

FCC

EMC

TEST REPORT

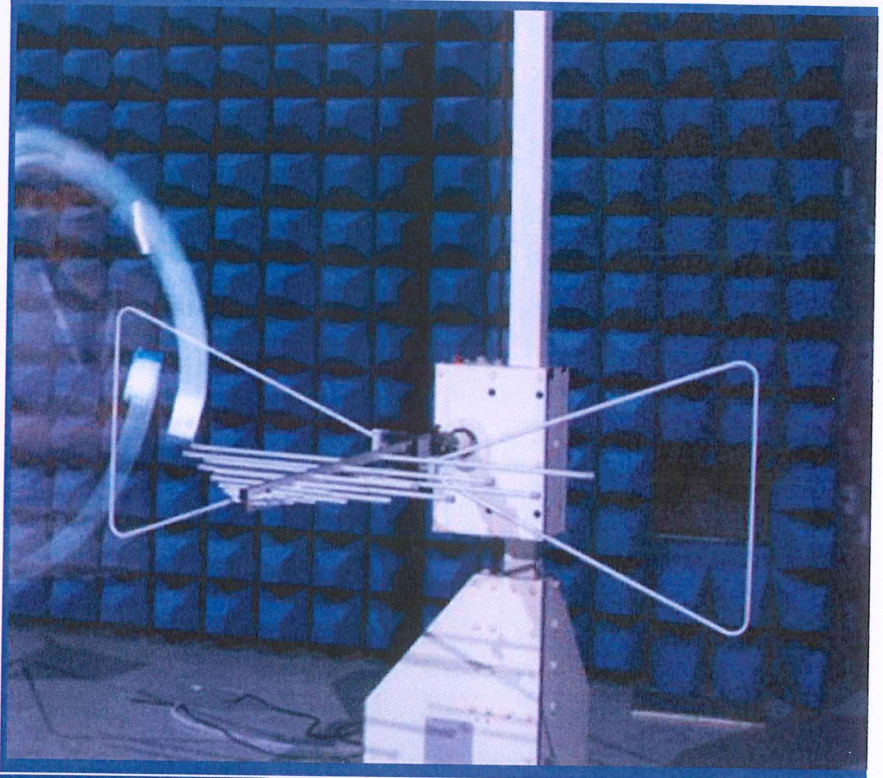
ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**Computer**

ISSUED TO  
Advantech Co Ltd

NO.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114,  
Taiwan



Tested by: Xia Long  
Xia Long  
(Engineer)

Date: Apr. 11, 2019

Approved by: Wei Yanquan  
Wei Yanquan  
(Chief Engineer)

Date: Apr. 11, 2019

Report No.: BL-EC18C0175-401  
EUT Name: Computer  
Model Name: DLT-V7212P+ (refer section 2.4)  
Brand Name: ADVANTECH DLOG  
Test Standard: 47 CFR Part 15 Subpart B  
FCC ID: M82-DLTV72

Test Conclusion: Pass  
Test Date: Dec. 18, 2018 ~ Jan. 08, 2019  
Date of Issue: Apr. 11, 2019

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### Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Mar. 20, 2019</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Apr. 11, 2019</u>	<u>Updated the information of applicant and manufacturer.</u>

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# 1 GENERAL INFORMATION

## 1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.</p> <p>The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025.The accreditation certificate is 4344.01.</p> <p>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.</p>
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

## 1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

## 1.4 Announce

- (1) The test report refer to the BALUN report mode v6.7.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

Applicant	Advantech Co Ltd
Address	NO.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan

### 2.2 Manufacturer Information

Manufacturer	Advantech Co Ltd
Address	NO.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan

### 2.3 Factory Information

Factory	Advantech Co.,Ltd.
Address	No. 27-3, Wende Rd., Guishan Dist., Taoyuan City 333, Taiwan

### 2.4 General Description for Equipment under Test (EUT)

EUT Name	Computer
Model Name Under Test	DLT-V7212P+
Series Model Name	DLT-V7210XXXXXXXXXX, DLT-V7212XXXXXXXXXX (X can be 0-9, A-Z, a-z, any symbol, blank or nothing)
Description of Model name differentiation	The difference between the two series models is a different screen size, All models have two internal antennas and one external antenna.
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

## 2.5 Ancillary Equipment

Ancillary Equipment 1	Antenna 1	
Ancillary Equipment 2	Antenna 2	
Ancillary Equipment 3	Control Line 1	
	Length (Approx.)	2.95m
Ancillary Equipment 4	Control Line 2	
	Length (Approx.)	2.95m
Ancillary Equipment 5	DC Power Line	
	Length (Approx.)	2.9 m

## 2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 900/1800 MHz 3G Network WCDMA/HSDPA/HSUPA Band 1/2/5/8 4G Network FDD LTE Band 1/2/3/4/5/7/8/12/20 TDD LTE Band 38/40/41 Bluetooth, WIFI, GPS, GLONASS
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### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 15 Subpart B (10-1-17 Edition)	Unintentional Radiators
2	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

#### 3.2 Verdict

No.	Description	FCC Rule	Test Verdict	Result
1	Radiated Emission	15.109	Pass	Annex A .1
2	Conducted Emission, AC Ports	15.107	Pass	Annex A .2

#### 3.3 Test 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.

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	3.23 dB
Radiated emissions (30 MHz-1 GHz)	4.30 dB
Radiated emissions (1 GHz-18 GHz)	4.81 dB
Radiated emissions (18 GHz-40 GHz)	5.71 dB

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

Environment Parameter	Selected Values During Tests			
	Temperature	Voltage	Relative Humidity	Ambient Pressure
Normal Temperature, Normal Voltage (NTNV)	23°C to 25°C	AC 120 V/60 Hz or AC 240 V/50Hz	50% to 55%	100 kPa to 102 kPa

### 4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2018.06.13	2019.06.12	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-977	2017.07.22	2019.07.21	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1600	2018.07.11	2020.07.10	<input type="checkbox"/>
Anechoic Chamber	EMC Electronic Co., Ltd	9m*6m*6m	N/A	2017.02.21	2019.02.20	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V18.626	--	--	<input checked="" type="checkbox"/>

Radiated Emission Test For Frequency Above 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2018.11.07	2019.11.06	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2017.07.22	2019.07.21	<input type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2018.07.11	2020.07.10	<input checked="" type="checkbox"/>
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2019.02.20	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V18.626	--	--	<input checked="" type="checkbox"/>

Conducted Emission Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2018.06.13	2019.06.12	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2018.06.13	2019.06.12	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NNLK 8129	8129-462	2018.11.07	2019.11.06	<input type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2017.12.05	2019.12.04	<input type="checkbox"/>
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A	<input type="checkbox"/>
Test Software	BALUN	BL410_E	V18.626	--	--	<input checked="" type="checkbox"/>



### 4.3 Test Enclosure list

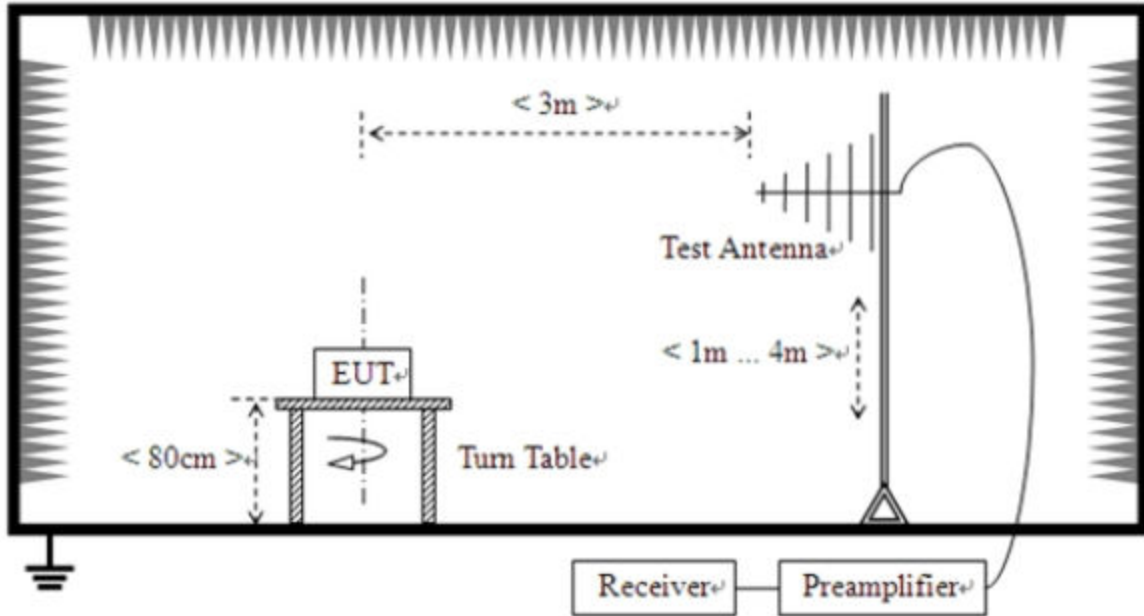
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	<input type="checkbox"/>
Laptop	Lenovo	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Printer	HP	DESKJET 1000	N/A	N/A	N/A	<input type="checkbox"/>
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Mouse	Logitech	M100	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB disk	Kingston	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
TF Card	Kingston	N/A	N/A	N/A	N/A	<input type="checkbox"/>
VGA Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
HDMI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
DVI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
Coaxial video cable	N/A	N/A	N/A	2.0 m	Shielded with core	<input type="checkbox"/>
iPhone	Apple	A1586	N/A	N/A	N/A	<input type="checkbox"/>
Phone	MI	M4	N/A	N/A	N/A	<input type="checkbox"/>
Bluetooth Earphone	SAMSUNG	Gear Circle	N/A	N/A	N/A	<input type="checkbox"/>
Wireless Communication s Test Set	R&S	CMW500	142028	N/A	Cal. Due 2018.06.11	<input type="checkbox"/>
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	<input type="checkbox"/>
Earphone	N/A	OPPO	N/A	1.1 m	N/A	<input type="checkbox"/>
Car Battery	Camel	55530	N/A	N/A	12 V/55 Ah	<input type="checkbox"/>
Artificial load	N/A	N/A	N/A	N/A	2.5 Ω/100 W	<input type="checkbox"/>
Artificial load	N/A	N/A	N/A	N/A	5 Ω/100 W	<input type="checkbox"/>
Electronic Load	ITECH	IT8511	N/A	N/A	N/A	<input type="checkbox"/>
USB Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
DC Power Supply	ITECH	IT6863A	60001401068 7210006	N/A	N/A	<input type="checkbox"/>
LCD Monitor	SAMSUNG	UA32C4000P	N/A	N/A	N/A	<input type="checkbox"/>
LCD Monitor	Dell	U241HB	N/A	N/A	N/A	<input type="checkbox"/>
RJ45 Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input checked="" type="checkbox"/>
Adapter	N/A	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>

## 4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The Video Play Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter + BT Link + WIFI Link + GPS RX
TC02	<u>The WCDMA Band 2 Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter + GLONASS RX + BT Link + WIFI Link + WCDMA Band 2 Link
TC03	<u>The WCDMA Band 5 Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter +GPS RX + BT Link + WIFI Link + WCDMA Band 5 Link
TC04	<u>The FDD LTE Band 2 Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter + GLONASS RX + BT Link + WIFI Link + LTE Band 2 Link
TC05	<u>The FDD LTE Band 4 Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter + GPS RX + BT Link +WIFI Link+ LTE Band 4 Link
TC06	<u>The FDD LTE Band 12 Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter + GLONASS RX + BT Link + WIFI Link + LTE Band 12 Link
TC07	<u>The USB Test Mode</u> EUT + Antenna 1 + Antenna 2 + Control Line 1 + Control Line 2 + DC Power Line + Mouse + Keyboard + USB Disk + Laptop + RJ45 Cable + Adapter

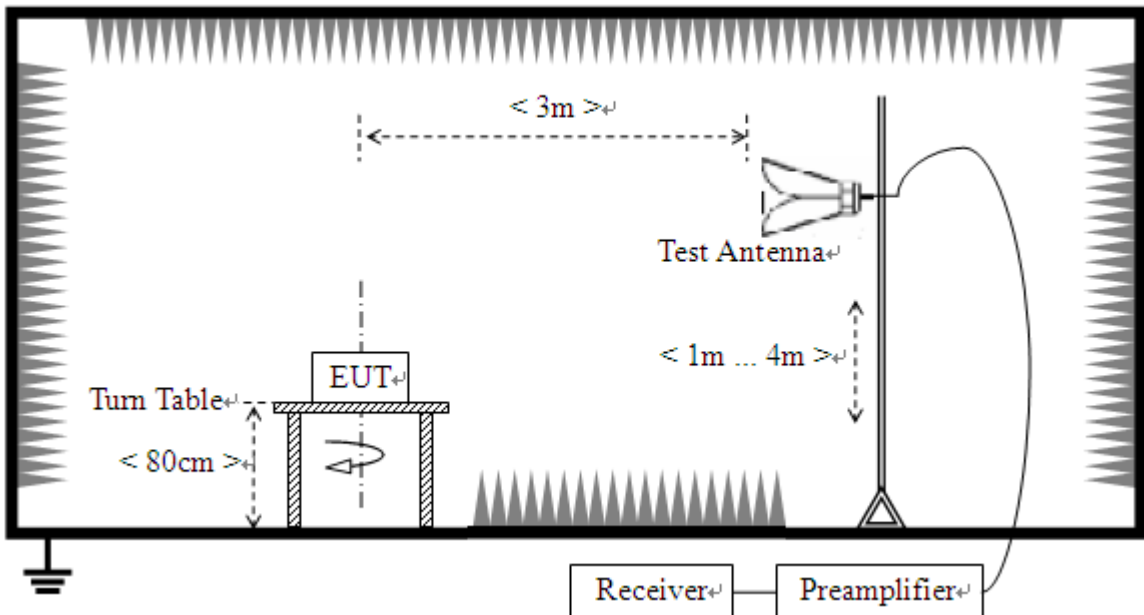
## 4.5 Test Setups

### Test Setup 1



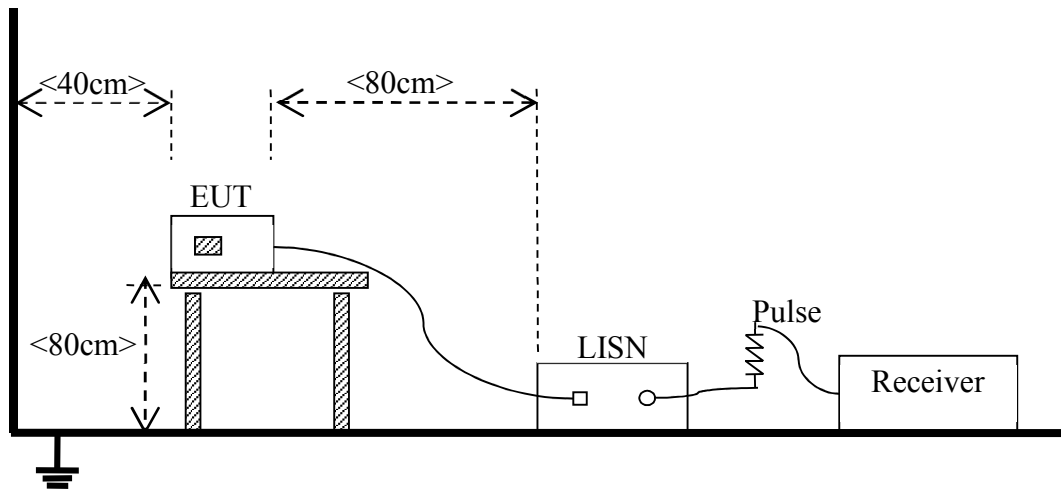
(For Radiated Emission Test (30 MHz-1 GHz))

### Test Setup 2



(For Radiated Emission Test (above 1 GHz))

Test Setup 3



(For Conducted Emission, AC Ports)

## 4.6 Test Conditions

Test Case	Test Conditions	
Radiated Emission	Test Env.	NTNV
	Test Setup	Test Setup 1&2
	Test Configuration	TC01~TC07 <sup>Note</sup>
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC07 <sup>Note</sup>

Note: Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report. The Video Play test mode is the worst mode in this report.

## 5 TEST ITEMS

### 5.1 Emission Tests

#### 5.1.1 Radiated Emission

##### 5.1.1.1 Limit

Frequency range (MHz)	Class B (at 3 m)		Class B (at 10 m)	Class A (at 10 m)	
	Field Strength ( $\mu\text{V/m}$ )	Field Strength ( $\text{dB}\mu\text{V/m}$ )	Field Strength ( $\text{dB}\mu\text{V/m}$ )	Field Strength ( $\mu\text{V/m}$ )	Field Strength ( $\text{dB}\mu\text{V/m}$ )
30 - 88	100	40	30	90	39
88 - 216	150	43.5	33.5	150	43.5
216 - 960	200	46	36	210	46.4
Above 960	500	54	44	300	49.5

NOTE:

- 1) Field Strength ( $\text{dB}\mu\text{V/m}$ ) =  $20 \cdot \log$  [Field Strength ( $\mu\text{V/m}$ )].
- 2) In the emission tables above, the tighter limit applies at the band edges.

##### 5.1.1.2 Test Setup

Refer to 4.5 section (test setup 1 to test setup 2) for radiated emission test, the photo of test setup please refer to ANNEX B.

##### 5.1.1.3 Test Procedure

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.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

##### 5.1.1.4 Test Result

Please refer to ANNEX A.1.

NOTE:

1. Results ( $\text{dB}\mu\text{V/m}$ ) = Reading ( $\text{dB}\mu\text{V}$ ) + Factor ( $\text{dB/m}$ )

The reading level is calculated by software which is not shown in the sheet

2. Factor ( $\text{dB/m}$ ) = Antenna Factor ( $\text{dB/m}$ ) + Cable Factor ( $\text{dB}$ ) – Amplifier Gain ( $\text{dB}$ )

3. Over limit = Results – Limit.

## 5.1.2 Conducted Emission

### 5.1.2.1 Test Limit

Frequency range (MHz)	Class A	
	Quasi-peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- 1) The lower limit shall apply at the band edges.
- 2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.

### 5.1.2.2 Test Setup

Refer to 4.5 section test (test setup 3) for conducted emission, the photo of test setup please refer to ANNEX B.

### 5.1.2.3 Test Procedure

The EUT is connected to the power mains through a LISN which provides 50  $\Omega$ /50  $\mu$ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are 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.

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.

### 5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

$$1. \text{ Results (dBuV/m)} = \text{Reading (dBuV)} + \text{Factor (dB/m)}$$

The reading level is calculated by software which is not shown in the sheet

$$2. \text{ Factor} = \text{Insertion loss} + \text{Cable loss}$$

$$3. \text{ Over limit} = \text{Results} - \text{Limit.}$$

## ANNEX A TEST RESULTS

### A.1 Radiated Emission

Note 1: The symbol of "--" in the table which means not application.

Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

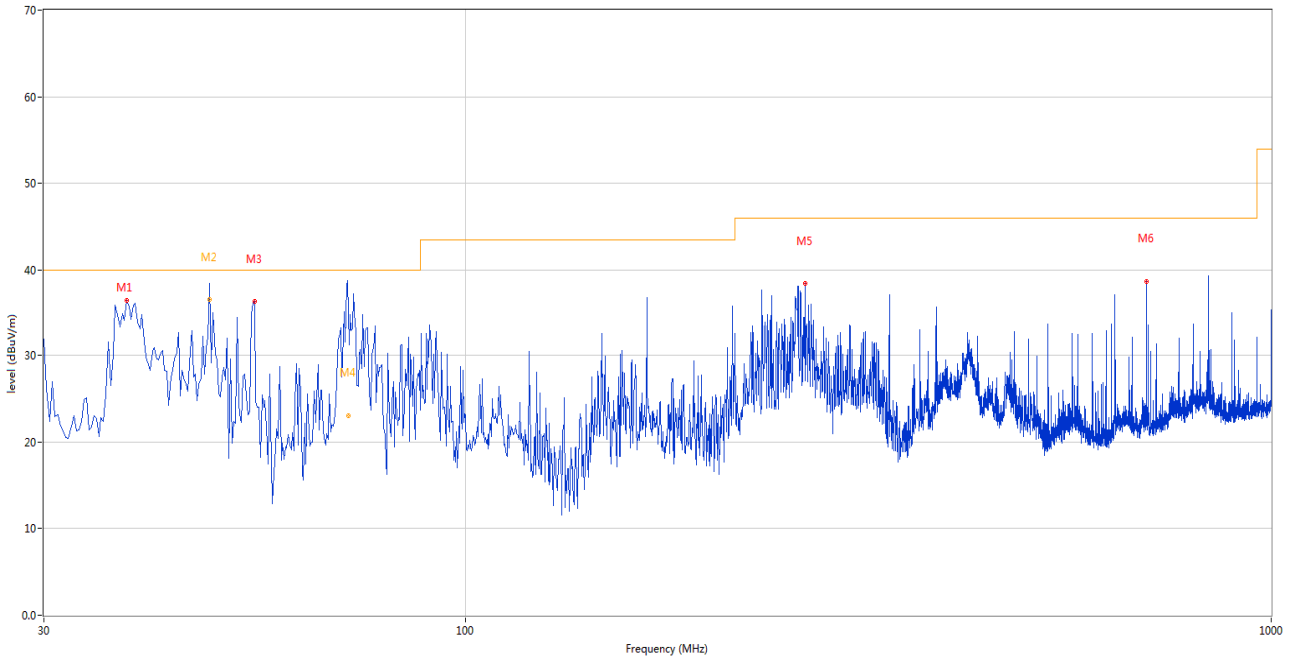
Note 3: The marked spikes near 2400 MHz with circle should be ignored because they are Bluetooth or WIFI carrier frequency.



Test Data and Plots

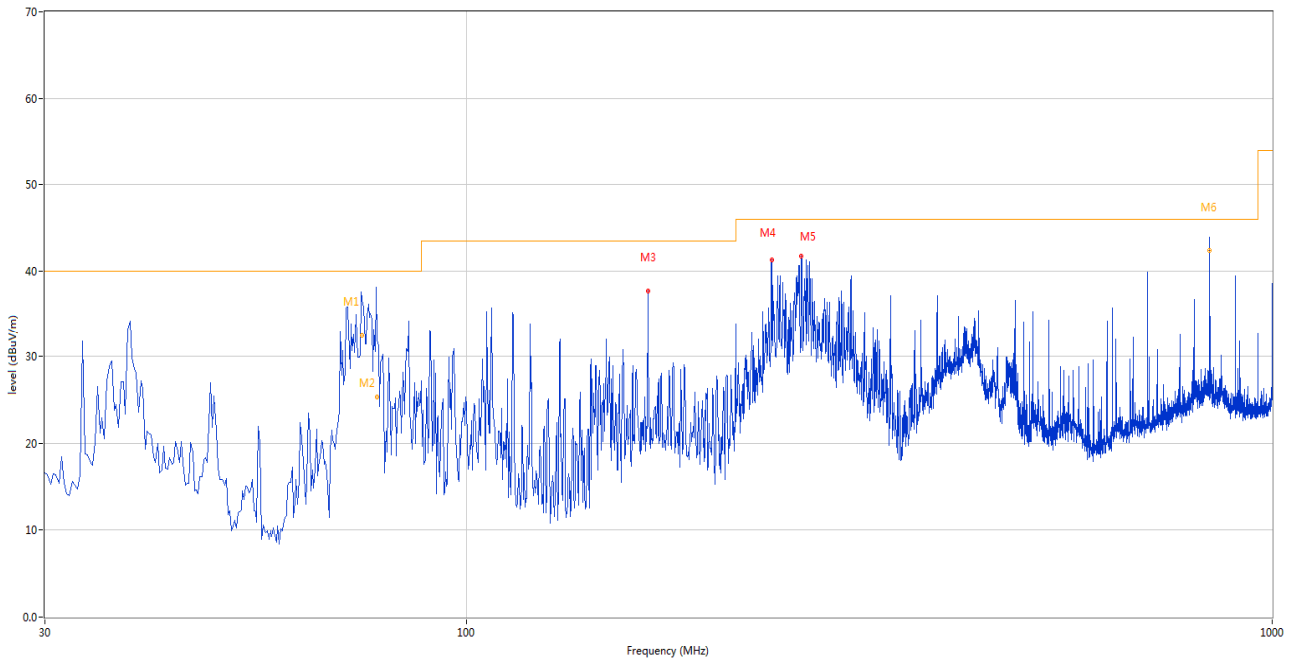
The Video Play Test Mode

A.1.1 Test Antenna Vertical, 30 MHz – 1 GHz



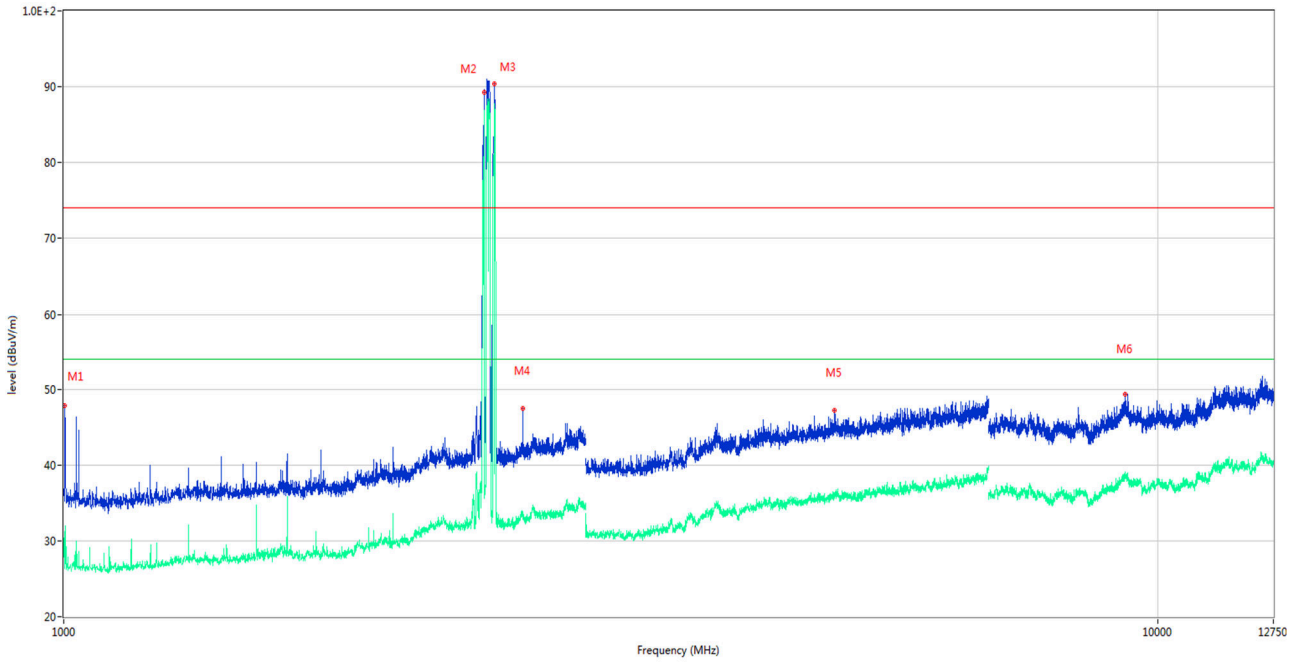
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	38.002	36.44	-24.86	40.0	-3.56	Peak	158.30	100	V	Pass
2	48.137	47.67	-23.34	40.0	7.67	Peak	230.90	109	V	N/A
2*	48.137	36.58	-23.34	40.0	-3.42	QP	230.90	109	V	Pass
3	54.735	36.31	-23.57	40.0	-3.69	Peak	78.70	100	V	Pass
4	71.691	32.20	-27.77	40.0	-7.80	Peak	109.60	108	V	N/A
4*	71.691	23.05	-27.77	40.0	-16.95	QP	109.60	108	V	Pass
5	264.013	38.40	-22.58	46.0	-7.60	Peak	15.40	100	V	Pass
6	700.028	38.66	-13.54	46.0	-7.34	Peak	200.40	100	V	Pass

## A.1.2 Test Antenna Horizontal, 30 MHz – 1 GHz



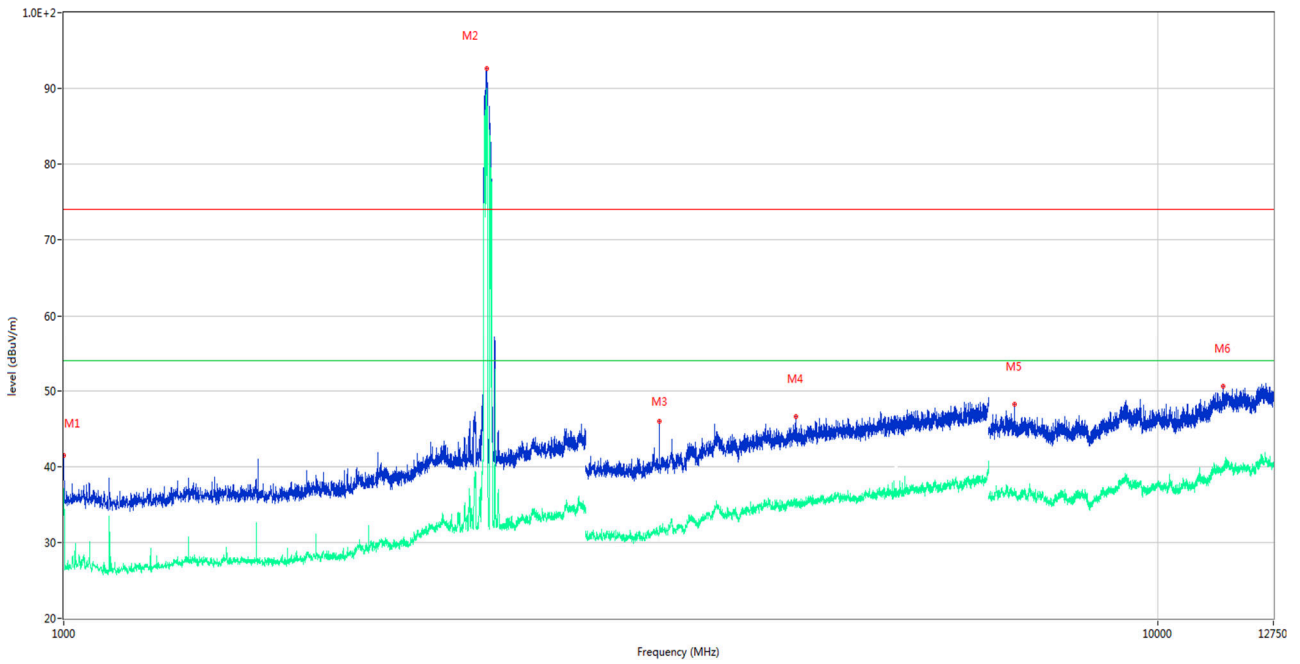
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	74.309	41.87	-28.72	40.0	1.87	Peak	155.90	200	H	N/A
1*	74.309	32.40	-28.72	40.0	-7.60	QP	155.90	200	H	Pass
2	77.468	34.15	-28.95	40.0	-5.85	Peak	170.90	199	H	N/A
2*	77.468	25.35	-28.95	40.0	-14.65	QP	170.90	199	H	Pass
3	167.982	37.70	-27.24	43.5	-5.80	Peak	268.30	200	H	Pass
4	239.278	41.24	-23.37	46.0	-4.76	Peak	145.60	100	H	Pass
5	260.617	41.76	-23.09	46.0	-4.24	Peak	220.30	100	H	Pass
6	836.632	44.94	-11.32	46.0	-1.06	Peak	188.00	184	H	N/A
6*	836.632	42.38	-11.32	46.0	-3.62	QP	188.00	184	H	Pass

A.1.3 Test Antenna Vertical, 1 GHz – 12.75 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1001.500	26.41	-16.48	54.0	-27.59	AV	41.50	100	V	Pass
1	1001.500	47.89	-16.48	74.0	-26.11	Peak	41.50	100	V	Pass
2**	2423.000	86.03	-11.22	54.0	32.03	AV	175.00	100	V	N/A
2	2423.000	89.33	-11.22	74.0	15.33	Peak	175.00	100	V	N/A
3**	2476.000	74.07	-11.53	54.0	20.07	AV	0.00	100	V	N/A
3	2476.000	90.38	-11.53	74.0	16.38	Peak	0.00	100	V	N/A
4**	2629.000	33.33	-9.79	54.0	-20.67	AV	48.90	100	V	Pass
4	2629.000	47.43	-9.79	74.0	-26.57	Peak	48.90	100	V	Pass
5**	5062.000	35.54	-4.53	54.0	-18.46	AV	125.70	100	V	Pass
5	5062.000	47.17	-4.53	74.0	-26.83	Peak	125.70	100	V	Pass
6**	9335.937	38.70	19.43	54.0	-15.30	AV	261.00	100	V	Pass
6	9335.937	49.30	19.43	74.0	-24.70	Peak	261.00	100	V	Pass

## A.1.4 Test Antenna Horizontal, 1 GHz – 12.75 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1000.000	33.61	-16.37	54.0	-20.39	AV	191.40	100	H	Pass
1	1000.000	41.46	-16.37	74.0	-32.54	Peak	191.40	100	H	Pass
2**	2434.500	89.97	-10.25	54.0	35.97	AV	248.90	100	H	N/A
2	2434.500	92.60	-10.25	74.0	18.60	Peak	248.90	100	H	N/A
3**	3502.000	31.77	-10.01	54.0	-22.23	AV	69.50	100	H	Pass
3	3502.000	45.93	-10.01	74.0	-28.07	Peak	69.50	100	H	Pass
4**	4672.000	35.22	-4.77	54.0	-18.78	AV	136.60	100	H	Pass
4	4672.000	46.56	-4.77	74.0	-27.44	Peak	136.60	100	H	Pass
5**	7398.188	36.69	16.33	54.0	-17.31	AV	115.70	100	H	Pass
5	7398.188	48.25	16.33	74.0	-25.75	Peak	115.70	100	H	Pass
6**	11477.812	40.08	19.81	54.0	-13.92	AV	171.60	100	H	Pass
6	11477.812	50.57	19.81	74.0	-23.43	Peak	171.60	100	H	Pass

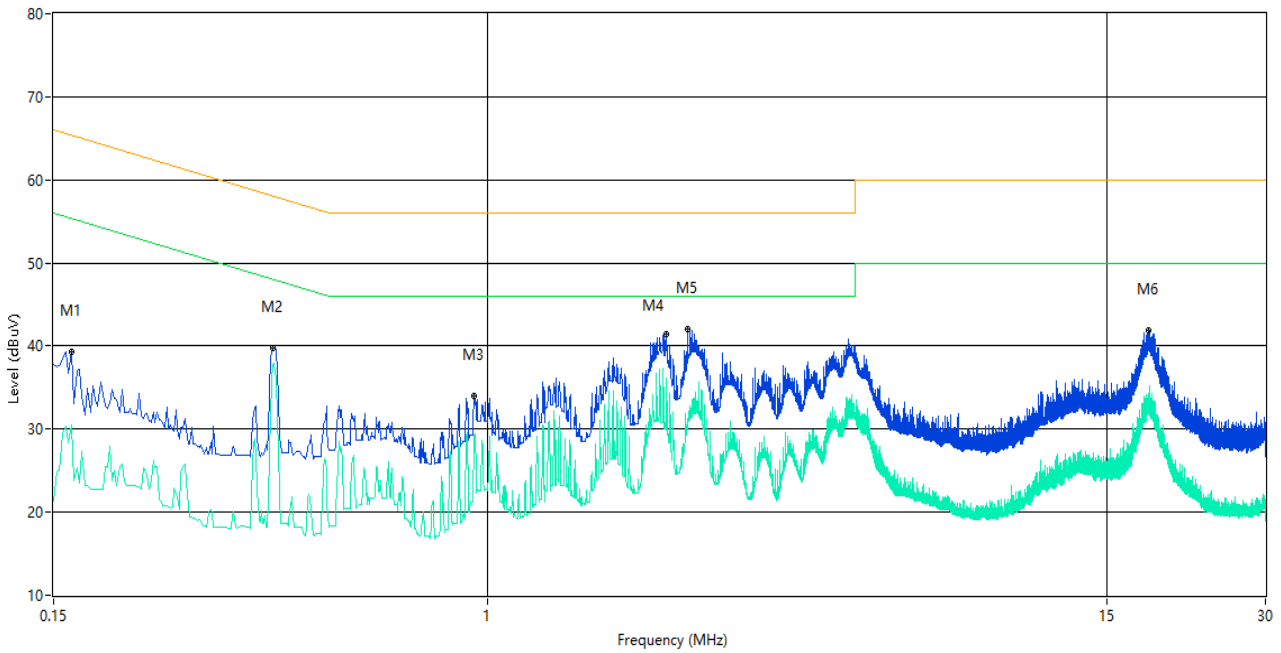
## A.2 Conducted Emission

### Test Data and Plots

#### The Video Play Test Mode

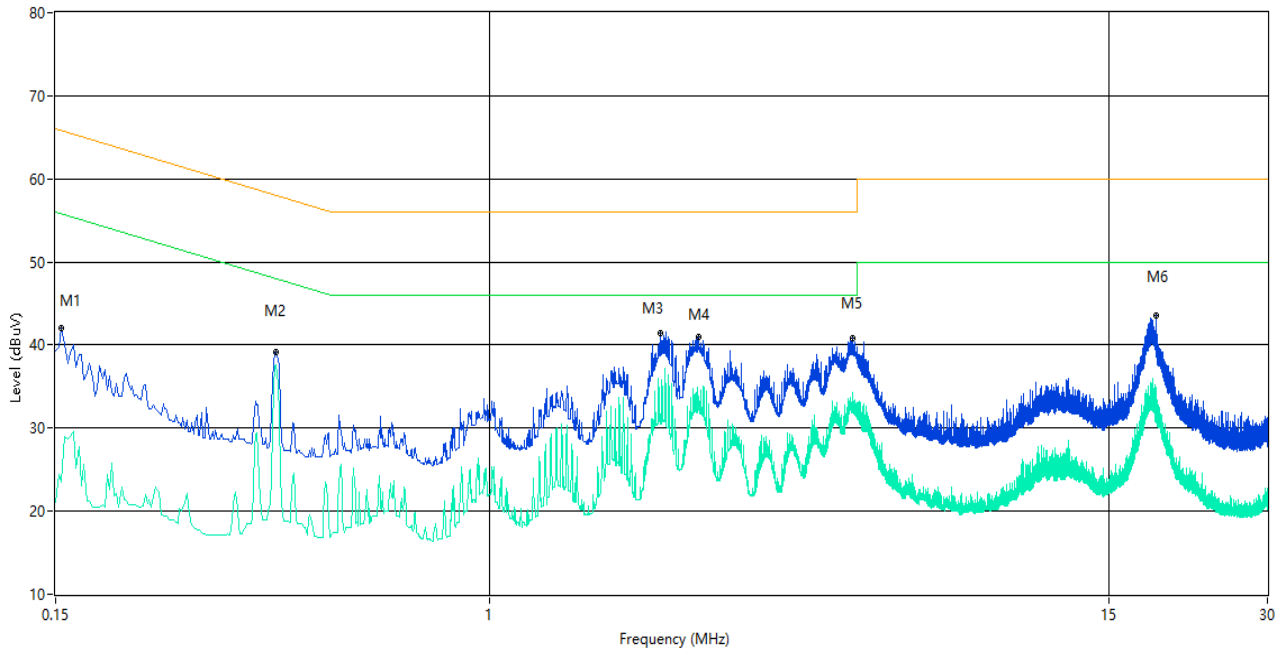
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (240 VAC, 50 Hz ) shown here.

#### A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.162	39.2	10.01	65.4	-26.20	Peak	L Line	Pass
1**	0.162	30.5	10.01	55.4	-24.90	AV	L Line	Pass
2	0.392	39.8	10.02	58.0	-18.20	Peak	L Line	Pass
2**	0.392	37.7	10.02	48.0	-10.30	AV	L Line	Pass
3	0.944	34.0	10.03	56.0	-22.00	Peak	L Line	Pass
3**	0.944	29.1	10.03	46.0	-16.90	AV	L Line	Pass
4	2.182	41.5	10.07	56.0	-14.50	Peak	L Line	Pass
4**	2.182	33.7	10.07	46.0	-12.30	AV	L Line	Pass
5	2.402	42.1	10.07	56.0	-13.90	Peak	L Line	Pass
5**	2.402	31.1	10.07	46.0	-14.90	AV	L Line	Pass
6	18.000	41.9	10.23	60.0	-18.10	Peak	L Line	Pass
6**	18.000	33.8	10.23	50.0	-16.20	AV	L Line	Pass

## A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.154	42.0	10.01	65.8	-23.80	Peak	N Line	Pass
1**	0.154	23.5	10.01	55.8	-32.30	AV	N Line	Pass
2	0.394	39.1	10.02	58.0	-18.90	Peak	N Line	Pass
2**	0.394	37.6	10.02	48.0	-10.40	AV	N Line	Pass
3	2.108	41.4	10.06	56.0	-14.60	Peak	N Line	Pass
3**	2.108	31.7	10.06	46.0	-14.30	AV	N Line	Pass
4	2.492	41.0	10.08	56.0	-15.00	Peak	N Line	Pass
4**	2.492	32.2	10.08	46.0	-13.80	AV	N Line	Pass
5	4.886	40.8	10.12	56.0	-15.20	Peak	N Line	Pass
5**	4.886	31.7	10.12	46.0	-14.30	AV	N Line	Pass
6	18.402	43.5	10.23	60.0	-16.50	Peak	N Line	Pass
6**	18.402	30.1	10.23	50.0	-19.90	AV	N Line	Pass

## **ANNEX B TEST SETUP PHOTOS**

Please refer the document "BL-EC18C0175-AE.PDF".

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document "BL-EC18C0175-AW.PDF".

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document "BL-EC18C0175-AI.PDF".

--END OF REPORT--