

Report No.: FG422321-02C



FCC RADIO TEST REPORT

FCC ID : J9C-M2X35

Equipment : Module

Brand Name : Qualcomm

Model Name : M2X35

Applicant : Qualcomm Technologies, Inc.

5775 Morehouse Drive, San Diego, California 92121, United States

Manufacturer : Qualcomm Technologies, Inc.

5775 Morehouse Drive, San Diego, California 92121, United States

Standard : FCC 47 CFR Part 2, 96

The product was received on Aug. 26, 2024 and testing was performed from Aug. 31, 2024 to Nov. 20, 2024. 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

TEL: 886-3-327-3456

Sporton International Inc. EMC & Wireless Communications Laboratory

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

FAX: 886-3-328-4978 Issue Date

Report Template No.: BU5-FGLTE96 Version 2.5

: 1 of 24

: Dec. 11, 2024

Report Version

Page Number

: 01

Table of Contents

His	story o	of this test report	3
Su		y of Test Result	
1	Gene	eral Description	5
	1.1	Product Feature of Equipment Under Test	5
	1.2	Modification of EUT	5
	1.3	Testing Site	6
	1.4	Applied Standards	
2	Test	Configuration of Equipment Under Test	
	2.1	Test Mode	
	2.2	Connection Diagram of Test System	9
	2.3	Support Unit used in test configuration and system	9
	2.4	Measurement Results Explanation Example	
	2.5	Frequency List of Low/Middle/High Channels	
3	Cond	ducted Test Items	
	3.1	Measuring Instruments	11
	3.2	Conducted Output Power Measurement	12
	3.3	Peak-to-Average Ratio	13
	3.4	EIRP	14
	3.5	Occupied Bandwidth	15
	3.6	Conducted Band Edge	16
	3.7	Conducted Spurious Emission	17
	3.8	Frequency Stability	18
4	Radia	ated Test Items	19
	4.1	Measuring Instruments	19
	4.2	Test Setup	19
	4.3	Test Result of Radiated Test	20
	4.4	Radiated Spurious Emission	21
5		of Measuring Equipment	
6		surement Uncertainty	24
-	-	x A. Test Results of Conducted Test	
•	•	x B. Test Results of Radiated Test	
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TEL: 886-3-327-3456 FAX: 886-3-328-4978

Report Template No.: BU5-FGLTE96 Version 2.5

Page Number

: 2 of 24

Issue Date

: Dec. 11, 2024

Report Version

: 01

History of this test report

Report No. : FG422321-02C

Report No.	Version	Description	Issue Date
FG422321-02C	01	Initial issue of report	Dec. 11, 2024

TEL: 886-3-327-3456 Page Number : 3 of 24 FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024 : 01

Summary of Test Result

Report No.: FG422321-02C

Report Clause	Ref Std. Clause	Test Items Result (PASS/FAIL		Remark
3.2	§2.1046	Conducted Output Power	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	Conducted Spurious Emission Pass	
3.8	§2.1055	Frequency Stability for Temperature & Voltage	Pass	
4.4	§2.1053 §96.41	D53 Radiated Spurious Emission Pass		7.86 dB under the limit at 7362.00 MHz

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: Keven Cheng Report Producer: Lucy Wu

TEL: 886-3-327-3456 Page Number : 4 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs
LTE/5G NR/5G NR RedCap and GNSS.

Report No.: FG422321-02C

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

TDD band Power Class				
	SISO PC3	SISO PC2		
B48	V	-		

RF Exposure					
	Max Antenna Gain information(dBi)				
Band Ant 1 Ant 4 Main					
B48 0 0					

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

1.2 Modification of EUT

No modifications made to the EUT during the testing.

TEL: 886-3-327-3456 Page Number : 5 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

1.3 Testing Site

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.		
Test Site No.	TH03-HY		
Test Engineer	Bryant Liu		
Temperature (°C)	22.1~23.7		
Relative Humidity (%)	50.1~56.7		

Report No. : FG422321-02C

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.	
rest site No.	03CH21-HY (TAF Code: 3786)	
Test Engineer	Jesse Fan, Ray Lung and Sky Chang	
Temperature (°C)	18~26	
Relative Humidity (%)	50~70	
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

TEL: 886-3-327-3456 Page Number : 6 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

1.4 Applied Standards

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

Report No.: FG422321-02C

- ANSI C63.26-2015
- FCC 47 CFR Part 2, 96
- 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 the test items were validated and recorded in accordance with the standards without any modification during the testing.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
- 3. The TAF code is not including all the FCC KDB listed without accreditation.

TEL: 886-3-327-3456 Page Number : 7 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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.

Report No.: FG422321-02C

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report.

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

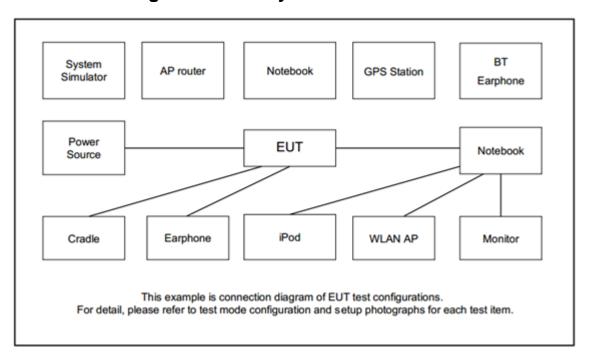
Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D	All	1, Half, Full	L, M, H
EIRP	A, B, C, D	All	1, Half, Full	L, M, H
PAR	A, B, C, D	20 MHz	Full	M
Bandwidth	A, B, C, D	All	Full	M
ACLR, Mask A, B, C, D		All	1RB Full	L, M, H
CSE	А	All	1RB	L, M, H
Frequency Stability	А	10 MHz	Full	M
RSE	Α	20 MHz	1RB	L, M, H

Remark:

- 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.
- 4. For LTE B48 support Antenna 1 (Main Ant.) and Antenna 4; Radiated Spurious Emission is full test. Conducted test items are verified and the worst case is Antenna 1. Therefore, the report only performed Antenna 1 test results.

TEL: 886-3-327-3456 Page Number : 8 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

2.2 Connection Diagram of Test System



Report No.: FG422321-02C

2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW Instek	GPE-2323	N/A	N/A	N/A
2.	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 4.5 dB and 10dB attenuator.

Example:

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

= 4.5 + 10 = 14.5 (dB)

TEL: 886-3-327-3456 Page Number : 9 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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	3625	3690									
15	Channel	55315	55990	56665									
15	Frequency	3557.5	3625	3692.5									
10	Channel	55290	55990	56690									
10	Frequency	3555	3625	3695									
-	Channel	55265	55990	56715									
5	Frequency	3552.5	3625	3697.5									

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : 10 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

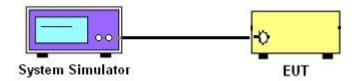
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

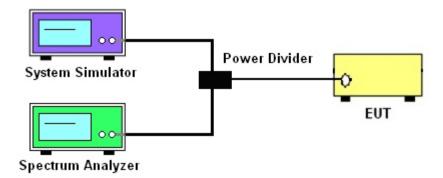
3.1.1 Test Setup

3.1.2 Conducted Output Power

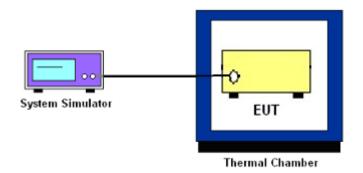


Report No.: FG422321-02C

3.1.3 EIRP, 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.

TEL: 886-3-327-3456 Page Number : 11 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

3.2 Conducted Output Power Measurement

3.2.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

Report No.: FG422321-02C

3.2.2 Test Procedures

- 1. The transmitter output port was connected to base station.
- 2. Set EUT at maximum power through base station.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure and record the power level from the system simulator.

TEL: 886-3-327-3456 Page Number : 12 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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.

Report No.: FG422321-02C

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.

TEL: 886-3-327-3456 Page Number : 13 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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.

Report No.: FG422321-02C

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 (dBm/10 MHz)	Maximum PSD (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.

Report No.: FG422321-02C

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.
- 2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
- 3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- 4. Set the detection mode to peak, and the trace mode to max hold.
- 5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
- 6. Determine the "-26 dB down amplitude" as equal to (Reference Value X).
- 7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "-X dB down amplitude" determined in step 6. If a marker is below this "-X dB down amplitude" value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- 8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

TEL: 886-3-327-3456 Page Number : 15 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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.

Report No.: FG422321-02C

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.
- The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

For Adjacent Channel Leakage Ratio (ACLR) measurement,

- 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.

TEL: 886-3-327-3456 Page Number : 16 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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.

- 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.

Report No.: FG422321-02C

- 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.

TEL: 886-3-327-3456 Page Number : 17 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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.

Report No.: FG422321-02C

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.
- 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.

TEL: 886-3-327-3456 Page Number : 18 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

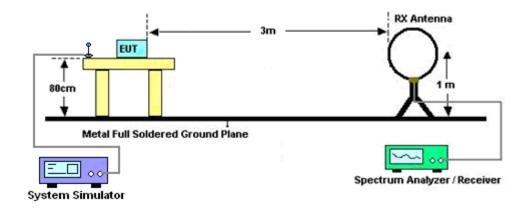
4 Radiated Test Items

4.1 Measuring Instruments

See list of measuring instruments of this test report.

4.2 Test Setup

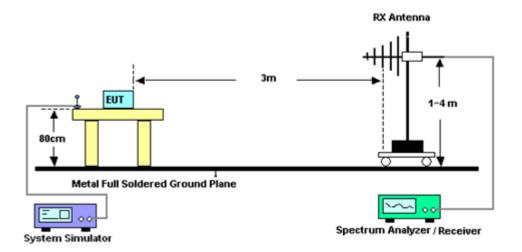
For radiated test below 30MHz



Report No.: FG422321-02C

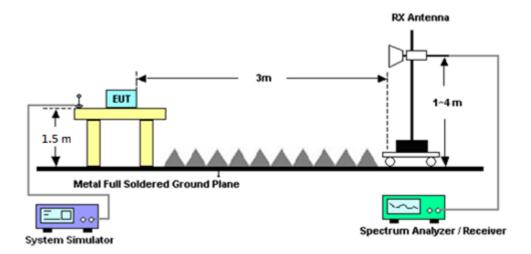
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For radiated test from 30MHz to 1GHz



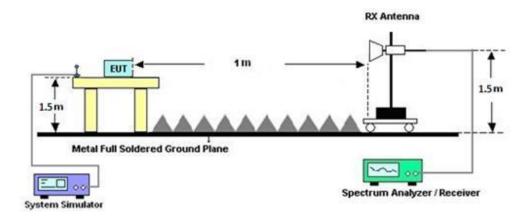
TEL: 886-3-327-3456 Page Number : 19 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

For radiated emissions from 1GHz to 18GHz



Report No.: FG422321-02C

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.

TEL: 886-3-327-3456 Page Number : 20 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

Report No.: FG422321-02C

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 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 mounted on the antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
- 5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
- 6. 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
- 7. 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 : 21 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Aug. 31, 2024~ Nov. 19, 2024	Aug. 28, 2025	Radiation (03CH21-HY)
Bilog Antenna	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	41912 & 05	30MHz~1GHz	Feb. 04, 2024	Aug. 31, 2024~ Nov. 19, 2024	Feb. 03, 2025	Radiation (03CH21-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C03A18EN	1GHz~18GHz	Jul. 11, 2024	Aug. 31, 2024~ Nov. 19, 2024	Jul. 10, 2025	Radiation (03CH21-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	1223	18GHz~40GHz	Jun. 24, 2024	Aug. 31, 2024~ Oct. 25, 2024	Jun. 23, 2025	Radiation (03CH21-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	1230	18GHz~40GHz	Oct. 25, 2024	Oct. 26, 2024~ Nov. 19, 2024	Oct. 24, 2025	Radiation (03CH21-HY)
Amplifier	EMEC	EM01G18GA	060876	1GHz~18GHz	Sep. 28, 2023	Aug. 31, 2024~ Sep. 26, 2024	Sep. 27, 2024	Radiation (03CH21-HY)
Amplifier	EMEC	EM01G18GA	060876	1GHz~18GHz	Sep. 27, 2024	Sep. 27, 2024~ Nov. 19, 2024	Sep. 26, 2025	Radiation (03CH21-HY)
Preamplifier	EMEC	EM18G40G	060871	18GHz~40GHz	Aug. 23, 2024	Aug. 31, 2024~ Nov. 19, 2024	Aug. 22, 2025	Radiation (03CH21-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200845	10Hz~44GHz	May 13, 2024	Aug. 31, 2024~ Sep. 06, 2024	May 12, 2025	Radiation (03CH21-HY)
Spectrum Analyzer	Keysight	N9010B	MY6217358	10Hz~44GHz	Sep. 06, 2024	Sep. 07, 2024~ Nov. 19, 2024	Sep. 05, 2025	Radiation (03CH21-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 06, 2024	Aug. 31, 2024~ Nov. 19, 2024	Mar. 05, 2025	Radiation (03CH21-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804397/2,8046 12/2,803954/2	30MHz~40GHz	Aug. 12, 2024	Aug. 31, 2024~ Nov. 19, 2024	Aug. 11, 2025	Radiation (03CH21-HY)
Hygrometer	TECPEL	DTM-303A	TP211568	N/A	Oct. 30, 2023	Aug. 31, 2024~ Oct. 20, 2024	Oct. 29, 2024	Radiation (03CH21-HY)
Hygrometer	TECPEL	DTM-303A	TP211568	N/A	Oct. 21, 2024	Oct. 21, 2024~ Nov. 19, 2024	Oct. 20, 2025	Radiation (03CH21-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Aug. 31, 2024~ Nov. 19, 2024	N/A	Radiation (03CH21-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Aug. 31, 2024~ Nov. 19, 2024	N/A	Radiation (03CH21-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Aug. 31, 2024~ Nov. 19, 2024	N/A	Radiation (03CH21-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Aug. 31, 2024~ Nov. 19, 2024	N/A	Radiation (03CH21-HY)

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : 22 of 24
FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

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. 03, 2023	Sep. 30, 2024~ Oct. 01, 2024	Oct. 02, 2024	Conducted (TH03-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 01, 2024	Oct. 01, 2024~ Nov. 20, 2024	Sep. 01, 2025	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 06, 2024	Sep. 30, 2024~ Nov. 20, 2024	Sep. 05, 2025	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Nov. 28, 2023	Sep. 30, 2024~ Nov. 20, 2024	Nov. 27, 2024	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. 02, 2024	Sep. 30, 2024~ Nov. 20, 2024	Jan. 01, 2025	Conducted (TH03-HY)
Power divider	Anritsu	K241C	2143398	9KHz~40GHz	Jun. 13, 2024	Sep. 30, 2024~ Nov. 20, 2024	Jun. 12, 2025	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101905	10Hz~40GHz	Jul. 11, 2024	Sep. 30, 2024~ Nov. 20, 2024	Jul. 10, 2025	Conducted (TH03-HY)
Software	Sporton	LTE Conducted Test Tools	N/A	Conducted Test Item	N/A	Sep. 30, 2024~ Nov. 20, 2024	N/A	Conducted (TH03-HY)
Hygrometer	TECPEL	DTM-303B	TP210073	-10 ~ 50°C / 20 ~ 95%RH	Jun. 05, 2024	Sep. 30, 2024~ Nov. 20, 2024	Jun. 04, 2025	Conducted (TH03-HY)

Report No. : FG422321-02C

TEL: 886-3-327-3456 Page Number : 23 of 24 FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

6 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.04 dB
301111d01100 01 00 70 (0 = 200(J))	

Report No. : FG422321-02C

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of	3.33 dB
Confidence of 95% (U = 2Uc(y))	3.33 UB

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

Measuring Uncertainty for a Level of	3.68 dB
Confidence of 95% (U = 2Uc(y))	3.00 UB

TEL: 886-3-327-3456 Page Number : 24 of 24 FAX: 886-3-328-4978 Issue Date : Dec. 11, 2024

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & EIRP)

	LTE	Band 48	Maximum .	Average P	ower [dBn	n] (GT - LC	= 0 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0		21.87	21.51	21.27		
20	1	49		21.85	21.52	21.36		
20	1	99		21.72	21.51	21.37		
20	50	0	QPSK	20.85	20.57	20.40	21.87	0.1538
20	50	24		20.89	20.58	20.42		
20	50	50		20.77	20.50	20.40		
20	100	0		20.85	20.57	20.43		
20	1	0		20.87	20.59	20.39		
20	1	49		20.91	20.61	20.40		
20	1	99		20.82	20.59	20.33		
20	50	0	16-QAM	19.87	19.62	19.45	20.91	0.1233
20	50	24		19.90	19.58	19.43		
20	50	50		19.78	19.52	19.37		
20	100	0		19.83	19.59	19.40		
20	1	0		19.83	19.41	19.36		
20	1	49		19.78	19.59	19.25		
20	1	99		19.69	19.55	19.25		
20	50	0	64-QAM	18.86	18.57	18.34	19.83	0.0962
20	50	24		18.86	18.58	18.41		
20	50	50		18.72	18.49	18.38		
20	100	0		18.79	18.50	18.31		
20	1	0		16.78	16.34	16.21		
20	1	49		16.77	16.51	16.36		
20	1	99		16.48	16.20	15.98		
20	50	0	256-QAM	16.88	16.59	16.39	16.89	0.0489
20	50	24		16.89	16.61	16.39		
20	50	50		16.62	16.40	16.28	1	
20	100	0		16.83	16.54	16.33		
Limit	EIRP	< 23dBm/1	0MHz		Result		Pa	ISS

Report No. : FG422321-02C

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



	LTE Band 48 Maximum Average Power [dBm] (GT - LC = 0 dB)											
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)				
15	1	0		21.85	21.33	21.27						
15	1	37		21.69	21.50	21.24]					
15	1	74		21.52	21.33	21.22	1					
15	36	0	QPSK	20.80	20.38	20.34	21.85	0.1531				
15	36	20		20.81	20.38	20.26						
15	36	39		20.60	20.34	20.35						
15	75	0		20.84	20.44	20.37						
15	1	0		20.83	20.43	20.32						
15	1	37		20.91	20.59	20.20						
15	1	74		20.66	20.44	20.21						
15	36	0	16-QAM	19.78	19.54	19.42	20.91	0.1233				
15	36	20		19.90	19.40	19.36						
15	36	39		19.59	19.48	19.17						
15	75	0		19.74	19.42	19.34						
15	1	0		19.65	19.38	19.33		0.0927				
15	1	37		19.67	19.41	19.05						
15	1	74		19.65	19.42	19.16						
15	36	0	64-QAM	18.85	18.38	18.17	19.67					
15	36	20		18.71	18.42	18.26						
15	36	39		18.72	18.42	18.25						
15	75	0		18.70	18.36	18.24]					
15	1	0		16.77	16.32	16.14						
15	1	37		16.66	16.46	16.27						
15	1	74		16.28	16.06	15.86						
15	36	0	256-QAM	16.80	16.59	16.33	16.87	0.0486				
15	36	20		16.87	16.59	16.21						
15	36	39		16.47	16.35	16.12						
15	75	0		16.77	16.44	16.26						
Limit	EIRP	< 23dBm/1	0MHz	_	Result	_	Pa	ss				

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



	LTE	Band 48	Maximum .	Average P	ower [dBn	n] (GT - LC	= 0 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0		21.85	21.47	21.19		
10	1	25		21.67	21.46	21.29		
10	1	49		21.54	21.40	21.18		
10	25	0	QPSK	20.72	20.43	20.24	21.85	0.1531
10	25	12		20.73	20.53	20.41		
10	25	25		20.77	20.47	20.21		
10	50	0	-	20.71	20.37	20.29		
10	1	0		20.74	20.53	20.19		
10	1	25		20.77	20.50	20.22		
10	1	49		20.81	20.47	20.20]	
10	25	0	16-QAM	19.76	19.50	19.44	20.81	0.1205
10	25	12		19.74	19.38	19.35		
10	25	25		19.78	19.37	19.29		
10	50	0		19.82	19.56	19.29		
10	1	0		19.78	19.35	19.23		
10	1	25		19.66	19.58	19.07		0.0951
10	1	49		19.67	19.55	19.11]	
10	25	0	64-QAM	18.78	18.52	18.32	19.78	
10	25	12		18.73	18.46	18.33		
10	25	25		18.65	18.35	18.32		
10	50	0		18.65	18.36	18.13]	
10	1	0		16.68	16.30	16.20		
10	1	25		16.62	16.37	16.28		
10	1	49		16.29	16.11	15.97		
10	25	0	256-QAM	16.71	16.56	16.39	16.85	0.0484
10	25	12		16.85	16.53	16.30		
10	25	25		16.47	16.20	16.13	1	
10	50	0		16.74	16.49	16.27		
Limit	EIRP	< 23dBm/1	0MHz		Result	-	Pa	iss

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



	LTE	Band 48	Maximum .	Average P	ower [dBm	n] (GT - LC	= 0 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0		21.80	21.35	21.24		
5	1	12		21.84	21.37	21.25]	
5	1	24		21.55	21.40	21.25		
5	12	0	QPSK	20.68	20.46	20.26	21.84	0.1528
5	12	7		20.87	20.44	20.27		
5	12	13		20.74	20.37	20.27		
5	25	0		20.84	20.47	20.39		
5	1	0		20.82	20.46	20.34		
5	1	12		20.84	20.60	20.33		
5	1	24		20.75	20.52	20.32		0.1213
5	12	0	16-QAM	19.80	19.58	19.29	20.84	
5	12	7		19.70	19.42	19.26		
5	12	13		19.74	19.38	19.17		
5	25	0		19.83	19.46	19.23		
5	1	0		19.70	19.31	19.22		0.0933
5	1	12		19.65	19.53	19.06	1	
5	1	24		19.57	19.45	19.15		
5	12	0	64-QAM	18.74	18.53	18.16	19.70	
5	12	7		18.68	18.46	18.23		
5	12	13		18.69	18.48	18.38		
5	25	0		18.62	18.33	18.19		
5	1	0		16.74	16.20	16.02		
5	1	12		16.63	16.45	16.32		
5	1	24		16.47	16.12	15.96		
5	12	0	256-QAM	16.74	16.48	16.27	16.76	0.0474
5	12	7		16.76	16.50	16.38		
5	12	13		16.48	16.21	16.24	1	
5	25	0		16.67	16.36	16.26		
Limit	EIRP	< 23dBm/1	0MHz		Result	-	Pa	ıss

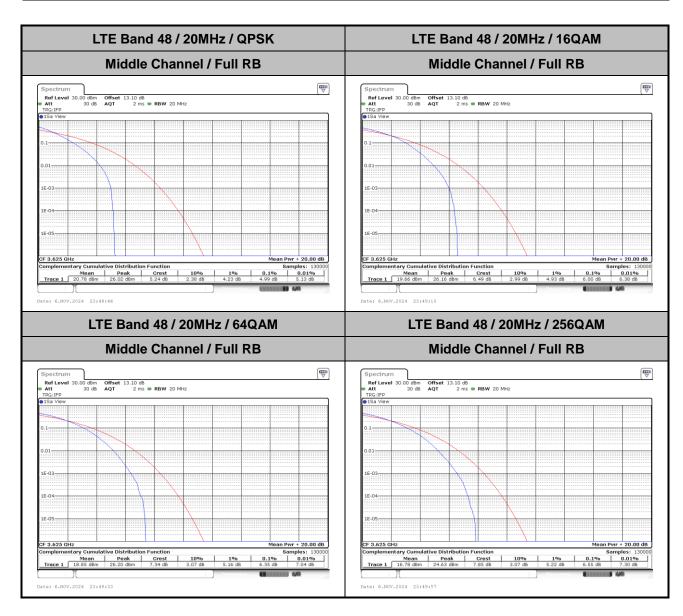
Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.

LTE Band 48

Peak-to-Average Ratio

Mode									
Mod.	QPSK	QPSK 16QAM 64QAM 256QAM							
RB Size	Full RB	Full RB Full RB Full RB							
Middle CH	4.99	6.00	6.35	6.55	PASS				

Report No.: FG422321-02C



TEL: 886-3-327-3456 Page Number: A2-1 of 62

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	-	-	-	-	4.89	5.01	9.73	9.75	14.20	14.38	18.78	19.10
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	-	-	-	-	4.91	4.88	9.73	9.66	14.44	14.08	18.90	18.98

Report No. : FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-2 of 62

LTE Band 48 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM 13.26 dBn 3.62487000 GH 26.00 dl M1[1] 14.80 dBn M1[1] -20 dBm--20 dBm--30 dBn 40 dBm
 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.6252 GHz
 14.80 GBm
 nd8 down

 T1
 1
 3.62526 GHz
 11.13 dBm
 nd8

 T2
 1
 3.627459 GHz
 -11.05 dBm
 Q factor
 Function Result 4.895 MHz
 Type
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.62487 GHz
 13.26 dBm
 nd8 down
 Function Result Middle Channel / 10MHz / QPSK Middle Channel / 10MHz / 16QAM Ref Level 30.00 dBm
Att 30 dB
SGL Count 100/100 13.10 dB • RBW 300 kHz 12.6 µs • VBW 1 MHz Mode FFT 15.34 dBi 3.6261590 C 20 dBm--10 dBm-40 dBm -50 dBm-
 X-value
 Y-value
 Function

 3.626159 GHz
 15.34 dBm
 nd8 down

 3.620085 GHz
 -10.64 dBm
 nd8

 3.629915 GHz
 -10.71 dbm
 Q factor
 Type Ref Trc Date: 6.NOV.2024 23:44:15 Date: 6.NOV.2024 23:44:37 Middle Channel / 15MHz / QPSK Middle Channel / 15MHz / 16QAM 15.41 dBi 3.6217630 GF 26.00 d 14.206000000 MF 10 dBm-251 -20 dBm -60 dBm--60 dBm-CF 3.625 GH CF 3.625 GHz Marker n 30.0 MHz 30.0 MHz Function Result 14.206 MHz 26.00 dB 254.9 Function Result 14.386 MHz 26.00 dB 251.7 Type Ref Trc
 X-value
 Y-value
 Function

 3.621763 GHz
 15.41 dBm
 nd8 down

 3.617957 GHz
 -9.73 dBm
 nd8

 3.632163 GHz
 -10.86 dBm
 Q factor

 X-value
 Y-value
 Function

 3.620504 GHz
 12.22 dBm
 ndB down

 3.617927 GHz
 -15.03 dBm
 ndB

 3.632313 GHz
 -13.92 dBm
 Q factor

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-3 of 62 FAX: 886-3-328-4978

LTE Band 48 Middle Channel / 20MHz / QPSK Middle Channel / 20MHz / 16QAM 13.61 dBm 3.6301550 GHz 26.00 dB 18.781000000 MHz 11.77 dBm 3.6220030 GH: 26.00 dE 19.101000000 MH: 189.6 M1[1] M1[1] -20 dBm-30 dBm--30 dBm-Function Result 19.101 MHz 26.00 dB 189.6
 X-value
 Y-value
 Function

 3.630155 GHz
 13.61 dBm
 ndb down

 3.615699 GHz
 -11.72 dBm
 ndb

 3.634471 GHz
 -12.56 dBm
 Q factor
 Function Result 18.781 MHz Type Ref Trc
 Type
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.622003 GHz
 11.77 dBm
 ndB down
 Middle Channel / 5MHz / 64QAM Middle Channel / 10MHz / 64QAM Ref Level 30.00 dBm

Att 30 dB

SGL Count 100/100

PIPK Max .10 dB **Θ RBW** 100 kHz 19 μs **Θ VBW** 300 kHz **Mode** FFT 13.26 dBi 3.62407100 GF 20 dBm--10 dBm--80 dBm-40 dBm 50 dBm -50 dBm-
 X-value
 Y-value
 Function

 3.626099 GHz
 14.20 dBm
 nd8 down

 3.620165 GHz
 -12.59 dBm
 nd8

 3.629995 GHz
 -11.52 dBm
 Q factor
 Type Ref Trc Type Ref Trc Date: 6.NOV.2024 23:43:29 Date: 6.NOV.2024 23:45:00 Middle Channel / 15MHz / 64QAM Middle Channel / 20MHz / 64QAM 26.0 14.446000000 10 dBm-251 -20 dBm 40 dBm--60 dBm--60 dBm-CF 3.625 GH CF 3.625 GHz Marker 30.0 MHz 40.0 MHz Function Result 14.446 MHz 26.00 dB 251.2 Function Result 18.901 MHz 26.00 dB 191.5 Type Ref Trc
 X-value
 Y-value
 Function

 3.628746 GHz
 12.28 dBm
 nd8 down

 3.617867 GHz
 -13.51 dBm
 nd8

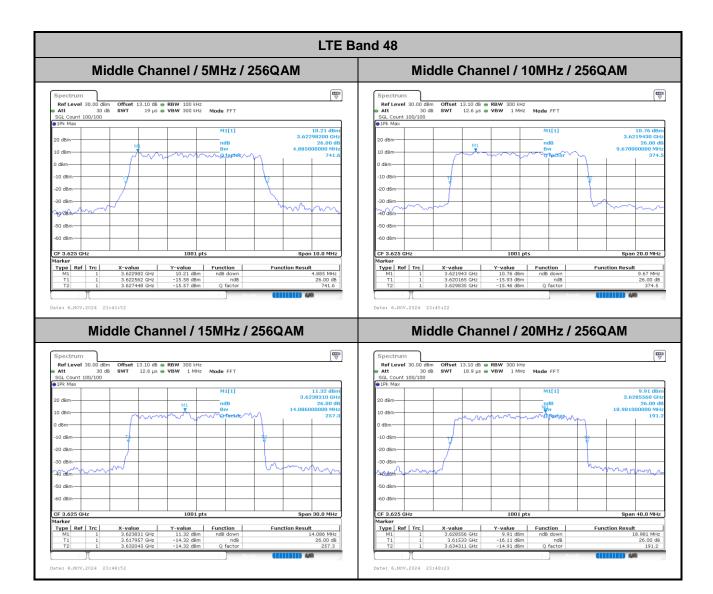
 3.632313 GHz
 -14.02 dBm
 Q factor

 X-value
 Y-value
 Function

 3.620045 GHz
 12.43 dBm
 nd8 down

 3.61549 GHz
 -13.94 dBm
 nd8

 3.634391 GHz
 -13.98 dBm
 Q factor



Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-5 of 62

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	-	-	-	-	4.50	4.48	8.98	9.06	13.41	13.45	17.93	17.86
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	-	-	-	-	4.46	4.50	8.99	9.12	13.40	13.40	17.90	17.85

Report No. : FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-6 of 62

LTE Band 48 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM 15.94 dBn 3.626270900 GH 4.509549045 MH 13.84 dBn 3.626192900 GH 4.480551945 MH M1[1] M1[1] 10 dBmdBm-30 dBm-40 dBm CF 3.625 GH Span 10.0 MHz
 Marker
 Trpe
 Ref
 Trc
 X-value
 Y-value
 Function
 Function Result

 M1
 1
 3.6262709 GHz
 15.94 dbm
 Punction
 Punction Result

 T1
 1
 3.6262203 GHz
 8.47 dbm
 Occ BW
 4.509546

 T2
 1
 3.62723978 GHz
 9.03 dbm
 Occ BW
 4.509546
 4.509549045 MHz 3.62275622 GHz 9.32 dBm Occ Bw 3.62723678 GHz 7.64 dBm 4.480551945 MHz Middle Channel / 10MHz / QPSK Middle Channel / 10MHz / 16QAM Ref Level 30.00 dBm Offset 13.10 dB RBW 300 kHz

Att 30 dB SWT 12.7 µs VBW 1 MHz Mode FFT

SGL Count 100/100

BPK Max 15.47 dBi 3.62459000 GF 8.989101090 MF 20 dBm--10 dBm--20 dBm--30 dBm 40 dBm 40 dBm--50 dBm -50 dBm-
 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.62459 GHz
 15.47 dBm
 15.47 dBm

 T1
 1
 3.62049945 GHz
 9.35 dBm
 Occ BW

 T2
 1
 3.62947955 GHz
 9.19 dBm

 Marker
 Trype
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.627917 GHz
 14.97 dbm
 14.97 dbm

 T1
 1
 3.620458945 GHz
 8.63 dbm
 Occ 8w

 T2
 1
 3.62952355 GHz
 8.59 dbm
 Occ 8w
 8.98910109 MHz 9.065093491 MHz Date: 6.NOV.2024 23:38:13 Date: 6.NOV.2024 23:38:36 Middle Channel / 15MHz / QPSK Middle Channel / 15MHz / 16QAM 13.41 dB 20 dBm 10 dBm--20 dBm--60 dBm--60 dBm-CF 3.625 GH CF 3.625 GHz 1 30.0 MHz Type Ref Trc
 X-value
 Y-value
 Function

 3.6300575 GHz
 13.49 dBm
 3.61827767 GHz

 3.61827767 GHz
 8.73 dBm
 Occ Bw

 3.63169533 GHz
 9.37 dBm

 X-value
 Y-value
 Function

 3.6190906 GHz
 13.41 dBm
 3.61824468 GHz
 8.56 dBm
 Occ Bw

 3.63170133 GHz
 7.60 dBm
 Occ Bw
 0cc Bw
 Function Result **Function Result** 13.417658234 MHz 13.456654335 MHz 40

Report No.: FG422321-02C

LTE Band 48 Middle Channel / 20MHz / 16QAM Middle Channel / 20MHz / QPSK Ref Level 3.0.0 dBm Offset 13.10 dB @ RBW 300 kHz
Ref Level 3.0.0 dB WY 19 µs @ VBW 1 MHz Mode FFT
SGL Count 100/100
JPK Max 12.58 dBn 3.62674780 GH 17.866213379 MH M1[1] M1[1] 10 dBmdBm--20 dBm--30 dBm 40 dBm-CF 3.625 GH Span 40.0 MHz
 Marker
 Trpe
 Ref
 Trc
 X-value
 Y-value
 Function
 Function Result

 M1
 1
 3.6175247 GHz
 12.72 dbm
 Text
 Function Result 17.934206579 MHz 3.6160489 GHz 7.07 dBm Occ Bw 3.63391511 GHz 8.31 dBm 17.866213379 MHz Middle Channel / 5MHz / 64QAM Middle Channel / 10MHz / 64QAM Ref Level 30.00 dBm Offset 13.10 dB RBW 300 kHz

Att 30 dB SWT 12.7 µs VBW 1 MHz Mode FFT

SGL Count 100/100

BPK Max 12.62 dBi 3.622869200 GF 4.468553145 MF 13.64 dBm 3.62245030 GHz 8.991100890 MHz 20 dBm--10 dBm -10 dBm--20 dBm--30 dBm 40 dBm -50 dBm -50 dBm-X-value Y-value Function
3.6226992 GHz 12.62 dBm
3.62277222 GHz 6.56 dBm Occ Bw
3.62724078 GHz 6.02 dBm
 Marker
 Trype
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.6224903 GHz
 13.64 dbm
 13.64 dbm

 T1
 1
 3.62049945 GHz
 7.36 dbm
 Occ 8w

 T2
 1
 3.62949955 GHz
 6.43 dbm
 6.43 dbm
 Type Ref Trc 4.468553145 MHz 8.99110089 MHz Date: 6.NOV.2024 23:37:28 Date: 6.NOV.2024 23:38:58 Middle Channel / 15MHz / 64QAM Middle Channel / 20MHz / 64QAM 12.41 dBi 3.62763370 GF 13.402659734 MF 20 dBm-10 dBmdBm--20 dBm-**√√√** -40 dBm− -60 dBm--60 dBm-CF 3.625 GH CF 3.625 GHz 40.0 MHz Type Ref Trc
 X-value
 Y-value
 Function

 3.6276337 GHz
 12.41 dBm
 ...

 3.61831667 GHz
 5.51 dBm
 Occ Bw

 3.63171933 GHz
 6.97 dBm
 ...

 X-value
 Y-value
 Function

 3.6208524 GHz
 10.80 dBm
 3.61605289 GHz
 6.48 dBm
 Occ Bw

 3.6399551 GHz
 5.99 dBm
 Occ Bw
 0cc Bw
 Function Result Function Result 13.402659734 MHz 17.902209779 MHz 440

Date: 6.NOV.2024 23:40:51

FAX: 886-3-328-4978

LTE Band 48 Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM RefLevel 30.00 dBm Offset 13.10 dB ● RBW 100 kHz
Att 30 dB SWT 19 μs ● VBW 300 kHz Mode FFT
SGL Count 100/100 10.73 dBn 3.624285100 GH 4.500549945 MH 11.40 dBn 3.62329420 GH 9.125087491 MH M1[1] M1[1] 10 dBmdBm--20 dBmmy 40 dBm 30 dBm 46 dBm CF 3.625 GHz Span 10.0 MHz
 Marker
 Trpe
 Ref
 Trc
 X-value
 Y-value
 Function
 Function Result

 M1
 1
 3.65242851 GHz
 10.73 dBm
 Trime
 1.36227542 GHz
 4.66 dBm
 Occ 8w
 4.500549

 T2
 1
 3.62725477 GHz
 5.51 dBm
 Occ 8w
 4.500549

 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.6233942 GHz
 11.40 dBm
 11.140 dBm

 T1
 1
 3.6295749544 GHz
 4.91 dBm
 Occ 8w

 T2
 1
 3.62957954 GHz
 5.87 dBm
 Function Result 4.500549945 MHz 9.125087491 MHz Middle Channel / 15MHz / 256QAM Middle Channel / 20MHz / 256QAM 10.48 dBr 3.62820670 GH 13.402659734 MH 10.08 dBn 3.63215930 GHz 17.850214979 MHz 20 dBm--10 dBm--20 dBmmm +6 dem√ 50 dBm -50 dBm-Y-value Function

10.48 dBm

4.49 dBm Occ Bw

4.41 dBm
 X-value
 Y-value
 Function

 3.6321593 GHz
 10.08 dbm
 3.6160499 GHz

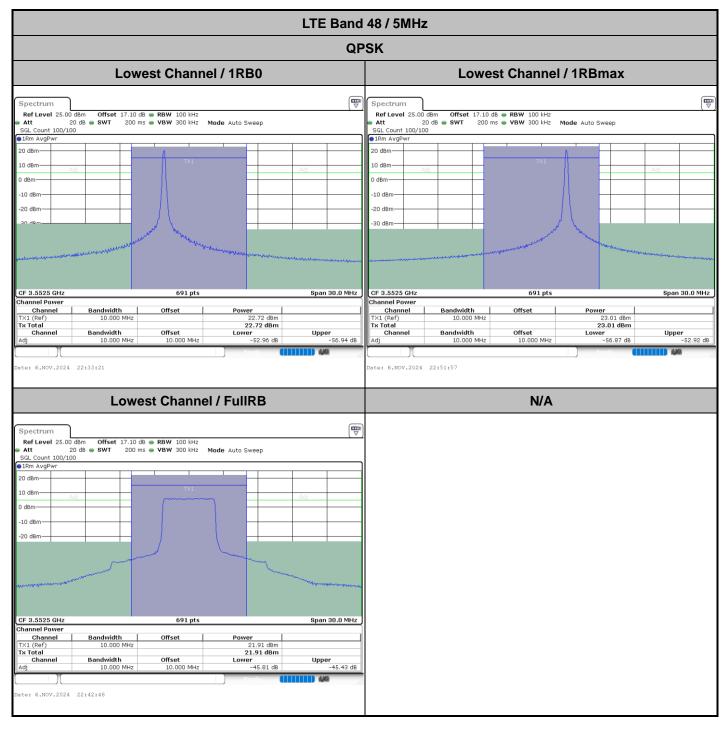
 3.6160499 GHz
 5.41 dbm
 Occ Bw

 3.63299911 GHz
 4.25 dbm
 X-value 3.6282067 GHz 3.61831967 GHz 3.63172233 GHz Function Result 13.402659734 MHz 17.850214979 MHz

Date: 6.NOV.2024 23:42:21

Report No.: FG422321-02C





Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-10 of 62

te: 6.NOV.2024 22:46:14

FAX: 886-3-328-4978

LTE Band 48 / 5MHz **QPSK** Middle Channel / 1RB0 Middle Channel / 1RBmax Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-10 dBm dBm 0 dBm -10 dBm -10 dBm -20 dBm 20 dBm Span 30.0 MHz Span 30.0 MHz hannel Power hannel Power Power 22.67 dBm 22.64 dBm 22.64 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset 22.67 dBm Bandwidth Offset Lower -53.26 dB Bandwidth Upper -57.20 dB Lower -57.17 dB Upper -53.34 dB 10.000 MHz ate: 6.NOV.2024 22:37:05 ate: 6.NOV.2024 22:55:23 Middle Channel / FullRB N/A Spectrum Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.625 GHz 691 pts Span 30.0 MHz 21.61 dBm 21.61 dBm 21.61 dBm Lower -47.38 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-11 of 62

LTE Band 48 / 5MHz **QPSK Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum
 Ref Level
 25.00 dBm
 Offset
 17.10 dB
 RBW
 100 kHz

 Att
 20 dB
 SWT
 200 ms
 YBW
 300 kHz
 Mode Auto Sweep Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm CF 3.6975 GHz Span 30.0 MHz Span 30.0 MHz hannel Power hannel Power Power 22.09 dBm Channel
TX1 (Ref)
Tx Total
Channel 22.49 dBm 22.49 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset 22.09 dBm Upper -56.93 dB Bandwidth Offset Bandwidth **Lower** -53.03 dB Lower -56.67 dB Upper -52.95 dB 10.000 MH; ate: 6.NOV.2024 22:39:54 ate: 6.NOV.2024 22:58:12 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.6975 GHz 691 pts Span 30.0 MHz Power 21.58 dBm 21.58 dBm Lower -48.22 dB Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 22:49:03

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-12 of 62

LTE Band 48 / 10MHz **QPSK Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm Span 30.0 MHz CF 3.555 GHz hannel Power hannel Power Power 21.93 dBm 21.93 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 21.65 dBm 21.65 dBm 21.65 dBm Lower -40.50 dB Upper -39.31 dB Bandwidth Lower -39.91 dB Bandwidth Offset Upper -39.98 dB 10.000 MHz ate: 6.NOV.2024 23:01:33 ate: 6.NOV.2024 23:04:59 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.695 GHz 691 pts Span 30.0 MHz 21.62 dBm 21.62 dBm 21.62 dBm Lower -41.39 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 23:07:48

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-13 of 62

LTE Band 48 / 15MHz **QPSK Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm dBm 0 dBm -10 dBm -10 dBm Span 60.0 MHz Span 60.0 MHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel 21.97 dBm 21.97 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 21.71 dBm 21.71 dBm 21.71 dBm Lower -43.17 dB Upper -41.53 dB Upper -42.82 dB Bandwidth **Lower** -41.96 dB Bandwidth Offset 20.000 MHz ate: 6.NOV.2024 23:18:24 ate: 6.NOV.2024 23:21:48 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.6925 GHz 691 pts Span 60.0 MHz 21.67 dBm 21.67 dBm 21.67 dBm Lower -43.64 dB Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz te: 6.NOV.2024 23:24:34

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-14 of 62

LTE Band 48 / 20MHz **QPSK Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm Span 60.0 MHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 21.64 dBm 21.64 dBm 21.64 dBm Lower -40.77 dB 22.02 dBm Upper -39.63 dB Lower -40.15 dB Upper -40.45 dB Bandwidth Bandwidth Offset 20.000 MHz ate: 6.NOV.2024 23:27:39 ate: 6.NOV.2024 23:31:03 **Highest Channel / FullRB** N/A
 Ref Level
 25.00 dBm
 Offset
 17.10 dB
 RBW
 200 kHz

 Att
 20 dB
 SWT
 200 ms
 VBW
 1 MHz
 Mode
 Auto Sweep

 SGL Count 100/100
 CF 3.69 GHz 691 pts Span 60.0 MHz 21.63 dBm 21.63 dBm 21.63 dBm Lower -41.74 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz te: 6.NOV.2024 23:33:49

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-15 of 62

LTE Band 48 / 5MHz **16QAM** Lowest Channel / 1RB0 **Lowest Channel / 1RBmax** Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm 10 dBm dBm 0 dBm -10 dBm -10 dBm -20 dBm 20 dBm CF 3.5525 GHz Span 30.0 MHz CF 3.5525 GHz Span 30.0 MHz hannel Power Channel Power Power 22.00 dBm Channel
TX1 (Ref)
Tx Total
Channel 21.91 dBm 21.91 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset 22.00 dBm Upper -56.73 dB Bandwidth Offset Lower -52.95 dB Bandwidth Lower -56.65 dB Upper -53.07 dB 10.000 MH; ate: 6.NOV.2024 22:34:04 ate: 6.NOV.2024 22:52:39 **Lowest Channel / FullRB** N/A Spectrum Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.5525 GHz 691 pts Span 30.0 MHz 20.84 dBm 20.84 dBm 20.84 dBm Lower -46.73 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 22:43:30

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-16 of 62

LTE Band 48 / 5MHz **16QAM** Middle Channel / 1RB0 Middle Channel / 1RBmax Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm -20 dBm Span 30.0 MHz CF 3.625 GHz Span 30.0 MHz hannel Power Channel Power Power 21.66 dBm Channel
TX1 (Ref)
Tx Total
Channel 21.66 dBm 21.66 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset 21.66 dBm Upper -56.77 dB Bandwidth Offset **Lower** -53.03 dB Bandwidth Lower -56.68 dB Upper -52.95 dB 10.000 MHz ate: 6.NOV.2024 22:37:47 ate: 6.NOV.2024 22:56:05 Middle Channel / FullRB N/A Spectrum Mode Auto Sweep CF 3.625 GHz 691 pts Span 30.0 MHz Power 20.53 dBm 20.53 dBm Lower -48.51 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset **Upper** -48.08 dB Bandwidth 10.000 MHz te: 6.NOV.2024 22:46:56

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-17 of 62

LTE Band 48 / 5MHz **16QAM Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum
 Ref Level
 25.00 dBm
 Offset
 17.10 dB
 RBW
 100 kHz

 Att
 20 dB
 SWT
 200 ms
 YBW
 300 kHz
 Mode Auto Sweep Att 20 SGL Count 100/100 ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm 20 dBn CF 3.6975 GHz Span 30.0 MHz Span 30.0 MHz hannel Power hannel Power 21.66 dBm 21.66 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Offset Power 21.42 dBm 21.42 dBm 21.42 dBm Lower -56.60 dB Upper -56.62 dB Bandwidth Offset Bandwidth **Lower** -52.92 dB Upper -52.99 dB 10.000 MH; ate: 6.NOV.2024 22:40:37 ate: 6.NOV.2024 22:58:54 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.6975 GHz 691 pts Span 30.0 MHz 20.57 dBm 20.57 dBm 20.57 dBm Lower -49.22 dB Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 22:49:46

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-18 of 62 FAX: 886-3-328-4978

LTE Band 48 / 10MHz **16QAM Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-10 dBm dBm 0 dBm -10 dBm -10 dBm Span 30.0 MHz hannel Power hannel Power Power 20.56 dBm Power 20.97 dBm 20.97 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset 20.56 dBm 20.56 dBm Lower -42.01 dB Upper -40.25 dB Upper -41.29 dB Bandwidth **Lower** -41.13 dB Bandwidth Offset 10.000 MHz ate: 6.NOV.2024 23:02:15 ate: 6.NOV.2024 23:05:41 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.695 GHz 691 pts Span 30.0 MHz 20.65 dBm 20.65 dBm 20.65 dBm Lower -43.06 dB Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 23:08:31

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-19 of 62

LTE Band 48 / 15MHz **16QAM Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm-10 dBm 0 dBm 0 dBm -10 dBm -10 dBm -20 dBm Span 60.0 MHz Span 60.0 MHz hannel Power hannel Power Power 20.64 dBm 21.00 dBm 21.00 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset 20.64 dBm 20.64 dBm Lower -44.95 dB Upper -42.45 dB Upper -44.40 dB Bandwidth Lower -43.02 dB Bandwidth Offset 20.000 MHz ate: 6.NOV.2024 23:19:06 ate: 6.NOV.2024 23:22:29 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 200 kHz
Att 20 dB SWT 200 ms VBW 1 MHz
SGL Count 100/100 Mode Auto Sweep CF 3.6925 GHz 691 pts Span 60.0 MHz 20.70 dBm 20.70 dBm 20.70 dBm Lower -45.05 dB Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz te: 6.NOV.2024 23:25:16

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-20 of 62

LTE Band 48 / 20MHz **16QAM Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm Span 60.0 MHz Span 60.0 MHz hannel Power hannel Power Power 20.55 dBm Power 21.05 dBm 21.05 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset 20.55 dBm 20.55 dBm Lower -42.39 dB Upper -40.59 dB Bandwidth **Lower** -41.24 dB Bandwidth Offset Upper -41.90 dB 20.000 MHz ate: 6.NOV.2024 23:28:21 ate: 6.NOV.2024 23:31:44 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz 20.63 dBm 20.63 dBm Lower -43.27 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz te: 6.NOV.2024 23:34:31

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-21 of 62

LTE Band 48 / 5MHz 64QAM Lowest Channel / 1RB0 **Lowest Channel / 1RBmax** Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm-10 dBm dBm 0 dBm -10 dBm -10 dBm -20 dBm -20 dBm Span 30.0 MHz CF 3.5525 GHz Span 30.0 MHz hannel Power Channel Power Power 20.90 dBm 20.90 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 20.85 dBm 20.85 dBm 20.85 dBm Lower -56.28 dB Upper -56.28 dB Bandwidth Offset Lower -52.70 dB Bandwidth Upper -52.94 dB 10.000 MH; ate: 6.NOV.2024 22:34:46 ate: 6.NOV.2024 22:53:22 **Lowest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.5525 GHz 691 pts Span 30.0 MHz Power 19.76 dBm 19.76 dBm Lower -48.30 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset **Upper** -47.87 dB Bandwidth 10.000 MHz

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-22 of 62

FAX: 886-3-328-4978

te: 6.NOV.2024 22:44:13

LTE Band 48 / 5MHz 64QAM Middle Channel / 1RB0 Middle Channel / 1RBmax Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm -20 dBm Span 30.0 MHz Span 30.0 MHz hannel Power Channel Power Channel
TX1 (Ref)
Tx Total
Channel 20.41 dBm 20.41 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 20.61 dBm 20.61 dBm 20.61 dBm Lower -56.13 dB Upper -56.25 dB Bandwidth Offset Lower -52.82 dB Bandwidth Upper -52.69 dB 10.000 MH; ate: 6.NOV.2024 22:38:29 ate: 6.NOV.2024 22:56:47 Middle Channel / FullRB N/A Spectrum Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.625 GHz 691 pts Span 30.0 MHz 19.65 dBm 19.65 dBm 19.65 dBm Lower -50.04 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset **Upper** -49.53 dB Bandwidth 10.000 MHz

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-23 of 62

FAX: 886-3-328-4978

te: 6.NOV.2024 22:47:38

LTE Band 48 / 5MHz 64QAM **Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum
 Ref Level
 25.00 dBm
 Offset
 17.10 dB
 RBW
 100 kHz

 Att
 20 dB
 SWT
 200 ms
 YBW
 300 kHz
 Mode Auto Sweep Att 20 SGL Count 100/100 ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm -20 dBm CF 3.6975 GHz Span 30.0 MHz hannel Power hannel Power Power 20.60 dBm Channel
TX1 (Ref)
Tx Total
Channel 20.46 dBm 20.46 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Offset 20.60 dBm 20.60 dBm Lower -56.40 dB Upper -56.21 dB Bandwidth Offset Bandwidth **Lower** -52.77 dB Upper -53.09 dB 10.000 MH; ate: 6.NOV.2024 22:41:20 ate: 6.NOV.2024 22:59:37 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.6975 GHz 691 pts Span 30.0 MHz 19.60 dBm 19.60 dBm 19.60 dBm Lower -51.38 dB Bandwidth 10.000 MHz Upper -50.98 dB Bandwidth 10.000 MHz te: 6.NOV.2024 22:50:29

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-24 of 62

LTE Band 48 / 10MHz 64QAM **Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm Span 30.0 MHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 19.68 dBm 19.68 dBm 19.68 dBm Lower -44.19 dB 19.80 dBm Upper -42.02 dB Upper -43.13 dB Bandwidth Lower -43.01 dB Bandwidth Offset 10.000 MHz ate: 6.NOV.2024 23:02:58 ate: 6.NOV.2024 23:06:23 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.695 GHz 691 pts Span 30.0 MHz 19.63 dBm 19.63 dBm Lower -45.42 dB Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 23:09:14

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-25 of 62

LTE Band 48 / 15MHz 64QAM **Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm-10 dBm 0 dBm dBm -10 dBm -10 dBm 20 dBm -20 dBm Span 60.0 MHz Span 60.0 MHz hannel Power hannel Power Power 19.84 dBm 19.84 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 19.74 dBm 19.74 dBm 19.74 dBm Lower -46.95 dB Upper -44.32 dB Upper -45.98 dB Bandwidth Lower -45.16 dB Bandwidth Offset 20.000 MHz ate: 6.NOV.2024 23:19:48 ate: 6.NOV.2024 23:23:11 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 200 kHz
Att 20 dB SWT 200 ms VBW 1 MHz
SGL Count 100/100 Mode Auto Sweep CF 3.6925 GHz 691 pts Span 60.0 MHz Power 19.68 dBm 19.68 dBm Lower -48.14 dB Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz te: 6.NOV.2024 23:25:58

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-26 of 62

LTE Band 48 / 20MHz 64QAM **Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm Span 60.0 MHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 19.67 dBm 19.67 dBm 19.67 dBm Lower -45.58 dB 19.95 dBm Upper -42.78 dB **Upper** -44.44 dB Bandwidth Lower -43.90 dB Bandwidth Offset 20.000 MHz ate: 6.NOV.2024 23:29:03 ate: 6.NOV.2024 23:32:25 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 200 kHz
Att 20 dB SWT 200 ms VBW 1 MHz
SGL Count 100/100 Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz Power 19.60 dBm 19.60 dBm Lower -46.71 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz te: 6.NOV.2024 23:35:13

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-27 of 62

LTE Band 48 / 5MHz 256QAM Lowest Channel / 1RB0 **Lowest Channel / 1RBmax** Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm-10 dBm dBm 0 dBm -10 dBm -10 dBm -20 dBm -20 dBm Span 30.0 MHz CF 3.5525 GHz Span 30.0 MHz hannel Power Channel Power Power 17.92 dBm 17.92 dBm Lower -54.80 dB Channel
TX1 (Ref)
Tx Total
Channel 17.81 dBm 17.81 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Upper -54.76 dB Bandwidth Offset Lower -52.15 dB Bandwidth Upper -52.34 dB 10.000 MH; ate: 6.NOV.2024 22:35:28 Date: 6.NOV.2024 22:54:04 **Lowest Channel / FullRB** N/A Spectrum Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep -20 dBm CF 3.5525 GHz 691 pts Span 30.0 MHz Power 17.78 dBm 17.78 dBm Lower -49.87 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset **Upper** -49.58 dB Bandwidth 10.000 MHz ate: 6.NOV.2024 22:44:55

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-28 of 62

LTE Band 48 / 5MHz 256QAM Middle Channel / 1RB0 Middle Channel / 1RBmax Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm 10 dBm dBm dBm -10 dBm -10 dBm -20 dBm -20 dBm Span 30.0 MHz CF 3.625 GHz Span 30.0 MHz hannel Power Channel Power Power 17.80 dBm 17.80 dBm Lower -54.89 dB Power 17.56 dBm 17.56 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Upper -54.77 dB Bandwidth Offset **Lower** -52.03 dB Bandwidth Upper -52.33 dB 10.000 MH; ate: 6.NOV.2024 22:39:11 ate: 6.NOV.2024 22:57:29 Middle Channel / FullRB N/A Spectrum Mode Auto Sweep 20 dBr 30 dBm CF 3.625 GHz 691 pts Span 30.0 MHz 17.70 dBm 17.70 dBm 17.70 dBm Lower -51.36 dB Bandwidth 10.000 MHz Channel (Ref) Offset Upper -50.84 dB Bandwidth 10.000 MHz

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-29 of 62

FAX: 886-3-328-4978

te: 6.NOV.2024 22:48:20

LTE Band 48 / 5MHz 256QAM **Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum
 Ref Level
 25.00 dBm
 Offset
 17.10 dB
 RBW
 100 kHz

 Att
 20 dB
 SWT
 200 ms
 YBW
 300 kHz
 Mode Auto Sweep Mode Auto Sweep Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm 10 dBm dBm dBm -10 dBm -10 dBm -20 dBm -20 dBm CF 3.6975 GHz Span 30.0 MHz Span 30.0 MHz hannel Power hannel Power Power 17.72 dBm 17.72 dBm Lower -54.79 dB Power 17.55 dBm 17.55 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Offset Upper -54.70 dB Bandwidth Offset Bandwidth **Lower** -52.00 dB Upper -52.17 dB 10.000 MH; ate: 6.NOV.2024 22:42:03 ate: 6.NOV.2024 23:00:20 **Highest Channel / FullRB** N/A Mode Auto Sweep -20 dBr 30 dBm CF 3.6975 GHz 691 pts Span 30.0 MHz 17.54 dBm 17.54 dBm 17.54 dBm Lower -52.24 dB Bandwidth 10.000 MHz Bandwidth 10.000 MHz

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-30 of 62

FAX: 886-3-328-4978

te: 6.NOV.2024 22:51:12

LTE Band 48 / 10MHz 256QAM **Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm-10 dBm 0 dBm dBm -10 dBm -10 dBm 20 dBm -20 dBm Span 30.0 MHz hannel Power hannel Power 17.74 dBm 17.74 dBm 17.74 dBm Lower -44.58 dB Channel
TX1 (Ref)
Tx Total
Channel 17.81 dBm 17.81 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset **Upper** -42.47 dB **Upper** -43.93 dB Bandwidth **Lower** -43.03 dB Bandwidth Offset 10.000 MHz ate: 6.NOV.2024 23:03:40 ate: 6.NOV.2024 23:07:05 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 17.10 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.695 GHz 691 pts Span 30.0 MHz 17.63 dBm 17.63 dBm Lower -46.79 dB Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz te: 6.NOV.2024 23:09:57

Report No.: FG422321-02C

TEL: 886-3-327-3456 Page Number : A2-31 of 62