



FCC RADIO TEST REPORT

FCC ID : PY7-24870P
Equipment : GSM/WCDMA/LTE Phone with BT, DTS/UNII
a/b/g/n/ac, NFC, FM receiver and GNSS
Brand Name : SONY
Applicant : Sony Corporation
1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan
Manufacturer : Sony Corporation
1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan
Standard : FCC 47 CFR Part 2, 27
Test Date(s) : Jan. 06, 2022 ~ Jan. 18, 2022

We, Sporton International Inc. (Kunshan), 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 Inc. (Kunshan), 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 Inc. (Kunshan)

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People's Republic of China**



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Appendix A. Test Results of Conducted Test

Appendix B. Test Results of Radiated Test



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(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	Pass	
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(h)	Conducted Band Edge Measurement (Band 4)	Pass	-
3.6	§2.1051 §27.53(h)	Conducted Spurious Emission (Band 4)	Pass	-
3.7	§2.1055 §22.355 §27.54	Frequency Stability Temperature & Voltage	Pass	-
4.2	§2.1053 §27.53(h)	Radiated Spurious Emission (Band 4)	Pass	Under limit 39.87 dB at 6900.00 MHz

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 4: -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	IMEI Code	Performed Test Item
A	0.306	004402543119840/ 004402543119857	Conducted Measurement
		004402543285823/ 004402543285831	Radiated Spurious Emission
		004402543285823/ 004402543285831	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 4		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1710.7 ~ 1754.3	0.0745	1M09G7D	0.0608	1M10W7D
3	1711.5 ~ 1753.5	0.0735	2M73G7D	0.0614	2M73W7D
5	1712.5 ~ 1752.5	0.0743	4M51G7D	0.0603	4M51W7D
10	1715.0 ~ 1750.0	0.0733	9M13G7D	0.0603	9M07W7D
15	1717.5 ~ 1747.5	0.0738	13M4G7D	0.0611	13M5W7D
20	1720.0 ~ 1745.0	0.0752	17M9G7D	0.0618	18M0W7D

Note: All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.



1.4 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
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
- ♦ 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

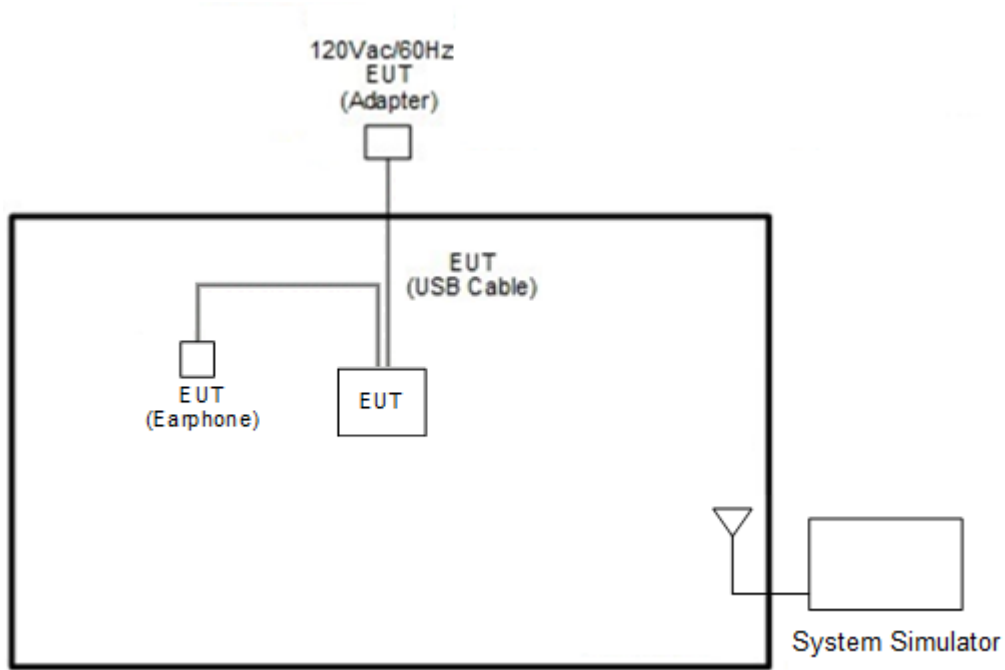
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

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	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
Peak-to-Average Ratio	4						v	v	v	v			v		v		
26dB and 99% Bandwidth	4	v	v	v	v	v	v	v	v	v			v	v	v	v	
Conducted Band Edge	4	v	v	v	v	v	v	v	v	v	v		v	v		v	
Conducted Spurious Emission	4	v	v	v	v	v	v	v				v			v	v	v
Frequency Stability	4				v			v					v		v		
E.R.P / E.I.R.P	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	4	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 5.4 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 5.4 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

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

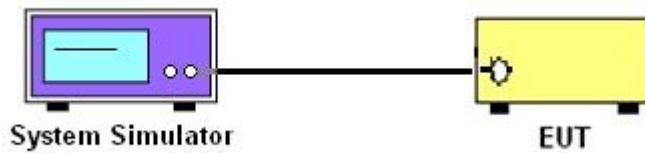
3 Conducted Test Items

3.1 Measuring Instruments

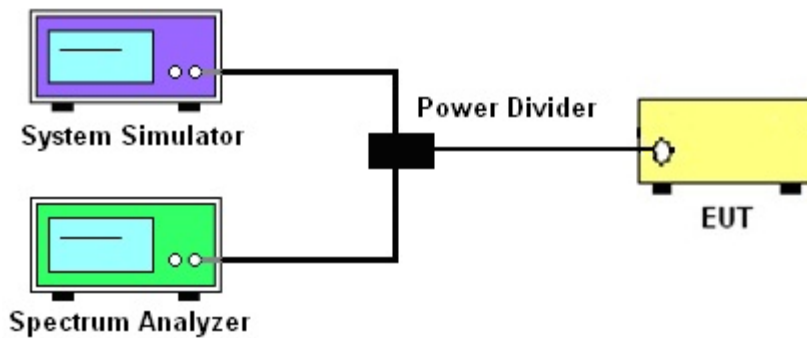
See list of measuring instruments of this test report.

3.1.1 Test Setup

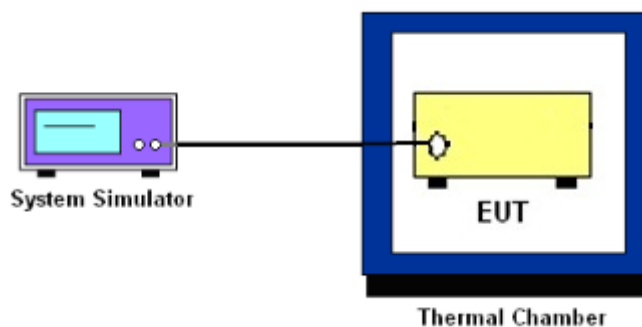
3.1.2 Conducted Output Power



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 EIRP

3.2.1 Description of the Conducted Output Power Measurement and 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 EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4.

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

27.53 (h)

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

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 $P(\text{Watts})$



3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

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

3.6.2 Test Procedures

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

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

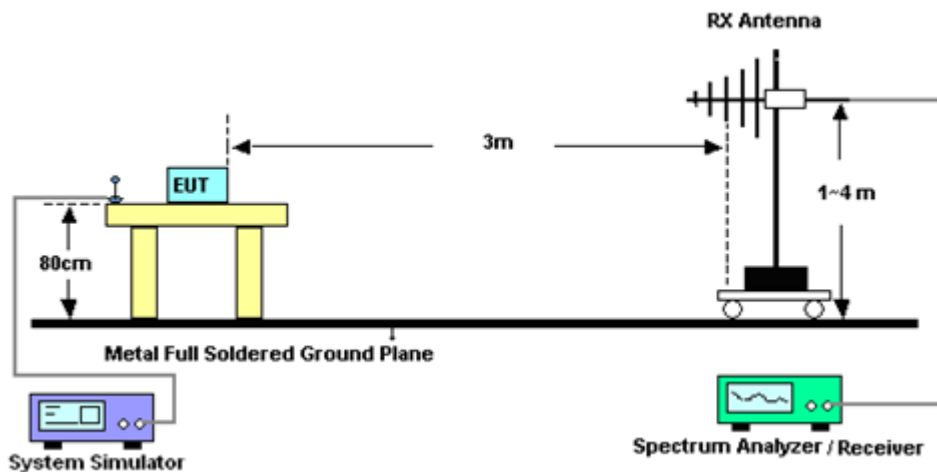
See list of measuring instruments of this test report.

4.1.1 Test Setup

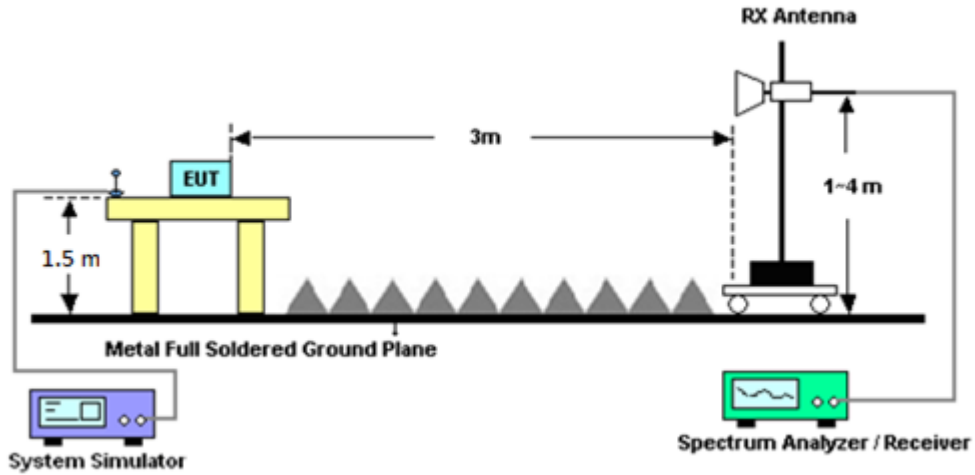
For radiated test below 30MHz



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.

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	Jan. 06, 2022~ Jan. 07, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Jan. 06, 2022~ Jan. 07, 2022	Aug. 25, 2022	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 12, 2021	Jan. 06, 2022~ Jan. 07, 2022	Jul. 11, 2022	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G,MAX 30dB	Apr. 13, 2021	Jan. 18, 2022	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 31, 2021	Jan. 18, 2022	Oct. 30, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	Jan. 18, 2022	May 29, 2022	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 18, 2021	Jan. 18, 2022	Apr. 17, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jan. 18, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	Burgeon	BPA-530	102219	0.01MHz ~3000MHz	Nov. 01, 2021	Jan. 18, 2022	Oct. 31, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2022	Jan. 18, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Jul. 30, 2021	Jan. 18, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	Jan. 18, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jan. 18, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jan. 18, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jan. 18, 2022	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% ($U = 2Uc(y)$)	3.3dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

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

Conducted Output Power(Average power) and ERP/EIRP

LTE Band 4:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	L	M	H
Channel				20050	20175	20300	20050	20175	20300
Frequency (MHz)				1720	1732.5	1745	1720	1732.5	1745
20	QPSK	1	0	19.74	19.86	19.79	0.0731	0.0752	0.0740
20	QPSK	1	49	19.74	19.82	19.76	0.0731	0.0745	0.0735
20	QPSK	1	99	19.64	19.74	19.62	0.0714	0.0731	0.0711
20	QPSK	50	0	18.88	18.94	18.81	0.0600	0.0608	0.0590
20	QPSK	50	24	18.84	18.92	18.85	0.0594	0.0605	0.0596
20	QPSK	50	50	18.65	18.76	18.76	0.0569	0.0583	0.0583
20	QPSK	100	0	18.64	18.78	18.69	0.0568	0.0586	0.0574
20	16QAM	1	0	18.94	18.94	19.01	0.0608	0.0608	0.0618
20	16QAM	1	49	18.84	18.87	18.94	0.0594	0.0598	0.0608
20	16QAM	1	99	18.69	18.75	18.85	0.0574	0.0582	0.0596
20	16QAM	50	0	17.84	17.86	17.82	0.0472	0.0474	0.0470
20	16QAM	50	24	17.82	17.92	17.97	0.0470	0.0481	0.0486
20	16QAM	50	50	17.71	17.77	17.78	0.0458	0.0465	0.0466
20	16QAM	100	0	17.87	17.82	17.75	0.0475	0.0470	0.0462
20	64QAM	1	0	17.70	17.78	17.72	0.0457	0.0466	0.0459
20	64QAM	1	49	17.62	17.66	17.62	0.0449	0.0453	0.0449
20	64QAM	1	99	17.78	17.84	17.87	0.0466	0.0472	0.0475
20	64QAM	50	0	16.75	16.85	16.89	0.0367	0.0376	0.0379
20	64QAM	50	24	16.71	16.70	16.76	0.0364	0.0363	0.0368
20	64QAM	50	50	16.83	16.78	16.69	0.0374	0.0370	0.0362
20	64QAM	100	0	16.96	16.87	16.76	0.0385	0.0378	0.0368
Channel				20025	20175	20325	20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5	1717.5	1732.5	1747.5
15	QPSK	1	0	19.58	19.78	19.69	0.0705	0.0738	0.0723
15	QPSK	1	37	19.75	19.77	19.77	0.0733	0.0736	0.0736
15	QPSK	1	74	19.64	19.59	19.53	0.0714	0.0706	0.0697
15	QPSK	36	0	18.71	18.78	18.81	0.0577	0.0586	0.0590
15	QPSK	36	20	18.95	18.90	18.79	0.0610	0.0603	0.0587
15	QPSK	36	39	18.57	18.77	18.54	0.0558	0.0585	0.0555
15	QPSK	75	0	18.65	18.70	18.55	0.0569	0.0575	0.0556
15	16QAM	1	0	18.96	18.74	18.94	0.0611	0.0581	0.0608
15	16QAM	1	37	18.76	18.83	18.74	0.0583	0.0593	0.0581
15	16QAM	1	74	18.60	18.65	18.66	0.0562	0.0569	0.0570
15	16QAM	36	0	17.69	17.76	17.81	0.0456	0.0463	0.0469
15	16QAM	36	20	17.63	17.93	17.85	0.0450	0.0482	0.0473



15	16QAM	36	39	17.67	17.72	17.64	0.0454	0.0459	0.0451
15	16QAM	75	0	17.68	17.79	17.75	0.0455	0.0467	0.0462
15	64QAM	1	0	17.56	17.66	17.73	0.0443	0.0453	0.0460
15	64QAM	1	37	17.61	17.58	17.50	0.0448	0.0445	0.0437
15	64QAM	1	74	17.76	17.63	17.87	0.0463	0.0450	0.0475
15	64QAM	36	0	16.70	16.63	16.87	0.0363	0.0357	0.0378
15	64QAM	36	20	16.69	16.50	16.56	0.0362	0.0347	0.0352
15	64QAM	36	39	16.78	16.73	16.70	0.0370	0.0366	0.0363
15	64QAM	75	0	16.79	16.76	16.64	0.0371	0.0368	0.0358
Channel				20000	20175	20350	20000	20175	20350
Frequency (MHz)				1715	1732.5	1750	1715	1732.5	1750
10	QPSK	1	0	19.62	19.74	19.65	0.0711	0.0731	0.0716
10	QPSK	1	25	19.56	19.75	19.55	0.0701	0.0733	0.0700
10	QPSK	1	49	19.44	19.73	19.57	0.0682	0.0729	0.0703
10	QPSK	25	0	18.72	18.69	18.69	0.0578	0.0574	0.0574
10	QPSK	25	12	18.96	18.85	18.64	0.0611	0.0596	0.0568
10	QPSK	25	25	18.61	18.69	18.63	0.0564	0.0574	0.0566
10	QPSK	50	0	18.49	18.57	18.62	0.0548	0.0558	0.0565
10	16QAM	1	0	18.88	18.76	18.87	0.0600	0.0583	0.0598
10	16QAM	1	25	18.65	18.71	18.90	0.0569	0.0577	0.0603
10	16QAM	1	49	18.63	18.66	18.85	0.0566	0.0570	0.0596
10	16QAM	25	0	17.83	17.70	17.77	0.0471	0.0457	0.0465
10	16QAM	25	12	17.80	17.84	17.97	0.0468	0.0472	0.0486
10	16QAM	25	25	17.49	17.74	17.78	0.0436	0.0461	0.0466
10	16QAM	50	0	17.74	17.77	17.54	0.0461	0.0465	0.0441
10	64QAM	1	0	17.50	17.76	17.51	0.0437	0.0463	0.0438
10	64QAM	1	25	17.57	17.55	17.41	0.0444	0.0442	0.0428
10	64QAM	1	49	17.78	17.80	17.67	0.0466	0.0468	0.0454
10	64QAM	25	0	16.65	16.66	16.89	0.0359	0.0360	0.0379
10	64QAM	25	12	16.60	16.66	16.73	0.0355	0.0360	0.0366
10	64QAM	25	25	16.75	16.71	16.66	0.0367	0.0364	0.0360
10	64QAM	50	0	16.83	16.68	16.69	0.0374	0.0361	0.0362
Channel				19975	20175	20375	19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5	1712.5	1732.5	1752.5
5	QPSK	1	0	19.61	19.81	19.63	0.0710	0.0743	0.0713
5	QPSK	1	12	19.65	19.69	19.57	0.0716	0.0723	0.0703
5	QPSK	1	24	19.57	19.69	19.61	0.0703	0.0723	0.0710
5	QPSK	12	0	18.68	18.82	18.63	0.0573	0.0592	0.0566
5	QPSK	12	7	18.73	18.76	18.74	0.0579	0.0583	0.0581
5	QPSK	12	13	18.62	18.65	18.68	0.0565	0.0569	0.0573
5	QPSK	25	0	18.52	18.48	18.54	0.0552	0.0547	0.0555
5	16QAM	1	0	18.81	18.90	18.86	0.0590	0.0603	0.0597
5	16QAM	1	12	18.75	18.78	18.81	0.0582	0.0586	0.0590
5	16QAM	1	24	18.66	18.58	18.63	0.0570	0.0560	0.0566
5	16QAM	12	0	17.68	17.83	17.70	0.0455	0.0471	0.0457
5	16QAM	12	7	17.75	17.76	17.99	0.0462	0.0463	0.0489
5	16QAM	12	13	17.54	17.59	17.70	0.0441	0.0446	0.0457



5	16QAM	25	0	17.89	17.83	17.64	0.0478	0.0471	0.0451
5	64QAM	1	0	17.58	17.73	17.74	0.0445	0.0460	0.0461
5	64QAM	1	12	17.57	17.58	17.62	0.0444	0.0445	0.0449
5	64QAM	1	24	17.60	17.77	17.72	0.0447	0.0465	0.0459
5	64QAM	12	0	16.74	16.79	16.86	0.0366	0.0371	0.0377
5	64QAM	12	7	16.61	16.59	16.56	0.0356	0.0354	0.0352
5	64QAM	12	13	16.69	16.59	16.52	0.0362	0.0354	0.0348
5	64QAM	25	0	16.84	16.86	16.70	0.0375	0.0377	0.0363
Channel				19965	20175	20385	19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5	1711.5	1732.5	1753.5
3	QPSK	1	0	19.57	19.76	19.73	0.0703	0.0735	0.0729
3	QPSK	1	8	19.60	19.68	19.69	0.0708	0.0721	0.0723
3	QPSK	1	14	19.56	19.66	19.46	0.0701	0.0718	0.0685
3	QPSK	8	0	18.66	18.74	18.69	0.0570	0.0581	0.0574
3	QPSK	8	4	18.77	18.72	18.72	0.0585	0.0578	0.0578
3	QPSK	8	7	18.63	18.63	18.66	0.0566	0.0566	0.0570
3	QPSK	15	0	18.58	18.50	18.62	0.0560	0.0550	0.0565
3	16QAM	1	0	18.93	18.90	18.98	0.0607	0.0603	0.0614
3	16QAM	1	8	18.66	18.66	18.91	0.0570	0.0570	0.0604
3	16QAM	1	14	18.70	18.61	18.80	0.0575	0.0564	0.0589
3	16QAM	8	0	17.77	17.70	17.76	0.0465	0.0457	0.0463
3	16QAM	8	4	17.63	17.77	17.84	0.0450	0.0465	0.0472
3	16QAM	8	7	17.58	17.72	17.74	0.0445	0.0459	0.0461
3	16QAM	15	0	17.73	17.78	17.72	0.0460	0.0466	0.0459
3	64QAM	1	0	17.57	17.66	17.58	0.0444	0.0453	0.0445
3	64QAM	1	8	17.48	17.55	17.57	0.0435	0.0442	0.0444
3	64QAM	1	14	17.68	17.67	17.87	0.0455	0.0454	0.0475
3	64QAM	8	0	16.57	16.75	16.79	0.0352	0.0367	0.0371
3	64QAM	8	4	16.64	16.56	16.68	0.0358	0.0352	0.0361
3	64QAM	8	7	16.68	16.74	16.48	0.0361	0.0366	0.0345
3	64QAM	15	0	16.77	16.82	16.61	0.0369	0.0373	0.0356
Channel				19957	20175	20393	19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3	1710.7	1732.5	1754.3
1.4	QPSK	1	0	19.57	19.76	19.81	0.0703	0.0735	0.0743
1.4	QPSK	1	3	19.57	19.82	19.62	0.0703	0.0745	0.0711
1.4	QPSK	1	5	19.58	19.63	19.46	0.0705	0.0713	0.0685
1.4	QPSK	3	0	19.52	19.63	19.61	0.0695	0.0713	0.0710
1.4	QPSK	3	1	19.50	19.51	19.48	0.0692	0.0693	0.0689
1.4	QPSK	3	3	19.57	19.65	19.42	0.0703	0.0716	0.0679
1.4	QPSK	6	0	18.90	18.83	18.70	0.0603	0.0593	0.0575
1.4	16QAM	1	0	18.74	18.89	18.72	0.0581	0.0601	0.0578
1.4	16QAM	1	3	18.47	18.76	18.68	0.0546	0.0583	0.0573
1.4	16QAM	1	5	18.45	18.69	18.63	0.0543	0.0574	0.0566
1.4	16QAM	3	0	18.94	18.78	18.89	0.0608	0.0586	0.0601
1.4	16QAM	3	1	18.76	18.85	18.82	0.0583	0.0596	0.0592
1.4	16QAM	3	3	18.68	18.66	18.82	0.0573	0.0570	0.0592
1.4	16QAM	6	0	17.68	17.76	17.77	0.0455	0.0463	0.0465



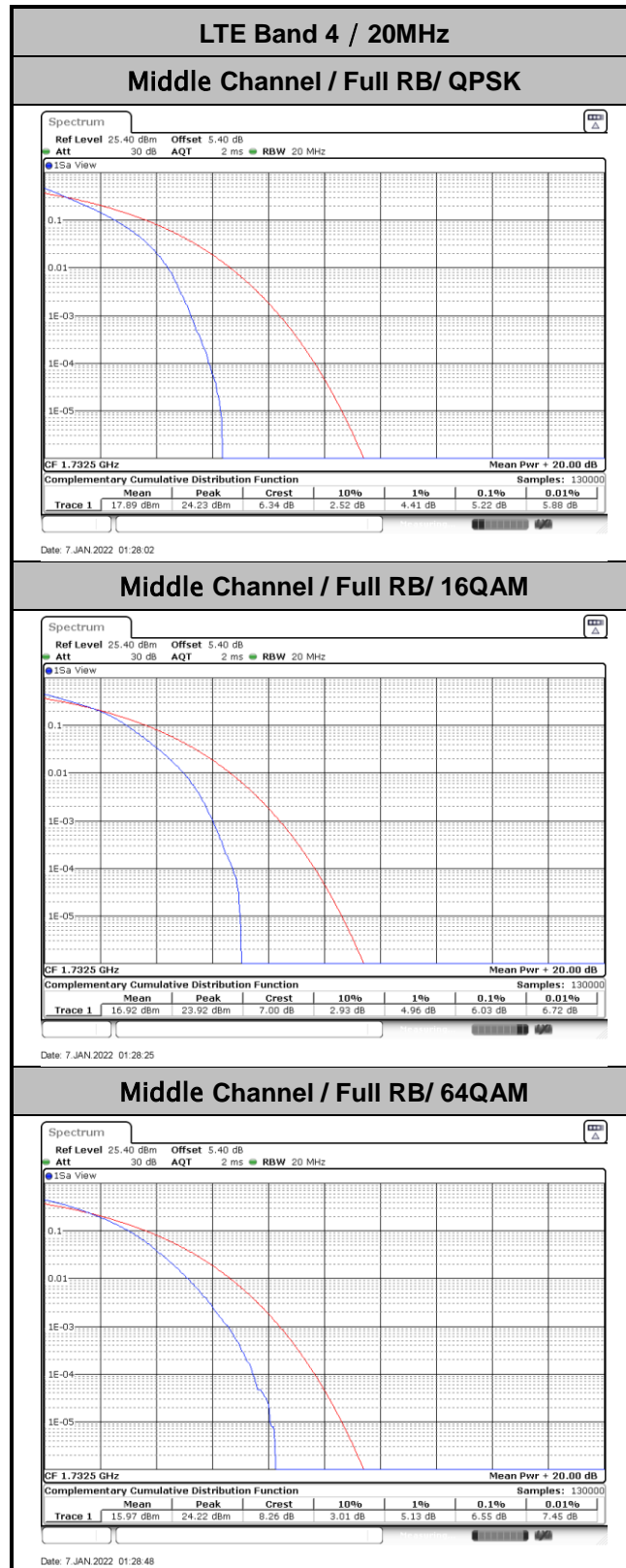
1.4	64QAM	1	0	17.74	17.83	17.76	0.0461	0.0471	0.0463
1.4	64QAM	1	3	17.66	17.64	17.77	0.0453	0.0451	0.0465
1.4	64QAM	1	5	17.76	17.64	17.60	0.0463	0.0451	0.0447
1.4	64QAM	3	0	17.49	17.65	17.70	0.0436	0.0452	0.0457
1.4	64QAM	3	1	17.60	17.60	17.59	0.0447	0.0447	0.0446
1.4	64QAM	3	3	17.68	17.82	17.87	0.0455	0.0470	0.0475
1.4	64QAM	6	0	16.67	16.64	16.89	0.0361	0.0358	0.0379



LTE Band 4

Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.22	6.03	6.55	PASS





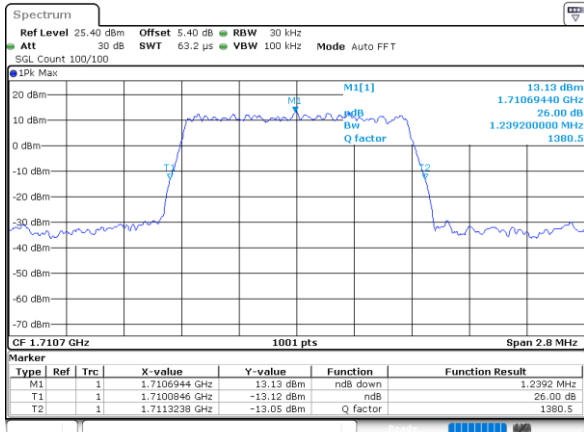
26dB Bandwidth

Mode	LTE Band 4 : 26dB BW(MHz)		
BW	1.4 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	1.24	1.22	1.22
Middle CH	1.23	1.23	1.22
Highest CH	1.23	1.22	1.23



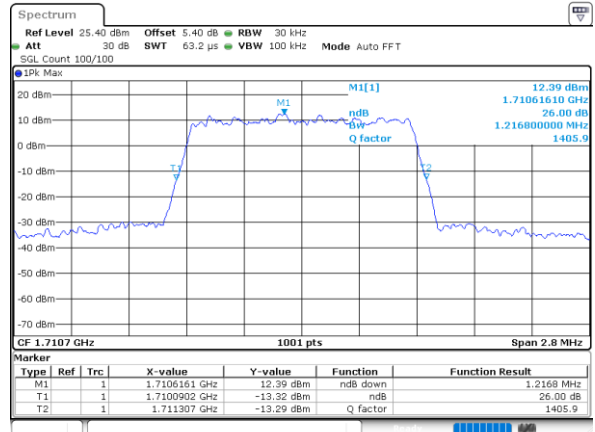
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



Date: 7.JAN.2022 17:37:14

Lowest Channel / 1.4MHz / 16QAM

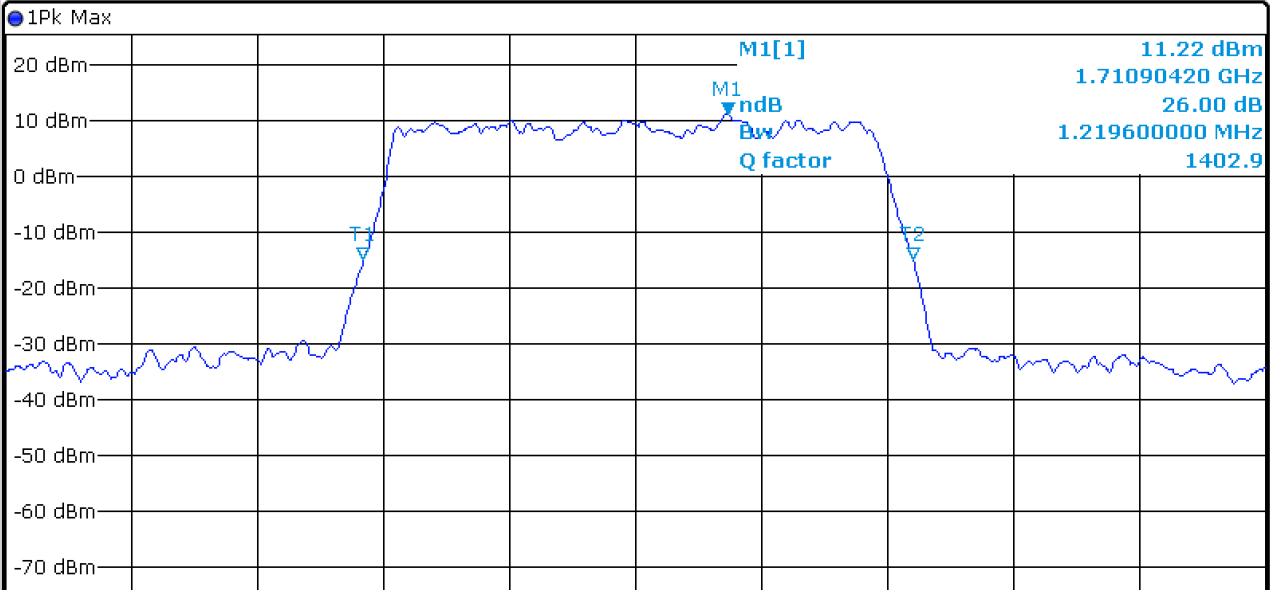


Date: 7.JAN.2022 17:37:54

Lowest Channel / 1.4MHz / 64QAM

Spectrum

Ref Level 25.40 dBm Offset 5.40 dB RBW 30 kHz
 Att 30 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT
 SGL Count 100/100



CF 1.7107 GHz 1001 pts Span 2.8 MHz

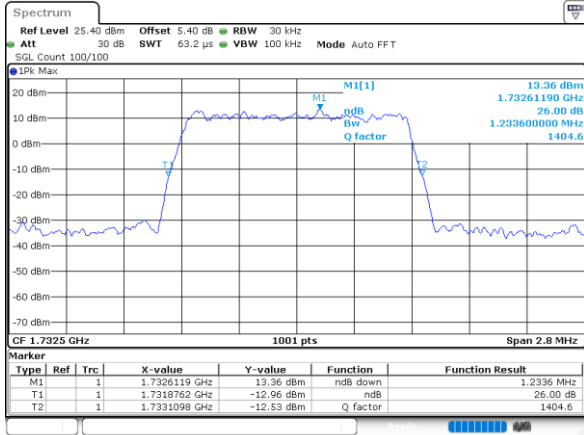
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1	1	1.7109042 GHz	11.22 dBm	ndB down	1.2196 MHz
T1	1	1	1.7100958 GHz	-14.84 dBm	ndB	26.00 dB
T2	1	1	1.7113154 GHz	-14.81 dBm	Q factor	1402.9

Date: 7.JAN.2022 17:38:34



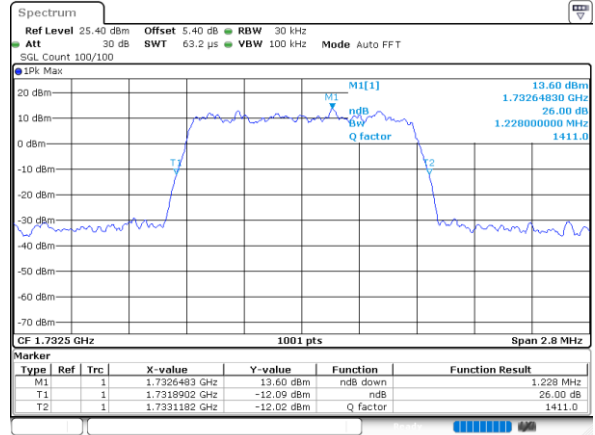
LTE Band 4

Middle Channel / 1.4MHz / QPSK



Date: 7.JAN.2022 17:39:14

Middle Channel / 1.4MHz / 16QAM



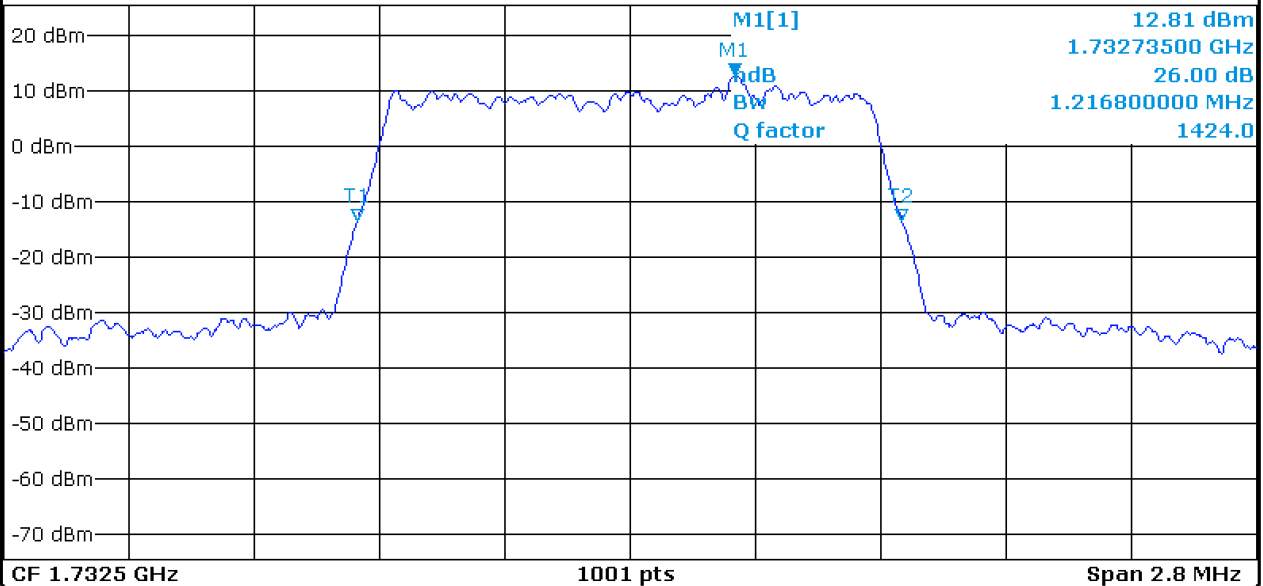
Date: 7.JAN.2022 17:39:53

Middle Channel / 1.4MHz / 64QAM

Spectrum

Ref Level 25.40 dBm Offset 5.40 dB RBW 30 kHz
 Att 30 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT
 SGL Count 100/100

1Pk Max



Marker

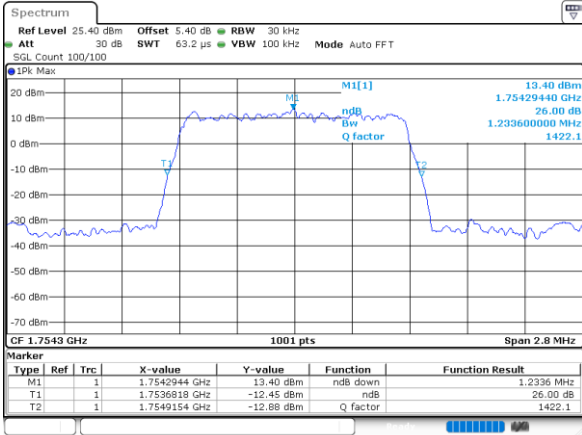
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.732735 GHz	12.81 dBm	ndB down	1.2168 MHz
T1	1		1.7318902 GHz	-13.46 dBm	ndB	26.00 dB
T2	1		1.733107 GHz	-13.34 dBm	Q factor	1424.0

Date: 7.JAN.2022 17:40:32



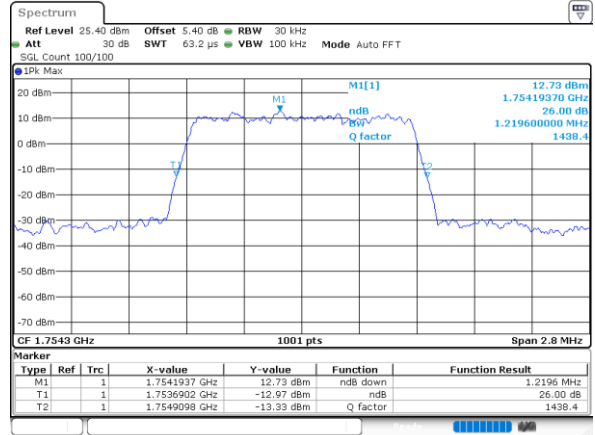
LTE Band 4

Highest Channel / 1.4MHz / QPSK



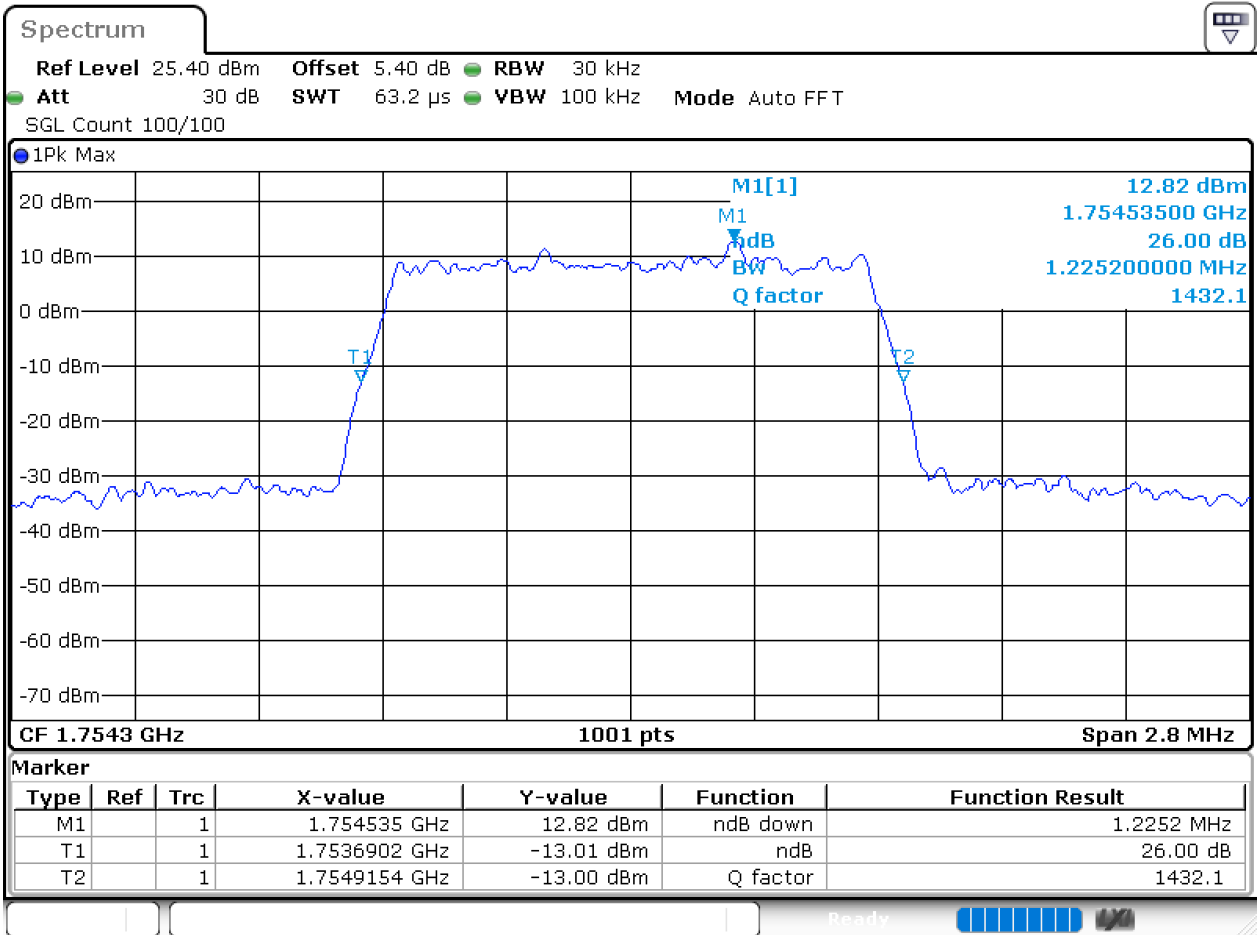
Date: 7.JAN.2022 17:41:12

Highest Channel / 1.4MHz / 16QAM



Date: 7.JAN.2022 17:41:53

Highest Channel / 1.4MHz / 64QAM



Date: 7.JAN.2022 17:42:32

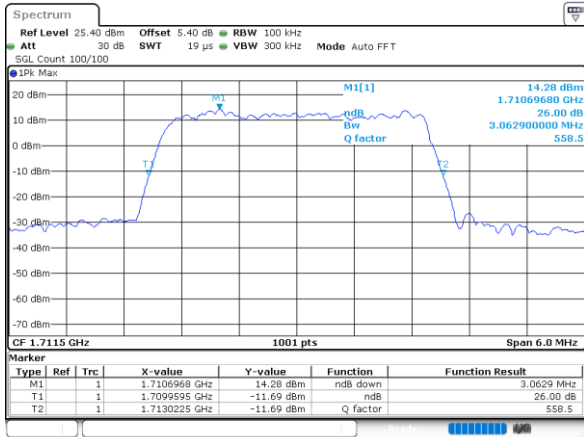


Mode	LTE Band 4 : 26dB BW(MHz)		
BW	3 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	3.06	3.03	3.03
Middle CH	3.03	3.02	2.97
Highest CH	3.03	2.96	3.00



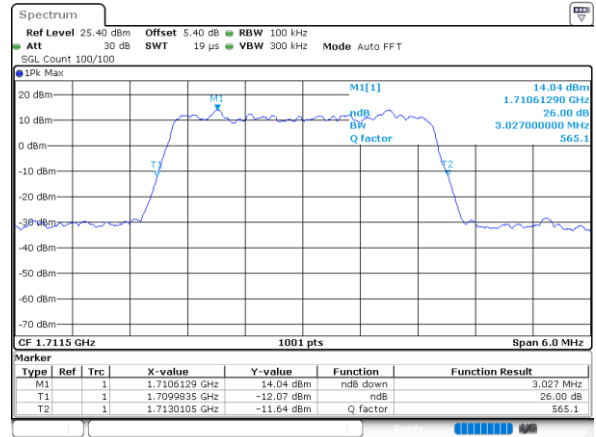
LTE Band 4

Lowest Channel / 3MHz / QPSK



Date: 7.JAN.2022 17:43:13

Lowest Channel / 3MHz / 16QAM

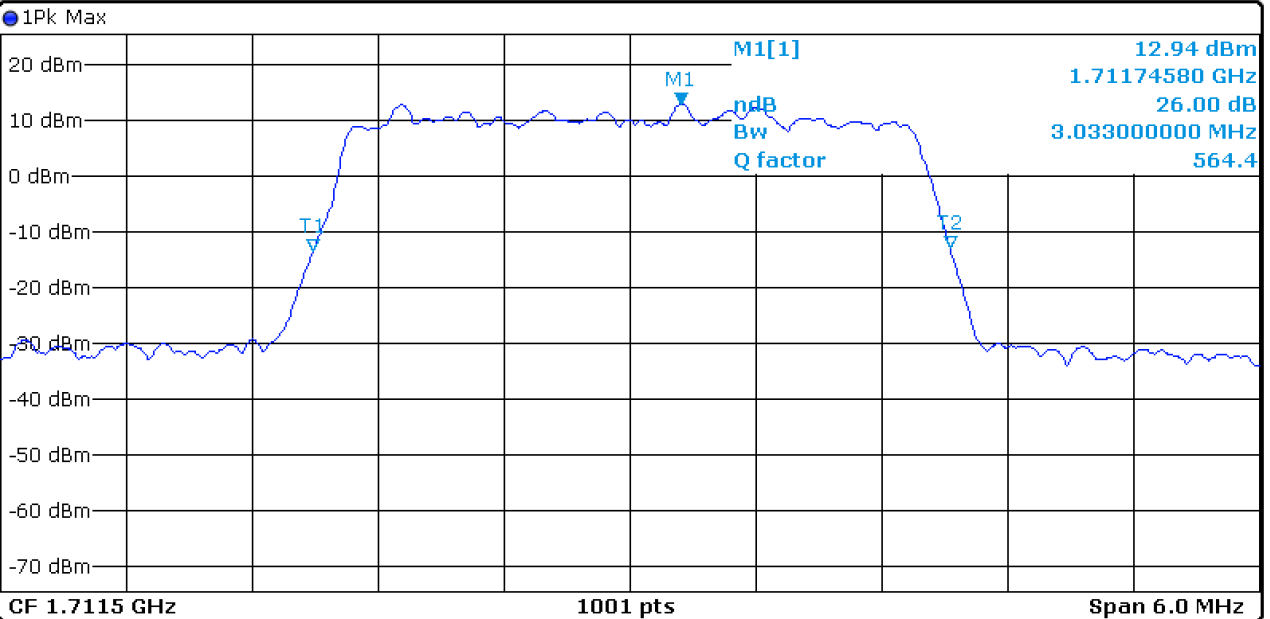


Date: 7.JAN.2022 17:43:53

Lowest Channel / 3MHz / 64QAM

Spectrum

Ref Level 25.40 dBm Offset 5.40 dB RBW 100 kHz
 Att 30 dB SWT 19 µs VBW 300 kHz Mode Auto FFT
 SGL Count 100/100



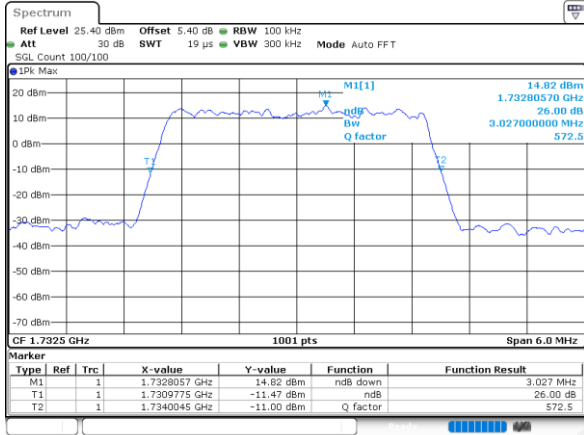
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.7117458 GHz	12.94 dBm	ndB down	3.033 MHz
T1	1		1.7099895 GHz	-13.33 dBm	ndB	26.00 dB
T2	1		1.7130225 GHz	-12.77 dBm	Q factor	564.4

Date: 7.JAN.2022 17:44:32



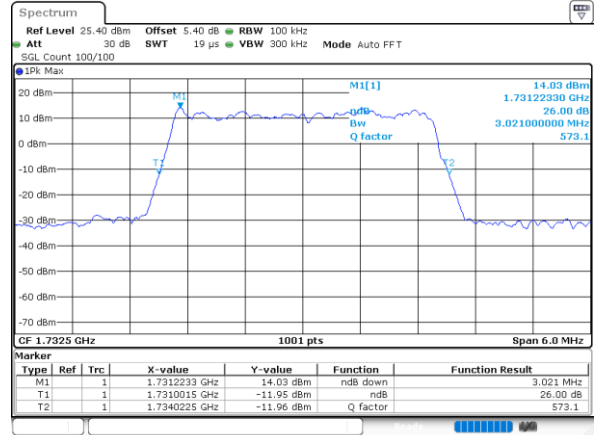
LTE Band 4

Middle Channel / 3MHz / QPSK



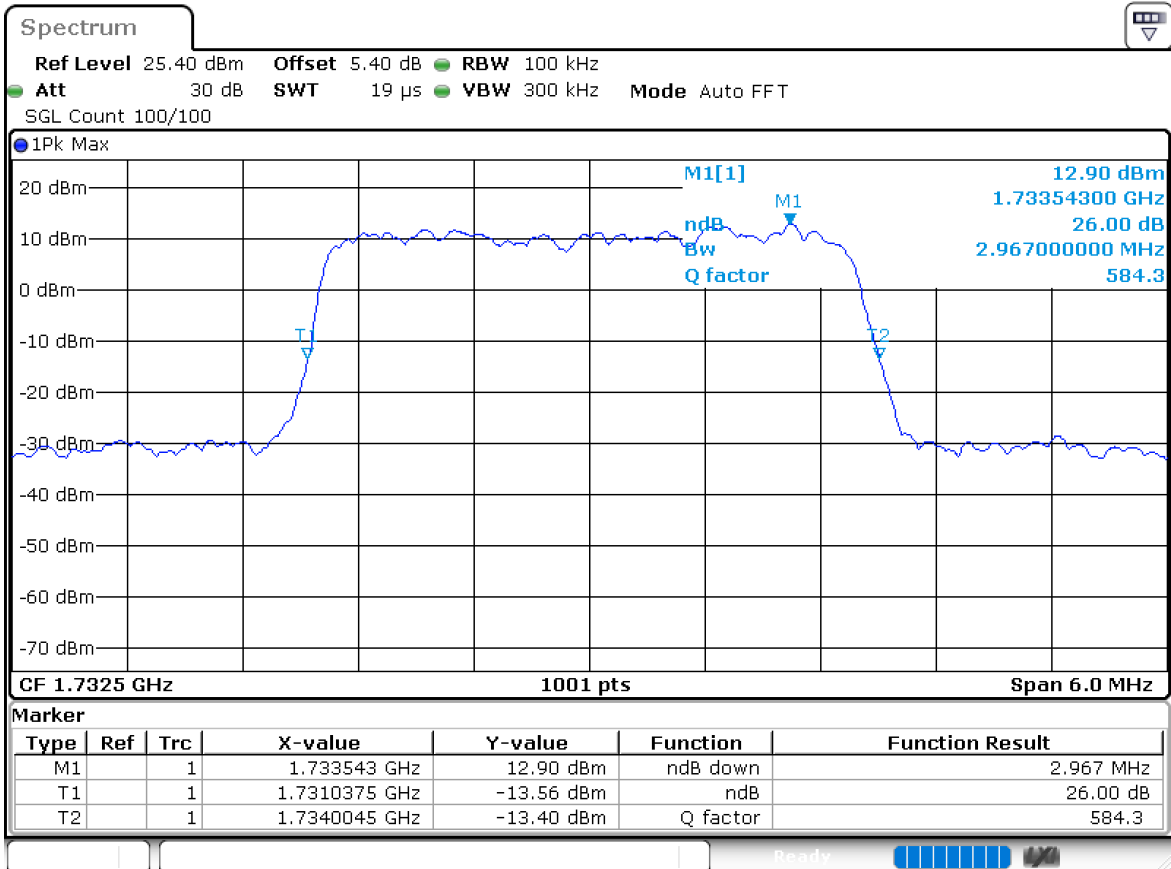
Date: 7.JAN.2022 17:45:11

Middle Channel / 3MHz / 16QAM



Date: 7.JAN.2022 17:45:50

Middle Channel / 3MHz / 64QAM

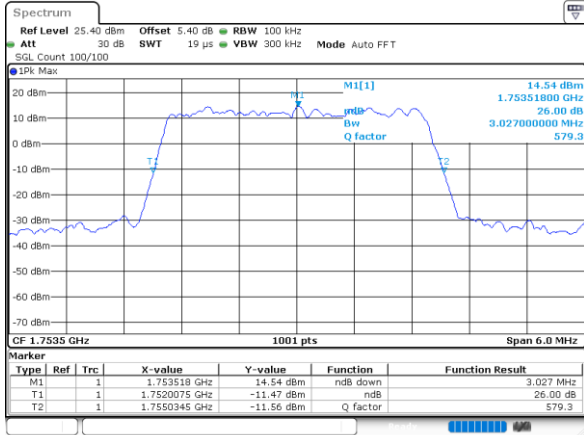


Date: 7.JAN.2022 17:46:28



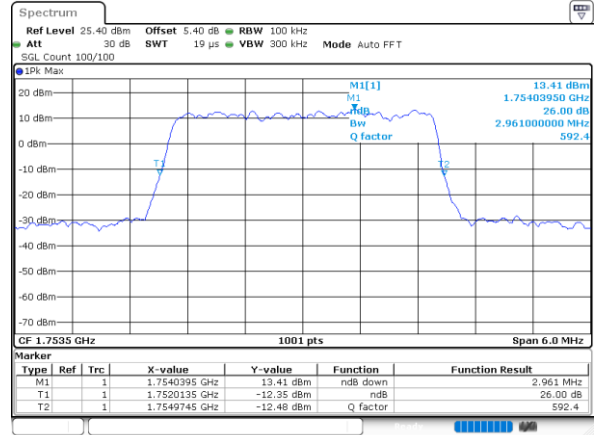
LTE Band 4

Highest Channel / 3MHz / QPSK



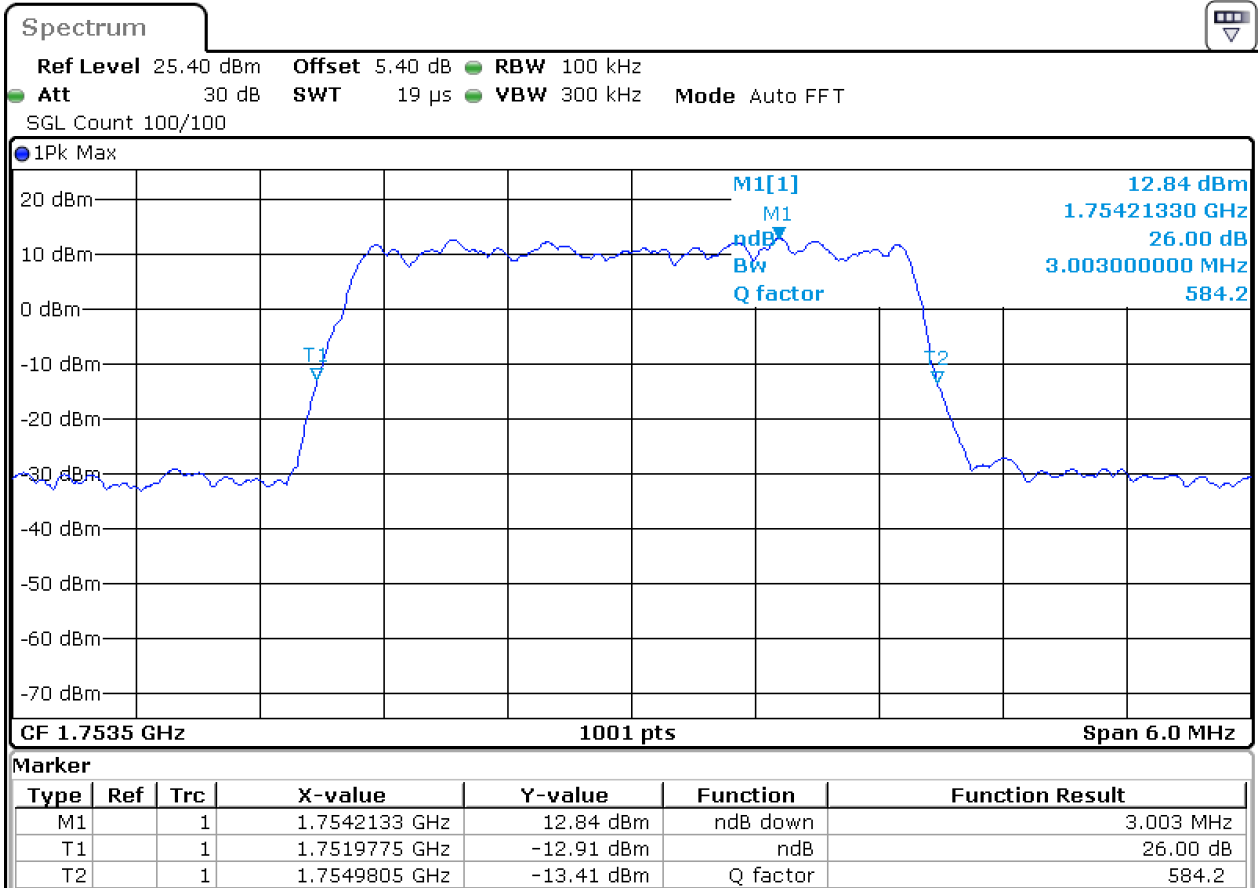
Date: 7.JAN.2022 17:47:07

Highest Channel / 3MHz / 16QAM



Date: 7.JAN.2022 17:47:08

Highest Channel / 3MHz / 64QAM



Date: 7.JAN.2022 17:48:27

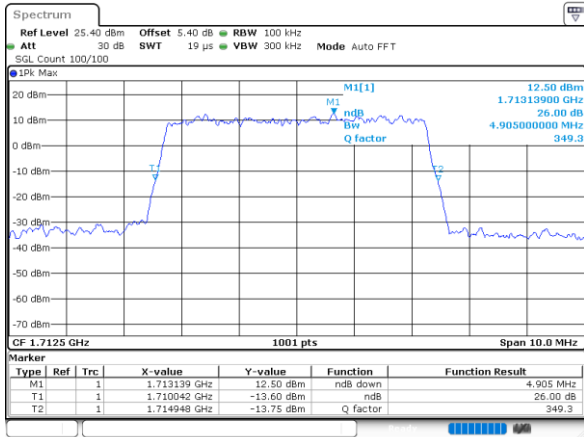


Mode	LTE Band 4 : 26dB BW(MHz)		
BW	5 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	4.91	4.89	4.87
Middle CH	4.91	4.97	4.79
Highest CH	4.89	4.87	4.96



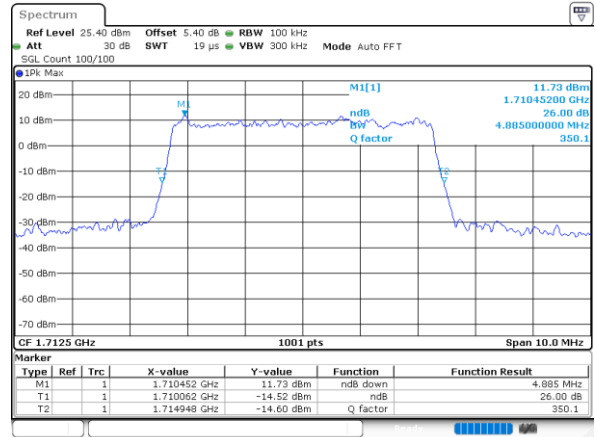
LTE Band 4

Lowest Channel / 5MHz / QPSK



Date: 7.JAN.2022 17:49:08

Lowest Channel / 5MHz / 16QAM

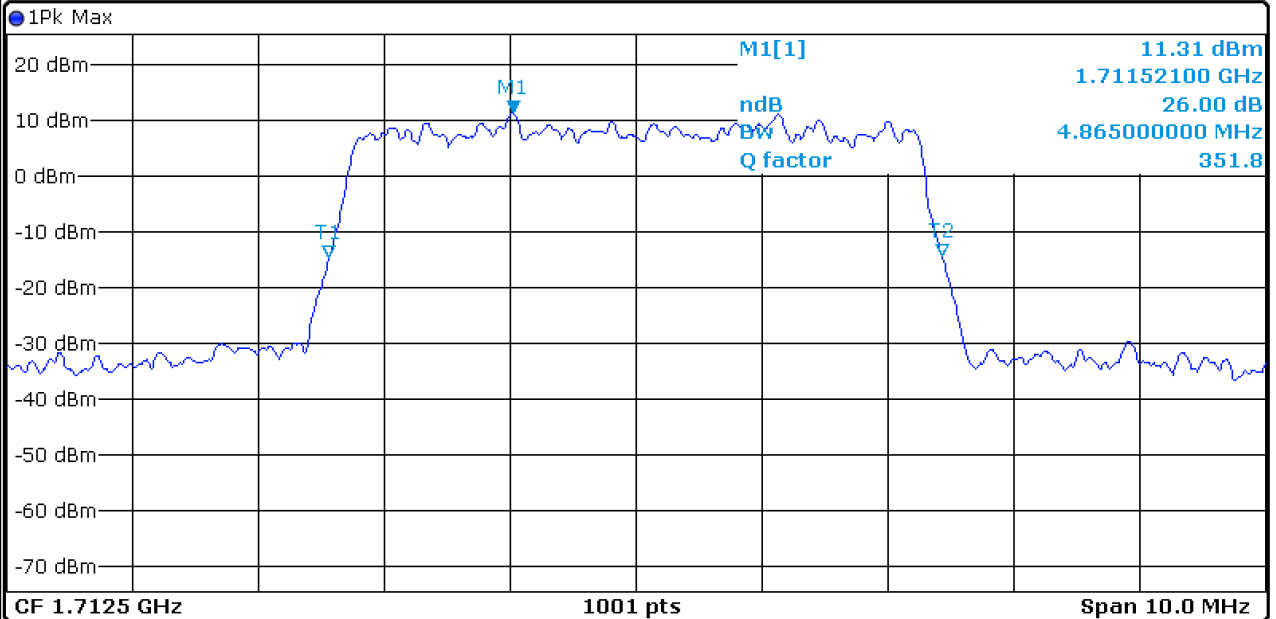


Date: 7.JAN.2022 17:49:07

Lowest Channel / 5MHz / 64QAM

Spectrum

Ref Level 25.40 dBm Offset 5.40 dB RBW 100 kHz
 Att 30 dB SWT 19 µs VBW 300 kHz Mode Auto FFT
 SGL Count 100/100



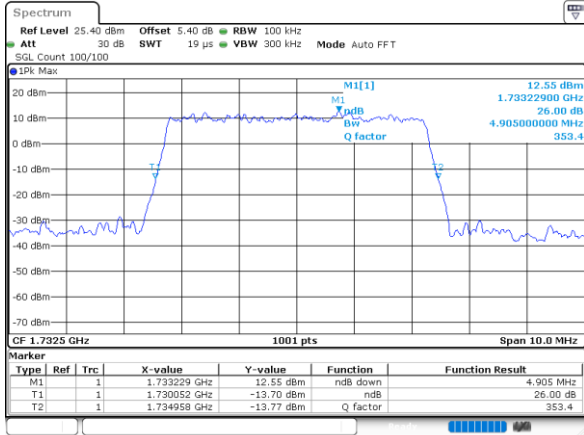
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.711521 GHz	11.31 dBm	ndB down	4.865 MHz
T1	1		1.710062 GHz	-14.61 dBm	ndB	26.00 dB
T2	1		1.714928 GHz	-14.33 dBm	Q factor	351.8

Date: 7.JAN.2022 17:50:30



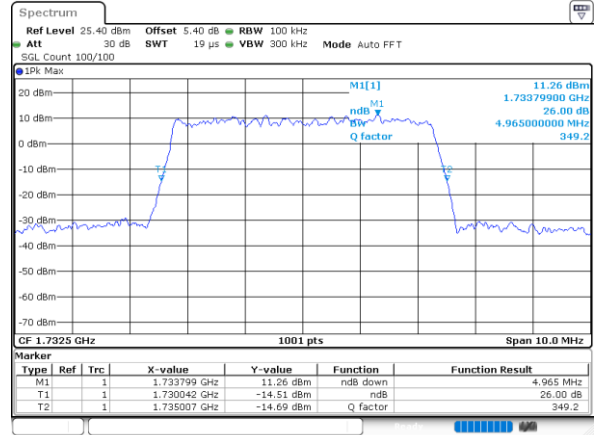
LTE Band 4

Middle Channel / 5MHz / QPSK



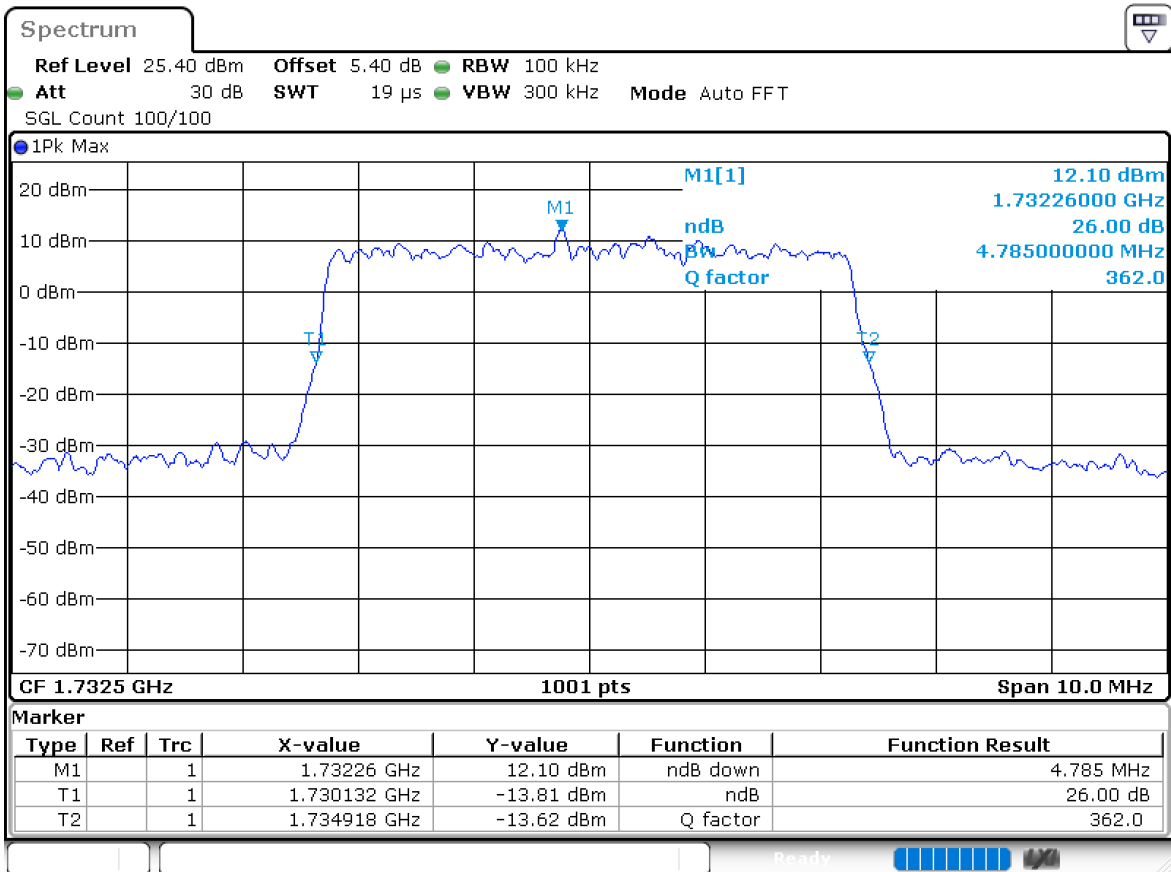
Date: 7.JAN.2022 17:51:09

Middle Channel / 5MHz / 16QAM



Date: 7.JAN.2022 17:51:48

Middle Channel / 5MHz / 64QAM

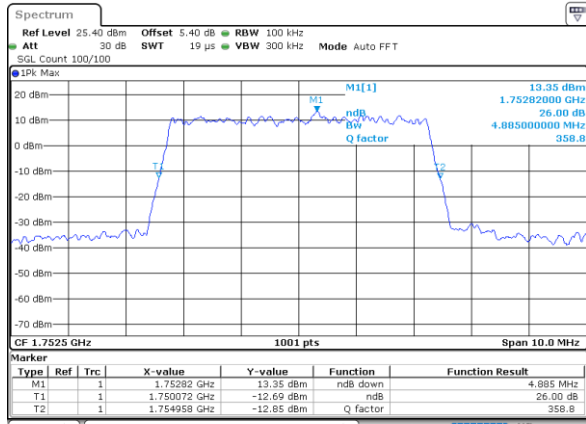


Date: 7.JAN.2022 17:52:27



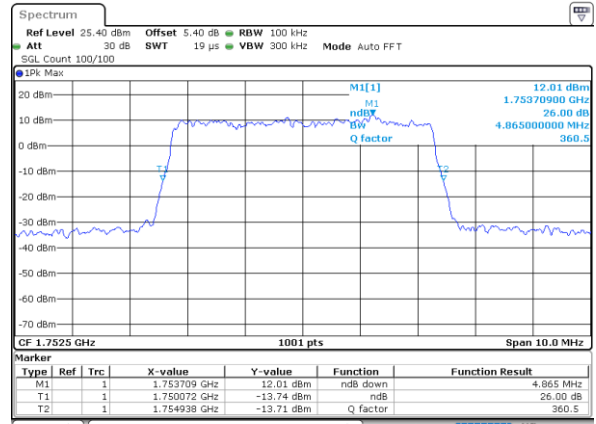
LTE Band 4

Highest Channel / 5MHz / QPSK



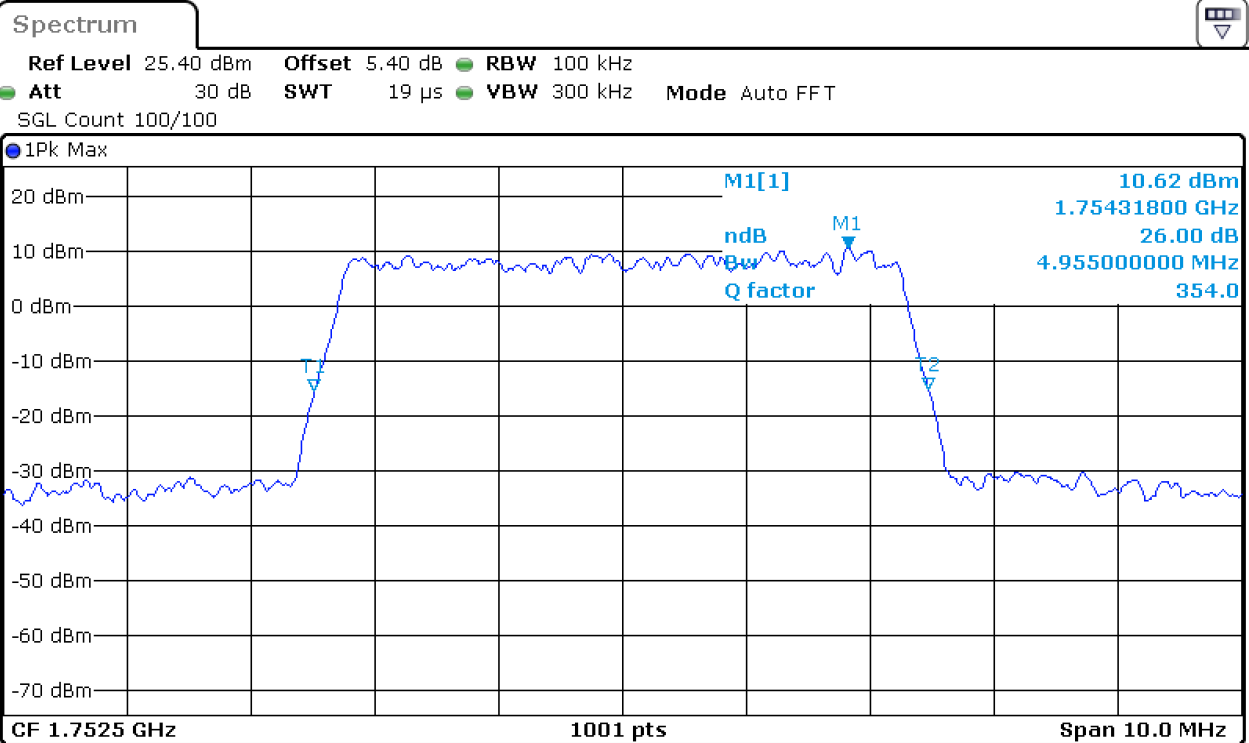
Date: 7.JAN.2022 17:53:07

Highest Channel / 5MHz / 16QAM



Date: 7.JAN.2022 17:53:46

Highest Channel / 5MHz / 64QAM



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.754318 GHz	10.62 dBm	ndB down	4.955 MHz
T1	1		1.750012 GHz	-15.40 dBm	ndB	26.00 dB
T2	1		1.754968 GHz	-15.05 dBm	Q factor	354.0

Date: 7.JAN.2022 17:54:25

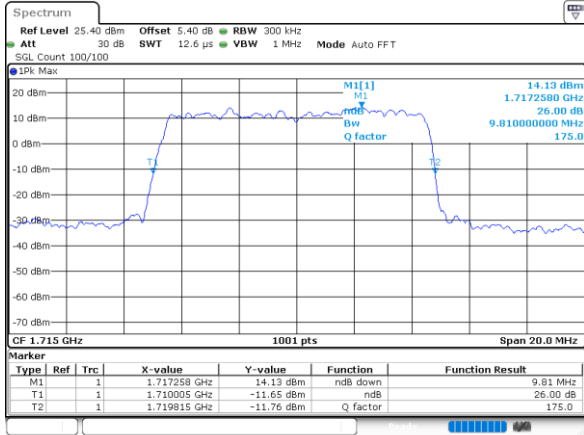


Mode	LTE Band 4 : 26dB BW(MHz)		
BW	10 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	9.81	9.77	9.79
Middle CH	9.77	9.85	9.87
Highest CH	9.67	9.87	9.89



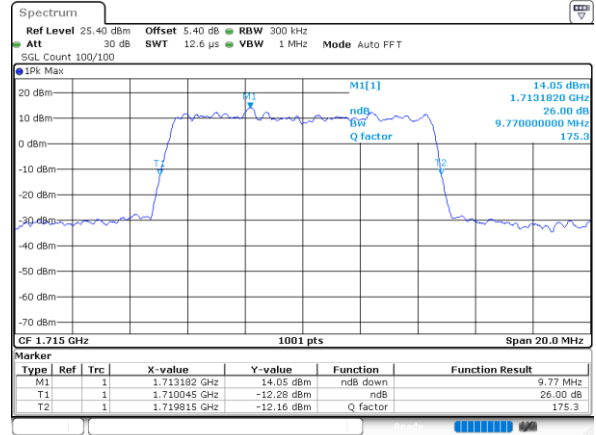
LTE Band 4

Lowest Channel / 10MHz / QPSK



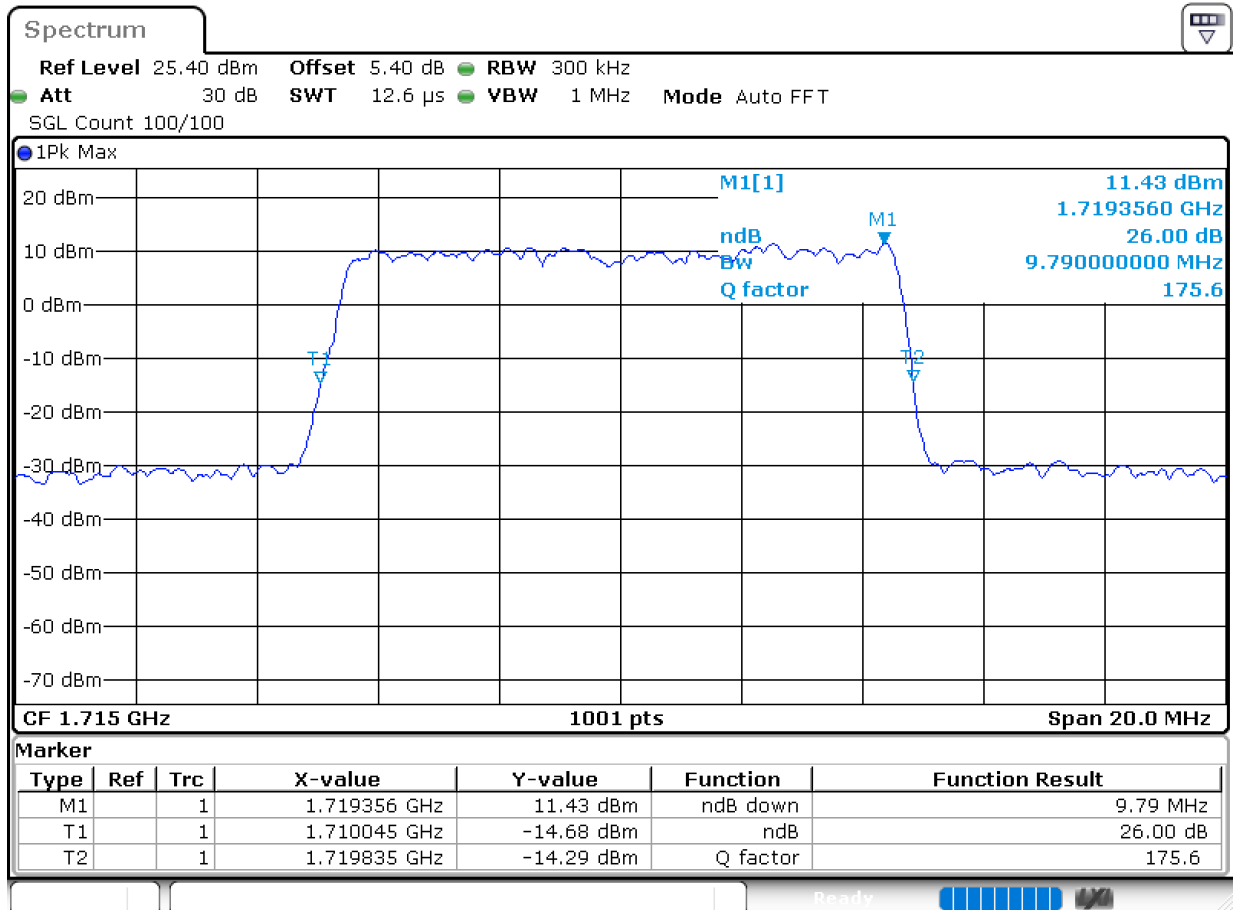
Date: 7.JAN.2022 19:13:45

Lowest Channel / 10MHz / 16QAM



Date: 7.JAN.2022 19:14:24

Lowest Channel / 10MHz / 64QAM

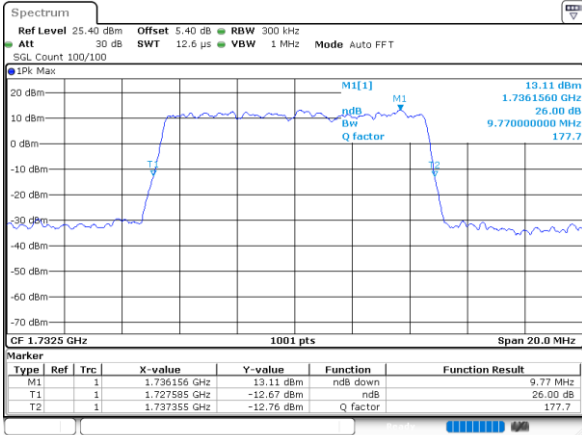


Date: 7.JAN.2022 19:15:02



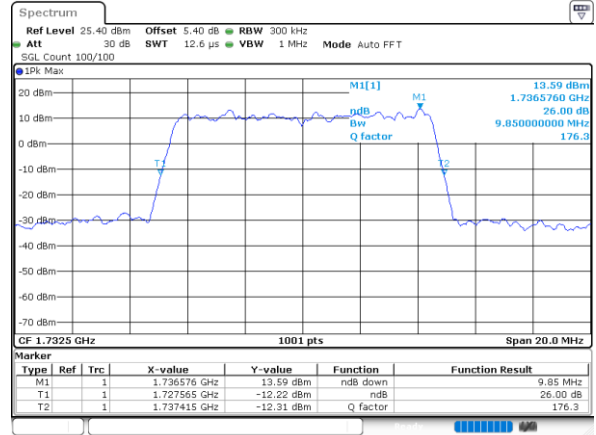
LTE Band 4

Middle Channel / 10MHz / QPSK



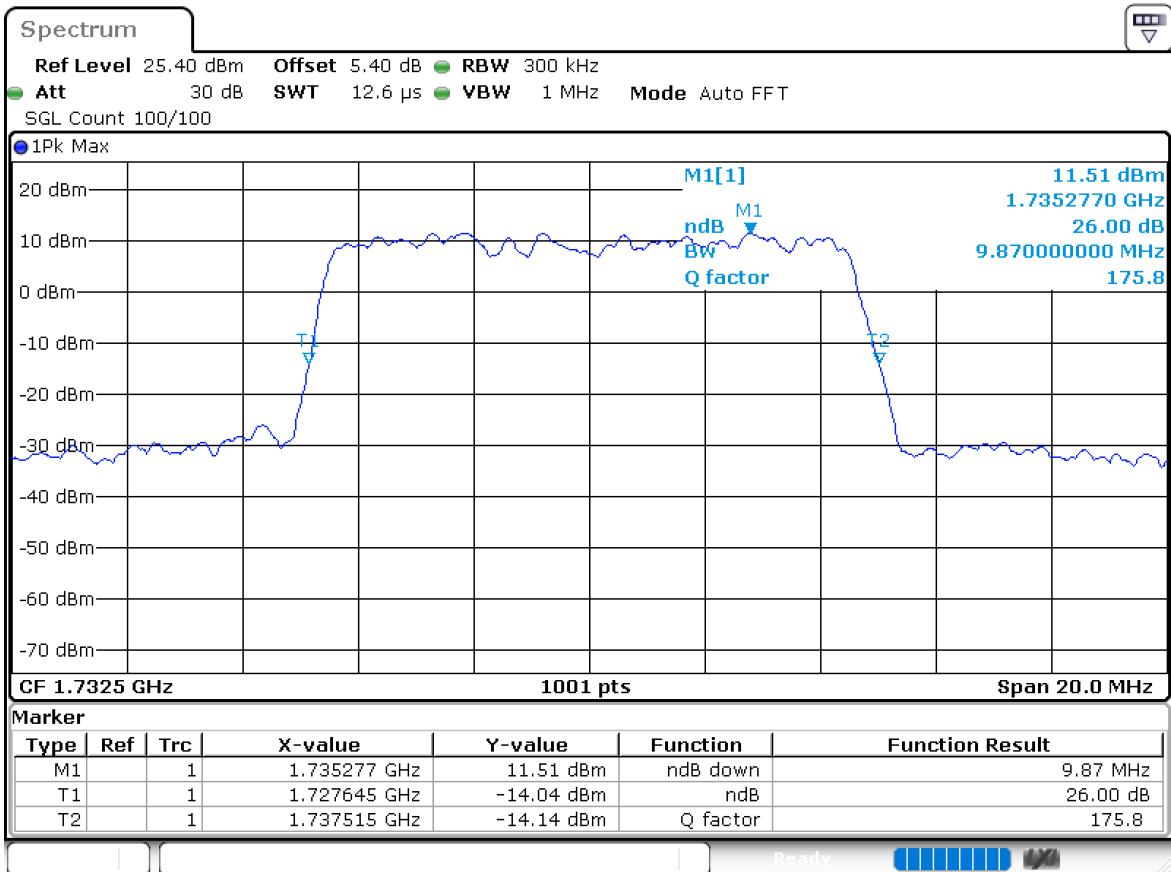
Date: 7.JAN.2022 19:15:41

Middle Channel / 10MHz / 16QAM



Date: 7.JAN.2022 19:16:20

Middle Channel / 10MHz / 64QAM

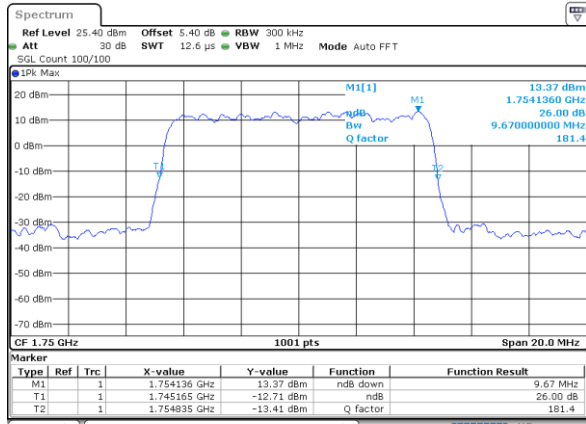


Date: 7.JAN.2022 19:16:59



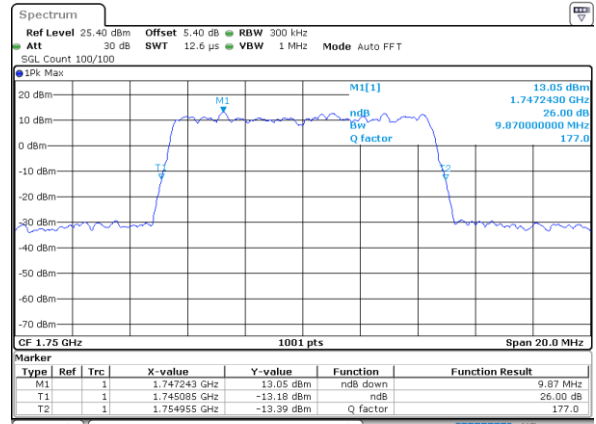
LTE Band 4

Highest Channel / 10MHz / QPSK



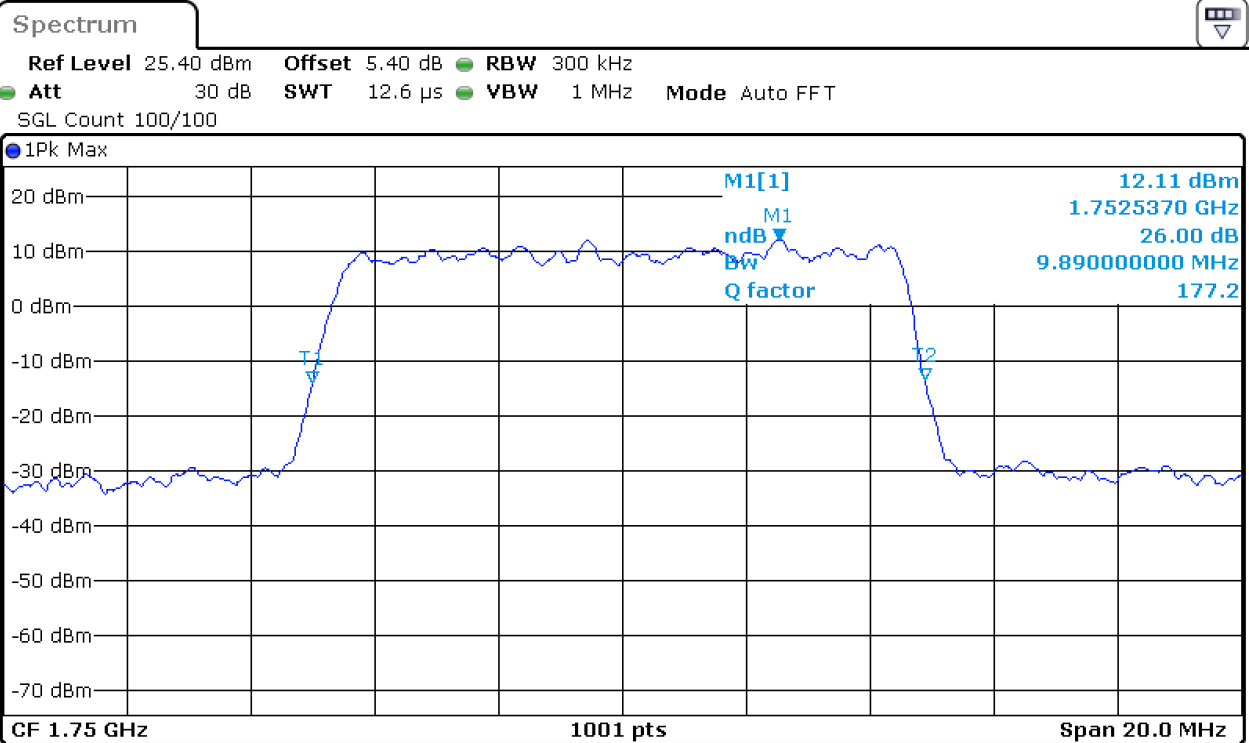
Date: 7.JAN.2022 19:17:38

Highest Channel / 10MHz / 16QAM



Date: 7.JAN.2022 19:18:18

Highest Channel / 10MHz / 64QAM



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.752537 GHz	12.11 dBm	ndB down	9.89 MHz
T1	1		1.744985 GHz	-13.93 dBm	ndB	26.00 dB
T2	1		1.754875 GHz	-13.59 dBm	Q factor	177.2

Date: 7.JAN.2022 19:18:57

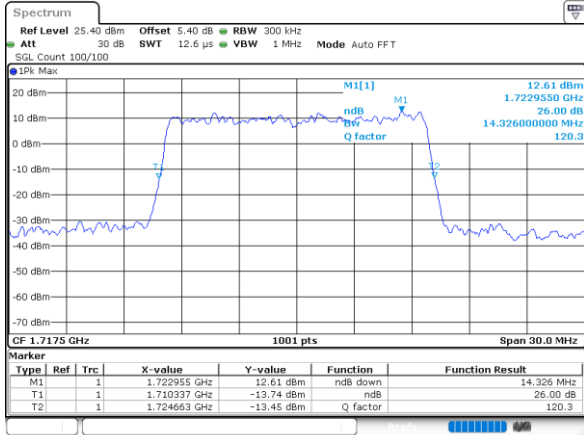


Mode	LTE Band 4 : 26dB BW(MHz)		
BW	15 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	14.33	14.57	14.60
Middle CH	14.36	14.30	14.24
Highest CH	14.33	14.42	14.54



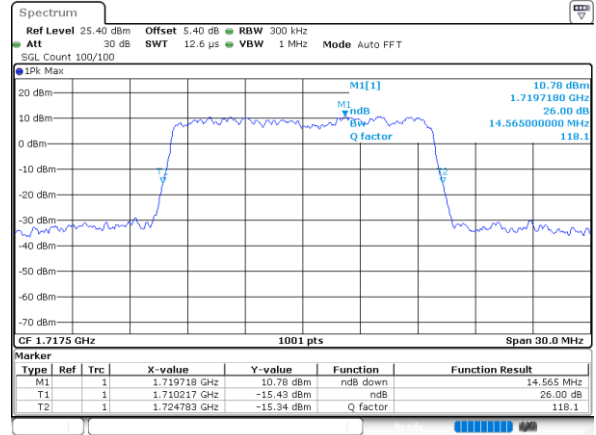
LTE Band 4

Lowest Channel / 15MHz / QPSK



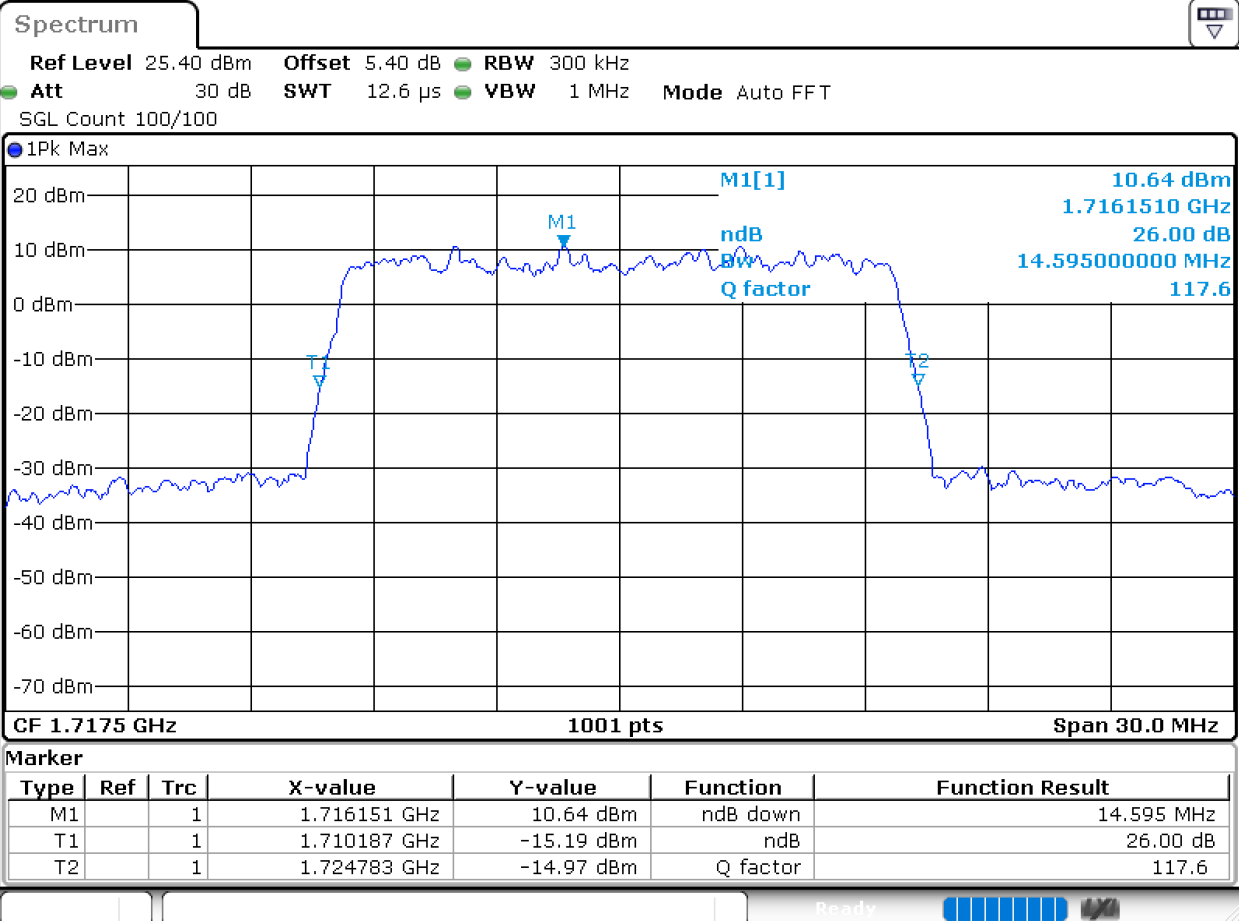
Date: 7.JAN.2022 19:19:37

Lowest Channel / 15MHz / 16QAM



Date: 7.JAN.2022 19:20:19

Lowest Channel / 15MHz / 64QAM

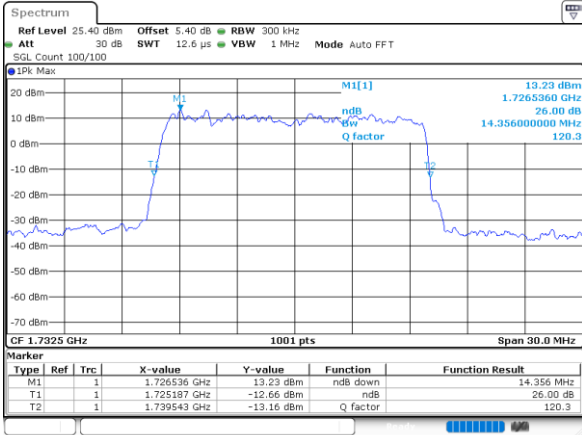


Date: 7.JAN.2022 19:20:58



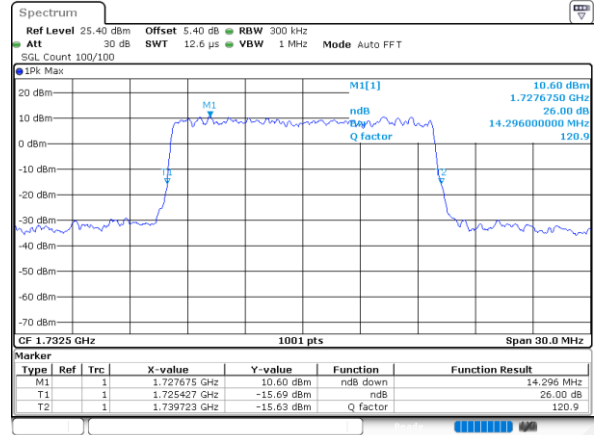
LTE Band 4

Middle Channel / 15MHz / QPSK



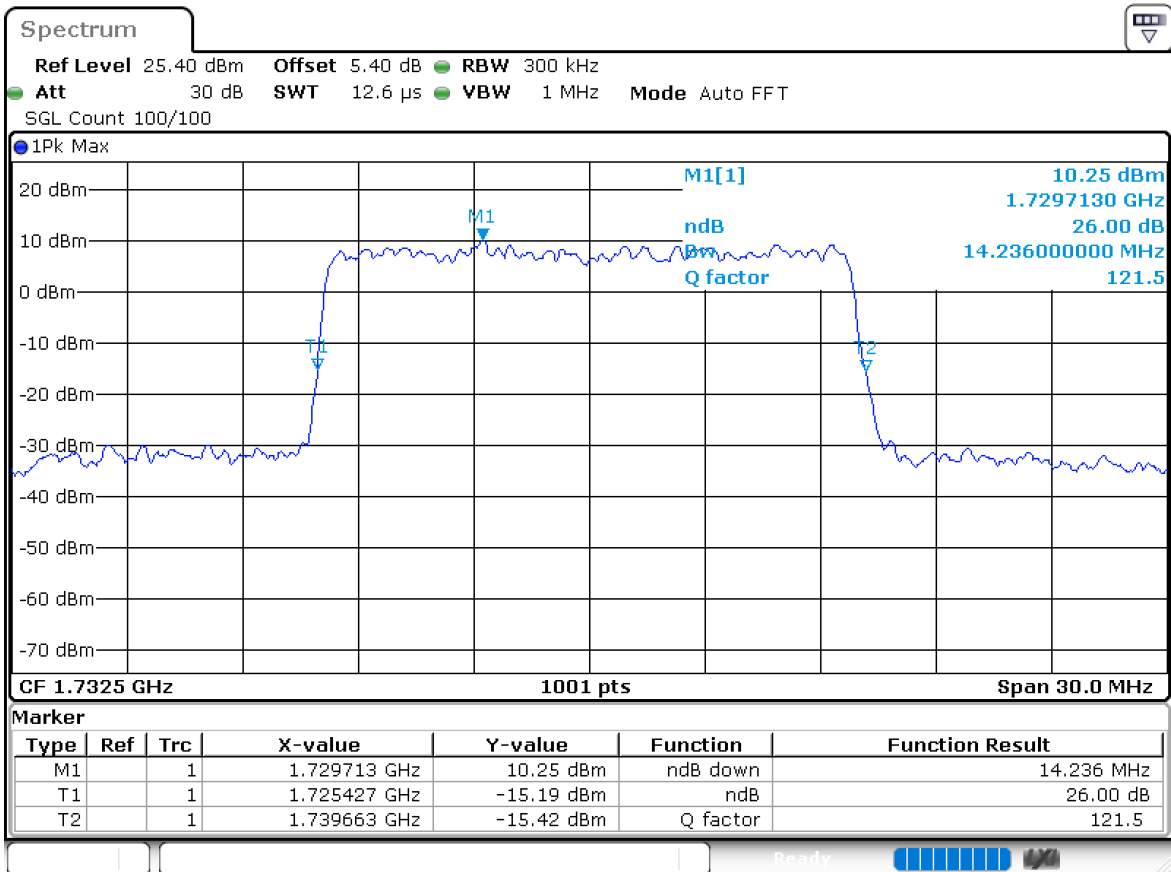
Date: 7.JAN.2022 19:21:36

Middle Channel / 15MHz / 16QAM



Date: 7.JAN.2022 19:22:16

Middle Channel / 15MHz / 64QAM

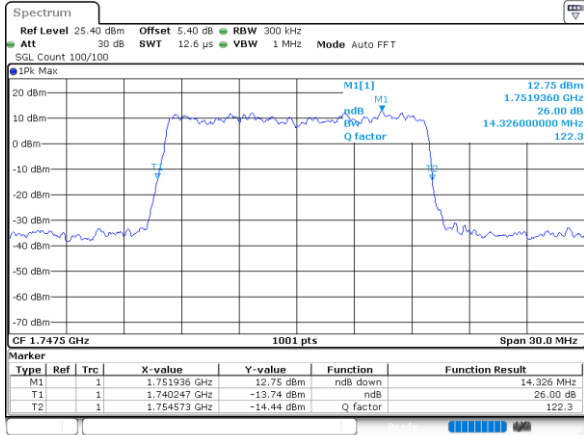


Date: 7.JAN.2022 19:22:54



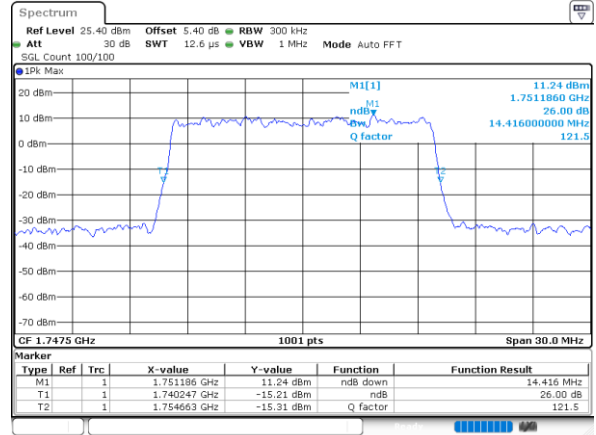
LTE Band 4

Highest Channel / 15MHz / QPSK



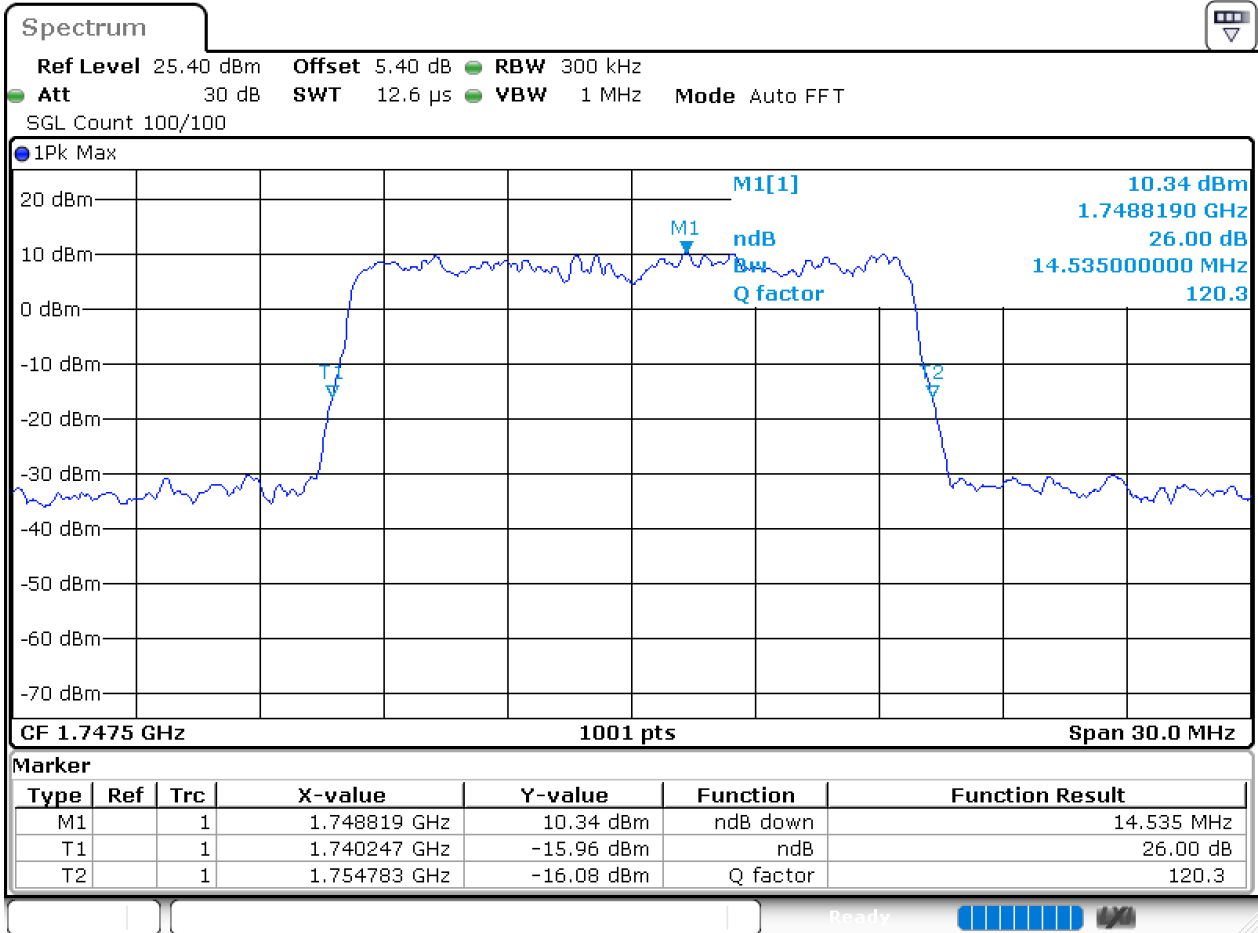
Date: 7.JAN.2022 19:23:133

Highest Channel / 15MHz / 16QAM



Date: 7.JAN.2022 19:24:12

Highest Channel / 15MHz / 64QAM



Date: 7.JAN.2022 19:24:51

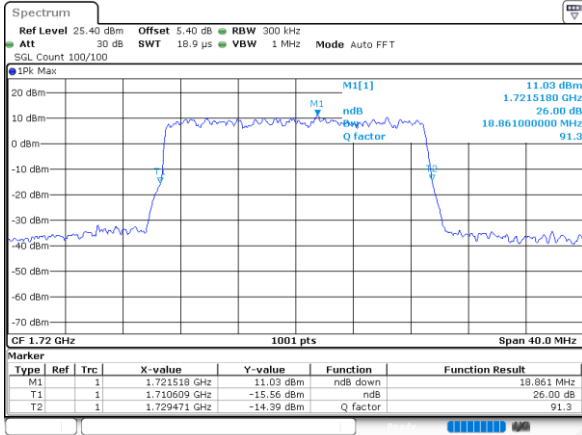


Mode	LTE Band 4 : 26dB BW(MHz)		
BW	20 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	18.86	19.06	18.74
Middle CH	18.94	18.70	19.06
Highest CH	18.82	18.98	18.78



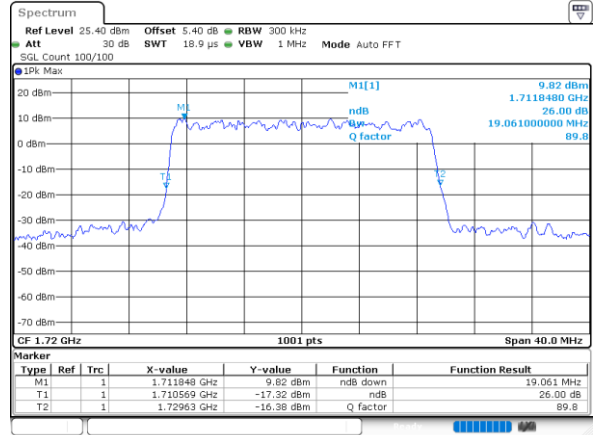
LTE Band 4

Lowest Channel / 20MHz / QPSK



Date: 7.JAN.2022 19:25:32

Lowest Channel / 20MHz / 16QAM

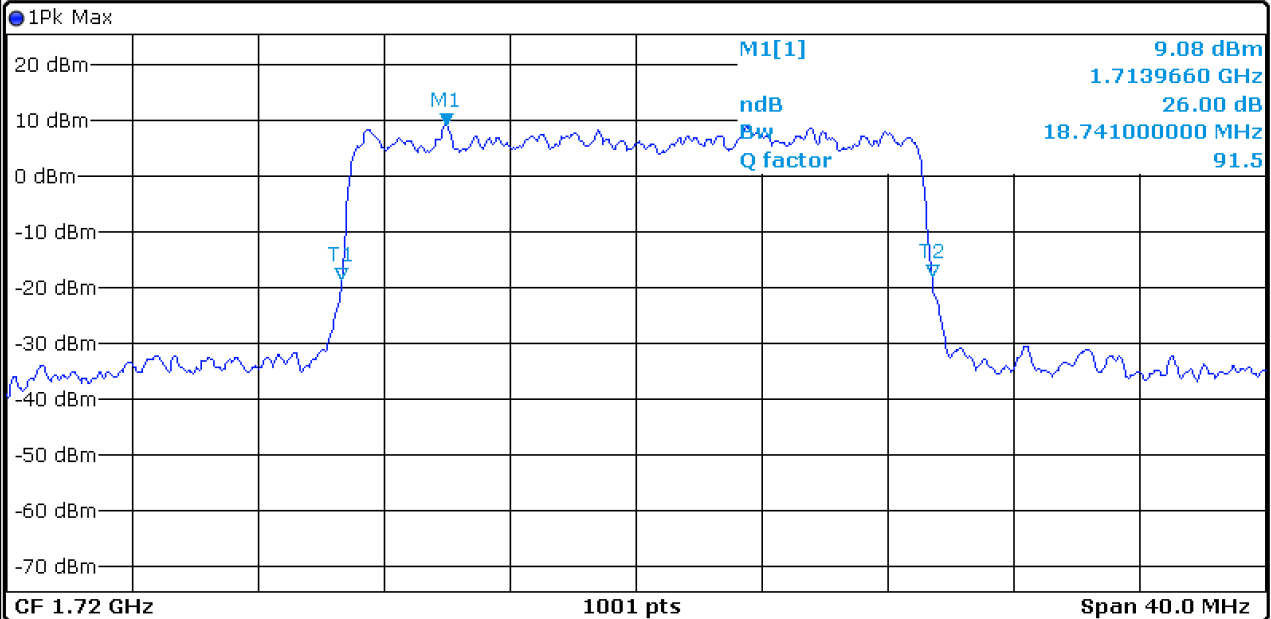


Date: 7.JAN.2022 19:26:10

Lowest Channel / 20MHz / 64QAM

Spectrum

Ref Level 25.40 dBm Offset 5.40 dB RBW 300 kHz
 Att 30 dB SWT 18.9 μs VBW 1 MHz Mode Auto FFT
 SGL Count 100/100



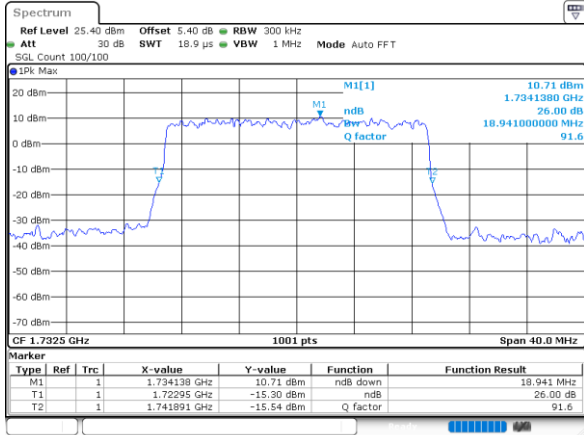
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.713966 GHz	9.08 dBm	ndB down	18.741 MHz
T1	1		1.710649 GHz	-18.72 dBm	ndB	26.00 dB
T2	1		1.729391 GHz	-17.96 dBm	Q factor	91.5

Date: 7.JAN.2022 19:26:49



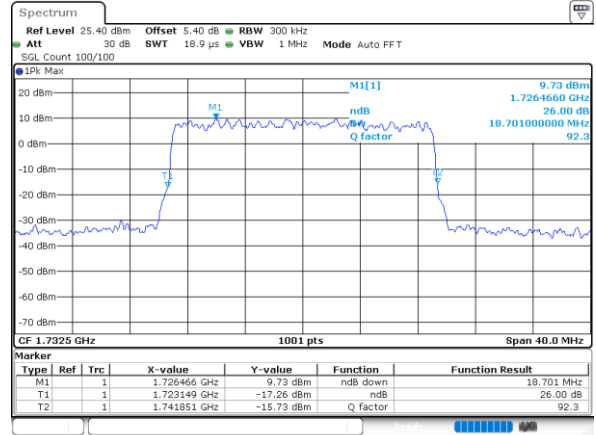
LTE Band 4

Middle Channel / 20MHz / QPSK



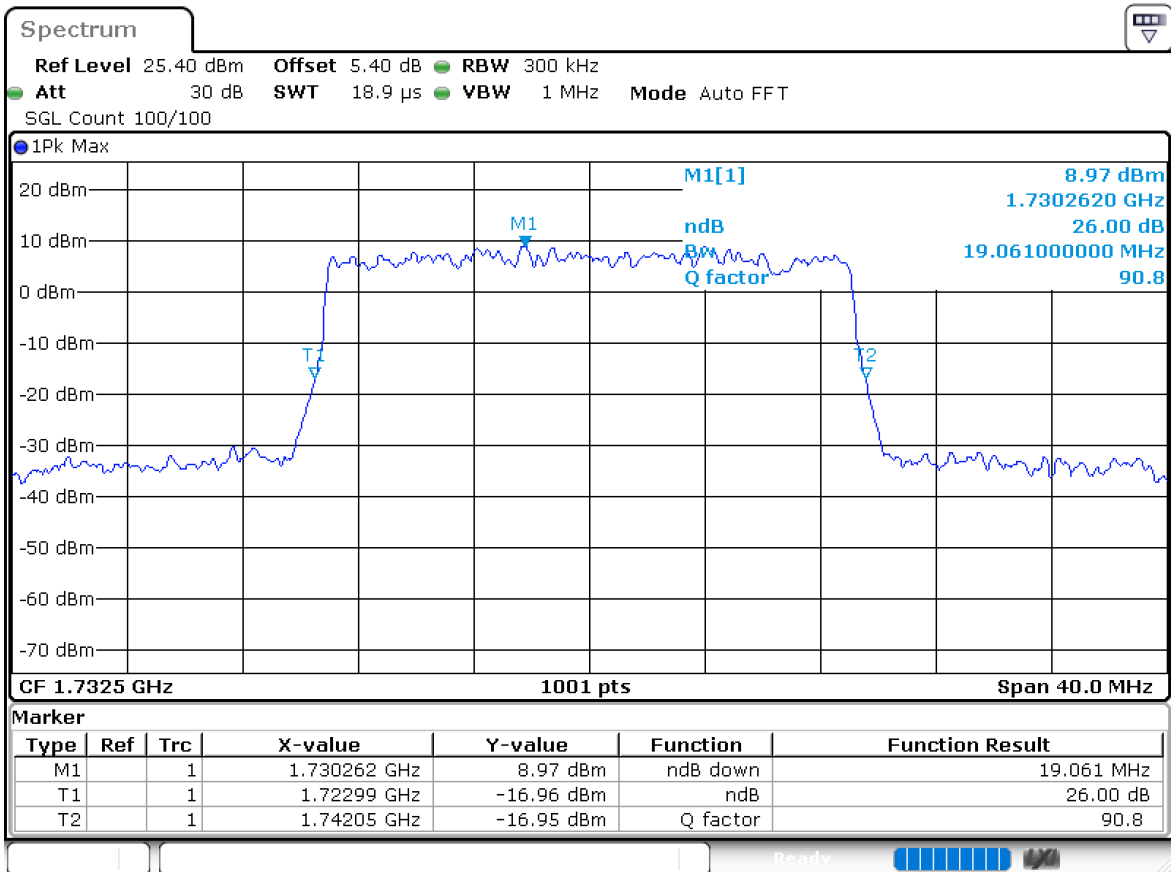
Date: 7.JAN.2022 19:27:28

Middle Channel / 20MHz / 16QAM



Date: 7.JAN.2022 19:28:06

Middle Channel / 20MHz / 64QAM

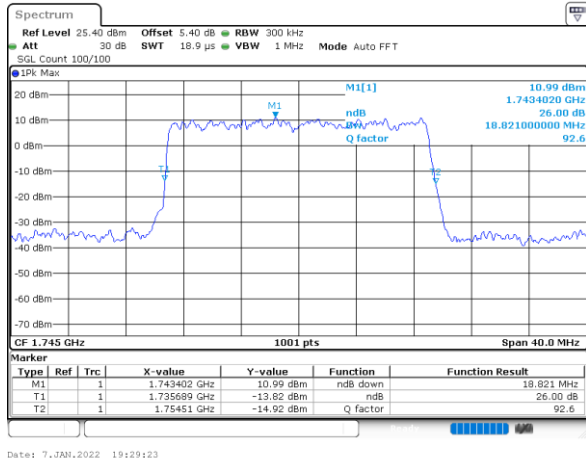


Date: 7.JAN.2022 19:28:44

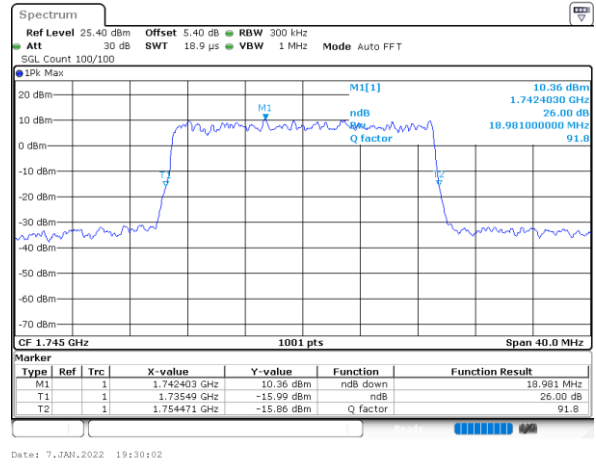


LTE Band 4

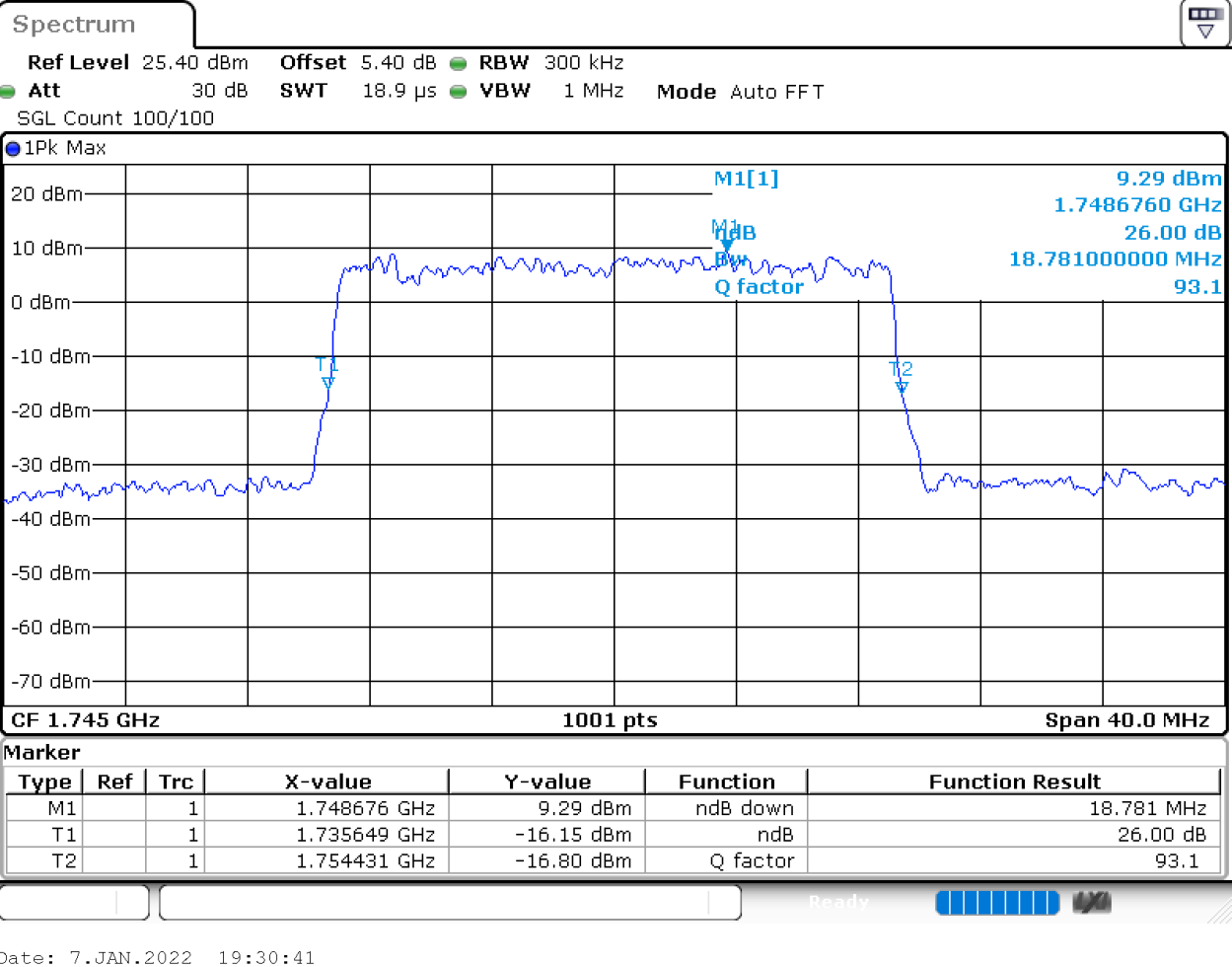
Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM



Highest Channel / 20MHz / 64QAM





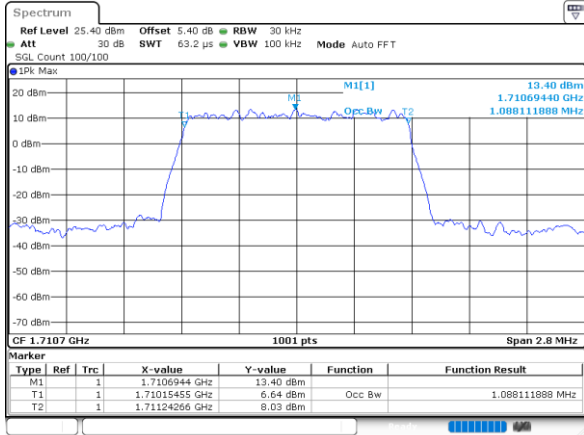
Occupied Bandwidth

Mode	LTE Band 4 : 99%OBW(MHz)		
BW	1.4 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	1.09	1.09	1.09
Middle CH	1.09	1.09	1.09
Highest CH	1.09	1.09	1.10



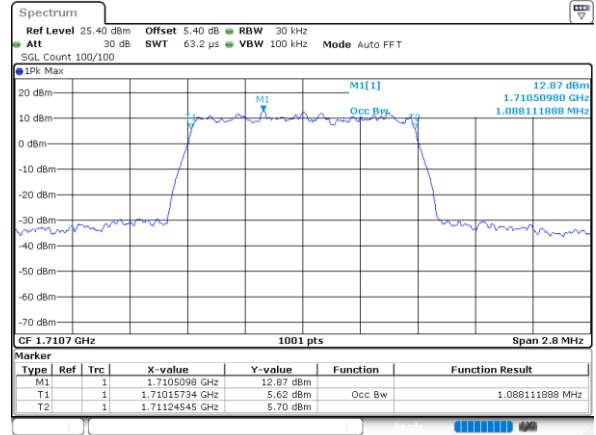
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



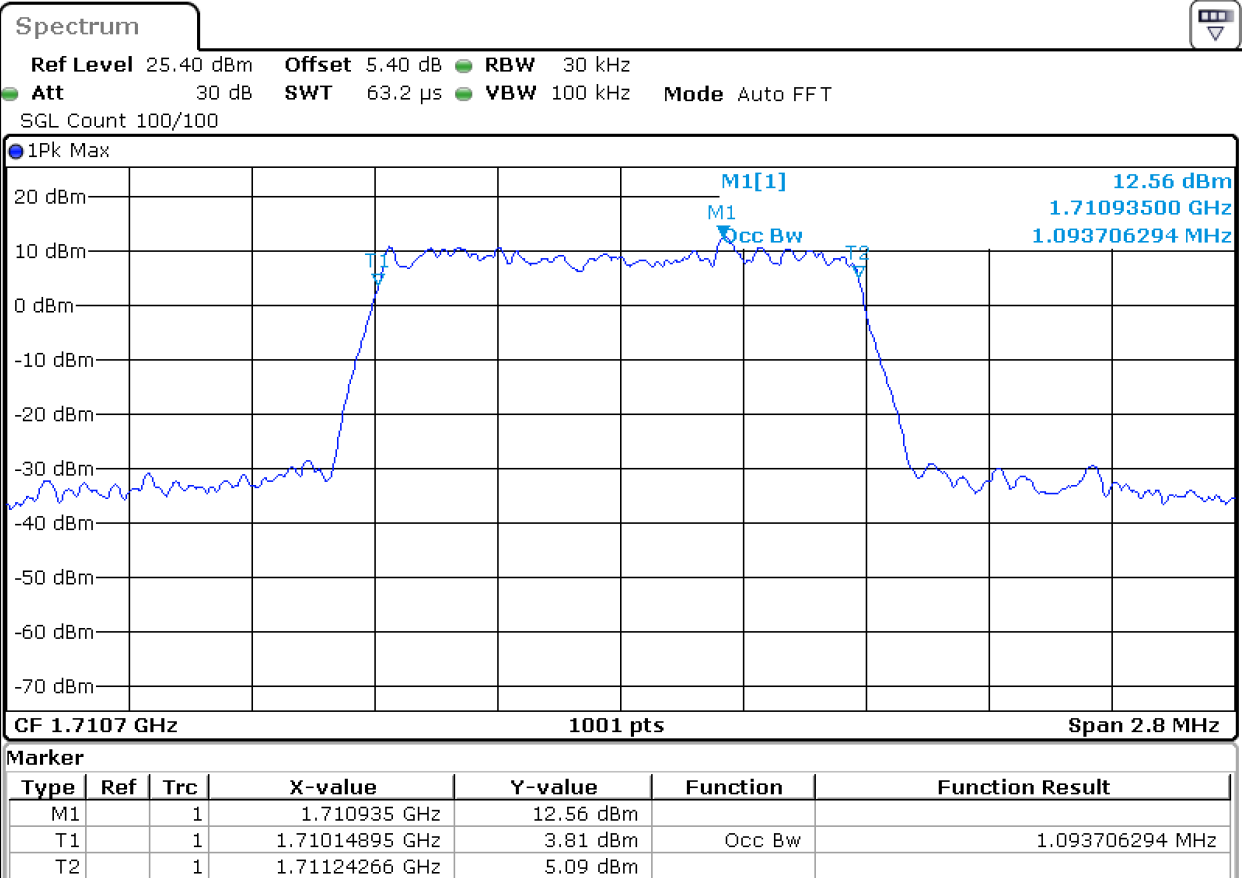
Date: 7.JAN.2022 17:36:59

Lowest Channel / 1.4MHz / 16QAM



Date: 7.JAN.2022 17:37:39

Lowest Channel / 1.4MHz / 64QAM

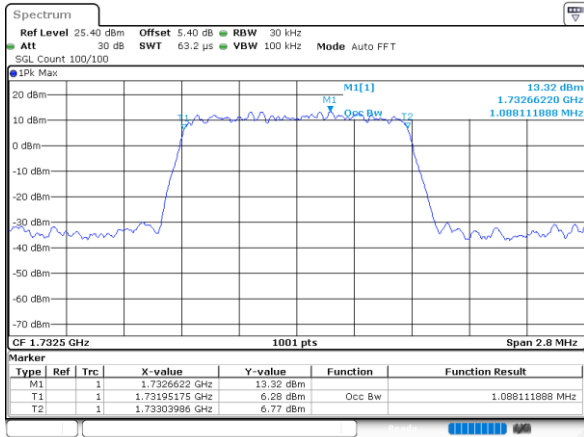


Date: 7.JAN.2022 17:38:19



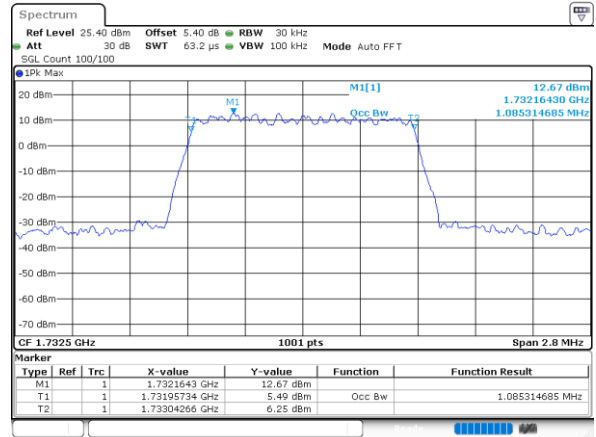
LTE Band 4

Middle Channel / 1.4MHz / QPSK



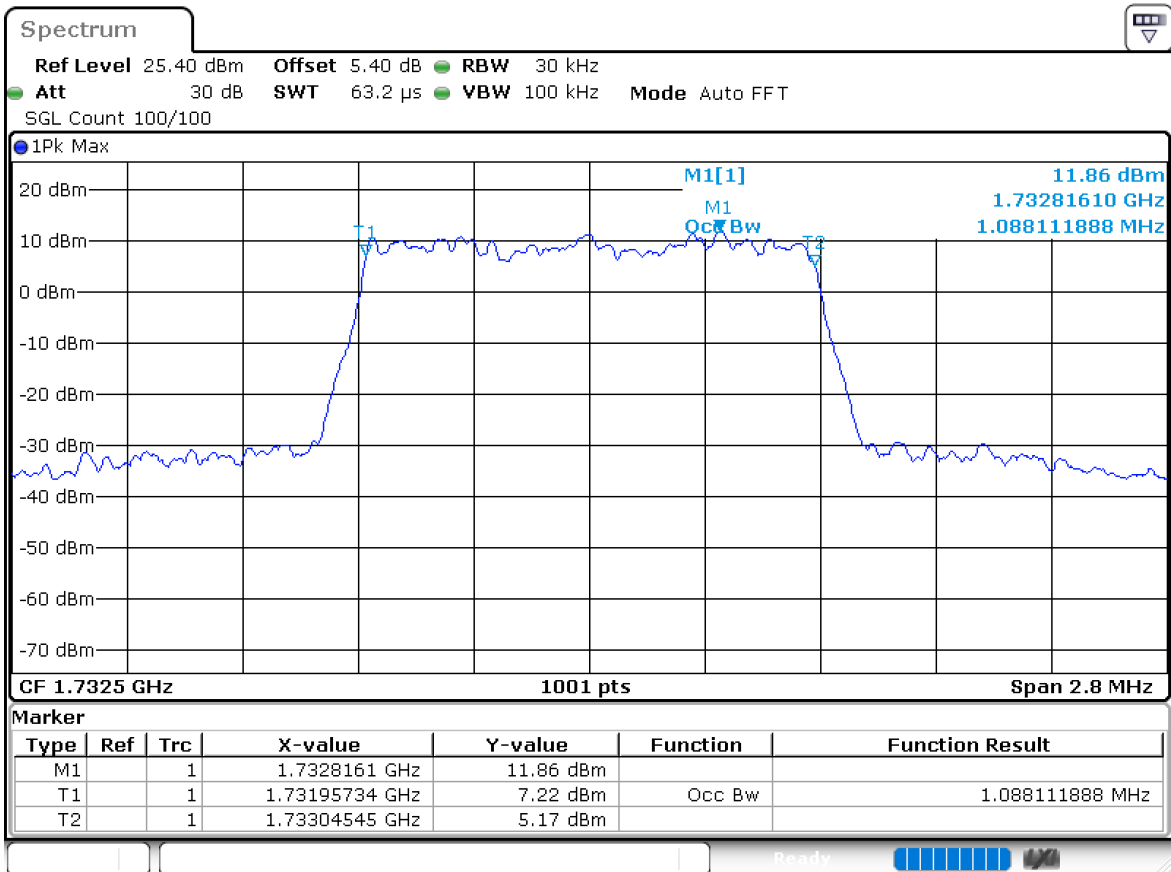
Date: 7.JAN.2022 17:38:59

Middle Channel / 1.4MHz / 16QAM



Date: 7.JAN.2022 17:39:38

Middle Channel / 1.4MHz / 64QAM

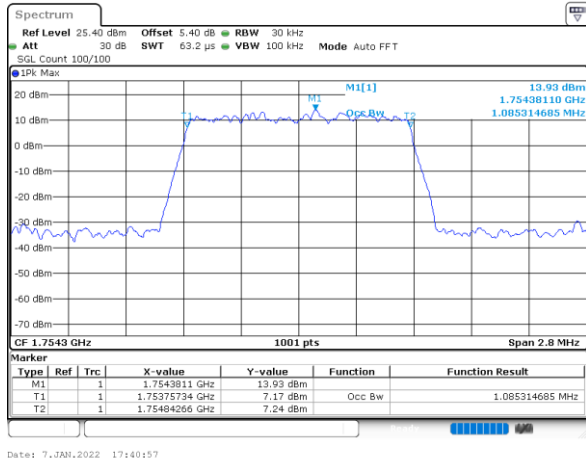


Date: 7.JAN.2022 17:40:17

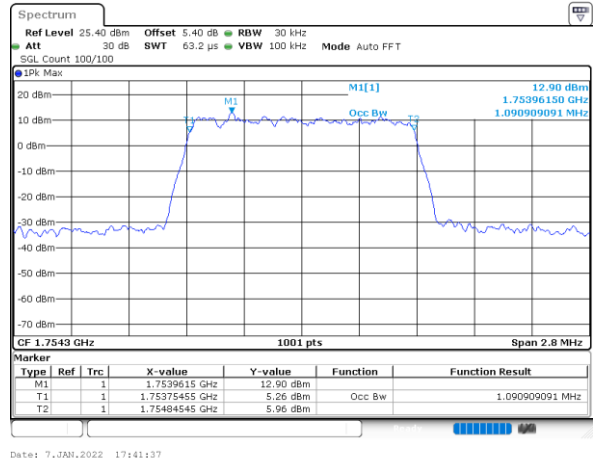


LTE Band 4

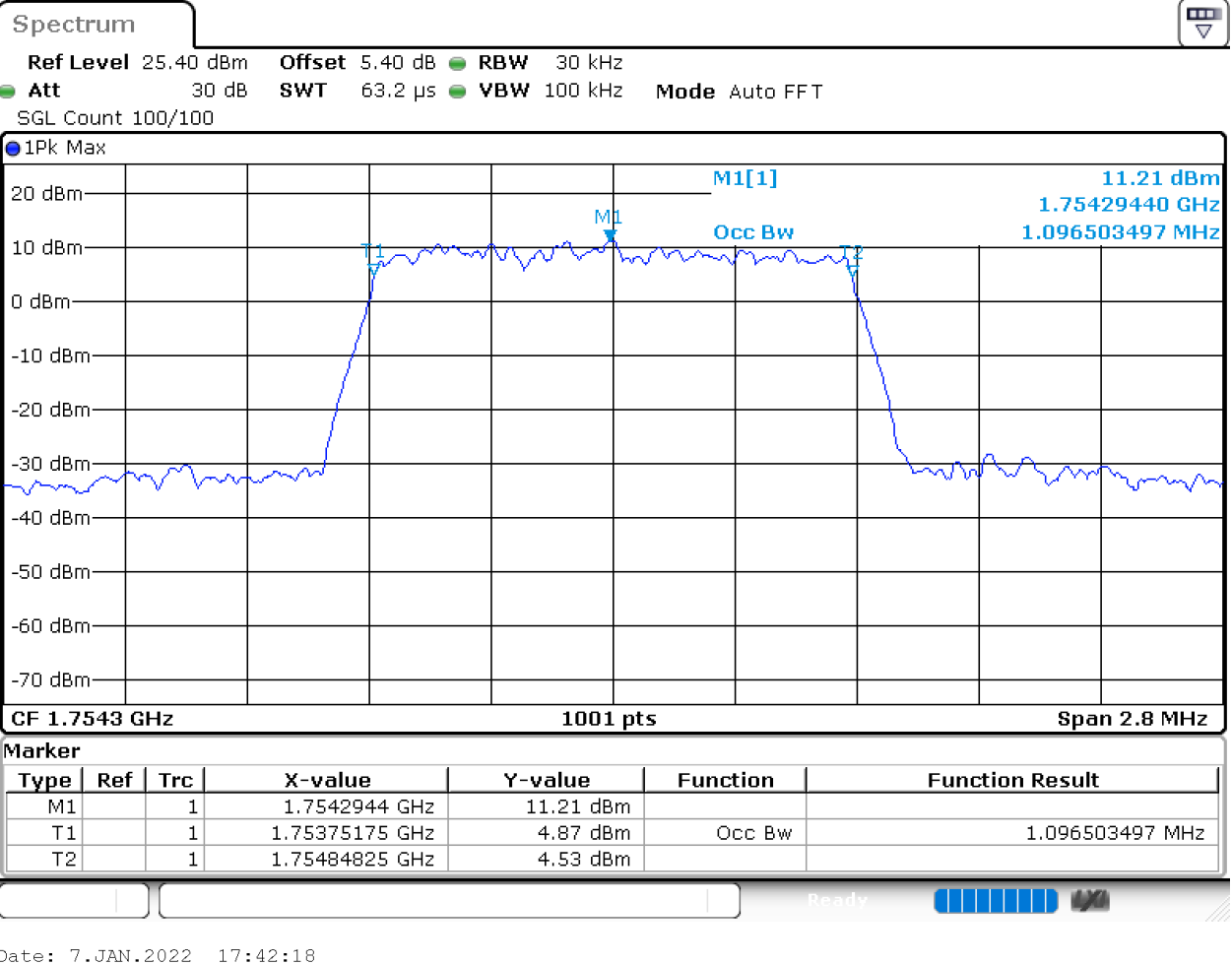
Highest Channel / 1.4MHz / QPSK



Highest Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / 64QAM



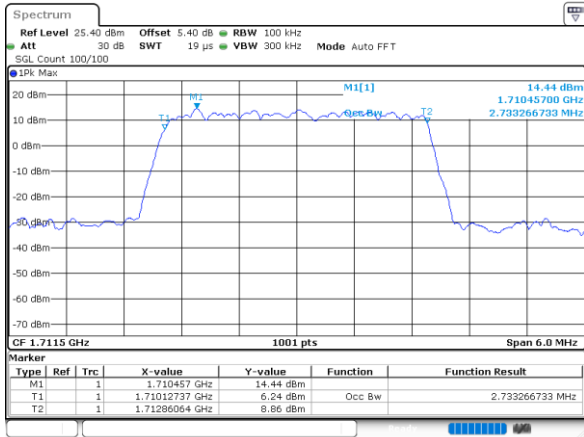


Mode	LTE Band 4 : 99%OBW(MHz)		
BW	3 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	2.73	2.72	2.73
Middle CH	2.71	2.70	2.73
Highest CH	2.73	2.70	2.73



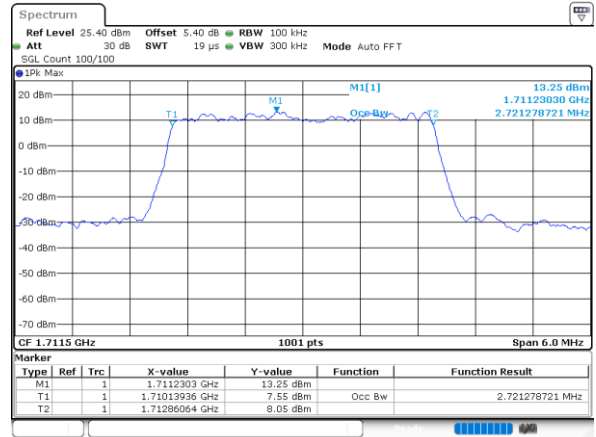
LTE Band 4

Lowest Channel / 3MHz / QPSK



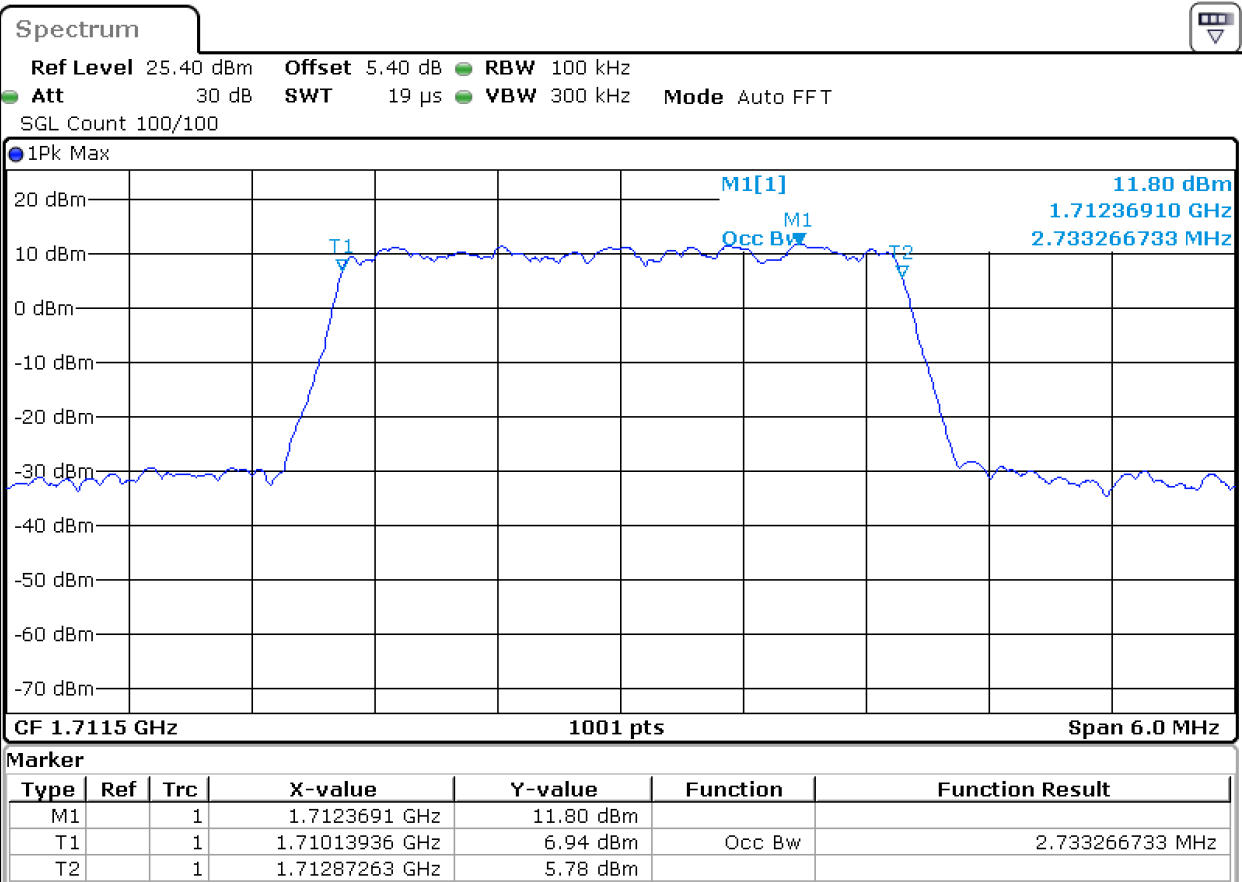
Date: 7.JAN.2022 17:42:58

Lowest Channel / 3MHz / 16QAM



Date: 7.JAN.2022 17:43:38

Lowest Channel / 3MHz / 64QAM

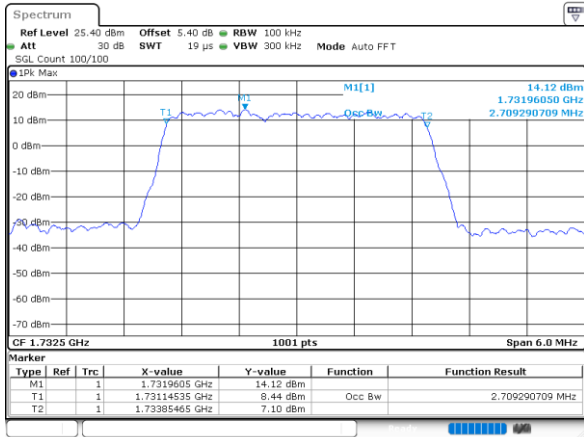


Date: 7.JAN.2022 17:44:17



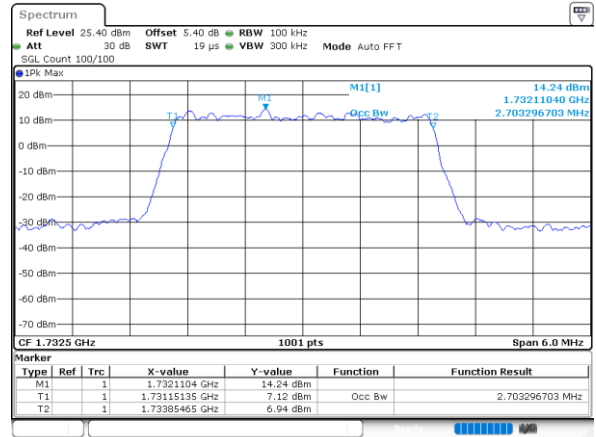
LTE Band 4

Middle Channel / 3MHz / QPSK



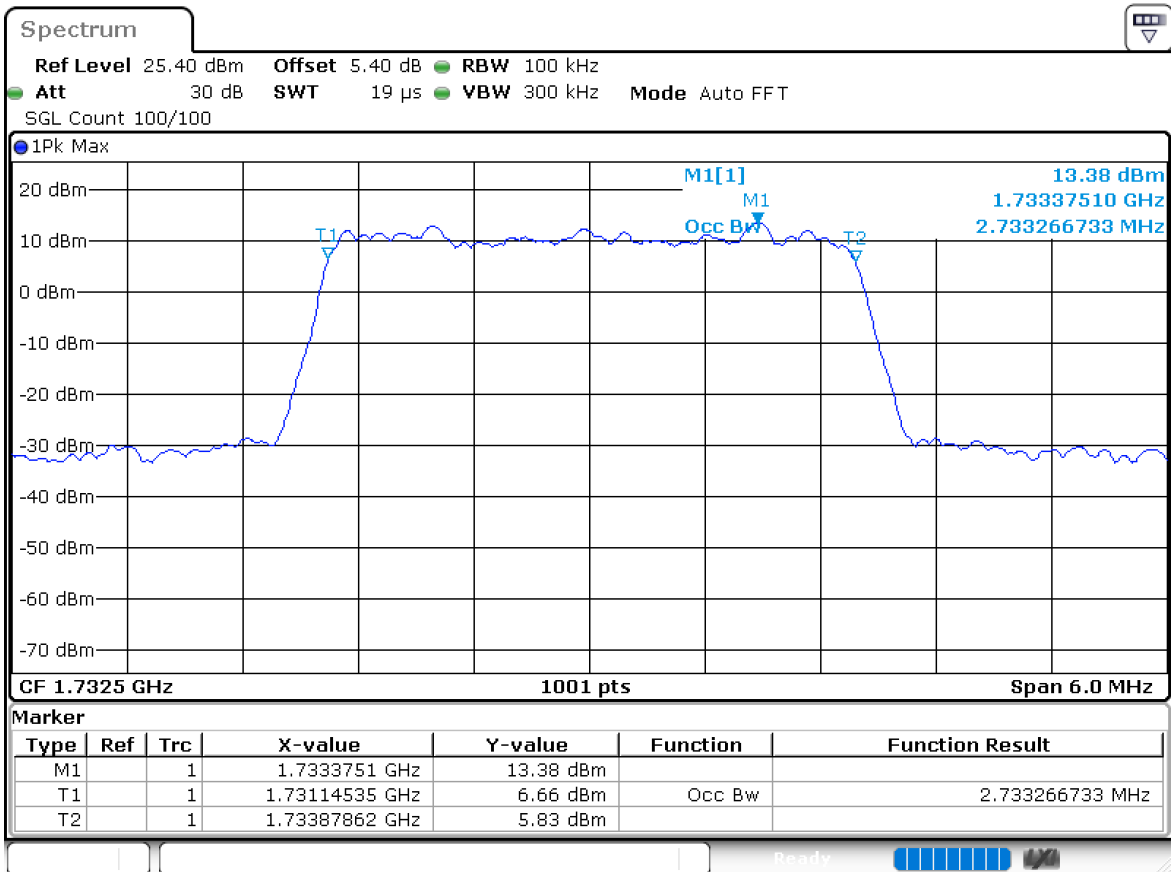
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Middle Channel / 3MHz / 16QAM



Date: 7.JAN.2022 17:45:35

Middle Channel / 3MHz / 64QAM

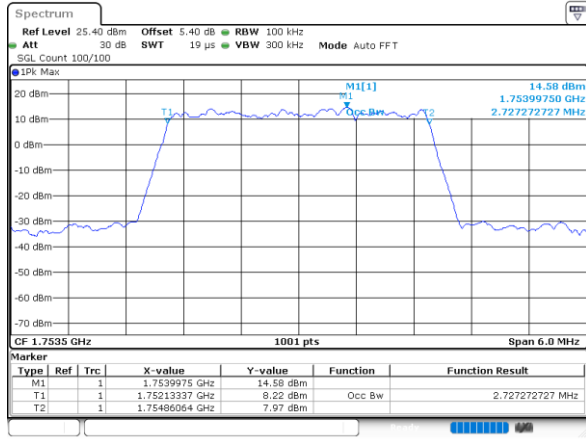


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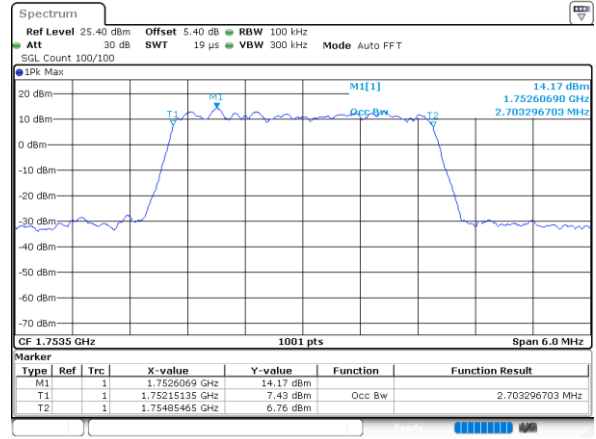


LTE Band 4

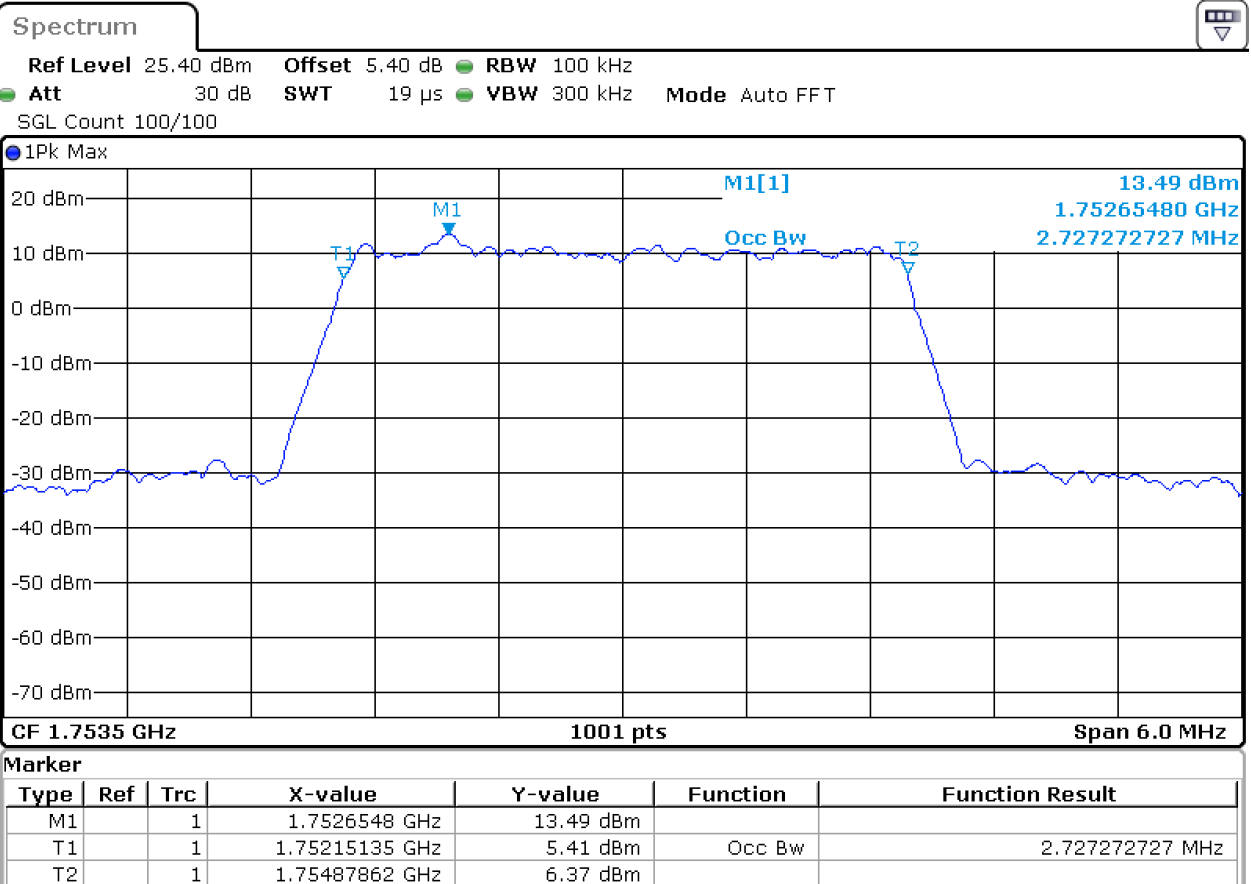
Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM



Highest Channel / 3MHz / 64QAM



Date: 7.JAN.2022 17:48:12

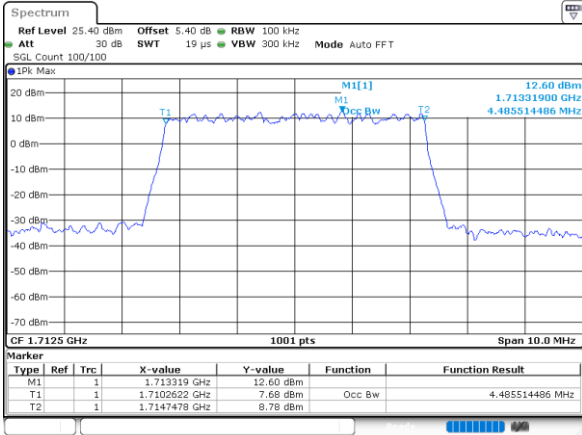


Mode	LTE Band 4 : 99%OBW(MHz)		
BW	5 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	4.49	4.50	4.51
Middle CH	4.50	4.50	4.49
Highest CH	4.51	4.50	4.48



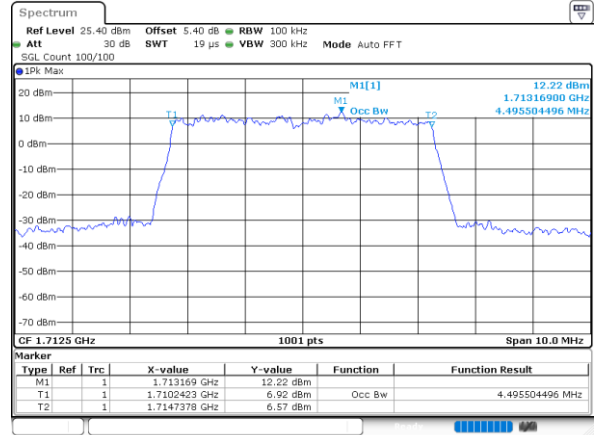
LTE Band 4

Lowest Channel / 5MHz / QPSK



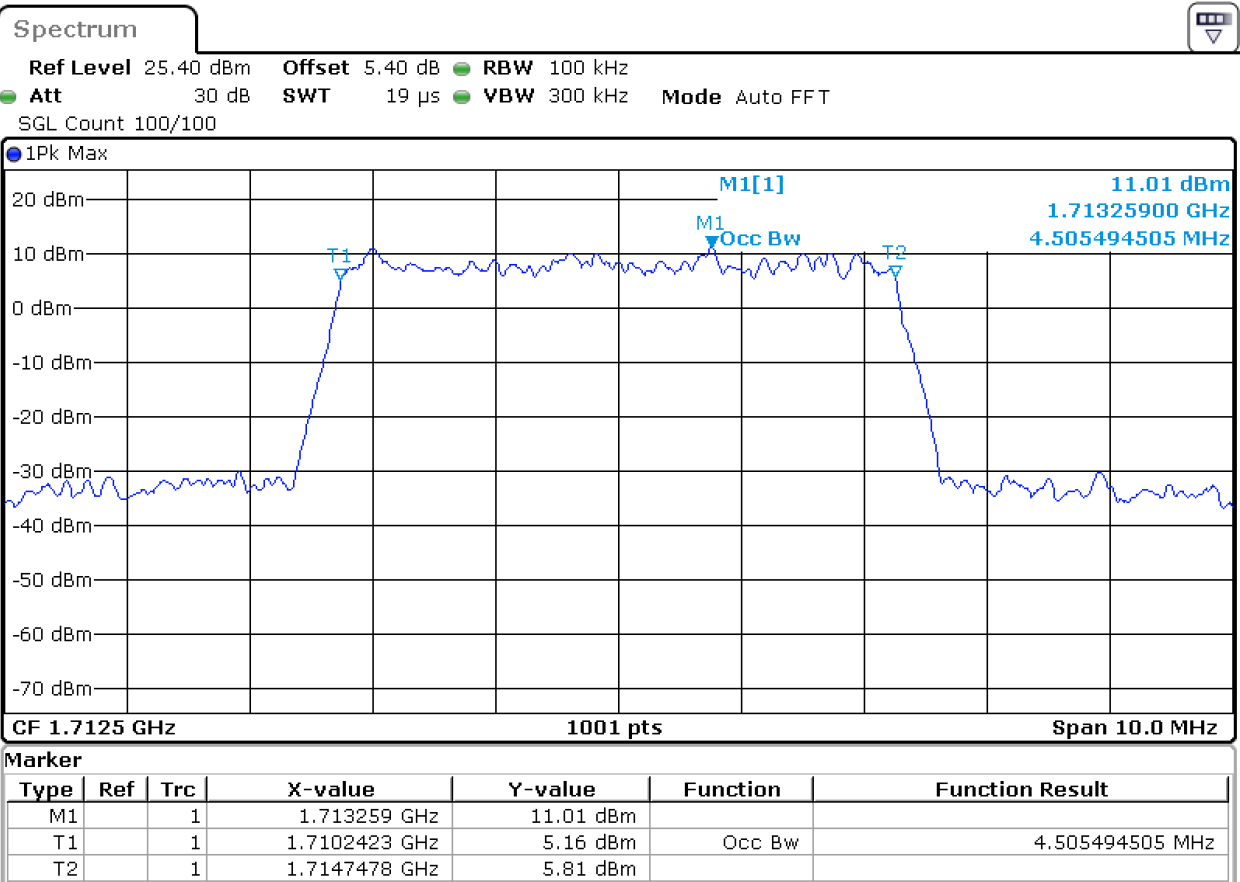
Date: 7.JAN.2022 17:48:53

Lowest Channel / 5MHz / 16QAM



Date: 7.JAN.2022 17:49:32

Lowest Channel / 5MHz / 64QAM

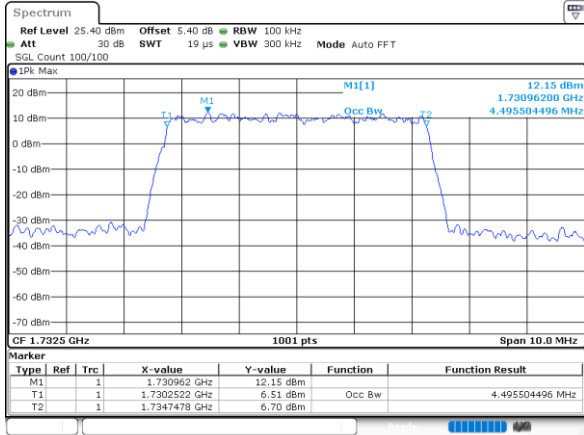


Date: 7.JAN.2022 17:50:15



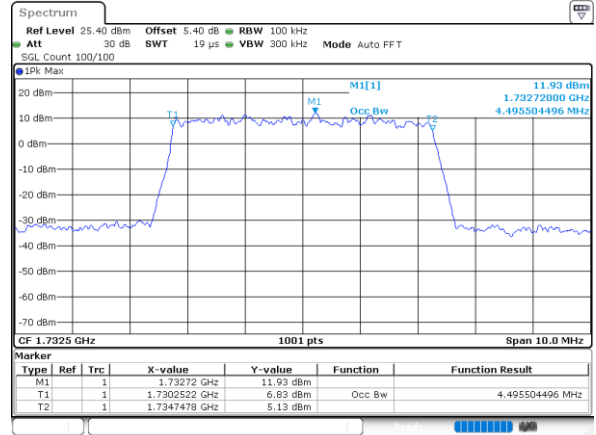
LTE Band 4

Middle Channel / 5MHz / QPSK



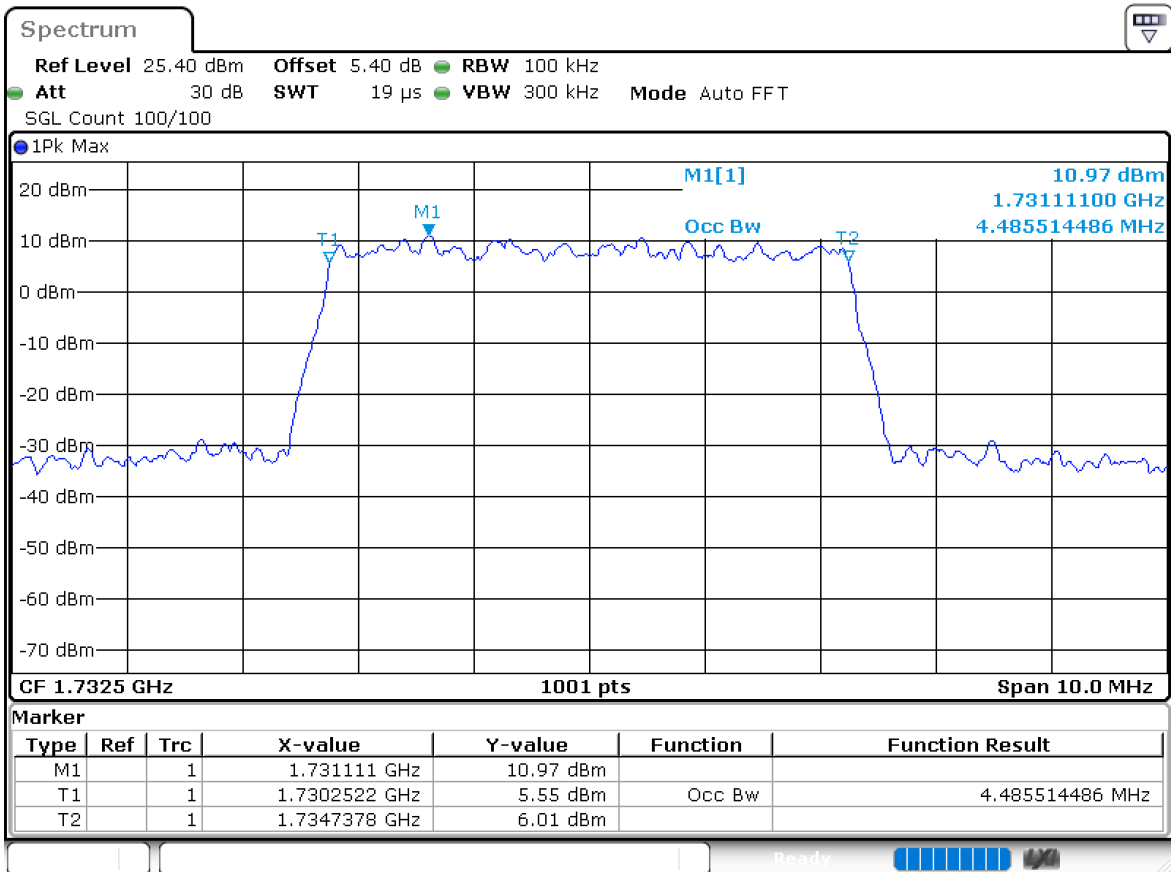
Date: 7.JAN.2022 17:50:54

Middle Channel / 5MHz / 16QAM



Date: 7.JAN.2022 17:51:33

Middle Channel / 5MHz / 64QAM

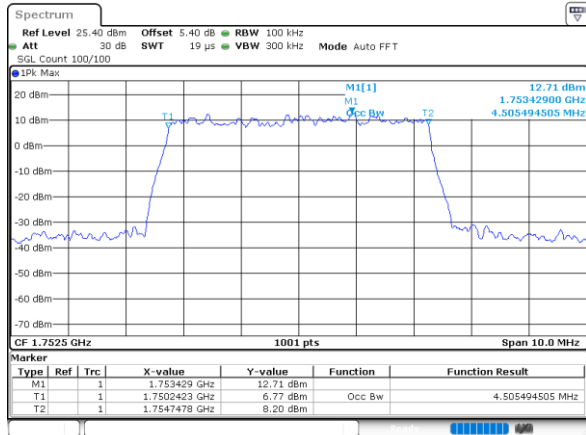


Date: 7.JAN.2022 17:52:12

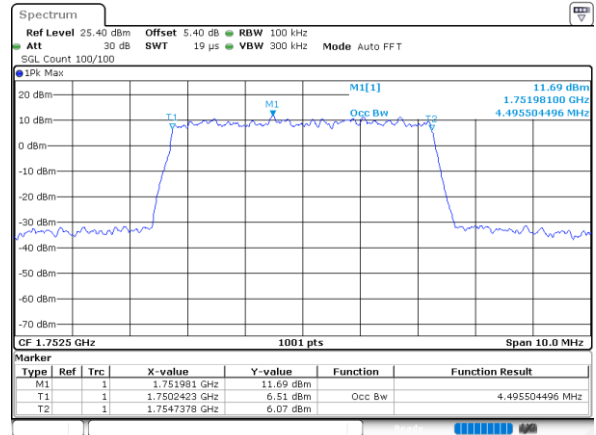


LTE Band 4

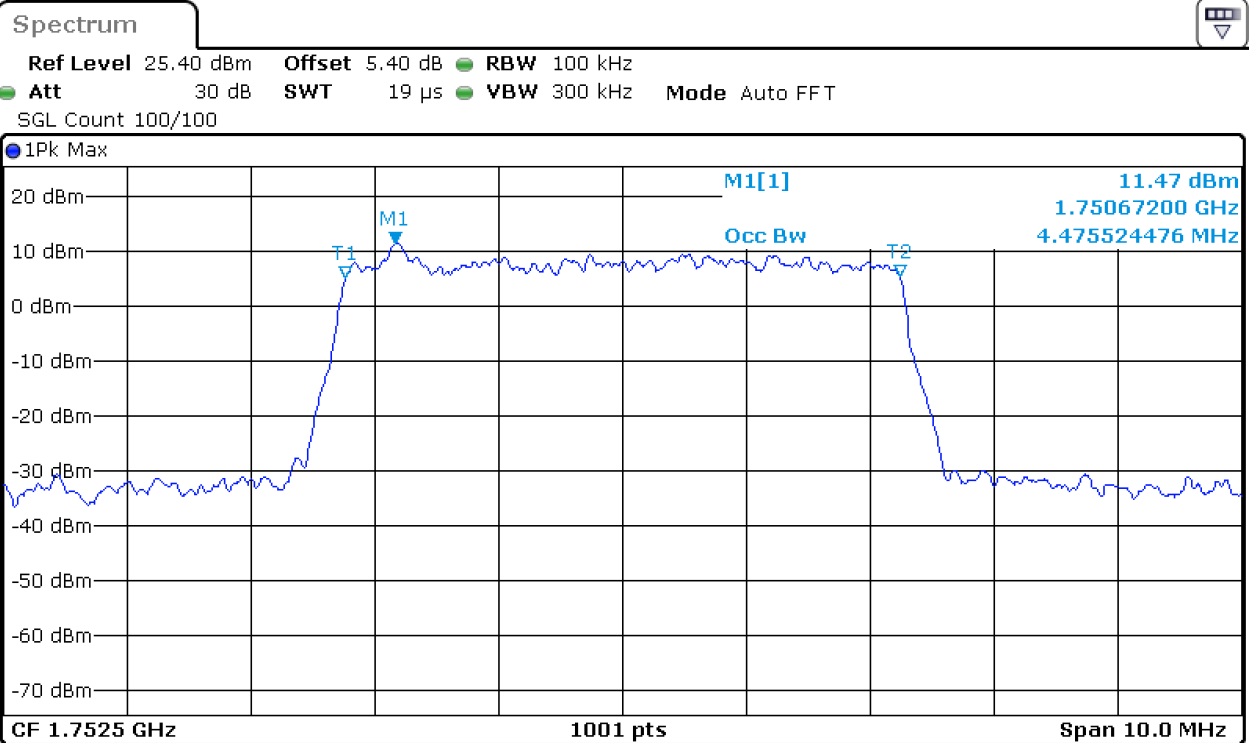
Highest Channel / 5MHz / QPSK



Highest Channel / 5MHz / 16QAM



Highest Channel / 5MHz / 64QAM



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.750672 GHz	11.47 dBm		
T1	1		1.7502622 GHz	5.05 dBm	Occ Bw	4.475524476 MHz
T2	1		1.7547378 GHz	5.29 dBm		

Date: 7.JAN.2022 17:54:10

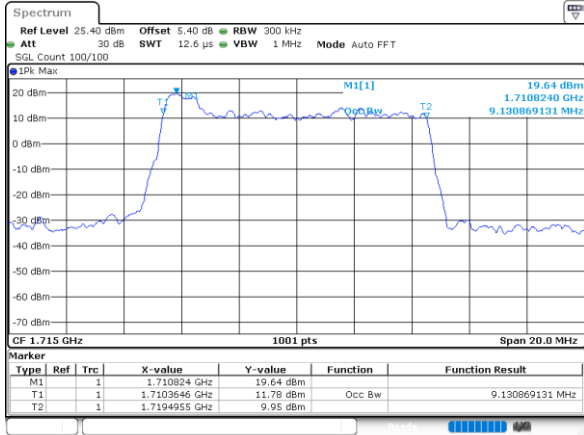


Mode	LTE Band 4 : 99%OBW(MHz)		
BW	10 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	9.13	8.99	9.01
Middle CH	9.05	9.05	9.03
Highest CH	9.05	9.05	9.07



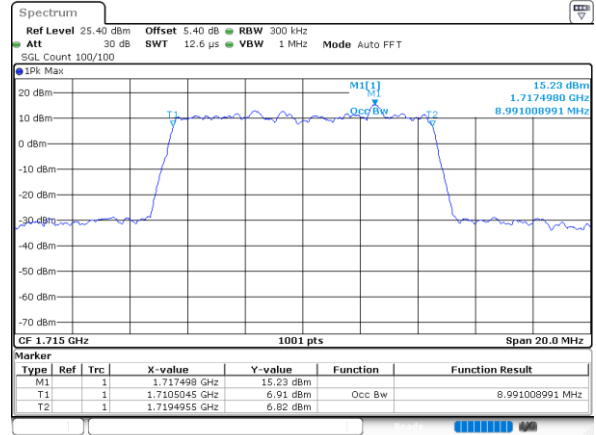
LTE Band 4

Lowest Channel / 10MHz / QPSK



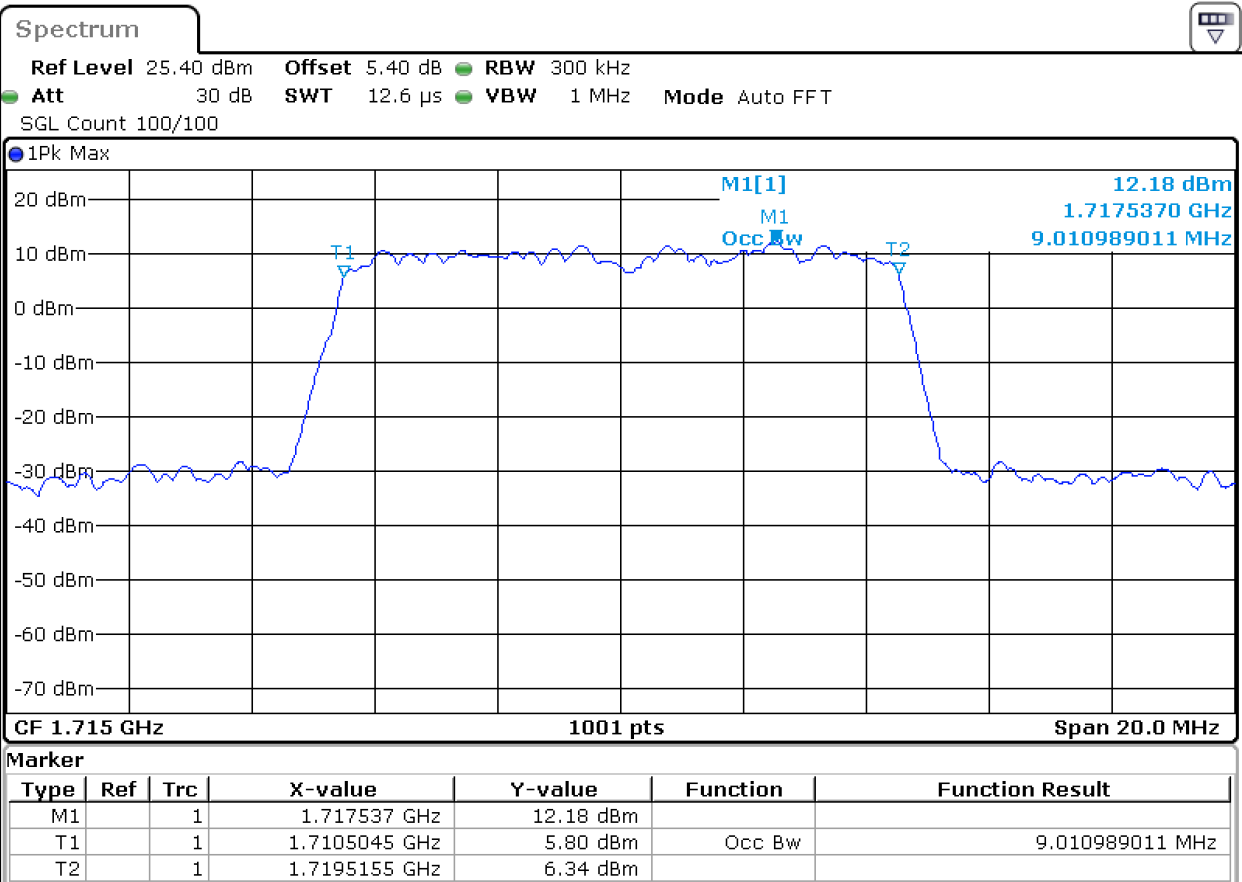
Date: 7.JAN.2022 19:13:30

Lowest Channel / 10MHz / 16QAM



Date: 7.JAN.2022 19:14:09

Lowest Channel / 10MHz / 64QAM

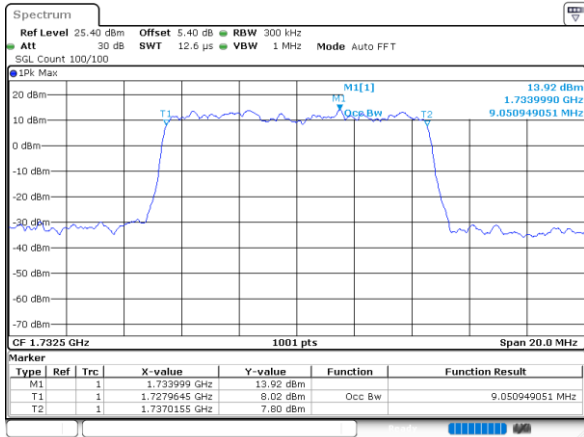


Date: 7.JAN.2022 19:14:48



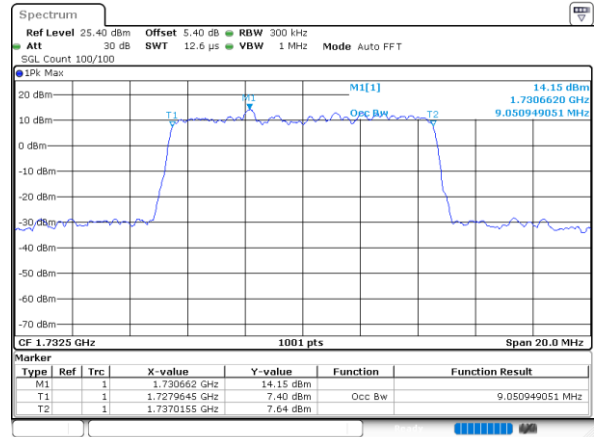
LTE Band 4

Middle Channel / 10MHz / QPSK



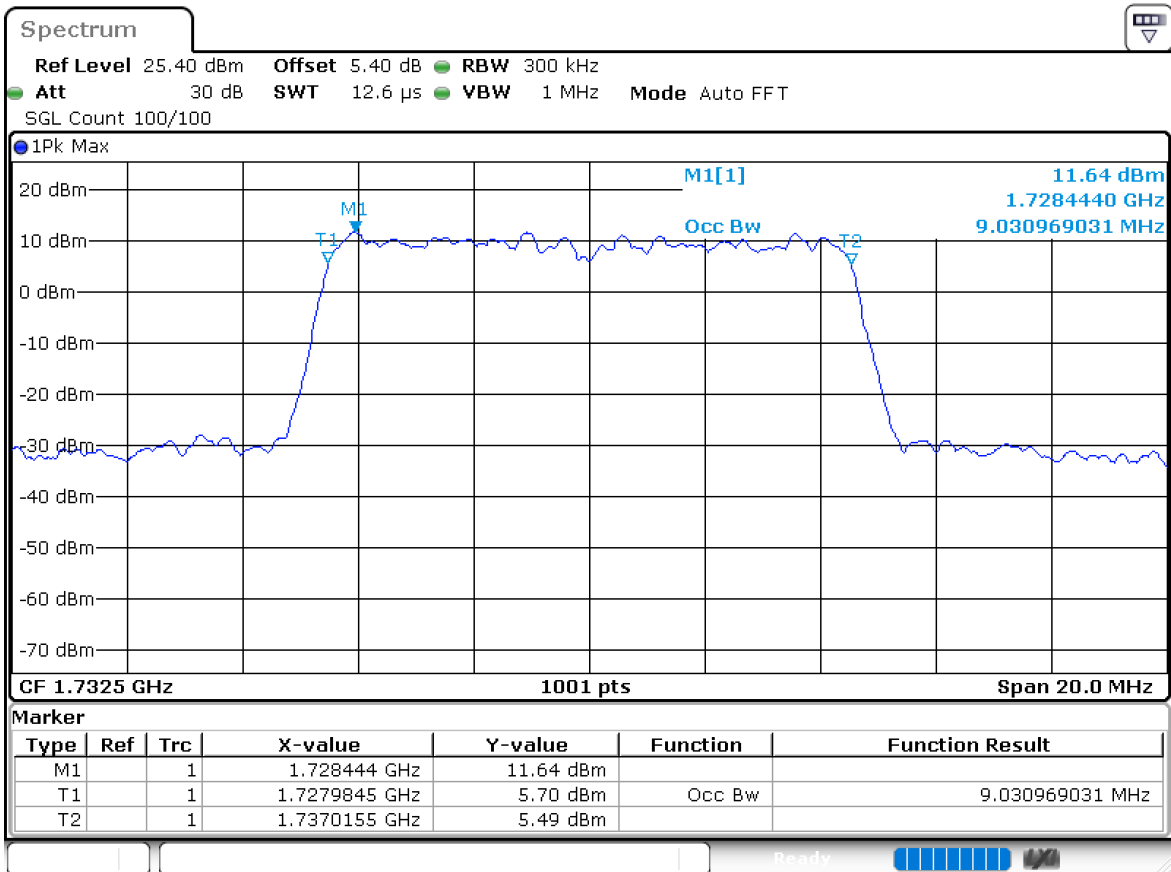
Date: 7.JAN.2022 19:15:26

Middle Channel / 10MHz / 16QAM



Date: 7.JAN.2022 19:16:05

Middle Channel / 10MHz / 64QAM

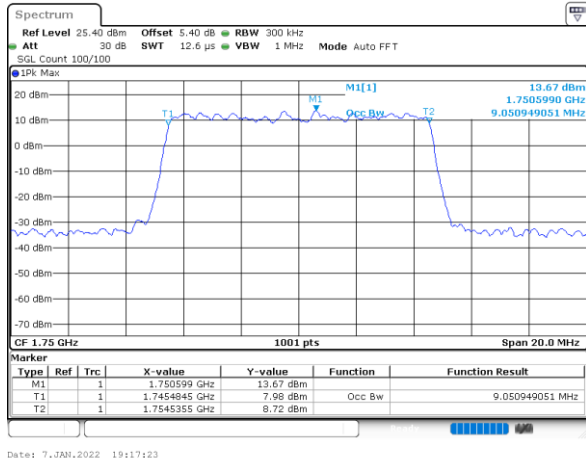


Date: 7.JAN.2022 19:16:44

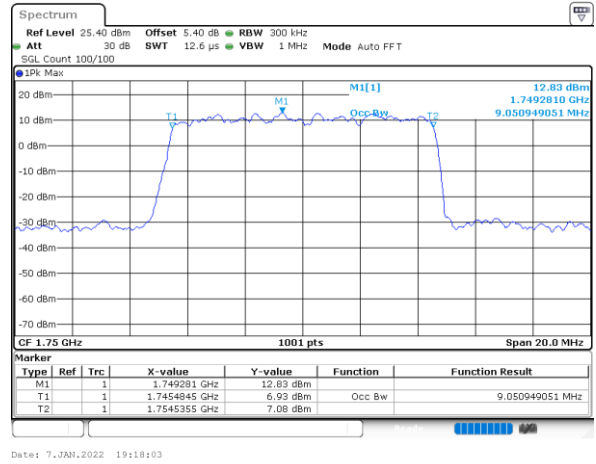


LTE Band 4

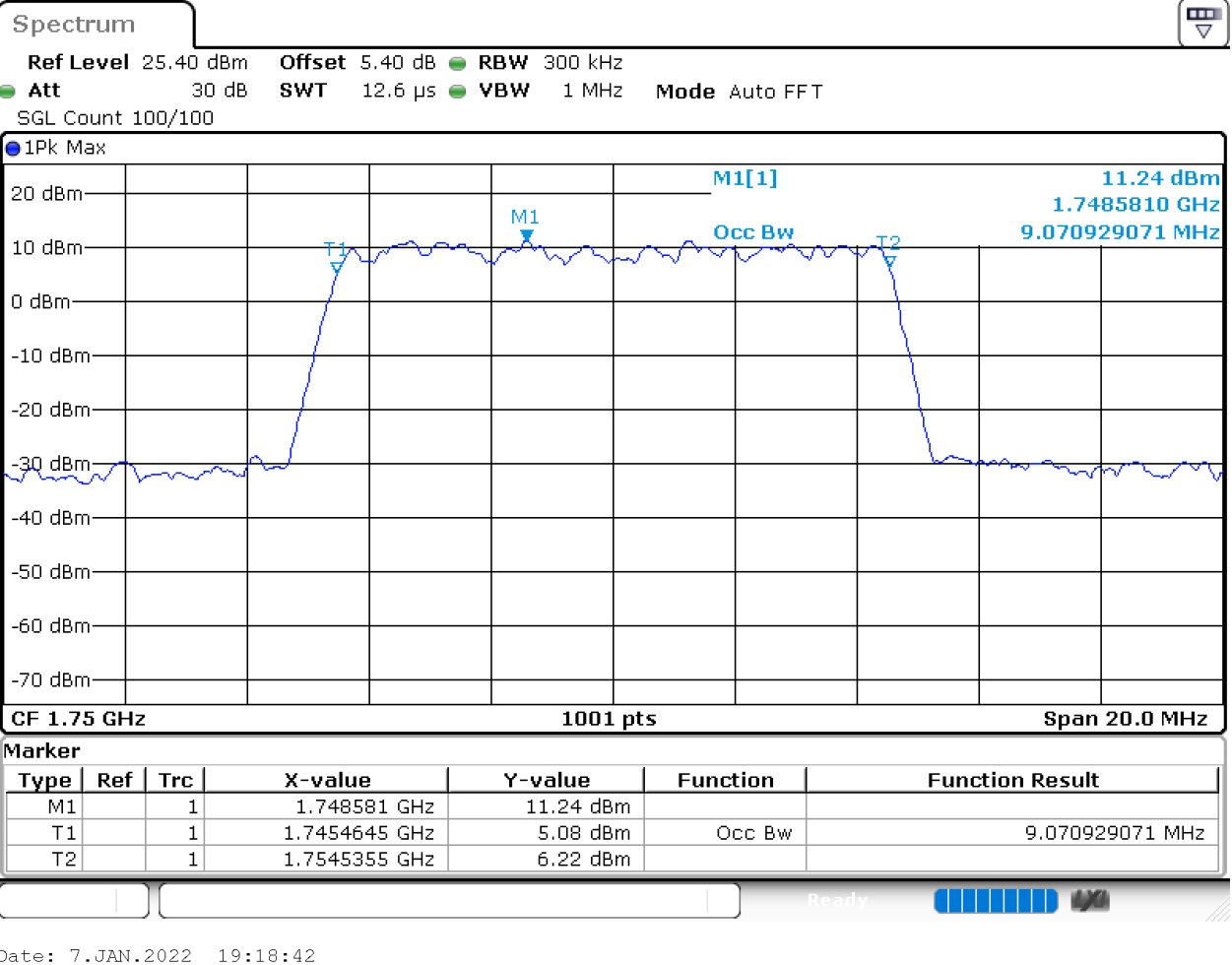
Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



Highest Channel / 10MHz / 64QAM



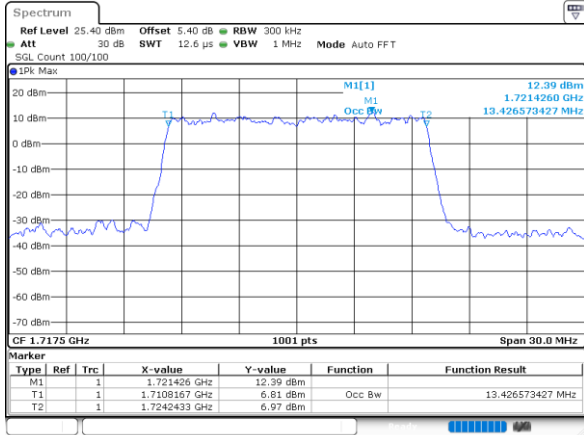


Mode	LTE Band 4 : 99%OBW(MHz)		
BW	15 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	13.43	13.43	13.43
Middle CH	13.43	13.49	13.40
Highest CH	13.43	13.46	13.49

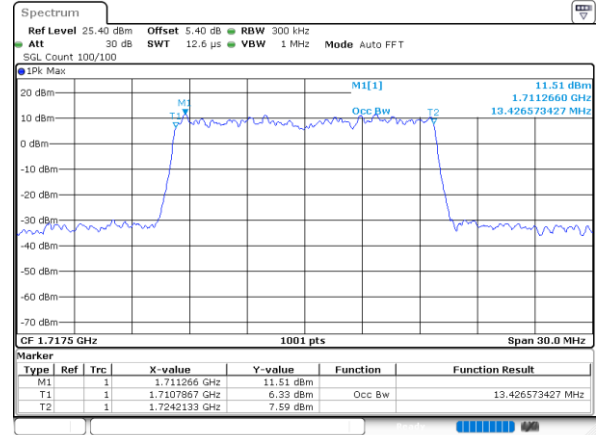


LTE Band 4

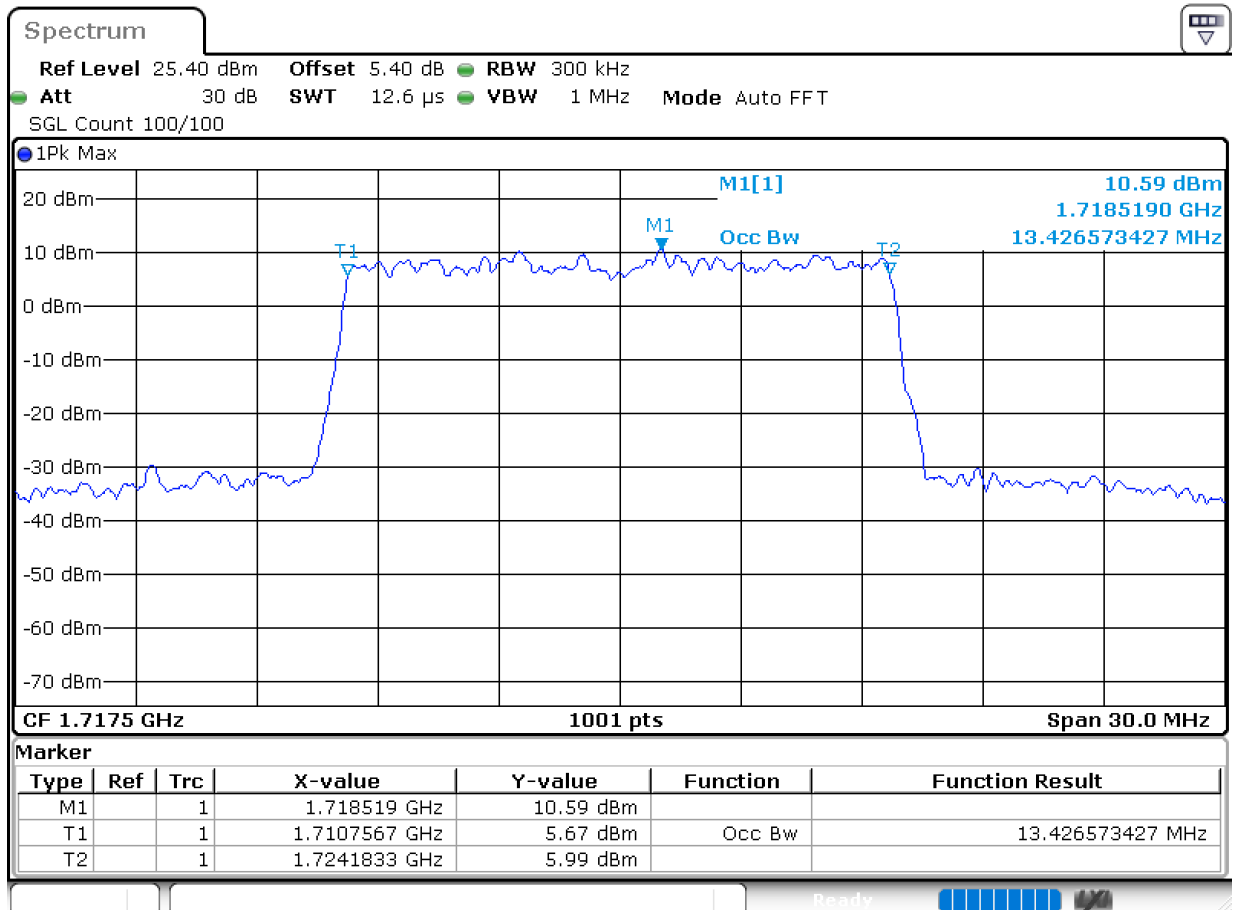
Lowest Channel / 15MHz / QPSK



Lowest Channel / 15MHz / 16QAM



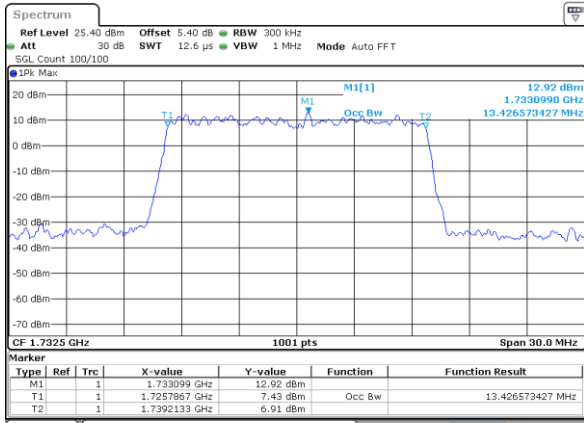
Lowest Channel / 15MHz / 64QAM





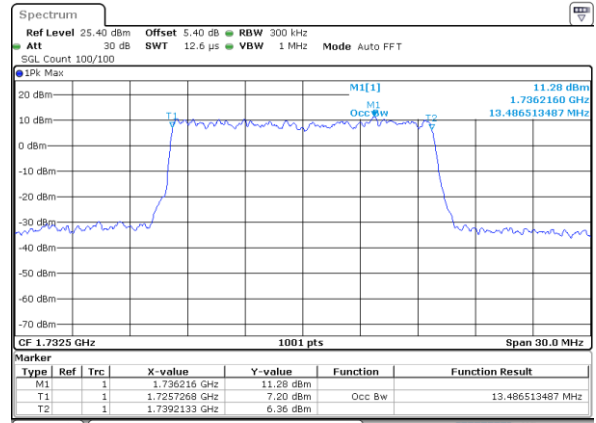
LTE Band 4

Middle Channel / 15MHz / QPSK



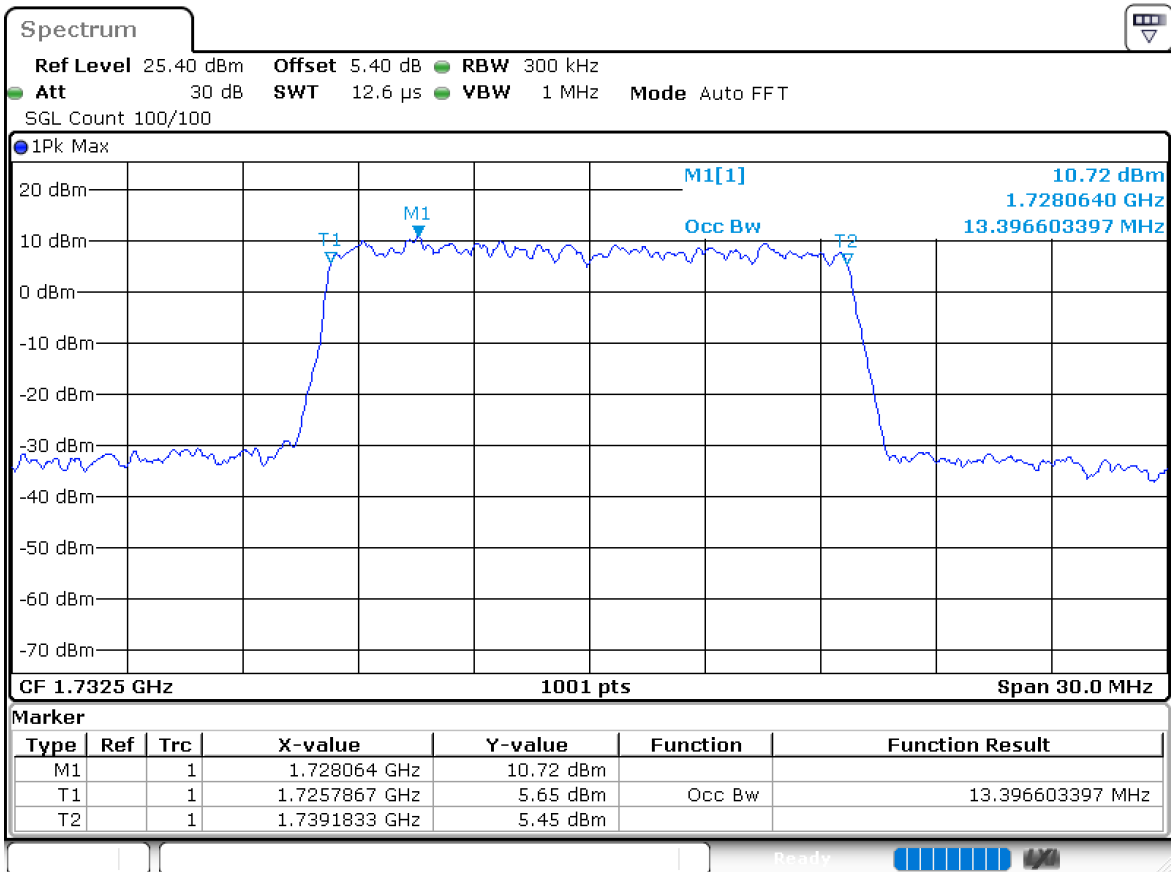
Date: 7.JAN.2022 19:21:22

Middle Channel / 15MHz / 16QAM



Date: 7.JAN.2022 19:22:01

Middle Channel / 15MHz / 64QAM

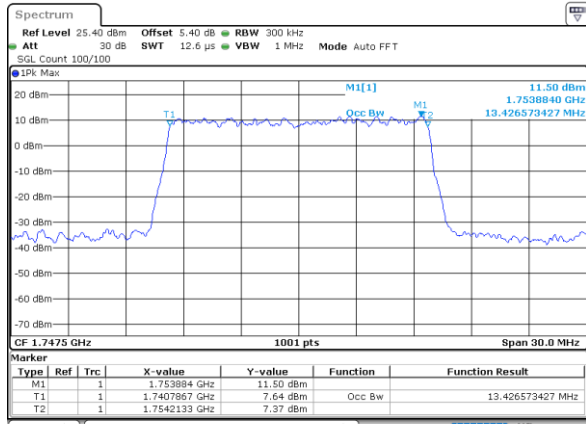


Date: 7.JAN.2022 19:22:39



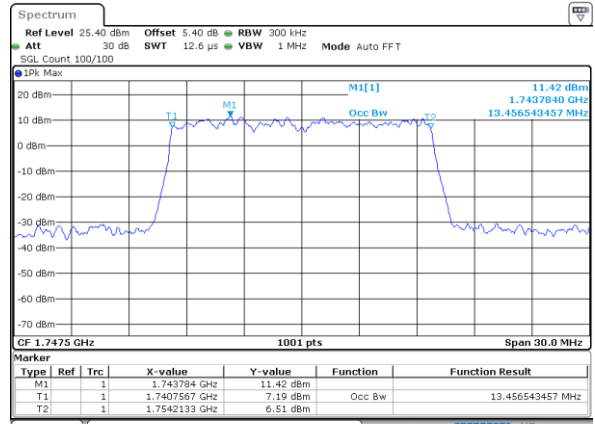
LTE Band 4

Highest Channel / 15MHz / QPSK



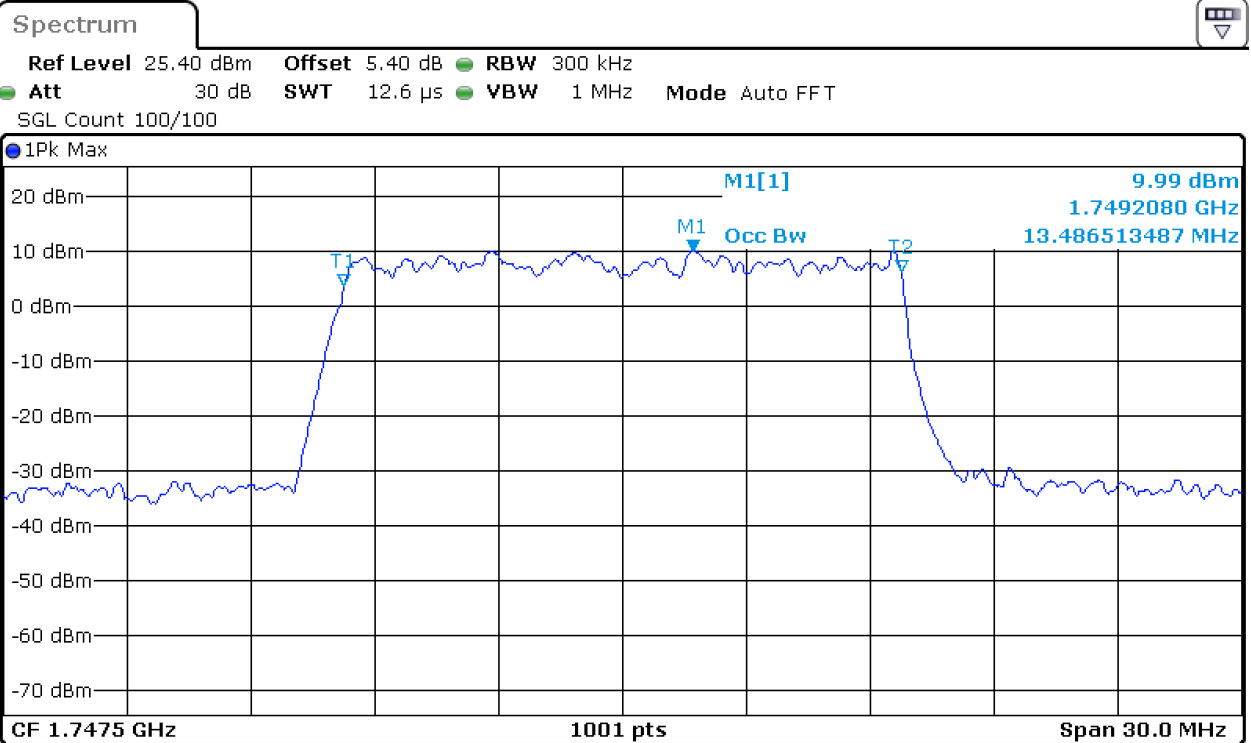
Date: 7.JAN.2022 19:23:18

Highest Channel / 15MHz / 16QAM



Date: 7.JAN.2022 19:23:57

Highest Channel / 15MHz / 64QAM



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		1.749208 GHz	9.99 dBm		
T1	1		1.7407567 GHz	3.75 dBm	Occ Bw	13.486513487 MHz
T2	1		1.7542433 GHz	6.23 dBm		

Date: 7.JAN.2022 19:24:36

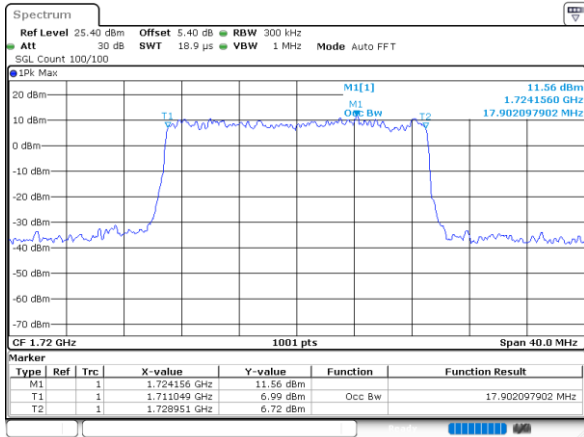


Mode	LTE Band 4 : 99%OBW(MHz)		
BW	20 MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	17.90	17.94	17.90
Middle CH	17.86	17.94	17.98
Highest CH	17.82	17.94	17.90



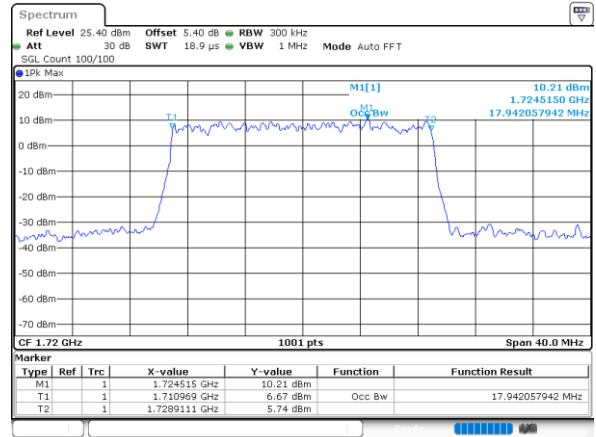
LTE Band 4

Lowest Channel / 20MHz / QPSK



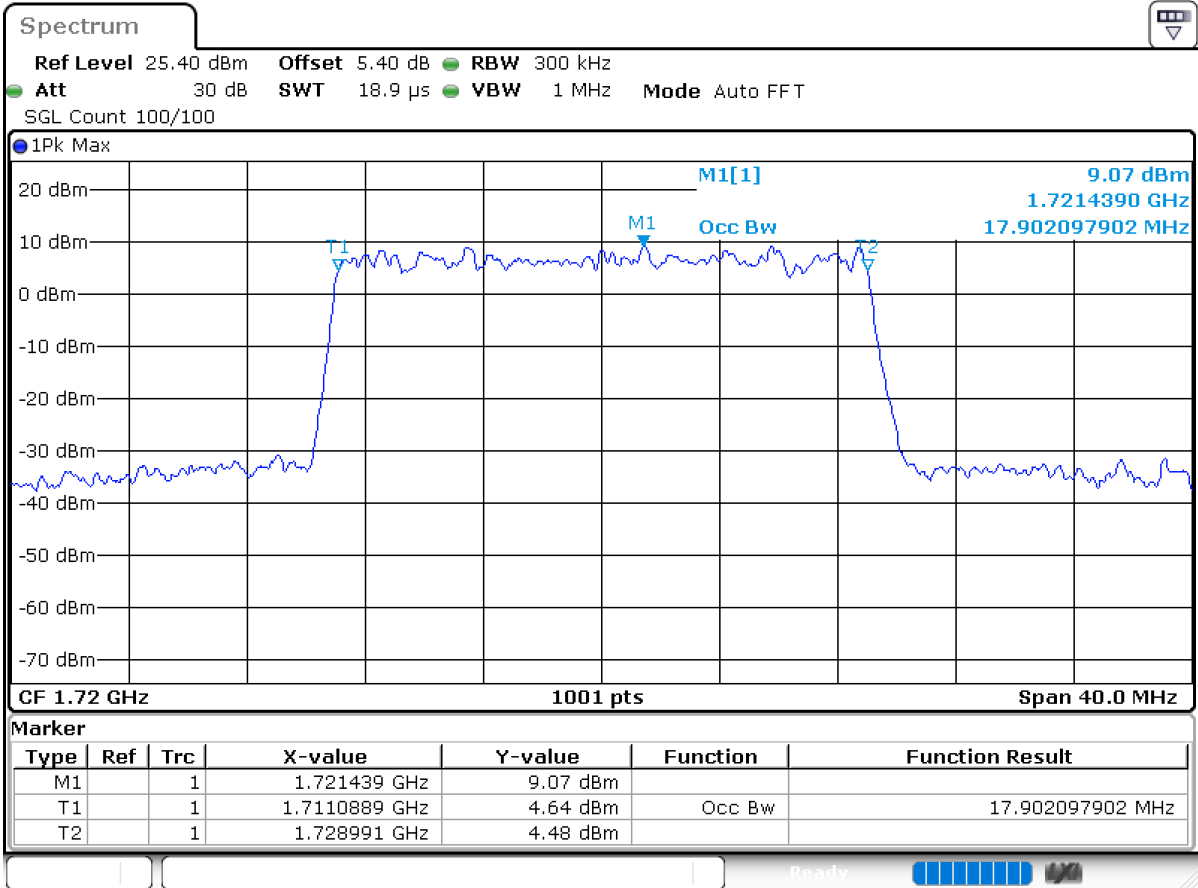
Date: 7.JAN.2022 19:25:17

Lowest Channel / 20MHz / 16QAM



Date: 7.JAN.2022 19:25:56

Lowest Channel / 20MHz / 64QAM

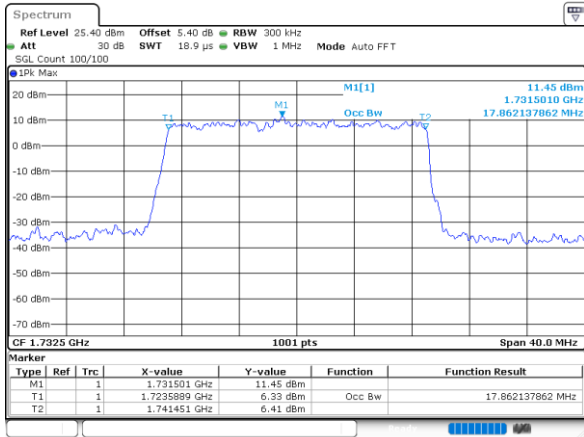


Date: 7.JAN.2022 19:26:34



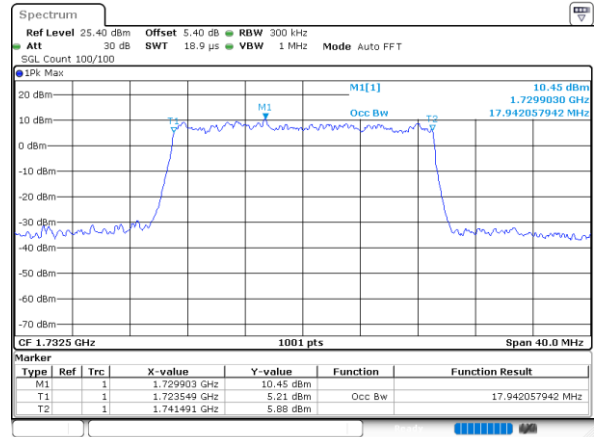
LTE Band 4

Middle Channel / 20MHz / QPSK



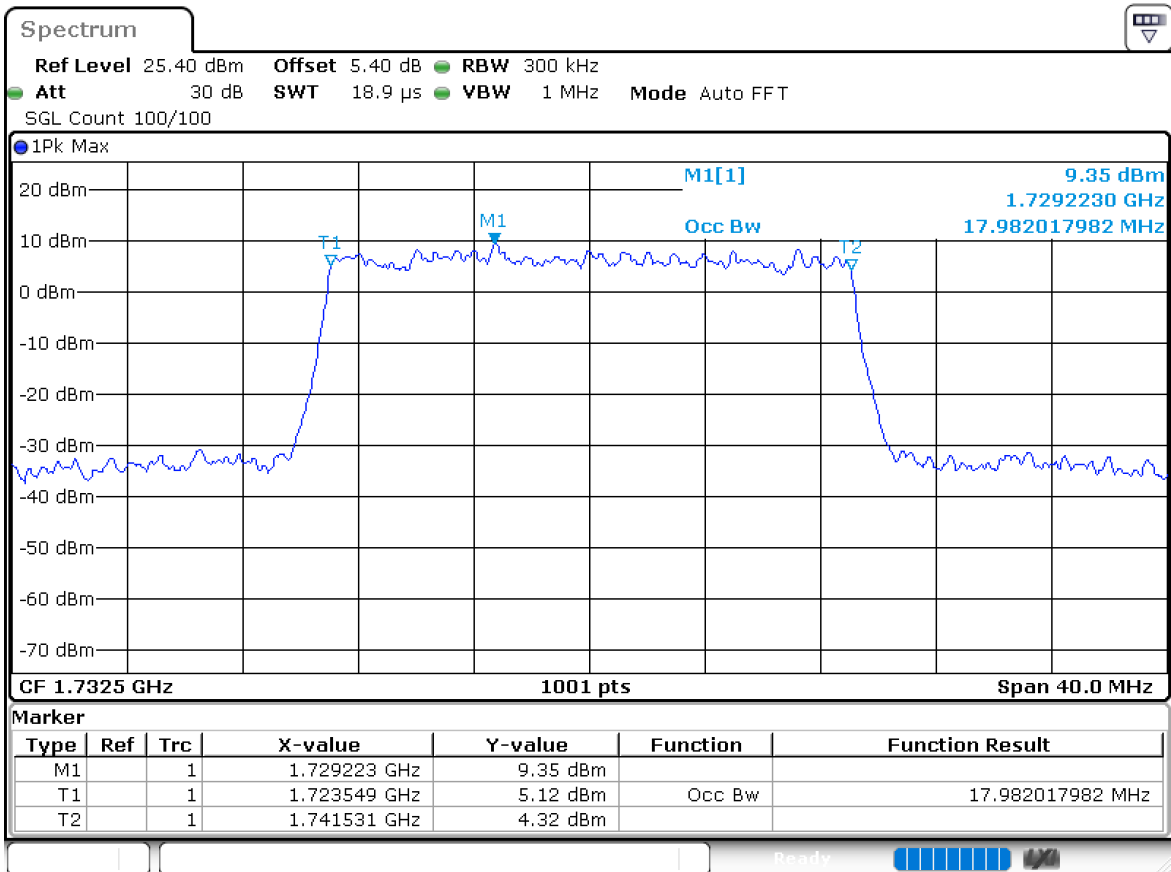
Date: 7.JAN.2022 19:27:13

Middle Channel / 20MHz / 16QAM



Date: 7.JAN.2022 19:27:51

Middle Channel / 20MHz / 64QAM

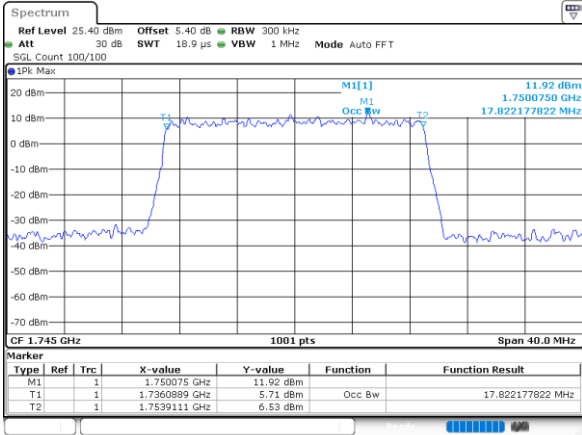


Date: 7.JAN.2022 19:28:30



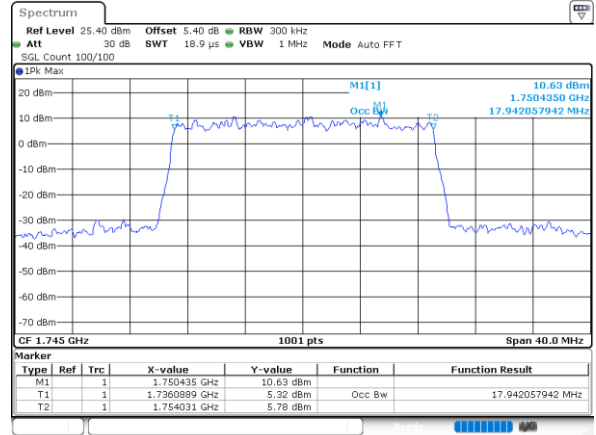
LTE Band 4

Highest Channel / 20MHz / QPSK



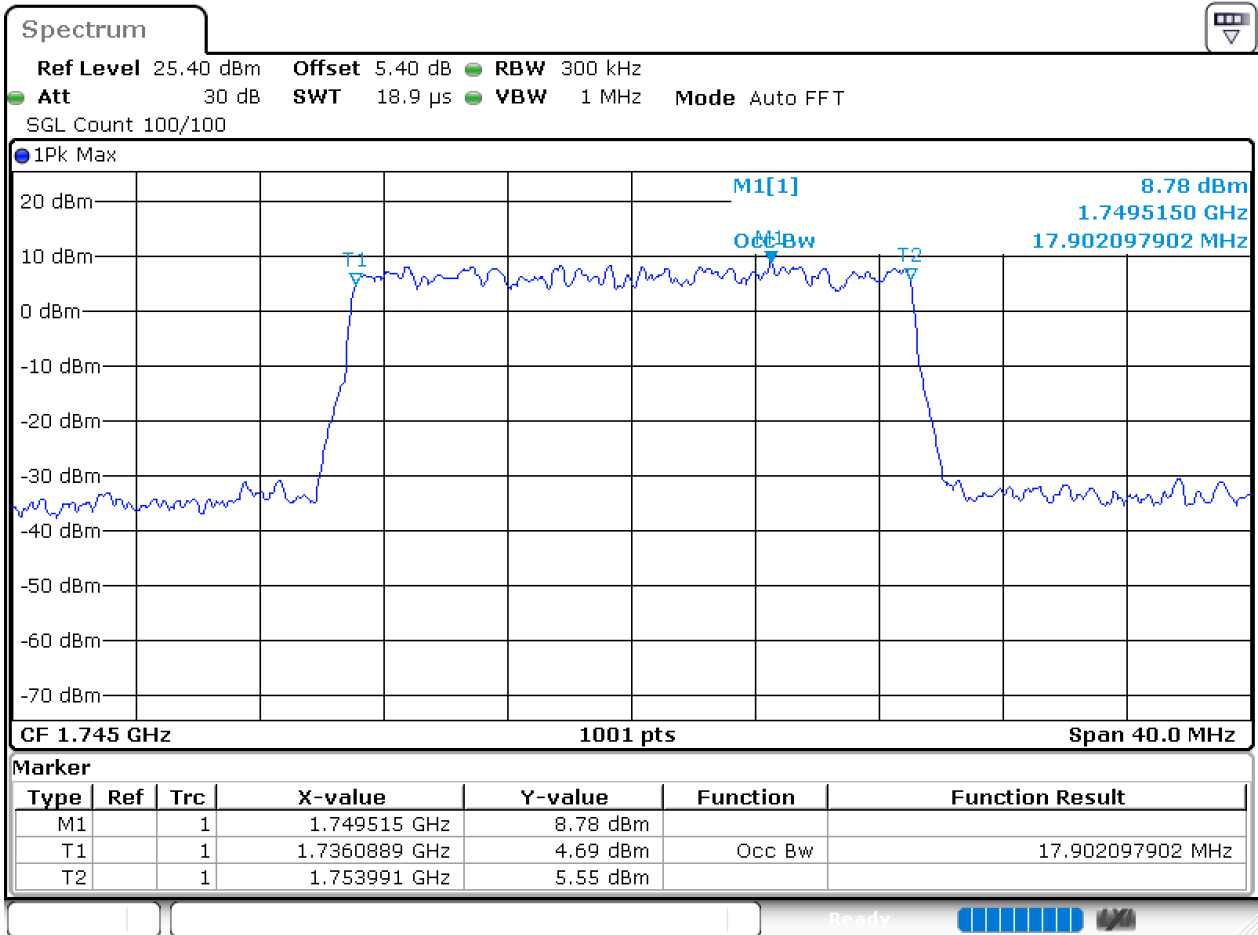
Date: 7.JAN.2022 19:29:08

Highest Channel / 20MHz / 16QAM



Date: 7.JAN.2022 19:29:47

Highest Channel / 20MHz / 64QAM



Date: 7.JAN.2022 19:30:26