



FCC RADIO TEST REPORT

FCC ID : PY7-47198F
Equipment : GSM/WCDMA/LTE Phone with BT, DTS/UNII
a/b/g/n/ac, GPS, FM Receiver and NFC
Brand Name : SONY
Applicant : Sony Corporation
1-7-1 Konan Minato-ku Tokyo, 108-0076 Japan
Manufacturer : Sony Corporation
1-7-1 Konan Minato-ku Tokyo, 108-0076 Japan
Standard : FCC 47 CFR Part 2, 27(H), 27(M),
Test Date(s) : Oct. 27, 2021 ~ Dec. 27, 2021

We, Sporton International (Kunshan) Inc., 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 of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

Alex Wang

Approved by: Alex Wang / Manager



Sporton International (Kunshan) Inc.

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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History of this test report

Report No.	Version	Description	Issued Date
FG1O1907B	01	Initial issue of report	Dec. 28, 2021



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§27.50 (c)(10)	Effective Radiated Power (Band 12)	Pass	
	§27.50 (h)(2)	Equivalent Isotropic Radiated Power (Band 41)		
3.3	§27.50 (d)(5)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §27.53 (g)	Conducted Band Edge Measurement (Band 12)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (Band 41)		
3.6	§2.1051 §27.53 (g)	Conducted Spurious Emission (Band 12)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (Band 41)		
3.7	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Pass	-
4.2	§2.1053 §27.53 (g)	Radiated Spurious Emission (Band 12)	Pass	Under limit 21.31 dB at 7640.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (Band 41)		

Declaration of Conformity:

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

Comments and Explanations:

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



1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac, NFC, FM Receiver, and GNSS.

Product Specification subjective to this standard	
Antenna Type	PIFA Antenna
Antenna Gain	LTE Band 12: -3.8dBi LTE Band 41: -1.1dBi

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

EUT Information List			
HW Version	SW Version	S/N	Performed Test Item
A	0.48	HQ618X04CE	Conducted Measurement
	0.150	HQ61AV0E0F	Radiated Spurious Emission
	0.150	HQ61AV0E0F	ERP/EIRP Test

Note: For other wireless features of this EUT, test report will be issued separately.

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Emission Designator

LTE Band 12		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
1.4	699.7 ~ 715.3	0.0478	1M10G7D	0.0378	1M10W7D
3	700.5 ~ 714.5	0.0472	2M72G7D	0.0373	2M73W7D
5	701.5 ~ 713.5	0.0468	4M52G7D	0.0375	4M50W7D
10	704.0 ~ 711.0	0.0480	9M07G7D	0.0379	9M07W7D
LTE Band 41		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2547.5 ~ 2647.5	0.0254	4M52G7D	0.0201	4M52W7D
10	2550 ~ 2645	0.0255	9M05G7D	0.0197	9M07W7D
15	2552.5 ~ 2642.5	0.0260	13M5G7D	0.0198	13M6W7D
20	2555 ~ 2640	0.0262	18M0G7D	0.0206	18M0W7D



1.4 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.5 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, 27(H), 27(M)
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

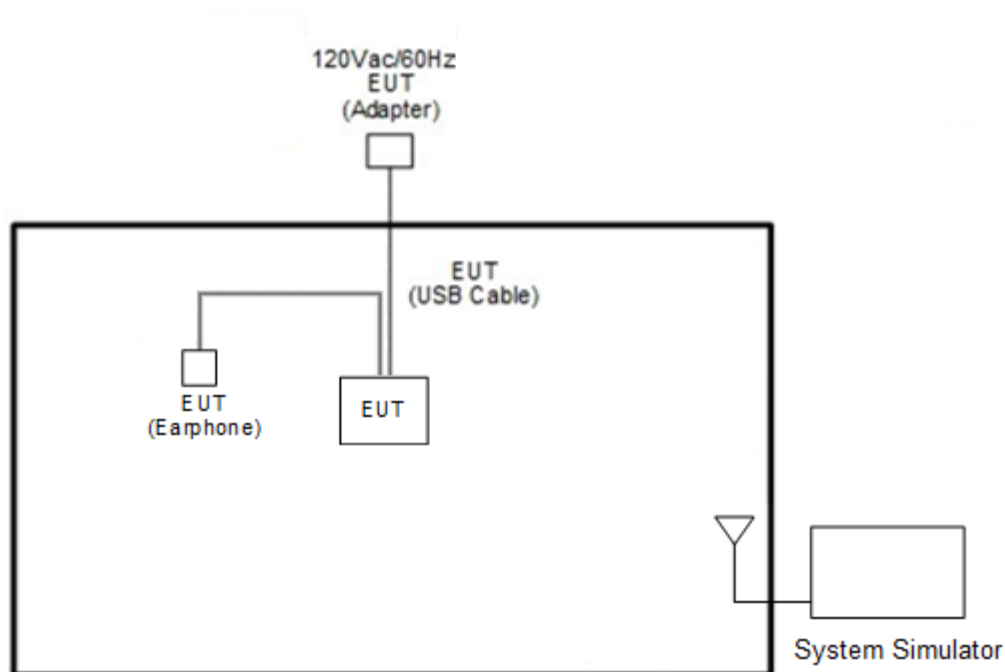
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

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 find Y plane as worst plane.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	12				v	-	-	v	v	v	v		v		v	
	41	-	-				v	v	v	v	v		v		v	
26dB and 99% Bandwidth	12	v	v	v	v	-	-	v	v	v			v	v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	12	v	v	v	v	-	-	v	v	v	v		v	v		v
	41	-	-	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	12	v	v	v	v	-	-	v			v			v	v	v
	41	-	-	v	v	v	v	v			v			v	v	v
Frequency Stability	12				v	-	-	v					v		v	
	41	-	-		v			v					v		v	
E.R.P / E.I.R.P	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	41			v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	12	Worst Case												v	v	v
	41	Worst Case												v	v	v
Remark	1. The mark “v ” means that this configuration is chosen for testing 2. The mark “-” means that this bandwidth is not supported. 3. 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.															

2.2 Connection Diagram of Test System

<EUT With Accessory>



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	MT8820C	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 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.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 8.22 dB.

Example :

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\
 &= 8.22 \text{ (dB)}
 \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

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 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	40240	40665	41090
	Frequency	2555	2597.5	2640
15	Channel	40215	40665	41115
	Frequency	2552.5	2597.5	2642.5
10	Channel	40190	40665	41140
	Frequency	2550	2597.5	2645
5	Channel	40165	40665	41165
	Frequency	2547.5	2597.5	2647.5

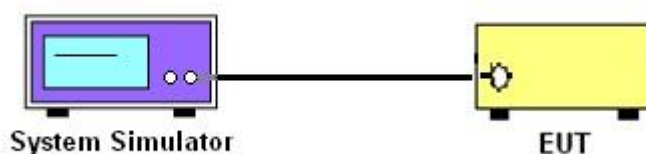
3 Conducted Test Items

3.1 Measuring Instruments

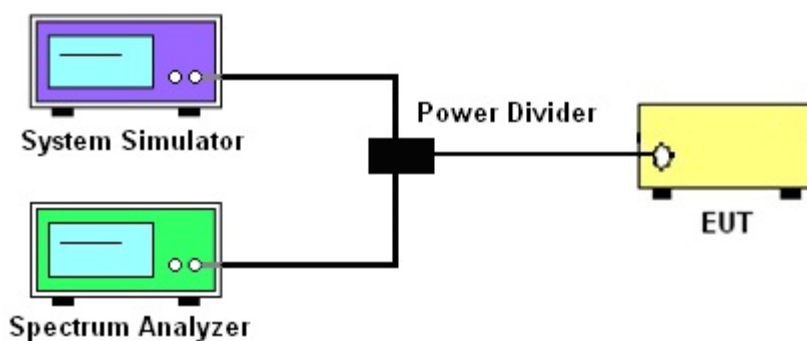
See list of measuring instruments of this test report.

3.1.1 Test Setup

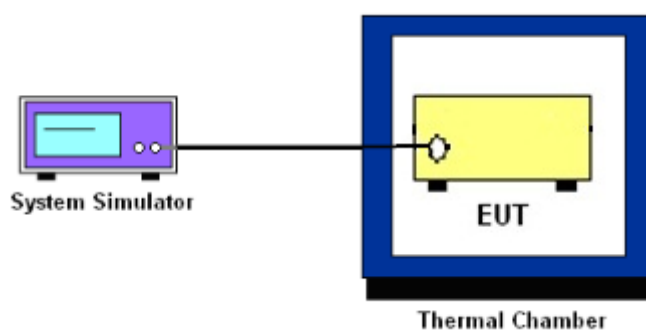
3.1.2 Conducted Output Power



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 3 Watts for LTE Band 12

The EIRP of mobile transmitters must not exceed 2 Watts for 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.

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.

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.

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. 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 $P(\text{Watts})$

For LTE Band 7, 41

The other 40 dB, and 55 dB have additionally applied same calculation above.



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.

For LTE Band 7, 41

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 $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. 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.

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.

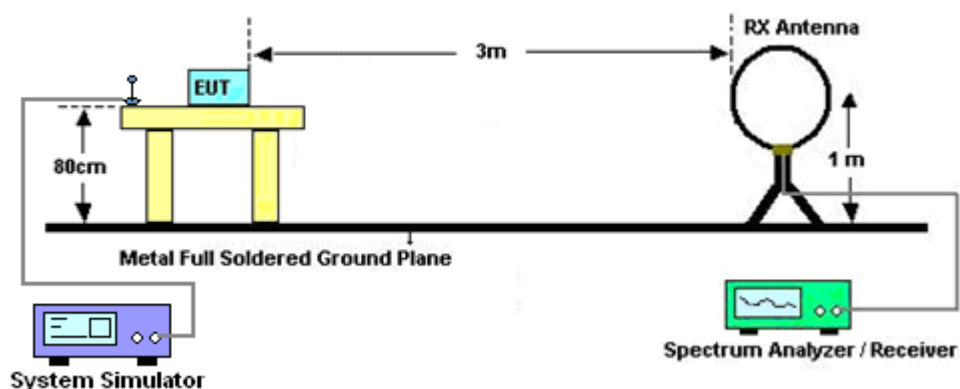
4 Radiated Test Items

4.1 Measuring Instruments

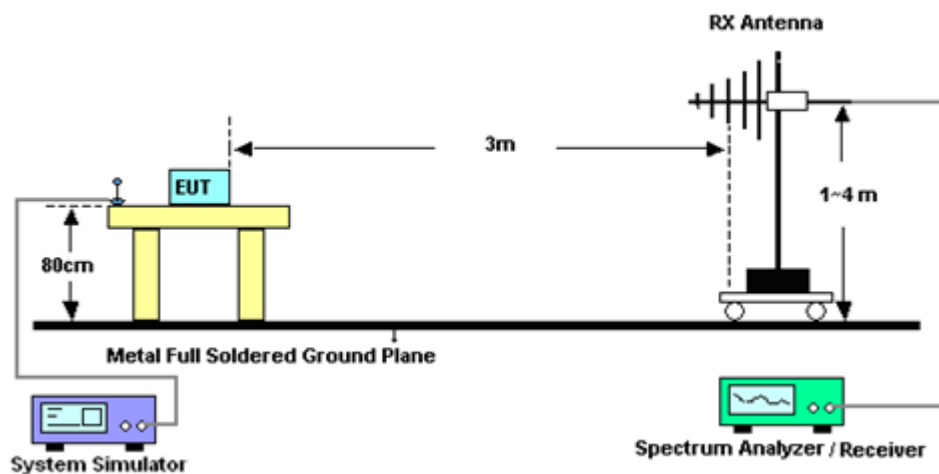
See list of measuring instruments of this test report.

4.1.1 Test Setup

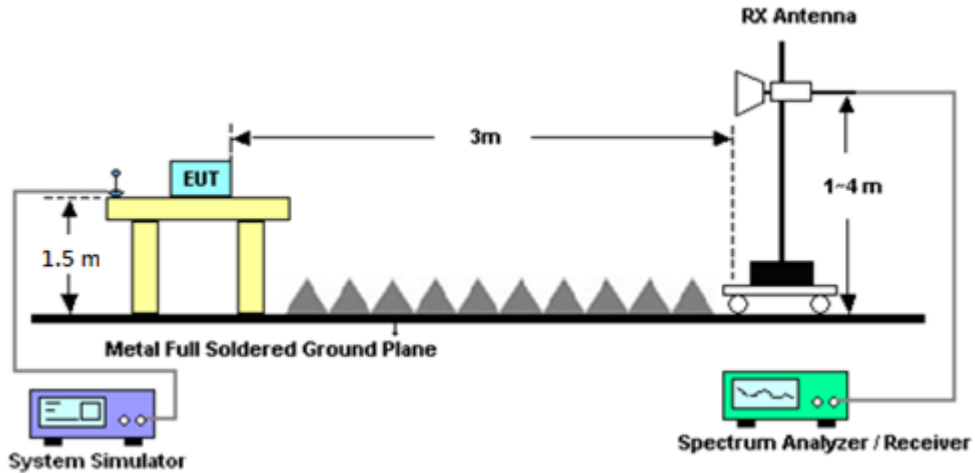
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



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

1. The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.
2. 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.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. 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.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. 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	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 14, 2021	Oct. 27, 2021~ Dec. 27, 2021	Oct. 13, 2022	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Oct. 27, 2021~ Dec. 27, 2021	Aug. 25, 2022	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 12, 2021	Oct. 27, 2021~ Dec. 27, 2021	Jul. 11, 2022	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G,MAX 30dB	Apr. 13, 2021	Nov. 04, 2021	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Nov. 04, 2021	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	Jun. 07, 2021	Nov. 04, 2021	Jun. 06, 2022	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 18, 2021	Nov. 04, 2021	Apr. 17, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 06, 2021	Nov. 04, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Jan. 06, 2021	Nov. 04, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 07, 2021	Nov. 04, 2021	Jan. 06, 2022	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz~18Ghz	Jan. 06, 2021	Nov. 04, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	Nov. 04, 2021	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 04, 2021	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 04, 2021	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 04, 2021	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.3dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.8dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP&EIRP

LTE Band 12:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP		
							L	H	M
Channel				23060	23095	23130	23060	23095	23130
Frequency (MHz)				704	707.5	711	704	707.5	711
10	QPSK	1	0	22.70	22.76	22.67	0.0473	0.0480	0.0470
10	QPSK	1	25	22.69	22.72	22.67	0.0472	0.0475	0.0470
10	QPSK	1	49	22.61	22.69	22.71	0.0463	0.0472	0.0474
10	QPSK	25	0	21.54	21.72	21.56	0.0362	0.0378	0.0364
10	QPSK	25	12	21.69	21.61	21.65	0.0375	0.0368	0.0372
10	QPSK	25	25	21.66	21.68	21.62	0.0372	0.0374	0.0369
10	QPSK	50	0	21.48	21.54	21.44	0.0357	0.0362	0.0354
10	16QAM	1	0	21.70	21.74	21.72	0.0376	0.0379	0.0378
10	16QAM	1	25	21.72	21.73	21.73	0.0378	0.0378	0.0378
10	16QAM	1	49	21.72	21.71	21.74	0.0378	0.0377	0.0379
10	16QAM	25	0	20.61	20.79	20.61	0.0292	0.0305	0.0292
10	16QAM	25	12	20.73	20.69	20.79	0.0301	0.0298	0.0305
10	16QAM	25	25	20.67	20.72	20.69	0.0296	0.0300	0.0298
10	16QAM	50	0	20.75	20.66	20.64	0.0302	0.0296	0.0294
10	64QAM	1	0	20.64	20.73	20.72	0.0294	0.0301	0.0300
10	64QAM	1	25	20.52	20.60	20.67	0.0286	0.0292	0.0296
10	64QAM	1	49	20.66	20.69	20.46	0.0296	0.0298	0.0282
10	64QAM	25	0	19.53	19.65	19.51	0.0228	0.0234	0.0227
10	64QAM	25	12	19.61	19.58	19.59	0.0232	0.0231	0.0231
10	64QAM	25	25	19.44	19.49	19.53	0.0223	0.0226	0.0228
10	64QAM	50	0	19.52	19.55	19.39	0.0228	0.0229	0.0221
Channel				23035	23095	23155	23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5	701.5	707.5	713.5
5	QPSK	1	0	22.62	22.65	22.58	0.0465	0.0468	0.0460
5	QPSK	1	12	22.57	22.64	22.53	0.0459	0.0467	0.0455
5	QPSK	1	24	22.48	22.60	22.57	0.0450	0.0462	0.0459
5	QPSK	12	0	21.42	21.58	21.51	0.0352	0.0366	0.0360
5	QPSK	12	7	21.57	21.55	21.57	0.0365	0.0363	0.0365
5	QPSK	12	13	21.52	21.43	21.50	0.0361	0.0353	0.0359
5	QPSK	25	0	21.41	21.41	21.51	0.0352	0.0352	0.0360
5	16QAM	1	0	21.62	21.69	21.65	0.0369	0.0375	0.0372
5	16QAM	1	12	21.65	21.62	21.67	0.0372	0.0369	0.0373
5	16QAM	1	24	21.66	21.57	21.59	0.0372	0.0365	0.0366
5	16QAM	12	0	20.46	20.73	20.48	0.0282	0.0301	0.0284



5	16QAM	12	7	20.59	20.57	20.74	0.0291	0.0290	0.0301
5	16QAM	12	13	20.54	20.58	20.57	0.0288	0.0290	0.0290
5	16QAM	25	0	20.67	20.61	20.50	0.0296	0.0292	0.0285
5	64QAM	1	0	20.53	20.62	20.61	0.0287	0.0293	0.0292
5	64QAM	1	12	20.39	20.46	20.59	0.0278	0.0282	0.0291
5	64QAM	1	24	20.58	20.61	20.39	0.0290	0.0292	0.0278
5	64QAM	12	0	19.42	19.54	19.42	0.0222	0.0229	0.0222
5	64QAM	12	7	19.53	19.48	19.49	0.0228	0.0225	0.0226
5	64QAM	12	13	19.34	19.35	19.43	0.0218	0.0219	0.0223
5	64QAM	25	0	19.40	19.48	19.34	0.0221	0.0225	0.0218
Channel				23025	23095	23165	23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5	700.5	707.5	714.5
3	QPSK	1	0	22.56	22.69	22.55	0.0458	0.0472	0.0457
3	QPSK	1	8	22.63	22.61	22.60	0.0466	0.0463	0.0462
3	QPSK	1	14	22.56	22.56	22.61	0.0458	0.0458	0.0463
3	QPSK	8	0	21.40	21.61	21.49	0.0351	0.0368	0.0358
3	QPSK	8	4	21.61	21.50	21.51	0.0368	0.0359	0.0360
3	QPSK	8	7	21.53	21.51	21.50	0.0361	0.0360	0.0359
3	QPSK	15	0	21.41	21.39	21.56	0.0352	0.0350	0.0364
3	16QAM	1	0	21.55	21.67	21.67	0.0363	0.0373	0.0373
3	16QAM	1	8	21.67	21.62	21.66	0.0373	0.0369	0.0372
3	16QAM	1	14	21.60	21.61	21.66	0.0367	0.0368	0.0372
3	16QAM	8	0	20.50	20.65	20.53	0.0285	0.0295	0.0287
3	16QAM	8	4	20.59	20.64	20.73	0.0291	0.0294	0.0301
3	16QAM	8	7	20.57	20.61	20.60	0.0290	0.0292	0.0292
3	16QAM	15	0	20.63	20.60	20.57	0.0294	0.0292	0.0290
3	64QAM	1	0	20.52	20.59	20.59	0.0286	0.0291	0.0291
3	64QAM	1	8	20.42	20.50	20.56	0.0280	0.0285	0.0289
3	64QAM	1	14	20.56	20.58	20.38	0.0289	0.0290	0.0277
3	64QAM	8	0	19.43	19.60	19.44	0.0223	0.0232	0.0223
3	64QAM	8	4	19.48	19.52	19.51	0.0225	0.0228	0.0227
3	64QAM	8	7	19.34	19.38	19.38	0.0218	0.0220	0.0220
3	64QAM	15	0	19.41	19.42	19.33	0.0222	0.0222	0.0218
Channel				23017	23095	23173	23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3	699.7	707.5	715.3
1.4	QPSK	1	0	22.65	22.74	22.59	0.0468	0.0478	0.0461
1.4	QPSK	1	3	22.73	22.72	22.66	0.0476	0.0475	0.0469
1.4	QPSK	1	5	22.57	22.59	22.56	0.0459	0.0461	0.0458
1.4	QPSK	3	0	22.71	22.67	22.64	0.0474	0.0470	0.0467
1.4	QPSK	3	1	22.70	22.68	22.67	0.0473	0.0471	0.0470
1.4	QPSK	3	3	22.69	22.66	22.59	0.0472	0.0469	0.0461
1.4	QPSK	6	0	21.68	21.76	21.72	0.0374	0.0381	0.0378
1.4	16QAM	1	0	21.66	21.73	21.67	0.0372	0.0378	0.0373
1.4	16QAM	1	3	21.70	21.69	21.65	0.0376	0.0375	0.0372
1.4	16QAM	1	5	21.62	21.59	21.53	0.0369	0.0366	0.0361
1.4	16QAM	3	0	21.47	21.44	21.36	0.0356	0.0354	0.0348
1.4	16QAM	3	1	21.44	21.40	21.34	0.0354	0.0351	0.0346



1.4	16QAM	3	3	21.49	21.37	21.31	0.0358	0.0348	0.0344
1.4	16QAM	6	0	20.77	20.79	20.73	0.0303	0.0305	0.0301
1.4	64QAM	1	0	20.52	20.60	20.52	0.0286	0.0292	0.0286
1.4	64QAM	1	3	20.59	20.45	20.53	0.0291	0.0282	0.0287
1.4	64QAM	1	5	20.50	20.49	20.49	0.0285	0.0284	0.0284
1.4	64QAM	3	0	20.53	20.34	20.41	0.0287	0.0275	0.0279
1.4	64QAM	3	1	20.49	20.47	20.52	0.0284	0.0283	0.0286
1.4	64QAM	3	3	20.45	20.43	20.37	0.0282	0.0281	0.0277
1.4	64QAM	6	0	19.67	19.79	19.71	0.0236	0.0242	0.0238



LTE Band 41:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Low Ch. / Freq.	Power High Ch. / Freq.	EIRP		
							L	M	H
Channel				40240	40665	41090	40240	40665	41090
Frequency (MHz)				2555	2597.5	2640	2555	2597.5	2640
20	QPSK	1	0	15.28	15.13	15.10	0.0262	0.0253	0.0251
20	QPSK	1	49	15.02	15.08	15.06	0.0247	0.0250	0.0249
20	QPSK	1	99	15.02	14.99	15.05	0.0247	0.0245	0.0248
20	QPSK	50	0	14.03	14.22	13.91	0.0196	0.0205	0.0191
20	QPSK	50	24	14.15	14.10	13.82	0.0202	0.0200	0.0187
20	QPSK	50	50	14.09	14.09	13.97	0.0199	0.0199	0.0194
20	QPSK	100	0	14.16	14.11	13.77	0.0202	0.0200	0.0185
20	16QAM	1	0	14.11	14.10	14.04	0.0200	0.0200	0.0197
20	16QAM	1	49	14.12	14.09	13.80	0.0200	0.0199	0.0186
20	16QAM	1	99	14.23	14.09	13.96	0.0206	0.0199	0.0193
20	16QAM	50	0	13.10	13.18	12.89	0.0158	0.0161	0.0151
20	16QAM	50	24	13.27	13.05	13.04	0.0165	0.0156	0.0156
20	16QAM	50	50	13.20	13.08	13.00	0.0162	0.0158	0.0155
20	16QAM	100	0	13.23	13.09	12.89	0.0163	0.0158	0.0151
20	64QAM	1	0	12.87	12.89	12.72	0.0150	0.0151	0.0145
20	64QAM	1	49	12.92	12.80	12.63	0.0152	0.0148	0.0142
20	64QAM	1	99	12.89	12.79	12.71	0.0151	0.0147	0.0145
20	64QAM	50	0	12.37	12.21	12.01	0.0134	0.0129	0.0123
20	64QAM	50	24	12.42	12.29	12.11	0.0136	0.0131	0.0126
20	64QAM	50	50	12.27	12.19	12.20	0.0131	0.0128	0.0129
20	64QAM	100	0	12.39	12.19	12.14	0.0135	0.0129	0.0127
Channel				40215	40665	41115	40215	40665	41115
Frequency (MHz)				2552.5	2597.5	2642.5	2552.5	2597.5	2642.5
15	QPSK	1	0	15.25	15.03	14.97	0.0260	0.0247	0.0244
15	QPSK	1	37	14.96	15.00	14.92	0.0243	0.0245	0.0241
15	QPSK	1	74	14.99	14.90	15.01	0.0245	0.0240	0.0246
15	QPSK	36	0	13.86	14.11	13.84	0.0189	0.0200	0.0188
15	QPSK	36	20	14.03	13.99	13.78	0.0196	0.0195	0.0185
15	QPSK	36	39	14.08	14.04	13.91	0.0199	0.0197	0.0191
15	QPSK	75	0	14.04	14.05	14.21	0.0197	0.0197	0.0205
15	16QAM	1	0	14.03	14.02	13.93	0.0196	0.0196	0.0192
15	16QAM	1	37	14.01	13.99	13.74	0.0195	0.0195	0.0184
15	16QAM	1	74	14.06	13.94	13.80	0.0198	0.0192	0.0186
15	16QAM	36	0	12.99	13.12	12.75	0.0155	0.0159	0.0146
15	16QAM	36	20	13.12	13.03	12.89	0.0159	0.0156	0.0151
15	16QAM	36	39	13.00	12.99	12.83	0.0155	0.0155	0.0149
15	16QAM	75	0	13.12	12.93	12.88	0.0159	0.0152	0.0151
15	64QAM	1	0	12.67	12.76	12.70	0.0144	0.0146	0.0145
15	64QAM	1	37	12.89	12.71	12.49	0.0151	0.0145	0.0138
15	64QAM	1	74	12.71	12.67	12.60	0.0145	0.0143	0.0141
15	64QAM	36	0	12.17	12.12	12.21	0.0128	0.0126	0.0129



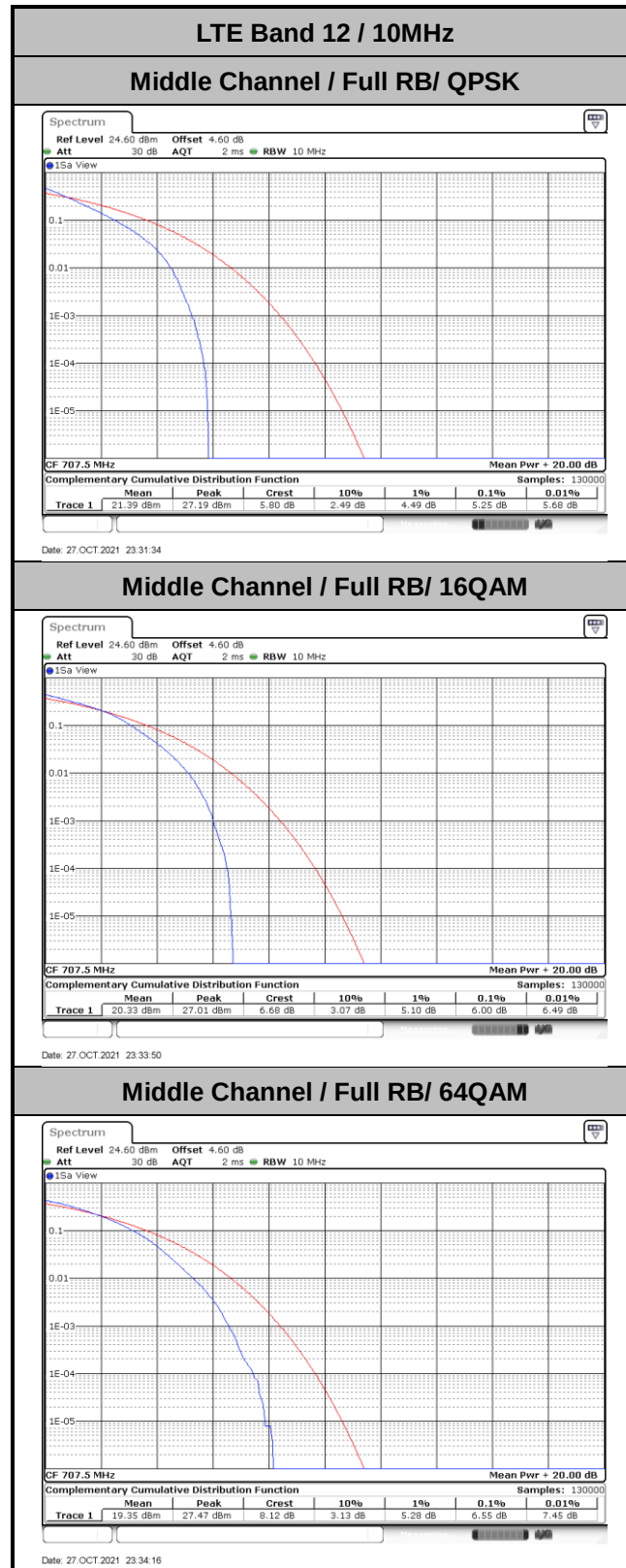
15	64QAM	36	20	12.25	12.20	12.06	0.0130	0.0129	0.0125
15	64QAM	36	39	12.19	12.05	12.12	0.0129	0.0124	0.0126
15	64QAM	75	0	12.24	12.03	12.05	0.0130	0.0124	0.0124
Channel				40190	40665	41140	40190	40665	41140
Frequency (MHz)				2550	2597.5	2645	2550	2597.5	2645
10	QPSK	1	0	15.17	15.00	14.97	0.0255	0.0245	0.0244
10	QPSK	1	25	14.92	14.98	14.99	0.0241	0.0244	0.0245
10	QPSK	1	49	14.89	14.95	15.02	0.0239	0.0243	0.0247
10	QPSK	25	0	13.85	13.99	13.78	0.0188	0.0195	0.0185
10	QPSK	25	12	14.01	14.04	13.75	0.0195	0.0197	0.0184
10	QPSK	25	25	14.07	13.98	13.79	0.0198	0.0194	0.0186
10	QPSK	50	0	14.12	14.01	13.75	0.0200	0.0195	0.0184
10	16QAM	1	0	13.99	13.95	13.97	0.0195	0.0193	0.0194
10	16QAM	1	25	14.04	14.05	13.72	0.0197	0.0197	0.0183
10	16QAM	1	49	14.04	14.00	13.92	0.0197	0.0195	0.0191
10	16QAM	25	0	13.04	13.08	12.85	0.0156	0.0158	0.0150
10	16QAM	25	12	13.27	12.95	12.99	0.0165	0.0153	0.0155
10	16QAM	25	25	13.13	13.04	12.80	0.0160	0.0156	0.0148
10	16QAM	50	0	13.09	12.97	12.80	0.0158	0.0154	0.0148
10	64QAM	1	0	12.76	12.84	12.67	0.0147	0.0149	0.0144
10	64QAM	1	25	12.87	12.67	12.53	0.0150	0.0143	0.0139
10	64QAM	1	49	12.73	12.64	12.66	0.0146	0.0143	0.0143
10	64QAM	25	0	12.35	12.04	11.98	0.0133	0.0124	0.0122
10	64QAM	25	12	12.37	12.17	12.11	0.0134	0.0128	0.0126
10	64QAM	25	25	12.08	12.01	12.08	0.0125	0.0123	0.0125
10	64QAM	50	0	12.37	12.00	12.04	0.0134	0.0123	0.0124
Channel				40165	40665	41165	40165	40665	41165
Frequency (MHz)				2547.5	2597.5	2647.5	2547.5	2597.5	2647.5
5	QPSK	1	0	15.14	14.95	15.03	0.0254	0.0242	0.0247
5	QPSK	1	12	14.85	15.00	15.04	0.0237	0.0245	0.0248
5	QPSK	1	24	14.93	14.82	14.94	0.0242	0.0236	0.0242
5	QPSK	12	0	13.91	14.08	13.82	0.0191	0.0199	0.0187
5	QPSK	12	7	14.13	14.08	13.76	0.0201	0.0198	0.0185
5	QPSK	12	13	14.07	14.00	13.84	0.0198	0.0195	0.0188
5	QPSK	25	0	14.16	13.95	13.68	0.0202	0.0193	0.0181
5	16QAM	1	0	13.98	13.95	14.01	0.0194	0.0193	0.0195
5	16QAM	1	12	14.06	14.01	13.73	0.0198	0.0195	0.0183
5	16QAM	1	24	14.13	14.02	13.79	0.0201	0.0196	0.0186
5	16QAM	12	0	13.03	13.08	12.81	0.0156	0.0158	0.0148
5	16QAM	12	7	13.07	12.92	12.88	0.0157	0.0152	0.0151
5	16QAM	12	13	13.19	12.94	12.83	0.0162	0.0153	0.0149
5	16QAM	25	0	13.20	12.94	12.86	0.0162	0.0153	0.0150
5	64QAM	1	0	12.83	12.78	12.64	0.0149	0.0147	0.0143
5	64QAM	1	12	12.89	12.69	12.53	0.0151	0.0144	0.0139
5	64QAM	1	24	12.75	12.67	12.71	0.0146	0.0143	0.0145
5	64QAM	12	0	12.31	12.06	11.97	0.0132	0.0125	0.0122
5	64QAM	12	7	12.33	12.24	11.93	0.0133	0.0130	0.0121
5	64QAM	12	13	12.24	12.08	12.13	0.0130	0.0125	0.0127
5	64QAM	25	0	12.23	12.08	12.07	0.0130	0.0125	0.0125



LTE Band 12

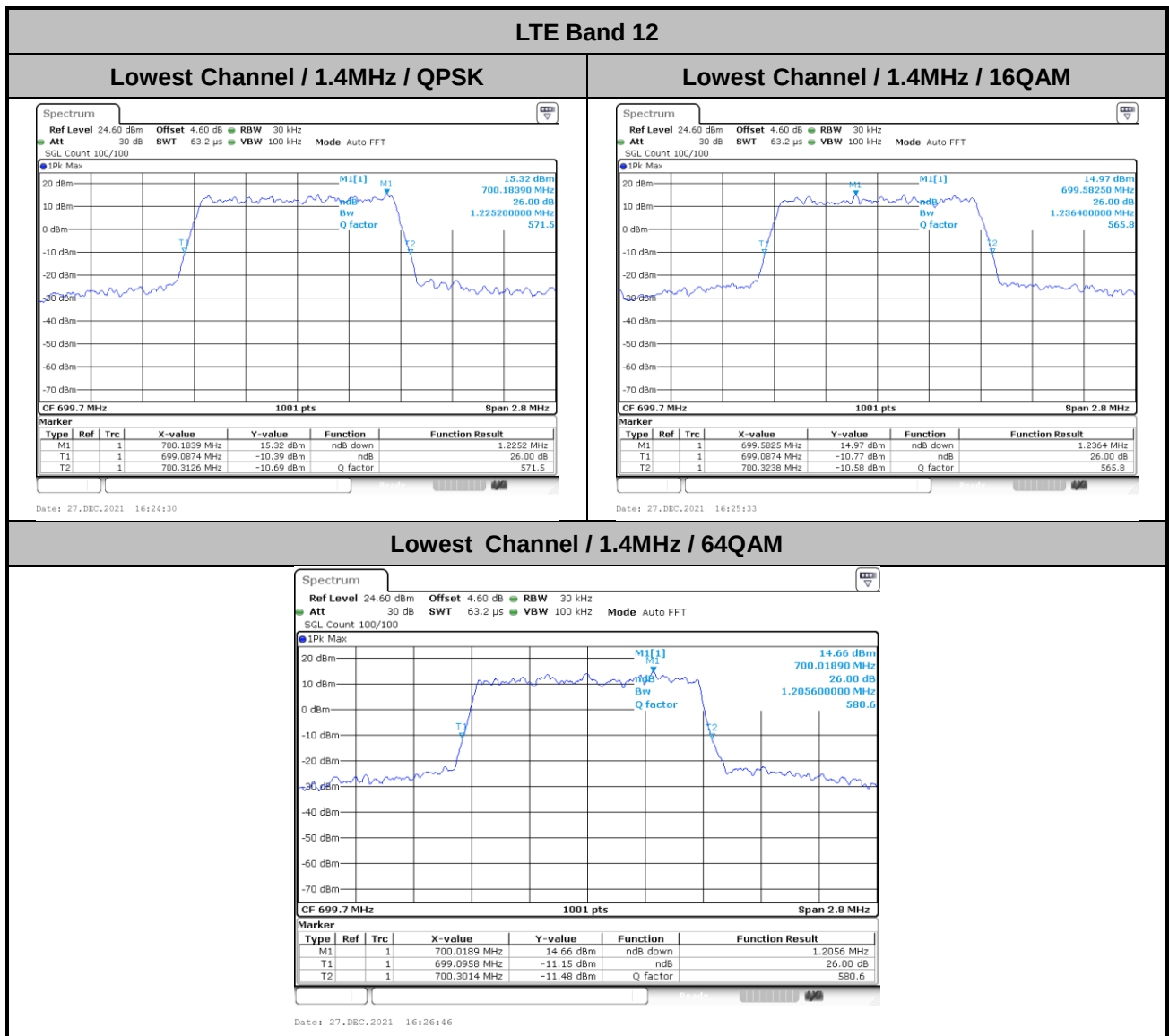
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.25	6.00	6.55	PASS



26dB Bandwidth

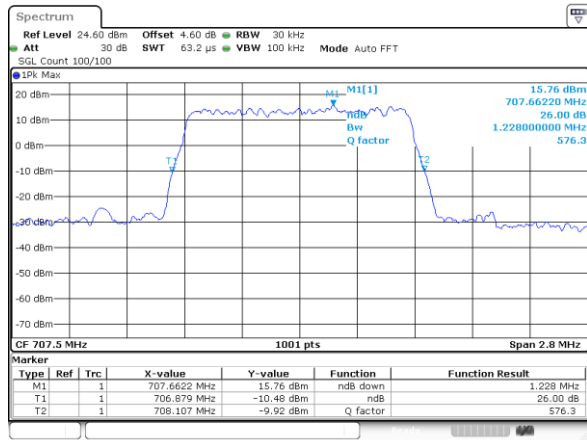
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	1.4 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	1.23	1.24	1.21
Middle CH	1.23	1.22	1.21
Highest CH	1.23	1.23	1.22





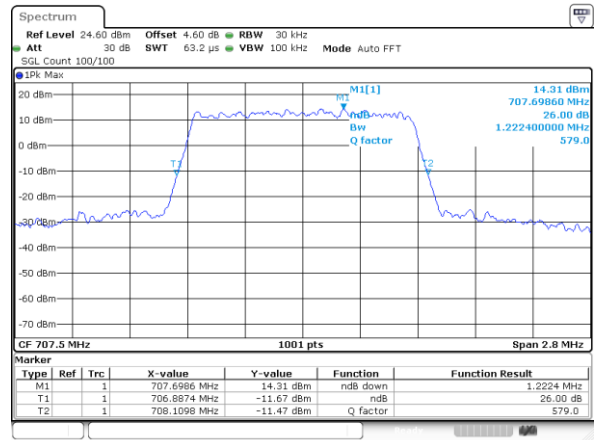
LTE Band 12

Middle Channel / 1.4MHz / QPSK



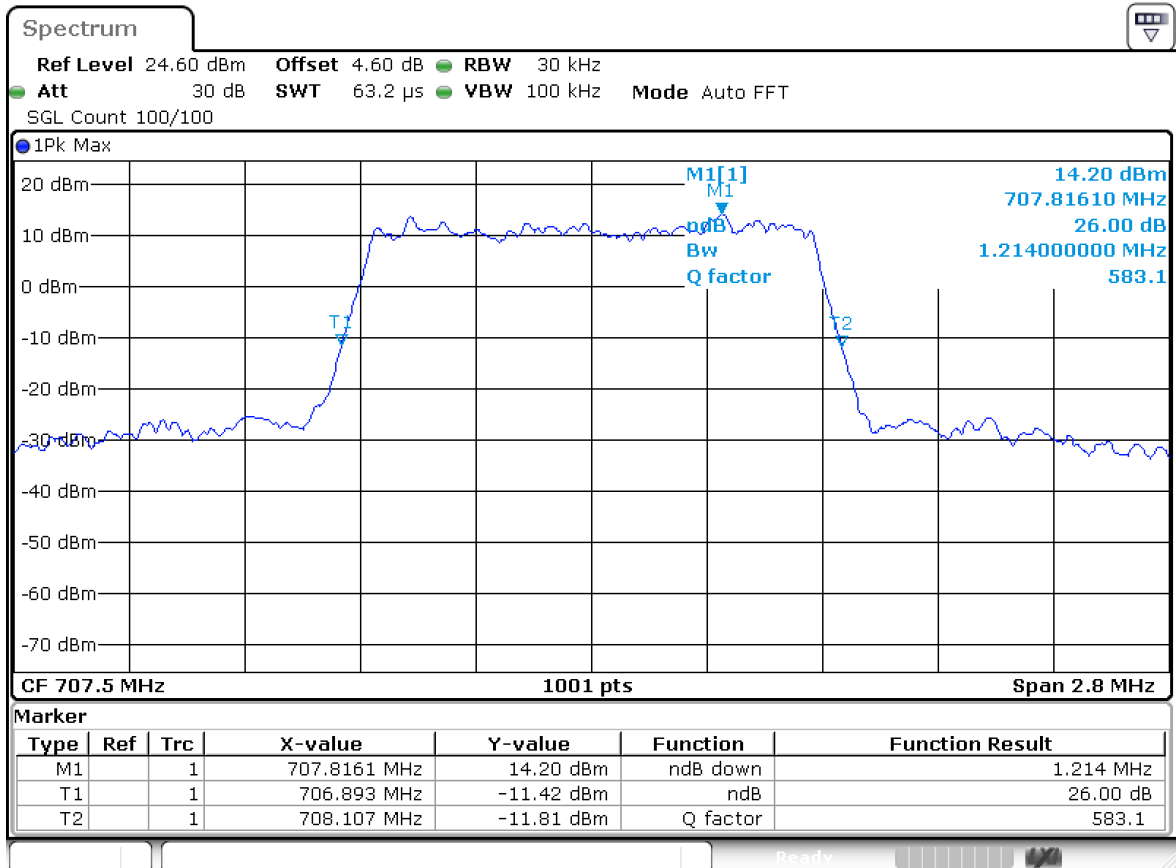
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Middle Channel / 1.4MHz / 16QAM



Date: 27.DEC.2021 16:28:38

Middle Channel / 1.4MHz / 64QAM

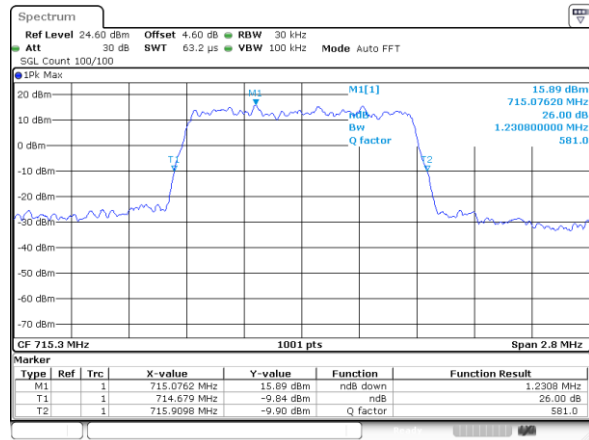


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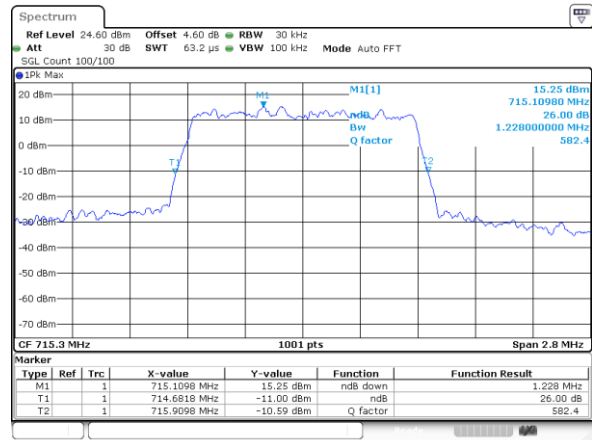
LTE Band 12

Highest Channel / 1.4MHz / QPSK



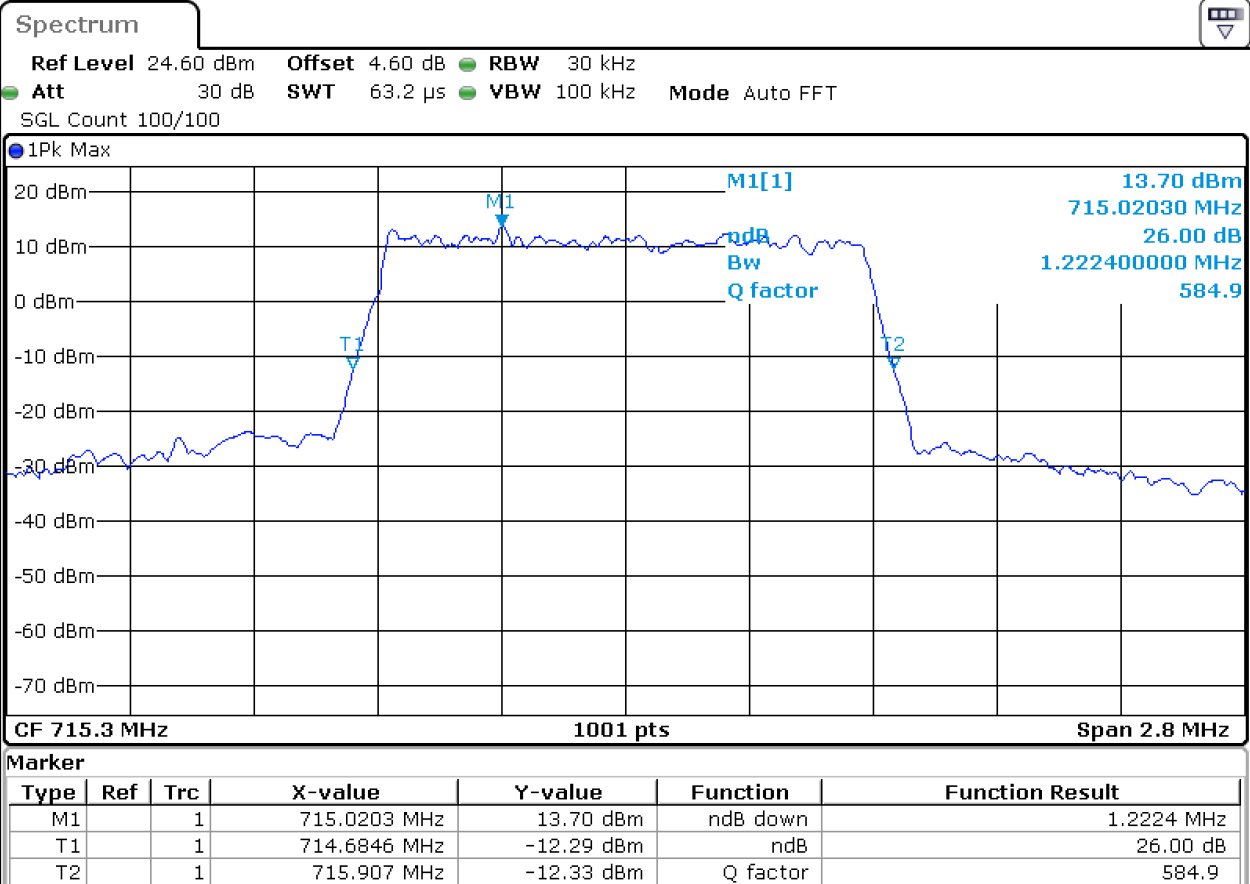
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Highest Channel / 1.4MHz / 16QAM



Date: 27.DEC.2021 16:33:37

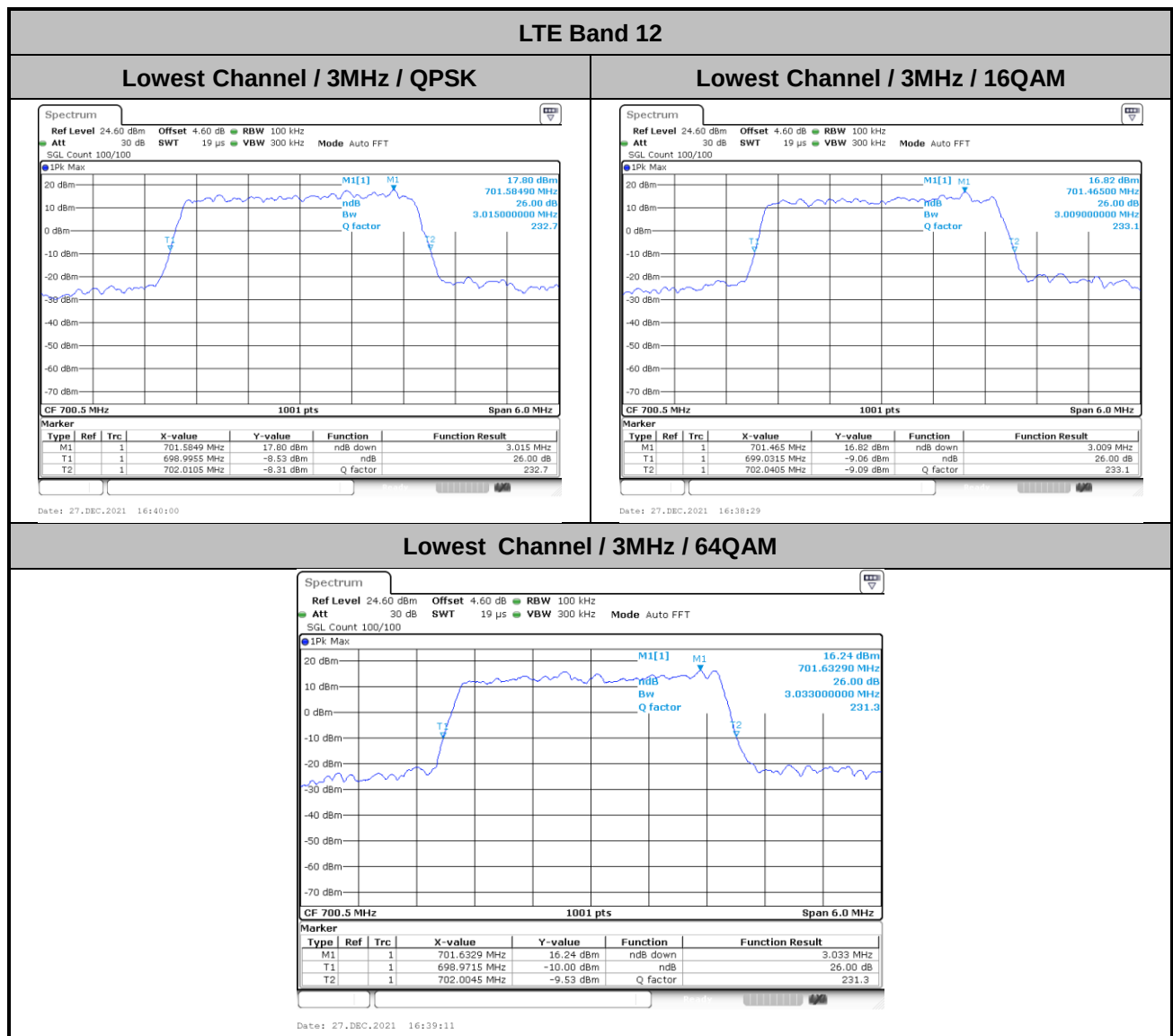
Highest Channel / 1.4MHz / 64QAM



Date: 27.DEC.2021 16:34:42



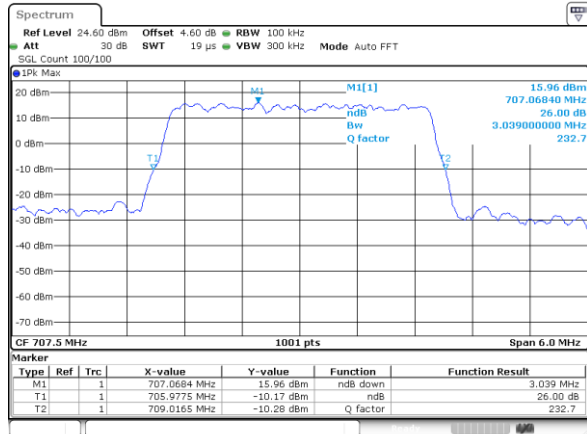
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	3 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	3.02	3.01	3.03
Middle CH	3.04	3.02	3.00
Highest CH	3.05	3.04	3.04





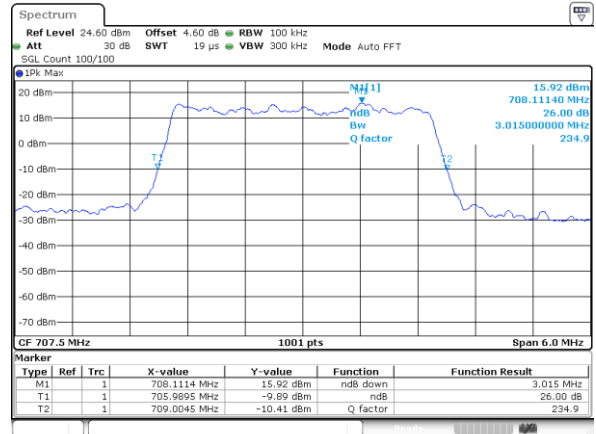
LTE Band 12

Middle Channel / 3MHz / QPSK



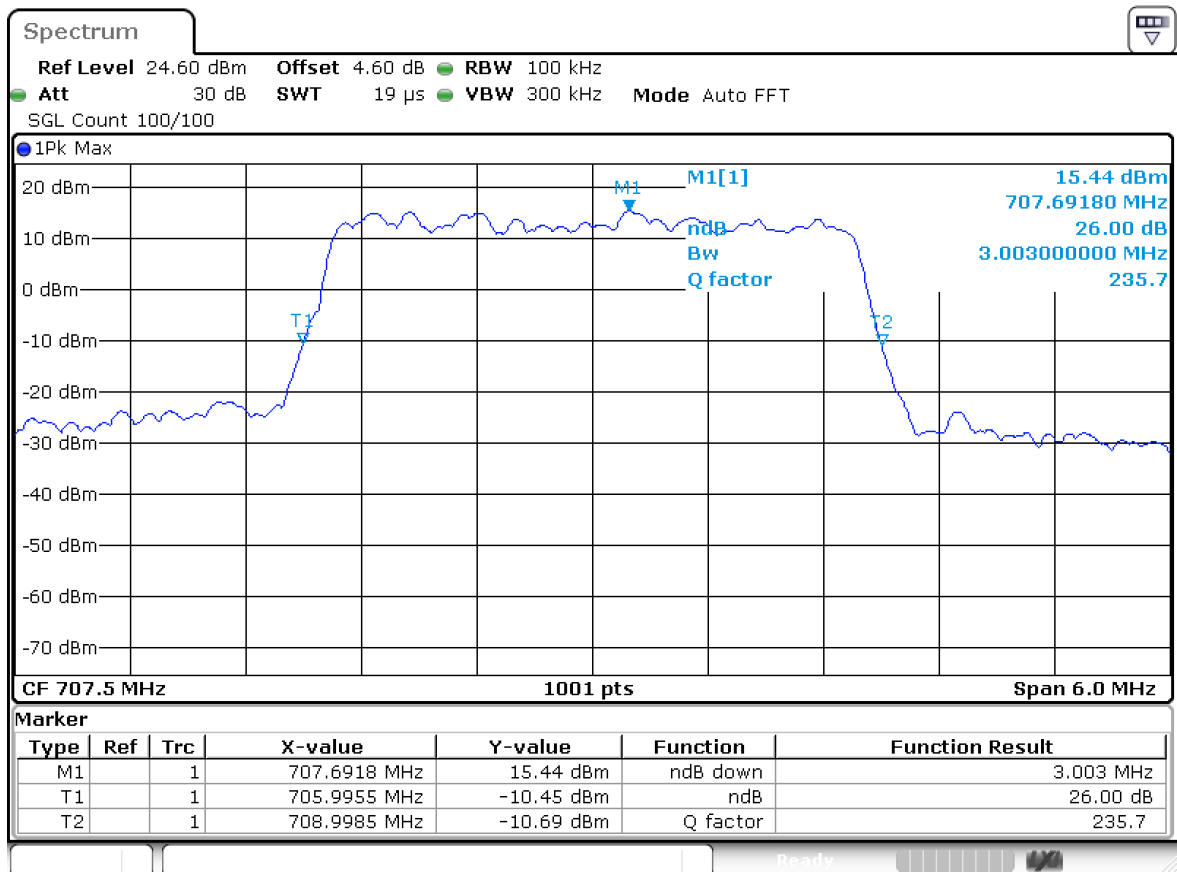
Date: 27.DEC.2021 16:41:12

Middle Channel / 3MHz / 16QAM



Date: 27.DEC.2021 16:42:53

Middle Channel / 3MHz / 64QAM

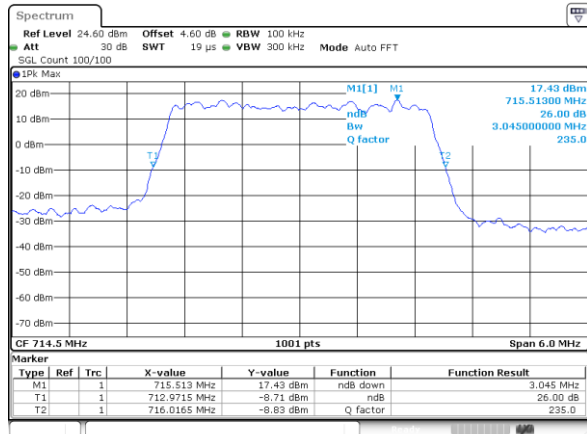


Date: 27.DEC.2021 16:43:48



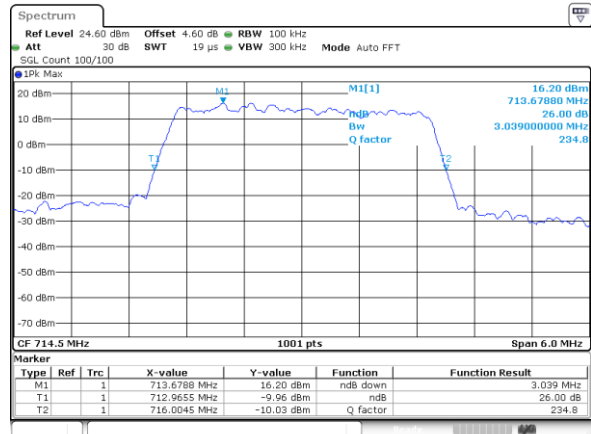
LTE Band 12

Highest Channel / 3MHz / QPSK



Date: 27.DEC.2021 18:15:54

Highest Channel / 3MHz / 16QAM



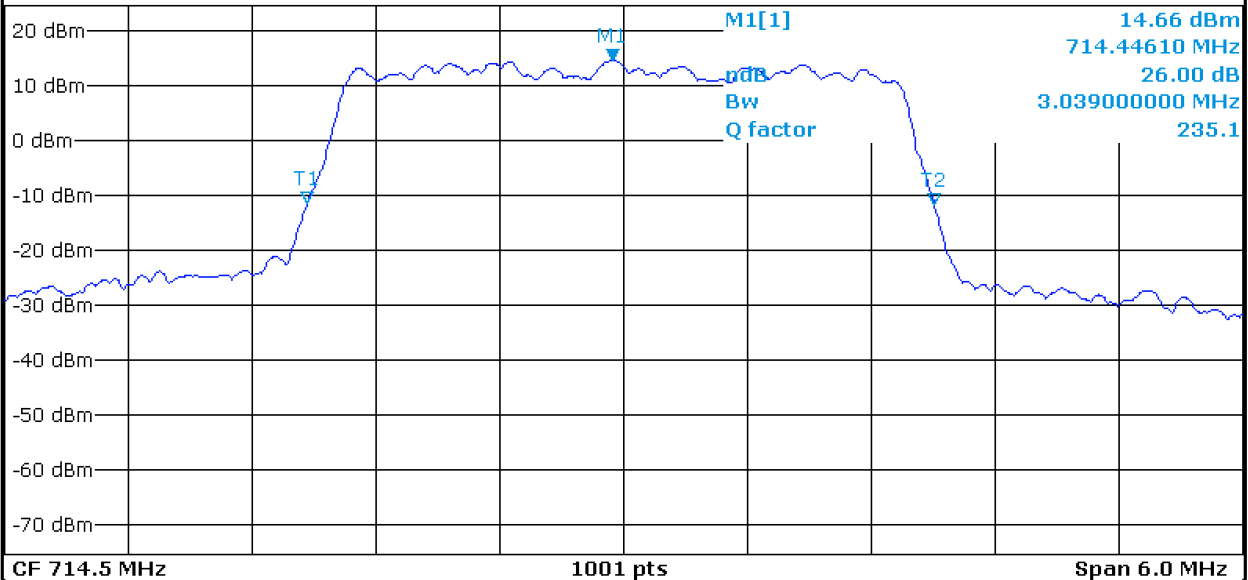
Date: 27.DEC.2021 16:48:20

Highest Channel / 3MHz / 64QAM

Spectrum

Ref Level 24.60 dBm Offset 4.60 dB RBW 100 kHz
Att 30 dB SWT 19 µs VBW 300 kHz Mode Auto FFT
SGL Count 100/100

1Pk Max



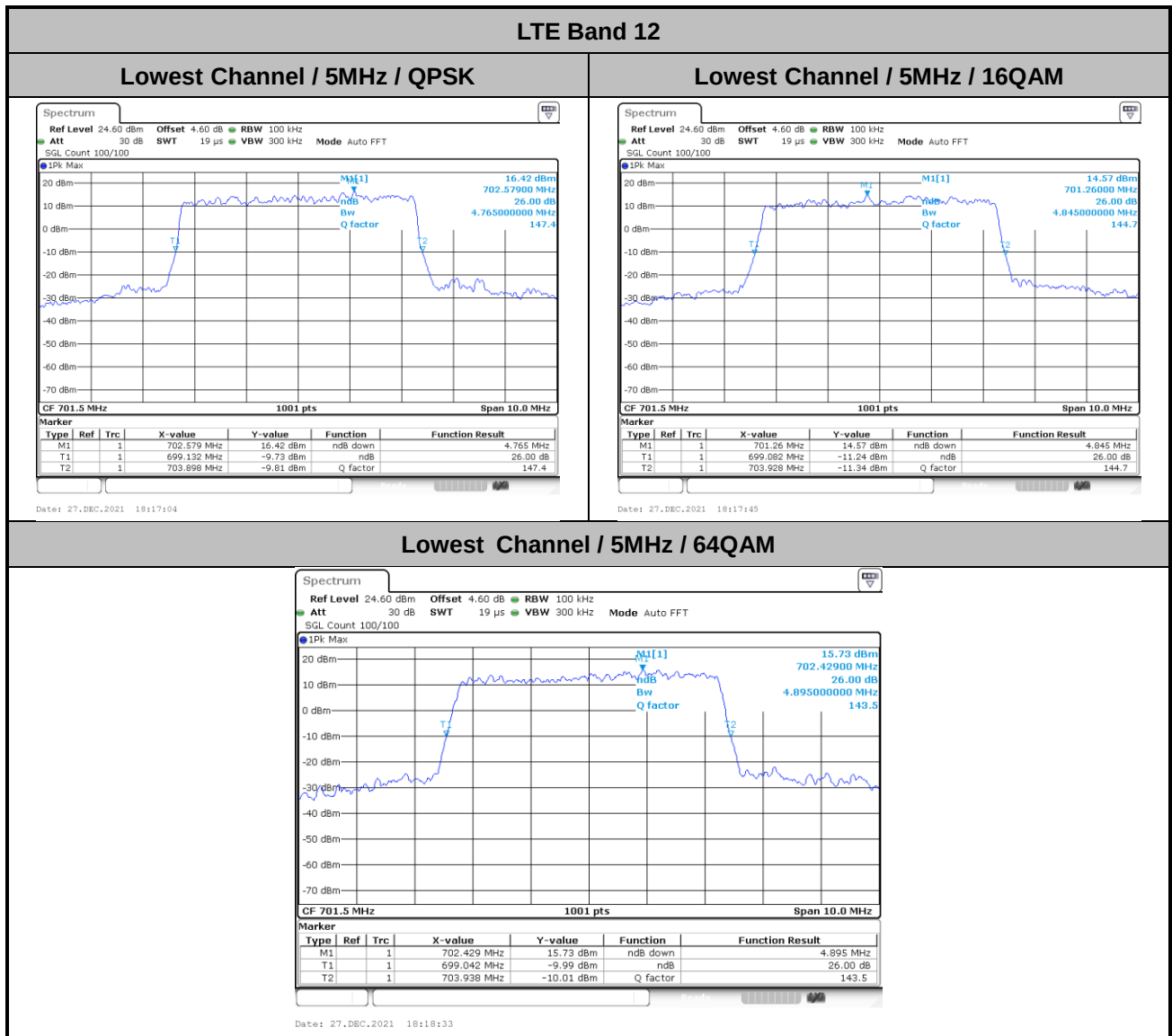
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		714.4461 MHz	14.66 dBm	ndB down	3.039 MHz
T1	1		712.9655 MHz	-11.54 dBm	ndB	26.00 dB
T2	1		716.0045 MHz	-11.65 dBm	Q factor	235.1

Date: 27.DEC.2021 16:46:14



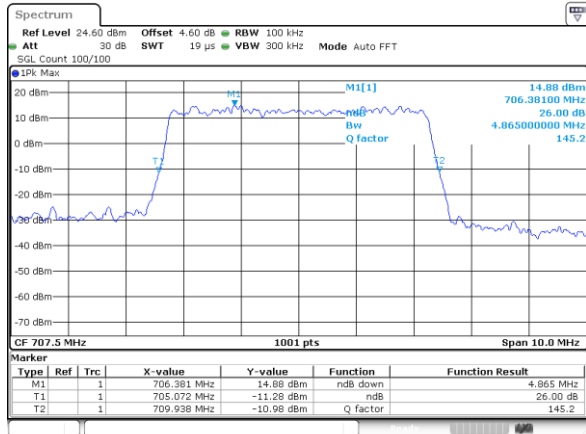
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	5 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	4.77	4.85	4.90
Middle CH	4.87	4.91	4.86
Highest CH	4.92	4.91	4.91





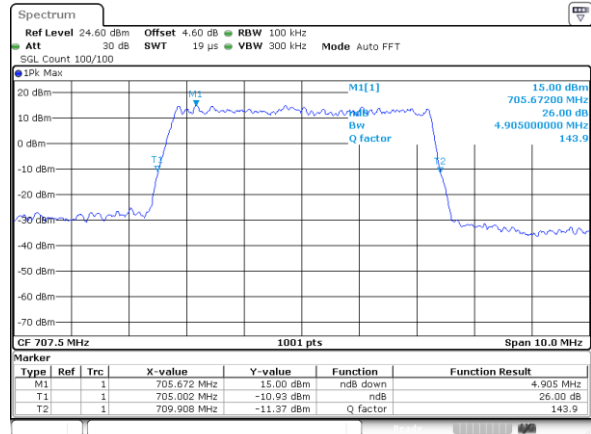
LTE Band 12

Middle Channel / 5MHz / QPSK



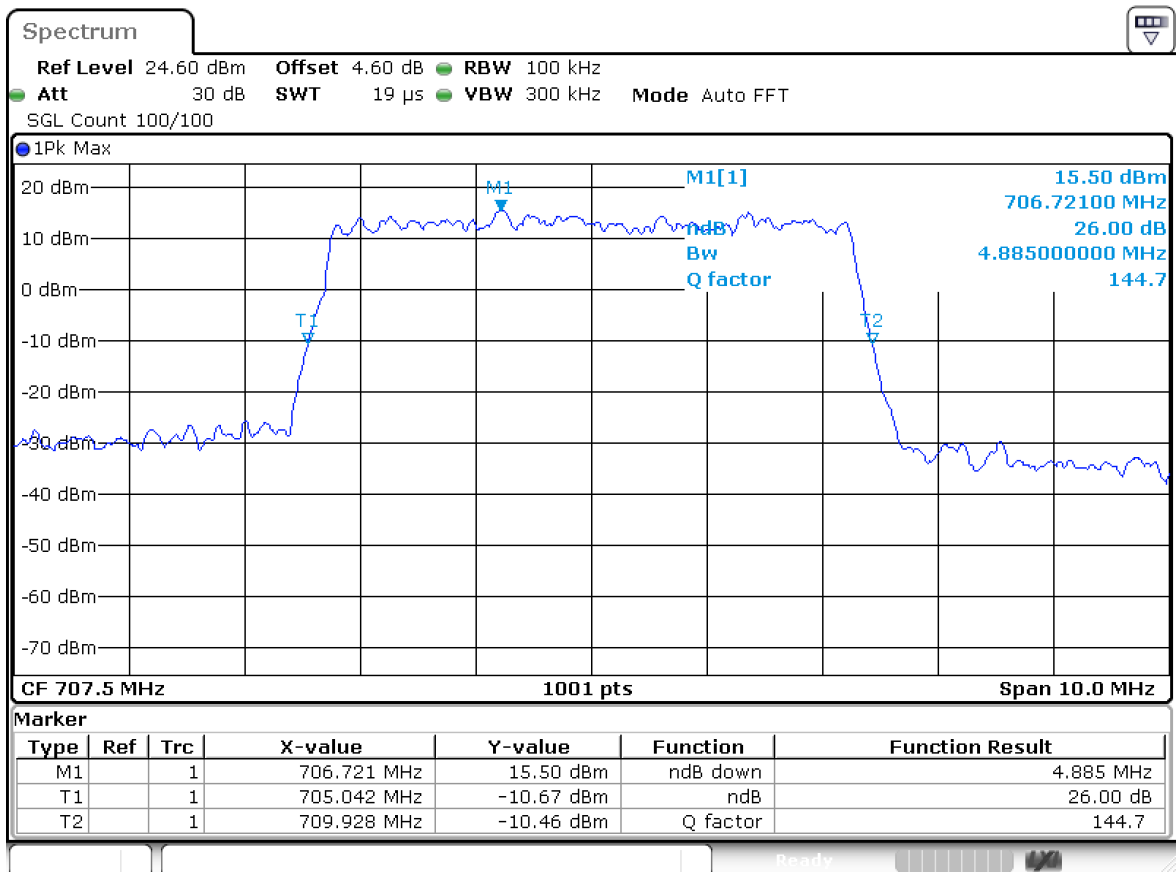
Date: 27.DEC.2021 18:21:41

Middle Channel / 5MHz / 16QAM



Date: 27.DEC.2021 18:20:56

Middle Channel / 5MHz / 64QAM

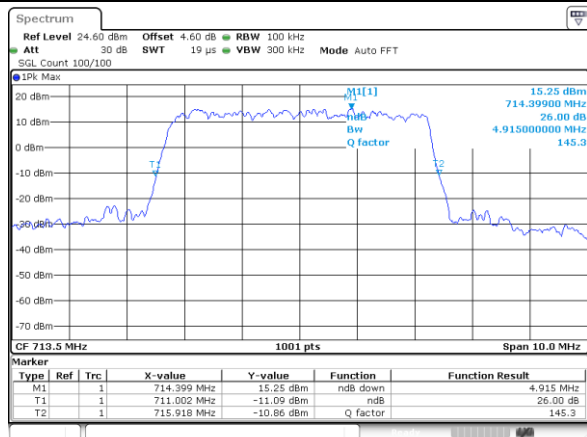


Date: 27.DEC.2021 18:19:46



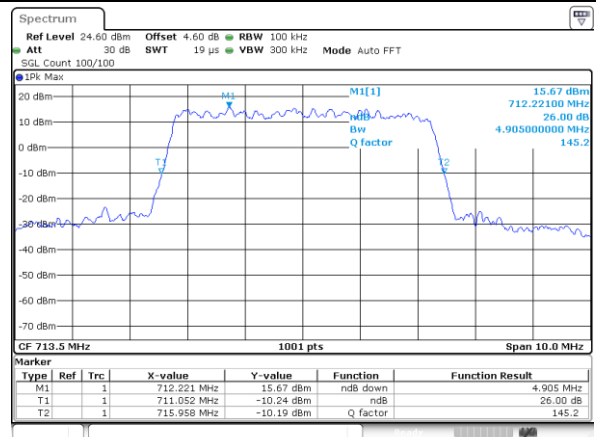
LTE Band 12

Highest Channel / 5MHz / QPSK



Date: 27.DEC.2021 18:23:22

Highest Channel / 5MHz / 16QAM



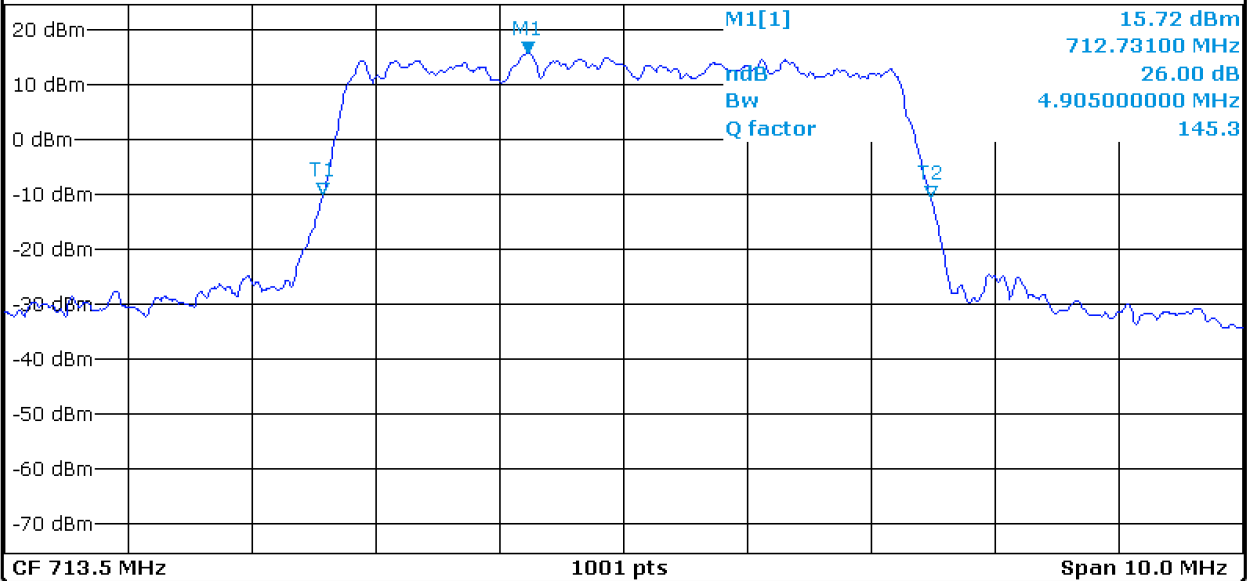
Date: 27.DEC.2021 18:25:16

Highest Channel / 5MHz / 64QAM

Spectrum

Ref Level 24.60 dBm Offset 4.60 dB RBW 100 kHz
Att 30 dB SWT 19 μ s VBW 300 kHz Mode Auto FFT
SGL Count 100/100

1Pk Max

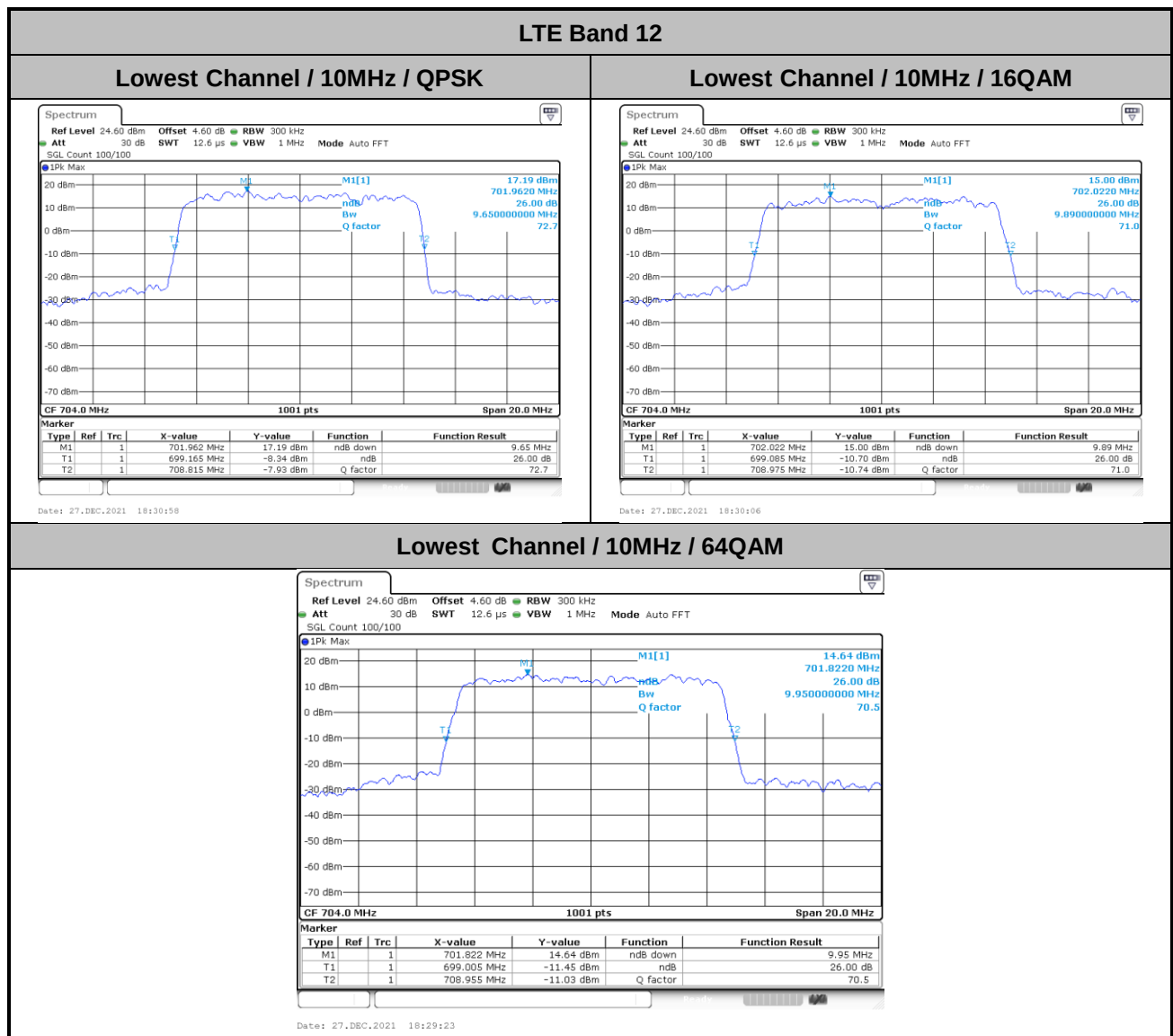


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		712.731 MHz	15.72 dBm	ndB down	4.905 MHz
T1	1		711.072 MHz	-10.09 dBm	ndB	26.00 dB
T2	1		715.978 MHz	-10.60 dBm	Q factor	145.3

Date: 27.DEC.2021 18:24:29



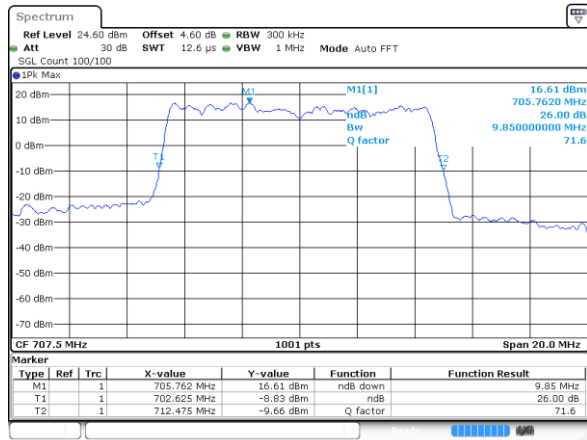
Mode	LTE Band 12 : 26dB BW(MHz)		
BW	10 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	9.65	9.89	9.95
Middle CH	9.85	9.63	9.79
Highest CH	9.85	9.75	9.99





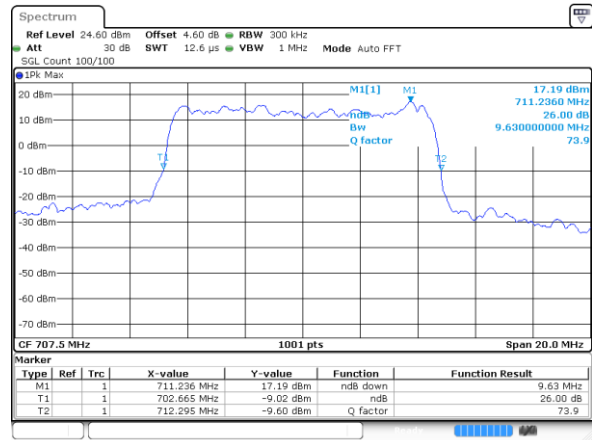
LTE Band 12

Middle Channel / 10MHz / QPSK



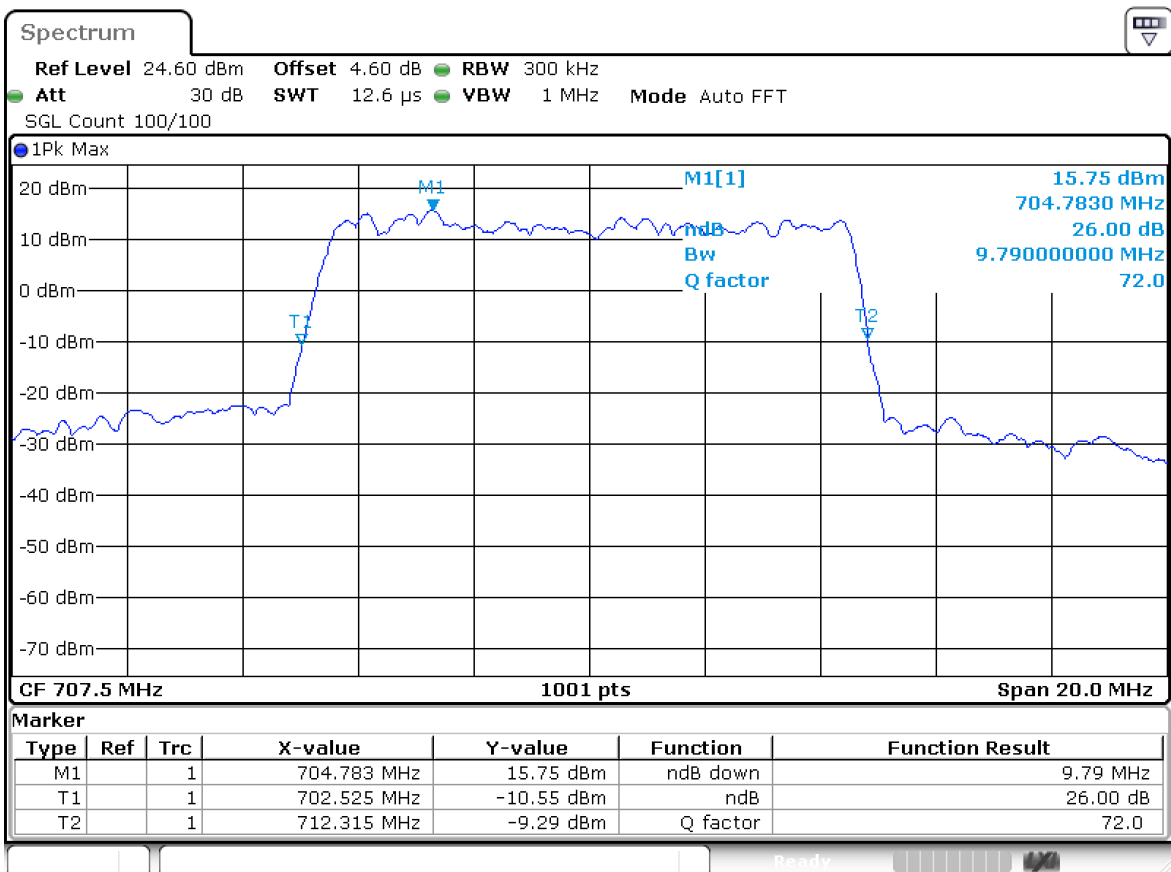
Date: 27.OCT.2021 23:30:23

Middle Channel / 10MHz / 16QAM



Date: 27.OCT.2021 23:31:53

Middle Channel / 10MHz / 64QAM

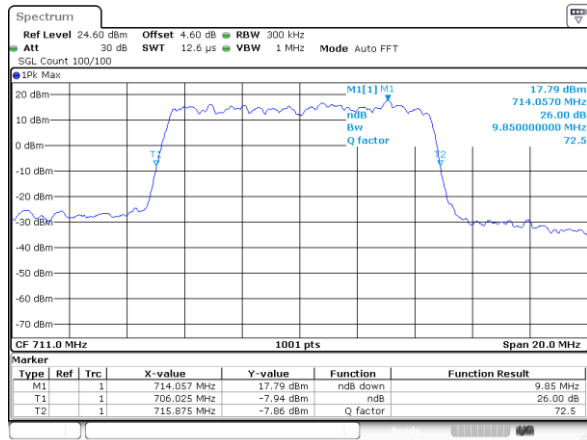


Date: 27.DEC.2021 18:26:47



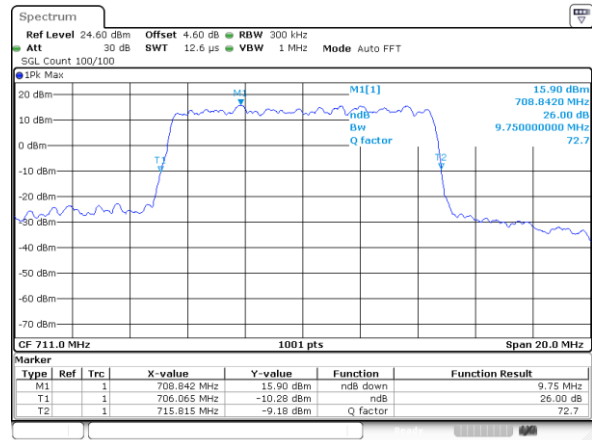
LTE Band 12

Highest Channel / 10MHz / QPSK



Date: 27.DEC.2021 18:32:19

Highest Channel / 10MHz / 16QAM

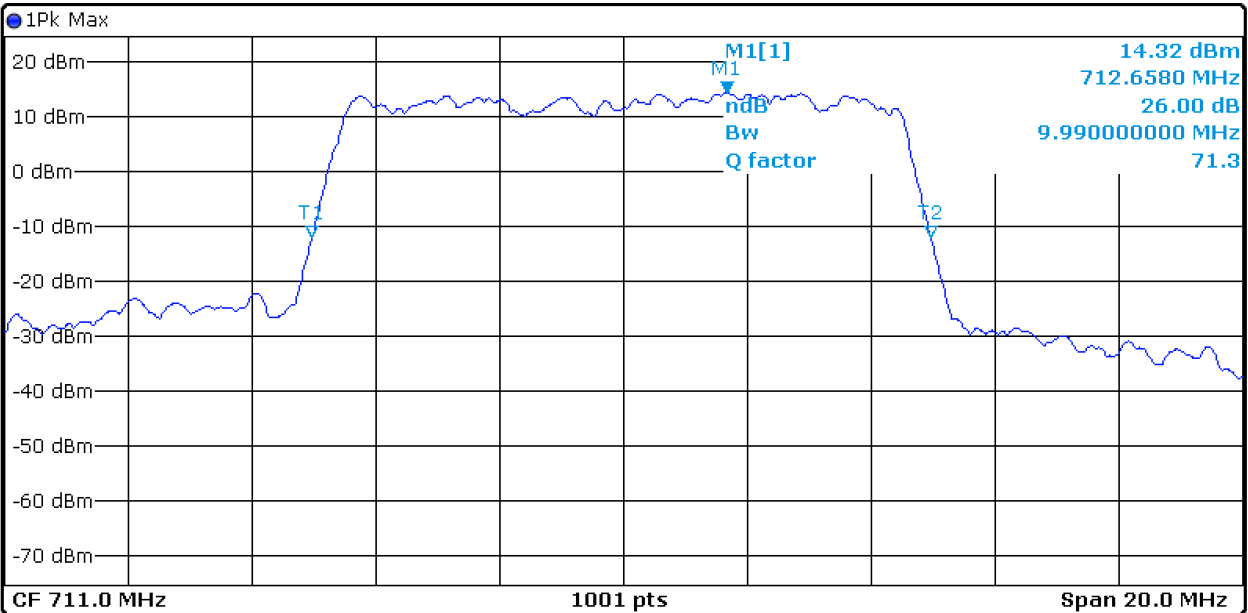


Date: 27.DEC.2021 18:33:20

Highest Channel / 10MHz / 64QAM

Spectrum

Ref Level 24.60 dBm Offset 4.60 dB RBW 300 kHz
Att 30 dB SWT 12.6 μ s VBW 1 MHz Mode Auto FFT
SGL Count 100/100



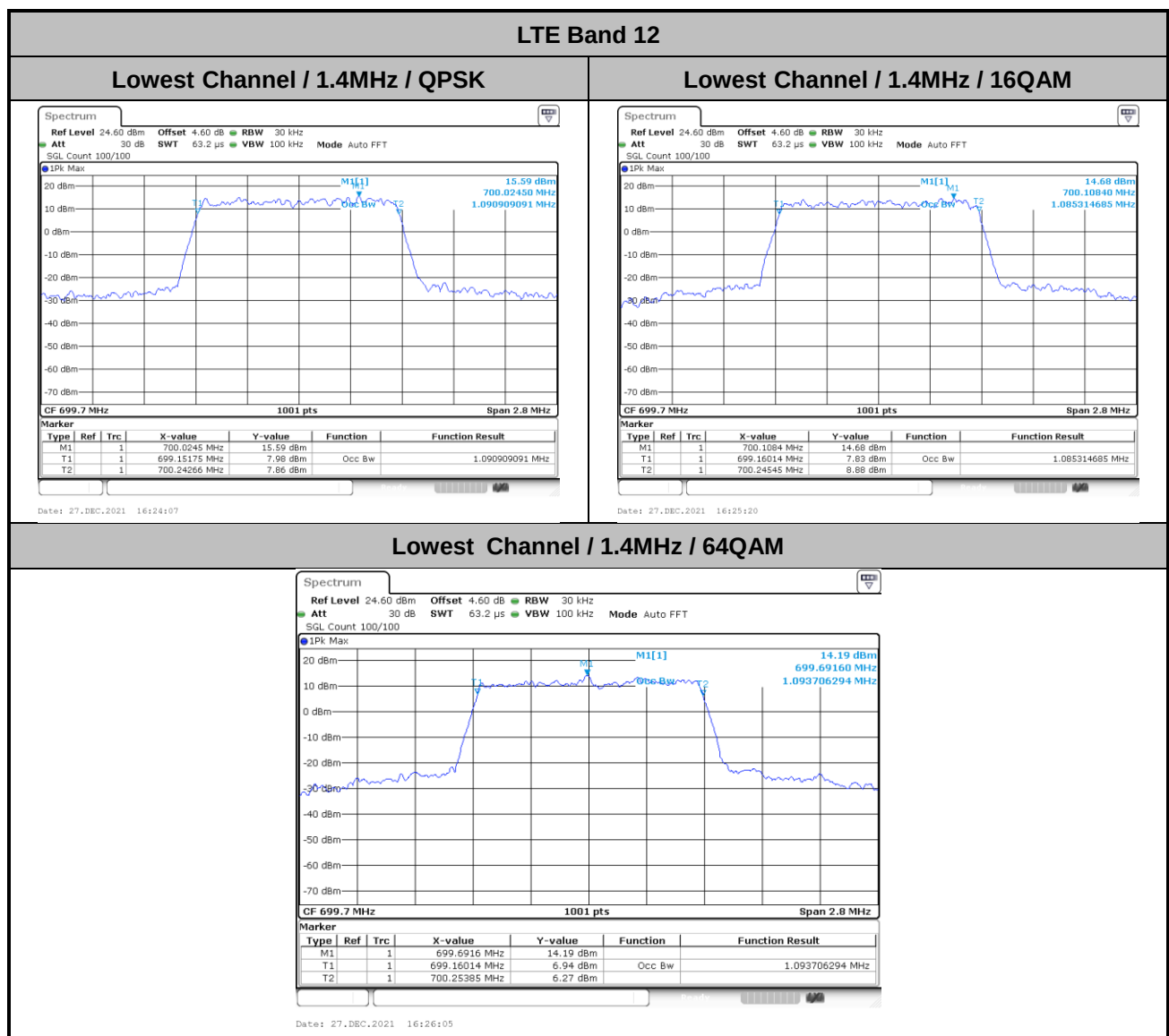
Marker						
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	712.658 MHz	14.32 dBm	ndB down	9.99 MHz
T1		1	705.965 MHz	-11.90 dBm	ndB	26.00 dB
T2		1	715.955 MHz	-11.84 dBm	Q factor	71.3

Date: 27.DEC.2021 18:35:10



Occupied Bandwidth

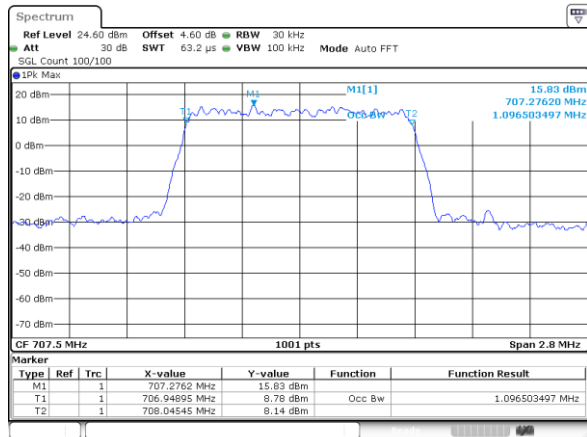
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	1.4 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	1.09	1.09	1.09
Middle CH	1.10	1.09	1.10
Highest CH	1.08	1.10	1.09





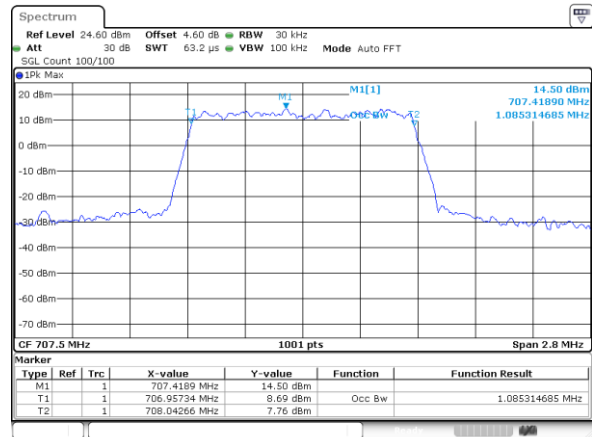
LTE Band 12

Middle Channel / 1.4MHz / QPSK



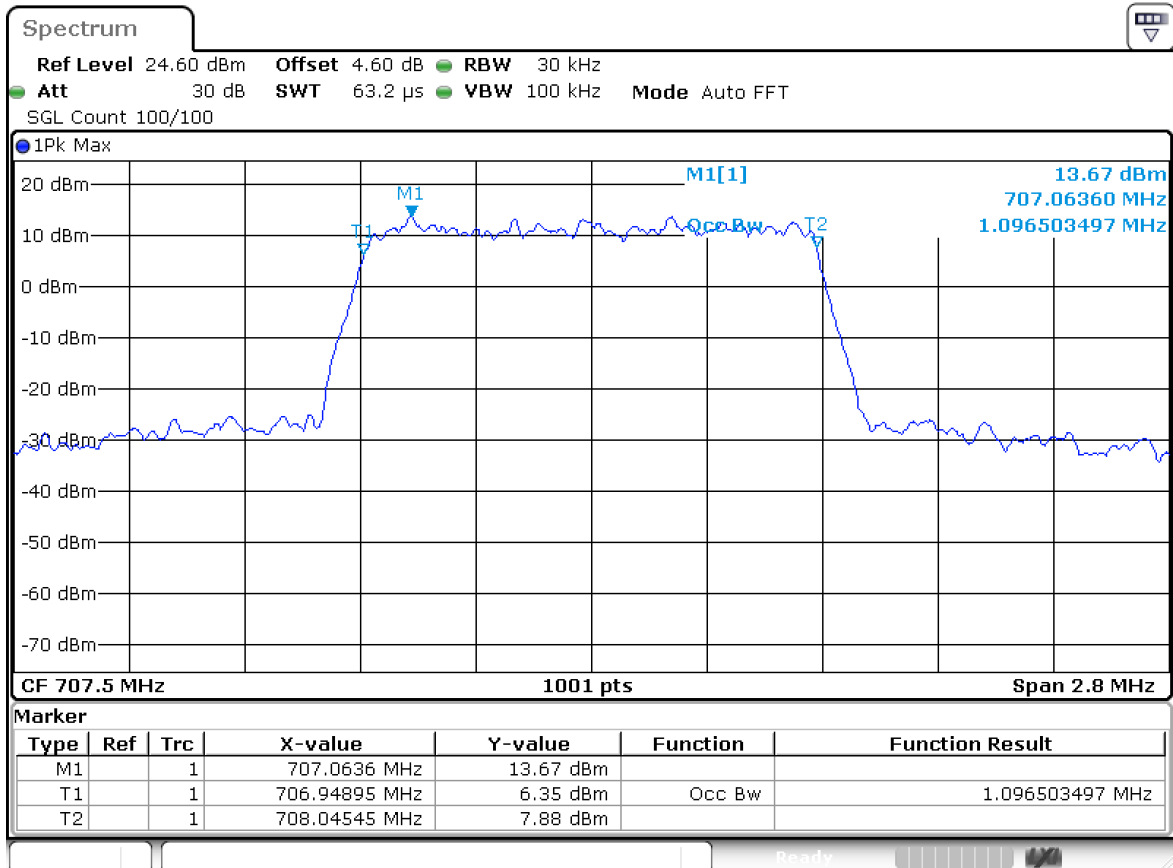
Date: 27.DEC.2021 16:29:27

Middle Channel / 1.4MHz / 16QAM



Date: 27.DEC.2021 16:28:05

Middle Channel / 1.4MHz / 64QAM

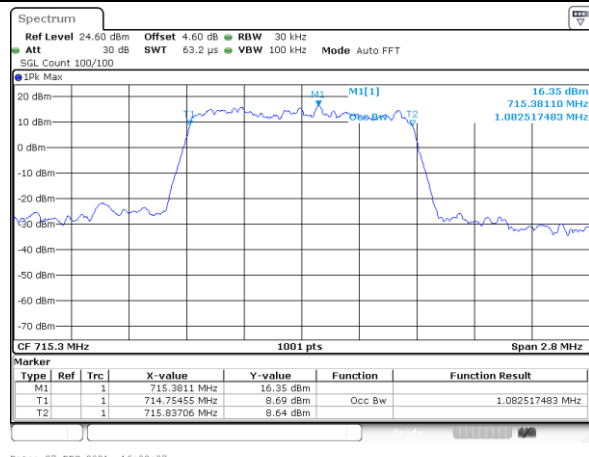


Date: 27.DEC.2021 16:27:21

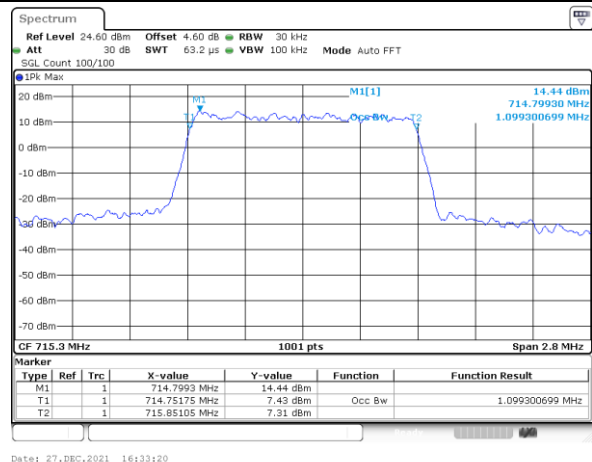


LTE Band 12

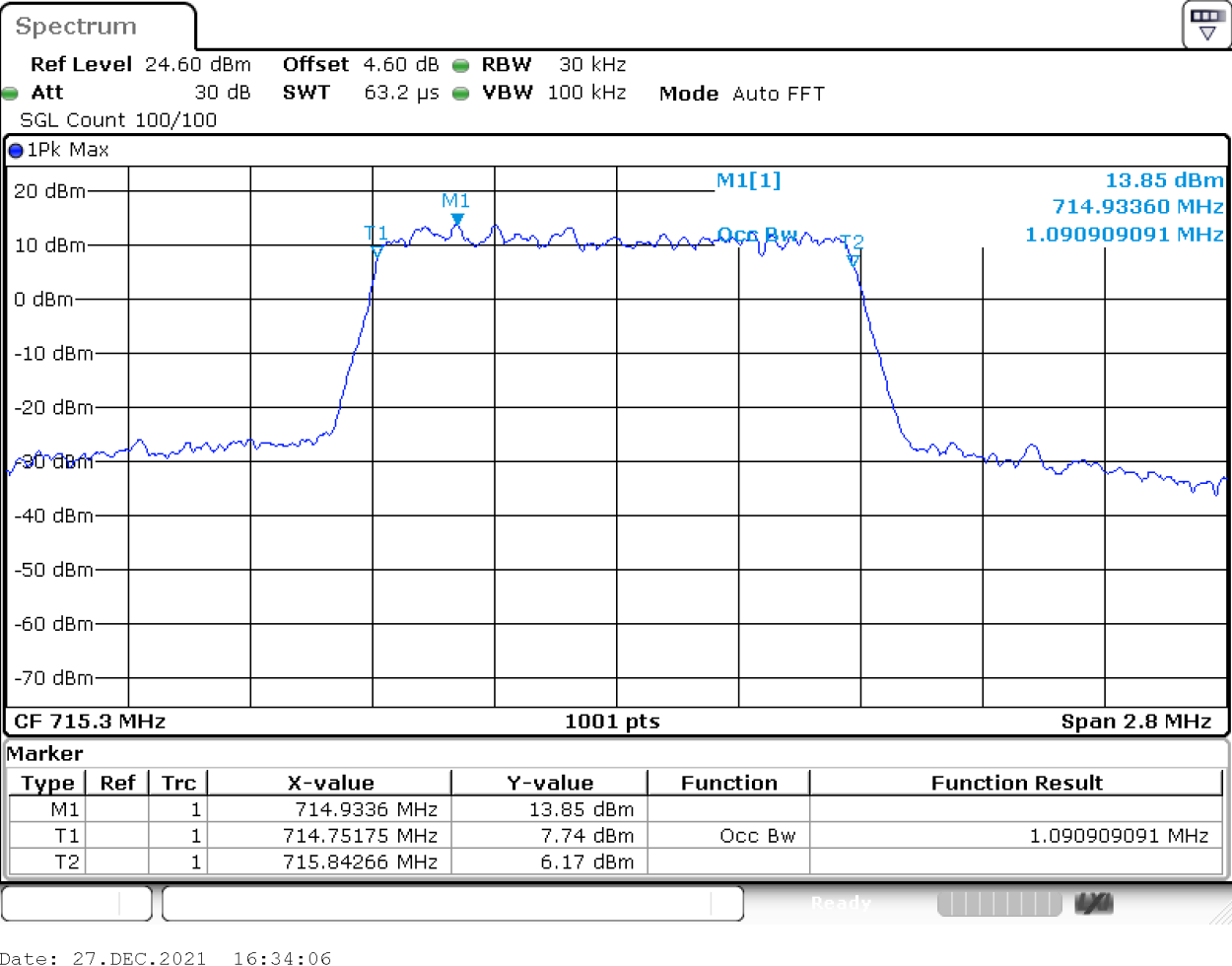
Highest Channel / 1.4MHz / QPSK



Highest Channel / 1.4MHz / 16QAM

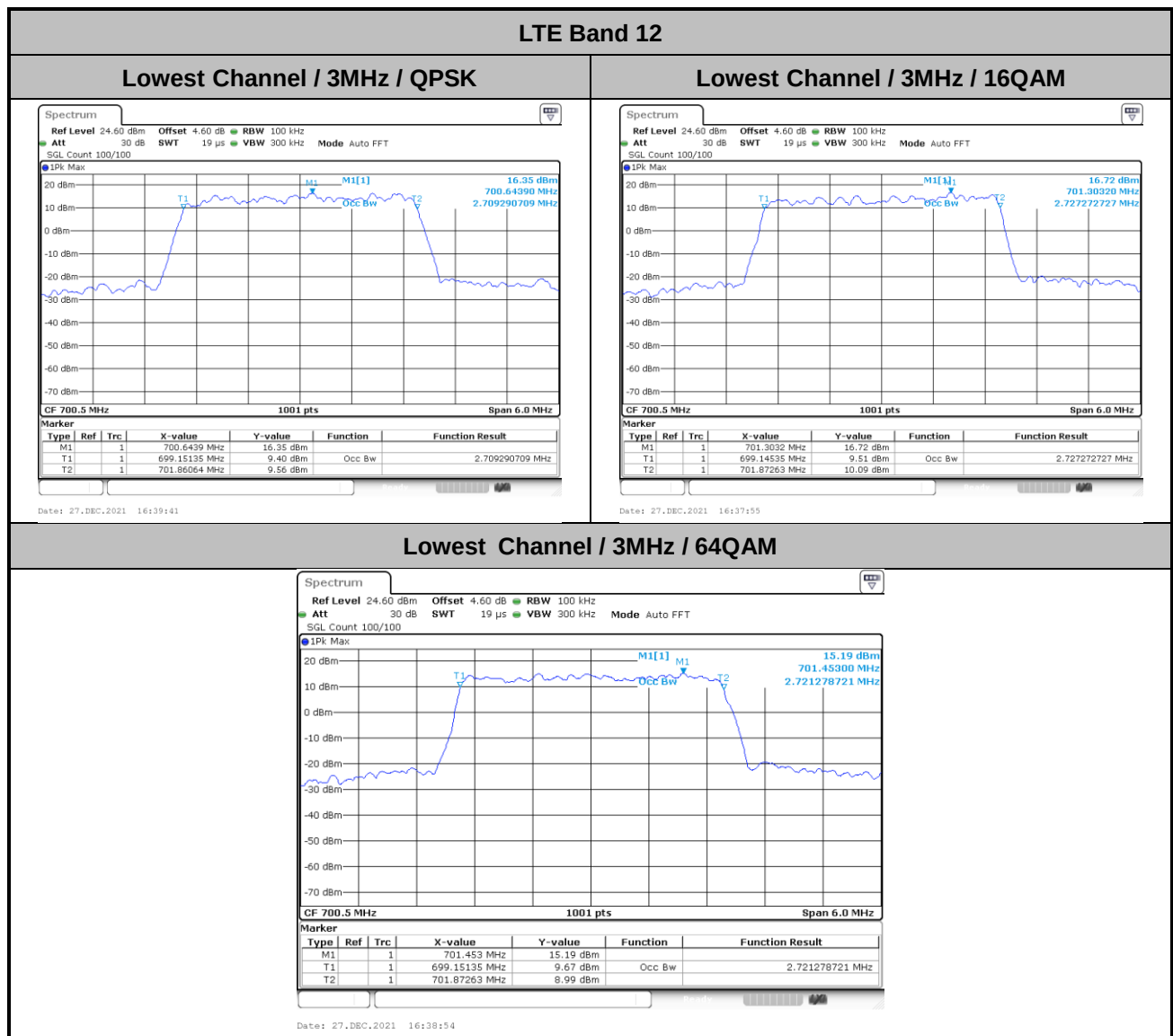


Highest Channel / 1.4MHz / 64QAM





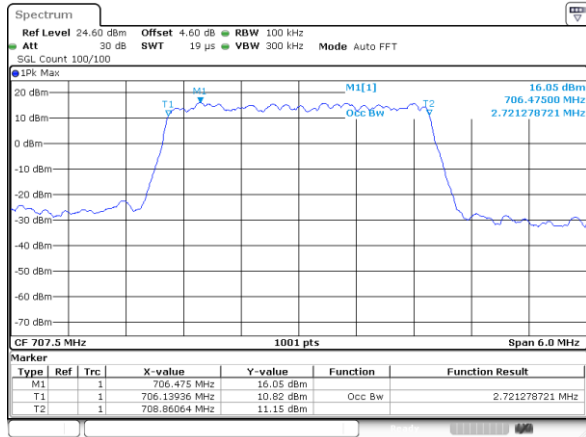
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	3 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	2.71	2.73	2.72
Middle CH	2.72	2.72	2.72
Highest CH	2.72	2.70	2.70





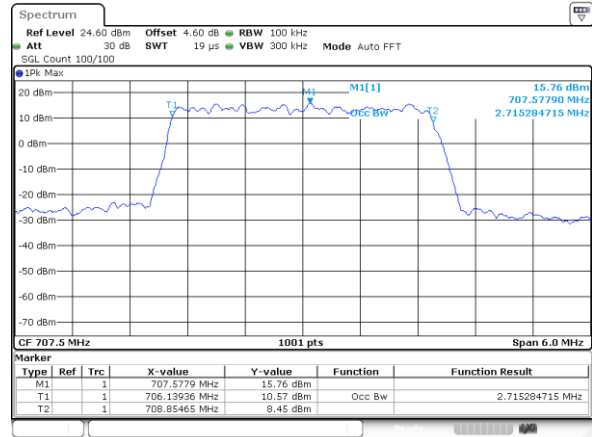
LTE Band 12

Middle Channel / 3MHz / QPSK



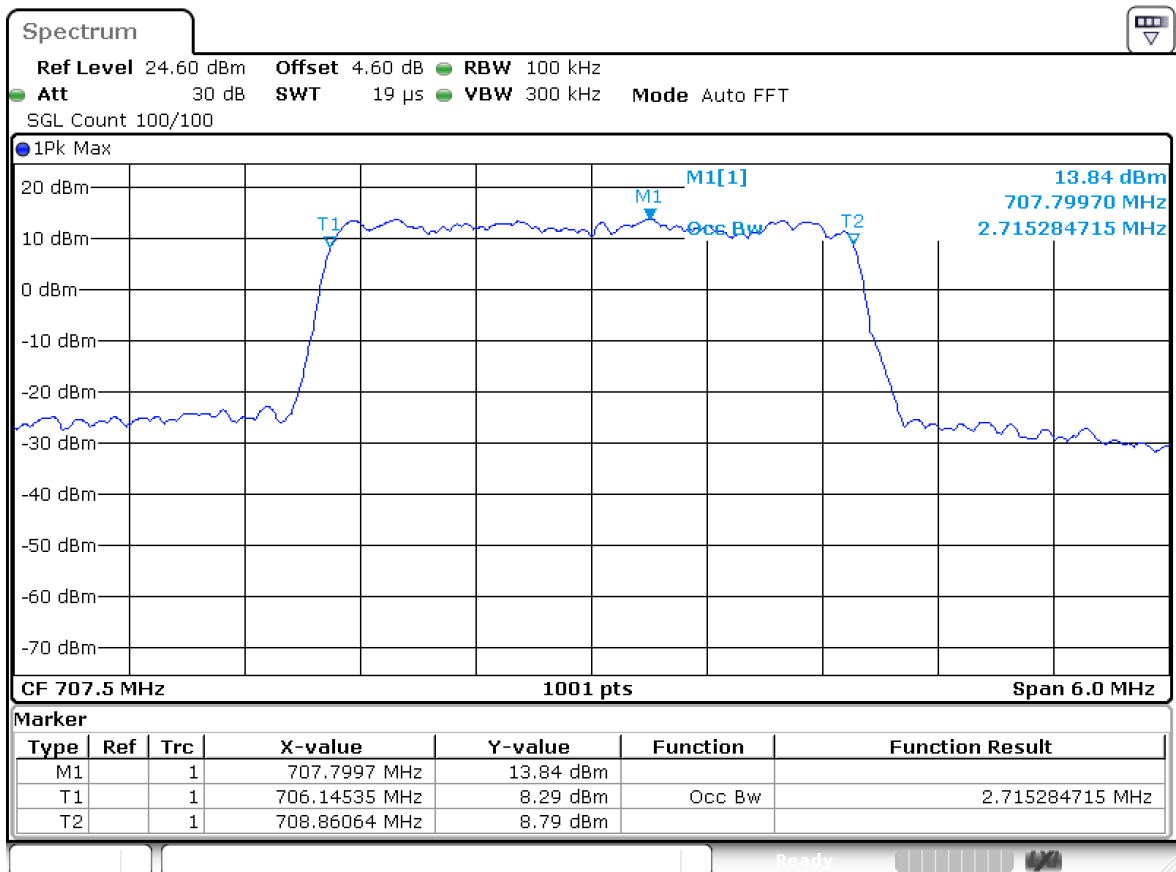
Date: 27.DEC.2021 16:40:49

Middle Channel / 3MHz / 16QAM



Date: 27.DEC.2021 16:41:55

Middle Channel / 3MHz / 64QAM

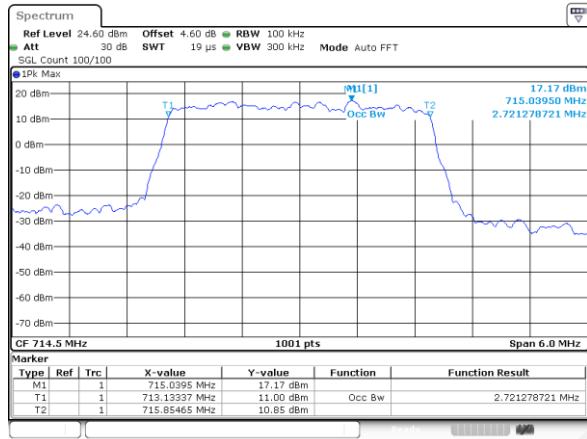


Date: 27.DEC.2021 16:43:32

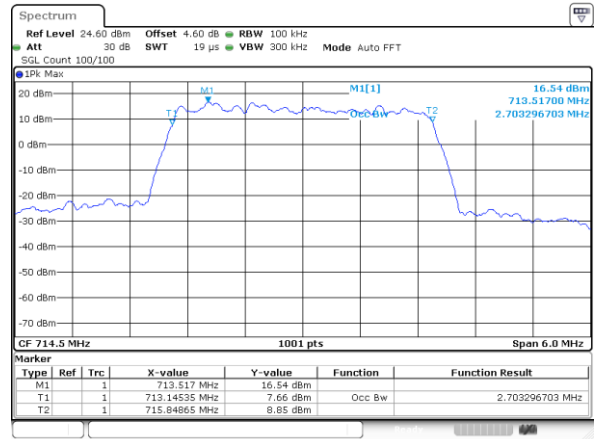


LTE Band 12

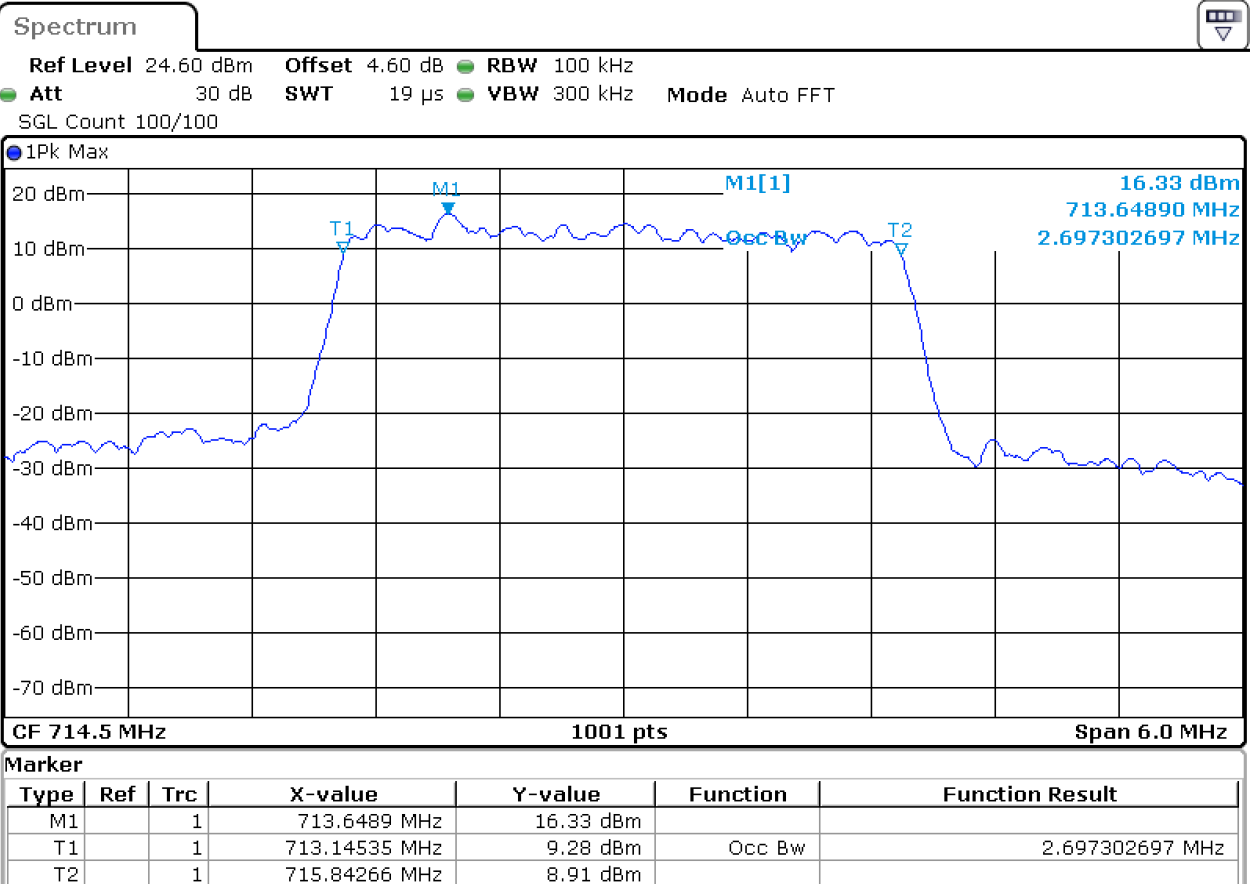
Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM



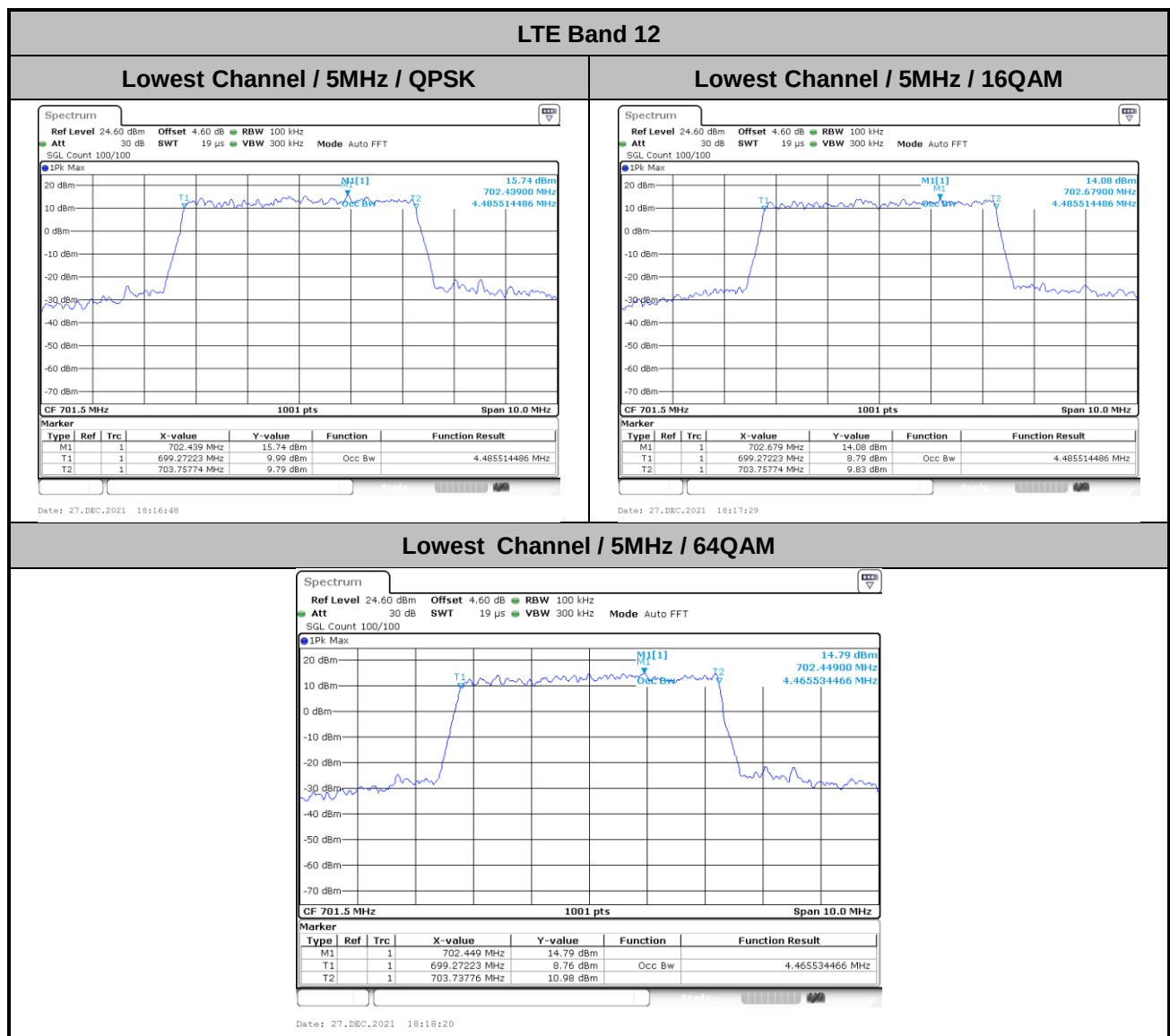
Highest Channel / 3MHz / 64QAM



Date: 27.DEC.2021 16:45:28



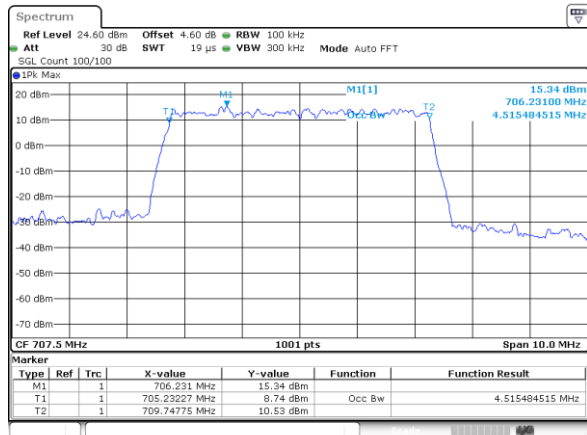
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	5 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	4.49	4.49	4.47
Middle CH	4.52	4.50	4.50
Highest CH	4.48	4.48	4.49





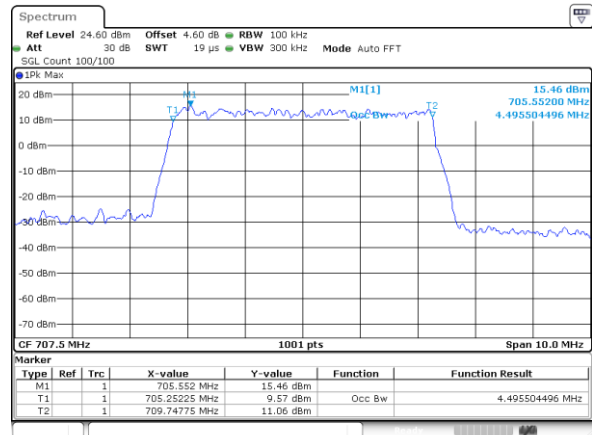
LTE Band 12

Middle Channel / 5MHz / QPSK



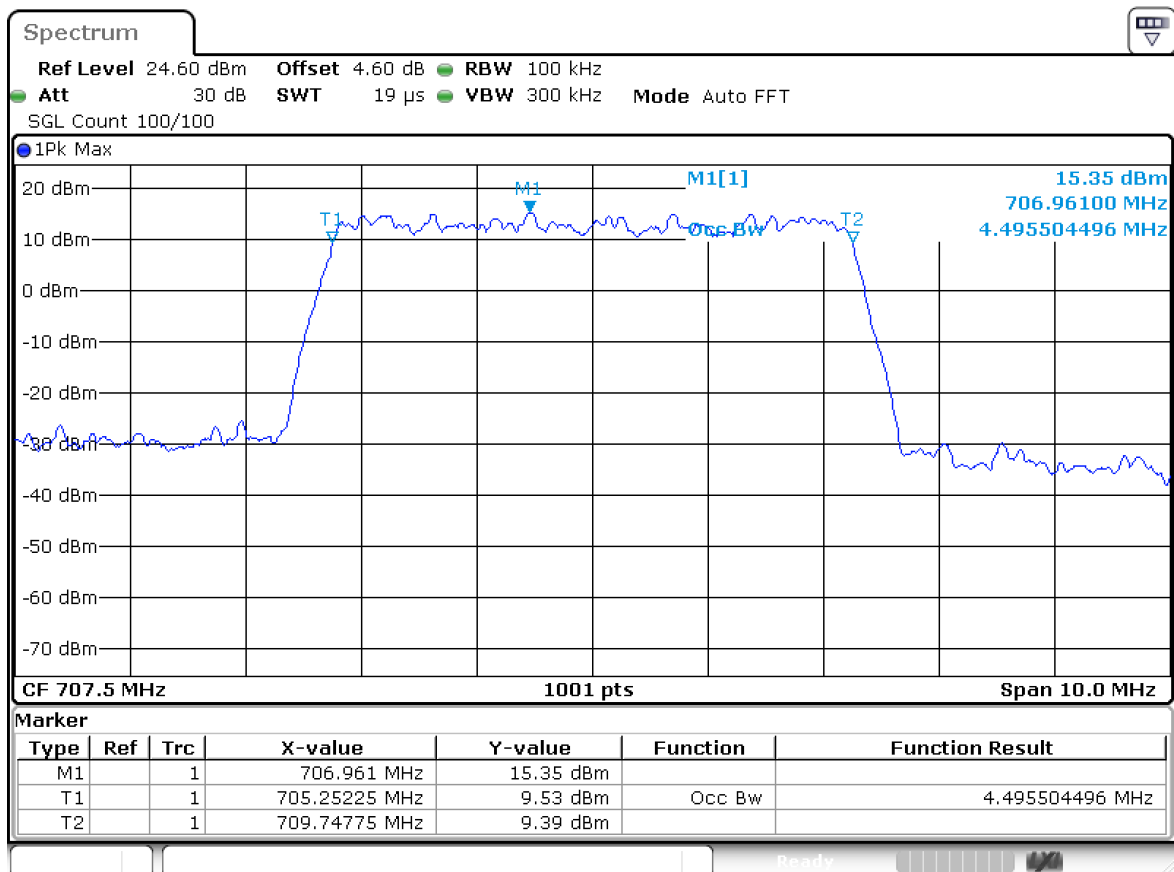
Date: 27.DEC.2021 18:21:25

Middle Channel / 5MHz / 16QAM



Date: 27.DEC.2021 18:20:15

Middle Channel / 5MHz / 64QAM

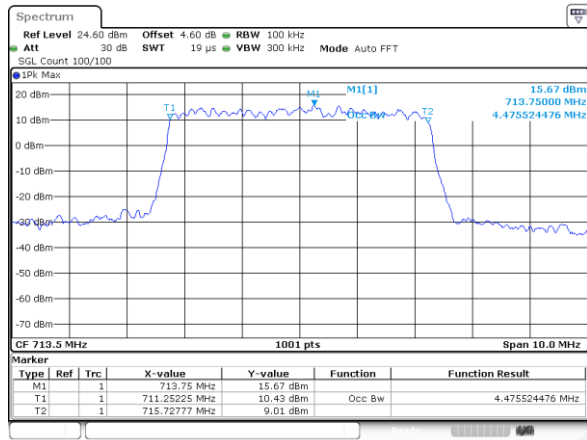


Date: 27.DEC.2021 18:19:23



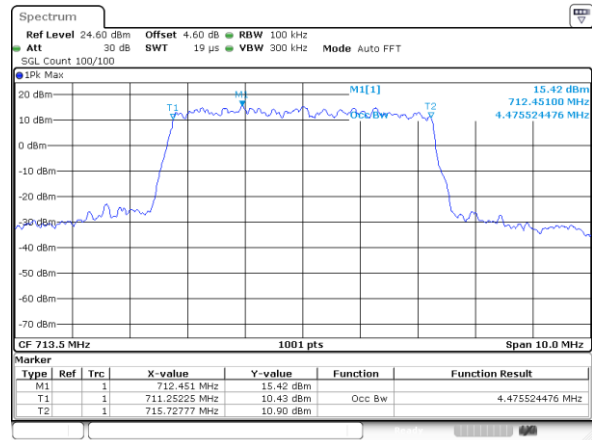
LTE Band 12

Highest Channel / 5MHz / QPSK



Date: 27.DEC.2021 18:22:59

Highest Channel / 5MHz / 16QAM

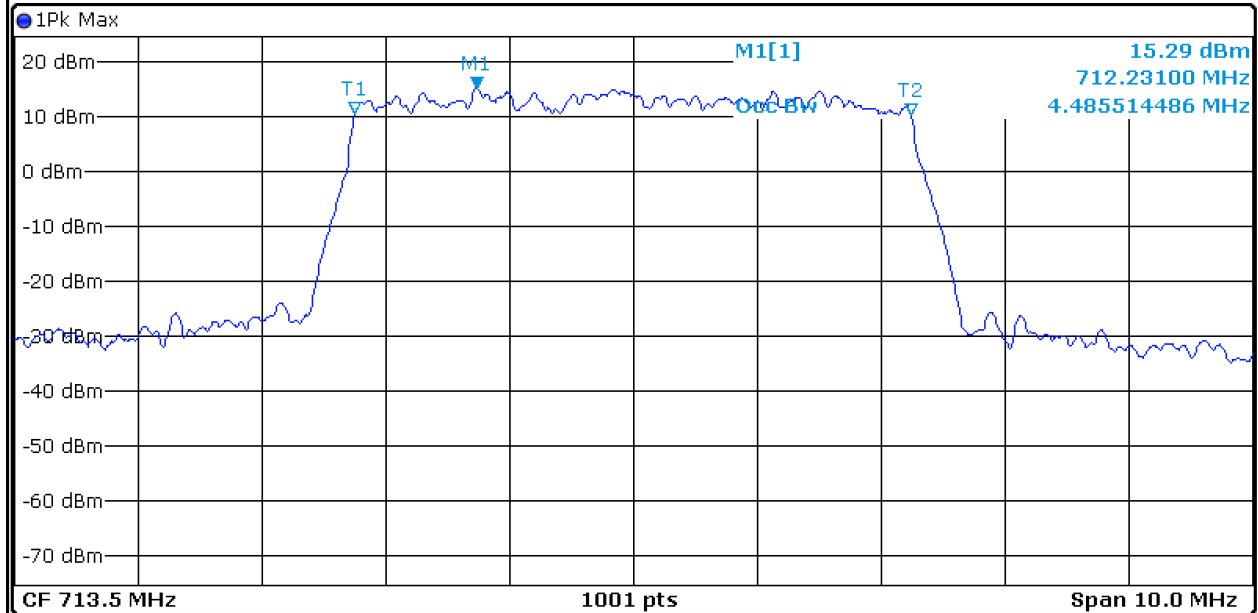


Date: 27.DEC.2021 18:23:55

Highest Channel / 5MHz / 64QAM

Spectrum

Ref Level 24.60 dBm Offset 4.60 dB RBW 100 kHz
Att 30 dB SWT 19 μ s VBW 300 kHz Mode Auto FFT
SGL Count 100/100

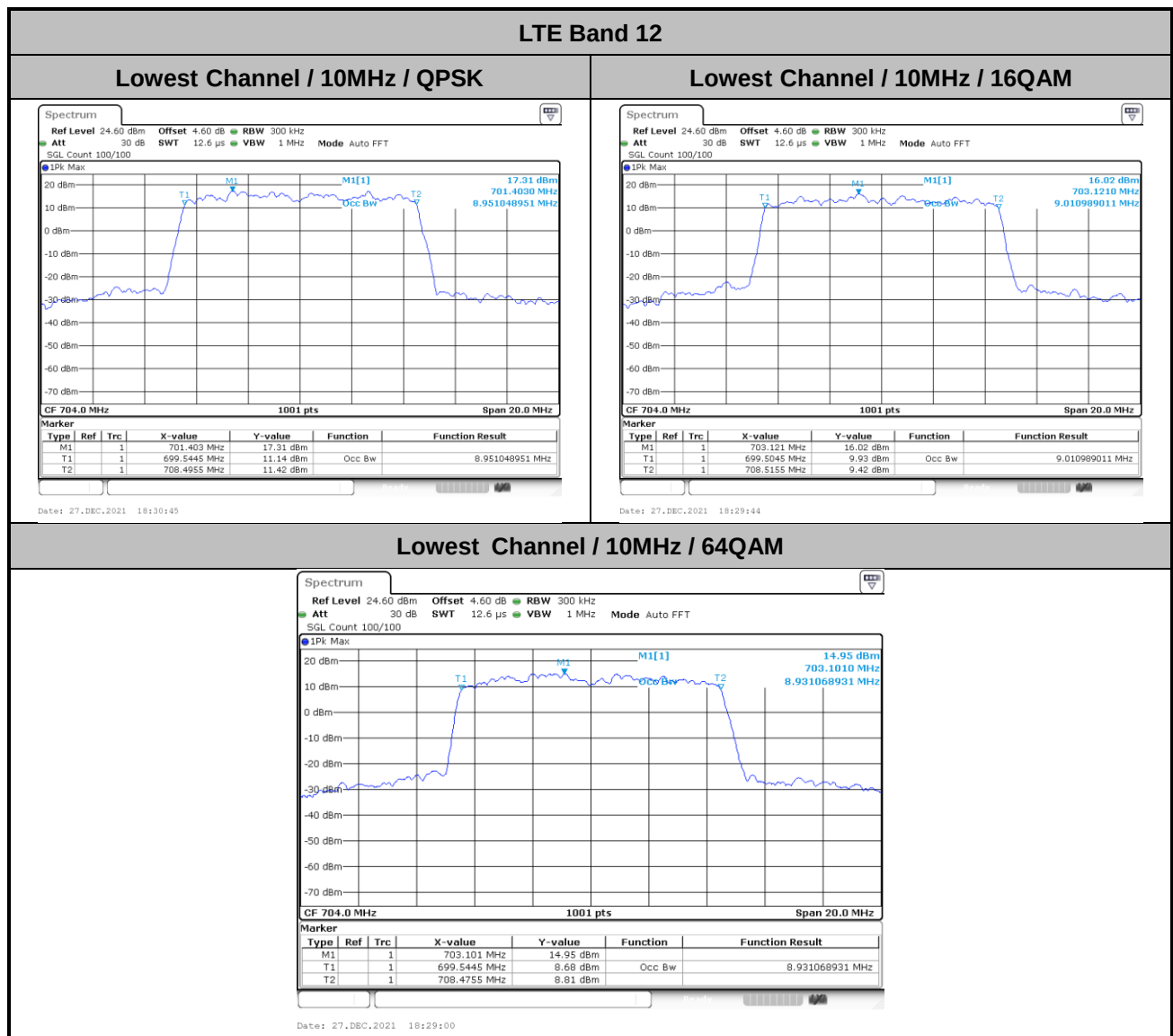


Marker						
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		712.231 MHz	15.29 dBm		
T1	1		712.23100 MHz	15.29 dBm		
T2	1		715.73776 MHz	10.35 dBm	Occ Bw	4.485514486 MHz

Date: 27.DEC.2021 18:24:12



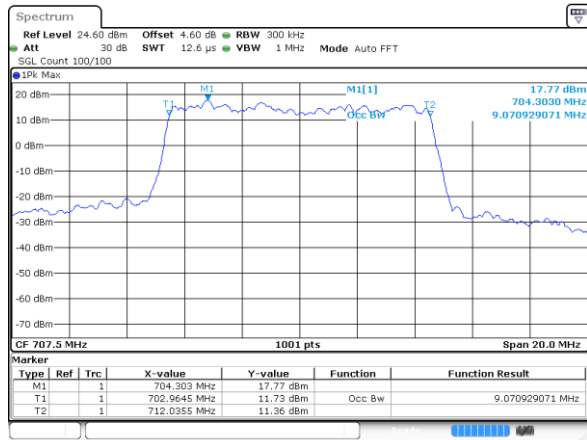
Mode	LTE Band 12 : 99%OBW(MHz)		
BW	10 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	8.95	9.01	8.93
Middle CH	9.07	9.07	8.99
Highest CH	9.01	9.01	8.97



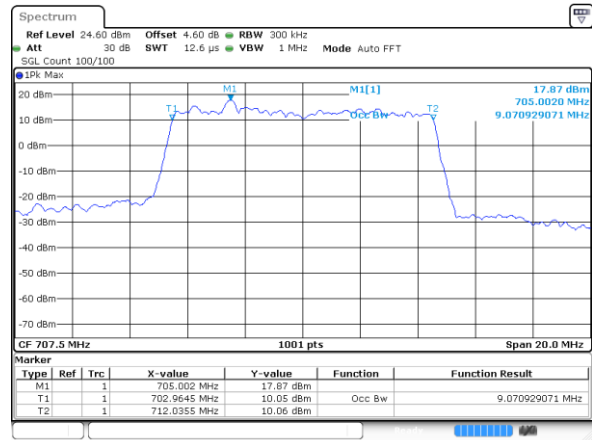


LTE Band 12

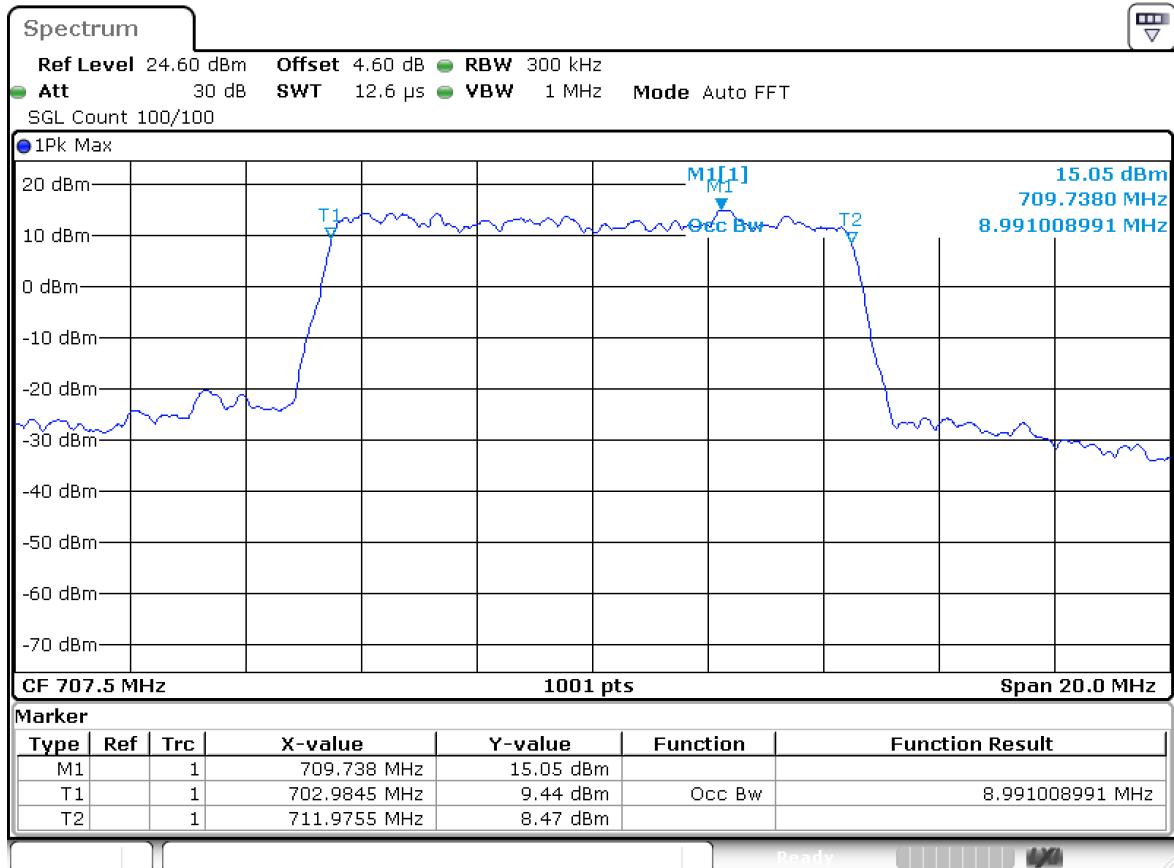
Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM



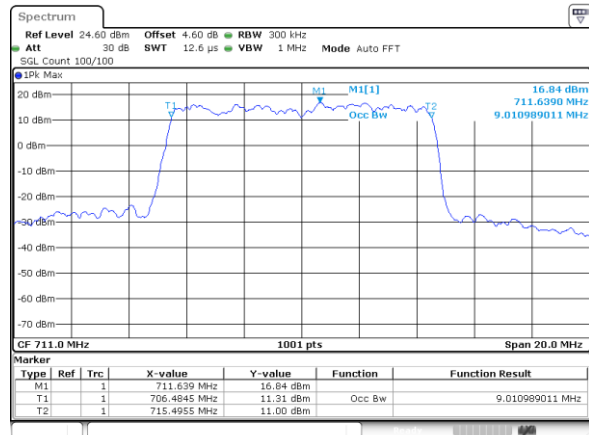
Middle Channel / 10MHz / 64QAM





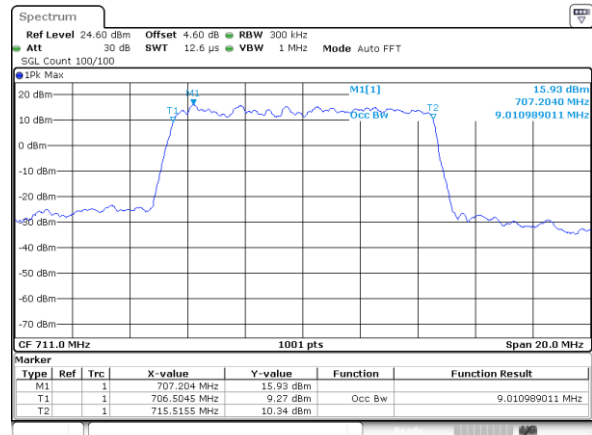
LTE Band 12

Highest Channel / 10MHz / QPSK



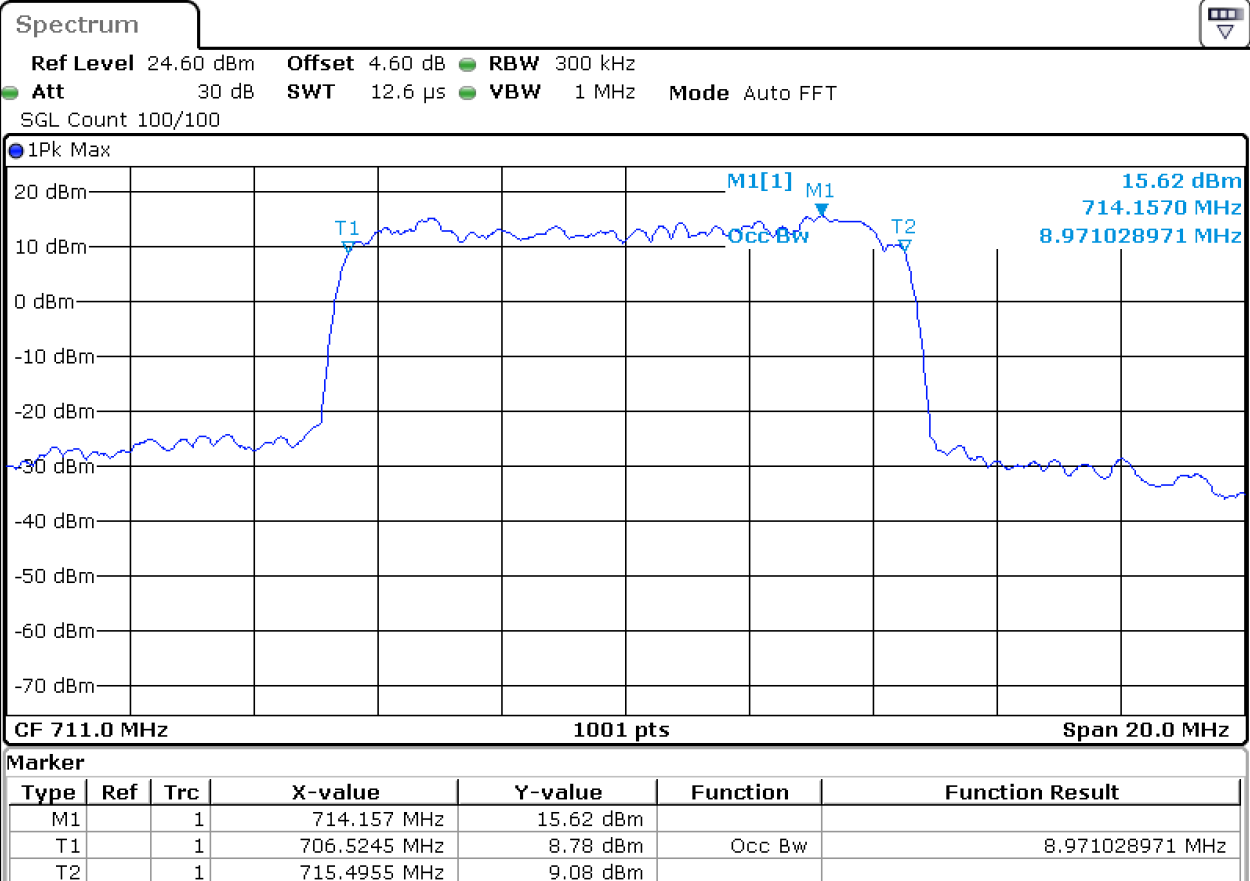
Date: 27.DEC.2021 18:31:58

Highest Channel / 10MHz / 16QAM

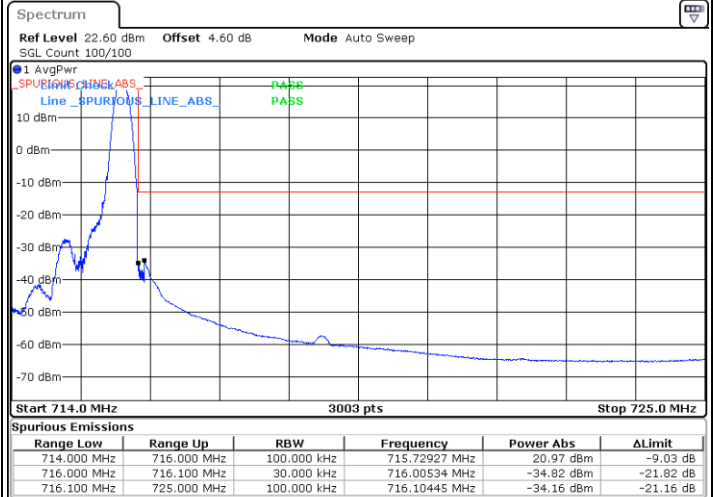
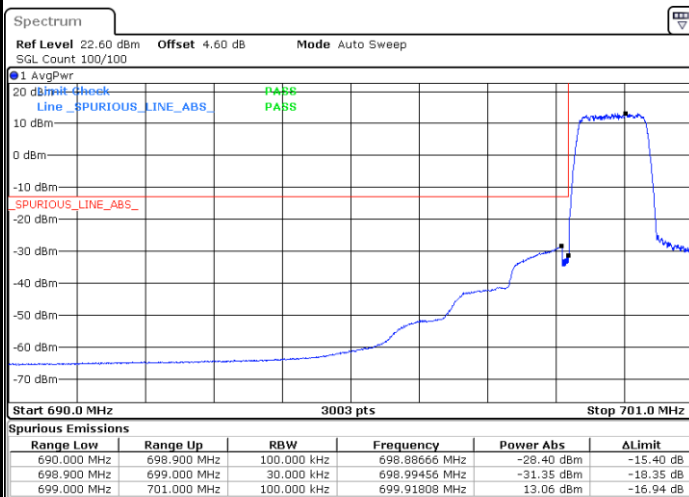
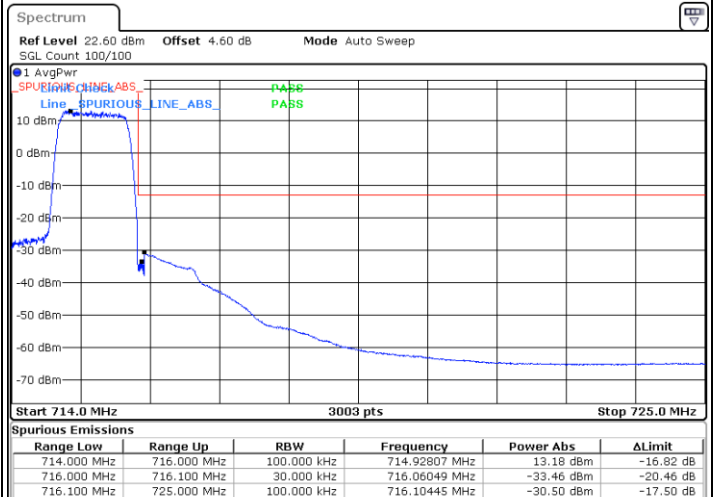


Date: 27.DEC.2021 18:32:58

Highest Channel / 10MHz / 64QAM



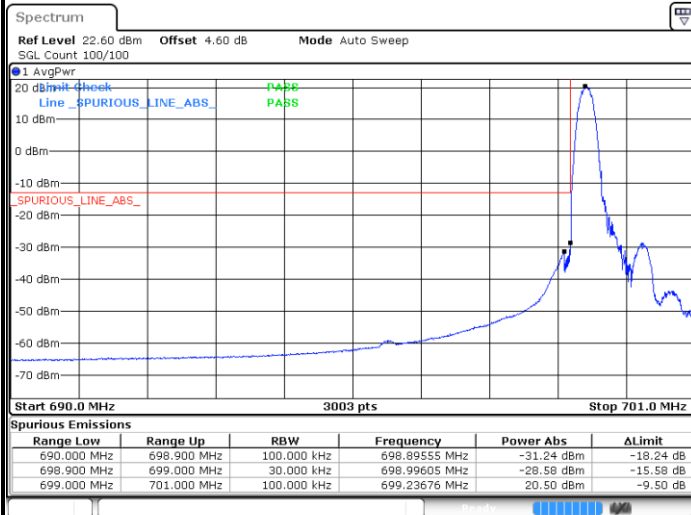
Date: 27.DEC.2021 18:34:15

**Conducted Band Edge****LTE Band 12 / 1.4MHz / QPSK****Lowest Band Edge / 1RB****Highest Band Edge / 1RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**



LTE Band 12 / 1.4MHz / 16QAM

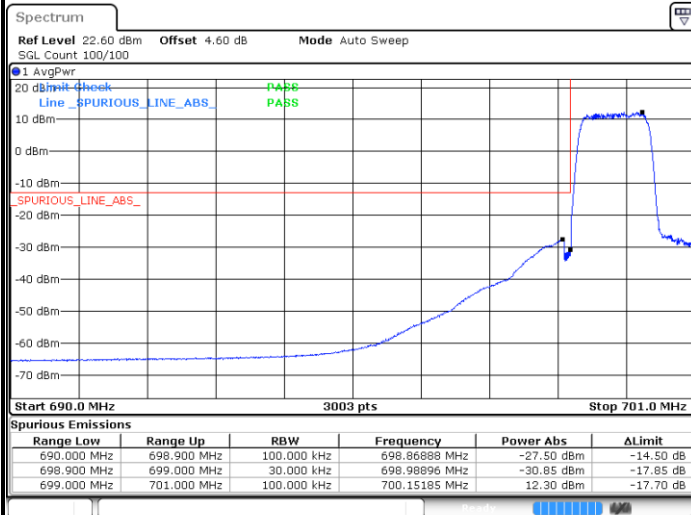
Lowest Band Edge / 1 RB



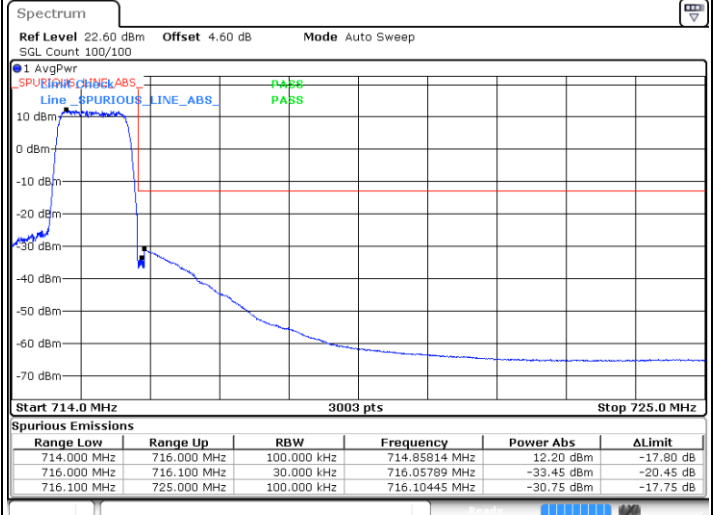
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



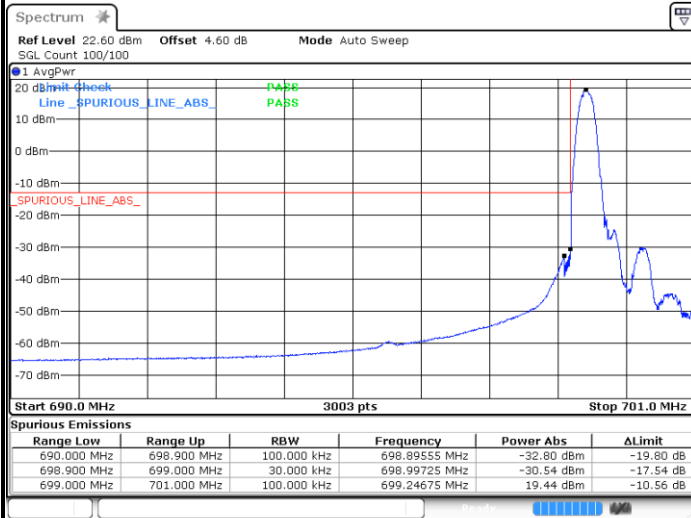
Highest Band Edge / Full RB



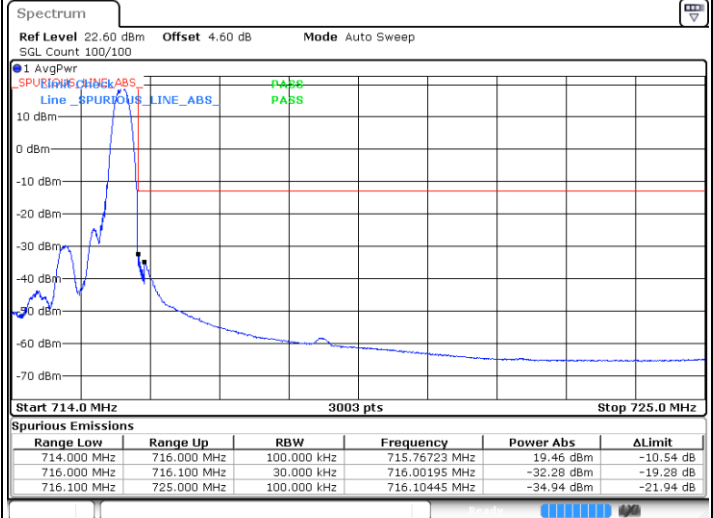


LTE Band 12 / 1.4MHz / 64QAM

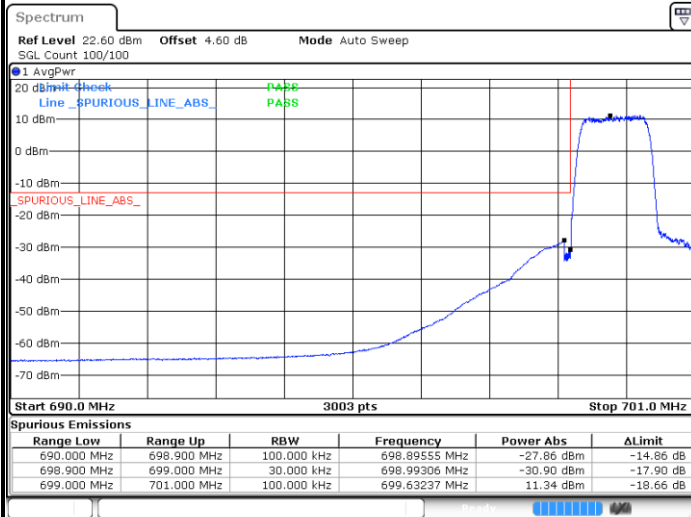
Lowest Band Edge / 1 RB



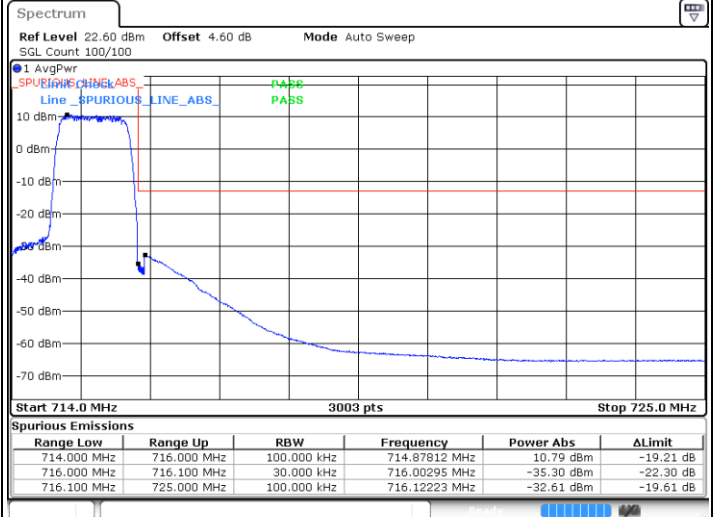
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



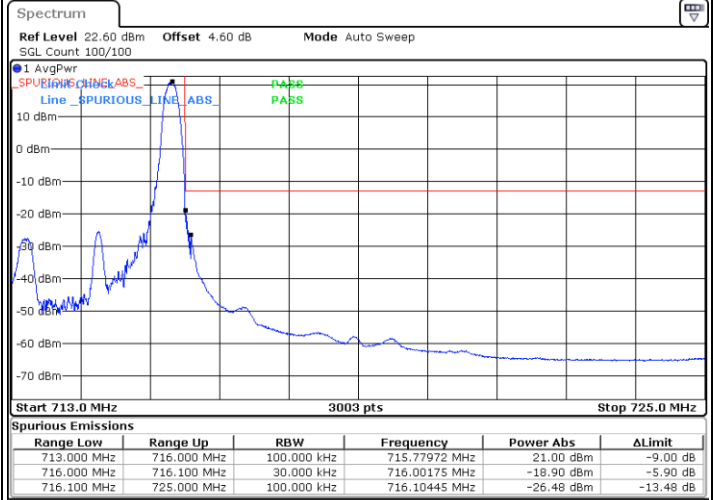


LTE Band 12 / 3MHz / QPSK

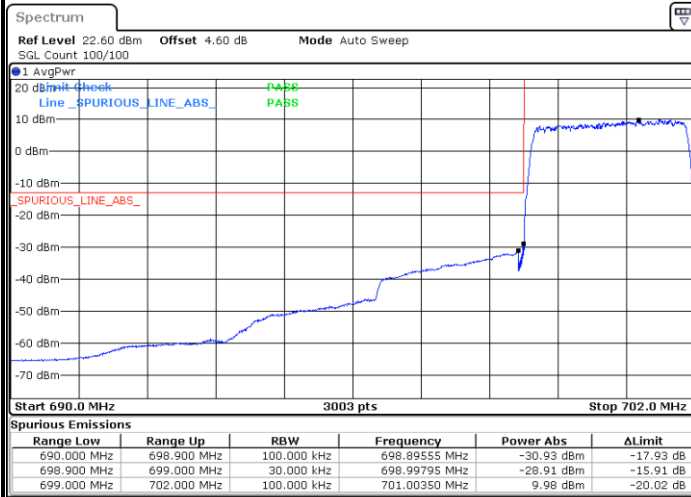
Lowest Band Edge / 1RB



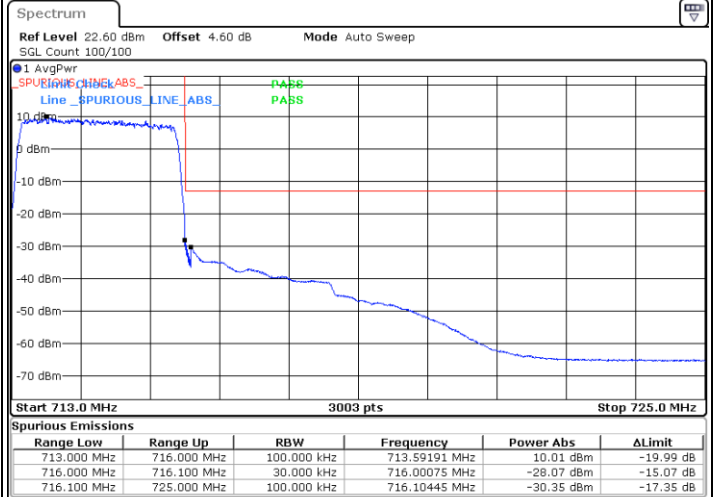
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



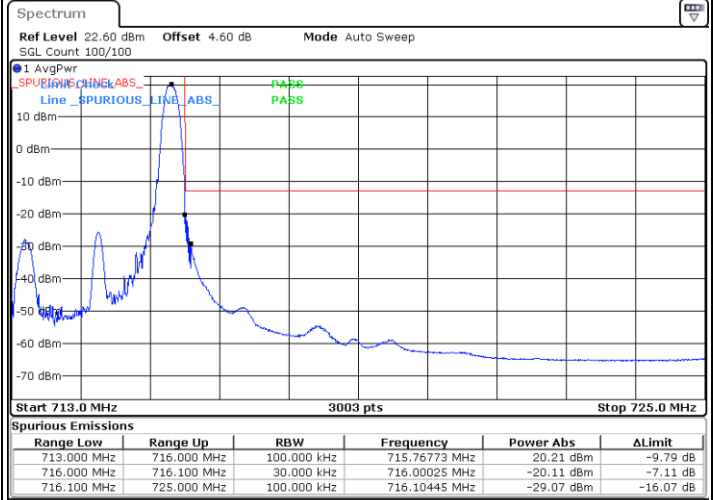


LTE Band 12 / 3MHz / 16QAM

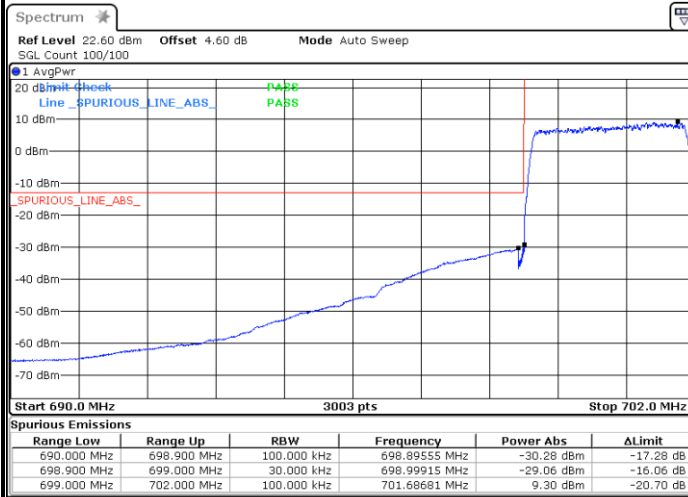
Lowest Band Edge / 1 RB



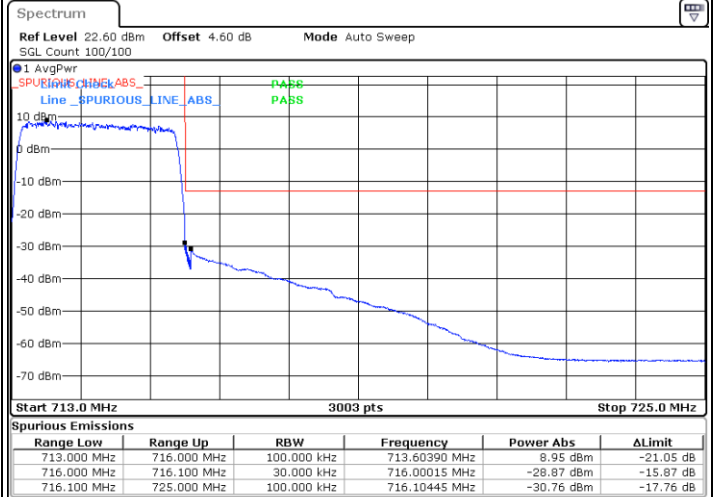
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



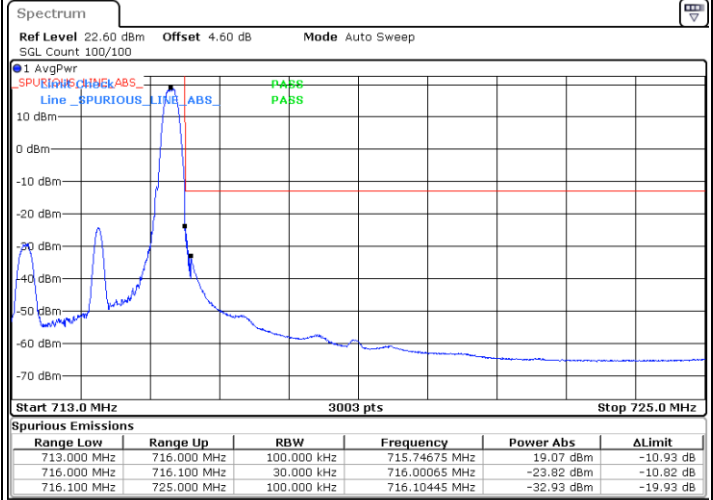


LTE Band 12 / 3MHz / 64QAM

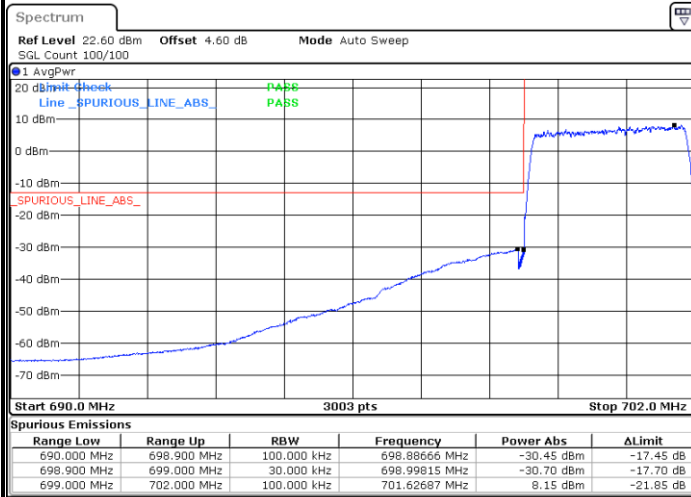
Lowest Band Edge / 1 RB



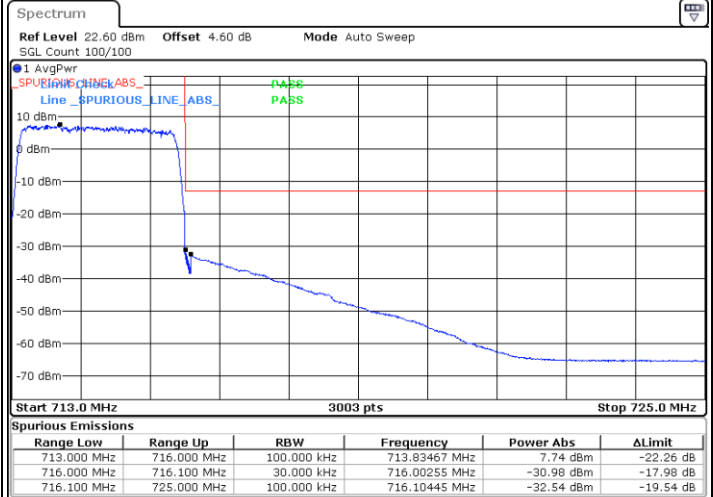
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



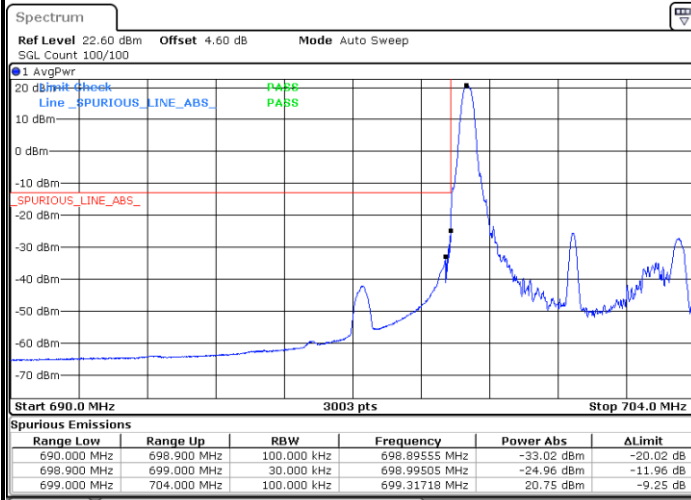
Highest Band Edge / Full RB



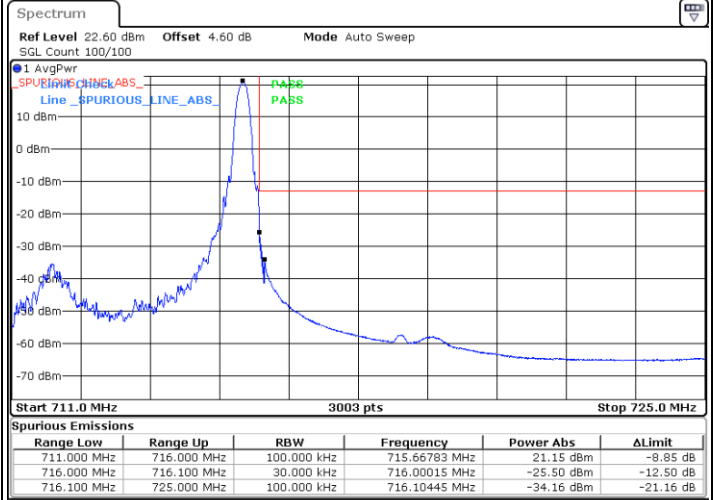


LTE Band 12 / 5MHz / QPSK

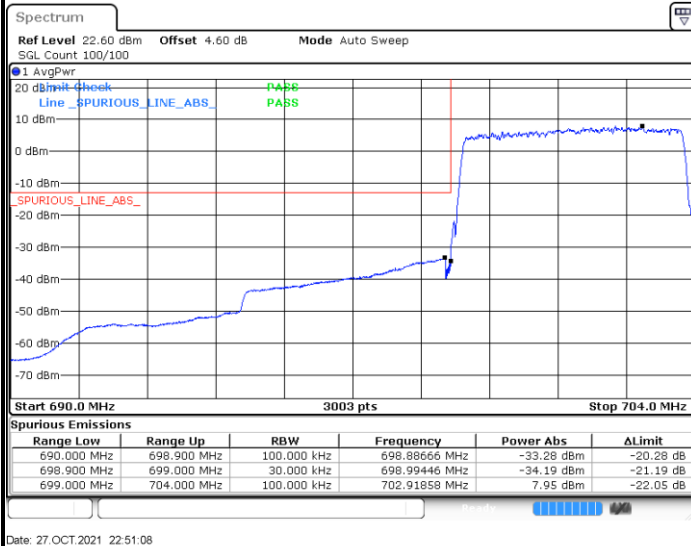
Lowest Band Edge / 1 RB



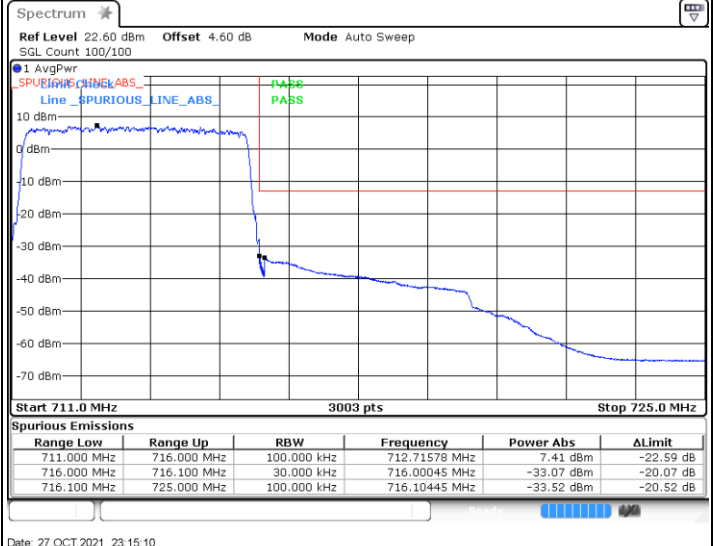
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



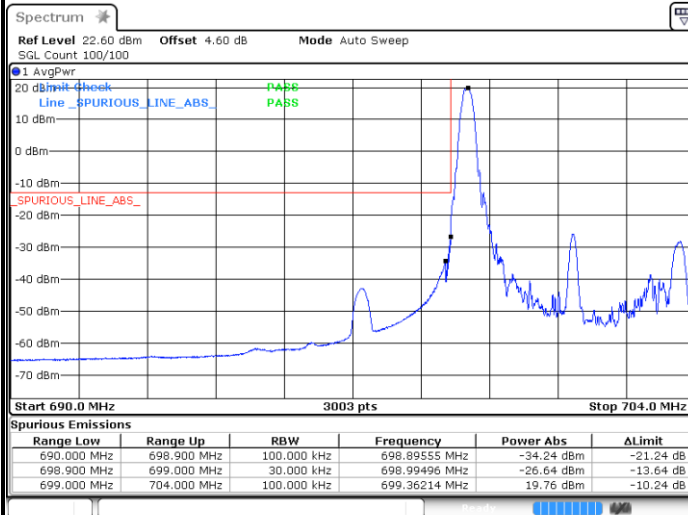
Highest Band Edge / Full RB



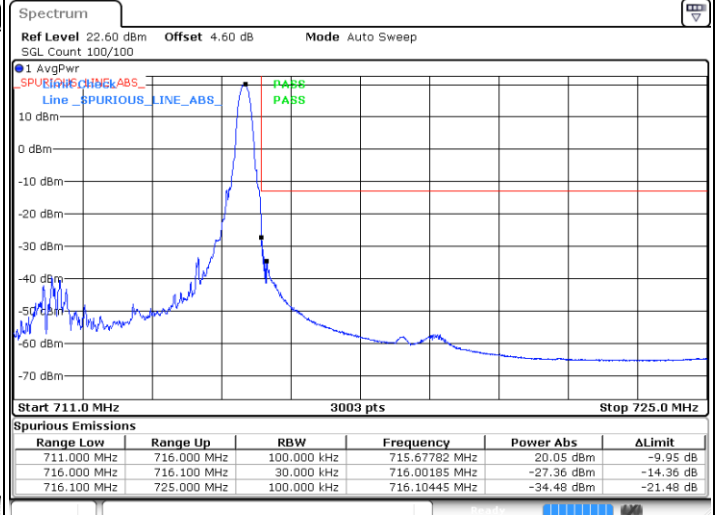


LTE Band 12 / 5MHz / 16QAM

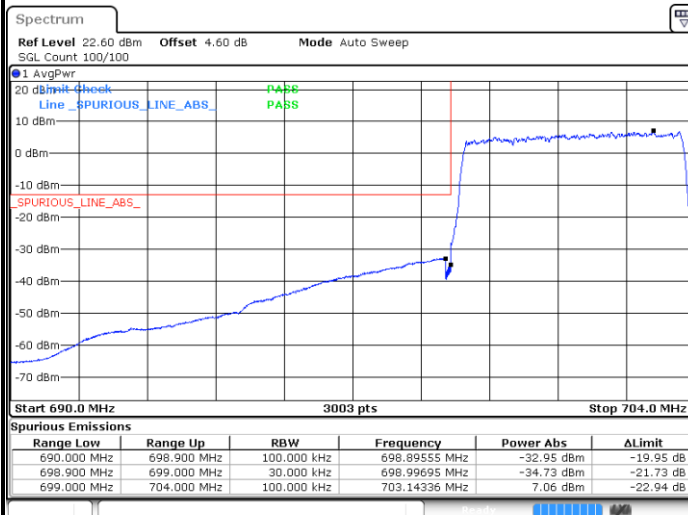
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

