

Report on the RF Testing of:

KYOCERA Corporation
Mobile Phone, Model: EB1220
FCC ID: JOYEB1220



In accordance with FCC Part 27 Subpart C, and FCC Part 27 Subpart H

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COMMERCIAL-IN-CONFIDENCE

Document Number: JPD-TR-25117-0

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EXECUTIVE SUMMARY

A sample(s) of this product was tested and the result above was confirmed in accordance with FCC Part 27 Subpart C, FCC Part 27 Subpart L, and FCC Part 27 Subpart H.



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1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-25117-0	First Issue	Refer to the cover page

1.2 Standards

CFR47 FCC Part 27 Subpart C
CFR47 FCC Part 27 Subpart H

1.3 Test methods

KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA 603-E-2016
ANSI C63.26-2015

1.4 Deviation from standards

None

1.5 List of applied test(s) of the EUT

Test item section	Test item	Condition	Result	Remark
2.1046	Conducted Output Power	Conducted	PASS	*1
27.50	Effective Radiated Power	Radiated	PASS	-
27.50	Peak to Average Ratio	Conducted	PASS	-
2.1049	Occupied Bandwidth	Conducted	PASS	-
27.53 2.1051	Band Edge Spurious and Harmonic at Antenna Terminal	Conducted	PASS	-
27.53 2.1053	Radiated emissions and Harmonic Emissions	Radiated	PASS	-
27.54 2.1055	Frequency Stability	Conducted	PASS	-

*1: Refer to RF Exposure Report (Test Report_SAR)

1.6 Test information

None

1.7 Test set up

Table-top

1.8 Test period

20-October-2025 - 26-November-2025

2 Equipment Under Test

All information in this chapter was provided by the applicant.

2.1 EUT information

Applicant	KYOCERA Corporation Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan Phone: +81-90-6100-4946
Equipment Under Test (EUT)	Mobile Phone
Model number	EB1220
Serial number	353379980000823, 3533799800008784
Trade name	Kyocera
Number of sample(s)	2
EUT condition	Pre-Production
Power rating	Battery: DC 3.87 V USB: DC 5.0 ~ 9.0V 2.0A
Size	(W) 75 mm × (D) 14.6 mm × (H) 157 mm
Environment	Indoor and Outdoor use
Terminal limitation	-20°C to 60°C
Hardware version	DMT1
Software version	0.070KB.0015.a
Firmware version	Not applicable
RF Specification	
Frequency of Operation	Up Link LTE Band XII: 699-716 MHz Down Link LTE Band XII: 729-746.0 MHz
Modulation type	LTE Band XII: QPSK, 16QAM, 64QAM
Emission designator	LTE Band XII: BW 1.4M QPSK: 1M10G7D, 16QAM: 1M11W7D, 64QAM: 1M11W7D BW 3M QPSK: 2M76G7D, 16QAM: 2M76W7D, 64QAM: 2M74W7D BW 5M QPSK: 4M53G7D, 16QAM: 4M52W7D, 64QAM: 4M52W7D BW 10M QPSK: 8M99G7D, 16QAM: 8M99W7D, 64QAM: 8M99W7D
Effective Radiated Power (E.R.P.)	LTE Band XII: 0.141 W (21.5 dBm)
Antenna type	Internal antenna
Antenna gain	LTE Band XII: -2.7 dBi

2.2 Modification to the EUT

The table below details modifications made to the EUT during the test project.

Modification State	Description of Modification	Modification fitted by	Date of Modification
Model: EB1220, Serial Number: 353379980000823, 3533799800008784			
0	As supplied by the applicant	Not Applicable	Not Applicable

2.3 Variation of family model(s)

2.3.1 List of family model(s)

Not applicable

2.3.2 Reason for selection of EUT

Not applicable

2.4 Description of test mode

The EUT had been tested under operating condition.
There are three channels have been tested as following:

Band	Modulation	Bandwidth [MHz]	Channel	Frequency [MHz]
LTE Band XII	QPSK, 16QAM, 64QAM	1.4	23017, 23095, 23173	699.7, 707.5, 715.3
		3	23025, 23095, 23165	700.5, 707.5, 714.5
		5	23035, 23095, 23155	701.5, 707.5, 713.5
		10	23060, 23095, 23130	704.0, 707.5, 711.0

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.

The worst emission was found in X-axis the worst case recorded.

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports.

3 Configuration of Equipment

Numbers assigned to equipment on the diagram in “3.2 System configuration” correspond to the list in “3.1 Equipment used”.

This test configuration is based on the manufacture’s instruction.

Cabling and setup(s) were taken into consideration and test data was taken under worse case condition.

3.1 Equipment used

No.	Equipment	Company	Model No.	Serial No.	FCC ID/DoC	Comment
1	Mobile Phone	KYOCERA	EB1220	353379980000823, 3533799800008784	JOYEB1220	EUT

3.2 System configuration

1. Mobile Phone
(EUT)

4 Test Result

4.1 Effective Radiated Power

4.1.1 Measurement procedure

[FCC 27.50]

<Step 1>

The EUT and support equipment are placed on a 1 meter x 1 meter surface, 0.8 meter height (Below 1GHz) or 0.6 meter x 0.6 meter surface, 1.5 meter height (Above 1GHz) styrene foam table. Radiated emission measurements are performed at 3 meter distance with the broadband antenna (Log periodic antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1 to 4 meters and stopped at height producing the maximum emission.

The bandwidth of the spectrum analyzer is set to 1 MHz. The turntable is rotated by 360 degrees and stopped at azimuth of producing the maximum emission.

<Step 2>

The substitution antenna is replaced by the transmitter antenna (EUT).

The frequency of the signal generator is adjusted to the measurement frequency.

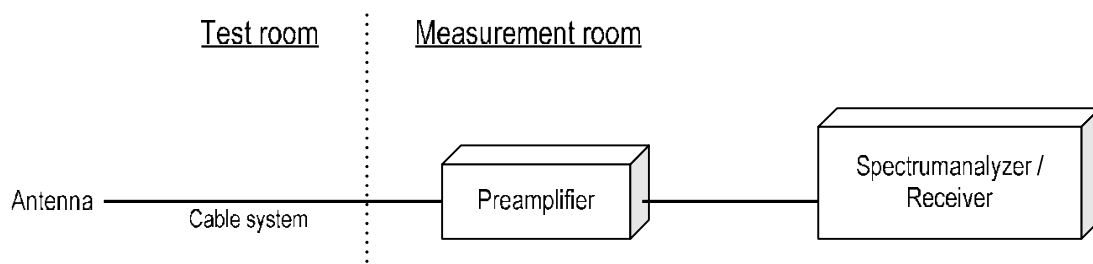
Level of the signal generator is adjusted to the level that is obtained from step 1, and record the emission level of signal generator.

The spectrum analyzer is set to;

- Span = 1.5 times the OBW
- RBW = 1-5% of the expected OBW, not to exceed 1 MHz
- VBW $\geq 3 \times$ RBW
- Number of sweep points $\geq 2 \times$ span / RBW
- Sweep time = auto-couple
- Detector = RMS (power averaging)
- If the EUT can be configured to transmit continuously (i.e., burst duty cycle $\geq 98\%$), then set the trigger to free run.
- If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle $< 98\%$), then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Ensure that the sweep time is less than or equal to the transmission burst duration.
- Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with the band limits set equal to the OBW band edges.

If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

- Test configuration



4.1.2 Calculation method

Result (ERP) = S.G Reading - Cable loss + Antenna Gain
Margin = Limit – Result (ERP)

Example:

Limit @ 707.5 MHz : 34.7 dBm
Ant. Input = 15.0 dBm Cable loss = 1.1 dB Ant. Gain = 8.0 dBd
Result = 15.0 – 1.1 + 8.0 = 21.9 dBm
Margin = 34.7 – 21.9 = 8.1 dB

4.1.3 Limit

ERP: 3W (34.7 dBm)

4.1.4 Test data

Date : 22-October-2025
Temperature : 22.4 [°C]
Humidity : 36.6 [%]
Test place : 3m Semi-anechoic chamber

Test engineer : Tadahiro Seino

Date : 20-November-2025
Temperature : 21.0 [°C]
Humidity : 30.6 [%]
Test place : 3m Semi-anechoic chamber

Test engineer : Chiaki Kanno

**[LTE Band XII]
QPSK, BW 1.4MHz**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	699.7	-34.0	26.3	0.9	-5.8	19.6	0.091	34.77	15.2
H	707.5	-33.9	27.3	0.9	-5.8	20.5	0.112	34.77	14.3
H	715.3	-34.1	26.3	1.0	-5.9	19.5	0.089	34.77	15.3

16QAM, BW 1.4MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	699.7	-35.1	25.2	0.9	-5.8	18.5	0.071	34.77	16.3
H	707.5	-34.7	26.5	0.9	-5.8	19.7	0.093	34.77	15.1
H	715.3	-35.1	25.3	1.0	-5.9	18.5	0.071	34.77	16.3

64QAM, BW 1.4MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	699.7	-35.8	24.5	0.9	-5.8	17.8	0.060	34.77	17.0
H	707.5	-35.4	25.8	0.9	-5.8	19.0	0.079	34.77	15.8
H	715.3	-35.9	24.5	1.0	-5.9	17.7	0.059	34.77	17.1

QPSK, BW 3MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	700.5	-33.5	26.8	0.9	-5.8	20.1	0.102	34.77	14.7
H	707.5	-33.4	27.8	0.9	-5.8	21.0	0.126	34.77	13.8
H	714.5	-33.7	26.9	1.0	-5.9	20.1	0.102	34.77	14.7

16QAM, BW 3MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	700.5	-34.5	25.8	0.9	-5.8	19.1	0.081	34.77	15.7
H	707.5	-34.2	27.0	0.9	-5.8	20.2	0.105	34.77	14.6
H	714.5	-34.7	25.9	1.0	-5.9	19.1	0.081	34.77	15.7

64QAM, BW 3MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	700.5	-35.5	24.8	0.9	-5.8	18.1	0.065	34.77	16.7
H	707.5	-35.2	26.0	0.9	-5.8	19.2	0.083	34.77	15.6
H	714.5	-35.7	24.9	1.0	-5.9	18.1	0.065	34.77	16.7

QPSK, BW 5MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	701.5	-35.1	25.2	0.9	-5.8	18.5	0.071	34.77	16.3
H	707.5	-34.2	27.0	0.9	-5.8	20.2	0.105	34.77	14.6
H	713.5	-33.5	26.9	1.0	-5.9	20.1	0.102	34.77	14.7

16QAM, BW 5MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	701.5	-35.2	25.1	0.9	-5.8	18.4	0.069	34.77	16.4
H	707.5	-35.1	26.1	0.9	-5.8	19.3	0.085	34.77	15.5
H	713.5	-34.5	25.9	1.0	-5.9	19.1	0.081	34.77	15.7

64QAM, BW 5MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	701.5	-36.2	24.1	0.9	-5.8	17.4	0.055	34.77	17.4
H	707.5	-36.1	25.1	0.9	-5.8	18.3	0.068	34.77	16.5
H	713.5	-35.6	24.8	1.0	-5.9	18.0	0.063	34.77	16.8

QPSK, BW 10MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	704.0	-33.0	27.4	0.9	-5.8	20.6	0.115	34.77	14.2
H	707.5	-32.9	28.3	0.9	-5.8	21.5	0.141	34.77	13.3
H	711.0	-33.1	27.2	1.0	-5.9	20.4	0.110	34.77	14.4

16QAM, BW 10MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	704.0	-34.0	26.4	0.9	-5.8	19.6	0.091	34.77	15.2
H	707.5	-33.9	27.3	0.9	-5.8	20.5	0.112	34.77	14.3
H	711.0	-34.1	26.2	1.0	-5.9	19.4	0.087	34.77	15.4

64QAM, BW 10MHz

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBd]	Result [dBm]	Result [W]	Limit [dBm]	Margin [dB]
H	704.0	-35.0	25.4	0.9	-5.8	18.6	0.072	34.77	16.2
H	707.5	-34.9	26.3	0.9	-5.8	19.5	0.089	34.77	15.3
H	711.0	-35.1	25.2	1.0	-5.9	18.4	0.069	34.77	16.4

4.2 Peak to Average Ratio

4.2.1 Measurement procedure

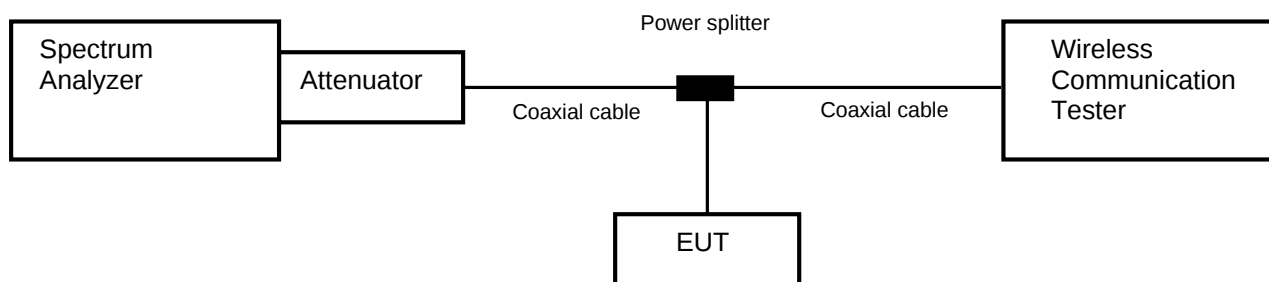
[FCC 27.50]

The peak to average ratio was measured with a spectrum analyzer connected to the antenna terminal.

The spectrum analyzer is set to;

- a) Power Stat CCDF mode
- b) Set resolution / measurement bandwidth $\geq$ signal's occupied bandwidth.
- c) Set the number of counts to a value that stabilizes the measured CCDF curve.
- d) Set the measurement interval as follows:
 - 1) For continuous transmissions, set to 1ms.
 - 2) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst duration.
- e) Record the maximum PAPR level associated with a probability of 0.1%.

- Test configuration



4.2.2 Limit

13 dB or less

4.2.3 Measurement result

Date : 20-October-2025

Temperature : 19.3 [°C]

Humidity : 60.9 [%]

Test place : Shielded room No.3

Test engineer :

Kazunori Saito

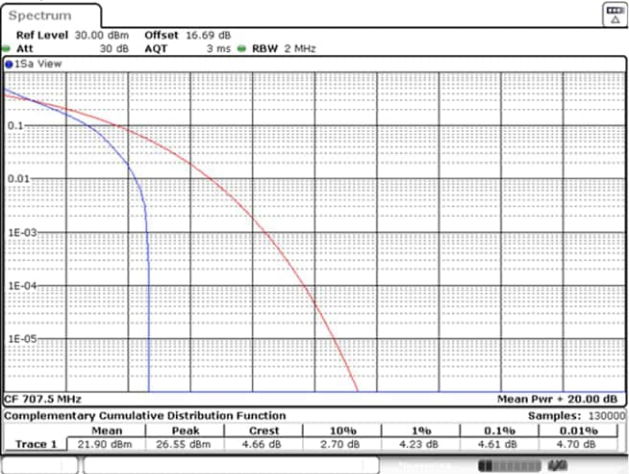
Band	Channel	Frequency [MHz]	Modulation	Bandwidth [MHz]	RB	Peak to Average Power Ratio [dB]	Limit [dB]
LTE Band XII	23095	707.5	QPSK	1.4	6-0	4.61	13.0
				3	15-0	4.43	
				5	25-0	4.46	
				10	50-0	4.43	
			16QAM	1.4	6-0	5.88	
				3	15-0	5.80	
				5	25-0	5.68	
				10	50-0	5.62	
			64QAM	1.4	6-0	6.61	
				3	15-0	6.06	
				5	25-0	6.35	
				10	50-0	6.23	

4.2.4 Trace data

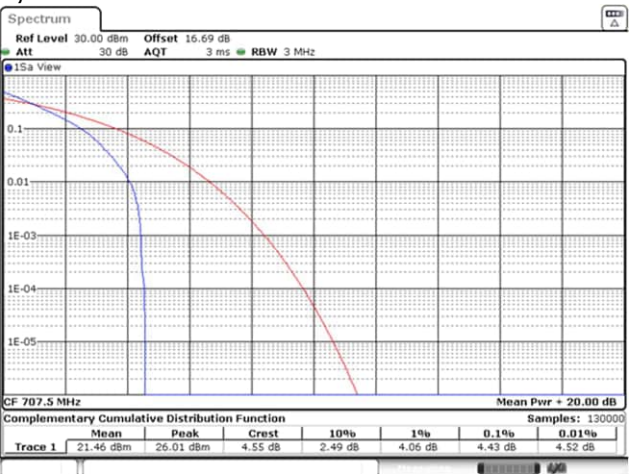
[LTE Band XII]

Channel: 23095

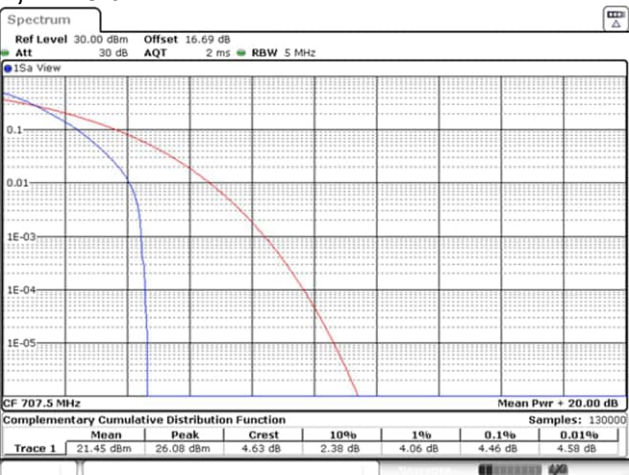
QPSK, BW 1.4MHz, RB6-0



QPSK, BW 3MHz, RB15-0

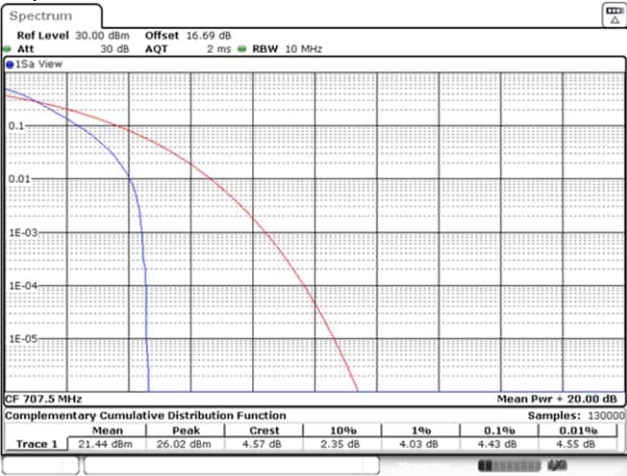


QPSK, BW 5MHz, RB25-0

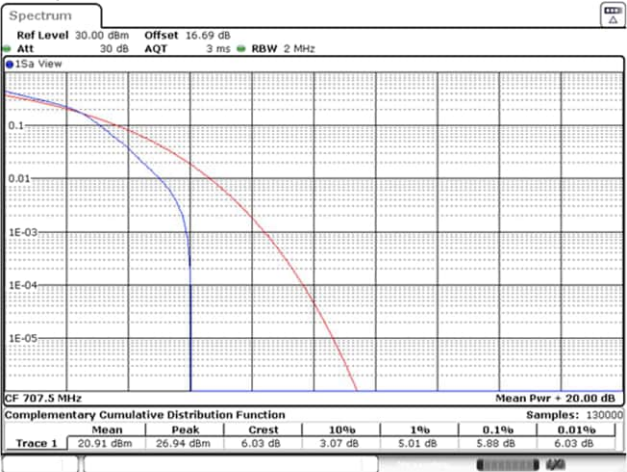


Channel: 23095

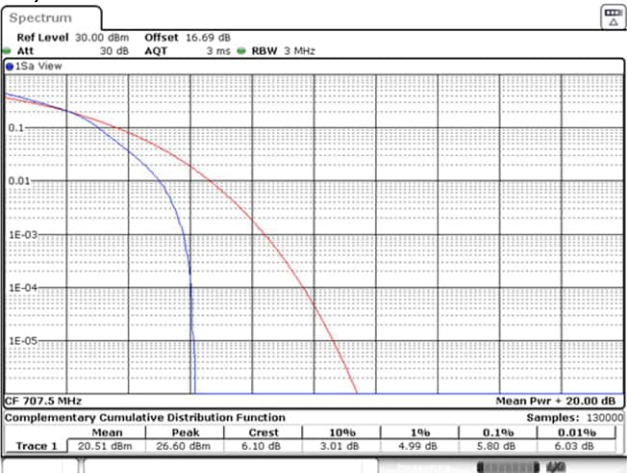
QPSK, BW 10MHz, RB50-0



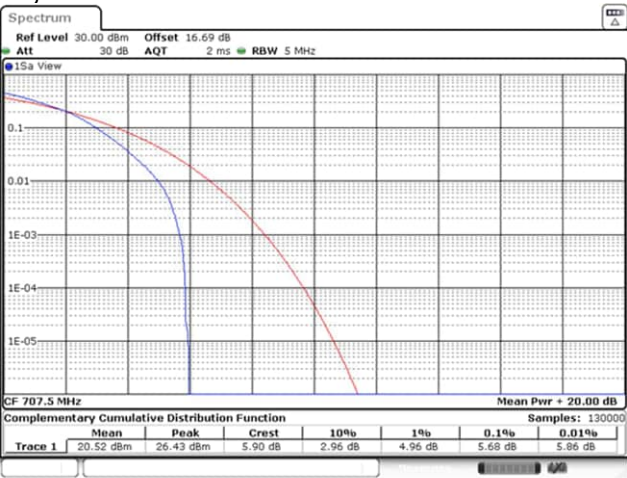
16QAM, BW 1.4MHz, RB6-0



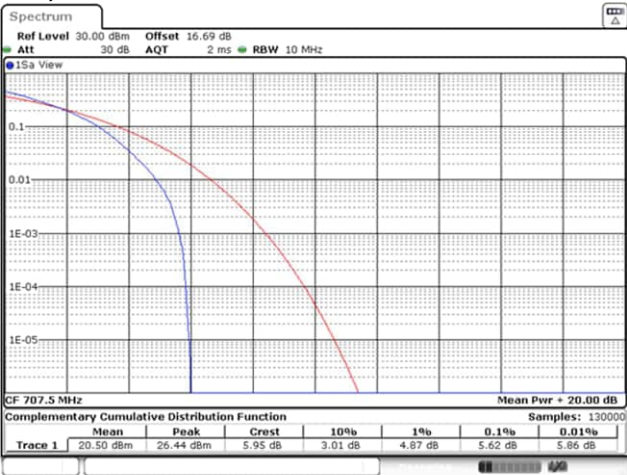
16QAM, BW 3MHz, RB15-0



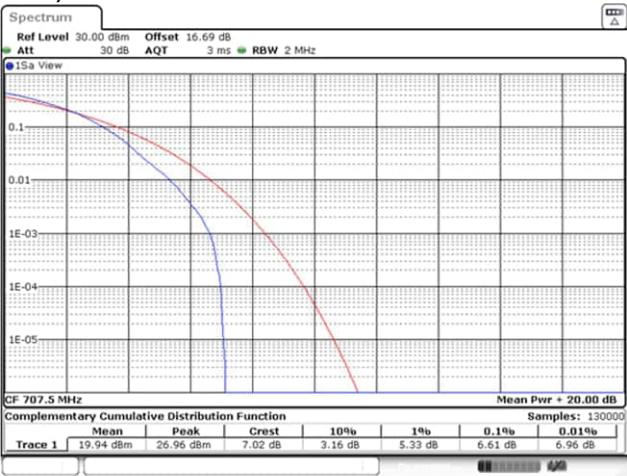
Channel: 23095
16QAM, BW 5MHz, RB25-0



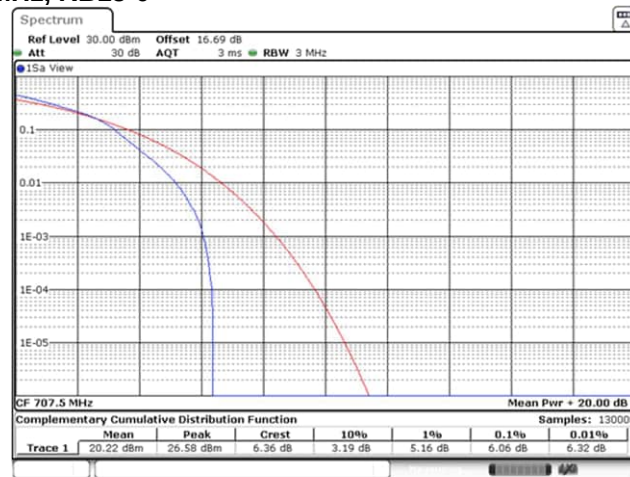
16QAM, BW 10MHz, RB50-0



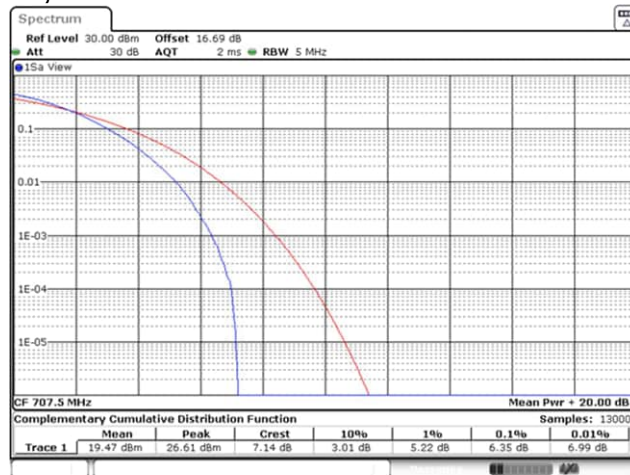
64QAM, BW 1.4MHz, RB6-0



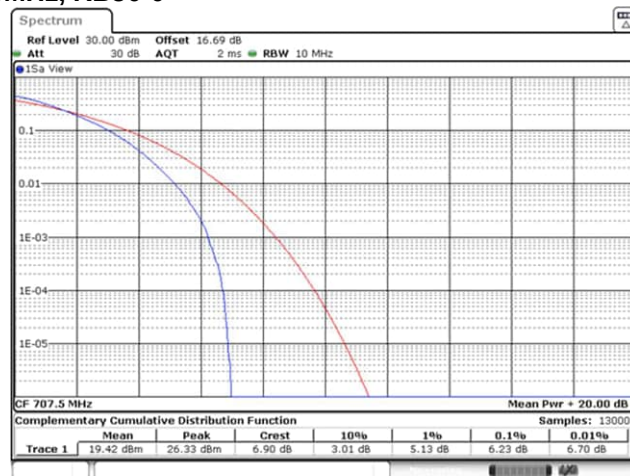
Channel: 23095
64QAM, BW 3MHz, RB15-0



64QAM, BW 5MHz, RB25-0



64QAM, BW 10MHz, RB50-0



4.3 Occupied Bandwidth

4.3.1 Measurement procedure

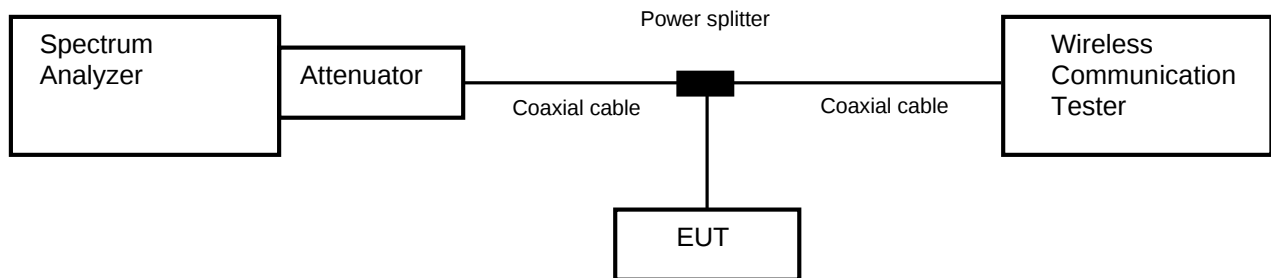
[FCC 2.1049]

The Occupied bandwidth was measured with a spectrum analyzer connected to the antenna terminal.

The spectrum analyzer is set to;

- a) RBW = 1-5% of the expected OBW & VBW $\geq 3 \times$ RBW
- b) Detector = Peak
- c) Trace mode = Max hold
- d) Sweep time = auto-couple

- Test configuration



4.3.2 Limit

None

4.3.3 Measurement result

Date : 20-October-2025
Temperature : 19.3 [°C]
Humidity : 60.9 [%]
Test place : Shielded room No.3

Test engineer : Kazunori Saito

Band	Channel	Frequency [MHz]	Bandwidth [MHz]	Modulation	RB	99% Occupied bandwidth [MHz]	26dB Bandwidth [MHz]
LTE Band XII	23095	707.5	1.4	QPSK	3-1	0.6204	0.8751
					6-0	1.0999	1.3487
				16QAM	3-1	0.6204	0.8811
					6-0	1.1059	1.3457
				64QAM	3-1	0.6084	0.8691
					6-0	1.1059	1.3576
			3	QPSK	8-4	1.6484	2.2537
					15-0	2.7632	3.1469
				16QAM	8-4	1.6424	2.3017
					15-0	2.7572	3.1409
				64QAM	8-4	1.6603	2.1998
					15-0	2.7393	3.1049
			5	QPSK	12-7	2.3477	3.1670
					25-0	4.5255	5.1750
				16QAM	12-7	2.3477	3.1770
					25-0	4.5155	5.1550
				64QAM	12-7	2.3477	3.2470
					25-0	4.5155	5.1350
			10	QPSK	25-12	4.7153	6.1340
					50-0	8.9910	10.1100
				16QAM	25-12	4.7353	6.0340
					50-0	8.9910	10.0700
				64QAM	25-12	4.7153	5.8740
					50-0	8.9910	9.9900

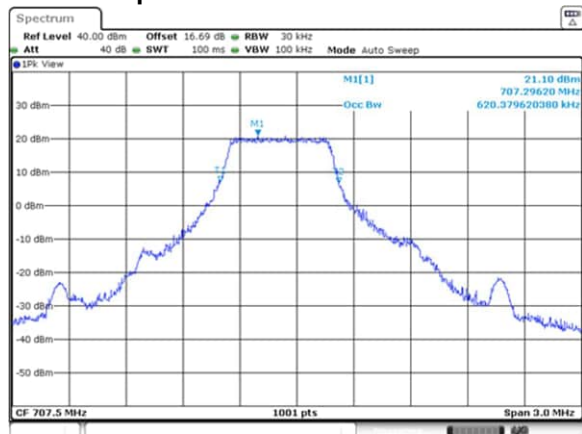
4.3.4 Trace data

[LTE Band XII]
Channel: 23095

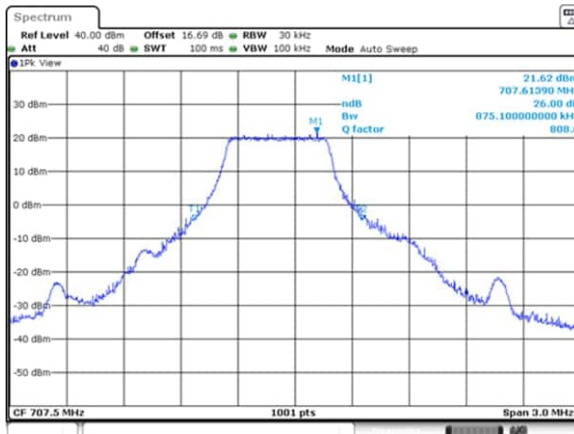
QPSK, BW 1.4MHz

RB3-1

99% Occupied Bandwidth

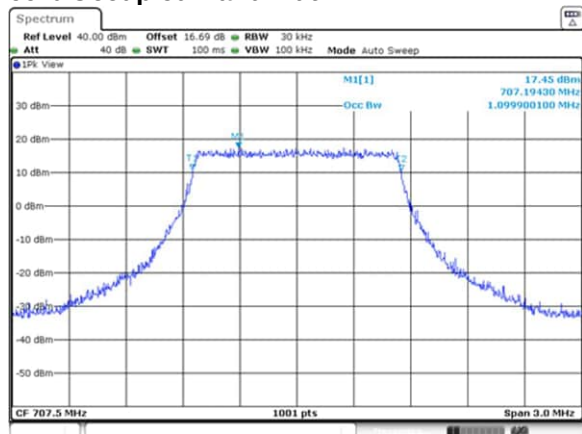


26dB Bandwidth

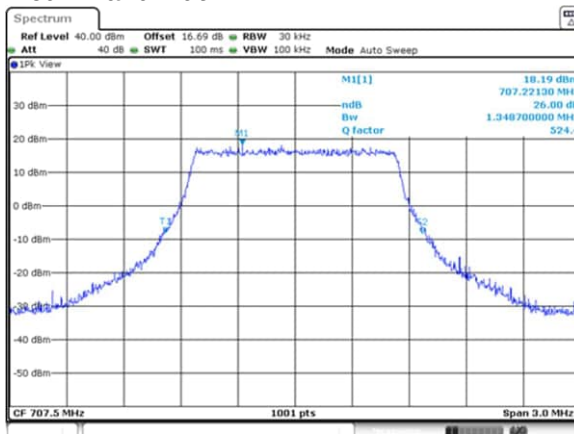


RB6-0

99% Occupied Bandwidth



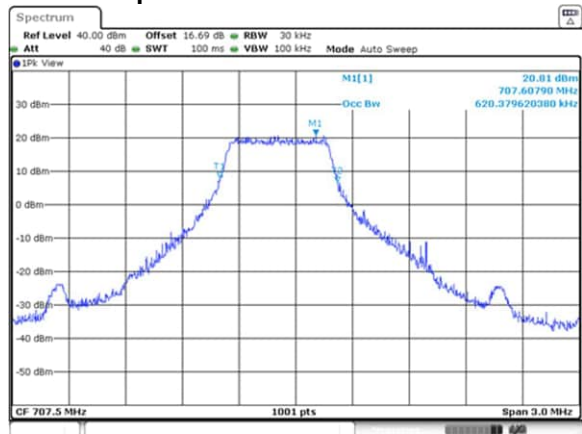
26dB Bandwidth



16QAM, BW 1.4MHz

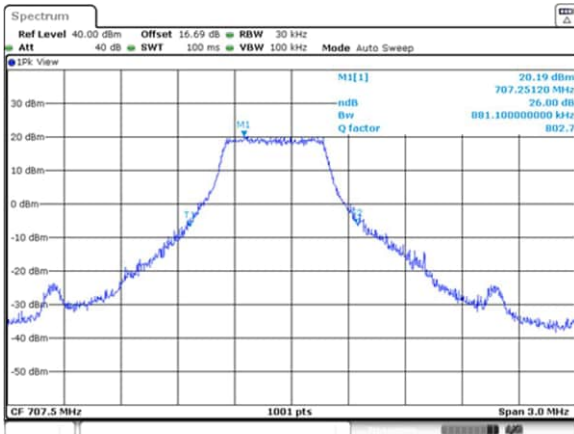
RB3-1

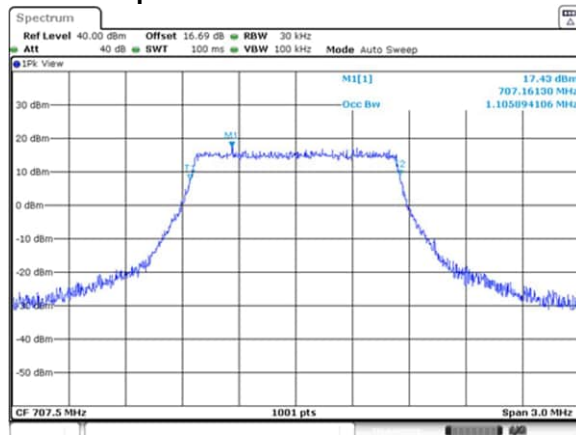
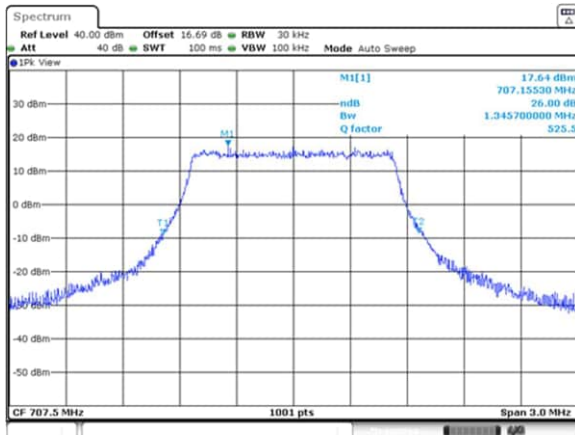
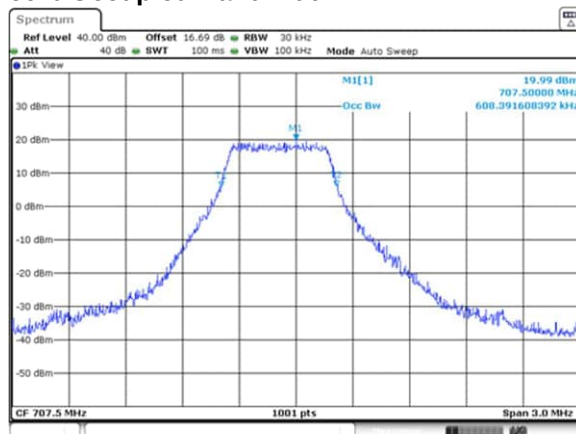
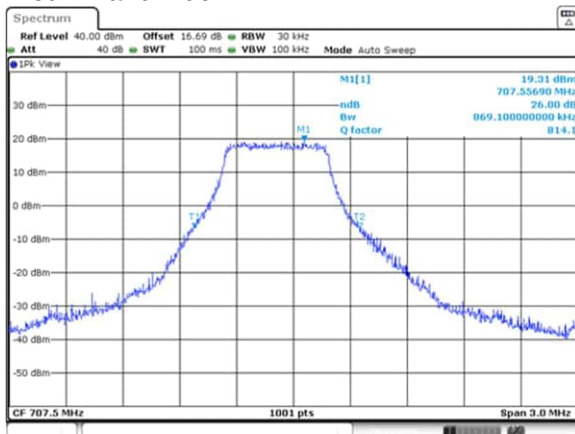
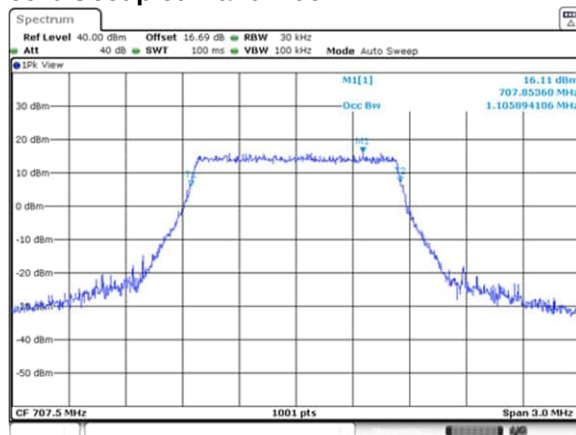
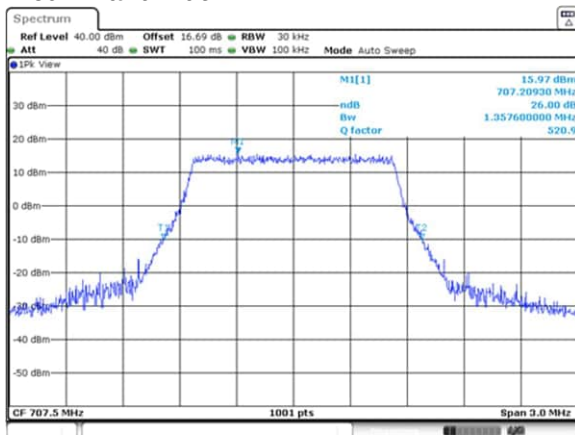
99% Occupied Bandwidth

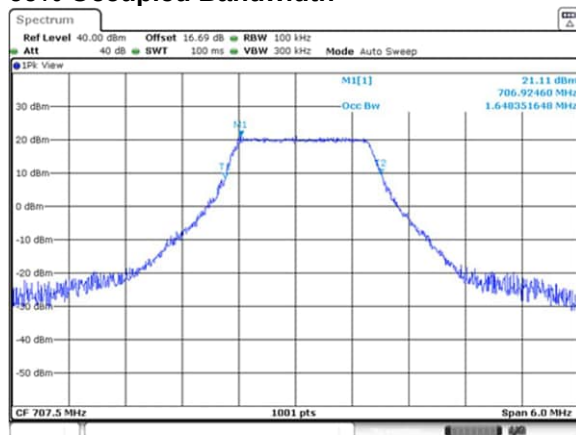
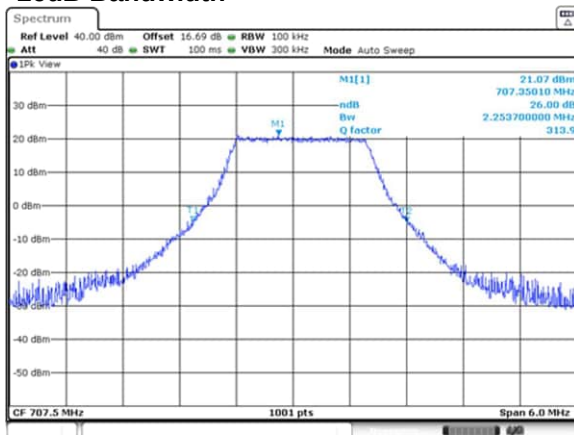
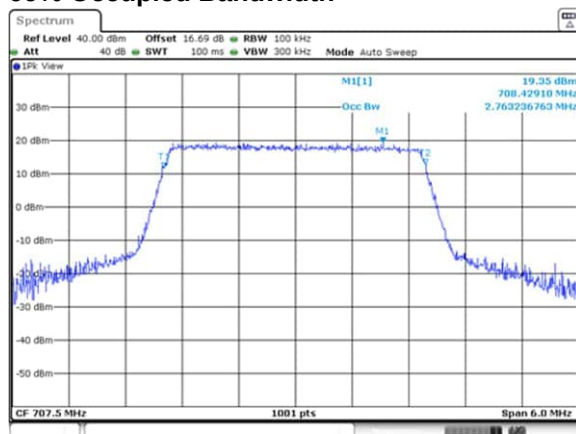
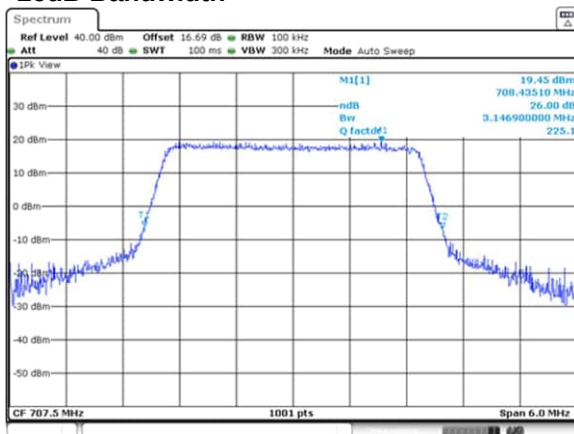
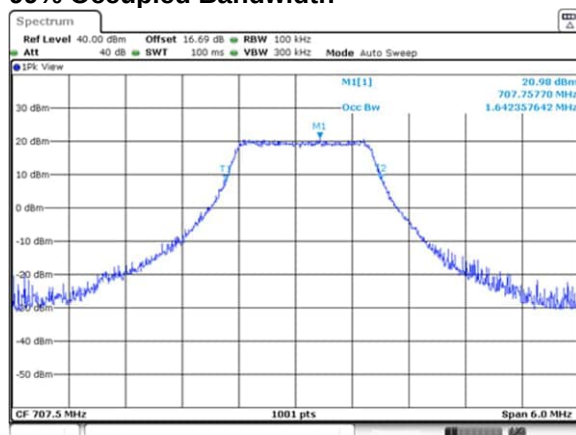


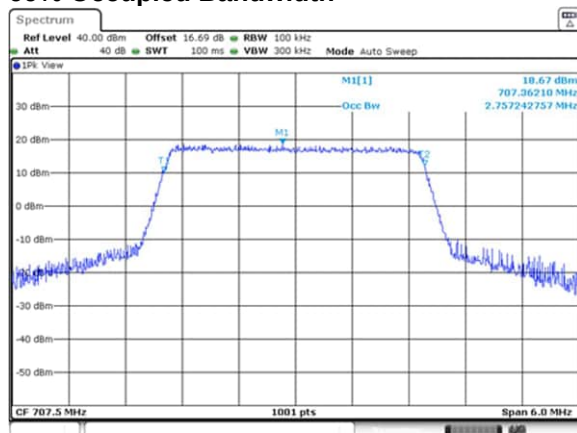
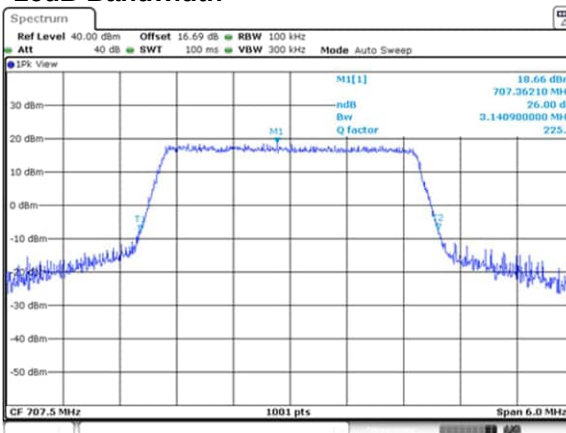
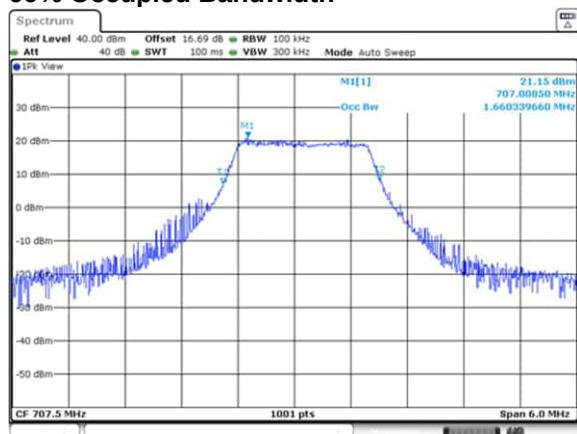
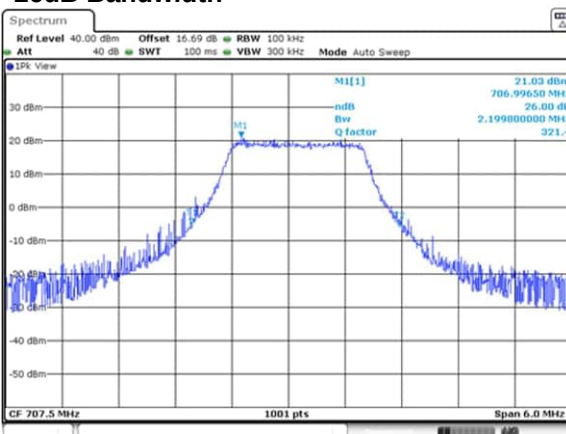
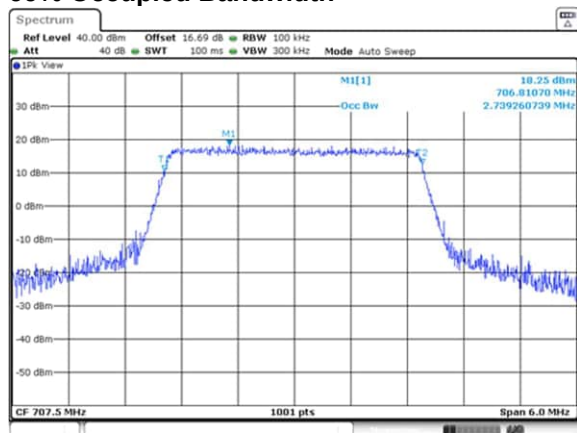
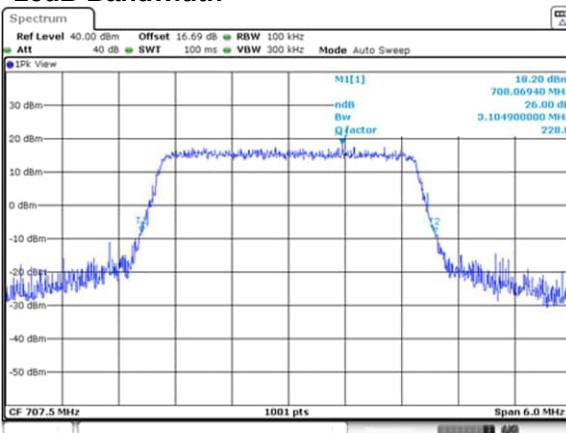
RB6-0

26dB Bandwidth



RB6-0**99% Occupied Bandwidth****26dB Bandwidth****64QAM, BW 1.4MHz****RB3-1****99% Occupied Bandwidth****26dB Bandwidth****RB6-0****99% Occupied Bandwidth****26dB Bandwidth**

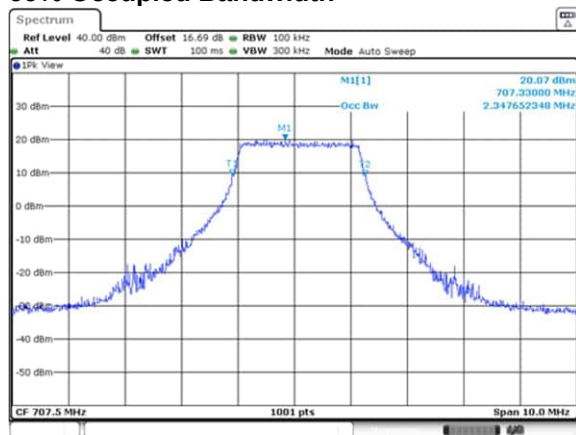
QPSK, BW 3MHz**RB8-4****99% Occupied Bandwidth****26dB Bandwidth****RB15-0****99% Occupied Bandwidth****26dB Bandwidth****16QAM, BW 3MHz****RB8-4****99% Occupied Bandwidth****26dB Bandwidth**

RB15-0**99% Occupied Bandwidth****26dB Bandwidth****64QAM, BW 3MHz****RB8-4****99% Occupied Bandwidth****26dB Bandwidth****RB15-0****99% Occupied Bandwidth****26dB Bandwidth**

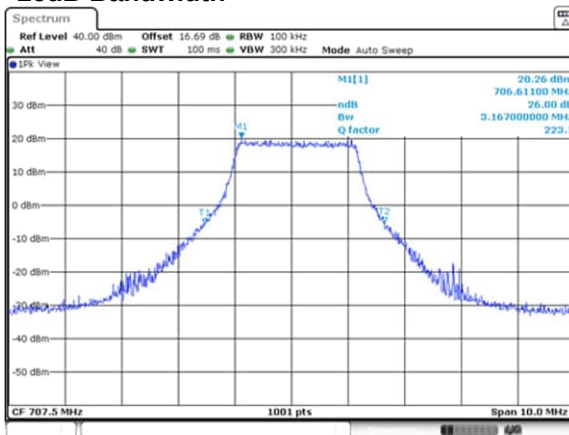
QPSK, BW 5MHz

RB12-7

99% Occupied Bandwidth

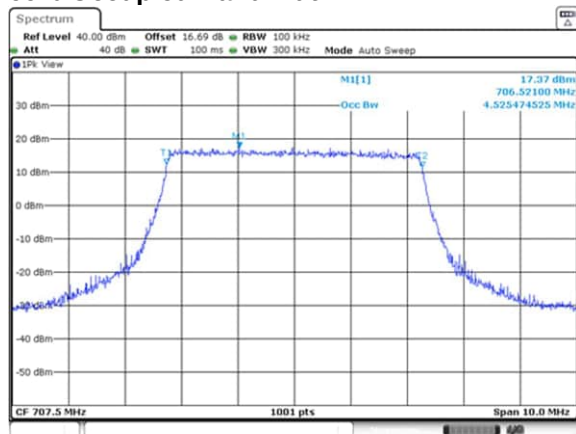


26dB Bandwidth

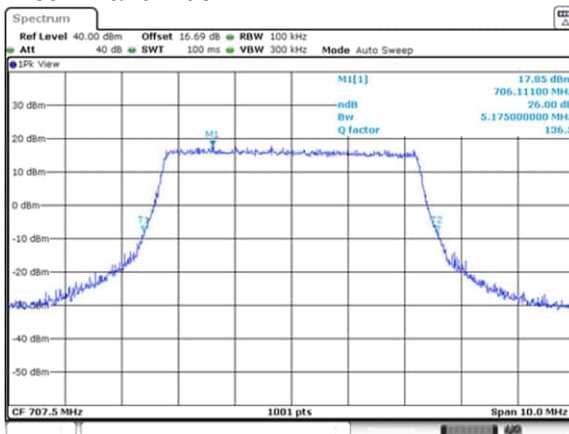


RB25-0

99% Occupied Bandwidth



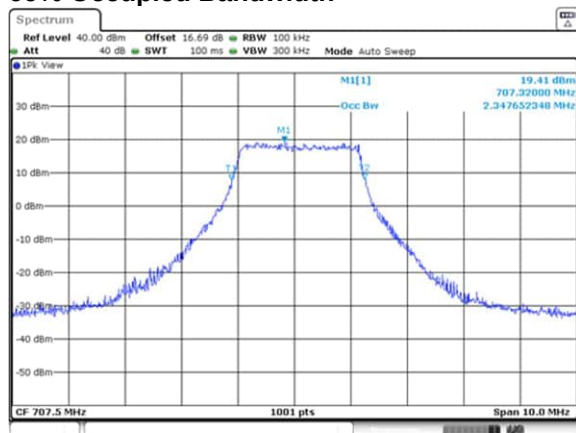
26dB Bandwidth



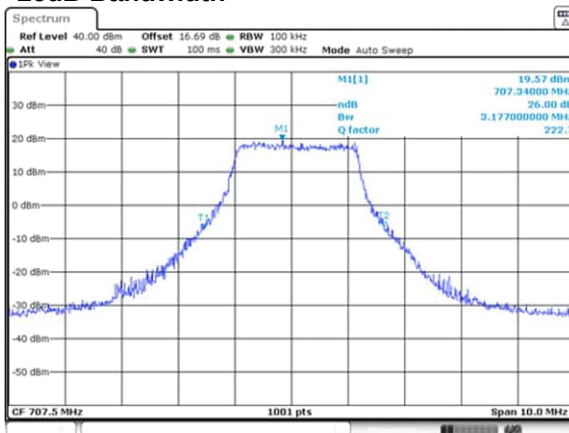
16QAM, BW 5MHz

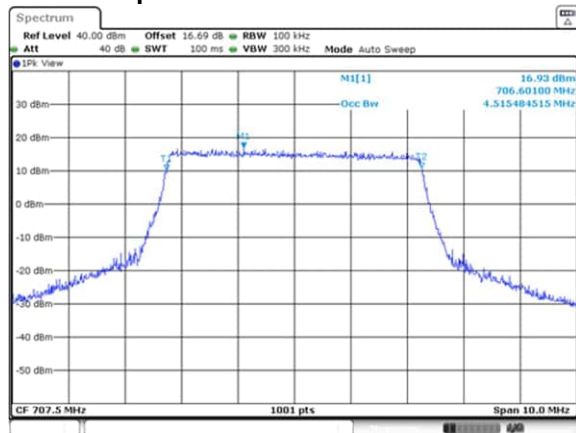
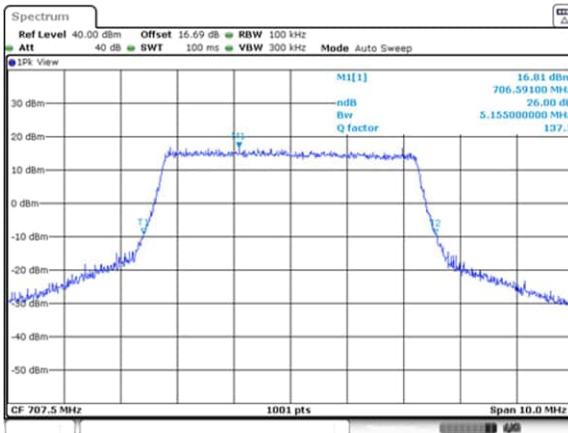
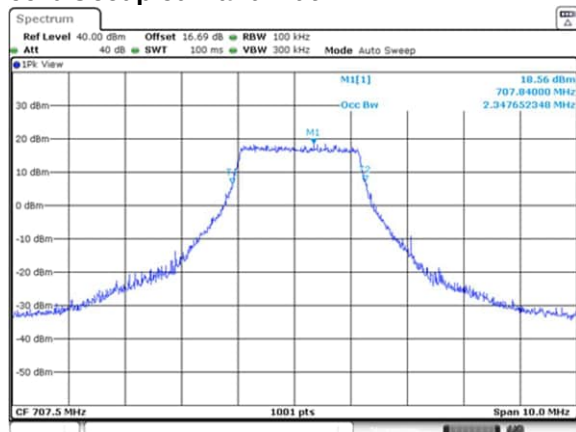
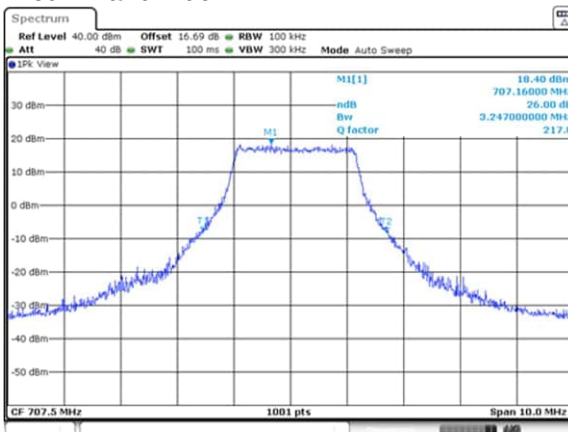
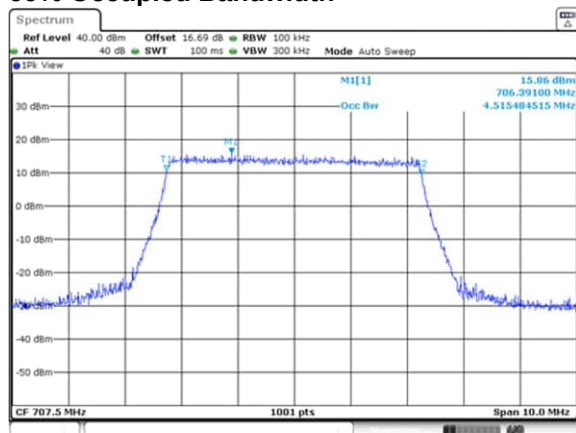
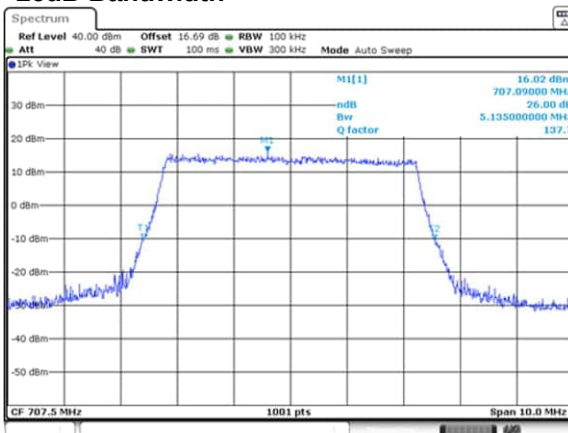
RB12-7

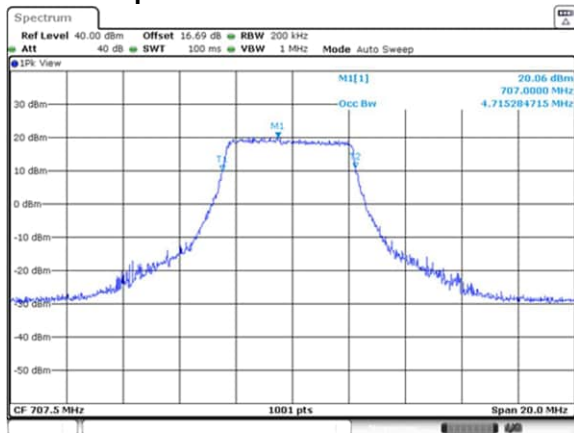
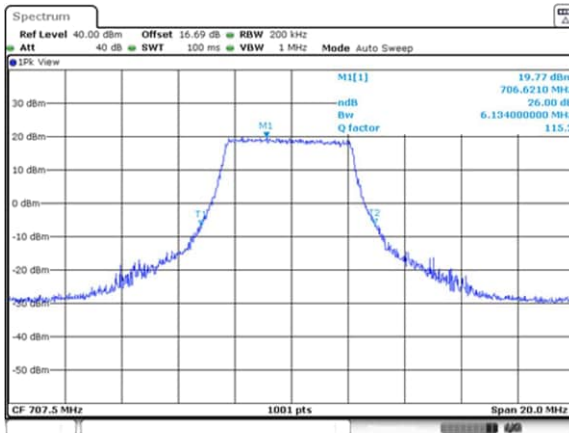
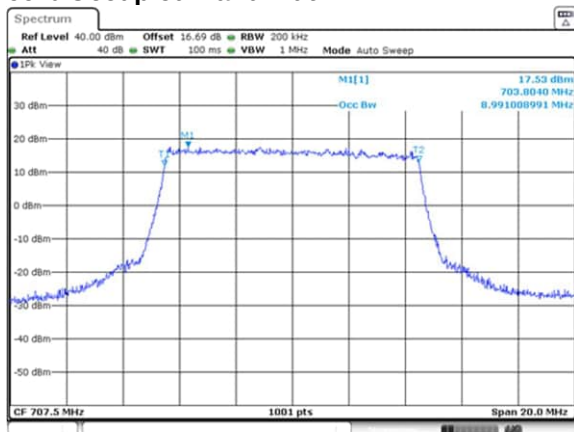
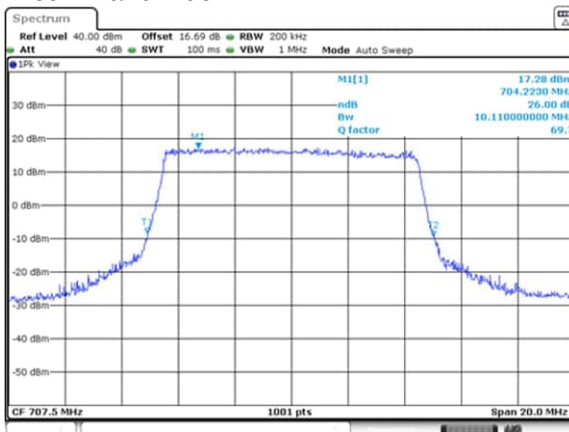
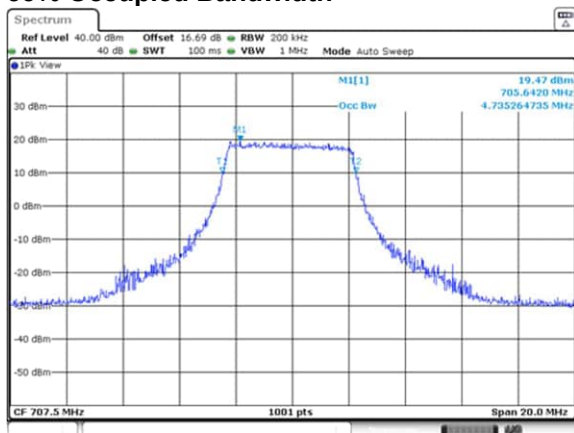
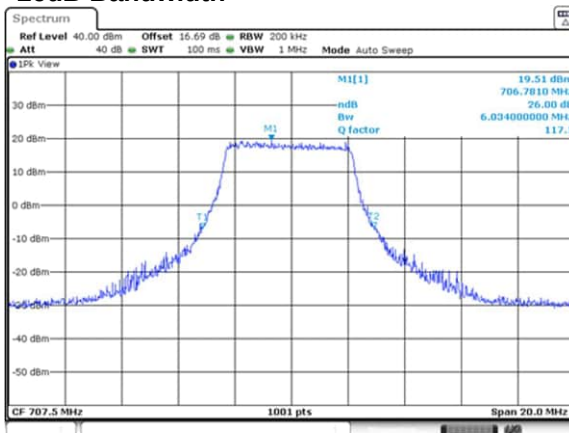
99% Occupied Bandwidth

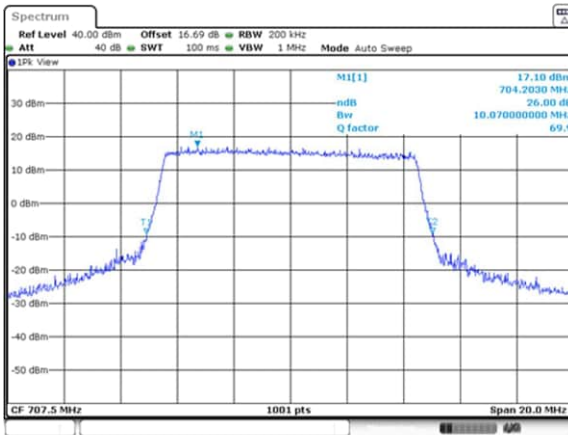
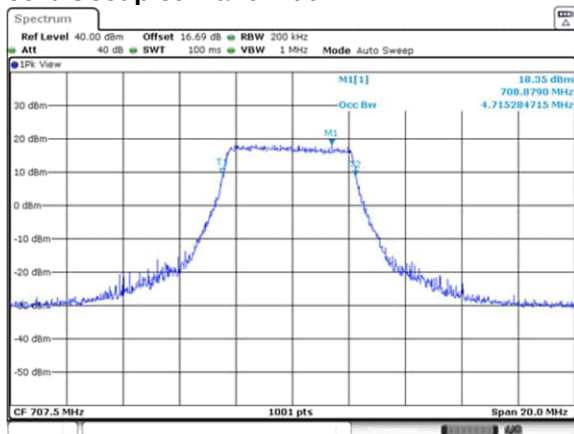
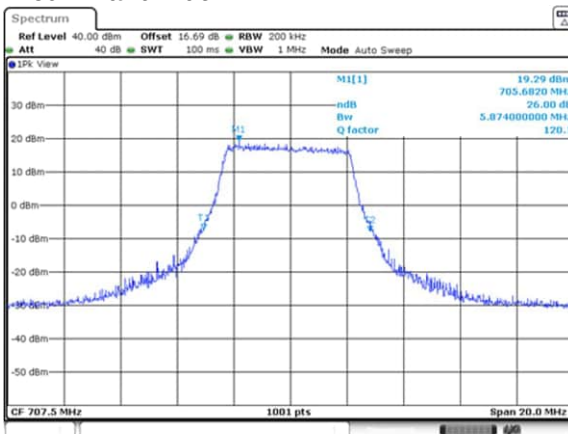
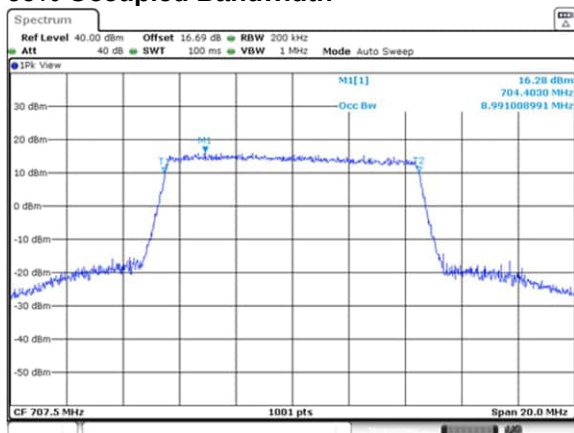
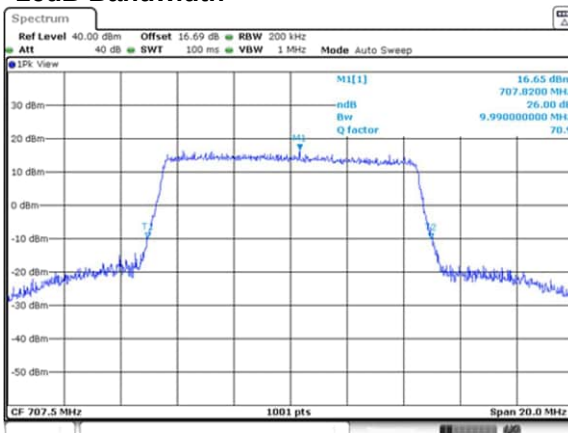


26dB Bandwidth



RB25-0**99% Occupied Bandwidth****26dB Bandwidth****64QAM, BW 5MHz****RB12-7****99% Occupied Bandwidth****26dB Bandwidth****RB25-0****99% Occupied Bandwidth****26dB Bandwidth**

QPSK, BW 10MHz**RB25-12****99% Occupied Bandwidth****26dB Bandwidth****RB50-0****99% Occupied Bandwidth****26dB Bandwidth****16QAM, BW 10MHz****RB25-12****99% Occupied Bandwidth****26dB Bandwidth**

RB50-0**99% Occupied Bandwidth****26dB Bandwidth****64QAM, BW 10MHz****RB25-12****99% Occupied Bandwidth****26dB Bandwidth****RB50-0****99% Occupied Bandwidth****26dB Bandwidth**

4.4 Band Edge Spurious and Harmonic at Antenna Terminals

4.4.1 Measurement procedure

[FCC 27.53, 2.1051]

The band edge spurious and harmonic was measured with a spectrum analyzer connected to the antenna terminal.

The spectrum analyzer is set to;

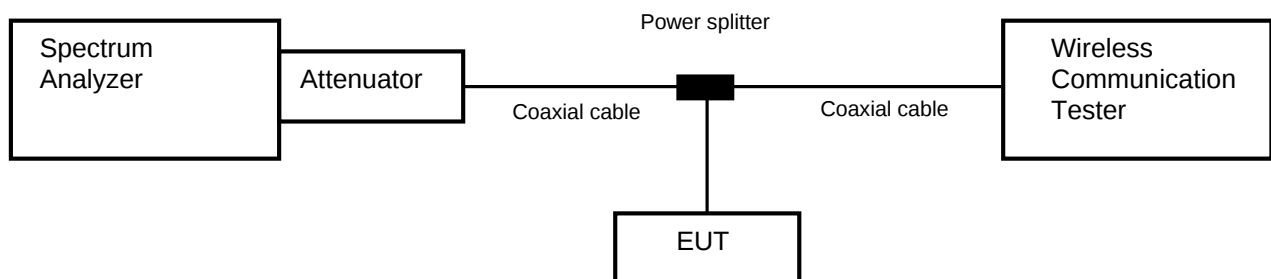
<Band Edge>

- a) Span was set large enough so as to capture all out of band emissions near the band edge
- b) $RBW \geq 1\%$ of the emission bandwidth or 2% of the emission bandwidth
- c) $VBW \geq 3 \times RBW$
- d) Detector = RMS
- e) Trace mode = Max hold
- f) Sweep time = auto-couple
- g) Number of sweep point $\geq 2 \times \text{span} / RBW$

<Spurious Emissions>

- a) $RBW = 1\text{MHz}$ & $VBW \geq 3 \times RBW$
- b) Detector = Peak
- c) Trace mode = Max hold
- d) Sweep time = auto-couple
- e) Number of sweep point $\geq 2 \times \text{span} / RBW$

- Test configuration



4.4.2 Limit

(1) [27.53(c)]

For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(2) [27.53(g)]

For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. 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.

(3) [27.53(h) (1)]

General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

(4) [27.53(m)(4)]

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

4.4.3 Measurement result

Date : 22-October-2025
 Temperature : 23.4 [°C]
 Humidity : 40.6 [%]
 Test place : Shielded room No.3

Test engineer : Kazunori Saito

Date : 23-October-2025
 Temperature : 21.9 [°C]
 Humidity : 44.3 [%]
 Test place : Shielded room No.3

Test engineer : Kazunori Saito

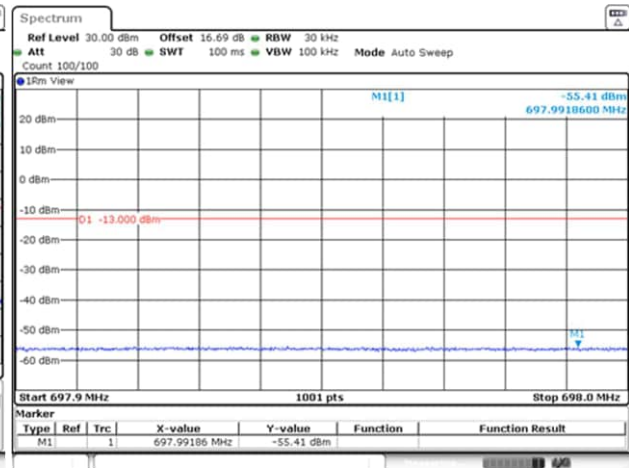
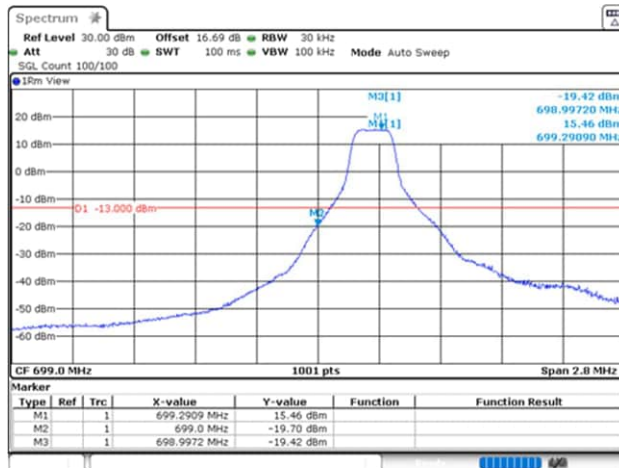
Band	Modulation	Bandwidth [MHz]	Channel	Frequency [MHz]	Results	
LTE Band XII	QPSK, 16QAM, 64QAM	1.4	23017	699.7	See the trace data	PASS
			23173	715.3	See the trace data	PASS
		3	23025	700.5	See the trace data	PASS
			23165	714.5	See the trace data	PASS
		5	23035	701.5	See the trace data	PASS
			23155	713.5	See the trace data	PASS
		10	23060	704.0	See the trace data	PASS
			23130	711.0	See the trace data	PASS

4.4.4 Trace data

[LTE Band XII]
(Band Edge)

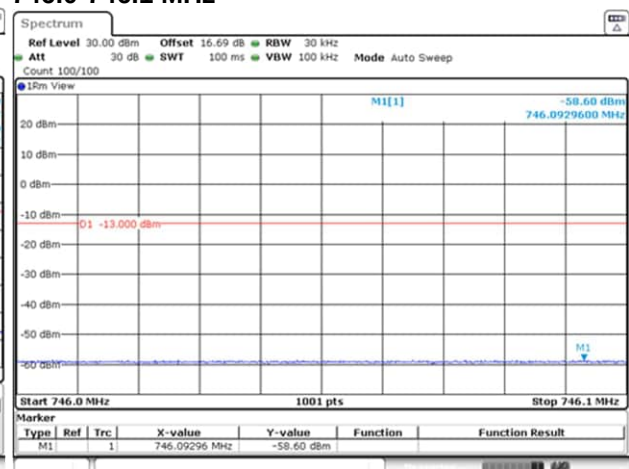
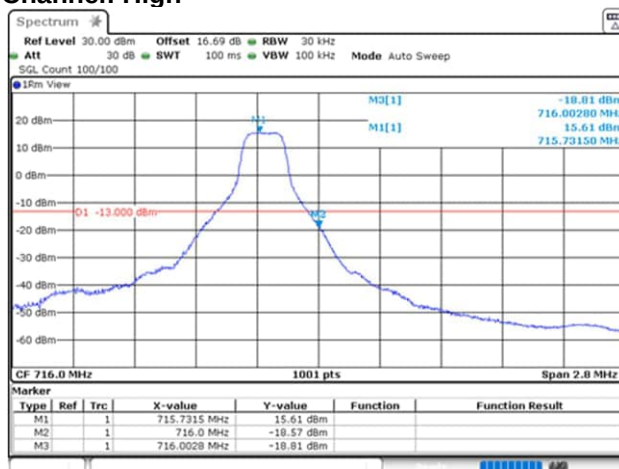
QPSK, BW 1.4MHz, RB1-0
Channel: Low

697.9-698.0 MHz



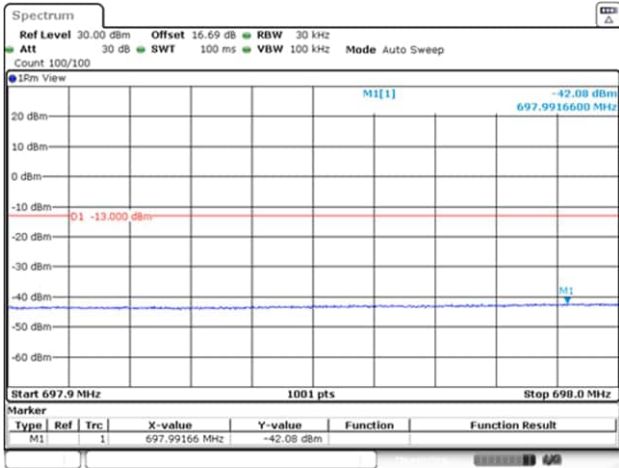
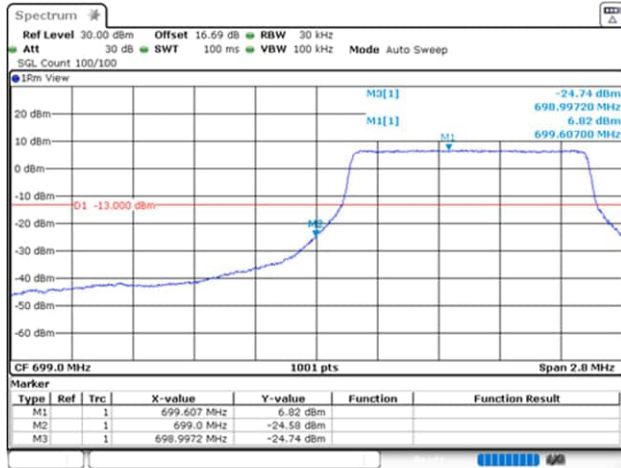
QPSK, BW 1.4MHz, RB1-5
Channel: High

746.0-746.1 MHz

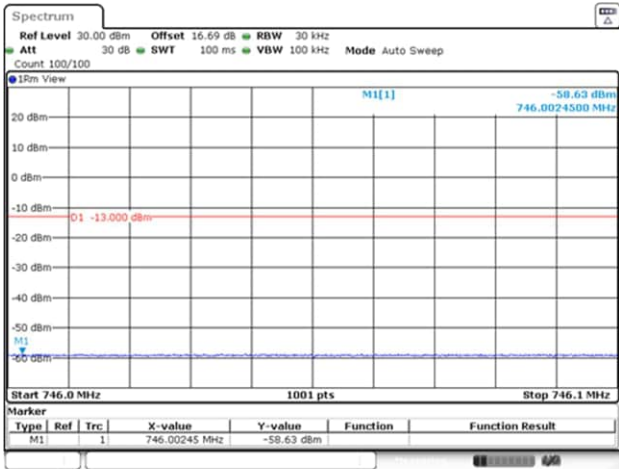
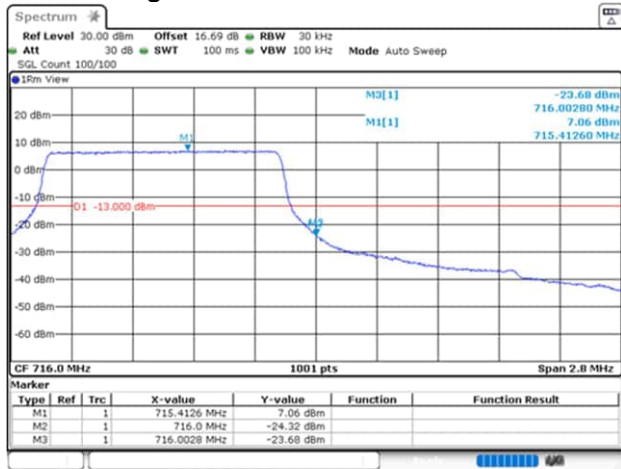


[LTE Band XII]
(Band Edge)

QPSK, BW 1.4MHz, RB6-0
Channel: Low

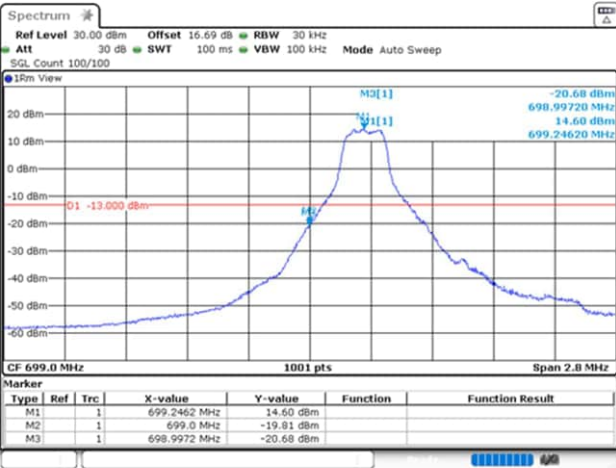


QPSK, BW 1.4MHz, RB6-0
Channel: High

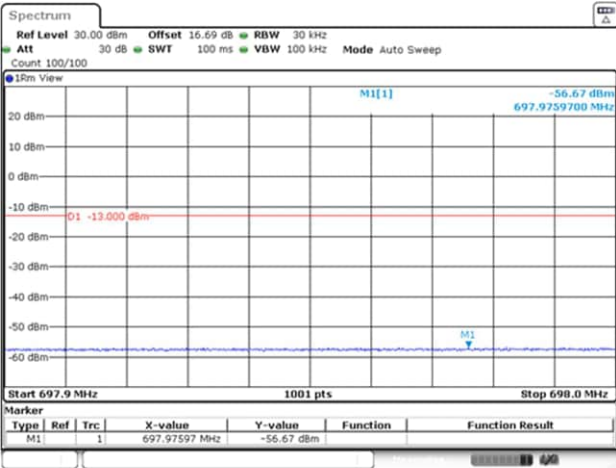


[LTE Band XII]
(Band Edge)

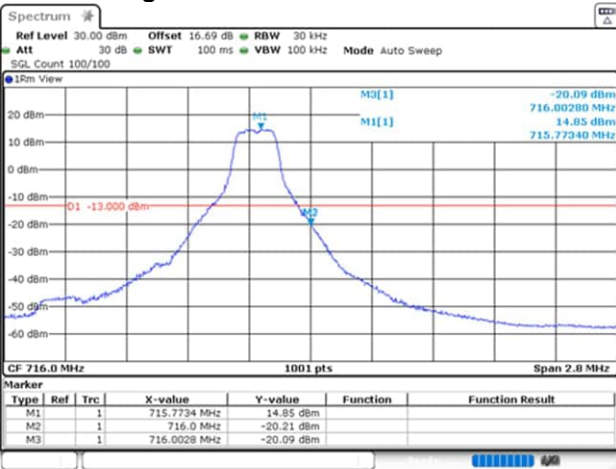
16QAM, BW 1.4MHz, RB1-0
Channel: Low



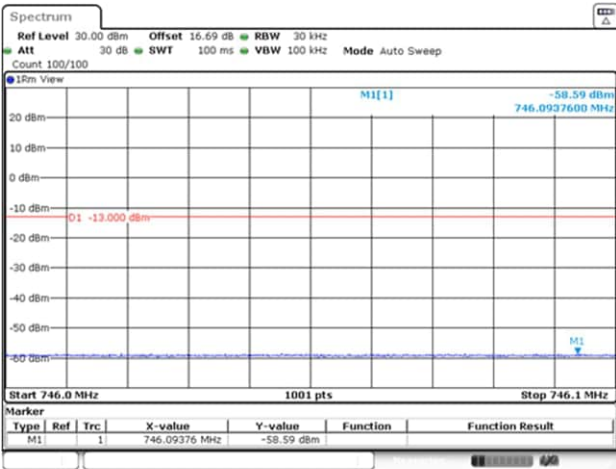
697.9-698.0 MHz



16QAM, BW 1.4MHz, RB1-5
Channel: High

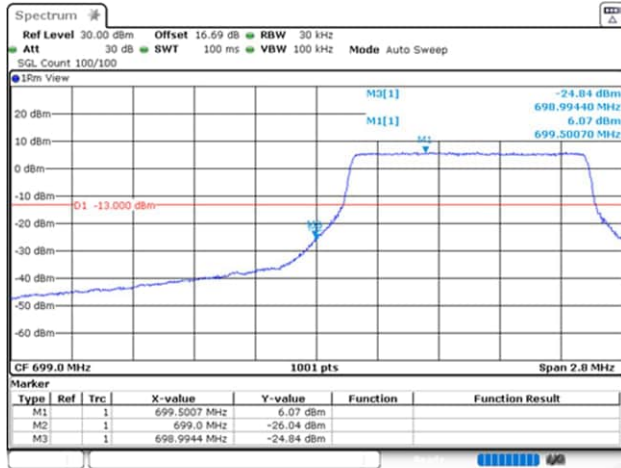


746.0-746.1 MHz

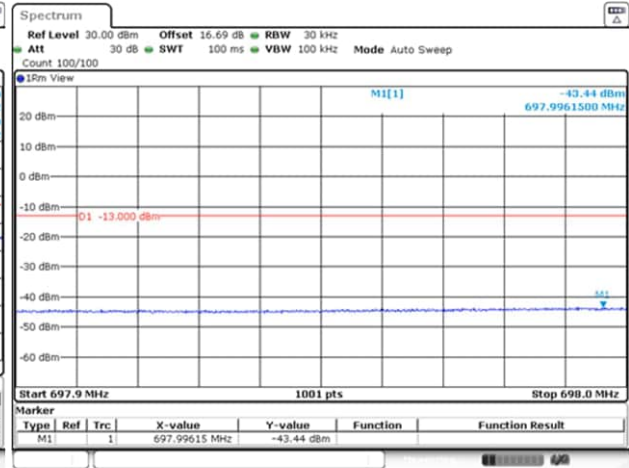


[LTE Band XII]
(Band Edge)

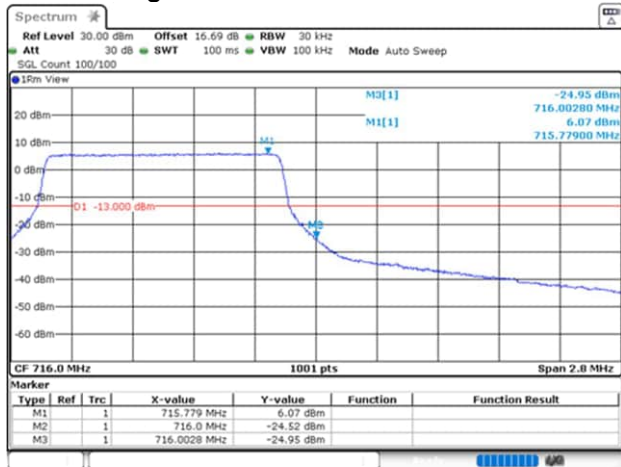
16QAM, BW 1.4MHz, RB6-0
Channel: Low



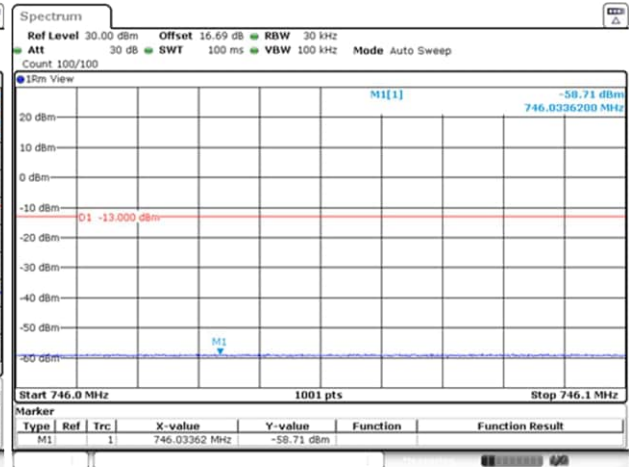
697.9-698.0 MHz



16QAM, BW 1.4MHz, RB6-0
Channel: High

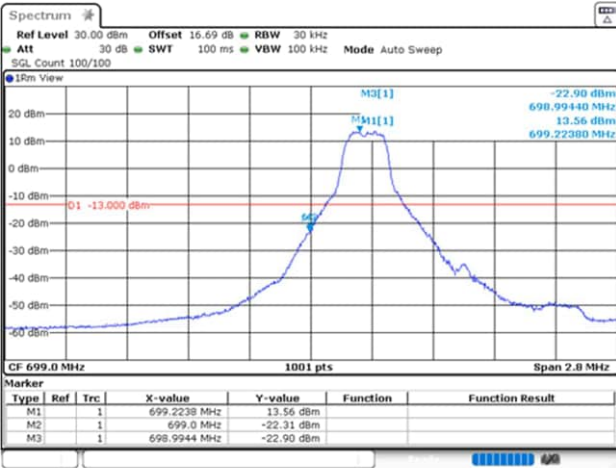


746.0-746.1 MHz

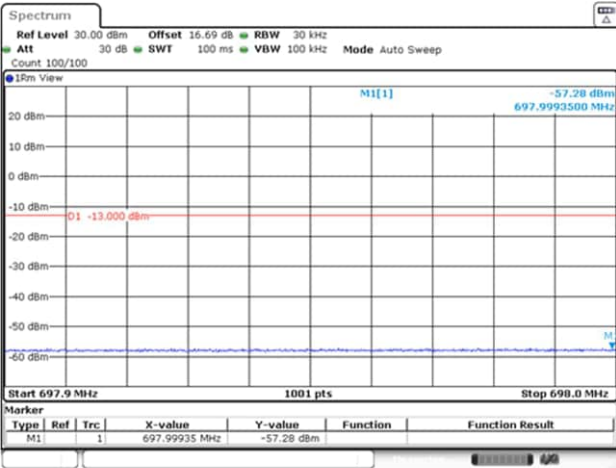


[LTE Band XII]
(Band Edge)

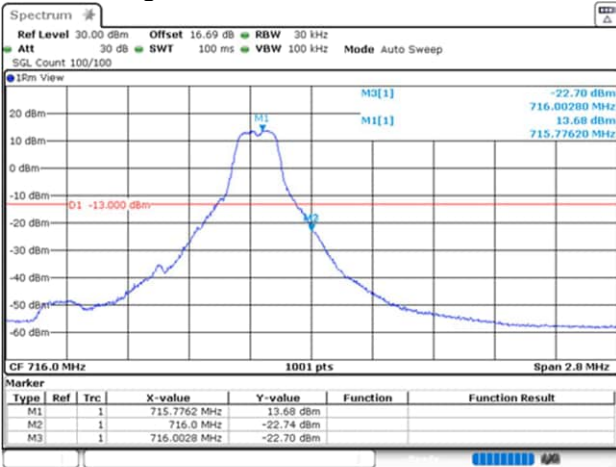
64QAM, BW 1.4MHz, RB1-0
Channel: Low



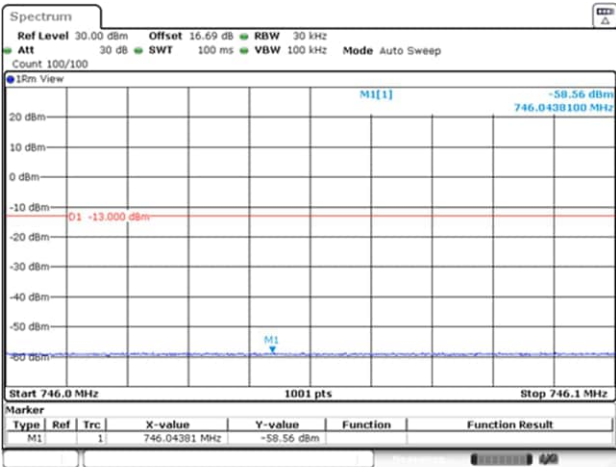
697.9-698.0 MHz



64QAM, BW 1.4MHz, RB1-5
Channel: High

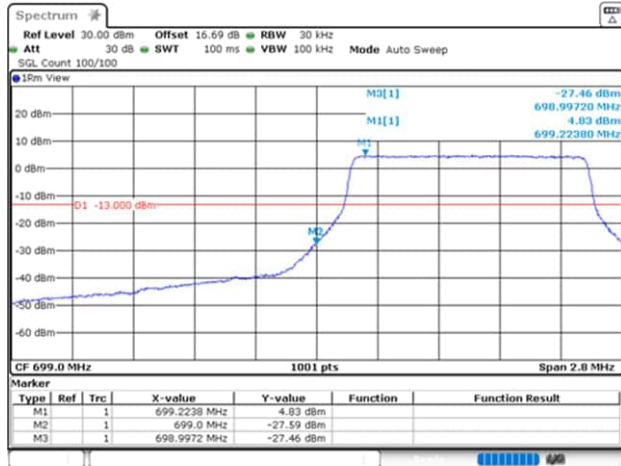


746.0-746.1 MHz

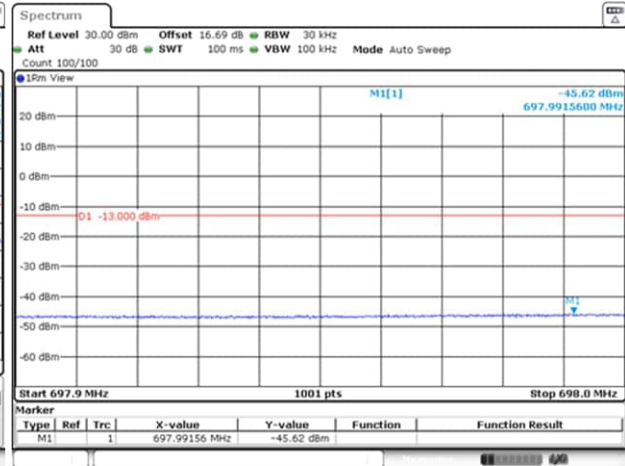


[LTE Band XII]
(Band Edge)

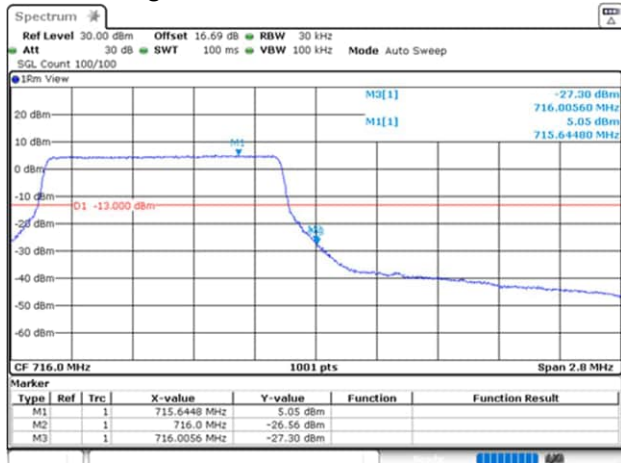
64QAM, BW 1.4MHz, RB6-0
Channel: Low



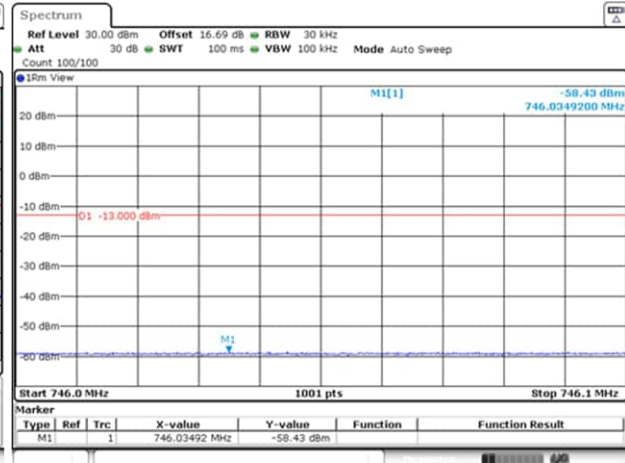
697.9-698.0 MHz



64QAM, BW 1.4MHz, RB6-0
Channel: High

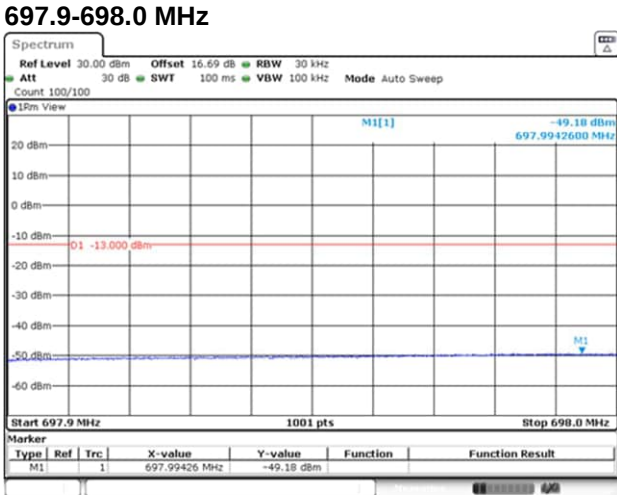
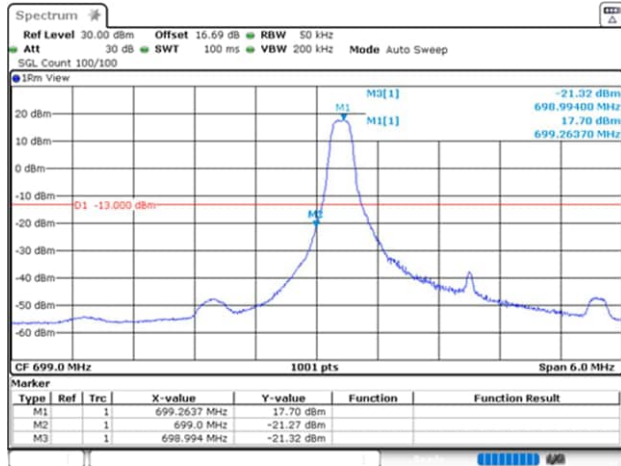


746.0-746.1 MHz

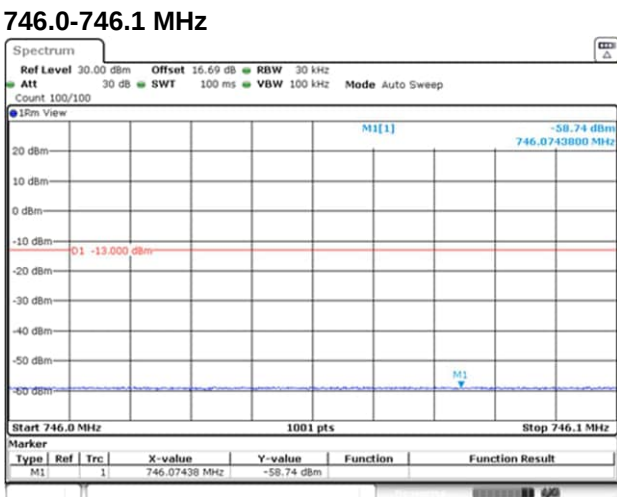
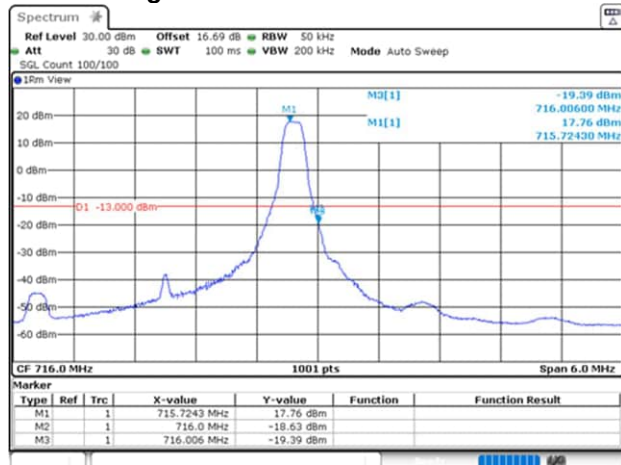


[LTE Band XII]
(Band Edge)

QPSK, BW 3MHz, RB1-0
Channel: Low



QPSK, BW 3MHz, RB1-14
Channel: High

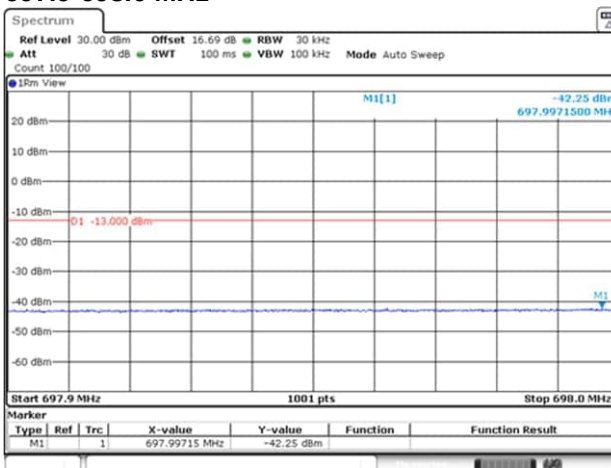
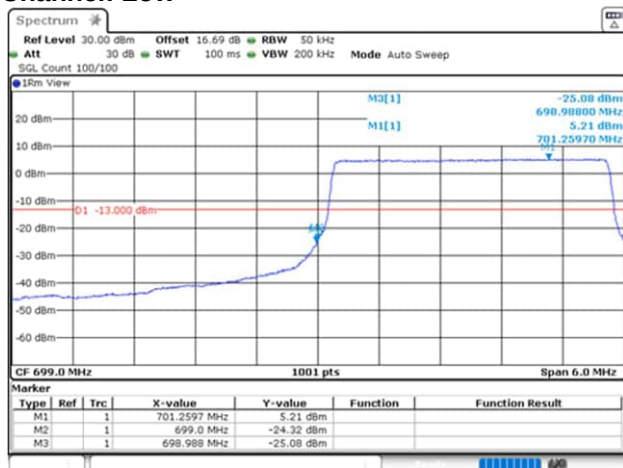


[LTE Band XII] (Band Edge)

QPSK, BW 3MHz, RB15-0

Channel: Low

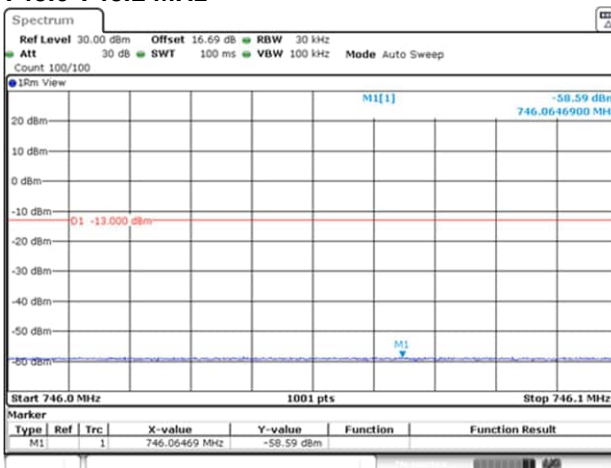
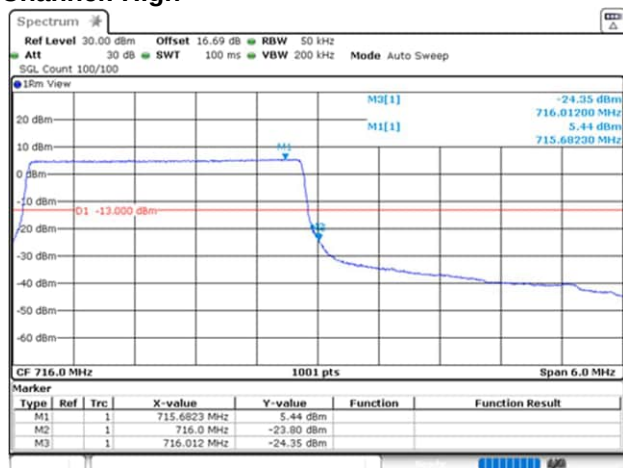
697.9-698.0 MHz



QPSK, BW 3MHz, RB15-0

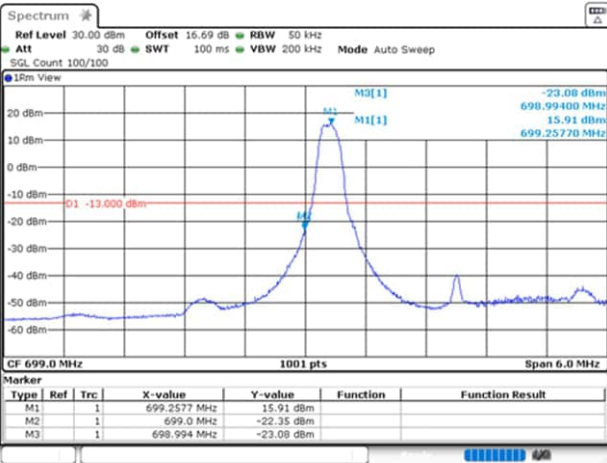
Channel: High

746.0-746.1 MHz

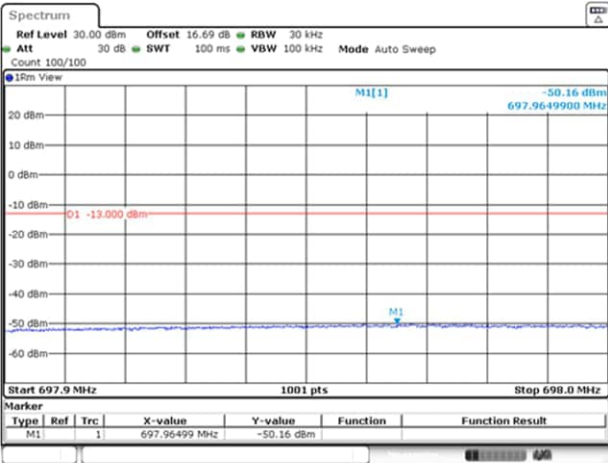


[LTE Band XII]
(Band Edge)

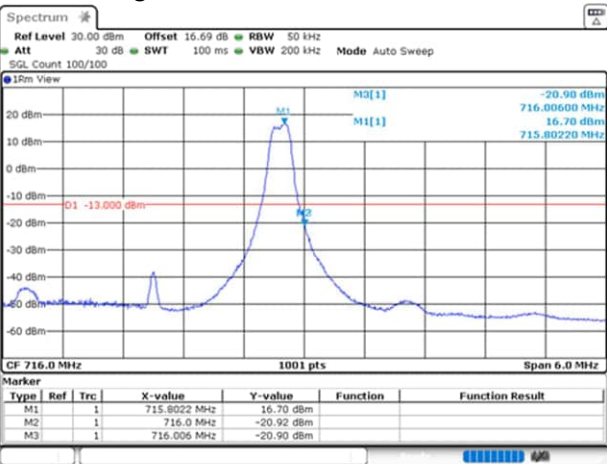
16QAM, BW 3MHz, RB1-0
Channel: Low



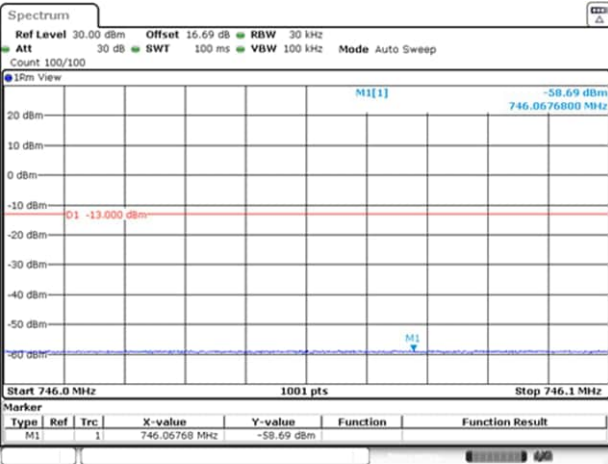
697.9-698.0 MHz



16QAM, BW 3MHz, RB1-14
Channel: High

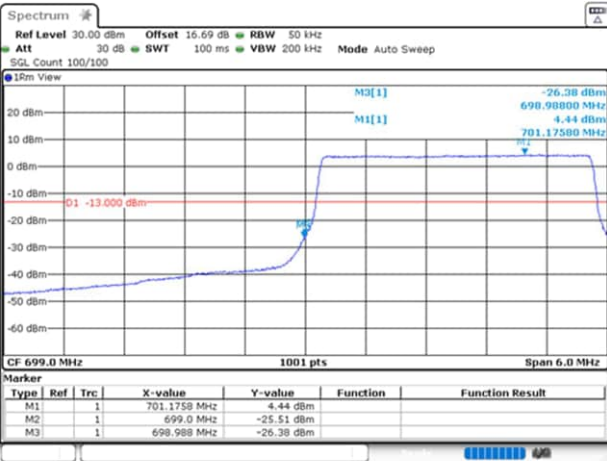


746.0-746.1 MHz

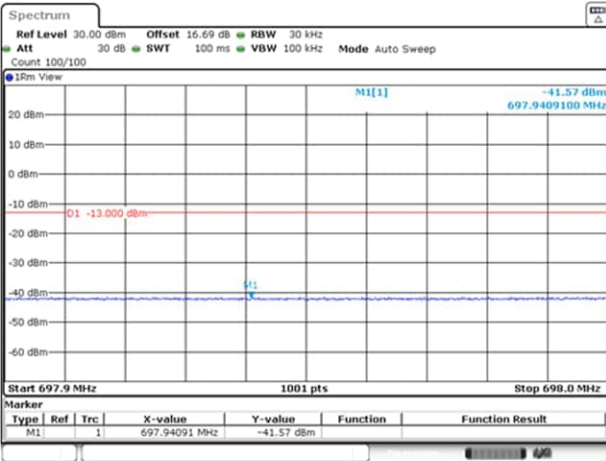


[LTE Band XII]
(Band Edge)

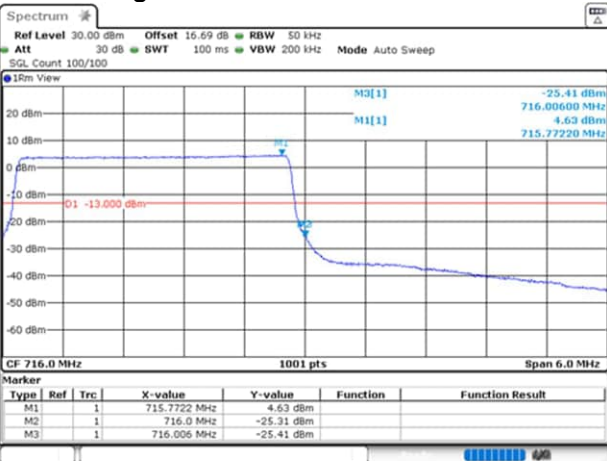
16QAM, BW 3MHz, RB15-0
Channel: Low



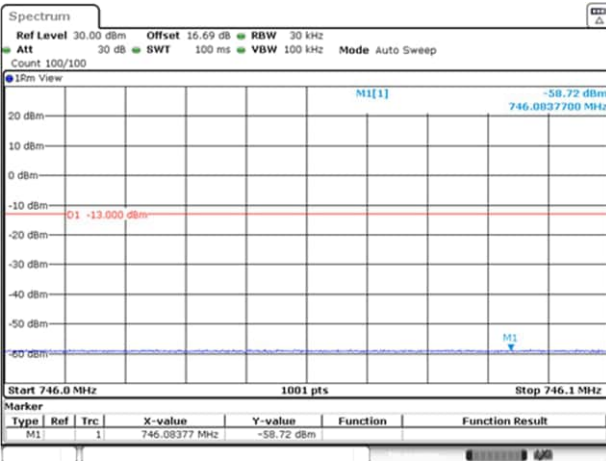
697.9-698.0 MHz



16QAM, BW 3MHz, RB15-0
Channel: High

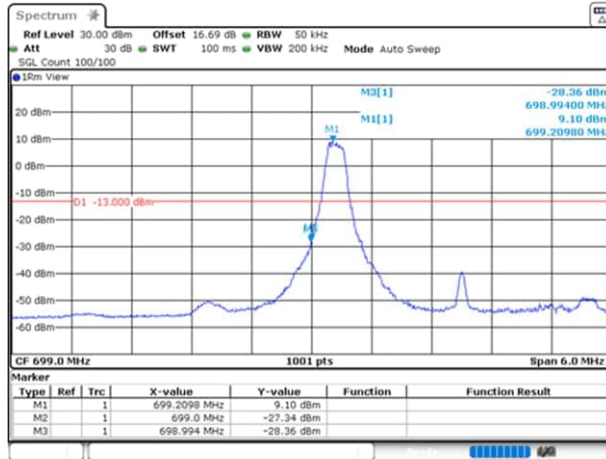


746.0-746.1 MHz

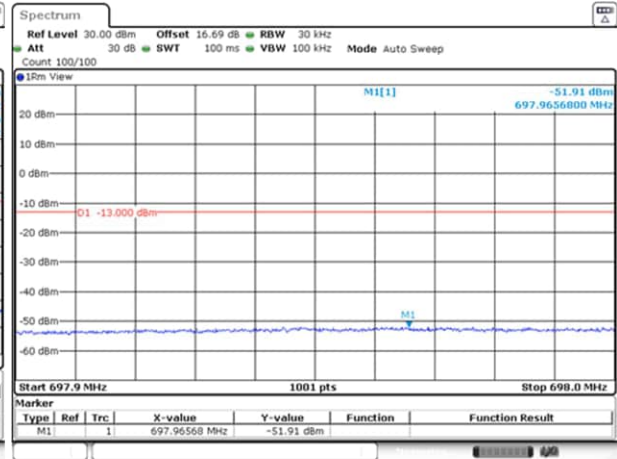


[LTE Band XII]
(Band Edge)

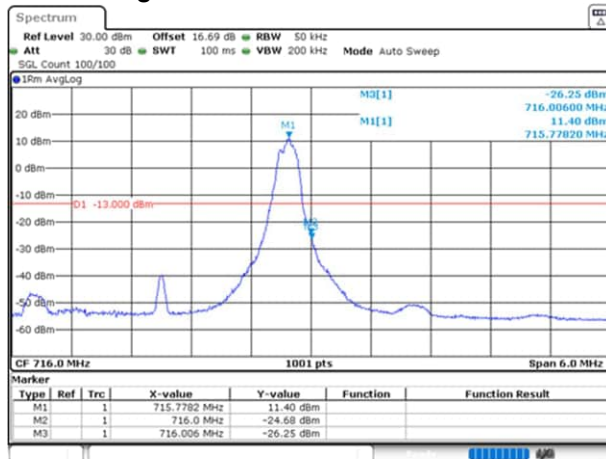
64QAM, BW 3MHz, RB1-0
Channel: Low



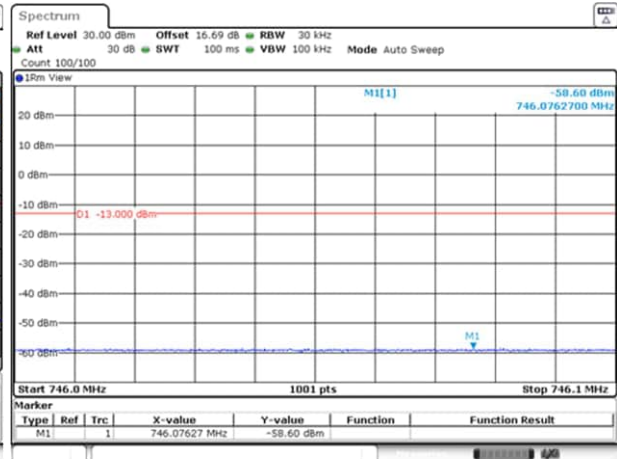
697.9-698.0 MHz



64QAM, BW 3MHz, RB1-14
Channel: High

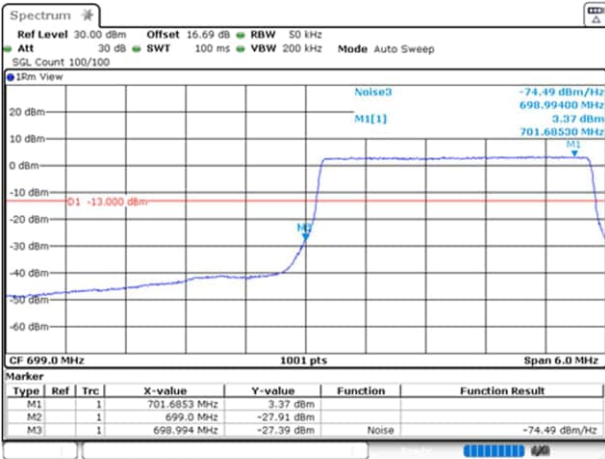


746.0-746.1 MHz

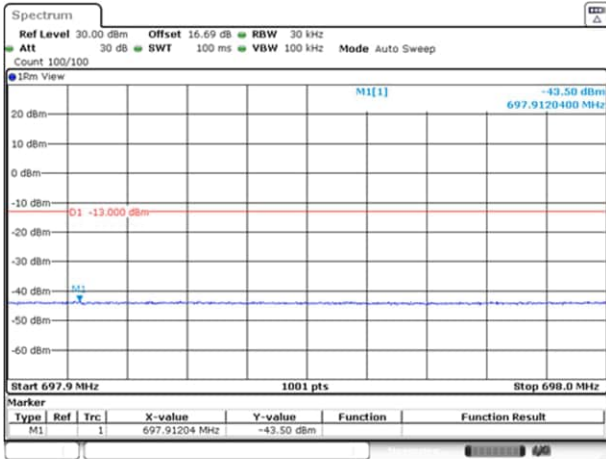


[LTE Band XII]
(Band Edge)

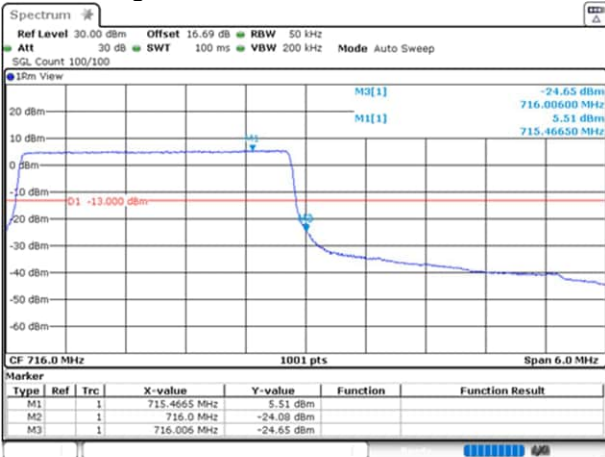
64QAM, BW 3MHz, RB15-0
Channel: Low



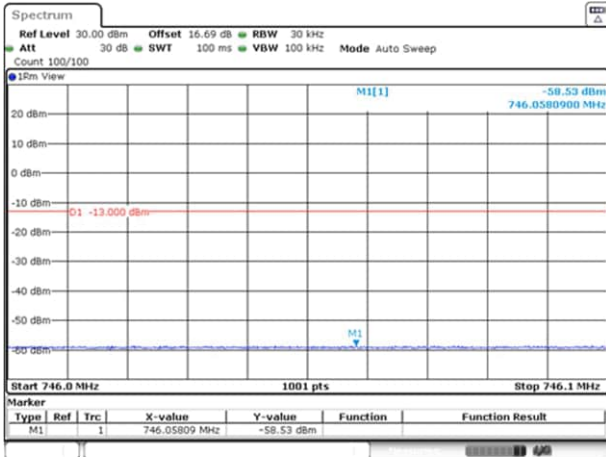
697.9-698.0 MHz



64QAM, BW 3MHz, RB15-0
Channel: High



746.0-746.1 MHz

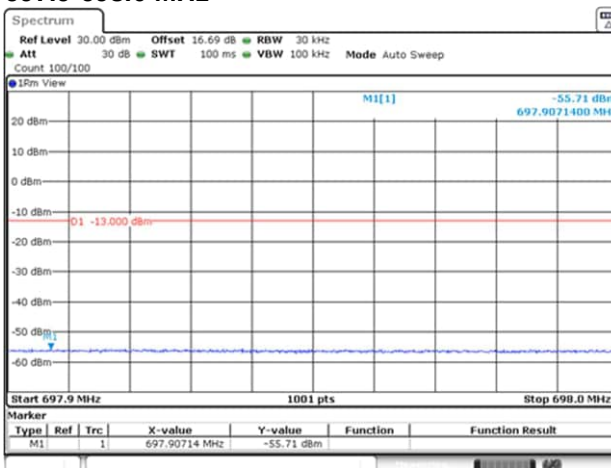
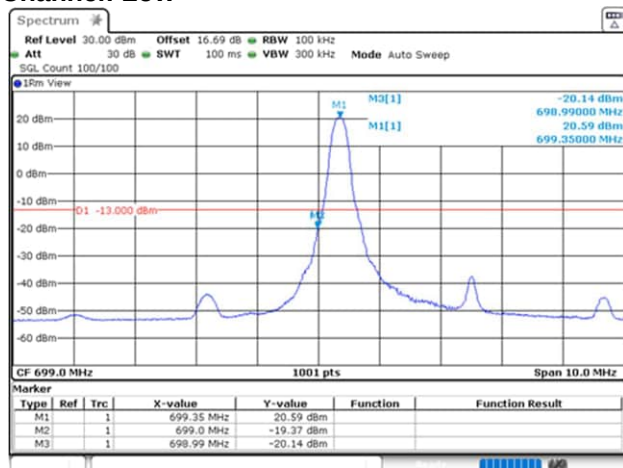


[LTE Band XII] (Band Edge)

QPSK, BW 5MHz, RB1-0

Channel: Low

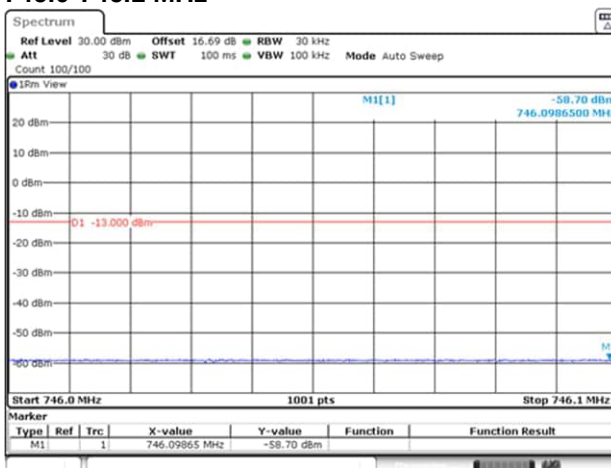
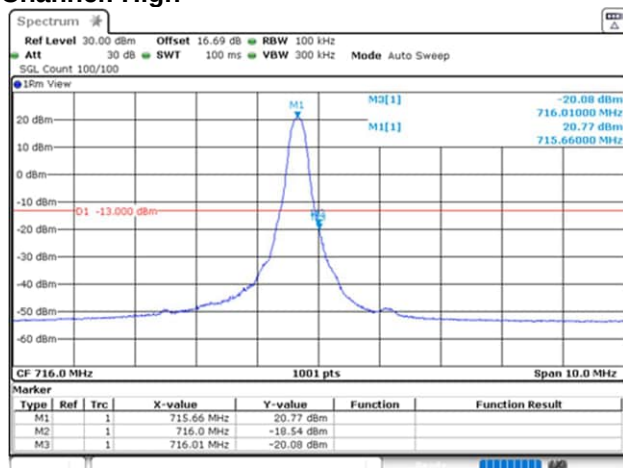
697.9-698.0 MHz



QPSK, BW 5MHz, RB1-24

Channel: High

746.0-746.1 MHz

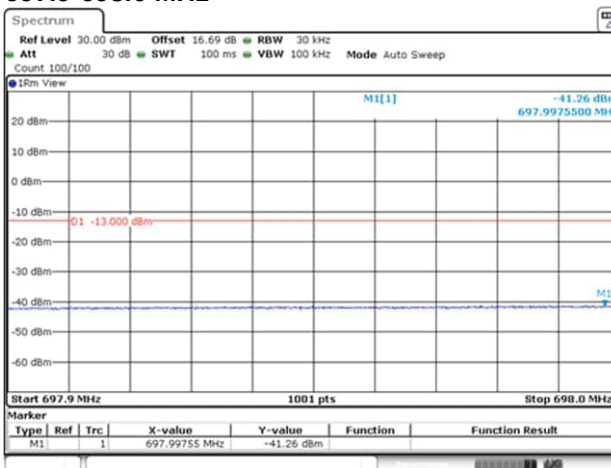
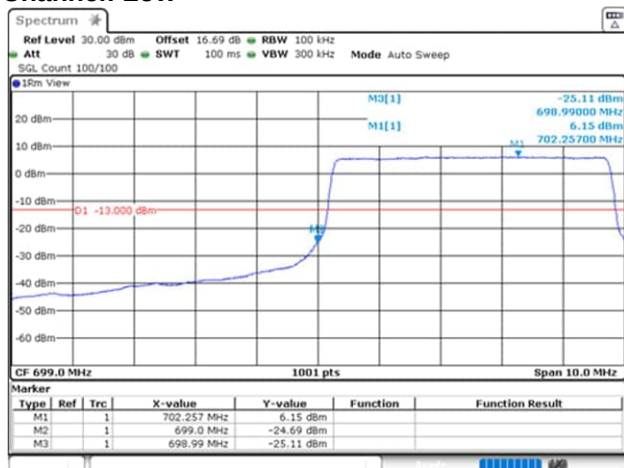


[LTE Band XII] (Band Edge)

QPSK, BW 5MHz, RB25-0

Channel: Low

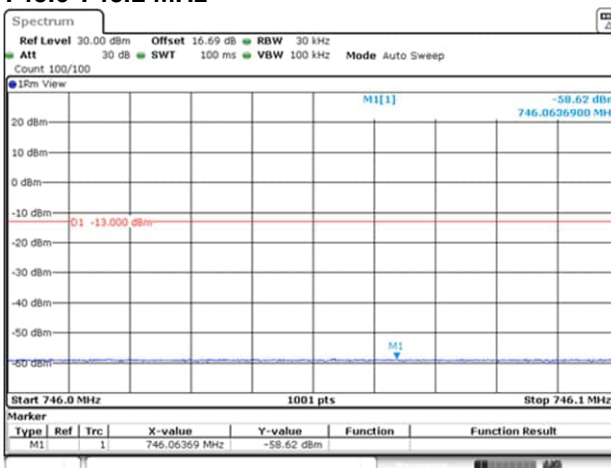
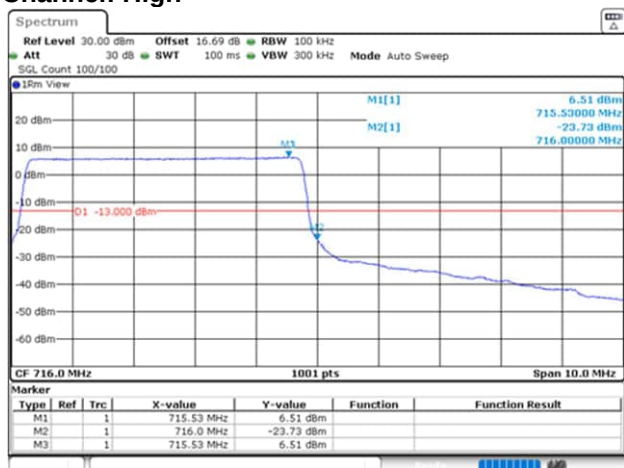
697.9-698.0 MHz



QPSK, BW 5MHz, RB25-0

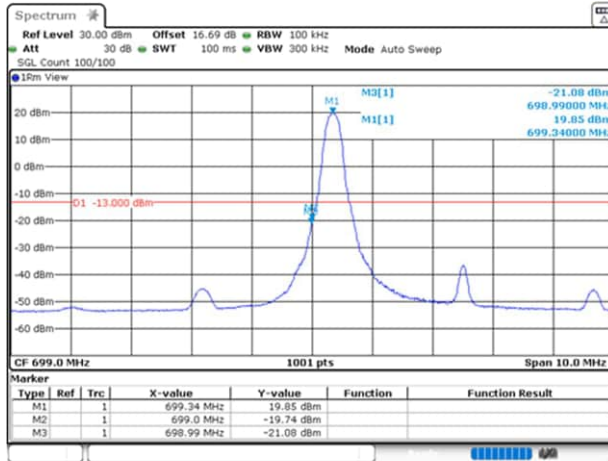
Channel: High

746.0-746.1 MHz

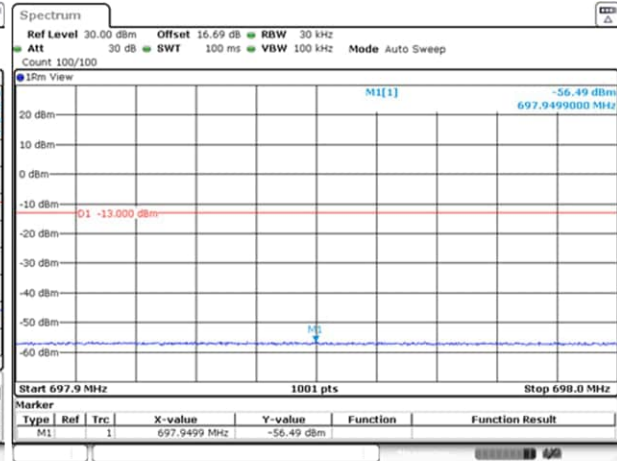


[LTE Band XII]
(Band Edge)

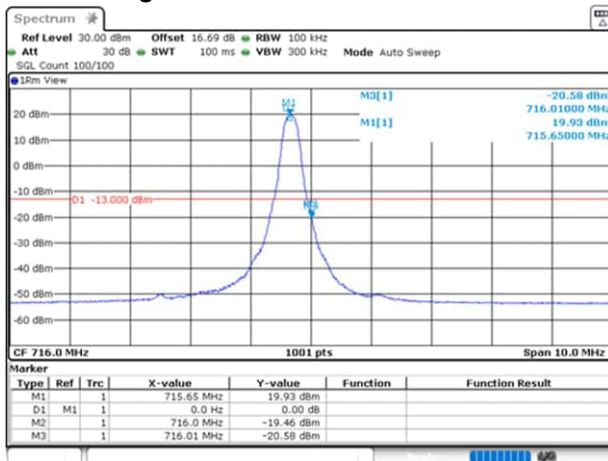
16QAM, BW 5MHz, RB1-0
Channel: Low



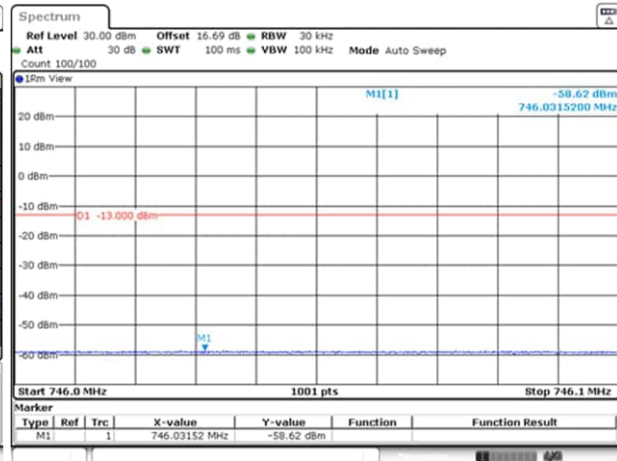
697.9-698.0 MHz



16QAM, BW 5MHz, RB1-24
Channel: High

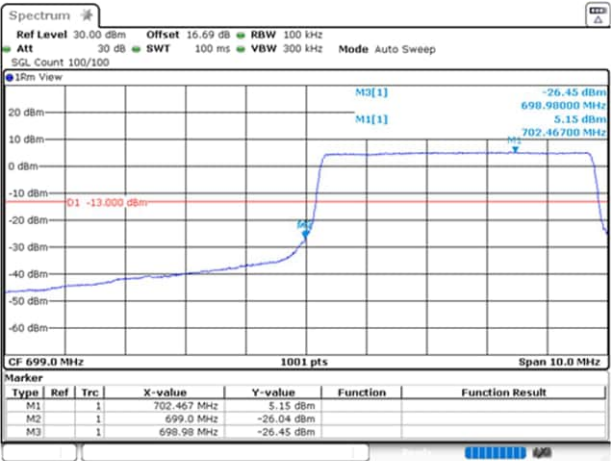


746.0-746.1 MHz

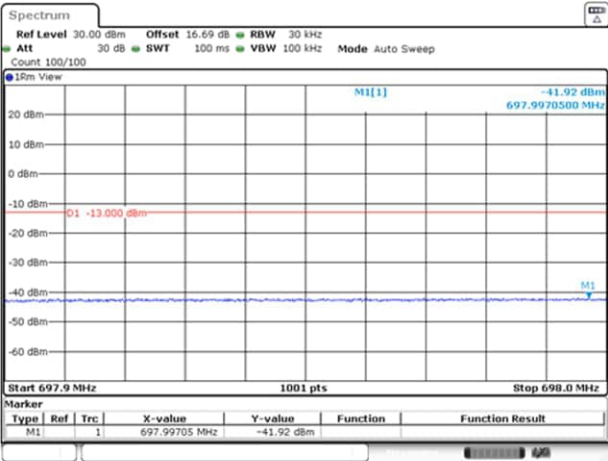


[LTE Band XII]
(Band Edge)

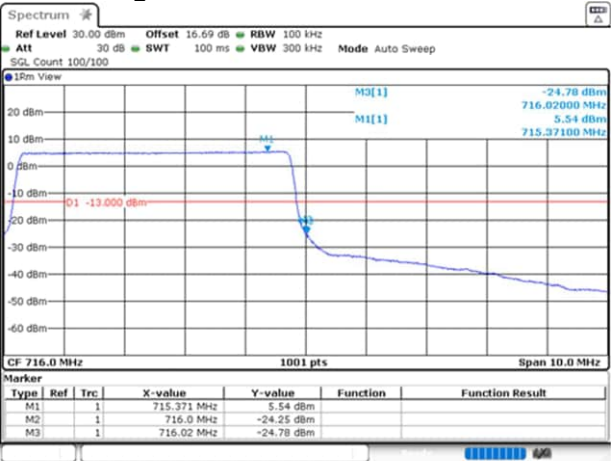
16QAM, BW 5MHz, RB25-0
Channel: Low



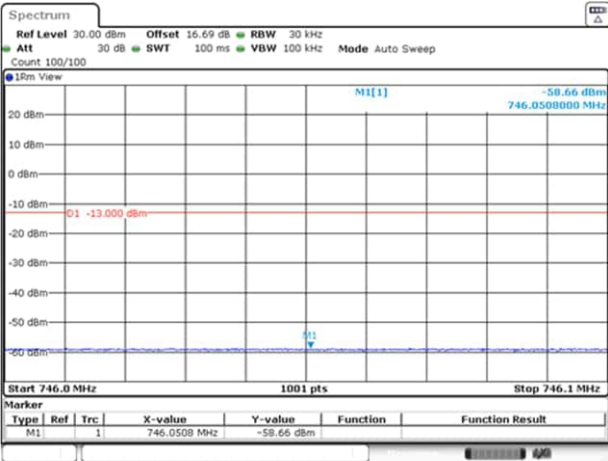
697.9-698.0 MHz



16QAM, BW 5MHz, RB25-0
Channel: High

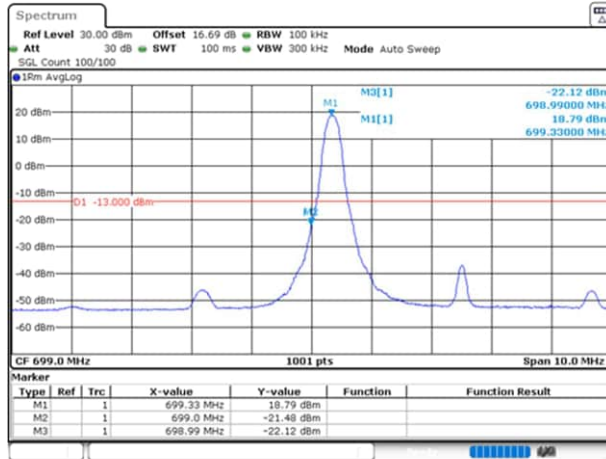


746.0-746.1 MHz

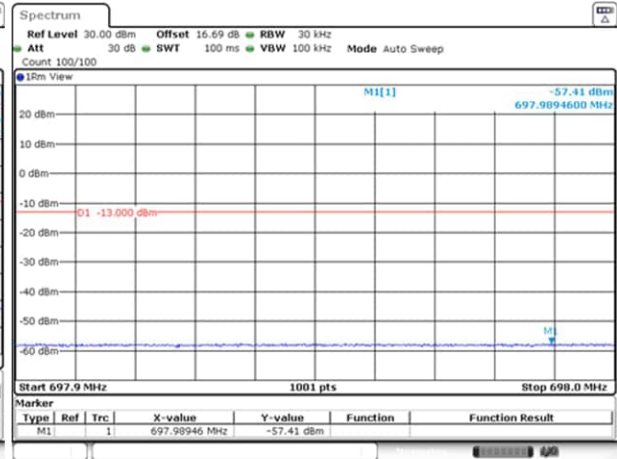


[LTE Band XII]
(Band Edge)

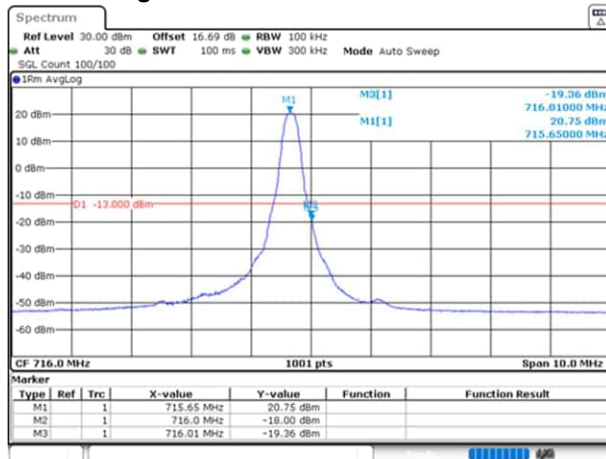
64QAM, BW 5MHz, RB1-0
Channel: Low



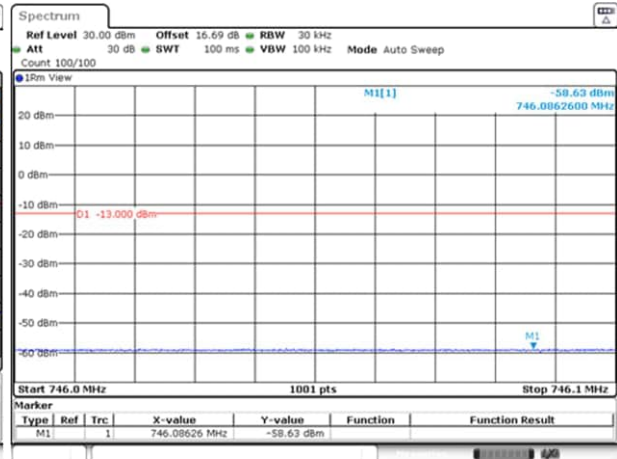
697.9-698.0 MHz



64QAM, BW 5MHz, RB1-24
Channel: High

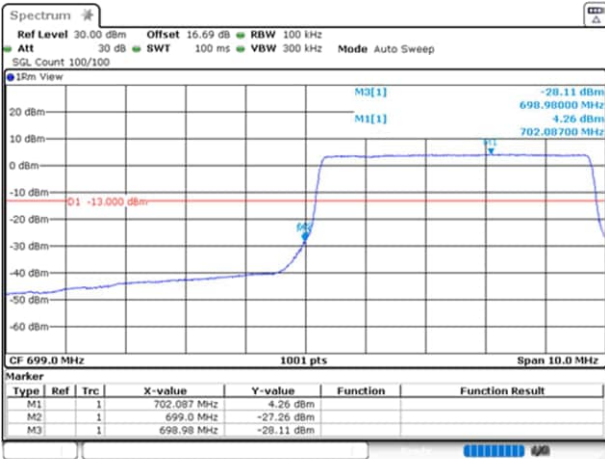


746.0-746.1 MHz

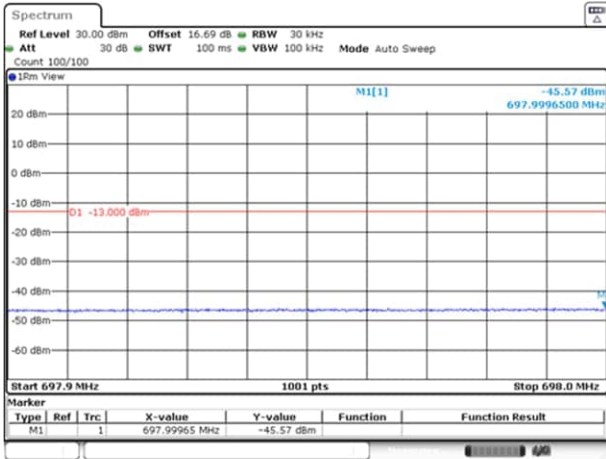


[LTE Band XII]
(Band Edge)

64QAM, BW 5MHz, RB25-0
Channel: Low



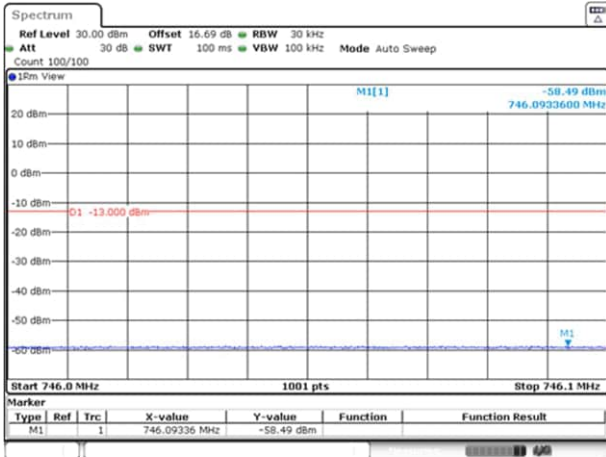
697.9-698.0 MHz



64QAM, BW 5MHz, RB25-0
Channel: High

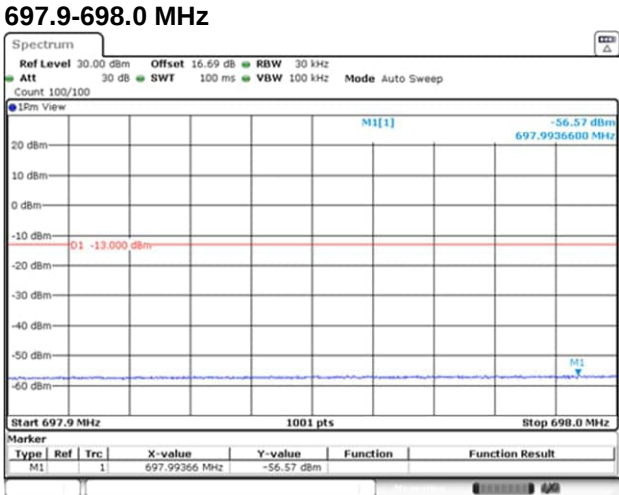
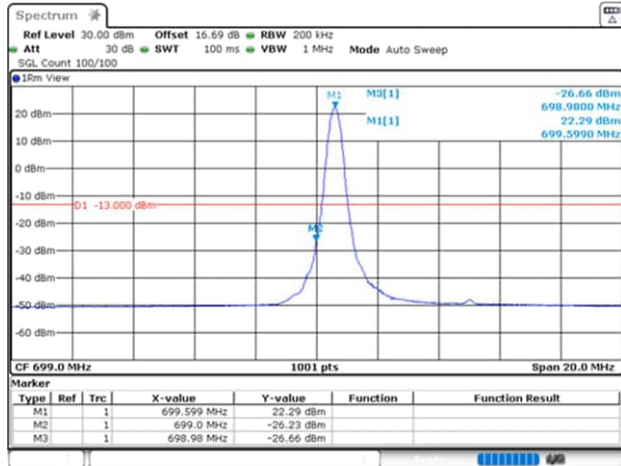


746.0-746.1 MHz

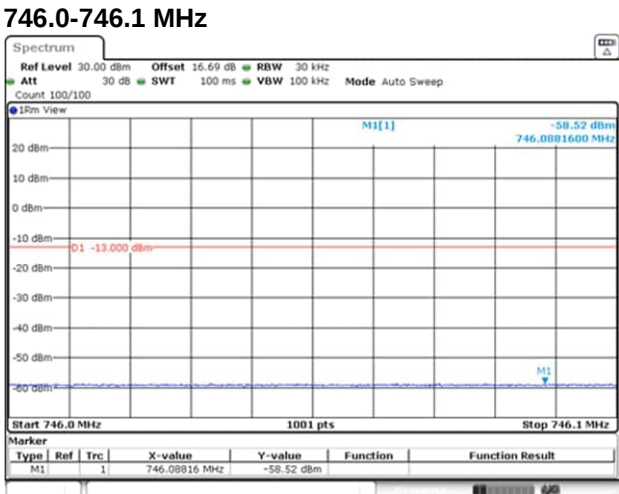
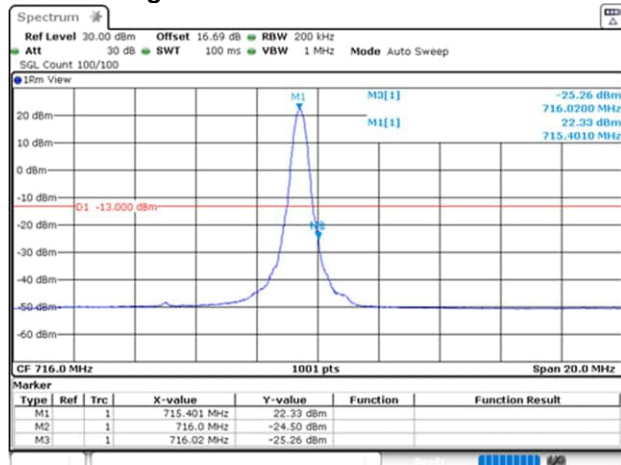


[LTE Band XII]
(Band Edge)

QPSK, BW 10MHz, RB1-0
Channel: Low



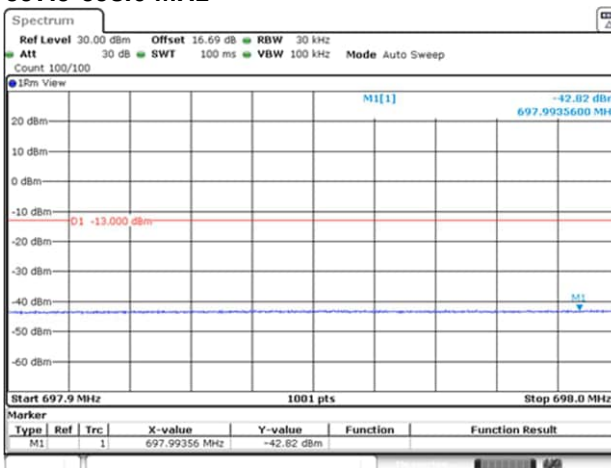
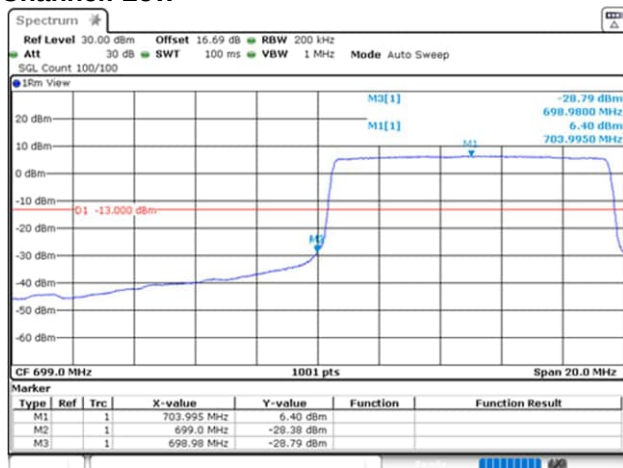
QPSK, BW 10MHz, RB1-49
Channel: High



[LTE Band XII] (Band Edge)

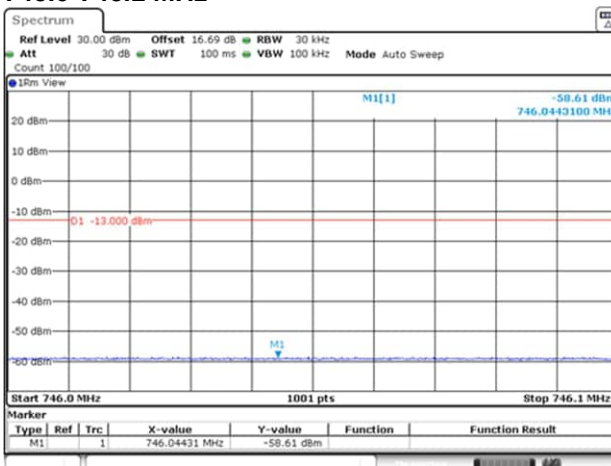
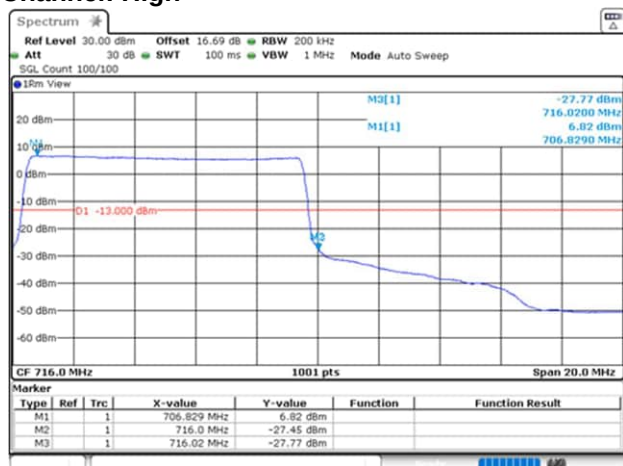
QPSK, BW 10MHz, RB50-0
Channel: Low

697.9-698.0 MHz



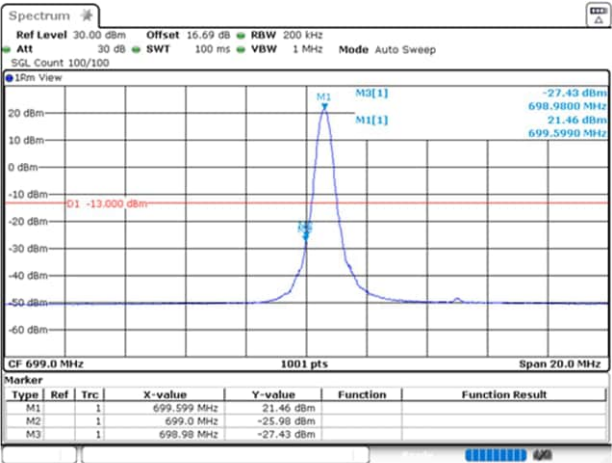
QPSK, BW 10MHz, RB50-0
Channel: High

746.0-746.1 MHz

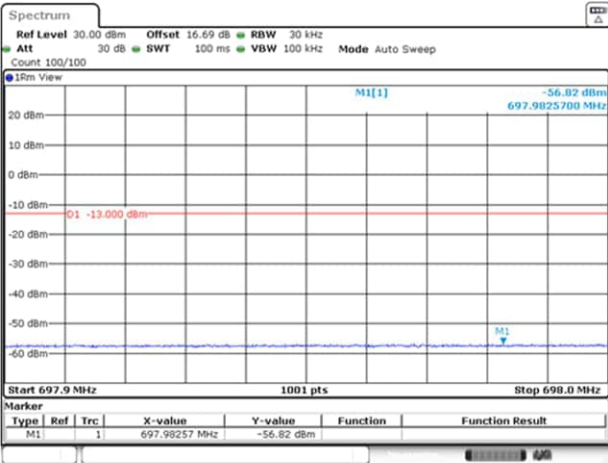


[LTE Band XII]
(Band Edge)

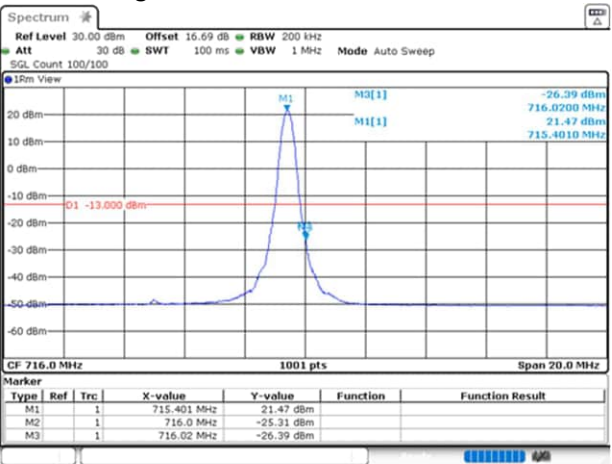
16QAM, BW 10MHz, RB1-0
Channel: Low



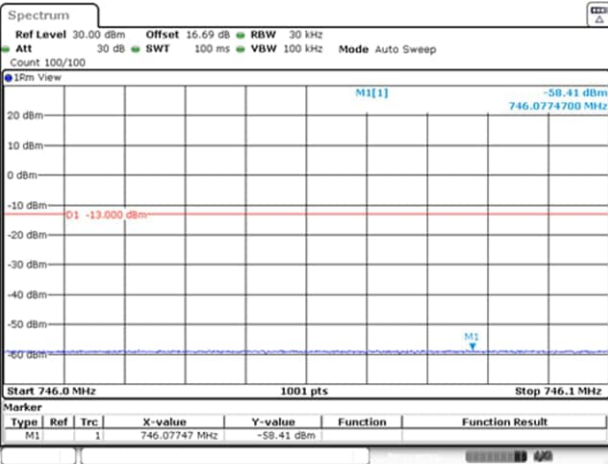
697.9-698.0 MHz



16QAM, BW 10MHz, RB1-49
Channel: High



746.0-746.1 MHz

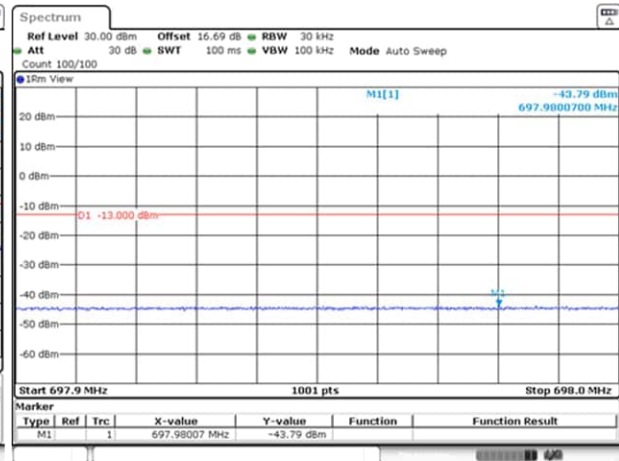
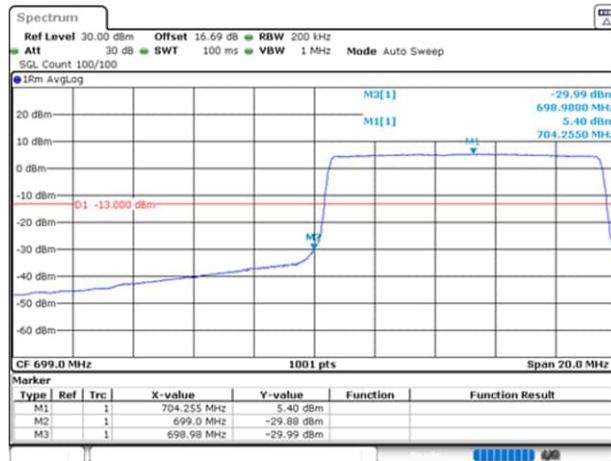


[LTE Band XII] (Band Edge)

16QAM, BW 10MHz, RB50-0

Channel: Low

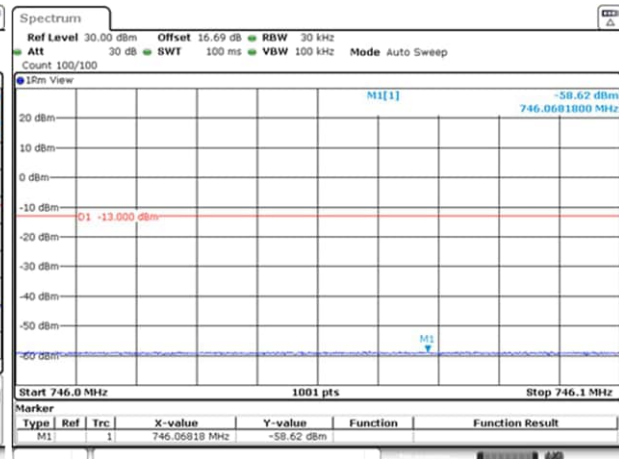
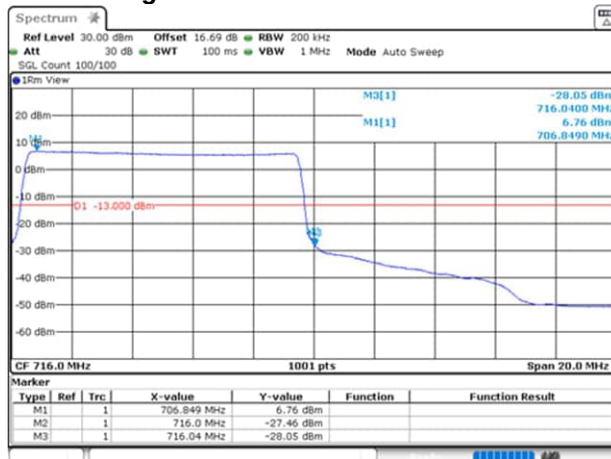
697.9-698.0 MHz



16QAM, BW 10MHz, RB50-0

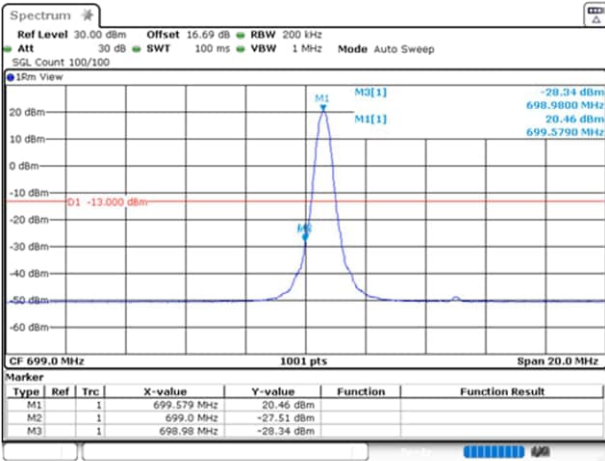
Channel: High

746.0-746.1 MHz

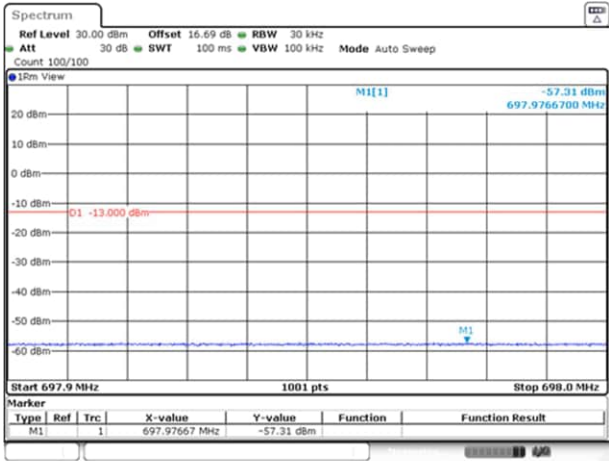


[LTE Band XII]
(Band Edge)

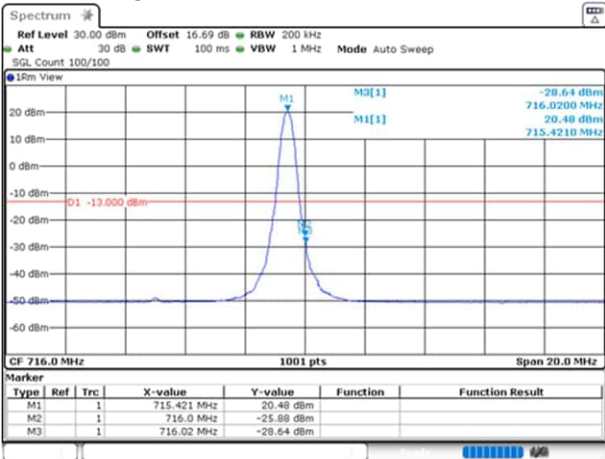
64QAM, BW 10MHz, RB1-0
Channel: Low



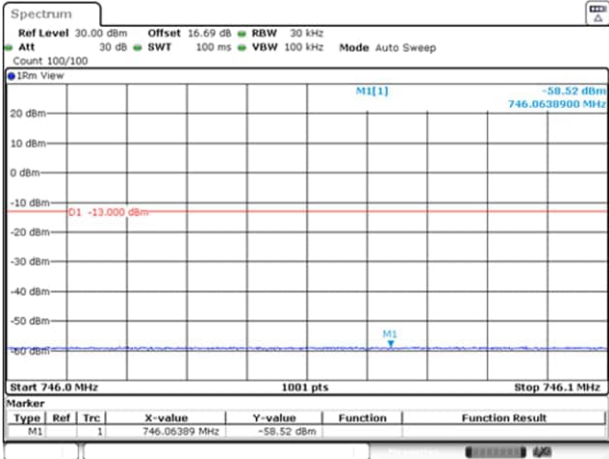
697.9-698.0 MHz



64QAM, BW 10MHz, RB1-49
Channel: High

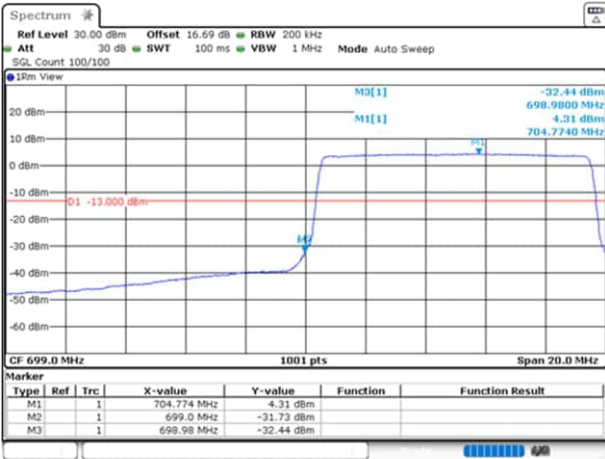


746.0-746.1 MHz

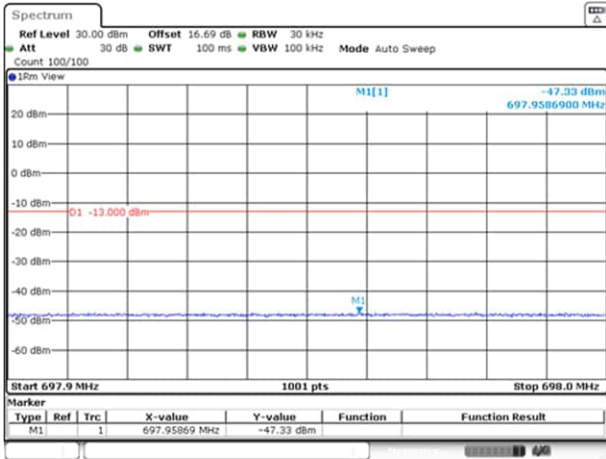


[LTE Band XII]
(Band Edge)

64QAM, BW 10MHz, RB50-0
Channel: Low



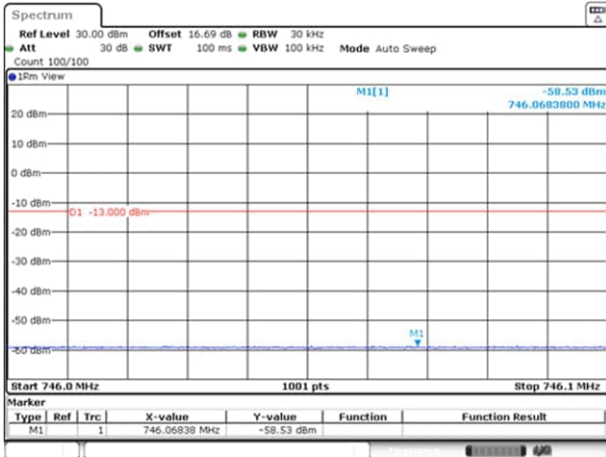
697.9-698.0 MHz



64QAM, BW 10MHz, RB50-0
Channel: High



746.0-746.1 MHz



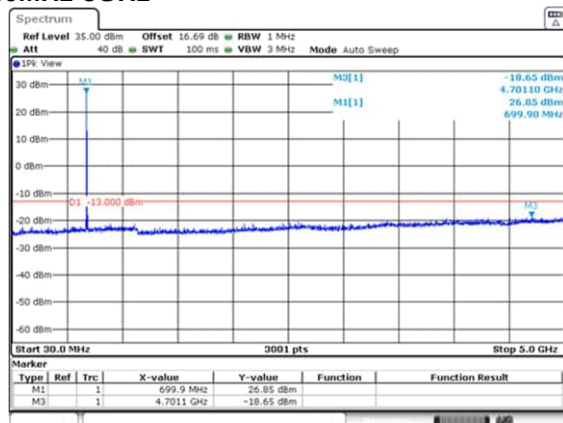
[LTE Band XII] (Spurious Emissions)

Note: Conducted spurious test was measured in the worst case of Effective Radiated Power.

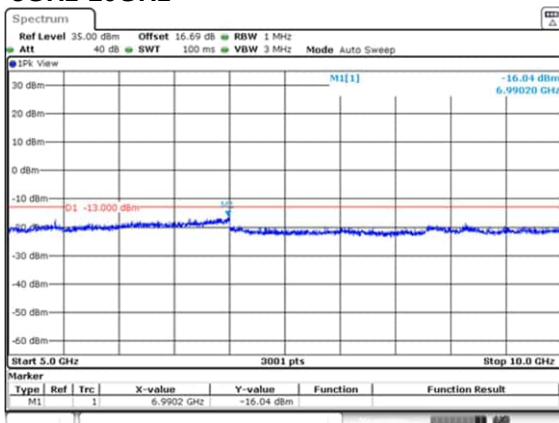
QPSK, BW 10MHz, RB 1-0

Channel: Low

30MHz-5GHz

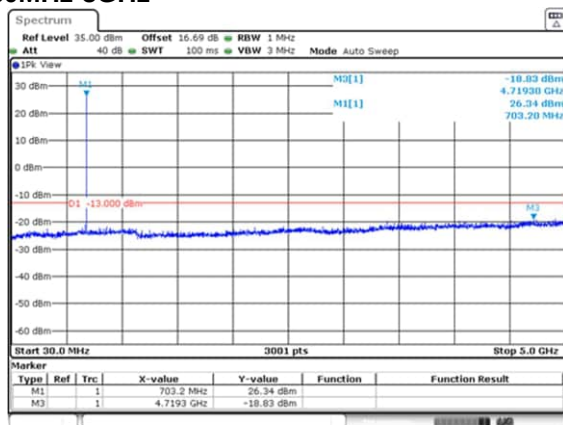


5GHz-10GHz

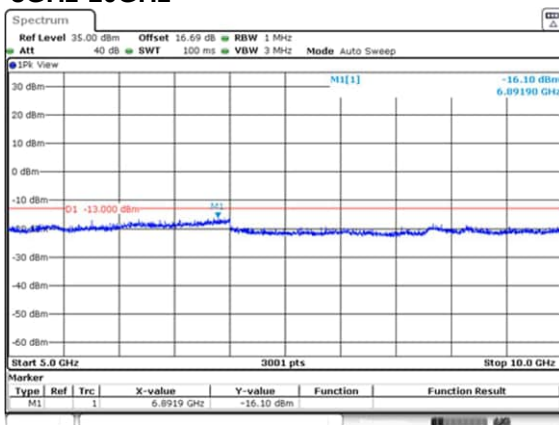


Channel: Middle

30MHz-5GHz

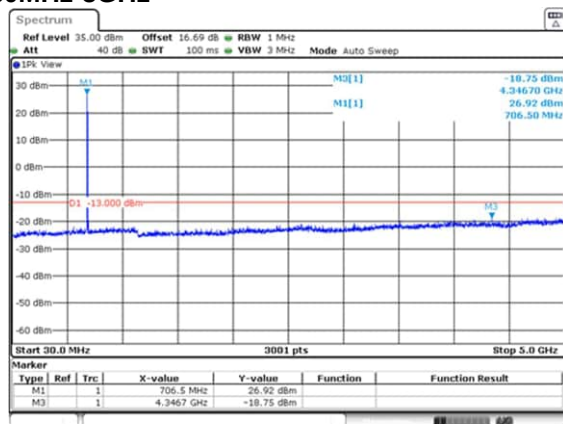


5GHz-10GHz

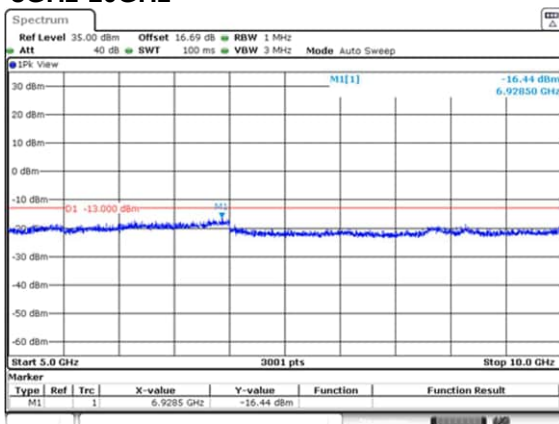


Channel: High

30MHz-5GHz

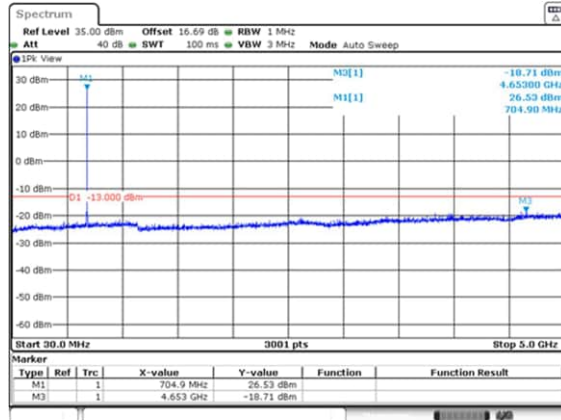


5GHz-10GHz

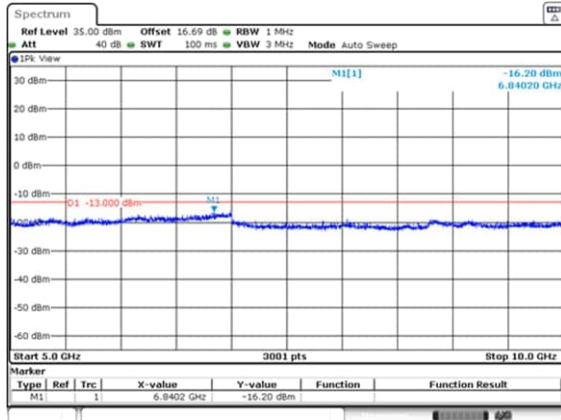


QPSK, BW 10MHz, RB 1-25
Channel: Low

30MHz-5GHz

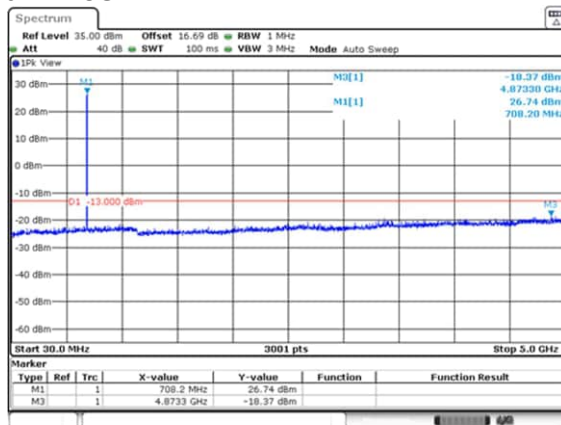


5GHz-10GHz

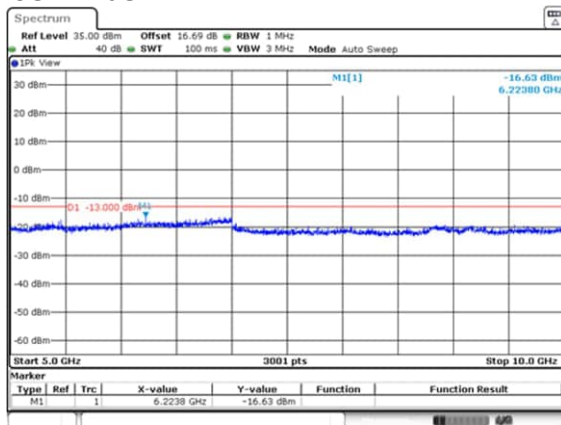


Channel: Middle

30MHz-5GHz

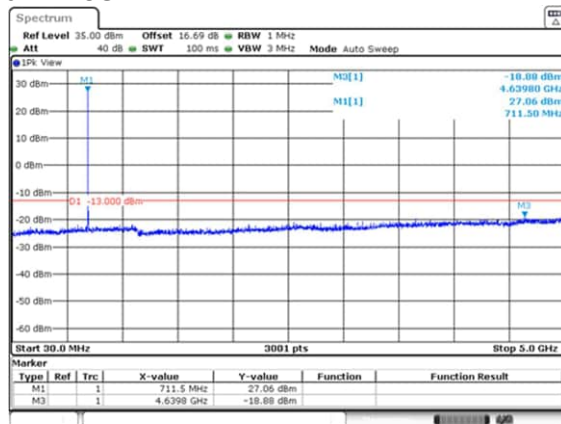


5GHz-10GHz

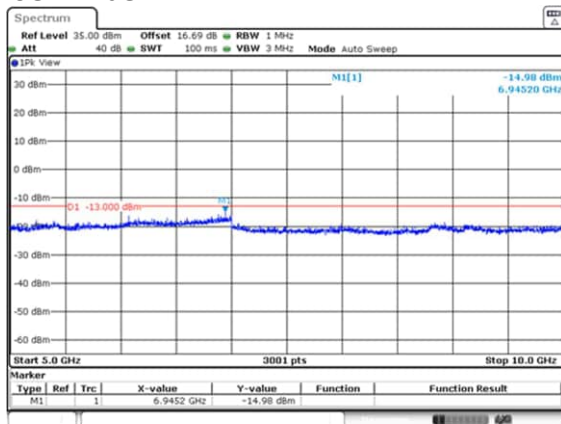


Channel: High

30MHz-5GHz



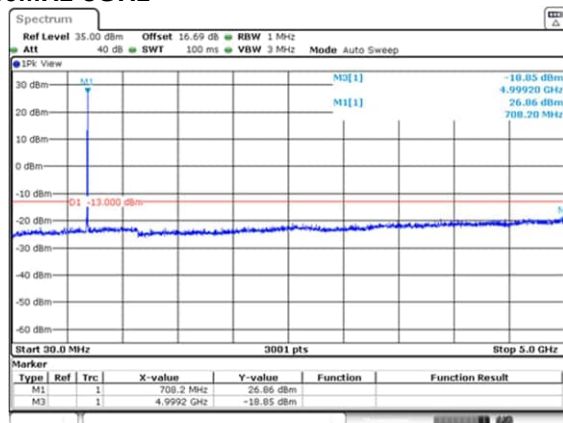
5GHz-10GHz



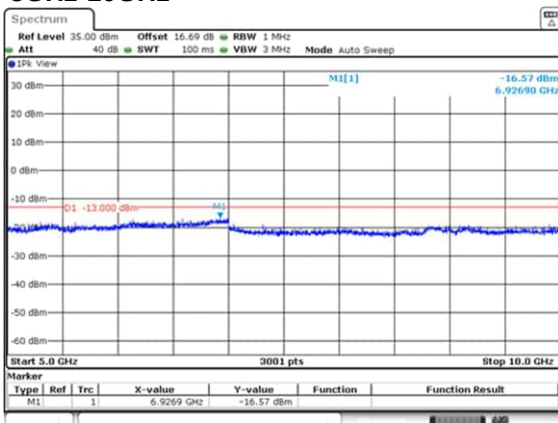
QPSK, BW 10MHz, RB 1-49

Channel: Low

30MHz-5GHz

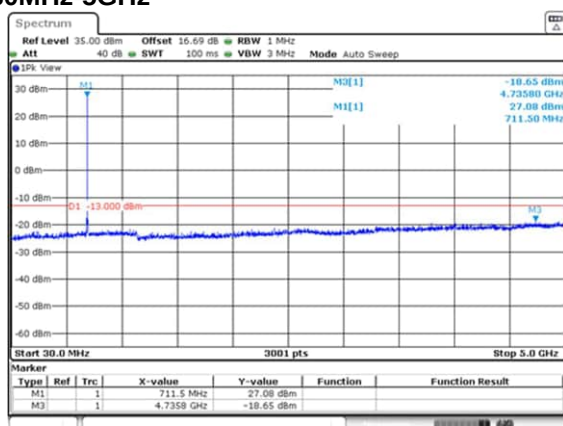


5GHz-10GHz

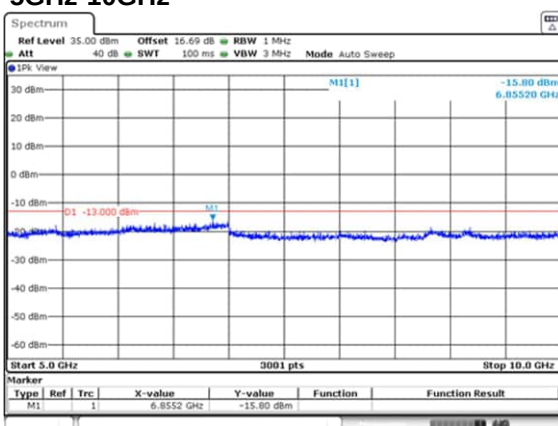


Channel: Middle

30MHz-5GHz

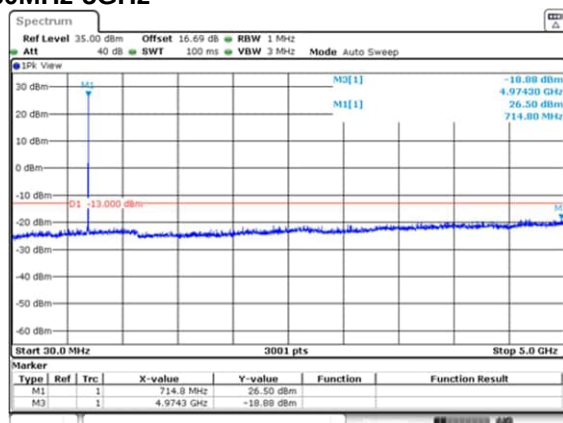


5GHz-10GHz

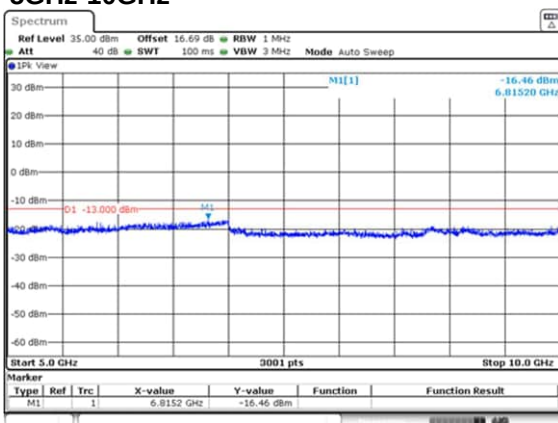


Channel: High

30MHz-5GHz



5GHz-10GHz



4.5 Radiated Emissions and Harmonic Emissions

4.5.1 Measurement procedure

[FCC 27.53, 2.1053]

<Step 1>

The EUT and support equipment are placed on a 1 meter x 1 meter surface, 0.8 meter height (Below 1GHz) or 0.6 meter x 0.6 meter surface, 1.5 meter height (Above 1GHz) styrene foam table. Radiated emission measurements are performed at 3 meter distance with the broadband antenna (Biconical antenna, Log periodic antenna and double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1 to 4 meters and stopped at height producing the maximum emission.

The bandwidth of the spectrum analyzer is set to 1 MHz. The turntable is rotated by 360 degrees and stopped at azimuth of producing the maximum emission. The frequency is investigated up to 20GHz.

<Step 2>

The substitution antenna is replaced by the transmitter antenna (EUT).

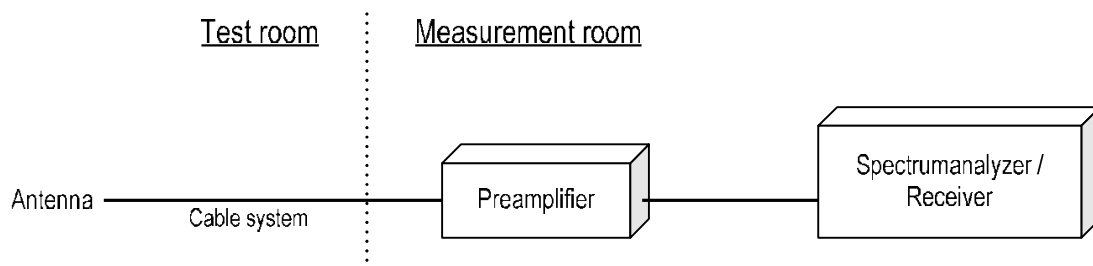
The frequency of the signal generator is adjusted to the measurement frequency.

Level of the signal generator is adjusted to the level that is obtained from step 1, and record the emission level of signal generator.

The spectrum analyzer is set to;

- a) RBW = 100 kHz for below 1GHz and 1MHz for above 1GHz / VBW $\geq 3 \times$ RBW
- b) Detector = Peak
- c) Trace mode = Max hold
- d) Sweep time = auto-couple

- Test configuration



4.5.2 Calculation method

Result (EIRP) = Ant. Input - Cable loss + Antenna Gain

Margin = Limit – Result (EIRP)

Example:

Limit @ 1420 MHz : -13.0 dBm

Ant. Input = -55.6 dBm Cable loss = 1.0dB Ant. Gain = 5.9 dBi

Result = -55.6 - 1.0 + 5.9 = -50.7 dBm

Margin = -13.0 - (-50.7) = 37.7 dB

4.5.3 Limit

-13 dBm or less

4.5.4 Test data

Date	: 23-October-2025		
Temperature	: 22.6 [°C]		
Humidity	: 34.4 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Taiki Watanabe</u>
Date	: 24-October-2025		
Temperature	: 21.9 [°C]		
Humidity	: 33.5 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Tadahiro Seino</u>
Date	: 20-November-2025		
Temperature	: 21.0 [°C]		
Humidity	: 30.6 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Chiaki Kanno</u>

**[LTE Band XII]
QPSK, BW 1.4MHz
Channel: 23017**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1399.4	-59.2	-54.5	1.0	4.0	-51.4	-13.0	38.4

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-58.8	-54.4	1.0	4.4	-51.0	-13.0	38.0

Channel: 23173

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1430.6	-58.5	-54.5	1.0	4.8	-50.7	-13.0	37.7

**16QAM, BW 1.4MHz
Channel: 23017**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1399.4	-59.3	-54.6	1.0	4.0	-51.5	-13.0	38.5

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.2	-54.8	1.0	4.4	-51.4	-13.0	38.4

Channel: 23173

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1430.6	-59.1	-55.1	1.0	4.8	-51.3	-13.0	38.3

**64QAM, BW 1.4MHz
Channel: 23017**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1399.4	-59.5	-54.8	1.0	4.0	-51.7	-13.0	38.7

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.5	-55.1	1.0	4.4	-51.7	-13.0	38.7

Channel: 23173

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1430.6	-59.3	-55.3	1.0	4.8	-51.5	-13.0	38.5

QPSK, BW 3MHz**Channel: 23025**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1401.0	-58.6	-53.8	1.0	4.1	-50.7	-13.0	37.7

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-58.8	-54.4	1.0	4.4	-51.0	-13.0	38.0

Channel: 23165

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1429.0	-59.0	-54.9	1.0	4.8	-51.1	-13.0	38.1

16QAM, BW 3MHz**Channel: 23025**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1401.0	-59.1	-54.3	1.0	4.1	-51.2	-13.0	38.2

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-58.9	-54.5	1.0	4.4	-51.1	-13.0	38.1

Channel: 23165

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1429.0	-59.3	-55.2	1.0	4.8	-51.4	-13.0	38.4

64QAM, BW 3MHz**Channel: 23025**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1401.0	-59.3	-54.5	1.0	4.1	-51.4	-13.0	38.4

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.2	-54.8	1.0	4.4	-51.4	-13.0	38.4

Channel: 23165

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1429.0	-59.6	-55.5	1.0	4.8	-51.7	-13.0	38.7

QPSK, BW 5MHz**Channel: 23035**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1403.0	-59.1	-54.4	1.0	4.1	-51.3	-13.0	38.3

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-58.9	-54.5	1.0	4.4	-51.1	-13.0	38.1

Channel: 23155

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1427.0	-58.6	-54.3	1.0	4.7	-50.6	-13.0	37.6

16QAM, BW 5MHz**Channel: 23035**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1403.0	-59.1	-54.4	1.0	4.1	-51.3	-13.0	38.3

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.3	-54.9	1.0	4.4	-51.5	-13.0	38.5

Channel: 23155

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1427.0	-59.0	-54.7	1.0	4.7	-51.0	-13.0	38.0

64QAM, BW 5MHz**Channel: 23035**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1403.0	-59.2	-54.5	1.0	4.1	-51.4	-13.0	38.4

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.3	-54.9	1.0	4.4	-51.5	-13.0	38.5

Channel: 23155

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1427.0	-59.0	-54.7	1.0	4.7	-51.0	-13.0	38.0

QPSK, BW 10MHz**Channel: 23060**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1408.0	-59.0	-54.1	1.0	4.2	-50.9	-13.0	37.9

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-58.7	-54.3	1.0	4.4	-50.9	-13.0	37.9

Channel: 23130

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1422.0	-58.9	-54.5	1.0	4.6	-50.9	-13.0	37.9

16QAM, BW 10MHz**Channel: 23060**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1408.0	-59.2	-54.6	1.0	4.2	-51.4	-13.0	38.4

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.1	-54.7	1.0	4.4	-51.3	-13.0	38.3

Channel: 23130

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1422.0	-59.2	-54.8	1.0	4.6	-51.2	-13.0	38.2

64QAM, BW 10MHz**Channel: 23060**

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1408.0	-59.1	-54.5	1.0	4.2	-51.3	-13.0	38.3

Channel: 23095

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1415.0	-59.2	-54.8	1.0	4.4	-51.4	-13.0	38.4

Channel: 23130

H/V	Frequency [MHz]	S.A Reading [dBm]	Ant. Input [dBm]	Cable loss [dB]	Ant.Gain [dBi]	Result [dBm]	Limit [dBm]	Margin [dB]
H	1422.0	-59.2	-54.8	1.0	4.6	-51.2	-13.0	38.2

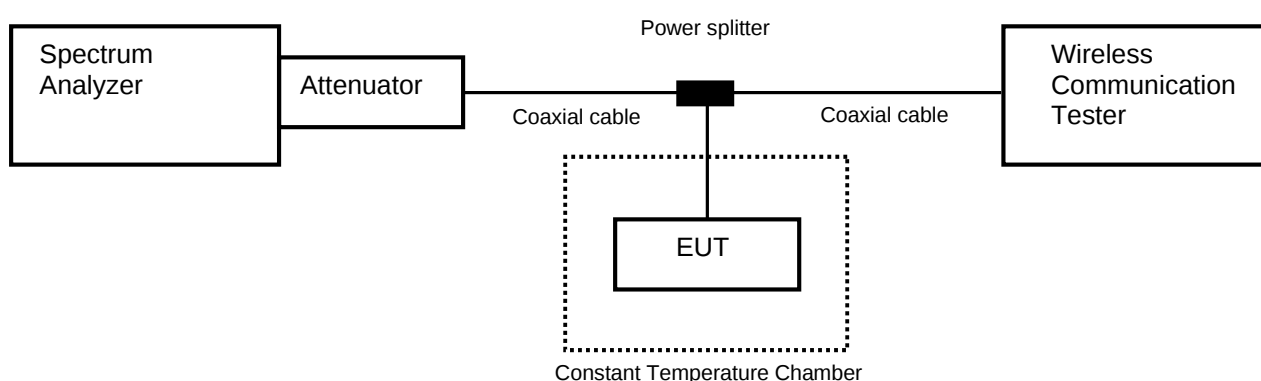
4.6 Frequency Stability

4.6.1 Measurement procedure

[FCC 27.54, 2.1055]

The EUT was placed of an inside of an constant temperature chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10°C intervals and the unit was allowed to stabilize at each measurement. The frequency drift was measured with the normal Temperature and voltage tolerance and it is presented as the ppm unit.

- Test configuration



4.6.2 Limit

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

4.6.3 Measurement result

Date	: 18-November-2025		
Temperature	: 20.0 [°C]		
Humidity	: 51.3 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Kazunori Saito</u>
Date	: 19-November-2025		
Temperature	: 19.4 [°C]		
Humidity	: 47.4 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Kazunori Saito</u>
Date	: 20-November-2025		
Temperature	: 19.8 [°C]		
Humidity	: 48.6 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Kazunori Saito</u>
Date	: 26-November-2025		
Temperature	: 20.5 [°C]		
Humidity	: 48.3 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Kazunori Saito</u>

**[LTE Band XII]
QPSK, BW 10MHz**

Limit[MHz]		699MHz ≤	≤ 716MHz	
Power Supply [V]	Temperature [°C]	Low Frequency [MHz]	High Frequency [MHz]	Result
3.87	25(Ref.)	699.5044955	715.4955045	Pass
	50	699.5044955	715.5354645	Pass
	40	699.5044955	715.4955045	Pass
	30	699.5044955	715.4955045	Pass
	20	699.5044955	715.5154845	Pass
	10	699.5044955	715.4955045	Pass
	0	699.4845155	715.5154845	Pass
	-10	699.5044955	715.4955045	Pass
	-20	699.5044955	715.5154845	Pass
	-30	699.5044955	715.4955045	Pass
3.29	25	699.5044955	715.4955045	Pass
4.45	25	699.5044955	715.4955045	Pass

5 Measurement Uncertainty

The reported measurement uncertainty is based on a value obtained by multiplying standard uncertainty by coverage factor of $k=2$, and a level of confidence becomes 95 %.

Test item	Measurement uncertainty
Conducted emission, AMN (9 kHz – 150 kHz)	± 3.7 dB
Conducted emission, AMN (150 kHz – 30 MHz)	± 3.3 dB
Radiated emission (9kHz – 30 MHz)	± 3.7 dB
Radiated emission (30 MHz – 1000 MHz)	± 5.4 dB
Radiated emission (1 GHz – 6 GHz)	± 5.1 dB
Radiated emission (6 GHz – 18 GHz)	± 4.8 dB
Radiated emission (18 GHz – 40 GHz)	± 6.0 dB
Radio Frequency	$\pm 0.9 \times 10^{-7}$
RF power, conducted	± 0.6 dB
Effective radiated power	± 4.3 dB
Radiated spurious emissions	± 4.4 dB
Adjacent channel power	± 1.5 dB
Bandwidth	± 2.8 %
Temperature	± 0.6 °C
Humidity	± 1.2 %
Voltage (DC)	± 0.4 %
Voltage (AC, <10kHz)	± 0.2 %

Judge	Measured value and standard limit value	
PASS	Standard limit value +Uncertainty -Uncertainty Measured value Even if it takes uncertainty into consideration, a standard limit value is fulfilled.	
	Standard limit value Measured value Although measured value is in a standard limit value, a limit value won't be fulfilled if uncertainty is taken into consideration.	
FAIL	Standard limit value Measured value Although measured value exceeds a standard limit value, a limit value will be fulfilled if uncertainty is taken into consideration.	
	Standard limit value Measured value Even if it takes uncertainty into consideration, a standard limit value isn't fulfilled.	

6 Laboratory Information

Testing was performed and the report was issued at:

TÜV SÜD Japan Ltd. Yonezawa Testing Center

Address: 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan
Phone: +81-238-28-2881

Accreditation and Registration

A2LA

Certificate #3686.03

BSMI

Laboratory Code: SL2-IN-E-6018, SL2-A1-E-6018

Innovation, Science and Economic Development Canada

ISED#: 4224A

Appendix A. Test Equipment

Antenna port conducted test

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
Spectrum analyzer	ROHDE&SCHWARZ	FSV40	101731	31-Jul-2026	31-Jul-2025
Attenuator	Weinschel	56-10	J4993	31-Dec-2025	16-Dec-2024
Power divider	ANRITSU	K240B	020205	30-Sep-2026	10-Sep-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX102/1m	547874/2	31-Jul-2026	9-Jul-2025
Wideband Radio Frequency Tester	ROHDE&SCHWARZ	CMW500	116338	30-Apr-2026	21-Apr-2025
Wideband Radio Frequency Tester	ROHDE&SCHWARZ	CMW500	167820	31-May-2026	28-May-2025
Low temperature and humidity chamber	Espec	PL1KP	14007261	30-Jun-2026	5-Jun-2025

Radiated emission

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI receiver	ROHDE&SCHWARZ	ESW44	103171	31-Dec-2025	2-Dec-2024
Biconical antenna	Schwarzbeck	VHBB9124/BBA9106	1344	31-Aug-2026	19-Aug-2025
Log-periodic antenna	Schwarzbeck	VUSLP9111B	#343	31-Dec-2025	9-Dec-2024
Attenuator	TOYO Connector	NA-PJ-6/6dB	N/A(S541)	30-Sep-2026	11-Sep-2025
Attenuator	TAMAGAWA.ELEC	CFA-01/3dB	N/A(S503)	31-Jul-2026	9-Jul-2025
Preamplifier	SONOMA	310	372170	30-Sep-2026	10-Sep-2025
Double ridged guide antenna	ETS LINDGREN	3117	00256478	30-Jun-2026	30-Jun-2025
Attenuator	HUBER+SUHNER	6803.17.B	N/A(2340)	31-Dec-2025	17-Dec-2024
Preamplifier	Techno Science Japan	MLA-0118-J02-40	23050008	30-Jun-2026	19-Jun-2025
Attenuator	AEROFLEX	26A-10	081217-08	31-Dec-2025	16-Dec-2024
DRGH antenna	A.H.Systems Inc.	SAS-574	469	30-Sep-2026	17-Sep-2025
Preamplifier	Techno Science Japan	MLA-1840-B03-35	1240332	30-Sep-2026	17-Sep-2025
Microwave cable	HUBER SUNER	Sucoflex 102/5m	31647	31-Jul-2026	8-Jul-2025
Notch Filter	CernexWave	CSFU6U82050-01	C35347	31-Oct-2026	22-Oct-2025
Attenuator	Qualwave Inc.	QFA2620-26.5-20-S	22295089	30-Sep-2026	9-Sep-2025
RF Power Amplifier	R&K	CGA020M602-2633R	B40240	30-Jun-2026	17-Jun-2025
Signal generator	ROHDE&SCHWARZ	SMB100A	177525	31-Dec-2025	6-Dec-2024
Microwave cable	HUBER SUNER	Sucoflex 102/2m	31648	31-Mar-2026	18-Mar-2025
Dipole antenna	Schwarzbeck	VHAP	1021	31-Jul-2026	18-Jul-2025
Dipole antenna	Schwarzbeck	UHAP	993	31-Jul-2026	18-Jul-2025
Double ridged guide antenna	ETS LINDGREN	3117	00218815	30-Nov-2025	11-Nov-2024
Wideband Radio Frequency Tester	ROHDE&SCHWARZ	CMW500	116338	30-Apr-2026	21-Apr-2025
Wideband Radio Frequency Tester	ROHDE&SCHWARZ	CMW500	167820	31-May-2026	28-May-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	800690/4	31-Oct-2026	21-Oct-2025
		SUCOFLEX104/1m	my24610/4	31-Dec-2025	17-Dec-2024
		SUCOFLEX104/9m	2001102/4	31-Dec-2025	17-Dec-2024
		SUCOFLEX104/1m	MY32976/4	31-Dec-2025	17-Dec-2024
		SUCOFLEX104/2m	SN MY28404/4	31-Dec-2025	17-Dec-2024
		SUCOFLEX106/7m	41625/6	31-Dec-2025	19-Dec-2024
Software	TOYO Technica	ES10/RE-AJ	Ver.2023.01.001	N/A	N/A
Absorber	RIKEN	PFP30	N/A	N/A	N/A
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-NSA)	31-May-2026	15-May-2025
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-SVSWR)	31-May-2026	15-May-2025

*: The calibrations of the above equipment are traceable to NIST or equivalent standards of the reference organizations.