



FCC RADIO TEST REPORT

FCC ID : RI7FN990B40
Equipment : 5G NR Module
Brand Name : 
Model Name : FN990B40
Marketing Name : FN990B40
Applicant : Telit Communications S.p.A.
Via Stazione Di Prosecco 5/B, Trieste 34010, Italy
Manufacturer : Telit Communications S.p.A.
Via Stazione Di Prosecco 5/B, Trieste 34010, Italy
Standard : FCC 47 CFR Part 2, 25, 27

The product was received on Oct. 13, 2024 and testing was performed from Oct. 27, 2025 to Nov. 14, 2025. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

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



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History of this test report

Report No.	Version	Description	Issue Date
FG4O1530-03B	01	Initial issue of report	Nov. 25, 2025



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046 §25.149 (c)(4)(iii)	Conducted Output Power	Pass	-
	§25.149 (c)(4)(iii)	Equivalent Isotropic Radiated Power (Band 53)	Pass	
	§27.1507 (a)	Effective Radiated Power (Band 106)		
3.3	§25.149 (c)(4)(iii) §27.54	Peak-to-Average Ratio	Reporting only	-
3.4	§2.1049 §25.149 (c)(4)(ii) §27.54	Occupied Bandwidth	Pass	-
3.5	25.149(c)(4)(iv)	Power spectral density	Pass	-
3.6	§2.1051 §25.149 (c)(4)(v.vi)	Conducted Band Edge Measurement (Band 53)	Pass	-
	§2.1051 §27.1509 (a)	Conducted Band Edge Measuremen (Band 106)		
3.7	§2.1051 §25.149 (c)(4)(v.vi)	Conducted Spurious Emission (Band 53)	Pass	-
	§2.1051 §27.1509 (a)	Conducted Spurious Emission (Band 106)		
3.8	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Pass	-
4.2	§2.1053 §25.149 (c)(4)(v.vi)	Radiated Spurious Emission (Band 53)	Pass	-
	§2.1053 §27.1509 (a)	Radiated Spurious Emission (Band 106)		

Note: This is a variant report by adding new Bandwidth. All the test cases were performed on original report which can be referred to Sporton Report Number FG4O1530B. Based on the original report, only worst case was verified.

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/manufacturer 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.

Reviewed by: Keven Cheng

Report Producer: Hannah Yang



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs WCDMA/LTE/5G NR and GNSS.	
Antenna Type WWAN: Monopole Antenna	
HW Version: 1.00 HW Version: 1.10 SW Version for HW:1.00: M0W.103001 SW Version for HW:1.10: M0W.101001	

Support band and evaluated information	
Supported band	B2, B4, B5, B7, B12, B13, B14, B17, B25, B26, B30, B38, B41, B42, B43, B53, B66, B71, B106, B2C, B5B, B7C, B12B, B38C, B41C, B42C, B43C, B66B, B66C
Evaluated and Tested band	B53, B106

FDD/TDD band Power Class				
	SISO PC3	SISO PC2		
B2/B2C	V			
B4	V			
B5/B5B	V			
B7/B7C	V			
B12/B12B	V			
B13	V			
B14	V			
B17	V			
B25	V			
B26	V			
B30	V			
B38/ B38C	V			
B41/ B41C	V	V		
B42/ B42C	V			
B43/ B43C	V			
B53	V			
B66/B66C	V			
B70	V			
B71	V			
B106	V			



RF Exposure							
Max Antenna Gain information(dBi)							
Band	Ant0						Main Ant. #
B2	8						0
B4	2						0
B5	9.9						0
B7	8						0
B12	9.1						0
B13	9.6						0
B14	9.7						0
B17	9.1						0
B25	8						0
B26	9.9						0
B30	1						0
B38	8						0
B41(PC3)	8						0
B41(PC2)	5						0
B42	0.5						0
B43	0.5						0
B53	5.5						0
B66	2						0
B70	5						0
B71	8.9						0
B106	10.7						0

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

1.2 Modification of EUT

No modifications made to the EUT during the testing.



1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH03-HY
Test Engineer	Cotty Hsu
Temperature (°C)	22.3~22.9
Relative Humidity (%)	53.2~55.5

Test Site	Sporton International Inc. Wensan Laboratory.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH12-HY (TAF Code: 3786)
Test Engineer	Gerry Wei, Tim Lee and Wilson Wu
Temperature (°C)	20~25
Relative Humidity (%)	50~60
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC Designation No.: TW1190 and TW3786

1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ FCC 47 CFR Part 2, 25, 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna two config (Degree 0 and Degree 90) and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report..

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

<Band 53>

Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D	All	1, Half, Full	L, M, H
EIRP	A, B, C, D	All	1, Half, Full	L, M, H
PAR	A, B, C, D	10 MHz	Outer_Full	M
Bandwidth	A, B	All	Outer_Full	M
CBE	A	All	1RB Full	L, H
CSE	A	All	Inner_1RB	L, M, H
Frequency Stability	A	10 MHz	Outer_Full	M
RSE	A	10 MHz	Inner_1RB	L, M, H

Remark:

1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.
2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported.
3. One representative bandwidth is selected to perform PAR and frequency stability.

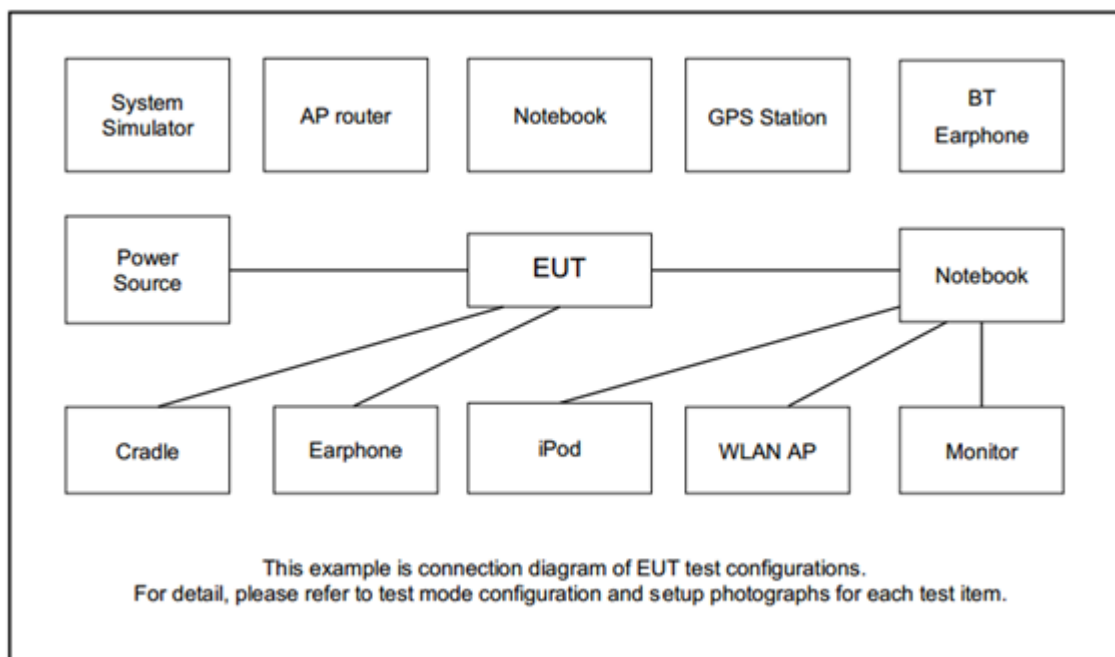
<Band 106>

Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D	All	1, Half, Full	L, M, H
EIRP	A, B, C, D	All	1, Half, Full	L, M, H
PAR	A, B, C, D	3MHz	Full	M
Bandwidth	A, B	All	Full	M
CBE	A, B	All	1RB Full	L, H
CSE	A	All	1RB	L, M, H
Frequency Stability	A	1.4 MHz	Full	M
RSE	A	Max	1RB	L, M, H

Remark:

1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.
2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported.
3. One representative bandwidth is selected to perform PAR and frequency stability.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	8821C	N/A	N/A	Unshielded, 1.8 m



2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

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

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

Band 53 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	60190	60198	60205
	Frequency	2488.5	2489.3	2490
5	Channel	60165	60198	60230
	Frequency	2486	2489.3	2492.5
3	Channel	60155	60198	60240
	Frequency	2485	2489.3	2493.5
1.4	Channel	60147	60198	60248
	Frequency	2484.2	2489.3	2494.3

Band 106 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
3	Channel	-	134322	-
	Frequency	-	899	-
1.4	Channel	134314	134322	134330
	Frequency	898.2	899	899.8

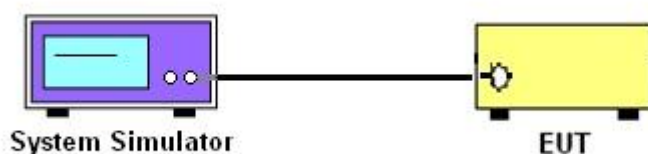
3 Conducted Test Items

3.1 Measuring Instruments

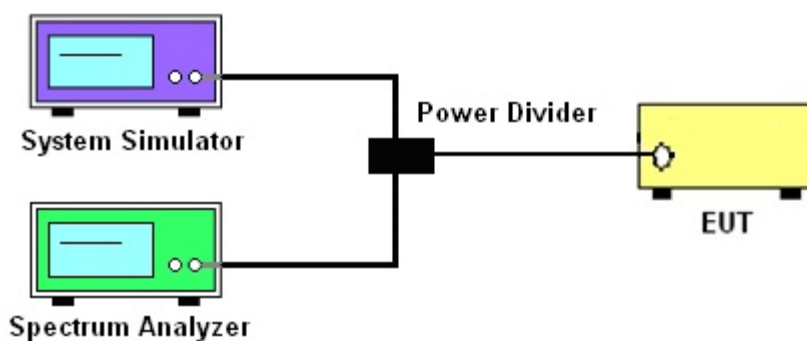
See list of measuring instruments of this test report.

3.1.1 Test Setup

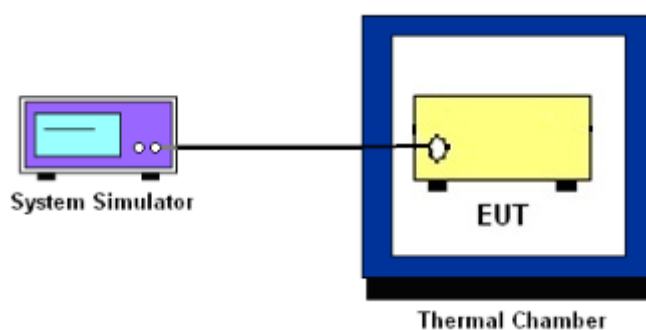
3.1.2 Conducted Output Power



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



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP

3.2.1 Description of the Conducted Output Power Measurement and 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 maximum transmit power is no more than 1 W with a peak EIRP of no more than 6 dBW;

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 106.

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 6dB and 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 6dB and 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.4.2 Test Procedures

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

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
6. Determine the "6dB and -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 Power spectral density

3.5.1 Description of Power Spectral Density

The maximum power spectral density conducted to the antenna is not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

3.5.2 Test Procedures

1. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
2. Set the maximum power setting and enable the EUT to transmit continuously.
3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz
4. Detector = RMS, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
5. Measure and record the results in the test report.



3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

Emissions below 2483.5 MHz are attenuated below the transmitter power (P) measured in watts by a factor of at least $40 + 10 \log (P)$ dB at the channel edge at 2483.5 MHz, $43 + 10 \log (P)$ dB at 5 MHz from the channel edge, and $55 + 10 \log (P)$ dB at X MHz from the channel edge where X is the greater of 6 MHz or the actual emission bandwidth.

Emissions above 2495 MHz are attenuated below the transmitter power (P) measured in watts by a factor of at least $43 + 10 \log (P)$ dB on all frequencies between the channel edge at 2495 MHz and X MHz from this channel edge and $55 + 10 \log (P)$ dB on all frequencies more than X MHz from this channel edge, where X is the greater of 6 MHz or the actual emission bandwidth;

Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately above and adjacent to the 2495 MHz a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. If 1 percent of the emission bandwidth of the fundamental emission is less than 1 MHz, the power measured must be integrated over the required measurement bandwidth of 1 MHz. A resolution bandwidth narrower than 1 MHz is permitted to improve measurement accuracy, provided the measured power is integrated over the full required measurement bandwidth (*i.e.*, 1 MHz). The emission bandwidth of the fundamental emission of a transmitter is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

27.1509 (a)

For operations in the 897.5 - 900.5 MHz band, the FCC limit is $43 + 10 \log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 100kHz 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.



3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

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



3.7 Conducted Spurious Emission

3.7.1 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.

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

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 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 conducted spurious emission for the whole frequency range was taken.
4. Make the measurement with the spectrum analyzer's RBW = 100 kHz if the authorized frequency band/block is at or below 1 GHz and 1 MHz if the authorized frequency band/block is above 1 GHz, VBW = 3 * RBW.
5. Set spectrum analyzer with RMS detector.
6. Taking the record of maximum spurious emission.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



3.8 Frequency Stability

3.8.1 Description of Frequency Stability Measurement

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

3.8.2 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.

3.8.3 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±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.

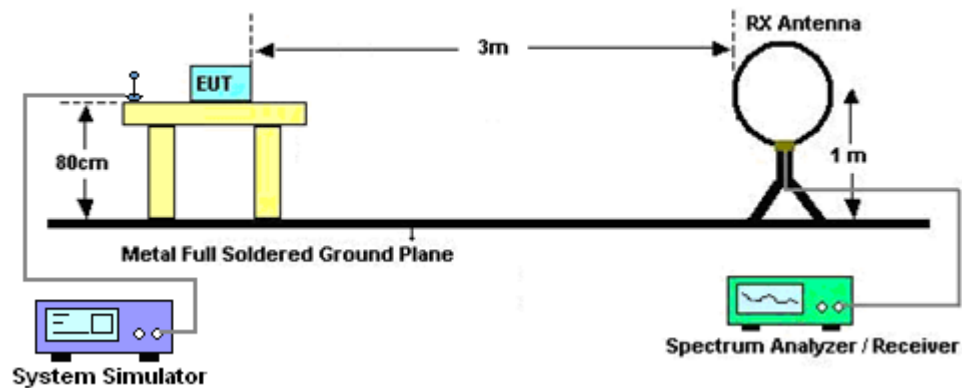
4 Radiated Test Items

4.1 Measuring Instruments

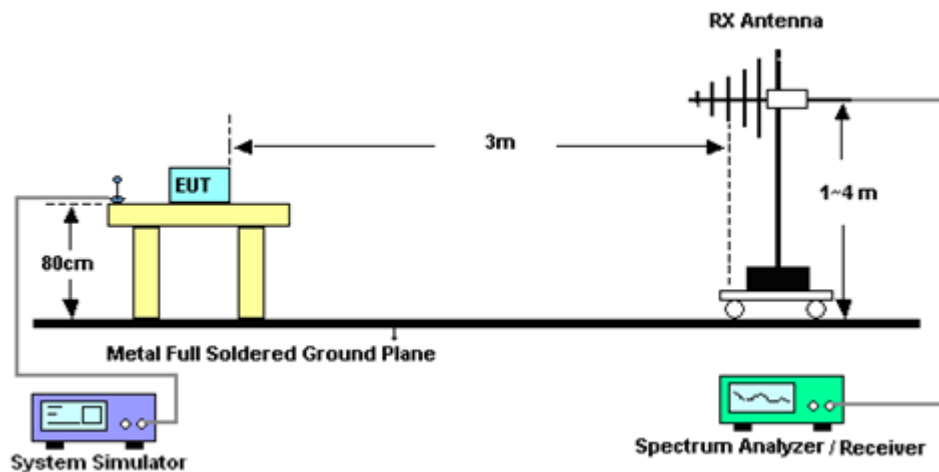
See list of measuring instruments of this test report.

4.1.1 Test Setup

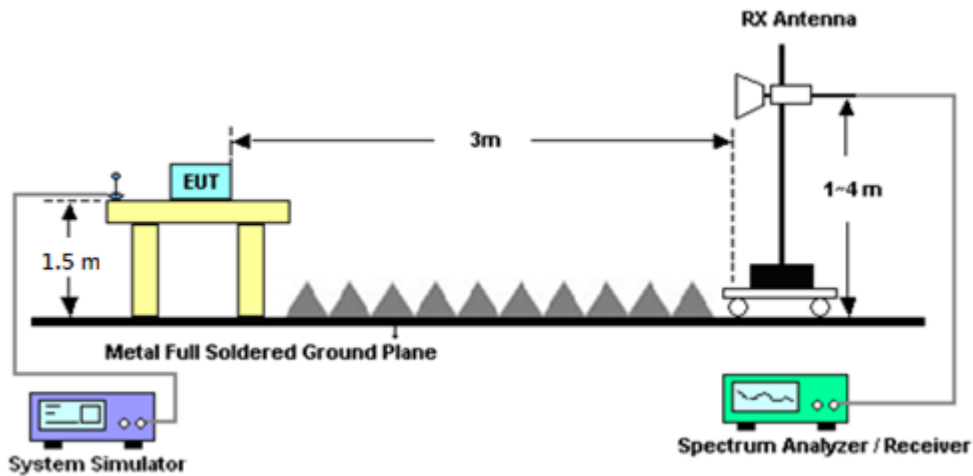
For radiated test below 30MHz



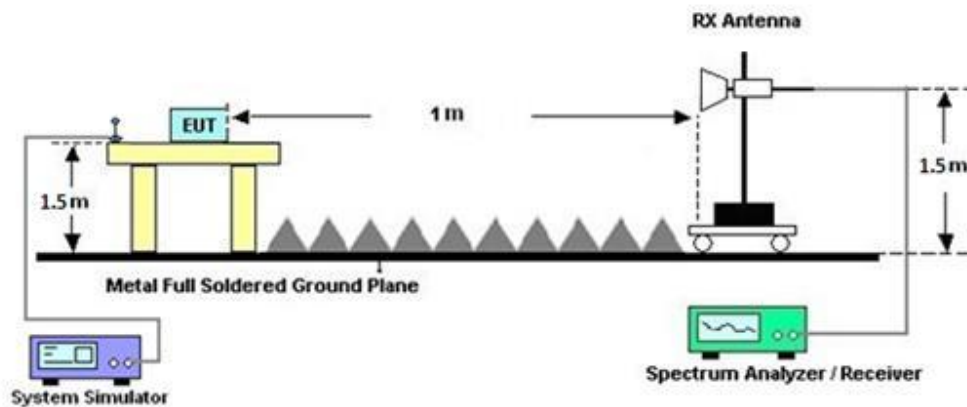
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

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

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



4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI 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 $43 + 10 \log (P)$ dB.

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

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI C63.26-2015 section 5.5.4 Radiated measurement using the field strength method.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. To convert spectrum reading E(dBuV/m) to EIRP(dBm)
$$\text{EIRP(dBm)} = \text{Level (dBuV/m)} + 20\log(d) - 104.77,$$
where d is the distance at which field strength limit is specified in the rules
7.
$$\text{Field Strength Level (dBm)} = \text{Spectrum Reading (dBm)} + \text{Antenna Factor} + \text{Cable Loss} + \text{Read Level} - \text{Preamplifier Factor}.$$
8.
$$\text{ERP (dBm)} = \text{EIRP (dBm)} - 2.15$$
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2E	101108	9 kHz~30 MHz	Dec. 18, 2024	Oct. 27, 2025~ Nov. 12, 2025	Dec. 17, 2025	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Nov. 27, 2024	Oct. 27, 2025~ Nov. 12, 2025	Nov. 26, 2025	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Jul. 02, 2025	Oct. 27, 2025~ Nov. 12, 2025	Jul. 01, 2026	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1223	18GHz~40GHz	Jul. 02, 2025	Oct. 27, 2025~ Nov. 12, 2025	Jul. 01, 2026	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 19, 2025	Oct. 27, 2025~ Nov. 12, 2025	Mar. 18, 2026	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	Feb. 07, 2025	Oct. 27, 2025~ Nov. 12, 2025	Feb. 06, 2026	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900269	1GHz~18GHz	Dec. 19, 2024	Oct. 27, 2025~ Nov. 12, 2025	Dec. 18, 2025	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 02, 2024	Oct. 27, 2025~ Nov. 12, 2025	Dec. 01, 2025	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Sep. 09, 2025	Oct. 27, 2025~ Nov. 12, 2025	Sep. 08, 2026	Radiation (03CH12-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290053	20Hz~26.5GHz	Sep. 08, 2025	Oct. 27, 2025~ Nov. 12, 2025	Sep. 07, 2026	Radiation (03CH12-HY)
Notch Filter	Wainwright	WLKS1200-12 SS	SN2	1.2GHz Low Pass Filter	Mar. 12, 2025	Oct. 27, 2025~ Nov. 12, 2025	Mar. 11, 2026	Radiation (03CH12-HY)
Notch Filter	Wainwright	WHKX8-5872. 5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 12, 2025	Oct. 27, 2025~ Nov. 12, 2025	Mar. 11, 2026	Radiation (03CH12-HY)
Notch Filter	Wainwright	WHKX12-2700 -3000-18000-60ST	SN2	3GHz High Pass Filter	Mar. 12, 2025	Oct. 27, 2025~ Nov. 12, 2025	Mar. 11, 2026	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 19, 2024	Oct. 27, 2025~ Nov. 12, 2025	Dec. 18, 2025	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY519228/2, 803950/2,50 8407/2E	30MHz~40GHz	Sep. 24, 2025	Oct. 27, 2025~ Nov. 12, 2025	Sep. 23, 2026	Radiation (03CH12-HY)
RF Cable	EMCI	EMC101Y-KM- KM-100	240907	30MHz~40GHz	Nov. 14, 2024	Oct. 27, 2025~ Nov. 12, 2025	Nov. 13, 2025	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP210090	N/A	Aug. 26, 2025	Oct. 27, 2025~ Nov. 12, 2025	Aug. 25, 2026	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 27, 2025~ Nov. 12, 2025	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Oct. 27, 2025~ Nov. 12, 2025	N/A	Radiation (03CH12-HY)
5G Wireless Test Platform	Anritsu	MT8000A	6262134933	FR1	Jul. 18, 2025	Oct. 27, 2025~ Nov. 12, 2025	Jul. 17, 2026	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Oct. 27, 2025~ Nov. 12, 2025	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Oct. 27, 2025~ Nov. 12, 2025	N/A	Radiation (03CH12-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 08, 2025	Oct. 31, 2025~ Nov. 14, 2025	Oct. 07, 2026	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 10, 2025	Oct. 31, 2025~ Nov. 14, 2025	Sep. 09, 2026	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPE-2323	GET861546	0V~64V ; 0A~6A	Jun. 03, 2025	Oct. 31, 2025~ Nov. 14, 2025	Jun. 02, 2026	Conducted (TH03-HY)
Coupler+10dB + RfCable	Warison + WoKen + E-Instument	20dB 25W SMA Directional Coupler+ 10dB 18GHz_5W+S FL405_1.5M	#A+#1+#1+# 7	1-18GHz	Jan. 03, 2025	Oct. 31, 2025~ Nov. 14, 2025	Jan. 02, 2026	Conducted (TH03-HY)
Power divider	Anritsu	K241C	2143398	9KHz~40GHz	Jun. 13,2025	Oct. 31, 2025~ Nov. 14, 2025	Jun. 12,2026	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101905	10Hz~40GHz	Jul. 21, 2025	Oct. 31, 2025~ Nov. 14, 2025	Jul. 20, 2026	Conducted (TH03-HY)
Software	Sporton	LTE Conducted Test Tools	N/A	Conducted Test Item	N/A	Oct. 31, 2025~ Nov. 14, 2025	N/A	Conducted (TH03-HY)
Hygrometer	TECPEL	DTM-303B	TP200886	-10 ~ 50℃ / 20 ~ 95%RH	Mar. 03,2025	Oct. 31, 2025~ Nov. 14, 2025	Mar. 02,2026	Conducted (TH03-HY)



6 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.5 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 6 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9 dB
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Uncertainty of Radiated Emission Measurement (6 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.7 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power (Average power and ERI/EIRP)

Part 27P LTE Band 106 Maximum Average Power [dBm] (GT - LC = 10.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0	QPSK	-	22.87	-	31.42	1.3868
3	1	8		-	22.81	-		
3	1	14		-	22.75	-		
3	8	0		-	21.69	-		
3	8	4		-	21.81	-		
3	8	7		-	21.77	-		
3	15	0		-	21.80	-		
3	1	0	16-QAM	-	22.03	-	30.74	1.1858
3	1	8		-	22.19	-		
3	1	14		-	21.95	-		
3	8	0		-	20.74	-		
3	8	4		-	20.82	-		
3	8	7		-	20.80	-		
3	15	0		-	20.86	-		
3	1	0	64-QAM	-	20.90	-	29.50	0.8913
3	1	8		-	20.93	-		
3	1	14		-	20.95	-		
3	8	0		-	19.74	-		
3	8	4		-	19.82	-		
3	8	7		-	19.88	-		
3	15	0		-	19.81	-		
3	1	0	256-QAM	-	17.75	-	26.39	0.4355
3	1	8		-	17.83	-		
3	1	14		-	17.82	-		
3	8	0		-	17.69	-		
3	8	4		-	17.84	-		
3	8	7		-	17.76	-		
3	15	0		-	17.81	-		
Limit	ERP < 3W			Result			Pass	

Part 27P LTE Band 106 Maximum Average Power [dBm] (GT - LC = 10.7 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0	QPSK	22.71	22.83	22.81	31.38	1.3740
1.4	1	3		22.65	22.76	22.72		
1.4	1	5		22.56	22.70	22.67		
1.4	3	0		21.45	21.59	21.54		
1.4	3	1		21.61	21.72	21.69		
1.4	3	3		21.57	21.70	21.68		
1.4	6	0		21.61	21.73	21.69		
1.4	1	0	16-QAM	21.83	21.93	21.91	30.66	1.1641
1.4	1	3		22.00	22.11	22.07		
1.4	1	5		21.76	21.90	21.86		
1.4	3	0		20.51	20.65	20.63		
1.4	3	1		20.64	20.76	20.72		
1.4	3	3		20.59	20.70	20.65		
1.4	6	0		20.70	20.80	20.75		
1.4	1	0	64-QAM	20.67	20.81	20.79	29.43	0.8770
1.4	1	3		20.73	20.88	20.84		
1.4	1	5		20.70	20.85	20.80		
1.4	3	0		19.50	19.65	19.62		
1.4	3	1		19.67	19.77	19.73		
1.4	3	3		19.70	19.83	19.79		
1.4	6	0		19.59	19.74	19.71		
1.4	1	0	256-QAM	17.56	17.69	17.65	26.33	0.4295
1.4	1	3		17.67	17.78	17.76		
1.4	1	5		17.62	17.73	17.68		
1.4	3	0		17.46	17.61	17.58		
1.4	3	1		17.64	17.75	17.71		
1.4	3	3		17.58	17.70	17.67		
1.4	6	0		17.62	17.75	17.73		
Limit	ERP < 3W			Result			Pass	

LTE Band 53 Maximum Average Power [dBm] (GT - LC = 5.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	24.08	24.12	24.07	29.62	0.9162
10	1	25		24.05	24.09	24.02		
10	1	49		23.93	23.97	23.90		
10	25	0		23.10	23.15	23.10		
10	25	12		23.06	23.13	23.05		
10	25	25		23.12	23.20	23.15		
10	50	0		23.08	23.13	23.08		
10	1	0	16-QAM	23.45	23.50	23.41	29.05	0.8035
10	1	25		23.50	23.55	23.46		
10	1	49		23.31	23.34	23.25		
10	25	0		22.16	22.22	22.15		
10	25	12		22.20	22.24	22.16		
10	25	25		22.18	22.23	22.14		
10	50	0		22.11	22.15	22.05		
10	1	0	64-QAM	22.19	22.24	22.16	27.93	0.6209
10	1	25		22.36	22.43	22.32		
10	1	49		22.21	22.25	22.26		
10	25	0		21.18	21.21	21.16		
10	25	12		21.15	21.17	21.12		
10	25	25		21.20	21.23	21.15		
10	50	0		21.17	21.22	21.14		
10	1	0	256-QAM	19.05	19.10	19.02	24.68	0.2938
10	1	25		19.10	19.13	19.05		
10	1	49		18.95	18.99	18.99		
10	25	0		19.14	19.18	19.10		
10	25	12		19.11	19.16	19.12		
10	25	25		19.15	19.17	19.10		
10	50	0		19.10	19.14	19.05		
Limit	EIRP < 1W			Result			Pass	

LTE Band 53 Maximum Average Power [dBm] (GT - LC = 5.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	23.97	24.08	23.97	29.58	0.9078
5	1	12		23.98	24.04	23.96		
5	1	24		23.81	23.90	23.84		
5	12	0		22.98	23.10	23.04		
5	12	7		22.94	23.01	22.99		
5	12	13		23.05	23.09	23.08		
5	25	0		22.97	23.05	23.02		
5	1	0	16-QAM	23.34	23.45	23.36	28.95	0.7852
5	1	12		23.43	23.44	23.36		
5	1	24		23.26	23.28	23.16		
5	12	0		22.11	22.13	22.09		
5	12	7		22.09	22.12	22.08		
5	12	13		22.13	22.15	22.08		
5	25	0		22.04	22.03	21.95		
5	1	0	64-QAM	22.08	22.16	22.06	27.87	0.6124
5	1	12		22.30	22.37	22.21		
5	1	24		22.16	22.15	22.19		
5	12	0		21.06	21.16	21.07		
5	12	7		21.03	21.08	21.05		
5	12	13		21.12	21.15	21.04		
5	25	0		21.11	21.10	21.06		
5	1	0	256-QAM	18.95	19.05	18.94	24.61	0.2891
5	1	12		19.04	19.06	18.98		
5	1	24		18.87	18.90	18.87		
5	12	0		19.03	19.11	19.03		
5	12	7		19.01	19.05	19.05		
5	12	13		19.04	19.09	19.05		
5	25	0		19.02	19.06	18.99		
Limit	EIRP < 1W			Result			Pass	

LTE Band 53 Maximum Average Power [dBm] (GT - LC = 5.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	23.98	24.05	23.95	29.55	0.9016
3	1	8		24.00	24.00	23.90		
3	1	14		23.88	23.87	23.85		
3	8	0		23.03	23.05	23.00		
3	8	4		22.95	23.04	22.96		
3	8	7		23.00	23.09	23.08		
3	15	0		22.98	23.04	23.00		
3	1	0	16-QAM	23.35	23.43	23.30	28.96	0.7870
3	1	8		23.45	23.46	23.38		
3	1	14		23.22	23.25	23.20		
3	8	0		22.05	22.12	22.06		
3	8	4		22.14	22.15	22.04		
3	8	7		22.12	22.15	22.05		
3	15	0		22.01	22.09	22.00		
3	1	0	64-QAM	22.12	22.19	22.07	27.85	0.6095
3	1	8		22.26	22.35	22.26		
3	1	14		22.10	22.17	22.15		
3	8	0		21.10	21.13	21.05		
3	8	4		21.05	21.05	21.03		
3	8	7		21.15	21.18	21.06		
3	15	0		21.08	21.11	21.08		
3	1	0	256-QAM	19.00	19.03	18.97	24.61	0.2891
3	1	8		19.03	19.03	18.97		
3	1	14		18.90	18.93	18.94		
3	8	0		19.03	19.11	19.02		
3	8	4		19.02	19.08	19.01		
3	8	7		19.04	19.10	18.98		
3	15	0		18.99	19.07	18.94		
Limit	EIRP < 1W			Result			Pass	

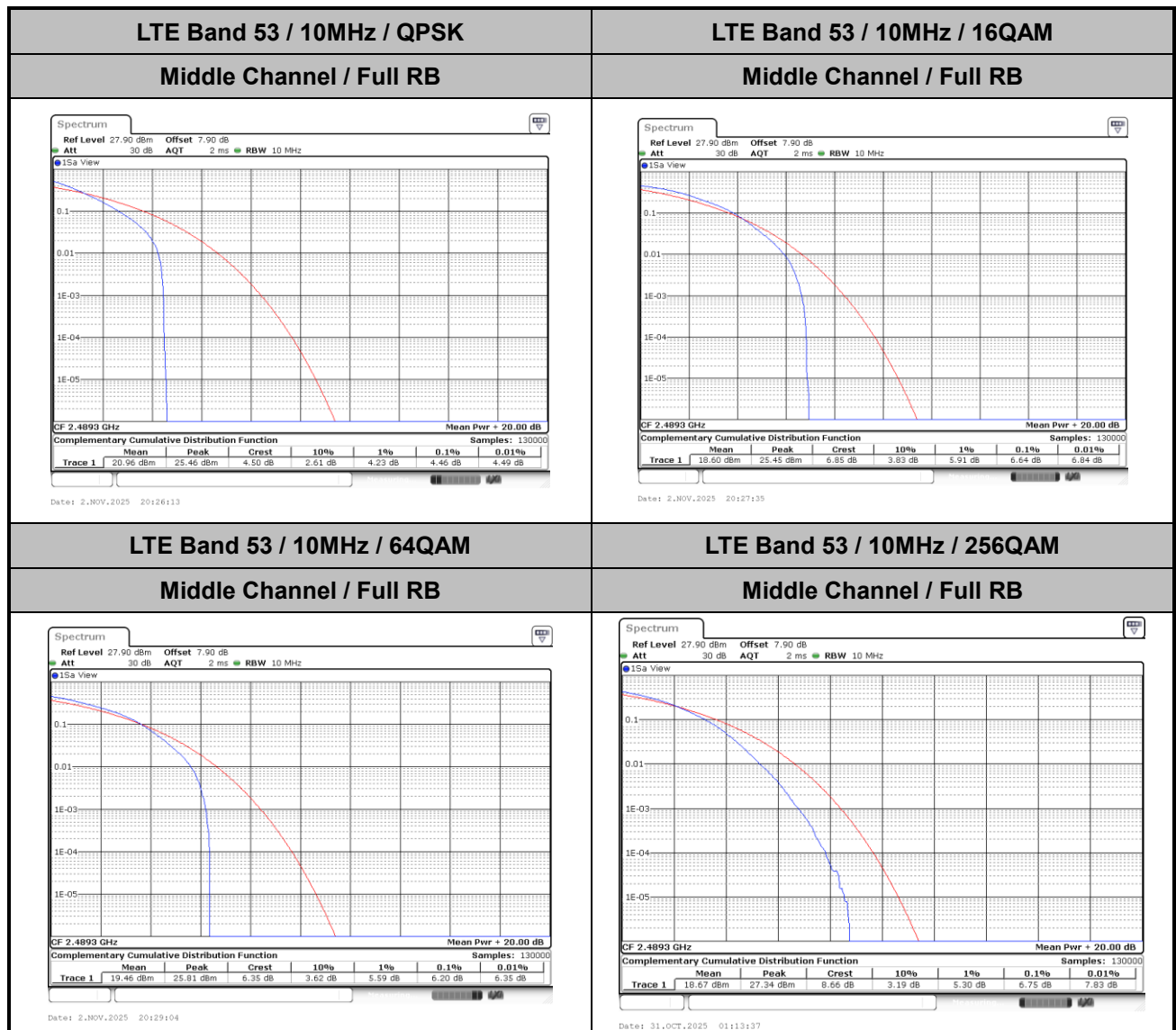
LTE Band 53 Maximum Average Power [dBm] (GT - LC = 5.5 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	23.97	24.06	23.96	29.56	0.9036
1.4	1	3		24.00	24.04	23.97		
1.4	1	5		23.83	23.88	23.85		
1.4	3	0		23.03	23.08	23.02		
1.4	3	1		22.99	23.03	22.98		
1.4	3	3		23.07	23.10	23.03		
1.4	6	0		23.03	23.05	22.98		
1.4	1	0	16-QAM	23.34	23.44	23.31	28.97	0.7889
1.4	1	3		23.45	23.47	23.41		
1.4	1	5		23.21	23.22	23.15		
1.4	3	0		22.09	22.14	22.04		
1.4	3	1		22.12	22.13	22.08		
1.4	3	3		22.06	22.12	22.09		
1.4	6	0		22.00	22.10	21.97		
1.4	1	0	64-QAM	22.11	22.16	22.09	27.82	0.6053
1.4	1	3		22.26	22.32	22.24		
1.4	1	5		22.09	22.17	22.17		
1.4	3	0		21.12	21.15	21.10		
1.4	3	1		21.06	21.09	21.01		
1.4	3	3		21.13	21.13	21.09		
1.4	6	0		21.09	21.15	21.05		
1.4	1	0	256-QAM	18.96	18.99	18.97	24.6	0.2884
1.4	1	3		19.04	19.01	18.99		
1.4	1	5		18.83	18.91	18.89		
1.4	3	0		19.02	19.09	19.02		
1.4	3	1		19.06	19.09	19.05		
1.4	3	3		19.07	19.10	18.98		
1.4	6	0		18.99	19.07	18.98		
Limit	EIRP < 1W			Result			Pass	



LTE Band 53

Peak-to-Average Ratio

Mode	LTE Band 53 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.46	6.64	6.20	6.75	PASS



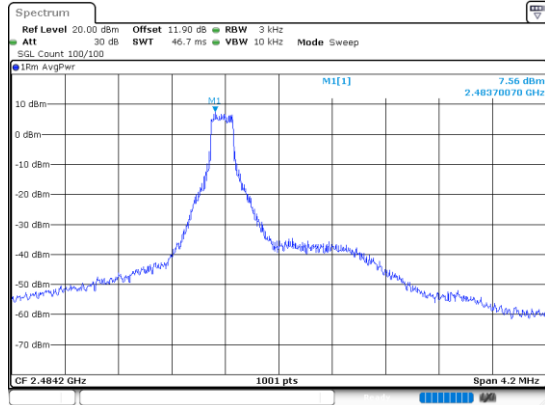
**Power Density**

Mode	LTE Band 53 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	7.56	7.62	7.74	7.36	7.85	6.50	7.38	6.29	-	-	-	-
Middle CH	7.03	7.50	7.79	7.49	7.82	6.89	7.24	6.50	-	-	-	-
Highest CH	7.89	7.13	7.29	6.98	6.70	6.66	7.37	5.09	-	-	-	-
Mode	LTE Band 53 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	6.50	3.03	6.20	3.40	5.72	2.68	5.43	2.27	-	-	-	-
Middle CH	6.44	4.04	6.21	3.36	5.68	2.58	5.33	2.28	-	-	-	-
Highest CH	6.32	4.24	6.03	2.37	5.41	2.73	5.08	2.37	-	-	-	-

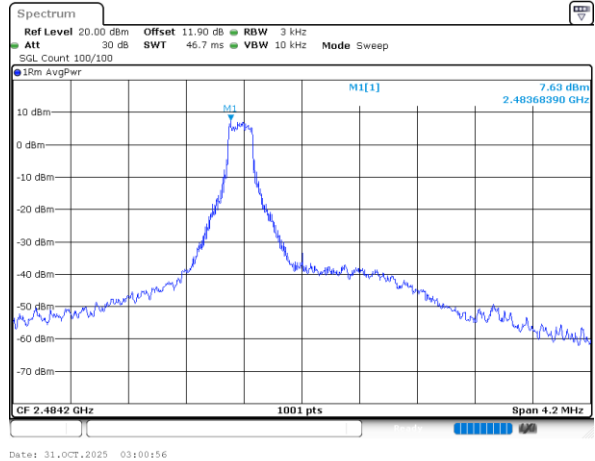


LTE Band 53 / 1.4MHz

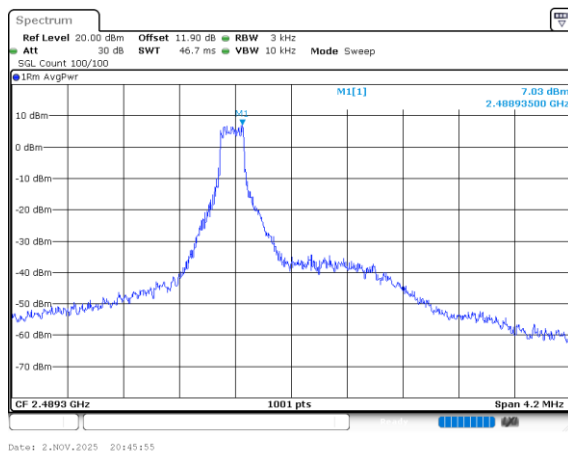
Lowest Channel / 1.4MHz / 1RB0 / QPSK



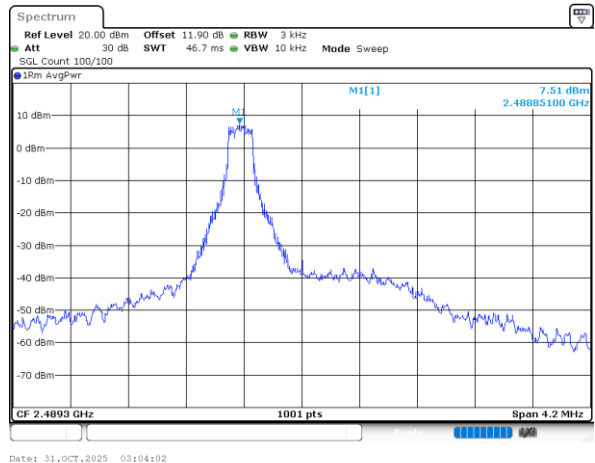
Lowest Channel / 1.4MHz / 1RB0 / 16QAM



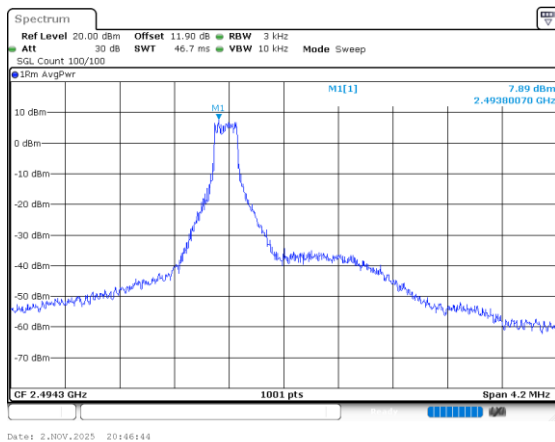
Middle Channel / 1.4MHz / 1RB0 / QPSK



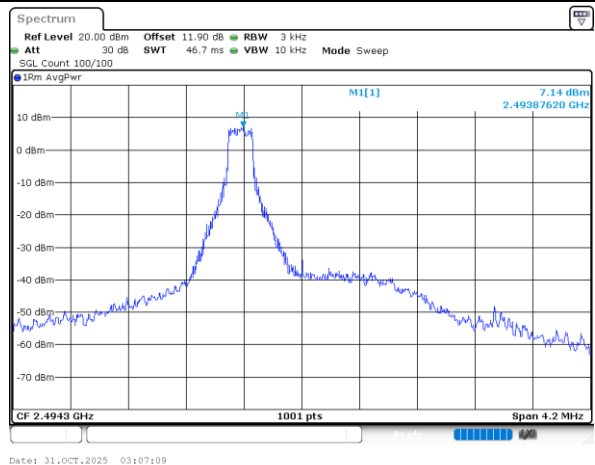
Middle Channel / 1.4MHz / 1RB0 / 16QAM



Highest Channel / 1.4MHz / 1RB0 / QPSK



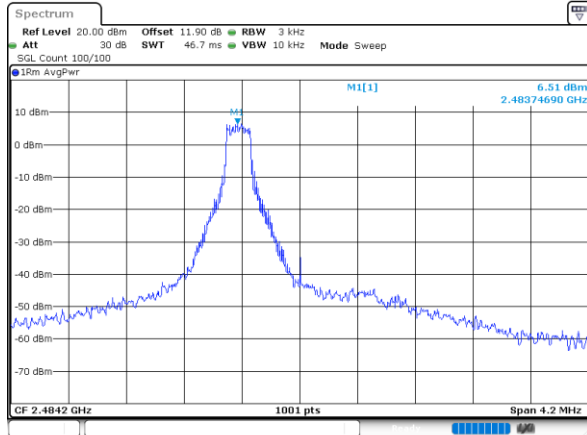
Highest Channel / 1.4MHz / 1RB0 / 16QAM





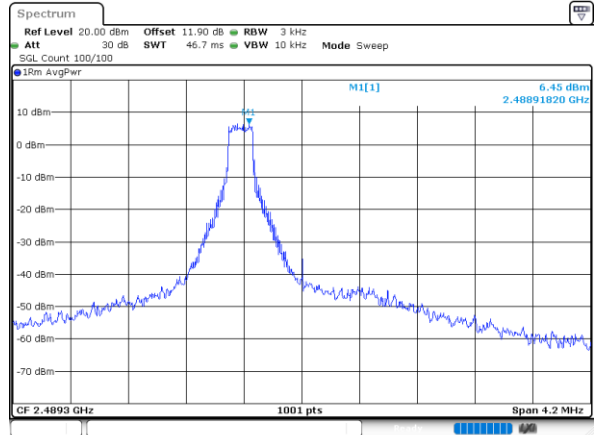
LTE Band 53 / 1.4MHz

Lowest Channel / 1.4MHz / 1RB0 / 64QAM



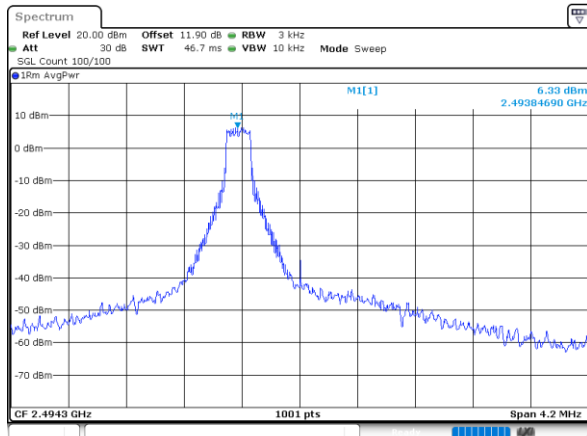
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Middle Channel / 1.4MHz / 1RB0 / 64QAM



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Highest Channel / 1.4MHz / 1RB0 / 64QAM

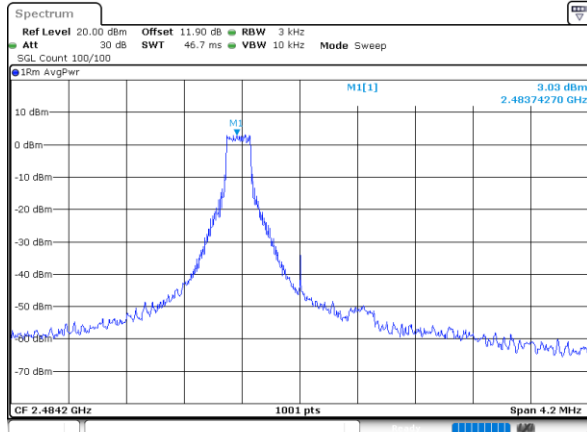


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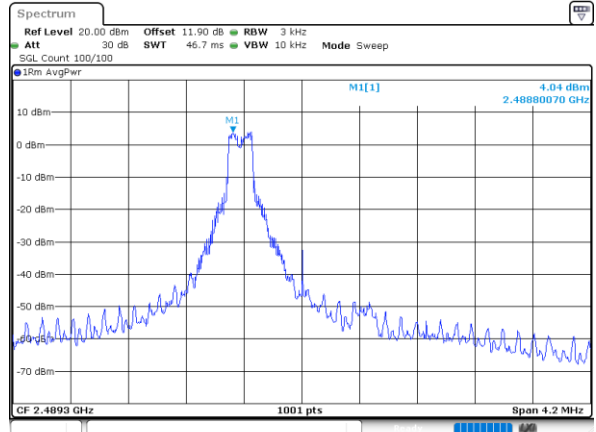


LTE Band 53 / 1.4MHz

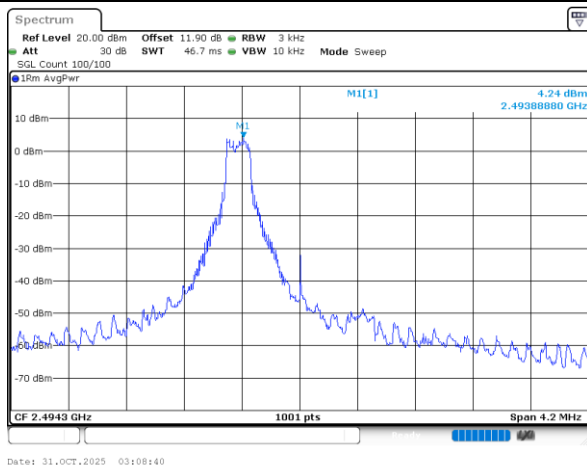
Lowest Channel / 1.4MHz / 1RB0 / 256QAM



Middle Channel / 1.4MHz / 1RB0 / 256QAM



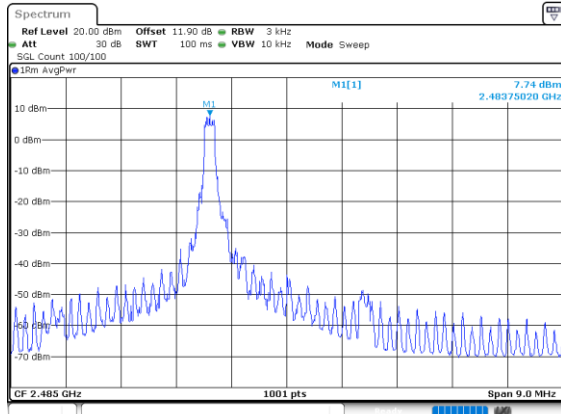
Highest Channel / 1.4MHz / 1RB0 / 256QAM





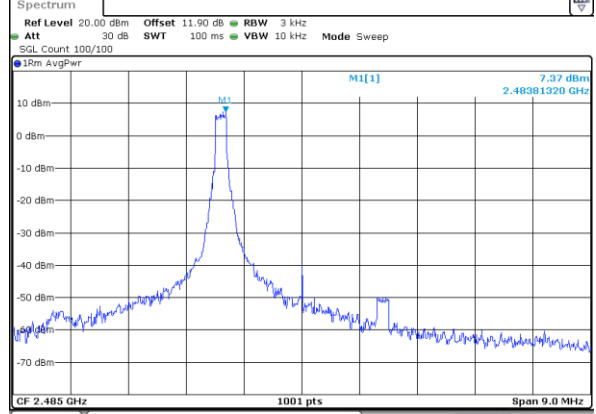
LTE Band 53 / 3MHz

Lowest Channel / 3MHz / 1RB0 / QPSK



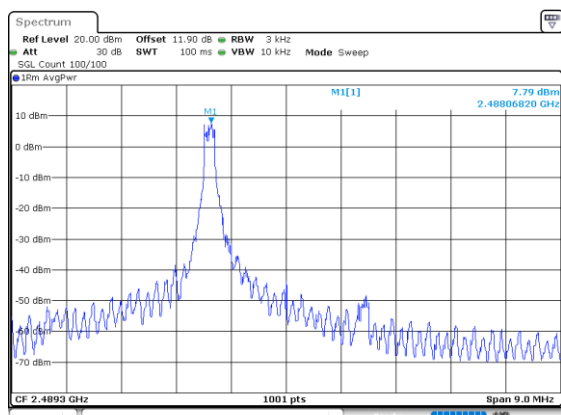
Date: 2.NOV.2025 20:49:10

Lowest Channel / 3MHz / 1RB0 / 16QAM



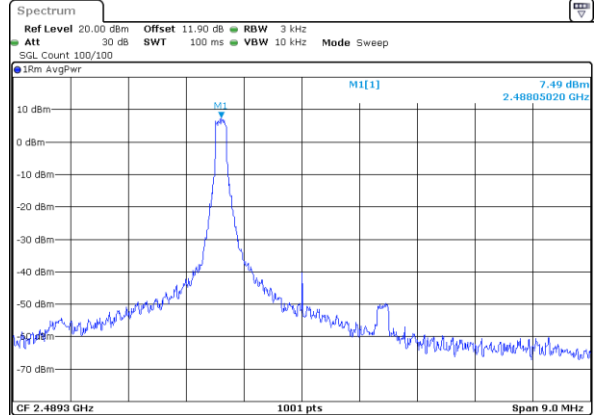
Date: 31.OCT.2025 03:10:22

Middle Channel / 3MHz / 1RB0 / QPSK



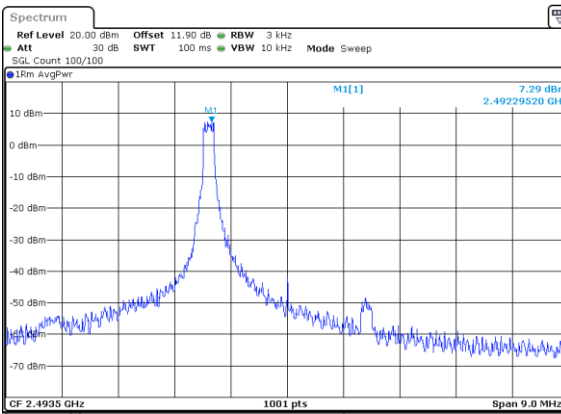
Date: 2.NOV.2025 21:07:03

Middle Channel / 1.4MHz / 1RB0 / 16QAM



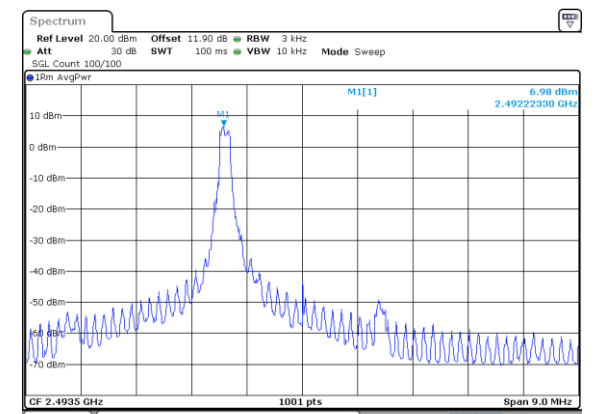
Date: 31.OCT.2025 03:14:31

Highest Channel / 3MHz / 1RB0 / QPSK



Date: 2.NOV.2025 20:50:49

Highest Channel / 3MHz / 1RB0 / 16QAM

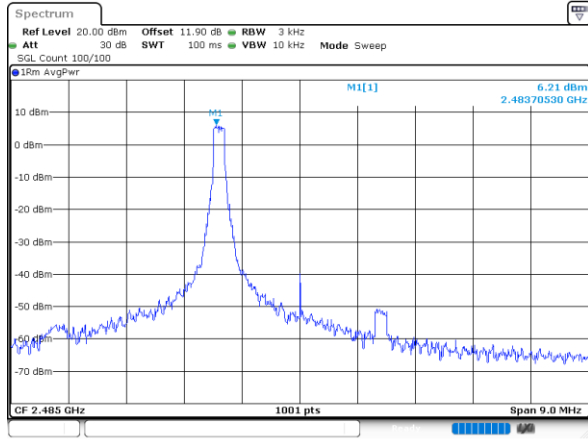


Date: 2.NOV.2025 20:51:39



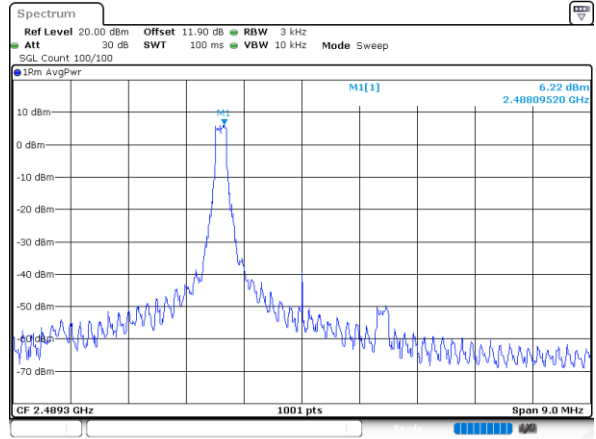
LTE Band 53 / 3MHz

Lowest Channel / 3MHz / 1RB0 / 64QAM



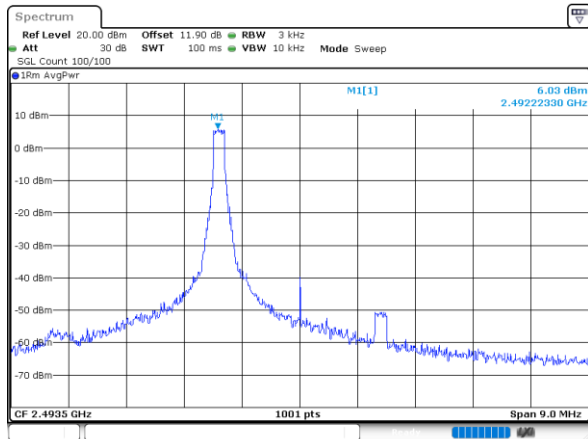
Date: 31.OCT.2025 03:11:28

Middle Channel / 3MHz / 1RB0 / 64QAM



Date: 31.OCT.2025 03:11:28

Highest Channel / 3MHz / 1RB0 / 64QAM

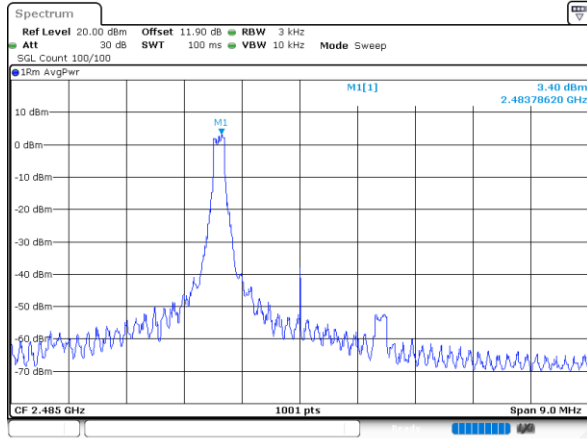


Date: 31.OCT.2025 03:18:55



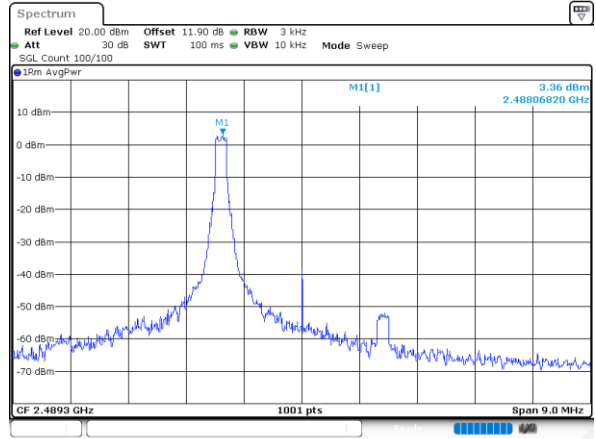
LTE Band 53 / 3MHz

Lowest Channel / 3MHz / 1RB0 / 256QAM



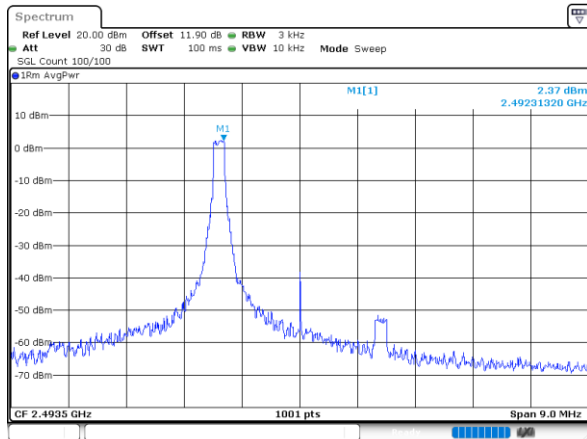
Date: 31.OCT.2025 03:12:30

Middle Channel / 3MHz / 1RB0 / 256QAM



Date: 31.OCT.2025 03:16:21

Highest Channel / 3MHz / 1RB0 / 256QAM

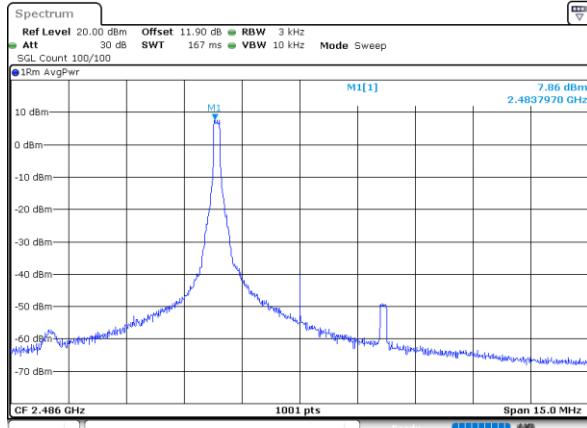


Date: 31.OCT.2025 03:19:46



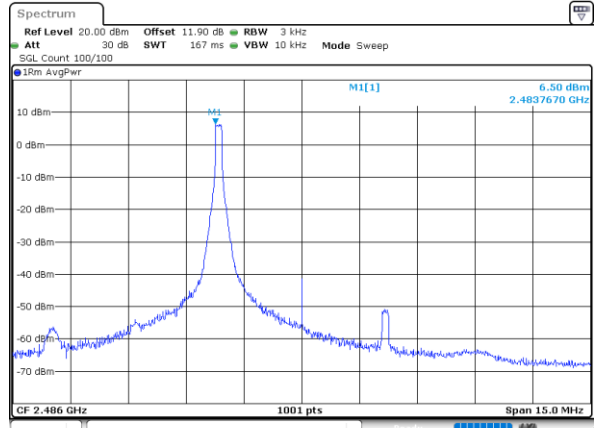
LTE Band 53 / 5MHz

Lowest Channel / 5MHz / 1RB0 / QPSK



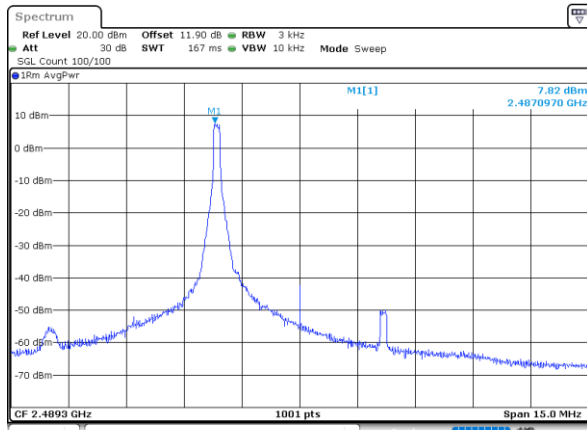
Date: 31.OCT.2025 03:20:46

Lowest Channel / 5MHz / 1RB0 / 16QAM



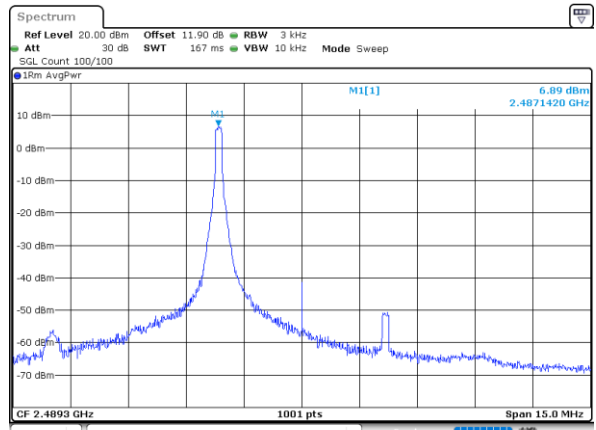
Date: 31.OCT.2025 03:21:44

Middle Channel / 5MHz / 1RB0 / QPSK



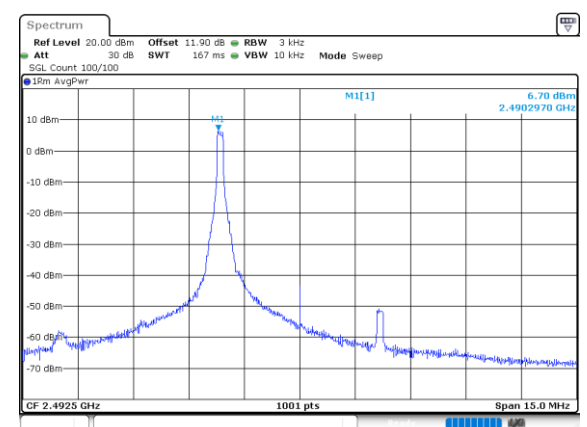
Date: 31.OCT.2025 03:24:37

Middle Channel / 5MHz / 1RB0 / 16QAM



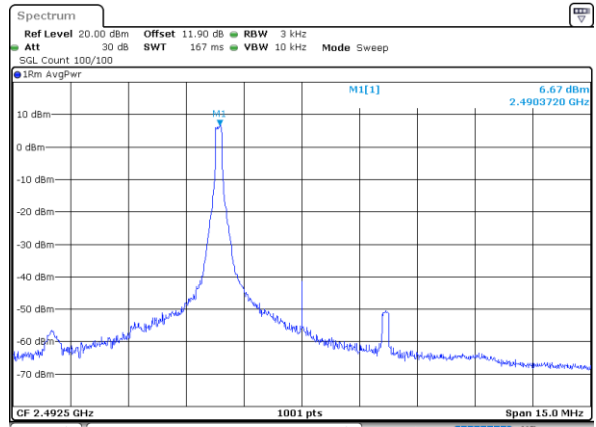
Date: 31.OCT.2025 03:25:34

Highest Channel / 5MHz / 1RB0 / QPSK



Date: 2.NOV.2025 21:10:07

Highest Channel / 5MHz / 1RB0 / 16QAM

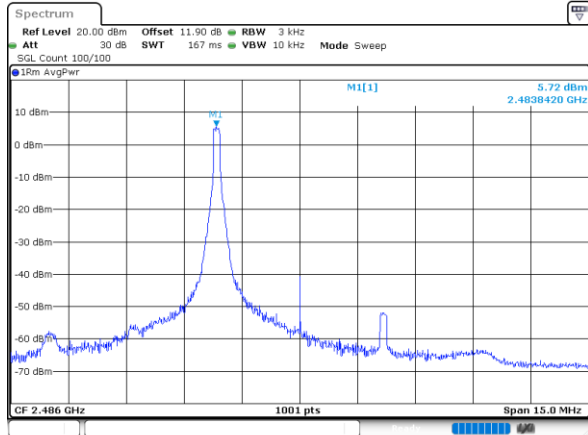


Date: 31.OCT.2025 03:29:26



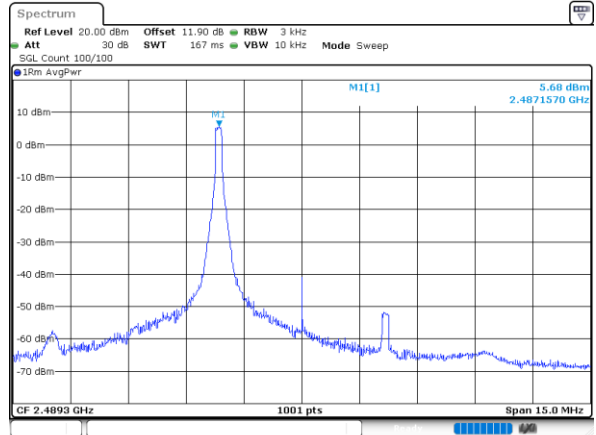
LTE Band 53 / 5MHz

Lowest Channel / 5MHz / 1RB0 / 64QAM



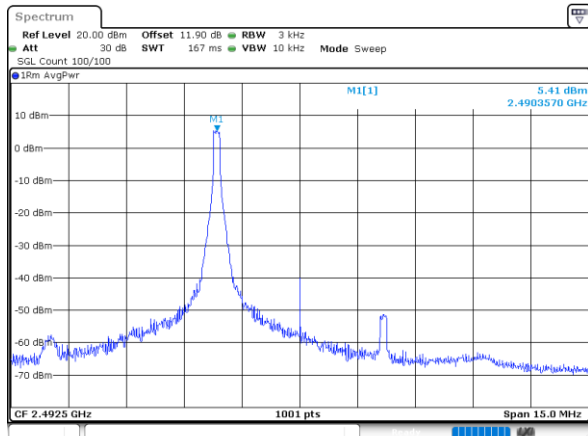
Date: 31.OCT.2025 03:22:43

Middle Channel / 5MHz / 1RB0 / 64QAM



Date: 31.OCT.2025 03:26:32

Highest Channel / 5MHz / 1RB0 / 64QAM

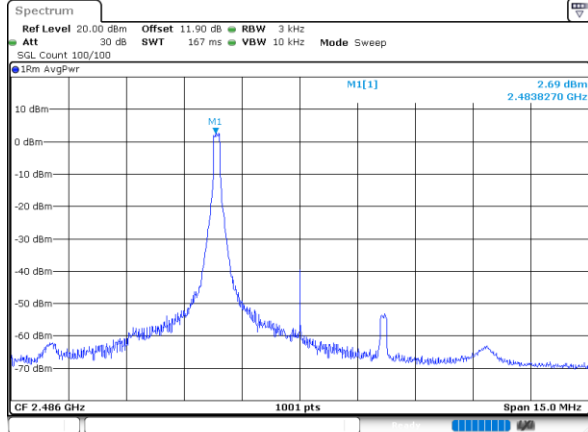


Date: 31.OCT.2025 03:35:38



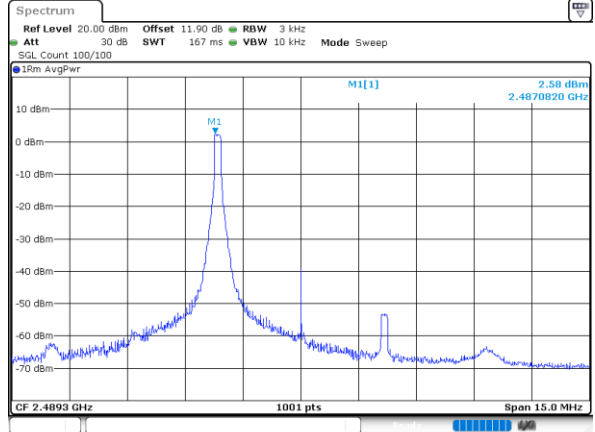
LTE Band 53 / 5MHz

Lowest Channel / 5MHz / 1RB0 / 256QAM



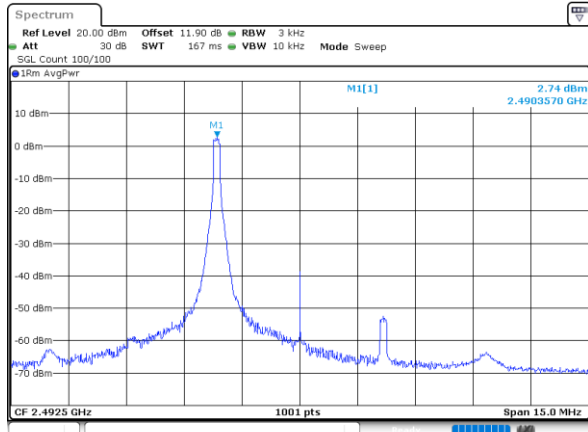
Date: 31.OCT.2025 03:23:40

Middle Channel / 5MHz / 1RB0 / 256QAM



Date: 31.OCT.2025 03:27:29

Highest Channel / 5MHz / 1RB0 / 256QAM

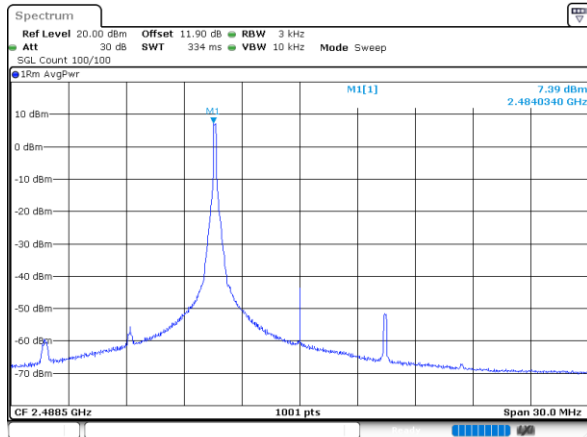


Date: 31.OCT.2025 03:31:42

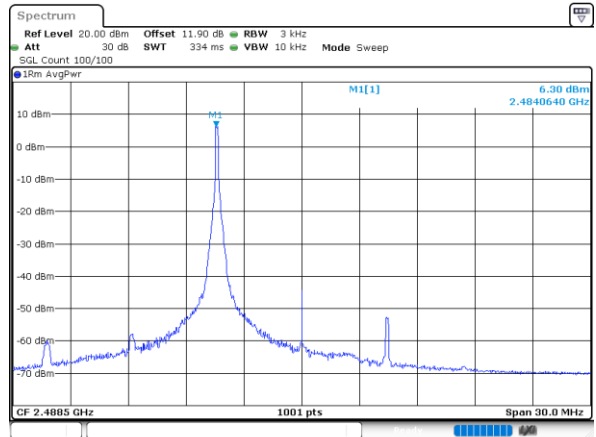


LTE Band 53 / 10MHz

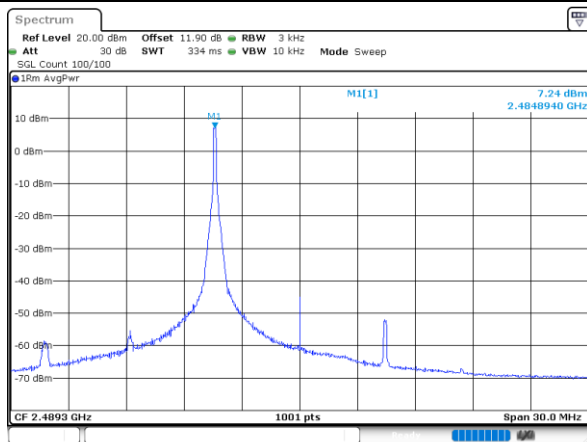
Lowest Channel / 10MHz / 1RB0 / QPSK



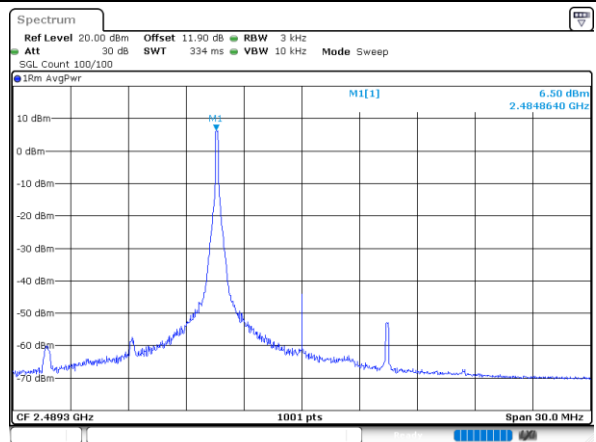
Lowest Channel / 10MHz / 1RB0 / 16QAM



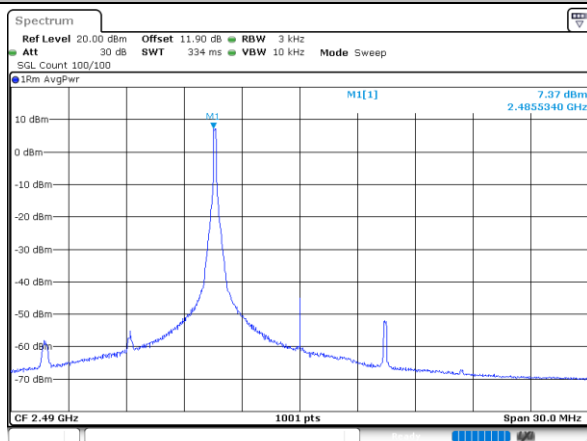
Middle Channel / 10MHz / 1RB0 / QPSK



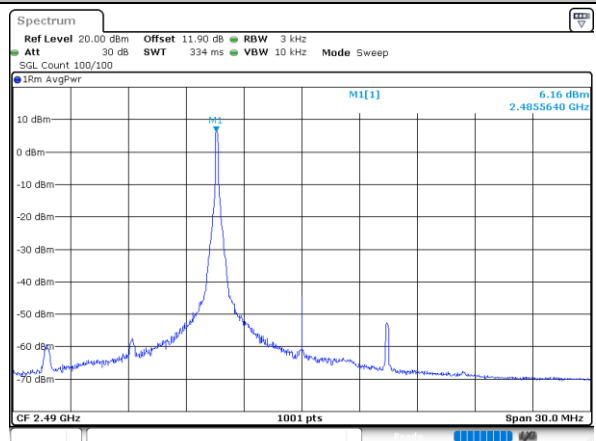
Middle Channel / 10MHz / 1RB0 / 16QAM



Highest Channel / 10MHz / 1RB0 / QPSK



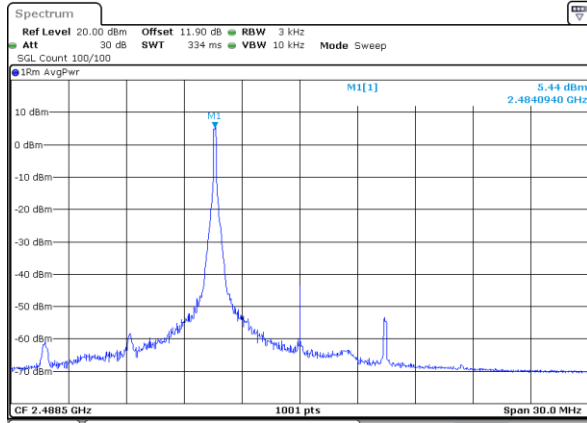
Highest Channel / 10MHz / 1RB0 / 16QAM





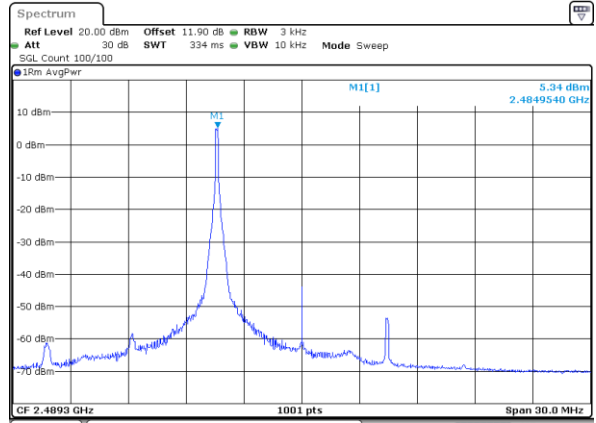
LTE Band 53 / 10MHz

Lowest Channel / 10MHz / 1RB0 / 64QAM



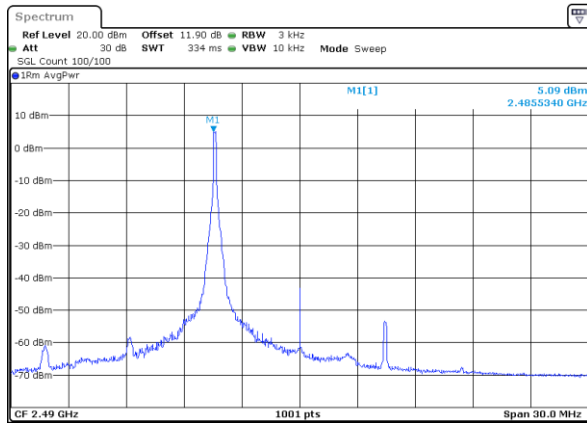
Date: 31.OCT.2025 03:35:27

Middle Channel / 10MHz / 1RB0 / 64QAM



Date: 31.OCT.2025 03:40:39

Highest Channel / 10MHz / 1RB0 / 64QAM

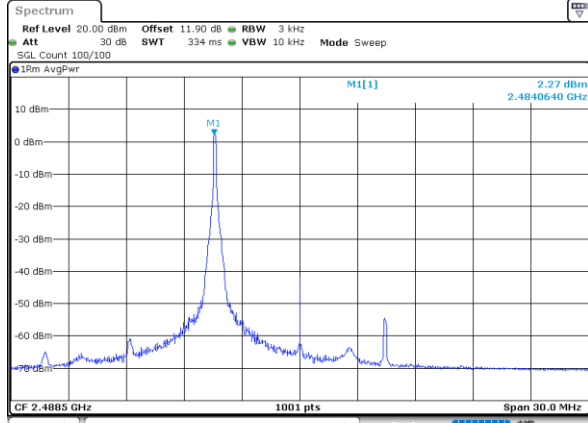


Date: 31.OCT.2025 03:46:02



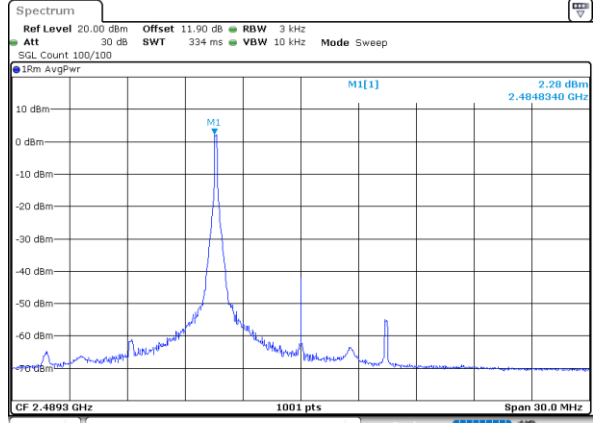
LTE Band 53 / 10MHz

Lowest Channel / 10MHz / 1RB0 / 256QAM



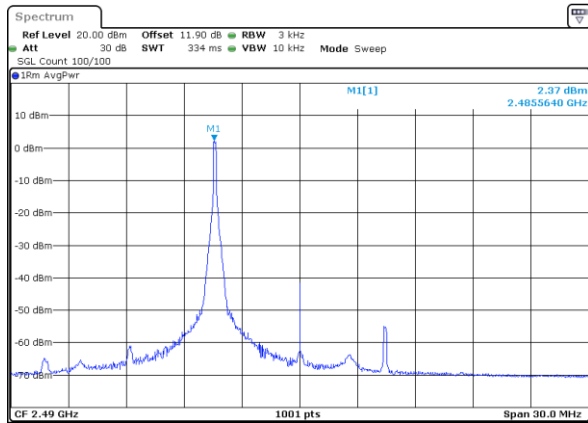
Date: 31.OCT.2025 03:36:47

Middle Channel / 10MHz / 1RB0 / 256QAM



Date: 31.OCT.2025 03:41:57

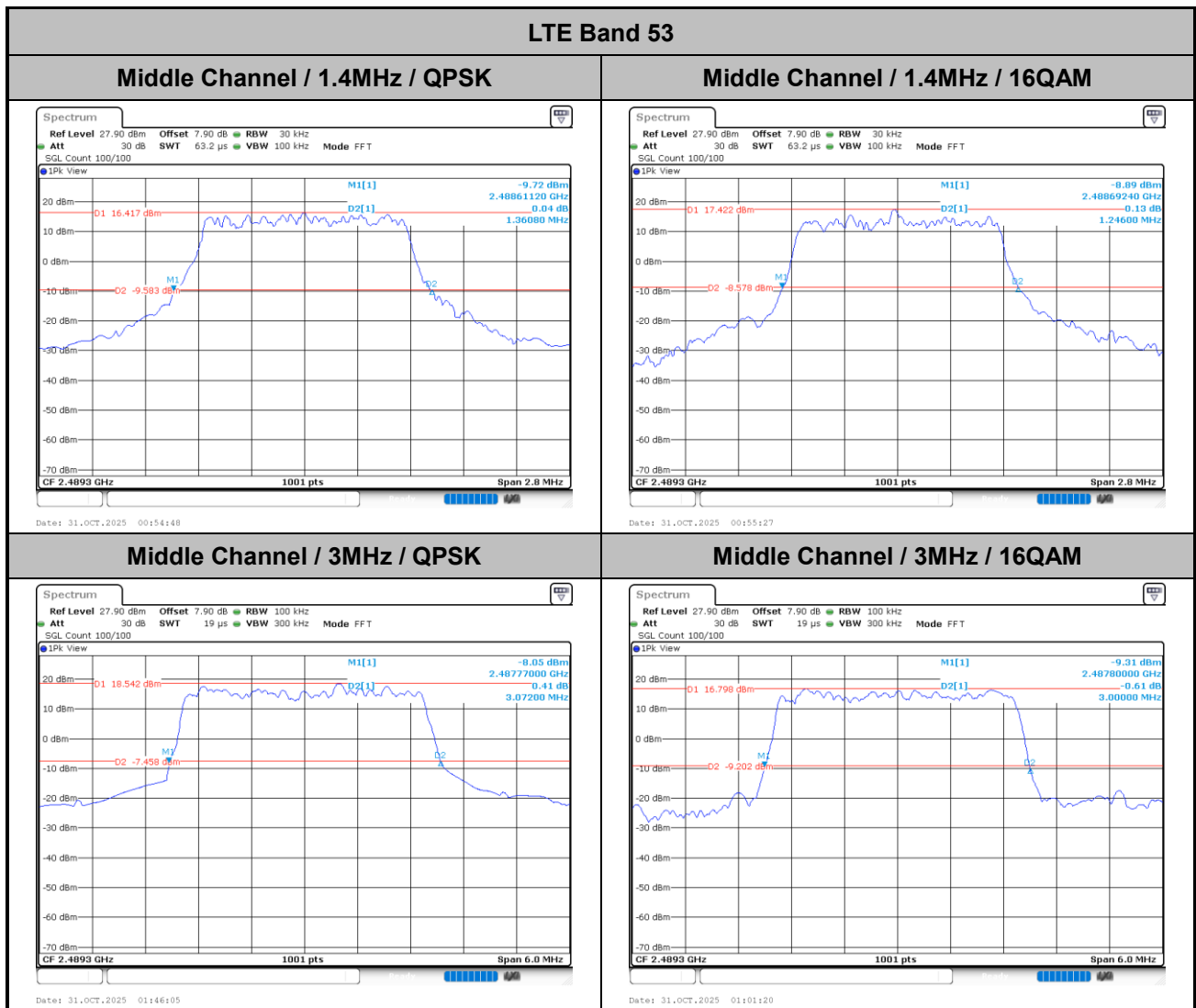
Highest Channel / 10MHz / 1RB0 / 256QAM



Date: 31.OCT.2025 03:47:24

**26dB Bandwidth**

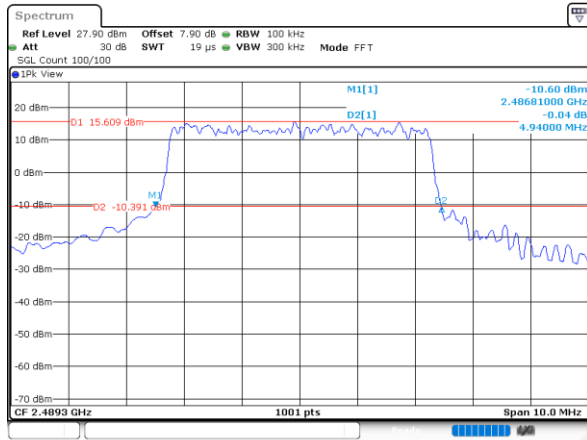
Mode	LTE Band 53 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.25	1.36	3.07	3.00	4.94	5.02	9.82	9.70	-	-	-	-



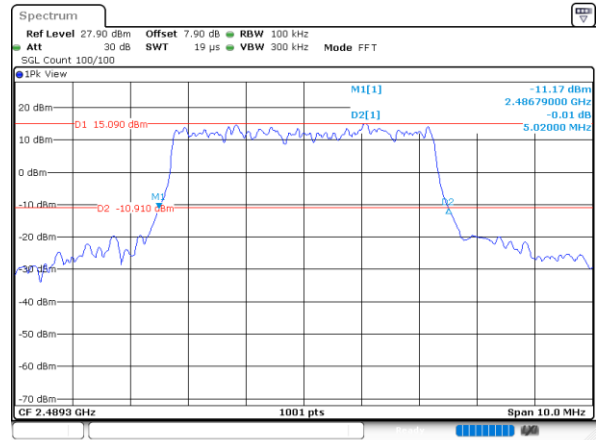


LTE Band 53

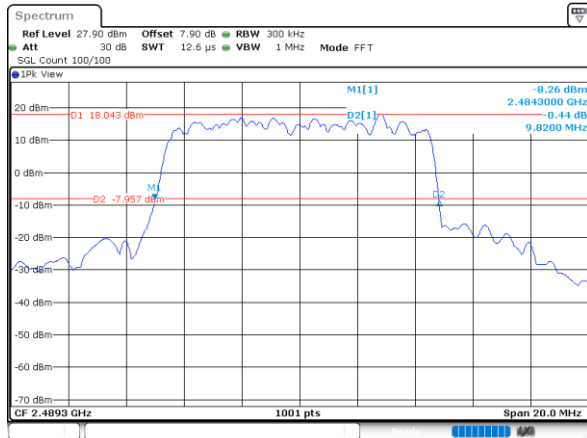
Middle Channel / 5MHz / QPSK



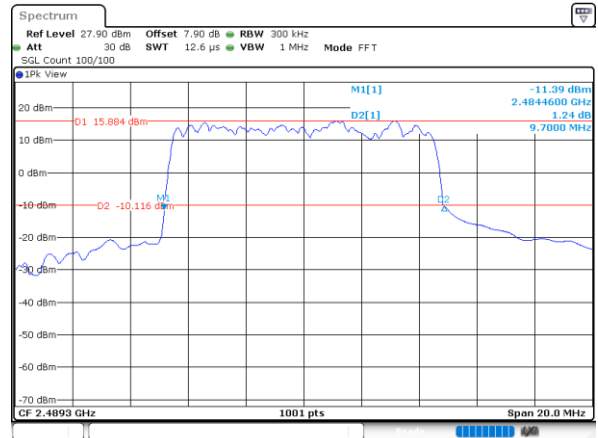
Middle Channel / 5MHz / 16QAM



Middle Channel / 10MHz / QPSK

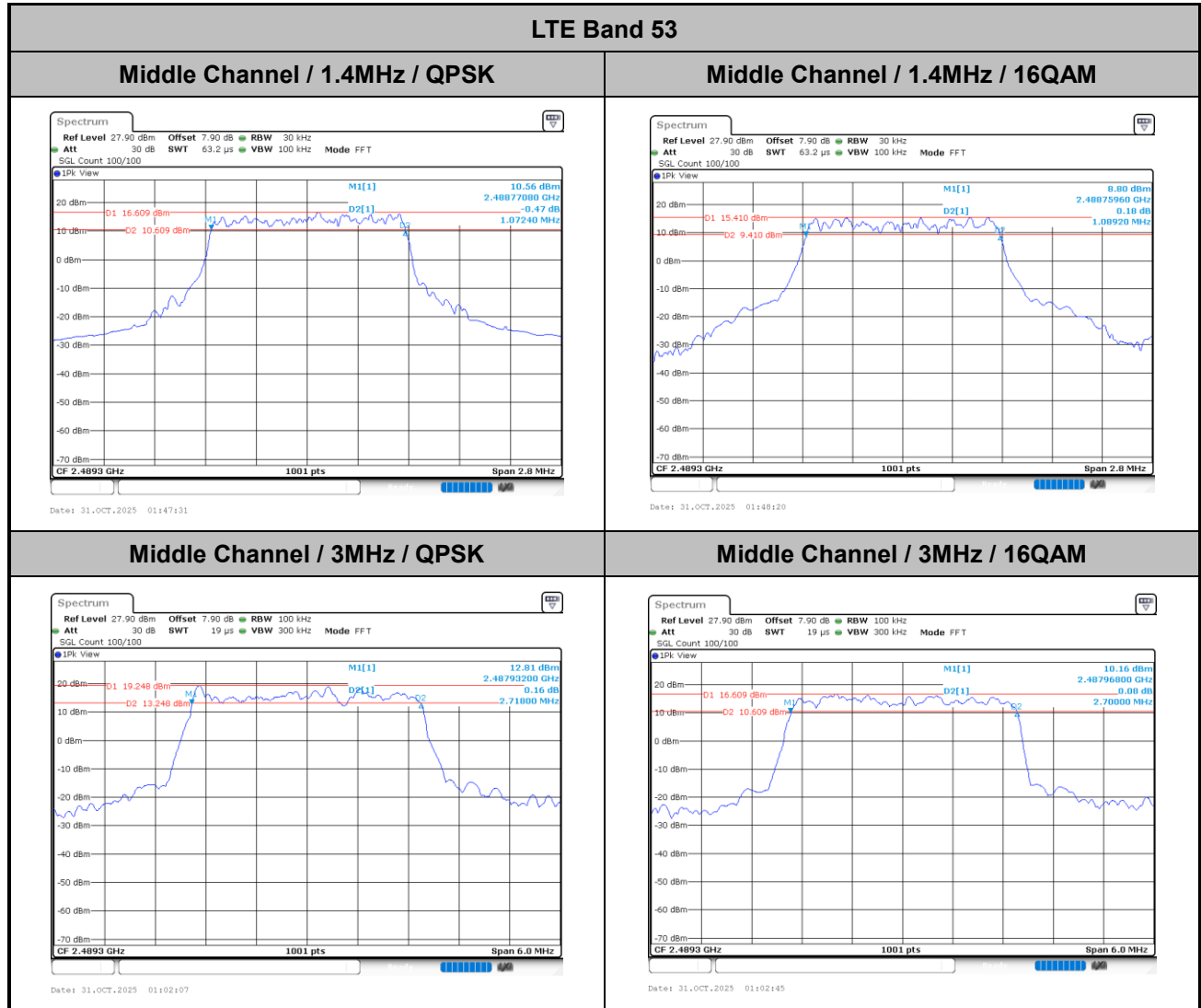


Middle Channel / 10MHz / 16QAM



**6dB Bandwidth**

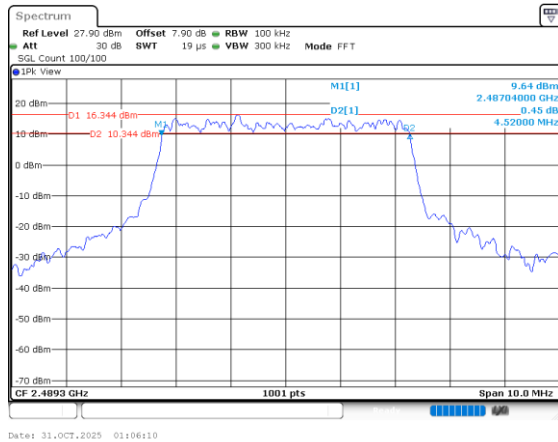
Mode	LTE Band 53 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.07	1.10	2.72	2.70	4.52	4.43	9.10	9.10	-	-	-	-



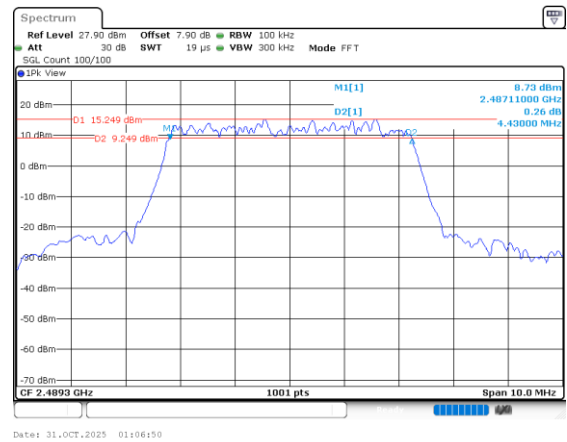


LTE Band 53

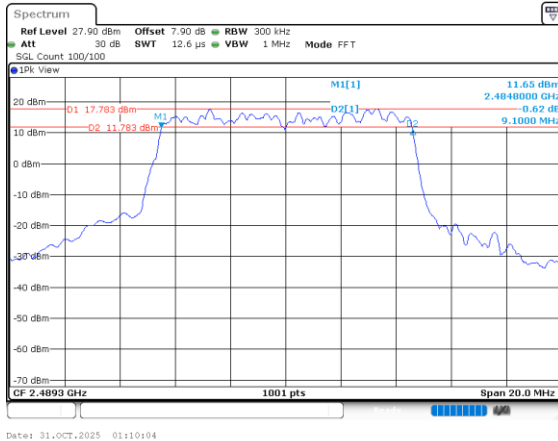
Middle Channel / 5MHz / QPSK



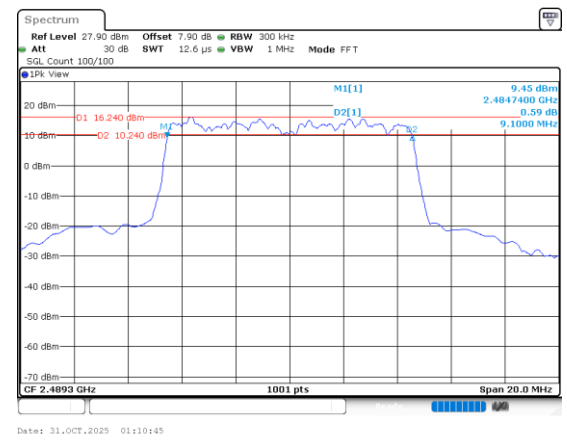
Middle Channel / 5MHz / 16QAM



Middle Channel / 10MHz / QPSK



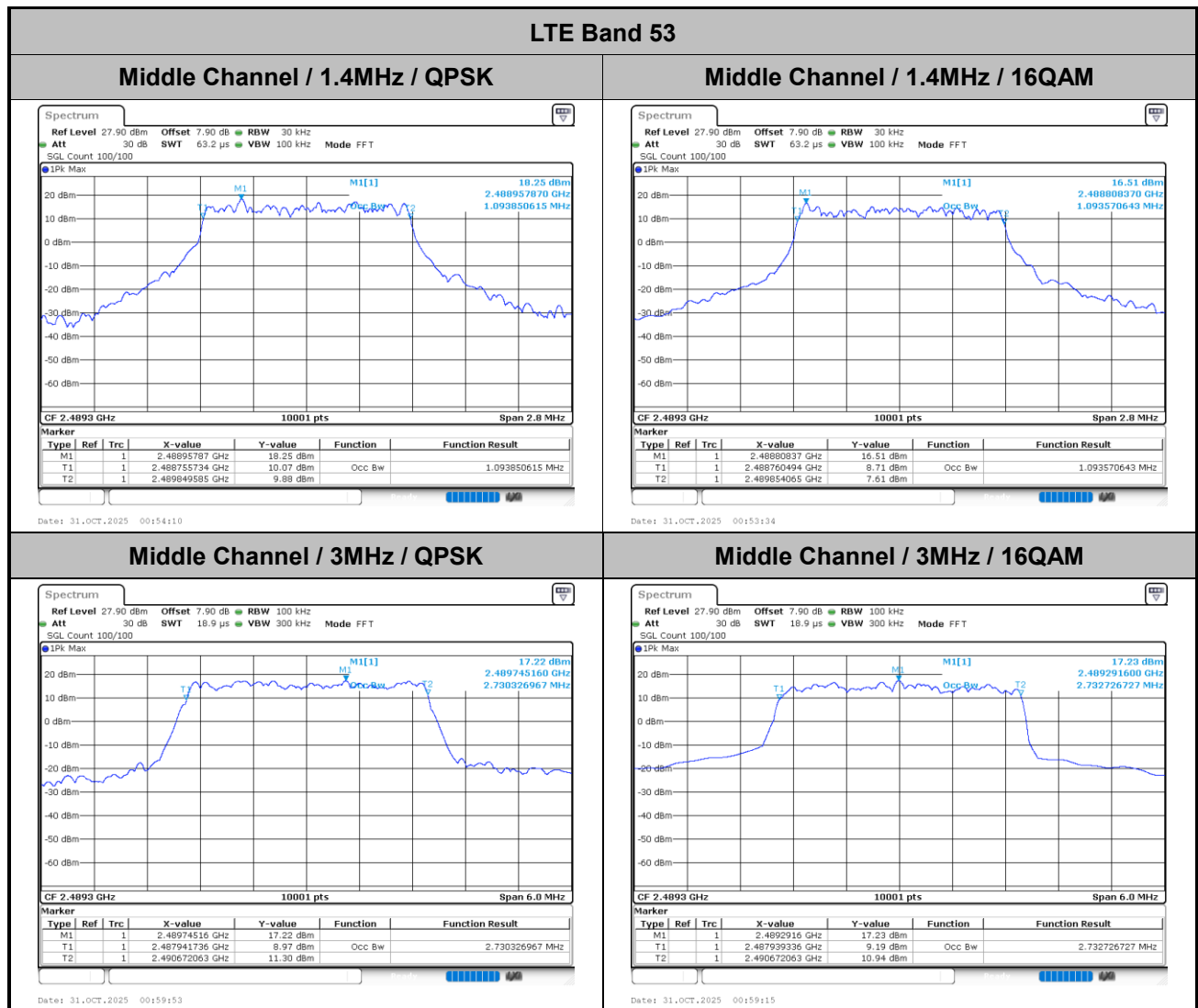
Middle Channel / 10MHz / 16QAM





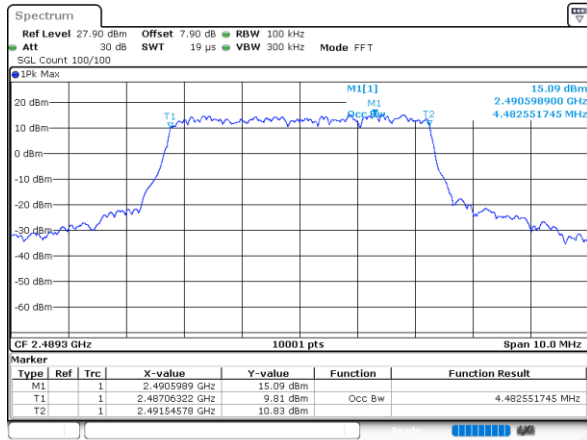
Occupied Bandwidth

Mode	LTE Band 53 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.09	2.73	2.73	4.48	4.46	9.03	9.01	-	-	-	-

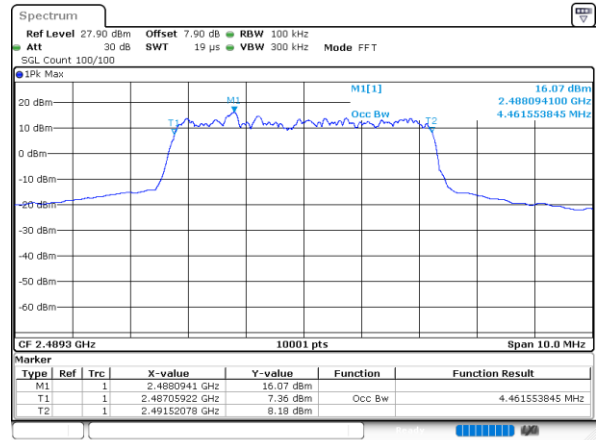


LTE Band 53

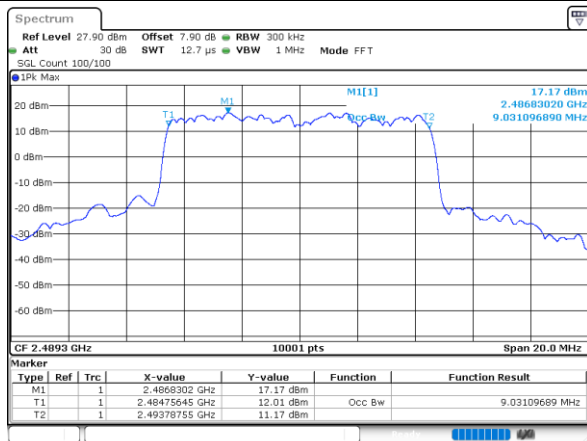
Middle Channel / 5MHz / QPSK



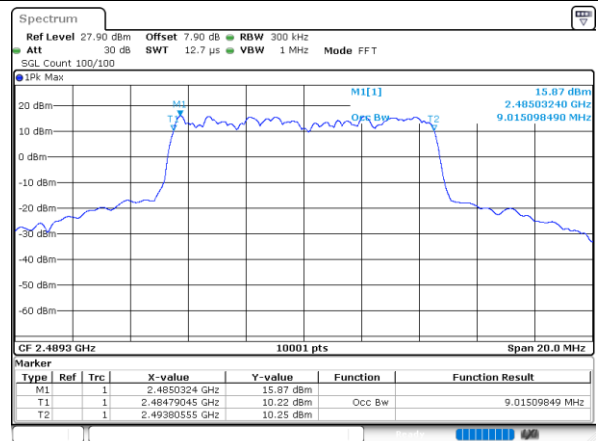
Middle Channel / 5MHz / 16QAM



Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM

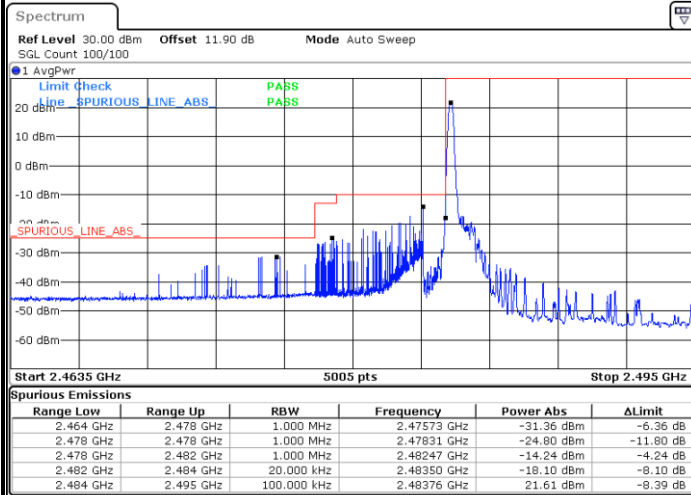




Conducted Band Edge

LTE Band 53 / 1.4MHz / QPSK

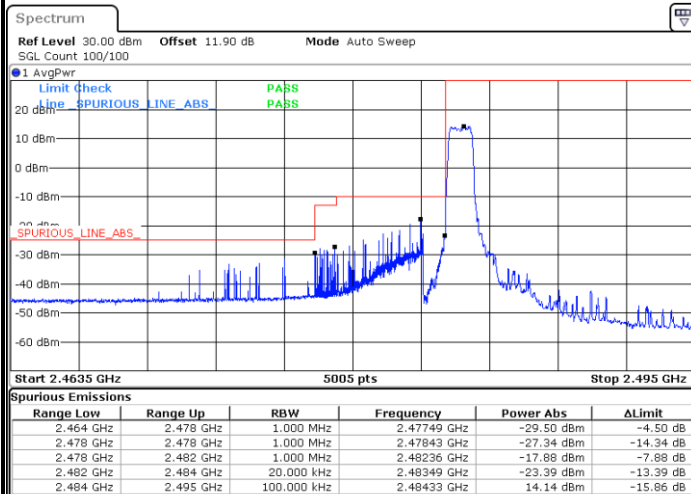
Lowest Band Edge / 1RB



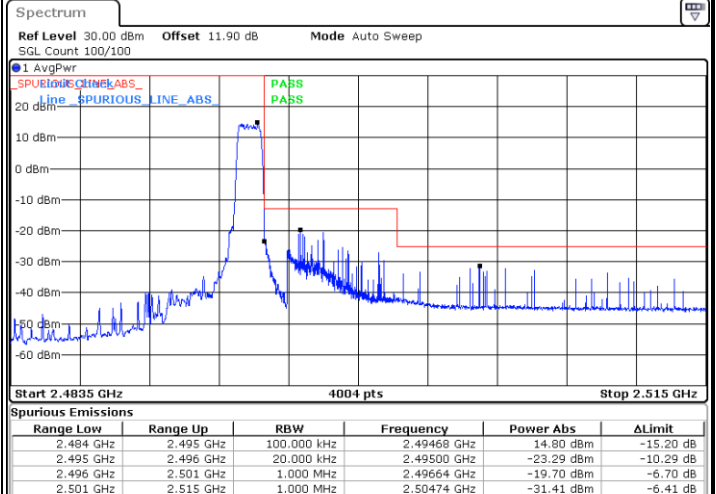
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



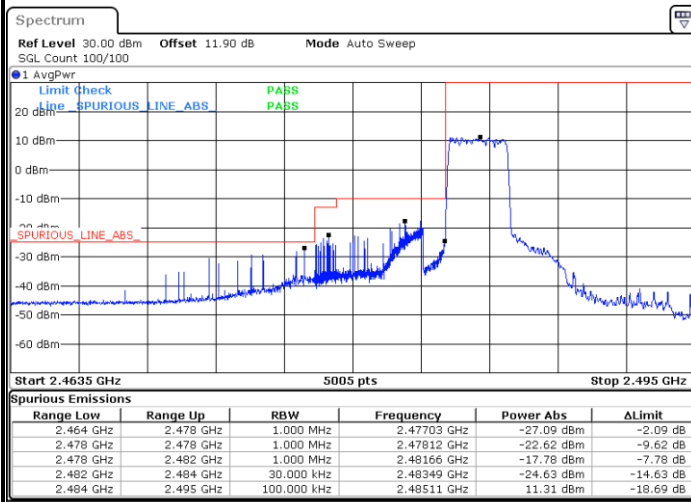
Highest Band Edge / Full RB



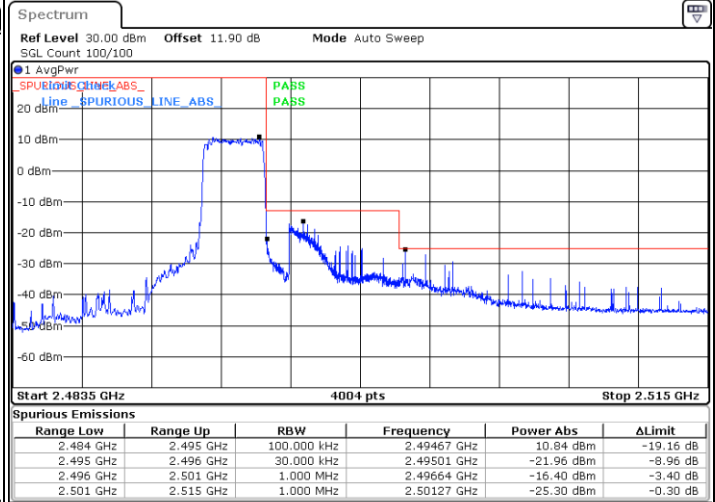


LTE Band 53 / 3MHz / QPSK

Lowest Band Edge / Full RB

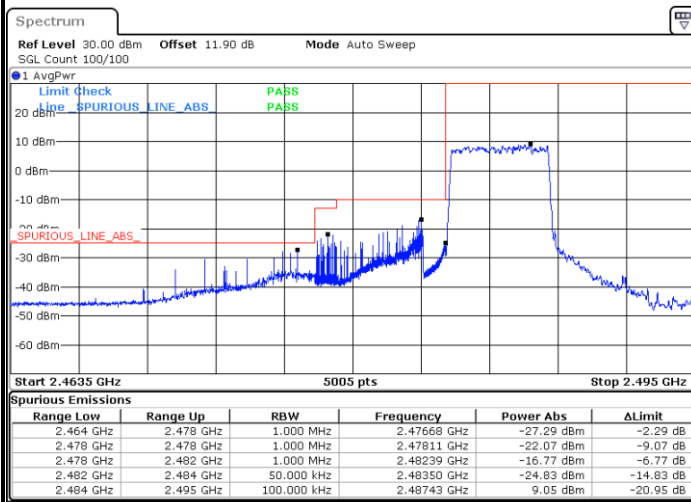


Highest Band Edge / Full RB

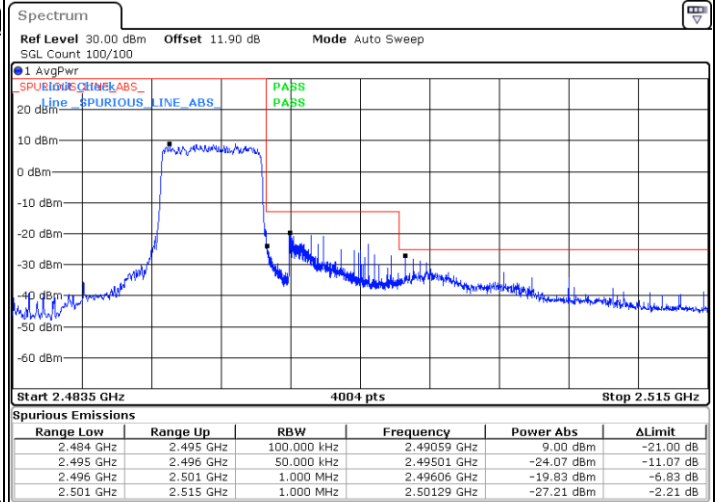


LTE Band 53 / 5MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

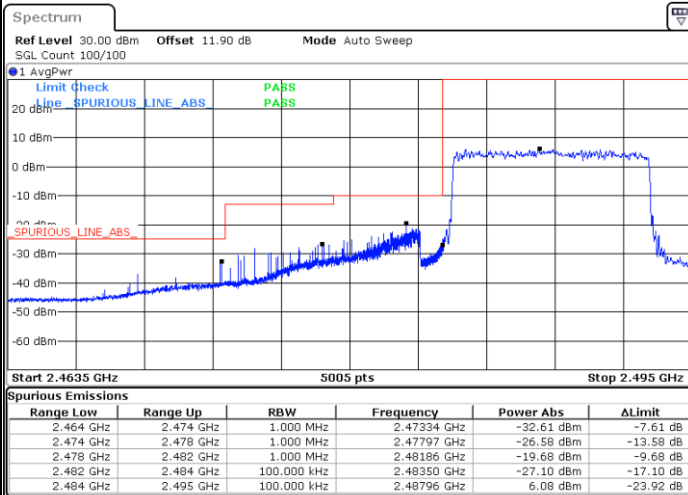




LTE Band 53 / 10MHz / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 31.OCT.2025 01:28:54



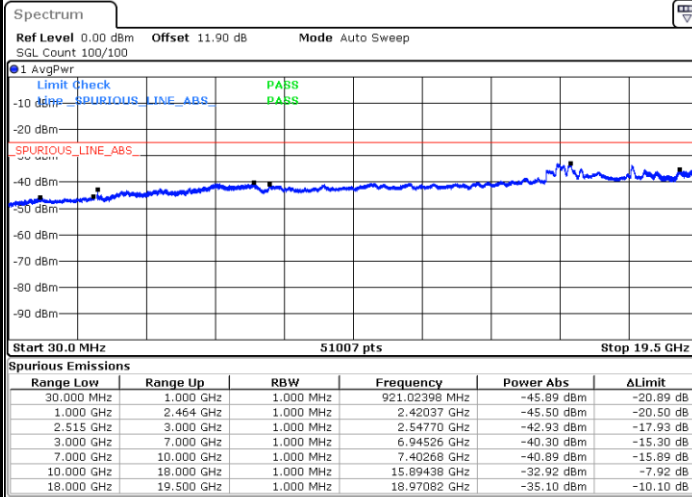
Date: 31.OCT.2025 01:30:03



Conducted Spurious Emission

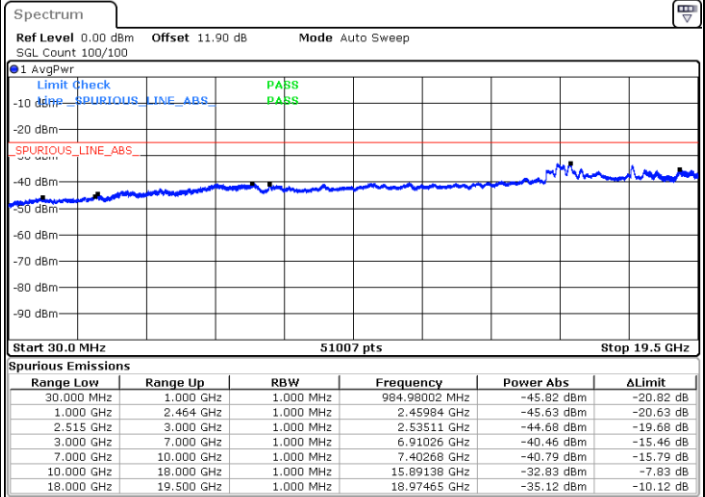
LTE Band 53 / 1.4MHz

Lowest Channel / QPSK



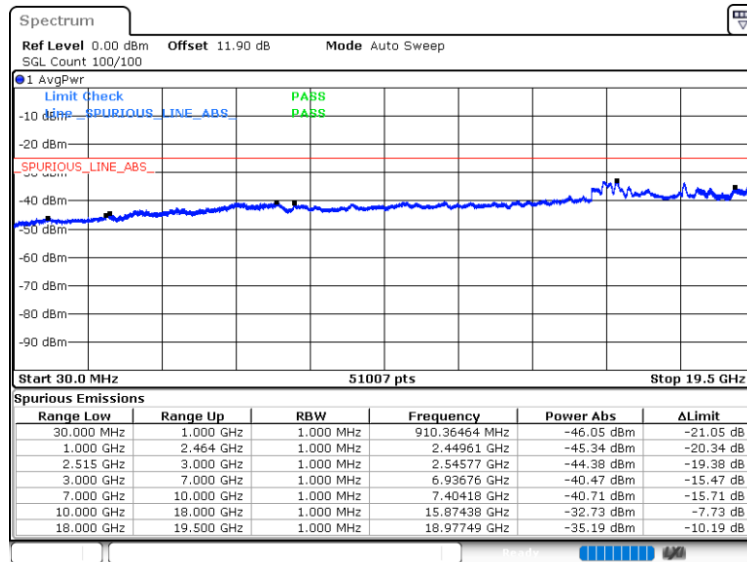
Date: 31.OCT.2025 01:17:37

Middle Channel / QPSK



Date: 31.OCT.2025 01:19:11

Highest Channel / QPSK

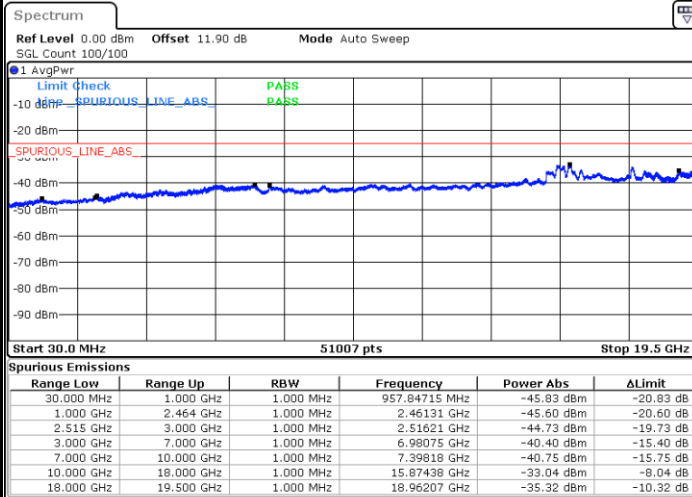


Date: 31.OCT.2025 01:23:00



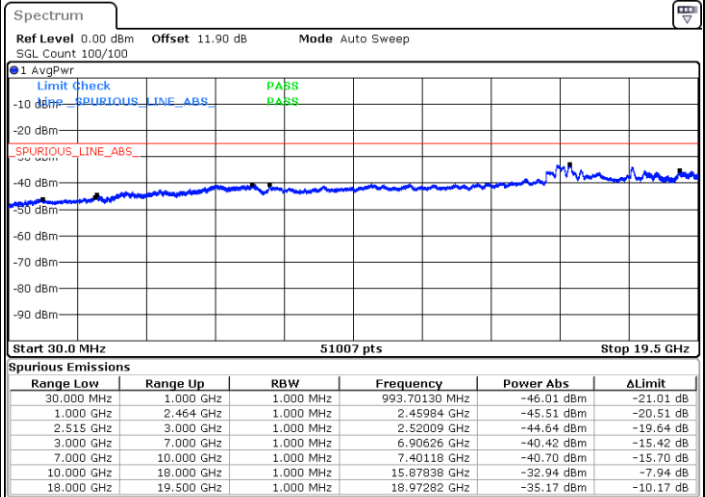
LTE Band 53 / 3MHz

Lowest Channel / QPSK



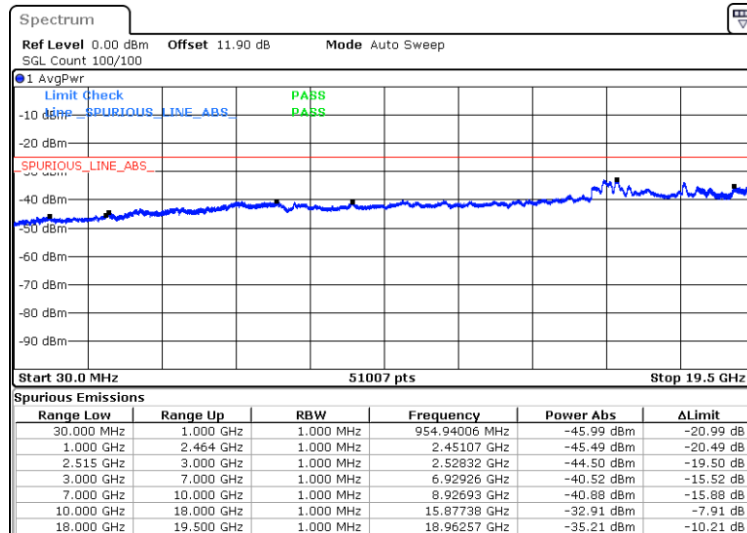
Date: 31.OCT.2025 01:31:31

Middle Channel / QPSK



Date: 31.OCT.2025 01:33:03

Highest Channel / QPSK

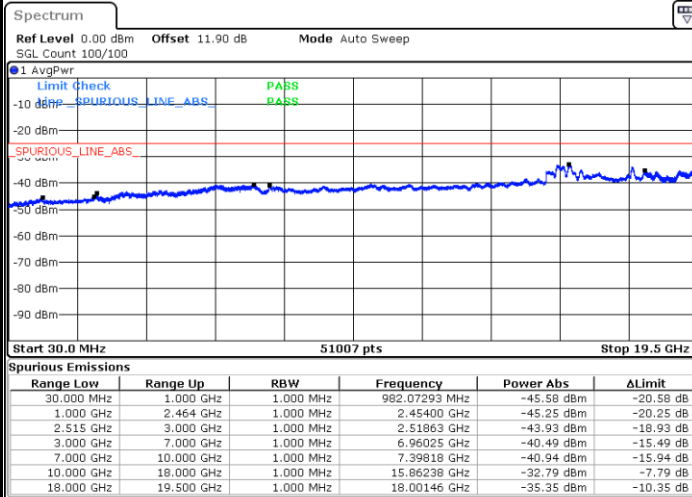


Date: 31.OCT.2025 01:34:36



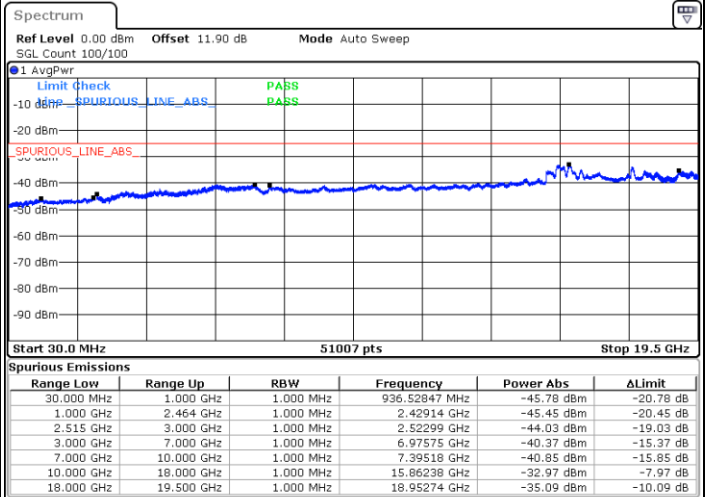
LTE Band 53 / 5MHz

Lowest Channel / QPSK



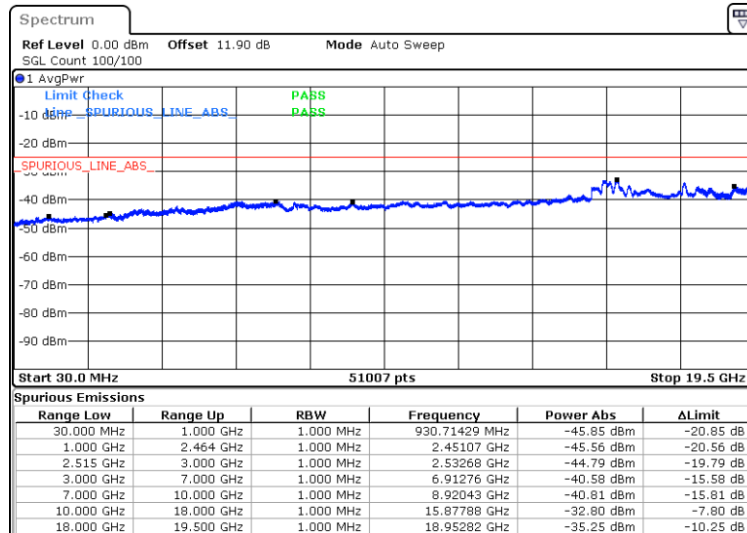
Date: 31.OCT.2025 01:36:10

Middle Channel / QPSK



Date: 31.OCT.2025 01:37:41

Highest Channel / QPSK

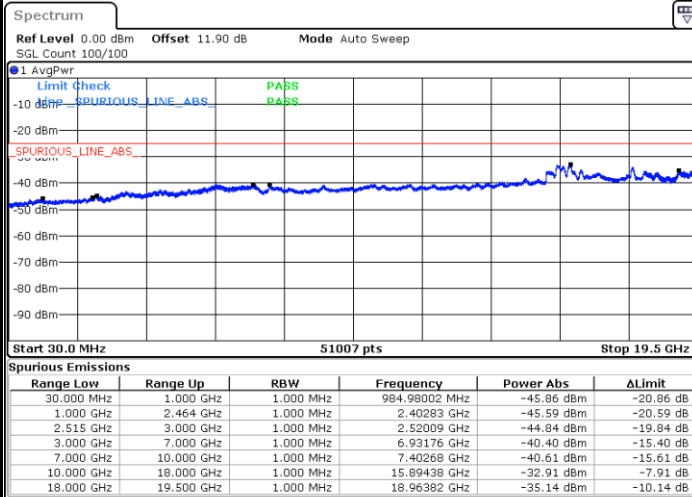


Date: 31.OCT.2025 01:39:12



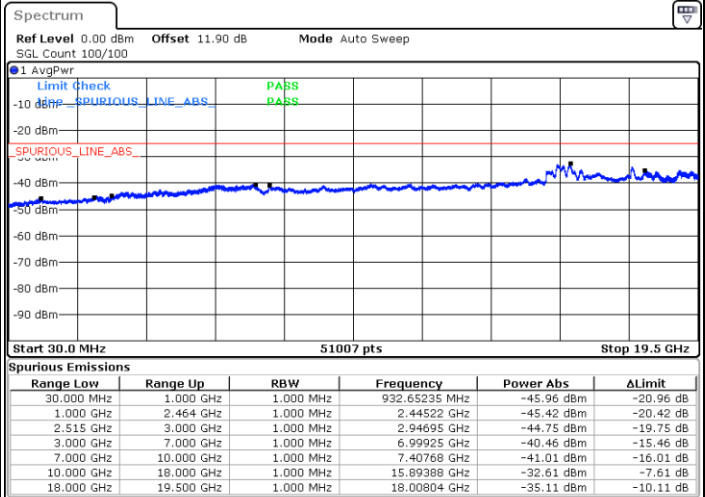
LTE Band 53 / 10MHz

Lowest Channel / QPSK



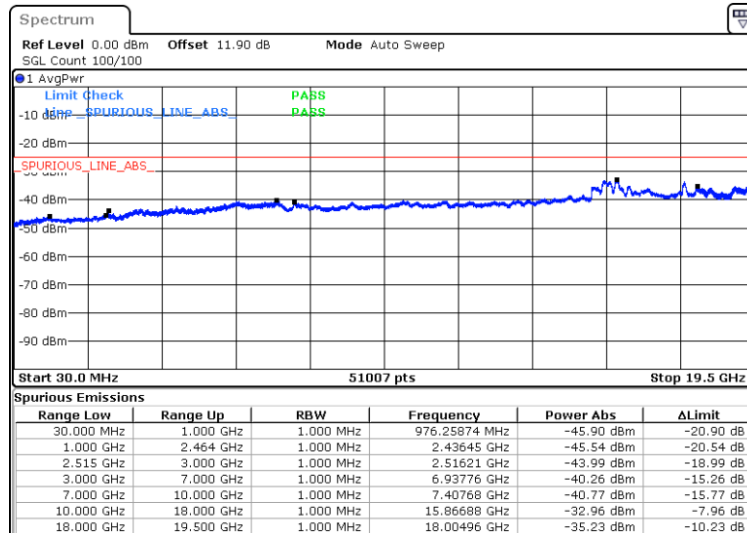
Date: 31.OCT.2025 01:40:45

Middle Channel / QPSK



Date: 31.OCT.2025 01:42:21

Highest Channel / QPSK



Date: 31.OCT.2025 01:44:02

Frequency Stability

Test Conditions		LTE Band 53 (QPSK) / Middle Channel / BandWidth 10M		
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0054	Yes	PASS
40	Normal Voltage	0.0047	Yes	
30	Normal Voltage	0.0061	Yes	
20(Ref.)	Normal Voltage	0.0000	Yes	
10	Normal Voltage	0.0014	Yes	
0	Normal Voltage	0.0004	Yes	
-10	Normal Voltage	0.0047	Yes	
-20	Normal Voltage	0.0048	Yes	
-30	Normal Voltage	0.0015	Yes	
20	Maximum Voltage	0.0059	Yes	
20	Normal Voltage	0.0000	Yes	
20	Minimum Voltage	0.0012	Yes	

Note:

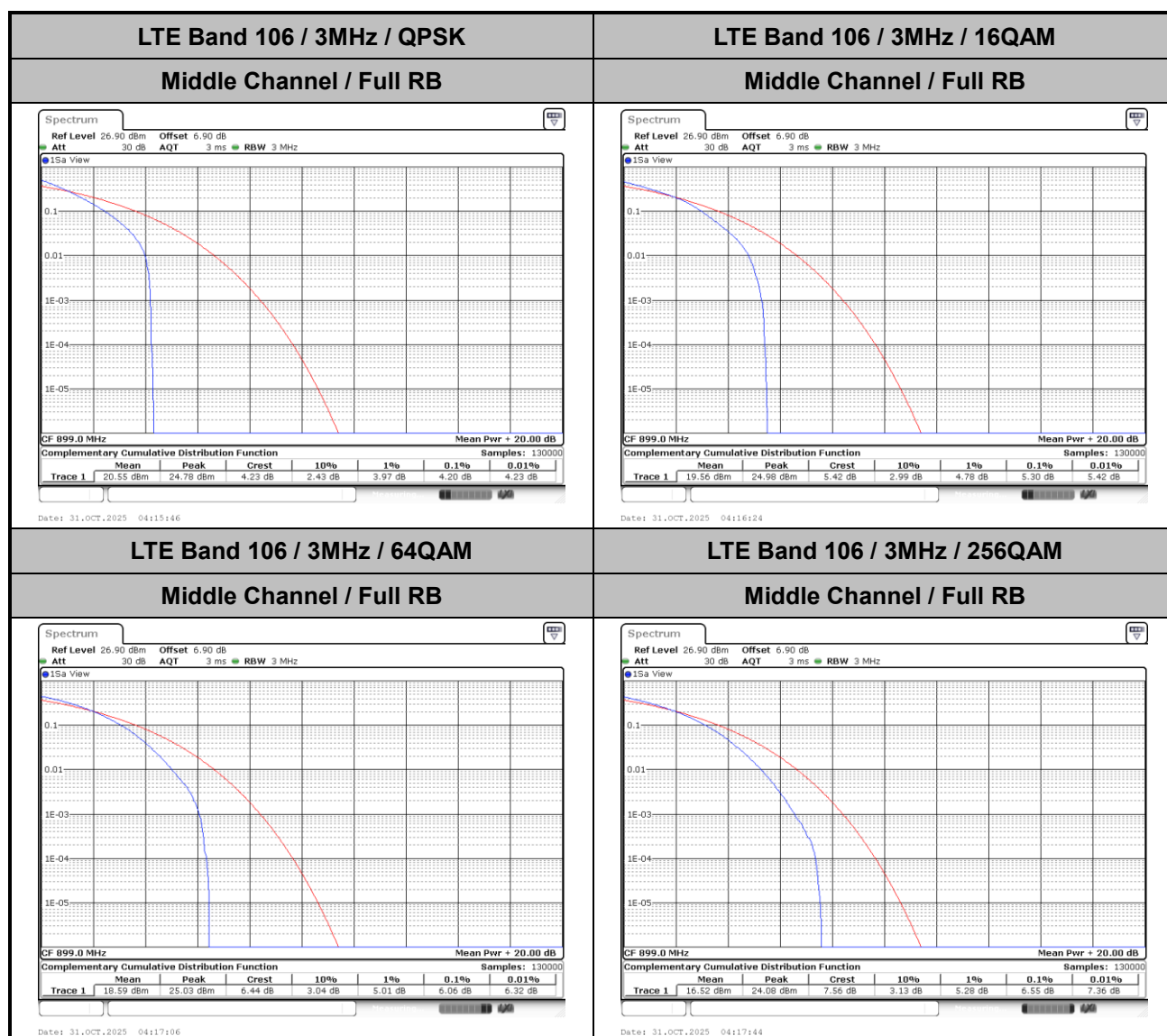
1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.14 V. ; Maximum Voltage = 3.47 V.
2. The frequency fundamental emissions stay within the authorized frequency block.
3. The frequency variation is sufficient to ensure that the occupied bandwidth of all operation channels stay within the operating frequency block or frequency block group.



LTE Band 106

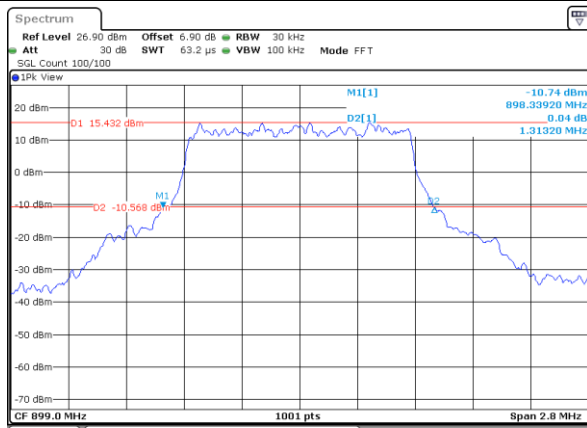
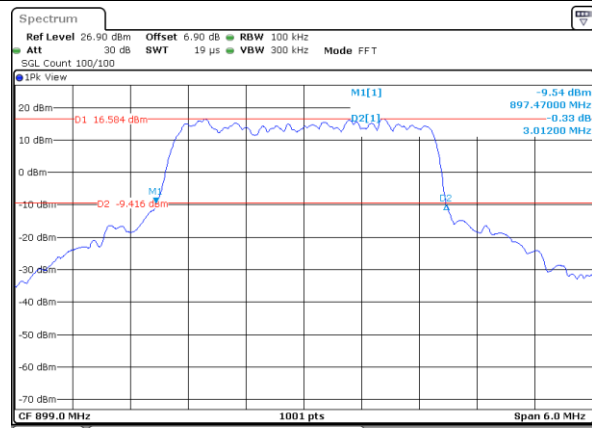
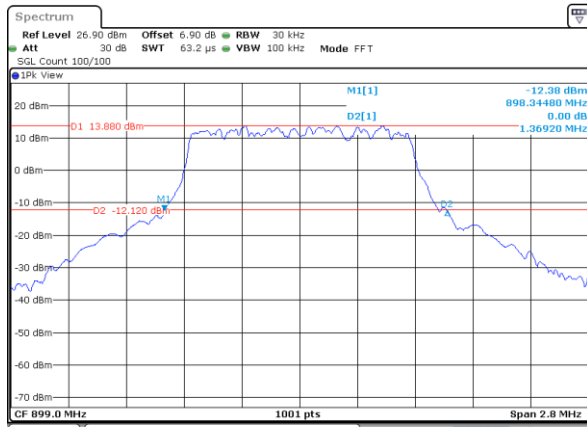
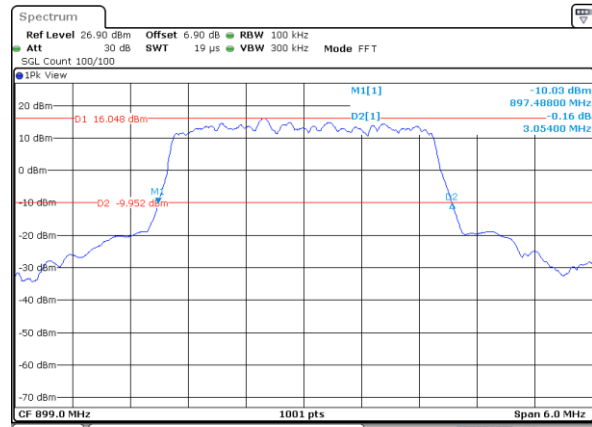
Peak-to-Average Ratio

Mode	LTE Band 106 / 3MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.20	5.30	6.06	6.55	PASS



**26dB Bandwidth**

Mode	LTE Band 106 : 26dB BW(MHz)			
BW	1.4MHz		3MHz	
Mod.	QPSK	16QAM	QPSK	16QAM
Middle CH	1.31	1.36	3.01	3.05

LTE Band 106**Middle Channel / 1.4MHz / QPSK****Middle Channel / 3MHz / QPSK****Middle Channel / 1.4MHz / 16QAM****Middle Channel / 3MHz / 16QAM**

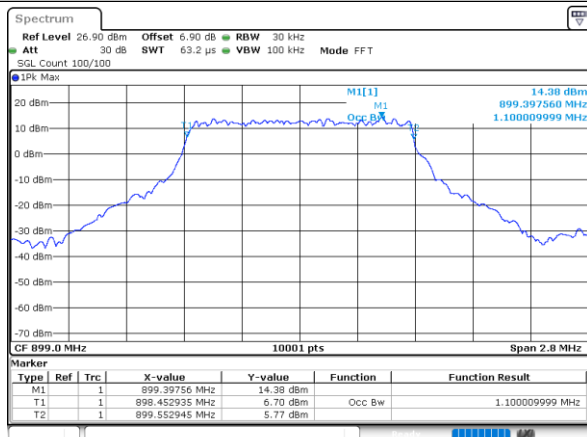


Occupied Bandwidth

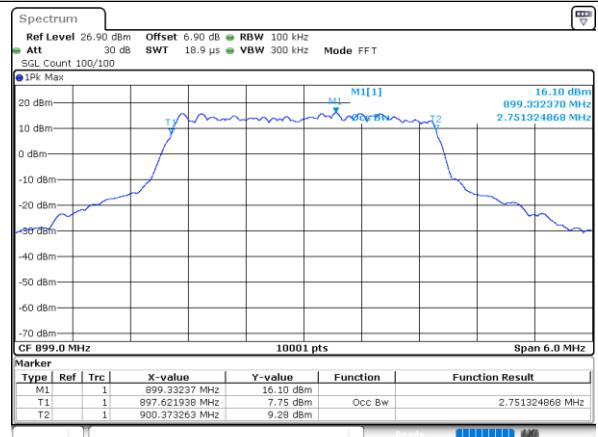
Mode	LTE Band 106 : 99%OBW(MHz)			
BW	1.4MHz		3MHz	
Mod.	QPSK	16QAM	QPSK	16QAM
Middle CH	1.10	1.11	2.75	2.76

LTE Band 106

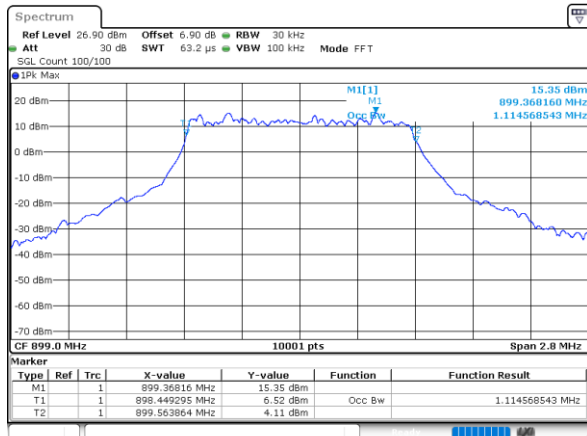
Middle Channel / 1.4MHz / QPSK



Middle Channel / 3MHz / QPSK



Middle Channel / 1.4MHz / 16QAM



Middle Channel / 3MHz / 16QAM

