FCC TEST REPORT

FCC ID: 2BL4K-F2

On Behalf of

Shenzhen bellwether Technology Co., Ltd

CCTV Security camera

Model No.: F2

Prepared for	:	Shenzhen bellwether Technology Co., Ltd
Address	:	C201, Building C and D, Gongchuang Ying Industrial Park, No. 8 Baodan Road, Danzhutou Community, Nanwan Street, Longgang District, Shenzhen, China

Prepared By	:	Shenzhen Alpha Product Testing Co., Ltd.
Address	:	Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

Report Number	:	A2601446-C02-R01
Date of Receipt	:	February 5, 2026
Date of Test	:	February 5, 2026 – August 7, 2026
Date of Report	:	August 26, 2026
Version Number	:	V0
Result		**Pass**

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TEST REPORT DECLARATION

Applicant	:	Shenzhen bellwether Technology Co., Ltd
Address	:	C201, Building C and D, Gongchuang Ying Industrial Park, No. 8 Baodan Road, Danzhutou Community, Nanwan Street, Longgang District, Shenzhen, China
Manufacturer	:	Shenzhen bellwether Technology Co., Ltd
Address	:	C201, Building C and D, Gongchuang Ying Industrial Park, No. 8 Baodan Road, Danzhutou Community, Nanwan Street, Longgang District, Shenzhen, China
EUT Description	:	CCTV Security camera
		(A) Model No. : F2
		(B) Trademark : N/A

Measurement Standard Used:

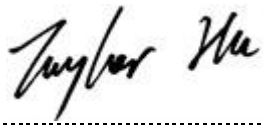
FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10-2020

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....…..:	Taylor Hu Project Engineer	
Approved by (name + signature)…....:	Alan Fan Project Manager	
Date of issue……..:	August 26, 2026	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	August 26, 2026	Initial released Issue	Taylor Hu

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Conducted Emission	FCC Part 15: 15.207	P
6dB Bandwidth	FCC PART 15:15.247(a)(2)	P
Output Power	FCC Part 15: 15.247(b)(3)	P
Radiated Spurious Emission	FCC Part 15: 15.209, FCC Part 15: 15.247(d)	P
Conducted Spurious & Band Edge Emission	FCC Part 15: 15.247(d)	P
Power Spectral Density	FCC PART 15:15.247(e)	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d)	P
Antenna Requirement	FCC Part 15: 15.203	P
Note:	1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable.	

1. Pass: The EUT complies with the essential requirements in the standard.

2. Frequency Stability: The manufacturer stated in the user's manual.

3. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description/PMN	:	CCTV Security camera
Model Number	:	F2
Diff.	:	Model F2 comes in three appearances, differing only in shell color.
Test Voltage	:	DC 5V from USB port
Radio Technology	:	2.4G WIFI
Operation frequency	:	2412MHz-2462MHz for IEEE 802.11 b, g. n/HT20
Channel No.	:	802.11b/802.11g /802.11n(HT20): 11
Modulation type	:	IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK)
Antenna Type	:	Spring antenna, max gain 3.26dBi (Antenna information is provided by applicant.) (Testing lab is not responsible for the accuracy of the information.)
Software Version	:	V1.0
Hardware version	:	V1.0
Intend use environment	:	Residential, commercial and light industrial environment

2.2. Accessories of Device (EUT)

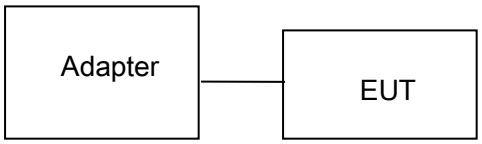
Accessories	:	N/A
Manufacturer	:	N/A
Model	:	N/A
Ratings	:	N/A

2.3. Tested Supporting System Details

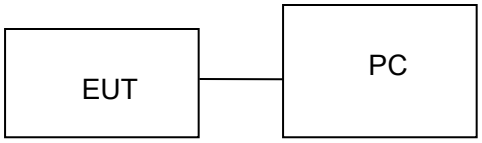
No.	Description	Manufacturer	Model	Serial Number	Certification or SDOC
1	N/A	N/A	N/A	N/A	N/A

2.4. Block Diagram of Test

Radiated Emission



RF conduction method



2.5. Test Mode Description

Duty cycle :100%Keeping TX			
Mode	**Data rate (Mbps)**	**Channel**	**Frequency (MHz)**
IEEE 802.11b	1	Low :CH1	2412
	1	Middle: CH6	2437
	1	High: CH11	2462
IEEE 802.11g	6	Low :CH1	2412
	6	Middle: CH6	2437
	6	High: CH11	2462
IEEE 802.11 n/HT20	6.5	Low :CH1	2412
	6.5	Middle: CH6	2437
	6.5	High: CH11	2462
Note: 1. According exploratory test, EUT will have maximum output power in those data rate. So those data rate were used for all test. 2. Use the Xshell 5 to control EUT work in Continuous TX mode, and select test channel, wireless mode, The power level for the test is set to default.			

Channel list:					
For IEEE 802.11b, g, n/HT20					
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
CH1	2412	CH5	2432	CH9	2452
CH2	2417	CH6	2437	CH10	2457
CH3	2422	CH7	2442	CH11	2462
CH4	2427	CH8	2447		

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.

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	24℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7. Test Facility

Shenzhen Alpha Product Testing Co., Ltd

Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103,
Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission
Registration Number: 293961
Designation Number: CN1236

July 15, 2019 Certificated by IC
Registration Number: 12135A
CAB identified: CN0085

2.8. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	1.63dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	4.17dB(Polarize: V)
	4.08dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 18GHz)	4.29dB(Polarize: V)
	4.82dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31dB(Polarize: V)
	4.30dB(Polarize: H)
Uncertainty for radio frequency	5.06×10^{-8}GHz
Uncertainty for conducted RF Power	0.40dB
Uncertainty for temperature	0.3℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%
Uncertainty for Power Spectral Density	0.69dB
Uncertainty for Occupied-Bandwidth	4.22%

2.9. Test Equipment List

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last Cal.	Cal. Due day
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025.03.09	4Year
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025.03.09	4Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2025.08.04	1Year
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2025.08.04	1Year
Spectrum analyzer	Keysight	N9020A	A.19.05	MY54500254	2025.08.04	1Year
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.20	1201.0002K50 -149889-wL	2025.08.04	1Year
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.22	1201.0002K50 -117239-sM	2025.08.04	1Year
UXM 5G Base Wireless Test Platform	Keysight	E7515E	1.8.1.2908 2(NR)(LTE)	MY62226130	2025.03.06	1Year
Test Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03 -102082-Wa	2025.08.04	1Year
Test Receiver	ROHDE&SCHWARZ	ESCI	4.42 SP1	101165	2025.08.04	1Year
Bilog Antenna	SCHWARZBECK	VULB 9168	/	VULB 9168#627	2025.08.11	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2025.08.11	2Year
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2025.08.11	2Year
RF Cable	Resenberger	Cable 1	/	RE1	2025.08.04	1Year
RF Cable	Resenberger	Cable 2	/	RE2	2025.08.04	1Year
RF Cable	Resenberger	Cable 3	/	CE1	2025.08.04	1Year
Amplifier	HP	HP8347A	/	2834A00455	2025.08.04	1Year
Amplifier	Agilent	8449B	/	3008A02664	2025.08.04	1Year
L.I.S.N.#1	SCHWARZBECK	NSLK8126	/	8126-466	2025.08.04	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2025.08.04	1Year
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2025.08.11	2Year
Preamplifier	SKET	LNPA_1840-5 0	/	SK201810180 1	2025.08.04	1 Year
Vector Signal Generator	Agilent	N5182A	/	MY49060042	2025.08.04	1 Year
Vector Signal Generator	Agilent	N5172B	2.02	MY51350397	2025.08.04	1 Year
Power Meter	Agilent	E4419B	/	GB40202122	2025.08.04	1 Year
Power Sensor	Agilent	E9300A	/	MY41496628	2025.08.04	1 Year
Power Sensor	Agilent	E9304A	/	MY41496815	2025.08.04	1 Year
Power Sensor	DARE	RPR3006W		15100041SNO 91	2025.08.04	1 Year
Power Sensor	DARE	RPR3006W		15100041SNO 92	2025.08.04	1 Year
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205- 01	2025.07.14	1 Year
Electronic Thermo-Hygrometer	S.H.Qixiang	HTC-1	/	N/A	2025.08.04	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2025.08.04	1 Year
Adjustable	MWRFtest	N/A	/	N/A	N/A	N/A

attenuator						
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last Cal.	Cal. Due day
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025.03.09	2029.03.08
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025.03.09	2029.03.08
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2025.08.04	2026.08.03
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2025.08.04	2026.08.03
Spectrum analyzer	Keysight	N9020A	A.19.05	MY54500254	2025.08.04	2026.08.03
Spectrum analyzer	ROHDE&SCHWARZ	FSU	4.71.SP5	200002	2025.08.04	2026.08.03
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.22	1201.0002K50 -117239-sM	2025.08.04	2026.08.03
UXM 5G Base Wireless Test Platform	Keysight	E7515E	1.8.1.2908 2(NR)(LTE)	MY62226130	2026.03.03	2027.03.02
Test Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03 -102082-Wa	2025.08.04	2026.08.03
Test Receiver	ROHDE&SCHWARZ	ESCI	4.42 SP1	101165	2025.08.04	2026.08.03
Bilog Antenna	SCHWARZBECK	VULB 9168	/	VULB 9168#627	2025.08.11	2027.08.10
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2025.08.11	2027.08.10
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2025.08.11	2027.08.10
RF Cable	Resenberger	Cable 1	/	RE1	2025.08.04	2026.08.03
RF Cable	Resenberger	Cable 2	/	RE2	2025.08.04	2026.08.03
RF Cable	Resenberger	Cable 3	/	CE1	2025.08.04	2026.08.03
Amplifier	HP	HP8347A	/	2834A00455	2025.08.04	2026.08.03
Amplifier	Agilent	8449B	/	3008A02664	2025.08.04	2026.08.03
Amplifier	SKET	LNPA_0118G-45	/	SK202001080 1	2025.08.04	2026.08.03
Filter/Amplifier bank unit	SKET	RSESU-HPH-LNPP18G	/	SK20190712	2025.08.04	2026.08.03
L.I.S.N.#1	SCHWARZBECK	NSLK8126	/	8126-466	2025.08.04	2026.08.03
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2025.08.04	2026.08.03
Pulse Limiter	SCHWARZBECK	9516F	/	9618	2025.08.04	2026.08.03
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2025.08.11	2027.08.10
Preamplifier	SKET	LNPA_1840-50	/	SK201810180 1	2025.08.04	2026.08.03
Vector Signal Generator	Agilent	N5182A	/	MY49060042	2025.08.04	2026.08.03
Vector Signal Generator	Agilent	N5172B	2.02	MY51350397	2025.08.04	2026.08.03
Analog Signal Generator	HP	83712B	10.02	US34490219	2025.08.04	2026.08.03
Power Meter	Agilent	E4419B	/	GB40202122	2025.08.04	2026.08.03
Power Sensor	Agilent	E9300A	/	MY41496628	2025.08.04	2026.08.03
Power Sensor	Agilent	E9304A	/	MY41496815	2025.08.04	2026.08.03
Power Sensor	DARE	RPR3006W	/	15100041SNO 91	2025.08.04	2026.08.03
Power Sensor	DARE	RPR3006W	/	15100041SNO 92	2025.08.04	2026.08.03
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2025.07.14	2026.07.13

Electronic Thermo-Hygrometer	S.H.Qixiang	HTC-1	/	N/A	2025.08.04	2026.08.03
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2025.08.04	2026.08.03
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A
6dB Fixed Attenuator	SKET	AP_DC01G-2W-N-6dB	/	N/A	2025.08.04	2026.08.03

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last Cal.	Cal. Due day
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025.03.09	2029.03.08
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025.03.09	2029.03.08
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2026.07.28	2027.07.27
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2026.07.27	2027.07.26
Spectrum analyzer	Keysight	N9020A	A.19.05	MY54500254	2026.07.27	2027.07.26
Spectrum analyzer	ROHDE&SCHWARZ	FSU	4.71.SP5	200002	2026.07.28	2027.07.27
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.22	1201.0002K50-117239-sM	2026.07.27	2027.07.26
UXM 5G Base Wireless Test Platform	Keysight	E7515E	1.8.1.29082(NR)(LTE)	MY62226130	2026.03.03	2027.03.02
Test Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03-102082-Wa	2026.07.27	2027.07.26
Test Receiver	ROHDE&SCHWARZ	ESCI	4.42 SP1	101165	2026.07.28	2027.07.27
Bilog Antenna	SCHWARZBECK	VULB 9168	/	VULB 9168#627	2025.08.11	2027.08.10
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2025.08.11	2027.08.10
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2025.08.11	2027.08.10
RF Cable	Resenberger	Cable 1	/	RE1	2026.07.27	2027.07.26
RF Cable	Resenberger	Cable 2	/	RE2	2026.07.27	2027.07.26
RF Cable	Resenberger	Cable 3	/	CE1	2026.07.27	2027.07.26
Amplifier	HP	HP8347A	/	2834A00455	2026.07.28	2027.07.27
Amplifier	Agilent	8449B	/	3008A02664	2026.07.27	2027.07.26
Amplifier	SKET	LNPA_0118G-45	/	SK2020010801	2026.07.27	2027.07.26
Filter/Amplifier bank unit	SKET	RSESU-HPH-LNPP18G	/	SK20190712	2026.07.27	2027.07.26
L.I.S.N.#1	SCHWARZBECK	NSLK8126	/	8126-466	2026.07.28	2027.07.27
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2026.07.28	2027.07.27
Pulse Limiter	SCHWARZBECK	9516F	/	9618	2026.07.27	2027.07.26
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2025.08.11	2027.08.10
Preamplifier	SKET	LNPA_1840-50	/	SK2018101801	2026.07.27	2027.07.26
Vector Signal Generator	Agilent	N5182A	/	MY49060042	2026.07.28	2027.07.27
Vector Signal Generator	Agilent	N5172B	2.02	MY51350397	2026.07.27	2027.07.26
Analog Signal Generator	HP	83712B	10.02	US34490219	2026.07.27	2027.07.26
Power Meter	Agilent	E4419B	/	GB40202122	2026.07.27	2027.07.26

Power Sensor	Agilent	E9300A	/	MY41496628	2026.07.27	2027.07.26
Power Sensor	Agilent	E9304A	/	MY41496815	2026.07.27	2027.07.26
Power Sensor	DARE	RPR3006W	/	15100041SNO 91	2026.07.28	2027.07.27
Power Sensor	DARE	RPR3006W	/	15100041SNO 92	2026.07.28	2027.07.27
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2026.07.07	2027.07.06
Electronic Thermo-Hygrometer	S.H.Qixiang	HTC-1	/	N/A	2026.07.31	2027.07.30
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2026.07.27	2027.07.26
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A
6dB Fixed Attenuator	SKET	AP_DC01G-2W-N-6dB	/	N/A	2026.07.28	2027.07.27

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last Cal.	Cal. Due day
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025.03.09	2029.03.08
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025.03.09	2029.03.08
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2026.07.28	2027.07.27
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2026.07.27	2027.07.26
Spectrum analyzer	Keysight	N9020A	A.19.05	MY54500254	2026.07.27	2027.07.26
Spectrum analyzer	ROHDE&SCHWARZ	FSU	4.71.SP5	200002	2026.07.28	2027.07.27
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.22	1201.0002K50 -117239-sM	2026.07.27	2027.07.26
UXM 5G Base Wireless Test Platform	Keysight	E7515E	1.8.1.2908 2(NR)(LTE)	MY62226130	2026.03.03	2027.03.02
Test Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03 -102082-Wa	2026.07.27	2027.07.26
Test Receiver	ROHDE&SCHWARZ	ESCI	4.42 SP1	101165	2026.07.28	2027.07.27
Bilog Antenna	SCHWARZBECK	VULB 9168	/	VULB 9168#627	2025.08.11	2027.08.10
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2025.08.11	2027.08.10
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2025.08.11	2027.08.10
RF Cable	Resenberger	Cable 1	/	RE1	2026.07.27	2027.07.26
RF Cable	Resenberger	Cable 2	/	RE2	2026.07.27	2027.07.26
RF Cable	Resenberger	Cable 3	/	CE1	2026.07.27	2027.07.26
Amplifier	HP	HP8347A	/	2834A00455	2026.07.28	2027.07.27
Amplifier	Agilent	8449B	/	3008A02664	2026.07.27	2027.07.26
Amplifier	SKET	LNPA_0118G-45	/	SK202001080 1	2026.07.27	2027.07.26
Filter/Amplifier bank unit	SKET	RSESU-HPH-LNPP18G	/	SK20190712	2026.07.27	2027.07.26
L.I.S.N.#1	SCHWARZBECK	NSLK8126	/	8126-466	2026.07.28	2027.07.27
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2026.07.28	2027.07.27
Pulse Limiter	SCHWARZBECK	9516F	/	9618	2026.07.27	2027.07.26
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2025.08.11	2027.08.10
Preamplifier	SKET	LNPA_1840-50	/	SK201810180 1	2026.07.27	2027.07.26
Vector Signal Generator	Agilent	N5182A	/	MY49060042	2026.07.28	2027.07.27
Vector Signal Generator	Agilent	N5172B	2.02	MY51350397	2026.07.27	2027.07.26
Analog Signal Generator	HP	83712B	10.02	US34490219	2026.07.27	2027.07.26
Power Meter	Agilent	E4419B	/	GB40202122	2026.07.27	2027.07.26
Power Sensor	Agilent	E9300A	/	MY41496628	2026.07.27	2027.07.26
Power Sensor	Agilent	E9304A	/	MY41496815	2026.07.27	2027.07.26
Power Sensor	DARE	RPR3006W	/	15100041SNO 91	2026.07.28	2027.07.27
Power Sensor	DARE	RPR3006W	/	15100041SNO 92	2026.07.28	2027.07.27
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2026.07.07	2027.07.06
Electronic Thermo-Hygromet	S.H.Qixiang	HTC-1	/	N/A	2026.07.31	2027.07.30

er						
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2026.07.27	2027.07.26
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A
6dB Fixed Attenuator	SKET	AP_DC01G-2 W-N-6dB	/	N/A	2026.07.28	2027.07.27

Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EZ-EMC	Farad	Alpha-3A1
RF-CE	MTS 8310	MWRFtest	V2.0.0.0

3. SPURIOUS EMISSION

3.1. Test Limits

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]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 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])

RSS-GEN Restricted frequency band

Table 7 – Restricted frequency bands Note 1

MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 – 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12

6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 – 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 – 8500	
108 – 138		

Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009-0.490	300	2400/F(KHz)	/
0.490-1.705	30	24000/F(KHz)	/
1.705-30	30	30	29.5
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	
Note 1: The peak limit is 20 dB higher than the average limit			
Note 2: Peak limit applies (AVG limit + 20 dB) as well as RSS-247 Section 5.5			

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

Table 5 – General field strength limits at frequencies above 30 MHz

Frequency (MHz)	Field strength (μV/m at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Table 6 – General field strength limits at frequencies below 30 MHz

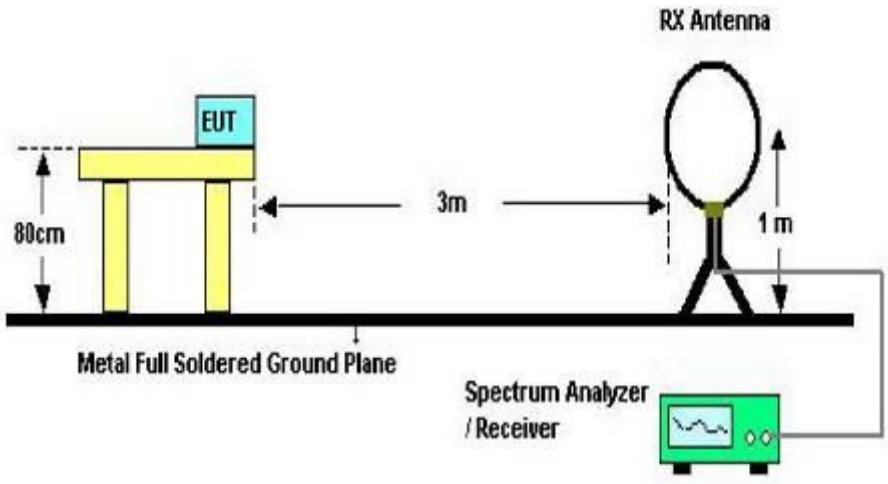
Frequency	Magnetic field strength (H-Field) (μA/m)	Measurement distance (m)
9 - 490 kHz[Note 1]	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

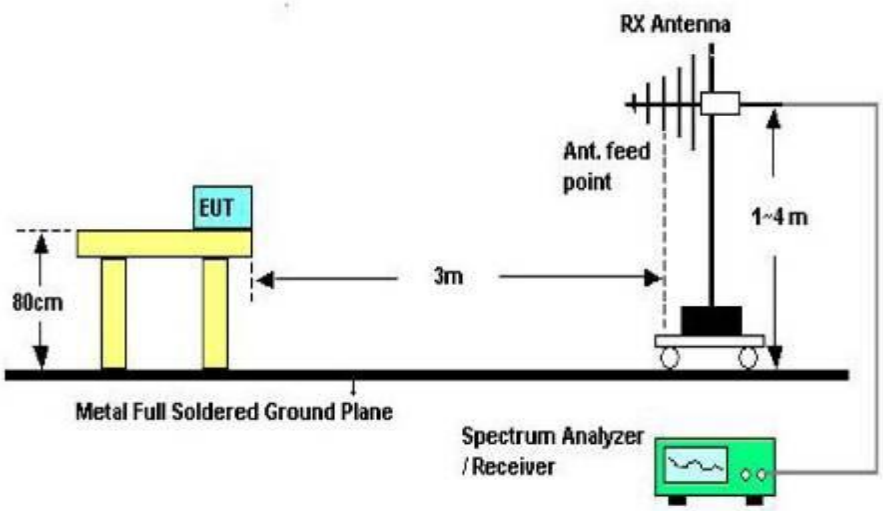
3.2. Test Procedure

The measuring distance of 3m shall be used for measurements at frequency up to 1GH and above 1GHz.
The EUT was placed on a rotating 0.8 m high above ground for below 1GHz and 1.5m high for above1GHz testing, the table was rotated 360 degrees to determine the position of the highest radiation
The Test antenna shall vary between 1m and 4m, both Horizontal and Vertical antenna are set of make measurement.
The initial step in collecting radiated emission data is a spectrum analyzer Peak detector mode pre-scanning the measurement frequency range. Significant Peaks are then marked. and then Quasi Peak Detector mode premeasured
If Peak value comply with QP limit below 1GHz, the EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.
For the actual test configuration, please see the test setup photo.

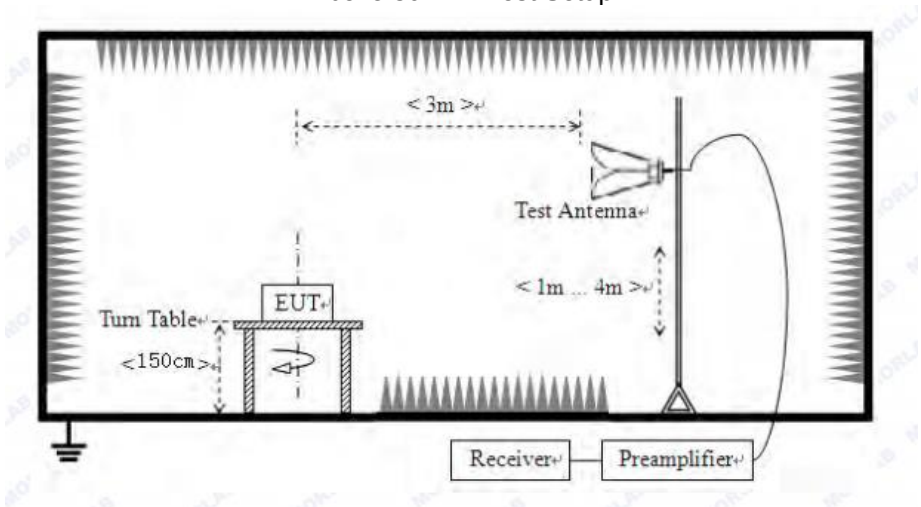
3.3. Test Setup



Below 30MHz Test Setup



Above 30MHz Test Setup



Above 1GHz Test Setup

3.4. Test Results

Test Condition
Continual Transmitting in maximum power.

9KHz~150KHz	RBW200Hz	VBW1KHz
150KHz~30MHz	RBW9KHz	VBW 30KHz
30MHZ~1GHz	RBW120KHz	VBW 300KHz
Above1GHz	RBW1MHz	VBW 3MHz

We have scanned the EUT from 9kHz up to the 10th harmonic of the fundamental.

Detailed information please see the following page.

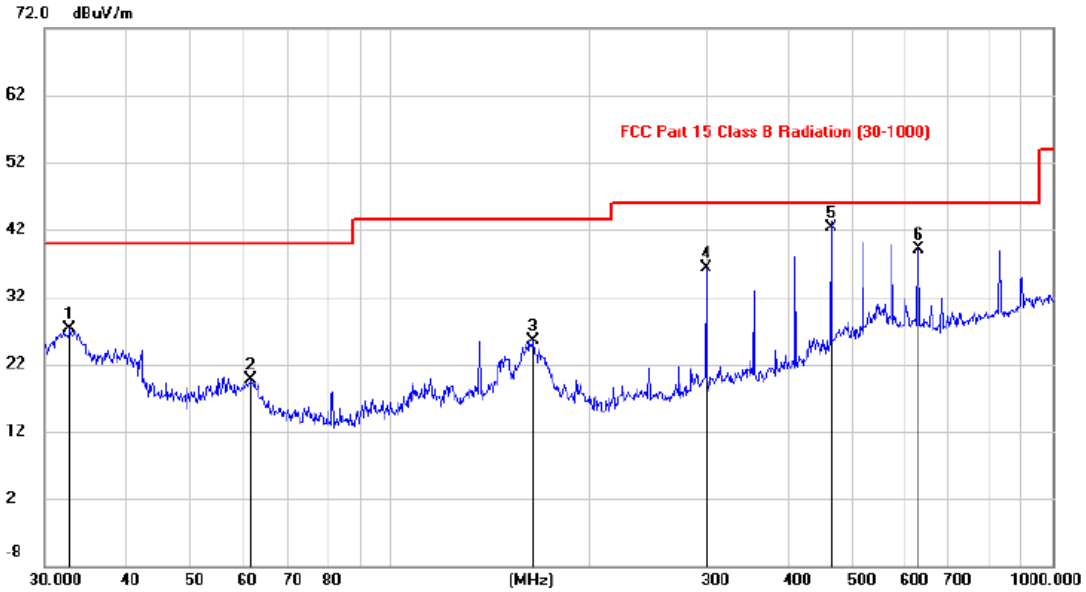
From 9KHz to 30MHz: Conclusion: PASS

Note: 1.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

2. Only show the test data of the worst Channel in this report.

From 30MHz to 1000MHz: Conclusion: Pass

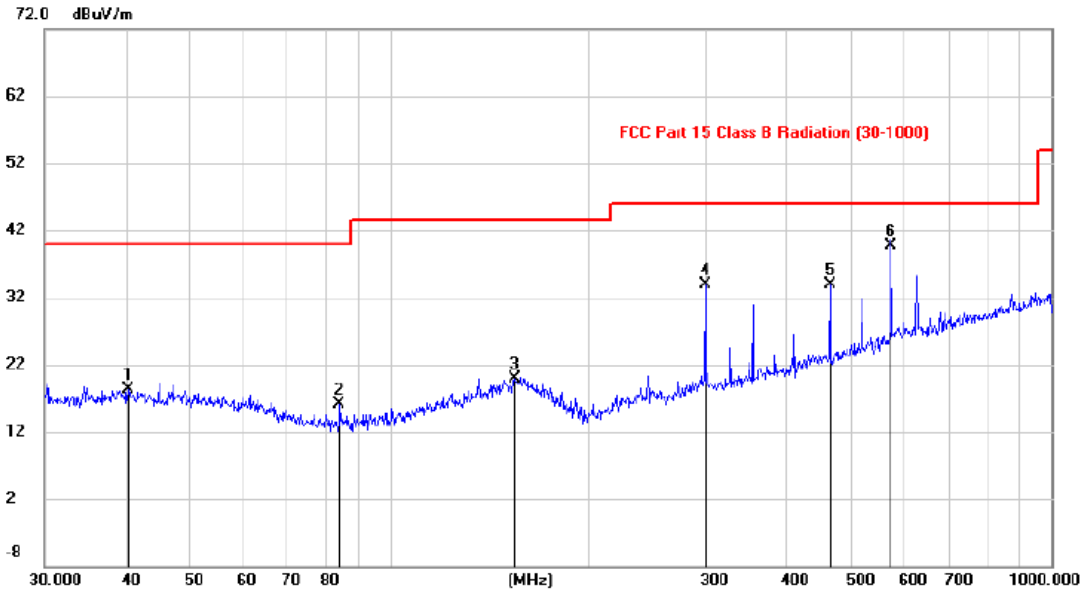
Vertical:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		32.8444	14.15	13.13	27.28	40.00	-12.72	peak			
2		61.6049	7.23	12.56	19.79	40.00	-20.21	peak			
3		164.5224	11.30	14.25	25.55	43.50	-17.95	peak			
4		300.0163	22.05	14.20	36.25	46.00	-9.75	peak			
5	*	463.6442	24.21	18.17	42.38	46.00	-3.62	QP			
6		627.3469	17.56	21.47	39.03	46.00	-6.97	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		40.2331	4.38	13.90	18.28	40.00	-21.72	peak			
2		84.0215	6.61	9.40	16.01	40.00	-23.99	peak			
3		154.4769	5.13	14.70	19.83	43.50	-23.67	peak			
4		300.0163	19.62	14.20	33.82	46.00	-12.18	peak			
5		463.6442	15.66	18.17	33.83	46.00	-12.17	peak			
6	*	572.7481	19.39	20.24	39.63	46.00	-6.37	QP			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Notes: Above is below 1GHz test data. This report only shall the worst case mode for b 2412MHz.

From 1G-25GHz

Test Mode: IEEE 802.11b TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824	43.21	V	33.95	10.18	34.26	53.08	74	-20.92	PK
4824	33.82	V	33.95	10.18	34.26	43.69	54	-10.31	AV
7236	/	/	/	/	/	/	/	/	/
9648	/	/	/	/	/	/	/	/	/
4824	44.18	H	33.95	10.18	34.26	54.05	74	-19.95	PK
4824	36.45	H	33.95	10.18	34.26	46.32	54	-7.68	AV
7236	/	/	/	/	/	/	/	/	/
9648	/	/	/	/	/	/	/	/	/
Test Mode: IEEE 802.11b TX Mid									
4874	44.08	V	33.93	10.2	34.29	53.92	74	-20.08	PK
4874	33.54	V	33.93	10.2	34.29	43.38	54	-10.62	AV
7311	/	/	/	/	/	/	/	/	/
9748	/	/	/	/	/	/	/	/	/
4874	44.75	H	33.93	10.2	34.29	54.59	74	-19.41	PK
4874	32.92	H	33.93	10.2	34.29	42.76	54	-11.24	AV
7311	/	/	/	/	/	/	/	/	/
9748	/	/	/	/	/	/	/	/	/
Test Mode: IEEE 802.11b TX High									
4924	46.55	V	33.98	10.22	34.25	56.50	74	-17.50	PK
4924	34.25	V	33.98	10.22	34.25	44.20	54	-9.80	AV
7386	/	/	/	/	/	/	/	/	/
9848	/	/	/	/	/	/	/	/	/
4924	47.38	H	33.98	10.22	34.25	57.33	74	-16.67	PK
4924	32.92	H	33.98	10.22	34.25	42.87	54	-11.13	AV
7386	/	/	/	/	/	/	/	/	/
9848	/	/	/	/	/	/	/	/	/

Note:

1, Result = Read level + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Test Mode: IEEE 802.11g TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824	43.06	V	33.95	10.18	34.26	52.93	74	-21.07	PK
4824	33.54	V	33.95	10.18	34.26	43.41	54	-10.59	AV
7236	/	/	/	/	/	/	/	/	/
9648	/	/	/	/	/	/	/	/	/
4824	45.61	H	33.95	10.18	34.26	55.48	74	-18.52	PK
4824	34.26	H	33.95	10.18	34.26	44.13	54	-9.87	AV
7236	/	/	/	/	/	/	/	/	/
9648	/	/	/	/	/	/	/	/	/
Test Mode: IEEE 802.11g TX Mid									
4874	43.95	V	33.93	10.2	34.29	53.79	74	-20.21	PK
4874	34.03	V	33.93	10.2	34.29	43.87	54	-10.13	AV
7311	/	/	/	/	/	/	/	/	/
9748	/	/	/	/	/	/	/	/	/
4874	44.52	H	33.93	10.2	34.29	54.36	74	-19.64	PK
4874	34.73	H	33.93	10.2	34.29	44.57	54	-9.43	AV
7311	/	/	/	/	/	/	/	/	/
9748	/	/	/	/	/	/	/	/	/
Test Mode: IEEE 802.11g TX High									
4924	47.32	V	33.98	10.22	34.25	57.27	74	-16.73	PK
4924	34.64	V	33.98	10.22	34.25	44.59	54	-9.41	AV
7386	/	/	/	/	/	/	/	/	/
9848	/	/	/	/	/	/	/	/	/
4924	46.78	H	33.98	10.22	34.25	56.73	74	-17.27	PK
4924	33.64	H	33.98	10.22	34.25	43.59	54	-10.41	AV
7386	/	/	/	/	/	/	/	/	/
9848	/	/	/	/	/	/	/	/	/

Note:

1, Result = Read level + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Test Mode: IEEE 802.11n HT20 TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824	44.03	V	33.95	10.18	34.26	53.90	74	-20.10	PK
4824	37.16	V	33.95	10.18	34.26	47.03	54	-6.97	AV
7236	/	/	/	/	/	/	/	/	/
9648	/	/	/	/	/	/	/	/	/
4824	42.66	H	33.95	10.18	34.26	52.53	74	-21.47	PK
4824	36.10	H	33.95	10.18	34.26	45.97	54	-8.03	AV
7236	/	/	/	/	/	/	/	/	/
9648	/	/	/	/	/	/	/	/	/
Test Mode: IEEE 802.11n HT20 TX Mid									
4874	43.06	V	33.93	10.2	34.29	52.90	74	-21.10	PK
4874	33.04	V	33.93	10.2	34.29	42.88	54	-11.12	AV
7311	/	/	/	/	/	/	/	/	/
9748	/	/	/	/	/	/	/	/	/
4874	45.90	H	33.93	10.2	34.29	55.74	74	-18.26	PK
4874	34.26	H	33.93	10.2	34.29	44.10	54	-9.90	AV
7311	/	/	/	/	/	/	/	/	/
9748	/	/	/	/	/	/	/	/	/
Test Mode: IEEE 802.11n HT20 TX High									
4924	44.83	V	33.98	10.22	34.25	54.78	74	-19.22	PK
4924	36.06	V	33.98	10.22	34.25	46.01	54	-7.99	AV
7386	/	/	/	/	/	/	/	/	/
9848	/	/	/	/	/	/	/	/	/
4924	47.85	H	33.98	10.22	34.25	57.80	74	-16.20	PK
4924	33.21	H	33.98	10.22	34.25	43.16	54	-10.84	AV
7386	/	/	/	/	/	/	/	/	/
9848	/	/	/	/	/	/	/	/	/

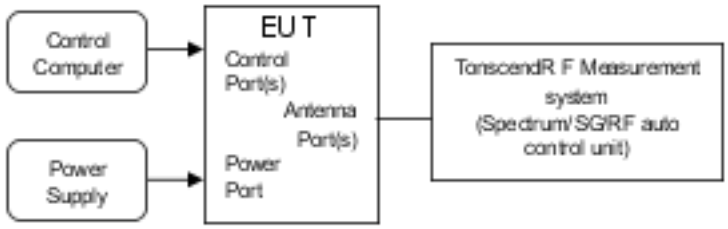
Note:

1, Result = Read level + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

4. RF CONDUCTED SPURIOUS EMISSIONS

4.1. Block diagram of test setup



4.2. Limits

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 20dB.
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)).

4.3. Test procedure

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz. The detector is set to Peak. The trace mode is max hold.

4.4. Test result

Please refer to the Appendix of 2.4GWIFI data.

5. POWER LINE CONDUCTED EMISSION

5.1. Test Limits

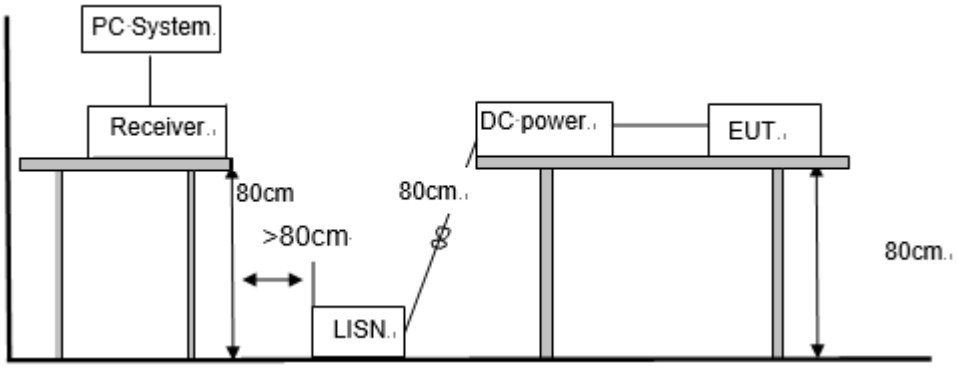
Frequency	Limits dB(μV)	
MHz	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases in line with the logarithm of the frequency in the rang of 0.15 to 0.50 MHz.

5.2. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10-2020 on Conducted Emission Measurement.
The bandwidth of test receiver is set at 9 kHz.

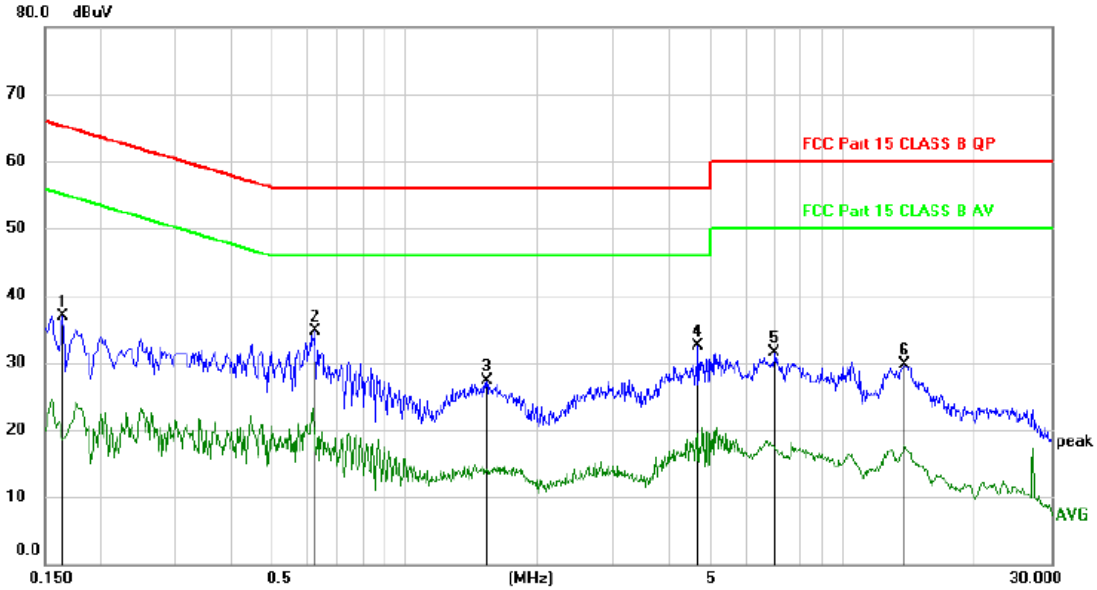
5.3. Test Setup



5.4. Test Results

PASS. (See below detailed test data)
Note: If peak Result comply with AV limit, QP and AV Result is deemed to comply with AV limit

Line:

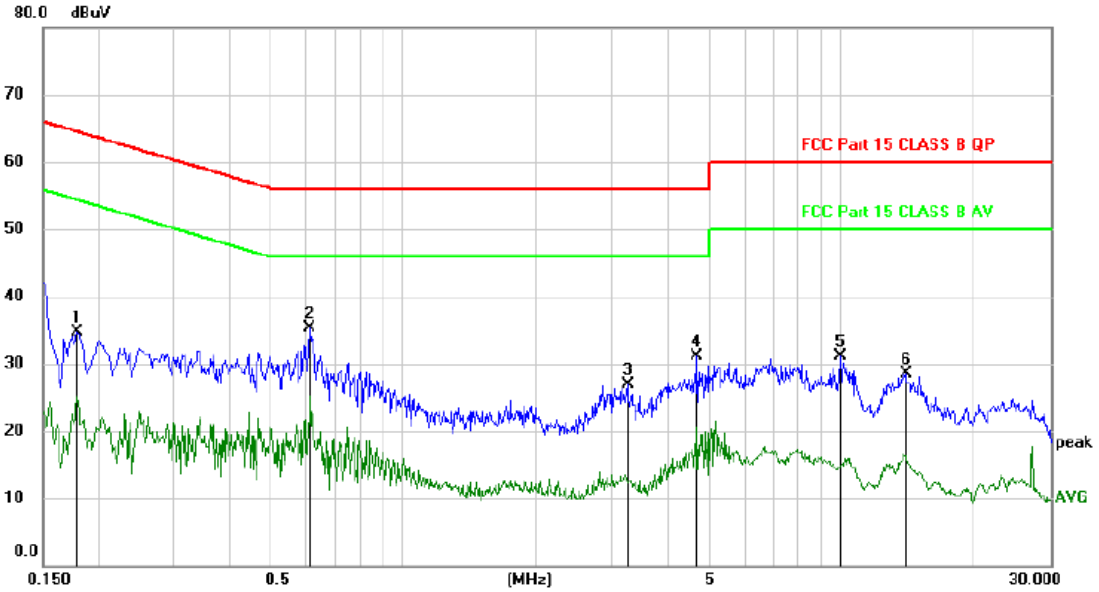


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1650	26.10	10.86	36.96	65.21	-28.25	peak	
2	*	0.6210	23.85	10.94	34.79	56.00	-21.21	peak	
3		1.5360	16.40	10.86	27.26	56.00	-28.74	peak	
4		4.6800	21.48	11.00	32.48	56.00	-23.52	peak	
5		7.0200	20.41	11.11	31.52	60.00	-28.48	peak	
6		13.8720	18.62	11.18	29.80	60.00	-30.20	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Neutral:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1800	23.90	10.77	34.67	64.49	-29.82	peak	
2	*	0.6120	24.44	10.94	35.38	56.00	-20.62	peak	
3		3.2460	16.09	10.83	26.92	56.00	-29.08	peak	
4		4.6830	20.04	11.00	31.04	56.00	-24.96	peak	
5		9.9210	19.74	11.32	31.06	60.00	-28.94	peak	
6		14.0190	17.26	11.18	28.44	60.00	-31.56	peak	

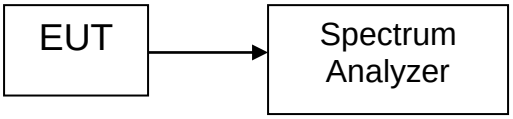
*:Maximum data x:Over limit !:over margin 〈Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Note: All modes and channels have been tested and only the b 2412MHz mode with the worst data is listed.

6. DUTY CYCLE

6.1. Block diagram of test setup



6.2. Test Procedure

Details see the ANSI C63.10-2020

6.2.1 A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.

6.2.2 The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

a) Set the center frequency of the instrument to the center frequency of the transmission.

b) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.

c) Set VBW ≥ RBW. Set detector = peak or average.

d) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 us.)

6.3. Test Results

Please refer to the Appendix of 2.4GWIFI data.

7. CONDUCTED MAXIMUM OUTPUT POWER

7.1. Test limits

Please refer FCC PART 15: 15.247.

Regulation 15.247(b) The limit of Maximum Peak conducted output power Measurement is 1W(30dBm). The e.i.r.p. shall not exceed 4 W(36dBm).

7.2. Test Procedure

Details see the ANSI C63.10-2020

7.2.1 Measure the duty cycle D of the transmitter output signal.

7.2.2 Set span to >1.5 times the OBW.

7.2.3 Set RBW = 1% to 5% of the OBW, but do not exceed 1 MHz.

7.2.4 Set VBW ⩾ [3 * RBW].

7.2.5 Number of points in sweep ⩾ [2 * span / RBW].

7.2.6 Sweep time = auto.

7.2.7 Detector = power averaging (rms).

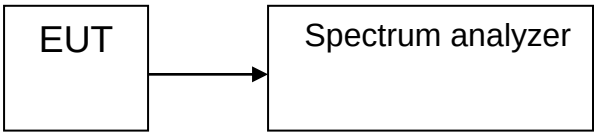
7.2.8 If transmit duty cycle < 98%, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at the maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF intervals) or at duty cycle ⩾ 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run.”

7.2.9 Trace average at least 100 traces in power averaging (rms) mode.

7.2.10 Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the OBW band-edges. If the instrument does not have a band-power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

7.2.11 Add [10 log (1 / D)], where D is the duty cycle, to the measured power to compute the average power during the actual transmission times.

7.3. Test Setup



7.4. Test Results

Please refer to the Appendix of 2.4GWIFI data.

8. AVERAGE POWER SPECTRAL DENSITY

8.1. Test limits

8.1.1 Please refer FCC PART 15: 15.247.

8.1.2 For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

8.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

8.2. Test Procedure

Details see the ANSI C63.10-2020

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

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

8.2.3 Set analyzer center frequency to DTS channel center frequency.

8.2.4 Set span to > 1.5 times the OBW.

8.2.5 Set RBW to: 3 kHz $\leqslant$ RBW $\leqslant$ 100 kHz.

8.2.6 Set VBW $\geqslant$ [3 * RBW].

8.2.7 Detector = power averaging (rms)

8.2.8 Ensure that the number of measurement points in the sweep $\geqslant$ [2 * span / RBW].

8.2.9 Sweep time = auto couple.

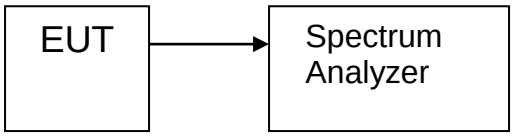
8.2.10 Employ trace averaging (rms) mode over a minimum of 100 traces.

8.2.11 Use the peak marker function to determine the maximum amplitude level.

8.2.12 If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this might require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

8.2.13 Repeat the above procedure until the measurements for all frequencies are completed.

8.3. Test Setup



8.4. Test Results

Please refer to the Appendix of 2.4GWIFI data.

9. BANDWIDTH

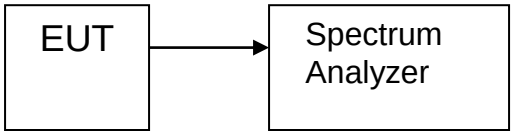
9.1. Test limits

Please refer FCC PART 15: 15.247
For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

9.2. Test Procedure

Details see the ANSI C63.10-2020
a) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.
b) The test receiver set RBW =1-5%BW, VBW≥3*RBW, Sweep time set auto, detail see the test plot for 99% Bandwidth and 6dB Bandwidth.

9.3. Test Setup



9.4. Test Results

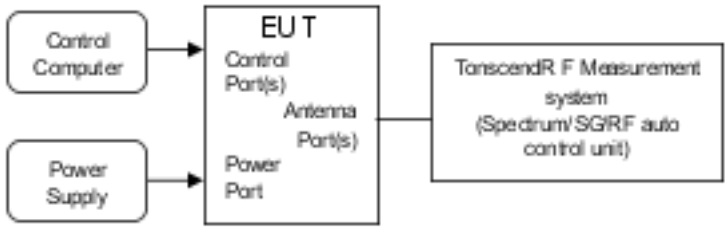
Please refer to the Appendix of 2.4GWIFI data.

10. BAND EDGE (CONDUCTED)

10.1.Test limits

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)).

10.2.Block diagram of test setup



10.3.Test Procedure

Details see the ANSI C63.10-2020
10.3.1. Place the EUT on the table and set it in transmitting mode.
10.3.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
10.3.3. Set center frequency of spectrum analyzer = operating frequency.
10.3.4. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz. The detector is set to Peak. The trace mode is max hold.
10.3.5. Repeat above procedures until all frequency measured were complete.

10.4.Test Results

Please refer to the Appendix of 2.4GWIFI data.

11. BAND EDGE(RADIATED)

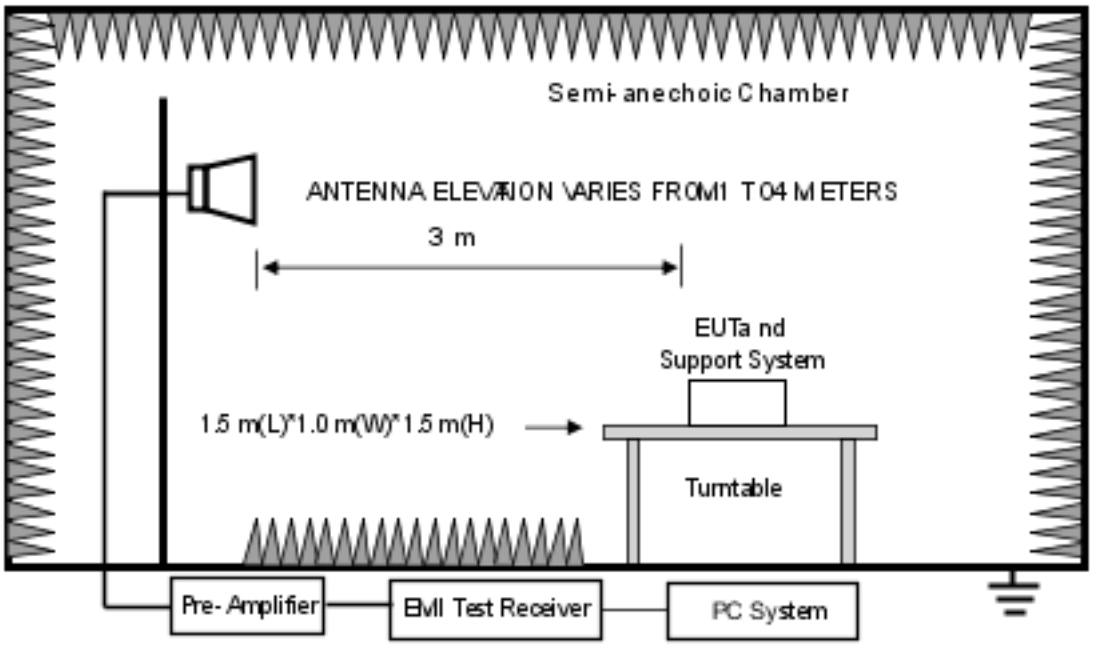
11.1.Test limits

Please refer FCC PART 15: 15.247

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.

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

11.2.Block diagram of test setup



11.3.Test Procedure

Details see the ANSI C63.10-2020

11.3.1 Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

11.3.2 Check the spurious emissions out of band.

11.3.3 RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 3MHz, RMS detector for AV value.

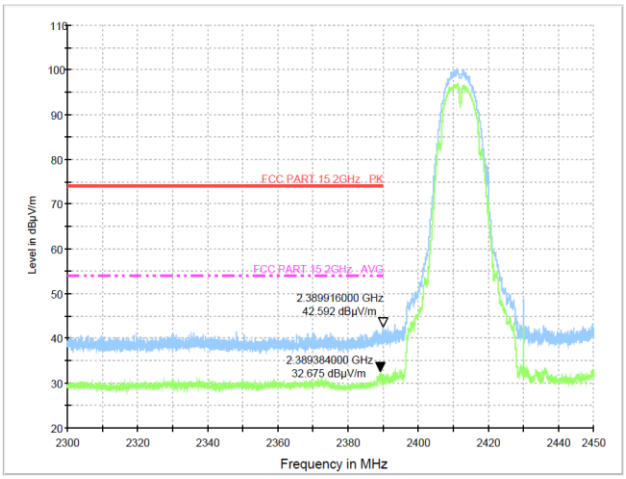
All restriction band and non- restriction band have been tested, only worse case is reported.

11.4.Test Results

PASS.

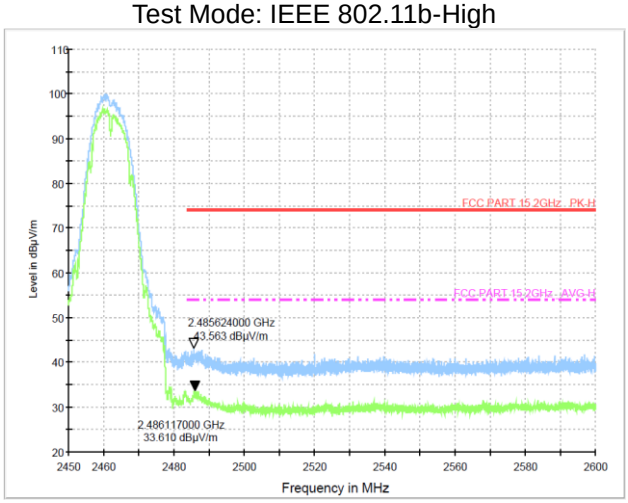
Detailed information please see the following page.

Test Mode: IEEE 802.11b-Low



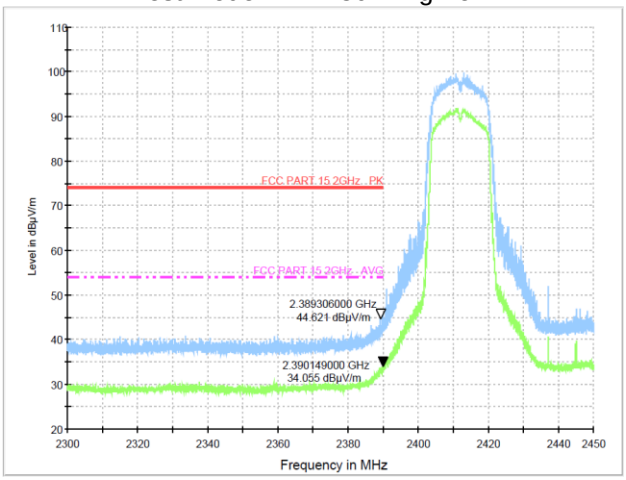
Polarity: Horizontal

Test Mode: IEEE 802.11b-High



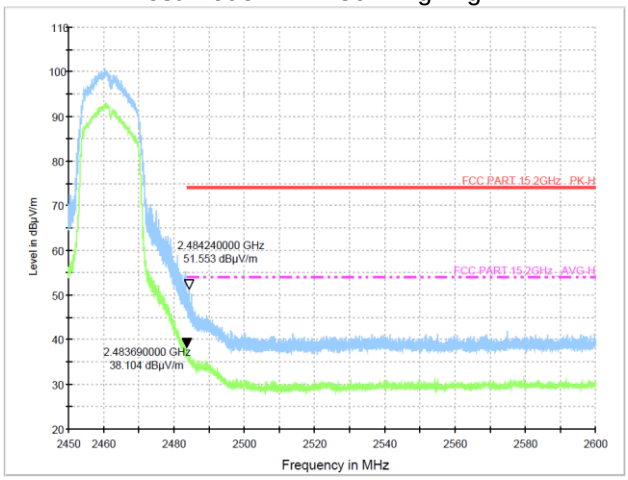
Polarity: Horizontal

Test Mode: IEEE 802.11g-Low



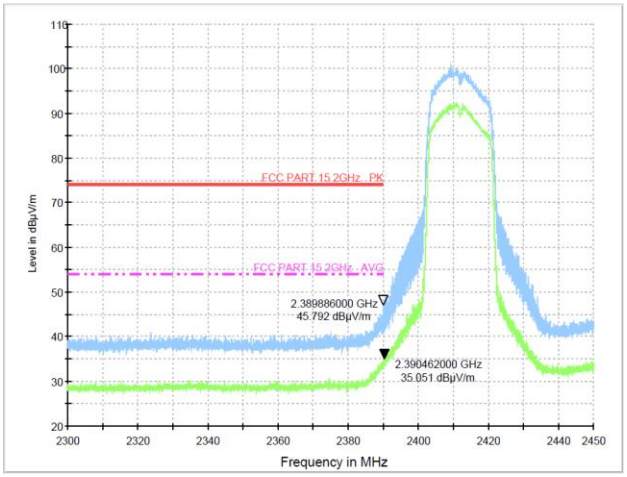
Polarity: Horizontal

Test Mode: IEEE 802.11g-High



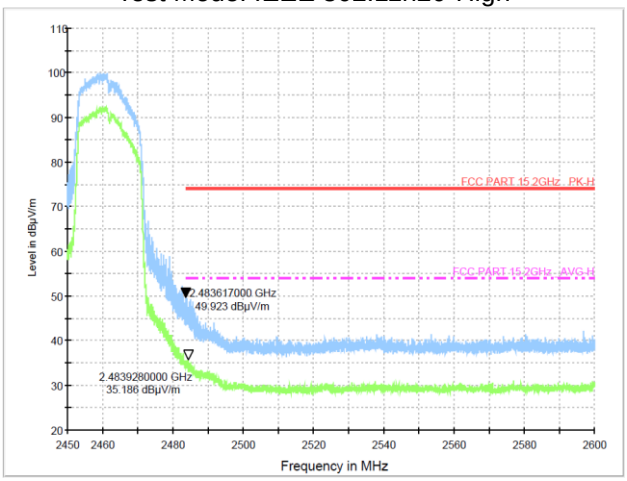
Polarity: Horizontal

Test Mode: IEEE 802.11n20-Low



Polarity: Horizontal

Test Mode: IEEE 802.11n20-High



Polarity: Horizontal

Note: Both horizontal and vertical polarities were tested, and only worst polarity was listed in this report.

12. ANTENNA REQUIREMENT

12.1.Standard Requirement

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

12.2.Antenna Connected Construction

The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

12.3.Results

The EUT antenna is Spring Antenna. It complies with the standard requirement.

13. PHOTOS OF TEST SETUP & EUT

Please refer to the Appendix of Test photos_RF & the Appendix of EUT photos.

---------END OF REPORT-------