	23.66	23.53	24.5	0
1.4	QPSK	1	3	23.77	23.77	23.61		
1.4	QPSK	1	5	23.64	23.69	23.49		
1.4	QPSK	3	0	23.72	23.65	23.57		
1.4	QPSK	3	1	23.76	23.74	23.62		
1.4	QPSK	3	3	23.70	23.72	23.55		
1.4	QPSK	6	0	22.82	22.75	22.66	23.5	1
1.4	16QAM	1	0	23.05	23.03	22.91	23.5	1
1.4	16QAM	1	3	23.09	23.14	22.87		
1.4	16QAM	1	5	23.05	23.16	22.76		
1.4	16QAM	3	0	22.89	22.83	22.72		
1.4	16QAM	3	1	22.92	22.84	22.76		
1.4	16QAM	3	3	22.83	22.81	22.68		
1.4	16QAM	6	0	21.89	21.85	21.71	22.5	2
1.4	64QAM	1	0	22.04	22.00	21.88	22.5	2
1.4	64QAM	1	3	22.09	22.11	21.91		
1.4	64QAM	1	5	21.98	21.97	21.80		
1.4	64QAM	3	0	21.98	21.98	21.84		
1.4	64QAM	3	1	22.07	22.00	21.88		
1.4	64QAM	3	3	21.93	21.92	21.78		
1.4	64QAM	6	0	20.85	20.77	20.64	21.5	3

<LTE Band 7 Main >

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	20.69	20.80	21.13	22	0
20	QPSK	1	49	20.74	20.96	21.19		
20	QPSK	1	99	20.87	21.14	21.32		
20	QPSK	50	0	19.76	19.97	20.24	21	1
20	QPSK	50	24	19.89	20.03	20.32		
20	QPSK	50	50	19.90	20.15	20.41		
20	QPSK	100	0	19.89	20.11	20.29		
20	16QAM	1	0	20.00	20.16	20.42	21	1
20	16QAM	1	49	20.11	20.30	20.58		
20	16QAM	1	99	20.24	20.44	20.64		
20	16QAM	50	0	18.76	19.00	19.26	20	2
20	16QAM	50	24	18.90	19.06	19.33		
20	16QAM	50	50	18.92	19.16	19.42		
20	16QAM	100	0	18.89	19.11	19.31		
20	64QAM	1	0	18.82	19.01	19.29	20	2
20	64QAM	1	49	18.92	19.20	19.39		
20	64QAM	1	99	19.12	19.36	19.56		
20	64QAM	50	0	17.81	18.01	18.27	19	3
20	64QAM	50	24	17.92	18.09	18.37		
20	64QAM	50	50	18.00	18.21	18.48		
20	64QAM	100	0	17.90	18.12	18.32		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	20.69	20.92	21.16	22	0
15	QPSK	1	37	20.71	20.98	21.27		
15	QPSK	1	74	20.87	21.12	21.28		
15	QPSK	36	0	19.73	19.98	20.29	21	1
15	QPSK	36	20	19.86	20.12	20.42		
15	QPSK	36	39	19.88	20.13	20.42		
15	QPSK	75	0	19.84	20.08	20.32		
15	16QAM	1	0	19.98	20.24	20.48	21	1
15	16QAM	1	37	20.09	20.30	20.60		
15	16QAM	1	74	20.25	20.45	20.66		
15	16QAM	36	0	18.74	19.00	19.28	20	2
15	16QAM	36	20	18.87	19.11	19.42		
15	16QAM	36	39	18.89	19.14	19.44		
15	16QAM	75	0	18.86	19.11	19.34		
15	64QAM	1	0	18.87	19.13	19.41	20	2
15	64QAM	1	37	18.95	19.19	19.53		
15	64QAM	1	74	19.09	19.36	19.54		
15	64QAM	36	0	17.82	18.06	18.33	19	3
15	64QAM	36	20	17.92	18.18	18.46		
15	64QAM	36	39	17.98	18.22	18.48		
15	64QAM	75	0	17.86	18.12	18.36		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	20.39	20.64	20.97	22	0
10	QPSK	1	25	20.40	20.68	20.98		
10	QPSK	1	49	20.47	20.78	21.03		
10	QPSK	25	0	19.54	19.78	20.06	21	1
10	QPSK	25	12	19.59	19.81	20.12		

10	QPSK	25	25	19.59	19.89	20.20		
10	QPSK	50	0	19.59	19.88	20.12		
10	16QAM	1	0	19.78	20.01	20.31	21	1
10	16QAM	1	25	19.77	20.06	20.39		
10	16QAM	1	49	19.84	20.17	20.43		
10	16QAM	25	0	18.55	18.75	19.06	20	2
10	16QAM	25	12	18.62	18.82	19.12		
10	16QAM	25	25	18.59	18.90	19.20		
10	16QAM	50	0	18.59	18.88	19.11		
10	64QAM	1	0	18.65	18.90	19.16	20	2
10	64QAM	1	25	18.71	19.00	19.29		
10	64QAM	1	49	18.74	19.05	19.37		
10	64QAM	25	0	17.59	17.82	18.13	19	3
10	64QAM	25	12	17.64	17.89	18.18		
10	64QAM	25	25	17.67	17.95	18.23		
10	64QAM	50	0	17.62	17.91	18.16		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	20.90	20.69	21.02	22	0
5	QPSK	1	12	21.00	20.74	21.07		
5	QPSK	1	24	21.10	20.79	21.08		
5	QPSK	12	0	20.88	19.81	20.17	21	1
5	QPSK	12	7	20.97	19.86	20.19		
5	QPSK	12	13	20.93	19.89	20.17		
5	QPSK	25	0	19.95	19.85	20.16		
5	16QAM	1	0	20.02	20.03	20.34	21	1
5	16QAM	1	12	20.19	20.09	20.35		
5	16QAM	1	24	20.46	20.13	20.42		
5	16QAM	12	0	19.90	18.84	19.21	20	2
5	16QAM	12	7	19.97	18.88	19.21		
5	16QAM	12	13	18.98	18.88	19.20		
5	16QAM	25	0	18.96	18.89	19.19		
5	64QAM	1	0	19.86	19.89	19.34	20	2
5	64QAM	1	12	19.93	19.95	19.30		
5	64QAM	1	24	19.96	19.98	19.28		
5	64QAM	12	0	18.82	18.79	18.24	19	3
5	64QAM	12	7	18.84	18.86	18.24		
5	64QAM	12	13	18.83	18.86	18.25		
5	64QAM	25	0	18.92	18.90	18.21		

<LTE Band 7 MIMO2 >

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	22.36	21.21	20.97	22.5	0
20	QPSK	1	49	22.24	21.00	20.78		
20	QPSK	1	99	22.21	21.03	20.82		
20	QPSK	50	0	22.26	21.11	20.86	22.5	0
20	QPSK	50	24	22.25	21.10	20.85		
20	QPSK	50	50	22.18	20.95	20.77		
20	QPSK	100	0	22.20	21.02	20.86		
20	16QAM	1	0	22.27	21.12	20.89	22.5	0
20	16QAM	1	49	22.18	20.98	20.76		
20	16QAM	1	99	22.28	21.04	20.80		
20	16QAM	50	0	22.26	21.12	20.91	22.5	0
20	16QAM	50	24	22.20	21.02	20.85		
20	16QAM	50	50	22.31	21.09	20.89		
20	16QAM	100	0	22.28	21.10	20.92		
20	64QAM	1	0	22.16	20.94	20.69	22.5	0
20	64QAM	1	49	22.31	21.08	20.82		
20	64QAM	1	99	22.26	21.08	20.90		
20	64QAM	50	0	22.19	21.00	20.76	22.5	0
20	64QAM	50	24	22.19	21.02	20.85		
20	64QAM	50	50	22.20	21.02	20.86		
20	64QAM	100	0	22.16	20.94	20.75		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	22.27	21.17	20.92	22.5	0
15	QPSK	1	37	22.19	20.99	20.71		
15	QPSK	1	74	22.20	20.98	20.78		
15	QPSK	36	0	22.21	21.02	20.80	22.5	0
15	QPSK	36	20	22.22	21.00	20.81		
15	QPSK	36	39	22.15	20.90	20.67		
15	QPSK	75	0	22.11	21.02	20.80		
15	16QAM	1	0	22.21	21.05	20.80	22.5	0
15	16QAM	1	37	22.13	20.89	20.70		
15	16QAM	1	74	22.18	20.94	20.72		
15	16QAM	36	0	22.21	21.09	20.82	22.5	0
15	16QAM	36	20	22.18	21.00	20.84		
15	16QAM	36	39	22.26	21.00	20.85		
15	16QAM	75	0	22.22	21.01	20.86		
15	64QAM	1	0	22.13	20.88	20.60	22.5	0
15	64QAM	1	37	22.28	20.98	20.76		
15	64QAM	1	74	22.25	21.04	20.89		
15	64QAM	36	0	22.14	20.94	20.74	22.5	0
15	64QAM	36	20	22.19	20.99	20.79		
15	64QAM	36	39	22.20	20.97	20.85		
15	64QAM	75	0	22.13	20.90	20.75		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	22.36	21.16	20.87	22.5	0
10	QPSK	1	25	22.21	21.00	20.69		
10	QPSK	1	49	22.14	21.02	20.77		
10	QPSK	25	0	22.23	21.03	20.81	22.5	0
10	QPSK	25	12	22.17	21.09	20.81		

10	QPSK	25	25	22.10	20.88	20.75		
10	QPSK	50	0	22.20	21.01	20.80		
10	16QAM	1	0	22.21	21.04	20.79	22.5	0
10	16QAM	1	25	22.12	20.91	20.73		
10	16QAM	1	49	22.24	21.04	20.75		
10	16QAM	25	0	22.23	21.12	20.84	22.5	0
10	16QAM	25	12	22.12	21.02	20.85		
10	16QAM	25	25	22.28	21.06	20.80		
10	16QAM	50	0	22.23	21.04	20.87		
10	64QAM	1	0	22.16	20.84	20.59	22.5	0
10	64QAM	1	25	22.29	20.99	20.78		
10	64QAM	1	49	22.17	21.00	20.85		
10	64QAM	25	0	22.10	20.97	20.72	22.5	0
10	64QAM	25	12	22.18	21.01	20.85		
10	64QAM	25	25	22.17	20.97	20.81		
10	64QAM	50	0	22.06	20.86	20.73		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	22.30	21.16	20.95	22.5	0
5	QPSK	1	12	22.19	20.90	20.73		
5	QPSK	1	24	22.21	20.98	20.76		
5	QPSK	12	0	22.22	21.01	20.78	22.5	0
5	QPSK	12	7	22.16	21.05	20.78		
5	QPSK	12	13	22.09	20.95	20.71		
5	QPSK	25	0	22.19	20.94	20.81		
5	16QAM	1	0	22.20	21.12	20.87	22.5	0
5	16QAM	1	12	22.08	20.97	20.66		
5	16QAM	1	24	22.25	20.99	20.71		
5	16QAM	12	0	22.17	21.02	20.84	22.5	0
5	16QAM	12	7	22.19	20.93	20.77		
5	16QAM	12	13	22.29	21.01	20.82		
5	16QAM	25	0	22.18	21.02	20.88		
5	64QAM	1	0	22.12	20.93	20.63	22.5	0
5	64QAM	1	12	22.25	20.99	20.76		
5	64QAM	1	24	22.22	21.03	20.86		
5	64QAM	12	0	22.19	20.99	20.74	22.5	0
5	64QAM	12	7	22.17	20.92	20.84		
5	64QAM	12	13	22.11	20.99	20.84		
5	64QAM	25	0	22.06	20.91	20.66		

<LTE Band 12 Main >

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	23.79	23.50	23.58	24.5	0
10	QPSK	1	25	23.73	23.49	23.58		
10	QPSK	1	49	23.72	23.45	23.62		
10	QPSK	25	0	22.92	22.77	22.78	23.5	1
10	QPSK	25	12	22.89	22.65	22.70		
10	QPSK	25	25	22.84	22.75	22.71		
10	QPSK	50	0	22.90	22.68	22.67		
10	16QAM	1	0	23.15	22.87	22.97	23.5	1
10	16QAM	1	25	23.09	22.86	22.87		
10	16QAM	1	49	23.13	22.84	22.83		
10	16QAM	25	0	21.88	21.65	21.64	22.5	2
10	16QAM	25	12	21.82	21.67	21.67		
10	16QAM	25	25	21.81	21.74	21.75		
10	16QAM	50	0	21.85	21.68	21.66		
10	64QAM	1	0	21.95	21.79	21.75	22.5	2
10	64QAM	1	25	21.85	21.86	21.89		
10	64QAM	1	49	21.91	21.85	21.81		
10	64QAM	25	0	20.84	20.73	20.66	21.5	3
10	64QAM	25	12	20.80	20.75	20.72		
10	64QAM	25	25	20.81	20.79	20.74		
10	64QAM	50	0	20.81	20.67	20.72		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	23.78	23.61	23.55	24.5	0
5	QPSK	1	12	23.75	23.59	23.57		
5	QPSK	1	24	23.72	23.60	23.59		
5	QPSK	12	0	22.83	22.71	22.65	23.5	1
5	QPSK	12	7	22.84	22.70	22.72		
5	QPSK	12	13	22.82	22.65	22.62		
5	QPSK	25	0	22.82	22.63	22.66		
5	16QAM	1	0	22.98	22.96	22.73	23.5	1
5	16QAM	1	12	22.91	22.85	22.81		
5	16QAM	1	24	22.91	22.86	22.87		
5	16QAM	12	0	21.86	21.71	21.70	22.5	2
5	16QAM	12	7	21.82	21.71	21.73		
5	16QAM	12	13	21.86	21.74	21.62		
5	16QAM	25	0	21.82	21.67	21.61		
5	64QAM	1	0	21.98	21.89	21.87	22.5	2
5	64QAM	1	12	21.95	21.96	21.85		
5	64QAM	1	24	21.68	21.97	21.82		
5	64QAM	12	0	20.80	20.76	20.72	21.5	3
5	64QAM	12	7	20.77	20.73	20.75		
5	64QAM	12	13	20.75	20.78	20.74		
5	64QAM	25	0	20.76	20.67	20.65		
Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	23.61	23.57	23.59	24.5	0
3	QPSK	1	8	23.61	23.64	23.67		
3	QPSK	1	14	23.52	23.57	23.58		
3	QPSK	8	0	22.69	22.65	22.67	23.5	1
3	QPSK	8	4	22.70	22.66	22.70		

3	QPSK	8	7	22.63	22.68	22.67		
3	QPSK	15	0	22.67	22.66	22.64		
3	16QAM	1	0	23.01	22.97	23.03	23.5	1
3	16QAM	1	8	22.97	23.06	22.94		
3	16QAM	1	14	22.93	22.95	22.92		
3	16QAM	8	0	21.74	21.75	21.70	22.5	2
3	16QAM	8	4	21.76	21.73	21.73		
3	16QAM	8	7	21.64	21.74	21.69		
3	16QAM	15	0	21.68	21.64	21.66		
3	64QAM	1	0	21.87	21.76	21.77	22.5	2
3	64QAM	1	8	21.83	21.91	21.78		
3	64QAM	1	14	21.80	21.81	21.74		
3	64QAM	8	0	20.75	20.73	20.73	21.5	3
3	64QAM	8	4	20.70	20.70	20.74		
3	64QAM	8	7	20.68	20.76	20.76		
3	64QAM	15	0	20.76	20.73	20.69		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	23.47	23.47	23.49	24.5	0
1.4	QPSK	1	3	23.52	23.58	23.54		
1.4	QPSK	1	5	23.42	23.52	23.46		
1.4	QPSK	3	0	23.53	23.46	23.50		
1.4	QPSK	3	1	23.56	23.52	23.52		
1.4	QPSK	3	3	23.50	23.54	23.45		
1.4	QPSK	6	0	22.57	22.52	22.59	23.5	1
1.4	16QAM	1	0	22.77	22.72	22.82	23.5	1
1.4	16QAM	1	3	22.77	22.91	22.81		
1.4	16QAM	1	5	22.72	22.79	22.80		
1.4	16QAM	3	0	22.66	22.62	22.66		
1.4	16QAM	3	1	22.68	22.70	22.65		
1.4	16QAM	3	3	22.59	22.65	22.61		
1.4	16QAM	6	0	21.62	21.63	21.65	22.5	2
1.4	64QAM	1	0	21.80	21.78	21.79	22.5	2
1.4	64QAM	1	3	21.84	21.91	21.80		
1.4	64QAM	1	5	21.75	21.80	21.62		
1.4	64QAM	3	0	21.80	21.65	21.70		
1.4	64QAM	3	1	21.75	21.79	21.83		
1.4	64QAM	3	3	21.72	21.80	21.68		
1.4	64QAM	6	0	20.61	20.53	20.57	21.5	3

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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		23.79		24.5	0
10	QPSK	1	25		23.68			
10	QPSK	1	49		23.65			
10	QPSK	25	0		22.90		23.5	1
10	QPSK	25	12		22.89			
10	QPSK	25	25		22.88			
10	QPSK	50	0		22.85			
10	16QAM	1	0		23.05		23.5	1
10	16QAM	1	25		23.19			
10	16QAM	1	49		23.06			
10	16QAM	25	0		21.86		22.5	2
10	16QAM	25	12		21.85			
10	16QAM	25	25		21.93			
10	16QAM	50	0		21.82			
10	64QAM	1	0		21.89		22.5	2
10	64QAM	1	25		21.99			
10	64QAM	1	49		22.02			
10	64QAM	25	0		20.83		21.5	3
10	64QAM	25	12		20.90			
10	64QAM	25	25		20.94			
10	64QAM	50	0		20.92			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	23.71	23.70	23.74	24.5	0
5	QPSK	1	12	23.72	23.77	23.74		
5	QPSK	1	24	23.70	23.76	23.76		
5	QPSK	12	0	22.81	22.84	22.88	23.5	1
5	QPSK	12	7	22.89	22.80	22.80		
5	QPSK	12	13	22.87	22.89	22.83		
5	QPSK	25	0	22.99	22.81	22.76		
5	16QAM	1	0	23.01	22.97	23.04	23.5	1
5	16QAM	1	12	22.93	23.12	23.00		
5	16QAM	1	24	23.12	23.10	23.06		
5	16QAM	12	0	21.87	21.86	21.87	22.5	2
5	16QAM	12	7	21.90	21.82	21.83		
5	16QAM	12	13	21.84	21.87	21.84		
5	16QAM	25	0	21.87	21.85	21.78		
5	64QAM	1	0	21.93	21.96	22.00	22.5	2
5	64QAM	1	12	21.85	22.09	22.08		
5	64QAM	1	24	21.92	22.03	21.93		
5	64QAM	12	0	20.98	20.90	20.89	21.5	3
5	64QAM	12	7	20.95	20.87	20.86		
5	64QAM	12	13	20.90	20.91	20.93		
5	64QAM	25	0	20.94	20.86	20.80		

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23330			
Frequency (MHz)					793			
10	QPSK	1	0		23.79		24.5	0
10	QPSK	1	25		23.60			
10	QPSK	1	49		23.57			
10	QPSK	25	0		22.75		23.5	1
10	QPSK	25	12		22.69			
10	QPSK	25	25		22.72			
10	QPSK	50	0		22.73			
10	16QAM	1	0		23.11		23.5	1
10	16QAM	1	25		23.04			
10	16QAM	1	49		23.01			
10	16QAM	25	0		21.67		22.5	2
10	16QAM	25	12		21.71			
10	16QAM	25	25		21.73			
10	16QAM	50	0		21.74			
10	64QAM	1	0		21.92		22.5	2
10	64QAM	1	25		21.93			
10	64QAM	1	49		21.89			
10	64QAM	25	0		20.73		21.5	3
10	64QAM	25	12		20.72			
10	64QAM	25	25		20.74			
10	64QAM	50	0		20.71			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	23.77	23.59	23.62	24.5	0
5	QPSK	1	12	23.70	23.75	23.63		
5	QPSK	1	24	23.63	23.65	23.58		
5	QPSK	12	0	22.78	22.66	22.67	23.5	1
5	QPSK	12	7	22.74	22.72	22.64		
5	QPSK	12	13	22.67	22.70	22.66		
5	QPSK	25	0	22.70	22.67	22.65		
5	16QAM	1	0	22.97	22.94	23.03	23.5	1
5	16QAM	1	12	22.97	23.00	22.87		
5	16QAM	1	24	22.98	22.84	23.04		
5	16QAM	12	0	21.70	21.72	21.69	22.5	2
5	16QAM	12	7	21.74	21.70	21.73		
5	16QAM	12	13	21.71	21.70	21.70		
5	16QAM	25	0	21.75	21.64	21.66		
5	64QAM	1	0	21.83	21.93	21.85	22.5	2
5	64QAM	1	12	21.91	21.94	22.13		
5	64QAM	1	24	21.94	21.89	21.83		
5	64QAM	12	0	20.82	20.77	20.72	21.5	3
5	64QAM	12	7	20.89	20.78	20.72		
5	64QAM	12	13	20.80	20.80	20.75		
5	64QAM	25	0	20.75	20.65	20.67		

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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	23.48	23.65	23.54	24.5	0
10	QPSK	1	25	23.47	23.49	23.45		
10	QPSK	1	49	23.46	23.48	23.43		
10	QPSK	25	0	22.74	22.75	22.67	23.5	1
10	QPSK	25	12	22.72	22.62	22.63		
10	QPSK	25	25	22.52	22.57	22.52		
10	QPSK	50	0	22.69	22.72	22.61		
10	16QAM	1	0	22.98	22.85	22.93	23.5	1
10	16QAM	1	25	22.85	22.92	22.98		
10	16QAM	1	49	23.02	23.06	22.96		
10	16QAM	25	0	21.57	21.53	21.62	22.5	2
10	16QAM	25	12	21.73	21.66	21.64		
10	16QAM	25	25	21.64	21.69	21.66		
10	16QAM	50	0	21.72	21.60	21.61		
10	64QAM	1	0	21.62	21.57	21.71	22.5	2
10	64QAM	1	25	21.74	21.82	21.88		
10	64QAM	1	49	21.89	21.88	21.83		
10	64QAM	25	0	20.56	20.59	20.57	21.5	3
10	64QAM	25	12	20.77	20.67	20.70		
10	64QAM	25	25	20.76	20.81	20.79		
10	64QAM	50	0	20.77	20.64	20.65		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	23.51	23.48	23.54	24.5	0
5	QPSK	1	12	23.53	23.55	23.57		
5	QPSK	1	24	23.62	23.63	23.59		
5	QPSK	12	0	22.63	22.62	22.60	23.5	1
5	QPSK	12	7	22.68	22.72	22.70		
5	QPSK	12	13	22.69	22.71	22.70		
5	QPSK	25	0	22.65	22.59	22.67		
5	16QAM	1	0	22.83	22.78	22.77	23.5	1
5	16QAM	1	12	22.80	22.70	22.81		
5	16QAM	1	24	23.02	22.91	22.88		
5	16QAM	12	0	21.64	21.64	21.65	22.5	2
5	16QAM	12	7	21.71	21.69	21.69		
5	16QAM	12	13	21.69	21.66	21.65		
5	16QAM	25	0	21.72	21.64	21.61		
5	64QAM	1	0	21.85	21.76	21.82	22.5	2
5	64QAM	1	12	21.81	21.80	21.82		
5	64QAM	1	24	22.00	21.85	21.86		
5	64QAM	12	0	20.69	20.64	20.70	21.5	3
5	64QAM	12	7	20.75	20.75	20.81		
5	64QAM	12	13	20.77	20.75	20.78		
5	64QAM	25	0	20.64	20.68	20.67		

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	23.23	23.31	23.19	24	0
20	QPSK	1	49	23.13	23.02	23.13		
20	QPSK	1	99	22.97	23.01	23.04		
20	QPSK	50	0	22.14	22.28	22.26	23	1
20	QPSK	50	24	22.12	22.19	22.24		
20	QPSK	50	50	22.11	22.15	22.22		
20	QPSK	100	0	22.31	22.35	22.15		
20	16QAM	1	0	22.52	22.40	22.44	23	1
20	16QAM	1	49	22.47	22.38	22.36		
20	16QAM	1	99	22.28	22.32	22.50		
20	16QAM	50	0	21.26	21.13	21.19	22	2
20	16QAM	50	24	21.34	21.23	21.25		
20	16QAM	50	50	21.24	21.14	21.24		
20	16QAM	100	0	21.32	21.18	21.16		
20	64QAM	1	0	21.48	21.37	21.30	22	2
20	64QAM	1	49	21.50	21.38	21.28		
20	64QAM	1	99	21.37	21.12	21.23		
20	64QAM	50	0	20.29	20.19	20.21	21	3
20	64QAM	50	24	20.33	20.19	20.27		
20	64QAM	50	50	20.25	20.20	20.21		
20	64QAM	100	0	20.30	20.18	20.17		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	23.21	23.16	23.20	24	0
15	QPSK	1	37	23.13	23.06	23.13		
15	QPSK	1	74	23.09	23.06	23.10		
15	QPSK	36	0	22.33	22.15	22.20	23	1
15	QPSK	36	20	22.34	22.21	22.27		
15	QPSK	36	39	22.21	22.15	22.23		
15	QPSK	75	0	22.31	22.20	22.19		
15	16QAM	1	0	22.54	22.44	22.56	23	1
15	16QAM	1	37	22.51	22.40	22.50		
15	16QAM	1	74	22.48	22.42	22.47		
15	16QAM	36	0	21.35	21.19	21.27	22	2
15	16QAM	36	20	21.27	21.19	21.27		
15	16QAM	36	39	21.20	21.11	21.20		
15	16QAM	75	0	21.32	21.24	21.21		
15	64QAM	1	0	21.35	21.35	21.39	22	2
15	64QAM	1	37	21.40	21.36	21.37		
15	64QAM	1	74	21.32	21.27	21.29		
15	64QAM	36	0	20.38	20.24	20.24	21	3
15	64QAM	36	20	20.35	20.23	20.31		
15	64QAM	36	39	20.31	20.15	20.28		
15	64QAM	75	0	20.36	20.18	20.21		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	22.95	22.90	22.92	24	0
10	QPSK	1	25	22.94	22.86	22.94		
10	QPSK	1	49	22.91	22.84	22.94		
10	QPSK	25	0	22.09	21.97	21.98	23	1
10	QPSK	25	12	22.11	21.99	22.03		

10	QPSK	25	25	22.09	21.95	22.11		
10	QPSK	50	0	22.08	21.98	21.98		
10	16QAM	1	0	22.36	22.27	22.27	23	1
10	16QAM	1	25	22.40	22.26	22.36		
10	16QAM	1	49	22.35	22.26	22.31		
10	16QAM	25	0	21.09	20.95	20.97	22	2
10	16QAM	25	12	21.12	21.05	21.01		
10	16QAM	25	25	21.10	21.02	21.09		
10	16QAM	50	0	21.10	20.97	20.95		
10	64QAM	1	0	21.24	21.11	21.07	22	2
10	64QAM	1	25	21.20	21.18	21.24		
10	64QAM	1	49	21.10	21.17	21.15		
10	64QAM	25	0	20.15	20.01	20.05	21	3
10	64QAM	25	12	20.12	19.99	20.09		
10	64QAM	25	25	20.10	20.04	20.16		
10	64QAM	50	0	20.14	20.04	20.04		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	22.96	22.79	22.95	24	0
5	QPSK	1	12	23.03	22.88	23.01		
5	QPSK	1	24	22.99	22.91	23.01		
5	QPSK	12	0	22.00	21.92	22.00	23	1
5	QPSK	12	7	22.07	22.00	22.09		
5	QPSK	12	13	22.09	21.99	22.06		
5	QPSK	25	0	22.07	21.94	22.07		
5	16QAM	1	0	22.27	22.21	22.20	23	1
5	16QAM	1	12	22.18	22.22	22.14		
5	16QAM	1	24	22.30	22.26	22.25		
5	16QAM	12	0	21.05	20.93	21.00	22	2
5	16QAM	12	7	21.15	21.06	21.05		
5	16QAM	12	13	21.12	21.08	21.04		
5	16QAM	25	0	21.04	20.96	21.06		
5	64QAM	1	0	21.28	21.06	21.19	22	2
5	64QAM	1	12	21.22	21.09	21.06		
5	64QAM	1	24	21.14	21.12	20.89		
5	64QAM	12	0	20.16	19.98	20.02	21	3
5	64QAM	12	7	20.19	20.06	20.08		
5	64QAM	12	13	20.19	20.07	20.08		
5	64QAM	25	0	20.09	19.96	20.09		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	22.93	22.88	22.91	24	0
3	QPSK	1	8	23.09	22.96	23.08		
3	QPSK	1	14	23.05	22.95	23.02		
3	QPSK	8	0	22.06	21.94	22.00	23	1
3	QPSK	8	4	22.11	21.98	22.05		
3	QPSK	8	7	22.09	21.98	22.09		
3	QPSK	15	0	22.09	21.98	22.07		
3	16QAM	1	0	22.23	22.14	22.25	23	1
3	16QAM	1	8	22.45	22.37	22.35		
3	16QAM	1	14	22.38	22.31	22.28		
3	16QAM	8	0	21.09	20.99	21.07	22	2
3	16QAM	8	4	21.17	21.08	21.15		
3	16QAM	8	7	21.19	21.08	21.14		
3	16QAM	15	0	21.15	21.03	21.01		
3	64QAM	1	0	21.25	20.92	21.02	22	2

3	64QAM	1	8	21.24	21.15	21.09		
3	64QAM	1	14	21.22	21.05	20.80		
3	64QAM	8	0	20.07	20.03	20.04	21	3
3	64QAM	8	4	20.19	20.08	20.15		
3	64QAM	8	7	20.22	20.08	19.93		
3	64QAM	15	0	20.11	20.04	20.14		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	22.93	22.80	22.84	24	0
1.4	QPSK	1	3	23.03	22.86	22.92		
1.4	QPSK	1	5	22.98	22.86	22.91		
1.4	QPSK	3	0	22.91	22.82	22.84		
1.4	QPSK	3	1	22.99	22.91	22.92		
1.4	QPSK	3	3	23.01	22.87	22.91		
1.4	QPSK	6	0	22.02	21.88	22.00	23	1
1.4	16QAM	1	0	22.13	22.07	22.16	23	1
1.4	16QAM	1	3	22.30	22.25	22.19		
1.4	16QAM	1	5	22.24	22.16	22.17		
1.4	16QAM	3	0	22.08	21.96	21.96		
1.4	16QAM	3	1	22.11	22.02	22.05		
1.4	16QAM	3	3	22.03	22.01	21.92		
1.4	16QAM	6	0	21.10	20.95	21.01	22	2
1.4	64QAM	1	0	21.26	21.08	21.04	22	2
1.4	64QAM	1	3	21.32	21.20	21.00		
1.4	64QAM	1	5	21.28	21.17	20.97		
1.4	64QAM	3	0	21.15	21.12	20.96		
1.4	64QAM	3	1	21.17	21.18	20.96		
1.4	64QAM	3	3	21.18	21.18	20.88		
1.4	64QAM	6	0	20.03	19.95	19.78	21	3

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	23.90	23.92	23.86	24.5	0
15	QPSK	1	37	23.88	23.86	23.74		
15	QPSK	1	74	23.91	23.87	23.69		
15	QPSK	36	0	23.05	23.09	22.91	23.5	1
15	QPSK	36	20	23.01	22.94	22.88		
15	QPSK	36	39	23.02	22.96	22.86		
15	QPSK	75	0	23.04	23.06	22.82		
15	16QAM	1	0	23.35	23.36	23.21	23.5	1
15	16QAM	1	37	23.31	23.23	23.19		
15	16QAM	1	74	23.18	23.13	22.97		
15	16QAM	36	0	22.08	22.00	21.93	22.5	2
15	16QAM	36	20	22.11	21.92	21.90		
15	16QAM	36	39	22.08	21.96	21.84		
15	16QAM	75	0	22.12	21.94	21.89		
15	64QAM	1	0	22.20	22.16	22.06	22.5	2
15	64QAM	1	37	22.08	22.14	22.00		
15	64QAM	1	74	22.12	22.02	21.96		
15	64QAM	36	0	20.86	21.02	20.90	21.5	3
15	64QAM	36	20	21.05	20.98	20.95		
15	64QAM	36	39	21.11	20.95	20.95		
15	64QAM	75	0	21.14	20.94	20.83		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	23.88	23.79	23.66	24.5	0
10	QPSK	1	25	23.83	23.72	23.60		
10	QPSK	1	49	23.83	23.63	23.54		
10	QPSK	25	0	23.01	22.78	22.69	23.5	1
10	QPSK	25	12	22.98	22.83	22.67		
10	QPSK	25	25	22.88	22.81	22.71		
10	QPSK	50	0	22.94	22.76	22.65		
10	16QAM	1	0	23.29	23.18	23.13	23.5	1
10	16QAM	1	25	23.30	23.19	22.97		
10	16QAM	1	49	23.20	23.14	22.92		
10	16QAM	25	0	22.00	21.81	21.70	22.5	2
10	16QAM	25	12	21.96	21.80	21.73		
10	16QAM	25	25	21.88	21.76	21.72		
10	16QAM	50	0	21.94	21.80	21.71		
10	64QAM	1	0	22.14	21.95	21.86	22.5	2
10	64QAM	1	25	21.73	22.13	21.93		
10	64QAM	1	49	22.03	22.00	21.98		
10	64QAM	25	0	20.78	20.82	20.75	21.5	3
10	64QAM	25	12	20.58	20.83	20.72		
10	64QAM	25	25	20.89	20.83	20.67		
10	64QAM	50	0	20.71	20.80	20.73		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	23.88	23.75	23.64	24.5	0
5	QPSK	1	12	23.76	23.79	23.63		
5	QPSK	1	24	23.81	23.76	23.57		
5	QPSK	12	0	22.98	22.81	22.71	23.5	1
5	QPSK	12	7	22.97	22.85	22.70		

5	QPSK	12	13	22.90	22.77	22.63		
5	QPSK	25	0	22.97	22.76	22.69		
5	16QAM	1	0	23.34	23.09	23.06	23.5	1
5	16QAM	1	12	23.10	23.02	22.97		
5	16QAM	1	24	22.97	23.07	22.88		
5	16QAM	12	0	22.02	21.84	21.71	22.5	2
5	16QAM	12	7	21.98	21.85	21.73		
5	16QAM	12	13	21.93	21.79	21.64		
5	16QAM	25	0	21.94	21.76	21.70		
5	64QAM	1	0	22.22	21.94	21.85	22.5	2
5	64QAM	1	12	21.91	21.96	21.76		
5	64QAM	1	24	21.80	21.89	21.72		
5	64QAM	12	0	21.09	20.86	20.80	21.5	3
5	64QAM	12	7	20.90	20.90	20.71		
5	64QAM	12	13	20.69	20.85	20.63		
5	64QAM	25	0	20.83	20.82	20.47		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	23.83	23.72	23.68	24.5	0
3	QPSK	1	8	23.88	23.87	23.68		
3	QPSK	1	14	23.83	23.74	23.59		
3	QPSK	8	0	23.05	22.78	22.71	23.5	1
3	QPSK	8	4	23.07	22.87	22.68		
3	QPSK	8	7	22.95	22.82	22.64		
3	QPSK	15	0	23.00	22.78	22.71		
3	16QAM	1	0	23.27	23.05	22.90	23.5	1
3	16QAM	1	8	23.31	23.14	22.89		
3	16QAM	1	14	23.18	23.06	22.95		
3	16QAM	8	0	22.08	21.88	21.76	22.5	2
3	16QAM	8	4	22.08	21.91	21.80		
3	16QAM	8	7	22.02	21.89	21.69		
3	16QAM	15	0	22.02	21.78	21.70		
3	64QAM	1	0	22.21	21.99	21.78	22.5	2
3	64QAM	1	8	22.15	22.05	21.73		
3	64QAM	1	14	21.87	21.98	21.75		
3	64QAM	8	0	21.00	20.81	20.63	21.5	3
3	64QAM	8	4	20.99	20.97	20.58		
3	64QAM	8	7	20.98	20.88	20.53		
3	64QAM	15	0	21.01	20.81	20.51		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	23.89	23.70	23.54	24.5	0
1.4	QPSK	1	3	23.90	23.75	23.55		
1.4	QPSK	1	5	23.88	23.71	23.45		
1.4	QPSK	3	0	23.90	23.70	23.52		
1.4	QPSK	3	1	23.75	23.82	23.59		
1.4	QPSK	3	3	23.83	23.73	23.51		
1.4	QPSK	6	0	22.94	22.80	22.61	23.5	1
1.4	16QAM	1	0	23.11	22.91	22.81	23.5	1
1.4	16QAM	1	3	23.20	22.99	22.80		
1.4	16QAM	1	5	23.08	22.90	22.74		
1.4	16QAM	3	0	22.98	22.74	22.66		
1.4	16QAM	3	1	23.03	22.82	22.73		
1.4	16QAM	3	3	22.92	22.78	22.62		
1.4	16QAM	6	0	22.05	21.85	21.69	22.5	2
1.4	64QAM	1	0	22.18	21.86	21.74	22.5	2

1.4	64QAM	1	3	22.14	21.93	21.70		
1.4	64QAM	1	5	22.05	21.87	21.69		
1.4	64QAM	3	0	22.18	21.94	21.73		
1.4	64QAM	3	1	22.17	22.00	21.69		
1.4	64QAM	3	3	22.14	21.93	21.68		
1.4	64QAM	6	0	20.92	20.79	20.59	21.5	3

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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		21.41		23	0
10	QPSK	1	25		21.40			
10	QPSK	1	49		21.42			
10	QPSK	25	0		20.50		22	1
10	QPSK	25	12		20.55			
10	QPSK	25	25		20.56			
10	QPSK	50	0		20.55			
10	16QAM	1	0		20.80		22	1
10	16QAM	1	25		20.83			
10	16QAM	1	49		20.78			
10	16QAM	25	0		19.51		21	2
10	16QAM	25	12		19.57			
10	16QAM	25	25		19.54			
10	16QAM	50	0		19.55			
10	64QAM	1	0		19.39		21	2
10	64QAM	1	25		19.45			
10	64QAM	1	49		19.37			
10	64QAM	25	0		18.47		20	3
10	64QAM	25	12		18.42			
10	64QAM	25	25		18.40			
10	64QAM	50	0		18.43			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	21.31	21.40	21.41	23	0
5	QPSK	1	12	21.37	21.41	21.41		
5	QPSK	1	24	21.39	21.38	21.36		
5	QPSK	12	0	20.50	20.54	20.58	22	1
5	QPSK	12	7	20.61	20.58	20.59		
5	QPSK	12	13	20.65	20.58	20.54		
5	QPSK	25	0	20.59	20.54	20.57		
5	16QAM	1	0	20.68	20.72	20.79	22	1
5	16QAM	1	12	20.76	20.83	20.76		
5	16QAM	1	24	20.89	20.81	20.74		
5	16QAM	12	0	19.50	19.55	19.58	21	2
5	16QAM	12	7	19.61	19.60	19.62		
5	16QAM	12	13	19.64	19.58	19.56		
5	16QAM	25	0	19.62	19.60	19.61		
5	64QAM	1	0	19.60	19.63	19.65	21	2
5	64QAM	1	12	19.65	19.73	19.68		
5	64QAM	1	24	19.77	19.71	19.66		
5	64QAM	12	0	18.58	18.62	18.64	20	3
5	64QAM	12	7	18.69	18.65	18.69		
5	64QAM	12	13	18.69	18.64	18.61		
5	64QAM	25	0	18.61	18.57	18.61		

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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	23.42	23.43	23.40	24	0
20	QPSK	1	49	23.32	23.26	23.22		
20	QPSK	1	99	23.31	23.23	23.16		
20	QPSK	50	0	22.48	22.52	22.48	23	1
20	QPSK	50	24	22.42	22.42	22.46		
20	QPSK	50	50	22.41	22.36	22.38		
20	QPSK	100	0	22.40	22.42	22.35		
20	16QAM	1	0	22.86	22.82	22.79	23	1
20	16QAM	1	49	22.80	22.75	22.65		
20	16QAM	1	99	22.73	22.53	22.45		
20	16QAM	50	0	21.45	21.37	21.39	22	2
20	16QAM	50	24	21.54	21.40	21.47		
20	16QAM	50	50	21.49	21.39	21.43		
20	16QAM	100	0	21.52	21.35	21.49		
20	64QAM	1	0	21.60	21.53	21.54	22	2
20	64QAM	1	49	21.54	21.64	21.47		
20	64QAM	1	99	21.49	21.46	21.42		
20	64QAM	50	0	20.54	20.44	20.45	21	3
20	64QAM	50	24	20.56	20.41	20.48		
20	64QAM	50	50	20.51	20.41	20.38		
20	64QAM	100	0	20.51	20.36	20.51		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	23.42	23.30	23.37	24	0
15	QPSK	1	37	23.36	23.27	23.25		
15	QPSK	1	74	23.34	23.23	23.25		
15	QPSK	36	0	22.53	22.37	22.38	23	1
15	QPSK	36	20	22.57	22.36	22.48		
15	QPSK	36	39	22.50	22.38	22.36		
15	QPSK	75	0	22.51	22.31	22.33		
15	16QAM	1	0	22.76	22.66	22.71	23	1
15	16QAM	1	37	22.74	22.62	22.67		
15	16QAM	1	74	22.72	22.64	22.64		
15	16QAM	36	0	21.54	21.40	21.36	22	2
15	16QAM	36	20	21.53	21.41	21.46		
15	16QAM	36	39	21.48	21.45	21.37		
15	16QAM	75	0	21.53	21.35	21.33		
15	64QAM	1	0	21.57	21.45	21.56	22	2
15	64QAM	1	37	21.64	21.51	21.41		
15	64QAM	1	74	21.54	21.45	21.42		
15	64QAM	36	0	20.54	20.47	20.44	21	3
15	64QAM	36	20	20.55	20.39	20.51		
15	64QAM	36	39	20.50	20.44	20.39		
15	64QAM	75	0	20.49	20.42	20.36		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.20	23.14	23.23	24	0
10	QPSK	1	25	23.13	23.09	23.03		
10	QPSK	1	49	23.12	23.10	23.00		
10	QPSK	25	0	22.34	22.22	22.15	23	1
10	QPSK	25	12	22.34	22.21	22.11		

10	QPSK	25	25	22.28	22.20	22.19		
10	QPSK	50	0	22.32	22.18	22.20		
10	16QAM	1	0	22.69	22.58	22.54	23	1
10	16QAM	1	25	22.62	22.47	22.50		
10	16QAM	1	49	22.54	22.44	22.38		
10	16QAM	25	0	21.39	21.22	21.19	22	2
10	16QAM	25	12	21.38	21.15	21.21		
10	16QAM	25	25	21.30	21.23	21.20		
10	16QAM	50	0	21.28	21.17	21.10		
10	64QAM	1	0	21.55	21.30	21.32	22	2
10	64QAM	1	25	21.56	21.41	21.44		
10	64QAM	1	49	21.51	21.34	21.37		
10	64QAM	25	0	20.40	20.25	20.21	21	3
10	64QAM	25	12	20.38	20.22	20.17		
10	64QAM	25	25	20.33	20.27	20.24		
10	64QAM	50	0	20.36	20.26	20.18		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.23	23.04	23.09	24	0
5	QPSK	1	12	23.21	23.15	23.08		
5	QPSK	1	24	23.26	23.09	23.06		
5	QPSK	12	0	22.37	22.23	22.25	23	1
5	QPSK	12	7	22.37	22.28	22.26		
5	QPSK	12	13	22.34	22.24	22.21		
5	QPSK	25	0	22.33	22.16	22.19		
5	16QAM	1	0	22.72	22.43	22.48	23	1
5	16QAM	1	12	22.59	22.45	22.43		
5	16QAM	1	24	22.64	22.47	22.37		
5	16QAM	12	0	21.38	21.20	21.26	22	2
5	16QAM	12	7	21.42	21.30	21.25		
5	16QAM	12	13	21.41	21.26	21.23		
5	16QAM	25	0	21.41	21.21	21.25		
5	64QAM	1	0	21.58	21.37	21.43	22	2
5	64QAM	1	12	21.57	21.35	21.40		
5	64QAM	1	24	21.49	21.40	21.35		
5	64QAM	12	0	20.42	20.29	20.29	21	3
5	64QAM	12	7	20.43	20.37	20.28		
5	64QAM	12	13	20.36	20.29	20.32		
5	64QAM	25	0	20.36	20.21	20.25		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.30	23.10	23.09	24	0
3	QPSK	1	8	23.26	23.18	23.18		
3	QPSK	1	14	23.18	23.14	23.07		
3	QPSK	8	0	22.34	22.18	22.18	23	1
3	QPSK	8	4	22.38	22.27	22.21		
3	QPSK	8	7	22.34	22.30	22.16		
3	QPSK	15	0	22.36	22.21	22.21		
3	16QAM	1	0	22.51	22.47	22.48	23	1
3	16QAM	1	8	22.79	22.49	22.48		
3	16QAM	1	14	22.51	22.39	22.35		
3	16QAM	8	0	21.43	21.27	21.27	22	2
3	16QAM	8	4	21.39	21.32	21.31		
3	16QAM	8	7	21.39	21.26	21.25		
3	16QAM	15	0	21.39	21.21	21.28		
3	64QAM	1	0	21.55	21.37	21.38	22	2

3	64QAM	1	8	21.69	21.49	21.42		
3	64QAM	1	14	21.42	21.46	21.35		
3	64QAM	8	0	20.45	20.25	20.29	21	3
3	64QAM	8	4	20.45	20.36	20.28		
3	64QAM	8	7	20.43	20.33	20.26		
3	64QAM	15	0	20.35	20.20	20.20		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	23.16	23.07	23.03	24	0
1.4	QPSK	1	3	23.19	23.10	23.10		
1.4	QPSK	1	5	23.12	23.02	23.01		
1.4	QPSK	3	0	23.20	23.10	23.07		
1.4	QPSK	3	1	23.18	23.10	23.05		
1.4	QPSK	3	3	23.20	23.09	23.06		
1.4	QPSK	6	0	22.25	22.18	22.15	23	1
1.4	16QAM	1	0	22.38	22.29	22.27	23	1
1.4	16QAM	1	3	22.47	22.35	22.28		
1.4	16QAM	1	5	22.36	22.31	22.30		
1.4	16QAM	3	0	22.32	22.09	22.13		
1.4	16QAM	3	1	22.35	22.17	22.14		
1.4	16QAM	3	3	22.32	22.15	22.09		
1.4	16QAM	6	0	21.33	21.19	21.21	22	2
1.4	64QAM	1	0	21.47	21.31	21.23	22	2
1.4	64QAM	1	3	21.50	21.31	21.34		
1.4	64QAM	1	5	21.45	21.26	21.24		
1.4	64QAM	3	0	21.38	21.33	21.21		
1.4	64QAM	3	1	21.43	21.30	21.34		
1.4	64QAM	3	3	21.41	21.33	21.28		
1.4	64QAM	6	0	20.27	20.22	20.18	21	3

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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	23.53	23.45	22.90	24	0
20	QPSK	1	49	23.52	23.43	22.83		
20	QPSK	1	99	23.52	23.42	22.83		
20	QPSK	50	0	23.50	23.39	22.83	24	0
20	QPSK	50	24	23.44	23.38	22.79		
20	QPSK	50	50	23.43	23.36	22.81		
20	QPSK	100	0	23.51	23.42	22.89		
20	16QAM	1	0	23.48	23.43	22.81	24	0
20	16QAM	1	49	23.47	23.34	22.79		
20	16QAM	1	99	23.49	23.43	22.86		
20	16QAM	50	0	23.46	23.42	22.75	24	0
20	16QAM	50	24	23.45	23.38	22.73		
20	16QAM	50	50	23.52	23.40	22.85		
20	16QAM	100	0	23.46	23.34	22.80		
20	64QAM	1	0	23.45	23.40	22.78	24	0
20	64QAM	1	49	23.45	23.45	22.89		
20	64QAM	1	99	23.44	23.34	22.80		
20	64QAM	50	0	23.43	23.42	22.73	24	0
20	64QAM	50	24	23.45	23.44	22.86		
20	64QAM	50	50	23.50	23.38	22.74		
20	64QAM	100	0	23.47	23.35	22.83		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	23.47	23.38	22.84	24	0
15	QPSK	1	37	23.50	23.40	22.81		
15	QPSK	1	74	23.52	23.35	22.74		
15	QPSK	36	0	23.48	23.27	22.81	24	0
15	QPSK	36	20	23.37	23.32	22.76		
15	QPSK	36	39	23.35	23.28	22.80		
15	QPSK	75	0	23.46	23.38	22.79		
15	16QAM	1	0	23.47	23.43	22.75	24	0
15	16QAM	1	37	23.45	23.33	22.73		
15	16QAM	1	74	23.40	23.41	22.76		
15	16QAM	36	0	23.40	23.37	22.70	24	0
15	16QAM	36	20	23.37	23.29	22.64		
15	16QAM	36	39	23.43	23.36	22.82		
15	16QAM	75	0	23.42	23.27	22.71		
15	64QAM	1	0	23.40	23.37	22.68	24	0
15	64QAM	1	37	23.43	23.41	22.80		
15	64QAM	1	74	23.38	23.33	22.74		
15	64QAM	36	0	23.41	23.33	22.67	24	0
15	64QAM	36	20	23.45	23.37	22.85		
15	64QAM	36	39	23.48	23.37	22.71		
15	64QAM	75	0	23.46	23.29	22.82		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.48	23.35	22.88	24	0
10	QPSK	1	25	23.43	23.37	22.82		
10	QPSK	1	49	23.51	23.35	22.79		
10	QPSK	25	0	23.40	23.27	22.82	24	0
10	QPSK	25	12	23.37	23.29	22.75		

10	QPSK	25	25	23.36	23.36	22.76		
10	QPSK	50	0	23.47	23.33	22.83		
10	16QAM	1	0	23.47	23.41	22.80	24	0
10	16QAM	1	25	23.41	23.25	22.76		
10	16QAM	1	49	23.44	23.33	22.86		
10	16QAM	25	0	23.36	23.38	22.66	24	0
10	16QAM	25	12	23.39	23.37	22.68		
10	16QAM	25	25	23.48	23.38	22.83		
10	16QAM	50	0	23.37	23.32	22.71		
10	64QAM	1	0	23.44	23.32	22.78	24	0
10	64QAM	1	25	23.45	23.40	22.85		
10	64QAM	1	49	23.38	23.31	22.74		
10	64QAM	25	0	23.33	23.40	22.68	24	0
10	64QAM	25	12	23.44	23.37	22.81		
10	64QAM	25	25	23.47	23.37	22.72		
10	64QAM	50	0	23.46	23.26	22.78		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	23.51	23.43	22.80	24	0
5	QPSK	1	12	23.44	23.37	22.76		
5	QPSK	1	24	23.52	23.34	22.77		
5	QPSK	12	0	23.40	23.26	22.79	24	0
5	QPSK	12	7	23.37	23.29	22.76		
5	QPSK	12	13	23.42	23.32	22.78		
5	QPSK	25	0	23.42	23.35	22.83		
5	16QAM	1	0	23.43	23.42	22.80	24	0
5	16QAM	1	12	23.45	23.29	22.72		
5	16QAM	1	24	23.42	23.34	22.82		
5	16QAM	12	0	23.39	23.32	22.74	24	0
5	16QAM	12	7	23.44	23.36	22.64		
5	16QAM	12	13	23.52	23.31	22.79		
5	16QAM	25	0	23.40	23.28	22.71		
5	64QAM	1	0	23.38	23.35	22.69	24	0
5	64QAM	1	12	23.37	23.44	22.87		
5	64QAM	1	24	23.34	23.30	22.75		
5	64QAM	12	0	23.34	23.36	22.69	24	0
5	64QAM	12	7	23.43	23.41	22.76		
5	64QAM	12	13	23.42	23.31	22.64		
5	64QAM	25	0	23.38	23.29	22.75		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.52	23.36	22.87	24	0
3	QPSK	1	8	23.48	23.41	22.76		
3	QPSK	1	14	23.47	23.34	22.83		
3	QPSK	8	0	23.40	23.35	22.76	24	0
3	QPSK	8	4	23.37	23.37	22.73		
3	QPSK	8	7	23.42	23.32	22.73		
3	QPSK	15	0	23.50	23.40	22.80		
3	16QAM	1	0	23.47	23.43	22.76	24	0
3	16QAM	1	8	23.46	23.29	22.76		
3	16QAM	1	14	23.43	23.35	22.81		
3	16QAM	8	0	23.44	23.33	22.75	24	0
3	16QAM	8	4	23.35	23.32	22.73		
3	16QAM	8	7	23.42	23.30	22.84		
3	16QAM	15	0	23.45	23.27	22.78		
3	64QAM	1	0	23.40	23.37	22.71	24	0

3	64QAM	1	8	23.41	23.39	22.79		
3	64QAM	1	14	23.34	23.27	22.78		
3	64QAM	8	0	23.37	23.36	22.66	24	0
3	64QAM	8	4	23.43	23.42	22.85		
3	64QAM	8	7	23.40	23.31	22.67		
3	64QAM	15	0	23.46	23.31	22.77		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	23.47	23.37	22.86	24	0
1.4	QPSK	1	3	23.48	23.41	22.80		
1.4	QPSK	1	5	23.52	23.41	22.78		
1.4	QPSK	3	0	23.44	23.25	22.82		
1.4	QPSK	3	1	23.39	23.35	22.79		
1.4	QPSK	3	3	23.37	23.29	22.75		
1.4	QPSK	6	0	23.41	23.35	22.87	24	0
1.4	16QAM	1	0	23.41	23.42	22.78	24	0
1.4	16QAM	1	3	23.45	23.27	22.70		
1.4	16QAM	1	5	23.44	23.35	22.85		
1.4	16QAM	3	0	23.43	23.41	22.74		
1.4	16QAM	3	1	23.44	23.28	22.73		
1.4	16QAM	3	3	23.52	23.35	22.81		
1.4	16QAM	6	0	23.38	23.27	22.78	24	0
1.4	64QAM	1	0	23.43	23.38	22.75	24	0
1.4	64QAM	1	3	23.39	23.37	22.80		
1.4	64QAM	1	5	23.38	23.29	22.77		
1.4	64QAM	3	0	23.43	23.41	22.71		
1.4	64QAM	3	1	23.38	23.34	22.79		
1.4	64QAM	3	3	23.44	23.35	22.67		
1.4	64QAM	6	0	23.41	23.33	22.83	24	0

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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	23.79	23.80	23.66	24.5	0
20	QPSK	1	49	23.78	23.68	23.65		
20	QPSK	1	99	23.74	23.75	23.65		
20	QPSK	50	0	22.90	22.93	22.78	23.5	1
20	QPSK	50	24	22.89	22.76	22.74		
20	QPSK	50	50	22.85	22.82	22.75		
20	QPSK	100	0	22.85	22.86	22.78		
20	16QAM	1	0	23.29	22.87	23.02	23.5	1
20	16QAM	1	49	23.20	23.08	22.99		
20	16QAM	1	99	23.21	23.11	23.05		
20	16QAM	50	0	21.90	21.77	21.73	22.5	2
20	16QAM	50	24	21.99	21.71	21.66		
20	16QAM	50	50	21.96	21.83	21.78		
20	16QAM	100	0	21.94	21.70	21.79		
20	64QAM	1	0	22.00	21.75	21.84	22.5	2
20	64QAM	1	49	22.00	21.75	22.00		
20	64QAM	1	99	22.06	21.88	21.78		
20	64QAM	50	0	20.90	20.72	20.78	21.5	3
20	64QAM	50	24	20.95	20.75	20.75		
20	64QAM	50	50	20.93	20.83	20.77		
20	64QAM	100	0	20.94	20.68	20.77		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	23.75	23.77	23.61	24.5	0
15	QPSK	1	37	23.71	23.75	23.64		
15	QPSK	1	74	23.62	23.79	23.70		
15	QPSK	36	0	22.91	22.82	22.70	23.5	1
15	QPSK	36	20	23.00	22.82	22.73		
15	QPSK	36	39	22.90	22.85	22.83		
15	QPSK	75	0	22.98	22.78	22.69		
15	16QAM	1	0	23.19	22.90	22.86	23.5	1
15	16QAM	1	37	23.29	22.93	22.87		
15	16QAM	1	74	23.12	22.81	22.84		
15	16QAM	36	0	21.97	21.74	21.75	22.5	2
15	16QAM	36	20	22.01	21.69	21.69		
15	16QAM	36	39	21.90	21.82	21.80		
15	16QAM	75	0	21.96	21.72	21.76		
15	64QAM	1	0	22.23	21.89	21.88	22.5	2
15	64QAM	1	37	21.95	21.91	21.95		
15	64QAM	1	74	22.11	21.93	21.94		
15	64QAM	36	0	20.98	20.75	20.77	21.5	3
15	64QAM	36	20	20.96	20.77	20.77		
15	64QAM	36	39	20.87	20.81	20.82		
15	64QAM	75	0	20.92	20.70	20.75		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	23.51	23.40	23.47	24.5	0
10	QPSK	1	25	23.30	23.38	23.49		
10	QPSK	1	49	23.38	23.44	23.42		
10	QPSK	25	0	22.56	22.48	22.58	23.5	1
10	QPSK	25	12	22.55	22.60	22.53		

10	QPSK	25	25	22.45	22.54	22.59		
10	QPSK	50	0	22.53	22.57	22.58		
10	16QAM	1	0	22.82	22.73	22.85	23.5	1
10	16QAM	1	25	22.78	22.77	22.81		
10	16QAM	1	49	22.76	22.79	22.81		
10	16QAM	25	0	21.54	21.47	21.55	22.5	2
10	16QAM	25	12	21.55	21.55	21.57		
10	16QAM	25	25	21.53	21.41	21.56		
10	16QAM	50	0	21.54	21.56	21.52		
10	64QAM	1	0	21.70	21.64	21.80	22.5	2
10	64QAM	1	25	21.65	21.77	21.85		
10	64QAM	1	49	21.66	21.82	21.78		
10	64QAM	25	0	20.59	20.50	20.59	21.5	3
10	64QAM	25	12	20.57	20.62	20.54		
10	64QAM	25	25	20.49	20.58	20.60		
10	64QAM	50	0	20.59	20.62	20.58		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	23.51	23.41	23.50	24.5	0
5	QPSK	1	12	23.45	23.42	23.49		
5	QPSK	1	24	23.39	23.43	23.41		
5	QPSK	12	0	22.60	22.51	22.56	23.5	1
5	QPSK	12	7	22.52	22.53	22.62		
5	QPSK	12	13	22.45	22.49	22.54		
5	QPSK	25	0	22.55	22.51	22.53		
5	16QAM	1	0	22.87	22.77	22.90	23.5	1
5	16QAM	1	12	22.83	22.75	22.89		
5	16QAM	1	24	22.76	22.83	22.83		
5	16QAM	12	0	21.60	21.56	21.63	22.5	2
5	16QAM	12	7	21.59	21.54	21.63		
5	16QAM	12	13	21.51	21.50	21.54		
5	16QAM	25	0	21.57	21.54	21.50		
5	64QAM	1	0	21.78	21.75	21.87	22.5	2
5	64QAM	1	12	21.67	21.74	21.82		
5	64QAM	1	24	21.64	21.68	21.75		
5	64QAM	12	0	20.67	20.58	20.64	21.5	3
5	64QAM	12	7	20.66	20.63	20.67		
5	64QAM	12	13	20.56	20.56	20.61		
5	64QAM	25	0	20.57	20.56	20.59		

<Reduced Power Mode>

<LTE Band 2 Main >

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	16.23	16.06	16.20	17	0
20	QPSK	1	49	16.14	16.12	16.20		
20	QPSK	1	99	16.10	16.16	16.21		
20	QPSK	50	0	15.23	15.23	15.34	16	1
20	QPSK	50	24	15.25	15.27	15.33		
20	QPSK	50	50	15.23	15.21	15.38		
20	QPSK	100	0	15.29	15.21	15.31		
20	16QAM	1	0	15.44	15.43	15.45	16	1
20	16QAM	1	49	15.46	15.39	15.48		
20	16QAM	1	99	15.40	15.46	15.48		
20	16QAM	50	0	14.22	14.19	14.36	15	2
20	16QAM	50	24	14.25	14.21	14.28		
20	16QAM	50	50	14.19	14.21	14.36		
20	16QAM	100	0	14.20	14.26	14.30		
20	64QAM	1	0	14.44	14.39	14.44	15	2
20	64QAM	1	49	14.41	14.35	14.44		
20	64QAM	1	99	14.44	14.46	14.52		
20	64QAM	50	0	13.22	13.24	13.39	14	3
20	64QAM	50	24	13.24	13.27	13.31		
20	64QAM	50	50	13.22	13.22	13.37		
20	64QAM	100	0	13.23	13.24	13.28		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	16.14	16.11	16.21	17	0
15	QPSK	1	37	16.11	16.11	16.18		
15	QPSK	1	74	16.07	16.13	16.15		
15	QPSK	36	0	15.19	15.21	15.35	16	1
15	QPSK	36	20	15.24	15.22	15.37		
15	QPSK	36	39	15.19	15.19	15.37		
15	QPSK	75	0	15.27	15.24	15.33		
15	16QAM	1	0	15.36	15.40	15.46	16	1
15	16QAM	1	37	15.36	15.38	15.42		
15	16QAM	1	74	15.31	15.40	15.43		
15	16QAM	36	0	14.20	14.10	14.31	15	2
15	16QAM	36	20	14.19	14.19	14.31		
15	16QAM	36	39	14.13	14.16	14.30		
15	16QAM	75	0	14.19	14.25	14.29		
15	64QAM	1	0	14.41	14.36	14.42	15	2
15	64QAM	1	37	14.33	14.38	14.47		
15	64QAM	1	74	14.39	14.39	14.44		
15	64QAM	36	0	13.17	13.18	13.39	14	3
15	64QAM	36	20	13.23	13.18	13.35		
15	64QAM	36	39	13.21	13.20	13.35		
15	64QAM	75	0	13.23	13.23	13.30		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	15.93	15.86	16.03	17	0
10	QPSK	1	25	15.89	15.87	16.01		
10	QPSK	1	49	15.88	15.92	16.11		
10	QPSK	25	0	15.02	14.99	15.14	16	1

10	QPSK	25	12	15.05	15.08	15.20		
10	QPSK	25	25	15.05	15.03	15.21		
10	QPSK	50	0	15.08	15.09	15.15		
10	16QAM	1	0	15.32	15.22	15.44	16	1
10	16QAM	1	25	15.27	15.25	15.41		
10	16QAM	1	49	15.27	15.27	15.43		
10	16QAM	25	0	14.02	13.96	14.12	15	2
10	16QAM	25	12	14.04	14.07	14.19		
10	16QAM	25	25	13.98	14.00	14.17		
10	16QAM	50	0	14.04	14.03	14.14		
10	64QAM	1	0	14.24	14.11	14.39	15	2
10	64QAM	1	25	14.20	14.12	14.42		
10	64QAM	1	49	14.15	14.15	14.34		
10	64QAM	25	0	13.06	12.96	13.15	14	3
10	64QAM	25	12	13.08	13.08	13.17		
10	64QAM	25	25	13.03	13.07	13.25		
10	64QAM	50	0	13.07	13.10	13.19		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	15.94	15.82	16.06	17	0
5	QPSK	1	12	16.00	15.93	16.11		
5	QPSK	1	24	15.96	15.97	16.16		
5	QPSK	12	0	15.06	14.99	15.24	16	1
5	QPSK	12	7	15.01	15.01	15.22		
5	QPSK	12	13	15.02	15.07	15.24		
5	QPSK	25	0	15.02	15.03	15.21		
5	16QAM	1	0	15.27	15.18	15.43	16	1
5	16QAM	1	12	15.31	15.27	15.42		
5	16QAM	1	24	15.25	15.28	15.46		
5	16QAM	12	0	14.09	14.06	14.28	15	2
5	16QAM	12	7	14.10	14.11	14.28		
5	16QAM	12	13	14.07	14.11	14.25		
5	16QAM	25	0	14.05	14.06	14.26		
5	64QAM	1	0	14.36	14.31	14.43	15	2
5	64QAM	1	12	14.30	14.28	14.45		
5	64QAM	1	24	14.30	14.36	14.41		
5	64QAM	12	0	13.11	13.05	13.28	14	3
5	64QAM	12	7	13.10	13.07	13.29		
5	64QAM	12	13	13.06	13.08	13.27		
5	64QAM	25	0	13.04	13.04	13.24		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	15.96	15.81	16.08	17	0
3	QPSK	1	8	16.01	15.96	16.20		
3	QPSK	1	14	15.95	15.92	16.13		
3	QPSK	8	0	15.01	14.92	15.21	16	1
3	QPSK	8	4	15.02	14.96	15.21		
3	QPSK	8	7	14.99	14.97	15.20		
3	QPSK	15	0	15.00	15.02	15.19		
3	16QAM	1	0	15.23	15.14	15.39	16	1
3	16QAM	1	8	15.38	15.39	15.48		
3	16QAM	1	14	15.26	15.24	15.44		
3	16QAM	8	0	14.10	14.07	14.27	15	2
3	16QAM	8	4	14.11	14.10	14.29		
3	16QAM	8	7	14.08	14.11	14.26		
3	16QAM	15	0	14.04	14.02	14.26		

3	64QAM	1	0	14.41	14.29	14.39	15	2
3	64QAM	1	8	14.42	14.28	14.47		
3	64QAM	1	14	14.28	14.30	14.38		
3	64QAM	8	0	13.05	12.98	13.23	14	3
3	64QAM	8	4	13.07	13.08	13.24		
3	64QAM	8	7	13.06	13.03	13.26		
3	64QAM	15	0	13.05	13.04	13.23		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	15.86	15.80	16.00	17	0
1.4	QPSK	1	3	15.94	15.88	16.05		
1.4	QPSK	1	5	15.90	15.81	16.04		
1.4	QPSK	3	0	15.94	15.86	16.05		
1.4	QPSK	3	1	15.97	15.94	16.07		
1.4	QPSK	3	3	15.92	15.88	16.05		
1.4	QPSK	6	0	14.92	14.90	15.08	16	1
1.4	16QAM	1	0	15.17	15.14	15.29	16	1
1.4	16QAM	1	3	15.25	15.16	15.39		
1.4	16QAM	1	5	15.17	15.16	15.31		
1.4	16QAM	3	0	15.01	15.03	15.12		
1.4	16QAM	3	1	15.13	15.05	15.20		
1.4	16QAM	3	3	15.04	15.00	15.13		
1.4	16QAM	6	0	13.87	13.89	14.16	15	2
1.4	64QAM	1	0	14.26	14.13	14.33	15	2
1.4	64QAM	1	3	14.30	14.26	14.34		
1.4	64QAM	1	5	14.23	14.19	14.28		
1.4	64QAM	3	0	14.10	14.06	14.22		
1.4	64QAM	3	1	14.13	14.11	14.28		
1.4	64QAM	3	3	14.13	14.04	14.26		
1.4	64QAM	6	0	12.97	12.92	13.12	14	3

<LTE Band 2 MIMO2 >

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	13.89	14.52	13.58	15.5	0
20	QPSK	1	49	13.88	14.49	13.62		
20	QPSK	1	99	13.98	14.48	13.54		
20	QPSK	50	0	13.87	14.46	13.57	15.5	0
20	QPSK	50	24	13.88	14.47	13.59		
20	QPSK	50	50	13.89	14.49	13.60		
20	QPSK	100	0	13.83	14.47	13.57		
20	16QAM	1	0	13.89	14.50	13.56	15.5	0
20	16QAM	1	49	13.85	14.46	13.57		
20	16QAM	1	99	13.86	14.48	13.55		
20	16QAM	50	0	13.85	14.49	13.54	15.5	0
20	16QAM	50	24	13.88	14.48	13.56		
20	16QAM	50	50	13.87	14.47	13.57		
20	16QAM	100	0	13.85	14.49	13.55		
20	64QAM	1	0	13.87	14.49	13.59	15.5	0
20	64QAM	1	49	13.86	14.46	13.58		
20	64QAM	1	99	13.88	14.47	13.56		
20	64QAM	50	0	13.86	14.48	13.56	15.5	0
20	64QAM	50	24	13.86	14.47	13.54		
20	64QAM	50	50	13.87	14.46	13.55		
20	64QAM	100	0	13.83	14.48	13.58		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	13.81	14.50	13.51	15.5	0
15	QPSK	1	37	13.86	14.49	13.55		
15	QPSK	1	74	13.95	14.47	13.51		
15	QPSK	36	0	13.84	14.44	13.50	15.5	0
15	QPSK	36	20	13.89	14.37	13.67		
15	QPSK	36	39	13.84	14.39	13.53		
15	QPSK	75	0	13.73	14.50	13.58		
15	16QAM	1	0	13.85	14.49	13.65	15.5	0
15	16QAM	1	37	13.93	14.41	13.52		
15	16QAM	1	74	13.95	14.41	13.53		
15	16QAM	36	0	13.76	14.45	13.57	15.5	0
15	16QAM	36	20	13.92	14.47	13.58		
15	16QAM	36	39	13.94	14.43	13.61		
15	16QAM	75	0	13.79	14.44	13.58		
15	64QAM	1	0	13.90	14.39	13.64	15.5	0
15	64QAM	1	37	13.78	14.48	13.50		
15	64QAM	1	74	13.94	14.44	13.60		
15	64QAM	36	0	13.90	14.38	13.50	15.5	0
15	64QAM	36	20	13.88	14.44	13.58		
15	64QAM	36	39	13.86	14.40	13.63		
15	64QAM	75	0	13.84	14.41	13.53		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	13.84	14.50	13.65	15.5	0
10	QPSK	1	25	13.78	14.48	13.57		
10	QPSK	1	49	13.81	14.49	13.57		
10	QPSK	25	0	13.82	14.44	13.52	15.5	0
10	QPSK	25	12	13.83	14.45	13.62		

10	QPSK	25	25	13.78	14.48	13.50		
10	QPSK	50	0	13.82	14.39	13.66		
10	16QAM	1	0	13.86	14.40	13.51	15.5	0
10	16QAM	1	25	13.78	14.42	13.63		
10	16QAM	1	49	13.96	14.40	13.59		
10	16QAM	25	0	13.76	14.41	13.57	15.5	0
10	16QAM	25	12	13.85	14.40	13.63		
10	16QAM	25	25	13.81	14.39	13.53		
10	16QAM	50	0	13.91	14.41	13.50		
10	64QAM	1	0	13.82	14.48	13.57	15.5	0
10	64QAM	1	25	13.80	14.44	13.53		
10	64QAM	1	49	13.89	14.37	13.52		
10	64QAM	25	0	13.86	14.41	13.56	15.5	0
10	64QAM	25	12	13.84	14.46	13.59		
10	64QAM	25	25	13.94	14.48	13.57		
10	64QAM	50	0	13.75	14.43	13.55		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	13.87	14.48	13.50	15.5	0
5	QPSK	1	12	13.91	14.49	13.65		
5	QPSK	1	24	13.95	14.45	13.50		
5	QPSK	12	0	13.86	14.47	13.52	15.5	0
5	QPSK	12	7	13.97	14.45	13.72		
5	QPSK	12	13	13.81	14.44	13.53		
5	QPSK	25	0	13.74	14.49	13.69		
5	16QAM	1	0	13.82	14.46	13.53	15.5	0
5	16QAM	1	12	13.75	14.44	13.53		
5	16QAM	1	24	13.87	14.43	13.59		
5	16QAM	12	0	13.84	14.50	13.59	15.5	0
5	16QAM	12	7	13.88	14.40	13.54		
5	16QAM	12	13	13.87	14.42	13.57		
5	16QAM	25	0	13.90	14.42	13.63		
5	64QAM	1	0	13.89	14.47	13.52	15.5	0
5	64QAM	1	12	13.77	14.36	13.53		
5	64QAM	1	24	13.95	14.46	13.58		
5	64QAM	12	0	13.89	14.47	13.63	15.5	0
5	64QAM	12	7	13.86	14.43	13.61		
5	64QAM	12	13	13.79	14.48	13.60		
5	64QAM	25	0	13.88	14.45	13.61		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	13.88	14.46	13.53	15.5	0
3	QPSK	1	8	13.87	14.43	13.67		
3	QPSK	1	14	13.88	14.45	13.51		
3	QPSK	8	0	13.96	14.40	13.55	15.5	0
3	QPSK	8	4	13.98	14.42	13.60		
3	QPSK	8	7	13.84	14.49	13.53		
3	QPSK	15	0	13.77	14.50	13.54		
3	16QAM	1	0	13.91	14.49	13.53	15.5	0
3	16QAM	1	8	13.85	14.49	13.55		
3	16QAM	1	14	13.85	14.41	13.68		
3	16QAM	8	0	13.94	14.50	13.64	15.5	0
3	16QAM	8	4	13.80	14.50	13.63		
3	16QAM	8	7	13.96	14.43	13.71		
3	16QAM	15	0	13.78	14.50	13.59		
3	64QAM	1	0	13.87	14.43	13.64	15.5	0

3	64QAM	1	8	13.96	14.47	13.62		
3	64QAM	1	14	13.78	14.46	13.56		
3	64QAM	8	0	13.95	14.48	13.53	15.5	0
3	64QAM	8	4	13.85	14.51	13.52		
3	64QAM	8	7	13.80	14.40	13.56		
3	64QAM	15	0	13.90	14.44	13.67		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	13.75	14.50	13.59	15.5	0
1.4	QPSK	1	3	13.85	14.46	13.63		
1.4	QPSK	1	5	13.79	14.41	13.51		
1.4	QPSK	3	0	13.95	14.48	13.53		
1.4	QPSK	3	1	13.89	14.49	13.64		
1.4	QPSK	3	3	13.87	14.49	13.68		
1.4	QPSK	6	0	13.74	14.44	13.62	15.5	0
1.4	16QAM	1	0	13.91	14.43	13.64	15.5	0
1.4	16QAM	1	3	13.94	14.49	13.63		
1.4	16QAM	1	5	13.88	14.50	13.62		
1.4	16QAM	3	0	13.90	14.48	13.59		
1.4	16QAM	3	1	13.80	14.48	13.51		
1.4	16QAM	3	3	13.92	14.41	13.53		
1.4	16QAM	6	0	13.94	14.45	13.58	15.5	0
1.4	64QAM	1	0	13.81	14.50	13.69	15.5	0
1.4	64QAM	1	3	13.91	14.48	13.60		
1.4	64QAM	1	5	13.87	14.39	13.53		
1.4	64QAM	3	0	13.86	14.43	13.64		
1.4	64QAM	3	1	13.83	14.41	13.51		
1.4	64QAM	3	3	13.80	14.40	13.62		
1.4	64QAM	6	0	13.80	14.43	13.52	15.5	0

<LTE Band 4 Main>

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	15.77	15.79	15.77	17	0
20	QPSK	1	49	15.75	15.68	15.71		
20	QPSK	1	99	15.70	15.63	15.68		
20	QPSK	50	0	14.96	14.79	14.80	16	1
20	QPSK	50	24	14.93	14.86	14.85		
20	QPSK	50	50	14.86	14.81	14.84		
20	QPSK	100	0	14.88	14.88	14.76		
20	16QAM	1	0	15.14	15.12	15.10	16	1
20	16QAM	1	49	15.12	15.03	15.03		
20	16QAM	1	99	15.07	14.97	15.01		
20	16QAM	50	0	13.91	13.82	13.78	15	2
20	16QAM	50	24	13.89	13.87	13.78		
20	16QAM	50	50	13.92	13.85	13.84		
20	16QAM	100	0	13.89	13.87	13.78		
20	64QAM	1	0	14.01	13.98	14.03	15	2
20	64QAM	1	49	14.01	13.97	13.95		
20	64QAM	1	99	13.95	13.95	13.92		
20	64QAM	50	0	12.94	12.80	12.81	14	3
20	64QAM	50	24	12.93	12.90	12.83		
20	64QAM	50	50	12.91	12.87	12.86		
20	64QAM	100	0	12.91	12.91	12.78		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	15.75	15.75	15.74	17	0
15	QPSK	1	37	15.74	15.70	15.73		
15	QPSK	1	74	15.77	15.70	15.75		
15	QPSK	36	0	14.77	14.80	14.76	16	1
15	QPSK	36	20	14.88	14.87	14.83		
15	QPSK	36	39	14.89	14.83	14.84		
15	QPSK	75	0	14.88	14.84	14.86		
15	16QAM	1	0	15.11	15.08	15.06	16	1
15	16QAM	1	37	15.09	15.06	15.06		
15	16QAM	1	74	15.10	15.03	15.07		
15	16QAM	36	0	13.83	13.77	13.74	15	2
15	16QAM	36	20	13.88	13.84	13.87		
15	16QAM	36	39	13.87	13.84	13.86		
15	16QAM	75	0	13.93	13.85	13.87		
15	64QAM	1	0	13.98	13.94	13.94	15	2
15	64QAM	1	37	13.99	13.94	14.01		
15	64QAM	1	74	14.02	13.95	13.99		
15	64QAM	36	0	12.83	12.83	12.81	14	3
15	64QAM	36	20	12.91	12.88	12.87		
15	64QAM	36	39	12.92	12.92	12.87		
15	64QAM	75	0	12.92	12.87	12.87		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	15.66	15.59	15.59	17	0
10	QPSK	1	25	15.57	15.49	15.55		
10	QPSK	1	49	15.59	15.50	15.54		
10	QPSK	25	0	14.64	14.58	14.58	16	1
10	QPSK	25	12	14.69	14.69	14.61		

10	QPSK	25	25	14.71	14.68	14.69		
10	QPSK	50	0	14.75	14.67	14.63		
10	16QAM	1	0	15.00	14.94	14.97	16	1
10	16QAM	1	25	14.94	14.94	14.98		
10	16QAM	1	49	14.97	14.90	14.94		
10	16QAM	25	0	13.69	13.60	13.59	15	2
10	16QAM	25	12	13.73	13.70	13.64		
10	16QAM	25	25	13.71	13.69	13.72		
10	16QAM	50	0	13.73	13.68	13.61		
10	64QAM	1	0	13.90	13.83	13.79	15	2
10	64QAM	1	25	13.87	13.87	13.90		
10	64QAM	1	49	13.83	13.77	13.80		
10	64QAM	25	0	12.71	12.65	12.64	14	3
10	64QAM	25	12	12.76	12.79	12.68		
10	64QAM	25	25	12.73	12.69	12.66		
10	64QAM	50	0	12.75	12.69	12.66		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	15.61	15.59	15.59	17	0
5	QPSK	1	12	15.62	15.61	15.63		
5	QPSK	1	24	15.62	15.59	15.61		
5	QPSK	12	0	14.70	14.65	14.67	16	1
5	QPSK	12	7	14.77	14.70	14.73		
5	QPSK	12	13	14.76	14.67	14.74		
5	QPSK	25	0	14.70	14.68	14.69		
5	16QAM	1	0	14.96	14.91	14.93	16	1
5	16QAM	1	12	14.95	14.89	14.91		
5	16QAM	1	24	14.97	14.89	14.91		
5	16QAM	12	0	13.73	13.67	13.69	15	2
5	16QAM	12	7	13.79	13.68	13.73		
5	16QAM	12	13	13.79	13.69	13.75		
5	16QAM	25	0	13.73	13.71	13.71		
5	64QAM	1	0	13.96	13.91	13.89	15	2
5	64QAM	1	12	13.96	13.92	13.81		
5	64QAM	1	24	13.95	13.91	13.81		
5	64QAM	12	0	12.76	12.70	12.69	14	3
5	64QAM	12	7	12.81	12.76	12.79		
5	64QAM	12	13	12.80	12.76	12.76		
5	64QAM	25	0	12.74	12.73	12.70		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	15.60	15.56	15.54	17	0
3	QPSK	1	8	15.74	15.67	15.70		
3	QPSK	1	14	15.71	15.65	15.64		
3	QPSK	8	0	14.67	14.63	14.62	16	1
3	QPSK	8	4	14.77	14.73	14.75		
3	QPSK	8	7	14.76	14.69	14.70		
3	QPSK	15	0	14.71	14.70	14.71		
3	16QAM	1	0	14.94	14.87	14.86	16	1
3	16QAM	1	8	15.07	15.01	15.01		
3	16QAM	1	14	15.02	14.98	14.96		
3	16QAM	8	0	13.76	13.71	13.69	15	2
3	16QAM	8	4	13.82	13.77	13.79		
3	16QAM	8	7	13.81	13.76	13.75		
3	16QAM	15	0	13.74	13.69	13.73		
3	64QAM	1	0	13.95	13.87	13.81	15	2

3	64QAM	1	8	14.04	14.00	13.89		
3	64QAM	1	14	13.98	13.98	13.89		
3	64QAM	8	0	12.77	12.66	12.71	14	3
3	64QAM	8	4	12.83	12.75	12.78		
3	64QAM	8	7	12.84	12.75	12.80		
3	64QAM	15	0	12.78	12.72	12.70		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	15.55	15.49	15.50	17	0
1.4	QPSK	1	3	15.61	15.58	15.59		
1.4	QPSK	1	5	15.61	15.56	15.55		
1.4	QPSK	3	0	15.59	15.49	15.54		
1.4	QPSK	3	1	15.65	15.52	15.58		
1.4	QPSK	3	3	15.60	15.55	15.59		
1.4	QPSK	6	0	14.62	14.57	14.61	16	1
1.4	16QAM	1	0	14.84	14.81	14.80	16	1
1.4	16QAM	1	3	14.94	14.90	14.92		
1.4	16QAM	1	5	14.92	14.87	14.93		
1.4	16QAM	3	0	14.68	14.60	14.59		
1.4	16QAM	3	1	14.76	14.64	14.67		
1.4	16QAM	3	3	14.67	14.65	14.63		
1.4	16QAM	6	0	13.70	13.66	13.66	15	2
1.4	64QAM	1	0	13.83	13.78	13.74	15	2
1.4	64QAM	1	3	13.90	13.92	13.83		
1.4	64QAM	1	5	13.88	13.86	13.78		
1.4	64QAM	3	0	13.79	13.73	13.73		
1.4	64QAM	3	1	13.84	13.79	13.77		
1.4	64QAM	3	3	13.82	13.78	13.75		
1.4	64QAM	6	0	12.69	12.64	12.60	14	3

<LTE Band 5 Main >

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	18.02	17.91	17.95	19	0
10	QPSK	1	25	17.92	17.90	17.76		
10	QPSK	1	49	17.89	17.89	17.74		
10	QPSK	25	0	17.09	17.09	17.01	18	1
10	QPSK	25	12	17.13	16.97	17.02		
10	QPSK	25	25	17.12	16.77	17.07		
10	QPSK	50	0	16.94	16.89	16.88		
10	16QAM	1	0	17.27	17.25	17.19	18	1
10	16QAM	1	25	17.31	17.06	17.24		
10	16QAM	1	49	17.22	17.26	17.18		
10	16QAM	25	0	16.10	16.08	16.03	17	2
10	16QAM	25	12	16.14	16.11	16.04		
10	16QAM	25	25	16.15	16.12	16.08		
10	16QAM	50	0	16.12	16.04	15.98		
10	64QAM	1	0	16.30	16.22	16.19	17	2
10	64QAM	1	25	16.26	16.29	16.17		
10	64QAM	1	49	16.19	16.13	16.10		
10	64QAM	25	0	15.10	15.11	15.04	16	3
10	64QAM	25	12	15.16	15.13	15.05		
10	64QAM	25	25	15.17	15.14	15.10		
10	64QAM	50	0	15.18	15.08	15.00		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	17.88	17.72	17.80	19	0
5	QPSK	1	12	17.78	17.70	17.59		
5	QPSK	1	24	17.70	17.72	17.54		
5	QPSK	12	0	16.92	16.93	16.83	18	1
5	QPSK	12	7	16.96	16.78	16.83		
5	QPSK	12	13	16.98	16.63	16.87		
5	QPSK	25	0	16.83	16.69	16.73		
5	16QAM	1	0	17.08	17.06	17.00	18	1
5	16QAM	1	12	17.13	16.96	17.12		
5	16QAM	1	24	17.03	17.11	17.03		
5	16QAM	12	0	16.00	15.96	15.92	17	2
5	16QAM	12	7	15.96	15.94	15.90		
5	16QAM	12	13	16.01	15.98	15.90		
5	16QAM	25	0	15.93	15.84	15.79		
5	64QAM	1	0	16.16	16.11	16.06	17	2
5	64QAM	1	12	16.12	16.18	16.07		
5	64QAM	1	24	16.03	16.01	15.98		
5	64QAM	12	0	14.92	14.93	14.92	16	3
5	64QAM	12	7	15.06	14.95	14.94		
5	64QAM	12	13	15.04	14.98	14.95		
5	64QAM	25	0	15.02	14.89	14.87		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	17.82	17.71	17.79	19	0
3	QPSK	1	8	17.77	17.80	17.64		
3	QPSK	1	14	17.78	17.77	17.61		
3	QPSK	8	0	16.95	16.93	16.90	18	1
3	QPSK	8	4	16.94	16.79	16.83		

3	QPSK	8	7	16.93	16.66	16.90		
3	QPSK	15	0	16.76	16.73	16.74		
3	16QAM	1	0	17.14	17.13	17.00	18	1
3	16QAM	1	8	17.15	16.95	17.12		
3	16QAM	1	14	17.11	17.11	17.02		
3	16QAM	8	0	15.93	15.91	15.84	17	2
3	16QAM	8	4	15.96	15.95	15.93		
3	16QAM	8	7	15.98	16.01	15.96		
3	16QAM	15	0	15.92	15.92	15.82		
3	64QAM	1	0	16.16	16.11	16.06	17	2
3	64QAM	1	8	16.06	16.10	16.04		
3	64QAM	1	14	16.09	16.03	15.93		
3	64QAM	8	0	14.92	14.99	14.85	16	3
3	64QAM	8	4	15.00	14.93	14.90		
3	64QAM	8	7	15.03	15.02	15.00		
3	64QAM	15	0	15.02	14.88	14.86		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	17.81	17.82	17.81	19	0
1.4	QPSK	1	3	17.43	16.92	17.85		
1.4	QPSK	1	5	17.07	17.65	17.73		
1.4	QPSK	3	0	17.97	17.88	17.75		
1.4	QPSK	3	1	17.93	17.63	17.82		
1.4	QPSK	3	3	17.91	17.84	17.79		
1.4	QPSK	6	0	17.04	16.87	16.85	18	1
1.4	16QAM	1	0	17.27	17.18	17.14	18	1
1.4	16QAM	1	3	17.36	17.30	16.94		
1.4	16QAM	1	5	17.21	17.13	17.09		
1.4	16QAM	3	0	17.08	16.88	16.82		
1.4	16QAM	3	1	17.02	17.05	16.93		
1.4	16QAM	3	3	17.03	16.96	16.85		
1.4	16QAM	6	0	16.14	16.09	16.00	17	2
1.4	64QAM	1	0	16.21	16.09	16.01	17	2
1.4	64QAM	1	3	16.25	16.19	16.03		
1.4	64QAM	1	5	16.17	16.19	15.97		
1.4	64QAM	3	0	16.20	16.07	16.03		
1.4	64QAM	3	1	16.25	16.16	16.07		
1.4	64QAM	3	3	16.14	16.11	15.98		
1.4	64QAM	6	0	15.08	15.06	14.90	16	3

<LTE Band 7 Main >

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	14.25	14.45	14.73	15	0
20	QPSK	1	49	14.35	14.58	14.90		
20	QPSK	1	99	14.51	14.70	14.96		
20	QPSK	50	0	13.45	13.73	13.93	14	1
20	QPSK	50	24	13.57	13.78	13.82		
20	QPSK	50	50	13.65	13.95	13.94		
20	QPSK	100	0	13.59	13.83	13.80		
20	16QAM	1	0	13.62	13.81	13.89	14	1
20	16QAM	1	49	13.69	13.91	14.00		
20	16QAM	1	99	13.83	13.85	13.96		
20	16QAM	50	0	12.43	12.74	12.75	13	2
20	16QAM	50	24	12.61	12.80	12.83		
20	16QAM	50	50	12.68	12.93	12.96		
20	16QAM	100	0	12.57	12.83	12.81		
20	64QAM	1	0	12.55	12.65	12.69	13	2
20	64QAM	1	49	12.66	12.85	12.87		
20	64QAM	1	99	12.79	12.79	12.97		
20	64QAM	50	0	11.46	11.75	11.77	12	3
20	64QAM	50	24	11.62	11.80	11.88		
20	64QAM	50	50	11.71	11.94	11.99		
20	64QAM	100	0	11.61	11.85	11.84		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	14.21	14.26	14.62	15	0
15	QPSK	1	37	14.18	14.43	14.78		
15	QPSK	1	74	14.38	14.50	14.77		
15	QPSK	36	0	13.34	13.58	13.86	14	1
15	QPSK	36	20	13.40	13.68	13.69		
15	QPSK	36	39	13.52	13.75	13.77		
15	QPSK	75	0	13.45	13.65	13.63		
15	16QAM	1	0	13.48	13.61	13.69	14	1
15	16QAM	1	37	13.56	13.71	13.83		
15	16QAM	1	74	13.73	13.73	13.81		
15	16QAM	36	0	12.33	12.58	12.55	13	2
15	16QAM	36	20	12.49	12.62	12.69		
15	16QAM	36	39	12.53	12.81	12.83		
15	16QAM	75	0	12.42	12.63	12.68		
15	64QAM	1	0	12.45	12.53	12.59	13	2
15	64QAM	1	37	12.52	12.68	12.71		
15	64QAM	1	74	12.65	12.59	12.82		
15	64QAM	36	0	11.35	11.64	11.61	12	3
15	64QAM	36	20	11.51	11.63	11.72		
15	64QAM	36	39	11.57	11.78	11.82		
15	64QAM	75	0	11.50	11.69	11.65		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	14.25	14.28	14.55	15	0
10	QPSK	1	25	14.19	14.45	14.78		
10	QPSK	1	49	14.41	14.54	14.85		
10	QPSK	25	0	13.31	13.56	13.80	14	1
10	QPSK	25	12	13.46	13.63	13.63		

10	QPSK	25	25	13.51	13.73	13.84		
10	QPSK	50	0	13.48	13.73	13.64		
10	16QAM	1	0	13.52	13.62	13.77	14	1
10	16QAM	1	25	13.59	13.79	13.84		
10	16QAM	1	49	13.69	13.72	13.81		
10	16QAM	25	0	12.32	12.56	12.60	13	2
10	16QAM	25	12	12.48	12.61	12.69		
10	16QAM	25	25	12.56	12.82	12.77		
10	16QAM	50	0	12.46	12.67	12.63		
10	64QAM	1	0	12.43	12.53	12.54	13	2
10	64QAM	1	25	12.53	12.75	12.74		
10	64QAM	1	49	12.67	12.69	12.80		
10	64QAM	25	0	11.31	11.58	11.63	12	3
10	64QAM	25	12	11.45	11.62	11.68		
10	64QAM	25	25	11.53	11.80	11.86		
10	64QAM	50	0	11.49	11.70	11.65		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	14.21	14.26	14.54	15	0
5	QPSK	1	12	14.19	14.38	14.80		
5	QPSK	1	24	14.33	14.56	14.85		
5	QPSK	12	0	13.33	13.60	13.86	14	1
5	QPSK	12	7	13.47	13.67	13.63		
5	QPSK	12	13	13.51	13.80	13.79		
5	QPSK	25	0	13.46	13.64	13.67		
5	16QAM	1	0	13.51	13.66	13.73	14	1
5	16QAM	1	12	13.50	13.81	13.88		
5	16QAM	1	24	13.68	13.66	13.86		
5	16QAM	12	0	12.25	12.64	12.59	13	2
5	16QAM	12	7	12.46	12.67	12.69		
5	16QAM	12	13	12.58	12.74	12.78		
5	16QAM	25	0	12.45	12.63	12.70		
5	64QAM	1	0	12.41	12.49	12.51	13	2
5	64QAM	1	12	12.53	12.66	12.68		
5	64QAM	1	24	12.63	12.60	12.79		
5	64QAM	12	0	11.34	11.60	11.60	12	3
5	64QAM	12	7	11.45	11.62	11.74		
5	64QAM	12	13	11.51	11.82	11.86		
5	64QAM	25	0	11.46	11.68	11.74		

<LTE Band 7 MIMO2 >

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	8.49	8.63	8.85	9	0
20	QPSK	1	49	8.47	8.56	8.86		
20	QPSK	1	99	8.46	8.53	8.82		
20	QPSK	50	0	8.47	8.56	8.83	9	0
20	QPSK	50	24	8.48	8.59	8.87		
20	QPSK	50	50	8.44	8.56	8.85		
20	QPSK	100	0	8.51	8.57	8.86		
20	16QAM	1	0	8.46	8.61	8.85	9	0
20	16QAM	1	49	8.42	8.59	8.86		
20	16QAM	1	99	8.46	8.56	8.81		
20	16QAM	50	0	8.43	8.56	8.83	9	0
20	16QAM	50	24	8.41	8.58	8.86		
20	16QAM	50	50	8.45	8.55	8.84		
20	16QAM	100	0	8.49	8.59	8.84		
20	64QAM	1	0	8.44	8.59	8.86	9	0
20	64QAM	1	49	8.41	8.60	8.87		
20	64QAM	1	99	8.42	8.57	8.86		
20	64QAM	50	0	8.47	8.56	8.85	9	0
20	64QAM	50	24	8.43	8.59	8.87		
20	64QAM	50	50	8.46	8.60	8.85		
20	64QAM	100	0	8.46	8.57	8.83		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	8.54	8.54	8.86	9	0
15	QPSK	1	37	8.42	8.46	8.83		
15	QPSK	1	74	8.45	8.58	8.90		
15	QPSK	36	0	8.56	8.49	8.86	9	0
15	QPSK	36	20	8.57	8.52	8.77		
15	QPSK	36	39	8.37	8.53	8.80		
15	QPSK	75	0	8.50	8.58	8.95		
15	16QAM	1	0	8.44	8.55	8.77	9	0
15	16QAM	1	37	8.42	8.50	8.94		
15	16QAM	1	74	8.54	8.56	8.90		
15	16QAM	36	0	8.37	8.47	8.75	9	0
15	16QAM	36	20	8.41	8.55	8.85		
15	16QAM	36	39	8.36	8.58	8.89		
15	16QAM	75	0	8.48	8.55	8.79		
15	64QAM	1	0	8.34	8.59	8.83	9	0
15	64QAM	1	37	8.39	8.57	8.82		
15	64QAM	1	74	8.36	8.58	8.95		
15	64QAM	36	0	8.39	8.58	8.86	9	0
15	64QAM	36	20	8.46	8.49	8.87		
15	64QAM	36	39	8.40	8.55	8.86		
15	64QAM	75	0	8.52	8.57	8.78		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	8.51	8.60	8.89	9	0
10	QPSK	1	25	8.52	8.50	8.92		
10	QPSK	1	49	8.53	8.44	8.86		
10	QPSK	25	0	8.38	8.57	8.93	9	0
10	QPSK	25	12	8.49	8.56	8.83		

10	QPSK	25	25	8.38	8.51	8.76		
10	QPSK	50	0	8.47	8.56	8.88		
10	16QAM	1	0	8.52	8.58	8.94	9	0
10	16QAM	1	25	8.32	8.57	8.83		
10	16QAM	1	49	8.36	8.51	8.79		
10	16QAM	25	0	8.46	8.47	8.84	9	0
10	16QAM	25	12	8.45	8.59	8.91		
10	16QAM	25	25	8.35	8.56	8.79		
10	16QAM	50	0	8.52	8.57	8.78		
10	64QAM	1	0	8.39	8.57	8.78	9	0
10	64QAM	1	25	8.51	8.57	8.84		
10	64QAM	1	49	8.41	8.48	8.91		
10	64QAM	25	0	8.51	8.55	8.84	9	0
10	64QAM	25	12	8.52	8.53	8.78		
10	64QAM	25	25	8.52	8.58	8.89		
10	64QAM	50	0	8.56	8.58	8.92		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	8.55	8.58	8.83	9	0
5	QPSK	1	12	8.44	8.58	8.88		
5	QPSK	1	24	8.48	8.49	8.92		
5	QPSK	12	0	8.48	8.55	8.93	9	0
5	QPSK	12	7	8.51	8.56	8.89		
5	QPSK	12	13	8.41	8.51	8.88		
5	QPSK	25	0	8.47	8.55	8.83		
5	16QAM	1	0	8.51	8.52	8.93	9	0
5	16QAM	1	12	8.36	8.54	8.79		
5	16QAM	1	24	8.44	8.56	8.85		
5	16QAM	12	0	8.45	8.61	8.82	9	0
5	16QAM	12	7	8.31	8.59	8.86		
5	16QAM	12	13	8.39	8.56	8.80		
5	16QAM	25	0	8.54	8.52	8.91		
5	64QAM	1	0	8.46	8.57	8.89	9	0
5	64QAM	1	12	8.51	8.60	8.95		
5	64QAM	1	24	8.34	8.59	8.82		
5	64QAM	12	0	8.39	8.57	8.85	9	0
5	64QAM	12	7	8.34	8.51	8.94		
5	64QAM	12	13	8.47	8.55	8.91		
5	64QAM	25	0	8.54	8.60	8.79		

<LTE Band 12 Main >

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	17.78	17.58	17.61	18.5	0
10	QPSK	1	25	17.77	17.60	17.57		
10	QPSK	1	49	17.79	17.61	17.60		
10	QPSK	25	0	16.92	16.76	16.72	17.5	1
10	QPSK	25	12	16.96	16.73	16.71		
10	QPSK	25	25	16.93	16.56	16.79		
10	QPSK	50	0	16.98	16.75	16.69		
10	16QAM	1	0	17.14	17.01	16.84	17.5	1
10	16QAM	1	25	16.98	16.98	16.96		
10	16QAM	1	49	17.14	17.01	16.89		
10	16QAM	25	0	15.87	15.78	15.72	16.5	2
10	16QAM	25	12	15.90	15.76	15.72		
10	16QAM	25	25	15.85	15.78	15.69		
10	16QAM	50	0	15.87	15.74	15.68		
10	64QAM	1	0	15.92	15.83	15.87	16.5	2
10	64QAM	1	25	15.94	15.93	15.91		
10	64QAM	1	49	15.91	15.93	15.86		
10	64QAM	25	0	14.78	14.78	14.70	15.5	3
10	64QAM	25	12	14.87	14.78	14.74		
10	64QAM	25	25	14.84	14.84	14.78		
10	64QAM	50	0	14.85	14.77	14.72		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	17.70	17.40	17.50	18.5	0
5	QPSK	1	12	17.65	17.49	17.40		
5	QPSK	1	24	17.60	17.43	17.47		
5	QPSK	12	0	16.76	16.59	16.52	17.5	1
5	QPSK	12	7	16.78	16.53	16.56		
5	QPSK	12	13	16.83	16.45	16.66		
5	QPSK	25	0	16.79	16.61	16.55		
5	16QAM	1	0	17.00	16.90	16.74	17.5	1
5	16QAM	1	12	16.81	16.87	16.85		
5	16QAM	1	24	16.96	16.89	16.79		
5	16QAM	12	0	15.68	15.63	15.58	16.5	2
5	16QAM	12	7	15.70	15.62	15.52		
5	16QAM	12	13	15.68	15.67	15.49		
5	16QAM	25	0	15.76	15.61	15.52		
5	64QAM	1	0	15.78	15.67	15.75	16.5	2
5	64QAM	1	12	15.82	15.78	15.76		
5	64QAM	1	24	15.77	15.83	15.72		
5	64QAM	12	0	14.60	14.68	14.59	15.5	3
5	64QAM	12	7	14.72	14.64	14.54		
5	64QAM	12	13	14.72	14.64	14.67		
5	64QAM	25	0	14.71	14.57	14.55		
Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	17.78	17.47	17.45	18.5	0
3	QPSK	1	8	17.65	17.45	17.42		
3	QPSK	1	14	17.59	17.46	17.42		
3	QPSK	8	0	16.80	16.65	16.52	17.5	1
3	QPSK	8	4	16.81	16.60	16.53		

3	QPSK	8	7	16.83	16.42	16.68		
3	QPSK	15	0	16.81	16.62	16.50		
3	16QAM	1	0	16.94	16.83	16.73	17.5	1
3	16QAM	1	8	16.81	16.81	16.85		
3	16QAM	1	14	16.97	16.90	16.78		
3	16QAM	8	0	15.68	15.68	15.62	16.5	2
3	16QAM	8	4	15.80	15.65	15.58		
3	16QAM	8	7	15.66	15.63	15.54		
3	16QAM	15	0	15.74	15.63	15.48		
3	64QAM	1	0	15.77	15.65	15.72	16.5	2
3	64QAM	1	8	15.79	15.74	15.77		
3	64QAM	1	14	15.79	15.80	15.73		
3	64QAM	8	0	14.68	14.66	14.51	15.5	3
3	64QAM	8	4	14.70	14.62	14.62		
3	64QAM	8	7	14.74	14.69	14.67		
3	64QAM	15	0	14.69	14.62	14.61		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	17.64	17.53	17.49	18.5	0
1.4	QPSK	1	3	17.66	17.62	17.54		
1.4	QPSK	1	5	17.58	17.54	17.45		
1.4	QPSK	3	0	17.63	17.53	17.49		
1.4	QPSK	3	1	17.64	17.58	17.53		
1.4	QPSK	3	3	17.62	17.58	17.49		
1.4	QPSK	6	0	16.72	16.62	16.57	17.5	1
1.4	16QAM	1	0	16.96	16.86	16.82	17.5	1
1.4	16QAM	1	3	17.02	16.96	16.88		
1.4	16QAM	1	5	16.90	16.88	16.79		
1.4	16QAM	3	0	16.74	16.66	16.61		
1.4	16QAM	3	1	16.76	16.67	16.63		
1.4	16QAM	3	3	16.69	16.66	16.56		
1.4	16QAM	6	0	15.82	15.70	15.69	16.5	2
1.4	64QAM	1	0	15.87	15.78	15.71	16.5	2
1.4	64QAM	1	3	15.88	15.86	15.74		
1.4	64QAM	1	5	15.79	15.77	15.65		
1.4	64QAM	3	0	15.85	15.77	15.70		
1.4	64QAM	3	1	15.88	15.76	15.74		
1.4	64QAM	3	3	15.81	15.78	15.68		
1.4	64QAM	6	0	14.73	14.65	14.58	15.5	3

<LTE Band 13 Main >

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		18.50		19.5	0
10	QPSK	1	25		18.51			
10	QPSK	1	49		18.26			
10	QPSK	25	0		17.59		18.5	1
10	QPSK	25	12		17.62			
10	QPSK	25	25		17.56			
10	QPSK	50	0		17.48			
10	16QAM	1	0		17.77		18.5	1
10	16QAM	1	25		17.78			
10	16QAM	1	49		17.75			
10	16QAM	25	0		16.70		17.5	2
10	16QAM	25	12		16.66			
10	16QAM	25	25		16.61			
10	16QAM	50	0		16.65			
10	64QAM	1	0		16.85		17.5	2
10	64QAM	1	25		16.73			
10	64QAM	1	49		16.67			
10	64QAM	25	0		15.66		16.5	3
10	64QAM	25	12		15.67			
10	64QAM	25	25		15.61			
10	64QAM	50	0		15.63			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	18.49	18.37	18.27	19.5	0
5	QPSK	1	12	18.41	18.30	18.27		
5	QPSK	1	24	18.31	18.28	18.28		
5	QPSK	12	0	17.55	17.42	17.34	18.5	1
5	QPSK	12	7	17.47	17.40	17.39		
5	QPSK	12	13	17.41	17.37	17.39		
5	QPSK	25	0	17.44	17.41	17.37		
5	16QAM	1	0	17.74	17.66	17.54	18.5	1
5	16QAM	1	12	17.53	17.53	17.56		
5	16QAM	1	24	17.58	17.60	17.54		
5	16QAM	12	0	16.64	16.46	16.37	17.5	2
5	16QAM	12	7	16.47	16.41	16.42		
5	16QAM	12	13	16.42	16.40	16.41		
5	16QAM	25	0	16.53	16.42	16.41		
5	64QAM	1	0	16.69	16.59	16.52	17.5	2
5	64QAM	1	12	16.59	16.47	16.50		
5	64QAM	1	24	16.47	16.51	16.53		
5	64QAM	12	0	15.66	15.52	15.42	16.5	3
5	64QAM	12	7	15.50	15.46	15.45		
5	64QAM	12	13	15.47	15.48	15.44		
5	64QAM	25	0	15.49	15.44	15.40		

<LTE Band 14 Main >

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		18.48		19.5	0
10	QPSK	1	25		18.43			
10	QPSK	1	49		18.38			
10	QPSK	25	0		17.53		18.5	1
10	QPSK	25	12		17.52			
10	QPSK	25	25		17.56			
10	QPSK	50	0		17.51			
10	16QAM	1	0		17.87		18.5	1
10	16QAM	1	25		17.78			
10	16QAM	1	49		17.77			
10	16QAM	25	0		16.57		17.5	2
10	16QAM	25	12		16.56			
10	16QAM	25	25		16.59			
10	16QAM	50	0		16.53			
10	64QAM	1	0		16.78		17.5	2
10	64QAM	1	25		16.81			
10	64QAM	1	49		16.65			
10	64QAM	25	0		15.55		16.5	3
10	64QAM	25	12		15.58			
10	64QAM	25	25		15.60			
10	64QAM	50	0		15.55			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	18.34	18.21	18.28	19.5	0
5	QPSK	1	12	18.33	18.37	18.31		
5	QPSK	1	24	18.28	18.29	18.20		
5	QPSK	12	0	17.38	17.34	17.42	18.5	1
5	QPSK	12	7	17.48	17.37	17.30		
5	QPSK	12	13	17.38	17.43	17.35		
5	QPSK	25	0	17.44	17.37	17.34		
5	16QAM	1	0	17.55	17.56	17.53	18.5	1
5	16QAM	1	12	17.60	17.65	17.62		
5	16QAM	1	24	17.59	17.59	17.52		
5	16QAM	12	0	16.42	16.42	16.36	17.5	2
5	16QAM	12	7	16.49	16.37	16.41		
5	16QAM	12	13	16.39	16.38	16.34		
5	16QAM	25	0	16.41	16.34	16.32		
5	64QAM	1	0	16.48	16.50	16.49	17.5	2
5	64QAM	1	12	16.43	16.58	16.56		
5	64QAM	1	24	16.45	16.54	16.57		
5	64QAM	12	0	15.53	15.44	15.45	16.5	3
5	64QAM	12	7	15.47	15.47	15.40		
5	64QAM	12	13	15.47	15.51	15.42		
5	64QAM	25	0	15.41	15.34	15.31		

<LTE Band 17 Main >

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	17.60	17.59	17.54	18.5	0
10	QPSK	1	25	17.57	17.57	17.53		
10	QPSK	1	49	17.58	17.58	17.56		
10	QPSK	25	0	16.63	16.60	16.60	17.5	1
10	QPSK	25	12	16.74	16.66	16.61		
10	QPSK	25	25	16.74	16.75	16.74		
10	QPSK	50	0	16.73	16.63	16.66		
10	16QAM	1	0	16.97	16.93	16.92	17.5	1
10	16QAM	1	25	16.95	16.95	16.95		
10	16QAM	1	49	16.96	16.96	16.91		
10	16QAM	25	0	15.62	15.63	15.59	16.5	2
10	16QAM	25	12	15.76	15.68	15.68		
10	16QAM	25	25	15.75	15.76	15.75		
10	16QAM	50	0	15.75	15.68	15.61		
10	64QAM	1	0	15.79	15.80	15.79	16.5	2
10	64QAM	1	25	15.89	15.86	15.84		
10	64QAM	1	49	15.85	15.85	15.85		
10	64QAM	25	0	14.67	14.66	14.69	15.5	3
10	64QAM	25	12	14.79	14.72	14.71		
10	64QAM	25	25	14.80	14.78	14.78		
10	64QAM	50	0	14.76	14.68	14.65		
Channel				23755	23790	23825	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	17.57	17.46	17.44	18.5	0
5	QPSK	1	12	17.46	17.41	17.40		
5	QPSK	1	24	17.46	17.40	17.44		
5	QPSK	12	0	16.49	16.46	16.47	17.5	1
5	QPSK	12	7	16.59	16.48	16.43		
5	QPSK	12	13	16.59	16.60	16.60		
5	QPSK	25	0	16.57	16.51	16.56		
5	16QAM	1	0	16.77	16.77	16.80	17.5	1
5	16QAM	1	12	16.85	16.81	16.84		
5	16QAM	1	24	16.78	16.83	16.79		
5	16QAM	12	0	15.44	15.46	15.45	16.5	2
5	16QAM	12	7	15.63	15.54	15.48		
5	16QAM	12	13	15.56	15.61	15.56		
5	16QAM	25	0	15.64	15.53	15.42		
5	64QAM	1	0	15.62	15.64	15.65	16.5	2
5	64QAM	1	12	15.74	15.72	15.68		
5	64QAM	1	24	15.71	15.66	15.74		
5	64QAM	12	0	14.51	14.55	14.56	15.5	3
5	64QAM	12	7	14.68	14.60	14.60		
5	64QAM	12	13	14.62	14.67	14.68		
5	64QAM	25	0	14.57	14.57	14.50		

<LTE Band 25 Main >

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	16.18	16.15	16.28	17	0
20	QPSK	1	49	16.08	16.14	16.25		
20	QPSK	1	99	16.08	16.14	16.24		
20	QPSK	50	0	15.22	15.24	15.35	16	1
20	QPSK	50	24	15.23	15.34	15.41		
20	QPSK	50	50	15.28	15.35	15.43		
20	QPSK	100	0	15.27	15.22	15.38		
20	16QAM	1	0	15.39	15.39	15.49	16	1
20	16QAM	1	49	15.35	15.43	15.42		
20	16QAM	1	99	15.34	15.44	15.43		
20	16QAM	50	0	14.22	14.27	14.36	15	2
20	16QAM	50	24	14.27	14.29	14.39		
20	16QAM	50	50	14.25	14.26	14.42		
20	16QAM	100	0	14.23	14.27	14.39		
20	64QAM	1	0	14.40	14.32	14.48	15	2
20	64QAM	1	49	14.33	14.40	14.48		
20	64QAM	1	99	14.29	14.43	14.47		
20	64QAM	50	0	13.21	13.28	13.36	14	3
20	64QAM	50	24	13.28	13.35	13.46		
20	64QAM	50	50	13.24	13.31	13.45		
20	64QAM	100	0	13.21	13.29	13.41		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	16.18	16.20	16.25	17	0
15	QPSK	1	37	16.06	16.13	16.22		
15	QPSK	1	74	16.04	16.12	16.23		
15	QPSK	36	0	15.11	15.14	15.25	16	1
15	QPSK	36	20	15.24	15.27	15.34		
15	QPSK	36	39	15.27	15.26	15.43		
15	QPSK	75	0	15.26	15.28	15.33		
15	16QAM	1	0	15.44	15.37	15.46	16	1
15	16QAM	1	37	15.29	15.29	15.43		
15	16QAM	1	74	15.28	15.34	15.47		
15	16QAM	36	0	14.07	14.13	14.24	15	2
15	16QAM	36	20	14.23	14.24	14.29		
15	16QAM	36	39	14.16	14.19	14.33		
15	16QAM	75	0	14.18	14.28	14.31		
15	64QAM	1	0	14.36	14.40	14.48	15	2
15	64QAM	1	37	14.32	14.37	14.44		
15	64QAM	1	74	14.34	14.42	14.42		
15	64QAM	36	0	13.07	13.16	13.28	14	3
15	64QAM	36	20	13.27	13.25	13.33		
15	64QAM	36	39	13.27	13.22	13.42		
15	64QAM	75	0	13.24	13.22	13.37		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	15.90	15.89	16.12	17	0
10	QPSK	1	25	15.81	15.93	16.14		
10	QPSK	1	49	15.83	15.97	16.12		
10	QPSK	25	0	15.01	14.96	15.12	16	1
10	QPSK	25	12	15.02	15.05	15.14		

10	QPSK	25	25	15.01	15.05	15.25		
10	QPSK	50	0	15.02	15.06	15.19		
10	16QAM	1	0	15.27	15.27	15.45	16	1
10	16QAM	1	25	15.24	15.25	15.48		
10	16QAM	1	49	15.20	15.26	15.47		
10	16QAM	25	0	14.01	13.94	14.18	15	2
10	16QAM	25	12	14.04	14.05	14.18		
10	16QAM	25	25	13.96	13.98	14.21		
10	16QAM	50	0	14.00	14.07	14.07		
10	64QAM	1	0	14.22	14.21	14.32	15	2
10	64QAM	1	25	14.08	14.15	14.43		
10	64QAM	1	49	14.08	14.20	14.41		
10	64QAM	25	0	12.99	13.01	13.12	14	3
10	64QAM	25	12	13.02	13.08	13.20		
10	64QAM	25	25	13.01	13.04	13.24		
10	64QAM	50	0	13.06	13.11	13.21		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	15.94	15.87	16.16	17	0
5	QPSK	1	12	15.94	15.98	16.12		
5	QPSK	1	24	15.93	16.06	15.94		
5	QPSK	12	0	15.06	15.08	15.23	16	1
5	QPSK	12	7	15.03	15.10	15.27		
5	QPSK	12	13	15.04	15.07	15.21		
5	QPSK	25	0	15.04	15.12	15.31		
5	16QAM	1	0	15.43	15.36	15.46	16	1
5	16QAM	1	12	15.41	15.46	15.43		
5	16QAM	1	24	15.40	15.42	15.47		
5	16QAM	12	0	14.19	14.19	14.29	15	2
5	16QAM	12	7	14.14	14.21	14.26		
5	16QAM	12	13	14.06	14.16	14.25		
5	16QAM	25	0	14.09	14.12	14.25		
5	64QAM	1	0	14.43	14.45	14.42	15	2
5	64QAM	1	12	14.46	14.46	14.45		
5	64QAM	1	24	14.43	14.49	14.42		
5	64QAM	12	0	13.12	13.16	13.30	14	3
5	64QAM	12	7	13.07	13.16	13.27		
5	64QAM	12	13	13.05	13.12	13.27		
5	64QAM	25	0	13.06	13.14	13.26		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	15.92	15.87	15.94	17	0
3	QPSK	1	8	16.00	16.07	15.75		
3	QPSK	1	14	15.99	16.08	15.70		
3	QPSK	8	0	15.01	14.94	15.18	16	1
3	QPSK	8	4	14.99	15.09	15.21		
3	QPSK	8	7	15.02	14.96	15.18		
3	QPSK	15	0	14.99	15.05	15.22		
3	16QAM	1	0	15.18	15.21	15.43	16	1
3	16QAM	1	8	15.32	15.37	15.45		
3	16QAM	1	14	15.27	15.35	15.43		
3	16QAM	8	0	14.06	14.16	14.36	15	2
3	16QAM	8	4	14.04	14.20	14.34		
3	16QAM	8	7	14.06	14.21	14.36		
3	16QAM	15	0	14.06	14.10	14.21		
3	64QAM	1	0	14.15	14.45	14.41	15	2

3	64QAM	1	8	14.25	14.36	14.44		
3	64QAM	1	14	14.19	14.32	14.41		
3	64QAM	8	0	13.07	13.07	13.25	14	3
3	64QAM	8	4	13.07	13.10	13.28		
3	64QAM	8	7	13.01	13.06	13.26		
3	64QAM	15	0	13.04	13.11	13.24		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	15.83	15.80	15.99	17	0
1.4	QPSK	1	3	15.96	15.95	16.10		
1.4	QPSK	1	5	15.89	15.94	16.01		
1.4	QPSK	3	0	15.89	15.92	16.02		
1.4	QPSK	3	1	15.88	15.89	15.94		
1.4	QPSK	3	3	15.88	15.95	16.07		
1.4	QPSK	6	0	14.93	14.97	15.15	16	1
1.4	16QAM	1	0	15.12	15.11	15.31	16	1
1.4	16QAM	1	3	15.25	15.37	15.49		
1.4	16QAM	1	5	15.20	15.26	15.46		
1.4	16QAM	3	0	14.95	15.13	15.20		
1.4	16QAM	3	1	15.02	15.17	15.27		
1.4	16QAM	3	3	14.99	15.22	15.28		
1.4	16QAM	6	0	14.00	13.95	14.06	15	2
1.4	64QAM	1	0	14.09	14.34	14.42	15	2
1.4	64QAM	1	3	14.16	14.32	14.44		
1.4	64QAM	1	5	14.07	14.36	14.40		
1.4	64QAM	3	0	14.03	14.17	14.28		
1.4	64QAM	3	1	14.10	14.20	14.35		
1.4	64QAM	3	3	14.09	14.14	14.34		
1.4	64QAM	6	0	12.92	13.01	13.16	14	3

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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	18.10	18.01	17.98	19	0
15	QPSK	1	37	17.96	18.00	17.80		
15	QPSK	1	74	18.06	17.96	17.92		
15	QPSK	36	0	17.24	17.22	17.15	18	1
15	QPSK	36	20	17.23	17.16	17.10		
15	QPSK	36	39	17.06	17.19	17.12		
15	QPSK	75	0	16.96	16.99	16.95		
15	16QAM	1	0	16.95	17.33	17.32	18	1
15	16QAM	1	37	17.40	17.38	17.39		
15	16QAM	1	74	17.18	17.41	17.16		
15	16QAM	36	0	16.22	16.23	16.20	17	2
15	16QAM	36	20	16.23	16.15	16.12		
15	16QAM	36	39	16.19	16.18	16.12		
15	16QAM	75	0	16.26	16.18	16.16		
15	64QAM	1	0	16.38	16.26	16.24	17	2
15	64QAM	1	37	16.32	16.32	16.25		
15	64QAM	1	74	16.27	16.29	16.13		
15	64QAM	36	0	15.28	15.25	15.23	16	3
15	64QAM	36	20	15.28	15.21	15.15		
15	64QAM	36	39	15.23	15.23	15.19		
15	64QAM	75	0	15.27	15.19	15.17		
Channel				26740	26865	26990	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	17.91	17.83	17.80	19	0
10	QPSK	1	25	17.84	17.89	17.70		
10	QPSK	1	49	17.90	17.83	17.74		
10	QPSK	25	0	17.10	17.03	16.99	18	1
10	QPSK	25	12	17.12	16.96	16.99		
10	QPSK	25	25	16.91	17.04	16.98		
10	QPSK	50	0	16.82	16.86	16.75		
10	16QAM	1	0	16.85	17.18	17.21	18	1
10	16QAM	1	25	17.28	17.23	17.23		
10	16QAM	1	49	16.99	17.29	17.00		
10	16QAM	25	0	16.08	16.08	16.03	17	2
10	16QAM	25	12	16.10	15.98	15.99		
10	16QAM	25	25	16.04	15.98	15.98		
10	16QAM	50	0	16.14	16.05	15.97		
10	64QAM	1	0	16.28	16.12	16.08	17	2
10	64QAM	1	25	16.22	16.18	16.07		
10	64QAM	1	49	16.17	16.14	15.96		
10	64QAM	25	0	15.13	15.15	15.03	16	3
10	64QAM	25	12	15.16	15.06	15.02		
10	64QAM	25	25	15.13	15.13	15.08		
10	64QAM	50	0	15.08	15.02	15.02		
Channel				26715	26865	27015	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	17.97	17.83	17.86	19	0
5	QPSK	1	12	17.79	17.90	17.60		
5	QPSK	1	24	17.95	17.76	17.72		
5	QPSK	12	0	17.07	17.02	17.00	18	1
5	QPSK	12	7	17.05	17.05	16.96		

5	QPSK	12	13	16.95	17.07	16.93		
5	QPSK	25	0	16.82	16.85	16.84		
5	16QAM	1	0	16.77	17.23	17.21	18	1
5	16QAM	1	12	17.29	17.20	17.22		
5	16QAM	1	24	17.06	17.25	17.05		
5	16QAM	12	0	16.11	16.07	16.06	17	2
5	16QAM	12	7	16.04	16.01	15.94		
5	16QAM	12	13	16.09	15.99	15.93		
5	16QAM	25	0	16.11	15.98	16.03		
5	64QAM	1	0	16.22	16.06	16.13	17	2
5	64QAM	1	12	16.20	16.15	16.05		
5	64QAM	1	24	16.13	16.15	15.98		
5	64QAM	12	0	15.13	15.09	15.03	16	3
5	64QAM	12	7	15.09	15.04	15.03		
5	64QAM	12	13	15.06	15.08	15.03		
5	64QAM	25	0	15.09	15.09	15.04		
Channel				26705	26865	27025	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	17.90	17.90	17.84	19	0
3	QPSK	1	8	17.85	17.83	17.62		
3	QPSK	1	14	17.86	17.76	17.79		
3	QPSK	8	0	17.03	17.03	17.05	18	1
3	QPSK	8	4	17.07	16.98	16.90		
3	QPSK	8	7	16.91	17.06	17.02		
3	QPSK	15	0	16.79	16.83	16.81		
3	16QAM	1	0	16.81	17.17	17.20	18	1
3	16QAM	1	8	17.24	17.21	17.25		
3	16QAM	1	14	17.06	17.27	16.99		
3	16QAM	8	0	16.10	16.09	16.00	17	2
3	16QAM	8	4	16.13	16.05	15.94		
3	16QAM	8	7	16.05	16.01	15.96		
3	16QAM	15	0	16.13	15.98	16.06		
3	64QAM	1	0	16.22	16.06	16.07	17	2
3	64QAM	1	8	16.22	16.14	16.10		
3	64QAM	1	14	16.14	16.19	15.94		
3	64QAM	8	0	15.14	15.13	15.10	16	3
3	64QAM	8	4	15.15	15.08	15.01		
3	64QAM	8	7	15.13	15.07	15.04		
3	64QAM	15	0	15.09	15.09	15.06		
Channel				26697	26865	27033	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	17.97	17.86	17.08	19	0
1.4	QPSK	1	3	18.01	16.95	17.79		
1.4	QPSK	1	5	17.92	16.55	17.66		
1.4	QPSK	3	0	17.99	17.05	17.73		
1.4	QPSK	3	1	18.03	16.91	17.73		
1.4	QPSK	3	3	17.97	17.39	17.71		
1.4	QPSK	6	0	17.03	16.61	16.84	18	1
1.4	16QAM	1	0	17.31	17.14	17.04	18	1
1.4	16QAM	1	3	17.35	16.85	17.12		
1.4	16QAM	1	5	17.25	16.99	17.00		
1.4	16QAM	3	0	17.09	16.93	16.81		
1.4	16QAM	3	1	17.12	16.98	16.84		
1.4	16QAM	3	3	17.05	16.99	16.75		
1.4	16QAM	6	0	16.14	15.97	15.97	17	2
1.4	64QAM	1	0	16.24	16.10	15.98	17	2

1.4	64QAM	1	3	16.26	16.21	16.01		
1.4	64QAM	1	5	16.16	16.10	15.89		
1.4	64QAM	3	0	16.23	16.05	15.93		
1.4	64QAM	3	1	16.24	16.10	16.00		
1.4	64QAM	3	3	16.17	16.09	15.94		
1.4	64QAM	6	0	15.05	14.90	14.84	16	3

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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		13.23		14	0
10	QPSK	1	25		13.15			
10	QPSK	1	49		13.17			
10	QPSK	25	0		12.18		13	1
10	QPSK	25	12		12.21			
10	QPSK	25	25		12.33			
10	QPSK	50	0		12.23			
10	16QAM	1	0		12.54		13	1
10	16QAM	1	25		12.51			
10	16QAM	1	49		12.53			
10	16QAM	25	0		11.22		12	2
10	16QAM	25	12		11.24			
10	16QAM	25	25		11.33			
10	16QAM	50	0		11.24			
10	64QAM	1	0		11.43		12	2
10	64QAM	1	25		11.50			
10	64QAM	1	49		11.46			
10	64QAM	25	0		10.21		11	3
10	64QAM	25	12		10.27			
10	64QAM	25	25		10.34			
10	64QAM	50	0		10.27			
Channel				27685	27710	27735	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2307.5	2310	2312.5		
5	QPSK	1	0	13.06	13.12	13.13	14	0
5	QPSK	1	12	13.18	13.23	13.21		
5	QPSK	1	24	13.23	13.21	13.22		
5	QPSK	12	0	12.15	12.18	12.18	13	1
5	QPSK	12	7	12.30	12.26	12.24		
5	QPSK	12	13	12.28	12.32	12.29		
5	QPSK	25	0	12.21	12.21	12.18		
5	16QAM	1	0	12.39	12.43	12.45	13	1
5	16QAM	1	12	12.45	12.51	12.51		
5	16QAM	1	24	12.58	12.64	12.57		
5	16QAM	12	0	11.20	11.22	11.23	12	2
5	16QAM	12	7	11.32	11.23	11.28		
5	16QAM	12	13	11.32	11.33	11.34		
5	16QAM	25	0	11.24	11.25	11.27		
5	64QAM	1	0	11.44	11.47	11.50	12	2
5	64QAM	1	12	11.51	11.53	11.53		
5	64QAM	1	24	11.59	11.71	11.61		
5	64QAM	12	0	10.22	10.23	10.26	11	3
5	64QAM	12	7	10.35	10.29	10.34		
5	64QAM	12	13	10.35	10.34	10.33		
5	64QAM	25	0	10.27	10.28	10.22		

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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	15.86	15.83	15.79	17	0
20	QPSK	1	49	15.74	15.67	15.68		
20	QPSK	1	99	15.72	15.74	15.63		
20	QPSK	50	0	14.87	14.91	14.89	16	1
20	QPSK	50	24	14.95	14.95	14.90		
20	QPSK	50	50	14.86	14.85	14.88		
20	QPSK	100	0	14.89	14.88	14.84		
20	16QAM	1	0	14.92	14.96	14.92	16	1
20	16QAM	1	49	14.96	14.98	14.96		
20	16QAM	1	99	14.95	14.93	14.97		
20	16QAM	50	0	13.92	13.90	13.93	15	2
20	16QAM	50	24	13.92	13.90	13.84		
20	16QAM	50	50	13.88	13.85	13.86		
20	16QAM	100	0	13.91	13.90	13.86		
20	64QAM	1	0	13.93	13.98	13.95	15	2
20	64QAM	1	49	13.96	13.89	13.95		
20	64QAM	1	99	13.94	13.97	13.86		
20	64QAM	50	0	12.96	12.90	12.96	14	3
20	64QAM	50	24	12.96	12.92	12.87		
20	64QAM	50	50	12.88	12.85	12.88		
20	64QAM	100	0	12.94	12.89	12.89		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	15.85	15.82	15.76	17	0
15	QPSK	1	37	15.73	15.68	15.70		
15	QPSK	1	74	15.76	15.69	15.68		
15	QPSK	36	0	14.98	14.84	14.87	16	1
15	QPSK	36	20	14.88	14.84	14.86		
15	QPSK	36	39	14.89	14.82	14.83		
15	QPSK	75	0	14.91	14.86	14.90		
15	16QAM	1	0	14.86	14.88	14.83	16	1
15	16QAM	1	37	14.88	14.85	14.82		
15	16QAM	1	74	14.82	14.83	14.97		
15	16QAM	36	0	13.99	13.87	13.87	15	2
15	16QAM	36	20	13.90	13.87	13.89		
15	16QAM	36	39	13.87	13.83	13.85		
15	16QAM	75	0	13.93	13.91	13.92		
15	64QAM	1	0	13.97	13.95	13.98	15	2
15	64QAM	1	37	13.95	13.93	13.94		
15	64QAM	1	74	13.99	13.89	13.88		
15	64QAM	36	0	13.00	12.89	12.97	14	3
15	64QAM	36	20	12.94	12.86	12.93		
15	64QAM	36	39	12.90	12.82	12.90		
15	64QAM	75	0	12.95	12.88	12.94		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	15.64	15.57	15.64	17	0
10	QPSK	1	25	15.56	15.58	15.59		
10	QPSK	1	49	15.56	15.56	15.57		
10	QPSK	25	0	14.70	14.59	14.61	16	1
10	QPSK	25	12	14.70	14.69	14.66		

10	QPSK	25	25	14.67	14.66	14.72		
10	QPSK	50	0	14.77	14.71	14.70		
10	16QAM	1	0	14.93	14.97	14.96	16	1
10	16QAM	1	25	14.98	14.95	15.00		
10	16QAM	1	49	14.95	14.91	14.97		
10	16QAM	25	0	13.72	13.65	13.61	15	2
10	16QAM	25	12	13.75	13.73	13.66		
10	16QAM	25	25	13.69	13.68	13.73		
10	16QAM	50	0	13.73	13.69	13.64		
10	64QAM	1	0	13.95	13.88	13.86	15	2
10	64QAM	1	25	13.87	13.86	13.90		
10	64QAM	1	49	13.82	13.80	13.80		
10	64QAM	25	0	12.75	12.63	12.69	14	3
10	64QAM	25	12	12.78	12.75	12.70		
10	64QAM	25	25	12.70	12.67	12.73		
10	64QAM	50	0	12.73	12.74	12.68		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	15.62	15.53	15.62	17	0
5	QPSK	1	12	15.65	15.61	15.66		
5	QPSK	1	24	15.60	15.56	15.61		
5	QPSK	12	0	14.76	14.65	14.75	16	1
5	QPSK	12	7	14.79	14.74	14.74		
5	QPSK	12	13	14.73	14.68	14.73		
5	QPSK	25	0	14.74	14.68	14.73		
5	16QAM	1	0	15.00	14.88	14.98	16	1
5	16QAM	1	12	15.00	15.00	15.00		
5	16QAM	1	24	14.98	14.92	14.92		
5	16QAM	12	0	13.79	13.69	13.77	15	2
5	16QAM	12	7	13.82	13.77	13.78		
5	16QAM	12	13	13.76	13.72	13.74		
5	16QAM	25	0	13.74	13.69	13.76		
5	64QAM	1	0	13.98	13.85	13.95	15	2
5	64QAM	1	12	13.86	13.89	13.85		
5	64QAM	1	24	13.96	13.87	13.76		
5	64QAM	12	0	12.83	12.72	12.84	14	3
5	64QAM	12	7	12.84	12.79	12.83		
5	64QAM	12	13	12.78	12.72	12.79		
5	64QAM	25	0	12.78	12.69	12.73		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	15.68	15.59	15.63	17	0
3	QPSK	1	8	15.72	15.67	15.74		
3	QPSK	1	14	15.62	15.61	15.64		
3	QPSK	8	0	14.77	14.69	14.72	16	1
3	QPSK	8	4	14.76	14.70	14.77		
3	QPSK	8	7	14.73	14.67	14.73		
3	QPSK	15	0	14.71	14.67	14.72		
3	16QAM	1	0	14.98	14.93	14.94	16	1
3	16QAM	1	8	14.95	14.96	14.95		
3	16QAM	1	14	14.94	14.93	14.93		
3	16QAM	8	0	13.82	13.77	13.77	15	2
3	16QAM	8	4	13.82	13.80	13.84		
3	16QAM	8	7	13.79	13.76	13.78		
3	16QAM	15	0	13.81	13.73	13.75		
3	64QAM	1	0	13.93	13.95	13.89	15	2

3	64QAM	1	8	13.98	13.97	13.91		
3	64QAM	1	14	13.97	13.90	13.80		
3	64QAM	8	0	12.80	12.75	12.81	14	3
3	64QAM	8	4	12.85	12.77	12.85		
3	64QAM	8	7	12.80	12.74	12.79		
3	64QAM	15	0	12.79	12.71	12.72		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	15.56	15.55	15.55	17	0
1.4	QPSK	1	3	15.62	15.56	15.65		
1.4	QPSK	1	5	15.53	15.52	15.56		
1.4	QPSK	3	0	15.60	15.59	15.56		
1.4	QPSK	3	1	15.67	15.63	15.63		
1.4	QPSK	3	3	15.60	15.56	15.59		
1.4	QPSK	6	0	14.65	14.60	14.63	16	1
1.4	16QAM	1	0	14.87	14.88	14.90	16	1
1.4	16QAM	1	3	14.98	14.91	14.98		
1.4	16QAM	1	5	14.92	14.88	14.87		
1.4	16QAM	3	0	14.69	14.67	14.67		
1.4	16QAM	3	1	14.76	14.70	14.74		
1.4	16QAM	3	3	14.68	14.63	14.64		
1.4	16QAM	6	0	13.74	13.64	13.71	15	2
1.4	64QAM	1	0	13.95	13.80	13.78	15	2
1.4	64QAM	1	3	13.81	13.83	13.80		
1.4	64QAM	1	5	13.91	13.77	13.70		
1.4	64QAM	3	0	13.82	13.76	13.77		
1.4	64QAM	3	1	13.88	13.78	13.83		
1.4	64QAM	3	3	13.83	13.74	13.78		
1.4	64QAM	6	0	12.70	12.65	12.64	14	3

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	14.11	14.43	14.01	15	0
20	QPSK	1	49	14.06	14.36	14.05		
20	QPSK	1	99	14.07	14.33	14.02		
20	QPSK	50	0	13.99	14.39	14.09	15	0
20	QPSK	50	24	13.97	14.36	14.07		
20	QPSK	50	50	13.97	14.37	14.03		
20	QPSK	100	0	13.99	14.39	14.05		
20	16QAM	1	0	14.01	14.41	14.02	15	0
20	16QAM	1	49	13.96	14.38	13.99		
20	16QAM	1	99	13.97	14.35	13.96		
20	16QAM	50	0	13.94	14.41	14.01	15	0
20	16QAM	50	24	13.95	14.36	14.03		
20	16QAM	50	50	13.92	14.39	13.99		
20	16QAM	100	0	13.97	14.40	14.01		
20	64QAM	1	0	14.03	14.42	14.04	15	0
20	64QAM	1	49	13.99	14.40	14.02		
20	64QAM	1	99	13.95	14.36	14.02		
20	64QAM	50	0	13.96	14.42	13.99	15	0
20	64QAM	50	24	13.93	14.38	14.01		
20	64QAM	50	50	13.93	14.40	14.03		
20	64QAM	100	0	13.96	14.35	13.98		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	14.06	14.41	14.06	15	0
15	QPSK	1	37	14.14	14.38	14.04		
15	QPSK	1	74	14.01	14.25	14.12		
15	QPSK	36	0	13.99	14.37	14.06	15	0
15	QPSK	36	20	13.90	14.27	13.97		
15	QPSK	36	39	13.92	14.31	14.07		
15	QPSK	75	0	14.03	14.31	14.15		
15	16QAM	1	0	14.08	14.36	14.12	15	0
15	16QAM	1	37	13.96	14.36	13.98		
15	16QAM	1	74	14.00	14.36	13.99		
15	16QAM	36	0	13.86	14.34	13.92	15	0
15	16QAM	36	20	13.89	14.38	13.99		
15	16QAM	36	39	13.91	14.29	14.06		
15	16QAM	75	0	13.97	14.41	14.06		
15	64QAM	1	0	13.98	14.36	14.06	15	0
15	64QAM	1	37	14.04	14.36	14.10		
15	64QAM	1	74	13.85	14.39	14.12		
15	64QAM	36	0	13.94	14.41	13.98	15	0
15	64QAM	36	20	13.99	14.35	14.00		
15	64QAM	36	39	13.98	14.39	13.95		
15	64QAM	75	0	14.00	14.32	14.00		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	14.02	14.37	14.00	15	0
10	QPSK	1	25	14.04	14.35	13.95		
10	QPSK	1	49	14.09	14.27	14.02		
10	QPSK	25	0	13.99	14.38	14.10	15	0
10	QPSK	25	12	13.89	14.33	14.12		

10	QPSK	25	25	14.04	14.41	13.97		
10	QPSK	50	0	13.99	14.33	14.05		
10	16QAM	1	0	14.01	14.42	14.06	15	0
10	16QAM	1	25	14.02	14.31	13.98		
10	16QAM	1	49	13.93	14.28	13.97		
10	16QAM	25	0	13.87	14.38	14.03	15	0
10	16QAM	25	12	14.05	14.26	13.93		
10	16QAM	25	25	13.87	14.41	13.90		
10	16QAM	50	0	13.91	14.38	14.01		
10	64QAM	1	0	14.00	14.33	14.03	15	0
10	64QAM	1	25	14.01	14.38	14.06		
10	64QAM	1	49	13.85	14.35	14.10		
10	64QAM	25	0	13.91	14.41	14.05	15	0
10	64QAM	25	12	13.92	14.32	13.93		
10	64QAM	25	25	13.91	14.35	13.93		
10	64QAM	50	0	14.04	14.39	14.02		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	14.10	14.41	14.06	15	0
5	QPSK	1	12	13.96	14.38	13.95		
5	QPSK	1	24	14.17	14.35	14.11		
5	QPSK	12	0	14.03	14.32	14.12	15	0
5	QPSK	12	7	13.98	14.28	14.09		
5	QPSK	12	13	14.04	14.40	13.99		
5	QPSK	25	0	13.92	14.34	14.10		
5	16QAM	1	0	13.96	14.37	13.94	15	0
5	16QAM	1	12	13.96	14.29	14.00		
5	16QAM	1	24	13.92	14.35	13.96		
5	16QAM	12	0	13.94	14.38	14.07	15	0
5	16QAM	12	7	13.92	14.27	14.03		
5	16QAM	12	13	13.95	14.34	14.00		
5	16QAM	25	0	14.01	14.36	14.00		
5	64QAM	1	0	14.13	14.35	14.12	15	0
5	64QAM	1	12	14.03	14.32	13.94		
5	64QAM	1	24	13.89	14.30	14.03		
5	64QAM	12	0	13.97	14.33	13.96	15	0
5	64QAM	12	7	14.03	14.34	13.91		
5	64QAM	12	13	13.99	14.41	13.96		
5	64QAM	25	0	14.02	14.32	14.05		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	14.10	14.38	14.10	15	0
3	QPSK	1	8	14.06	14.33	14.01		
3	QPSK	1	14	14.03	14.37	14.07		
3	QPSK	8	0	14.09	14.40	14.04	15	0
3	QPSK	8	4	14.03	14.35	14.14		
3	QPSK	8	7	14.01	14.39	14.08		
3	QPSK	15	0	13.97	14.29	14.12		
3	16QAM	1	0	14.00	14.31	14.06	15	0
3	16QAM	1	8	13.92	14.35	13.97		
3	16QAM	1	14	13.90	14.29	13.90		
3	16QAM	8	0	14.00	14.31	14.11	15	0
3	16QAM	8	4	13.98	14.30	14.08		
3	16QAM	8	7	14.00	14.32	14.06		
3	16QAM	15	0	14.05	13.50	14.09		
3	64QAM	1	0	14.00	14.39	14.05	15	0

3	64QAM	1	8	13.92	14.40	14.03		
3	64QAM	1	14	13.88	14.36	14.12		
3	64QAM	8	0	13.93	14.35	13.97	15	0
3	64QAM	8	4	13.98	14.37	13.96		
3	64QAM	8	7	13.90	14.39	14.11		
3	64QAM	15	0	14.06	14.29	14.06		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	14.02	14.39	13.91	15	0
1.4	QPSK	1	3	14.09	14.37	14.15		
1.4	QPSK	1	5	14.08	14.35	14.07		
1.4	QPSK	3	0	13.89	14.36	14.05		
1.4	QPSK	3	1	13.92	14.30	14.06		
1.4	QPSK	3	3	14.03	14.32	13.99		
1.4	QPSK	6	0	13.96	14.28	14.03	15	0
1.4	16QAM	1	0	14.02	14.33	13.93	15	0
1.4	16QAM	1	3	13.92	14.35	13.96		
1.4	16QAM	1	5	14.03	14.41	14.00		
1.4	16QAM	3	0	14.03	14.37	13.97		
1.4	16QAM	3	1	13.94	14.28	13.98		
1.4	16QAM	3	3	13.98	14.36	14.00		
1.4	16QAM	6	0	14.06	14.38	14.06	15	0
1.4	64QAM	1	0	14.03	14.39	14.02	15	0
1.4	64QAM	1	3	14.07	14.35	14.00		
1.4	64QAM	1	5	13.99	14.29	13.92		
1.4	64QAM	3	0	14.02	14.37	13.91		
1.4	64QAM	3	1	13.86	14.31	14.00		
1.4	64QAM	3	3	13.93	14.33	14.02		
1.4	64QAM	6	0	13.91	14.35	13.88	15	0

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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	18.48	18.25	18.33	19	0
20	QPSK	1	49	18.48	18.39	18.41		
20	QPSK	1	99	18.66	18.46	18.47		
20	QPSK	50	0	17.54	17.44	17.49	18	1
20	QPSK	50	24	17.54	17.52	17.57		
20	QPSK	50	50	17.62	17.61	17.64		
20	QPSK	100	0	17.46	17.49	17.51		
20	16QAM	1	0	17.62	17.60	17.69	18	1
20	16QAM	1	49	17.59	17.76	17.74		
20	16QAM	1	99	17.79	17.83	17.85		
20	16QAM	50	0	16.36	16.47	16.51	17	2
20	16QAM	50	24	16.41	16.54	16.58		
20	16QAM	50	50	16.54	16.62	16.67		
20	16QAM	100	0	16.46	16.47	16.51		
20	64QAM	1	0	16.52	16.47	16.53	17	2
20	64QAM	1	49	16.40	16.54	16.60		
20	64QAM	1	99	16.64	16.70	16.74		
20	64QAM	50	0	15.38	15.49	15.51	16	3
20	64QAM	50	24	15.44	15.56	15.60		
20	64QAM	50	50	15.55	15.65	15.68		
20	64QAM	100	0	15.48	15.50	15.54		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	18.45	18.05	18.16	19	0
15	QPSK	1	37	18.31	18.21	18.25		
15	QPSK	1	74	18.54	18.29	18.28		
15	QPSK	36	0	17.35	17.31	17.34	18	1
15	QPSK	36	20	17.41	17.37	17.47		
15	QPSK	36	39	17.44	17.51	17.45		
15	QPSK	75	0	17.36	17.33	17.38		
15	16QAM	1	0	17.45	17.41	17.52	18	1
15	16QAM	1	37	17.48	17.65	17.61		
15	16QAM	1	74	17.62	17.66	17.67		
15	16QAM	36	0	16.24	16.30	16.31	17	2
15	16QAM	36	20	16.24	16.39	16.44		
15	16QAM	36	39	16.37	16.46	16.57		
15	16QAM	75	0	16.34	16.29	16.33		
15	64QAM	1	0	16.32	16.27	16.42	17	2
15	64QAM	1	37	16.23	16.39	16.45		
15	64QAM	1	74	16.52	16.54	16.62		
15	64QAM	36	0	15.25	15.31	15.31	16	3
15	64QAM	36	20	15.31	15.38	15.46		
15	64QAM	36	39	15.37	15.54	15.57		
15	64QAM	75	0	15.34	15.32	15.34		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	18.41	18.12	18.21	19	0
10	QPSK	1	25	18.34	18.21	18.23		
10	QPSK	1	49	18.54	18.27	18.36		
10	QPSK	25	0	17.37	17.28	17.30	18	1
10	QPSK	25	12	17.35	17.32	17.43		

10	QPSK	25	25	17.45	17.43	17.45		
10	QPSK	50	0	17.33	17.29	17.33		
10	16QAM	1	0	17.46	17.50	17.51	18	1
10	16QAM	1	25	17.44	17.58	17.58		
10	16QAM	1	49	17.60	17.70	17.68		
10	16QAM	25	0	16.21	16.37	16.38	17	2
10	16QAM	25	12	16.30	16.42	16.43		
10	16QAM	25	25	16.40	16.49	16.48		
10	16QAM	50	0	16.30	16.37	16.33		
10	64QAM	1	0	16.41	16.29	16.43	17	2
10	64QAM	1	25	16.29	16.39	16.43		
10	64QAM	1	49	16.49	16.54	16.56		
10	64QAM	25	0	15.26	15.38	15.40	16	3
10	64QAM	25	12	15.32	15.45	15.50		
10	64QAM	25	25	15.45	15.48	15.52		
10	64QAM	50	0	15.31	15.34	15.44		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	18.41	18.06	18.15	19	0
5	QPSK	1	12	18.34	18.22	18.21		
5	QPSK	1	24	18.54	18.32	18.33		
5	QPSK	12	0	17.37	17.32	17.33	18	1
5	QPSK	12	7	17.42	17.42	17.47		
5	QPSK	12	13	17.51	17.43	17.48		
5	QPSK	25	0	17.34	17.39	17.32		
5	16QAM	1	0	17.45	17.42	17.57	18	1
5	16QAM	1	12	17.39	17.64	17.62		
5	16QAM	1	24	17.60	17.69	17.72		
5	16QAM	12	0	16.16	16.34	16.38	17	2
5	16QAM	12	7	16.22	16.36	16.48		
5	16QAM	12	13	16.38	16.42	16.54		
5	16QAM	25	0	16.28	16.29	16.40		
5	64QAM	1	0	16.32	16.33	16.43	17	2
5	64QAM	1	12	16.29	16.40	16.42		
5	64QAM	1	24	16.51	16.53	16.56		
5	64QAM	12	0	15.27	15.38	15.32	16	3
5	64QAM	12	7	15.34	15.45	15.49		
5	64QAM	12	13	15.45	15.45	15.53		
5	64QAM	25	0	15.32	15.38	15.38		

<Additional information for TDD LTE>

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.

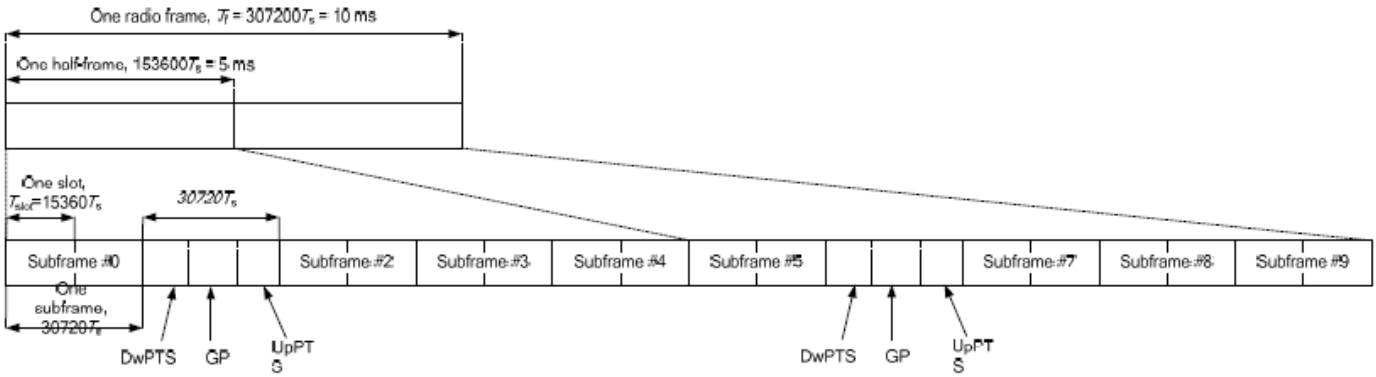

Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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.

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

<Default Power Mode>

<LTE Band 38 Main >

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				37850	38000	38150		
Frequency (MHz)				2580	2595	2610		
20	QPSK	1	0	23.17	23.16	23.16	23.5	0
20	QPSK	1	49	23.21	23.28	23.24		
20	QPSK	1	99	23.27	23.30	23.20		
20	QPSK	50	0	22.30	22.32	22.27	22.5	1
20	QPSK	50	24	22.38	22.35	22.38		
20	QPSK	50	50	22.39	22.36	22.37		
20	QPSK	100	0	22.40	22.35	22.38		
20	16QAM	1	0	22.27	22.27	22.28	22.5	1
20	16QAM	1	49	22.30	22.31	22.27		
20	16QAM	1	99	22.34	22.37	22.35		
20	16QAM	50	0	21.32	21.35	21.32	21.5	2
20	16QAM	50	24	21.34	21.35	21.40		
20	16QAM	50	50	21.40	21.37	21.40		
20	16QAM	100	0	21.40	21.35	21.39		
20	64QAM	1	0	21.03	21.20	20.93	21.5	2
20	64QAM	1	49	21.01	21.27	21.05		
20	64QAM	1	99	21.02	21.30	21.14		
20	64QAM	50	0	20.34	20.35	20.33	20.5	3
20	64QAM	50	24	20.37	20.39	20.36		
20	64QAM	50	50	20.38	20.40	20.40		
20	64QAM	100	0	20.36	20.36	20.40		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	23.13	23.17	23.16	23.5	0
15	QPSK	1	37	23.17	23.24	23.17		
15	QPSK	1	74	23.20	23.23	23.21		
15	QPSK	36	0	22.27	22.32	22.30	22.5	1
15	QPSK	36	20	22.35	22.33	22.30		
15	QPSK	36	39	22.34	22.39	22.35		
15	QPSK	75	0	22.35	22.32	22.29		
15	16QAM	1	0	22.27	22.32	22.30	22.5	1
15	16QAM	1	37	22.17	22.21	22.27		
15	16QAM	1	74	22.31	22.40	22.37		
15	16QAM	36	0	21.25	21.29	21.27	21.5	2
15	16QAM	36	20	21.32	21.28	21.27		
15	16QAM	36	39	21.32	21.36	21.32		
15	16QAM	75	0	21.39	21.36	21.31		
15	64QAM	1	0	20.94	20.99	20.91	21.5	2
15	64QAM	1	37	21.01	21.08	21.05		
15	64QAM	1	74	21.00	21.10	21.09		
15	64QAM	36	0	20.30	20.37	20.32	20.5	3
15	64QAM	36	20	20.38	20.35	20.30		
15	64QAM	36	39	20.36	20.32	20.38		
15	64QAM	75	0	20.37	20.34	20.32		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	23.09	23.16	23.14	23.5	0
10	QPSK	1	25	23.08	23.24	23.11		
10	QPSK	1	49	23.14	23.13	23.16		
10	QPSK	25	0	22.24	22.24	22.21	22.5	1

10	QPSK	25	12	22.27	22.29	22.30		
10	QPSK	25	25	22.28	22.30	22.29		
10	QPSK	50	0	22.34	22.32	22.23		
10	16QAM	1	0	22.17	22.30	22.28	22.5	1
10	16QAM	1	25	22.14	22.19	22.21		
10	16QAM	1	49	22.28	22.40	22.27		
10	16QAM	25	0	21.24	21.28	21.20	21.5	2
10	16QAM	25	12	21.25	21.19	21.23		
10	16QAM	25	25	21.24	21.29	21.26		
10	16QAM	50	0	21.36	21.26	21.23		
10	64QAM	1	0	20.88	20.89	20.90	21.5	2
10	64QAM	1	25	20.91	21.08	21.04		
10	64QAM	1	49	20.95	21.07	20.99		
10	64QAM	25	0	20.24	20.32	20.22	20.5	3
10	64QAM	25	12	20.33	20.32	20.25		
10	64QAM	25	25	20.36	20.32	20.32		
10	64QAM	50	0	20.33	20.33	20.22		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	23.01	22.99	23.05	23.5	0
5	QPSK	1	12	22.99	23.04	23.03		
5	QPSK	1	24	23.02	23.08	23.06		
5	QPSK	12	0	22.10	22.13	22.15	22.5	1
5	QPSK	12	7	22.13	22.16	22.18		
5	QPSK	12	13	22.11	22.19	22.16		
5	QPSK	25	0	22.10	22.11	22.14		
5	16QAM	1	0	22.14	22.20	22.26	22.5	1
5	16QAM	1	12	22.18	22.24	22.22		
5	16QAM	1	24	22.23	22.33	22.29		
5	16QAM	12	0	21.11	21.12	21.15	21.5	2
5	16QAM	12	7	21.10	21.12	21.17		
5	16QAM	12	13	21.07	21.17	21.14		
5	16QAM	25	0	21.13	21.15	21.19		
5	64QAM	1	0	20.89	20.88	20.90	21.5	2
5	64QAM	1	12	20.87	20.95	20.93		
5	64QAM	1	24	20.89	21.01	21.01		
5	64QAM	12	0	20.15	20.18	20.19	20.5	3
5	64QAM	12	7	20.17	20.21	20.22		
5	64QAM	12	13	20.16	20.25	20.21		
5	64QAM	25	0	20.18	20.19	20.23		

<LTE Band 41 Main>

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	22.14	22.40	22.77	22.85	22.59	23.5	0
20	QPSK	1	49	22.14	22.53	22.75	22.79	22.54		
20	QPSK	1	99	22.20	22.65	22.86	22.85	22.60		
20	QPSK	50	0	21.23	21.61	21.83	21.96	21.75	22.5	1
20	QPSK	50	24	21.33	21.73	21.94	21.97	21.71		
20	QPSK	50	50	21.35	21.73	21.99	21.98	21.76		
20	QPSK	100	0	21.34	21.73	21.92	21.91	21.74		
20	16QAM	1	0	21.25	21.54	21.92	22.00	21.80	22.5	1
20	16QAM	1	49	21.23	21.62	21.80	21.91	21.62		
20	16QAM	1	99	21.38	21.74	21.89	21.96	21.64		
20	16QAM	50	0	20.26	20.64	20.87	21.00	20.78	21.5	2
20	16QAM	50	24	20.37	20.76	20.97	20.98	20.75		
20	16QAM	50	50	20.39	20.76	20.97	20.96	20.63		
20	16QAM	100	0	20.36	20.75	20.94	20.99	20.73		
20	64QAM	1	0	19.98	20.34	20.58	20.69	20.42	21.5	2
20	64QAM	1	49	19.92	20.33	20.56	20.70	20.34		
20	64QAM	1	99	20.18	20.47	20.69	20.65	20.25		
20	64QAM	50	0	19.27	19.64	19.87	20.00	19.78	20.5	3
20	64QAM	50	24	19.39	19.78	19.97	20.00	19.75		
20	64QAM	50	50	19.38	19.78	19.98	19.99	19.64		
20	64QAM	100	0	19.38	19.77	19.98	20.00	19.74		
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	22.11	22.53	22.72	22.81	22.65	23.5	0
15	QPSK	1	37	22.15	22.55	22.76	22.78	22.57		
15	QPSK	1	74	22.15	22.65	22.82	22.84	22.58		
15	QPSK	36	0	21.21	21.62	21.85	22.00	21.73	22.5	1
15	QPSK	36	20	21.31	21.70	21.93	21.96	21.68		
15	QPSK	36	39	21.29	21.71	21.92	21.98	21.68		
15	QPSK	75	0	21.30	21.71	21.92	21.98	21.71		
15	16QAM	1	0	21.29	21.65	21.84	21.97	21.73	22.5	1
15	16QAM	1	37	21.19	21.50	21.78	21.89	21.56		
15	16QAM	1	74	21.31	21.78	21.97	21.82	21.68		
15	16QAM	36	0	20.17	20.57	20.81	20.96	20.70	21.5	2
15	16QAM	36	20	20.28	20.67	20.89	20.94	20.63		
15	16QAM	36	39	20.30	20.68	20.89	20.94	20.62		
15	16QAM	75	0	20.35	20.73	20.95	21.00	20.74		
15	64QAM	1	0	20.04	20.33	20.56	20.69	20.41	21.5	2
15	64QAM	1	37	20.05	20.38	20.60	20.70	20.32		
15	64QAM	1	74	20.07	20.57	20.71	20.77	20.29		
15	64QAM	36	0	19.21	19.65	19.88	19.79	19.75	20.5	3
15	64QAM	36	20	19.31	19.73	19.93	20.00	19.71		
15	64QAM	36	39	19.31	19.75	19.96	19.93	19.69		
15	64QAM	75	0	19.34	19.73	19.96	19.95	19.72		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	22.09	22.52	22.63	22.77	22.60	23.5	0
10	QPSK	1	25	22.14	22.51	22.72	22.78	22.55		
10	QPSK	1	49	22.06	22.63	22.79	22.79	22.58		
10	QPSK	25	0	21.12	21.61	21.77	21.91	21.64	22.5	1
10	QPSK	25	12	21.30	21.67	21.91	21.92	21.59		

10	QPSK	25	25	21.25	21.70	21.88	21.95	21.61		
10	QPSK	50	0	21.30	21.71	21.91	21.90	21.68		
10	16QAM	1	0	21.28	21.56	21.84	21.90	21.73	22.5	1
10	16QAM	1	25	21.17	21.43	21.78	21.79	21.54		
10	16QAM	1	49	21.26	21.68	21.88	21.74	21.64		
10	16QAM	25	0	20.09	20.47	20.79	20.89	20.69	21.5	2
10	16QAM	25	12	20.18	20.66	20.87	20.92	20.61		
10	16QAM	25	25	20.26	20.59	20.79	20.89	20.57		
10	16QAM	50	0	20.28	20.70	20.91	20.91	20.73		
10	64QAM	1	0	20.04	20.28	20.51	20.68	20.36	21.5	2
10	64QAM	1	25	20.05	20.36	20.58	20.67	20.30		
10	64QAM	1	49	20.07	20.54	20.68	20.77	20.21		
10	64QAM	25	0	19.17	19.60	19.85	19.69	19.69	20.5	3
10	64QAM	25	12	19.29	19.63	19.86	19.91	19.65		
10	64QAM	25	25	19.27	19.70	19.96	19.89	19.69		
10	64QAM	50	0	19.33	19.73	19.93	19.94	19.70		
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	22.09	22.29	22.53	22.62	22.28	23.5	0
5	QPSK	1	12	22.04	22.32	22.59	22.64	22.28		
5	QPSK	1	24	22.05	22.33	22.59	22.60	22.24		
5	QPSK	12	0	21.07	21.42	21.72	21.77	21.49	22.5	1
5	QPSK	12	7	21.09	21.52	21.75	21.79	21.49		
5	QPSK	12	13	21.09	21.50	21.74	21.77	21.47		
5	QPSK	25	0	21.06	21.48	21.74	21.78	21.48		
5	16QAM	1	0	21.11	21.42	21.66	21.72	21.48	22.5	1
5	16QAM	1	12	21.15	21.55	21.82	21.93	21.57		
5	16QAM	1	24	21.11	21.53	21.80	21.83	21.47		
5	16QAM	12	0	20.04	20.39	20.70	20.76	20.45	21.5	2
5	16QAM	12	7	20.07	20.50	20.75	20.80	20.46		
5	16QAM	12	13	20.05	20.49	20.71	20.75	20.45		
5	16QAM	25	0	20.11	20.52	20.77	20.82	20.49		
5	64QAM	1	0	20.03	20.19	20.40	20.44	20.17	21.5	2
5	64QAM	1	12	20.10	20.28	20.49	20.53	20.18		
5	64QAM	1	24	20.04	20.29	20.53	20.57	20.16		
5	64QAM	12	0	19.13	19.47	19.74	19.83	19.51	20.5	3
5	64QAM	12	7	19.14	19.56	19.79	19.84	19.52		
5	64QAM	12	13	19.11	19.54	19.78	19.81	19.47		
5	64QAM	25	0	19.13	19.57	19.80	19.83	19.53		

<LTE Band 41 Main 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	24.81	25.22	25.44	25.45	25.46	26.5	0
20	QPSK	1	49	24.81	25.31	25.44	25.44	25.25		
20	QPSK	1	99	24.85	25.41	25.45	25.45	24.58		
20	QPSK	50	0	24.02	24.40	24.61	24.76	24.52	25.5	1
20	QPSK	50	24	24.11	24.48	24.72	24.77	24.35		
20	QPSK	50	50	24.11	24.52	24.70	24.74	23.84		
20	QPSK	100	0	24.13	24.51	24.70	24.75	24.25		
20	16QAM	1	0	24.15	24.47	24.82	24.87	24.67	25.5	1
20	16QAM	1	49	24.13	24.58	24.78	24.84	24.55		
20	16QAM	1	99	24.18	24.63	24.88	24.88	23.90		
20	16QAM	50	0	23.06	23.42	23.65	23.80	23.54	24.5	2
20	16QAM	50	24	23.16	23.53	23.74	23.79	23.50		
20	16QAM	50	50	23.17	23.55	23.74	23.78	23.06		
20	16QAM	100	0	23.16	23.52	23.74	23.79	23.35		
20	64QAM	1	0	23.01	23.35	23.66	23.49	22.65	24.5	2
20	64QAM	1	49	22.97	23.40	23.64	23.71	22.74		
20	64QAM	1	99	23.11	23.55	23.77	23.50	22.00		
20	64QAM	50	0	22.07	22.43	22.66	22.66	21.82	23.5	3
20	64QAM	50	24	22.18	22.56	22.75	22.68	21.49		
20	64QAM	50	50	22.17	22.55	22.76	22.70	21.03		
20	64QAM	100	0	22.17	22.54	22.74	22.55	21.27		
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	24.85	25.27	25.49	25.53	25.36	26.5	0
15	QPSK	1	37	24.86	25.24	25.49	25.51	25.02		
15	QPSK	1	74	24.89	25.39	25.52	25.47	24.63		
15	QPSK	36	0	23.98	24.39	24.61	24.74	24.45	25.5	1
15	QPSK	36	20	24.07	24.49	24.69	24.75	24.15		
15	QPSK	36	39	24.07	24.49	24.70	24.72	23.89		
15	QPSK	75	0	24.08	24.47	24.69	24.74	24.08		
15	16QAM	1	0	24.13	24.56	24.77	24.85	24.57	25.5	1
15	16QAM	1	37	24.11	24.52	24.77	24.81	24.26		
15	16QAM	1	74	24.17	24.68	24.92	24.89	23.91		
15	16QAM	36	0	22.97	23.38	23.61	23.75	23.44	24.5	2
15	16QAM	36	20	23.07	23.45	23.69	23.72	23.25		
15	16QAM	36	39	23.07	23.46	23.67	23.71	22.96		
15	16QAM	75	0	23.11	23.50	23.71	23.75	23.21		
15	64QAM	1	0	22.97	23.36	23.63	23.63	22.72	24.5	2
15	64QAM	1	37	23.07	23.44	23.69	23.63	22.19		
15	64QAM	1	74	23.08	23.57	23.78	23.65	21.82		
15	64QAM	36	0	22.02	22.41	22.65	22.68	21.57	23.5	3
15	64QAM	36	20	22.11	22.51	22.72	22.73	21.25		
15	64QAM	36	39	22.11	22.52	22.72	22.72	20.96		
15	64QAM	75	0	22.12	22.52	22.73	22.65	21.19		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	24.65	24.98	25.22	25.31	25.06	26.5	0
10	QPSK	1	25	24.62	25.05	25.31	25.31	24.76		
10	QPSK	1	49	24.73	25.14	25.41	25.38	24.49		
10	QPSK	25	0	23.83	24.17	24.41	24.47	24.07	25.5	1
10	QPSK	25	12	23.86	24.27	24.53	24.59	23.90		

10	QPSK	25	25	23.85	24.26	24.52	24.54	23.66		
10	QPSK	50	0	23.87	24.26	24.52	24.56	23.73		
10	16QAM	1	0	24.05	24.41	24.66	24.70	24.33	25.5	1
10	16QAM	1	25	24.00	24.44	24.69	24.71	24.08		
10	16QAM	1	49	24.03	24.44	24.69	24.68	23.82		
10	16QAM	25	0	22.89	23.20	23.43	23.48	23.19	24.5	2
10	16QAM	25	12	22.90	23.30	23.58	23.61	23.04		
10	16QAM	25	25	22.85	23.28	23.53	23.55	22.84		
10	16QAM	50	0	22.90	23.30	23.54	23.59	22.90		
10	64QAM	1	0	22.98	23.30	23.55	23.45	22.23	24.5	2
10	64QAM	1	25	23.03	23.41	23.68	23.53	21.99		
10	64QAM	1	49	22.95	23.38	23.64	23.51	21.68		
10	64QAM	25	0	21.94	22.28	22.51	22.55	21.22	23.5	3
10	64QAM	25	12	21.96	22.38	22.62	22.66	21.05		
10	64QAM	25	25	21.92	22.36	22.59	22.63	20.82		
10	64QAM	50	0	21.90	22.30	22.55	22.55	20.84		
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	24.71	25.02	25.28	25.31	24.85	26.5	0
5	QPSK	1	12	24.69	25.12	25.35	25.38	24.69		
5	QPSK	1	24	24.66	25.09	25.35	25.34	24.56		
5	QPSK	12	0	23.87	24.18	24.48	24.55	23.86	25.5	1
5	QPSK	12	7	23.90	24.27	24.51	24.57	23.79		
5	QPSK	12	13	23.85	24.26	24.54	24.54	23.67		
5	QPSK	25	0	23.83	24.26	24.51	24.54	23.62		
5	16QAM	1	0	24.02	24.34	24.58	24.62	24.03	25.5	1
5	16QAM	1	12	24.00	24.41	24.66	24.66	23.96		
5	16QAM	1	24	23.99	24.45	24.69	24.71	23.84		
5	16QAM	12	0	22.91	23.24	23.54	23.57	22.98	24.5	2
5	16QAM	12	7	22.92	23.33	23.57	23.59	22.89		
5	16QAM	12	13	22.89	23.34	23.54	23.58	22.77		
5	16QAM	25	0	22.89	23.30	23.57	23.58	22.79		
5	64QAM	1	0	22.93	23.21	23.50	23.53	21.97	24.5	2
5	64QAM	1	12	22.92	23.34	23.59	23.58	21.88		
5	64QAM	1	24	22.93	23.34	23.59	23.60	21.75		
5	64QAM	12	0	21.92	22.29	22.58	22.63	20.95	23.5	3
5	64QAM	12	7	21.94	22.36	22.58	22.65	20.86		
5	64QAM	12	13	21.89	22.34	22.57	22.61	20.75		
5	64QAM	25	0	21.89	22.32	22.57	22.63	20.78		

<LTE Band 48 MIMO2 >

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	21.89	21.88	21.92	21.88	22	0
20	QPSK	1	49	21.75	21.74	21.76	21.72		
20	QPSK	1	99	21.73	21.73	21.70	21.64		
20	QPSK	50	0	20.94	20.94	20.95	20.92	21	1
20	QPSK	50	24	20.90	20.89	20.88	20.85		
20	QPSK	50	50	20.79	20.75	20.84	20.82		
20	QPSK	100	0	20.91	20.88	20.89	20.85		
20	16QAM	1	0	20.98	20.99	21.00	20.97	21	1
20	16QAM	1	49	20.88	20.86	20.82	20.77		
20	16QAM	1	99	20.90	20.82	20.81	20.79		
20	16QAM	50	0	19.96	19.96	19.99	19.95	20	2
20	16QAM	50	24	19.98	19.93	19.95	19.91		
20	16QAM	50	50	19.84	19.79	19.91	19.87		
20	16QAM	100	0	19.93	19.90	19.92	19.89		
20	64QAM	1	0	19.73	19.74	19.82	19.74	20	2
20	64QAM	1	49	19.61	19.58	19.60	19.56		
20	64QAM	1	99	19.60	19.56	19.55	19.51		
20	64QAM	50	0	18.97	18.97	18.99	18.96	19	3
20	64QAM	50	24	18.96	18.94	18.94	18.94		
20	64QAM	50	50	18.85	18.83	18.87	18.85		
20	64QAM	100	0	18.95	18.93	18.92	18.90		
Channel				55315	55820	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3642	3692.5		
15	QPSK	1	0	21.87	21.81	21.84	21.79	22	0
15	QPSK	1	37	21.65	21.64	21.74	21.69		
15	QPSK	1	74	21.70	21.69	21.61	21.54		
15	QPSK	36	0	20.92	20.94	20.85	20.90	21	1
15	QPSK	36	20	20.90	20.86	20.87	20.81		
15	QPSK	36	39	20.71	20.73	20.81	20.76		
15	QPSK	75	0	20.83	20.83	20.89	20.81		
15	16QAM	1	0	20.90	20.97	20.91	20.88	21	1
15	16QAM	1	37	20.86	20.78	20.73	20.69		
15	16QAM	1	74	20.87	20.72	20.79	20.76		
15	16QAM	36	0	19.89	19.96	19.95	19.93	20	2
15	16QAM	36	20	19.90	19.91	19.92	19.83		
15	16QAM	36	39	19.78	19.78	19.81	19.78		
15	16QAM	75	0	19.86	19.80	19.90	19.82		
15	64QAM	1	0	19.67	19.68	19.79	19.69	20	2
15	64QAM	1	37	19.60	19.53	19.51	19.51		
15	64QAM	1	74	19.50	19.54	19.45	19.43		
15	64QAM	36	0	18.88	18.96	18.95	18.87	19	3
15	64QAM	36	20	18.88	18.85	18.84	18.92		
15	64QAM	36	39	18.79	18.74	18.87	18.81		
15	64QAM	75	0	18.85	18.91	18.92	18.89		
Channel				55290	55815	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3642.5	3695		
10	QPSK	1	0	21.86	21.83	21.89	21.83	22	0
10	QPSK	1	25	21.69	21.70	21.69	21.65		
10	QPSK	1	49	21.63	21.72	21.67	21.60		
10	QPSK	25	0	20.85	20.91	20.89	20.90	21	1
10	QPSK	25	12	20.90	20.88	20.79	20.75		

10	QPSK	25	25	20.75	20.69	20.78	20.80		
10	QPSK	50	0	20.84	20.80	20.88	20.84		
10	16QAM	1	0	20.94	20.95	20.99	20.87	21	1
10	16QAM	1	25	20.87	20.84	20.73	20.73		
10	16QAM	1	49	20.81	20.76	20.80	20.70		
10	16QAM	25	0	19.95	19.95	19.97	19.88	20	2
10	16QAM	25	12	19.96	19.88	19.92	19.87		
10	16QAM	25	25	19.77	19.69	19.88	19.86		
10	16QAM	50	0	19.84	19.84	19.89	19.83		
10	64QAM	1	0	19.73	19.65	19.75	19.64	20	2
10	64QAM	1	25	19.56	19.49	19.57	19.52		
10	64QAM	1	49	19.59	19.50	19.47	19.48		
10	64QAM	25	0	18.87	18.90	18.95	18.96	19	3
10	64QAM	25	12	18.86	18.90	18.88	18.91		
10	64QAM	25	25	18.78	18.76	18.83	18.77		
10	64QAM	50	0	18.88	18.88	18.89	18.82		
Channel				55265	55810	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3643	3697.5		
5	QPSK	1	0	21.80	21.81	21.82	21.87	22	0
5	QPSK	1	12	21.73	21.69	21.72	21.71		
5	QPSK	1	24	21.63	21.69	21.66	21.56		
5	QPSK	12	0	20.91	20.91	20.82	20.91	21	1
5	QPSK	12	7	20.80	20.86	20.84	20.83		
5	QPSK	12	13	20.72	20.68	20.83	20.77		
5	QPSK	25	0	20.86	20.86	20.80	20.80		
5	16QAM	1	0	20.97	20.98	20.96	20.91	21	1
5	16QAM	1	12	20.81	20.83	20.73	20.77		
5	16QAM	1	24	20.89	20.75	20.80	20.73		
5	16QAM	12	0	19.92	19.87	19.97	19.91	20	2
5	16QAM	12	7	19.95	19.85	19.91	19.86		
5	16QAM	12	13	19.74	19.75	19.87	19.83		
5	16QAM	25	0	19.92	19.80	19.83	19.85		
5	64QAM	1	0	19.70	19.69	19.75	19.64	20	2
5	64QAM	1	12	19.51	19.49	19.58	19.46		
5	64QAM	1	24	19.60	19.54	19.46	19.49		
5	64QAM	12	0	18.93	18.97	18.96	18.90	19	3
5	64QAM	12	7	18.91	18.89	18.90	18.87		
5	64QAM	12	13	18.75	18.75	18.79	18.85		
5	64QAM	25	0	18.88	18.83	18.90	18.89		

<Reduced Power Mode>

<LTE Band 38 Main >

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	17.69	17.76	17.72	18	0
20	QPSK	1	49	17.76	17.82	17.79		
20	QPSK	1	99	17.79	17.83	17.77		
20	QPSK	50	0	16.82	16.87	16.82	17	1
20	QPSK	50	24	16.93	16.89	16.93		
20	QPSK	50	50	16.90	16.96	16.93		
20	QPSK	100	0	16.92	16.88	16.93		
20	16QAM	1	0	16.87	16.86	16.86	17	1
20	16QAM	1	49	16.83	16.90	16.86		
20	16QAM	1	99	16.92	16.95	16.90		
20	16QAM	50	0	15.86	15.91	15.88	16	2
20	16QAM	50	24	15.96	15.92	15.94		
20	16QAM	50	50	15.94	15.99	15.93		
20	16QAM	100	0	15.95	15.91	15.91		
20	64QAM	1	0	15.58	15.57	15.48	16	2
20	64QAM	1	49	15.60	15.64	15.59		
20	64QAM	1	99	15.67	15.77	15.70		
20	64QAM	50	0	14.85	14.91	14.87	15	3
20	64QAM	50	24	14.97	14.93	14.96		
20	64QAM	50	50	14.96	14.99	14.92		
20	64QAM	100	0	14.93	14.90	14.94		
Channel				37825	38000	38175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2577.5	2595	2612.5		
15	QPSK	1	0	17.63	17.62	17.55	18	0
15	QPSK	1	37	17.56	17.70	17.68		
15	QPSK	1	74	17.59	17.64	17.62		
15	QPSK	36	0	16.65	16.75	16.70	17	1
15	QPSK	36	20	16.81	16.78	16.83		
15	QPSK	36	39	16.80	16.83	16.76		
15	QPSK	75	0	16.82	16.72	16.75		
15	16QAM	1	0	16.74	16.68	16.74	17	1
15	16QAM	1	37	16.70	16.77	16.74		
15	16QAM	1	74	16.79	16.83	16.76		
15	16QAM	36	0	15.70	15.80	15.72	16	2
15	16QAM	36	20	15.82	15.81	15.77		
15	16QAM	36	39	15.74	15.82	15.78		
15	16QAM	75	0	15.81	15.71	15.81		
15	64QAM	1	0	15.41	15.42	15.36	16	2
15	64QAM	1	37	15.47	15.54	15.41		
15	64QAM	1	74	15.50	15.67	15.53		
15	64QAM	36	0	14.69	14.72	14.75	15	3
15	64QAM	36	20	14.84	14.82	14.85		
15	64QAM	36	39	14.84	14.88	14.77		
15	64QAM	75	0	14.80	14.78	14.79		
Channel				37800	38000	38200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2575	2595	2615		
10	QPSK	1	0	17.61	17.60	17.54	18	0
10	QPSK	1	25	17.58	17.62	17.62		
10	QPSK	1	49	17.61	17.72	17.64		
10	QPSK	25	0	16.69	16.76	16.72	17	1

10	QPSK	25	12	16.81	16.73	16.75		
10	QPSK	25	25	16.76	16.83	16.80		
10	QPSK	50	0	16.81	16.74	16.80		
10	16QAM	1	0	16.67	16.72	16.74	17	1
10	16QAM	1	25	16.69	16.80	16.66		
10	16QAM	1	49	16.81	16.83	16.78		
10	16QAM	25	0	15.74	15.81	15.70	16	2
10	16QAM	25	12	15.84	15.80	15.80		
10	16QAM	25	25	15.82	15.89	15.74		
10	16QAM	50	0	15.83	15.72	15.73		
10	64QAM	1	0	15.46	15.46	15.37	16	2
10	64QAM	1	25	15.49	15.45	15.48		
10	64QAM	1	49	15.50	15.60	15.57		
10	64QAM	25	0	14.70	14.71	14.71	15	3
10	64QAM	25	12	14.81	14.78	14.80		
10	64QAM	25	25	14.80	14.86	14.77		
10	64QAM	50	0	14.77	14.80	14.77		
Channel				37775	38000	38225	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2572.5	2595	2617.5		
5	QPSK	1	0	17.65	17.59	17.61	18	0
5	QPSK	1	12	17.58	17.71	17.64		
5	QPSK	1	24	17.61	17.66	17.59		
5	QPSK	12	0	16.72	16.75	16.63	17	1
5	QPSK	12	7	16.76	16.74	16.83		
5	QPSK	12	13	16.72	16.79	16.78		
5	QPSK	25	0	16.73	16.69	16.82		
5	16QAM	1	0	16.70	16.69	16.72	17	1
5	16QAM	1	12	16.66	16.76	16.69		
5	16QAM	1	24	16.76	16.80	16.72		
5	16QAM	12	0	15.72	15.78	15.75	16	2
5	16QAM	12	7	15.84	15.82	15.78		
5	16QAM	12	13	15.82	15.82	15.77		
5	16QAM	25	0	15.76	15.73	15.77		
5	64QAM	1	0	15.39	15.43	15.37	16	2
5	64QAM	1	12	15.40	15.48	15.45		
5	64QAM	1	24	15.50	15.57	15.51		
5	64QAM	12	0	14.70	14.72	14.68	15	3
5	64QAM	12	7	14.83	14.75	14.85		
5	64QAM	12	13	14.83	14.82	14.77		
5	64QAM	25	0	14.76	14.77	14.82		

<LTE Band 41 Main >

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	16.10	16.36	16.74	16.79	16.48	18	0
20	QPSK	1	49	16.09	16.50	16.67	16.73	16.48		
20	QPSK	1	99	16.15	16.59	16.81	16.80	16.49		
20	QPSK	50	0	15.21	15.56	15.78	15.91	15.70	17	1
20	QPSK	50	24	15.29	15.67	15.86	15.92	15.69		
20	QPSK	50	50	15.32	15.72	15.94	15.93	15.71		
20	QPSK	100	0	15.28	15.67	15.94	15.93	15.67		
20	16QAM	1	0	15.20	15.46	15.88	15.93	15.74	17	1
20	16QAM	1	49	15.16	15.56	15.79	15.81	15.59		
20	16QAM	1	99	15.22	15.70	15.89	15.87	15.57		
20	16QAM	50	0	14.21	14.60	14.81	14.96	14.75	16	2
20	16QAM	50	24	14.30	14.71	14.91	14.93	14.71		
20	16QAM	50	50	14.35	14.77	14.92	14.91	14.58		
20	16QAM	100	0	14.30	14.68	14.89	14.93	14.69		
20	64QAM	1	0	13.95	14.24	14.50	14.49	14.36	16	2
20	64QAM	1	49	13.81	14.28	14.46	14.50	14.37		
20	64QAM	1	99	14.03	14.49	14.54	14.44	14.34		
20	64QAM	50	0	13.23	13.60	13.82	13.95	13.75	15	3
20	64QAM	50	24	13.32	13.71	13.92	13.96	13.70		
20	64QAM	50	50	13.32	13.75	13.91	13.93	13.59		
20	64QAM	100	0	13.30	13.70	13.91	13.92	13.69		
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	16.08	16.33	16.71	16.77	16.57	18	0
15	QPSK	1	37	16.01	16.45	16.67	16.73	16.39		
15	QPSK	1	74	16.11	16.56	16.81	16.77	16.45		
15	QPSK	36	0	15.14	15.48	15.69	15.91	15.66	17	1
15	QPSK	36	20	15.20	15.60	15.80	15.85	15.67		
15	QPSK	36	39	15.32	15.71	15.86	15.84	15.55		
15	QPSK	75	0	15.18	15.67	15.81	15.92	15.57		
15	16QAM	1	0	15.13	15.45	15.84	15.86	15.72	17	1
15	16QAM	1	37	15.11	15.54	15.75	15.71	15.50		
15	16QAM	1	74	15.20	15.64	15.80	15.84	15.49		
15	16QAM	36	0	14.17	14.59	14.79	14.93	14.66	16	2
15	16QAM	36	20	14.20	14.64	14.85	14.89	14.66		
15	16QAM	36	39	14.33	14.77	14.88	14.87	14.48		
15	16QAM	75	0	14.21	14.66	14.88	14.91	14.61		
15	64QAM	1	0	13.91	14.18	14.48	14.40	14.29	16	2
15	64QAM	1	37	13.73	14.28	14.45	14.41	14.28		
15	64QAM	1	74	13.95	14.48	14.46	14.41	14.29		
15	64QAM	36	0	13.21	13.56	13.78	13.91	13.72	15	3
15	64QAM	36	20	13.22	13.67	13.92	13.86	13.61		
15	64QAM	36	39	13.32	13.69	13.85	13.87	13.56		
15	64QAM	75	0	13.22	13.68	13.81	13.85	13.66		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	16.10	16.36	16.69	16.74	16.53	18	0
10	QPSK	1	25	15.99	16.44	16.63	16.68	16.39		
10	QPSK	1	49	16.10	16.54	16.74	16.70	16.43		
10	QPSK	25	0	15.21	15.54	15.72	15.91	15.67	17	1
10	QPSK	25	12	15.22	15.67	15.79	15.87	15.62		

10	QPSK	25	25	15.30	15.70	15.80	15.85	15.46		
10	QPSK	50	0	15.24	15.58	15.86	15.92	15.60		
10	16QAM	1	0	15.10	15.37	15.82	15.86	15.72	17	1
10	16QAM	1	25	15.14	15.53	15.79	15.75	15.54		
10	16QAM	1	49	15.14	15.68	15.82	15.84	15.55		
10	16QAM	25	0	14.14	14.55	14.76	14.86	14.75	16	2
10	16QAM	25	12	14.30	14.71	14.85	14.91	14.62		
10	16QAM	25	25	14.26	14.76	14.90	14.81	14.49		
10	16QAM	50	0	14.20	14.58	14.79	14.84	14.66		
10	64QAM	1	0	13.92	14.24	14.44	14.48	14.27	16	2
10	64QAM	1	25	13.80	14.26	14.43	14.50	14.30		
10	64QAM	1	49	14.03	14.47	14.44	14.38	14.26		
10	64QAM	25	0	13.18	13.57	13.72	13.94	13.75	15	3
10	64QAM	25	12	13.31	13.70	13.86	13.94	13.70		
10	64QAM	25	25	13.30	13.71	13.89	13.88	13.53		
10	64QAM	50	0	13.24	13.70	13.85	13.91	13.64		
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	16.03	16.36	16.71	16.72	16.57	18	0
5	QPSK	1	12	16.03	16.48	16.63	16.66	16.45		
5	QPSK	1	24	16.15	16.50	16.79	16.76	16.46		
5	QPSK	12	0	15.16	15.56	15.75	15.88	15.63	17	1
5	QPSK	12	7	15.25	15.63	15.83	15.86	15.66		
5	QPSK	12	13	15.29	15.64	15.78	15.86	15.49		
5	QPSK	25	0	15.28	15.57	15.80	15.91	15.61		
5	16QAM	1	0	15.11	15.43	15.80	15.84	15.69	17	1
5	16QAM	1	12	15.11	15.50	15.72	15.74	15.50		
5	16QAM	1	24	15.18	15.64	15.84	15.84	15.50		
5	16QAM	12	0	14.18	14.58	14.80	14.86	14.75	16	2
5	16QAM	12	7	14.25	14.71	14.89	14.92	14.67		
5	16QAM	12	13	14.28	14.70	14.92	14.81	14.53		
5	16QAM	25	0	14.25	14.58	14.84	14.87	14.67		
5	64QAM	1	0	13.90	14.20	14.45	14.41	14.26	16	2
5	64QAM	1	12	13.71	14.24	14.44	14.40	14.28		
5	64QAM	1	24	14.00	14.46	14.53	14.39	14.30		
5	64QAM	12	0	13.16	13.52	13.74	13.94	13.66	15	3
5	64QAM	12	7	13.22	13.65	13.91	13.95	13.70		
5	64QAM	12	13	13.31	13.69	13.82	13.89	13.56		
5	64QAM	25	0	13.25	13.68	13.83	13.89	13.66		

<LTE Band 41 Main 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	19.79	20.03	20.41	20.53	20.29	21	0
20	QPSK	1	49	19.76	20.18	20.38	20.47	20.16		
20	QPSK	1	99	19.83	20.30	20.47	20.52	20.17		
20	QPSK	50	0	18.97	19.34	19.56	19.72	19.49	20	1
20	QPSK	50	24	19.09	19.46	19.67	19.72	19.45		
20	QPSK	50	50	19.07	19.46	19.66	19.70	19.34		
20	QPSK	100	0	19.08	19.47	19.68	19.73	19.46		
20	16QAM	1	0	19.18	19.41	19.76	19.92	19.63	20	1
20	16QAM	1	49	19.11	19.52	19.69	19.84	19.58		
20	16QAM	1	99	19.26	19.71	19.77	19.84	19.53		
20	16QAM	50	0	18.04	18.41	18.62	18.76	18.53	19	2
20	16QAM	50	24	18.15	18.50	18.70	18.77	18.50		
20	16QAM	50	50	18.16	18.56	18.68	18.73	18.39		
20	16QAM	100	0	18.11	18.48	18.68	18.74	18.47		
20	64QAM	1	0	18.07	18.35	18.80	18.70	18.39	19	2
20	64QAM	1	49	17.96	18.44	18.80	18.74	18.47		
20	64QAM	1	99	18.14	18.56	18.93	18.73	18.40		
20	64QAM	50	0	17.02	17.40	17.62	17.75	17.52	18	3
20	64QAM	50	24	17.11	17.52	17.71	17.72	17.50		
20	64QAM	50	50	17.14	17.53	17.73	17.74	17.39		
20	64QAM	100	0	17.12	17.47	17.71	17.73	17.46		
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	19.74	19.93	20.38	20.44	20.26	21	0
15	QPSK	1	37	19.73	20.08	20.32	20.45	20.09		
15	QPSK	1	74	19.76	20.24	20.42	20.44	20.11		
15	QPSK	36	0	18.88	19.29	19.55	19.68	19.42	20	1
15	QPSK	36	20	19.05	19.36	19.57	19.71	19.35		
15	QPSK	36	39	19.03	19.45	19.58	19.69	19.33		
15	QPSK	75	0	19.05	19.40	19.63	19.66	19.42		
15	16QAM	1	0	19.11	19.37	19.74	19.88	19.56	20	1
15	16QAM	1	37	19.01	19.46	19.67	19.77	19.50		
15	16QAM	1	74	19.24	19.64	19.72	19.84	19.53		
15	16QAM	36	0	17.99	18.32	18.52	18.72	18.43	19	2
15	16QAM	36	20	18.09	18.47	18.61	18.77	18.44		
15	16QAM	36	39	18.16	18.52	18.60	18.73	18.34		
15	16QAM	75	0	18.07	18.42	18.64	18.66	18.41		
15	64QAM	1	0	18.02	18.26	18.72	18.67	18.32	19	2
15	64QAM	1	37	17.89	18.44	18.80	18.73	18.44		
15	64QAM	1	74	18.10	18.48	18.83	18.63	18.31		
15	64QAM	36	0	16.98	17.37	17.56	17.69	17.45	18	3
15	64QAM	36	20	17.01	17.44	17.70	17.66	17.44		
15	64QAM	36	39	17.14	17.43	17.69	17.68	17.36		
15	64QAM	75	0	17.04	17.38	17.69	17.68	17.42		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	19.75	19.93	20.33	20.43	20.23	21	0
10	QPSK	1	25	19.75	20.15	20.32	20.40	20.15		
10	QPSK	1	49	19.83	20.21	20.46	20.52	20.08		
10	QPSK	25	0	18.92	19.33	19.46	19.70	19.48	20	1
10	QPSK	25	12	19.07	19.41	19.61	19.70	19.40		

10	QPSK	25	25	19.04	19.42	19.57	19.69	19.26		
10	QPSK	50	0	19.01	19.46	19.65	19.71	19.38		
10	16QAM	1	0	19.17	19.35	19.68	19.91	19.53	20	1
10	16QAM	1	25	19.08	19.43	19.59	19.81	19.48		
10	16QAM	1	49	19.21	19.62	19.72	19.75	19.47		
10	16QAM	25	0	17.94	18.33	18.60	18.69	18.49	19	2
10	16QAM	25	12	18.05	18.42	18.64	18.69	18.50		
10	16QAM	25	25	18.10	18.56	18.62	18.71	18.35		
10	16QAM	50	0	18.08	18.40	18.58	18.65	18.43		
10	64QAM	1	0	18.03	18.34	18.78	18.62	18.37	19	2
10	64QAM	1	25	17.96	18.44	18.71	18.64	18.43		
10	64QAM	1	49	18.04	18.50	18.92	18.68	18.38		
10	64QAM	25	0	16.94	17.32	17.61	17.67	17.49	18	3
10	64QAM	25	12	17.09	17.43	17.70	17.72	17.48		
10	64QAM	25	25	17.08	17.51	17.66	17.65	17.36		
10	64QAM	50	0	17.07	17.45	17.70	17.67	17.38		
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	19.78	19.98	20.38	20.51	20.26	21	0
5	QPSK	1	12	19.76	20.08	20.38	20.42	20.12		
5	QPSK	1	24	19.80	20.25	20.38	20.47	20.10		
5	QPSK	12	0	18.93	19.33	19.50	19.63	19.44	20	1
5	QPSK	12	7	19.01	19.45	19.63	19.71	19.45		
5	QPSK	12	13	19.01	19.37	19.64	19.70	19.29		
5	QPSK	25	0	19.08	19.42	19.67	19.64	19.40		
5	16QAM	1	0	19.17	19.32	19.66	19.86	19.56	20	1
5	16QAM	1	12	19.08	19.45	19.66	19.74	19.57		
5	16QAM	1	24	19.21	19.65	19.75	19.76	19.44		
5	16QAM	12	0	18.03	18.41	18.59	18.67	18.45	19	2
5	16QAM	12	7	18.13	18.40	18.69	18.74	18.46		
5	16QAM	12	13	18.16	18.52	18.58	18.63	18.36		
5	16QAM	25	0	18.11	18.41	18.67	18.70	18.47		
5	64QAM	1	0	18.01	18.32	18.77	18.62	18.32	19	2
5	64QAM	1	12	17.86	18.38	18.75	18.71	18.38		
5	64QAM	1	24	18.13	18.49	18.91	18.66	18.34		
5	64QAM	12	0	16.97	17.39	17.62	17.71	17.50	18	3
5	64QAM	12	7	17.05	17.49	17.68	17.68	17.40		
5	64QAM	12	13	17.07	17.53	17.66	17.71	17.38		
5	64QAM	25	0	17.04	17.39	17.68	17.73	17.37		

<LTE Band 48 MIMO2>

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	15.36	15.62	15.76	16.00	16	0
20	QPSK	1	49	15.22	15.49	15.64	15.87		
20	QPSK	1	99	15.25	15.51	15.63	15.85		
20	QPSK	50	0	14.32	14.69	14.74	14.99	15	1
20	QPSK	50	24	14.33	14.66	14.74	14.98		
20	QPSK	50	50	14.34	14.70	14.76	15.00		
20	QPSK	100	0	14.31	14.65	14.73	14.96		
20	16QAM	1	0	14.44	14.74	14.87	15.00	15	1
20	16QAM	1	49	14.26	14.57	14.67	14.78		
20	16QAM	1	99	14.33	14.59	14.68	14.74		
20	16QAM	50	0	13.38	13.69	13.80	13.87	14	2
20	16QAM	50	24	13.35	13.67	13.75	13.83		
20	16QAM	50	50	13.34	13.64	13.78	13.82		
20	16QAM	100	0	13.35	13.66	13.73	13.80		
20	64QAM	1	0	13.18	13.47	13.60	13.71	14	2
20	64QAM	1	49	13.15	13.40	13.55	13.59		
20	64QAM	1	99	13.25	13.45	13.56	13.56		
20	64QAM	50	0	12.38	12.72	12.80	12.87	13	3
20	64QAM	50	24	12.37	12.70	12.79	12.84		
20	64QAM	50	50	12.36	12.67	12.78	12.85		
20	64QAM	100	0	12.37	12.69	12.75	12.81		
Channel				55315	55820	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3642	3692.5		
15	QPSK	1	0	15.27	15.59	15.72	15.97	16	0
15	QPSK	1	37	15.22	15.52	15.62	15.86		
15	QPSK	1	74	15.34	15.55	15.66	15.87		
15	QPSK	36	0	14.26	14.68	14.79	14.92	15	1
15	QPSK	36	20	14.30	14.66	14.81	14.95		
15	QPSK	36	39	14.30	14.64	14.76	14.87		
15	QPSK	75	0	14.35	14.68	14.80	14.93		
15	16QAM	1	0	14.41	14.70	14.85	15.00	15	1
15	16QAM	1	37	14.26	14.53	14.66	14.74		
15	16QAM	1	74	14.40	14.64	14.77	14.88		
15	16QAM	36	0	13.23	13.65	13.74	13.87	14	2
15	16QAM	36	20	13.30	13.62	13.76	13.92		
15	16QAM	36	39	13.33	13.61	13.73	13.84		
15	16QAM	75	0	13.35	13.67	13.85	13.94		
15	64QAM	1	0	13.33	13.45	13.57	13.69	14	2
15	64QAM	1	37	13.23	13.42	13.53	13.67		
15	64QAM	1	74	13.30	13.51	13.61	13.69		
15	64QAM	36	0	12.30	12.71	12.82	12.96	13	3
15	64QAM	36	20	12.37	12.70	12.83	12.98		
15	64QAM	36	39	12.32	12.65	12.80	12.91		
15	64QAM	75	0	12.36	12.69	12.85	12.98		
Channel				55290	55815	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3642.5	3695		
10	QPSK	1	0	15.24	15.59	15.66	15.91	16	0
10	QPSK	1	25	15.22	15.46	15.52	15.78		
10	QPSK	1	49	15.30	15.51	15.64	15.80		
10	QPSK	25	0	14.25	14.61	14.72	15.00	15	1
10	QPSK	25	12	14.24	14.57	14.78	14.96		

10	QPSK	25	25	14.30	14.57	14.69	14.91		
10	QPSK	50	0	14.26	14.60	14.79	14.89		
10	16QAM	1	0	14.33	14.60	14.85	14.99	15	1
10	16QAM	1	25	14.19	14.46	14.65	14.71		
10	16QAM	1	49	14.36	14.59	14.73	14.82		
10	16QAM	25	0	13.15	13.56	13.68	13.90	14	2
10	16QAM	25	12	13.23	13.55	13.70	13.88		
10	16QAM	25	25	13.31	13.56	13.68	13.85		
10	16QAM	50	0	13.29	13.60	13.85	13.97		
10	64QAM	1	0	13.27	13.39	13.50	13.65	14	2
10	64QAM	1	25	13.13	13.39	13.49	13.68		
10	64QAM	1	49	13.22	13.41	13.61	13.63		
10	64QAM	25	0	12.22	12.63	12.73	12.99	13	3
10	64QAM	25	12	12.27	12.63	12.81	13.00		
10	64QAM	25	25	12.22	12.62	12.78	12.90		
10	64QAM	50	0	12.28	12.64	12.78	12.99		
Channel				55265	55810	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3643	3697.5		
5	QPSK	1	0	15.10	15.36	15.50	15.87	16	0
5	QPSK	1	12	14.97	15.26	15.41	15.75		
5	QPSK	1	24	15.04	15.29	15.43	15.80		
5	QPSK	12	0	14.06	14.42	14.64	14.92	15	1
5	QPSK	12	7	14.12	14.49	14.61	14.90		
5	QPSK	12	13	14.08	14.47	14.60	14.86		
5	QPSK	25	0	14.08	14.43	14.57	14.86		
5	16QAM	1	0	14.20	14.51	14.61	14.99	15	1
5	16QAM	1	12	14.20	14.52	14.68	14.92		
5	16QAM	1	24	14.24	14.51	14.66	14.95		
5	16QAM	12	0	13.07	13.47	13.61	13.86	14	2
5	16QAM	12	7	13.10	13.45	13.61	13.90		
5	16QAM	12	13	13.08	13.43	13.56	13.84		
5	16QAM	25	0	13.10	13.45	13.65	13.90		
5	64QAM	1	0	13.02	13.34	13.45	13.77	14	2
5	64QAM	1	12	12.96	13.29	13.41	13.68		
5	64QAM	1	24	13.05	13.35	13.50	13.73		
5	64QAM	12	0	12.11	12.50	12.66	12.92	13	3
5	64QAM	12	7	12.14	12.47	12.67	12.92		
5	64QAM	12	13	12.12	12.46	12.63	12.89		
5	64QAM	25	0	12.13	12.51	12.69	12.92		

<5G FR1 Note>

1. NR implementation of n2, n5, n7, n12, n41 n66 and n71 is limited to EN-DC operations only (NSA), with LTE Bands 2/5/7/12/13/25/26/30/48/66/71 acting as anchor bands, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Following 5G NR support SCS 15 KHz/ 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-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 2 and 3, the CP-OFDM mode will not higher than DFT-s-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-s-Pi/2 BPSK and the reported SAR for the DFT-s-Pi/2 BPSK configuration is ≤ 1.45 W/kg; CP-OFDM measurement is unnecessary.
   b. For DFT-s-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, full measurement on Pi/2 BPSK/QPSK with larger bandwidth, 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 also 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 are 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

<3GPP 38.101 MPR for EN-DC>

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

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

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

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

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

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

<Default Power Mode>

<n2 Main>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	23.66	23.63	23.73	24.0	0.0
20	PI/2 BPSK	1	53	23.80	23.76	23.82		
20	PI/2 BPSK	1	104	23.63	23.58	23.63		
20	PI/2 BPSK	50	0	23.55	23.47	23.35	24.0	0.0
20	PI/2 BPSK	50	28	23.54	23.52	23.57		
20	PI/2 BPSK	50	56	23.56	23.48	23.60		
20	PI/2 BPSK	100	0	23.49	23.48	23.55	23.5	0.5
20	QPSK	1	1	23.49	23.50	23.57	24.0	0.0
20	QPSK	1	53	23.46	23.48	23.55		
20	QPSK	1	104	23.32	23.45	23.49		
20	QPSK	50	0	22.99	23.06	23.11	24.0	0.0
20	QPSK	50	28	23.45	23.49	23.53		
20	QPSK	50	56	23.01	23.04	23.17		
20	QPSK	100	0	23.03	23.08	22.84	23.0	1.0
20	16QAM	1	1	22.60	23.03	23.24	23.0	1.0
20	64QAM	1	1	21.60	21.46	21.40	21.5	2.5
20	256QAM	1	1	19.70	19.72	19.78	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	23.57	23.59	23.66	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	23.46	23.35	23.40	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	23.38	23.30	23.32	24.0	0.0

<n2 MIMO2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	22.29	22.21	22.43	24.0	0.0
20	PI/2 BPSK	1	53	22.36	22.34	22.38		
20	PI/2 BPSK	1	104	22.37	22.53	22.52		
20	PI/2 BPSK	50	0	22.03	22.25	22.00	24.0	0.0
20	PI/2 BPSK	50	28	22.04	22.27	22.05		
20	PI/2 BPSK	50	56	22.05	22.31	22.03		
20	PI/2 BPSK	100	0	21.69	21.76	21.75	23.5	0.5
20	QPSK	1	1	22.42	22.59	22.47	24.0	0.0
20	QPSK	1	53	22.11	22.60	22.19		
20	QPSK	1	104	22.53	22.35	22.61		
20	QPSK	50	0	22.02	22.23	22.07	24.0	0.0
20	QPSK	50	28	22.07	22.30	22.01		
20	QPSK	50	56	22.03	22.29	22.02		
20	QPSK	100	0	22.03	21.86	22.02	23.0	1.0
20	16QAM	1	1	21.35	21.43	21.37	23.0	1.0
20	64QAM	1	1	20.47	20.48	20.44	21.5	2.5
20	256QAM	1	1	18.34	18.37	18.35	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	22.29	22.31	22.03	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	22.05	22.12	21.99	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	22.02	22.06	22.30	24.0	0.0

<n5 Main>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	23.48	23.69	23.54	24.0	0.0
20	PI/2 BPSK	1	53	23.61	23.67	23.58		
20	PI/2 BPSK	1	104	23.46	23.53	23.48		
20	PI/2 BPSK	50	0	23.23	23.29	23.28	24.0	0.0
20	PI/2 BPSK	50	28	23.46	23.56	23.51		
20	PI/2 BPSK	50	56	23.21	23.22	23.14		
20	PI/2 BPSK	100	0	23.22	23.24	23.19	23.5	0.5
20	QPSK	1	1	23.62	23.67	23.67	24.0	0.0
20	QPSK	1	53	23.65	23.72	23.70		
20	QPSK	1	104	23.41	23.46	23.46		
20	QPSK	50	0	22.62	22.63	22.55	24.0	0.0
20	QPSK	50	28	23.42	23.52	23.49		
20	QPSK	50	56	22.60	22.60	22.58		
20	QPSK	100	0	22.58	22.61	22.51	23.0	1.0
20	16QAM	1	1	22.70	22.77	22.73	23.0	1.0
20	64QAM	1	1	21.00	21.03	21.02	21.5	2.5
20	256QAM	1	1	19.11	19.19	19.10	19.5	4.5
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	23.65	23.72	23.61	24.0	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	23.37	23.42	23.34	24.0	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	23.48	23.44	23.28	24.0	0.0

<n7 MIMO2>

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	21.82	21.71	21.58	23.0	0.0
20	PI/2 BPSK	1	53	22.12	22.11	21.73		
20	PI/2 BPSK	1	104	21.68	21.75	21.20		
20	PI/2 BPSK	50	0	21.71	21.76	21.36	23.0	0.0
20	PI/2 BPSK	50	28	21.72	21.78	21.55		
20	PI/2 BPSK	50	56	21.67	21.75	21.53		
20	PI/2 BPSK	100	0	21.70	21.72	21.49	23.0	0.0
20	QPSK	1	1	21.69	21.77	21.79	23.0	0.0
20	QPSK	1	53	21.80	21.87	21.36		
20	QPSK	1	104	21.78	21.79	21.42		
20	QPSK	50	0	21.66	21.71	21.39	23.0	0.0
20	QPSK	50	28	21.74	21.77	21.43		
20	QPSK	50	56	21.59	21.67	21.28		
20	QPSK	100	0	21.68	21.70	21.32	23.0	0.0
20	16QAM	1	1	21.48	21.52	21.17	23.0	0.0
20	64QAM	1	1	20.64	20.65	20.30	21.5	1.5
20	256QAM	1	1	19.45	19.46	19.06	19.5	3.5
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	PI/2 BPSK	1	1	21.80	21.70	21.79	23.0	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	21.83	21.76	21.69	23.0	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	21.72	21.66	21.70	23.0	0.0

<n12 Main>

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	22.27	22.36	22.24	24.0	0.0
15	PI/2 BPSK	1	40	22.08	22.12	22.10		
15	PI/2 BPSK	1	77	21.96	22.03	21.94		
15	PI/2 BPSK	36	0	22.09	22.19	22.15	24.0	0.0
15	PI/2 BPSK	36	22	22.04	22.12	22.05		
15	PI/2 BPSK	36	43	22.04	22.09	22.03		
15	PI/2 BPSK	75	0	22.08	22.13	22.11	23.5	0.5
15	QPSK	1	1	22.26	22.32	22.20	24.0	0.0
15	QPSK	1	40	22.17	22.19	22.13		
15	QPSK	1	77	21.94	22.02	21.92		
15	QPSK	36	0	22.20	22.20	22.20	24.0	0.0
15	QPSK	36	22	22.08	22.17	22.14		
15	QPSK	36	43	21.97	22.06	22.00		
15	QPSK	75	0	21.51	21.55	21.54	23.0	1.0
15	16QAM	1	1	21.82	21.91	21.76	23.0	1.0
15	64QAM	1	1	20.24	20.19	20.20	21.5	2.5
15	256QAM	1	1	18.47	18.42	18.46	19.5	4.5
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	21.96	21.98	21.93	24.0	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	21.97	21.99	21.92	24.0	0.0

<n41 MIMO2>

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	21.84	22.25	22.17	23.0	0.0
100	PI/2 BPSK	1	137	22.07	22.11	22.09		
100	PI/2 BPSK	1	271	21.94	21.81	21.86		
100	PI/2 BPSK	135	0	22.04	22.12	22.22	23.0	0.0
100	PI/2 BPSK	135	69	21.83	21.88	21.91		
100	PI/2 BPSK	135	138	22.51	22.55	22.49		
100	PI/2 BPSK	270	0	22.37	22.42	22.38	22.5	0.5
100	QPSK	1	1	21.39	21.41	21.39	23.0	0.0
100	QPSK	1	137	21.84	21.84	21.39		
100	QPSK	1	271	21.46	21.50	21.74		
100	QPSK	135	0	22.00	22.04	21.98	23.0	0.0
100	QPSK	135	69	22.41	22.43	22.41		
100	QPSK	135	138	22.76	22.79	22.73		
100	QPSK	270	0	21.62	21.65	21.79	22.0	1.0
100	16QAM	1	1	21.85	21.93	21.90	22.0	1.0
100	64QAM	1	1	20.33	20.42	20.39	20.5	2.5
100	256QAM	1	1	18.41	18.43	18.37	18.5	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	21.47	21.97	21.83	23.0	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	21.46	22.10	21.96	23.0	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	21.21	21.81	21.45	23.0	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	21.20	21.84	21.46	23.0	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	21.78	22.37	21.93	23.0	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	21.22	21.63	21.12	23.0	0.0

<n66 Main>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	22.30	22.37	22.30	24.0	0.0
20	PI/2 BPSK	1	53	22.22	21.74	21.92		
20	PI/2 BPSK	1	104	22.26	22.16	22.08		
20	PI/2 BPSK	50	0	22.25	22.32	22.23	24.0	0.0
20	PI/2 BPSK	50	28	22.32	22.32	22.26		
20	PI/2 BPSK	50	56	22.34	22.35	22.28		
20	PI/2 BPSK	100	0	22.27	22.32	22.25	23.5	0.5
20	QPSK	1	1	22.29	22.26	22.29	24.0	0.0
20	QPSK	1	53	21.95	21.95	21.95		
20	QPSK	1	104	22.29	22.29	22.24		
20	QPSK	50	0	21.96	22.06	21.97	24.0	0.0
20	QPSK	50	28	21.86	21.92	21.88		
20	QPSK	50	56	21.77	21.80	21.77		
20	QPSK	100	0	21.17	21.22	21.21	23.0	1.0
20	16QAM	1	1	21.54	21.63	21.55	23.0	1.0
20	64QAM	1	1	20.35	20.39	20.33	21.5	2.5
20	256QAM	1	1	18.35	18.43	18.35	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	21.75	21.81	21.76	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	21.61	21.57	21.57	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	21.48	21.55	21.52	24.0	0.0

<n66 MIMO2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	22.15	23.10	22.55	24.0	0.0
20	PI/2 BPSK	1	53	22.81	22.93	22.88		
20	PI/2 BPSK	1	104	22.39	22.14	22.04		
20	PI/2 BPSK	50	0	22.65	22.66	22.61	24.0	0.0
20	PI/2 BPSK	50	28	22.85	22.86	22.62		
20	PI/2 BPSK	50	56	22.84	22.14	22.07		
20	PI/2 BPSK	100	0	22.82	22.86	22.84	23.5	0.5
20	QPSK	1	1	23.07	22.89	22.81	24.0	0.0
20	QPSK	1	53	23.06	22.97	22.91		
20	QPSK	1	104	22.62	22.37	22.33		
20	QPSK	50	0	22.16	22.21	22.16	24.0	0.0
20	QPSK	50	28	22.22	22.22	22.19		
20	QPSK	50	56	22.57	22.63	22.59		
20	QPSK	100	0	22.63	21.29	21.23	23.0	1.0
20	16QAM	1	1	22.54	22.64	22.63	23.0	1.0
20	64QAM	1	1	21.47	22.12	22.10	21.5	2.5
20	256QAM	1	1	19.43	19.35	19.31	19.5	4.5
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	22.82	22.83	22.72	24.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	22.56	22.81	22.73	24.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	22.62	22.77	22.76	24.0	0.0

<n71 Main>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	22.57	22.43	22.51	24.0	0.0
20	PI/2 BPSK	1	53	22.40	22.42	22.34		
20	PI/2 BPSK	1	104	22.39	22.22	22.13		
20	PI/2 BPSK	50	0	22.44	22.46	22.39	24.0	0.0
20	PI/2 BPSK	50	28	22.37	22.41	22.39		
20	PI/2 BPSK	50	56	22.16	22.25	22.22		
20	PI/2 BPSK	100	0	22.37	22.38	22.36	23.5	0.5
20	QPSK	1	1	22.53	22.37	22.52	24.0	0.0
20	QPSK	1	53	21.47	21.51	21.43		
20	QPSK	1	104	22.19	22.13	22.10		
20	QPSK	50	0	22.41	22.43	22.36	24.0	0.0
20	QPSK	50	28	22.32	22.35	22.35		
20	QPSK	50	56	22.22	22.22	22.18		
20	QPSK	100	0	21.28	21.35	21.25	23.0	1.0
20	16QAM	1	1	21.81	21.64	21.73	23.0	1.0
20	64QAM	1	1	19.56	19.67	19.63	21.5	2.5
20	256QAM	1	1	17.72	17.68	17.63	19.5	4.5
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	22.61	22.36	22.48	24.0	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	22.31	22.15	22.22	24.0	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	22.46	22.27	22.34	24.0	0.0

<Reduced Power Mode>

<n2 Main>

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	12.26	12.22	12.23	14.0	0.0
20	PI/2 BPSK	1	53	12.32	12.34	12.25		
20	PI/2 BPSK	1	104	12.19	12.13	12.22		
20	PI/2 BPSK	50	0	12.13	12.18	12.20	14.0	0.0
20	PI/2 BPSK	50	28	12.15	12.15	12.20		
20	PI/2 BPSK	50	56	12.09	12.19	12.11		
20	PI/2 BPSK	100	0	12.16	12.10	12.18	14.0	0.0
20	QPSK	1	1	12.17	12.29	12.18	14.0	0.0
20	QPSK	1	53	12.22	12.24	12.21		
20	QPSK	1	104	12.01	12.05	12.10		
20	QPSK	50	0	12.11	12.05	12.22	14.0	0.0
20	QPSK	50	28	12.12	12.11	12.15		
20	QPSK	50	56	12.07	12.16	12.18		
20	QPSK	100	0	12.11	12.13	12.14	14.0	0.0
20	16QAM	1	1	12.33	12.37	12.34	14.0	0.0
20	64QAM	1	1	12.35	12.02	12.22	14.0	0.0
20	256QAM	1	1	12.40	12.46	12.26	14.0	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	12.25	12.29	12.28	14.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	12.14	12.13	12.05	14.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	12.16	12.04	12.02	14.0	0.0

<n2 MIMO2>

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	14.54	14.50	14.52	15.5	0.0
20	PI/2 BPSK	1	53	14.66	14.65	14.62		
20	PI/2 BPSK	1	104	14.58	14.50	14.52		
20	PI/2 BPSK	50	0	14.50	14.00	14.45	15.5	0.0
20	PI/2 BPSK	50	28	14.38	14.46	14.41		
20	PI/2 BPSK	50	56	14.54	14.47	14.45		
20	PI/2 BPSK	100	0	14.48	14.00	14.41	15.5	0.0
20	QPSK	1	1	14.55	14.45	14.46	15.5	0.0
20	QPSK	1	53	14.41	14.42	14.34		
20	QPSK	1	104	14.53	14.47	14.39		
20	QPSK	50	0	14.34	14.40	14.39	15.5	0.0
20	QPSK	50	28	14.48	14.43	14.41		
20	QPSK	50	56	14.43	14.50	14.52		
20	QPSK	100	0	14.47	14.45	14.52	15.5	0.0
20	16QAM	1	1	14.40	14.37	14.36	15.5	0.0
20	64QAM	1	1	14.86	14.77	14.82	15.5	0.0
20	256QAM	1	1	14.56	14.54	14.55	15.5	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	14.50	14.46	14.47	15.5	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	14.45	14.43	14.42	15.5	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	14.52	14.47	14.49	15.5	0.0

<n5 Main>

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	14.91	15.10	14.89	16.0	0.0
20	PI/2 BPSK	1	53	14.88	15.11	14.91		
20	PI/2 BPSK	1	104	14.66	14.75	14.68		
20	PI/2 BPSK	50	0	14.75	14.50	14.81	16.0	0.0
20	PI/2 BPSK	50	28	14.78	15.01	14.84		
20	PI/2 BPSK	50	56	14.72	14.87	14.76		
20	PI/2 BPSK	100	0	14.00	14.00	14.00	16.0	0.0
20	QPSK	1	1	15.09	15.02	15.12	16.0	0.0
20	QPSK	1	53	15.00	14.94	14.94		
20	QPSK	1	104	14.62	14.68	14.70		
20	QPSK	50	0	14.91	14.81	14.83	16.0	0.0
20	QPSK	50	28	14.84	14.90	14.99		
20	QPSK	50	56	14.91	14.85	14.85		
20	QPSK	100	0	14.95	15.02	14.97	16.0	0.0
20	16QAM	1	1	14.91	14.86	14.79	16.0	0.0
20	64QAM	1	1	15.30	15.22	15.27	16.0	0.0
20	256QAM	1	1	14.92	14.92	14.94	16.0	0.0
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	14.83	15.08	14.84	16.0	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	14.85	15.02	14.88	16.0	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	14.82	15.05	14.81	16.0	0.0

<n7 MIMO2>

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	8.25	8.47	8.29	9.0	0.0
20	PI/2 BPSK	1	53	8.41	8.48	8.44		
20	PI/2 BPSK	1	104	8.30	8.35	8.37		
20	PI/2 BPSK	50	0	8.36	8.38	8.38	9.0	0.0
20	PI/2 BPSK	50	28	8.26	8.29	8.23		
20	PI/2 BPSK	50	56	8.37	8.32	8.36		
20	PI/2 BPSK	100	0	8.35	8.31	8.37	9.0	0.0
20	QPSK	1	1	8.32	8.34	8.29	9.0	0.0
20	QPSK	1	53	8.56	8.58	8.47		
20	QPSK	1	104	8.34	8.21	8.11		
20	QPSK	50	0	8.28	8.30	8.32	9.0	0.0
20	QPSK	50	28	8.29	8.37	8.40		
20	QPSK	50	56	8.29	8.28	8.34		
20	QPSK	100	0	8.31	8.34	8.30	9.0	0.0
20	16QAM	1	1	8.20	8.18	8.28	9.0	0.0
20	64QAM	1	1	8.34	8.48	8.48	9.0	0.0
20	256QAM	1	1	7.97	8.06	8.08	9.0	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	8.21	8.38	8.19	9.0	0.0
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	PI/2 BPSK	1	1	8.15	8.44	8.27	9.0	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	8.24	8.47	8.19	9.0	0.0

<n12 Main>

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	15.35	15.47	15.33	16.0	0.0
15	PI/2 BPSK	1	40	15.30	15.33	15.24		
15	PI/2 BPSK	1	77	15.32	15.26	15.29		
15	PI/2 BPSK	36	0	15.38	15.30	15.26	16.0	0.0
15	PI/2 BPSK	36	22	15.37	15.29	15.32		
15	PI/2 BPSK	36	43	15.34	15.25	15.31		
15	PI/2 BPSK	75	0	15.01	15.10	15.19	16.0	0.0
15	QPSK	1	1	15.26	15.35	15.33	16.0	0.0
15	QPSK	1	40	15.15	15.21	15.13		
15	QPSK	1	77	15.02	15.00	15.00		
15	QPSK	36	0	15.31	15.30	15.38	16.0	0.0
15	QPSK	36	22	15.26	15.25	15.27		
15	QPSK	36	43	15.08	15.18	15.16		
15	QPSK	75	0	15.32	15.32	15.24	16.0	0.0
15	16QAM	1	1	15.59	15.66	15.65	16.0	0.0
15	64QAM	1	1	15.54	15.46	15.45	16.0	0.0
15	256QAM	1	1	15.43	15.46	15.40	16.0	0.0
Channel				140800	141500	142200	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				704	707.5	711		
10	PI/2 BPSK	1	1	15.34	15.39	15.29	16.0	0.0
Channel				140300	141500	142700	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	PI/2 BPSK	1	1	15.26	15.42	15.28	16.0	0.0

<n41 MIMO2>

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	8.30	8.66	8.97	9.0	0.0
100	PI/2 BPSK	1	137	8.26	8.61	8.96		
100	PI/2 BPSK	1	271	8.26	8.60	8.93		
100	PI/2 BPSK	135	0	8.23	8.59	8.90	9.0	0.0
100	PI/2 BPSK	135	69	8.27	8.56	8.89		
100	PI/2 BPSK	135	138	8.24	8.57	8.87		
100	PI/2 BPSK	270	0	8.26	8.56	8.91	9.0	0.0
100	QPSK	1	1	8.27	8.52	8.89	9.0	0.0
100	QPSK	1	137	8.16	8.52	8.94		
100	QPSK	1	271	8.25	8.60	8.85		
100	QPSK	135	0	8.22	8.51	8.80	9.0	0.0
100	QPSK	135	69	8.18	8.52	8.83		
100	QPSK	135	138	8.17	8.49	8.80		
100	QPSK	270	0	8.27	8.58	8.91	9.0	0.0
100	16QAM	1	1	8.17	8.58	8.89	9.0	0.0
100	64QAM	1	1	8.30	8.66	8.97	9.0	0.0
100	256QAM	1	1	8.24	8.57	8.85	9.0	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	8.18	8.60	8.90	9.0	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	8.21	8.51	8.90	9.0	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	8.19	8.59	8.88	9.0	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	8.22	8.59	8.93	9.0	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	8.19	8.52	8.83	9.0	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	8.20	8.50	8.93	9.0	0.0

<n66 Main>

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	12.12	12.08	11.86	13.5	0.0
20	PI/2 BPSK	1	53	12.15	12.21	12.01		
20	PI/2 BPSK	1	104	12.05	11.95	11.81		
20	PI/2 BPSK	50	0	11.82	11.85	11.78	13.5	0.0
20	PI/2 BPSK	50	28	11.85	11.86	11.77		
20	PI/2 BPSK	50	56	11.84	11.50	11.71		
20	PI/2 BPSK	100	0	11.50	11.50	11.50	13.5	0.0
20	QPSK	1	1	11.91	11.87	11.90	13.5	0.0
20	QPSK	1	53	11.67	11.71	11.70		
20	QPSK	1	104	11.76	11.80	11.74		
20	QPSK	50	0	11.75	11.80	11.82	13.5	0.0
20	QPSK	50	28	11.77	11.70	11.61		
20	QPSK	50	56	11.67	11.77	11.68		
20	QPSK	100	0	11.85	11.75	11.69	13.5	0.0
20	16QAM	1	1	12.28	12.24	12.26	13.5	0.0
20	64QAM	1	1	11.89	11.96	11.91	13.5	0.0
20	256QAM	1	1	12.04	12.04	11.94	13.5	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	12.20	12.02	11.77	13.5	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	12.15	12.05	11.85	13.5	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	12.14	12.01	11.76	13.5	0.0

<n66 MIMO2>

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	12.65	12.77	12.77	14.0	0.0
20	PI/2 BPSK	1	53	12.79	12.73	12.83		
20	PI/2 BPSK	1	104	12.75	12.84	12.81		
20	PI/2 BPSK	50	0	12.71	12.73	12.72	14.0	0.0
20	PI/2 BPSK	50	28	12.64	12.60	12.63		
20	PI/2 BPSK	50	56	12.70	12.50	12.71		
20	PI/2 BPSK	100	0	12.00	12.00	12.00	14.0	0.0
20	QPSK	1	1	12.79	12.89	12.86	14.0	0.0
20	QPSK	1	53	12.52	12.58	12.65		
20	QPSK	1	104	12.69	12.70	12.62		
20	QPSK	50	0	12.56	12.65	12.63	14.0	0.0
20	QPSK	50	28	12.40	12.49	12.47		
20	QPSK	50	56	12.57	12.63	12.54		
20	QPSK	100	0	12.52	12.53	12.46	14.0	0.0
20	16QAM	1	1	13.00	12.97	13.00	14.0	0.0
20	64QAM	1	1	12.75	12.85	12.88	14.0	0.0
20	256QAM	1	1	12.77	12.86	12.87	14.0	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	12.60	12.68	12.68	14.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	12.64	12.77	12.69	14.0	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	12.65	12.71	12.77	14.0	0.0

<n71 Main>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	15.53	15.41	15.47	16.5	0.0
20	PI/2 BPSK	1	53	15.37	15.58	15.47		
20	PI/2 BPSK	1	104	15.42	15.40	15.23		
20	PI/2 BPSK	50	0	15.44	15.00	15.34	16.5	0.0
20	PI/2 BPSK	50	28	15.02	15.45	15.42		
20	PI/2 BPSK	50	56	15.44	15.42	15.39		
20	PI/2 BPSK	100	0	14.50	14.50	14.50	16.5	0.0
20	QPSK	1	1	15.35	15.38	15.41	16.5	0.0
20	QPSK	1	53	15.50	15.50	15.42		
20	QPSK	1	104	15.32	15.35	15.40		
20	QPSK	50	0	15.42	15.38	15.31	16.5	0.0
20	QPSK	50	28	15.55	15.50	15.49		
20	QPSK	50	56	15.28	15.38	15.48		
20	QPSK	100	0	15.48	15.50	15.42	16.5	0.0
20	16QAM	1	1	15.32	15.24	15.25	16.5	0.0
20	64QAM	1	1	15.85	15.77	15.84	16.5	0.0
20	256QAM	1	1	15.37	15.33	15.42	16.5	0.0
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	15.50	15.41	15.41	16.5	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	15.43	15.41	15.41	16.5	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	15.48	15.32	15.44	16.5	0.0

12. DL/UL carrier aggregation

<LTE Carrier Aggregation combinations>

General Note:

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

2CC Downlink Carrier Aggregation					3CC Downlink Carrier Aggregation				
Number	Combination	4X4 MIMO	Restriction	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Restriction	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	4X4 MIMO	Restriction	Covered by Measurement Superset	Covered by Measurement Superset	Combination	4X4 MIMO	Restriction	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					
271	2A-7A-66A-66A			5CC-404					
272	2C-12A-30A								
273	2C-5A-30A								
274	2C-66A-66A								
275	41A-41A-41C								

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								

6CC Downlink Carrier Aggregation				
Number	Combination	4X4 MIMO	Restriction	Covered by Measurement Superset
405	2A-48E-66A			
406	41C-42C-42C			
407	13A-48E-66A			

<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	23.19	23.20
		4	20	1720	20050	QPSK	1	0	17	10	740	5790	23.26	23.33
		4	20	1720	20050	QPSK	1	0	48	20	3609	55830	23.29	23.35
		5	10	829	20450	QPSK	1	0	25	20	1960	8340	23.83	23.85
		5	10	829	20450	QPSK	1	0	38	20	2595	38000	23.76	23.76
		5	10	829	20450	QPSK	1	0	41	20	2593	40620	23.67	23.76
		7	20	2560	21350	QPSK	1	99	42	20	3575	43340	22.15	22.22
		12	10	704	23060	QPSK	1	0	25	20	1960	8340	23.65	23.72
		41	20	2593	40620	QPSK	1	99	48	20	3609	55830	23.76	23.86
Intra-Band	Contiguous	7	15	2562.5	21375	QPSK	1	74	7	5	2691.80	3468	22.21	22.21
		38	20	2595	38000	QPSK	1	99	38	20	2614.80	38198	23.78	23.82

<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	23.05	23.13
	2	20	1860	18700	QPSK	1	0	5	10	881.5	2525	7	20	2655	3100	23.10	23.11
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	7	20	2655	3100	23.28	23.34
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	13	10	751	5230	23.35	23.36
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	71	20	637	68786	23.25	23.30
	4	20	1720	20050	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	23.30	23.40
	5	10	829	20450	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	23.81	23.81
	5	10	829	20450	QPSK	1	0	7	20	2655	3100	7	20	2674.8	3298	23.67	23.76
	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	25	20	1960	8340	23.18	23.22
	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	26	15	876.5	8865	23.11	23.21
	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	41	20	2593	40620	23.16	23.26
	25	20	1880	26340	QPSK	1	0	26	15	876.5	8865	41	20	2593	40620	23.22	23.24
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	71	20	637	68786	21.81	21.82
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	71	20	637	68786	21.86	21.91

<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	23.03	23.10
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	4	5	2112.5	1975	23.16	23.18
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	5	10	881.5	2525	23.04	23.12
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	4	20	2132.5	2175	71	20	637	68786	23.08	23.12
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	12	5	737.5	5095	12	5	731.5	5035	23.14	23.14
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	66	5	2112.5	66461	23.17	23.17
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	66	20	2155	66886	71	20	637	68786	23.14	23.18
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	4	5	2112.5	1975	5	10	881.5	2525	23.17	23.17
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	4	5	2112.5	1975	12	10	737.5	5095	23.04	23.14
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	30	10	9820	2355	23.11	23.20
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	7	5	2622.5	2775	23.09	23.18
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	12	10	737.5	5095	23.10	23.19
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	7	20	2674.8	3298	23.16	23.17
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	12	5	737.5	5095	12	5	731.5	5035	23.16	23.19
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	12	10	737.5	5095	30	10	9820	2355	23.08	23.15
	2	20	1860	18700	QPSK	1	0	4	20	2132.5	2175	12	5	737.5	5095	12	10	744.7	5167	23.14	23.19
	2	20	1860	18700	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	66	20	2174.8	67084	23.13	23.19
	2	20	1860	18700	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	13	10	751	5230	23.09	23.15
	2	20	1860	18700	QPSK	1	0	48	20	3697.5	56715	66	20	2155	66886	66	5	2112.5	66461	23.12	23.16
	2	20	1860	18700	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	71	20	637	68786	23.13	23.19
	2	20	1860	18700	QPSK	1	0	66	20	2155	66886	66	20	2174.8	67084	71	20	637	68786	23.08	23.18
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	5	10	881.5	2525	30	10	9820	2355	23.12	23.19
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	12	10	737.5	5095	30	10	9820	2355	23.11	23.18
	2	20	1860	18700	QPSK	1	0	2	20	1959.8	898	66	20	2155	66886	66	5	2112.5	66461	23.00	23.10
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	5	10	881.5	2525	30	10	9820	2355	23.22	23.30
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	12	5	737.5	5095	12	5	731.5	5035	23.27	23.34
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	12	10	737.5	5095	30	10	9820	2355	23.29	23.35
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	12	5	737.5	5095	12	10	744.7	5167	23.27	23.31
	4	20	1720	20050	QPSK	1	0	48	20	3697.5	56715	48	20	3717.3	56913	48	20	3737.1	57111	23.31	23.34
	5	10	829	20450	QPSK	1	0	5	5	891.5	2625	66	20	2155	66886	66	5	2112.5	66461	23.69	23.78
	5	10	829	20450	QPSK	1	0	5	5	891.5	2625	66	15	2155	66886	66	5	2164.3	66979	23.75	23.78

	5	10	829	20450	QPSK	1	0	5	5	891.5	2625	66	20	2155	66886	66	20	2174.8	67084	23.71	23.78
	5	10	829	20450	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	15	2121.8	66554	23.74	23.79
	5	10	829	20450	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	20	2124.2	66578	23.76	23.81
	5	10	829	20450	QPSK	1	0	66	20	2155	66886	66	20	2174.8	67084	66	20	2194.6	67282	23.74	23.84
	13	10	782	23230	QPSK	1	0	48	20	3697.5	56715	66	15	2155	66886	66	5	2164.3	66979	23.76	23.79
	13	10	782	23230	QPSK	1	0	48	20	3697.5	56715	66	20	2155	66886	66	20	2174.8	67084	23.67	23.70
	13	10	782	23230	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	23.72	23.79
	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	41	20	2593	40620	41	20	2612.8	40818	23.22	23.30
	25	20	1880	26340	QPSK	1	0	26	15	1960	8340	41	20	2593	40620	41	20	2612.8	40818	23.17	23.23
	41	20	2593	40620	QPSK	1	99	41	5	2687.5	41565	41	20	2506	39750	41	20	2525.8	39948	23.80	23.80
	41	20	2593	40620	QPSK	1	99	41	5	2687.5	41565	41	20	2699.2	41682	41	20	2719	41880	23.76	23.81
	41	20	2593	40620	QPSK	1	99	42	20	3575	43340	42	5	3552.5	43115	42	20	3564.2	43232	23.78	23.83
	41	20	2593	40620	QPSK	1	99	42	20	3575	43340	42	20	3594.8	43538	42	20	3614.6	43736	23.74	23.83
	41	20	2593	40620	QPSK	1	99	41	20	2612.8	40818	41	5	2687.5	41565	41	20	2699.2	41682	23.70	23.80
	41	20	2593	40620	QPSK	1	99	41	20	2612.8	40818	41	20	2632.6	41016	42	20	3575	43340	23.73	23.76
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	66	20	2155	66886	66	5	2112.5	66461	21.81	21.83
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	66	15	2155	66886	66	5	2164.3	66979	21.88	21.88
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	66	20	2155	66886	66	20	2174.8	67084	21.84	21.91
	48	20	3641	56150	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	21.86	21.88
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	66	20	2155	66886	66	5	2112.5	66461	21.75	21.83

<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	23.10	23.14
	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	23.10	23.13
	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	23.14	23.17
	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	23.06	23.10
	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	23.05	23.12
	2	20	1860	18700	QPSK	1	0	2	5	1987.5	1175	14	10	763	5330	30	10	2355	9820	66	20	2155	66886	23.06	23.13
	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	23.07	23.16
	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	23.17	23.19
	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	23.12	23.13
	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	23.11	23.14
	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	23.08	23.18
	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	23.11	23.19
	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	23.10	23.11
	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	23.10	23.14
	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	23.14	23.14
	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	23.12	23.18
	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	23.07	23.11
	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	23.10	23.15
	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	23.10	23.14
	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	23.04	23.10
	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	23.08	23.15
	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	23.11	23.18
	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	23.10	23.15
	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	23.09	23.14
	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	23.11	23.14
	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	23.09	23.10
	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	23.18	23.19
	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	23.06	23.12
	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	23.16	23.18
	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	23.13	23.14
	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	23.13	23.13

	2	20	1860	18700	QPSK	1	0	13	10	751	5230	48	20	3609	55830	48	5	3697.5	56715	66	20	2155	66886	23.09	23.12
	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	23.05	23.14
	2	20	1860	18700	QPSK	1	0	13	10	751	5230	48	20	3609	55830	48	20	3628.8	56028	66	20	2155	66886	23.08	23.14
	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	23.04	23.14
	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	23.06	23.13
	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	23.12	23.12
	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	23.05	23.10
	2	20	1860	18700	QPSK	1	0	14	10	763	5330	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	23.08	23.12
	2	20	1860	18700	QPSK	1	0	14	10	763	5330	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	23.13	23.16
	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	23.10	23.14
	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	23.13	23.18
	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	23.12	23.20
	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	23.12	23.18
	4	20	1720	20050	QPSK	1	0	4	5	2152.5	2375	5	10	881.5	2525	5	10	891.4	2624	30	10	2355	9820	23.33	23.36
	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	23.25	23.32
	5	10	829	20450	QPSK	1	0	5	10	883.9	2549	66	20	2155	66886	66	5	2112.5	66461	66	15	2121.8	66554	23.74	23.75
	5	10	829	20450	QPSK	1	0	5	10	883.9	2549	66	20	2155	66886	66	5	2112.5	66461	66	20	2124.2	66578	23.76	23.83
	5	10	829	20450	QPSK	1	0	5	10	883.9	2549	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	23.77	23.81
	5	10	829	20450	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	66	20	2155	66886	23.77	23.77
	5	10	829	20450	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	5	3697.5	56715	48	20	3709.2	56832	23.77	23.84
	5	10	829	20450	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	48	20	3668.4	56424	23.74	23.75
	5	10	829	20450	QPSK	1	0	48	20	3609	55830	48	5	3697.5	56715	48	20	3709.2	56832	48	20	3729	57030	23.71	23.75
	5	10	829	20450	QPSK	1	0	48	20	3609	55830	48	20	3628.8	56028	48	20	3648.6	56226	66	20	2155	66886	23.69	23.79
	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	23.64	23.69
	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	23.67	23.71
	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	23.65	23.71
	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	23.68	23.76
	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	23.71	23.78
	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	23.67	23.77
	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	41	20	2593	40620	41	20	2612.8	40818	41	20	2632.6	41016	23.20	23.26
	25	20	1880	26340	QPSK	1	0	41	20	2593	40620	41	20	2612.8	40818	41	20	2632.6	41016	41	20	2652.4	41214	23.24	23.31
	41	20	2593	40620	QPSK	1	99	41	20	2612.8	40818	41	5	2687.5	41565	41	20	2667.7	41367	41	20	2647.9	41169	23.76	23.78
	41	20	2593	40620	QPSK	1	99	41	20	2612.8	40818	42	20	3575	43340	42	5	3552.5	43115	42	20	3564.2	43232	23.73	23.78
	41	20	2593	40620	QPSK	1	99	41	20	2612.8	40818	41	20	2632.6	41016	42	20	3575	43340	42	20	3594.8	43538	23.75	23.79
	41	20	2593	40620	QPSK	1	99	42	20	3575	43340	42	20	3594.8	43538	42	5	3552.5	43115	42	20	3564.2	43232	23.80	23.86
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	48	20	3564.2	55382	66	15	2155	66886	66	5	2164.3	66979	21.80	21.83
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	48	20	3564.2	55382	66	20	2155	66886	66	20	2174.8	67084	21.82	21.82
	48	20	3641	56150	QPSK	1	0	48	5	3552.5	55265	48	20	3564.2	55382	48	20	3584	55580	66	20	2155	66886	21.85	21.87
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	48	5	3552.5	55265	48	20	3564.2	55382	66	20	2155	66886	21.80	21.86
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	48	5	3552.5	55265	48	20	3564.2	55382	48	20	3584	55580	21.79	21.82
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	66	20	2155	66886	66	5	2112.5	66461	66	20	2190	67236	21.84	21.89
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	48	20	3601.4	55754	48	20	3581.6	55556	66	20	2155	66886	21.79	21.88
	48	20	3641	56150	QPSK	1	0	48	20	3621.2	55952	48	20	3601.4	55754	48	20	3581.6	55556	48	20	3561.8	55358	21.85	21.86

<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	23.19	23.20
	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	23.76	23.79
	41	20	2593	40620	QPSK	1	99	41	20	2612.8	40818	42	20	3575	43340	42	20	3594.8	43538	42	5	3552.5	43115	42	20	3564.2	43232	23.76	23.77

<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.

<Default Power Mode>

CA_5B										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	23.75	24.5
20525	20426	QPSK	1	0	1	49	2	0	23.76	24.5
20600	20501	QPSK	1	0	1	49	2	0	23.68	24.5

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	21.63	23
21100	20902	QPSK	1	0	1	99	2	0	21.7	23
21350	21152	QPSK	1	0	1	99	2	0	21.69	23

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	23.42	24
132322	132229	QPSK	1	0	1	24	2	0	23.21	24
132572	132479	QPSK	1	0	1	24	2	0	23.27	24

CA_66C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	23.37	24
132322	132124	QPSK	1	0	1	99	2	0	23.34	24
132572	132374	QPSK	1	0	1	99	2	0	23.34	24

CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	23.75	24
37901	38099	QPSK	1	0	0	0	1	0	23.76	24
38150	37952	QPSK	1	0	1	99	2	0	23.71	24

CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	23.07	23.5
40185	39987	QPSK	1	0	1	99	2	0	23.33	23.5
40620	40422	QPSK	1	0	1	99	2	0	23.72	23.5
41055	40857	QPSK	1	0	1	99	2	0	23.75	23.5
41490	41292	QPSK	1	0	1	99	2	0	23.57	23.5

CA_48C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	21.88	22
55830	55632	QPSK	1	0	1	99	2	0	21.85	22
56150	55952	QPSK	1	0	1	99	2	0	21.87	22
56640	56442	QPSK	1	0	1	99	2	0	21.78	22

<Reduced Power Mode>

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	17.96	19
20525	20426	QPSK	1	0	1	49	2	0	17.96	19
20600	20501	QPSK	1	0	1	49	2	0	17.93	19

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	14.19	15
21100	20902	QPSK	1	0	1	99	2	0	14.38	15
21350	21152	QPSK	1	0	1	99	2	0	14.73	15

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	15.83	17
132322	132229	QPSK	1	0	1	24	2	0	15.8	17
132572	132479	QPSK	1	0	1	24	2	0	15.75	17

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	15.8	17
132322	132124	QPSK	1	0	1	99	2	0	15.81	17
132572	132374	QPSK	1	0	1	99	2	0	15.75	17

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	17.6	18
37901	38099	QPSK	1	0	0	0	1	0	17.69	18
38150	37952	QPSK	1	0	1	99	2	0	17.66	18

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	17.04	18
40185	39987	QPSK	1	0	1	99	2	0	17.26	18
40620	40422	QPSK	1	0	1	99	2	0	17.73	18
41055	40857	QPSK	1	0	1	99	2	0	17.78	18
41490	41292	QPSK	1	0	1	99	2	0	17.48	18

CA_48C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	16.34	17
55830	55632	QPSK	1	0	1	99	2	0	16.62	17
56150	55952	QPSK	1	0	1	99	2	0	16.72	17
56640	56442	QPSK	1	0	1	99	2	0	16.96	17

13. RF Exposure Conditions

General Note:

1. The detail antenna location please refers to Appendix D.
2. The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
3. Maximum power is the source-based time-average power and represents the maximum RF output power among production units
4. 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.
5. 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.
6. 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
7. 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 Antenna>

	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71/n71	LTE Band 12/17/n12	LTE Band 13	LTE Band 14	LTE Band 26/5/n5	LTE Band 66/4/n66	LTE Band 25/2/n2	LTE Band 30	LTE Band 7	LTE Band 38/41
Exposure Position	Maximum power (dBm)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24	24	23	23	23.5
	Maximum rated power(mW)	282.0	282.0	282.0	282.0	282.0	282.0	282.0	282.0	251.0	251.0	200.0	200.0	224.0
Bottom Face	Separation distance(mm)	5.0												
	exclusion threshold	51.9	74.6	77.9	47.0	47.7	49.9	50.3	51.9	67.0	69.5	60.8	64.1	72.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	5.0												
	exclusion threshold	51.9	74.6	77.9	47.0	47.7	49.9	50.3	51.9	67.0	69.5	60.8	64.1	72.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	15.5												
	exclusion threshold	16.7	24.1	25.1	15.2	15.4	16.1	16.2	16.8	21.6	22.4	19.6	20.7	72.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 3	Separation distance(mm)	220.0												
	exclusion threshold	1122.0	1813.0	1809.0	968.0	988.0	1058.0	1070.0	1124.0	1812.0	1808.0	1799.0	1794.0	1793.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	179.0												
	exclusion threshold	891.0	1403.0	1399.0	778.0	792.0	844.0	853.0	892.0	1402.0	1398.0	1389.0	1384.0	1383.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No

<MIMO2 Antenna>

Exposure Position	Wireless Interface	LTE Band 66/n66	LTE Band 2/n2	LTE Band 7/n7	n38/n41	LTE Band 48
	Calculated Frequency	1779MHz	1909MHz	2567MHz	2617MHz	3698MHz
	Maximum power (dBm)	24	24	23	23	22
	Maximum rated power(mW)	251.0	251.0	200.0	200.0	158.0
Bottom Face	Separation distance(mm)	5.0				
	exclusion threshold	67.0	69.4	64.1	64.7	60.8
	Testing required?	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	222.6				
	exclusion threshold	1838.0	1835.0	1820.0	1819.0	1804.0
	Testing required?	No	No	No	No	No
Edge 2	Separation distance(mm)	213.3				
	exclusion threshold	1745.0	1742.0	1727.0	1726.0	1711.0
	Testing required?	No	No	No	No	No
Edge 3	Separation distance(mm)	5.0				
	exclusion threshold	67.0	69.4	64.1	64.7	60.8
	Testing required?	Yes	Yes	Yes	Yes	Yes
Edge 4	Separation distance(mm)	52.7				
	exclusion threshold	139.0	136.0	121.0	120.0	105.0
	Testing required?	Yes	Yes	Yes	Yes	Yes

14. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   c. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
4. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in sensor trigger distance was performed; 12mm for bottom face of main antenna, 25mm for edge1 of main antenna, 15mm for bottom face of MIMO2 antenna and 22mm for edge3 of MIMO2 antenna. These test results just verification the sensor trigger distance to meet KDB 616217 requirement, when in normal usage will not operate at trigger distance, therefore, these results were not using performed Sim-Tx analysis

UMTS Note:

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

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B12/B26/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B4/B5/B17/B38 SAR test was covered by B12/B26/B66/B41; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
   c. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for 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 are not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   f. For 5G FR1 n2/n5/n7/n12/n41/n66/n71 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

14.1 Body SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	9538	1907.6	15.80	17.00	1.318	0.14	0.729	0.961
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	9262	1852.4	15.75	17.00	1.334	-0.04	0.830	1.107
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	9400	1880	15.78	17.00	1.324	-0.11	0.760	1.006
	WCDMA II_Main	RMC 12.2Kbps	Edge 1	0mm	ON	9538	1907.6	15.80	17.00	1.318	0.07	0.868	1.144
	WCDMA II_Main	RMC 12.2Kbps	Edge 1	0mm	ON	9262	1852.4	15.75	17.00	1.334	0.1	0.701	0.935
01	WCDMA II_Main	RMC 12.2Kbps	Edge 1	0mm	ON	9400	1880	15.78	17.00	1.324	0.09	0.876	1.160
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	12mm	OFF	9262	1852.4	23.94	24.50	1.138	-0.04	0.671	0.763
	WCDMA II_Main	RMC 12.2Kbps	Edge 1	25mm	OFF	9262	1852.4	23.94	24.50	1.138	-0.03	0.057	0.065
	WCDMA II_Main	RMC 12.2Kbps	Edge 2	0mm	OFF	9262	1852.4	23.94	24.50	1.138	0.02	0.576	0.655
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	1413	1732.6	17.00	17.00	1.000	-0.03	0.939	0.939
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	1312	1712.4	17.00	17.00	1.000	-0.09	0.888	0.888
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	1513	1752.6	16.98	17.00	1.005	-0.09	0.906	0.910
	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	0mm	ON	1413	1732.6	17.00	17.00	1.000	0.18	1.180	1.180
02	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	0mm	ON	1312	1712.4	17.00	17.00	1.000	0.15	1.190	1.190
	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	0mm	ON	1513	1752.6	16.98	17.00	1.005	0.12	1.080	1.085
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	12mm	OFF	1513	1752.6	24.14	24.50	1.086	-0.01	0.674	0.732
	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	25mm	OFF	1513	1752.6	24.14	24.50	1.086	-0.19	0.046	0.050
	WCDMA IV_Main	RMC 12.2Kbps	Edge 2	0mm	OFF	1513	1752.6	24.14	24.50	1.086	-0.13	0.790	0.858
	WCDMA IV_Main	RMC 12.2Kbps	Edge 2	0mm	OFF	1312	1712.4	24.08	24.50	1.102	-0.11	0.737	0.812
	WCDMA IV_Main	RMC 12.2Kbps	Edge 2	0mm	OFF	1413	1732.6	24.06	24.50	1.107	-0.12	0.820	0.907
	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	0mm	ON	4233	846.6	16.69	17.50	1.205	-0.12	0.613	0.739
	WCDMA V_Main	RMC 12.2Kbps	Edge 1	0mm	ON	4233	846.6	16.69	17.50	1.205	0.17	0.918	1.106
03	WCDMA V_Main	RMC 12.2Kbps	Edge 1	0mm	ON	4132	826.4	16.15	17.50	1.365	0.13	0.875	1.194
	WCDMA V_Main	RMC 12.2Kbps	Edge 1	0mm	ON	4182	836.4	16.39	17.50	1.291	0.1	0.867	1.119
	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	12mm	OFF	4132	826.4	24.21	24.50	1.069	-0.1	0.607	0.649
	WCDMA V_Main	RMC 12.2Kbps	Edge 1	25mm	OFF	4132	826.4	24.21	24.50	1.069	0.05	0.065	0.069
	WCDMA V_Main	RMC 12.2Kbps	Edge 2	0mm	OFF	4132	826.4	24.21	24.50	1.069	-0.05	0.206	0.220
	WCDMA V_Main	RMC 12.2Kbps	Edge 3	0mm	OFF	4132	826.4	24.21	24.50	1.069	0	0.001	0.001
	WCDMA V_Main	RMC 12.2Kbps	Edge 4	0mm	OFF	4132	826.4	24.21	24.50	1.069	0	0.001	0.001

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_MIMO2	20M	QPSK	1	0	Bottom Face	0mm	ON	18900	1880	14.52	15.50	1.253	-0.09	0.495	0.620
	LTE Band 2_MIMO2	20M	QPSK	50	50	Bottom Face	0mm	ON	18900	1880	14.49	15.50	1.262	0.01	0.488	0.616
	LTE Band 2_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	18900	1880	14.52	15.50	1.253	-0.17	0.537	0.673
04	LTE Band 2_MIMO2	20M	QPSK	1	99	Edge 3	0mm	ON	18700	1860	13.98	15.50	1.419	-0.17	0.489	0.694
	LTE Band 2_MIMO2	20M	QPSK	1	49	Edge 3	0mm	ON	19100	1900	13.62	15.50	1.542	-0.12	0.372	0.574
	LTE Band 2_MIMO2	20M	QPSK	50	50	Edge 3	0mm	ON	18900	1880	14.49	15.50	1.262	0.11	0.526	0.664
	LTE Band 2_MIMO2	20M	QPSK	1	0	Bottom Face	15mm	OFF	19100	1900	23.38	24.00	1.153	-0.06	0.428	0.494
	LTE Band 2_MIMO2	20M	QPSK	50	0	Bottom Face	15mm	OFF	19100	1900	23.34	24.00	1.164	0.15	0.416	0.484
	LTE Band 2_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	19100	1900	23.38	24.00	1.153	-0.1	0.368	0.424
	LTE Band 2_MIMO2	20M	QPSK	50	0	Edge 3	22mm	OFF	19100	1900	23.34	24.00	1.164	0.13	0.359	0.418
	LTE Band 2_MIMO2	20M	QPSK	1	0	Edge 4	0mm	OFF	19100	1900	23.38	24.00	1.153	-0.13	0.332	0.383
	LTE Band 2_MIMO2	20M	QPSK	50	0	Edge 4	0mm	OFF	19100	1900	23.34	24.00	1.164	0.12	0.325	0.378

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	21350	2560	14.96	15.00	1.009	0.1	0.913	0.921
	LTE Band 7_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	20850	2510	14.51	15.00	1.119	-0.15	1.000	1.119
	LTE Band 7_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	21100	2535	14.70	15.00	1.072	0.17	0.957	1.025
	LTE Band 7_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	21100	2535	13.95	14.00	1.012	-0.09	0.801	0.810
	LTE Band 7_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	20850	2510	13.65	14.00	1.084	0.03	0.817	0.886
	LTE Band 7_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	21350	2560	13.94	14.00	1.014	0.11	0.751	0.761
	LTE Band 7_Main	20M	QPSK	100	0	Bottom Face	0mm	ON	21100	2535	13.83	14.00	1.040	0.12	0.779	0.810
	LTE Band 7_Main	20M	QPSK	1	99	Edge 1	0mm	ON	21350	2560	14.96	15.00	1.009	-0.13	0.734	0.741
	LTE Band 7_Main	20M	QPSK	50	50	Edge 1	0mm	ON	21100	2535	13.95	14.00	1.012	-0.18	0.626	0.633
	LTE Band 7_Main	20M	QPSK	1	99	Bottom Face	12mm	OFF	21350	2560	21.32	22.00	1.169	-0.19	0.530	0.620
	LTE Band 7_Main	20M	QPSK	50	50	Bottom Face	12mm	OFF	21350	2560	20.41	21.00	1.146	0.01	0.419	0.480
	LTE Band 7_Main	20M	QPSK	1	99	Edge 1	25mm	OFF	21350	2560	21.32	22.00	1.169	-0.17	0.184	0.215
	LTE Band 7_Main	20M	QPSK	50	50	Edge 1	25mm	OFF	21350	2560	20.41	21.00	1.146	0.12	0.146	0.167
	LTE Band 7_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	21350	2560	21.32	22.00	1.169	-0.05	0.923	1.079
	LTE Band 7_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	20850	2510	20.87	22.00	1.297	-0.08	0.886	1.149
	LTE Band 7_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	21100	2535	21.14	22.00	1.219	-0.08	0.904	1.102
	LTE Band 7_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	21350	2560	20.41	21.00	1.146	0	0.733	0.840
	LTE Band 7_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	20850	2510	19.09	21.00	1.552	-0.09	0.586	0.910
	LTE Band 7_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	21100	2535	20.15	21.00	1.216	-0.06	0.717	0.872
	LTE Band 7_Main	20M	QPSK	100	0	Edge 2	0mm	OFF	21350	2560	20.29	21.00	1.178	0.11	0.721	0.849
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	21350	2560	14.73	15.00	1.064	-0.11	0.970	1.032
	LTE Band 7C_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	21100	2535	21.70	23.00	1.349	0.03	0.840	1.133
	LTE Band 7_MIMO2	20M	QPSK	1	49	Bottom Face	0mm	ON	21350	2560	8.86	9.00	1.033	-0.17	0.436	0.450
	LTE Band 7_MIMO2	20M	QPSK	50	24	Bottom Face	0mm	ON	21350	2560	8.87	9.00	1.030	0.15	0.431	0.444
	LTE Band 7_MIMO2	20M	QPSK	1	49	Edge 3	0mm	ON	21350	2560	8.86	9.00	1.033	-0.12	0.701	0.724
	LTE Band 7_MIMO2	20M	QPSK	50	24	Edge 3	0mm	ON	21350	2560	8.87	9.00	1.030	-0.04	0.690	0.711
	LTE Band 7_MIMO2	20M	QPSK	1	0	Bottom Face	15mm	OFF	20850	2510	22.36	22.50	1.033	-0.14	0.753	0.778
	LTE Band 7_MIMO2	20M	QPSK	50	0	Bottom Face	15mm	OFF	20850	2510	22.26	22.50	1.057	-0.11	0.740	0.782
05	LTE Band 7_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	20850	2510	22.36	22.50	1.033	-0.17	1.160	1.198
	LTE Band 7_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	21100	2535	21.21	22.50	1.346	-0.16	0.851	1.145
	LTE Band 7_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	21350	2560	20.97	22.50	1.422	-0.16	0.790	1.124
	LTE Band 7_MIMO2	20M	QPSK	50	0	Edge 3	22mm	OFF	20850	2510	22.26	22.50	1.057	0.19	1.080	1.141
	LTE Band 7_MIMO2	20M	QPSK	50	0	Edge 3	22mm	OFF	21100	2535	21.11	22.50	1.377	0.03	0.820	1.129
	LTE Band 7_MIMO2	20M	QPSK	50	0	Edge 3	22mm	OFF	21350	2560	20.86	22.50	1.459	-0.02	0.780	1.138
	LTE Band 7_MIMO2	20M	QPSK	100	0	Edge 3	22mm	OFF	20850	2510	22.20	22.50	1.072	0.06	1.070	1.147
	LTE Band 7_MIMO2	20M	QPSK	1	0	Edge 4	0mm	OFF	20850	2510	22.36	22.50	1.033	-0.17	0.339	0.350
	LTE Band 7_MIMO2	20M	QPSK	50	0	Edge 4	0mm	OFF	20850	2510	22.26	22.50	1.057	-0.05	0.326	0.345
	LTE Band 12_Main	10M	QPSK	1	49	Bottom Face	0mm	ON	23095	707.5	17.61	18.50	1.227	-0.05	0.268	0.329
	LTE Band 12_Main	10M	QPSK	25	0	Bottom Face	0mm	ON	23095	707.5	16.76	17.50	1.186	0.15	0.217	0.257
06	LTE Band 12_Main	10M	QPSK	1	49	Edge 1	0mm	ON	23095	707.5	17.61	18.50	1.227	0.07	0.925	1.135
	LTE Band 12_Main	10M	QPSK	25	0	Edge 1	0mm	ON	23095	707.5	16.76	17.50	1.186	0.16	0.759	0.900
	LTE Band 12_Main	10M	QPSK	50	0	Edge 1	0mm	ON	23095	707.5	16.75	17.50	1.189	-0.07	0.751	0.893
	LTE Band 12_Main	10M	QPSK	1	0	Bottom Face	12mm	OFF	23095	707.5	23.50	24.50	1.259	-0.11	0.055	0.069
	LTE Band 12_Main	10M	QPSK	25	0	Bottom Face	12mm	OFF	23095	707.5	22.77	23.50	1.183	0.06	0.046	0.054
	LTE Band 12_Main	10M	QPSK	1	0	Edge 1	25mm	OFF	23095	707.5	23.50	24.50	1.259	0.04	0.182	0.229
	LTE Band 12_Main	10M	QPSK	25	0	Edge 1	25mm	OFF	23095	707.5	22.77	23.50	1.183	0.17	0.148	0.175
	LTE Band 12_Main	10M	QPSK	1	0	Edge 2	0mm	OFF	23095	707.5	23.50	24.50	1.259	-0.14	0.200	0.252
	LTE Band 12_Main	10M	QPSK	25	0	Edge 2	0mm	OFF	23095	707.5	22.77	23.50	1.183	0.07	0.153	0.181
	LTE Band 12_Main	10M	QPSK	1	0	Edge 3	0mm	OFF	23095	707.5	23.50	24.50	1.259	0.17	0.056	0.070
	LTE Band 12_Main	10M	QPSK	25	0	Edge 3	0mm	OFF	23095	707.5	22.77	23.50	1.183	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	1	0	Edge 4	0mm	OFF	23095	707.5	23.50	24.50	1.259	-0.07	0.060	0.076
	LTE Band 12_Main	10M	QPSK	25	0	Edge 4	0mm	OFF	23095	707.5	22.77	23.50	1.183	0	0.048	0.057

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_Main	10M	QPSK	1	25	Bottom Face	0mm	ON	23230	782	18.51	19.50	1.256	-0.15	0.804	1.010
	LTE Band 13_Main	10M	QPSK	25	12	Bottom Face	0mm	ON	23230	782	17.62	18.50	1.225	0.06	0.651	0.797
	LTE Band 13_Main	10M	QPSK	50	0	Bottom Face	0mm	ON	23230	782	17.48	18.50	1.265	0.03	0.629	0.796
07	LTE Band 13_Main	10M	QPSK	1	25	Edge 1	0mm	ON	23230	782	18.51	19.50	1.256	0.09	0.943	1.184
	LTE Band 13_Main	10M	QPSK	25	12	Edge 1	0mm	ON	23230	782	17.62	18.50	1.225	-0.13	0.761	0.932
	LTE Band 13_Main	10M	QPSK	50	0	Edge 1	0mm	ON	23230	782	17.48	18.50	1.265	0.08	0.741	0.937
	LTE Band 13_Main	10M	QPSK	1	0	Bottom Face	12mm	OFF	23230	782	23.79	24.50	1.178	-0.16	0.124	0.146
	LTE Band 13_Main	10M	QPSK	25	0	Bottom Face	12mm	OFF	23230	782	22.90	23.50	1.148	0.12	0.097	0.111
	LTE Band 13_Main	10M	QPSK	1	0	Edge 1	25mm	OFF	23230	782	23.79	24.50	1.178	0.05	0.373	0.439
	LTE Band 13_Main	10M	QPSK	25	0	Edge 1	25mm	OFF	23230	782	22.90	23.50	1.148	0.01	0.317	0.364
	LTE Band 13_Main	10M	QPSK	1	0	Edge 2	0mm	OFF	23230	782	23.79	24.50	1.178	0	0.288	0.339
	LTE Band 13_Main	10M	QPSK	25	0	Edge 2	0mm	OFF	23230	782	22.90	23.50	1.148	0.03	0.236	0.271
	LTE Band 13_Main	10M	QPSK	1	0	Edge 3	0mm	OFF	23230	782	23.79	24.50	1.178	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	25	0	Edge 3	0mm	OFF	23230	782	22.90	23.50	1.148	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	1	0	Edge 4	0mm	OFF	23230	782	23.79	24.50	1.178	0.16	0.078	0.092
	LTE Band 13_Main	10M	QPSK	25	0	Edge 4	0mm	OFF	23230	782	22.90	23.50	1.148	-0.1	0.065	0.075
	LTE Band 14_Main	10M	QPSK	1	0	Bottom Face	0mm	ON	23330	793	18.48	19.50	1.265	-0.13	0.816	1.032
	LTE Band 14_Main	10M	QPSK	25	25	Bottom Face	0mm	ON	23330	793	17.56	18.50	1.242	0.04	0.657	0.816
	LTE Band 14_Main	10M	QPSK	50	0	Bottom Face	0mm	ON	23330	793	17.51	18.50	1.256	0.05	0.649	0.815
08	LTE Band 14_Main	10M	QPSK	1	0	Edge 1	0mm	ON	23330	793	18.48	19.50	1.265	0.05	0.933	1.180
	LTE Band 14_Main	10M	QPSK	25	25	Edge 1	0mm	ON	23330	793	17.56	18.50	1.242	-0.1	0.751	0.932
	LTE Band 14_Main	10M	QPSK	50	0	Edge 1	0mm	ON	23330	793	17.51	18.50	1.256	-0.13	0.741	0.931
	LTE Band 14_Main	10M	QPSK	1	0	Bottom Face	12mm	OFF	23330	793	23.79	24.50	1.178	-0.16	0.121	0.142
	LTE Band 14_Main	10M	QPSK	25	0	Bottom Face	12mm	OFF	23330	793	22.75	23.50	1.189	0.01	0.093	0.111
	LTE Band 14_Main	10M	QPSK	1	0	Edge 1	25mm	OFF	23330	793	23.79	24.50	1.178	0.15	0.397	0.468
	LTE Band 14_Main	10M	QPSK	25	0	Edge 1	25mm	OFF	23330	793	22.75	23.50	1.189	0.06	0.312	0.371
	LTE Band 14_Main	10M	QPSK	1	0	Edge 2	0mm	OFF	23330	793	23.79	24.50	1.178	0.15	0.287	0.338
	LTE Band 14_Main	10M	QPSK	25	0	Edge 2	0mm	OFF	23330	793	22.75	23.50	1.189	-0.16	0.231	0.275
	LTE Band 14_Main	10M	QPSK	1	0	Edge 3	0mm	OFF	23330	793	23.79	24.50	1.178	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	25	0	Edge 3	0mm	OFF	23330	793	22.75	23.50	1.189	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	1	0	Edge 4	0mm	OFF	23330	793	23.79	24.50	1.178	-0.1	0.080	0.094
	LTE Band 14_Main	10M	QPSK	25	0	Edge 4	0mm	OFF	23330	793	22.75	23.50	1.189	0.13	0.062	0.074
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	26590	1905	16.28	17.00	1.180	-0.12	0.759	0.896
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	26140	1860	16.18	17.00	1.208	-0.1	0.919	1.110
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	26340	1880	16.15	17.00	1.216	-0.14	0.865	1.052
	LTE Band 25_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	26590	1905	15.43	16.00	1.140	0.12	0.617	0.704
	LTE Band 25_Main	20M	QPSK	100	0	Bottom Face	0mm	ON	26590	1905	15.38	16.00	1.153	0.11	0.611	0.705
	LTE Band 25_Main	20M	QPSK	1	0	Edge 1	0mm	ON	26590	1905	16.28	17.00	1.180	0.17	0.937	1.106
	LTE Band 25_Main	20M	QPSK	1	0	Edge 1	0mm	ON	26140	1860	16.18	17.00	1.208	0.14	0.923	1.115
09	LTE Band 25_Main	20M	QPSK	1	0	Edge 1	0mm	ON	26340	1880	16.15	17.00	1.216	0.19	0.962	1.170
	LTE Band 25_Main	20M	QPSK	50	50	Edge 1	0mm	ON	26590	1905	15.43	16.00	1.140	0.18	0.766	0.873
	LTE Band 25_Main	20M	QPSK	50	50	Edge 1	0mm	ON	26140	1860	15.28	16.00	1.180	-0.14	0.744	0.878
	LTE Band 25_Main	20M	QPSK	50	50	Edge 1	0mm	ON	26340	1880	15.35	16.00	1.161	0.06	0.798	0.927
	LTE Band 25_Main	20M	QPSK	100	0	Edge 1	0mm	ON	26590	1905	15.38	16.00	1.153	-0.13	0.755	0.871
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	12mm	OFF	26340	1880	23.31	24.00	1.172	-0.11	0.576	0.675
	LTE Band 25_Main	20M	QPSK	50	0	Bottom Face	12mm	OFF	26340	1880	22.28	23.00	1.180	-0.09	0.449	0.530
	LTE Band 25_Main	20M	QPSK	1	0	Edge 1	25mm	OFF	26340	1880	23.31	24.00	1.172	-0.1	0.259	0.304
	LTE Band 25_Main	20M	QPSK	50	0	Edge 1	25mm	OFF	26340	1880	22.28	23.00	1.180	0.17	0.207	0.244
	LTE Band 25_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	26340	1880	23.31	24.00	1.172	0.13	0.616	0.722
	LTE Band 25_Main	20M	QPSK	50	0	Edge 2	0mm	OFF	26340	1880	22.28	23.00	1.180	-0.13	0.481	0.568

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Main	15M	QPSK	1	0	Bottom Face	0mm	ON	26865	831.5	18.01	19.00	1.256	-0.13	0.782	0.982
	LTE Band 26_Main	15M	QPSK	36	0	Bottom Face	0mm	ON	26865	831.5	17.22	18.00	1.197	0.15	0.649	0.777
	LTE Band 26_Main	15M	QPSK	75	0	Bottom Face	0mm	ON	26865	831.5	16.99	18.00	1.262	-0.12	0.611	0.771
10	LTE Band 26_Main	15M	QPSK	1	0	Edge 1	0mm	ON	26865	831.5	18.01	19.00	1.256	0.04	0.940	1.181
	LTE Band 26_Main	15M	QPSK	36	0	Edge 1	0mm	ON	26865	831.5	17.22	18.00	1.197	-0.02	0.777	0.930
	LTE Band 26_Main	15M	QPSK	75	0	Edge 1	0mm	ON	26865	831.5	16.99	18.00	1.262	-0.08	0.729	0.920
	LTE Band 26_Main	15M	QPSK	1	0	Bottom Face	12mm	OFF	26865	831.5	23.92	24.50	1.143	-0.13	0.121	0.138
	LTE Band 26_Main	15M	QPSK	36	0	Bottom Face	12mm	OFF	26865	831.5	23.09	23.50	1.099	0.04	0.096	0.106
	LTE Band 26_Main	15M	QPSK	1	0	Edge 1	25mm	OFF	26865	831.5	23.92	24.50	1.143	0.09	0.361	0.413
	LTE Band 26_Main	15M	QPSK	36	0	Edge 1	25mm	OFF	26865	831.5	23.09	23.50	1.099	-0.13	0.292	0.321
	LTE Band 26_Main	15M	QPSK	1	0	Edge 2	0mm	OFF	26865	831.5	23.92	24.50	1.143	0.14	0.206	0.235
	LTE Band 26_Main	15M	QPSK	36	0	Edge 2	0mm	OFF	26865	831.5	23.09	23.50	1.099	0.03	0.160	0.176
	LTE Band 26_Main	15M	QPSK	1	0	Edge 3	0mm	OFF	26865	831.5	23.92	24.50	1.143	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	36	0	Edge 3	0mm	OFF	26865	831.5	23.09	23.50	1.099	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	1	0	Edge 4	0mm	OFF	26865	831.5	23.92	24.50	1.143	-0.02	0.041	0.047
	LTE Band 26_Main	15M	QPSK	36	0	Edge 4	0mm	OFF	26865	831.5	23.09	23.50	1.099	-0.13	0.001	0.001
	LTE Band 5B_Main	10M	QPSK	1	0	Edge 1	0mm	ON	20525	836.5	17.96	19.00	1.271	-0.02	0.920	1.169
	LTE Band 5B_Main	10M	QPSK	1	0	Edge 1	25mm	OFF	20525	836.5	23.76	24.50	1.186	0.06	0.341	0.404
11	LTE Band 30_Main	10M	QPSK	1	0	Bottom Face	0mm	ON	27710	2310	13.23	14.00	1.194	0.02	0.963	1.150
	LTE Band 30_Main	10M	QPSK	25	25	Bottom Face	0mm	ON	27710	2310	12.33	13.00	1.167	0.14	0.779	0.909
	LTE Band 30_Main	10M	QPSK	50	0	Bottom Face	0mm	ON	27710	2310	12.23	13.00	1.194	0.17	0.761	0.909
	LTE Band 30_Main	10M	QPSK	1	0	Edge 1	0mm	ON	27710	2310	13.23	14.00	1.194	-0.12	0.892	1.065
	LTE Band 30_Main	10M	QPSK	25	25	Edge 1	0mm	ON	27710	2310	12.33	13.00	1.167	-0.09	0.721	0.841
	LTE Band 30_Main	10M	QPSK	50	0	Edge 1	0mm	ON	27710	2310	12.23	13.00	1.194	0.15	0.706	0.843
	LTE Band 30_Main	10M	QPSK	1	49	Bottom Face	12mm	OFF	27710	2310	21.42	23.00	1.439	-0.05	0.400	0.576
	LTE Band 30_Main	10M	QPSK	25	25	Bottom Face	12mm	OFF	27710	2310	20.56	22.00	1.393	-0.08	0.324	0.451
	LTE Band 30_Main	10M	QPSK	1	49	Edge 1	25mm	OFF	27710	2310	21.42	23.00	1.439	-0.16	0.172	0.247
	LTE Band 30_Main	10M	QPSK	25	25	Edge 1	25mm	OFF	27710	2310	20.56	22.00	1.393	-0.01	0.142	0.198
	LTE Band 30_Main	10M	QPSK	1	49	Edge 2	0mm	OFF	27710	2310	21.42	23.00	1.439	-0.06	0.589	0.847
	LTE Band 30_Main	10M	QPSK	25	25	Edge 2	0mm	OFF	27710	2310	20.56	22.00	1.393	0.08	0.479	0.667

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	132072	1720	15.86	17.00	1.300	-0.02	0.667	0.867
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	132322	1745	15.83	17.00	1.309	-0.19	0.623	0.816
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	132572	1770	15.79	17.00	1.321	-0.07	0.684	0.904
	LTE Band 66_Main	20M	QPSK	50	24	Bottom Face	0mm	ON	132072	1720	14.95	16.00	1.274	0.18	0.539	0.686
	LTE Band 66_Main	20M	QPSK	100	0	Bottom Face	0mm	ON	132072	1720	14.89	16.00	1.291	-0.06	0.528	0.682
12	LTE Band 66_Main	20M	QPSK	1	0	Edge 1	0mm	ON	132072	1720	15.86	17.00	1.300	0.06	0.910	1.183
	LTE Band 66_Main	20M	QPSK	1	0	Edge 1	0mm	ON	132322	1745	15.83	17.00	1.309	0.03	0.874	1.144
	LTE Band 66_Main	20M	QPSK	1	0	Edge 1	0mm	ON	132572	1770	15.79	17.00	1.321	0.07	0.801	1.058
	LTE Band 66_Main	20M	QPSK	50	24	Edge 1	0mm	ON	132072	1720	14.95	16.00	1.274	0.13	0.735	0.936
	LTE Band 66_Main	20M	QPSK	50	24	Edge 1	0mm	ON	132322	1745	14.95	16.00	1.274	-0.04	0.709	0.903
	LTE Band 66_Main	20M	QPSK	50	24	Edge 1	0mm	ON	132572	1770	14.90	16.00	1.288	0.03	0.648	0.835
	LTE Band 66_Main	20M	QPSK	100	0	Edge 1	0mm	ON	132072	1720	14.89	16.00	1.291	0.03	0.721	0.931
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	12mm	OFF	132322	1745	23.43	24.00	1.140	-0.06	0.523	0.596
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	12mm	OFF	132322	1745	22.52	23.00	1.117	0.04	0.219	0.245
	LTE Band 66_Main	20M	QPSK	1	0	Edge 1	25mm	OFF	132322	1745	23.43	24.00	1.140	0.05	0.218	0.249
	LTE Band 66_Main	20M	QPSK	50	0	Edge 1	25mm	OFF	132322	1745	22.52	23.00	1.117	-0.07	0.180	0.201
	LTE Band 66_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	132322	1745	23.43	24.00	1.140	0.06	0.675	0.770
	LTE Band 66_Main	20M	QPSK	50	0	Edge 2	0mm	OFF	132322	1745	22.52	23.00	1.117	0.16	0.541	0.604
	LTE Band 66B_Main	15M	QPSK	1	0	Edge 1	0mm	ON	132047	1717.5	15.83	17.00	1.309	0.02	0.880	1.152
	LTE Band 66B_Main	15M	QPSK	1	0	Edge 2	0mm	OFF	132047	1717.5	23.42	24.00	1.143	-0.02	0.661	0.755
	LTE Band 66C_Main	20M	QPSK	1	99	Edge 1	0mm	ON	132322	1745	15.81	17.00	1.315	0.09	0.870	1.144
	LTE Band 66C_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	132072	1720	23.37	24.00	1.156	-0.11	0.649	0.750
	LTE Band 66_MIMO2	20M	QPSK	1	0	Bottom Face	0mm	ON	132322	1745	14.43	15.00	1.140	-0.16	0.544	0.620
	LTE Band 66_MIMO2	20M	QPSK	50	0	Bottom Face	0mm	ON	132322	1745	14.39	15.00	1.151	0.09	0.532	0.612
	LTE Band 66_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	132322	1745	14.43	15.00	1.140	0.18	0.545	0.621
	LTE Band 66_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	132072	1720	14.11	15.00	1.227	-0.14	0.415	0.509
	LTE Band 66_MIMO2	20M	QPSK	1	49	Edge 3	0mm	ON	132572	1770	14.05	15.00	1.245	0.14	0.576	0.717
	LTE Band 66_MIMO2	20M	QPSK	50	0	Edge 3	0mm	ON	132322	1745	14.39	15.00	1.151	0.04	0.532	0.612
	LTE Band 66_MIMO2	20M	QPSK	1	0	Bottom Face	15mm	OFF	132072	1720	23.53	24.00	1.114	0.01	0.397	0.442
	LTE Band 66_MIMO2	20M	QPSK	50	0	Bottom Face	15mm	OFF	132072	1720	23.50	24.00	1.122	-0.04	0.387	0.434
	LTE Band 66_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	132072	1720	23.53	24.00	1.114	0.19	0.322	0.359
	LTE Band 66_MIMO2	20M	QPSK	50	0	Edge 3	22mm	OFF	132072	1720	23.50	24.00	1.122	-0.17	0.321	0.360
	LTE Band 66_MIMO2	20M	QPSK	1	0	Edge 4	0mm	OFF	132072	1720	23.53	24.00	1.114	-0.18	0.521	0.581
	LTE Band 66_MIMO2	20M	QPSK	50	0	Edge 4	0mm	OFF	132072	1720	23.50	24.00	1.122	-0.09	0.510	0.572
	LTE Band 71_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	133322	683	18.46	19.00	1.132	0.01	0.255	0.289
13	LTE Band 71_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	133322	683	17.61	18.00	1.094	0.17	0.205	0.224
	LTE Band 71_Main	20M	QPSK	1	99	Edge 1	0mm	ON	133322	683	18.46	19.00	1.132	0.06	0.965	1.093
	LTE Band 71_Main	20M	QPSK	50	50	Edge 1	0mm	ON	133322	683	17.61	18.00	1.094	0.06	0.788	0.862
	LTE Band 71_Main	20M	QPSK	100	0	Edge 1	0mm	ON	133322	683	17.49	18.00	1.125	0.02	0.761	0.856
	LTE Band 71_Main	20M	QPSK	1	0	Bottom Face	12mm	OFF	133322	683	23.80	24.50	1.175	-0.13	0.060	0.070
	LTE Band 71_Main	20M	QPSK	50	0	Bottom Face	12mm	OFF	133322	683	22.93	23.50	1.140	0.15	0.047	0.054
	LTE Band 71_Main	20M	QPSK	1	0	Edge 1	25mm	OFF	133322	683	23.80	24.50	1.175	-0.03	0.169	0.199
	LTE Band 71_Main	20M	QPSK	50	0	Edge 1	25mm	OFF	133322	683	22.93	23.50	1.140	0.16	0.134	0.153
	LTE Band 71_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	133322	683	23.80	24.50	1.175	-0.17	0.261	0.307
	LTE Band 71_Main	20M	QPSK	50	0	Edge 2	0mm	OFF	133322	683	22.93	23.50	1.140	0.17	0.205	0.234
	LTE Band 71_Main	20M	QPSK	1	0	Edge 3	0mm	OFF	133322	683	23.80	24.50	1.175	-0.07	0.072	0.085
	LTE Band 71_Main	20M	QPSK	50	0	Edge 3	0mm	OFF	133322	683	22.93	23.50	1.140	-0.07	0.061	0.070
	LTE Band 71_Main	20M	QPSK	1	0	Edge 4	0mm	OFF	133322	683	23.80	24.50	1.175	0.12	0.086	0.101
	LTE Band 71_Main	20M	QPSK	50	0	Edge 4	0mm	OFF	133322	683	22.93	23.50	1.140	0.07	0.070	0.080

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	40620	2593	16.81	18.00	1.315	62.9	1.006	-0.14	0.801	1.060
	LTE Band 41_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	39750	2506	16.15	18.00	1.531	62.9	1.006	-0.09	0.700	1.078
	LTE Band 41_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	40185	2549.5	16.59	18.00	1.384	62.9	1.006	-0.09	0.747	1.040
	LTE Band 41_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	41055	2636.5	16.80	18.00	1.318	62.9	1.006	-0.07	0.782	1.037
	LTE Band 41_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	41490	2680	16.49	18.00	1.416	62.9	1.006	-0.15	0.761	1.084
	LTE Band 41_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	40620	2593	15.94	17.00	1.276	62.9	1.006	0.04	0.658	0.845
	LTE Band 41_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	39750	2506	15.32	17.00	1.472	62.9	1.006	-0.12	0.635	0.941
	LTE Band 41_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	40185	2549.5	15.72	17.00	1.343	62.9	1.006	-0.14	0.611	0.825
	LTE Band 41_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	41055	2636.5	15.93	17.00	1.279	62.9	1.006	0.07	0.686	0.883
	LTE Band 41_Main	20M	QPSK	50	50	Bottom Face	0mm	ON	41490	2680	15.71	17.00	1.346	62.9	1.006	-0.15	0.701	0.949
	LTE Band 41_Main	20M	QPSK	100	0	Bottom Face	0mm	ON	40620	2593	15.94	17.00	1.276	62.9	1.006	0.05	0.655	0.841
	LTE Band 41_Main	20M	QPSK	1	99	Edge 1	0mm	ON	40620	2593	16.81	18.00	1.315	62.9	1.006	-0.15	0.758	1.003
	LTE Band 41_Main	20M	QPSK	1	99	Edge 1	0mm	ON	39750	2506	16.15	18.00	1.531	62.9	1.006	0.05	0.674	1.038
	LTE Band 41_Main	20M	QPSK	1	99	Edge 1	0mm	ON	40185	2549.5	16.59	18.00	1.384	62.9	1.006	0.03	0.725	1.009
	LTE Band 41_Main	20M	QPSK	1	99	Edge 1	0mm	ON	41055	2636.5	16.80	18.00	1.318	62.9	1.006	0.04	0.735	0.975
	LTE Band 41_Main	20M	QPSK	1	99	Edge 1	0mm	ON	41490	2680	16.49	18.00	1.416	62.9	1.006	0.1	0.729	1.038
	LTE Band 41_Main	20M	QPSK	50	50	Edge 1	0mm	ON	40620	2593	15.94	17.00	1.276	62.9	1.006	-0.02	0.638	0.819
	LTE Band 41_Main	20M	QPSK	50	50	Edge 1	0mm	ON	39750	2506	15.32	17.00	1.472	62.9	1.006	0.01	0.611	0.905
	LTE Band 41_Main	20M	QPSK	50	50	Edge 1	0mm	ON	40185	2549.5	15.72	17.00	1.343	62.9	1.006	-0.1	0.589	0.796
	LTE Band 41_Main	20M	QPSK	50	50	Edge 1	0mm	ON	41055	2636.5	15.93	17.00	1.279	62.9	1.006	-0.07	0.641	0.825
	LTE Band 41_Main	20M	QPSK	50	50	Edge 1	0mm	ON	41490	2680	15.71	17.00	1.346	62.9	1.006	0.18	0.671	0.908
	LTE Band 41_Main	20M	QPSK	100	0	Edge 1	0mm	ON	40620	2593	15.94	17.00	1.276	62.9	1.006	-0.13	0.622	0.799
	LTE Band 41_Main	20M	QPSK	1	99	Bottom Face	12mm	OFF	40620	2593	22.86	23.50	1.159	62.9	1.006	-0.06	0.426	0.497
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	12mm	OFF	40620	2593	21.99	22.50	1.125	62.9	1.006	0.09	0.346	0.391
	LTE Band 41_Main	20M	QPSK	1	99	Edge 1	25mm	OFF	40620	2593	22.86	23.50	1.159	62.9	1.006	-0.03	0.164	0.191
	LTE Band 41_Main	20M	QPSK	50	0	Edge 1	25mm	OFF	40620	2593	21.99	22.50	1.125	62.9	1.006	-0.06	0.127	0.144
	LTE Band 41_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	40620	2593	22.86	23.50	1.159	62.9	1.006	0.08	0.807	0.941
	LTE Band 41_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	39750	2506	22.20	23.50	1.349	62.9	1.006	0.04	0.692	0.939
	LTE Band 41_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	40185	2549.5	22.65	23.50	1.216	62.9	1.006	0.13	0.768	0.940
	LTE Band 41_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	41055	2636.5	22.85	23.50	1.161	62.9	1.006	0.08	0.802	0.937
	LTE Band 41_Main	20M	QPSK	1	99	Edge 2	0mm	OFF	41490	2680	22.60	23.50	1.230	62.9	1.006	0.1	0.760	0.941
	LTE Band 41_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	40620	2593	21.99	22.50	1.125	62.9	1.006	0	0.658	0.744
	LTE Band 41_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	39750	2506	21.35	22.50	1.303	62.9	1.006	0.14	0.581	0.762
	LTE Band 41_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	40185	2549.5	21.73	22.50	1.194	62.9	1.006	-0.02	0.644	0.774
	LTE Band 41_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	41055	2636.5	21.98	22.50	1.127	62.9	1.006	-0.19	0.749	0.849
	LTE Band 41_Main	20M	QPSK	50	50	Edge 2	0mm	OFF	41490	2680	21.76	22.50	1.186	62.9	1.006	0.15	0.735	0.877
	LTE Band 41_Main	20M	QPSK	100	0	Edge 2	0mm	OFF	40620	2593	21.92	22.50	1.143	62.9	1.006	-0.04	0.645	0.742
	LTE Band 41_HPUE_Main	20M	QPSK	1	99	Bottom Face	0mm	ON	41490	2680	20.17	21.00	1.211	42.9	1.009	-0.01	0.875	1.069
14	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	41490	2680	25.46	26.50	1.271	42.9	1.009	0.03	0.904	1.159
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom Face	0mm	ON	41055	2636.5	16.78	18.00	1.324	62.9	1.006	0.15	0.802	1.068
	LTE Band 41C_Main	20M	QPSK	1	0	Edge 2	0mm	OFF	41055	2636.5	22.75	23.50	1.189	62.9	1.006	-0.06	0.700	0.837

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 48_MIMO2	20M	QPSK	1	0	Bottom Face	0mm	ON	56640	3690	16.00	16.00	1.000	62.9	1.006	0.08	0.705	0.709
	LTE Band 48_MIMO2	20M	QPSK	1	0	Bottom Face	0mm	ON	55340	3560	15.36	16.00	1.159	62.9	1.006	-0.11	0.581	0.677
	LTE Band 48_MIMO2	20M	QPSK	1	0	Bottom Face	0mm	ON	55830	3609	15.62	16.00	1.091	62.9	1.006	0.05	0.603	0.662
	LTE Band 48_MIMO2	20M	QPSK	1	0	Bottom Face	0mm	ON	56150	3641	15.76	16.00	1.057	62.9	1.006	-0.03	0.649	0.690
	LTE Band 48_MIMO2	20M	QPSK	50	50	Bottom Face	0mm	ON	56640	3690	15.00	15.00	1.000	62.9	1.006	-0.16	0.558	0.561
	LTE Band 48_MIMO2	20M	QPSK	100	0	Bottom Face	0mm	ON	56640	3690	14.96	15.00	1.009	62.9	1.006	-0.18	0.551	0.559
	LTE Band 48_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	56640	3690	16.00	16.00	1.000	62.9	1.006	-0.01	0.958	0.964
15	LTE Band 48_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	55340	3560	15.36	16.00	1.159	62.9	1.006	-0.07	0.859	1.001
	LTE Band 48_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	55830	3609	15.62	16.00	1.091	62.9	1.006	-0.08	0.889	0.976
	LTE Band 48_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	56150	3641	15.76	16.00	1.057	62.9	1.006	-0.08	0.924	0.982
	LTE Band 48_MIMO2	20M	QPSK	50	50	Edge 3	0mm	ON	56640	3690	15.00	15.00	1.000	62.9	1.006	-0.1	0.758	0.763
	LTE Band 48_MIMO2	20M	QPSK	50	50	Edge 3	0mm	ON	55340	3560	14.34	15.00	1.164	62.9	1.006	-0.07	0.677	0.793
	LTE Band 48_MIMO2	20M	QPSK	50	50	Edge 3	0mm	ON	55830	3609	14.70	15.00	1.072	62.9	1.006	0.04	0.718	0.774
	LTE Band 48_MIMO2	20M	QPSK	50	50	Edge 3	0mm	ON	56150	3641	14.76	15.00	1.057	62.9	1.006	0.14	0.732	0.778
	LTE Band 48_MIMO2	20M	QPSK	100	0	Edge 3	0mm	ON	56640	3690	14.96	15.00	1.009	62.9	1.006	-0.15	0.751	0.762
	LTE Band 48_MIMO2	20M	QPSK	1	0	Bottom Face	15mm	OFF	56150	3641	21.92	22.00	1.019	62.9	1.590	-0.09	0.152	0.246
	LTE Band 48_MIMO2	20M	QPSK	50	0	Bottom Face	15mm	OFF	56150	3641	20.95	21.00	1.012	62.9	1.590	0.15	0.190	0.306
	LTE Band 48_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	56150	3641	21.92	22.00	1.019	62.9	1.590	-0.08	0.199	0.322
	LTE Band 48_MIMO2	20M	QPSK	50	0	Edge 3	22mm	OFF	56150	3641	20.95	21.00	1.012	62.9	1.590	0.01	0.249	0.400
	LTE Band 48_MIMO2	20M	QPSK	1	0	Edge 4	0mm	OFF	56150	3641	21.92	22.00	1.019	62.9	1.590	0.02	0.085	0.138
	LTE Band 48_MIMO2	20M	QPSK	50	0	Edge 4	0mm	OFF	56150	3641	20.95	21.00	1.012	62.9	1.590	0.02	0.101	0.162
	LTE Band 48C_MIMO2	20M	QPSK	1	0	Edge 3	0mm	ON	56640	3690	15.96	16.00	1.009	62.9	1.006	0.04	0.942	0.956
	LTE Band 48C_MIMO2	20M	QPSK	1	0	Edge 3	22mm	OFF	55340	3560	21.88	22.00	1.028	62.9	1.006	0.11	0.306	0.316

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2_Main	20M	BPSK	1	53	Bottom Face	0mm	ON	376000	1880	12.34	14.00	1.466	0.16	0.355	0.520
	FR1 n2_Main	20M	BPSK	50	28	Bottom Face	0mm	ON	380000	1900	12.20	14.00	1.514	0.06	0.332	0.503
	FR1 n2_Main	20M	BPSK	1	53	Edge 1	0mm	ON	376000	1880	12.34	14.00	1.466	-0.12	0.470	0.689
	FR1 n2_Main	20M	BPSK	1	53	Edge 1	0mm	ON	372000	1860	12.32	14.00	1.472	0.14	0.448	0.660
16	FR1 n2_Main	20M	BPSK	1	53	Edge 1	0mm	ON	380000	1900	12.25	14.00	1.496	0.09	0.463	0.693
	FR1 n2_Main	20M	BPSK	50	28	Edge 1	0mm	ON	380000	1900	12.20	14.00	1.514	0.17	0.444	0.672
	FR1 n2_Main	20M	BPSK	1	53	Bottom Face	12mm	OFF	380000	1900	23.82	24.00	1.042	-0.13	0.504	0.525
	FR1 n2_Main	20M	BPSK	50	56	Bottom Face	12mm	OFF	380000	1900	23.60	24.00	1.096	-0.04	0.508	0.557
	FR1 n2_Main	20M	BPSK	1	53	Edge 1	25mm	OFF	380000	1900	23.82	24.00	1.042	0	0.205	0.214
	FR1 n2_Main	20M	BPSK	50	56	Edge 1	25mm	OFF	380000	1900	23.60	24.00	1.096	-0.17	0.219	0.240
	FR1 n2_Main	20M	BPSK	1	53	Edge 2	0mm	OFF	380000	1900	23.82	24.00	1.042	0.05	0.536	0.559
	FR1 n2_Main	20M	BPSK	50	56	Edge 2	0mm	OFF	380000	1900	23.60	24.00	1.096	0.09	0.544	0.596
	FR1 n2_MIMO2	20M	BPSK	1	53	Bottom Face	0mm	ON	372000	1860	14.66	15.50	1.213	-0.17	0.504	0.612
	FR1 n2_MIMO2	20M	BPSK	50	56	Bottom Face	0mm	ON	372000	1860	14.54	15.50	1.247	-0.19	0.488	0.609
	FR1 n2_MIMO2	20M	BPSK	1	53	Edge 3	0mm	ON	372000	1860	14.66	15.50	1.213	-0.05	0.542	0.658
	FR1 n2_MIMO2	20M	BPSK	50	56	Edge 3	0mm	ON	372000	1860	14.54	15.50	1.247	0.08	0.534	0.666
	FR1 n2_MIMO2	20M	BPSK	50	56	Edge 3	0mm	ON	376000	1880	14.47	15.50	1.268	-0.11	0.509	0.645
	FR1 n2_MIMO2	20M	BPSK	50	56	Edge 3	0mm	ON	380000	1900	14.45	15.50	1.274	0.15	0.274	0.349
	FR1 n2_MIMO2	20M	BPSK	1	104	Bottom Face	15mm	OFF	372000	1860	22.53	24.00	1.403	0.08	0.293	0.411
	FR1 n2_MIMO2	20M	BPSK	50	56	Bottom Face	15mm	OFF	372000	1860	22.31	24.00	1.476	-0.04	0.295	0.435
	FR1 n2_MIMO2	20M	BPSK	1	104	Edge 3	22mm	OFF	372000	1860	22.53	24.00	1.403	-0.12	0.286	0.401
	FR1 n2_MIMO2	20M	BPSK	50	56	Edge 3	22mm	OFF	372000	1860	22.31	24.00	1.476	0.15	0.276	0.407
	FR1 n2_MIMO2	20M	BPSK	1	104	Edge 4	0mm	OFF	372000	1860	22.53	24.00	1.403	0	0.263	0.369
	FR1 n2_MIMO2	20M	BPSK	50	56	Edge 4	0mm	OFF	372000	1860	22.31	24.00	1.476	-0.18	0.272	0.401

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5_Main	20M	BPSK	1	53	Bottom Face	0mm	ON	167300	836.5	15.11	16.00	1.227	0.03	0.397	0.487
	FR1 n5_Main	20M	BPSK	50	28	Bottom Face	0mm	ON	167300	836.5	15.01	16.00	1.256	0.12	0.381	0.479
	FR1 n5_Main	20M	BPSK	1	53	Edge 1	0mm	ON	167300	836.5	15.11	16.00	1.227	0.1	0.523	0.642
17	FR1 n5_Main	20M	BPSK	50	28	Edge 1	0mm	ON	167300	836.5	15.01	16.00	1.256	0.13	0.515	0.647
	FR1 n5_Main	20M	BPSK	1	1	Bottom Face	12mm	OFF	167300	836.5	23.69	24.00	1.074	-0.13	0.582	0.625
	FR1 n5_Main	20M	BPSK	50	28	Bottom Face	12mm	OFF	167300	836.5	23.56	24.00	1.107	0.04	0.567	0.627
	FR1 n5_Main	20M	BPSK	1	1	Edge 1	25mm	OFF	167300	836.5	23.69	24.00	1.074	0	0.281	0.302
	FR1 n5_Main	20M	BPSK	50	28	Edge 1	25mm	OFF	167300	836.5	23.56	24.00	1.107	-0.17	0.284	0.314
	FR1 n5_Main	20M	BPSK	1	1	Edge 2	0mm	OFF	167300	836.5	23.69	24.00	1.074	-0.18	0.166	0.178
	FR1 n5_Main	20M	BPSK	50	28	Edge 2	0mm	OFF	167300	836.5	23.56	24.00	1.107	0.05	0.172	0.190
	FR1 n5_Main	20M	BPSK	1	1	Edge 3	0mm	OFF	167300	836.5	23.69	24.00	1.074	-0.07	0.001	0.001
	FR1 n5_Main	20M	BPSK	50	28	Edge 3	0mm	OFF	167300	836.5	23.56	24.00	1.107	0.08	0.001	0.001
	FR1 n5_Main	20M	BPSK	1	1	Edge 4	0mm	OFF	167300	836.5	23.69	24.00	1.074	-0.15	0.001	0.001
	FR1 n5_Main	20M	BPSK	50	28	Edge 4	0mm	OFF	167300	836.5	23.56	24.00	1.107	0	0.001	0.001
	FR1 n7_MIMO2	20M	BPSK	1	53	Bottom Face	0mm	ON	507000	2535	8.48	9.00	1.127	-0.15	0.331	0.373
	FR1 n7_MIMO2	20M	BPSK	50	0	Bottom Face	0mm	ON	507000	2535	8.38	9.00	1.153	0.16	0.319	0.368
	FR1 n7_MIMO2	20M	BPSK	1	53	Edge 3	0mm	ON	507000	2535	8.48	9.00	1.127	0.16	0.532	0.600
	FR1 n7_MIMO2	20M	BPSK	50	0	Edge 3	0mm	ON	507000	2535	8.38	9.00	1.153	0.15	0.533	0.615
	FR1 n7_MIMO2	20M	BPSK	1	53	Bottom Face	15mm	OFF	502000	2510	22.12	23.00	1.225	0.04	0.537	0.658
	FR1 n7_MIMO2	20M	BPSK	50	28	Bottom Face	15mm	OFF	507000	2535	21.78	23.00	1.324	-0.13	0.502	0.665
18	FR1 n7_MIMO2	20M	BPSK	1	53	Edge 3	22mm	OFF	502000	2510	22.12	23.00	1.225	0.12	0.934	1.144
	FR1 n7_MIMO2	20M	BPSK	1	53	Edge 3	22mm	OFF	507000	2535	22.11	23.00	1.227	0.13	0.721	0.885
	FR1 n7_MIMO2	20M	BPSK	1	53	Edge 3	22mm	OFF	512000	2560	21.73	23.00	1.340	-0.11	0.600	0.804
	FR1 n7_MIMO2	20M	BPSK	50	28	Edge 3	22mm	OFF	507000	2535	21.78	23.00	1.324	-0.17	0.851	1.127
	FR1 n7_MIMO2	20M	BPSK	50	28	Edge 3	22mm	OFF	502000	2510	21.72	23.00	1.343	0.12	0.639	0.858
	FR1 n7_MIMO2	20M	BPSK	50	28	Edge 3	22mm	OFF	512000	2560	21.55	23.00	1.396	0.12	0.552	0.771
	FR1 n7_MIMO2	20M	BPSK	100	0	Edge 3	22mm	OFF	507000	2535	21.72	23.00	1.343	-0.01	0.836	1.123
	FR1 n7_MIMO2	20M	BPSK	1	53	Edge 4	0mm	OFF	502000	2510	22.12	23.00	1.225	0.01	0.286	0.350
	FR1 n7_MIMO2	20M	BPSK	50	28	Edge 4	0mm	OFF	507000	2535	21.78	23.00	1.324	0.06	0.250	0.331
	FR1 n12_Main	15M	BPSK	1	1	Bottom Face	0mm	ON	141500	707.5	15.47	16.00	1.130	-0.06	0.213	0.241
	FR1 n12_Main	15M	BPSK	36	0	Bottom Face	0mm	ON	141500	707.5	15.30	16.00	1.175	0.17	0.208	0.244
	FR1 n12_Main	15M	BPSK	1	1	Edge 1	0mm	ON	141500	707.5	15.47	16.00	1.130	0.12	0.535	0.604
19	FR1 n12_Main	15M	BPSK	36	0	Edge 1	0mm	ON	141500	707.5	15.30	16.00	1.175	0.15	0.535	0.629
	FR1 n12_Main	15M	BPSK	1	1	Bottom Face	12mm	OFF	141500	707.5	22.36	24.00	1.459	-0.01	0.256	0.373
	FR1 n12_Main	15M	BPSK	36	0	Bottom Face	12mm	OFF	141500	707.5	22.19	24.00	1.517	-0.07	0.251	0.381
	FR1 n12_Main	15M	BPSK	1	1	Edge 1	25mm	OFF	141500	707.5	22.36	24.00	1.459	-0.04	0.093	0.136
	FR1 n12_Main	15M	BPSK	36	0	Edge 1	25mm	OFF	141500	707.5	22.19	24.00	1.517	-0.08	0.088	0.134
	FR1 n12_Main	15M	BPSK	1	1	Edge 2	0mm	OFF	141500	707.5	22.36	24.00	1.459	0.06	0.177	0.258
	FR1 n12_Main	15M	BPSK	36	0	Edge 2	0mm	OFF	141500	707.5	22.19	24.00	1.517	-0.18	0.165	0.250
	FR1 n12_Main	15M	BPSK	1	1	Edge 3	0mm	OFF	141500	707.5	22.36	24.00	1.459	0.15	0.001	0.001
	FR1 n12_Main	15M	BPSK	36	0	Edge 3	0mm	OFF	141500	707.5	22.19	24.00	1.517	-0.11	0.001	0.002
	FR1 n12_Main	15M	BPSK	1	1	Edge 4	0mm	OFF	141500	707.5	22.36	24.00	1.459	-0.15	0.001	0.001
	FR1 n12_Main	15M	BPSK	36	0	Edge 4	0mm	OFF	141500	707.5	22.19	24.00	1.517	0.16	0.001	0.002

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_MIMO2	100M	BPSK	1	1	Bottom Face	0mm	ON	528000	2640	8.97	9.00	1.007	0.12	0.385	0.388
	FR1 n41_MIMO2	100M	BPSK	135	0	Bottom Face	0mm	ON	528000	2640	8.90	9.00	1.023	-0.18	0.371	0.380
	FR1 n41_MIMO2	100M	BPSK	1	1	Edge 3	0mm	ON	528000	2640	8.97	9.00	1.007	-0.18	0.663	0.668
	FR1 n41_MIMO2	100M	BPSK	1	1	Edge 3	0mm	ON	509202	2546.01	8.30	9.00	1.175	-0.14	0.514	0.604
	FR1 n41_MIMO2	100M	BPSK	1	1	Edge 3	0mm	ON	518598	2592.99	8.66	9.00	1.081	-0.16	0.590	0.638
	FR1 n41_MIMO2	100M	BPSK	135	0	Edge 3	0mm	ON	528000	2640	8.90	9.00	1.023	0.02	0.641	0.656
	FR1 n41_MIMO2	100M	BPSK	135	69	Edge 3	0mm	ON	509202	2546.01	8.27	9.00	1.183	-0.13	0.502	0.594
	FR1 n41_MIMO2	100M	BPSK	135	0	Edge 3	0mm	ON	518598	2592.99	8.59	9.00	1.099	0.09	0.569	0.625
	FR1 n41_MIMO2	100M	BPSK	270	0	Edge 3	0mm	ON	528000	2640	8.91	9.00	1.021	0.19	0.646	0.660
	FR1 n41_MIMO2	100M	BPSK	1	1	Bottom Face	15mm	OFF	518598	2592.99	22.25	23.00	1.189	0.19	0.744	0.884
	FR1 n41_MIMO2	100M	BPSK	1	137	Bottom Face	15mm	OFF	509202	2546.01	22.07	23.00	1.239	0.11	0.613	0.759
	FR1 n41_MIMO2	100M	BPSK	1	1	Bottom Face	15mm	OFF	528000	2640	22.17	23.00	1.211	0.15	0.759	0.919
	FR1 n41_MIMO2	100M	BPSK	135	138	Bottom Face	15mm	OFF	518598	2592.99	22.55	23.00	1.109	0.13	0.791	0.877
	FR1 n41_MIMO2	100M	BPSK	135	138	Bottom Face	15mm	OFF	509202	2546.01	22.51	23.00	1.119	0.12	0.672	0.752
	FR1 n41_MIMO2	100M	BPSK	135	138	Bottom Face	15mm	OFF	528000	2640	22.49	23.00	1.125	-0.1	0.811	0.912
	FR1 n41_MIMO2	100M	BPSK	270	0	Bottom Face	15mm	OFF	518598	2592.99	22.42	23.00	1.143	-0.02	0.771	0.881
	FR1 n41_MIMO2	100M	BPSK	1	1	Edge 3	22mm	OFF	518598	2592.99	22.25	23.00	1.189	-0.11	0.817	0.971
	FR1 n41_MIMO2	100M	BPSK	1	137	Edge 3	22mm	OFF	509202	2546.01	22.07	23.00	1.239	-0.14	0.717	0.888
20	FR1 n41_MIMO2	100M	BPSK	1	1	Edge 3	22mm	OFF	528000	2640	22.17	23.00	1.211	0.12	0.899	1.088
	FR1 n41_MIMO2	100M	BPSK	135	138	Edge 3	22mm	OFF	518598	2592.99	22.55	23.00	1.109	-0.13	0.862	0.956
	FR1 n41_MIMO2	100M	BPSK	135	138	Edge 3	22mm	OFF	509202	2546.01	22.51	23.00	1.119	0.17	0.781	0.874
	FR1 n41_MIMO2	100M	BPSK	135	138	Edge 3	22mm	OFF	528000	2640	22.49	23.00	1.125	0.19	0.955	1.074
	FR1 n41_MIMO2	100M	BPSK	270	0	Edge 3	22mm	OFF	518598	2592.99	22.42	23.00	1.143	0.15	0.832	0.951
	FR1 n41_MIMO2	100M	BPSK	1	1	Edge 4	0mm	OFF	518598	2592.99	22.25	23.00	1.189	-0.01	0.183	0.217
	FR1 n41_MIMO2	100M	BPSK	135	138	Edge 4	0mm	OFF	518598	2592.99	22.55	23.00	1.109	-0.1	0.240	0.266

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n66_Main	20M	BPSK	1	53	Bottom Face	0mm	ON	349000	1745	12.21	13.50	1.346	0.05	0.328	0.441
	FR1 n66_Main	20M	BPSK	50	28	Bottom Face	0mm	ON	349000	1745	11.86	13.50	1.459	-0.01	0.311	0.454
	FR1 n66_Main	20M	BPSK	1	53	Edge 1	0mm	ON	349000	1745	12.21	13.50	1.346	0.08	0.499	0.672
	FR1 n66_Main	20M	BPSK	50	28	Edge 1	0mm	ON	349000	1745	11.86	13.50	1.459	-0.07	0.458	0.668
	FR1 n66_Main	20M	BPSK	1	1	Bottom Face	12mm	OFF	349000	1745	22.37	24.00	1.455	0.13	0.266	0.387
	FR1 n66_Main	20M	BPSK	50	56	Bottom Face	12mm	OFF	349000	1745	22.35	24.00	1.462	0.01	0.210	0.307
	FR1 n66_Main	20M	BPSK	1	1	Edge 1	25mm	OFF	349000	1745	22.37	24.00	1.455	-0.07	0.119	0.173
	FR1 n66_Main	20M	BPSK	50	56	Edge 1	25mm	OFF	349000	1745	22.35	24.00	1.462	0.11	0.118	0.173
	FR1 n66_Main	20M	BPSK	1	1	Edge 2	0mm	OFF	349000	1745	22.37	24.00	1.455	-0.04	0.400	0.582
	FR1 n66_Main	20M	BPSK	50	56	Edge 2	0mm	OFF	349000	1745	22.35	24.00	1.462	0.13	0.319	0.466
	FR1 n66_MIMO2	20M	BPSK	1	104	Bottom Face	0mm	ON	349000	1745	12.84	14.00	1.306	0.05	0.328	0.428
	FR1 n66_MIMO2	20M	BPSK	50	0	Bottom Face	0mm	ON	349000	1745	12.73	14.00	1.340	0.08	0.315	0.422
21	FR1 n66_MIMO2	20M	BPSK	1	104	Edge 3	0mm	ON	349000	1745	12.84	14.00	1.306	0.05	0.517	0.675
	FR1 n66_MIMO2	20M	BPSK	50	0	Edge 3	0mm	ON	349000	1745	12.73	14.00	1.340	-0.02	0.478	0.640
	FR1 n66_MIMO2	20M	BPSK	1	1	Bottom Face	15mm	OFF	349000	1745	23.10	24.00	1.230	-0.03	0.345	0.424
	FR1 n66_MIMO2	20M	BPSK	50	28	Bottom Face	15mm	OFF	349000	1745	22.86	24.00	1.300	0.06	0.383	0.498
	FR1 n66_MIMO2	20M	BPSK	1	1	Edge 3	22mm	OFF	349000	1745	23.10	24.00	1.230	0	0.266	0.327
	FR1 n66_MIMO2	20M	BPSK	50	28	Edge 3	22mm	OFF	349000	1745	22.86	24.00	1.300	0.1	0.281	0.365
	FR1 n66_MIMO2	20M	BPSK	1	1	Edge 4	0mm	OFF	349000	1745	23.10	24.00	1.230	0.15	0.370	0.455
	FR1 n66_MIMO2	20M	BPSK	50	28	Edge 4	0mm	OFF	349000	1745	22.86	24.00	1.300	-0.18	0.348	0.452
	FR1 n71_Main	20M	BPSK	1	53	Bottom Face	0mm	ON	136100	680.5	15.58	16.50	1.236	0.070	0.251	0.310
	FR1 n71_Main	20M	BPSK	50	28	Bottom Face	0mm	ON	136100	680.5	15.45	16.50	1.274	-0.11	0.236	0.301
	FR1 n71_Main	20M	BPSK	1	53	Edge 1	0mm	ON	136100	680.5	15.58	16.50	1.236	0.1	0.527	0.651
22	FR1 n71_Main	20M	BPSK	50	28	Edge 1	0mm	ON	136100	680.5	15.45	16.50	1.274	0.14	0.528	0.672
	FR1 n71_Main	20M	BPSK	1	1	Bottom Face	12mm	OFF	136100	680.5	22.43	24.00	1.435	-0.15	0.222	0.319
	FR1 n71_Main	20M	BPSK	50	0	Bottom Face	12mm	OFF	136100	680.5	22.46	24.00	1.426	0.16	0.225	0.321
	FR1 n71_Main	20M	BPSK	1	1	Edge 1	25mm	OFF	136100	680.5	22.43	24.00	1.435	0.11	0.070	0.100
	FR1 n71_Main	20M	BPSK	50	0	Edge 1	25mm	OFF	136100	680.5	22.46	24.00	1.426	-0.03	0.078	0.111
	FR1 n71_Main	20M	BPSK	1	1	Edge 2	0mm	OFF	136100	680.5	22.43	24.00	1.435	0.17	0.171	0.245
	FR1 n71_Main	20M	BPSK	50	0	Edge 2	0mm	OFF	136100	680.5	22.46	24.00	1.426	0.09	0.177	0.252
	FR1 n71_Main	20M	BPSK	1	1	Edge 3	0mm	OFF	136100	680.5	22.43	24.00	1.435	-0.03	0.001	0.001
	FR1 n71_Main	20M	BPSK	50	0	Edge 3	0mm	OFF	136100	680.5	22.46	24.00	1.426	-0.07	0.001	0.001
	FR1 n71_Main	20M	BPSK	1	1	Edge 4	0mm	OFF	136100	680.5	22.43	24.00	1.435	-0.12	0.001	0.001
	FR1 n71_Main	20M	BPSK	50	0	Edge 4	0mm	OFF	136100	680.5	22.46	24.00	1.426	0.02	0.001	0.001

14.2 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ration	Reported 1g SAR (W/kg)
1st	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	0mm	ON	1312	1712.4	17.00	17.00	1.000	-	1.000	0.15	1.190	-	1.190
2nd	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	0mm	ON	1312	1712.4	17.00	17.00	1.000	-	1.000	0.02	1.180	1.01	1.180
1st	LTE Band 7_MIMO2	20M_QPSK_1_0	Edge 3	22mm	OFF	20850	2510	22.36	22.50	1.033	-	1.000	-0.17	1.160	-	1.198
2nd	LTE Band 7_MIMO2	20M_QPSK_1_0	Edge 3	22mm	OFF	20850	2510	22.36	22.50	1.033	-	1.000	-0.11	1.150	1.01	1.188
1st	LTE Band 25_Main	20M_QPSK_1_0	Edge 1	0mm	ON	26340	1880	16.15	17.00	1.216	-	1.000	0.19	0.962	-	1.170
2nd	LTE Band 25_Main	20M_QPSK_1_0	Edge 1	0mm	ON	26340	1880	16.15	17.00	1.216	-	1.000	0.14	0.959	1.00	1.166
1st	LTE Band 26_Main	15M_QPSK_1_0	Edge 1	0mm	ON	26865	831.5	18.01	19.00	1.256	-	1.000	0.04	0.940	-	1.181
2nd	LTE Band 26_Main	15M_QPSK_1_0	Edge 1	0mm	ON	26865	831.5	18.01	19.00	1.256	-	1.000	0.12	0.928	1.01	1.166
1st	LTE Band 30_Main	10M_QPSK_1_0	Bottom Face	0mm	ON	27710	2310	13.23	14.00	1.194	-	1.000	0.02	0.963	-	1.150
2nd	LTE Band 30_Main	10M_QPSK_1_0	Bottom Face	0mm	ON	27710	2310	13.23	14.00	1.194	-	1.000	0.12	0.936	1.03	1.118
1st	LTE Band 48_MIMO2	20M_QPSK_1_0	Edge 3	0mm	ON	56640	3690	16.00	16.00	1.000	62.9	1.006	-0.01	0.958	-	0.964
2nd	LTE Band 48_MIMO2	20M_QPSK_1_0	Edge 3	0mm	ON	56640	3690	16.00	16.00	1.000	62.9	1.006	-0.02	0.957	1.00	0.963
1st	LTE Band 71_Main	20M_QPSK_1_0	Edge 1	0mm	ON	133322	683	18.46	19.00	1.132	-	1.000	0.06	0.965	-	1.093
2nd	LTE Band 71_Main	20M_QPSK_1_0	Edge 1	0mm	ON	133322	683	18.46	19.00	1.132	-	1.000	0.08	0.960	1.01	1.087

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.

14.3 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)	23.5	26.5
Reported 1g SAR (W/kg)	0.941	1.159
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	193.41
Linearity SAR(W/kg)	1.28	
% deviation from expected linearity		-9.76%

15. 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 2 + 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:

2. The Intel AX200D2WL is also integrated into this host, the WLAN and Bluetooth SAR results are referenced to FCC ID: PD9AX200D2L, report no.: 200525-03.TR01 and the results are used to perform simultaneous transmission analysis..
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.

15.1 Body Exposure Conditions

<EN-DC non-Active>

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 2 1g SAR (W/kg)	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	SPLSR	Case No
WCDMA II_Main	Bottom Face at 0mm	1.107	0.560	0.410	0.390	0.380	0.050	2.077	1.877	1.717	1.547	1.927	0.01	Case 1
	Edge 1 at 0mm	1.160		0.780		0.940	0.090	1.940	2.100	1.250	1.250	2.190	0.01	Case 2
	Edge 2 at 0mm	0.655						0.655	0.655	0.655	0.655	0.655		
WCDMA IV_Main	Bottom Face at 0mm	0.939	0.560	0.410	0.390	0.380	0.050	1.909	1.709	1.549	1.379	1.759	0.01	Case 3
	Edge 1 at 0mm	1.190		0.780		0.940	0.090	1.970	2.130	1.280	1.280	2.220	0.02	Case 4
	Edge 2 at 0mm	0.907						0.907	0.907	0.907	0.907	0.907		
WCDMA V_Main	Bottom Face at 0mm	0.739	0.560	0.410	0.390	0.380	0.050	1.709	1.509	1.349	1.179	1.559	0.01	Case 5
	Edge 1 at 0mm	1.194		0.780		0.940	0.090	1.974	2.134	1.284	1.284	2.224	0.02	Case 6
	Edge 2 at 0mm	0.220						0.220	0.220	0.220	0.220	0.220		
	Edge 3 at 0mm	0.001	0.770		0.780			0.771	0.781	0.771	0.781	0.781		
	Edge 4 at 0mm	0.001	0.220	0.170	0.060	0.140	0.020	0.391	0.201	0.241	0.081	0.221		
LTE Band 2_MIMO2	Bottom Face at 0mm	0.620	0.560	0.410	0.390	0.380	0.050	1.590	1.390	1.230	1.060	1.440		
	Edge 3 at 0mm	0.694	0.770		0.780			1.464	1.474	1.464	1.474	1.474		
	Edge 4 at 0mm	0.383	0.220	0.170	0.060	0.140	0.020	0.773	0.583	0.623	0.463	0.603		
LTE Band 7_Main	Bottom Face at 0mm	1.119	0.560	0.410	0.390	0.380	0.050	2.089	1.889	1.729	1.559	1.939	0.01	Case 7
	Edge 1 at 0mm	0.741		0.780		0.940	0.090	1.521	1.681	0.831	0.831	1.771	0.01	Case 8
	Edge 2 at 0mm	1.149						1.149	1.149	1.149	1.149	1.149		
LTE Band 7_MIMO2	Bottom Face at 0mm	0.450	0.560	0.410	0.390	0.380	0.050	1.420	1.220	1.060	0.890	1.270		
	Edge 3 at 0mm	0.724	0.770		0.780			1.494	1.504	1.494	1.504	1.504		
	Edge 4 at 0mm	0.350	0.220	0.170	0.060	0.140	0.020	0.740	0.550	0.590	0.430	0.570		
LTE Band 12_Main	Bottom Face at 0mm	0.329	0.560	0.410	0.390	0.380	0.050	1.299	1.099	0.939	0.769	1.149		
	Edge 1 at 0mm	1.135		0.780		0.940	0.090	1.915	2.075	1.225	1.225	2.165	0.01	Case 9
	Edge 2 at 0mm	0.252						0.252	0.252	0.252	0.252	0.252		
	Edge 3 at 0mm	0.070	0.770		0.780			0.840	0.850	0.840	0.850	0.850		
	Edge 4 at 0mm	0.076	0.220	0.170	0.060	0.140	0.020	0.466	0.276	0.316	0.156	0.296		
LTE Band 13_Main	Bottom Face at 0mm	1.010	0.560	0.410	0.390	0.380	0.050	1.980	1.780	1.620	1.450	1.830	0.01	Case 10
	Edge 1 at 0mm	1.184		0.780		0.940	0.090	1.964	2.124	1.274	1.274	2.214	0.01	Case 11
	Edge 2 at 0mm	0.339						0.339	0.339	0.339	0.339	0.339		
	Edge 3 at 0mm	0.001	0.770		0.780			0.771	0.781	0.771	0.781	0.781		
	Edge 4 at 0mm	0.092	0.220	0.170	0.060	0.140	0.020	0.482	0.292	0.332	0.172	0.312		
LTE Band 14_Main	Bottom Face at 0mm	1.032	0.560	0.410	0.390	0.380	0.050	2.002	1.802	1.642	1.472	1.852	0.01	Case 12
	Edge 1 at 0mm	1.180		0.780		0.940	0.090	1.960	2.120	1.270	1.270	2.210	0.01	Case 13
	Edge 2 at 0mm	0.338						0.338	0.338	0.338	0.338	0.338		
	Edge 3 at 0mm	0.001	0.770		0.780			0.771	0.781	0.771	0.781	0.781		
	Edge 4 at 0mm	0.094	0.220	0.170	0.060	0.140	0.020	0.484	0.294	0.334	0.174	0.314		
LTE Band 25_Main	Bottom Face at 0mm	1.110	0.560	0.410	0.390	0.380	0.050	2.080	1.880	1.720	1.550	1.930	0.01	Case 14
	Edge 1 at 0mm	1.170		0.780		0.940	0.090	1.950	2.110	1.260	1.260	2.200	0.01	Case 15
	Edge 2 at 0mm	0.722						0.722	0.722	0.722	0.722	0.722		
LTE Band 26_Main	Bottom Face at 0mm	0.982	0.560	0.410	0.390	0.380	0.050	1.952	1.752	1.592	1.422	1.802	0.01	Case 16
	Edge 1 at 0mm	1.181		0.780		0.940	0.090	1.961	2.121	1.271	1.271	2.211	0.01	Case 17
	Edge 2 at 0mm	0.235						0.235	0.235	0.235	0.235	0.235		
	Edge 3 at 0mm	0.001	0.770		0.780			0.771	0.781	0.771	0.781	0.781		
	Edge 4 at 0mm	0.047	0.220	0.170	0.060	0.140	0.020	0.437	0.247	0.287	0.127	0.267		
LTE Band 30_Main	Bottom Face at 0mm	1.150	0.560	0.410	0.390	0.380	0.050	2.120	1.920	1.760	1.590	1.970	0.01	Case 20
	Edge 1 at 0mm	1.065		0.780		0.940	0.090	1.845	2.005	1.155	1.155	2.095	0.01	Case 21
	Edge 2 at 0mm	0.847						0.847	0.847	0.847	0.847	0.847		

LTE Band 41_Main	Bottom Face at 0mm	1.084	0.560	0.410	0.390	0.380	0.050	2.054	1.854	1.694	1.524	1.904	0.01	Case 22
	Edge 1 at 0mm	1.038		0.780		0.940	0.090	1.818	1.978	1.128	1.128	2.068	0.01	Case 23
	Edge 2 at 0mm	1.159						1.159	1.159	1.159	1.159	1.159		
LTE Band 48_MIMO2	Bottom Face at 0mm	0.709	0.560	0.410	0.390	0.380	0.050	1.679	1.479	1.319	1.149	1.529	0.03	Case 24
	Edge 3 at 0mm	1.001	0.770		0.780			1.771	1.781	1.771	1.781	1.781	0.04	Case 25
	Edge 4 at 0mm	0.162	0.220	0.170	0.060	0.140	0.020	0.552	0.362	0.402	0.242	0.382		
LTE Band 66_Main	Bottom Face at 0mm	0.904	0.560	0.410	0.390	0.380	0.050	1.874	1.674	1.514	1.344	1.724	0.01	Case 26
	Edge 1 at 0mm	1.183		0.780		0.940	0.090	1.963	2.123	1.273	1.273	2.213	0.01	Case 27
	Edge 2 at 0mm	0.770						0.770	0.770	0.770	0.770	0.770		
LTE Band 66_MIMO2	Bottom Face at 0mm	0.620	0.560	0.410	0.390	0.380	0.050	1.590	1.390	1.230	1.060	1.440		
	Edge 3 at 0mm	0.717	0.770		0.780			1.487	1.497	1.487	1.497	1.497		
	Edge 4 at 0mm	0.581	0.220	0.170	0.060	0.140	0.020	0.971	0.781	0.821	0.661	0.801		
LTE Band 71_Main	Bottom Face at 0mm	0.224	0.560	0.410	0.390	0.380	0.050	1.194	0.994	0.834	0.664	1.044		
	Edge 1 at 0mm	1.093		0.780		0.940	0.090	1.873	2.033	1.183	1.183	2.123	0.01	Case 28
	Edge 2 at 0mm	0.307						0.307	0.307	0.307	0.307	0.307		
	Edge 3 at 0mm	0.085	0.770		0.780			0.855	0.865	0.855	0.865	0.865		
	Edge 4 at 0mm	0.101	0.220	0.170	0.060	0.140	0.020	0.491	0.301	0.341	0.181	0.321		

<When EN-DC is active>

<EN-DC combination and Maximum Power>

General Note:

1. Test positions and test channels used for the testing below are based on the standalone SAR result. When the EN-DC active the LTE Anchors Band output power is equal or less than the standalone output power for each frequency bands, therefore, LTE Anchors Band power and SAR was estimated based on standalone results to performed sim-Tx analysis with 5G NR and WiFi and Bluetooth.
2. The single uplink 1g SAR values for each LTE Anchors Bands and 5G NR are both less than 0.8W/kg and the algebraic summation of the 1g SAR value are less than 1.45W/kg, additional measurements are not required according to TCBC workshop guidance, the detail sim-Tx analysis as following.

Combination	Tech	Band	Tx ANT	Standalone w/ DPR (dBm)	EN-ED Active w/ DPR (dBm)
ENDC	LTE ENDC	2	MIMO2	24.0	15.5
	5G NSA	5	Main	24.0	16.0
ENDC	LTE ENDC	2	MIMO2	24.0	15.5
	5G NSA	12	Main	24.0	16.0
ENDC	LTE ENDC	2	Main	24.0	15.0
	5G NSA	41	MIMO2	23.0	9.0
ENDC	LTE ENDC	2	MIMO2	24.0	15.5
	5G NSA	71	Main	24.0	16.5
ENDC	LTE ENDC	5	Main	24.0	17.0
	5G NSA	2	MIMO2	24.0	15.5
ENDC	LTE ENDC	5	Main	24.0	17.0
	5G NSA	7	MIMO2	23.0	9.0
ENDC	LTE ENDC	5	Main	24.0	17.0
	5G NSA	66	MIMO2	24.0	14.0
ENDC	LTE ENDC	7	MIMO2	22.5	9.0
	5G NSA	5	Main	24.0	16.0
ENDC	LTE ENDC	7	MIMO2	22.5	9.0
	5G NSA	71	Main	24.0	16.5
ENDC	LTE ENDC	12	Main	24.0	16.5
	5G NSA	2	MIMO2	24.0	15.5
ENDC	LTE ENDC	12	Main	24.0	16.5
	5G NSA	7	MIMO2	23.0	9.0
ENDC	LTE ENDC	12	Main	24.0	16.5
	5G NSA	66	MIMO2	24.0	14.0
ENDC	LTE ENDC	13	Main	24.0	17.5
	5G NSA	2	MIMO2	24.0	15.5
ENDC	LTE ENDC	13	Main	24.0	17.5
	5G NSA	66	MIMO2	24.0	14.0
ENDC	LTE ENDC	25	Main	24.0	15.0
	5G NSA	41	MIMO2	23.0	9.0
ENDC	LTE ENDC	26	Main	24.0	17.0
	5G NSA	41	MIMO2	23.0	9.0
ENDC	LTE ENDC	48	MIMO2	22.0	15.5
	5G NSA	2	Main	24.0	14.0
ENDC	LTE ENDC	48	MIMO2	22.0	15.5
	5G NSA	5	Main	24.0	16.0
ENDC	LTE ENDC	48	MIMO2	22.0	15.5
	5G NSA	66	Main	24.0	13.5
ENDC	LTE ENDC	66	MIMO2	24.0	15.0
	5G NSA	5	Main	24.0	16.0
ENDC	LTE ENDC	66	MIMO2	24.0	15.0
	5G NSA	12	Main	24.0	16.0
ENDC	LTE ENDC	66	Main	24.0	15.0
	5G NSA	41	MIMO2	23.0	9.0
ENDC	LTE ENDC	66	MIMO2	24.0	15.0
	5G NSA	71	Main	24.0	16.5
ENDC	LTE ENDC	71	Main	24.0	17.0
	5G NSA	66	MIMO2	24.0	14.0

WWAN Band	FR1 Band	Exposure Position	LTE Standalone Maximum Power (dBm)	0 WWAN 1g SAR (W/kg)	EN-DC Active LTE Maximum Power (dBm)	1 EN-DC Active Estimated LTE 1g SAR (W/kg)	2 FR1 1g SAR (W/kg)	3 2.4GHz WLAN Ant 1 1g SAR (W/kg)	4 2.4GHz WLAN Ant 2 1g SAR (W/kg)	5 5GHz WLAN Ant 1 1g SAR (W/kg)	6 5GHz WLAN Ant 2 1g SAR (W/kg)	7 Bluetooth Ant 2 1g SAR (W/kg)	1+2+3+4 Summed 1g SAR (W/kg)	1+2+5+6 Summed 1g SAR (W/kg)	1+2+3+7 Summed 1g SAR (W/kg)	1+2+5+7 Summed 1g SAR (W/kg)	1+2+5+6+7 Summed 1g SAR (W/kg)	SPLSR	Case No
LTE Band 2_MIMO2	FR1 n5_Main	Bottom Face at 0mm	15.5	0.620	15.5	0.620	0.487	0.560	0.410	0.390	0.380	0.050	2.077	1.877	1.717	1.547	1.927	0.03	Case 29
		Edge 1 at 0mm					0.647		0.780		0.940	0.090	1.427	1.587	0.737	0.737	1.677	0.01	Case 30
		Edge 2 at 0mm					0.190						0.190	0.190	0.190	0.190	0.190		
		Edge 3 at 0mm	15.5	0.694	15.5	0.694	0.001	0.770		0.780			1.465	1.475	1.465	1.475	1.475		
		Edge 4 at 0mm	24.0	0.383	24.0	0.383	0.001	0.220	0.170	0.060	0.140	0.020	0.774	0.584	0.624	0.464	0.604		
	FR1 n12_Main	Bottom Face at 0mm	15.5	0.620	15.5	0.620	0.244	0.560	0.410	0.390	0.380	0.050	1.834	1.634	1.474	1.304	1.684	0.03	Case 31
		Edge 1 at 0mm					0.629		0.780		0.940	0.090	1.409	1.569	0.719	0.719	1.659	0.01	Case 32
		Edge 2 at 0mm					0.258						0.258	0.258	0.258	0.258	0.258		
		Edge 3 at 0mm	15.5	0.694	15.5	0.694	0.002	0.770		0.780			1.466	1.476	1.466	1.476	1.476		
		Edge 4 at 0mm	24.0	0.383	24.0	0.383	0.002	0.220	0.170	0.060	0.140	0.020	0.775	0.585	0.625	0.465	0.605		
	FR1 n71_Main	Bottom Face at 0mm	15.5	0.620	15.5	0.620	0.310	0.560	0.410	0.390	0.380	0.050	1.900	1.700	1.540	1.370	1.750	0.03	Case 33
		Edge 1 at 0mm					0.672		0.780		0.940	0.090	1.452	1.612	0.762	0.762	1.702	0.01	Case 34
		Edge 2 at 0mm					0.252						0.252	0.252	0.252	0.252	0.252		
		Edge 3 at 0mm	15.5	0.694	15.5	0.694	0.001	0.770		0.780			1.465	1.475	1.465	1.475	1.475		
		Edge 4 at 0mm	24.0	0.383	24.0	0.383	0.001	0.220	0.170	0.060	0.140	0.020	0.774	0.584	0.624	0.464	0.604		
LTE Band 5_Main	FR1 n2_MIMO2	Bottom Face at 0mm	19.0	0.982	17.0	0.620	0.612	0.560	0.410	0.390	0.380	0.050	2.202	2.002	1.842	1.672	2.052	0.03	Case 35
		Edge 1 at 0mm	19.0	1.181	17.0	0.745			0.780		0.940	0.090	1.525	1.685	0.835	0.835	1.775	0.01	Case 36
		Edge 2 at 0mm	24.5	0.235	24.5	0.235							0.235	0.235	0.235	0.235	0.235		
		Edge 3 at 0mm	24.5	0.001	24.5	0.001	0.666	0.770		0.780			1.437	1.447	1.437	1.447	1.447		
		Edge 4 at 0mm	24.5	0.047	24.5	0.047	0.401	0.220	0.170	0.060	0.140	0.020	0.838	0.648	0.688	0.528	0.668		
	FR1 n7_MIMO2	Bottom Face at 0mm	19.0	0.982	17.0	0.620	0.373	0.560	0.410	0.390	0.380	0.050	1.963	1.763	1.603	1.433	1.813	0.03	Case 37
		Edge 1 at 0mm	19.0	1.181	17.0	0.745			0.780		0.940	0.090	1.525	1.685	0.835	0.835	1.775	0.01	Case 36
		Edge 2 at 0mm	24.5	0.235	24.5	0.235							0.235	0.235	0.235	0.235	0.235		
		Edge 3 at 0mm	24.5	0.001	24.5	0.001	0.615	0.770		0.780			1.386	1.396	1.386	1.396	1.396		
		Edge 4 at 0mm	24.5	0.047	24.5	0.047	0.350	0.220	0.170	0.060	0.140	0.020	0.787	0.597	0.637	0.477	0.617		
	FR1 n66_MIMO2	Bottom Face at 0mm	19.0	0.982	17.0	0.620	0.428	0.560	0.410	0.390	0.380	0.050	2.018	1.818	1.658	1.488	1.868	0.02	Case 38
		Edge 1 at 0mm	19.0	1.181	17.0	0.745			0.780		0.940	0.090	1.525	1.685	0.835	0.835	1.775	0.01	Case 36
		Edge 2 at 0mm	24.5	0.235	24.5	0.235							0.235	0.235	0.235	0.235	0.235		
		Edge 3 at 0mm	24.5	0.001	24.5	0.001	0.675	0.770		0.780			1.446	1.456	1.446	1.456	1.456		
		Edge 4 at 0mm	24.5	0.047	24.5	0.047	0.455	0.220	0.170	0.060	0.140	0.020	0.892	0.702	0.742	0.582	0.722		
LTE Band 7_MIMO2	FR1 n5_Main	Bottom Face at 0mm	9.0	0.450	9.0	0.450	0.487	0.560	0.410	0.390	0.380	0.050	1.907	1.707	1.547	1.377	1.757	0.02	Case 39
		Edge 1 at 0mm					0.647		0.780		0.940	0.090	1.427	1.587	0.737	0.737	1.677	0.01	Case 30
		Edge 2 at 0mm					0.190						0.190	0.190	0.190	0.190	0.190		
		Edge 3 at 0mm	9.0	0.724	9.0	0.724	0.001	0.770		0.780			1.495	1.505	1.495	1.505	1.505		
		Edge 4 at 0mm	22.5	0.350	22.5	0.350	0.001	0.220	0.170	0.060	0.140	0.020	0.741	0.551	0.591	0.431	0.571		
	FR1 n71_Main	Bottom Face at 0mm	9.0	0.450	9.0	0.450	0.310	0.560	0.410	0.390	0.380	0.050	1.730	1.530	1.370	1.200	1.580	0.02	Case 40
		Edge 1 at 0mm					0.672		0.780		0.940	0.090	1.452	1.612	0.762	0.762	1.702	0.01	Case 34
		Edge 2 at 0mm					0.252						0.252	0.252	0.252	0.252	0.252		
		Edge 3 at 0mm	9.0	0.724	9.0	0.724	0.001	0.770		0.780			1.495	1.505	1.495	1.505	1.505		
		Edge 4 at 0mm	22.5	0.350	22.5	0.350	0.001	0.220	0.170	0.060	0.140	0.020	0.741	0.551	0.591	0.431	0.571		
LTE Band 12_Main	FR1 n2_MIMO2	Bottom Face at 0mm	18.5	0.329	16.5	0.208	0.612	0.560	0.410	0.390	0.380	0.050	1.790	1.590	1.430	1.260	1.640	0.03	Case 41
		Edge 1 at 0mm	18.5	1.135	16.5	0.716			0.780		0.940	0.090	1.496	1.656	0.806	0.806	1.746	0.01	Case 42
		Edge 2 at 0mm	24.5	0.252	24.5	0.252							0.252	0.252	0.252	0.252	0.252		
		Edge 3 at 0mm	24.5	0.070	24.5	0.070	0.666	0.770		0.780			1.506	1.516	1.506	1.516	1.516		
		Edge 4 at 0mm	24.5	0.076	24.5	0.076	0.401	0.220	0.170	0.060	0.140	0.020	0.867	0.677	0.717	0.557	0.697		
	FR1 n7_MIMO2	Bottom Face at 0mm	18.5	0.329	16.5	0.208	0.373	0.560	0.410	0.390	0.380	0.050	1.551	1.351	1.191	1.021	1.401		
		Edge 1 at 0mm	18.5	1.135	16.5	0.716			0.780		0.940	0.090	1.496	1.656	0.806	0.806	1.746	0.01	Case 42
		Edge 2 at 0mm	24.5	0.252	24.5	0.252							0.252	0.252	0.252	0.252	0.252		
		Edge 3 at 0mm	24.5	0.070	24.5	0.070	0.615	0.770		0.780			1.455	1.465	1.455	1.465	1.465		
		Edge 4 at 0mm	24.5	0.076	24.5	0.076	0.350	0.220	0.170	0.060	0.140	0.020	0.816	0.626	0.666	0.506	0.646		

	FR1 n66_MIMO2	Bottom Face at 0mm	18.5	0.329	16.5	0.208	0.428	0.560	0.410	0.390	0.380	0.050	1.606	1.406	1.246	1.076	1.456	0.02	Case 43
		Edge 1 at 0mm	18.5	1.135	16.5	0.716			0.780		0.940	0.090	1.496	1.656	0.806	0.806	1.746	0.01	Case 42
		Edge 2 at 0mm	24.5	0.252	24.5	0.252							0.252	0.252	0.252	0.252	0.252		
		Edge 3 at 0mm	24.5	0.070	24.5	0.070	0.675	0.770		0.780			1.515	1.525	1.515	1.525	1.525		
		Edge 4 at 0mm	24.5	0.076	24.5	0.076	0.455	0.220	0.170	0.060	0.140	0.020	0.921	0.731	0.771	0.611	0.751		
LTE Band 13_Main	FR1 n2_MIMO2	Bottom Face at 0mm	19.5	1.010	17.5	0.637	0.612	0.560	0.410	0.390	0.380	0.050	2.219	2.019	1.859	1.689	2.069	0.03	Case 44
		Edge 1 at 0mm	19.5	1.184	17.5	0.747			0.780		0.940	0.090	1.527	1.687	0.837	0.837	1.777	0.01	Case 45
		Edge 2 at 0mm	24.5	0.339	24.5	0.339							0.339	0.339	0.339	0.339	0.339		
		Edge 3 at 0mm	24.5	0.001	24.5	0.001	0.666	0.770		0.780			1.437	1.447	1.437	1.447	1.447		
		Edge 4 at 0mm	24.5	0.092	24.5	0.092	0.401	0.220	0.170	0.060	0.140	0.020	0.883	0.693	0.733	0.573	0.713		
	FR1 n66_MIMO2	Bottom Face at 0mm	19.5	1.010	17.5	0.637	0.428	0.560	0.410	0.390	0.380	0.050	2.035	1.835	1.675	1.505	1.885	0.02	Case 46
		Edge 1 at 0mm	19.5	1.184	17.5	0.747			0.780		0.940	0.090	1.527	1.687	0.837	0.837	1.777	0.01	Case 45
		Edge 2 at 0mm	24.5	0.339	24.5	0.339							0.339	0.339	0.339	0.339	0.339		
		Edge 3 at 0mm	24.5	0.001	24.5	0.001	0.675	0.770		0.780			1.446	1.456	1.446	1.456	1.456		
		Edge 4 at 0mm	24.5	0.092	24.5	0.092	0.455	0.220	0.170	0.060	0.140	0.020	0.937	0.747	0.787	0.627	0.767		
LTE Band 25_Main	FR1 n41_MIMO2	Bottom Face at 0mm	17.0	1.110	15.0	0.700	0.388	0.560	0.410	0.390	0.380	0.050	2.058	1.858	1.698	1.528	1.908	0.02	Case 47
		Edge 1 at 0mm	17.0	1.170	15.0	0.738			0.780		0.940	0.090	1.518	1.678	0.828	0.828	1.768	0.01	Case 48
		Edge 2 at 0mm	24.0	0.722	24.0	0.722							0.722	0.722	0.722	0.722	0.722		
		Edge 3 at 0mm					0.668	0.770		0.780			1.438	1.448	1.438	1.448	1.448		
		Edge 4 at 0mm					0.266	0.220	0.170	0.060	0.140	0.020	0.656	0.466	0.506	0.346	0.486		
LTE Band 26_Main	FR1 n41_MIMO2	Bottom Face at 0mm	19.0	0.982	17.0	0.620	0.388	0.560	0.410	0.390	0.380	0.050	1.978	1.778	1.618	1.448	1.828	0.02	Case 49
		Edge 1 at 0mm	19.0	1.181	17.0	0.745			0.780		0.940	0.090	1.525	1.685	0.835	0.835	1.775	0.01	Case 50
		Edge 2 at 0mm	24.5	0.235	24.5	0.235							0.235	0.235	0.235	0.235	0.235		
		Edge 3 at 0mm	24.5	0.001	24.5	0.001	0.668	0.770		0.780			1.439	1.449	1.439	1.449	1.449		
		Edge 4 at 0mm	24.5	0.047	24.5	0.047	0.266	0.220	0.170	0.060	0.140	0.020	0.703	0.513	0.553	0.393	0.533		
LTE Band 48_MIMO2	FR1 n2_Main	Bottom Face at 0mm	17.0	0.709	15.5	0.502	0.520	0.560	0.410	0.390	0.380	0.050	1.992	1.792	1.632	1.462	1.842	0.02	Case 53
		Edge 1 at 0mm					0.693		0.780		0.940	0.090	1.473	1.633	0.783	0.783	1.723	0.01	Case 54
		Edge 2 at 0mm					0.596						0.596	0.596	0.596	0.596	0.596		
		Edge 3 at 0mm	17.0	1.001	15.5	0.709		0.770		0.780			1.479	1.489	1.479	1.489	1.489		
		Edge 4 at 0mm	22.0	0.162	22.0	0.162		0.220	0.170	0.060	0.140	0.020	0.552	0.362	0.402	0.242	0.382		
	FR1 n5_Main	Bottom Face at 0mm	17.0	0.709	15.5	0.502	0.487	0.560	0.410	0.390	0.380	0.050	1.959	1.759	1.599	1.429	1.809	0.02	Case 55
		Edge 1 at 0mm					0.647		0.780		0.940	0.090	1.427	1.587	0.737	0.737	1.677	0.01	Case 56
		Edge 2 at 0mm					0.190						0.190	0.190	0.190	0.190	0.190		
		Edge 3 at 0mm	17.0	1.001	15.5	0.709	0.001	0.770		0.780			1.480	1.490	1.480	1.490	1.490		
		Edge 4 at 0mm	22.0	0.162	22.0	0.162	0.001	0.220	0.170	0.060	0.140	0.020	0.553	0.363	0.403	0.243	0.383		
	FR1 n66_Main	Bottom Face at 0mm	17.0	0.709	15.5	0.502	0.454	0.560	0.410	0.390	0.380	0.050	1.926	1.726	1.566	1.396	1.776	0.02	Case 57
		Edge 1 at 0mm					0.672		0.780		0.940	0.090	1.452	1.612	0.762	0.762	1.702	0.01	Case 58
		Edge 2 at 0mm					0.582						0.582	0.582	0.582	0.582	0.582		
		Edge 3 at 0mm	17.0	1.001	15.5	0.709		0.770		0.780			1.479	1.489	1.479	1.489	1.489		
		Edge 4 at 0mm	22.0	0.162	22.0	0.162		0.220	0.170	0.060	0.140	0.020	0.552	0.362	0.402	0.242	0.382		
LTE Band 66_Main	FR1 n41_MIMO2	Bottom Face at 0mm	17.0	0.904	15.0	0.570	0.388	0.560	0.410	0.390	0.380	0.050	1.928	1.728	1.568	1.398	1.778	0.02	Case 59
		Edge 1 at 0mm	17.0	1.183	15.0	0.746			0.780		0.940	0.090	1.526	1.686	0.836	0.836	1.776	0.01	Case 60
		Edge 2 at 0mm	24.0	0.770	24.0	0.770							0.770	0.770	0.770	0.770	0.770		
		Edge 3 at 0mm					0.668	0.770		0.780			1.438	1.448	1.438	1.448	1.448		
		Edge 4 at 0mm					0.266	0.220	0.170	0.060	0.140	0.020	0.656	0.466	0.506	0.346	0.486		
LTE Band 66_MIMO2	FR1 n5_Main	Bottom Face at 0mm	15.0	0.620	15.0	0.620	0.487	0.560	0.410	0.390	0.380	0.050	2.077	1.877	1.717	1.547	1.927	0.03	Case 61
		Edge 1 at 0mm					0.647		0.780		0.940	0.090	1.427	1.587	0.737	0.737	1.677	0.01	Case 30
		Edge 2 at 0mm					0.190						0.190	0.190	0.190	0.190	0.190		
		Edge 3 at 0mm	15.0	0.717	15.0	0.717	0.001	0.770		0.780			1.488	1.498	1.488	1.498	1.498		
		Edge 4 at 0mm	24.0	0.581	24.0	0.581	0.001	0.220	0.170	0.060	0.140	0.020	0.972	0.782	0.822	0.662	0.802		
	FR1 n12_Main	Bottom Face at 0mm	15.0	0.620	15.0	0.620	0.244	0.560	0.410	0.390	0.380	0.050	1.834	1.634	1.474	1.304	1.684	0.03	Case 62
		Edge 1 at 0mm					0.629		0.780		0.940	0.090	1.409	1.569	0.719	0.719	1.659	0.01	Case 32
		Edge 2 at 0mm					0.258						0.258	0.258	0.258	0.258	0.258		
		Edge 3 at 0mm	15.0	0.717	15.0	0.717	0.002	0.770		0.780			1.489	1.499	1.489	1.499	1.499		
		Edge 4 at 0mm	24.0	0.581	24.0	0.581	0.002	0.220	0.170	0.060	0.140	0.020	0.973	0.783	0.823	0.663	0.803		
	FR1	Bottom Face at 0mm	15.0	0.620	15.0	0.620	0.310	0.560	0.410	0.390	0.380	0.050	1.900	1.700	1.540	1.370	1.750	0.03	Case 63

	n71_Main	Edge 1 at 0mm					0.672		0.780		0.940	0.090	**1.452**	**1.612**	**0.762**	**0.762**	**1.702**	**0.01**	**Case 34**
		Edge 2 at 0mm					0.252						**0.252**	**0.252**	**0.252**	**0.252**	**0.252**		
		Edge 3 at 0mm	15.0	0.717	15.0	0.717	0.001	0.770		0.780			**1.488**	**1.498**	**1.488**	**1.498**	**1.498**		
		Edge 4 at 0mm	24.0	0.581	24.0	0.581	0.001	0.220	0.170	0.060	0.140	0.020	**0.972**	**0.782**	**0.822**	**0.662**	**0.802**		
LTE Band 71_Main	FR1 n66_MIMO2	Bottom Face at 0mm	19.0	0.224	17.0	0.141	0.428	0.560	0.410	0.390	0.380	0.050	**1.539**	**1.339**	**1.179**	**1.009**	**1.389**		
		Edge 1 at 0mm	19.0	1.093	17.0	0.690			0.780		0.940	0.090	**1.470**	**1.630**	**0.780**	**0.780**	**1.720**	**0.01**	**Case 64**
		Edge 2 at 0mm	24.5	0.307	24.5	0.307							**0.307**	**0.307**	**0.307**	**0.307**	**0.307**		
		Edge 3 at 0mm	24.5	0.085	24.5	0.085	0.675	0.770		0.780			**1.530**	**1.540**	**1.530**	**1.540**	**1.540**		
		Edge 4 at 0mm	24.5	0.101	24.5	0.101	0.455	0.220	0.170	0.060	0.140	0.020	**0.946**	**0.756**	**0.796**	**0.636**	**0.776**		