ACCREDITED
CERTIFICATE #5473.01

Test Report No.:
FCC2024-0061-RF

TEST REPORT

FCC ID	:	2BM9U-YJE010
Applicant	:	Shenzhen Wei Wu Sen Lin Technology Company Limited
Product Name	:	Pet Water Fountain
Model No.	:	YJE010

CVC Testing Technology Co., Ltd.

Applicant	**Name:** Shenzhen Wei Wu Sen Lin Technology Company Limited **Address:** Room 504, 5/F.,Tower C, Amazing Plaza, 4088 Qiaoxiang Rd, Nanshan, Shenzhen, Guangdong Province,518074,China
Manufacturer	**Name:** Shenzhen Wei Wu Sen Lin Technology Company Limited **Address:** Room 504, 5/F.,Tower C, Amazing Plaza, 4088 Qiaoxiang Rd, Nanshan, Shenzhen, Guangdong Province,518074,China
Equipment Under Test	**Product Name :** Pet Water Fountain **Model No. :** YJE010 **Trade mark :** Pet's Journey **Serial no.** : N/A **Sampling :** 1-1

Date of Receipt.	2024.12.24	Date of Testing	2025.1.9

Test Specification	**Test Result**
FCC CFR47 Part 15C Radio Frequency Devices ANSI C63.10-2020/Cor1-2023 KDB 558074 D01 15.247 Meas Guidance v05r02	PASS

Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. **Seal of CVC** **Issue Date:** 2025-1-18

Approved by:	Reviewed by:	Tested by:
Chen Huawen	**Xu Zhenfei**	**Lu Weiji**

Other Aspects: NONE.

Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested

Note: This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of **CVC**.

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1. General Product Information

1.1 General information

Product Name	Pet Water Fountain	
Model No.	YJE010	
Additional model	/	
Power Supply	Rated Voltage	DC 5V ⎓
	Adapter	AC 100-240V~
Serial Number(SN)	/	
Hardware	1.0.1	
Software	2.6.3	
specific power settings	Bluetooth(LE_1M): Default IEEE 802.11b: 82 IEEE 802.11g: 92 IEEE 802.11n(20MHz): 92	
Antenna Type	Internal antenna	
Antenna Gain	WIFI: 2.54 dBi (provided by client) Bluetooth: 2.54 dBi (provided by client)	
Beamforming gain	Unsupported (provided by client)	
Frequency Range	Bluetooth(LE_1M): 2402~2480MHz IEEE 802.11b/g/n(20MHz): 2412~2462MHz	
Channel Number	Bluetooth(LE_1M):40 Channels IEEE 802.11b/g/n (20MHz): 11 Channels	
Type of Modulation	Bluetooth(LE_1M):GFSK IEEE 802.11b: DSSS (CCK,DQPSK,DBPSK); IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK); IEEE 802.11n(HT20) : OFDM (64QAM, 16QAM,QPSK,BPSK)	
Max. Conducted Power	Bluetooth(LE): 6.06 dBm WIFI2.4G: 20.05dBm	
Operate Temp.Range	5~40℃	

Note：
1. The information of the EUT is declared by the manufacturer.
2. The laboratory is not responsible for the product technical specification provided by the client.

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by RF testing Lab. of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou,Guangdong,510663, People's Republic of China

Telephone : +86-20-32293888

Fax : +86-20-32293889

FCC(Test firm designation number：CN1282)

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix X**.

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Test Mode	Antenna Delivery	Test Channel
Bluetooth(LE_1M)	1TX / 1RX	0,19,39
IEEE 802.11b	1TX / 1RX	1,6,11
IEEE 802.11g	1TX / 1RX	1,6,11
IEEE 802.11n 20	1TX / 1RX	1,6,11

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate and different channels. Preliminary tests have been done on all the configurations for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates and channels are shown as following table.

Test Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
Bluetooth(LE_1M)	1	/	/
IEEE 802.11b	1	/	/
IEEE 802.11g	6	/	/
IEEE 802.11n 2.4GHz 20MHz	MCS 0	/	/

Test Items	Test Antennas	Test Modes	Test Channels
Radiated Emissions	Antenna 1	IEEE 802.11n 20 Bluetooth(LE_1M)	1/ 0
Radiated Emissions (Band Edge)	Antenna 1	IEEE 802.11n 20 Bluetooth(LE_1M)	1,11/ 0,39
Maximum conducted output power	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11
Minimum 6 dB bandwidth	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11
Occupied Channel Bandwidth	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11
Band Edge Measurement	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20	0,39/ 1,11/ 1,11/ 1,11
Maximum Power spectral density	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11
Spurious RF Conducted Emissions	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Verdict	Note
Conducted Emissions	15.207	PASS	/
Radiated Emissions	15.247(d),15.205,15.209	PASS	/
Maximum conducted output power	15.247(b)(3)	PASS	Appendix C of WIFI2.4G_ diagram and Appendix C of BLE_ diagram
Minimum 6 dB bandwidth	15.247(a)(2)	PASS	Appendix A of WIFI2.4G_ diagram and Appendix A of BLE_ diagram
Occupied Channel Bandwidth	15.247(a)(2)	PASS	Appendix B of WIFI2.4G_ diagram and Appendix B of BLE_ diagram
Band Edge Measurement	15.247(d)	PASS	Appendix E of WIFI2.4G_ diagram and Appendix E of BLE_ diagram
Maximum Power spectral density	15.247(e)	PASS	Appendix D of WIFI2.4G_ diagram and Appendix D of BLE_ diagram
Spurious RF Conducted Emissions	15.247(d)	PASS	Appendix F of WIFI2.4G_ diagram and Appendix F of BLE_ diagram
Antenna Requirement	15.203	PASS	See note 1

Note 1: According to 15.203, it is considered sufficient to comply with the provisions of this section.
Note 2: Not applicable to DC powered devices.

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

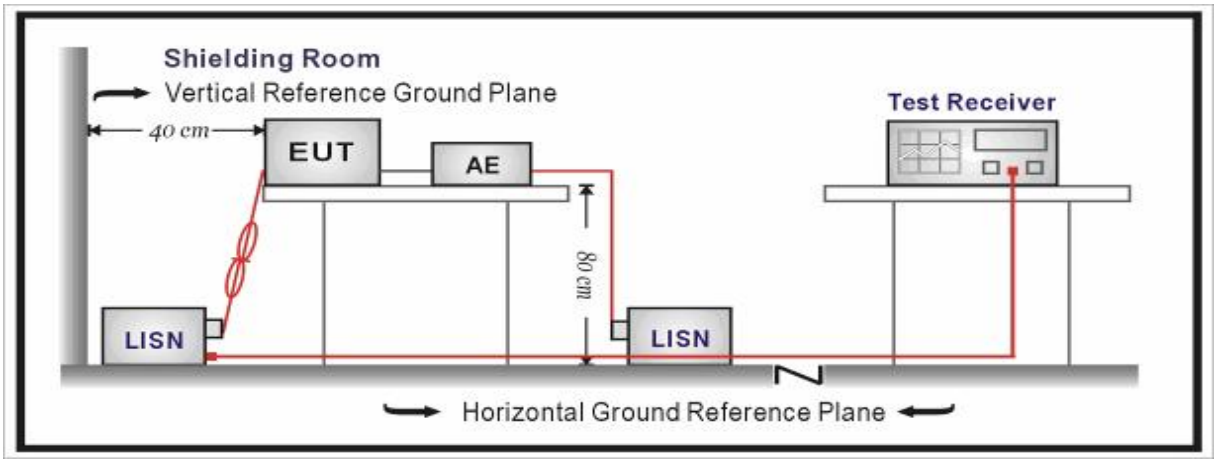
Method of Measurement:

The EUT was setup according to ANSI C63.10-2020/Cor1-2023 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

Limits:

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

Test Setup:



Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Notes:

1. *The following Quasi-Peak and Average measurements were performed on the EUT:*
2. *Final Level =Reading + Factor.*

Measurement Uncertainty：

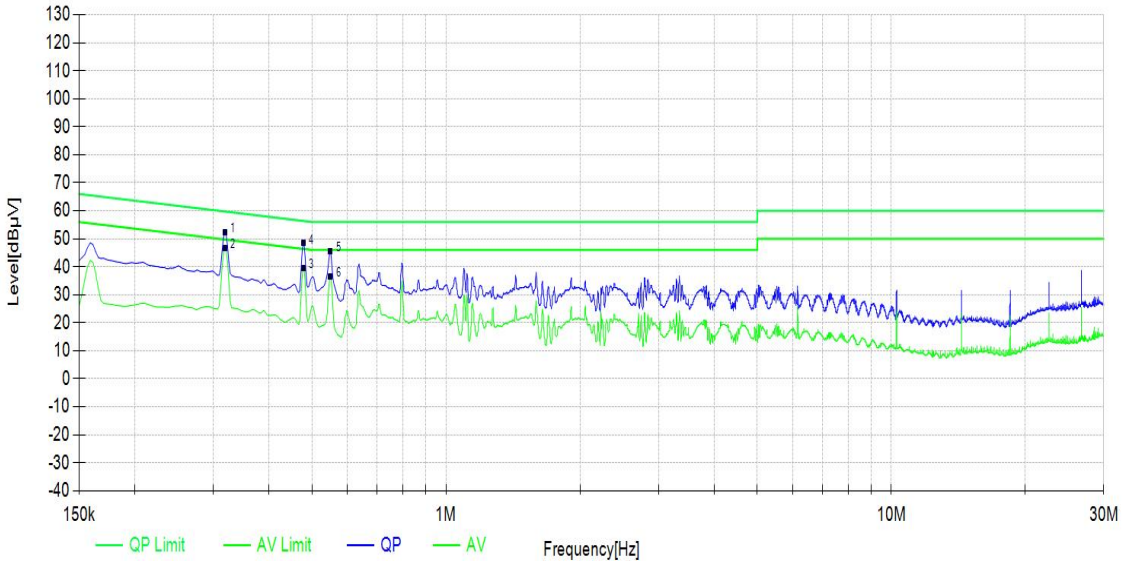
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96. U= 3.12 dB.

Test Results:

During the test, the Conducted Emission from 150kHz to 30MHz was performed in all modes with all channels, and all antennas. WIFI2.4G, 11N20, Channel 1, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

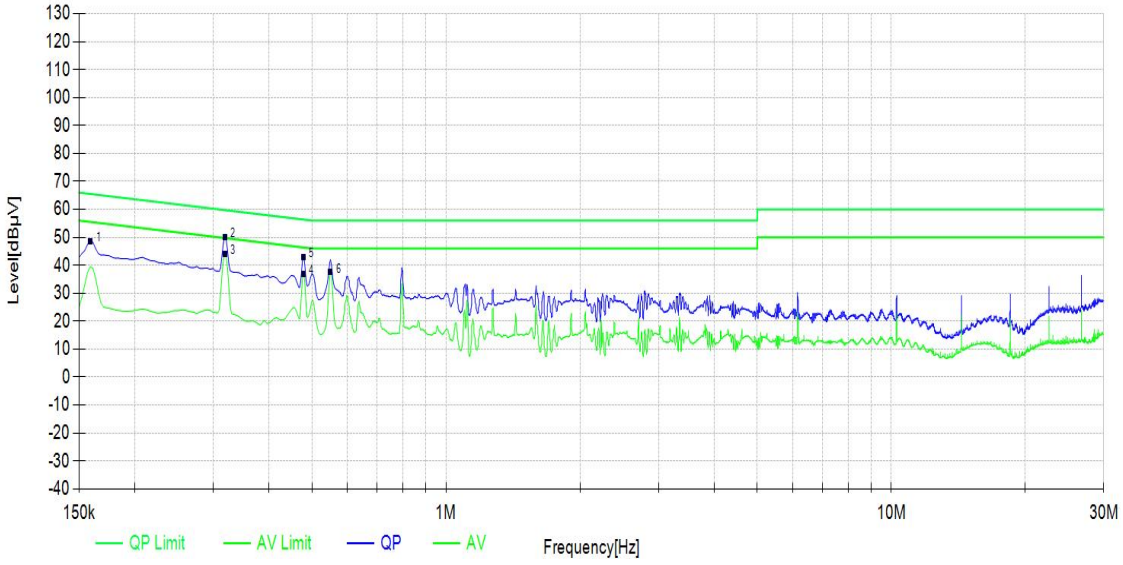
Power Line	L
Test channel	Worst-Case

NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV]	Limit [dBμV]	Margin [dB]	Detector	Pass/ Fail
1	0.3188	10.21	42.16	52.37	59.74	7.37	QP	PASS
4	0.4785	10.22	38.28	48.50	56.37	7.87	QP	PASS
5	0.5505	10.23	35.32	45.55	56.00	10.45	QP	PASS
2	0.3188	10.21	36.90	46.71	49.74	3.03	AV	PASS
6	0.5505	10.23	26.84	36.67	46.00	9.33	AV	PASS
3	0.4785	10.22	29.77	39.59	46.37	6.78	AV	PASS



Power Line	N
Test channel	Worst-Case

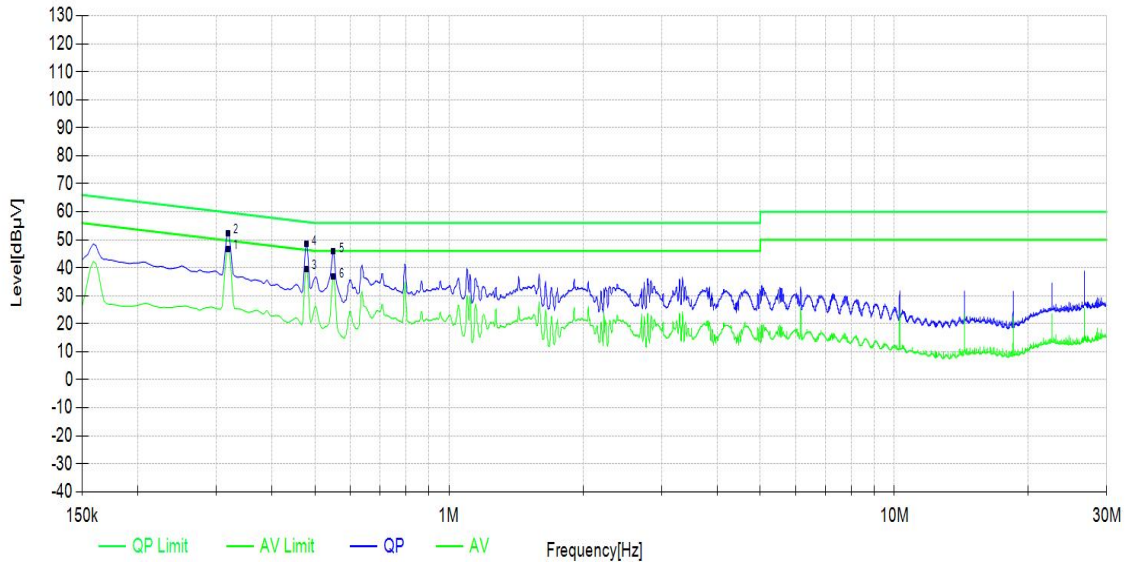
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/ Fail
1	0.1590	10.19	38.49	48.68	65.52	16.84	QP	PASS
2	0.3188	10.20	39.82	50.02	59.74	9.72	QP	PASS
5	0.4785	10.21	32.84	43.05	56.37	13.32	QP	PASS
6	0.5505	10.21	27.26	37.47	46.00	8.53	AV	PASS
4	0.4785	10.21	26.70	36.91	46.37	9.46	AV	PASS
3	0.3188	10.20	33.82	44.02	49.74	5.72	AV	PASS



During the test, the Conducted Emission from 150kHz to 30MHz was performed in all modes with all channels, and all antennas. Bluetooth(LE_1M), Channel 0, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

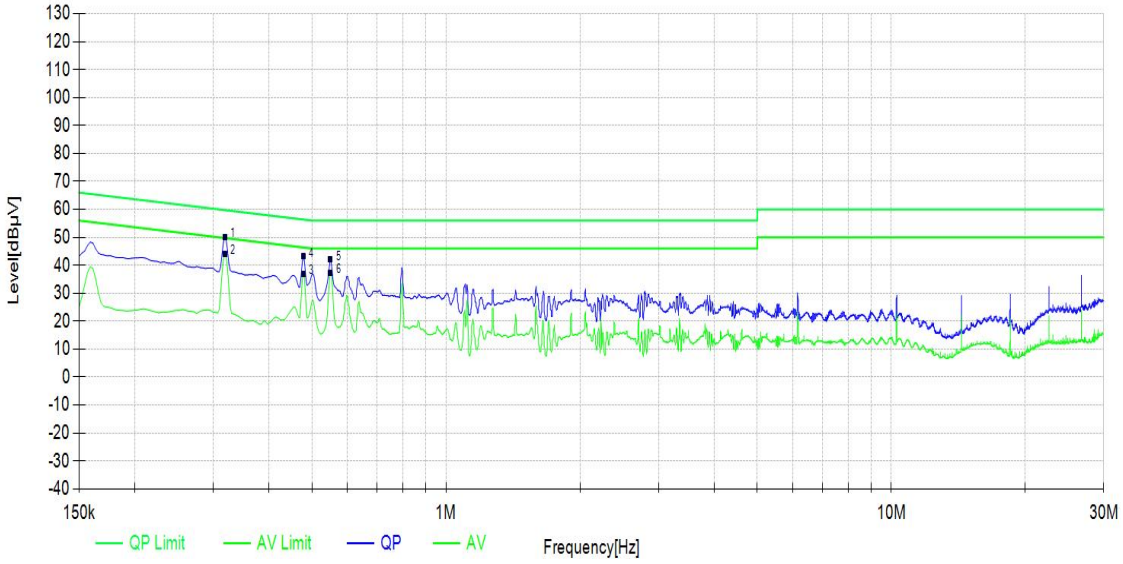
Power Line	L
Test channel	Worst-Case

NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/ Fail
2	0.3188	10.21	42.13	52.34	59.74	7.40	QP	PASS
4	0.4785	10.22	38.27	48.49	56.37	7.88	QP	PASS
5	0.5505	10.23	35.54	45.77	56.00	10.23	QP	PASS
3	0.4785	10.22	29.79	39.61	46.37	6.76	AV	PASS
6	0.5505	10.23	26.98	36.81	46.00	9.19	AV	PASS
1	0.3188	10.21	36.91	46.72	49.74	3.02	AV	PASS



Power Line	N
Test channel	Worst-Case

NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/ Fail
1	0.3188	10.20	39.83	50.03	59.74	9.71	QP	PASS
4	0.4785	10.21	32.88	43.09	56.37	13.28	QP	PASS
5	0.5505	10.21	31.76	41.97	56.00	14.03	QP	PASS
2	0.3188	10.20	33.84	44.04	49.74	5.70	AV	PASS
6	0.5505	10.21	27.14	37.35	46.00	8.65	AV	PASS
3	0.4785	10.21	26.73	36.94	46.37	9.43	AV	PASS



5.2 Radiated Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The EUT was setup and tested according to ANSI C63.10-2020/Cor1-2023.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Antenna to the EUT was 3 meters.

The Antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the Antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2020/Cor1-2023 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Antenna will be bended down a little (as horn Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

Limits:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Frequency	Limit (μV/m)	Limit (dBμV/m @3m)	Remark
0.009MHz-0.490MHz	2400/F(kHz)@300m	20lg(24000000/F(kHz))	Quasi-peak Level
0.490MHz~1.705MHz	24000/F(kHz)@30m	20lg(2400000/F(kHz))	Quasi-peak Level
1.705MHz~30.0MHz	30@30m	69.54	Quasi-peak Level
30MHz-88MHz	100@3m	40.0	Quasi-peak Level
88MHz-216MHz	150@3m	43.5	Quasi-peak Level
216MHz-960MHz	200@3m	46.0	Quasi-peak Level
960MHz-1GHz	500@3m	54.0	Quasi-peak Level
Above 1GHz	500@3m	54.0	Average Level

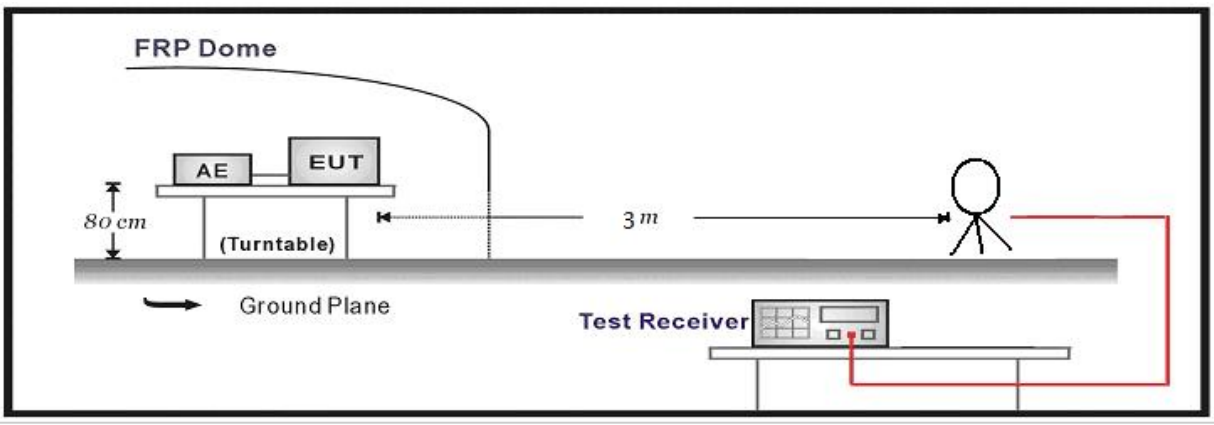
	5000@3m	74.0	Peak Level

Spurious Radiated Emissions are permitted in any of the frequency bands listed below:

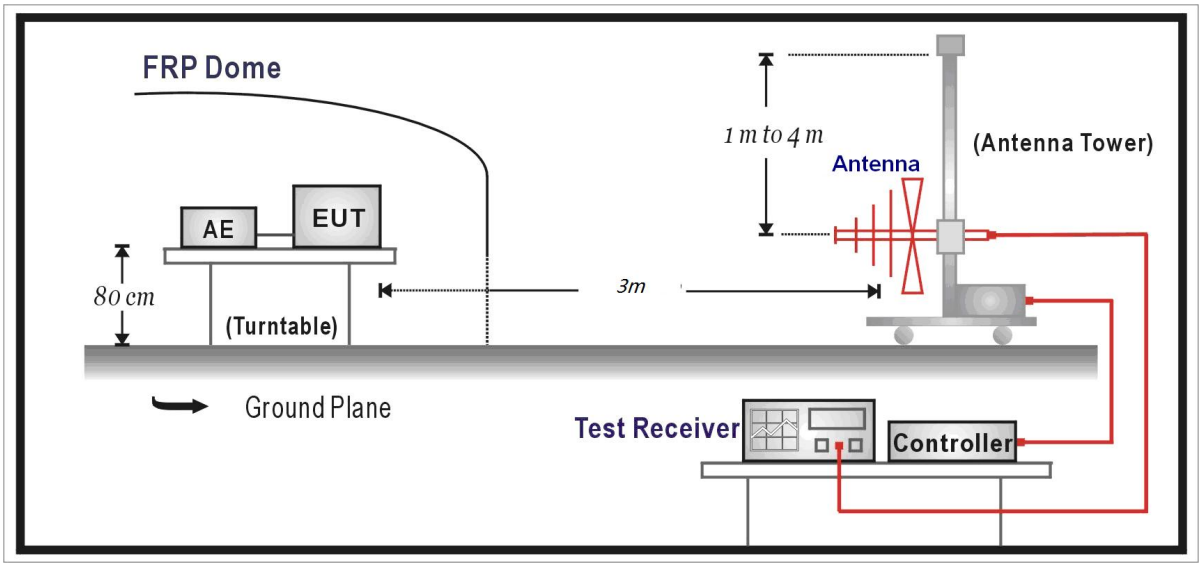
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.
12.57675-12.57725	322-335.4	3600-4400	/
13.36-13.41	/	/	/

Test Setup:

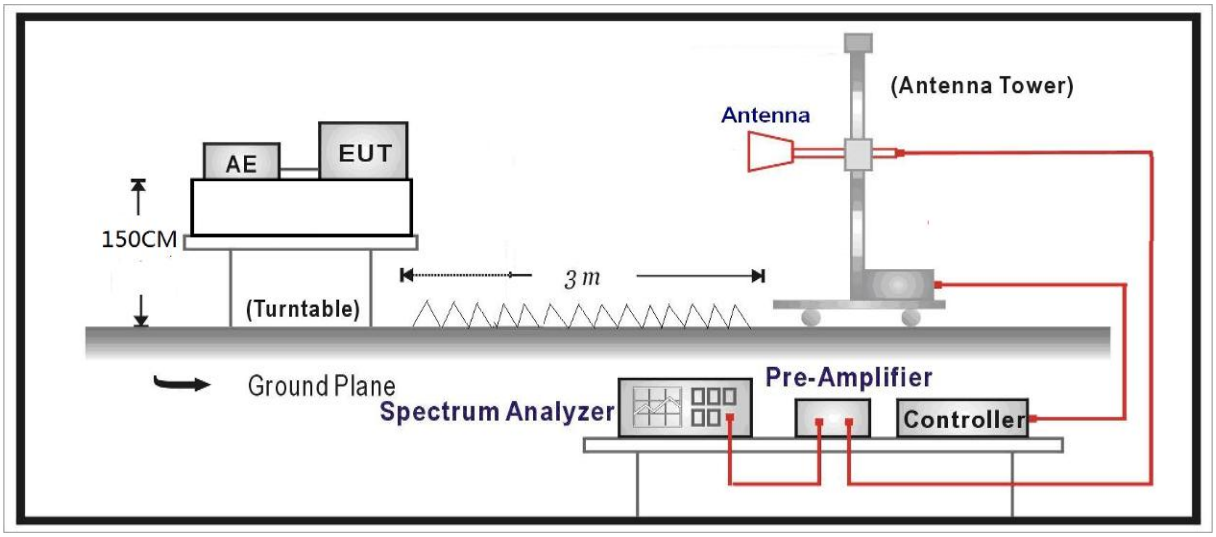
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



Measurement Data：

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Level =Reading - Factor

Factor = Preamplifier Factor – Antenna Factor–Cable Loss

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
Above 1GHz	3.68 dB

Test Results:

SPURIOUS EMISSIONS：

WIFI:

During the test, the Radiates Emission from 9kHz to 1GHz was performed in WIFI all modes with all channels and all antennas. 802.11n20, Channel 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	9k~1G
Test channel	Worst-Case

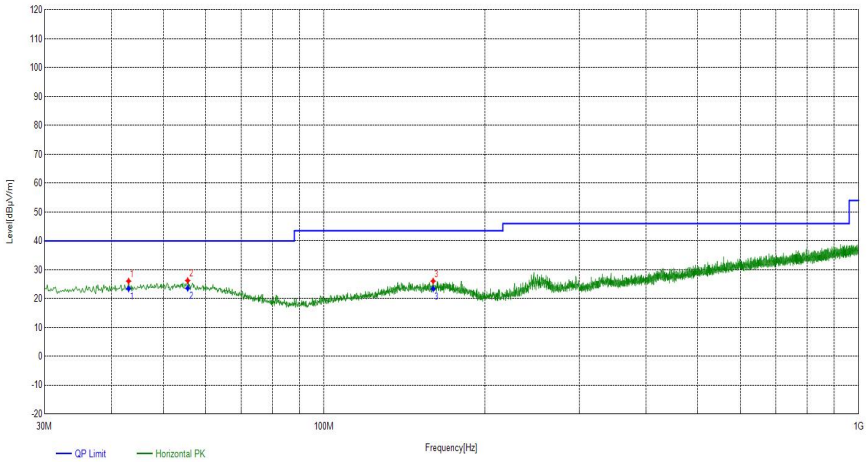
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
43.095	Horizontal	20.23	5.84	26.07	---	---	PK	100	57	---
55.5838	Horizontal	20.25	5.99	26.24	---	---	PK	100	274	---
159.98	Horizontal	20.84	5.23	26.07	---	---	PK	100	356	---

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
43.095	Horizontal	20.23	23.41	40.00	16.59	177	57	PASS
55.5838	Horizontal	20.25	23.58	40.00	16.42	270	274	PASS
159.98	Horizontal	20.84	23.41	43.50	20.09	189	356	PASS



Radiates Emission	9k~1G
Test channel	Worst-Case

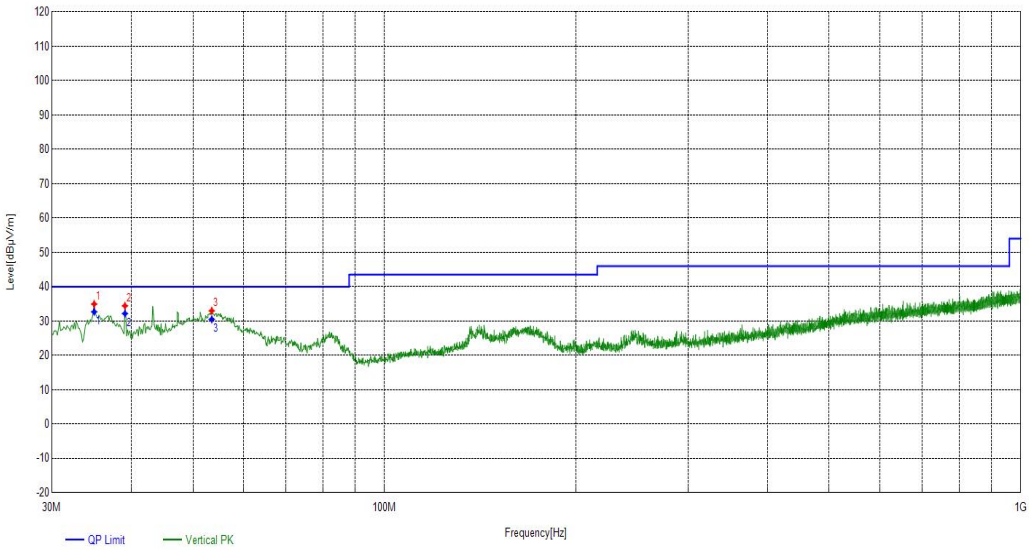
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
34.9712	Vertical	19.44	15.50	34.94	---	---	PK	100	228	---
39.0938	Vertical	19.90	14.52	34.42	---	---	PK	100	321	---
53.5225	Vertical	20.36	12.62	32.98	---	---	PK	100	47	---

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
34.9712	Vertical	19.44	32.70	40.00	7.30	179	228	PASS
39.0938	Vertical	19.90	32.18	40.00	7.82	326	321	PASS
53.5225	Vertical	20.36	30.50	40.00	9.50	152	47	PASS



During the test, the Radiates Emission from 1GHz to 40GHz was performed in WIFI all modes with all channels and all antennas. 802.11n20, Highest, medium, lowest channels are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4188.118812	0.44	38.35	38.79	74.00	35.21	PK	150	250	PASS
5383.738374	3.18	35.41	38.59	74.00	35.41	PK	150	340	PASS
7347.434744	8.99	33.86	42.85	74.00	31.15	PK	150	310	PASS
4114.611461	0.48	27.21	27.69	54.00	26.31	AV	150	40	PASS
5286.228623	2.98	25.65	28.63	54.00	25.37	AV	150	30	PASS
7353.435344	8.99	23.98	32.97	54.00	21.03	AV	150	140	PASS

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4060.606061	0.52	39.03	39.55	74.00	34.45	PK	150	340	PASS
6085.808581	5.80	34.33	40.13	74.00	33.87	PK	150	240	PASS
7947.49475	9.24	33.94	43.18	74.00	30.82	PK	150	80	PASS
4083.108311	0.50	28.82	29.32	54.00	24.68	AV	150	70	PASS
5965.79658	5.52	24.58	30.10	54.00	23.90	AV	150	220	PASS
7743.474347	9.19	24.17	33.36	54.00	20.64	AV	150	240	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Medium
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4561.656166	0.20	38.41	38.61	74.00	35.39	PK	150	240	PASS
5506.750675	3.49	36.26	39.75	74.00	34.25	PK	150	50	PASS
10097.209721	12.48	32.23	44.71	74.00	29.29	PK	150	320	PASS
4756.675668	1.04	27.73	28.77	54.00	25.23	AV	150	50	PASS
5458.745875	3.36	26.44	29.80	54.00	24.20	AV	150	80	PASS
9620.162016	12.38	22.03	34.41	54.00	19.59	AV	150	120	PASS

Radiates Emission	Above 1G
Test channel	Medium
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4611.161116	0.40	37.36	37.76	74.00	36.24	PK	150	100	PASS
6609.360936	6.90	33.35	40.25	74.00	33.75	PK	150	110	PASS
9609.660966	12.38	31.95	44.33	74.00	29.67	PK	150	350	PASS
4617.161716	0.44	28.04	28.48	54.00	25.52	AV	150	80	PASS
6814.881488	8.02	22.64	30.66	54.00	23.34	AV	150	40	PASS
9302.130213	11.49	22.28	33.77	54.00	20.23	AV	150	210	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Highest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4960.69607	1.92	37.09	39.01	74.00	34.99	PK	150	190	PASS
5983.79838	5.61	33.60	39.21	74.00	34.79	PK	150	290	PASS
9762.676268	12.41	31.56	43.97	74.00	30.03	PK	150	260	PASS
5061.206121	2.31	26.30	28.61	54.00	25.39	AV	150	120	PASS
6030.30303	5.73	24.24	29.97	54.00	24.03	AV	150	140	PASS
9444.644464	12.09	21.99	34.08	54.00	19.92	AV	150	220	PASS

Radiates Emission	Above 1G
Test channel	Highest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4110.111011	0.50	37.63	38.13	74.00	35.87	PK	150	100	PASS
6180.318032	5.93	33.90	39.83	74.00	34.17	PK	150	70	PASS
9609.660966	12.38	31.95	44.33	74.00	29.67	PK	150	350	PASS
4108.610861	0.50	28.76	29.26	54.00	24.74	AV	150	70	PASS
6559.855986	6.58	23.79	30.37	54.00	23.63	AV	150	50	PASS
9792.679268	12.41	22.25	34.66	54.00	19.34	AV	150	80	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Bluetooth(Low Energy):

During the test, the Radiates Emission from 9kHz to 40GHz was performed in Bluetooth(Low Energy) all modes with all channels and all antennas. BLE(1Mbps), channel 0, antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	9k~1G
Test channel	Worst-Case

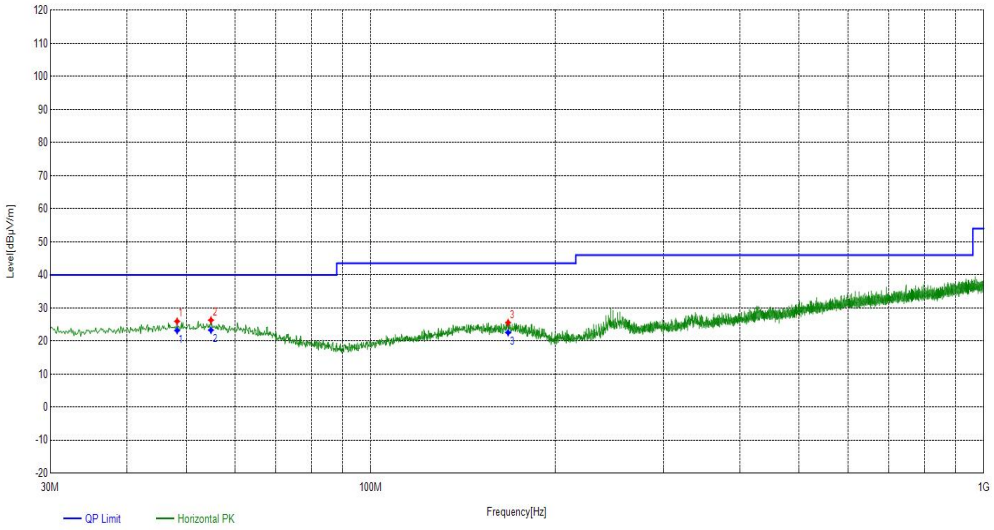
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
48.3088	Horizontal	20.46	5.51	25.97	---	---	PK	100	57	---
54.8562	Horizontal	20.31	6.01	26.32	---	---	PK	100	0	---
167.4975	Horizontal	20.43	5.14	25.57	---	---	PK	100	344	---

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
48.3088	Horizontal	20.46	23.19	40.00	16.81	215	57	PASS
54.8562	Horizontal	20.31	23.30	40.00	16.70	148	0	PASS
167.4975	Horizontal	20.43	22.55	43.50	20.95	133	344	PASS



Radiates Emission	9k~1G
Test channel	Worst-Case

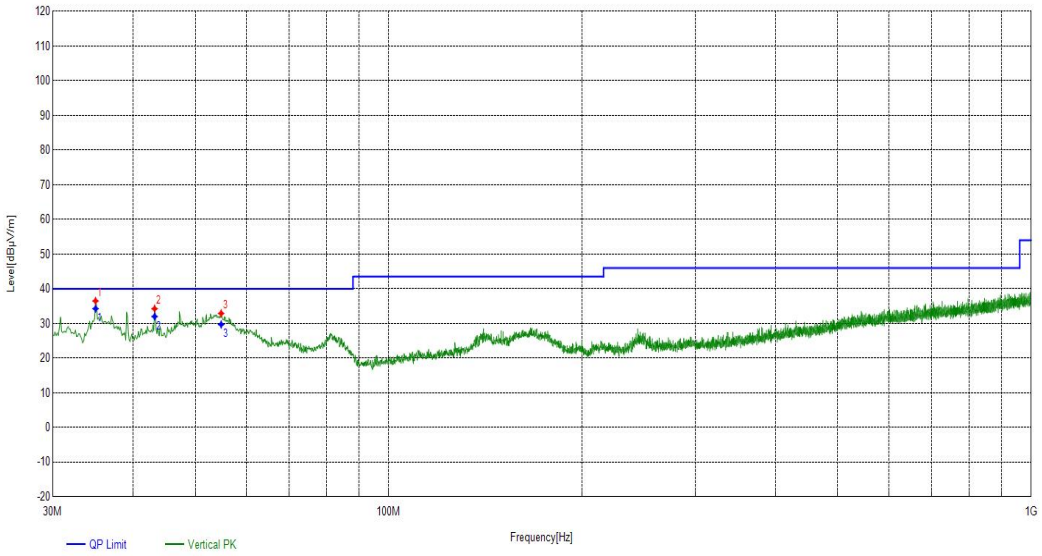
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
34.9712	Vertical	19.44	17.06	36.50	---	---	PK	100	345	---
43.2162	Vertical	20.24	14.01	34.25	---	---	PK	100	142	---
54.8562	Vertical	20.31	12.59	32.90	---	---	PK	100	181	---

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
34.9712	Vertical	19.44	34.26	40.00	5.74	124	345	PASS
43.2162	Vertical	20.24	32.01	40.00	7.99	178	142	PASS
54.8562	Vertical	20.31	29.70	40.00	10.30	162	181	PASS



During the test, the Radiates Emission from 1GHz to 40GHz was performed in WIFI all modes with all channels and all antennas. BLE(1Mbps), Highest, medium, lowest channels, antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4188.118812	0.44	38.35	38.79	74.00	35.21	PK	150	250	PASS
5383.738374	3.18	35.41	38.59	74.00	35.41	PK	150	340	PASS
7347.434744	8.99	33.86	42.85	74.00	31.15	PK	150	310	PASS
4114.611461	0.48	27.21	27.69	54.00	26.31	AV	150	330	PASS
5286.228623	2.98	25.65	28.63	54.00	25.37	AV	150	320	PASS
7353.435344	8.99	23.98	32.97	54.00	21.03	AV	150	100	PASS

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
5662.766277	4.15	35.07	39.22	74.00	34.78	PK	150	140	PASS
6991.89919	8.89	33.75	42.64	74.00	31.36	PK	150	230	PASS
7884.488449	9.24	34.49	43.73	74.00	30.27	PK	150	70	PASS
5359.735974	3.12	26.19	29.31	54.00	24.69	AV	150	120	PASS
6559.855986	6.58	23.79	30.37	54.00	23.63	AV	150	140	PASS
7995.49955	9.25	24.39	33.64	54.00	20.36	AV	150	70	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Medium
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4147.614762	0.47	38.16	38.63	74.00	35.37	PK	150	320	PASS
4896.189619	1.65	37.15	38.80	74.00	35.20	PK	150	360	PASS
9591.659166	12.39	32.33	44.72	74.00	29.28	PK	150	50	PASS
4047.104711	0.52	27.79	28.31	54.00	25.69	AV	150	220	PASS
4854.185419	1.47	27.51	28.98	54.00	25.02	AV	150	240	PASS
9266.126613	11.35	21.93	33.28	54.00	20.72	AV	150	120	PASS

Radiates Emission	Above 1G
Test channel	Medium
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
5260.726073	2.93	35.84	38.77	74.00	35.23	PK	150	20	PASS
6979.89799	8.84	33.92	42.76	74.00	31.24	PK	150	70	PASS
10415.241524	12.88	32.58	45.46	74.00	28.54	PK	150	20	PASS
4936.693669	1.82	26.99	28.81	54.00	25.19	AV	150	90	PASS
7017.40174	8.95	23.48	32.43	54.00	21.57	AV	150	120	PASS
10140.714071	12.52	22.03	34.55	54.00	19.45	AV	150	200	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Highest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4639.663966	0.53	38.40	38.93	74.00	35.07	PK	150	30	PASS
5383.738374	3.18	35.41	38.59	74.00	35.41	PK	150	340	PASS
6315.331533	5.97	34.04	40.01	74.00	33.99	PK	150	180	PASS
4689.168917	0.75	27.84	28.59	54.00	25.41	AV	150	60	PASS
5286.228623	2.98	25.65	28.63	54.00	25.37	AV	150	120	PASS
6573.357336	6.67	23.22	29.89	54.00	24.11	AV	150	250	PASS

Radiates Emission	Above 1G
Test channel	Highest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
4105.610561	0.49	38.09	38.58	74.00	35.42	PK	150	320	PASS
6220.822082	5.96	34.08	40.04	74.00	33.96	PK	150	330	PASS
7833.483348	9.23	34.62	43.85	74.00	30.15	PK	150	240	PASS
4113.111311	0.48	28.13	28.61	54.00	25.39	AV	150	250	PASS
6042.30423	5.75	24.90	30.65	54.00	23.35	AV	150	170	PASS
7947.49475	9.24	24.47	33.71	54.00	20.29	AV	150	210	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Band Edge：

During the test, the Band Edge was performed in WIFI all modes with all channels and all antennas. 802.11n20 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Test mode	802.11n20
Test channel	Lowest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2377.1377	32.01	7.49	39.50	74.00	34.50	PK	150	315	PASS
2390.1390	32.06	8.05	40.11	74.00	33.89	PK	150	348	PASS
2411.1411	32.13	58.14	90.27	---	---	PK	150	163	---
2377.1377	32.01	-1.03	30.98	54.00	23.02	AV	150	116	PASS
2390.1390	32.06	-0.28	31.78	54.00	22.22	AV	150	209	PASS
2409.1409	32.12	49.64	81.76	---	---	AV	150	163	---

Test mode	802.11n20
Test channel	Lowest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2359.9359	31.94	7.04	38.98	74.00	35.02	PK	150	240	PASS
2390.1390	32.06	8.30	40.36	74.00	33.64	PK	150	311	PASS
2420.1420	32.16	53.74	85.90	---	---	PK	150	83	---
2359.9359	31.94	-1.50	30.44	54.00	23.56	AV	150	323	PASS
2390.1390	32.06	-1.28	30.78	54.00	23.22	AV	150	5	PASS
2416.1416	32.15	44.62	76.77	---	---	AV	150	120	---

Test mode	802.11n20
Test channel	Highest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2466.3466	32.32	59.13	91.45	---	---	PK	150	164	---
2483.5483	32.38	35.65	68.03	74.00	5.97	PK	150	140	PASS
2521.3521	32.54	9.64	42.18	74.00	31.82	PK	150	176	PASS
2473.1473	32.35	51.73	84.08	---	---	AV	150	164	---
2483.5483	32.38	15.85	48.23	54.00	5.77	AV	150	176	PASS
2521.3521	32.54	-1.36	31.18	54.00	22.82	AV	150	22	PASS

Test mode	802.11n20
Test channel	Highest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2469.1469	32.34	53.87	86.21	---	---	PK	150	84	---
2483.5483	32.38	28.65	61.03	74.00	12.97	PK	150	170	PASS
2499.1499	32.44	8.73	41.17	74.00	32.83	PK	150	0	PASS
2474.5474	32.35	43.90	76.25	---	---	AV	150	84	---
2483.5483	32.38	8.74	41.12	54.00	12.88	AV	150	292	PASS
2499.1499	32.44	-0.48	31.96	54.00	22.04	AV	150	0	PASS

During the test, the Band Edge was performed in BLE all modes with all channels and all antennas. BLE(1Mbps), Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Test mode	BLE(1Mbps)
Test channel	Lowest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2373.7373	31.99	7.71	39.70	74.00	34.30	PK	150	341	PASS
2390.1390	32.06	7.39	39.45	74.00	34.55	PK	150	92	PASS
2402.1402	32.10	72.73	104.83	---	---	PK	150	163	---
2373.7373	31.99	-1.41	30.58	54.00	23.42	AV	150	293	PASS
2390.1390	32.06	-0.63	31.43	54.00	22.57	AV	150	186	PASS
2402.1402	32.10	56.15	88.25	---	---	AV	150	186	---

Test mode	BLE(1Mbps)
Test channel	Lowest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2368.1368	31.97	10.24	42.21	74.00	31.79	PK	150	338	PASS
2390.1390	32.06	7.48	39.54	74.00	34.46	PK	150	77	PASS
2402.3402	32.10	68.43	100.53	---	---	PK	150	101	---
2368.1368	31.97	-0.59	31.38	54.00	22.62	AV	150	359	PASS
2390.1390	32.06	-1.65	30.41	54.00	23.59	AV	150	0	PASS
2402.1402	32.10	55.42	87.52	---	---	AV	150	171	---

Test mode	BLE(1Mbps)
Test channel	Highest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2480.1480	32.37	70.78	103.15	---	---	PK	150	104	---
2483.5483	32.38	12.22	44.60	74.00	29.40	PK	150	104	PASS
2495.3495	32.42	10.82	43.24	74.00	30.76	PK	150	338	PASS
2480.1480	32.37	57.84	90.21	---	---	AV	150	359	---
2483.5483	32.38	1.32	33.70	54.00	20.30	AV	150	359	PASS
2495.3495	32.42	-0.67	31.75	54.00	22.25	AV	150	151	PASS

Test mode	BLE(1Mbps)
Test channel	Highest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2480.1480	32.37	66.12	98.49	---	---	PK	150	115	---
2483.5483	32.38	8.44	40.82	74.00	33.18	PK	150	115	PASS
2491.1491	32.41	9.75	42.16	74.00	31.84	PK	150	244	PASS
2480.1480	32.37	49.60	81.97	---	---	AV	150	139	---
2483.5483	32.38	0.65	33.03	54.00	20.97	AV	150	115	PASS
2491.1491	32.41	-1.02	31.39	54.00	22.61	AV	150	348	PASS

5.3 Maximum conducted output power

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

a.A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor and set the detector to PEAK. Record the power level.

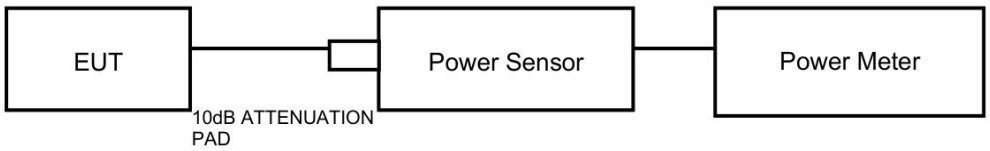
Limits:

Average Output Power	≤ 1W (30dBm)

Note: the conducted output power limit specified above is based on the use the antennas with directional gains that do not exceed 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated Levels above, as appropriate, by the amount in dB that the directional gain of antenna exceeds 6 dBi.

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.44 dB.

Test Results:

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	17.57	≤30.00	PASS
	Ant1	2437	18.08	≤30.00	PASS
	Ant1	2462	18.22	≤30.00	PASS
11G	Ant1	2412	19.35	≤30.00	PASS
	Ant1	2437	19.88	≤30.00	PASS
	Ant1	2462	20.05	≤30.00	PASS
11N20SISO	Ant1	2412	19.34	≤30.00	PASS
	Ant1	2437	19.90	≤30.00	PASS
	Ant1	2462	20.05	≤30.00	PASS
BLE_1M	Ant1	2402	5.57	≤30.00	PASS
	Ant1	2440	6.06	≤30.00	PASS
	Ant1	2480	5.74	≤30.00	PASS

5.4 Minimum 6 dB Bandwidth

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

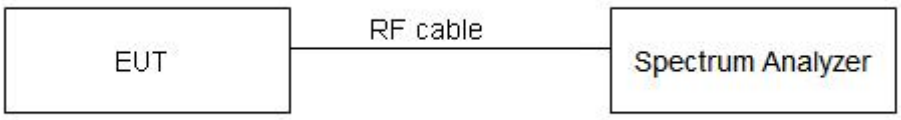
The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz; VBW is set to greater than 3 times RBW on spectrum analyzer.
Detector=Peak, Trace mode=Max hold.

Limits:

Rule Part 15.247 (a) (2) specifies that “Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.”

Minimum 6dB Bandwidth	≥ 500 kHz

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.40	2407.28	2416.68	≥0.5	PASS
	Ant1	2437	9.40	2432.28	2441.68	≥0.5	PASS
	Ant1	2462	9.40	2457.28	2466.68	≥0.5	PASS
11G	Ant1	2412	16.48	2403.80	2420.28	≥0.5	PASS
	Ant1	2437	16.36	2428.76	2445.12	≥0.5	PASS
	Ant1	2462	16.44	2453.72	2470.16	≥0.5	PASS
11N20SISO	Ant1	2412	17.56	2403.20	2420.76	≥0.5	PASS
	Ant1	2437	17.60	2428.20	2445.80	≥0.5	PASS
	Ant1	2462	17.88	2453.12	2471.00	≥0.5	PASS
BLE_1M	Ant1	2402	0.64	2401.67	2402.31	≥0.5	PASS
	Ant1	2440	0.65	2439.66	2440.31	≥0.5	PASS
	Ant1	2480	0.65	2479.66	2480.32	≥0.5	PASS

5.5 Occupied Channel Bandwidth

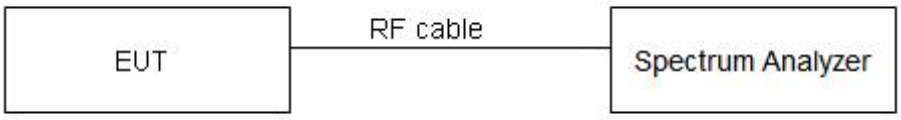
Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. RBW is set to 1% to 5% of the OBW; video bandwidth (VBW) shall be at least three times RBW on spectrum analyzer.
Detector=Peak, Trace mode=Max hold.

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

TestMode	Antenna	Channel	OCB [MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.146	---	---
	Ant1	2412	14.106	---	---
	Ant1	2437	14.146	---	---
11G	Ant1	2437	17.463	---	---
	Ant1	2462	17.343	---	---
	Ant1	2462	17.463	---	---
11N20SISO	Ant1	2402	18.462	---	---
	Ant1	2440	18.422	---	---
	Ant1	2480	18.501	---	---
BLE_1M	Ant1	2402	1.027	---	---
	Ant1	2440	1.031	---	---
	Ant1	2480	1.039	---	---

5.6 Band Edge Measurement

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

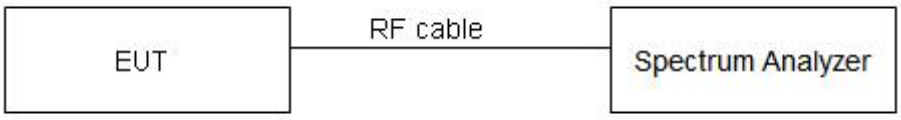
Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable the band edge of the lowest and highest channels were measured. The peak detector is used and RBW is set to 100 kHz and VBW is set to 300 kHz on spectrum analyzer.

Limits:

Rule Part 15.247(d) specifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U= 936 Hz, 2 GHz-3 GHz = 1.407 dB.

Test Results:

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.02	-40.61	≤-13.98	PASS
	Ant1	Low	2462	6.67	-40.14	≤-13.33	PASS
11G	Ant1	High	2412	0.24	-35.12	≤-19.76	PASS
	Ant1	High	2462	0.81	-40.67	≤-19.19	PASS
11N20SISO	Ant1	Low	2412	-0.25	-33.44	≤-20.25	PASS
	Ant1	High	2462	0.68	-40.31	≤-19.32	PASS
BLE_1M	Ant1	Low	2402	5.28	-42.53	≤-14.72	PASS
	Ant1	High	2480	5.31	-41.24	≤-14.69	PASS

5.7 Maximum Power Spectral Density

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

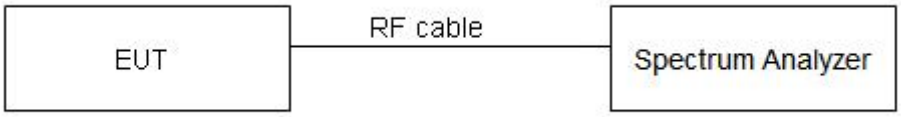
During the process of the testing, The EUT was connected to Spectrum Analyzer with a known loss. The EUT is max power transmission with proper modulation. The Average detector is used. We use Method AVGPSD-2 in KDB 558074 D01 for this test.

Limits:

Rule Part 15.247(e) specifies that" For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Maximum Power Spectral Density	≤ 8 dBm / 3kHz

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.75dB.

Test Results:

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-5.88	≤8	PASS
	Ant1	2437	-6.56	≤8	PASS
	Ant1	2462	-6.30	≤8	PASS
11G	Ant1	2412	-13.00	≤8	PASS
	Ant1	2437	-11.84	≤8	PASS
	Ant1	2462	-12.05	≤8	PASS
11N20SISO	Ant1	2412	-13.03	≤8	PASS
	Ant1	2437	-13.15	≤8	PASS
	Ant1	2462	-12.07	≤8	PASS
BLE_1M	Ant1	2402	-11.02	≤8	PASS
	Ant1	2440	-9.80	≤8	PASS
	Ant1	2480	-7.74	≤8	PASS

5.8 Spurious RF Conducted Emissions

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW to100kHz and VBW to 300 kHz, Sweep is set to AUTO .The test is in transmitting mode.

Limits:

Rule Part 15.247(d) pacifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

Test Setup:

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-26GHz	1.407 dB

Test Results:

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	4.20	4.20	---	PASS
			30~1000	4.20	-52.37	≤-15.8	PASS
			1000~26500	4.20	-40.13	≤-15.8	PASS
		2437	Reference	4.96	4.96	---	PASS
			30~1000	4.96	-52.56	≤-15.04	PASS
			1000~26500	4.96	-40.72	≤-15.04	PASS
		2462	Reference	4.04	4.04	---	PASS
			30~1000	4.04	-51.79	≤-15.96	PASS
			1000~26500	4.04	-40.98	≤-15.96	PASS
11G	Ant1	2412	Reference	-3.21	-3.21	---	PASS
			30~1000	-3.21	-51.98	≤-23.21	PASS
			1000~26500	-3.21	-40.85	≤-23.21	PASS
		2437	Reference	-1.79	-1.79	---	PASS
			30~1000	-1.79	-52.16	≤-21.79	PASS
			1000~26500	-1.79	-40.81	≤-21.79	PASS
		2462	Reference	-2.62	-2.62	---	PASS
			30~1000	-2.62	-51.22	≤-22.62	PASS
			1000~26500	-2.62	-39.22	≤-22.62	PASS
11N20SISO	Ant1	2412	Reference	-3.55	-3.55	---	PASS
			30~1000	-3.55	-52.08	≤-23.55	PASS
			1000~26500	-3.55	-40.57	≤-23.55	PASS
		2437	Reference	-2.52	-2.52	---	PASS
			30~1000	-2.52	-51.94	≤-22.52	PASS
			1000~26500	-2.52	-40.3	≤-22.52	PASS
		2462	Reference	-0.44	-0.44	---	PASS
			30~1000	-0.44	-51.29	≤-20.44	PASS
			1000~26500	-0.44	-39.85	≤-20.44	PASS

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	4.08	4.08	---	PASS
			30~1000	4.08	-51.53	≤-15.92	PASS
			1000~26500	4.08	-40.5	≤-15.92	PASS
		2440	Reference	5.71	5.71	---	PASS
			30~1000	5.71	-51.09	≤-14.29	PASS
			1000~26500	5.71	-40.17	≤-14.29	PASS
		2480	Reference	5.06	5.06	---	PASS
			30~1000	5.06	-52.24	≤-14.94	PASS
			1000~26500	5.06	-40.86	≤-14.94	PASS

6. Appendix X

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
Communication Shielded Room 2	4m*3m*3m	CRTDSWKSR 44301	/	CRT	2027/04/22
Spectrum Analyzer	FSV40	101580	DZ-000238-3	R&S	2025/04/22
Power Meter	JS0806-2	19H9080187	DZ-000241	Tonscend	2025/04/27
Programmable DC Power Supply	E3644A	MY58036222	DZ-000178	KEYSIGHT	2025/04/11
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2027/02/01
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2026/01/01
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2025/12/26
EMI Test Receiver	ESR7	102235	EM-000574	R&S	2026/01/06
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2025/06/04
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2025/06/09
Waveguide Horn Antenna	HF906	360306/008	EM-000093	R&S	2025/12/26
Waveguide Horn Antenna	BBHA9170	00949	DZ-000209-2	SCHWARZBECK	2025/08/03
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2025/06/02
Bandstop Filters	SW-BSF-2400-100-7-A1	/	EM-000495	/	2025/08/29
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2025/06/03
Temperature and humidity meter	MHO-C201	/	DZ-000249-2	Seconds test	2025/07/28
Temperature and humidity meter	MHO-C201	/	DZ-000249-5	Seconds test	2025/07/28
Shielding Room(#2)	GP1A	/	EM-000372	LEINING	2029-08-04
EMI Test Receiver	ESR3	/	EM-000520	R&S	2025-01-14
LISN	NSLK 8127	/	EM-000370	SCHWARZBECK	2025-07-22

Dynacomm	Software Release	Software Developer
TS1120-3 Test System(Conduction test)	3.3.38	Tonscend
TS+（5m,Radiation test）	JS32-RE 5.0.0	Tonscend

The End

Important

1. The test report is invalid without the official stamp of CVC;
2. Any part photocopies of the test report are forbidden without the written permission from CVC;
3. The test report is invalid without the signatures of Author and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, "—" or " N/A" means "not applicable", " / "means "not testing", "P" means "pass" and "F" means "fail".

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