FCC 47 CFR PART 27 SUBPART L

TEST REPORT

For

LTE-FDD/HSPA MODULE

Model No.: SIM7600AH

Trade Name: SIMCOM

Issued to

Shanghai Simcom Ltd.
SIM Technology Building,No.633, Jinzhong Road, Changning District, Shanghai, P.R. China 200233

Issued by

Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City, Taiwan. (R.O.C.)
Issued Date: July 2, 2021

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 2, 2021	Initial Issue	ALL	Allison Chen

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION 4
2. EUT DESCRIPTION 5
3. TEST METHODOLOGY 6
3.1 DESCRIPTION OF TEST TYPE 6
3.2 THE WORST MODE OF MEASUREMENT 7
4. TEST SUMMARY 8
5. INSTRUMENT CALIBRATION 9
5.1 MEASURING INSTRUMENT CALIBRATION 9
5.2 MEASUREMENT EQUIPMENT USED 9
5.3 MEASUREMENT UNCERTAINTY 10
6. FACILITIES AND ACCREDITATIONS 11
6.1 FACILITIES 11
6.2 EQUIPMENT 11
7. SETUP OF EQUIPMENT UNDER TEST 12
7.1 SETUP CONFIGURATION OF EUT 12
7.2 SUPPORT EQUIPMENT 12
8. TEST PROCEDURE AND RESULT 13
8.1 EIRP MEASUREMENT 13
8.2 RADIATED EMISSION MEASUREMENT 20
APPENDIX A PHOTOGRAPHS OF TEST SETUP A-1

1. TEST RESULT CERTIFICATION

Applicant: Shanghai Simcom Ltd.
SIM Technology Building,No.633, Jinzhong Road,
Changning District, Shanghai, P.R. China 200233

Manufacturer: Shanghai Simcom Ltd.
SIM Technology Building,No.633, Jinzhong Road, Changning District, Shanghai, P.R. China 200233

Equipment Under Test: LTE-FDD/HSPA MODULE

Trade Name: SIMCOM

Model No.: SIM7600AH

Date of Test: April 26 ~ 29, 2021

APPLICABLE STANDARDS	
Standard	**TEST RESULT**
FCC Part 27, Subpart C, L, FCC Part 2	No non-compliance noted
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc. .

2. EUT DESCRIPTION

Product	LTE-FDD/HSPA MODULE	
Model No.	SIM7600AH	
Model Discrepancy	N/A	
Trade	SIMCOM	
Received Date	March 24, 2021	
Power Supply	Power from external 12VDC/4A DC power supply.	
Modulation Technology	LTE Band 4	QPSK, 16QAM
Frequency Range	LTE Band 4 Channel Bandwidth: 1.4MHz	1710.7MHz ~1754.3MHz
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.4MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715.0MHz ~1750.0MHz
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720MHz ~1745MHz
Antenna Specification	PCB Antenna Band 4 Gain: 4 dBi	

Remark:
1. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

3. TEST METHODOLOGY

3.1 DESCRIPTION OF TEST TYPE

The EUT (model: SIM7600AH) had been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

LTE Band 4: 1710MHz ~ 1755MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	1.4MHz		3MHz		5MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	19957	1710.7	19965	1711.5	19975	1712.5
Middle CH	20175	1732.5	20175	1732.5	20175	1732.5
High CH	20393	1754.3	20384	1753.4	20375	1752.5
Channel Bandwidth	**10MHz**		**15MHz**		**20MHz**	
	Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
Low CH	20000	1715.0	20025	1717.5	20050	1720.00
Middle CH	20175	1732.5	20175	1732.5	20175	1732.50
High CH	20350	1750.0	20325	1747.5	20300	1745.00

3.2 THE WORST MODE OF MEASUREMENT

3.2.1 The worst mode of measurement

Radiated Emission Measurement	
Test Condition	**Radiated Emission Above 1G**
Power supply Mode	**Mode 1: EUT power by Adapter**
Worst Mode	☒ **Mode 1** ☐ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**
Worst Position	☐ **Placed in fixed position.** ☒ **Placed in fixed position at X-Plane (E2-Plane)** ☐ **Placed in fixed position at Y-Plane (E1-Plane)** ☐ **Placed in fixed position at Z-Plane (H-Plane)**

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Power supply Mode	**Mode 1: EUT power by Adapter**
Worst Mode	☒ **Mode 1** ☐ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(X-Plane) were recorded in this report

4. TEST SUMMARY

FCC Standard Section	Report Section	Test Item	Result
-	2	Antenna Requirement	Pass
27.50(d)	8.1	EIRP Measurement	Pass
27.53(h)	8.2	Spurious Radiation Measurement	Pass

5. INSTRUMENT CALIBRATION

5.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

5.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: Each piece of equipment is scheduled for calibration once a year.

RF Conducted Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Coaxial Cable	Woken	WC12	CC003	06/29/2020	06/28/2021
Radio Communication Analyzer	Anritsu	MT-8820C	6201240043	07/17/2020	07/16/2021
Software	N/A				

3M 966 Chamber Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/08/2021	02/07/2022
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/24/2021	02/23/2022
Coaxial Cable	EMCI	EMC105	190914+327109/4	09/19/2020	09/18/2021
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/06/2021	01/05/2022
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/30/2020	09/29/2021
Pre-Amplifier	EMEC	EM330	060609	02/24/2021	02/23/2022
Pre-Amplifier	HP	8449B	3008A00965	12/25/2020	12/24/2021
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	07/24/2020	07/23/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Radio Communication Analyzer	Anritsu	MT-8820C	6201240043	07/17/2020	07/16/2021
Software	e3 6.11-20180413				

5.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87

Remark: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

6. FACILITIES AND ACCREDITATIONS

6.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)
Tel: 886-2-2299-9720 / Fax: 886-2-2299-9721

Canada Regisreation number: 2324G

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10: 2013 and CISPR Publication 22.

6.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

7. SETUP OF EQUIPMENT UNDER TEST

7.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

7.2 SUPPORT EQUIPMENT

No	Equipment	Brand	Model	Series No.	FCC ID
1	NB(J)	TOSHIBA	PT345T-00L002	N/A	PD97260H

Remark:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

8. TEST PROCEDURE AND RESULT

8.1 EIRP MEASUREMENT

LIMIT

According to FCC §2.1046

FCC 27.50 (d) (4): Fixed, mobile, and portable (handheld)stations operating in the 1710-1755MHz band and mobile and portable stations operating in the 1695-1710MHz and 1755-1780MHz bands are limited to 1 watt EIRP.

TEST PROCEDURES

CONDUCTED POWER MEASUREMENT:

1. The transmitter output power was connected to the call box.
2. Set EUT at maximum output power via call box.
3. Set Call box at lowest, middle and highest channels for each band and modulation.

TEST RESULTS

No non-compliance noted.

Temperature:	25.1℃	**Test Date:**	April 26, 2021
Humidity:	45% RH	**Tested by:**	Jerry Chang

LTE Band 4

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Average power (dBm)	E.I.R.P. Power
Band 4	1.4M	19957	1710.7	QPSK	1	0	0	21.23	25.23
					1	2	0	21.39	25.39
					1	5	0	21.46	**25.46**
					3	0	1	20.81	24.81
					3	1	1	20.49	24.49
					3	2	1	20.46	24.46
					6	0	1	20.58	24.58
				16QAM	1	0	1	21.02	25.02
					1	2	1	21.53	**25.53**
					1	5	1	21.49	25.49
					3	0	2	19.89	23.89
					3	1	2	19.74	23.74
					3	2	2	19.70	23.70
					6	0	2	19.67	23.67
		20175	1732.5	QPSK	1	0	0	21.50	25.50
					1	2	0	21.53	**25.53**
					1	5	0	21.47	25.47
					3	0	1	20.93	24.93
					3	1	1	20.89	24.89
					3	2	1	20.83	24.83
					6	0	1	20.82	24.82
				16QAM	1	0	1	21.31	25.31
					1	2	1	21.56	**25.56**
					1	5	1	21.45	25.45
					3	0	2	20.04	24.04
					3	1	2	19.89	23.89
					3	2	2	20.05	24.05
					6	0	2	19.88	23.88
		20392	1754.2	QPSK	1	0	0	21.57	**25.57**
					1	2	0	21.52	25.52
					1	5	0	21.47	25.47
					3	0	1	21.04	25.04
					3	1	1	20.81	24.81
					3	2	1	20.73	24.73
					6	0	1	20.83	24.83
				16QAM	1	0	1	21.03	**25.03**
					1	2	1	20.95	24.95
					1	5	1	20.72	24.72
					3	0	2	19.99	23.99
					3	1	2	19.95	23.95
					3	2	2	19.92	23.92
					6	0	2	19.89	23.89

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Average power (dBm)	E.I.R.P. Power
Band 4	3M	19965	1711.5	QPSK	1	0	0	21.24	25.24
					1	7	0	21.40	25.40
					1	14	0	21.47	**25.47**
					8	0	1	20.82	24.82
					8	4	1	20.50	24.50
					8	7	1	20.47	24.47
					15	0	1	20.59	24.59
				16QAM	1	0	1	21.03	25.03
					1	7	1	21.54	**25.54**
					1	14	1	21.50	25.50
					8	0	2	19.90	23.90
					8	4	2	19.75	23.75
					8	7	2	19.71	23.71
					15	0	2	19.68	23.68
		20175	1732.5	QPSK	1	0	0	21.51	25.51
					1	7	0	21.54	**25.54**
					1	14	0	21.48	25.48
					8	0	1	20.94	24.94
					8	4	1	20.90	24.90
					8	7	1	20.84	24.84
					15	0	1	20.83	24.83
				16QAM	1	0	1	21.32	25.32
					1	7	1	21.57	**25.57**
					1	14	1	21.46	25.46
					8	0	2	20.05	24.05
					8	4	2	19.90	23.90
					8	7	2	20.06	24.06
					15	0	2	19.89	23.89
		20384	1753.4	QPSK	1	0	0	21.58	**25.58**
					1	7	0	21.53	25.53
					1	14	0	21.48	25.48
					8	0	1	21.05	25.05
					8	4	1	20.82	24.82
					8	7	1	20.74	24.74
					15	0	1	20.84	24.84
				16QAM	1	0	1	21.04	**25.04**
					1	7	1	20.96	24.96
					1	14	1	20.73	24.73
					8	0	2	20.00	24.00
					8	4	2	19.96	23.96
					8	7	2	19.93	23.93
					15	0	2	19.90	23.90

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Average power (dBm)	E.I.R.P. Power
Band 4	5M	19975	1712.5	QPSK	1	0	0	21.26	25.26
					1	12	0	21.42	25.42
					1	24	0	21.49	**25.49**
					12	0	1	20.84	24.84
					12	6	1	20.52	24.52
					12	11	1	20.49	24.49
					25	0	1	20.61	24.61
				16QAM	1	0	1	21.05	25.05
					1	12	1	21.56	**25.56**
					1	24	1	21.52	25.52
					12	0	2	19.92	23.92
					12	6	2	19.77	23.77
					12	11	2	19.73	23.73
					25	0	2	19.70	23.70
		20175	1732.5	QPSK	1	0	0	21.52	25.52
					1	12	0	21.55	**25.55**
					1	24	0	21.49	25.49
					12	0	1	20.95	24.95
					12	6	1	20.91	24.91
					12	11	1	20.85	24.85
					25	0	1	20.84	24.84
				16QAM	1	0	1	21.33	25.33
					1	12	1	21.58	**25.58**
					1	24	1	21.47	25.47
					12	0	2	20.06	24.06
					12	6	2	19.91	23.91
					12	11	2	20.07	24.07
					25	0	2	19.90	23.90
		20375	1752.5	QPSK	1	0	0	21.59	**25.59**
					1	12	0	21.54	25.54
					1	24	0	21.49	25.49
					12	0	1	21.06	25.06
					12	6	1	20.83	24.83
					12	11	1	20.75	24.75
					25	0	1	20.85	24.85
				16QAM	1	0	1	21.05	**25.05**
					1	12	1	20.97	24.97
					1	24	1	20.74	24.74
					12	0	2	20.01	24.01
					12	6	2	19.97	23.97
					12	11	2	19.94	23.94
					25	0	2	19.91	23.91

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Average power (dBm)	E.I.R.P. Power
Band 4	10M	20000	1715.0	QPSK	1	0	0	21.27	25.27
					1	24	0	21.43	25.43
					1	49	0	21.50	**25.50**
					25	0	1	20.85	24.85
					25	12	1	20.53	24.53
					25	24	1	20.50	24.50
					50	0	1	20.62	24.62
				16QAM	1	0	1	21.06	25.06
					1	24	1	21.57	**25.57**
					1	49	1	21.53	25.53
					25	0	2	19.93	23.93
					25	12	2	19.78	23.78
					25	24	2	19.74	23.74
					50	0	2	19.71	23.71
		20175	1732.5	QPSK	1	0	0	21.54	25.54
					1	24	0	21.57	**25.57**
					1	49	0	21.51	25.51
					25	0	1	20.97	24.97
					25	12	1	20.93	24.93
					25	24	1	20.87	24.87
					50	0	1	20.86	24.86
				16QAM	1	0	1	21.35	25.35
					1	24	1	21.60	**25.60**
					1	49	1	21.49	25.49
					25	0	2	20.08	24.08
					25	12	2	19.93	23.93
					25	24	2	20.09	24.09
					50	0	2	19.92	23.92
		20350	1750.0	QPSK	1	0	0	21.62	**25.62**
					1	24	0	21.57	25.57
					1	49	0	21.52	25.52
					25	0	1	21.09	25.09
					25	12	1	20.86	24.86
					25	24	1	20.78	24.78
					50	0	1	20.88	24.88
				16QAM	1	0	1	21.08	**25.08**
					1	24	1	21.00	25.00
					1	49	1	20.77	24.77
					25	0	2	20.04	24.04
					25	12	2	20.00	24.00
					25	24	2	19.97	23.97
					50	0	2	19.94	23.94

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Average power (dBm)	E.I.R.P. Power
Band 4	15M	20025	1717.5	QPSK	1	0	0	21.30	25.30
					1	37	0	21.46	25.46
					1	74	0	21.53	**25.53**
					36	0	1	20.88	24.88
					36	18	1	20.56	24.56
					36	35	1	20.53	24.53
					75	0	1	20.65	24.65
				16QAM	1	0	1	21.09	25.09
					1	37	1	21.60	**25.60**
					1	74	1	21.56	25.56
					36	0	2	19.96	23.96
					36	18	2	19.81	23.81
					36	35	2	19.77	23.77
					75	0	2	19.74	23.74
		20175	1732.5	QPSK	1	0	0	21.56	25.56
					1	37	0	21.59	**25.59**
					1	74	0	21.53	25.53
					36	0	1	20.99	24.99
					36	18	1	20.95	24.95
					36	35	1	20.89	24.89
					75	0	1	20.88	24.88
				16QAM	1	0	1	21.37	25.37
					1	37	1	21.62	**25.62**
					1	74	1	21.51	25.51
					36	0	2	20.10	24.10
					36	18	2	19.95	23.95
					36	35	2	20.11	24.11
					75	0	2	19.94	23.94
		20325	1747.5	QPSK	1	0	0	21.64	**25.64**
					1	37	0	21.59	25.59
					1	74	0	21.54	25.54
					36	0	1	21.11	25.11
					36	18	1	20.88	24.88
					36	35	1	20.80	24.80
					75	0	1	20.90	24.90
				16QAM	1	0	1	21.10	**25.10**
					1	37	1	21.02	25.02
					1	74	1	20.79	24.79
					36	0	2	20.06	24.06
					36	18	2	20.02	24.02
					36	35	2	19.99	23.99
					75	0	2	19.96	23.96

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Average power (dBm)	E.I.R.P. Power
Band 4	20M	20050	1720.0	QPSK	1	0	0	21.38	25.38
					1	49	0	21.54	25.54
					1	99	0	21.61	**25.61**
					50	0	1	20.96	24.96
					50	24	1	20.64	24.64
					50	49	1	20.61	24.61
					100	0	1	20.73	24.73
				16QAM	1	0	1	21.17	25.17
					1	49	1	21.68	**25.68**
					1	99	1	21.64	25.64
					50	0	2	20.04	24.04
					50	24	2	19.89	23.89
					50	49	2	19.85	23.85
					100	0	2	19.82	23.82
		20175	1732.5	QPSK	1	0	0	21.62	25.62
					1	49	0	21.65	**25.65**
					1	99	0	21.59	25.59
					50	0	1	21.05	25.05
					50	24	1	21.01	25.01
					50	49	1	20.95	24.95
					100	0	1	20.94	24.94
				16QAM	1	0	1	21.43	25.43
					1	49	1	21.68	**25.68**
					1	99	1	21.57	25.57
					50	0	2	20.16	24.16
					50	24	2	20.01	24.01
					50	49	2	20.17	24.17
					100	0	2	20.00	24.00
		20300	1745.0	QPSK	1	0	0	21.69	**25.69**
					1	49	0	21.64	25.64
					1	99	0	21.59	25.59
					50	0	1	21.16	25.16
					50	24	1	20.93	24.93
					50	49	1	20.85	24.85
					100	0	1	20.95	24.95
				16QAM	1	0	1	21.15	**25.15**
					1	49	1	21.07	25.07
					1	99	1	20.84	24.84
					50	0	2	20.11	24.11
					50	24	2	20.07	24.07
					50	49	2	20.04	24.04
					100	0	2	20.01	24.01

8.2 RADIATED EMISSION MEASUREMENT

LIMITS

FCC §27.53(h), Band 4

(h) AWS emission limits—(1) General protection levels. 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 log10 (P) dB.

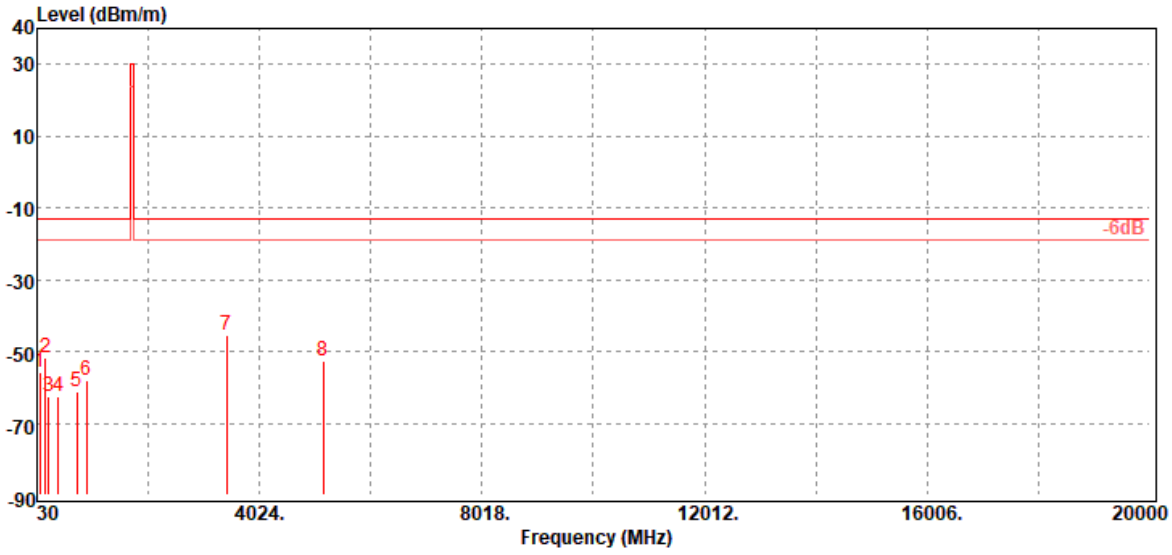
TEST PROCEDURES

1. According to KDB 971168 D01 and C63.26: 2015.
2. The EUT was placed on a turntable
   (1) Below 1G : 0.8m
   (2) Above 1G : 1.5m
   (3) EUT set 3m from the receiving antenna
   (4) The table was rotated 360 degrees of the highest spurious emission to determine the position.
3. Set the spectrum analyzer , RBW=1MHz, VBW=3MHz.
4. A horn antenna was driven by a signal generator.
5. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.

Test Results

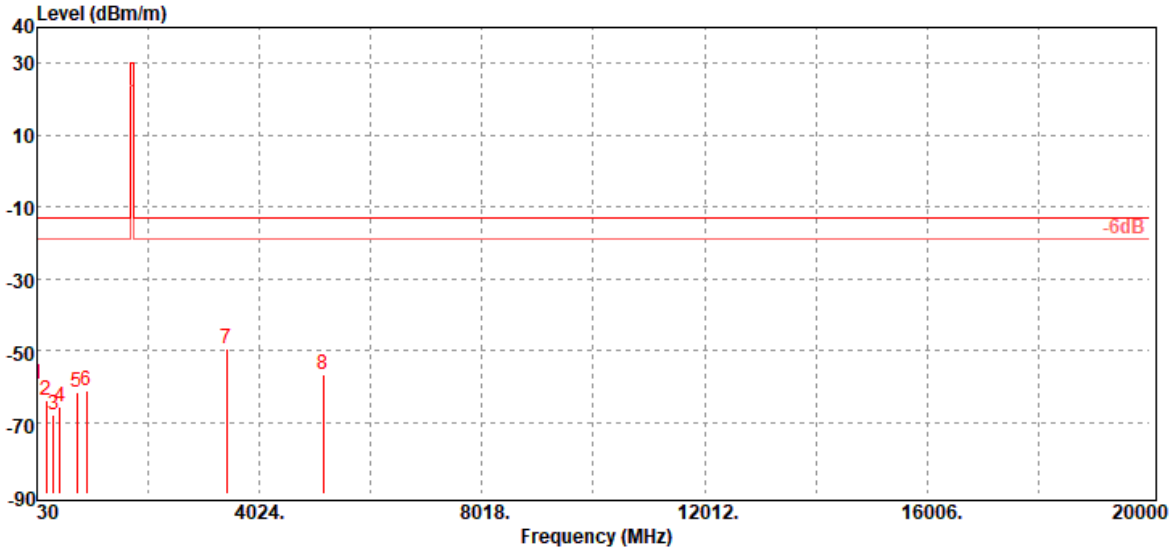
LTE Band 4 / BW: 20MHz / QPSK / RB =1, RB Offset = 0

Operation Mode:	Tx / Low CH	**Test Date:**	April 29, 2021
Temperature:	22.6℃	**Tested by:**	Ray Li
Humidity:	58% RH	**Polarity:**	Ver.



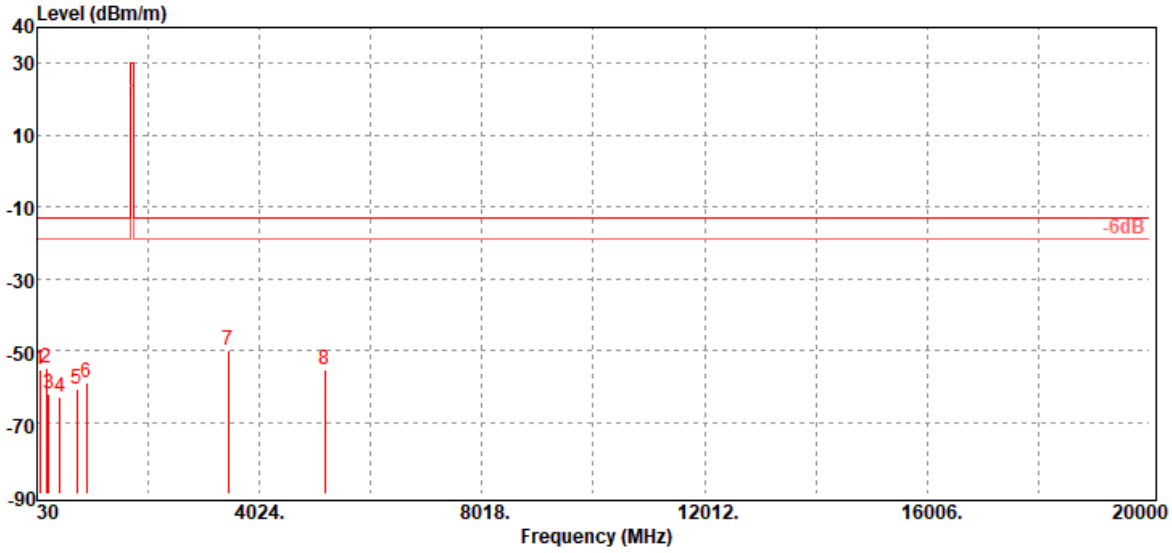
Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
86.26	-55.86	-47.55	-7.55	-0.76	-13.00	-42.86	V
175.50	-51.65	-45.71	-4.85	-1.09	-13.00	-38.65	V
241.46	-62.61	-59.29	-2.04	-1.28	-13.00	-49.61	V
418.97	-62.74	-59.14	-1.90	-1.70	-13.00	-49.74	V
747.80	-61.18	-57.47	-1.40	-2.31	-13.00	-48.18	V
924.34	-58.12	-54.24	-1.30	-2.58	-13.00	-45.12	V
3440.00	-45.59	-52.80	12.72	-5.51	-13.00	-32.59	V
5160.00	-52.86	-58.91	12.76	-6.71	-13.00	-39.86	V

Operation Mode:	Tx / Low CH	**Test Date:**	April 29, 2021
Temperature:	22.6℃	**Tested by:**	Ray Li
Humidity:	58% RH	**Polarity:**	Hor.



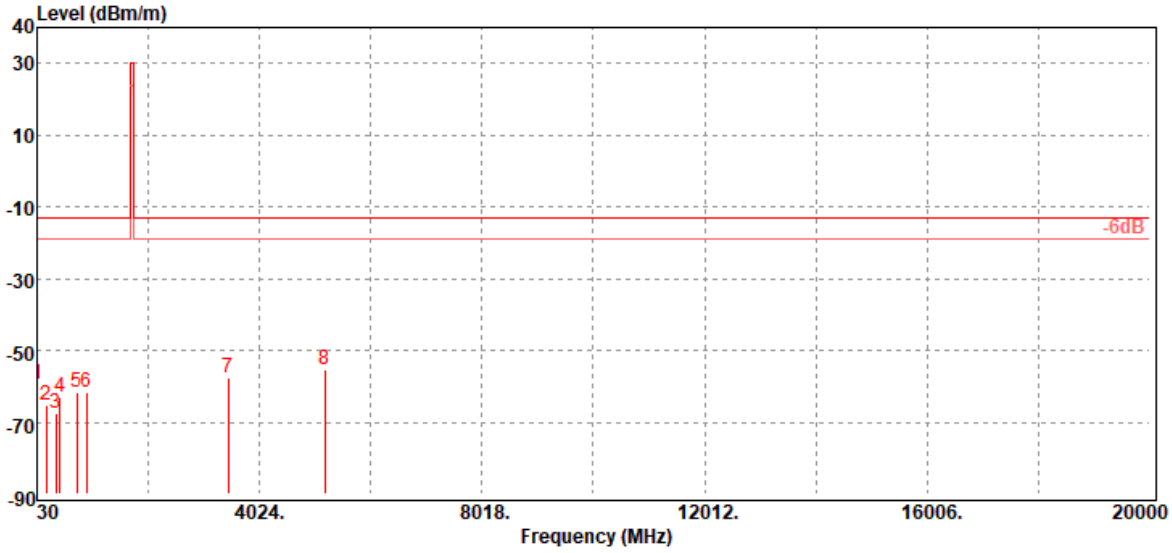
Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
31.94	-59.57	-30.94	-28.16	-0.47	-13.00	-46.57	H
197.81	-63.86	-58.12	-4.58	-1.16	-13.00	-50.86	H
330.70	-68.01	-64.82	-1.69	-1.50	-13.00	-55.01	H
445.16	-65.85	-62.00	-2.10	-1.75	-13.00	-52.85	H
747.80	-61.69	-57.98	-1.40	-2.31	-13.00	-48.69	H
924.34	-61.05	-57.17	-1.30	-2.58	-13.00	-48.05	H
3440.00	-49.35	-56.56	12.72	-5.51	-13.00	-36.35	H
5160.00	-56.56	-62.61	12.76	-6.71	-13.00	-43.56	H

Operation Mode:	Tx / Mid CH	**Test Date:**	April 29, 2021
Temperature:	22.6℃	**Tested by:**	Ray Li
Humidity:	58% RH	**Polarity:**	Ver.



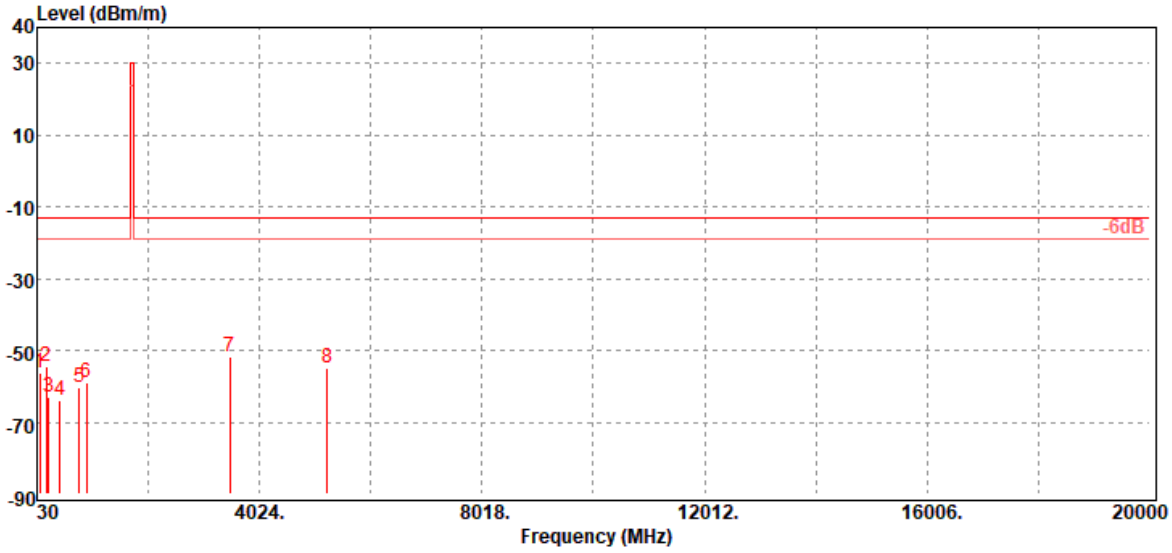
Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
86.26	-55.50	-47.19	-7.55	-0.76	-13.00	-42.50	V
197.81	-54.94	-49.20	-4.58	-1.16	-13.00	-41.94	V
241.46	-62.33	-59.01	-2.04	-1.28	-13.00	-49.33	V
445.16	-62.90	-59.05	-2.10	-1.75	-13.00	-49.90	V
747.80	-60.75	-57.04	-1.40	-2.31	-13.00	-47.75	V
924.34	-58.96	-55.08	-1.30	-2.58	-13.00	-45.96	V
3465.00	-49.86	-56.97	12.64	-5.53	-13.00	-36.86	V
5197.00	-55.28	-61.51	12.98	-6.75	-13.00	-42.28	V

Operation Mode:	Tx / Mid CH	**Test Date:**	April 29, 2021
Temperature:	22.6℃	**Tested by:**	Ray Li
Humidity:	58% RH	**Polarity:**	Hor.



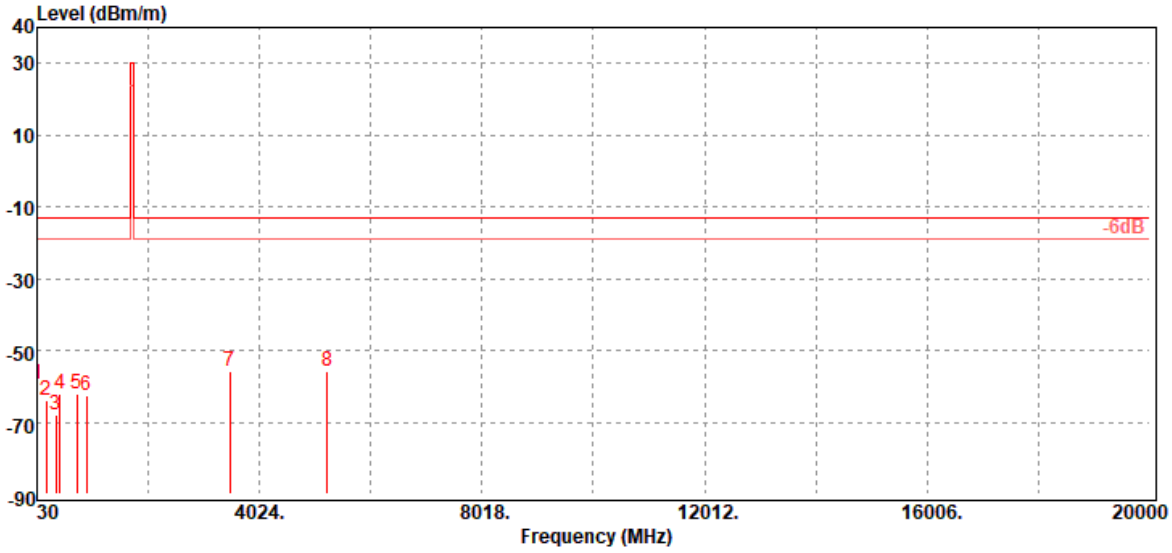
Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
31.94	-59.36	-30.73	-28.16	-0.47	-13.00	-46.36	H
197.81	-65.37	-59.63	-4.58	-1.16	-13.00	-52.37	H
374.35	-67.69	-64.38	-1.71	-1.60	-13.00	-54.69	H
445.16	-62.79	-58.94	-2.10	-1.75	-13.00	-49.79	H
747.80	-61.87	-58.16	-1.40	-2.31	-13.00	-48.87	H
924.34	-61.58	-57.70	-1.30	-2.58	-13.00	-48.58	H
3465.00	-57.49	-64.60	12.64	-5.53	-13.00	-44.49	H
5197.00	-55.26	-61.49	12.98	-6.75	-13.00	-42.26	H

Operation Mode:	Tx / High CH	**Test Date:**	April 29, 2021
Temperature:	22.6℃	**Tested by:**	Ray Li
Humidity:	58% RH	**Polarity:**	Ver.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
86.26	-56.18	-47.87	-7.55	-0.76	-13.00	-43.18	V
197.81	-54.33	-48.59	-4.58	-1.16	-13.00	-41.33	V
241.46	-62.82	-59.50	-2.04	-1.28	-13.00	-49.82	V
445.16	-64.00	-60.15	-2.10	-1.75	-13.00	-51.00	V
791.45	-60.21	-56.58	-1.27	-2.36	-13.00	-47.21	V
924.34	-59.05	-55.17	-1.30	-2.58	-13.00	-46.05	V
3490.00	-51.77	-58.76	12.54	-5.55	-13.00	-38.77	V
5235.00	-54.76	-61.11	13.14	-6.79	-13.00	-41.76	V

Operation Mode:	Tx / High CH	**Test Date:**	April 29, 2021
Temperature:	22.6℃	**Tested by:**	Ray Li
Humidity:	58% RH	**Polarity:**	Hor.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
31.94	-59.49	-30.86	-28.16	-0.47	-13.00	-46.49	H
197.81	-63.90	-58.16	-4.58	-1.16	-13.00	-50.90	H
374.35	-68.16	-64.85	-1.71	-1.60	-13.00	-55.16	H
445.16	-62.31	-58.46	-2.10	-1.75	-13.00	-49.31	H
747.80	-62.31	-58.60	-1.40	-2.31	-13.00	-49.31	H
924.34	-62.34	-58.46	-1.30	-2.58	-13.00	-49.34	H
3490.00	-55.71	-62.70	12.54	-5.55	-13.00	-42.71	H
5235.00	-56.02	-62.37	13.14	-6.79	-13.00	-43.02	H

- End of Test Report -