



FCC PART 15B, CLASS B MEASUREMENT AND TEST REPORT

For

Grandstream Networks, Inc.

126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

FCC ID: YZZUCM6308

Report Type: Original Report	Product Type: IP PBX
Report Number: RSZ200727013-EM-00	
Report Date: 2020-08-24	
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	IP PBX
Tested Model	UCM6308
Multiple Model	UCM6304
Model Differences	Refer to the DOS letter
Voltage Range	DC 12.0V from adapter or DC 48V from POE
Highest operating frequency	1.8GHz
Date of Test	2020-07-30 to 2020-08-14
Sample serial number	RSZ200727013-EM-S1 RSZ200727013-EM-S2 (Assigned by BACL, Shenzhen)
Received date	2020-07-27
Sample/EUT Status	Good condition
Adapter 1 information	Model: NBS24J120200HU Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 12.0V, 2.0A
Adapter 2 information	Model: GQ24-120200-AU Input: AC 100-240V, 50/60Hz, 1.0A Max Output: DC 12.0V, 2.0A
Adapter 3 information	Model: RD1202000-C55-154MG Input: AC 100-240V, 50/60Hz, 1.0A MAX Output: DC 12.0V, 2.0A

Objective

This test report is prepared on behalf of Grandstream Networks, Inc. in accordance with Part 2-Subpart J, Part 15-Subparts A, B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine the compliance of the EUT with FCC Part 15 B.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on CISPR 16-4-2:2011, the expanded combined standard uncertainty of test at Bay Area Compliance Laboratories Corp. (Shenzhen) is shown as below. And the uncertainty will be taken into consideration for the test data recorded in the report

Parameter		uncertainty
Conducted Emissions		$\pm 1.95\text{dB}$
Radiated Emissions	Below 1GHz	$\pm 4.75\text{dB}$
	Above 1GHz	$\pm 4.88\text{dB}$

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a manufacturer testing fashion.

EUT operation mode: Normal Working

EUT Exercise Software

No exercise software was used.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

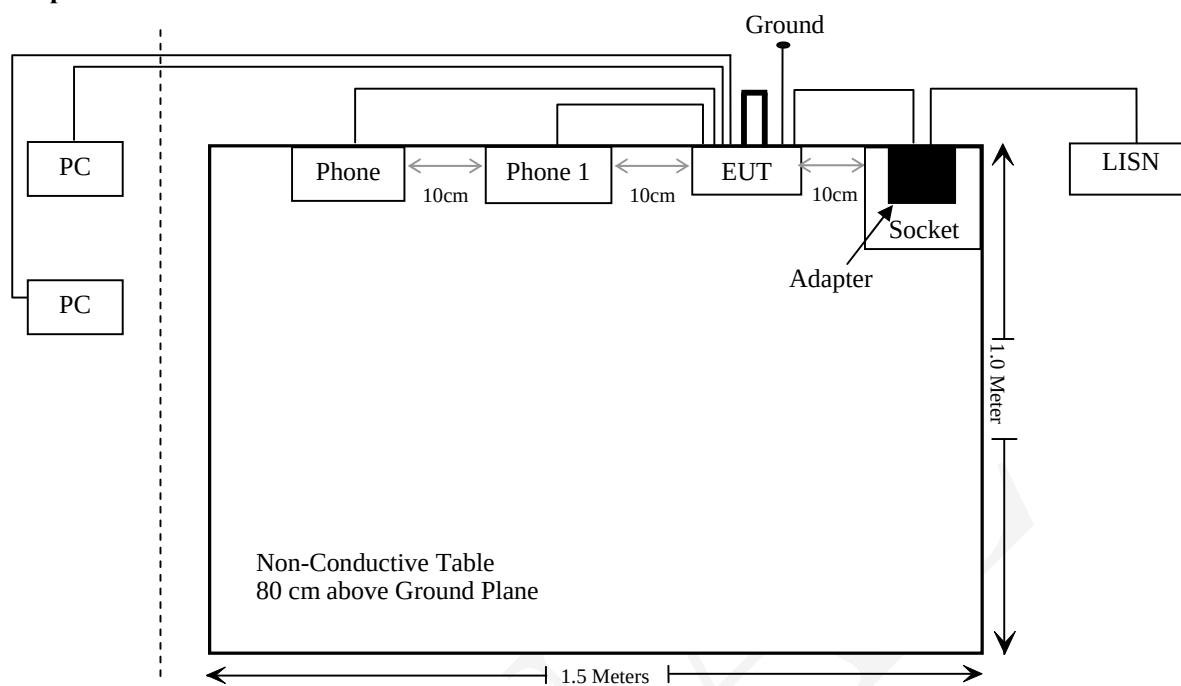
Manufacturer	Description	Model	Serial Number
BULL	Socket	GN-415K	5503290068073
DELL	PC	Latitude E5430	JG3NLV1
DELL	PC	Optiplex380	Optiplex380
GOSPELL	POE	G0720-480-050	G0720-480-050
Kinhao	Phone	E001	E001
Grandstream	Phone1	GRP2612W	20EZ2XAJC0F4BEDE

External I/O Cable

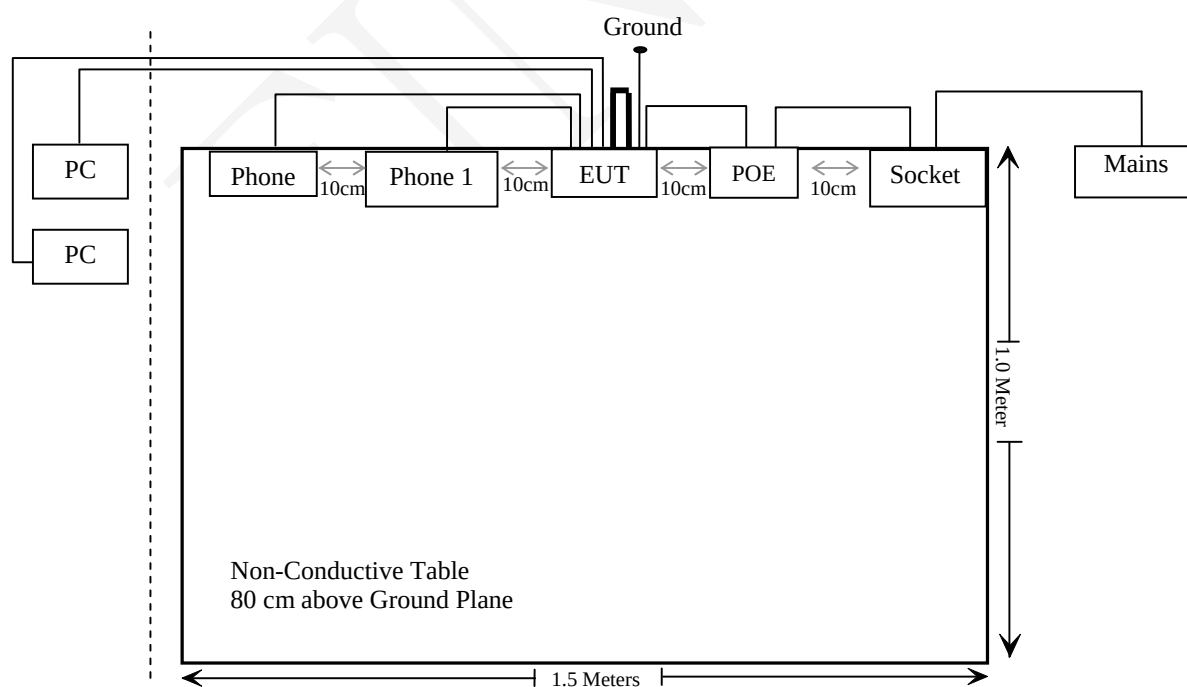
Cable Description	Length (m)	From/Port	To
Unshielded un-detachable AC cable	1.2	Socket	Mains
Unshielded detachable RJ11 cable	3.0	Phone	EUT
Unshielded un-detachable DC cable	1.5	Adapter	EUT
Unshielded detachable RJ45 cable*2	8.0	EUT	PC
Unshielded detachable RJ45 cable	3.0	EUT	Phone1
Unshielded detachable AC cable	1.0	POE	Socket
Unshielded detachable RJ45 cable	3.0	POE	EUT
Unshielded detachable RJ11 cables	0.5	EUT	EUT
Unshielded detachable ground cable	1.0	EUT	Ground

Block Diagram of Test Setup

Adapter:



POE:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2020/7/8	2021/7/7
Rohde & Schwarz	LISN	ENV216	101613	2020/1/22	2021/1/21
Rohde & Schwarz	Transient Limitor	ESH3Z2	DE25985	2019/11/29	2020/11/28
Unknown	CE Cable	CE Cable	UF A210B-1-0720-504504	2019/11/29	2020/11/28
Rohde & Schwarz	CE Test software	EMC 32	V8.53.0	NCR	NCR
R&S	EMI Test Receiver	ESR3	102455	2020/08/04	2021/08/03
Sonoma instrument	Pre-amplifier	310 N	186238	2020/08/04	2021/08/03
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2017/12/22	2020/12/21
Unknown	Cable 2	RF Cable 2	F-03-EM197	2019/11/29	2020/11/28
Unknown	Cable	Chamber Cable 4	EC-007	2019/11/29	2020/11/28
Rohde & Schwarz	Auto test software	EMC 32	V9.10	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40-N	102259	2020/7/22	2021/07/21
COM-POWER	Pre-amplifier	PA-122	181919	2019/11/29	2020/11/28
Sunol Sciences	Horn Antenna	DRH-118	A052604	2017/12/22	2020/12/21
Insulted Wire Inc.	RF Cable	SPS-2503-3150	02222010	2019/11/29	2020/11/28
Unknown	RF Cable	W1101-EQ1 OUT	F-19-EM005	2019/11/29	2020/11/28

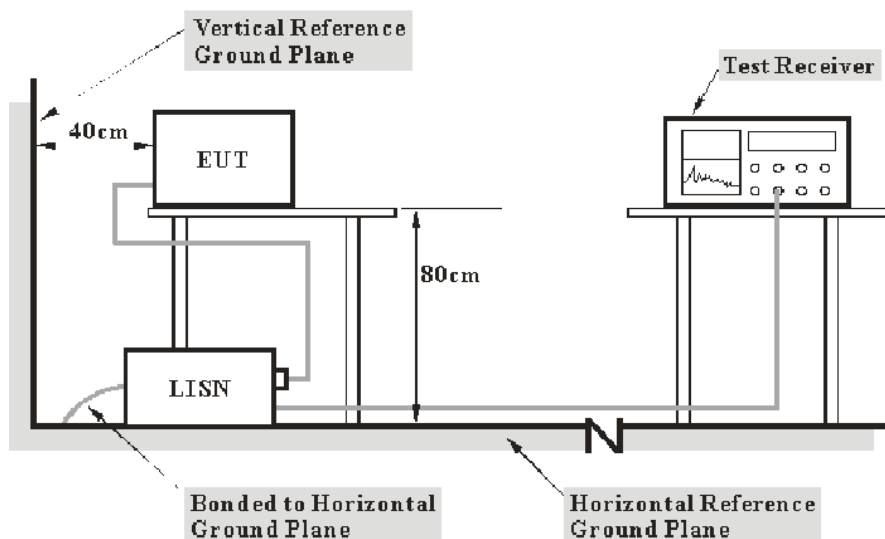
* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Applicable Standard

According to FCC §15.107

EUT Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with per ANSI C63.4-2014. The related limit was specified in FCC Part 15.107 Class B.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN/ISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

$$\text{Correction Factor} = \text{LISN VDF} + \text{Cable Loss} + \text{Transient Limiter Attenuation}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Data

Environmental Conditions

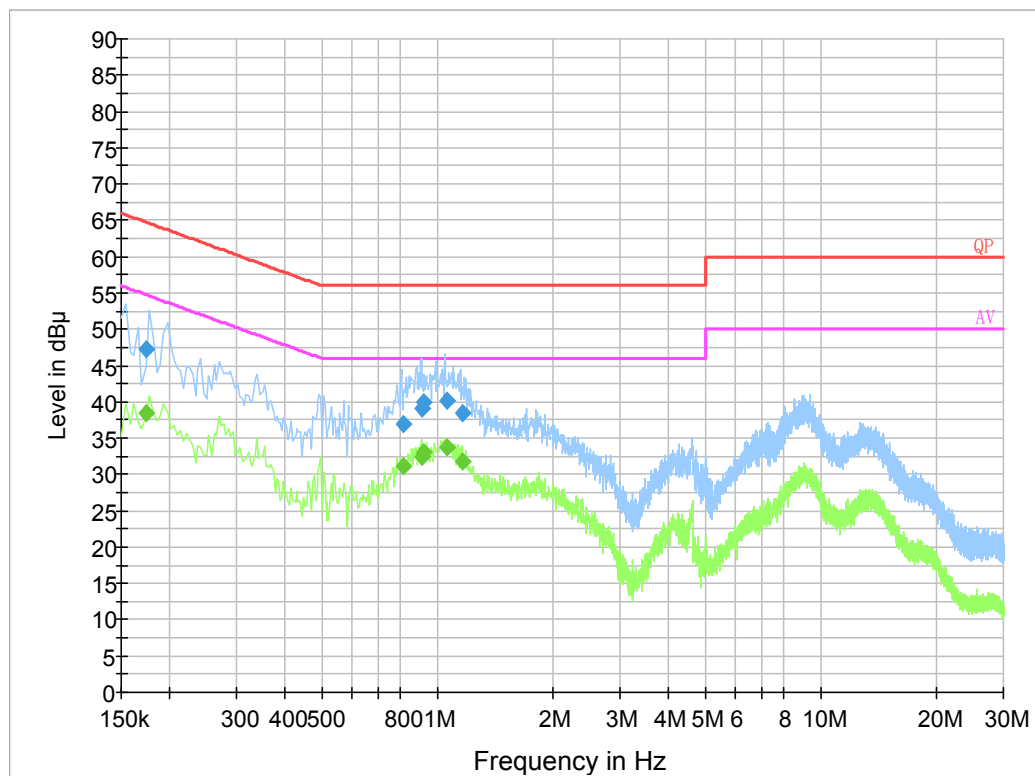
Temperature:	25 °C
Relative Humidity:	65 %
ATM Pressure:	101.0 kPa

The testing was performed by Haiguo Li on 2020-07-31.

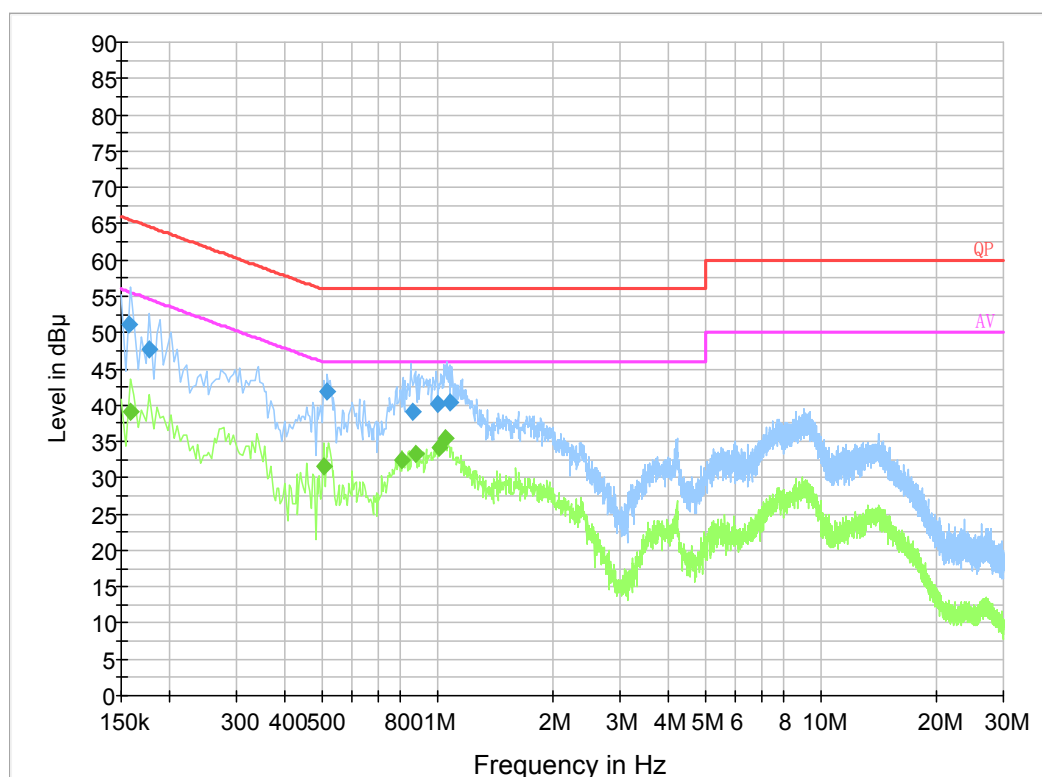
EUT Operation Mode: Normal Working

For adapter 1 (NBS24J120200HU):

AC 120V/60 Hz, Line



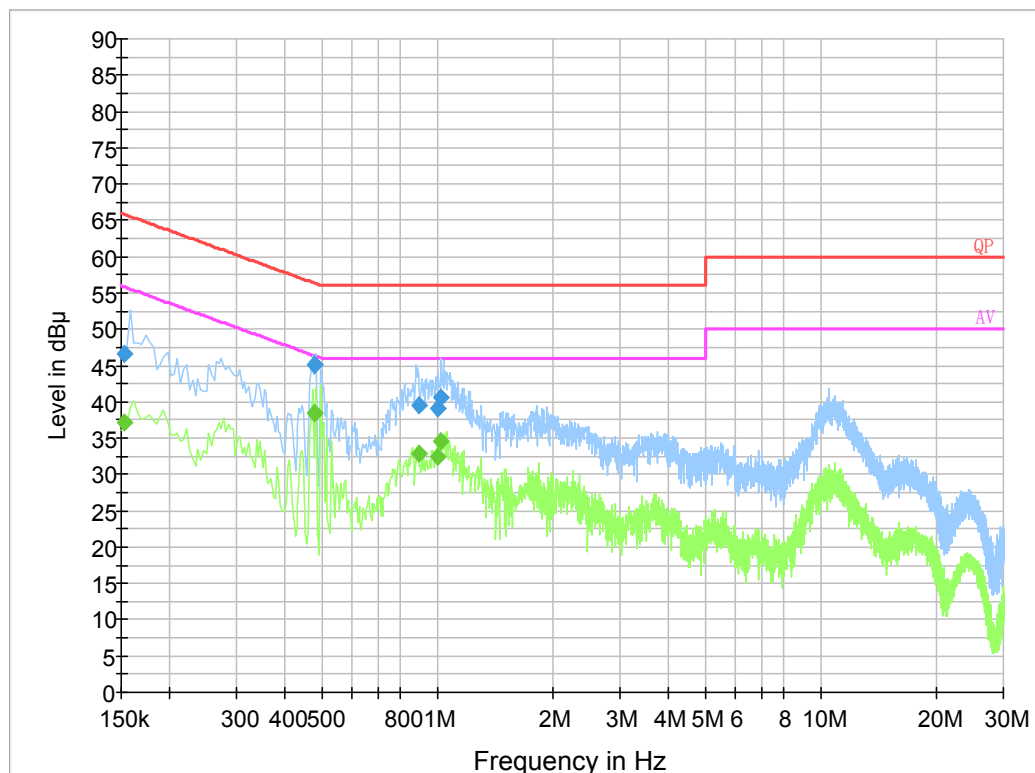
Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.173500	47.3	19.9	64.8	17.5	QP
0.813910	37.0	19.8	56.0	19.0	QP
0.916410	39.1	19.8	56.0	16.9	QP
0.920350	39.9	19.8	56.0	16.1	QP
1.062250	40.3	19.9	56.0	15.7	QP
1.164750	38.4	19.8	56.0	17.6	QP
0.173500	38.4	19.9	54.8	16.3	Ave.
0.813910	31.2	19.8	46.0	14.8	Ave.
0.916410	32.4	19.8	46.0	13.6	Ave.
0.920350	33.0	19.8	46.0	13.0	Ave.
1.062250	33.7	19.9	46.0	12.3	Ave.
1.164750	31.8	19.8	46.0	14.2	Ave.

AC 120V/60 Hz, Neutral

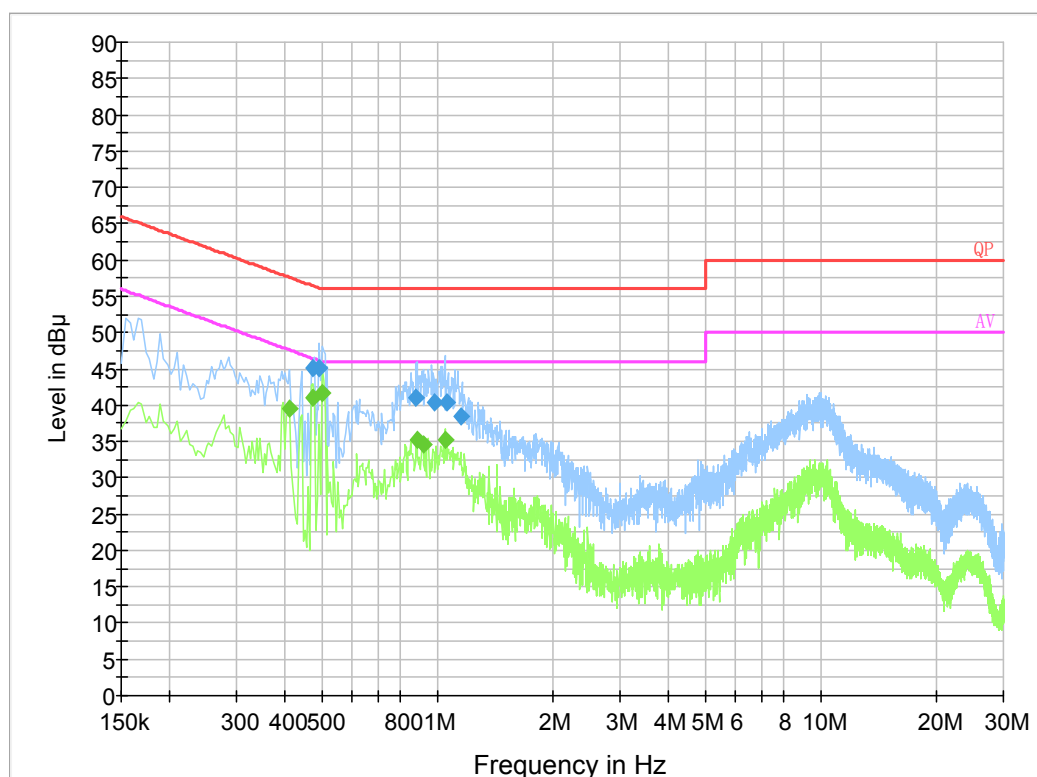
Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.157500	51.1	19.8	65.6	14.5	QP
0.177500	47.8	19.8	64.6	16.8	QP
0.514230	41.9	19.8	56.0	14.1	QP
0.866810	39.1	19.7	56.0	16.9	QP
1.003030	40.1	19.8	56.0	15.9	QP
1.078010	40.5	19.8	56.0	15.5	QP
0.158000	39.0	19.8	55.6	16.6	Ave.
0.506000	31.5	19.8	46.0	14.5	Ave.
0.810000	32.4	19.8	46.0	13.6	Ave.
0.882000	33.3	19.7	46.0	12.7	Ave.
1.010000	34.2	19.8	46.0	11.8	Ave.
1.050000	35.4	19.8	46.0	10.6	Ave.

For adapter 2 (GQ24-120200-AU):

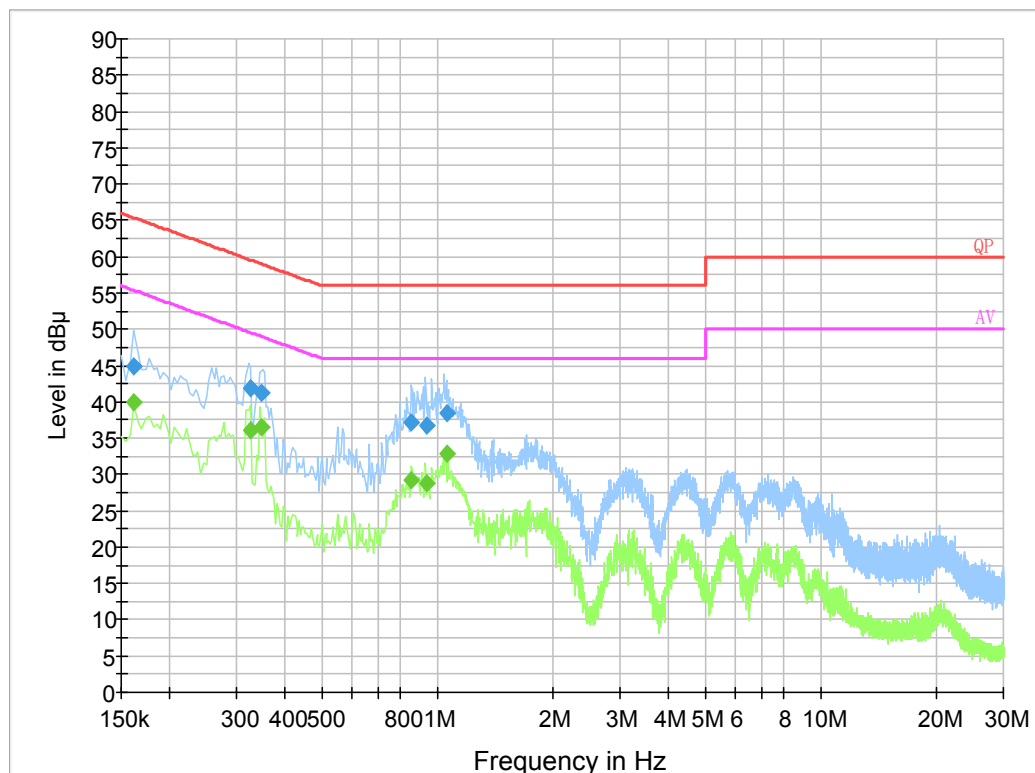
AC 120V/60 Hz, Line



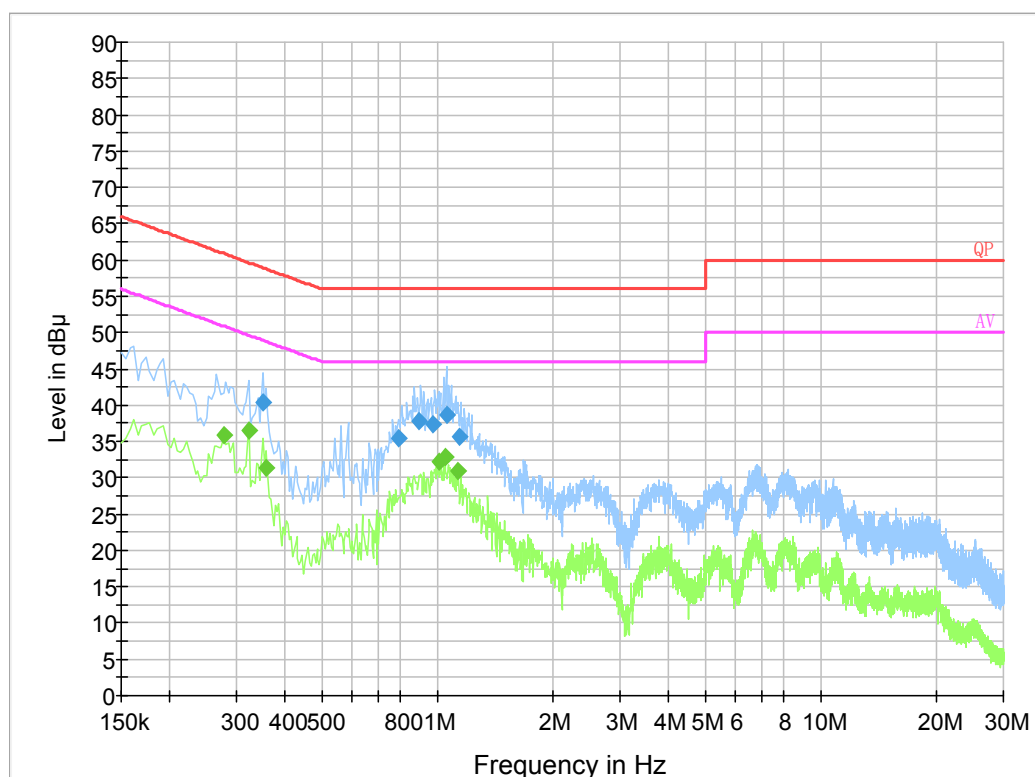
Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.153500	46.6	19.8	65.8	19.2	QP
0.478770	45.1	19.8	56.4	11.3	QP
0.478890	45.2	19.8	56.4	11.2	QP
0.895230	39.6	19.8	56.0	16.4	QP
1.006910	39.1	19.9	56.0	16.9	QP
1.022670	40.6	19.9	56.0	15.4	QP
0.153500	37.1	19.8	55.8	18.7	Ave.
0.478770	38.4	19.8	46.4	8.0	Ave.
0.478890	38.4	19.8	46.4	7.9	Ave.
0.895230	32.8	19.8	46.0	13.2	Ave.
1.006910	32.4	19.9	46.0	13.6	Ave.
1.022670	34.6	19.9	46.0	11.4	Ave.

AC 120V/60 Hz, Neutral

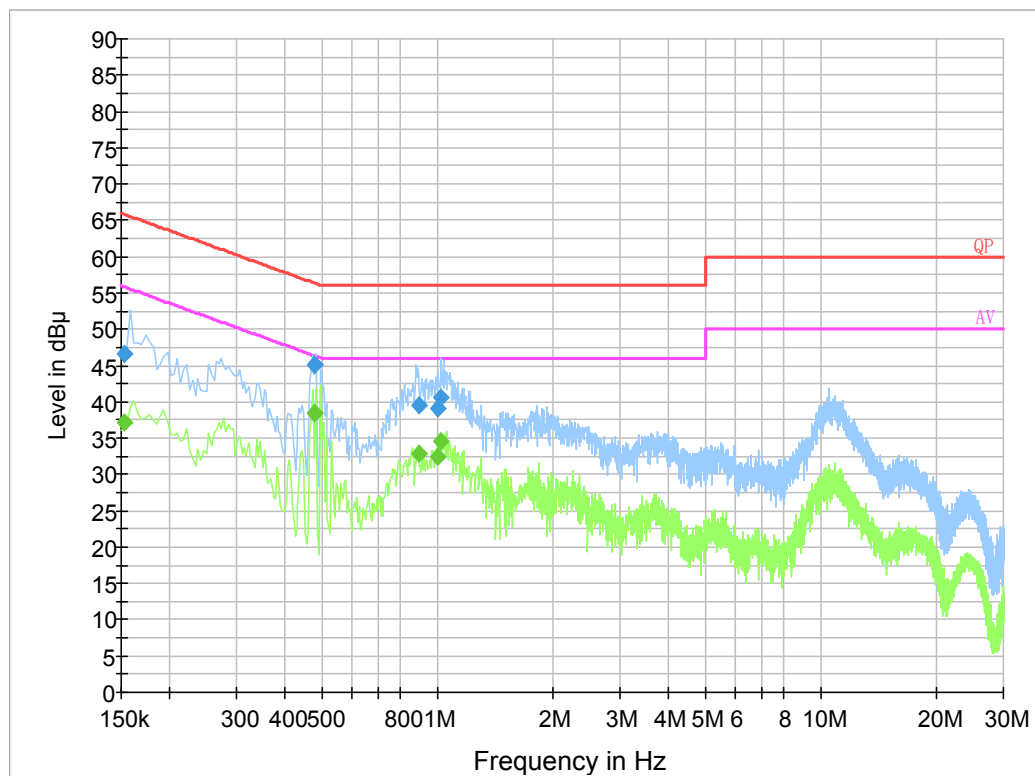
Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.474830	45.2	19.8	56.4	11.2	QP
0.490590	45.2	19.8	56.2	11.0	QP
0.880710	41.0	19.7	56.0	15.0	QP
0.984550	40.4	19.8	56.0	15.6	QP
1.062250	40.4	19.8	56.0	15.6	QP
1.151010	38.4	19.8	56.0	17.6	QP
0.414000	39.6	19.8	47.6	8.0	Ave.
0.474000	41.1	19.8	46.4	5.3	Ave.
0.502000	41.6	19.8	46.0	4.4	Ave.
0.886000	35.3	19.7	46.0	10.7	Ave.
0.918000	34.5	19.8	46.0	11.5	Ave.
1.050000	35.3	19.8	46.0	10.7	Ave.

For adapter 3 (RD1202000-C55-154MG):**AC 120V/60 Hz, Line**

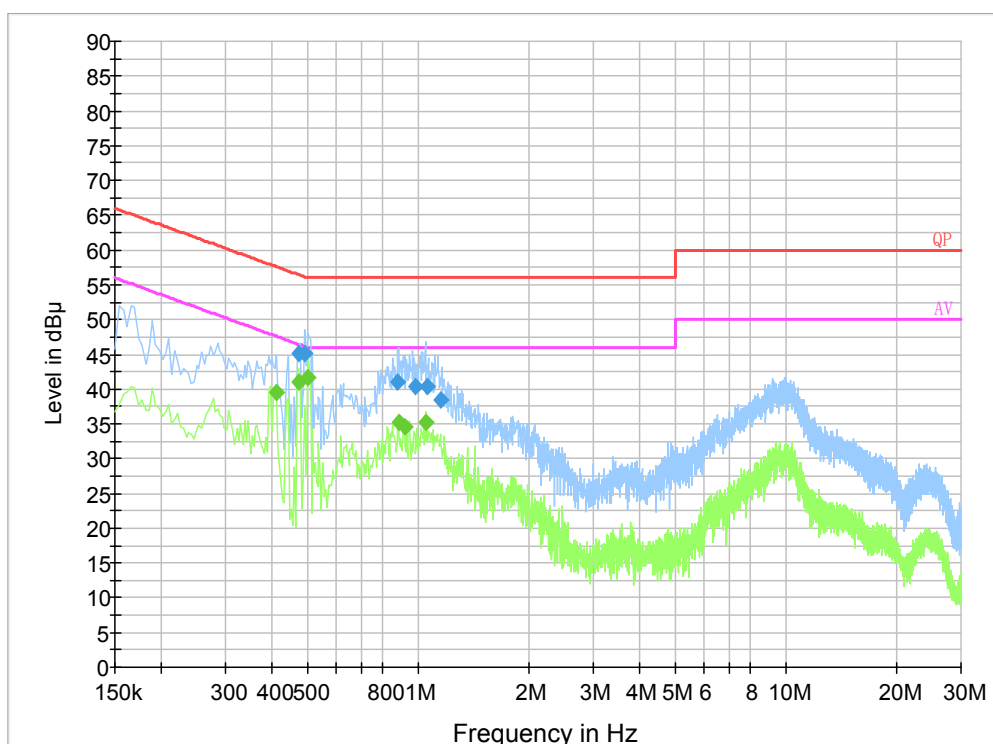
Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.161500	44.9	19.9	65.4	20.5	QP
0.325170	42.0	19.8	59.6	17.6	QP
0.348690	41.2	19.9	59.0	17.8	QP
0.857130	37.2	19.8	56.0	18.8	QP
0.935990	36.8	19.8	56.0	19.2	QP
1.058310	38.4	19.9	56.0	17.6	QP
0.161500	40.0	19.9	55.4	15.4	Ave.
0.325170	36.0	19.8	49.6	13.6	Ave.
0.348690	36.5	19.9	49.0	12.5	Ave.
0.857130	29.3	19.8	46.0	16.7	Ave.
0.935990	28.8	19.8	46.0	17.2	Ave.
1.058310	32.8	19.9	46.0	13.2	Ave.

AC 120V/60 Hz, Neutral

Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.352750	40.5	19.9	58.9	18.4	QP
0.793910	35.5	19.8	56.0	20.5	QP
0.900410	37.7	19.7	56.0	18.3	QP
0.975210	37.3	19.8	56.0	18.7	QP
1.062130	38.7	19.8	56.0	17.3	QP
1.144690	35.6	19.8	56.0	20.4	QP
0.278000	35.9	19.7	50.9	15.0	Ave.
0.322000	36.5	19.8	49.7	13.1	Ave.
0.358000	31.4	19.9	48.8	17.4	Ave.
1.010000	32.3	19.8	46.0	13.7	Ave.
1.050000	32.9	19.8	46.0	13.1	Ave.
1.138000	30.9	19.8	46.0	15.1	Ave.

For POE:**AC 120V/60 Hz, Line**

Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.153500	46.6	19.8	65.8	19.2	QP
0.478770	45.1	19.8	56.4	11.3	QP
0.478890	45.2	19.8	56.4	11.2	QP
0.895230	39.6	19.8	56.0	16.4	QP
1.006910	39.1	19.9	56.0	16.9	QP
1.022670	40.6	19.9	56.0	15.4	QP
0.153500	37.1	19.8	55.8	18.7	Ave.
0.478770	38.4	19.8	46.4	8.0	Ave.
0.478890	38.4	19.8	46.4	7.9	Ave.
0.895230	32.8	19.8	46.0	13.2	Ave.
1.006910	32.4	19.9	46.0	13.6	Ave.
1.022670	34.6	19.9	46.0	11.4	Ave.

AC 120V/60 Hz, Neutral

Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/Ave./QP)
0.474830	45.2	19.8	56.4	11.2	QP
0.490590	45.2	19.8	56.2	11.0	QP
0.880710	41.0	19.7	56.0	15.0	QP
0.984550	40.4	19.8	56.0	15.6	QP
1.062250	40.4	19.8	56.0	15.6	QP
1.151010	38.4	19.8	56.0	17.6	QP
0.414000	39.6	19.8	47.6	8.0	Ave.
0.474000	41.1	19.8	46.4	5.3	Ave.
0.502000	41.6	19.8	46.0	4.4	Ave.
0.886000	35.3	19.7	46.0	10.7	Ave.
0.918000	34.5	19.8	46.0	11.5	Ave.
1.050000	35.3	19.8	46.0	10.7	Ave.

Note:

- 1) Correction Factor = LISN VDF (Voltage Division Factor) + Cable Loss + Transient Limiter Attenuation
- 2) Corrected Amplitude = Reading + Correction Factor
- 3) Margin = Limit – Corrected Amplitude

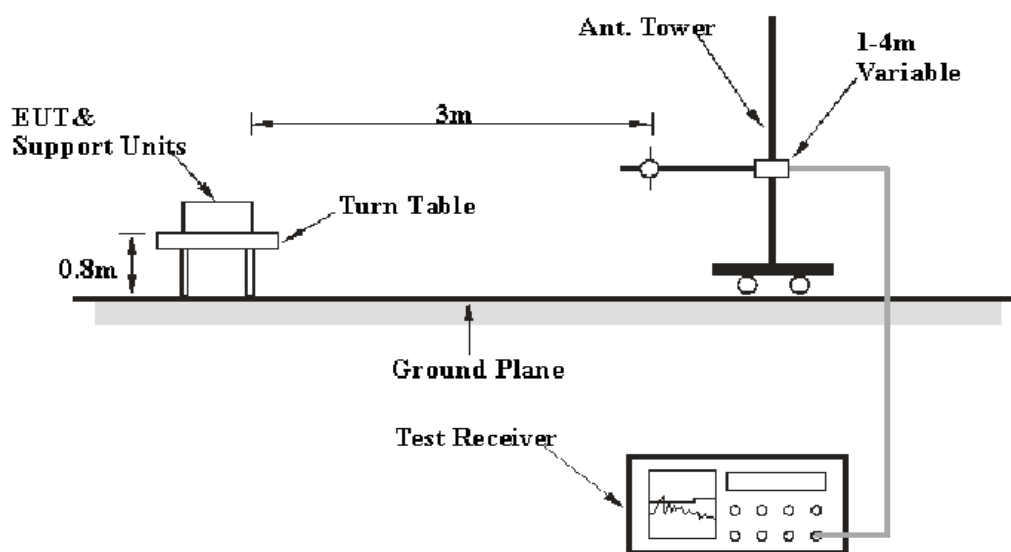
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

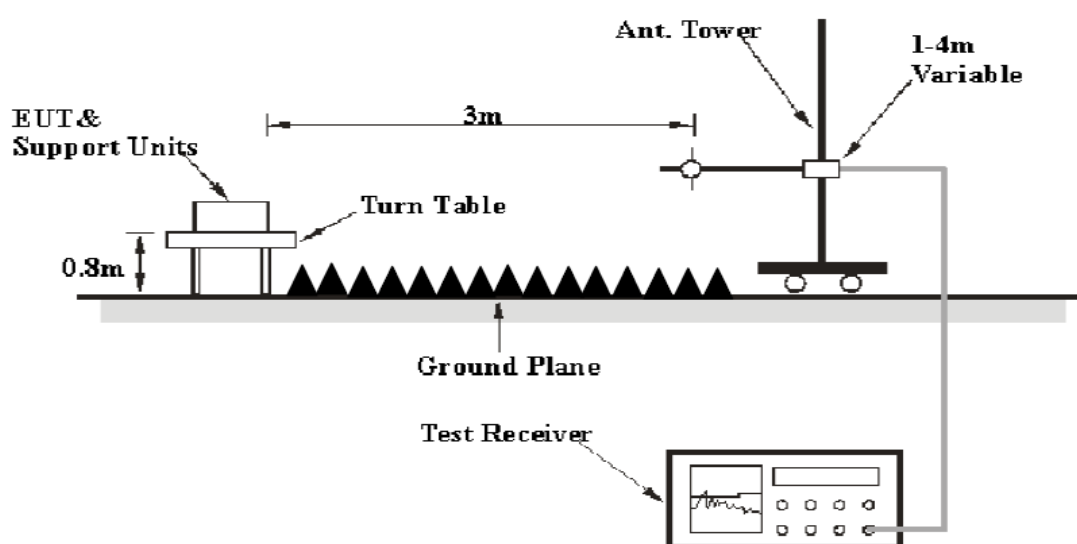
FCC §15.109

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 9 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Data

Environmental Conditions

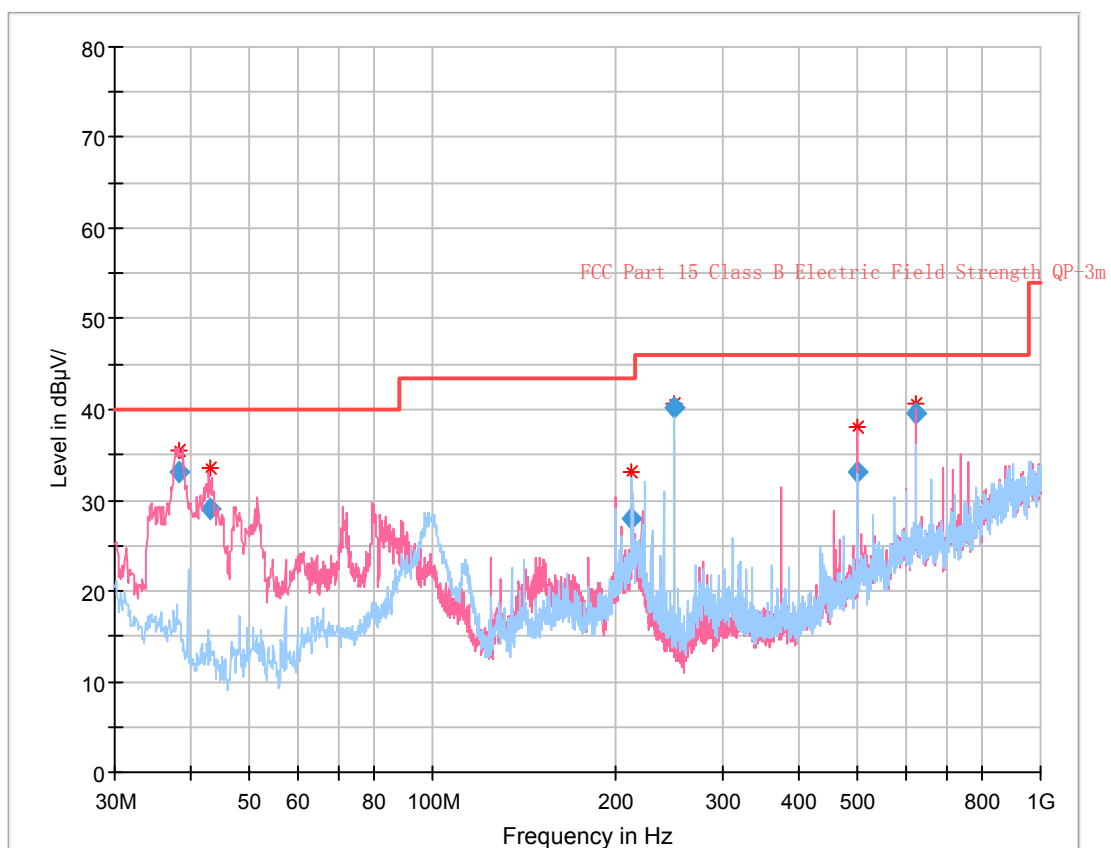
Temperature:	29 °C
Relative Humidity:	56~58 %
ATM Pressure:	101.0 kPa

The testing was performed by Holland Yang and Harris He from 2020-08-12 to 2020-08-13 for below 1GHz and Leven Gan and Leo Huang from 2020-07-30 to 2020-08-14 for above 1GHz.

EUT Operation Mode: Normal Working

For adapter 1 (NBS24J120200HU):

30 MHz – 1 GHz:



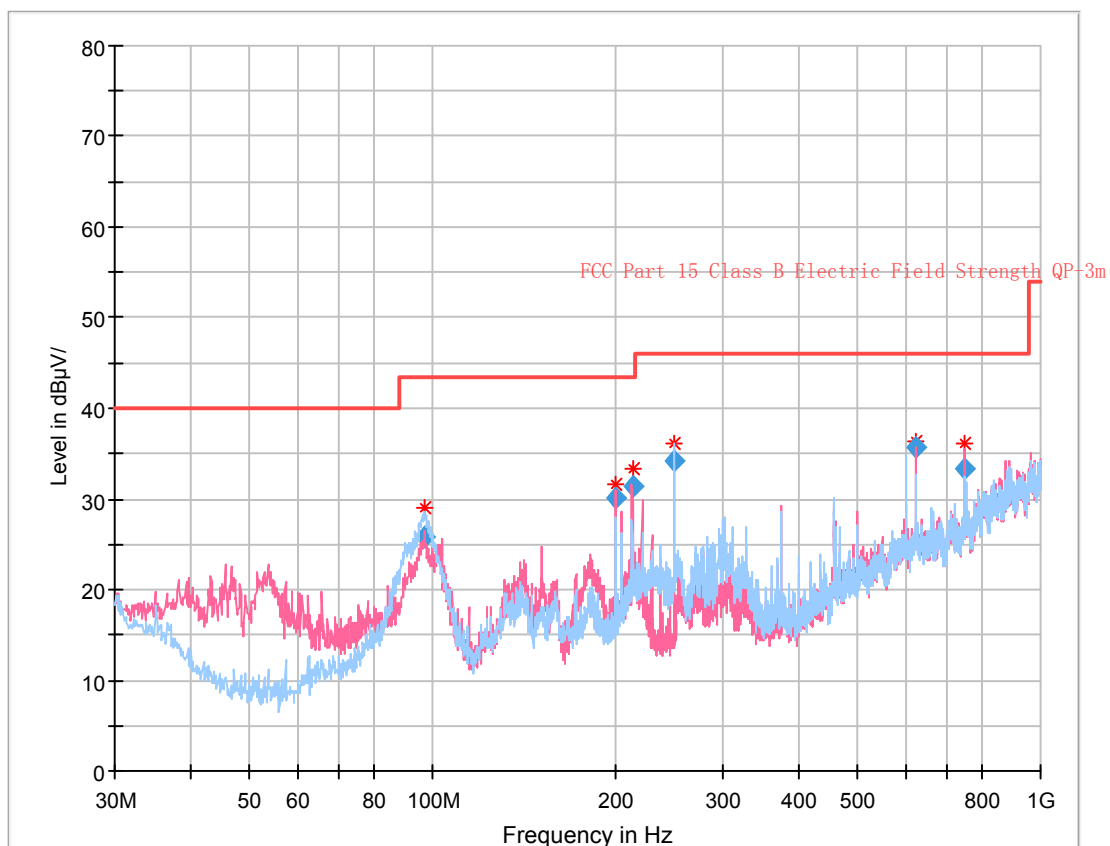
Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna height (cm)	Antenna Polarity	Turntable position (degree)	Correction Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
38.273750	33.15	110.0	V	60.0	-12.7	40.00	6.85
42.923125	29.05	115.0	V	91.0	-15.8	40.00	10.95
212.962000	27.92	138.0	H	309.0	-13.9	43.50	15.58
250.001000	40.11	130.0	H	293.0	-14.1	46.00	5.89
499.976250	33.07	146.0	V	91.0	-5.2	46.00	12.93
625.001000	39.62	109.0	V	161.0	-1.6	46.00	6.38

Above 1 GHz

Frequency (MHz)	Measurement		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dB μ V/m)	FCC Part 15B	
	Reading (dB μ V)	PK/QP/Ave.		Height (m)	Polar (H / V)			Limit (dB μ V/m)	Margin (dB)
1308.00	52.76	PK	75	1.3	H	-4.31	48.45	74	25.55
1308.00	28.42	Ave.	75	1.3	H	-4.31	24.11	54	29.89
1308.00	55.39	PK	214	1.1	V	-4.31	51.08	74	22.92
1308.00	28.69	Ave.	214	1.1	V	-4.31	24.38	54	29.62
2207.00	59.60	PK	172	2.4	H	-0.56	59.04	74	14.96
2207.00	31.19	Ave.	172	2.4	H	-0.56	30.63	54	23.37
2207.00	61.81	PK	29	1.6	V	-0.56	61.25	74	12.75
2207.00	34.22	Ave.	29	1.6	V	-0.56	33.66	54	20.34

For adapter 2 (GQ24-120200-AU):

30 MHz – 1 GHz:



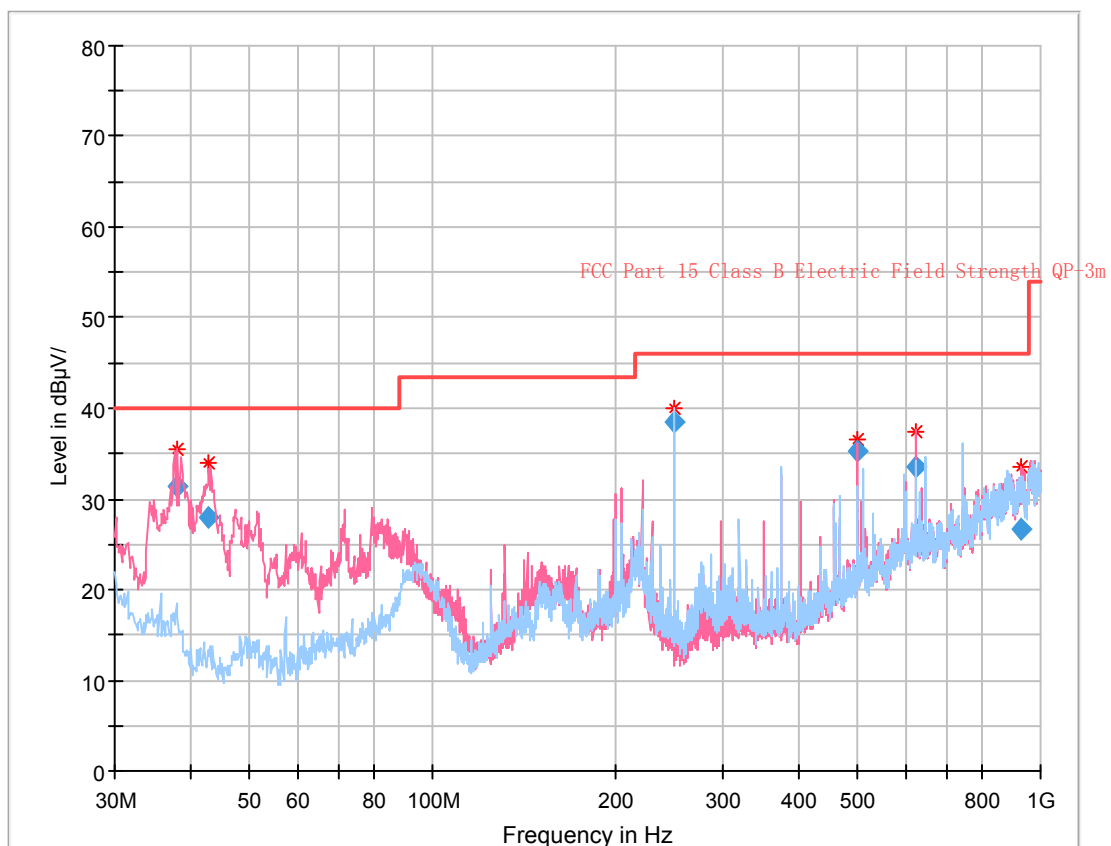
Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna height (cm)	Antenna Polarity	Turntable position (degree)	Correction Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
96.679250	25.74	395.0	H	76.0	-17.8	43.50	17.76
200.011500	30.15	109.0	V	355.0	-13.8	43.50	13.35
212.976375	31.35	102.0	V	329.0	-13.9	43.50	12.15
250.014875	34.29	170.0	H	104.0	-14.1	46.00	11.71
625.003750	35.71	130.0	V	269.0	-1.6	46.00	10.29
749.980000	33.33	123.0	V	307.0	-0.4	46.00	12.67

Above 1 GHz

Frequency (MHz)	Measurement		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dB μ V/m)	FCC Part 15B	
	Reading (dB μ V)	PK/QP/Ave.		Height (m)	Polar (H / V)			Limit (dB μ V/m)	Margin (dB)
2197.54	63.47	PK	180	1.2	H	-0.56	62.91	74	11.09
2197.54	32.88	Ave.	180	1.2	H	-0.56	32.32	54	21.68
2197.54	58.17	PK	91	1.4	V	-0.56	57.61	74	16.39
2197.54	30.57	Ave.	91	1.4	V	-0.56	30.01	54	23.99
2298.80	56.96	PK	110	2.0	H	-1.15	55.81	74	18.19
2298.80	28.02	Ave.	110	2.0	H	-1.15	26.87	54	27.13
2298.80	57.65	PK	90	1.6	V	-1.15	56.50	74	17.50
2298.80	29.09	Ave.	90	1.6	V	-1.15	27.94	54	26.06

For adapter 3 (RD1202000-C55-154MG):

30 MHz – 1 GHz:



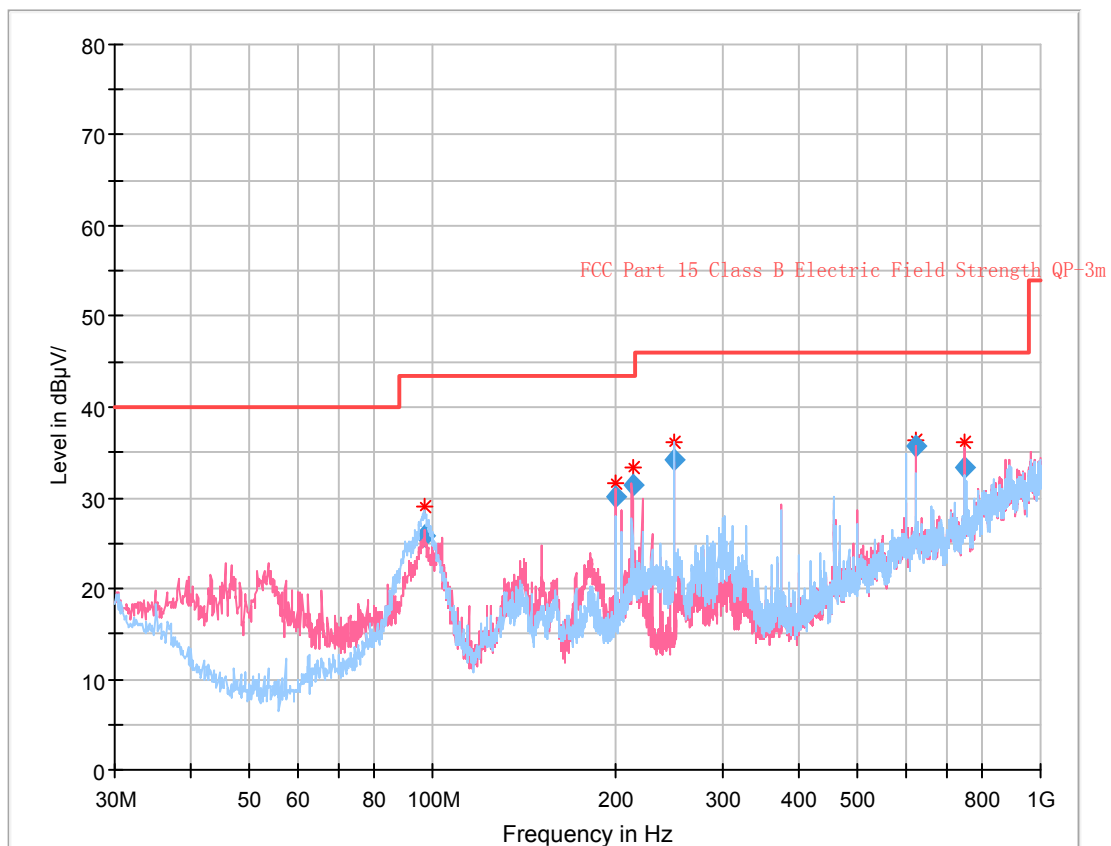
Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna height (cm)	Antenna Polarity	Turntable position (degree)	Correction Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
38.056250	31.37	123.0	V	299.0	-12.5	40.00	8.63
42.706125	27.89	103.0	V	298.0	-15.7	40.00	12.11
250.008625	38.48	208.0	H	314.0	-14.1	46.00	7.52
499.994250	35.22	156.0	V	58.0	-5.2	46.00	10.78
625.026500	33.63	134.0	V	61.0	-1.6	46.00	12.37
926.397125	26.57	116.0	V	157.0	4.7	46.00	19.43

Above 1 GHz

Frequency (MHz)	Measurement		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dB μ V/m)	FCC Part 15B	
	Reading (dB μ V)	PK/QP/Ave.		Height (m)	Polar (H / V)			Limit (dB μ V/m)	Margin (dB)
1308.00	52.37	PK	85	2.0	H	-4.31	48.06	74	25.94
1308.00	28.69	Ave.	85	2.0	H	-4.31	24.38	54	29.62
1308.00	56.92	PK	117	2.4	V	-4.31	52.61	74	21.39
1308.00	28.90	Ave.	117	2.4	V	-4.31	24.59	54	29.41
2206.59	62.12	PK	11	1.8	H	-0.56	61.56	74	12.44
2206.59	33.95	Ave.	11	1.8	H	-0.56	33.39	54	20.61
2206.59	62.56	PK	330	1.9	V	-0.56	62.00	74	12.00
2206.59	31.63	Ave.	330	1.9	V	-0.56	31.07	54	22.93

For POE:

30 MHz – 1 GHz:



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna height (cm)	Antenna Polarity	Turntable position (degree)	Correction Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
96.679250	25.74	395.0	H	76.0	-17.8	43.50	17.76
200.011500	30.15	109.0	V	355.0	-13.8	43.50	13.35
212.976375	31.35	102.0	V	329.0	-13.9	43.50	12.15
250.014875	34.29	170.0	H	104.0	-14.1	46.00	11.71
625.003750	35.71	130.0	V	269.0	-1.6	46.00	10.29
749.980000	33.33	123.0	V	307.0	-0.4	46.00	12.67

Above 1 GHz

Frequency (MHz)	Measurement		Turntable Degree	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dB μ V/m)	FCC Part 15B	
	Reading (dB μ V)	PK/QP/Ave.		Height (m)	Polar (H / V)			Limit (dB μ V/m)	Margin (dB)
1133.90	47.30	PK	258	1.5	H	-5.43	41.87	74	32.13
1133.90	30.22	Ave.	258	1.5	H	-5.43	24.79	54	29.21
1133.90	49.53	PK	65	1.8	V	-5.43	44.10	74	29.90
1133.90	33.30	Ave.	65	1.8	V	-5.43	27.87	54	26.13
2200.05	53.57	PK	345	1.1	H	-0.56	53.01	74	20.99
2200.05	33.22	Ave.	345	1.1	H	-0.56	32.66	54	21.34
2200.05	56.91	PK	223	2.4	V	-0.56	56.35	74	17.65
2200.05	34.15	Ave.	223	2.4	V	-0.56	33.59	54	20.41

Note:

- 1) Correction Factor=Antenna factor (RX) + cable loss – amplifier factor
- 2) Corrected Amplitude = Correction Factor + Reading
- 3) Margin = Limit - Corrected Amplitude

***** END OF REPORT *****