

Report No.: FG2D0206-01F



FCC RADIO TEST REPORT

FCC ID : A4RG1MNW

Equipment : Phone

Model Name : G1MNW

Applicant : Google LLC

1600 Amphitheatre Parkway,

Mountain View, California, 94043 USA

Standard : FCC 47 CFR Part 2, 96

The product was received on Feb. 06, 2023 and testing was performed from Feb. 08, 2023 to May 05, 2023. 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 given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

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

Approved by: Louis Wu

Louis Win

Sporton International Inc. EMC & Wireless Communications Laboratory

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

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History of this test report

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Report No.	Version	Description	Issue Date
FG2D0206-01F	01	Initial issue of report	Jun. 15, 2023

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Summary of Test Result

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Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark	
3.2	§2.1046	Conducted Output Power	Reporting only	-	
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	Reporting only	-	
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	Under limit 11.69 dB at 14464.000 MHz for Primary Antenna Under limit 12.00 dB at 14200.000 MHz for ASDIV Antenna	

Conformity Assessment Condition:

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

Disclaimer:

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

Reviewed by: William Chen Report Producer: Rachel Hsieh

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1 General Description

1.1 Product Feature of Equipment Under Test

	Product Feature
Equipment	Phone
Model Name	G1MNW
FCC ID	A4RG1MNW
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/NFC/GNSS/WPT/UWB WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 WLAN 11be EHT20/EHT40/EHT80/EHT160 Bluetooth BR/EDR/LE/HR

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Remark: The above EUT's information was declared by manufacturer.

EUT Information List							
S/N	Performed Test Item						
31061FDJG0001E	Conducted Measurement						
33141FDJG0012X	EIRP						
33161FDJG000BA	Radiated Spurious Emission						

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard					
Tx Frequency 3552.5 MHz ~ 3697.5 MHz					
Rx Frequency	3552.5 MHz ~ 3697.5 MHz				
Bandwidth	5 MHz / 10 MHz / 15 MHz / 20 MHz				
Maximum Output Power to Antenna	<primary antenna="">: 21.00 dBm</primary>				
Maximum Output Fower to Antenna	<asdiv antenna="">: 22.92 dBm</asdiv>				
	<primary antenna="">:</primary>				
Antonna Typo	<ant. 6="">: PIFA Antenna</ant.>				
Antenna Type	<asdiv antenna="">:</asdiv>				
	<ant. 7="">: PIFA Antenna</ant.>				
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM				

<Primary Antenna>

Radio Tech	Band Number	Antenna name	Gain	
LTE	B48	ANT6	0.6	

<ASDIV Antenna>

Radio Tech	Band Number	Antenna name	Gain	
LTE	B48	ANT7	-3.6	

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

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1.3 Modification of EUT

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

1.4 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.
rest site No.	TH03-HY
Test Engineer	HaoEn Zhang
Temperature (°C)	21.3~23.2
Relative Humidity (%)	52.1~54.5

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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.	03CH20-HY (TAF Code: 3786)			
Test Engineer	John Chuang, JC Liang and Howard Huang			
Temperature (°C)	18.8~20.1			
Relative Humidity (%)	67.9~69.5			
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

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1.5 Applied Standards

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

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- ANSI C63.26-2015
- ANSI / TIA-603-E
- 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 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.

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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.

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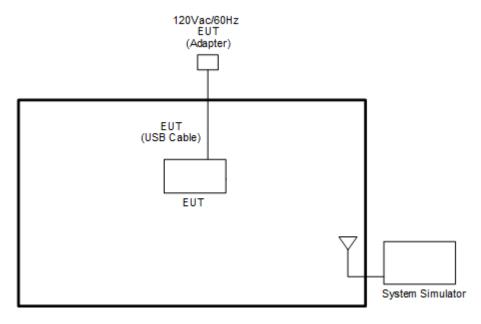
For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and accessory (Adapter or Earphone) and adjusting the measurement antenna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

Test Items	Band	Bandwidth (MHz)			Modulation			RB#			Test Channel				
Tool nome	Dana	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	М	Н
Max. Output Power	48	v	v	v	٧	v	v	٧	v	٧	v	v	v	٧	v
26dB and 99% Bandwidth	48	v	v	v	v	v	v	٧	v			v		v	
Conducted Band Edge	48	v	v	v	v	v	v	٧	v	v		v	v	v	v
Peak-to-Average Ratio	48				٧	v	v	٧	v			v		٧	
Conducted Spurious Emission	48	v	v	٧	>	v				>			v	٧	v
E.I.R.P	48	v	v	v	v	v	v	v	v		r	Max. P	ower		
Frequency Stability	48		v			v				v				v	
Radiated Spurious Emission	48						Worst (Case					>	٧	v
Remark	 The mark "v" means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. 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. All the radiated test cases were performed with Adapter 2 and USB Cable 1. During the preliminary test, both charging modes (Adapter mode and WPT mode) were verified. It is determined that the adaptor mode is the worst case for official test. One representative bandwidth is selected to perform PAR and frequency stability. 														

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2.2 Connection Diagram of Test System

<EUT with Adapter>



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2.3 Support Unit used in test configuration

Item	Equipment	ipment Brand Name Model No		FCC ID	Data Cable	Power Cord	
1.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m	

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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.

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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 Highes										
20	Channel	55340	55990	56640							
20	Frequency	3560.0	3625.0	3690.0							
45	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							
ΰ	Frequency	3552.5	3625.0	3697.5							

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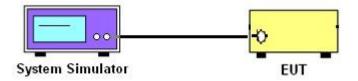
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

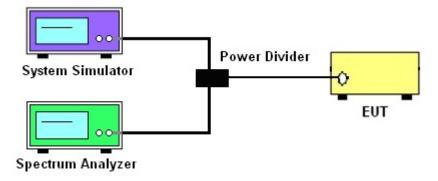
3.1.1 Test Setup

3.1.2 Conducted Output Power

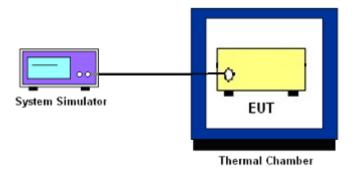


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3.1.3 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

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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.

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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.

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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.

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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

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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.

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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.

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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

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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.

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.

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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.

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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.

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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.

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- 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.

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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. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency

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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.

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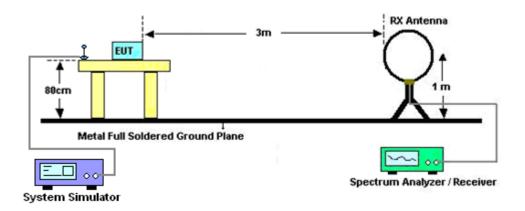
4 Radiated Test Items

4.1 Measuring Instruments

See list of measuring instruments of this test report.

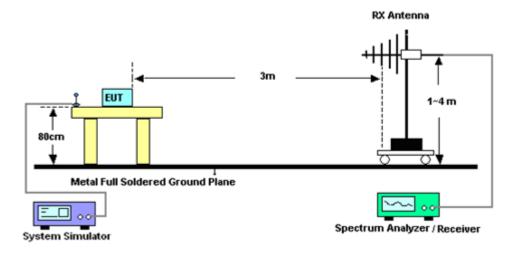
4.2 Test Setup

For radiated emissions below 30MHz



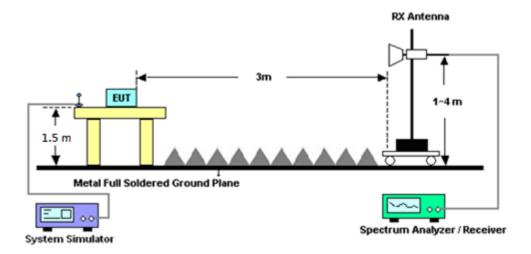
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For radiated emissions from 30MHz to 1GHz



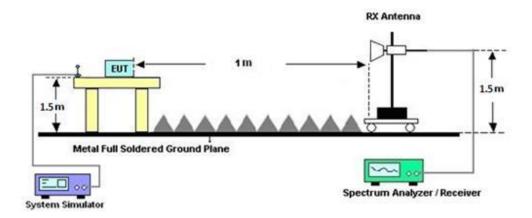
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For radiated emissions from 1GHz to 18GHz



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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.

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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 / TIA-603-E.

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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 / TIA-603-E Section 2.2.12.

- 1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
- 2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
- 5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
- 6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
- A horn antenna was substituted in place of the EUT and was driven by a signal generator.
 Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.

```
EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain ERP (dBm) = EIRP - 2.15
```

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

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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	MY59053012	N/A	Nov. 18, 2022	Apr. 12, 2023~ Apr. 13, 2023	Nov. 17, 2023	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60241058	N/A	Jul. 07, 2022	Apr. 12, 2023~ Apr. 13, 2023	Jul. 06, 2023	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz-1000MHz	Jan. 02, 2023	Apr. 12, 2023~ Apr. 13, 2023	Jan. 01, 2024	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 14, 2022	Apr. 12, 2023~ Apr. 13, 2023	Nov. 13, 2023	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 28, 2022	Apr. 12, 2023~ Apr. 13, 2023	Jun. 27, 2023	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Apr. 12, 2023~ Apr. 13, 2023	Sep. 19, 2023	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00802N1 D01N-06	55606 & 08	30MHz~1GHz	Oct. 22, 2022	Apr. 12, 2023~ Apr. 13, 2023	Oct. 21, 2023	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00802N1 D01N-06	54682 & AT-N0603	30MHz~1GHz	Sep. 18, 2022	Apr. 12, 2023~ Apr. 13, 2023	Sep. 17, 2023	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	02360	1GHz~18GHz	Nov. 04, 2022	Apr. 12, 2023~ Apr. 13, 2023	Nov. 03, 2023	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02038	1GHz~18GHz	Aug. 09, 2022	Apr. 12, 2023~ Apr. 13, 2023	Aug. 08, 2023	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	00994	18GHz-40GHz	Nov. 04, 2022	Apr. 12, 2023~ Apr. 13, 2023	Nov. 03, 2023	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	00993	18GHz-40GHz	Nov. 24, 2022	Apr. 12, 2023~ Apr. 13, 2023	Nov. 23, 2023	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-302	SN3	N/A	Sep. 28, 2022	Apr. 12, 2023~ Apr. 13, 2023	Sep. 27, 2023	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,8040 15/2,804027/2	N/A	Jan. 18, 2023	Apr. 12, 2023~ Apr. 13, 2023	Jan. 17, 2024	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2857/2	N/A	Sep. 28, 2022	Apr. 12, 2023~ Apr. 13, 2023	Sep. 27, 2023	Radiation (03CH20-HY)
Software	Audix	E3 6.2009-8-24	RK-002156	N/A	N/A	Apr. 12, 2023~ Apr. 13, 2023	N/A	Radiation (03CH20-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Apr. 12, 2023~ Apr. 13, 2023	N/A	Radiation (03CH20-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Apr. 12, 2023~ Apr. 13, 2023	N/A	Radiation (03CH20-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Apr. 12, 2023~ Apr. 13, 2023	N/A	Radiation (03CH20-HY)
Filter	Wainwright	WHKX8-6090-700 0-18000-40SS	SN99	N/A	Nov. 03, 2022	Apr. 12, 2023~ Apr. 13, 2023	Nov. 02, 2023	Radiation (03CH20-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 13, 2022	Feb. 08, 2023~ May 05, 2023	Oct. 12, 2023	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101908	10Hz~40GHz	Sep. 27, 2022	Feb. 08, 2023~ May 05, 2023	Sep. 26, 2023	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40°C ~90°C	Sep. 07, 2022	Feb. 08, 2023~ May 05, 2023	Sep. 06, 2023	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Dec. 29, 2022	Feb. 08, 2023~ May 05, 2023	Dec. 28, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 06, 2023	Feb. 08, 2023~ May 05, 2023	Jan. 05, 2024	Conducted (TH03-HY)

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6 Measurement Uncertainty

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.40 dB
Confidence of 95% (U = $2UC(y)$)	

<u>Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)</u>

Measuring Uncertainty for a Level of	4.43 dB
Confidence of 95% (U = 2Uc(y))	4.43 UB

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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & EIRP)

<Primary Antenna>

	y Antenn LTE		Maximum A	verage Po	wer [dBm]] (GT - LC	= 0.6 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0		20.88	20.77	20.80		
20	1	49		20.86	20.60	20.68		
20	1	99		20.78	20.62	20.76		
20	50	0	QPSK	20.91	20.84	20.91	21.51	0.1416
20	50	24		20.86	20.82	20.90		
20	50	50		20.84	20.77	20.87		
20	100	0		20.84	20.80	20.89		
20	1	0		20.99	20.88	21.00		
20	1	49		20.91	20.82	20.88		
20	1	99		20.89	20.78	20.94		
20	50	0	16-QAM	20.92	20.86	20.93	21.60	0.1445
20	50	24		20.90	20.83	20.94		
20	50	50		20.86	20.79	20.90		
20	100	0		20.85	20.79	20.92		
20	1	0		20.80	20.57	20.64		
20	1	49		20.73	20.53	20.64		
20	1	99		20.67	20.47	20.62		
20	50	0	64-QAM	20.87	20.83	20.90	21.50	0.1413
20	50	24		20.87	20.81	20.87		
20	50	50		20.80	20.74	20.85		
20	100	0		20.82	20.74	20.83		
20	1	0		19.35	19.37	19.51		
20	1	49		19.21	19.27	19.42		
20	1	99		18.99	19.36	19.41		
20	50	0	256-QAM	19.40	19.43	19.57	20.17	0.1040
20	50	24		19.39	19.46	19.47		
20	50	50		19.38	19.40	19.49		
20	100	0		19.41	19.42	19.56		
Limit	EIRP	< 23dBm/1	0MHz		Result		Pa	ISS

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



	LTE	Band 48 N	/laximum A	verage Po	wer [dBm] (GT - LC :	= 0.6 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0		20.71	20.57	20.61		
15	1	37		20.75	20.55	20.57]	
15	1	74		20.62	20.59	20.58]	
15	36	0	QPSK	20.72	20.67	20.86	21.46	0.1400
15	36	20		20.75	20.68	20.79		
15	36	39		20.65	20.58	20.71		
15	75	0		20.82	20.77	20.79		
15	1	0		20.94	20.72	20.80		
15	1	37		20.87	20.63	20.78		
15	1	74		20.84	20.67	20.87		
15	36	0	16-QAM	20.87	20.77	20.81	21.54	0.1426
15	36	20		20.78	20.73	20.88		
15	36	39		20.74	20.68	20.90		
15	75	0		20.69	20.59	20.85		
15	1	0		20.69	20.50	20.55		
15	1	37		20.71	20.49	20.54		
15	1	74		20.53	20.40	20.46		
15	36	0	64-QAM	20.81	20.78	20.76	21.43	0.1390
15	36	20		20.72	20.71	20.70		
15	36	39		20.76	20.57	20.83		
15	75	0		20.64	20.65	20.63		
15	1	0		19.21	19.22	19.38		
15	1	37		19.05	19.26	19.23		
15	1	74		18.93	19.23	19.28		
15	36	0	256-QAM	19.32	19.40	19.48	20.08	0.1019
15	36	20		19.20	19.44	19.33		
15	36	39		19.19	19.35	19.45		
15	75	0		19.21	19.36	19.38		
Limit	EIRP	< 23dBm/1	0MHz		Result		Pa	ISS



	LTE	Band 48 N	Maximum A	verage Po	wer [dBm]] (GT - LC :	= 0.6 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0		20.70	20.67	20.67		
10	1	25		20.85	20.58	20.55		
10	1	49		20.64	20.44	20.62		
10	25	0	QPSK	20.80	20.68	20.86	21.46	0.1400
10	25	12		20.82	20.70	20.74		
10	25	25		20.83	20.67	20.82		
10	50	0		20.76	20.63	20.75		
10	1	0		20.92	20.75	20.99		
10	1	25		20.87	20.63	20.72		
10	1	49		20.86	20.78	20.80		
10	25	0	16-QAM	20.81	20.86	20.78	21.59	0.1442
10	25	12		20.74	20.82	20.84		
10	25	25		20.73	20.64	20.90		
10	50	0		20.79	20.68	20.82		
10	1	0		20.76	20.45	20.48		
10	1	25		20.70	20.40	20.57		
10	1	49		20.64	20.33	20.50		
10	25	0	64-QAM	20.82	20.70	20.81	21.47	0.1403
10	25	12		20.87	20.68	20.80		
10	25	25		20.65	20.62	20.80		
10	50	0		20.63	20.61	20.63		
10	1	0		19.28	19.33	19.44		
10	1	25		19.06	19.17	19.42		
10	1	49		18.99	19.16	19.33		
10	25	0	256-QAM	19.21	19.25	19.56	20.16	0.1038
10	25	12		19.22	19.28	19.29		
10	25	25		19.35	19.35	19.41		
10	50	0		19.33	19.30	19.44		
Limit	EIRP	< 23dBm/1	0MHz		Result	·	Pa	ISS



	LTE	Band 48 N	/laximum A	verage Po	wer [dBm] (GT - LC :	= 0.6 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0		20.79	20.65	20.62		
5	1	12		20.79	20.51	20.54		
5	1	24		20.67	20.55	20.76		
5	12	0	QPSK	20.74	20.71	20.73	21.46	0.1400
5	12	7		20.86	20.76	20.84		
5	12	13		20.71	20.66	20.73		
5	25	0		20.77	20.66	20.77		
5	1	0		20.92	20.79	20.93		
5	1	12		20.74	20.65	20.83		
5	1	24		20.70	20.78	20.82		
5	12	0	16-QAM	20.74	20.85	20.77	21.53	0.1422
5	12	7		20.78	20.80	20.74		
5	12	13		20.71	20.73	20.89		
5	25	0		20.74	20.66	20.78		
5	1	0		20.63	20.54	20.55		
5	1	12		20.63	20.45	20.64		
5	1	24		20.60	20.32	20.51		
5	12	0	64-QAM	20.72	20.66	20.81	21.44	0.1393
5	12	7		20.71	20.79	20.84		
5	12	13		20.78	20.74	20.78		
5	25	0		20.77	20.73	20.73		
5	1	0		19.15	19.20	19.47		
5	1	12		19.03	19.24	19.31		
5	1	24		18.94	19.17	19.29		
5	12	0	256-QAM	19.39	19.43	19.43	20.08	0.1019
5	12	7		19.25	19.26	19.43		
5	12	13		19.25	19.25	19.48		
5	25	0		19.40	19.39	19.41		
Limit	EIRP	< 23dBm/1	0MHz		Result		Pa	ISS

<ASDIV Antenna>

	LTE	Band 48 N	laximum A	verage Po	wer [dBm]	(GT - LC =	= -3.6 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0		22.92	22.87	22.86		
20	1	49		22.85	22.79	22.85		
20	1	99		22.80	22.65	22.72		
20	50	0	QPSK	21.77	21.71	21.74	19.32	0.0855
20	50	24		21.76	21.65	21.73		
20	50	50		21.75	21.62	21.72		
20	100	0		21.75	21.67	21.72		
20	1	0		22.09	22.22	22.22		
20	1	49		22.19	21.98	21.96		
20	1	99		21.96	21.91	21.97		
20	50	0	16-QAM	20.84	20.70	20.70	18.62	0.0728
20	50	24		20.85	20.65	20.89		
20	50	50		20.82	20.60	20.84		
20	100	0		20.78	20.67	20.87		
20	1	0		20.76	20.72	20.76		
20	1	49		20.77	20.53	20.76		
20	1	99		20.72	20.55	20.83		
20	50	0	64-QAM	19.79	19.64	19.87	17.23	0.0528
20	50	24		19.77	19.64	19.82		
20	50	50		19.74	19.57	19.82		
20	100	0		19.70	19.56	19.81		
20	1	0		18.50	18.34	18.45		
20	1	49		18.43	18.42	18.35		
20	1	99		18.22	18.26	18.34		
20	50	0	256-QAM	18.52	18.36	18.62	15.02	0.0318
20	50	24		18.46	18.38	18.53		
20	50	50		18.45	18.31	18.56		
20	100	0		18.45	18.36	18.48		
Limit	EIRP	< 23dBm/1	0MHz		Result		Pa	ISS

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



	LTE	Band 48 N	laximum A	verage Po	wer [dBm]	(GT - LC =	= -3.6 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0		22.84	22.76	22.86		
15	1	37		22.70	22.79	22.79		
15	1	74		22.77	22.54	22.89		
15	36	0	QPSK	21.87	21.66	21.76	19.29	0.0849
15	36	20		21.72	21.50	21.80		
15	36	39		21.87	21.49	21.76		
15	75	0		21.73	21.53	21.87		
15	1	0		21.94	22.09	22.04		
15	1	37		22.01	21.95	21.76		
15	1	74		21.84	21.88	21.92		
15	36	0	16-QAM	20.79	20.63	20.88	18.49	0.0706
15	36	20		20.73	20.49	20.74		
15	36	39		20.74	20.45	20.83		
15	75	0		20.74	20.50	20.78		
15	1	0		20.70	20.61	20.73		
15	1	37		21.88	20.41	20.89		
15	1	74		21.77	20.41	20.82		
15	36	0	64-QAM	19.88	19.53	19.74	18.28	0.0673
15	36	20		19.71	19.55	19.75		
15	36	39		19.83	19.37	19.75		
15	75	0		19.83	19.37	19.88		
15	1	0		18.46	18.28	18.30		
15	1	37		18.43	18.25	18.21		
15	1	74		18.05	18.13	18.28		
15	36	0	256-QAM	18.47	18.34	18.54	14.94	0.0312
15	36	20		18.26	18.28	18.39		
15	36	39		18.32	18.25	18.43		
15	75	0		18.39	18.25	18.41		
Limit	EIRP	< 23dBm/1	0MHz		Result		Pa	SS



LTE Band 48 Maximum Average Power [dBm] (GT - LC = -3.6 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)		
10	1	0		22.92	22.71	22.82				
10	1	25		22.78	22.79	22.70				
10	1	49		22.89	22.58	22.85				
10	25	0	QPSK	21.73	21.68	21.87	19.32	0.0855		
10	25	12		21.70	21.49	21.71				
10	25	25		21.88	21.45	21.80				
10	50	0		21.84	21.55	21.73				
10	1	0		21.94	22.20	22.19				
10	1	25		22.07	21.98	21.92				
10	1	49		21.93	21.78	21.96	18.60	0.0724		
10	25	0	16-QAM	20.80	20.55	20.73				
10	25	12		20.73	20.53	20.73				
10	25	25		20.88	20.47	20.84				
10	50	0		20.85	20.50	20.88				
10	1	0	64-QAM	20.82	20.62	20.76	17.27	0.0533		
10	1	25		20.84	20.43	20.76				
10	1	49		20.83	20.53	20.87				
10	25	0		19.88	19.46	19.75				
10	25	12		19.76	19.50	19.88				
10	25	25		19.72	19.54	19.86				
10	50	0		19.71	19.36	19.72				
10	1	0		18.43	18.26	18.36				
10	1	25		18.40	18.28	18.20		0.0311		
10	1	49		18.04	18.15	18.15	14.93			
10	25	0	256-QAM	18.50	18.36	18.53				
10	25	12		18.34	18.19	18.53				
10	25	25		18.40	18.15	18.39				
10	50	0		18.34	18.34	18.46				
Limit	EIRP < 23dBm/10MHz				Result	Pass				

LTE Band 48 Maximum Average Power [dBm] (GT - LC = -3.6 dB)									
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)	
5	1	0		22.88	22.85	22.87			
5	1	12		22.85	22.74	22.78			
5	1	24		22.74	22.64	22.70			
5	12	0	QPSK	21.80	21.60	21.74	19.28	0.0847	
5	12	7		21.75	21.64	21.81			
5	12	13		21.89	21.52	21.72			
5	25	0		21.88	21.52	21.71			
5	1	0		21.98	22.22	22.13			
5	1	12		22.09	21.84	21.91	18.62	0.0728	
5	1	24		21.77	21.77	21.83			
5	12	0	16-QAM	20.88	20.57	20.70			
5	12	7		20.80	20.47	20.79			
5	12	13		20.72	20.55	20.80			
5	25	0		20.72	20.64	20.82			
5	1	0		20.87	20.57	20.70			
5	1	12		20.88	20.41	20.81			
5	1	24	64-QAM	20.83	20.42	20.78	17.28	0.0535	
5	12	0		19.80	19.60	19.80			
5	12	7		19.72	19.52	19.86			
5	12	13		19.82	19.51	19.79			
5	25	0		19.70	19.51	19.73			
5	1	0		18.43	18.25	18.33			
5	1	12		18.32	18.28	18.24			
5	1	24		18.14	18.25	18.34	15.00	0.0316	
5	12	0	256-QAM	18.47	18.18	18.60			
5	12	7		18.31	18.29	18.49			
5	12	13		18.25	18.11	18.39			
5	25	0		18.45	18.33	18.33			
Limit	EIRP	< 23dBm/1	0MHz		Result	Pass			

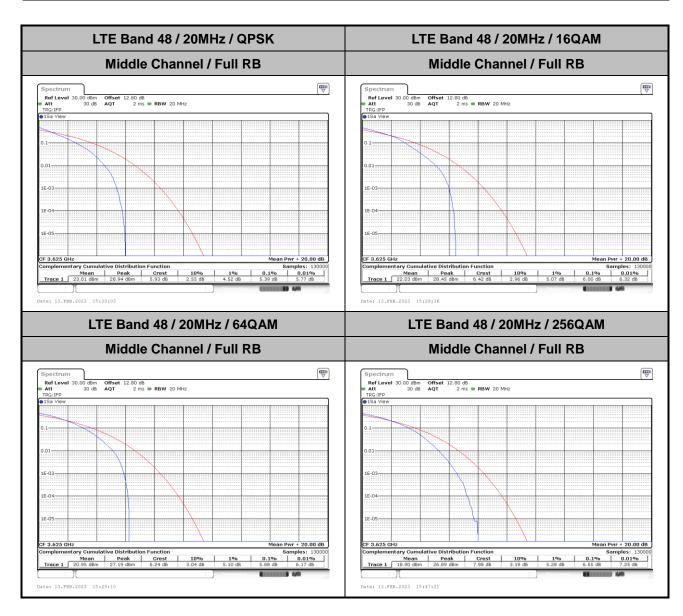


LTE Band 48

Peak-to-Average Ratio

Mode						
Mod.	QPSK	QPSK 16QAM		256QAM	Limit: 13dB	
RB Size	Full RB	Full RB	Full RB	Full RB	Result	
Middle CH	5.39	6.00	5.88	6.55	PASS	

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26dB Bandwidth

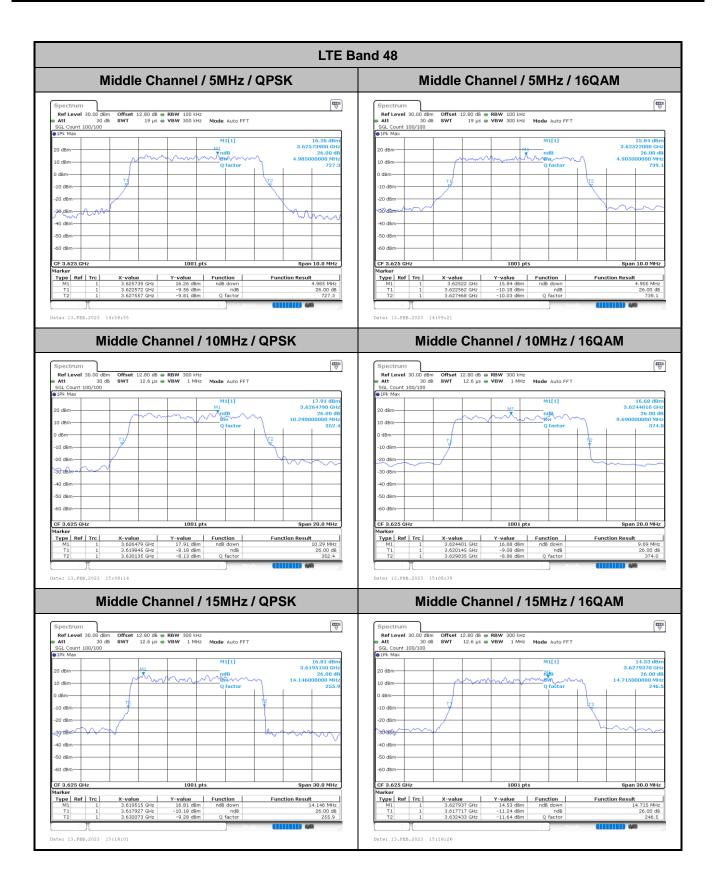
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.99	4.91	10.29	9.69	14.15	14.72	19.02	18.90
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	5.29	4.99	10.23	9.95	14.78	14.18	18.66	18.70

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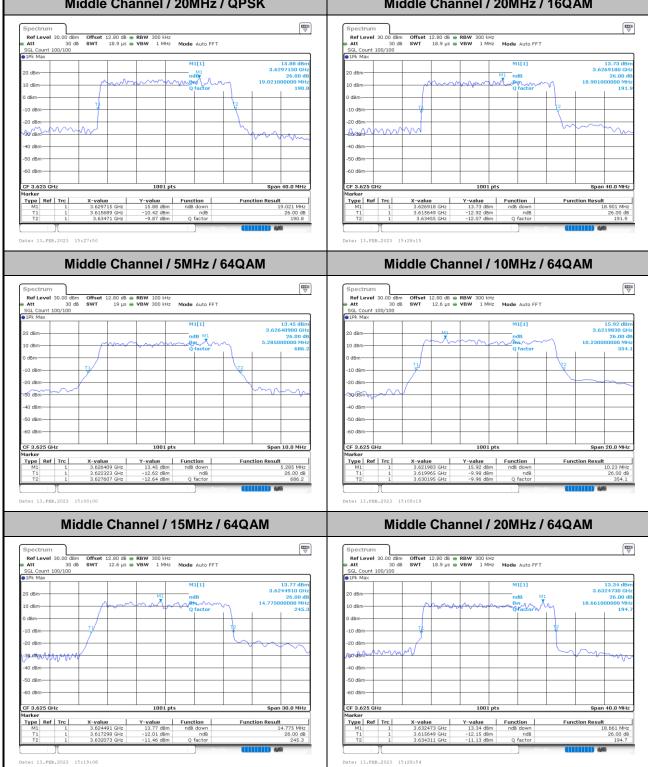
Report No.: FG2D0206-01F



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FAX: 886-3-328-4978

FCC RADIO TEST REPORT Report No.: FG2D0206-01F LTE Band 48 Middle Channel / 20MHz / 16QAM Middle Channel / 20MHz / QPSK 13.73 dBn 3.6269180 GH: 26.00 dE 18.901000000 MH: 191.9 M1[1] M1[1] 19.0210000 dBm--20 dBm



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LTE Band 48 Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM Ref Level 30.00 dBm Offset 12.80 dB @ RBW 100 kHz

Ref Level 30.00 dBm Offset 12.80 dB @ RBW 100 kHz

Act 19 µs @ VBW 300 kHz Mode Auto FFT 50L Count 100/100

JIPK Max. 13.53 dBm 3.62344200 GHz 26.00 dB 4.985000000 MHz 13.44 dBn 3.6269980 GH 26.00 dl M1[1] M1[1] dBm--20 dBm--30 dBm 40 dBm-CF 3.625 GH
 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.626998 GHz
 13.44 dism
 nd8 down

 T1
 1
 3.620156 GHz
 11.43 dism
 nd8 down

 T2
 1
 3.630115 GHz
 -12.62 dism
 Q factor

 Marker
 Troe
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.623442 GHz
 13.53 dBm
 nd8 down

 T1
 1
 3.62232 GHz
 12.45 dBm
 nd8

 T2
 1
 3.627517 GHz
 -12.46 dBm
 Q factor
 Function Result 4.985 MHz Function Result Middle Channel / 15MHz / 256QAM Middle Channel / 20MHz / 256QAM 13.20 dBs 3.6204750 GF 11.62 dBr 3.6162090 GH 20 dBm--10 dBm-40 dBm--50 dBm-

Date: 13.FEB.2023 15:46:27

 Y-value
 Function

 11.62 dBm
 ndB down

 -16.48 dBm
 ndB

 -14.39 dBm
 Q factor

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Date: 13.FEB.2023 15:43:32

X-value 3.620475 GHz 3.617957 GHz 3.632133 GHz

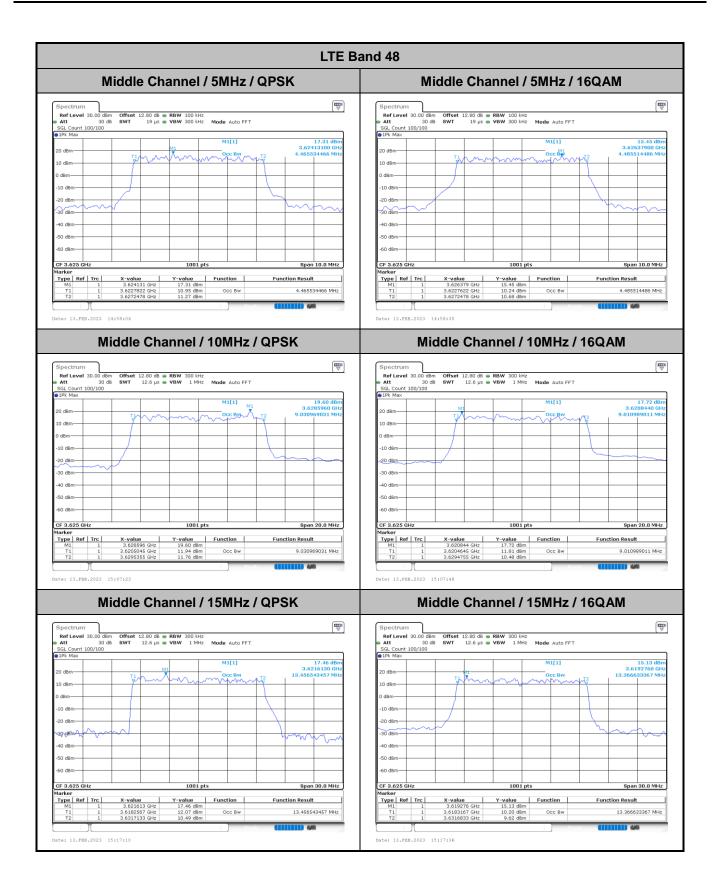
Occupied Bandwidth

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	-	-	-	-	4.47	4.49	9.03	9.01	13.46	13.37	17.94	17.98
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	-	-	-	-	4.52	4.47	9.11	8.99	13.46	13.46	17.86	17.86

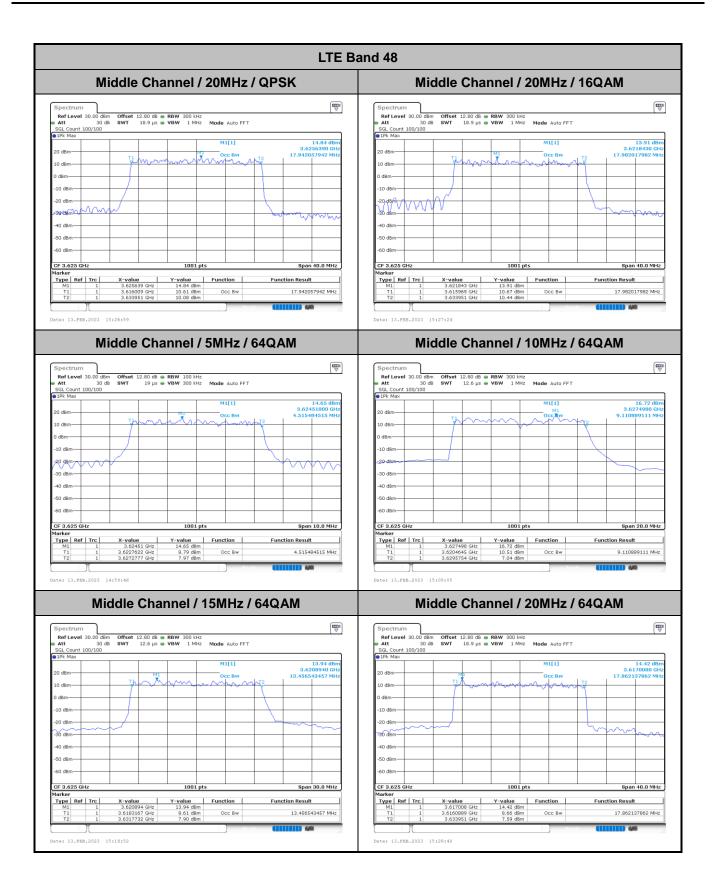
Report No.: FG2D0206-01F

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Report No.: FG2D0206-01F



Report No.: FG2D0206-01F



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LTE Band 48 Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM Ref Level 30.00 dBm Offset 12.80 dB ● RBW 100 kHz
Att 30 dB SWT 19 μs ● VBW 300 kHz Mode Auto FFT
SGL Count 100/100
11Pk Max 12.07 dBn 3.62313200 GH 4.465534466 MH 15.17 dBn 3.6238610 GHz 8.991008991 MHz M1[1] M1[1] 10 dBmdBm--20 dBm--30 dBm 40 dBm-CF 3.625 GHz Span 10.0 MHz
 Marker
 Trc
 X-value
 Y-value
 Function
 Function Result

 M1
 1
 3.623132 GHz
 12.07 dBm
 Texture
 Texture
 4.465534

 T1
 1
 3.627222 GHz
 5.93 dBm
 Occ 8w
 4.465534

 T2
 1
 3.6272278 GHz
 5.99 dBm
 5.99 dBm

 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.623961 GHz
 15.17 dibm

 T1
 1
 3.6209145 GHz
 7.98 dbm
 Occ Bw

 T2
 1
 3.6294955 GHz
 7.05 dbm
 Occ Bw
 Function Result 4.465534466 MHz 8.991008991 MHz Date: 13.FEB.2023 15:40:23 Middle Channel / 15MHz / 256QAM Middle Channel / 20MHz / 256QAM Ref Level 30.00 dBm Offset 12.80 dB @ RBW 300 kHz Att under SWT 18.9 µs @ VBW 1 MHz Mode Auto FFT SSL Count 100/100 PP Max 12.17 dBr 3.6189160 GH 13.456543457 MH 11.10 dBn 3.6171680 GHz 17.862137862 MHz 20 dBm-10 dBm--10 dBm--20 dBm--30 dBm 40 dBm -50 dBm -50 dBm-
 Marker
 Trype
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 3.617168 GHz
 11.10 dbm
 11.10 dbm

 T1
 1
 3.6160889 GHz
 6.53 dbm
 Occ 8w

 T2
 1
 3.639951 GHz
 7.07 dbm
 X-value 3.618916 GHz 3.6182567 GHz 3.6317133 GHz Function Result 13.456543457 MHz 17.862137862 MHz

Date: 13.FEB.2023 15:46:13

Report No.: FG2D0206-01F

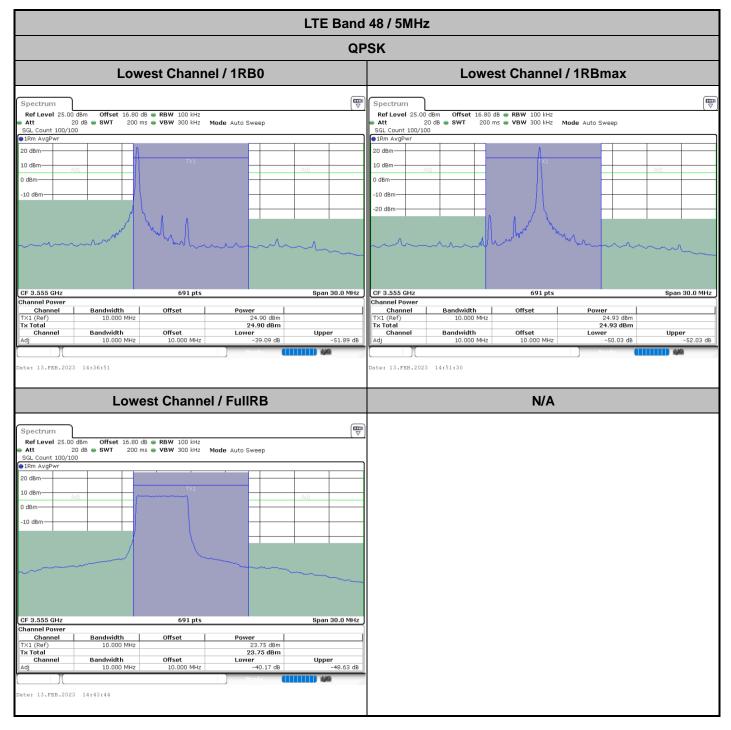
TEL: 886-3-327-3456 Page Number: A2-9 of 62

FAX: 886-3-328-4978

Date: 13.FEB.2023 15:43:18

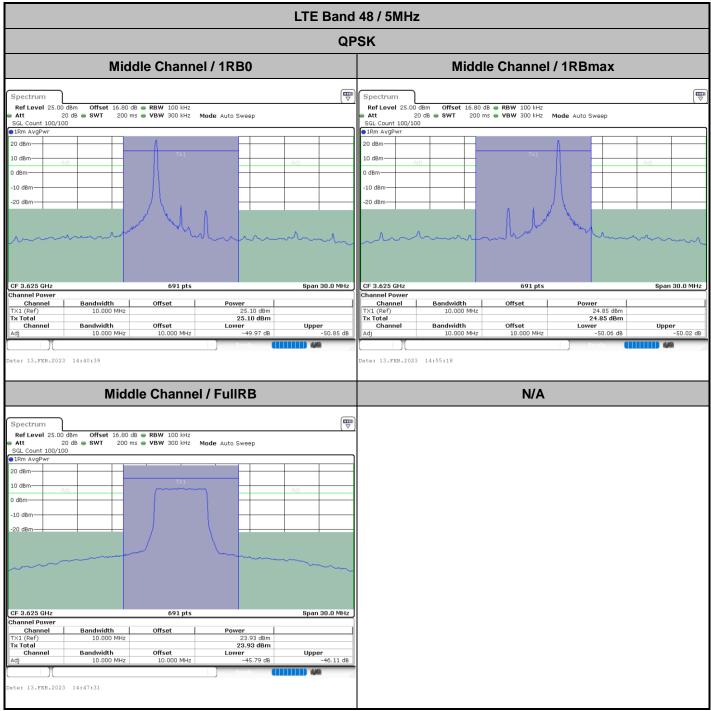
Report No.: FG2D0206-01F





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LTE Band 48 / 5MHz **QPSK Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum Mode Auto Sweep 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 Span 30.0 MHz CF 3.695 GHz hannel Power hannel Power 25.11 dBm 25.11 dBm 25.11 dBm Lower -49.64 dB Power 25.20 dBm 25.20 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Upper -49.53 dB Bandwidth Bandwidth Offset **Lower** -49.81 dB Upper -39.21 dB 10.000 MH; ate: 13.FEB.2023 14:41:26 ate: 13.FEB.2023 14:56:04 **Highest Channel / FullRB** N/A CF 3.695 GHz 691 pts Span 30.0 MHz 24.05 dBm 24.05 dBm 24.05 dBm Lower -47.01 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset **Upper** -40.03 dB Bandwidth 10.000 MHz

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FAX: 886-3-328-4978

te: 13.FEB.2023 14:48:17

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-20 dBm-10 dBm 0 dBm 0 dBm -10 dBm -10 dBm Span 30.0 MHz hannel Power Channel Power 23.77 dBm 23.77 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 23.98 dBm 23.98 dBm 23.98 dBm Lower -42.17 dB Upper -42.85 dB Upper -43.48 dB Bandwidth **Lower** -42.05 dB Bandwidth Offset 10.000 MHz ate: 13.FEB.2023 15:02:19 Date: 13.FEB.2023 15:03:05 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 16.80 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 CF 3.695 GHz 691 pts Span 30.0 MHz 24.22 dBm 24.22 dBm 24.22 dBm Lower -41.61 dB Bandwidth 10.000 MHz Channel (Ref) Offset Bandwidth 10.000 MHz

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FAX: 886-3-328-4978

te: 13.FEB.2023 15:06:56

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 Channel TX1 (Ref) Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 24.02 dBm 24.02 dBm 24.02 dBm Lower -45.56 dB Tx Total Channel 23.77 dBm **Upper** -47.95 dB Upper -47.16 dB Bandwidth Lower -43.09 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:10:46 Date: 13.FEB.2023 15:14:29 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz Power 24.27 dBm 24.27 dBm Lower -46.57 dB

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FAX: 886-3-328-4978

Bandwidth 20.000 MHz

Bandwidth 20.000 MHz

Offset

Channel (Ref)

te: 13.FEB.2023 15:15:14

LTE Band 48 / 20MHz **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 dBm -10 dBm -10 dBm Span 60.0 MHz Span 60.0 MHz hannel Power hannel Power 24.01 dBm 24.01 dBm 24.01 dBm Lower -42.79 dB Power 23.81 dBm 23.81 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Upper -44.10 dB Upper -45.17 dB Bandwidth Lower -42.28 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:22:03 ate: 13.FEB.2023 15:22:48 **Highest Channel / FullRB** N/A CF 3.69 GHz 691 pts Span 60.0 MHz Power 24.24 dBm 24.24 dBm Lower -42.72 dB Bandwidth 20.000 MHz Channel (Ref) Offset

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FAX: 886-3-328-4978

Bandwidth 20.000 MHz

te: 13.FEB.2023 15:26:32

LTE Band 48 / 5MHz **16QAM** Lowest Channel / 1RB0 **Lowest Channel / 1RBmax** 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 Span 30.0 MHz CF 3.555 GHz hannel Power hannel Power 24.06 dBm 24.06 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 23.86 dBm 23.86 dBm 23.86 dBm Lower -49.50 dB Upper -51.46 dB Bandwidth Offset Lower -39.67 dB Bandwidth Upper -51.30 dB 10.000 MH ate: 13.FEB.2023 14:37:36 Date: 13.FEB.2023 14:52:16 **Lowest Channel / FullRB** N/A Spectrum Ref Level 25.00 dBm Offset 16.80 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.555 GHz 691 pts Span 30.0 MHz

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TEL: 886-3-327-3456 Page Number : A2-16 of 62 FAX: 886-3-328-4978

22.68 dBm 22.68 dBm Lower -38.70 dB

Channel
TX1 (Ref)
Tx Total
Channel

te: 13.FEB.2023 14:44:30

Bandwidth 10.000 MHz

Bandwidth 10.000 MHz Offset

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 0 dBm dBm -10 dBm -10 dBm 20 dBm -20 dBm Span 30.0 MHz CF 3.625 GHz Span 30.0 MHz CF 3.625 GHz hannel Power Channel Power Power 23.99 dBm 23.99 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 24.02 dBm 24.02 dBm 24.02 dBm Lower -49.56 dB Upper -50.08 dB Upper -49.60 dB Bandwidth Offset Lower -49.34 dB Bandwidth 10.000 MH; ate: 13.FEB.2023 14:39:53 ate: 13.FEB.2023 14:54:32 Middle Channel / FullRB N/A Spectrum Ref Level 25.00 dBm Offset 16.80 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 22.95 dBm 22.95 dBm 22.95 dBm Lower -45.43 dB Bandwidth 10.000 MHz Channel (Ref) Offset Bandwidth 10.000 MHz

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FAX: 886-3-328-4978

te: 13.FEB.2023 14:46:46

LTE Band 48 / 5MHz **16QAM Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum Mode Auto Sweep 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 Span 30.0 MHz CF 3.695 GHz hannel Power hannel Power Power 24.21 dBm 24.21 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 24.23 dBm 24.23 dBm 24.23 dBm Lower -48.94 dB **Upper** -48.73 dB Bandwidth Bandwidth Offset **Lower** -49.00 dB Upper -39.34 dB 10.000 MH; ate: 13.FEB.2023 14:42:12 ate: 13.FEB.2023 14:56:50 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.695 GHz 691 pts Span 30.0 MHz 23.06 dBm 23.06 dBm Lower -47.22 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Upper -39.97 dB Bandwidth 10.000 MHz

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

FAX: 886-3-328-4978

te: 13.FEB.2023 14:49:04

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 dBm -10 dBm -10 dBm Span 30.0 MHz hannel Power hannel Power Power 22.76 dBm 22.76 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 22.97 dBm 22.97 dBm 22.97 dBm Lower -42.21 dB **Upper** -40.45 dB Upper -42.25 dB Bandwidth Bandwidth Offset **Lower** -40.95 dB 10.000 MHz ate: 13.FEB.2023 15:01:32 ate: 13.FEB.2023 15:03:51 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 16.80 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

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23.21 dBm 23.21 dBm 23.21 dBm Lower -41.56 dB

FAX: 886-3-328-4978

Bandwidth 10.000 MHz

Bandwidth 10.000 MHz Offset

Channel (Ref)

te: 13.FEB.2023 15:06:09

LTE Band 48 / 15MHz **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 60.0 MHz Span 60.0 MHz hannel Power hannel Power Power 22.73 dBm 22.73 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 22.95 dBm 22.95 dBm 22.95 dBm Lower -44.93 dB Upper -46.27 dB Upper -45.54 dB Bandwidth Lower -42.00 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:11:32 Date: 13.FEB.2023 15:13:45 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz Power 23.21 dBm 23.21 dBm Lower -46.17 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz te: 13.FEB.2023 15:15:59

Report No.: FG2D0206-01F

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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 hannel Power hannel Power Power 22.76 dBm 22.76 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 22.97 dBm 22.97 dBm 22.97 dBm Lower -42.47 dB Upper -40.98 dB Upper -43.09 dB Bandwidth **Lower** -41.30 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:21:18 ate: 13.FEB.2023 15:23:32 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz Power 23.20 dBm 23.20 dBm Lower -42.91 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz

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FAX: 886-3-328-4978

te: 13.FEB.2023 15:25:47

LTE Band 48 / 5MHz 64QAM Lowest Channel / 1RB0 **Lowest Channel / 1RBmax** Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm Span 30.0 MHz CF 3.555 GHz CF 3.555 GHz hannel Power hannel Power Power 22.92 dBm 22.92 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 22.93 dBm 22.93 dBm 22.93 dBm Lower -50.27 dB Upper -52.06 dB Bandwidth Offset Lower -40.81 dB Bandwidth Upper -52.11 dB 10.000 MH; ate: 13.FEB.2023 14:38:22 Date: 13.FEB.2023 14:53:01 **Lowest Channel / FullRB** N/A Spectrum Ref Level 25.00 dBm Offset 16.80 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.555 GHz 691 pts Span 30.0 MHz 21.72 dBm 21.72 dBm 21.72 dBm Lower -39.10 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset

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FAX: 886-3-328-4978

Bandwidth 10.000 MHz

te: 13.FEB.2023 14:45:16

LTE Band 48 / 5MHz 64QAM Middle Channel / 1RB0 Middle Channel / 1RBmax Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm 20 dBm -20 dBm CF 3.625 GHz Span 30.0 MHz CF 3.625 GHz Span 30.0 MHz hannel Power hannel Power 23.06 dBm 23.06 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 22.96 dBm 22.96 dBm 22.96 dBm Lower -50.34 dB Upper -50.99 dB Bandwidth Offset **Lower** -50.25 dB Bandwidth Upper -50.33 dB 10.000 MH; ate: 13.FEB.2023 14:39:08 ate: 13.FEB.2023 14:53:47 Middle Channel / FullRB N/A Spectrum Mode Auto Sweep CF 3.625 GHz 691 pts Span 30.0 MHz 21.94 dBm 21.94 dBm 21.94 dBm Lower -44.65 dB Bandwidth 10.000 MHz Channel (Ref) Offset Upper -45.01 dB Bandwidth 10.000 MHz

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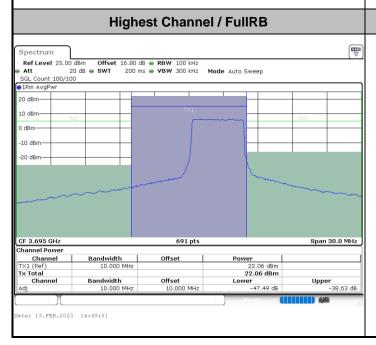
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FAX: 886-3-328-4978

te: 13.FEB.2023 14:46:01

Report No.: FG2D0206-01F LTE Band 48 / 5MHz 64QAM **Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum
 Ref Level
 25.00 dBm
 Offset
 16.80 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 AvgPwr 20 dBm-20 dBm-10 dBm 10 dBm dBm dBm -10 dBm -10 dBm 20 dBm -20 dBm Span 30.0 MHz CF 3.695 GHz hannel Power hannel Power Power 23.23 dBm Power 22.98 dBm 22.98 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Offset 23.23 dBm 23.23 dBm Lower -50.35 dB Upper -49.82 dB Upper -40.03 dB Bandwidth **Lower** -50.24 dB Bandwidth Offset 10.000 MH; ate: 13.FEB.2023 14:42:58 ate: 13.FEB.2023 14:57:37



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N/A

TEL: 886-3-327-3456 FAX: 886-3-328-4978

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 Span 30.0 MHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel 21.72 dBm 21.72 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 21.92 dBm 21.92 dBm 21.92 dBm Lower -40.16 dB Upper -40.79 dB Upper -40.31 dB Bandwidth Bandwidth Offset **Lower** -40.71 dB 10.000 MHz ate: 13.FEB.2023 15:00:47 ate: 13.FEB.2023 15:04:36 **Highest Channel / FullRB** N/A Spectrum Ref Level 25.00 dBm Offset 16.80 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 22.19 dBm 22.19 dBm 22.19 dBm Lower -40.67 dB Bandwidth 10.000 MHz Channel (Ref) Offset Bandwidth 10.000 MHz

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

FAX: 886-3-328-4978

te: 13.FEB.2023 15:05:23

LTE Band 48 / 15MHz 64QAM **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 60.0 MHz Span 60.0 MHz hannel Power hannel Power 21.76 dBm 21.76 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel TX1 (Ref) Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 21.97 dBm 21.97 dBm 21.97 dBm Lower -43.16 dB Tx Total Channel **Upper** -46.33 dB Upper -43.71 dB Bandwidth **Lower** -41.73 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:12:16 Date: 13.FEB.2023 15:13:01 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz Power 22.23 dBm 22.23 dBm Lower -44.82 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz te: 13.FEB.2023 15:16:43

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LTE Band 48 / 20MHz 64QAM **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 hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel 21.72 dBm 21.72 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 21.97 dBm 21.97 dBm 21.97 dBm Lower -41.32 dB Upper -41.86 dB Bandwidth **Lower** -41.49 dB Bandwidth Offset Upper -41.72 dB 20.000 MHz ate: 13.FEB.2023 15:20:33 ate: 13.FEB.2023 15:24:17 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.69 GHz 691 pts Span 60.0 MHz 22.20 dBm 22.20 dBm 22.20 dBm Lower -41.31 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz

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te: 13.FEB.2023 15:25:02

LTE Band 48 / 5MHz 256QAM Lowest Channel / 1RB0 **Lowest Channel / 1RBmax** Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr ●1Rm AvgPwr 20 dBm-20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm Span 30.0 MHz CF 3.555 GHz Span 30.0 MHz CF 3.555 GHz 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 19.67 dBm 19.56 dBm 19.67 dBm 19.67 dBm Lower -47.80 dB Upper -49.31 dB **Upper** -49.42 dB Bandwidth Bandwidth Offset Lower -39.79 dB 10.000 MH ate: 13.FEB.2023 15:30:50 Date: 13.FEB.2023 15:35:25 **Lowest Channel / FullRB** N/A Spectrum Ref Level 25.00 dBm Offset 16.80 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep CF 3.555 GHz 691 pts Span 30.0 MHz Power 19.70 dBm 19.70 dBm Lower -41.11 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz

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te: 13.FEB.2023 15:33:07

LTE Band 48 / 5MHz 256QAM Middle Channel / 1RB0 Middle Channel / 1RBmax Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm Span 30.0 MHz CF 3.625 GHz Span 30.0 MHz CF 3.625 GHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel 20.11 dBm 20.11 dBm Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Bandwidth 10.000 MHz Offset Power 19.86 dBm 19.86 dBm 19.86 dBm Lower -48.01 dB Upper -48.72 dB Upper -48.20 dB Bandwidth Offset Bandwidth 10.000 MH; ate: 13.FEB.2023 15:31:35 ate: 13.FEB.2023 15:36:11 Middle Channel / FullRB N/A Spectrum Mode Auto Sweep 20 dBm CF 3.625 GHz 691 pts Span 30.0 MHz 19.91 dBm 19.91 dBm 19.91 dBm Lower -47.38 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset

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Bandwidth 10.000 MHz

te: 13.FEB.2023 15:33:53

LTE Band 48 / 5MHz 256QAM **Highest Channel / 1RB0 Highest Channel / 1RBmax** Spectrum Mode Auto Sweep Att 20 SGL Count 100/100 ●1Rm AvgPwr 20 dBm-10 dBm dBm dBm -10 dBm -10 dBm -20 dBm Span 30.0 MHz CF 3.695 GHz hannel Power hannel Power 20.04 dBm 20.04 dBm Channel
TX1 (Ref)
Tx Total
Channel Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Offset Offset Power 19.97 dBm 19.97 dBm 19.97 dBm Lower -49.29 dB Upper -49.11 dB Upper -40.77 dB Bandwidth Bandwidth Offset 10.000 MH; ate: 13.FEB.2023 15:32:21 ate: 13.FEB.2023 15:36:57 **Highest Channel / FullRB** N/A Mode Auto Sweep CF 3.695 GHz 691 pts Span 30.0 MHz 20.00 dBm 20.00 dBm 20.00 dBm Lower -49.65 dB Channel
TX1 (Ref)
Tx Total
Channel Bandwidth 10.000 MHz Upper -39.12 dB Bandwidth 10.000 MHz

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te: 13.FEB.2023 15:34:39

691 pts

Offset

20.17 dBm 20.17 dBm 20.17 dBm Lower -41.71 dB

LTE Band 48 / 10MHz 256QAM **Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-10 dBm 0 dBm dBm -10 dBm -10 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 19.91 dBm 19.91 dBm 19.91 dBm Lower -42.46 dB 19.68 dBm Upper -42.39 dB **Upper** -41.43 dB Bandwidth Lower -43.28 dB Bandwidth Offset 10.000 MHz ate: 13.FEB.2023 15:38:25 ate: 13.FEB.2023 15:39:10 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 16.80 dB RBW 100 kHz
Att 20 dB SWT 200 ms VBW 300 kHz
SGL Count 100/100 Mode Auto Sweep

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Span 30.0 MHz

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Bandwidth 10.000 MHz

Bandwidth 10.000 MHz

CF 3.695 GHz

te: 13.FEB.2023 15:39:56

691 pts

Offset

Power 20.12 dBm 20.12 dBm Lower -46.61 dB

LTE Band 48 / 15MHz 256QAM **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 Span 60.0 MHz Span 60.0 MHz hannel Power hannel Power Channel
TX1 (Ref)
Tx Total
Channel Channel TX1 (Ref) Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 19.89 dBm 19.89 dBm 19.89 dBm Lower -45.08 dB 19.68 dBm Tx Total Channel **Upper** -47.44 dB Upper -44.62 dB Bandwidth Lower -43.68 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:41:23 ate: 13.FEB.2023 15:42:07 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 16.80 dB RBW 200 kHz
Att 20 dB SWT 200 ms VBW 1 MHz
SGL Count 100/100 Mode Auto Sweep -20 dBm-

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Span 60.0 MHz

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Bandwidth 20.000 MHz

Bandwidth 20.000 MHz

CF 3.69 GHz

Channel (Ref)

te: 13.FEB.2023 15:42:52

LTE Band 48 / 20MHz 256QAM **Lowest Channel / FullRB** Middle Channel / FullRB Spectrum Spectrum Att 20 SGL Count 100/100 ●1Rm AvgPwi ●1Rm AvgPwr 20 dBm-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) Bandwidth 20.000 MHz Offset Bandwidth 20.000 MHz Offset Power 19.94 dBm 19.94 dBm 19.94 dBm Lower -42.94 dB 19.73 dBm Tx Total Channel Upper -43.31 dB **Upper** -42.35 dB Bandwidth Lower -43.83 dB Bandwidth Offset 20.000 MHz ate: 13.FEB.2023 15:44:18 ate: 13.FEB.2023 15:45:03 **Highest Channel / FullRB** N/A Ref Level 25.00 dBm Offset 16.80 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 20.18 dBm 20.18 dBm 20.18 dBm Lower -42.30 dB Bandwidth 20.000 MHz Channel (Ref) Offset Bandwidth 20.000 MHz

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te: 13.FEB.2023 15:45:47