

TEST REPORT

Product : Industrial Wireless Routers
Trade mark : N/A
Model/Type reference : See section 4.2
Serial Number : N/A
Report Number : EED32Q81626901
FCC ID : 2BLUFEDGE-RX8XX-SFX
Date of Issue : Nov. 20, 2024
Test Standards : 47 CFR Part 15 Subpart C
Test result : PASS

Prepared for:

Tianjin Elco Automation Co., Ltd
No.12, 4th XEDA Branch Rd, Xiqing Economic-Technological
Development Area, Tianjin

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled by:

Zhenxia Wen

Zhenxia Wen

Reviewed by:

Frazer Li

Frazer Li

Approved by:

Aaron Ma

Aaron Ma

Date:

Nov. 20, 2024



Check No.: 3726141024

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2 Version

Version No.	Date	Description
00	Nov. 20, 2024	Original

3 Test Summary

Test Item	Test Requirement	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	N/A
DTS Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	PASS
Maximum Conducted Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	PASS
Maximum Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	PASS
Band edge measurements	47 CFR Part 15 Subpart C Section 15.247(d)	PASS
Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	PASS
Radiated Spurious Emission & Restricted bands	47 CFR Part 15 Subpart C Section 15.205/15.209	PASS

Remark:

N/A: The product is DC power supply.

Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.: EDGE-R0831-SF2-01A, EDGE-R series, Model EDGE-R, followed by 0 to 9, followed by 8, followed by 0 to 9, followed by 0 to 9, followed by AL,U,R or vacant , followed by –SF, followed by 0 to 9, followed by –01A to -09A or vacant.

Only the model EDGE-R0831-SF2-01A was tested, Their have same electrical, PCB and BOM, only the model' s names definition are different for marketing requirements.

4 General Information

4.1 Client Information

Applicant:	Tianjin Elco Automation Co., Ltd
Address of Applicant:	No.12, 4th XEDA Branch Rd, Xiqing Economic-Technological Development Area, Tianjin
Manufacturer:	Tianjin Elco Automation Co., Ltd
Address of Manufacturer:	No.12, 4th XEDA Branch Rd, Xiqing Economic-Technological Development Area, Tianjin
Factory:	Tianjin Elco Automation Co., Ltd
Address of Factory:	No.12, 4th XEDA Branch Rd, Xiqing Economic-Technological Development Area, Tianjin

4.2 General Description of EUT

Product Name:	Industrial Wireless Routers
Model No.:	EDGE-R0831-SF2-01A, EDGE-R series, Model EDGE-R, followed by 0 to 9, followed by 8, followed by 0 to 9, followed by 0 to 9, followed by AL,U,R or vacant , followed by -SF, followed by 0 to 9,followed by -01A to -09A or vacant.
Test Model No.:	EDGE-R0831-SF2-01A
Trade mark:	N/A
Product Type:	☐ Mobile ☐ Portable ☒ Fixed Location
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM,QPSK,BPSK)
Number of Channel:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Antenna Type:	External Antenna
Antenna Gain:	1.1 dBi
Power Supply:	DC 30V
Test Voltage:	DC 30V
Sample Received Date:	Oct. 23, 2024
Sample tested Date:	Oct. 23, 2024 to Nov. 05, 2024

Operation Frequency each of channel (802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		
Operation Frequency each of channel (802.11n HT40)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	2422MHz	6	2437MHz	9	2452MHz		
4	2427MHz	7	2442MHz				
5	2432MHz	8	2447MHz				

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

802.11b/g/n (HT20)

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2437MHz
The highest channel	2462MHz

802.11n (HT40)

Channel	Frequency
The lowest channel	2422MHz
The middle channel	2437MHz
The highest channel	2452MHz

4.3 Test Configuration

EUT Test Software Settings:	
Test Software:	MobaXterm_Personal_22.1
EUT Power Grade:	Default
Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT.	
Test Mode:	
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.	
Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	MCS0
802.11n(HT40)	MCS0
According to ANSI C63.10 standards, the test results are both the "worst case" and "worst setup" 1Mbps for 802.11b, 6Mbps for 802.11g, MCS0 for 802.11n(HT20) and MCS0 for 802.11n(HT40).	

4.4 Test Environment

Operating Environment:	
Radiated Spurious Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Conducted Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
RF Conducted:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar

4.5 Description of Support Units

The EUT has been tested with associated equipment below.

1) support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
Netbook	Asus	FL8700JP1065-0D8GXYQ2X10	FCC&CE	CTI

4.6 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.7 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-40GHz)
3	Radiated Spurious emission test	3.3dB (9kHz-30MHz)
		4.3dB (30MHz-1GHz)
		4.5dB (1GHz-18GHz)
		3.4dB (18GHz-40GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

5 Equipment List

RF test system					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Communication test set	R&S	CMW500	107929	06-26-2024	06-25-2025
Signal Generator	R&S	SMBV100A	1407.6004K02- 262149-CV	09-05-2023 09-02-2024	09-04-2024 09-01-2025
Spectrum Analyzer	R&S	FSV40	101200	07-18-2024	07-17-2025
RF control unit(power unit)	MWRF-test	MW100-RFCB	MW220620CTI-42	06-25-2024	06-24-2025
High-low temperature test chamber	Dong Guang Qin Zhuo	LK-80GA	QZ20150611879	11-12-2023	12-10-2024
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	05-29-2024	05-28-2025
BT&WI-FI Automatic test software	MWRF-test	MTS 8310	V2.0.0.0	---	---
Spectrum Analyzer	R&S	FSV3044	101509	01-17-2024	01-16-2025

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
				(mm-dd-yyyy)	(mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05/22/2022	05/21/2025
Receiver	R&S	ESC17	100938-003	09/07/2024	09/06/2025
Spectrum Analyzer	R&S	FSV40	101200	07/18/2024	07/17/2025
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/22/2022	05/21/2025
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04/16/2024	04/15/2025
Microwave Preamplifier	Tonscend	EMC051845SE	980380	12/14/2023	12/13/2024
Horn Antenna	A.H.SYSTEMS	SAS-574	374	07/02/2023	07/01/2026
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/16/2024	04/15/2025
Preamplifier	Agilent	11909A	12-1	03/22/2024	03/21/2025
Preamplifier	CD	PAP-1840-60	6041.6042	06/19/2024	06/18/2025
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---

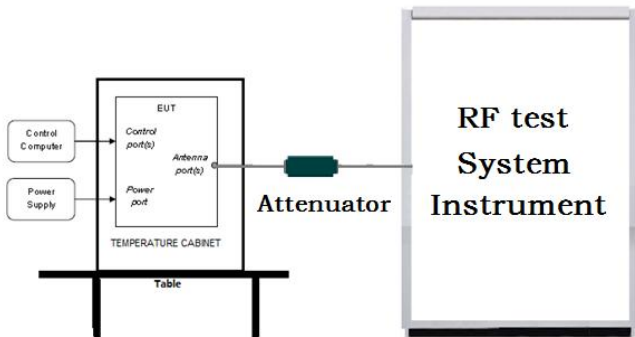
3M full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Fully Anechoic Chamber	TDK	FAC-3	---	01-09-2024	01-08-2027
Receiver	Keysight	N9038A	MY57290136	01-09-2024	01-08-2025
Spectrum Analyzer	Keysight	N9020B	MY57111112	01-29-2024	01-28-2025
Spectrum Analyzer	Keysight	N9030B	MY57140871	01-23-2024	01-22-2025
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-28-2024	04-27-2025
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-16-2024	04-15-2025
Horn Antenna	ETS-LINDGREN	3117	57407	07-03-2024	07-02-2025
Preamplifier	EMCI	EMC001330	980563	03-08-2024	03-07-2025
Preamplifier	Tonscend	TAP-011858	AP21B806112	07-18-2024	07-17-2025
Preamplifier	Tonscend	EMC051845SE	980380	12-14-2023	12-13-2024
Communication test set	R&S	CMW500	102898	12-14-2023	12-13-2024
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-07-2024	04-06-2025
RSE Automatic test software	JS Tonscend	JS36-RSE	V4.0.0.0	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0001		---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

6 Test results and Measurement Data

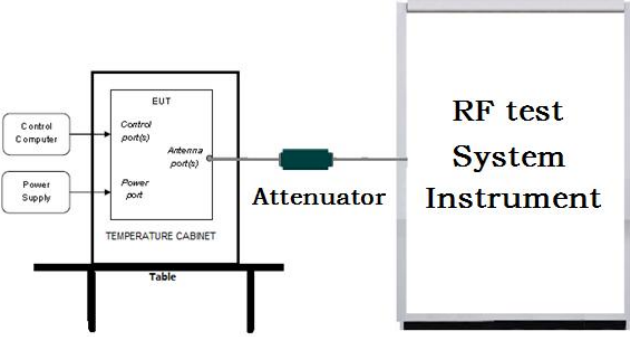
6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 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, 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. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
EUT Antenna:	Please see Internal photos
The antenna is external antenna. The best case gain of the antenna is 1.1dBi.	

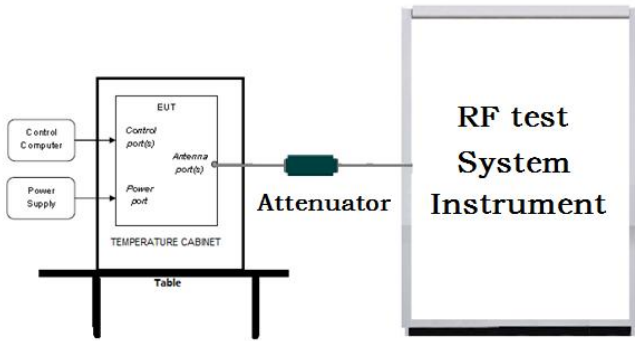
6.2 Maximum Conducted Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10 2013
Test Setup:	
Test Procedure:	1. PKPM1 Peak power meter measurement The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector. 2. Method AVGPM-G Average power measurement Method AVGPM-G is a measurement using a gated RF average power meter. Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
Limit:	30dBm
Test Mode:	Refer to clause 5.3
Test Results:	Refer to Appendix 2.4G Wi-Fi

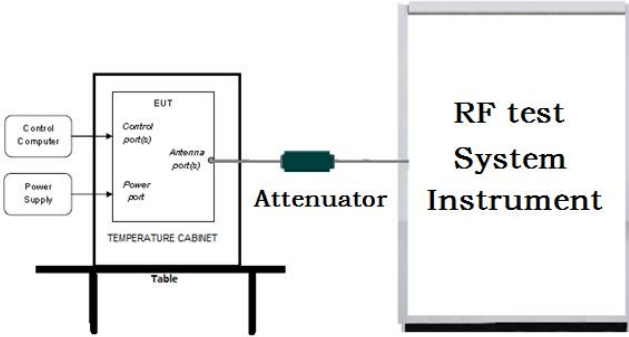
6.3 DTS Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set RBW = 100 kHz. b) Set the VBW $\geq [3 \times \text{RBW}]$. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Limit:	$\geq 500 \text{ kHz}$
Test Mode:	Refer to clause 5.3
Test Results:	Refer to Appendix 2.4G Wi-Fi

6.4 Maximum Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set analyzer center frequency to DTS channel center frequency. b) Set the span to 1.5 times the DTS bandwidth. c) Set the RBW to $3\text{ kHz} < \text{RBW} < 100\text{ kHz}$. d) Set the VBW $> [3 \times \text{RBW}]$. e) Detector = peak. f) Sweep time = auto couple. g) Trace mode = max hold. h) Allow trace to fully stabilize. i) Use the peak marker function to determine the maximum amplitude level within the RBW. j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.
Limit:	$\leq 8.00\text{dBm}/3\text{kHz}$
Test Mode:	Refer to clause 5.3
Test Results:	Refer to Appendix 2.4G Wi-Fi

6.5 Band Edge Measurements and Conducted Spurious Emission

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set RBW = 100KHz. b) Set VBW = 300KHz. c) Sweep time = auto couple. d) Detector = peak. e) Trace mode = max hold. f) Allow trace to fully stabilize. g) Use peak marker function to determine the peak amplitude level.
Limit:	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, based on either an RF conducted or a radiated measurement.
Test Mode:	Refer to clause 5.3
Test Results:	Refer to Appendix 2.4G Wi-Fi

6.6 Radiated Spurious Emission & Restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205				
Test Method:	ANSI C63.10 2013				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10kHz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.					

Test Setup:

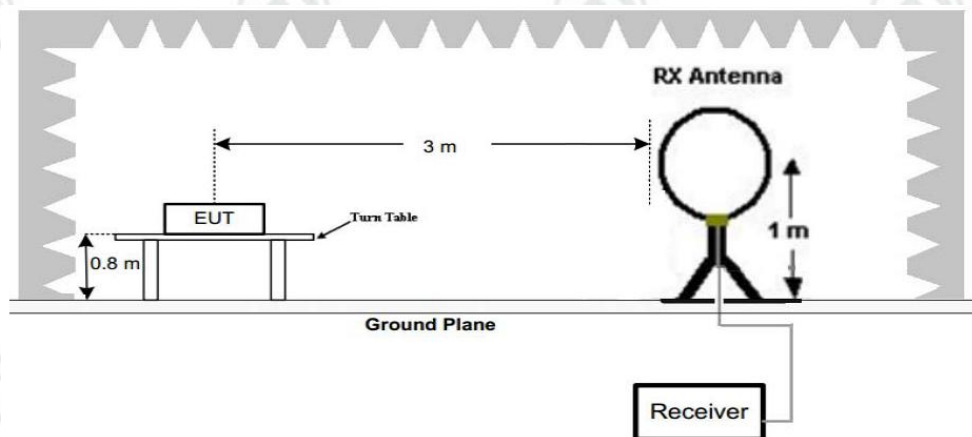


Figure 1. Below 30MHz

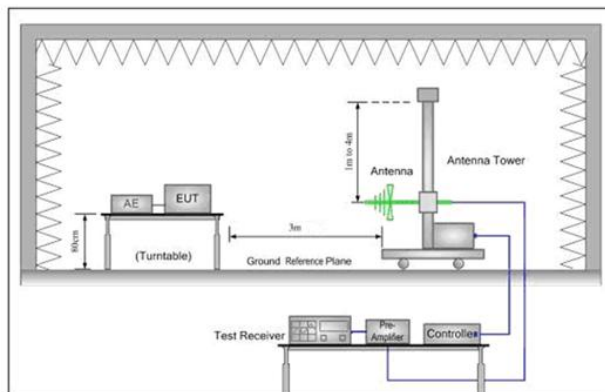


Figure 2. 30MHz to 1GHz

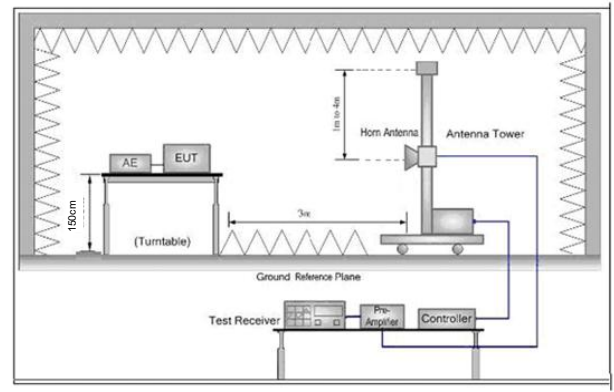


Figure 3. Above 1 GHz

Test Procedure:

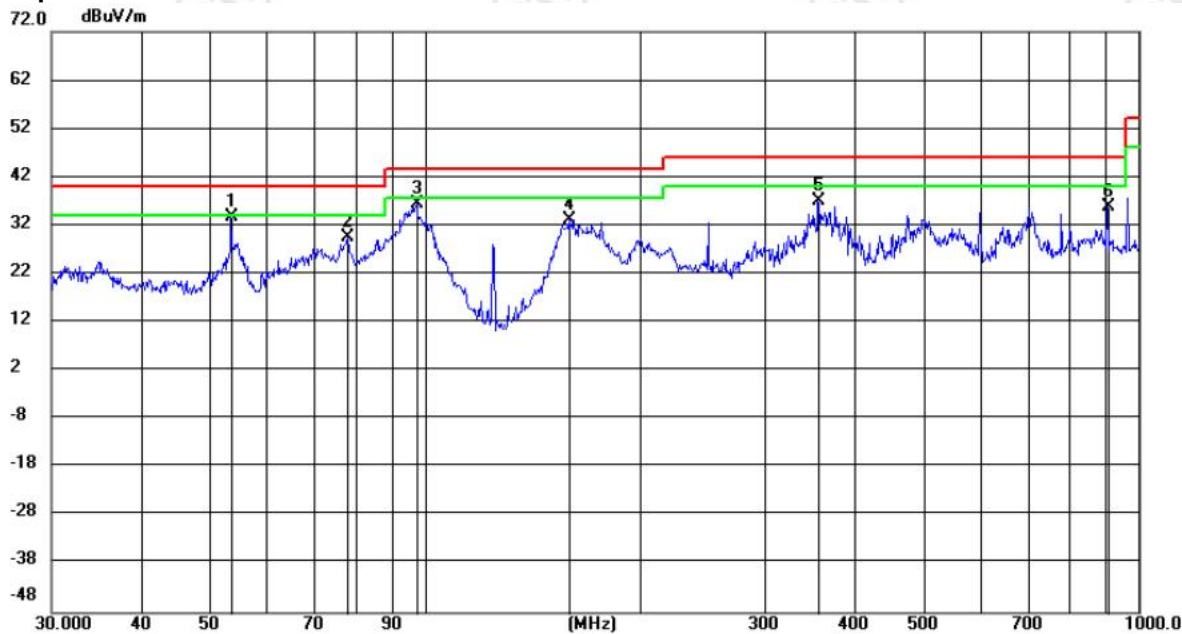
- 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
 - 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- Note: For the radiated emission test above 1GHz:
- Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
 - The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both

	horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel (2402MHz),the middle channel (2440MHz),the Highest channel (2480MHz) h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Refer to clause 5.3
Test Results:	Pass

Radiated Spurious Emission below 1GHz:

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes, only the worst case lowest channel of 1Mbps for 802.11b was recorded in the report.

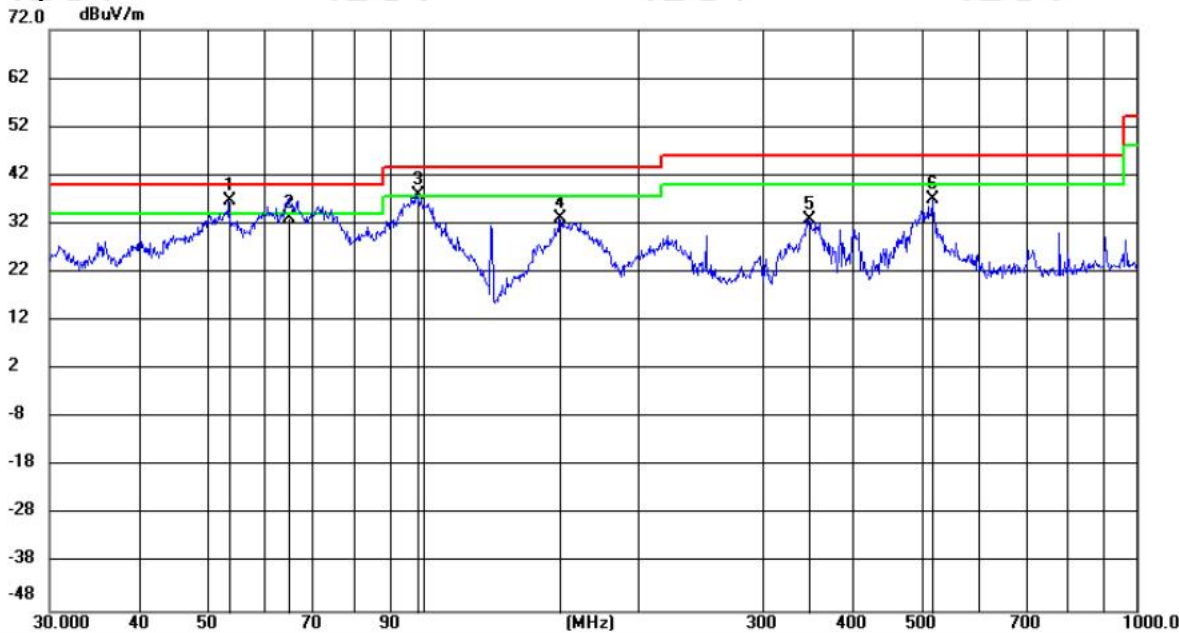
Horizontal:
Test Graph



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
1	*	53.6743	20.31	13.32	33.63	40.00	-6.37	QP	100	277
2		78.1388	20.24	9.40	29.64	40.00	-10.36	QP	199	219
3		97.7811	23.53	12.84	36.37	43.50	-7.13	QP	199	166
4		159.2530	23.44	9.86	33.30	43.50	-10.20	QP	199	166
5		356.6132	19.81	17.22	37.03	46.00	-8.97	QP	100	299
6		906.3235	9.93	25.96	35.89	46.00	-10.11	QP	100	330

Vertical:

Test Graph



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
1	*	53.6555	23.87	12.74	36.61	40.00	-3.39	QP	100	103
2		64.9321	22.28	11.02	33.30	40.00	-6.70	QP	100	167
3	!	98.1419	26.10	11.84	37.94	43.50	-5.56	QP	100	7
4		155.5551	24.74	8.29	33.03	43.50	-10.47	QP	100	188
5		347.2960	17.75	15.00	32.75	46.00	-13.25	QP	100	7
6		517.3387	19.41	17.78	37.19	46.00	-8.81	QP	100	28

Radiated Spurious Emission above 1GHz:

Remark: Through Pre-scan, for 20MHz Occupied Bandwidth, 802.11 b mode was the worst case; for 40MHz Occupied Bandwidth, 802.11 n(HT40) mode was the worst case; only the worst case of was recorded in the report.

ANT 1:

Mode:			802.11 b Transmitting			Channel:		2412MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1352.2352	7.82	37.10	44.92	74.00	29.08	PASS	H	PK
2	1956.2956	12.01	35.98	47.99	74.00	26.01	PASS	H	PK
3	3750.05	-16.87	54.82	37.95	74.00	36.05	PASS	H	PK
4	4824.1216	-12.66	51.65	38.99	74.00	35.01	PASS	H	PK
5	7850.3234	-1.30	48.15	46.85	74.00	27.15	PASS	H	PK
6	11259.5506	6.81	43.86	50.67	74.00	23.33	PASS	H	PK
7	1324.2324	7.45	37.67	45.12	74.00	28.88	PASS	V	PK
8	1945.8946	12.26	36.69	48.95	74.00	25.05	PASS	V	PK
9	3750.05	-16.87	53.34	36.47	74.00	37.53	PASS	V	PK
10	4509.1006	-11.63	49.93	38.30	74.00	35.70	PASS	V	PK
11	7168.2779	-4.45	47.42	42.97	74.00	31.03	PASS	V	PK
12	10899.5266	7.37	43.48	50.85	74.00	23.15	PASS	V	PK

Mode:			802.11 b Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1414.8415	8.40	37.15	45.55	74.00	28.45	PASS	H	PK
2	1881.0881	10.85	37.00	47.85	74.00	26.15	PASS	H	PK
3	3750.05	-16.87	56.09	39.22	74.00	34.78	PASS	H	PK
4	4874.1249	-12.08	50.59	38.51	74.00	35.49	PASS	H	PK
5	6906.2604	-4.11	48.57	44.46	74.00	29.54	PASS	H	PK
6	10887.5258	7.04	44.15	51.19	74.00	22.81	PASS	H	PK
7	1390.039	8.31	36.69	45.00	74.00	29.00	PASS	V	PK
8	1937.6938	12.01	35.77	47.78	74.00	26.22	PASS	V	PK
9	3448.0299	-16.56	53.47	36.91	74.00	37.09	PASS	V	PK
10	5053.1369	-10.77	49.56	38.79	74.00	35.21	PASS	V	PK
11	7398.2932	-3.89	47.35	43.46	74.00	30.54	PASS	V	PK
12	10911.5274	6.97	43.63	50.60	74.00	23.40	PASS	V	PK

Mode:			802.11 b Transmitting			Channel:		2462MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1161.2161	7.36	38.13	45.49	74.00	28.51	PASS	H	PK
2	1949.695	12.37	35.55	47.92	74.00	26.08	PASS	H	PK
3	3750.05	-16.87	56.06	39.19	74.00	34.81	PASS	H	PK
4	5062.1375	-10.91	50.28	39.37	74.00	34.63	PASS	H	PK
5	6906.2604	-4.11	47.96	43.85	74.00	30.15	PASS	H	PK
6	11254.5503	7.12	43.45	50.57	74.00	23.43	PASS	H	PK
7	1138.0138	7.35	37.89	45.24	74.00	28.76	PASS	V	PK
8	1927.8928	11.72	36.49	48.21	74.00	25.79	PASS	V	PK
9	3406.0271	-17.29	54.42	37.13	74.00	36.87	PASS	V	PK
10	5058.1372	-10.84	49.05	38.21	74.00	35.79	PASS	V	PK
11	8200.3467	-2.06	47.18	45.12	74.00	28.88	PASS	V	PK
12	11009.534	7.12	43.65	50.77	74.00	23.23	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2422MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1153.6154	7.62	37.44	45.06	74.00	28.94	PASS	H	PK
2	1951.8952	12.27	36.00	48.27	74.00	25.73	PASS	H	PK
3	3750.05	-16.87	54.72	37.85	74.00	36.15	PASS	H	PK
4	5059.1373	-10.86	48.82	37.96	74.00	36.04	PASS	H	PK
5	6906.2604	-4.11	49.45	45.34	74.00	28.66	PASS	H	PK
6	10903.5269	7.25	43.66	50.91	74.00	23.09	PASS	H	PK
7	1070.6071	6.68	39.30	45.98	74.00	28.02	PASS	V	PK
8	1936.2936	11.97	35.94	47.91	74.00	26.09	PASS	V	PK
9	3454.0303	-16.70	53.76	37.06	74.00	36.94	PASS	V	PK
10	4696.1131	-11.58	49.25	37.67	74.00	36.33	PASS	V	PK
11	7857.3238	-1.29	45.88	44.59	74.00	29.41	PASS	V	PK
12	11009.534	7.12	43.40	50.52	74.00	23.48	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1070.8071	6.67	38.96	45.63	74.00	28.37	PASS	H	PK
2	1958.8959	11.86	36.44	48.30	74.00	25.70	PASS	H	PK
3	3750.05	-16.87	54.80	37.93	74.00	36.07	PASS	H	PK
4	4874.1249	-12.08	50.06	37.98	74.00	36.02	PASS	H	PK
5	6906.2604	-4.11	48.24	44.13	74.00	29.87	PASS	H	PK
6	10815.521	5.85	44.47	50.32	74.00	23.68	PASS	H	PK
7	1072.0072	6.65	39.29	45.94	74.00	28.06	PASS	V	PK
8	1928.0928	11.73	36.15	47.88	74.00	26.12	PASS	V	PK
9	3212.0141	-18.33	55.66	37.33	74.00	36.67	PASS	V	PK
10	4500.1	-11.30	49.35	38.05	74.00	35.95	PASS	V	PK
11	7760.3174	-2.06	47.10	45.04	74.00	28.96	PASS	V	PK
12	10996.5331	7.21	43.37	50.58	74.00	23.42	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2452MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1071.6072	6.66	39.16	45.82	74.00	28.18	PASS	H	PK
2	1942.6943	12.16	36.42	48.58	74.00	25.42	PASS	H	PK
3	3750.05	-16.87	55.73	38.86	74.00	35.14	PASS	H	PK
4	4871.1247	-12.14	50.35	38.21	74.00	35.79	PASS	H	PK
5	6907.2605	-4.15	49.11	44.96	74.00	29.04	PASS	H	PK
6	10864.5243	6.43	44.20	50.63	74.00	23.37	PASS	H	PK
7	1071.2071	6.66	40.79	47.45	74.00	26.55	PASS	V	PK
8	1949.695	12.37	35.47	47.84	74.00	26.16	PASS	V	PK
9	3440.0293	-16.71	53.79	37.08	74.00	36.92	PASS	V	PK
10	5071.1381	-11.05	49.66	38.61	74.00	35.39	PASS	V	PK
11	7936.3291	-0.37	45.23	44.86	74.00	29.14	PASS	V	PK
12	10990.5327	7.00	43.98	50.98	74.00	23.02	PASS	V	PK

MIMO:

Mode:			802.11 n(HT40) Transmitting			Channel:		2422MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1146.6147	7.62	37.61	45.23	74.00	28.77	PASS	H	PK
2	1951.0951	12.32	35.86	48.18	74.00	25.82	PASS	H	PK
3	3308.0205	-17.16	52.70	35.54	74.00	38.46	PASS	H	PK
4	4713.1142	-11.69	48.53	36.84	74.00	37.16	PASS	H	PK
5	6907.2605	-4.15	47.80	43.65	74.00	30.35	PASS	H	PK
6	11005.5337	7.22	43.43	50.65	74.00	23.35	PASS	H	PK
7	1071.2071	6.66	39.81	46.47	74.00	27.53	PASS	V	PK
8	1935.2935	11.94	35.75	47.69	74.00	26.31	PASS	V	PK
9	3355.0237	-16.57	53.05	36.48	74.00	37.52	PASS	V	PK
10	5369.1579	-10.29	49.04	38.75	74.00	35.25	PASS	V	PK
11	7316.2878	-3.91	46.86	42.95	74.00	31.05	PASS	V	PK
12	10761.5174	5.87	44.76	50.63	74.00	23.37	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1071.0071	6.67	41.28	47.95	74.00	26.05	PASS	H	PK
2	1949.895	12.38	35.61	47.99	74.00	26.01	PASS	H	PK
3	3750.05	-16.87	55.11	38.24	74.00	35.76	PASS	H	PK
4	5054.1369	-10.79	48.68	37.89	74.00	36.11	PASS	H	PK
5	6906.2604	-4.11	48.86	44.75	74.00	29.25	PASS	H	PK
6	11060.5374	6.09	44.41	50.50	74.00	23.50	PASS	H	PK
7	1119.0119	6.73	39.11	45.84	74.00	28.16	PASS	V	PK
8	1953.0953	12.20	36.52	48.72	74.00	25.28	PASS	V	PK
9	3391.0261	-17.23	53.92	36.69	74.00	37.31	PASS	V	PK
10	4515.101	-11.86	49.91	38.05	74.00	35.95	PASS	V	PK
11	7920.328	-0.74	46.50	45.76	74.00	28.24	PASS	V	PK
12	10899.5266	7.37	43.13	50.50	74.00	23.50	PASS	V	PK