FCC ID TEST REPORT

Prepared for	:	Thortron Technology Incorporated Co., Ltd.
Address	:	12F., No.166 Fuxing N.Rd., Taipei 10487, Taiwan
Trade Name	:	WFCO
E.U.T	:	Power Pro Plus Control System
Model Number	:	WF-3611
Prepared by	:	Keyway Testing Technology(Guangdong) Co., Ltd.
Address	:	21st Floor, Building 6, Dongyi Intelligent Equipment New Energy Vehicle Park, No.30 of Tangxia District, Dongshen Road, Tangxia Town, Dongguan City, Guangdong province, China Tel: 86-769-87182258 Fax: 86-769-87181058
Report No.	:	TR25050434-E-000
Date of Test:	:	May 20~Jun. 05, 2025
Date of Report	:	Jun. 06, 2025

Applicant:	Thortron Technology Incorporated Co., Ltd.
Address:	12F., No.166 Fuxing N.Rd., Taipei 10487, Taiwan
Manufacturer 1:	Jeytron Technology Co Ltd
Address:	16 Gaoli 5th Rd Tang Xia Town Dong Guan Guang Dong China
Manufacturer 2:	Thortron Technology Incorporated Co., Ltd.
Address:	12F., No.166 Fuxing N.Rd., Taipei 10487, Taiwan
E.U.T:	Power Pro Plus Control System
Model Number:	WF-3611
Trade Name:	WFCO
Date of Receipt:	May 19, 2025
Date of Test:	May 20~Jun. 05, 2025
Test Specification :	FCC CFR47 Part 15 Section 15.247
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied. **Issue Date: Jun. 06, 2025**

Tested by:	Reviewed by:	Authorized by:
Jacob Ouyang/Engineer	Billy Zeng / Supervisor	Cherry Chen / RF Project Supervisor

Abbreviations: OK/P=passed fail/F=failed N/A=not applicable E.U.T=equipment under tested

This device described above has been tested by Keyway, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Revision Record				
Version	Chapter	Date	Modifier	Remark
00		Jun. 06, 2025		Original

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1 Test Summary

Test Items	Test Requirement	Result
Conduct Emission	FCC part 15.207	N/A
Radiated Spurious Emissions	FCC part 15.205/15.209	PASS
Conducted Spurious Emission	FCC part 15.205/15.209	PASS
Band edge	FCC part 15.247(d)	PASS
6dB&99% Bandwidth	FCC part 15.247 (a)(2)	PASS
Maximum Peak Output Power	FCC part 15.247 (b)(3)	PASS
Power Spectral Density	FCC part 15.247 (e)	PASS
Antenna Requirement	FCC part 15.203/15.247 (c)	PASS

Remark:

"N/A" denotes test is not applicable in this Test Report.

2 GENERAL PRODUCT INFORMATION

2.1 Description of Device (EUT)

Product Name:	Power Pro Plus Control System
Trademark	WFCO
Test Model No.:	WF-3611
Sample ID:	250520001
Model No.:	N/A
Model Difference:	N/A
Specification:	802.11b/g/n HT20;n HT40
Operation Frequency:	2412-2462MHz for 802.11b/g/n20; 2422-2452MHz for 802.11n40;
Number of Channel:	11 channels for 802.11b/g/n20; 7 channels for 802.11n40;
Type of Modulation:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n(20)/ n(40): OFDM (QPSK, BPSK, 16-QAM, 64-QAM)
Antenna installation:	Internal Antenna
Antenna Gain:	2.57dBi
Power supply:	8Vdc-18Vdc
Hardware Version:	WF-3510-Voice Board-R03(20230313)
Software Version:	0.7.8.01

Remark:The information in this section is provided by the applicant or manufacturer, Kayway is not liable to the accuracy, suitability, reliability or/and integrity of the information.

2.2 Channel List

The EUT has been tested under its typical operating condition.

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (802.11b: 1 Mbps; 802.11g: 6 Mbps; 802.11n (HT20): MCS0; 802.11n (HT40): MCS0; were used for all test.

Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Frequency and Channel list for 802.11 b/g/n (HT20)/n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447		

Test Frequency and Channel for 802.11 b/g/n (HT20)/n (HT40):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	6	2437	11	2462
3	2422	9	2452		

2.3 Test Mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

Test Software	MP_Kit_RTL11n_8723DS_SDIO_v1.09
Power level setup	19

3 TEST SITES

3.1 Test Facilities

Site Description

EMC Lab. : Certificated by Nemko
Registration No.: ELA 814
Date of registration: September 25, 2024

Certificated by CMA China
Registration No.: 202319016955
Date of registration: July 23, 2024

Certificated by A2LA
Certificate Number: 7404.01
Valid To: March 31, 2027

Name of Firm : Keyway Testing Technology (Guangdong) Co., Ltd.

Site Location : 21st Floor, Building 6, Dongyi Intelligent Equipment New , Energy Vehicle Park, No.30 of Tangxia, District, Dongshen Road, Tangxia Town, Dongguan City, Guangdong province, China

3.2 Measurement Uncertainty

The reported uncertainty of measurement **y** ± **U**,where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**,providing a level of confidence of approximately **95** %。

Parameter	**Uncertainty**
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Duty Cycle	±2%
Spurious emissions,conducted	±0.21dB
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(9KHz~30MHz)	±4.51dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB
Radiated Emission(25GHz~40GHz)	±3.38dB

3.3 List of Test and Measurement Instruments

Equipment	Manufacturer	Model No.	Serial No.	Date of Cal.	Valid until
For conducted emission at the mains terminals and signal port test 944 Shielded Room					
Test Software	FARAD	EZ-EMC Ver.FARAD-3A1+	KWET-089	/	/
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr 14, 25	Apr 13, 26
ArtificialMains Network	Rohde&Schwarz	ENV216	101314	Mar 05, 25	Mar 04, 26
RF Cable	FUJIKURA	3D-2W	KWET-030	Apr 14, 25	Apr 13, 26
Socket	Gongniu	KWET-003A1	KWET-003A1	Feb 21, 25	Feb 20, 26
For radiated emission test (30MHz-1GHz)966 Chamber 2					
Test Software	FARAD	EZ-EMC Ver.FARAD-3A1+	KWET-087	/	/
EMI Test Receiver	Rohde&Schwarz	ESCI	101178	Apr 14, 25	Apr 13, 26
TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00829	May 10, 25	May 09, 26
3m Semi-anechoic Chamber	YIHENDIANZI	966	YH-KW-966-02	Mar 07, 26	Mar 06, 29
RF Cable	EMC Instruments	EMCCFD400-NM-NM-2000	240307	Apr 14, 25	Apr 13, 26
RF Cable	EMC Instruments	EMCCFD400-NM-NM-9000	240309	Apr 14, 25	Apr 13, 26
For radiated emission test (Above 1GHz)966 Chamber 2					
Test Software	FARAD	EZ-EMC Ver.FARAD-3A1+	KWET-087	/	/
EMI Test Receiver	Rohde&Schwarz	ESCI	101178	Apr 14, 25	Apr 13, 26
Spectrum Analyzer	Agilent	N9020A	MY56070279	Apr 14, 25	Apr 13, 26
Spectrum analyzer	R&S	FSV 40	101059	Nov 06, 25	Nov 05, 26
Horn Antenna	DAZE	ZN30701	11003	Jul 27, 25	Jul 26, 26
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1368	May 16, 25	May 15, 26
Signal Amplifier	WCS Technology	DLNA-18000-40000	KWET-138	Apr 19, 25	Apr 18, 26
3m anechoic Chamber	YIHENDIANZI	966	YH-KW-966-02	Mar 07, 25	Mar 06, 29
RF Cable(1G-18GHz)	EMC Instruments	EMC105-SM-SM-1000	240301	Apr 14, 25	Apr 13, 26
RF Cable(1G-18GHz)	EMC Instruments	EMC105-SM-SM-2000	240302	Apr 14, 25	Apr 13, 26
RF Cable(1G-18GHz)	EMC Instruments	EMC105-SM-SM-9000	240303	Apr 14, 25	Apr 13, 26
RF Cable(18G-40GHz)	WCS Technology	CA360P-29M29M-1M	W2415130001	Apr 14, 25	Apr 13, 26
RF Cable(18G-40GHz)	WCS Technology	CA360P-29M29M-9M	W2415110001	Apr 14, 25	Apr 13, 26
For conducted emission test（RF）					
MXG Signal Analyzer	Agilent	N9020A	MY56070279	Apr 14, 25	Apr 13, 26

RF SWITCH BOX	CSKJ	SMU-1003	KWET-047	Apr 14, 25	Apr 13, 26
Attenuator	R&S	ESH3-Z2	102696	Apr 14, 25	Apr 13, 26
Power meter	YOKOKAWA	WY210	27D528405	Apr 14, 25	Apr 13, 26
RF sma cable	Keysight	ULC-1m-SMSM+	1623	May 15, 25	May 14, 26
RF sma cable	Keysight	ULC-1m-SMSM+	1623	May 15, 25	May 14, 26
RF sma cable	Keysight	ULC-1.5FT-SMSM+	1623	May 15, 25	May 14, 26
RF sma cable	Keysight	ULC-1.5FT-SMSM+	1623	May 15, 25	May 14, 26
Coupler	Keysight	ZHDC-10-63-S+	SF331801603	May 15, 25	May 14, 26
Test Software	CSKJ	CS-305X	KWET-149	/	/

3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Power Pro Plus Control System	WFCO	WF-3611	N/A	EUT

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

4 Conducted Emission

Test Requirement:	:	FCC CFR 47 Part 15 Section 15.207,RSS-Gen 8.8
Test Method	:	ANSI C63.10: 2013
Test Result	:	PASS
Frequency Range	:	150kHz to 30MHz
Class/Severity	:	Class B

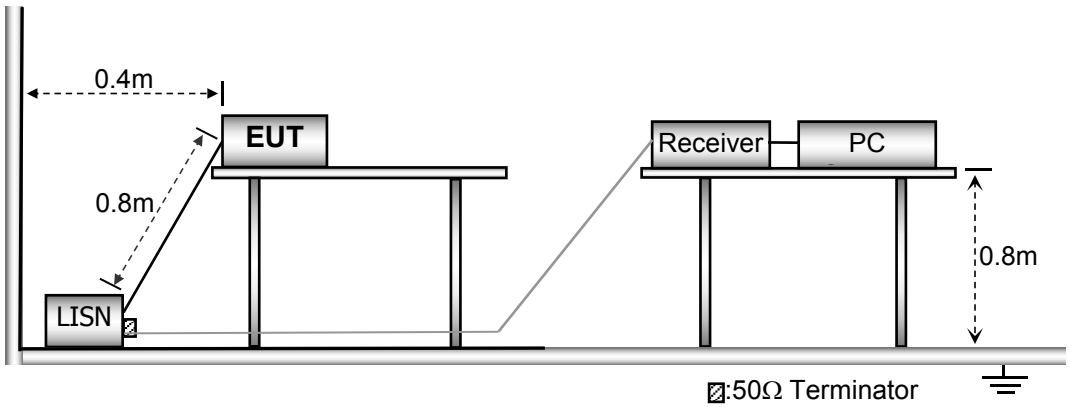
4.1 E.U.T. Operation

Operating Environment **:**

Temperature	:	23.5
Humidity	:	54
Atmospheric Pressure	:	1015

4.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013.



4.3 Measurement Procedure

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

4.4 Conducted Emission Limit

Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:
1. The lower limit shall apply at the transition frequencies
2.The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.5 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

4.6 Conducted Emission Test Result

Not Applicable.

5 Radiated Spurious Emissions

Test Requirement : FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method : ANSI C63.10:2013

Test Result : PASS

Measurement Distance : 3m

Limit : See the follow table

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

5.1 EUT Operation

Operating Environment :

Temperature: : 23

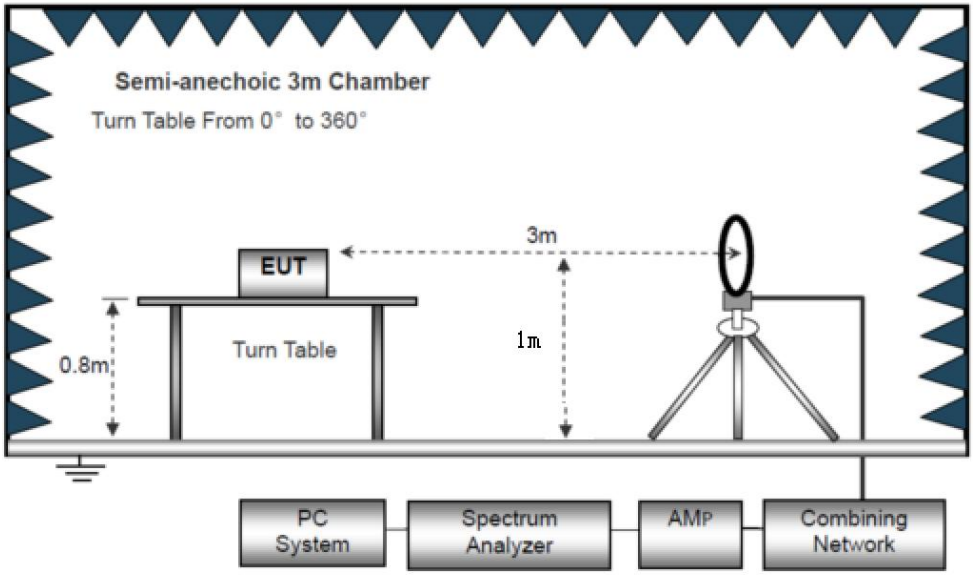
Humidity: : 54

Atmospheric Pressure: : 1015

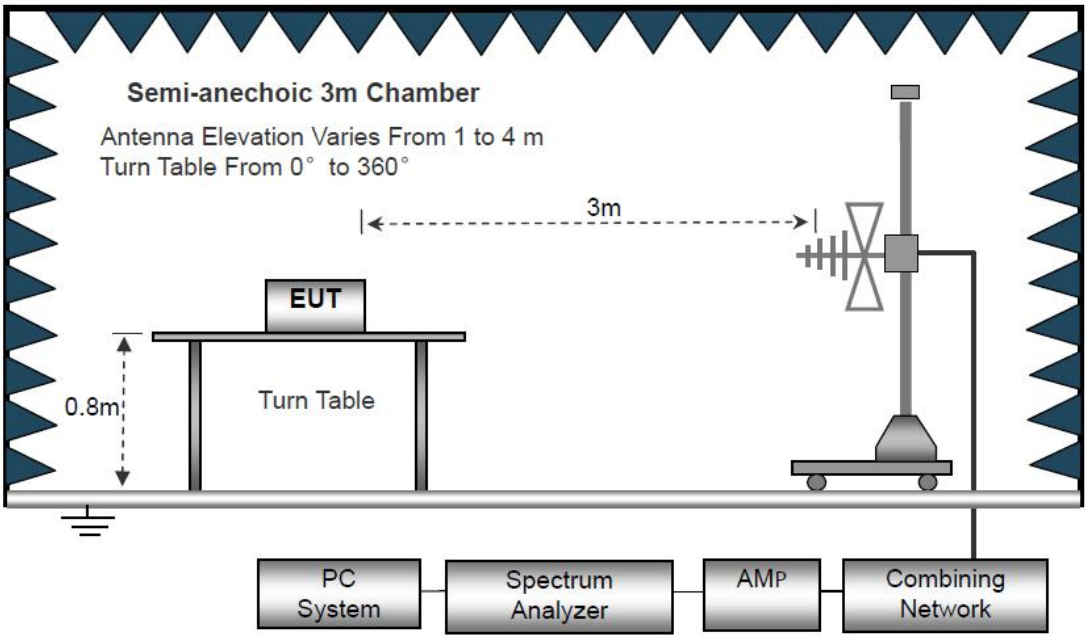
5.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site

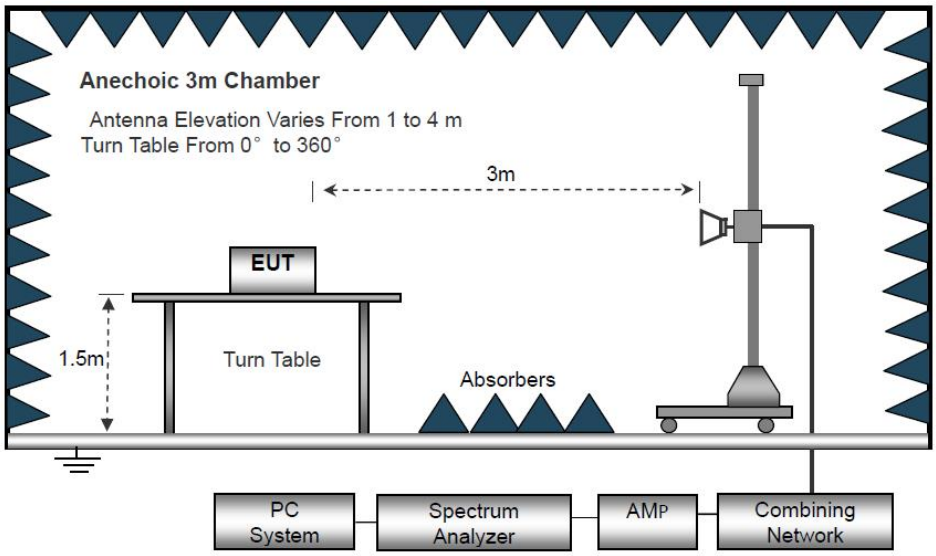
The test setup for emission measurement below 30MHz



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz



5.3 Spectrum Analyzer Setup

Below 30MHz			
IF Bandwidth	:	10kHz	
Resolution Bandwidth	:	10kHz	
Video Bandwidth	:	10kHz	
30MHz ~ 1GHz			
Detector	:	PK	QP
Resolution Bandwidth	:	100kHz	120kHz
Video Bandwidth	:	300kHz	300kHz
Above 1GHz			
Detector	:	PK	AV
Resolution Bandwidth	:	1MHz	1MHz
Video Bandwidth	:	3MHz	10Hz

5.4 Test Procedure

1. Below 1000MHz, The EUT was placed on a turn table which is 0.8m above ground plane, And above 1000MHz, The EUT was placed on a styrofoam table which is 1.5m above ground plane.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

6. Repeat above procedures until the measurements for all frequencies are complete.

7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

8. The test above 1GHz must be use the fully anechoic room, and the test below 1GHz use the half anechoic room

5.5 Summary of Test Results

Test Frequency: 9KHz-30MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	>20

Note:

The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

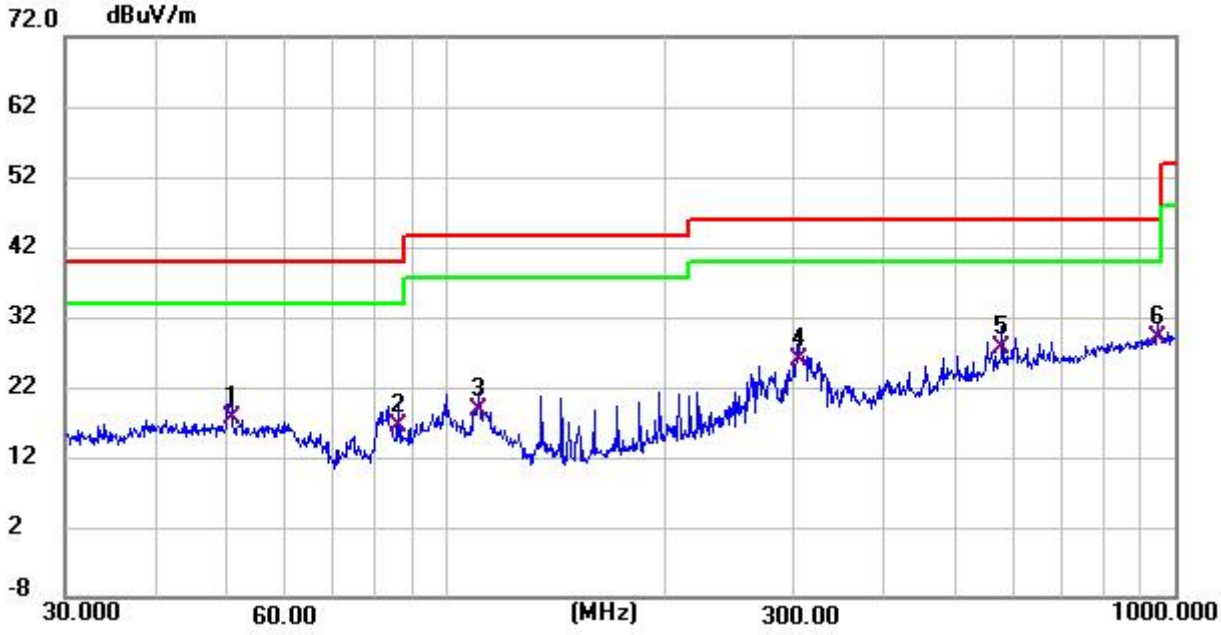
Distance extrapolation factor =40log(Specific distance/ test distance)(dB);
Limit line=Specific limits(dBuV) + distance extrapolation factor.

Test Frequency: 30MHz ~ 1GHz

All the modulation modes were tested the data of the worst mode (TX 802.11b Low Channel) are recorded in the following pages and the others modulation methods do not exceed the limits.

Please refer to the following test plots:

M/N	:	WF-3611
Operation Mode	:	TX 802.11b Low Channel
Test Voltage	:	DC 12V from battery
Test Specification	:	Vertical



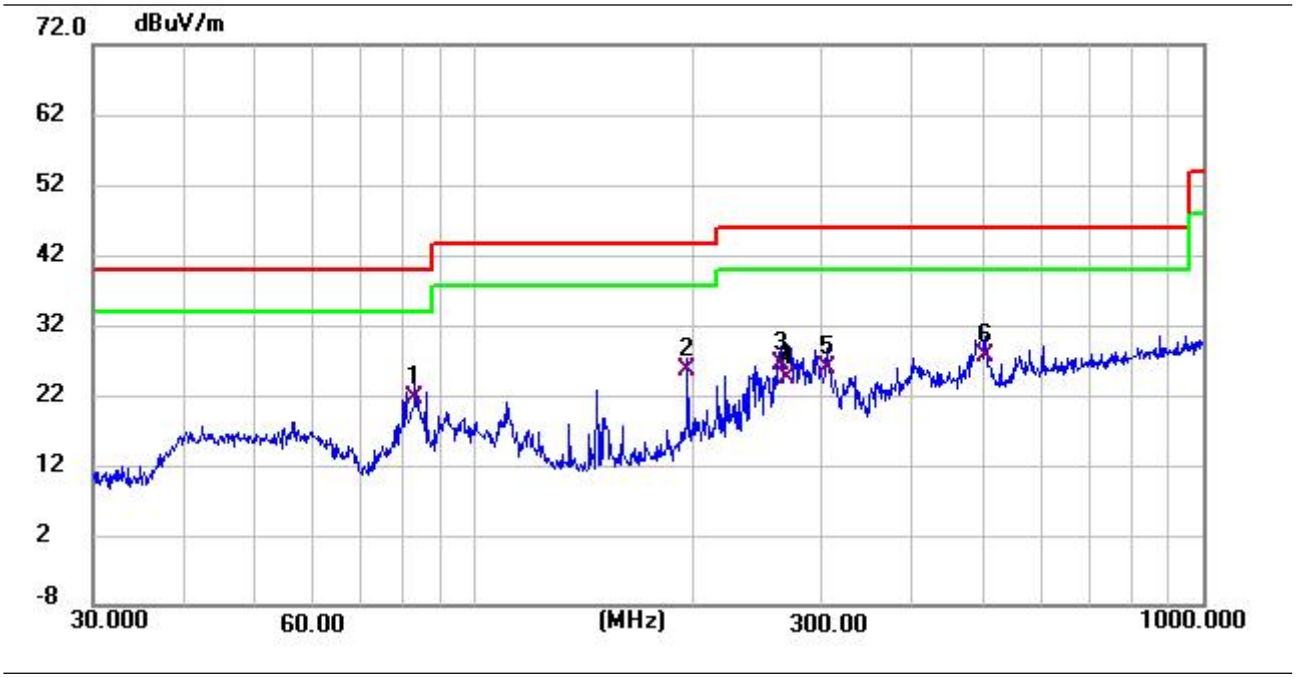
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	50.764	5.27	12.22	17.49	40.00	-22.51	QP
2	85.898	6.51	9.81	16.32	40.00	-23.68	QP
3	110.957	7.20	11.49	18.69	43.50	-24.81	QP
4	304.610	11.48	14.30	25.78	46.00	-20.22	QP
5	578.670	7.29	20.27	27.56	46.00	-18.44	QP
6 *	948.761	4.79	24.17	28.96	46.00	-17.04	QP

Remark:

Emission Level=Reading+Factor

Factor=Cable Loss+ANT Factor-Preamp Factor

M/N	:	WF-3611
Operation Mode	:	TX 802.11b Low Channel
Test Voltage	:	DC 12V from battery
Test Specification	:	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	82.938	12.69	8.85	21.54	40.00	-18.46	QP
2 *	196.510	14.86	10.77	25.63	43.50	-17.87	QP
3	263.819	13.05	13.34	26.39	46.00	-19.61	QP
4	269.428	10.87	13.48	24.35	46.00	-21.65	QP
5	304.610	11.66	14.30	25.96	46.00	-20.04	QP
6	504.706	8.81	18.64	27.45	46.00	-18.55	QP

Remark:

Emission Level=Reading+Factor

Factor=Cable Loss+ANT Factor-Preamp Factor

Test Frequency: From 1GHz to 25GHz

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2412MHz									
V	4824	54.17	34.12	5.03	32.39	57.47	74	-16.53	PK
V	4824	40.38	34.12	5.03	32.39	43.68	54	-10.32	AV
V	7236	48.86	32.54	6.29	35.86	58.47	74	-15.53	PK
V	7236	35.38	32.54	6.29	35.86	44.99	54	-9.01	AV
V	9648	44.05	32.98	7.55	38.4	57.02	74	-16.98	PK
V	9648	31.68	32.98	7.55	38.4	44.65	54	-9.35	AV
V	12060	41.44	32.09	8.93	39	57.28	74	-16.72	PK
V	12060	31.92	32.09	8.93	39	47.76	54	-6.24	AV
H	4824	52.13	34.12	5.03	32.39	55.43	74	-18.57	PK
H	4824	39.77	34.12	5.03	32.39	43.07	54	-10.93	AV
H	7236	44.57	32.54	6.29	35.86	54.18	74	-19.82	PK
H	7236	33.92	32.54	6.29	35.86	43.53	54	-10.47	AV
H	9648	47.88	32.98	7.55	38.4	60.85	74	-13.15	PK
H	9648	31.62	32.98	7.55	38.4	44.59	54	-9.41	AV
H	12060	40.59	32.09	8.93	39	56.43	74	-17.57	PK
H	12060	28.56	32.09	8.93	39	44.40	54	-9.60	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2437MHz									
V	4874	53.37	30.55	5.77	24.66	53.25	74	-20.75	PK
V	4874	43.03	30.55	5.77	24.66	42.91	54	-11.09	AV
V	7311	53.87	30.33	6.32	24.55	54.41	74	-19.59	PK
V	7311	43.04	30.33	6.32	24.55	43.58	54	-10.42	AV
V	9748	53.88	30.85	7.45	24.69	55.17	74	-18.83	PK
V	9748	45.50	30.85	7.45	24.69	46.79	54	-7.21	AV
V	12185	53.37	31.02	8.99	25.57	56.91	74	-17.09	PK
V	12185	43.58	31.02	8.99	25.57	47.12	54	-6.88	AV
H	4874	53.55	30.55	5.77	24.66	53.43	74	-20.57	PK
H	4874	42.98	30.55	5.77	24.66	42.86	54	-11.14	AV
H	7311	53.27	30.33	6.32	24.55	53.81	74	-20.19	PK
H	7311	42.84	30.33	6.32	24.55	43.38	54	-10.62	AV
H	9748	52.23	30.85	7.45	24.69	53.52	74	-20.48	PK
H	9748	42.76	30.85	7.45	24.69	44.05	54	-9.95	AV
H	12185	55.17	31.02	8.99	25.57	58.71	74	-15.29	PK
H	12185	42.97	31.02	8.99	25.57	46.51	54	-7.49	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2462MHz									
V	4924	54.49	30.55	5.77	24.66	54.37	74	-19.63	PK
V	4924	41.78	30.55	5.77	24.66	41.66	54	-12.34	AV
V	7386	52.20	30.33	6.32	24.55	52.74	74	-21.26	PK
V	7386	43.81	30.33	6.32	24.55	44.35	54	-9.65	AV
V	9848	55.13	30.85	7.45	24.69	56.42	74	-17.58	PK
V	9848	41.95	30.85	7.45	24.69	43.24	54	-10.76	AV
V	12310	54.87	31.02	8.99	25.57	58.41	74	-15.59	PK
V	12310	43.12	31.02	8.99	25.57	46.66	54	-7.34	AV
H	4924	53.90	30.55	5.77	24.66	53.78	74	-20.22	PK
H	4924	44.74	30.55	5.77	24.66	44.62	54	-9.38	AV
H	7386	55.43	30.33	6.32	24.55	55.97	74	-18.03	PK
H	7386	43.93	30.33	6.32	24.55	44.47	54	-9.53	AV
H	9848	52.91	30.85	7.45	24.69	54.20	74	-19.80	PK
H	9848	43.95	30.85	7.45	24.69	45.24	54	-8.76	AV
H	12310	53.25	31.02	8.99	25.57	56.79	74	-17.21	PK
H	12310	42.50	31.02	8.99	25.57	46.04	54	-7.96	AV

Note:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. We test all the mode and recorded the worst mode (802.11b) in the report.

Radiated Band Emission Measuremen:

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin(dB)	Detector Type	Result
802.11b	Low Channel 2412MHz										
	H	2390	58.03	35.17	3.48	27.49	53.83	74	-20.17	PK	PASS
	H	2390	49.72	35.17	3.48	27.49	45.52	54	-8.48	AV	PASS
	H	2400	62.42	35.16	3.49	27.52	58.27	74	-15.73	PK	PASS
	H	2400	52.46	35.16	3.49	27.52	48.31	54	-5.69	AV	PASS
	V	2390	59.94	35.17	3.48	27.49	55.74	74	-18.26	PK	PASS
	V	2390	52.70	35.17	3.48	27.49	48.50	54	-5.5	AV	PASS
	V	2400	60.88	35.16	3.49	27.52	56.73	74	-17.27	PK	PASS
	V	2400	51.59	35.16	3.49	27.52	47.44	54	-6.56	AV	PASS
	High Channel 2462MHz										
	H	2483.5	59.99	35.11	3.56	27.75	56.19	74	-17.81	PK	PASS
	H	2483.5	49.21	35.11	3.56	27.75	45.41	54	-8.59	AV	PASS
	H	2500	59.55	35.1	3.57	27.8	55.82	74	-18.18	PK	PASS
	H	2500	50.83	35.1	3.57	27.8	47.10	54	-6.9	AV	PASS
	V	2483.5	58.50	35.11	3.56	27.75	54.70	74	-19.3	PK	PASS
	V	2483.5	50.54	35.11	3.56	27.75	46.74	54	-7.26	AV	PASS
	V	2500	58.88	35.1	3.57	27.8	55.15	74	-18.85	PK	PASS
	V	2500	50.80	35.1	3.57	27.8	47.07	54	-6.93	AV	PASS
802.11g	Low Channel 2412MHz										
	H	2390	57.94	35.17	3.48	27.49	53.74	74	-20.26	PK	PASS
	H	2390	50.83	35.17	3.48	27.49	46.63	54	-7.37	AV	PASS
	H	2400	60.12	35.16	3.49	27.52	55.97	74	-18.03	PK	PASS
	H	2400	50.24	35.16	3.49	27.52	46.09	54	-7.91	AV	PASS

	V	2390	58.28	35.17	3.48	27.49	54.08	74	-19.92	PK	PASS
	V	2390	48.96	35.17	3.48	27.49	44.76	54	-9.24	AV	PASS
	V	2400	59.84	35.16	3.49	27.52	55.69	74	-18.31	PK	PASS
	V	2400	50.17	35.16	3.49	27.52	46.02	54	-7.98	AV	PASS
	High Channel 2462MHz										
	H	2483.5	56.47	35.11	3.56	27.75	52.67	74	-21.33	PK	PASS
	H	2483.5	48.27	35.11	3.56	27.75	44.47	54	-9.53	AV	PASS
	H	2500	59.09	35.1	3.57	27.8	55.36	74	-18.64	PK	PASS
	H	2500	50.76	35.1	3.57	27.8	47.03	54	-6.97	AV	PASS
	V	2483.5	57.73	35.11	3.56	27.75	53.93	74	-20.07	PK	PASS
	V	2483.5	49.62	35.11	3.56	27.75	45.82	54	-8.18	AV	PASS
	V	2500	58.31	35.1	3.57	27.8	54.58	74	-19.42	PK	PASS
	V	2500	49.56	35.1	3.57	27.8	45.83	54	-8.17	AV	PASS
802.11 n20	Low Channel 2412MHz										
	H	2390	57.19	35.17	3.48	27.49	52.99	74	-21.01	PK	PASS
	H	2390	51.40	35.17	3.48	27.49	47.20	54	-6.8	AV	PASS
	H	2400	59.98	35.16	3.49	27.52	55.83	74	-18.17	PK	PASS
	H	2400	48.73	35.16	3.49	27.52	44.58	54	-9.42	AV	PASS
	V	2390	58.49	35.17	3.48	27.49	54.29	74	-19.71	PK	PASS
	V	2390	49.77	35.17	3.48	27.49	45.57	54	-8.43	AV	PASS
	V	2400	60.03	35.16	3.49	27.52	55.88	74	-18.12	PK	PASS
	V	2400	48.04	35.16	3.49	27.52	43.89	54	-10.11	AV	PASS
	High Channel 2462MHz										
	H	2483.5	57.16	35.11	3.56	27.75	53.36	74	-20.64	PK	PASS
	H	2483.5	49.18	35.11	3.56	27.75	45.38	54	-8.62	AV	PASS
	H	2500	60.22	35.1	3.57	27.8	56.49	74	-17.51	PK	PASS
	H	2500	52.02	35.1	3.57	27.8	48.29	54	-5.71	AV	PASS

	V	2483.5	59.16	35.11	3.56	27.75	55.36	74	-18.64	PK	PASS
	V	2483.5	50.97	35.11	3.56	27.75	47.17	54	-6.83	AV	PASS
	V	2500	59.98	35.1	3.57	27.8	56.25	74	-17.75	PK	PASS
	V	2500	50.42	35.1	3.57	27.8	46.69	54	-7.31	AV	PASS
802.11 n40	Low Channel 2422MHz										
	H	2390	57.62	35.17	3.48	27.49	53.42	74	-20.58	PK	PASS
	H	2390	49.89	35.17	3.48	27.49	45.69	54	-8.31	AV	PASS
	H	2400	59.32	35.16	3.49	27.52	55.17	74	-18.83	PK	PASS
	H	2400	49.28	35.16	3.49	27.52	45.13	54	-8.87	AV	PASS
	V	2390	58.03	35.17	3.48	27.49	53.83	74	-20.17	PK	PASS
	V	2390	48.82	35.17	3.48	27.49	44.62	54	-9.38	AV	PASS
	V	2400	59.33	35.16	3.49	27.52	55.18	74	-18.82	PK	PASS
	V	2400	49.34	35.16	3.49	27.52	45.19	54	-8.81	AV	PASS
	High Channel 2452MHz										
	H	2483.5	57.33	35.11	3.56	27.75	53.53	74	-20.47	PK	PASS
	H	2483.5	47.47	35.11	3.56	27.75	43.67	54	-10.33	AV	PASS
	H	2500	60.57	35.1	3.57	27.8	56.84	74	-17.16	PK	PASS
	H	2500	48.06	35.1	3.57	27.8	44.33	54	-9.67	AV	PASS
	V	2483.5	58.13	35.11	3.56	27.75	54.33	74	-19.67	PK	PASS
	V	2483.5	51.27	35.11	3.56	27.75	47.47	54	-6.53	AV	PASS
	V	2500	59.30	35.1	3.57	27.8	55.57	74	-18.43	PK	PASS
	V	2500	50.01	35.1	3.57	27.8	46.28	54	-7.72	AV	PASS

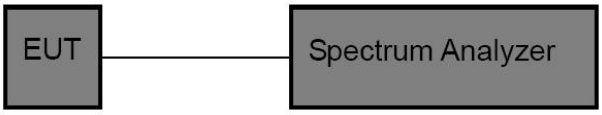
Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit

6 Conduct Band Edge And Spurious Emissions Measurement

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013
Test Limit	:	Regulation 15.247 (d),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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)). RSS-247 §5.5： In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

6.1 Test Setup



6.2 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold

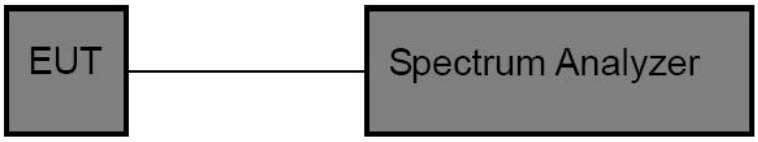
6.3 Test Result

Please see the attachment for WIFI2.4G data.

7 6dB&99% Bandwidth Measurement

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013
Test Limit		Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

7.1 Test Setup



7.2 Test Procedure

For 6dB Bandwidth Measurement

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

For 99% Bandwidth Measurement

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 1%-5% OBW, VBW ≥ 3RBW

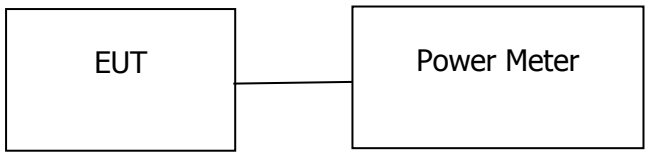
7.3 Test Result

Please see the attachment for WIFI2.4G data.

8 Maximum Peak Output Power

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013
Test Limit	:	Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. RSS-247§5.4 (d) For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

8.1 Test Setup



8.2 Test Procedure

1. Place the EUT on the table and set it in transmitting mode.

2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance and C63.10 section 11.9.1 for Maximum peak conducted output power.

3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter or spectrum analyzer

Power Meter:

It is used as the auxiliary test equipment to conduct the output power measurement.

4. Record the max. Reading as observed from Spectrum or Power Meter.

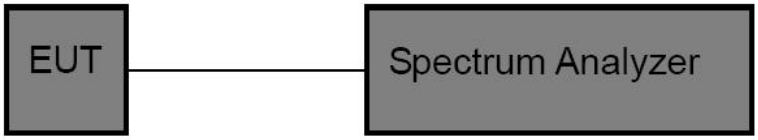
8.3 Test Result

Please see the attachment for WIFI2.4G data.

9 Power Spectral density

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013
Test Limit	:	Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

9.1 Test Setup



9.2 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz, Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.

3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

9.3 Test Result

Please see the attachment for WIFI2.4G data.

10 On Time and Duty Cycle

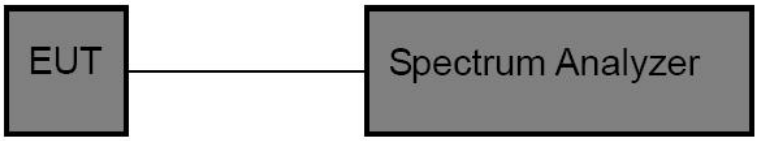
10.1 Standard Applicable

None: for reporting purpose only.

10.2 Measuring Instruments and Setting

Please refer to equipment's list in this report. The following table is the setting of the spectrum analyzer.

10.3 Test Setup



10.4 Test Procedures

1. Set the centre frequency of the spectrum analyzer to the transmitting frequency;

2. Set the span=0MHz, RBW=8MHz, VBW=8MHz, Sweep time=40000pts;

3. Detector = RMS;

4. Trace mode = Single hold.

10.5 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

10.6 Test result

Please see the attachment for WIFI2.4G data.

11 Antenna Application

11.1 Antenna Requirement

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

According to RSS-GEN section 6.8

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

11.2 Result

The EUT'S antenna, permanent attached antenna, is Internal Antenna. The antenna's gain is 2.57dBi, and meets the requirement.

12 Test Setup and EUT Photos

Reference to the attachment for details.

******THE END REPORT******