TEST REPORT

Applicant	MerchSource, LLC.
Address	7755 Irvine Center Drive, Suite 100, Irvine, CA 92618

Manufacturer or Supplier	MerchSource, LLC.
Address	7755 Irvine Center Drive, Suite 100, Irvine, CA 92618
Product	Wireless Charger with Mirror Round LED 8inch
Brand Name	Sharper Image
Model	1014289
Additional Model & Model Difference	N/A
Date of tests	Jul. 06, 2021 ~ Jul. 12, 2021 Jan. 25, 2022 ~ Feb. 23, 2022
The submitted sample of the above equipment has been tested for according to the requirements of the following standards:	
☒ **FCC Part 15, Subpart C**	
CONCLUSION: The submitted sample was found to COMPLY with the test requirement	

Tested by Andy Zhu Supervisor / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	 Date: Apr. 26, 2022

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF2106WDG0113	Original release	Aug. 04, 2021
RF2201WDG0226	Based on the original report RF2106WDG0113, Change the Manufacturer and address, Change PCB cabling and component layout it did need to be retested Radiated Emission (30M-1G) after the engineer evaluated.	Apr. 26, 2022

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
§15.209	Radiated Emission	PASS	Meet the requirement of limit.

2 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:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	9KHz ~ 30MHz	2.16dB
	30MHz ~ 1GMHz	3.82dB

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

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless Charger with Mirror Round LED 8inch
MODEL NO.	1014289
ADDITIONAL MODEL	N/A
SAMPLE STATUS	Engineering sample
FCC ID	2AEVM1014289
POWER SUPPLY	DC 12V from Adapter
MODULATION TYPE	ASK
OPERATING FREQUENCY RANGE	111-205KHz
ANTENNA TYPE	Coil Antenna
FIELD STRENGTH	87.58dBuV/m
CABLE SUPPLIED	N/A

NOTES:

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 test report.
3. Please refer to the EUT photo document (Reference No.: 2201WDG0226) for detailed product photo.
4. The EUT were powered by the following adapter.

ADAPTER	
BRAND:	N/A
MODEL:	AD0301-1202000UB
INPUT:	AC 100-240V, 50-60Hz 0.8A Max.
OUTPUT:	DC 12V, 2A 24W
DC LINE:	Unshielded, Non-detachable, 155cm

3.2 DESCRIPTION OF TEST MODES

The following test frequencies are provided to this EUT:

Operating Frequency Range(KHz)	Tested Frequency(KHz)	Mode
111-205	128.2 KHz	Operating
111-205	128.1 KHz	Standby

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as a dependent 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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	S8	Samsung	G9500	N/A	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

4 EMISSION TEST

4.1 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart C, Section 15.209

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

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

NOTES:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/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. The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

4.2.2 TEST INSTRUMENTS

FREQUENCY 9KHz-30MHz

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101564	Mar. 07,22
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	1519B-045	May 29,22
Amplifier	Burgeon	BPA-530	100210	Mar. 13,22
Test Software	ADT	ADT_Radiated_V8.7.07	N/A	N/A

NOTES: 1. The test was performed in 10m Chamber.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. The FCC Site Registration No. is 749762.

FREQUENCY 30MHz-1GHz

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU40	100449	Mar. 07,22
Bilog Antenna	Teseq	CBL 6111D	30643	May 29,22
Amplifier	Burgeon	BPA-530	100220	Mar. 13,22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	May 22,22
Test software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A

NOTES: 1. The test was performed in 966 Chamber
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. The FCC Site Registration No. is 749762.

4.2.3 TEST PROCEDURE

< Below 30MHz >

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meters 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 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.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter 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 1 GHz.

<30MHz~1GHz >

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. 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 antenna is a broadband antenna, and its height 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.
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 Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTES:

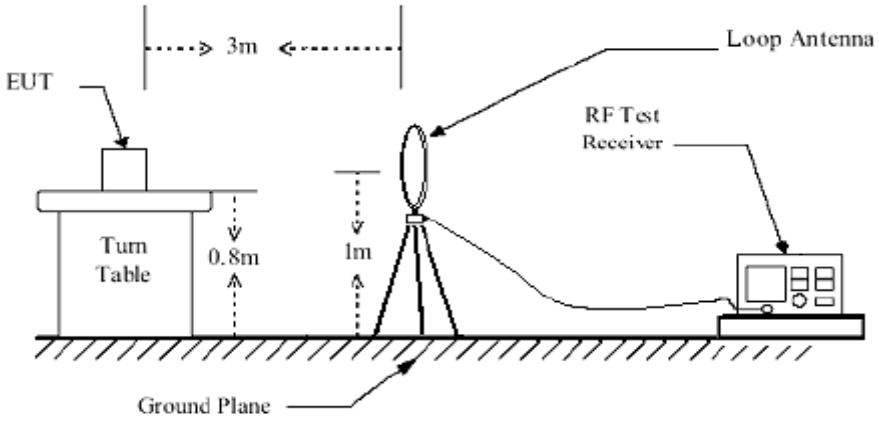
1. The resolution bandwidth of test receiver/spectrum analyzer is 200Hz for Quasi-peak detection (QP) at fundamental frequency 9K-150KHz;
2. The resolution bandwidth of test receiver/spectrum analyzer is 9KHz for Quasi-peak detection (QP) at fundamental frequency 150K-30MHz;
3. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at radiated spurious emission frequency 30MHz-1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

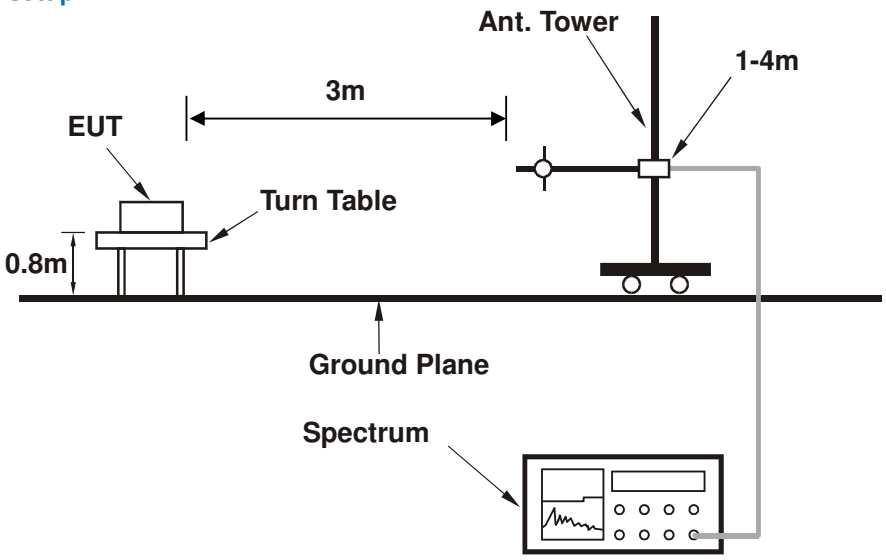
No deviation.

4.2.5 TEST SETUP

Below 30MHz test setup



Below 1GHz test setup



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

4.2.6 EUT OPERATING CONDITIONS

a. Turn on the power supply of the EUT.

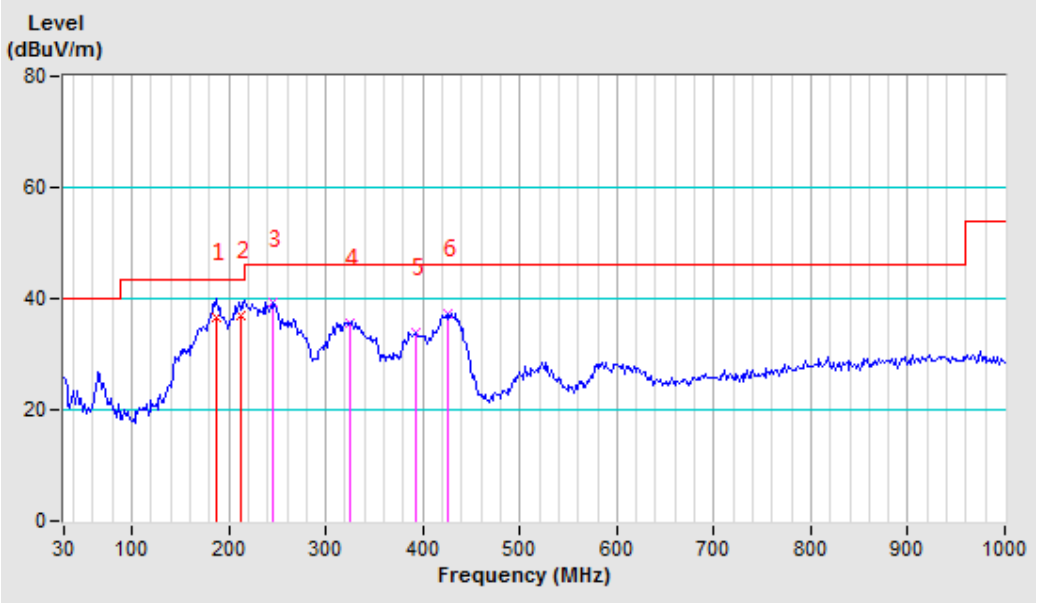
b. EUT was operated according to the type description in manufacturer's specifications or the User's Manual.

4.2.7 TEST RESULTS

TEST MODE	Operating	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	DC 12V from Adapter Input AC 120V 60Hz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 55% RH	TESTED BY: panda	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	187.00	-8.21	44.86	36.65	43.50	-6.85	100	125
2	213.00	-7.87	44.85	36.98	43.50	-6.52	154	122
3	246.07	-7.78	46.98	39.20	46.00	-6.80	100	120
4	325.35	-5.17	40.78	35.61	46.00	-10.39	147	136
5	392.20	-3.81	37.83	34.02	46.00	-11.98	100	12
6	426.39	-3.12	40.41	37.29	46.00	-8.71	100	0

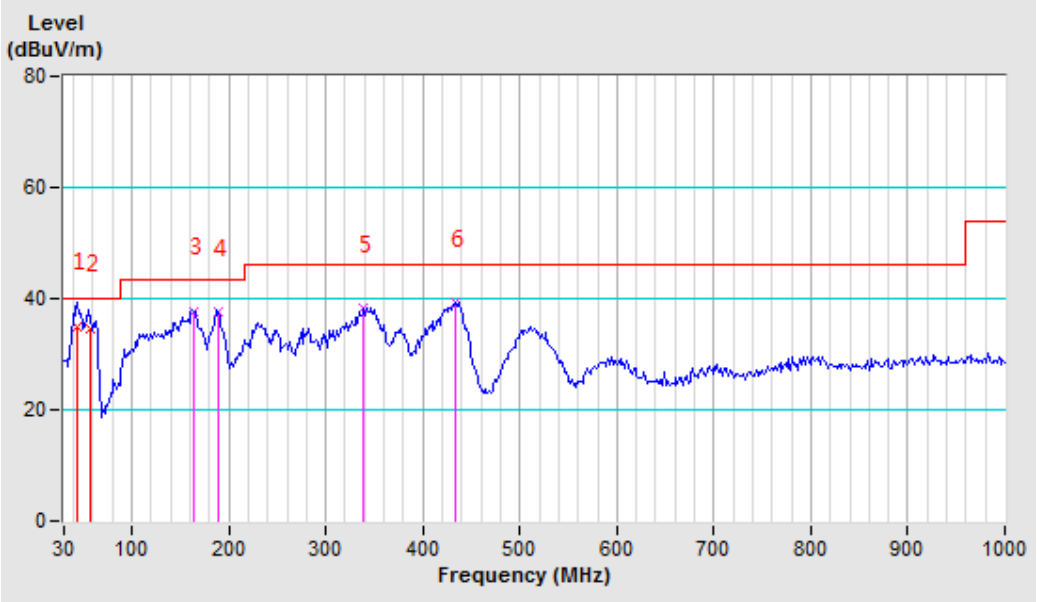
REMARKS:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 30MHz to 1000MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	Operating	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	DC 12V from Adapter Input AC 120V 60Hz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	27deg. C, 58% RH	TESTED BY: panda	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	44.00	-8.95	43.90	34.95	40.00	-5.05	100	145
2	57.98	-13.49	48.03	34.54	40.00	-5.46	100	145
3	163.69	-7.90	45.65	37.75	43.50	-5.75	100	0
4	188.56	-8.18	45.67	37.49	43.50	-6.01	220	186
5	339.34	-4.87	43.04	38.17	46.00	-7.83	213	146
6	432.61	-3.00	42.22	39.22	46.00	-6.78	153	230

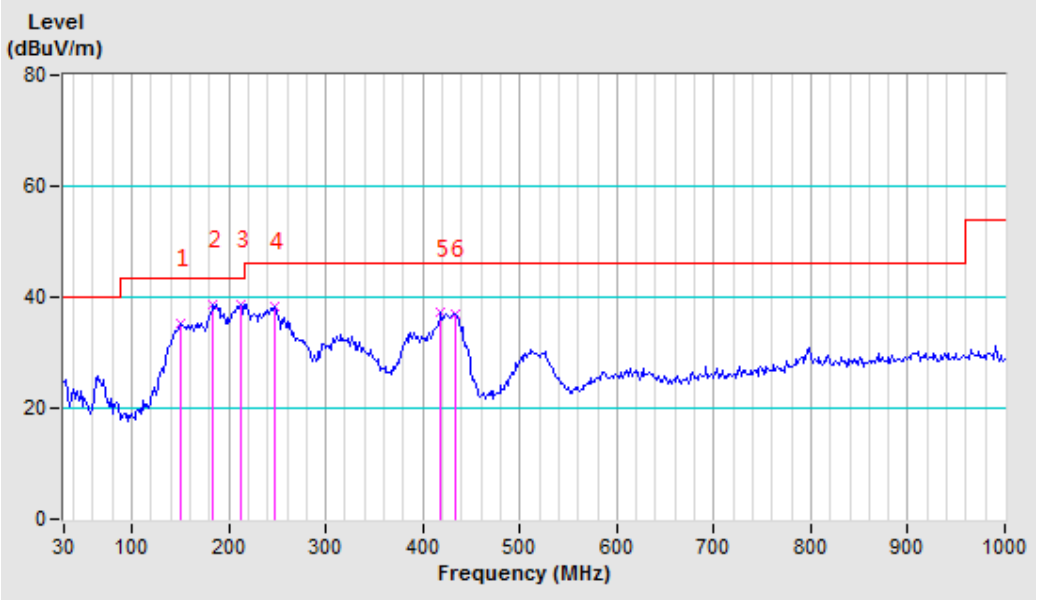
REMARKS:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 30MHz to 1000MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	Standby	**FREQUENCY RANGE**	30-1000MHz
TEST VOLTAGE	DC 12V from Adapter Input AC 120V 60Hz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	27deg. C, 58% RH	**TESTED BY**: panda	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	149.70	-7.52	42.80	35.28	43.50	-8.22	100	200
2	183.89	-8.30	47.04	38.74	43.50	-4.76	100	159
3	211.87	-7.87	46.64	38.77	43.50	-4.73	100	299
4	247.63	-7.78	46.13	38.35	46.00	-7.65	100	254
5	418.62	-3.28	40.47	37.19	46.00	-8.81	100	228
6	434.17	-2.96	39.90	36.94	46.00	-9.06	100	145

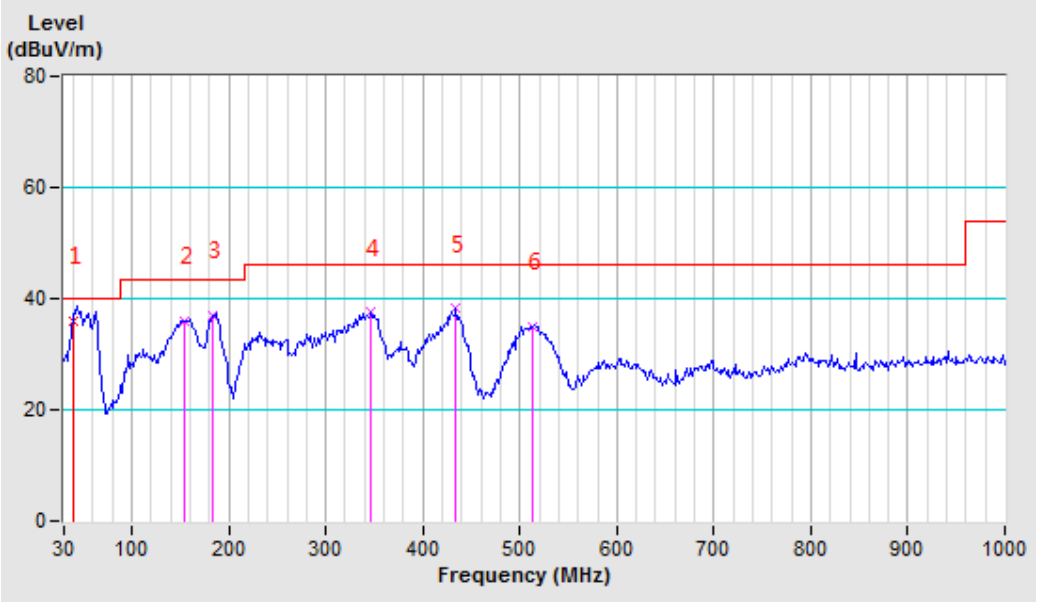
REMARKS:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 30MHz to 1000MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	Standby	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	DC 12V from Adapter Input AC 120V 60Hz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23deg. C, 58% RH	TESTED BY: panda	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	**40.00**	**-6.55**	**42.55**	**36.00**	**40.00**	**-4.00**	**100**	**121**
2	154.36	-7.64	43.72	36.08	43.50	-7.42	100	156
3	183.89	-8.30	45.36	37.06	43.50	-6.44	142	120
4	347.12	-4.70	42.23	37.53	46.00	-8.47	110	113
5	434.17	-2.96	41.10	38.14	46.00	-7.86	100	156
6	513.45	-1.46	36.53	35.07	46.00	-10.93	156	186

REMARKS:
1. Peak detector quick scan is showed 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: 30MHz to 1000MHz.
4. Only emissions significantly above equipment noise floor are reported.



5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6 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.

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