TEST REPORT

Product Name:	Smart Watch
FCC ID:	2BCNP-BS-SWMC
Trademark:	BLACK SHARK
Model Number:	BS-W2403, BS-W2401, BS-W2402, BS-W2404, BS-W2405, BS-W2406, BS-W2407, BS-W2408, BS-W2409, BS-W2410, BS-W2411, BS-W2412, BS-W2413, BS-W2414, BS-W2415, BS-W2416, BS-W2417, BS-W2418, BS-W2419, BS-W2420, BS-W2421, BS-W2422, BS-W2423, BS-W2424, BS-W2425, BS-W2426, BS-W2427, BS-W2428, BS-W2429, BS-W2430
Prepared For:	Blackshark Technologies (Nanchang) Co., Ltd
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Manufacturer:	Blackshark Technologies (Nanchang) Co., Ltd
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Prepared By:	Shenzhen CTB Testing Technology Co., Ltd.
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Sample Received Date:	May. 13, 2024
Sample tested Date:	May. 13, 2024 to May. 25, 2024
Issue Date:	May. 25, 2024
Report No.:	CTB240530033RF
Test Standards	FCC Part 2, 22, 24E, 27
Test Results	PASS
Remark:	This is LTE radio test report.

Compiled by:	Reviewed by:	Approved by:
Zhou Kui	Arron Liu	Bin Mei / Director

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.

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(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
CTB240530033RF	May. 25, 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

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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):	BS-W2403, BS-W2401, BS-W2402, BS-W2404, BS-W2405, BS-W2406, BS-W2407, BS-W2408, BS-W2409, BS-W2410, BS-W2411, BS-W2412, BS-W2413, BS-W2414, BS-W2415, BS-W2416, BS-W2417, BS-W2418, BS-W2419, BS-W2420, BS-W2421, BS-W2422, BS-W2423, BS-W2424, BS-W2425, BS-W2426, BS-W2427, BS-W2428, BS-W2429, BS-W2430
Model Description:	All the model are the same circuit and RF module, only for model name. Test sample model: BS-W2403
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	FDD-LTE BAND 2: 1850-1910MHz FDD-LTE BAND 4: 1710-1755MHz FDD-LTE BAND 5: 824-849MHz FDD-LTE BAND 7: 2500-2570MHz FDD-LTE BAND 12: 699-716MHz FDD-LTE BAND 17: 704-716MHz
Max. RF output power:	FDD-LTE BAND 2: 22.95dBm FDD-LTE BAND 4: 22.16dBm FDD-LTE BAND 5: 23.41dBm FDD-LTE BAND 7: 22.09dBm FDD-LTE BAND 12: 22.99dBm FDD-LTE BAND 17: 23.01dBm
Type of Modulation:	QPSK, 16QAM
Antenna installation:	Internal antenna
Antenna Gain:	FDD-LTE BAND 2: 1.36dBi FDD-LTE BAND 4: 1.1dBi FDD-LTE BAND 5: -2.45dBi FDD-LTE BAND 7: 1.08dBi FDD-LTE BAND 12: -4.47dBi FDD-LTE BAND 17: -4.39dBi
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

Item	Equipment	Mfr/Brand	Model/TypeNo.	SeriesNo.	Note
1	Adapter	JIYIN	JY-05100C	/	/

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	FDD-LTE BAND 7	Low, Middle, High Channels
TM5	FDD-LTE BAND 12	Low, Middle, High Channels
TM7	FDD-LTE BAND 17	Low, Middle, High Channels

4.5 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(DC):	3.7V
Normal Temperature(℃)	23
Low Temperature(℃)	0
High Temperature(℃)	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, Xinhe 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	MSF2400-2483.5MS-1154	20181015001	/	2024.07.05
10	5 GHz Filter	Shenxiang	MSF5150-5850MS-1155	20181015001	/	2024.07.06
11	Filter	Xingbo	XBLBQ-DZA120	190821-1-1	/	2024.07.06
12	BT&WI-FI Automatic test software	Micowave	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	Micowave	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.

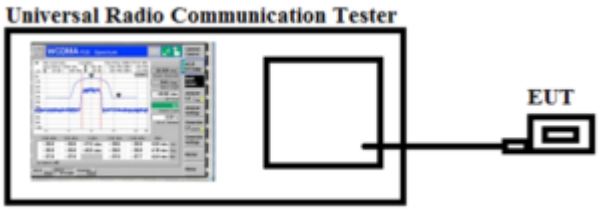
According to §24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

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

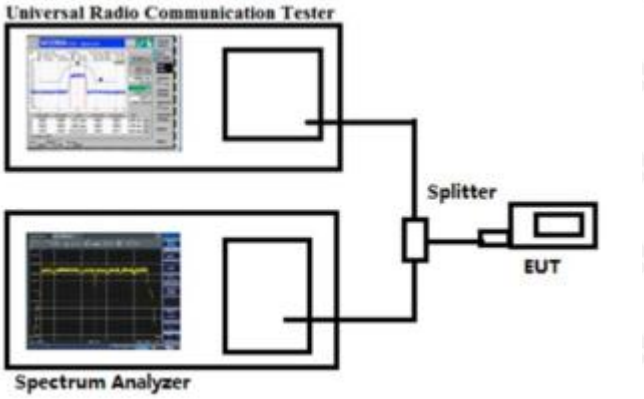
According to §24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in 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 B: 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.

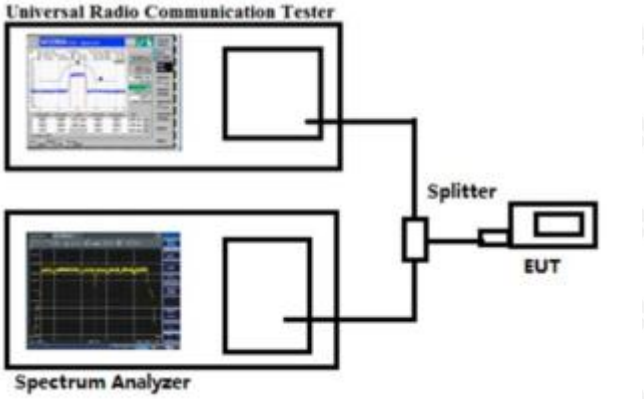
According to §24.238(b), the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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 C: 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.

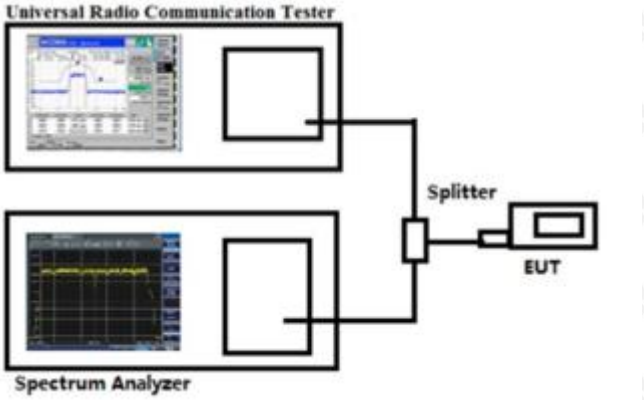
According to §27.53(h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.
According to §27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside 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 that 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 D & E: 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 log10 (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 (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.
1391.86	143	23	-57.85	-13	-44.85	Pass	H
1721.32	152	300	-52.04	-13	-39.04	Pass	H
3851.45	160	103	-50.37	-13	-37.37	Pass	H
5780.26	142	98	-44.24	-13	-31.24	Pass	H
6574.38	142	52	-42.80	-13	-29.80	Pass	H
7942.25	159	310	-49.27	-13	-36.27	Pass	H
1154.50	155	56	-57.29	-13	-44.29	Pass	V
1452.27	154	358	-60.21	-13	-47.21	Pass	V
3471.82	155	147	-53.15	-13	-40.15	Pass	V
3831.56	151	22	-50.83	-13	-37.83	Pass	V
5721.25	158	164	-45.72	-13	-32.72	Pass	V
6552.68	160	235	-49.16	-13	-36.16	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.
1211.50	150	198	-55.82	-13	-42.82	Pass	H
1660.29	146	339	-49.47	-13	-36.47	Pass	H
3803.71	150	319	-51.24	-13	-38.24	Pass	H
5805.12	146	177	-43.19	-13	-30.19	Pass	H
6407.93	149	182	-48.73	-13	-35.73	Pass	H
8050.86	151	143	-50.00	-13	-37.00	Pass	H
1169.03	149	77	-55.36	-13	-42.36	Pass	V
1485.18	148	39	-56.88	-13	-43.88	Pass	V
3639.02	147	340	-56.82	-13	-43.82	Pass	V
3899.19	148	130	-50.66	-13	-37.66	Pass	V
5922.63	150	311	-47.78	-13	-34.78	Pass	V
6531.50	150	344	-47.63	-13	-34.63	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.
1259.73	147	84	-57.66	-13	-44.66	Pass	H
1573.80	145	231	-54.45	-13	-41.45	Pass	H
3896.56	155	304	-42.66	-13	-29.66	Pass	H
5947.95	155	68	-38.96	-13	-25.96	Pass	H
6449.73	148	51	-45.39	-13	-32.39	Pass	H
8082.88	152	160	-47.18	-13	-34.18	Pass	H
1237.12	146	207	-55.21	-13	-42.21	Pass	V
1381.82	155	208	-57.28	-13	-44.28	Pass	V
3597.10	151	221	-50.40	-13	-37.40	Pass	V
3923.22	147	182	-46.09	-13	-33.09	Pass	V
5742.86	146	39	-42.05	-13	-29.05	Pass	V
6667.83	154	168	-45.46	-13	-32.46	Pass	V

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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.
1240.91	149	63	-58.38	-13	-45.38	Pass	H
1756.85	147	202	-47.45	-13	-34.45	Pass	H
3798.40	151	297	-48.27	-13	-35.27	Pass	H
5934.61	153	313	-44.09	-13	-31.09	Pass	H
6653.07	148	160	-43.84	-13	-30.84	Pass	H
7925.64	151	139	-42.43	-13	-29.43	Pass	H
1278.95	152	224	-54.51	-13	-41.51	Pass	V
1405.11	147	270	-54.38	-13	-41.38	Pass	V
3504.01	154	149	-52.50	-13	-39.50	Pass	V
3895.77	148	113	-51.04	-13	-38.04	Pass	V
5800.37	146	205	-45.64	-13	-32.64	Pass	V
6600.10	149	31	-50.69	-13	-37.69	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.
1325.09	152	241	-52.08	-13	-41.45	Pass	H
1810.77	147	6	-49.13	-13	-37.85	Pass	H
3763.36	155	133	-48.89	-13	-35.2	Pass	H
5866.81	150	119	-43.73	-13	-30.39	Pass	H
6516.56	148	257	-43.11	-13	-32.24	Pass	H
8143.26	154	114	-42.72	-13	-30.22	Pass	H
1146.87	150	352	-55.83	-13	-44.9	Pass	V
1338.76	148	210	-56.41	-13	-43.63	Pass	V
3444.45	153	68	-45.82	-13	-35.94	Pass	V
3796.05	148	4	-49.27	-13	-36.01	Pass	V
5808.33	152	116	-43.51	-13	-33.75	Pass	V
6574.29	147	79	-48.41	-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.
1388.14	153	312	-57.54	-13	-44.54	Pass	H
1703.44	149	172	-51.74	-13	-38.74	Pass	H
3888.05	150	286	-44.69	-13	-31.69	Pass	H
5857.23	145	135	-39.17	-13	-26.17	Pass	H
6579.18	149	228	-40.11	-13	-27.11	Pass	H
7991.74	150	63	-43.09	-13	-30.09	Pass	H
1179.56	145	117	-51.79	-13	-38.79	Pass	V
1466.27	145	29	-57.72	-13	-44.72	Pass	V
3498.00	152	49	-46.28	-13	-33.28	Pass	V
3866.37	154	347	-52.89	-13	-39.89	Pass	V
5883.04	149	261	-51.22	-13	-38.22	Pass	V
6646.66	145	136	-44.19	-13	-31.19	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.

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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.
1340.07	145	291	-58.65	-13	-45.65	Pass	H
1630.53	148	313	-46.68	-13	-33.68	Pass	H
3970.06	153	238	-46.94	-13	-33.94	Pass	H
5866.32	144	71	-43.27	-13	-30.27	Pass	H
6589.54	157	353	-45.10	-13	-32.10	Pass	H
8161.70	143	198	-42.29	-13	-29.29	Pass	H
1151.71	150	65	-55.07	-13	-42.07	Pass	V
1414.56	148	152	-57.40	-13	-44.40	Pass	V
3611.71	159	92	-50.15	-13	-37.15	Pass	V
3902.36	147	246	-50.97	-13	-37.97	Pass	V
5811.33	154	300	-46.02	-13	-33.02	Pass	V
6474.25	141	0	-45.20	-13	-32.20	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.
1228.20	150	352	-55.33	-13	-42.33	Pass	H
1803.65	146	300	-50.06	-13	-37.06	Pass	H
3897.85	150	171	-49.55	-13	-36.55	Pass	H
5942.24	146	264	-48.13	-13	-35.13	Pass	H
6538.48	149	216	-46.50	-13	-33.50	Pass	H
7998.25	151	67	-49.56	-13	-36.56	Pass	H
1264.67	149	72	-52.88	-13	-39.88	Pass	V
1492.68	148	16	-59.84	-13	-46.84	Pass	V
3589.29	147	62	-51.69	-13	-38.69	Pass	V
3972.55	148	59	-48.70	-13	-35.70	Pass	V
5859.03	150	165	-48.57	-13	-35.57	Pass	V
6595.29	150	50	-50.90	-13	-37.90	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.
1346.00	149	123	-56.86	-13	-43.86	Pass	H
1585.97	151	183	-50.24	-13	-37.24	Pass	H
3886.49	151	21	-46.48	-13	-33.48	Pass	H
6004.00	152	247	-43.36	-13	-30.36	Pass	H
6552.39	150	319	-44.00	-13	-31.00	Pass	H
8006.94	148	129	-46.51	-13	-33.51	Pass	H
1160.37	151	284	-57.04	-13	-44.04	Pass	V
1388.14	154	125	-55.53	-13	-42.53	Pass	V
3611.19	149	156	-52.66	-13	-39.66	Pass	V
3949.99	151	245	-46.97	-13	-33.97	Pass	V
5725.37	154	216	-44.77	-13	-31.77	Pass	V
6602.27	149	287	-50.15	-13	-37.15	Pass	V

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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.
1233.44	152	301	-61.48	-13	-48.48	Pass	H
1784.65	153	209	-46.10	-13	-33.10	Pass	H
3846.66	148	304	-51.62	-13	-38.62	Pass	H
5961.42	150	133	-43.19	-13	-30.19	Pass	H
6622.92	146	267	-44.64	-13	-31.64	Pass	H
8033.12	153	257	-44.96	-13	-31.96	Pass	H
1153.34	147	8	-54.31	-13	-41.31	Pass	V
1443.84	151	213	-53.96	-13	-40.96	Pass	V
3510.99	147	116	-49.15	-13	-36.15	Pass	V
3839.96	150	287	-50.22	-13	-37.22	Pass	V
5852.66	148	196	-44.73	-13	-31.73	Pass	V
6636.01	145	275	-48.42	-13	-35.42	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.
1375.22	154	204	-56.88	-13	-41.45	Pass	H
1655.78	155	110	-50.54	-13	-37.85	Pass	H
3928.63	150	151	-49.30	-13	-35.2	Pass	H
6015.42	154	113	-43.91	-13	-30.39	Pass	H
6464.28	155	235	-44.79	-13	-32.24	Pass	H
8088.70	151	189	-43.80	-13	-30.22	Pass	H
1180.93	153	1	-58.83	-13	-44.9	Pass	V
1480.62	150	90	-58.02	-13	-43.63	Pass	V
3604.47	148	265	-46.76	-13	-35.94	Pass	V
3846.83	154	57	-47.10	-13	-36.01	Pass	V
5779.95	152	293	-48.34	-13	-33.75	Pass	V
6494.81	155	268	-47.18	-13	-32.41	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.
1430.91	150	13	-54.30	-13	-41.30	Pass	H
1657.31	147	34	-46.77	-13	-33.77	Pass	H
3822.49	146	154	-45.03	-13	-32.03	Pass	H
5862.40	147	106	-44.55	-13	-31.55	Pass	H
6552.94	147	220	-37.61	-13	-24.61	Pass	H
8128.60	148	54	-48.76	-13	-35.76	Pass	H
1108.80	152	138	-53.94	-13	-40.94	Pass	V
1381.39	155	85	-60.84	-13	-47.84	Pass	V
3531.00	149	282	-51.13	-13	-38.13	Pass	V
3929.06	146	155	-47.16	-13	-34.16	Pass	V
5768.67	153	115	-45.81	-13	-32.81	Pass	V
6558.58	154	193	-42.19	-13	-29.19	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.

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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.
1315.06	151	92	-56.07	-13	-43.07	Pass	H
1633.54	152	168	-44.39	-13	-31.39	Pass	H
3934.90	146	260	-47.00	-13	-34.00	Pass	H
5976.14	147	56	-46.61	-13	-33.61	Pass	H
6465.92	151	8	-45.87	-13	-32.87	Pass	H
8030.93	154	180	-39.89	-13	-26.89	Pass	H
1172.30	148	33	-56.61	-13	-43.61	Pass	V
1445.88	145	352	-55.87	-13	-42.87	Pass	V
3634.10	145	214	-48.86	-13	-35.86	Pass	V
3845.55	154	327	-49.16	-13	-36.16	Pass	V
5898.91	154	248	-46.26	-13	-33.26	Pass	V
6568.33	145	150	-46.71	-13	-33.71	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.
1269.65	147	154	-56.11	-13	-43.11	Pass	H
1797.96	154	243	-46.99	-13	-33.99	Pass	H
3946.57	146	359	-46.09	-13	-33.09	Pass	H
5863.22	153	50	-39.43	-13	-26.43	Pass	H
6531.53	147	246	-39.54	-13	-26.54	Pass	H
8078.31	151	156	-44.25	-13	-31.25	Pass	H
1094.75	149	304	-58.95	-13	-45.95	Pass	V
1346.22	154	168	-62.04	-13	-49.04	Pass	V
3577.50	154	226	-47.98	-13	-34.98	Pass	V
3919.53	149	161	-47.62	-13	-34.62	Pass	V
5758.53	152	261	-45.61	-13	-32.61	Pass	V
6560.57	147	231	-42.74	-13	-29.74	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.
1244.13	149	165	-49.80	-13	-36.80	Pass	H
1686.31	146	208	-49.33	-13	-36.33	Pass	H
3803.40	146	4	-44.98	-13	-31.98	Pass	H
5926.24	150	198	-39.69	-13	-26.69	Pass	H
6517.73	146	341	-43.13	-13	-30.13	Pass	H
8003.44	150	235	-43.58	-13	-30.58	Pass	H
1197.48	146	292	-52.11	-13	-39.11	Pass	V
1471.67	150	158	-58.05	-13	-45.05	Pass	V
3617.40	149	55	-53.07	-13	-40.07	Pass	V
3902.66	150	319	-46.97	-13	-33.97	Pass	V
5736.17	146	118	-44.29	-13	-31.29	Pass	V
6480.52	150	155	-44.68	-13	-31.68	Pass	V

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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.
1410.08	150	78	-55.17	-13	-42.17	Pass	H
1626.82	149	291	-54.47	-13	-41.47	Pass	H
3874.38	151	213	-53.33	-13	-40.33	Pass	H
5886.05	150	89	-44.02	-13	-31.02	Pass	H
6437.30	151	329	-44.20	-13	-31.20	Pass	H
8025.01	148	138	-50.02	-13	-37.02	Pass	H
1256.14	149	99	-57.03	-13	-44.03	Pass	V
1384.13	148	217	-57.03	-13	-44.03	Pass	V
3609.04	150	12	-52.97	-13	-39.97	Pass	V
3760.21	150	137	-49.19	-13	-36.19	Pass	V
5851.61	146	356	-47.29	-13	-34.29	Pass	V
6539.78	146	95	-44.21	-13	-31.21	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.
1275.63	150	142	-53.17	-13	-40.17	Pass	H
1686.78	146	280	-53.12	-13	-40.12	Pass	H
3910.97	150	330	-46.74	-13	-33.74	Pass	H
5766.49	146	194	-41.82	-13	-28.82	Pass	H
6424.19	149	260	-50.06	-13	-37.06	Pass	H
8114.52	151	31	-48.86	-13	-35.86	Pass	H
1328.55	149	4	-51.50	-13	-38.50	Pass	V
1450.28	148	257	-61.36	-13	-48.36	Pass	V
3671.24	147	55	-53.57	-13	-40.57	Pass	V
3913.43	148	273	-51.07	-13	-38.07	Pass	V
5897.94	150	136	-54.64	-13	-41.64	Pass	V
6431.50	150	16	-47.11	-13	-34.11	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.
1242.98	149	156	-59.82	-13	-46.82	Pass	H
1653.48	149	170	-48.72	-13	-35.72	Pass	H
3834.42	149	127	-47.92	-13	-34.92	Pass	H
5821.02	146	42	-45.47	-13	-32.47	Pass	H
6506.49	147	69	-40.19	-13	-27.19	Pass	H
7914.89	151	110	-48.47	-13	-35.47	Pass	H
1195.39	148	61	-54.71	-13	-41.71	Pass	V
1370.25	147	266	-50.44	-13	-37.44	Pass	V
3504.84	148	303	-52.92	-13	-39.92	Pass	V
3817.59	149	195	-43.26	-13	-30.26	Pass	V
5759.80	147	323	-44.55	-13	-31.55	Pass	V
6496.94	146	325	-46.55	-13	-33.55	Pass	V

Note:

5) 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.

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.

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Band 7 20775 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1302.29	154	337	-54.61	-13	-41.61	Pass	H
1668.43	148	216	-47.80	-13	-34.80	Pass	H
3815.08	153	351	-50.78	-13	-37.78	Pass	H
5881.95	149	255	-46.77	-13	-33.77	Pass	H
6545.19	150	295	-42.50	-13	-29.50	Pass	H
7989.37	146	36	-37.90	-13	-24.90	Pass	H
1105.02	152	313	-52.49	-13	-39.49	Pass	V
1452.50	150	347	-58.85	-13	-45.85	Pass	V
3652.73	148	108	-51.59	-13	-38.59	Pass	V
3832.47	146	322	-47.95	-13	-34.95	Pass	V
5872.48	151	8	-43.71	-13	-30.71	Pass	V
6635.21	146	56	-50.81	-13	-37.81	Pass	V

Band 7 21100 channel/BW 5 (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1334.17	149	333	-55.21	-13	-42.21	Pass	H
1780.02	151	321	-48.09	-13	-35.09	Pass	H
3865.86	152	196	-47.82	-13	-34.82	Pass	H
5885.58	153	241	-42.69	-13	-29.69	Pass	H
6531.43	155	358	-45.61	-13	-32.61	Pass	H
8089.71	146	63	-42.41	-13	-29.41	Pass	H
1254.67	147	117	-60.05	-13	-47.05	Pass	V
1319.71	150	232	-58.99	-13	-45.99	Pass	V
3516.74	147	320	-45.21	-13	-32.21	Pass	V
3784.18	152	252	-50.08	-13	-37.08	Pass	V
5856.04	148	353	-40.77	-13	-27.77	Pass	V
6545.28	153	309	-46.98	-13	-33.98	Pass	V

Band 7 21425 channel/BW 5 (highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1239.22	149	165	-56.17	-13	-43.17	Pass	H
1622.48	146	208	-50.82	-13	-37.82	Pass	H
3902.26	146	4	-42.40	-13	-29.40	Pass	H
5896.80	150	198	-39.41	-13	-26.41	Pass	H
6550.22	146	341	-45.04	-13	-32.04	Pass	H
8150.72	150	235	-40.34	-13	-27.34	Pass	H
1116.43	146	292	-51.00	-13	-38.00	Pass	V
1469.12	150	158	-56.89	-13	-43.89	Pass	V
3496.53	149	55	-50.81	-13	-37.81	Pass	V
3785.71	150	319	-47.56	-13	-34.56	Pass	V
5733.08	146	118	-49.89	-13	-36.89	Pass	V
6498.05	150	155	-48.08	-13	-35.08	Pass	V

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Band 7 20775 channel/BW 5 (lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1360.85	150	78	-55.44	-13	-42.44	Pass	H
1676.64	149	291	-49.93	-13	-36.93	Pass	H
3893.18	151	213	-50.41	-13	-37.41	Pass	H
5799.49	150	89	-43.80	-13	-30.80	Pass	H
6530.94	151	329	-49.31	-13	-36.31	Pass	H
7959.63	148	138	-44.63	-13	-31.63	Pass	H
1240.40	149	99	-54.99	-13	-41.99	Pass	V
1398.18	148	217	-56.67	-13	-43.67	Pass	V
3558.91	150	12	-49.62	-13	-36.62	Pass	V
3800.49	150	137	-50.04	-13	-37.04	Pass	V
5714.42	146	356	-48.38	-13	-35.38	Pass	V
6622.37	146	95	-46.11	-13	-33.11	Pass	V

Band 7 21100 channel/BW 5 (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1391.64	150	142	-56.24	-13	-43.24	Pass	H
1638.59	146	280	-52.02	-13	-39.02	Pass	H
3834.69	150	330	-49.47	-13	-36.47	Pass	H
5773.15	146	194	-47.79	-13	-34.79	Pass	H
6395.88	149	260	-51.99	-13	-38.99	Pass	H
8046.87	151	31	-44.57	-13	-31.57	Pass	H
1269.61	149	4	-52.97	-13	-39.97	Pass	V
1423.66	148	257	-65.22	-13	-52.22	Pass	V
3605.41	147	55	-53.43	-13	-40.43	Pass	V
3884.17	148	273	-50.20	-13	-37.20	Pass	V
5820.13	150	136	-53.28	-13	-40.28	Pass	V
6429.14	150	16	-51.13	-13	-38.13	Pass	V

Band 7 21425 channel/BW 5 (highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1297.01	149	156	-54.37	-13	-41.37	Pass	H
1623.02	149	170	-52.69	-13	-39.69	Pass	H
3806.06	149	127	-42.92	-13	-29.92	Pass	H
5852.57	146	42	-41.19	-13	-28.19	Pass	H
6465.00	147	69	-44.49	-13	-31.49	Pass	H
7940.92	151	110	-44.48	-13	-31.48	Pass	H
1159.29	148	61	-52.23	-13	-39.23	Pass	V
1348.63	147	266	-52.75	-13	-39.75	Pass	V
3446.75	148	303	-53.40	-13	-40.40	Pass	V
3841.57	149	195	-46.20	-13	-33.20	Pass	V
5742.16	147	323	-47.88	-13	-34.88	Pass	V
6489.59	146	325	-46.74	-13	-33.74	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.

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Band 12 23017 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1247.81	148	185	-55.66	-13	-42.66	Pass	H
1684.37	146	304	-44.94	-13	-31.94	Pass	H
3941.88	151	32	-52.73	-13	-39.73	Pass	H
5930.00	148	186	-43.60	-13	-30.60	Pass	H
6502.22	150	99	-47.52	-13	-34.52	Pass	H
8098.50	147	207	-40.82	-13	-27.82	Pass	H
1255.59	149	59	-50.90	-13	-37.90	Pass	V
1420.06	150	336	-58.01	-13	-45.01	Pass	V
3529.51	148	134	-50.01	-13	-37.01	Pass	V
3900.56	153	225	-52.15	-13	-39.15	Pass	V
5935.15	150	279	-48.50	-13	-35.50	Pass	V
6549.87	149	191	-46.53	-13	-33.53	Pass	V
Band 12 23095 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1324.69	150	201	-52.72	-13	-39.72	Pass	H
1630.65	148	236	-48.86	-13	-35.86	Pass	H
3862.79	149	258	-46.69	-13	-33.69	Pass	H
5926.11	147	281	-40.70	-13	-27.70	Pass	H
6561.99	147	207	-40.05	-13	-27.05	Pass	H
7990.14	149	242	-45.07	-13	-32.07	Pass	H
1184.88	149	149	-59.90	-13	-46.90	Pass	V
1414.38	154	342	-57.52	-13	-44.52	Pass	V
3619.33	146	8	-51.28	-13	-38.28	Pass	V
3773.76	148	134	-44.50	-13	-31.50	Pass	V
5910.75	154	213	-40.79	-13	-27.79	Pass	V
6562.53	151	138	-41.98	-13	-28.98	Pass	V

Band 12 23173 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1245.78	149	165	-49.97	-13	-36.97	Pass	H
1790.98	146	208	-47.90	-13	-34.90	Pass	H
3839.15	146	4	-45.03	-13	-32.03	Pass	H
5821.58	150	198	-41.78	-13	-28.78	Pass	H
6484.81	146	341	-43.89	-13	-30.89	Pass	H
8060.54	150	235	-42.63	-13	-29.63	Pass	H
1165.51	146	292	-55.80	-13	-42.80	Pass	V
1479.39	150	158	-56.52	-13	-43.52	Pass	V
3527.50	149	55	-50.64	-13	-37.64	Pass	V
3852.29	150	319	-45.92	-13	-32.92	Pass	V
5764.00	146	118	-50.34	-13	-37.34	Pass	V
6584.73	150	155	-45.45	-13	-32.45	Pass	V

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Band 12 23017 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1252.77	150	78	-55.95	-13	-42.95	Pass	H
1626.41	149	291	-55.62	-13	-42.62	Pass	H
3857.50	151	213	-51.22	-13	-38.22	Pass	H
5796.22	150	89	-47.73	-13	-34.73	Pass	H
6513.55	151	329	-47.04	-13	-34.04	Pass	H
8094.09	148	138	-48.11	-13	-35.11	Pass	H
1240.01	149	99	-54.21	-13	-41.21	Pass	V
1534.08	148	217	-57.72	-13	-44.72	Pass	V
3500.88	150	12	-46.86	-13	-33.86	Pass	V
3819.05	150	137	-49.96	-13	-36.96	Pass	V
5823.78	146	356	-45.93	-13	-32.93	Pass	V
6549.89	146	95	-50.16	-13	-37.16	Pass	V

Band 12 23095 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1223.58	150	142	-56.60	-13	-43.60	Pass	H
1634.15	146	280	-54.17	-13	-41.17	Pass	H
3857.68	150	330	-49.26	-13	-36.26	Pass	H
5807.98	146	194	-46.05	-13	-33.05	Pass	H
6403.48	149	260	-51.93	-13	-38.93	Pass	H
8079.33	151	31	-47.82	-13	-34.82	Pass	H
1303.14	149	4	-52.68	-13	-39.68	Pass	V
1433.84	148	257	-62.63	-13	-49.63	Pass	V
3665.75	147	55	-49.08	-13	-36.08	Pass	V
3957.57	148	273	-56.16	-13	-43.16	Pass	V
5808.98	150	136	-52.19	-13	-39.19	Pass	V
6534.43	150	16	-44.96	-13	-31.96	Pass	V
Band 12 23173 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1295.40	149	156	-54.12	-13	-41.12	Pass	H
1659.80	149	170	-49.61	-13	-36.61	Pass	H
3828.17	149	127	-44.91	-13	-31.91	Pass	H
5834.94	146	42	-44.01	-13	-31.01	Pass	H
6477.08	147	69	-39.75	-13	-26.75	Pass	H
7990.37	151	110	-48.30	-13	-35.30	Pass	H
1255.96	148	61	-52.27	-13	-39.27	Pass	V
1365.85	147	266	-55.30	-13	-42.30	Pass	V
3521.22	148	303	-49.12	-13	-36.12	Pass	V
3899.11	149	195	-44.35	-13	-31.35	Pass	V
5703.51	147	323	-45.79	-13	-32.79	Pass	V
6498.10	146	325	-50.11	-13	-37.11	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.

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Band 17 23755 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1351.96	143	168	-55.04	-13	-42.04	Pass	H
1787.33	155	313	-49.90	-13	-36.90	Pass	H
3808.28	156	104	-45.57	-13	-32.57	Pass	H
5910.35	149	56	-42.56	-13	-29.56	Pass	H
6409.29	142	220	-44.34	-13	-31.34	Pass	H
8024.23	157	262	-42.10	-13	-29.10	Pass	H
1159.56	147	245	-55.31	-13	-42.31	Pass	V
1374.87	152	131	-56.26	-13	-43.26	Pass	V
3517.88	160	34	-49.14	-13	-36.14	Pass	V
3850.06	155	239	-52.35	-13	-39.35	Pass	V
5821.31	159	179	-48.90	-13	-35.90	Pass	V
6544.67	153	196	-45.33	-13	-32.33	Pass	V

Band 17 23790 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1286.83	150	279	-53.79	-13	-40.79	Pass	H
1725.05	146	318	-51.62	-13	-38.62	Pass	H
3827.22	150	30	-49.61	-13	-36.61	Pass	H
5913.64	146	327	-44.74	-13	-31.74	Pass	H
6429.41	149	171	-51.30	-13	-38.30	Pass	H
7999.24	151	29	-51.32	-13	-38.32	Pass	H
1153.06	149	95	-52.27	-13	-39.27	Pass	V
1406.64	148	69	-56.49	-13	-43.49	Pass	V
3501.91	147	280	-51.62	-13	-38.62	Pass	V
3864.56	148	94	-48.83	-13	-35.83	Pass	V
5833.54	150	59	-47.71	-13	-34.71	Pass	V
6519.64	150	179	-46.80	-13	-33.80	Pass	V

Band 17 23825 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1257.37	147	268	-59.63	-13	-46.63	Pass	H
1669.75	145	122	-49.10	-13	-36.10	Pass	H
3838.89	150	276	-43.83	-13	-30.83	Pass	H
5972.94	153	324	-41.90	-13	-28.90	Pass	H
6453.16	151	282	-44.88	-13	-31.88	Pass	H
8083.01	147	189	-46.21	-13	-33.21	Pass	H
1319.17	146	217	-53.66	-13	-40.66	Pass	V
1328.27	149	82	-59.69	-13	-46.69	Pass	V
3537.21	148	328	-52.31	-13	-39.31	Pass	V
3984.61	152	296	-49.01	-13	-36.01	Pass	V
5696.41	147	328	-44.69	-13	-31.69	Pass	V
6568.75	148	230	-47.66	-13	-34.66	Pass	V

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Band 17 23755 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1425.58	148	327	-59.07	-13	-46.07	Pass	H
1729.21	153	187	-47.33	-13	-34.33	Pass	H
3808.79	151	270	-50.95	-13	-37.95	Pass	H
5966.36	151	278	-43.23	-13	-30.23	Pass	H
6641.30	154	174	-43.98	-13	-30.98	Pass	H
8086.37	146	162	-39.53	-13	-26.53	Pass	H
1165.67	146	337	-54.38	-13	-41.38	Pass	V
1498.35	155	203	-57.37	-13	-44.37	Pass	V
3658.59	151	106	-51.71	-13	-38.71	Pass	V
3952.41	151	124	-51.69	-13	-38.69	Pass	V
5903.17	146	326	-44.82	-13	-31.82	Pass	V
6554.59	147	193	-50.27	-13	-37.27	Pass	V

Band 17 23790 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1237.86	149	168	-56.89	-13	-41.45	Pass	H
1772.52	147	216	-52.75	-13	-37.85	Pass	H
3912.72	152	9	-45.37	-13	-35.2	Pass	H
5848.92	149	69	-39.53	-13	-30.39	Pass	H
6524.68	149	104	-43.86	-13	-32.24	Pass	H
7984.42	150	354	-42.85	-13	-30.22	Pass	H
1273.95	154	339	-54.88	-13	-44.9	Pass	V
1417.94	154	295	-53.26	-13	-43.63	Pass	V
3566.57	152	318	-48.28	-13	-35.94	Pass	V
3804.26	146	32	-50.80	-13	-36.01	Pass	V
5762.52	152	137	-45.11	-13	-33.75	Pass	V
6597.65	155	188	-42.98	-13	-32.41	Pass	V

Band 17 23825 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1264.77	154	227	-54.82	-13	-41.82	Pass	H
1725.94	154	34	-49.51	-13	-36.51	Pass	H
3825.45	151	82	-42.04	-13	-29.04	Pass	H
5912.57	150	277	-44.29	-13	-31.29	Pass	H
6560.49	154	236	-43.66	-13	-30.66	Pass	H
8014.37	153	319	-48.37	-13	-35.37	Pass	H
1114.66	147	283	-55.61	-13	-42.61	Pass	V
1503.60	149	49	-61.79	-13	-48.79	Pass	V
3489.99	149	155	-52.42	-13	-39.42	Pass	V
3881.75	150	333	-51.80	-13	-38.80	Pass	V
5825.85	152	285	-45.63	-13	-32.63	Pass	V
6492.87	149	186	-47.40	-13	-34.40	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.

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 ※※※※※