

FCC SAR TEST REPORT

FCC ID : B94HNI62COMR
Equipment : Notebook Computer
Brand Name : HP
Model Name : HSN-I62C
Applicant : HP Inc.
1501 Page Mill Road, Palo Alto CA, 94304, USA
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Dec. 14, 2025 and testing was started from Dec. 14, 2025 and completed on Dec. 23, 2025. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

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



Approved by: Cona Huang / Deputy Manager



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Table of Contents

1. Statement of Compliance	4
2. Equipment Under Test (EUT) Information	5
2.1 General Information	5
2.2 General LTE SAR Test and Reporting Considerations	14
2.3 General 5G NR SAR Test and Reporting Considerations	17
2.4 Sensor Triggering angle and power verification	20
3. Guidance Applied	22
4. RF Exposure Limits	23
4.1 Uncontrolled Environment	23
4.2 Controlled Environment	23
4.3 RF Exposure limit for above 6GHz	24
5. Specific Absorption Rate (SAR)	25
5.1 Introduction	25
5.2 SAR Definition	25
6. System Description and Setup	26
6.1 Test Site Location	26
6.2 E-Field Probe	27
6.3 Data Acquisition Electronics (DAE)	27
6.4 Phantom	28
6.5 Device Holder	29
7. Measurement Procedures	30
7.1 Spatial Peak SAR Evaluation	30
7.2 Power Reference Measurement	31
7.3 Area Scan	31
7.4 Zoom Scan	32
7.5 Volume Scan Procedures	32
7.6 Power Drift Monitoring	32
8. Test Equipment List	33
9. System Verification	34
9.1 Tissue Verification	34
9.2 System Performance Check Results	35
10. RF Exposure Positions	36
10.1 SAR Testing for Tablet	36
11. UMTS/LTE Output Power (Unit: dBm)	37
12. UL/DL Carrier aggregation	106
13. 5G NR Output Power (Unit: dBm)	110
14. Antenna Location	154
15. SAR Test Results	158
15.1 Body SAR	159
15.2 Power Class 2 and Power Class 3 Linearity	164
16. Simultaneous Transmission Analysis	166
16.1 Body Exposure Conditions	166
16.2 SPLSR Evaluation and Analysis	167
17. Uncertainty Assessment	168
18. References	170
Appendix A. Plots of System Performance Check	
Appendix B. Plots of High SAR Measurement	
Appendix C. DASY Calibration Certificate	
Appendix D. Test Setup Photos	

History of this test report

Report No.	Version	Description	Issued Date
FA5N2416B	01	Initial issue of report	Jan. 20, 2026

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for HP Inc., Notebook Computer, HSN-I62C, are as follows.

Equipment Class		Highest SAR Summary	Highest Simultaneous Transmission 1g SAR (W/kg)
		Body (Separation 0mm)	
		1g SAR (W/kg)	
Licensed	WCDMA II	0.95	1.42
	WCDMA IV	0.80	
	WCDMA V	0.71	
	LTE Band 7	0.93	
	LTE Band 12/17	0.71	
	LTE Band 13	0.64	
	LTE Band 14	0.61	
	LTE Band 2/25	0.89	
	LTE Band 5/26	0.81	
	LTE Band 30	0.79	
	LTE Band 38/41	0.53	
	LTE Band 48	0.44	
	LTE Band 4/66	1.00	
	LTE Band 71	0.36	
	FR1 n7	0.47	
	FR1 n12	0.62	
	FR1 n14	0.53	
	FR1 n2/n25	0.93	
	FR1 n5/n26	0.74	
	FR1 n30	0.91	
	FR1 n38/n41	0.75	
	FR1 n48	1.13	
	FR1 n66	0.87	
	FR1 n71	0.50	
FR1 n77	1.14		
FR1 n78	1.15		
Date of Testing:		2025/12/14 ~ 2025/12/23	

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Paula Chen



2. Equipment Under Test (EUT) Information

2.1 General Information

Product Feature & Specification	
Equipment Name	Notebook Computer
Brand Name	HP
Model Name	HSN-I62C
FCC ID	B94HNI62COMR
Integrated WWAN Module	Brand Name: WNC Model Name: DRMR-H01
Integrated WLAN Module	Brand Name: Intel Model Name: BE211NGW
Integrated NFC Module	Brand Name: WNC Model Name: XRAV-1
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 n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM
EUT Stage	Production Unit
Remark: 1. The Intel BE211NGW WLAN/BT module is integrated into this host. The maximum WLAN/BT output power and evaluation results are referenced from the Intel test report (Report No.: 250825-02.TR01, FCC ID: PD9BE211NG). The SAR results are used for simultaneous transmission analysis. 2. NFC (XRAV-1) transmissions do not overlap with other radio transmitters for more than 30 seconds. Therefore, per FCC KDB 447498 D01v06, additional simultaneous transmission analysis between NFC and other radios is not required. 3. This device is a convertible type notebook PC, and there are two usage ways: Laptop and Tablet. When the end user uses a different mode, the device will limit the maximum power according to the current mode. 4. There are two antenna vendors. RF exposure evaluation selects Vendor 1 as the main test sample, and Vendor 2 will be spot-checked based on the worst case found in Vendor 1. 5. The device implements Intel TAS feature for SAR compliance, the validation result includes in part2 report no.: FA5N2416C	

**WWAN Antenna Information_NB Mode**

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
WCDMA/LTE	2	1850	1910	Ant5 : 6036B0370401 (00-330270505L)	Vendor 1	PIFA	-0.61
WCDMA/LTE	4	1710	1755				1.01
WCDMA/LTE	5	824	849				0.74
LTE	7	2500	2570				1.03
LTE	12	699	716				0.58
LTE	13	777	787				0.91
LTE	14	788	798				0.54
LTE	17	704	716				0.58
LTE	25	1850	1915				-0.61
LTE	26	814	849				0.74
LTE	30	2305	2315				0.96
LTE	38	2570	2620				-0.22
LTE	41	2496	2690				1.03
LTE	48	3550	3700				-1.19
LTE	66	1710	1780				-0.23
LTE	71	663	698				-0.62
5G NR FR1	2	1850	1910				-0.61
5G NR FR1	5	824	849				0.74
5G NR FR1	7	2500	2570				1.03
5G NR FR1	12	699	716				0.58
5G NR FR1	14	788	798				0.54
5G NR FR1	25	1850	1915				-0.61
5G NR FR1	26	814	849				0.74
5G NR FR1	30	2305	2315				0.96
5G NR FR1	38	2570	2620				-0.22
5G NR FR1	41	2496	2690				1.03
5G NR FR1	48	3550	3700				-1.19
5G NR FR1	66	1710	1780				-0.23
5G NR FR1	71	663	698				-0.62
5G NR FR1	77	3300	4200				-0.4
5G NR FR1	78	3300	3800				-0.48



Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
LTE	2	1850	1910	Ant8 : 6036B0370401 (00-330270505L)	Vendor 1	PIFA	2
LTE	4	1710	1755				2.28
LTE	7	2500	2570				1.17
LTE	25	1850	1915				2
LTE	30	2305	2315				1.18
LTE	38	2570	2620				1.26
LTE	41	2496	2690				1.52
LTE	48	3550	3700				0.76
LTE	66	1710	1780				2.28
5G NR FR1	2	1850	1910				2
5G NR FR1	7	2500	2570				1.17
5G NR FR1	25	1850	1915				2
5G NR FR1	30	2305	2315				1.18
5G NR FR1	38	2570	2620				1.26
5G NR FR1	41	2496	2690				1.52
5G NR FR1	48	3550	3700				0.76
5G NR FR1	66	1710	1780				2.28
5G NR FR1	77	3300	4200				1.85
5G NR FR1	78	3300	3800				1.85



Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi)
WCDMA/ LTE	2	1850	1910	Ant5: 6036B0366201 (81ELBF15.G36)	Vendor 2	PIFA	-1.4
WCDMA/ LTE	4	1710	1755				-2.5
WCDMA/ LTE	5	824	849				-1.93
LTE	7	2500	2570				-1.62
LTE	12	699	716				-0.18
LTE	13	777	787				-1.38
LTE	14	788	798				-2.7
LTE	17	704	716				-0.18
LTE	25	1850	1915				-1.4
LTE	26	814	849				-1.93
LTE	30	2305	2315				-2.42
LTE	38	2570	2620				-2.36
LTE	40	2300	2400				-1.34
LTE	41	2496	2690				-1.62
LTE	48	3550	3700				0.85
LTE	66	1710	1780				-2.5
LTE	71	663	698				-2.64
5G NR FR1	2	1850	1910				-1.4
5G NR FR1	5	824	849				-1.93
5G NR FR1	7	2500	2570				-1.62
5G NR FR1	12	699	716				-0.18
5G NR FR1	14	788	798				-2.7
5G NR FR1	25	1850	1915				-1.4
5G NR FR1	26	814	849				-1.93
5G NR FR1	28	703	748				-0.18
5G NR FR1	30	2305	2315				-2.42
5G NR FR1	38	2570	2620				-2.36
5G NR FR1	40	2300	2400				-1.34
5G NR FR1	41	2496	2690				-1.62
5G NR FR1	48	3550	3700				0.85
5G NR FR1	66	1710	1780				-2.5
5G NR FR1	71	663	698				-2.64
5G NR FR1	77	3300	4200				0.85
5G NR FR1	78	3300	3800				0.85



Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi)
LTE	2	1850	1910	Ant8: 6036B0366201 (81ELBF15.G36)	Vendor 2	PIFA	-1.88
LTE	4	1710	1755				-0.92
LTE	7	2500	2570				-1.88
LTE	25	1850	1915				-1.88
LTE	30	2305	2315				-3.25
LTE	38	2570	2620				-2.6
LTE	40	2300	2400				-2.69
LTE	41	2496	2690				-1.88
LTE	48	3550	3700				0.93
LTE	66	1710	1780				-0.92
5G NR FR1	2	1850	1910				-1.88
5G NR FR1	7	2500	2570				-1.88
5G NR FR1	25	1850	1915				-1.88
5G NR FR1	30	2305	2315				-3.25
5G NR FR1	38	2570	2620				-2.6
5G NR FR1	41	2496	2690				-1.88
5G NR FR1	48	3550	3700				0.93
5G NR FR1	66	1710	1780				-0.92
5G NR FR1	77	3300	4200				1.58
5G NR FR1	78	3300	3800				1.58



WWAN Antenna Information_TB Mode

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
WCDMA/ LTE	2	1850	1910	Ant5 : 6036B0370401 (00-330270505L)	Vendor 1	PIFA	-2.73
WCDMA/ LTE	4	1710	1755				-1.67
WCDMA/ LTE	5	824	849				-3.96
LTE	7	2500	2570				0.22
LTE	12	699	716				-7.17
LTE	13	777	787				-4.48
LTE	14	788	798				-4.82
LTE	17	704	716				-7.17
LTE	25	1850	1915				-2.73
LTE	26	814	849				-3.96
LTE	30	2305	2315				0.29
LTE	38	2570	2620				0.47
LTE	41	2496	2690				0.01
LTE	48	3550	3700				-1.58
LTE	66	1710	1780				-1.67
LTE	71	663	698				-7.62
5G NR FR1	2	1850	1910				-2.73
5G NR FR1	5	824	849				-3.96
5G NR FR1	7	2500	2570				0.22
5G NR FR1	12	699	716				-7.17
5G NR FR1	14	788	798				-4.82
5G NR FR1	25	1850	1915				-2.73
5G NR FR1	26	814	849				-3.96
5G NR FR1	30	2305	2315				0.29
5G NR FR1	38	2570	2620				0.47
5G NR FR1	41	2496	2690				0.01
5G NR FR1	48	3550	3700				-1.58
5G NR FR1	66	1710	1780				-1.67
5G NR FR1	71	663	698				-7.62
5G NR FR1	77	3300	4200				0.08
5G NR FR1	78	3300	3800				-1.2



Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
LTE	2	1850	1910	Ant8 : 6036B0370401 (00-330270505L)	Vendor 1	PIFA	-0.12
LTE	4	1710	1755				-2.05
LTE	7	2500	2570				-0.83
LTE	25	1850	1915				-0.12
LTE	30	2305	2315				-2.29
LTE	38	2570	2620				-1.97
LTE	41	2496	2690				-0.83
LTE	48	3550	3700				-0.49
LTE	66	1710	1780				-2.05
5G NR FR1	2	1850	1910				-0.12
5G NR FR1	7	2500	2570				-0.83
5G NR FR1	25	1850	1915				-0.12
5G NR FR1	30	2305	2315				-2.29
5G NR FR1	38	2570	2620				-1.97
5G NR FR1	41	2496	2690				-0.83
5G NR FR1	48	3550	3700				-0.49
5G NR FR1	66	1710	1780				-2.05
5G NR FR1	77	3300	4200				-0.49
5G NR FR1	78	3300	3800				-0.49



Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi)
WCDMA/ LTE	2	1850	1910	Ant5 : 6036B0366201 (81ELBF15.G36)	Vendor 2	PIFA	-4.44
WCDMA/ LTE	4	1710	1755				-4.64
WCDMA/ LTE	5	824	849				-5.75
LTE	7	2500	2570				1.34
LTE	12	699	716				-3.8
LTE	13	777	787				-6.49
LTE	14	788	798				-8.01
LTE	17	704	716				-3.8
LTE	25	1850	1915				-4.44
LTE	26	814	849				-5.75
LTE	30	2305	2315				-3.3
LTE	38	2570	2620				-0.12
LTE	41	2496	2690				1.34
LTE	48	3550	3700				-1.83
LTE	66	1710	1780				-4.08
LTE	71	663	698				-3.54
5G NR FR1	2	1850	1910				-4.44
5G NR FR1	5	824	849				-5.75
5G NR FR1	7	2500	2570				1.34
5G NR FR1	12	699	716				-3.8
5G NR FR1	14	788	798				-8.01
5G NR FR1	25	1850	1915				-4.44
5G NR FR1	26	814	849				-5.75
5G NR FR1	28	703	748				-3.8
5G NR FR1	30	2305	2315				-3.3
5G NR FR1	38	2570	2620				-0.12
5G NR FR1	41	2496	2690				1.34
5G NR FR1	48	3550	3700				-1.83
5G NR FR1	66	1710	1780				-4.08
5G NR FR1	71	663	698				-3.54
5G NR FR1	77	3300	4200				-0.41
5G NR FR1	78	3300	3800				-0.41

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi)
LTE	2	1850	1910	Ant8 : 6036B0366201 (81ELBF15.G36)	Vendor 2	PIFA	-4.5
LTE	4	1710	1755				-5.19
LTE	7	2500	2570				-0.93
LTE	25	1850	1915				-4.5
LTE	30	2305	2315				-6.04
LTE	38	2570	2620				-1.43
LTE	41	2496	2690				-0.93
LTE	48	3550	3700				-0.52
LTE	66	1710	1780				-3.39
5G NR FR1	2	1850	1910				-4.5
5G NR FR1	7	2500	2570				-0.93
5G NR FR1	25	1850	1915				-4.5
5G NR FR1	30	2305	2315				-6.04
5G NR FR1	38	2570	2620				-1.43
5G NR FR1	41	2496	2690				-0.93
5G NR FR1	48	3550	3700				-0.52
5G NR FR1	66	1710	1780				-3.39
5G NR FR1	77	3300	4200				0.38
5G NR FR1	78	3300	3800				-0.52

WLAN Antenna Information

Antenna Information									
WWAN SKU NB mode Main/Tx2 Antenna 6036B0370501 (00-330270515L) Vendor 1	Ant. Type	PIFA			WWAN SKU NB mode Aux/Tx1 Antenna 6036B0370501 (00-330270515L) Vendor 1	Ant. Type	PIFA		
	Peak Gain (dBi)			Peak Gain (dBi)					
	2400~2483.5MHz	1.47	5470~5725MHz	0.67		2400~2483.5MHz	0.26	5470~5725MHz	0.21
	5150~5250MHz	-0.06	5725~5850MHz	0.67		5150~5250MHz	1.08	5725~5850MHz	0.5
	5250~5350MHz	0.2	5925~7125MHz	0.52		5250~5350MHz	1.08	5925~7125MHz	1.11
WWAN SKU TB mode Main/Tx2 Antenna 6036B0370501 (00-330270515L) Vendor 1	Ant. Type	PIFA			WWAN SKU TB mode Aux/Tx1 Antenna 6036B0370501 (00-330270515L) Vendor 1	Ant. Type	PIFA		
	Peak Gain (dBi)			Peak Gain (dBi)					
	2400~2483.5MHz	-0.93	5470~5725MHz	-1.02		2400~2483.5MHz	-1.59	5470~5725MHz	-0.57
	5150~5250MHz	-1.92	5725~5850MHz	-0.83		5150~5250MHz	-1.44	5725~5850MHz	-0.89
	5250~5350MHz	-1.95	5925~7125MHz	-0.51		5250~5350MHz	-1.44	5925~7125MHz	-0.82
WWAN SKU NB mode Main/Tx2 Antenna 6036B0366101 (81ELBF15.G35) Vendor 2	Ant. Type	PIFA			WWAN SKU NB mode Aux/Tx1 Antenna 6036B0366101 (81ELBF15.G35) Vendor 2	Ant. Type	PIFA		
	Peak Gain (dBi)			Peak Gain (dBi)					
	2400~2483.5MHz	0.51	5470~5725MHz	-1.33		2400~2483.5MHz	1.89	5470~5725MHz	-0.12
	5150~5250MHz	-0.33	5725~5850MHz	-1.33		5150~5250MHz	0.81	5725~5850MHz	-0.09
	5250~5350MHz	-0.33	5925~7125MHz	-1.24		5250~5350MHz	0.03	5925~7125MHz	-0.32
WWAN SKU TB mode Main/Tx2 Antenna 6036B0366101 (81ELBF15.G35) Vendor 2	Ant. Type	PIFA			WWAN SKU TB mode Aux/Tx1 Antenna 6036B0366101 (81ELBF15.G35) Vendor 2	Ant. Type	PIFA		
	Peak Gain (dBi)			Peak Gain (dBi)					
	2400~2483.5MHz	-1.95	5470~5725MHz	-0.13		2400~2483.5MHz	0.7	5470~5725MHz	-1.21
	5150~5250MHz	-0.36	5725~5850MHz	-1.54		5150~5250MHz	2.25	5725~5850MHz	-0.46
	5250~5350MHz	-0.36	5925~7125MHz	0.42		5250~5350MHz	2.25	5925~7125MHz	1.16

2.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05												
FCC ID				B94HNI62COMR								
Equipment Name				Notebook Computer								
Operating Frequency Range of each LTE transmission band				LTE Band 2: 1850 MHz ~ 1910 MHz								
				LTE Band 4: 1710 MHz ~ 1755 MHz								
				LTE Band 5: 824 MHz ~ 849 MHz								
				LTE Band 7: 2500 MHz ~ 2570 MHz								
				LTE Band 12: 699 MHz ~ 716 MHz								
				LTE Band 13: 777 MHz ~ 787 MHz								
				LTE Band 14: 788 MHz ~ 798 MHz								
				LTE Band 17: 704 MHz ~ 716 MHz								
				LTE Band 25: 1850 MHz ~ 1915 MHz								
				LTE Band 26: 814 MHz ~ 849 MHz								
				LTE Band 30: 2305 MHz ~ 2315 MHz								
				LTE Band 38: 2570 MHz ~ 2620 MHz								
				LTE Band 41: 2496 MHz ~ 2690 MHz								
				LTE Band 48: 3550 MHz ~ 3700 MHz								
				LTE Band 66: 1710 MHz ~ 1780 MHz								
Channel Bandwidth				LTE Band 71: 663 MHz ~ 698 MHz								
				LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz								
				LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz								
				LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz								
				LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz								
				LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz								
				LTE Band 13: 5MHz, 10MHz								
				LTE Band 14: 5MHz, 10MHz								
				LTE Band 17: 5MHz, 10MHz								
				LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz								
				LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz								
				LTE Band 30: 5MHz, 10MHz								
				LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz								
				LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz								
				LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz								
LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz												
LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz												
uplink modulations used				QPSK / 16QAM / 64QAM / 256QAM								
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, G-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				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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20425	826.5	20450	829		
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5		
H	20643	848.3	20635	847.5	20625	846.5	20625	846.5	20600	844		
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20825	2507.5	20850	2510		
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535		
H	21425	2567.5	21400	2565	21375	2562.5	21375	2562.5	21350	2560		
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23035	701.5	23060	704		
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5		
H	23173	715.3	23165	714.5	23155	713.5	23155	713.5	23130	711		
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(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)		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)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		709					
M	23790		710		23790		710					
H	23825		713.5		23800		711					
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		

LTE Band 30												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	27685		2307.5		27710		2310					
M	27710		2310									
H	27735		2312.5									
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
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 40(2305MHz ~ 2315MHz)												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	38725		2307.5		38750		2310					
M	38750		2310									
H	38775		2312.5									
LTE Band 40(2350MHz ~ 2360MHz)												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	39175		2352.5		39200		2355					
M	39200		2355									
H	39225		2357.5									
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	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
L	55810	3607	55815	3607.5	55820	3608	55830	3609				
M	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690				
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	133147	665.5	133172	668	133197	670.5	133222	673				
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5				
H	133447	695.5	133422	693	133397	690.5	133372	688				



2.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information																
FCC ID			B94HNI62COMR													
Equipment Name			Notebook Computer													
Operating Frequency Range of each 5G NR transmission band			5G NR n2: 1850 MHz ~ 1910 MHz													
			5G NR n5: 824 MHz ~ 849 MHz													
			5G NR n7: 2500 MHz ~ 2570 MHz													
			5G NR n12: 699 MHz ~ 716 MHz													
			5G NR n14 : 788 MHz ~ 798 MHz													
			5G NR n25: 1850 MHz ~ 1915 MHz													
			5G NR n26: 814 MHz ~ 849 MHz													
			5G NR n30: 2305 MHz ~ 2315 MHz													
			5G NR n38: 2570 MHz ~ 2620 MHz													
			5G NR n41: 2496 MHz ~ 2690 MHz													
Channel Bandwidth			5G NR n48: 3550 MHz ~ 3700 MHz													
			5G NR n66: 1710 MHz ~ 1780 MHz													
			5G NR n71: 663 MHz ~ 698 MHz													
			5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz													
			5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz													
			5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz													
			5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz													
			5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz													
			5G NR n12: 5MHz, 10MHz, 15MHz													
			5G NR n14: 5MHz, 10MHz													
SCS			5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz 30MHz, 40MHz													
			5G NR n26: 5MHz, 10MHz, 15MHz, 20MHz													
			5G NR n30: 5MHz, 10MHz													
			5G NR n38: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz													
			5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz													
			5G NR n48: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz													
			5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz,30MHz, 40MHz													
			5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz													
			5G NR n77/n78: 10MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz													
			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 B2/5/12/13/14/30/48/66													
LTE Anchor Bands for n5			LTE B2/7/30/48/66													
LTE Anchor Bands for n41			LTE B2/66													
LTE Anchor Bands for n66			LTE B5/12/13/14/48													
LTE Anchor Bands for n71			LTE B2/66													
LTE Anchor Bands for n77			LTE B2/5/13/14/30/38/41/66													
LTE Anchor Bands for n78			LTE B7/41													
NR Band 2																
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz						
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)					
L	370500	1852.5		371000	1855		371500	1857.5		372000	1860					
M	376000	1880		376000	1880		376000	1880		376000	1880					
H	381500	1907.5		381000	1905		380500	1902.5		380000	1900					
NR Band 5																
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz						
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)					
L	165300	826.5		165800	829		166300	831.5		166800	834					
M	167300	836.5		167300	836.5		167300	836.5		167300	836.5					
H	169300	846.5		168800	844		168300	841.5		167800	839					
NR Band 7																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545

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 14																	
	Bandwidth 5MHz				Bandwidth 10MHz												
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)						
L	158100		790.5		158600		793										
M	158600		793														
H	159100		795.5														
NR Band 25																	
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz				
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)			
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870			
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5			
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000	1895			
NR Band 26																	
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz				
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		
L	163300		816.5		163800		819		164300		821.5		164800		824		
M	166300		831.5		166300		831.5		166300		831.5		166300		831.5		
H	169300		846.5		168800		844		168300		841.5		167800		839		
NR Band 30																	
	Bandwidth 5MHz						Bandwidth 10MHz										
	Ch. #			Freq. (MHz)			Ch. #			Freq. (MHz)			Ch. #			Freq. (MHz)	
L	461500			2307.5			462000			2310							
M	462000			2310													
H	462500			2312.5													
NR Band 38																	
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz				
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)			
L	514500	2572.5	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02			
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595			
H	523500	2617.5	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98			
NR Band 41																	
	Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	501204	2506.02	502200	2511	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	518598	2592.99	
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640	
NR Band 48																	
	Bandwidth10MHz			Bandwidth 15MHz			Bandwidth20MHz			Bandwidth30MHz			Bandwidth 40MHz				
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)			
L	637000	3555		637168	3557.52		637334	3560.01		637668	3565.02		638000	3570			
M	641666	3624.99		641666	3624.99		641666	3624.99		641666	3624.99		641666	3624.99			
H	646332	3694.98		646166	3692.49		646000	3690		645666	3684.99		645332	3679.98			



NR Band 66																				
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	346000	1730						
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745						
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352000	1760						
NR Band 71																				
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	133100	665.5	133600	668	134100	670.5	134600	673	135100	675.5	135600	678	136100	680.5						
M	136100	680.5	136600	683	137100	685.5	137600	688	138100	690.5	138600	693	139100	695.5						
H	139100	695.5	139600	698	140100	700.5	140600	703	141100	705.5	141600	708	142100	710						
NR Band 77_Part 27O																				
	Bandwidth10MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930
NR Band 78_Part 27O																				
	Bandwidth10MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750		
H	653000	3795	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98		
NR Band 77/78_Part 27Q																				
	Bandwidth10MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495	633332	3499.98
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98		
H	636332	3544.98	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		

2.4 Sensor Triggering angle and power verification

General Note:

1. The following guidance should be applied to laptops/tablets that use Hall Effect or gravity sensors to detect lid angle for the purpose of power reduction:

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

when the screen angle is from 0 degree to 360 degree							
Screen angle (degree) v.s. power	Band		WCDMA II Ant 5	LTE B38 Ant 5	LTE B48 Ant 8	NR n77 PC2 Ant 5	NR n77 PC2 Ant 8
	Lid Close	0	standby	standby	standby	standby	standby
		1	standby	standby	standby	standby	standby
		2	standby	standby	standby	standby	standby
		3	standby	standby	standby	standby	standby
		4	standby	standby	standby	standby	standby
		5	standby	standby	standby	standby	standby
		10	standby	standby	standby	standby	standby
		20	standby	standby	standby	standby	standby
		30	standby	standby	standby	standby	standby
	Laptop	35	23.49	22.78	20.71	25.79	25.62
		40	23.58	22.62	21.43	26.16	26.47
		50	23.32	23.40	21.05	25.97	26.43
		60	23.22	22.76	21.40	26.46	25.54
		70	23.27	22.71	21.36	26.25	26.04
		80	23.52	23.41	21.44	26.08	25.87
		90	23.60	22.77	20.52	26.10	26.17
		100	23.54	23.21	21.06	25.74	25.75
		110	23.62	23.41	21.25	25.77	26.23
		120	23.76	23.06	21.31	26.44	26.15
		125	23.15	22.68	21.03	25.87	26.34
		126	23.91	23.05	20.60	26.07	26.21
		127	23.78	22.91	21.50	26.47	25.77
		128	23.83	22.53	20.52	25.92	25.89
		129	23.56	22.73	21.37	26.49	25.78
	Tablet	130	15.25	14.35	14.85	13.19	14.41
		131	14.85	14.05	14.40	13.33	14.23
		132	15.31	13.65	14.22	12.96	14.06
		133	15.23	14.35	14.64	13.09	13.85
		134	15.18	14.25	14.59	12.99	13.69
		135	14.50	13.67	14.09	13.24	14.06
		140	14.85	14.34	14.97	13.45	14.33
		145	14.59	13.92	14.05	13.39	13.95
		150	14.92	14.21	14.16	12.90	14.41
		160	14.88	14.19	14.25	13.00	14.43
		170	15.38	14.20	14.01	12.87	13.57
		180	15.16	13.53	14.89	12.80	13.58
		190	15.33	14.30	14.65	12.62	14.01
		200	14.70	13.68	14.83	12.62	14.29

		210	15.29	14.18	14.38	12.81	14.43
		220	14.78	14.32	14.54	13.50	13.54
		230	14.65	13.71	14.93	12.95	13.95
		240	15.49	14.24	14.19	12.52	13.82
		250	15.28	14.14	14.83	12.67	13.57
		260	15.44	14.44	14.81	12.87	14.11
		270	15.50	14.40	14.03	13.30	13.81
		280	14.71	14.39	14.92	13.33	14.04
		290	15.29	13.71	14.86	13.18	13.81
		300	15.07	14.33	14.75	12.57	14.01
		310	14.99	14.00	14.21	13.38	13.87
		320	14.57	14.40	14.48	13.01	13.54
		330	15.13	14.40	14.36	12.91	14.43
		340	14.79	14.25	14.34	13.10	13.75
		350	15.41	13.87	14.70	12.80	13.98
		360	15.44	13.60	14.93	12.89	13.72

when the screen angle is from 0 degree to 360 degree							
Screen angle (degree) v.s. power	Wireless		WCDMA II Ant 5	LTE B38 Ant 5	LTE B48 Ant 8	NR n77 PC2 Ant 5	NR n77 PC2 Ant 8
	Tablet	360	14.97	14.09	14.77	13.25	13.66
		350	14.69	13.51	14.98	12.78	13.65
		340	15.40	13.98	14.57	12.52	14.49
		330	14.78	14.03	14.93	12.75	13.57
		320	14.50	13.75	14.92	12.51	14.22
		310	15.32	13.80	14.62	13.41	14.15
		300	14.84	13.67	14.70	12.58	14.22
		290	14.93	14.21	14.93	13.32	14.41
		280	15.35	14.16	14.79	12.78	13.92
		270	15.43	14.08	14.54	12.73	14.47
		260	14.98	13.75	14.19	12.83	14.40
		250	14.79	14.33	14.27	12.56	13.51
		240	14.57	14.12	14.99	12.65	14.22
		230	14.91	13.73	14.65	13.05	14.21
		220	14.98	14.41	14.54	13.01	14.31
		210	15.29	13.59	14.53	12.66	13.97
		200	14.98	13.57	14.16	12.50	13.87
		190	14.51	14.14	14.77	12.78	13.71
		180	14.79	13.87	14.61	13.44	13.88
		170	14.99	14.04	14.74	12.56	14.36
		160	14.86	14.34	14.37	13.18	13.79
		150	15.01	13.60	14.51	13.23	13.50
		140	15.46	14.30	14.96	13.28	14.41
		135	14.94	14.24	14.63	12.51	13.64
		134	14.83	14.25	14.65	12.59	14.35
		133	14.88	13.92	14.86	13.00	13.72
		132	14.77	13.97	14.43	13.39	13.51
		131	14.96	13.86	14.98	12.93	14.09
		130	15.39	14.25	14.11	12.63	13.52
	Laptop	129	23.06	23.23	21.08	25.97	26.38
		128	24.00	22.90	21.41	26.37	25.77
		127	23.07	23.10	21.30	26.21	25.86
		126	23.30	22.67	20.94	25.90	25.95

		125	23.50	23.25	21.36	26.17	26.24
		120	23.76	22.57	20.71	25.67	25.85
		120	23.61	23.05	21.12	26.10	25.50
		110	23.77	23.08	21.33	26.27	26.16
		100	23.96	22.55	20.59	25.86	26.17
		90	23.39	22.91	21.15	25.74	25.99
		80	23.02	22.75	20.83	25.99	25.95
		70	23.80	23.23	21.11	25.89	25.51
		60	23.41	22.93	20.96	26.02	26.16
		50	24.00	22.93	21.33	25.68	26.13
		40	23.75	22.56	20.61	26.02	25.87
		35	23.30	22.93	20.56	26.18	26.07
	Lid Close	30	standby	standby	standby	standby	standby
		20	standby	standby	standby	standby	standby
		10	standby	standby	standby	standby	standby
		5	standby	standby	standby	standby	standby
		4	standby	standby	standby	standby	standby
		3	standby	standby	standby	standby	standby
		2	standby	standby	standby	standby	standby
		1	standby	standby	standby	standby	standby
		0	standby	standby	standby	standby	standby

3. Guidance Applied

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

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

4. RF Exposure Limits

4.1 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.

4.2 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.



4.3 RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm^2 per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	$1842/f$	$4.89/f$	*($900/f^2$)	6
30-300	61.4	0.163	1.0	6
300-1500			$f/300$	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	$824/f$	$2.19/f$	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500			$f/1500$	30
1500-100,000			1.0	30

5. Specific Absorption Rate (SAR)

5.1 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.

5.2 SAR Definition

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

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

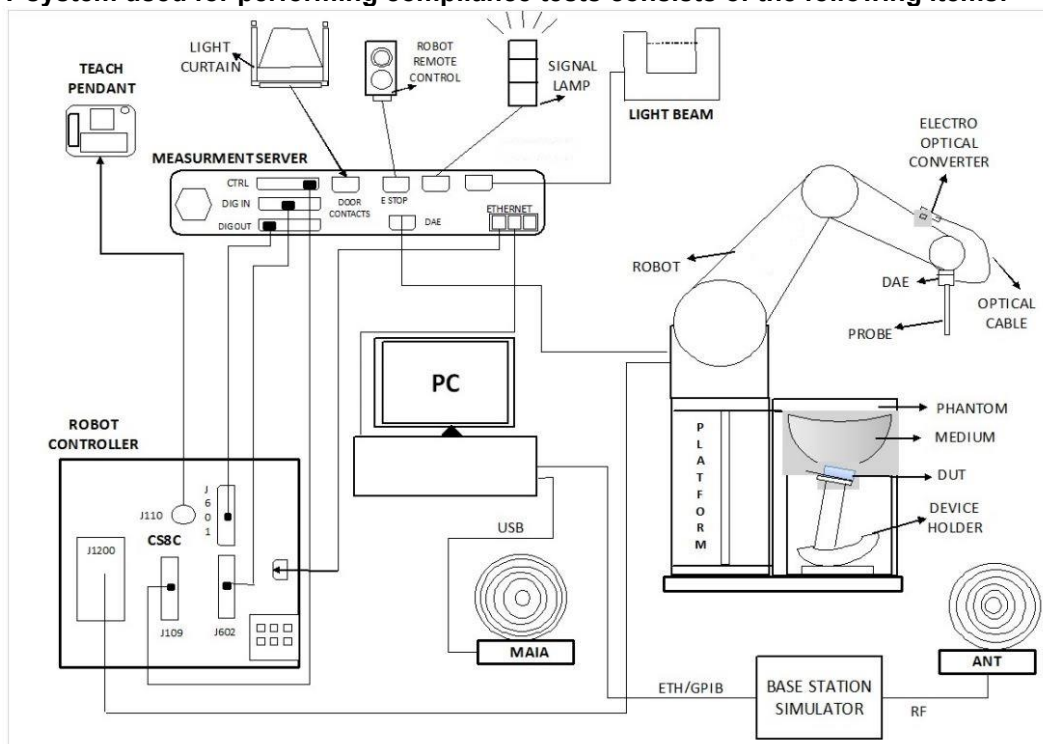
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

6. System Description and Setup

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



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

6.1 Test Site Location

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

Laboratory	EMC & Wireless Communications Laboratory		Wensan Laboratory					
Test Site Location	TW1190		TW3786					
	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan					
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY	SAR18-HY	SAR21-HY	
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY	SAR19-HY	SAR22-HY	
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY	SAR20-HY		

6.2 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	4 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 μ W/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	4 MHz – > 6 GHz Linearity: ± 0.2 dB (30 MHz – 6 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 μ W/g – > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

6.3 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.

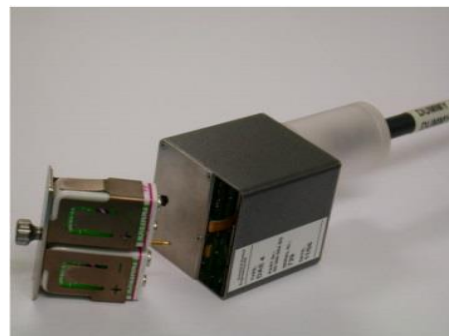


Fig 5.1 Photo of DAE

6.4 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.

6.5 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

7. Measurement Procedures

The measurement procedures are as follows:

- (a) Configure the device RF transmitters to be in continuous transmission mode., 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

7.1 Spatial Peak SAR Evaluation

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

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

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

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

7.2 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.

7.3 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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

7.4 Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

7.5 Volume Scan Procedures

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

7.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASYS 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.



8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1117	Mar. 12, 2025	Mar. 11, 2026
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	499	Aug. 22, 2024	Aug. 20, 2026
SPEAG	1750MHz System Validation Kit	D1750V2	1112	Feb. 20, 2025	Feb. 19, 2026
SPEAG	1900MHz System Validation Kit ⁽²⁾	D1900V2	5d041	Aug. 15, 2024	Aug. 13, 2026
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Jun. 11, 2025	Jun. 10, 2026
SPEAG	2300MHz System Validation Kit ⁽²⁾	D2300V2	1006	Jan. 14, 2025	Jan. 13, 2026
SPEAG	2600MHz System Validation Kit ⁽²⁾	D2600V2	1008	Aug. 15, 2024	Aug. 13, 2026
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Jun. 11, 2025	Jun. 10, 2026
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1014	Jan. 15, 2025	Jan. 14, 2026
SPEAG	3700MHz System Validation Kit	D3700V2	1006	Jun. 12, 2025	Jun. 11, 2026
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1092	May. 15, 2023	May. 12, 2026
SPEAG	3900MHz System Validation Kit	D3900V2	1017	Apr. 22, 2025	Apr. 21, 2026
SPEAG	Data Acquisition Electronics	DAE4	1647	Oct. 20, 2025	Oct. 19, 2026
SPEAG	Data Acquisition Electronics	DAE4	1707	Nov. 20, 2025	Nov. 19, 2026
SPEAG	Data Acquisition Electronics	DAE4	1794	Feb. 12, 2025	Feb. 11, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7785	Nov. 26, 2025	Nov. 25, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 23, 2025	Jan. 22, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7793	Feb. 18, 2025	Feb. 17, 2026
SPEAG	Dielectric Probe Kit	DAK-3.5	1270	May. 19, 2025	May. 18, 2026
Testo	Hygro meter	608-H1	45196600	Nov. 04, 2025	Nov. 03, 2026
Testo	Hygro meter	608-H1	45142597	Jan. 09, 2025	Jan. 08, 2026
Anritsu	Radio Communication Analyzer	MT8821C	6201074414	Aug. 19, 2025	Aug. 18, 2026
Keysight	5G Wireless Test Platform	E7515B	MY59321595	Jun. 20, 2025	Jun. 19, 2026
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Sep. 24, 2025	Sep. 23, 2026
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 14, 2025	Oct. 13, 2026
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3902	Feb. 19, 2025	Feb. 18, 2026
Anritsu	Power Meter	ML2496A	2119003	Jul. 14, 2025	Jul. 13, 2026
R&S	Power Sensor	NRP8S	109687	Sep. 22, 2025	Sep. 21, 2026
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Sep. 09, 2025	Sep. 08, 2026
Mini-Circuits	Power Amplifier	ZVE-8G+	D120604	Oct. 17, 2025	Oct. 16, 2026
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	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. 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.



9. System Verification

9.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18°C to 25°C, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

The liquid tissue depth was at least 15cm in the phantom for all SAR testing

The SPEAG Dasy Measurement system implement a SAR error compensation algorithm as documented in IEEE Std 1528-2013 to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, according to KDB 865664 D01 and IEC/IEEE 62209-1528, the tolerance for "Delta (σ)" and "Delta (ϵ_r)" can be relaxed to $\pm 10\%$

< Tissue Dielectric Parameter Check Results >

Frequency (MHz)	Liquid Temp (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.5	0.895	42.7	0.89	41.9	0.56	1.91	± 10.0	2025-12-16
750	22.9	0.896	42.1	0.89	41.9	0.67	0.48	± 10.0	2025-12-19
835	22.5	0.926	42.4	0.9	41.5	2.89	2.17	± 10.0	2025-12-16
835	22.9	0.927	42.0	0.9	41.5	3.00	1.20	± 10.0	2025-12-19
1750	22.7	1.35	40.9	1.37	40.1	-1.46	2.00	± 10.0	2025-12-17
1750	22.5	1.35	41.7	1.37	40.1	-1.46	3.99	± 10.0	2025-12-20
1900	22.7	1.42	40.6	1.4	40.0	1.43	1.50	± 10.0	2025-12-17
1900	22.5	1.44	41.5	1.4	40.0	2.86	3.75	± 10.0	2025-12-20
2300	22.5	1.72	39.7	1.67	39.5	2.99	0.51	± 10.0	2025-12-15
2300	22.2	1.74	40.1	1.67	39.5	4.19	1.52	± 10.0	2025-12-22
2600	22.5	1.95	39.2	1.96	39.0	-0.51	0.51	± 10.0	2025-12-15
2600	22.2	1.97	39.7	1.96	39.0	0.51	1.79	± 10.0	2025-12-22
3500	22.4	2.7	38.5	2.91	37.9	-7.22	1.58	± 10.0	2025-12-14
3500	22.8	2.68	37.5	2.91	37.9	-7.90	-1.06	± 10.0	2025-12-18
3500	22.1	2.69	41.0	2.91	37.9	-7.56	8.18	± 10.0	2025-12-21
3500	22.3	2.72	39.2	2.91	37.9	-6.53	3.43	± 10.0	2025-12-23
3700	22.4	2.88	38.2	3.12	37.7	-7.69	1.33	± 10.0	2025-12-14
3700	22.8	2.88	40.7	3.12	37.7	-7.69	7.96	± 10.0	2025-12-18
3700	22.1	2.87	40.7	3.12	37.7	-8.01	7.96	± 10.0	2025-12-21
3700	22.3	2.9	38.9	3.12	37.7	-7.05	3.18	± 10.0	2025-12-23
3900	22.4	3.09	38.0	3.33	37.51	-7.21	1.31	± 10.0	2025-12-14
3900	22.8	3.16	38.2	3.33	37.51	-5.11	1.84	± 10.0	2025-12-18
3900	22.1	3.06	40.4	3.33	37.51	-8.11	7.70	± 10.0	2025-12-21
3900	22.3	3.09	38.7	3.33	37.51	-7.21	3.17	± 10.0	2025-12-23

9.2 System Performance Check Results

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

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR15	2025-12-16	750	250.00	D750V3 - 1117	EX3DV4 - SN7793	DAE4 Sn1647	2.320	8.600	9.280	7.91	1.520	5.570	6.080	9.16
SAR15	2025-12-19	750	250.00	D750V3 - 1117	EX3DV4 - SN7793	DAE4 Sn1647	2.310	8.600	9.240	7.44	1.490	5.570	5.960	7.00
SAR15	2025-12-16	835	250.00	D835V2 - 499	EX3DV4 - SN7793	DAE4 Sn1647	2.570	9.440	10.280	8.90	1.620	6.050	6.480	7.11
SAR15	2025-12-19	835	250.00	D835V2 - 499	EX3DV4 - SN7793	DAE4 Sn1647	2.510	9.440	10.040	6.36	1.620	6.050	6.480	7.11
SAR15	2025-12-17	1750	50.00	D1750V2 - 1112	EX3DV4 - SN7793	DAE4 Sn1647	1.900	36.300	38.000	4.68	1.020	19.300	20.400	5.70
SAR15	2025-12-20	1750	250.00	D1750V2 - 1112	EX3DV4 - SN7793	DAE4 Sn1647	9.390	36.300	37.560	3.47	5.020	19.300	20.080	4.04
SAR15	2025-12-17	1900	50.00	D1900V2 - 5d185	EX3DV4 - SN7793	DAE4 Sn1647	1.900	39.600	38.000	-4.04	1.000	20.800	20.000	-3.85
SAR15	2025-12-20	1900	250.00	D1900V2 - 5d041	EX3DV4 - SN7793	DAE4 Sn1647	10.000	39.200	40.000	2.04	5.290	20.700	21.160	2.22
SAR15	2025-12-15	2300	50.00	D2300V2 - 1006	EX3DV4 - SN7793	DAE4 Sn1647	2.400	48.200	48.000	-0.41	1.150	23.200	23.000	-0.86
SAR15	2025-12-22	2300	50.00	D2300V2 - 1006	EX3DV4 - SN7793	DAE4 Sn1647	2.450	48.200	49.000	1.66	1.180	23.200	23.600	1.72
SAR15	2025-12-15	2600	50.00	D2600V2 - 1008	EX3DV4 - SN7793	DAE4 Sn1647	2.730	55.700	54.600	-1.97	1.230	25.300	24.600	-2.77
SAR15	2025-12-22	2600	50.00	D2600V2 - 1078	EX3DV4 - SN7793	DAE4 Sn1647	2.780	55.300	55.600	0.54	1.260	24.900	25.200	1.20
SAR15	2025-12-14	3500	50.00	D3500V2 - 1014	EX3DV4 - SN7793	DAE4 Sn1647	3.190	65.700	63.800	-2.89	1.160	24.900	23.200	-6.83
SAR15	2025-12-18	3500	50.00	D3500V2 - 1014	EX3DV4 - SN7793	DAE4 Sn1647	2.960	65.700	59.200	-9.89	1.130	24.900	22.600	-9.24
SAR15	2025-12-21	3500	50.00	D3500V2 - 1014	EX3DV4 - SN7793	DAE4 Sn1647	3.040	65.700	60.800	-7.46	1.170	24.900	23.400	-6.02
SAR15	2025-12-23	3500	50.00	D3500V2 - 1014	EX3DV4 - SN7793	DAE4 Sn1647	3.050	65.700	61.000	-7.15	1.170	24.900	23.400	-6.02
SAR15	2025-12-14	3700	50.00	D3700V2 - 1017	EX3DV4 - SN7793	DAE4 Sn1647	3.440	69.900	68.800	-1.57	1.250	25.600	25.000	-2.34
SAR15	2025-12-18	3700	50.00	D3700V2 - 1006	EX3DV4 - SN7793	DAE4 Sn1647	3.180	69.900	63.600	-9.01	1.190	25.600	23.800	-7.03
SAR15	2025-12-21	3700	50.00	D3700V2 - 1006	EX3DV4 - SN7793	DAE4 Sn1647	3.200	69.900	64.000	-8.44	1.190	25.600	23.800	-7.03
SAR15	2025-12-23	3700	50.00	D3700V2 - 1006	EX3DV4 - SN7793	DAE4 Sn1647	3.180	69.900	63.600	-9.01	1.240	25.600	24.800	-3.13
SAR16	2025-12-14	3900	50.00	D3900V2 - 1017	EX3DV4 - SN7785	DAE4 Sn1707	3.640	70.200	72.800	3.70	1.270	24.600	25.400	3.25
SAR14	2025-12-18	3900	50.00	D3900V2 - 1092	EX3DV4 - SN3976	DAE4 Sn1794	3.210	67.000	64.200	-4.18	1.140	23.200	22.800	-1.72
SAR14	2025-12-21	3900	50.00	D3900V2 - 1092	EX3DV4 - SN3976	DAE4 Sn1794	3.230	67.000	64.600	-3.58	1.210	23.200	24.200	4.31
SAR14	2025-12-23	3900	50.00	D3900V2 - 1092	EX3DV4 - SN3976	DAE4 Sn1794	3.250	67.000	65.000	-2.99	1.220	23.200	24.400	5.17

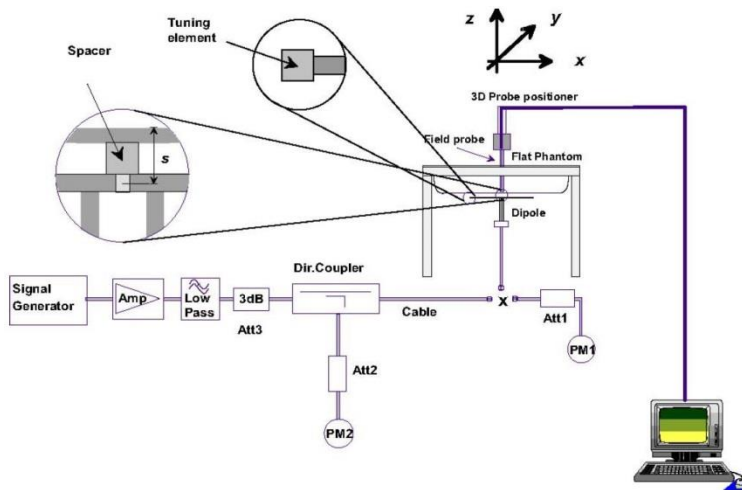


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo



10. RF Exposure Positions

10.1 SAR Testing for Tablet

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

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

< WCDMA Conducted Power >

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

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

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

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of 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 $\beta_c = 11/15$ and $\beta_d = 15/15$.

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} (Note 1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

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

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

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

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

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

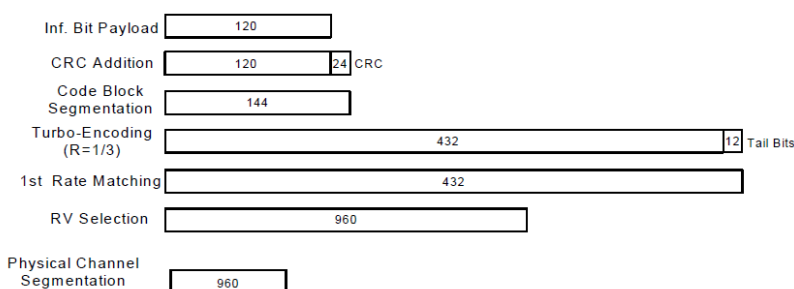


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

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

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

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

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

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

Setup Configuration

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

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA 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 $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

【WCDMA II_NB Mode】

TX Channel		9262	9400	9538	Tune-up Limit (dBm)
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	22.58	22.76	22.66	24.50
3GPP Rel 6	HSDPA Subtest-1	22.27	22.40	22.31	23.50
3GPP Rel 6	HSDPA Subtest-2	22.27	22.40	22.31	23.50
3GPP Rel 6	HSDPA Subtest-3	21.81	21.91	21.86	23.00
3GPP Rel 6	HSDPA Subtest-4	21.77	21.87	21.79	23.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.07	22.21	22.13	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.12	22.27	22.15	23.50
3GPP Rel 8	DC-HSDPA Subtest-3	21.68	21.78	21.66	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	21.64	21.69	21.67	23.00
3GPP Rel 6	HSUPA Subtest-1	22.35	22.34	22.36	23.50
3GPP Rel 6	HSUPA Subtest-2	20.26	20.36	20.26	21.50
3GPP Rel 6	HSUPA Subtest-3	21.29	21.38	21.27	22.50
3GPP Rel 6	HSUPA Subtest-4	19.78	19.91	19.77	21.50
3GPP Rel 6	HSUPA Subtest-5	22.30	22.40	22.30	23.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.12	20.31	20.10	21.00

【WCDMA II_TB Mode】

TX Channel		9262	9400	9538	Tune-up Limit (dBm)
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	15.07	15.11	15.05	16.00
3GPP Rel 6	HSDPA Subtest-1	14.83	14.87	14.81	15.00
3GPP Rel 6	HSDPA Subtest-2	14.83	14.87	14.81	15.00
3GPP Rel 6	HSDPA Subtest-3	14.41	14.50	14.49	14.50
3GPP Rel 6	HSDPA Subtest-4	14.48	14.49	14.46	14.50
3GPP Rel 8	DC-HSDPA Subtest-1	14.70	14.74	14.68	15.00
3GPP Rel 8	DC-HSDPA Subtest-2	14.74	14.78	14.72	15.00
3GPP Rel 8	DC-HSDPA Subtest-3	14.42	14.46	14.40	14.50
3GPP Rel 8	DC-HSDPA Subtest-4	14.36	14.40	14.34	14.50
3GPP Rel 6	HSUPA Subtest-1	14.79	14.83	14.77	15.00
3GPP Rel 6	HSUPA Subtest-2	12.48	12.52	12.47	13.00
3GPP Rel 6	HSUPA Subtest-3	13.15	13.19	13.13	14.00
3GPP Rel 6	HSUPA Subtest-4	12.19	12.22	12.17	13.00
3GPP Rel 6	HSUPA Subtest-5	14.83	14.87	14.81	15.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	11.00	11.10	10.98	12.50

【WCDMA IV_NB Mode】

TX Channel		1312	1413	1513	Tune-up Limit (dBm)
Frequency (MHz)		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	22.52	22.57	22.53	24.50
3GPP Rel 6	HSDPA Subtest-1	22.31	22.27	22.35	23.50
3GPP Rel 6	HSDPA Subtest-2	22.29	22.24	22.35	23.50
3GPP Rel 6	HSDPA Subtest-3	21.81	21.77	21.86	23.00
3GPP Rel 6	HSDPA Subtest-4	21.78	21.73	21.82	23.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.21	22.15	22.22	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.15	22.06	22.17	23.50
3GPP Rel 8	DC-HSDPA Subtest-3	21.64	21.60	21.74	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	21.68	21.57	21.67	23.00
3GPP Rel 6	HSUPA Subtest-1	21.68	21.60	21.65	23.50
3GPP Rel 6	HSUPA Subtest-2	20.23	20.21	20.31	21.50
3GPP Rel 6	HSUPA Subtest-3	21.31	21.23	21.36	22.50
3GPP Rel 6	HSUPA Subtest-4	19.82	19.73	19.85	21.50
3GPP Rel 6	HSUPA Subtest-5	21.70	21.58	21.65	23.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.11	20.16	20.15	21.00

【WCDMA IV_TB Mode】

TX Channel		1312	1413	1513	Tune-up Limit (dBm)
Frequency (MHz)		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	14.81	14.91	14.89	16.00
3GPP Rel 6	HSDPA Subtest-1	14.61	14.71	14.69	15.00
3GPP Rel 6	HSDPA Subtest-2	14.59	14.69	14.67	15.00
3GPP Rel 6	HSDPA Subtest-3	14.28	14.38	14.36	14.50
3GPP Rel 6	HSDPA Subtest-4	14.26	14.36	14.34	14.50
3GPP Rel 8	DC-HSDPA Subtest-1	14.53	14.63	14.61	15.00
3GPP Rel 8	DC-HSDPA Subtest-2	14.47	14.57	14.55	15.00
3GPP Rel 8	DC-HSDPA Subtest-3	14.17	14.27	14.25	14.50
3GPP Rel 8	DC-HSDPA Subtest-4	14.15	14.25	14.23	14.50
3GPP Rel 6	HSUPA Subtest-1	14.17	14.27	14.25	15.00
3GPP Rel 6	HSUPA Subtest-2	12.26	12.35	12.33	13.00
3GPP Rel 6	HSUPA Subtest-3	13.93	14.00	14.00	14.00
3GPP Rel 6	HSUPA Subtest-4	12.94	13.00	12.91	13.00
3GPP Rel 6	HSUPA Subtest-5	14.16	14.26	14.24	15.00
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	11.12	11.32	11.20	12.50

【WCDMA V_NB Mode】

TX Channel		4132	4182	4233	Tune-up Limit (dBm)
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	23.18	23.24	23.12	24.50
3GPP Rel 6	HSDPA Subtest-1	22.89	22.82	22.97	23.50
3GPP Rel 6	HSDPA Subtest-2	22.91	22.84	22.95	23.50
3GPP Rel 6	HSDPA Subtest-3	22.43	22.37	22.51	23.00
3GPP Rel 6	HSDPA Subtest-4	22.39	22.32	22.47	23.00
3GPP Rel 8	DC-HSDPA Subtest-1	22.69	22.63	22.85	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	22.79	22.68	22.78	23.50
3GPP Rel 8	DC-HSDPA Subtest-3	22.23	22.23	22.34	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	22.20	22.20	22.35	23.00
3GPP Rel 6	HSUPA Subtest-1	21.85	21.76	21.90	23.50
3GPP Rel 6	HSUPA Subtest-2	20.83	20.78	20.90	21.50
3GPP Rel 6	HSUPA Subtest-3	21.89	21.81	21.93	22.50
3GPP Rel 6	HSUPA Subtest-4	20.40	20.27	20.46	21.50
3GPP Rel 6	HSUPA Subtest-5	21.90	21.80	21.90	23.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	19.90	20.10	20.03	21.00

【WCDMA V_TB Mode】

TX Channel		4132	4182	4233	Tune-up Limit (dBm)
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	17.48	17.53	17.52	18.50
3GPP Rel 6	HSDPA Subtest-1	17.16	17.21	17.20	17.50
3GPP Rel 6	HSDPA Subtest-2	17.18	17.23	17.22	17.50
3GPP Rel 6	HSDPA Subtest-3	16.82	16.87	16.86	17.00
3GPP Rel 6	HSDPA Subtest-4	16.79	16.84	16.83	17.00
3GPP Rel 8	DC-HSDPA Subtest-1	17.02	17.07	17.06	17.50
3GPP Rel 8	DC-HSDPA Subtest-2	17.06	17.11	17.10	17.50
3GPP Rel 8	DC-HSDPA Subtest-3	16.72	16.77	16.76	17.00
3GPP Rel 8	DC-HSDPA Subtest-4	16.70	16.75	16.74	17.00
3GPP Rel 6	HSUPA Subtest-1	16.36	16.41	16.40	17.50
3GPP Rel 6	HSUPA Subtest-2	15.23	15.37	15.26	15.50
3GPP Rel 6	HSUPA Subtest-3	16.40	16.45	16.44	16.50
3GPP Rel 6	HSUPA Subtest-4	15.25	15.29	15.28	15.50
3GPP Rel 6	HSUPA Subtest-5	16.39	16.44	16.43	17.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	13.40	13.82	13.66	15.00

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

1. A Base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

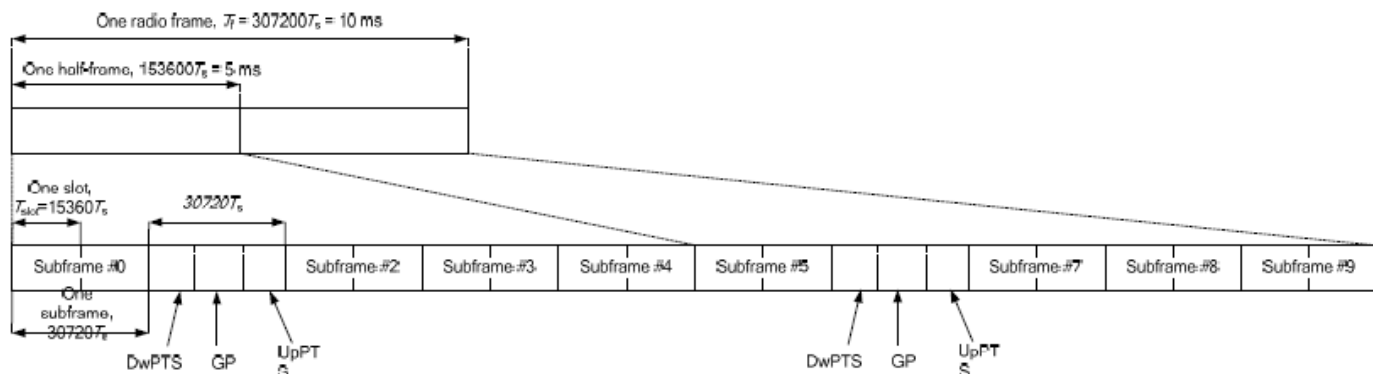


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41.
- 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.

【LTE Band 2_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	22.71	22.76	22.73	24.00
20	QPSK	1	49	22.85	22.87	22.89	24.00
20	QPSK	1	99	22.80	22.77	22.80	24.00
20	QPSK	50	0	21.83	21.79	21.92	23.00
20	QPSK	50	24	21.85	21.88	21.93	23.00
20	QPSK	50	50	21.82	21.82	21.90	23.00
20	QPSK	100	0	21.83	21.75	21.93	23.00
20	16QAM	1	0	22.00	22.05	21.95	23.00
20	16QAM	1	49	22.12	22.16	22.18	23.00
20	16QAM	1	99	22.13	21.96	22.06	23.00
20	16QAM	50	0	20.84	20.74	20.93	22.00
20	16QAM	50	24	20.84	20.80	20.88	22.00
20	16QAM	50	50	20.80	20.77	20.89	22.00
20	16QAM	100	0	20.81	20.74	20.92	22.00
20	64QAM	1	0	20.85	20.95	20.86	22.00
20	64QAM	1	49	20.94	20.99	21.00	22.00
20	64QAM	1	99	20.99	20.88	20.88	22.00
20	64QAM	50	0	19.81	19.69	19.90	21.00
20	64QAM	50	24	19.81	19.81	19.86	21.00
20	64QAM	50	50	19.72	19.76	19.83	21.00
20	64QAM	100	0	19.79	19.70	19.86	21.00
20	256QAM	1	0	17.38	17.37	17.34	19.00
20	256QAM	1	49	17.19	17.18	18.00	19.00
20	256QAM	1	99	17.56	17.54	17.10	19.00
20	256QAM	50	0	17.35	17.43	17.62	19.00
20	256QAM	50	24	17.34	17.40	17.52	19.00
20	256QAM	50	50	17.32	17.44	17.47	19.00
20	256QAM	100	0	17.42	17.41	17.59	19.00
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.59	22.70	22.64	24.00
15	QPSK	1	37	22.74	22.84	22.84	24.00
15	QPSK	1	74	22.75	22.67	22.74	24.00
15	QPSK	36	0	21.72	21.72	21.77	23.00
15	QPSK	36	20	21.81	21.86	21.85	23.00
15	QPSK	36	39	21.77	21.72	21.78	23.00
15	QPSK	75	0	21.72	21.69	21.80	23.00
15	16QAM	1	0	21.88	22.03	21.93	23.00
15	16QAM	1	37	22.04	22.13	22.16	23.00
15	16QAM	1	74	22.05	21.84	22.02	23.00
15	16QAM	36	0	20.79	20.66	20.79	22.00
15	16QAM	36	20	20.73	20.69	20.81	22.00
15	16QAM	36	39	20.69	20.70	20.87	22.00
15	16QAM	75	0	20.70	20.61	20.90	22.00
15	64QAM	1	0	20.71	20.86	20.84	22.00
15	64QAM	1	37	20.82	20.94	20.89	22.00
15	64QAM	1	74	20.92	20.73	20.82	22.00
15	64QAM	36	0	19.70	19.58	19.76	21.00
15	64QAM	36	20	19.70	19.72	19.79	21.00
15	64QAM	36	39	19.68	19.71	19.75	21.00
15	64QAM	75	0	19.69	19.69	19.82	21.00
15	256QAM	1	0	17.24	17.23	17.32	19.00
15	256QAM	1	37	17.15	17.10	17.89	19.00
15	256QAM	1	74	17.54	17.49	17.04	19.00
15	256QAM	36	0	17.28	17.30	17.51	19.00
15	256QAM	36	20	17.25	17.37	17.50	19.00
15	256QAM	36	39	17.21	17.32	17.39	19.00
15	256QAM	75	0	17.34	17.31	17.50	19.00
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.60	22.68	22.59	24.00
10	QPSK	1	25	22.78	22.79	22.77	24.00
10	QPSK	1	49	22.69	22.73	22.67	24.00
10	QPSK	25	0	21.75	21.74	21.87	23.00
10	QPSK	25	12	21.75	21.80	21.91	23.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	QPSK	25	25	21.68	21.79	21.86	23.00
10	QPSK	50	0	21.82	21.65	21.78	23.00
10	16QAM	1	0	21.90	21.91	21.89	23.00
10	16QAM	1	25	22.02	22.05	22.14	23.00
10	16QAM	1	49	22.01	21.85	21.98	23.00
10	16QAM	25	0	20.75	20.70	20.78	22.00
10	16QAM	25	12	20.77	20.71	20.87	22.00
10	16QAM	25	25	20.72	20.66	20.74	22.00
10	16QAM	50	0	20.73	20.66	20.87	22.00
10	64QAM	1	0	20.84	20.92	20.81	22.00
10	64QAM	1	25	20.92	20.93	20.87	22.00
10	64QAM	1	49	20.94	20.75	20.78	22.00
10	64QAM	25	0	19.74	19.62	19.87	21.00
10	64QAM	25	12	19.76	19.72	19.76	21.00
10	64QAM	25	25	19.59	19.66	19.81	21.00
10	64QAM	50	0	19.76	19.67	19.84	21.00
10	256QAM	1	0	17.25	17.23	17.28	19.00
10	256QAM	1	25	17.12	17.09	17.87	19.00
10	256QAM	1	49	17.53	17.43	17.06	19.00
10	256QAM	25	0	17.27	17.30	17.56	19.00
10	256QAM	25	12	17.23	17.36	17.38	19.00
10	256QAM	25	25	17.19	17.36	17.40	19.00
10	256QAM	50	0	17.37	17.28	17.54	19.00
Channel				18625	18900	19175	Tune-up limit
Frequency (MHz)				1852.5	1880	1907.5	(dBm)
5	QPSK	1	0	22.63	22.64	22.69	24.00
5	QPSK	1	12	22.79	22.82	22.86	24.00
5	QPSK	1	24	22.78	22.75	22.73	24.00
5	QPSK	12	0	21.69	21.73	21.88	23.00
5	QPSK	12	7	21.77	21.79	21.89	23.00
5	QPSK	12	13	21.81	21.80	21.79	23.00
5	QPSK	25	0	21.73	21.71	21.79	23.00
5	16QAM	1	0	21.98	21.98	21.83	23.00
5	16QAM	1	12	22.02	22.08	22.08	23.00
5	16QAM	1	24	22.08	21.95	22.03	23.00
5	16QAM	12	0	20.82	20.60	20.82	22.00
5	16QAM	12	7	20.81	20.75	20.82	22.00
5	16QAM	12	13	20.77	20.66	20.77	22.00
5	16QAM	25	0	20.76	20.68	20.78	22.00
5	64QAM	1	0	20.80	20.92	20.73	22.00
5	64QAM	1	12	20.79	20.89	20.97	22.00
5	64QAM	1	24	20.85	20.86	20.79	22.00
5	64QAM	12	0	19.75	19.64	19.88	21.00
5	64QAM	12	7	19.78	19.75	19.79	21.00
5	64QAM	12	13	19.66	19.71	19.74	21.00
5	64QAM	25	0	19.68	19.64	19.72	21.00
5	256QAM	1	0	17.27	17.31	17.33	19.00
5	256QAM	1	12	17.06	17.04	17.88	19.00
5	256QAM	1	24	17.51	17.44	17.01	19.00
5	256QAM	12	0	17.33	17.29	17.61	19.00
5	256QAM	12	7	17.25	17.27	17.50	19.00
5	256QAM	12	13	17.22	17.37	17.46	19.00
5	256QAM	25	0	17.29	17.30	17.46	19.00
Channel				18615	18900	19185	Tune-up limit
Frequency (MHz)				1851.5	1880	1908.5	(dBm)
3	QPSK	1	0	22.62	22.72	22.70	24.00
3	QPSK	1	8	22.73	22.72	22.77	24.00
3	QPSK	1	14	22.67	22.68	22.74	24.00
3	QPSK	8	0	21.76	21.65	21.84	23.00
3	QPSK	8	4	21.73	21.83	21.90	23.00
3	QPSK	8	7	21.70	21.68	21.82	23.00
3	QPSK	15	0	21.72	21.63	21.90	23.00
3	16QAM	1	0	21.94	21.97	21.80	23.00
3	16QAM	1	8	22.05	22.03	22.15	23.00
3	16QAM	1	14	22.04	21.94	21.91	23.00
3	16QAM	8	0	20.74	20.60	20.86	22.00
3	16QAM	8	4	20.76	20.69	20.79	22.00
3	16QAM	8	7	20.67	20.64	20.86	22.00
3	16QAM	15	0	20.69	20.64	20.78	22.00
3	64QAM	1	0	20.70	20.92	20.82	22.00
3	64QAM	1	8	20.89	20.92	20.93	22.00
3	64QAM	1	14	20.91	20.80	20.75	22.00
3	64QAM	8	0	19.71	19.59	19.87	21.00
3	64QAM	8	4	19.75	19.79	19.84	21.00
3	64QAM	8	7	19.66	19.72	19.79	21.00

3	64QAM	15	0	19.72	19.68	19.74	21.00
3	256QAM	1	0	17.24	17.30	17.30	19.00
3	256QAM	1	8	17.13	17.07	17.99	19.00
3	256QAM	1	14	17.53	17.41	17.06	19.00
3	256QAM	8	0	17.34	17.41	17.60	19.00
3	256QAM	8	4	17.25	17.26	17.50	19.00
3	256QAM	8	7	17.24	17.38	17.37	19.00
3	256QAM	15	0	17.34	17.38	17.57	19.00
Channel				18607	18900	19193	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.78	22.82	22.81	24.00
1.4	QPSK	1	3	22.80	22.85	22.84	24.00
1.4	QPSK	1	5	22.78	22.81	22.82	24.00
1.4	QPSK	3	0	22.82	22.85	22.86	24.00
1.4	QPSK	3	1	22.83	22.85	22.87	24.00
1.4	QPSK	3	3	22.83	22.83	22.86	24.00
1.4	QPSK	6	0	21.81	21.82	21.84	23.00
1.4	16QAM	1	0	22.14	22.20	22.07	23.00
1.4	16QAM	1	3	22.05	22.15	22.10	23.00
1.4	16QAM	1	5	22.02	22.08	22.04	23.00
1.4	16QAM	3	0	21.82	21.87	21.84	23.00
1.4	16QAM	3	1	21.78	21.84	21.89	23.00
1.4	16QAM	3	3	21.82	21.83	21.86	23.00
1.4	16QAM	6	0	20.87	20.85	20.94	22.00
1.4	64QAM	1	0	20.94	20.98	20.94	22.00
1.4	64QAM	1	3	20.93	21.01	21.01	22.00
1.4	64QAM	1	5	20.95	20.99	20.92	22.00
1.4	64QAM	3	0	20.83	20.89	20.91	22.00
1.4	64QAM	3	1	20.88	20.90	20.93	22.00
1.4	64QAM	3	3	20.90	20.85	20.92	22.00
1.4	64QAM	6	0	19.71	19.76	19.75	21.00
1.4	256QAM	1	0	17.24	17.32	17.29	19.00
1.4	256QAM	1	3	17.11	17.09	17.91	19.00
1.4	256QAM	1	5	17.45	17.43	17.03	19.00
1.4	256QAM	3	0	17.33	17.31	17.56	19.00
1.4	256QAM	3	1	17.21	17.35	17.49	19.00
1.4	256QAM	3	3	17.27	17.32	17.35	19.00
1.4	256QAM	6	0	17.31	17.28	17.53	19.00

【LTE Band 2_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	14.87	14.97	14.94	16.00
20	QPSK	1	49	14.81	15.03	14.87	16.00
20	QPSK	1	99	14.78	14.92	14.82	16.00
20	QPSK	50	0	14.71	14.94	14.79	16.00
20	QPSK	50	24	14.83	15.03	14.86	16.00
20	QPSK	50	50	14.82	15.01	14.84	16.00
20	QPSK	100	0	14.82	14.98	14.93	16.00
20	16QAM	1	0	15.04	15.25	15.16	16.00
20	16QAM	1	49	15.13	15.31	15.21	16.00
20	16QAM	1	99	15.06	15.20	15.08	16.00
20	16QAM	50	0	15.10	15.22	15.06	16.00
20	16QAM	50	24	15.13	15.31	15.14	16.00
20	16QAM	50	50	15.08	15.29	15.21	16.00
20	16QAM	100	0	15.02	15.26	15.15	16.00
20	64QAM	1	0	14.93	15.15	15.10	16.00
20	64QAM	1	49	15.04	15.21	15.15	16.00
20	64QAM	1	99	14.92	15.10	15.01	16.00
20	64QAM	50	0	14.96	15.12	15.08	16.00
20	64QAM	50	24	14.97	15.21	15.07	16.00
20	64QAM	50	50	15.01	15.19	15.06	16.00
20	64QAM	100	0	14.91	15.16	15.01	16.00
20	256QAM	1	0	14.86	15.05	14.87	16.00
20	256QAM	1	49	14.97	15.11	15.00	16.00
20	256QAM	1	99	14.78	15.00	14.88	16.00
20	256QAM	50	0	14.84	15.02	14.85	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

20	256QAM	50	24	14.89	15.11	14.95	16.00
20	256QAM	50	50	14.95	15.09	14.94	16.00
20	256QAM	100	0	14.83	15.06	15.01	16.00
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	14.79	14.91	14.89	16.00
15	QPSK	1	37	14.79	15.01	14.82	16.00
15	QPSK	1	74	14.65	14.91	14.79	16.00
15	QPSK	36	0	14.63	14.91	14.65	16.00
15	QPSK	36	20	14.73	14.99	14.78	16.00
15	QPSK	36	39	14.69	14.88	14.79	16.00
15	QPSK	75	0	14.70	14.94	14.81	16.00
15	16QAM	1	0	14.91	15.16	15.11	16.00
15	16QAM	1	37	15.05	15.19	15.12	16.00
15	16QAM	1	74	15.04	15.13	15.06	16.00
15	16QAM	36	0	14.97	15.13	15.04	16.00
15	16QAM	36	20	15.00	15.16	15.10	16.00
15	16QAM	36	39	15.01	15.18	15.15	16.00
15	16QAM	75	0	14.97	15.16	15.09	16.00
15	64QAM	1	0	14.81	15.14	15.09	16.00
15	64QAM	1	37	14.97	15.14	15.12	16.00
15	64QAM	1	74	14.81	15.07	14.98	16.00
15	64QAM	36	0	14.86	14.98	15.03	16.00
15	64QAM	36	20	14.83	15.18	15.05	16.00
15	64QAM	36	39	14.94	15.11	15.02	16.00
15	64QAM	75	0	14.82	15.13	14.98	16.00
15	256QAM	1	0	14.79	14.95	14.81	16.00
15	256QAM	1	37	14.89	15.03	14.98	16.00
15	256QAM	1	74	14.65	14.98	14.76	16.00
15	256QAM	36	0	14.69	14.97	14.78	16.00
15	256QAM	36	20	14.79	15.09	14.91	16.00
15	256QAM	36	39	14.93	14.98	14.88	16.00
15	256QAM	75	0	14.73	15.00	14.96	16.00
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	14.76	14.95	14.87	16.00
10	QPSK	1	25	14.73	14.92	14.78	16.00
10	QPSK	1	49	14.70	14.87	14.75	16.00
10	QPSK	25	0	14.58	14.79	14.68	16.00
10	QPSK	25	12	14.71	15.01	14.78	16.00
10	QPSK	25	25	14.75	14.90	14.81	16.00
10	QPSK	50	0	14.69	14.90	14.89	16.00
10	16QAM	1	0	15.03	15.16	15.03	16.00
10	16QAM	1	25	15.10	15.29	15.10	16.00
10	16QAM	1	49	14.97	15.16	14.93	16.00
10	16QAM	25	0	14.98	15.14	15.03	16.00
10	16QAM	25	12	15.00	15.17	15.09	16.00
10	16QAM	25	25	15.03	15.24	15.19	16.00
10	16QAM	50	0	14.98	15.21	15.02	16.00
10	64QAM	1	0	14.86	15.01	15.09	16.00
10	64QAM	1	25	15.00	15.18	15.08	16.00
10	64QAM	1	49	14.79	15.08	14.95	16.00
10	64QAM	25	0	14.83	15.04	15.01	16.00
10	64QAM	25	12	14.92	15.10	15.02	16.00
10	64QAM	25	25	14.87	15.14	15.01	16.00
10	64QAM	50	0	14.83	15.11	14.97	16.00
10	256QAM	1	0	14.77	15.02	14.78	16.00
10	256QAM	1	25	14.86	14.98	14.88	16.00
10	256QAM	1	49	14.74	14.89	14.74	16.00
10	256QAM	25	0	14.79	14.88	14.76	16.00
10	256QAM	25	12	14.83	15.01	14.85	16.00
10	256QAM	25	25	14.88	14.97	14.88	16.00
10	256QAM	50	0	14.77	14.98	14.94	16.00
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	14.75	14.85	14.90	16.00
5	QPSK	1	12	14.66	14.88	14.77	16.00
5	QPSK	1	24	14.76	14.79	14.69	16.00
5	QPSK	12	0	14.65	14.85	14.68	16.00
5	QPSK	12	7	14.81	15.01	14.72	16.00
5	QPSK	12	13	14.76	14.90	14.70	16.00
5	QPSK	25	0	14.74	14.85	14.78	16.00
5	16QAM	1	0	14.97	15.13	15.13	16.00
5	16QAM	1	12	15.09	15.21	15.13	16.00
5	16QAM	1	24	14.99	15.10	14.99	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	16QAM	12	0	15.04	15.17	15.02	16.00
5	16QAM	12	7	15.09	15.25	15.01	16.00
5	16QAM	12	13	14.95	15.25	15.14	16.00
5	16QAM	25	0	14.99	15.20	15.01	16.00
5	64QAM	1	0	14.83	15.02	15.02	16.00
5	64QAM	1	12	14.99	15.19	15.09	16.00
5	64QAM	1	24	14.84	15.02	14.91	16.00
5	64QAM	12	0	14.82	15.04	14.98	16.00
5	64QAM	12	7	14.95	15.18	14.95	16.00
5	64QAM	12	13	14.96	15.05	15.00	16.00
5	64QAM	25	0	14.90	15.07	14.92	16.00
5	256QAM	1	0	14.81	14.97	14.72	16.00
5	256QAM	1	12	14.87	14.97	14.93	16.00
5	256QAM	1	24	14.74	14.96	14.77	16.00
5	256QAM	12	0	14.80	14.91	14.71	16.00
5	256QAM	12	7	14.77	15.06	14.87	16.00
5	256QAM	12	13	14.88	14.98	14.82	16.00
5	256QAM	25	0	14.73	15.04	14.89	16.00
Channel				18615	18900	19185	Tune-up limit
Frequency (MHz)				1851.5	1880	1908.5	(dBm)
3	QPSK	1	0	14.81	14.88	14.89	16.00
3	QPSK	1	8	14.74	14.89	14.74	16.00
3	QPSK	1	14	14.70	14.86	14.68	16.00
3	QPSK	8	0	14.60	14.83	14.66	16.00
3	QPSK	8	4	14.68	14.97	14.78	16.00
3	QPSK	8	7	14.77	14.93	14.83	16.00
3	QPSK	15	0	14.79	14.88	14.80	16.00
3	16QAM	1	0	14.98	15.18	15.10	16.00
3	16QAM	1	8	15.03	15.23	15.13	16.00
3	16QAM	1	14	15.05	15.13	15.05	16.00
3	16QAM	8	0	15.06	15.18	15.05	16.00
3	16QAM	8	4	15.09	15.27	15.10	16.00
3	16QAM	8	7	15.02	15.24	15.14	16.00
3	16QAM	15	0	14.97	15.23	15.10	16.00
3	64QAM	1	0	14.86	15.07	14.96	16.00
3	64QAM	1	8	14.98	15.12	15.12	16.00
3	64QAM	1	14	14.78	15.01	14.87	16.00
3	64QAM	8	0	14.91	15.06	14.95	16.00
3	64QAM	8	4	14.92	15.18	14.99	16.00
3	64QAM	8	7	14.87	15.05	14.96	16.00
3	64QAM	15	0	14.77	15.06	14.87	16.00
3	256QAM	1	0	14.73	15.02	14.73	16.00
3	256QAM	1	8	14.89	15.05	14.87	16.00
3	256QAM	1	14	14.72	14.87	14.78	16.00
3	256QAM	8	0	14.80	14.90	14.71	16.00
3	256QAM	8	4	14.78	15.04	14.91	16.00
3	256QAM	8	7	14.83	15.06	14.83	16.00
3	256QAM	15	0	14.73	14.96	14.90	16.00
Channel				18607	18900	19193	Tune-up limit
Frequency (MHz)				1850.7	1880	1909.3	(dBm)
1.4	QPSK	1	0	14.75	14.87	14.93	16.00
1.4	QPSK	1	3	14.71	15.02	14.84	16.00
1.4	QPSK	1	5	14.65	14.82	14.81	16.00
1.4	QPSK	3	0	14.69	14.81	14.65	16.00
1.4	QPSK	3	1	14.76	15.01	14.73	16.00
1.4	QPSK	3	3	14.78	14.90	14.78	16.00
1.4	QPSK	6	0	14.75	14.96	14.86	16.00
1.4	16QAM	1	0	15.01	15.11	15.15	16.00
1.4	16QAM	1	3	15.06	15.24	15.09	16.00
1.4	16QAM	1	5	15.00	15.12	15.03	16.00
1.4	16QAM	3	0	15.04	15.13	15.00	16.00
1.4	16QAM	3	1	15.00	15.27	15.09	16.00
1.4	16QAM	3	3	14.95	15.27	15.11	16.00
1.4	16QAM	6	0	15.00	15.25	15.11	16.00
1.4	64QAM	1	0	14.81	15.10	15.09	16.00
1.4	64QAM	1	3	14.97	15.16	15.06	16.00
1.4	64QAM	1	5	14.84	15.02	14.87	16.00
1.4	64QAM	3	0	14.93	15.02	14.99	16.00
1.4	64QAM	3	1	14.96	15.17	15.06	16.00
1.4	64QAM	3	3	14.97	15.12	15.04	16.00
1.4	64QAM	6	0	14.78	15.05	14.87	16.00
1.4	256QAM	1	0	14.84	14.91	14.81	16.00
1.4	256QAM	1	3	14.85	15.02	14.92	16.00
1.4	256QAM	1	5	14.70	14.86	14.85	16.00
1.4	256QAM	3	0	14.75	14.95	14.80	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

1.4	256QAM	3	1	14.77	14.98	14.91	16.00
1.4	256QAM	3	3	14.87	15.00	14.80	16.00
1.4	256QAM	6	0	14.74	15.01	14.94	16.00

【LTE Band 4_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	22.51	22.55	22.60	24.00
20	QPSK	1	49	22.73	22.79	22.77	24.00
20	QPSK	1	99	22.73	22.77	22.66	24.00
20	QPSK	50	0	21.58	21.76	21.80	23.00
20	QPSK	50	24	21.72	21.76	21.77	23.00
20	QPSK	50	50	21.76	21.73	21.78	23.00
20	QPSK	100	0	21.65	21.68	21.77	23.00
20	16QAM	1	0	21.80	21.83	21.83	23.00
20	16QAM	1	49	22.05	21.98	22.07	23.00
20	16QAM	1	99	22.01	22.02	21.98	23.00
20	16QAM	50	0	20.57	20.71	20.76	22.00
20	16QAM	50	24	20.69	20.70	20.76	22.00
20	16QAM	50	50	20.72	20.70	20.75	22.00
20	16QAM	100	0	20.59	20.67	20.72	22.00
20	64QAM	1	0	20.69	20.62	20.67	22.00
20	64QAM	1	49	20.87	20.92	20.88	22.00
20	64QAM	1	99	20.83	20.88	20.82	22.00
20	64QAM	50	0	19.69	19.86	19.91	21.00
20	64QAM	50	24	19.84	19.87	19.90	21.00
20	64QAM	50	50	19.83	19.84	19.86	21.00
20	64QAM	100	0	19.79	19.80	19.86	21.00
20	256QAM	1	0	17.15	17.25	17.33	19.00
20	256QAM	1	49	17.51	17.79	17.45	19.00
20	256QAM	1	99	17.49	17.24	17.63	19.00
20	256QAM	50	0	17.21	17.31	17.45	19.00
20	256QAM	50	24	17.33	17.40	17.35	19.00
20	256QAM	50	50	17.40	17.39	17.28	19.00
20	256QAM	100	0	17.28	17.36	17.39	19.00
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.42	22.41	22.58	24.00
15	QPSK	1	37	22.60	22.71	22.65	24.00
15	QPSK	1	74	22.64	22.75	22.60	24.00
15	QPSK	36	0	21.48	21.66	21.72	23.00
15	QPSK	36	20	21.59	21.61	21.65	23.00
15	QPSK	36	39	21.73	21.62	21.69	23.00
15	QPSK	75	0	21.57	21.59	21.65	23.00
15	16QAM	1	0	21.74	21.80	21.73	23.00
15	16QAM	1	37	22.01	21.86	22.01	23.00
15	16QAM	1	74	21.87	21.94	21.95	23.00
15	16QAM	36	0	20.49	20.56	20.72	22.00
15	16QAM	36	20	20.67	20.66	20.68	22.00
15	16QAM	36	39	20.64	20.59	20.72	22.00
15	16QAM	75	0	20.49	20.56	20.66	22.00
15	64QAM	1	0	20.61	20.54	20.55	22.00
15	64QAM	1	37	20.77	20.81	20.75	22.00
15	64QAM	1	74	20.82	20.84	20.73	22.00
15	64QAM	36	0	19.61	19.84	19.83	21.00
15	64QAM	36	20	19.71	19.73	19.81	21.00
15	64QAM	36	39	19.76	19.76	19.76	21.00
15	64QAM	75	0	19.76	19.66	19.76	21.00
15	256QAM	1	0	17.09	17.13	17.24	19.00
15	256QAM	1	37	17.45	17.72	17.31	19.00
15	256QAM	1	74	17.39	17.15	17.52	19.00
15	256QAM	36	0	17.17	17.21	17.33	19.00
15	256QAM	36	20	17.30	17.34	17.20	19.00
15	256QAM	36	39	17.27	17.30	17.20	19.00
15	256QAM	75	0	17.24	17.24	17.36	19.00
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	QPSK	1	0	22.40	22.50	22.52	24.00
10	QPSK	1	25	22.68	22.71	22.74	24.00
10	QPSK	1	49	22.65	22.67	22.59	24.00
10	QPSK	25	0	21.57	21.62	21.78	23.00
10	QPSK	25	12	21.66	21.71	21.68	23.00
10	QPSK	25	25	21.69	21.64	21.73	23.00
10	QPSK	50	0	21.59	21.57	21.73	23.00
10	16QAM	1	0	21.78	21.69	21.77	23.00
10	16QAM	1	25	21.95	21.94	21.97	23.00
10	16QAM	1	49	21.91	21.97	21.87	23.00
10	16QAM	25	0	20.51	20.69	20.71	22.00
10	16QAM	25	12	20.60	20.61	20.62	22.00
10	16QAM	25	25	20.67	20.65	20.64	22.00
10	16QAM	50	0	20.55	20.64	20.70	22.00
10	64QAM	1	0	20.66	20.49	20.61	22.00
10	64QAM	1	25	20.74	20.87	20.86	22.00
10	64QAM	1	49	20.71	20.84	20.80	22.00
10	64QAM	25	0	19.61	19.78	19.88	21.00
10	64QAM	25	12	19.73	19.75	19.84	21.00
10	64QAM	25	25	19.76	19.79	19.80	21.00
10	64QAM	50	0	19.68	19.78	19.79	21.00
10	256QAM	1	0	17.09	17.14	17.22	19.00
10	256QAM	1	25	17.47	17.73	17.35	19.00
10	256QAM	1	49	17.41	17.21	17.56	19.00
10	256QAM	25	0	17.17	17.23	17.39	19.00
10	256QAM	25	12	17.19	17.27	17.27	19.00
10	256QAM	25	25	17.37	17.29	17.16	19.00
10	256QAM	50	0	17.24	17.33	17.25	19.00
Channel				19975	20175	20375	Tune-up limit
Frequency (MHz)				1712.5	1732.5	1752.5	(dBm)
5	QPSK	1	0	22.46	22.53	22.49	24.00
5	QPSK	1	12	22.70	22.65	22.70	24.00
5	QPSK	1	24	22.65	22.70	22.51	24.00
5	QPSK	12	0	21.51	21.64	21.66	23.00
5	QPSK	12	7	21.66	21.62	21.67	23.00
5	QPSK	12	13	21.62	21.65	21.68	23.00
5	QPSK	25	0	21.61	21.62	21.65	23.00
5	16QAM	1	0	21.79	21.77	21.70	23.00
5	16QAM	1	12	21.97	21.86	21.98	23.00
5	16QAM	1	24	21.94	21.87	21.86	23.00
5	16QAM	12	0	20.51	20.59	20.64	22.00
5	16QAM	12	7	20.61	20.67	20.74	22.00
5	16QAM	12	13	20.69	20.60	20.70	22.00
5	16QAM	25	0	20.54	20.54	20.70	22.00
5	64QAM	1	0	20.56	20.51	20.66	22.00
5	64QAM	1	12	20.82	20.82	20.83	22.00
5	64QAM	1	24	20.79	20.77	20.80	22.00
5	64QAM	12	0	19.60	19.84	19.86	21.00
5	64QAM	12	7	19.71	19.84	19.77	21.00
5	64QAM	12	13	19.77	19.70	19.76	21.00
5	64QAM	25	0	19.77	19.66	19.77	21.00
5	256QAM	1	0	17.09	17.22	17.19	19.00
5	256QAM	1	12	17.37	17.71	17.40	19.00
5	256QAM	1	24	17.36	17.16	17.56	19.00
5	256QAM	12	0	17.12	17.23	17.40	19.00
5	256QAM	12	7	17.18	17.26	17.26	19.00
5	256QAM	12	13	17.39	17.32	17.20	19.00
5	256QAM	25	0	17.18	17.27	17.32	19.00
Channel				19965	20175	20385	Tune-up limit
Frequency (MHz)				1711.5	1732.5	1753.5	(dBm)
3	QPSK	1	0	22.36	22.52	22.59	24.00
3	QPSK	1	8	22.67	22.71	22.66	24.00
3	QPSK	1	14	22.70	22.63	22.64	24.00
3	QPSK	8	0	21.55	21.71	21.75	23.00
3	QPSK	8	4	21.65	21.69	21.66	23.00
3	QPSK	8	7	21.68	21.65	21.69	23.00
3	QPSK	15	0	21.51	21.61	21.71	23.00
3	16QAM	1	0	21.74	21.74	21.82	23.00
3	16QAM	1	8	21.94	21.93	22.02	23.00
3	16QAM	1	14	22.00	22.00	21.86	23.00
3	16QAM	8	0	20.51	20.66	20.75	22.00
3	16QAM	8	4	20.62	20.68	20.67	22.00
3	16QAM	8	7	20.58	20.66	20.69	22.00
3	16QAM	15	0	20.49	20.53	20.69	22.00
3	64QAM	1	0	20.57	20.53	20.65	22.00

3	64QAM	1	8	20.84	20.84	20.83	22.00
3	64QAM	1	14	20.70	20.74	20.78	22.00
3	64QAM	8	0	19.59	19.78	19.81	21.00
3	64QAM	8	4	19.72	19.77	19.79	21.00
3	64QAM	8	7	19.73	19.73	19.81	21.00
3	64QAM	15	0	19.68	19.73	19.75	21.00
3	256QAM	1	0	17.09	17.23	17.21	19.00
3	256QAM	1	8	17.43	17.69	17.34	19.00
3	256QAM	1	14	17.36	17.22	17.59	19.00
3	256QAM	8	0	17.17	17.20	17.41	19.00
3	256QAM	8	4	17.25	17.27	17.27	19.00
3	256QAM	8	7	17.30	17.31	17.18	19.00
3	256QAM	15	0	17.15	17.23	17.28	19.00
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.62	22.72	22.69	24.00
1.4	QPSK	1	3	22.68	22.74	22.72	24.00
1.4	QPSK	1	5	22.68	22.71	22.71	24.00
1.4	QPSK	3	0	22.65	22.77	22.74	24.00
1.4	QPSK	3	1	22.67	22.78	22.75	24.00
1.4	QPSK	3	3	22.66	22.75	22.72	24.00
1.4	QPSK	6	0	21.63	21.76	21.74	23.00
1.4	16QAM	1	0	21.93	21.94	22.07	23.00
1.4	16QAM	1	3	21.94	22.03	22.03	23.00
1.4	16QAM	1	5	21.93	21.98	22.01	23.00
1.4	16QAM	3	0	21.63	21.69	21.77	23.00
1.4	16QAM	3	1	21.63	21.76	21.74	23.00
1.4	16QAM	3	3	21.61	21.77	21.74	23.00
1.4	16QAM	6	0	20.71	20.81	20.80	22.00
1.4	64QAM	1	0	20.80	20.83	20.85	22.00
1.4	64QAM	1	3	20.76	20.89	20.83	22.00
1.4	64QAM	1	5	20.83	20.81	20.86	22.00
1.4	64QAM	3	0	20.70	20.81	20.75	22.00
1.4	64QAM	3	1	20.71	20.78	20.79	22.00
1.4	64QAM	3	3	20.68	20.79	20.80	22.00
1.4	64QAM	6	0	19.74	19.83	19.63	21.00
1.4	256QAM	1	0	17.03	17.13	17.18	19.00
1.4	256QAM	1	3	17.49	17.72	17.37	19.00
1.4	256QAM	1	5	17.39	17.19	17.59	19.00
1.4	256QAM	3	0	17.07	17.29	17.32	19.00
1.4	256QAM	3	1	17.29	17.33	17.28	19.00
1.4	256QAM	3	3	17.39	17.30	17.26	19.00
1.4	256QAM	6	0	17.26	17.22	17.27	19.00

【LTE Band 4_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	14.97	15.05	15.04	16.00
20	QPSK	1	49	15.02	15.25	15.10	16.00
20	QPSK	1	99	15.07	15.17	15.11	16.00
20	QPSK	50	0	15.05	15.14	15.08	16.00
20	QPSK	50	24	15.00	15.18	15.12	16.00
20	QPSK	50	50	14.95	15.10	15.04	16.00
20	QPSK	100	0	15.01	15.14	15.05	16.00
20	16QAM	1	0	15.05	15.20	15.10	16.00
20	16QAM	1	49	15.24	15.40	15.30	16.00
20	16QAM	1	99	15.18	15.32	15.21	16.00
20	16QAM	50	0	15.08	15.29	15.22	16.00
20	16QAM	50	24	15.12	15.33	15.23	16.00
20	16QAM	50	50	15.03	15.25	15.10	16.00
20	16QAM	100	0	15.06	15.29	15.21	16.00
20	64QAM	1	0	15.07	15.18	15.08	16.00
20	64QAM	1	49	15.19	15.38	15.31	16.00
20	64QAM	1	99	15.10	15.30	15.23	16.00
20	64QAM	50	0	15.05	15.27	15.14	16.00
20	64QAM	50	24	15.13	15.31	15.20	16.00
20	64QAM	50	50	15.00	15.23	15.10	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

20	64QAM	100	0	15.11	15.27	15.18	16.00
20	256QAM	1	0	15.48	15.70	15.67	16.00
20	256QAM	1	49	15.72	15.91	15.86	16.00
20	256QAM	1	99	15.64	15.83	15.77	16.00
20	256QAM	50	0	15.61	15.79	15.69	16.00
20	256QAM	50	24	15.63	15.84	15.78	16.00
20	256QAM	50	50	15.58	15.75	15.64	16.00
20	256QAM	100	0	15.59	15.79	15.64	16.00
Channel				20025	20175	20325	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	14.85	14.95	14.92	16.00
15	QPSK	1	37	14.93	15.13	15.03	16.00
15	QPSK	1	74	14.99	15.02	15.10	16.00
15	QPSK	36	0	14.91	15.04	14.99	16.00
15	QPSK	36	20	14.95	15.09	15.10	16.00
15	QPSK	36	39	14.90	15.03	14.92	16.00
15	QPSK	75	0	14.91	15.00	15.03	16.00
15	16QAM	1	0	14.98	15.10	14.97	16.00
15	16QAM	1	37	15.18	15.34	15.16	16.00
15	16QAM	1	74	15.17	15.22	15.18	16.00
15	16QAM	36	0	15.06	15.15	15.13	16.00
15	16QAM	36	20	15.01	15.32	15.15	16.00
15	16QAM	36	39	15.02	15.15	15.00	16.00
15	16QAM	75	0	14.99	15.28	15.18	16.00
15	64QAM	1	0	15.02	15.04	15.05	16.00
15	64QAM	1	37	15.17	15.36	15.24	16.00
15	64QAM	1	74	15.07	15.28	15.13	16.00
15	64QAM	36	0	15.01	15.14	14.99	16.00
15	64QAM	36	20	15.05	15.23	15.17	16.00
15	64QAM	36	39	14.97	15.15	14.96	16.00
15	64QAM	75	0	15.08	15.21	15.03	16.00
15	256QAM	1	0	15.38	15.57	15.55	16.00
15	256QAM	1	37	15.70	15.86	15.84	16.00
15	256QAM	1	74	15.56	15.70	15.63	16.00
15	256QAM	36	0	15.52	15.67	15.62	16.00
15	256QAM	36	20	15.52	15.77	15.71	16.00
15	256QAM	36	39	15.44	15.64	15.60	16.00
15	256QAM	75	0	15.53	15.67	15.59	16.00
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	14.92	14.96	15.02	16.00
10	QPSK	1	25	14.91	15.11	14.99	16.00
10	QPSK	1	49	15.04	15.11	15.08	16.00
10	QPSK	25	0	15.01	15.12	15.02	16.00
10	QPSK	25	12	14.97	15.09	14.99	16.00
10	QPSK	25	25	14.93	15.07	14.99	16.00
10	QPSK	50	0	14.92	15.05	14.98	16.00
10	16QAM	1	0	14.99	15.11	14.96	16.00
10	16QAM	1	25	15.12	15.37	15.29	16.00
10	16QAM	1	49	15.13	15.28	15.07	16.00
10	16QAM	25	0	14.99	15.20	15.16	16.00
10	16QAM	25	12	15.03	15.26	15.20	16.00
10	16QAM	25	25	14.91	15.16	14.99	16.00
10	16QAM	50	0	14.95	15.21	15.16	16.00
10	64QAM	1	0	14.94	15.10	15.04	16.00
10	64QAM	1	25	15.17	15.34	15.27	16.00
10	64QAM	1	49	15.00	15.23	15.20	16.00
10	64QAM	25	0	14.97	15.13	15.07	16.00
10	64QAM	25	12	15.08	15.16	15.12	16.00
10	64QAM	25	25	14.88	15.20	14.99	16.00
10	64QAM	50	0	15.03	15.22	15.10	16.00
10	256QAM	1	0	15.38	15.60	15.60	16.00
10	256QAM	1	25	15.61	15.77	15.74	16.00
10	256QAM	1	49	15.62	15.72	15.76	16.00
10	256QAM	25	0	15.49	15.70	15.60	16.00
10	256QAM	25	12	15.56	15.79	15.64	16.00
10	256QAM	25	25	15.53	15.71	15.51	16.00
10	256QAM	50	0	15.45	15.73	15.56	16.00
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	14.95	15.00	14.94	16.00
5	QPSK	1	12	14.93	15.18	14.96	16.00
5	QPSK	1	24	14.96	15.10	15.00	16.00
5	QPSK	12	0	14.90	15.09	15.00	16.00
5	QPSK	12	7	14.97	15.17	15.03	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	QPSK	12	13	14.84	14.98	14.99	16.00
5	QPSK	25	0	14.90	15.07	15.00	16.00
5	16QAM	1	0	15.01	15.06	15.06	16.00
5	16QAM	1	12	15.21	15.26	15.22	16.00
5	16QAM	1	24	15.17	15.20	15.08	16.00
5	16QAM	12	0	15.05	15.23	15.16	16.00
5	16QAM	12	7	15.07	15.32	15.21	16.00
5	16QAM	12	13	15.01	15.23	14.96	16.00
5	16QAM	25	0	15.00	15.23	15.16	16.00
5	64QAM	1	0	15.00	15.05	15.05	16.00
5	64QAM	1	12	15.05	15.25	15.26	16.00
5	64QAM	1	24	15.06	15.19	15.14	16.00
5	64QAM	12	0	15.04	15.18	15.09	16.00
5	64QAM	12	7	14.98	15.19	15.16	16.00
5	64QAM	12	13	14.96	15.12	15.03	16.00
5	64QAM	25	0	15.09	15.21	15.05	16.00
5	256QAM	1	0	15.37	15.64	15.53	16.00
5	256QAM	1	12	15.62	15.83	15.79	16.00
5	256QAM	1	24	15.62	15.80	15.69	16.00
5	256QAM	12	0	15.55	15.66	15.64	16.00
5	256QAM	12	7	15.59	15.70	15.64	16.00
5	256QAM	12	13	15.49	15.73	15.54	16.00
5	256QAM	25	0	15.56	15.67	15.62	16.00
Channel				19965	20175	20385	Tune-up limit
Frequency (MHz)				1711.5	1732.5	1753.5	(dBm)
3	QPSK	1	0	14.93	14.96	14.98	16.00
3	QPSK	1	8	14.88	15.13	14.96	16.00
3	QPSK	1	14	15.00	15.15	14.99	16.00
3	QPSK	8	0	14.99	15.05	15.01	16.00
3	QPSK	8	4	14.94	15.09	15.06	16.00
3	QPSK	8	7	14.83	15.00	14.93	16.00
3	QPSK	15	0	14.95	15.06	15.03	16.00
3	16QAM	1	0	14.90	15.17	15.01	16.00
3	16QAM	1	8	15.09	15.38	15.24	16.00
3	16QAM	1	14	15.17	15.27	15.08	16.00
3	16QAM	8	0	14.96	15.17	15.11	16.00
3	16QAM	8	4	15.08	15.23	15.18	16.00
3	16QAM	8	7	14.95	15.20	15.02	16.00
3	16QAM	15	0	14.97	15.25	15.07	16.00
3	64QAM	1	0	14.97	15.06	15.04	16.00
3	64QAM	1	8	15.12	15.29	15.29	16.00
3	64QAM	1	14	15.01	15.16	15.19	16.00
3	64QAM	8	0	14.94	15.24	15.00	16.00
3	64QAM	8	4	15.02	15.23	15.18	16.00
3	64QAM	8	7	14.94	15.19	15.01	16.00
3	64QAM	15	0	15.06	15.25	15.12	16.00
3	256QAM	1	0	15.39	15.62	15.53	16.00
3	256QAM	1	8	15.69	15.77	15.72	16.00
3	256QAM	1	14	15.62	15.81	15.73	16.00
3	256QAM	8	0	15.58	15.71	15.56	16.00
3	256QAM	8	4	15.61	15.71	15.72	16.00
3	256QAM	8	7	15.47	15.68	15.53	16.00
3	256QAM	15	0	15.53	15.69	15.63	16.00
Channel				19957	20175	20393	Tune-up limit
Frequency (MHz)				1710.7	1732.5	1754.3	(dBm)
1.4	QPSK	1	0	14.82	15.04	14.90	16.00
1.4	QPSK	1	3	14.99	15.15	14.97	16.00
1.4	QPSK	1	5	15.02	15.14	15.03	16.00
1.4	QPSK	3	0	14.97	15.02	14.97	16.00
1.4	QPSK	3	1	14.98	15.07	15.11	16.00
1.4	QPSK	3	3	14.84	15.00	15.01	16.00
1.4	QPSK	6	0	14.86	15.07	14.97	16.00
1.4	16QAM	1	0	15.01	15.13	15.00	16.00
1.4	16QAM	1	3	15.11	15.26	15.17	16.00
1.4	16QAM	1	5	15.03	15.18	15.15	16.00
1.4	16QAM	3	0	15.00	15.22	15.14	16.00
1.4	16QAM	3	1	15.01	15.24	15.19	16.00
1.4	16QAM	3	3	14.92	15.15	15.01	16.00
1.4	16QAM	6	0	14.94	15.19	15.09	16.00
1.4	64QAM	1	0	14.96	15.08	14.96	16.00
1.4	64QAM	1	3	15.06	15.35	15.22	16.00
1.4	64QAM	1	5	15.03	15.25	15.16	16.00
1.4	64QAM	3	0	14.96	15.23	15.07	16.00
1.4	64QAM	3	1	15.10	15.16	15.10	16.00
1.4	64QAM	3	3	14.87	15.10	15.00	16.00

1.4	64QAM	6	0	15.01	15.16	15.10	16.00
1.4	256QAM	1	0	10.43	10.68	10.66	11.00
1.4	256QAM	1	3	10.59	10.77	10.81	11.00
1.4	256QAM	1	5	10.60	10.78	10.74	11.00
1.4	256QAM	3	0	10.48	10.67	10.61	11.00
1.4	256QAM	3	1	10.51	10.79	10.77	11.00
1.4	256QAM	3	3	10.45	10.68	10.53	11.00
1.4	256QAM	6	0	10.57	10.74	10.58	11.00

【LTE Band 5_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	22.94	22.99	22.88	24.00
10	QPSK	1	25	23.04	22.99	22.99	24.00
10	QPSK	1	49	22.97	22.89	23.05	24.00
10	QPSK	25	0	22.05	21.83	22.02	23.00
10	QPSK	25	12	22.02	21.87	21.98	23.00
10	QPSK	25	25	22.04	21.90	22.08	23.00
10	QPSK	50	0	22.01	21.95	22.08	23.00
10	16QAM	1	0	22.15	22.22	22.22	23.00
10	16QAM	1	25	22.27	22.26	22.19	23.00
10	16QAM	1	49	22.24	22.20	22.29	23.00
10	16QAM	25	0	21.05	20.86	21.02	22.00
10	16QAM	25	12	21.03	20.89	21.02	22.00
10	16QAM	25	25	21.05	20.94	21.06	22.00
10	16QAM	50	0	20.99	20.87	21.06	22.00
10	64QAM	1	0	21.07	21.12	21.05	22.00
10	64QAM	1	25	21.17	21.07	21.12	22.00
10	64QAM	1	49	21.06	21.04	21.16	22.00
10	64QAM	25	0	20.04	19.82	19.98	21.00
10	64QAM	25	12	20.00	19.85	19.96	21.00
10	64QAM	25	25	20.01	19.85	20.05	21.00
10	64QAM	50	0	20.00	19.89	20.06	21.00
10	256QAM	1	0	17.14	17.31	17.45	19.00
10	256QAM	1	25	17.59	17.22	17.09	19.00
10	256QAM	1	49	17.28	17.62	17.87	19.00
10	256QAM	25	0	17.37	17.15	17.36	19.00
10	256QAM	25	12	17.32	17.15	17.28	19.00
10	256QAM	25	25	17.33	17.21	17.31	19.00
10	256QAM	50	0	17.29	17.12	17.31	19.00
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	22.92	22.98	22.79	24.00
5	QPSK	1	12	22.94	22.88	22.96	24.00
5	QPSK	1	24	22.84	22.74	23.02	24.00
5	QPSK	12	0	21.90	21.80	21.99	23.00
5	QPSK	12	7	21.87	21.75	21.94	23.00
5	QPSK	12	13	21.91	21.76	22.06	23.00
5	QPSK	25	0	21.94	21.83	22.07	23.00
5	16QAM	1	0	22.03	22.18	22.16	23.00
5	16QAM	1	12	22.25	22.14	22.05	23.00
5	16QAM	1	24	22.17	22.15	22.23	23.00
5	16QAM	12	0	20.92	20.83	21.00	22.00
5	16QAM	12	7	20.88	20.85	20.92	22.00
5	16QAM	12	13	20.96	20.92	20.99	22.00
5	16QAM	25	0	20.86	20.76	20.93	22.00
5	64QAM	1	0	20.98	21.06	20.97	22.00
5	64QAM	1	12	21.03	20.98	21.00	22.00
5	64QAM	1	24	20.96	20.95	21.02	22.00
5	64QAM	12	0	19.93	19.81	19.94	21.00
5	64QAM	12	7	19.96	19.77	19.84	21.00
5	64QAM	12	13	19.99	19.81	20.01	21.00
5	64QAM	25	0	19.93	19.81	20.00	21.00
5	256QAM	1	0	17.09	17.21	17.39	19.00
5	256QAM	1	12	17.57	17.21	17.00	19.00
5	256QAM	1	24	17.25	17.53	17.85	19.00
5	256QAM	12	0	17.31	17.11	17.26	19.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	256QAM	12	7	17.20	17.07	17.24	19.00
5	256QAM	12	13	17.20	17.11	17.24	19.00
5	256QAM	25	0	17.19	17.02	17.20	19.00
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	22.80	22.91	22.81	24.00
3	QPSK	1	8	23.01	22.85	22.93	24.00
3	QPSK	1	14	22.86	22.86	22.93	24.00
3	QPSK	8	0	21.97	21.79	21.92	23.00
3	QPSK	8	4	21.97	21.73	21.97	23.00
3	QPSK	8	7	21.95	21.82	22.01	23.00
3	QPSK	15	0	21.91	21.84	21.99	23.00
3	16QAM	1	0	22.07	22.12	22.10	23.00
3	16QAM	1	8	22.14	22.20	22.13	23.00
3	16QAM	1	14	22.19	22.06	22.21	23.00
3	16QAM	8	0	20.97	20.75	20.90	22.00
3	16QAM	8	4	20.95	20.86	20.97	22.00
3	16QAM	8	7	20.91	20.80	21.02	22.00
3	16QAM	15	0	20.96	20.72	20.94	22.00
3	64QAM	1	0	21.01	21.03	21.02	22.00
3	64QAM	1	8	21.04	21.03	21.07	22.00
3	64QAM	1	14	20.95	20.93	21.08	22.00
3	64QAM	8	0	20.03	19.67	19.90	21.00
3	64QAM	8	4	19.93	19.72	19.89	21.00
3	64QAM	8	7	19.90	19.79	20.01	21.00
3	64QAM	15	0	19.90	19.74	19.98	21.00
3	256QAM	1	0	17.00	17.24	17.38	19.00
3	256QAM	1	8	17.57	17.08	17.06	19.00
3	256QAM	1	14	17.23	17.49	17.78	19.00
3	256QAM	8	0	17.33	17.06	17.32	19.00
3	256QAM	8	4	17.21	17.11	17.26	19.00
3	256QAM	8	7	17.26	17.14	17.20	19.00
3	256QAM	15	0	17.22	17.03	17.28	19.00
Channel				20407	20525	20643	Tune-up limit (dBm)
Frequency (MHz)				824.7	836.5	848.3	
1.4	QPSK	1	0	22.89	22.89	23.00	24.00
1.4	QPSK	1	3	22.93	22.89	23.02	24.00
1.4	QPSK	1	5	22.93	22.90	23.01	24.00
1.4	QPSK	3	0	22.96	22.92	23.07	24.00
1.4	QPSK	3	1	22.96	22.91	23.07	24.00
1.4	QPSK	3	3	22.96	22.92	23.07	24.00
1.4	QPSK	6	0	21.95	21.91	22.07	23.00
1.4	16QAM	1	0	22.23	22.14	22.33	23.00
1.4	16QAM	1	3	22.27	22.19	22.25	23.00
1.4	16QAM	1	5	22.23	22.21	22.27	23.00
1.4	16QAM	3	0	21.96	21.96	22.04	23.00
1.4	16QAM	3	1	21.93	21.91	22.03	23.00
1.4	16QAM	3	3	21.90	21.91	22.05	23.00
1.4	16QAM	6	0	21.01	20.99	21.13	22.00
1.4	64QAM	1	0	21.06	21.09	21.11	22.00
1.4	64QAM	1	3	21.06	21.04	21.23	22.00
1.4	64QAM	1	5	21.12	21.09	21.19	22.00
1.4	64QAM	3	0	21.03	20.99	21.16	22.00
1.4	64QAM	3	1	21.03	20.99	21.13	22.00
1.4	64QAM	3	3	21.01	20.96	21.09	22.00
1.4	64QAM	6	0	19.89	19.82	19.98	21.00
1.4	256QAM	1	0	17.12	17.22	17.35	19.00
1.4	256QAM	1	3	17.44	17.18	17.00	19.00
1.4	256QAM	1	5	17.18	17.55	17.83	19.00
1.4	256QAM	3	0	17.25	17.06	17.29	19.00
1.4	256QAM	3	1	17.27	17.04	17.14	19.00
1.4	256QAM	3	3	17.22	17.06	17.22	19.00
1.4	256QAM	6	0	17.22	17.01	17.19	19.00

【LTE Band 5_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20450	20525	20600	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	QPSK	1	0	17.87	17.91	17.80	18.50
10	QPSK	1	25	17.81	17.89	17.66	18.50
10	QPSK	1	49	17.67	17.82	17.65	18.50
10	QPSK	25	0	17.73	17.80	17.66	18.50
10	QPSK	25	12	17.71	17.82	17.60	18.50
10	QPSK	25	25	17.67	17.85	17.61	18.50
10	QPSK	50	0	17.70	17.80	17.58	18.50
10	16QAM	1	0	17.98	18.10	17.97	18.50
10	16QAM	1	25	18.01	18.08	17.84	18.50
10	16QAM	1	49	17.90	18.01	17.79	18.50
10	16QAM	25	0	17.91	17.99	17.81	18.50
10	16QAM	25	12	17.84	18.01	17.83	18.50
10	16QAM	25	25	17.86	18.04	17.88	18.50
10	16QAM	50	0	17.81	17.99	17.78	18.50
10	64QAM	1	0	17.97	18.11	17.87	18.50
10	64QAM	1	25	17.92	18.09	17.86	18.50
10	64QAM	1	49	17.91	18.02	17.76	18.50
10	64QAM	25	0	17.89	18.00	17.81	18.50
10	64QAM	25	12	17.89	18.02	17.78	18.50
10	64QAM	25	25	17.94	18.05	17.81	18.50
10	64QAM	50	0	17.90	18.00	17.78	18.50
10	256QAM	1	0	18.22	18.30	18.08	18.50
10	256QAM	1	25	18.19	18.28	18.11	18.50
10	256QAM	1	49	18.03	18.21	18.04	18.50
10	256QAM	25	0	18.10	18.19	18.03	18.50
10	256QAM	25	12	18.07	18.21	18.04	18.50
10	256QAM	25	25	18.07	18.24	18.00	18.50
10	256QAM	50	0	18.04	18.19	17.95	18.50
Channel				20425	20525	20625	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	QPSK	1	0	17.82	17.76	17.69	18.50
5	QPSK	1	12	17.67	17.82	17.62	18.50
5	QPSK	1	24	17.63	17.71	17.56	18.50
5	QPSK	12	0	17.63	17.68	17.64	18.50
5	QPSK	12	7	17.65	17.72	17.54	18.50
5	QPSK	12	13	17.53	17.84	17.49	18.50
5	QPSK	25	0	17.65	17.76	17.51	18.50
5	16QAM	1	0	17.84	18.05	17.93	18.50
5	16QAM	1	12	17.93	18.06	17.70	18.50
5	16QAM	1	24	17.79	17.87	17.78	18.50
5	16QAM	12	0	17.81	17.94	17.79	18.50
5	16QAM	12	7	17.72	17.89	17.73	18.50
5	16QAM	12	13	17.84	18.01	17.82	18.50
5	16QAM	25	0	17.75	17.95	17.69	18.50
5	64QAM	1	0	17.88	18.02	17.74	18.50
5	64QAM	1	12	17.79	18.04	17.75	18.50
5	64QAM	1	24	17.81	17.90	17.66	18.50
5	64QAM	12	0	17.87	17.93	17.70	18.50
5	64QAM	12	7	17.82	17.92	17.65	18.50
5	64QAM	12	13	17.87	18.01	17.68	18.50
5	64QAM	25	0	17.78	17.90	17.72	18.50
5	256QAM	1	0	18.20	18.20	18.02	18.50
5	256QAM	1	12	18.17	18.17	18.01	18.50
5	256QAM	1	24	17.97	18.13	17.98	18.50
5	256QAM	12	0	18.02	18.05	18.00	18.50
5	256QAM	12	7	18.01	18.11	17.97	18.50
5	256QAM	12	13	18.03	18.12	17.92	18.50
5	256QAM	25	0	17.90	18.05	17.80	18.50
Channel				20415	20525	20635	Tune-up limit (dBm)
Frequency (MHz)				825.5	836.5	847.5	
3	QPSK	1	0	17.75	17.83	17.74	18.50
3	QPSK	1	8	17.74	17.86	17.60	18.50
3	QPSK	1	14	17.61	17.74	17.55	18.50
3	QPSK	8	0	17.69	17.71	17.52	18.50
3	QPSK	8	4	17.62	17.79	17.48	18.50
3	QPSK	8	7	17.62	17.71	17.57	18.50

3	QPSK	15	0	17.60	17.66	17.54	18.50
3	16QAM	1	0	17.94	18.09	17.89	18.50
3	16QAM	1	8	17.91	17.94	17.76	18.50
3	16QAM	1	14	17.86	17.99	17.74	18.50
3	16QAM	8	0	17.88	17.93	17.71	18.50
3	16QAM	8	4	17.69	17.89	17.70	18.50
3	16QAM	8	7	17.77	18.02	17.87	18.50
3	16QAM	15	0	17.75	17.93	17.65	18.50
3	64QAM	1	0	17.88	17.97	17.82	18.50
3	64QAM	1	8	17.78	18.04	17.85	18.50
3	64QAM	1	14	17.86	17.96	17.63	18.50
3	64QAM	8	0	17.88	17.92	17.79	18.50
3	64QAM	8	4	17.77	17.99	17.63	18.50
3	64QAM	8	7	17.81	17.91	17.77	18.50
3	64QAM	15	0	17.85	17.88	17.72	18.50
3	256QAM	1	0	18.11	18.21	18.02	18.50
3	256QAM	1	8	18.12	18.15	17.98	18.50
3	256QAM	1	14	17.98	18.13	17.91	18.50
3	256QAM	8	0	18.00	18.06	17.95	18.50
3	256QAM	8	4	18.05	18.20	17.92	18.50
3	256QAM	8	7	18.03	18.11	17.94	18.50
3	256QAM	15	0	18.00	18.09	17.93	18.50
Channel				20407	20525	20643	Tune-up limit
Frequency (MHz)				824.7	836.5	848.3	(dBm)
1.4	QPSK	1	0	17.83	17.82	17.73	18.50
1.4	QPSK	1	3	17.72	17.82	17.62	18.50
1.4	QPSK	1	5	17.62	17.71	17.60	18.50
1.4	QPSK	3	0	17.58	17.74	17.55	18.50
1.4	QPSK	3	1	17.61	17.80	17.53	18.50
1.4	QPSK	3	3	17.55	17.84	17.56	18.50
1.4	QPSK	6	0	17.69	17.72	17.54	18.50
1.4	16QAM	1	0	17.94	18.09	17.86	18.50
1.4	16QAM	1	3	17.89	17.94	17.77	18.50
1.4	16QAM	1	5	17.86	17.93	17.69	18.50
1.4	16QAM	3	0	17.87	17.96	17.69	18.50
1.4	16QAM	3	1	17.72	17.87	17.70	18.50
1.4	16QAM	3	3	17.77	17.97	17.87	18.50
1.4	16QAM	6	0	17.73	17.86	17.69	18.50
1.4	64QAM	1	0	17.90	18.04	17.75	18.50
1.4	64QAM	1	3	17.85	18.06	17.82	18.50
1.4	64QAM	1	5	17.83	17.89	17.62	18.50
1.4	64QAM	3	0	17.76	17.96	17.78	18.50
1.4	64QAM	3	1	17.77	17.90	17.66	18.50
1.4	64QAM	3	3	17.89	17.97	17.74	18.50
1.4	64QAM	6	0	17.80	17.93	17.77	18.50
1.4	256QAM	1	0	18.12	18.18	18.04	18.50
1.4	256QAM	1	3	18.16	18.21	18.08	18.50
1.4	256QAM	1	5	17.97	18.09	17.93	18.50
1.4	256QAM	3	0	18.06	18.08	18.01	18.50
1.4	256QAM	3	1	18.04	18.08	17.91	18.50
1.4	256QAM	3	3	17.98	18.10	17.90	18.50
1.4	256QAM	6	0	17.98	18.07	17.90	18.50

【LTE Band 7_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	22.91	23.19	23.07	24.00
20	QPSK	1	49	23.03	23.18	23.11	24.00
20	QPSK	1	99	22.97	23.03	22.97	24.00
20	QPSK	50	0	21.99	22.20	22.05	23.00
20	QPSK	50	24	22.05	22.19	22.09	23.00
20	QPSK	50	50	22.13	22.15	22.07	23.00
20	QPSK	100	0	22.08	22.15	22.02	23.00
20	16QAM	1	0	22.12	22.25	22.33	23.00
20	16QAM	1	49	22.41	22.51	22.45	23.00
20	16QAM	1	99	22.31	22.33	22.26	23.00
20	16QAM	50	0	20.98	21.12	21.06	22.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

20	16QAM	50	24	20.99	21.18	21.04	22.00
20	16QAM	50	50	21.10	21.09	21.05	22.00
20	16QAM	100	0	21.05	21.10	21.03	22.00
20	64QAM	1	0	21.03	21.22	21.20	22.00
20	64QAM	1	49	21.17	21.38	21.31	22.00
20	64QAM	1	99	21.14	21.19	21.11	22.00
20	64QAM	50	0	19.97	20.14	20.01	21.00
20	64QAM	50	24	19.98	20.16	20.02	21.00
20	64QAM	50	50	20.07	20.08	20.02	21.00
20	64QAM	100	0	20.02	20.05	19.98	21.00
20	256QAM	1	0	17.73	17.87	17.37	19.00
20	256QAM	1	49	17.87	17.77	17.91	19.00
20	256QAM	1	99	17.37	17.87	17.17	19.00
20	256QAM	50	0	17.40	17.53	17.48	19.00
20	256QAM	50	24	17.38	17.59	17.40	19.00
20	256QAM	50	50	17.49	17.52	17.47	19.00
20	256QAM	100	0	17.45	17.53	17.48	19.00
Channel				20825	21100	21375	Tune-up limit
Frequency (MHz)				2507.5	2535	2562.5	(dBm)
15	QPSK	1	0	22.82	23.07	23.03	24.00
15	QPSK	1	37	22.88	23.06	23.02	24.00
15	QPSK	1	74	22.89	23.02	22.83	24.00
15	QPSK	36	0	21.96	22.06	21.92	23.00
15	QPSK	36	20	21.98	22.06	21.98	23.00
15	QPSK	36	39	21.98	22.07	21.98	23.00
15	QPSK	75	0	21.95	22.00	22.00	23.00
15	16QAM	1	0	21.98	22.11	22.30	23.00
15	16QAM	1	37	22.27	22.40	22.33	23.00
15	16QAM	1	74	22.25	22.30	22.13	23.00
15	16QAM	36	0	20.88	21.06	21.03	22.00
15	16QAM	36	20	20.93	21.12	20.95	22.00
15	16QAM	36	39	21.05	21.04	21.03	22.00
15	16QAM	75	0	20.99	21.00	20.91	22.00
15	64QAM	1	0	20.99	21.19	21.17	22.00
15	64QAM	1	37	21.03	21.28	21.21	22.00
15	64QAM	1	74	21.10	21.12	21.09	22.00
15	64QAM	36	0	19.90	20.10	19.89	21.00
15	64QAM	36	20	19.90	20.15	19.98	21.00
15	64QAM	36	39	19.99	20.01	19.91	21.00
15	64QAM	75	0	19.93	19.99	19.86	21.00
15	256QAM	1	0	17.59	17.85	17.32	19.00
15	256QAM	1	37	17.74	17.68	17.86	19.00
15	256QAM	1	74	17.23	17.83	17.13	19.00
15	256QAM	36	0	17.31	17.46	17.45	19.00
15	256QAM	36	20	17.36	17.44	17.37	19.00
15	256QAM	36	39	17.37	17.48	17.46	19.00
15	256QAM	75	0	17.39	17.47	17.35	19.00
Channel				20800	21100	21400	Tune-up limit
Frequency (MHz)				2505	2535	2565	(dBm)
10	QPSK	1	0	22.79	23.14	23.05	24.00
10	QPSK	1	25	23.00	23.06	23.06	24.00
10	QPSK	1	49	22.91	22.90	22.93	24.00
10	QPSK	25	0	21.91	22.14	21.94	23.00
10	QPSK	25	12	21.94	22.17	21.96	23.00
10	QPSK	25	25	22.09	22.12	21.94	23.00
10	QPSK	50	0	22.02	22.06	22.00	23.00
10	16QAM	1	0	22.05	22.11	22.27	23.00
10	16QAM	1	25	22.34	22.44	22.38	23.00
10	16QAM	1	49	22.18	22.21	22.19	23.00
10	16QAM	25	0	20.88	20.98	20.93	22.00
10	16QAM	25	12	20.94	21.05	21.02	22.00
10	16QAM	25	25	21.04	21.01	20.96	22.00
10	16QAM	50	0	21.03	21.09	20.90	22.00
10	64QAM	1	0	20.93	21.08	21.14	22.00
10	64QAM	1	25	21.07	21.27	21.25	22.00
10	64QAM	1	49	21.08	21.10	21.01	22.00
10	64QAM	25	0	19.87	20.04	20.00	21.00
10	64QAM	25	12	19.89	20.11	19.96	21.00
10	64QAM	25	25	20.05	19.99	20.00	21.00
10	64QAM	50	0	20.01	19.91	19.86	21.00
10	256QAM	1	0	17.66	17.82	17.28	19.00
10	256QAM	1	25	17.83	17.72	17.77	19.00
10	256QAM	1	49	17.28	17.79	17.03	19.00
10	256QAM	25	0	17.34	17.48	17.40	19.00
10	256QAM	25	12	17.30	17.53	17.29	19.00

10	256QAM	25	25	17.41	17.41	17.44	19.00
10	256QAM	50	0	17.32	17.39	17.45	19.00
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	22.78	23.10	23.03	24.00
5	QPSK	1	12	23.01	23.04	23.09	24.00
5	QPSK	1	24	22.82	22.97	22.85	24.00
5	QPSK	12	0	21.88	22.09	21.91	23.00
5	QPSK	12	7	21.98	22.09	21.98	23.00
5	QPSK	12	13	22.10	22.09	21.93	23.00
5	QPSK	25	0	22.00	22.10	22.00	23.00
5	16QAM	1	0	22.02	22.21	22.21	23.00
5	16QAM	1	12	22.27	22.43	22.41	23.00
5	16QAM	1	24	22.19	22.31	22.22	23.00
5	16QAM	12	0	20.93	21.06	20.97	22.00
5	16QAM	12	7	20.84	21.16	20.90	22.00
5	16QAM	12	13	21.03	20.98	20.99	22.00
5	16QAM	25	0	20.92	20.97	20.90	22.00
5	64QAM	1	0	20.98	21.17	21.08	22.00
5	64QAM	1	12	21.02	21.27	21.22	22.00
5	64QAM	1	24	21.10	21.09	21.00	22.00
5	64QAM	12	0	19.84	20.06	19.92	21.00
5	64QAM	12	7	19.89	20.02	20.00	21.00
5	64QAM	12	13	20.03	19.97	19.88	21.00
5	64QAM	25	0	20.01	19.97	19.84	21.00
5	256QAM	1	0	17.59	17.84	17.36	19.00
5	256QAM	1	12	17.79	17.65	17.78	19.00
5	256QAM	1	24	17.34	17.83	17.14	19.00
5	256QAM	12	0	17.38	17.47	17.38	19.00
5	256QAM	12	7	17.24	17.56	17.29	19.00
5	256QAM	12	13	17.42	17.37	17.38	19.00
5	256QAM	25	0	17.33	17.46	17.34	19.00

【LTE Band 7_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	14.83	15.11	14.90	15.50
20	QPSK	1	49	14.69	15.01	14.70	15.50
20	QPSK	1	99	14.52	14.88	14.62	15.50
20	QPSK	50	0	14.69	15.00	14.73	15.50
20	QPSK	50	24	14.57	14.96	14.64	15.50
20	QPSK	50	50	14.55	14.95	14.63	15.50
20	QPSK	100	0	14.65	15.00	14.65	15.50
20	16QAM	1	0	15.00	15.30	14.99	15.50
20	16QAM	1	49	14.74	15.10	14.82	15.50
20	16QAM	1	99	14.76	15.07	14.84	15.50
20	16QAM	50	0	14.82	15.19	14.91	15.50
20	16QAM	50	24	14.79	15.15	14.90	15.50
20	16QAM	50	50	14.74	15.14	14.81	15.50
20	16QAM	100	0	14.86	15.19	14.87	15.50
20	64QAM	1	0	14.68	15.00	14.64	15.50
20	64QAM	1	49	14.92	15.29	14.96	15.50
20	64QAM	1	99	14.36	14.77	14.43	15.50
20	64QAM	50	0	14.56	14.89	14.63	15.50
20	64QAM	50	24	14.53	14.85	14.60	15.50
20	64QAM	50	50	14.49	14.84	14.56	15.50
20	64QAM	100	0	14.56	14.89	14.66	15.50
20	256QAM	1	0	14.66	14.99	14.75	15.50
20	256QAM	1	49	14.94	15.28	14.94	15.50
20	256QAM	1	99	14.47	14.76	14.51	15.50
20	256QAM	50	0	14.53	14.88	14.55	15.50
20	256QAM	50	24	14.43	14.84	14.50	15.50
20	256QAM	50	50	14.42	14.83	14.48	15.50
20	256QAM	100	0	14.52	14.88	14.59	15.50
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	14.78	15.01	14.84	15.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

15	QPSK	1	37	14.56	14.87	14.62	15.50
15	QPSK	1	74	14.42	14.80	14.56	15.50
15	QPSK	36	0	14.63	14.90	14.60	15.50
15	QPSK	36	20	14.44	14.83	14.59	15.50
15	QPSK	36	39	14.54	14.83	14.60	15.50
15	QPSK	75	0	14.63	14.85	14.63	15.50
15	16QAM	1	0	14.87	15.21	14.97	15.50
15	16QAM	1	37	14.59	15.04	14.69	15.50
15	16QAM	1	74	14.64	14.92	14.73	15.50
15	16QAM	36	0	14.73	15.17	14.87	15.50
15	16QAM	36	20	14.75	15.02	14.86	15.50
15	16QAM	36	39	14.62	15.05	14.74	15.50
15	16QAM	75	0	14.76	15.10	14.74	15.50
15	64QAM	1	0	14.54	14.91	14.61	15.50
15	64QAM	1	37	14.88	15.20	14.81	15.50
15	64QAM	1	74	14.26	14.66	14.32	15.50
15	64QAM	36	0	14.49	14.82	14.58	15.50
15	64QAM	36	20	14.44	14.75	14.57	15.50
15	64QAM	36	39	14.39	14.73	14.54	15.50
15	64QAM	75	0	14.53	14.77	14.64	15.50
15	256QAM	1	0	14.57	14.87	14.61	15.50
15	256QAM	1	37	14.86	15.21	14.86	15.50
15	256QAM	1	74	14.34	14.75	14.49	15.50
15	256QAM	36	0	14.42	14.74	14.51	15.50
15	256QAM	36	20	14.40	14.75	14.36	15.50
15	256QAM	36	39	14.33	14.69	14.33	15.50
15	256QAM	75	0	14.43	14.85	14.48	15.50
Channel				20800	21100	21400	Tune-up limit
Frequency (MHz)				2505	2535	2565	(dBm)
10	QPSK	1	0	14.77	14.96	14.84	15.50
10	QPSK	1	25	14.65	14.96	14.58	15.50
10	QPSK	1	49	14.42	14.83	14.49	15.50
10	QPSK	25	0	14.60	14.94	14.67	15.50
10	QPSK	25	12	14.42	14.82	14.51	15.50
10	QPSK	25	25	14.44	14.88	14.51	15.50
10	QPSK	50	0	14.57	14.96	14.62	15.50
10	16QAM	1	0	14.94	15.20	14.96	15.50
10	16QAM	1	25	14.62	15.09	14.76	15.50
10	16QAM	1	49	14.75	14.93	14.75	15.50
10	16QAM	25	0	14.77	15.08	14.89	15.50
10	16QAM	25	12	14.72	15.10	14.84	15.50
10	16QAM	25	25	14.68	15.03	14.70	15.50
10	16QAM	50	0	14.78	15.12	14.78	15.50
10	64QAM	1	0	14.66	14.92	14.57	15.50
10	64QAM	1	25	14.77	15.26	14.84	15.50
10	64QAM	1	49	14.22	14.65	14.29	15.50
10	64QAM	25	0	14.47	14.83	14.51	15.50
10	64QAM	25	12	14.39	14.72	14.51	15.50
10	64QAM	25	25	14.37	14.82	14.50	15.50
10	64QAM	50	0	14.52	14.81	14.59	15.50
10	256QAM	1	0	14.54	14.85	14.60	15.50
10	256QAM	1	25	14.81	15.19	14.88	15.50
10	256QAM	1	49	14.44	14.61	14.46	15.50
10	256QAM	25	0	14.47	14.82	14.51	15.50
10	256QAM	25	12	14.35	14.74	14.47	15.50
10	256QAM	25	25	14.34	14.81	14.41	15.50
10	256QAM	50	0	14.38	14.83	14.52	15.50
Channel				20775	21100	21425	Tune-up limit
Frequency (MHz)				2502.5	2535	2567.5	(dBm)
5	QPSK	1	0	14.71	15.09	14.85	15.50
5	QPSK	1	12	14.62	14.99	14.63	15.50
5	QPSK	1	24	14.49	14.83	14.56	15.50
5	QPSK	12	0	14.60	14.88	14.59	15.50
5	QPSK	12	7	14.49	14.88	14.61	15.50
5	QPSK	12	13	14.49	14.82	14.58	15.50
5	QPSK	25	0	14.62	14.90	14.52	15.50
5	16QAM	1	0	14.89	15.23	14.92	15.50
5	16QAM	1	12	14.64	15.03	14.72	15.50
5	16QAM	1	24	14.66	15.05	14.77	15.50
5	16QAM	12	0	14.71	15.14	14.90	15.50
5	16QAM	12	7	14.72	15.01	14.84	15.50
5	16QAM	12	13	14.69	15.08	14.67	15.50
5	16QAM	25	0	14.75	15.11	14.81	15.50
5	64QAM	1	0	14.66	14.95	14.52	15.50
5	64QAM	1	12	14.88	15.26	14.94	15.50

5	64QAM	1	24	14.29	14.71	14.37	15.50
5	64QAM	12	0	14.45	14.83	14.53	15.50
5	64QAM	12	7	14.49	14.73	14.58	15.50
5	64QAM	12	13	14.46	14.83	14.43	15.50
5	64QAM	25	0	14.49	14.77	14.52	15.50
5	256QAM	1	0	14.52	14.86	14.62	15.50
5	256QAM	1	12	14.82	15.24	14.83	15.50
5	256QAM	1	24	14.40	14.71	14.41	15.50
5	256QAM	12	0	14.49	14.83	14.51	15.50
5	256QAM	12	7	14.38	14.74	14.38	15.50
5	256QAM	12	13	14.40	14.71	14.46	15.50
5	256QAM	25	0	14.49	14.81	14.52	15.50

【LTE Band 12_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	23.23	23.23	23.18	24.00
10	QPSK	1	25	23.19	23.22	23.19	24.00
10	QPSK	1	49	23.12	23.17	23.16	24.00
10	QPSK	25	0	22.20	22.17	22.20	23.00
10	QPSK	25	12	22.17	22.15	22.18	23.00
10	QPSK	25	25	22.14	22.16	22.20	23.00
10	QPSK	50	0	22.21	22.19	22.22	23.00
10	16QAM	1	0	22.48	22.48	22.37	23.00
10	16QAM	1	25	22.45	22.53	22.40	23.00
10	16QAM	1	49	22.50	22.37	22.40	23.00
10	16QAM	25	0	21.17	21.13	21.20	22.00
10	16QAM	25	12	21.15	21.20	21.19	22.00
10	16QAM	25	25	21.18	21.22	21.21	22.00
10	16QAM	50	0	21.20	21.15	21.20	22.00
10	64QAM	1	0	21.31	21.27	21.33	22.00
10	64QAM	1	25	21.33	21.35	21.26	22.00
10	64QAM	1	49	21.29	21.23	21.30	22.00
10	64QAM	25	0	20.18	20.12	20.15	21.00
10	64QAM	25	12	20.14	20.18	20.16	21.00
10	64QAM	25	25	20.15	20.16	20.14	21.00
10	64QAM	50	0	20.12	20.16	20.16	21.00
10	256QAM	1	0	17.62	18.11	17.63	19.00
10	256QAM	1	25	18.09	18.22	17.82	19.00
10	256QAM	1	49	17.63	17.69	17.90	19.00
10	256QAM	25	0	17.70	17.60	17.66	19.00
10	256QAM	25	12	17.65	17.63	17.58	19.00
10	256QAM	25	25	17.64	17.69	17.59	19.00
10	256QAM	50	0	17.61	17.60	17.64	19.00
Channel				23035	23095	23115	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	23.18	23.12	23.09	24.00
5	QPSK	1	12	23.17	23.10	23.09	24.00
5	QPSK	1	24	23.10	23.12	23.12	24.00
5	QPSK	12	0	22.18	22.15	22.06	23.00
5	QPSK	12	7	22.12	22.02	22.15	23.00
5	QPSK	12	13	22.01	22.03	22.08	23.00
5	QPSK	25	0	22.09	22.10	22.15	23.00
5	16QAM	1	0	22.39	22.36	22.24	23.00
5	16QAM	1	12	22.39	22.43	22.33	23.00
5	16QAM	1	24	22.45	22.27	22.30	23.00
5	16QAM	12	0	21.06	21.09	21.06	22.00
5	16QAM	12	7	21.05	21.17	21.13	22.00
5	16QAM	12	13	21.07	21.08	21.17	22.00
5	16QAM	25	0	21.11	21.13	21.09	22.00
5	64QAM	1	0	21.26	21.25	21.21	22.00
5	64QAM	1	12	21.31	21.20	21.13	22.00
5	64QAM	1	24	21.18	21.10	21.17	22.00
5	64QAM	12	0	20.05	19.99	20.01	21.00
5	64QAM	12	7	20.13	20.14	20.12	21.00
5	64QAM	12	13	20.03	20.08	20.05	21.00
5	64QAM	25	0	20.00	20.13	20.08	21.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	256QAM	1	0	17.60	17.97	17.59	19.00
5	256QAM	1	12	18.02	18.13	17.80	19.00
5	256QAM	1	24	17.62	17.61	17.80	19.00
5	256QAM	12	0	17.65	17.47	17.52	19.00
5	256QAM	12	7	17.62	17.50	17.48	19.00
5	256QAM	12	13	17.61	17.68	17.54	19.00
5	256QAM	25	0	17.59	17.55	17.50	19.00
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	23.18	23.19	23.07	24.00
3	QPSK	1	8	23.18	23.13	23.10	24.00
3	QPSK	1	14	22.98	23.08	23.14	24.00
3	QPSK	8	0	22.06	22.07	22.15	23.00
3	QPSK	8	4	22.02	22.02	22.08	23.00
3	QPSK	8	7	22.08	22.09	22.13	23.00
3	QPSK	15	0	22.14	22.16	22.15	23.00
3	16QAM	1	0	22.42	22.46	22.33	23.00
3	16QAM	1	8	22.31	22.38	22.26	23.00
3	16QAM	1	14	22.37	22.31	22.34	23.00
3	16QAM	8	0	21.13	21.03	21.11	22.00
3	16QAM	8	4	21.14	21.05	21.06	22.00
3	16QAM	8	7	21.08	21.08	21.18	22.00
3	16QAM	15	0	21.15	21.10	21.13	22.00
3	64QAM	1	0	21.22	21.18	21.32	22.00
3	64QAM	1	8	21.23	21.25	21.18	22.00
3	64QAM	1	14	21.26	21.12	21.21	22.00
3	64QAM	8	0	20.14	20.00	20.07	21.00
3	64QAM	8	4	20.06	20.05	20.03	21.00
3	64QAM	8	7	20.01	20.08	20.04	21.00
3	64QAM	15	0	20.07	20.09	20.03	21.00
3	256QAM	1	0	17.61	17.97	17.50	19.00
3	256QAM	1	8	17.96	18.17	17.74	19.00
3	256QAM	1	14	17.55	17.56	17.88	19.00
3	256QAM	8	0	17.66	17.48	17.56	19.00
3	256QAM	8	4	17.59	17.56	17.50	19.00
3	256QAM	8	7	17.59	17.61	17.48	19.00
3	256QAM	15	0	17.58	17.57	17.52	19.00
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	23.27	23.17	23.14	24.00
1.4	QPSK	1	3	23.23	23.18	23.20	24.00
1.4	QPSK	1	5	23.20	23.19	23.17	24.00
1.4	QPSK	3	0	23.26	23.21	23.21	24.00
1.4	QPSK	3	1	23.23	23.23	23.22	24.00
1.4	QPSK	3	3	23.24	23.21	23.21	24.00
1.4	QPSK	6	0	22.21	22.21	22.19	23.00
1.4	16QAM	1	0	22.61	22.38	22.39	23.00
1.4	16QAM	1	3	22.44	22.47	22.49	23.00
1.4	16QAM	1	5	22.53	22.50	22.50	23.00
1.4	16QAM	3	0	22.30	22.18	22.18	23.00
1.4	16QAM	3	1	22.22	22.19	22.24	23.00
1.4	16QAM	3	3	22.24	22.17	22.23	23.00
1.4	16QAM	6	0	21.28	21.25	21.27	22.00
1.4	64QAM	1	0	21.39	21.35	21.30	22.00
1.4	64QAM	1	3	21.40	21.33	21.31	22.00
1.4	64QAM	1	5	21.31	21.33	21.33	22.00
1.4	64QAM	3	0	21.32	21.28	21.25	22.00
1.4	64QAM	3	1	21.27	21.27	21.25	22.00
1.4	64QAM	3	3	21.31	21.26	21.23	22.00
1.4	64QAM	6	0	20.19	20.13	20.14	21.00
1.4	256QAM	1	0	17.52	18.05	17.58	19.00
1.4	256QAM	1	3	17.97	18.17	17.69	19.00
1.4	256QAM	1	5	17.53	17.62	17.86	19.00
1.4	256QAM	3	0	17.59	17.49	17.60	19.00
1.4	256QAM	3	1	17.58	17.61	17.55	19.00
1.4	256QAM	3	3	17.55	17.57	17.53	19.00
1.4	256QAM	6	0	17.56	17.51	17.50	19.00

【LTE Band 12_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	17.94	18.05	17.90	18.50
10	QPSK	1	25	17.83	18.02	17.73	18.50
10	QPSK	1	49	17.73	17.96	17.72	18.50
10	QPSK	25	0	17.77	18.01	17.75	18.50
10	QPSK	25	12	17.82	18.00	17.77	18.50
10	QPSK	25	25	17.84	17.99	17.72	18.50
10	QPSK	50	0	17.81	18.01	17.83	18.50
10	16QAM	1	0	17.64	17.85	17.66	18.50
10	16QAM	1	25	17.60	17.82	17.60	18.50
10	16QAM	1	49	17.59	17.76	17.48	18.50
10	16QAM	25	0	17.57	17.81	17.59	18.50
10	16QAM	25	12	17.54	17.80	17.55	18.50
10	16QAM	25	25	17.63	17.79	17.59	18.50
10	16QAM	50	0	17.64	17.81	17.57	18.50
10	64QAM	1	0	17.86	17.99	17.74	18.50
10	64QAM	1	25	17.78	17.96	17.76	18.50
10	64QAM	1	49	17.75	17.90	17.74	18.50
10	64QAM	25	0	17.75	17.95	17.69	18.50
10	64QAM	25	12	17.78	17.94	17.70	18.50
10	64QAM	25	25	17.70	17.93	17.71	18.50
10	64QAM	50	0	17.81	17.95	17.75	18.50
10	256QAM	1	0	17.86	18.00	17.78	18.50
10	256QAM	1	25	17.80	17.97	17.71	18.50
10	256QAM	1	49	17.72	17.91	17.75	18.50
10	256QAM	25	0	17.74	17.96	17.79	18.50
10	256QAM	25	12	17.81	17.95	17.77	18.50
10	256QAM	25	25	17.74	17.94	17.72	18.50
10	256QAM	50	0	17.78	17.96	17.74	18.50
Channel				23035	23095	23115	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	17.80	17.91	17.80	18.50
5	QPSK	1	12	17.74	17.88	17.61	18.50
5	QPSK	1	24	17.62	17.89	17.62	18.50
5	QPSK	12	0	17.67	17.87	17.60	18.50
5	QPSK	12	7	17.81	17.88	17.66	18.50
5	QPSK	12	13	17.83	17.85	17.64	18.50
5	QPSK	25	0	17.71	17.93	17.72	18.50
5	16QAM	1	0	17.56	17.70	17.64	18.50
5	16QAM	1	12	17.57	17.70	17.48	18.50
5	16QAM	1	24	17.51	17.74	17.45	18.50
5	16QAM	12	0	17.51	17.75	17.52	18.50
5	16QAM	12	7	17.49	17.67	17.47	18.50
5	16QAM	12	13	17.59	17.75	17.55	18.50
5	16QAM	25	0	17.55	17.70	17.55	18.50
5	64QAM	1	0	17.78	17.88	17.60	18.50
5	64QAM	1	12	17.68	17.83	17.75	18.50
5	64QAM	1	24	17.66	17.88	17.71	18.50
5	64QAM	12	0	17.70	17.90	17.62	18.50
5	64QAM	12	7	17.68	17.92	17.61	18.50
5	64QAM	12	13	17.60	17.90	17.65	18.50
5	64QAM	25	0	17.69	17.91	17.73	18.50
5	256QAM	1	0	17.77	17.85	17.68	18.50
5	256QAM	1	12	17.72	17.91	17.56	18.50
5	256QAM	1	24	17.66	17.88	17.73	18.50
5	256QAM	12	0	17.64	17.83	17.65	18.50
5	256QAM	12	7	17.79	17.82	17.67	18.50
5	256QAM	12	13	17.64	17.82	17.65	18.50
5	256QAM	25	0	17.67	17.88	17.71	18.50
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	17.85	18.00	17.85	18.50
3	QPSK	1	8	17.77	17.92	17.72	18.50
3	QPSK	1	14	17.65	17.91	17.62	18.50
3	QPSK	8	0	17.70	17.95	17.66	18.50
3	QPSK	8	4	17.75	17.92	17.63	18.50
3	QPSK	8	7	17.77	17.92	17.58	18.50
3	QPSK	15	0	17.77	17.96	17.80	18.50
3	16QAM	1	0	17.54	17.79	17.63	18.50

3	16QAM	1	8	17.53	17.79	17.56	18.50
3	16QAM	1	14	17.54	17.72	17.38	18.50
3	16QAM	8	0	17.52	17.77	17.57	18.50
3	16QAM	8	4	17.52	17.76	17.41	18.50
3	16QAM	8	7	17.60	17.65	17.45	18.50
3	16QAM	15	0	17.56	17.72	17.45	18.50
3	64QAM	1	0	17.75	17.90	17.62	18.50
3	64QAM	1	8	17.74	17.89	17.65	18.50
3	64QAM	1	14	17.64	17.89	17.71	18.50
3	64QAM	8	0	17.71	17.93	17.56	18.50
3	64QAM	8	4	17.63	17.90	17.56	18.50
3	64QAM	8	7	17.60	17.86	17.63	18.50
3	64QAM	15	0	17.67	17.84	17.64	18.50
3	256QAM	1	0	17.79	17.88	17.72	18.50
3	256QAM	1	8	17.72	17.94	17.58	18.50
3	256QAM	1	14	17.70	17.86	17.65	18.50
3	256QAM	8	0	17.61	17.94	17.75	18.50
3	256QAM	8	4	17.72	17.84	17.64	18.50
3	256QAM	8	7	17.71	17.80	17.64	18.50
3	256QAM	15	0	17.66	17.93	17.70	18.50
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	17.86	17.99	17.84	18.50
1.4	QPSK	1	3	17.81	17.98	17.71	18.50
1.4	QPSK	1	5	17.66	17.84	17.69	18.50
1.4	QPSK	3	0	17.69	17.97	17.61	18.50
1.4	QPSK	3	1	17.76	17.94	17.64	18.50
1.4	QPSK	3	3	17.73	17.97	17.63	18.50
1.4	QPSK	6	0	17.79	17.95	17.79	18.50
1.4	16QAM	1	0	17.57	17.76	17.62	18.50
1.4	16QAM	1	3	17.51	17.75	17.48	18.50
1.4	16QAM	1	5	17.44	17.69	17.46	18.50
1.4	16QAM	3	0	17.51	17.68	17.51	18.50
1.4	16QAM	3	1	17.40	17.76	17.46	18.50
1.4	16QAM	3	3	17.56	17.64	17.50	18.50
1.4	16QAM	6	0	17.58	17.67	17.50	18.50
1.4	64QAM	1	0	17.77	17.95	17.71	18.50
1.4	64QAM	1	3	17.67	17.83	17.69	18.50
1.4	64QAM	1	5	17.61	17.85	17.63	18.50
1.4	64QAM	3	0	17.64	17.83	17.60	18.50
1.4	64QAM	3	1	17.69	17.90	17.67	18.50
1.4	64QAM	3	3	17.68	17.91	17.59	18.50
1.4	64QAM	6	0	17.67	17.85	17.68	18.50
1.4	256QAM	1	0	17.75	17.86	17.64	18.50
1.4	256QAM	1	3	17.76	17.92	17.58	18.50
1.4	256QAM	1	5	17.58	17.77	17.70	18.50
1.4	256QAM	3	0	17.61	17.90	17.64	18.50
1.4	256QAM	3	1	17.75	17.93	17.62	18.50
1.4	256QAM	3	3	17.66	17.80	17.67	18.50
1.4	256QAM	6	0	17.73	17.88	17.61	18.50

【LTE Band 13_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23230		
Frequency (MHz)					782		
10	QPSK	1	0		22.82		24.00
10	QPSK	1	25		22.79		24.00
10	QPSK	1	49		22.72		24.00
10	QPSK	25	0		21.75		23.00
10	QPSK	25	12		21.73		23.00
10	QPSK	25	25		21.74		23.00
10	QPSK	50	0		21.77		23.00
10	16QAM	1	0		21.97		23.00
10	16QAM	1	25		21.99		23.00
10	16QAM	1	49		21.93		23.00
10	16QAM	25	0		20.71		22.00
10	16QAM	25	12		20.77		22.00
10	16QAM	25	25		20.84		22.00

10	16QAM	50	0		20.74		22.00
10	64QAM	1	0		20.89		22.00
10	64QAM	1	25		20.83		22.00
10	64QAM	1	49		20.76		22.00
10	64QAM	25	0		19.64		21.00
10	64QAM	25	12		19.72		21.00
10	64QAM	25	25		19.78		21.00
10	64QAM	50	0		19.70		21.00
10	256QAM	1	0		17.40		19.00
10	256QAM	1	25		17.34		19.00
10	256QAM	1	49		17.17		19.00
10	256QAM	25	0		17.21		19.00
10	256QAM	25	12		17.23		19.00
10	256QAM	25	25		17.27		19.00
10	256QAM	50	0		17.25		19.00
Channel				23205	23230	23255	Tune-up limit
Frequency (MHz)				779.5	782	784.5	(dBm)
5	QPSK	1	0	22.76	22.80	22.71	24.00
5	QPSK	1	12	22.60	22.77	22.64	24.00
5	QPSK	1	24	22.61	22.70	22.56	24.00
5	QPSK	12	0	21.55	21.73	21.63	23.00
5	QPSK	12	7	21.64	21.71	21.54	23.00
5	QPSK	12	13	21.59	21.72	21.54	23.00
5	QPSK	25	0	21.66	21.75	21.52	23.00
5	16QAM	1	0	21.84	21.95	21.83	23.00
5	16QAM	1	12	21.83	21.97	21.84	23.00
5	16QAM	1	24	21.77	21.91	21.75	23.00
5	16QAM	12	0	20.55	20.69	20.57	22.00
5	16QAM	12	7	20.59	20.75	20.66	22.00
5	16QAM	12	13	20.67	20.82	20.70	22.00
5	16QAM	25	0	20.58	20.72	20.52	22.00
5	64QAM	1	0	20.76	20.87	20.68	22.00
5	64QAM	1	12	20.72	20.81	20.59	22.00
5	64QAM	1	24	20.63	20.74	20.53	22.00
5	64QAM	12	0	19.52	19.62	19.47	21.00
5	64QAM	12	7	19.61	19.70	19.58	21.00
5	64QAM	12	13	19.70	19.76	19.67	21.00
5	64QAM	25	0	19.52	19.68	19.46	21.00
5	256QAM	1	0	17.27	17.38	17.27	19.00
5	256QAM	1	12	17.21	17.32	17.23	19.00
5	256QAM	1	24	17.05	17.15	17.00	19.00
5	256QAM	12	0	17.11	17.19	17.06	19.00
5	256QAM	12	7	17.05	17.21	17.01	19.00
5	256QAM	12	13	17.20	17.25	17.16	19.00
5	256QAM	25	0	17.07	17.23	17.09	19.00

【LTE Band 13_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23230		
Frequency (MHz)					782		
10	QPSK	1	0		17.85		18.50
10	QPSK	1	25		17.72		18.50
10	QPSK	1	49		17.64		18.50
10	QPSK	25	0		17.75		18.50
10	QPSK	25	12		17.66		18.50
10	QPSK	25	25		17.70		18.50
10	QPSK	50	0		17.68		18.50
10	16QAM	1	0		17.70		18.50
10	16QAM	1	25		17.57		18.50
10	16QAM	1	49		17.49		18.50
10	16QAM	25	0		17.60		18.50
10	16QAM	25	12		17.51		18.50
10	16QAM	25	25		17.55		18.50
10	16QAM	50	0		17.53		18.50
10	64QAM	1	0		17.71		18.50
10	64QAM	1	25		17.58		18.50
10	64QAM	1	49		17.50		18.50
10	64QAM	25	0		17.61		18.50

10	64QAM	25	12		17.52		18.50
10	64QAM	25	25		17.56		18.50
10	64QAM	50	0		17.54		18.50
10	256QAM	1	0		17.80		18.50
10	256QAM	1	25		17.67		18.50
10	256QAM	1	49		17.59		18.50
10	256QAM	25	0		17.70		18.50
10	256QAM	25	12		17.61		18.50
10	256QAM	25	25		17.65		18.50
10	256QAM	50	0		17.63		18.50
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	17.77	17.81	17.72	18.50
5	QPSK	1	12	17.51	17.68	17.51	18.50
5	QPSK	1	24	17.50	17.60	17.39	18.50
5	QPSK	12	0	17.60	17.71	17.56	18.50
5	QPSK	12	7	17.56	17.62	17.40	18.50
5	QPSK	12	13	17.52	17.66	17.53	18.50
5	QPSK	25	0	17.53	17.64	17.41	18.50
5	16QAM	1	0	17.55	17.66	17.42	18.50
5	16QAM	1	12	17.44	17.53	17.40	18.50
5	16QAM	1	24	17.31	17.45	17.35	18.50
5	16QAM	12	0	17.45	17.56	17.37	18.50
5	16QAM	12	7	17.39	17.47	17.27	18.50
5	16QAM	12	13	17.41	17.51	17.31	18.50
5	16QAM	25	0	17.36	17.49	17.25	18.50
5	64QAM	1	0	17.53	17.67	17.51	18.50
5	64QAM	1	12	17.45	17.54	17.43	18.50
5	64QAM	1	24	17.35	17.46	17.23	18.50
5	64QAM	12	0	17.47	17.57	17.46	18.50
5	64QAM	12	7	17.33	17.48	17.28	18.50
5	64QAM	12	13	17.43	17.52	17.35	18.50
5	64QAM	25	0	17.43	17.50	17.34	18.50
5	256QAM	1	0	17.57	17.76	17.65	18.50
5	256QAM	1	12	17.54	17.63	17.47	18.50
5	256QAM	1	24	17.43	17.55	17.39	18.50
5	256QAM	12	0	17.58	17.66	17.44	18.50
5	256QAM	12	7	17.43	17.57	17.47	18.50
5	256QAM	12	13	17.54	17.61	17.48	18.50
5	256QAM	25	0	17.47	17.59	17.38	18.50

【LTE Band 14_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23330		
Frequency (MHz)					793		
10	QPSK	1	0		22.92		24.00
10	QPSK	1	25		22.91		24.00
10	QPSK	1	49		22.81		24.00
10	QPSK	25	0		21.97		23.00
10	QPSK	25	12		21.86		23.00
10	QPSK	25	25		21.86		23.00
10	QPSK	50	0		21.93		23.00
10	16QAM	1	0		22.08		23.00
10	16QAM	1	25		22.06		23.00
10	16QAM	1	49		22.05		23.00
10	16QAM	25	0		20.97		22.00
10	16QAM	25	12		20.88		22.00
10	16QAM	25	25		20.84		22.00
10	16QAM	50	0		20.93		22.00
10	64QAM	1	0		21.01		22.00
10	64QAM	1	25		21.01		22.00
10	64QAM	1	49		20.89		22.00
10	64QAM	25	0		19.92		21.00
10	64QAM	25	12		19.84		21.00
10	64QAM	25	25		19.82		21.00
10	64QAM	50	0		19.90		21.00
10	256QAM	1	0		17.86		19.00
10	256QAM	1	25		17.09		19.00

10	256QAM	1	49		17.39		19.00
10	256QAM	25	0		17.50		19.00
10	256QAM	25	12		17.38		19.00
10	256QAM	25	25		17.37		19.00
10	256QAM	50	0		17.40		19.00
Channel				23305	23330	23355	Tune-up limit
Frequency (MHz)				790.5	793	795.5	(dBm)
5	QPSK	1	0	22.81	22.89	22.84	24.00
5	QPSK	1	12	22.72	22.88	22.75	24.00
5	QPSK	1	24	22.61	22.78	22.63	24.00
5	QPSK	12	0	21.83	21.94	21.79	23.00
5	QPSK	12	7	21.67	21.83	21.75	23.00
5	QPSK	12	13	21.74	21.83	21.66	23.00
5	QPSK	25	0	21.70	21.90	21.83	23.00
5	16QAM	1	0	21.93	22.05	21.86	23.00
5	16QAM	1	12	21.81	22.03	21.84	23.00
5	16QAM	1	24	21.82	22.02	21.94	23.00
5	16QAM	12	0	20.84	20.94	20.77	22.00
5	16QAM	12	7	20.67	20.85	20.75	22.00
5	16QAM	12	13	20.63	20.81	20.73	22.00
5	16QAM	25	0	20.71	20.90	20.74	22.00
5	64QAM	1	0	20.89	20.98	20.86	22.00
5	64QAM	1	12	20.84	20.98	20.87	22.00
5	64QAM	1	24	20.73	20.86	20.75	22.00
5	64QAM	12	0	19.76	19.89	19.70	21.00
5	64QAM	12	7	19.64	19.81	19.65	21.00
5	64QAM	12	13	19.59	19.79	19.69	21.00
5	64QAM	25	0	19.76	19.87	19.74	21.00
5	256QAM	1	0	17.69	17.84	17.68	19.00
5	256QAM	1	12	17.00	17.07	17.01	19.00
5	256QAM	1	24	17.26	17.37	17.26	19.00
5	256QAM	12	0	17.40	17.48	17.30	19.00
5	256QAM	12	7	17.21	17.36	17.21	19.00
5	256QAM	12	13	17.15	17.35	17.22	19.00
5	256QAM	25	0	17.22	17.38	17.24	19.00

【LTE Band 14_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					23330		
Frequency (MHz)					793		
10	QPSK	1	0		17.88		18.50
10	QPSK	1	25		17.84		18.50
10	QPSK	1	49		17.75		18.50
10	QPSK	25	0		17.83		18.50
10	QPSK	25	12		17.80		18.50
10	QPSK	25	25		17.77		18.50
10	QPSK	50	0		17.80		18.50
10	16QAM	1	0		17.76		18.50
10	16QAM	1	25		17.72		18.50
10	16QAM	1	49		17.63		18.50
10	16QAM	25	0		17.71		18.50
10	16QAM	25	12		17.68		18.50
10	16QAM	25	25		17.65		18.50
10	16QAM	50	0		17.68		18.50
10	64QAM	1	0		17.68		18.50
10	64QAM	1	25		17.64		18.50
10	64QAM	1	49		17.55		18.50
10	64QAM	25	0		17.63		18.50
10	64QAM	25	12		17.60		18.50
10	64QAM	25	25		17.57		18.50
10	64QAM	50	0		17.60		18.50
10	256QAM	1	0		17.79		18.50
10	256QAM	1	25		17.75		18.50
10	256QAM	1	49		17.66		18.50
10	256QAM	25	0		17.74		18.50
10	256QAM	25	12		17.71		18.50
10	256QAM	25	25		17.68		18.50
10	256QAM	50	0		17.71		18.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

Channel				23305	23330	23355	Tune-up limit
Frequency (MHz)				790.5	793	795.5	(dBm)
5	QPSK	1	0	17.83	17.86	17.84	18.50
5	QPSK	1	12	17.74	17.82	17.76	18.50
5	QPSK	1	24	17.64	17.73	17.62	18.50
5	QPSK	12	0	17.64	17.81	17.76	18.50
5	QPSK	12	7	17.73	17.78	17.66	18.50
5	QPSK	12	13	17.66	17.75	17.62	18.50
5	QPSK	25	0	17.61	17.78	17.68	18.50
5	16QAM	1	0	17.65	17.74	17.66	18.50
5	16QAM	1	12	17.57	17.70	17.67	18.50
5	16QAM	1	24	17.53	17.61	17.55	18.50
5	16QAM	12	0	17.60	17.69	17.53	18.50
5	16QAM	12	7	17.59	17.66	17.50	18.50
5	16QAM	12	13	17.56	17.63	17.47	18.50
5	16QAM	25	0	17.60	17.66	17.51	18.50
5	64QAM	1	0	17.51	17.66	17.61	18.50
5	64QAM	1	12	17.54	17.62	17.59	18.50
5	64QAM	1	24	17.43	17.53	17.40	18.50
5	64QAM	12	0	17.49	17.61	17.47	18.50
5	64QAM	12	7	17.50	17.58	17.50	18.50
5	64QAM	12	13	17.40	17.55	17.52	18.50
5	64QAM	25	0	17.44	17.58	17.46	18.50
5	256QAM	1	0	17.70	17.77	17.64	18.50
5	256QAM	1	12	17.63	17.73	17.60	18.50
5	256QAM	1	24	17.55	17.64	17.61	18.50
5	256QAM	12	0	17.60	17.72	17.60	18.50
5	256QAM	12	7	17.59	17.69	17.60	18.50
5	256QAM	12	13	17.53	17.66	17.57	18.50
5	256QAM	25	0	17.63	17.69	17.57	18.50

【LTE Band 17_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	23.15	23.18	23.16	24.00
10	QPSK	1	25	23.27	23.25	23.23	24.00
10	QPSK	1	49	23.17	23.15	23.17	24.00
10	QPSK	25	0	22.14	22.19	22.19	23.00
10	QPSK	25	12	22.19	22.22	22.21	23.00
10	QPSK	25	25	22.22	22.21	22.21	23.00
10	QPSK	50	0	22.21	22.26	22.23	23.00
10	16QAM	1	0	22.45	22.43	22.42	23.00
10	16QAM	1	25	22.46	22.58	22.43	23.00
10	16QAM	1	49	22.47	22.39	22.43	23.00
10	16QAM	25	0	21.14	21.22	21.16	22.00
10	16QAM	25	12	21.17	21.16	21.23	22.00
10	16QAM	25	25	21.23	21.25	21.20	22.00
10	16QAM	50	0	21.17	21.21	21.18	22.00
10	64QAM	1	0	21.26	21.30	21.23	22.00
10	64QAM	1	25	21.39	21.37	21.34	22.00
10	64QAM	1	49	21.30	21.24	21.28	22.00
10	64QAM	25	0	20.14	20.16	20.16	21.00
10	64QAM	25	12	20.13	20.17	20.20	21.00
10	64QAM	25	25	20.19	20.18	20.23	21.00
10	64QAM	50	0	20.15	20.19	20.16	21.00
10	256QAM	1	0	17.81	17.62	17.29	19.00
10	256QAM	1	25	17.76	17.92	18.22	19.00
10	256QAM	1	49	18.21	18.19	17.71	19.00
10	256QAM	25	0	17.70	17.65	17.66	19.00
10	256QAM	25	12	17.64	17.73	17.55	19.00
10	256QAM	25	25	17.68	17.73	17.63	19.00
10	256QAM	50	0	17.69	17.68	17.65	19.00
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	23.00	23.04	23.06	24.00
5	QPSK	1	12	23.16	23.18	23.21	24.00
5	QPSK	1	24	23.05	23.09	23.06	24.00

5	QPSK	12	0	22.00	22.07	22.05	23.00
5	QPSK	12	7	22.06	22.17	22.17	23.00
5	QPSK	12	13	22.15	22.15	22.14	23.00
5	QPSK	25	0	22.19	22.24	22.11	23.00
5	16QAM	1	0	22.30	22.38	22.41	23.00
5	16QAM	1	12	22.37	22.57	22.29	23.00
5	16QAM	1	24	22.36	22.37	22.36	23.00
5	16QAM	12	0	21.06	21.21	21.08	22.00
5	16QAM	12	7	21.12	21.14	21.09	22.00
5	16QAM	12	13	21.22	21.20	21.12	22.00
5	16QAM	25	0	21.14	21.11	21.14	22.00
5	64QAM	1	0	21.14	21.20	21.22	22.00
5	64QAM	1	12	21.35	21.22	21.28	22.00
5	64QAM	1	24	21.23	21.23	21.14	22.00
5	64QAM	12	0	20.05	20.07	20.08	21.00
5	64QAM	12	7	20.08	20.12	20.18	21.00
5	64QAM	12	13	20.09	20.09	20.22	21.00
5	64QAM	25	0	20.06	20.08	20.13	21.00
5	256QAM	1	0	17.69	17.54	17.17	19.00
5	256QAM	1	12	17.73	17.77	18.13	19.00
5	256QAM	1	24	18.08	18.05	17.67	19.00
5	256QAM	12	0	17.58	17.64	17.54	19.00
5	256QAM	12	7	17.50	17.61	17.40	19.00
5	256QAM	12	13	17.55	17.67	17.48	19.00
5	256QAM	25	0	17.65	17.56	17.58	19.00

【LTE Band 17_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	Tune-up limit (dBm)
Frequency (MHz)				709	710	711	
10	QPSK	1	0	17.86	18.00	17.92	18.50
10	QPSK	1	25	17.75	18.01	17.80	18.50
10	QPSK	1	49	17.76	17.99	17.83	18.50
10	QPSK	25	0	17.73	17.95	17.76	18.50
10	QPSK	25	12	17.76	17.98	17.76	18.50
10	QPSK	25	25	17.68	17.96	17.84	18.50
10	QPSK	50	0	17.81	17.97	17.87	18.50
10	16QAM	1	0	17.74	17.96	17.85	18.50
10	16QAM	1	25	17.82	17.97	17.81	18.50
10	16QAM	1	49	17.67	17.95	17.74	18.50
10	16QAM	25	0	17.64	17.91	17.79	18.50
10	16QAM	25	12	17.79	17.94	17.75	18.50
10	16QAM	25	25	17.72	17.92	17.82	18.50
10	16QAM	50	0	17.75	17.93	17.71	18.50
10	64QAM	1	0	17.79	17.99	17.89	18.50
10	64QAM	1	25	17.72	18.00	17.80	18.50
10	64QAM	1	49	17.73	17.98	17.76	18.50
10	64QAM	25	0	17.76	17.94	17.84	18.50
10	64QAM	25	12	17.70	17.97	17.76	18.50
10	64QAM	25	25	17.70	17.95	17.72	18.50
10	64QAM	50	0	17.75	17.96	17.80	18.50
10	256QAM	1	0	17.71	17.96	17.81	18.50
10	256QAM	1	25	17.74	17.97	17.87	18.50
10	256QAM	1	49	17.67	17.95	17.84	18.50
10	256QAM	25	0	17.73	17.91	17.75	18.50
10	256QAM	25	12	17.72	17.94	17.75	18.50
10	256QAM	25	25	17.72	17.92	17.76	18.50
10	256QAM	50	0	17.71	17.93	17.78	18.50
Channel				23755	23790	23825	Tune-up limit (dBm)
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	17.81	17.92	17.88	18.50
5	QPSK	1	12	17.62	17.88	17.72	18.50
5	QPSK	1	24	17.70	17.85	17.69	18.50
5	QPSK	12	0	17.63	17.87	17.73	18.50
5	QPSK	12	7	17.69	17.89	17.71	18.50
5	QPSK	12	13	17.60	17.91	17.71	18.50
5	QPSK	25	0	17.67	17.89	17.85	18.50
5	16QAM	1	0	17.63	17.91	17.76	18.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	16QAM	1	12	17.70	17.89	17.66	18.50
5	16QAM	1	24	17.56	17.83	17.65	18.50
5	16QAM	12	0	17.56	17.78	17.67	18.50
5	16QAM	12	7	17.73	17.89	17.74	18.50
5	16QAM	12	13	17.66	17.81	17.80	18.50
5	16QAM	25	0	17.65	17.82	17.67	18.50
5	64QAM	1	0	17.75	17.97	17.78	18.50
5	64QAM	1	12	17.67	17.96	17.71	18.50
5	64QAM	1	24	17.67	17.87	17.71	18.50
5	64QAM	12	0	17.69	17.93	17.81	18.50
5	64QAM	12	7	17.67	17.91	17.67	18.50
5	64QAM	12	13	17.66	17.90	17.63	18.50
5	64QAM	25	0	17.70	17.88	17.69	18.50
5	256QAM	1	0	17.57	17.89	17.75	18.50
5	256QAM	1	12	17.69	17.91	17.84	18.50
5	256QAM	1	24	17.61	17.93	17.79	18.50
5	256QAM	12	0	17.59	17.78	17.72	18.50
5	256QAM	12	7	17.63	17.89	17.65	18.50
5	256QAM	12	13	17.65	17.85	17.72	18.50
5	256QAM	25	0	17.69	17.81	17.77	18.50

【LTE Band 25_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	22.68	22.80	22.66	24.00
20	QPSK	1	49	22.64	22.69	22.64	24.00
20	QPSK	1	99	22.65	22.64	22.63	24.00
20	QPSK	50	0	21.73	21.74	21.72	23.00
20	QPSK	50	24	21.70	21.70	21.71	23.00
20	QPSK	50	50	21.71	21.70	21.59	23.00
20	QPSK	100	0	21.67	21.70	21.60	23.00
20	16QAM	1	0	21.87	22.03	21.91	23.00
20	16QAM	1	49	22.00	22.11	22.08	23.00
20	16QAM	1	99	21.96	21.87	21.96	23.00
20	16QAM	50	0	20.74	20.59	20.64	22.00
20	16QAM	50	24	20.74	20.68	20.74	22.00
20	16QAM	50	50	20.63	20.66	20.54	22.00
20	16QAM	100	0	20.66	20.60	20.58	22.00
20	64QAM	1	0	20.73	20.81	20.68	22.00
20	64QAM	1	49	20.79	20.89	20.81	22.00
20	64QAM	1	99	20.79	20.78	20.84	22.00
20	64QAM	50	0	19.73	19.54	19.59	21.00
20	64QAM	50	24	19.67	19.66	19.66	21.00
20	64QAM	50	50	19.60	19.66	19.53	21.00
20	64QAM	100	0	19.62	19.59	19.55	21.00
20	256QAM	1	0	17.58	17.23	17.21	19.00
20	256QAM	1	49	17.17	17.21	17.02	19.00
20	256QAM	1	99	17.32	17.56	18.02	19.00
20	256QAM	50	0	17.18	17.12	17.31	19.00
20	256QAM	50	24	17.26	17.31	17.35	19.00
20	256QAM	50	50	17.21	17.27	17.18	19.00
20	256QAM	100	0	17.26	17.23	17.26	19.00
Channel				26115	26340	26615	Tune-up limit
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	22.58	22.79	22.53	24.00
15	QPSK	1	37	22.50	22.62	22.55	24.00
15	QPSK	1	74	22.63	22.53	22.62	24.00
15	QPSK	36	0	21.66	21.70	21.66	23.00
15	QPSK	36	20	21.67	21.60	21.65	23.00
15	QPSK	36	39	21.60	21.63	21.44	23.00
15	QPSK	75	0	21.57	21.55	21.51	23.00
15	16QAM	1	0	21.82	21.92	21.87	23.00
15	16QAM	1	37	21.91	22.03	22.05	23.00
15	16QAM	1	74	21.90	21.73	21.83	23.00
15	16QAM	36	0	20.72	20.51	20.59	22.00
15	16QAM	36	20	20.64	20.59	20.59	22.00
15	16QAM	36	39	20.59	20.62	20.51	22.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

15	16QAM	75	0	20.64	20.55	20.50	22.00
15	64QAM	1	0	20.60	20.74	20.66	22.00
15	64QAM	1	37	20.64	20.86	20.72	22.00
15	64QAM	1	74	20.70	20.74	20.72	22.00
15	64QAM	36	0	19.64	19.42	19.46	21.00
15	64QAM	36	20	19.66	19.63	19.62	21.00
15	64QAM	36	39	19.48	19.57	19.42	21.00
15	64QAM	75	0	19.51	19.56	19.49	21.00
15	256QAM	1	0	17.50	17.20	17.19	19.00
15	256QAM	1	37	17.06	17.17	17.01	19.00
15	256QAM	1	74	17.25	17.50	17.90	19.00
15	256QAM	36	0	17.07	17.00	17.29	19.00
15	256QAM	36	20	17.12	17.19	17.32	19.00
15	256QAM	36	39	17.11	17.18	17.04	19.00
15	256QAM	75	0	17.16	17.15	17.14	19.00
Channel				26090	26340	26640	Tune-up limit
Frequency (MHz)				1855	1880	1910	(dBm)
10	QPSK	1	0	22.65	22.65	22.58	24.00
10	QPSK	1	25	22.60	22.68	22.59	24.00
10	QPSK	1	49	22.56	22.55	22.57	24.00
10	QPSK	25	0	21.68	21.65	21.67	23.00
10	QPSK	25	12	21.61	21.69	21.65	23.00
10	QPSK	25	25	21.56	21.57	21.54	23.00
10	QPSK	50	0	21.64	21.63	21.47	23.00
10	16QAM	1	0	21.83	21.95	21.90	23.00
10	16QAM	1	25	21.92	21.99	22.00	23.00
10	16QAM	1	49	21.83	21.83	21.91	23.00
10	16QAM	25	0	20.65	20.58	20.50	22.00
10	16QAM	25	12	20.61	20.60	20.71	22.00
10	16QAM	25	25	20.53	20.59	20.49	22.00
10	16QAM	50	0	20.59	20.57	20.51	22.00
10	64QAM	1	0	20.69	20.78	20.61	22.00
10	64QAM	1	25	20.65	20.85	20.73	22.00
10	64QAM	1	49	20.77	20.75	20.74	22.00
10	64QAM	25	0	19.66	19.41	19.47	21.00
10	64QAM	25	12	19.64	19.65	19.63	21.00
10	64QAM	25	25	19.59	19.57	19.41	21.00
10	64QAM	50	0	19.48	19.49	19.47	21.00
10	256QAM	1	0	17.52	17.12	17.08	19.00
10	256QAM	1	25	17.11	17.17	17.00	19.00
10	256QAM	1	49	17.23	17.52	17.98	19.00
10	256QAM	25	0	17.03	17.01	17.23	19.00
10	256QAM	25	12	17.23	17.24	17.30	19.00
10	256QAM	25	25	17.20	17.25	17.17	19.00
10	256QAM	50	0	17.12	17.20	17.22	19.00
Channel				26065	26340	26665	Tune-up limit
Frequency (MHz)				1852.5	1880	1912.5	(dBm)
5	QPSK	1	0	22.53	22.70	22.54	24.00
5	QPSK	1	12	22.56	22.58	22.53	24.00
5	QPSK	1	24	22.50	22.58	22.54	24.00
5	QPSK	12	0	21.69	21.66	21.68	23.00
5	QPSK	12	7	21.62	21.67	21.63	23.00
5	QPSK	12	13	21.68	21.56	21.52	23.00
5	QPSK	25	0	21.64	21.62	21.51	23.00
5	16QAM	1	0	21.74	21.92	21.87	23.00
5	16QAM	1	12	21.95	22.07	22.01	23.00
5	16QAM	1	24	21.87	21.84	21.85	23.00
5	16QAM	12	0	20.66	20.58	20.57	22.00
5	16QAM	12	7	20.65	20.55	20.64	22.00
5	16QAM	12	13	20.53	20.65	20.48	22.00
5	16QAM	25	0	20.57	20.48	20.45	22.00
5	64QAM	1	0	20.71	20.74	20.66	22.00
5	64QAM	1	12	20.67	20.82	20.74	22.00
5	64QAM	1	24	20.77	20.68	20.83	22.00
5	64QAM	12	0	19.66	19.45	19.44	21.00
5	64QAM	12	7	19.57	19.58	19.65	21.00
5	64QAM	12	13	19.58	19.57	19.43	21.00
5	64QAM	25	0	19.56	19.47	19.43	21.00
5	256QAM	1	0	17.44	17.16	17.10	19.00
5	256QAM	1	12	17.09	17.18	17.01	19.00
5	256QAM	1	24	17.28	17.49	17.90	19.00
5	256QAM	12	0	17.05	17.00	17.22	19.00
5	256QAM	12	7	17.24	17.19	17.28	19.00
5	256QAM	12	13	17.08	17.16	17.13	19.00
5	256QAM	25	0	17.18	17.13	17.13	19.00

Channel				26055	26340	26675	Tune-up limit
Frequency (MHz)				1851.5	1880	1913.5	(dBm)
3	QPSK	1	0	22.58	22.70	22.59	24.00
3	QPSK	1	8	22.57	22.59	22.60	24.00
3	QPSK	1	14	22.61	22.54	22.51	24.00
3	QPSK	8	0	21.70	21.67	21.71	23.00
3	QPSK	8	4	21.65	21.64	21.63	23.00
3	QPSK	8	7	21.58	21.64	21.54	23.00
3	QPSK	15	0	21.60	21.68	21.51	23.00
3	16QAM	1	0	21.74	22.02	21.87	23.00
3	16QAM	1	8	21.98	22.07	22.00	23.00
3	16QAM	1	14	21.85	21.76	21.92	23.00
3	16QAM	8	0	20.66	20.53	20.53	22.00
3	16QAM	8	4	20.66	20.56	20.71	22.00
3	16QAM	8	7	20.50	20.56	20.49	22.00
3	16QAM	15	0	20.52	20.50	20.49	22.00
3	64QAM	1	0	20.65	20.79	20.65	22.00
3	64QAM	1	8	20.66	20.81	20.69	22.00
3	64QAM	1	14	20.77	20.76	20.83	22.00
3	64QAM	8	0	19.67	19.46	19.47	21.00
3	64QAM	8	4	19.55	19.55	19.52	21.00
3	64QAM	8	7	19.48	19.55	19.43	21.00
3	64QAM	15	0	19.49	19.52	19.40	21.00
3	256QAM	1	0	17.52	17.10	17.19	19.00
3	256QAM	1	8	17.03	17.15	17.00	19.00
3	256QAM	1	14	17.28	17.53	17.89	19.00
3	256QAM	8	0	17.15	17.00	17.28	19.00
3	256QAM	8	4	17.18	17.23	17.25	19.00
3	256QAM	8	7	17.16	17.18	17.17	19.00
3	256QAM	15	0	17.13	17.14	17.23	19.00
Channel				26047	26340	26683	Tune-up limit
Frequency (MHz)				1850.7	1880	1914.3	(dBm)
1.4	QPSK	1	0	22.69	22.71	22.72	24.00
1.4	QPSK	1	3	22.70	22.74	22.75	24.00
1.4	QPSK	1	5	22.68	22.70	22.74	24.00
1.4	QPSK	3	0	22.71	22.71	22.77	24.00
1.4	QPSK	3	1	22.70	22.74	22.77	24.00
1.4	QPSK	3	3	22.73	22.75	22.79	24.00
1.4	QPSK	6	0	21.71	21.75	21.75	23.00
1.4	16QAM	1	0	21.91	21.96	22.03	23.00
1.4	16QAM	1	3	22.06	21.97	22.07	23.00
1.4	16QAM	1	5	22.01	21.99	22.09	23.00
1.4	16QAM	3	0	21.69	21.66	21.76	23.00
1.4	16QAM	3	1	21.71	21.77	21.80	23.00
1.4	16QAM	3	3	21.70	21.74	21.72	23.00
1.4	16QAM	6	0	20.76	20.80	20.81	22.00
1.4	64QAM	1	0	20.84	20.86	20.92	22.00
1.4	64QAM	1	3	20.90	20.94	20.93	22.00
1.4	64QAM	1	5	20.80	20.83	20.92	22.00
1.4	64QAM	3	0	20.74	20.70	20.81	22.00
1.4	64QAM	3	1	20.73	20.78	20.84	22.00
1.4	64QAM	3	3	20.76	20.77	20.83	22.00
1.4	64QAM	6	0	19.62	19.67	19.71	21.00
1.4	256QAM	1	0	17.55	17.16	17.09	19.00
1.4	256QAM	1	3	17.03	17.07	17.00	19.00
1.4	256QAM	1	5	17.30	17.52	17.90	19.00
1.4	256QAM	3	0	17.09	17.04	17.26	19.00
1.4	256QAM	3	1	17.13	17.21	17.29	19.00
1.4	256QAM	3	3	17.20	17.24	17.10	19.00
1.4	256QAM	6	0	17.22	17.08	17.19	19.00

【LTE Band 25_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	15.64	15.82	15.66	16.00
20	QPSK	1	49	15.44	15.71	15.41	16.00
20	QPSK	1	99	15.55	15.76	15.57	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

20	QPSK	50	0	15.47	15.78	15.54	16.00
20	QPSK	50	24	15.55	15.76	15.56	16.00
20	QPSK	50	50	15.40	15.70	15.43	16.00
20	QPSK	100	0	15.50	15.74	15.45	16.00
20	16QAM	1	0	15.36	15.68	15.38	16.00
20	16QAM	1	49	15.32	15.57	15.32	16.00
20	16QAM	1	99	15.30	15.62	15.41	16.00
20	16QAM	50	0	15.36	15.64	15.44	16.00
20	16QAM	50	24	15.37	15.62	15.37	16.00
20	16QAM	50	50	15.28	15.56	15.39	16.00
20	16QAM	100	0	15.35	15.60	15.41	16.00
20	64QAM	1	0	15.51	15.70	15.49	16.00
20	64QAM	1	49	15.36	15.59	15.36	16.00
20	64QAM	1	99	15.38	15.64	15.46	16.00
20	64QAM	50	0	15.35	15.66	15.44	16.00
20	64QAM	50	24	15.43	15.64	15.46	16.00
20	64QAM	50	50	15.30	15.58	15.29	16.00
20	64QAM	100	0	15.37	15.62	15.33	16.00
20	256QAM	1	0	15.37	15.69	15.39	16.00
20	256QAM	1	49	15.30	15.58	15.39	16.00
20	256QAM	1	99	15.35	15.63	15.40	16.00
20	256QAM	50	0	15.36	15.65	15.41	16.00
20	256QAM	50	24	15.31	15.63	15.44	16.00
20	256QAM	50	50	15.34	15.57	15.34	16.00
20	256QAM	100	0	15.36	15.61	15.43	16.00
Channel				26115	26340	26615	Tune-up limit
Frequency (MHz)				1857.5	1880	1907.5	(dBm)
15	QPSK	1	0	15.61	15.72	15.59	16.00
15	QPSK	1	37	15.33	15.66	15.32	16.00
15	QPSK	1	74	15.43	15.73	15.51	16.00
15	QPSK	36	0	15.33	15.69	15.53	16.00
15	QPSK	36	20	15.48	15.63	15.44	16.00
15	QPSK	36	39	15.25	15.66	15.29	16.00
15	QPSK	75	0	15.43	15.65	15.32	16.00
15	16QAM	1	0	15.28	15.67	15.35	16.00
15	16QAM	1	37	15.21	15.54	15.25	16.00
15	16QAM	1	74	15.16	15.56	15.36	16.00
15	16QAM	36	0	15.33	15.50	15.41	16.00
15	16QAM	36	20	15.26	15.59	15.22	16.00
15	16QAM	36	39	15.18	15.47	15.28	16.00
15	16QAM	75	0	15.34	15.49	15.29	16.00
15	64QAM	1	0	15.47	15.56	15.34	16.00
15	64QAM	1	37	15.28	15.56	15.33	16.00
15	64QAM	1	74	15.27	15.54	15.36	16.00
15	64QAM	36	0	15.23	15.64	15.30	16.00
15	64QAM	36	20	15.31	15.51	15.33	16.00
15	64QAM	36	39	15.17	15.45	15.14	16.00
15	64QAM	75	0	15.33	15.54	15.29	16.00
15	256QAM	1	0	15.23	15.60	15.37	16.00
15	256QAM	1	37	15.28	15.46	15.24	16.00
15	256QAM	1	74	15.26	15.50	15.36	16.00
15	256QAM	36	0	15.26	15.55	15.33	16.00
15	256QAM	36	20	15.26	15.54	15.30	16.00
15	256QAM	36	39	15.23	15.48	15.32	16.00
15	256QAM	75	0	15.33	15.54	15.35	16.00
Channel				26090	26340	26640	Tune-up limit
Frequency (MHz)				1855	1880	1910	(dBm)
10	QPSK	1	0	15.52	15.81	15.59	16.00
10	QPSK	1	25	15.36	15.65	15.39	16.00
10	QPSK	1	49	15.42	15.61	15.45	16.00
10	QPSK	25	0	15.41	15.71	15.51	16.00
10	QPSK	25	12	15.49	15.67	15.41	16.00
10	QPSK	25	25	15.34	15.60	15.36	16.00
10	QPSK	50	0	15.38	15.71	15.35	16.00
10	16QAM	1	0	15.24	15.63	15.31	16.00
10	16QAM	1	25	15.24	15.46	15.24	16.00
10	16QAM	1	49	15.23	15.55	15.37	16.00
10	16QAM	25	0	15.26	15.54	15.31	16.00
10	16QAM	25	12	15.33	15.59	15.29	16.00
10	16QAM	25	25	15.18	15.43	15.38	16.00
10	16QAM	50	0	15.29	15.54	15.35	16.00
10	64QAM	1	0	15.43	15.60	15.42	16.00
10	64QAM	1	25	15.31	15.47	15.34	16.00
10	64QAM	1	49	15.23	15.51	15.40	16.00
10	64QAM	25	0	15.33	15.63	15.34	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	64QAM	25	12	15.29	15.59	15.34	16.00
10	64QAM	25	25	15.17	15.55	15.25	16.00
10	64QAM	50	0	15.29	15.57	15.26	16.00
10	256QAM	1	0	15.29	15.64	15.25	16.00
10	256QAM	1	25	15.16	15.52	15.36	16.00
10	256QAM	1	49	15.22	15.58	15.30	16.00
10	256QAM	25	0	15.23	15.51	15.36	16.00
10	256QAM	25	12	15.22	15.53	15.29	16.00
10	256QAM	25	25	15.32	15.53	15.21	16.00
10	256QAM	50	0	15.27	15.51	15.42	16.00
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	15.60	15.76	15.58	16.00
5	QPSK	1	12	15.38	15.59	15.34	16.00
5	QPSK	1	24	15.44	15.65	15.54	16.00
5	QPSK	12	0	15.33	15.67	15.43	16.00
5	QPSK	12	7	15.47	15.71	15.44	16.00
5	QPSK	12	13	15.34	15.61	15.32	16.00
5	QPSK	25	0	15.49	15.66	15.43	16.00
5	16QAM	1	0	15.22	15.58	15.28	16.00
5	16QAM	1	12	15.31	15.54	15.27	16.00
5	16QAM	1	24	15.18	15.55	15.29	16.00
5	16QAM	12	0	15.34	15.49	15.41	16.00
5	16QAM	12	7	15.31	15.58	15.36	16.00
5	16QAM	12	13	15.20	15.47	15.31	16.00
5	16QAM	25	0	15.23	15.48	15.26	16.00
5	64QAM	1	0	15.38	15.63	15.47	16.00
5	64QAM	1	12	15.33	15.51	15.21	16.00
5	64QAM	1	24	15.30	15.57	15.41	16.00
5	64QAM	12	0	15.26	15.53	15.30	16.00
5	64QAM	12	7	15.31	15.55	15.36	16.00
5	64QAM	12	13	15.27	15.53	15.26	16.00
5	64QAM	25	0	15.33	15.48	15.20	16.00
5	256QAM	1	0	15.34	15.57	15.36	16.00
5	256QAM	1	12	15.22	15.52	15.27	16.00
5	256QAM	1	24	15.29	15.52	15.31	16.00
5	256QAM	12	0	15.34	15.52	15.32	16.00
5	256QAM	12	7	15.23	15.55	15.29	16.00
5	256QAM	12	13	15.22	15.44	15.19	16.00
5	256QAM	25	0	15.32	15.60	15.35	16.00
Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	15.58	15.79	15.53	16.00
3	QPSK	1	8	15.41	15.62	15.34	16.00
3	QPSK	1	14	15.54	15.63	15.50	16.00
3	QPSK	8	0	15.33	15.70	15.41	16.00
3	QPSK	8	4	15.53	15.64	15.43	16.00
3	QPSK	8	7	15.26	15.62	15.31	16.00
3	QPSK	15	0	15.40	15.63	15.31	16.00
3	16QAM	1	0	15.34	15.57	15.32	16.00
3	16QAM	1	8	15.31	15.45	15.27	16.00
3	16QAM	1	14	15.29	15.48	15.37	16.00
3	16QAM	8	0	15.24	15.50	15.31	16.00
3	16QAM	8	4	15.25	15.52	15.25	16.00
3	16QAM	8	7	15.24	15.44	15.28	16.00
3	16QAM	15	0	15.24	15.57	15.36	16.00
3	64QAM	1	0	15.48	15.62	15.47	16.00
3	64QAM	1	8	15.30	15.46	15.22	16.00
3	64QAM	1	14	15.28	15.49	15.34	16.00
3	64QAM	8	0	15.28	15.57	15.41	16.00
3	64QAM	8	4	15.31	15.52	15.44	16.00
3	64QAM	8	7	15.18	15.56	15.18	16.00
3	64QAM	15	0	15.28	15.54	15.26	16.00
3	256QAM	1	0	15.33	15.67	15.36	16.00
3	256QAM	1	8	15.28	15.53	15.26	16.00
3	256QAM	1	14	15.21	15.57	15.26	16.00
3	256QAM	8	0	15.28	15.51	15.39	16.00
3	256QAM	8	4	15.28	15.55	15.41	16.00
3	256QAM	8	7	15.32	15.50	15.22	16.00
3	256QAM	15	0	15.34	15.46	15.31	16.00
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	15.53	15.79	15.52	16.00
1.4	QPSK	1	3	15.34	15.62	15.31	16.00
1.4	QPSK	1	5	15.49	15.62	15.42	16.00

1.4	QPSK	3	0	15.44	15.68	15.39	16.00
1.4	QPSK	3	1	15.41	15.69	15.55	16.00
1.4	QPSK	3	3	15.31	15.66	15.38	16.00
1.4	QPSK	6	0	15.41	15.65	15.36	16.00
1.4	16QAM	1	0	15.35	15.58	15.34	16.00
1.4	16QAM	1	3	15.19	15.47	15.18	16.00
1.4	16QAM	1	5	15.29	15.55	15.36	16.00
1.4	16QAM	3	0	15.33	15.62	15.41	16.00
1.4	16QAM	3	1	15.33	15.47	15.34	16.00
1.4	16QAM	3	3	15.23	15.51	15.36	16.00
1.4	16QAM	6	0	15.28	15.50	15.36	16.00
1.4	64QAM	1	0	15.47	15.59	15.41	16.00
1.4	64QAM	1	3	15.29	15.57	15.31	16.00
1.4	64QAM	1	5	15.31	15.61	15.38	16.00
1.4	64QAM	3	0	15.29	15.59	15.42	16.00
1.4	64QAM	3	1	15.42	15.54	15.44	16.00
1.4	64QAM	3	3	15.15	15.50	15.16	16.00
1.4	64QAM	6	0	15.24	15.56	15.23	16.00
1.4	256QAM	1	0	15.27	15.64	15.25	16.00
1.4	256QAM	1	3	15.19	15.45	15.26	16.00
1.4	256QAM	1	5	15.26	15.55	15.29	16.00
1.4	256QAM	3	0	15.26	15.54	15.35	16.00
1.4	256QAM	3	1	15.17	15.50	15.31	16.00
1.4	256QAM	3	3	15.25	15.52	15.29	16.00
1.4	256QAM	6	0	15.26	15.56	15.38	16.00

【LTE Band 26_FCC (814~849MHz)_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	Tune-up limit (dBm)
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	23.17	23.24	23.28	24.00
15	QPSK	1	37	23.19	23.24	23.17	24.00
15	QPSK	1	74	23.25	23.18	23.36	24.00
15	QPSK	36	0	22.18	22.27	22.26	23.00
15	QPSK	36	20	22.24	22.29	22.26	23.00
15	QPSK	36	39	22.17	22.23	22.27	23.00
15	QPSK	75	0	22.22	22.30	22.24	23.00
15	16QAM	1	0	22.70	22.69	22.75	23.00
15	16QAM	1	37	22.56	22.82	22.87	23.00
15	16QAM	1	74	22.60	22.65	22.81	23.00
15	16QAM	36	0	21.12	21.23	21.22	22.00
15	16QAM	36	20	21.24	21.22	21.25	22.00
15	16QAM	36	39	21.20	21.25	21.26	22.00
15	16QAM	75	0	21.23	21.24	21.23	22.00
15	64QAM	1	0	21.28	21.25	21.53	22.00
15	64QAM	1	37	21.32	21.69	21.57	22.00
15	64QAM	1	74	21.32	21.50	21.50	22.00
15	64QAM	36	0	20.19	20.26	20.23	21.00
15	64QAM	36	20	20.23	20.27	20.27	21.00
15	64QAM	36	39	20.19	20.28	20.23	21.00
15	64QAM	75	0	20.20	20.24	20.25	21.00
15	256QAM	1	0	18.32	18.75	18.83	19.00
15	256QAM	1	37	18.49	18.75	18.78	19.00
15	256QAM	1	74	18.59	18.65	18.70	19.00
15	256QAM	36	0	17.55	17.69	17.61	19.00
15	256QAM	36	20	17.63	17.28	17.41	19.00
15	256QAM	36	39	17.56	17.41	17.28	19.00
15	256QAM	75	0	17.55	17.34	17.36	19.00
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	23.05	23.16	23.22	24.00
10	QPSK	1	25	23.05	23.19	23.16	24.00
10	QPSK	1	49	23.24	23.17	23.34	24.00
10	QPSK	25	0	22.14	22.18	22.21	23.00
10	QPSK	25	12	22.22	22.19	22.23	23.00
10	QPSK	25	25	22.04	22.21	22.13	23.00
10	QPSK	50	0	22.12	22.21	22.11	23.00
10	16QAM	1	0	22.69	22.57	22.73	23.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	16QAM	1	25	22.48	22.75	22.82	23.00
10	16QAM	1	49	22.59	22.53	22.76	23.00
10	16QAM	25	0	21.01	21.19	21.15	22.00
10	16QAM	25	12	21.11	21.10	21.13	22.00
10	16QAM	25	25	21.08	21.19	21.23	22.00
10	16QAM	50	0	21.10	21.13	21.16	22.00
10	64QAM	1	0	21.21	21.12	21.50	22.00
10	64QAM	1	25	21.24	21.55	21.50	22.00
10	64QAM	1	49	21.26	21.37	21.37	22.00
10	64QAM	25	0	20.14	20.22	20.12	21.00
10	64QAM	25	12	20.17	20.12	20.14	21.00
10	64QAM	25	25	20.16	20.16	20.12	21.00
10	64QAM	50	0	20.18	20.16	20.20	21.00
10	256QAM	1	0	18.22	18.70	18.82	19.00
10	256QAM	1	25	18.37	18.67	18.67	19.00
10	256QAM	1	49	18.50	18.56	18.60	19.00
10	256QAM	25	0	17.53	17.63	17.52	19.00
10	256QAM	25	12	17.56	17.26	17.30	19.00
10	256QAM	25	25	17.49	17.34	17.19	19.00
10	256QAM	50	0	17.44	17.27	17.31	19.00
Channel				26715	26865	27015	Tune-up limit
Frequency (MHz)				816.5	831.5	846.5	(dBm)
5	QPSK	1	0	23.07	23.18	23.14	24.00
5	QPSK	1	12	23.13	23.18	23.13	24.00
5	QPSK	1	24	23.21	23.04	23.22	24.00
5	QPSK	12	0	22.14	22.15	22.14	23.00
5	QPSK	12	7	22.20	22.27	22.17	23.00
5	QPSK	12	13	22.13	22.16	22.22	23.00
5	QPSK	25	0	22.16	22.24	22.22	23.00
5	16QAM	1	0	22.57	22.62	22.72	23.00
5	16QAM	1	12	22.46	22.76	22.85	23.00
5	16QAM	1	24	22.52	22.51	22.68	23.00
5	16QAM	12	0	21.06	21.11	21.16	22.00
5	16QAM	12	7	21.13	21.13	21.23	22.00
5	16QAM	12	13	21.08	21.17	21.11	22.00
5	16QAM	25	0	21.16	21.14	21.15	22.00
5	64QAM	1	0	21.25	21.24	21.40	22.00
5	64QAM	1	12	21.28	21.59	21.46	22.00
5	64QAM	1	24	21.23	21.46	21.38	22.00
5	64QAM	12	0	20.16	20.19	20.14	21.00
5	64QAM	12	7	20.14	20.15	20.21	21.00
5	64QAM	12	13	20.17	20.23	20.15	21.00
5	64QAM	25	0	20.17	20.20	20.13	21.00
5	256QAM	1	0	18.19	18.69	18.74	19.00
5	256QAM	1	12	18.45	18.65	18.77	19.00
5	256QAM	1	24	18.58	18.52	18.62	19.00
5	256QAM	12	0	17.50	17.62	17.57	19.00
5	256QAM	12	7	17.49	17.22	17.34	19.00
5	256QAM	12	13	17.54	17.35	17.24	19.00
5	256QAM	25	0	17.41	17.24	17.22	19.00
Channel				26705	26865	27025	Tune-up limit
Frequency (MHz)				815.5	831.5	847.5	(dBm)
3	QPSK	1	0	23.08	23.10	23.23	24.00
3	QPSK	1	8	23.16	23.16	23.10	24.00
3	QPSK	1	14	23.20	23.16	23.25	24.00
3	QPSK	8	0	22.06	22.14	22.18	23.00
3	QPSK	8	4	22.22	22.26	22.19	23.00
3	QPSK	8	7	22.05	22.17	22.16	23.00
3	QPSK	15	0	22.10	22.27	22.11	23.00
3	16QAM	1	0	22.66	22.61	22.72	23.00
3	16QAM	1	8	22.52	22.69	22.85	23.00
3	16QAM	1	14	22.49	22.53	22.68	23.00
3	16QAM	8	0	20.97	21.21	21.17	22.00
3	16QAM	8	4	21.16	21.16	21.20	22.00
3	16QAM	8	7	21.05	21.19	21.21	22.00
3	16QAM	15	0	21.12	21.14	21.22	22.00
3	64QAM	1	0	21.21	21.15	21.48	22.00
3	64QAM	1	8	21.21	21.64	21.53	22.00
3	64QAM	1	14	21.23	21.37	21.48	22.00
3	64QAM	8	0	20.13	20.24	20.09	21.00
3	64QAM	8	4	20.21	20.12	20.25	21.00
3	64QAM	8	7	20.10	20.14	20.10	21.00
3	64QAM	15	0	20.13	20.12	20.17	21.00
3	256QAM	1	0	18.24	18.67	18.68	19.00
3	256QAM	1	8	18.38	18.70	18.71	19.00

3	256QAM	1	14	18.53	18.51	18.62	19.00
3	256QAM	8	0	17.41	17.64	17.52	19.00
3	256QAM	8	4	17.48	17.14	17.34	19.00
3	256QAM	8	7	17.50	17.33	17.21	19.00
3	256QAM	15	0	17.43	17.21	17.22	19.00
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	23.12	23.15	23.22	24.00
1.4	QPSK	1	3	23.17	23.14	23.15	24.00
1.4	QPSK	1	5	23.12	23.10	23.22	24.00
1.4	QPSK	3	0	23.04	23.21	23.20	24.00
1.4	QPSK	3	1	23.11	23.16	23.19	24.00
1.4	QPSK	3	3	23.04	23.17	23.21	24.00
1.4	QPSK	6	0	22.15	22.20	22.16	23.00
1.4	16QAM	1	0	22.64	22.63	22.66	23.00
1.4	16QAM	1	3	22.46	22.71	22.72	23.00
1.4	16QAM	1	5	22.55	22.55	22.69	23.00
1.4	16QAM	3	0	22.11	22.13	22.15	23.00
1.4	16QAM	3	1	22.13	22.19	22.20	23.00
1.4	16QAM	3	3	22.10	22.16	22.23	23.00
1.4	16QAM	6	0	21.12	21.22	21.19	22.00
1.4	64QAM	1	0	21.16	21.20	21.41	22.00
1.4	64QAM	1	3	21.29	21.64	21.51	22.00
1.4	64QAM	1	5	21.29	21.48	21.48	22.00
1.4	64QAM	3	0	21.13	21.25	21.11	22.00
1.4	64QAM	3	1	21.15	21.20	21.15	22.00
1.4	64QAM	3	3	21.06	21.21	21.18	22.00
1.4	64QAM	6	0	20.13	20.18	20.11	21.00
1.4	256QAM	1	0	18.22	18.67	18.79	19.00
1.4	256QAM	1	3	18.34	18.67	18.74	19.00
1.4	256QAM	1	5	18.46	18.63	18.68	19.00
1.4	256QAM	3	0	17.49	17.58	17.55	19.00
1.4	256QAM	3	1	17.50	17.26	17.38	19.00
1.4	256QAM	3	3	17.42	17.39	17.15	19.00
1.4	256QAM	6	0	17.44	17.24	17.29	19.00

【LTE Band 26_FCC (814~849MHz)_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	17.90	17.96	17.92	18.50
15	QPSK	1	37	17.77	17.90	17.81	18.50
15	QPSK	1	74	17.74	17.85	17.75	18.50
15	QPSK	36	0	17.75	17.84	17.76	18.50
15	QPSK	36	20	17.67	17.85	17.74	18.50
15	QPSK	36	39	17.66	17.80	17.70	18.50
15	QPSK	75	0	17.64	17.81	17.63	18.50
15	16QAM	1	0	17.77	17.88	17.74	18.50
15	16QAM	1	37	17.72	17.82	17.76	18.50
15	16QAM	1	74	17.62	17.77	17.71	18.50
15	16QAM	36	0	17.61	17.76	17.59	18.50
15	16QAM	36	20	17.63	17.75	17.65	18.50
15	16QAM	36	39	17.59	17.72	17.53	18.50
15	16QAM	75	0	17.57	17.73	17.54	18.50
15	64QAM	1	0	17.66	17.80	17.61	18.50
15	64QAM	1	37	17.55	17.74	17.57	18.50
15	64QAM	1	74	17.58	17.69	17.52	18.50
15	64QAM	36	0	17.60	17.68	17.59	18.50
15	64QAM	36	20	17.47	17.67	17.59	18.50
15	64QAM	36	39	17.48	17.64	17.50	18.50
15	64QAM	75	0	17.47	17.65	17.57	18.50
15	256QAM	1	0	17.72	17.85	17.70	18.50
15	256QAM	1	37	17.58	17.79	17.61	18.50
15	256QAM	1	74	17.64	17.74	17.58	18.50
15	256QAM	36	0	17.55	17.73	17.57	18.50
15	256QAM	36	20	17.64	17.72	17.59	18.50
15	256QAM	36	39	17.61	17.69	17.60	18.50
15	256QAM	75	0	17.53	17.70	17.55	18.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

Channel				26740	26865	26990	Tune-up limit
Frequency (MHz)				819	831.5	844	(dBm)
10	QPSK	1	0	17.86	17.87	17.85	18.50
10	QPSK	1	25	17.74	17.82	17.78	18.50
10	QPSK	1	49	17.69	17.77	17.65	18.50
10	QPSK	25	0	17.66	17.74	17.70	18.50
10	QPSK	25	12	17.58	17.68	17.69	18.50
10	QPSK	25	25	17.58	17.69	17.67	18.50
10	QPSK	50	0	17.50	17.73	17.60	18.50
10	16QAM	1	0	17.64	17.86	17.70	18.50
10	16QAM	1	25	17.65	17.68	17.73	18.50
10	16QAM	1	49	17.54	17.65	17.62	18.50
10	16QAM	25	0	17.60	17.65	17.57	18.50
10	16QAM	25	12	17.53	17.64	17.57	18.50
10	16QAM	25	25	17.47	17.66	17.42	18.50
10	16QAM	50	0	17.51	17.59	17.49	18.50
10	64QAM	1	0	17.56	17.76	17.50	18.50
10	64QAM	1	25	17.49	17.62	17.56	18.50
10	64QAM	1	49	17.49	17.58	17.46	18.50
10	64QAM	25	0	17.49	17.54	17.56	18.50
10	64QAM	25	12	17.39	17.62	17.57	18.50
10	64QAM	25	25	17.35	17.62	17.45	18.50
10	64QAM	50	0	17.35	17.51	17.46	18.50
10	256QAM	1	0	17.71	17.73	17.60	18.50
10	256QAM	1	25	17.47	17.66	17.49	18.50
10	256QAM	1	49	17.59	17.66	17.51	18.50
10	256QAM	25	0	17.48	17.61	17.53	18.50
10	256QAM	25	12	17.50	17.67	17.46	18.50
10	256QAM	25	25	17.55	17.61	17.58	18.50
10	256QAM	50	0	17.42	17.66	17.44	18.50
Channel				26715	26865	27015	Tune-up limit
Frequency (MHz)				816.5	831.5	846.5	(dBm)
5	QPSK	1	0	17.80	17.87	17.85	18.50
5	QPSK	1	12	17.73	17.75	17.69	18.50
5	QPSK	1	24	17.71	17.82	17.72	18.50
5	QPSK	12	0	17.66	17.72	17.74	18.50
5	QPSK	12	7	17.58	17.80	17.67	18.50
5	QPSK	12	13	17.54	17.76	17.55	18.50
5	QPSK	25	0	17.50	17.73	17.51	18.50
5	16QAM	1	0	17.62	17.79	17.73	18.50
5	16QAM	1	12	17.62	17.71	17.64	18.50
5	16QAM	1	24	17.52	17.67	17.67	18.50
5	16QAM	12	0	17.49	17.75	17.44	18.50
5	16QAM	12	7	17.54	17.61	17.53	18.50
5	16QAM	12	13	17.45	17.68	17.39	18.50
5	16QAM	25	0	17.48	17.70	17.50	18.50
5	64QAM	1	0	17.55	17.72	17.57	18.50
5	64QAM	1	12	17.43	17.65	17.53	18.50
5	64QAM	1	24	17.48	17.63	17.45	18.50
5	64QAM	12	0	17.55	17.65	17.56	18.50
5	64QAM	12	7	17.38	17.65	17.50	18.50
5	64QAM	12	13	17.34	17.63	17.42	18.50
5	64QAM	25	0	17.39	17.51	17.48	18.50
5	256QAM	1	0	17.69	17.81	17.57	18.50
5	256QAM	1	12	17.52	17.66	17.58	18.50
5	256QAM	1	24	17.60	17.72	17.50	18.50
5	256QAM	12	0	17.44	17.59	17.44	18.50
5	256QAM	12	7	17.53	17.65	17.56	18.50
5	256QAM	12	13	17.58	17.68	17.45	18.50
5	256QAM	25	0	17.48	17.60	17.54	18.50
Channel				26705	26865	27025	Tune-up limit
Frequency (MHz)				815.5	831.5	847.5	(dBm)
3	QPSK	1	0	17.89	17.84	17.86	18.50
3	QPSK	1	8	17.63	17.76	17.68	18.50
3	QPSK	1	14	17.60	17.84	17.67	18.50
3	QPSK	8	0	17.71	17.81	17.64	18.50
3	QPSK	8	4	17.65	17.69	17.61	18.50
3	QPSK	8	7	17.57	17.75	17.63	18.50
3	QPSK	15	0	17.56	17.75	17.60	18.50
3	16QAM	1	0	17.70	17.80	17.62	18.50
3	16QAM	1	8	17.62	17.77	17.62	18.50
3	16QAM	1	14	17.56	17.75	17.68	18.50
3	16QAM	8	0	17.56	17.67	17.45	18.50
3	16QAM	8	4	17.51	17.74	17.55	18.50
3	16QAM	8	7	17.55	17.65	17.39	18.50

3	16QAM	15	0	17.52	17.59	17.45	18.50
3	64QAM	1	0	17.64	17.78	17.59	18.50
3	64QAM	1	8	17.53	17.67	17.47	18.50
3	64QAM	1	14	17.47	17.59	17.41	18.50
3	64QAM	8	0	17.56	17.55	17.44	18.50
3	64QAM	8	4	17.46	17.61	17.57	18.50
3	64QAM	8	7	17.35	17.55	17.38	18.50
3	64QAM	15	0	17.46	17.53	17.46	18.50
3	256QAM	1	0	17.60	17.74	17.62	18.50
3	256QAM	1	8	17.47	17.75	17.49	18.50
3	256QAM	1	14	17.60	17.71	17.53	18.50
3	256QAM	8	0	17.45	17.60	17.50	18.50
3	256QAM	8	4	17.62	17.58	17.48	18.50
3	256QAM	8	7	17.60	17.54	17.52	18.50
3	256QAM	15	0	17.47	17.58	17.50	18.50
Channel				26697	26865	27033	Tune-up limit (dBm)
Frequency (MHz)				814.7	831.5	848.3	
1.4	QPSK	1	0	17.77	17.89	17.83	18.50
1.4	QPSK	1	3	17.65	17.88	17.73	18.50
1.4	QPSK	1	5	17.72	17.74	17.67	18.50
1.4	QPSK	3	0	17.70	17.71	17.74	18.50
1.4	QPSK	3	1	17.64	17.81	17.72	18.50
1.4	QPSK	3	3	17.58	17.75	17.60	18.50
1.4	QPSK	6	0	17.51	17.69	17.60	18.50
1.4	16QAM	1	0	17.68	17.84	17.64	18.50
1.4	16QAM	1	3	17.66	17.71	17.69	18.50
1.4	16QAM	1	5	17.55	17.63	17.68	18.50
1.4	16QAM	3	0	17.56	17.69	17.46	18.50
1.4	16QAM	3	1	17.54	17.68	17.55	18.50
1.4	16QAM	3	3	17.50	17.66	17.47	18.50
1.4	16QAM	6	0	17.52	17.72	17.45	18.50
1.4	64QAM	1	0	17.53	17.71	17.49	18.50
1.4	64QAM	1	3	17.40	17.61	17.44	18.50
1.4	64QAM	1	5	17.54	17.66	17.45	18.50
1.4	64QAM	3	0	17.46	17.61	17.54	18.50
1.4	64QAM	3	1	17.38	17.57	17.49	18.50
1.4	64QAM	3	3	17.34	17.52	17.44	18.50
1.4	64QAM	6	0	17.34	17.58	17.42	18.50
1.4	256QAM	1	0	17.60	17.76	17.65	18.50
1.4	256QAM	1	3	17.56	17.67	17.57	18.50
1.4	256QAM	1	5	17.49	17.65	17.56	18.50
1.4	256QAM	3	0	17.49	17.71	17.44	18.50
1.4	256QAM	3	1	17.54	17.59	17.44	18.50
1.4	256QAM	3	3	17.56	17.60	17.47	18.50
1.4	256QAM	6	0	17.48	17.60	17.49	18.50

【LTE Band 30_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					27710		
Frequency (MHz)					2310		
10	QPSK	1	0		22.22		24.00
10	QPSK	1	25		22.16		24.00
10	QPSK	1	49		22.09		24.00
10	QPSK	25	0		21.05		23.00
10	QPSK	25	12		21.01		23.00
10	QPSK	25	25		21.04		23.00
10	QPSK	50	0		21.07		23.00
10	16QAM	1	0		21.47		23.00
10	16QAM	1	25		21.52		23.00
10	16QAM	1	49		21.32		23.00
10	16QAM	25	0		20.00		22.00
10	16QAM	25	12		20.10		22.00
10	16QAM	25	25		20.09		22.00
10	16QAM	50	0		20.03		22.00
10	64QAM	1	0		20.29		22.00
10	64QAM	1	25		20.30		22.00
10	64QAM	1	49		20.17		22.00
10	64QAM	25	0		19.00		21.00
10	64QAM	25	12		19.23		21.00

10	64QAM	25	25		19.22		21.00
10	64QAM	50	0		19.18		21.00
10	256QAM	1	0		17.79		19.00
10	256QAM	1	25		17.35		19.00
10	256QAM	1	49		17.16		19.00
10	256QAM	25	0		17.29		19.00
10	256QAM	25	12		17.27		19.00
10	256QAM	25	25		17.30		19.00
10	256QAM	50	0		17.27		19.00
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	22.19	22.15	22.13	24.00
5	QPSK	1	12	22.18	22.14	22.16	24.00
5	QPSK	1	24	22.10	22.11	22.11	24.00
5	QPSK	12	0	21.05	21.09	21.10	23.00
5	QPSK	12	7	21.15	21.11	21.09	23.00
5	QPSK	12	13	21.16	21.09	21.03	23.00
5	QPSK	25	0	21.15	21.08	21.08	23.00
5	16QAM	1	0	21.49	21.46	21.48	23.00
5	16QAM	1	12	21.48	21.49	21.39	23.00
5	16QAM	1	24	21.39	21.38	21.36	23.00
5	16QAM	12	0	20.07	20.06	20.05	22.00
5	16QAM	12	7	20.13	20.07	20.07	22.00
5	16QAM	12	13	20.17	20.07	20.01	22.00
5	16QAM	25	0	20.15	20.09	20.08	22.00
5	64QAM	1	0	20.25	20.33	20.32	22.00
5	64QAM	1	12	20.33	20.33	20.30	22.00
5	64QAM	1	24	20.23	20.25	20.21	22.00
5	64QAM	12	0	19.05	19.02	19.21	21.00
5	64QAM	12	7	19.07	19.25	19.24	21.00
5	64QAM	12	13	19.14	19.25	19.20	21.00
5	64QAM	25	0	19.12	19.25	19.21	21.00
5	256QAM	1	0	17.68	17.77	17.73	19.00
5	256QAM	1	12	17.29	17.33	17.27	19.00
5	256QAM	1	24	17.16	17.14	17.00	19.00
5	256QAM	12	0	17.18	17.27	17.24	19.00
5	256QAM	12	7	17.19	17.25	17.12	19.00
5	256QAM	12	13	17.18	17.28	17.25	19.00
5	256QAM	25	0	17.19	17.25	17.19	19.00

【LTE Band 30_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					27710		
Frequency (MHz)					2310		
10	QPSK	1	0		16.85		18.00
10	QPSK	1	25		16.80		18.00
10	QPSK	1	49		16.74		18.00
10	QPSK	25	0		16.77		18.00
10	QPSK	25	12		16.68		18.00
10	QPSK	25	25		16.74		18.00
10	QPSK	50	0		16.80		18.00
10	16QAM	1	0		16.75		18.00
10	16QAM	1	25		16.70		18.00
10	16QAM	1	49		16.64		18.00
10	16QAM	25	0		16.67		18.00
10	16QAM	25	12		16.58		18.00
10	16QAM	25	25		16.64		18.00
10	16QAM	50	0		16.70		18.00
10	64QAM	1	0		16.74		18.00
10	64QAM	1	25		16.69		18.00
10	64QAM	1	49		16.63		18.00
10	64QAM	25	0		16.66		18.00
10	64QAM	25	12		16.57		18.00
10	64QAM	25	25		16.63		18.00
10	64QAM	50	0		16.69		18.00
10	256QAM	1	0		16.80		18.00
10	256QAM	1	25		16.75		18.00
10	256QAM	1	49		16.69		18.00
10	256QAM	25	0		16.72		18.00
10	256QAM	25	12		16.63		18.00
10	256QAM	25	25		16.69		18.00

10	256QAM	50	0	27685	16.75	27735	18.00
Channel				27685	27710	27735	Tune-up limit
Frequency (MHz)				2307.5	2310	2312.5	(dBm)
5	QPSK	1	0	16.82	16.84	16.83	18.00
5	QPSK	1	12	16.73	16.79	16.75	18.00
5	QPSK	1	24	16.63	16.73	16.57	18.00
5	QPSK	12	0	16.67	16.76	16.63	18.00
5	QPSK	12	7	16.57	16.67	16.53	18.00
5	QPSK	12	13	16.57	16.73	16.61	18.00
5	QPSK	25	0	16.73	16.79	16.66	18.00
5	16QAM	1	0	16.62	16.74	16.71	18.00
5	16QAM	1	12	16.52	16.69	16.61	18.00
5	16QAM	1	24	16.46	16.63	16.59	18.00
5	16QAM	12	0	16.60	16.66	16.54	18.00
5	16QAM	12	7	16.53	16.57	16.48	18.00
5	16QAM	12	13	16.46	16.63	16.59	18.00
5	16QAM	25	0	16.64	16.69	16.57	18.00
5	64QAM	1	0	16.65	16.73	16.64	18.00
5	64QAM	1	12	16.62	16.68	16.53	18.00
5	64QAM	1	24	16.58	16.62	16.52	18.00
5	64QAM	12	0	16.58	16.65	16.53	18.00
5	64QAM	12	7	16.46	16.56	16.42	18.00
5	64QAM	12	13	16.58	16.62	16.52	18.00
5	64QAM	25	0	16.58	16.68	16.55	18.00
5	256QAM	1	0	16.65	16.79	16.72	18.00
5	256QAM	1	12	16.66	16.74	16.67	18.00
5	256QAM	1	24	16.57	16.68	16.63	18.00
5	256QAM	12	0	16.59	16.71	16.59	18.00
5	256QAM	12	7	16.45	16.62	16.57	18.00
5	256QAM	12	13	16.62	16.68	16.65	18.00
5	256QAM	25	0	16.68	16.74	16.63	18.00

【LTE Band 38_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	22.96	22.99	22.88	24.00
20	QPSK	1	49	23.12	23.04	22.95	24.00
20	QPSK	1	99	22.90	22.89	22.83	24.00
20	QPSK	50	0	22.09	22.05	21.97	23.00
20	QPSK	50	24	22.12	22.03	21.96	23.00
20	QPSK	50	50	22.04	21.94	21.92	23.00
20	QPSK	100	0	22.04	21.99	21.93	23.00
20	16QAM	1	0	22.06	22.07	21.98	23.00
20	16QAM	1	49	22.20	22.13	22.04	23.00
20	16QAM	1	99	21.97	21.97	21.91	23.00
20	16QAM	50	0	21.09	21.07	20.98	22.00
20	16QAM	50	24	21.11	21.04	20.96	22.00
20	16QAM	50	50	21.03	20.96	20.95	22.00
20	16QAM	100	0	21.06	21.01	20.94	22.00
20	64QAM	1	0	20.60	20.64	20.52	22.00
20	64QAM	1	49	20.77	20.70	20.57	22.00
20	64QAM	1	99	20.53	20.51	20.44	22.00
20	64QAM	50	0	20.03	20.02	19.92	21.00
20	64QAM	50	24	20.06	19.96	19.93	21.00
20	64QAM	50	50	20.02	19.91	19.90	21.00
20	64QAM	100	0	20.04	19.97	19.91	21.00
20	256QAM	1	0	17.36	17.31	17.20	19.00
20	256QAM	1	49	17.42	17.33	17.22	19.00
20	256QAM	1	99	17.18	17.18	17.11	19.00
20	256QAM	50	0	17.57	17.53	17.51	19.00
20	256QAM	50	24	17.63	17.53	17.47	19.00
20	256QAM	50	50	17.52	17.43	17.44	19.00
20	256QAM	100	0	17.51	17.44	17.42	19.00
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	22.83	22.85	22.80	24.00
15	QPSK	1	37	22.99	23.01	22.82	24.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

15	QPSK	1	74	22.76	22.78	22.72	24.00
15	QPSK	36	0	21.95	21.98	21.91	23.00
15	QPSK	36	20	22.10	21.99	21.85	23.00
15	QPSK	36	39	21.90	21.79	21.81	23.00
15	QPSK	75	0	21.97	21.90	21.79	23.00
15	16QAM	1	0	21.94	22.01	21.88	23.00
15	16QAM	1	37	22.09	22.06	22.01	23.00
15	16QAM	1	74	21.85	21.83	21.77	23.00
15	16QAM	36	0	20.95	20.94	20.83	22.00
15	16QAM	36	20	21.01	20.97	20.82	22.00
15	16QAM	36	39	20.92	20.87	20.88	22.00
15	16QAM	75	0	20.93	20.91	20.79	22.00
15	64QAM	1	0	20.49	20.61	20.46	22.00
15	64QAM	1	37	20.71	20.64	20.52	22.00
15	64QAM	1	74	20.40	20.47	20.39	22.00
15	64QAM	36	0	19.93	19.88	19.78	21.00
15	64QAM	36	20	19.91	19.87	19.79	21.00
15	64QAM	36	39	20.00	19.84	19.82	21.00
15	64QAM	75	0	20.01	19.95	19.80	21.00
15	256QAM	1	0	17.29	17.20	17.15	19.00
15	256QAM	1	37	17.31	17.20	17.16	19.00
15	256QAM	1	74	17.11	17.09	17.08	19.00
15	256QAM	36	0	17.45	17.45	17.44	19.00
15	256QAM	36	20	17.51	17.39	17.37	19.00
15	256QAM	36	39	17.40	17.42	17.31	19.00
15	256QAM	75	0	17.48	17.35	17.30	19.00
Channel				37800	38000	38200	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	22.86	22.89	22.78	24.00
10	QPSK	1	25	22.99	22.98	22.92	24.00
10	QPSK	1	49	22.80	22.79	22.73	24.00
10	QPSK	25	0	22.06	21.91	21.92	23.00
10	QPSK	25	12	22.09	21.96	21.85	23.00
10	QPSK	25	25	21.95	21.85	21.82	23.00
10	QPSK	50	0	21.91	21.84	21.90	23.00
10	16QAM	1	0	21.99	21.94	21.91	23.00
10	16QAM	1	25	22.13	22.07	21.92	23.00
10	16QAM	1	49	21.90	21.91	21.83	23.00
10	16QAM	25	0	21.05	21.01	20.85	22.00
10	16QAM	25	12	20.98	21.01	20.86	22.00
10	16QAM	25	25	20.98	20.91	20.87	22.00
10	16QAM	50	0	20.92	20.99	20.80	22.00
10	64QAM	1	0	20.51	20.59	20.38	22.00
10	64QAM	1	25	20.72	20.68	20.48	22.00
10	64QAM	1	49	20.51	20.43	20.38	22.00
10	64QAM	25	0	19.91	19.96	19.86	21.00
10	64QAM	25	12	19.92	19.85	19.85	21.00
10	64QAM	25	25	19.88	19.81	19.79	21.00
10	64QAM	50	0	20.00	19.84	19.80	21.00
10	256QAM	1	0	17.28	17.22	17.11	19.00
10	256QAM	1	25	17.28	17.27	17.11	19.00
10	256QAM	1	49	17.10	17.08	17.01	19.00
10	256QAM	25	0	17.54	17.39	17.39	19.00
10	256QAM	25	12	17.62	17.45	17.44	19.00
10	256QAM	25	25	17.48	17.35	17.36	19.00
10	256QAM	50	0	17.41	17.36	17.39	19.00
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	22.86	22.93	22.87	24.00
5	QPSK	1	12	23.05	22.96	22.85	24.00
5	QPSK	1	24	22.77	22.81	22.75	24.00
5	QPSK	12	0	21.96	22.01	21.89	23.00
5	QPSK	12	7	22.09	21.98	21.84	23.00
5	QPSK	12	13	21.92	21.90	21.85	23.00
5	QPSK	25	0	21.99	21.94	21.81	23.00
5	16QAM	1	0	21.99	22.04	21.84	23.00
5	16QAM	1	12	22.17	22.10	22.02	23.00
5	16QAM	1	24	21.89	21.92	21.78	23.00
5	16QAM	12	0	20.95	21.00	20.96	22.00
5	16QAM	12	7	21.02	20.99	20.86	22.00
5	16QAM	12	13	21.01	20.88	20.90	22.00
5	16QAM	25	0	20.92	20.88	20.85	22.00
5	64QAM	1	0	20.49	20.60	20.38	22.00
5	64QAM	1	12	20.67	20.58	20.48	22.00
5	64QAM	1	24	20.51	20.42	20.37	22.00

5	64QAM	12	0	19.99	20.00	19.80	21.00
5	64QAM	12	7	20.02	19.86	19.80	21.00
5	64QAM	12	13	19.93	19.89	19.87	21.00
5	64QAM	25	0	19.92	19.92	19.82	21.00
5	256QAM	1	0	17.30	17.20	17.11	19.00
5	256QAM	1	12	17.35	17.27	17.21	19.00
5	256QAM	1	24	17.07	17.11	17.08	19.00
5	256QAM	12	0	17.45	17.48	17.44	19.00
5	256QAM	12	7	17.50	17.42	17.41	19.00
5	256QAM	12	13	17.43	17.37	17.39	19.00
5	256QAM	25	0	17.47	17.42	17.41	19.00

【LTE Band 38_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	Tune-up limit (dBm)
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	14.70	14.72	14.69	15.00
20	QPSK	1	49	14.79	14.87	14.72	15.00
20	QPSK	1	99	14.49	14.61	14.43	15.00
20	QPSK	50	0	14.64	14.80	14.74	15.00
20	QPSK	50	24	14.70	14.77	14.63	15.00
20	QPSK	50	50	14.61	14.73	14.59	15.00
20	QPSK	100	0	14.73	14.77	14.64	15.00
20	16QAM	1	0	14.75	14.82	14.76	15.00
20	16QAM	1	49	14.85	14.97	14.85	15.00
20	16QAM	1	99	14.67	14.71	14.64	15.00
20	16QAM	50	0	14.80	14.90	14.80	15.00
20	16QAM	50	24	14.81	14.87	14.78	15.00
20	16QAM	50	50	14.77	14.83	14.73	15.00
20	16QAM	100	0	14.75	14.87	14.75	15.00
20	64QAM	1	0	14.67	14.83	14.71	15.00
20	64QAM	1	49	14.89	14.98	14.89	15.00
20	64QAM	1	99	14.56	14.72	14.64	15.00
20	64QAM	50	0	14.76	14.91	14.77	15.00
20	64QAM	50	24	14.76	14.88	14.83	15.00
20	64QAM	50	50	14.80	14.84	14.72	15.00
20	64QAM	100	0	14.84	14.88	14.81	15.00
20	256QAM	1	0	14.76	14.85	14.67	15.00
20	256QAM	1	49	14.84	15.00	14.89	15.00
20	256QAM	1	99	14.60	14.74	14.57	15.00
20	256QAM	50	0	14.82	14.93	14.81	15.00
20	256QAM	50	24	14.76	14.90	14.76	15.00
20	256QAM	50	50	14.76	14.86	14.77	15.00
20	256QAM	100	0	14.84	14.90	14.77	15.00
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	14.67	14.71	14.59	15.00
15	QPSK	1	37	14.72	14.81	14.65	15.00
15	QPSK	1	74	14.39	14.47	14.37	15.00
15	QPSK	36	0	14.61	14.75	14.63	15.00
15	QPSK	36	20	14.56	14.72	14.60	15.00
15	QPSK	36	39	14.54	14.62	14.48	15.00
15	QPSK	75	0	14.63	14.70	14.50	15.00
15	16QAM	1	0	14.62	14.78	14.64	15.00
15	16QAM	1	37	14.77	14.85	14.70	15.00
15	16QAM	1	74	14.60	14.60	14.49	15.00
15	16QAM	36	0	14.75	14.78	14.69	15.00
15	16QAM	36	20	14.69	14.84	14.73	15.00
15	16QAM	36	39	14.66	14.82	14.65	15.00
15	16QAM	75	0	14.64	14.79	14.67	15.00
15	64QAM	1	0	14.62	14.75	14.65	15.00
15	64QAM	1	37	14.77	14.86	14.81	15.00
15	64QAM	1	74	14.53	14.70	14.51	15.00
15	64QAM	36	0	14.65	14.81	14.63	15.00
15	64QAM	36	20	14.71	14.79	14.72	15.00
15	64QAM	36	39	14.69	14.82	14.63	15.00
15	64QAM	75	0	14.82	14.74	14.79	15.00
15	256QAM	1	0	14.66	14.71	14.64	15.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

15	256QAM	1	37	14.76	14.92	14.79	15.00
15	256QAM	1	74	14.49	14.70	14.45	15.00
15	256QAM	36	0	14.69	14.80	14.75	15.00
15	256QAM	36	20	14.66	14.85	14.75	15.00
15	256QAM	36	39	14.73	14.84	14.65	15.00
15	256QAM	75	0	14.81	14.80	14.74	15.00
Channel				37800	38000	38200	Tune-up limit
Frequency (MHz)				2575	2595	2615	(dBm)
10	QPSK	1	0	14.68	14.70	14.55	15.00
10	QPSK	1	25	14.77	14.85	14.69	15.00
10	QPSK	1	49	14.45	14.59	14.37	15.00
10	QPSK	25	0	14.51	14.70	14.64	15.00
10	QPSK	25	12	14.59	14.70	14.55	15.00
10	QPSK	25	25	14.58	14.69	14.47	15.00
10	QPSK	50	0	14.60	14.71	14.54	15.00
10	16QAM	1	0	14.71	14.76	14.68	15.00
10	16QAM	1	25	14.74	14.84	14.80	15.00
10	16QAM	1	49	14.56	14.66	14.51	15.00
10	16QAM	25	0	14.72	14.76	14.79	15.00
10	16QAM	25	12	14.78	14.74	14.70	15.00
10	16QAM	25	25	14.70	14.81	14.62	15.00
10	16QAM	50	0	14.66	14.80	14.72	15.00
10	64QAM	1	0	14.57	14.69	14.65	15.00
10	64QAM	1	25	14.77	14.86	14.80	15.00
10	64QAM	1	49	14.43	14.62	14.54	15.00
10	64QAM	25	0	14.62	14.90	14.75	15.00
10	64QAM	25	12	14.72	14.74	14.75	15.00
10	64QAM	25	25	14.76	14.76	14.65	15.00
10	64QAM	50	0	14.75	14.87	14.74	15.00
10	256QAM	1	0	14.64	14.82	14.57	15.00
10	256QAM	1	25	14.76	14.91	14.81	15.00
10	256QAM	1	49	14.47	14.62	14.48	15.00
10	256QAM	25	0	14.76	14.91	14.78	15.00
10	256QAM	25	12	14.74	14.83	14.65	15.00
10	256QAM	25	25	14.69	14.72	14.64	15.00
10	256QAM	50	0	14.80	14.85	14.71	15.00
Channel				37775	38000	38225	Tune-up limit
Frequency (MHz)				2572.5	2595	2617.5	(dBm)
5	QPSK	1	0	14.68	14.64	14.66	15.00
5	QPSK	1	12	14.66	14.85	14.59	15.00
5	QPSK	1	24	14.42	14.52	14.32	15.00
5	QPSK	12	0	14.63	14.78	14.71	15.00
5	QPSK	12	7	14.58	14.72	14.58	15.00
5	QPSK	12	13	14.58	14.68	14.49	15.00
5	QPSK	25	0	14.70	14.64	14.55	15.00
5	16QAM	1	0	14.60	14.67	14.74	15.00
5	16QAM	1	12	14.79	14.85	14.73	15.00
5	16QAM	1	24	14.55	14.62	14.58	15.00
5	16QAM	12	0	14.68	14.79	14.78	15.00
5	16QAM	12	7	14.75	14.76	14.68	15.00
5	16QAM	12	13	14.72	14.71	14.64	15.00
5	16QAM	25	0	14.62	14.78	14.60	15.00
5	64QAM	1	0	14.65	14.72	14.62	15.00
5	64QAM	1	12	14.86	14.93	14.80	15.00
5	64QAM	1	24	14.52	14.65	14.61	15.00
5	64QAM	12	0	14.69	14.79	14.63	15.00
5	64QAM	12	7	14.70	14.85	14.77	15.00
5	64QAM	12	13	14.77	14.76	14.70	15.00
5	64QAM	25	0	14.83	14.85	14.67	15.00
5	256QAM	1	0	14.68	14.76	14.57	15.00
5	256QAM	1	12	14.83	14.91	14.78	15.00
5	256QAM	1	24	14.53	14.69	14.45	15.00
5	256QAM	12	0	14.76	14.87	14.67	15.00
5	256QAM	12	7	14.61	14.75	14.61	15.00
5	256QAM	12	13	14.73	14.76	14.71	15.00
5	256QAM	25	0	14.74	14.87	14.70	15.00

【LTE Band 41 _ FCC (2496~2690MHz) Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	Tune-up limit (dBm)
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	22.62	23.16	23.17	22.84	22.76	24.00
20	QPSK	1	49	22.76	23.15	23.16	22.84	22.84	24.00
20	QPSK	1	99	22.65	23.01	22.98	22.71	22.75	24.00
20	QPSK	50	0	21.26	21.69	21.69	21.35	21.35	23.00
20	QPSK	50	24	21.60	21.67	21.68	21.34	21.34	23.00
20	QPSK	50	50	21.12	21.66	21.57	21.32	21.31	23.00
20	QPSK	100	0	21.17	21.66	21.60	21.34	21.30	23.00
20	16QAM	1	0	21.24	22.22	22.21	21.96	21.84	23.00
20	16QAM	1	49	21.64	22.25	22.26	21.96	21.96	23.00
20	16QAM	1	99	21.74	22.11	22.07	21.79	21.85	23.00
20	16QAM	50	0	20.29	21.16	21.18	20.87	20.87	22.00
20	16QAM	50	24	20.72	21.21	21.22	20.83	20.87	22.00
20	16QAM	50	50	20.42	21.19	21.06	20.86	20.85	22.00
20	16QAM	100	0	20.29	21.16	21.13	20.84	20.85	22.00
20	64QAM	1	0	20.18	20.83	20.77	20.46	20.38	22.00
20	64QAM	1	49	20.15	20.82	20.82	20.44	20.50	22.00
20	64QAM	1	99	20.47	20.63	20.59	20.31	20.40	22.00
20	64QAM	50	0	19.30	20.12	20.16	19.80	19.82	21.00
20	64QAM	50	24	19.40	20.14	20.16	19.80	19.81	21.00
20	64QAM	50	50	19.71	20.16	20.04	19.81	19.81	21.00
20	64QAM	100	0	19.63	20.10	20.09	19.80	19.79	21.00
20	256QAM	1	0	17.43	17.50	17.42	17.12	17.12	19.00
20	256QAM	1	49	17.41	17.47	17.44	17.10	17.23	19.00
20	256QAM	1	99	17.30	17.32	17.27	17.04	17.18	19.00
20	256QAM	50	0	17.30	17.64	17.73	17.44	17.42	19.00
20	256QAM	50	24	17.39	17.67	17.68	17.36	17.40	19.00
20	256QAM	50	50	17.07	17.69	17.56	17.37	17.39	19.00
20	256QAM	100	0	17.35	17.63	17.56	17.42	17.36	19.00
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.03	23.11	23.15	22.70	22.68	24.00
15	QPSK	1	37	23.19	23.10	23.13	22.82	22.69	24.00
15	QPSK	1	74	23.24	22.89	22.90	22.60	22.70	24.00
15	QPSK	36	0	21.61	21.59	21.67	21.32	21.22	23.00
15	QPSK	36	20	21.70	21.66	21.66	21.26	21.28	23.00
15	QPSK	36	39	21.73	21.60	21.46	21.30	21.20	23.00
15	QPSK	75	0	21.65	21.54	21.45	21.29	21.21	23.00
15	16QAM	1	0	22.11	22.07	22.17	21.94	21.82	23.00
15	16QAM	1	37	22.25	22.23	22.23	21.85	21.94	23.00
15	16QAM	1	74	22.19	22.04	21.99	21.64	21.79	23.00
15	16QAM	36	0	21.19	21.11	21.11	20.78	20.85	22.00
15	16QAM	36	20	21.22	21.08	21.19	20.72	20.80	22.00
15	16QAM	36	39	21.32	21.10	21.05	20.83	20.76	22.00
15	16QAM	75	0	21.18	21.13	20.99	20.73	20.76	22.00
15	64QAM	1	0	20.94	20.81	20.70	20.33	20.33	22.00
15	64QAM	1	37	21.04	20.80	20.78	20.31	20.44	22.00
15	64QAM	1	74	21.10	20.61	20.57	20.22	20.31	22.00
15	64QAM	36	0	20.06	20.07	20.12	19.74	19.78	21.00
15	64QAM	36	20	20.19	20.12	20.02	19.70	19.77	21.00
15	64QAM	36	39	20.24	20.12	19.99	19.71	19.74	21.00
15	64QAM	75	0	20.19	20.01	19.96	19.70	19.73	21.00
15	256QAM	1	0	17.31	17.40	17.27	17.07	17.09	19.00
15	256QAM	1	37	17.21	17.45	17.37	17.06	17.17	19.00
15	256QAM	1	74	17.19	17.19	17.23	17.01	17.05	19.00
15	256QAM	36	0	18.08	17.58	17.65	17.35	17.40	19.00
15	256QAM	36	20	17.67	17.62	17.62	17.28	17.31	19.00
15	256QAM	36	39	17.86	17.64	17.48	17.23	17.25	19.00
15	256QAM	75	0	18.18	17.52	17.42	17.39	17.28	19.00
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	23.09	23.05	23.09	22.70	22.65	24.00
10	QPSK	1	25	23.18	23.08	23.02	22.78	22.69	24.00
10	QPSK	1	49	23.20	22.90	22.89	22.61	22.72	24.00
10	QPSK	25	0	21.67	21.54	21.60	21.22	21.20	23.00
10	QPSK	25	12	21.71	21.53	21.65	21.30	21.27	23.00
10	QPSK	25	25	21.80	21.53	21.44	21.26	21.28	23.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	QPSK	50	0	21.68	21.65	21.45	21.25	21.26	23.00
10	16QAM	1	0	22.12	22.10	22.14	21.91	21.74	23.00
10	16QAM	1	25	22.28	22.23	22.20	21.82	21.91	23.00
10	16QAM	1	49	22.20	22.10	21.96	21.73	21.83	23.00
10	16QAM	25	0	21.14	21.10	21.08	20.82	20.79	22.00
10	16QAM	25	12	21.23	21.18	21.19	20.71	20.73	22.00
10	16QAM	25	25	21.35	21.10	20.97	20.77	20.82	22.00
10	16QAM	50	0	21.22	21.07	21.04	20.74	20.84	22.00
10	64QAM	1	0	21.02	20.80	20.70	20.36	20.36	22.00
10	64QAM	1	25	21.07	20.79	20.69	20.30	20.44	22.00
10	64QAM	1	49	20.99	20.52	20.52	20.20	20.29	22.00
10	64QAM	25	0	20.19	19.97	20.09	19.65	19.75	21.00
10	64QAM	25	12	20.26	20.02	20.05	19.77	19.80	21.00
10	64QAM	25	25	20.28	20.05	19.95	19.70	19.78	21.00
10	64QAM	50	0	20.17	20.05	20.07	19.78	19.68	21.00
10	256QAM	1	0	17.32	17.37	17.32	17.07	17.06	19.00
10	256QAM	1	25	17.19	17.36	17.33	17.02	17.15	19.00
10	256QAM	1	49	17.21	17.20	17.15	17.00	17.12	19.00
10	256QAM	25	0	18.02	17.60	17.67	17.40	17.39	19.00
10	256QAM	25	12	17.71	17.58	17.54	17.24	17.27	19.00
10	256QAM	25	25	17.86	17.66	17.48	17.30	17.33	19.00
10	256QAM	50	0	17.29	17.53	17.48	17.31	17.27	19.00
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.3	2687.5	
5	QPSK	1	0	23.09	23.03	23.12	22.77	22.70	24.00
5	QPSK	1	12	23.21	23.13	23.03	22.81	22.78	24.00
5	QPSK	1	24	23.30	22.97	22.94	22.56	22.66	24.00
5	QPSK	12	0	21.62	21.67	21.64	21.34	21.29	23.00
5	QPSK	12	7	21.67	21.61	21.62	21.26	21.23	23.00
5	QPSK	12	13	21.78	21.59	21.44	21.20	21.23	23.00
5	QPSK	25	0	21.63	21.59	21.51	21.29	21.20	23.00
5	16QAM	1	0	22.10	22.18	22.07	21.86	21.72	23.00
5	16QAM	1	12	22.22	22.17	22.12	21.83	21.87	23.00
5	16QAM	1	24	22.20	22.06	21.96	21.76	21.82	23.00
5	16QAM	12	0	21.20	21.11	21.12	20.75	20.84	22.00
5	16QAM	12	7	21.28	21.15	21.13	20.73	20.83	22.00
5	16QAM	12	13	21.24	21.16	20.92	20.77	20.83	22.00
5	16QAM	25	0	21.23	21.11	21.06	20.70	20.73	22.00
5	64QAM	1	0	21.05	20.76	20.75	20.31	20.34	22.00
5	64QAM	1	12	21.08	20.71	20.70	20.39	20.48	22.00
5	64QAM	1	24	21.00	20.56	20.56	20.19	20.30	22.00
5	64QAM	12	0	20.07	20.00	20.08	19.71	19.79	21.00
5	64QAM	12	7	20.17	20.11	20.10	19.68	19.75	21.00
5	64QAM	12	13	20.21	20.12	19.95	19.74	19.76	21.00
5	64QAM	25	0	20.29	19.97	20.06	19.76	19.66	21.00
5	256QAM	1	0	17.28	17.39	17.32	17.06	17.00	19.00
5	256QAM	1	12	17.21	17.43	17.43	17.06	17.21	19.00
5	256QAM	1	24	17.17	17.24	17.19	17.01	17.16	19.00
5	256QAM	12	0	17.96	17.58	17.65	17.42	17.30	19.00
5	256QAM	12	7	17.74	17.60	17.56	17.21	17.36	19.00
5	256QAM	12	13	17.81	17.65	17.52	17.33	17.37	19.00
5	256QAM	25	0	18.16	17.61	17.48	17.32	17.26	19.00

【LTE Band 41 __FCC (2496~2690MHz)_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	14.87	14.98	15.05	14.65	14.61	15.50
20	QPSK	1	49	14.36	14.47	14.68	14.21	14.16	15.50
20	QPSK	1	99	14.45	14.50	14.64	14.20	14.11	15.50
20	QPSK	50	0	14.53	14.62	14.72	14.28	14.22	15.50
20	QPSK	50	24	14.54	14.64	14.75	14.33	14.25	15.50
20	QPSK	50	50	14.41	14.55	14.71	14.31	14.15	15.50
20	QPSK	100	0	14.41	14.59	14.70	14.24	14.15	15.50
20	16QAM	1	0	14.75	14.79	15.00	14.54	14.53	15.50
20	16QAM	1	49	14.37	14.55	14.63	14.10	14.07	15.50
20	16QAM	1	99	14.33	14.40	14.59	14.09	14.08	15.50
20	16QAM	50	0	14.46	14.56	14.67	14.20	14.10	15.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

20	16QAM	50	24	14.45	14.56	14.70	14.23	14.23	15.50
20	16QAM	50	50	14.41	14.58	14.66	14.18	14.17	15.50
20	16QAM	100	0	14.36	14.49	14.65	14.22	14.20	15.50
20	64QAM	1	0	14.70	14.79	14.96	14.53	14.37	15.50
20	64QAM	1	49	14.31	14.41	14.59	14.18	14.15	15.50
20	64QAM	1	99	14.35	14.38	14.55	14.10	14.07	15.50
20	64QAM	50	0	14.41	14.52	14.63	14.21	14.16	15.50
20	64QAM	50	24	14.45	14.54	14.66	14.25	14.18	15.50
20	64QAM	50	50	14.30	14.50	14.62	14.19	14.06	15.50
20	64QAM	100	0	14.39	14.47	14.61	14.13	14.17	15.50
20	256QAM	1	0	14.75	14.85	14.95	14.46	14.37	15.50
20	256QAM	1	49	14.32	14.45	14.58	14.15	14.09	15.50
20	256QAM	1	99	14.34	14.34	14.54	14.07	13.97	15.50
20	256QAM	50	0	14.42	14.53	14.62	14.15	14.08	15.50
20	256QAM	50	24	14.44	14.49	14.65	14.24	14.15	15.50
20	256QAM	50	50	14.41	14.51	14.61	14.18	14.10	15.50
20	256QAM	100	0	14.41	14.47	14.60	14.09	14.07	15.50
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	14.76	14.86	14.96	14.63	14.49	15.50
15	QPSK	1	37	14.32	14.43	14.66	14.16	14.13	15.50
15	QPSK	1	74	14.30	14.44	14.56	14.19	14.08	15.50
15	QPSK	36	0	14.51	14.54	14.59	14.16	14.20	15.50
15	QPSK	36	20	14.52	14.52	14.65	14.26	14.19	15.50
15	QPSK	36	39	14.27	14.44	14.61	14.29	14.12	15.50
15	QPSK	75	0	14.34	14.52	14.62	14.17	14.14	15.50
15	16QAM	1	0	14.60	14.68	14.91	14.52	14.39	15.50
15	16QAM	1	37	14.36	14.41	14.54	14.07	14.04	15.50
15	16QAM	1	74	14.19	14.36	14.54	13.99	13.96	15.50
15	16QAM	36	0	14.32	14.46	14.62	14.14	14.05	15.50
15	16QAM	36	20	14.37	14.44	14.69	14.11	14.09	15.50
15	16QAM	36	39	14.29	14.53	14.57	14.14	14.12	15.50
15	16QAM	75	0	14.21	14.43	14.60	14.09	14.10	15.50
15	64QAM	1	0	14.58	14.67	14.93	14.39	14.28	15.50
15	64QAM	1	37	14.23	14.38	14.50	14.11	14.01	15.50
15	64QAM	1	74	14.28	14.36	14.42	13.99	14.00	15.50
15	64QAM	36	0	14.35	14.46	14.53	14.09	14.12	15.50
15	64QAM	36	20	14.42	14.44	14.61	14.11	14.05	15.50
15	64QAM	36	39	14.27	14.39	14.58	14.17	13.97	15.50
15	64QAM	75	0	14.30	14.33	14.49	14.07	14.07	15.50
15	256QAM	1	0	14.69	14.73	14.82	14.42	14.33	15.50
15	256QAM	1	37	14.22	14.32	14.52	14.13	14.01	15.50
15	256QAM	1	74	14.28	14.24	14.45	13.98	13.95	15.50
15	256QAM	36	0	14.37	14.46	14.53	14.04	13.98	15.50
15	256QAM	36	20	14.36	14.44	14.57	14.22	14.03	15.50
15	256QAM	36	39	14.35	14.47	14.57	14.17	14.04	15.50
15	256QAM	75	0	14.27	14.43	14.59	14.07	13.98	15.50
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	14.73	14.88	14.95	14.61	14.56	15.50
10	QPSK	1	25	14.28	14.43	14.66	14.15	14.08	15.50
10	QPSK	1	49	14.42	14.36	14.49	14.08	14.00	15.50
10	QPSK	25	0	14.44	14.59	14.61	14.14	14.20	15.50
10	QPSK	25	12	14.40	14.62	14.74	14.25	14.22	15.50
10	QPSK	25	25	14.27	14.53	14.57	14.26	14.02	15.50
10	QPSK	50	0	14.28	14.47	14.56	14.10	14.14	15.50
10	16QAM	1	0	14.62	14.76	14.93	14.51	14.49	15.50
10	16QAM	1	25	14.34	14.50	14.51	13.97	14.03	15.50
10	16QAM	1	49	14.25	14.32	14.56	13.94	13.97	15.50
10	16QAM	25	0	14.34	14.45	14.59	14.14	14.08	15.50
10	16QAM	25	12	14.35	14.48	14.67	14.18	14.09	15.50
10	16QAM	25	25	14.35	14.47	14.61	14.09	14.04	15.50
10	16QAM	50	0	14.31	14.42	14.61	14.08	14.19	15.50
10	64QAM	1	0	14.68	14.74	14.81	14.45	14.30	15.50
10	64QAM	1	25	14.29	14.36	14.51	14.15	14.05	15.50
10	64QAM	1	49	14.29	14.34	14.52	13.98	13.93	15.50
10	64QAM	25	0	14.36	14.40	14.56	14.18	14.03	15.50
10	64QAM	25	12	14.34	14.41	14.53	14.11	14.04	15.50
10	64QAM	25	25	14.29	14.49	14.60	14.17	13.92	15.50
10	64QAM	50	0	14.27	14.36	14.56	14.04	14.10	15.50
10	256QAM	1	0	14.74	14.77	14.85	14.44	14.34	15.50
10	256QAM	1	25	14.25	14.35	14.53	14.04	14.04	15.50
10	256QAM	1	49	14.30	14.23	14.48	14.03	13.85	15.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	256QAM	25	0	14.30	14.41	14.56	14.03	13.95	15.50
10	256QAM	25	12	14.39	14.37	14.53	14.14	14.13	15.50
10	256QAM	25	25	14.31	14.41	14.49	14.06	14.07	15.50
10	256QAM	50	0	14.37	14.34	14.49	14.03	14.01	15.50
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.3	2687.5	
5	QPSK	1	0	14.76	14.85	14.94	14.63	14.57	15.50
5	QPSK	1	12	14.28	14.39	14.65	14.08	14.02	15.50
5	QPSK	1	24	14.31	14.47	14.57	14.07	14.03	15.50
5	QPSK	12	0	14.46	14.54	14.61	14.18	14.18	15.50
5	QPSK	12	7	14.52	14.54	14.60	14.20	14.13	15.50
5	QPSK	12	13	14.40	14.50	14.66	14.29	14.02	15.50
5	QPSK	25	0	14.38	14.55	14.56	14.11	14.06	15.50
5	16QAM	1	0	14.67	14.67	14.86	14.40	14.40	15.50
5	16QAM	1	12	14.31	14.43	14.61	14.04	13.97	15.50
5	16QAM	1	24	14.24	14.38	14.56	14.07	13.97	15.50
5	16QAM	12	0	14.32	14.49	14.62	14.15	14.03	15.50
5	16QAM	12	7	14.38	14.45	14.59	14.10	14.19	15.50
5	16QAM	12	13	14.26	14.51	14.60	14.04	14.09	15.50
5	16QAM	25	0	14.22	14.37	14.60	14.07	14.14	15.50
5	64QAM	1	0	14.63	14.76	14.84	14.41	14.34	15.50
5	64QAM	1	12	14.26	14.37	14.57	14.04	14.08	15.50
5	64QAM	1	24	14.28	14.24	14.45	14.00	14.03	15.50
5	64QAM	12	0	14.31	14.46	14.51	14.08	14.05	15.50
5	64QAM	12	7	14.38	14.47	14.54	14.12	14.10	15.50
5	64QAM	12	13	14.20	14.44	14.56	14.09	13.97	15.50
5	64QAM	25	0	14.33	14.45	14.56	14.10	14.07	15.50
5	256QAM	1	0	14.61	14.79	14.84	14.43	14.36	15.50
5	256QAM	1	12	14.27	14.33	14.57	14.10	14.00	15.50
5	256QAM	1	24	14.26	14.23	14.40	13.94	13.96	15.50
5	256QAM	12	0	14.30	14.41	14.51	14.08	14.01	15.50
5	256QAM	12	7	14.35	14.46	14.51	14.10	14.04	15.50
5	256QAM	12	13	14.30	14.39	14.51	14.10	13.98	15.50
5	256QAM	25	0	14.40	14.46	14.55	14.01	14.01	15.50

【LTE Band 41_FCC (2496~2690MHz)_HPUE_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	25.70	26.10	26.09	25.79	25.70	27.00
20	QPSK	1	49	25.87	26.12	26.13	25.78	25.79	27.00
20	QPSK	1	99	25.76	25.99	25.94	25.66	25.71	27.00
20	QPSK	50	0	24.86	24.71	24.73	24.40	24.36	26.00
20	QPSK	50	24	24.92	24.74	24.75	24.41	24.38	26.00
20	QPSK	50	50	24.98	24.73	24.62	24.37	24.36	26.00
20	QPSK	100	0	24.90	24.71	24.68	24.37	24.37	26.00
20	16QAM	1	0	24.88	25.35	25.37	25.11	24.97	26.00
20	16QAM	1	49	25.09	25.38	25.41	25.06	25.06	26.00
20	16QAM	1	99	24.93	25.26	25.21	24.94	24.96	26.00
20	16QAM	50	0	24.34	24.22	24.27	23.93	23.89	25.00
20	16QAM	50	24	24.47	24.27	24.31	23.90	23.96	25.00
20	16QAM	50	50	24.47	24.31	24.16	23.92	23.91	25.00
20	16QAM	100	0	24.36	24.24	24.19	23.92	23.88	25.00
20	64QAM	1	0	23.76	24.16	24.16	23.85	23.76	25.00
20	64QAM	1	49	23.93	24.17	24.20	23.82	23.84	25.00
20	64QAM	1	99	23.87	24.04	23.99	23.68	23.75	25.00
20	64QAM	50	0	23.36	23.20	23.20	22.89	22.88	24.00
20	64QAM	50	24	23.37	23.24	23.24	22.88	22.88	24.00
20	64QAM	50	50	23.43	23.21	23.14	22.87	22.82	24.00
20	64QAM	100	0	23.33	23.21	23.16	22.89	22.85	24.00
20	256QAM	1	0	20.93	20.48	20.52	20.26	20.11	22.00
20	256QAM	1	49	21.29	20.60	20.56	20.27	20.27	22.00
20	256QAM	1	99	20.88	20.38	20.30	20.10	20.19	22.00
20	256QAM	50	0	20.71	20.60	20.62	20.30	20.33	22.00
20	256QAM	50	24	20.85	20.62	20.56	20.22	20.35	22.00
20	256QAM	50	50	20.48	20.62	20.45	20.30	20.31	22.00
20	256QAM	100	0	20.83	20.53	20.43	20.22	20.21	22.00
Channel				39725	40173	40620	41068	41515	Tune-up



FCC SAR TEST REPORT

Report No. : FA5N2416B

Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	limit (dBm)
15	QPSK	1	0	25.56	26.04	25.98	25.70	25.68	27.00
15	QPSK	1	37	25.82	26.09	26.01	25.64	25.68	27.00
15	QPSK	1	74	25.71	25.89	25.82	25.55	25.64	27.00
15	QPSK	36	0	24.81	24.67	24.62	24.31	24.32	26.00
15	QPSK	36	20	24.80	24.59	24.61	24.39	24.27	26.00
15	QPSK	36	39	24.93	24.68	24.58	24.33	24.32	26.00
15	QPSK	75	0	24.88	24.59	24.62	24.35	24.27	26.00
15	16QAM	1	0	24.83	25.24	25.35	25.07	24.84	26.00
15	16QAM	1	37	25.04	25.27	25.38	25.00	24.93	26.00
15	16QAM	1	74	24.86	25.20	25.09	24.81	24.88	26.00
15	16QAM	36	0	24.33	24.20	24.17	23.80	23.79	25.00
15	16QAM	36	20	24.34	24.14	24.27	23.80	23.84	25.00
15	16QAM	36	39	24.35	24.17	24.08	23.77	23.78	25.00
15	16QAM	75	0	24.30	24.21	24.08	23.86	23.78	25.00
15	64QAM	1	0	23.68	24.03	24.06	23.73	23.68	25.00
15	64QAM	1	37	23.81	24.13	24.10	23.71	23.76	25.00
15	64QAM	1	74	23.84	24.02	23.88	23.61	23.65	25.00
15	64QAM	36	0	23.23	23.17	23.12	22.80	22.81	24.00
15	64QAM	36	20	23.23	23.17	23.19	22.85	22.86	24.00
15	64QAM	36	39	23.38	23.11	23.01	22.77	22.72	24.00
15	64QAM	75	0	23.30	23.20	23.08	22.85	22.84	24.00
15	256QAM	1	0	20.79	20.37	20.47	20.23	20.09	22.00
15	256QAM	1	37	21.26	20.54	20.42	20.18	20.15	22.00
15	256QAM	1	74	20.74	20.36	20.22	20.05	20.05	22.00
15	256QAM	36	0	20.63	20.56	20.57	20.26	20.31	22.00
15	256QAM	36	20	20.81	20.53	20.50	20.19	20.26	22.00
15	256QAM	36	39	20.34	20.49	20.30	20.28	20.16	22.00
15	256QAM	75	0	20.78	20.44	20.34	20.07	20.08	22.00
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	25.63	25.99	25.97	25.65	25.62	27.00
10	QPSK	1	25	25.72	26.09	26.05	25.67	25.66	27.00
10	QPSK	1	49	25.62	25.98	25.80	25.59	25.58	27.00
10	QPSK	25	0	24.71	24.57	24.64	24.34	24.23	26.00
10	QPSK	25	12	24.82	24.59	24.72	24.36	24.25	26.00
10	QPSK	25	25	24.96	24.59	24.49	24.26	24.33	26.00
10	QPSK	50	0	24.77	24.57	24.57	24.31	24.24	26.00
10	16QAM	1	0	24.74	25.28	25.33	25.10	24.89	26.00
10	16QAM	1	25	25.04	25.32	25.35	25.01	25.05	26.00
10	16QAM	1	49	24.81	25.21	25.19	24.80	24.86	26.00
10	16QAM	25	0	24.27	24.16	24.25	23.80	23.77	25.00
10	16QAM	25	12	24.34	24.12	24.22	23.77	23.93	25.00
10	16QAM	25	25	24.34	24.27	24.08	23.88	23.83	25.00
10	16QAM	50	0	24.24	24.11	24.07	23.89	23.85	25.00
10	64QAM	1	0	23.74	24.14	24.09	23.77	23.62	25.00
10	64QAM	1	25	23.85	24.07	24.17	23.80	23.83	25.00
10	64QAM	1	49	23.84	23.96	23.86	23.66	23.61	25.00
10	64QAM	25	0	23.28	23.11	23.13	22.80	22.75	24.00
10	64QAM	25	12	23.30	23.21	23.09	22.81	22.86	24.00
10	64QAM	25	25	23.33	23.10	23.02	22.75	22.72	24.00
10	64QAM	50	0	23.27	23.08	23.06	22.77	22.78	24.00
10	256QAM	1	0	20.81	20.35	20.47	20.11	20.02	22.00
10	256QAM	1	25	21.20	20.54	20.50	20.18	20.15	22.00
10	256QAM	1	49	20.79	20.23	20.29	20.01	20.09	22.00
10	256QAM	25	0	20.62	20.46	20.55	20.22	20.28	22.00
10	256QAM	25	12	20.72	20.56	20.50	20.14	20.26	22.00
10	256QAM	25	25	20.33	20.58	20.36	20.26	20.27	22.00
10	256QAM	50	0	20.68	20.52	20.31	20.19	20.07	22.00
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.3	2687.5	
5	QPSK	1	0	25.65	26.06	25.97	25.68	25.58	27.00
5	QPSK	1	12	25.78	25.99	26.04	25.68	25.67	27.00
5	QPSK	1	24	25.64	25.97	25.91	25.55	25.57	27.00
5	QPSK	12	0	24.74	24.69	24.61	24.30	24.31	26.00
5	QPSK	12	7	24.81	24.62	24.74	24.35	24.26	26.00
5	QPSK	12	13	24.87	24.64	24.49	24.30	24.28	26.00
5	QPSK	25	0	24.76	24.65	24.61	24.29	24.34	26.00
5	16QAM	1	0	24.79	25.33	25.23	25.05	24.89	26.00
5	16QAM	1	12	25.05	25.35	25.29	25.04	25.05	26.00
5	16QAM	1	24	24.80	25.13	25.10	24.88	24.85	26.00
5	16QAM	12	0	24.25	24.09	24.22	23.87	23.74	25.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	16QAM	12	7	24.44	24.22	24.18	23.81	23.92	25.00
5	16QAM	12	13	24.45	24.28	24.12	23.78	23.85	25.00
5	16QAM	25	0	24.32	24.13	24.13	23.88	23.76	25.00
5	64QAM	1	0	23.71	24.12	24.08	23.79	23.72	25.00
5	64QAM	1	12	23.90	24.08	24.07	23.73	23.77	25.00
5	64QAM	1	24	23.80	23.90	23.91	23.63	23.68	25.00
5	64QAM	12	0	23.22	23.08	23.15	22.85	22.81	24.00
5	64QAM	12	7	23.32	23.09	23.12	22.81	22.86	24.00
5	64QAM	12	13	23.37	23.09	23.11	22.76	22.71	24.00
5	64QAM	25	0	23.32	23.08	23.05	22.85	22.74	24.00
5	256QAM	1	0	20.84	20.41	20.39	20.17	20.01	22.00
5	256QAM	1	12	21.22	20.50	20.47	20.22	20.17	22.00
5	256QAM	1	24	20.78	20.23	20.26	20.00	20.13	22.00
5	256QAM	12	0	20.58	20.47	20.59	20.23	20.20	22.00
5	256QAM	12	7	20.72	20.56	20.49	20.17	20.34	22.00
5	256QAM	12	13	20.45	20.54	20.34	20.22	20.17	22.00
5	256QAM	25	0	20.74	20.47	20.30	20.14	20.17	22.00

【LTE Band 41_FCC (2496~2690MHz)_HPUE_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	15.50
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	14.90	14.87	14.91	14.48	14.46	15.50
20	QPSK	1	49	14.49	14.28	14.56	14.06	14.06	15.50
20	QPSK	1	99	14.43	14.33	14.49	14.03	13.93	15.50
20	QPSK	50	0	14.41	14.45	14.54	14.17	14.08	15.50
20	QPSK	50	24	14.49	14.52	14.61	14.17	14.08	15.50
20	QPSK	50	50	14.51	14.45	14.59	14.13	13.97	15.50
20	QPSK	100	0	14.44	14.47	14.53	14.10	13.95	15.50
20	16QAM	1	0	14.71	14.59	14.82	14.40	14.41	15.50
20	16QAM	1	49	14.40	14.37	14.48	13.95	13.87	15.50
20	16QAM	1	99	14.31	14.28	14.42	13.92	13.98	15.50
20	16QAM	50	0	14.42	14.38	14.55	14.07	13.97	15.50
20	16QAM	50	24	14.44	14.41	14.55	14.07	14.10	15.50
20	16QAM	50	50	14.39	14.42	14.46	14.05	14.01	15.50
20	16QAM	100	0	14.49	14.32	14.53	14.12	14.10	15.50
20	64QAM	1	0	14.67	14.63	14.82	14.41	14.26	15.50
20	64QAM	1	49	14.34	14.21	14.48	14.00	13.99	15.50
20	64QAM	1	99	14.30	14.19	14.42	13.93	13.94	15.50
20	64QAM	50	0	14.36	14.42	14.43	14.10	14.06	15.50
20	64QAM	50	24	14.45	14.42	14.51	14.09	14.05	15.50
20	64QAM	50	50	14.38	14.34	14.50	14.01	13.95	15.50
20	64QAM	100	0	14.45	14.35	14.49	13.99	13.97	15.50
20	256QAM	1	0	14.72	14.75	14.76	14.32	14.21	15.50
20	256QAM	1	49	14.33	14.35	14.42	14.04	13.92	15.50
20	256QAM	1	99	14.41	14.23	14.44	13.97	13.78	15.50
20	256QAM	50	0	14.34	14.34	14.49	13.95	13.93	15.50
20	256QAM	50	24	14.41	14.35	14.48	14.10	13.97	15.50
20	256QAM	50	50	14.27	14.36	14.42	14.03	13.97	15.50
20	256QAM	100	0	14.36	14.36	14.45	13.95	13.96	15.50
Channel				39725	40173	40620	41068	41515	15.50
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	14.75	14.79	14.89	14.45	14.42	15.50
15	QPSK	1	37	14.35	14.17	14.42	13.97	13.91	15.50
15	QPSK	1	74	14.29	14.23	14.36	13.92	13.85	15.50
15	QPSK	36	0	14.37	14.30	14.52	14.05	14.00	15.50
15	QPSK	36	20	14.40	14.39	14.51	14.12	14.04	15.50
15	QPSK	36	39	14.37	14.33	14.46	14.09	13.86	15.50
15	QPSK	75	0	14.40	14.39	14.51	14.01	13.93	15.50
15	16QAM	1	0	14.61	14.46	14.78	14.25	14.33	15.50
15	16QAM	1	37	14.33	14.31	14.44	13.89	13.79	15.50
15	16QAM	1	74	14.24	14.25	14.30	13.88	13.93	15.50
15	16QAM	36	0	14.35	14.25	14.51	14.00	13.92	15.50
15	16QAM	36	20	14.33	14.27	14.51	14.00	14.01	15.50
15	16QAM	36	39	14.26	14.37	14.45	13.92	13.96	15.50
15	16QAM	75	0	14.45	14.21	14.44	14.05	13.96	15.50
15	64QAM	1	0	14.53	14.61	14.73	14.34	14.16	15.50
15	64QAM	1	37	14.22	14.07	14.43	13.90	13.94	15.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

15	64QAM	1	74	14.29	14.06	14.34	13.84	13.91	15.50
15	64QAM	36	0	14.34	14.28	14.30	13.97	14.03	15.50
15	64QAM	36	20	14.37	14.38	14.40	14.08	14.02	15.50
15	64QAM	36	39	14.36	14.23	14.42	13.99	13.89	15.50
15	64QAM	75	0	14.40	14.32	14.46	13.86	13.86	15.50
15	256QAM	1	0	14.67	14.64	14.72	14.22	14.19	15.50
15	256QAM	1	37	14.20	14.26	14.30	14.01	13.88	15.50
15	256QAM	1	74	14.33	14.16	14.30	13.87	13.70	15.50
15	256QAM	36	0	14.25	14.25	14.41	13.83	13.86	15.50
15	256QAM	36	20	14.37	14.32	14.41	13.97	13.84	15.50
15	256QAM	36	39	14.22	14.30	14.35	13.94	13.83	15.50
15	256QAM	75	0	14.34	14.34	14.41	13.87	13.81	15.50
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	14.87	14.86	14.82	14.40	14.39	15.50
10	QPSK	1	25	14.47	14.19	14.43	14.01	14.03	15.50
10	QPSK	1	49	14.38	14.31	14.40	13.96	13.80	15.50
10	QPSK	25	0	14.32	14.33	14.52	14.09	13.96	15.50
10	QPSK	25	12	14.43	14.51	14.50	14.03	13.99	15.50
10	QPSK	25	25	14.40	14.43	14.49	14.10	13.96	15.50
10	QPSK	50	0	14.30	14.35	14.43	14.08	13.89	15.50
10	16QAM	1	0	14.65	14.46	14.69	14.26	14.40	15.50
10	16QAM	1	25	14.27	14.32	14.44	13.91	13.77	15.50
10	16QAM	1	49	14.27	14.14	14.28	13.77	13.96	15.50
10	16QAM	25	0	14.28	14.34	14.42	13.96	13.94	15.50
10	16QAM	25	12	14.41	14.32	14.50	14.01	14.08	15.50
10	16QAM	25	25	14.27	14.41	14.42	14.01	13.98	15.50
10	16QAM	50	0	14.48	14.23	14.48	14.07	13.99	15.50
10	64QAM	1	0	14.64	14.57	14.79	14.33	14.19	15.50
10	64QAM	1	25	14.25	14.15	14.46	13.91	13.91	15.50
10	64QAM	1	49	14.17	14.09	14.31	13.83	13.92	15.50
10	64QAM	25	0	14.34	14.38	14.33	14.07	13.95	15.50
10	64QAM	25	12	14.40	14.38	14.43	13.94	13.94	15.50
10	64QAM	25	25	14.31	14.29	14.44	13.96	13.82	15.50
10	64QAM	50	0	14.38	14.26	14.40	13.91	13.88	15.50
10	256QAM	1	0	14.59	14.61	14.67	14.26	14.06	15.50
10	256QAM	1	25	14.29	14.31	14.36	14.02	13.89	15.50
10	256QAM	1	49	14.33	14.19	14.42	13.93	13.65	15.50
10	256QAM	25	0	14.25	14.29	14.37	13.87	13.85	15.50
10	256QAM	25	12	14.38	14.22	14.46	14.04	13.89	15.50
10	256QAM	25	25	14.19	14.23	14.32	13.92	13.93	15.50
10	256QAM	50	0	14.29	14.23	14.37	13.83	13.87	15.50
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.3	2687.5	
5	QPSK	1	0	14.77	14.86	14.83	14.47	14.43	15.50
5	QPSK	1	12	14.45	14.17	14.53	14.00	14.00	15.50
5	QPSK	1	24	14.30	14.30	14.36	13.99	13.84	15.50
5	QPSK	12	0	14.31	14.31	14.43	14.15	13.94	15.50
5	QPSK	12	7	14.42	14.46	14.50	14.03	14.02	15.50
5	QPSK	12	13	14.37	14.32	14.46	14.11	13.87	15.50
5	QPSK	25	0	14.37	14.42	14.47	14.01	13.92	15.50
5	16QAM	1	0	14.69	14.47	14.69	14.34	14.30	15.50
5	16QAM	1	12	14.32	14.34	14.45	13.81	13.78	15.50
5	16QAM	1	24	14.30	14.26	14.33	13.88	13.88	15.50
5	16QAM	12	0	14.31	14.24	14.52	13.96	13.82	15.50
5	16QAM	12	7	14.34	14.28	14.53	13.95	14.09	15.50
5	16QAM	12	13	14.32	14.32	14.36	14.03	13.92	15.50
5	16QAM	25	0	14.34	14.29	14.49	14.03	14.02	15.50
5	64QAM	1	0	14.58	14.50	14.72	14.39	14.24	15.50
5	64QAM	1	12	14.27	14.08	14.44	13.86	13.96	15.50
5	64QAM	1	24	14.25	14.17	14.29	13.88	13.85	15.50
5	64QAM	12	0	14.34	14.38	14.35	14.08	13.95	15.50
5	64QAM	12	7	14.42	14.37	14.48	13.98	13.98	15.50
5	64QAM	12	13	14.33	14.25	14.42	13.93	13.87	15.50
5	64QAM	25	0	14.43	14.28	14.34	13.92	13.86	15.50
5	256QAM	1	0	14.59	14.70	14.74	14.31	14.13	15.50
5	256QAM	1	12	14.19	14.22	14.31	14.03	13.85	15.50
5	256QAM	1	24	14.30	14.15	14.42	13.95	13.68	15.50
5	256QAM	12	0	14.24	14.26	14.45	13.92	13.88	15.50
5	256QAM	12	7	14.32	14.33	14.33	13.99	13.83	15.50
5	256QAM	12	13	14.14	14.31	14.28	13.89	13.85	15.50
5	256QAM	25	0	14.27	14.26	14.41	13.82	13.89	15.50

**【LTE Band 48_FCC_Part 96_Ant 8_NB Mode】**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	55990	56150	56640	Tune-up limit (dBm)
Frequency (MHz)				3560	3609	3625	3641	3690	
20	QPSK	1	0	21.28	21.06	21.13	21.10	21.18	22.00
20	QPSK	1	49	21.51	21.25	21.23	21.22	21.49	22.00
20	QPSK	1	99	21.43	21.18	21.17	21.32	21.61	22.00
20	QPSK	50	0	20.40	20.22	20.24	20.17	20.36	21.00
20	QPSK	50	24	20.49	20.22	20.23	20.26	20.48	21.00
20	QPSK	50	50	20.52	20.22	20.19	20.32	20.62	21.00
20	QPSK	100	0	20.49	20.21	20.18	20.19	20.46	21.00
20	16QAM	1	0	20.36	20.14	20.20	20.18	20.27	21.00
20	16QAM	1	49	20.57	20.33	20.31	20.29	20.56	21.00
20	16QAM	1	99	20.49	20.24	20.23	20.38	20.69	21.00
20	16QAM	50	0	19.43	19.22	19.24	19.18	19.36	20.00
20	16QAM	50	24	19.52	19.24	19.22	19.24	19.49	20.00
20	16QAM	50	50	19.51	19.22	19.22	19.27	19.60	20.00
20	16QAM	100	0	19.47	19.23	19.22	19.22	19.47	20.00
20	64QAM	1	0	18.97	18.74	18.81	18.77	18.85	20.00
20	64QAM	1	49	19.17	18.95	18.92	18.91	19.13	20.00
20	64QAM	1	99	19.08	18.86	18.89	18.98	19.29	20.00
20	64QAM	50	0	18.40	18.18	18.19	18.13	18.34	19.00
20	64QAM	50	24	18.45	18.22	18.19	18.20	18.45	19.00
20	64QAM	50	50	18.49	18.21	18.14	18.26	18.55	19.00
20	64QAM	100	0	18.44	18.20	18.17	18.20	18.44	19.00
20	256QAM	1	0	15.46	15.34	15.39	15.36	15.31	17.00
20	256QAM	1	49	15.66	15.51	15.48	15.46	15.61	17.00
20	256QAM	1	99	15.58	15.42	15.36	15.51	15.77	17.00
20	256QAM	50	0	15.80	15.71	15.73	15.65	15.73	17.00
20	256QAM	50	24	15.82	15.75	15.73	15.68	15.90	17.00
20	256QAM	50	50	15.89	15.70	15.61	15.70	15.98	17.00
20	256QAM	100	0	15.77	15.65	15.59	15.58	15.84	17.00
Channel				55315	55820	55990	56160	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	21.17	21.03	21.10	20.99	21.09	22.00
15	QPSK	1	37	21.47	21.23	21.22	21.11	21.48	22.00
15	QPSK	1	74	21.35	21.09	21.11	21.20	21.51	22.00
15	QPSK	36	0	20.33	20.20	20.18	20.11	20.24	21.00
15	QPSK	36	20	20.40	20.16	20.14	20.22	20.39	21.00
15	QPSK	36	39	20.39	20.16	20.07	20.25	20.60	21.00
15	QPSK	75	0	20.38	20.18	20.03	20.12	20.42	21.00
15	16QAM	1	0	20.31	20.05	20.17	20.06	20.17	21.00
15	16QAM	1	37	20.45	20.30	20.26	20.26	20.47	21.00
15	16QAM	1	74	20.38	20.11	20.11	20.27	20.62	21.00
15	16QAM	36	0	19.28	19.11	19.13	19.11	19.27	20.00
15	16QAM	36	20	19.39	19.16	19.12	19.20	19.38	20.00
15	16QAM	36	39	19.47	19.20	19.19	19.15	19.55	20.00
15	16QAM	75	0	19.38	19.21	19.16	19.13	19.43	20.00
15	64QAM	1	0	18.94	18.63	18.73	18.64	18.72	20.00
15	64QAM	1	37	19.10	18.91	18.81	18.87	19.02	20.00
15	64QAM	1	74	18.95	18.78	18.84	18.83	19.27	20.00
15	64QAM	36	0	18.25	18.11	18.06	17.98	18.24	19.00
15	64QAM	36	20	18.36	18.14	18.05	18.17	18.33	19.00
15	64QAM	36	39	18.36	18.14	18.03	18.16	18.48	19.00
15	64QAM	75	0	18.38	18.11	18.11	18.07	18.32	19.00
15	256QAM	1	0	15.34	15.27	15.29	15.28	15.19	17.00
15	256QAM	1	37	15.64	15.37	15.40	15.39	15.56	17.00
15	256QAM	1	74	15.51	15.36	15.33	15.49	15.68	17.00
15	256QAM	36	0	15.76	15.68	15.60	15.61	15.67	17.00
15	256QAM	36	20	15.78	15.67	15.58	15.54	15.86	17.00
15	256QAM	36	39	15.74	15.56	15.51	15.59	15.83	17.00
15	256QAM	75	0	15.62	15.51	15.54	15.48	15.78	17.00
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	21.20	20.91	21.10	21.07	21.04	22.00
10	QPSK	1	25	21.49	21.16	21.17	21.20	21.40	22.00
10	QPSK	1	49	21.38	21.12	21.12	21.19	21.58	22.00
10	QPSK	25	0	20.31	20.07	20.11	20.14	20.32	21.00
10	QPSK	25	12	20.45	20.07	20.19	20.17	20.39	21.00

10	QPSK	25	25	20.42	20.14	20.11	20.22	20.60	21.00
10	QPSK	50	0	20.36	20.18	20.16	20.12	20.39	21.00
10	16QAM	1	0	20.33	20.08	20.08	20.05	20.22	21.00
10	16QAM	1	25	20.52	20.29	20.19	20.17	20.51	21.00
10	16QAM	1	49	20.41	20.11	20.11	20.29	20.65	21.00
10	16QAM	25	0	19.34	19.14	19.15	19.13	19.26	20.00
10	16QAM	25	12	19.42	19.21	19.16	19.17	19.38	20.00
10	16QAM	25	25	19.40	19.17	19.14	19.22	19.48	20.00
10	16QAM	50	0	19.35	19.10	19.11	19.10	19.42	20.00
10	64QAM	1	0	18.92	18.60	18.71	18.67	18.78	20.00
10	64QAM	1	25	19.13	18.83	18.86	18.84	19.08	20.00
10	64QAM	1	49	18.98	18.74	18.77	18.92	19.28	20.00
10	64QAM	25	0	18.36	18.11	18.08	18.00	18.32	19.00
10	64QAM	25	12	18.41	18.13	18.04	18.08	18.36	19.00
10	64QAM	25	25	18.47	18.13	18.03	18.16	18.50	19.00
10	64QAM	50	0	18.37	18.13	18.10	18.19	18.43	19.00
10	256QAM	1	0	15.32	15.24	15.31	15.26	15.27	17.00
10	256QAM	1	25	15.55	15.48	15.35	15.45	15.58	17.00
10	256QAM	1	49	15.56	15.29	15.22	15.44	15.72	17.00
10	256QAM	25	0	15.76	15.64	15.59	15.57	15.70	17.00
10	256QAM	25	12	15.79	15.68	15.72	15.60	15.85	17.00
10	256QAM	25	25	15.81	15.60	15.49	15.62	15.93	17.00
10	256QAM	50	0	15.64	15.58	15.48	15.44	15.81	17.00
Channel				55265	55810	55990	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	21.16	20.97	21.03	21.00	21.12	22.00
5	QPSK	1	12	21.38	21.12	21.18	21.20	21.42	22.00
5	QPSK	1	24	21.36	21.06	21.08	21.21	21.47	22.00
5	QPSK	12	0	20.35	20.13	20.20	20.07	20.25	21.00
5	QPSK	12	7	20.36	20.13	20.21	20.15	20.35	21.00
5	QPSK	12	13	20.44	20.08	20.15	20.27	20.53	21.00
5	QPSK	25	0	20.36	20.08	20.11	20.12	20.39	21.00
5	16QAM	1	0	20.23	20.12	20.16	20.05	20.25	21.00
5	16QAM	1	12	20.51	20.20	20.19	20.23	20.45	21.00
5	16QAM	1	24	20.44	20.15	20.21	20.34	20.58	21.00
5	16QAM	12	0	19.34	19.20	19.22	19.09	19.26	20.00
5	16QAM	12	7	19.49	19.22	19.12	19.16	19.36	20.00
5	16QAM	12	13	19.42	19.12	19.12	19.22	19.53	20.00
5	16QAM	25	0	19.36	19.16	19.18	19.17	19.37	20.00
5	64QAM	1	0	18.88	18.72	18.71	18.72	18.80	20.00
5	64QAM	1	12	19.12	18.90	18.90	18.87	19.07	20.00
5	64QAM	1	24	18.95	18.84	18.83	18.94	19.18	20.00
5	64QAM	12	0	18.28	18.15	18.13	18.05	18.28	19.00
5	64QAM	12	7	18.35	18.14	18.08	18.08	18.43	19.00
5	64QAM	12	13	18.36	18.14	18.07	18.21	18.45	19.00
5	64QAM	25	0	18.33	18.10	18.04	18.08	18.42	19.00
5	256QAM	1	0	15.44	15.25	15.34	15.32	15.23	17.00
5	256QAM	1	12	15.60	15.45	15.37	15.35	15.55	17.00
5	256QAM	1	24	15.54	15.27	15.34	15.41	15.65	17.00
5	256QAM	12	0	15.67	15.67	15.66	15.54	15.69	17.00
5	256QAM	12	7	15.78	15.62	15.69	15.56	15.77	17.00
5	256QAM	12	13	15.76	15.64	15.57	15.57	15.93	17.00
5	256QAM	25	0	15.70	15.52	15.50	15.52	15.76	17.00

【LTE Band 48 _ FCC _ Part 96 _ Ant 8 _ TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	55990	56150	56640	
Frequency (MHz)				3560	3609	3625	3641	3690	
20	QPSK	1	0	15.11	14.84	14.92	14.85	14.84	15.50
20	QPSK	1	49	14.98	14.96	15.01	14.92	14.91	15.50
20	QPSK	1	99	15.15	14.93	14.97	14.90	14.86	15.50
20	QPSK	50	0	15.17	15.05	15.07	14.95	14.89	15.50
20	QPSK	50	24	15.20	15.06	15.00	14.96	14.90	15.50
20	QPSK	50	50	15.07	14.91	15.01	14.81	14.80	15.50
20	QPSK	100	0	15.15	14.91	15.03	14.86	14.84	15.50
20	16QAM	1	0	15.06	14.80	14.90	14.70	14.77	15.50
20	16QAM	1	49	15.05	14.89	14.99	14.83	14.86	15.50
20	16QAM	1	99	15.01	14.78	14.85	14.76	14.69	15.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

20	16QAM	50	0	15.13	14.91	15.05	14.88	14.90	15.50
20	16QAM	50	24	15.17	14.98	15.03	14.91	14.91	15.50
20	16QAM	50	50	15.13	14.97	14.99	14.87	14.86	15.50
20	16QAM	100	0	15.13	14.96	15.01	14.89	14.79	15.50
20	64QAM	1	0	14.95	14.83	14.88	14.77	14.78	15.50
20	64QAM	1	49	15.05	14.86	14.97	14.78	14.85	15.50
20	64QAM	1	99	14.91	14.76	14.83	14.74	14.64	15.50
20	64QAM	50	0	15.19	14.94	15.03	14.84	14.87	15.50
20	64QAM	50	24	15.08	14.91	15.01	14.79	14.89	15.50
20	64QAM	50	50	15.06	14.97	14.97	14.82	14.79	15.50
20	64QAM	100	0	15.08	14.91	14.99	14.88	14.78	15.50
20	256QAM	1	0	14.99	14.83	14.90	14.77	14.80	15.50
20	256QAM	1	49	15.15	14.87	14.99	14.91	14.86	15.50
20	256QAM	1	99	14.90	14.79	14.85	14.67	14.69	15.50
20	256QAM	50	0	15.16	15.01	15.05	14.91	14.89	15.50
20	256QAM	50	24	15.14	14.97	15.03	14.85	14.83	15.50
20	256QAM	50	50	15.04	14.93	14.99	14.89	14.84	15.50
20	256QAM	100	0	15.06	14.97	15.01	14.84	14.82	15.50
Channel				55315	55820	55990	56160	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	15.08	14.85	14.85	14.74	14.74	15.50
15	QPSK	1	37	15.06	14.90	14.89	14.81	14.86	15.50
15	QPSK	1	74	14.89	14.80	14.84	14.66	14.65	15.50
15	QPSK	36	0	15.05	14.94	14.94	14.82	14.80	15.50
15	QPSK	36	20	15.10	14.89	14.91	14.81	14.74	15.50
15	QPSK	36	39	14.96	14.79	14.90	14.75	14.78	15.50
15	QPSK	75	0	15.13	14.81	15.01	14.78	14.78	15.50
15	16QAM	1	0	14.95	14.78	14.87	14.57	14.63	15.50
15	16QAM	1	37	14.90	14.78	14.95	14.81	14.75	15.50
15	16QAM	1	74	14.87	14.63	14.70	14.73	14.68	15.50
15	16QAM	36	0	15.00	14.79	14.96	14.83	14.80	15.50
15	16QAM	36	20	15.05	14.90	14.90	14.87	14.86	15.50
15	16QAM	36	39	15.08	14.88	14.90	14.80	14.79	15.50
15	16QAM	75	0	15.00	14.89	14.90	14.82	14.73	15.50
15	64QAM	1	0	14.93	14.81	14.78	14.74	14.66	15.50
15	64QAM	1	37	14.98	14.76	14.88	14.71	14.74	15.50
15	64QAM	1	74	14.84	14.67	14.79	14.70	14.56	15.50
15	64QAM	36	0	15.14	14.87	14.89	14.74	14.86	15.50
15	64QAM	36	20	15.03	14.81	14.95	14.68	14.79	15.50
15	64QAM	36	39	14.92	14.84	14.86	14.80	14.74	15.50
15	64QAM	75	0	14.96	14.81	14.90	14.80	14.74	15.50
15	256QAM	1	0	14.85	14.75	14.84	14.70	14.70	15.50
15	256QAM	1	37	15.12	14.80	14.94	14.85	14.78	15.50
15	256QAM	1	74	14.79	14.66	14.80	14.56	14.63	15.50
15	256QAM	36	0	15.14	14.87	14.95	14.78	14.78	15.50
15	256QAM	36	20	15.07	14.95	14.94	14.73	14.70	15.50
15	256QAM	36	39	15.02	14.87	14.89	14.75	14.71	15.50
15	256QAM	75	0	15.04	14.94	14.98	14.79	14.79	15.50
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	14.97	14.86	14.90	14.77	14.71	15.50
10	QPSK	1	25	15.10	14.93	14.92	14.79	14.82	15.50
10	QPSK	1	49	14.89	14.74	14.81	14.71	14.55	15.50
10	QPSK	25	0	15.14	14.96	14.95	14.81	14.78	15.50
10	QPSK	25	12	15.05	14.94	14.90	14.80	14.77	15.50
10	QPSK	25	25	15.02	14.82	14.95	14.67	14.75	15.50
10	QPSK	50	0	15.01	14.81	14.97	14.82	14.73	15.50
10	16QAM	1	0	15.05	14.76	14.88	14.60	14.66	15.50
10	16QAM	1	25	14.96	14.78	14.97	14.76	14.79	15.50
10	16QAM	1	49	14.91	14.70	14.71	14.70	14.60	15.50
10	16QAM	25	0	15.11	14.78	14.96	14.85	14.83	15.50
10	16QAM	25	12	15.03	14.97	14.94	14.81	14.77	15.50
10	16QAM	25	25	15.06	14.82	14.89	14.76	14.75	15.50
10	16QAM	50	0	15.02	14.87	14.94	14.83	14.67	15.50
10	64QAM	1	0	14.84	14.75	14.78	14.63	14.72	15.50
10	64QAM	1	25	15.02	14.72	14.83	14.67	14.77	15.50
10	64QAM	1	49	14.86	14.73	14.71	14.66	14.60	15.50
10	64QAM	25	0	15.06	14.90	14.94	14.77	14.72	15.50
10	64QAM	25	12	15.03	14.83	14.91	14.77	14.77	15.50
10	64QAM	25	25	15.01	14.88	14.87	14.68	14.68	15.50
10	64QAM	50	0	15.02	14.76	14.86	14.80	14.67	15.50
10	256QAM	1	0	14.94	14.69	14.87	14.72	14.77	15.50
10	256QAM	1	25	15.02	14.83	14.93	14.81	14.76	15.50

10	256QAM	1	49	14.82	14.73	14.82	14.57	14.55	15.50
10	256QAM	25	0	15.04	14.87	15.02	14.82	14.87	15.50
10	256QAM	25	12	15.03	14.88	14.94	14.70	14.76	15.50
10	256QAM	25	25	15.01	14.88	14.88	14.81	14.81	15.50
10	256QAM	50	0	14.97	14.96	14.97	14.73	14.73	15.50
Channel				55265	55810	55990	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	14.96	14.90	14.78	14.73	14.78	15.50
5	QPSK	1	12	15.13	14.92	14.88	14.87	14.78	15.50
5	QPSK	1	24	14.91	14.79	14.81	14.65	14.63	15.50
5	QPSK	12	0	15.05	14.93	15.00	14.90	14.80	15.50
5	QPSK	12	7	15.12	15.01	15.03	14.74	14.73	15.50
5	QPSK	12	13	15.03	14.89	14.95	14.75	14.72	15.50
5	QPSK	25	0	15.07	14.77	14.89	14.76	14.75	15.50
5	16QAM	1	0	15.02	14.78	14.79	14.62	14.71	15.50
5	16QAM	1	12	14.96	14.77	14.85	14.77	14.79	15.50
5	16QAM	1	24	14.98	14.75	14.73	14.66	14.63	15.50
5	16QAM	12	0	15.08	14.85	14.99	14.77	14.88	15.50
5	16QAM	12	7	15.12	14.88	14.96	14.79	14.86	15.50
5	16QAM	12	13	15.02	14.83	14.85	14.78	14.83	15.50
5	16QAM	25	0	14.99	14.95	14.92	14.86	14.76	15.50
5	64QAM	1	0	14.93	14.69	14.76	14.74	14.69	15.50
5	64QAM	1	12	14.97	14.85	14.92	14.72	14.71	15.50
5	64QAM	1	24	14.84	14.63	14.75	14.64	14.50	15.50
5	64QAM	12	0	15.17	14.85	15.01	14.75	14.83	15.50
5	64QAM	12	7	14.99	14.85	14.88	14.70	14.79	15.50
5	64QAM	12	13	15.02	14.89	14.85	14.71	14.66	15.50
5	64QAM	25	0	14.94	14.85	14.85	14.87	14.71	15.50
5	256QAM	1	0	14.85	14.73	14.86	14.63	14.68	15.50
5	256QAM	1	12	15.09	14.85	14.92	14.83	14.79	15.50
5	256QAM	1	24	14.85	14.78	14.78	14.56	14.65	15.50
5	256QAM	12	0	15.09	14.91	15.03	14.86	14.84	15.50
5	256QAM	12	7	15.11	14.86	14.98	14.76	14.74	15.50
5	256QAM	12	13	14.92	14.83	14.85	14.80	14.77	15.50
5	256QAM	25	0	15.03	14.92	14.96	14.72	14.72	15.50

【LTE Band 66_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	22.58	22.58	22.56	24.00
20	QPSK	1	49	22.73	22.81	22.71	24.00
20	QPSK	1	99	22.66	22.67	22.68	24.00
20	QPSK	50	0	21.72	21.80	21.76	23.00
20	QPSK	50	24	21.70	21.79	21.74	23.00
20	QPSK	50	50	21.71	21.78	21.73	23.00
20	QPSK	100	0	21.67	21.78	21.75	23.00
20	16QAM	1	0	21.86	21.82	21.84	23.00
20	16QAM	1	49	22.04	21.98	21.98	23.00
20	16QAM	1	99	21.93	22.00	21.92	23.00
20	16QAM	50	0	20.56	20.78	20.67	22.00
20	16QAM	50	24	20.68	20.80	20.69	22.00
20	16QAM	50	50	20.73	20.74	20.70	22.00
20	16QAM	100	0	20.62	20.75	20.69	22.00
20	64QAM	1	0	20.72	20.65	20.70	22.00
20	64QAM	1	49	20.87	20.89	20.85	22.00
20	64QAM	1	99	20.74	20.81	20.74	22.00
20	64QAM	50	0	19.72	19.89	19.64	21.00
20	64QAM	50	24	19.85	19.89	19.69	21.00
20	64QAM	50	50	19.82	19.89	19.68	21.00
20	64QAM	100	0	19.78	19.87	19.66	21.00
20	256QAM	1	0	17.20	17.62	17.59	19.00
20	256QAM	1	49	17.76	17.34	17.22	19.00
20	256QAM	1	99	17.72	17.41	17.10	19.00
20	256QAM	50	0	17.17	17.43	17.37	19.00
20	256QAM	50	24	17.31	17.36	17.38	19.00
20	256QAM	50	50	17.31	17.34	17.33	19.00
20	256QAM	100	0	17.34	17.41	17.31	19.00

Channel				132047	132322	132597	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	(dBm)
15	QPSK	1	0	22.54	22.46	22.49	24.00
15	QPSK	1	37	22.62	22.74	22.61	24.00
15	QPSK	1	74	22.58	22.53	22.64	24.00
15	QPSK	36	0	21.59	21.68	21.69	23.00
15	QPSK	36	20	21.59	21.70	21.66	23.00
15	QPSK	36	39	21.69	21.65	21.67	23.00
15	QPSK	75	0	21.60	21.71	21.67	23.00
15	16QAM	1	0	21.79	21.79	21.71	23.00
15	16QAM	1	37	21.94	21.95	21.96	23.00
15	16QAM	1	74	21.84	21.95	21.83	23.00
15	16QAM	36	0	20.41	20.67	20.63	22.00
15	16QAM	36	20	20.64	20.77	20.60	22.00
15	16QAM	36	39	20.70	20.72	20.69	22.00
15	16QAM	75	0	20.61	20.64	20.64	22.00
15	64QAM	1	0	20.68	20.64	20.60	22.00
15	64QAM	1	37	20.78	20.80	20.77	22.00
15	64QAM	1	74	20.66	20.79	20.66	22.00
15	64QAM	36	0	19.71	19.85	19.56	21.00
15	64QAM	36	20	19.72	19.80	19.68	21.00
15	64QAM	36	39	19.68	19.78	19.60	21.00
15	64QAM	75	0	19.74	19.75	19.64	21.00
15	256QAM	1	0	17.12	17.47	17.49	19.00
15	256QAM	1	37	17.68	17.22	17.15	19.00
15	256QAM	1	74	17.59	17.37	17.05	19.00
15	256QAM	36	0	17.13	17.34	17.29	19.00
15	256QAM	36	20	17.19	17.30	17.36	19.00
15	256QAM	36	39	17.22	17.29	17.30	19.00
15	256QAM	75	0	17.26	17.28	17.24	19.00
Channel				132022	132322	132622	Tune-up limit
Frequency (MHz)				1715	1745	1775	(dBm)
10	QPSK	1	0	22.55	22.46	22.48	24.00
10	QPSK	1	25	22.64	22.68	22.69	24.00
10	QPSK	1	49	22.59	22.54	22.63	24.00
10	QPSK	25	0	21.65	21.66	21.64	23.00
10	QPSK	25	12	21.68	21.74	21.73	23.00
10	QPSK	25	25	21.70	21.73	21.63	23.00
10	QPSK	50	0	21.53	21.64	21.65	23.00
10	16QAM	1	0	21.77	21.72	21.80	23.00
10	16QAM	1	25	21.92	21.93	21.85	23.00
10	16QAM	1	49	21.90	21.87	21.84	23.00
10	16QAM	25	0	20.45	20.67	20.60	22.00
10	16QAM	25	12	20.62	20.71	20.58	22.00
10	16QAM	25	25	20.62	20.61	20.61	22.00
10	16QAM	50	0	20.58	20.63	20.56	22.00
10	64QAM	1	0	20.65	20.58	20.55	22.00
10	64QAM	1	25	20.76	20.86	20.78	22.00
10	64QAM	1	49	20.62	20.76	20.72	22.00
10	64QAM	25	0	19.59	19.86	19.56	21.00
10	64QAM	25	12	19.83	19.74	19.54	21.00
10	64QAM	25	25	19.69	19.77	19.53	21.00
10	64QAM	50	0	19.63	19.79	19.53	21.00
10	256QAM	1	0	17.17	17.50	17.55	19.00
10	256QAM	1	25	17.62	17.29	17.14	19.00
10	256QAM	1	49	17.64	17.40	17.02	19.00
10	256QAM	25	0	17.14	17.37	17.32	19.00
10	256QAM	25	12	17.19	17.29	17.25	19.00
10	256QAM	25	25	17.25	17.20	17.19	19.00
10	256QAM	50	0	17.24	17.39	17.23	19.00
Channel				131997	132322	132647	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	(dBm)
5	QPSK	1	0	22.54	22.57	22.53	24.00
5	QPSK	1	12	22.62	22.70	22.58	24.00
5	QPSK	1	24	22.60	22.54	22.60	24.00
5	QPSK	12	0	21.63	21.71	21.75	23.00
5	QPSK	12	7	21.68	21.75	21.59	23.00
5	QPSK	12	13	21.67	21.70	21.60	23.00
5	QPSK	25	0	21.57	21.73	21.60	23.00
5	16QAM	1	0	21.71	21.75	21.71	23.00
5	16QAM	1	12	21.97	21.88	21.95	23.00
5	16QAM	1	24	21.78	21.94	21.91	23.00
5	16QAM	12	0	20.47	20.73	20.64	22.00
5	16QAM	12	7	20.55	20.73	20.62	22.00
5	16QAM	12	13	20.60	20.65	20.64	22.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

5	16QAM	25	0	20.59	20.70	20.63	22.00
5	64QAM	1	0	20.60	20.63	20.55	22.00
5	64QAM	1	12	20.73	20.87	20.75	22.00
5	64QAM	1	24	20.63	20.68	20.65	22.00
5	64QAM	12	0	19.63	19.87	19.50	21.00
5	64QAM	12	7	19.76	19.82	19.66	21.00
5	64QAM	12	13	19.68	19.84	19.55	21.00
5	64QAM	25	0	19.67	19.78	19.52	21.00
5	256QAM	1	0	17.11	17.48	17.52	19.00
5	256QAM	1	12	17.68	17.22	17.20	19.00
5	256QAM	1	24	17.61	17.27	17.07	19.00
5	256QAM	12	0	17.07	17.36	17.33	19.00
5	256QAM	12	7	17.19	17.25	17.33	19.00
5	256QAM	12	13	17.21	17.20	17.18	19.00
5	256QAM	25	0	17.26	17.28	17.25	19.00
Channel				131987	132322	132657	Tune-up limit
Frequency (MHz)				1711.5	1745	1778.5	(dBm)
3	QPSK	1	0	22.50	22.51	22.54	24.00
3	QPSK	1	8	22.68	22.72	22.61	24.00
3	QPSK	1	14	22.63	22.61	22.53	24.00
3	QPSK	8	0	21.65	21.68	21.69	23.00
3	QPSK	8	4	21.55	21.75	21.73	23.00
3	QPSK	8	7	21.59	21.63	21.68	23.00
3	QPSK	15	0	21.59	21.68	21.63	23.00
3	16QAM	1	0	21.74	21.76	21.78	23.00
3	16QAM	1	8	22.02	21.91	21.94	23.00
3	16QAM	1	14	21.88	21.93	21.90	23.00
3	16QAM	8	0	20.48	20.68	20.65	22.00
3	16QAM	8	4	20.56	20.67	20.68	22.00
3	16QAM	8	7	20.69	20.60	20.65	22.00
3	16QAM	15	0	20.55	20.62	20.54	22.00
3	64QAM	1	0	20.63	20.59	20.65	22.00
3	64QAM	1	8	20.82	20.76	20.83	22.00
3	64QAM	1	14	20.71	20.80	20.64	22.00
3	64QAM	8	0	19.71	19.88	19.61	21.00
3	64QAM	8	4	19.73	19.78	19.60	21.00
3	64QAM	8	7	19.75	19.81	19.67	21.00
3	64QAM	15	0	19.71	19.72	19.62	21.00
3	256QAM	1	0	17.11	17.49	17.52	19.00
3	256QAM	1	8	17.65	17.32	17.20	19.00
3	256QAM	1	14	17.64	17.32	17.01	19.00
3	256QAM	8	0	17.13	17.32	17.32	19.00
3	256QAM	8	4	17.17	17.33	17.35	19.00
3	256QAM	8	7	17.20	17.23	17.23	19.00
3	256QAM	15	0	17.21	17.30	17.25	19.00
Channel				131979	132322	132665	Tune-up limit
Frequency (MHz)				1710.7	1745	1779.3	(dBm)
1.4	QPSK	1	0	22.72	22.76	22.71	24.00
1.4	QPSK	1	3	22.77	22.78	22.71	24.00
1.4	QPSK	1	5	22.71	22.75	22.69	24.00
1.4	QPSK	3	0	22.75	22.80	22.75	24.00
1.4	QPSK	3	1	22.77	22.80	22.75	24.00
1.4	QPSK	3	3	22.76	22.78	22.75	24.00
1.4	QPSK	6	0	21.71	21.78	21.76	23.00
1.4	16QAM	1	0	22.02	22.01	22.02	23.00
1.4	16QAM	1	3	22.05	22.04	22.05	23.00
1.4	16QAM	1	5	22.00	22.02	21.89	23.00
1.4	16QAM	3	0	21.72	21.81	21.72	23.00
1.4	16QAM	3	1	21.69	21.76	21.78	23.00
1.4	16QAM	3	3	21.74	21.78	21.72	23.00
1.4	16QAM	6	0	20.79	20.83	20.79	22.00
1.4	64QAM	1	0	20.91	20.86	20.81	22.00
1.4	64QAM	1	3	20.87	20.88	20.85	22.00
1.4	64QAM	1	5	20.89	20.90	20.87	22.00
1.4	64QAM	3	0	20.79	20.82	20.79	22.00
1.4	64QAM	3	1	20.78	20.87	20.84	22.00
1.4	64QAM	3	3	20.78	20.84	20.77	22.00
1.4	64QAM	6	0	19.85	19.71	19.66	21.00
1.4	256QAM	1	0	17.16	17.55	17.52	19.00
1.4	256QAM	1	3	17.68	17.30	17.08	19.00
1.4	256QAM	1	5	17.70	17.30	17.01	19.00
1.4	256QAM	3	0	17.03	17.33	17.31	19.00
1.4	256QAM	3	1	17.28	17.27	17.36	19.00
1.4	256QAM	3	3	17.16	17.29	17.27	19.00
1.4	256QAM	6	0	17.33	17.29	17.18	19.00



【LTE Band 66_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	15.90	15.93	15.88	16.00
20	QPSK	1	49	15.85	15.95	15.83	16.00
20	QPSK	1	99	15.81	15.90	15.78	16.00
20	QPSK	50	0	15.84	15.89	15.82	16.00
20	QPSK	50	24	15.76	15.87	15.78	16.00
20	QPSK	50	50	15.64	15.80	15.61	16.00
20	QPSK	100	0	15.76	15.85	15.77	16.00
20	16QAM	1	0	15.81	15.90	15.74	16.00
20	16QAM	1	49	15.79	15.92	15.79	16.00
20	16QAM	1	99	15.75	15.87	15.80	16.00
20	16QAM	50	0	15.77	15.86	15.79	16.00
20	16QAM	50	24	15.71	15.84	15.74	16.00
20	16QAM	50	50	15.72	15.77	15.69	16.00
20	16QAM	100	0	15.72	15.82	15.74	16.00
20	64QAM	1	0	15.78	15.89	15.75	16.00
20	64QAM	1	49	15.73	15.91	15.76	16.00
20	64QAM	1	99	15.76	15.86	15.68	16.00
20	64QAM	50	0	15.75	15.85	15.67	16.00
20	64QAM	50	24	15.73	15.83	15.68	16.00
20	64QAM	50	50	15.71	15.76	15.57	16.00
20	64QAM	100	0	15.68	15.81	15.74	16.00
20	256QAM	1	0	15.79	15.91	15.84	16.00
20	256QAM	1	49	15.80	15.93	15.74	16.00
20	256QAM	1	99	15.74	15.88	15.71	16.00
20	256QAM	50	0	15.70	15.87	15.80	16.00
20	256QAM	50	24	15.79	15.85	15.66	16.00
20	256QAM	50	50	15.67	15.78	15.66	16.00
20	256QAM	100	0	15.67	15.83	15.69	16.00
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	15.75	15.84	15.83	16.00
15	QPSK	1	37	15.81	15.84	15.68	16.00
15	QPSK	1	74	15.75	15.80	15.72	16.00
15	QPSK	36	0	15.75	15.80	15.67	16.00
15	QPSK	36	20	15.70	15.75	15.73	16.00
15	QPSK	36	39	15.61	15.67	15.54	16.00
15	QPSK	75	0	15.66	15.83	15.64	16.00
15	16QAM	1	0	15.66	15.89	15.66	16.00
15	16QAM	1	37	15.65	15.86	15.72	16.00
15	16QAM	1	74	15.69	15.79	15.71	16.00
15	16QAM	36	0	15.69	15.76	15.71	16.00
15	16QAM	36	20	15.65	15.73	15.71	16.00
15	16QAM	36	39	15.63	15.68	15.56	16.00
15	16QAM	75	0	15.69	15.74	15.66	16.00
15	64QAM	1	0	15.70	15.77	15.70	16.00
15	64QAM	1	37	15.59	15.84	15.70	16.00
15	64QAM	1	74	15.71	15.74	15.67	16.00
15	64QAM	36	0	15.72	15.72	15.66	16.00
15	64QAM	36	20	15.62	15.72	15.55	16.00
15	64QAM	36	39	15.66	15.64	15.55	16.00
15	64QAM	75	0	15.65	15.76	15.71	16.00
15	256QAM	1	0	15.66	15.89	15.83	16.00
15	256QAM	1	37	15.79	15.80	15.62	16.00
15	256QAM	1	74	15.66	15.75	15.64	16.00
15	256QAM	36	0	15.68	15.83	15.69	16.00
15	256QAM	36	20	15.75	15.82	15.62	16.00
15	256QAM	36	39	15.59	15.65	15.53	16.00
15	256QAM	75	0	15.57	15.72	15.67	16.00
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	15.85	15.90	15.85	16.00
10	QPSK	1	25	15.73	15.81	15.82	16.00
10	QPSK	1	49	15.79	15.80	15.73	16.00
10	QPSK	25	0	15.73	15.85	15.78	16.00
10	QPSK	25	12	15.66	15.78	15.67	16.00
10	QPSK	25	25	15.61	15.79	15.55	16.00
10	QPSK	50	0	15.75	15.78	15.72	16.00
10	16QAM	1	0	15.70	15.77	15.67	16.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

10	16QAM	1	25	15.75	15.85	15.72	16.00
10	16QAM	1	49	15.63	15.78	15.75	16.00
10	16QAM	25	0	15.65	15.79	15.66	16.00
10	16QAM	25	12	15.65	15.82	15.69	16.00
10	16QAM	25	25	15.71	15.73	15.67	16.00
10	16QAM	50	0	15.66	15.71	15.63	16.00
10	64QAM	1	0	15.64	15.79	15.69	16.00
10	64QAM	1	25	15.69	15.84	15.64	16.00
10	64QAM	1	49	15.68	15.73	15.60	16.00
10	64QAM	25	0	15.72	15.75	15.61	16.00
10	64QAM	25	12	15.71	15.81	15.56	16.00
10	64QAM	25	25	15.63	15.61	15.55	16.00
10	64QAM	50	0	15.59	15.73	15.67	16.00
10	256QAM	1	0	15.78	15.88	15.82	16.00
10	256QAM	1	25	15.74	15.79	15.71	16.00
10	256QAM	1	49	15.59	15.79	15.59	16.00
10	256QAM	25	0	15.68	15.73	15.67	16.00
10	256QAM	25	12	15.73	15.84	15.60	16.00
10	256QAM	25	25	15.61	15.76	15.56	16.00
10	256QAM	50	0	15.61	15.82	15.60	16.00
Channel				131997	132322	132647	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	(dBm)
5	QPSK	1	0	15.87	15.89	15.80	16.00
5	QPSK	1	12	15.84	15.86	15.68	16.00
5	QPSK	1	24	15.70	15.76	15.73	16.00
5	QPSK	12	0	15.73	15.81	15.74	16.00
5	QPSK	12	7	15.65	15.86	15.74	16.00
5	QPSK	12	13	15.55	15.71	15.53	16.00
5	QPSK	25	0	15.74	15.75	15.69	16.00
5	16QAM	1	0	15.74	15.87	15.69	16.00
5	16QAM	1	12	15.67	15.86	15.69	16.00
5	16QAM	1	24	15.62	15.78	15.68	16.00
5	16QAM	12	0	15.72	15.78	15.72	16.00
5	16QAM	12	7	15.66	15.81	15.72	16.00
5	16QAM	12	13	15.59	15.74	15.64	16.00
5	16QAM	25	0	15.61	15.68	15.64	16.00
5	64QAM	1	0	15.70	15.77	15.69	16.00
5	64QAM	1	12	15.62	15.84	15.64	16.00
5	64QAM	1	24	15.71	15.72	15.54	16.00
5	64QAM	12	0	15.70	15.73	15.63	16.00
5	64QAM	12	7	15.69	15.76	15.55	16.00
5	64QAM	12	13	15.61	15.71	15.46	16.00
5	64QAM	25	0	15.55	15.80	15.62	16.00
5	256QAM	1	0	15.66	15.78	15.72	16.00
5	256QAM	1	12	15.71	15.84	15.64	16.00
5	256QAM	1	24	15.65	15.76	15.58	16.00
5	256QAM	12	0	15.61	15.81	15.78	16.00
5	256QAM	12	7	15.76	15.70	15.57	16.00
5	256QAM	12	13	15.58	15.76	15.57	16.00
5	256QAM	25	0	15.62	15.72	15.55	16.00
Channel				131987	132322	132657	Tune-up limit
Frequency (MHz)				1711.5	1745	1778.5	(dBm)
3	QPSK	1	0	15.89	15.80	15.78	16.00
3	QPSK	1	8	15.71	15.82	15.71	16.00
3	QPSK	1	14	15.73	15.79	15.73	16.00
3	QPSK	8	0	15.71	15.78	15.76	16.00
3	QPSK	8	4	15.66	15.78	15.64	16.00
3	QPSK	8	7	15.55	15.66	15.55	16.00
3	QPSK	15	0	15.62	15.82	15.64	16.00
3	16QAM	1	0	15.72	15.76	15.71	16.00
3	16QAM	1	8	15.73	15.85	15.73	16.00
3	16QAM	1	14	15.73	15.84	15.76	16.00
3	16QAM	8	0	15.75	15.73	15.73	16.00
3	16QAM	8	4	15.64	15.81	15.61	16.00
3	16QAM	8	7	15.67	15.70	15.67	16.00
3	16QAM	15	0	15.69	15.75	15.71	16.00
3	64QAM	1	0	15.68	15.84	15.72	16.00
3	64QAM	1	8	15.70	15.80	15.68	16.00
3	64QAM	1	14	15.61	15.77	15.56	16.00
3	64QAM	8	0	15.73	15.76	15.61	16.00
3	64QAM	8	4	15.68	15.69	15.61	16.00
3	64QAM	8	7	15.60	15.74	15.46	16.00
3	64QAM	15	0	15.59	15.66	15.63	16.00
3	256QAM	1	0	15.73	15.89	15.72	16.00
3	256QAM	1	8	15.69	15.84	15.59	16.00

3	256QAM	1	14	15.59	15.78	15.64	16.00
3	256QAM	8	0	15.57	15.79	15.78	16.00
3	256QAM	8	4	15.67	15.79	15.57	16.00
3	256QAM	8	7	15.55	15.64	15.64	16.00
3	256QAM	15	0	15.61	15.68	15.54	16.00
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	15.75	15.79	15.82	16.00
1.4	QPSK	1	3	15.72	15.94	15.81	16.00
1.4	QPSK	1	5	15.73	15.81	15.64	16.00
1.4	QPSK	3	0	15.74	15.83	15.79	16.00
1.4	QPSK	3	1	15.70	15.81	15.73	16.00
1.4	QPSK	3	3	15.55	15.67	15.59	16.00
1.4	QPSK	6	0	15.74	15.79	15.67	16.00
1.4	16QAM	1	0	15.70	15.83	15.67	16.00
1.4	16QAM	1	3	15.68	15.80	15.78	16.00
1.4	16QAM	1	5	15.61	15.80	15.75	16.00
1.4	16QAM	3	0	15.74	15.73	15.74	16.00
1.4	16QAM	3	1	15.65	15.70	15.65	16.00
1.4	16QAM	3	3	15.64	15.76	15.67	16.00
1.4	16QAM	6	0	15.66	15.68	15.63	16.00
1.4	64QAM	1	0	15.72	15.87	15.71	16.00
1.4	64QAM	1	3	15.68	15.87	15.73	16.00
1.4	64QAM	1	5	15.62	15.79	15.54	16.00
1.4	64QAM	3	0	15.68	15.73	15.58	16.00
1.4	64QAM	3	1	15.64	15.79	15.53	16.00
1.4	64QAM	3	3	15.64	15.69	15.49	16.00
1.4	64QAM	6	0	15.59	15.67	15.73	16.00
1.4	256QAM	1	0	15.64	15.80	15.79	16.00
1.4	256QAM	1	3	15.71	15.89	15.65	16.00
1.4	256QAM	1	5	15.64	15.84	15.65	16.00
1.4	256QAM	3	0	15.55	15.73	15.77	16.00
1.4	256QAM	3	1	15.78	15.72	15.61	16.00
1.4	256QAM	3	3	15.52	15.74	15.58	16.00
1.4	256QAM	6	0	15.54	15.81	15.60	16.00

【LTE Band 71_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	23.02	22.95	23.02	24.00
20	QPSK	1	49	23.03	23.15	23.19	24.00
20	QPSK	1	99	22.94	23.00	22.98	24.00
20	QPSK	50	0	21.86	22.13	22.13	23.00
20	QPSK	50	24	22.04	22.12	22.15	23.00
20	QPSK	50	50	22.10	22.11	22.08	23.00
20	QPSK	100	0	21.97	22.08	22.07	23.00
20	16QAM	1	0	22.30	22.18	22.20	23.00
20	16QAM	1	49	22.34	22.47	22.35	23.00
20	16QAM	1	99	22.19	22.29	22.19	23.00
20	16QAM	50	0	20.86	20.99	21.08	22.00
20	16QAM	50	24	21.01	21.07	21.13	22.00
20	16QAM	50	50	21.08	21.11	21.06	22.00
20	16QAM	100	0	20.93	21.02	21.08	22.00
20	64QAM	1	0	21.12	21.06	21.15	22.00
20	64QAM	1	49	21.15	21.26	21.32	22.00
20	64QAM	1	99	21.09	21.12	21.09	22.00
20	64QAM	50	0	19.83	20.01	20.08	21.00
20	64QAM	50	24	20.02	20.09	20.14	21.00
20	64QAM	50	50	20.04	20.08	20.04	21.00
20	64QAM	100	0	20.01	19.98	19.96	21.00
20	256QAM	1	0	17.48	17.30	17.66	19.00
20	256QAM	1	49	17.68	17.61	18.01	19.00
20	256QAM	1	99	17.49	17.22	17.23	19.00
20	256QAM	50	0	17.32	17.43	17.56	19.00
20	256QAM	50	24	17.48	17.57	17.57	19.00
20	256QAM	50	50	17.53	17.59	17.51	19.00
20	256QAM	100	0	17.50	17.55	17.55	19.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

Channel				133197	133297	133397	Tune-up limit
Frequency (MHz)				670.5	680.5	690.5	(dBm)
15	QPSK	1	0	22.94	22.80	22.96	24.00
15	QPSK	1	37	22.97	23.12	23.04	24.00
15	QPSK	1	74	22.84	22.97	22.96	24.00
15	QPSK	36	0	21.82	22.11	22.09	23.00
15	QPSK	36	20	21.92	22.07	22.13	23.00
15	QPSK	36	39	22.05	22.00	21.93	23.00
15	QPSK	75	0	21.84	21.98	21.99	23.00
15	16QAM	1	0	22.28	22.11	22.15	23.00
15	16QAM	1	37	22.28	22.45	22.25	23.00
15	16QAM	1	74	22.18	22.24	22.13	23.00
15	16QAM	36	0	20.78	20.94	21.01	22.00
15	16QAM	36	20	20.99	21.00	21.00	22.00
15	16QAM	36	39	21.03	21.10	20.95	22.00
15	16QAM	75	0	20.87	20.97	21.02	22.00
15	64QAM	1	0	21.01	20.93	21.01	22.00
15	64QAM	1	37	21.04	21.20	21.30	22.00
15	64QAM	1	74	21.02	20.98	21.06	22.00
15	64QAM	36	0	19.74	19.88	20.02	21.00
15	64QAM	36	20	19.89	20.05	20.02	21.00
15	64QAM	36	39	19.96	19.94	19.93	21.00
15	64QAM	75	0	19.99	19.96	19.92	21.00
15	256QAM	1	0	17.34	17.17	17.61	19.00
15	256QAM	1	37	17.54	17.50	17.91	19.00
15	256QAM	1	74	17.40	17.11	17.14	19.00
15	256QAM	36	0	17.20	17.37	17.43	19.00
15	256QAM	36	20	17.43	17.42	17.53	19.00
15	256QAM	36	39	17.46	17.50	17.48	19.00
15	256QAM	75	0	17.46	17.52	17.52	19.00
Channel				133172	133297	133422	Tune-up limit
Frequency (MHz)				668	680.5	693	(dBm)
10	QPSK	1	0	22.93	22.89	22.98	24.00
10	QPSK	1	25	22.92	23.00	23.08	24.00
10	QPSK	1	49	22.92	22.90	22.93	24.00
10	QPSK	25	0	21.83	22.12	22.01	23.00
10	QPSK	25	12	21.98	22.00	22.05	23.00
10	QPSK	25	25	22.02	21.96	22.01	23.00
10	QPSK	50	0	21.89	22.01	21.96	23.00
10	16QAM	1	0	22.28	22.13	22.09	23.00
10	16QAM	1	25	22.21	22.41	22.31	23.00
10	16QAM	1	49	22.06	22.24	22.17	23.00
10	16QAM	25	0	20.77	20.93	20.99	22.00
10	16QAM	25	12	20.96	20.97	21.09	22.00
10	16QAM	25	25	20.99	20.99	21.04	22.00
10	16QAM	50	0	20.86	20.89	21.06	22.00
10	64QAM	1	0	21.00	21.00	21.04	22.00
10	64QAM	1	25	21.01	21.16	21.30	22.00
10	64QAM	1	49	20.98	21.04	20.94	22.00
10	64QAM	25	0	19.79	19.97	20.01	21.00
10	64QAM	25	12	19.93	20.08	20.13	21.00
10	64QAM	25	25	20.00	20.06	20.00	21.00
10	64QAM	50	0	19.90	19.95	19.87	21.00
10	256QAM	1	0	17.38	17.23	17.51	19.00
10	256QAM	1	25	17.55	17.58	17.93	19.00
10	256QAM	1	49	17.46	17.11	17.08	19.00
10	256QAM	25	0	17.29	17.34	17.44	19.00
10	256QAM	25	12	17.40	17.49	17.47	19.00
10	256QAM	25	25	17.44	17.47	17.49	19.00
10	256QAM	50	0	17.36	17.45	17.43	19.00
Channel				133147	133297	133447	Tune-up limit
Frequency (MHz)				665.5	680.5	695.5	(dBm)
5	QPSK	1	0	23.00	22.89	22.93	24.00
5	QPSK	1	12	23.02	23.07	23.04	24.00
5	QPSK	1	24	22.85	22.99	22.90	24.00
5	QPSK	12	0	21.73	22.09	22.05	23.00
5	QPSK	12	7	22.00	22.05	22.00	23.00
5	QPSK	12	13	22.05	21.99	21.97	23.00
5	QPSK	25	0	21.91	21.96	21.94	23.00
5	16QAM	1	0	22.20	22.10	22.14	23.00
5	16QAM	1	12	22.32	22.43	22.27	23.00
5	16QAM	1	24	22.05	22.16	22.10	23.00
5	16QAM	12	0	20.78	20.96	21.01	22.00
5	16QAM	12	7	20.90	20.94	21.05	22.00
5	16QAM	12	13	20.98	21.06	20.94	22.00

5	16QAM	25	0	20.83	20.93	21.05	22.00
5	64QAM	1	0	21.01	20.91	21.02	22.00
5	64QAM	1	12	21.02	21.14	21.30	22.00
5	64QAM	1	24	21.08	21.04	21.01	22.00
5	64QAM	12	0	19.70	19.94	20.05	21.00
5	64QAM	12	7	19.89	20.01	20.02	21.00
5	64QAM	12	13	19.97	19.96	19.90	21.00
5	64QAM	25	0	19.91	19.93	19.90	21.00
5	256QAM	1	0	17.42	17.16	17.65	19.00
5	256QAM	1	12	17.54	17.59	17.93	19.00
5	256QAM	1	24	17.36	17.08	17.18	19.00
5	256QAM	12	0	17.19	17.31	17.46	19.00
5	256QAM	12	7	17.43	17.51	17.49	19.00
5	256QAM	12	13	17.44	17.45	17.37	19.00
5	256QAM	25	0	17.43	17.43	17.52	19.00

【LTE Band 71_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	Tune-up limit (dBm)
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	19.70	19.72	19.68	20.00
20	QPSK	1	49	19.73	19.89	19.72	20.00
20	QPSK	1	99	19.63	19.75	19.62	20.00
20	QPSK	50	0	19.64	19.80	19.65	20.00
20	QPSK	50	24	19.70	19.74	19.55	20.00
20	QPSK	50	50	19.63	19.79	19.61	20.00
20	QPSK	100	0	18.62	18.77	18.64	20.00
20	16QAM	1	0	19.59	19.70	19.64	20.00
20	16QAM	1	49	19.73	19.87	19.71	20.00
20	16QAM	1	99	19.69	19.73	19.61	20.00
20	16QAM	50	0	19.68	19.78	19.62	20.00
20	16QAM	50	24	19.62	19.72	19.55	20.00
20	16QAM	50	50	19.61	19.77	19.63	20.00
20	16QAM	100	0	18.65	18.75	18.57	20.00
20	64QAM	1	0	19.52	19.64	19.53	20.00
20	64QAM	1	49	19.67	19.81	19.71	20.00
20	64QAM	1	99	19.51	19.67	19.53	20.00
20	64QAM	50	0	19.67	19.72	19.67	20.00
20	64QAM	50	24	19.58	19.66	19.52	20.00
20	64QAM	50	50	19.57	19.71	19.60	20.00
20	64QAM	100	0	18.59	18.69	18.53	20.00
20	256QAM	1	0	19.65	19.70	19.56	20.00
20	256QAM	1	49	19.70	19.87	19.77	20.00
20	256QAM	1	99	19.57	19.73	19.58	20.00
20	256QAM	50	0	19.67	19.78	19.71	20.00
20	256QAM	50	24	19.67	19.72	19.56	20.00
20	256QAM	50	50	19.71	19.77	19.70	20.00
20	256QAM	100	0	18.66	18.75	18.65	20.00
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	19.65	19.61	19.60	20.00
15	QPSK	1	37	19.70	19.82	19.58	20.00
15	QPSK	1	74	19.57	19.69	19.59	20.00
15	QPSK	36	0	19.56	19.69	19.52	20.00
15	QPSK	36	20	19.63	19.66	19.47	20.00
15	QPSK	36	39	19.51	19.75	19.59	20.00
15	QPSK	75	0	18.49	18.67	18.55	20.00
15	16QAM	1	0	19.57	19.63	19.53	20.00
15	16QAM	1	37	19.63	19.72	19.68	20.00
15	16QAM	1	74	19.56	19.68	19.48	20.00
15	16QAM	36	0	19.57	19.64	19.53	20.00
15	16QAM	36	20	19.53	19.68	19.51	20.00
15	16QAM	36	39	19.47	19.74	19.57	20.00
15	16QAM	75	0	18.55	18.60	18.51	20.00
15	64QAM	1	0	19.47	19.60	19.49	20.00
15	64QAM	1	37	19.65	19.76	19.57	20.00
15	64QAM	1	74	19.37	19.64	19.49	20.00
15	64QAM	36	0	19.60	19.62	19.54	20.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

15	64QAM	36	20	19.50	19.53	19.43	20.00
15	64QAM	36	39	19.52	19.59	19.57	20.00
15	64QAM	75	0	18.53	18.67	18.39	20.00
15	256QAM	1	0	19.62	19.63	19.44	20.00
15	256QAM	1	37	19.63	19.83	19.62	20.00
15	256QAM	1	74	19.49	19.60	19.49	20.00
15	256QAM	36	0	19.63	19.73	19.60	20.00
15	256QAM	36	20	19.65	19.70	19.52	20.00
15	256QAM	36	39	19.63	19.65	19.56	20.00
15	256QAM	75	0	18.60	18.63	18.51	20.00
Channel				133172	133297	133422	Tune-up limit
Frequency (MHz)				668	680.5	693	(dBm)
10	QPSK	1	0	19.60	19.63	19.66	20.00
10	QPSK	1	25	19.69	19.78	19.62	20.00
10	QPSK	1	49	19.51	19.70	19.54	20.00
10	QPSK	25	0	19.53	19.75	19.62	20.00
10	QPSK	25	12	19.57	19.60	19.44	20.00
10	QPSK	25	25	19.62	19.67	19.47	20.00
10	QPSK	50	0	18.49	18.73	18.60	20.00
10	16QAM	1	0	19.53	19.55	19.59	20.00
10	16QAM	1	25	19.66	19.73	19.65	20.00
10	16QAM	1	49	19.58	19.68	19.57	20.00
10	16QAM	25	0	19.60	19.65	19.48	20.00
10	16QAM	25	12	19.55	19.64	19.52	20.00
10	16QAM	25	25	19.59	19.75	19.49	20.00
10	16QAM	50	0	18.62	18.72	18.48	20.00
10	64QAM	1	0	19.50	19.49	19.39	20.00
10	64QAM	1	25	19.60	19.74	19.69	20.00
10	64QAM	1	49	19.40	19.64	19.51	20.00
10	64QAM	25	0	19.54	19.69	19.55	20.00
10	64QAM	25	12	19.56	19.62	19.46	20.00
10	64QAM	25	25	19.42	19.62	19.55	20.00
10	64QAM	50	0	18.52	18.57	18.38	20.00
10	256QAM	1	0	19.55	19.57	19.45	20.00
10	256QAM	1	25	19.67	19.85	19.74	20.00
10	256QAM	1	49	19.45	19.62	19.54	20.00
10	256QAM	25	0	19.61	19.63	19.57	20.00
10	256QAM	25	12	19.63	19.66	19.46	20.00
10	256QAM	25	25	19.67	19.64	19.58	20.00
10	256QAM	50	0	18.54	18.71	18.56	20.00
Channel				133147	133297	133447	Tune-up limit
Frequency (MHz)				665.5	680.5	695.5	(dBm)
5	QPSK	1	0	19.63	19.58	19.61	20.00
5	QPSK	1	12	19.67	19.79	19.61	20.00
5	QPSK	1	24	19.49	19.73	19.56	20.00
5	QPSK	12	0	19.51	19.70	19.51	20.00
5	QPSK	12	7	19.67	19.70	19.41	20.00
5	QPSK	12	13	19.55	19.70	19.51	20.00
5	QPSK	25	0	18.58	18.74	18.61	20.00
5	16QAM	1	0	19.44	19.62	19.53	20.00
5	16QAM	1	12	19.67	19.83	19.62	20.00
5	16QAM	1	24	19.65	19.68	19.51	20.00
5	16QAM	12	0	19.63	19.63	19.60	20.00
5	16QAM	12	7	19.50	19.66	19.41	20.00
5	16QAM	12	13	19.54	19.63	19.57	20.00
5	16QAM	25	0	18.60	18.63	18.50	20.00
5	64QAM	1	0	19.50	19.49	19.40	20.00
5	64QAM	1	12	19.55	19.78	19.66	20.00
5	64QAM	1	24	19.48	19.59	19.49	20.00
5	64QAM	12	0	19.52	19.70	19.55	20.00
5	64QAM	12	7	19.45	19.61	19.43	20.00
5	64QAM	12	13	19.43	19.66	19.58	20.00
5	64QAM	25	0	18.53	18.67	18.48	20.00
5	256QAM	1	0	19.62	19.67	19.47	20.00
5	256QAM	1	12	19.55	19.72	19.72	20.00
5	256QAM	1	24	19.52	19.60	19.52	20.00
5	256QAM	12	0	19.60	19.73	19.69	20.00
5	256QAM	12	7	19.63	19.59	19.45	20.00
5	256QAM	12	13	19.65	19.74	19.66	20.00
5	256QAM	25	0	18.56	18.61	18.51	20.00

12. UL/DL Carrier aggregation

LTE DL Carrier Aggregation

General Note:

1. According to 202410 TCB workshop, the downlink (DL) pertains to receiver functionality, thus it is not related to RF exposure compliance limits related to cumulative effects of different transmitters.
2. According to 202410 TCB workshop, equipment authorization applications shall refer to the worst-case UL powers resulting from all the possible modes of operations. Accordingly, CA-DL cases do not need to be analyzed separately, unless pertinent to establishing UL power setting.
3. This device supports LTE carrier aggregation in the downlink. All 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

LTE UL carrier aggregation

General Note:

1. The device supports intra-band 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 3GPP requirement.
2. 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.
3. 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.

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

【CA_2C_Ant 5_NB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
18700	18898	QPSK	1	0	0	0	22.61	24.00
18900	19098	QPSK	1	0	1	99	22.65	24.00
19100	18902	QPSK	1	0	1	99	22.57	24.00

【CA_2C_Ant 5_TB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
18700	18898	QPSK	1	0	0	0	14.93	16.00
18900	19098	QPSK	1	0	1	99	14.90	16.00
19100	18902	QPSK	1	0	1	99	14.95	16.00

【CA_7C_Ant 5_NB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
20850	21048	QPSK	1	0	0	0	23.00	24.00
21100	20902	QPSK	1	0	1	99	22.96	24.00
21350	21152	QPSK	1	0	1	99	22.82	24.00

【CA_7C_Ant 5_TB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
20850	21048	QPSK	1	0	0	0	15.01	15.50
21100	20902	QPSK	1	0	1	99	14.98	15.50
21350	21152	QPSK	1	0	1	99	14.96	15.50

【CA_38C_Ant 5_NB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
37850	38048	QPSK	1	0	0	0	22.97	24.00
37901	38099	QPSK	1	0	0	0	22.92	24.00
38150	37952	QPSK	1	0	1	99	22.94	24.00

【CA_38C_Ant 5_TB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
37850	38048	QPSK	1	0	0	0	14.65	15.00
37901	38099	QPSK	1	0	0	0	14.63	15.00
38150	37952	QPSK	1	0	1	99	14.55	15.00

【CA_41C_Ant 5_NB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
39750	39948	QPSK	1	0	0	0	23.10	24.00
40185	39987	QPSK	1	0	1	99	22.89	24.00
40620	40422	QPSK	1	0	1	99	22.93	24.00
41055	40857	QPSK	1	0	1	99	22.90	24.00
41490	41292	QPSK	1	0	1	99	23.00	24.00

【CA_41C_Ant 5_NB Mode_HPUE】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
39750	39948	QPSK	1	0	0	0	26.01	27.00
40185	39987	QPSK	1	0	1	99	25.96	27.00
40620	40422	QPSK	1	0	1	99	25.82	27.00
41055	40857	QPSK	1	0	1	99	25.79	27.00
41490	41292	QPSK	1	0	1	99	25.94	27.00

【CA_41C_Ant 5_TB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
39750	39948	QPSK	1	0	0	0	14.74	15.50
40185	39987	QPSK	1	0	1	99	14.66	15.50
40620	40422	QPSK	1	0	1	99	14.98	15.50
41055	40857	QPSK	1	0	1	99	14.86	15.50
41490	41292	QPSK	1	0	1	99	14.82	15.50

【CA_41C_Ant 5_TB Mode_HPUE】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
39750	39948	QPSK	1	0	0	0	14.77	15.50
40185	39987	QPSK	1	0	1	99	14.80	15.50
40620	40422	QPSK	1	0	1	99	14.85	15.50
41055	40857	QPSK	1	0	1	99	14.76	15.50
41490	41292	QPSK	1	0	1	99	17.50	15.50

【CA_48C_Ant 8_NB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
55340	55538	QPSK	1	0	0	0	21.11	22.00
55830	55632	QPSK	1	0	1	99	21.02	22.00
56150	55952	QPSK	1	0	1	99	21.00	22.00
56640	56442	QPSK	1	0	1	99	21.10	22.00

【CA_48C_Ant 8_TB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
55340	55538	QPSK	1	0	0	0	15.05	15.50
55830	55632	QPSK	1	0	1	99	15.00	15.50
56150	55952	QPSK	1	0	1	99	14.98	15.50
56640	56442	QPSK	1	0	1	99	14.90	15.50

【CA_66B_Ant 5_NB Mode】

Combination 15MHz+5MHz (75RB+25RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
132047	132140	QPSK	1	0	0	0	22.43	24.00
132322	132229	QPSK	1	0	1	24	22.61	24.00
132597	132504	QPSK	1	0	1	24	22.53	24.00

【CA_66C_Ant 5_NB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
132072	132270	QPSK	1	0	0	0	22.35	24.00
132322	132124	QPSK	1	0	1	99	22.51	24.00
132572	132374	QPSK	1	0	1	99	22.46	24.00

【CA_66B_Ant 5_TB Mode】

Combination 15MHz+5MHz (75RB+25RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
132047	132140	QPSK	1	0	0	0	15.74	16.00
132322	132229	QPSK	1	0	1	24	15.83	16.00
132597	132504	QPSK	1	0	1	24	15.80	16.00

【CA_66C_Ant 5_TB Mode】

Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB Offset	RB Size	RB Offset		
132072	132270	QPSK	1	0	0	0	15.63	16.00
132322	132124	QPSK	1	0	1	99	15.77	16.00
132572	132374	QPSK	1	0	1	99	15.68	16.00

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

General Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for Pi/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for Pi/2 BPSK SAR testing using 1RB Pi/2 BPSK allocation procedure
 - d. For Pi/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is ≤ 1.45 W/kg, the remaining required test channels must also be tested.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission

3GPP 38.101 MPR for EN-DC

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

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

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

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

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

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

【FR1 n2_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	23.11	23.30	23.16	24.00
20	PI/2 BPSK	1	53	22.80	23.23	22.88	24.00
20	PI/2 BPSK	1	104	22.83	23.25	23.00	24.00
20	PI/2 BPSK	50	0	22.27	22.62	22.35	23.50
20	PI/2 BPSK	50	28	22.93	23.28	22.95	24.00
20	PI/2 BPSK	50	56	22.42	22.71	22.44	23.50
20	PI/2 BPSK	100	0	22.36	22.69	22.34	23.50
20	QPSK	1	1	22.78	23.15	22.83	24.00
20	QPSK	1	53	22.88	23.20	22.85	24.00
20	QPSK	1	104	22.96	23.35	22.97	24.00
20	QPSK	50	0	21.74	22.16	21.79	23.00
20	QPSK	50	28	22.84	23.27	22.98	24.00
20	QPSK	50	56	21.89	22.18	21.84	23.00
20	QPSK	100	0	21.83	22.19	21.87	23.00
20	16QAM	1	1	21.62	21.90	21.60	23.00
20	64QAM	1	1	20.12	20.42	20.20	21.50
20	256QAM	1	1	18.86	19.18	18.86	19.50
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	23.03	23.33	23.12	24.00
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	23.00	23.29	23.12	24.00
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	23.01	23.24	23.11	24.00

【FR1 n2_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	15.04	15.10	15.07	16.00
20	PI/2 BPSK	1	53	15.10	15.25	15.08	16.00
20	PI/2 BPSK	1	104	15.02	15.21	15.08	16.00
20	PI/2 BPSK	50	0	15.04	15.12	15.03	16.00
20	PI/2 BPSK	50	28	15.00	15.20	15.05	16.00
20	PI/2 BPSK	50	56	15.03	15.18	15.07	16.00
20	PI/2 BPSK	100	0	15.08	15.21	15.12	16.00
20	QPSK	1	1	14.95	15.05	15.00	16.00
20	QPSK	1	53	15.17	15.27	15.13	16.00
20	QPSK	1	104	15.12	15.19	15.15	16.00
20	QPSK	50	0	15.01	15.17	14.99	16.00
20	QPSK	50	28	15.11	15.20	15.08	16.00
20	QPSK	50	56	15.03	15.14	15.10	16.00
20	QPSK	100	0	15.07	15.26	15.13	16.00
20	16QAM	1	1	14.83	14.91	14.87	16.00
20	64QAM	1	1	14.85	15.00	14.89	16.00
20	256QAM	1	1	15.41	15.59	15.52	16.00
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	14.93	15.07	15.01	16.00
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	14.91	15.07	15.05	16.00
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	14.92	15.07	15.04	16.00

【FR1 n5_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	23.12	23.18	23.10	24.00
20	PI/2 BPSK	1	53	23.06	23.15	22.93	24.00
20	PI/2 BPSK	1	104	22.94	23.14	22.97	24.00
20	PI/2 BPSK	50	0	22.50	22.60	22.51	23.50
20	PI/2 BPSK	50	28	23.04	23.15	23.05	24.00
20	PI/2 BPSK	50	56	22.32	22.50	22.32	23.50
20	PI/2 BPSK	100	0	22.43	22.55	22.39	23.50
20	QPSK	1	1	22.95	23.12	22.98	24.00
20	QPSK	1	53	23.03	23.14	22.93	24.00
20	QPSK	1	104	22.97	23.10	22.96	24.00
20	QPSK	50	0	22.00	22.09	21.99	23.00
20	QPSK	50	28	22.94	23.12	22.91	24.00
20	QPSK	50	56	21.87	21.97	21.88	23.00
20	QPSK	100	0	21.91	22.05	21.84	23.00
20	16QAM	1	1	21.70	21.87	21.77	23.00
20	64QAM	1	1	20.27	20.39	20.17	21.50
20	256QAM	1	1	18.85	18.91	18.79	19.50
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	23.10	23.08	22.98	24.00
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	22.97	23.11	23.04	24.00
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	23.08	23.16	23.08	24.00

【FR1 n5_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	17.60	17.65	17.61	18.50
20	PI/2 BPSK	1	53	17.50	17.63	17.48	18.50
20	PI/2 BPSK	1	104	17.47	17.64	17.58	18.50
20	PI/2 BPSK	50	0	17.53	17.58	17.47	18.50
20	PI/2 BPSK	50	28	17.48	17.61	17.53	18.50
20	PI/2 BPSK	50	56	17.32	17.46	17.34	18.50
20	PI/2 BPSK	100	0	17.46	17.55	17.47	18.50
20	QPSK	1	1	17.53	17.61	17.56	18.50
20	QPSK	1	53	17.48	17.61	17.48	18.50
20	QPSK	1	104	17.53	17.61	17.47	18.50
20	QPSK	50	0	17.44	17.52	17.41	18.50
20	QPSK	50	28	17.54	17.59	17.51	18.50
20	QPSK	50	56	17.37	17.45	17.35	18.50
20	QPSK	100	0	17.46	17.54	17.48	18.50
20	16QAM	1	1	17.19	17.37	17.32	18.50
20	64QAM	1	1	17.34	17.42	17.33	18.50
20	256QAM	1	1	17.89	17.47	17.89	18.50
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	17.45	17.49	17.59	18.50
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	17.51	17.49	17.58	18.50
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	17.53	17.60	17.52	18.50

【FR1 n7_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				505000	507000	509000	
Frequency (MHz)				2525	2535	2545	
50	PI/2 BPSK	1	1	23.21	23.50	23.23	24.00
50	PI/2 BPSK	1	135	23.02	23.35	23.04	24.00
50	PI/2 BPSK	1	268	22.95	23.26	22.95	24.00
50	PI/2 BPSK	135	0	22.46	22.77	22.47	23.50
50	PI/2 BPSK	135	68	23.01	23.44	23.07	24.00
50	PI/2 BPSK	135	135	22.45	22.83	22.55	23.50
50	PI/2 BPSK	270	0	22.52	22.86	22.52	23.50
50	QPSK	1	1	23.00	23.30	22.98	24.00
50	QPSK	1	135	23.06	23.47	23.15	24.00
50	QPSK	1	268	22.97	23.27	22.94	24.00
50	QPSK	135	0	21.89	22.29	21.93	23.00
50	QPSK	135	68	23.04	23.45	23.10	24.00
50	QPSK	135	135	22.06	22.38	22.08	23.00
50	QPSK	270	0	22.03	22.33	21.97	23.00
50	16QAM	1	1	21.70	22.06	21.71	23.00
50	64QAM	1	1	20.18	20.58	20.32	21.50
50	256QAM	1	1	18.93	19.23	18.87	19.50
Channel				504000	507000	510000	Tune-up limit (dBm)
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	23.17	23.47	23.11	24.00
Channel				503000	507000	511000	Tune-up limit (dBm)
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	23.09	23.45	23.08	24.00
Channel				502500	507000	511500	Tune-up limit (dBm)
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	23.08	23.48	23.13	24.00
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	23.17	23.40	23.14	24.00
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	23.07	23.44	23.16	24.00
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	23.12	23.39	23.21	24.00
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	23.10	23.42	23.10	24.00

【FR1 n7_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				505000	507000	509000	
Frequency (MHz)				2525	2535	2545	
50	PI/2 BPSK	1	1	14.27	14.77	14.22	15.50
50	PI/2 BPSK	1	135	14.62	14.31	14.55	15.50
50	PI/2 BPSK	1	268	14.18	14.24	14.09	15.50
50	PI/2 BPSK	135	0	14.25	14.35	14.17	15.50
50	PI/2 BPSK	135	68	14.41	14.47	14.32	15.50
50	PI/2 BPSK	135	135	14.34	14.40	14.21	15.50
50	PI/2 BPSK	270	0	14.16	14.26	14.07	15.50
50	QPSK	1	1	14.23	14.29	14.18	15.50
50	QPSK	1	135	14.29	14.40	14.29	15.50
50	QPSK	1	268	14.15	14.25	14.03	15.50
50	QPSK	135	0	14.11	14.21	13.97	15.50
50	QPSK	135	68	14.33	14.42	14.23	15.50
50	QPSK	135	135	14.21	14.35	14.23	15.50
50	QPSK	270	0	14.12	14.20	13.98	15.50
50	16QAM	1	1	13.95	14.05	13.86	15.50
50	64QAM	1	1	13.99	14.15	14.00	15.50
50	256QAM	1	1	14.32	14.44	14.33	15.50
Channel				504000	507000	510000	Tune-up limit (dBm)
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	14.15	14.23	14.19	15.50

Channel				503000	507000	511000	Tune-up limit
Frequency (MHz)				2515	2535	2555	(dBm)
30	PI/2 BPSK	1	1	14.18	14.28	14.08	15.50
Channel				502500	507000	511500	Tune-up limit
Frequency (MHz)				2512.5	2535	2557.5	(dBm)
25	PI/2 BPSK	1	1	14.18	14.27	14.13	15.50
Channel				502000	507000	512000	Tune-up limit
Frequency (MHz)				2510	2535	2560	(dBm)
20	PI/2 BPSK	1	1	14.17	14.22	14.13	15.50
Channel				501500	507000	512500	Tune-up limit
Frequency (MHz)				2507.5	2535	2562.5	(dBm)
15	PI/2 BPSK	1	1	14.19	14.25	14.11	15.50
Channel				501000	507000	513000	Tune-up limit
Frequency (MHz)				2505	2535	2565	(dBm)
10	PI/2 BPSK	1	1	14.14	14.19	14.18	15.50
Channel				500500	507000	513500	Tune-up limit
Frequency (MHz)				2502.5	2535	2567.5	(dBm)
5	PI/2 BPSK	1	1	14.25	14.20	14.20	15.50

【FR1 n12_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				141300	141500	141700	
Frequency (MHz)				706.5	707.5	708.5	
15	PI/2 BPSK	1	1	22.91	23.07	22.95	24.00
15	PI/2 BPSK	1	40	22.68	22.98	22.84	24.00
15	PI/2 BPSK	1	77	22.78	23.00	22.85	24.00
15	PI/2 BPSK	36	0	22.20	22.49	22.34	23.50
15	PI/2 BPSK	36	22	22.76	23.05	22.85	24.00
15	PI/2 BPSK	36	43	22.31	22.55	22.39	23.50
15	PI/2 BPSK	75	0	22.29	22.55	22.38	23.50
15	QPSK	1	1	22.60	22.91	22.69	24.00
15	QPSK	1	40	22.75	22.96	22.80	24.00
15	QPSK	1	77	22.78	22.99	22.74	24.00
15	QPSK	36	0	21.72	22.00	21.87	23.00
15	QPSK	36	22	22.80	23.03	22.84	24.00
15	QPSK	36	43	21.80	22.08	21.92	23.00
15	QPSK	75	0	21.85	22.02	21.77	23.00
15	16QAM	1	1	21.41	21.68	21.48	23.00
15	64QAM	1	1	20.02	20.19	20.04	21.50
15	256QAM	1	1	18.64	18.91	18.69	19.50
Channel				140800	141500	142200	Tune-up limit
Frequency (MHz)				704	707.5	711	(dBm)
10	PI/2 BPSK	1	1	22.83	23.03	22.84	24.00
Channel				140300	141500	142700	Tune-up limit
Frequency (MHz)				701.5	707.5	713.5	(dBm)
5	PI/2 BPSK	1	1	22.85	23.02	22.84	24.00

【FR1 n12_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				141300	141500	141700	
Frequency (MHz)				706.5	707.5	708.5	
15	PI/2 BPSK	1	1	17.48	17.57	17.51	18.50
15	PI/2 BPSK	1	40	17.41	17.54	17.41	18.50
15	PI/2 BPSK	1	77	17.33	17.56	17.37	18.50
15	PI/2 BPSK	36	0	17.45	17.55	17.42	18.50
15	PI/2 BPSK	36	22	17.44	17.57	17.49	18.50
15	PI/2 BPSK	36	43	17.34	17.50	17.41	18.50
15	PI/2 BPSK	75	0	17.36	17.55	17.38	18.50
15	QPSK	1	1	17.24	17.45	17.29	18.50
15	QPSK	1	40	17.31	17.50	17.37	18.50
15	QPSK	1	77	17.29	17.52	17.39	18.50
15	QPSK	36	0	17.35	17.48	17.32	18.50
15	QPSK	36	22	17.32	17.53	17.35	18.50
15	QPSK	36	43	17.30	17.49	17.30	18.50
15	QPSK	75	0	17.41	17.53	17.34	18.50

15	16QAM	1	1	17.00	17.22	17.03	18.50
15	64QAM	1	1	17.12	17.30	17.14	18.50
15	256QAM	1	1	17.06	17.19	17.02	18.50
Channel				140800	141500	142200	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	PI/2 BPSK	1	1	17.35	17.48	17.42	18.50
Channel				140300	141500	142700	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	PI/2 BPSK	1	1	17.35	17.48	17.44	18.50

【FR1 n14_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					158600		
Frequency (MHz)					793		
10	PI/2 BPSK	1	1		23.10		24.00
10	PI/2 BPSK	1	26		23.03		24.00
10	PI/2 BPSK	1	50		23.02		24.00
10	PI/2 BPSK	25	0		22.59		23.50
10	PI/2 BPSK	25	14		22.97		24.00
10	PI/2 BPSK	25	27		22.47		23.50
10	PI/2 BPSK	50	0		22.53		23.50
10	QPSK	1	1		22.98		24.00
10	QPSK	1	26		22.99		24.00
10	QPSK	1	50		23.05		24.00
10	QPSK	25	0		22.04		23.00
10	QPSK	25	14		22.92		24.00
10	QPSK	25	27		21.97		23.00
10	QPSK	50	0		22.00		23.00
10	16QAM	1	1		21.71		23.00
10	64QAM	1	1		20.26		21.50
10	256QAM	1	1		18.74		19.50
Channel				158100	158600	159100	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	PI/2 BPSK	1	1	23.00	23.05	22.97	24.00

【FR1 n14_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					158600		
Frequency (MHz)					793		
10	PI/2 BPSK	1	1		17.62		18.50
10	PI/2 BPSK	1	26		17.52		18.50
10	PI/2 BPSK	1	50		17.55		18.50
10	PI/2 BPSK	25	0		17.45		18.50
10	PI/2 BPSK	25	14		17.59		18.50
10	PI/2 BPSK	25	27		17.51		18.50
10	PI/2 BPSK	50	0		17.51		18.50
10	QPSK	1	1		17.53		18.50
10	QPSK	1	26		17.47		18.50
10	QPSK	1	50		17.53		18.50
10	QPSK	25	0		17.57		18.50
10	QPSK	25	14		17.41		18.50
10	QPSK	25	27		17.48		18.50
10	QPSK	50	0		17.49		18.50
10	16QAM	1	1		17.27		18.50
10	64QAM	1	1		17.35		18.50
10	256QAM	1	1		17.40		18.50
Channel				158100	158600	159100	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	PI/2 BPSK	1	1	17.52	17.56	17.55	18.50

【FR1 n25_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374000	376500	379000	
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	22.60	22.69	22.59	24.00
40	PI/2 BPSK	1	108	23.06	23.40	23.00	24.00
40	PI/2 BPSK	1	214	22.56	22.79	22.60	24.00
40	PI/2 BPSK	108	0	22.27	22.48	22.25	23.50
40	PI/2 BPSK	108	54	22.99	23.22	23.05	24.00
40	PI/2 BPSK	108	108	22.18	22.42	22.23	23.50
40	PI/2 BPSK	216	0	22.40	22.53	22.33	23.50
40	QPSK	1	1	22.56	22.68	22.51	24.00
40	QPSK	1	108	23.03	23.16	22.96	24.00
40	QPSK	1	214	22.58	22.77	22.63	24.00
40	QPSK	108	0	21.79	21.99	21.84	23.00
40	QPSK	108	54	23.10	23.21	22.96	24.00
40	QPSK	108	108	21.77	21.89	21.74	23.00
40	QPSK	216	0	21.84	21.99	21.82	23.00
40	16QAM	1	1	21.23	21.40	21.20	23.00
40	64QAM	1	1	19.69	19.81	19.64	21.50
40	256QAM	1	1	18.42	18.62	18.40	19.50
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	22.52	22.60	22.51	24.00
Channel				372500	376500	380500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1882.5	1902.5	
25	PI/2 BPSK	1	1	22.53	22.67	22.50	24.00
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	22.49	22.67	22.57	24.00
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	22.52	22.54	22.53	24.00
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	22.50	22.61	22.44	24.00
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	22.53	22.67	22.44	24.00

【FR1 n25_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374000	376500	379000	
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	15.12	15.20	15.16	16.00
40	PI/2 BPSK	1	108	15.48	15.65	15.49	16.00
40	PI/2 BPSK	1	214	15.16	15.28	15.13	16.00
40	PI/2 BPSK	108	0	15.45	15.54	15.43	16.00
40	PI/2 BPSK	108	54	15.50	15.62	15.44	16.00
40	PI/2 BPSK	108	108	15.27	15.42	15.28	16.00
40	PI/2 BPSK	216	0	15.26	15.43	15.28	16.00
40	QPSK	1	1	14.92	15.14	15.05	16.00
40	QPSK	1	108	15.41	15.60	15.53	16.00
40	QPSK	1	214	15.03	15.26	15.11	16.00
40	QPSK	108	0	15.27	15.50	15.31	16.00
40	QPSK	108	54	15.30	15.42	15.27	16.00
40	QPSK	108	108	15.28	15.43	15.30	16.00
40	QPSK	216	0	15.25	15.46	15.31	16.00
40	16QAM	1	1	14.80	14.93	14.84	16.00
40	64QAM	1	1	14.81	15.00	14.90	16.00
40	256QAM	1	1	14.39	14.61	14.44	16.00
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	15.07	15.16	15.08	16.00
Channel				372500	376500	380500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1882.5	1902.5	
25	PI/2 BPSK	1	1	15.09	15.17	15.11	16.00

Channel				372000	376500	381000	Tune-up limit
Frequency (MHz)				1860	1882.5	1905	(dBm)
20	PI/2 BPSK	1	1	15.05	15.08	15.04	16.00
Channel				371500	376500	381500	Tune-up limit
Frequency (MHz)				1857.5	1882.5	1907.5	(dBm)
15	PI/2 BPSK	1	1	14.99	15.08	15.12	16.00
Channel				371000	376500	382000	Tune-up limit
Frequency (MHz)				1855	1882.5	1910	(dBm)
10	PI/2 BPSK	1	1	15.09	15.08	15.11	16.00
Channel				370500	376500	382500	Tune-up limit
Frequency (MHz)				1852.5	1882.5	1912.5	(dBm)
5	PI/2 BPSK	1	1	15.09	15.12	15.12	16.00

【FR1 n26_FCC_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				164800	166300	167800	
Frequency (MHz)				824	831.5	839	
20	PI/2 BPSK	1	1	22.96	23.05	23.00	24.00
20	PI/2 BPSK	1	53	22.73	22.89	22.84	24.00
20	PI/2 BPSK	1	104	22.81	22.97	22.92	24.00
20	PI/2 BPSK	50	0	22.11	22.33	22.28	23.50
20	PI/2 BPSK	50	28	22.78	22.97	22.92	24.00
20	PI/2 BPSK	50	56	22.06	22.26	22.21	23.50
20	PI/2 BPSK	100	0	22.19	22.30	22.25	23.50
20	QPSK	1	1	22.75	22.89	22.84	24.00
20	QPSK	1	53	22.64	22.86	22.81	24.00
20	QPSK	1	104	22.67	22.90	22.85	24.00
20	QPSK	50	0	21.74	21.89	21.84	23.00
20	QPSK	50	28	22.72	22.87	22.82	24.00
20	QPSK	50	56	21.52	21.75	21.70	23.00
20	QPSK	100	0	21.64	21.77	21.72	23.00
20	16QAM	1	1	21.46	21.63	21.58	23.00
20	64QAM	1	1	19.96	20.17	20.13	21.50
20	256QAM	1	1	18.49	18.69	18.65	19.50
Channel				164300	166300	168300	Tune-up limit
Frequency (MHz)				821.5	831.5	841.5	(dBm)
15	PI/2 BPSK	1	1	22.81	22.91	22.92	24.00
Channel				163800	166300	168800	Tune-up limit
Frequency (MHz)				819	831.5	844	(dBm)
10	PI/2 BPSK	1	1	22.94	23.04	22.92	24.00
Channel				163300	166300	169300	Tune-up limit
Frequency (MHz)				816.5	831.5	846.5	(dBm)
5	PI/2 BPSK	1	1	22.83	23.01	22.94	24.00

【FR1 n26_FCC_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				164800	166300	167800	
Frequency (MHz)				824	831.5	839	
20	PI/2 BPSK	1	1	17.57	17.66	17.54	18.50
20	PI/2 BPSK	1	53	17.38	17.62	17.46	18.50
20	PI/2 BPSK	1	104	17.43	17.64	17.42	18.50
20	PI/2 BPSK	50	0	17.35	17.57	17.31	18.50
20	PI/2 BPSK	50	28	17.42	17.62	17.46	18.50
20	PI/2 BPSK	50	56	17.27	17.45	17.21	18.50
20	PI/2 BPSK	100	0	17.30	17.51	17.35	18.50
20	QPSK	1	1	17.43	17.57	17.39	18.50
20	QPSK	1	53	17.47	17.60	17.34	18.50
20	QPSK	1	104	17.47	17.61	17.44	18.50
20	QPSK	50	0	17.42	17.56	17.38	18.50
20	QPSK	50	28	17.50	17.62	17.39	18.50
20	QPSK	50	56	17.34	17.46	17.26	18.50
20	QPSK	100	0	17.41	17.52	17.37	18.50
20	16QAM	1	1	17.16	17.33	17.16	18.50
20	64QAM	1	1	17.20	17.40	17.15	18.50
20	256QAM	1	1	17.15	17.36	17.09	18.50

Channel				164300	166300	168300	Tune-up limit
Frequency (MHz)				821.5	831.5	841.5	(dBm)
15	PI/2 BPSK	1	1	17.51	17.64	17.42	18.50
Channel				163800	166300	168800	Tune-up limit
Frequency (MHz)				819	831.5	844	(dBm)
10	PI/2 BPSK	1	1	17.56	17.59	17.53	18.50
Channel				163300	166300	169300	Tune-up limit
Frequency (MHz)				816.5	831.5	846.5	(dBm)
5	PI/2 BPSK	1	1	17.50	17.57	17.50	18.50

【FR1 n30_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					462000		
Frequency (MHz)					2310		
10	PI/2 BPSK	1	1		22.41		24.00
10	PI/2 BPSK	1	26		22.21		24.00
10	PI/2 BPSK	1	50		22.33		24.00
10	PI/2 BPSK	25	0		21.64		23.50
10	PI/2 BPSK	25	14		22.29		24.00
10	PI/2 BPSK	25	27		21.81		23.50
10	PI/2 BPSK	50	0		21.70		23.50
10	QPSK	1	1		22.37		24.00
10	QPSK	1	26		22.20		24.00
10	QPSK	1	50		22.28		24.00
10	QPSK	25	0		21.07		23.00
10	QPSK	25	14		22.31		24.00
10	QPSK	25	27		21.34		23.00
10	QPSK	50	0		21.17		23.00
10	16QAM	1	1		21.08		23.00
10	64QAM	1	1		19.59		21.50
10	256QAM	1	1		18.19		19.50
Channel				461500	462000	462500	Tune-up limit
Frequency (MHz)				2307.5	2310	2312.5	(dBm)
5	PI/2 BPSK	1	1	22.29	22.35	22.31	24.00

【FR1 n30_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					462000		
Frequency (MHz)					2310		
10	PI/2 BPSK	1	1		17.38		18.00
10	PI/2 BPSK	1	26		17.20		18.00
10	PI/2 BPSK	1	50		17.23		18.00
10	PI/2 BPSK	25	0		17.11		18.00
10	PI/2 BPSK	25	14		17.28		18.00
10	PI/2 BPSK	25	27		17.25		18.00
10	PI/2 BPSK	50	0		17.24		18.00
10	QPSK	1	1		17.32		18.00
10	QPSK	1	26		17.21		18.00
10	QPSK	1	50		17.24		18.00
10	QPSK	25	0		17.10		18.00
10	QPSK	25	14		17.32		18.00
10	QPSK	25	27		17.22		18.00
10	QPSK	50	0		17.23		18.00
10	16QAM	1	1		17.01		18.00
10	64QAM	1	1		17.04		18.00
10	256QAM	1	1		17.09		18.00
Channel				461500	462000	462500	Tune-up limit
Frequency (MHz)				2307.5	2310	2312.5	(dBm)
5	PI/2 BPSK	1	1	17.33	17.35	17.31	18.00

**【FR1 n38_Ant 5_NB Mode】**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	22.95	23.05	22.97	24.00
40	PI/2 BPSK	1	53	23.27	23.45	23.26	24.00
40	PI/2 BPSK	1	104	22.76	22.97	22.87	24.00
40	PI/2 BPSK	50	0	22.52	22.75	22.58	23.50
40	PI/2 BPSK	50	28	23.23	23.35	23.12	24.00
40	PI/2 BPSK	50	56	22.42	22.63	22.45	23.50
40	PI/2 BPSK	100	0	22.61	22.72	22.55	23.50
40	QPSK	1	1	22.74	22.94	22.72	24.00
40	QPSK	1	53	23.25	23.41	23.23	24.00
40	QPSK	1	104	22.80	22.93	22.70	24.00
40	QPSK	50	0	22.00	22.21	22.05	23.00
40	QPSK	50	28	23.11	23.31	23.14	24.00
40	QPSK	50	56	21.89	22.11	21.99	23.00
40	QPSK	100	0	21.97	22.20	22.00	23.00
40	16QAM	1	1	21.50	21.61	21.39	23.00
40	64QAM	1	1	19.87	20.08	19.98	21.50
40	256QAM	1	1	18.57	18.72	18.56	19.50
Channel				517000	519000	521000	Tune-up limit (dBm)
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	22.85	22.94	22.95	24.00
Channel				516500	519000	521500	Tune-up limit (dBm)
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	22.92	23.03	22.84	24.00
Channel				516000	519000	522000	Tune-up limit (dBm)
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	22.91	22.93	22.91	24.00
Channel				515500	519000	522500	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	22.88	22.91	22.96	24.00
Channel				515000	519000	523000	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	22.89	22.93	22.94	24.00
Channel				514500	519000	523500	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	PI/2 BPSK	1	1	22.93	22.96	22.93	24.00

【FR1 n38_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	14.37	14.39	14.38	15.00
40	PI/2 BPSK	1	53	14.70	14.77	14.74	15.00
40	PI/2 BPSK	1	104	14.25	14.37	14.31	15.00
40	PI/2 BPSK	50	0	14.56	14.66	14.60	15.00
40	PI/2 BPSK	50	28	14.60	14.76	14.71	15.00
40	PI/2 BPSK	50	56	14.50	14.57	14.43	15.00
40	PI/2 BPSK	100	0	14.49	14.65	14.60	15.00
40	QPSK	1	1	14.28	14.37	14.26	15.00
40	QPSK	1	53	14.70	14.75	14.69	15.00
40	QPSK	1	104	14.28	14.38	14.30	15.00
40	QPSK	50	0	14.59	14.65	14.60	15.00
40	QPSK	50	28	14.74	14.77	14.74	15.00
40	QPSK	50	56	14.44	14.58	14.48	15.00
40	QPSK	100	0	14.55	14.65	14.57	15.00
40	16QAM	1	1	14.03	14.17	14.01	15.00
40	64QAM	1	1	14.20	14.24	14.17	15.00
40	256QAM	1	1	14.05	14.20	14.06	15.00
Channel				517000	519000	521000	Tune-up limit (dBm)
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	14.35	14.26	14.37	15.00
Channel				516500	519000	521500	Tune-up limit (dBm)
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	14.33	14.27	14.23	15.00

Channel				516000	519000	522000	Tune-up limit
Frequency (MHz)				2580	2595	2610	(dBm)
20	PI/2 BPSK	1	1	14.35	14.32	14.36	15.00
Channel				515500	519000	522500	Tune-up limit
Frequency (MHz)				2577.5	2595	2612.5	(dBm)
15	PI/2 BPSK	1	1	14.26	14.29	14.34	15.00
Channel				515000	519000	523000	Tune-up limit
Frequency (MHz)				2575	2595	2615	(dBm)
10	PI/2 BPSK	1	1	14.23	14.29	14.34	15.00
Channel				514500	519000	523500	Tune-up limit
Frequency (MHz)				2572.5	2595	2617.5	(dBm)
5	PI/2 BPSK	1	1	14.26	14.35	14.29	15.00

【FR1 n41 _FCC_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.52	22.61	22.41	24.00
100	PI/2 BPSK	1	137	23.40	23.55	22.92	24.00
100	PI/2 BPSK	1	271	22.17	22.35	22.05	24.00
100	PI/2 BPSK	135	0	22.72	22.90	22.67	23.50
100	PI/2 BPSK	135	69	22.90	23.12	22.82	24.00
100	PI/2 BPSK	135	138	22.69	22.88	22.55	23.50
100	PI/2 BPSK	270	0	22.67	22.88	22.55	23.50
100	QPSK	1	1	22.20	22.42	22.13	24.00
100	QPSK	1	137	22.89	23.09	22.82	24.00
100	QPSK	1	271	22.21	22.36	22.14	24.00
100	QPSK	135	0	22.72	22.89	22.62	23.00
100	QPSK	135	69	22.90	23.09	22.80	24.00
100	QPSK	135	138	22.66	22.87	22.61	23.00
100	QPSK	270	0	22.67	22.79	22.50	23.00
100	16QAM	1	1	21.98	22.15	21.82	23.00
100	64QAM	1	1	20.83	21.00	20.75	21.50
100	256QAM	1	1	19.00	19.10	18.80	19.50
Channel				508200	518598	528996	Tune-up limit
Frequency (MHz)				2541	2592.99	2644.98	(dBm)
90	PI/2 BPSK	1	1	22.38	22.46	22.32	24.00
Channel				507204	518598	529998	Tune-up limit
Frequency (MHz)				2536.02	2592.99	2649.99	(dBm)
80	PI/2 BPSK	1	1	22.39	22.53	22.28	24.00
Channel				505200	518598	531996	Tune-up limit
Frequency (MHz)				2526	2592.99	2659.98	(dBm)
60	PI/2 BPSK	1	1	22.40	22.57	22.32	24.00
Channel				504204	518598	532998	Tune-up limit
Frequency (MHz)				2521.02	2592.99	2664.99	(dBm)
50	PI/2 BPSK	1	1	22.46	22.59	22.34	24.00
Channel				503202	518598	534000	Tune-up limit
Frequency (MHz)				2516.01	2592.99	2670	(dBm)
40	PI/2 BPSK	1	1	22.38	22.59	22.37	24.00
Channel				502200	518598	534996	Tune-up limit
Frequency (MHz)				2511	2592.99	2674.98	(dBm)
30	PI/2 BPSK	1	1	22.49	22.47	22.31	24.00
Channel				501204	518598	535998	Tune-up limit
Frequency (MHz)				2506.02	2592.99	2679.99	(dBm)
20	PI/2 BPSK	1	1	22.39	22.46	22.36	24.00

【FR1 n41 _ FCC_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	14.85	14.86	14.75	15.50
100	PI/2 BPSK	1	137	15.20	15.28	15.09	15.50
100	PI/2 BPSK	1	271	14.69	14.75	14.54	15.50
100	PI/2 BPSK	135	0	15.00	15.12	14.87	15.50
100	PI/2 BPSK	135	69	15.29	15.32	15.07	15.50
100	PI/2 BPSK	135	138	15.07	15.16	14.97	15.50
100	PI/2 BPSK	270	0	15.02	15.13	14.89	15.50
100	QPSK	1	1	14.64	14.80	14.57	15.50
100	QPSK	1	137	15.16	15.24	15.06	15.50
100	QPSK	1	271	14.73	14.78	14.65	15.50
100	QPSK	135	0	15.05	15.17	15.03	15.50
100	QPSK	135	69	15.29	15.35	15.14	15.50
100	QPSK	135	138	15.10	15.19	14.96	15.50
100	QPSK	270	0	15.12	15.15	14.90	15.50
100	16QAM	1	1	14.53	14.62	14.44	15.50
100	64QAM	1	1	14.58	14.70	14.45	15.50
100	256QAM	1	1	14.66	14.78	14.60	15.50
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	14.82	14.71	14.62	15.50
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	14.82	14.77	14.72	15.50
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	14.84	14.81	14.66	15.50
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	14.80	14.71	14.65	15.50
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	14.74	14.85	14.62	15.50
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	14.78	14.79	14.60	15.50
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	14.79	14.75	14.73	15.50

【FR1 n41 _ FCC_HPUE_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.51	25.63	25.45	27.00
100	PI/2 BPSK	1	137	25.94	26.21	25.90	27.00
100	PI/2 BPSK	1	271	25.32	25.46	25.19	27.00
100	PI/2 BPSK	135	0	24.50	24.58	24.50	26.50
100	PI/2 BPSK	135	69	25.94	26.14	25.87	27.00
100	PI/2 BPSK	135	138	24.51	24.61	24.50	26.50
100	PI/2 BPSK	270	0	24.51	24.50	24.52	26.50
100	QPSK	1	1	25.20	25.46	25.25	27.00
100	QPSK	1	137	25.91	26.09	25.81	27.00
100	QPSK	1	271	25.16	25.42	25.13	27.00
100	QPSK	135	0	24.00	24.00	24.00	26.00
100	QPSK	135	69	25.89	26.10	25.87	27.00
100	QPSK	135	138	24.41	24.60	24.39	26.00
100	QPSK	270	0	24.12	24.25	24.00	26.00
100	16QAM	1	1	24.02	24.25	24.04	26.00
100	64QAM	1	1	22.59	22.77	22.56	24.50
100	256QAM	1	1	20.95	21.13	20.92	22.50
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	25.44	25.59	25.41	27.00

Channel				507204	518598	529998	Tune-up limit
Frequency (MHz)				2536.02	2592.99	2649.99	(dBm)
80	PI/2 BPSK	1	1	25.43	25.50	25.41	27.00
Channel				505200	518598	531996	Tune-up limit
Frequency (MHz)				2526	2592.99	2659.98	(dBm)
60	PI/2 BPSK	1	1	25.48	25.60	25.32	27.00
Channel				504204	518598	532998	Tune-up limit
Frequency (MHz)				2521.02	2592.99	2664.99	(dBm)
50	PI/2 BPSK	1	1	25.44	25.48	25.32	27.00
Channel				503202	518598	534000	Tune-up limit
Frequency (MHz)				2516.01	2592.99	2670	(dBm)
40	PI/2 BPSK	1	1	25.46	25.50	25.35	27.00
Channel				502200	518598	534996	Tune-up limit
Frequency (MHz)				2511	2592.99	2674.98	(dBm)
30	PI/2 BPSK	1	1	25.42	25.49	25.40	27.00
Channel				501204	518598	535998	Tune-up limit
Frequency (MHz)				2506.02	2592.99	2679.99	(dBm)
20	PI/2 BPSK	1	1	25.40	25.52	25.35	27.00

【FR1 n41_FCC_HPUE_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	14.85	14.86	14.75	15.50
100	PI/2 BPSK	1	137	15.20	15.28	15.09	15.50
100	PI/2 BPSK	1	271	14.69	14.75	14.54	15.50
100	PI/2 BPSK	135	0	15.00	15.12	14.87	15.50
100	PI/2 BPSK	135	69	15.29	15.32	15.07	15.50
100	PI/2 BPSK	135	138	15.07	15.16	14.97	15.50
100	PI/2 BPSK	270	0	15.02	15.13	14.89	15.50
100	QPSK	1	1	14.64	14.80	14.57	15.50
100	QPSK	1	137	15.16	15.24	15.06	15.50
100	QPSK	1	271	14.73	14.78	14.65	15.50
100	QPSK	135	0	15.05	15.17	15.03	15.50
100	QPSK	135	69	15.29	15.35	15.14	15.50
100	QPSK	135	138	15.10	15.19	14.96	15.50
100	QPSK	270	0	15.12	15.15	14.90	15.50
100	16QAM	1	1	14.53	14.62	14.44	15.50
100	64QAM	1	1	14.58	14.70	14.45	15.50
100	256QAM	1	1	14.66	14.78	14.60	15.50
Channel				508200	518598	528996	Tune-up limit
Frequency (MHz)				2541	2592.99	2644.98	(dBm)
90	PI/2 BPSK	1	1	14.82	14.71	14.62	15.50
Channel				507204	518598	529998	Tune-up limit
Frequency (MHz)				2536.02	2592.99	2649.99	(dBm)
80	PI/2 BPSK	1	1	14.82	14.77	14.72	15.50
Channel				505200	518598	531996	Tune-up limit
Frequency (MHz)				2526	2592.99	2659.98	(dBm)
60	PI/2 BPSK	1	1	14.84	14.81	14.66	15.50
Channel				504204	518598	532998	Tune-up limit
Frequency (MHz)				2521.02	2592.99	2664.99	(dBm)
50	PI/2 BPSK	1	1	14.80	14.71	14.65	15.50
Channel				503202	518598	534000	Tune-up limit
Frequency (MHz)				2516.01	2592.99	2670	(dBm)
40	PI/2 BPSK	1	1	14.74	14.85	14.62	15.50
Channel				502200	518598	534996	Tune-up limit
Frequency (MHz)				2511	2592.99	2674.98	(dBm)
30	PI/2 BPSK	1	1	14.78	14.79	14.60	15.50
Channel				501204	518598	535998	Tune-up limit
Frequency (MHz)				2506.02	2592.99	2679.99	(dBm)
20	PI/2 BPSK	1	1	14.79	14.75	14.73	15.50

【FR1 n41 _ FCC_Ant 8 _NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.23	22.49	22.25	24.00
100	PI/2 BPSK	1	137	22.90	23.25	22.93	24.00
100	PI/2 BPSK	1	271	22.17	22.44	22.10	24.00
100	PI/2 BPSK	135	0	22.72	23.03	22.72	23.50
100	PI/2 BPSK	135	69	22.81	23.15	22.87	24.00
100	PI/2 BPSK	135	138	22.79	23.08	22.78	23.50
100	PI/2 BPSK	270	0	22.79	23.09	22.81	23.50
100	QPSK	1	1	22.02	22.26	22.01	24.00
100	QPSK	1	137	22.71	23.10	22.81	24.00
100	QPSK	1	271	22.13	22.47	22.13	24.00
100	QPSK	135	0	22.67	23.00	22.69	23.00
100	QPSK	135	69	22.82	23.23	22.87	24.00
100	QPSK	135	138	22.70	23.00	22.61	23.00
100	QPSK	270	0	22.57	22.89	22.53	23.00
100	16QAM	1	1	21.73	22.06	21.80	23.00
100	64QAM	1	1	21.82	22.11	21.75	22.50
100	256QAM	1	1	20.80	21.16	20.82	21.50
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	22.19	22.34	22.23	24.00
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.15	22.46	22.12	24.00
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	22.13	22.44	22.21	24.00
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.16	22.46	22.12	24.00
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.18	22.42	22.20	24.00
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	22.12	22.43	22.14	24.00
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	22.14	22.36	22.12	24.00

【FR1 n41 _ FCC_Ant 8 _TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	16.08	16.25	16.15	17.00
100	PI/2 BPSK	1	137	16.45	16.72	16.58	17.00
100	PI/2 BPSK	1	271	16.02	16.25	16.12	17.00
100	PI/2 BPSK	135	0	16.33	16.55	16.31	17.00
100	PI/2 BPSK	135	69	16.36	16.68	16.50	17.00
100	PI/2 BPSK	135	138	16.39	16.58	16.38	17.00
100	PI/2 BPSK	270	0	16.35	16.58	16.41	17.00
100	QPSK	1	1	15.74	16.00	15.77	17.00
100	QPSK	1	137	16.37	16.69	16.46	17.00
100	QPSK	1	271	15.93	16.19	16.03	17.00
100	QPSK	135	0	16.30	16.58	16.37	17.00
100	QPSK	135	69	16.39	16.68	16.56	17.00
100	QPSK	135	138	16.35	16.61	16.44	17.00
100	QPSK	270	0	16.41	16.60	16.36	17.00
100	16QAM	1	1	15.62	15.83	15.72	17.00
100	64QAM	1	1	15.59	15.85	15.62	17.00
100	256QAM	1	1	15.62	15.91	15.76	17.00
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	16.06	16.14	16.05	17.00



FCC SAR TEST REPORT

Report No. : FA5N2416B

Channel				507204	518598	529998	Tune-up limit
Frequency (MHz)				2536.02	2592.99	2649.99	(dBm)
80	PI/2 BPSK	1	1	16.05	16.13	16.05	17.00
Channel				505200	518598	531996	Tune-up limit
Frequency (MHz)				2526	2592.99	2659.98	(dBm)
60	PI/2 BPSK	1	1	15.96	16.17	16.13	17.00
Channel				504204	518598	532998	Tune-up limit
Frequency (MHz)				2521.02	2592.99	2664.99	(dBm)
50	PI/2 BPSK	1	1	15.98	16.18	16.03	17.00
Channel				503202	518598	534000	Tune-up limit
Frequency (MHz)				2516.01	2592.99	2670	(dBm)
40	PI/2 BPSK	1	1	16.04	16.19	16.10	17.00
Channel				502200	518598	534996	Tune-up limit
Frequency (MHz)				2511	2592.99	2674.98	(dBm)
30	PI/2 BPSK	1	1	16.02	16.12	16.07	17.00
Channel				501204	518598	535998	Tune-up limit
Frequency (MHz)				2506.02	2592.99	2679.99	(dBm)
20	PI/2 BPSK	1	1	16.07	16.17	16.03	17.00

【FR1 n41_FCC_HPUE_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.41	25.75	25.33	27.00
100	PI/2 BPSK	1	137	25.12	25.52	25.07	27.00
100	PI/2 BPSK	1	271	25.20	25.68	25.11	27.00
100	PI/2 BPSK	135	0	24.50	24.66	24.50	26.50
100	PI/2 BPSK	135	69	25.25	25.72	25.23	27.00
100	PI/2 BPSK	135	138	25.12	25.58	25.05	26.50
100	PI/2 BPSK	270	0	25.00	25.48	24.99	26.50
100	QPSK	1	1	25.00	25.36	25.00	27.00
100	QPSK	1	137	25.02	25.14	25.01	27.00
100	QPSK	1	271	25.27	25.64	25.16	27.00
100	QPSK	135	0	24.18	24.60	24.18	26.00
100	QPSK	135	69	25.29	25.66	25.54	27.00
100	QPSK	135	138	24.87	25.31	24.79	26.00
100	QPSK	270	0	25.11	25.55	25.04	26.00
100	16QAM	1	1	24.02	24.10	24.00	26.00
100	64QAM	1	1	22.50	22.64	22.50	24.50
100	256QAM	1	1	20.85	21.17	20.72	22.50
Channel				508200	518598	528996	Tune-up limit
Frequency (MHz)				2541	2592.99	2644.98	(dBm)
90	PI/2 BPSK	1	1	25.26	25.70	25.30	27.00
Channel				507204	518598	529998	Tune-up limit
Frequency (MHz)				2536.02	2592.99	2649.99	(dBm)
80	PI/2 BPSK	1	1	25.27	25.69	25.32	27.00
Channel				505200	518598	531996	Tune-up limit
Frequency (MHz)				2526	2592.99	2659.98	(dBm)
60	PI/2 BPSK	1	1	25.29	25.69	25.31	27.00
Channel				504204	518598	532998	Tune-up limit
Frequency (MHz)				2521.02	2592.99	2664.99	(dBm)
50	PI/2 BPSK	1	1	25.33	25.74	25.19	27.00
Channel				503202	518598	534000	Tune-up limit
Frequency (MHz)				2516.01	2592.99	2670	(dBm)
40	PI/2 BPSK	1	1	25.32	25.73	25.20	27.00
Channel				502200	518598	534996	Tune-up limit
Frequency (MHz)				2511	2592.99	2674.98	(dBm)
30	PI/2 BPSK	1	1	25.27	25.64	25.32	27.00
Channel				501204	518598	535998	Tune-up limit
Frequency (MHz)				2506.02	2592.99	2679.99	(dBm)
20	PI/2 BPSK	1	1	25.29	25.73	25.18	27.00

**【FR1 n41_FCC_HPUE_Ant 8_TB Mode】**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	16.08	16.25	16.15	17.00
100	PI/2 BPSK	1	137	16.45	16.72	16.58	17.00
100	PI/2 BPSK	1	271	16.02	16.25	16.12	17.00
100	PI/2 BPSK	135	0	16.33	16.55	16.31	17.00
100	PI/2 BPSK	135	69	16.36	16.68	16.50	17.00
100	PI/2 BPSK	135	138	16.39	16.58	16.38	17.00
100	PI/2 BPSK	270	0	16.35	16.58	16.41	17.00
100	QPSK	1	1	15.74	16.00	15.77	17.00
100	QPSK	1	137	16.37	16.69	16.46	17.00
100	QPSK	1	271	15.93	16.19	16.03	17.00
100	QPSK	135	0	16.30	16.58	16.37	17.00
100	QPSK	135	69	16.39	16.68	16.56	17.00
100	QPSK	135	138	16.35	16.61	16.44	17.00
100	QPSK	270	0	16.41	16.60	16.36	17.00
100	16QAM	1	1	15.62	15.83	15.72	17.00
100	64QAM	1	1	15.59	15.85	15.62	17.00
100	256QAM	1	1	15.62	15.91	15.76	17.00
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	16.06	16.14	16.05	17.00
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	16.05	16.13	16.05	17.00
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	15.96	16.17	16.13	17.00
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	15.98	16.18	16.03	17.00
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	16.04	16.19	16.10	17.00
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	16.02	16.12	16.07	17.00
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	16.07	16.17	16.03	17.00

【FR1 n48_FCC_Part 96_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	20.63	21.19	20.78	22.00
40	PI/2 BPSK	1	53	20.77	21.37	20.81	22.00
40	PI/2 BPSK	1	104	20.45	21.15	20.61	22.00
40	PI/2 BPSK	50	0	20.07	20.65	20.22	21.50
40	PI/2 BPSK	50	28	20.60	21.30	20.76	22.00
40	PI/2 BPSK	50	56	20.12	20.75	20.23	21.50
40	PI/2 BPSK	100	0	20.07	20.73	20.29	21.50
40	QPSK	1	1	20.22	20.79	20.31	22.00
40	QPSK	1	53	20.71	21.36	20.85	22.00
40	QPSK	1	104	20.51	21.12	20.63	22.00
40	QPSK	50	0	19.58	20.15	19.68	21.00
40	QPSK	50	28	20.65	21.28	20.78	22.00
40	QPSK	50	56	19.55	20.22	19.78	21.00
40	QPSK	100	0	19.56	20.20	19.78	21.00
40	16QAM	1	1	19.00	19.55	19.09	21.00
40	64QAM	1	1	17.50	18.04	17.57	19.50
40	256QAM	1	1	16.04	16.55	16.10	17.50
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	20.52	21.12	20.65	22.00

Channel				637334	641666	646000	Tune-up limit
Frequency (MHz)				3560.01	3624.99	3690	(dBm)
20	PI/2 BPSK	1	1	20.59	21.11	20.74	22.00
Channel				637168	641666	646166	Tune-up limit
Frequency (MHz)				3557.52	3624.99	3692.49	(dBm)
15	PI/2 BPSK	1	1	20.52	21.05	20.69	22.00
Channel				637000	641666	646332	Tune-up limit
Frequency (MHz)				3555	3624.99	3694.98	(dBm)
10	PI/2 BPSK	1	1	20.62	21.16	20.68	22.00

【FR1 n48_FCC_Part 96_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	Tune-up limit
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	14.50	14.52	14.46	15.50
40	PI/2 BPSK	1	53	14.83	14.87	14.77	15.50
40	PI/2 BPSK	1	104	14.46	14.51	14.35	15.50
40	PI/2 BPSK	50	0	14.66	14.81	14.70	15.50
40	PI/2 BPSK	50	28	14.71	14.86	14.75	15.50
40	PI/2 BPSK	50	56	14.57	14.64	14.51	15.50
40	PI/2 BPSK	100	0	14.53	14.70	14.53	15.50
40	QPSK	1	1	13.94	13.98	13.86	15.50
40	QPSK	1	53	14.72	14.84	14.63	15.50
40	QPSK	1	104	14.35	14.44	14.35	15.50
40	QPSK	50	0	14.68	14.80	14.72	15.50
40	QPSK	50	28	14.72	14.85	14.66	15.50
40	QPSK	50	56	14.56	14.63	14.42	15.50
40	QPSK	100	0	14.67	14.75	14.64	15.50
40	16QAM	1	1	14.17	14.26	14.19	15.50
40	64QAM	1	1	14.17	14.32	14.17	15.50
40	256QAM	1	1	14.33	14.37	14.19	15.50
Channel				637668	641666	645666	Tune-up limit
Frequency (MHz)				3565.02	3624.99	3684.99	(dBm)
30	PI/2 BPSK	1	1	14.43	14.44	14.32	15.50
Channel				637334	641666	646000	Tune-up limit
Frequency (MHz)				3560.01	3624.99	3690	(dBm)
20	PI/2 BPSK	1	1	14.36	14.47	14.44	15.50
Channel				637168	641666	646166	Tune-up limit
Frequency (MHz)				3557.52	3624.99	3692.49	(dBm)
15	PI/2 BPSK	1	1	14.39	14.45	14.43	15.50
Channel				637000	641666	646332	Tune-up limit
Frequency (MHz)				3555	3624.99	3694.98	(dBm)
10	PI/2 BPSK	1	1	14.49	14.49	14.37	15.50

【FR1 n66_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	22.56	22.86	22.65	24.00
40	PI/2 BPSK	1	108	23.20	23.53	23.21	24.00
40	PI/2 BPSK	1	214	22.51	22.89	22.56	24.00
40	PI/2 BPSK	108	0	22.43	22.87	22.63	23.50
40	PI/2 BPSK	108	54	22.97	23.42	23.18	24.00
40	PI/2 BPSK	108	108	22.33	22.77	22.52	23.50
40	PI/2 BPSK	216	0	22.52	22.84	22.61	23.50
40	QPSK	1	1	22.45	22.83	22.57	24.00
40	QPSK	1	108	23.13	23.48	23.13	24.00
40	QPSK	1	214	22.48	22.87	22.54	24.00
40	QPSK	108	0	21.90	22.30	22.08	23.00
40	QPSK	108	54	22.98	23.36	23.06	24.00
40	QPSK	108	108	21.86	22.25	21.99	23.00
40	QPSK	216	0	21.98	22.30	22.03	23.00
40	16QAM	1	1	21.37	21.51	21.37	23.00
40	64QAM	1	1	19.88	20.05	19.87	21.50
40	256QAM	1	1	18.57	18.84	18.65	19.50

Channel				345000	349000	353000	Tune-up limit
Frequency (MHz)				1725	1745	1765	(dBm)
30	PI/2 BPSK	1	1	22.47	22.84	22.52	24.00
Channel				344500	349000	353500	Tune-up limit
Frequency (MHz)				1722.5	1745	1767.5	(dBm)
25	PI/2 BPSK	1	1	22.49	22.73	22.51	24.00
Channel				344000	349000	354000	Tune-up limit
Frequency (MHz)				1720	1745	1770	(dBm)
20	PI/2 BPSK	1	1	22.43	22.81	22.53	24.00
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	(dBm)
15	PI/2 BPSK	1	1	22.46	22.84	22.53	24.00
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	(dBm)
10	PI/2 BPSK	1	1	22.50	22.80	22.62	24.00
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	(dBm)
5	PI/2 BPSK	1	1	22.48	22.80	22.54	24.00

【FR1 n66_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	15.37	15.40	15.38	16.00
40	PI/2 BPSK	1	108	15.81	15.87	15.83	16.00
40	PI/2 BPSK	1	214	15.27	15.41	15.35	16.00
40	PI/2 BPSK	108	0	15.76	15.83	15.74	16.00
40	PI/2 BPSK	108	54	15.75	15.86	15.82	16.00
40	PI/2 BPSK	108	108	15.63	15.78	15.67	16.00
40	PI/2 BPSK	216	0	15.60	15.77	15.69	16.00
40	QPSK	1	1	15.21	15.33	15.23	16.00
40	QPSK	1	108	15.77	15.86	15.76	16.00
40	QPSK	1	214	15.25	15.38	15.22	16.00
40	QPSK	108	0	15.74	15.85	15.73	16.00
40	QPSK	108	54	15.80	15.86	15.81	16.00
40	QPSK	108	108	15.71	15.76	15.65	16.00
40	QPSK	216	0	15.74	15.79	15.69	16.00
40	16QAM	1	1	15.06	15.14	15.02	16.00
40	64QAM	1	1	15.00	15.17	15.10	16.00
40	256QAM	1	1	15.06	15.19	15.11	16.00
Channel				345000	349000	353000	Tune-up limit
Frequency (MHz)				1725	1745	1765	(dBm)
30	PI/2 BPSK	1	1	15.26	15.34	15.27	16.00
Channel				344500	349000	353500	Tune-up limit
Frequency (MHz)				1722.5	1745	1767.5	(dBm)
25	PI/2 BPSK	1	1	15.35	15.25	15.32	16.00
Channel				344000	349000	354000	Tune-up limit
Frequency (MHz)				1720	1745	1770	(dBm)
20	PI/2 BPSK	1	1	15.26	15.39	15.34	16.00
Channel				343500	349000	354500	Tune-up limit
Frequency (MHz)				1717.5	1745	1772.5	(dBm)
15	PI/2 BPSK	1	1	15.35	15.36	15.37	16.00
Channel				343000	349000	355000	Tune-up limit
Frequency (MHz)				1715	1745	1775	(dBm)
10	PI/2 BPSK	1	1	15.27	15.31	15.24	16.00
Channel				342500	349000	355500	Tune-up limit
Frequency (MHz)				1712.5	1745	1777.5	(dBm)
5	PI/2 BPSK	1	1	15.25	15.31	15.31	16.00

【FR1 n71_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	23.10	23.32	23.18	24.00
20	PI/2 BPSK	1	53	23.03	23.30	23.14	24.00
20	PI/2 BPSK	1	104	22.90	23.26	22.98	24.00
20	PI/2 BPSK	50	0	22.28	22.64	22.48	23.50
20	PI/2 BPSK	50	28	23.04	23.30	23.10	24.00
20	PI/2 BPSK	50	56	22.42	22.72	22.55	23.50
20	PI/2 BPSK	100	0	22.35	22.71	22.53	23.50
20	QPSK	1	1	22.74	23.09	22.91	24.00
20	QPSK	1	53	23.07	23.30	23.12	24.00
20	QPSK	1	104	22.97	23.23	23.03	24.00
20	QPSK	50	0	21.86	22.12	21.94	23.00
20	QPSK	50	28	22.98	23.28	23.09	24.00
20	QPSK	50	56	21.96	22.20	21.93	23.00
20	QPSK	100	0	21.88	22.15	21.88	23.00
20	16QAM	1	1	21.58	21.86	21.61	23.00
20	64QAM	1	1	20.12	20.34	20.10	21.50
20	256QAM	1	1	18.82	19.08	18.90	19.50
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	22.98	23.18	23.12	24.00
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	22.96	23.27	23.15	24.00
Channel				133100	136100	139100	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	22.96	23.30	23.11	24.00

【FR1 n71_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	19.19	19.35	19.26	20.00
20	PI/2 BPSK	1	53	19.07	19.32	19.12	20.00
20	PI/2 BPSK	1	104	19.10	19.33	19.15	20.00
20	PI/2 BPSK	50	0	18.96	19.17	19.03	20.00
20	PI/2 BPSK	50	28	19.13	19.31	19.16	20.00
20	PI/2 BPSK	50	56	18.99	19.27	19.05	20.00
20	PI/2 BPSK	100	0	19.01	19.22	19.06	20.00
20	QPSK	1	1	18.99	19.17	19.01	20.00
20	QPSK	1	53	19.08	19.30	19.14	20.00
20	QPSK	1	104	18.98	19.27	19.12	20.00
20	QPSK	50	0	18.88	19.16	18.96	20.00
20	QPSK	50	28	19.10	19.27	19.17	20.00
20	QPSK	50	56	19.03	19.26	19.10	20.00
20	QPSK	100	0	18.93	19.20	19.03	20.00
20	16QAM	1	1	18.73	18.93	18.76	20.00
20	64QAM	1	1	18.76	18.98	18.84	20.00
20	256QAM	1	1	18.75	19.02	18.91	20.00
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	19.07	19.22	19.20	20.00
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	19.10	19.33	19.11	20.00
Channel				133100	136100	139100	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	19.06	19.21	19.13	20.00

【FR1 n77 (27Q) _FCC_Part 27Q (3450~3550MHz)_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.03		24.00
100	PI/2 BPSK	1	137		22.30		24.00
100	PI/2 BPSK	1	271		22.19		24.00
100	PI/2 BPSK	135	0		22.33		23.50
100	PI/2 BPSK	135	69		22.31		24.00
100	PI/2 BPSK	135	138		22.30		23.50
100	PI/2 BPSK	270	0		22.15		23.50
100	QPSK	1	1		22.04		24.00
100	QPSK	1	137		22.23		24.00
100	QPSK	1	271		22.16		24.00
100	QPSK	135	0		22.23		23.00
100	QPSK	135	69		22.28		24.00
100	QPSK	135	138		22.19		23.00
100	QPSK	270	0		22.04		23.00
100	16QAM	1	1		21.71		23.00
100	64QAM	1	1		21.24		21.50
100	256QAM	1	1		19.36		19.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	22.01	22.02	22.00	24.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	22.00	22.00	22.02	24.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	22.00	22.00	22.00	24.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	22.01	22.00	22.02	24.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	22.00	22.00	22.00	24.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	22.00	22.01	22.02	24.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	22.00	22.00	22.00	24.00
Channel				630834	633332	635832	Tune-up limit
Frequency (MHz)				3462.51	3499.98	3537.48	(dBm)
25	PI/2 BPSK	1	1	22.01	22.00	22.00	24.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	22.00	22.00	22.00	24.00
Channel				630500	633332	636166	Tune-up limit
Frequency (MHz)				3457.5	3499.98	3542.49	(dBm)
15	PI/2 BPSK	1	1	22.01	22.01	22.01	24.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	22.00	22.00	22.00	24.00

【FR1 n77 (27O) _FCC_Part 27O (3700~3980MHz)_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.13	22.20	22.20	24.00
100	PI/2 BPSK	1	137	22.06	22.18	22.07	24.00
100	PI/2 BPSK	1	271	22.10	22.08	22.05	24.00
100	PI/2 BPSK	135	0	22.48	22.54	22.43	23.50
100	PI/2 BPSK	135	69	22.60	22.63	22.54	24.00
100	PI/2 BPSK	135	138	22.50	22.48	22.40	23.50
100	PI/2 BPSK	270	0	22.44	22.41	22.57	23.50
100	QPSK	1	1	22.01	22.02	22.00	24.00

100	QPSK	1	137	22.00	22.16	22.11	24.00
100	QPSK	1	271	22.07	22.09	22.06	24.00
100	QPSK	135	0	22.46	22.47	22.46	23.00
100	QPSK	135	69	22.55	22.43	22.51	24.00
100	QPSK	135	138	22.48	22.45	22.54	23.00
100	QPSK	270	0	22.45	22.54	22.44	23.00
100	16QAM	1	1	21.80	21.72	21.67	23.00
100	64QAM	1	1	20.57	20.43	20.53	21.50
100	256QAM	1	1	18.41	18.31	18.39	19.50
Channel				649668	656000	662332	Tune-up limit
Frequency (MHz)				3745.02	3840	3934.98	(dBm)
90	PI/2 BPSK	1	1	22.02	22.12	22.09	24.00
Channel				649334	656000	662666	Tune-up limit
Frequency (MHz)				3740.01	3840	3939.99	(dBm)
80	PI/2 BPSK	1	1	22.01	22.05	22.15	24.00
Channel				649000	656000	663000	Tune-up limit
Frequency (MHz)				3735	3840	3945	(dBm)
70	PI/2 BPSK	1	1	22.01	22.10	22.07	24.00
Channel				648668	656000	663332	Tune-up limit
Frequency (MHz)				3730.02	3840	3949.98	(dBm)
60	PI/2 BPSK	1	1	22.00	22.16	22.10	24.00
Channel				648334	656000	663666	Tune-up limit
Frequency (MHz)				3725.01	3840	3954.99	(dBm)
50	PI/2 BPSK	1	1	22.00	22.15	22.12	24.00
Channel				648000	656000	664000	Tune-up limit
Frequency (MHz)				3720	3840	3960	(dBm)
40	PI/2 BPSK	1	1	22.03	22.16	22.16	24.00
Channel				647668	656000	664332	Tune-up limit
Frequency (MHz)				3715.02	3840	3964.98	(dBm)
30	PI/2 BPSK	1	1	22.07	22.08	22.15	24.00
Channel				647334	656000	664666	Tune-up limit
Frequency (MHz)				3710.01	3840	3969.99	(dBm)
20	PI/2 BPSK	1	1	22.10	22.11	22.16	24.00
Channel				647000	656000	665000	Tune-up limit
Frequency (MHz)				3705	3840	3975	(dBm)
10	PI/2 BPSK	1	1	22.05	22.17	22.14	24.00

【FR1 n77 (27Q)_FCC_Part 27Q (3450~3550MHz)_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		13.16		14.00
100	PI/2 BPSK	1	137		13.61		14.00
100	PI/2 BPSK	1	271		13.34		14.00
100	PI/2 BPSK	135	0		13.58		14.00
100	PI/2 BPSK	135	69		13.69		14.00
100	PI/2 BPSK	135	138		13.64		14.00
100	PI/2 BPSK	270	0		13.60		14.00
100	QPSK	1	1		13.13		14.00
100	QPSK	1	137		13.58		14.00
100	QPSK	1	271		13.39		14.00
100	QPSK	135	0		13.57		14.00
100	QPSK	135	69		13.69		14.00
100	QPSK	135	138		13.65		14.00
100	QPSK	270	0		13.58		14.00
100	16QAM	1	1		12.93		14.00
100	64QAM	1	1		12.96		14.00
100	256QAM	1	1		13.07		14.00
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	13.10	13.15	13.14	14.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	13.08	13.04	13.01	14.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	13.06	13.09	13.06	14.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	13.02	13.07	12.99	14.00

Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	13.08	13.11	13.04	14.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	13.03	13.07	13.02	14.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	13.00	13.13	13.08	14.00
Channel				630834	633332	635832	Tune-up limit
Frequency (MHz)				3462.51	3499.98	3537.48	(dBm)
25	PI/2 BPSK	1	1	13.02	13.12	13.03	14.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	13.08	13.12	13.01	14.00
Channel				630500	633332	636166	Tune-up limit
Frequency (MHz)				3457.5	3499.98	3542.49	(dBm)
15	PI/2 BPSK	1	1	12.97	13.09	13.09	14.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	13.03	13.06	13.12	14.00

【FR1 n77 (270)_FCC_Part 270 (3700~3980MHz)_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	12.99	13.15	13.13	14.00
100	PI/2 BPSK	1	137	13.35	13.59	13.55	14.00
100	PI/2 BPSK	1	271	12.99	13.22	13.18	14.00
100	PI/2 BPSK	135	0	13.29	13.51	13.39	14.00
100	PI/2 BPSK	135	69	13.42	13.64	13.60	14.00
100	PI/2 BPSK	135	138	13.24	13.52	13.43	14.00
100	PI/2 BPSK	270	0	13.25	13.51	13.43	14.00
100	QPSK	1	1	12.92	13.11	13.07	14.00
100	QPSK	1	137	13.38	13.56	13.43	14.00
100	QPSK	1	271	12.94	13.24	13.07	14.00
100	QPSK	135	0	13.29	13.52	13.49	14.00
100	QPSK	135	69	13.44	13.62	13.56	14.00
100	QPSK	135	138	13.34	13.53	13.40	14.00
100	QPSK	270	0	13.21	13.51	13.39	14.00
100	16QAM	1	1	12.62	12.89	12.85	14.00
100	64QAM	1	1	12.78	12.97	12.93	14.00
100	256QAM	1	1	12.90	13.14	13.04	14.00
Channel				649668	656000	662332	Tune-up limit
Frequency (MHz)				3745.02	3840	3934.98	(dBm)
90	PI/2 BPSK	1	1	12.94	13.02	13.02	14.00
Channel				649334	656000	662666	Tune-up limit
Frequency (MHz)				3740.01	3840	3939.99	(dBm)
80	PI/2 BPSK	1	1	12.89	13.10	13.12	14.00
Channel				649000	656000	663000	Tune-up limit
Frequency (MHz)				3735	3840	3945	(dBm)
70	PI/2 BPSK	1	1	12.91	13.12	13.09	14.00
Channel				648668	656000	663332	Tune-up limit
Frequency (MHz)				3730.02	3840	3949.98	(dBm)
60	PI/2 BPSK	1	1	12.88	13.03	13.01	14.00
Channel				648334	656000	663666	Tune-up limit
Frequency (MHz)				3725.01	3840	3954.99	(dBm)
50	PI/2 BPSK	1	1	12.98	13.02	13.09	14.00
Channel				648000	656000	664000	Tune-up limit
Frequency (MHz)				3720	3840	3960	(dBm)
40	PI/2 BPSK	1	1	12.85	13.04	12.99	14.00
Channel				647668	656000	664332	Tune-up limit
Frequency (MHz)				3715.02	3840	3964.98	(dBm)
30	PI/2 BPSK	1	1	12.94	13.07	13.02	14.00
Channel				647334	656000	664666	Tune-up limit
Frequency (MHz)				3710.01	3840	3969.99	(dBm)
20	PI/2 BPSK	1	1	12.92	13.03	13.03	14.00
Channel				647000	656000	665000	Tune-up limit
Frequency (MHz)				3705	3840	3975	(dBm)
10	PI/2 BPSK	1	1	12.88	13.02	12.99	14.00

【FR1 n77 (27Q) FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.04		27.00
100	PI/2 BPSK	1	137		25.42		27.00
100	PI/2 BPSK	1	271		25.21		27.00
100	PI/2 BPSK	135	0		25.40		26.50
100	PI/2 BPSK	135	69		25.38		27.00
100	PI/2 BPSK	135	138		25.38		26.50
100	PI/2 BPSK	270	0		25.34		26.50
100	QPSK	1	1		25.07		27.00
100	QPSK	1	137		25.32		27.00
100	QPSK	1	271		25.15		27.00
100	QPSK	135	0		25.37		26.00
100	QPSK	135	69		25.46		27.00
100	QPSK	135	138		25.33		26.00
100	QPSK	270	0		25.09		26.00
100	16QAM	1	1		24.81		26.00
100	64QAM	1	1		24.15		24.50
100	256QAM	1	1		22.15		22.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.01	25.03	25.02	27.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.02	25.00	25.00	27.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.00	25.02	25.00	27.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.01	25.00	25.01	27.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.00	25.02	25.00	27.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.01	25.00	25.00	27.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.00	25.00	25.02	27.00
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.02	25.00	25.01	27.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.01	25.02	25.00	27.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.01	25.00	25.01	27.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.00	25.01	25.01	27.00

【FR1 n77 (27O) FCC_Part 27O (3700~3980MHz)_HPUE_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.10	25.06	25.08	27.00
100	PI/2 BPSK	1	137	25.03	25.01	25.00	27.00
100	PI/2 BPSK	1	271	25.08	25.01	25.00	27.00
100	PI/2 BPSK	135	0	25.56	25.43	25.43	26.50
100	PI/2 BPSK	135	69	25.69	25.64	25.52	27.00
100	PI/2 BPSK	135	138	25.62	25.46	25.47	26.50
100	PI/2 BPSK	270	0	25.55	25.40	25.39	26.50

100	QPSK	1	1	25.00	25.05	25.00	27.00
100	QPSK	1	137	25.05	25.04	25.06	27.00
100	QPSK	1	271	25.02	25.00	25.10	27.00
100	QPSK	135	0	25.54	25.44	25.50	26.00
100	QPSK	135	69	25.63	25.51	25.47	27.00
100	QPSK	135	138	25.57	25.41	25.44	26.00
100	QPSK	270	0	25.57	25.44	25.38	26.00
100	16QAM	1	1	24.71	24.65	24.60	26.00
100	64QAM	1	1	23.37	23.19	23.24	24.50
100	256QAM	1	1	20.92	20.88	20.83	22.50
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.00	25.00	25.00	27.00
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.08	25.00	25.02	27.00
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.06	25.04	25.01	27.00
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.04	25.00	25.03	27.00
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.03	25.00	25.03	27.00
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.02	25.00	25.00	27.00
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840	3964.98	
30	PI/2 BPSK	1	1	25.05	25.00	25.04	27.00
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.01	25.00	25.04	27.00
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.06	25.01	25.00	27.00

【FR1 n77 (27Q) FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		13.16		14.00
100	PI/2 BPSK	1	137		13.61		14.00
100	PI/2 BPSK	1	271		13.34		14.00
100	PI/2 BPSK	135	0		13.58		14.00
100	PI/2 BPSK	135	69		13.69		14.00
100	PI/2 BPSK	135	138		13.64		14.00
100	PI/2 BPSK	270	0		13.60		14.00
100	QPSK	1	1		13.13		14.00
100	QPSK	1	137		13.58		14.00
100	QPSK	1	271		13.39		14.00
100	QPSK	135	0		13.57		14.00
100	QPSK	135	69		13.69		14.00
100	QPSK	135	138		13.65		14.00
100	QPSK	270	0		13.58		14.00
100	16QAM	1	1		12.93		14.00
100	64QAM	1	1		12.96		14.00
100	256QAM	1	1		13.07		14.00
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	13.10	13.15	13.14	14.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	13.08	13.04	13.01	14.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	13.06	13.09	13.06	14.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	

60	PI/2 BPSK	1	1	13.02	13.07	12.99	14.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	13.08	13.11	13.04	14.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	13.03	13.07	13.02	14.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	13.00	13.13	13.08	14.00
Channel				630834	633332	635832	Tune-up limit
Frequency (MHz)				3462.51	3499.98	3537.48	(dBm)
25	PI/2 BPSK	1	1	13.02	13.12	13.03	14.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	13.08	13.12	13.01	14.00
Channel				630500	633332	636166	Tune-up limit
Frequency (MHz)				3457.5	3499.98	3542.49	(dBm)
15	PI/2 BPSK	1	1	12.97	13.09	13.09	14.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	13.03	13.06	13.12	14.00

【FR1 n77 (270) FCC_Part 270 (3700~3980MHz)_HPUE_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	12.99	13.15	13.13	14.00
100	PI/2 BPSK	1	137	13.35	13.59	13.55	14.00
100	PI/2 BPSK	1	271	12.99	13.22	13.18	14.00
100	PI/2 BPSK	135	0	13.29	13.51	13.39	14.00
100	PI/2 BPSK	135	69	13.42	13.64	13.60	14.00
100	PI/2 BPSK	135	138	13.24	13.52	13.43	14.00
100	PI/2 BPSK	270	0	13.25	13.51	13.43	14.00
100	QPSK	1	1	12.92	13.11	13.07	14.00
100	QPSK	1	137	13.38	13.56	13.43	14.00
100	QPSK	1	271	12.94	13.24	13.07	14.00
100	QPSK	135	0	13.29	13.52	13.49	14.00
100	QPSK	135	69	13.44	13.62	13.56	14.00
100	QPSK	135	138	13.34	13.53	13.40	14.00
100	QPSK	270	0	13.21	13.51	13.39	14.00
100	16QAM	1	1	12.62	12.89	12.85	14.00
100	64QAM	1	1	12.78	12.97	12.93	14.00
100	256QAM	1	1	12.90	13.14	13.04	14.00
Channel				649668	656000	662332	Tune-up limit
Frequency (MHz)				3745.02	3840	3934.98	(dBm)
90	PI/2 BPSK	1	1	12.94	13.02	13.02	14.00
Channel				649334	656000	662666	Tune-up limit
Frequency (MHz)				3740.01	3840	3939.99	(dBm)
80	PI/2 BPSK	1	1	12.89	13.10	13.12	14.00
Channel				649000	656000	663000	Tune-up limit
Frequency (MHz)				3735	3840	3945	(dBm)
70	PI/2 BPSK	1	1	12.91	13.12	13.09	14.00
Channel				648668	656000	663332	Tune-up limit
Frequency (MHz)				3730.02	3840	3949.98	(dBm)
60	PI/2 BPSK	1	1	12.88	13.03	13.01	14.00
Channel				648334	656000	663666	Tune-up limit
Frequency (MHz)				3725.01	3840	3954.99	(dBm)
50	PI/2 BPSK	1	1	12.98	13.02	13.09	14.00
Channel				648000	656000	664000	Tune-up limit
Frequency (MHz)				3720	3840	3960	(dBm)
40	PI/2 BPSK	1	1	12.85	13.04	12.99	14.00
Channel				647668	656000	664332	Tune-up limit
Frequency (MHz)				3715.02	3840	3964.98	(dBm)
30	PI/2 BPSK	1	1	12.94	13.07	13.02	14.00
Channel				647334	656000	664666	Tune-up limit
Frequency (MHz)				3710.01	3840	3969.99	(dBm)
20	PI/2 BPSK	1	1	12.92	13.03	13.03	14.00
Channel				647000	656000	665000	Tune-up limit
Frequency (MHz)				3705	3840	3975	(dBm)
10	PI/2 BPSK	1	1	12.88	13.02	12.99	14.00

【FR1 n77 (27Q) FCC_Part 27Q (3450~3550MHz)_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.89		24.00
100	PI/2 BPSK	1	137		23.30		24.00
100	PI/2 BPSK	1	271		23.39		24.00
100	PI/2 BPSK	135	0		23.20		23.50
100	PI/2 BPSK	135	69		23.31		24.00
100	PI/2 BPSK	135	138		23.41		23.50
100	PI/2 BPSK	270	0		22.96		23.50
100	QPSK	1	1		23.88		24.00
100	QPSK	1	137		23.37		24.00
100	QPSK	1	271		22.94		24.00
100	QPSK	135	0		22.68		23.00
100	QPSK	135	69		23.28		24.00
100	QPSK	135	138		22.36		23.00
100	QPSK	270	0		22.83		23.00
100	16QAM	1	1		22.84		23.00
100	64QAM	1	1		22.29		23.00
100	256QAM	1	1		21.89		22.50
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.79	23.86	23.82	24.00
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.74	23.73	23.70	24.00
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.75	23.84	23.73	24.00
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.78	23.76	23.75	24.00
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.78	23.85	23.80	24.00
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.75	23.81	23.68	24.00
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.65	23.78	23.70	24.00
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.75	23.75	23.75	24.00
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.70	23.78	23.68	24.00
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.73	23.81	23.75	24.00
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.75	23.73	23.77	24.00

【FR1 n77 (27O) FCC_Part 27O (3700~3980MHz)_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.09	22.27	22.65	24.00
100	PI/2 BPSK	1	137	22.69	22.81	23.25	24.00
100	PI/2 BPSK	1	271	22.07	22.18	22.54	24.00
100	PI/2 BPSK	135	0	22.66	22.82	23.16	23.50
100	PI/2 BPSK	135	69	22.72	22.97	23.35	24.00
100	PI/2 BPSK	135	138	22.47	22.65	22.97	23.50
100	PI/2 BPSK	270	0	22.75	22.87	23.29	23.50

100	QPSK	1	1	22.03	22.14	22.60	24.00
100	QPSK	1	137	22.58	22.73	23.17	24.00
100	QPSK	1	271	22.00	22.21	22.57	24.00
100	QPSK	135	0	22.30	22.50	22.86	23.00
100	QPSK	135	69	22.68	22.79	23.22	24.00
100	QPSK	135	138	22.22	22.39	22.77	23.00
100	QPSK	270	0	22.28	22.35	22.88	23.00
100	16QAM	1	1	21.82	21.97	22.38	23.00
100	64QAM	1	1	21.89	22.08	22.43	23.00
100	256QAM	1	1	21.37	21.56	21.90	22.50
Channel				649668	656000	662332	Tune-up limit
Frequency (MHz)				3745.02	3840	3934.98	(dBm)
90	PI/2 BPSK	1	1	22.04	22.17	22.62	24.00
Channel				649334	656000	662666	Tune-up limit
Frequency (MHz)				3740.01	3840	3939.99	(dBm)
80	PI/2 BPSK	1	1	22.00	22.17	22.60	24.00
Channel				649000	656000	663000	Tune-up limit
Frequency (MHz)				3735	3840	3945	(dBm)
70	PI/2 BPSK	1	1	22.08	22.22	22.56	24.00
Channel				648668	656000	663332	Tune-up limit
Frequency (MHz)				3730.02	3840	3949.98	(dBm)
60	PI/2 BPSK	1	1	22.02	22.18	22.60	24.00
Channel				648334	656000	663666	Tune-up limit
Frequency (MHz)				3725.01	3840	3954.99	(dBm)
50	PI/2 BPSK	1	1	22.00	22.20	22.55	24.00
Channel				648000	656000	664000	Tune-up limit
Frequency (MHz)				3720	3840	3960	(dBm)
40	PI/2 BPSK	1	1	22.05	22.13	22.62	24.00
Channel				647668	656000	664332	Tune-up limit
Frequency (MHz)				3715.02	3840	3964.98	(dBm)
30	PI/2 BPSK	1	1	22.00	22.19	22.57	24.00
Channel				647334	656000	664666	Tune-up limit
Frequency (MHz)				3710.01	3840	3969.99	(dBm)
20	PI/2 BPSK	1	1	22.01	22.15	22.63	24.00
Channel				647000	656000	665000	Tune-up limit
Frequency (MHz)				3705	3840	3975	(dBm)
10	PI/2 BPSK	1	1	22.02	22.21	22.55	24.00

【FR1 n77 (27Q) FCC_Part 27Q (3450~3550MHz)_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.30		15.00
100	PI/2 BPSK	1	137		14.87		15.00
100	PI/2 BPSK	1	271		14.66		15.00
100	PI/2 BPSK	135	0		14.67		15.00
100	PI/2 BPSK	135	69		14.82		15.00
100	PI/2 BPSK	135	138		14.80		15.00
100	PI/2 BPSK	270	0		14.73		15.00
100	QPSK	1	1		14.26		15.00
100	QPSK	1	137		14.80		15.00
100	QPSK	1	271		14.70		15.00
100	QPSK	135	0		14.69		15.00
100	QPSK	135	69		14.79		15.00
100	QPSK	135	138		14.81		15.00
100	QPSK	270	0		14.72		15.00
100	16QAM	1	1		14.04		15.00
100	64QAM	1	1		14.10		15.00
100	256QAM	1	1		14.25		15.00
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	14.21	14.28	14.25	15.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	14.15	14.22	14.18	15.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	14.19	14.26	14.19	15.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	14.20	14.14	14.18	15.00
Channel				631668	633332	635000	Tune-up limit

50	PI/2 BPSK	1	1	Frequency (MHz)	3475.02	3499.98	3525	(dBm)
				Channel	14.06	14.23	14.14	15.00
				Frequency (MHz)	631334	633332	635332	Tune-up limit (dBm)
40	PI/2 BPSK	1	1	Frequency (MHz)	3470.01	3499.98	3529.98	(dBm)
				Channel	14.18	14.13	14.14	15.00
				Frequency (MHz)	631000	633332	635666	Tune-up limit (dBm)
30	PI/2 BPSK	1	1	Frequency (MHz)	3465	3499.98	3534.99	(dBm)
				Channel	14.06	14.25	14.15	15.00
				Frequency (MHz)	630834	633332	635832	Tune-up limit (dBm)
25	PI/2 BPSK	1	1	Frequency (MHz)	3462.51	3499.98	3537.48	(dBm)
				Channel	14.18	14.16	14.16	15.00
				Frequency (MHz)	630668	633332	636000	Tune-up limit (dBm)
20	PI/2 BPSK	1	1	Frequency (MHz)	3460.02	3499.98	3540	(dBm)
				Channel	14.10	14.18	14.11	15.00
				Frequency (MHz)	630500	633332	636166	Tune-up limit (dBm)
15	PI/2 BPSK	1	1	Frequency (MHz)	3457.5	3499.98	3542.49	(dBm)
				Channel	14.17	14.23	14.20	15.00
				Frequency (MHz)	630334	633332	636332	Tune-up limit (dBm)
10	PI/2 BPSK	1	1	Frequency (MHz)	3455.01	3499.98	3544.98	(dBm)
				Channel	14.07	14.14	14.19	15.00

【FR1 n77 (270) FCC_Part 270 (3700~3980MHz)_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
				Channel	650000	656000	662000
				Frequency (MHz)	3750	3840	3930
100	PI/2 BPSK	1	1	14.48	14.50	14.30	15.00
100	PI/2 BPSK	1	137	14.79	14.90	14.60	15.00
100	PI/2 BPSK	1	271	14.35	14.46	14.13	15.00
100	PI/2 BPSK	135	0	14.71	14.84	14.57	15.00
100	PI/2 BPSK	135	69	14.81	14.90	14.64	15.00
100	PI/2 BPSK	135	138	14.71	14.76	14.49	15.00
100	PI/2 BPSK	270	0	14.62	14.79	14.55	15.00
100	QPSK	1	1	14.31	14.45	14.11	15.00
100	QPSK	1	137	14.75	14.87	14.65	15.00
100	QPSK	1	271	14.35	14.46	14.24	15.00
100	QPSK	135	0	14.73	14.80	14.55	15.00
100	QPSK	135	69	14.73	14.90	14.58	15.00
100	QPSK	135	138	14.59	14.75	14.53	15.00
100	QPSK	270	0	14.72	14.79	14.56	15.00
100	16QAM	1	1	14.19	14.25	14.01	15.00
100	64QAM	1	1	14.20	14.29	13.97	15.00
100	256QAM	1	1	14.28	14.37	14.07	15.00
				Channel	649668	656000	662332
				Frequency (MHz)	3745.02	3840	3934.98
90	PI/2 BPSK	1	1	14.36	14.45	14.27	15.00
				Channel	649334	656000	662666
				Frequency (MHz)	3740.01	3840	3939.99
80	PI/2 BPSK	1	1	14.46	14.42	14.22	15.00
				Channel	649000	656000	663000
				Frequency (MHz)	3735	3840	3945
70	PI/2 BPSK	1	1	14.46	14.45	14.19	15.00
				Channel	648668	656000	663332
				Frequency (MHz)	3730.02	3840	3949.98
60	PI/2 BPSK	1	1	14.45	14.45	14.29	15.00
				Channel	648334	656000	663666
				Frequency (MHz)	3725.01	3840	3954.99
50	PI/2 BPSK	1	1	14.34	14.36	14.28	15.00
				Channel	648000	656000	664000
				Frequency (MHz)	3720	3840	3960
40	PI/2 BPSK	1	1	14.34	14.45	14.23	15.00
				Channel	647668	656000	664332
				Frequency (MHz)	3715.02	3840	3964.98
30	PI/2 BPSK	1	1	14.45	14.41	14.24	15.00
				Channel	647334	656000	664666
				Frequency (MHz)	3710.01	3840	3969.99
20	PI/2 BPSK	1	1	14.34	14.37	14.25	15.00
				Channel	647000	656000	665000
				Frequency (MHz)	3705	3840	3975
10	PI/2 BPSK	1	1	14.46	14.47	14.18	15.00

【FR1 n77 (27Q) FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		26.03		27.00
100	PI/2 BPSK	1	137		26.27		27.00
100	PI/2 BPSK	1	271		26.22		27.00
100	PI/2 BPSK	135	0		26.05		26.50
100	PI/2 BPSK	135	69		26.19		27.00
100	PI/2 BPSK	135	138		26.12		26.50
100	PI/2 BPSK	270	0		26.13		26.50
100	QPSK	1	1		26.01		27.00
100	QPSK	1	137		26.18		27.00
100	QPSK	1	271		26.24		27.00
100	QPSK	135	0		25.54		26.00
100	QPSK	135	69		26.18		27.00
100	QPSK	135	138		25.58		26.00
100	QPSK	270	0		25.55		26.00
100	16QAM	1	1		24.70		26.00
100	64QAM	1	1		23.20		24.50
100	256QAM	1	1		22.07		22.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	25.96	26.00	25.94	27.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	25.87	25.95	25.90	27.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	25.86	25.92	25.89	27.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	25.82	25.91	25.87	27.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	25.90	25.93	25.83	27.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	25.87	25.96	25.81	27.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	25.84	25.97	25.88	27.00
Channel				630834	633332	635832	Tune-up limit
Frequency (MHz)				3462.51	3499.98	3537.48	(dBm)
25	PI/2 BPSK	1	1	25.87	25.93	25.85	27.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	25.93	25.98	25.90	27.00
Channel				630500	633332	636166	Tune-up limit
Frequency (MHz)				3457.5	3499.98	3542.49	(dBm)
15	PI/2 BPSK	1	1	25.91	25.95	25.82	27.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	25.94	25.90	25.85	27.00

【FR1 n77 (27O) FCC_Part 27O (3700~3980MHz)_HPUE_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.42	25.62	25.96	27.00
100	PI/2 BPSK	1	137	25.55	25.64	26.03	27.00
100	PI/2 BPSK	1	271	25.47	25.57	25.95	27.00
100	PI/2 BPSK	135	0	25.53	25.73	26.02	26.50
100	PI/2 BPSK	135	69	25.42	25.59	25.91	27.00
100	PI/2 BPSK	135	138	25.37	25.48	25.82	26.50
100	PI/2 BPSK	270	0	25.37	25.53	25.82	26.50

100	QPSK	1	1	25.39	25.52	25.93	27.00
100	QPSK	1	137	25.45	25.65	25.91	27.00
100	QPSK	1	271	25.48	25.64	25.92	27.00
100	QPSK	135	0	25.08	25.12	25.47	26.00
100	QPSK	135	69	25.41	25.46	25.90	27.00
100	QPSK	135	138	24.83	24.96	25.34	26.00
100	QPSK	270	0	24.81	24.95	25.32	26.00
100	16QAM	1	1	24.24	24.34	24.66	26.00
100	64QAM	1	1	22.67	22.84	23.12	24.50
100	256QAM	1	1	21.65	21.75	22.12	22.50
Channel				649668	656000	662332	Tune-up limit
Frequency (MHz)				3745.02	3840	3934.98	(dBm)
90	PI/2 BPSK	1	1	25.32	25.55	25.89	27.00
Channel				649334	656000	662666	Tune-up limit
Frequency (MHz)				3740.01	3840	3939.99	(dBm)
80	PI/2 BPSK	1	1	25.34	25.50	25.81	27.00
Channel				649000	656000	663000	Tune-up limit
Frequency (MHz)				3735	3840	3945	(dBm)
70	PI/2 BPSK	1	1	25.38	25.48	25.90	27.00
Channel				648668	656000	663332	Tune-up limit
Frequency (MHz)				3730.02	3840	3949.98	(dBm)
60	PI/2 BPSK	1	1	25.33	25.59	25.89	27.00
Channel				648334	656000	663666	Tune-up limit
Frequency (MHz)				3725.01	3840	3954.99	(dBm)
50	PI/2 BPSK	1	1	25.29	25.57	25.89	27.00
Channel				648000	656000	664000	Tune-up limit
Frequency (MHz)				3720	3840	3960	(dBm)
40	PI/2 BPSK	1	1	25.41	25.54	25.90	27.00
Channel				647668	656000	664332	Tune-up limit
Frequency (MHz)				3715.02	3840	3964.98	(dBm)
30	PI/2 BPSK	1	1	25.29	25.56	25.90	27.00
Channel				647334	656000	664666	Tune-up limit
Frequency (MHz)				3710.01	3840	3969.99	(dBm)
20	PI/2 BPSK	1	1	25.40	25.59	25.93	27.00
Channel				647000	656000	665000	Tune-up limit
Frequency (MHz)				3705	3840	3975	(dBm)
10	PI/2 BPSK	1	1	25.29	25.47	25.84	27.00

【FR1 n77 (27Q) FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.30		15.00
100	PI/2 BPSK	1	137		14.87		15.00
100	PI/2 BPSK	1	271		14.66		15.00
100	PI/2 BPSK	135	0		14.67		15.00
100	PI/2 BPSK	135	69		14.82		15.00
100	PI/2 BPSK	135	138		14.80		15.00
100	PI/2 BPSK	270	0		14.73		15.00
100	QPSK	1	1		14.26		15.00
100	QPSK	1	137		14.80		15.00
100	QPSK	1	271		14.70		15.00
100	QPSK	135	0		14.69		15.00
100	QPSK	135	69		14.79		15.00
100	QPSK	135	138		14.81		15.00
100	QPSK	270	0		14.72		15.00
100	16QAM	1	1		14.04		15.00
100	64QAM	1	1		14.10		15.00
100	256QAM	1	1		14.25		15.00
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	14.21	14.28	14.25	15.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	14.15	14.22	14.18	15.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	14.19	14.26	14.19	15.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)

60	PI/2 BPSK	1	1	14.20	14.14	14.18	15.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	14.06	14.23	14.14	15.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	14.18	14.13	14.14	15.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	14.06	14.25	14.15	15.00
Channel				630834	633332	635832	Tune-up limit
Frequency (MHz)				3462.51	3499.98	3537.48	(dBm)
25	PI/2 BPSK	1	1	14.18	14.16	14.16	15.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	14.10	14.18	14.11	15.00
Channel				630500	633332	636166	Tune-up limit
Frequency (MHz)				3457.5	3499.98	3542.49	(dBm)
15	PI/2 BPSK	1	1	14.17	14.23	14.20	15.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	14.07	14.14	14.19	15.00

【FR1 n77 (270) FCC_Part 270 (3700~3980MHz)_HPUE_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	14.48	14.50	14.30	15.00
100	PI/2 BPSK	1	137	14.79	14.90	14.60	15.00
100	PI/2 BPSK	1	271	14.35	14.46	14.13	15.00
100	PI/2 BPSK	135	0	14.71	14.84	14.57	15.00
100	PI/2 BPSK	135	69	14.81	14.90	14.64	15.00
100	PI/2 BPSK	135	138	14.71	14.76	14.49	15.00
100	PI/2 BPSK	270	0	14.62	14.79	14.55	15.00
100	QPSK	1	1	14.31	14.45	14.11	15.00
100	QPSK	1	137	14.75	14.87	14.65	15.00
100	QPSK	1	271	14.35	14.46	14.24	15.00
100	QPSK	135	0	14.73	14.80	14.55	15.00
100	QPSK	135	69	14.73	14.90	14.58	15.00
100	QPSK	135	138	14.59	14.75	14.53	15.00
100	QPSK	270	0	14.72	14.79	14.56	15.00
100	16QAM	1	1	14.19	14.25	14.01	15.00
100	64QAM	1	1	14.20	14.29	13.97	15.00
100	256QAM	1	1	14.28	14.37	14.07	15.00
Channel				649668	656000	662332	Tune-up limit
Frequency (MHz)				3745.02	3840	3934.98	(dBm)
90	PI/2 BPSK	1	1	14.36	14.45	14.27	15.00
Channel				649334	656000	662666	Tune-up limit
Frequency (MHz)				3740.01	3840	3939.99	(dBm)
80	PI/2 BPSK	1	1	14.46	14.42	14.22	15.00
Channel				649000	656000	663000	Tune-up limit
Frequency (MHz)				3735	3840	3945	(dBm)
70	PI/2 BPSK	1	1	14.46	14.45	14.19	15.00
Channel				648668	656000	663332	Tune-up limit
Frequency (MHz)				3730.02	3840	3949.98	(dBm)
60	PI/2 BPSK	1	1	14.45	14.45	14.29	15.00
Channel				648334	656000	663666	Tune-up limit
Frequency (MHz)				3725.01	3840	3954.99	(dBm)
50	PI/2 BPSK	1	1	14.34	14.36	14.28	15.00
Channel				648000	656000	664000	Tune-up limit
Frequency (MHz)				3720	3840	3960	(dBm)
40	PI/2 BPSK	1	1	14.34	14.45	14.23	15.00
Channel				647668	656000	664332	Tune-up limit
Frequency (MHz)				3715.02	3840	3964.98	(dBm)
30	PI/2 BPSK	1	1	14.45	14.41	14.24	15.00
Channel				647334	656000	664666	Tune-up limit
Frequency (MHz)				3710.01	3840	3969.99	(dBm)
20	PI/2 BPSK	1	1	14.34	14.37	14.25	15.00
Channel				647000	656000	665000	Tune-up limit
Frequency (MHz)				3705	3840	3975	(dBm)
10	PI/2 BPSK	1	1	14.46	14.47	14.18	15.00

【FR1 n78 (27Q) FCC_Part 27Q (3450~3550MHz)_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.91		24.00
100	PI/2 BPSK	1	137		23.08		24.00
100	PI/2 BPSK	1	271		22.42		24.00
100	PI/2 BPSK	135	0		23.05		23.50
100	PI/2 BPSK	135	69		22.98		24.00
100	PI/2 BPSK	135	138		22.68		23.50
100	PI/2 BPSK	270	0		22.88		23.50
100	QPSK	1	1		22.83		24.00
100	QPSK	1	137		22.76		24.00
100	QPSK	1	271		22.40		24.00
100	QPSK	135	0		22.79		23.00
100	QPSK	135	69		22.98		24.00
100	QPSK	135	138		22.66		23.00
100	QPSK	270	0		22.82		23.00
100	16QAM	1	1		22.55		23.00
100	64QAM	1	1		20.65		21.50
100	256QAM	1	1		18.68		19.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	22.84	22.90	22.86	24.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	22.77	22.83	22.72	24.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	22.74	22.84	22.73	24.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	22.81	22.88	22.83	24.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	22.80	22.76	22.82	24.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	22.71	22.80	22.76	24.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	22.81	22.80	22.72	24.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	22.80	22.85	22.77	24.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	22.82	22.81	22.78	24.00

【FR1 n78 (270) _FCC_Part 27O (3700~3800MHz)_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.89		24.00
100	PI/2 BPSK	1	137		23.11		24.00
100	PI/2 BPSK	1	271		22.32		24.00
100	PI/2 BPSK	135	0		23.10		23.50
100	PI/2 BPSK	135	69		23.03		24.00
100	PI/2 BPSK	135	138		22.68		23.50
100	PI/2 BPSK	270	0		22.88		23.50
100	QPSK	1	1		22.80		24.00
100	QPSK	1	137		22.92		24.00
100	QPSK	1	271		22.43		24.00
100	QPSK	135	0		22.87		23.00
100	QPSK	135	69		22.95		24.00
100	QPSK	135	138		22.70		23.00
100	QPSK	270	0		22.83		23.00
100	16QAM	1	1		22.55		23.00
100	64QAM	1	1		20.59		21.50
100	256QAM	1	1		19.03		19.50
Channel				649668	650000	650332	Tune-up limit
Frequency (MHz)				3745.02	3750	3754.98	(dBm)
90	PI/2 BPSK	1	1	22.74	22.86	22.80	24.00
Channel				649334	650000	650666	Tune-up limit
Frequency (MHz)				3740.01	3750	3759.99	(dBm)
80	PI/2 BPSK	1	1	22.70	22.83	22.68	24.00
Channel				649000	650000	651000	Tune-up limit
Frequency (MHz)				3735	3750	3765	(dBm)
70	PI/2 BPSK	1	1	22.73	22.82	22.76	24.00
Channel				648668	650000	651332	Tune-up limit
Frequency (MHz)				3730.02	3750	3769.98	(dBm)
60	PI/2 BPSK	1	1	22.68	22.75	22.74	24.00
Channel				648334	650000	651666	Tune-up limit
Frequency (MHz)				3725.01	3750	3774.99	(dBm)
50	PI/2 BPSK	1	1	22.70	22.75	22.67	24.00
Channel				648000	650000	652000	Tune-up limit
Frequency (MHz)				3720	3750	3780	(dBm)
40	PI/2 BPSK	1	1	22.66	22.79	22.71	24.00
Channel				647668	650000	652332	Tune-up limit
Frequency (MHz)				3715.02	3750	3784.98	(dBm)
30	PI/2 BPSK	1	1	22.72	22.80	22.73	24.00
Channel				647334	650000	652666	Tune-up limit
Frequency (MHz)				3710.01	3750	3789.99	(dBm)
20	PI/2 BPSK	1	1	22.71	22.82	22.72	24.00
Channel				647000	650000	653000	Tune-up limit
Frequency (MHz)				3705	3750	3795	(dBm)
10	PI/2 BPSK	1	1	22.61	22.84	22.77	24.00

【FR1 n78 (27Q) _FCC_Part 27Q (3450~3550MHz)_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		13.82		14.50
100	PI/2 BPSK	1	137		14.26		14.50
100	PI/2 BPSK	1	271		14.03		14.50
100	PI/2 BPSK	135	0		14.15		14.50
100	PI/2 BPSK	135	69		14.34		14.50
100	PI/2 BPSK	135	138		14.23		14.50
100	PI/2 BPSK	270	0		14.15		14.50
100	QPSK	1	1		13.78		14.50
100	QPSK	1	137		14.23		14.50
100	QPSK	1	271		13.99		14.50
100	QPSK	135	0		14.14		14.50
100	QPSK	135	69		14.33		14.50
100	QPSK	135	138		14.22		14.50



FCC SAR TEST REPORT

Report No. : FA5N2416B

100	QPSK	270	0		14.14		14.50
100	16QAM	1	1		13.54		14.50
100	64QAM	1	1		13.57		14.50
100	256QAM	1	1		13.64		14.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	13.75	13.80	13.77	14.50
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	13.65	13.68	13.63	14.50
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	13.68	13.75	13.64	14.50
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	13.65	13.75	13.67	14.50
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	13.71	13.79	13.70	14.50
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	13.71	13.71	13.71	14.50
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	13.65	13.73	13.67	14.50
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	13.68	13.76	13.73	14.50
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	13.64	13.70	13.64	14.50

【FR1 n78 (270) FCC_Part 270 (3700~3800MHz)_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		13.55		14.50
100	PI/2 BPSK	1	137		14.21		14.50
100	PI/2 BPSK	1	271		13.82		14.50
100	PI/2 BPSK	135	0		14.09		14.50
100	PI/2 BPSK	135	69		14.22		14.50
100	PI/2 BPSK	135	138		14.08		14.50
100	PI/2 BPSK	270	0		14.10		14.50
100	QPSK	1	1		13.51		14.50
100	QPSK	1	137		14.14		14.50
100	QPSK	1	271		13.81		14.50
100	QPSK	135	0		14.07		14.50
100	QPSK	135	69		14.19		14.50
100	QPSK	135	138		14.04		14.50
100	QPSK	270	0		14.03		14.50
100	16QAM	1	1		13.26		14.50
100	64QAM	1	1		13.32		14.50
100	256QAM	1	1		13.36		14.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	13.51	13.53	13.48	14.50
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	13.49	13.50	13.41	14.50
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	13.46	13.48	13.40	14.50
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	13.38	13.40	13.38	14.50
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	13.49	13.49	13.37	14.50
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	13.43	13.39	13.37	14.50
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	13.47	13.41	13.42	14.50
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	13.37	13.39	13.35	14.50
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	13.39	13.43	13.35	14.50

【FR1 n78 (27Q) FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.72		27.00
100	PI/2 BPSK	1	137		26.07		27.00
100	PI/2 BPSK	1	271		25.14		27.00
100	PI/2 BPSK	135	0		25.90		26.50
100	PI/2 BPSK	135	69		25.93		27.00
100	PI/2 BPSK	135	138		25.59		26.50
100	PI/2 BPSK	270	0		25.74		26.50
100	QPSK	1	1		25.60		27.00
100	QPSK	1	137		25.74		27.00
100	QPSK	1	271		25.13		27.00
100	QPSK	135	0		25.64		26.00
100	QPSK	135	69		25.91		27.00
100	QPSK	135	138		25.51		26.00
100	QPSK	270	0		25.68		26.00

100	16QAM	1	1		25.35		26.00
100	64QAM	1	1		23.48		24.50
100	256QAM	1	1		21.42		22.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	25.63	25.70	25.66	27.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	25.48	25.68	25.59	27.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	25.60	25.63	25.65	27.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	25.49	25.57	25.60	27.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	25.53	25.56	25.58	27.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	25.51	25.55	25.58	27.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	25.56	25.63	25.56	27.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	25.58	25.68	25.57	27.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	25.55	25.63	25.63	27.00

【FR1 n78 (270) _FCC_Part 270 (3700~3800MHz)_HPUE_Ant 5_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.50		27.00
100	PI/2 BPSK	1	137		25.81		27.00
100	PI/2 BPSK	1	271		25.00		27.00
100	PI/2 BPSK	135	0		25.69		26.50
100	PI/2 BPSK	135	69		25.67		27.00
100	PI/2 BPSK	135	138		25.34		26.50
100	PI/2 BPSK	270	0		25.48		26.50
100	QPSK	1	1		25.40		27.00
100	QPSK	1	137		25.49		27.00
100	QPSK	1	271		25.01		27.00
100	QPSK	135	0		25.51		26.00
100	QPSK	135	69		25.71		27.00
100	QPSK	135	138		25.35		26.00
100	QPSK	270	0		25.44		26.00
100	16QAM	1	1		25.13		26.00
100	64QAM	1	1		24.18		24.50
100	256QAM	1	1		22.50		22.50
Channel				649668	650000	650332	Tune-up limit
Frequency (MHz)				3745.02	3750	3754.98	(dBm)
90	PI/2 BPSK	1	1	25.33	25.39	25.30	27.00
Channel				649334	650000	650666	Tune-up limit
Frequency (MHz)				3740.01	3750	3759.99	(dBm)
80	PI/2 BPSK	1	1	25.32	25.46	25.26	27.00
Channel				649000	650000	651000	Tune-up limit
Frequency (MHz)				3735	3750	3765	(dBm)
70	PI/2 BPSK	1	1	25.25	25.40	25.29	27.00
Channel				648668	650000	651332	Tune-up limit
Frequency (MHz)				3730.02	3750	3769.98	(dBm)
60	PI/2 BPSK	1	1	25.28	25.37	25.18	27.00
Channel				648334	650000	651666	Tune-up limit
Frequency (MHz)				3725.01	3750	3774.99	(dBm)
50	PI/2 BPSK	1	1	25.19	25.37	25.27	27.00
Channel				648000	650000	652000	Tune-up limit
Frequency (MHz)				3720	3750	3780	(dBm)
40	PI/2 BPSK	1	1	25.27	25.47	25.26	27.00

Channel				647668	650000	652332	Tune-up limit
Frequency (MHz)				3715.02	3750	3784.98	(dBm)
30	PI/2 BPSK	1	1	25.27	25.41	25.24	27.00
Channel				647334	650000	652666	Tune-up limit
Frequency (MHz)				3710.01	3750	3789.99	(dBm)
20	PI/2 BPSK	1	1	25.28	25.47	25.19	27.00
Channel				647000	650000	653000	Tune-up limit
Frequency (MHz)				3705	3750	3795	(dBm)
10	PI/2 BPSK	1	1	25.29	25.44	25.20	27.00

【FR1 n78 (27Q)_FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		13.82		14.50
100	PI/2 BPSK	1	137		14.26		14.50
100	PI/2 BPSK	1	271		14.03		14.50
100	PI/2 BPSK	135	0		14.15		14.50
100	PI/2 BPSK	135	69		14.34		14.50
100	PI/2 BPSK	135	138		14.23		14.50
100	PI/2 BPSK	270	0		14.15		14.50
100	QPSK	1	1		13.78		14.50
100	QPSK	1	137		14.23		14.50
100	QPSK	1	271		13.99		14.50
100	QPSK	135	0		14.14		14.50
100	QPSK	135	69		14.33		14.50
100	QPSK	135	138		14.22		14.50
100	QPSK	270	0		14.14		14.50
100	16QAM	1	1		13.54		14.50
100	64QAM	1	1		13.57		14.50
100	256QAM	1	1		13.64		14.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	13.75	13.80	13.77	14.50
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	13.65	13.68	13.63	14.50
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	13.68	13.75	13.64	14.50
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	13.65	13.75	13.67	14.50
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	13.71	13.79	13.70	14.50
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	13.71	13.71	13.71	14.50
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	13.65	13.73	13.67	14.50
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	13.68	13.76	13.73	14.50
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	13.64	13.70	13.64	14.50

【FR1 n78 (270) FCC_Part 270 (3700~3800MHz)_HPUE_Ant 5_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		13.55		14.50
100	PI/2 BPSK	1	137		14.21		14.50
100	PI/2 BPSK	1	271		13.82		14.50
100	PI/2 BPSK	135	0		14.09		14.50
100	PI/2 BPSK	135	69		14.22		14.50
100	PI/2 BPSK	135	138		14.08		14.50
100	PI/2 BPSK	270	0		14.10		14.50
100	QPSK	1	1		13.51		14.50
100	QPSK	1	137		14.14		14.50
100	QPSK	1	271		13.81		14.50
100	QPSK	135	0		14.07		14.50
100	QPSK	135	69		14.19		14.50
100	QPSK	135	138		14.04		14.50
100	QPSK	270	0		14.03		14.50
100	16QAM	1	1		13.26		14.50
100	64QAM	1	1		13.32		14.50
100	256QAM	1	1		13.36		14.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	13.51	13.53	13.48	14.50
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	13.49	13.50	13.41	14.50
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	13.46	13.48	13.40	14.50
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	13.38	13.40	13.38	14.50
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	13.49	13.49	13.37	14.50
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	13.43	13.39	13.37	14.50
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	13.47	13.41	13.42	14.50
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	13.37	13.39	13.35	14.50
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	13.39	13.43	13.35	14.50

【FR1 n78 (27Q) FCC_Part 27Q (3450~3550MHz)_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.57		24.00
100	PI/2 BPSK	1	137		23.11		24.00
100	PI/2 BPSK	1	271		22.64		24.00
100	PI/2 BPSK	135	0		23.01		23.50
100	PI/2 BPSK	135	69		23.28		24.00
100	PI/2 BPSK	135	138		23.04		23.50
100	PI/2 BPSK	270	0		23.02		23.50
100	QPSK	1	1		22.45		24.00
100	QPSK	1	137		23.02		24.00
100	QPSK	1	271		22.68		24.00
100	QPSK	135	0		22.95		23.00
100	QPSK	135	69		23.19		24.00
100	QPSK	135	138		22.93		23.00
100	QPSK	270	0		23.00		23.00

100	16QAM	1	1		22.26		23.00
100	64QAM	1	1		22.26		23.00
100	256QAM	1	1		21.79		22.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	22.47	22.56	22.52	24.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	22.35	22.51	22.45	24.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	22.42	22.53	22.47	24.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	22.38	22.49	22.48	24.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	22.37	22.43	22.48	24.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	22.45	22.50	22.49	24.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	22.35	22.42	22.37	24.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	22.43	22.44	22.48	24.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	22.37	22.46	22.45	24.00

【FR1 n78 (270) _ FCC_Part 270 (3700~3800MHz)_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.83		24.00
100	PI/2 BPSK	1	137		23.50		24.00
100	PI/2 BPSK	1	271		22.92		24.00
100	PI/2 BPSK	135	0		23.38		23.50
100	PI/2 BPSK	135	69		23.59		24.00
100	PI/2 BPSK	135	138		23.40		23.50
100	PI/2 BPSK	270	0		23.38		23.50
100	QPSK	1	1		22.78		24.00
100	QPSK	1	137		23.47		24.00
100	QPSK	1	271		22.94		24.00
100	QPSK	135	0		22.35		23.00
100	QPSK	135	69		23.57		24.00
100	QPSK	135	138		22.48		23.00
100	QPSK	270	0		22.35		23.00
100	16QAM	1	1		22.64		23.00
100	64QAM	1	1		22.60		23.00
100	256QAM	1	1		22.09		22.50
Channel				649668	650000	650332	Tune-up limit
Frequency (MHz)				3745.02	3750	3754.98	(dBm)
90	PI/2 BPSK	1	1	22.66	22.75	22.60	24.00
Channel				649334	650000	650666	Tune-up limit
Frequency (MHz)				3740.01	3750	3759.99	(dBm)
80	PI/2 BPSK	1	1	22.62	22.76	22.46	24.00
Channel				649000	650000	651000	Tune-up limit
Frequency (MHz)				3735	3750	3765	(dBm)
70	PI/2 BPSK	1	1	22.63	22.81	22.52	24.00
Channel				648668	650000	651332	Tune-up limit
Frequency (MHz)				3730.02	3750	3769.98	(dBm)
60	PI/2 BPSK	1	1	22.60	22.71	22.55	24.00
Channel				648334	650000	651666	Tune-up limit
Frequency (MHz)				3725.01	3750	3774.99	(dBm)
50	PI/2 BPSK	1	1	22.65	22.76	22.48	24.00
Channel				648000	650000	652000	Tune-up limit
Frequency (MHz)				3720	3750	3780	(dBm)
40	PI/2 BPSK	1	1	22.53	22.76	22.50	24.00

Channel				647668	650000	652332	Tune-up limit
Frequency (MHz)				3715.02	3750	3784.98	(dBm)
30	PI/2 BPSK	1	1	22.62	22.80	22.58	24.00
Channel				647334	650000	652666	Tune-up limit
Frequency (MHz)				3710.01	3750	3789.99	(dBm)
20	PI/2 BPSK	1	1	22.64	22.80	22.47	24.00
Channel				647000	650000	653000	Tune-up limit
Frequency (MHz)				3705	3750	3795	(dBm)
10	PI/2 BPSK	1	1	22.59	22.80	22.51	24.00

【FR1 n78 (27Q)_FCC_Part 27Q (3450~3550MHz)_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.66		15.50
100	PI/2 BPSK	1	137		14.97		15.50
100	PI/2 BPSK	1	271		14.66		15.50
100	PI/2 BPSK	135	0		14.90		15.50
100	PI/2 BPSK	135	69		14.95		15.50
100	PI/2 BPSK	135	138		14.89		15.50
100	PI/2 BPSK	270	0		14.88		15.50
100	QPSK	1	1		14.64		15.50
100	QPSK	1	137		14.94		15.50
100	QPSK	1	271		14.63		15.50
100	QPSK	135	0		14.89		15.50
100	QPSK	135	69		14.94		15.50
100	QPSK	135	138		14.89		15.50
100	QPSK	270	0		14.88		15.50
100	16QAM	1	1		14.27		15.50
100	64QAM	1	1		14.31		15.50
100	256QAM	1	1		14.47		15.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	14.61	14.64	14.63	15.50
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	14.50	14.54	14.49	15.50
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	14.49	14.61	14.49	15.50
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	14.59	14.56	14.60	15.50
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	14.58	14.58	14.53	15.50
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	14.58	14.63	14.51	15.50
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	14.55	14.57	14.51	15.50
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	14.48	14.51	14.49	15.50
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	14.51	14.61	14.55	15.50

【FR1 n78 (270) FCC_Part 270 (3700~3800MHz)_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		14.65		15.50
100	PI/2 BPSK	1	137		14.96		15.50
100	PI/2 BPSK	1	271		14.65		15.50
100	PI/2 BPSK	135	0		14.89		15.50
100	PI/2 BPSK	135	69		14.94		15.50
100	PI/2 BPSK	135	138		14.88		15.50
100	PI/2 BPSK	270	0		14.87		15.50
100	QPSK	1	1		14.63		15.50
100	QPSK	1	137		14.93		15.50
100	QPSK	1	271		14.62		15.50
100	QPSK	135	0		14.88		15.50
100	QPSK	135	69		14.93		15.50
100	QPSK	135	138		14.88		15.50
100	QPSK	270	0		14.87		15.50
100	16QAM	1	1		14.26		15.50
100	64QAM	1	1		14.30		15.50
100	256QAM	1	1		14.46		15.50
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	14.61	14.64	14.63	15.50
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	14.54	14.54	14.57	15.50
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	14.52	14.52	14.49	15.50
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	14.60	14.51	14.54	15.50
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	14.52	14.55	14.50	15.50
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	14.49	14.60	14.51	15.50
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750	3784.98	
30	PI/2 BPSK	1	1	14.50	14.60	14.53	15.50
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	14.58	14.60	14.55	15.50
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	14.50	14.59	14.51	15.50

【FR1 n78 (27Q) FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.41		27.00
100	PI/2 BPSK	1	137		26.07		27.00
100	PI/2 BPSK	1	271		25.46		27.00
100	PI/2 BPSK	135	0		25.97		26.50
100	PI/2 BPSK	135	69		26.03		27.00
100	PI/2 BPSK	135	138		25.92		26.50
100	PI/2 BPSK	270	0		25.94		26.50
100	QPSK	1	1		25.34		27.00
100	QPSK	1	137		25.96		27.00
100	QPSK	1	271		25.39		27.00
100	QPSK	135	0		25.86		26.00
100	QPSK	135	69		26.22		27.00
100	QPSK	135	138		25.85		26.00
100	QPSK	270	0		25.87		26.00

100	16QAM	1	1		25.04		26.00
100	64QAM	1	1		25.01		26.00
100	256QAM	1	1		24.45		25.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	25.30	25.38	25.32	27.00
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	25.19	25.35	25.23	27.00
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	25.21	25.37	25.29	27.00
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	25.27	25.28	25.22	27.00
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	25.16	25.30	25.29	27.00
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	25.27	25.25	25.28	27.00
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	25.25	25.24	25.22	27.00
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	25.17	25.30	25.27	27.00
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	25.17	25.24	25.29	27.00

【FR1 n78 (270) _FCC_Part 270 (3700~3800MHz)_HPUE_Ant 8_NB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.82		27.00
100	PI/2 BPSK	1	137		26.57		27.00
100	PI/2 BPSK	1	271		25.92		27.00
100	PI/2 BPSK	135	0		26.45		26.50
100	PI/2 BPSK	135	69		26.67		27.00
100	PI/2 BPSK	135	138		26.47		26.50
100	PI/2 BPSK	270	0		26.45		26.50
100	QPSK	1	1		25.76		27.00
100	QPSK	1	137		26.54		27.00
100	QPSK	1	271		25.95		27.00
100	QPSK	135	0		25.41		26.00
100	QPSK	135	69		26.65		27.00
100	QPSK	135	138		25.45		26.00
100	QPSK	270	0		25.41		26.00
100	16QAM	1	1		25.60		26.00
100	64QAM	1	1		25.57		26.00
100	256QAM	1	1		24.99		25.50
Channel				649668	650000	650332	Tune-up limit
Frequency (MHz)				3745.02	3750	3754.98	(dBm)
90	PI/2 BPSK	1	1	25.66	25.73	25.70	27.00
Channel				649334	650000	650666	Tune-up limit
Frequency (MHz)				3740.01	3750	3759.99	(dBm)
80	PI/2 BPSK	1	1	25.52	25.81	25.69	27.00
Channel				649000	650000	651000	Tune-up limit
Frequency (MHz)				3735	3750	3765	(dBm)
70	PI/2 BPSK	1	1	25.53	25.78	25.62	27.00
Channel				648668	650000	651332	Tune-up limit
Frequency (MHz)				3730.02	3750	3769.98	(dBm)
60	PI/2 BPSK	1	1	25.54	25.78	25.65	27.00
Channel				648334	650000	651666	Tune-up limit
Frequency (MHz)				3725.01	3750	3774.99	(dBm)
50	PI/2 BPSK	1	1	25.55	25.80	25.66	27.00
Channel				648000	650000	652000	Tune-up limit
Frequency (MHz)				3720	3750	3780	(dBm)
40	PI/2 BPSK	1	1	25.54	25.81	25.59	27.00

Channel				647668	650000	652332	Tune-up limit
Frequency (MHz)				3715.02	3750	3784.98	(dBm)
30	PI/2 BPSK	1	1	25.64	25.81	25.59	27.00
Channel				647334	650000	652666	Tune-up limit
Frequency (MHz)				3710.01	3750	3789.99	(dBm)
20	PI/2 BPSK	1	1	25.53	25.76	25.68	27.00
Channel				647000	650000	653000	Tune-up limit
Frequency (MHz)				3705	3750	3795	(dBm)
10	PI/2 BPSK	1	1	25.59	25.72	25.56	27.00

【FR1 n78 (27Q)_FCC_Part 27Q (3450~3550MHz)_HPUE_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.66		15.50
100	PI/2 BPSK	1	137		14.97		15.50
100	PI/2 BPSK	1	271		14.66		15.50
100	PI/2 BPSK	135	0		14.90		15.50
100	PI/2 BPSK	135	69		14.95		15.50
100	PI/2 BPSK	135	138		14.89		15.50
100	PI/2 BPSK	270	0		14.88		15.50
100	QPSK	1	1		14.64		15.50
100	QPSK	1	137		14.94		15.50
100	QPSK	1	271		14.63		15.50
100	QPSK	135	0		14.89		15.50
100	QPSK	135	69		14.94		15.50
100	QPSK	135	138		14.89		15.50
100	QPSK	270	0		14.88		15.50
100	16QAM	1	1		14.27		15.50
100	64QAM	1	1		14.31		15.50
100	256QAM	1	1		14.47		15.50
Channel				633000	633332	633666	Tune-up limit
Frequency (MHz)				3495	3499.98	3504.99	(dBm)
90	PI/2 BPSK	1	1	14.61	14.64	14.63	15.50
Channel				632668	633332	634000	Tune-up limit
Frequency (MHz)				3490.02	3499.98	3510	(dBm)
80	PI/2 BPSK	1	1	14.50	14.54	14.49	15.50
Channel				632334	633332	634332	Tune-up limit
Frequency (MHz)				3485.01	3499.98	3514.98	(dBm)
70	PI/2 BPSK	1	1	14.49	14.61	14.49	15.50
Channel				632000	633332	634666	Tune-up limit
Frequency (MHz)				3480	3499.98	3519.99	(dBm)
60	PI/2 BPSK	1	1	14.59	14.56	14.60	15.50
Channel				631668	633332	635000	Tune-up limit
Frequency (MHz)				3475.02	3499.98	3525	(dBm)
50	PI/2 BPSK	1	1	14.58	14.58	14.53	15.50
Channel				631334	633332	635332	Tune-up limit
Frequency (MHz)				3470.01	3499.98	3529.98	(dBm)
40	PI/2 BPSK	1	1	14.58	14.63	14.51	15.50
Channel				631000	633332	635666	Tune-up limit
Frequency (MHz)				3465	3499.98	3534.99	(dBm)
30	PI/2 BPSK	1	1	14.55	14.57	14.51	15.50
Channel				630668	633332	636000	Tune-up limit
Frequency (MHz)				3460.02	3499.98	3540	(dBm)
20	PI/2 BPSK	1	1	14.48	14.51	14.49	15.50
Channel				630334	633332	636332	Tune-up limit
Frequency (MHz)				3455.01	3499.98	3544.98	(dBm)
10	PI/2 BPSK	1	1	14.51	14.61	14.55	15.50

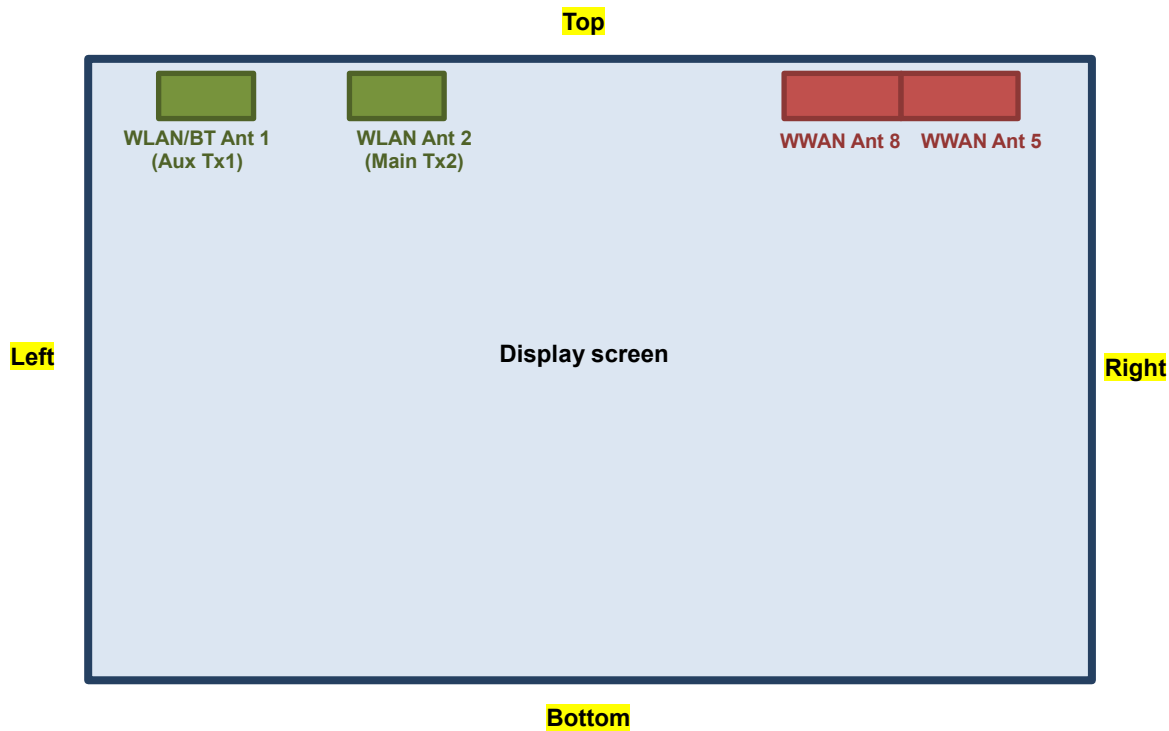


【FR1 n78 (270) FCC_Part 270 (3700~3800MHz)_HPUE_Ant 8_TB Mode】

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		14.65		15.50
100	PI/2 BPSK	1	137		14.96		15.50
100	PI/2 BPSK	1	271		14.65		15.50
100	PI/2 BPSK	135	0		14.89		15.50
100	PI/2 BPSK	135	69		14.94		15.50
100	PI/2 BPSK	135	138		14.88		15.50
100	PI/2 BPSK	270	0		14.87		15.50
100	QPSK	1	1		14.63		15.50
100	QPSK	1	137		14.93		15.50
100	QPSK	1	271		14.62		15.50
100	QPSK	135	0		14.88		15.50
100	QPSK	135	69		14.93		15.50
100	QPSK	135	138		14.88		15.50
100	QPSK	270	0		14.87		15.50
100	16QAM	1	1		14.26		15.50
100	64QAM	1	1		14.30		15.50
100	256QAM	1	1		14.46		15.50
Channel				649668	650000	650332	Tune-up limit
Frequency (MHz)				3745.02	3750	3754.98	(dBm)
90	PI/2 BPSK	1	1	14.61	14.64	14.63	15.50
Channel				649334	650000	650666	Tune-up limit
Frequency (MHz)				3740.01	3750	3759.99	(dBm)
80	PI/2 BPSK	1	1	14.54	14.54	14.57	15.50
Channel				649000	650000	651000	Tune-up limit
Frequency (MHz)				3735	3750	3765	(dBm)
70	PI/2 BPSK	1	1	14.52	14.52	14.49	15.50
Channel				648668	650000	651332	Tune-up limit
Frequency (MHz)				3730.02	3750	3769.98	(dBm)
60	PI/2 BPSK	1	1	14.60	14.51	14.54	15.50
Channel				648334	650000	651666	Tune-up limit
Frequency (MHz)				3725.01	3750	3774.99	(dBm)
50	PI/2 BPSK	1	1	14.52	14.55	14.50	15.50
Channel				648000	650000	652000	Tune-up limit
Frequency (MHz)				3720	3750	3780	(dBm)
40	PI/2 BPSK	1	1	14.49	14.60	14.51	15.50
Channel				647668	650000	652332	Tune-up limit
Frequency (MHz)				3715.02	3750	3784.98	(dBm)
30	PI/2 BPSK	1	1	14.50	14.60	14.53	15.50
Channel				647334	650000	652666	Tune-up limit
Frequency (MHz)				3710.01	3750	3789.99	(dBm)
20	PI/2 BPSK	1	1	14.58	14.60	14.55	15.50
Channel				647000	650000	653000	Tune-up limit
Frequency (MHz)				3705	3750	3795	(dBm)
10	PI/2 BPSK	1	1	14.50	14.59	14.51	15.50

14. Antenna Location

Tablet Mode

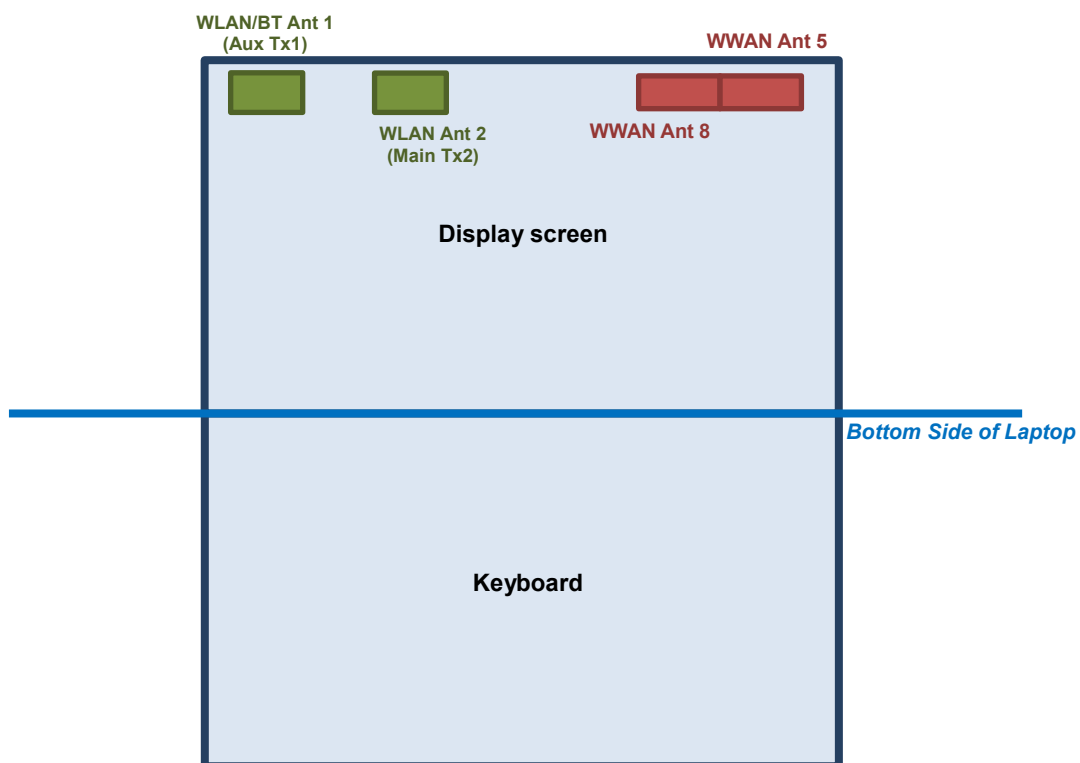


Front View

The separation distance for antenna to edge :

Antenna	To Top Edge (mm)	To Right Edge (mm)	To Bottom Edge (mm)	To Left Edge (mm)
WWAN Antenna 5	<5	10.45	206.3	216.1
WWAN Antenna 8	<5	86.85	206.3	193.1

Laptop Mode



The separation distance for antenna to edge :

Antenna	To Bottom Side (mm)
WWAN Antenna 5	217.17
WWAN Antenna 8	217.17
WLAN/BT Antenna 1	217.17
WLAN Antenna 2	217.17

< SAR test exclusion table >
General Note:

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- 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.
- 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.
- 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - 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
- 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
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Tablet Mode_Ant 5

		WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71	LTE Band 12/17	LTE Band 13	LTE Band 14	LTE Band 26/5	LTE Band 66/4	LTE Band 25/2	LTE Band 30	LTE Band 7	LTE Band 41/38	LTE Band 48	NR n71	NR n12	NR n14	NR n26/5	NR n66	NR n25/2	NR n30	NR n7	NR n41/38	NR n77/78
Exposure Position	Wireless Interface																								
	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	848	1779	1914	2312	2567	2690	3700	695	715	795	848	1779	1914	2312	2567	2690	3980
	Maximum power (dBm)	18.5	16.0	16.0	20.0	18.5	18.5	18.5	18.5	16.0	16.0	18.0	15.5	15.5	15.5	20.0	18.5	18.5	18.5	16.0	16.0	18.0	15.5	15.5	14.5
	Maximum rated power(mW)	70.79	39.81	39.81	100.00	70.79	70.79	70.79	70.79	39.81	39.81	63.10	35.48	35.48	35.48	100.00	70.79	70.79	70.79	39.81	39.81	63.10	35.48	35.48	28.18
Back	Separation distance(mm)	5.0																							
	exclusion threshold	13.0	10.5	11.0	16.7	12.0	12.5	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	11.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Top	Separation distance(mm)	5.0																							
	exclusion threshold	13.0	10.5	11.0	16.7	12.0	12.5	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	11.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right	Separation distance(mm)	10.5																							
	exclusion threshold	6.2	5.0	5.3	8.0	5.7	6.0	6.0	6.2	5.1	5.3	9.2	5.4	5.6	6.5	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	5.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom	Separation distance(mm)	206.3																							
	exclusion threshold	1045.0	1676.0	1672.0	904.0	922.0	986.0	997.0	1047.0	1675.0	1671.0	1662.0	1657.0	1654.0	1641.0	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	1638.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Left	Separation distance(mm)	216.3																							
	exclusion threshold	1101.0	1776.0	1771.0	950.0	970.0	1038.0	1049.0	1103.0	1775.0	1771.0	1761.0	1756.0	1754.0	1740.0	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	1738.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No



Tablet Mode_Ant 8

Exposure Position	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71	LTE Band 12/17	LTE Band 13	LTE Band 14	LTE Band 26/5	LTE Band 66/4	LTE Band 25/2	LTE Band 30	LTE Band 7	LTE Band 41/38	LTE Band 48	NR n71	NR n12	NR n14	NR n26/5	NR n66	NR n25/2	NR n30	NR n7	NR n41/38	NR n48	LTE Band n77/78
	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	848	1779	1914	2312	2567	2690	3700	695	715	795	848	1779	1914	2312	2567	2690	3700	3980
	Maximum power (dBm)	18.5	16.0	16.0	20.0	18.5	18.5	18.5	18.5	16.0	16.0	18.0	15.5	15.5	15.5	20.0	18.5	18.5	18.5	16.0	16.0	18.0	15.5	15.5	15.5	15.5
	Maximum rated power(mW)	70.79	39.81	39.81	100.00	70.79	70.79	70.79	70.79	39.81	39.81	63.10	35.48	35.48	35.48	100.00	70.79	70.79	70.79	39.81	39.81	63.10	35.48	35.48	35.48	35.48
Back	Separation distance(mm)	5.0																								
	exclusion threshold	13.0	10.5	11.0	16.7	12.0	12.5	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	14.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Top	Separation distance(mm)	5.0																								
	exclusion threshold	13.0	10.5	11.0	16.7	12.0	12.5	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	14.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right	Separation distance(mm)	86.9																								
	exclusion threshold	371.0	482.0	477.0	351.0	353.0	362.0	364.0	371.0	481.0	477.0	467.0	462.0	460.0	446.0	351.0	353.0	362.0	371.0	481.0	477.0	477.0	467.0	460.0	446.0	444.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Bottom	Separation distance(mm)	206.3																								
	exclusion threshold	1045.0	1676.0	1672.0	904.0	922.0	986.0	997.0	1047.0	1675.0	1671.0	1662.0	1657.0	1654.0	1641.0	16.7	12.0	12.6	13.0	10.6	11.0	19.2	11.4	11.6	13.7	1638.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Left	Separation distance(mm)	193.3																								
	exclusion threshold	971.0	1546.0	1542.0	844.0	861.0	918.0	928.0	973.0	1546.0	1542.0	1532.0	1527.0	1525.0	1511.0	844.0	861.0	928.0	973.0	1546.0	1542.0	1532.0	1527.0	1525.0	1511.0	1508.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Laptop Mode

Exposure Position	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71	LTE Band 12/17	LTE Band 13	LTE Band 14	LTE Band 26/5	LTE Band 66/4	LTE Band 25/2	LTE Band 30	LTE Band 7	LTE Band 41/38	LTE Band 48	NR n71	NR n12	NR n14	NR n26/5	NR n66	NR n25/2	NR n30	NR n7	NR n41/38	NR n48	NR n77/78
	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	848	1779	1914	2312	2567	2690	3700	695	715	795	848	1779	1914	2312	2567	2690	3700	3980
	Maximum power (dBm)	24.5	24.5	24.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	24.0	27.0	22.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	27.0	22.0	27.0	
	Maximum rated power(mW)	281.84	281.84	281.84	251.19	251.19	251.19	251.19	251.19	251.19	251.19	199.53	251.19	501.19	158.49	251.19	251.19	251.19	251.19	251.19	251.19	251.19	501.19	158.49	501.19	
Bottom Side	Separation distance(mm)	217.2																								
	exclusion threshold	1106.0	1785.0	1780.0	954.0	974.0	1043.0	1054.0	1108.0	1784.0	1780.0	1770.0	1765.0	1763.0	1750.0	41.9	42.5	44.8	46.3	67.0	69.5	60.7	80.5	164.4	61.0	1747.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - 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 ≥ 0.8 W/kg.

UMTS Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA 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 (HSDPA / HSUPA / DC-HSDPA) are less than $\frac{1}{4}$ 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 $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; 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 $\leq$ the larger band to qualify for the SAR test exclusion.
 - b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

5G NR Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
 - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not $\frac{1}{2}$ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - d. Smaller bandwidth output power for each RB allocation configuration for this device is not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - e. For 5G FR1 n5/n12/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission
 - g. For NR FDD was establishing connections via a base station simulator to use for output power measurement and SAR testing.

15.1 Body SAR

[WCDMA SAR]

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Configuration	Ch.	Freq. (MHz)	Antenna Vendor	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 5	Tablet	9400	1880	Vendor1	15.11	16.00	1.227	0.17	0.057	0.070
	WCDMA II	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	9400	1880	Vendor1	15.11	16.00	1.227	-0.11	0.772	0.947
	WCDMA II	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	9262	1852.4	Vendor1	15.07	16.00	1.239	0.02	0.631	0.782
	WCDMA II	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	9538	1907.6	Vendor1	15.05	16.00	1.245	0.17	0.674	0.839
	WCDMA II	RMC 12.2Kbps	Right	0mm	Ant 5	Tablet	9400	1880	Vendor1	15.11	16.00	1.227	0.09	0.186	0.228
	WCDMA II	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	9400	1880	Vendor2	15.11	16.00	1.227	-0.01	0.734	0.901
02	WCDMA II	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	9262	1852.4	Vendor2	15.07	16.00	1.239	0.01	0.721	0.893
	WCDMA II	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	9538	1907.6	Vendor2	15.05	16.00	1.245	-0.12	0.709	0.883
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 5	Tablet	1413	1732.6	Vendor1	14.91	16.00	1.285	-0.15	0.046	0.059
	WCDMA IV	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	1413	1732.6	Vendor1	14.91	16.00	1.285	-0.18	0.620	0.797
	WCDMA IV	RMC 12.2Kbps	Right	0mm	Ant 5	Tablet	1413	1732.6	Vendor1	14.91	16.00	1.285	-0.17	0.147	0.189
	WCDMA IV	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	1413	1732.6	Vendor2	14.91	16.00	1.285	-0.07	0.587	0.754
03	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 5	Tablet	4182	836.4	Vendor1	17.53	18.50	1.25	-0.13	0.084	0.105
	WCDMA V	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	4182	836.4	Vendor1	17.53	18.50	1.25	-0.02	0.571	0.714
	WCDMA V	RMC 12.2Kbps	Right	0mm	Ant 5	Tablet	4182	836.4	Vendor1	17.53	18.50	1.25	0.12	0.261	0.326
	WCDMA V	RMC 12.2Kbps	Top	0mm	Ant 5	Tablet	4182	836.4	Vendor2	17.53	18.50	1.25	0.13	0.564	0.705



【LTE SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Antenna	Configuration	Ch.	Freq. (MHz)	Antenna Vendor	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 7	20M	QPSK	1	0	Back	0mm	Ant 5	Tablet	21100	2535	Vendor1	15.11	15.50	1.094			-0.12	0.049	0.054
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Ant 5	Tablet	21100	2535	Vendor1	15.00	15.50	1.122			0.08	0.049	0.055
	LTE Band 7	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	21100	2535	Vendor1	15.11	15.50	1.094			0.13	0.535	0.585
	LTE Band 7	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	21100	2535	Vendor1	15.00	15.50	1.122			-0.10	0.525	0.589
	LTE Band 7	20M	QPSK	1	0	Right	0mm	Ant 5	Tablet	21100	2535	Vendor1	15.11	15.50	1.094			-0.18	0.065	0.071
	LTE Band 7	20M	QPSK	50	0	Right	0mm	Ant 5	Tablet	21100	2535	Vendor1	15.00	15.50	1.122			-0.12	0.064	0.072
	LTE Band 7C	20M+20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	20850+21048	2510	Vendor1	15.01	15.50	1.119			0.03	0.513	0.574
04	LTE Band 7	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	21100	2535	Vendor2	15.00	15.50	1.122			-0.17	0.824	0.925
	LTE Band 7	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	20850	2510	Vendor2	14.69	15.50	1.205			-0.09	0.735	0.886
	LTE Band 7	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	21350	2560	Vendor2	14.73	15.50	1.194			0.02	0.750	0.896
	LTE Band 12	10M	QPSK	1	0	Back	0mm	Ant 5	Tablet	23095	707.5	Vendor1	18.05	18.50	1.109			0.17	0.070	0.078
	LTE Band 12	10M	QPSK	25	0	Back	0mm	Ant 5	Tablet	23095	707.5	Vendor1	18.01	18.50	1.119			-0.11	0.084	0.094
05	LTE Band 12	10M	QPSK	1	0	Top	0mm	Ant 5	Tablet	23095	707.5	Vendor1	18.05	18.50	1.109			0.01	0.641	0.711
	LTE Band 12	10M	QPSK	25	0	Top	0mm	Ant 5	Tablet	23095	707.5	Vendor1	18.01	18.50	1.119			0.02	0.623	0.697
	LTE Band 12	10M	QPSK	1	0	Right	0mm	Ant 5	Tablet	23095	707.5	Vendor1	18.05	18.50	1.109			0.10	0.165	0.183
	LTE Band 12	10M	QPSK	25	0	Right	0mm	Ant 5	Tablet	23095	707.5	Vendor1	18.01	18.50	1.119			0.01	0.176	0.197
	LTE Band 12	10M	QPSK	1	0	Top	0mm	Ant 5	Tablet	23095	707.5	Vendor2	18.05	18.50	1.109			-0.19	0.510	0.566
	LTE Band 13	10M	QPSK	1	0	Back	0mm	Ant 5	Tablet	23230	782	Vendor1	17.85	18.50	1.161			0.13	0.090	0.104
	LTE Band 13	10M	QPSK	25	0	Back	0mm	Ant 5	Tablet	23230	782	Vendor1	17.75	18.50	1.189			0.02	0.088	0.105
	LTE Band 13	10M	QPSK	1	0	Top	0mm	Ant 5	Tablet	23230	782	Vendor1	17.85	18.50	1.161			-0.15	0.498	0.578
06	LTE Band 13	10M	QPSK	25	0	Top	0mm	Ant 5	Tablet	23230	782	Vendor1	17.75	18.50	1.189			0.01	0.539	0.641
	LTE Band 13	10M	QPSK	1	0	Right	0mm	Ant 5	Tablet	23230	782	Vendor1	17.85	18.50	1.161			-0.04	0.221	0.257
	LTE Band 13	10M	QPSK	25	0	Right	0mm	Ant 5	Tablet	23230	782	Vendor1	17.75	18.50	1.189			0.18	0.213	0.253
	LTE Band 13	10M	QPSK	25	0	Top	0mm	Ant 5	Tablet	23230	782	Vendor2	17.75	18.50	1.189			-0.03	0.399	0.474
	LTE Band 14	10M	QPSK	1	0	Back	0mm	Ant 5	Tablet	23330	793	Vendor1	17.88	18.50	1.153			0.16	0.088	0.101
	LTE Band 14	10M	QPSK	25	0	Back	0mm	Ant 5	Tablet	23330	793	Vendor1	17.83	18.50	1.167			-0.18	0.094	0.110
	LTE Band 14	10M	QPSK	1	0	Top	0mm	Ant 5	Tablet	23330	793	Vendor1	17.88	18.50	1.153			-0.02	0.455	0.525
07	LTE Band 14	10M	QPSK	25	0	Top	0mm	Ant 5	Tablet	23330	793	Vendor1	17.83	18.50	1.167			-0.01	0.523	0.610
	LTE Band 14	10M	QPSK	1	0	Right	0mm	Ant 5	Tablet	23330	793	Vendor1	17.88	18.50	1.153			0.09	0.155	0.179
	LTE Band 14	10M	QPSK	25	0	Right	0mm	Ant 5	Tablet	23330	793	Vendor1	17.83	18.50	1.167			-0.10	0.164	0.191
	LTE Band 14	10M	QPSK	25	0	Top	0mm	Ant 5	Tablet	23330	793	Vendor2	17.83	18.50	1.167			0.05	0.431	0.503
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.82	16.00	1.042			-0.04	0.074	0.077
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.78	16.00	1.052			0.11	0.081	0.085
08	LTE Band 25	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.82	16.00	1.042			-0.14	0.858	0.894
	LTE Band 25	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26140	1860	Vendor1	15.64	16.00	1.086			-0.08	0.762	0.828
	LTE Band 25	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26590	1905	Vendor1	15.66	16.00	1.081			-0.06	0.757	0.818
	LTE Band 25	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.78	16.00	1.052			-0.00	0.760	0.800
	LTE Band 25	20M	QPSK	50	24	Top	0mm	Ant 5	Tablet	26140	1860	Vendor1	15.55	16.00	1.109			-0.13	0.788	0.874
	LTE Band 25	20M	QPSK	50	24	Top	0mm	Ant 5	Tablet	26590	1905	Vendor1	15.56	16.00	1.107			-0.02	0.780	0.863
	LTE Band 25	20M	QPSK	100	0	Top	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.74	16.00	1.062			0.17	0.783	0.832
	LTE Band 25	20M	QPSK	1	0	Right	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.82	16.00	1.042			0.03	0.158	0.165
	LTE Band 25	20M	QPSK	50	0	Right	0mm	Ant 5	Tablet	26340	1880	Vendor1	15.78	16.00	1.052			-0.00	0.163	0.171
	LTE Band 25	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26340	1880	Vendor2	15.82	16.00	1.042			-0.13	0.847	0.883
	LTE Band 25	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26340	1880	Vendor2	15.82	16.00	1.042			-0.10	0.820	0.854
	LTE Band 25	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26590	1905	Vendor2	15.66	16.00	1.081			0.01	0.813	0.879
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.96	18.50	1.132			0.13	0.104	0.118
	LTE Band 26	15M	QPSK	36	20	Back	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.85	18.50	1.161			-0.09	0.112	0.130
09	LTE Band 26	15M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.96	18.50	1.132			-0.04	0.718	0.813
	LTE Band 26	15M	QPSK	36	20	Top	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.85	18.50	1.161			0.14	0.642	0.745
	LTE Band 26	15M	QPSK	75	0	Top	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.81	18.50	1.172			0.04	0.654	0.766
	LTE Band 26	15M	QPSK	1	0	Right	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.96	18.50	1.132			-0.14	0.277	0.314
	LTE Band 26	15M	QPSK	36	20	Right	0mm	Ant 5	Tablet	26865	831.5	Vendor1	17.85	18.50	1.161			-0.05	0.301	0.349
	LTE Band 26	15M	QPSK	1	0	Top	0mm	Ant 5	Tablet	26865	831.5	Vendor2	17.96	18.50	1.132			0.08	0.650	0.736
	LTE Band 30	10M	QPSK	1	0	Back	0mm	Ant 5	Tablet	27710	2310	Vendor1	16.85	18.00	1.303			0.05	0.115	0.150
	LTE Band 30	10M	QPSK	25	0	Back	0mm	Ant 5	Tablet	27710	2310	Vendor1	16.77	18.00	1.327			0.15	0.105	0.139
10	LTE Band 30	10M	QPSK	1	0	Top	0mm	Ant 5	Tablet	27710	2310	Vendor1	16.85	18.00	1.303			-0.13	0.604	0.787
	LTE Band 30	10M	QPSK	25	0	Top	0mm	Ant 5	Tablet	27710	2310	Vendor1	16.77	18.00	1.327			-0.06	0.540	0.717
	LTE Band 30	10M	QPSK	1	0	Right	0mm	Ant 5	Tablet	27710	2310	Vendor1	16.85	18.00	1.303			-0.03	0.052	0.068
	LTE Band 30	10M	QPSK	25	0	Right	0mm	Ant 5	Tablet	27710	2310	Vendor1	16.77	18.00	1.327			-0.05	0.051	0.068
	LTE Band 30	10M	QPSK	1	0	Top	0mm	Ant 5	Tablet	27710	2310	Vendor2	16.85	18.00	1.303			-0.16	0.594	0.774
	LTE Band 66	20M	QPSK	1	49	Back	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.95	16.00	1.012			0.11	0.100	0.101
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.89	16.00	1.026			-0.17	0.101	0.104
	LTE Band 66	20M	QPSK	1	49	Top	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.95	16.00	1.012			0.10	0.832	0.842



FCC SAR TEST REPORT

Report No. : FA5N2416B

	LTE Band 66	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	132072	1720	Vendor1	15.90	16.00	1.023				0.16	0.664	0.679
	LTE Band 66	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	132572	1770	Vendor1	15.88	16.00	1.028				0.11	0.942	0.968
	LTE Band 66	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.89	16.00	1.026				0.08	0.804	0.825
	LTE Band 66	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	132072	1720	Vendor1	15.84	16.00	1.038				0.14	0.598	0.621
11	LTE Band 66	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	132572	1770	Vendor1	15.82	16.00	1.042				-0.07	0.957	0.997
	LTE Band 66	20M	QPSK	100	0	Top	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.85	16.00	1.035				-0.05	0.846	0.876
	LTE Band 66	20M	QPSK	100	0	Top	0mm	Ant 5	Tablet	132072	1720	Vendor1	15.76	16.00	1.057				0.07	0.814	0.860
	LTE Band 66	20M	QPSK	100	0	Top	0mm	Ant 5	Tablet	132572	1770	Vendor1	15.77	16.00	1.054				-0.16	0.805	0.848
	LTE Band 66	20M	QPSK	1	49	Right	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.95	16.00	1.012				0.17	0.175	0.177
	LTE Band 66	20M	QPSK	50	0	Right	0mm	Ant 5	Tablet	132322	1745	Vendor1	15.89	16.00	1.026				0.10	0.172	0.176
	LTE Band 66B	20M+20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	132322+132229	1745	Vendor1	15.83	16.00	1.04				0.05	0.765	0.796
	LTE Band 66C	20M+20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	132322+132124	1745	Vendor1	15.77	16.00	1.054				-0.01	0.732	0.772
	LTE Band 66	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	132572	1770	Vendor2	15.82	16.00	1.042				0.14	0.907	0.945
	LTE Band 66	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	132072	1720	Vendor2	15.84	16.00	1.038				0.09	0.885	0.919
	LTE Band 66	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	132322	1745	Vendor2	15.89	16.00	1.026				0.01	0.876	0.899
	LTE Band 71	20M	QPSK	1	49	Back	0mm	Ant 5	Tablet	133297	680.5	Vendor1	19.89	20.00	1.026				0.10	0.045	0.046
	LTE Band 71	20M	QPSK	50	0	Back	0mm	Ant 5	Tablet	133297	680.5	Vendor1	19.80	20.00	1.047				0.03	0.048	0.050
	LTE Band 71	20M	QPSK	1	49	Top	0mm	Ant 5	Tablet	133297	680.5	Vendor1	19.89	20.00	1.026				-0.03	0.331	0.340
12	LTE Band 71	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	133297	680.5	Vendor1	19.80	20.00	1.047				-0.02	0.345	0.361
	LTE Band 71	20M	QPSK	1	49	Right	0mm	Ant 5	Tablet	133297	680.5	Vendor1	19.89	20.00	1.026				-0.09	0.122	0.125
	LTE Band 71	20M	QPSK	50	0	Right	0mm	Ant 5	Tablet	133297	680.5	Vendor1	19.80	20.00	1.047				-0.11	0.134	0.140
	LTE Band 71	20M	QPSK	50	0	Top	0mm	Ant 5	Tablet	133297	680.5	Vendor2	19.80	20.00	1.047				-0.00	0.283	0.296
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Ant 5	Tablet	40620	2593	Vendor1	15.05	15.50	1.109	62.9	1.006	0.07	0.001	0.001	
	LTE Band 41	20M	QPSK	50	24	Back	0mm	Ant 5	Tablet	40620	2593	Vendor1	14.75	15.50	1.189	62.9	1.006	-0.11	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	40620	2593	Vendor1	15.05	15.50	1.109	62.9	1.006	0.19	0.275	0.307	
	LTE Band 41	20M	QPSK	50	24	Top	0mm	Ant 5	Tablet	40620	2593	Vendor1	14.75	15.50	1.189	62.9	1.006	-0.02	0.286	0.342	
	LTE Band 41	20M	QPSK	1	0	Right	0mm	Ant 5	Tablet	40620	2593	Vendor1	15.05	15.50	1.109	62.9	1.006	-0.11	0.037	0.041	
	LTE Band 41	20M	QPSK	50	24	Right	0mm	Ant 5	Tablet	40620	2593	Vendor1	14.75	15.50	1.189	62.9	1.006	0.12	0.001	0.001	
	LTE Band 41C	20M+20M	QPSK	1	0	Top	0mm	Ant 5	Tablet	40620+40422	2593	Vendor1	14.98	15.50	1.127	62.9	1.006	-0.05	0.254	0.288	
	LTE Band 41 HPUE	20M	QPSK	50	24	Top	0mm	Ant 5	Tablet	40620	2593	Vendor1	14.61	15.50	1.227	42.9	1.009	0.05	0.321	0.397	
13	LTE Band 41	20M	QPSK	50	24	Top	0mm	Ant 5	Tablet	40620	2593	Vendor2	14.75	15.50	1.189	62.9	1.006	-0.13	0.446	0.533	
	LTE Band 48	20M	QPSK	1	99	Back	0mm	Ant 8	Tablet	55340	3560	Vendor1	15.15	15.50	1.084	62.9	1.006	0.11	0.001	0.001	
	LTE Band 48	20M	QPSK	50	24	Back	0mm	Ant 8	Tablet	55340	3560	Vendor1	15.20	15.50	1.072	62.9	1.006	-0.16	0.001	0.001	
	LTE Band 48	20M	QPSK	1	99	Top	0mm	Ant 8	Tablet	55340	3560	Vendor1	15.15	15.50	1.084	62.9	1.006	-0.03	0.383	0.418	
14	LTE Band 48	20M	QPSK	50	24	Top	0mm	Ant 8	Tablet	55340	3560	Vendor1	15.20	15.50	1.072	62.9	1.006	-0.14	0.411	0.443	
	LTE Band 48C	20M+20M	QPSK	1	0	Top	0mm	Ant 8	Tablet	55830+55538	3609	Vendor1	15.05	15.50	1.109	62.9	1.006	0.01	0.362	0.404	
	LTE Band 48	20M	QPSK	50	24	Top	0mm	Ant 8	Tablet	55340	3560	Vendor2	15.20	15.50	1.072	62.9	1.006	-0.05	0.401	0.432	

【FR1 SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	Test Position	Gap (mm)	Antenna	Configuration	Ch.	Freq. (MHz)	Antenna Vendor	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 n7	50M	BPSK	1	1	Back	0mm	Ant 5	Tablet	507000	2535	Vendor1	14.77	15.50	1.183	-0.02	0.047	0.056
	FR1 n7	50M	BPSK	135	68	Back	0mm	Ant 5	Tablet	507000	2535	Vendor1	14.47	15.50	1.268	0.14	0.045	0.057
	FR1 n7	50M	BPSK	1	1	Top	0mm	Ant 5	Tablet	507000	2535	Vendor1	14.77	15.50	1.183	0.10	0.385	0.455
15	FR1 n7	50M	BPSK	135	68	Top	0mm	Ant 5	Tablet	507000	2535	Vendor1	14.47	15.50	1.268	0.15	0.371	0.470
	FR1 n7	50M	BPSK	1	1	Right	0mm	Ant 5	Tablet	507000	2535	Vendor1	14.77	15.50	1.183	-0.06	0.001	0.001
	FR1 n7	50M	BPSK	135	68	Right	0mm	Ant 5	Tablet	507000	2535	Vendor1	14.47	15.50	1.268	-0.13	0.001	0.001
	FR1 n7	50M	BPSK	135	68	Top	0mm	Ant 5	Tablet	507000	2535	Vendor2	14.47	15.50	1.268	0.06	0.263	0.333
	FR1 n12	15M	BPSK	1	1	Back	0mm	Ant 5	Tablet	141500	707.5	Vendor1	17.57	18.50	1.239	-0.04	0.048	0.059
	FR1 n12	15M	BPSK	36	22	Back	0mm	Ant 5	Tablet	141500	707.5	Vendor1	17.57	18.50	1.239	-0.11	0.055	0.068
	FR1 n12	15M	BPSK	1	1	Top	0mm	Ant 5	Tablet	141500	707.5	Vendor1	17.57	18.50	1.239	0.16	0.436	0.540
16	FR1 n12	15M	BPSK	36	22	Top	0mm	Ant 5	Tablet	141500	707.5	Vendor1	17.57	18.50	1.239	-0.02	0.503	0.623
	FR1 n12	15M	BPSK	1	1	Right	0mm	Ant 5	Tablet	141500	707.5	Vendor1	17.57	18.50	1.239	-0.18	0.103	0.128
	FR1 n12	15M	BPSK	36	22	Right	0mm	Ant 5	Tablet	141500	707.5	Vendor1	17.57	18.50	1.239	0.05	0.107	0.133
	FR1 n12	15M	BPSK	36	22	Top	0mm	Ant 5	Tablet	141500	707.5	Vendor2	17.57	18.50	1.239	-0.07	0.452	0.560
	FR1 n14	10M	BPSK	1	1	Back	0mm	Ant 5	Tablet	158600	793	Vendor1	17.62	18.50	1.225	0.00	0.054	0.066
	FR1 n14	10M	BPSK	25	14	Back	0mm	Ant 5	Tablet	158600	793	Vendor1	17.59	18.50	1.233	0.07	0.052	0.064
17	FR1 n14	10M	BPSK	1	1	Top	0mm	Ant 5	Tablet	158600	793	Vendor1	17.62	18.50	1.225	-0.02	0.429	0.526
	FR1 n14	10M	BPSK	25	14	Top	0mm	Ant 5	Tablet	158600	793	Vendor1	17.59	18.50	1.233	-0.10	0.396	0.488
	FR1 n14	10M	BPSK	1	1	Right	0mm	Ant 5	Tablet	158600	793	Vendor1	17.62	18.50	1.225	-0.15	0.170	0.208
	FR1 n14	10M	BPSK	25	14	Right	0mm	Ant 5	Tablet	158600	793	Vendor1	17.59	18.50	1.233	-0.14	0.164	0.202
	FR1 n14	10M	BPSK	1	1	Top	0mm	Ant 5	Tablet	158600	793	Vendor2	17.62	18.50	1.225	-0.03	0.390	0.478
	FR1 n25	40M	BPSK	1	108	Back	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.65	16.00	1.084	0.00	0.089	0.096
	FR1 n25	40M	BPSK	108	54	Back	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.62	16.00	1.091	0.12	0.085	0.093
	FR1 n25	40M	BPSK	1	108	Top	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.65	16.00	1.084	-0.03	0.804	0.872
18	FR1 n25	40M	BPSK	108	54	Top	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.62	16.00	1.091	-0.01	0.850	0.927



FCC SAR TEST REPORT

Report No. : FA5N2416B

	FR1 n25	40M	BPSK	216	0	Top	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.43	16.00	1.14	-0.08	0.805	0.918
	FR1 n25	40M	BPSK	1	108	Right	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.65	16.00	1.084	0.07	0.167	0.181
	FR1 n25	40M	BPSK	108	54	Right	0mm	Ant 5	Tablet	376500	1882.5	Vendor1	15.62	16.00	1.091	-0.05	0.196	0.214
	FR1 n25	40M	BPSK	108	54	Top	0mm	Ant 5	Tablet	376500	1882.5	Vendor2	15.62	16.00	1.091	0.13	0.811	0.885
	FR1 n26	20M	BPSK	1	1	Back	0mm	Ant 5	Tablet	166300	831.5	Vendor1	17.66	18.50	1.213	0.11	0.093	0.113
	FR1 n26	20M	BPSK	50	28	Back	0mm	Ant 5	Tablet	166300	831.5	Vendor1	17.62	18.50	1.225	-0.08	0.083	0.102
	FR1 n26	20M	BPSK	1	1	Top	0mm	Ant 5	Tablet	166300	831.5	Vendor1	17.66	18.50	1.213	0.02	0.556	0.674
19	FR1 n26	20M	BPSK	50	28	Top	0mm	Ant 5	Tablet	166300	831.5	Vendor1	17.62	18.50	1.225	-0.02	0.606	0.742
	FR1 n26	20M	BPSK	1	1	Right	0mm	Ant 5	Tablet	166300	831.5	Vendor1	17.66	18.50	1.213	-0.08	0.202	0.245
	FR1 n26	20M	BPSK	50	28	Right	0mm	Ant 5	Tablet	166300	831.5	Vendor1	17.62	18.50	1.225	-0.06	0.219	0.268
	FR1 n26	20M	BPSK	50	28	Top	0mm	Ant 5	Tablet	166300	831.5	Vendor2	17.62	18.50	1.225	0.13	0.579	0.709
	FR1 n30	10M	BPSK	1	1	Back	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.38	18.00	1.153	-0.10	0.155	0.179
	FR1 n30	10M	BPSK	25	14	Back	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.28	18.00	1.18	-0.18	0.157	0.185
20	FR1 n30	10M	BPSK	1	1	Top	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.38	18.00	1.153	0.04	0.789	0.910
	FR1 n30	10M	BPSK	25	14	Top	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.28	18.00	1.18	-0.17	0.729	0.860
	FR1 n30	10M	BPSK	50	0	Top	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.24	18.00	1.191	0.01	0.698	0.831
	FR1 n30	10M	BPSK	1	1	Right	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.38	18.00	1.153	-0.05	0.001	0.001
	FR1 n30	10M	BPSK	25	14	Right	0mm	Ant 5	Tablet	462000	2310	Vendor1	17.28	18.00	1.18	0.05	0.001	0.001
	FR1 n30	10M	BPSK	1	1	Top	0mm	Ant 5	Tablet	462000	2310	Vendor2	17.38	18.00	1.153	-0.08	0.778	0.897
	FR1 n66	40M	BPSK	1	108	Back	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.87	16.00	1.03	0.17	0.054	0.056
	FR1 n66	40M	BPSK	108	54	Back	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.86	16.00	1.033	0.08	0.057	0.059
	FR1 n66	40M	BPSK	1	108	Top	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.87	16.00	1.03	-0.19	0.758	0.781
21	FR1 n66	40M	BPSK	108	54	Top	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.86	16.00	1.033	-0.08	0.837	0.865
	FR1 n66	40M	BPSK	216	0	Top	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.77	16.00	1.054	-0.09	0.797	0.840
	FR1 n66	40M	BPSK	1	108	Right	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.87	16.00	1.03	0.15	0.213	0.219
	FR1 n66	40M	BPSK	108	54	Right	0mm	Ant 5	Tablet	349000	1745	Vendor1	15.86	16.00	1.033	-0.02	0.211	0.218
	FR1 n66	40M	BPSK	108	54	Top	0mm	Ant 5	Tablet	349000	1745	Vendor2	15.86	16.00	1.033	-0.04	0.828	0.855
	FR1 n71	20M	BPSK	1	1	Back	0mm	Ant 5	Tablet	136100	680.5	Vendor1	19.35	20.00	1.161	0.01	0.001	0.001
	FR1 n71	20M	BPSK	50	28	Back	0mm	Ant 5	Tablet	136100	680.5	Vendor1	19.31	20.00	1.172	0.18	0.001	0.001
	FR1 n71	20M	BPSK	1	1	Top	0mm	Ant 5	Tablet	136100	680.5	Vendor1	19.35	20.00	1.161	-0.18	0.367	0.426
22	FR1 n71	20M	BPSK	50	28	Top	0mm	Ant 5	Tablet	136100	680.5	Vendor1	19.31	20.00	1.172	-0.04	0.428	0.502
	FR1 n71	20M	BPSK	1	1	Right	0mm	Ant 5	Tablet	136100	680.5	Vendor1	19.35	20.00	1.161	-0.09	0.107	0.124
	FR1 n71	20M	BPSK	50	28	Right	0mm	Ant 5	Tablet	136100	680.5	Vendor1	19.31	20.00	1.172	-0.15	0.061	0.071
	FR1 n71	20M	BPSK	50	28	Top	0mm	Ant 5	Tablet	136100	680.5	Vendor2	19.31	20.00	1.172	-0.12	0.407	0.477
	FR1 n41	100M	BPSK	1	137	Back	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.28	15.50	1.052	-0.10	0.044	0.046
	FR1 n41	100M	BPSK	135	69	Back	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.32	15.50	1.042	-0.10	0.048	0.050
	FR1 n41	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.28	15.50	1.052	-0.04	0.440	0.463
	FR1 n41	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.32	15.50	1.042	-0.15	0.550	0.573
	FR1 n41	100M	BPSK	1	137	Right	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.28	15.50	1.052	0.04	0.078	0.082
	FR1 n41	100M	BPSK	135	69	Right	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.32	15.50	1.042	-0.09	0.080	0.083
	FR1 n41_HPUE	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	518598	2592.99	Vendor1	15.32	15.50	1.042	0.17	0.289	0.301
	FR1 n41	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	518598	2592.99	Vendor2	15.32	15.50	1.042	0.17	0.534	0.556
	FR1 n41	100M	BPSK	1	137	Back	0mm	Ant 8	Tablet	518598	2592.99	Vendor1	16.72	17.00	1.067	0.04	0.001	0.001
	FR1 n41	100M	BPSK	135	69	Back	0mm	Ant 8	Tablet	518598	2592.99	Vendor1	16.68	17.00	1.076	0.17	0.001	0.001
23	FR1 n41	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	518598	2592.99	Vendor1	16.72	17.00	1.067	-0.05	0.699	0.746
	FR1 n41	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	518598	2592.99	Vendor1	16.68	17.00	1.076	-0.15	0.635	0.683
	FR1 n41_HPUE	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	518598	2592.99	Vendor1	16.72	17.00	1.067	0.10	0.353	0.377
	FR1 n41	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	518598	2592.99	Vendor2	16.72	17.00	1.067	-0.03	0.641	0.684
	FR1 n48	40M	BPSK	1	53	Back	0mm	Ant 8	Tablet	641666	3624.99	Vendor1	14.87	15.50	1.156		0.044	0.051
	FR1 n48	40M	BPSK	50	28	Back	0mm	Ant 8	Tablet	641666	3624.99	Vendor1	14.86	15.50	1.159	0.02	0.043	0.050
	FR1 n48	40M	BPSK	1	53	Top	0mm	Ant 8	Tablet	641666	3624.99	Vendor1	14.87	15.50	1.156	-0.01	0.888	1.027
	FR1 n48	40M	BPSK	1	53	Top	0mm	Ant 8	Tablet	638000	3570	Vendor1	14.83	15.50	1.167	-0.10	0.544	0.635
24	FR1 n48	40M	BPSK	1	53	Top	0mm	Ant 8	Tablet	645332	3679.98	Vendor1	14.77	15.50	1.183	-0.17	0.959	1.134
	FR1 n48	40M	BPSK	50	28	Top	0mm	Ant 8	Tablet	641666	3624.99	Vendor1	14.86	15.50	1.159	0.11	0.700	0.811
	FR1 n48	40M	BPSK	50	28	Top	0mm	Ant 8	Tablet	638000	3570	Vendor1	14.71	15.50	1.199	0.09	0.486	0.583
	FR1 n48	40M	BPSK	50	28	Top	0mm	Ant 8	Tablet	645332	3679.98	Vendor1	14.75	15.50	1.189	-0.19	0.906	1.077
	FR1 n48	40M	BPSK	100	0	Top	0mm	Ant 8	Tablet	641666	3624.99	Vendor1	14.70	15.50	1.202	0.00	0.597	0.718
	FR1 n48	40M	BPSK	1	53	Top	0mm	Ant 8	Tablet	645332	3679.98	Vendor2	14.77	15.50	1.183	-0.09	0.906	1.072
	FR1 n48	40M	BPSK	1	53	Top	0mm	Ant 8	Tablet	641666	3624.99	Vendor2	14.87	15.50	1.156	-0.12	0.878	1.015
	FR1 n48	40M	BPSK	1	53	Top	0mm	Ant 8	Tablet	638000	3570	Vendor2	14.83	15.50	1.167	0.10	0.871	1.016
	FR1 n77	100M	BPSK	1	137	Back	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.61	14.00	1.094	-0.14	0.001	0.001
	FR1 n77	100M	BPSK	135	69	Back	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.69	14.00	1.074	0.01	0.001	0.001
	FR1 n77	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.61	14.00	1.094	0.10	0.518	0.567
	FR1 n77	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.69	14.00	1.074	0.05	0.603	0.648
	FR1 n77	100M	BPSK	1	137	Right	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.61	14.00	1.094	-0.18	0.001	0.001
	FR1 n77	100M	BPSK	135	69	Right	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.69	14.00	1.074	-0.11	0.001	0.001
	FR1 n77_HPUE	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	13.69	14.00	1.074	-0.03	0.320	0.344
	FR1 n77	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor2	13.69	14.00	1.074	0.11	0.580	0.623
	FR1 n77	100M	BPSK	1	137	Back	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.87	15.00	1.03	-0.17	0.075	0.077
	FR1 n77	100M	BPSK	135	69	Back	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.82	15.00	1.042	0.06	0.080	0.083



FCC SAR TEST REPORT

Report No. : FA5N2416B

	FR1 n77	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.87	15.00	1.03	-0.02	1.030	1.061
	FR1 n77	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.82	15.00	1.042	-0.08	1.000	1.042
	FR1 n77	100M	BPSK	270	0	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.73	15.00	1.064	0.02	0.915	0.974
	FR1 n77_HPUE	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.87	15.00	1.03	-0.12	0.549	0.565
	FR1 n77	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor2	14.87	15.00	1.03	0.04	1.010	1.040
	FR1 n77	100M	BPSK	1	137	Back	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.59	14.00	1.099	0.11	0.001	0.001
	FR1 n77	100M	BPSK	135	69	Back	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.64	14.00	1.086	-0.04	0.001	0.001
	FR1 n77	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.59	14.00	1.099	0.03	0.854	0.939
	FR1 n77	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.64	14.00	1.086	0.02	0.719	0.781
	FR1 n77	100M	BPSK	270	0	Top	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.51	14.00	1.119	-0.11	0.764	0.855
	FR1 n77	100M	BPSK	1	137	Right	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.59	14.00	1.099	-0.02	0.001	0.001
	FR1 n77	100M	BPSK	135	69	Right	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.64	14.00	1.086	0.05	0.001	0.001
	FR1 n77_HPUE	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	656000	3840	Vendor1	13.59	14.00	1.099	-0.03	0.458	0.503
	FR1 n77	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	656000	3840	Vendor2	13.59	14.00	1.099	-0.10	0.846	0.930
	FR1 n77	100M	BPSK	1	137	Back	0mm	Ant 8	Tablet	656000	3840	Vendor1	14.90	15.00	1.023	0.15	0.039	0.040
	FR1 n77	100M	BPSK	135	69	Back	0mm	Ant 8	Tablet	656000	3840	Vendor1	14.90	15.00	1.023	-0.18	0.040	0.041
	FR1 n77	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	656000	3840	Vendor1	14.90	15.00	1.023	-0.15	1.040	1.064
25	FR1 n77	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	656000	3840	Vendor1	14.90	15.00	1.023	-0.02	1.110	1.136
	FR1 n77	100M	BPSK	270	0	Top	0mm	Ant 8	Tablet	656000	3840	Vendor1	14.79	15.00	1.05	0.15	1.050	1.103
	FR1 n77_HPUE	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	656000	3840	Vendor1	14.90	15.00	1.023	-0.04	0.606	0.620
	FR1 n77	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	656000	3840	Vendor2	14.90	15.00	1.023	-0.16	1.060	1.084
	FR1 n78	100M	BPSK	1	137	Back	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.26	14.50	1.057	-0.18	0.001	0.001
	FR1 n78	100M	BPSK	135	69	Back	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.34	14.50	1.038	0.08	0.001	0.001
	FR1 n78	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.26	14.50	1.057	0.08	0.686	0.725
	FR1 n78	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.34	14.50	1.038	-0.06	0.694	0.720
	FR1 n78	100M	BPSK	1	137	Right	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.26	14.50	1.057	0.02	0.001	0.001
	FR1 n78	100M	BPSK	135	69	Right	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.34	14.50	1.038	0.13	0.001	0.001
	FR1 n78_HPUE	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor1	14.26	14.50	1.057	0.19	0.338	0.357
	FR1 n78	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	633332	3499.98	Vendor2	14.26	14.50	1.057	0.13	0.673	0.711
	FR1 n78	100M	BPSK	1	137	Back	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.97	15.50	1.13	0.14	0.062	0.070
	FR1 n78	100M	BPSK	135	69	Back	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.95	15.50	1.135	-0.17	0.059	0.067
26	FR1 n78	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.97	15.50	1.13	-0.07	1.020	1.153
	FR1 n78	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.95	15.50	1.135	-0.13	0.784	0.890
	FR1 n78	100M	BPSK	270	0	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.88	15.50	1.153	0.01	0.709	0.817
	FR1 n78_HPUE	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor1	14.97	15.50	1.13	-0.15	0.548	0.619
	FR1 n78	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	633332	3499.98	Vendor2	14.97	15.50	1.13	-0.15	0.955	1.079
	FR1 n78	100M	BPSK	1	137	Back	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.21	14.50	1.069	0.06	0.001	0.001
	FR1 n78	100M	BPSK	135	69	Back	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.22	14.50	1.067	0.14	0.001	0.001
	FR1 n78	100M	BPSK	1	137	Top	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.21	14.50	1.069	0.03	1.020	1.090
	FR1 n78	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.22	14.50	1.067	-0.14	1.040	1.110
	FR1 n78	100M	BPSK	270	0	Top	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.10	14.50	1.096	-0.03	0.943	1.034
	FR1 n78	100M	BPSK	1	137	Right	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.21	14.50	1.069	-0.16	0.001	0.001
	FR1 n78	100M	BPSK	135	69	Right	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.22	14.50	1.067	0.06	0.001	0.001
	FR1 n78_HPUE	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	650000	3750	Vendor1	14.22	14.50	1.067	0.02	0.486	0.519
	FR1 n78	100M	BPSK	135	69	Top	0mm	Ant 5	Tablet	650000	3750	Vendor2	14.22	14.50	1.067	-0.18	0.982	1.048
	FR1 n78	100M	BPSK	1	137	Back	0mm	Ant 8	Tablet	650000	3750	Vendor1	14.96	15.50	1.132	-0.15	0.032	0.036
	FR1 n78	100M	BPSK	135	69	Back	0mm	Ant 8	Tablet	650000	3750	Vendor1	14.94	15.50	1.138	-0.11	0.034	0.039
	FR1 n78	100M	BPSK	1	137	Top	0mm	Ant 8	Tablet	650000	3750	Vendor1	14.96	15.50	1.132	0.05	0.859	0.972
	FR1 n78	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	650000	3750	Vendor1	14.94	15.50	1.138	0.07	0.907	1.032
	FR1 n78	100M	BPSK	270	0	Top	0mm	Ant 8	Tablet	650000	3750	Vendor1	14.87	15.50	1.156	-0.02	0.846	0.978
	FR1 n78_HPUE	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	650000	3750	Vendor1	14.94	15.50	1.138	-0.18	0.502	0.571
	FR1 n78	100M	BPSK	135	69	Top	0mm	Ant 8	Tablet	650000	3750	Vendor2	14.94	15.50	1.138	0.15	0.892	1.015

15.2 Power Class 2 and Power Class 3 Linearity

General Note:

This device support Power Class 2 and Power Class 3 operations. 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 and FR1 configuration and exposure condition combination, according to the highest time averaged power for Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required. Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is < 10%

LTE Band 41_Ant 5	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	15.5	15.5
Reported 1g SAR (W/kg)	0.533	0.397
Duty Cycle (%)	63.3 %	43.3 %
Frame Averaged (mW)	22.46	15.36
Linearity SAR (W/kg)	0.36	
% deviation from Expected Linearity		8.91 %

FR1 n41_Ant 5	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	15.5	15.5
Reported 1g SAR (W/kg)	0.573	0.301
Duty Cycle (%)	100.0 %	50.0 %
Frame Averaged (mW)	35.48	17.74
Linearity SAR (W/kg)	0.29	
% deviation from Expected Linearity		5.06 %

FR1 n41_Ant 8	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	17.0	17.0
Reported 1g SAR (W/kg)	0.746	0.377
Duty Cycle (%)	100.0 %	50.0 %
Frame Averaged (mW)	50.12	25.06
Linearity SAR (W/kg)	0.37	
% deviation from Expected Linearity		1.07 %



FR1 n77 (27O)_Ant 5	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	14.0	14.0
Reported 1g SAR (W/kg)	0.939	0.503
Duty Cycle (%)	100.0 %	50.0 %
Frame Averaged (m/W)	25.12	12.56
Linearity SAR (W/kg)	0.47	
% deviation from Expected Linearity		7.14 %

FR1 n77 (27O)_Ant 8	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	15.0	15.0
Reported 1g SAR (W/kg)	1.136	0.62
Duty Cycle (%)	100.0 %	50.0 %
Frame Averaged (m/W)	31.62	15.81
Linearity SAR (W/kg)	0.57	
% deviation from Expected Linearity		9.15 %

FR1 n78 (27O)_Ant 5	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	14.5	14.5
Reported 1g SAR (W/kg)	1.11	0.519
Duty Cycle (%)	100.0 %	50.0 %
Frame Averaged (m/W)	28.18	14.09
Linearity SAR (W/kg)	0.56	
% deviation from Expected Linearity		-6.49 %

FR1 n78 (27Q)_Ant 8	Power Class 3	Power Class 2
Max Tune Up Power (dBm)	15.5	15.5
Reported 1g SAR (W/kg)	1.153	0.619
Duty Cycle (%)	100.0 %	50.0 %
Frame Averaged (m/W)	35.48	17.74
Linearity SAR (W/kg)	0.58	
% deviation from Expected Linearity		7.37 %

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN + WLAN+BT Main	Yes
2.	WWAN + WLAN+BT Aux	Yes

General Note:

- The Intel BE211NGW WLAN/BT module is integrated into this host. The maximum WLAN/BT output power and evaluation results are referenced from the Intel test report (Report No.: 250825-02.TR01, FCC ID: PD9BE211NG). The SAR results are used for simultaneous transmission analysis.
- The WLAN Main / Aux Sim-Tx address in intel SAR report
- The Scaled SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1g 1.6W/kg or 10g 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, 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.
 - If $SPLSR \leq 0.04$ for 1g SAR, ≤ 0.1 for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg or 10g SAR < 4.0W/kg.
 - Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - The SPLSR calculated results please refer to section 16.2.

16.1 Body Exposure Conditions

Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	Case No		SPLSR	
	Maximum WWAN 1g SAR (W/kg)	WLAN+BT Main 1g SAR (W/kg)	WLAN+BT Aux 1g SAR (W/kg)						
Back at 0mm	0.185	1.040	1.230	1.225	1.415				
Top at 0mm	1.153	1.900	1.340	3.053	2.493	1	2	0.04	0.02
Right at 0mm	0.349			0.349	0.349				

16.2 SPLSR Evaluation and Analysis

General Note:

1. Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Therefore, the adjacent transmit antennas will be summed first, and then the SPLSR calculation will be evaluated with the farther transmitted antennas.
2. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary

Case 1	Band	Position	SAR (W/kg)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
	Max WWAN	Top	1.153	1.5	62.8	-177	136.4	3.05	0.04	Not required
	Max WLAN+BT Main		1.9	6.3	-73.5	-177				
Case 2	Band	Position	SAR (W/kg)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				X	Y	Z				
	Max WWAN	Top	1.153	1.5	62.8	-177	196.0	2.49	0.02	Not required
	Max WLAN+BT Aux		1.34	7.8	-133.1	-177				

Test Engineer : Teddy Chang and Samy Lo

17. Uncertainty Assessment

Declaration of Conformity:

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

Comments and Explanations:

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

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	1/k ^(b)	1/√3	1/√6	1/√2

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) κ is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Applicable for SAR Measurements:

Uncertainty Budget (4 MHz - 10 GHz range)							
Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System							
Probe Calibration	18.60	N	2	1	1	9.3	9.3
Axial Isotropy	4.70	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.60	R	1.732	0.7	0.7	3.9	3.9
Linearity	4.70	R	1.732	1	1	2.7	2.7
Modulation Response	4.68	R	1.732	1	1	2.7	2.7
System Detection Limits	1.00	R	1.732	1	1	0.6	0.6
Boundary Effects	2.00	R	1.732	1	1	1.2	1.2
Readout Electronics	0.30	N	1	1	1	0.3	0.3
Response Time	0.00	R	1.732	1	1	0.0	0.0
Integration Time	2.60	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.00	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.00	R	1.732	1	1	1.7	1.7
Probe Positioner	0.40	R	1.732	1	1	0.2	0.2
Probe Positioning	6.70	R	1.732	1	1	3.9	3.9
Post-processing	4.00	R	1.732	1	1	2.3	2.3
Test Sample Related							
Device Holder	3.60	N	1	1	1	3.6	3.6
Test sample Positioning	3.03	N	1	1	1	3.0	3.0
Power Scaling	0.00	R	1.732	1	1	0.0	0.0
Power Drift	5.00	R	1.732	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty	7.60	R	1.732	1	1	4.4	4.4
SAR correction	0.00	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.03	N	1	0.78	0.77	0.0	0.0
Liquid Conductivity (target)	5.00	R	1.732	0.78	0.77	2.3	2.2
Liquid Conductivity (mea.)	2.50	R	1.732	0.78	0.77	1.1	1.1
Temp. unc. - Conductivity	3.68	R	1.732	0.78	0.77	1.7	1.6
Liquid Permittivity Repeatability	0.02	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.00	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.50	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.84	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						14.5%	14.2%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.4%

18. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [5] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [6] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [7] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [8] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.