

# TEST REPORT

**Report No.:** 8225EU012405W2

**Applicant:** Shenzhen Qianyan Technology LTD

**Address:** No.3301,Block C,Section 1,Chuangzhi Yuncheng Building,Liuxian Avenue,Xili Community,Xili Street,Nanshan District,Shenzhen 518000 China

**Product Name:** Govee RGB LED Strip Light

**Model No.:** H615E (refer to clause 2.4)

**Trademark:** Govee

**FCC ID:** 2A7VD-H615EA

**Test Standard(s):** 47 CFR Part 15 Subpart C

**Date of Receipt:** Jan. 24, 2024

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**ISSUED BY:**  
SHENZHEN EU TESTING LABORATORY LIMITED



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## 2 General Information

### 2.1 Applicant Information

Applicant	Shenzhen Qianyan Technology LTD
Address	No.3301,Block C,Section 1,Chuangzhi Yuncheng Building,Liuxian Avenue,Xili Community,Xili Street, Nanshan District,Shenzhen 518000 China

### 2.2 Manufacturer Information

Manufacturer	Shenzhen Qianyan Technology LTD
Address	No.3301,Block C,Section 1,Chuangzhi Yuncheng Building,Liuxian Avenue,Xili Community,Xili Street, Nanshan District,Shenzhen 518000 China

### 2.3 Factory Information

Factory	N/A
Address	N/A

### 2.4 General Description of E.U.T.

Product Name	Govee RGB LED Strip Light
Model No. Under Test	H615E
List Model No.	H615A, H615B, H615C, H615D, H6110, H6159, H614B, H614E
Description of Model differentiation	All samples are the same, only the input current, adapter, lengths of light are different. The model differentiations will not affect RF parameters, so we prepare all models for Conducted Emission, Radiated Emission tests with their own adapters. And prepare "H615E" for RF test only.
Rating(s)	Refer to the following detailed table.
Product Type	<input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Test Sample No.	-1/2(Normal Sample), -2/2(Engineering Sample)
Hardware Version	H1001-3 V1.0
Software Version	6.2.40
Remark	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Detailed table:

Model No.	Length of Light	Rating	Adapter Information
H615E	30m	24V $\equiv$ 0.5A	Model No.: BI12G-240050-BdU Input: 100-240V~ 50/60Hz 0.5A Output: 24V $\equiv$ 0.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H615A	5m	24V $\equiv$ 0.5A	Model No.: BI12G-240050-BdU Input: 100-240V~ 50/60Hz 0.5A Output: 24V $\equiv$ 0.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H615B	10m	24V $\equiv$ 0.5A	Model No.: BI12G-240050-BdU Input: 100-240V~ 50/60Hz 0.5A Output: 24V $\equiv$ 0.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H615C	15m	24V $\equiv$ 0.5A	Model No.: BI12G-240050-BdU Input: 100-240V~ 50/60Hz 0.5A Output: 24V $\equiv$ 0.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H615D	20m	24V $\equiv$ 0.5A	Model No.: BI12G-240050-BdU Input: 100-240V~ 50/60Hz 0.5A Output: 24V $\equiv$ 0.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H6110	2*5m	24V $\equiv$ 1.5A	Model No.: BI36GL-240150-AdU Input: 100-240V~ 50/60Hz 1.0A Output: 24V $\equiv$ 1.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H6159	5m	24V $\equiv$ 0.75A	Model No.: YXTG18US-2400750 Input: 100-240V~ 50/60Hz 0.8A Max Output: 24.0V $\equiv$ 0.75A 18.0W Manufacturer: SHENZHEN LINKSOONER TECHNOLOGY CO., LTD
H614B	2*10m	24V $\equiv$ 1.5A	Model No.: BI36GL-240150-AdU Input: 100-240V~ 50/60Hz 1.0A Output: 24V $\equiv$ 1.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.
H614E	2*15m	24V $\equiv$ 1.5A	Model No.: BI36GL-240150-AdU Input: 100-240V~ 50/60Hz 1.0A Output: 24V $\equiv$ 1.5A Manufacturer: Dong Guan Royal Intelligent Co., Ltd.

## 2.5 Technical Information of E.U.T.

Network and Wireless Connectivity	Bluetooth (BLE) WiFi 2.4G: 802.11b, 802.11g, 802.11n(HT20)
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The requirement for the following technical information of the EUT was tested in this report:

Technology	<b>WiFi 2.4G</b>
Operation Mode	<input checked="" type="checkbox"/> b <input checked="" type="checkbox"/> g <input checked="" type="checkbox"/> n(HT20) <input type="checkbox"/> n(HT40)
	<input type="checkbox"/> ac(VHT20) <input type="checkbox"/> ac(VHT40) <input type="checkbox"/> ax(HEW20) <input type="checkbox"/> ax(HEW40)
Operating Frequency	802.11b/g/n(HT20): 2412MHz to 2462MHz
Number of Channels	802.11b/g/n(HT20): 11 Channels
Modulation Technology	DSSS, OFDM
Modulation Type	802.11b: DSSS(CCK, DQPSK, DBPSK); 802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM) 802.11n(HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	PCB Antenna
Antenna Gain(Peak)	4.42 dBi

All channels were listed on the following table:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

Modulation technology	Modulation Type	Transfer Rate (Mbps)(Single RF path)
DSSS (802.11b)	DBPSK	1
	DQPSK	2
	CCK	5.5/11
OFDM (802.11g)	BPSK	6/9
	QPSK	12/18
	16QAM	24/36
	64QAM	48/54
OFDM (802.11n-20 MHz)	BPSK	6.5/7.2
	QPSK	13/19.5/14.4/21.7
	16QAM	26/39/28.9/43.3
	64QAM	52/58.5/65/57.8/65/72.2

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel
Conducted Emission at AC Power Line	11b/11g/11n20	1/6/6.5Mbps	1/6/11
DTS Bandwidth	11b/11g/11n20	1/6/6.5Mbps	1/6/11
Maximum Conducted Output Power	11b/11g/11n20	1/6/6.5Mbps	1/6/11
Power spectral density (PSD)	11b/11g/11n20	1/6/6.5Mbps	1/6/11
Emission in non-restricted frequency bands (Conducted)	11b/11g/11n20	1/6/6.5Mbps	1/6/11
Band Edge Emissions (Restricted frequency bands)	11b/11g/11n20	1/6/6.5Mbps	1/6/11
Radiated Spurious Emission	11b/11g/11n20	1/6/6.5Mbps	1/6/11

Note: The above EUT information in section 2.4 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.



### 3 Test Summary

#### 3.1 Test Standard

The tests were performed according to following standards:

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Intentional radiators of radio frequency equipment
2	ANSI C63.10-2020	American National Standard for Testing Unlicensed Wireless Devices
3	KDB Publication 558074 D01v05r02	Guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules

Remark:

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

#### 3.2 Test Verdict

No.	Description	FCC Part No.	Verdict	Remark
1	Antenna Requirement	15.203	Pass	--
2	Conducted Emission at AC Power Line	15.207	Pass	--
3	DTS Bandwidth	15.247(a)(2)	Pass	--
4	Maximum Conducted Output Power	15.247(b)(3)	Pass	--
5	Power spectral density (PSD)	15.247(e)	Pass	--
6	Emission in non-restricted frequency bands (Conducted)	15.247(d)	Pass	--
7	Band Edge Emissions (Restricted frequency bands)	15.247(d)	Pass	--
8	Radiated Spurious Emission	15.247(d)	Pass	--

#### 3.3 Test Laboratory

Test Laboratory	Shenzhen EU Testing Laboratory Limited
Address	101, Building B1, Fuqiao Fourth Area, Qiaotou Community, Fuhai Subdistrict, Baoan District, Shenzhen, Guangdong, China
Designation Number	CN1368
Test Firm Registration Number	952583

## 4 Test Configuration

### 4.1 Test Environment

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	30% to 60%	
Atmospheric Pressure	86 kPa to 106 kPa	
Temperature	NT (Normal Temperature)	+15°C to +35°C
Working Voltage of the EUT	NV (Normal Voltage)	120VAC, 60Hz for Adapter

### 4.2 Test Equipment

Conducted Emission at AC power line					
Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	EE-004	2024/01/09	2025/01/08
EMI Test Receiver	Rohde & Schwarz	ESCI	EE-005	2024/01/09	2025/01/08
Test Software	Ferrari Technology	EZ-EMC	EE-014	N.C.R	N.C.R

Radiated Emission and RF Test					
Equipment	Manufacturer	Model No	Serial No	Cal Date	Cal Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESPI	EE-006	2024/01/09	2025/01/08
Bilog Broadband Antenna	SCHWARZBECK	VULB 9163	EE-007	2023/01/14	2026/01/13
Double Ridged Horn Antenna	A-INFOMW	LB-10180-NF	EE-008	2023/01/12	2026/01/11
Pre-amplifier	Agilent	8447D	EE-009	2024/01/09	2025/01/08
Pre-amplifier	Agilent	8449B	EE-010	2024/01/09	2025/01/08
MXA Signal Analyzer	Agilent	N9020A	EE-011	2024/01/09	2025/01/08
MXG RF Vector Signal Generator	Agilent	N5182A	EE-012	2024/01/09	2025/01/08
Test Software	Farad	EZ-EMC	EE-015	N.C.R	N.C.R
MIMO Power Measurement Module	TSTPASS	TSPS 2023R	EE-016	2024/01/09	2025/01/08
RF Test Software	TSTPASS	TS32893 V2.0	EE-017	N.C.R	N.C.R
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	EE-402	2024/02/15	2025/02/14
Loop Antenna	TESEQ	HLA6121	EE-403	2024/02/15	2025/02/14
MXG RF Analog Signal Generator	Agilent	N5181A	EE-406	2024/02/15	2025/02/14
Constant Temperature Humidity Chamber	Guangxin	GXP-401	ES-002	2023/07/31	2024/07/30
Power Sensor	ROHDE&SCHWARZ ZN	NRP18S	ES-052	2024/02/15	2025/02/14

### 4.3 Description of Support Unit

No.	Title	Manufacturer	Model No.	Serial No.
1	Adapter	refer to clause 2.4	refer to clause 2.4	--

### 4.4 Test Mode

No.	Test Modes	Description
TM1	802.11b mode	Keep the EUT in 802.11b transmitting mode.
TM2	802.11g mode	Keep the EUT in 802.11g transmitting mode.
TM3	802.11n(HT20) mode	Keep the EUT in 802.11n(HT20) transmitting mode.

### 4.5 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test Item	Measurement Uncertainty
Conducted Emission	2.64 dB
Occupied Channel Bandwidth	2.8 %
RF output power, conducted	0.68 dB
Power Spectral Density, conducted	1.37 dB
Unwanted Emissions, conducted	1.84 dB
Radiated Emission (30MHz- 1GHz)	Ur = 2.70 dB (Horizontal)
	Ur = 2.70 dB (Vertical)
Radiated Emission (1GHz- 18GHz)	Ur = 3.50 dB (Horizontal)
	Ur = 3.50 dB (Vertical)
Radiated Emission (18GHz- 40GHz)	Ur = 5.15 dB (Horizontal)
	Ur = 5.24 dB (Vertical)
Temperature	0.8°C
Humidity	4%

### 4.6 Deviation from Standards

None.

### 4.7 Abnormalities from Standard Condition

None.

## 5 Test Items

### 5.1 Antenna requirement

#### 5.1.1 Test Requirement

Test Requirement	<p>According to FCC §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. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</p> <p>If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. 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 FCC rule.</p>
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#### 5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna design is used.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

#### 5.1.3 Antenna Gain

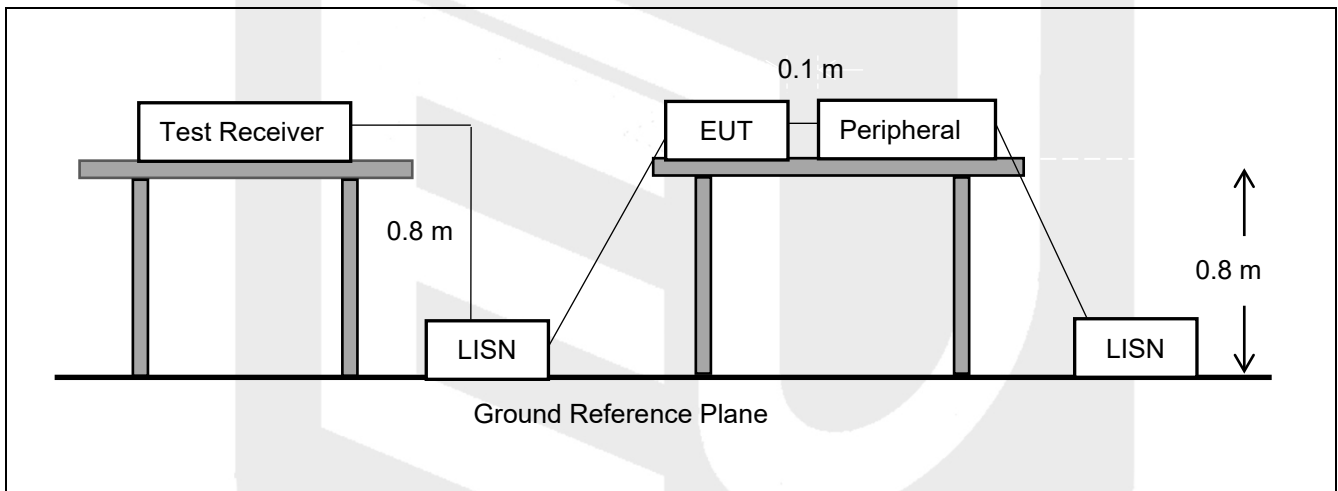
The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

## 5.2 Conducted Emission at AC Power Line

### 5.2.1 Test Requirement

Test Requirement	Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN).		
Test Limit	Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
*Decreases with the logarithm of the frequency.			
Test Method	ANSI C63.10-2020 section 6.2		

### 5.2.2 Test Setup Diagram



### 5.2.3 Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipment. Both sides of AC line are investigated to find out the maximum conducted emission according to the test standard regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver ESCI) is set at 9kHz in 150kHz~30MHz.

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

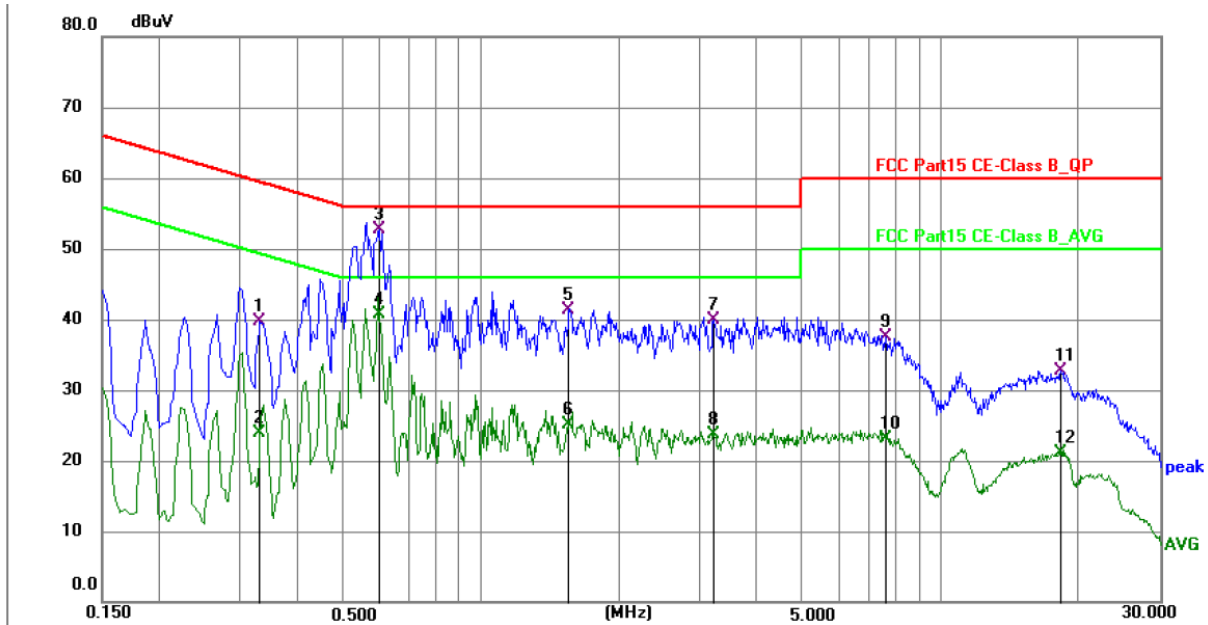
### 5.2.4 Test Data

PASS.

All modes have been tested and PASS. Only the worst case data was showed in the report, please to see the following pages.

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Live Line  
 Model No.: H615E

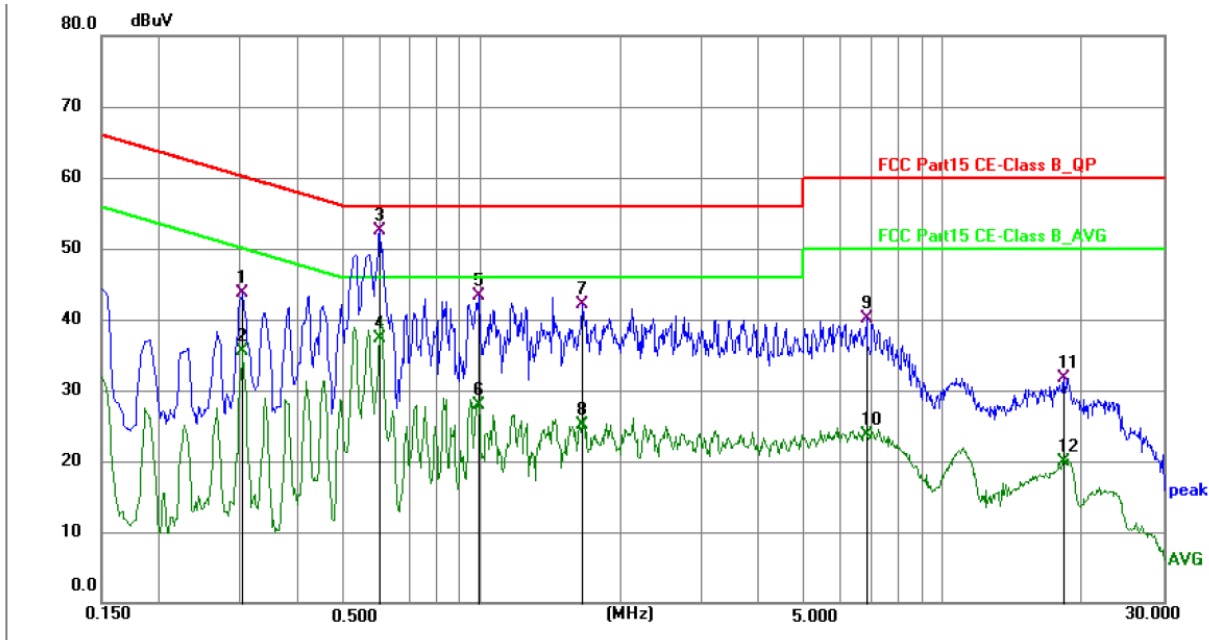


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.3300	29.75	9.95	39.70	59.45	-19.75	QP	P	
2	0.3300	14.02	9.95	23.97	49.45	-25.48	AVG	P	
3 *	0.6000	42.78	9.97	52.75	56.00	-3.25	QP	P	
4	0.6000	30.66	9.97	40.63	46.00	-5.37	AVG	P	
5	1.5584	31.23	10.00	41.23	56.00	-14.77	QP	P	
6	1.5584	15.06	10.00	25.06	46.00	-20.94	AVG	P	
7	3.2190	29.93	10.02	39.95	56.00	-16.05	QP	P	
8	3.2190	13.66	10.02	23.68	46.00	-22.32	AVG	P	
9	7.6063	27.42	10.01	37.43	60.00	-22.57	QP	P	
10	7.6063	13.19	10.01	23.20	50.00	-26.80	AVG	P	
11	18.2804	22.56	10.09	32.65	60.00	-27.35	QP	P	
12	18.2804	11.10	10.09	21.19	50.00	-28.81	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Neutral Line  
 Model No.: H615E

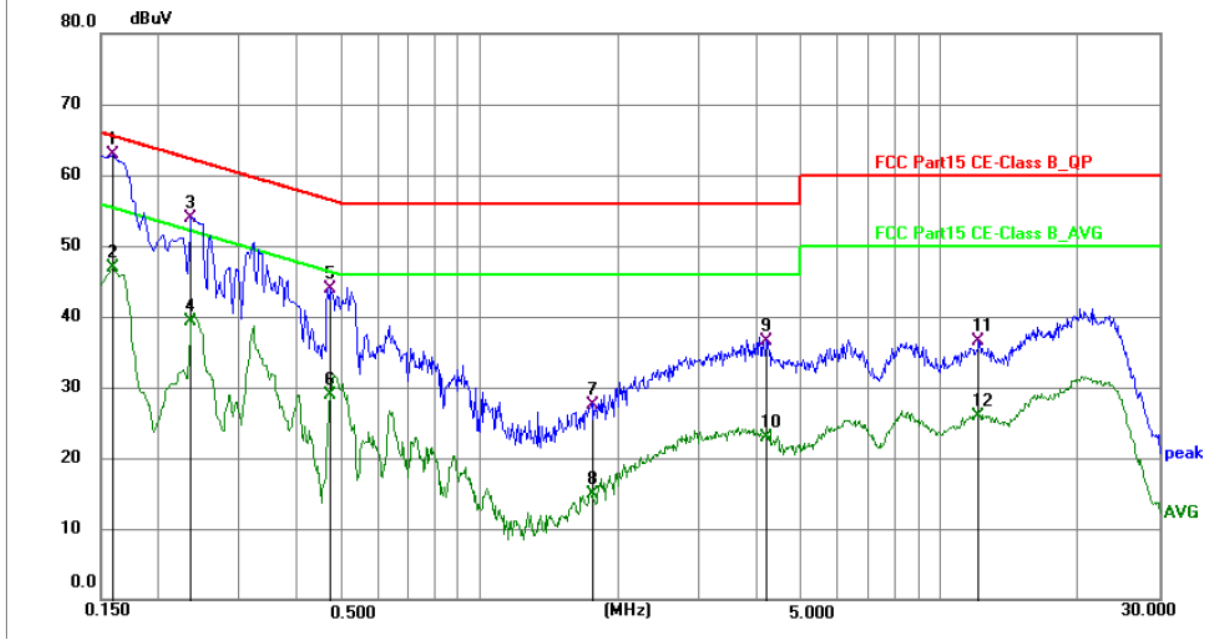


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.3030	33.66	9.97	43.63	60.16	-16.53	QP	P	
2	0.3030	25.50	9.97	35.47	50.16	-14.69	AVG	P	
3 *	0.6000	42.52	10.00	52.52	56.00	-3.48	QP	P	
4	0.6000	27.21	10.00	37.21	46.00	-8.79	AVG	P	
5	0.9870	33.28	10.03	43.31	56.00	-12.69	QP	P	
6	0.9870	17.95	10.03	27.98	46.00	-18.02	AVG	P	
7	1.6485	32.10	10.04	42.14	56.00	-13.86	QP	P	
8	1.6485	15.07	10.04	25.11	46.00	-20.89	AVG	P	
9	6.8370	30.16	10.03	40.19	60.00	-19.81	QP	P	
10	6.8370	13.73	10.03	23.76	50.00	-26.24	AVG	P	
11	18.2442	21.54	10.10	31.64	60.00	-28.36	QP	P	
12	18.2442	9.72	10.10	19.82	50.00	-30.18	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Live Line  
 Model No.: H6110



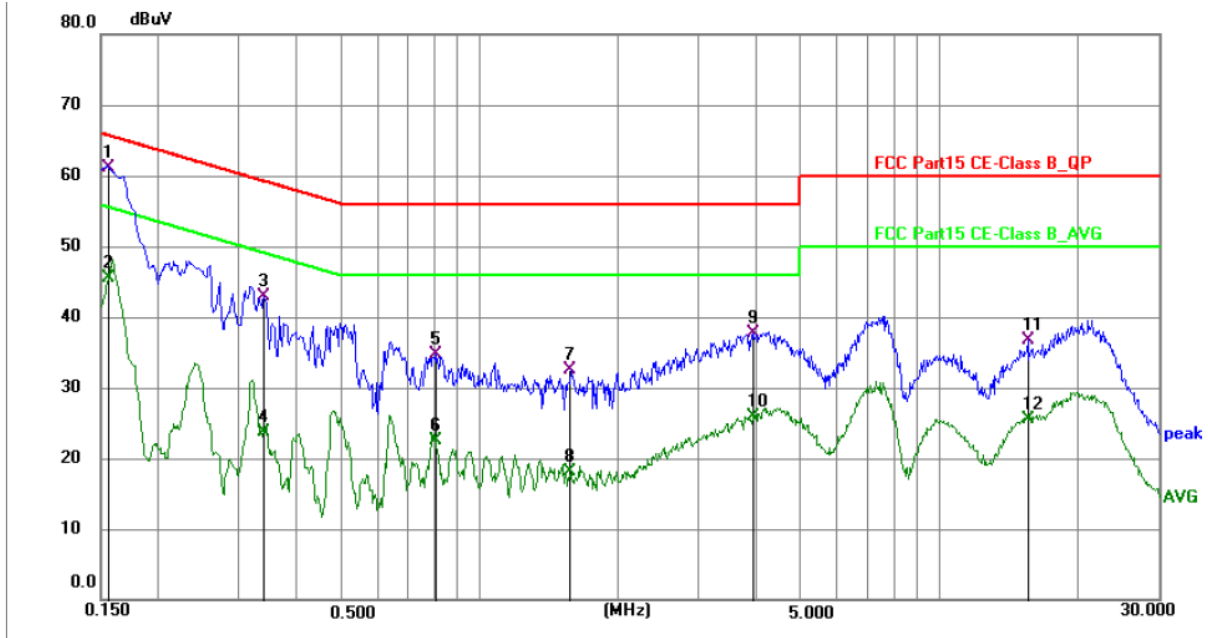
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1590	52.90	9.91	62.81	65.52	-2.71	QP	P	
2	0.1590	36.90	9.91	46.81	55.52	-8.71	AVG	P	
3	0.2353	43.93	9.92	53.85	62.26	-8.41	QP	P	
4	0.2353	29.43	9.92	39.35	52.26	-12.91	AVG	P	
5	0.4740	33.87	9.97	43.84	56.44	-12.60	QP	P	
6	0.4740	19.01	9.97	28.98	46.44	-17.46	AVG	P	
7	1.7560	17.61	9.99	27.60	56.00	-28.40	QP	P	
8	1.7560	4.85	9.99	14.84	46.00	-31.16	AVG	P	
9	4.2134	26.60	10.00	36.60	56.00	-19.40	QP	P	
10	4.2134	12.95	10.00	22.95	46.00	-23.05	AVG	P	
11	12.1425	26.41	10.01	36.42	60.00	-23.58	QP	P	
12	12.1425	15.97	10.01	25.98	50.00	-24.02	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit



**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Neutral Line  
 Model No.: H6110

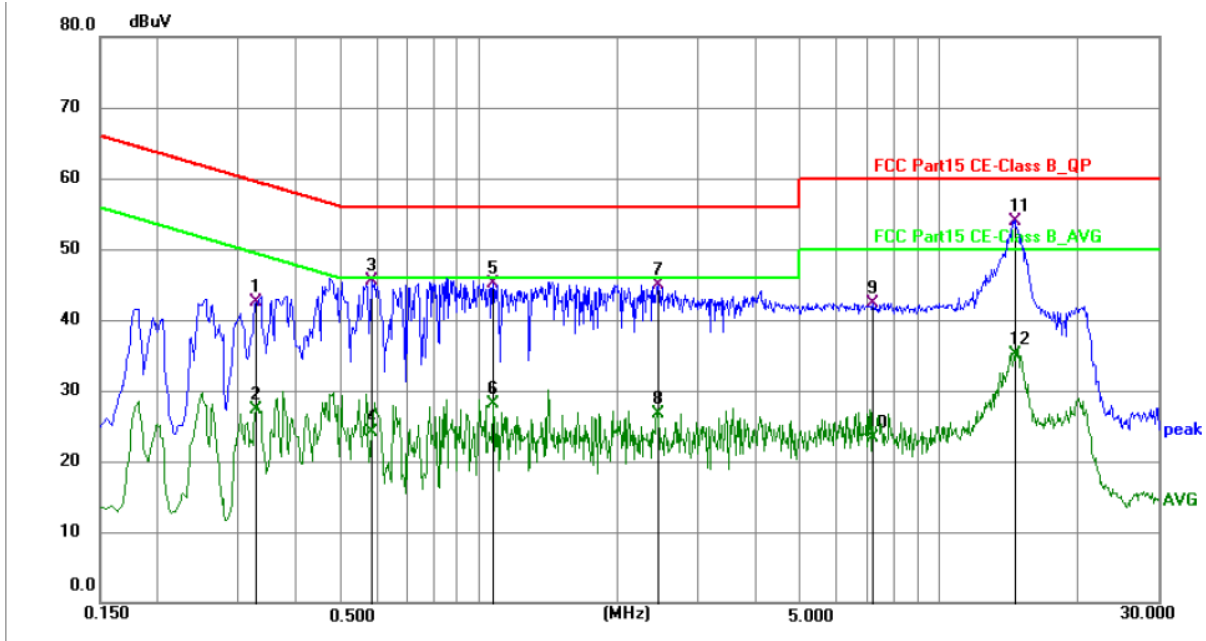


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1554	51.27	9.93	61.20	65.71	-4.51	QP	P	
2	0.1554	35.59	9.93	45.52	55.71	-10.19	AVG	P	
3	0.3390	32.87	9.97	42.84	59.23	-16.39	QP	P	
4	0.3390	13.77	9.97	23.74	49.23	-25.49	AVG	P	
5	0.8024	24.62	10.02	34.64	56.00	-21.36	QP	P	
6	0.8024	12.44	10.02	22.46	46.00	-23.54	AVG	P	
7	1.5809	22.37	10.04	32.41	56.00	-23.59	QP	P	
8	1.5809	7.97	10.04	18.01	46.00	-27.99	AVG	P	
9	3.9615	27.78	10.01	37.79	56.00	-18.21	QP	P	
10	3.9615	15.85	10.01	25.86	46.00	-20.14	AVG	P	
11	15.6030	26.75	10.05	36.80	60.00	-23.20	QP	P	
12	15.6030	15.45	10.05	25.50	50.00	-24.50	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Live Line  
 Model No.: H6159

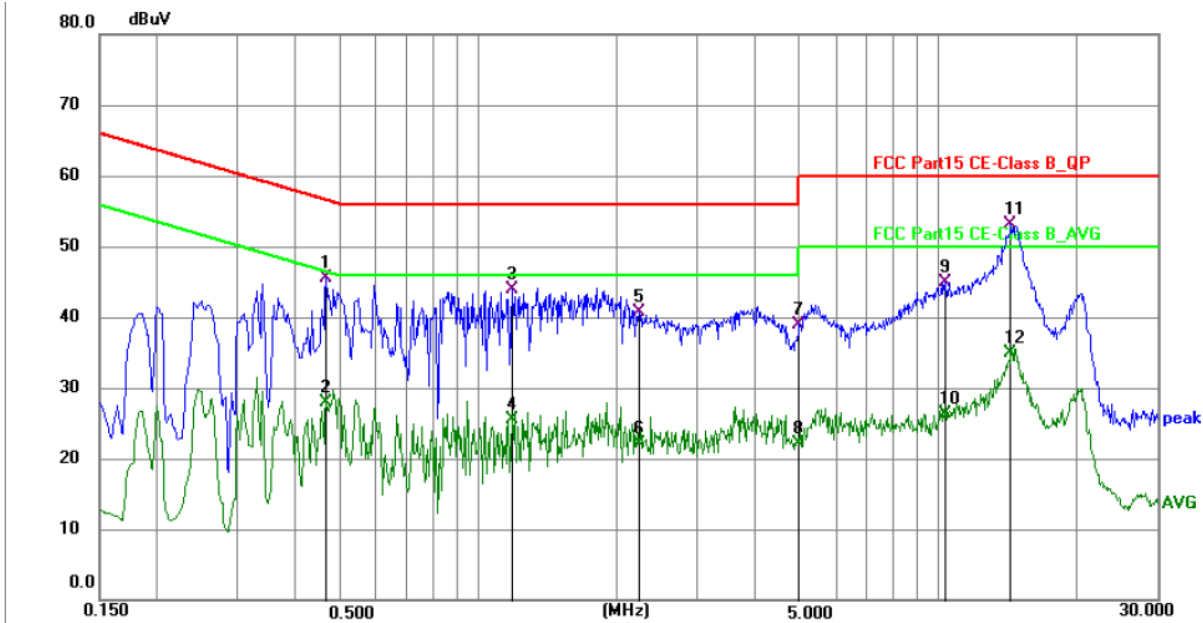


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.3255	32.54	9.94	42.48	59.57	-17.09	QP	P	
2	0.3255	17.27	9.94	27.21	49.57	-22.36	AVG	P	
3	0.5865	35.44	9.97	45.41	56.00	-10.59	QP	P	
4	0.5865	14.05	9.97	24.02	46.00	-21.98	AVG	P	
5	1.0725	35.11	10.01	45.12	56.00	-10.88	QP	P	
6	1.0725	18.05	10.01	28.06	46.00	-17.94	AVG	P	
7	2.4495	34.91	10.00	44.91	56.00	-11.09	QP	P	
8	2.4495	16.77	10.00	26.77	46.00	-19.23	AVG	P	
9	7.1970	32.28	10.00	42.28	60.00	-17.72	QP	P	
10	7.1970	13.32	10.00	23.32	50.00	-26.68	AVG	P	
11 *	14.6220	43.98	10.02	54.00	60.00	-6.00	QP	P	
12	14.6220	25.01	10.02	35.03	50.00	-14.97	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Neutral Line  
 Model No.: H6159

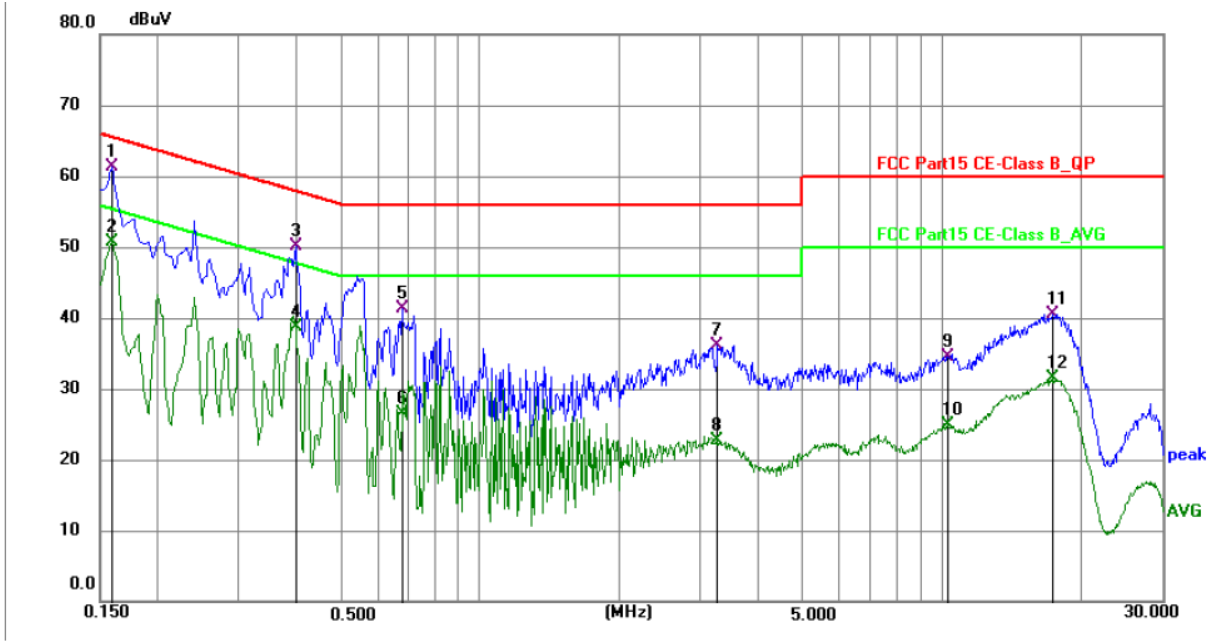


No.	Frequency (MHz)	Reading (dBUV)	Factor (dB)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	P/F	Remark
1	0.4661	35.41	10.06	45.47	56.58	-11.11	QP	P	
2	0.4661	17.91	10.06	27.97	46.58	-18.61	AVG	P	
3	1.1844	33.86	10.06	43.92	56.00	-12.08	QP	P	
4	1.1844	15.54	10.06	25.60	46.00	-20.40	AVG	P	
5	2.2367	30.65	10.07	40.72	56.00	-15.28	QP	P	
6	2.2367	12.07	10.07	22.14	46.00	-23.86	AVG	P	
7	4.9782	28.91	10.05	38.96	56.00	-17.04	QP	P	
8	4.9782	12.08	10.05	22.13	46.00	-23.87	AVG	P	
9	10.3422	34.88	10.01	44.89	60.00	-15.11	QP	P	
10	10.3422	16.38	10.01	26.39	50.00	-23.61	AVG	P	
11 *	14.3641	43.19	9.99	53.18	60.00	-6.82	QP	P	
12	14.3641	24.88	9.99	34.87	50.00	-15.13	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Live Line  
 Model No.: H614B

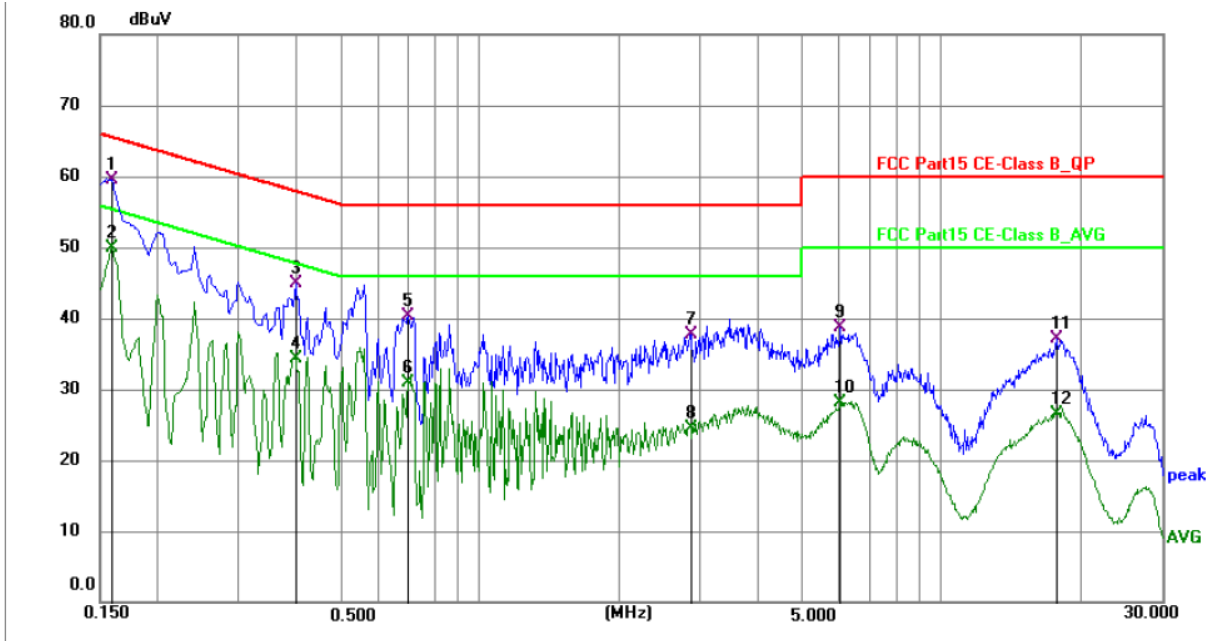


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1590	51.38	9.96	61.34	65.52	-4.18	QP	P	
2	0.1590	40.79	9.96	50.75	55.52	-4.77	AVG	P	
3	0.3975	40.03	10.02	50.05	57.91	-7.86	QP	P	
4	0.3975	28.62	10.02	38.64	47.91	-9.27	AVG	P	
5	0.6765	31.20	10.04	41.24	56.00	-14.76	QP	P	
6	0.6765	16.44	10.04	26.48	46.00	-19.52	AVG	P	
7	3.2595	26.03	10.05	36.08	56.00	-19.92	QP	P	
8	3.2595	12.58	10.05	22.63	46.00	-23.37	AVG	P	
9	10.3020	24.56	9.96	34.52	60.00	-25.48	QP	P	
10	10.3020	14.88	9.96	24.84	50.00	-25.16	AVG	P	
11	17.3940	30.58	10.02	40.60	60.00	-19.40	QP	P	
12	17.3940	21.54	10.02	31.56	50.00	-18.44	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Neutral Line  
 Model No.: H614B

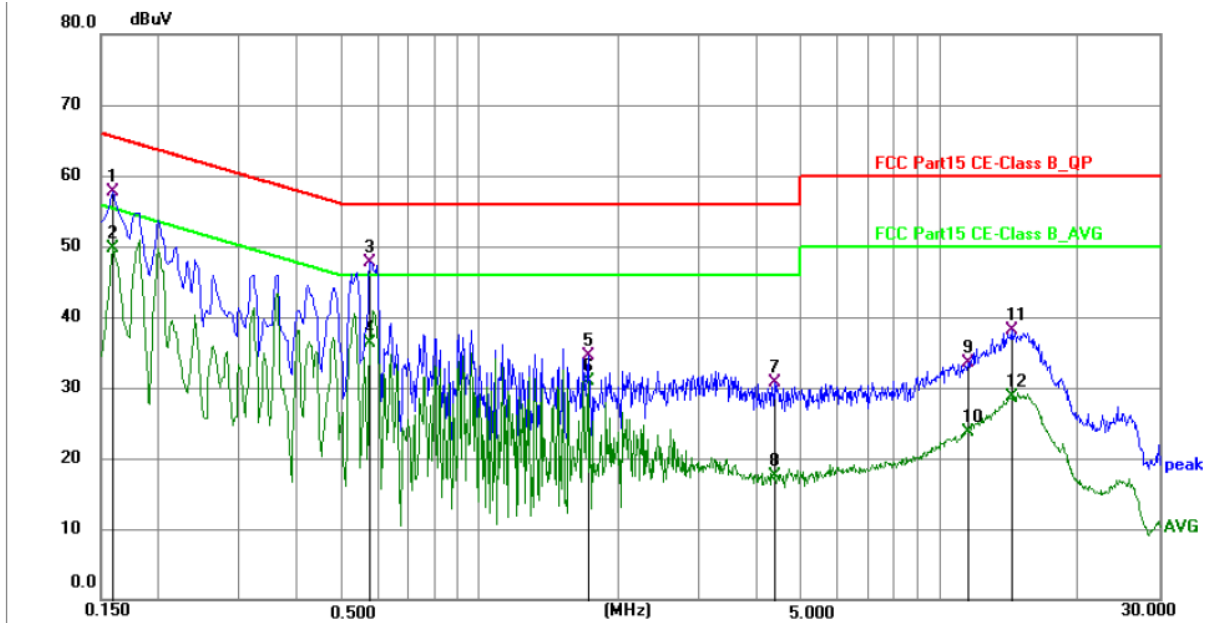


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1590	49.54	9.98	59.52	65.52	-6.00	QP	P	
2 *	0.1590	39.98	9.98	49.96	55.52	-5.56	AVG	P	
3	0.3975	34.83	10.04	44.87	57.91	-13.04	QP	P	
4	0.3975	24.17	10.04	34.21	47.91	-13.70	AVG	P	
5	0.6990	30.25	10.06	40.31	56.00	-15.69	QP	P	
6	0.6990	20.88	10.06	30.94	46.00	-15.06	AVG	P	
7	2.8545	27.71	10.05	37.76	56.00	-18.24	QP	P	
8	2.8545	14.46	10.05	24.51	46.00	-21.49	AVG	P	
9	6.0495	28.76	10.04	38.80	60.00	-21.20	QP	P	
10	6.0495	18.16	10.04	28.20	50.00	-21.80	AVG	P	
11	17.6910	27.05	10.04	37.09	60.00	-22.91	QP	P	
12	17.6910	16.48	10.04	26.52	50.00	-23.48	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Live Line  
 Model No.: H614E

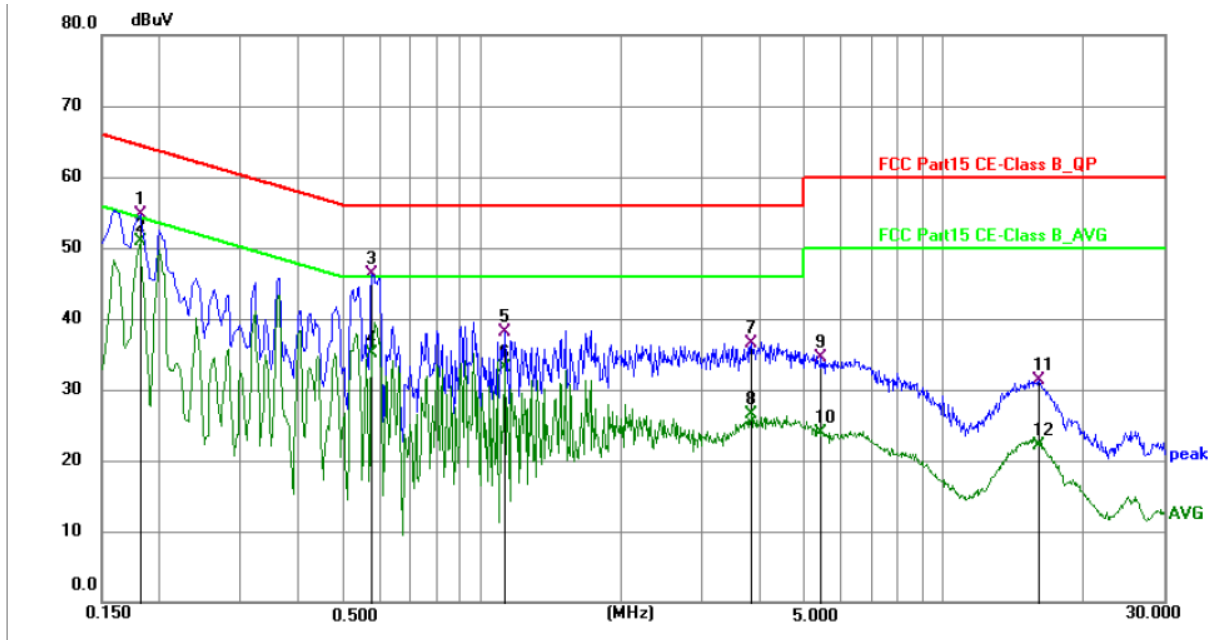


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1590	47.73	9.96	57.69	65.52	-7.83	QP	P	
2 *	0.1590	39.69	9.96	49.65	55.52	-5.87	AVG	P	
3	0.5775	37.74	10.04	47.78	56.00	-8.22	QP	P	
4	0.5775	26.26	10.04	36.30	46.00	-9.70	AVG	P	
5	1.7205	24.48	10.03	34.51	56.00	-21.49	QP	P	
6	1.7205	20.81	10.03	30.84	46.00	-15.16	AVG	P	
7	4.3755	20.72	10.04	30.76	56.00	-25.24	QP	P	
8	4.3755	7.37	10.04	17.41	46.00	-28.59	AVG	P	
9	11.5530	23.45	9.96	33.41	60.00	-26.59	QP	P	
10	11.5530	13.82	9.96	23.78	50.00	-26.22	AVG	P	
11	14.3520	28.19	9.97	38.16	60.00	-21.84	QP	P	
12	14.3520	18.78	9.97	28.75	50.00	-21.25	AVG	P	

Note: Level = Reading + Factor    Margin = Level - Limit

**Conducted Emission Test Data**

Test Site: Shielded Room #1  
 Test Mode: TM1/ CH Middle  
 Comments: Neutral Line  
 Model No.: H614E



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1815	44.78	9.99	54.77	64.42	-9.65	QP	P	
2 *	0.1815	40.83	9.99	50.82	54.42	-3.60	AVG	P	
3	0.5775	36.14	10.07	46.21	56.00	-9.79	QP	P	
4	0.5775	24.99	10.07	35.06	46.00	-10.94	AVG	P	
5	1.1220	28.00	10.06	38.06	56.00	-17.94	QP	P	
6	1.1220	22.98	10.06	33.04	46.00	-12.96	AVG	P	
7	3.8265	26.51	10.04	36.55	56.00	-19.45	QP	P	
8	3.8265	16.51	10.04	26.55	46.00	-19.45	AVG	P	
9	5.4375	24.40	10.04	34.44	60.00	-25.56	QP	P	
10	5.4375	13.84	10.04	23.88	50.00	-26.12	AVG	P	
11	16.1160	21.29	10.01	31.30	60.00	-28.70	QP	P	
12	16.1160	12.06	10.01	22.07	50.00	-27.93	AVG	P	

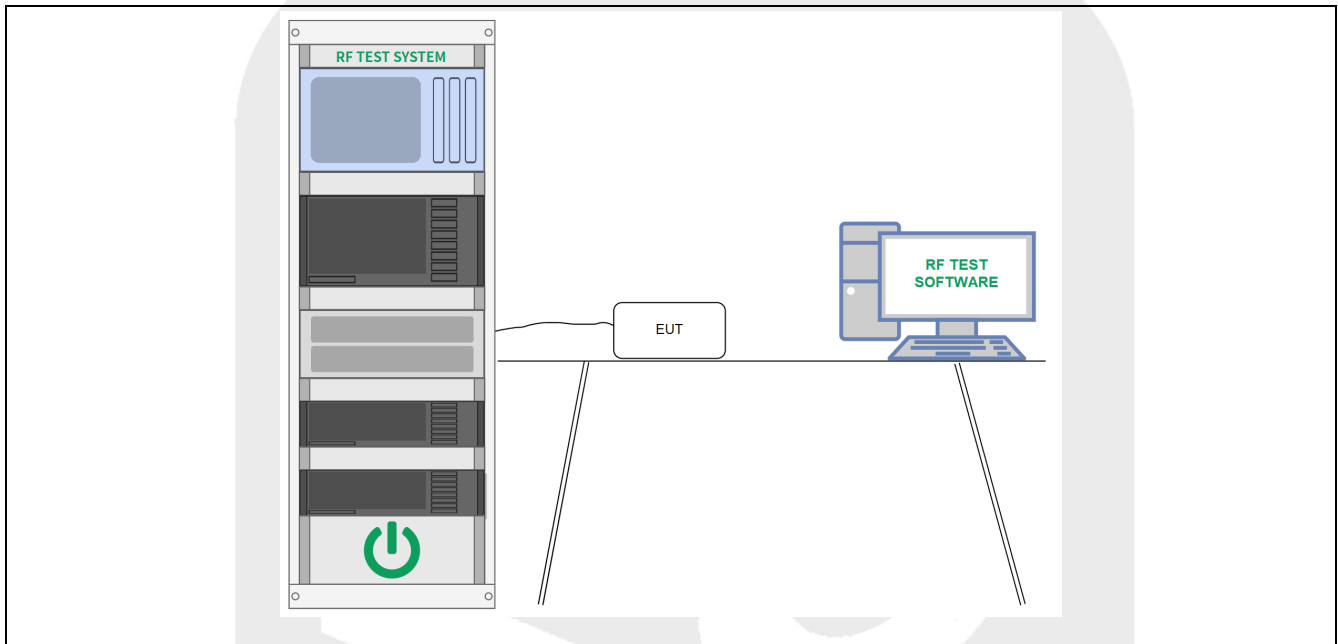
Note: Level = Reading + Factor    Margin = Level - Limit

### 5.3 DTS Bandwidth

#### 5.3.1 Test Requirement

Test Requirement	Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Limit	Section (a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Method	ANSI C63.10-2020 section 11.8

#### 5.3.2 Test Setup Diagram



#### 5.3.3 Test Procedure

- Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- Set the VBW  $\geq [3 \times \text{RBW}]$ .
- Detector = peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize.
- 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.

#### 5.3.4 Test Data

**PASS.**

Please refer to Annex E for details.

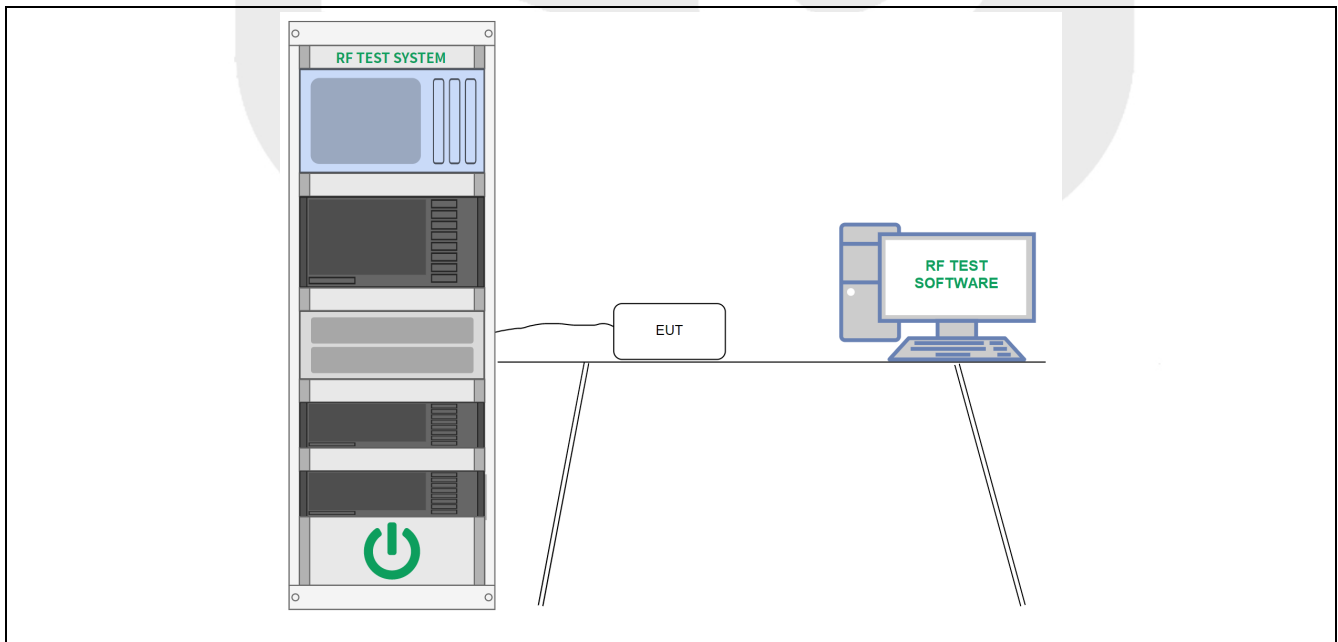


## 5.4 Maximum Conducted Output Power

### 5.4.1 Test Requirement

Test Requirement	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. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Limit	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. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Method	ANSI C63.10-2020 section 11.9

### 5.4.2 Test Setup Diagram



### 5.4.3 Test Procedure

a) Maximum peak conducted output power

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

Set the RBW  $\geq$  DTS bandwidth.

Set VBW  $\geq 3 \times$  RBW.

Set span  $\geq 3 \times$  RBW

Sweep time = auto couple.

Detector = peak.

Trace mode = max hold.

Allow trace to fully stabilize.

Use peak marker function to determine the peak amplitude level.

b) Measurements of duty cycle

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.

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

Set RBW  $\geq$  OBW if possible; otherwise, set RBW to the largest available value.

Set VBW  $\geq$  RBW. Set detector = peak or average.

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 duty cycle shall not be used if  $T \leq 16.7$  microseconds.)

### 5.4.4 Test Data

**PASS.**

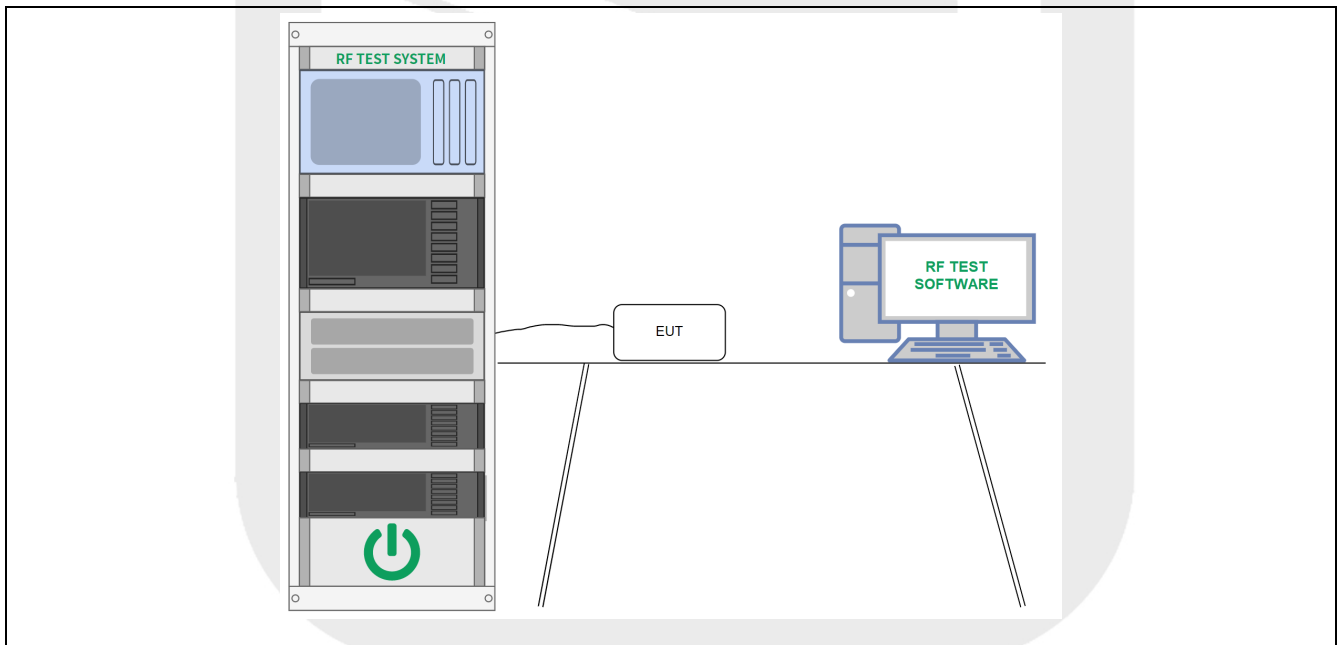
Please refer to Annex E for details.

## 5.5 Power Spectral Density

### 5.5.1 Test Requirement

Test Requirement	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Limit	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Method	ANSI C63.10-2020 section 11.10

### 5.5.2 Test Setup Diagram



### 5.5.3 Test Procedure

Set analyzer center frequency to DTS channel center frequency.  
 Set the span to 1.5 times the DTS bandwidth.  
 Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .  
 Set the VBW  $\geq 3 \text{ RBW}$ .  
 Detector = peak.  
 Sweep time = auto couple.  
 Trace mode = max hold.  
 Allow trace to fully stabilize.  
 Use the peak marker function to determine the maximum amplitude level within the RBW.  
 If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 5.5.4 Test Data

**PASS.**

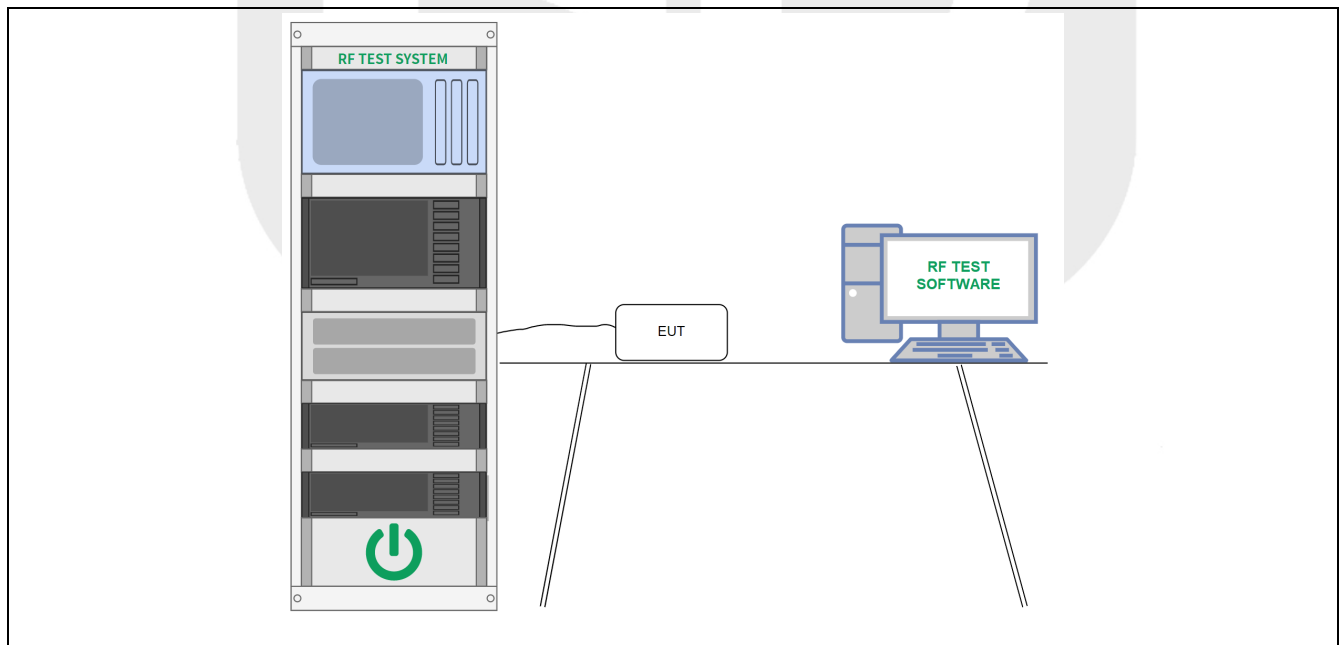
Please refer to Annex E for details.

## 5.6 Emissions in Non-restricted Frequency Bands (Conducted)

### 5.6.1 Test Requirement

Test Requirement	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.
Test Limit	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.
Test Method	ANSI C63.10-2020 section 11.11

### 5.6.2 Test Setup Diagram



### 5.6.3 Test Procedure

The following procedures may be used to determine the peak or average field strength or power of an unwanted emission that is within 2 MHz of the authorized band edge. If a peak detector is utilized, use the procedure described in 13.2.1. Use the procedure described in 13.2.2 when using an average detector and the EUT can be configured to transmit continuously (i.e., duty cycle  $\geq 98\%$ ). Use the procedure described in 13.2.3 when using an average detector and the EUT cannot be configured to transmit continuously but the duty cycle is constant (i.e., duty cycle variations are less than  $\pm 2$  percent). Use the procedure described in 13.2.4 when using an average detector for those cases where the EUT cannot be configured to transmit continuously and the duty cycle is not constant (duty cycle variations equal or exceed 2 percent).

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used.

Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).

Set span to 2 MHz

RBW = 100 kHz.

VBW  $\geq 3 \times$  RBW.

Detector = peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweep to continue until the trace stabilizes (required measurement time may increase for low duty cycle applications)

Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency (femission)  $\pm 0.5$  MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by femission  $\pm 0.5$  MHz.

Standard method(The 99% OBW of the fundamental emission is without 2 MHz of the authorized band):

Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation.

Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (\text{OBW}/\text{RBW})]$  below the reference level. Specific guidance is given in 4.1.5.2.

Attenuation: Auto (at least 10 dB preferred).

Sweep time: Coupled.

Resolution bandwidth: 100 kHz.

Video bandwidth: 300 kHz.

Detector: Peak.

Trace: Max hold.

### 5.6.4 Test Data

**PASS.**

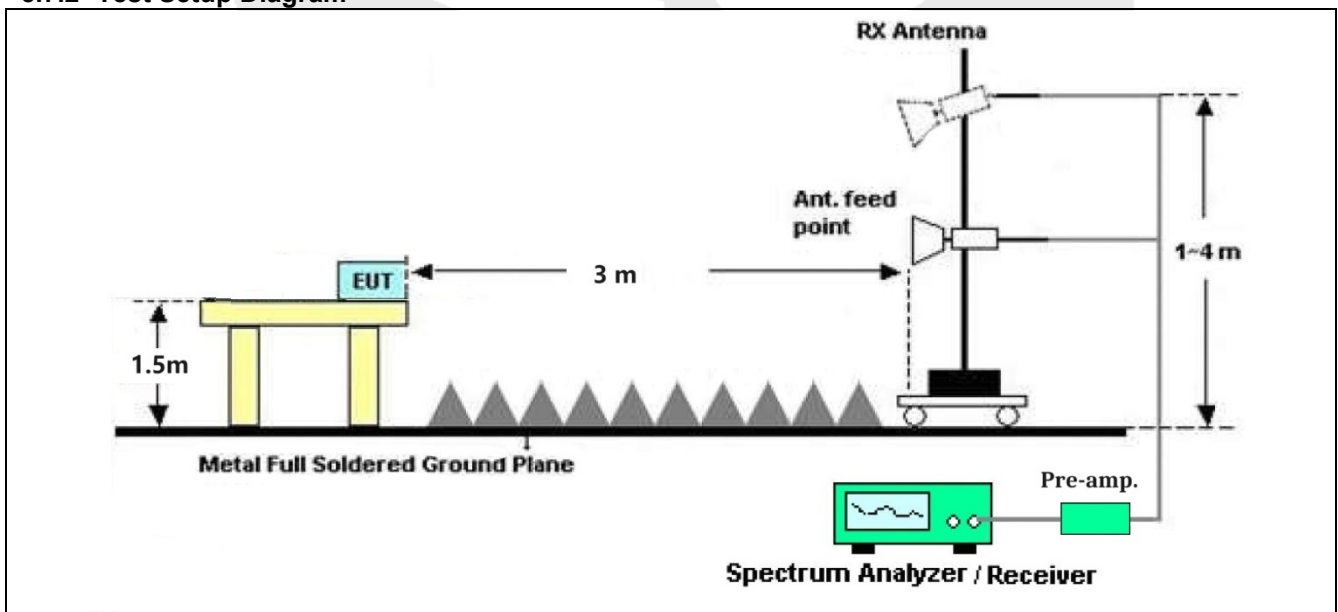
Please refer to Annex E for details.

## 5.7 Band edge Emissions (Restricted frequency bands)

### 5.7.1 Test Requirement

Test Requirement	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)).		
Test Limit	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
	<p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>Note:</p> <ol style="list-style-type: none"> <li>1) Field Strength (dBµV/m) = 20*log[Field Strength (µV/m)].</li> <li>2) In the emission tables above, the tighter limit applies at the band edges.</li> <li>3) For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.</li> <li>4) For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).</li> </ol>		
Test Method	ANSI C63.10-2020 section 11.12		

### 5.7.2 Test Setup Diagram



### 5.7.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz

VBW  $\geq$  RBW

Sweep = auto

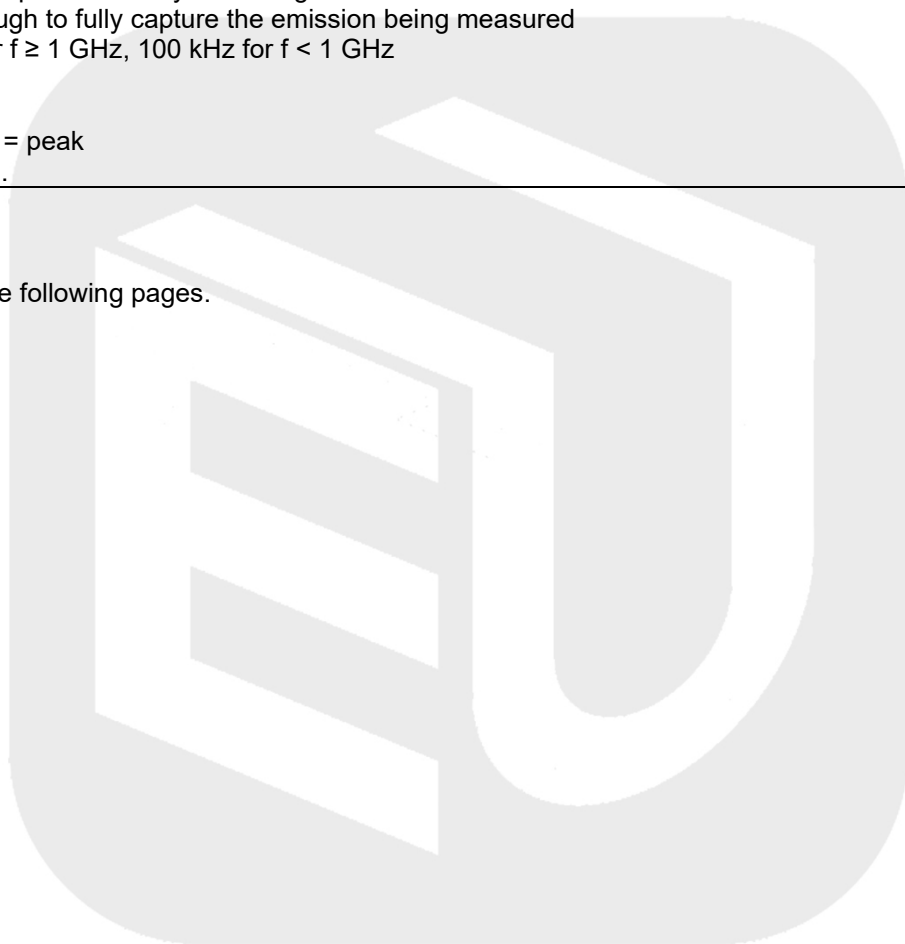
Detector function = peak

Trace = max hold.

### 5.7.4 Test Data

**PASS.**

Please refer to the following pages.



**Band Edge Emissions (Restricted frequency bands):**

Test Mode: 802.11b					CH Low: 2412 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	2310.00	43.24	-2.81	40.43	74.00	-33.57	PK	PASS
H	2390.00	47.62	-2.69	44.93	74.00	-29.07	PK	PASS
H	**2400.00	64.66	-2.68	61.98	74.00	-12.02	PK	PASS
V	2310.00	44.51	-2.81	41.70	74.00	-32.30	PK	PASS
V	2390.00	48.75	-2.69	46.06	74.00	-27.94	PK	PASS
V	**2400.00	64.73	-2.68	62.05	74.00	-11.95	PK	PASS
H	2310.00	32.92	-2.81	30.11	54.00	-23.89	AV	PASS
H	2390.00	36.44	-2.69	33.75	54.00	-20.25	AV	PASS
H	**2400.00	46.19	-2.68	43.51	54.00	-10.49	AV	PASS
V	2310.00	35.54	-2.81	32.73	54.00	-21.27	AV	PASS
V	2390.00	34.97	-2.69	32.28	54.00	-21.72	AV	PASS
V	**2400.00	49.69	-2.68	47.01	54.00	-6.99	AV	PASS

Test Mode: 802.11b					CH High: 2462 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	**2483.50	48.56	-2.56	46.00	74.00	-28.00	PK	PASS
H	2500.00	50.86	-2.54	48.32	74.00	-25.68	PK	PASS
V	**2483.50	49.68	-2.56	47.12	74.00	-26.88	PK	PASS
V	2500.00	51.98	-2.54	49.44	74.00	-24.56	PK	PASS
H	**2483.50	38.99	-2.56	36.43	54.00	-17.57	AV	PASS
H	2500.00	42.30	-2.54	39.76	54.00	-14.24	AV	PASS
V	**2483.50	39.26	-2.56	36.70	54.00	-17.30	AV	PASS
V	2500.00	42.44	-2.54	39.90	54.00	-14.10	AV	PASS

## Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.



**Band Edge Emissions (Restricted frequency bands):**

Test Mode: 802.11g					CH Low: 2412 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	2310.00	45.01	-2.81	42.20	74.00	-31.80	PK	PASS
H	2390.00	49.34	-2.69	46.65	74.00	-27.35	PK	PASS
H	**2400.00	64.25	-2.68	61.57	74.00	-12.43	PK	PASS
V	2310.00	43.01	-2.81	40.20	74.00	-33.80	PK	PASS
V	2390.00	46.20	-2.69	43.51	74.00	-30.49	PK	PASS
V	**2400.00	63.66	-2.68	60.98	74.00	-13.02	PK	PASS
H	2310.00	34.53	-2.81	31.72	54.00	-22.28	AV	PASS
H	2390.00	38.35	-2.69	35.66	54.00	-18.34	AV	PASS
H	**2400.00	47.18	-2.68	44.50	54.00	-9.50	AV	PASS
V	2310.00	34.85	-2.81	32.04	54.00	-21.96	AV	PASS
V	2390.00	35.27	-2.69	32.58	54.00	-21.42	AV	PASS
V	**2400.00	46.21	-2.68	43.53	54.00	-10.47	AV	PASS

Test Mode: 802.11g					CH High: 2462 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	**2483.50	47.93	-2.56	45.37	74.00	-28.63	PK	PASS
H	2500.00	50.98	-2.54	48.44	74.00	-25.56	PK	PASS
V	**2483.50	48.38	-2.56	45.82	74.00	-28.18	PK	PASS
V	2500.00	52.24	-2.54	49.70	74.00	-24.30	PK	PASS
H	**2483.50	39.54	-2.56	36.98	54.00	-17.02	AV	PASS
H	2500.00	41.91	-2.54	39.37	54.00	-14.63	AV	PASS
V	**2483.50	39.07	-2.56	36.51	54.00	-17.49	AV	PASS
V	2500.00	39.25	-2.54	36.71	54.00	-17.29	AV	PASS

## Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

**Band Edge Emissions (Restricted frequency bands):**

Test Mode: 802.11n(HT20)					CH Low: 2412 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	2310.00	45.26	-2.81	42.45	74.00	-31.55	PK	PASS
H	2390.00	47.16	-2.69	44.47	74.00	-29.53	PK	PASS
H	**2400.00	64.87	-2.68	62.19	74.00	-11.81	PK	PASS
V	2310.00	45.66	-2.81	42.85	74.00	-31.15	PK	PASS
V	2390.00	48.63	-2.69	45.94	74.00	-28.06	PK	PASS
V	**2400.00	61.83	-2.68	59.15	74.00	-14.85	PK	PASS
H	2310.00	34.26	-2.81	31.45	54.00	-22.55	AV	PASS
H	2390.00	37.25	-2.69	34.56	54.00	-19.44	AV	PASS
H	**2400.00	46.36	-2.68	43.68	54.00	-10.32	AV	PASS
V	2310.00	32.52	-2.81	29.71	54.00	-24.29	AV	PASS
V	2390.00	35.68	-2.69	32.99	54.00	-21.01	AV	PASS
V	**2400.00	49.96	-2.68	47.28	54.00	-6.72	AV	PASS

Test Mode: 802.11n(HT20)					CH High: 2462 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	**2483.50	49.44	-2.56	46.88	74.00	-27.12	PK	PASS
H	2500.00	50.35	-2.54	47.81	74.00	-26.19	PK	PASS
V	**2483.50	46.63	-2.56	44.07	74.00	-29.93	PK	PASS
V	2500.00	49.55	-2.54	47.01	74.00	-26.99	PK	PASS
H	**2483.50	39.81	-2.56	37.25	54.00	-16.75	AV	PASS
H	2500.00	42.27	-2.54	39.73	54.00	-14.27	AV	PASS
V	**2483.50	37.51	-2.56	34.95	54.00	-19.05	AV	PASS
V	2500.00	40.85	-2.54	38.31	54.00	-15.69	AV	PASS

## Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

## 5.8 Radiated Spurious Emissions

### 5.8.1 Test Requirement

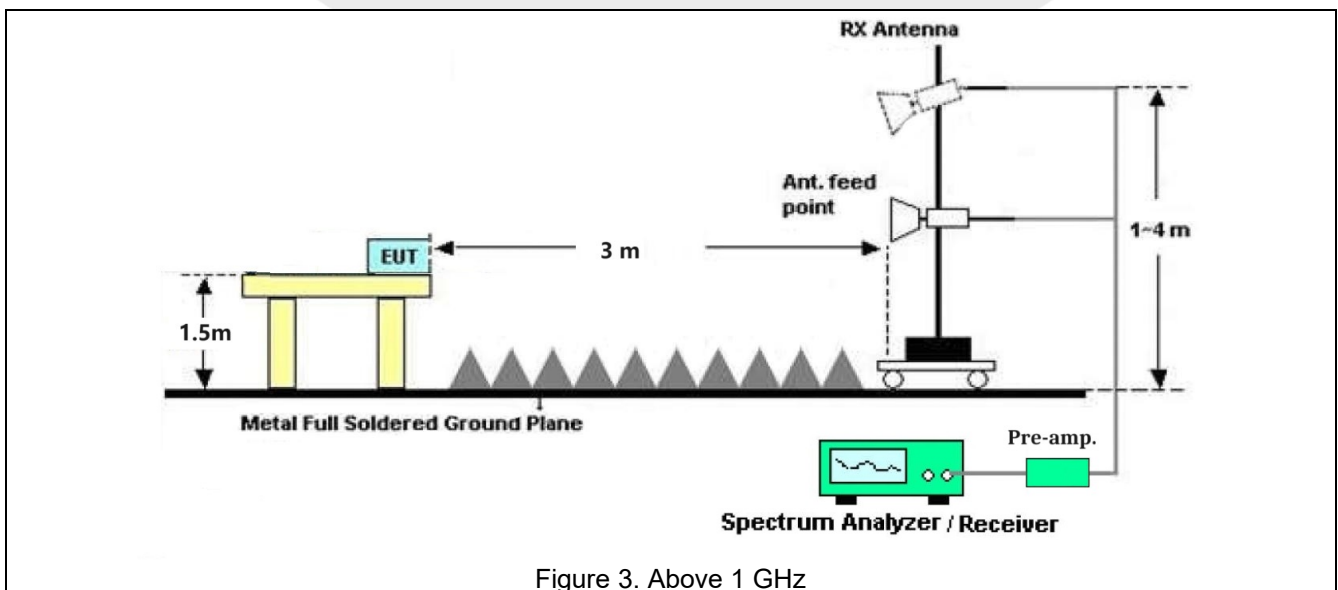
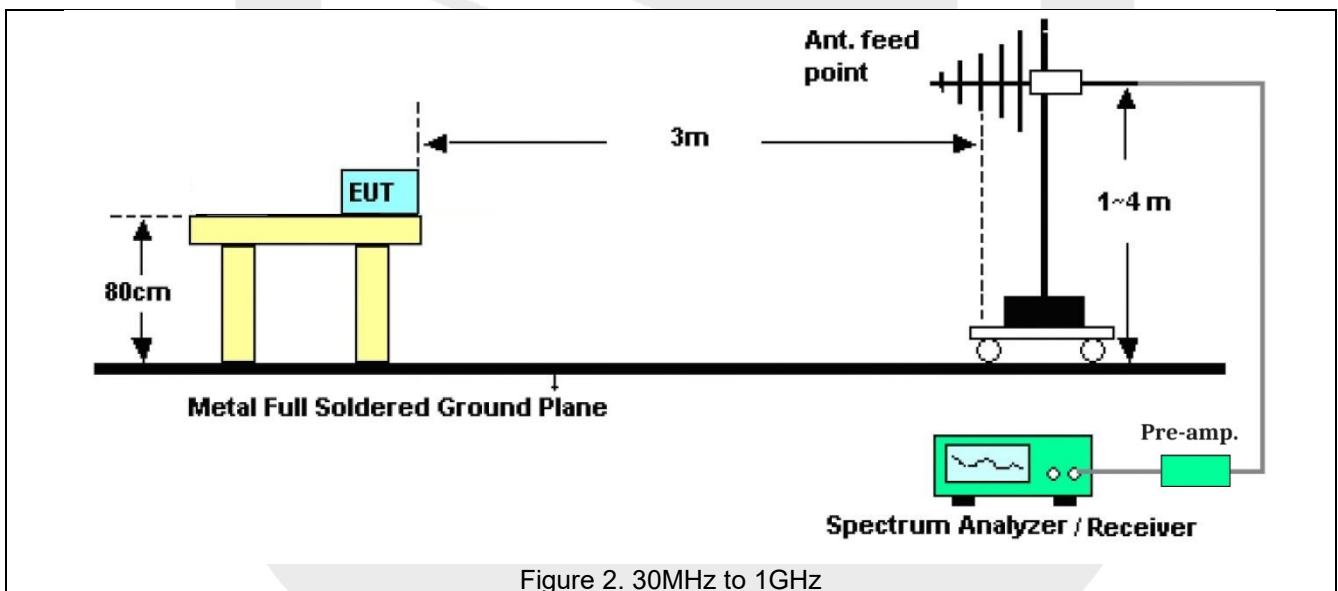
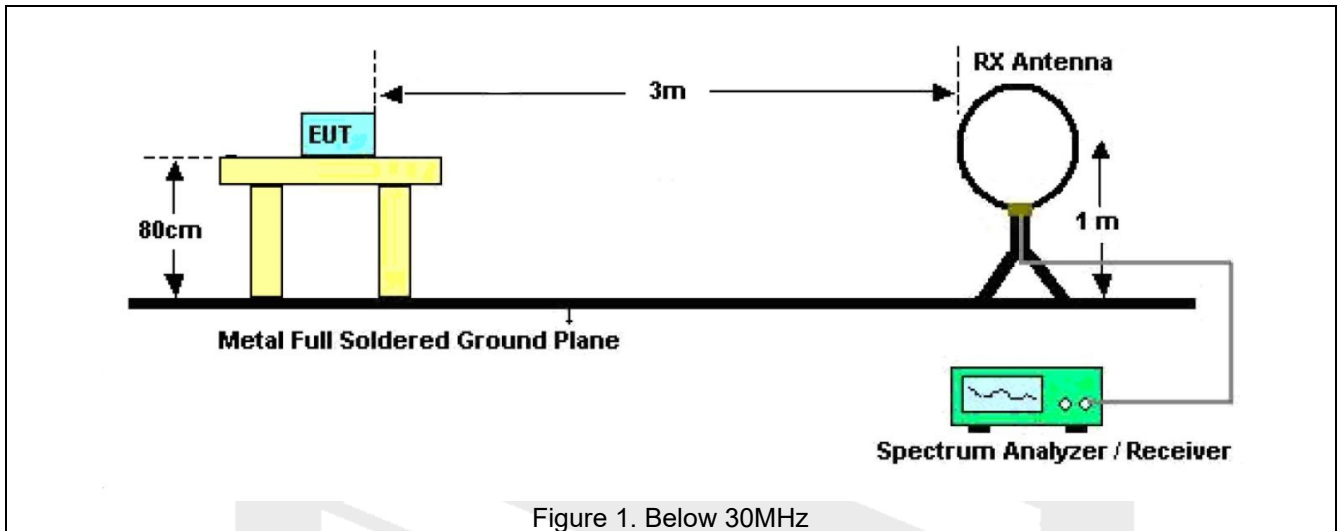
Test Requirement	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
Test Method	ANSI C63.10-2020 section 6.6.4		

\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

Note:

- 1) Field Strength (dB $\mu$ V/m) = 20\*log[Field Strength ( $\mu$ V/m)].
- 2) In the emission tables above, the tighter limit applies at the band edges.
- 3) For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
- 4) For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

**5.8.2 Test Setup Diagram**



### 5.8.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power.

Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW = 1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW = 30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW = 300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz, Set the spectrum analyzer as:

RBW = 1MHz, VBW = 1MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

RBW = 1MHz, VBW = 10Hz, Detector= Average, Trace mode= Max hold, Sweep- auto couple.

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

### 5.8.4 Test Data

PASS.

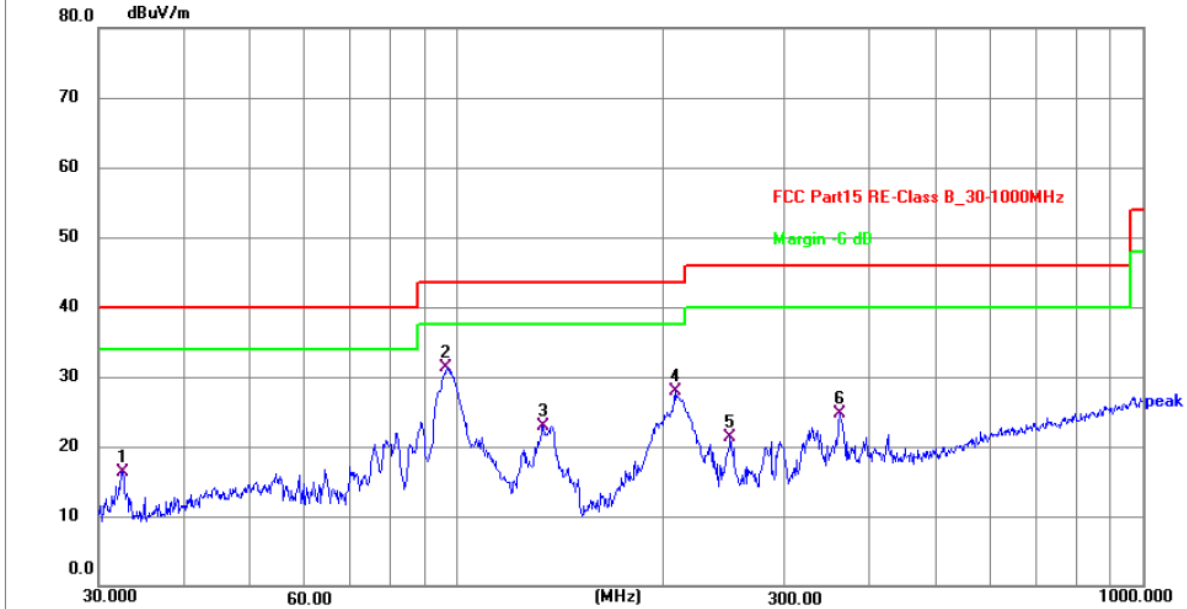
Please to see the following pages.

The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

For test of 30MHz-1GHz, during the test, pre-scan all modes, only the worst case is recorded in the report.

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H615E</b>		

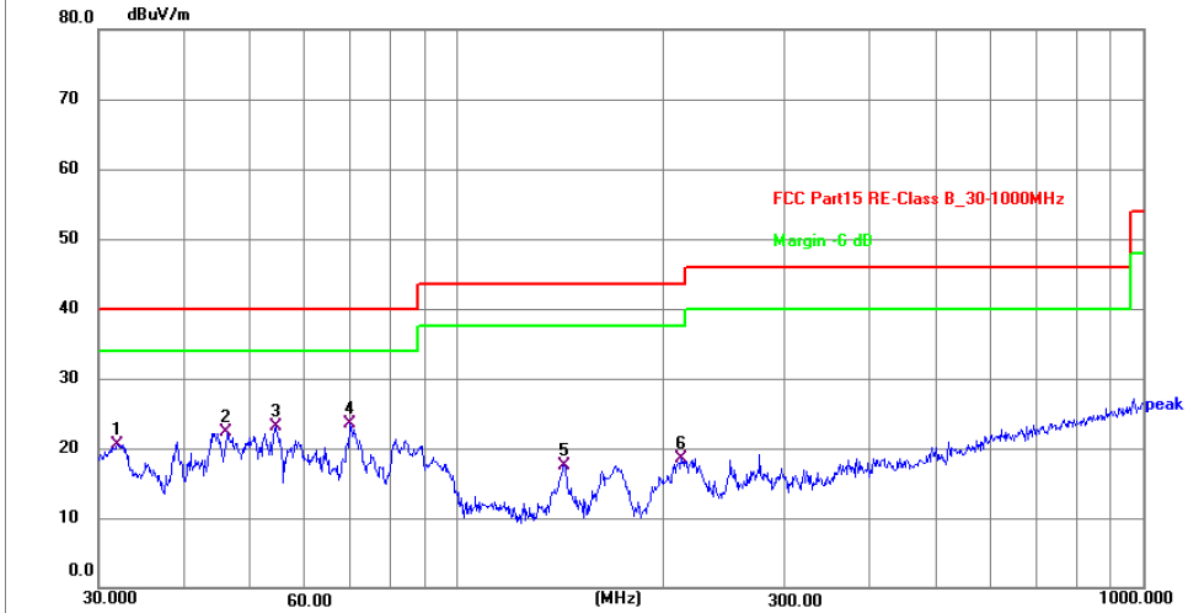


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	32.5198	33.27	-16.90	16.37	40.00	-23.63	QP	P	
2 *	96.7749	47.37	-16.04	31.33	43.50	-12.17	QP	P	
3	133.6188	40.32	-17.41	22.91	43.50	-20.59	QP	P	
4	207.8501	42.46	-14.61	27.85	43.50	-15.65	QP	P	
5	250.3012	34.54	-13.21	21.33	46.00	-24.67	QP	P	
6	361.7139	35.44	-10.77	24.67	46.00	-21.33	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H615E</b>		

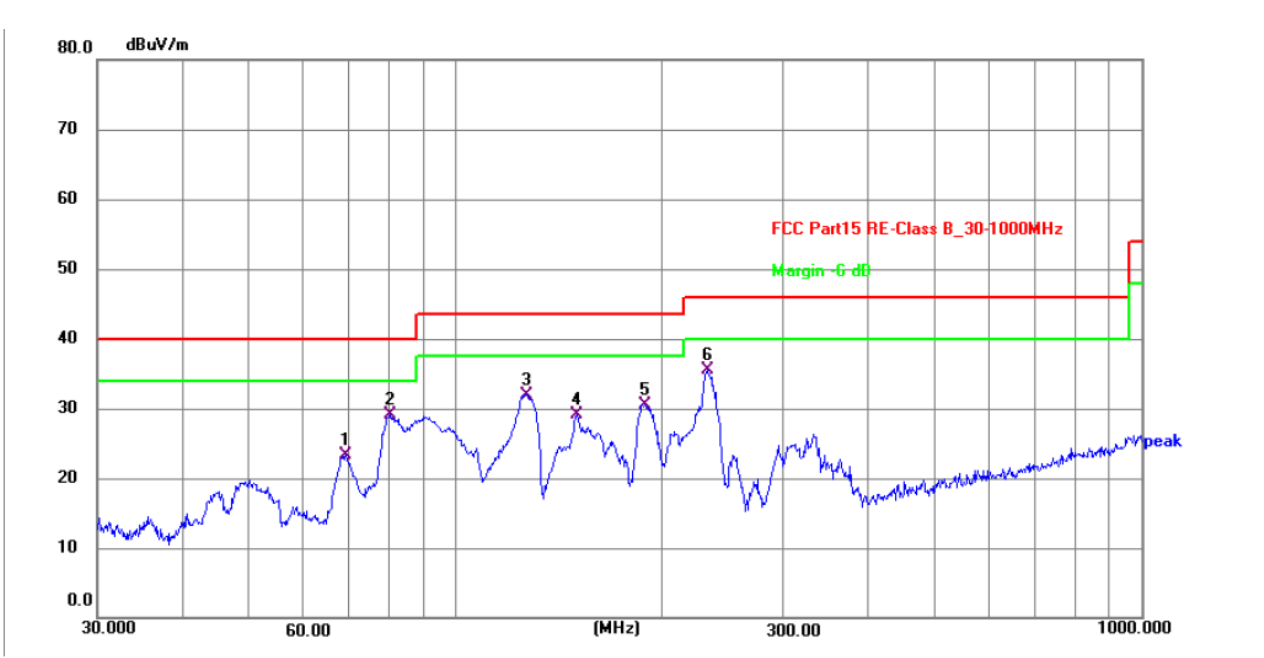


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	31.9546	37.49	-16.92	20.57	40.00	-19.43	QP	P	
2	46.1779	36.47	-14.18	22.29	40.00	-17.71	QP	P	
3	54.4516	37.55	-14.42	23.13	40.00	-16.87	QP	P	
4 *	69.8450	41.30	-17.86	23.44	40.00	-16.56	QP	P	
5	143.3261	35.53	-18.00	17.53	43.50	-25.97	QP	P	
6	212.2695	32.93	-14.49	18.44	43.50	-25.06	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H6110</b>		



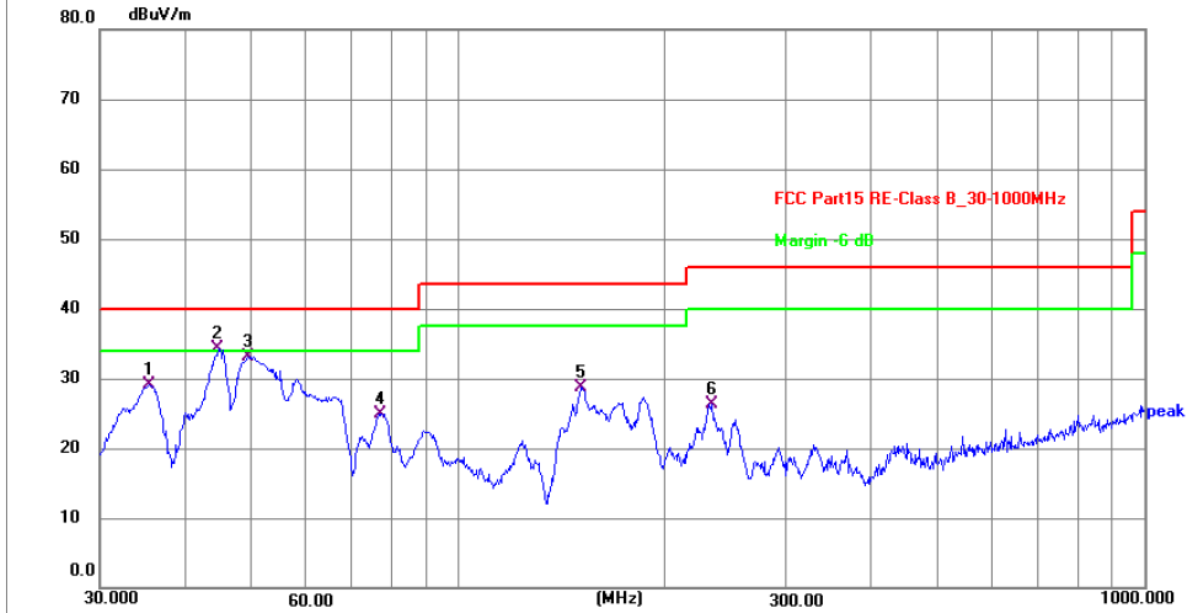
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	69.1141	40.84	-17.60	23.24	40.00	-16.76	QP	P	
2	80.3619	48.54	-19.49	29.05	40.00	-10.95	QP	P	
3	126.7723	48.89	-16.97	31.92	43.50	-11.58	QP	P	
4	150.0108	47.53	-18.40	29.13	43.50	-14.37	QP	P	
5	189.0743	46.17	-15.63	30.54	43.50	-12.96	QP	P	
6 *	232.5318	49.35	-13.79	35.56	46.00	-10.44	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**



**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H6110</b>		

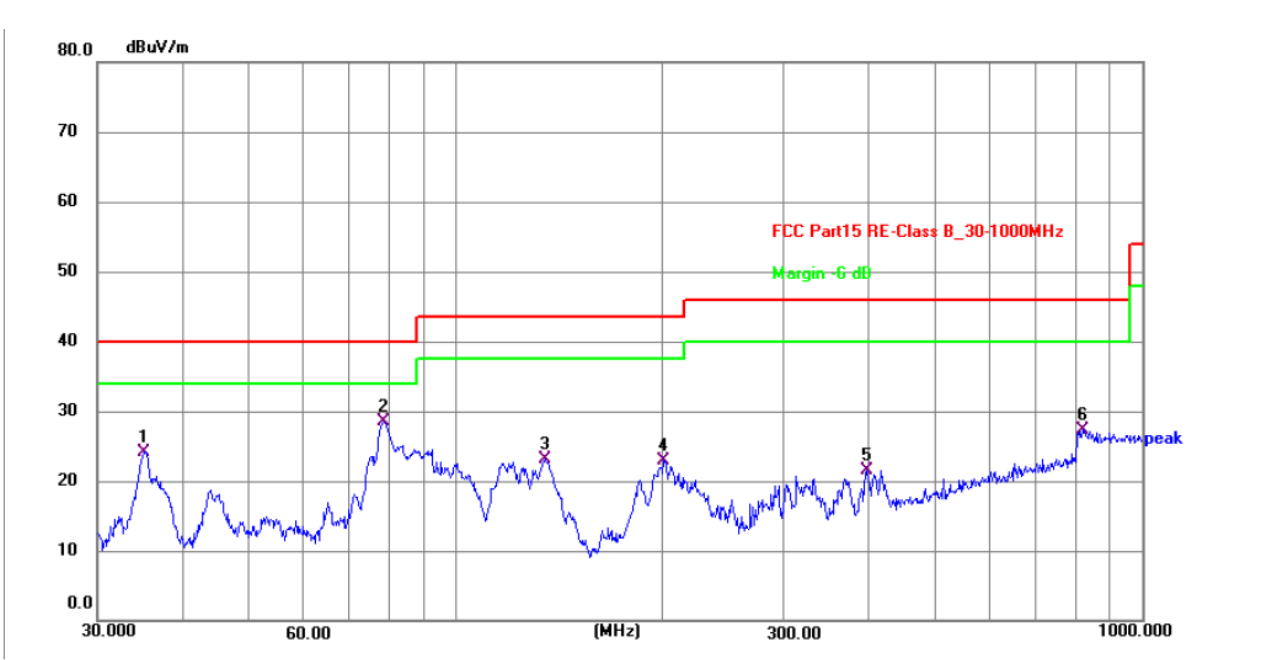


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	35.3750	45.82	-16.71	29.11	40.00	-10.89	QP	P	
2 *	44.7433	48.51	-14.25	34.26	40.00	-5.74	QP	P	
3	49.3594	47.28	-14.13	33.15	40.00	-6.85	QP	P	
4	77.0505	44.24	-19.26	24.98	40.00	-15.02	QP	P	
5	151.0666	47.12	-18.33	28.79	43.50	-14.71	QP	P	
6	234.1684	40.12	-13.85	26.27	46.00	-19.73	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H6159</b>		

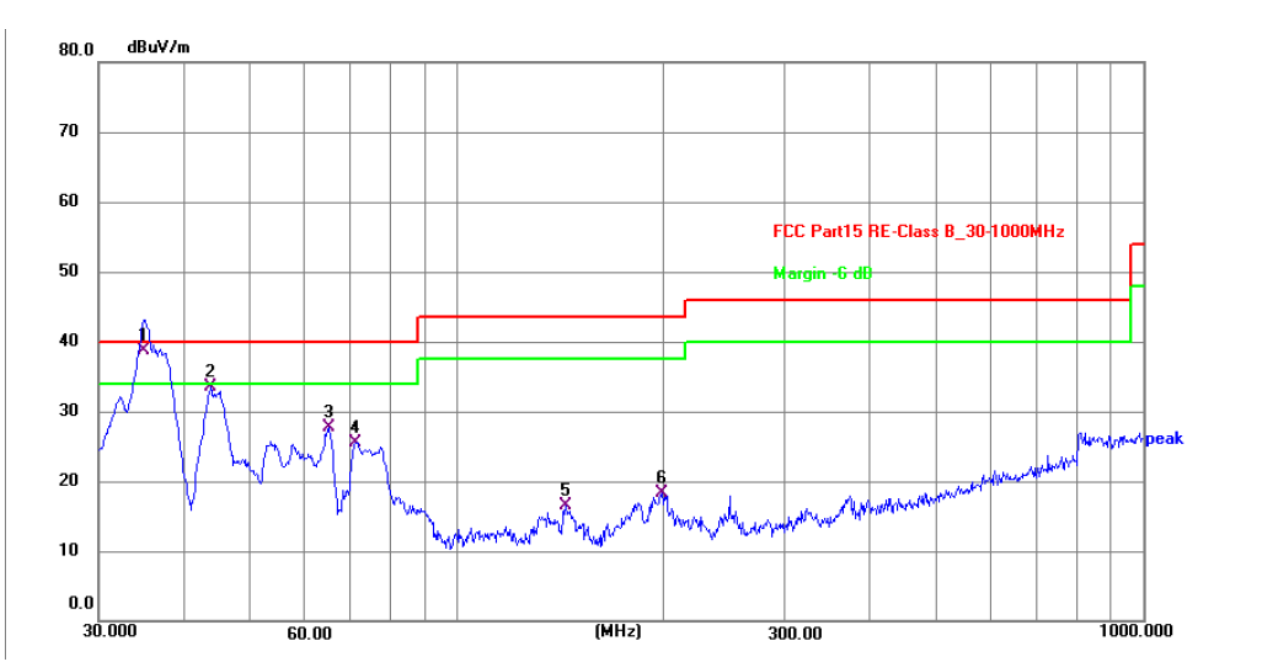


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	35.1278	40.95	-16.79	24.16	40.00	-15.84	QP	P	
2 *	78.4133	47.92	-19.40	28.52	40.00	-11.48	QP	P	
3	134.5592	40.63	-17.45	23.18	43.50	-20.32	QP	P	
4	200.6881	37.78	-14.84	22.94	43.50	-20.56	QP	P	
5	396.2415	31.57	-10.15	21.42	46.00	-24.58	QP	P	
6	818.8341	30.71	-3.35	27.36	46.00	-18.64	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H6159</b>		

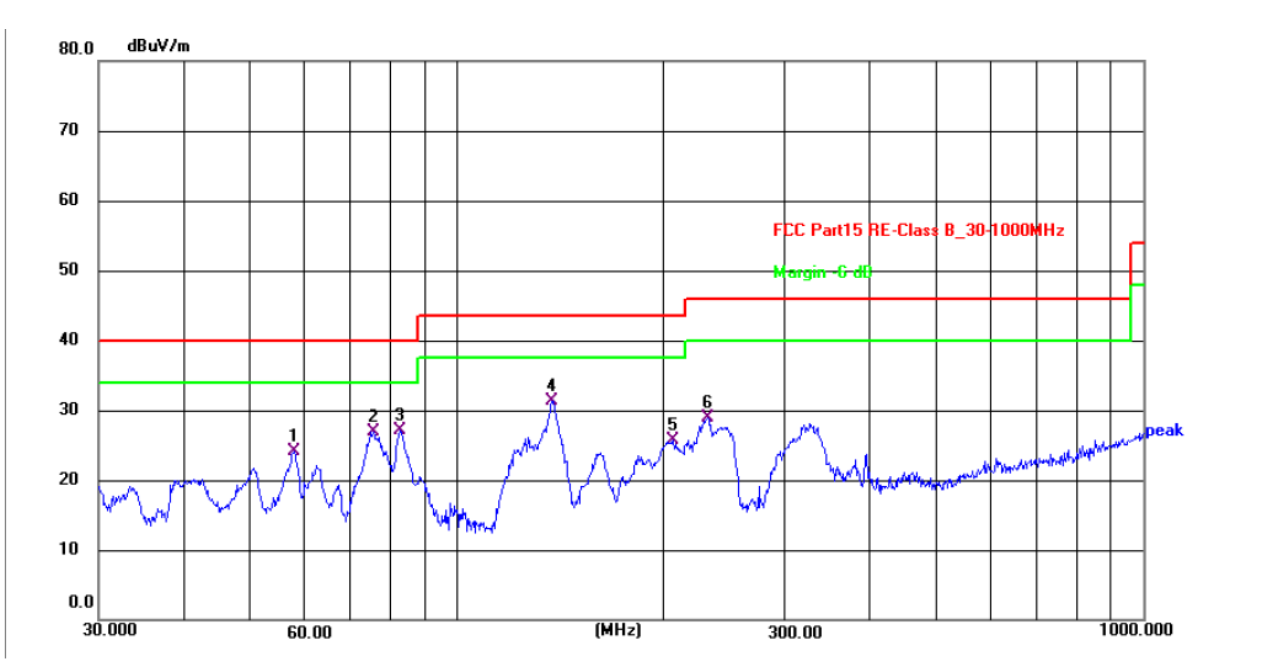


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	34.8823	55.53	-16.83	38.70	40.00	-1.30	QP	P	
2	43.6584	47.88	-14.46	33.42	40.00	-6.58	QP	P	
3	64.8865	43.71	-16.09	27.62	40.00	-12.38	QP	P	
4	71.0803	43.74	-18.16	25.58	40.00	-14.42	QP	P	
5	143.8295	34.61	-18.02	16.59	43.50	-26.91	QP	P	
6	198.5880	33.29	-14.96	18.33	43.50	-25.17	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H614B</b>		

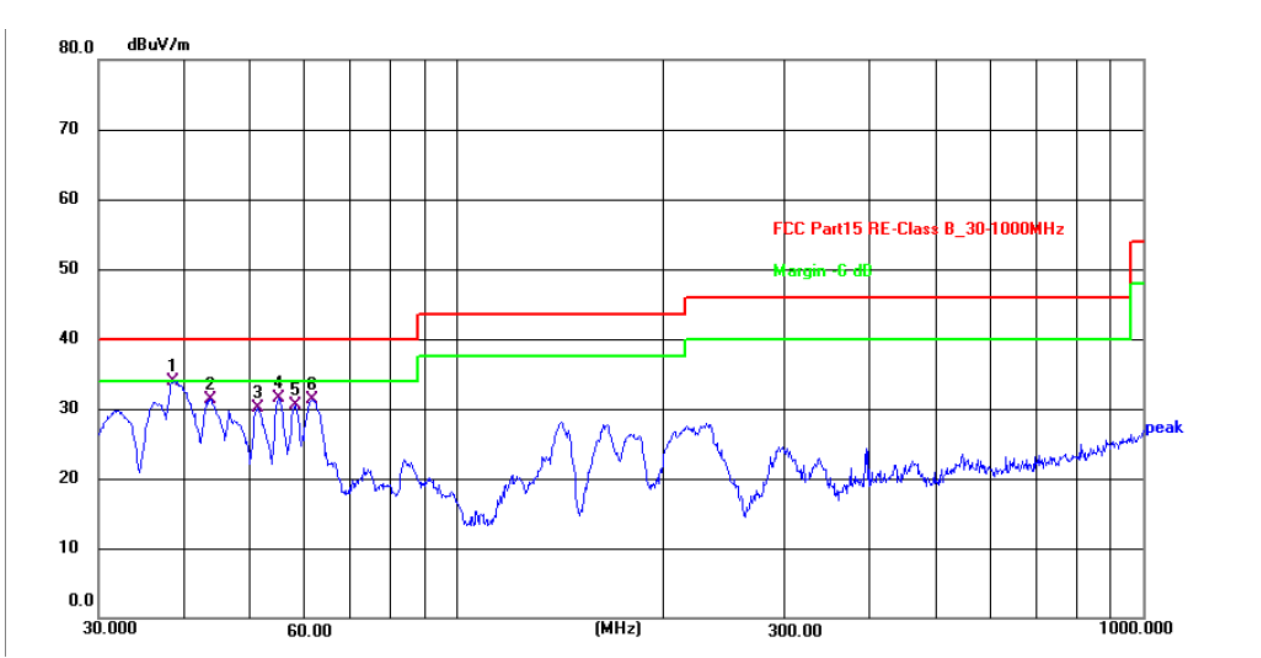


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	57.7962	39.09	-15.04	24.05	40.00	-15.95	QP	P	
2	75.4464	46.16	-19.18	26.98	40.00	-13.02	QP	P	
3	82.6482	46.25	-19.18	27.07	40.00	-12.93	QP	P	
4 *	137.9028	49.38	-17.98	31.40	43.50	-12.10	QP	P	
5	206.3976	40.50	-14.83	25.67	43.50	-17.83	QP	P	
6	231.7179	42.96	-13.96	29.00	46.00	-17.00	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H614B</b>		

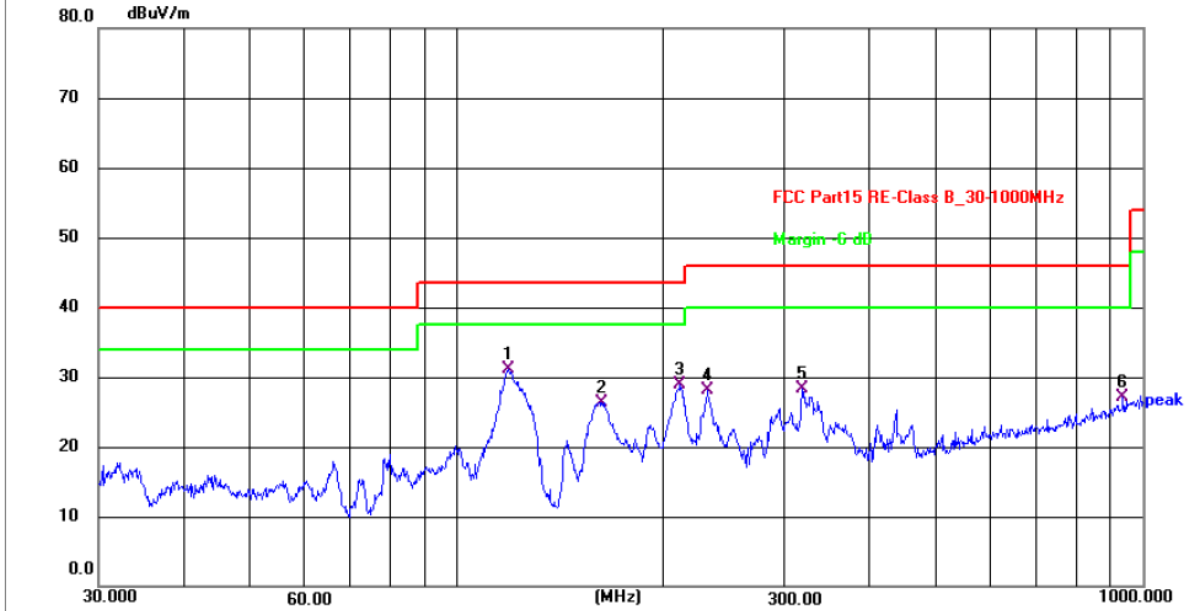


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	38.6160	49.57	-15.65	33.92	40.00	-6.08	QP	P	
2	43.8119	45.84	-14.46	31.38	40.00	-8.62	QP	P	
3	51.3005	44.30	-14.25	30.05	40.00	-9.95	QP	P	
4	54.8348	45.99	-14.50	31.49	40.00	-8.51	QP	P	
5	57.9993	45.60	-15.07	30.53	40.00	-9.47	QP	P	
6	61.3463	47.03	-15.65	31.38	40.00	-8.62	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H614E</b>		

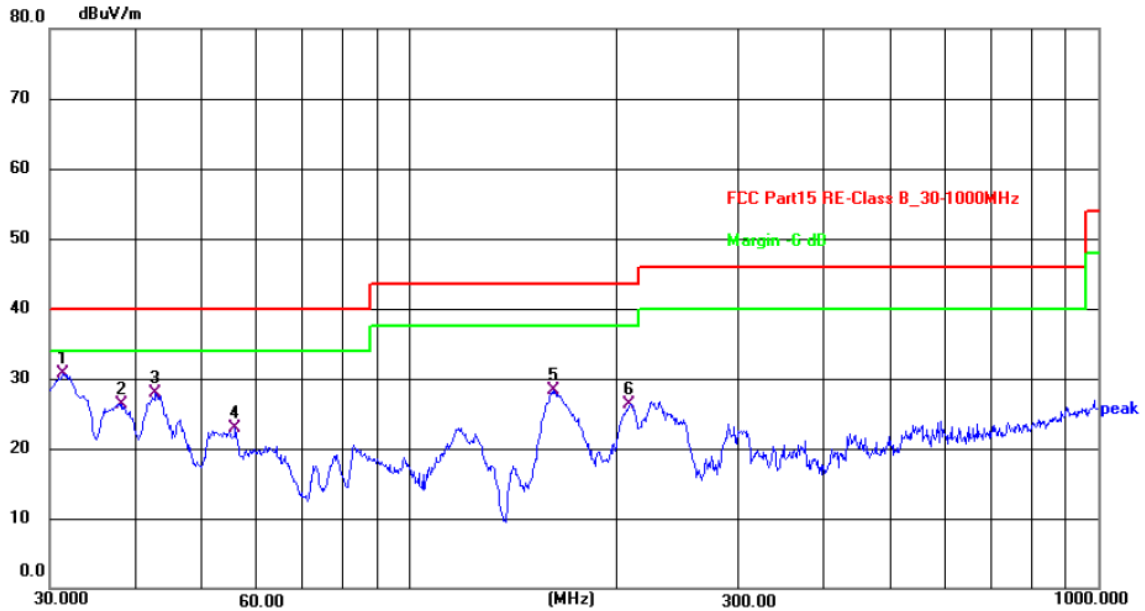


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	119.0180	47.93	-16.86	31.07	43.50	-12.43	QP	P	
2	162.6106	44.07	-17.77	26.30	43.50	-17.20	QP	P	
3	211.5265	43.60	-14.66	28.94	43.50	-14.56	QP	P	
4	231.7179	42.13	-13.96	28.17	46.00	-17.83	QP	P	
5	318.8170	39.96	-11.58	28.38	46.00	-17.62	QP	P	
6	935.5463	28.61	-1.52	27.09	46.00	-18.91	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Emission Test Data (30-1000MHz)**

<b>Test Site:</b>	<b>966 Chamber #1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Mode:</b>	<b>TM1/ CH High</b>
<b>Model No.:</b>	<b>H614E</b>		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	31.2893	47.61	-16.90	30.71	40.00	-9.29	QP	P	
2	38.2120	42.16	-15.78	26.38	40.00	-13.62	QP	P	
3	42.7496	42.62	-14.68	27.94	40.00	-12.06	QP	P	
4	55.8047	37.64	-14.66	22.98	40.00	-17.02	QP	P	
5	161.4742	46.19	-17.86	28.33	43.50	-15.17	QP	P	
6	209.3129	41.03	-14.76	26.27	43.50	-17.23	QP	P	

**Note: Level = Reading + Factor      Margin = Level - Limit**

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11b					CH Low: 2412 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4824.24	42.10	4.74	46.84	74.00	-27.17	PK	PASS
V	7236.25	34.91	9.84	44.75	74.00	-29.25	PK	PASS
V	9648.08	30.24	13.18	43.42	74.00	-30.59	PK	PASS
V	12060.55	*	*	*	74.00	*	PK	PASS
V	14472.30	*	*	*	74.00	*	PK	PASS
V	16884.83	*	*	*	74.00	*	PK	PASS
H	4824.57	41.55	4.74	46.29	74.00	-27.72	PK	PASS
H	7236.09	35.97	9.84	45.81	74.00	-28.20	PK	PASS
H	9648.40	29.76	13.18	42.94	74.00	-31.06	PK	PASS
H	12060.42	*	*	*	74.00	*	PK	PASS
H	14472.30	*	*	*	74.00	*	PK	PASS
H	16884.36	*	*	*	74.00	*	PK	PASS
V	4824.47	32.48	4.74	37.22	54.00	-16.78	AV	PASS
V	7236.42	24.04	9.84	33.88	54.00	-20.12	AV	PASS
V	9648.12	17.24	13.18	30.42	54.00	-23.58	AV	PASS
V	12060.02	*	*	*	54.00	*	AV	PASS
V	14472.36	*	*	*	54.00	*	AV	PASS
V	16884.04	*	*	*	54.00	*	AV	PASS
H	4824.81	31.41	4.74	36.15	54.00	-17.85	AV	PASS
H	7236.09	22.19	9.84	32.03	54.00	-21.97	AV	PASS
H	9648.40	18.78	13.18	31.96	54.00	-22.05	AV	PASS
H	12060.42	*	*	*	54.00	*	AV	PASS
H	14472.30	*	*	*	54.00	*	AV	PASS
H	16884.36	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11b					CH Middle: 2437 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4874.96	42.83	4.90	47.73	74.00	-26.28	PK	PASS
V	7311.72	33.89	9.83	43.72	74.00	-30.28	PK	PASS
V	9748.65	28.84	13.21	42.05	74.00	-31.95	PK	PASS
V	12185.35	*	*	*	74.00	*	PK	PASS
V	14622.19	*	*	*	74.00	*	PK	PASS
V	17059.79	*	*	*	74.00	*	PK	PASS
H	4874.98	40.11	4.90	45.01	74.00	-29.00	PK	PASS
H	7311.57	33.31	9.83	43.14	74.00	-30.87	PK	PASS
H	9748.97	30.63	13.21	43.84	74.00	-30.16	PK	PASS
H	12185.31	*	*	*	74.00	*	PK	PASS
H	14622.49	*	*	*	74.00	*	PK	PASS
H	17059.01	*	*	*	74.00	*	PK	PASS
V	4874.43	31.78	4.90	36.68	54.00	-17.33	AV	PASS
V	7311.99	23.92	9.83	33.75	54.00	-20.25	AV	PASS
V	9748.15	17.27	13.21	30.48	54.00	-23.52	AV	PASS
V	12185.47	*	*	*	54.00	*	AV	PASS
V	14622.41	*	*	*	54.00	*	AV	PASS
V	17059.13	*	*	*	54.00	*	AV	PASS
H	4874.98	32.68	4.90	37.58	54.00	-16.43	AV	PASS
H	7311.57	22.99	9.83	32.82	54.00	-21.18	AV	PASS
H	9748.97	17.19	13.21	30.40	54.00	-23.60	AV	PASS
H	12185.31	*	*	*	54.00	*	AV	PASS
H	14622.49	*	*	*	54.00	*	AV	PASS
H	17059.01	*	*	*	54.00	*	AV	PASS

## Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. “\*” means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11b					CH High: 2462 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4924.74	42.91	5.05	47.96	74.00	-26.04	PK	PASS
V	7386.10	34.56	9.83	44.39	74.00	-29.61	PK	PASS
V	9848.43	28.26	13.24	41.50	74.00	-32.50	PK	PASS
V	12310.37	*	*	*	74.00	*	PK	PASS
V	14772.39	*	*	*	74.00	*	PK	PASS
V	17234.89	*	*	*	74.00	*	PK	PASS
H	4924.88	42.06	5.05	47.11	74.00	-26.89	PK	PASS
H	7386.23	33.44	9.83	43.27	74.00	-30.74	PK	PASS
H	9848.64	29.81	13.24	43.05	74.00	-30.95	PK	PASS
H	12310.74	*	*	*	74.00	*	PK	PASS
H	14772.41	*	*	*	74.00	*	PK	PASS
H	17234.88	*	*	*	74.00	*	PK	PASS
V	4924.42	31.40	5.05	36.45	54.00	-17.56	AV	PASS
V	7386.18	23.54	9.83	33.37	54.00	-20.64	AV	PASS
V	9848.27	17.32	13.24	30.56	54.00	-23.44	AV	PASS
V	12310.83	*	*	*	54.00	*	AV	PASS
V	14772.82	*	*	*	54.00	*	AV	PASS
V	17234.53	*	*	*	54.00	*	AV	PASS
H	4924.88	31.67	5.05	36.72	54.00	-17.28	AV	PASS
H	7386.23	22.89	9.83	32.72	54.00	-21.29	AV	PASS
H	9848.64	18.20	13.24	31.44	54.00	-22.56	AV	PASS
H	12310.74	*	*	*	54.00	*	AV	PASS
H	14772.41	*	*	*	54.00	*	AV	PASS
H	17234.88	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11g					CH Low: 2412 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4824.18	41.51	4.74	46.25	74.00	-27.75	PK	PASS
V	7236.50	34.01	9.84	43.85	74.00	-30.16	PK	PASS
V	9648.70	30.68	13.18	43.86	74.00	-30.14	PK	PASS
V	12060.19	*	*	*	74.00	*	PK	PASS
V	14472.24	*	*	*	74.00	*	PK	PASS
V	16884.20	*	*	*	74.00	*	PK	PASS
H	4824.38	42.03	4.74	46.77	74.00	-27.23	PK	PASS
H	7236.93	35.00	9.84	44.84	74.00	-29.16	PK	PASS
H	9648.98	30.69	13.18	43.87	74.00	-30.13	PK	PASS
H	12060.30	*	*	*	74.00	*	PK	PASS
H	14472.18	*	*	*	74.00	*	PK	PASS
H	16884.00	*	*	*	74.00	*	PK	PASS
V	4824.58	31.15	4.74	35.89	54.00	-18.11	AV	PASS
V	7236.27	23.19	9.84	33.03	54.00	-20.97	AV	PASS
V	9648.86	17.14	13.18	30.32	54.00	-23.68	AV	PASS
V	12060.27	*	*	*	54.00	*	AV	PASS
V	14472.15	*	*	*	54.00	*	AV	PASS
V	16884.05	*	*	*	54.00	*	AV	PASS
H	4824.52	31.09	4.74	35.83	54.00	-18.18	AV	PASS
H	7236.93	24.43	9.84	34.27	54.00	-19.73	AV	PASS
H	9648.98	18.89	13.18	32.07	54.00	-21.94	AV	PASS
H	12060.30	*	*	*	54.00	*	AV	PASS
H	14472.18	*	*	*	54.00	*	AV	PASS
H	16884.00	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11g					CH Middle: 2437 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4874.07	40.82	4.90	45.72	74.00	-28.28	PK	PASS
V	7311.86	33.90	9.83	43.73	74.00	-30.27	PK	PASS
V	9748.60	28.83	13.21	42.04	74.00	-31.97	PK	PASS
V	12185.01	*	*	*	74.00	*	PK	PASS
V	14622.15	*	*	*	74.00	*	PK	PASS
V	17059.35	*	*	*	74.00	*	PK	PASS
H	4874.17	42.63	4.90	47.53	74.00	-26.48	PK	PASS
H	7311.23	33.73	9.83	43.56	74.00	-30.44	PK	PASS
H	9748.24	28.87	13.21	42.08	74.00	-31.93	PK	PASS
H	12185.41	*	*	*	74.00	*	PK	PASS
H	14622.66	*	*	*	74.00	*	PK	PASS
H	17059.95	*	*	*	74.00	*	PK	PASS
V	4874.71	31.94	4.90	36.84	54.00	-17.16	AV	PASS
V	7311.84	22.64	9.83	32.47	54.00	-21.54	AV	PASS
V	9748.33	19.29	13.21	32.50	54.00	-21.50	AV	PASS
V	12185.73	*	*	*	54.00	*	AV	PASS
V	14622.39	*	*	*	54.00	*	AV	PASS
V	17059.00	*	*	*	54.00	*	AV	PASS
H	4874.17	31.12	4.90	36.02	54.00	-17.99	AV	PASS
H	7311.23	23.58	9.83	33.41	54.00	-20.59	AV	PASS
H	9748.24	18.10	13.21	31.31	54.00	-22.69	AV	PASS
H	12185.41	*	*	*	54.00	*	AV	PASS
H	14622.66	*	*	*	54.00	*	AV	PASS
H	17059.95	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11g					CH High: 2462 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4924.52	41.62	5.05	46.67	74.00	-27.33	PK	PASS
V	7386.93	34.23	9.83	44.06	74.00	-29.94	PK	PASS
V	9848.56	28.17	13.24	41.41	74.00	-32.60	PK	PASS
V	12310.31	*	*	*	74.00	*	PK	PASS
V	14772.08	*	*	*	74.00	*	PK	PASS
V	17234.77	*	*	*	74.00	*	PK	PASS
H	4924.43	40.75	5.05	45.80	74.00	-28.20	PK	PASS
H	7386.95	34.85	9.83	44.68	74.00	-29.32	PK	PASS
H	9848.51	29.48	13.24	42.72	74.00	-31.28	PK	PASS
H	12310.17	*	*	*	74.00	*	PK	PASS
H	14772.65	*	*	*	74.00	*	PK	PASS
H	17234.46	*	*	*	74.00	*	PK	PASS
V	4924.67	31.97	5.05	37.02	54.00	-16.99	AV	PASS
V	7386.67	23.83	9.83	33.66	54.00	-20.34	AV	PASS
V	9848.49	17.06	13.24	30.30	54.00	-23.71	AV	PASS
V	12310.89	*	*	*	54.00	*	AV	PASS
V	14772.78	*	*	*	54.00	*	AV	PASS
V	17234.73	*	*	*	54.00	*	AV	PASS
H	4924.43	31.76	5.05	36.81	54.00	-17.20	AV	PASS
H	7386.95	24.92	9.83	34.75	54.00	-19.25	AV	PASS
H	9848.51	19.99	13.24	33.23	54.00	-20.78	AV	PASS
H	12310.17	*	*	*	54.00	*	AV	PASS
H	14772.65	*	*	*	54.00	*	AV	PASS
H	17234.46	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11n(HT20)					CH Low: 2412 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4824.19	41.24	4.74	45.98	74.00	-28.02	PK	PASS
V	7236.16	33.65	9.84	43.49	74.00	-30.51	PK	PASS
V	9648.58	28.60	13.18	41.78	74.00	-32.23	PK	PASS
V	12060.79	*	*	*	74.00	*	PK	PASS
V	14472.63	*	*	*	74.00	*	PK	PASS
V	16884.92	*	*	*	74.00	*	PK	PASS
H	4824.67	40.06	4.74	44.80	74.00	-29.20	PK	PASS
H	7236.58	34.02	9.84	43.86	74.00	-30.14	PK	PASS
H	9648.77	29.26	13.18	42.44	74.00	-31.56	PK	PASS
H	12060.47	*	*	*	74.00	*	PK	PASS
H	14472.27	*	*	*	74.00	*	PK	PASS
H	16884.16	*	*	*	74.00	*	PK	PASS
V	4824.06	31.56	4.74	36.30	54.00	-17.70	AV	PASS
V	7236.91	22.75	9.84	32.59	54.00	-21.41	AV	PASS
V	9648.18	17.00	13.18	30.18	54.00	-23.82	AV	PASS
V	12060.83	*	*	*	54.00	*	AV	PASS
V	14472.97	*	*	*	54.00	*	AV	PASS
V	16884.92	*	*	*	54.00	*	AV	PASS
H	4824.70	31.36	4.74	36.10	54.00	-17.90	AV	PASS
H	7236.58	24.05	9.84	33.89	54.00	-20.11	AV	PASS
H	9648.77	18.17	13.18	31.35	54.00	-22.65	AV	PASS
H	12060.47	*	*	*	54.00	*	AV	PASS
H	14472.27	*	*	*	54.00	*	AV	PASS
H	16884.16	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. “\*” means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11n(HT20)					CH Middle: 2437 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4874.63	40.83	4.90	45.73	74.00	-28.27	PK	PASS
V	7311.96	34.30	9.83	44.13	74.00	-29.88	PK	PASS
V	9748.80	29.85	13.21	43.06	74.00	-30.95	PK	PASS
V	12185.96	*	*	*	74.00	*	PK	PASS
V	14622.57	*	*	*	74.00	*	PK	PASS
V	17059.40	*	*	*	74.00	*	PK	PASS
H	4874.31	40.15	4.90	45.05	74.00	-28.95	PK	PASS
H	7311.69	35.53	9.83	45.36	74.00	-28.64	PK	PASS
H	9748.54	29.90	13.21	43.11	74.00	-30.89	PK	PASS
H	12185.52	*	*	*	74.00	*	PK	PASS
H	14622.18	*	*	*	74.00	*	PK	PASS
H	17059.75	*	*	*	74.00	*	PK	PASS
V	4874.14	31.45	4.90	36.35	54.00	-17.65	AV	PASS
V	7311.42	23.60	9.83	33.43	54.00	-20.57	AV	PASS
V	9748.16	19.83	13.21	33.04	54.00	-20.97	AV	PASS
V	12185.60	*	*	*	54.00	*	AV	PASS
V	14622.18	*	*	*	54.00	*	AV	PASS
V	17059.43	*	*	*	54.00	*	AV	PASS
H	4874.31	30.47	4.90	35.37	54.00	-18.64	AV	PASS
H	7311.69	24.23	9.83	34.06	54.00	-19.95	AV	PASS
H	9748.54	19.79	13.21	33.00	54.00	-21.00	AV	PASS
H	12185.52	*	*	*	54.00	*	AV	PASS
H	14622.18	*	*	*	54.00	*	AV	PASS
H	17059.75	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

**Radiated Spurious Emission (1GHz-40GHz)**

Test Mode: 802.11n(HT20)					CH High: 2462 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	4924.27	40.48	5.05	45.53	74.00	-28.47	PK	PASS
V	7386.56	35.22	9.83	45.05	74.00	-28.96	PK	PASS
V	9848.53	29.06	13.24	42.30	74.00	-31.71	PK	PASS
V	12310.04	*	*	*	74.00	*	PK	PASS
V	14772.08	*	*	*	74.00	*	PK	PASS
V	17234.51	*	*	*	74.00	*	PK	PASS
H	4924.92	42.50	5.05	47.55	74.00	-26.46	PK	PASS
H	7386.95	34.03	9.83	43.86	74.00	-30.15	PK	PASS
H	9848.74	29.47	13.24	42.71	74.00	-31.30	PK	PASS
H	12310.32	*	*	*	74.00	*	PK	PASS
H	14772.77	*	*	*	74.00	*	PK	PASS
H	17234.19	*	*	*	74.00	*	PK	PASS
V	4924.77	30.92	5.05	35.97	54.00	-18.03	AV	PASS
V	7386.25	23.70	9.83	33.53	54.00	-20.47	AV	PASS
V	9848.04	19.73	13.24	32.97	54.00	-21.04	AV	PASS
V	12310.58	*	*	*	54.00	*	AV	PASS
V	14772.79	*	*	*	54.00	*	AV	PASS
V	17234.79	*	*	*	54.00	*	AV	PASS
H	4924.92	31.94	5.05	36.99	54.00	-17.02	AV	PASS
H	7386.95	22.76	9.83	32.59	54.00	-21.42	AV	PASS
H	9848.74	17.48	13.24	30.72	54.00	-23.28	AV	PASS
H	12310.32	*	*	*	54.00	*	AV	PASS
H	14772.77	*	*	*	54.00	*	AV	PASS
H	17234.19	*	*	*	54.00	*	AV	PASS

**Remark:**

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



## **ANNEX A TEST SETUP PHOTOS**

Please refer to the document "8225EU012405W-AA.PDF"

## **ANNEX B EXTERNAL PHOTOS**

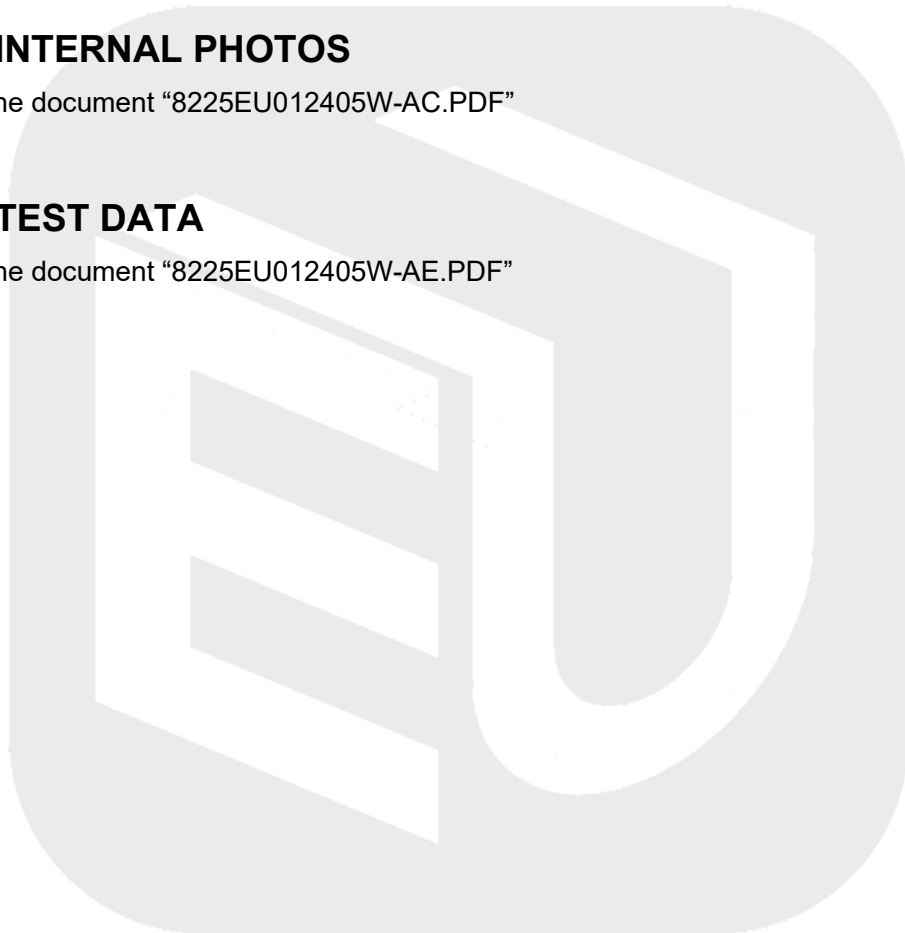
Please refer to the document "8225EU012405W-AB.PDF"

## **ANNEX C INTERNAL PHOTOS**

Please refer to the document "8225EU012405W-AC.PDF"

## **ANNEX D TEST DATA**

Please refer to the document "8225EU012405W-AE.PDF"



## STATEMENT

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--- End of Report ---