

VARIANT EMC TEST REPORT

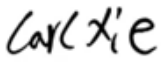
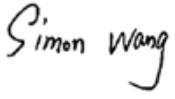
Applicant:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States

Manufacturer or Supplier:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Product:	Mobile Computer
Brand Name:	Honeywell
Model Name:	CT45-L1N-G
FCC ID:	HD5-CT45L1NG
Date of tests:	Dec, 25, 2025 ~ Apr. 01, 2026

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

- ☐ FCC Part 15, Subpart B, Class A
☒ FCC Part 15, Subpart B, Class B
☒ ANSI C63.4:2014

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Carl Xie Engineer / Mobile Department	Approved by Simon Wang Manager / Mobile Department
	
Date: Apr. 01, 2026	Date: Apr. 01, 2026

Boomwave Test (Shenzhen) Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. Without written approval of Boomwave Test (Shenzhen) Co., Ltd., the test report shall not be reproduced except in full.



Test Report No.: EMC20251225B001-FCC 15B Report

TABLE OF CONTENTS

TABLE OF CONTENTS	2
RELEASE CONTROL RECORD	3
1 GENERAL INFORMATION	4
1.1 GENERAL DESCRIPTION OF EUT	4
1.2 SUMMARY OF TEST RESULTS	7
1.3 MEASUREMENT UNCERTAINTY	8
1.4 DESCRIPTION OF TEST MODES	9
1.5 DESCRIPTION OF SUPPORT UNITS	10
2 EMISSION TEST	11
2.1 CONDUCTED EMISSION MEASUREMENT	11
2.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	11
2.1.2 TEST INSTRUMENTS	11
2.1.3 TEST PROCEDURES	12
2.1.4 DEVIATION FROM TEST STANDARD	12
2.1.5 TEST SETUP	13
2.1.6 EUT OPERATING CONDITIONS	13
2.1.7 TEST RESULTS	14
2.2 RADIATED EMISSION MEASUREMENT	16
2.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT	16
2.2.2 TEST INSTRUMENTS	17
2.2.3 TEST PROCEDURE	18
2.2.4 DEVIATION FROM TEST STANDARD	19
2.2.5 TEST SETUP	20
2.2.6 EUT OPERATING CONDITIONS	20
2.2.7 TEST RESULTS	21
3 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	25



Test Report No.: EMC20251225B001-FCC 15B Report

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L- P21080006EM03	Original release	Sep. 01, 2021
W7L-P21040030EM03	Based on the original report W7L-P21080006EM03 Changed LCM to screen HD(1280*720), removing a 2nd BLE and Supercap, Increase the RTC battery, Detail refer to Product Equality Declaration	Sep. 09, 2021
EMC20251225B001-FCC 15B Report	Based on the report W7L-P21040030EM03 (FCC ID: HD5-CT45L1NG). The new product add alternate parts, the electrical specs of the alternate part is equivalent to the current part. In this report update the SW version, verify CE and RE worst case, So this report updates CE and RE worst case data.	Apr. 01, 2026

1 GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Mobile Computer	
BRAND NAME	Honeywell	
MODEL NAME	CT45-L1N-G	
NOMINAL VOLTAGE	5Vdc (adapter) 3.85Vdc (Lithium-ion cell, battery)	
MODULATION TYPE	BT_LE	GFSK
	Bluetooth	GFSK, $\pi/4$ -DQPSK, 8DPSK
	NFC	ASK
	WLAN	DSSS, OFDM, OFDMA
	GPS/GALILEO/G LONASS/BDS	BPSK
	GSM/GPRS/ EDGE	GMSK, 8PSK
	WCDMA	BPSK/QPSK
	LTE	QPSK/16QAM/64QAM
OPERATING FREQUENCY	Bluetooth/ BT_LE	2402MHz ~ 2480MHz
	NFC	13.56 MHz
	WLAN	2412 ~ 2462MHz for 11b/g/n(HT20/40) 5180 ~ 5240MHz, 5260 ~ 5320 MHz, 5500 ~ 5720MHz, 5745 ~ 5825 MHz for 11a/ n(HT20)/ n(HT40) / ac(VHT20)/ ac(VHT40) / ac(VHT80)
	GPS/GALILEO/G LONASS/BDS	1559MHz ~ 1610MHz 1164 MHz -1215 MHz
	GSM	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR GSM 1900)

Test Report No.: EMC20251225B001-FCC 15B Report

OPERATING FREQUENCY	WCDMA	1852.4MHz ~ 1907.6MHz(FOR WCDMA Band 2) 1712.4MHz ~ 1752.6MHz(FOR WCDMA Band 4) 826.4MHz ~ 846.6MHz (FOR WCDMA Band 5)
	LTE	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 2502.5MHz ~ 2567.5MHz (FOR LTE Band7) 2505.5MHz ~ 2564.7MHz (FOR LTE Band CA_7C) 699.7MHz ~ 715.3MHz (FOR LTE Band12) 779.5MHz ~ 784.5MHz (FOR LTE Band13) 790.5MHz ~ 795.5MHz (FOR LTE Band14) 706.5MHz ~ 713.5MHz (FOR LTE Band17) 1850.7MHz ~ 1914.3MHz (FOR LTE Band25) 814.7MHz ~ 848.3MHz (FOR LTE Band26) 2307.5MHz ~ 2312.5MHz (FOR LTE Band30) 2572.5MHz ~ 2617.5MHz (FOR LTE Band38) 2498.5MHz ~ 2687.5MHz (FOR LTE Band41) 2499.3MHz ~ 2686.7MHz (FOR LTE Band CA_41C) 1710.7MHz ~ 1779.3MHz (FOR LTE Band66) 665.5MHz ~ 695.5MHz (FOR LTE Band71)
HW VERSION	V1.0	
SW VERSION	OS.11.003-HON.11.003	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: shielded without ferrite, 1.25 meter Earphone cable: unshielded without ferrite, 1.27 meter	
ACCESSORY DEVICES	Refer to note as below	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in the test report.

Test Report No.: EMC20251225B001-FCC 15B Report

3. This product includes the following six SKU which hardware is exactly same, the difference is described as following, Sample 1 was full test, sample 2 verify the worst case, check worst case Radiated emission:

SAMPLE	EUT CONFIGURATION INFORMATION
1	SKU ID:CT45-L1N-27D120G ,Assembled Scanner Imager: 7-S0703
2	SKU ID:CT45-L1N-28D120G ,Assembled Scanner Imager: 8 - N6803/S0803
3	SKU ID: CT45-L1N-28D120T, Assembled with Scanner: 8 - N6803/S0803 for Turkey Only
4	SKU ID: CT45-L1N-27D120T, Assembled with Scanner: 7-S0703 for Turkey Only
5	SKU ID:CT45-L1N-28D220C, Assembled with Scanner: 8 - N6803/S0803 for China Only with Android non-GMS
6	SKU ID:CT45-L1N-27D220C, Assembled with Scanner: 7-S0703 for China Only with Android non-GMS

4. List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery	Honeywell	CT50-BTSC	Capacity: 3.85vdc 4020mAh
AC Adapter	HONOR	ADS-12B-06 05010E	I/P:100-240Vac, 0.3A O/P: 5Vdc, 2A
USB Cable	Honeywell	CT40-SN	Shielded, 1.25meter
Earphone	VIVO	N/A	Shielded, 1.27meter
LCD Panel	TZD	TS5099	5.0" HD(1280*720)



Test Report No.: EMC20251225B001-FCC 15B Report

1.2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart B			
Standard Section	Test Item	Result	Test lab*
FCC Part 15, Subpart B, Class B ANSI C63.4:2014	Conducted Test	Compliance	A
	Radiated Emission Test (30MHz ~ 1GHz)	Compliance	A
	Radiated Emission Test (Above 1GHz)	Compliance	A

*Test Lab Information Reference

Lab A:

Boomwave Test (Shenzhen) Co., Ltd.

Lab Address:

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan 4th Rd, Chiwan Comm, Zhaoshang St, Nanshan Dist, Shenzhen, Guangdong, Shenzhen, China

Accredited Test Lab Cert 7607.01

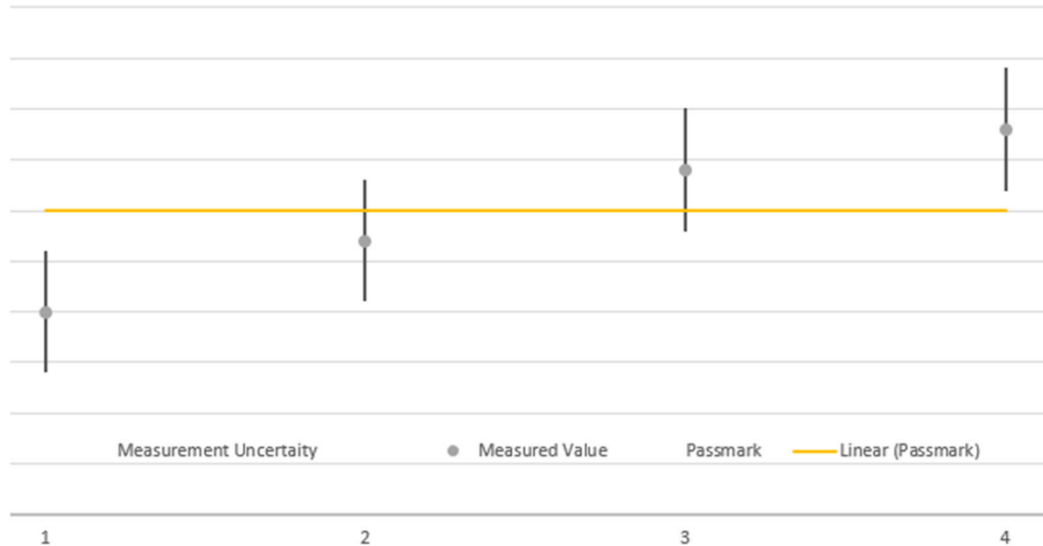
The FCC Site Registration No. is 646781; The Designation No. is CN1429.

1.3 MEASUREMENT UNCERTAINTY

Where relevant, 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	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz ~ 30MHz	$\pm 2.70\text{dB}$
Radiated emissions	30MHz~1GHz	$\pm 4.98\text{dB}$
	1GHz ~6GHz	$\pm 4.70\text{dB}$
	6GHz ~18GHz	$\pm 4.60\text{dB}$
	18GHz ~40GHz	$\pm 4.12\text{dB}$



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

1.4 DESCRIPTION OF TEST MODES

Test Mode	Test Condition
Radiated emission test	
1	Adapter + USB cable + Front Camera On+GSM850 RX
2	Adapter + USB cable + Back Camera On+ GSM850 RX
3	Adapter + USB cable + MPG4 + Scanning+WCDMA 850 RX
4	USB Link + Data Transmission + USB Cable + PC to EUT+LTE Band 5 RX
5	USB Link + Data Transmission + USB Cable +PC to SD+ LTE Band 12 RX
6	Adapter + Charger + Back Camera On + LTE Band 13 RX
7	Adapter + Charger + Front Camera On + LTE Band 14 RX
8	Adapter + Charger + MPG4 + Scanning + LTE Band 17 RX
9	Charger + Data Transmission + PC to EUT + GSM850 RX
10	Charger + Data Transmission + PC to SD+ GSM850 RX
11	Earphone + MPG4+ GSM850 RX

Test Mode	Test Condition
Conducted emission test	
1	Adapter + USB cable + Front Camera On+GSM850 RX
2	Adapter + USB cable + Back Camera On+ GSM850 RX
3	Adapter + USB cable + MPG4 + Scanning+WCDMA 850 RX
4	USB Link + Data Transmission + USB Cable + PC to EUT+LTE Band 5 RX
5	USB Link + Data Transmission + USB Cable +PC to SD+ LTE Band 12 RX
6	Adapter + Charger + Back Camera On + LTE Band 13 RX
7	Adapter + Charger + Front Camera On + LTE Band 14 RX
8	Adapter + Charger + MPG4 + Scanning + LTE Band 17 RX
9	Charger + Data Transmission + PC to EUT + GSM850 RX
10	Charger + Data Transmission + PC to SD+ GSM850 RX
NOTE: - For radiated emission test, Pre-scan all mode, test mode 3 was the worst case and only this mode was presented in this report - For conducted emission test, Pre-scan all mode, mode 2 was the worst case and only this mode was presented in this report.	



Test Report No.: EMC20251225B001-FCC 15B Report

1.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

FOR ALL TESTS

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Micro SD	SAM SUNG	N/A	N/A	N/A
2	Adapter	N/A	N/A	N/A	N/A
3	NFC Card	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 1.25m;

2 EMISSION TEST

2.1 CONDUCTED EMISSION MEASUREMENT

2.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.107 a CLASS B)

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.107 b CLASS A)

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	79	66
0.5 ~ 30	73	60

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

2.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pulse limiter	SCHWARZBECK	VTSD 9561F	01579	2025/7/22	2026/7/21
ESR.EMI TEST RECEIVER	Rohde&SCHWARZ	ESR	101405	2025/6/30	2026/6/29
LISN	SCHWARZBECK	NSLK 8127	01216	2025/8/27	2026/8/26
Cable	Tonscend	/	/	2025/7/22	2026/7/21

- NOTE:**
1. The test was performed in CE shielded room.

2.1.3 TEST PROCEDURES

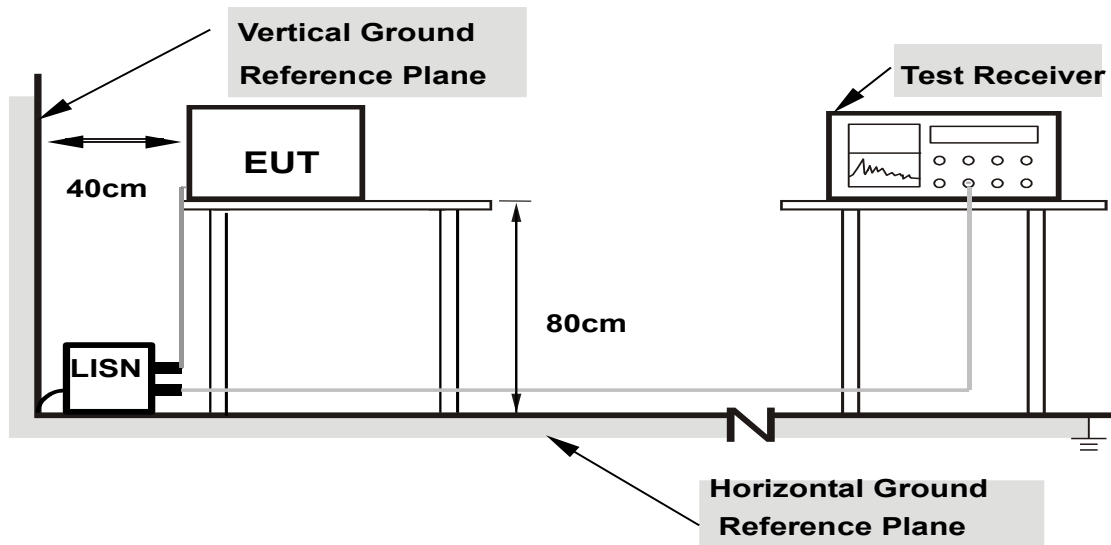
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

2.1.4 DEVIATION FROM TEST STANDARD

No deviation.

2.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

2.1.6 EUT OPERATING CONDITIONS

- Turned on the power and connected of all equipment.
- EUT was operated according to the use type described in the manufacturer's specifications or the user's manual.

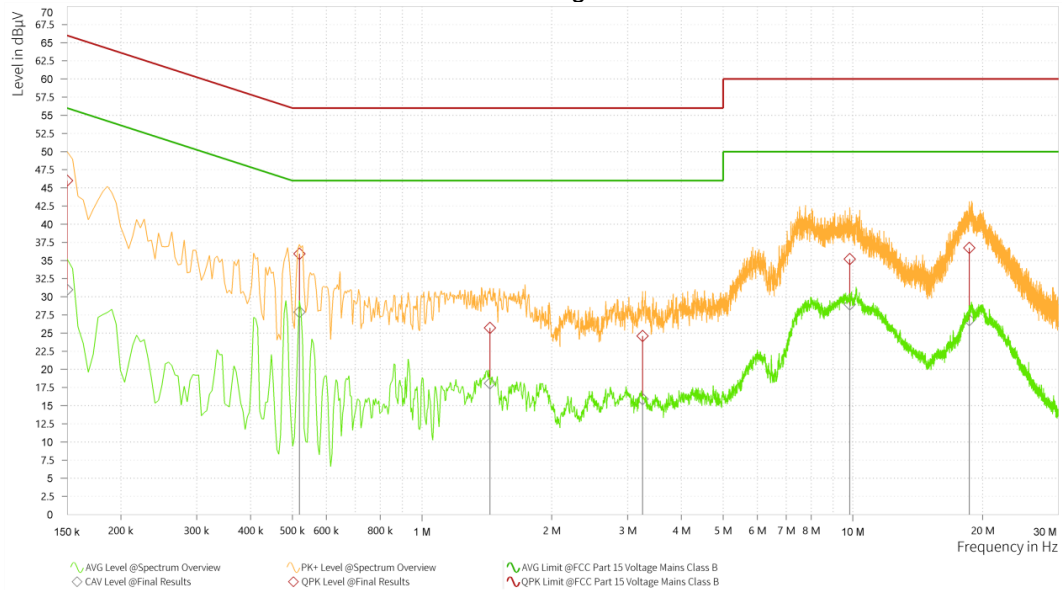
2.1.7 TEST RESULTS

TEST VOLTAGE	Input 120 Vac, 60 Hz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
ENVIRONMENTAL CONDITIONS	26deg. C, 51%RH	TESTED BY	Carl Xie

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.150	45.99	66.00	20.01	30.97	56.00	25.03	9.80	L1	9.000
1	0.519	35.92	56.00	20.08	27.88	46.00	18.12	9.75	L1	9.000
1	1.437	25.72	56.00	30.28	18.07	46.00	27.93	9.79	L1	9.000
1	3.251	24.61	56.00	31.39	15.90	46.00	30.10	9.97	L1	9.000
1	9.839	35.20	60.00	24.80	28.94	50.00	21.06	10.95	L1	9.000
1	18.636	36.73	60.00	23.27	26.77	50.00	23.23	13.19	L1	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Limit value- Emission level
4. Correction factor = Insertion loss + Cable loss + Attenuate
5. Emission Level = Correction Factor + Reading Value.



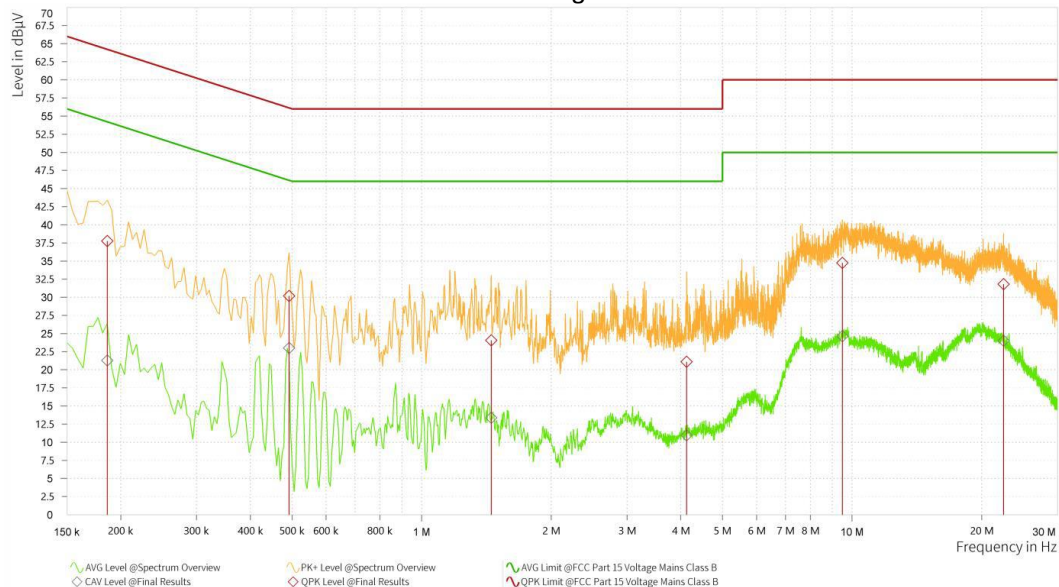
Test Report No.: EMC20251225B001-FCC 15B Report

TEST VOLTAGE	Input 120 Vac, 60 Hz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak (QP) / Average (AV), 9 kHz
ENVIRONMENTAL CONDITIONS	26deg. C, 51%RH	TESTED BY	Carl Xie

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.186	37.77	64.21	26.44	21.27	54.21	32.94	9.78	N	9.000
1	0.492	30.18	56.13	25.95	23.01	46.13	23.12	9.75	N	9.000
1	1.451	24.05	56.00	31.95	13.36	46.00	32.64	9.79	N	9.000
1	4.128	21.10	56.00	34.90	10.95	46.00	35.05	10.06	N	9.000
1	9.492	34.75	60.00	25.25	24.64	50.00	25.36	10.89	N	9.000
1	22.502	31.83	60.00	28.17	24.01	50.00	25.99	13.64	N	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Limit value- Emission level
4. Correction factor = Insertion loss + Cable loss + Attenuate
5. Emission Level = Correction Factor + Reading Value.



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

2.2 RADIATED EMISSION MEASUREMENT

2.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.109)

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 3 meters (dB μ V/m)		
Frequencies (MHz)	FCC 15B Class A	FCC 15B Class B
30-88	49.54	40
88-216	53.98	43.5
216-960	56.9	46
960-1000	60	54
Above 1000	Avg: 60 Peak: 80	Avg: 54 Peak: 74

Frequency Range (For unintentional radiators)

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	5 th harmonic of the highest frequency or 40GHz, whichever is lower

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. Emission level (dB μ V/m) = 20 log Emission level (uV/m).
 3. As shown in 15.35(b), for frequencies above 1000MHz, 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 20dB under any condition of modulation.
 4. QP detector shall be applied if not specified.

2.2.2 TEST INSTRUMENTS

Frequency range below 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
BiConiLog Antenna	ETS-LINDGREN	3143B	161965	2025/7/17	2026/7/16
Preamplifier	Tonscend	TPA001330	806JSAPO40804251015	2025/6/30	2026/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927166	2025/6/30	2026/6/29
Cable 1	N/A	N/A	N/A	N/A	N/A
MXE EMI Receiver	keysight	N9038B	MY50018017	2025/6/31	2026/6/30
Active Receive Loop Antenna	SCHWARZBECK	FMZB 1519 B	00173	2025/11/29	2026/11/28

Frequency range above 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	SCHWARZBECK	BBHA9120D	3297	2025/9/27	2026/9/26
Horn Antenna	STEATITE	QWH-SL-18-40-K-SG QMS-00361	15433	2025/7/19	2026/7/18
Preamplifier	Tonscend	TPA184045	'AP24L8060388	2025/7/3	2026/7/2
Preamplifier	Tonscend	TPA011845	'AP24L8060392	2025/6/30	2026/6/29
MXE EMI Receiver	keysight	N9038B	MY50018017	2025/7/1	2026/6/30
Attenuator 6DB	SHX	TS2-6-6-A	230927166	2025/6/30	2026/6/29
HIGH pass FILTER_1-18	EWT	EWT-57-0222	EWT-57-0222	2025/6/30	2026/6/29
HIGH pass FILTER_7-18	EWT	EWT-57-0223	EWT-57-0223	2025/6/30	2026/6/29
HIGH pass FILTER_3-18	EWT	EWT-57-0221	EWT-57-0221	2025/6/30	2026/6/29
DC~1GHz Lowpass Filter	EWT	EWT-56-0649	EWT-56-0649	2025/7/3	2026/7/2
Cable 2	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 3	N/A	N/A	N/A	2025/9/28	2026/9/27

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.

2.2.3 TEST PROCEDURE

<Frequency Range below 1GHz>

The basic test procedure was in accordance with ANSI C63.4:2014 (section 12).

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from 1 meter to 4 meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.

NOTE:

1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. $\text{Emission level(dBuV/m)} = \text{Raw Value(dBuV)} + \text{Correction Factor(dB/m)}$
3. $\text{Correction Factor(dB/m)} = \text{Antenna Factor (dB/m)} + \text{Cable Factor (dB)}$ (if the raw value not contains the amplifier);
4. $\text{Correction Factor(dB/m)} = \text{Antenna Factor (dB/m)} + \text{Cable Factor (dB)} - \text{Amplifier Gain(dB)}$ (if the raw value contains the amplifier).
5. $\text{Margin value} = \text{Limit value} - \text{Emission level}$.

Test Report No.: EMC20251225B001-FCC 15B Report
<Frequency Range above 1GHz>

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. The bore sight should be used during the test above 1GHz.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz

NOTE:

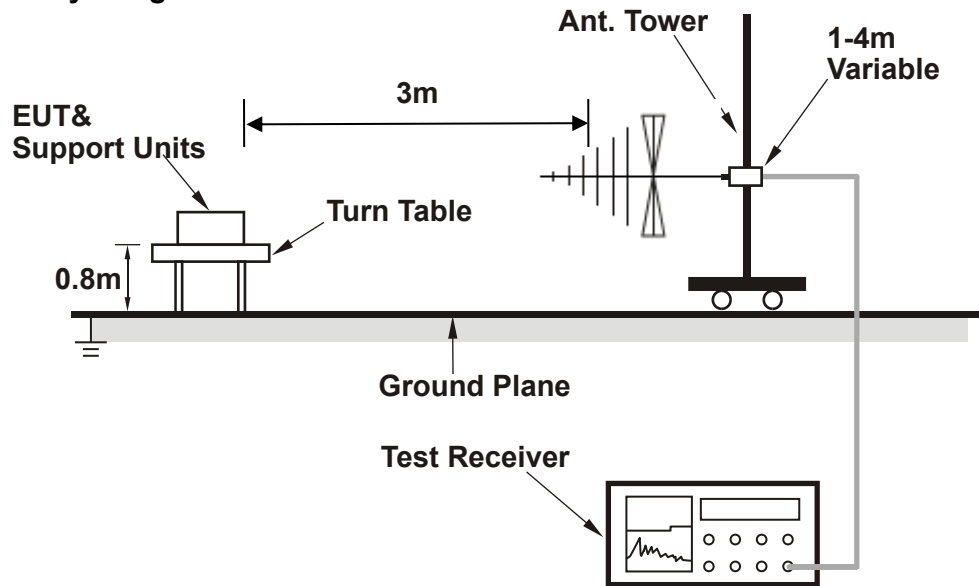
1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth of test receiver/spectrum analyzer is 1Hz for Average detection (AV) at frequency above 1GHz.
3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.
4. $\text{Emission level(dBuV/m)} = \text{Raw Value(dBuV)} + \text{Correction Factor(dB/m)}$
5. $\text{Correction Factor(dB/m)} = \text{Antenna Factor (dB/m)} + \text{Cable Factor (dB)}$ (if the raw value not contains the amplifier);
6. $\text{Correction Factor(dB/m)} = \text{Antenna Factor (dB/m)} + \text{Cable Factor (dB)} - \text{Amplifier Gain(dB)}$ (if the raw value contains the amplifier)
7. $\text{Margin value} = \text{Limit value} - \text{Emission level.}$

2.2.4 DEVIATION FROM TEST STANDARD

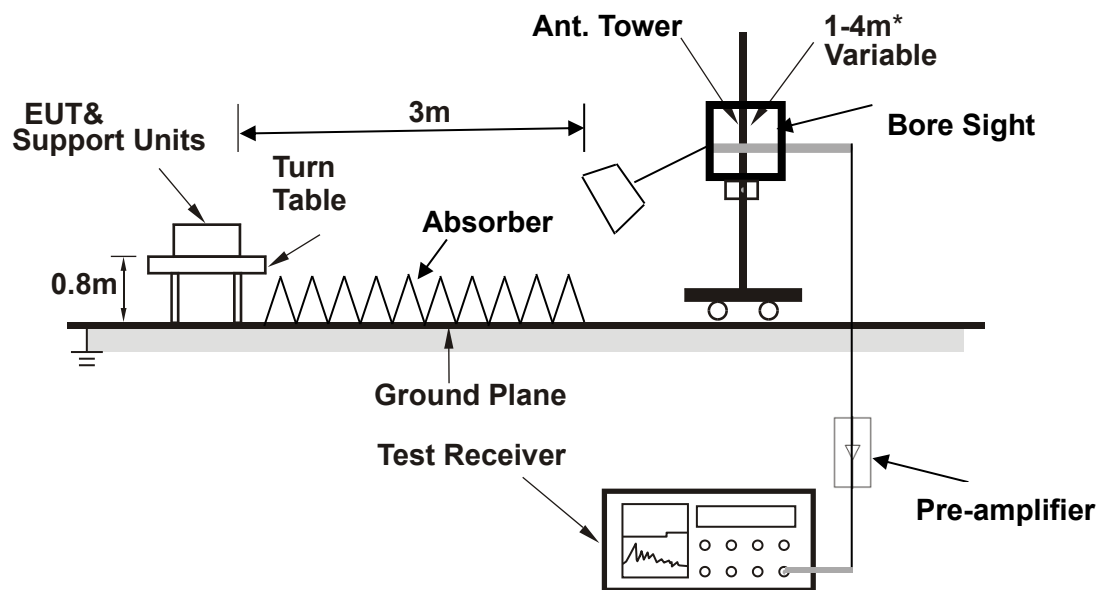
No deviation.

2.2.5 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB bandwidth both, refer to section 7.3 of CISPR 16-2-3.

2.2.6 EUT OPERATING CONDITIONS

Same as item 2.1.6.

2.2.7 TEST RESULTS

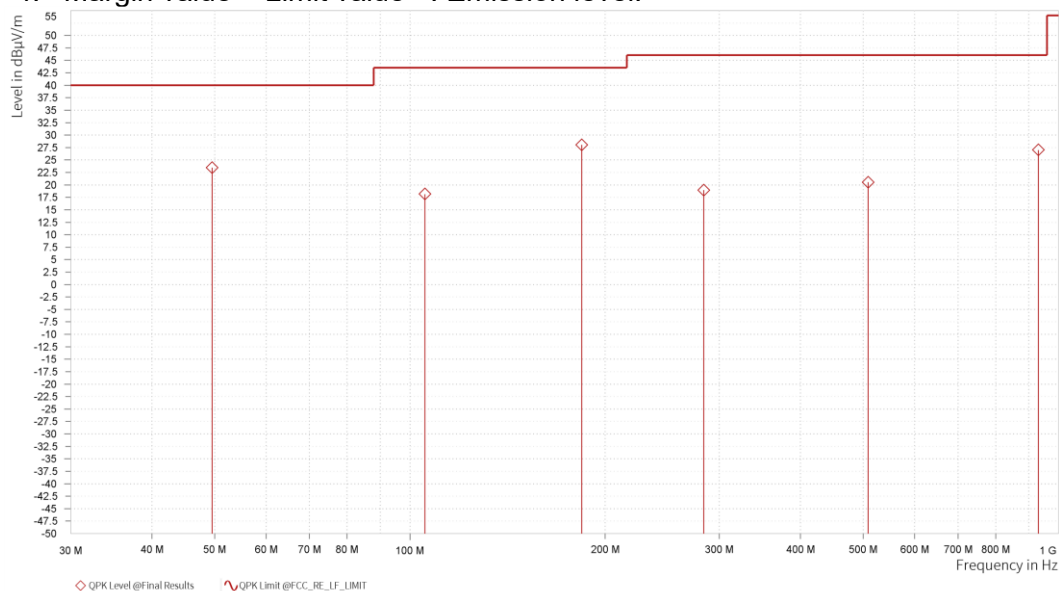
TEST VOLTAGE	Input 120 Vac, 60 Hz	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120 kHz
TESTED BY	Carl Xie		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	49.562	23.46	40.00	16.54	-9.97	H	211.3	2.00	120.000
1	105.444	18.15	43.50	25.35	-12.10	H	154.6	1.00	120.000
1	184.122	28.04	43.50	15.46	-12.61	H	57.1	2.00	120.000
1	283.924	18.93	46.00	27.07	-7.83	H	231.1	1.00	120.000
1	508.479	20.52	46.00	25.48	-3.66	H	154.6	1.00	120.000
1	930.699	27.00	46.00	19.00	2.78	H	355.7	2.00	120.000

REMARKS:

1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) -Amplifier Gain
3. The other emission levels were very low against the limit.
4. Margin value = Limit value –. Emission level.



Test Report No.: EMC20251225B001-FCC 15B Report

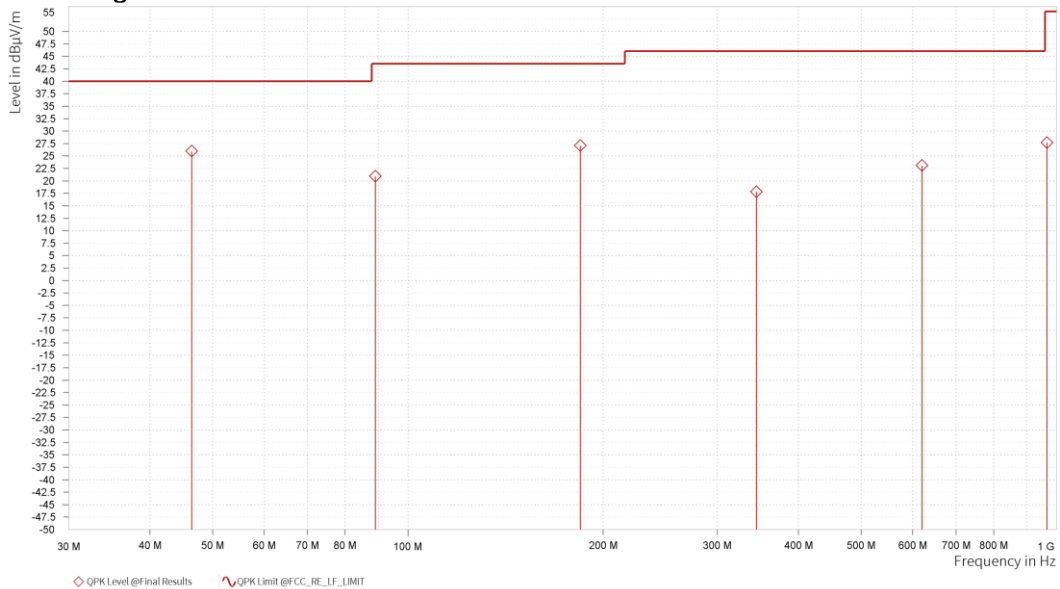
TEST VOLTAGE	Input 120 Vac, 60 Hz	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120 kHz
TESTED BY	Carl Xie		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	46.436	25.94	40.00	14.06	-10.21	V	76.9	1.00	120.000
1	89.062	20.90	43.50	22.60	-14.57	V	359.1	1.00	120.000
1	184.338	27.11	43.50	16.39	-12.57	V	153.4	1.00	120.000
1	344.442	17.83	46.00	28.17	-5.51	V	50	2.00	120.000
1	619.976	23.06	46.00	22.94	-2.17	V	307.6	1.00	120.000
1	966.319	27.67	54.00	26.33	3.26	V	50	2.00	120.000

REMARKS:

1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) -Amplifier Gain
3. The other emission levels were very low against the limit.
4. Margin value = Limit value –. Emission level.



Test Report No.: EMC20251225B001-FCC 15B Report

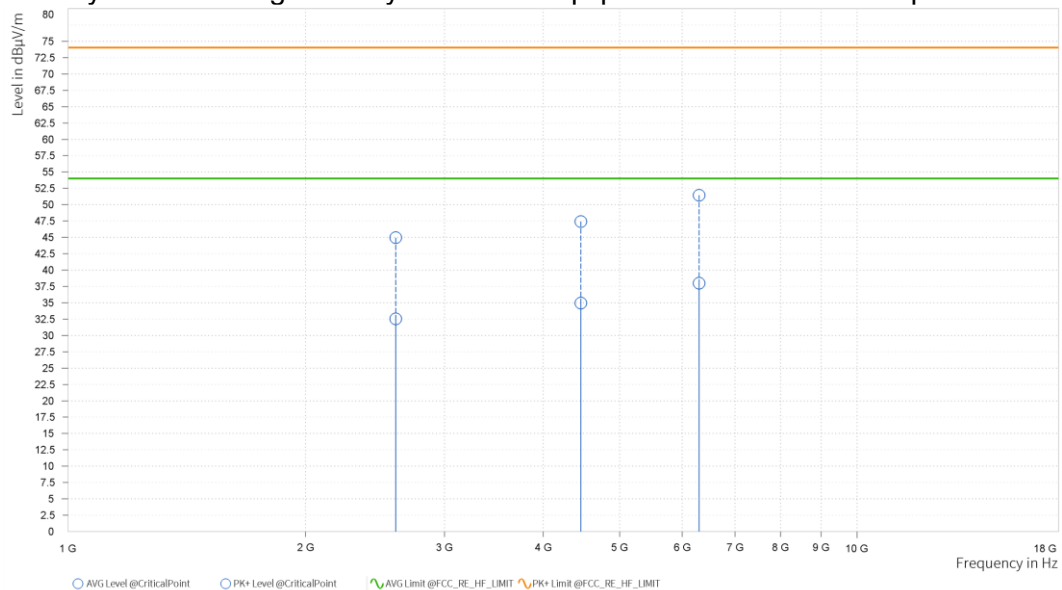
TEST VOLTAGE	Input 120 Vac, 60 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Carl Xie		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,601.000	44.95	74.00	29.05	32.52	54.00	21.48	7.43	H	355.2	2.00
1	4,466.000	47.43	74.00	26.57	34.95	54.00	19.05	10.56	H	1	2.00
1	6,303.500	51.46	74.00	22.54	37.98	54.00	16.02	15.08	H	181.4	2.00

REMARKS:

1. Peak detector quick scan is shown on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 1GHz to 5th harmonic of the highest frequency or 40GHz, whichever is lower. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.
4. Only emissions significantly above the equipment noise floor are reported.



Test Report No.: EMC20251225B001-FCC 15B Report

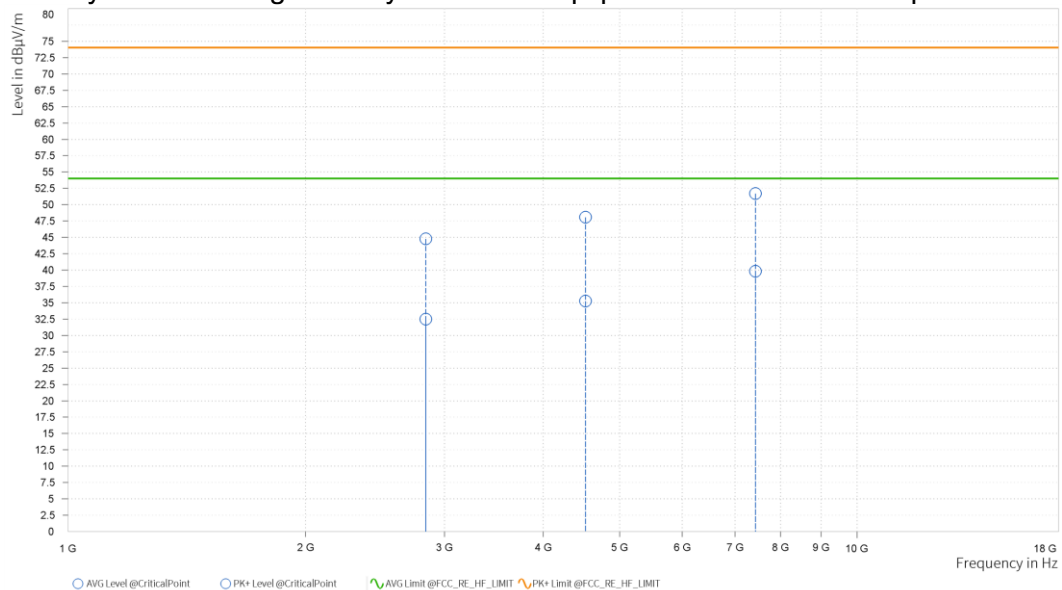
TEST VOLTAGE	Input 120 Vac, 60 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Carl Xie		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	2,840.500	44.77	74.00	29.23	32.47	54.00	21.53	7.53	V	355.1	2.00
1	4,526.500	48.09	74.00	25.91	35.24	54.00	18.76	10.60	V	359	2.00
1	7,431.500	51.70	74.00	22.30	39.81	54.00	14.19	16.21	V	41.5	2.00

REMARKS:

1. Peak detector quick scan is shown on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 1GHz to 5th harmonic of the highest frequency or 40GHz, whichever is lower. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.
4. Only emissions significantly above the equipment noise floor are reported.





Test Report No.: EMC20251225B001-FCC 15B Report

3 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

---END---