

Report No.: FG190614-03C



# FCC RADIO TEST REPORT

FCC ID : PY322100558

Equipment : Netgear 5G MHS Travel Router

Brand Name : Netgear

Model Name : MR6400

Applicant : Netgear Inc

350 E. Plumeria Drive, San Jose, CA 95134, United States

Manufacturer : Netgear Inc

350 E. Plumeria Drive, San Jose, CA 95134, United States

Standard : FCC 47 CFR Part 2, and 90(S)

The product was received on Mar 31, 2022 and testing was performed from Apr. 20, 2022 to May 11, 2022. 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

Report No. : FG190614-03C

Report No.	Version	Description	Issued Date
FG190614-03C	01	Initial issue of report	May 11, 2022

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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 §90.635	Conducted Output Power and Effective Radiated Power	Pass	-
3.3	-	Peak-to-Average Ratio	Reporting only	-
3.4	§2.1049 §90.209	Occupied Bandwidth and 26dB Bandwidth	Reporting only	-
3.5	§2.1051 §90.691	Emission masks – In-band emissions	Pass	-
3.6	§2.1051 §90.691	Emission masks – Out of band emissions	Pass	-
3.7	§2.1055 Frequency Stability fo §90.213 Temperature & Voltage		Pass	-
3.8	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	Under limit 39.67 dB at 2448.000 MHz

#### **Declaration of Conformity:**

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
  - It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- 2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".

#### **Comments and Explanations:**

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

Reviewed by: Avis Chuang Report Producer: Vivian Hsu

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# 1 General Description

### 1.1 Feature of Equipment Under Test

LTE/5G NR, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11a/n/ac/ax, and GNSS

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	Product Feature					
Antenna Type	WWAN: <ant. 1="">: Monopole Antenna  <ant. 2="">: Monopole Antenna  WLAN:  <ant. 3="">: Monopole Antenna  <ant. 4="">: Monopole Antenna  GPS: PIFA Antenna</ant.></ant.></ant.></ant.>					

**Remark:** The EUT's information above was declared by manufacturer. Please refer to Comments and Explanations in report summary.

Antenna Information						
Internal Antenna Gain	<b><ant. 1="">:</ant.></b> LTE Band 26: -0.88 dBi					
External Antenna Gain	<b><ant. 1="">:</ant.></b> LTE Band 26: 4.00 dBi					
External Connector	TS9					

#### Remark:

- 1. TS9 connector is for the external antennas, while the external antennas are connected, RF outputs are switched from internal antenna 1/2 to the external one.
- 2. The maximum antenna gain allowed for the external antenna is limited by the numbers in the table, and also illustrated in the user manual.

#### 1.2 Modification of EUT

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

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### 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	HaoEn Zhang						
Temperature (°C)	21.6~25.8						
Relative Humidity (%)	52.4~57.6						

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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.	03CH16-HY (TAF Code: 3786)			
Test Engineer	Andy Yang and Karl Hou			
Temperature (°C)	21~25			
Relative Humidity (%)	48~58			
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory			

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

FCC Designation No.: TW1190 and TW3786

### 1.4 Applied Standards

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

- FCC 47 CFR Part 2, 90
- ANSI / TIA-603-E
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01
- Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations OET/Lab/EACB, June 6, 2013

#### 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

During all testing, EUT is in link mode with base station emulator at maximum power level.

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 find X plane as worst plane.

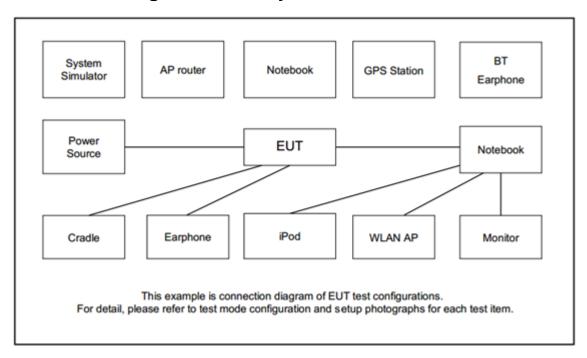
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Frequency range investigated for radiated emission is 30 MHz to 9000 MHz

Conducted	Band	Bandwidth (MHz)			Modulation			RB#			Test Channel						
Test Cases		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	М	Н
Max. Output Power	26	v	٧	v	v	v	-	٧	v	v	v	v	v	v	٧	٧	v
Peak-to-Average Ratio	26				v		-	>	v	v	v			v		٧	
26dB and 99% Bandwidth	26	v	>	v	v	v	-	>	v	v	v			v	٧	>	
Emission masks In-band emissions	26	v	>	٧	v	٧	1	>	v	v	v	v		<b>v</b>	>		٧
Emission masks  - Out of band emissions	26	v	٧	v	v	٧	-	٧				v			v	v	٧
Frequency Stability	26	-	-		v	v	-	٧						<b>~</b>	v	٧	
E.R.P.	26	26															
Radiated Spurious 26 Worst Case Emission							v	v	٧								
Remark	The mark "v" means that this configuration is chosen for testing     The mark "-" means that this bandwidth is not supported.      It Band26 transmit frequency for part22 rule is 824MHz-849MHz, for part90 rule is 814MHz-824MHz     ERP over 15MHz bandwidth complies the ERP limit line of part22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies.						Hz.										

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### 2.2 Connection Diagram of Test System



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### 2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord	
1.	System Simulator	Anritsu	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 RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

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

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 4.2 dB and a 10dB attenuator.

#### Example:

Offset(dB) = RF cable loss(dB) + attenuator factor(dB). = 4.2 + 10 = 14.2 (dB)

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# 2.5 Frequency List of Low/Middle/High Channels

LTE Band 26 Channel and Frequency List									
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest					
15	Channel	26765	-	-					
15	Frequency	821.5	-	-					
40	Channel	-	26740	-					
10	Frequency	-	819	-					
5	Channel	26715	26740	26765					
5	Frequency	816.5	819	821.5					
2	Channel	26705	26740	26775					
3	Frequency	815.5	819	822.5					
1.4	Channel	26697	26740	26783					
1.4	Frequency	814.7	819	823.3					

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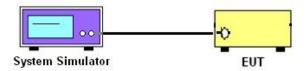
### 3 Conducted Test Items

### 3.1 Measuring Instruments

See list of measuring instruments of this test report.

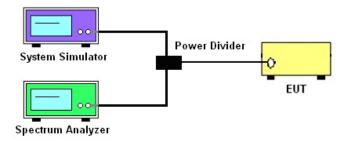
# 3.1.1 Test Setup

#### 3.1.2 Conducted Output Power

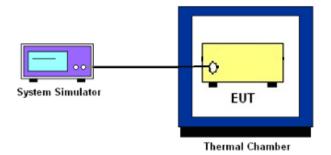


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# 3.1.3 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge, Emission Mask, Emissions Mask – Out Of Band Emissions, and Conducted Spurious Emission



### 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 Measurement and ERP Measurement

# 3.2.1 Description of the Conducted Output Power Measurement and ERP Measurement

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

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The ERP of mobile transmitters must not exceed 100 Watts for LTE Band 26.

According to KDB 412172 D01 Power Approach,

 $EIRP = P_T + G_T - L_C$ , where

 $P_T$  = transmitter output power in dBm

 $G_T$  = gain of the transmitting antenna in dBi

L<sub>C</sub> = signal attenuation in the connecting cable between the transmitter and antenna in dB

#### 3.2.2 Test Procedures

- 1. The transmitter output port was connected to the system simulator.
- 2. Set EUT at maximum power through 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

Reporting only

#### 3.3.2 Test Procedures

- 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.

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- 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 99% Occupied Bandwidth and 26dB Bandwidth Measurement

#### 3.4.1 Description of (Occupied) Bandwidth Limitations Measurement

The 99% 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.

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The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

#### 3.4.2 Test Procedures

- 1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

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#### 3.5 Emissions Mask Measurement

#### 3.5.1 Description of Emissions Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691.(a)

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- (a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
- (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116  $\log_{10}(f/6.1)$  decibels or 50 + 10  $\log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
- (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \text{Log}_{10}$  (P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

#### 3.5.2 Test Procedures

- 1. The EUT was connected to spectrum analyzer and base station via power divider.
- 2. The emissions mask of low and high channels for the highest RF powers were measured.
- 3. Set RBW and VBW 3 times of RBW to make the measurement with the spectrum analyzer's, and according to KDB 971168 D02 Misc Rev Approve License Devices v02r01 standards, set RBW = 300 Hz to make offsets less than 37.5 kHz from a channel edge, RBW = 100 kHz to make offsets greater than 37.5 kHz, that is allowed.
- 4. The test results were shown below plots with a correction offset factor including cable loss, insertion loss of power divider.

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#### 3.6 Emissions Mask - Out Of Band Emissions Measurement

#### 3.6.1 Description of Conducted Emissions Out of band emissions measurement

The power of any emission FCC Part 90.691 (a)(2) on any frequency removed from the assigned frequency by out of the authorized bandwidth at least 43 + 10 log (P) dB. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

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#### 3.6.2 Test Procedures

- 1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. The middle channel for the highest RF power within the transmitting frequency was measured.
- 4. The conducted spurious emission for the whole frequency range was taken.
- 5. For testing below 1GHz, make the measurement with the spectrum analyzer's RBW = 100 kHz, VBW = 3MHz, taking the record of maximum spurious emission.
- 6. For testing above 1GHz, make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
- The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 8. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

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### 3.7 Frequency Stability Measurement

#### 3.7.1 Description of Frequency Stability Measurement

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

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### 3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.7.3 Test Procedures for Temperature Variation

- 1. The EUT was set up in the thermal chamber and connected with the base station.
- 2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three hours. 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.

#### 3.7.4 Test Procedures for Voltage Variation

- 1. The EUT was placed in a temperature chamber at 20±5° C and connected with the base station.
- The power supply voltage to the EUT was varied from BEP 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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### 3.8 Field Strength of Spurious Radiation Measurement

#### 3.8.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

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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 43+10log<sub>10</sub>(P[Watts]) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

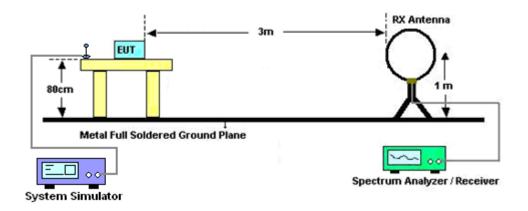
#### 3.8.2 Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
- 2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- 5. For testing below 1GHz, make the measurement with the spectrum analyzer's RBW = 100 kHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
- 6. For testing above 1GHz, make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
- 7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 9. Taking the record of output power at antenna port.
- 10. Repeat step 7 to step 8 for another polarization.
- 11. EIRP (dBm) = S.G. Power Tx Cable Loss + Tx Antenna Gain
- 12. ERP (dBm) = EIRP 2.15
- 13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 14. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

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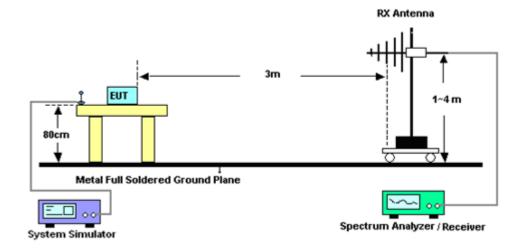
### 3.8.3 Test Setup

#### For radiated test below 30MHz



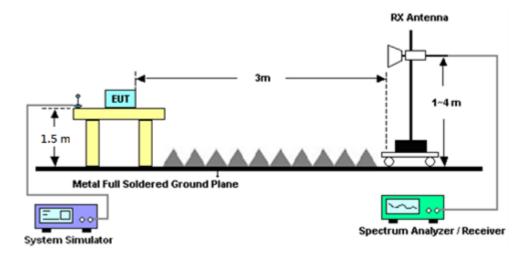
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#### For radiated test from 30MHz to 1GHz



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#### For radiated test above 1GHz



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#### 3.8.4 Test Result of Field Strength of Spurious Radiated

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 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6201664755	2/3/4G/LTE FDD/TDD with44)/LTE-3CC DLCA/2CC ULCA, CatM1/NB1/NB2	Jul. 21, 2021	Apr. 20, 2022~ May 11, 2022	Jul. 20, 2022	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101908	10Hz~40GHz	Oct. 01, 2021	Apr. 20, 2022~ May 11, 2022	Sep. 30, 2022	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40°C ~90°C	Sep. 09, 2021	Apr. 20, 2022~ May 11, 2022	Sep. 08, 2022	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Jan. 06, 2022	Apr. 20, 2022~ May 11, 2022	Jan. 05, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 07, 2022	Apr. 20, 2022~ May 11, 2022	Jan. 06, 2023	Conducted (TH03-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Apr. 26, 2022~ May 11, 2022	Sep. 06, 2022	Radiation (03CH16-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 15, 2021	Apr. 26, 2022~ May 11, 2022	Oct. 14, 2022	Radiation (03CH16-HY)
Signal Generator	Agilent	MG3694C	163401	0.1Hz~40GHz	Feb. 13, 2022	Apr. 26, 2022~ May 11, 2022	Feb. 12, 2023	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	41912 & 05	30MHz to 1GHz	Feb. 06, 2022	Apr. 26, 2022~ May 11, 2022	Feb. 05, 2023	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01 N-06	47020 & 06	30MHz to 1GHz	Oct. 09, 2021	Apr. 26, 2022~ May 11, 2022	Oct. 08, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02114	1G~18GHz	Aug. 04, 2021	Apr. 26, 2022~ May 11, 2022	Aug. 03, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1212	1G~18GHz	May 18, 2021	Apr. 26, 2022~ May 11, 2022	May 17, 2022	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Jul. 05, 2021	Apr. 26, 2022~ May 11, 2022	Jul. 04, 2022	Radiation (03CH16-HY)
Amplifier	Jet-Power	JPA0118-55- 303	17100018000 54001	1-18GHz	Jun. 16, 2021	Apr. 26, 2022~ May 11, 2022	Jun. 15, 2022	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 09, 2021	Apr. 26, 2022~ May 11, 2022	Dec. 08, 2022	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY57290111	3Hz~26.5GHz	Dec. 15, 2021	Apr. 26, 2022~ May 11, 2022	Dec. 14, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/4PE	NA	Aug. 28, 2021	Apr. 26, 2022~ May 11, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCCELEY	MY11688/4PE	NA	Aug. 28, 2021	Apr. 26, 2022~ May 11, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-57 57	NA	Aug. 28, 2021	Apr. 26, 2022~ May 11, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Apr. 26, 2022~ May 11, 2022	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Apr. 26, 2022~ May 11, 2022	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 26, 2022~ May 11, 2022	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 26, 2022~ May 11, 2022	N/A	Radiation (03CH16-HY)

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# 5 Uncertainty of Evaluation

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

_		
	Measuring Uncertainty for a Level of	2.86 dB
	Confidence of 95% (U = 2Uc(y))	2.00 UB

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

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

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# **Appendix A. Test Results of Conducted Test**

# Conducted Output Power(Average power & ERP)

	LTE Band 26 Maximum Average Power [dBm] (GT - LC = -0.88 dB)											
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)				
15	1	0		22.51	-	-						
15	1	37		22.40	-	-						
15	1	74		22.46	-	-						
15	36	0	QPSK	21.43	-	-	19.48	0.0887				
15	36	20		21.55	-	-						
15	36	39		21.58	-	-						
15	75	0		21.55	-	-						
15	1	0		21.63	-	-						
15	1	37		21.65	-	-						
15	1	74		21.85	-	-						
15	36	0	16-QAM	20.50	-	-	18.82	0.0762				
15	36	20		20.47	-	-						
15	36	39		20.54	-	-						
15	75	0		20.52	-	-						
15	1	0		20.60	-	-						
15	1	37		20.62	-	-						
15	1	74		20.61	-	-						
15	36	0	64-QAM	19.44	-	-	17.59	0.0574				
15	36	20		19.58	-	-						
15	36	39		19.50	-	-						
15	75	0		19.57	-	-						
15	1	0		17.67	-	-						
15	1	37		17.65	-	-						
15	1	74		17.73	-	-						
15	36	0	256-QAM	17.46	-	-	14.70	0.0295				
15	36	20		17.53	-	-						
15	36	39		17.54	-	-						
15	75	0		17.54	-	-						
Limit	P	ower < 100	W		Result		Pa	ISS				



	LTE E	Band 26 M	aximum A	/erage Po	wer [dBm]	(GT - LC =	-0.88 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0		-	22.63	-		
10	1	25		-	22.50	-		
10	1	49		-	22.47	-		
10	25	0	QPSK	-	21.52	-	19.60	0.0912
10	25	12		-	21.38	-		
10	25	25		ı	21.52	-		
10	50	0		-	21.46	-		
10	1	0		ı	21.55	-		
10	1	25		1	21.78	-		
10	1	49		1	21.47	-		
10	25	0	16-QAM	-	20.51	-	18.75	0.0750
10	25	12		-	20.45	-		
10	25	25		ı	20.55	-		
10	50	0		1	20.46	-		
10	1	0		1	20.65	-		
10	1	25		1	20.64	-		
10	1	49		ı	20.81	-		
10	25	0	64-QAM	ı	19.58	-	17.78	0.0600
10	25	12		ı	19.48	-		
10	25	25		1	19.53	-		
10	50	0		1	19.49	-		
10	1	0		ı	17.54	-		
10	1	25		ı	17.46	-		
10	1	49		1	17.79	-		
10	25	0	256-QAM	1	17.54	-	14.76	0.0299
10	25	12		ı	17.48	-		
10	25	25		-	17.55	-	7	
10	50	0		-	17.53	-		
Limit	Р	ower < 100	W		Result		Pa	ISS



	LTE E	Band 26 M	aximum A	verage Pov	wer [dBm]	(GT - LC =	-0.88 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0		22.44	22.45	22.47		
5	1	12		22.31	22.25	22.40		
5	1	24		22.44	22.52	22.53		
5	12	0	QPSK	21.36	21.40	21.34	19.50	0.0891
5	12	7		21.45	21.54	21.50		
5	12	13		21.48	21.46	21.55		
5	25	0		21.48	21.53	21.55		
5	1	0		21.55	21.56	21.47		
5	1	12		21.64	21.61	21.59		
5	1	24		21.83	21.85	21.79		
5	12	0	16-QAM	20.49	20.45	20.40	18.82	0.0762
5	12	7		20.40	20.30	20.36		
5	12	13		20.53	20.51	20.44		
5	25	0		20.42	20.38	20.35		
5	1	0		20.57	20.47	20.47		
5	1	12		20.54	20.60	20.56		
5	1	24		20.56	20.46	20.63		
5	12	0	64-QAM	19.40	19.32	19.39	17.60	0.0575
5	12	7		19.52	19.54	19.47		
5	12	13		19.44	19.46	19.43		
5	25	0		19.48	19.57	19.39		
5	1	0		17.67	17.75	17.66		
5	1	12		17.58	17.65	17.68		
5	1	24		17.63	17.63	17.70		
5	12	0	256-QAM	17.46	17.37	17.45	14.72	0.0296
5	12	7		17.43	17.44	17.51		
5	12	13		17.45	17.39	17.43		
5	25	0		17.44	17.50	17.37		
Limit	P	ower < 100	W		Result		Pa	ISS



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	LTE Band 26 Maximum Average Power [dBm] (GT - LC = -0.88 dB)										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)			
3	1	0		22.48	22.57	22.46					
3	1	8		22.34	22.29	22.35					
3	1	14		22.38	22.28	22.32					
3	8	0	QPSK	21.35	21.36	21.40	19.54	0.0899			
3	8	4		21.54	21.47	21.47					
3	8	7		21.52	21.52	21.49					
3	15	0		21.54	21.51	21.58					
3	1	0		21.62	21.61	21.56					
3	1	8		21.57	21.53	21.58					
3	1	14		21.82	21.82	21.78					
3	8	0	16-QAM	20.45	20.36	20.48	18.79	0.0757			
3	8	4		20.37	20.37	20.34					
3	8	7		20.50	20.40	20.47					
3	15	0		20.50	20.54	20.57					
3	1	0		20.56	20.66	20.63					
3	1	8		20.56	20.65	20.57					
3	1	14		20.56	20.65	20.64					
3	8	0	64-QAM	19.42	19.51	19.48	17.63	0.0579			
3	8	4		19.54	19.49	19.64					
3	8	7		19.45	19.48	19.37					
3	15	0		19.53	19.53	19.58					
3	1	0		17.65	17.68	17.70					
3	1	8		17.60	17.68	17.50					
3	1	14		17.68	17.62	17.68					
3	8	0	256-QAM	17.45	17.54	17.55	14.67	0.0293			
3	8	4		17.49	17.56	17.42					
3	8	7		17.50	17.55	17.49					
3	15	0		17.46	17.41	17.37					
Limit	P	ower < 100	W		Result		Pa	ISS			



	LTE E	Band 26 M	aximum A	/erage Pov	wer [dBm]	(GT - LC =	-0.88 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0		22.44	22.42	22.39		
1.4	1	3		22.36	22.40	22.34		
1.4	1	5		22.45	22.54	22.48		
1.4	3	0	QPSK	22.44	22.40	22.51	19.51	0.0893
1.4	3	1		22.31	22.22	22.32		
1.4	3	3		22.44	22.36	22.42		
1.4	6	0		21.47	21.57	21.41		
1.4	1	0		21.62	21.59	21.53		
1.4	1	3		21.61	21.70	21.52		
1.4	1	5		21.83	21.84	21.88		
1.4	3	0	16-QAM	21.60	21.61	21.50	18.85	0.0767
1.4	3	1		21.64	21.60	21.64		
1.4	3	3		21.77	21.71	21.86		
1.4	6	0		20.49	20.43	20.53		
1.4	1	0		20.52	20.49	20.59		
1.4	1	3		20.58	20.48	20.55		
1.4	1	5		20.52	20.52	20.47		
1.4	3	0	64-QAM	20.51	20.51	20.46	17.63	0.0579
1.4	3	1		20.57	20.66	20.54		
1.4	3	3		20.58	20.48	20.54		
1.4	6	0		19.50	19.50	19.59		
1.4	1	0		17.66	17.57	17.72		
1.4	1	3		17.55	17.61	17.63		
1.4	1	5		17.70	17.67	17.72		
1.4	3	0	256-QAM	17.59	17.51	17.51	14.75	0.0299
1.4	3	1		17.56	17.60	17.54		
1.4	3	3		17.69	17.72	17.78	7	
1.4	6	0		17.54	17.61	17.64		
Limit	P	ower < 100	W		Result		Pa	ISS



	LTE Band	26 Stradd	le Maximu	m Average	e Power [d	Bm] (GT -	LC = -0.88 dI	B)
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0		-	22.53	-		
15	1	37		-	22.33	-		
15	1	74		-	22.44	-		
15	36	0	QPSK	-	21.41	-	19.50	0.0891
15	36	20		-	21.53	-		
15	36	39		-	21.62	-		
15	75	0		-	21.46	-		
15	1	0		-	21.56	-		
15	1	37		-	21.74	-		
15	1	74		-	21.91	-		
15	36	0	16-QAM	-	20.57	-	18.88	0.0773
15	36	20		-	20.47	-		
15	36	39		-	20.56	-		
15	75	0		-	20.51	-		
15	1	0		-	20.66	-		
15	1	37		-	20.66	-		
15	1	74		-	20.56	-		
15	36	0	64-QAM	-	19.50	-	17.63	0.0579
15	36	20		-	19.49	-		
15	36	39		-	19.44	-		
15	75	0		-	19.47	-		
15	1	0		-	17.62	-		
15	1	37		-	17.65	-		
15	1	74		-	17.77	-		
15	36	0	256-QAM	-	17.51	-	14.74	0.0298
15	36	20		-	17.45	-		
15	36	39		-	17.63	-		
15	75	0		ı	17.46	-		
Limit	R	eporting on	ıly	_	Result		N.	/A



	LTE Band 26 Straddle Maximum Average Power [dBm] (GT - LC = -0.88 dB)											
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)				
10	1	0		-	22.56	-						
10	1	25		1	22.38	-						
10	1	49		-	22.48	-						
10	25	0	QPSK	-	21.28	-	19.53	0.0897				
10	25	12		1	21.54	-						
10	25	25		1	21.47	-						
10	50	0		1	21.59	-						
10	1	0		1	21.52	-						
10	1	25		1	21.57	-						
10	1	49		1	21.90	-						
10	25	0	16-QAM	1	20.47	-	18.87	0.0771				
10	25	12		-	20.49	-						
10	25	25		-	20.37	-						
10	50	0		1	20.49	1						
10	1	0		1	20.60	1						
10	1	25		1	20.63	1						
10	1	49		ı	20.61	1						
10	25	0	64-QAM	1	19.44	1	17.60	0.0575				
10	25	12		1	19.53	1						
10	25	25		1	19.51	1						
10	50	0		1	19.62	-						
10	1	0		1	17.58	-						
10	1	25		ı	17.66	ı						
10	1	49		1	17.70	-						
10	25	0	256-QAM	-	17.49	-	14.67	0.0293				
10	25	12		-	17.42	-						
10	25	25		-	17.48	-						
10	50	0		-	17.52	-						
Limit	R	eporting on	ıly		Result		N	/A				



	LTE Band	26 Straddl	le Maximu	m Average	e Power [d	Bm] (GT -	LC = -0.88 dI	В)
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0		-	22.42	-		
5	1	12		-	22.25	-		
5	1	24		-	22.34	-		
5	12	0	QPSK	-	21.39	-	19.39	0.0869
5	12	7		-	21.43	-		
5	12	13		-	21.50	-		
5	25	0		-	21.43	-		
5	1	0		-	21.60	-		
5	1	12		-	21.73	-		
5	1	24		-	21.75	-		
5	12	0	16-QAM	-	20.42	-	18.72	0.0745
5	12	7		-	20.42	-		
5	12	13		-	20.55	-		
5	25	0		-	20.43	-		
5	1	0		-	20.54	-		
5	1	12		-	20.54	-		
5	1	24		-	20.49	-		0.0564
5	12	0	64-QAM	-	19.39	-	17.51	
5	12	7		-	19.55	1		
5	12	13		-	19.47	-		
5	25	0		-	19.42	-		
5	1	0		-	17.57	-		
5	1	12		-	17.57	-		
5	1	24		-	17.65	-		
5	12	0	256-QAM	-	17.53	-	14.62	0.0290
5	12	7		-	17.41	-		
5	12	13		-	17.51	-	$\neg$	
5	25	0		-	17.47	-		
Limit	R	eporting on	ıly		Result		N.	/A



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	LTE Band	26 Stradd	le Maximu	m Average	e Power [d	Bm] (GT -	LC = -0.88 dI	В)
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0		-	22.44	-		
3	1	8		-	22.30	-		
3	1	14		-	22.34	-		
3	8	0	QPSK	-	21.34	-	19.41	0.0873
3	8	4		-	21.49	-		
3	8	7		-	21.58	-		
3	15	0		-	21.63	-		
3	1	0		-	21.69	-		
3	1	8		-	21.54	-		
3	1	14		-	21.77	-		
3	8	0	16-QAM	-	20.53	-	18.74	0.0748
3	8	4		-	20.28	-		
3	8	7		-	20.57	-		
3	15	0		-	20.59	-		
3	1	0		-	20.52	-		
3	1	8		-	20.58	-		
3	1	14		-	20.62	-		
3	8	0	64-QAM	-	19.43	-	17.59	0.0574
3	8	4		-	19.49	-		
3	8	7		-	19.46	-		
3	15	0		-	19.47	-		
3	1	0		-	17.65	-		
3	1	8		-	17.55	-		
3	1	14		-	17.58	-		
3	8	0	256-QAM	-	17.46	-	14.62	0.0290
3	8	4		-	17.40	-		
3	8	7		-	17.55	-		
3	15	0		-	17.38	-		
Limit	R	eporting on	nly		Result		N.	/A



	LTE Band	26 Stradd	le Maximu	m Average	e Power [d	Bm] (GT -	LC = -0.88 di	3)
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0		-	22.44	-		
1.4	1	3		-	22.37	-		
1.4	1	5		-	22.41	-		
1.4	3	0	QPSK	-	22.39	-	19.41	0.0873
1.4	3	1		-	22.31	-		
1.4	3	3		-	22.44	-		
1.4	6	0		-	21.51	-		
1.4	1	0		-	21.69	-		
1.4	1	3		-	21.58	-		
1.4	1	5		-	21.79	-		
1.4	3	0	16-QAM	-	21.59	-	18.76	0.0752
1.4	3	1		-	21.59	-		
1.4	3	3		-	21.79	-		
1.4	6	0		-	20.44	-		
1.4	1	0		-	20.54	-		
1.4	1	3		-	20.55	-		
1.4	1	5		-	20.62	-		
1.4	3	0	64-QAM	-	20.58	-	17.63	0.0579
1.4	3	1		-	20.56	-		
1.4	3	3		-	20.66	-		
1.4	6	0		-	19.52	-		
1.4	1	0		-	17.60	-		
1.4	1	3		-	17.46	-		
1.4	1	5		-	17.76	-		
1.4	3	0	256-QAM	-	17.69	-	14.73	0.0297
1.4	3	1		-	17.57	-		
1.4	3	3		-	17.73	-		
1.4	6	0		-	17.58	-		
Limit	R	eporting on	ıly		Result		N/	/A

# LTE Band 26

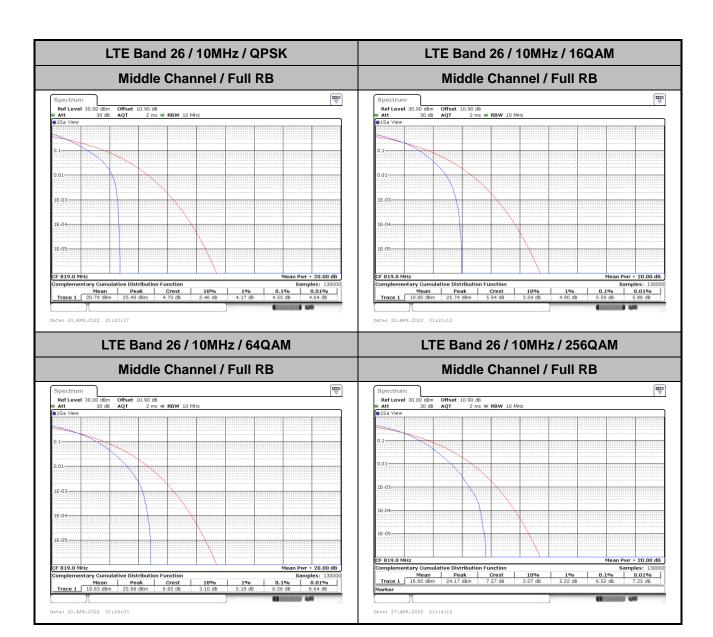
# Peak-to-Average Ratio

Mode		LTE Band 26 / 10MHz								
Mod.	QPSK	QPSK 16QAM 64QAM 256QAM								
RB Size	Full RB	Full RB	Full RB	Full RB	Result					
Middle CH	4.55	5.59	6.26	6.52	PASS					

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# 26dB Bandwidth

Mode	LTE Band 26 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Low CH	-	-	-	-	-	-	-	-	14.42	14.42	-	-
Middle CH	1.37	1.30	3.15	3.07	4.89	4.96	9.89	10.11	-	-	-	-
Mode	LTE Band 26 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Low CH	-	-	-	-	-	-	-	-	14.15	14.60	-	-
Middle CH	1.34	1.31	3.11	3.09	4.94	5.15	9.71	9.85	-	-	-	-

Report No. : FG190614-03C

TEL: 886-3-327-3456 Page Number : A2-3 of 38

FAX: 886-3-328-4978

Report No.: FG190614-03C LTE Band 26 Middle Channel / 1.4MHz / QPSK Middle Channel / 1.4MHz / 16QAM Ref Level 30.00 dBm Offset 10.90 dB = RBW 30 kHz = Att 30 dB SWT 63.2 µs = VBW 100 kHz Mode Auto FFT SQL COUNT 100/100 M1[1] 15.32 dBr 819.00840 MH M1[1] 14.27 dBn 819.43080 MHz -10 dBm -20 dBm-30 dBm -50 dBm--60 dBm-Span 2.8 MHz CF 819.0 MHz Function Result 1.3678 MHz 26.00 dB 598.8 Function Result 1.3007 MHz 26.00 dB 630.0 Marker Type | Ref | Trc | X-value 819.4308 MHz 818.3427 MHz 819.6434 MHz Type | Ref | Trc | Function ndp. down Function nd9 down 14.27 dBm -11.86 dBm -11.74 dBm Middle Channel / 3MHz / QPSK Middle Channel / 3MHz / 16QAM Ref Level 30.00 dBm Offset 10.90 dB RBW 100 kHz

Att 30 db SWT 19 µs VBW 300 kHz Mode Auto FFT

SGL Count 100/100

PIPk Max Offset Att 30 dB SWT SGL Count 100/100 1Pk Max 10.90 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT 15.47 dBm 819.76120 MHz 26.00 dB 3.068900000 MHz 267.1 16.17 dB: 819.26970 MF dBm--10 dBm -20 dBm 40 dBm -50 dBm -50 dBm-CF 819.0 MHz CF 819.0 MHz Function Result 3.1528 MHz 26.00 dB 259.9 Function Result 3.0689 MHz 26.00 dB 267.1 
 X-value
 Y-value
 Function

 819.2697 MHz
 16.17 dBm
 ndB down

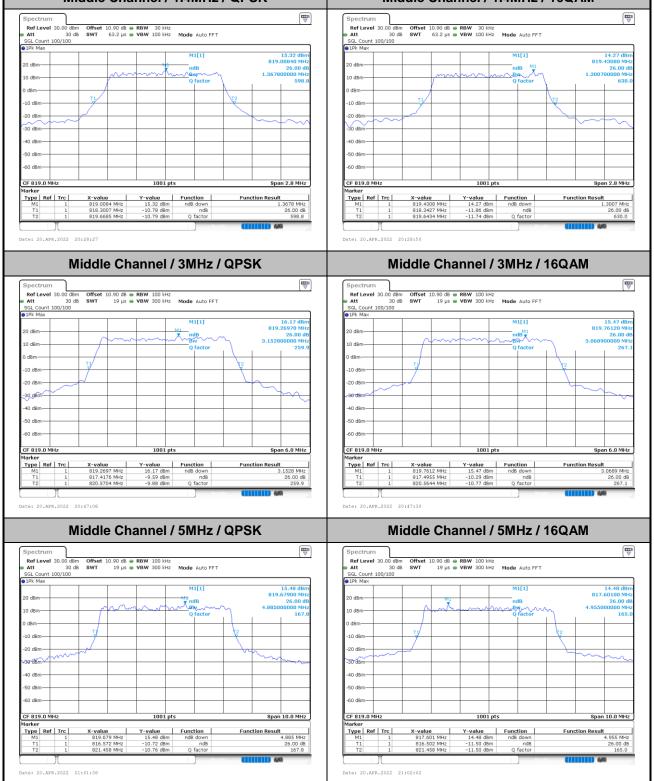
 817.4176 MHz
 -9.59 dBm
 ndB

 820.5704 MHz
 -9.88 dBm
 Q factor
 Type | Ref | Trc | X-value 819.7612 MHz 817.4955 MHz 820.5644 MHz Date: 20.APR.2022 20:47:06 Date: 20.APR.2022 20:47:30 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM 30 dB SWT

Count 100/100

Max Ref Level 30.00 dBm Offset
Att 30 dB SWT
SGL Count 100/100

1Pk Max .90 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT 15.48 dBr 819.67900 MH 26.00 d 14.48 dBn 817.60100 MH 26.00 d M1[1] 10 dBm dBm-



TEL: 886-3-327-3456 Page Number : A2-4 of 38 FAX: 886-3-328-4978

LTE Band 26 Middle Channel / 10MHz / QPSK Middle Channel / 10MHz / 16QAM Ref Level 30.00 dBm Offset 10.90 dB = RBW 300 kHz att 30 dB SWT 12.6 ps = VSW 1 MHz Mode Auto FFT SQL Count 100/100 = VFK Max 15.50 dBm 817.2420 MHz 26.00 dB 10.110000000 MHz M1[1] 15.59 dBn 821.9570 MH M1[1] ndB M1 -10 dBm -30 d6m -50 dBm-Marker Type | Ref | Trc | Type | Ref | Trc | Function | Function Result Function ndB down Low Channel / 15MHz / QPSK Low Channel / 15MHz / 16QAM 14.04 dBm 819.3420 MHz 26.00 dE 14.416000000 MHz dBm--20 dBm 40 dBm--40 dB/m--50 dBm -50 dBm-CF 821.5 MHz CF 821.5 MHz Span 30.0 MHz Span 30.0 MHz Function Result

14.416 MHz

26.00 dB

57.3 
 Y-value
 Function

 z
 14.04 d8m
 nd8 down

 z
 -10.89 d8m
 nd8

 z
 -11.92 d8m
 Q factor

 X-value
 Y-value
 Function

 826,205 MHz
 13,56 d8m
 nd8 down

 814,157 MHz
 -12,13 d8m
 nd8

 828,573 MHz
 -12,72 d8m
 Q factor
 Type Ref Trc Type Ref Trc Function Result

Date: 20.APR.2022 21:46:36

Report No.: FG190614-03C

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FAX: 886-3-328-4978

Date: 20.APR.2022 21:47:24

LTE Band 26 Middle Channel / 1.4MHz / 64QAM Middle Channel / 3MHz / 64QAM Ref Level 30.00 dBm Offset 10.90 dB ● RBW 30 kHz
Att 30 dB SWT 63.2 µs ● VBW 100 kHz Mode Auto FFT
SGL Count 100/100
SGL SWI 63.2 µs ● VBW 100 kHz Mode Auto FFT M1[1] 12.93 dBn 818.47970 MH M1[1] -10 dBm -20 dBm-30 dBm--50 dBm--60 dBm-Function Result 1.3399 MHz 26.00 dB 610.9 Span 2.8 MHz CF 819.0 MH Function Result 3.1109 MHz 26.00 dB 263.6 Marker Type | Ref | Trc | Type | Ref | Trc | X-value 819.983 MHz 817.4236 MHz 820.5345 MHz Function nd9 down Function nd9 down Middle Channel / 5MHz / 64QAM Middle Channel / 10MHz / 64QAM 14.36 dBm 820.9180 MHz 26.00 dB 9.710000000 MHz 84.5 M1[1] 12.59 dBr 819.70900 MF M1[1] 819.70900 MH 26.00 d 4.935000000 MH 166. MindB MBW 10 factor dBm--10 dBm -20 dBr -20 dBm -50 dBm -50 dBm-CF 819.0 MHz CF 819.0 MHz Function Result 4,935 MHz 26.00 dB 166.1 Span 10.0 MHz Function Result Date: 20.APR.2022 20:59:11 Date: 20.APR.2022 21:19:56 Low Channel / 15MHz / 64QAM M1[1] -20 dBm CF 821.5 MH 1001 pts Function Result 14.146 MHz 26.00 dB 58.3 Type Ref Trc 
 X-value
 Y-value
 Function

 825.246 MHz
 12.44 dBm
 nd8 down

 814.427 MHz
 -13.45 dBm
 nd8

 626.573 MHz
 -13.56 dBm
 Q factor

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FAX: 886-3-328-4978

Date: 20.APR.2022 21:45:48

LTE Band 26 Middle Channel / 1.4MHz / 256QAM Middle Channel / 3MHz / 256QAM Ref Level 30.00 dBm Offset 10.90 dB ● RBW 30 kHz
Att 30 dB SWT 63.2 µs ● VBW 100 kHz Mode Auto FFT
SGL Count 100/100
SGL SWI 63.2 µs ● VBW 100 kHz Mode Auto FFT 11.91 dBm 819.37760 MHz 26.00 dB 3.092900000 MHz M1[1] 12.08 dBn 818.75380 MH M1[1] -10 dBm -30 dBm 40 dBm--50 dBm--60 dBm-Span 2.8 MHz CF 819.0 MHz Function Result
1.3091 MHz
26.00 dB
625.4 Marker Type | Ref | Trc | 
 X-value
 Y-value
 Function

 818.7538 MHz
 12.08 dBm
 nd8 down

 818.3343 MHz
 -13.93 dBm
 nd8

 819.6434 MHz
 -13.81 dBm
 Q factor
 X-value 819.3776 MHz 817.4835 MHz 820.5764 MHz Type | Ref | Trc | Function nd9 down Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM Ref Level 30.00 dBm Offset 10.90 dB RBW 300 kHz

Att 30 db SWT 12.6 µs WBW 1 MHz

SGL Count 100/100

1Pk Max M1[1] 9.56 dBr 820.48900 MF M1[1] 12.91 dBn 819.8390 MH .8390 MH 26.00 di 00000 MH 83. dBm--20 dBm -20 dBm -50 dBm--50 dBm-CF 819.0 MHz CF 819.0 MHz Function Result Function Result Date: 27.APR.2022 22:53:59 Date: 27.APR.2022 23:01:02 Low Channel / 5MHz / 256QAM M1[1] -20 dBm CF 821.5 MH 1001 pts Function Result 14.595 MHz 26.00 dB 56.5 Type Ref Trc 
 X-value
 Y-value
 Function

 824.017 MHz
 9.65 dBm
 nd8 down

 814.187 MHz
 -16.17 dBm
 nd8

 626.783 MHz
 -16.39 dBm
 Q factor

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FAX: 886-3-328-4978

Date: 27.APR.2022 23:10:26

## **Occupied Bandwidth**

Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Low CH	-	-	-	-	-	-	-	-	13.40	13.46	-	-
Middle CH	1.10	1.12	2.72	2.74	4.48	4.50	9.07	9.01	-	-	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256	64QAM	256	64QAM	256 QAM	64QAM	256	64QAM	256	64QAM	256
	04QAIVI	QAM	04QAW	QAM				QAM		QAM		QAM
Low CH	-	-	-	-	-	-	-	-	13.37	13.37	-	-
Middle CH	1.09	1.10	2.72	2.72	4.50	4.51	9.05	9.05	-	-	-	-

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LTE Band 26 Middle Channel / 1.4MHz / QPSK Middle Channel / 1.4MHz / 16QAM Ref Level 3.0.0 dBm Offset 10.90 dB = RBW 30 kHz
Att 30.0 dB SWT 63.2 µs = VBW 100 kHz Mode Auto FFT
SGL Count 100/100 14.64 dBi 819.44480 MH 1.096503497 20 dBm 10 dBm--10 dBm -10 dBm -20 dBm-30/4Bm 40 dBm -50 dBm-50 dBm 60 dBm -60 dBm CF 819.0 MHz
Marker
Type | Ref | Trc | 
 X-value
 Y-value
 Function

 819.444B MHz
 14.64 dBm

 818.45175 MHz
 7.60 dBm
 Occ Bw

 819.54925 MHz
 6.76 dBm
 Type Ref Trc 
 X-value
 Y-value
 Function

 819.4755 MHz
 13.74 dbm
 818.42378 MHz
 4.54 dbm
 Occ Bw

 819.54825 MHz
 6.91 dbm
 Occ Bw
 Occ Bw
 Occ Bw
 Occ Bw
 1.096503497 MHz 1.124475524 MHz Date: 20.APR.2022 20:28:03 Middle Channel / 3MHz / QPSK Middle Channel / 3MHz / 16QAM 10.90 dB • RBW 100 kHz 19 µs • VBW 300 kHz Mode Auto FFT Ref Level 30.00 Att Offset 10.90 dB ● RBW 100 kHz SWT 19 µs ● VBW 300 kHz Mode Auto FFT 30 dB SGL Count 100/100 16.02 dBr 819.25770 MH 2.715284715 MH 15.80 dBn 819.29970 MH 2.739260739 MH M1[1] M1[1] 20 dBm dBm-10 dBm--30 dBm-40 dBm -50 dBm-CF 819.0 MHz CF 819.0 MHz Span 6.0 MHz 819.2577 MHz 16.02 dBm 817.63936 MHz 10.09 dBm Occ Bw 820.35465 MHz 9.02 dBm 
 819.2997 MHz
 15.80 dBm

 817.62138 MHz
 10.28 dBm
 Occ Bw

 820.36064 MHz
 8.68 dBm
 2.739260739 MHz 2.715284715 MHz Date: 20.APR.2022 20:46:18 Date: 20.APR.2022 20:46:42 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM Ref Level 30.00 dBm Offset
Att 30 dB SWT
SGL Count 100/100

1Pk Max 10.90 dB • RBW 100 kHz 19 μs • VBW 300 kHz Mode Auto FFT 14.66 dB 819.15000 MH 4.475524476 MH 15.26 dBn 819.73900 MH 4.495504496 MH 10 dBm dBm--20 dBm -20 dBm--30 dBm-30 dBm--40 dBm -50 dBm--50 dBm--60 dBm-CF 819.0 MH: 1001 pts Span 10.0 MHz CF 819.0 MHz 1001 pts Span 10.0 MHz 
 X-value
 Y-value
 Function

 819,739 MHz
 15.26 dbm
 8.00 dbm

 816.75225 MHz
 8.00 dbm
 Occ Bw

 821.24775 MHz
 6.38 dbm
 Type Ref Trc Function Result Function Result 4.475524476 MHz 4.495504496 MHz

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Date: 20.APR.2022 21:01:14

FAX: 886-3-328-4978

Date: 20.APR.2022 21:00:50

LTE Band 26 Middle Channel / 10MHz / QPSK Middle Channel / 10MHz / 16QAM Ref Level 30.00 dBm Offset 10.90 dB ● RBW 300 kHz
Att 30 dB SWT 12.6 µs ● VBW 1 MHz Mode Auto FFT
SGL Count 100/100
SGL SOUNT 10.50 BM Mode Auto FFT 15.94 dBn 815.7630 MH: 170929071 MH: 15.26 dBn 821.4980 MH; 310989011 MH; M1[1] M1[1] -10 dBm -20 dBm--30 dBm--38 dBm 50 dBm -50 dBm--60 dBm CF 819.0 MHz Marker Type | Ref | Trc | 
 X-value
 Y-value
 Function

 815.763 MHz
 15.94 dBm

 814.4845 MHz
 10.14 dBm
 Occ Bw

 823.5554 MHz
 10.97 dBm
 Type Ref Trc 
 X-value
 Y-value
 Function

 821.498 MHz
 15.26 dBm

 814.5045 MHz
 9.24 dBm
 Occ Bw

 823.5155 MHz
 8.97 dBm
 Function Result Function Result 9.070929071 MHz 9.010989011 MHz Low Channel / 15MHz / QPSK Low Channel / 15MHz / 16QAM Ref Level 30.00 dBm Offset 10.90 dB • RBW 300 kHz

Att 30.48 SWT 12.6 µs • VBW 1 MHz

Mode Auto FFT

\$1Pk Max 14.04 dBi 824.5570 MF 13.396603397 MF 12.44 dBn 819.3120 MHz 13.456543457 MHz dBm--10 dBm -20 dBm--20 dBm -40 dBm-40 dBm--50 dBm--50 dBm-CF 821.5 MHz CF 821.5 MHz Span 30.0 MHz Span 30.0 MHz Function Result Function Result 13.396603397 MHz 13.456543457 MHz

Date: 20.APR.2022 21:46:12

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FAX: 886-3-328-4978

Date: 20.APR.2022 21:47:00

LTE Band 26 Middle Channel / 1.4MHz / 64QAM Middle Channel / 3MHz / 64QAM Ref Level 30,00 dbm Offset 10,90 db = RBW 30 kHz
30 db SWT 63.2 µs = VBW 100 kHz Mode Auto FFT
SGL Count 100/100
1Plk Max 13.57 dBn 818.82100 MH: 1.093706294 20 dBm 10 dBm--10 dBm -30 dBm--30 dBm- $\mathcal{M}$ 40 dBm -50 dBm-50 dBm -60 dBm CF 819.0 MHz
Marker
Type | Ref | Trc | 
 X-value
 Y-value
 Function

 818.821 MHz
 13.57 dBm

 818.45455 MHz
 6.91 dBm
 Occ Bw

 819.54825 MHz
 5.75 dBm

 X-value
 Y-value
 Function

 B18.0649 MHz
 13.82 dBm

 817.63936 MHz
 7.37 dBm
 Occ Bw

 820.35465 MHz
 7.34 dBm
 1.093706294 MHz 2.715284715 MHz Date: 20.APR.2022 20:45:30 Middle Channel / 5MHz / 64QAM Middle Channel / 10MHz / 64QAM Ref Level 30.00 Offset 10.90 dB ● RBW 300 kHz SWT 12.6 µs ● VBW 1 MHz Mode Auto FFT 30 dB SGL Count 100/100 12.13 dBr 819.28000 MH 4.495504496 MH 13.53 dBn 817.9410 MH: 9.050949051 MH: M1[1] M1[1] 20 dBm dBm-10 dBm--30 dBm--30 dBm-40 dBm--50 dBm-CF 819.0 MHz Span 20.0 MHz CF 819.0 MHz Span 10.0 MHz 
 Marker
 Y-value
 Function
 Function Result

 M1
 1
 819,28 MHz
 12,13 dBm
 12,13 dBm

 T1
 1
 816,7426 MHz
 7,37 dBm
 Occ BW
 4.4955044

 T2
 1
 821,23776 MHz
 6,59 dBm
 0
 4.4955044
 Function Result 7.52 dBm Occ Bw 8.50 dBm 9.050949051 MHz 4.495504496 MHz Date: 20.APR.2022 20:58:47 Date: 20.APR.2022 21:19:32 Low Channel / 5MHz / 64QAM 12.86 dBi 819.8520 MF 13.366633367 MF -20 dBm-CF 821.5 MH: 1001 pts Span 30.0 MHz 
 X-value
 Y-value
 Function

 819.852 MHz
 12.86 dBm

 814.8167 MHz
 7.34 dBm
 Occ Bw

 828.1833 MHz
 7.10 dBm
 Type | Ref | Trc | Function Result 13.366633367 MHz

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Date: 20.APR.2022 21:45:24

LTE Band 26 Middle Channel / 1.4MHz / 256QAM Middle Channel / 3MHz / 256QAM Ref Level 30.00 dbm Offset 10.90 db e RBW 30 kHz
Act 30 db SWT 63.2 µs e VBW 100 kHz Mode Auto FFT
SGL Count 100/100
13Pk Max 10 dBm--10 dBm -30 dBm -30 dBm 40 dBm--50 dBm-50 dBm -60 dBm CF 819.0 MHz
Marker
Type | Ref | Trc | 
 X-value
 Y-value
 Function

 818.6895 MHz
 11.20 dBm

 818.44895 MHz
 2.68 dBm
 Occ Bw

 819.54825 MHz
 4.56 dBm

 X-value
 Y-value
 Function

 819.3956 MHz
 12.77 dBm

 817.64535 MHz
 6.18 dBm
 Occ Bw

 820.36663 MHz
 5.53 dBm
 2.721278721 MHz Date: 27.APR.2022 22:46:52 Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM Offset 10.90 dB ● RBW 300 kHz SWT 12.6 µs ● VBW 1 MHz Mode Auto FFT 30 dB SGL Count 100/100 10.89 dBr 817.97100 MH 4.505494505 MH 11.60 dBn 815.5030 MH 9.050949051 MH M1[1] M1[1] 20 dBm dBm--10 dBm -10 d8m--30 d8m--30 dBm-40 dBm--50 dBm-CF 819.0 MHz CF 819.0 MHz Span 20.0 MHz Span 10.0 MHz 
 Marker
 Y-value
 Function
 Function Result

 M1
 1
 817.971 MHz
 10.99 dBm
 91.00 dBm
 11.00 dBm
 11.00 dBm
 00.00 dBm
 00.00 dBm
 00.00 dBm
 4.5054945
 12.00 dBm
 00.00 dBm
 00.00 dBm
 00.00 dBm
 4.5054945
 10.00 dBm
 00.00 dBm
 Function Result 11.60 dBm 6.23 dBm Occ Bw 5.15 dBm 9.050949051 MHz 4.505494505 MHz Date: 27.APR.2022 22:53:33 Date: 27.APR.2022 23:00:35 Low Channel / 15MHz / 256QAM 11.16 dB 818.1430 MH 13.366633367 MH -20 dBm-CF 821.5 MH:

Report No.: FG190614-03C

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Span 30.0 MHz

Function Result 13.366633367 MHz

FAX: 886-3-328-4978

Date: 27.APR.2022 23:10:00

Type | Ref | Trc |

1001 pts

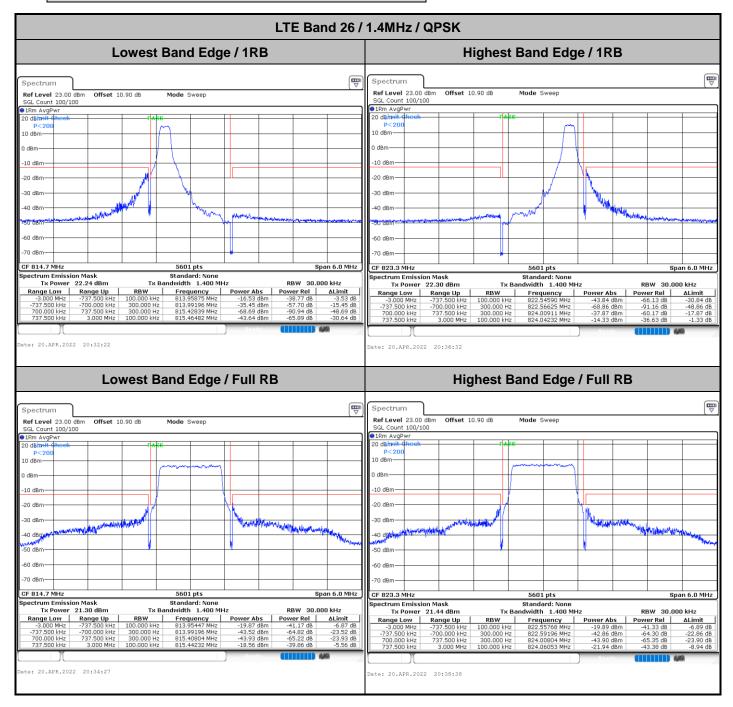
 X-value
 Y-value
 Function

 818.143 MHz
 11.16 dBm

 814.8167 MHz
 4.92 dBm
 Occ Bw

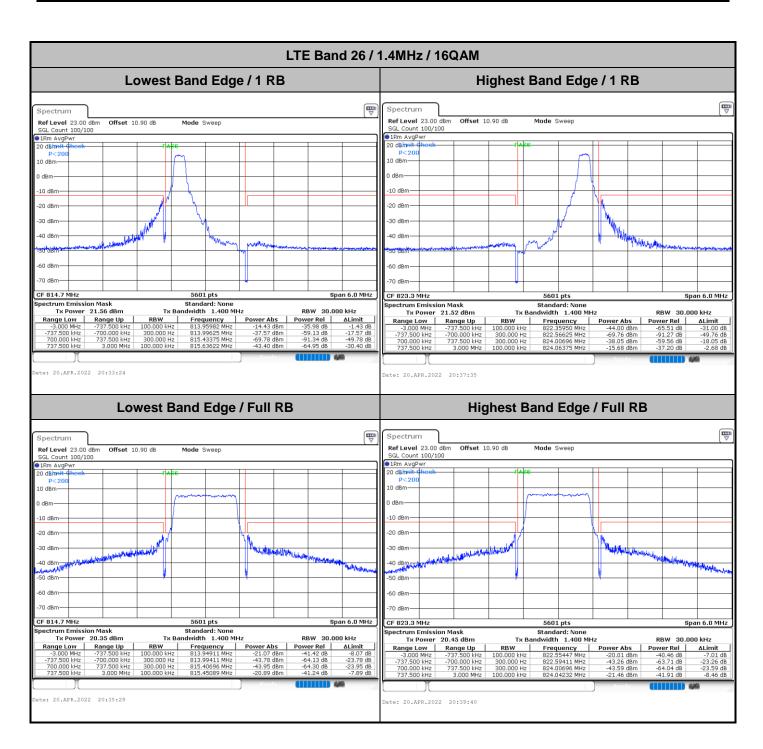
 828.1833 MHz
 5.94 dBm

## Emission masks - In-band emissions

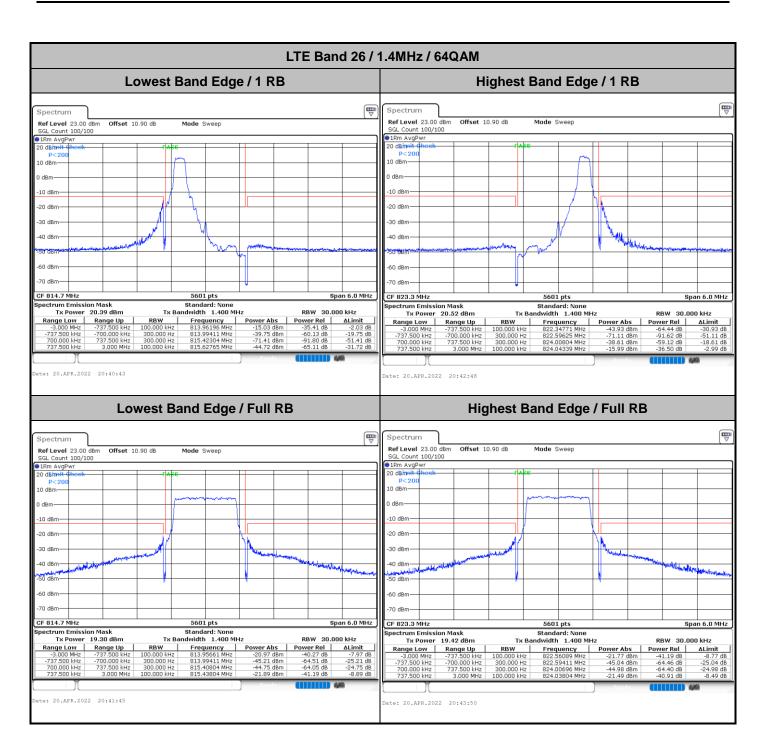


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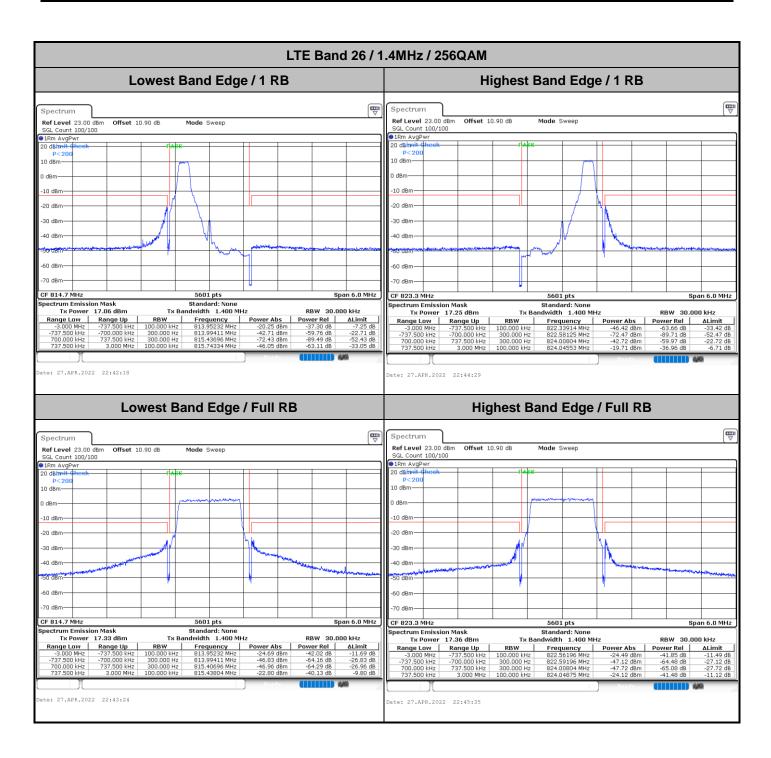
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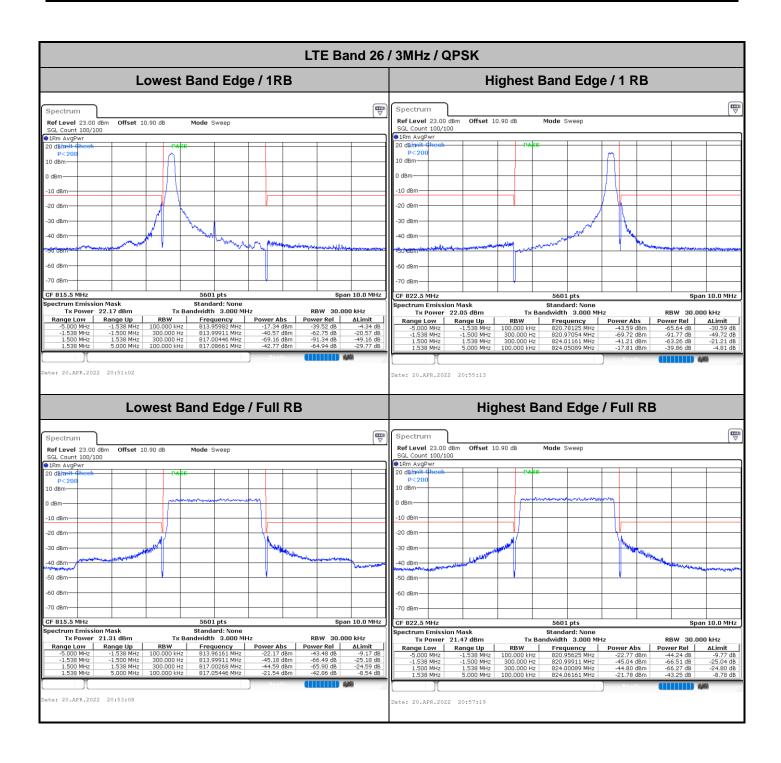
TEL: 886-3-327-3456 Page Number : A2-14 of 38



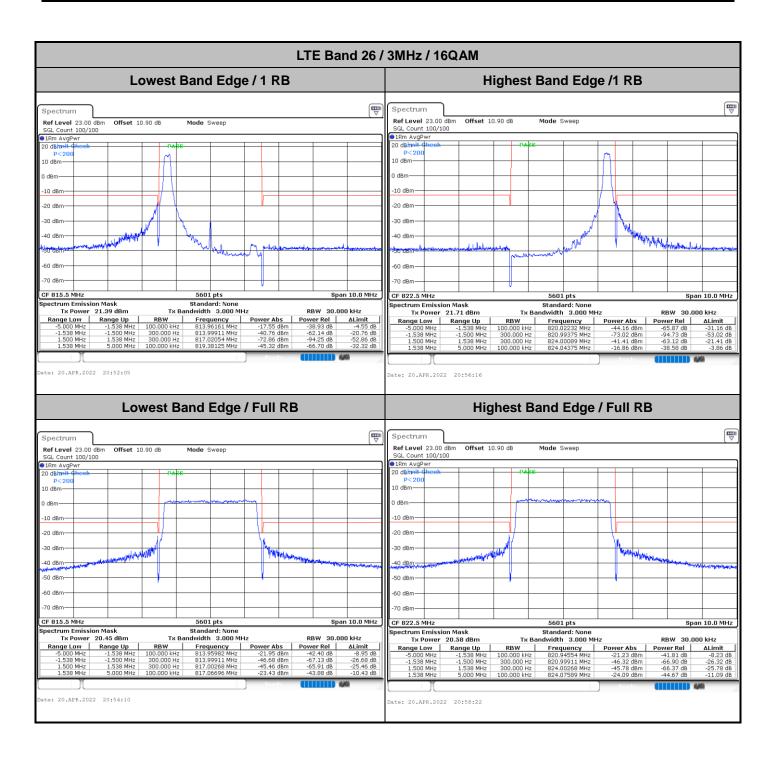
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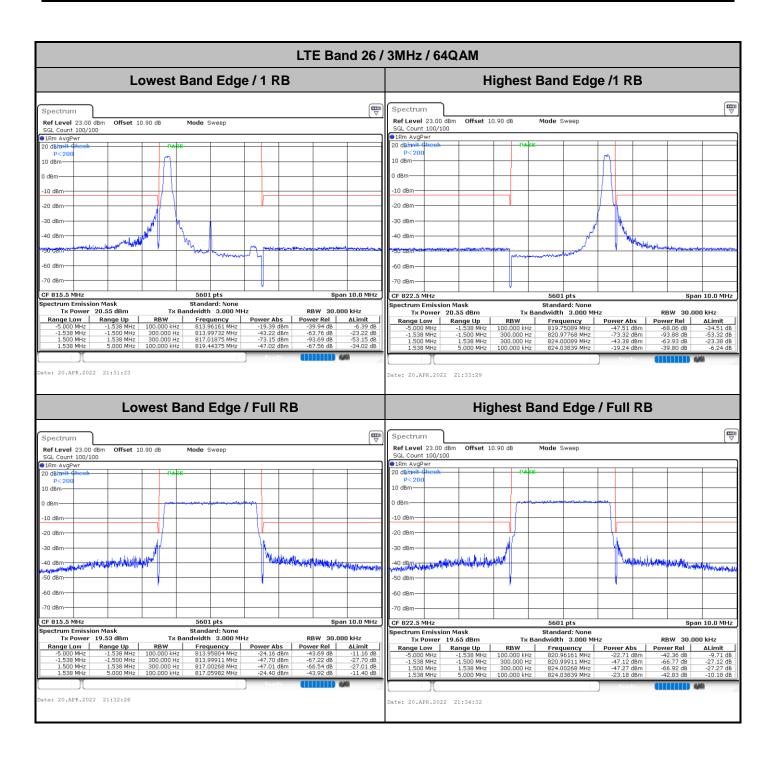
TEL: 886-3-327-3456 Page Number : A2-16 of 38 FAX: 886-3-328-4978



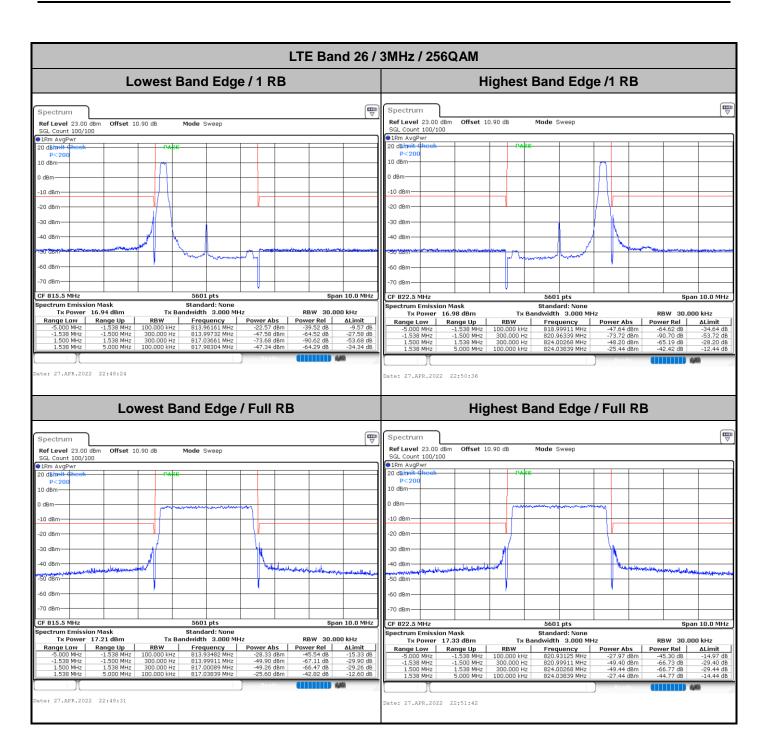
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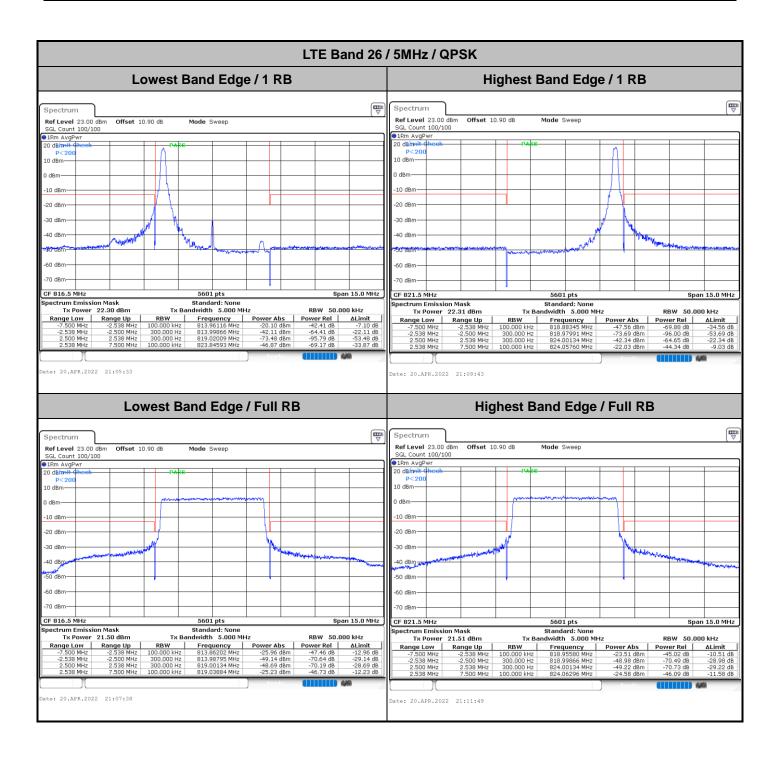
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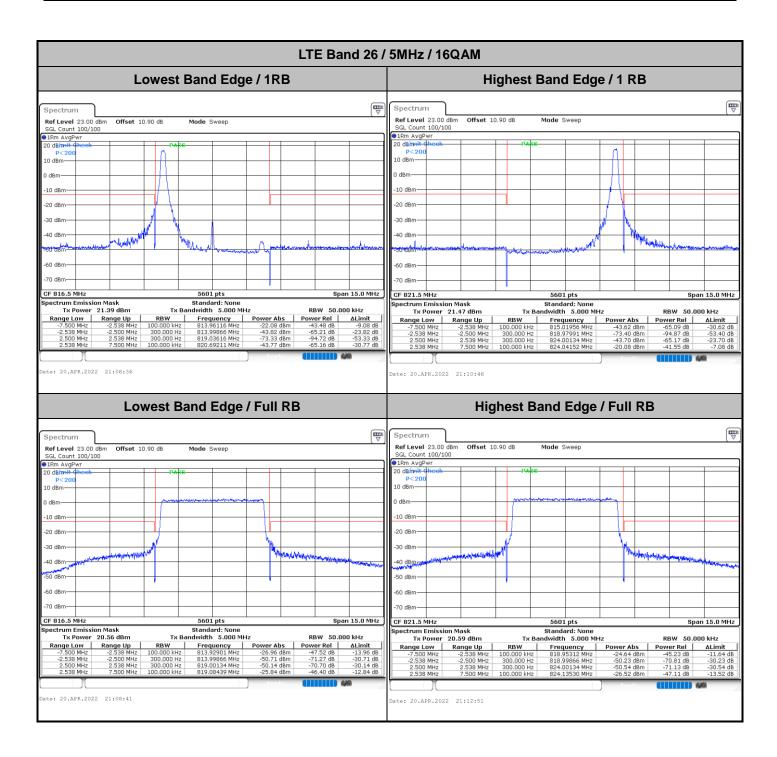
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