



FCC RADIO TEST REPORT

FCC ID : PKRISGFW3000
Equipment : Outdoor Fixed CPE
Brand Name : Inseego
Model Name : FW3000
Marketing Name : FW3000
Applicant : Inseego Corp.
9710 Scranton Road Suite 200, San Diego, CA 92121
Manufacturer : Inseego Corp.
9710 Scranton Road Suite 200, San Diego, CA 92121
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27

The product was received on Jul. 24, 2023 and testing was performed from Jul. 25, 2023 to Sep. 06, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FG320711A	01	Initial issue of report	Sep. 27, 2023
FG320711A	02	Revise Test Mode and Appendix B This report is an updated version, replacing the report issued on Sep. 27, 2023.	Oct. 02, 2023



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§22.913 (a)(5)	Effective Radiated Power (Band 5) (Band 26)	Pass	
	§27.50 (b)(4) §27.50 (c)(3)	Effective Radiated Power (Band 12) (Band 13) (Band 71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 25) (Band 41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)		
3.3	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §22.917 (a) §24.238 (a) §27.53 (c)(2)(3) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 25) (Band 26) (Band 66) (Band 71)	Pass	-
	§2.1051 §27.53 (m)(2)(v)	Conducted Band Edge Measurement (Band 41)		
3.6	§2.1051 §22.917 (a) §24.238 (a) §27.53 (c)(2) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 25) (Band 26) (Band 66) (Band 71)	Pass	-
	§2.1051 §27.53 (m)(2)(v)	Conducted Spurious Emission (Band 41)		
3.7	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Pass	-



Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.2	\$2.1053 \$22.917 (a) \$24.238 (a) \$27.53 (c)(2) \$27.53 (f) \$27.53 (g) \$27.53 (h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 25) (Band 26) (Band 66) (Band 71)	Pass	14.50 dB under the limit at 7622.00 MHz
	\$2.1051 \$27.53 (m)(2)(v)	Radiated Spurious Emission (Band 41)		

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Avis Chuang**Report Producer: Lucy Wu**



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs 4G-LTE, 5G-FR1, Bluetooth-LE, and GNSS.	
Antenna Type WWAN: Fixed Internal Antenna Bluetooth-LE: Fixed Internal Antenna GPS / Glonass / BDS / Galileo: Fixed Internal Antenna	

Support Band and Evaluated Information	
Supported Band	B2, B4, B5, B12, B13, B25, B26, B41, B66, B71
Evaluated and Tested Band	B12, B13, B25, B26, B41, B66, B71
Band Covered Information	Wider operating frequency band range covers narrower one when the power is worse as follows: ■ B26 cover B5 (Part 22) ■ B25 cover B2 (Part 24) ■ B66 cover B4 (Part 27)

TDD Band Power Class		
	PC3	PC2
B41	V	V

Antenna Information						
Band	Ant0	Ant1	Ant12	Ant13	Main Ant. #	Secondary Ant. #
B2			5.0	4.7	13	12
B4			5.0	4.9	13	12
B5	3.4	3.5			0	1
B12	2.4				0	
B13	3.0				0	
B25				4.7	13	
B26	3.4				0	
B41			5.5	5.4	12	13
B66			5.0	4.9	13	12
B71	2.2				0	

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.



1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH03-HY
Test Engineer	Jacky Wang
Temperature (°C)	23.2~25.3
Relative Humidity (%)	55.4~57.2

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH13-HY (TAF Code: 3786)
Test Engineer	Rain Lee, Jacky Hong and Mancy Chou
Temperature (°C)	20~26
Relative Humidity (%)	40~65
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report.

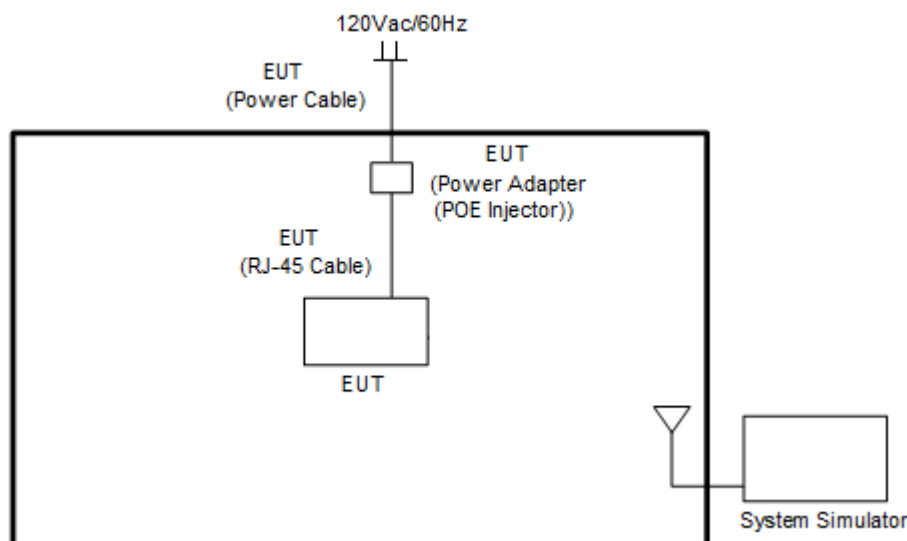
Modulation Type	Modulation
A	QPSK
B	16QAM
C	64QAM
D	256QAM

Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D	All	1, Half, Full	L, M, H
EIRP	A, B, C, D	All	1, Half, Full	L, M, H
PAR	A, B, C, D	Maximum	Full	M
Bandwidth	A, B, C, D	All	Full	M
CSE	A	Minimum	1RB	L, M, H
Frequency Stability	A	10 MHz or less	Full	M
RSE	A	10 MHz or less	1RB	L, M, H

Remark:

1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.
2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported.
3. For 4G LTE test combination are LTE Band CA 2A_5A, LTE Band CA 2A_12A, LTE Band CA 2A_66A, LTE Band CA 4A_5A, LTE Band CA 4A_12A, LTE Band CA 5A_66A, and LTE Band CA 12A_66A.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

$$= 4.2 + 10 = 14.2 \text{ (dB)}$$



2.5 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3

LTE Band 13 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5



LTE Band 25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	26140	26340	26590
	Frequency	1860	1880	1905
15	Channel	26115	26340	26615
	Frequency	1857.5	1880	1907.5
10	Channel	26090	26340	26640
	Frequency	1855	1880	1910
5	Channel	26065	26340	26665
	Frequency	1852.5	1880	1912.5
3	Channel	26055	26340	26675
	Frequency	1851.5	1880	1913.5
1.4	Channel	26047	26340	26683
	Frequency	1850.7	1880	1914.3

LTE Band 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829.0	836.5	844.0
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3



LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	39750	40620	41490
	Frequency	2506.0	2593.0	2680.0
15	Channel	39725	40620	41515
	Frequency	2503.5	2593.0	2682.5
10	Channel	39700	40620	41540
	Frequency	2501.0	2593.0	2685.0
5	Channel	39675	40620	41565
	Frequency	2498.5	2593.0	2687.5

LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132197	132322
	Frequency	1720	1732.5	1745
15	Channel	132047	132197	132347
	Frequency	1717.5	1732.5	1747.5
10	Channel	132022	132197	132372
	Frequency	1715	1732.5	1750
5	Channel	131997	132197	132397
	Frequency	1712.5	1732.5	1752.5
3	Channel	131987	132197	132407
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	131979	132197	132415
	Frequency	1710.7	1732.5	1754.3

LTE Band 71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	133222	133297	133372
	Frequency	673.0	680.5	688.0
15	Channel	133197	133297	133397
	Frequency	670.5	680.5	690.5
10	Channel	133172	133297	133422
	Frequency	668.0	680.5	693.0
5	Channel	133147	133297	133447
	Frequency	665.5	680.5	695.5



LTE Band 41C Channel and Frequency List_CA					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	39750	40521	41292
		Frequency	2506.0	2583.1	2660.2
	SCC	Channel	39948	40719	41490
		Frequency	2525.8	2602.9	2680.0
20 + 15	PCC	Channel	39750	40546	41341
		Frequency	2506.0	2585.6	2665.1
	SCC	Channel	39921	40717	41512
		Frequency	2523.1	2602.7	2682.2
15 + 20	PCC	Channel	39728	40523	41319
		Frequency	2503.8	2583.3	2662.9
	SCC	Channel	39899	40694	41490
		Frequency	2520.9	2600.4	2680.0
20 + 10	PCC	Channel	39750	40571	41391
		Frequency	2506.0	2588.1	2670.1
	SCC	Channel	39894	40715	41535
		Frequency	2520.4	2602.5	2684.5
10 + 20	PCC	Channel	39705	40526	41346
		Frequency	2501.5	2583.6	2665.6
	SCC	Channel	39849	40670	41490
		Frequency	2515.9	2598.0	2680.0



LTE Band 41C Channel and Frequency List_CA					
20 + 5	PCC	Channel	39750	40595	41440
		Frequency	2506.0	2590.5	2675.0
	SCC	Channel	39867	40712	41557
		Frequency	2517.7	2602.2	2686.7
5 + 20	PCC	Channel	39683	40528	41373
		Frequency	2499.3	2583.8	2668.3
	SCC	Channel	39800	40645	41490
		Frequency	2511.0	2595.5	2680.0
15 + 15	PCC	Channel	39725	40545	41365
		Frequency	2503.5	2585.5	2667.5
	SCC	Channel	39875	40695	41515
		Frequency	2518.5	2600.5	2682.5
10 + 15	PCC	Channel	39703	40549	41395
		Frequency	2501.3	2585.9	2670.5
	SCC	Channel	39823	40669	41515
		Frequency	2513.3	2597.9	2682.5
15 + 10	PCC	Channel	39725	40571	41417
		Frequency	2503.5	2588.1	2672.7
	SCC	Channel	39845	40691	41537
		Frequency	2515.5	2600.1	2684.7

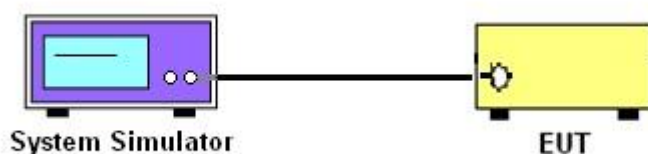
3 Conducted Test Items

3.1 Measuring Instruments

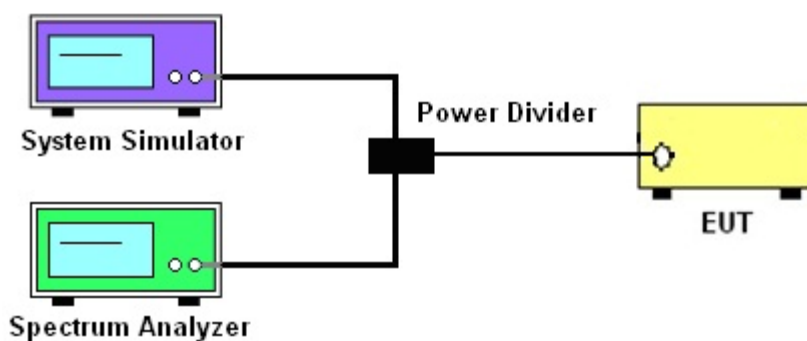
See list of measuring instruments of this test report.

3.1.1 Test Setup

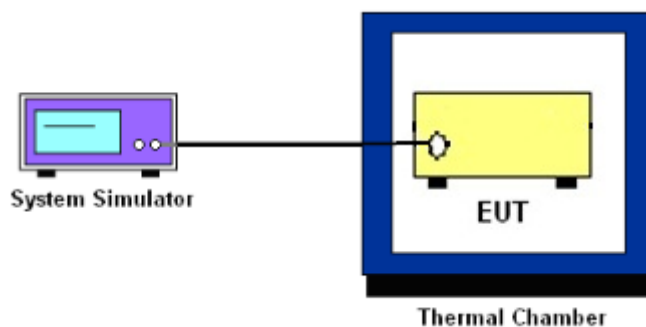
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5 and Band 26

The ERP of transmitters must not exceed 1000 Watts for LTE Band 12 and Band 13 and Band 71

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 25

The EIRP of transmitters must not exceed 1 Watts for LTE Band 4 and Band 66

The output power of transmitters must not exceed 2 Watts for LTE Band 41

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.



3.4 Occupied Bandwidth

3.4.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.4.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (c)

For operations in the 776-788 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least $76 + 10 \log_{10} p(\text{watts})$, dB, for mobile and portable equipment.

27.53 (g)

For operations in the 600MHz band and 698-746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.



27.53(m)

For all fixed digital user stations, the attenuation factor shall be not less than $43 + 10\log_{10}(P[\text{Watts}])$ dB at the channel edge

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.

The limit line is derived from $43 + 10\log(P)\text{dB}$ below the transmitter power P(Watts)



3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

22.355

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

24.235 & 27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

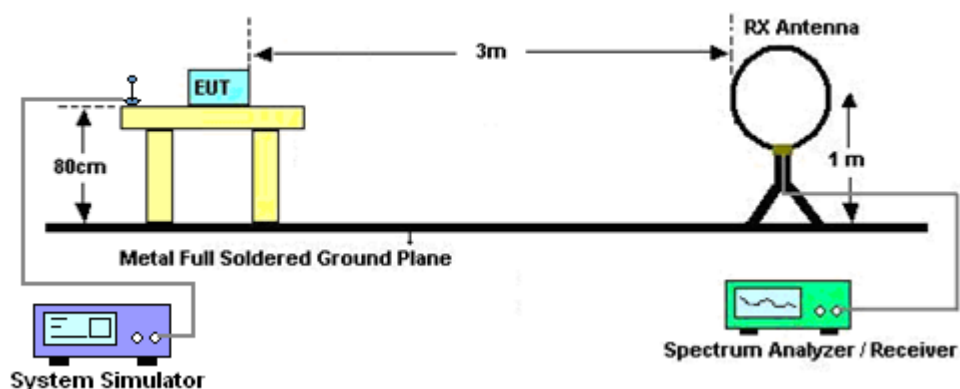
4 Radiated Test Items

4.1 Measuring Instruments

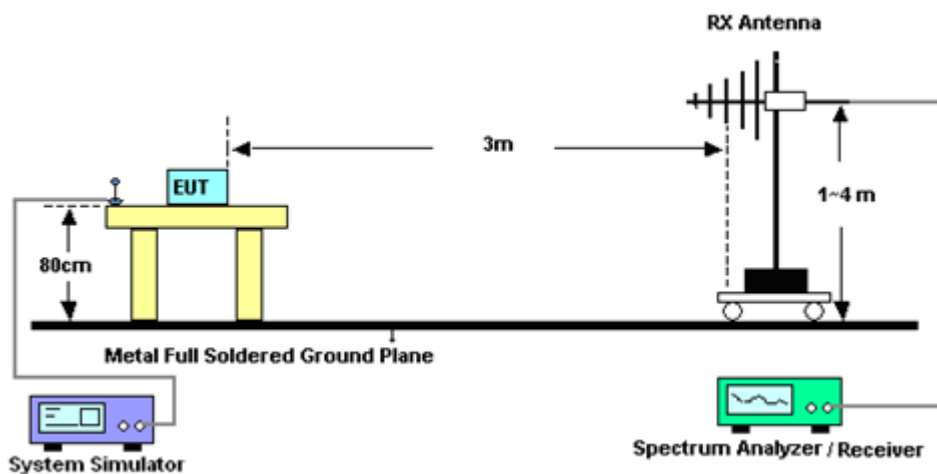
See list of measuring instruments of this test report.

4.1.1 Test Setup

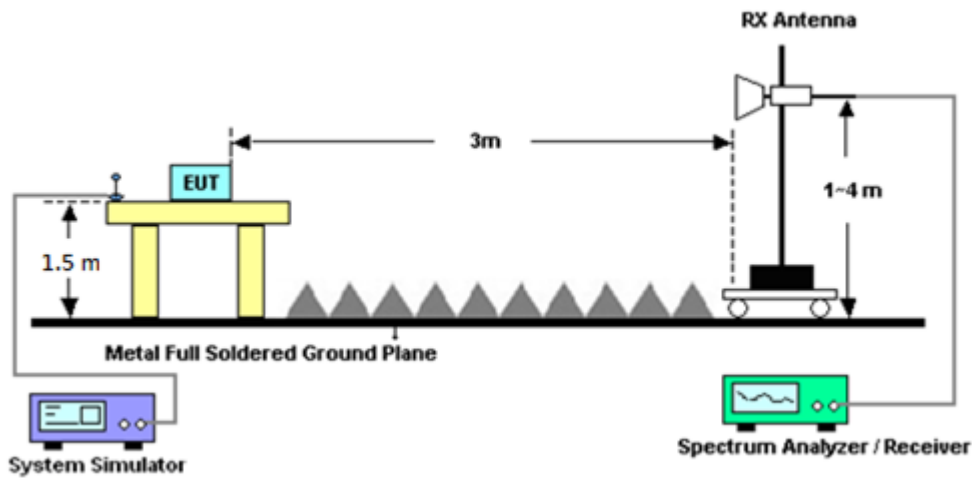
For radiated test below 30MHz



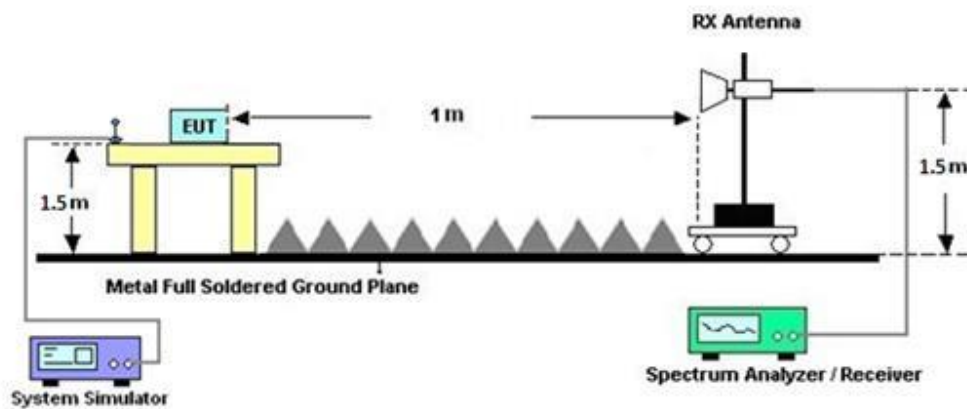
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$

$ERP \text{ (dBm)} = EIRP - 2.15$



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Jul. 25, 2023~ Aug. 29, 2023	Sep. 19, 2023	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 07, 2022	Jul. 25, 2023~ Aug. 29, 2023	Dec. 06, 2023	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	1223	18GHz~40GHz	Jul. 10, 2023	Jul. 25, 2023~ Aug. 29, 2023	Jul. 09, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 20, 2022	Jul. 25, 2023~ Aug. 29, 2023	Dec. 19, 2023	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 15, 2023	Jul. 25, 2023~ Aug. 29, 2023	May 14, 2024	Radiation (03CH13-HY)
Amplifier	SONOMA	310N	187282	9kHz~1GHz	Dec. 14, 2022	Jul. 25, 2023~ Aug. 29, 2023	Dec. 13, 2023	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 07	30MHz~1GHz	Apr. 23, 2023	Jul. 25, 2023~ Aug. 29, 2023	Apr. 22, 2024	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	41912 & 05	30MHz~1GHz	Feb. 05, 2023	Jul. 25, 2023~ Aug. 29, 2023	Feb. 04, 2024	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Nov. 07, 2022	Jul. 25, 2023~ Aug. 29, 2023	Nov. 06, 2023	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 16, 2023	Jul. 25, 2023~ Aug. 29, 2023	May 15, 2024	Radiation (03CH13-HY)
Preamplifier	EM Electronics	EM01G18G	060803	1GHz~18GHz	Jan. 10, 2023	Jul. 25, 2023~ Aug. 29, 2023	Jan. 09, 2024	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 23, 2023	Jul. 25, 2023~ Aug. 29, 2023	Mar. 22, 2024	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-15 30-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 13, 2022	Jul. 25, 2023~ Aug. 29, 2023	Sep. 12, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-1080 -1200-15000-6 0SS	SN3	1.2GHz High Pass Filter	Jun. 29, 2023	Jul. 25, 2023~ Aug. 29, 2023	Jun. 28, 2024	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0SS	SN2	3GHz High Pass Filter	Jul. 10, 2023	Jul. 25, 2023~ Aug. 29, 2023	Jul. 09, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30MHz~18GHz	Feb. 08, 2023	Jul. 25, 2023~ Aug. 29, 2023	Feb. 07, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30MHz~18GHz	Feb. 08, 2023	Jul. 25, 2023~ Aug. 29, 2023	Feb. 07, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682/4	9 kHz~18GHz	Feb. 22, 2023	Jul. 25, 2023~ Aug. 29, 2023	Feb. 21, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30MHz~18GHz	Feb. 08, 2023	Jul. 25, 2023~ Aug. 29, 2023	Feb. 07, 2024	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jul. 25, 2023~ Aug. 29, 2023	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jul. 25, 2023~ Aug. 29, 2023	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jul. 25, 2023~ Aug. 29, 2023	N/A	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz~18GHz	Aug. 24, 2022	Jul. 25, 2023~ Aug. 17, 2023	Aug. 23, 2023	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz~18GHz	Aug. 17, 2023	Aug. 18, 2023~ Aug. 29, 2023	Aug. 16, 2024	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 23, 2023	Jul. 25, 2023~ Aug. 29, 2023	Mar. 22, 2024	Radiation (03CH13-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 13, 2022	Aug. 03, 2023~ Sep. 06, 2023	Oct. 12, 2023	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101908	10Hz~40GHz	Sep. 27, 2022	Aug. 03, 2023~ Sep. 06, 2023	Sep. 26, 2023	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 07, 2022	Aug. 03, 2023~ Sep. 05, 2023	Sep. 06, 2023	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Dec. 29, 2022	Aug. 03, 2023~ Sep. 06, 2023	Dec. 28, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 06, 2023	Aug. 03, 2023~ Sep. 06, 2023	Jan. 05, 2024	Conducted (TH03-HY)



6 Measurement Uncertainty

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.02 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.55 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.82 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & ERP/EIRP)

4G-LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	23.31	24.69	23.37	29.69	0.9311
20	1	49		23.50	24.36	22.96		
20	1	99		24.38	23.33	23.64		
20	50	0		22.65	23.84	22.51		
20	50	24		22.73	23.68	22.16		
20	50	50		22.99	23.56	22.99		
20	100	0		22.82	23.64	22.28		
20	1	0	16-QAM	22.66	23.88	22.68	28.88	0.7727
20	1	49		22.87	23.69	22.30		
20	1	99		23.75	22.59	22.98		
20	50	0		21.73	22.88	21.59		
20	50	24		21.81	22.77	21.24		
20	50	50		22.06	22.63	22.10		
20	100	0		21.90	22.71	21.37		
20	1	0	64-QAM	21.69	22.97	21.68	27.97	0.6266
20	1	49		21.88	22.85	21.36		
20	1	99		22.65	21.63	22.08		
20	50	0		20.78	21.94	20.68		
20	50	24		20.88	21.86	20.32		
20	50	50		21.14	21.69	21.20		
20	100	0		20.97	21.81	20.45		
20	1	0	256-QAM	18.75	19.99	19.66	24.99	0.3155
20	1	49		19.42	19.98	18.30		
20	1	99		19.98	19.40	19.85		
20	50	0		18.99	19.87	18.99		
20	50	24		19.06	19.89	18.62		
20	50	50		19.31	19.96	19.60		
20	100	0		19.19	19.85	18.76		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	23.58	24.59	23.40	29.61	0.9141
15	1	37		23.45	24.61	23.08		
15	1	74		24.03	23.51	24.07		
15	36	0		22.59	23.78	22.59		
15	36	20		22.64	23.84	22.30		
15	36	39		22.91	23.72	23.30		
15	75	0		22.73	23.78	22.43		
15	1	0	16-QAM	22.79	23.30	22.72	28.52	0.7112
15	1	37		22.55	23.52	22.59		
15	1	74		23.48	22.72	23.27		
15	36	0		21.63	22.90	21.60		
15	36	20		21.68	22.78	21.30		
15	36	39		21.99	22.76	22.36		
15	75	0		21.80	22.85	21.43		
15	1	0	64-QAM	22.12	23.00	21.70	28.00	0.6310
15	1	37		21.93	22.99	21.69		
15	1	74		22.43	22.15	22.44		
15	36	0		21.10	21.86	20.99		
15	36	20		21.13	21.83	20.70		
15	36	39		21.34	21.96	21.70		
15	75	0		21.27	21.88	20.92		
15	1	0	256-QAM	19.31	19.89	18.74	24.99	0.3155
15	1	37		18.57	19.99	18.26		
15	1	74		19.67	19.16	19.74		
15	36	0		18.65	19.84	18.56		
15	36	20		18.82	19.88	18.19		
15	36	39		19.08	19.91	19.42		
15	75	0		18.96	19.85	18.42		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	22.52	23.80	22.50	28.80	0.7586
10	1	25		23.11	23.26	23.26		
10	1	49		22.96	22.82	23.02		
10	25	0		21.51	22.56	21.56		
10	25	12		21.62	22.57	22.24		
10	25	25		21.82	22.51	22.50		
10	50	0		21.66	22.63	22.47		
10	1	0	16-QAM	22.04	23.40	22.52	28.50	0.7079
10	1	25		22.29	23.36	23.01		
10	1	49		22.86	22.26	23.50		
10	25	0		21.55	22.57	21.51		
10	25	12		21.56	22.48	22.29		
10	25	25		21.75	22.49	22.44		
10	50	0		21.61	22.45	22.41		
10	1	0	64-QAM	21.93	22.56	21.63	28.00	0.6310
10	1	25		21.33	23.00	22.77		
10	1	49		22.17	22.06	22.52		
10	25	0		20.99	21.62	20.78		
10	25	12		21.01	21.65	21.74		
10	25	25		21.32	21.69	21.76		
10	50	0		21.22	21.61	21.62		
10	1	0	256-QAM	19.26	19.96	19.15	24.96	0.3133
10	1	25		18.59	19.49	19.22		
10	1	49		19.45	19.20	19.80		
10	25	0		18.67	19.67	18.52		
10	25	12		18.72	19.61	19.44		
10	25	25		19.02	19.69	19.58		
10	50	0		18.94	19.68	19.54		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	22.80	23.68	23.52	28.68	0.7379
5	1	12		22.53	23.16	23.53		
5	1	24		23.04	23.55	23.37		
5	12	0		21.55	22.50	22.35		
5	12	7		21.50	22.38	22.22		
5	12	13		21.67	22.16	22.28		
5	25	0		21.59	22.33	22.22		
5	1	0	16-QAM	22.72	23.57	23.42	28.57	0.7194
5	1	12		22.00	23.00	22.82		
5	1	24		22.38	23.22	22.91		
5	12	0		21.55	22.36	22.30		
5	12	7		21.36	22.33	22.14		
5	12	13		21.73	22.26	22.18		
5	25	0		21.58	22.34	22.26		
5	1	0	64-QAM	22.03	22.74	22.51	27.87	0.6124
5	1	12		21.65	22.54	22.65		
5	1	24		22.40	22.75	22.87		
5	12	0		21.02	21.70	21.57		
5	12	7		21.01	21.72	21.59		
5	12	13		21.22	21.70	21.61		
5	25	0		21.15	21.60	21.67		
5	1	0	256-QAM	18.78	19.49	19.84	24.86	0.3062
5	1	12		18.57	19.78	19.28		
5	1	24		19.10	19.86	19.27		
5	12	0		18.88	19.58	19.37		
5	12	7		18.65	19.57	19.35		
5	12	13		18.89	19.58	19.34		
5	25	0		18.84	19.58	19.35		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	22.64	23.49	22.82	28.57	0.7194
3	1	8		22.63	23.50	23.22		
3	1	14		22.68	23.57	23.03		
3	8	0		21.55	22.38	22.22		
3	8	4		21.55	22.37	22.41		
3	8	7		21.65	22.36	22.29		
3	15	0		21.60	22.10	22.17		
3	1	0	16-QAM	22.51	23.16	23.10	28.40	0.6918
3	1	8		22.44	23.18	23.40		
3	1	14		22.87	23.06	22.97		
3	8	0		21.67	22.31	22.24		
3	8	4		21.53	22.35	22.26		
3	8	7		21.50	22.30	22.14		
3	15	0		21.61	22.38	22.11		
3	1	0	64-QAM	21.89	22.72	22.65	27.76	0.5970
3	1	8		21.76	22.49	22.39		
3	1	14		21.65	22.76	22.01		
3	8	0		21.05	21.53	21.61		
3	8	4		21.00	21.70	21.64		
3	8	7		21.12	21.58	21.63		
3	15	0		21.17	21.43	21.61		
3	1	0	256-QAM	19.17	19.61	19.57	24.92	0.3105
3	1	8		18.97	19.81	19.58		
3	1	14		19.59	19.92	19.32		
3	8	0		19.06	19.68	19.38		
3	8	4		18.85	19.61	19.40		
3	8	7		19.10	19.50	19.60		
3	15	0		19.00	19.71	19.39		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 2 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	23.62	24.25	24.04	29.25	0.8414
1.4	1	3		23.52	24.13	24.01		
1.4	1	5		23.45	24.12	23.97		
1.4	3	0		23.43	24.17	23.98		
1.4	3	1		23.47	24.18	23.96		
1.4	3	3		23.33	24.13	23.84		
1.4	6	0		22.52	23.36	23.05		
1.4	1	0	16-QAM	22.57	23.25	22.83	28.34	0.6823
1.4	1	3		22.48	23.29	23.23		
1.4	1	5		22.54	23.34	23.20		
1.4	3	0		22.40	23.24	23.04		
1.4	3	1		22.54	23.25	23.10		
1.4	3	3		22.45	23.22	22.93		
1.4	6	0		21.65	22.47	22.08		
1.4	1	0	64-QAM	21.81	22.57	22.24	27.89	0.6152
1.4	1	3		21.77	22.55	22.13		
1.4	1	5		21.85	22.41	22.17		
1.4	3	0		21.95	22.68	22.54		
1.4	3	1		22.04	22.58	22.44		
1.4	3	3		22.08	22.89	22.60		
1.4	6	0		20.94	21.57	21.54		
1.4	1	0	256-QAM	18.76	19.98	19.57	24.98	0.3148
1.4	1	3		18.92	19.98	19.50		
1.4	1	5		18.97	19.48	19.30		
1.4	3	0		18.91	19.63	19.44		
1.4	3	1		18.90	19.74	19.60		
1.4	3	3		18.78	19.71	19.51		
1.4	6	0		18.90	19.68	19.49		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 25 Maximum Average Power [dBm] (GT - LC = 4.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	23.65	24.22	24.08	28.92	0.7798
20	1	49		23.90	23.81	23.63		
20	1	99		23.49	23.29	23.06		
20	50	0		22.29	22.62	22.75		
20	50	24		22.39	22.82	22.70		
20	50	50		22.39	22.80	22.53		
20	100	0		22.43	22.63	22.73		
20	1	0	16-QAM	23.02	23.57	23.23	28.44	0.6982
20	1	49		23.34	23.35	23.74		
20	1	99		23.40	23.25	22.73		
20	50	0		22.12	22.40	22.50		
20	50	24		22.25	22.60	22.43		
20	50	50		22.32	22.46	22.33		
20	100	0		22.17	22.46	22.50		
20	1	0	64-QAM	21.82	22.78	22.40	27.69	0.5875
20	1	49		22.18	22.85	22.99		
20	1	99		21.86	22.14	22.24		
20	50	0		21.08	21.38	21.54		
20	50	24		21.13	21.56	21.47		
20	50	50		21.12	21.54	21.76		
20	100	0		21.21	21.41	21.47		
20	1	0	256-QAM	19.22	19.52	19.81	24.54	0.2844
20	1	49		19.46	19.79	19.18		
20	1	99		19.29	19.84	19.00		
20	50	0		19.12	19.44	19.54		
20	50	24		19.24	19.47	19.43		
20	50	50		19.39	19.74	19.44		
20	100	0		19.27	19.48	19.58		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 25 Maximum Average Power [dBm] (GT - LC = 4.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	23.96	24.58	24.54	29.42	0.8750
15	1	37		24.10	24.53	24.40		
15	1	74		24.44	24.72	23.51		
15	36	0		23.27	23.66	23.75		
15	36	20		23.40	23.71	23.53		
15	36	39		23.30	23.88	23.35		
15	75	0		23.37	23.72	23.51		
15	1	0	16-QAM	22.68	23.15	23.28	28.21	0.6622
15	1	37		23.07	23.48	23.05		
15	1	74		23.04	23.51	22.30		
15	36	0		22.04	22.47	22.55		
15	36	20		22.19	22.54	22.36		
15	36	39		22.21	22.73	22.18		
15	75	0		22.15	22.58	22.38		
15	1	0	64-QAM	21.79	22.32	22.48	27.33	0.5408
15	1	37		21.98	22.63	22.52		
15	1	74		22.30	22.53	21.73		
15	36	0		21.07	21.49	21.66		
15	36	20		21.12	21.48	21.69		
15	36	39		21.20	21.52	21.69		
15	75	0		21.08	21.57	21.67		
15	1	0	256-QAM	19.32	19.37	19.23	24.69	0.2944
15	1	37		19.00	19.99	19.15		
15	1	74		19.97	19.26	18.85		
15	36	0		19.11	19.49	19.53		
15	36	20		19.14	19.61	19.34		
15	36	39		19.20	19.59	19.21		
15	75	0		19.19	19.58	19.32		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 25 Maximum Average Power [dBm] (GT - LC = 4.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	23.65	23.95	24.10	28.80	0.7586
10	1	25		23.65	24.09	23.70		
10	1	49		23.69	24.07	22.90		
10	25	0		22.49	22.78	22.89		
10	25	12		22.51	22.87	22.77		
10	25	25		22.44	22.81	22.47		
10	50	0		22.51	22.91	22.71		
10	1	0	16-QAM	23.06	23.46	23.05	28.46	0.7015
10	1	25		23.66	23.76	23.16		
10	1	49		23.22	23.23	22.36		
10	25	0		21.93	22.39	22.48		
10	25	12		22.03	22.53	22.28		
10	25	25		22.06	22.45	22.02		
10	50	0		22.12	22.51	22.26		
10	1	0	64-QAM	22.12	22.87	22.57	27.57	0.5715
10	1	25		22.31	22.63	22.74		
10	1	49		22.32	22.51	21.68		
10	25	0		20.99	21.38	21.47		
10	25	12		21.02	21.52	21.68		
10	25	25		20.94	21.52	21.52		
10	50	0		21.06	21.45	21.57		
10	1	0	256-QAM	19.07	19.53	19.03	24.63	0.2904
10	1	25		18.90	19.36	19.19		
10	1	49		19.57	19.93	18.50		
10	25	0		18.88	19.41	19.49		
10	25	12		19.21	19.57	19.25		
10	25	25		19.06	19.42	18.93		
10	50	0		19.13	19.51	19.17		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 25 Maximum Average Power [dBm] (GT - LC = 4.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	23.53	24.19	23.65	28.98	0.7907
5	1	12		23.72	24.28	23.51		
5	1	24		23.29	24.13	22.87		
5	12	0		22.30	22.85	22.60		
5	12	7		22.51	22.93	22.28		
5	12	13		22.48	22.87	22.08		
5	25	0		22.32	22.90	22.26		
5	1	0	16-QAM	23.22	23.71	23.34	28.69	0.7396
5	1	12		23.86	23.99	23.04		
5	1	24		23.59	23.96	22.41		
5	12	0		22.35	22.64	22.43		
5	12	7		22.42	22.90	22.32		
5	12	13		22.41	23.00	21.91		
5	25	0		22.40	22.82	22.15		
5	1	0	64-QAM	22.36	22.95	22.23	27.65	0.5821
5	1	12		22.68	22.92	22.56		
5	1	24		22.58	22.94	22.12		
5	12	0		21.34	21.91	21.80		
5	12	7		21.53	21.86	21.71		
5	12	13		21.40	21.93	21.39		
5	25	0		21.39	21.88	21.71		
5	1	0	256-QAM	19.65	19.80	19.62	24.69	0.2944
5	1	12		19.77	19.93	19.56		
5	1	24		19.45	19.61	18.99		
5	12	0		19.38	19.69	19.33		
5	12	7		19.48	19.99	19.13		
5	12	13		19.30	19.97	18.84		
5	25	0		19.40	19.93	19.10		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 25 Maximum Average Power [dBm] (GT - LC = 4.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	23.72	24.11	23.59	28.81	0.7603
3	1	8		23.74	23.80	23.06		
3	1	14		23.50	23.89	22.59		
3	8	0		22.49	22.83	22.38		
3	8	4		22.44	22.98	22.05		
3	8	7		22.41	22.93	21.75		
3	15	0		22.82	23.31	22.94		
3	1	0	16-QAM	23.46	23.89	22.64	28.59	0.7228
3	1	8		23.19	23.70	22.01		
3	1	14		21.95	22.24	22.03		
3	8	0		22.02	22.61	21.92		
3	8	4		22.01	22.60	21.51		
3	8	7		22.00	22.42	21.75		
3	15	0		21.96	22.55	21.83		
3	1	0	64-QAM	22.28	22.66	22.16	27.36	0.5445
3	1	8		22.18	22.62	21.72		
3	1	14		20.94	21.51	21.40		
3	8	0		21.13	21.46	21.31		
3	8	4		21.00	21.53	20.99		
3	8	7		20.99	21.48	21.31		
3	15	0		19.25	19.40	19.22		
3	1	0	256-QAM	19.37	19.63	19.16	24.61	0.2891
3	1	8		19.05	19.21	18.59		
3	1	14		18.98	19.29	18.93		
3	8	0		19.08	19.59	18.73		
3	8	4		18.90	19.57	18.44		
3	8	7		19.00	19.53	18.70		
3	15	0		19.34	19.91	18.97		
Limit	EIRP < 2W			Result			Pass	



FCC RADIO TEST REPORT

Report No. : FG320711A

4G-LTE Band 25 Maximum Average Power [dBm] (GT - LC = 4.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	24.11	24.48	23.28	29.18	0.8279
1.4	1	3		24.15	24.34	22.94		
1.4	1	5		23.96	24.28	22.90		
1.4	3	0		23.93	24.32	23.11		
1.4	3	1		24.05	24.44	23.03		
1.4	3	3		23.90	24.29	22.87		
1.4	6	0		22.96	23.44	22.08		
1.4	1	0	16-QAM	22.90	23.50	22.53	28.45	0.6998
1.4	1	3		23.02	23.55	22.12		
1.4	1	5		23.36	23.52	21.84		
1.4	3	0		23.00	23.33	22.10		
1.4	3	1		23.04	23.75	22.20		
1.4	3	3		23.01	23.44	21.93		
1.4	6	0		22.07	22.32	21.06		
1.4	1	0	64-QAM	21.71	22.64	21.50	27.67	0.5848
1.4	1	3		21.86	22.97	21.67		
1.4	1	5		21.92	22.32	21.46		
1.4	3	0		22.04	22.21	21.60		
1.4	3	1		22.14	22.63	21.40		
1.4	3	3		22.22	22.53	21.55		
1.4	6	0		20.97	21.60	20.53		
1.4	1	0	256-QAM	19.06	19.22	18.84	24.38	0.2742
1.4	1	3		19.16	19.60	18.52		
1.4	1	5		19.18	19.49	18.32		
1.4	3	0		19.27	19.26	18.33		
1.4	3	1		18.97	19.68	18.43		
1.4	3	3		18.70	19.47	18.17		
1.4	6	0		18.88	19.59	18.30		
Limit	EIRP < 2W			Result			Pass	



4G-LTE Band 4 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	24.31	24.56	24.51	29.62	0.9162
20	1	49		24.11	24.53	24.36		
20	1	99		24.54	24.62	24.24		
20	50	0		23.37	23.54	23.50		
20	50	24		23.34	23.52	23.47		
20	50	50		23.54	23.45	23.30		
20	100	0		23.44	23.50	23.44		
20	1	0	16-QAM	23.62	23.89	23.78	28.89	0.7745
20	1	49		23.40	23.83	23.68		
20	1	99		23.80	23.70	23.55		
20	50	0		22.46	22.54	22.52		
20	50	24		22.44	22.56	22.49		
20	50	50		22.63	22.49	22.35		
20	100	0		22.55	22.51	22.49		
20	1	0	64-QAM	22.69	22.81	22.68	27.81	0.6039
20	1	49		22.47	22.73	22.54		
20	1	99		22.69	22.70	22.58		
20	50	0		21.56	21.55	21.54		
20	50	24		21.53	21.52	21.50		
20	50	50		21.64	21.48	21.33		
20	100	0		21.65	21.54	21.46		
20	1	0	256-QAM	19.43	19.28	19.35	24.80	0.3020
20	1	49		19.23	19.80	19.33		
20	1	99		19.60	19.14	19.75		
20	50	0		19.59	19.33	19.27		
20	50	24		19.53	19.40	19.40		
20	50	50		19.59	19.41	19.38		
20	100	0		19.57	19.35	19.40		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 4 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	24.60	24.37	24.61	29.61	0.9141
15	1	37		24.41	24.39	24.26		
15	1	74		24.49	24.61	24.35		
15	36	0		23.51	23.41	23.39		
15	36	20		23.52	23.47	23.36		
15	36	39		23.60	23.45	23.29		
15	75	0		23.60	23.33	23.35		
15	1	0	16-QAM	23.50	23.62	23.29	28.83	0.7638
15	1	37		23.71	23.36	23.57		
15	1	74		23.83	23.58	23.19		
15	36	0		22.57	22.46	22.30		
15	36	20		22.49	22.43	22.35		
15	36	39		22.61	22.40	22.34		
15	75	0		22.64	22.44	22.37		
15	1	0	64-QAM	22.57	22.99	22.46	27.99	0.6295
15	1	37		22.85	22.61	22.51		
15	1	74		22.99	22.81	22.31		
15	36	0		21.57	21.40	21.37		
15	36	20		21.51	21.48	21.21		
15	36	39		21.65	21.47	21.33		
15	75	0		21.57	21.38	21.28		
15	1	0	256-QAM	19.68	19.77	19.19	24.99	0.3155
15	1	37		19.18	19.40	18.98		
15	1	74		19.99	19.13	19.07		
15	36	0		19.61	19.37	19.35		
15	36	20		19.54	19.36	19.27		
15	36	39		19.64	19.50	19.25		
15	75	0		19.51	19.37	19.37		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 4 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	24.07	24.07	23.81	29.07	0.8072
10	1	25		23.60	23.69	23.91		
10	1	49		24.07	23.73	23.53		
10	25	0		22.73	22.70	22.52		
10	25	12		22.60	22.53	22.52		
10	25	25		22.69	22.62	22.38		
10	50	0		22.61	22.50	22.42		
10	1	0	16-QAM	23.35	23.84	23.62	28.85	0.7674
10	1	25		23.51	23.64	23.40		
10	1	49		23.85	23.74	23.63		
10	25	0		22.59	22.67	22.50		
10	25	12		22.50	22.53	22.38		
10	25	25		22.67	22.62	22.42		
10	50	0		22.64	22.57	22.51		
10	1	0	64-QAM	22.55	22.75	22.48	27.96	0.6252
10	1	25		22.81	22.96	22.46		
10	1	49		22.86	22.75	22.88		
10	25	0		21.84	21.73	21.45		
10	25	12		21.68	21.58	21.50		
10	25	25		21.63	21.53	21.37		
10	50	0		21.73	21.61	21.45		
10	1	0	256-QAM	19.54	19.41	19.52	24.74	0.2979
10	1	25		19.34	19.55	19.36		
10	1	49		19.64	19.38	19.64		
10	25	0		19.62	19.61	19.46		
10	25	12		19.56	19.63	19.53		
10	25	25		19.74	19.50	19.41		
10	50	0		19.72	19.47	19.43		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 4 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	24.09	24.15	23.90	29.15	0.8222
5	1	12		23.17	23.80	23.82		
5	1	24		23.49	23.94	23.71		
5	12	0		22.38	22.70	22.43		
5	12	7		22.32	22.63	22.64		
5	12	13		22.36	22.60	22.55		
5	25	0		22.29	22.53	22.55		
5	1	0	16-QAM	23.24	23.70	23.66	28.96	0.7870
5	1	12		23.10	23.66	23.96		
5	1	24		23.65	23.65	23.58		
5	12	0		22.27	22.68	22.56		
5	12	7		22.21	22.53	22.46		
5	12	13		22.25	22.68	22.40		
5	25	0		22.31	22.49	22.43		
5	1	0	64-QAM	22.55	22.72	22.40	27.86	0.6109
5	1	12		22.70	22.30	22.46		
5	1	24		22.72	22.86	22.63		
5	12	0		21.94	21.58	21.46		
5	12	7		21.76	21.47	21.34		
5	12	13		21.67	21.51	21.48		
5	25	0		21.65	21.52	21.37		
5	1	0	256-QAM	19.80	19.42	19.55	24.84	0.3048
5	1	12		19.54	19.84	19.67		
5	1	24		19.61	19.40	19.06		
5	12	0		19.44	19.72	19.44		
5	12	7		19.16	19.53	19.44		
5	12	13		19.32	19.66	19.39		
5	25	0		19.43	19.53	19.49		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 4 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	23.39	24.00	23.66	29.00	0.7943
3	1	8		23.46	23.77	23.58		
3	1	14		23.09	23.36	23.67		
3	8	0		22.18	22.72	22.47		
3	8	4		22.42	22.76	22.50		
3	8	7		22.29	22.44	22.56		
3	15	0		22.28	22.57	22.36		
3	1	0	16-QAM	23.50	23.62	23.71	29.00	0.7943
3	1	8		23.29	23.97	23.99		
3	1	14		23.43	23.76	24.00		
3	8	0		22.22	22.58	22.34		
3	8	4		22.29	22.51	22.49		
3	8	7		22.27	22.47	22.45		
3	15	0		22.27	22.55	22.29		
3	1	0	64-QAM	22.37	22.76	22.28	27.95	0.6237
3	1	8		22.95	22.66	22.60		
3	1	14		22.39	22.36	22.19		
3	8	0		21.78	21.55	21.45		
3	8	4		21.66	21.62	21.59		
3	8	7		21.73	21.61	21.42		
3	15	0		21.84	21.51	21.39		
3	1	0	256-QAM	19.71	19.48	19.25	24.83	0.3041
3	1	8		19.40	19.83	19.52		
3	1	14		19.18	19.52	19.76		
3	8	0		19.50	19.67	19.31		
3	8	4		19.38	19.59	19.37		
3	8	7		19.40	19.61	19.33		
3	15	0		19.39	19.65	19.42		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 4 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	23.92	24.60	24.34	29.61	0.9141
1.4	1	3		24.06	24.59	24.39		
1.4	1	5		24.02	24.59	24.31		
1.4	3	0		23.94	24.55	24.51		
1.4	3	1		23.97	24.61	24.36		
1.4	3	3		23.94	24.57	24.46		
1.4	6	0		23.11	23.55	23.32		
1.4	1	0	16-QAM	23.00	23.97	23.39	28.97	0.7889
1.4	1	3		23.52	23.55	23.51		
1.4	1	5		23.07	23.77	23.63		
1.4	3	0		22.98	23.73	23.39		
1.4	3	1		23.13	23.72	23.35		
1.4	3	3		23.10	23.67	23.61		
1.4	6	0		21.99	22.61	22.46		
1.4	1	0	64-QAM	22.14	22.91	22.73	27.94	0.6223
1.4	1	3		22.71	22.94	22.71		
1.4	1	5		22.76	22.73	22.33		
1.4	3	0		22.63	22.49	22.42		
1.4	3	1		22.70	22.41	22.36		
1.4	3	3		22.61	22.66	22.42		
1.4	6	0		21.72	21.78	21.04		
1.4	1	0	256-QAM	19.71	19.54	19.33	24.96	0.3133
1.4	1	3		19.80	19.79	19.74		
1.4	1	5		19.20	19.96	19.42		
1.4	3	0		19.51	19.30	19.54		
1.4	3	1		19.29	19.38	19.30		
1.4	3	3		19.54	19.73	19.50		
1.4	6	0		19.35	19.65	19.42		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 5 Maximum Average Power [dBm] (GT - LC = 3.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	24.26	24.38	24.17	26.05	0.4027
10	1	25		23.99	24.46	24.11		
10	1	49		24.01	24.70	24.22		
10	25	0		22.81	22.99	23.09		
10	25	12		23.04	23.02	22.95		
10	25	25		22.82	22.97	22.96		
10	50	0		22.90	22.97	23.07		
10	1	0	16-QAM	23.44	23.43	23.72	25.35	0.3428
10	1	25		23.80	24.00	23.90		
10	1	49		23.50	23.42	23.69		
10	25	0		22.47	22.60	22.63		
10	25	12		22.52	22.64	22.58		
10	25	25		22.37	22.60	22.76		
10	50	0		22.54	22.60	22.54		
10	1	0	64-QAM	22.40	22.60	22.77	24.33	0.2710
10	1	25		22.70	22.98	22.46		
10	1	49		22.55	22.44	22.83		
10	25	0		21.32	21.44	21.53		
10	25	12		21.36	21.37	21.37		
10	25	25		21.30	21.48	21.35		
10	50	0		21.41	21.36	21.41		
10	1	0	256-QAM	19.06	19.44	19.55	21.26	0.1337
10	1	25		19.48	19.90	19.91		
10	1	49		19.69	19.38	19.44		
10	25	0		19.17	19.40	19.41		
10	25	12		19.31	19.38	19.45		
10	25	25		19.39	19.45	19.40		
10	50	0		19.31	19.39	19.36		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 5 Maximum Average Power [dBm] (GT - LC = 3.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	24.38	24.53	24.56	26.04	0.4018
5	1	12		24.51	24.69	24.69		
5	1	24		24.39	24.48	24.45		
5	12	0		23.39	23.59	23.53		
5	12	7		23.54	23.61	23.68		
5	12	13		23.44	23.62	23.64		
5	25	0		23.51	23.60	23.52		
5	1	0	16-QAM	23.69	23.87	23.90	25.30	0.3388
5	1	12		23.86	23.95	23.93		
5	1	24		23.66	23.84	23.70		
5	12	0		22.47	22.65	22.59		
5	12	7		22.60	22.65	22.70		
5	12	13		22.50	22.64	22.71		
5	25	0		22.50	22.54	22.59		
5	1	0	64-QAM	22.60	22.67	22.85	24.21	0.2636
5	1	12		22.69	22.86	22.77		
5	1	24		22.56	22.75	22.79		
5	12	0		21.45	21.58	21.57		
5	12	7		21.51	21.62	21.72		
5	12	13		21.46	21.69	21.71		
5	25	0		21.51	21.54	21.57		
5	1	0	256-QAM	19.50	19.69	19.64	21.12	0.1294
5	1	12		19.53	19.69	19.77		
5	1	24		19.38	19.68	19.64		
5	12	0		19.41	19.57	19.57		
5	12	7		19.53	19.62	19.68		
5	12	13		19.49	19.62	19.64		
5	25	0		19.49	19.52	19.57		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 5 Maximum Average Power [dBm] (GT - LC = 3.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	24.08	24.11	24.12	25.70	0.3715
3	1	8		24.06	24.35	24.20		
3	1	14		24.04	24.35	24.08		
3	8	0		22.83	22.99	23.01		
3	8	4		22.84	23.05	23.12		
3	8	7		22.89	23.07	23.07		
3	15	0		22.87	22.97	23.02		
3	1	0	16-QAM	23.48	23.63	23.72	25.17	0.3289
3	1	8		23.58	23.82	23.72		
3	1	14		23.59	23.66	23.61		
3	8	0		22.39	22.61	22.55		
3	8	4		22.57	22.68	22.75		
3	8	7		22.46	22.67	22.71		
3	15	0		22.48	22.59	22.62		
3	1	0	64-QAM	22.46	22.73	22.77	24.28	0.2679
3	1	8		22.66	22.83	22.93		
3	1	14		22.55	22.68	22.72		
3	8	0		21.38	21.59	21.60		
3	8	4		21.49	21.67	21.71		
3	8	7		21.53	21.63	21.64		
3	15	0		21.50	21.49	21.56		
3	1	0	256-QAM	19.44	19.64	19.77	21.24	0.1330
3	1	8		19.71	19.77	19.89		
3	1	14		19.56	19.72	19.58		
3	8	0		19.48	19.67	19.65		
3	8	4		19.56	19.71	19.72		
3	8	7		19.53	19.72	19.73		
3	15	0		19.53	19.61	19.64		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 5 Maximum Average Power [dBm] (GT - LC = 3.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	24.51	24.64	24.63	26.04	0.4018
1.4	1	3		24.57	24.69	24.44		
1.4	1	5		24.42	24.69	24.33		
1.4	3	0		24.52	24.66	24.55		
1.4	3	1		24.48	24.63	24.41		
1.4	3	3		24.49	24.67	24.38		
1.4	6	0		23.51	23.58	23.54		
1.4	1	0	16-QAM	23.90	23.97	23.92	25.35	0.3428
1.4	1	3		23.85	24.00	23.70		
1.4	1	5		23.76	23.87	23.59		
1.4	3	0		23.63	23.83	23.76		
1.4	3	1		23.66	23.81	23.68		
1.4	3	3		23.75	23.78	23.68		
1.4	6	0		22.61	22.71	22.74		
1.4	1	0	64-QAM	22.56	22.77	22.86	24.32	0.2704
1.4	1	3		22.83	22.97	22.81		
1.4	1	5		22.74	22.87	22.70		
1.4	3	0		22.56	22.76	22.86		
1.4	3	1		22.67	22.71	22.81		
1.4	3	3		22.61	22.75	22.79		
1.4	6	0		21.61	21.68	21.71		
1.4	1	0	256-QAM	19.58	19.57	19.74	21.13	0.1297
1.4	1	3		19.63	19.74	19.76		
1.4	1	5		19.57	19.73	19.78		
1.4	3	0		19.61	19.61	19.76		
1.4	3	1		19.61	19.67	19.71		
1.4	3	3		19.58	19.74	19.78		
1.4	6	0		19.50	19.64	19.69		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 12 Maximum Average Power [dBm] (GT - LC = 2.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	24.27	24.19	23.58	24.52	0.2831
10	1	25		23.80	23.93	23.87		
10	1	49		23.79	23.92	24.16		
10	25	0		22.75	22.84	22.83		
10	25	12		22.83	22.71	22.74		
10	25	25		22.85	22.85	22.79		
10	50	0		22.78	22.81	22.68		
10	1	0	16-QAM	23.63	23.60	23.03	24.01	0.2518
10	1	25		23.59	23.76	23.68		
10	1	49		23.73	23.26	23.75		
10	25	0		22.33	22.40	22.33		
10	25	12		22.39	22.40	22.41		
10	25	25		22.29	22.42	22.35		
10	50	0		22.35	22.36	22.38		
10	1	0	64-QAM	22.74	22.97	22.44	23.22	0.2099
10	1	25		22.88	22.71	22.35		
10	1	49		22.41	22.45	22.47		
10	25	0		21.28	21.35	21.38		
10	25	12		21.52	21.36	21.31		
10	25	25		21.33	21.42	21.35		
10	50	0		21.39	21.28	21.27		
10	1	0	256-QAM	19.40	19.25	19.28	19.77	0.0948
10	1	25		19.52	19.10	18.98		
10	1	49		19.39	19.18	19.47		
10	25	0		19.35	19.29	19.43		
10	25	12		19.40	19.30	19.31		
10	25	25		19.45	19.40	19.40		
10	50	0		19.42	19.30	19.33		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 12 Maximum Average Power [dBm] (GT - LC = 2.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	24.79	24.79	24.75	25.12	0.3251
5	1	12		24.85	24.87	24.79		
5	1	24		24.81	24.74	24.64		
5	12	0		23.77	23.80	23.73		
5	12	7		23.90	23.78	23.76		
5	12	13		23.84	23.79	23.72		
5	25	0		23.83	23.77	23.74		
5	1	0	16-QAM	23.70	23.78	23.71	24.23	0.2649
5	1	12		23.81	23.98	23.89		
5	1	24		23.72	23.70	23.62		
5	12	0		22.39	22.40	22.33		
5	12	7		22.54	22.46	22.47		
5	12	13		22.46	22.50	22.40		
5	25	0		22.46	22.37	22.39		
5	1	0	64-QAM	22.71	22.59	22.61	22.96	0.1977
5	1	12		22.60	22.71	22.60		
5	1	24		22.56	22.52	22.48		
5	12	0		21.41	21.38	21.26		
5	12	7		21.51	21.42	21.41		
5	12	13		21.46	21.47	21.36		
5	25	0		21.48	21.35	21.35		
5	1	0	256-QAM	19.46	19.54	19.35	19.84	0.0964
5	1	12		19.57	19.59	19.45		
5	1	24		19.46	19.50	19.33		
5	12	0		19.37	19.40	19.32		
5	12	7		19.51	19.39	19.37		
5	12	13		19.43	19.37	19.34		
5	25	0		19.47	19.37	19.39		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 12 Maximum Average Power [dBm] (GT - LC = 2.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	23.89	23.91	23.81	24.43	0.2773
3	1	8		24.10	24.18	23.95		
3	1	14		23.85	23.87	23.81		
3	8	0		22.91	22.85	22.71		
3	8	4		22.88	22.79	22.77		
3	8	7		22.87	22.85	22.75		
3	15	0		22.86	22.79	22.64		
3	1	0	16-QAM	23.58	23.61	23.51	23.89	0.2449
3	1	8		23.60	23.64	23.59		
3	1	14		23.50	23.58	23.42		
3	8	0		22.61	22.51	22.40		
3	8	4		22.61	22.54	22.41		
3	8	7		22.58	22.57	22.46		
3	15	0		22.55	22.42	22.33		
3	1	0	64-QAM	22.59	22.65	22.56	23.02	0.2004
3	1	8		22.77	22.67	22.63		
3	1	14		22.64	22.62	22.52		
3	8	0		21.57	21.50	21.39		
3	8	4		21.61	21.54	21.41		
3	8	7		21.58	21.57	21.38		
3	15	0		21.57	21.51	21.40		
3	1	0	256-QAM	19.58	19.56	19.49	20.04	0.1009
3	1	8		19.73	19.79	19.58		
3	1	14		19.58	19.61	19.47		
3	8	0		19.69	19.55	19.46		
3	8	4		19.70	19.58	19.49		
3	8	7		19.56	19.60	19.53		
3	15	0		19.57	19.52	19.46		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 12 Maximum Average Power [dBm] (GT - LC = 2.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	24.43	24.49	24.28	24.75	0.2985
1.4	1	3		24.34	24.46	24.38		
1.4	1	5		24.34	24.37	24.33		
1.4	3	0		24.42	24.50	24.37		
1.4	3	1		24.42	24.48	24.39		
1.4	3	3		24.38	24.49	24.33		
1.4	6	0		23.39	23.39	23.31		
1.4	1	0	16-QAM	23.83	23.75	23.72	24.08	0.2559
1.4	1	3		23.73	23.75	23.77		
1.4	1	5		23.67	23.70	23.77		
1.4	3	0		23.55	23.58	23.46		
1.4	3	1		23.57	23.55	23.53		
1.4	3	3		23.62	23.66	23.49		
1.4	6	0		22.49	22.55	22.40		
1.4	1	0	64-QAM	22.58	22.54	22.46	22.97	0.1982
1.4	1	3		22.72	22.68	22.46		
1.4	1	5		22.54	22.61	22.46		
1.4	3	0		22.47	22.61	22.49		
1.4	3	1		22.53	22.57	22.37		
1.4	3	3		22.51	22.56	22.34		
1.4	6	0		21.40	21.46	21.43		
1.4	1	0	256-QAM	19.43	19.42	19.45	19.87	0.0971
1.4	1	3		19.50	19.62	19.43		
1.4	1	5		19.51	19.55	19.45		
1.4	3	0		19.46	19.50	19.41		
1.4	3	1		19.47	19.48	19.40		
1.4	3	3		19.43	19.60	19.35		
1.4	6	0		19.40	19.38	19.34		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 13 Maximum Average Power [dBm] (GT - LC = 3 dB)											
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)			
10	1	0	QPSK	-	23.91	-	24.76	0.2992			
10	1	25			23.74						
10	1	49			23.48						
10	25	0			22.76						
10	25	12			22.63						
10	25	25			22.57						
10	50	0			22.71						
10	1	0	16-QAM		23.76		-	24.61	0.2891		
10	1	25			23.60						
10	1	49			23.71						
10	25	0			22.56						
10	25	12			22.59						
10	25	25			22.51						
10	50	0			22.52						
10	1	0	64-QAM		22.43			-	23.85	0.2427	
10	1	25			23.00						
10	1	49			22.68						
10	25	0			21.55						
10	25	12			21.57						
10	25	25			21.47						
10	50	0			21.57						
10	1	0	256-QAM		19.98				-	20.83	0.1211
10	1	25			19.34						
10	1	49			19.45						
10	25	0			19.56						
10	25	12			19.56						
10	25	25			19.44						
10	50	0			19.49						
Limit	ERP < 1000W			Result						Pass	



4G-LTE Band 13 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	24.50	24.51	24.44	25.64	0.3664
5	1	12		24.59	24.66	24.79		
5	1	24		24.50	24.39	24.48		
5	12	0		23.52	23.51	23.50		
5	12	7		23.64	23.52	23.56		
5	12	13		23.60	23.46	23.49		
5	25	0		23.55	23.46	23.49		
5	1	0	16-QAM	23.84	23.87	23.81	24.83	0.3041
5	1	12		23.88	23.98	23.87		
5	1	24		23.85	23.79	23.83		
5	12	0		22.63	22.57	22.58		
5	12	7		22.65	22.60	22.61		
5	12	13		22.67	22.51	22.57		
5	25	0		22.61	22.50	22.53		
5	1	0	64-QAM	22.88	22.89	22.68	23.74	0.2366
5	1	12		22.81	22.89	22.65		
5	1	24		22.77	22.74	22.80		
5	12	0		21.56	21.54	21.59		
5	12	7		21.67	21.50	21.64		
5	12	13		21.66	21.49	21.53		
5	25	0		21.63	21.57	21.50		
5	1	0	256-QAM	19.56	19.62	19.63	20.60	0.1148
5	1	12		19.72	19.75	19.60		
5	1	24		19.63	19.51	19.47		
5	12	0		19.53	19.54	19.56		
5	12	7		19.59	19.53	19.52		
5	12	13		19.56	19.48	19.46		
5	25	0		19.64	19.51	19.47		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 26 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0	QPSK	24.36	24.51	24.79	26.04	0.4018
15	1	37		24.49	24.59	24.70		
15	1	74		24.51	24.58	24.63		
15	36	0		23.50	23.59	23.75		
15	36	20		23.62	23.71	23.83		
15	36	39		23.64	23.83	23.78		
15	75	0		23.59	23.74	23.85		
15	1	0	16-QAM	23.10	23.08	23.73	25.04	0.3192
15	1	37		23.29	23.16	23.79		
15	1	74		23.48	23.03	23.04		
15	36	0		22.18	22.30	22.46		
15	36	20		22.26	22.26	22.46		
15	36	39		22.28	22.37	22.55		
15	75	0		22.24	22.35	22.29		
15	1	0	64-QAM	22.22	22.04	22.60	24.20	0.2630
15	1	37		22.23	22.43	22.56		
15	1	74		22.31	22.95	22.35		
15	36	0		21.23	21.29	21.36		
15	36	20		21.28	21.34	21.31		
15	36	39		21.28	21.26	21.47		
15	75	0		21.15	21.28	21.41		
15	1	0	256-QAM	19.29	19.25	19.48	21.12	0.1294
15	1	37		19.11	19.25	19.40		
15	1	74		19.75	19.87	19.25		
15	36	0		19.06	19.30	19.35		
15	36	20		19.21	19.24	19.40		
15	36	39		19.40	19.44	19.39		
15	75	0		19.28	19.24	19.35		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 26 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	24.68	24.79	24.92	26.19	0.4159
10	1	25		24.73	24.92	24.94		
10	1	49		24.73	24.83	24.87		
10	25	0		23.73	23.88	23.90		
10	25	12		23.81	23.89	23.95		
10	25	25		23.77	23.93	23.98		
10	50	0		23.79	23.83	24.00		
10	1	0	16-QAM	23.64	23.79	23.92	25.22	0.3327
10	1	25		23.65	23.84	23.93		
10	1	49		23.60	23.97	23.84		
10	25	0		22.36	22.49	22.53		
10	25	12		22.41	22.53	22.55		
10	25	25		22.47	22.53	22.58		
10	50	0		22.40	22.49	22.60		
10	1	0	64-QAM	22.71	22.67	22.81	24.06	0.2547
10	1	25		22.58	22.81	22.78		
10	1	49		22.54	22.71	22.79		
10	25	0		21.39	21.48	21.58		
10	25	12		21.42	21.50	21.54		
10	25	25		21.42	21.59	21.59		
10	50	0		21.37	21.51	21.61		
10	1	0	256-QAM	19.36	19.46	19.55	20.95	0.1245
10	1	25		19.54	19.70	19.62		
10	1	49		19.54	19.63	19.60		
10	25	0		19.37	19.49	19.50		
10	25	12		19.45	19.52	19.54		
10	25	25		19.47	19.58	19.58		
10	50	0		19.40	19.47	19.63		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 26 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	24.57	24.79	24.85	26.16	0.4130
5	1	12		24.75	24.91	24.81		
5	1	24		24.58	24.80	24.78		
5	12	0		23.57	23.80	23.77		
5	12	7		23.71	23.94	23.92		
5	12	13		23.67	23.90	23.84		
5	25	0		23.66	23.77	23.83		
5	1	0	16-QAM	23.70	23.94	23.93	25.21	0.3319
5	1	12		23.71	23.96	23.95		
5	1	24		23.47	23.75	23.64		
5	12	0		22.28	22.47	22.38		
5	12	7		22.35	22.53	22.50		
5	12	13		22.32	22.55	22.51		
5	25	0		22.31	22.45	22.45		
5	1	0	64-QAM	22.51	22.59	22.74	24.02	0.2523
5	1	12		22.53	22.77	22.63		
5	1	24		22.43	22.74	22.76		
5	12	0		21.25	21.46	21.49		
5	12	7		21.37	21.61	21.53		
5	12	13		21.37	21.54	21.55		
5	25	0		21.37	21.45	21.47		
5	1	0	256-QAM	19.30	19.46	19.41	20.90	0.1230
5	1	12		19.34	19.65	19.62		
5	1	24		19.40	19.56	19.51		
5	12	0		19.29	19.47	19.39		
5	12	7		19.34	19.56	19.52		
5	12	13		19.32	19.53	19.46		
5	25	0		19.35	19.44	19.47		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 26 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	24.67	24.90	24.75	26.17	0.4140
3	1	8		24.76	24.91	24.92		
3	1	14		24.65	24.88	24.66		
3	8	0		23.66	23.87	23.88		
3	8	4		23.80	24.00	23.88		
3	8	7		23.36	23.65	23.51		
3	15	0		23.43	23.47	23.43		
3	1	0	16-QAM	23.71	23.78	23.87	25.16	0.3281
3	1	8		23.74	23.82	23.91		
3	1	14		23.60	23.76	23.63		
3	8	0		22.33	22.52	22.62		
3	8	4		22.50	22.66	22.62		
3	8	7		22.43	22.64	22.63		
3	15	0		22.36	22.51	22.51		
3	1	0	64-QAM	22.47	22.71	22.74	24.01	0.2518
3	1	8		22.56	22.76	22.76		
3	1	14		22.38	22.68	22.76		
3	8	0		21.40	21.56	21.53		
3	8	4		21.36	21.64	21.53		
3	8	7		21.36	21.66	21.58		
3	15	0		21.42	21.51	21.51		
3	1	0	256-QAM	19.43	19.63	19.41	20.96	0.1247
3	1	8		19.55	19.68	19.71		
3	1	14		19.43	19.65	19.62		
3	8	0		19.35	19.54	19.53		
3	8	4		19.42	19.59	19.50		
3	8	7		19.45	19.65	19.59		
3	15	0		19.42	19.52	19.49		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 26 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	24.48	24.85	24.24	26.18	0.4150
1.4	1	3		24.63	24.93	24.08		
1.4	1	5		24.66	24.92	23.93		
1.4	3	0		24.57	24.90	24.18		
1.4	3	1		24.58	24.85	24.06		
1.4	3	3		24.59	24.93	23.93		
1.4	6	0		23.61	23.86	23.17		
1.4	1	0	16-QAM	23.79	23.71	23.50	25.22	0.3327
1.4	1	3		23.97	23.90	23.35		
1.4	1	5		23.91	23.90	23.20		
1.4	3	0		23.67	23.66	23.39		
1.4	3	1		23.71	23.62	23.32		
1.4	3	3		23.90	23.62	23.13		
1.4	6	0		22.64	22.56	22.28		
1.4	1	0	64-QAM	22.69	22.52	22.60	24.14	0.2594
1.4	1	3		22.78	22.84	22.44		
1.4	1	5		22.79	22.77	22.15		
1.4	3	0		22.77	22.58	22.50		
1.4	3	1		22.89	22.60	22.41		
1.4	3	3		22.85	22.69	22.30		
1.4	6	0		21.75	21.50	21.43		
1.4	1	0	256-QAM	19.58	19.52	19.68	21.06	0.1276
1.4	1	3		19.69	19.71	19.41		
1.4	1	5		19.81	19.59	19.27		
1.4	3	0		19.75	19.56	19.60		
1.4	3	1		19.69	19.57	19.50		
1.4	3	3		19.77	19.66	19.34		
1.4	6	0		19.69	19.49	19.41		
Limit	ERP < 7W			Result			Pass	



4G-LTE Band 41 (PC2) Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
20	1	0	QPSK	26.10	26.55	26.49	26.75	0.4732
20	1	49		26.28	26.58	26.31		
20	1	99		26.31	26.75	26.32		
20	50	0		25.36	25.66	25.42		
20	50	24		25.43	25.73	25.38		
20	50	50		25.43	25.66	25.31		
20	100	0		25.41	25.70	25.36		
20	1	0	16-QAM	25.54	26.22	25.74	26.22	0.4188
20	1	49		25.61	26.22	25.61		
20	1	99		25.60	25.97	25.48		
20	50	0		24.42	24.73	24.44		
20	50	24		24.43	24.80	24.45		
20	50	50		24.42	24.67	24.30		
20	100	0		24.45	24.72	24.41		
20	1	0	64-QAM	24.45	24.87	24.69	24.95	0.3126
20	1	49		24.56	24.81	24.50		
20	1	99		24.61	24.95	24.43		
20	50	0		23.34	23.71	23.38		
20	50	24		23.45	23.78	23.38		
20	50	50		23.42	23.66	23.29		
20	100	0		23.47	23.77	23.40		
20	1	0	256-QAM	21.52	21.91	21.55	21.91	0.1552
20	1	49		21.53	21.85	21.53		
20	1	99		21.65	21.84	21.49		
20	50	0		21.45	21.81	21.45		
20	50	24		21.49	21.78	21.47		
20	50	50		21.52	21.73	21.36		
20	100	0		21.44	21.75	21.48		
Limit	Power < 2W			Result			Pass	



4G-LTE Band 41 (PC2) Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
15	1	0	QPSK	26.07	26.62	26.38	26.67	0.4645
15	1	37		26.34	26.61	26.19		
15	1	74		26.30	26.67	26.30		
15	36	0		25.44	25.74	25.41		
15	36	20		25.45	25.77	25.42		
15	36	39		25.46	25.72	25.31		
15	75	0		25.44	25.77	25.43		
15	1	0	16-QAM	25.41	25.95	25.65	26.07	0.4046
15	1	37		25.70	26.07	25.81		
15	1	74		25.62	26.06	25.67		
15	36	0		24.45	24.75	24.50		
15	36	20		24.50	24.79	24.46		
15	36	39		24.49	24.72	24.33		
15	75	0		24.47	24.79	24.41		
15	1	0	64-QAM	24.41	24.88	24.53	24.93	0.3112
15	1	37		24.58	24.91	24.63		
15	1	74		24.76	24.93	24.63		
15	36	0		23.43	23.73	23.43		
15	36	20		23.45	23.75	23.42		
15	36	39		23.44	23.73	23.35		
15	75	0		23.48	23.79	23.41		
15	1	0	256-QAM	21.46	21.85	21.47	21.85	0.1531
15	1	37		21.49	21.81	21.52		
15	1	74		21.54	21.74	21.48		
15	36	0		21.42	21.77	21.37		
15	36	20		21.48	21.75	21.39		
15	36	39		21.52	21.68	21.31		
15	75	0		21.48	21.75	21.41		
Limit	Power < 2W			Result			Pass	



4G-LTE Band 41 (PC2) Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
10	1	0	QPSK	24.95	26.82	25.02	26.92	0.4920
10	1	25		25.09	26.92	25.01		
10	1	49		25.06	26.80	24.86		
10	25	0		25.07	25.87	25.04		
10	25	12		25.13	25.95	25.11		
10	25	25		25.04	25.84	24.93		
10	50	0		25.53	25.91	25.56		
10	1	0	16-QAM	25.33	26.24	25.45	26.27	0.4236
10	1	25		25.47	26.27	25.36		
10	1	49		25.40	26.21	25.26		
10	25	0		24.48	24.94	25.07		
10	25	12		24.55	24.97	24.97		
10	25	25		24.64	24.82	24.92		
10	50	0		24.51	24.93	24.53		
10	1	0	64-QAM	24.48	25.12	25.30	25.30	0.3388
10	1	25		24.68	25.07	25.09		
10	1	49		24.86	25.07	25.23		
10	25	0		23.67	23.91	24.56		
10	25	12		23.78	23.92	24.46		
10	25	25		23.83	23.85	24.47		
10	50	0		23.51	23.93	23.52		
10	1	0	256-QAM	22.42	22.04	23.43	23.44	0.2208
10	1	25		22.43	22.08	23.11		
10	1	49		23.04	21.94	23.44		
10	25	0		22.26	21.93	23.24		
10	25	12		22.38	21.94	23.12		
10	25	25		22.67	21.83	23.22		
10	50	0		21.54	21.88	21.52		
Limit	Power < 2W			Result			Pass	



4G-LTE Band 41 (PC2) Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
5	1	0	QPSK	24.98	26.78	24.94	26.90	0.4898
5	1	12		25.06	26.90	25.01		
5	1	24		25.01	26.75	24.88		
5	12	0		25.02	25.84	25.02		
5	12	7		25.06	25.91	25.02		
5	12	13		25.03	25.89	25.00		
5	25	0		25.40	25.87	25.46		
5	1	0	16-QAM	25.36	26.08	25.35	26.28	0.4246
5	1	12		25.40	26.28	25.47		
5	1	24		25.43	26.13	25.33		
5	12	0		24.34	24.90	24.97		
5	12	7		24.40	24.91	24.90		
5	12	13		24.43	24.96	24.93		
5	25	0		24.51	24.85	24.48		
5	1	0	64-QAM	24.53	25.04	25.22	25.22	0.3327
5	1	12		24.59	25.18	25.06		
5	1	24		24.75	25.08	25.19		
5	12	0		23.52	23.85	24.49		
5	12	7		23.72	23.97	24.45		
5	12	13		23.72	24.01	24.51		
5	25	0		23.56	23.89	23.51		
5	1	0	256-QAM	22.36	21.91	23.27	23.27	0.2123
5	1	12		22.26	22.02	22.86		
5	1	24		22.68	21.86	23.08		
5	12	0		22.18	21.92	22.81		
5	12	7		22.21	21.93	22.71		
5	12	13		22.37	21.89	22.73		
5	25	0		21.56	21.85	21.53		
Limit	Power < 2W			Result			Pass	



4G-LTE Band 66 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	24.50	24.42	24.47	29.69	0.9311
20	1	49		24.51	24.59	24.58		
20	1	99		24.60	24.59	24.69		
20	50	0		23.49	23.50	23.48		
20	50	24		23.60	23.58	23.60		
20	50	50		23.61	23.60	23.58		
20	100	0		23.57	23.59	23.56		
20	1	0	16-QAM	23.77	23.72	23.70	28.79	0.7568
20	1	49		23.70	23.72	23.74		
20	1	99		23.73	23.69	23.79		
20	50	0		22.51	22.52	22.52		
20	50	24		22.63	22.61	22.61		
20	50	50		22.66	22.64	22.63		
20	100	0		22.60	22.63	22.62		
20	1	0	64-QAM	22.65	22.64	22.81	27.81	0.6039
20	1	49		22.68	22.71	22.71		
20	1	99		22.80	22.73	22.75		
20	50	0		21.50	21.53	21.50		
20	50	24		21.61	21.59	21.63		
20	50	50		21.63	21.62	21.61		
20	100	0		21.61	21.62	21.61		
20	1	0	256-QAM	19.56	19.51	19.56	24.74	0.2979
20	1	49		19.64	19.61	19.57		
20	1	99		19.74	19.68	19.70		
20	50	0		19.47	19.48	19.51		
20	50	24		19.57	19.55	19.58		
20	50	50		19.59	19.56	19.57		
20	100	0		19.56	19.57	19.58		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 66 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	24.44	24.37	24.35	29.60	0.9120
15	1	37		24.44	24.59	24.53		
15	1	74		24.60	24.41	24.56		
15	36	0		23.46	23.30	23.42		
15	36	20		23.51	23.46	23.51		
15	36	39		23.47	23.60	23.43		
15	75	0		23.40	23.56	23.50		
15	1	0	16-QAM	23.58	23.71	23.51	28.71	0.7430
15	1	37		23.57	23.68	23.68		
15	1	74		23.57	23.54	23.63		
15	36	0		22.50	22.42	22.38		
15	36	20		22.47	22.56	22.61		
15	36	39		22.55	22.55	22.61		
15	75	0		22.49	22.51	22.48		
15	1	0	64-QAM	22.53	22.47	22.66	27.69	0.5875
15	1	37		22.68	22.55	22.59		
15	1	74		22.66	22.53	22.69		
15	36	0		21.34	21.44	21.31		
15	36	20		21.45	21.44	21.45		
15	36	39		21.46	21.54	21.50		
15	75	0		21.52	21.46	21.57		
15	1	0	256-QAM	19.51	19.43	19.48	24.66	0.2924
15	1	37		19.52	19.52	19.55		
15	1	74		19.64	19.66	19.62		
15	36	0		19.36	19.39	19.44		
15	36	20		19.40	19.39	19.43		
15	36	39		19.41	19.39	19.52		
15	75	0		19.48	19.44	19.48		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 66 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	24.32	24.38	24.34	29.54	0.8995
10	1	25		24.33	24.47	24.45		
10	1	49		24.50	24.39	24.54		
10	25	0		23.45	23.43	23.36		
10	25	12		23.47	23.43	23.56		
10	25	25		23.60	23.57	23.56		
10	50	0		23.49	23.46	23.45		
10	1	0	16-QAM	23.72	23.72	23.55	28.74	0.7482
10	1	25		23.61	23.70	23.64		
10	1	49		23.69	23.63	23.74		
10	25	0		22.31	22.36	22.33		
10	25	12		22.53	22.41	22.54		
10	25	25		22.61	22.54	22.58		
10	50	0		22.42	22.48	22.56		
10	1	0	64-QAM	22.52	22.49	22.62	27.69	0.5875
10	1	25		22.58	22.56	22.66		
10	1	49		22.69	22.61	22.68		
10	25	0		21.33	21.42	21.33		
10	25	12		21.54	21.51	21.51		
10	25	25		21.60	21.48	21.50		
10	50	0		21.53	21.62	21.42		
10	1	0	256-QAM	19.56	19.50	19.39	24.74	0.2979
10	1	25		19.59	19.42	19.38		
10	1	49		19.74	19.65	19.55		
10	25	0		19.36	19.35	19.42		
10	25	12		19.51	19.36	19.58		
10	25	25		19.49	19.36	19.42		
10	50	0		19.43	19.39	19.48		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 66 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	24.39	24.22	24.39	29.56	0.9036
5	1	12		24.47	24.50	24.38		
5	1	24		24.53	24.56	24.51		
5	12	0		23.33	23.35	23.42		
5	12	7		23.47	23.50	23.55		
5	12	13		23.57	23.43	23.46		
5	25	0		23.45	23.50	23.39		
5	1	0	16-QAM	23.57	23.56	23.62	28.73	0.7464
5	1	12		23.56	23.68	23.73		
5	1	24		23.59	23.61	23.64		
5	12	0		22.34	22.39	22.32		
5	12	7		22.58	22.61	22.55		
5	12	13		22.47	22.53	22.60		
5	25	0		22.47	22.47	22.60		
5	1	0	64-QAM	22.46	22.46	22.74	27.74	0.5943
5	1	12		22.66	22.70	22.54		
5	1	24		22.67	22.68	22.59		
5	12	0		21.34	21.34	21.45		
5	12	7		21.44	21.50	21.55		
5	12	13		21.48	21.48	21.53		
5	25	0		21.56	21.60	21.58		
5	1	0	256-QAM	19.52	19.38	19.43	24.74	0.2979
5	1	12		19.47	19.44	19.48		
5	1	24		19.74	19.49	19.68		
5	12	0		19.41	19.39	19.37		
5	12	7		19.41	19.50	19.57		
5	12	13		19.57	19.36	19.57		
5	25	0		19.45	19.53	19.38		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 66 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	24.35	24.22	24.44	29.57	0.9057
3	1	8		24.48	24.42	24.40		
3	1	14		24.46	24.42	24.57		
3	8	0		23.29	23.46	23.41		
3	8	4		23.56	23.57	23.40		
3	8	7		23.49	23.40	23.56		
3	15	0		23.44	23.48	23.45		
3	1	0	16-QAM	23.59	23.68	23.60	28.70	0.7413
3	1	8		23.62	23.58	23.64		
3	1	14		23.61	23.56	23.70		
3	8	0		22.34	22.37	22.34		
3	8	4		22.58	22.50	22.42		
3	8	7		22.65	22.54	22.61		
3	15	0		22.41	22.45	22.42		
3	1	0	64-QAM	22.65	22.52	22.77	27.78	0.5998
3	1	8		22.55	22.58	22.63		
3	1	14		22.78	22.65	22.64		
3	8	0		21.45	21.51	21.31		
3	8	4		21.48	21.52	21.43		
3	8	7		21.61	21.56	21.49		
3	15	0		21.56	21.56	21.52		
3	1	0	256-QAM	19.48	19.33	19.49	24.64	0.2911
3	1	8		19.60	19.45	19.46		
3	1	14		19.60	19.64	19.53		
3	8	0		19.41	19.39	19.47		
3	8	4		19.47	19.45	19.49		
3	8	7		19.49	19.37	19.47		
3	15	0		19.45	19.41	19.57		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 66 Maximum Average Power [dBm] (GT - LC = 5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	24.43	24.45	23.69	29.58	0.9078
1.4	1	3		24.58	24.14	23.39		
1.4	1	5		24.29	24.23	23.25		
1.4	3	0		24.41	24.20	23.41		
1.4	3	1		24.41	24.28	23.35		
1.4	3	3		24.27	24.29	23.34		
1.4	6	0		23.26	23.40	22.55		
1.4	1	0	16-QAM	23.40	23.49	22.96	28.85	0.7674
1.4	1	3		23.41	23.52	22.49		
1.4	1	5		23.85	23.45	22.33		
1.4	3	0		23.50	23.33	22.56		
1.4	3	1		23.45	23.61	22.50		
1.4	3	3		23.38	23.31	22.41		
1.4	6	0		22.46	22.26	21.39		
1.4	1	0	64-QAM	22.16	22.47	21.86	27.79	0.6012
1.4	1	3		22.24	22.79	22.03		
1.4	1	5		22.37	22.19	21.93		
1.4	3	0		22.50	22.05	22.05		
1.4	3	1		22.57	22.45	21.76		
1.4	3	3		22.54	22.39	21.95		
1.4	6	0		21.39	21.40	20.98		
1.4	1	0	256-QAM	19.54	19.13	19.18	24.77	0.2999
1.4	1	3		19.54	19.40	19.02		
1.4	1	5		19.53	19.29	18.67		
1.4	3	0		19.77	19.17	18.82		
1.4	3	1		19.40	19.63	18.77		
1.4	3	3		19.00	19.33	18.48		
1.4	6	0		19.19	19.54	18.64		
Limit	EIRP < 1W			Result			Pass	



4G-LTE Band 71 Maximum Average Power [dBm] (GT - LC = 2.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
20	1	0	QPSK	23.75	23.55	23.76	23.91	0.2460
20	1	49		23.58	23.62	23.86		
20	1	99		23.35	23.80	23.83		
20	50	0		22.41	22.68	22.65		
20	50	24		22.62	22.63	22.64		
20	50	50		22.53	22.67	22.62		
20	100	0		22.60	22.56	22.59		
20	1	0	16-QAM	23.92	23.38	23.64	23.97	0.2495
20	1	49		23.82	23.92	23.55		
20	1	99		23.70	23.27	23.74		
20	50	0		22.44	22.58	22.66		
20	50	24		22.62	22.64	22.52		
20	50	50		22.46	22.51	22.58		
20	100	0		22.56	22.49	22.64		
20	1	0	64-QAM	22.60	22.82	22.89	23.04	0.2014
20	1	49		22.38	22.93	22.99		
20	1	99		22.65	22.63	22.69		
20	50	0		21.50	21.63	21.66		
20	50	24		21.57	21.62	21.62		
20	50	50		21.43	21.71	21.62		
20	100	0		21.62	21.67	21.66		
20	1	0	256-QAM	19.25	19.66	19.72	20.05	0.1012
20	1	49		20.00	19.78	19.30		
20	1	99		19.49	19.39	19.68		
20	50	0		19.50	19.53	19.70		
20	50	24		19.47	19.55	19.71		
20	50	50		19.72	19.65	19.76		
20	100	0		19.54	19.66	19.70		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 71 Maximum Average Power [dBm] (GT - LC = 2.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0	QPSK	24.37	24.55	24.62	24.67	0.2931
15	1	37		24.36	24.59	24.59		
15	1	74		24.32	24.40	24.43		
15	36	0		23.36	23.57	23.65		
15	36	20		23.51	23.59	23.62		
15	36	39		23.54	23.56	23.60		
15	75	0		23.52	23.58	23.65		
15	1	0	16-QAM	23.47	23.65	23.62	23.72	0.2355
15	1	37		23.67	23.65	23.58		
15	1	74		23.59	23.56	23.64		
15	36	0		22.39	22.53	22.63		
15	36	20		22.52	22.58	22.63		
15	36	39		22.50	22.57	22.61		
15	75	0		22.56	22.58	22.67		
15	1	0	64-QAM	22.56	22.53	22.74	22.85	0.1928
15	1	37		22.60	22.74	22.80		
15	1	74		22.50	22.60	22.78		
15	36	0		21.43	21.52	21.61		
15	36	20		21.53	21.53	21.68		
15	36	39		21.51	21.60	21.56		
15	75	0		21.50	21.53	21.66		
15	1	0	256-QAM	19.40	19.58	19.76	19.83	0.0962
15	1	37		19.59	19.64	19.69		
15	1	74		19.78	19.78	19.70		
15	36	0		19.42	19.50	19.67		
15	36	20		19.48	19.54	19.67		
15	36	39		19.58	19.61	19.68		
15	75	0		19.57	19.57	19.72		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 71 Maximum Average Power [dBm] (GT - LC = 2.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	24.49	24.67	24.69	24.77	0.2999
10	1	25		24.62	24.66	24.72		
10	1	49		24.50	24.62	24.66		
10	25	0		23.56	23.70	23.73		
10	25	12		23.60	23.76	23.74		
10	25	25		23.58	23.73	23.69		
10	50	0		23.57	23.70	23.69		
10	1	0	16-QAM	23.72	23.86	23.92	23.97	0.2495
10	1	25		23.81	23.75	23.86		
10	1	49		23.74	23.88	23.85		
10	25	0		22.60	22.69	22.78		
10	25	12		22.66	22.79	22.72		
10	25	25		22.65	22.74	22.75		
10	50	0		22.61	22.74	22.74		
10	1	0	64-QAM	22.65	22.89	22.96	23.01	0.2000
10	1	25		22.72	22.92	22.96		
10	1	49		22.75	22.88	22.87		
10	25	0		21.55	21.70	21.72		
10	25	12		21.65	21.80	21.74		
10	25	25		21.58	21.70	21.73		
10	50	0		21.61	21.77	21.72		
10	1	0	256-QAM	19.63	19.72	19.82	19.98	0.0995
10	1	25		19.81	19.83	19.93		
10	1	49		19.74	19.81	19.73		
10	25	0		19.60	19.71	19.79		
10	25	12		19.68	19.82	19.77		
10	25	25		19.59	19.73	19.75		
10	50	0		19.65	19.73	19.73		
Limit	ERP < 1000W			Result			Pass	



4G-LTE Band 71 Maximum Average Power [dBm] (GT - LC = 2.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	24.27	24.44	24.48	24.60	0.2884
5	1	12		24.42	24.48	24.55		
5	1	24		24.26	24.42	24.34		
5	12	0		23.27	23.42	23.48		
5	12	7		23.15	23.25	23.35		
5	12	13		23.11	23.37	23.29		
5	25	0		23.15	23.26	23.22		
5	1	0	16-QAM	23.38	23.50	23.52	23.77	0.2382
5	1	12		23.52	23.66	23.72		
5	1	24		23.40	23.64	23.55		
5	12	0		22.18	22.33	22.36		
5	12	7		22.22	22.38	22.39		
5	12	13		22.21	22.41	22.34		
5	25	0		22.15	22.25	22.23		
5	1	0	64-QAM	22.38	22.46	22.45	22.66	0.1845
5	1	12		22.31	22.61	22.60		
5	1	24		22.19	22.44	22.50		
5	12	0		21.12	21.27	21.35		
5	12	7		21.23	21.28	21.42		
5	12	13		21.20	21.39	21.34		
5	25	0		21.15	21.28	21.31		
5	1	0	256-QAM	19.15	19.35	19.29	19.58	0.0908
5	1	12		19.29	19.45	19.53		
5	1	24		19.20	19.35	19.47		
5	12	0		19.04	19.36	19.33		
5	12	7		19.21	19.31	19.40		
5	12	13		19.15	19.33	19.34		
5	25	0		19.17	19.27	19.30		
Limit	ERP < 1000W			Result			Pass	



4G-LTE CA Band 41C (PC2) Maximum Average Power [dBm]										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
	RB Size	RB Offset	RB Size	RB Offset						
20+20	100	0	100	0	QPSK	24.81	25.13	24.81	26.81	0.4797
20+20	1	0	1	99		18.35	18.67	18.30		
20+20	1	99	1	0		26.69	26.81	26.46		
20+20	100	0	100	0	16-QAM	23.87	24.15	23.79	26.13	0.4102
20+20	1	0	1	99		18.89	19.31	18.82		
20+20	1	99	1	0		26.01	26.13	25.85		
20+20	100	0	100	0	64-QAM	23.77	24.20	23.66	25.13	0.3258
20+20	1	0	1	99		18.77	19.03	18.66		
20+20	1	99	1	0		24.45	25.13	24.86		
20+20	100	0	100	0	256-QAM	21.43	21.51	21.07	21.58	0.1439
20+20	1	0	1	99		18.18	18.32	18.04		
20+20	1	99	1	0		21.52	21.58	21.52		
20+15	100	0	75	0	QPSK	24.90	25.12	24.72	26.80	0.4786
20+15	1	0	1	74		18.29	18.64	18.19		
20+15	1	99	1	0		26.65	26.80	26.39		
20+15	100	0	75	0	16-QAM	23.89	24.12	23.77	26.00	0.3981
20+15	1	0	1	74		18.86	19.21	18.77		
20+15	1	99	1	0		25.97	26.00	25.64		
20+15	100	0	75	0	64-QAM	23.91	24.15	23.76	25.40	0.3467
20+15	1	0	1	74		18.78	19.03	18.60		
20+15	1	99	1	0		24.80	25.40	24.90		
20+15	100	0	75	0	256-QAM	21.32	21.67	21.17	21.67	0.1469
20+15	1	0	1	74		18.07	18.25	18.03		
20+15	1	99	1	0		21.57	21.53	21.14		
15+20	75	0	100	0	QPSK	24.91	25.13	24.73	26.79	0.4775
15+20	1	0	1	99		18.27	18.62	18.19		
15+20	1	74	1	0		26.62	26.79	26.32		
15+20	75	0	100	0	16-QAM	23.89	24.14	23.77	26.02	0.3999
15+20	1	0	1	99		18.82	19.22	18.72		
15+20	1	74	1	0		26.01	26.02	25.78		
15+20	75	0	100	0	64-QAM	23.90	24.15	23.76	25.41	0.3475
15+20	1	0	1	99		18.73	19.00	18.59		
15+20	1	74	1	0		24.53	25.41	25.05		
15+20	75	0	100	0	256-QAM	21.23	21.52	20.99	21.61	0.1449
15+20	1	0	1	99		18.15	18.27	17.84		
15+20	1	74	1	0		21.45	21.61	21.16		
Limit	Power < 2W					Result			Pass	



4G-LTE CA Band 41C (PC2) Maximum Average Power [dBm]										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
	RB Size	RB Offset	RB Size	RB Offset						
20+10	100	0	50	0	QPSK	24.85	25.01	24.41	26.71	0.4688
20+10	1	0	1	49		18.26	18.59	18.14		
20+10	1	99	1	0		26.64	26.71	26.21		
20+10	100	0	50	0	16-QAM	23.87	24.00	23.49	26.15	0.4121
20+10	1	0	1	49		18.89	19.15	18.73		
20+10	1	99	1	0		25.87	26.15	25.42		
20+10	100	0	50	0	64-QAM	23.84	23.97	23.62	25.16	0.3281
20+10	1	0	1	49		18.67	19.03	18.45		
20+10	1	99	1	0		24.61	25.16	24.89		
20+10	100	0	50	0	256-QAM	21.51	21.67	21.14	21.69	0.1476
20+10	1	0	1	49		17.96	18.44	17.87		
20+10	1	99	1	0		21.69	21.61	21.43		
10+20	50	0	100	0	QPSK	24.82	25.08	24.47	26.84	0.4831
10+20	1	0	1	99		18.30	18.48	18.09		
10+20	1	49	1	0		26.50	26.84	26.34		
10+20	50	0	100	0	16-QAM	23.82	24.08	23.51	26.11	0.4083
10+20	1	0	1	99		18.86	19.10	18.65		
10+20	1	49	1	0		25.70	26.11	25.48		
10+20	50	0	100	0	64-QAM	23.87	24.01	23.68	25.33	0.3412
10+20	1	0	1	99		18.61	19.11	18.46		
10+20	1	49	1	0		24.30	25.33	24.71		
10+20	50	0	100	0	256-QAM	21.47	21.54	21.09	21.70	0.1479
10+20	1	0	1	99		18.03	18.28	18.05		
10+20	1	49	1	0		21.48	21.70	21.28		
20+5	100	0	25	0	QPSK	24.90	25.13	24.75	26.86	0.4853
20+5	1	0	1	24		18.38	18.70	18.28		
20+5	1	99	1	0		26.76	26.86	26.49		
20+5	100	0	25	0	16-QAM	23.94	24.12	23.75	26.11	0.4083
20+5	1	0	1	24		18.94	18.48	18.87		
20+5	1	99	1	0		25.93	26.11	25.70		
20+5	100	0	25	0	64-QAM	23.92	24.14	23.72	25.42	0.3483
20+5	1	0	1	24		18.78	18.41	18.76		
20+5	1	99	1	0		25.02	25.42	25.01		
20+5	100	0	25	0	256-QAM	21.90	22.28	21.96	22.28	0.1690
20+5	1	0	1	24		18.65	18.98	18.58		
20+5	1	99	1	0		22.22	22.27	21.89		
Limit	Power < 2W					Result			Pass	



4G-LTE CA Band 41C (PC2) Maximum Average Power [dBm]										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
	RB Size	RB Offset	RB Size	RB Offset						
5+20	25	0	100	0	QPSK	24.79	25.07	24.71	26.89	0.4887
5+20	1	0	1	99		18.37	18.63	18.22		
5+20	1	24	1	0		26.62	26.89	26.45		
5+20	25	0	100	0	16-QAM	23.84	24.15	23.70	26.00	0.3981
5+20	1	0	1	99		18.84	19.19	18.77		
5+20	1	24	1	0		25.78	26.00	25.61		
5+20	25	0	100	0	64-QAM	23.81	24.08	23.68	25.37	0.3443
5+20	1	0	1	99		18.68	19.04	18.65		
5+20	1	24	1	0		24.42	25.37	24.99		
5+20	25	0	100	0	256-QAM	22.03	22.33	21.97	22.39	0.1734
5+20	1	0	1	99		18.54	18.94	18.51		
5+20	1	24	1	0		21.95	22.39	21.88		
15+10	75	0	50	0	QPSK	24.82	25.05	24.68	26.76	0.4742
15+10	1	0	1	49		18.33	18.62	18.21		
15+10	1	74	1	0		26.65	26.76	26.36		
15+10	75	0	50	0	16-QAM	23.84	24.08	23.70	25.99	0.3972
15+10	1	0	1	49		18.87	19.18	18.82		
15+10	1	74	1	0		25.95	25.99	25.64		
15+10	75	0	50	0	64-QAM	23.80	24.08	23.67	25.32	0.3404
15+10	1	0	1	49		18.70	18.96	18.69		
15+10	1	74	1	0		24.51	25.32	24.89		
15+10	75	0	50	0	256-QAM	21.23	21.48	21.07	21.68	0.1472
15+10	1	0	1	49		17.95	18.57	18.06		
15+10	1	74	1	0		21.54	21.68	21.25		
10+15	50	0	75	0	QPSK	24.78	25.00	24.67	26.80	0.4786
10+15	1	0	1	74		18.30	18.57	18.21		
10+15	1	49	1	0		26.59	26.80	26.35		
10+15	50	0	75	0	16-QAM	23.81	24.07	23.69	26.04	0.4018
10+15	1	0	1	74		18.89	19.19	18.77		
10+15	1	49	1	0		25.72	26.04	25.49		
10+15	50	0	75	0	64-QAM	23.81	24.05	23.65	25.27	0.3365
10+15	1	0	1	74		18.68	18.95	18.88		
10+15	1	49	1	0		24.26	25.27	24.94		
10+15	50	0	75	0	256-QAM	21.45	22.31	20.93	22.31	0.1702
10+15	1	0	1	74		18.07	18.90	18.09		
10+15	1	49	1	0		21.45	22.18	21.25		
Limit	Power < 2W					Result			Pass	



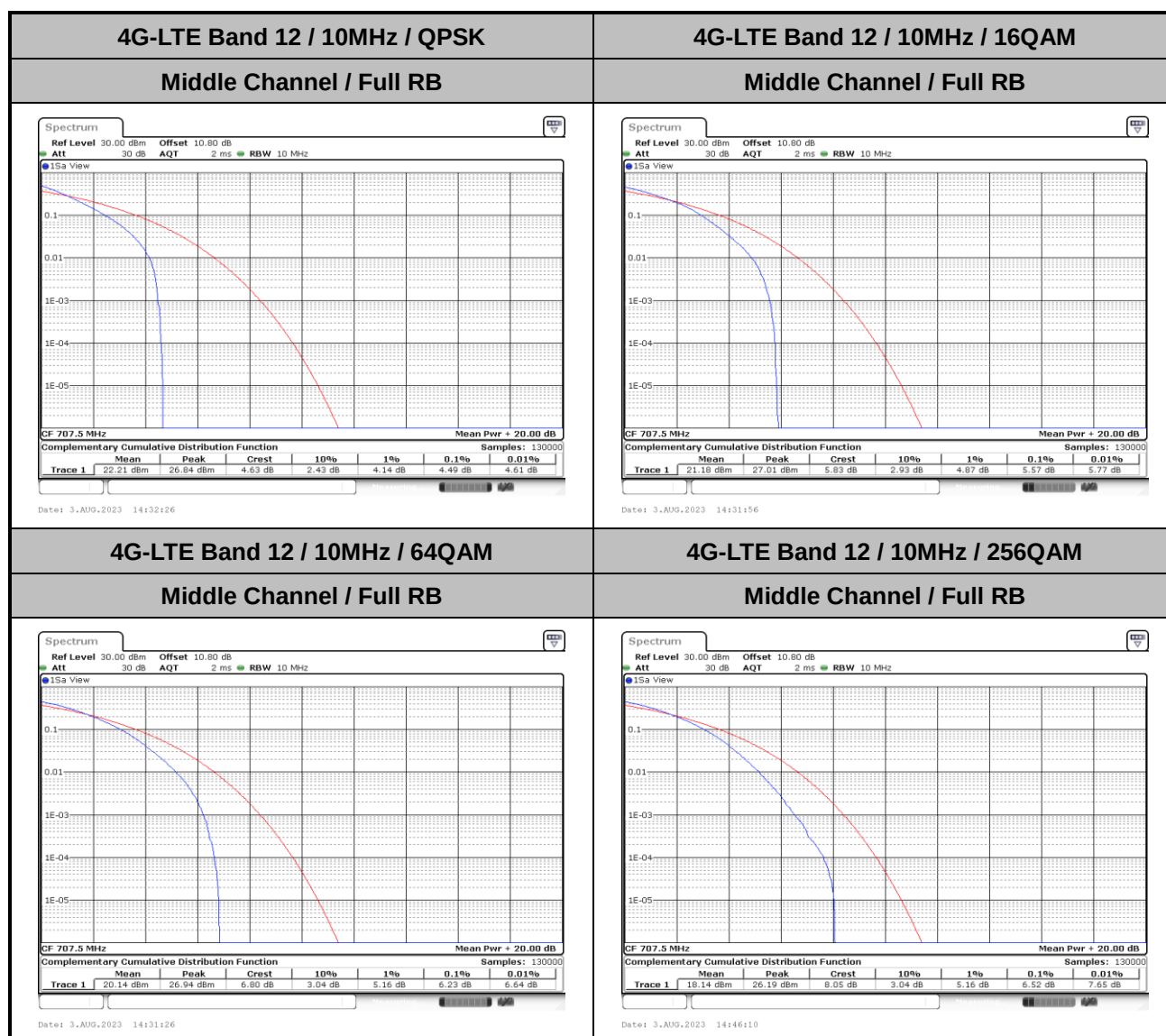
4G-LTE CA Band 41C (PC2) Maximum Average Power [dBm]										
BW [MHz]	PCC		SCC		Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
	RB Size	RB Offset	RB Size	RB Offset						
15+15	75	0	75	0	QPSK	24.87	25.35	24.79	26.88	0.4875
15+15	1	0	1	74		18.34	18.66	18.27		
15+15	1	74	1	0		26.65	26.88	26.38		
15+15	75	0	75	0	16-QAM	23.91	23.98	23.80	26.04	0.4018
15+15	1	0	1	74		18.94	19.29	18.90		
15+15	1	74	1	0		26.00	26.04	25.63		
15+15	75	0	75	0	64-QAM	23.66	24.13	23.77	25.15	0.3273
15+15	1	0	1	74		18.76	19.09	18.67		
15+15	1	74	1	0		24.18	25.15	24.78		
15+15	75	0	75	0	256-QAM	21.31	21.72	21.33	22.21	0.1663
15+15	1	0	1	74		18.00	18.14	17.87		
15+15	1	74	1	0		21.53	22.21	21.19		
Limit	Power < 2W					Result			Pass	



4G-LTE Band 12

Peak-to-Average Ratio

Mode	4G-LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.49	5.57	6.23	6.52	PASS



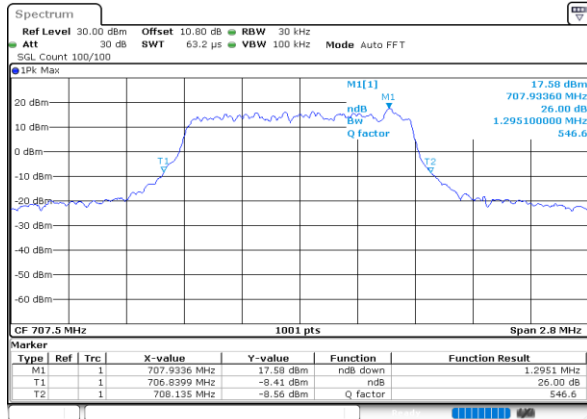
**26dB Bandwidth**

Mode	4G-LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.30	1.37	3.11	3.08	5.04	5.06	9.89	9.99	-	-	-	-
Mode	4G-LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	1.37	1.29	3.11	3.05	5.01	5.09	10.17	9.65	-	-	-	-

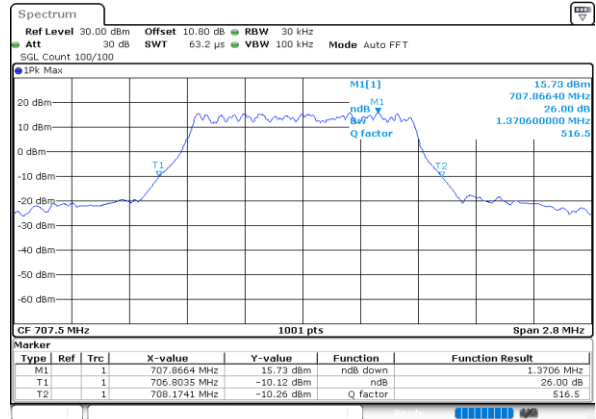


4G-LTE Band 12

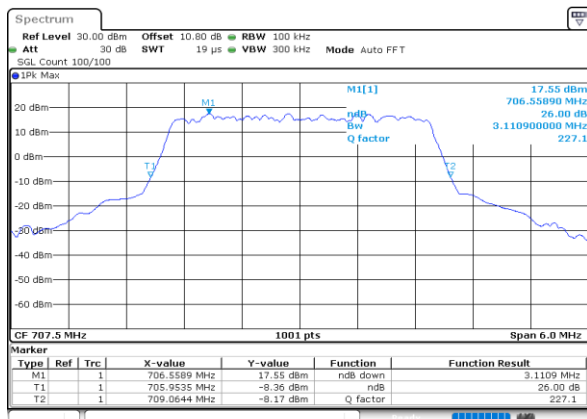
Middle Channel / 1.4MHz / QPSK



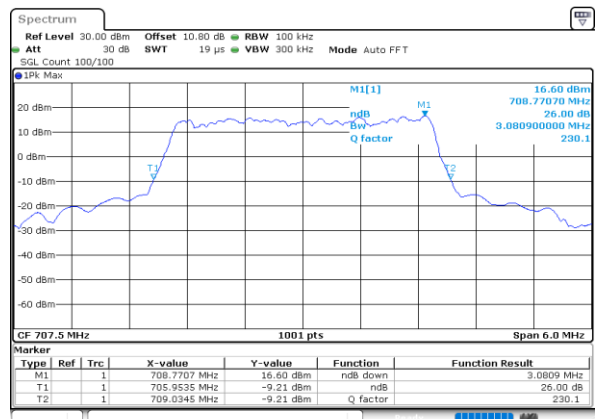
Middle Channel / 1.4MHz / 16QAM



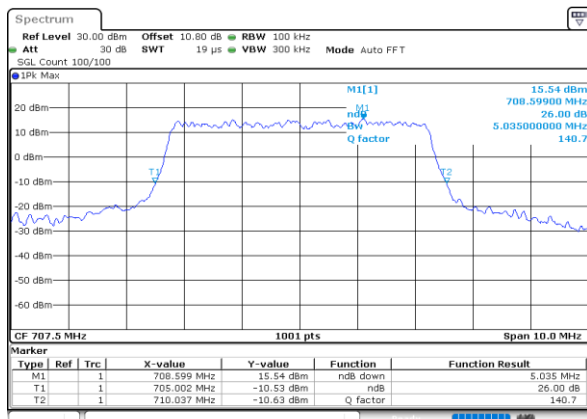
Middle Channel / 3MHz / QPSK



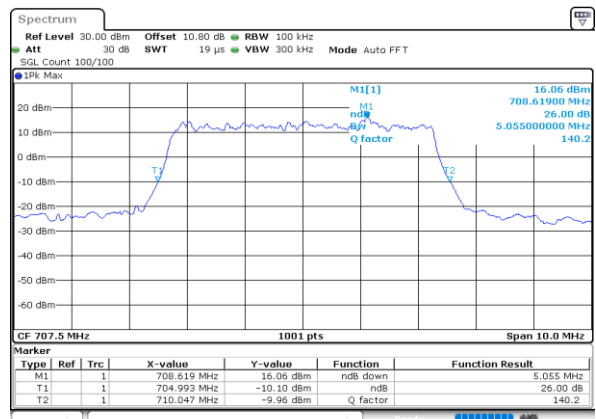
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK



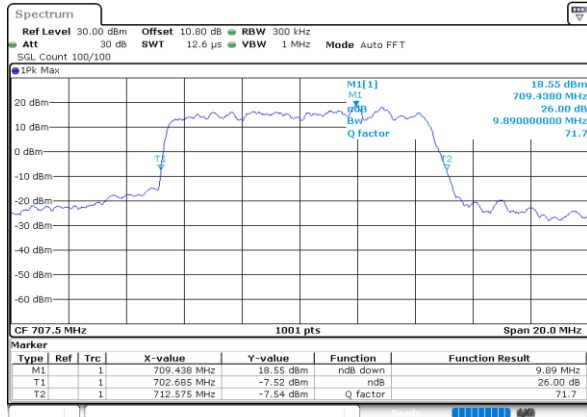
Middle Channel / 5MHz / 16QAM



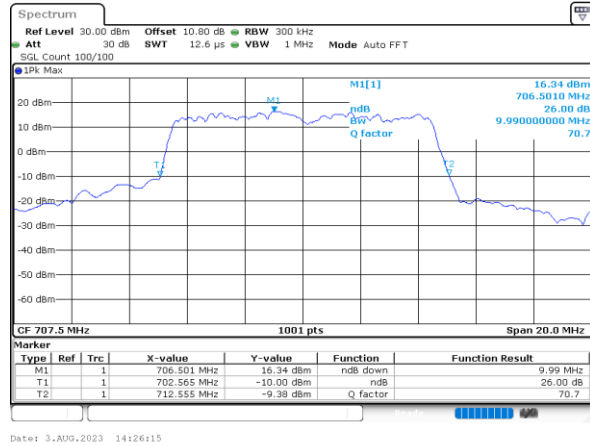


4G-LTE Band 12

Middle Channel / 10MHz / QPSK

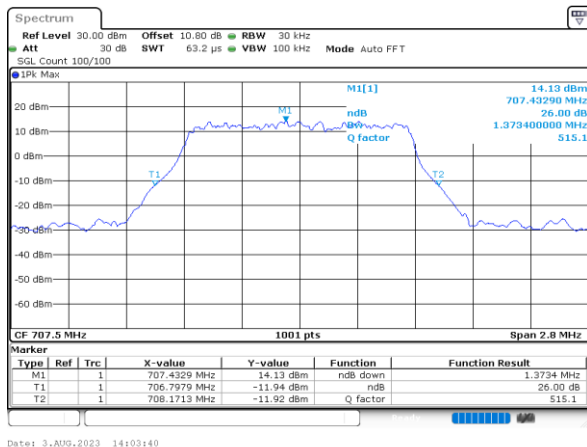


Middle Channel / 10MHz / 16QAM

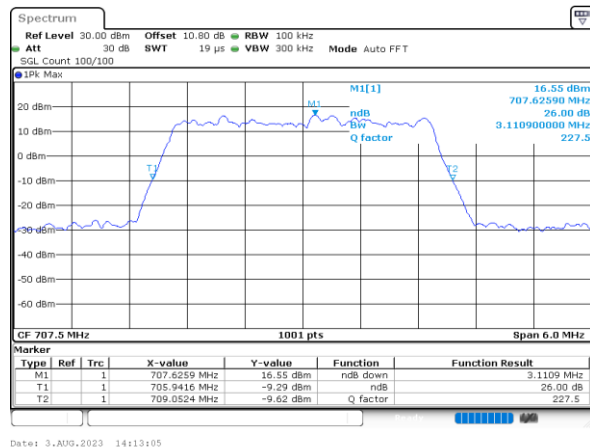


4G-LTE Band 12

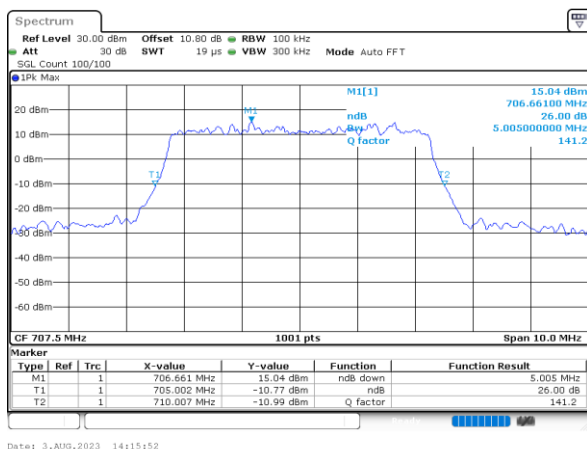
Middle Channel / 1.4MHz / 64QAM



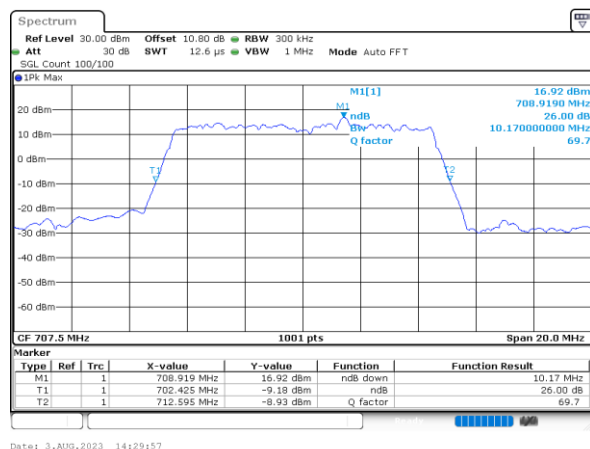
Middle Channel / 3MHz / 64QAM



Middle Channel / 5MHz / 64QAM



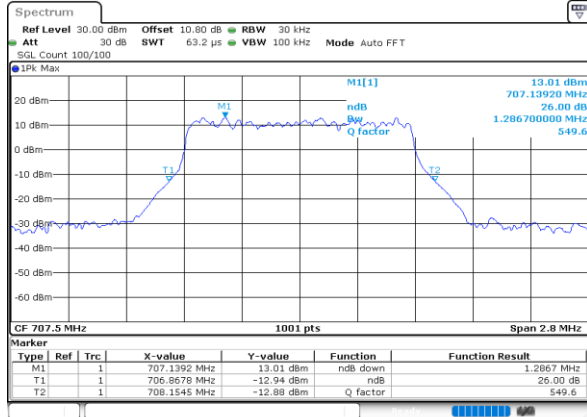
Middle Channel / 10MHz / 64QAM



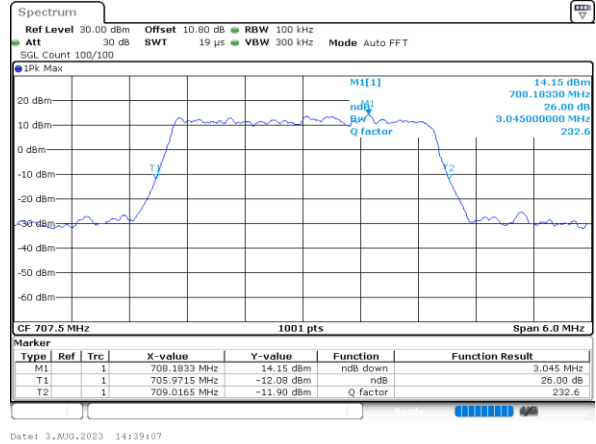


4G-LTE Band 12

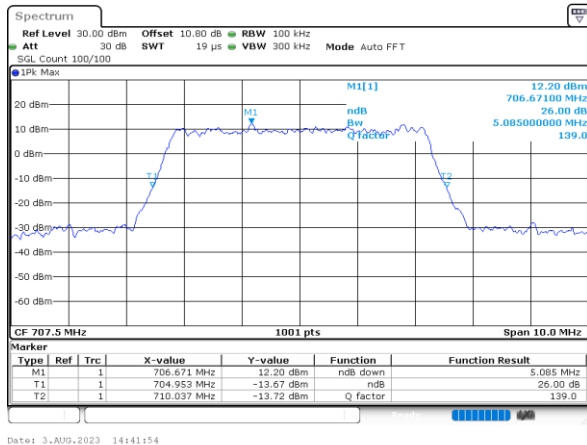
Middle Channel / 1.4MHz / 256QAM



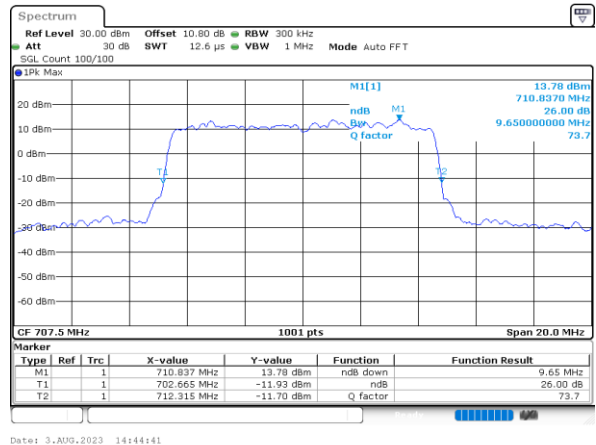
Middle Channel / 3MHz / 256QAM



Middle Channel / 5MHz / 256QAM



Middle Channel / 10MHz / 256QAM



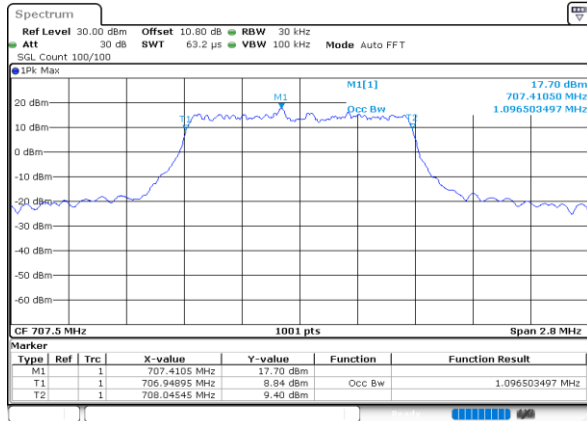
**Occupied Bandwidth**

Mode	4G-LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.10	1.10	2.73	2.73	4.48	4.49	9.01	8.99	-	-	-	-
Mode	4G-LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	1.09	1.09	2.73	2.72	4.52	4.48	9.01	9.07	-	-	-	-

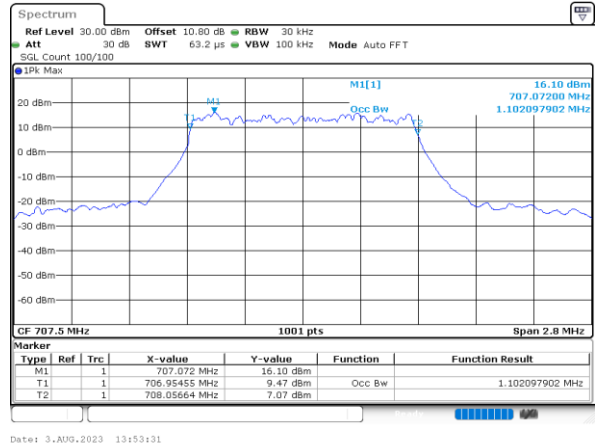


4G-LTE Band 12

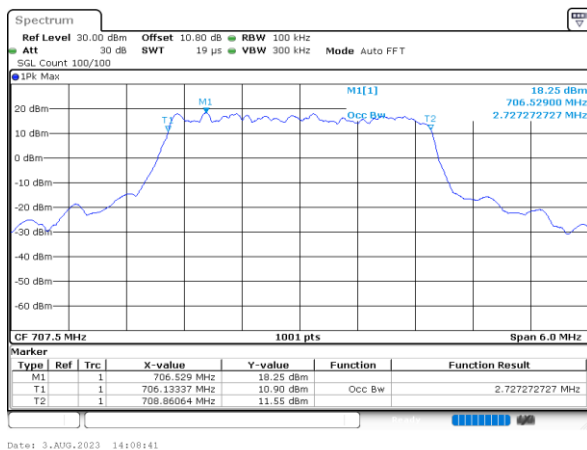
Middle Channel / 1.4MHz / QPSK



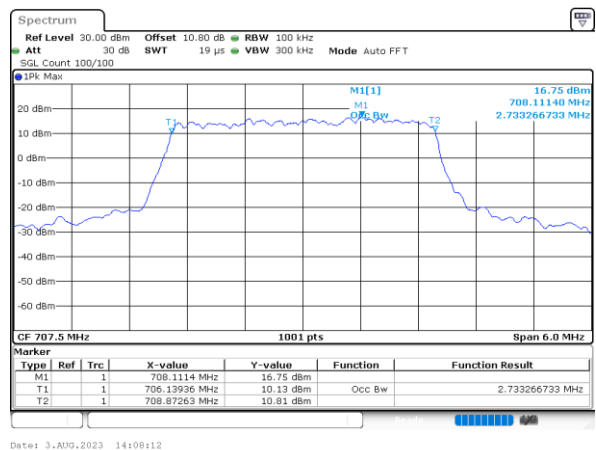
Middle Channel / 1.4MHz / 16QAM



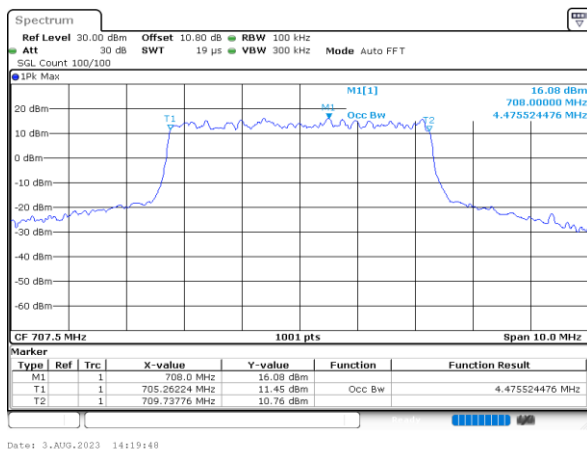
Middle Channel / 3MHz / QPSK



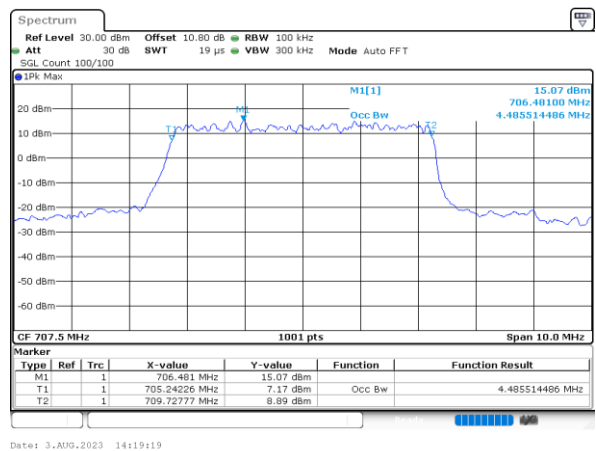
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK



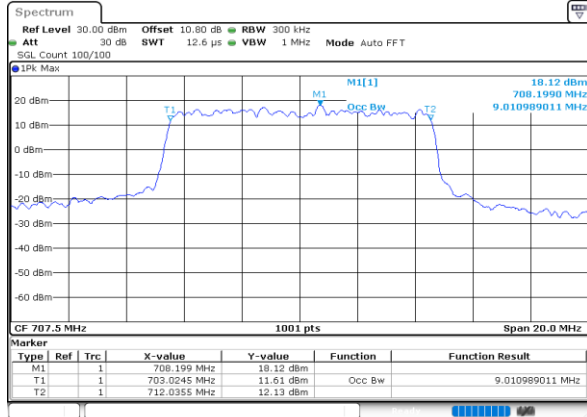
Middle Channel / 5MHz / 16QAM



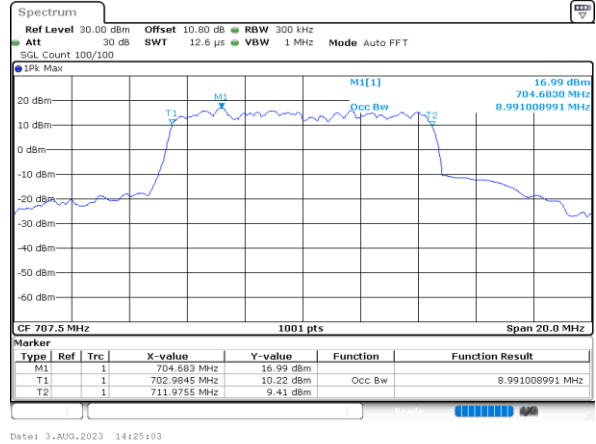


4G-LTE Band 12

Middle Channel / 10MHz / QPSK

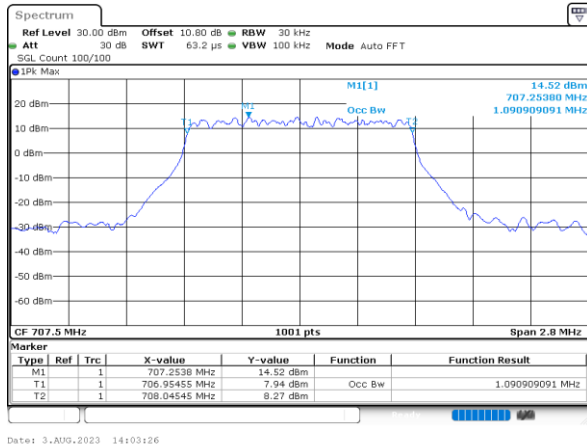


Middle Channel / 10MHz / 16QAM

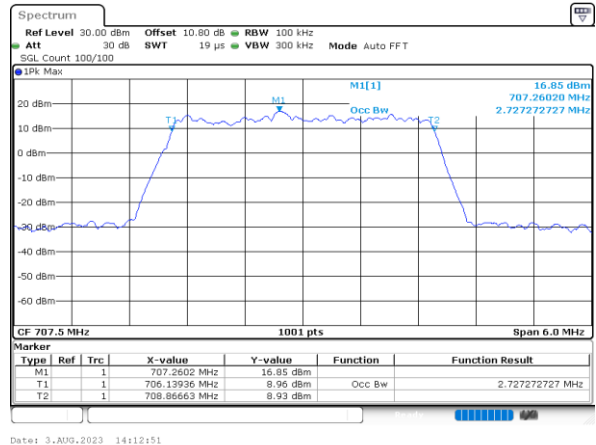


4G-LTE Band 12

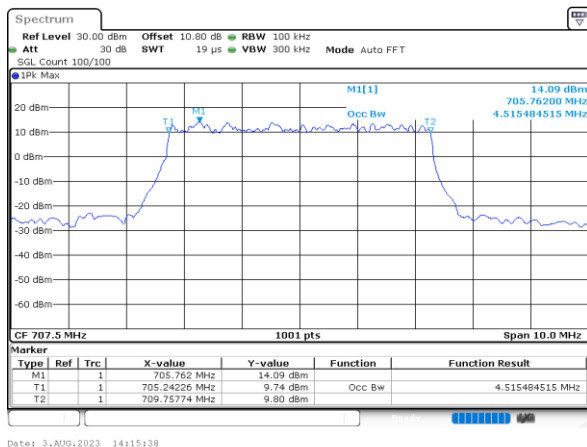
Middle Channel / 1.4MHz / 64QAM



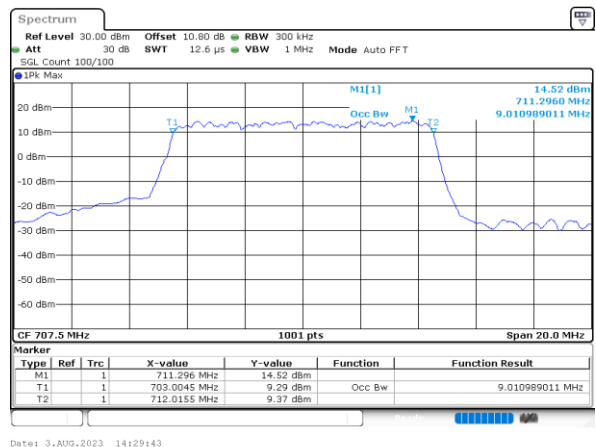
Middle Channel / 3MHz / 64QAM



Middle Channel / 5MHz / 64QAM



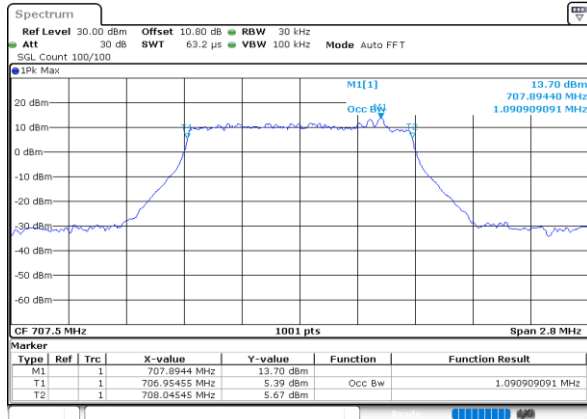
Middle Channel / 10MHz / 64QAM



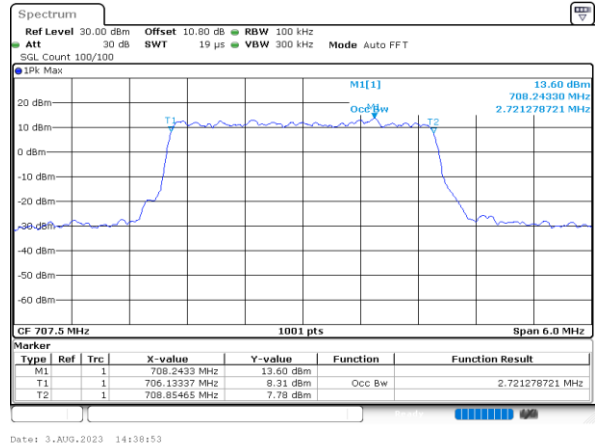


4G-LTE Band 12

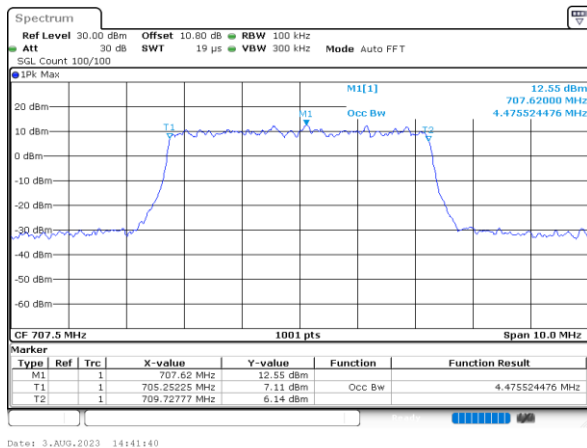
Middle Channel / 1.4MHz / 256QAM



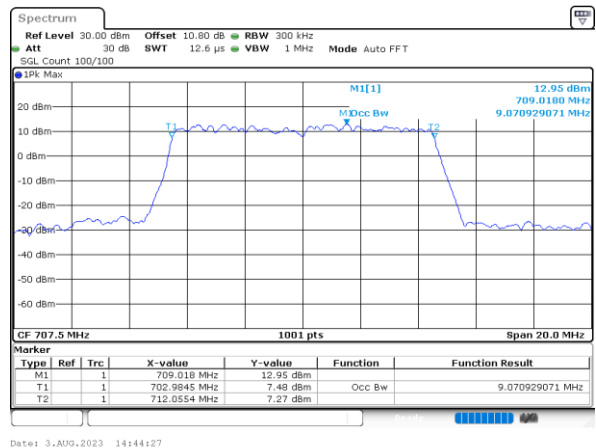
Middle Channel / 3MHz / 256QAM



Middle Channel / 5MHz / 256QAM



Middle Channel / 10MHz / 256QAM

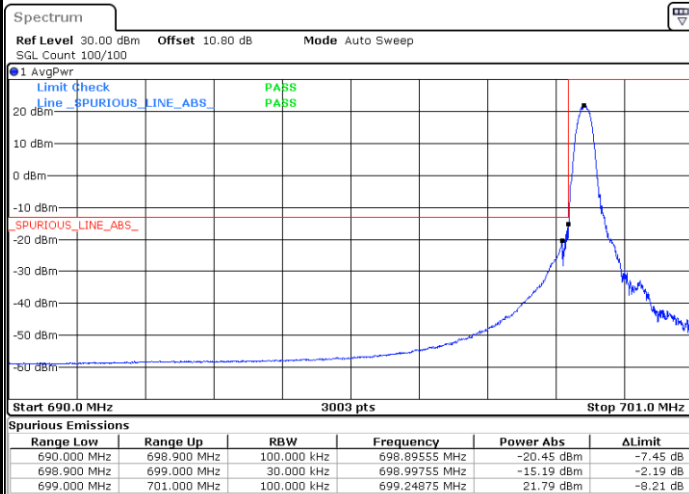




Conducted Band Edge

4G-LTE Band 12 / 1.4MHz / QPSK

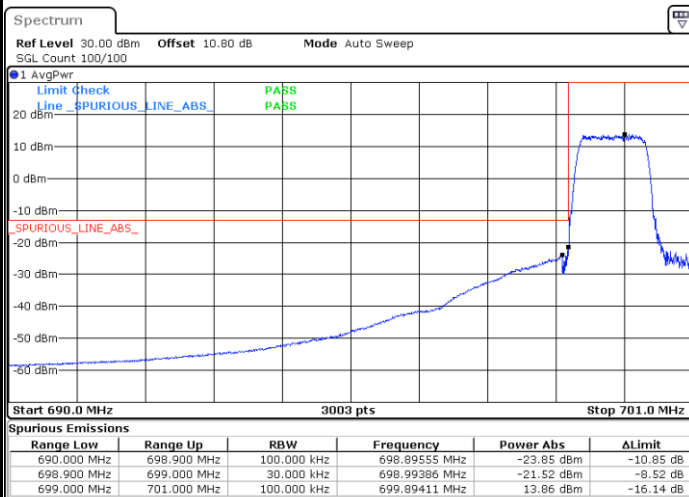
Lowest Band Edge / 1RB



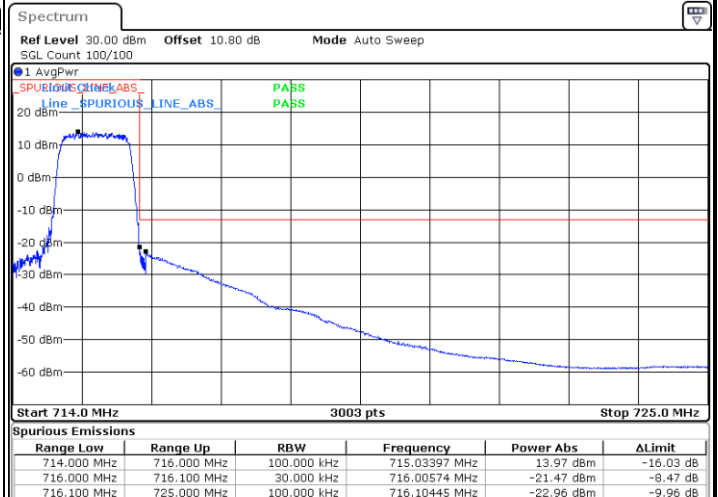
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



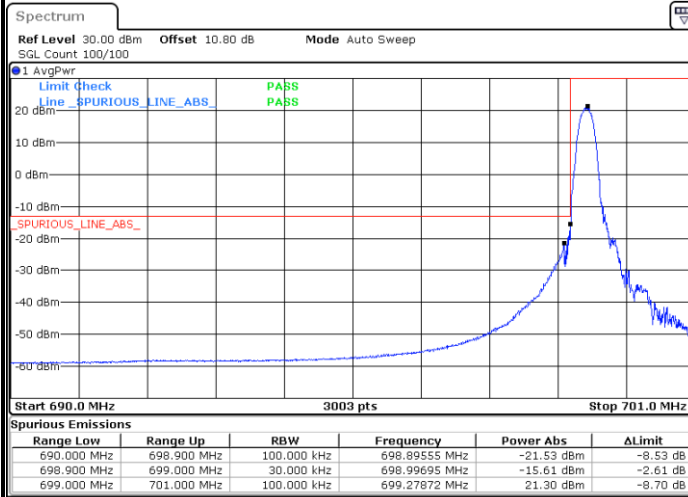
Highest Band Edge / Full RB





4G-LTE Band 12 / 1.4MHz / 16QAM

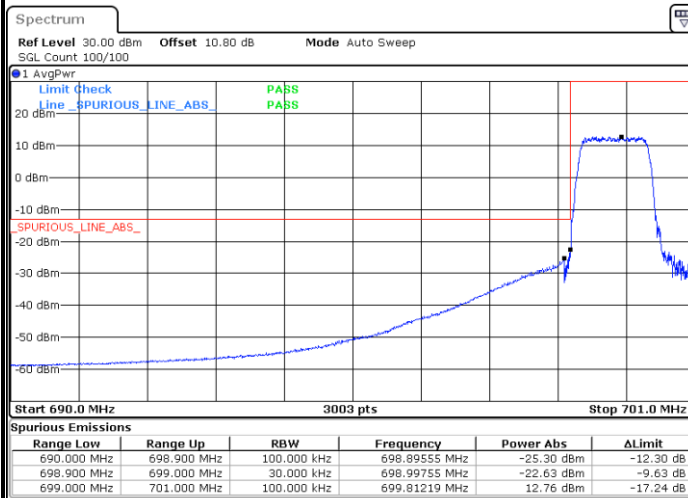
Lowest Band Edge / 1 RB



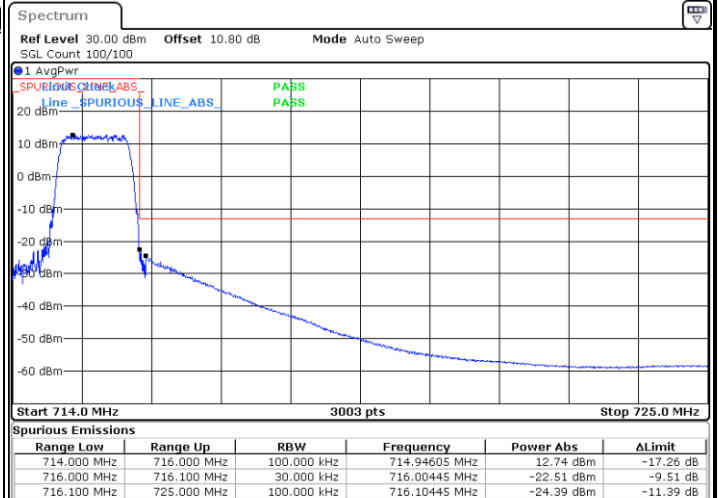
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



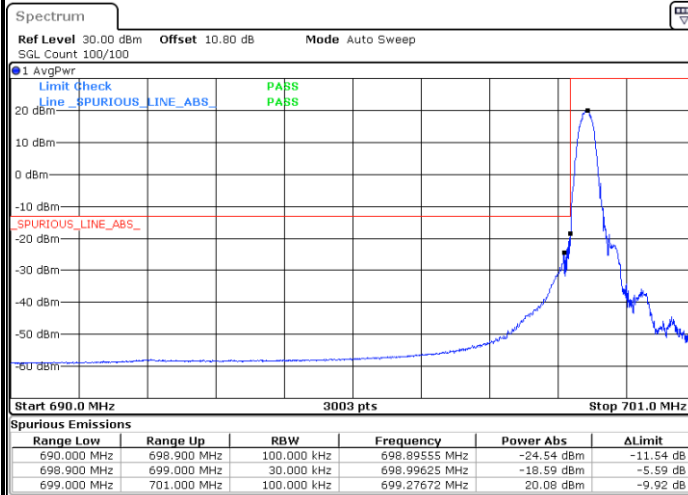
Highest Band Edge / Full RB



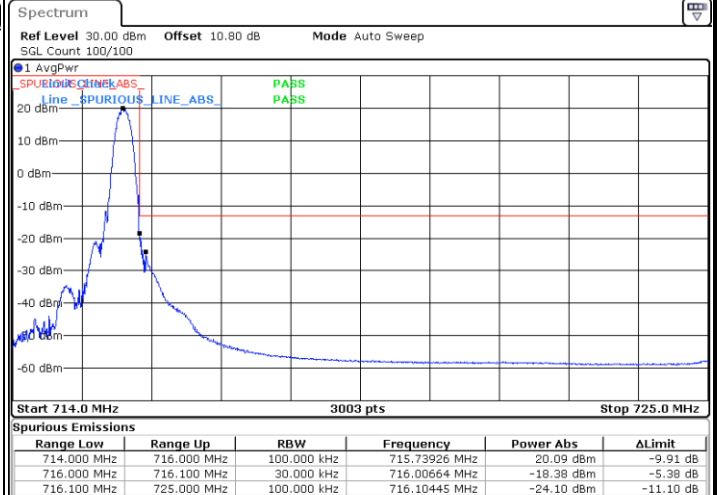


4G-LTE Band 12 / 1.4MHz / 64QAM

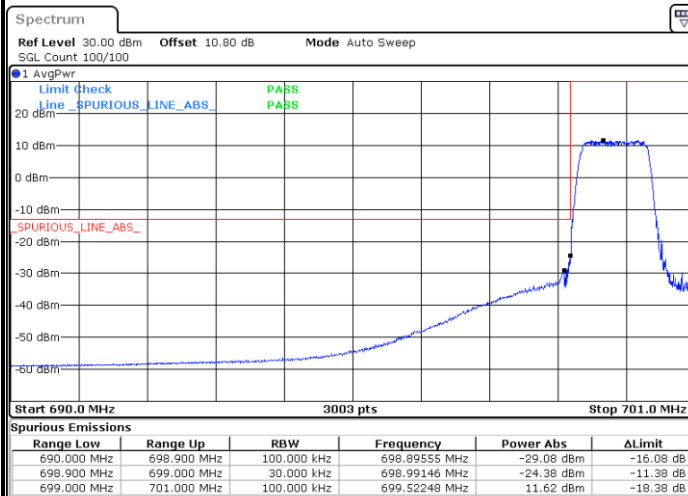
Lowest Band Edge / 1 RB



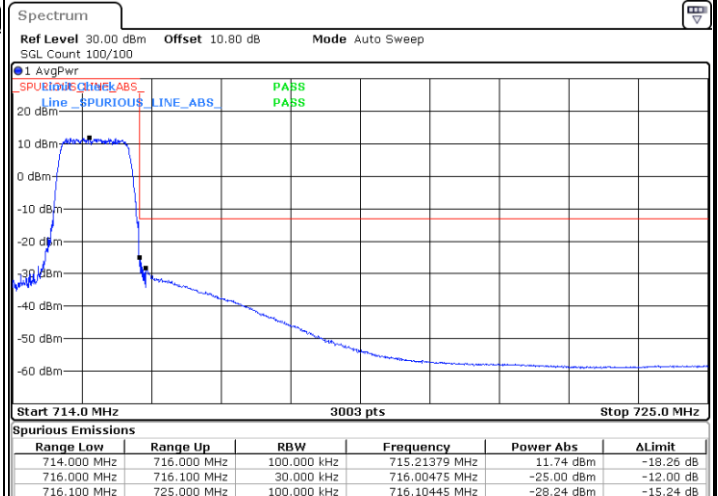
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



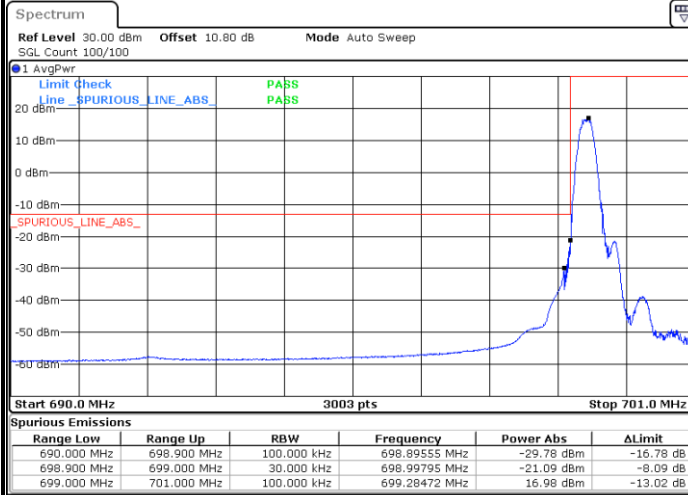
Highest Band Edge / Full RB



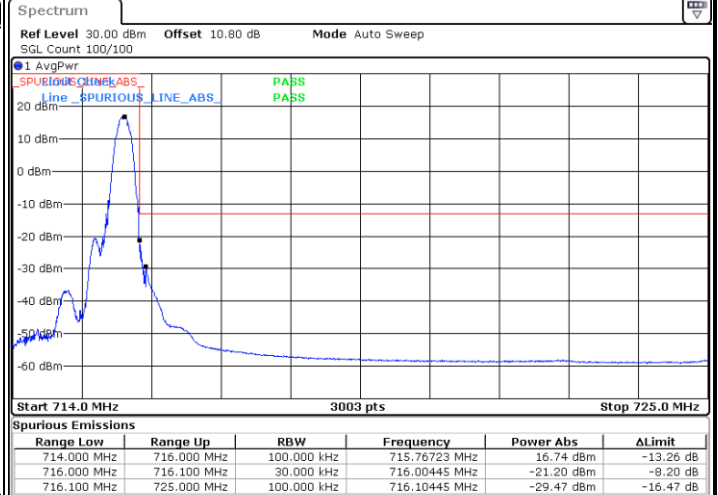


4G-LTE Band 12 / 1.4MHz / 256QAM

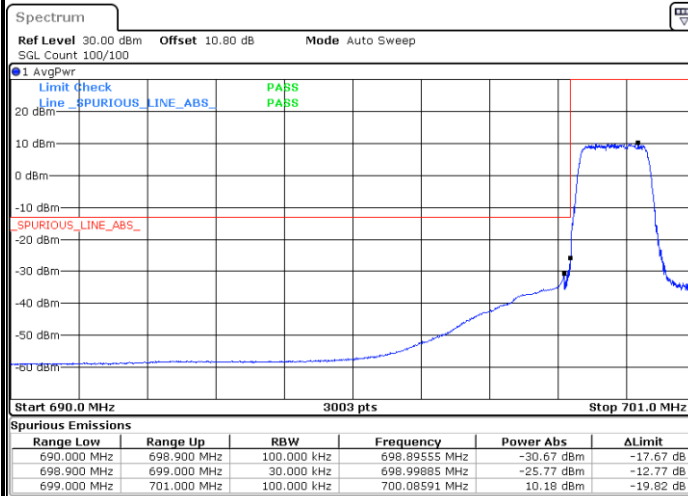
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



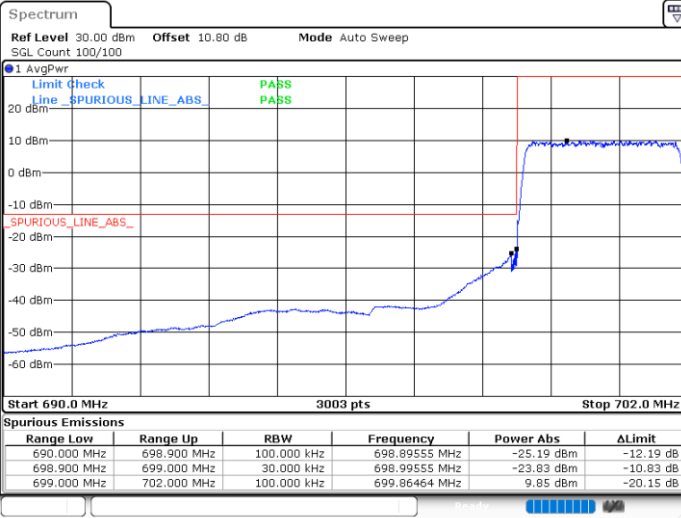
Highest Band Edge / Full RB



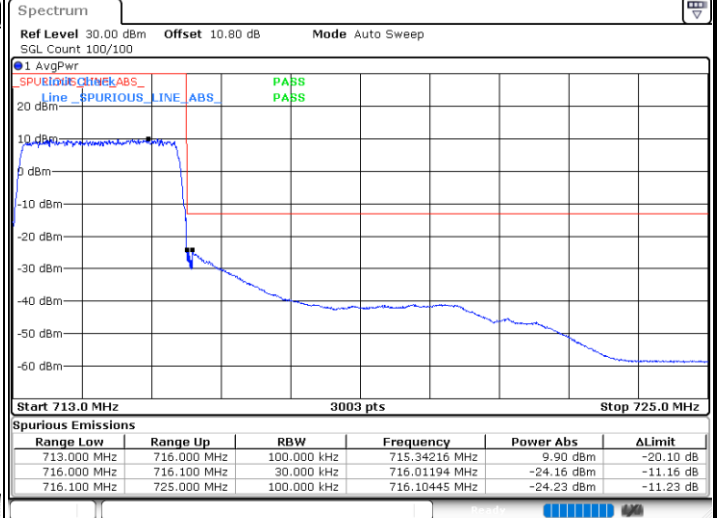


4G-LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / Full RB

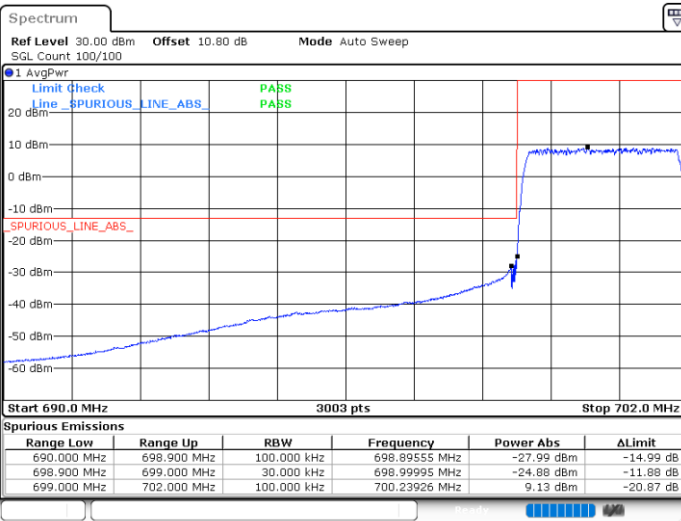


Highest Band Edge / Full RB

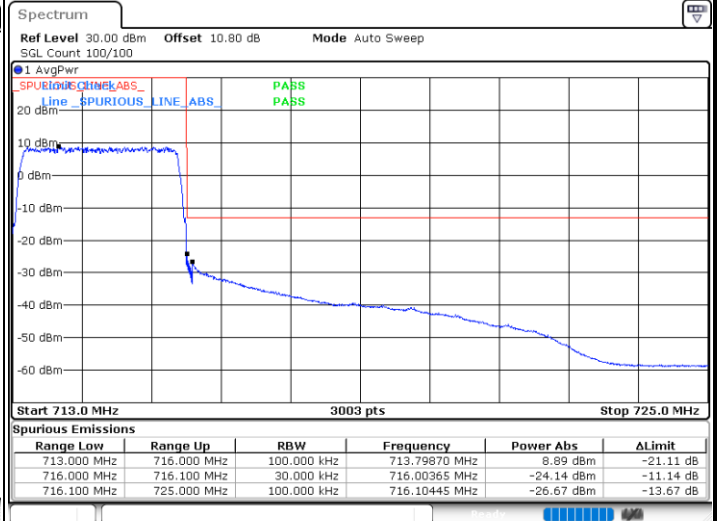


4G-LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / Full RB



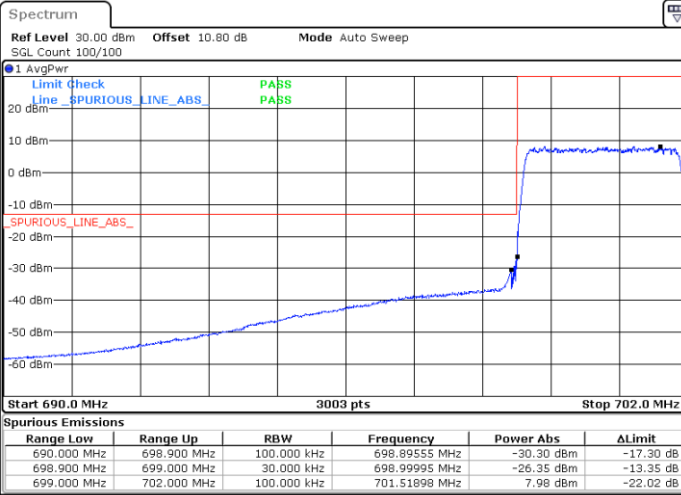
Highest Band Edge / Full RB



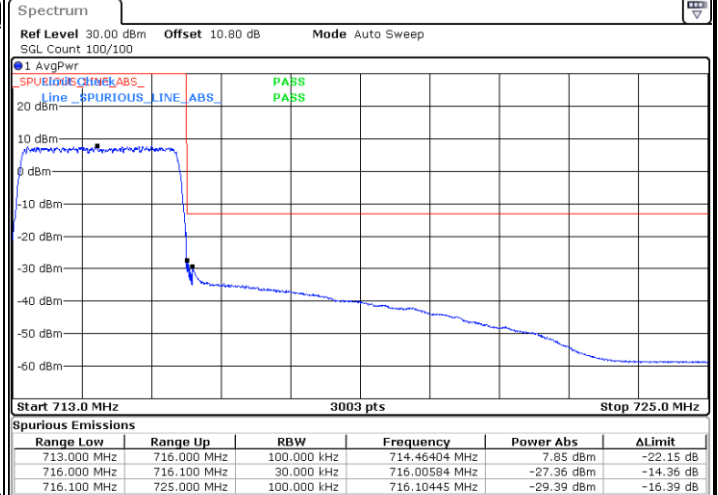


4G-LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / Full RB

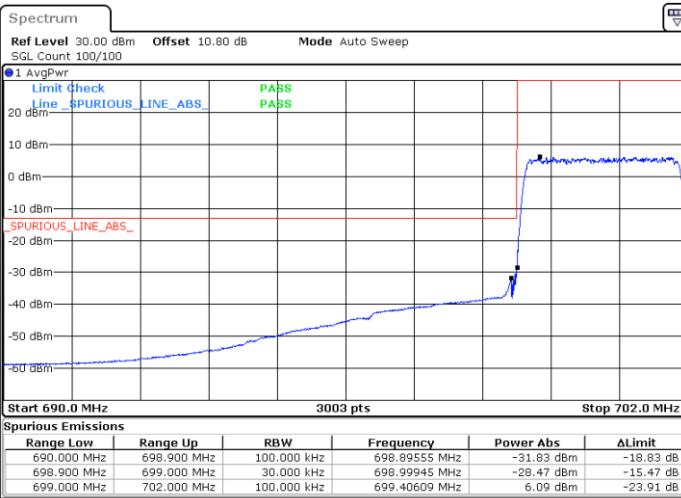


Highest Band Edge / Full RB

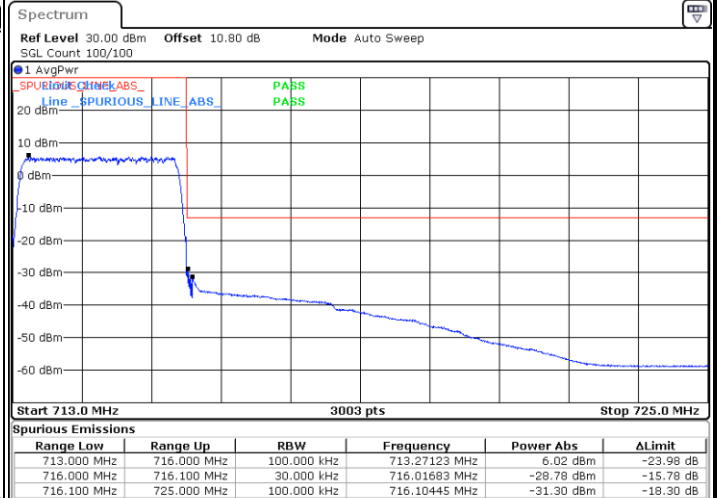


4G-LTE Band 12 / 3MHz / 256QAM

Lowest Band Edge / Full RB



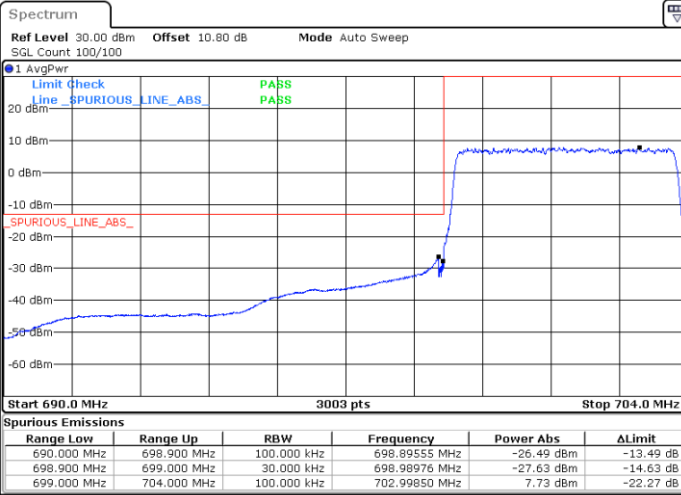
Highest Band Edge / Full RB



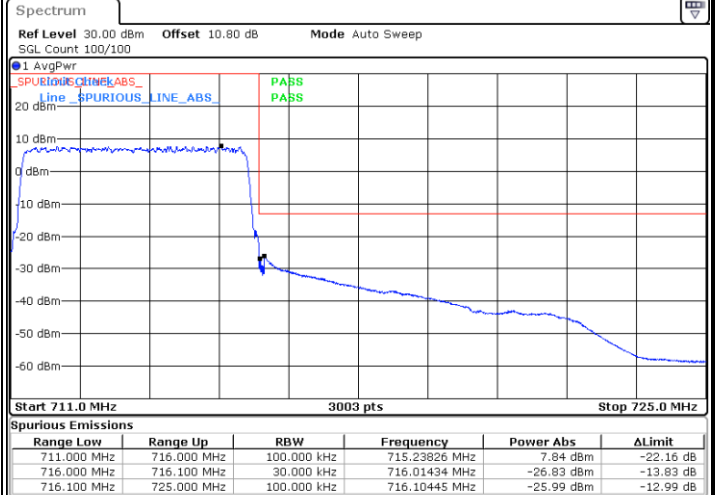


4G-LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / Full RB

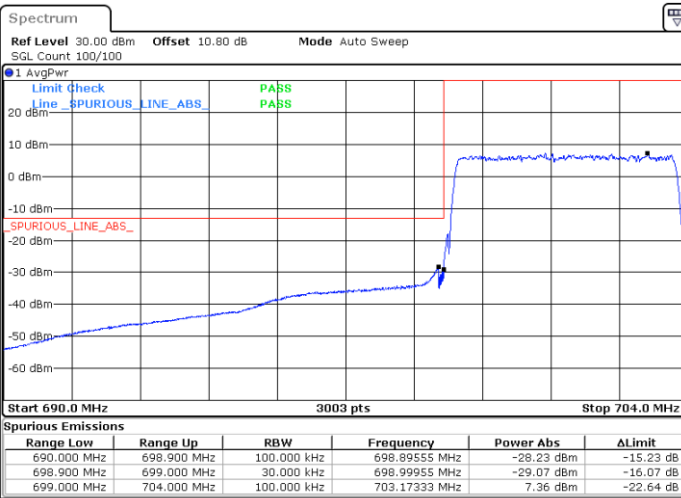


Highest Band Edge / Full RB

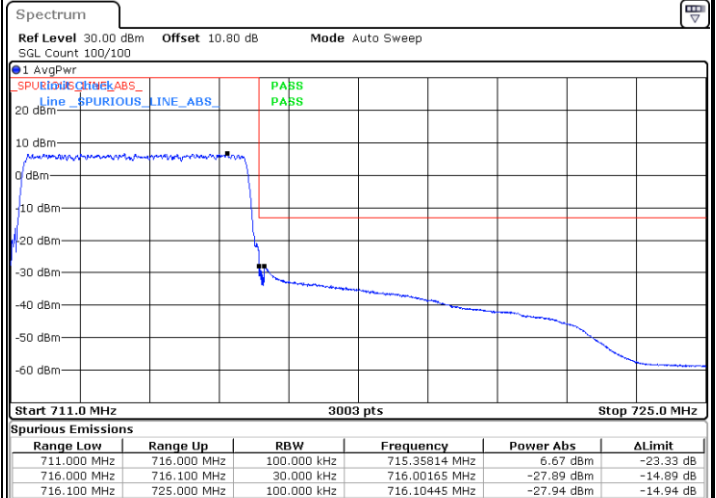


4G-LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / Full RB



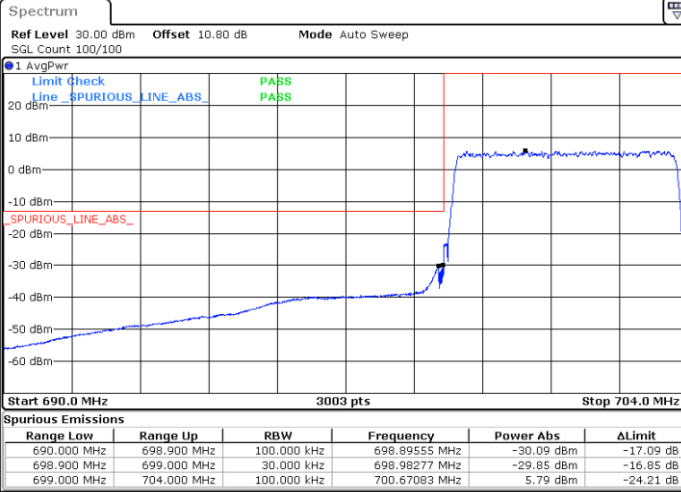
Highest Band Edge / Full RB



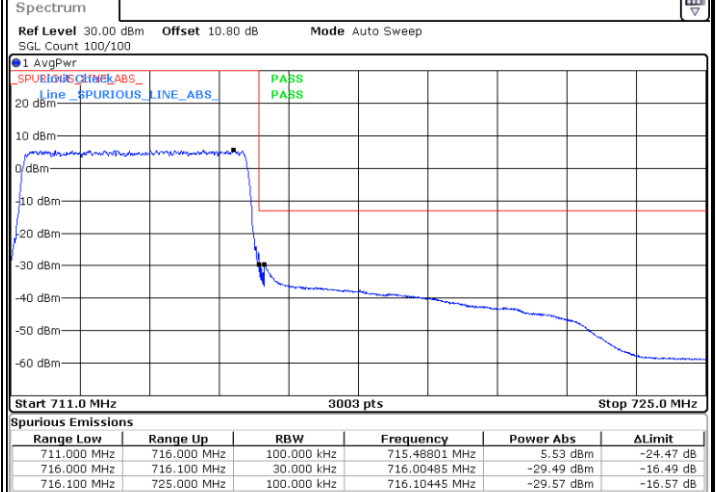


4G-LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / Full RB

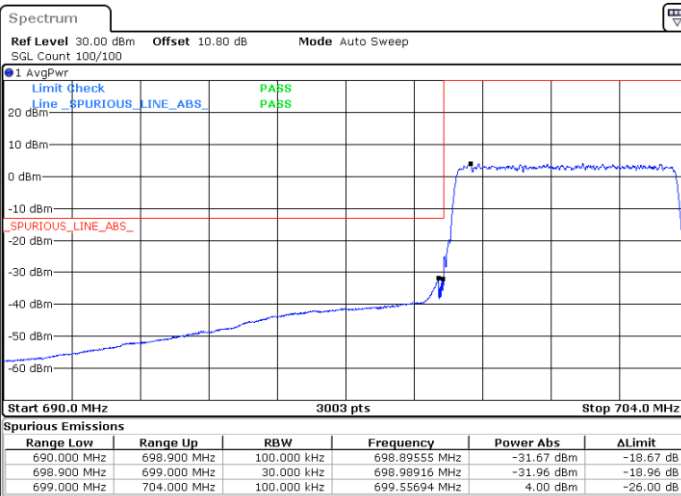


Highest Band Edge / Full RB

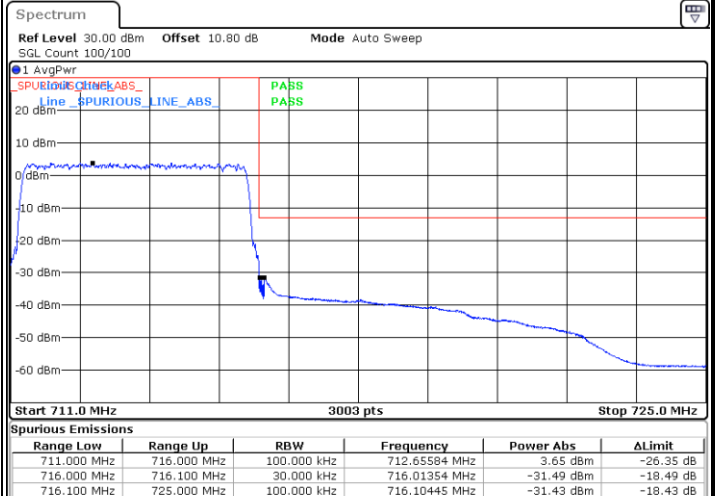


4G-LTE Band 12 / 5MHz / 256QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

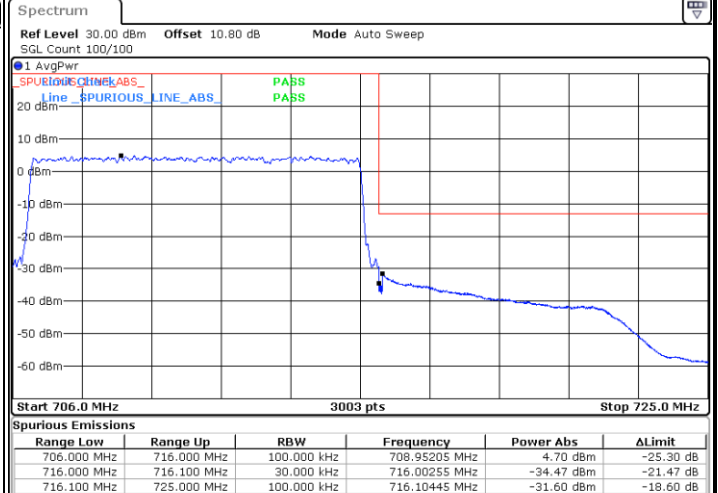
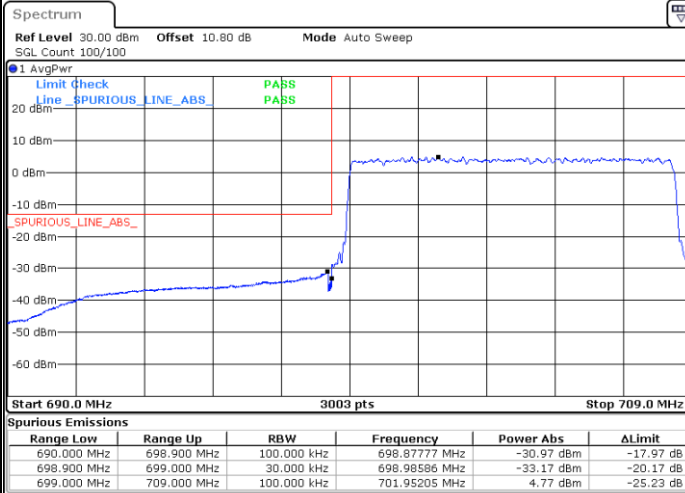




4G-LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / Full RB

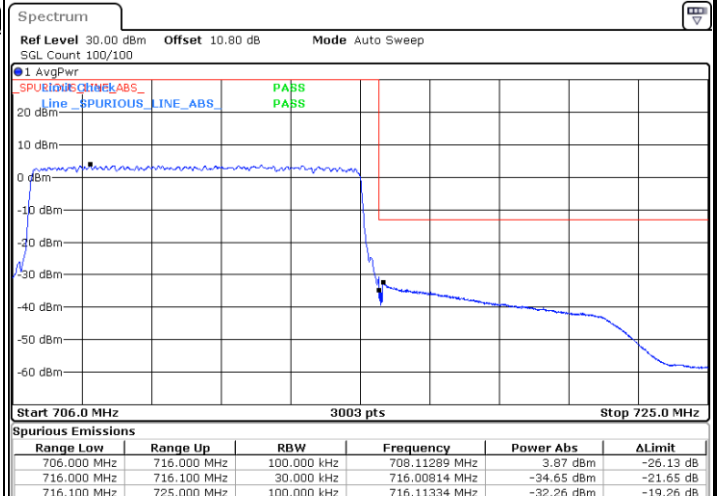
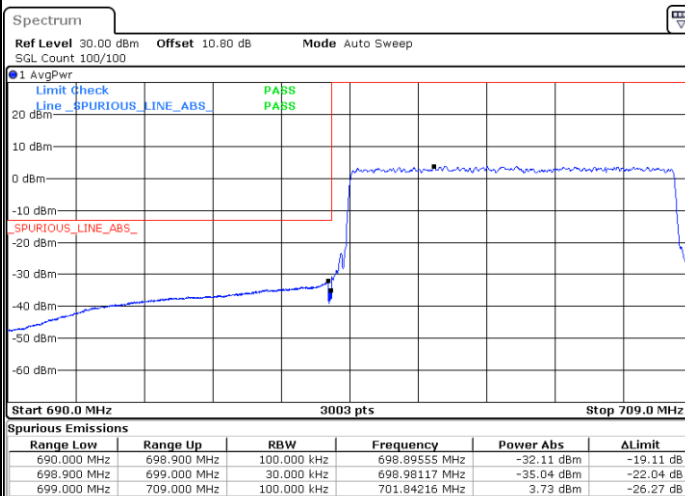
Highest Band Edge / Full RB



4G-LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / Full RB

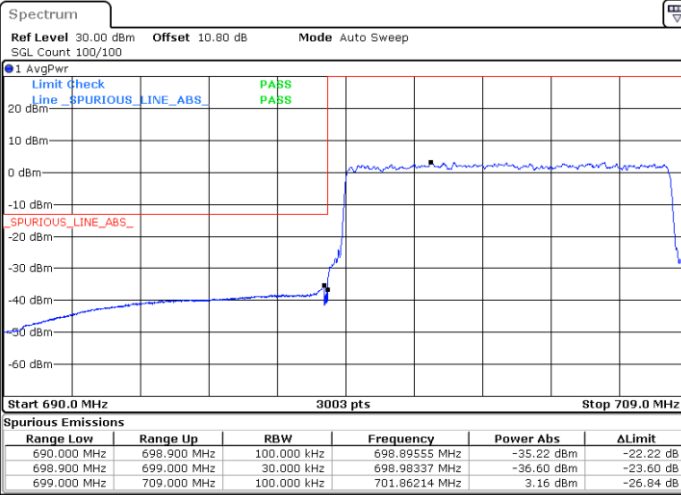
Highest Band Edge / Full RB



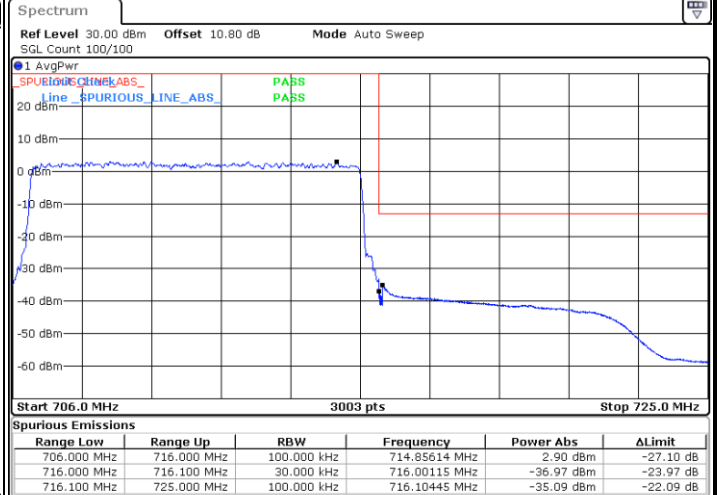


4G-LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / Full RB

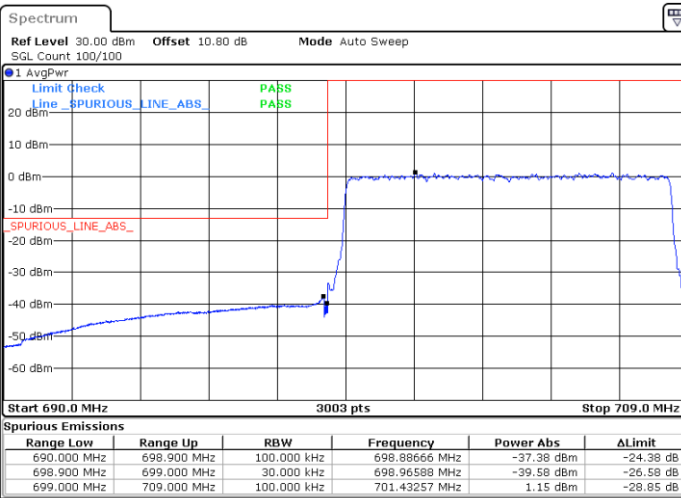


Highest Band Edge / Full RB

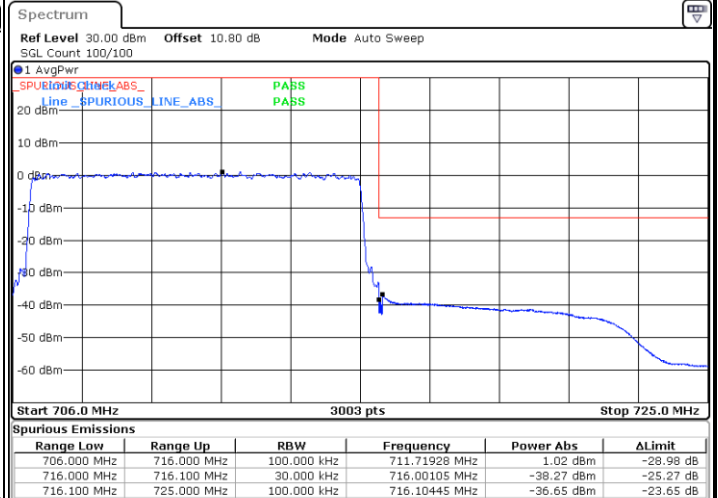


4G-LTE Band 12 / 10MHz / 256QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

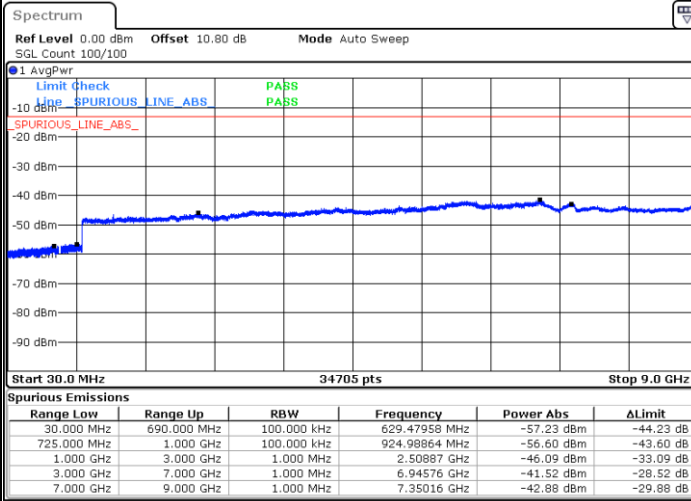




Conducted Spurious Emission

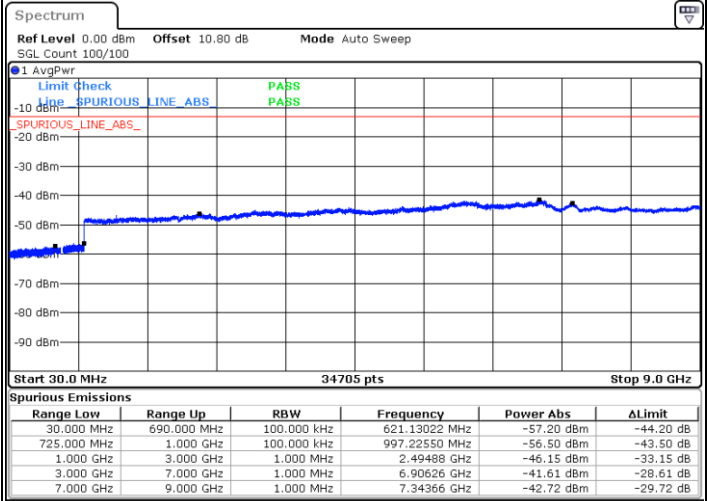
4G-LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



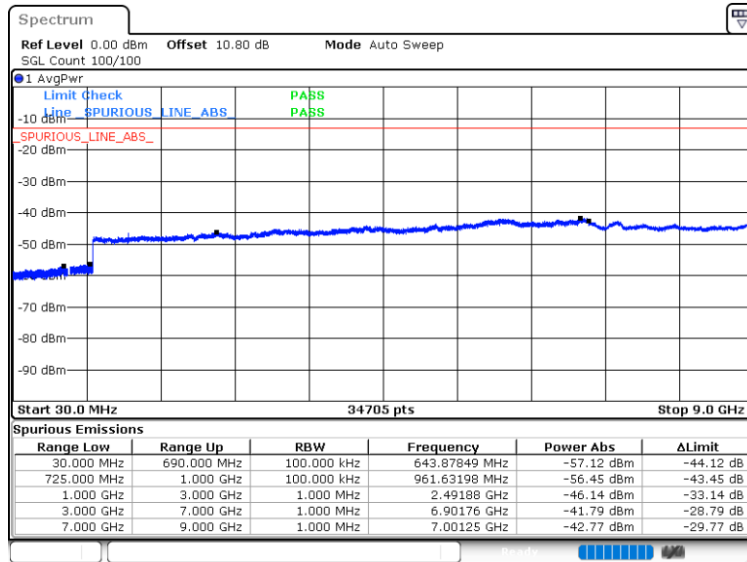
Date: 3.AUG.2023 13:53:02

Middle Channel / QPSK



Date: 3.AUG.2023 13:55:51

Highest Channel / QPSK

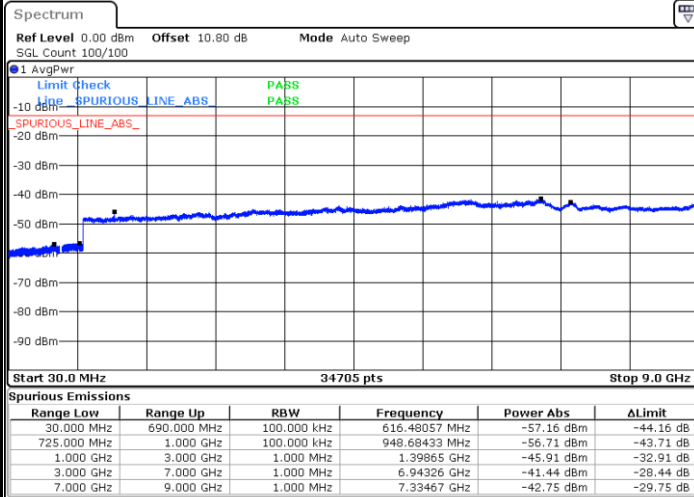


Date: 3.AUG.2023 14:00:57



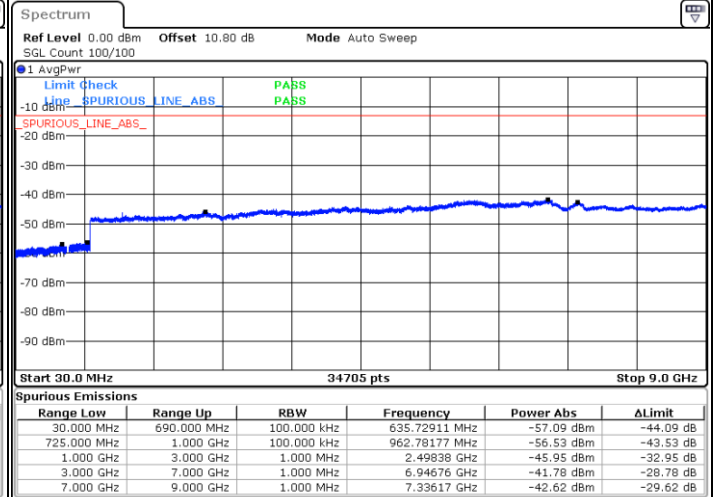
4G-LTE Band 12 / 3MHz

Lowest Channel / QPSK



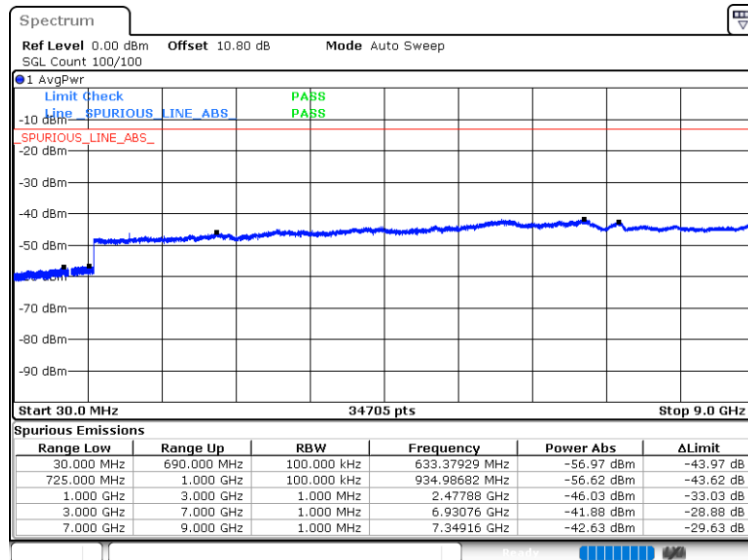
Date: 3.AUG.2023 14:47:23

Middle Channel / QPSK



Date: 3.AUG.2023 14:48:31

Highest Channel / QPSK

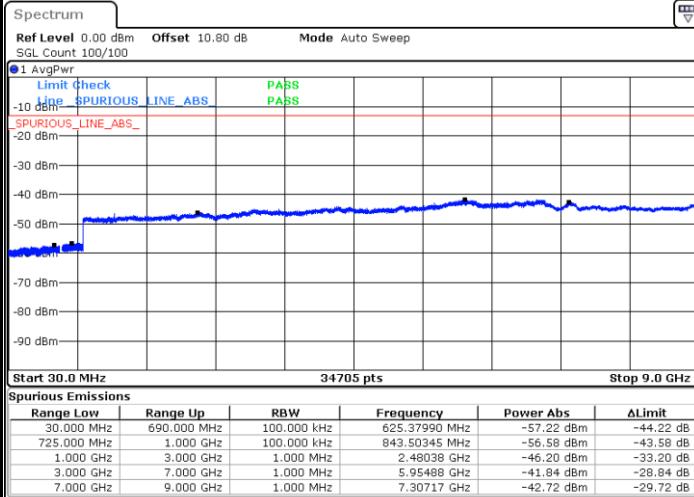


Date: 3.AUG.2023 14:49:39



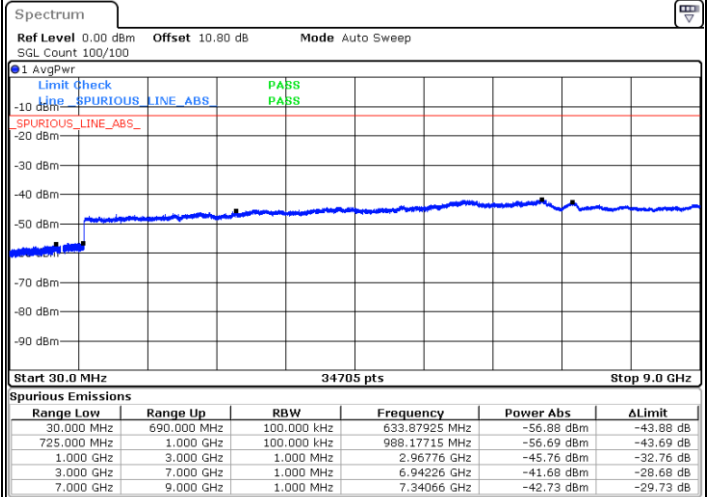
4G-LTE Band 12 / 5MHz

Lowest Channel / QPSK



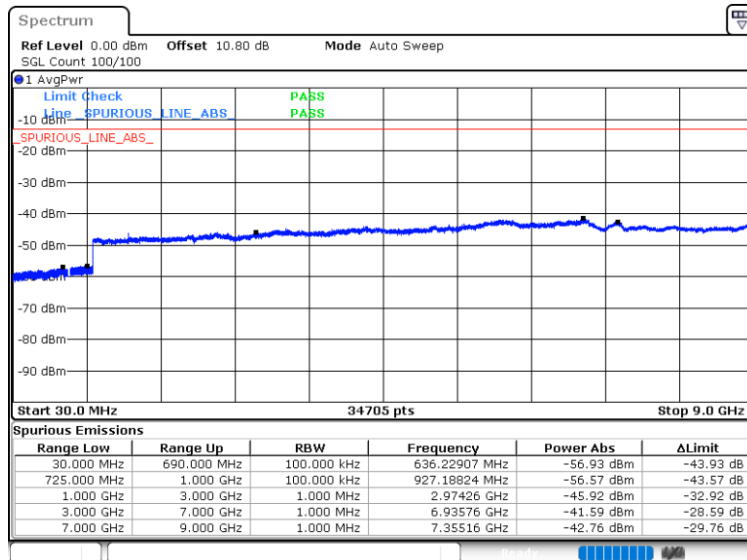
Date: 3.AUG.2023 14:50:52

Middle Channel / QPSK



Date: 3.AUG.2023 14:52:00

Highest Channel / QPSK

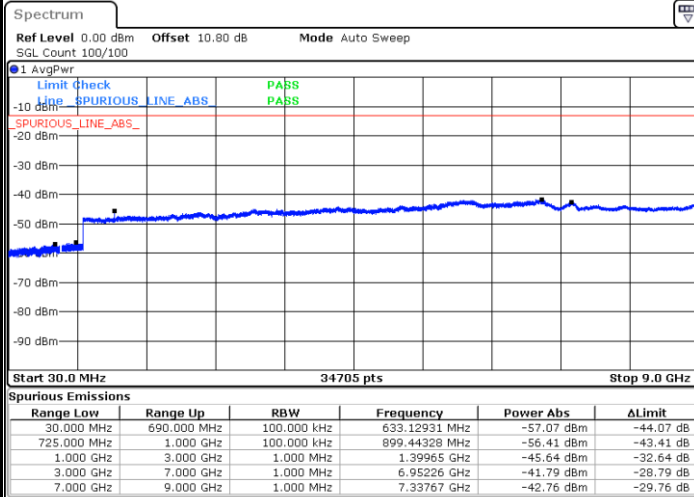


Date: 3.AUG.2023 14:53:08



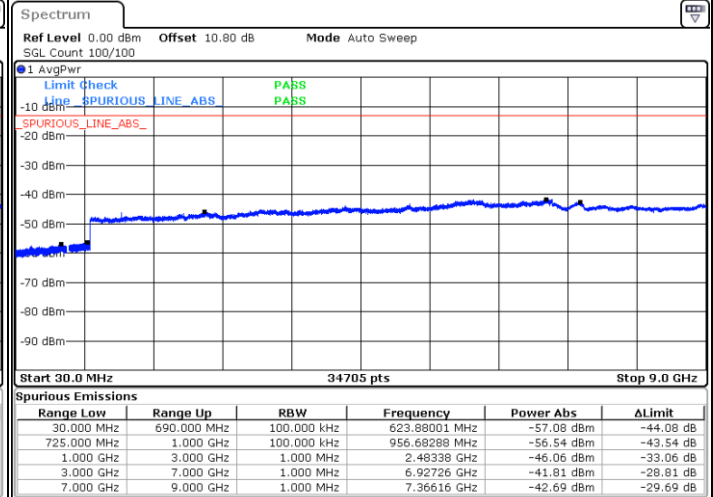
4G-LTE Band 12 / 10MHz

Lowest Channel / QPSK



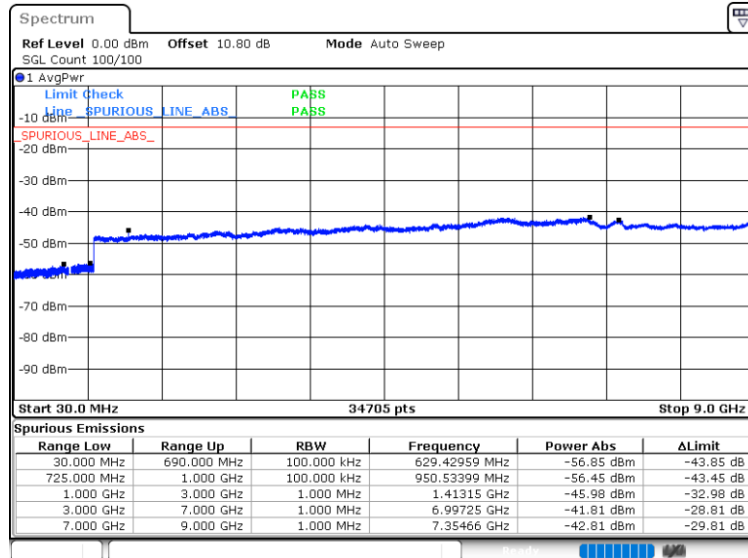
Date: 3.AUG.2023 14:54:21

Middle Channel / QPSK



Date: 3.AUG.2023 14:55:29

Highest Channel / QPSK



Date: 3.AUG.2023 14:56:37

Frequency Stability

Test Conditions		4G-LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0119	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0134	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0044	
0	Normal Voltage	0.0075	
-10	Normal Voltage	0.0137	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0165	
20	Maximum Voltage	0.0204	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0034	

Note:

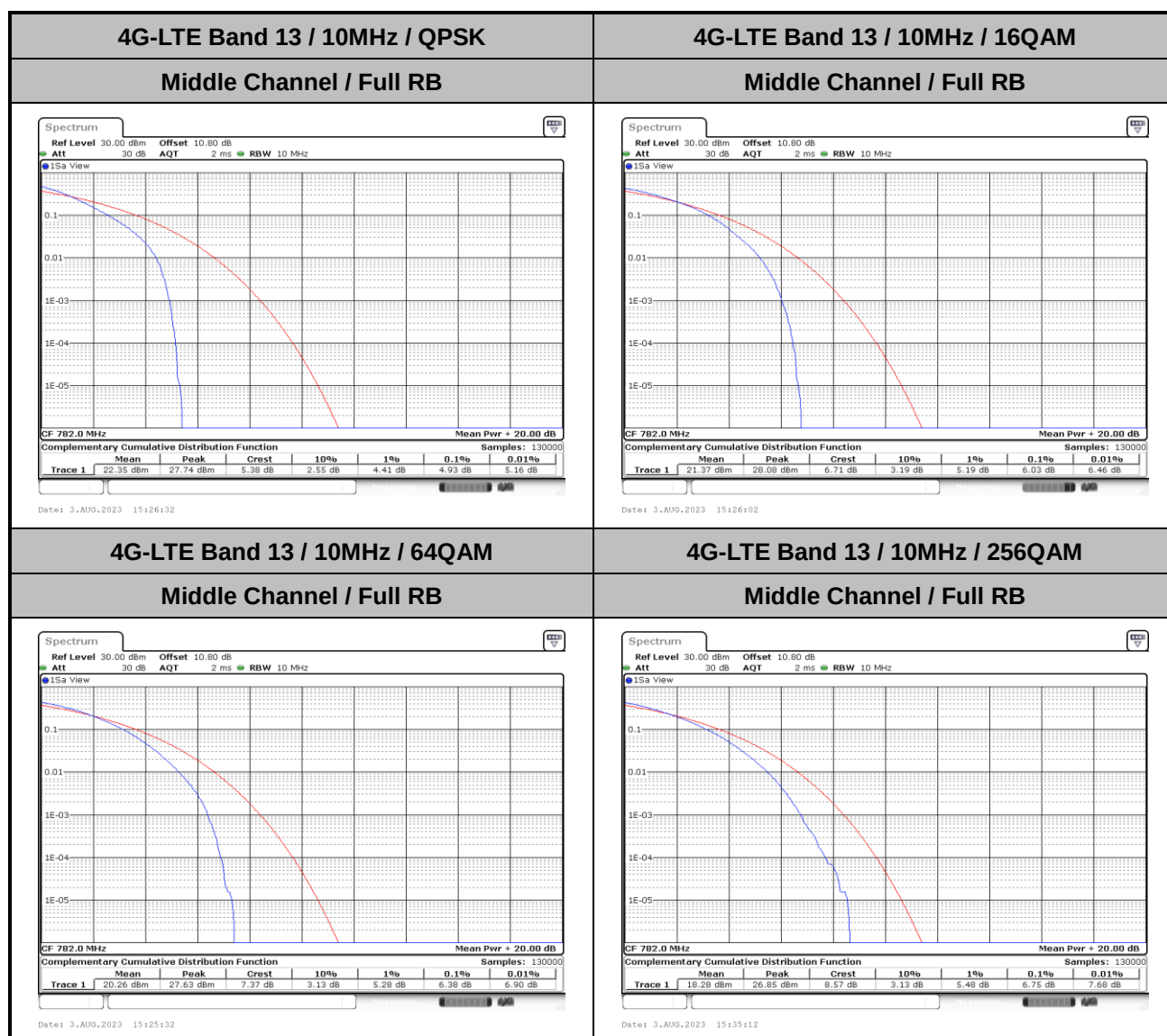
1. Normal Voltage = 48 V. ; Minimum Voltage = 42.5 V. ; Maximum Voltage = 57 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



4G-LTE Band 13

Peak-to-Average Ratio

Mode	4G-LTE Band 13 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.93	6.03	6.38	6.75	PASS



**26dB Bandwidth**

Mode	4G-LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.99	5.12	9.81	9.77	-	-	-	-
Mode	4G-LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	5.07	5.12	9.73	9.81	-	-	-	-