



FCC RADIO TEST REPORT

FCC ID	:	PKRISGRM4210
Equipment	:	WWAN LGA Radio Module
Brand Name	:	Inseego
Model Name	:	RM4210
Applicant	:	Inseego Corp. 9710 Scranton Road Suite 200, San Diego,CA 92121
Manufacturer	:	Inseego Corp. 9710 Scranton Road Suite 200, San Diego,CA 92121
Standard	:	FCC 47 CFR Part 2, 96

The product was received on Feb. 24, 2025 and testing was performed from Feb. 25, 2025 to May 05, 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 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.)



Table of Contents

His	tory of	f this test report	.3
Su	nmary	of Test Result	.4
1	Gene	ral Description	.5
	1.1 1.2 1.3 1.4	Product Feature of Equipment Under Test Modification of EUT Testing Location	.5 .5 .6
2	Test (Configuration of Equipment Under Test	.7
	2.1 2.2 2.3 2.4 2.5	Test Mode Connection Diagram of Test System Support Unit used in test configuration Measurement Results Explanation Example Frequency List of Low/Middle/High Channels	.7 .8 .8
3	Cond	ucted Test Items1	0
	3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8	Measuring Instruments 1 Conducted Output Power 1 Peak-to-Average Ratio 1 EIRP 1 Occupied Bandwidth 1 Conducted Band Edge 1 Conducted Spurious Emission 1 Frequency Stability 1	1 2 3 4 5
4	Radia	ted Test Items1	8
	4.1 4.2 4.3 4.4	Measuring Instruments	18 19 20
5		f Measuring Equipment2	
6	Meas	urement Uncertainty2	22
Ap	pendix	A. Test Results of Conducted Test	
Ap	pendix	B. Test Results of Radiated Test	

Appendix C. Test Setup Photographs



History of this test report

Version	Description	Issue Date
01	Initial issue of report	May 07, 2025
		· · ·



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Pass	-
3.3	§96.41	Peak-to-Average Ratio	Pass	-
3.4	§96.41	Effective Isotropic Radiated Power	Pass	-
3.5	§2.1049 §96.41	Occupied Bandwidth	Pass	-
3.6	§2.1051 §96.41	Conducted Band Edge Measurement	Pass	-
3.7	§2.1051 §96.41	Conducted Spurious Emission	Pass	-
3.8	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	-

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.

2. 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: Danny Lee Report Producer: Clio Lo



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature

General Specs

3G-WCDMA, 4G-LTE, 5G-FR1 and GNSS.

Antenna Type

WWAN: Fixed Internal Antenna

Remark:

- 1. The above EUT's information was declared by manufacturer. Please refer to Disclaimer in report summary.
- 2. Maximum allow antenna Gain: refer MPE Report FA4N2547.

Support band and evaluated information				
Supported band B48				
Evaluated and Tested band	B48			

TDD band Power Class					
PC3 PC2					
B48	V				

1.2 Modification of EUT

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

TEL : 886-3-327-3456	Page Number	: 5 of 22
FAX : 886-3-328-4978	Issue Date	: May 07, 2025
Report Template No.: BU5-FGLTE96 Version 2.4	Report Version	: 01



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	Diego Huang		
Temperature (°C)	22.2~23.6		
Relative Humidity (%)	50.2~55.8		

Test Site	Sporton International Inc. Wensan Laboratory		
	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,		
Test Site Location	Taoyuan City 333010, Taiwan (R.O.C.)		
	TEL: +886-3-327-0868		
	FAX: +886-3-327-0855		
Test Site No.	Sporton Site No.		
Test Site No.	03CH20-HY (TAF Code: 3786)		
Test Engineer	John Chuang, David Dai and Sam Chou		
Temperature (°C)	19.5~22.5		
Relative Humidity (%)	65.7~70.6		
Remark	The Radiated Spurious Emission test item subcontracted to Sporto International Inc. Wensan Laboratory.		

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

FCC Designation No.: TW1190 and TW3786

1.4 Applied Standards

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

+ ANSI C63.26-2015

- + FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 940660 D01 Part 96 CBRS Eqpt v03
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01

Remark:

- 1. All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. 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 in two config (Ant. Horizontal and Ant. Vertical), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find X Plane with Adapter as worst plane.

Modulation Type	Modulation
A	QPSK
В	16QAM
С	64QAM
D	256QAM

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	20 MHz	Full	М
Bandwidth	A, B, C, D	All	Full	М
ACLR, Mask	A, B, C, D	All	1RB Full	L, M, H
CSE	А	Minimum	1RB	L, M, H
Frequency Stability	А	10 MHz	Full	М
RSE	А	20 MHz	1RB	L, M, H

Remark:

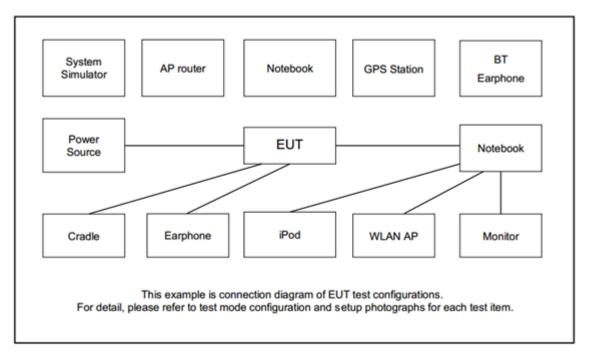
1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.

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

ltem	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GW Instek	PSS-2005	N/A	N/A	N/A
2.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator	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 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 :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (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					
20	Frequency	3560.0	3625.0	3690.0					
15	Channel	55315	55990	56665					
15	Frequency	3557.5	3625.0	3692.5					
10	Channel	55290	55990	56690					
10	Frequency	3555.0	3625.0	3695.0					
5	Channel	55265	55990	56715					
	Frequency	3552.5	3625.0	3697.5					



3 Conducted Test Items

3.1 Measuring Instruments

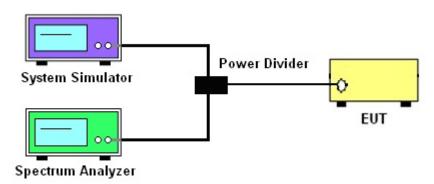
See list of measuring instruments of this test report.

3.1.1 Test Setup

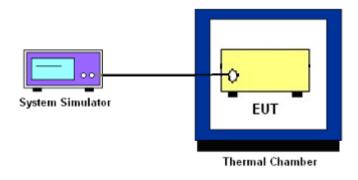
3.1.2 Conducted Output Power



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



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power

3.2.1 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.

3.2.2 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 EIRP

3.4.1 Description of the EIRP Measurement

The EIRP of mobile transmitters must not exceed 23 dBm /10 megahertz for LTE Band 48.

The testing follows ANSI C63.26-2015 Section 5.2.5.5

According to KDB 412172 D01 Power Approach,

EIRP = PT + GT - LC, where

PT = transmitter output power in dBm

GT = gain of the transmitting antenna in dBi

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

Device	Maximum EIRP	Maximum PSD		
Device	(dBm/10 MHz)	(dBm/MHz)		
End User Device	23	n/a		

Remark: Total channel power is complied with EIRP limit 23dBm/10MHz.

3.4.2 Test Procedures

The testing follows procedure in Section 5.2 of ANSI C63.26-2015 and KDB 940660 D01 Part 96 CBRS Eqpt v03 Section 3.2(b)(2)

Determine the EIRP by adding the effective antenna gain to the measured average conducted power level.



3.5 Occupied Bandwidth

3.5.1 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.

3.5.2 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.
- 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.
- 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.



3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

The conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

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 >= 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.

For Adjacent Channel Leakage Ratio (ACLR) measurement,

- 1. The Adjacent Channel Leakage Ratio (ACLR) is the ratio of the average power in the assigned aggregated channel bandwidth to the average power over the equivalent adjacent channel bandwidth.
- 2. The option ACLR of spectrum analyzer is used and measures the ACLR ratio by setting equivalent channel bandwidth.
- 3. The measured ACLR ratio shall be at least 30 dB.

3.7 Conducted Spurious Emission

3.7.1 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.

3.7.2 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.
- 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.



3.8 Frequency Stability

3.8.1 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.

3.8.2 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 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.



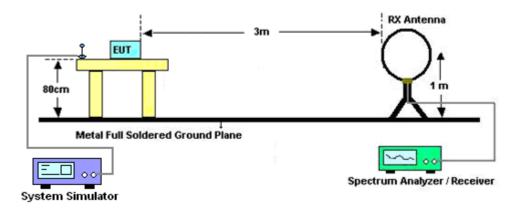
4 Radiated Test Items

4.1 Measuring Instruments

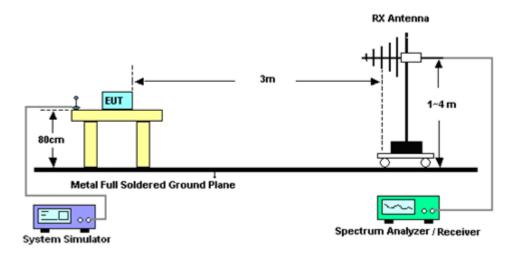
See list of measuring instruments of this test report.

4.2 Test Setup

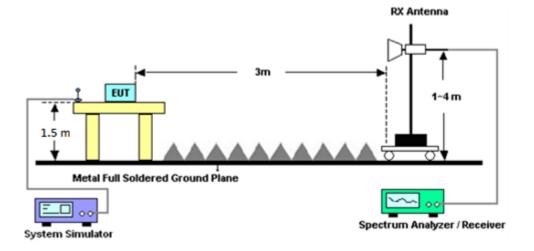
For radiated emissions below 30MHz



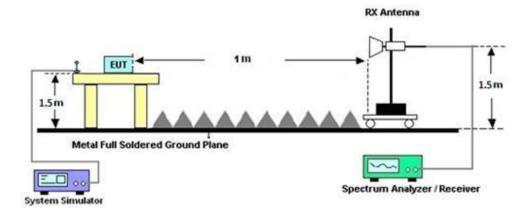
For radiated emissions from 30MHz to 1GHz



For radiated emissions from 1GHz to 18GHz



For radiated emissions above 18GHz



4.3 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.

4.4 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

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 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.
- To convert spectrum reading E(dBuV/m) to EIRP(dBm)
 EIRP(dBm) = Level (dBuV/m) + 20log(d) -104.77, where d is the distance at which filed strength limit is specified in the rules.
- Field Strength Level (dBm) = Spectrum Reading (dBm) + Antenna Factor + Cable Loss + Read Level - Preamp Factor.
- 8. ERP (dBm) = EIRP (dBm) 2.15
- 9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

TEL : 886-3-327-3456	Page Number	: 20 of 22
FAX : 886-3-328-4978	Issue Date	: May 07, 2025
Report Template No.: BU5-FGLTE96 Version 2.4	Report Version	: 01



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A(MXE)	MY57290111	N/A	Nov. 22, 2024	Mar. 20, 2025~ May 05, 2025	Nov. 21, 2024	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Mar. 20, 2025~ May 05, 2025	Aug. 28, 2025	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060871	18GHz~40GHz	Aug. 23, 2024	Mar. 20, 2025~ May 05, 2025	Aug. 22, 2025	Radiation (03CH20-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Mar. 20, 2025~ May 05, 2025	N/A	Radiation (03CH20-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Mar. 20, 2025~ May 05, 2025	N/A	Radiation (03CH20-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Mar. 20, 2025~ May 05, 2025	N/A	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	N/A	Dec. 09, 2024	Mar. 20, 2025~ May 05, 2025	Dec. 08, 2025	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	55606 & 08	30MHz~1GHz	Nov. 27, 2024	Mar. 20, 2025~ May 05, 2025	Nov. 26, 2025	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	02360	1GHz-18GHz	Nov. 01, 2024	Mar. 20, 2025~ May 05, 2025	Oct. 31, 2025	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	1223	18GHz-40GHz	Jun. 24, 2024	Mar. 20, 2025~ May 05, 2025	Jun. 23, 2025	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz-1000MHz	Dec. 31, 2024	Mar. 20, 2025~ May 05, 2025	Dec. 30, 2025	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45S E	980792	N/A	Nov. 12, 2024	Mar. 20, 2025~ May 05, 2025	Nov. 11, 2025	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,80 4015/2,8040 27/2	N/A	Jan. 16, 2025	Mar. 20, 2025~ May 05, 2025	Jan. 15, 2026	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303A	TP215159	N/A	Sep. 10, 2024	Mar. 20, 2025~ May 05, 2025	Sep. 09, 2025	Radiation (03CH20-HY)
Software	Audix	N/A	RK-002156	N/A	N/A	Mar. 20, 2025~ May 05, 2025	N/A	Radiation (03CH20-HY)
Radio Communicatio n Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 01, 2024	Feb. 25, 2025~ Apr. 22, 2025	Sep. 30, 2025	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40° C ~90° C	Sep. 06, 2024	Feb. 25, 2025~ Apr. 22, 2025	Sep. 05, 2025	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V;0A~6A	Nov. 27, 2024	Feb. 25, 2025~ Apr. 22, 2025	Nov. 26, 2025	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	Feb. 25, 2025~ Apr. 22, 2025	Jan. 02, 2026	Conducted (TH03-HY)
Power divider	Anritsu	K241C	2143398	9KHz~40GHz	Jun. 13, 2024	Feb. 25, 2025~ Apr. 22, 2025	Jun. 12, 2025	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101905	10Hz~40GHz	Jul. 11, 2024	Feb. 25, 2025~ Apr. 22, 2025	Jul. 10, 2025	Conducted (TH03-HY)
Software	Sporton	LTE Conducted Test Tools	N/A	Conducted Test Item	N/A	Feb. 25, 2025~ Apr. 22, 2025	N/A	Conducted (TH03-HY)
Hygrometer	TECPEL	DTM-303B	TP210073	-10 ~ 50°C / 20 ~ 95%RH	Jun. 05, 2024	Feb. 25, 2025~ Apr. 22, 2025	Jun. 04, 2025	Conducted (TH03-HY)



6 Measurement Uncertainty

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

Measuring Uncertainty for a Level of	6.7 dB
Confidence of 95% (U = 2Uc(y))	0.7 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 6 GHz)

Measuring Uncertainty for a Level of	5.4 dB
Confidence of 95% (U = 2Uc(y))	5.4 UB

Uncertainty of Radiated Emission Measurement (6 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of	5.6 dB
Confidence of 95% (U = 2Uc(y))	5.0 UB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of	5.7 dB
Confidence of 95% (U = 2Uc(y))	5.7 dB

	Part 96 L	TE Band 4	8 Maximu	m Average	Power [dB	m] (GT - L	C = 3 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0		19.32	19.30	18.99		
20	1	49		19.32	19.34	19.15		
20	1	99		19.26	19.31	19.00		
20	50	0	QPSK	18.28	18.37	18.03	22.34	0.1714
20	50	24		18.34	18.40	18.11		
20	50	50		18.33	18.35	18.07		
20	100	0		18.33	18.35	18.12		
20	1	0		18.30	18.30	18.06		
20	1	49		18.33	18.29	18.03		
20	1	99		18.21	18.29	18.06		
20	50	0	16-QAM	17.33	17.37	17.03	21.33	0.1358
20	50	24		17.33	17.39	17.13		
20	50	50		17.34	17.32	17.09		
20	100	0		17.28	17.34	17.10		
20	1	0		17.20	17.30	17.03		
20	1	49		17.27	17.32	17.09		
20	1	99		17.28	17.24	17.01		
20	50	0	64-QAM	16.29	16.36	15.99	20.32	0.1076
20	50	24		16.38	16.36	16.13		
20	50	50		16.31	16.32	16.09		
20	100	0		16.31	16.35	16.09		
20	1	0		14.64	14.67	14.69		
20	1	49		14.50	14.59	14.60		
20	1	99		14.58	14.73	14.53		
20	50	0	256-QAM	14.61	14.59	14.75	17.75	0.0596
20	50	24		14.50	14.53	14.73		
20	50	50		14.54	14.63	14.66		
20	100	0		14.71	14.69	14.58		
Limit		< 23dBm/10)MHz		Result		Pa	ISS

	Part 96 L	TE Band 4	8 Maximu	m Average	Power [dB	m] (GT - L	C = 3 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0		19.28	19.37	19.05		
15	1	37		19.26	19.33	19.10		
15	1	74		19.27	19.37	19.07		
15	36	0	QPSK	18.33	18.40	18.08	22.37	0.1726
15	36	20		18.34	18.41	18.10		
15	36	39		18.29	18.41	18.15		
15	75	0		18.32	18.38	18.03		
15	1	0		18.30	18.34	18.04		
15	1	37		18.26	18.51	18.21		
15	1	74		18.27	18.27	18.11		
15	36	0	16-QAM	17.32	17.42	17.06	21.51	0.1416
15	36	20		17.33	17.40	17.09		
15	36	39		17.29	17.37	17.16		
15	75	0		17.30	17.36	17.06		
15	1	0		17.14	17.28	16.93		
15	1	37		17.19	17.27	17.05		
15	1	74		17.25	17.27	17.01		
15	36	0	64-QAM	16.31	16.38	16.06	20.28	0.1067
15	36	20		16.31	16.38	16.06		
15	36	39		16.28	16.32	16.10		
15	75	0		16.33	16.37	16.05		
15	1	0		14.52	14.59	14.74		
15	1	37		14.66	14.60	14.65		
15	1	74		14.72	14.61	14.50		
15	36	0	256-QAM	14.69	14.70	14.51	17.74	0.0594
15	36	20		14.55	14.52	14.71		
15	36	39		14.50	14.63	14.69		
15	75	0		14.68	14.59	14.61		
Limit		< 23dBm/1()MHz		Result		Pa	ISS

	Part 96 L	TE Band 4	8 Maximu	m Average	Power [dB	m] (GT - L	C = 3 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0		19.32	19.40	19.11		
10	1	25		19.35	19.40	19.18		
10	1	49		19.35	19.35	19.15		
10	25	0	QPSK	18.35	18.42	18.08	22.40	0.1738
10	25	12		18.42	18.47	18.15		
10	25	25		18.44	18.49	18.24		
10	50	0		18.37	18.48	18.12		
10	1	0		18.38	18.37	18.13		
10	1	25		18.37	18.49	18.26		
10	1	49		18.41	18.38	18.23		
10	25	0	16-QAM	17.37	17.43	17.11	21.49	0.1409
10	25	12		17.40	17.49	17.16		
10	25	25		17.44	17.48	17.25		
10	50	0		17.37	17.46	17.10		
10	1	0		17.20	17.32	16.96		
10	1	25		17.28	17.35	17.05		
10	1	49		17.25	17.33	17.12		
10	25	0	64-QAM	16.31	16.38	16.02	20.35	0.1084
10	25	12		16.38	16.46	16.13		
10	25	25		16.43	16.44	16.20		
10	50	0		16.39	16.42	16.09		
10	1	0		14.55	14.56	14.72		
10	1	25		14.62	14.51	14.75		
10	1	49		14.69	14.53	14.61]	
10	25	0	256-QAM	14.71	14.56	14.59	17.75	0.0596
10	25	12		14.67	14.62	14.57]	
10	25	25		14.67	14.69	14.59		
10	50	0		14.65	14.67	14.52		
Limit	EIRP	< 23dBm/10	DMHz		Result		Pa	ISS

	Part 96 L	TE Band 4	8 Maximu	m Average	Power [dB	m] (GT - L	C = 3 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0		19.29	19.35	19.12		
5	1	12		19.41	19.45	19.16		
5	1	24		19.29	19.32	19.06		
5	12	0	QPSK	18.38	18.44	18.08	22.45	0.1758
5	12	7		18.44	18.47	18.25		
5	12	13		18.40	18.44	18.15		
5	25	0		18.36	18.42	18.16		
5	1	0		18.34	18.39	18.16		
5	1	12		18.44	18.47	18.15		
5	1	24		18.26	18.37	18.11		
5	12	0	16-QAM	17.34	17.39	17.09	21.47	0.1403
5	12	7		17.35	17.45	17.20		
5	12	13		17.34	17.41	17.13		
5	25	0		17.35	17.43	17.15		
5	1	0		17.23	17.38	16.99		
5	1	12		17.34	17.44	17.11		
5	1	24		17.17	17.24	17.04		
5	12	0	64-QAM	16.33	16.35	16.06	20.44	0.1107
5	12	7		16.37	16.44	16.21		
5	12	13		16.34	16.43	16.17		
5	25	0		16.34	16.40	16.14		
5	1	0		14.75	14.63	14.68		
5	1	12		14.52	14.60	14.62		
5	1	24		14.60	14.51	14.70		
5	12	0	256-QAM	14.52	14.74	14.70	17.75	0.0596
5	12	7		14.64	14.55	14.61		
5	12	13		14.71	14.69	14.75		
5	25	0		14.59	14.60	14.59		
Limit	EIRP	< 23dBm/10)MHz		Result		Pa	ISS

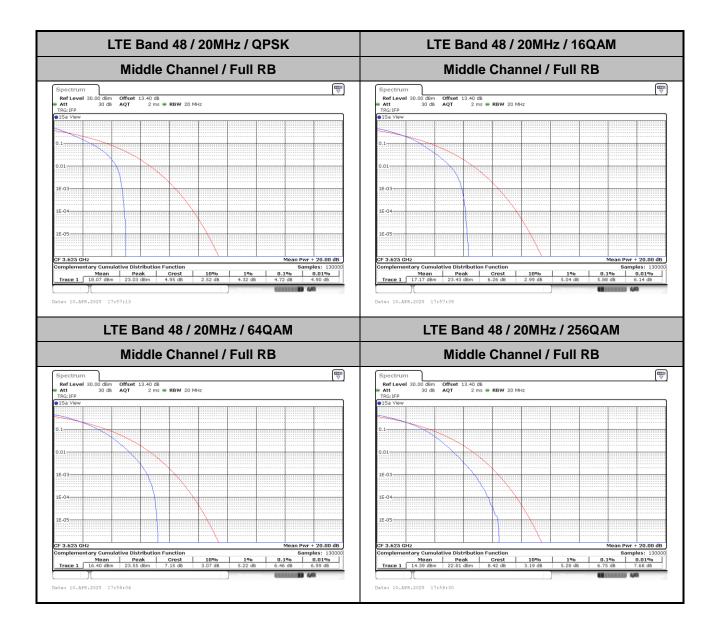


LTE Band 48

Peak-to-Average Ratio

Mode					
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.72	5.88	6.46	6.75	PASS



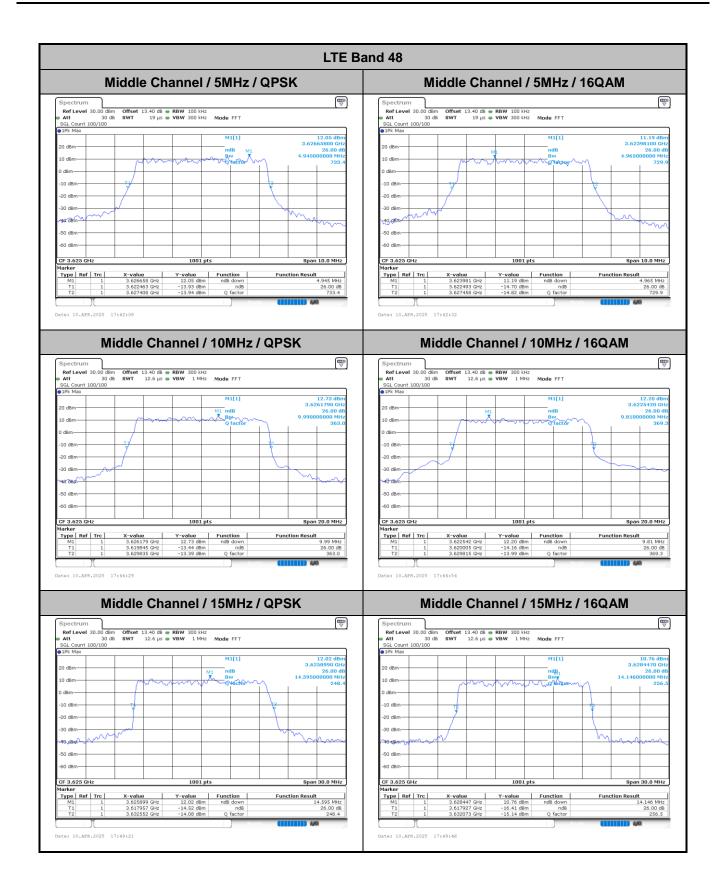




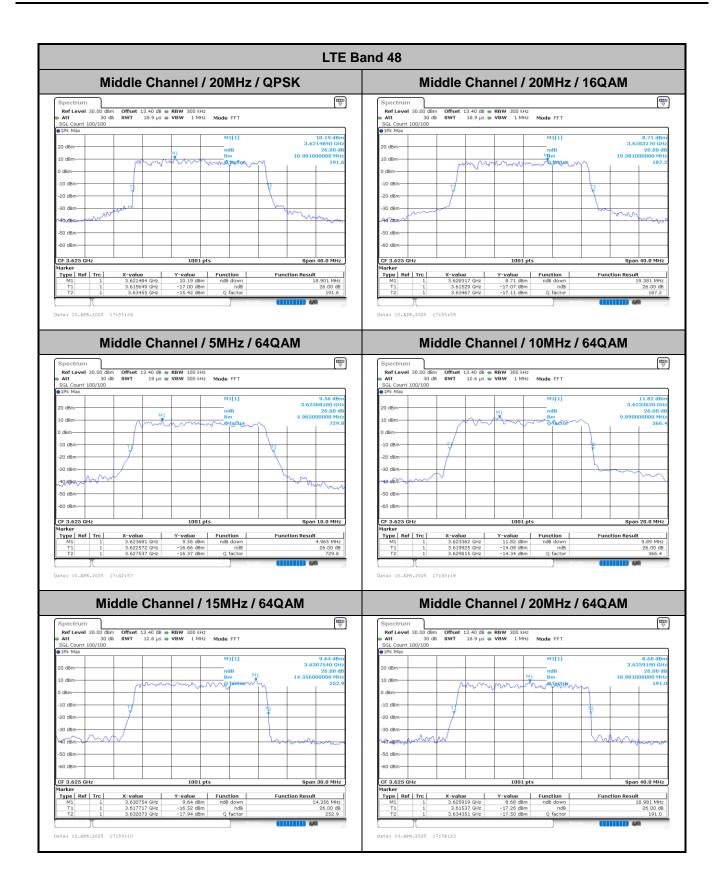
26dB Bandwidth

Mode	LTE Band 48 : 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	-	-	-	-	4.95	4.97	9.99	9.81	14.60	14.15	18.90	19.38
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	4.97	4.76	9.89	9.81	14.36	14.09	18.98	18.98

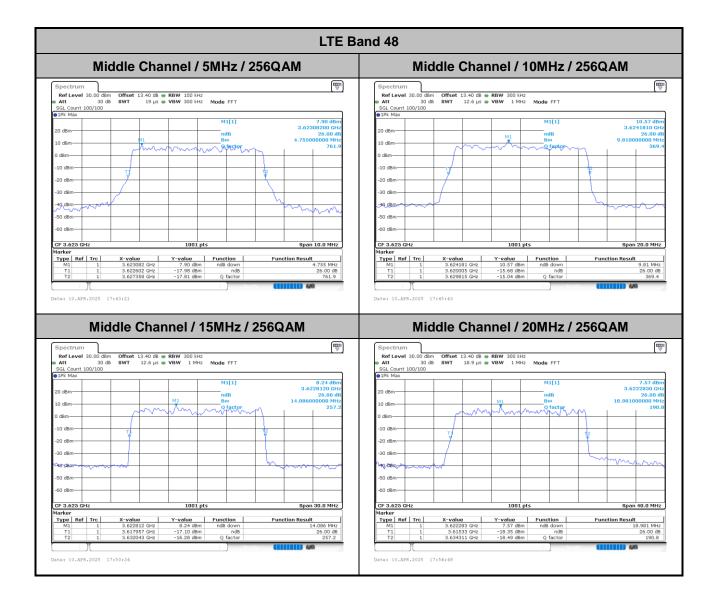










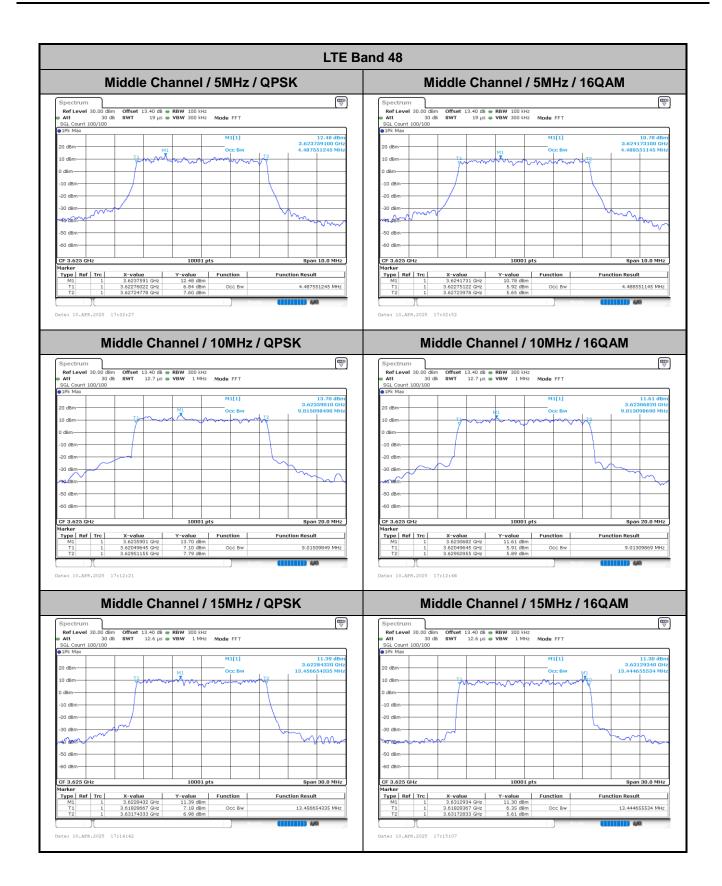




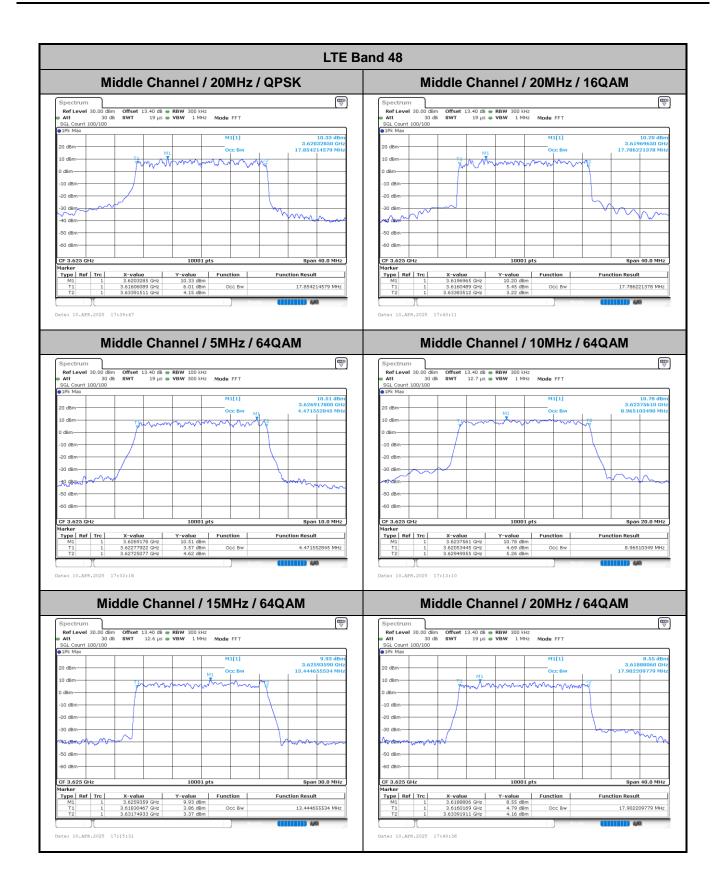
Occupied Bandwidth

Mode	LTE Band 48 : 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	-	-	-	-	4.49	4.49	9.02	9.01	13.46	13.44	17.85	17.79
Mode	LTE Band 48 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	4.47	4.50	8.97	9.00	13.44	13.61	17.90	17.85

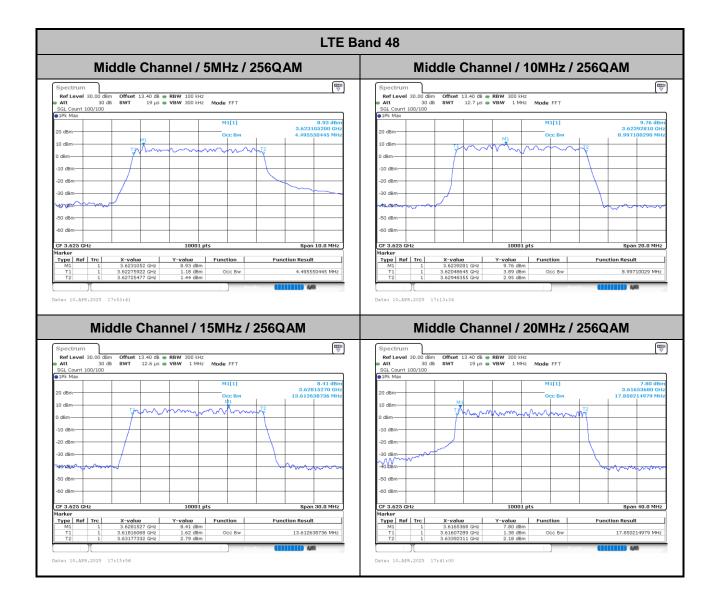






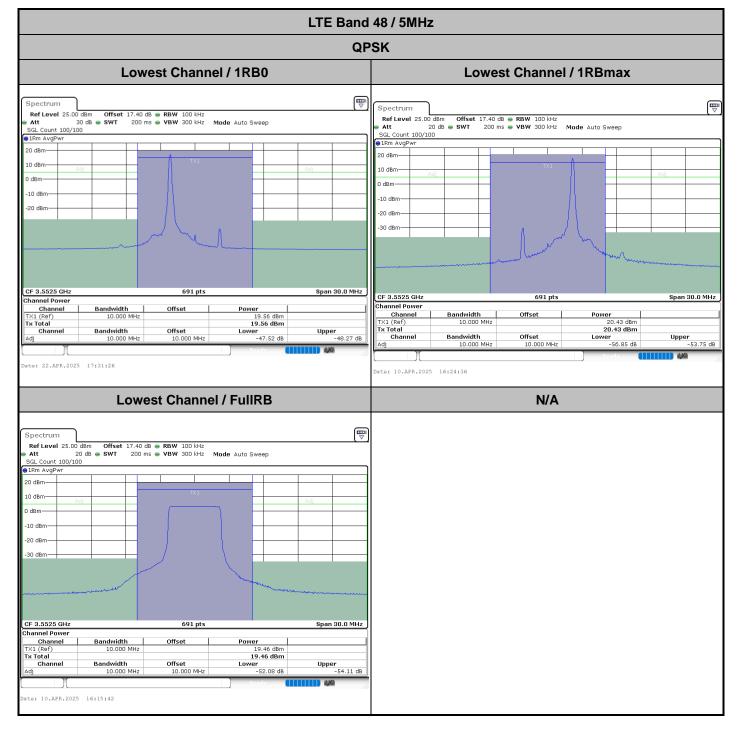




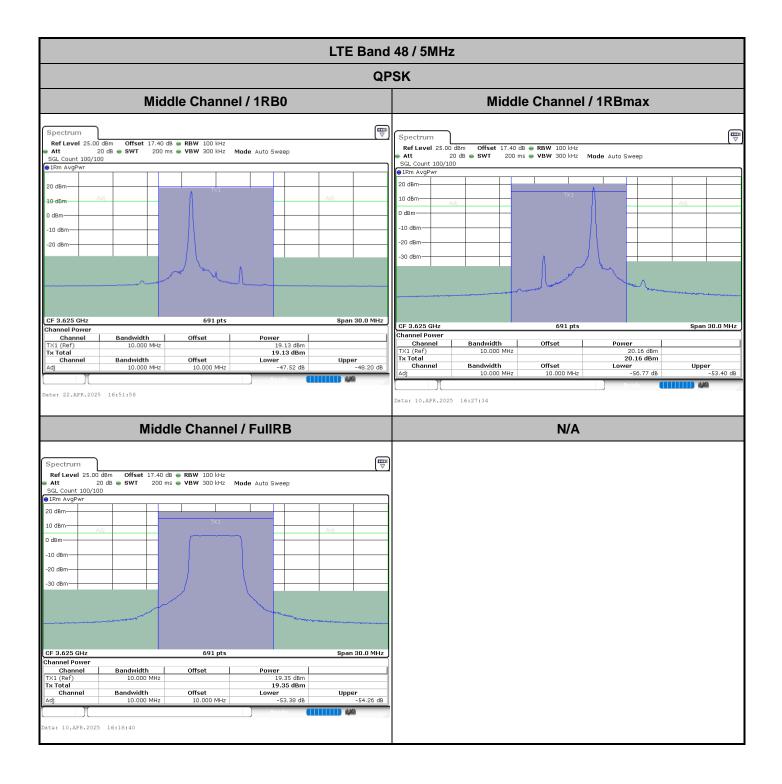




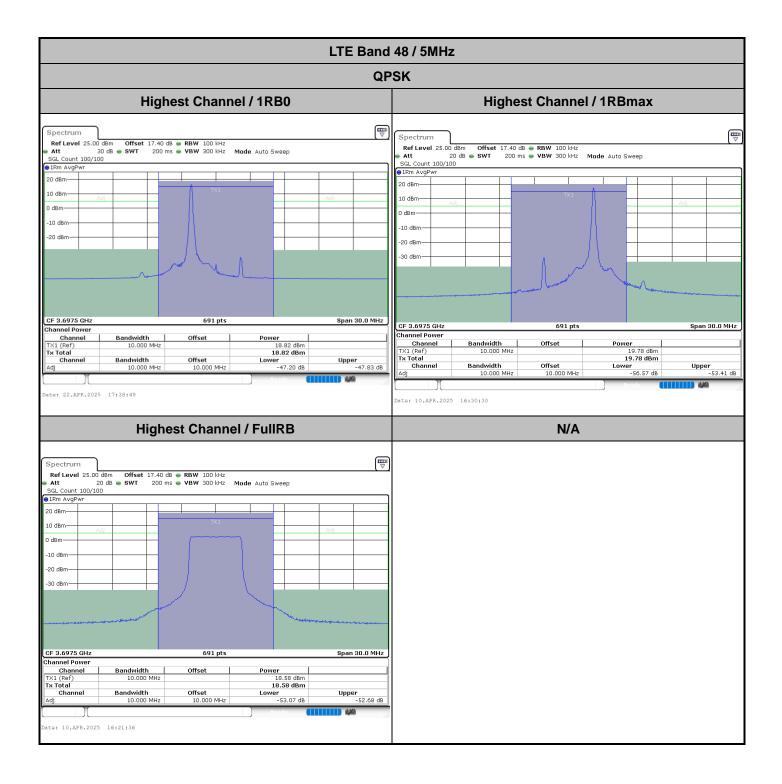








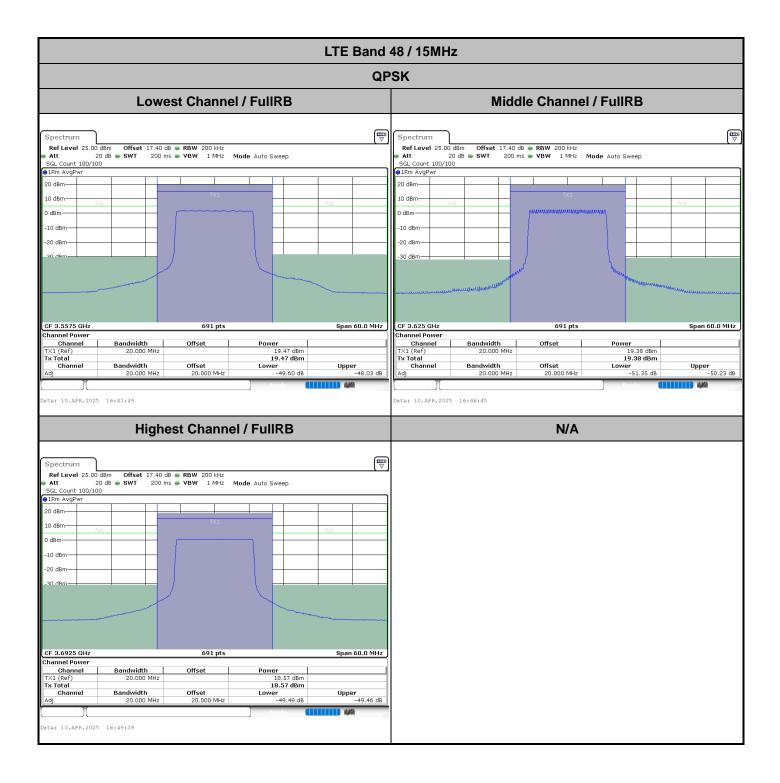




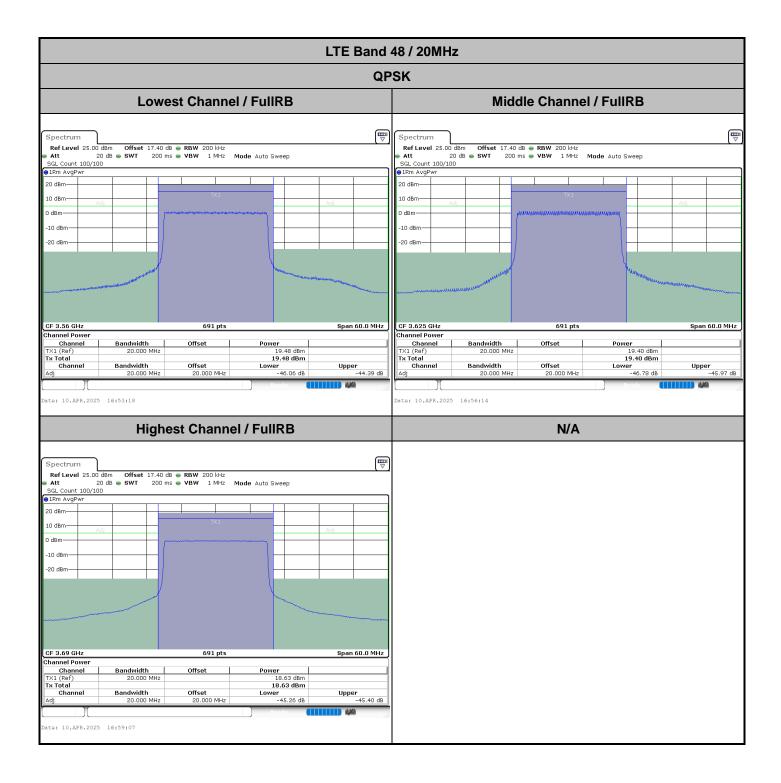


LTE Band 48 / 10MHz								
PSK								
Middle Channel / FullRB								
Spectrum Image: Construction of the second sec								
Channel Bandwidth Offset Power TX1 (Ref) 10.000 MHz 19.39 dBm Channel Bandwidth Offset 19.39 dBm Channel Bandwidth Offset Lower Channel Bandwidth 0ffset Lower Channel Bandwidth 0ffset Lower Adj 10.000 MHz 10.000 MHz -45.37 dB Date: 10.APR.2025 16:37:10 MM								
N/A								

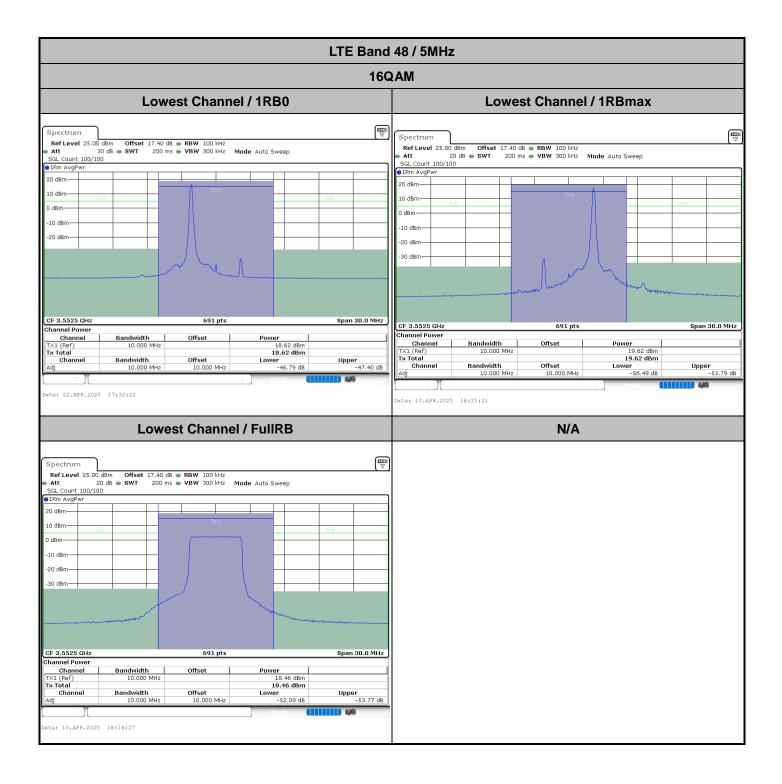




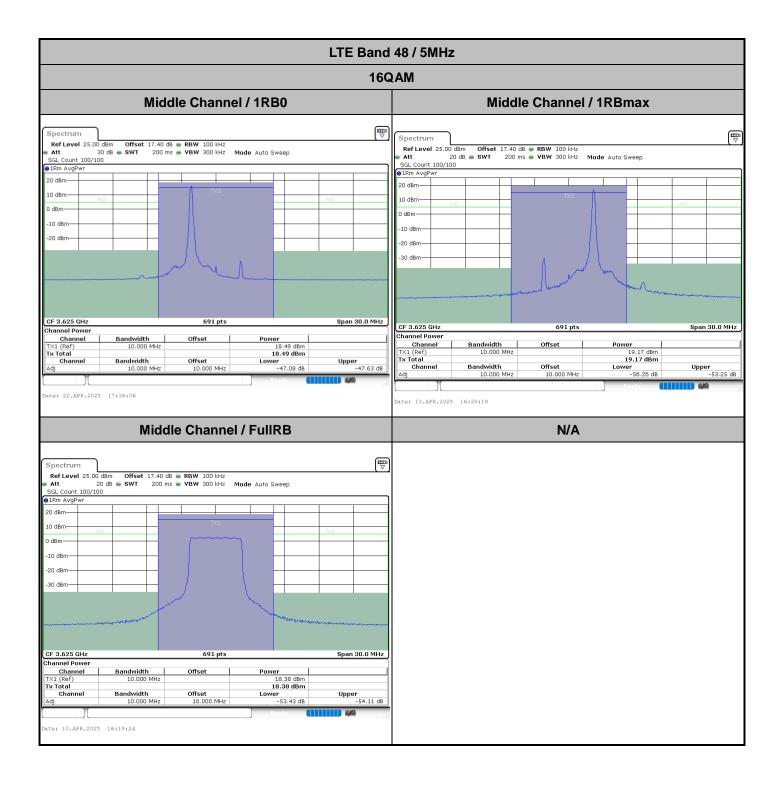




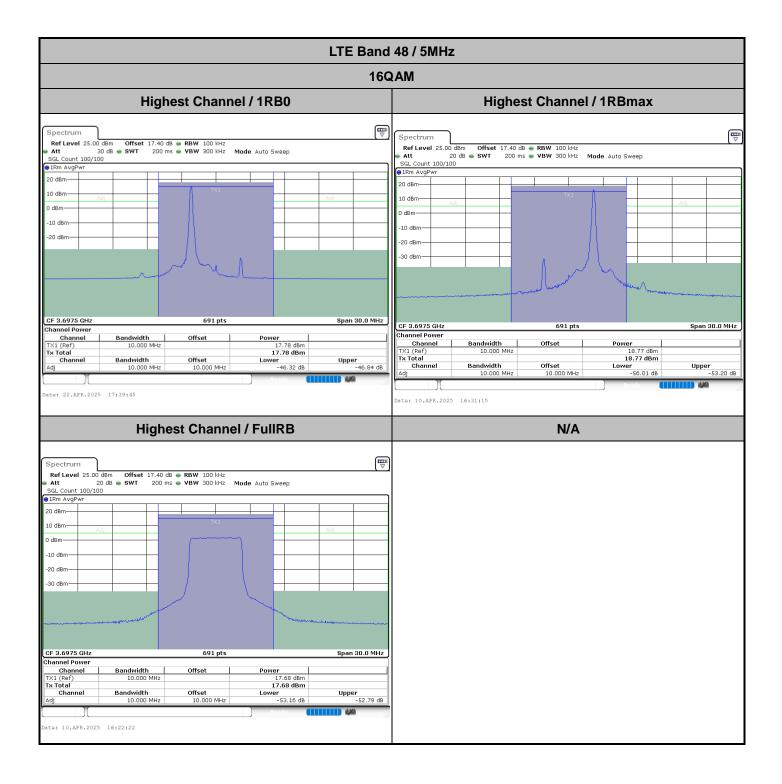








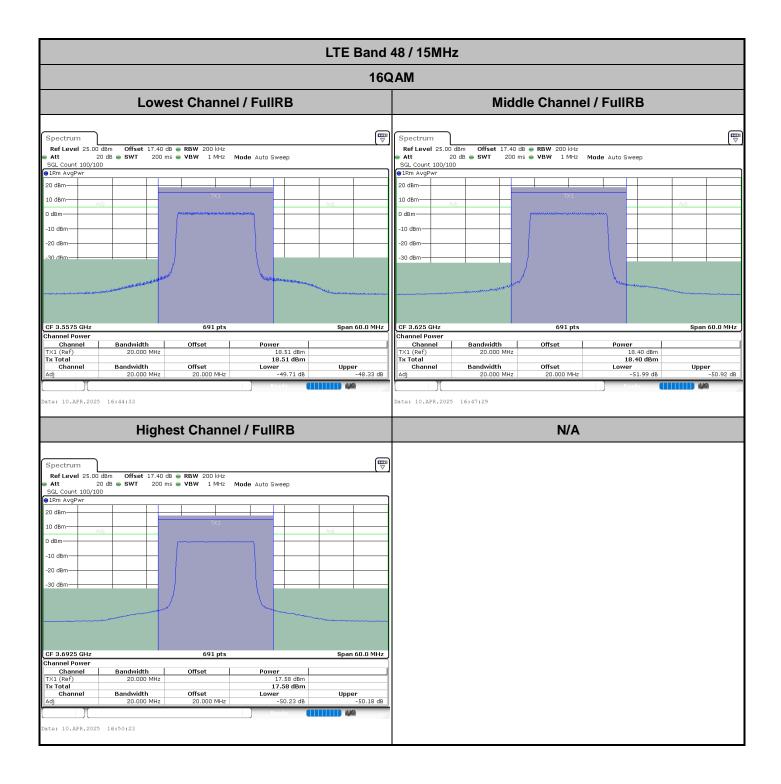






LTE Band 48 / 10MHz							
160	AM						
Lowest Channel / FullRB	Middle Channel / FullRB						
Spectrum Image: Construction of the sector of	Spectrum Image: Construction of the sector of						
Channel Power Offset Power Channel Power 10.000 MHz 18.48 dBm TX1 (Ref) 10.000 MHz 18.48 dBm Adj 10.000 MHz 10.000 MHz Adj 10.000 MHz 10.000 MHz Date: 10.000 MHz -44.51 dB	Of Data Strike Of Data Strike Open dots with Channel Power Channel No.000 MHz 0.000 MHz 18.41 dBm TX (Ref) 10.000 MHz 18.41 dBm 18.41 dBm Adj 10.000 MHz 10.000 MHz -46.03 dB -46.62 dB Date: 10.APR.2025 16:37:54 16:37:54 16:37:54 16:37:54 16:37:54						
Highest Channel / FullRB	N/A						
Spectrum Image: Construction of the sector of							

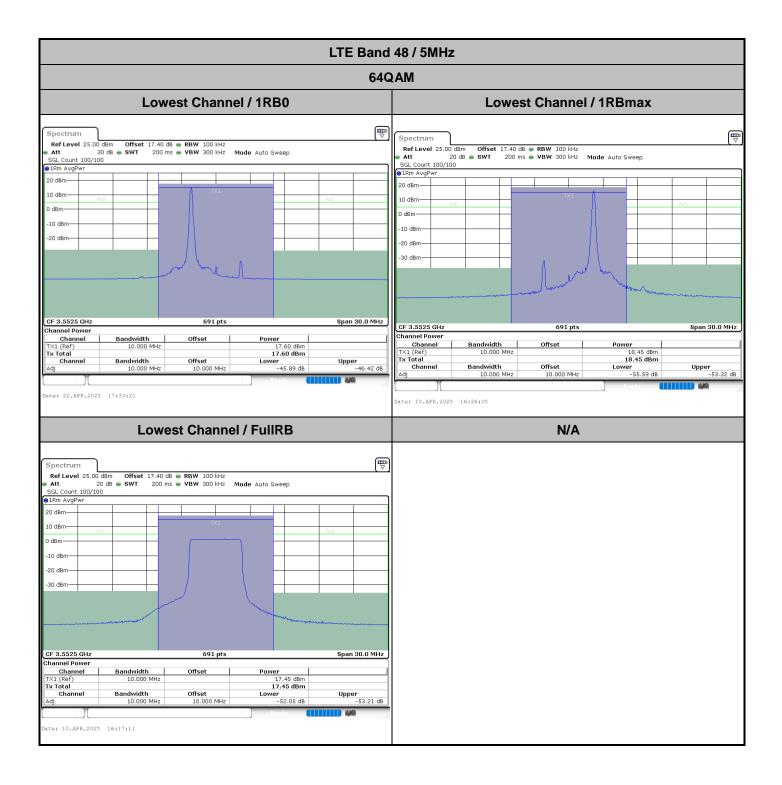




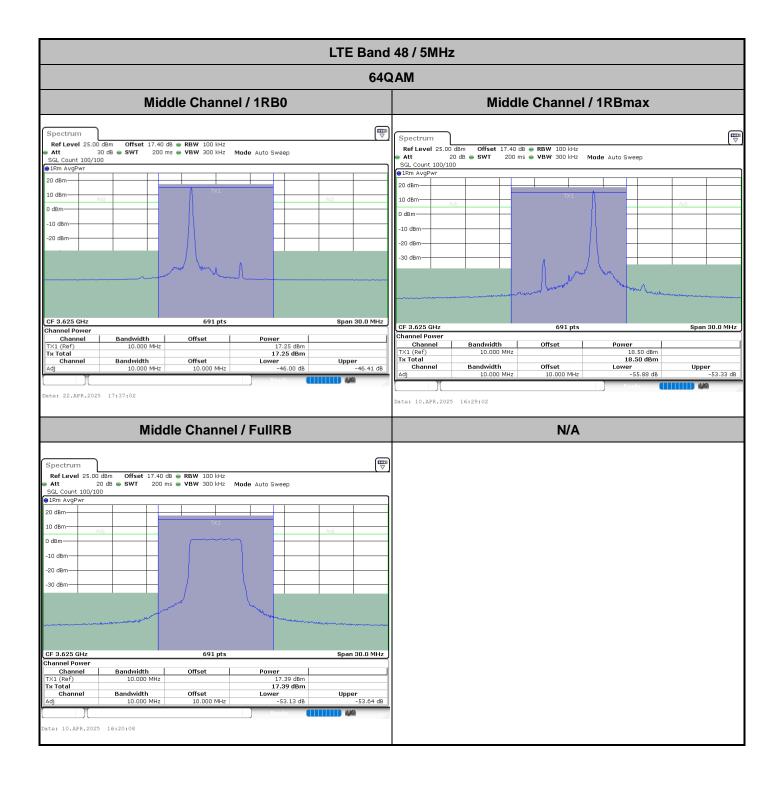


LTE Band 48 / 20MHz								
160	AM							
Lowest Channel / FullRB	Middle Channel / FullRB							
Spectrum Image: Construction of fiset 17.40 db end and the second s	Spectrum Image: Construction of the sector of							
Channel Bandwidth Offset Power TX1 (Ref) 20.000 MHz 18.48 dBm Tx Total 18.48 dBm 18.48 dBm Channel Bandwidth Offset Lower Adj 20.000 MHz 20.000 MHz 44.82 dB Date: 10.APR.2025 16:54:02 16:54:02	Channel Power Bandwidth Offset Power TX1 (Ref) 20.000 MHz 18.41 dBm Tx Total 18.41 dBm 18.41 dBm Channel Bandwidth Offset Lower Adj 20.000 MHz 20.000 MHz 46.65 dB Date: 10.APR.2023 16:36:57							
Highest Channel / FullRB	N/A							
Spectrum Image: Construction of the set 17.40 db end with the set 200 kHz At 20 db end to swith 200 ms end with 1 MHz Mode Auto Sweep SGL Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Im								

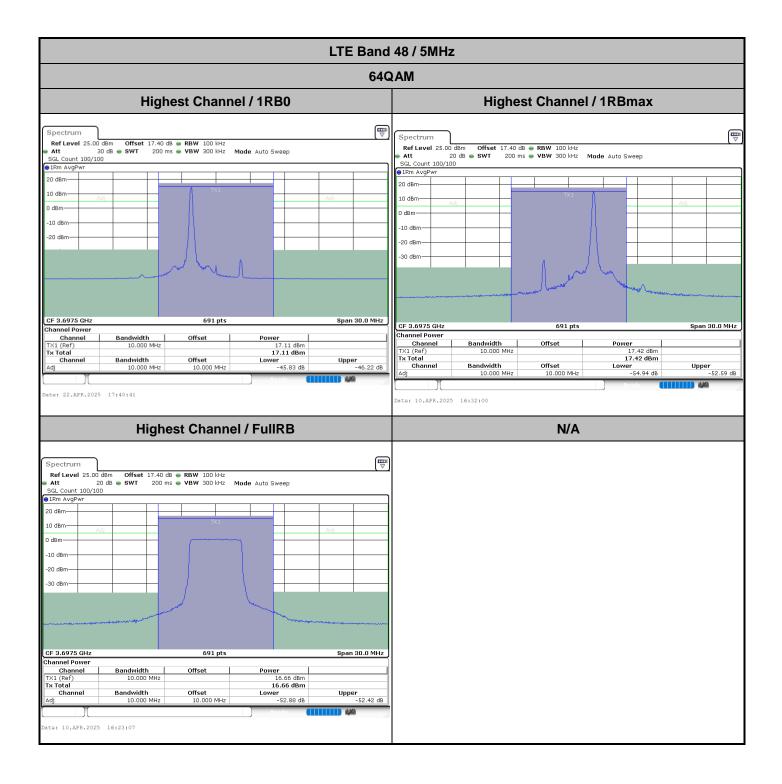








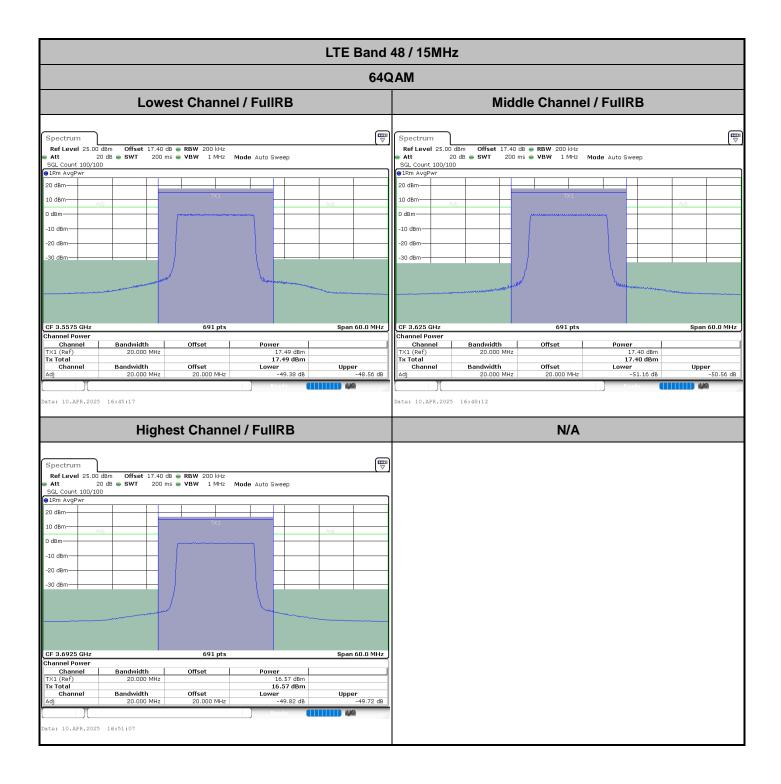






LTE Band 48 / 10MHz								
640	AM							
Lowest Channel / FullRB	Middle Channel / FullRB							
Spectrum Image: Construction of fiset 17.40 dB • RBW 100 kHz Att 20 dB • SWT 200 ms • VBW 300 kHz Mode Auto Sweep SGL Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 • Image: Count 100/100 <	Spectrum Image: Creating of the second							
Channel Power Offset Power TX1 (Ref) 10.000 MHz 17.51 dBm TX fotal 17.51 dBm 17.51 dBm Channel Bandwidth Offset Lower Adj 10.000 MHz 10.000 MHz -46.67 dB Date: 10.APR.2025 16:35:42 Date: 10.APR.2025	Channel Power Offset Power TX1 (Ref) 10.000 MHz 17.42 dBm TX Total 17.42 dBm 17.42 dBm Channel Bandwidth Offset Lower Adj 10.000 MHz 10.000 MHz -47.05 dB Date: 10.478.2025 16:38:38 Peeder							
Highest Channel / FullRB	N/A							
Spectrum Image: Construction of the set 17.40 db @ RBW 100 kHz At 20 db @ SWT 200 ms @ VBW 300 kHz Mode Auto Sweep SGL Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Channel Power Image: Count 100/1000 Image								

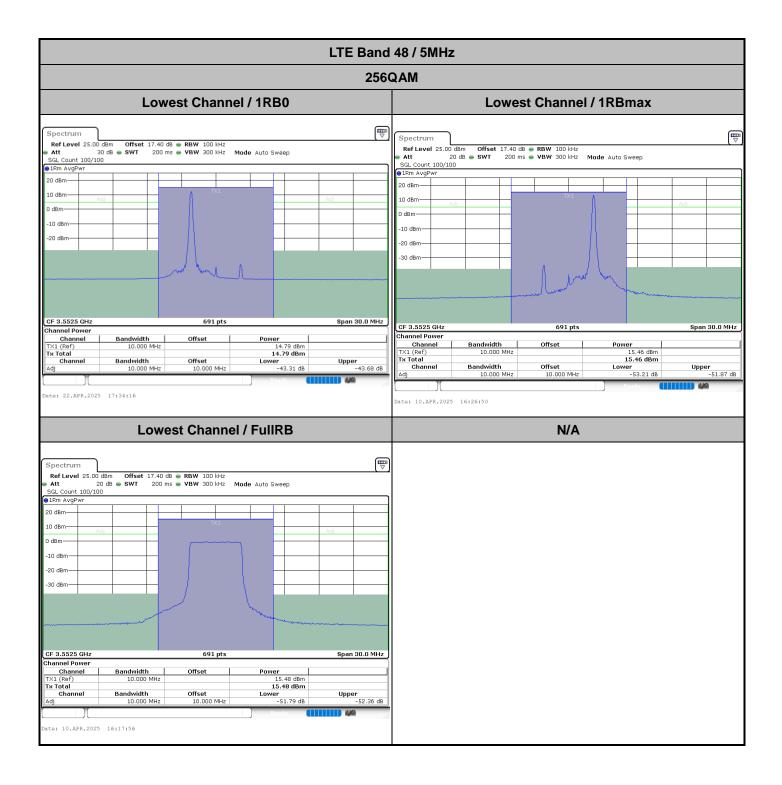




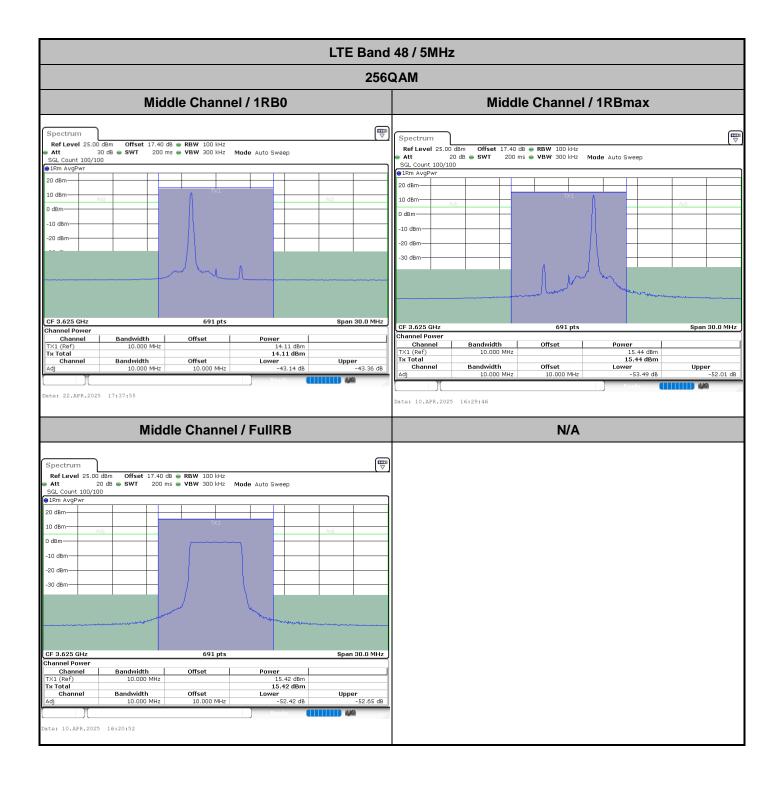


LTE Band 48 / 20MHz								
640	2AM							
Lowest Channel / FullRB	Middle Channel / FullRB							
Spectrum Image: Construction of fiset 17.40 db end RBW 200 kHz Att 20 db end SWT 200 ms end WBW 1 MHz Mode Auto Sweep SGL Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 I	Spectrum Image: Construction of fixed 17.40 dB = RBW 200 kHz Att 20 dB = SWT 200 ms = VBW 1 MHz Mode Auto Sweep SGL Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100							
Channel Power Power Channel Bandwidth Offset Power TX1 (Ref) 20.000 MHz 17.50 dBm TX Total Tx Total 17.50 dBm Upper Adj 20.000 MHz 20.000 MHz -47.11 dB Date: 10.APR.2025 16:54:46 40	Channel Power Description							
Highest Channel / FullRB	N/A							
Spectrum Image: Constraint of the sector of th								

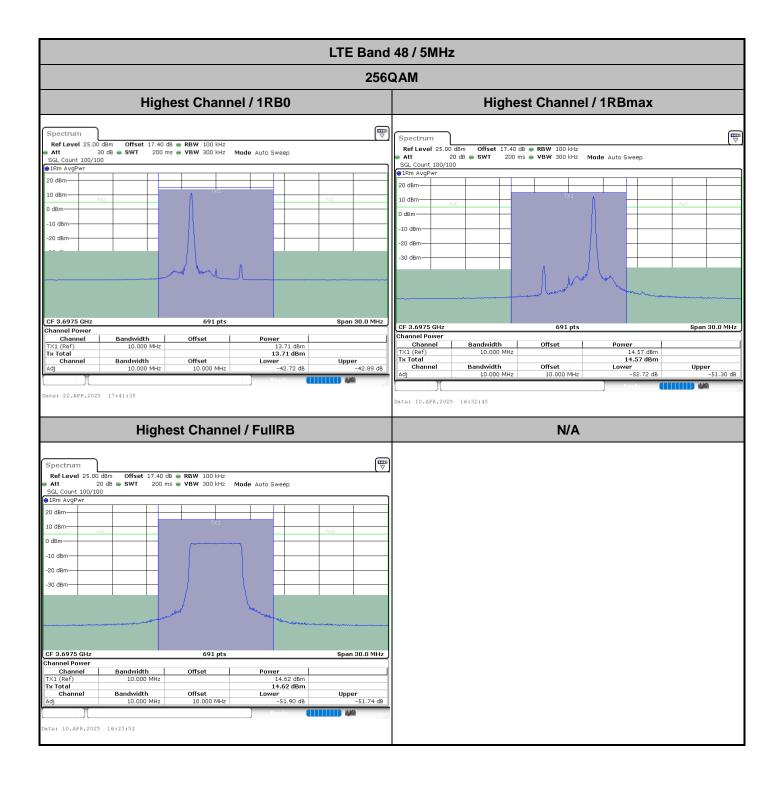




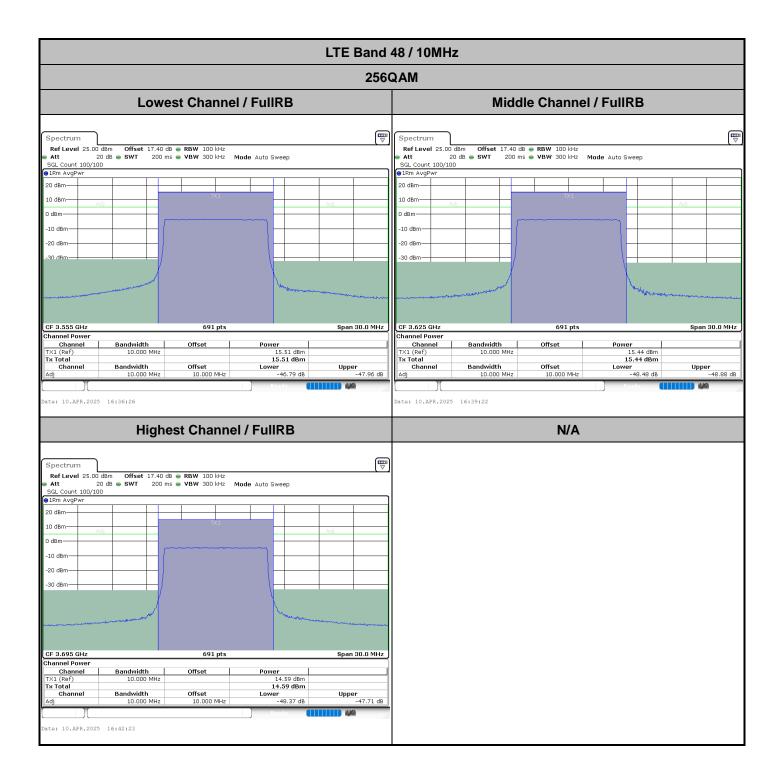




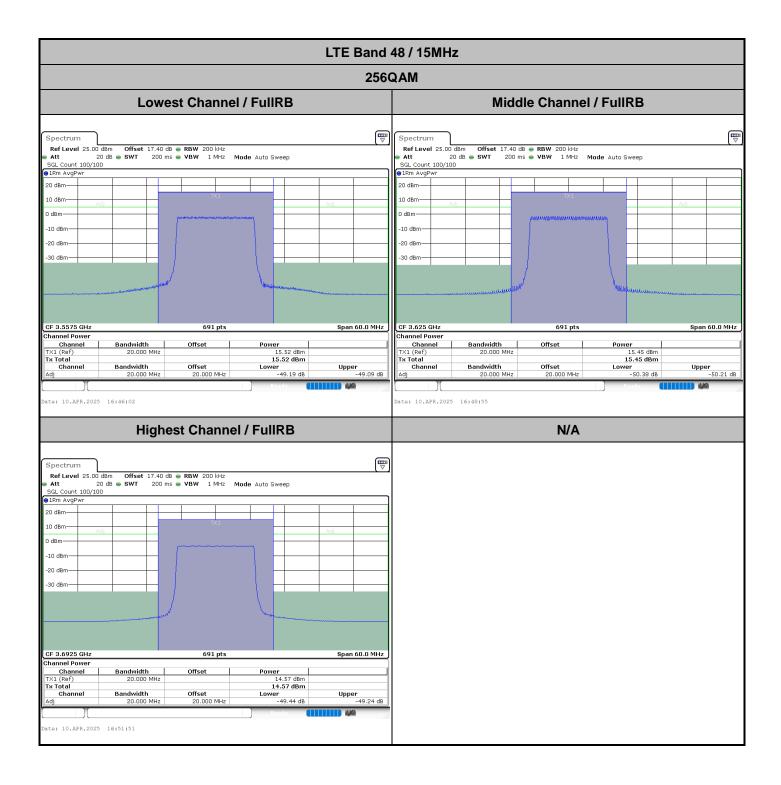










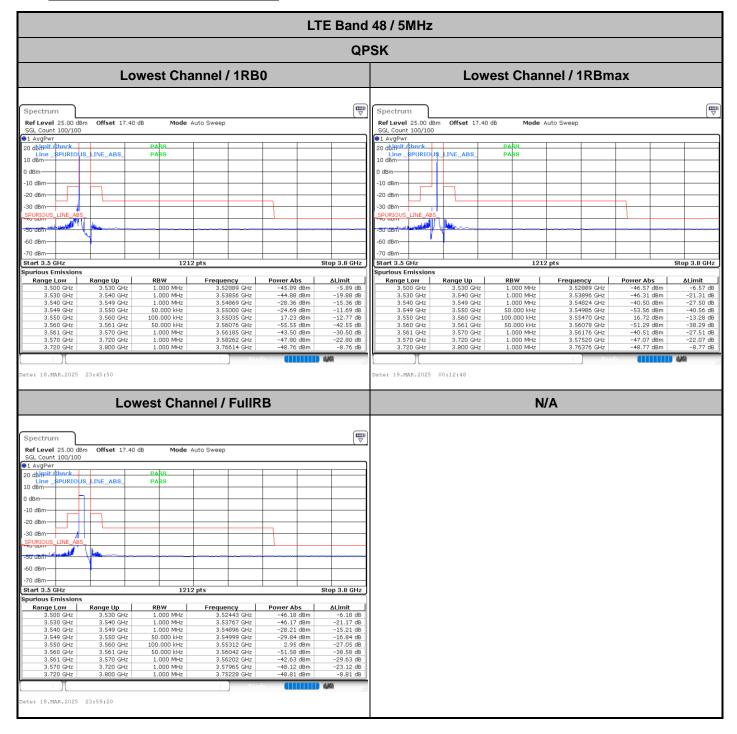




LTE Band 48 / 20MHz								
2560	QAM							
Lowest Channel / FullRB	Middle Channel / FullRB							
Spectrum Image: Construction of fiset 17.40 dB • RBW 200 kHz Att 20 dB • SWT 200 ms • VBW 1 MHz Mode Auto Sweep SGL Count 100/100 • RBW 200 kHz • Image: Construction of the second sec	Spectrum Image: Construction of the sector of							
Chranel Power Span 60.0 MH2 Span 60.	Ch-3.625 CH2 B1 pts Span 60.0 MH2 Channel Power Channel Power Channel Power TX1 (Ref) 20.000 MH2 15.43 dBm TX Total IS.43 dBm IS.43 dBm Channel Bandwidth Offset Lower Adj 20.000 MH2 -49.52 dB -49.05 dB Date: 10.APR.2023 16:58:23 Intervention Intervention							
Highest Channel / FullRB	N/A							
Spectrum W Ref Level 25.00 dBm Offset 17.40 dB e RBW 200 kHz Att 20 dB e SWT 200 ms e VBW 1 MHz Mode Auto Sweep SG. Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count								



Conducted Band Edge





LTE Band 48 / 5MHz							
QPSK							
Middle Channel / 1RB0	Middle Channel / 1RBmax						
Spectrum Image: Construction of the sector of	Spectrum Ref Level 25.00 dBm Offset 17.40 dB Mode Auto Sweep SGL Count 100/100 SGL Count 100/100 ©1 AvgPwr PASS 20 dbipblt thouck PASS 10 dBm						
-60 dBm	-60 dBm						
Range Low Range Up RBW Frequency Power Abs ALlmit 3.500 GHz 3.530 GHz 1.000 MHz 3.52668 GHz -48.13 dBm -6.13 dB 3.530 GHz 3.610 GHz 1.000 MHz 3.52668 GHz -48.13 dBm -9.13 dB 3.510 GHz 3.610 GHz 1.000 MHz 3.6101 GHz -45.51 dBm -9.27.79 dB 3.610 GHz 3.620 GHz 5.0000 KHz 3.61980 GHz -36.79 dBm -23.79 dB 3.620 GHz 3.630 GHz 3.620 GHz 50.000 KHz 3.61928 GHz 17.46 dBm -12.54 dB 3.630 GHz 3.631 GHz 1.000 MHz 3.63229 GHz -45.78 dBm -41.15 dB 3.630 GHz 3.640 GHz 1.000 MHz 3.63229 GHz -41.16 dB 3.640 GHz 3.720 GHz -40.78 dBm -21.85 dB 3.720 GHz 3.800 GHz 1.000 MHz 3.64697 GHz -46.85 dBm -21.85 dB 3.720 GHz 3.800 GHz 1.000 MHz 3.7754 GHz -48.95 dBm -8.95 dB Date: 18.MAR.2025 23:50:20 23:50:20 <td>Range Low Range Up RBW Frequency Power Abs Allmit 3.500 GHz 3.530 GHz 1.000 MHz 3.51791 GHz -48.03 dB -80.03 dB 3.530 GHz 3.610 GHz 1.000 MHz 3.59926 GHz -46.03 dB -80.03 dB 3.530 GHz 3.610 GHz 1.000 MHz 3.59926 GHz -43.04 dB -30.74 dB 3.610 GHz 3.619 GHz 1.000 MHz 3.61973 GHz -43.74 dB -30.74 dB 3.619 GHz 3.620 GHz 50.000 KHz 3.6197 GHz -43.74 dB -30.20 dB 3.630 GHz 3.630 GHz 100.000 KHz 3.62712 GHz 16.80 dBm -13.20 dB 3.630 GHz 3.631 GHz 1.000 MHz 3.6319 GHz -47.30 dB -33.21 dB 3.631 GHz 3.640 GHz 1.000 MHz 3.6319 GHz -47.30 dB -48.80 dBm -48.80 dB 3.720 GHz 3.800 GHz 1.000 MHz 3.64060 GHz -44.07 dBm -19.07 dB 3.720 GHz 3.800 GHz 1.000 MHz 3.7291 GHz -48.8 dBm -6.86 dB</td>	Range Low Range Up RBW Frequency Power Abs Allmit 3.500 GHz 3.530 GHz 1.000 MHz 3.51791 GHz -48.03 dB -80.03 dB 3.530 GHz 3.610 GHz 1.000 MHz 3.59926 GHz -46.03 dB -80.03 dB 3.530 GHz 3.610 GHz 1.000 MHz 3.59926 GHz -43.04 dB -30.74 dB 3.610 GHz 3.619 GHz 1.000 MHz 3.61973 GHz -43.74 dB -30.74 dB 3.619 GHz 3.620 GHz 50.000 KHz 3.6197 GHz -43.74 dB -30.20 dB 3.630 GHz 3.630 GHz 100.000 KHz 3.62712 GHz 16.80 dBm -13.20 dB 3.630 GHz 3.631 GHz 1.000 MHz 3.6319 GHz -47.30 dB -33.21 dB 3.631 GHz 3.640 GHz 1.000 MHz 3.6319 GHz -47.30 dB -48.80 dBm -48.80 dB 3.720 GHz 3.800 GHz 1.000 MHz 3.64060 GHz -44.07 dBm -19.07 dB 3.720 GHz 3.800 GHz 1.000 MHz 3.7291 GHz -48.8 dBm -6.86 dB						
Middle Channel / FullRB	N/A						
Spectrum Image: Spectrum Mode Auto Sweep SL court 100/100 0ffset 17.40 dB Mode Auto Sweep 0 dsmail Abark PASS Image: Apple Amage 0 dsmail Abark PASS Image: Apple Amage 0 dsmail Abark PASS Image: Apple Amage 10 dsm Image: Apple Amage Image: Apple Amage -0 dsmail Abark Image: Apple Amage Image: Apple Amage -0 dsmail Abark Image: Apple Amage Image: Apple Amage -0 dsmail Amage Image: Apple Amage Image: Apple Amage -0 dsmail Amage Image: Apple Amage Image: Apple Amage -0 dsmail Amage Image: Apple Amage Image: Apple Amage -0 dsmail Amage Image: Apple Amage Image: Apple Amagee -0 dsmail Amagee Image: Apple Amagee Image: Apple Amagee Imagee Spurious: Emissions Image: Apple Amagee Imagee Imagee Imagee 3 d50 GHz 3 d50 GHz 1 000 MHz 3 d50 GHz Imagee Imagee 3 d50 GHz 3 d50 GHz 1 000 MHz 3 d50 GHz Imageee							



LTE Band 48 / 5MHz							
QPSK							
Highest Channel / 1RB0	Highest Channel / 1RBmax						
Spectrum Press Ref Level 25.00 dbm Offset 17.40 db Mode Auto Sweep SGL Count 100/100 SGL Count 100/100 SGL Count 100/100 0 dbm Line Abs Abs 10 dbm Charter PASS Image: Count 100/100 0 dbm Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 0 dbm Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 0 dbm Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 0 dbm Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 20 dbm Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 30 dbm Image: Count 100/100 30 dbm Image: Count 100/100 30 dbm Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 Image: Count 1	Spectrum Image: constraint of the second secon						
Highest Channel / FullRB	N/A						
Spectrum Mode Auto Sweep ScL count 100/100 Offset 17.40 dB Mode Auto Sweep 21 AugPvr 20 dbm ² dbvr ² dbvr ² 20 dbvr ² dbvr ² dbvr ² 20 dbm ² dbvr ² dbvr ² 20 dbvr ² dbvr ² 20 dbvr ² dbvr ² 20 dbm ² dbvr ² dbvr ² 20 dbvr ² dbvr ² 20 dbvr ² dbvr ² 30 dbm ² dbvr ² 212 pts Stop 3.8 GHz Spurious Emissions 2112 pts Stop 3.8 GHz Spurious Emissions 21.000 MHz 3.530 GHz 3.640 GHz 3.690 GHz 3.690 GHz 1.000 MHz 3.5273 GHz -46.87 dbm 3.690 GHz 3.690 GHz 1.000 MHz 3.6773 GHz -46.87 dbm -23.560 db 3.690 GHz 3.690 GHz 1.000 MHz 3.6773 GHz -45.57 db -23.560 db 3.690 GHz 3.690 GHz 1.000 MHz 3.6773 GHz -45.57 db -23.560 db 3.690 GHz 3.700 GHz 1.000 MHz 3.6735 GHz -23.560 db -23.560 db 3.700 GHz 3.							





Understand Middle Channel / FullRB Sympto Outer 100 mm S		LTE Band 48 / 10MHz												
Spectrum Spectrum <th< th=""><th></th><th colspan="9">QPSK</th></th<>		QPSK												
Balt Local 200 Bin Offset 17-00 Bin Node Auto Server 100 Bin 0 Auto 0 Aut		Low	est Chanı	nel / FullR	В				Mi	iddle	Char	nnel / FullR	B	
Bel control	Spectrum						Spectrur	n						
Diagnamentary Parking	SGL Count 100/100	Offset 17.40 dB	3 Mode Aut	o Sweep			SGL Count		Offset 17.4	HO dB	Mode A	luto Sweep		
10.00-1-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	20 dbimit_Check						20 dbimit		LINE ABS					
a a b b b b b b b b b b b b b b b b b b	10 dBm						10 dBm							
a a b b b b b b b b b b b b b b b b b b														
	-20 dBm						-20 dBm							
Start Start <th< td=""><td></td><td>k l</td><td></td><td></td><td></td><td></td><td></td><td>LINE ABS</td><td></td><td></td><td>4.</td><td></td><td></td><td></td></th<>		k l						LINE ABS			4.			
a a a a a a a a a a a a a a a a a a a	الارانيون .	Luna								ممليوليا				
Bard 3.3 dirk Isiz ps Brog 3.0 dirk Bard 3.0 dirk Isiz ps Brog 3.0 dirk Bard 4.0 dirk Brog 3.0 dirk Isiz ps Isiz ps <th< td=""><td>-60 dBm</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	-60 dBm													
Sparling invisions Importance Importance <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>														
3.500 0Hz 3.500 0Hz 1.000 Hz 3.500 0Hz	Spurious Emissions						Spurious E	missions				i pis		
Normal N/A Spectrum Image: spectrum <td>3.500 GHz 3.530 GHz 3.540 GHz 3.549 GHz 3.550 GHz 3.550 GHz 3.551 GHz 3.570 GHz</td> <td>3.530 GHz 3.540 GHz 3.549 GHz 3.550 GHz 3.560 GHz 3.561 GHz 3.570 GHz 3.720 GHz</td> <td>1.000 MHz 1.000 MHz 1.000 MHz 100.000 kHz 100.000 kHz 100.000 kHz 1.000 MHz 1.000 MHz</td> <td>3.52837 GHz 3.53906 GHz 3.54896 GHz 3.54996 GHz 3.55423 GHz 3.55601 GHz 3.56131 GHz 3.59896 GHz</td> <td>-46.49 dBm -44.30 dBm -27.67 dBm -33.21 dBm 1.21 dBm -32.76 dBm -30.98 dBm -46.06 dBm</td> <td>-6.49 dB -19.30 dB -14.67 dB -20.21 dB -28.79 dB -19.76 dB -17.98 dB -21.06 dB</td> <td>3.51 3.53 3.65 3.65 3.65 3.65 3.65 3.65 3.65</td> <td>00 GHz 80 GHz 10 GHz 19 GHz 20 GHz 80 GHz 81 GHz 40 GHz</td> <td>3.530 GHz 3.610 GHz 3.619 GHz 3.620 GHz 3.630 GHz 3.631 GHz 3.640 GHz 3.720 GHz</td> <td>1.0 1.0 100.0 100.0 100.0 100.0 1.0 1</td> <td>00 MHz 00 MHz 00 MHz 00 kHz 00 kHz 00 kHz 00 kHz 00 MHz 00 MHz</td> <td>3.52844 GHz 3.60821 GHz 3.61896 GHz 3.61991 GHz 3.62532 GHz 3.63007 GHz 3.63140 GHz 3.64537 GHz</td> <td>-48.37 dBm -44.00 dBm -31.91 dBm -32.00 dBm 0.05 dBm -33.55 dBm -31.94 dBm -44.58 dBm</td> <td>-8.37 dB -19.00 dB -19.91 dB -19.00 dB -29.95 dB -29.95 dB -18.94 dB -19.95 dB</td>	3.500 GHz 3.530 GHz 3.540 GHz 3.549 GHz 3.550 GHz 3.550 GHz 3.551 GHz 3.570 GHz	3.530 GHz 3.540 GHz 3.549 GHz 3.550 GHz 3.560 GHz 3.561 GHz 3.570 GHz 3.720 GHz	1.000 MHz 1.000 MHz 1.000 MHz 100.000 kHz 100.000 kHz 100.000 kHz 1.000 MHz 1.000 MHz	3.52837 GHz 3.53906 GHz 3.54896 GHz 3.54996 GHz 3.55423 GHz 3.55601 GHz 3.56131 GHz 3.59896 GHz	-46.49 dBm -44.30 dBm -27.67 dBm -33.21 dBm 1.21 dBm -32.76 dBm -30.98 dBm -46.06 dBm	-6.49 dB -19.30 dB -14.67 dB -20.21 dB -28.79 dB -19.76 dB -17.98 dB -21.06 dB	3.51 3.53 3.65 3.65 3.65 3.65 3.65 3.65 3.65	00 GHz 80 GHz 10 GHz 19 GHz 20 GHz 80 GHz 81 GHz 40 GHz	3.530 GHz 3.610 GHz 3.619 GHz 3.620 GHz 3.630 GHz 3.631 GHz 3.640 GHz 3.720 GHz	1.0 1.0 100.0 100.0 100.0 100.0 1.0 1	00 MHz 00 MHz 00 MHz 00 kHz 00 kHz 00 kHz 00 kHz 00 MHz 00 MHz	3.52844 GHz 3.60821 GHz 3.61896 GHz 3.61991 GHz 3.62532 GHz 3.63007 GHz 3.63140 GHz 3.64537 GHz	-48.37 dBm -44.00 dBm -31.91 dBm -32.00 dBm 0.05 dBm -33.55 dBm -31.94 dBm -44.58 dBm	-8.37 dB -19.00 dB -19.91 dB -19.00 dB -29.95 dB -29.95 dB -18.94 dB -19.95 dB
Spectrum Spectrum Ret Level 25.00 dfm Offset 17.40 dfm Mode Auto Sweep SGL Count 100/00 AvgWr AvgWr O dfm AvgWr AvgWr - 00 dfm	Date: 19.MAR.2025 01			Read			 Date: 19.M	AR.2025 ()1:42:59	_		Re		
Ref Level 25.00 dBm Offset 17.40 dB Mode Auto Sweep SGL Count 1000/100 INVE_ABS PASS 0 dbm/d flow A PASS Investigation 10 dBm Investigation Investigation Investigation 20 dBm/d flow Investin Investigation Investiga		High	est Chan	nel / FullR	В						N	/A		
Church SPURIOUS INE_ABS PASS 0 dBm	Ref Level 25.00 dBm SGL Count 100/100 1 AvgPwr	Offset 17.40 dB		o Sweep										
Spurous Line Ass. No	Line _\$PURIOUS_ 10 dBm 0 dBm -10 dBm -20 dBm	LINE_ABS_												
ATO dBm Atom Store Store 3.5 GHz 2011 pts Store 3.5 GHz Spurious Emission Store 3.5 GHz Store 3.5 GHz Spurious Emission 8 Ange Up RBW Frequency Power Abs ALlmit 3.500 GHz 3.600 GHz 3.500 GHz 3.600 GHz 3.700 GHz 3.700 GHz 3.700 GHz 3.700 GHz 3.700 GHz 3.700 GHz	SPURIOUS_LINE_ABS_					ll.naki								
Start 3.5 GHz 2011 pts Stop 3.75 GHz Spurious Emissions														
Range Lop Range Up RB W Frequency Power Abs ALimit 3.500 GHz 3.530 GHz 1.000 MHz 3.5027 GHz -48.16 dBm -8.16 dB 3.530 GHz 3.640 GHz 1.000 MHz 3.5406 GHz -448.61 dBm -22.61 dB 3.640 GHz 3.690 GHz 1.000 MHz 3.6490 GHz -44.62 dBm -10.26 dB 3.640 GHz 3.690 GHz 1.000 MHz 3.6996 GHz -0.001 MHz -3.693 dBm -17.93 dB 3.690 GHz 3.690 GHz 100.000 KHz 3.6999 GHz -30.14 dBm -17.14 dB 3.690 GHz 3.700 GHz 100.000 KHz 3.7001 GHz -29.93 dBm -19.71 dBm 3.700 GHz 3.710 GHz 100.000 KHz 3.70101 GHz -29.86 dBm -16.86 dB 3.710 GHz 3.720 GHz 1.000 MHz 3.71285 GHz -43.45 dBm -16.86 dB 3.720 GHz 3.750 GHz 1.000 MHz 3.7228 GHz -43.45 dBm -16.85 dB 3.720 GHz 3.750 GHz 1.000 MHz 3.72550 GHz -47.57 dBm -7.57 dB <td>Start 3.5 GHz</td> <td></td> <td>2011 pi</td> <td>s</td> <td></td> <td>Stop 3.75 GHz</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Start 3.5 GHz		2011 pi	s		Stop 3.75 GHz								
3.530 GHz 3.640 GHz 1.000 MHz 3.5460 GHz -48.61 dBm -23.61 dBm 3.640 GHz 3.680 GHz 1.000 MHz 3.67941 GHz -44.26 dBm -19.26 dBm 3.680 GHz 3.680 GHz 1.000 MHz 3.6896 GHz -30.93 dBm -17.93 dB 3.680 GHz 3.690 GHz 100.000 KHz 3.68997 GHz -30.14 dBm -17.14 dBm 3.690 GHz 3.000 000 KHz 3.68997 GHz -0.07 dBm -29.93 dBm 3.700 GHz 100.000 KHz 3.70001 GHz -29.71 dBm -19.71 dBm 3.701 GHz 3.70001 GHz -3.70001 GHz -3.71 dBm -19.71 dBm 3.701 GHz 3.700 GHz 3.701 GHz -3.710 GHz -16.86 dBm 3.710 GHz 3.720 GHz 1.000 MHz 3.71252 GHz -43.45 dBm -16.86 dB 3.720 GHz 3.750 GHz 1.000 MHz 3.7255 GHz -47.57 dBm -7.57 dBm		Range Up	RBW	Frequency	Power Abs	ΔLimit								
3.701 GHz 3.701 GHz 1.000 MHz 3.70140 GHz -29.66 dB 3.710 GHz 3.720 GHz 1.000 MHz 3.71252 GHz -43.45 dB 3.720 GHz 3.750 GHz 1.000 MHz 3.72550 GHz -44.45 dB 3.720 GHz 3.750 GHz 1.000 MHz 3.72550 GHz -47.57 dBm -7.57 dB	3.530 GHz 3.640 GHz 3.680 GHz 3.689 GHz 3.690 GHz	3.640 GHz 3.680 GHz 3.689 GHz 3.690 GHz 3.700 GHz	1.000 MHz 1.000 MHz 1.000 MHz 100.000 kHz 100.000 kHz	3.54606 GHz 3.67941 GHz 3.68896 GHz 3.68997 GHz 3.69517 GHz	-48.61 dBm -44.26 dBm -30.93 dBm -30.14 dBm 0.07 dBm	-23.61 dB -19.26 dB -17.93 dB -17.14 dB -29.93 dB								
	3.701 GHz 3.710 GHz	3.710 GHz 3.720 GHz	1.000 MHz 1.000 MHz	3.70140 GHz 3.71252 GHz	-29.86 dBm -43.45 dBm -47.57 dBm	-16.86 dB -18.45 dB -7.57 dB								
	Date: 19.MAR.2025 01	1:47:06		Read										





LTE Band 48 / 15MHz						
		QI	PSK			
Lowes	st Channel / FullR	RB	Middle Channel / FullRB			
Spectrum Ref Level 25.00 dBm Offset 17.40 dB SGL Count 100/100	Mode Auto Sweep		Spectrum Ref Level 25.00 dBm Offset 17.40 dB Mode Auto Sweep SGL Count 100/100			
1 AvgPar 20 dbpm 20 dbp 20 dbpm 2	ARR ARR ARR ARR ARR ARR ARR ARR	Stop 3.8 GHz Power Abs ALimit -42.43 dBm -7.71 dBm -42.43 dBm -17.43 dBm -31.33 dBm -8.33 dB -3.65 dBm -20.65 dB -33.65 dBm -30.36 dB -38.65 dBm -20.65 dB -48.66 dBm -30.36 dB -38.65 dBm -26.65 dB -48.90 dBm -8.79 dB -48.79 dBm -8.79 dB	Image: Spurious Line_ABS_ PASS Image: Spurious_Line_ABS_ PASS Image: Spurious_Line_ABS_ I			
Highes	st Channel / FullF	RB	N/A			
ClineSPURIOUS_LINE_ABS Pr 0 dBm	Mode Auto Sweep ASS ASS ASS ASS Jone State ASS 2011 pts Control State 2011 pts Control State 2010 MHz 3.64785 GHz 1.000 MHz 3.64785 GHz 0.000 HHz 3.66800 GHz 0.000 HHz 3.66800 GHz 0.000 HHz 3.66800 GHz 0.000 HHz 3.67853 GHz 0.000 Hz 3.67853 GHz 0.000 Hz 3.67853 GHz 0.000 Hz 3.67805 GHz 0.000 Hz 3.67805 GHz 0.000 Hz 3.70103 GHz 0.000 Hz 3.71193 GHz 0.000 Hz 3.71193 GHz	Bits Bits <th< th=""><th></th></th<>				





LTE Band 48 / 20MHz								
QPSK								
Lowest Cl	annel / FullRB			Mid	Idle Chan	nel / FullR	В	
Spectrum			Spectrum					
Ref Level 25.00 dBm Offset 17.40 Ma SGL Count 100/100 Image: Count 100/100 Image: Coun	le Auto Sweep		Ref Level 25.00 dBm SGL Count 100/100	Offset 17.40	dB Mode Au	to Sweep		
20 dbjmir (back PASS Line SPURIOUS_LINE_ABS PASS 10 dBm			20 dbipoit (back Line _SPURIOUS 10 dBm	LINE_ABS_	PARS PASS			
0 dBm			0 dBm					
-20 dBm			-20 dBm					
-50 dBm			_SPURIOUS_LINE_ABS_		- V			
-60 dBm			-60 dBm					
Start 3.5 GHz Spurious Emissions Range Low Range Up RBW	411 pts	Stop 3.8 GHz	Start 3.5 GHz Spurious Emissions Range Low	Range Up	1811 RBW	Frequency	Power Abs	Stop 3.8 GHz
3.500 GHz 3.530 GHz 1.000 MH 3.530 GHz 3.540 GHz 1.000 MH 3.540 GHz 3.540 GHz 1.000 MH 3.540 GHz 3.550 GHz 200.000 kH 3.550 GHz 3.570 GHz 100.000 kH 3.570 GHz 3.571 GHz 200.000 kH 3.571 GHz 3.570 GHz 1.000 MH 3.590 GHz 3.720 GHz 1.000 MH 3.720 GHz 3.720 GHz 1.000 MH 3.720 GHz 3.270 GHz 1.000 MH	z 3.53777 GHz -42.45 dHz 3.54969 GHz -31.97 dHz z 3.54999 GHz -35.15 dHz z 3.56150 GHz -35.15 dHz z 3.57007 GHz -36.00 dHz z 3.57109 GHz -33.40 dHz z 3.57109 GHz -48.14 dHz	m -17.45 dB m -18.97 dB m -22.15 dB m -33.05 dB m -23.00 dB m -20.40 dB m -23.14 dB	3.500 GHz 3.500 GHz 3.500 GHz 3.610 GHz 3.610 GHz 3.640 GHz 3.640 GHz 3.660 GHz 3.720 GHz Date: 19.MAR.2025	3.530 GHz 3.590 GHz 3.609 GHz 3.640 GHz 3.640 GHz 3.641 GHz 3.640 GHz 3.720 GHz 3.800 GHz 3.800 GHz	1.000 MHz 1.000 MHz 1.000 MHz 200.000 KHz 200.000 KHz 200.000 KHz 1.000 MHz 1.000 MHz 1.000 MHz	3.52012 GHz 3.6294 GHz 3.60901 GHz 3.61996 GHz 3.61996 GHz 3.64005 GHz 3.64005 GHz 3.64208 GHz 3.65224 GHz 3.75188 GHz	-48.64 dBm -47.64 dBm -44.64 dBm -46.70 dBm -3.12 dBm -46.19 dBm -41.22 dBm -46.94 dBm -48.75 dBm	-8.64 dB -22.64 dB -31.64 dB -33.70 dB -33.12 dB -33.12 dB -28.22 dB -21.94 dB -8.75 dB
Highest C	annel / FullRB				N/	A		
SGL count 100/100 I Augew PASR Line_sPURIOUS_LINE_ABS_ PASS 0 d8m	z 3.64906 GHz -48.04 dB 3.67991 GHz -32.13 dB z 3.67997 GHz -34.49 dB z 3.68307 GHz -34.49 dB z 3.68307 GHz -2.63 dB z 3.70014 GHz -34.01 dB z 3.70014 GHz -33.28 dB z 3.71114 GHz -42.10 dB	m -23.04 dB m -19.13 dB m -21.49 dB m -32.63 dB m -21.01 dB m -20.28 dB m -17.10 dB m -7.64 dB						



LTE Band 48 / 5MHz						
	16Q	AM				
Lowest Channel / 1RB0		Lowest Channel / 1RBmax				
Spectrum Ref Level 25.00 dBm Offset 17.40 dB Mode Auto Sweep SGL Count 100/100 PAS PAS I AvgPwr PAS I 0 dBm O PASS I 0 dBm O BAS PASS 0 dBm O INE_ABS PASS 0 dBm O INE_ASS PASS -20 dBm INE_ASS PASS I -30 dBm INE_ASS I I -30 dBm I I I I -30 dBm I I I I I -30 dBm <thi< th=""> I <thi< th=""> I<</thi<></thi<>	Stop 3.8 GHz Power Abs ALimit -46.91 dBm -6.91 dB -46.91 dBm -19.97 dB -26.26 dBm -13.26 dB 15.59 dBm -13.26 dB -57.09 dBm -13.26 dB -57.09 dBm -13.26 dB -45.94 dBm -32.94 dB -47.41 dBm -22.41 dB -47.80 dBm -22.41 dB -47.80 dBm -48.80 dB	Spectrum Pals Mode Auto Sweep SGL Count 100/100 I ArgPwr I ArgPwr I ArgPwr 20 db/mit fbork PASS I I I I I I I I I I I I I I I I I I I				
Lowest Channel / FuliRE	3	Date: 19.MAR.2025 00:13:56 N/A				
Spectrum Ref Level 25.00 dbm Offset 17.40 db Mode Auto Sweep SGL Count 100/100 1 AvgPwr PARS Image: Count 100/100 1 AvgPwr 20 db/mli dbwrk PARS Image: Count 100/100 0 dbm Image: Count 100/108 INE_ABS PARS Image: Count 100/100 0 dbm Image: Count 100/108 INE_ABS PARS Image: Count 100/100 0 dbm Image: Count 100/108 INE_ABS PARS Image: Count 100/100 -20 dbm Image: Count 100/108 Image: Count 100/100 Image: Count 100/100 Image: Count 100/100 -30 dbm Image: Count 100/100 -30 dbm Image: Count 100/100 -30 dbm Image: Count 100/100 Image: Count 1	Stop 3.8 GHz Power Abs ALimit -45.34 dBm -5.34 dB -29.73 dBm -21.69 dB -31.38 dBm -18.38 dB -31.38 dBm -18.38 dB -44.08 dBm -21.08 dB -44.08 dBm -22.62 dB -44.08 dBm -31.08 dB -47.62 dBm -22.62 dB -48.79 dBm -8.79 dB					