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TEST REPORT

Report No.: **CTC20210136E03**

FCC ID.....: **2AC88-GLMB20A01**

Applicant.....: **HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED**

Address.....: Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong

Manufacturer.....: HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED

Address.....: Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong

Product Name.....: **LTE Module**

Trade Mark.....: GlocalMe

Model/Type reference.....: SC20-A

Listed Model(s): N/A


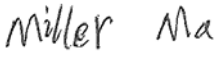
Standard.....: **FCC CFR47 PART 22H, 24E, 27, 90S**

Date of receipt of test sample.: Feb. 02, 2020

Date of testing.....: Feb. 03, 2021 ~ Mar. 15, 2021

Date of issue.....: Mar. 16, 2021

Result.....: **PASS**

Compiled by:		
(Printed name+signature)	Terry Su	
Supervised by:		
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Approved by:		
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Testing Laboratory Name....: **CTC Laboratories, Inc.**

Address.....: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

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1. SUMMARY

1.1. Test Standards

- [FCC Rules Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
- [FCC Rules Part 22](#): PRIVATE LAND MOBILE RADIO SERVICES.
- [FCC Part 22 Subpart H](#): Cellular Radiotelephone Service.
- [FCC Rules Part 24](#): PUBLIC MOBILE SERVICES
- [FCC Rules Part 27](#): MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES
- [FCC Part 90 Subpart S](#): Regulations Governing Licensing and Use of Frequencies in the 806-824, 851-869, 896-901, and 935-940 MHz Bands.
- [ANSI C63.26: 2015](#): American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
- [KDB 971168 D01 Power Meas License Digital Systems v03](#): MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS
- [RSS-Gen Issue 5](#): General Requirements for Compliance of Radio Apparatus.
- [RSS-130 Issue 1](#): Mobile Broadband Services (MBS) Equipment Operating in the Frequency Bands 698-756 MHz and 777-787 MHz
- [RSS-132 Issue 3](#): Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz.
- [RSS-133 Issue 6](#): 2 GHz Personal Communications Services.
- [RSS-139 Issue 3](#): Advanced Wireless Services Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz
- [RSS-199 Issue 3](#): Broadband Radio Service (BRS) Equipment Operating in the Band 2500–2690 MHz

1.2. Report version

Revised No.	Date of issue	Description
01	Mar. 16, 2021	Original



1.3. Test Description

Test Item	Section in CFR 47	RSS Rule	Result	Test Engineer
Conducted Output Power	Part 2.1046 Part 22.913(a) Part 24.232(c) Part 27.50	RSS-130(4.4) RSS-132(5.4) RSS-133(6.4) RSS-139(6.4)	N/A	N/A
Peak-to-Average Ratio	Part 24.232 Part 27.50	RSS-130(4.4) RSS-132(5.4) RSS-133(6.4) RSS-139(6.4)	N/A	N/A
99% Occupied Bandwidth & 26 dB Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b) Part 27.53 Part 90.209	RSS-GEN(6.6) RSS-130(3.1) RSS-133(6.5) RSS-139(6.5) RSS-199(4.2)	N/A	N/A
Band Edge	Part 2.1051 Part 22.917 Part 24.238 Part 27.53 Part 90.691	RSS-130(4.6) RSS-132(5.5) RSS-133(6.5) RSS-139(6.5)	N/A	N/A
Conducted Spurious Emissions	Part 2.1051 Part 22.917 Part 24.238 Part 27.53 Part 90.691	RSS-130(4.6) RSS-132(5.5) RSS-133(6.5) RSS-139(6.5)	N/A	N/A
Frequency stability VS Temperature	Part 2.1055(a)(1)(b) Part 22.355 Part 24.235 Part 27.54 Part 90.213	RSS-GEN(6.11) RSS-130(4.3) RSS-132(5.3) RSS-133(6.3) RSS-199(4.3)	N/A	N/A
Frequency stability VS Voltage	Part 2.1055(d)(1)(2) Part 22.355 Part 24.235 Part 27.54 Part 90.213	RSS-GEN(6.11) RSS-132(5.3) RSS-133(6.3) RSS-139(6.3) RSS-199(4.3)	N/A	N/A
ERP and EIRP	Part 22.913(a) Part 24.232(b) Part 27.50 Part 90.635	RSS-130(4.4) RSS-132(5.4) RSS-133(6.4) RSS-139(6.4) RSS-199(4.4)	Pass	Rod Luo
Radiated Spurious Emissions	Part 2.1053 Part 22.917 Part 24.238 Part 27.53 Part 90.691	RSS-130(4.6) RSS-132(5.5) RSS-133(6.5) RSS-139(6.5) RSS-199(4.5)	Pass	Rod Luo
Receiver Spurious Emissions	/	RSS-GEN(7.1.3)	N/A	N/A

Note: The measurement uncertainty is not included in the test result.

The antenna was replaced, Only test item for Radiated Spurious Emissions and ERP or EIRP test was performed for this report. For other test data, Refer to report number: FG741007B.



1.4. Test Facility

Address of the report laboratory

CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5365

CTC Laboratories, Inc. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025:2017 General Requirements) the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC)Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.



1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01” Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1” and TR-100028-02 “Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 “ and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTC Laboratories, Inc. is reported:

Test Items	Measurement Uncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emission 1~18GHz	5.16 dB	(1)
Radiated Emission 18-40GHz	5.54 dB	(1)
Occupied Bandwidth	-----	(1)
Emission Mask	-----	(1)
Modulation Characteristic	-----	(1)
Transmitter Frequency Behavior	-----	(1)

Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

1.6. Environmental conditions

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

Normal Temperature:	20°C-25°C
Relative Humidity:	50 %-55 %
Air Pressure:	101kPa



2. GENERAL INFORMATION

2.1. Client Information

Applicant:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong
Manufacturer:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong
Factory:	Shenzhen uCloudlink Network Technology Co., Ltd.
Address:	3rd Floor, A part of Building 1, Shenzhen Software Industry Base, Nanshan District Xuefu Road, 518057 Shenzhen City, Guangdong, China



2.2. General Description of EUT

Product Name:	LTE Module
Trade Mark:	GlocalMe
Model/Type reference:	SC20-A
Listed Model(s):	N/A
Hardware version:	R1.0
Software version:	SC20ASAR04A03H8G
LTE	
Operation Band:	Band 2: UL: 1850.7MHz~1909.3MHz, DL: 1930.7MHz~1989.3MHz Band 4: UL: 1710.7MHz~1754.3MHz, DL: 2110.7MHz~2154.3MHz Band 5: UL: 824.7MHz~848.3MHz, DL: 869.7MHz~893.3MHz Band 7: UL: 2502.5MHz~2567.5MHz, DL: 2622.5MHz~2687.5MHz Band 12: UL: 699.7MHz~715.3MHz, DL: 729.7MHz~745.3MHz Band 13: UL: 779.5MHz~784.5MHz, DL: 748.5MHz~753.5MHz Band 25: UL: 1850.7MHz~1914.3MHz, DL: 1930.7MHz~1994.3MHz Band 26: UL: 814.7MHz~823.3MHz, DL: 859.7MHz~868.3MHz Band 26: UL: 824.7MHz~848.3MHz, DL: 869.7MHz~893.3MHz
Modulation Type:	QPSK, 16QAM
Antenna type:	FPC Antenna
Antenna Gain:	Main Antenna: FDD Band 2: 3.49dBi Max FDD Band 4: 4.95dBi Max FDD Band 5: 2.18dBi Max FDD Band 7: 4.03dBi Max FDD Band 12: 1.78dBi Max FDD Band 13: 3.10dBi Max FDD Band 25: 3.49dBi Max FDD Band 26: 2.18dBi Max



2.3. Description of Test Modes and Test Frequency

The EUT has been tested under typical operating condition. The CMW500 used to control the EUT staying in continuous transmitting and receiving mode for testing.

Test Frequency:

Band 2			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	18607	1850.70
	3	18615	1851.50
	5	18625	1852.50
	10	18650	1855.00
	15	18675	1857.50
	20	18700	1860.00
Mid Range	1.4/3/5/10/15/20	18900	1880.00
High Range	1.4	19193	1909.30
	3	19185	1908.50
	5	19175	1907.50
	10	19150	1905.00
	15	19125	1902.50
	20	19100	1900.00

Band 4			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	19957	1710.70
	3	19965	1711.50
	5	19975	1712.50
	10	20000	1715.00
	15	20025	1717.50
	20	20050	1720.00
Mid Range	1.4/3/5/10/15/20	20175	1732.50
High Range	1.4	20393	1754.30
	3	20385	1753.50
	5	20375	1752.50
	10	20350	1750.00
	15	20325	1747.50
	20	20300	1745.00

Band 5			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	20407	824.70
	3	20415	825.50
	5	20425	826.50
	10	20450	829.00
Mid Range	1.4/3/5/10	20525	836.50
High Range	1.4	20643	848.30
	3	20635	847.50
	5	20625	846.50
	10	20600	844.00



Band 7			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	5	20775	2502.50
	10	20800	2505.00
	15	20825	2507.50
	20	20850	2510.00
Mid Range	5/10/15/20	21100	2535.00
High Range	5	21425	2567.50
	10	21400	2565.00
	15	21375	2562.50
	20	21350	2560.00

Band 12			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	23017	699.70
	3	23025	700.50
	5	23035	701.50
	10	23060	704.00
Mid Range	1.4/3/5/10	23095	707.50
High Range	1.4	23173	715.30
	3	23165	714.50
	5	23155	713.50
	10	23130	711.00

Band 13			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	5	23205	779.50
	10	23230	782.00
Mid Range	5/10	23230	782.00
High Range	5	23255	784.50
	10	23230	782.00

Band 25			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	26047	1850.70
	3	26055	1851.50
	5	26065	1852.50
	10	26090	1855.00
	15	26115	1857.50
	20	26140	1860.00
Mid Range	1.4/3/5/10/15/20	26365	1882.50
High Range	1.4	26683	1914.30
	3	26675	1913.50
	5	26665	1912.50
	10	26640	1910.00
	15	26615	1907.50
	20	26590	1905.00



Band 26/ 814.7~823.3 MHz			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	26697	814.7
	3	26705	815.5
	5	26715	816.5
	15	26765	821.5
Mid Range	1.4/3/5/10	26740	819.0
High Range	1.4	26783	823.3
	3	26775	822.5
	5	26765	821.5

Band 26/ 824.7~848.3MHz			
Test channel	Bandwidth(MHz)	N _{UL}	Frequency of Uplink (MHz)
Low Range	1.4	26797	824.7
	3	26805	825.5
	5	26815	826.5
	10	26840	829.0
	15	26865	831.5
Mid Range	1.4/3/5/10/15	26915	836.5
High Range	1.4	27033	848.3
	3	27025	847.5
	5	27015	846.5
	10	26990	844.0
	15	26965	841.5



2.4. Measurement Instruments List

Output Power (Radiated) & Radiated Spurious Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100967	Dec. 25, 2021
2	High pass filter	Compliance Direction systems	BSU-6	34202	Dec. 25, 2021
3	Log-Bicon Antenna	Schwarzbeck	CBL6141A	4180	Dec. 25, 2021
4	Log-Bicon Antenna	Schwarzbeck	CBL6141A	4181	Dec. 25, 2021
5	Spectrum Analyzer	HP	8563E	02052	Dec. 25, 2021
6	Horn Antenna	Schwarzbeck	BBHA 9120D	648	Dec. 25, 2021
7	Horn Antenna	Schwarzbeck	BBHA 9120D	649	Dec. 25, 2021
8	Ultra-Broadband Antenna	Schwarzbeck	BBHA9170	25841	Dec. 25, 2021
9	Ultra-Broadband Antenna	Schwarzbeck	BBHA9170	25842	Dec. 25, 2021
10	Pre-Amplifier	HP	8447D	1937A03050	Dec. 25, 2021
11	Pre-Amplifier	EMCI	EMC051835	980075	Dec. 25, 2021
12	Splitter	Mini-Circuit	ZAPD-4	400059	Dec. 25, 2021
13	Signal Generator	Agilent	N5182A	1019356	Dec. 25, 2021
14	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	116410	Dec. 25, 2021
15	Antenna Mast	UC	UC3000	N/A	N/A
16	Antenna mast	MATURO	TAM-4.0-P	N/A	N/A
17	Turn Table	UC	UC3000	N/A	N/A
18	Cable Below 1GHz	Schwarzbeck	AK9515E	33155	Dec. 25, 2021
19	Cable Above 1GHz	Hubersuhner	SUCOFLEX102	DA1580	Dec. 25, 2021

Output Power(Conducted) & Occupied Bandwidth & Emission Bandwidth & Band Edge Compliance & Conducted Spurious Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	UNIVERSAL RADIO COMMUNICATION	Rohde & Schwarz	CMU200	114694	Dec. 25, 2021
2	Spectrum Analyzer	Rohde & Schwarz	FSU	100105	Dec. 25, 2021
3	Spectrum Analyzer	Rohde & Schwarz	FUV40-N	101331	Mar. 15, 2021
4	Splitter	Mini-Circuit	ZAPD-4	400059	Dec. 25, 2021

Frequency Stability					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	UNIVERSAL RADIO COMMUNICATION	Rohde & Schwarz	CMU200	114694	Dec. 25, 2021
2	Spectrum Analyzer	Rohde & Schwarz	FSU	100105	Dec. 25, 2021
3	Spectrum Analyzer	Rohde & Schwarz	FUV40-N	101331	Mar. 15, 2021
4	Splitter	Mini-Circuit	ZAPD-4	400059	Dec. 25, 2021
5	Climate Chamber	ESPEC	EL-10KA	05107008	Dec. 25, 2021

Note: 1. The Cal. Interval was one year.

2. The cable loss has calculated in test result which connection between each test instruments.

3. TEST ITEM AND RESULTS

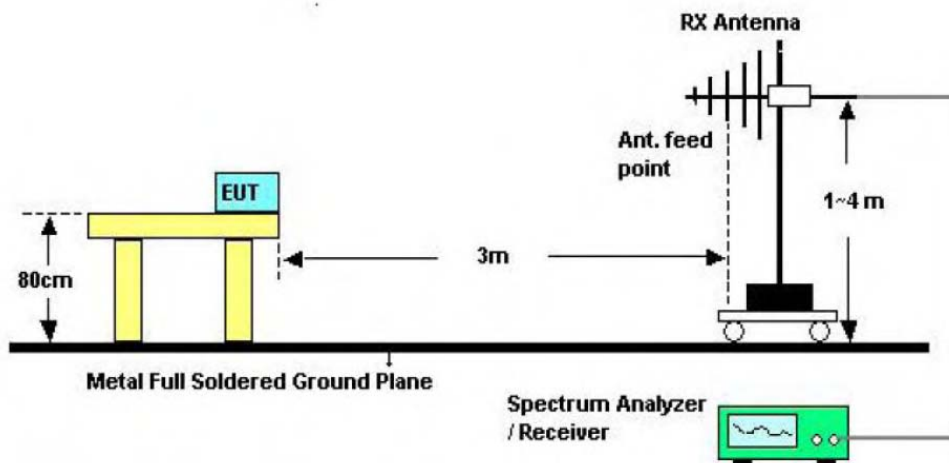
3.1. Radiated Power Measurement

LIMIT

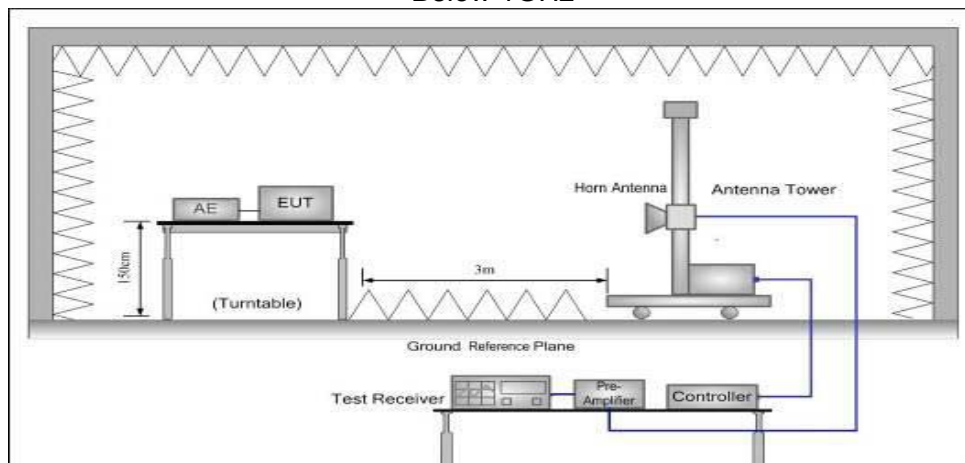
LTE FDD Band 2: 2W(33dBm) EIRP
LTE FDD Band 4: 1W(30dBm) EIRP
LTE FDD Band 5: 7W(38.45dBm) ERP
LTE FDD Band 7: 2W(33dBm) EIRP
LTE FDD Band 12: 3W(34.77dBm) ERP
LTE FDD Band 13: 3W(34.77dBm) ERP
LTE FDD Band 17: 3W(34.77dBm) ERP
LTE FDD Band 25: 2W(33dBm) EIRP
LTE FDD Band 26: 7W(38.45dBm) ERP
LTE FDD Band 30: 0.25W(23.97dBm) EIRP
LTE TDD Band 41: 2W(33dBm) EIRP
LTE FDD Band 66: 1W(30dBm) EIRP
LTE FDD Band 71: 2W(34.77dBm) ERP
FCC: §2.1046, §22.913, §24.232, §27.50, §90.635, §90.541, and §96.41

TEST CONFIGURATION

For the actual test configuration, please refer to the related Item – EUT Test Photos.



Below 1GHz



Above 1GHz

CTC Laboratories, Inc.

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For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : <http://yz.cnca.cn>



TEST PROCEDURE

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, and the maximum value of the receiver should be recorded as (Pr).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier should be connected to the Signal Source output port. And the cable should be connecting between the Amplifier and the Substitution Antenna. The cable loss (Pcl), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
6. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
We used N5182A microwave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substitution test; The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST RESULTS

Remark:

1. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "Z axis" position was the worst, and test data recorded in this report.



LTE Band 2 - 1.4MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.44	19.01	≤33	PASS
	Mid	20.97	18.39		
	High	20.30	19.10		
16QAM	Low	20.99	18.99		
	Mid	20.87	18.45		
	High	20.92	18.60		

LTE Band 2 - 3MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.00	19.17	≤33	PASS
	Mid	20.37	18.47		
	High	20.46	18.51		
16QAM	Low	20.65	18.90		
	Mid	20.37	18.42		
	High	20.81	18.91		

LTE Band 2 - 5MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.36	18.96	≤33	PASS
	Mid	20.92	18.83		
	High	21.21	19.03		
16QAM	Low	20.88	18.80		
	Mid	21.17	18.88		
	High	21.02	18.59		



LTE Band 2 - 10MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.03	19.18	≤33	PASS
	Mid	21.19	19.26		
	High	20.68	18.57		
16QAM	Low	20.73	18.60		
	Mid	20.66	19.24		
	High	21.07	19.29		

LTE Band 2 - 15MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.56	18.87	≤33	PASS
	Mid	21.06	18.90		
	High	20.61	19.05		
16QAM	Low	21.20	19.34		
	Mid	20.27	18.36		
	High	20.91	19.32		

LTE Band 2 - 20MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.52	18.61	≤33	PASS
	Mid	20.91	19.23		
	High	20.95	19.03		
16QAM	Low	20.42	19.04		
	Mid	20.74	19.34		
	High	20.56	18.53		



LTE Band 4 - 1.4MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.70	18.52	≤30	PASS
	Mid	20.49	18.66		
	High	20.61	19.06		
16QAM	Low	20.33	18.72		
	Mid	20.74	19.15		
	High	21.04	19.09		

LTE Band 4 - 3MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.35	18.85	≤30	PASS
	Mid	20.96	19.24		
	High	20.64	18.67		
16QAM	Low	21.02	18.83		
	Mid	21.19	18.71		
	High	20.79	19.17		

LTE Band 4 - 5MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.56	18.79	≤30	PASS
	Mid	20.66	18.63		
	High	20.68	18.53		
16QAM	Low	20.79	19.05		
	Mid	20.58	19.05		
	High	20.27	18.95		



LTE Band 4 - 10MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.32	18.55	≤30	PASS
	Mid	20.59	18.64		
	High	21.12	18.71		
16QAM	Low	21.21	18.37		
	Mid	20.44	18.85		
	High	21.13	18.85		

LTE Band 4 - 15MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.29	19.00	≤30	PASS
	Mid	20.84	18.56		
	High	21.14	18.71		
16QAM	Low	20.54	18.74		
	Mid	20.40	19.08		
	High	20.64	19.19		

LTE Band 4 - 20MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.35	19.32	≤30	PASS
	Mid	20.92	18.98		
	High	20.77	19.19		
16QAM	Low	20.86	18.64		
	Mid	20.43	19.31		
	High	21.20	18.59		



LTE Band 5 - 1.4MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.08	18.40	≤38.45	PASS
	Mid	20.76	19.12		
	High	20.38	18.81		
16QAM	Low	20.53	18.75		
	Mid	20.71	19.08		
	High	21.07	19.18		

LTE Band 5 - 3MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.66	18.66	≤38.45	PASS
	Mid	20.81	19.29		
	High	20.89	18.81		
16QAM	Low	20.61	18.45		
	Mid	20.41	18.51		
	High	20.29	19.22		

LTE Band 5 - 5MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.52	19.17	≤38.45	PASS
	Mid	21.06	19.23		
	High	21.10	18.67		
16QAM	Low	20.82	19.07		
	Mid	20.47	18.76		
	High	20.44	18.95		



LTE Band 5 - 10MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.29	19.14	≤38.45	PASS
	Mid	20.83	18.63		
	High	21.21	19.00		
16QAM	Low	20.28	18.61		
	Mid	21.14	19.34		
	High	21.02	19.27		

LTE Band 7 - 5MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.85	19.31	≤33	PASS
	Mid	20.60	19.23		
	High	21.15	18.42		
16QAM	Low	20.88	19.27		
	Mid	20.32	18.87		
	High	20.33	18.71		

LTE Band 7 - 10MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.09	19.04	≤33	PASS
	Mid	20.85	18.35		
	High	20.79	19.26		
16QAM	Low	20.23	19.12		
	Mid	20.33	19.31		
	High	20.83	19.17		



LTE Band 7 - 15MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.83	18.71	≤33	PASS
	Mid	21.12	18.84		
	High	21.08	18.77		
16QAM	Low	20.25	18.37		
	Mid	20.68	19.35		
	High	21.11	18.40		

LTE Band 7 - 20MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.11	18.83	≤33	PASS
	Mid	20.84	18.98		
	High	20.77	18.41		
16QAM	Low	20.99	18.77		
	Mid	20.24	18.37		
	High	20.70	18.97		

LTE Band 12 – 1.4MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.32	19.26	≤34.77	PASS
	Mid	20.72	18.52		
	High	20.69	18.99		
16QAM	Low	20.47	19.05		
	Mid	21.17	19.08		
	High	20.75	18.38		



LTE Band 12 - 3MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.40	18.50	≤34.77	PASS
	Mid	20.26	18.52		
	High	20.43	19.14		
16QAM	Low	20.94	18.65		
	Mid	20.31	19.21		
	High	21.15	19.28		

LTE Band 12 - 5MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.00	18.89	≤34.77	PASS
	Mid	20.92	18.44		
	High	21.09	18.62		
16QAM	Low	20.98	18.68		
	Mid	21.13	18.98		
	High	20.48	18.71		

LTE Band 12 -10MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.30	19.03	≤34.77	PASS
	Mid	20.80	19.18		
	High	20.77	18.38		
16QAM	Low	20.28	19.13		
	Mid	21.05	18.37		
	High	20.82	19.15		



LTE Band 13 - 5MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.58	18.49	≤34.77	PASS
	Mid	20.69	18.77		
	High	20.68	18.37		
16QAM	Low	21.08	19.12		
	Mid	21.13	18.36		
	High	20.98	18.86		

LTE Band 13 - 10MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.66	19.12	≤34.77	PASS
	Mid	20.92	18.66		
	High	21.02	18.84		
16QAM	Low	20.46	18.88		
	Mid	20.46	18.95		
	High	21.09	19.00		

LTE Band 25 - 1.4MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.42	19.09	≤33	PASS
	Mid	20.52	18.46		
	High	20.68	18.44		
16QAM	Low	21.08	18.67		
	Mid	20.77	18.50		
	High	21.02	18.47		



LTE Band 25 - 3MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.30	19.01	≤33	PASS
	Mid	21.08	19.14		
	High	21.08	18.49		
16QAM	Low	20.67	18.47		
	Mid	20.38	18.68		
	High	21.18	18.74		

LTE Band 25 - 5MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.33	18.92	≤33	PASS
	Mid	21.15	18.49		
	High	20.51	19.02		
16QAM	Low	20.86	18.89		
	Mid	20.49	18.59		
	High	20.81	18.43		

LTE Band 25 - 10MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.48	19.17	≤33	PASS
	Mid	20.64	18.98		
	High	21.18	19.31		
16QAM	Low	20.58	18.62		
	Mid	21.04	18.52		
	High	21.02	18.68		



LTE Band 25 - 15MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.52	18.59	≤33	PASS
	Mid	20.73	18.66		
	High	20.63	18.65		
16QAM	Low	21.16	18.41		
	Mid	20.84	19.14		
	High	20.39	19.06		

LTE Band 25 - 20MHz					
Modulation	Channel	EIRP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.05	18.73	≤33	PASS
	Mid	21.23	19.05		
	High	20.88	18.74		
16QAM	Low	20.60	19.29		
	Mid	20.54	18.76		
	High	21.23	18.35		

LTE Band 26 (814.7-823.3) - 1.4MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.78	18.56	≤38.45	PASS
	Mid	21.01	19.02		
	High	21.03	18.59		
16QAM	Low	20.26	19.11		
	Mid	20.28	18.57		
	High	20.86	19.00		



LTE Band 26 (814.7-823.3) - 3MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.81	18.98	≤38.45	PASS
	Mid	20.94	18.54		
	High	20.72	18.88		
16QAM	Low	20.88	19.31		
	Mid	20.69	19.08		
	High	20.99	19.22		

LTE Band 26 (814.7-823.3) - 5MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.41	18.93	≤38.45	PASS
	Mid	20.89	19.15		
	High	20.74	18.40		
16QAM	Low	20.61	18.46		
	Mid	20.63	19.03		
	High	20.39	18.48		

LTE Band 26 (814.7-823.3) - 10MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Mid	20.33	18.99	≤38.45	PASS
16QAM	Mid	20.73	18.94		

LTE Band 26 (824.7-848.3) - 15MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	21.13	18.59	≤38.45	PASS
16QAM	Low	20.48	18.58		



LTE Band 26 (824.7-848.3) - 1.4MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.25	19.34	≤38.45	PASS
	Mid	20.88	19.17		
	High	20.84	19.10		
16QAM	Low	20.88	19.26		
	Mid	20.49	18.77		
	High	20.93	19.07		

LTE Band 26 (824.7-848.3) - 3MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.44	18.94	≤38.45	PASS
	Mid	20.53	18.35		
	High	20.28	18.56		
16QAM	Low	21.09	18.90		
	Mid	20.81	18.40		
	High	20.49	18.95		

LTE Band 26 (824.7-848.3) - 5MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.40	18.58	≤38.45	PASS
	Mid	20.32	18.51		
	High	21.12	18.56		
16QAM	Low	20.69	19.18		
	Mid	20.92	18.63		
	High	20.37	18.47		



LTE Band 26 (824.7-848.3) - 10MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.27	18.92	≤38.45	PASS
	Mid	21.11	18.96		
	High	21.10	18.80		
16QAM	Low	20.69	18.93		
	Mid	20.25	18.97		
	High	21.02	18.49		

LTE Band 26 (824.7-848.3) - 15MHz					
Modulation	Channel	ERP (dBm)		Limit (dBm)	Result
		Vertical	Horizontal		
QPSK	Low	20.65	18.49	≤38.45	PASS
	Mid	20.33	18.39		
	High	20.63	18.39		
16QAM	Low	20.27	18.58		
	Mid	20.84	19.03		
	High	20.28	18.43		

3.2. Radiated Spurious Emission

LIMIT

§ 22.917(a), §24.238(a), §27.53 (g), (h), §90.691

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.

§ 27.53 (Band 13)

(c) 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.

(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40 dBm/MHz).

FCC: § 90.669 Emission limits. (Band 26)

(a) On any frequency in an MTA licensee's spectrum block that is adjacent to a non-MTA frequency, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 plus $10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation.

§ 27.53 (a) (Band 30)

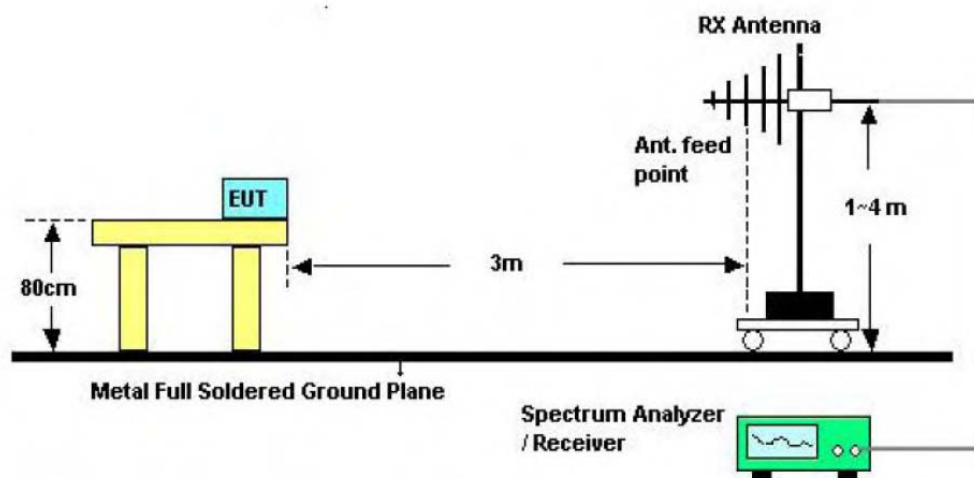
For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

§ 27.53 (m) (Band 7, 41)

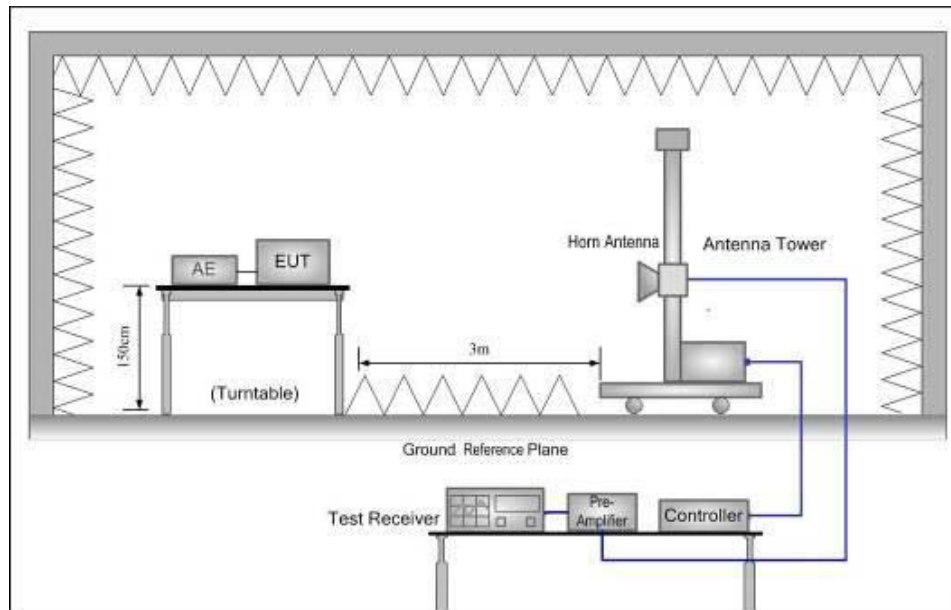
At least $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

TEST CONFIGURATION

For the actual test configuration, please refer to the related Item – EUT Test Photos.



Below 1GHz



Above 1GHz

TEST PROCEDURE

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, and the maximum value of the receiver should be recorded as (Pr).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier should be connected to the Signal Source output port. And the cable should be connecting between the Amplifier and the Substitution Antenna. The cable loss (Pcl), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
6. The measurement results are obtained as described below:



7. Power(EIRP)=PMea- PAg - Pcl + Ga

We used SMF100A microwave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substitution test; The measurement results are amend as described below:

$$\text{Power(EIRP)}=\text{PMea}- \text{Pcl} + \text{Ga}$$

8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dBi) and known input power.

ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

9. Test frequency range should extend to 10th harmonic of highest fundamental frequency.**TEST RESULTS**

Remark:

1. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "Z axis" position was the worst, and test data recorded in this report.
2. We test all modulation types, all bandwidths, and record the worst case at the maximum bandwidth of each modulation.



Measured data (worst case):

Band 2 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
20MHz	QPSK	L	3720.00	-40.32	Vertical	-13.00	Pass
			5580.00	-49.62	Vertical		
			3720.00	-45.45	Horizontal		
			5580.00	-53.07	Horizontal		
20MHz	QPSK	M	3760.00	-41.82	Vertical	-13.00	Pass
			5640.00	-47.17	Vertical		
			3760.00	-41.25	Horizontal		
			5640.00	-52.02	Horizontal		
20MHz	QPSK	H	3800.00	-41.71	Vertical	-13.00	Pass
			5700.00	-48.49	Vertical		
			3800.00	-41.98	Horizontal		
			5700.00	-54.52	Horizontal		
20MHz	16QAM	L	3720.00	-41.16	Vertical	-13.00	Pass
			5580.00	-49.66	Vertical		
			3720.00	-42.73	Horizontal		
			5580.00	-53.49	Horizontal		
20MHz	16QAM	M	3760.00	-40.71	Vertical	-13.00	Pass
			5640.00	-48.05	Vertical		
			3760.00	-41.99	Horizontal		
			5640.00	-52.76	Horizontal		
20MHz	16QAM	H	3800.00	-40.69	Vertical	-13.00	Pass
			5700.00	-49.51	Vertical		
			3800.00	-40.33	Horizontal		
			5700.00	-52.21	Horizontal		

Remark:

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 4 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
20MHz	QPSK	L	3440.00	-42.98	Vertical	-13.00	Pass
			5160.00	-47.63	Vertical		
			3440.00	-45.59	Horizontal		
			5160.00	-53.36	Horizontal		
20MHz	QPSK	M	3465.00	-41.73	Vertical	-13.00	Pass
			5197.50	-47.28	Vertical		
			3465.00	-41.80	Horizontal		
			5197.50	-52.02	Horizontal		
20MHz	QPSK	H	3490.00	-40.85	Vertical	-13.00	Pass
			5235.00	-47.38	Vertical		
			3490.00	-40.31	Horizontal		
			5235.00	-54.65	Horizontal		
20MHz	16QAM	L	3440.00	-42.09	Vertical	-13.00	Pass
			5160.00	-49.71	Vertical		
			3440.00	-40.26	Horizontal		
			5160.00	-54.21	Horizontal		
20MHz	16QAM	M	3465.00	-42.65	Vertical	-13.00	Pass
			5197.50	-48.60	Vertical		
			3465.00	-41.84	Horizontal		
			5197.50	-54.48	Horizontal		
20MHz	16QAM	H	3490.00	-40.30	Vertical	-13.00	Pass
			5235.00	-48.93	Vertical		
			3490.00	-41.14	Horizontal		
			5235.00	-53.51	Horizontal		

Remark:

3. The emission behavior belongs to narrowband spurious emission.
4. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 5 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
10MHz	QPSK	L	3430.00	-42.77	Vertical	-13.00	Pass
			5145.00	-48.26	Vertical		
			3430.00	-45.87	Horizontal		
			5145.00	-53.31	Horizontal		
10MHz	QPSK	M	3465.00	-42.27	Vertical	-13.00	Pass
			5197.50	-49.08	Vertical		
			3465.00	-42.98	Horizontal		
			5197.50	-52.11	Horizontal		
10MHz	QPSK	H	3500.00	-40.79	Vertical	-13.00	Pass
			5250.00	-47.33	Vertical		
			3500.00	-40.75	Horizontal		
			5250.00	-53.65	Horizontal		
10MHz	16QAM	L	3430.00	-41.72	Vertical	-13.00	Pass
			5145.00	-49.38	Vertical		
			3430.00	-41.75	Horizontal		
			5145.00	-54.65	Horizontal		
10MHz	16QAM	M	3465.00	-42.66	Vertical	-13.00	Pass
			5197.50	-48.65	Vertical		
			3465.00	-41.28	Horizontal		
			5197.50	-54.58	Horizontal		
10MHz	16QAM	H	3500.00	-40.30	Vertical	-13.00	Pass
			5250.00	-49.98	Vertical		
			3500.00	-41.62	Horizontal		
			5250.00	-52.32	Horizontal		

Remark:

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 7 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
20MHz	QPSK	L	5020.00	-41.33	Vertical	-25.00	Pass
			7530.00	-47.08	Vertical		
			5020.00	-45.62	Horizontal		
			7530.00	-52.60	Horizontal		
20MHz	QPSK	M	5070.00	-42.21	Vertical	-25.00	Pass
			7605.00	-48.61	Vertical		
			5070.00	-40.29	Horizontal		
			7605.00	-54.28	Horizontal		
20MHz	QPSK	H	5120.00	-41.26	Vertical	-25.00	Pass
			7680.00	-49.18	Vertical		
			5120.00	-42.26	Horizontal		
			7680.00	-54.74	Horizontal		
20MHz	16QAM	L	5020.00	-42.17	Vertical	-25.00	Pass
			7530.00	-48.85	Vertical		
			5020.00	-42.54	Horizontal		
			7530.00	-52.75	Horizontal		
20MHz	16QAM	M	5070.00	-40.26	Vertical	-25.00	Pass
			7605.00	-47.31	Vertical		
			5070.00	-41.86	Horizontal		
			7605.00	-52.12	Horizontal		
20MHz	16QAM	H	5120.00	-40.50	Vertical	-25.00	Pass
			7680.00	-49.50	Vertical		
			5120.00	-40.35	Horizontal		
			7680.00	-52.15	Horizontal		

Remark:

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 12 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
10MHz	QPSK	L	1408.00	-40.63	Vertical	-13.00	Pass
			2112.00	-48.30	Vertical		
			1408.00	-47.11	Horizontal		
			2112.00	-52.50	Horizontal		
10MHz	QPSK	M	1415.00	-42.55	Vertical	-13.00	Pass
			2122.50	-47.32	Vertical		
			1415.00	-41.17	Horizontal		
			2122.50	-52.78	Horizontal		
10MHz	QPSK	H	1422.00	-42.55	Vertical	-13.00	Pass
			2133.00	-49.24	Vertical		
			1422.00	-41.99	Horizontal		
			2133.00	-53.73	Horizontal		
10MHz	16QAM	L	1408.00	-42.15	Vertical	-13.00	Pass
			2112.00	-48.76	Vertical		
			1408.00	-42.70	Horizontal		
			2112.00	-54.10	Horizontal		
10MHz	16QAM	M	1415.00	-42.85	Vertical	-13.00	Pass
			2122.50	-49.15	Vertical		
			1415.00	-41.55	Horizontal		
			2122.50	-52.73	Horizontal		
10MHz	16QAM	H	1422.00	-42.57	Vertical	-13.00	Pass
			2133.00	-47.59	Vertical		
			1422.00	-40.65	Horizontal		
			2133.00	-53.55	Horizontal		

Remark:

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 13 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
10MHz	QPSK	L	1564.00	-41.40	Vertical	-13	Pass
			2346.00	-47.62	Vertical		
			1564.00	-46.82	Horizontal		
			2346.00	-53.82	Horizontal		
10MHz	QPSK	M	1564.00	-41.00	Vertical	-13	Pass
			2346.00	-47.23	Vertical		
			1564.00	-42.78	Horizontal		
			2346.00	-53.50	Horizontal		
10MHz	QPSK	H	1564.00	-42.57	Vertical	-13	Pass
			2346.00	-48.83	Vertical		
			1564.00	-41.77	Horizontal		
			2346.00	-52.90	Horizontal		
10MHz	16QAM	L	1564.00	-42.75	Vertical	-13	Pass
			2346.00	-47.21	Vertical		
			1564.00	-41.50	Horizontal		
			2346.00	-53.50	Horizontal		
10MHz	16QAM	M	1564.00	-41.75	Vertical	-13	Pass
			2346.00	-47.06	Vertical		
			1564.00	-42.45	Horizontal		
			2346.00	-53.40	Horizontal		
10MHz	16QAM	H	1564.00	-40.53	Vertical	-13	Pass
			2346.00	-47.46	Vertical		
			1564.00	-40.53	Horizontal		
			2346.00	-54.54	Horizontal		

Remark:

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 25 Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
20MHz	QPSK	L	3720	-41.71	Vertical	-13.00	Pass
			5580	-48.79	Vertical		
			3720	-47.39	Horizontal		
			5580	-54.81	Horizontal		
20MHz	QPSK	M	3765	-40.52	Vertical	-13.00	Pass
			5647.5	-49.58	Vertical		
			3765	-40.99	Horizontal		
			5647.5	-53.56	Horizontal		
20MHz	QPSK	H	3810	-40.89	Vertical	-13.00	Pass
			5715	-49.61	Vertical		
			3810	-41.13	Horizontal		
			5715	-54.81	Horizontal		
20MHz	16QAM	L	3720	-41.96	Vertical	-13.00	Pass
			5580	-47.65	Vertical		
			3720	-40.06	Horizontal		
			5580	-54.60	Horizontal		
20MHz	16QAM	M	3765	-41.97	Vertical	-13.00	Pass
			5647.5	-49.84	Horizontal		
			3765	-41.77	Vertical		
			5647.5	-53.59	Horizontal		
20MHz	16QAM	H	3810	-40.15	Vertical	-13.00	Pass
			5715	-47.22	Horizontal		
			3810	-40.40	Vertical		
			5715	-53.45	Horizontal		

Remark:

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 26 (814.7-823.3) Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
5MHz	QPSK	L	1633	-41.84	Vertical	-13.00	Pass
			2449.5	-47.68	Vertical		
			1633	-45.64	Horizontal		
			2449.5	-53.50	Horizontal		
5MHz	QPSK	M	1638	-41.05	Vertical	-13.00	Pass
			2457	-48.11	Vertical		
			1638	-42.66	Horizontal		
			2457	-52.89	Horizontal		
5MHz	QPSK	H	1643	-42.30	Vertical	-13.00	Pass
			2464.5	-49.39	Vertical		
			1643	-41.27	Horizontal		
			2464.5	-52.42	Horizontal		
5MHz	16QAM	L	1633	-41.84	Vertical	-13.00	Pass
			2449.5	-47.09	Vertical		
			1633	-40.23	Horizontal		
			2449.5	-54.17	Horizontal		
5MHz	16QAM	M	1638	-42.65	Vertical	-13.00	Pass
			2457	-48.07	Horizontal		
			1638	-41.33	Vertical		
			2457	-54.10	Horizontal		
5MHz	16QAM	H	1643	-40.28	Vertical	-13.00	Pass
			2464.5	-47.59	Horizontal		
			1643	-42.38	Vertical		
			2464.5	-54.26	Horizontal		

Remark:

- The emission behavior belongs to narrowband spurious emission. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.



Band 26 (824.7-848.3) Radiated Spurious Emissions							
Bandwidth	Modulation	Test Channel	Spurious Emission			Limit (dBm)	Result
			Frequency	Level (dBm)	Polarization		
15MHz	QPSK	L	1663	-40.60	Vertical	-13.00	Pass
			2494.5	-48.03	Vertical		
			1663	-45.40	Horizontal		
			2494.5	-54.07	Horizontal		
15MHz	QPSK	M	1673	-40.84	Vertical	-13.00	Pass
			2509.5	-49.32	Vertical		
			1673	-40.42	Horizontal		
			2509.5	-52.99	Horizontal		
15MHz	QPSK	H	1683	-40.32	Vertical	-13.00	Pass
			2524.5	-48.61	Vertical		
			1683	-41.61	Horizontal		
			2524.5	-53.03	Horizontal		
15MHz	16QAM	L	1663	-41.65	Vertical	-13.00	Pass
			2494.5	-49.88	Vertical		
			1663	-41.82	Horizontal		
			2494.5	-52.55	Horizontal		
15MHz	16QAM	M	1673	-40.12	Vertical	-13.00	Pass
			2509.5	-47.06	Horizontal		
			1673	-41.18	Vertical		
			2509.5	-53.15	Horizontal		
15MHz	16QAM	H	1683	-40.45	Vertical	-13.00	Pass
			2524.5	-47.20	Horizontal		
			1683	-42.68	Vertical		
			2524.5	-52.49	Horizontal		

Remark:

2. The emission behavior belongs to narrowband spurious emission.

The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.

*****THE END*****

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