

# FCC TEST REPORT

**Product Name:** Mobile Phone  
**Trade Mark:** BLU  
**Model No.:** TANK MEGA 4G  
**Report Number:** 24111314624EMC-1  
**Test Standards:** FCC 47 CFR Part 15 Subpart B  
**FCC ID:** YHLBLUTKMG4G  
**Test Result:** PASS  
**Date of Issue:** December 12, 2024

Prepared for:

**BLU Products, Inc.**  
**8600 NW 36th Street, Suite #300 | Miami, FL 33166**

Prepared by:

**Shenzhen UnionTrust Quality and Technology Co., Ltd.**  
**16/F, Block A, Building 6th, Baoneng Science and Technology Park,**  
**Longhua Street, Longhua District, Shenzhen, China**  
**TEL: +86-755-2823 0888**  
**FAX: +86-755-2823 0886**

Prepared by:

*David Chen*

David Chen  
Senior Project Engineer

Reviewed by:

*Henry Lu*

Henry Lu  
Team Leader

Approved by:

*Robben Chen*

Robben Chen  
Assistant Manager

Date: December 12, 2024

**Shenzhen UnionTrust Quality and Technology Co., Ltd.**

Address: 16/F, Block A, Building 6th, Baoneng Science and Technology Park, Longhua Street, Longhua District, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: [info@uttlab.com](mailto:info@uttlab.com)

<http://www.uttlab.com>

UTTR-EMC-FCCPART15B-V1.1

Version

Version No.	Date	Description
V1.0	December 12, 2024	Original



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## 1. GENERAL INFORMATION

### 1.1 CLIENT INFORMATION

<b>Applicant:</b>	BLU Products, Inc.
<b>Address of Applicant:</b>	8600 NW 36th Street, Suite #300   Miami, FL 33166
<b>Manufacturer:</b>	BLU Products, Inc.
<b>Address of Manufacturer:</b>	8600 NW 36th Street, Suite #300   Miami, FL 33166

### 1.2 EUT INFORMATION

#### 1.2.1 General Description of EUT

<b>Product Name:</b>	Mobile Phone
<b>Model No.:</b>	TANK MEGA 4G
<b>Trade Mark:</b>	BLU
<b>DUT Stage:</b>	Identical Prototype
<b>Rated Voltage:</b>	<input checked="" type="checkbox"/> Powered by USB port (5Vdc) <input checked="" type="checkbox"/> 100-240V~50/60Hz and/or 3.8Vdc (1x3.8V Lithium-ion Battery)
<b>Classification of digital devices:</b>	Class B
<b>Highest Internal Frequency:</b>	2567.5 MHz
<b>Software Version:</b>	BLU_T0110LL_V03.01_GENERIC_ANATEL_22112024 (Provided by the customer)
<b>Hardware Version:</b>	A599M10-A10 (Provided by the customer)
<b>Sample Received Date:</b>	November 13, 2024
<b>Sample Tested Date:</b>	November 14, 2024 to November 16, 2024

**Remark:**

The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.

#### 1.2.2 Description of Accessories

Adapter	
<b>Model No.:</b>	US-WS-1001
<b>Input:</b>	100-240 V~50/60 Hz 0.2 A
<b>Output:</b>	5.0 V $\equiv$ 1000 mA
<b>DC Cable:</b>	1.0 Meter, Unshielded without ferrite

Battery	
<b>Model No.:</b>	C724211369L
<b>Battery Type:</b>	Lithium-ion Polymer Rechargeable Battery
<b>Rated Voltage:</b>	3.8 Vdc
<b>Limited Charge Voltage:</b>	4.35 Vdc
<b>Rated Capacity:</b>	3600 mAh

### 1.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	Supplied by
Notebook	Lenovo	E450	SL10G10780	UnionTrust
Mouse	DELL	MS111	CN-011D3V-738	UnionTrust
Earphone	Huawei	N/A	N/A	UnionTrust

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
USB Type-B Cable	Unshielded without ferrite	USB Type-B	0.5 Meter	UnionTrust

### 1.4 TEST LOCATION

**Shenzhen UnionTrust Quality and Technology Co., Ltd.**

Address: 16/F, Block A, Building 6th, Baoneng Science and Technology Park, Longhua Street, Longhua District, Shenzhen, China

Telephone: +86 (0) 755 2823 0888

Fax: +86 (0) 755 2823 0886

### 1.5 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

**CNAS-Lab Code: L9069**

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

**A2LA-Lab Certificate No.: 4312.01**

Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**ISED Wireless Device Testing Laboratories**

CAB identifier: CN0032

**FCC Accredited Lab.**

Designation Number: CN1194

Test Firm Registration Number: 259480

### 1.6 DEVIATION FROM STANDARDS

None.

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## 1.7 ABNORMALITIES FROM STANDARD CONDITIONS

None.

## 1.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

## 1.9 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product 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  $k=2$ .

No.	Item	Measurement Uncertainty
1	Conducted emission 9kHz-150kHz	$\pm 3.2$ dB
2	Conducted emission 150kHz-30MHz	$\pm 2.7$ dB
3	Radiated emission 9kHz-30MHz	$\pm 4.7$ dB
4	Radiated emission 30MHz-1GHz	$\pm 4.6$ dB
5	Radiated emission 1GHz-18GHz	$\pm 4.4$ dB
6	Radiated emission 18GHz-40GHz	$\pm 4.6$ dB

## 2. TEST SUMMARY

FCC 47 CFR Part 15 Subpart B Test Cases			
Test Item	Test Requirement	Test Method	Result
Conducted Emission	FCC 47 CFR Part 15.107	ANSI C63.4-2014	PASS
Radiated Emission	FCC 47 CFR Part 15.109	ANSI C63.4-2014	PASS



### 3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
<input checked="" type="checkbox"/>	3m SAC	ETS-LINDGREN	3M	Euroshiedpn-CT001270-1317	11-Nov-2023	10-Nov-2026
<input checked="" type="checkbox"/>	Receiver	R&S	ESIB26	100114	25-Oct-2024	24-Oct-2025
<input type="checkbox"/>	Loop Antenna	ETS-LINDGREN	6502	00202525	28-Oct-2024	27-Oct-2025
<input checked="" type="checkbox"/>	Broadband Antenna	ETS-LINDGREN	3142E	00201566	29-Oct-2024	28-Oct-2025
<input checked="" type="checkbox"/>	6dB Attenuator	Talent	RA6A5-N-18	18103001	29-Oct-2024	28-Oct-2025
<input checked="" type="checkbox"/>	Preamplifier	HP	8447F	2805A02960	25-Oct-2024	24-Oct-2025
<input checked="" type="checkbox"/>	Double-Ridged Waveguide Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201541	01-Apr-2024	31-Mar-2025
<input checked="" type="checkbox"/>	Pre-amplifier	ETS-LINDGREN	00118385	00201874	01-Apr-2024	31-Mar-2025
<input checked="" type="checkbox"/>	Double-Ridged Waveguide Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	28-Oct-2024	27-Oct-2025
<input checked="" type="checkbox"/>	Pre-amplifier	ETS-LINDGREN	00118384	00202652	28-Oct-2024	27-Oct-2025
<input checked="" type="checkbox"/>	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
<input checked="" type="checkbox"/>	Test Software	Audix	e3	Software Version: 9.160323		

Conducted Emission Test Equipment List						
Used	Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
<input checked="" type="checkbox"/>	Receiver	R&S	ESCI3	1166.5950.03	25-Oct-2024	24-Oct-2025
<input checked="" type="checkbox"/>	Pulse Limiter	R&S	ESH3-Z2	0357.8810.54	25-Oct-2024	24-Oct-2025
<input checked="" type="checkbox"/>	LISN	R&S	EVN216	3560.6550.12	26-Sep-2024	25-Sep-2025
<input type="checkbox"/>	LISN	ETS-Lindgren	3816/2SH	00201088	25-Oct-2024	24-Oct-2025
<input checked="" type="checkbox"/>	Test Software	EZ-EMC	EZ-CON	Software Version: EMC-CON 3A1.1		

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## 4. TEST CONFIGURATION

### 4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

#### 4.1.1 Normal or Extreme Test Conditions

Environment Parameter	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
NT/NV	+15 to +35	120V~60 Hz/240V~50 Hz or/and 3.8 V Battery	20 to 75
<b>Remark:</b> 1) NV: Normal Voltage; NT: Normal Temperature			

#### 4.1.2 Record of Normal Environment and Test Sample

Test Item	Temp. (°C)	Relative Humidity (%)	Pressure (kPa)	Sample No.	Tested by
Radiated Emission	25.1	65.9	99.7	S202411134635-ZJA03/8	Linson Xie
Conducted Emission	23.5	52.0	99.6		David Du

### 4.2 TEST MODES

Test Item	EMI Test Modes
Radiated Emission	<b>Test Mode 1: Charging from 120 Vac + MP4 playing (With TF Card) + Earphone+ +Light on + GSM 850 idle(Receivers 869-894MHz)</b> Test Mode 2: Charging from 120 Vac + Camera (Front)+ With TF Card+ WCDMA Band V idle(Receivers 869-894MHz) Test Mode 3: Charging from 120 Vac + Camera (Rear) + With TF Card+ LTE Band 5 idle(Receivers 869-894MHz) Test Mode 4: Charging from 240 Vac + Worst from mode 1~3 + GPS on Test Mode 5: Battery + FM (With Earphone) + GPS on Test Mode 6: USB Cable (data transfer with notebook) + With TF Card
Conducted Emission	Test Mode 1: Charging from 120 Vac + MP4 playing (With TF Card) + Earphone +Light on +GSM 850 idle(Receivers 869-894MHz) Test Mode 2: Charging from 120 Vac + Camera (Front)+ With TF Card+ WCDMA Band V idle(Receivers 869-894MHz) Test Mode 3: Charging from 120 Vac + Camera (Rear) + With TF Card + LTE Band 5 idle(Receivers 869-894MHz) <b>Test Mode 4: Charging from 240 Vac + Worst from mode 1~3 + GPS on(for Test Mode 3)</b> Test Mode 5: USB Cable (data transfer with notebook) + With TF Card
<b>Remark:</b> The above test modes in boldface were the worst cases, only the test data of these modes were reported.	

### 4.3 TEST SETUP

#### **4.3.1 For Radiated Emissions test setup**

Figure 1. 30MHz to 1GHz

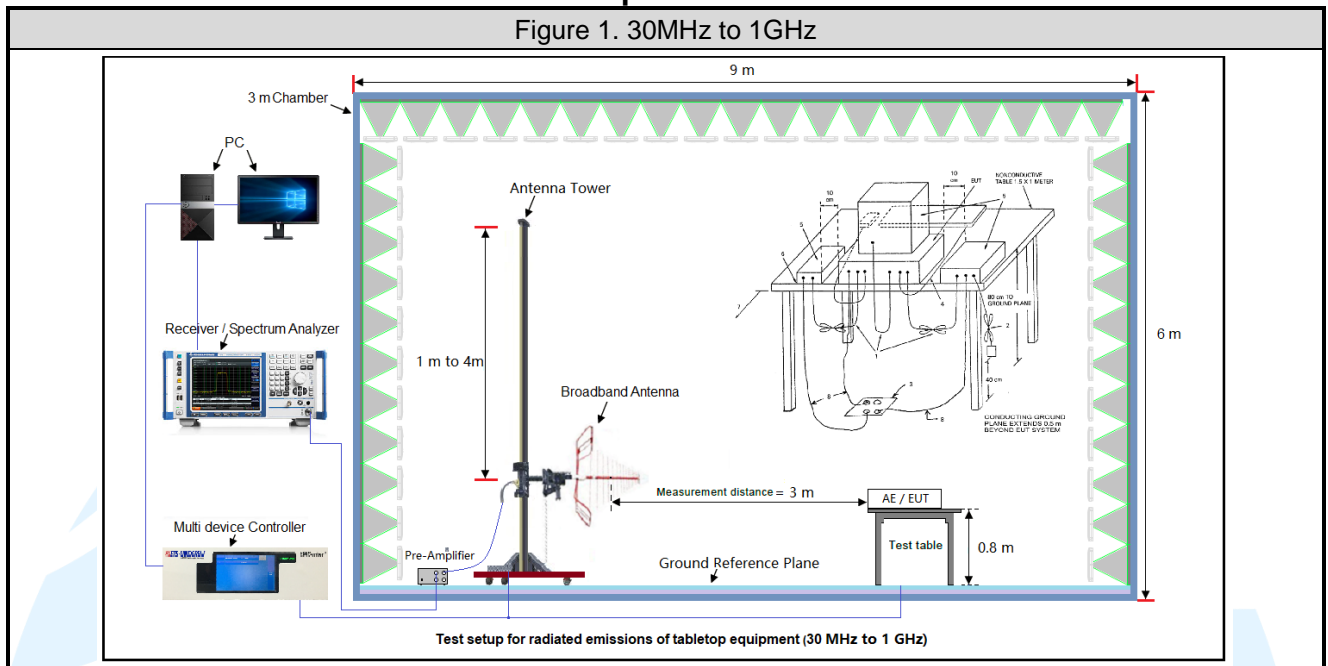
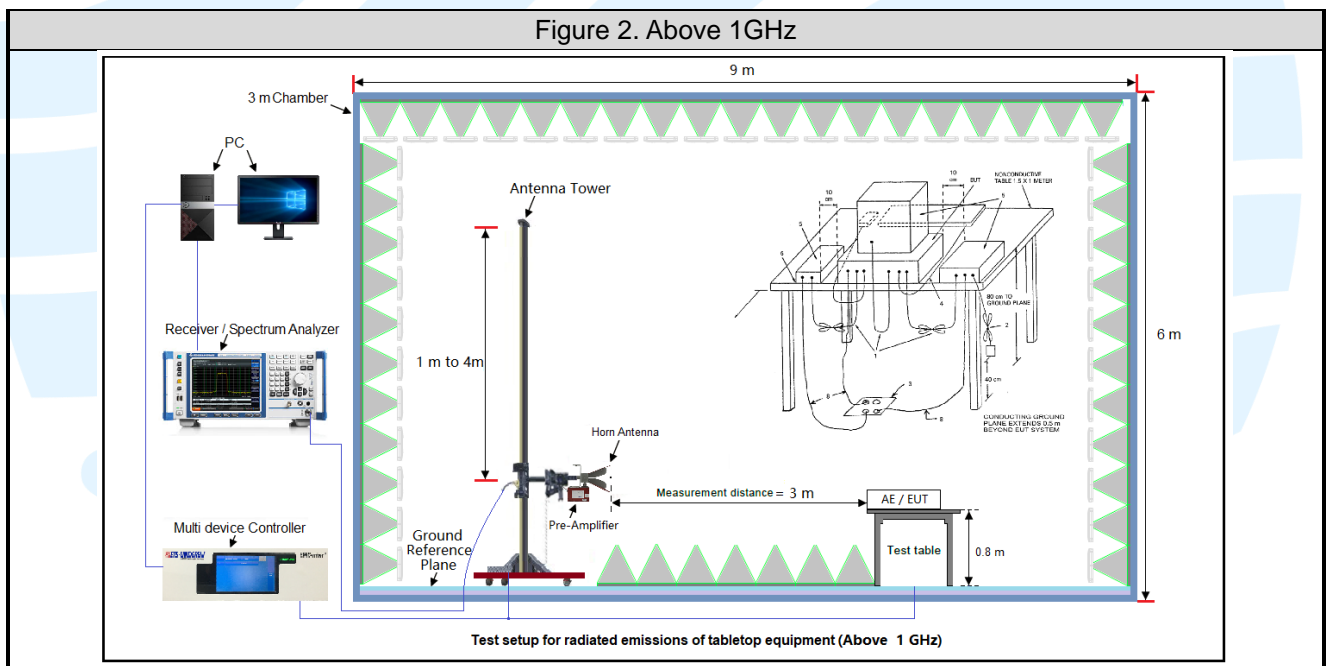
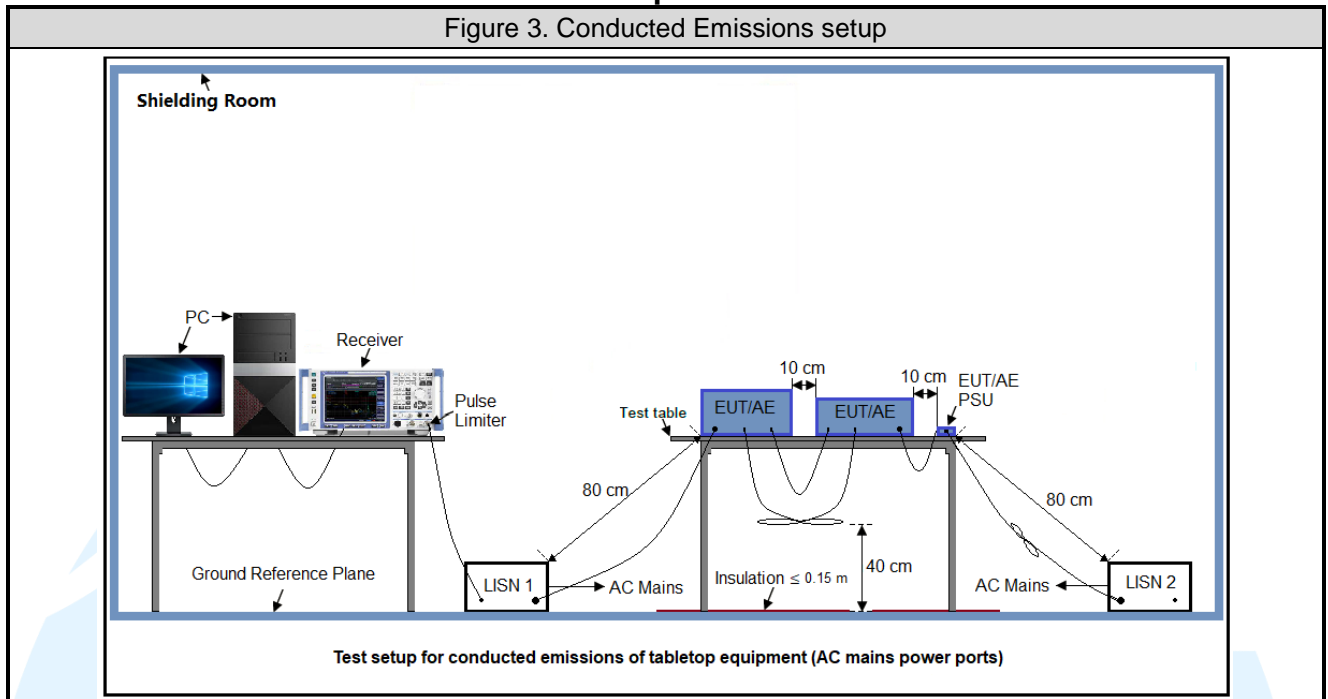


Figure 2. Above 1GHz



### 4.3.2 For Conducted Emissions test setup

Figure 3. Conducted Emissions setup



#### 4.4 SYSTEM TEST CONFIGURATION

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000MHz. The resolution is 1 MHz or greater for frequencies above 1000MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic (according to KDB 896810 D02 SDoC FAQ v01r01) of the highest fundamental frequency or to 40 GHz, whichever is lower.

## 5. REFERENCE DOCUMENTS FOR TESTING

No.	Identity	Document Title
1	FCC 47 CFR Part15 Subpart B	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	KDB 174176 D01 Line Conducted FAQ v01r01	AC power-line conducted emission frequency asked questions
4	KDB 896810 D02 SDoC FAQ v01r02	Supplier's Declaration of Conformity frequency asked questions

## 6. EMC REQUIREMENTS SPECIFICATION

### 6.1 RADIATED EMISSION

**Test Requirement:** FCC 47 CFR Part 15.109

**Test Method:** ANSI C63.4-2014

**Receiver Setup:**

Frequency: (f) (MHz)	Detector type	Measurement receiver bandwidth	
		RBW	VBW
$30 \leq f \leq 1\,000$	Quasi Peak	120 kHz	300 kHz
$f \geq 1000$	Peak	1 MHz	3 MHz
	Average	1 MHz	3 MHz

**Measured frequency range**

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30.
1.705-108	1000.
108-500	2000.
500-1000	5000.
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

**Limits:**

Limits for Class B devices

Frequency (MHz)	limits at 3m (dB $\mu$ V/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

**Remark:**

- The lower limit shall apply at the transition frequencies.
- Emission level (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m).
- For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

**Test Setup:** Refer to section 4.3.1 for details.

**Test Procedures:**

1. From 30 MHz to 1GHz test procedure as below:

- The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

2. Above 1GHz test procedure as below:

- The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both

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horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

- 3) For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

**Equipment Used:** Refer to section 3 for details.

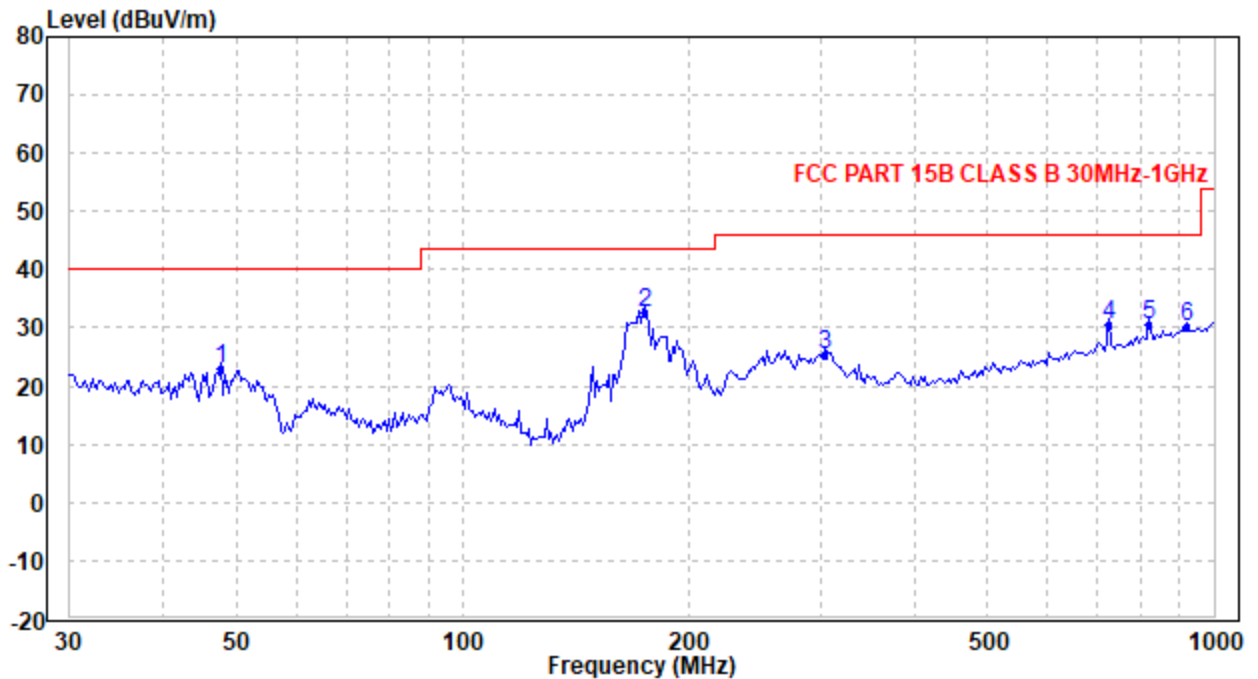
**Test Result:** Pass

**The worst measurement data as follows:**

**Below 1GHz (Quasi Peak):**

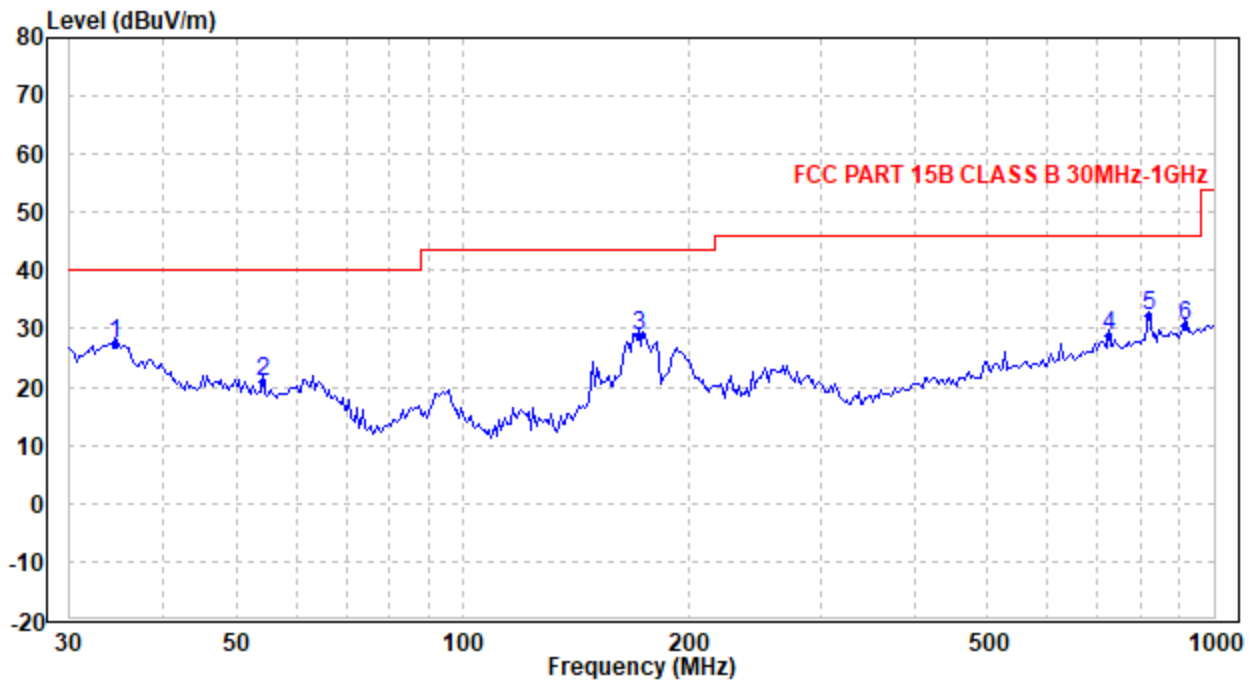
**Test Mode1**

**Horizontal**



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	47.703	36.04	-13.10	22.94	40.00	-17.06	QP
2	175.040	44.12	-11.44	32.68	43.50	-10.82	QP
3	302.819	34.14	-8.77	25.37	46.00	-20.63	QP
4	723.793	28.41	1.99	30.40	46.00	-15.60	QP
5	821.387	27.06	3.61	30.67	46.00	-15.33	QP
6	919.132	25.09	4.94	30.03	46.00	-15.97	QP

# Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.527	34.10	-6.67	27.43	40.00	-12.57	QP
2	54.135	36.73	-15.87	20.86	40.00	-19.14	QP
3	171.389	40.49	-11.75	28.74	43.50	-14.76	QP
4	723.793	26.89	1.99	28.88	46.00	-17.12	QP
5	821.387	28.47	3.61	32.08	46.00	-13.92	QP
6	912.695	25.78	4.90	30.68	46.00	-15.32	QP

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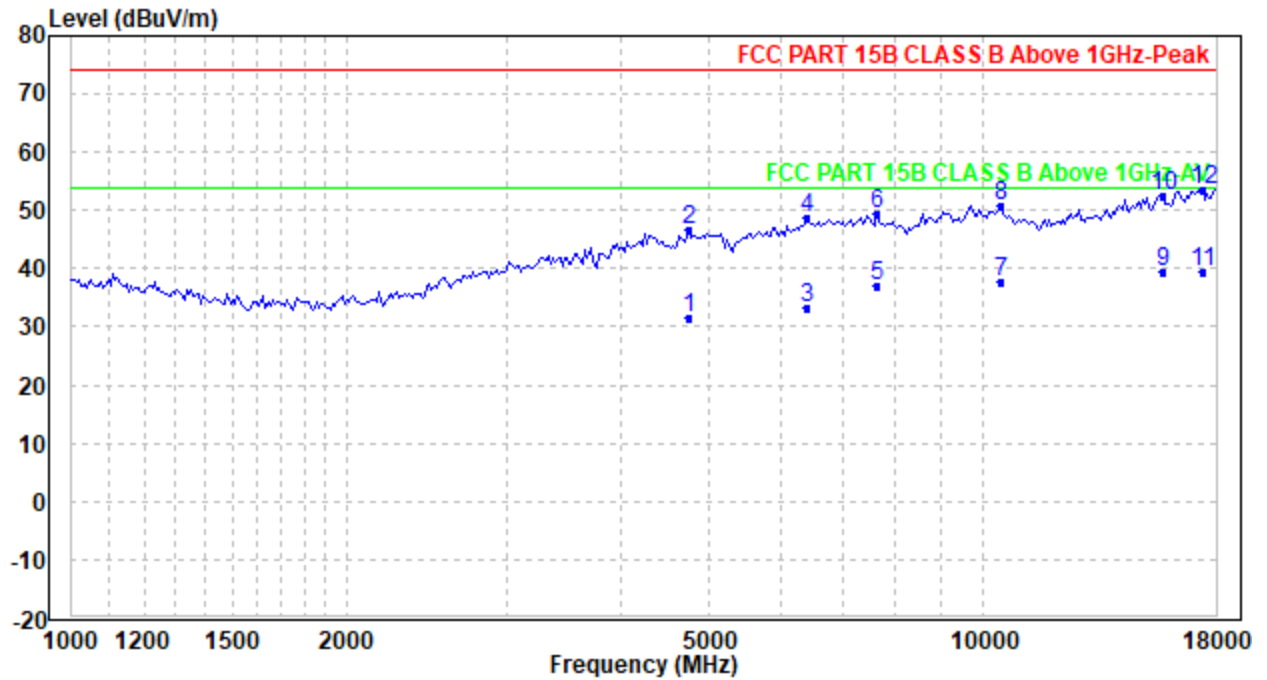
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Above 1GHz (Peak & Average)  
Test Mode1  
Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4749.960	33.74	-2.10	31.64	54.00	-22.36	Average
2	4749.960	48.90	-2.10	46.80	74.00	-27.20	Peak
3	6419.481	32.32	1.09	33.41	54.00	-20.59	Average
4	6419.481	47.47	1.09	48.56	74.00	-25.44	Peak
5	7637.782	35.93	1.28	37.21	54.00	-16.79	Average
6	7637.782	48.05	1.28	49.33	74.00	-24.67	Peak
7	10442.590	34.36	3.39	37.75	54.00	-16.25	Average
8	10442.590	47.49	3.39	50.88	74.00	-23.12	Peak
9	15754.850	32.05	7.37	39.42	54.00	-14.58	Average
10	15754.850	45.18	7.37	52.55	74.00	-21.45	Peak
11	17385.170	30.17	9.21	39.38	54.00	-14.62	Average
12	17385.170	44.32	9.21	53.53	74.00	-20.47	Peak

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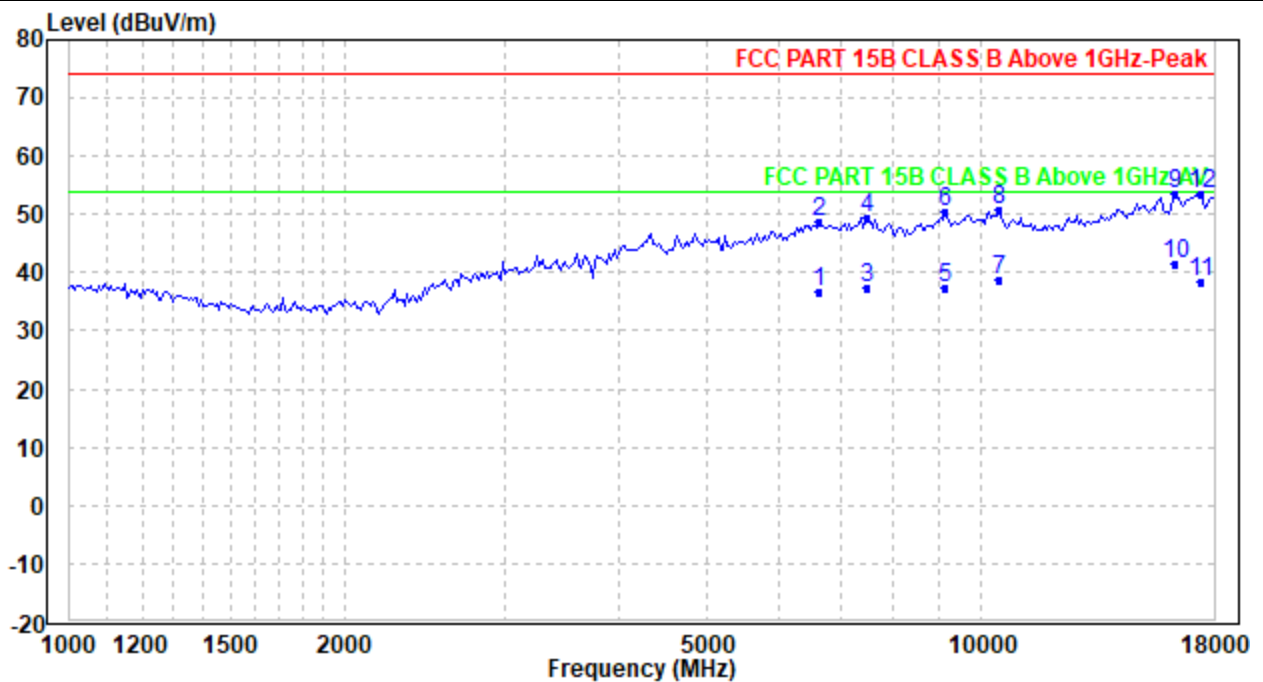
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# Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	6646.506	35.38	1.25	36.63	54.00	-17.37	Average
2	6646.506	47.50	1.25	48.75	74.00	-25.25	Peak
3	7506.207	36.09	1.33	37.42	54.00	-16.58	Average
4	7506.207	48.22	1.33	49.55	74.00	-24.45	Peak
5	9140.082	34.46	2.86	37.32	54.00	-16.68	Average
6	9140.082	47.59	2.86	50.45	74.00	-23.55	Peak
7	10442.590	35.24	3.39	38.63	54.00	-15.37	Average
8	10442.590	47.36	3.39	50.75	74.00	-23.25	Peak
9	16312.020	45.84	7.68	53.52	74.00	-20.48	Peak
10	16312.020	33.72	7.68	41.40	54.00	-12.60	Average
11	17385.170	29.14	9.21	38.35	54.00	-15.65	Average
12	17385.170	44.30	9.21	53.51	74.00	-20.49	Peak

## Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result - Limit
4. All possible modes of operation were investigated, and testing at two nominal voltages of 240V~50Hz and 120V~60Hz, only the worst case emissions reported.
5. For Radiated Emission above 18GHz, there was not any unwanted emission detected.

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## 6.2 CONDUCTED EMISSION

**Test Requirement:** FCC 47 CFR Part 15.107

**Test Method:** ANSI C63.4-2014

**Limits:**

Limits for Class B devices

Frequency range (MHz)	Limits (dB(μV))	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

**Remark:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

**Test Setup:** Refer to section 4.3.2 for details.

**Test Procedures:**

- 1) The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- 2) The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- 3) For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

**Equipment Used:** Refer to section 3 for details.

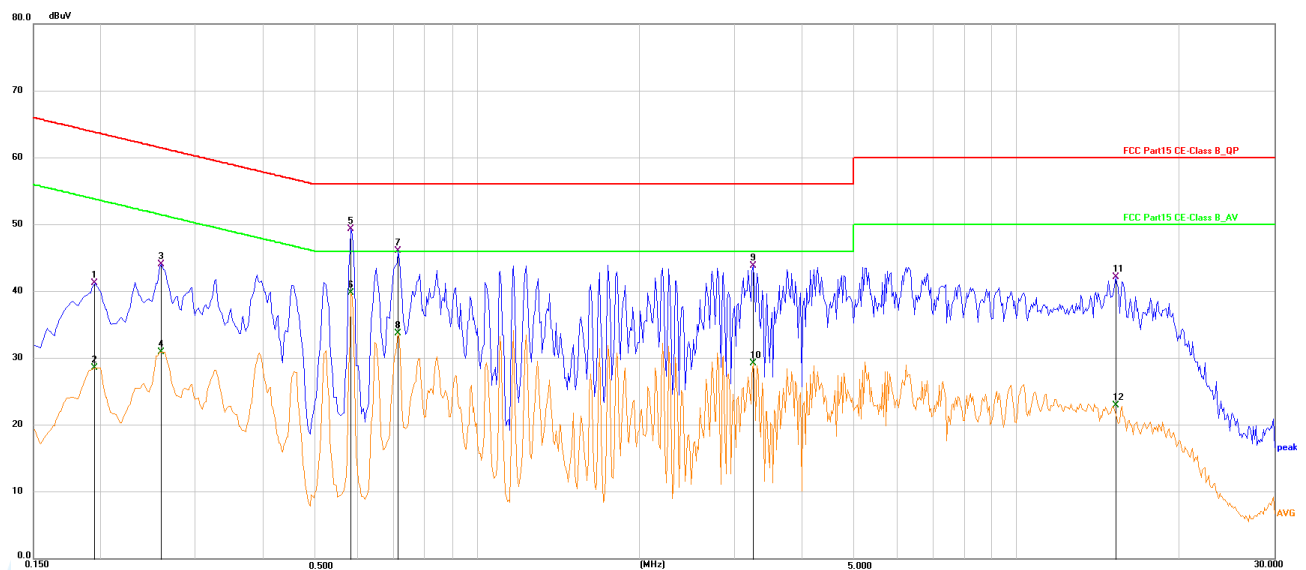
**Test Result:** Pass

The worst measurement data as follows:

Quasi Peak and Average:

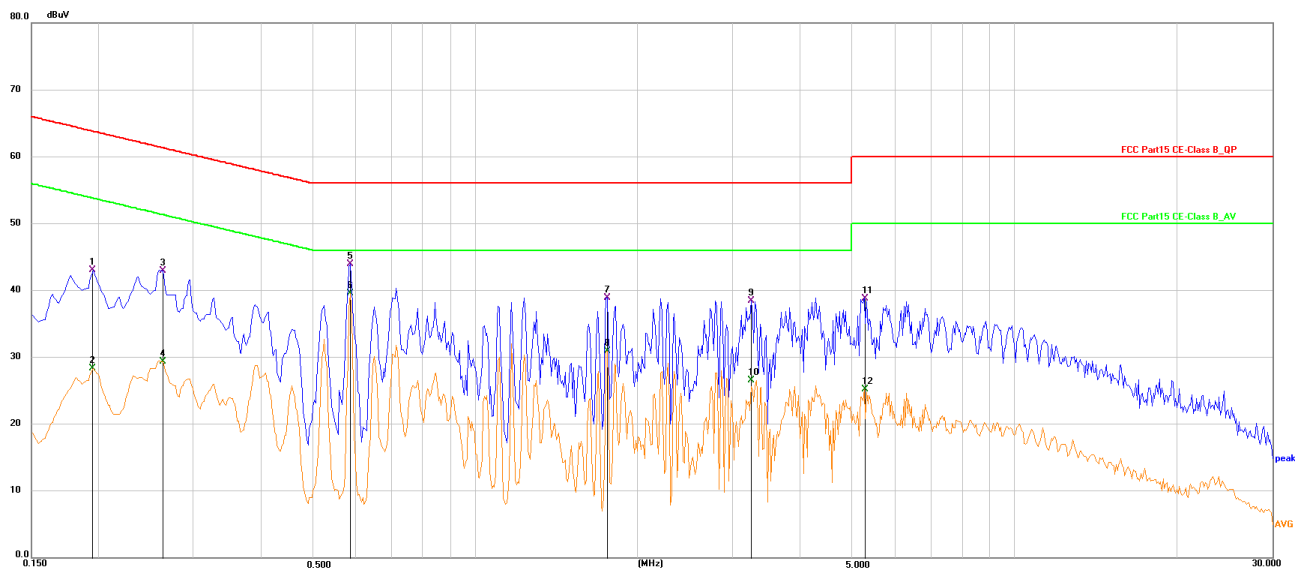
Test Mode4

Live Line



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1949	31.47	9.80	41.27	63.83	-22.56	QP
2	0.1949	18.70	9.80	28.50	53.83	-25.33	AVG
3	0.2580	34.23	9.76	43.99	61.50	-17.51	QP
4	0.2580	21.17	9.76	30.93	51.50	-20.57	AVG
5	0.5820	39.51	9.79	49.30	56.00	-6.70	QP
6	0.5820	29.94	9.79	39.73	46.00	-6.27	AVG
7	0.7125	36.33	9.77	46.10	56.00	-9.90	QP
8	0.7125	23.95	9.77	33.72	46.00	-12.28	AVG
9	3.2460	34.11	9.73	43.84	56.00	-12.16	QP
10	3.2460	19.50	9.73	29.23	46.00	-16.77	AVG
11	15.2475	32.28	9.81	42.09	60.00	-17.91	QP
12	15.2475	13.08	9.81	22.89	50.00	-27.11	AVG

### Neutral Line



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1949	33.29	9.77	43.06	63.83	-20.77	QP
2	0.1949	18.53	9.77	28.30	53.83	-25.53	AVG
3	0.2625	33.10	9.78	42.88	61.35	-18.47	QP
4	0.2625	19.52	9.78	29.30	51.35	-22.05	AVG
5	0.5865	34.23	9.74	43.97	56.00	-12.03	QP
6	0.5865	29.83	9.74	39.57	46.00	-6.43	AVG
7	1.7564	29.18	9.74	38.92	56.00	-17.08	QP
8	1.7564	21.19	9.74	30.93	46.00	-15.07	AVG
9	3.2505	28.71	9.75	38.46	56.00	-17.54	QP
10	3.2505	16.81	9.75	26.56	46.00	-19.44	AVG
11	5.2619	29.06	9.76	38.82	60.00	-21.18	QP
12	5.2619	15.48	9.76	25.24	50.00	-24.76	AVG

#### Remark:

1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result - Limit
4. An initial pre-scan was performed on the Phase and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.
5. All possible modes of operation were investigated, and testing at two nominal voltages of 240V~50Hz and 120V~60Hz, only the worst case emissions reported.

### Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6th, Baoneng Science and Technology Park, Longhua Street, Longhua District, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

<http://www.uttlab.com>

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## APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

## APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

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\*\*\*\*\* End of Report \*\*\*\*\*

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of UnionTrust, this report can't be reproduced except in full.

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