



TEST REPORT

Product Name: Multi-Band Internet Radio
FCC ID: 2BGNV-LC90
Trademark: CHOYONG
Model Number: LC90, LC90M, LC100, A8W, A9, LC86
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Sample Received Date: Apr. 19, 2024
Sample tested Date: Apr. 19, 2024 to May. 09, 2024
Issue Date: May. 09, 2024
Report No.: CTB240509025RF
Test Standards: FCC Part 2, 22, 24E, 27
Test Results: PASS
Remark: This is LTE radio test report.

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Approved by:

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Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "*" indicates the testing items were fulfilled by subcontracted lab. "#" indicates the items are not in CNAS accreditation scope.

TABLE OF CONTENT

Test Report Declaration	Page
1. VERSION	3
2. TEST SUMMARY	4
3. MEASUREMENT UNCERTAINTY	5
4. PRODUCT INFORMATION AND TEST SETUP	6
4.1 Product Information	6
4.2 Test Setup Configuration	6
4.3 Support Equipment	6
4.4 Test Mode	7
4.5 Test Environment	7
5. TEST FACILITY AND TEST INSTRUMENT USED	8
5.1 Test Facility	8
5.2 Test Instrument Used	8
6. RF EXPOSURE	10
6.1 Standard Applicable	10
6.2 Test Result	10
7. RF OUTPUT POWER	11
7.1 Standard Applicable	11
7.2 Test Procedure	11
7.3 Summary of Test Results/Plots	12
8. PEAK-TO-AVERAGE RATIO (PAR) OF TRANSMITTER	12
8.1 Standard Applicable	13
8.2 Test Procedure	13
8.3 Summary of Test Results	13
9. EMISSION BANDWIDTH	14
9.1 Standard Applicable	14
9.2 Test Procedure	14
9.3 Summary of Test Results/Plots	14
10. OUT OF BAND EMISSIONS AT ANTENNA TERMINAL	15
10.1 Standard Applicable	15
10.2 Test Procedure	15
10.3 Summary of Test Results/Plots	16
11. SPURIOUS RADIATED EMISSIONS	17
11.1 Standard Applicable	17
11.2 Test Procedure	17
11.3 Summary of Test Results/Plots	18
12. FREQUENCY STABILITY	39
12.1 Standard Applicable	39
12.2 Test Procedure	39
12.3 Summary of Test Results/Plots	39

(Note: N/A means not applicable)



1. VERSION

Report No.	Issue Date	Description	Approved
CTB240509025RF	May. 09, 2024	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Test Item	Test Requirement	Test method	Result
Conducted output power	Part 2.1046(a)	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Effective Radiated Power of Transmitter(EIRP)	Part 22.913(a)(5)/Part27.50(h)(2)	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
peak-to-average ratio	Part 27.50(d)	KDB 971168 D01v03r01	PASS
99% & 26dB Occupied Bandwidth	Part 2.1049(h)	KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 22.917(a)/Part 27.53(m) (4)	KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 22.917(a)/Part 27.53(m) (4)	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	Part 2.1053/ Part 22.917(a)/Part 27.53(m) (4)	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	Part 2.1055/Part 27.54	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Item	Uncertainty
Occupancy bandwidth	54.3kHz
Conducted output power Above 1G	0.9dB
Conducted output power below 1G	0.9dB
Power Spectral Density , Conduction	0.9dB
Conduction spurious emissions	2.0dB
Out of band emission	2.0dB
3m camber Radiated spurious emission(30MHz-1GHz)	4.6dB
3m chamber Radiated spurious emission(1GHz-18GHz)	5.1dB
3m chamber Radiated spurious emission(18GHz-40GHz)	3.4dB
Receiver Reference Sensitivity level	1.9dB
humidity uncertainty	5.5%
Temperature uncertainty	0.63℃
frequency	1×10 ⁻⁷

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	LC90, LC90M, LC100, A8W, A9, LC86
Model Description:	All the model are the same circuit and RF module, only different for model name. Test sample model: LC90
Hardware Version:	V3.0
Software Version:	LC90EN_CYOS_4.3_240409_0938
Operation Frequency:	FDD-LTE BAND 2: 1850-1910MHz FDD-LTE BAND 4: 1710-1755MHz FDD-LTE BAND 5: 824-849MHz TDD-LTE BAND 38: 2570-2620MHz TDD-LTE BAND 40A: 2305-2315MHz TDD-LTE BAND 40B: 2350-2360MHz TDD-LTE BAND 41: 2496-2690 MHz
Max. RF output power:	FDD-LTE BAND 2: 23.52dBm FDD-LTE BAND 4: 23.37dBm FDD-LTE BAND 5: 24.02dBm TDD-LTE BAND 38: 24.04dBm TDD-LTE BAND 40A: 24.33dBm TDD-LTE BAND 40B: 25.13dBm TDD-LTE BAND 41: 22.51dBm
Type of Modulation:	QPSK, 16QAM
Antenna Gain:	FDD-LTE BAND 2: 2.55dBi FDD-LTE BAND 4: 1.79dBi FDD-LTE BAND 5: 0.22dBi TDD-LTE BAND 38: 2.69dBi TDD-LTE BAND 40A: 2.67dBi TDD-LTE BAND 40B: 2.78dBi TDD-LTE BAND 41: 3.13dBi
Ratings:	DC 5V charging from adapter DC 3.7V by battery

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1	Adapter	JIYIN	JY-05100C	N/A	N/A

Notes:

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.

4.4 Test Mode

Test Mode List		
Test Mode	Description	Remark
TM1	FDD-LTE BAND 2	Low, Middle, High Channels
TM2	FDD-LTE BAND 4	Low, Middle, High Channels
TM3	FDD-LTE BAND 5	Low, Middle, High Channels
TM4	TDD-LTE BAND 41	Low, Middle, High Channels
TM5	TDD-LTE BAND 38	Low, Middle, High Channels
TM6	TDD-LTE BAND 40A	Low, Middle, High Channels
TM7	TDD-LTE BAND 40B	Low, Middle, High Channels

4.5 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(DC):	3.7V
Normal Temperature(°C)	23
Low Temperature(°C)	0
High Temperature(°C)	40

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at 1&2F., Building A, No. 26, Xinghe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

No.	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2024.07.05
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2024.07.05
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2024.07.05
4	Communication test set	R&S	CMW500	108058	V3.5.80	2024.07.05
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2024.07.05
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2024.07.05
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2024.07.05
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2024.07.06
9	2.4 GHz Filter	Shenxiang	MSF2400-24 83.5MS-1154	20181015001	/	2024.07.05
10	5 GHz Filter	Shenxiang	MSF5150-58 50MS-1155	20181015001	/	2024.07.06
11	Filter	Xingbo	XBLBQ-DZA 120	190821-1-1	/	2024.07.06
12	BT&WI-FI Automatic test software	Microwave	MTS8000	Ver. 2.0.0.0	/	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	/	2024.10.30
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	/	2024.07.05
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/	/
16	966 chamber	C.R.T.	966	/	/	2024.08.11
17	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2024.07.05
18	Amplifier	HP	8447E	2945A02747	/	2024.07.05
19	Amplifier	Agilent	8449B	3008A01838	/	2024.07.05
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2024.07.08
21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2024.07.08

22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2024.07.08
24	loop antenna	ZHINAN	ZN30900A	GTS534	/	/
25	40G Horn antenna	A/H/System	SAS-574	588	/	2024.10.30
26	Amplifier	AEROFLEX	Aeroflex	097	/	2024.07.05

6. RF EXPOSURE

6.1 Standard Applicable

According to §1.1307 and §2.1091, §2.1093, the portable transmitter must comply the RF exposure requirements.

6.2 Test Result

This product complied with the requirement of the RF exposure, please see the RF Exposure report.

7. RF OUTPUT POWER

7.1 Standard Applicable

According to §22.913(a)(2), the ERP of mobile and portable stations transmitters and auxiliary test transmitters must not exceed 7 Watts.

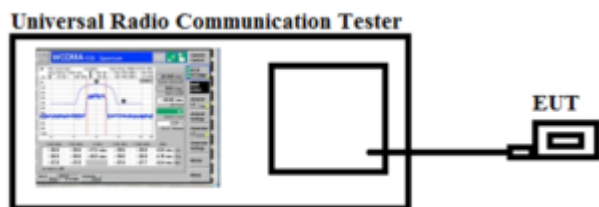
According to §24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to §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.

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

7.2 Test Procedure

Conducted output power test method:



Radiated power test method:

1. The setup of EUT is according with per ANSI/TIA Standard 603E and ANSI C63.26 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

7.3 Summary of Test Results/Plots

Please refer to Appendix 1: Conducted output power

Test result: Pass

8. PEAK-TO-AVERAGE RATIO (PAR) OF TRANSMITTER

8.1 Standard Applicable

According to §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 paragraph (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.

According to §27.50(B), the peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal

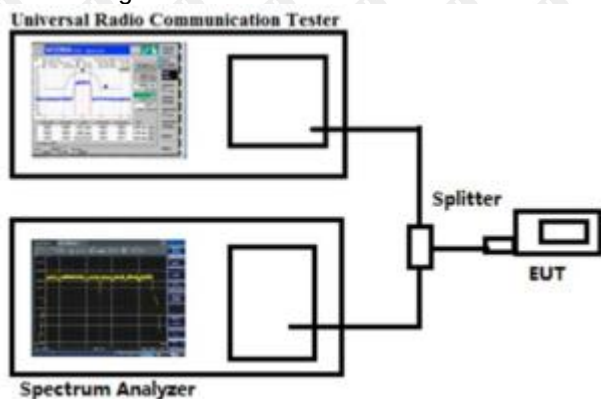
corresponding to the highest PAPR expected during periods of continuous transmission.

8.2 Test Procedure

According with KDB 971168

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Configuration for the emission bandwidth testing:



8.3 Summary of Test Results

Please refer to Appendix 3: Peak-to-Average Ratio

Test result: Pass

9. EMISSION BANDWIDTH

9.1 Standard Applicable

According to §22.917(b), 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.

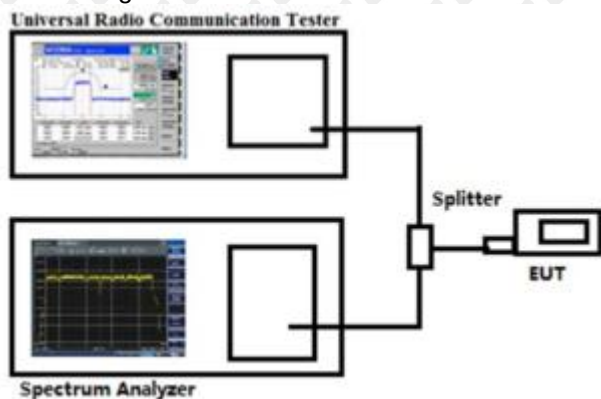
According to §24.238(b), the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

According to §27.53, 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.

9.2 Test Procedure

According to §22.917(b), 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.

Test Configuration for the emission bandwidth testing:



9.3 Summary of Test Results/Plots

Please refer to Appendix 4: 26dB Bandwidth and Occupied Bandwidth

Test result: Pass

10. OUT OF BAND EMISSIONS AT ANTENNA TERMINAL

10.1 Standard Applicable

According to §22.917(a), the power of any emissions 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.

According to §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.

According to §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;

(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(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.

According to §27.53 (f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

According to §27.53(h), 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.

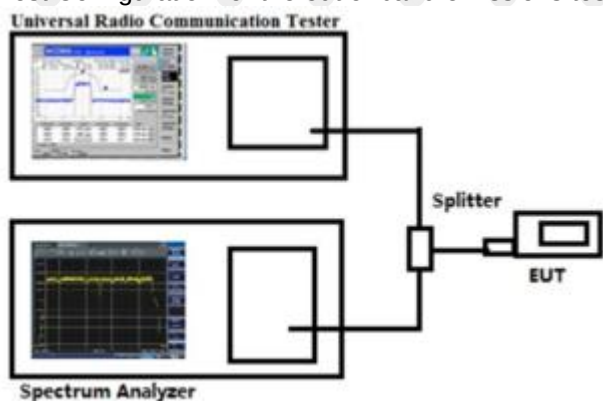
According to §27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

According to §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.

10.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 100kHz and 1MHz for the scan frequency from 30MHz to 1GHz and the scan frequency from 1GHz to up to 10 th harmonic.

Test Configuration for the out of band emissions testing:



10.3 Summary of Test Results/Plots

Please refer to Appendix 5 & 6: Band Edge & Conducted Spurious Emission

Test result: Pass

11. SPURIOUS RADIATED EMISSIONS

11.1 Standard Applicable

According to §22.917(a), the power of any emissions 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.

According to §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.

According to §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;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (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.

According to §27.53 (f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

According to §27.53(h), 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.

According to §27.53(g) 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.

11.2 Test Procedure

1. The setup of EUT is according with per ANSI/TIA-603-E and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious attenuation limit in dB = $43 + 10 \log_{10}(\text{power out in Watts})$

11.3 Summary of Test Results/Plots

Note: 1. this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

2. All test modes (different bandwidth and different modulation) are performed, but only the worst case is recorded in this report.

Test Data:
QPSK

Band 2 18607 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1379.59	148	297	-55.04	-13	-42.04	Pass	H
1790.81	145	143	-47.41	-13	-34.41	Pass	H
3804.42	149	156	-47.95	-13	-34.95	Pass	H
5983.03	142	23	-43.64	-13	-30.64	Pass	H
6559.31	145	115	-43.02	-13	-30.02	Pass	H
8053.85	145	295	-41.64	-13	-28.64	Pass	H
1137.62	148	258	-53.26	-13	-40.26	Pass	V
1378.14	152	246	-57.81	-13	-44.81	Pass	V
3516.57	148	80	-51.97	-13	-38.97	Pass	V
3832.56	157	196	-52.11	-13	-39.11	Pass	V
5792.32	158	59	-47.04	-13	-34.04	Pass	V
6499.33	142	283	-45.88	-13	-32.88	Pass	V
Band 2 18900 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1255.24	150	235	-54.36	-13	-41.36	Pass	H
1757.21	146	212	-51.03	-13	-38.03	Pass	H
3968.40	150	163	-53.34	-13	-40.34	Pass	H
5960.54	146	184	-44.07	-13	-31.07	Pass	H
6468.81	149	330	-51.51	-13	-38.51	Pass	H
8084.68	151	221	-46.13	-13	-33.13	Pass	H
1241.31	149	255	-55.52	-13	-42.52	Pass	V
1420.72	148	263	-56.20	-13	-43.20	Pass	V
3570.88	147	34	-51.53	-13	-38.53	Pass	V
3907.13	148	42	-51.20	-13	-38.20	Pass	V
5916.38	150	206	-48.71	-13	-35.71	Pass	V
6539.02	150	227	-47.31	-13	-34.31	Pass	V

Band 2 19193 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1290.89	150	82	-59.43	-13	-46.43	Pass	H
1750.65	154	169	-50.44	-13	-37.44	Pass	H
3882.67	146	238	-43.09	-13	-30.09	Pass	H
5971.80	151	198	-42.97	-13	-29.97	Pass	H
6490.05	149	281	-40.59	-13	-27.59	Pass	H
8061.56	151	276	-45.64	-13	-32.64	Pass	H
1343.32	146	311	-57.33	-13	-44.33	Pass	V
1397.12	154	209	-56.26	-13	-43.26	Pass	V
3460.53	149	99	-54.87	-13	-41.87	Pass	V
3991.99	151	167	-49.10	-13	-36.10	Pass	V
5832.52	150	195	-43.38	-13	-30.38	Pass	V
6665.69	150	57	-45.33	-13	-32.33	Pass	V

16QAM

Band 2 18607 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1387.12	152	248	-56.22	-13	-43.22	Pass	H
1679.56	147	242	-47.69	-13	-34.69	Pass	H
3908.00	152	147	-51.54	-13	-38.54	Pass	H
5975.71	145	314	-43.54	-13	-30.54	Pass	H
6520.70	149	176	-45.03	-13	-32.03	Pass	H
8071.38	152	7	-42.75	-13	-29.75	Pass	H
1129.11	150	73	-52.08	-13	-39.08	Pass	V
1389.90	146	147	-56.25	-13	-43.25	Pass	V
3524.14	153	234	-53.02	-13	-40.02	Pass	V
3919.34	146	317	-53.73	-13	-40.73	Pass	V
5816.26	146	205	-42.70	-13	-29.70	Pass	V
6508.15	148	119	-52.07	-13	-39.07	Pass	V

Band 2 18900 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1237.72	154	292	-54.92	-13	-41.45	Pass	H
1645.22	148	339	-49.99	-13	-37.85	Pass	H
3825.23	149	147	-44.95	-13	-35.2	Pass	H
5990.67	145	175	-39.44	-13	-30.39	Pass	H
6420.30	151	238	-47.75	-13	-32.24	Pass	H
8064.78	153	191	-45.74	-13	-30.22	Pass	H
1145.65	145	175	-60.36	-13	-44.9	Pass	V
1424.39	152	69	-55.33	-13	-43.63	Pass	V
3555.78	147	228	-49.90	-13	-35.94	Pass	V
3803.15	145	127	-49.14	-13	-36.01	Pass	V
5772.29	154	90	-44.56	-13	-33.75	Pass	V
6554.37	146	213	-44.15	-13	-32.41	Pass	V
Band 2 19193 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1369.74	153	276	-54.76	-13	-41.76	Pass	H
1649.91	154	83	-52.06	-13	-39.06	Pass	H
3945.79	153	308	-45.94	-13	-32.94	Pass	H
5886.24	152	90	-39.98	-13	-26.98	Pass	H
6524.20	151	271	-40.48	-13	-27.48	Pass	H
8003.77	149	230	-44.19	-13	-31.19	Pass	H
1260.71	150	44	-55.75	-13	-42.75	Pass	V
1445.10	155	15	-59.13	-13	-46.13	Pass	V
3499.39	149	178	-52.88	-13	-39.88	Pass	V
3761.49	147	280	-51.01	-13	-38.01	Pass	V
5713.44	153	16	-47.12	-13	-34.12	Pass	V
6541.16	153	43	-46.73	-13	-33.73	Pass	V

Note:

- 1) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

QPSK

Band 4 19957 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1272.14	148	269	-59.13	-13	-46.13	Pass	H
1602.18	152	196	-50.17	-13	-37.17	Pass	H
3887.83	145	205	-49.53	-13	-36.53	Pass	H
6015.25	150	354	-48.24	-13	-35.24	Pass	H
6634.59	146	63	-42.33	-13	-29.33	Pass	H
8046.63	151	209	-38.04	-13	-25.04	Pass	H
1107.92	146	342	-54.13	-13	-41.13	Pass	V
1441.26	149	165	-58.68	-13	-45.68	Pass	V
3522.50	149	46	-51.46	-13	-38.46	Pass	V
3948.31	152	131	-54.32	-13	-41.32	Pass	V
5784.91	145	135	-45.90	-13	-32.90	Pass	V
6598.88	148	192	-44.47	-13	-31.47	Pass	V
Band 4 20175 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1384.37	149	124	-54.99	-13	-41.99	Pass	H
1707.61	155	41	-44.84	-13	-31.84	Pass	H
3775.70	151	358	-44.72	-13	-31.72	Pass	H
5835.62	154	167	-41.52	-13	-28.52	Pass	H
6415.35	148	298	-42.95	-13	-29.95	Pass	H
8088.62	152	319	-43.26	-13	-30.26	Pass	H
1140.64	146	168	-54.50	-13	-41.50	Pass	V
1381.45	153	44	-57.11	-13	-44.11	Pass	V
3489.69	155	107	-45.98	-13	-32.98	Pass	V
3806.85	153	71	-50.63	-13	-37.63	Pass	V
5905.46	149	318	-42.44	-13	-29.44	Pass	V
6466.54	149	179	-45.13	-13	-32.13	Pass	V

Band 4 20393 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1381.83	149	165	-53.15	-13	-40.15	Pass	H
1749.47	146	208	-46.56	-13	-33.56	Pass	H
3985.71	146	4	-40.42	-13	-27.42	Pass	H
5873.27	150	198	-38.08	-13	-25.08	Pass	H
6438.82	146	341	-43.90	-13	-30.90	Pass	H
8022.87	150	235	-41.28	-13	-28.28	Pass	H
1283.23	146	292	-54.08	-13	-41.08	Pass	V
1388.12	150	158	-57.53	-13	-44.53	Pass	V
3609.62	149	55	-48.52	-13	-35.52	Pass	V
3813.58	150	319	-50.49	-13	-37.49	Pass	V
5755.23	146	118	-50.43	-13	-37.43	Pass	V
6515.62	150	155	-46.43	-13	-33.43	Pass	V

16QAM

Band 4 19957 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1401.90	150	78	-56.13	-13	-43.13	Pass	H
1777.21	149	291	-52.79	-13	-39.79	Pass	H
3969.91	151	213	-50.18	-13	-37.18	Pass	H
5808.65	150	89	-43.43	-13	-30.43	Pass	H
6515.28	151	329	-46.87	-13	-33.87	Pass	H
8024.69	148	138	-45.79	-13	-32.79	Pass	H
1166.94	149	99	-60.41	-13	-47.41	Pass	V
1353.21	148	217	-56.30	-13	-43.30	Pass	V
3629.02	150	12	-49.46	-13	-36.46	Pass	V
3863.09	150	137	-46.45	-13	-33.45	Pass	V
5780.19	146	356	-47.40	-13	-34.40	Pass	V
6518.92	146	95	-49.20	-13	-36.20	Pass	V

Band 4 20175 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1235.25	150	142	-59.23	-13	-46.23	Pass	H
1809.92	146	280	-50.73	-13	-37.73	Pass	H
3779.10	150	330	-49.83	-13	-36.83	Pass	H
5874.95	146	194	-46.58	-13	-33.58	Pass	H
6538.06	149	260	-47.89	-13	-34.89	Pass	H
7989.45	151	31	-42.74	-13	-29.74	Pass	H
1219.27	149	4	-53.69	-13	-40.69	Pass	V
1481.27	148	257	-63.06	-13	-50.06	Pass	V
3597.69	147	55	-49.99	-13	-36.99	Pass	V
3822.67	148	273	-54.36	-13	-41.36	Pass	V
5866.16	150	136	-49.99	-13	-36.99	Pass	V
6584.67	150	16	-49.53	-13	-36.53	Pass	V
Band 4 20393 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1252.78	149	156	-57.99	-13	-44.99	Pass	H
1606.51	149	170	-48.53	-13	-35.53	Pass	H
3792.53	149	127	-46.21	-13	-33.21	Pass	H
5840.05	146	42	-45.77	-13	-32.77	Pass	H
6509.57	147	69	-42.70	-13	-29.70	Pass	H
7948.09	151	110	-45.74	-13	-32.74	Pass	H
1188.36	148	61	-55.18	-13	-42.18	Pass	V
1338.59	147	266	-50.46	-13	-37.46	Pass	V
3505.77	148	303	-48.65	-13	-35.65	Pass	V
3879.80	149	195	-46.69	-13	-33.69	Pass	V
5738.60	147	323	-46.50	-13	-33.50	Pass	V
6501.82	146	325	-44.56	-13	-31.56	Pass	V

Note:

3) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

4) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

QPSK

Band 5 20407 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1237.33	141	131	-55.34	-13	-42.34	Pass	H
1802.04	156	214	-49.85	-13	-36.85	Pass	H
3914.39	143	64	-46.69	-13	-33.69	Pass	H
5888.67	149	314	-46.09	-13	-33.09	Pass	H
6512.68	150	200	-45.86	-13	-32.86	Pass	H
7984.76	147	61	-44.45	-13	-31.45	Pass	H
1291.93	141	89	-54.68	-13	-41.68	Pass	V
1457.39	149	227	-56.32	-13	-43.32	Pass	V
3449.58	146	148	-50.69	-13	-37.69	Pass	V
3785.29	146	179	-51.83	-13	-38.83	Pass	V
5854.87	157	248	-47.38	-13	-34.38	Pass	V
6484.83	144	122	-44.95	-13	-31.95	Pass	V

Band 5 20525 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1389.38	150	86	-57.02	-13	-44.02	Pass	H
1659.27	146	235	-52.02	-13	-39.02	Pass	H
3942.16	150	244	-49.17	-13	-36.17	Pass	H
5888.37	146	128	-46.53	-13	-33.53	Pass	H
6401.55	149	276	-48.00	-13	-35.00	Pass	H
7971.29	151	178	-47.18	-13	-34.18	Pass	H
1334.82	149	164	-52.34	-13	-39.34	Pass	V
1405.41	148	15	-56.38	-13	-43.38	Pass	V
3492.39	147	143	-55.49	-13	-42.49	Pass	V
3825.26	148	63	-49.94	-13	-36.94	Pass	V
5772.18	150	33	-48.95	-13	-35.95	Pass	V
6429.45	150	258	-49.28	-13	-36.28	Pass	V

Band 5 20643 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1399.92	147	50	-56.31	-13	-43.31	Pass	H
1656.92	151	345	-49.88	-13	-36.88	Pass	H
3920.17	147	130	-43.58	-13	-30.58	Pass	H
5922.58	154	163	-42.22	-13	-29.22	Pass	H
6446.24	146	142	-42.42	-13	-29.42	Pass	H
8046.91	155	134	-43.02	-13	-30.02	Pass	H
1223.65	147	202	-58.55	-13	-45.55	Pass	V
1460.19	150	334	-57.40	-13	-44.40	Pass	V
3562.69	151	164	-53.61	-13	-40.61	Pass	V
3847.01	153	5	-46.26	-13	-33.26	Pass	V
5809.95	152	54	-41.78	-13	-28.78	Pass	V
6619.90	147	203	-50.03	-13	-37.03	Pass	V

16QAM

Band 5 20407 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1404.80	147	99	-55.71	-13	-42.71	Pass	H
1716.19	154	1	-44.59	-13	-31.59	Pass	H
3818.78	148	163	-46.21	-13	-33.21	Pass	H
5953.99	148	168	-45.00	-13	-32.00	Pass	H
6563.45	153	250	-46.03	-13	-33.03	Pass	H
7905.90	148	90	-39.32	-13	-26.32	Pass	H
1197.06	145	76	-53.82	-13	-40.82	Pass	V
1432.84	146	205	-54.88	-13	-41.88	Pass	V
3644.38	152	357	-52.41	-13	-39.41	Pass	V
3867.37	150	254	-48.68	-13	-35.68	Pass	V
5759.66	147	30	-43.68	-13	-30.68	Pass	V
6516.32	146	262	-51.35	-13	-38.35	Pass	V

Band 5 20525 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1381.34	154	235	-54.39	-13	-41.45	Pass	H
1675.75	152	12	-53.59	-13	-37.85	Pass	H
3914.41	150	190	-49.35	-13	-35.2	Pass	H
5971.22	150	144	-40.80	-13	-30.39	Pass	H
6435.56	149	36	-45.81	-13	-32.24	Pass	H
7981.36	149	119	-39.95	-13	-30.22	Pass	H
1120.37	149	22	-56.08	-13	-44.9	Pass	V
1370.34	148	81	-59.54	-13	-43.63	Pass	V
3444.54	146	146	-50.41	-13	-35.94	Pass	V
3758.26	151	179	-46.83	-13	-36.01	Pass	V
5811.80	146	347	-44.61	-13	-33.75	Pass	V
6590.28	150	338	-47.68	-13	-32.41	Pass	V

Band 5 20643 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1360.48	149	318	-54.69	-13	-41.69	Pass	H
1749.99	149	166	-47.94	-13	-34.94	Pass	H
3953.28	146	138	-47.23	-13	-34.23	Pass	H
5943.70	146	182	-44.58	-13	-31.58	Pass	H
6590.34	152	276	-38.48	-13	-25.48	Pass	H
8154.62	153	167	-48.37	-13	-35.37	Pass	H
1215.40	151	122	-57.73	-13	-44.73	Pass	V
1443.33	154	285	-59.02	-13	-46.02	Pass	V
3496.90	146	95	-50.84	-13	-37.84	Pass	V
3877.50	149	66	-49.52	-13	-36.52	Pass	V
5825.49	147	205	-47.96	-13	-34.96	Pass	V
6609.28	155	288	-43.20	-13	-30.20	Pass	V

Note:

5) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

6) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

QPSK

Band 38 37775 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1379.57	146	65	-55.07	-13	-42.07	Pass	H
1710.67	144	11	-50.05	-13	-37.05	Pass	H
3839.25	155	353	-48.72	-13	-35.72	Pass	H
5841.59	156	227	-44.00	-13	-31.00	Pass	H
6517.19	147	286	-41.25	-13	-28.25	Pass	H
8160.63	146	118	-44.06	-13	-31.06	Pass	H
1140.01	145	46	-56.22	-13	-43.22	Pass	V
1476.92	155	201	-56.06	-13	-43.06	Pass	V
3533.60	144	115	-48.48	-13	-35.48	Pass	V
3887.21	150	28	-50.83	-13	-37.83	Pass	V
5796.21	153	32	-48.66	-13	-35.66	Pass	V
6593.64	144	12	-49.11	-13	-36.11	Pass	V

Band 38 38000 channel/BW 5 (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1352.14	150	171	-56.10	-13	-43.10	Pass	H
1813.08	146	256	-51.43	-13	-38.43	Pass	H
3789.60	150	290	-47.70	-13	-34.70	Pass	H
5798.94	146	265	-42.63	-13	-29.63	Pass	H
6455.70	149	241	-47.29	-13	-34.29	Pass	H
8023.08	151	164	-48.25	-13	-35.25	Pass	H
1153.51	149	303	-56.43	-13	-43.43	Pass	V
1345.98	148	327	-60.76	-13	-47.76	Pass	V
3603.38	147	317	-53.69	-13	-40.69	Pass	V
3834.37	148	276	-51.49	-13	-38.49	Pass	V
5777.50	150	284	-45.96	-13	-32.96	Pass	V
6470.77	150	199	-46.66	-13	-33.66	Pass	V

Band 38 38225 channel/BW 5 (highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1346.79	145	161	-59.56	-13	-46.56	Pass	H
1575.11	148	254	-53.21	-13	-40.21	Pass	H
3824.75	151	38	-45.94	-13	-32.94	Pass	H
5863.38	152	16	-41.75	-13	-28.75	Pass	H
6531.32	152	162	-40.21	-13	-27.21	Pass	H
7996.18	152	134	-46.98	-13	-33.98	Pass	H
1278.74	147	21	-57.82	-13	-44.82	Pass	V
1385.94	152	41	-55.41	-13	-42.41	Pass	V
3614.92	153	330	-53.58	-13	-40.58	Pass	V
3990.97	148	23	-51.22	-13	-38.22	Pass	V
5868.26	148	219	-44.31	-13	-31.31	Pass	V
6603.41	145	356	-50.72	-13	-37.72	Pass	V

16QAM

Band 38 37775 channel/BW 5 (lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1314.57	145	333	-56.19	-13	-43.19	1314.57	H
1611.91	150	253	-47.26	-13	-34.26	1611.91	H
3850.33	153	9	-47.99	-13	-34.99	3850.33	H
5945.19	152	283	-42.75	-13	-29.75	5945.19	H
6575.52	153	297	-47.20	-13	-34.20	6575.52	H
7956.09	155	29	-45.03	-13	-32.03	7956.09	H
1235.40	152	181	-55.05	-13	-42.05	1235.40	V
1372.11	149	197	-53.05	-13	-40.05	1372.11	V
3597.43	150	292	-50.07	-13	-37.07	3597.43	V
3935.08	153	340	-53.30	-13	-40.30	3935.08	V
5849.07	151	10	-45.45	-13	-32.45	5849.07	V
6670.14	153	25	-51.05	-13	-38.05	6670.14	V

Band 38 38000 channel/BW 5 (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1371.51	149	293	-60.33	-13	-47.33	Pass	H
1665.58	146	331	-47.20	-13	-34.20	Pass	H
3890.10	150	27	-46.83	-13	-33.83	Pass	H
5868.44	150	139	-47.66	-13	-34.66	Pass	H
6597.42	153	287	-45.59	-13	-32.59	Pass	H
8099.38	146	154	-43.44	-13	-30.44	Pass	H
1231.29	150	155	-51.44	-13	-38.44	Pass	V
1375.67	149	135	-56.20	-13	-43.20	Pass	V
3667.15	155	29	-53.11	-13	-40.11	Pass	V
3935.19	153	147	-49.84	-13	-36.84	Pass	V
5761.98	152	266	-45.21	-13	-32.21	Pass	V
6584.39	155	56	-51.44	-13	-38.44	Pass	V

Band 38 38225 channel/BW 5 (highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1249.24	147	192	-57.21	-13	-44.21	Pass	H
1713.69	148	330	-49.82	-13	-36.82	Pass	H
3830.32	155	53	-51.76	-13	-38.76	Pass	H
5899.21	153	319	-46.31	-13	-33.31	Pass	H
6652.19	150	192	-45.89	-13	-32.89	Pass	H
7913.00	152	201	-39.48	-13	-26.48	Pass	H
1260.43	149	325	-50.94	-13	-37.94	Pass	V
1448.80	147	116	-55.70	-13	-42.70	Pass	V
3567.97	147	130	-54.43	-13	-41.43	Pass	V
4002.49	152	21	-53.47	-13	-40.47	Pass	V
5952.12	148	176	-44.13	-13	-31.13	Pass	V
6653.58	149	168	-50.97	-13	-37.97	Pass	V

Note:

7) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

8) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

QPSK

Band 40A 38725 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1299.51	150	94	-54.19	-40	-14.19	Pass	H
1634.49	146	139	-48.92	-40	-8.92	Pass	H
3921.15	150	280	-50.34	-40	-10.34	Pass	H
5862.80	146	125	-46.64	-40	-6.64	Pass	H
6523.51	149	206	-50.71	-40	-10.71	Pass	H
8119.51	151	214	-50.15	-40	-10.15	Pass	H
1322.27	149	242	-56.21	-40	-16.21	Pass	V
1410.64	148	347	-57.19	-40	-17.19	Pass	V
3620.99	147	253	-51.74	-40	-11.74	Pass	V
3859.05	148	319	-53.71	-40	-13.71	Pass	V
5847.19	150	185	-45.57	-40	-5.57	Pass	V
6596.85	150	75	-50.58	-40	-10.58	Pass	V

Band 40A 38750 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1392.42	150	4	-58.28	-40	-18.28	Pass	H
1760.42	146	45	-53.51	-40	-13.51	Pass	H
3815.51	150	287	-52.13	-40	-12.13	Pass	H
5917.27	146	21	-48.16	-40	-8.16	Pass	H
6518.09	149	247	-49.26	-40	-9.26	Pass	H
8076.62	151	157	-50.79	-40	-10.79	Pass	H
1195.98	149	354	-52.51	-40	-12.51	Pass	V
1396.45	148	236	-61.37	-40	-21.37	Pass	V
3663.98	147	55	-54.71	-40	-14.71	Pass	V
3985.47	148	44	-50.08	-40	-10.08	Pass	V
5817.19	150	10	-51.38	-40	-11.38	Pass	V
6430.27	150	319	-51.03	-40	-11.03	Pass	V

Band 40A 38775 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1258.09	150	61	-58.13	-40	-18.13	Pass	H
1679.99	146	99	-50.08	-40	-10.08	Pass	H
3935.30	150	357	-52.83	-40	-12.83	Pass	H
5822.20	146	204	-44.48	-40	-4.48	Pass	H
6424.61	149	121	-49.37	-40	-9.37	Pass	H
8091.71	151	117	-46.09	-40	-6.09	Pass	H
1146.44	149	39	-56.49	-40	-16.49	Pass	V
1449.24	148	116	-61.63	-40	-21.63	Pass	V
3607.22	147	139	-54.07	-40	-14.07	Pass	V
3897.35	148	226	-51.38	-40	-11.38	Pass	V
5903.47	150	251	-49.03	-40	-9.03	Pass	V
6530.60	150	256	-49.83	-40	-9.83	Pass	V

16QAM

Band 40A 38725 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1321.81	150	323	-54.92	-40	-14.92	Pass	H
1657.25	146	239	-52.38	-40	-12.38	Pass	H
3815.68	150	248	-51.42	-40	-11.42	Pass	H
5815.90	146	351	-46.08	-40	-6.08	Pass	H
6405.93	149	335	-51.25	-40	-11.25	Pass	H
8092.94	151	72	-46.84	-40	-6.84	Pass	H
1207.95	149	163	-52.35	-40	-12.35	Pass	V
1425.62	148	326	-61.69	-40	-21.69	Pass	V
3496.99	147	150	-54.51	-40	-14.51	Pass	V
3893.37	148	319	-48.47	-40	-8.47	Pass	V
5762.79	150	145	-51.36	-40	-11.36	Pass	V
6590.85	150	138	-50.31	-40	-10.31	Pass	V

Band 40A 38750channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1284.69	150	58	-54.42	-40	-14.42	Pass	H
1767.94	146	127	-52.15	-40	-12.15	Pass	H
3889.64	150	311	-49.07	-40	-9.07	Pass	H
5795.25	146	335	-44.90	-40	-4.90	Pass	H
6529.44	149	188	-50.56	-40	-10.56	Pass	H
8032.80	151	334	-48.13	-40	-8.13	Pass	H
1274.81	149	212	-53.01	-40	-13.01	Pass	V
1417.63	148	242	-61.32	-40	-21.32	Pass	V
3597.20	147	263	-54.82	-40	-14.82	Pass	V
3868.48	148	307	-53.35	-40	-13.35	Pass	V
5772.25	150	188	-46.89	-40	-6.89	Pass	V
6458.53	150	234	-46.84	-40	-6.84	Pass	V

Band 40A 38875 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1219.45	150	22	-57.87	-40	-17.87	Pass	H
1784.31	146	203	-53.21	-40	-13.21	Pass	H
3851.13	150	33	-51.04	-40	-11.04	Pass	H
5952.48	146	70	-45.49	-40	-5.49	Pass	H
6513.03	149	294	-51.67	-40	-11.67	Pass	H
8081.90	151	50	-48.25	-40	-8.25	Pass	H
1189.18	149	38	-56.33	-40	-16.33	Pass	V
1390.10	148	139	-59.33	-40	-19.33	Pass	V
3553.08	147	1	-55.16	-40	-15.16	Pass	V
3905.81	148	321	-53.47	-40	-13.47	Pass	V
5765.24	150	301	-51.19	-40	-11.19	Pass	V
6553.14	150	19	-45.29	-40	-5.29	Pass	V

Note:

9) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

10) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

QPSK

Band 40B 39175channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1287.29	150	97	-53.31	-40	-13.31	Pass	H
1631.47	146	251	-52.67	-40	-12.67	Pass	H
3951.15	150	58	-51.51	-40	-11.51	Pass	H
5804.93	146	326	-42.58	-40	-2.58	Pass	H
6382.17	149	173	-47.47	-40	-7.47	Pass	H
8025.13	151	105	-49.86	-40	-9.86	Pass	H
1282.26	149	317	-53.10	-40	-13.10	Pass	V
1421.91	148	276	-57.64	-40	-17.64	Pass	V
3549.92	147	189	-55.54	-40	-15.54	Pass	V
3927.78	148	216	-50.62	-40	-10.62	Pass	V
5808.96	150	8	-51.49	-40	-11.49	Pass	V
6451.00	150	51	-45.91	-40	-5.91	Pass	V

Band 40B 39200 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1285.78	150	295	-55.71	-40	-15.71	Pass	H
1690.19	146	245	-49.82	-40	-9.82	Pass	H
3966.07	150	254	-52.81	-40	-12.81	Pass	H
5831.18	146	340	-42.66	-40	-2.66	Pass	H
6374.47	149	54	-46.88	-40	-6.88	Pass	H
7935.81	151	295	-51.43	-40	-11.43	Pass	H
1175.56	149	311	-54.63	-40	-14.63	Pass	V
1487.43	148	223	-56.30	-40	-16.30	Pass	V
3614.37	147	327	-53.47	-40	-13.47	Pass	V
3825.08	148	338	-50.16	-40	-10.16	Pass	V
5912.90	150	334	-49.94	-40	-9.94	Pass	V
6446.92	150	25	-49.08	-40	-9.08	Pass	V

Band 40B 39225 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1338.83	150	149	-56.68	-40	-16.68	Pass	H
1761.69	146	350	-53.13	-40	-13.13	Pass	H
3913.23	150	202	-49.11	-40	-9.11	Pass	H
5955.54	146	73	-46.67	-40	-6.67	Pass	H
6495.31	149	314	-47.65	-40	-7.65	Pass	H
8120.14	151	331	-46.68	-40	-6.68	Pass	H
1293.45	149	293	-55.79	-40	-15.79	Pass	V
1340.94	148	70	-59.54	-40	-19.54	Pass	V
3607.56	147	290	-54.08	-40	-14.08	Pass	V
3878.52	148	248	-48.19	-40	-8.19	Pass	V
5796.84	150	244	-49.20	-40	-9.20	Pass	V
6576.01	150	343	-49.70	-40	-9.70	Pass	V

16QAM

Band 40B 39175 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1243.68	150	308	-56.48	-40	-16.48	Pass	H
1714.61	146	100	-49.23	-40	-9.23	Pass	H
3945.79	150	321	-50.99	-40	-10.99	Pass	H
5918.14	146	209	-43.89	-40	-3.89	Pass	H
6541.87	149	151	-46.98	-40	-6.98	Pass	H
8004.66	151	51	-46.30	-40	-6.30	Pass	H
1181.80	149	153	-55.42	-40	-15.42	Pass	V
1413.17	148	32	-56.79	-40	-16.79	Pass	V
3682.98	147	57	-55.43	-40	-15.43	Pass	V
3939.32	148	160	-48.65	-40	-8.65	Pass	V
5784.66	150	109	-46.64	-40	-6.64	Pass	V
6531.19	150	339	-47.55	-40	-7.55	Pass	V

Band 40B 39200channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1394.22	150	315	-55.63	-40	-15.63	Pass	H
1733.33	146	219	-49.14	-40	-9.14	Pass	H
3958.85	150	166	-50.49	-40	-10.49	Pass	H
5808.29	146	135	-48.03	-40	-8.03	Pass	H
6492.36	149	13	-50.39	-40	-10.39	Pass	H
8036.74	151	166	-49.08	-40	-9.08	Pass	H
1173.51	149	219	-51.14	-40	-11.14	Pass	V
1490.84	148	234	-62.02	-40	-22.02	Pass	V
3665.69	147	70	-52.67	-40	-12.67	Pass	V
3913.07	148	318	-53.94	-40	-13.94	Pass	V
5815.10	150	98	-47.65	-40	-7.65	Pass	V
6581.50	150	246	-46.17	-40	-6.17	Pass	V

Band 40B 39225 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1264.85	150	295	-55.43	-40	-15.43	Pass	H
1732.57	146	195	-51.98	-40	-11.98	Pass	H
3926.24	150	240	-51.51	-40	-11.51	Pass	H
5840.33	146	323	-45.91	-40	-5.91	Pass	H
6443.24	149	157	-47.87	-40	-7.87	Pass	H
8051.31	151	317	-49.34	-40	-9.34	Pass	H
1213.29	149	113	-53.49	-40	-13.49	Pass	V
1380.67	148	281	-56.54	-40	-16.54	Pass	V
3509.48	147	192	-54.19	-40	-14.19	Pass	V
3820.65	148	195	-48.49	-40	-8.49	Pass	V
5871.47	150	40	-50.20	-40	-10.20	Pass	V
6580.55	150	145	-50.11	-40	-10.11	Pass	V

Note:

11) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

12) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

QPSK

Band 41 40265 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1331.88	149	165	-54.85	-25	-29.85	Pass	H
1672.85	146	208	-44.79	-25	-19.79	Pass	H
3901.05	146	4	-44.01	-25	-19.01	Pass	H
5871.11	150	198	-42.60	-25	-17.60	Pass	H
6460.45	146	341	-38.91	-25	-13.91	Pass	H
8013.43	150	235	-41.60	-25	-16.60	Pass	H
1113.72	146	292	-54.69	-25	-29.69	Pass	V
1474.16	150	158	-56.43	-25	-31.43	Pass	V
3461.14	149	55	-48.71	-25	-23.71	Pass	V
3828.46	150	319	-48.99	-25	-23.99	Pass	V
5734.09	146	118	-49.99	-25	-24.99	Pass	V
6648.76	150	155	-42.54	-25	-17.54	Pass	V
Band 41 40740 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1333.72	149	165	-55.33	-25	-30.33	Pass	H
1626.68	146	208	-48.02	-25	-23.02	Pass	H
3976.52	146	4	-46.98	-25	-21.98	Pass	H
5875.83	150	198	-44.23	-25	-19.23	Pass	H
6415.32	146	341	-46.41	-25	-21.41	Pass	H
8165.63	150	235	-44.87	-25	-19.87	Pass	H
1275.76	146	292	-51.15	-25	-26.15	Pass	V
1545.39	150	158	-58.74	-25	-33.74	Pass	V
3602.73	149	55	-52.55	-25	-27.55	Pass	V
3908.06	150	319	-52.15	-25	-27.15	Pass	V
5725.03	146	118	-42.96	-25	-17.96	Pass	V
6500.07	150	155	-44.91	-25	-19.91	Pass	V
Band 41 41215 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1426.21	149	165	-55.75	-25	-30.75	Pass	H
1695.37	146	208	-45.37	-25	-20.37	Pass	H
3968.74	146	4	-44.98	-25	-19.98	Pass	H
5868.03	150	198	-41.05	-25	-16.05	Pass	H
6505.81	146	341	-40.89	-25	-15.89	Pass	H
8112.80	150	235	-48.14	-25	-23.14	Pass	H
1255.03	146	292	-52.34	-25	-27.34	Pass	V
1398.22	150	158	-61.98	-25	-36.98	Pass	V
3480.58	149	55	-49.57	-25	-24.57	Pass	V
3795.67	150	319	-50.03	-25	-25.03	Pass	V
5876.26	146	118	-48.03	-25	-23.03	Pass	V
6535.39	150	155	-46.25	-25	-21.25	Pass	V

16QAM-B41

Band 41 40265 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1368.09	149	55	-51.87	-25	-26.87	Pass	H
1691.99	155	46	-48.48	-25	-23.48	Pass	H
3842.47	152	35	-44.72	-25	-19.72	Pass	H
5895.56	152	348	-42.90	-25	-17.90	Pass	H
6539.90	146	4	-41.42	-25	-16.42	Pass	H
8161.78	145	173	-43.26	-25	-18.26	Pass	H
1214.62	154	250	-51.79	-25	-26.79	Pass	V
1454.61	154	257	-60.46	-25	-35.46	Pass	V
3503.57	151	28	-49.18	-25	-24.18	Pass	V
3786.58	149	27	-51.25	-25	-26.25	Pass	V
5763.66	150	113	-48.13	-25	-23.13	Pass	V
6513.23	151	128	-44.17	-25	-19.17	Pass	V
Band 41 40740 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1360.36	149	155	-51.60	-25	-26.60	Pass	H
1693.29	151	315	-49.63	-25	-24.63	Pass	H
3841.81	153	100	-45.98	-25	-20.98	Pass	H
5811.74	149	357	-41.89	-25	-16.89	Pass	H
6564.98	153	349	-43.11	-25	-18.11	Pass	H
7997.95	146	261	-45.27	-25	-20.27	Pass	H
1251.33	152	341	-50.45	-25	-25.45	Pass	V
1473.55	152	97	-56.08	-25	-31.08	Pass	V
3527.70	146	86	-52.26	-25	-27.26	Pass	V
3778.35	151	141	-47.10	-25	-22.10	Pass	V
5780.66	149	331	-49.85	-25	-24.85	Pass	V
6519.13	148	294	-47.15	-25	-22.15	Pass	V
Band 41 41215 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1353.72	149	165	-58.41	-25	-33.41	Pass	H
1644.71	146	208	-48.61	-25	-23.61	Pass	H
3972.20	146	4	-47.18	-25	-22.18	Pass	H
5951.17	150	198	-42.23	-25	-17.23	Pass	H
6603.37	146	341	-44.76	-25	-19.76	Pass	H
8040.55	150	235	-39.16	-25	-14.16	Pass	H
1198.86	146	292	-49.83	-25	-24.83	Pass	V
1448.14	150	158	-59.13	-25	-34.13	Pass	V
3578.06	149	55	-51.38	-25	-26.38	Pass	V
3803.85	150	319	-51.08	-25	-26.08	Pass	V
5792.62	146	118	-45.72	-25	-20.72	Pass	V
6583.68	150	155	-45.57	-25	-20.57	Pass	V

Note:

13) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

14) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

12. FREQUENCY STABILITY

12.1 Standard Applicable

According to §22.355, §24.235, §27.54 the limit is 2.5ppm.

12.2 Test Procedure

According to §2.1055, the following test procedure was performed.

The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.

The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a Frequency Domain Analyzer in histogram mode

12.3 Summary of Test Results/Plots

Note: 1.Normal Voltage NV=DC3.7V; Low Voltage LV=DC3.33; High Voltage HV=DC4.07V

Please refer to Appendix 2: Frequency Stability

Test result: Pass

***** END OF REPORT *****