



FCC RF Test Report

APPLICANT : Codium Networks LLC
EQUIPMENT : Outdoor CPE
BRAND NAME : Codium
MODEL NAME : OCBX12
FCC ID : 2AWJHOCBX12
STANDARD : 47 CFR Part 96
CLASSIFICATION : Citizens Band Category A and B Devices (CBD)
EQUIPMENT TYPE : CPE-CBSD (Category B)
TEST DATE(S) : Oct. 09, 2024 ~ Oct. 18, 2024

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26 and shown 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

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

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
FG492703-01A	01	Initial issue of report	Oct. 25, 2024

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	§2.1046	Conducted Output Power	Reporting only	-
3.4	§96.41	Peak-to-Average Ratio	Pass	-
3.5	§96.41	Maximum E.I.R.P	Pass	-
		Maximum Power Spectral Density	Pass	-
3.6	§2.1049 §96.41	Occupied Bandwidth	Reporting only	-
3.7	§2.1051 §96.41	Conducted Band Edge Measurement	Pass	-
3.8	§2.1051 §96.41	Conducted Spurious Emission	Pass	
3.9	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 16.53 dB at 7232.18 MHz

Note:

This is a change FCC ID report. Since no changes have been made to this device, all test cases were leveraged from original report (FCC ID: 2AU8HSRU410, report number FG492703A)

Conformity Assessment Condition:

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

Disclaimer:

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



1 General Description

1.1 Applicant

Codium Networks LLC

3410 GALT OCEAN DRAPT 1601N Fort Lauderdale, FL 33308 United States

1.2 Manufacturer

Codium Networks LLC

3410 GALT OCEAN DRAPT 1601N Fort Lauderdale, FL 33308 United States

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Outdoor CPE
Brand Name	Codium
Model Name	OCBX12
FCC ID	2AWJHOCBX12
Tx Frequency	LTE Band 42 : 3550 MHz ~ 3600 MHz LTE Band 43 : 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz
Rx Frequency	LTE Band 42 : 3550 MHz ~ 3600 MHz LTE Band 43 : 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz
Bandwidth	5MHz / 10MHz / 15MHz / 20MHz
Antenna Gain	LTE Band 42: 19.42 dBi LTE Band 43: 19.42 dBi LTE Band 48: 19.42 dBi
Type of Modulation	QPSK / 16QAM / 64QAM
SN Code	Conducted: A6220CB4346610031 Radiation: OCB12X09234510021
HW Version	V1.0
SW Version	OCB12_FW_V2.0.5M
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Maximum EIRP Power and Emission Designator

LTE Band 42		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3552.5~3597.5	11.5878	4M53G7D	11.4288	4M48W7D
10	3555.0~3595.0	16.5577	9M03G7D	16.0325	9M97W7D
15	3557.5~3592.5	17.1791	13M5G7D	17.0216	13M4W7D
20	3560.0~3590.0	16.4059	17M9G7D	16.2930	17M8W7D

LTE Band 43		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3602.5~3697.5	12.3880	4M53G7D	12.0781	4M48W7D
10	3605.0~3695.0	20.3236	9M03G7D	19.6336	9M97W7D
15	3607.5~3692.5	20.7491	13M5G7D	20.1837	13M4W7D
20	3610.0~3690.0	19.9986	17M9G7D	19.6789	17M8W7D

LTE Band 48		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3552.5~3697.5	14.3219	4M53G7D	14.0605	4M48W7D
10	3555~3695	22.4905	9M03G7D	22.1309	9M97W7D
15	3557.5~3692.5	20.8449	13M5G7D	20.2768	13M4W7D
20	3560~3690	19.9067	17M9G7D	19.3179	17M8W7D

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

1.5 Testing Site

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		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH04-KS	AUDIX	E3	210616

1.7 Applied Standards

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

- ♦ ANSI C63.26-2015
- ♦ 47 CFR Part 96
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 940660 D01 Part 96 CBRS v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP 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

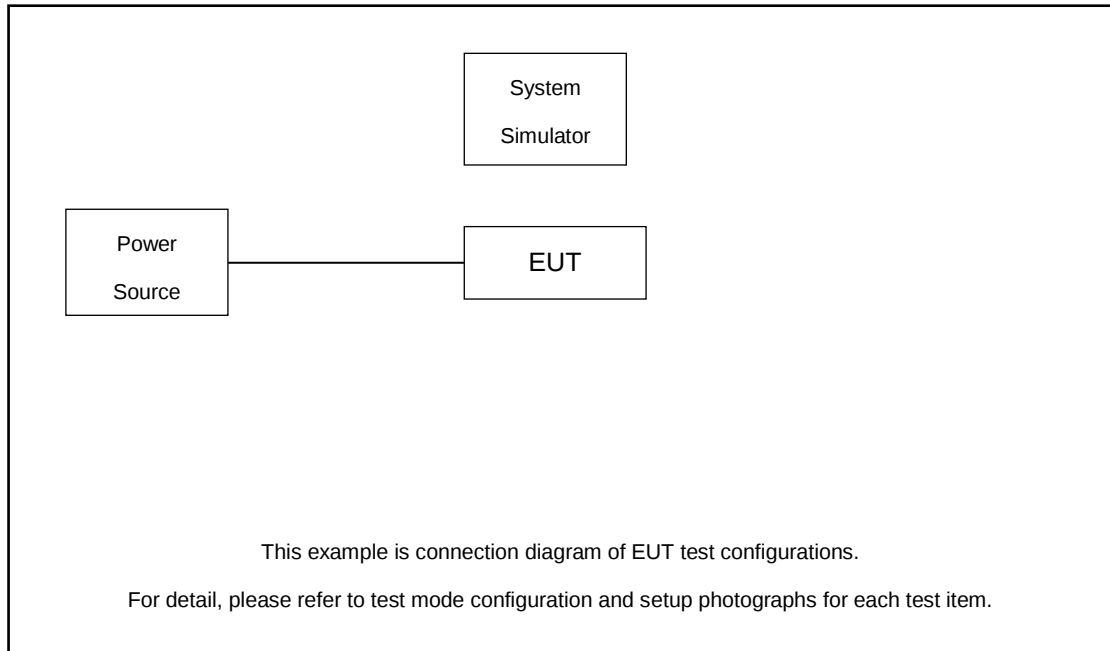
2.1 Test Mode

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, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

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	42	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	43	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	48	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak EIRP Density	48	-	-	v	v	v	v	v	v		v		v	v	v	v
Peak-to-Average Ratio	48	-	-				v	v	v		v		v		v	
26dB and 99% Bandwidth	48	-	-	v	v	v	v	v	v				v		v	
Conducted Band Edge	48	-	-	v	v	v	v	v	v		v		v	v	v	v
Conducted Spurious Emission	48	-	-	v	v	v	v	v	v		v		v	v	v	v
E.I.R.P	42	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	43	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	48	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
Frequency Stability	48	-	-		v			v			v			v	v	v
Radiated Spurious Emission	48	Worst Case													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



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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 4.2 dB.

Example :

Offset(dB) = RF cable loss(dB).

= 6.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 48 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	55340	55990	56640
	Frequency	3560.0	3625.0	3690.0
15	Channel	55315	55990	56665
	Frequency	3557.5	3625.0	3692.5
10	Channel	55290	55990	56690
	Frequency	3555.0	3625.0	3695.0
5	Channel	55265	55990	56715
	Frequency	3552.5	3625.0	3697.5

LTE Band 42 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	43190	43340	43490
	Frequency	3560	3575	3590
15	Channel	43165	43340	43515
	Frequency	3557.5	3575	3592.5
10	Channel	43140	43340	43540
	Frequency	3555	3575	3595
5	Channel	43115	43340	43565
	Frequency	3552.5	3575	3597.5

LTE Band 43 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	43690	44090	44490
	Frequency	3610	3650	3690
15	Channel	43665	44090	44515
	Frequency	3607.5	3650	3692.5
10	Channel	43640	44090	44540
	Frequency	3605	3650	3695
5	Channel	43615	44090	44565
	Frequency	3602.5	3650	3697.5

3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

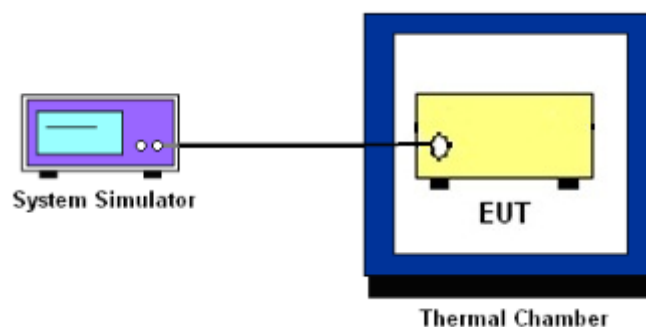
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.2.4 Test Result of Conducted Test

Please refer to Appendix A.

3.3 Conducted Output Power

3.3.1 Description of the Conducted Output Power 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.

3.3.2 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.

3.4 Peak-to-Average Ratio

3.4.1 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.

3.4.2 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

3.5 EIRP

3.5.1 Description of the EIRP Measurement

EIRP and PSD limits for CBRS equipment as below table:

Device		Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
☐	End User Device	23	n/a
☐	Category A CBSD	30	20
Applied	Category B CBSD	47	37

3.5.2 Test Procedures

1. Set instrument center frequency to OBW center frequency.
2. Set span to at least 2 times the OBW.
3. Set the RBW to the specified reference bandwidth (often 1 MHz).
4. Set VBW $\geq 3 \times$ RBW.
5. Detector = RMS (power averaging).
6. Ensure that the number of measurement points in the sweep $\geq 2 \times$ span/RBW.
7. Sweep time = auto couple.
8. Employ trace averaging (RMS) mode over a minimum of 100 traces.
9. Use the peak marker function to determine the maximum amplitude level within the reference bandwidth (PSD).
10. Determine the EIRP by adding the effective antenna gain to the adjusted power level.
11. Add 10 log (1/duty cycle) to the measured power level to compute the average power during continuous transmission.

The testing follows ANSI C63.26-2015 Section 5.2.5.5

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, 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

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 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.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

Part 96.41 (e) (1) (i)

For CBSD the emission limits outside the fundamental are as follows:

Within 0 MHz to 10 MHz above and below the assigned channel ≤ -13 dBm/MHz

Greater than 10 MHz above and below the assigned channel ≤ -25 dBm/MHz

Part 96.41 (e) (2)

For CBSDs, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz

3.7.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
5. Offset has included the duty factor for LTE Band 48. Duty factor $=10 \log (1/x)$, where x is the measured duty cycle.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

96.41 (e)(2)

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

3.8.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is -40dBm/MHz.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

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.

3.9.2 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.

3.9.3 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 25±5° 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.

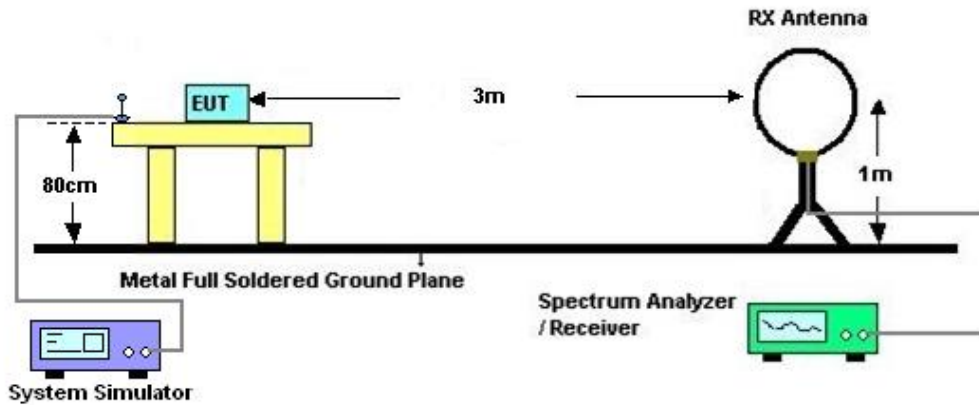
4 Radiated Test Items

4.1 Measuring Instruments

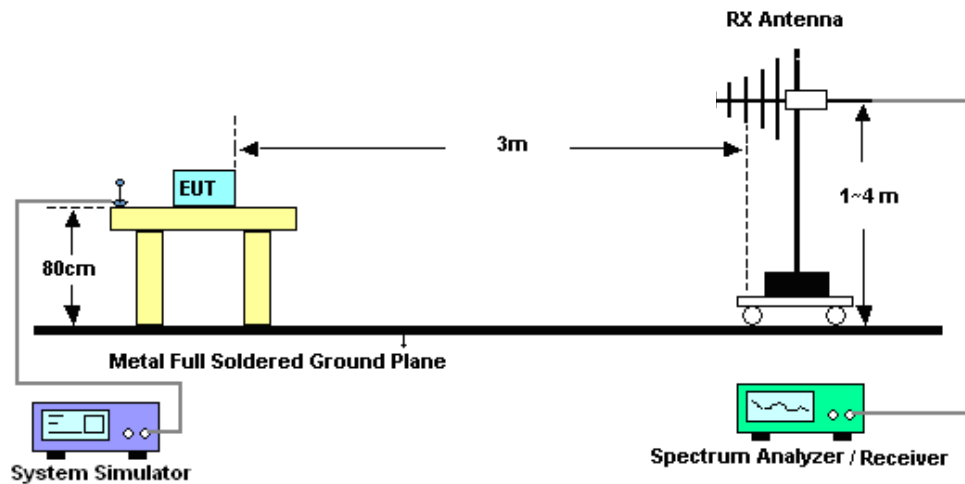
See list of measuring instruments of this test report.

4.2 Test Setup

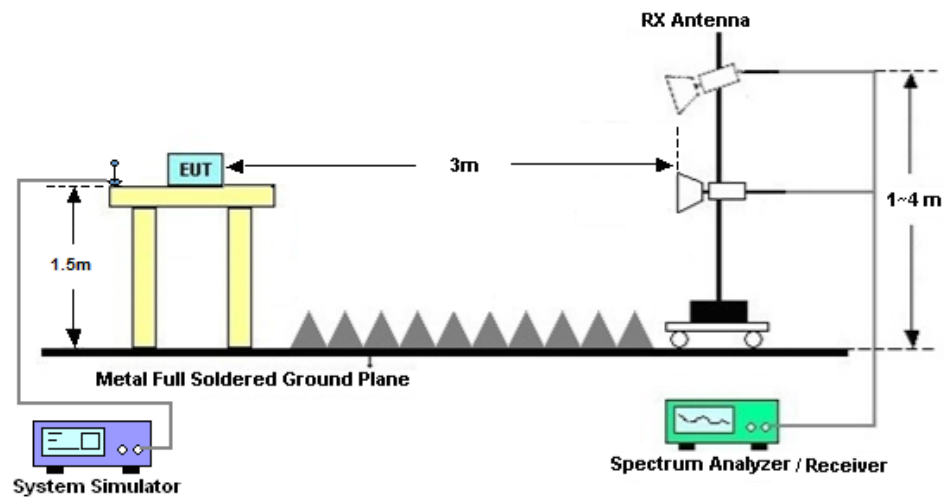
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26-2015.

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 -40dBm / MHz.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
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. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
$$\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$$
$$\text{ERP (dBm)} = \text{EIRP} - 2.15$$
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is -40dBm/MHz



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. 11, 2023	Oct. 09, 2024~ Oct. 18, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024		Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	/	Oct. 09, 2024~ Oct. 18, 2024	/	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Oct. 09, 2024~ Oct. 18, 2024	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz~44G,MAX 30dB	Oct. 11, 2023	Oct. 09, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Oct. 09, 2024	Sep. 07, 2025	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Dec. 06, 2023	Oct. 09, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 23, 2023	Oct. 09, 2024	Oct. 22, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Oct. 09, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz~1GHz	Jan. 03, 2024	Oct. 09, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40GA	060728	18~40GHz	Jan. 02, 2024	Oct. 09, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz~18Ghz	Oct. 11, 2023	Oct. 09, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Amplifier	EM	EM01G18GA	060892	1Ghz~18Ghz	Oct. 11, 2023	Oct. 09, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Oct. 09, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Oct. 09, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Oct. 09, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

Uncertainty of Conducted Measurement

Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.50 dB
Frequency Stability	±0.04 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.82 dB
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Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power and EIRP(Total channel bandwidth)

LTE_Band42

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				43190	43340	43490			
Frequency (MHz)				3560	3575	3590	L	M	H
20	QPSK	1	0	15.39	14.80	14.34	3.0269	2.6424	2.3768
20	QPSK	5	0	15.35	14.87	14.33	2.9992	2.6853	2.3714
20	QPSK	10	0	17.75	17.10	16.46	5.2119	4.4875	3.8726
20	QPSK	15	0	18.53	18.17	17.78	6.2373	5.7412	5.2481
20	QPSK	20	0	19.92	19.14	18.61	8.5901	7.1779	6.3533
20	QPSK	25	0	20.69	20.13	19.85	10.2565	9.0157	8.4528
20	QPSK	30	0	20.74	20.18	19.91	10.3753	9.1201	8.5704
20	QPSK	1	99	14.83	14.63	15.89	2.6607	2.5410	3.3963
20	QPSK	100	0	20.78	19.95	20.50	10.4713	8.6497	9.8175
20	QPSK	90	0	22.73	21.64	22.18	16.4059	12.7644	14.4544
20	16QAM	90	0	22.70	21.58	22.16	16.2930	12.5893	14.3880
20	64QAM	90	0	22.69	21.49	21.95	16.2555	12.3310	13.7088
20	16QAM	100	0	20.66	19.85	20.41	10.1859	8.4528	9.6161
20	64QAM	100	0	20.55	19.81	20.31	9.9312	8.3753	9.3972
Channel				43165	43340	43515	EIRP(W)		
Frequency (MHz)				3557.5	3575	3592.5	L	M	H
15	QPSK	1	0	15.18	14.70	14.73	2.8840	2.5823	2.6002
15	QPSK	5	0	15.14	14.59	14.63	2.8576	2.5177	2.5410
15	QPSK	10	0	17.14	16.36	16.66	4.5290	3.7844	4.0551
15	QPSK	15	0	18.65	17.81	18.08	6.4121	5.2845	5.6234
15	QPSK	20	0	19.48	18.64	18.82	7.7625	6.3973	6.6681
15	QPSK	25	0	20.86	19.97	20.14	10.6660	8.6896	9.0365
15	QPSK	30	0	20.68	20.01	19.96	10.2329	8.7700	8.6696
15	QPSK	1	74	14.81	14.24	15.93	2.6485	2.3227	3.4277
15	QPSK	75	0	22.93	21.89	22.53	17.1791	13.5207	15.6675
15	16QAM	75	0	22.89	21.73	22.46	17.0216	13.0317	15.4170
15	64QAM	75	0	22.78	21.51	22.38	16.5959	12.3880	15.1356
Channel				43140	43340	43540	EIRP(W)		
Frequency (MHz)				3555	3575	3595	L	M	H
10	QPSK	1	0	14.87	14.23	14.76	2.6853	2.3174	2.6182
10	QPSK	5	0	15.01	14.26	14.82	2.7733	2.3335	2.6546
10	QPSK	10	0	17.49	16.79	17.36	4.9091	4.1783	4.7643



10	QPSK	15	0	18.71	17.77	18.46	6.5013	5.2360	6.1376
10	QPSK	20	0	18.66	18.89	19.75	6.4269	6.7764	8.2604
10	QPSK	25	0	20.90	20.01	20.58	10.7647	8.7700	10.0000
10	QPSK	30	0	20.85	19.95	20.53	10.6414	8.6497	9.8855
10	QPSK	1	49	14.81	14.13	15.66	2.6485	2.2646	3.2211
10	QPSK	50	0	22.77	21.86	22.75	16.5577	13.4276	16.4816
10	16QAM	50	0	22.63	21.71	22.62	16.0325	12.9718	15.9956
10	64QAM	50	0	22.48	21.33	22.49	15.4882	11.8850	15.5239
Channel				43115	43340	43565	EIRP(W)		
Frequency (MHz)				3552.5	3575	3597.5	L	M	H
5	QPSK	1	0	14.81	14.18	15.27	2.6485	2.2909	2.9444
5	QPSK	5	0	14.90	14.23	15.49	2.7040	2.3174	3.0974
5	QPSK	10	0	17.96	17.01	18.41	5.4702	4.3954	6.0674
5	QPSK	15	0	18.55	17.56	18.99	6.2661	4.9888	6.9343
5	QPSK	20	0	20.27	19.23	20.58	9.3111	7.3282	10.0000
5	QPSK	1	24	14.69	14.70	15.30	2.5763	2.5823	2.9648
5	QPSK	25	0	20.79	19.84	21.22	10.4954	8.4333	11.5878
5	16QAM	25	0	20.66	19.69	21.16	10.1859	8.1470	11.4288
5	64QAM	25	0	20.58	19.55	21.03	10.0000	7.8886	11.0917

LTE_Band43

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				43690	44090	44490			
Frequency (MHz)				3610	3650	3690	L	M	H
20	QPSK	1	0	15.16	15.54	15.37	2.8708	3.1333	3.0130
20	QPSK	5	0	15.14	15.49	15.43	2.8576	3.0974	3.0549
20	QPSK	10	0	17.55	17.90	17.64	4.9774	5.3951	5.0816
20	QPSK	15	0	18.69	18.99	18.77	6.4714	6.9343	6.5917
20	QPSK	20	0	19.75	20.04	19.72	8.2604	8.8308	8.2035
20	QPSK	25	0	20.82	21.05	20.81	10.5682	11.1429	10.5439
20	QPSK	30	0	20.88	21.27	20.84	10.7152	11.7220	10.6170
20	QPSK	1	99	15.16	16.13	15.18	2.8708	3.5892	2.8840
20	QPSK	100	0	20.78	21.54	21.21	10.4713	12.4738	11.5611
20	QPSK	90	0	22.93	23.59	23.15	17.1791	19.9986	18.0717
20	16QAM	90	0	22.85	23.52	23.07	16.8655	19.6789	17.7419
20	64QAM	90	0	22.48	22.95	22.64	15.4882	17.2584	16.0694
20	16QAM	100	0	20.63	21.42	21.15	10.1158	12.1339	11.4025
20	64QAM	100	0	20.42	20.76	20.68	9.6383	10.4232	10.2329
Channel				43665	44090	44515	EIRP(W)		
Frequency (MHz)				3607.5	3650	3692.5	L	M	H
15	QPSK	1	0	15.04	15.52	15.34	2.7925	3.1189	2.9923
15	QPSK	5	0	14.97	15.44	15.29	2.7479	3.0620	2.9580
15	QPSK	10	0	16.84	17.31	17.13	4.2267	4.7098	4.5186
15	QPSK	15	0	18.43	19.00	18.64	6.0954	6.9502	6.3973
15	QPSK	20	0	19.21	19.73	19.37	7.2946	8.2224	7.5683



15	QPSK	25	0	20.59	21.13	20.79	10.0231	11.3501	10.4954
15	QPSK	30	0	20.42	21.05	20.61	9.6383	11.1429	10.0693
15	QPSK	1	74	15.06	15.89	15.06	2.8054	3.3963	2.8054
15	QPSK	75	0	22.84	23.75	23.36	16.8267	20.7491	18.9671
15	16QAM	75	0	22.74	23.63	23.22	16.4437	20.1837	18.3654
15	64QAM	75	0	22.60	23.05	22.80	15.9221	17.6604	16.6725
Channel				43640	44090	44540	EIRP(W)		
Frequency (MHz)				3605	3650	3695	L	M	H
10	QPSK	1	0	14.93	15.48	15.10	2.7227	3.0903	2.8314
10	QPSK	5	0	14.98	15.55	15.17	2.7542	3.1405	2.8774
10	QPSK	10	0	17.26	17.82	17.58	4.6559	5.2966	5.0119
10	QPSK	15	0	18.47	19.01	18.87	6.1518	6.9663	6.7453
10	QPSK	20	0	19.53	20.06	19.98	7.8524	8.8716	8.7096
10	QPSK	25	0	20.71	21.37	21.20	10.3039	11.9950	11.5345
10	QPSK	30	0	20.66	21.30	21.03	10.1859	11.8032	11.0917
10	QPSK	1	49	14.87	15.61	14.90	2.6853	3.1842	2.7040
10	QPSK	50	0	22.94	23.66	23.38	17.2187	20.3236	19.0546
10	16QAM	50	0	22.88	23.51	23.26	16.9824	19.6336	18.5353
10	64QAM	50	0	22.56	22.96	22.72	15.7761	17.2982	16.3682
Channel				43615	44090	44565	EIRP(W)		
Frequency (MHz)				3602.5	3650	3697.5	L	M	H
5	QPSK	1	0	14.97	15.48	15.09	2.7479	3.0903	2.8249
5	QPSK	5	0	14.85	15.47	15.11	2.6730	3.0832	2.8379
5	QPSK	10	0	17.62	18.23	17.94	5.0582	5.8210	5.4450
5	QPSK	15	0	18.45	19.06	18.67	6.1235	7.0469	6.4417
5	QPSK	20	0	20.06	20.66	20.43	8.8716	10.1859	9.6605
5	QPSK	1	24	14.73	15.57	14.92	2.6002	3.1550	2.7164
5	QPSK	25	0	20.71	21.51	21.09	10.3039	12.3880	11.2460
5	16QAM	25	0	20.65	21.40	21.02	10.1625	12.0781	11.0662
5	64QAM	25	0	20.46	20.91	20.55	9.7275	10.7895	9.9312

LTE_Band48

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel	Channel			55340	55990	56640			
Frequency (MHz)	Frequency (MHz)			3560	3625	3690	L	M	H
20	QPSK	1	0	15.12	16.15	15.17	2.8445	3.6058	2.8774
20	QPSK	5	0	15.08	16.02	15.16	2.8184	3.4995	2.8708
20	QPSK	10	0	17.70	18.29	17.43	5.1523	5.9020	4.8417
20	QPSK	15	0	18.86	19.27	18.50	6.7298	7.3961	6.1944
20	QPSK	20	0	20.15	20.34	19.48	9.0573	9.4624	7.7625
20	QPSK	25	0	21.30	21.35	20.46	11.8032	11.9399	9.7275
20	QPSK	30	0	21.37	21.41	20.53	11.9950	12.1060	9.8855
20	QPSK	1	99	15.33	15.76	16.45	2.9854	3.2961	3.8637
20	QPSK	100	0	21.26	21.42	21.31	11.6950	12.1339	11.8304
20	QPSK	90	0	23.57	23.40	23.33	19.9067	19.1426	18.8365



20	16QAM	90	0	23.44	23.34	23.28	19.3197	18.8799	18.6209
20	64QAM	90	0	23.33	22.78	22.84	18.8365	16.5959	16.8267
20	16QAM	100	0	21.19	21.35	21.24	11.5080	11.9399	11.6413
20	64QAM	100	0	21.16	20.77	20.70	11.4288	10.4472	10.2802
Channel	Channel			55315	55990	56665	EIRP(W)		
Frequency (MHz)	Frequency (MHz)			3557.5	3625	3692.5	L	M	H
15	QPSK	1	0	15.00	16.04	15.19	2.7669	3.5156	2.8907
15	QPSK	5	0	14.92	15.98	15.15	2.7164	3.4674	2.8642
15	QPSK	10	0	17.18	17.60	16.95	4.5709	5.0350	4.3351
15	QPSK	15	0	18.72	19.20	18.58	6.5163	7.2778	6.3096
15	QPSK	20	0	19.52	19.93	19.39	7.8343	8.6099	7.6033
15	QPSK	25	0	21.10	21.34	20.73	11.2720	11.9124	10.3514
15	QPSK	30	0	20.96	21.16	20.56	10.9144	11.4288	9.9541
15	QPSK	1	74	15.43	15.81	16.50	3.0549	3.3343	3.9084
15	QPSK	75	0	23.51	23.33	23.77	19.6336	18.8365	20.8449
15	16QAM	75	0	23.37	23.20	23.65	19.0108	18.2810	20.2768
15	64QAM	75	0	23.28	22.89	23.30	18.6209	17.0216	18.7068
Channel	Channel			55290	55990	56690	EIRP(W)		
Frequency (MHz)	Frequency (MHz)			3555	3625	3695	L	M	H
10	QPSK	1	0	14.84	15.98	15.24	2.6669	3.4674	2.9242
10	QPSK	5	0	14.78	15.91	15.32	2.6303	3.4119	2.9785
10	QPSK	10	0	17.44	18.06	17.62	4.8529	5.5976	5.0582
10	QPSK	15	0	18.76	19.19	19.06	6.5766	7.2611	7.0469
10	QPSK	20	0	19.94	20.17	20.03	8.6298	9.0991	8.8105
10	QPSK	25	0	21.20	21.26	21.39	11.5345	11.6950	12.0504
10	QPSK	30	0	21.15	21.19	21.48	11.4025	11.5080	12.3027
10	QPSK	1	49	15.23	15.79	16.39	2.9174	3.3189	3.8107
10	QPSK	50	0	23.66	23.30	24.10	20.3236	18.7068	22.4905
10	16QAM	50	0	23.52	23.24	24.03	19.6789	18.4502	22.1309
10	64QAM	50	0	23.48	22.89	23.58	19.4984	17.0216	19.9526
Channel	Channel			55265	55990	56715	EIRP(W)		
Frequency (MHz)	Frequency (MHz)			3552.5	3625	3697.5	L	M	H
5	QPSK	1	0	14.66	15.74	15.59	2.5586	3.2810	3.1696
5	QPSK	5	0	14.78	15.72	15.86	2.6303	3.2659	3.3729
5	QPSK	10	0	17.81	18.28	18.55	5.2845	5.8884	6.2661
5	QPSK	15	0	18.88	18.97	19.65	6.7608	6.9024	8.0724
5	QPSK	20	0	20.37	20.46	21.09	9.5280	9.7275	11.2460
5	QPSK	1	24	15.00	15.54	16.26	2.7669	3.1333	3.6983
5	QPSK	25	0	21.25	21.18	22.14	11.6681	11.4815	14.3219
5	16QAM	25	0	21.11	21.08	22.06	11.2980	11.2202	14.0605
5	64QAM	25	0	21.08	20.66	20.89	11.2202	10.1859	10.7399

**Conducted Output Power and EIRP(dBm/10MHz)**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W) /10Mhz		
Channel	Channel			55340	55990	56640			
Frequency (MHz)	Frequency (MHz)			3560	3625	3690	L	M	H
20	QPSK	1	0	15.12	16.15	15.17	2.8445	3.6058	2.8774
20	QPSK	5	0	15.08	16.02	15.16	2.8184	3.4995	2.8708
20	QPSK	10	0	17.70	18.29	17.43	5.1523	5.9020	4.8417
20	QPSK	15	0	18.86	19.27	18.50	6.7298	7.3961	6.1944
20	QPSK	20	0	20.15	20.34	19.48	9.0573	9.4624	7.7625
20	QPSK	25	0	21.30	21.35	20.46	11.8032	11.9399	9.7275
20	QPSK	30	0	21.37	21.41	20.53	11.9950	12.1060	9.8855
20	QPSK	1	99	15.33	15.76	16.45	2.9854	3.2961	3.8637
20	QPSK	100	0	18.95	18.34	18.42	6.8707	5.9704	6.0814
20	QPSK	90	0	21.79	20.70	20.85	13.2130	10.2802	10.6414
20	16QAM	90	0	21.68	20.64	21.03	12.8825	10.1391	11.0917
20	64QAM	90	0	21.57	20.82	20.80	12.5603	10.5682	10.5196
20	16QAM	100	0	19.07	18.36	18.49	7.0632	5.9979	6.1802
20	64QAM	100	0	18.97	18.49	18.43	6.9024	6.1802	6.0954
Channel	Channel			55315	55990	56665	EIRP(W) /10Mhz		
Frequency (MHz)	Frequency (MHz)			3557.5	3625	3692.5	L	M	H
15	QPSK	1	0	15.00	16.04	15.19	2.7669	3.5156	2.8907
15	QPSK	5	0	14.92	15.98	15.15	2.7164	3.4674	2.8642
15	QPSK	10	0	17.18	17.60	16.95	4.5709	5.0350	4.3351
15	QPSK	15	0	18.72	19.20	18.58	6.5163	7.2778	6.3096
15	QPSK	20	0	19.52	19.93	19.39	7.8343	8.6099	7.6033
15	QPSK	25	0	21.10	21.34	20.73	11.2720	11.9124	10.3514
15	QPSK	30	0	20.96	21.16	20.56	10.9144	11.4288	9.9541
15	QPSK	1	74	15.43	15.81	16.50	3.0549	3.3343	3.9084
15	QPSK	75	0	22.27	21.14	21.58	14.7571	11.3763	12.5893
15	16QAM	75	0	22.10	21.22	21.57	14.1906	11.5878	12.5603
15	64QAM	75	0	22.41	21.31	21.54	15.2405	11.8304	12.4738
Channel	Channel			55290	55990	56690	EIRP(W) /10Mhz		
Frequency (MHz)	Frequency (MHz)			3555	3625	3695	L	M	H
10	QPSK	1	0	14.84	15.98	15.24	2.6669	3.4674	2.9242
10	QPSK	5	0	14.78	15.91	15.32	2.6303	3.4119	2.9785
10	QPSK	10	0	17.44	18.06	17.62	4.8529	5.5976	5.0582
10	QPSK	15	0	18.76	19.19	19.06	6.5766	7.2611	7.0469
10	QPSK	20	0	19.94	20.17	20.03	8.6298	9.0991	8.8105
10	QPSK	25	0	21.20	21.26	21.39	11.5345	11.6950	12.0504
10	QPSK	30	0	21.15	21.19	21.48	11.4025	11.5080	12.3027
10	QPSK	1	49	15.23	15.79	16.39	2.9174	3.3189	3.8107
10	QPSK	50	0	23.66	23.30	24.10	20.3236	18.7068	22.4905



10	16QAM	50	0	23.52	23.24	24.03	19.6789	18.4502	22.1309
10	64QAM	50	0	23.48	22.89	23.58	19.4984	17.0216	19.9526
Channel	Channel			55265	55990	56715	EIRP(W) /10Mhz		
Frequency (MHz)	Frequency (MHz)			3552.5	3625	3697.5	L	M	H
5	QPSK	1	0	14.66	15.74	15.59	2.5586	3.2810	3.1696
5	QPSK	5	0	14.78	15.72	15.86	2.6303	3.2659	3.3729
5	QPSK	10	0	17.81	18.28	18.55	5.2845	5.8884	6.2661
5	QPSK	15	0	18.88	18.97	19.65	6.7608	6.9024	8.0724
5	QPSK	20	0	20.37	20.46	21.09	9.5280	9.7275	11.2460
5	QPSK	1	24	15.00	15.54	16.26	2.7669	3.1333	3.6983
5	QPSK	25	0	21.25	21.18	22.14	11.6681	11.4815	14.3219
5	16QAM	25	0	21.11	21.08	22.06	11.2980	11.2202	14.0605
5	64QAM	25	0	21.08	20.66	20.89	11.2202	10.1859	10.7399

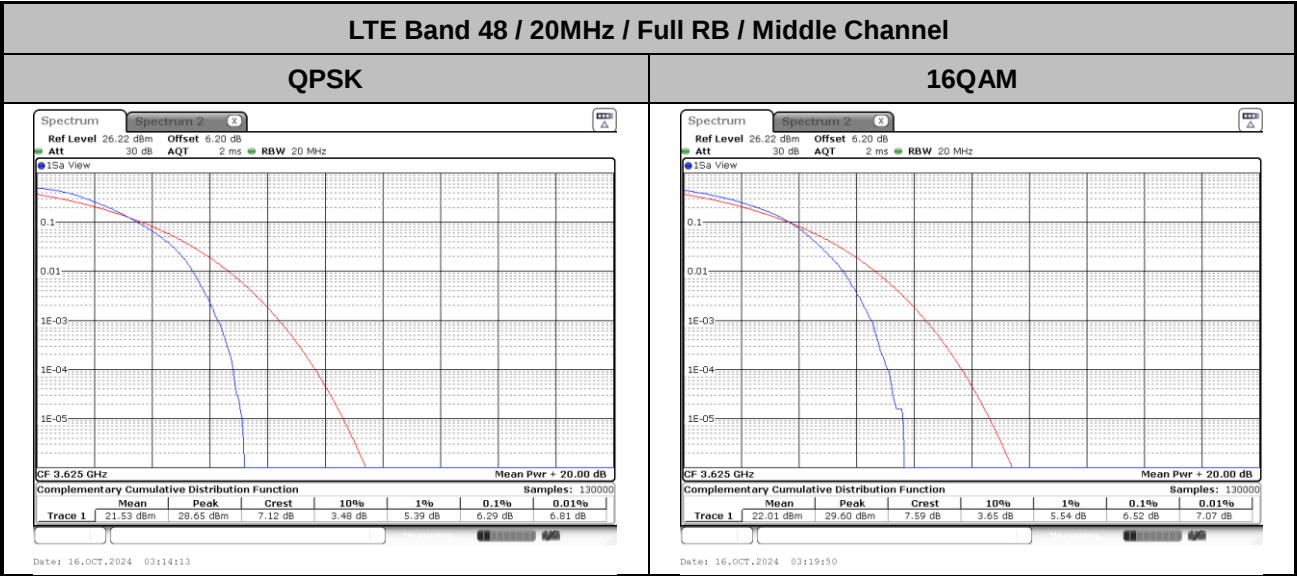
EIRP Limit	Result
47 dBm/10 MHz	PASS



LTE Band 48

Peak-to-Average Ratio

Mode	LTE Band 48 / 20MHz				
Mod.	QPSK	16QAM			Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.29	6.52			PASS



EIRP PSD Density

1RB0

Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	35.7	36.04	35.86	36.12	36.09	35.93	36.24	36.26
Middle CH	36.72	36.8	35.73	35.88	36.76	36.88	35.7	35.62
Highest CH	36.79	36.85	36.46	36.72	35.96	36.07	36.21	36.22
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

1RB MAX

Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	36.38	36.15	36.37	36.41	36.57	36.37	36.27	36.35
Middle CH	36.46	36.61	36.47	36.83	36.62	36.77	36.85	35.51
Highest CH	35.91	36.42	36.17	36.4	36.12	36.43	36.22	36.56
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

FULL RB

Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	25RB0 QPSK	25RB0 16QAM	50RB0 QPSK	50RB0 16QAM	75RB0 QPSK	75RB0 16QAM	100RB0 QPSK	100RB0 16QAM
Lowest CH	36.55	36.74	35.09	35.12	33.18	33.2	32.06	32.23
Middle CH	36.23	36.47	34.64	34.6	32.8	32.89	32.04	32.05
Highest CH	36.14	36.18	35.44	35.35	33.66	33.44	32.16	32.25
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

Partial RB

Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	5RB0 QPSK	10RB0 QPSK	5RB0 QPSK	10RB0 QPSK	5RB0 QPSK	10RB0 QPSK	5RB0 QPSK	10RB0 QPSK
Lowest CH	35.11	36.49	35.31	35.98	35.26	35.92	35.4	36.25
Middle CH	36.07	35.56	35.87	36.5	35.88	36.07	36.15	36.42
Highest CH	36.43	35.96	35.63	36.34	35.09	35.62	35.37	36.28
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

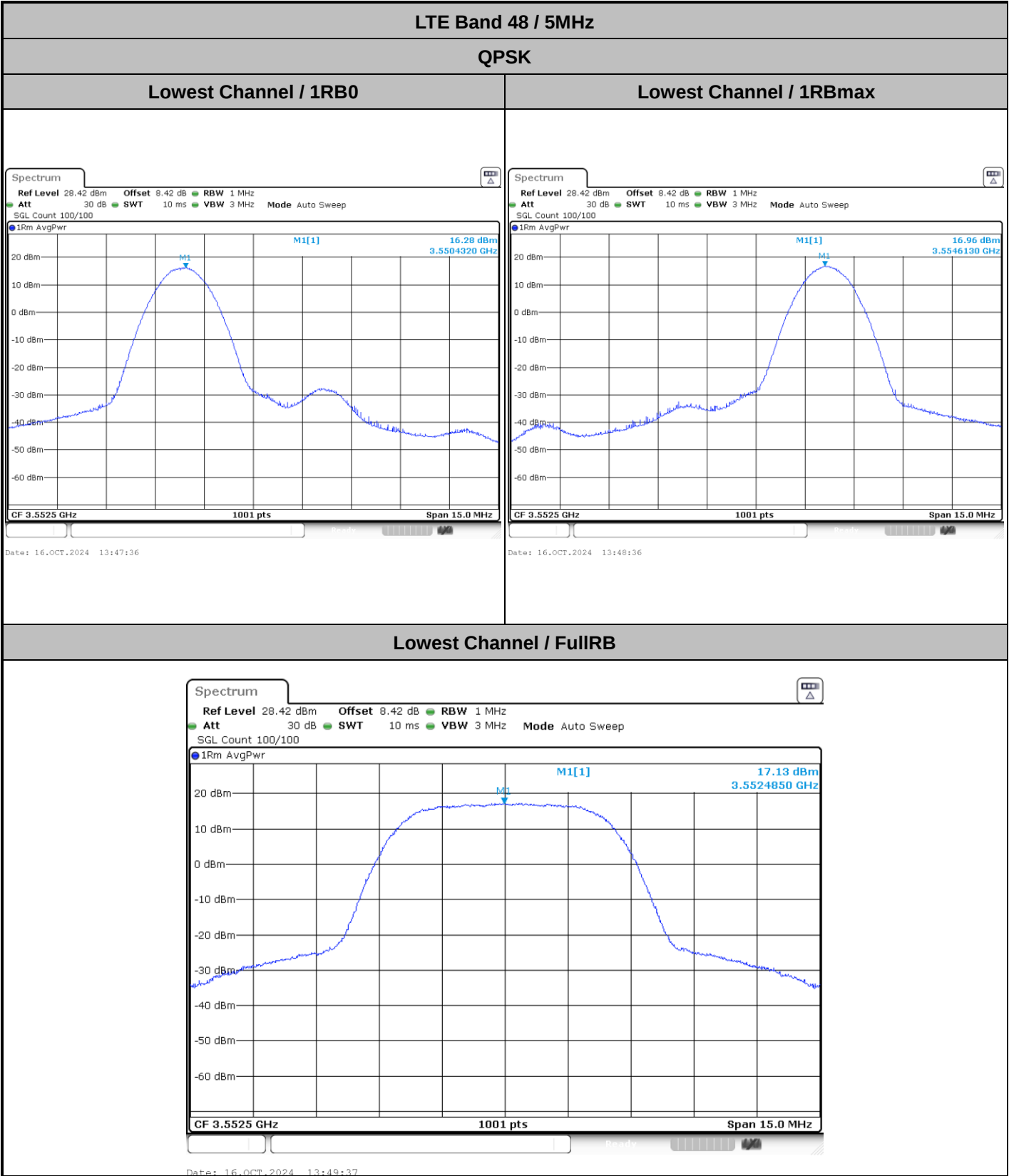
Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	15RB0 QPSK	20RB0 QPSK	15RB0 QPSK	20RB0 QPSK	15RB0 QPSK	20RB0 QPSK	15RB0 QPSK	20RB0 QPSK
Lowest CH	36.05	36.58	35.88	36.08	35.73	35.64	36.01	36.03
Middle CH	36.11	36.72	35.94	35.89	35.92	35.59	36.22	35.97
Highest CH	36.74	36.02	36.2	36.42	35.53	35.13	35.66	35.43
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

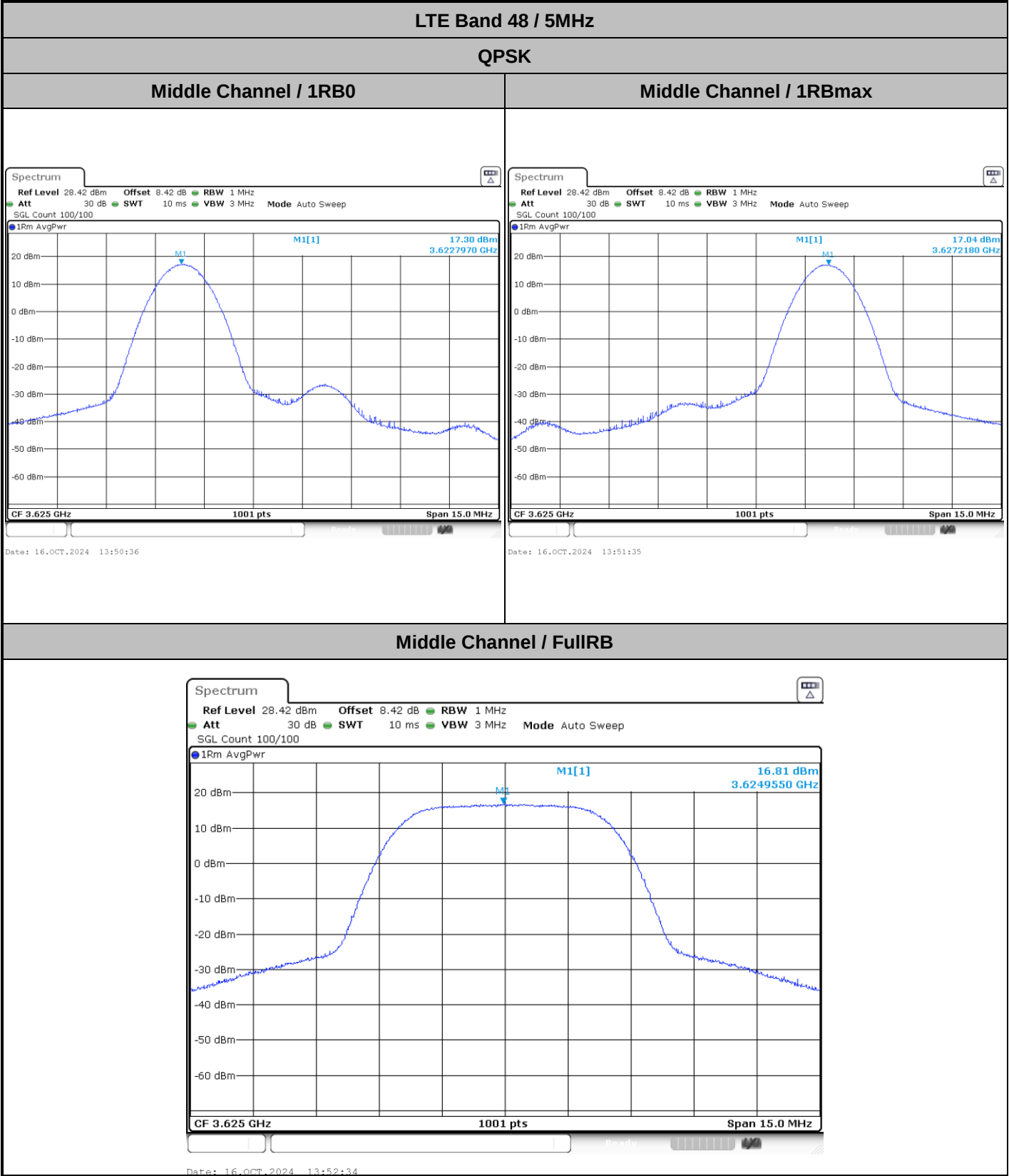
Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	/	/	25RB0 QPSK	30RB0 QPSK	25RB0 QPSK	30RB0 QPSK	25RB0 QPSK	30RB0 QPSK
Lowest CH	/	/	36.65	34.6	36.39	36.73	36.26	36.86
Middle CH	/	/	36.23	36.58	36.26	36.23	36.03	36.64
Highest CH	/	/	36.35	34.81	35.61	36.11	35.42	36.23
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

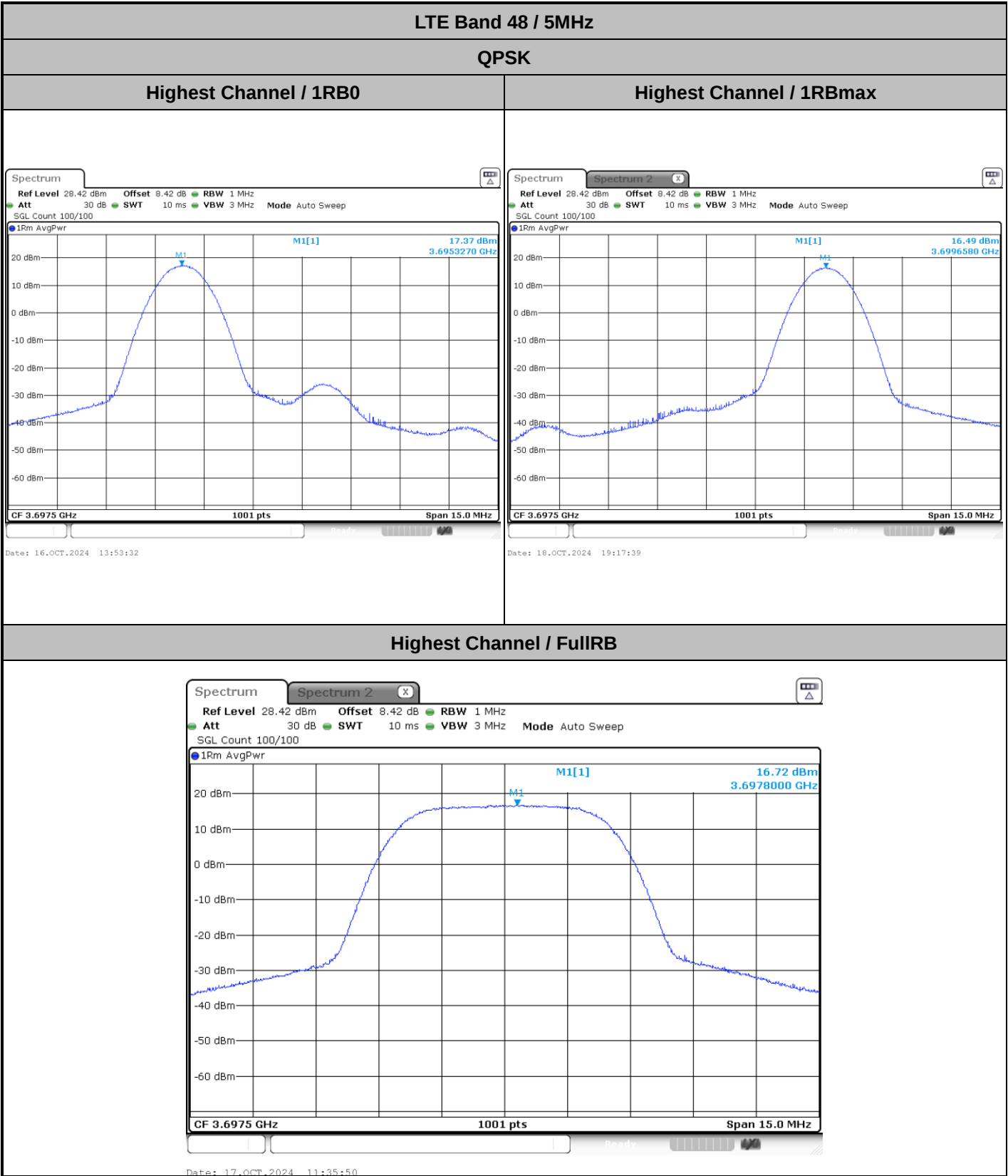
Mode	LTE Band 48 : EIRP PSD Density (dBm/1MHz)							
BW	20MHz		20MHz		20MHz		20MHz	
Mod.	90RB0 QPSK	90RB0 16QAM	90RB10 QPSK	90RB10 16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	32.32	32.29	32.35	32.2	/	/	/	/
Middle CH	32.25	32.06	32.18	32.25	/	/	/	/
Highest CH	32.37	32.24	32.26	32.45	/	/	/	/
Limit	37dBm /1MHz							
Gain	19.42 dBi							
Result	Pass							

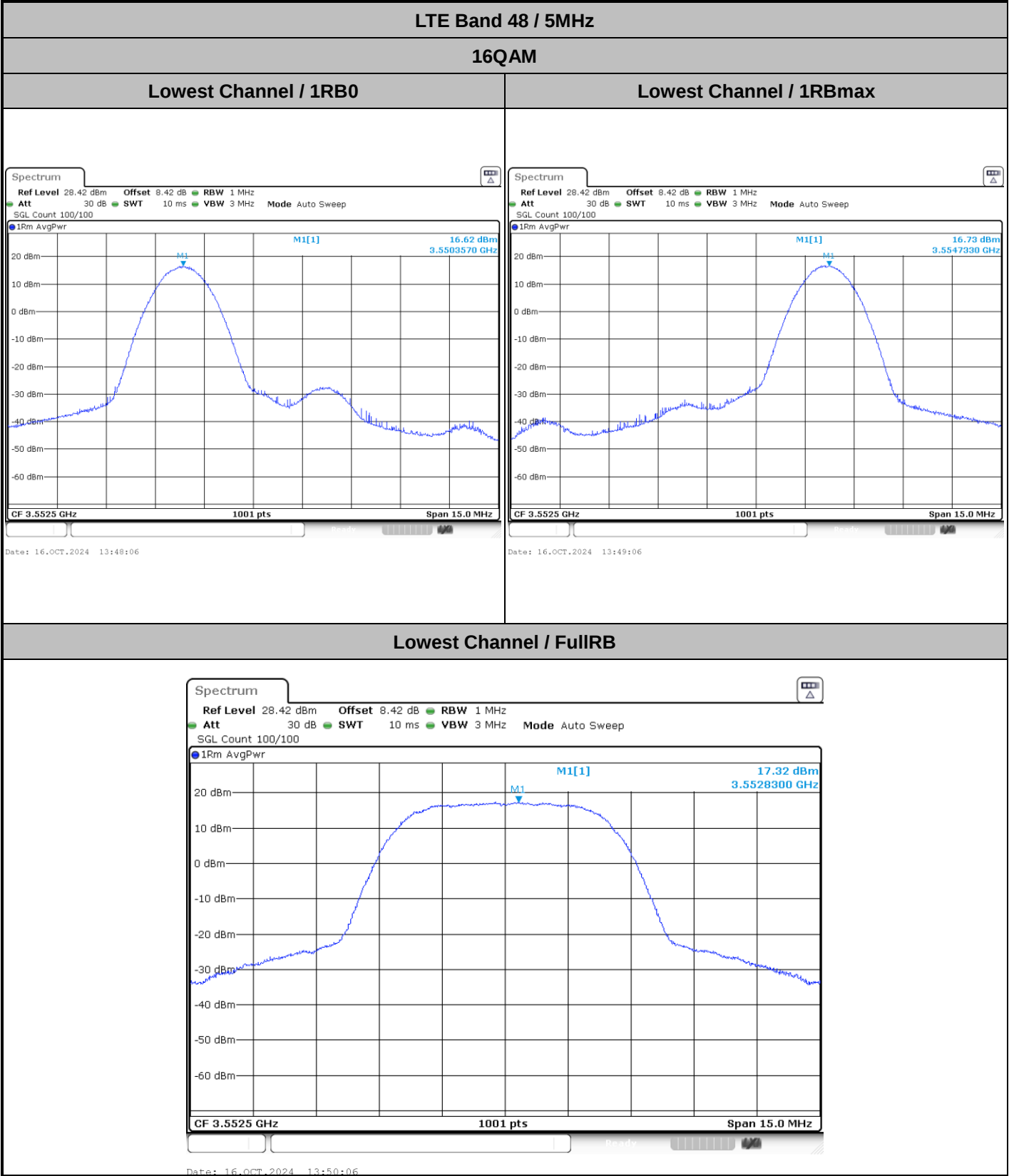


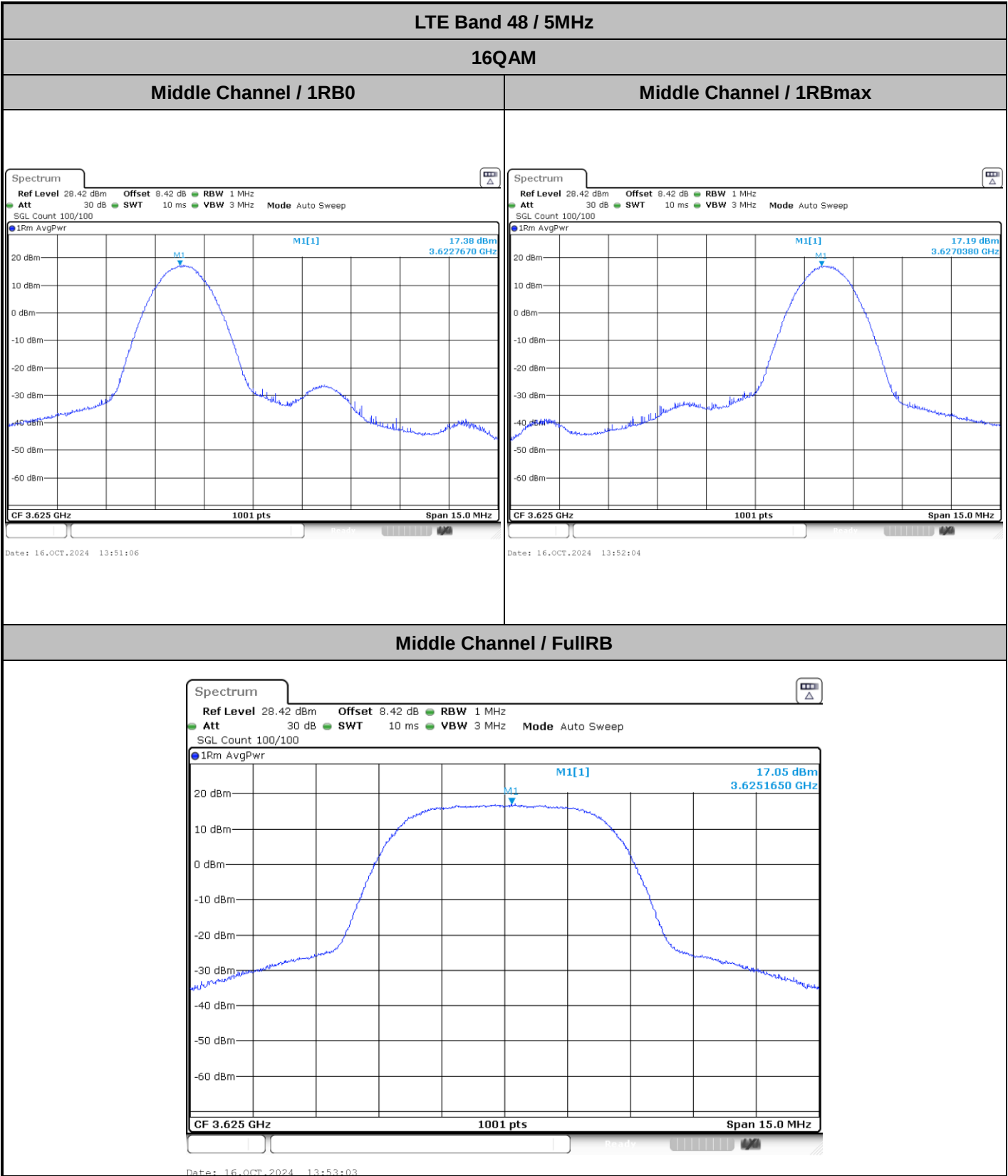
PSD









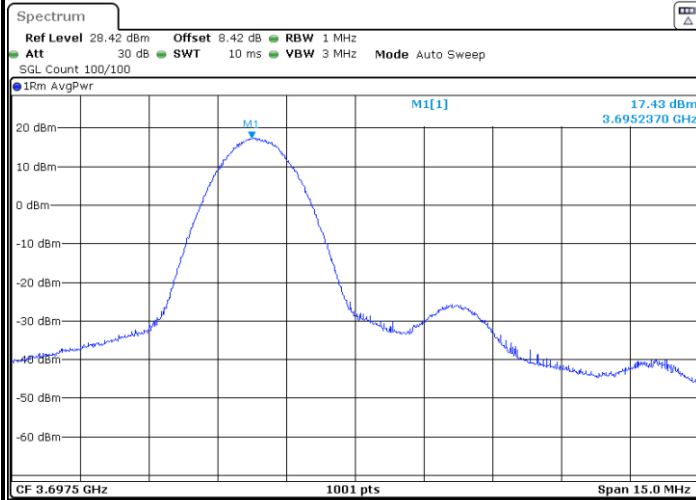




LTE Band 48 / 5MHz

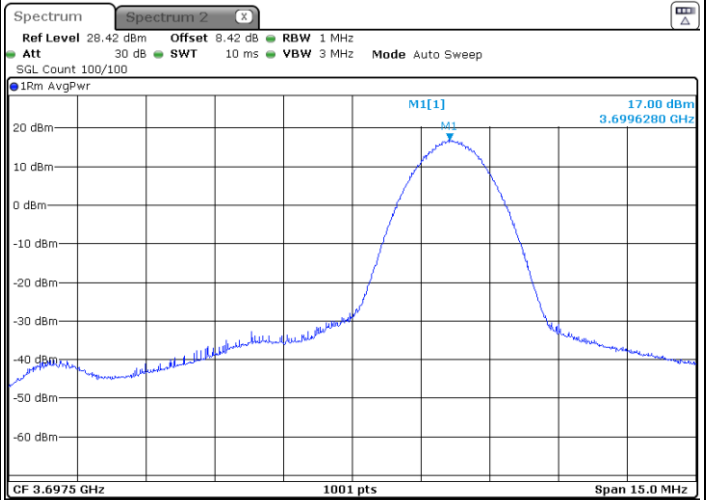
16QAM

Highest Channel / 1RB0



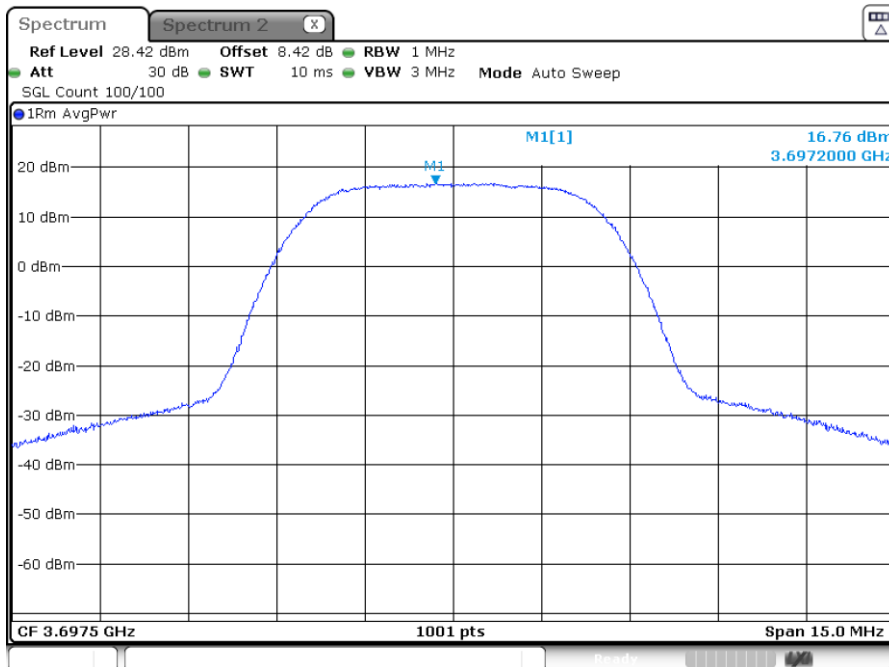
Date: 16.OCT.2024 15:00:08

Highest Channel / 1RBmax

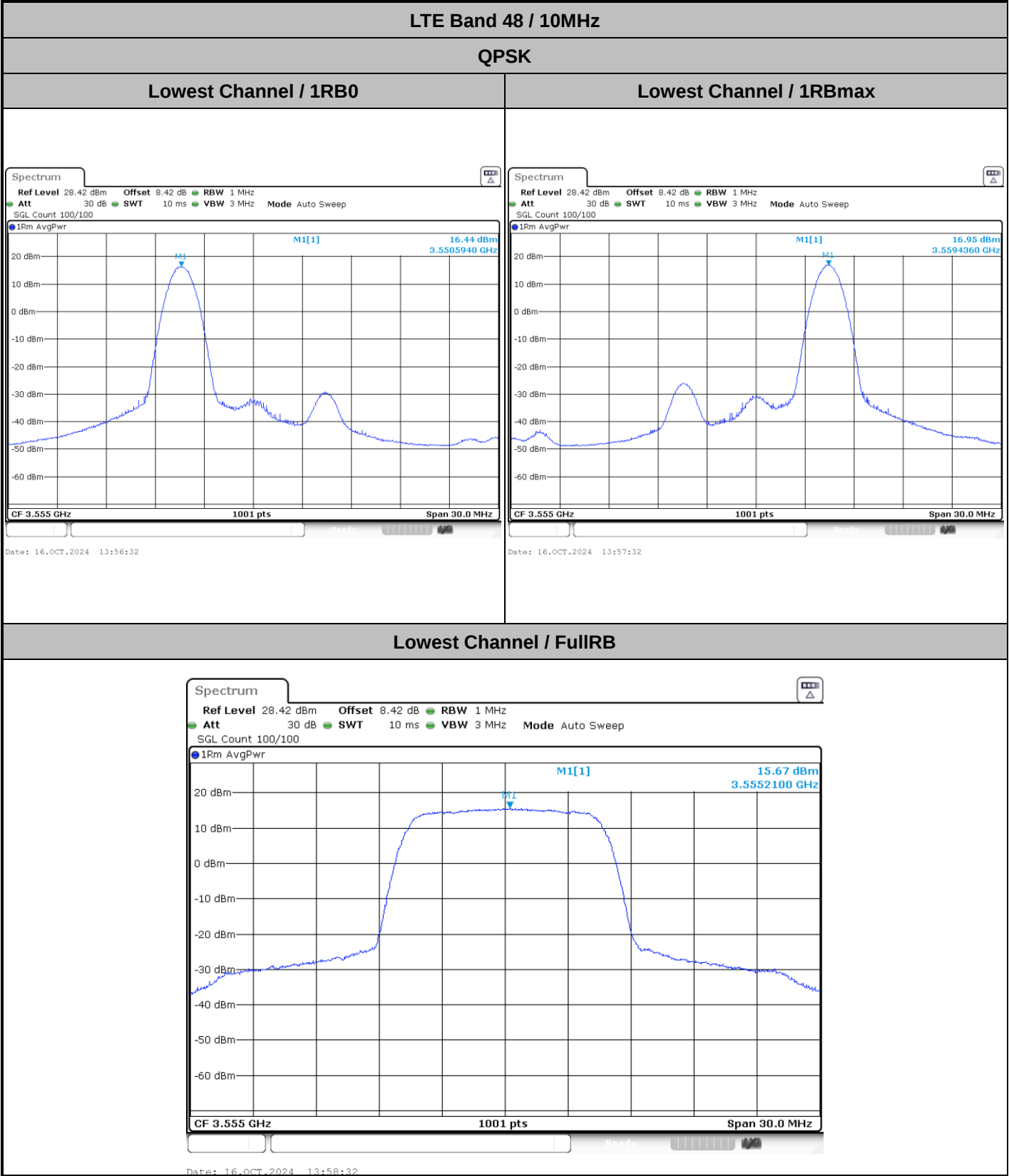


Date: 18.OCT.2024 19:17:01

Highest Channel / FullRB



Date: 17.OCT.2024 11:36:24

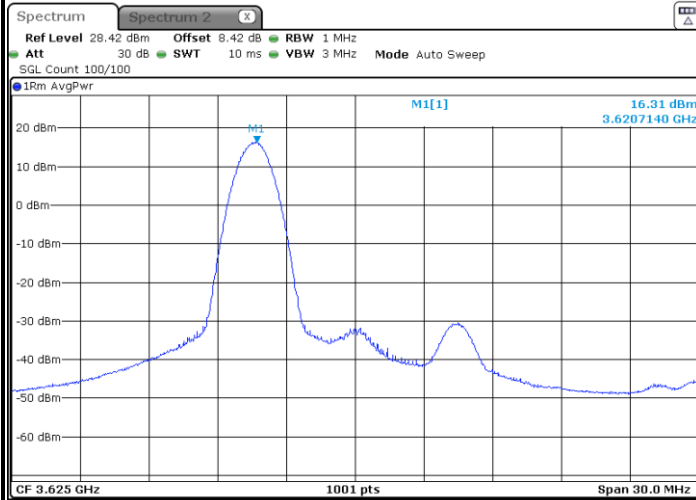




LTE Band 48 / 10MHz

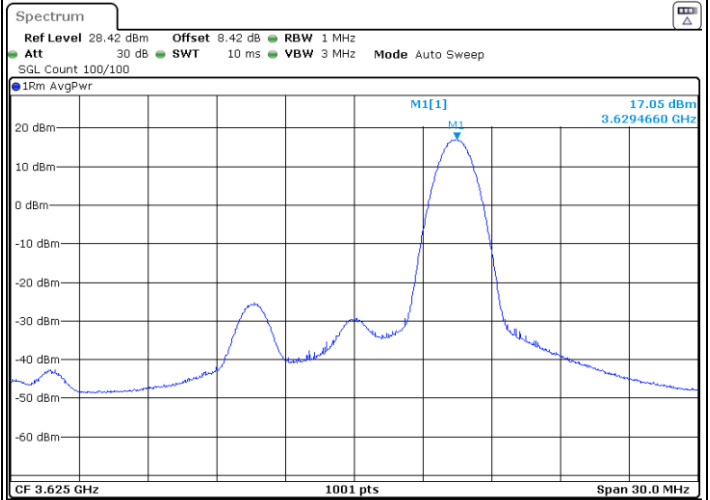
QPSK

Middle Channel / 1RB0



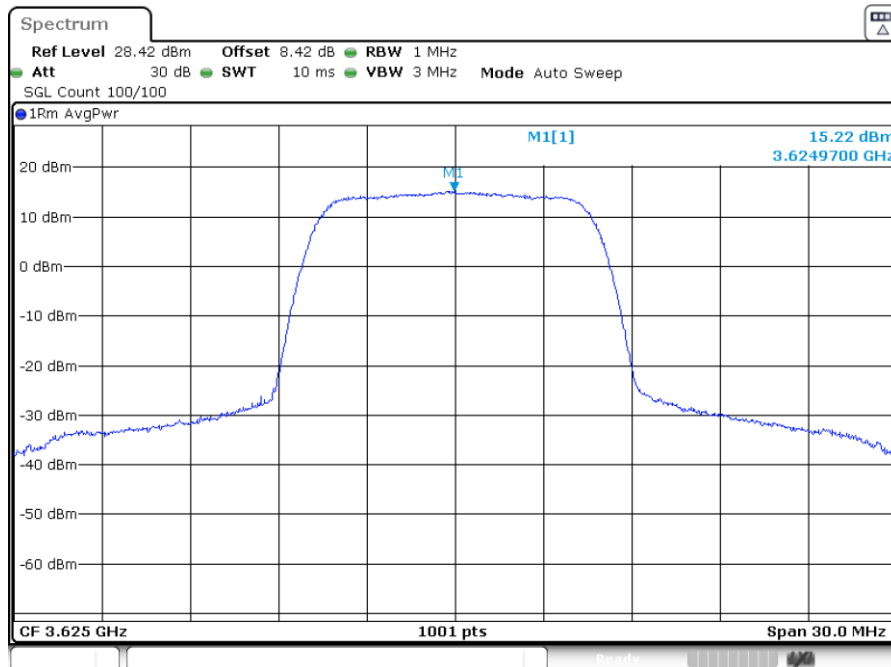
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Middle Channel / 1RBmax

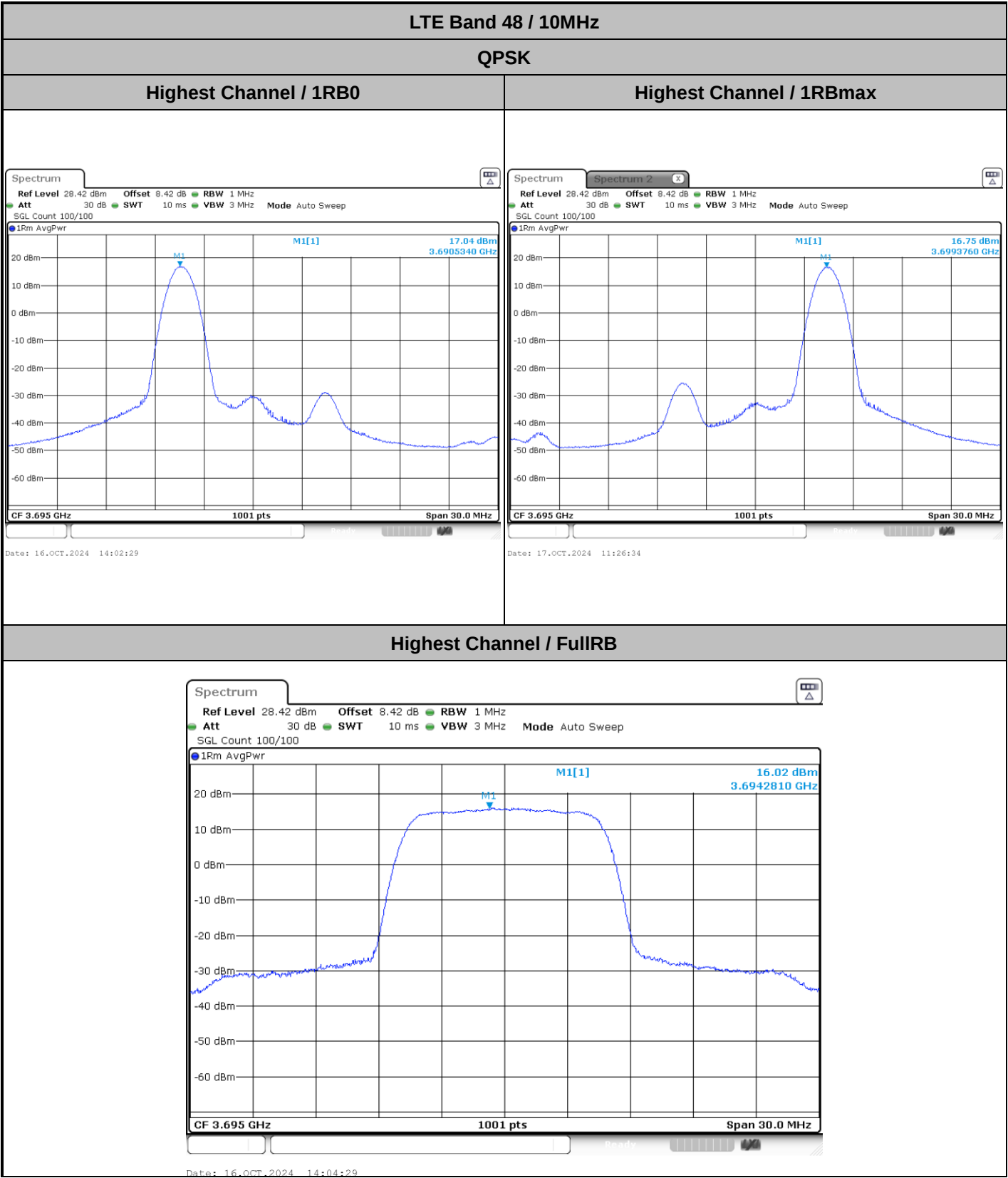


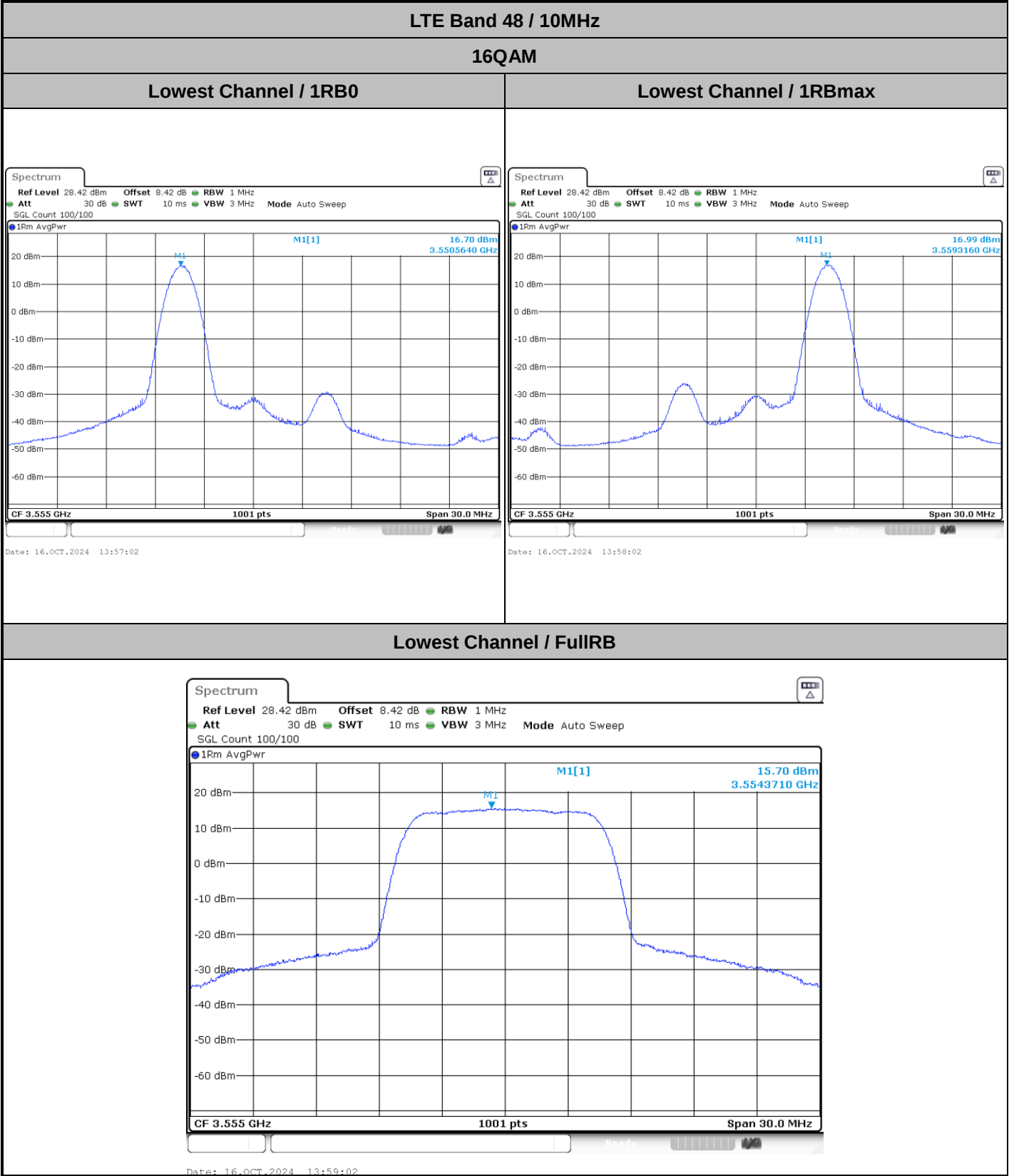
Date: 16.OCT.2024 14:00:31

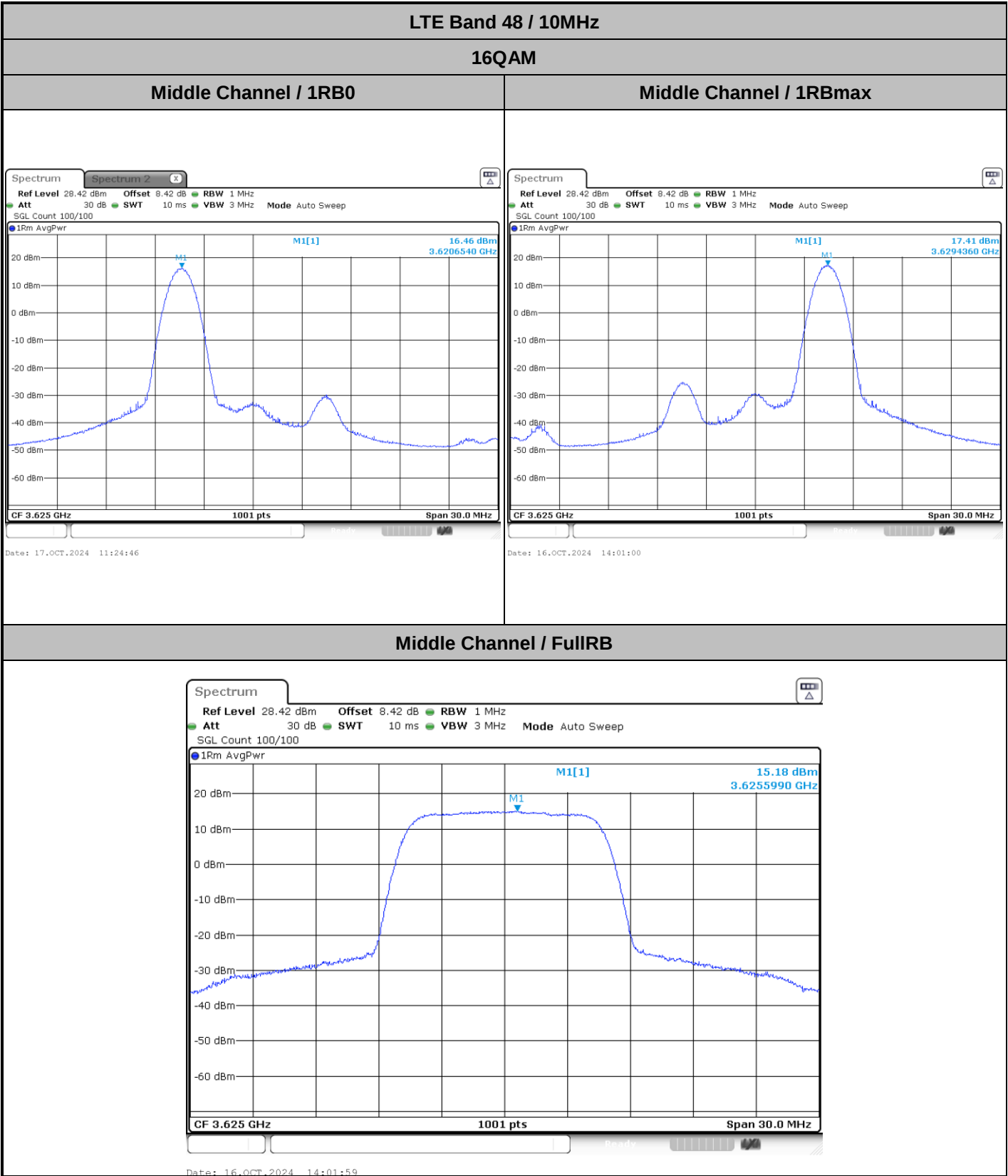
Middle Channel / FullRB

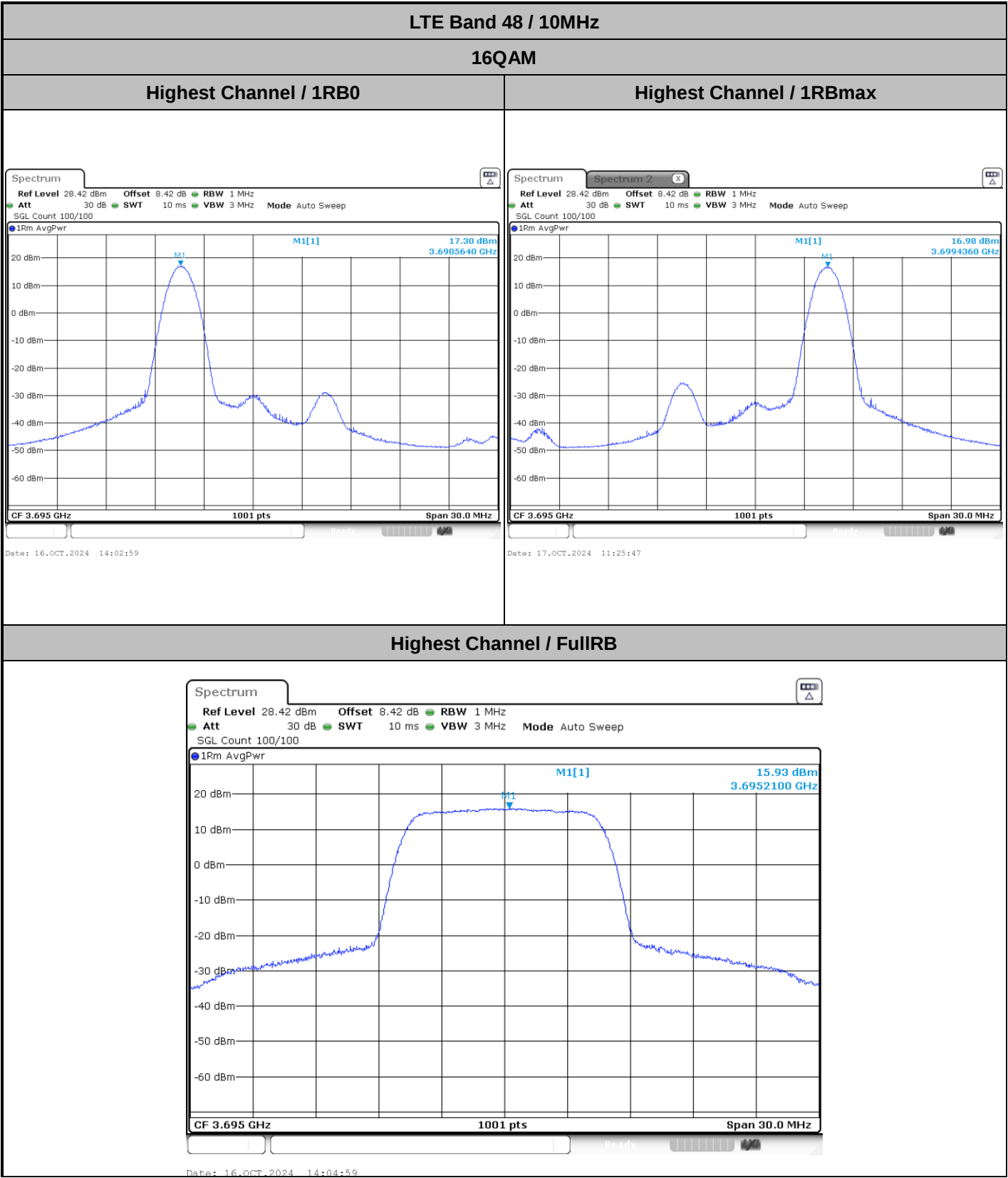


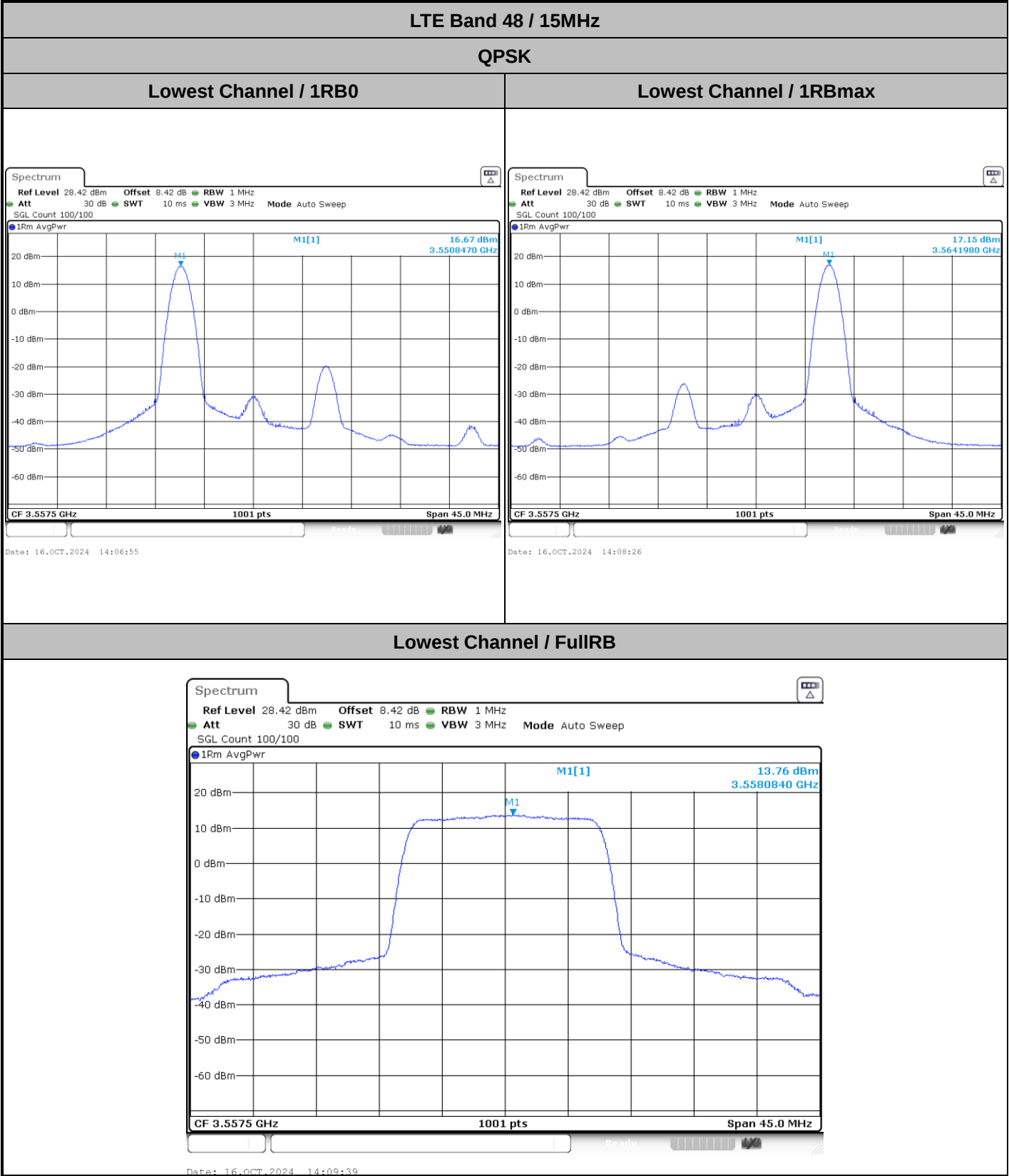
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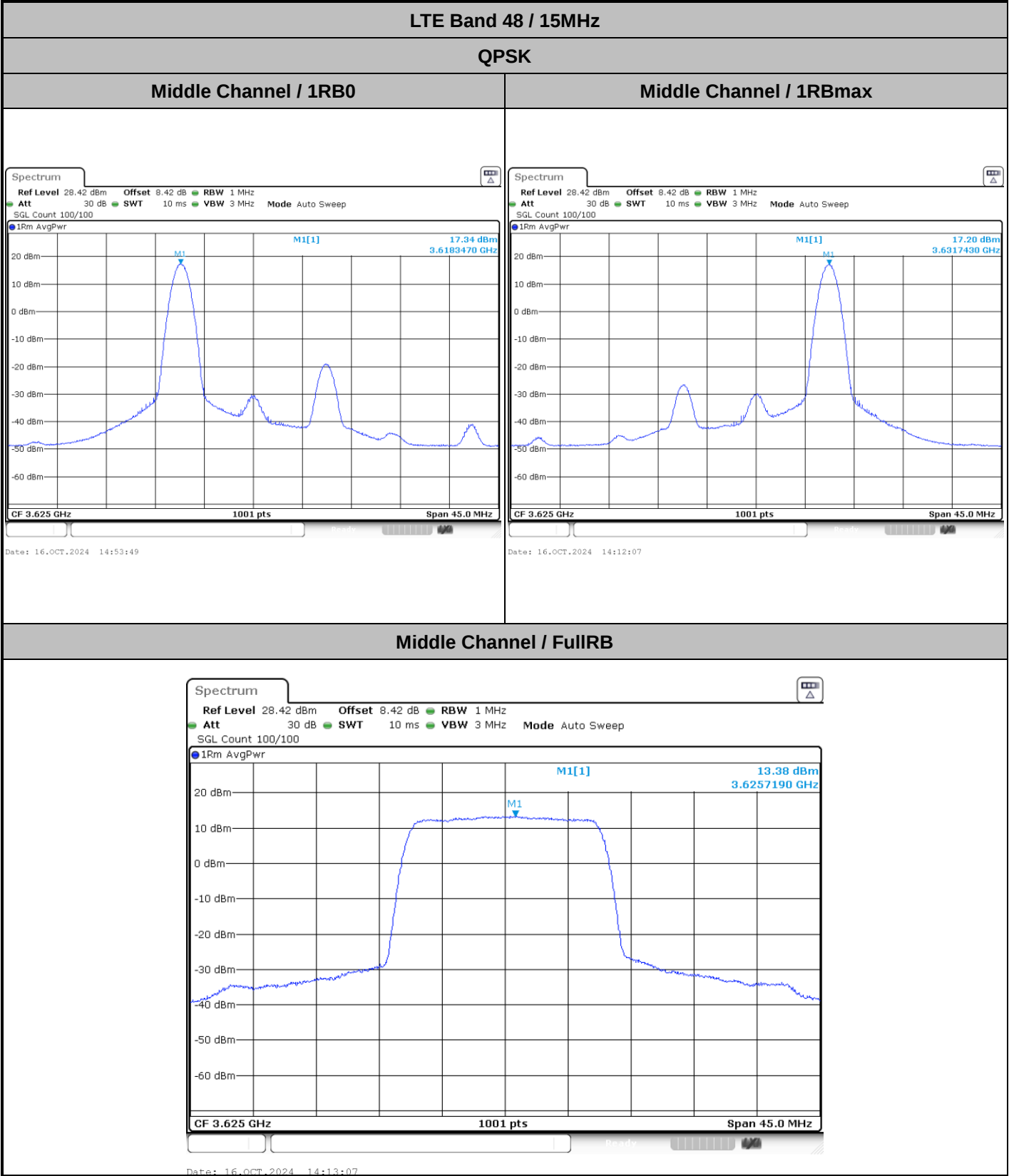


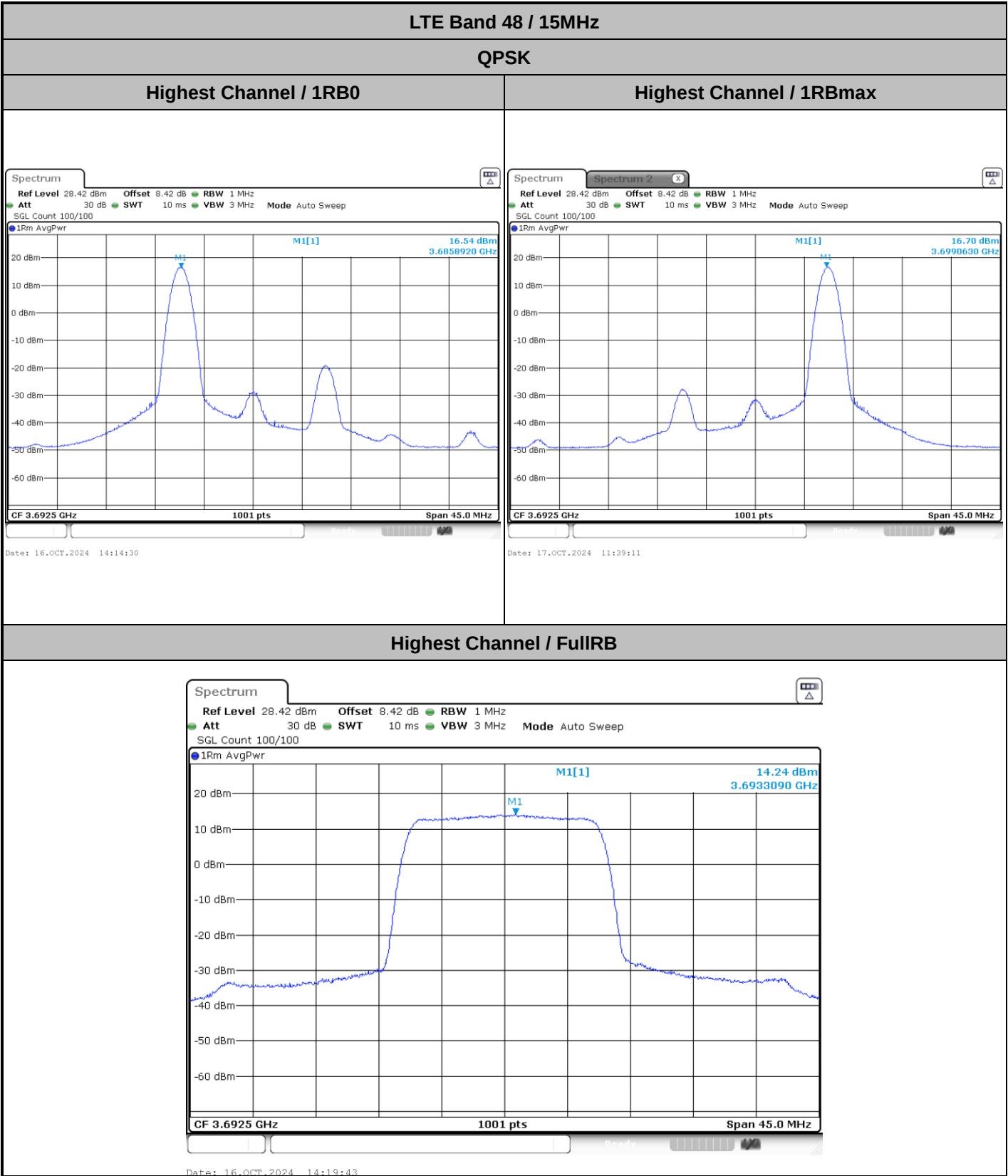


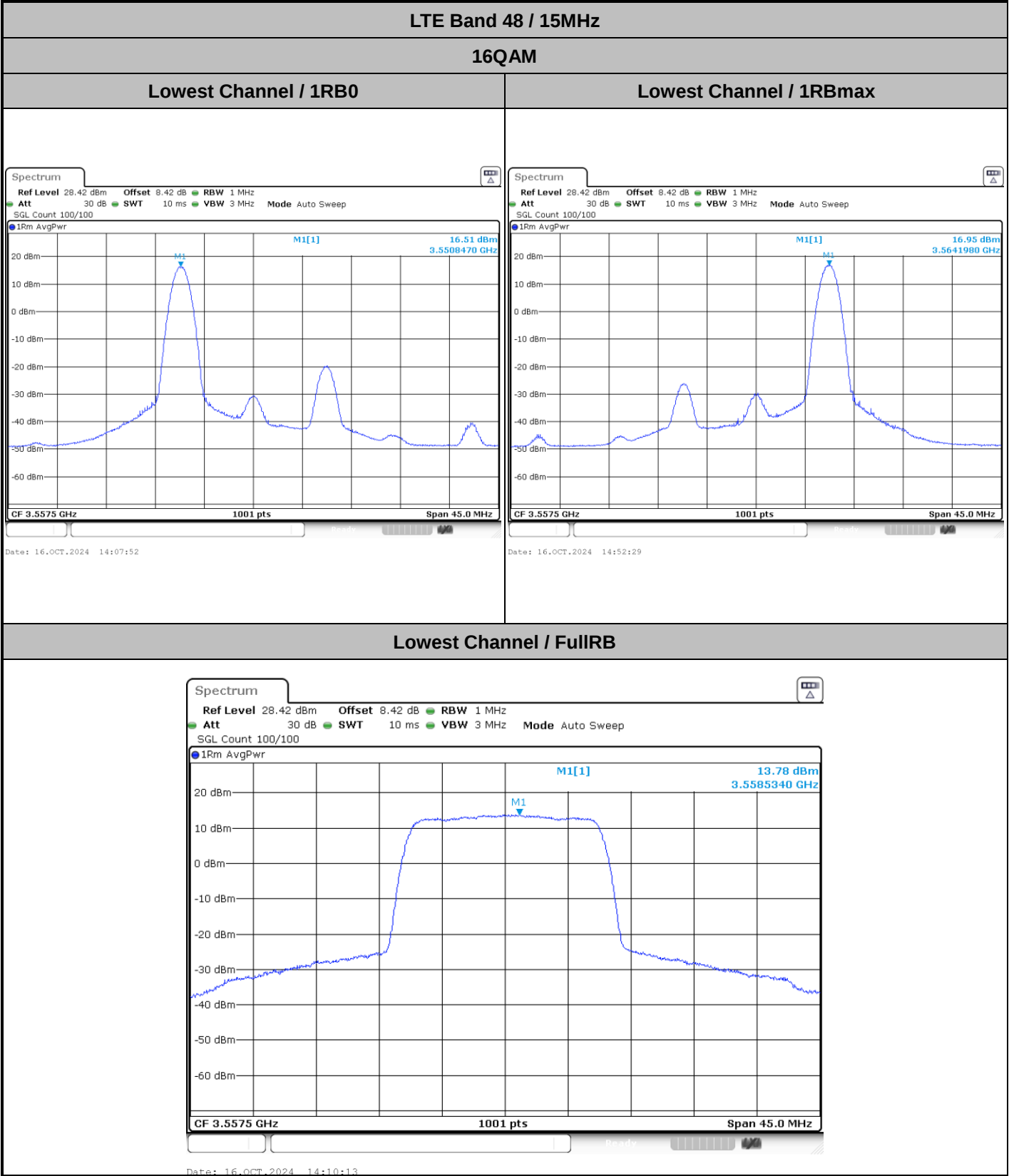


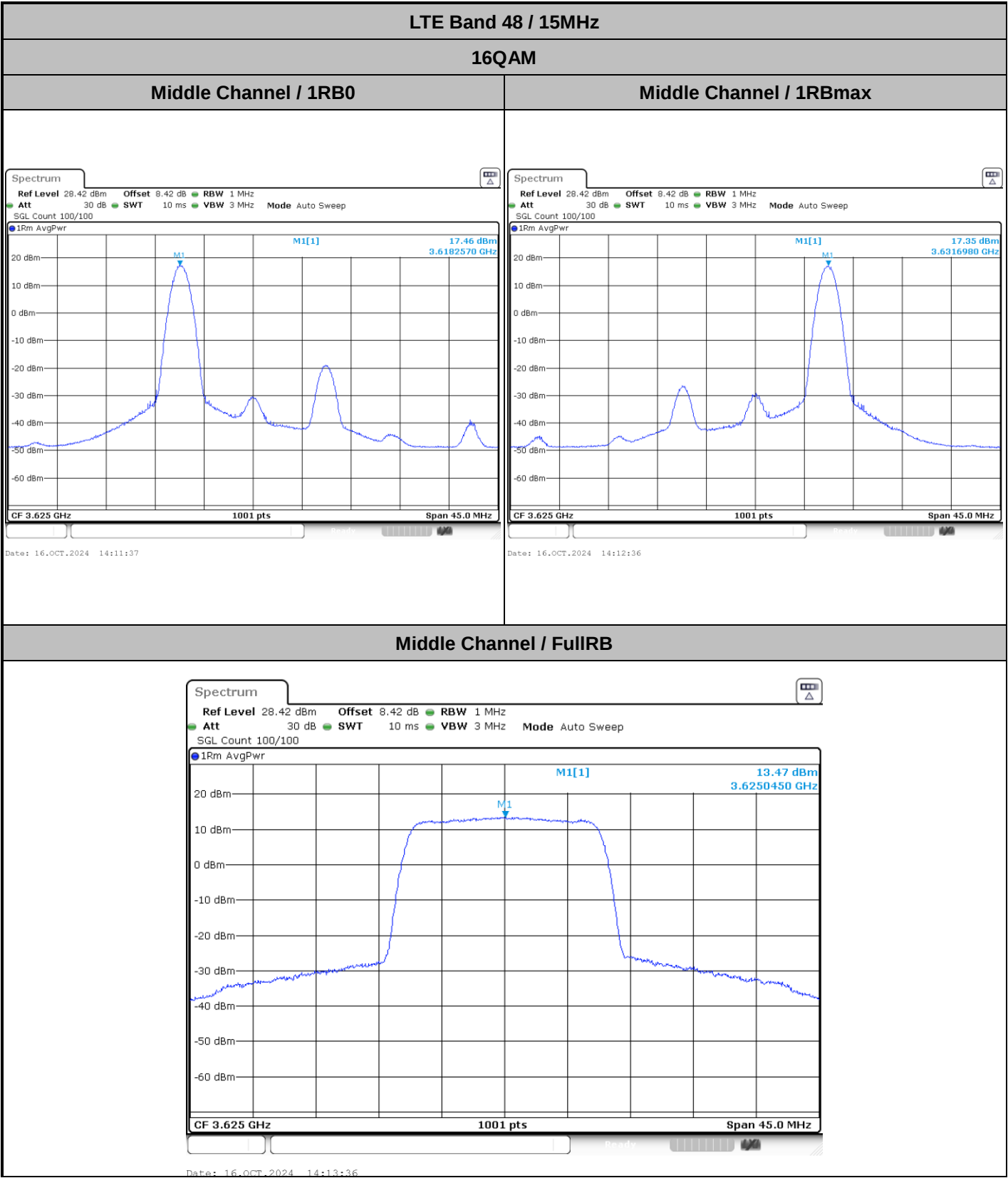


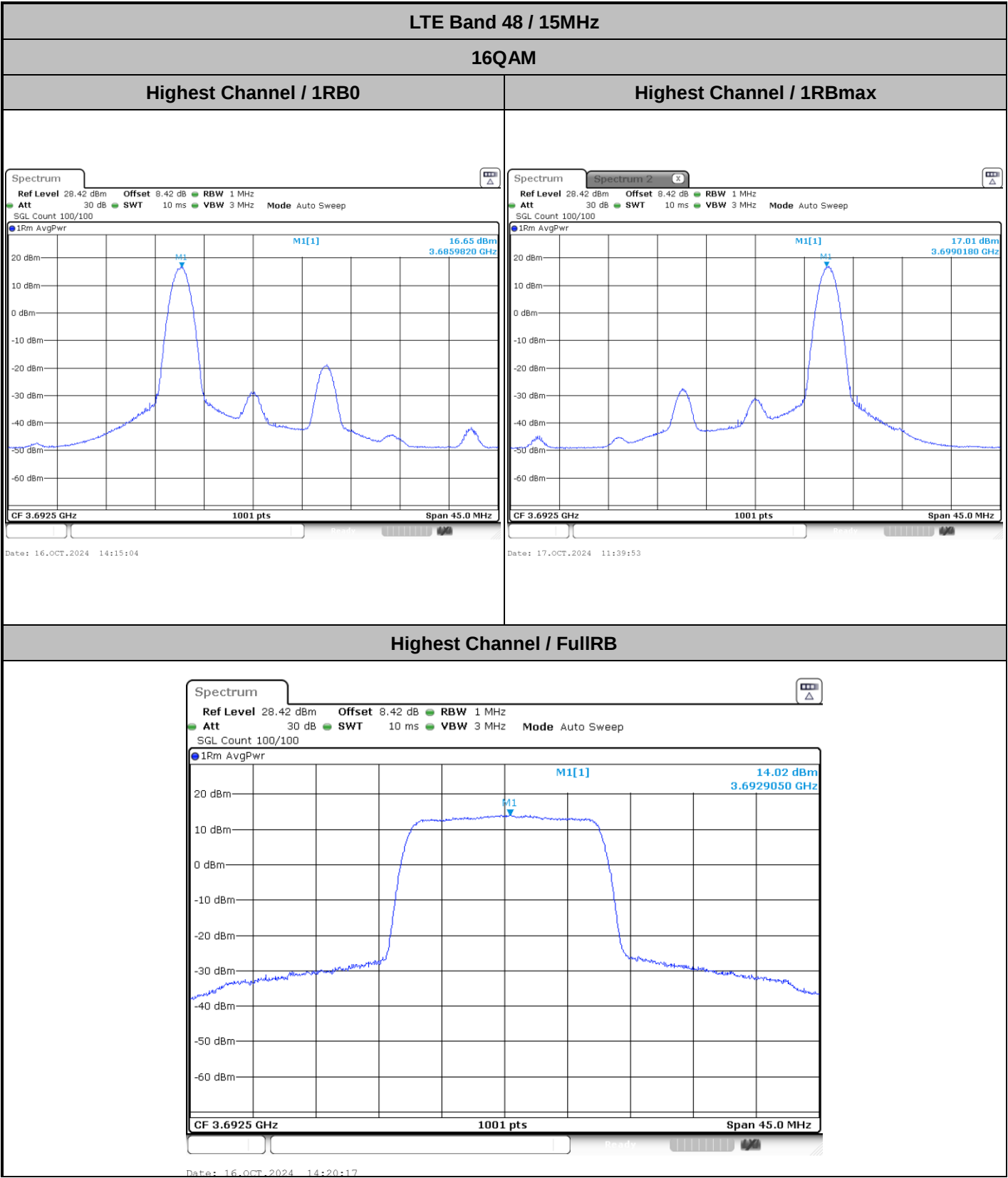


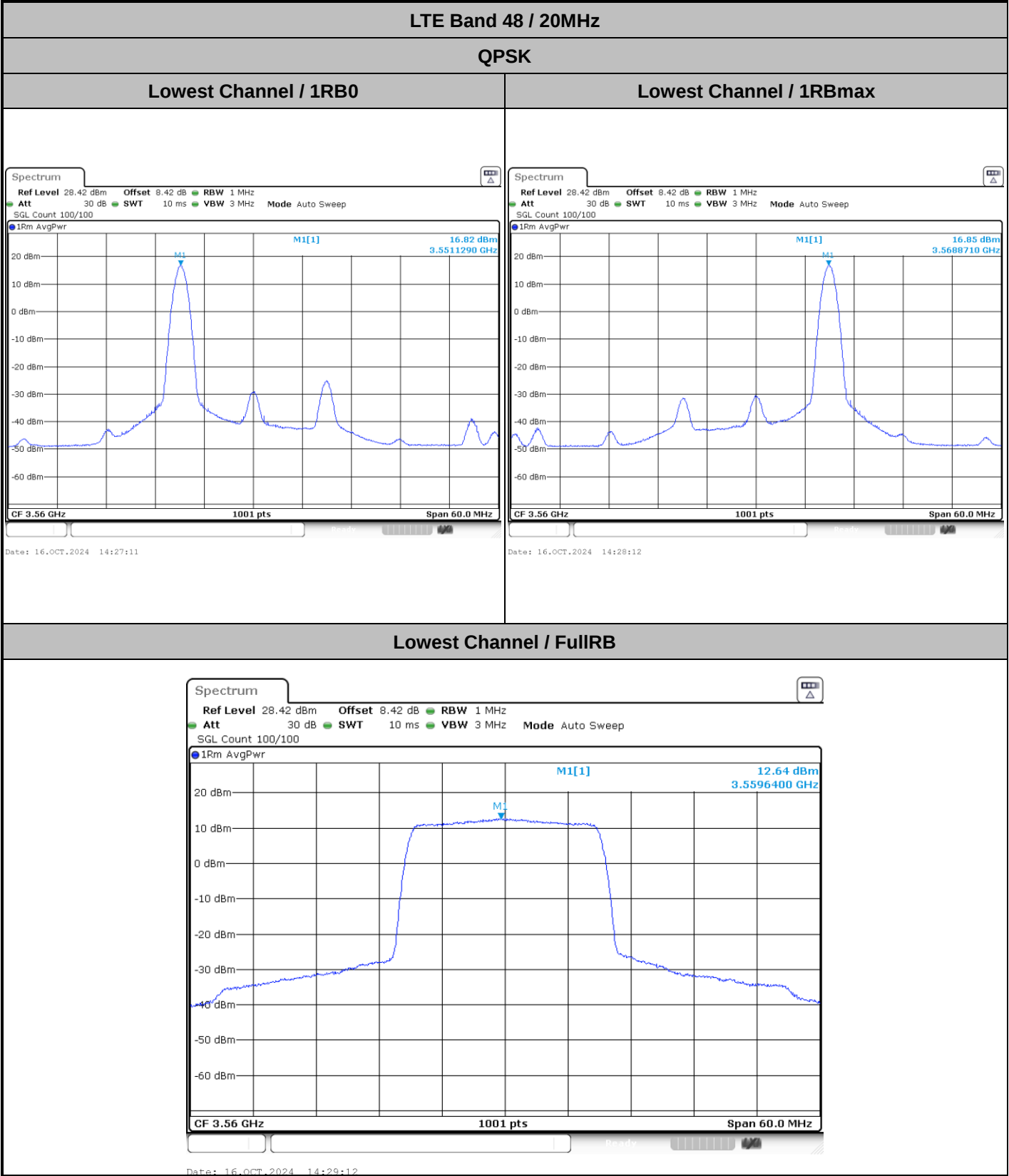


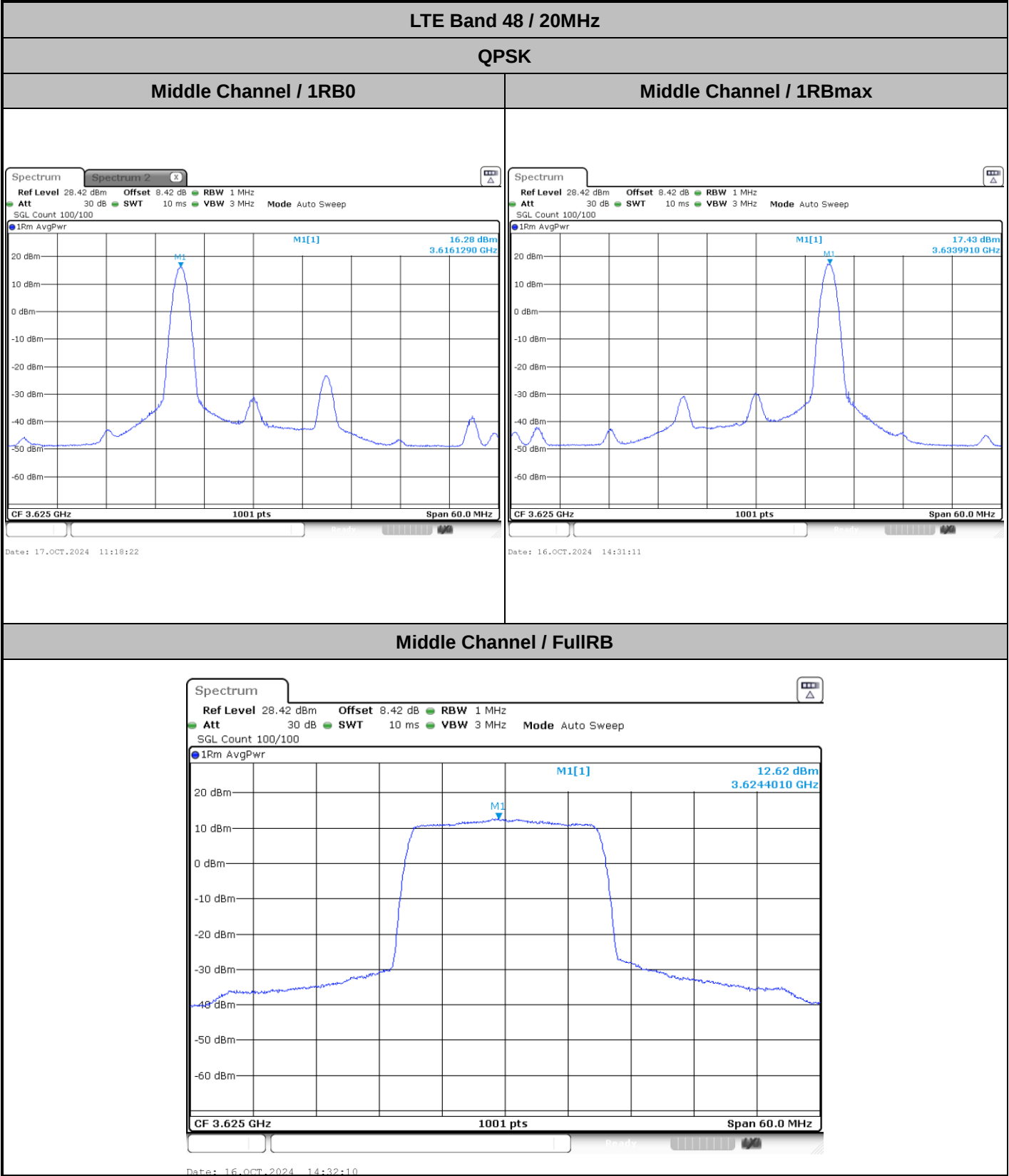










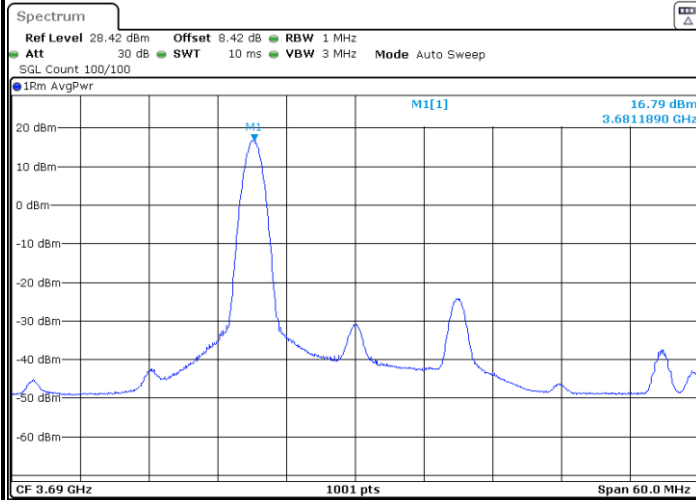




LTE Band 48 / 20MHz

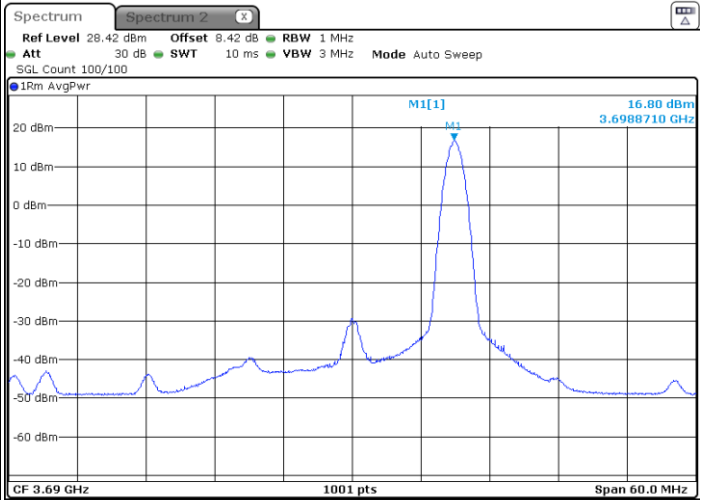
QPSK

Highest Channel / 1RB0



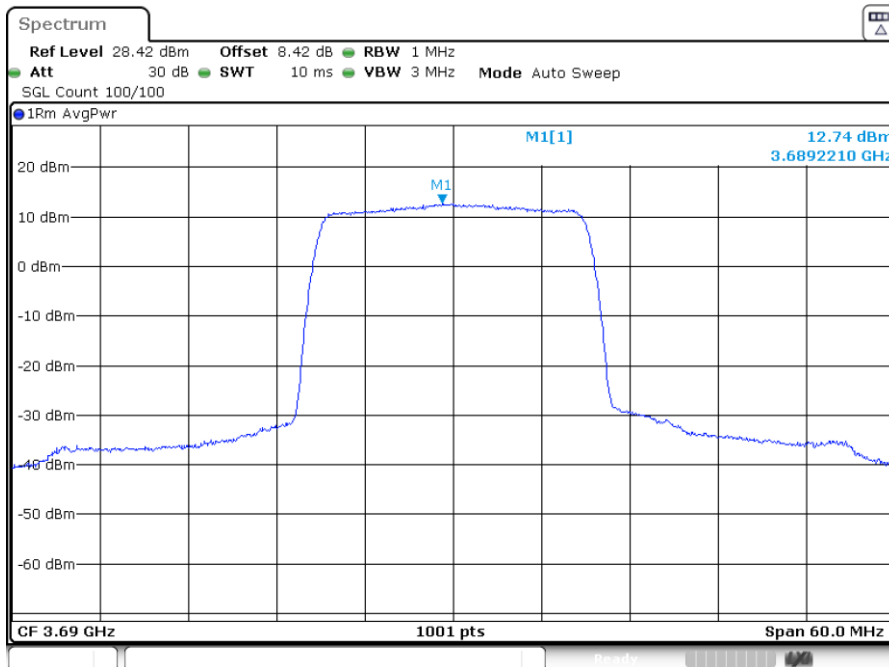
Date: 16.OCT.2024 14:33:10

Highest Channel / 1RBmax

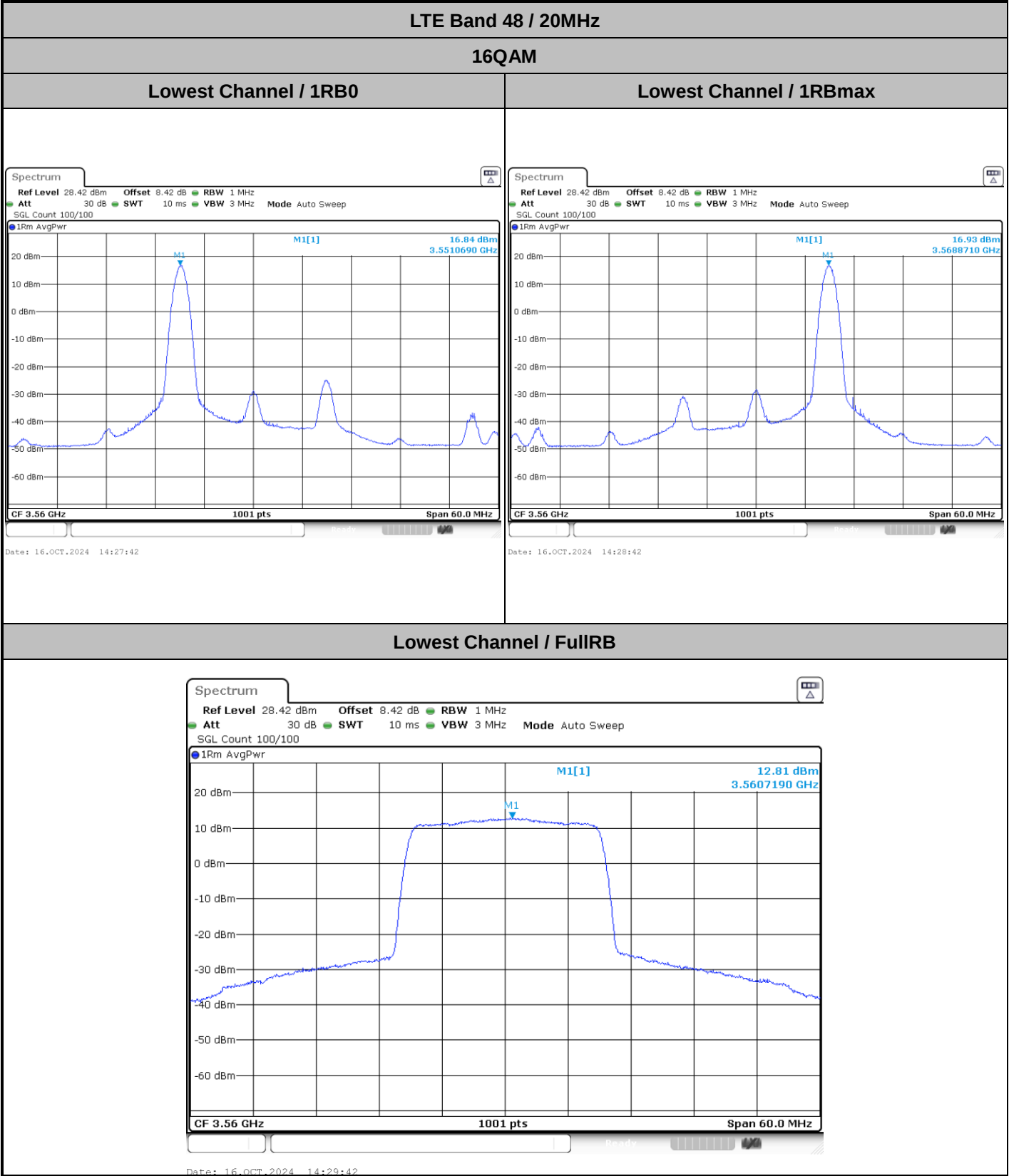


Date: 17.OCT.2024 11:22:11

Highest Channel / FullRB



Date: 16.OCT.2024 14:35:10



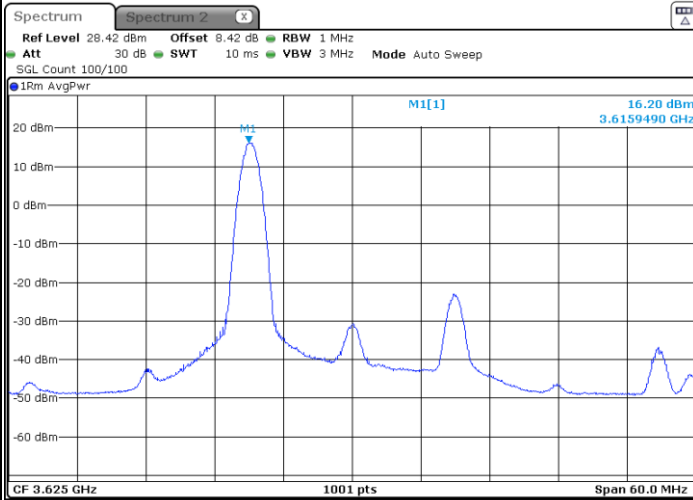


LTE Band 48 / 20MHz

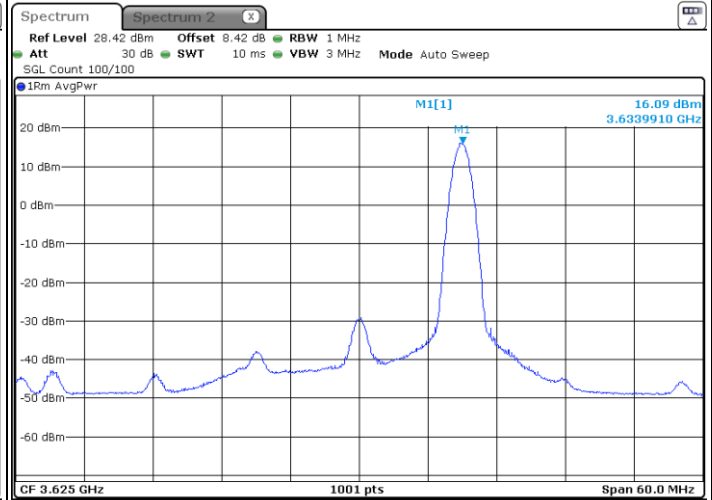
16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

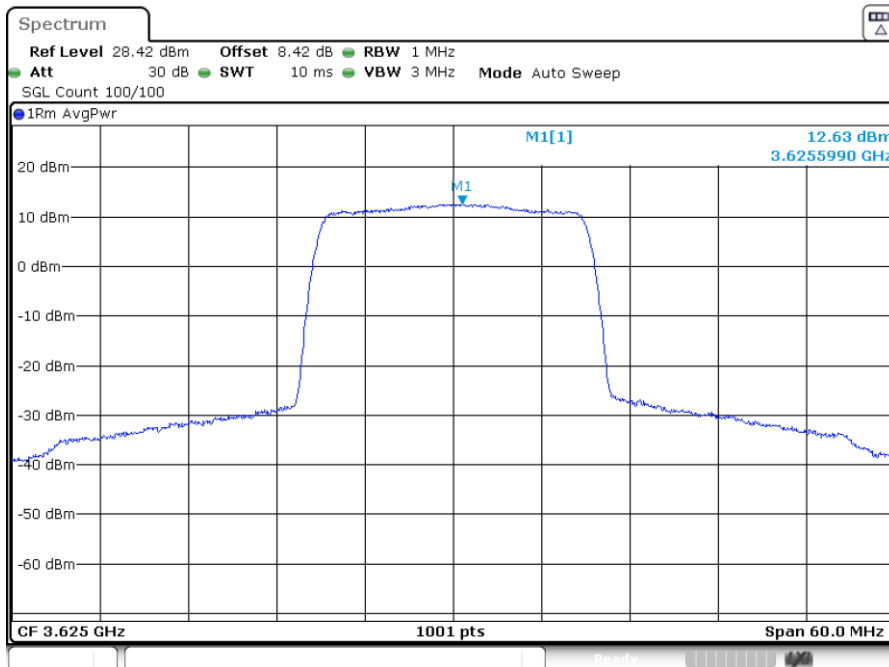


Date: 17.OCT.2024 11:19:27

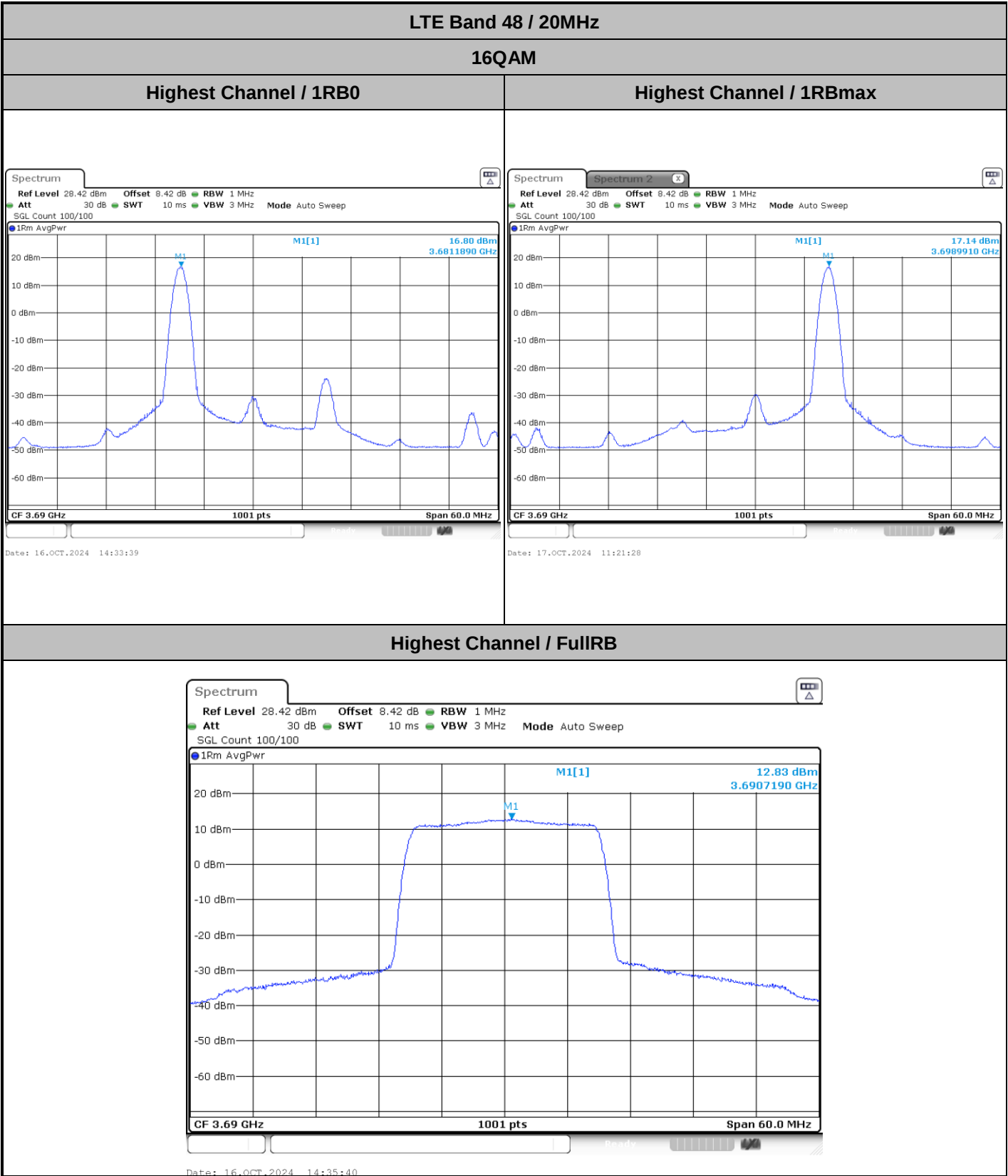


Date: 17.OCT.2024 11:20:44

Middle Channel / FullRB



Date: 16.OCT.2024 14:32:39

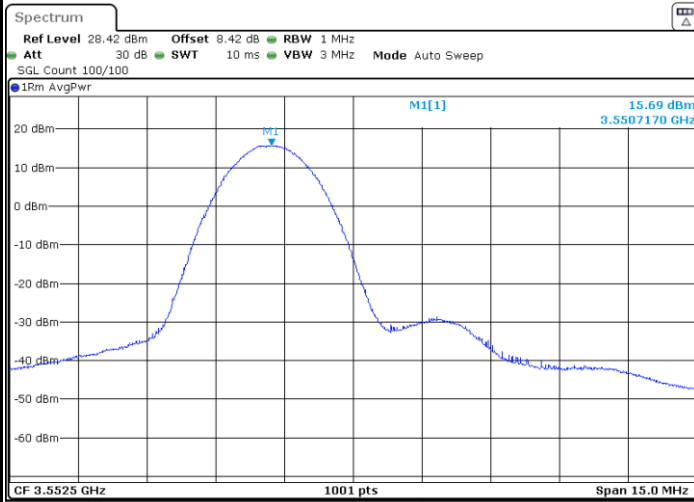




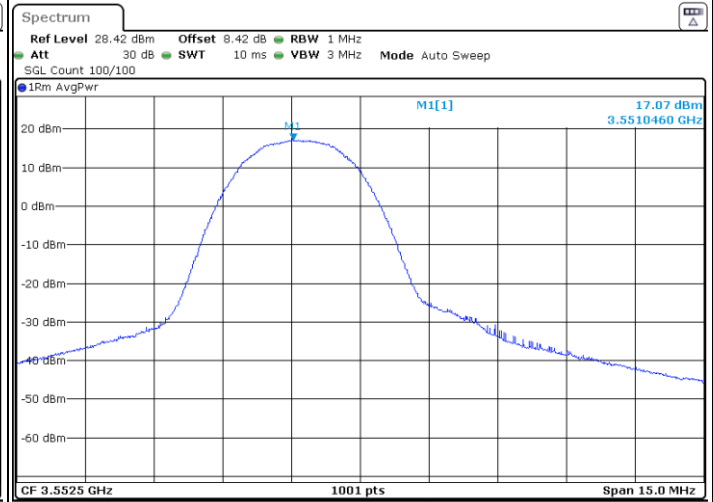
LTE Band 48 / 5MHz

QPSK

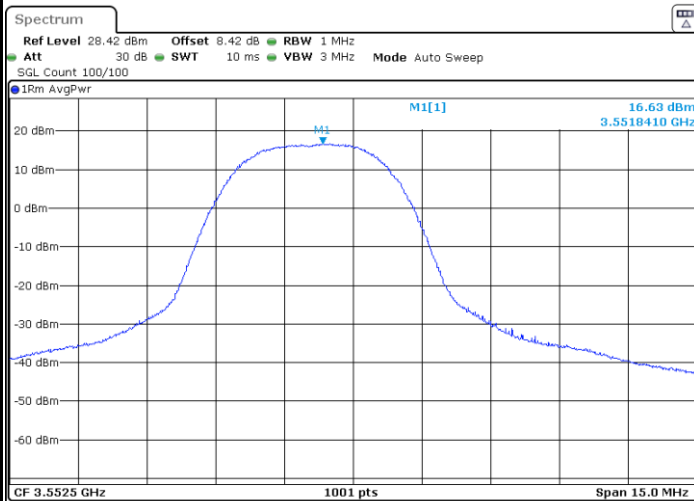
Lowest Channel / 5RB0



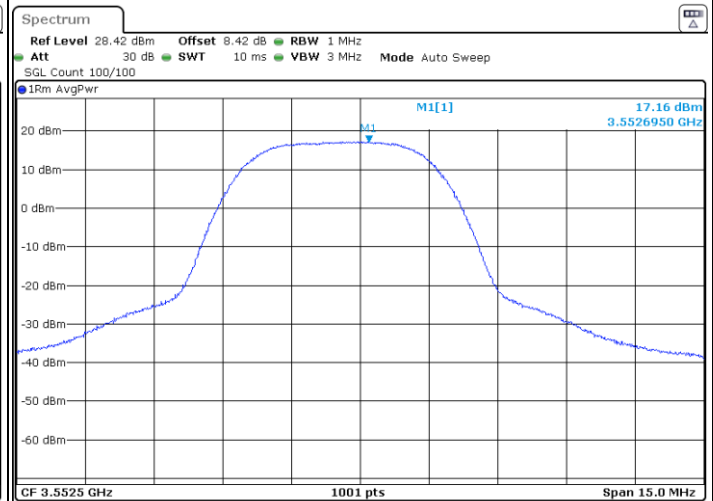
Lowest Channel / 10RB0



Lowest Channel / 15RB0



Lowest Channel / 20RB0

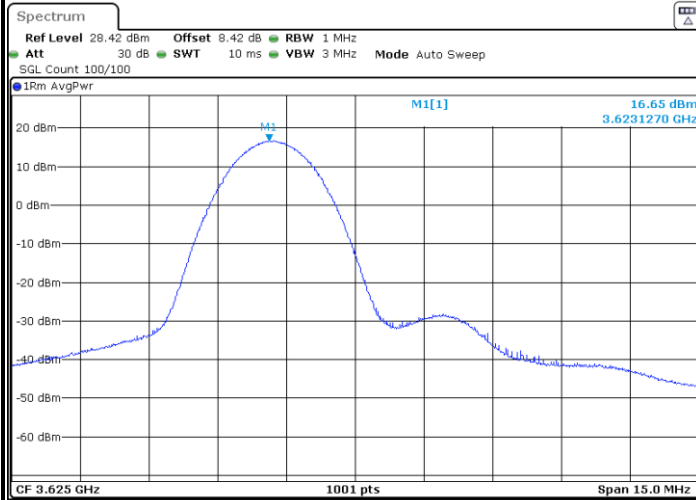




LTE Band 48 / 5MHz

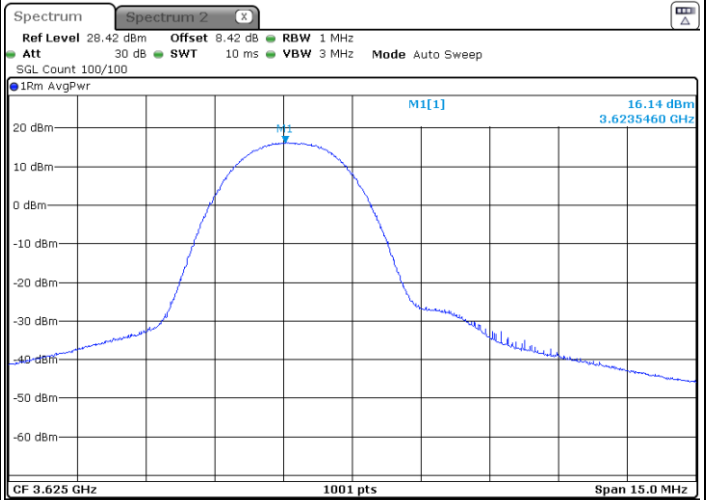
QPSK

Middle Channel / 5RB0



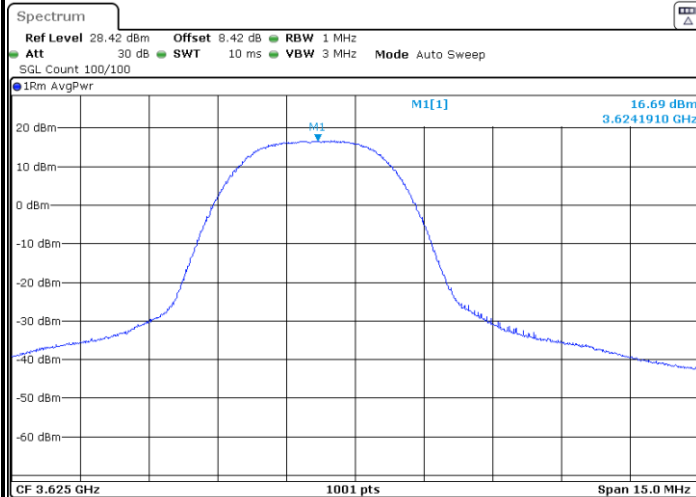
Date: 16.OCT.2024 11:42:46

Middle Channel / 10RB0



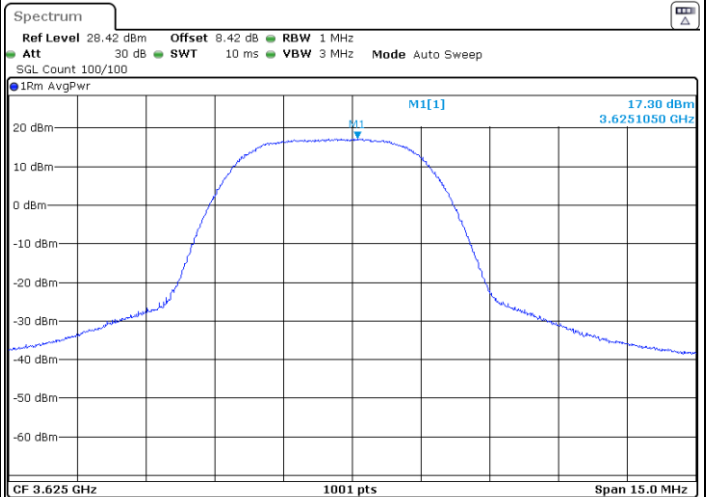
Date: 17.OCT.2024 11:31:43

Middle Channel / 15RB0



Date: 16.OCT.2024 11:41:07

Middle Channel / 20RB0



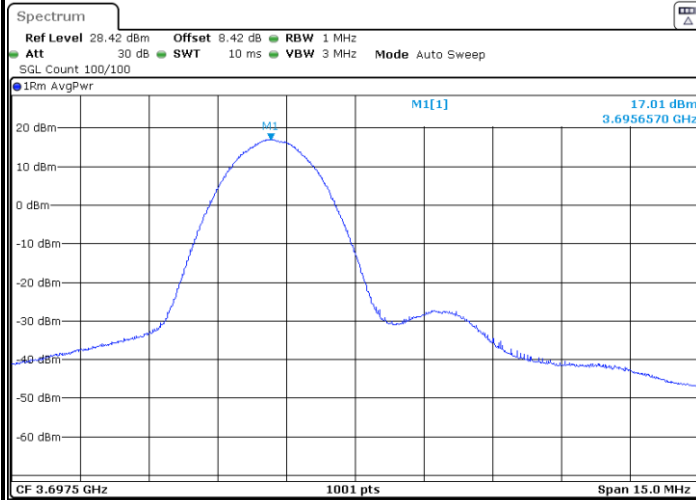
Date: 16.OCT.2024 11:40:09



LTE Band 48 / 5MHz

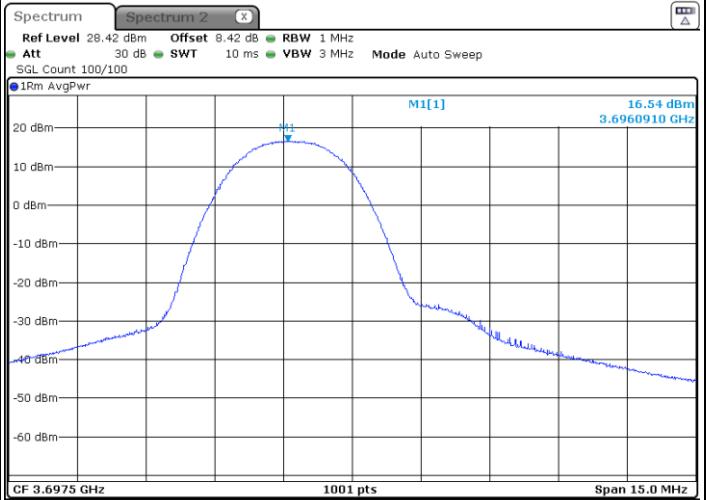
QPSK

Highest Channel / 5RB0



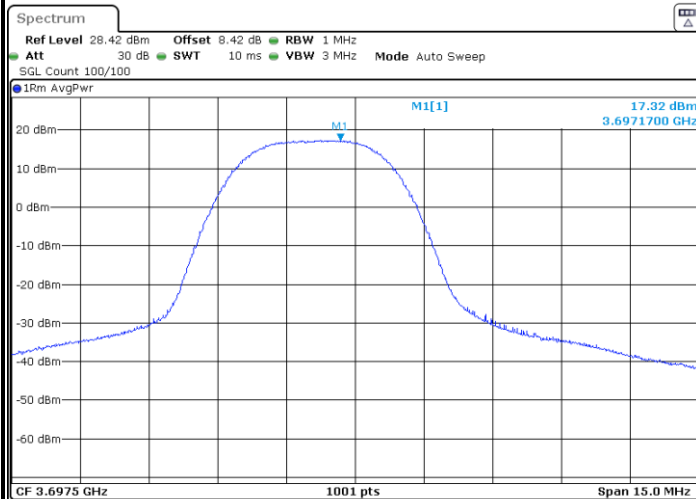
Date: 16.OCT.2024 11:51:23

Highest Channel / 10RB0



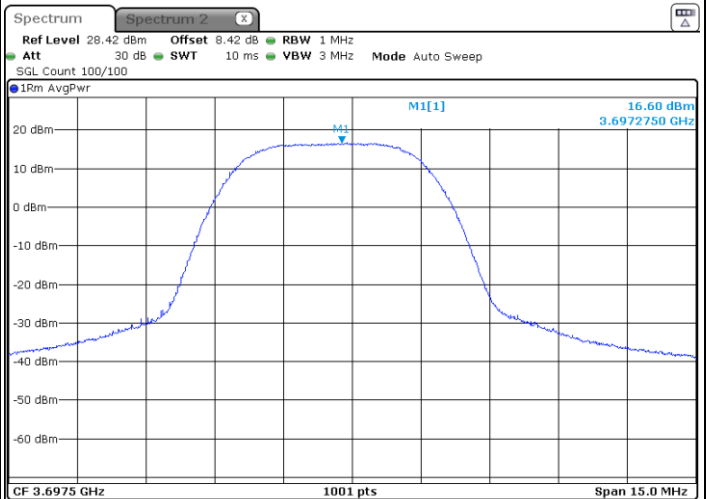
Date: 17.OCT.2024 11:33:14

Highest Channel / 15RB0



Date: 16.OCT.2024 11:49:09

Highest Channel / 20RB0



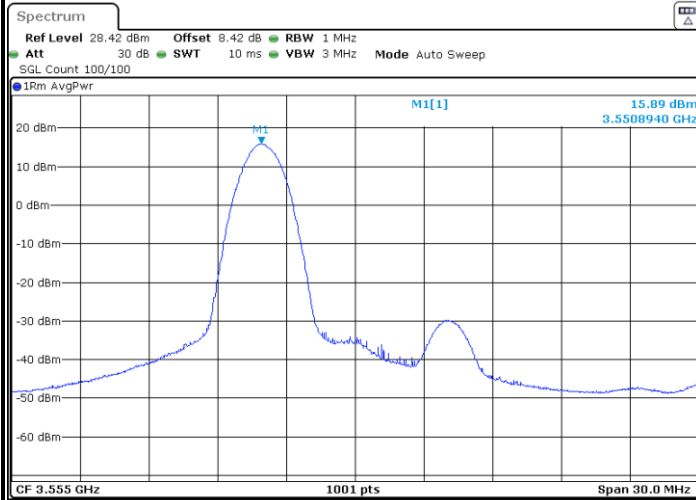
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LTE Band 48 / 10MHz

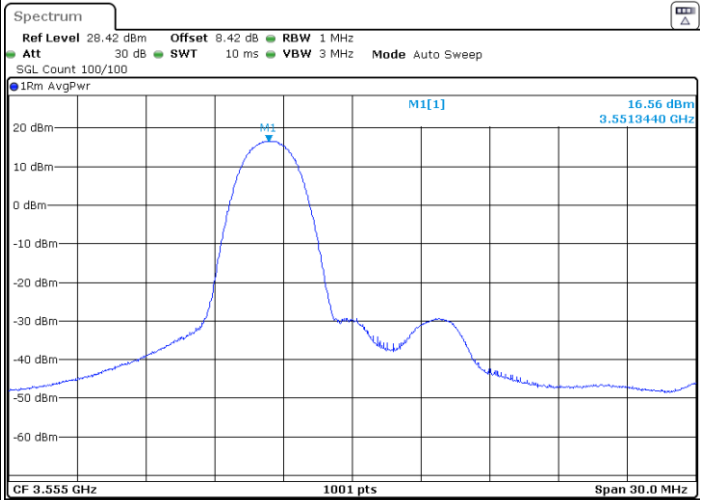
QPSK

Lowest Channel / 5RB0



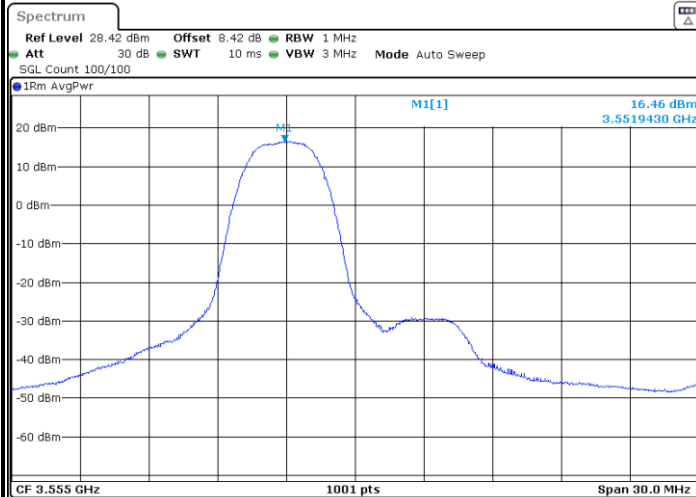
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Lowest Channel / 10RB0



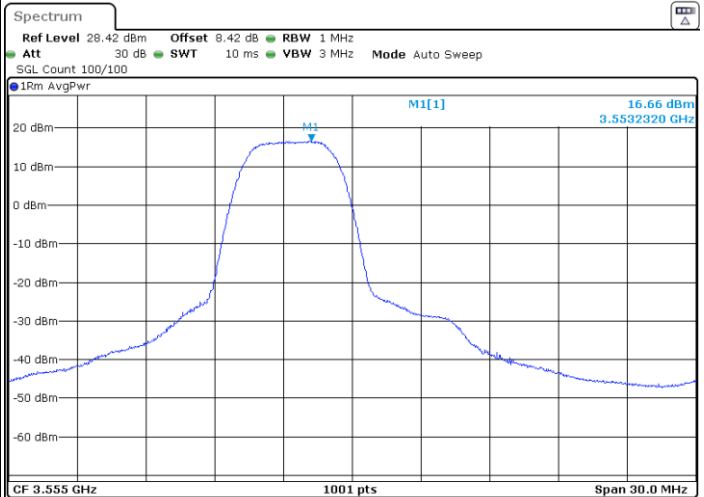
Date: 16.OCT.2024 11:18:06

Lowest Channel / 15RB0

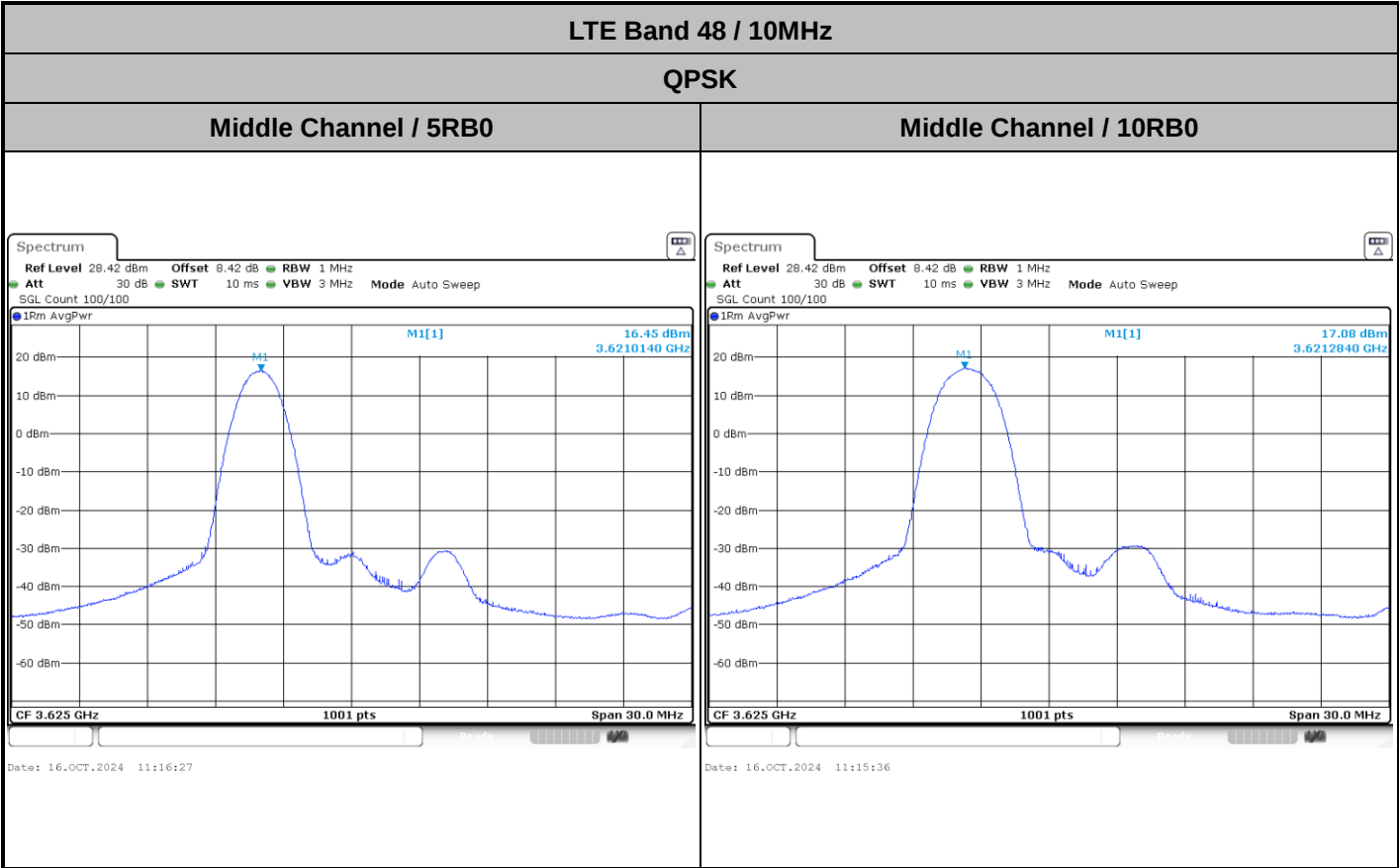
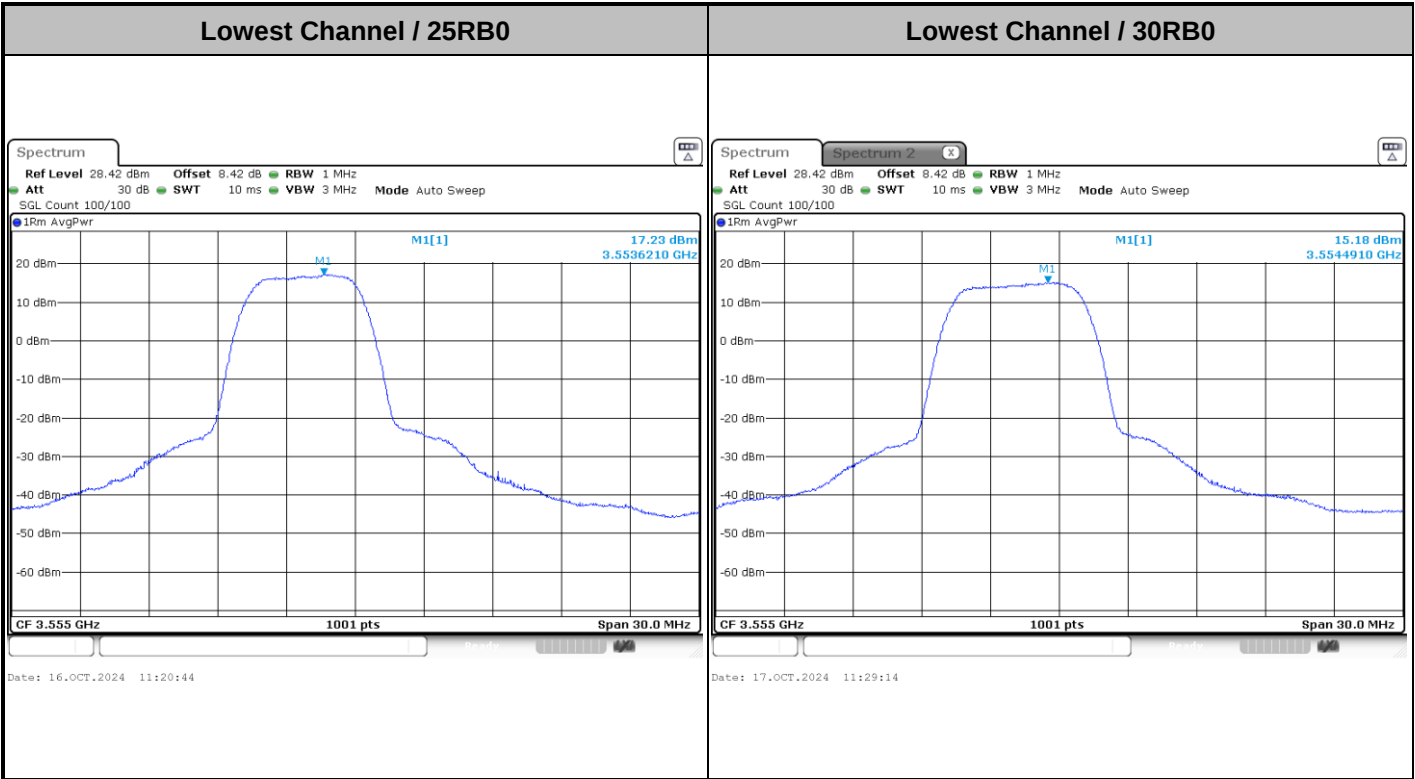


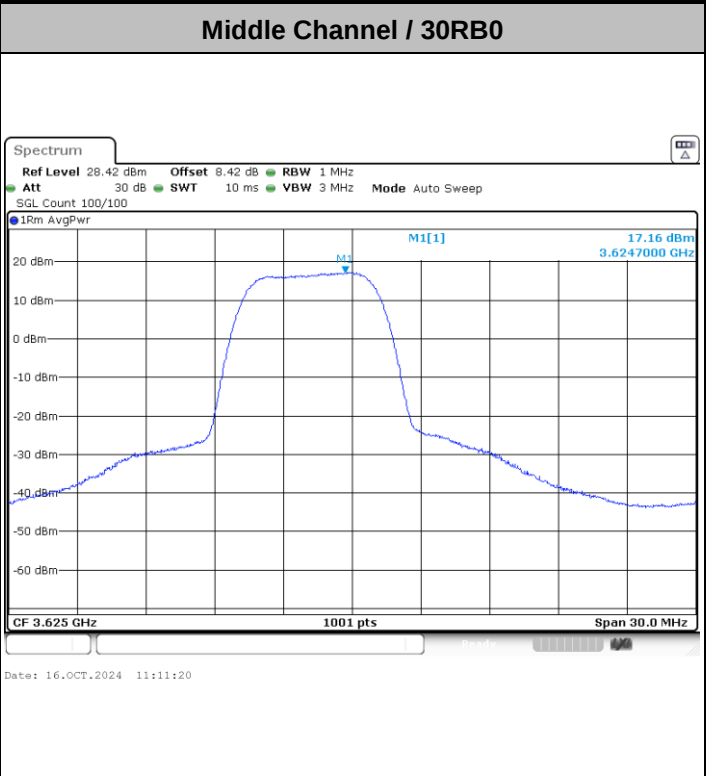
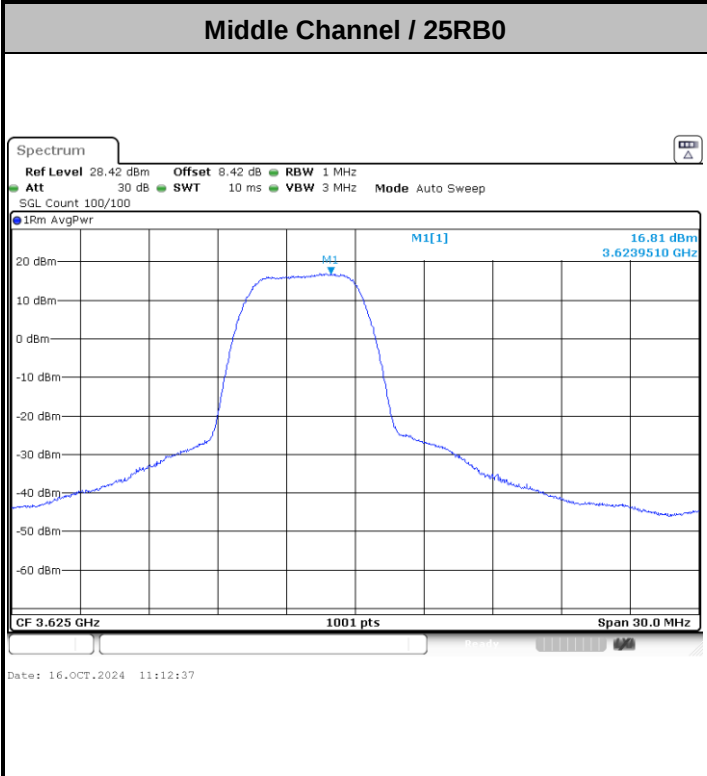
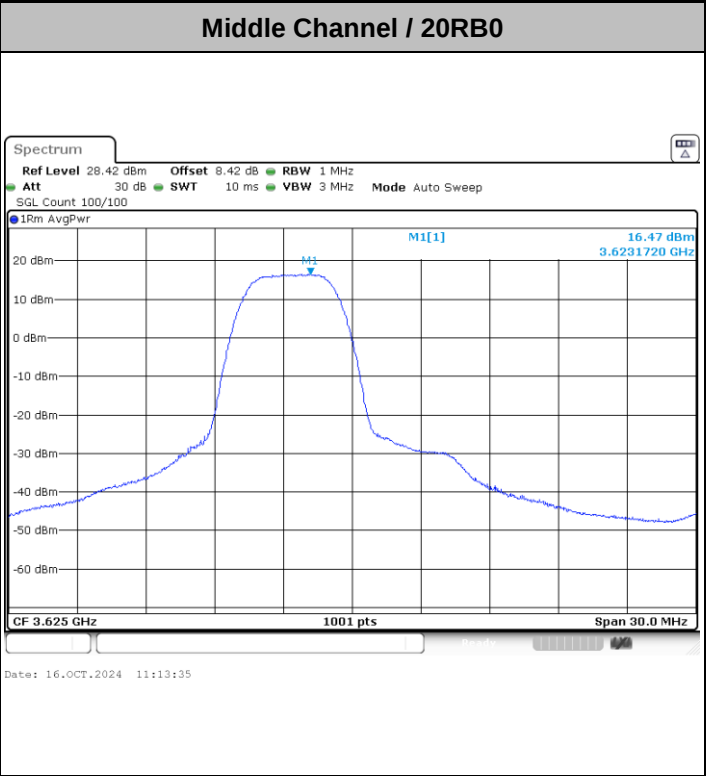
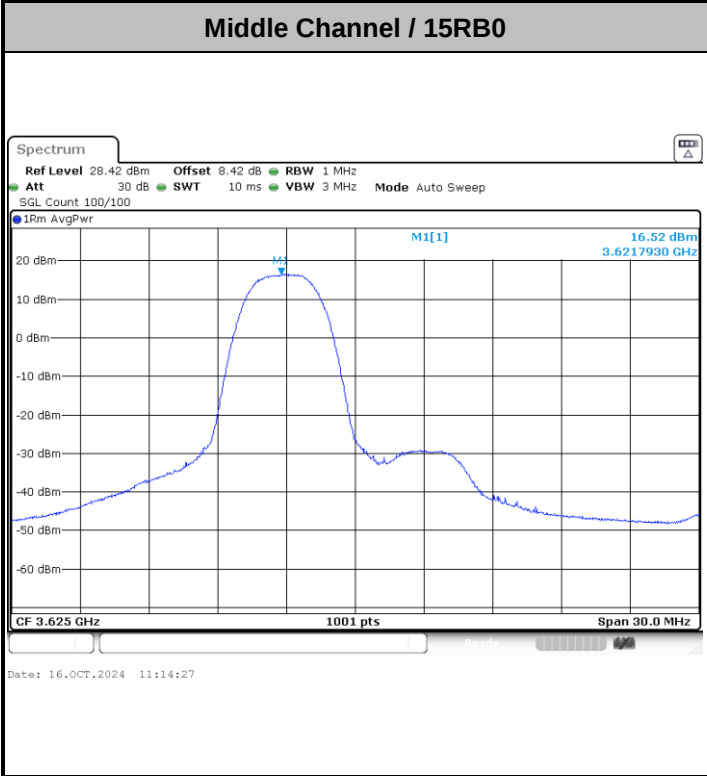
Date: 16.OCT.2024 11:19:02

Lowest Channel / 20RB0



Date: 16.OCT.2024 11:19:53



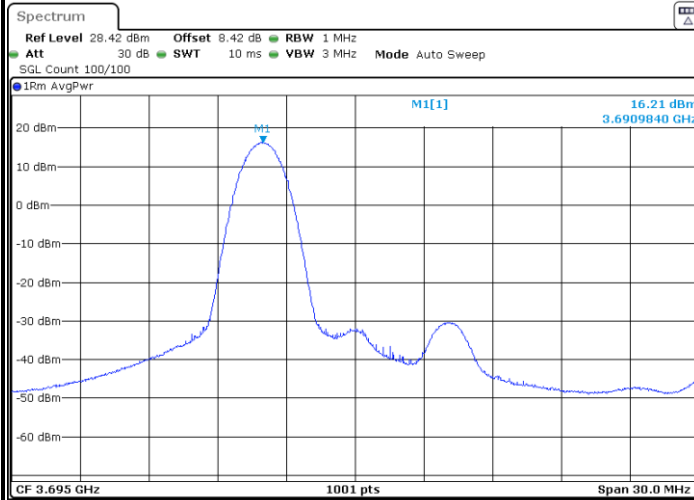




LTE Band 48 / 10MHz

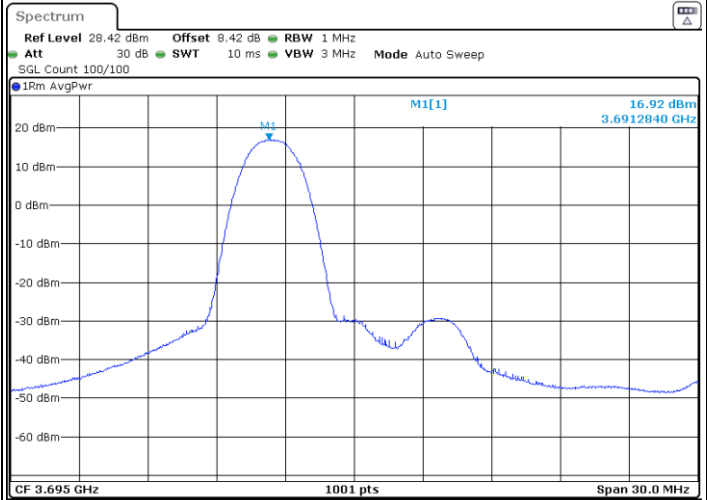
QPSK

Highest Channel / 5RB0



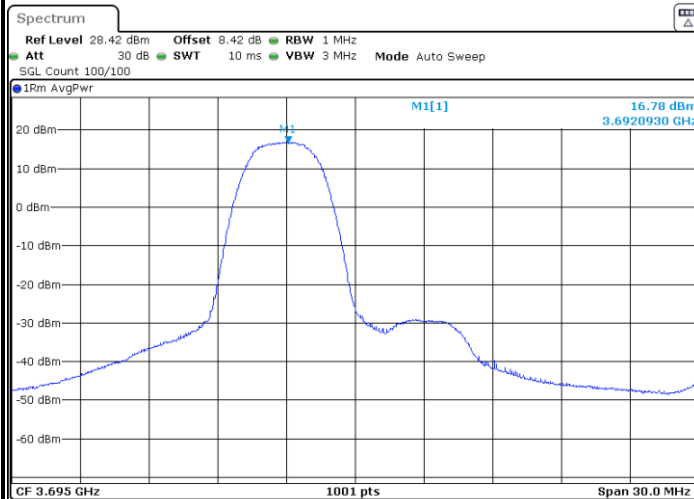
Date: 16.OCT.2024 11:27:29

Highest Channel / 10RB0



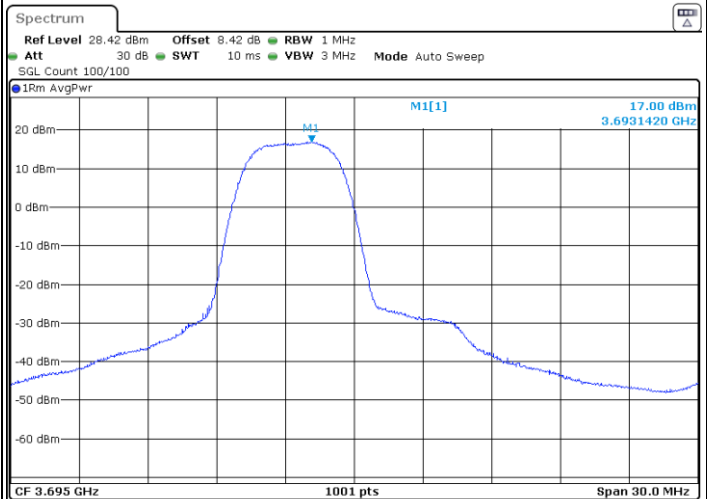
Date: 16.OCT.2024 11:26:32

Highest Channel / 15RB0



Date: 16.OCT.2024 11:25:46

Highest Channel / 20RB0



Date: 16.OCT.2024 11:24:51