



Report No.: FG222202F

## FCC RADIO TEST REPORT

FCC ID : UZ7TC58A1

**Equipment**: Touch Computer

Brand Name : Zebra Model Name : TC58A1

Applicant : Zebra Technologies Corporation

1 Zebra Plaza, Holtsville, NY 11742

Manufacturer : Zebra Technologies Corporation

1 Zebra Plaza, Holtsville, NY 11742

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

The product was received on Mar. 14, 2022 and testing was performed from Mar. 25, 2022 to Jun. 06, 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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**Appendix A. Test Results of Conducted Test** 

**Appendix B. Test Results of Radiated Test** 

**Appendix C. Test Setup Photographs** 

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## History of this test report

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Report No.	Version	Description	Issued Date
FG222202F	01	Initial issue of report	Jun. 17, 2022
FG222202F	02	Revise FCC ID	Jun. 22, 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 for §90.213 Temperature & Voltage		Pass	-
3.8	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	Under limit 39.49 dB at 2458.000 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.

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## 1 **General Description**

## 1.1 Feature of Equipment Under Test

Product Feature					
Equipment	Touch Computer				
Brand Name	Zebra				
Model Name	TC58A1				
FCC ID	UZ7TC58A1				
Sample 1	Lowell + Premium config				
Sample 2	SE4720 + Base config				
Sample 3	Lowell + Base config				
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/NFC/GNSS WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE				
HW Version	EV3				
SW Version	athena_A11_userdebug_GMS_RelKey_2022-02-22-214				
MFD	19FEB22				
EUT Stage	Identical Prototype				

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

Specification of Accessories								
Adapter	<b>Brand Name</b>	Zebra	Part Number	PWR-WUA5V12W0US				
Battery 1X	<b>Brand Name</b>	Zebra	Part Number	BT-000442-0020				
Battery 1.5X	<b>Brand Name</b>	Zebra	Part Number	BT-000442-0820				
USB TYPE A to TYPE C cable	<b>Brand Name</b>	Zebra	Part Number	CBL-TC5X-USBC2A-01				
USB TYPE C to 3.5mm audio connector	Brand Name	Zebra	Part Number	ADP-USBC-35MM1-01				
3.5mm Earphone	<b>Brand Name</b>	Zebra	Part Number	HDST-35MM-PTVP-01				
USB TYPE C Earphone	<b>Brand Name</b>	Zebra	Part Number	HPST-USBC-PTT1-01				
Headset Jumper	<b>Brand Name</b>	Zebra	Part Number	CBL-TC51-HDST35-01				
Trigger Handle	<b>Brand Name</b>	Zebra	Part Number	TRG-NGTC5-ELEC-01				
Soft Holster	<b>Brand Name</b>	Zebra	Part Number	SG-NGTC5TC7-HLSTR-01				
TC53/TC58 RUGGED BOOT	<b>Brand Name</b>	Zebra	Part Number	SG-NGTC5EXO1-01				

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## 1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard						
Tx Frequency	LTE Band 26 : 814.7 ~ 823.3 MHz					
Rx Frequency	LTE Band 26 : 859.7 ~ 868.3 MHz					
Bandwidth	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz					
Maximum Output Power to Antenna	23.89 dBm					
Antenna Type	PIFA Antenna					
Antenna Gain	-2.42 dBi					
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM					

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

#### 1.3 Modification of EUT

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

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## 1.4 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.	
rest site No.	TH03-HY	
Test Engineer	HaoEn Zhang	
Temperature °C	21.5~25.1	
Relative Humidity %	52.8~54.6	

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

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

FCC Designation No.: TW1190 and TW3786

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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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- 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:

- All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
- 3. The TAF code is not including all the FCC KDB listed without accreditation.

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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 accessory (Adapter or Earphone), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find X plane with Adapter plane as worst plane.

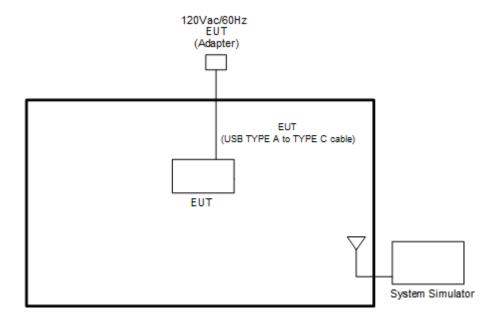
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Frequency range investigated for radiated emission is 30 MHz to 9000 MHz.

Conducted Test Cases	Band					Modulation			RB#		Test Channel						
1001 00000		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	Н
Max. Output Power	26	v	V	v	v	v	-	v	v	v	v	٧	v	v	V	v	v
Peak-to-Average Ratio	26				v	٧	-	v	v	v	v			٧		٧	
26dB and 99% Bandwidth	26	٧	V	v	v	٧	-	v	v	v	v			٧	٧	٧	
Emission masks In-band emissions	26	v	v	٧	v	٧	-	v	v	v	v	٧		v	٧		v
Emission masks - Out of band emissions	26	٧	v	٧	v	>	-	v				>			>	v	v
Frequency Stability	26				v	v	-	v						v	v	v	
E.R.P.	26	٧	٧	v	v	٧	-	v	v	v	٧	Max. Power					
Radiated Spurious Emission	26							Wors	t Case						v	v	v
Remark	<ol> <li>The mark "v " means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>LTE 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.</li> <li>All the radiated test cases were performed with Battery 1X and Sample 2.</li> <li>One representative bandwidth is selected to perform PAR and frequency stability.</li> </ol>																

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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

Iten	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	-	-				
10	Channel	-	26740	-				
10	Frequency	-	819	-				
5	Channel	26715	26740	26765				
5	Frequency	816.5	819	821.5				
3	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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LTE Band 26 Channel and Frequency List								
BW [MHz]	Channel/Frequency(MHz)	-	cross-rule channels					
15	Channel	-	26790	-				
15	Frequency	-	824	-				
10	Channel	-	26790	-				
10	Frequency	-	824	-				
5	Channel	-	26790	-				
5	Frequency	-	824	-				
3	Channel	-	26790	-				
3	Frequency	-	824	-				
1.4	Channel	-	26790	-				
1.4	Frequency	-	824	-				

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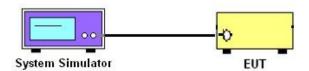
#### 3 Conducted Test Items

#### 3.1 Measuring Instruments

See list of measuring instruments of this test report.

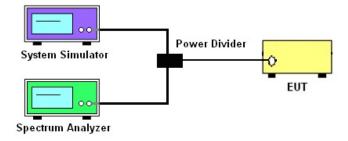
#### 3.1.1 Test Setup

#### 3.1.2 Conducted Output Power

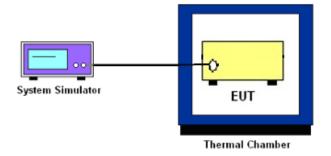


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# 3.1.3 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge, Emission Mask, Emissions Mask – Out Of Band Emissions, and Conducted Spurious Emission



#### 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 conducted output power 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.

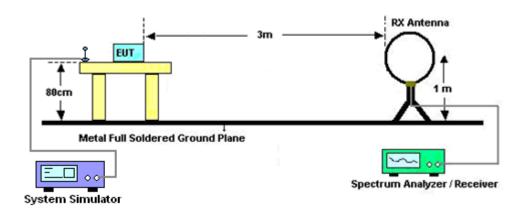
#### 3.8.2 Test Procedures

- 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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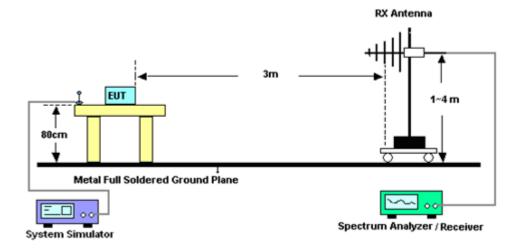
#### 3.8.3 Test Setup

#### For radiated test below 30MHz



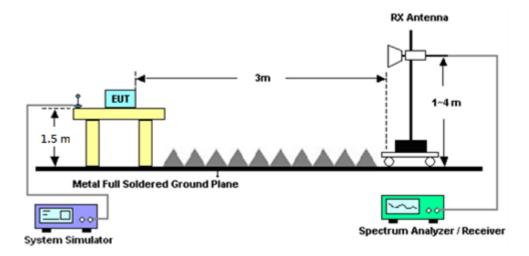
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#### For radiated test from 30MHz to 1GHz



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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
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Mar. 25, 2022~ Jun. 02, 2022	Sep. 06, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	37059 & 01	30MHz~1GHz	Oct. 09, 2021	Mar. 25, 2022~ Jun. 02, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 09, 2021	Mar. 25, 2022~ Jun. 02, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 03, 2021	Mar. 25, 2022~ Jun. 02, 2022	Dec. 02, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 10, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
Preamplifier	COM-POWE R	PA-103	161075	10MHz~1GHz	Mar. 23, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 22, 2023	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 25, 2021	Mar. 25, 2022~ May 23, 2022	May 24, 2022	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	May 24, 2022~ Jun. 02, 2022	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUME NT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900270	1GHz-18GHz	Dec. 27, 2021	Mar. 25, 2022~ Jun. 02, 2022	Dec. 26, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY53470118	10Hz~44GHz	Jan. 12, 2022	Mar. 25, 2022~ Jun. 02, 2022	Jan. 11, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 10, 2021	Mar. 25, 2022~ Jun. 02, 2022	Dec. 09, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Mar. 25, 2022~ Jun. 02, 2022	Feb. 20, 2023	Radiation (03CH12-HY)

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Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Mar. 08, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 07, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-108 0-1200-15000- 60SS	SN1	1.2GHz High Pass Filter	Mar. 16, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 15, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000- 60ST	SN2	3GHz High Pass Filter	Jul. 12, 2021	Mar. 25, 2022~ Jun. 02, 2022	Jul. 11, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12 SS	SN2	1.2GHz Low Pass Filter	Mar. 16, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 15, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN2	6.75GHz High Pass Filter	Mar. 16, 2022	Mar. 25, 2022~ Jun. 02, 2022	Mar. 15, 2023	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Sep. 30, 2021	Mar. 25, 2022~ Jun. 02, 2022	Sep. 29, 2022	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 25, 2022~ Jun. 02, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1m~4m	N/A	Mar. 25, 2022~ Jun. 02, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Mar. 25, 2022~ Jun. 02, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Mar. 25, 2022~ Jun. 02, 2022	N/A	Radiation (03CH12-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6201664755	2/3/4G/LTE FDD/TDD with44)/LTE-3C C DLCA/2CC ULCA, CatM1/NB1/NB2	Jul. 21, 2021	May 07, 2022~ Jun. 06, 2022	Jul. 20, 2022	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101908	10Hz~40GHz	Oct. 01, 2021	May 07, 2022~ Jun. 06, 2022	Sep. 30, 2022	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40°C ~90°C	Sep. 09, 2021	May 07, 2022~ Jun. 06, 2022	Sep. 08, 2022	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Jan. 06, 2022	May 07, 2022~ Jun. 06, 2022	Jan. 05, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W S MA Directiona I Coupler	#B	1-18GHz	Jan. 07, 2022	May 07, 2022~ Jun. 06, 2022	Jan. 06, 2023	Conducted (TH03-HY)

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## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	3.10 dB
Confidence of 95% (U = 2Uc(y))	3.10 dB

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

Measuring Uncertainty for a Level of	3.39 dB
Confidence of 95% (U = 2Uc(y))	3.39 UB

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

## Conducted Output Power(Average power & ERP)

	LTE E	Band 26 M	aximum A	erage Pov	wer [dBm]	(GT - LC =	-2.42 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
15	1	0		23.87	-	-		
15	1	37		23.48	-	-		
15	1	74		23.59	-	-		
15	36	0	QPSK	23.12	-	-	19.30	0.0851
15	36	20		23.12	-	-		
15	36	39		23.17	-	-		
15	75	0		23.13	-	-		
15	1	0		23.40	-	-		
15	1	37		23.42	-	-		0.0769
15	1	74		23.43	-	-		
15	36	0	16-QAM	22.13	-	-	18.86	
15	36	20		22.22	-	-		
15	36	39		22.11	-	-		
15	75	0		22.31	-	-		
15	1	0		22.35	-	-	-	0.0600
15	1	37		22.23	-	-		
15	1	74		22.26	-	-		
15	36	0	64-QAM	21.19	-	-	17.78	
15	36	20		21.31	-	-		
15	36	39		21.15	-	-		
15	75	0		21.20	-	-		
15	1	0		19.17	-	-		
15	1	37		19.08	-	-		
15	1	74		19.21	-	-		
15	36	0	256-QAM	19.04	-	-	14.64	0.0291
15	36	20		19.20	-	-		
15	36	39	-	18.93	-	-		
15	75	0		19.08	-	-		
Limit	Р	ower < 100'	W		Result		Pa	iss



	LTE E	Band 26 M	aximum A	/erage Po	wer [dBm]	(GT - LC =	-2.42 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0		-	23.58	-		
10	1	25		-	23.48	-		
10	1	49		-	23.61	-		
10	25	0	QPSK	-	23.40	-	19.04	0.0802
10	25	12		-	23.27	-		
10	25	25		•	23.30	-		
10	50	0		-	23.15	-		
10	1	0		1	23.51	-		
10	1	25		•	23.36	-		0.0783
10	1	49		-	23.20	-		
10	25	0	16-QAM	-	22.18	-	18.94	
10	25	12		-	22.16	-		
10	25	25	_	-	22.03	-		
10	50	0		•	22.22	-		
10	1	0		•	22.37	-	-	0.0603
10	1	25		•	22.24	-		
10	1	49		ı	22.16	-		
10	25	0	64-QAM	•	21.09	-	17.80	
10	25	12		ı	21.16	-		
10	25	25		•	21.09	-		
10	50	0		-	21.14	-		
10	1	0		ı	19.10	-		
10	1	25		-	19.12	-		
10	1	49		-	19.02	-		
10	25	0	256-QAM	ı	18.99	-	14.55	0.0285
10	25	12		ı	19.02	-		
10	25	25		-	18.87	-		
10	50	0		-	18.97	-		
Limit	Р	ower < 100'	W	_	Result	_	Pa	ISS



	LTE E	Band 26 M	aximum A	verage Pov	wer [dBm]	(GT - LC =	-2.42 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0		23.85	23.82	23.77		
5	1	12		23.42	23.46	23.34		
5	1	24		23.55	23.60	23.59		
5	12	0	QPSK	23.09	22.99	23.06	19.28	0.0847
5	12	7		23.08	23.15	23.14		
5	12	13		23.17	23.07	23.11		
5	25	0		23.10	23.01	23.11		
5	1	0		23.31	23.27	23.22		
5	1	12		23.33	23.31	23.26		0.0771
5	1	24		23.36	23.41	23.44		
5	12	0	16-QAM	22.12	22.09	22.15	18.87	
5	12	7		22.21	22.29	22.27		
5	12	13	-	22.03	22.00	22.07		
5	25	0		22.21	22.17	22.17		
5	1	0		22.27	22.28	22.20		0.0598
5	1	12		22.17	22.17	22.21		
5	1	24		22.24	22.34	22.31		
5	12	0	64-QAM	21.18	21.27	21.08	17.77	
5	12	7		21.28	21.33	21.35		
5	12	13		21.06	21.07	20.96		
5	25	0		21.12	21.15	21.12		
5	1	0		19.15	19.18	19.14		
5	1	12		19.01	19.07	19.02		
5	1	24		19.14	19.07	19.21		
5	12	0	256-QAM	18.99	18.89	19.04	14.64	0.0291
5	12	7		19.17	19.11	19.09		
5	12	13		18.86	18.93	18.94		
5	25	0		19.04	19.14	19.03		
Limit	P	ower < 100'	W		Result		Pa	iss



	LTE E	Band 26 M	aximum A	verage Pov	wer [dBm]	(GT - LC =	-2.42 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
3	1	0		23.77	23.87	23.70		
3	1	8		23.46	23.53	23.42		
3	1	14		23.58	23.49	23.58		
3	8	0	QPSK	23.03	23.13	23.08	19.30	0.0851
3	8	4		23.10	23.08	23.04		
3	8	7		23.09	23.02	23.11		
3	15	0		23.06	23.13	23.05		
3	1	0		23.37	23.37	23.27		
3	1	8		23.41	23.39	23.35		
3	1	14		23.43	23.41	23.52		0.0785
3	8	0	16-QAM	22.07	22.05	22.06	18.95	
3	8	4		22.13	22.09	22.10		
3	8	7		22.04	22.08	22.09		
3	15	0		22.23	22.13	22.28		
3	1	0		22.29	22.38	22.24		
3	1	8		22.22	22.20	22.23	]	0.0604
3	1	14		22.25	22.17	22.33		
3	8	0	64-QAM	21.16	21.21	21.19	17.81	
3	8	4		21.26	21.18	21.36		
3	8	7		21.08	21.17	20.99		
3	15	0		21.11	21.16	21.04		
3	1	0		19.10	19.05	19.15		
3	1	8		19.04	19.01	19.07		
3	1	14		19.12	19.05	19.08		
3	8	0	256-QAM	18.94	18.95	18.98	14.71	0.0296
3	8	4		19.20	19.28	19.22		
3	8	7	_	18.84	18.75	18.88		
3	15	0		19.08	19.15	18.98		
Limit	P	ower < 100'	W		Result		Pa	ISS



	LTE E	Band 26 M	aximum A	verage Pov	wer [dBm]	(GT - LC =	-2.42 dB)	
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
1.4	1	0		23.85	23.89	23.77		
1.4	1	3		23.48	23.46	23.39		
1.4	1	5		23.51	23.46	23.54		
1.4	3	0	QPSK	23.80	23.73	23.79	19.32	0.0855
1.4	3	1		23.45	23.36	23.50		
1.4	3	3		23.54	23.53	23.56		
1.4	6	0		23.08	23.12	23.04		
1.4	1	0		23.32	23.39	23.31		
1.4	1	3		23.33	23.41	23.31		
1.4	1	5		23.35	23.41	23.29		0.0782
1.4	3	0	16-QAM	23.40	23.37	23.50	18.93	
1.4	3	1		23.37	23.33	23.42		
1.4	3	3	_	23.43	23.48	23.35		
1.4	6	0		22.21	22.15	22.22		
1.4	1	0		22.26	22.31	22.16		
1.4	1	3		22.14	22.22	22.08	1	0.0612
1.4	1	5		22.24	22.24	22.31		
1.4	3	0	64-QAM	22.35	22.44	22.41	17.87	
1.4	3	1		22.13	22.08	22.16		
1.4	3	3		22.23	22.29	22.24		
1.4	6	0		21.14	21.08	21.15		
1.4	1	0		19.12	19.17	19.02		
1.4	1	3		18.99	19.01	19.02		
1.4	1	5		19.17	19.17	19.20		
1.4	3	0	256-QAM	18.98	18.91	19.06	14.63	0.0290
1.4	3	1		19.13	19.14	19.07		
1.4	3	3		18.83	18.81	18.85		
1.4	6	0		19.00	18.95	19.05		
Limit	P	ower < 100'	W	-	Result		Pa	ISS

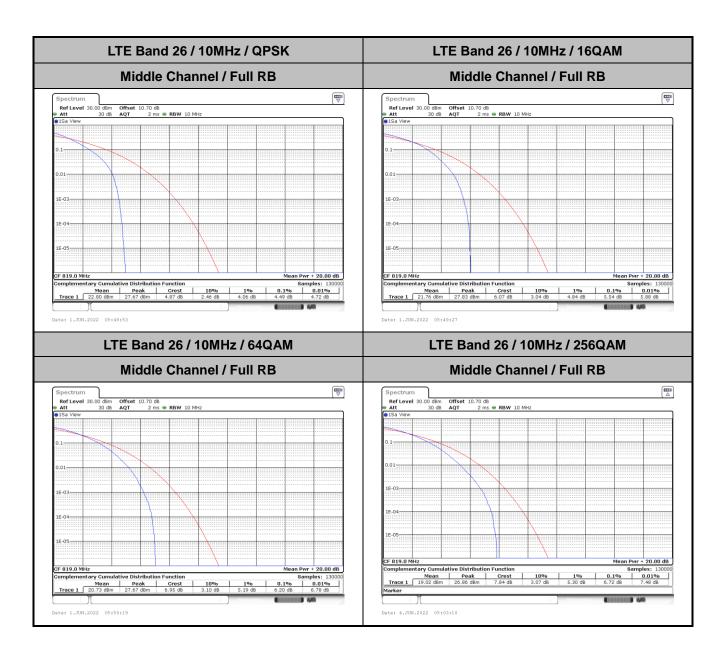
## LTE Band 26

## Peak-to-Average Ratio

Mode					
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.49	5.54	6.20	6.72	PASS

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## 26dB Bandwidth

Mode		LTE Band 26 : 26dB BW(MHz)										
BW	1.4MHz		3MHz		5M	5MHz		10MHz		ЛHz	20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Low CH	-	-	-	-	-	-	-	-	14.42	14.27	-	-
Middle CH	1.23	1.24	3.05	3.06	4.91	4.88	9.73	9.83	-	-	-	-
Mode					LTE Ba	and 26 :	26dB BV	V(MHz)				
BW	1.41	ИНz	3M	Hz 5MHz		Hz	10MHz		15MHz		20MHz	
Mod.	64QAM	256	64QAM	256	64QAM	256	64QAM	256	64QAM	256	64QAM	256
Low CH		QAM		QAM		QAM		QAM	14.27	<b>QAM</b> 14.24		QAM
LOW CH	-	-	-	-	-	-	-	-	14.27	14.24	-	-
Middle CH	1.22	1.23	3.03	3.01	4.91	4.86	9.83	9.73	-	-	-	-

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LTE Band 26 Middle Channel / 1.4MHz / QPSK Middle Channel / 1.4MHz / 16QAM 16.42 dBi 819.3692n \*\*\* 17.45 dBr 818.8238n MH 26.00 d 10 dBm dBm-0 dBm--20 dBm -20 dBm -30 dBm 40 dBm -40 dBm -50 dBm--50 dBm-CF 819.0 MHz Marker CF 819.0 MHz 1001 pts Span 2.8 MHz Span 2.8 MHz Function Result 1.2448 MHz 26.00 dB 658.3 Function Result 1.2336 MHz 26.00 dB 663.8 Type Ref Trc Type Ref Trc 
 X-value
 Y-value
 Function

 818.8238 MHz
 17.45 dBm
 nd8 down

 818.3346 MHz
 -8.87 dBm
 nd8

 819.6182 MHz
 -8.49 dBm
 Q factor

 X-value
 Y-value
 Function

 819.3692 MHz
 16.42 dBm
 ndB down

 818.379 MHz
 -9.18 dBm
 ndB

 819.6238 MHz
 -9.29 dBm
 Q factor
 Date: 1.JUN.2022 04:51:29 Date: 1.JUN.2022 04:51:53 Middle Channel / 3MHz / QPSK Middle Channel / 3MHz / 16QAM Ref Level 30.00 dBm Offset Att 30 dB SWT SGL Count 100/100 Ref Level 30.00 dBm Offset Att 30 dB SWT SGL Count 100/100 18.58 dBr 818.40060 MH 26.00 d 3.056900000 MH 10 dBm dRm -10 dBm 10 dBm -20 dBm 20 dBm -30 dBm -40 dBm-40 dBm--50 dBm 50 dBm CF 819.0 MHz CF 819.0 MHz Span 6.0 MHz Span 6.0 MHz Function Result 3.0569 MHz 26.00 dB 267.7 Function Result
3.045 MHz
26.00 dB
269.1 
 Marker
 Trope
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 819,2937 MHz
 17.66 dbm
 nd8 down

 T1
 1
 817.5015 MHz
 -8.54 dbm
 nd8

 T2
 1
 820.5465 MHz
 -8.55 dbm
 Q factor

 Marker
 Type
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 818.4006 MHz
 18.58 dbm
 nd8 dbm
 nd8 down

 T1
 1
 817.4535 MHz
 -7.33 dbm
 nd8
 nd8

 T2
 1
 820.5105 MHz
 -7.63 dbm
 Q factor
 Date: 1.JUN.2022 05:08:08 Date: 1.JUN.2022 05:08:32 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM Ref Level 30.00 dBm

Att 30 dB

SGL Count 100/100

1Pk Max 16.82 dBr 819.83900 MH 26.00 d 16.47 dBr 819.81900 MH 26.00 d 4.875000000 MH M1[1] M1[1] 10 dBm-10 dBm-167. 168 dBm— -10 dBm -10 dBm 30 dBm -m8b 0e 40 dBm 40 dBm -60 dBm-60 dBm-CF 819.0 MH: 
 X-value
 Y-value
 Function

 819.839 MHz
 16.82 dBm
 ndB down

 816.552 MHz
 -9.32 dBm
 ndB

 821.458 MHz
 -9.48 dBm
 Q factor
 Type Ref Trc Type Ref Trc Date: 1.JUN.2022 05:21:20 Date: 1.JUN.2022 05:21:44

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LTE Band 26 Middle Channel / 10MHz / QPSK Middle Channel / 10MHz / 16QAM 19.21 dBr 10 dBm 83. -10 dBm -40 dBm--40 dBm Span 20.0 MHz 20.0 MHz Type Ref Trc Type Ref Trc Date: 1.JUN.2022 05:47:22 Date: 1.JUN.2022 05:47:47 Low Channel / 15MHz / QPSK Low Channel / 15MHz / 16QAM 
 Ref Level
 30.00 dBm
 Offset
 10.70 dB
 RBW
 300 kHz
 Att
 30 dB
 SWT
 12.6 µs
 VBW
 1 MHz
 Mode
 Auto FFT

 SGL Count 100/100
 61Pk Max
 42.6 µs
 VBW
 1 MHz
 Mode
 Auto FFT
 Mode Auto FFT 16.35 dB 819.1620 MF 10 dBm -10 dBm -10 dBm -30 dBm -30 dBm -60 dBm--60 dBm-Type Ref Trc Date: 1.JUN.2022 06:10:21 Date: 1.JUN.2022

LTE Band 26 Middle Channel / 1.4MHz / 64QAM Middle Channel / 3MHz / 64QAM Ref Level 30.00 dBm Offset 10.70 dB = RBW 100 kHz att SQL count 100/100 SWI 19 µs = VBW 300 kHz Mode Auto FFT SQL count 100/100 SWI 19 µs = VBW 300 kHz Mode Auto FFT SQL PIEW Max 14.78 dBn 818.55240 MH 26.00 dl 1.219600000 MH 17.07 dBr 820.21680 MF 26.00 d 20 dBm 10 dBm 671. -10 dBm -10 dBm -30 dBm 30/dBm -50 dBm -50 dBm -60 dBm -60 dBm Span 2.8 MHz Function Result 3.033 MHz 26.00 dB 270.4 Function Result 
 Marker
 Trc
 X-value
 Y-value
 Function

 M1
 1
 820,2166 MHz
 17.07 dbm
 nd8 down

 T1
 1
 817,4353 MHz
 -8.92 dbm
 nd8

 T2
 1
 820,5165 MHz
 -8.69 dbm
 Q factor

 X-value
 Y-value
 Function

 818.5524 MHz
 14.76 dBm
 nd8 down

 918.3818 MHz
 -11.07 dBm
 nd8

 819.6014 MHz
 -11.01 dBm
 Q factor
 Type Ref Trc Middle Channel / 5MHz / 64QAM Middle Channel / 10MHz / 64QAM 
 Ref Level
 30.00 dBm
 Offset
 10.70 dB • RBW
 300 kHz

 Att
 30 dB
 SWT
 12.6 μs • VBW
 1 MHz
 Mode
 Auto FFT
 30 SGL Count 100/100 1Pk Max SGL Count 100/100 1Pk Max 14.33 dBn 820.76800 MH M1[1] M1[1] 16.99 dBr 820.7780 MH 20 dBn dBm dBm--10 dBm -20 dBn -20 dBn 30 dBm -30 dBm/ -50 dBm--50 dBm CF 819.0 MHz CF 819.0 MHz Span 10.0 MHz 
 X-value
 Y-value
 Function

 820.768 MHz
 14.33 dBm
 ndB down

 816.522 MHz
 -11.95 dBm
 ndB

 821.428 MHz
 -12.07 dBm
 Q factor
 X-value N 820.778 MHz 814.045 MHz 823.875 MHz Type | Ref | Trc | Y-value Function Function Result Date: 1.JUN.2022 05:18:54 Date: 1.JUN.2022 05:46:10 Low Channel / 15MHz / 64QAM 10.70 dB • RBW 300 kHz 12.6 µs • VBW 1 MHz M1[1] 10 dBm -20 dBm--30 dBm--40 dBm CF 821.5 MHz 1001 pts Span 30.0 MHz Type Ref Trc Date: 1.JUN.2022 06:08:45

Report No.: FG222202F

LTE Band 26 Middle Channel / 1.4MHz / 256QAM Middle Channel / 3MHz / 256QAM 14.11 dBm 819.15940 MH: 26.00 dE 1.228000000 MH: M1[1] M1[1] 10 dBm-10 dBm-272 -10 dBm -10 dBm -30 d8m--40 dBm-40 dBm -60 dBm-60 dBm-1001 pt CF 819.0 N Span 2.8 MHz CF 819.0 MH: Span 6.0 MHz X-value 819.1594 MHz 818.3846 MHz 819.6126 MHz Y-value 14.11 dBm -11.63 dBm -11.77 dBm Type Ref Trc X-value 820.1988 MHz 817.4895 MHz 820.4985 MHz Y-value 15.03 dBm -10.74 dBm -11.03 dBm Date: 4.JUN.2022 04:42:30 Date: 4.JUN.2022 04:47:05 Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM | Spectrum | Ref Level 30.00 dBm | Offset 10.70 dB | RBW 100 kHz | Alt | 30 dB | SWT | 19 μs | VBW 300 kHz | Mode Auto FFT | SGL Count 100/100 | PFF Max Ref Level 30.00 dBm Offset 10.70 dB = RBW 300 kHz Att 30 db SWT 12.6 µs = VBW 1 MHz SGL Count 100/100 BJPK Max 14.81 dBm 821.7770 MHz 26.00 dB 9.730000000 MHz M1[1] 12.36 dBn M1[1] 12.30 up. 821.14800 MH 26.00 d 10 dBm-10 dBm-169. -10 dBm -10 dBm 30 dBm--30/dBm-40 dBm 40 dBm -60 dBm 60 dBm CF 819.0 1001 pt Span 10.0 MHz CF 819.0 M Span 20.0 MHz X-value 821.148 MHz 816.572 MHz 821.428 MHz Y-value 12.36 dBm -13.47 dBm -13.30 dBm X-value 821.777 MHz 814.185 MHz 823.915 MHz Function ndB down Function Result Type Ref Trc Function ndB down Function Result Date: 4.JUN.2022 04:51:43 Date: 4.JUN.2022 04:56:21 Low Channel / 5MHz / 256QAM 13.30 dBn 820.2410 MH 26.00 di M1[1] 10 dBm--10 dBm -30 dBm -40 dBm--60 dBm-1001 pt CF 821.5 N Span 30.0 MHz Y-value 13.30 dBm -11.63 dBm -12.34 dBm

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Date: 4.JUN.2022 05:02:40

## **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	-	-	-	-	-	-	-	-	13.46	13.40	-	-
Middle CH	1.09	1.09	2.72	2.73	4.50	4.48	8.99	9.05	-	-	-	-
Mode	LTE Band 26 : 99%OBW(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	-	-	-	-	-	-	-	-	13.46	13.46	-	-
Middle CH	1.08	1.09	2.72	2.70	4.49	4.49	9.03	9.03	-	-	-	-

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LTE Band 26 Middle Channel / 1.4MHz / 16QAM Middle Channel / 1.4MHz / QPSK Ref Level 30.00 dBm Offset 10.70 dB • RBW 30 kHz

Att 30 dB SWT 63.2 µs • VBW 100 kHz Mode Auto FFT

\$1CL count 100/100

\$1Pk Max Att 30 db SWT 63.2 µs VBW 100 kHz Mode Auto FFT SGL Count 100/100 17.11 dBr 819.25170 MH 1.090909091 MH 10 dBm 10 dBm ) dBm -10 dBm -20 dBm--20 dBm 30 dBm 30 dBm -40 dBm 40 dBm -50 dBm -50 dBm-CF 819.0 MHz Marker CF 819.0 MHz 1001 pt Span 2.8 MHz 1001 pts Span 2.8 MHz Type Ref Trc 
 X-value
 Y-value
 Function

 819.2517 MHz
 17.11 dBm

 818.45455 MHz
 11.77 dBm
 Occ Bw

 819.54545 MHz
 11.45 dBm

 X-value
 Y-value
 Function

 818.8985 MHz
 16.46 dBm
 91.8145175 MHz

 818.45175 MHz
 10.03 dBm
 Occ Bw

 819.54545 MHz
 10.78 dBm
 Function Result Function Result 1.090909091 MHz 1.093706294 MHz Date: 1.JUN.2022 04:50:40 Date: 1.JUN.2022 04:51:04 Middle Channel / 3MHz / QPSK Middle Channel / 3MHz / 16QAM 18.90 dBr 819.53950 MH 10 dBm dBmdBm--20 dBm -20 dBm-30 dBm 40 dBm -50 dBm--50 dBm-60 dBm -60 dBm-CF 819.0 MHz CF 819.0 MHz Span 6.0 MHz Span 6.0 MHz 1001 pts 1001 pts Y-value Function

18.90 dBm

12.12.34 dBm Occ Bw

12.70 dBm Type | Ref | Trc | Type | Ref | Trc | | Y-value | Function | 2 | 17.85 dBm | 2 | 12.42 dBm | Occ Bw | 2 | 11.91 dBm | Function X-value 819.5395 MHz 817.63936 MHz 820.36064 MHz Function Result X-value 818.2088 MHz 817.63936 MHz 820.36663 MHz Function Result 2.721278721 MHz 2.727272727 MHz Date: 1.JUN.2022 05:07:20 Date: 1.JUN.2022 05:07:44 Middle Channel / 5MHz / QPSK Middle Channel / 5MHz / 16QAM Ref Level 30.00 dBm Offset 10.70 dB @ RBW 100 kHz Att 20 dB SWT 19 µs @ VBW 300 kHz Mode Auto FFT 50.00m1 100/100 SPF Max 16.99 dBr 819.29000 MH 4.495504496 MH M1[1] M1[1] 20 dBm 10 dBm -10 dBm-20 dBm S 30 dBm--30 dBm -50 dBm -50 dBm--60 dBm CF 819.0 MHz CF 819.0 MHz 1001 pts Span 10.0 MHz 1001 pts Span 10.0 MHz Type Ref Trc 
 Type
 Ref
 Trc
 X-value
 Y-value
 Function

 M1
 1
 819.29 MHz
 16.99 dBm
 Function Result Function Result 16.32 dBm 9.01 dBm Occ Bw 10.44 dBm 16.99 dBm 11.94 dBm Occ Bw 11.08 dBm 4.495504496 MHz 4.475524476 MHz Date: 1.JUN.2022 05:20:32 Date: 1.JUN.2022 05:20:56

Report No.: FG222202F

LTE Band 26 Middle Channel / 10MHz / QPSK Middle Channel / 10MHz / 16QAM Ref Level 30.00 dBm Offset 10.70 dB RBW 300 kHz

Att 30 dB SWT 12.6 µs WBW 1 MHz Mode Auto FFT

SGL Count 100/100

PIX Max 18.12 dBi 819.6590 MH 8.991008991 MH 18.67 dBm 818.1810 MHz 9.050949051 MHz 20 dBm 0 dBm-0 dBm--20 dBm -20 dBm -30 dBm -30 dBm--40 dBm--40 dBm--50 dBm--50 dBm-CF 819.0 MHz CF 819.0 MHz 1001 pts Span 20.0 MHz 1001 pts Span 20.0 MHz 
 X-value
 Y-value
 Function

 818.191 MHz
 18.67 dBm
 9

 814.4446 MHz
 11.71 dBm
 Occ BW

 823.4955 MHz
 11.54 dBm
 Function Result Function Result 8.991008991 MHz 9.050949051 MHz Date: 1.JUN.2022 05:46:34 Date: 1.JUN.2022 05:46:58 Low Channel / 15MHz / QPSK Low Channel / 15MHz / 16QAM 16.19 dBr 817.5740 MH 13.456543457 MH 20 dBm 10 dBm-10 dBm -10 dBm--10 dBm--30 dBm -30 dBm--50 dBm--50 dBm -60 dBm -60 dBm-Span 30.0 MHz Marker Type | Ref | Trc | Marker Type Ref Trc Y-value Function

16.19 dBm

11.50 dBm Occ Bw

10.80 dBm 13.456543457 MHz 13.396603397 MHz

Report No.: FG222202F

LTE Band 26 Middle Channel / 1.4MHz / 64QAM Middle Channel / 3MHz / 64QAM Ref Level 30.00 dBm Offset 10.70 db RBW 100 kHz
Att 30 db SWT 19 µs VBW 300 kHz Mode Auto FFT
61Pk Max Ref Level 30.00 dBm Offset 10.70 dB RBW 30 kHz Att SGL Count 100/100 SWT 63.2 µs VBW 100 kHz Mode Auto FFT SGL Count 100/100 M1[1] M1[1] 10 dBm 10 dBm dBm--10 dBn -20 dBm 20 dBm 30 dBm--40 dBm--40 dBm -60 dBm 60 dBm CF 819.0 MHz 1001 pts Span 2.8 MHz CF 819.0 MHz 1001 pts Span 6.0 MHz 
 X-value
 Y-value
 Function

 818.8573 MHz
 16.05 dBm
 818.45734 MHz

 918.45734 MHz
 10.35 dBm
 Occ Bw

 819.53986 MHz
 10.16 dBm
 Function Result Type Ref Trc 
 X-value
 Y-value
 Function

 819.7073 MHz
 16.88 dbm
 819.767337 MHz

 817.63337 MHz
 10.48 dbm
 Occ Bw

 820.35465 MHz
 9.84 dbm
 Function Result 1.082517483 MHz 2.721278721 MHz Date: 1.JUN.2022 04:48:37 Date: 1.JUN.2022 05:06:32 Middle Channel / 5MHz / 64QAM Middle Channel / 10MHz / 64QAM Ref Level 30.00 dBm Offset 10.70 dB ● RBW 100 kHz ■ Att 30 db SWT 19 µs ● VBW 300 kHz Mode Auto FFT SGL Count 100/100 ● 1Pk Max Ref Level 30.00 dBm Offset 10.70 dB ● RBW 300 kHz ■ Att 30 db SWT 12.6 μs ● VBW 1 MHz Mode Auto FFT SGL Count 100/100 ■ 1Pk Max 15.16 dBn 818.51000 MH 4.485514486 MH 16.42 dBm 821.2580 MHz 9.030969031 MHz M1F11 M1[1] 20 dBm 20 dBm dBm -10 dBm 10 dBm -90 dBm -30 dBm 50 dBm -50 dBm -60 dBm 
 X-value
 Y-value
 Function

 821.258 MHz
 16.42 dBm

 814.5045 MHz
 10.19 dBm
 Occ Bw

 823.5355 MHz
 10.84 dBm
 Type Ref Trc 
 X-value
 Y-value
 Function

 818.51 MHz
 15.16 dBm
 Type | Ref | Trc | Function Result **Function Result** 15.16 dBm 8.55 dBm Occ Bw 9.09 dBm 4.485514486 MHz 9.030969031 MHz Date: 1.JUN.2022 05:18:30 Date: 1.JUN.2022 05:45:46 Low Channel / 5MHz / 64QAM 14.35 dBn 820.8710 MHz 13.456543457 MHz M1[1] 20 dBm dBm--10 d8m -30 dBm-40 dBm<sub>7</sub> -50 dBm-CF 821.5 MHz Span 30.0 MHz 1001 pts 
 X-value
 Y-value
 Function

 820.871 MHz
 14.35 dBm

 814.7867 MHz
 9.46 dBm
 Occ Bw

 828.2433 MHz
 9.81 dBm
 Type Ref Trc Function Result 13.456543457 MHz Date: 1.JUN.2022 06:08:21

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LTE Band 26 Middle Channel / 1.4MHz / 256QAM Middle Channel / 3MHz / 256QAM Ref Level 30.00 dBm Offset 10.70 dB RBW 100 kHz
Att 30 db SWT 19 µs VBW 300 kHz Mode Auto FFT
SGL Count 100/100

1Pk Max M1[1] M1[1] 10 dBm 10 dBm n dBm n dam--20 dBm--20 dBm--40 dBm--40 dBm--50 dBm--50 dBm--60 dBm -60 dBm CF 819.0 MHz CF 819.0 MHz 1001 pts Span 2.8 MHz Span 6.0 MHz Type Ref Trc 
 X-value
 Y-value
 Function

 818.821 MHz
 13.30 dBm
 818.45455 MHz
 6.07 dBm
 Occ Bw

 819.54825 MHz
 5.27 dBm
 Occ Bw
 6.07 dBm
 Occ Bw
 0.07 dBm
 Occ Bw
 0.07 dBm
 Occ Bw
 0.07 dBm
 0.07 dB | Y-value Function | | | 15,93 dBm | | | 7,81 dBm | Occ Bw | | | 8,23 dBm | | Function Result X-value 819.3896 MHz 817.64535 MHz 820.34865 MHz Function Result 1.093706294 MHz 2.703296703 MHz Date: 4.JUN.2022 04:42:16 Date: 4.JUN.2022 04:46:51 Middle Channel / 5MHz / 256QAM Middle Channel / 10MHz / 256QAM 14.13 dBn 817.9610 MH: 9.030969031 MH: M1[1] 12.77 dBr M1[1] 10 dBm-10 dBm-0 dBm--10 dBm -10 dBm -20 dBm--30 dBm--30 dBm--40 dBm--40 dBm--60 dBm--60 dBm-CF 819.0 MHz 1001 pts Span 10.0 MHz CF 819.0 MI 1001 pts Span 20.0 MHz X-value 817.761 MHz 816.76224 MHz 821.24775 MHz | Y-value | Function |
| 2 | 12.77 dBm | |
| 2 | 7.37 dBm | Occ Bw |
| 2 | 8.10 dBm | X-value 817.961 MHz 814.4645 MHz 823.4955 MHz Y-value Function

14.13 dBm

8.73 dBm Occ Bw

8.19 dBm Function Function Result Type Ref Trc Function Result 4.485514486 MHz 9.030969031 MHz Date: 4.JUN.2022 04:51:29 Date: 4.JUN.2022 04:56:07 Low Channel / 15MHz / 256QAM | Spectrum | Ref Level 30.00 dBm | Offset 10.70 db | RBW 300 kHz | Alt | 30 db | SWT | 12.6 µs | VBW | 1 MHz | Mode | Auto FFT | SGL Count 100/100 | GPR Max | Count 100/100 | GPR Max | Count 100/100 | GPR Max | GRAND | GRA 12.73 dBn 820.3910 MH 13.456543457 MH M1[1] 10 dBm--20 dBm--30 dBm--40 dBm--60 dBm-CF 821.5 MHz 1001 pts Span 30.0 MHz Type Ref Trc 
 X-value
 Y-value
 Function

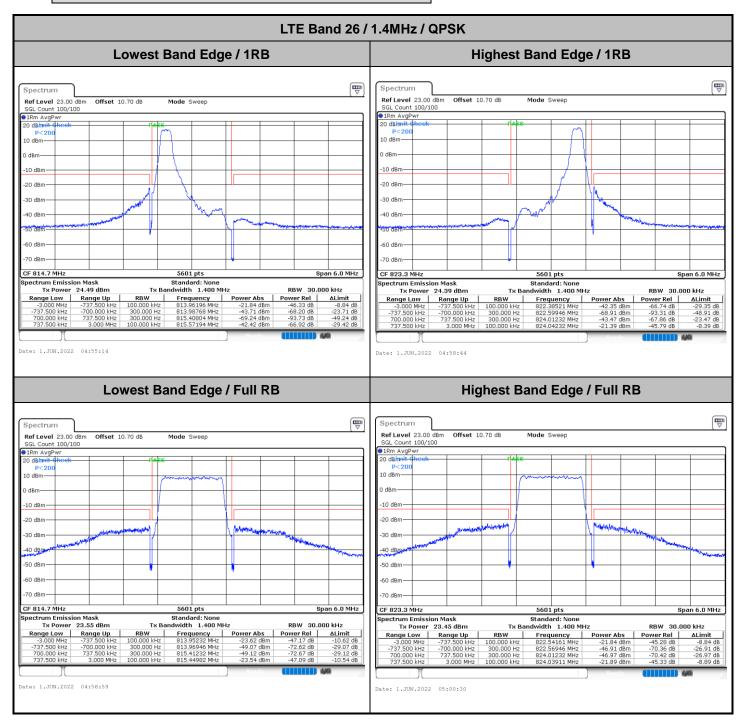
 820,391 MHz
 12.73 dBm
 814.7867 MHz
 7.34 dBm
 Occ Bw

 828.2433 MHz
 7.14 dBm
 Occ Bw
 7.14 dBm
 Occ Bw
 Function Result 13.456543457 MHz Date: 4.JUN.2022 05:02:26

Report No.: FG222202F

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## Emission masks - In-band emissions



Report No.: FG222202F

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LTE Band 26 / 1.4MHz / 16QAM Highest Band Edge / 1 RB Lowest Band Edge / 1 RB Spectrum Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep **Ref Level** 23.00 dBm **Offset** 10.70 dB SGL Count 100/100 Mode Sweep SGL Count 100/100 1Rm AvgPwr 10 dBm dBm -10 dBm -20 dBm 5601 pts ectrum Emission Mask Standard: None Tx Bandwidth 1.400 MHz Spectrum Emission Mask Standard: None RBW 30.000 kHz Tx Power 23.92 dBm

Range Low Range Up

-3.000 MHz -737.500 kB RBW 30.000 kHz ndwidth 1.400 MHz 
 Power Rel
 ALimit

 -44.06 dB
 -7.14 dB

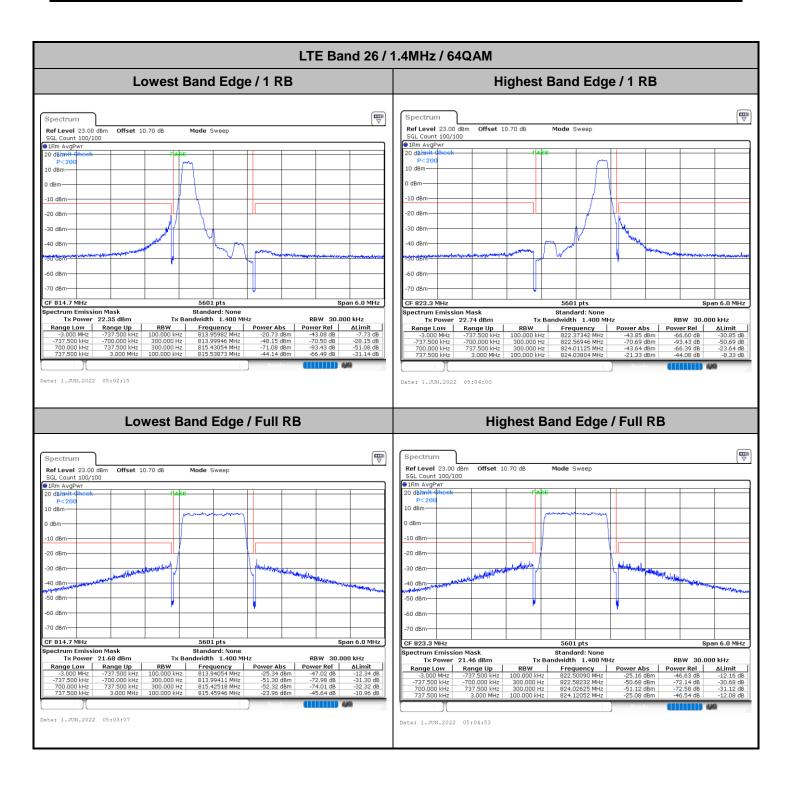
 -68.32 dB
 -24.41 dB

 -93.67 dB
 -49.75 dB

 -66.82 dB
 -29.91 dB
 Range Low Range Up -29.60 dB -49.62 dB -22.14 dB -5.77 dB Date: 1.JUN.2022 04:56:07 Lowest Band Edge / Full RB **Highest Band Edge / Full RB** Spectrum Ref Level 23.00 dBm SGL Count 100/100 Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep SGL Count 100/100 1Rm AvgPwr 10 dBinnit theek 20 dBim 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 d8m -50 dBm -60 dBm -70 dBm-CF 814.7 MHz Span 6.0 MHz 5601 pts pectrum Emission Mask
Tx Power 22.75 dBm
Range Low Range Up
-3.000 MHz -737.500 kHz Standard: None Tx Bandwidth 1.400 MHz Spectrum Emission Mask Standard: None Tx Bandwidth 1.400 MHz RBW 30.000 kHz RBW 30.000 kHz Frequency Power Abs 813,95875 MHz -26,04 dBi Range Low Range Up Date: 1.JUN.2022 04:57:52

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LTE Band 26 / 1.4MHz / 256QAM Highest Band Edge / 1 RB Lowest Band Edge / 1 RB Spectrum Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB SGL Count 100/100 Mode Sweep SGL Count 100/100 m AvgPwr 10 dBm -10 dBm -10 dBm -20 dBm 5601 pts | Spectrum Emission Mask | Tx Power | 19.97 dBm | Range Low | Range Up | -3.000 MHz | -737.500 kHz Spectrum Emission Mask Standard: None RBW 30.000 kHz RBW 30.000 kHz dwidth 1.400 MHz Power Rel ΔLimit
n -49.11 dB -16.14
n -73.46 dB -33.49
n -91.63 dB -51.66
n -65.15 dB -32.19 Frequency 813.95768 MHz 813.99518 MHz 815.42839 MHz 815.52695 MHz Power Abs Date: 4.JUN.2022 04:43:28 Lowest Band Edge / Full RB **Highest Band Edge / Full RB** Spectrum Spectrum Ref Level 23.00 dBm SGL Count 100/100 Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep SGL Count 100/100 ● 1Rm AvgPwr ●1Rm AvgPw 10 dBm 10 dBm-0 dBm dBm -10 dBm--10 dBm--20 dBm -20 dBm--30 dBm 30 dBm-40 dBm 40 dBm -50 dBm -50 dBm -60 dBm 60 dBm--70 dBm-70 dBm-CF 814.7 MHz Span 6.0 MHz CF 823.3 MHz Span 6.0 MHz 5601 pts 5601 pts Spectrum Emission Mask
Tx Power 19.81 dBm
Range Low Range Up Standard: None ndwidth 1.400 MHz RRW 30.000 kHz 
 TS Borbwidth 1.400 MHz
 Row Feequency
 Power Als
 Power Rel
 ALimit

 10.000 kHz
 813.90305 MHz
 -29.35 dBm
 -49.16 dB
 -16.35

 100.000 kHz
 813.97696 MHz
 -53.05 dBm
 -72.86 dB
 -30.41

 00.000 kHz
 815.42911 MHz
 -54.10 dBm
 -73.91 dB
 -34.10

 00.000 kHz
 815.43940 MHz
 -30.45 dBm
 -50.26 dB
 -17.45
 Frequency Range Low Range Up Power Abs Date: 4.JUN.2022 04:46:21

Report No.: FG222202F

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LTE Band 26 / 3MHz / QPSK Lowest Band Edge / 1RB Highest Band Edge / 1 RB Spectrum Spectrum Ref Level 23.00 dBm Offset 10.70 dB SGL Count 100/100 Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep SGL Count 100/100 1Rm AvgPwr ●1Rm AvgPwr 20 dBin 20 dBim 10 dBm-10 dBm dBm-0 dBm--10 dBm--10 dBm -20 dBm -20 dBm -30 dBm--30 dBm-40 dBm--40 dBm--60 dBm--60 dBm-70 dBm--70 dBm-CF 815.5 MHz Span 10.0 MHz 5601 pts CF 822.5 MHz Span 10.0 MHz 5601 pts ectrum Emission Mask Standard: None ndwidth 3.000 MHz | Tx Powr | 24.13 uo... | Tx Powr | 24.13 uo... | Tx Powr | 5.000 MHz | -1.538 MHz | -1.530 MHz Tx Bandwidth 3.000 MHz RBW 30.000 kHz RBW 30.000 kHz | Power Rel | ΔLimit | -37.98 dB | -0.58 dB | RBW | Frequency | Power Abs | 100.000 kHz | 813.96161 MHz | -13.58 dBm | 300.000 Hz | 813.98661 MHz | -35.62 dBm | 300.000 Hz | 817.00268 MHz | -69.43 dBm | 100.000 kHz | 817.99732 MHz | -43.19 dBm Power Rel ALimit
n -66.85 dB -29.72
n -90.21 dB -46.08
n -60.04 dB -15.91
n -39.64 dB -2.51 Frequency Power Abs 820.96161 MHz -42.72 dBr Date: 1.JUN.2022 05:11:54 Date: 1.JUN.2022 05:15:26 Lowest Band Edge / Full RB Highest Band Edge / Full RB Spectrum Ref Level 23.00 dBm Mode Sweep Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm GL Count 100/100 SGL Count 100/100 20 dBim 10 dBm -10 dBm--20 dBm -20 dBm--30 dBn 40 dBr -50 dBm -50 dBm -70 dBm-Span 10.0 MHz CF 815.5 MHz F 815.5 MHz

pectrum Emission Mask
Tx Power 23.79 dBm

Range Low Range Up

-5.000 MHz -1.538 MHz
-1.538 MHz -1.500 MHz
1.500 MHz | 1.538 MHz
-1.500 MHz | 1.538 MHz 5601 pts 5601 pts Standard: None Tx Bandwidth 3.000 MHz Spectrum Emission Mask Tx Power 23.59 dBm Standard: None Tx Bandwidth 3.000 MHz RBW 30.000 kHz Range Low Range Up
-5.000 MHz -1.538 MHz
-1.538 MHz -1.500 MHz
1.538 MHz 1.538 MHz
1.538 MHz 5.000 MHz 
 Frequency
 Power Abs

 813.96161 MHz
 -23.03 dBm

 813.98661 MHz
 -44.57 dBm

 817.00099 MHz
 -44.44 dBm

 817.05446 MHz
 -20.66 dBm
Power Rel	ALimit
-45.38 dB	-8.79
-67.83 dB	-24.23
-68.31 dB	-24.71
-45.74 dB	-9.15

Report No.: FG222202F

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LTE Band 26 / 3MHz / 16QAM Lowest Band Edge / 1 RB Highest Band Edge /1 RB Spectrum Spectrum Ref Level 23.00 dBm Offset 10.70 dB SGL Count 100/100 Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep GL Count 100/100 ●1Rm AvgPwi P<200 10 dBm-10 dBmdBm 0 dBm--10 dBm -10 dBm 20 dBm -20 dBm -30 dBm 30 dBm-40 dBm-40 dBm--60 dBm 60 dBm--70 dBm-70 dBm-CF 815.5 MHz 5601 pts Span 10.0 MHz CF 822.5 MHz Span 10.0 MHz 5601 pts Dectrum Emission Mask
Tx Power 23.50 dBm
Range Low Range Up
-5.000 MHz -1.538 MH pectrum Emission Mask Standard: None Tx Bandwidth 3.000 MHz Standard: None Tx Bandwidth 3.000 MHz Tx Power 23.46 dBm

ange Low Range Up

-5.000 MHz -1.538 MH; RBW 30.000 kHz RBW 30.000 kHz 
 RBW
 Frequency
 Power Abs

 100.000 kHz
 813.95804 MHz
 -14.97 dBr

 300.000 Hz
 813.97411 MHz
 -39.37 dBr

 300.000 Hz
 817.01875 MHz
 -71.98 dBr

 100.000 kHz
 818.02054 MHz
 -43.61 dBr
 Power Rel ALimit
-38.43 dB -1.9.7
-62.82 dB -19.37
-95.44 dB -51.98
-67.06 dB -30.61 Frequency 920.95268 MH Power Rel ALimit -52.20 dB -18.21 dB -2.35 dB Date: 1.JUN.2022 05:12:47 Date: 1.JUN.2022 05:16:18 Lowest Band Edge / Full RB **Highest Band Edge / Full RB** Spectrum Offset 10.70 dB Mode Sweep Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm Count 100/100 SGL Count 100/100 -20 dBm-20 dBm -50 dBm 5601 pts Span 10.0 MHz | Peetrum Emissis | Mask | Tx Power | 22.55 dBm | Range Low | 5.500 MHz | 1.538 MHz | 1.500 MHz | 1.538 MHz | 1.538 MHz | 5.000 MHz | 5.00 Standard: None Tx Bandwidth 3.000 MHz Standard: None Tx Bandwidth 3.000 MHz RBW 30.000 kHz 
 Frequency
 Power Abs

 813.96161 MHz
 -22.52 dBm

 813.99732 MHz
 -45.63 dBm

 817.00268 MHz
 -44.79 dBm

 817.06161 MHz
 -22.53 dBm
 | Power Rel | ALimit | -45.24 dB | -9.52 dB | -68.35 dB | -25.63 dB | -67.51 dB | -24.79 dB | -45.25 dB | -9.53 dB | Power Abs -22.77 dBm -45.43 dBm -45.43 dBm -45.43 dBm -24.41 dBm Power Rel ALimit
-45.31 dB -9.77
-67.98 dB -25.43
-67.98 dB -25.43
-46.96 dB -11.41 Date: 1.JUN.2022 05:14:33

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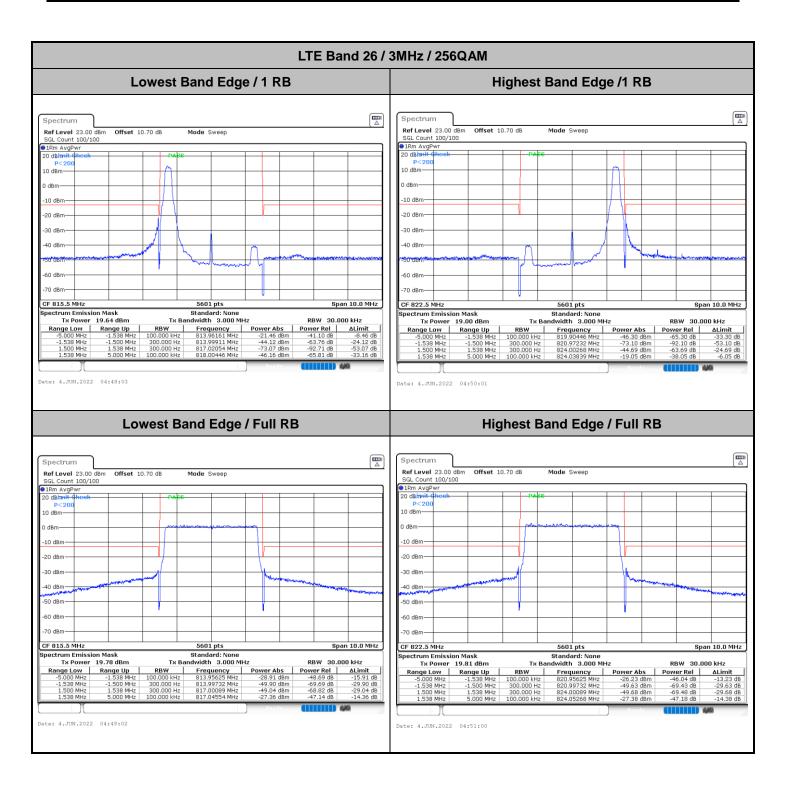
LTE Band 26 / 3MHz / 64QAM Highest Band Edge /1 RB Lowest Band Edge / 1 RB Spectrum Spectrum Ref Level 23.00 dBm Offset 10.70 dB Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep SGL Count 100/100 1Rm AvgPwr 20 dBim 10 dBm-10 dBmdBm--10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm 40 dBm 40 dBm -60 dBm -60 dBm--70 dBm-CF 815.5 MHz CF 822.5 MHz 5601 pts 5601 pts ectrum Emission Mask Standard: None Tx Bandwidth 3.000 MHz Spectrum Emission Mask Tx Power 22.15 d Standard: None Idwidth 3.000 MHz RBW 30.000 kHz 22.15 dBm RRW 30.000 kHz Tx Power 22.15 dBm

Range Low Range Up

-5,000 MHz -1 539 MHz Power Rel ALimit
1 -69.27 dB -34.12
1 -95.28 dB -53.13
1 -61.94 dB -19.78
1 -38.05 dB -2.89 RBW Frequency Power Abs 100.000 kHz 820.69554 MHz -47.12 dBr Date: 1.JUN.2022 05:56:29 Date: 1.JUN.2022 05:58:15 Lowest Band Edge / Full RB **Highest Band Edge / Full RB** Spectrum Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep SGL Count 100/100 -50 dBm -60 dBm -70 dBm CF 815.5 MH 5601 pts Spectrum Emission Mask Tx Power 21.53 dBm Standard: None Tx Bandwidth 3.000 MHz Tx Bandwidth 3.000 MHz RBW 30.000 kHz Frequency 820,95089 MHz 820,99554 MHz 824,00268 MHz 824,03839 MHz Frequency 813.96161 MHz 813.99554 MHz 817.00268 MHz 817.03839 MHz Range Low Range Up Power Rel ∆Limit -46.26 dB -11.73 Date: 1.JUN.2022 05:57:22 Date: 1.JUN.2022 05:59:08

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LTE Band 26 / 5MHz / QPSK Highest Band Edge / 1 RB Lowest Band Edge / 1 RB Spectrum Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep SGL Count 100/100

1Rm AvgPwr
20 dBirnit theek ●1Rm AvgPwr 0 dBn -10 dBm CF 816.5 MHz CF 821.5 MHz 5601 pts Standard: None Tx Bandwidth 5.000 MHz ectrum Emission Mask RBW 50.000 kHz Tx Power 23.99 dBm Tx Bandwidth 5.000 MHz RBW 50.000 kHz Frequency
2 813.94240 MHz
2 813.99866 MHz
2 819.00402 MHz
2 820.81805 MHz RBW Power Rel | ALimit Date: 1.JUN.2022 05:25:05 Date: 1.JUN.2022 05:28:36 **Highest Band Edge / Full RB** Lowest Band Edge / Full RB Spectrum Spectrum Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep Offset 10.70 dB Ref Level 23.00 dBm Mode Sweep SGL Count 100/100 1Rm AvgPwr SGL Count 100/100 10 dBm 0 dBm -10 dBm--10 dBm--20 dBm 20 dBm--30 dBm -50 dBm -50 dBm--60 dBm 60 dBm--70 dBm-CF 816.5 MHz 5601 pts Span 15.0 MHz CF 821.5 MHz CF 821.5 MHz

ipectrum Emission Mask
Tx Power 23.64 dBm

Range Low Range Up
7.500 MHz 2.538 MHz
2.538 MHz 2.500 MHz
2.530 MHz 2.538 MHz
2.538 MHz 7.500 MHz 5601 pts Span 15.0 MHz ectrum Emission Mask Standard: None Tx Bandwidth 5.000 MHz RBW 50.000 kHz 
 RBW
 Frequency
 Power Abs

 0.000 kHz
 813.95312 MHz
 -26.06 dB

 Frequency
 Power Abs

 818.96116 MHz
 -27.38 dBm

 818.98795 MHz
 -49.57 dBm

 824.00402 MHz
 -50.27 dBm

 824.08171 MHz
 -27.68 dBm
 Date: 1.JUN.2022 05:30:21

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LTE Band 26 / 5MHz / 16QAM Highest Band Edge / 1 RB Lowest Band Edge / 1RB Spectrum Spectrum Spectrum

Ref Level 23.00 dBm Offset 10.70 dB Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep Count 100/100 SGL Count 100/100 1Rm AvgPw ●1Rm AvgPw 20 dBi<del>mnit (</del>I P<200 10 dBm-0 dBm--10 dBm 10 dBm 20 dBm -20 dBm 30 dBm -30 dBm 40 dBm 40 dBm -60 dBm 60 dBm-70 dBm-CF 816.5 MHz 5601 pts CF 821.5 MHz 5601 pts | Spectrum Emission Mask | Tx Power | 23.41 dBm | Range Low | Range Up | -7.500 MHz | -2.538 MH | -2.538 MHz | 2.538 MHz | 2.538 MHz | 7.500 MHz | 2.538 MHz | 3.538 MHz | 3.5 rectrum Emission Mask
Tx Power 23.43 dBm

Range Low Range Up

-7.500 MHz -2.538 MH; Standard: None Tx Bandwidth 5.000 MHz Tx Bandwidth 5.000 MHz RBW 50.000 kHz 
 Tx Bərbərbir 5.000 MHz

 RBW
 Frequency
 Power Abs

 100.000 HHz
 817.97777 MHz
 -47.46 dBm

 300.000 Hz
 819.97723 MHz
 -73.71 dBm

 300.000 Hz
 824.0134 MHz
 -44.90 dBm

 100.000 kHz
 824.015224 MHz
 -23.43 dBm
 RBW 50.000 kHz Power Rel ALimit
-70.89 dB -34.46 dB
-97.14 dB -53.71 dB
-68.23 dB -24.80 dB
-46.86 dB -10.43 dB Date: 1.JUN.2022 05:25:58 Date: 1.JUN.2022 05:29:28 Lowest Band Edge / Full RB **Highest Band Edge / Full RB** Spectrum Ref Level 23.00 dBm SGL Count 100/100 Ref Level 23.00 dBm Offset 10.70 dB Mode Sweep Offset 10.70 dB Mode Sweep SGL Count 100/100 1Rm AvgPwr m AvgPwr 10 dBm CF 816.5 MHz Span 15.0 MHz Span 15.0 MHz CF 821.5 MHz 5601 pts ectrum Emission Mask

Tx Power 22.66 dBm

Range Low Range Up

-7 500 MHz -2 538 MH Standard: None Tx Bandwidth 5.000 MHz RBW 50.000 kHz ndwidth 5.000 MHz RBW 50.000 kHz Power Abs
z -28.41 dBm
z -53.02 dBm
z -52.07 dBm
z -28.76 dBm 
 Power Rel
 ALimit

 -51.11 dB
 -15.41 dB

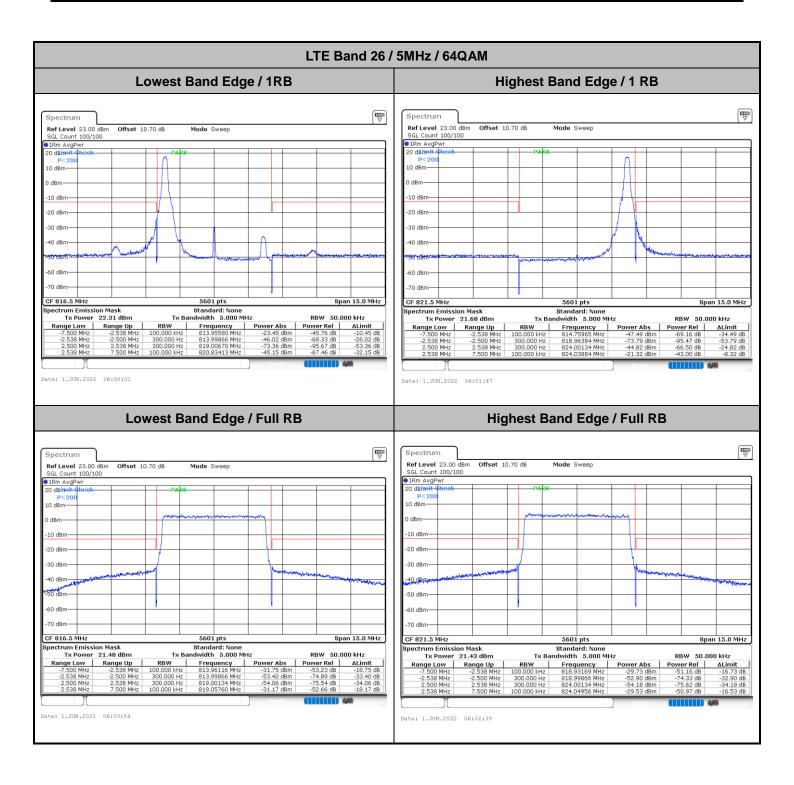
 -75.73 dB
 -33.02 dB

 -74.78 dB
 -32.07 dB

 -51.47 dB
 -15.76 dB
 Frequency 818.95848 MHz 818.99063 MHz 824.01205 MHz 824.06564 MHz Power Abs -28.11 dBm -52.79 dBm -51.91 dBm -29.10 dBm Power Rel ALimit
-50.76 dB -15.11
-75.45 dB -32.79
-74.57 dB -31.91
-51.76 dB -16.10 Frequency 813 96116 MH Date: 1.JUN.2022 05:27:43 Date: 1.JUN.2022 05:31:14

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