

TEST REPORT

Report No.: SHE24010061-01AE

Date: 2024-02-21

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Applicant : SIMCom Wireless Solutions Limited
Address of Applicant : SIMCom Headquarters Building, Building 3, No.289
Linhong Road, Changning District, Shanghai,China

Product Name : SIMCom LTE Cat 1 Module
Brand Name : SIMCom
Model Name : SIM7500V
Sample Acquisition Method : Sent by Client

Sample No. : E24010061-01#01
E24010061-01#02

FCC ID : 2AJYU-8PYA00D


Standards : FCC CFR47 Part 2 (Others refer to chapter 1.4)

Date of Receipt : 2024-01-19
Date of Test : 2024-01-23 ~ 2024-02-21
Date of Issue : 2024-02-21

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Approved by:



(Authorized signatory: Echo Mu)

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1 General Information

1.1 Testing Laboratory

Company Name	ICAS Testing Technology Service (Shanghai) Co., Ltd.
Address	No.1298 Pingan Road, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Company Name	SIMCom Wireless Solutions Limited
Address	SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai,China
Contact Person	Yongsheng Li
Telephone	+86 21 3252 3134
Email	yongsheng.li@simcom.com
Manufacturer Company Name	SIMCom Wireless Solutions Limited
Address	SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai,China
Factory Company Name	SIMCom Wireless Solutions Limited
Address	SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai,China

1.3 Details of EUT

Product Name	SIMCom LTE Cat 1 Module		
Brand Name	SIMCom		
Test Model Name	SIM7500V		
FCC ID	2AJYU-8PYA00D		
Mode of Operation	LTE FDD Band 4/13		
Frequency Range	Band	Tx (MHz)	Rx (MHz)
	LTE FDD Band 4	1710 ~ 1755	2110 ~ 2155
	LTE FDD Band 13	777 ~ 787	746 ~ 756
Modulation Type	QPSK/16QAM		
Power Class	LTE FDD Band 4: 3 LTE FDD Band 13: 3		
Antenna Type	External Antenna		
Antenna Gain	LTE FDD Band 4: 5.0 dBi LTE FDD Band 13: 4.0 dBi		
Extreme Temperature Range	-20°C ~ +55°C		
Hardware version	SIM7500V_V1.3		

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Software version	V2.01
Test SW Version	BL410_R;BL410_E

1.4 Test Methodology

47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
47 CFR Part 27	Miscellaneous Wireless Communications Services
ANSI/TIA-603-E-2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
ANSI C63.26:2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 971168 D01 v03	Measurement Guidance for Certification of Licensed Digital Transmitters

Note(s):

All test items were verified and recorded according to the standards and without any addition/deviation/exclusion during the test.

1.5 Test Verdict

No.	FCC Part No.	Description	Test Result	Verdict
1	2.1046	Conducted RF Output Power	Reporting Only Clause 5.1.1	PASS
2	2.1046 27.50	Effective (Isotropic) Radiated Power	Clause 5.1.1	PASS
3	2.1046 27.50(d)	Peak to Average Ratio	Clause 5.1.2	PASS
4	2.1049 27.53	Occupied Bandwidth	Clause 5.1.3	PASS
5	2.1055 27.54	Frequency Stability	Clause 5.1.4	PASS
6	2.1051 27.53	Spurious Emission at Antenna Terminals	Clause 5.1.5	PASS
7	2.1051 27.53	Band Edge	Clause 5.1.6	PASS
8	2.1051 27.53	Field Strength of Spurious Radiation	Clause 5.1.7	PASS

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2 Test Condition

2.1 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060

2.2 Test Environments

During the measurement, the environmental conditions were within the listed ranges:

Test Voltage	NV (Normal Voltage)	3.80 V
	LV (Low Voltage)	3.40 V
	HV (High Voltage)	4.20 V
Test Temperature	NT (Normal Temperature)	+25 °C
	LT (Low Temperature)	-20 °C
	HT (High Temperature)	+55 °C

2.3 Equipment List

Name of Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Keysight	N9020A	MY54101709	2023-07-27	2024-07-26
Spectrum Analyzer	Keysight	N9020B	MY59260184	2023-07-27	2024-07-26
Spectrum Analyzer	Rohde & Schwarz	FSV40N	101450	2023-06-08	2024-06-07
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	100687	2023-07-27	2024-07-26
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	150835	2023-07-27	2024-07-26
DC Power Supply	ITECH	IT6952A	N/A	2022-06-07	2024-06-06
Temperature Chamber	ESPEC	ECT-2	055239A	2023-11-09	2025-11-08
Broadband Antenna	SCHWARZBECK	VULB9163	9163-1037	2023-03-22	2025-03-21
Horn Antenna-18G	SCHWARZBECK	BBHA9120D	9120D-1775	2023-06-13	2025-06-12
Loop Antenna	SCHWARZBECK	FMZB 1513	N/A	2023-06-09	2024-06-08
Horn Antenna-40G	YINGLIAN	LB-180400-KF	N/A	2023-06-18	2025-06-17
EMC chamber 9*6*6(L*W*H)	CHANGNING	966	N/A	2023-06-09	2025-06-08
Shielded Room 8*5*4(L*W*H)	CHANGNING	854	N/A	2023-06-09	2025-06-08
Test Software	BL	BL410_E	Version:1.0.0.117	N/A	N/A
Test Software	BL	BL410_R	Version:2.1.1.409	N/A	N/A

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2.4 Measurement Uncertainty

FCC Part No.	Description	Uncertainty
2.1046	Conducted RF Output Power	$\pm 0.69\text{dB}$
2.1046 24.232(d) 27.50(d)	Peak to Average Ratio	$\pm 0.015\%$
2.1049 22.917 24.238 27.53	Occupied Bandwidth	$\pm 30\text{kHz}$
2.1055 22.355 24.235 27.54	Frequency Stability	$\pm 12\text{Hz}$
2.1051 22.917 24.238 27.53	Spurious Emission at Antenna Terminals	$\pm 2.84\text{dB}$
2.1051 22.917 24.238 27.53	Band Edge	$\pm 2.84\text{dB}$
2.1051 22.917 24.238 27.53	Field Strength of Spurious Radiation	$\pm 5.00\text{dB}$

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3 Test Set-up and Operation Modes

3.1 Details of Test Mode

Test Item	LTE Band	Bandwidth (MHz)						Modulation Type		RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	LCH	MCH	HCH
Effective (Isotropic) Radiated Power	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
Peak to Average Radio	4	--	--	--	--	--	v	v	v	v	--	v	v	v	v
	13	n	n	--	v	n	n	v	v	v	--	v	v	v	v
Occupied Bandwidth	4	v	v	v	v	v	v	v	v	--	--	v	v	v	v
	13	n	n	v	v	n	n	v	v	--	--	v	v	v	v
Frequency Stability	4	--	--	--	v	--	--	v	v	--	--	v	--	v	--
	13	n	n	--	v	n	n	v	v	--	--	v	--	v	--
Spurious Emission at Antenna Terminals	4	v	v	v	v	v	v	v	v	v	--	--	v	v	v
	13	n	n	v	v	n	n	v	v	v	--	--	v	v	v
Band Edge	4	v	v	v	v	v	v	v	v	v	--	v	v	--	v
	13	n	n	v	v	n	n	v	v	v	--	v	v	--	v
Field Strength of Spurious Radiation	4	v	v	v	v	v	v	v	--	v	--	--	--	v	--
	13	n	n	v	v	n	n	v	--	v	--	--	--	v	--

Note(s):

The mark 'v' means that this configuration is chosen for testing.

The mark 'n' means that this bandwidth is not supported.

10M 15M 20M bandwidth 16 QAM modulation does not support full RB.

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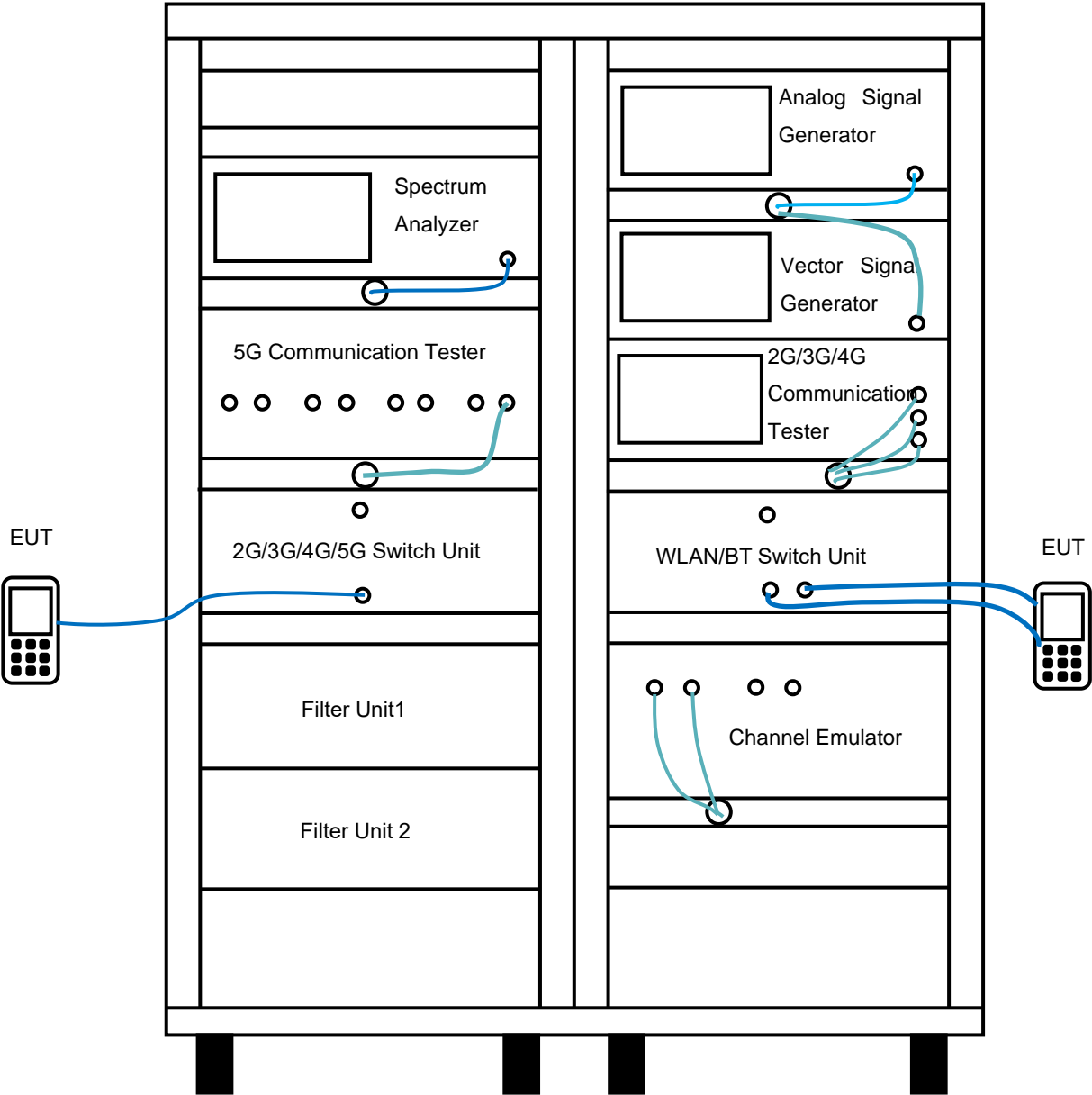
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3.2 Test Setup Diagram

Diagram of Measurement Equipment Configuration for Antenna Port Test



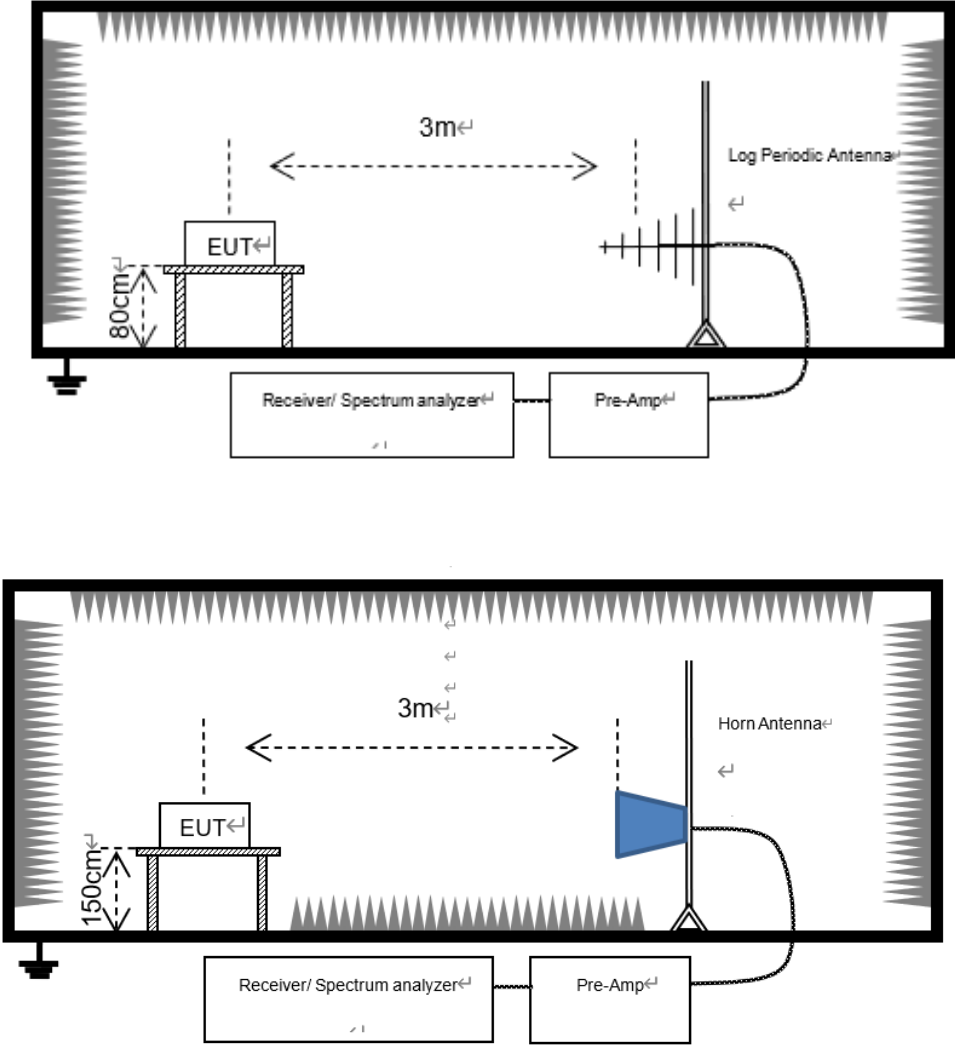
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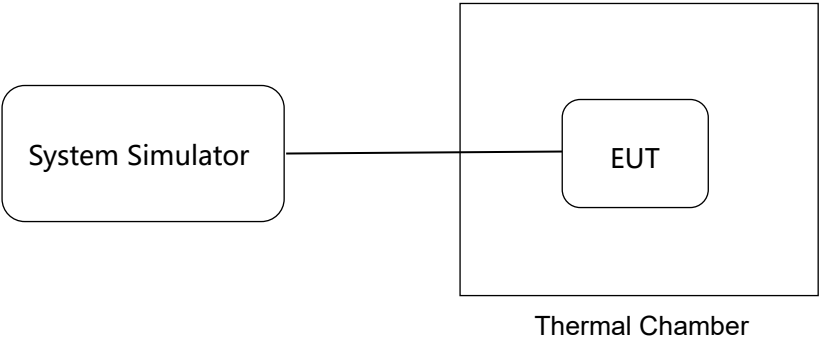
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Diagram of Measurement Configuration for Radiation Test



Note: Measurements below 1GHz are done with a table height of 0.8m and above 1GHz are done with a table height of 1.5m. In addition, there is RF absorbing material on the floor of the test site for above 1GHz measurement.

Diagram of Measurement Configuration for Frequency Stability



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4 Test Items

4.1 Transmitter Radiated Power (EIRP/ERP)

4.1.1 Limit

FCC § 2.1046(a) & 22.913(a) & 24.232(c) & 27.50(b) & 27.50(c) & 27.50(d) & 27.50(h)

According to FCC section 22.913(a) (2), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 24.232(c), Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50(b) (10), portable stations (hand-held devices) transmitting in the 746-757MHz, 776-788MHz, and 805-806MHz bands are limited to 3 watts ERP.

FCC section 27.50(c) (10), portable stations (hand-held devices) in the 698-746MHz band are limited to 3 watts ERP.

FCC section 27.50(d) (4), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

Fixed, mobile, and portable (hand-held) stations operating in the 2000-2020 MHz band are limited to 2 watts EIRP.

And FCC section 27.50(h) (2), for mobile and other user stations, mobile stations are limited to 2 watts EIRP. All user stations are limited to 2 watts transmitter output power.

4.1.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{EIRP} = P_T + G_T - L_C$$

$$\text{ERP} = \text{EIRP} - 2.15$$

Where:

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

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ERP/EIRP = SA Read Value + Correction Factor

where:

ERP/EIRP = effective or equivalent radiated power in dBm

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer in dBm

Correction Factor = total correction factor including cable loss in dB

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

4.1.3 Test Result

Please refer to 5.1.1.

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4.2 Peak-to-Average Ratio

4.2.1 Limit

FCC § 2.1046 & 24.232(d) & 27.50(d)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to FCC section 24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with 24.232 (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

For FCC section 24.232(e), peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an RMS equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

According to FCC section 27.50(d), in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

4.2.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

4.2.3 Test Result

Please refer to 5.1.2.

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4.3 Occupied Bandwidth

4.3.1 Limit

FCC § 2.1049

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Many of the individual rule parts specify a relative OBW in lieu of the 99% OBW. In such cases, the OBW is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated by at least X dB below the transmitter power, where the value of X is typically specified as 26.

4.3.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

4.3.3 Test Result

Please refer to 5.1.3.

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4.4 Frequency Stability

4.4.1 Limit

FCC § 2.1055 & 22.355 & 24.235 & 27.54

FCC § 2.1055

The frequency stability shall be measured with variation of ambient temperature as follows:

- (1) The temperature is varied from -30°C to +50°C.
- (2) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10°C through the range. The frequency stability shall be measured with variation of primary supply voltage as follows:
 - (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than carried battery equipment.
 - (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating and point which shall be specified by the manufacture.
 - (3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

FCC § 22.355

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in table as below.

Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

FCC § 24.235

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

FCC § 27.54

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

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4.4.2 Test Procedures

For Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -10°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. 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.

For Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

4.4.3 Test Result

Please refer to 5.1.4.

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4.5 Spurious Emission at Antenna Terminals

4.5.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(c) & 27.53(g) & 27.53(h) & 27.53(m)

In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

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

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the

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power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

FCC § 27.53(m) (4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

4.5.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. CMW500 is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10 \log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10 \log(P)] \text{ (dB)}$$

$$= [30 + 10 \log(P)] \text{ (dBm)} - [43 + 10 \log(P)] \text{ (dB)}$$

$$= -13 \text{ dBm.}$$

11. For Band 7/41

The limit line is derived from $55 + 10 \log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [55 + 10 \log(P)] \text{ (dB)}$$

$$= [30 + 10 \log(P)] \text{ (dBm)} - [55 + 10 \log(P)] \text{ (dB)}$$

$$= -25 \text{ dBm.}$$

4.5.3 Test Result

Please refer to 5.1.5.

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4.6 Band Edge

4.6.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(c) & 27.53(g) & 27.53(h) & 27.53(m)

In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

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

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts

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by at least $43 + 10 \log_{10}(P)$ dB.

FCC § 27.53(m) (4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

4.6.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW \geq 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm.}$$

9. For LTE Band 7/41, the other 40 dB, and 55 dB have additionally applied same calculation above.

4.6.3 Test Result

Please refer to 5.1.6.

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4.7 Field Strength of Spurious Radiation

4.7.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(c) & 27.53(g) & 27.53(h) & 27.53(m)

RSS-Gen § 6.13 & RSS-132 § 5.5 & RSS-133 § 6.5 & RSS-139 § 6.6

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

FCC § 27.53(m) (4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz

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and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

4.7.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$
13. For Band 7/41: The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [55 + 10\log(P)] \text{ (dB)}$
 $= -25\text{dBm}.$

4.7.3 Test Result

Please refer to 5.1.7.

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5 Test Results

5.1.1 Transmitter Radiated Power (EIRP/ERP)

Effective (Isotropic) Radiated Power Measurement Results for LTE

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
FDD LTE Band 4									
1.4 MHz	LCH	QPSK	RB1#0	23.39	5.00	28.39	0.690	1	PASS
			RB1#3	23.43	5.00	28.43	0.697	1	PASS
			RB1#5	23.41	5.00	28.41	0.693	1	PASS
			RB3#0	23.36	5.00	28.36	0.685	1	PASS
			RB3#2	23.31	5.00	28.31	0.678	1	PASS
			RB3#3	22.22	5.00	27.22	0.527	1	PASS
			RB6#0	23.30	5.00	28.30	0.676	1	PASS
		16-QAM	RB1#0	22.13	5.00	27.13	0.516	1	PASS
			RB1#3	22.03	5.00	27.03	0.505	1	PASS
			RB1#5	22.02	5.00	27.02	0.504	1	PASS
			RB3#0	21.85	5.00	26.85	0.484	1	PASS
			RB3#2	21.93	5.00	26.93	0.493	1	PASS
			RB3#3	21.90	5.00	26.90	0.490	1	PASS
			RB6#0	21.08	5.00	26.08	0.406	1	PASS
	MCH	QPSK	RB1#0	23.04	5.00	28.04	0.637	1	PASS
			RB1#3	23.14	5.00	28.14	0.652	1	PASS
			RB1#5	23.24	5.00	28.24	0.667	1	PASS
			RB3#0	23.23	5.00	28.23	0.665	1	PASS
			RB3#2	23.25	5.00	28.25	0.668	1	PASS
			RB3#3	23.18	5.00	28.18	0.658	1	PASS
			RB6#0	22.22	5.00	27.22	0.527	1	PASS
		16-QAM	RB1#0	21.98	5.00	26.98	0.499	1	PASS
			RB1#3	21.97	5.00	26.97	0.498	1	PASS
			RB1#5	21.70	5.00	26.70	0.468	1	PASS
			RB3#0	22.10	5.00	27.10	0.513	1	PASS
			RB3#2	22.17	5.00	27.17	0.521	1	PASS
			RB3#3	22.07	5.00	27.07	0.509	1	PASS
			RB6#0	20.96	5.00	25.96	0.394	1	PASS
	HCH	QPSK	RB1#0	22.85	5.00	27.85	0.610	1	PASS
			RB1#3	22.90	5.00	27.90	0.617	1	PASS
RB1#5			22.96	5.00	27.96	0.625	1	PASS	

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Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict			
FDD LTE Band 4												
			RB3#0	23.04	5.00	28.04	0.637	1	PASS			
			RB3#2	23.05	5.00	28.05	0.638	1	PASS			
			RB3#3	22.97	5.00	27.97	0.627	1	PASS			
			RB6#0	21.91	5.00	26.91	0.491	1	PASS			
		16-QAM	RB1#0	21.77	5.00	26.77	0.475	1	PASS			
			RB1#3	21.72	5.00	26.72	0.470	1	PASS			
			RB1#5	21.67	5.00	26.67	0.465	1	PASS			
			RB3#0	21.75	5.00	26.75	0.473	1	PASS			
			RB3#2	21.76	5.00	26.76	0.474	1	PASS			
			RB3#3	21.79	5.00	26.79	0.478	1	PASS			
			RB6#0	20.94	5.00	25.94	0.393	1	PASS			
			3 MHz	LCH	QPSK	RB1#0	23.14	5.00	28.14	0.652	1	PASS
						RB1#7	23.12	5.00	28.12	0.649	1	PASS
						RB1#14	23.02	5.00	28.02	0.634	1	PASS
RB8#0	22.28	5.00				27.28	0.535	1	PASS			
RB8#4	22.25	5.00				27.25	0.531	1	PASS			
RB8#7	22.16	5.00				27.16	0.520	1	PASS			
RB15#0	22.19	5.00				27.19	0.524	1	PASS			
16-QAM	RB1#0	22.01			5.00	27.01	0.502	1	PASS			
	RB1#7	21.75			5.00	26.75	0.473	1	PASS			
	RB1#14	21.71			5.00	26.71	0.469	1	PASS			
	RB8#0	21.07			5.00	26.07	0.405	1	PASS			
	RB8#4	20.95			5.00	25.95	0.394	1	PASS			
	RB8#7	20.91			5.00	25.91	0.390	1	PASS			
	RB15#0	21.15			5.00	26.15	0.412	1	PASS			
MCH	QPSK	RB1#0	23.22	5.00	28.22	0.664	1	PASS				
		RB1#7	23.13	5.00	28.13	0.650	1	PASS				
		RB1#14	23.07	5.00	28.07	0.641	1	PASS				
		RB8#0	22.20	5.00	27.20	0.525	1	PASS				
		RB8#4	22.20	5.00	27.20	0.525	1	PASS				
		RB8#7	22.17	5.00	27.17	0.521	1	PASS				
		RB15#0	22.25	5.00	27.25	0.531	1	PASS				
	16-QAM	RB1#0	21.91	5.00	26.91	0.491	1	PASS				
		RB1#7	21.90	5.00	26.90	0.490	1	PASS				
		RB1#14	21.83	5.00	26.83	0.482	1	PASS				
		RB8#0	21.22	5.00	26.22	0.419	1	PASS				

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Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict	
FDD LTE Band 4										
	HCH		RB8#4	21.21	5.00	26.21	0.418	1	PASS	
			RB8#7	21.23	5.00	26.23	0.420	1	PASS	
			RB15#0	21.23	5.00	26.23	0.420	1	PASS	
		QPSK	RB1#0	22.63	5.00	27.63	0.579	1	PASS	
			RB1#7	22.70	5.00	27.70	0.589	1	PASS	
			RB1#14	22.83	5.00	27.83	0.607	1	PASS	
			RB8#0	21.79	5.00	26.79	0.478	1	PASS	
			RB8#4	21.75	5.00	26.75	0.473	1	PASS	
			RB8#7	21.81	5.00	26.81	0.480	1	PASS	
	RB15#0		21.90	5.00	26.90	0.490	1	PASS		
	16-QAM		RB1#0	21.58	5.00	26.58	0.455	1	PASS	
			RB1#7	21.65	5.00	26.65	0.462	1	PASS	
		RB1#14	21.73	5.00	26.73	0.471	1	PASS		
		RB8#0	21.05	5.00	26.05	0.403	1	PASS		
		RB8#4	21.01	5.00	26.01	0.399	1	PASS		
		RB8#7	20.92	5.00	25.92	0.391	1	PASS		
	5 MHz	LCH	QPSK	RB1#0	22.98	5.00	27.98	0.628	1	PASS
				RB1#13	22.98	5.00	27.98	0.628	1	PASS
RB1#24				23.07	5.00	28.07	0.641	1	PASS	
RB12#0				22.06	5.00	27.06	0.508	1	PASS	
RB12#6				22.09	5.00	27.09	0.512	1	PASS	
RB12#13				22.10	5.00	27.10	0.513	1	PASS	
16-QAM			RB25#0	22.03	5.00	27.03	0.505	1	PASS	
			RB1#0	21.71	5.00	26.71	0.469	1	PASS	
			RB1#13	21.83	5.00	26.83	0.482	1	PASS	
			RB1#24	21.69	5.00	26.69	0.467	1	PASS	
			RB12#0	20.95	5.00	25.95	0.394	1	PASS	
			RB12#6	20.88	5.00	25.88	0.387	1	PASS	
MCH		QPSK	RB12#13	20.90	5.00	25.90	0.389	1	PASS	
			RB25#0	21.17	5.00	26.17	0.414	1	PASS	
			RB1#0	22.97	5.00	27.97	0.627	1	PASS	
			RB1#13	22.96	5.00	27.96	0.625	1	PASS	
			RB1#24	22.86	5.00	27.86	0.611	1	PASS	
			RB12#0	22.12	5.00	27.12	0.515	1	PASS	
			RB12#6	22.20	5.00	27.20	0.525	1	PASS	

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Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
FDD LTE Band 4									
10 MHz	HCH	16-QAM	RB12#13	22.14	5.00	27.14	0.518	1	PASS
			RB25#0	22.13	5.00	27.13	0.516	1	PASS
			RB1#0	22.07	5.00	27.07	0.509	1	PASS
			RB1#13	22.07	5.00	27.07	0.509	1	PASS
			RB1#24	21.69	5.00	26.69	0.467	1	PASS
			RB12#0	20.99	5.00	25.99	0.397	1	PASS
			RB12#6	21.10	5.00	26.10	0.407	1	PASS
			RB12#13	21.05	5.00	26.05	0.403	1	PASS
		RB25#0	21.23	5.00	26.23	0.420	1	PASS	
		QPSK	RB1#0	22.74	5.00	27.74	0.594	1	PASS
			RB1#13	22.69	5.00	27.69	0.587	1	PASS
			RB1#24	22.97	5.00	27.97	0.627	1	PASS
			RB12#0	21.79	5.00	26.79	0.478	1	PASS
			RB12#6	21.75	5.00	26.75	0.473	1	PASS
	RB12#13		21.87	5.00	26.87	0.486	1	PASS	
	RB25#0		21.81	5.00	26.81	0.480	1	PASS	
	16-QAM	RB1#0	21.73	5.00	26.73	0.471	1	PASS	
		RB1#13	21.58	5.00	26.58	0.455	1	PASS	
		RB1#24	21.39	5.00	26.39	0.436	1	PASS	
		RB12#0	20.73	5.00	25.73	0.374	1	PASS	
		RB12#6	20.77	5.00	25.77	0.378	1	PASS	
		RB12#13	20.78	5.00	25.78	0.378	1	PASS	
		RB25#0	20.71	5.00	25.71	0.372	1	PASS	
	LCH	QPSK	RB1#0	23.25	5.00	28.25	0.668	1	PASS
			RB1#25	23.35	5.00	28.35	0.684	1	PASS
			RB1#49	22.83	5.00	27.83	0.607	1	PASS
			RB25#0	22.00	5.00	27.00	0.501	1	PASS
			RB25#13	22.23	5.00	27.23	0.528	1	PASS
RB25#25			22.04	5.00	27.04	0.506	1	PASS	
RB50#0			22.01	5.00	27.01	0.502	1	PASS	
16-QAM		RB1#0	21.99	5.00	26.99	0.500	1	PASS	
		RB1#25	22.04	5.00	27.04	0.506	1	PASS	
		RB1#49	21.59	5.00	26.59	0.456	1	PASS	
		RB6#0	21.77	5.00	26.77	0.475	1	PASS	
		RB6#22	22.09	5.00	27.09	0.512	1	PASS	
		RB6#24	21.63	5.00	26.63	0.460	1	PASS	

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Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
FDD LTE Band 4									
	MCH	QPSK	RB12#0	21.92	5.00	26.92	0.492	1	PASS
			RB1#0	22.90	5.00	27.90	0.617	1	PASS
			RB1#25	23.54	5.00	28.54	0.714	1	PASS
			RB1#49	22.90	5.00	27.90	0.617	1	PASS
			RB25#0	22.15	5.00	27.15	0.519	1	PASS
			RB25#13	22.16	5.00	27.16	0.520	1	PASS
			RB25#25	22.03	5.00	27.03	0.505	1	PASS
		RB50#0	22.08	5.00	27.08	0.511	1	PASS	
		16-QAM	RB1#0	21.82	5.00	26.82	0.481	1	PASS
			RB1#25	22.06	5.00	27.06	0.508	1	PASS
			RB1#49	21.75	5.00	26.75	0.473	1	PASS
			RB6#0	22.30	5.00	27.30	0.537	1	PASS
			RB6#22	21.96	5.00	26.96	0.497	1	PASS
			RB6#24	22.03	5.00	27.03	0.505	1	PASS
	RB12#0		22.02	5.00	27.02	0.504	1	PASS	
	HCH	QPSK	RB1#0	22.93	5.00	27.93	0.621	1	PASS
			RB1#25	23.18	5.00	28.18	0.658	1	PASS
			RB1#49	23.04	5.00	28.04	0.637	1	PASS
			RB25#0	21.96	5.00	26.96	0.497	1	PASS
			RB25#13	22.02	5.00	27.02	0.504	1	PASS
			RB25#25	21.68	5.00	26.68	0.466	1	PASS
			RB50#0	21.82	5.00	26.82	0.481	1	PASS
		16-QAM	RB1#0	21.62	5.00	26.62	0.459	1	PASS
			RB1#25	22.18	5.00	27.18	0.522	1	PASS
			RB1#49	21.90	5.00	26.90	0.490	1	PASS
			RB6#0	22.23	5.00	27.23	0.528	1	PASS
			RB6#22	22.10	5.00	27.10	0.513	1	PASS
			RB6#24	21.76	5.00	26.76	0.474	1	PASS
RB12#0			21.87	5.00	26.87	0.486	1	PASS	
15 MHz	LCH	QPSK	RB1#0	23.12	5.00	28.12	0.649	1	PASS
			RB1#38	23.01	5.00	28.01	0.632	1	PASS
			RB1#74	23.03	5.00	28.03	0.635	1	PASS
			RB36#0	22.03	5.00	27.03	0.505	1	PASS
			RB36#19	22.04	5.00	27.04	0.506	1	PASS
			RB36#39	21.96	5.00	26.96	0.497	1	PASS
			RB75#0	22.01	5.00	27.01	0.502	1	PASS

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FDD LTE Band 4										
		16-QAM	RB1#0	21.75	5.00	26.75	0.473	1	PASS	
			RB1#38	22.43	5.00	27.43	0.553	1	PASS	
			RB1#74	21.86	5.00	26.86	0.485	1	PASS	
			RB8#0	22.11	5.00	27.11	0.514	1	PASS	
			RB8#34	22.30	5.00	27.30	0.537	1	PASS	
			RB8#67	21.66	5.00	26.66	0.463	1	PASS	
			RB16#0	22.07	5.00	27.07	0.509	1	PASS	
		MCH	QPSK	RB1#0	22.79	5.00	27.79	0.601	1	PASS
				RB1#38	23.02	5.00	28.02	0.634	1	PASS
				RB1#74	22.78	5.00	27.78	0.600	1	PASS
				RB36#0	22.15	5.00	27.15	0.519	1	PASS
				RB36#19	22.15	5.00	27.15	0.519	1	PASS
				RB36#39	22.05	5.00	27.05	0.507	1	PASS
				RB75#0	22.21	5.00	27.21	0.526	1	PASS
	16-QAM		RB1#0	21.65	5.00	26.65	0.462	1	PASS	
			RB1#38	21.70	5.00	26.70	0.468	1	PASS	
			RB1#74	21.35	5.00	26.35	0.432	1	PASS	
			RB8#0	21.77	5.00	26.77	0.475	1	PASS	
			RB8#34	22.19	5.00	27.19	0.524	1	PASS	
			RB8#67	21.77	5.00	26.77	0.475	1	PASS	
			RB16#0	21.70	5.00	26.70	0.468	1	PASS	
	HCH	QPSK	RB1#0	22.96	5.00	27.96	0.625	1	PASS	
			RB1#38	22.92	5.00	27.92	0.619	1	PASS	
			RB1#74	22.75	5.00	27.75	0.596	1	PASS	
			RB36#0	21.99	5.00	26.99	0.500	1	PASS	
			RB36#19	21.97	5.00	26.97	0.498	1	PASS	
			RB36#39	21.80	5.00	26.80	0.479	1	PASS	
			RB75#0	21.86	5.00	26.86	0.485	1	PASS	
		16-QAM	RB1#0	22.56	5.00	27.56	0.570	1	PASS	
			RB1#38	22.61	5.00	27.61	0.577	1	PASS	
RB1#74			22.06	5.00	27.06	0.508	1	PASS		
RB8#0			21.89	5.00	26.89	0.489	1	PASS		
RB8#34			21.67	5.00	26.67	0.465	1	PASS		
RB8#67			21.29	5.00	26.29	0.426	1	PASS		
RB16#0			22.01	5.00	27.01	0.502	1	PASS		
20 MHz			LCH	QPSK	RB1#0	22.84	5.00	27.84	0.608	1

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FDD LTE Band 4										
			RB1#50	23.17	5.00	28.17	0.656	1	PASS	
			RB1#99	22.66	5.00	27.66	0.583	1	PASS	
			RB50#0	22.08	5.00	27.08	0.511	1	PASS	
			RB50#25	22.01	5.00	27.01	0.502	1	PASS	
			RB50#50	21.99	5.00	26.99	0.500	1	PASS	
			RB100#0	22.11	5.00	27.11	0.514	1	PASS	
		16-QAM	RB1#0	21.48	5.00	26.48	0.445	1	PASS	
			RB1#50	22.11	5.00	27.11	0.514	1	PASS	
			RB1#99	21.29	5.00	26.29	0.426	1	PASS	
			RB9#0	21.89	5.00	26.89	0.489	1	PASS	
			RB9#46	21.95	5.00	26.95	0.495	1	PASS	
			RB9#47	21.71	5.00	26.71	0.469	1	PASS	
		RB18#0	22.05	5.00	27.05	0.507	1	PASS		
		MCH	QPSK	RB1#0	22.90	5.00	27.90	0.617	1	PASS
				RB1#50	23.28	5.00	28.28	0.673	1	PASS
	RB1#99			22.64	5.00	27.64	0.581	1	PASS	
	RB50#0			22.19	5.00	27.19	0.524	1	PASS	
	RB50#25			22.14	5.00	27.14	0.518	1	PASS	
	RB50#50			22.03	5.00	27.03	0.505	1	PASS	
	RB100#0			22.15	5.00	27.15	0.519	1	PASS	
	16-QAM		RB1#0	21.85	5.00	26.85	0.484	1	PASS	
			RB1#50	21.81	5.00	26.81	0.480	1	PASS	
			RB1#99	21.43	5.00	26.43	0.440	1	PASS	
			RB9#0	21.60	5.00	26.60	0.457	1	PASS	
			RB9#46	22.22	5.00	27.22	0.527	1	PASS	
			RB9#47	21.70	5.00	26.70	0.468	1	PASS	
			RB18#0	21.81	5.00	26.81	0.480	1	PASS	
			HCH	QPSK	RB1#0	23.33	5.00	28.33	0.681	1
	RB1#50	23.04			5.00	28.04	0.637	1	PASS	
	RB1#99	22.94			5.00	27.94	0.622	1	PASS	
RB50#0	22.07	5.00			27.07	0.509	1	PASS		
RB50#25	22.06	5.00			27.06	0.508	1	PASS		
RB50#50	21.88	5.00			26.88	0.488	1	PASS		
RB100#0	22.05	5.00			27.05	0.507	1	PASS		
16-QAM	RB1#0	21.57		5.00	26.57	0.454	1	PASS		
	RB1#50	21.70		5.00	26.70	0.468	1	PASS		

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Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
FDD LTE Band 4									
			RB1#99	21.32	5.00	26.32	0.429	1	PASS
			RB9#0	22.01	5.00	27.01	0.502	1	PASS
			RB9#46	22.10	5.00	27.10	0.513	1	PASS
			RB9#47	21.75	5.00	26.75	0.473	1	PASS
			RB18#0	21.83	5.00	26.83	0.482	1	PASS

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
FDD LTE Band 13									
5 MHz	LCH	QPSK	RB1#0	23.77	4.00	25.62	0.365	3	PASS
			RB1#13	23.95	4.00	25.80	0.380	3	PASS
			RB1#24	23.77	4.00	25.62	0.365	3	PASS
			RB12#0	23.04	4.00	24.89	0.308	3	PASS
			RB12#6	23.19	4.00	25.04	0.319	3	PASS
			RB12#13	23.11	4.00	24.96	0.313	3	PASS
			RB25#0	23.08	4.00	24.93	0.311	3	PASS
		16-QAM	RB1#0	22.71	4.00	24.56	0.286	3	PASS
			RB1#13	22.85	4.00	24.70	0.295	3	PASS
			RB1#24	22.58	4.00	24.43	0.277	3	PASS
			RB12#0	21.84	4.00	23.69	0.234	3	PASS
			RB12#6	21.99	4.00	23.84	0.242	3	PASS
			RB12#13	21.90	4.00	23.75	0.237	3	PASS
			RB25#0	22.21	4.00	24.06	0.255	3	PASS
	MCH	QPSK	RB1#0	23.98	4.00	25.83	0.383	3	PASS
			RB1#13	24.02	4.00	25.87	0.386	3	PASS
			RB1#24	23.74	4.00	25.59	0.362	3	PASS
			RB12#0	23.14	4.00	24.99	0.316	3	PASS
			RB12#6	23.14	4.00	24.99	0.316	3	PASS
			RB12#13	23.04	4.00	24.89	0.308	3	PASS
			RB25#0	23.15	4.00	25.00	0.316	3	PASS
		16-QAM	RB1#0	23.15	4.00	25.00	0.316	3	PASS
			RB1#13	23.35	4.00	25.20	0.331	3	PASS
			RB1#24	23.02	4.00	24.87	0.307	3	PASS
			RB12#0	22.12	4.00	23.97	0.249	3	PASS

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Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (W)	Limit (W)	Verdict		
FDD LTE Band 13											
			RB12#6	22.08	4.00	23.93	0.247	3	PASS		
			RB12#13	21.97	4.00	23.82	0.241	3	PASS		
			RB25#0	22.33	4.00	24.18	0.262	3	PASS		
		HCH	QPSK	RB1#0	23.86	4.00	25.71	0.372	3	PASS	
				RB1#13	24.04	4.00	25.89	0.388	3	PASS	
				RB1#24	23.86	4.00	25.71	0.372	3	PASS	
				RB12#0	23.07	4.00	24.92	0.310	3	PASS	
				RB12#6	23.12	4.00	24.97	0.314	3	PASS	
				RB12#13	23.08	4.00	24.93	0.311	3	PASS	
				RB25#0	23.03	4.00	24.88	0.308	3	PASS	
				16-QAM	RB1#0	22.92	4.00	24.77	0.300	3	PASS
					RB1#13	22.95	4.00	24.80	0.302	3	PASS
			RB1#24		22.81	4.00	24.66	0.292	3	PASS	
			RB12#0		21.88	4.00	23.73	0.236	3	PASS	
			RB12#6		21.96	4.00	23.81	0.240	3	PASS	
			RB12#13		22.01	4.00	23.86	0.243	3	PASS	
					RB25#0	22.04	4.00	23.89	0.245	3	PASS
			10 MHz	LCH	QPSK	RB1#0	--	--	--	--	--
RB1#25	--	--				--	--	--	--		
RB1#49	--	--				--	--	--	--		
RB25#0	--	--				--	--	--	--		
RB25#13	--	--				--	--	--	--		
RB25#25	--	--				--	--	--	--		
RB50#0	--	--				--	--	--	--		
16-QAM	RB1#0	--			--	--	--	--	--		
	RB1#25	--			--	--	--	--	--		
	RB1#49	--			--	--	--	--	--		
	RB6#0	--			--	--	--	--	--		
	RB6#22	--			--	--	--	--	--		
	RB6#24	--			--	--	--	--	--		
	RB12#0	--			--	--	--	--	--		
MCH	QPSK	RB1#0		23.92	4.00	25.77	0.378	3	PASS		
		RB1#25		24.18	4.00	26.03	0.401	3	PASS		
		RB1#49		23.88	4.00	25.73	0.374	3	PASS		
		RB25#0		23.16	4.00	25.01	0.317	3	PASS		
		RB25#13		23.11	4.00	24.96	0.313	3	PASS		

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FDD LTE Band 13												
		16-QAM	RB25#25	23.04	4.00	24.89	0.308	3	PASS			
			RB50#0	23.15	4.00	25.00	0.316	3	PASS			
			RB1#0	22.92	4.00	24.77	0.300	3	PASS			
			RB1#25	23.50	4.00	25.35	0.343	3	PASS			
			RB1#49	22.91	4.00	24.76	0.299	3	PASS			
			RB6#0	23.24	4.00	25.09	0.323	3	PASS			
			RB6#22	23.16	4.00	25.01	0.317	3	PASS			
			RB6#24	22.93	4.00	24.78	0.301	3	PASS			
			RB12#0	23.08	4.00	24.93	0.311	3	PASS			
			HCH	QPSK	RB1#0	--	--	--	--	--	--	--
					RB1#25	--	--	--	--	--	--	--
					RB1#49	--	--	--	--	--	--	--
					RB25#0	--	--	--	--	--	--	--
					RB25#13	--	--	--	--	--	--	--
	RB25#25	--			--	--	--	--	--	--		
	RB50#0	--			--	--	--	--	--	--		
	16-QAM	RB1#0		--	--	--	--	--	--	--		
		RB1#25		--	--	--	--	--	--	--		
		RB1#49		--	--	--	--	--	--	--		
		RB6#0		--	--	--	--	--	--	--		
		RB6#22		--	--	--	--	--	--	--		
		RB6#24		--	--	--	--	--	--	--		
		RB12#0		--	--	--	--	--	--	--		

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5.1.2 Peak to Average Ratio

Note(s):

1. Test plots please refer to the document "Annex No: SHE24010061-01AE Data EXHIBIT A".

Peak to Average Ratio Measurement Results for LTE

FDD LTE Band 4							
Test BW	Channel	Modul.	RB Set (Size#Offset)	Peak to Average Ratio (dB)	Limit (dB)	Refer to Plot ^{Note 1}	Verdict
20 MHz	Low	QPSK	RB1#0	4.90	13	1.1	PASS
			RB100#0	5.03	13	1.2	PASS
		16QAM	RB1#0	5.67	13	1.3	PASS
	Middle	QPSK	RB1#0	4.72	13	1.4	PASS
			RB100#0	5.29	13	1.5	PASS
		16QAM	RB1#0	5.72	13	1.6	PASS
	High	QPSK	RB1#0	4.88	13	1.7	PASS
			RB100#0	5.18	13	1.8	PASS
		16QAM	RB1#0	5.75	13	1.9	PASS

FDD LTE Band 13							
Test BW	Channel	Modul.	RB Set (Size#Offset)	Peak to Average Ratio (dB)	Limit (dB)	Refer to Plot ^{Note 1}	Verdict
10 MHz	Low	QPSK	RB1#0	--	--	--	--
			RB50#0	--	--	--	--
		16QAM	RB1#0	--	--	--	--
			RB50#0	--	--	--	--
	Middle	QPSK	RB1#0	3.98	13	2.1	PASS
			RB50#0	5.14	13	2.2	PASS
		16QAM	RB1#0	4.79	13	2.3	PASS
	High	QPSK	RB1#0	--	--	--	--
			RB50#0	--	--	--	--
		16QAM	RB1#0	--	--	--	--
			RB50#0	--	--	--	--

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5.1.3 Occupied Bandwidth

Note(s):

1. All modes were tested, but only the typical data were reported in this report.
2. Test plots please refer to the document "Annex No: SHE24010061-01AE Data EXHIBIT B".

Occupied Bandwidth Measurement Results for LTE

FDD LTE Band 4						
Test BW	CH	Modul.	RB Set (Size#Offset)	99% Occupied Bandwidth (MHz)	-26 dB Bandwidth (MHz)	Refer to Plot ^{Note 2}
1.4 MHz	Low	QPSK	RB6#0	1.087	1.275	1.1
		16QAM	RB6#0	1.096	1.296	1.2
	Middle	QPSK	RB6#0	1.093	1.310	1.3
		16QAM	RB6#0	1.085	1.275	1.4
	High	QPSK	RB6#0	1.094	1.270	1.5
		16QAM	RB6#0	1.093	1.285	1.6
3 MHz	Low	QPSK	RB15#0	2.701	2.970	1.7
		16QAM	RB15#0	2.699	2.992	1.8
	Middle	QPSK	RB15#0	2.701	2.980	1.9
		16QAM	RB15#0	2.700	2.986	1.10
	High	QPSK	RB15#0	2.710	2.995	1.11
		16QAM	RB15#0	2.700	3.000	1.12
5 MHz	Low	QPSK	RB25#0	4.511	4.996	1.13
		16QAM	RB25#0	4.505	4.967	1.14
	Middle	QPSK	RB25#0	4.497	5.015	1.15
		16QAM	RB25#0	4.508	4.968	1.16
	High	QPSK	RB25#0	4.497	4.980	1.17
		16QAM	RB25#0	4.503	5.010	1.18
10 MHz	Low	QPSK	RB50#0	8.963	9.870	1.19
		16QAM	RB12#0	2.424	3.131	1.20
	Middle	QPSK	RB50#0	8.959	9.830	1.21
		16QAM	RB12#0	2.439	3.150	1.22
	High	QPSK	RB50#0	8.943	9.849	1.23
		16QAM	RB12#0	2.472	3.172	1.24
15 MHz	Low	QPSK	RB75#0	13.417	14.781	1.25
		16QAM	RB16#0	3.267	4.102	1.26
	Middle	QPSK	RB75#0	13.421	14.632	1.27
		16QAM	RB16#0	3.189	4.069	1.28
	High	QPSK	RB75#0	13.399	14.723	1.29
		16QAM	RB16#0	3.208	4.662	1.30
20 MHz	Low	QPSK	RB100#0	17.849	19.186	1.31
		16QAM	RB18#0	3.721	4.917	1.32

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	Middle	QPSK	RB100#0	17.877	19.364	1.33
		16QAM	RB18#0	3.726	5.177	1.34
	High	QPSK	RB100#0	17.893	19.585	1.35
		16QAM	RB18#0	3.753	4.854	1.36

FDD LTE Band 13

Test BW	CH	Modul.	RB Set (Size#Offset)	99% Occupied Bandwidth (MHz)	-26 dB Bandwidth (MHz)	Refer to Plot ^{Note 2}
5 MHz	Low	QPSK	RB25#0	4.511	5.006	2.1
		16QAM	RB25#0	4.498	4.968	2.2
	Middle	QPSK	RB25#0	4.501	5.010	2.3
		16QAM	RB25#0	4.511	4.979	2.4
	High	QPSK	RB25#0	4.497	4.980	2.5
		16QAM	RB25#0	4.513	5.009	2.6
10 MHz	Low	QPSK	RB50#0	--	--	--
		16QAM	RB12#0	--	--	--
	Middle	QPSK	RB50#0	8.987	9.995	2.7
		16QAM	RB12#0	2.413	3.364	2.8
	High	QPSK	RB50#0	--	--	--
		16QAM	RB12#0	--	--	--

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5.1.4 Frequency Stability

Frequency Stability Measurement Results for LTE

FDD LTE Band 4								
Test Conditions		Frequency Deviation					Verdict	
Power (V)	Temperature (°C)	QPSK 10MHz			16QAM 10MHz			
		Middle channel 1732.5 MHz			Middle channel 1732.5 MHz			
		Value		Limits	Value			Limits
		(Hz)	(ppm)		(Hz)	(ppm)		
3.8 V	-20	-0.06	0.000034	±4331.25(Hz) or 2.5ppm	0.70	0.000404	±4331.25(Hz) or 2.5ppm	PASS
	-10	-0.46	0.000266		0.66	0.000381		
	0	1.47	0.000848		1.39	0.000802		
	10	0.24	0.000139		0.62	0.000358		
	20	0.56	0.000323		-0.39	0.000225		
	25	0.50	0.000289		0.14	0.000081		
	30	0.60	0.000346		0.29	0.000167		
	40	0.56	0.000323		0.09	0.000052		
	50	-0.86	0.000496		0.74	0.000427		
3.4 V	20	0.60	0.000346		0.29	0.000167		
4.2 V	20	-0.01	0.000006		-0.19	0.000110		

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FDD LTE Band 13								
Test Conditions		Frequency Deviation						Verdict
Power (V)	Temperature (°C)	QPSK 10MHz			16QAM 10MHz			
		Middle channel 782 MHz			Middle channel 782 MHz			
		Value		Limits	Value		Limits	
		(Hz)	(ppm)		(Hz)	(ppm)		
3.8 V	-20	0.66	0.000844	±1955(Hz) or 2.5ppm	-0.13	0.000166	±1955(Hz) or 2.5ppm	PASS
	-10	0.29	0.000371		-0.73	0.000934		
	0	-0.04	0.000051		-0.19	0.000243		
	10	0.23	0.000294		-0.66	0.000844		
	20	0.34	0.000435		-0.27	0.000345		
	25	-0.76	0.000972		0.16	0.000205		
	30	0.30	0.000384		-0.60	0.000767		
	40	-0.14	0.000179		-0.47	0.000601		
	50	-0.09	0.000115		0.21	0.000269		
3.4 V	20	-0.64	0.000818		-0.82	0.001049		
4.2 V	20	0.27	0.000345		0.10	0.000128		

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5.1.5 Spurious Emission at Antenna Terminals

Note(s):

1. The frequencies of verdict which are marked by "N/A" should be ignored because they are MS carrier frequency.
2. Test plots please refer to the document "Annex No: SHE24010061-01AE Data EXHIBIT C".

FDD LTE Band 4					
Test BW	CH	Modul.	RB Set (Size#Offset)	Refer to Plot ^{Note 2}	Verdict
1.4 MHz	Low	QPSK	RB1#0	1.1	PASS
		16QAM	RB1#0	1.2	PASS
	Middle	QPSK	RB1#0	1.3	PASS
		16QAM	RB1#0	1.4	PASS
	High	QPSK	RB1#0	1.5	PASS
		16QAM	RB1#0	1.6	PASS
3 MHz	Low	QPSK	RB1#0	1.7	PASS
		16QAM	RB1#0	1.8	PASS
	Middle	QPSK	RB1#0	1.9	PASS
		16QAM	RB1#0	1.10	PASS
	High	QPSK	RB1#0	1.11	PASS
		16QAM	RB1#0	1.12	PASS
5 MHz	Low	QPSK	RB1#0	1.13	PASS
		16QAM	RB1#0	1.14	PASS
	Middle	QPSK	RB1#0	1.15	PASS
		16QAM	RB1#0	1.16	PASS
	High	QPSK	RB1#0	1.17	PASS
		16QAM	RB1#0	1.18	PASS
10 MHz	Low	QPSK	RB1#0	1.19	PASS
		16QAM	RB1#0	1.20	PASS
	Middle	QPSK	RB1#0	1.21	PASS
		16QAM	RB1#0	1.22	PASS
	High	QPSK	RB1#0	1.23	PASS
		16QAM	RB1#0	1.24	PASS
15 MHz	Low	QPSK	RB1#0	1.25	PASS
		16QAM	RB1#0	1.26	PASS
	Middle	QPSK	RB1#0	1.27	PASS
		16QAM	RB1#0	1.28	PASS
	High	QPSK	RB1#0	1.29	PASS
		16QAM	RB1#0	1.30	PASS
20 MHz	Low	QPSK	RB1#0	1.31	PASS
		16QAM	RB1#0	1.32	PASS

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	Middle	QPSK	RB1#0	1.33	PASS
		16QAM	RB1#0	1.34	PASS
	High	QPSK	RB1#0	1.35	PASS
		16QAM	RB1#0	1.36	PASS

FDD LTE Band 13

Test BW	CH	Modul.	RB Set (Size#Offset)	Refer to Plot ^{Note 2}	Verdict
5 MHz	Low	QPSK	RB1#0	2.1	PASS
		16QAM	RB1#0	2.2	PASS
	Middle	QPSK	RB1#0	2.3	PASS
		16QAM	RB1#0	2.4	PASS
	High	QPSK	RB1#0	2.5	PASS
		16QAM	RB1#0	2.6	PASS
10 MHz	Low	QPSK	--	--	--
		16QAM	--	--	--
	Middle	QPSK	RB1#0	2.7	PASS
		16QAM	RB1#0	2.8	PASS
	High	QPSK	--	--	--
		16QAM	--	--	--

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5.1.6 Band Edge

Note(s):

1. Test plots please refer to the document "Annex No: SHE24010061-01AE Data EXHIBIT D".

Band Edge Measurement Results for LTE

FDD LTE Band 4					
Test BW	CH	Modul.	RB Set (Size#Offset)	Refer to Plot ^{Note 1}	Verdict
1.4 MHz	Low	QPSK	RB1#0	1.1	PASS
			RB6#0	1.2	PASS
		16QAM	RB1#0	1.3	PASS
			RB6#0	1.4	PASS
	High	QPSK	RB1#5	1.5	PASS
			RB6#0	1.6	PASS
		16QAM	RB1#5	1.7	PASS
			RB6#0	1.8	PASS
3 MHz	Low	QPSK	RB1#0	1.9	PASS
			RB15#0	1.10	PASS
		16QAM	RB1#0	1.11	PASS
			RB15#0	1.12	PASS
	High	QPSK	RB1#14	1.13	PASS
			RB15#0	1.14	PASS
		16QAM	RB1#14	1.15	PASS
			RB15#0	1.16	PASS
5 MHz	Low	QPSK	RB1#0	1.17	PASS
			RB25#0	1.18	PASS
		16QAM	RB1#0	1.19	PASS
			RB25#0	1.20	PASS
	High	QPSK	RB1#24	1.21	PASS
			RB25#0	1.22	PASS
		16QAM	RB1#24	1.23	PASS
			RB25#0	1.24	PASS
10 MHz	Low	QPSK	RB1#0	1.25	PASS
			RB50#0	1.26	PASS
		16QAM	RB1#0	1.27	PASS
	High	QPSK	RB1#49	1.28	PASS
			RB50#0	1.29	PASS
		16QAM	RB1#49	1.30	PASS
15 MHz	Low	QPSK	RB1#0	1.31	PASS
			RB75#0	1.32	PASS

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	High	16QAM	RB1#0	1.33	PASS
		QPSK	RB1#74	1.34	PASS
			RB75#0	1.35	PASS
		16QAM	RB1#74	1.36	PASS
20 MHz	Low	QPSK	RB1#0	1.37	PASS
			RB100#0	1.38	PASS
		16QAM	RB1#0	1.39	PASS
	High	QPSK	RB1#99	1.40	PASS
			RB100#0	1.41	PASS
		16QAM	RB1#99	1.42	PASS

FDD LTE Band 13

Test BW	CH	Modul.	RB Set (Size#Offset)	Refer to Plot ^{Note 1}	Verdict
5 MHz	Low	QPSK	RB1#0	2.1	PASS
			RB25#0	2.2	PASS
		16QAM	RB1#0	2.3	PASS
			RB25#0	2.4	PASS
	High	QPSK	RB1#24	2.5	PASS
			RB25#0	2.6	PASS
		16QAM	RB1#24	2.7	PASS
			RB25#0	2.8	PASS
10 MHz	Low	QPSK	RB1#0	2.9	PASS
			RB50#0	2.10	PASS
		16QAM	RB1#0	2.11	PASS
	High	QPSK	RB1#49	2.12	PASS
			RB50#0	2.13	PASS
		16QAM	RB1#49	2.14	PASS

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5.1.7 Field Strength of Spurious Radiation

Note(s):

1. The frequencies of verdict which are marked by "N/A" should be ignored because they are MS carrier frequency.
2. When measurement frequency is above 18GHz, there is only noise floor of test system existing. So that there is no test data above 18GHz in the report.
3. Test plots please refer to the document:
"SHE24010061-01AE Data FCC PCE LTE TX EXHIBIT E B4 B13".

Field Strength of Spurious Radiation Measurement Results for LTE

FDD LTE Band 4					
Test BW	Channel	Modul.	RB Set (Size#Offset)	Refer to Plot ^{Note 3}	Verdict
1.4 MHz	Middle	QPSK	RB1#0	--	Pass
3 MHz	Middle	QPSK	RB1#0	--	Pass
5 MHz	Middle	QPSK	RB1#0	--	Pass
10 MHz	Middle	QPSK	RB1#0	--	Pass
15 MHz	Middle	QPSK	RB1#0	--	Pass
20 MHz	Middle	QPSK	RB1#0	--	Pass

FDD LTE Band 13					
Test BW	Channel	Modul.	RB Set (Size#Offset)	Refer to Plot ^{Note 3}	Verdict
5 MHz	Middle	QPSK	RB1#0	--	Pass
10 MHz	Middle	QPSK	RB1#0	--	Pass

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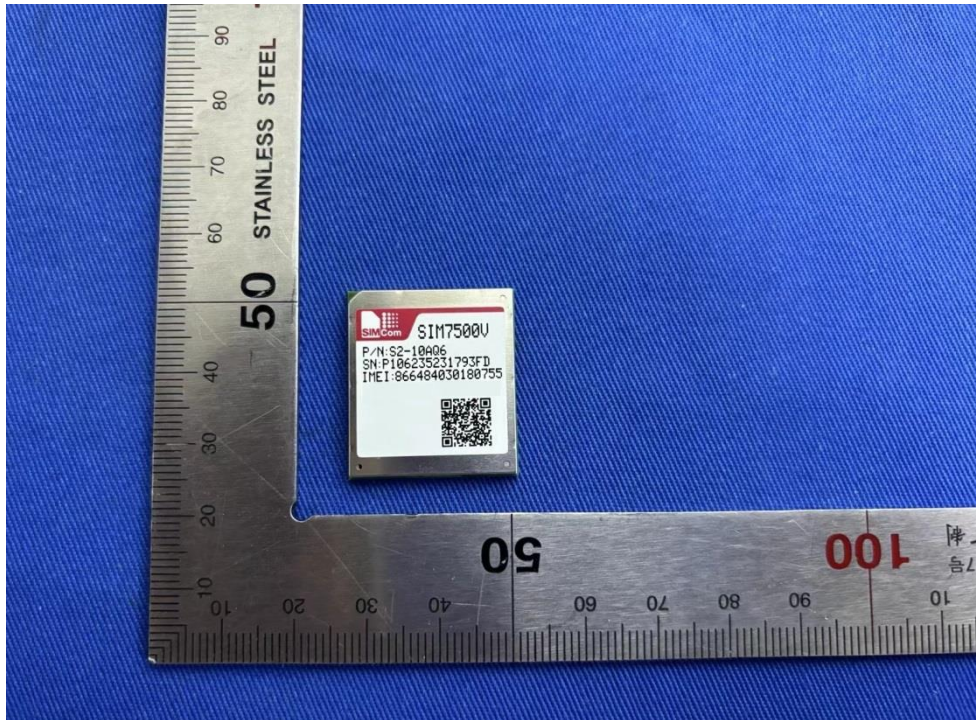
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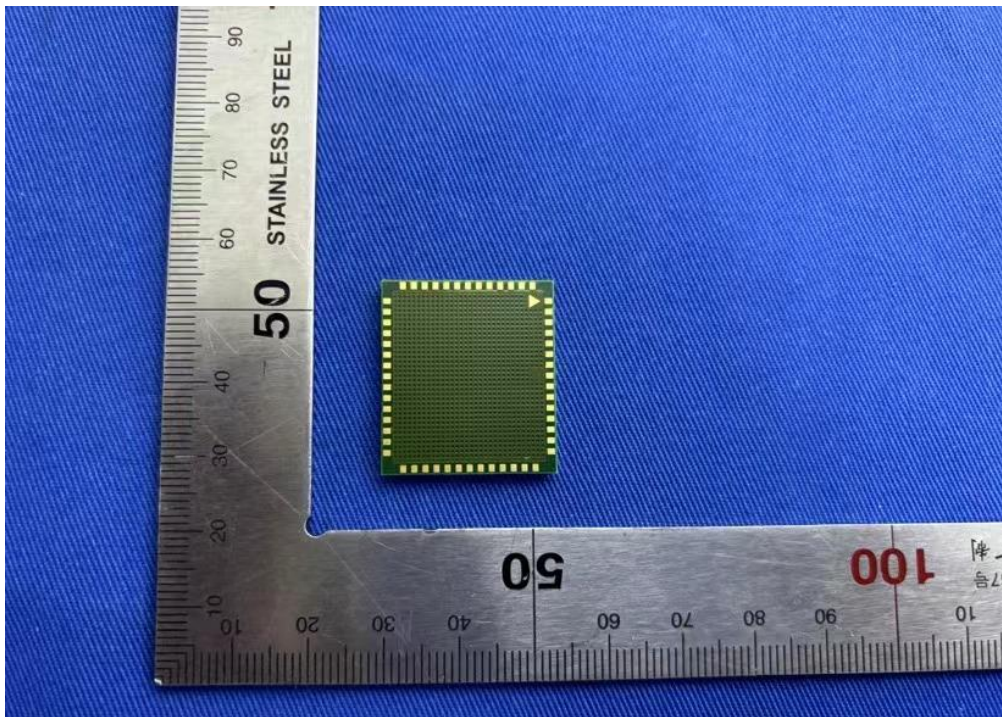
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6 Photos

6.1 Photographs of the Sample



Front of the sample



Rear of the sample

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6.2 Set-up for Conducted RF test at Antenna Port



6.3 Set-up for Spurious Emissions below 1GHz



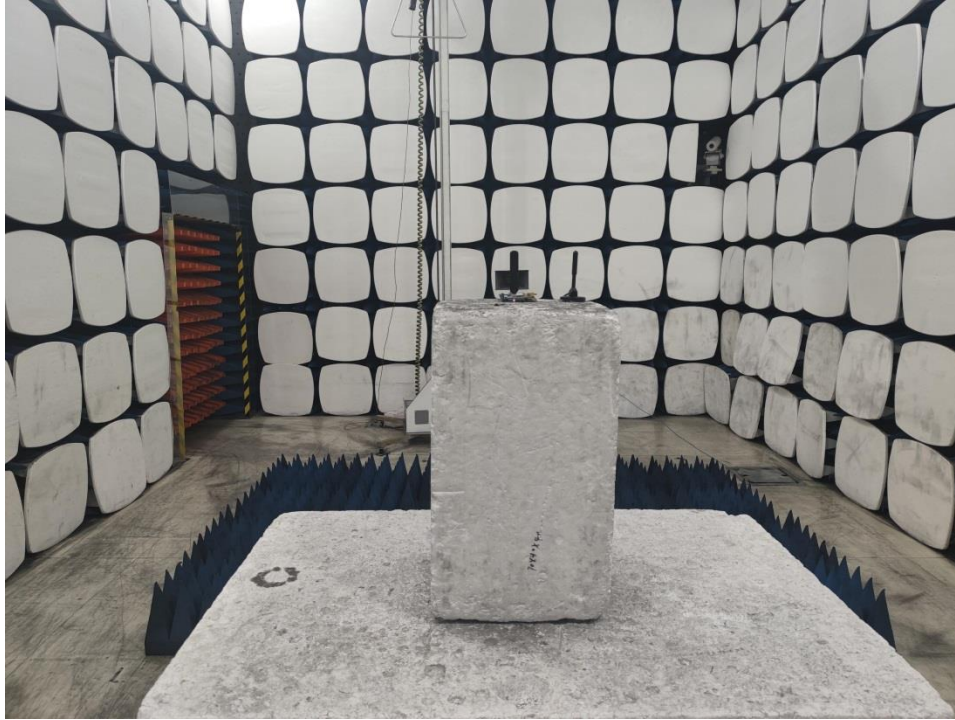
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6.4 Set-up for Spurious Emissions above 1GHz



End of the report