

TEST REPORT

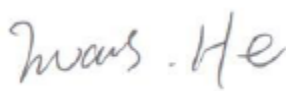
Applicant	Digital Gallery Global Limited
Address	Flat 20, 11/F, BLK A, Hoi Luen Industrial Centre, 55 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong

Manufacturer or Supplier	Nosanky Electronic Technology Co. Ltd
Address	301 Blk A No. 12 Silianhuamao Industrial Zone Henggang Street Longgang District Shenzhen China
Product	Qi Wireless Charging Power Station Alarm Clock
Brand Name	SHARP
Model	SPC237A
Additional Model & Model Difference	SPC237, SPC237B, SPC237D, SPC237BL, SPC237AMZ, SPC237OP
Date of tests	Jul. 14 to Aug. 04, 2020

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 Evans He Project Engineer/ EMC Department	Approved by David Huang Supervisor / EMC Department
	 Date: Aug. 05, 2020

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF200710S003	Original release	Aug. 05, 2020

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
§15.203	Antenna Requirement	PASS	No antenna connector is used.
§15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
§15.209	Radiated Emission	PASS	Meet the requirement of limit.
§15.215 (c)	20dB Bandwidth	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
Conducted emissions	9kHz~30MHz	2.70dB
Radiated emissions	9KHz ~ 30MHz	2.16dB
	30MHz ~ 1GMHz	3.74dB

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	Qi Wireless Charging Power Station Alarm Clock
MODEL NO.	SPC237A
ADDITIONAL MODELS	SPC237, SPC237B, SPC237D, SPC237BL, SPC237AMZ, SPC237OP
FCC ID	P5FSPC237A
POWER SUPPLY	AC 120V / 60Hz and DC 3V(1.5V*AA*2) from battery
MODULATION TYPE	ASK
OPERATING FREQUENCY	110KHz ~ 206KHz
ANTENNA TYPE	Coil Antenna
CABLE SUPPLIED	AC Line: Unshielded, Non-Detachable 1.73m

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 test report.
3. Please refer to the EUT photo document (Reference No.: 200710S003) for detailed product photo.
4. Additional models (see about table) are identical with the test model SPC237A except the color of the appearance、trade name and model name for trading purpose.

3.2 DESCRIPTION OF TEST MODES

The EUT was tested under the following modes the final worst mode was marked in boldface and recorded in this report.

TEST FREQUENCY	TEST MODE	TEST VOLTAGE
144.3298KHz	wireless charging	AC 120V / 60Hz and DC 3V from battery
144.3568KHz	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 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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Wireless charging test stand	N/A	N/A	N/A	N/A

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

4 EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

- NOTES:**
- (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 0.50 MHz.
 - (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.

4.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCS30	8471241027	Mar. 24,20	Mar. 24,21
Artificial Mains Network	SCHWARZBECK	8127	8127713	Mar. 24,20	Mar. 24,21
ISN	Com-Power	ISN T800	34373	Mar. 24,20	Mar. 24,21
Test software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

- 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 shielding room 553.

4.1.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4:2014 (section 7).

- 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 30 MHz was searched. Emission levels under (Limit – 20dB) were not recorded.

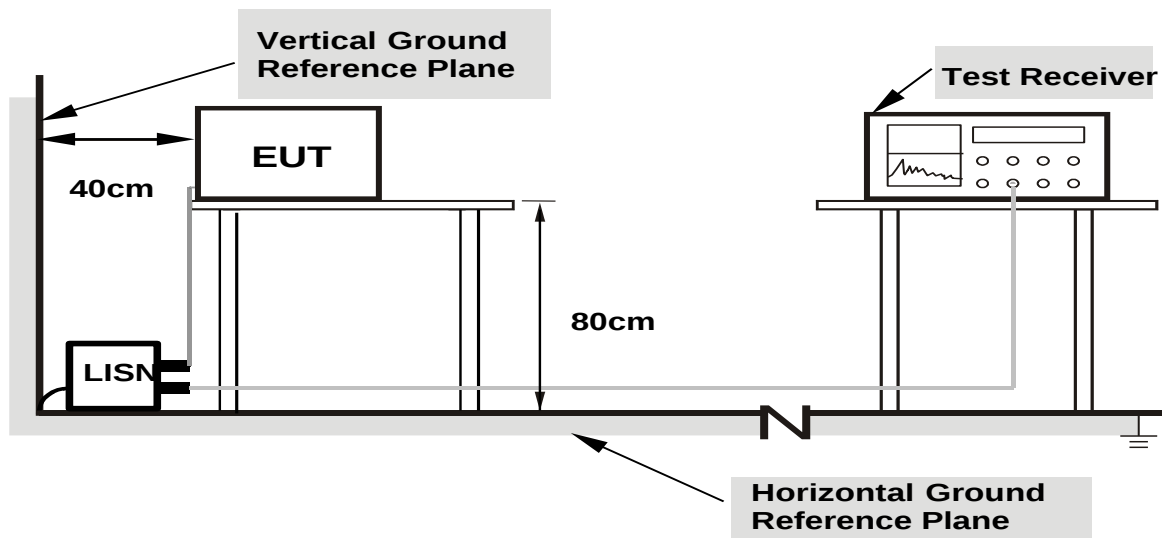
NOTE:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

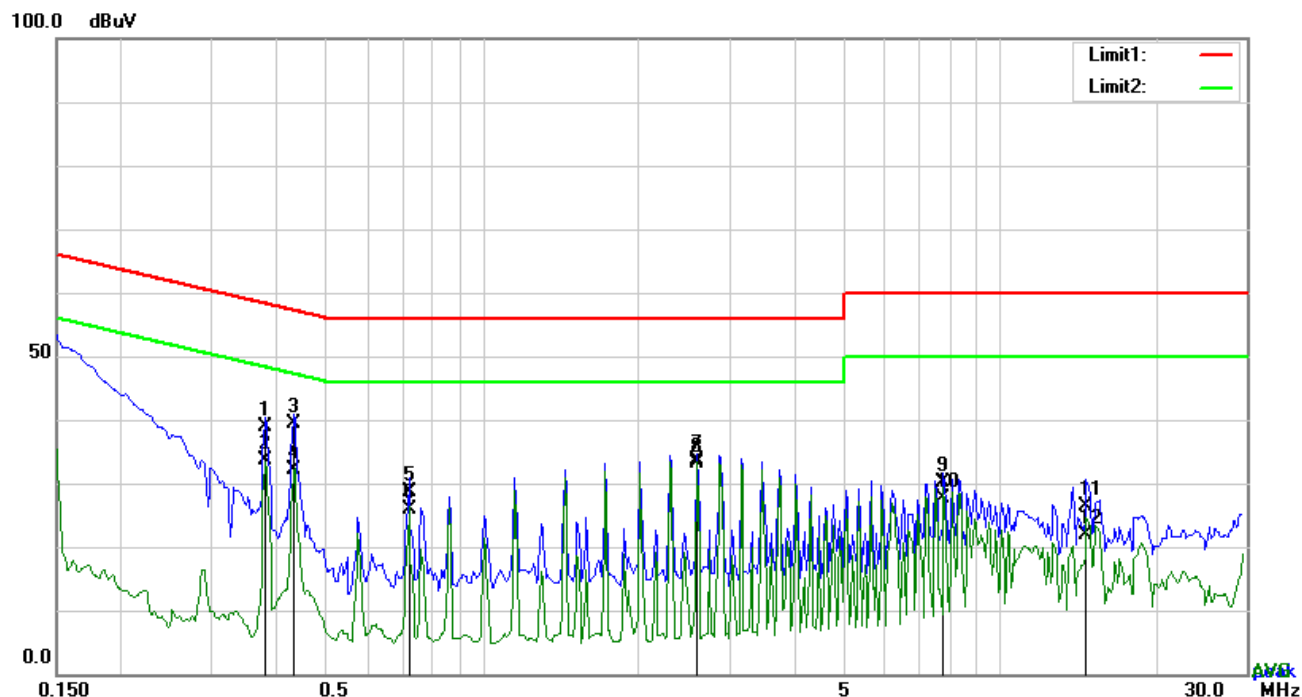
- a. Turned on the power of all equipment.
- b. EUT was operated according to the type description in manufacturer's specifications or the User's Manual.

4.1.7 TEST RESULTS

TEST MODE	wireless charging	6DB BANDWIDTH	9 kHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	25.2deg. C, 51% RH	TESTED BY	Evans He

No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	L1	0.3801	28.83	QP	10.11	38.94	58.28	-19.34
2	L1	0.3801	23.42	AVG	10.11	33.53	48.28	-14.75
3	L1	0.4308	29.16	QP	10.10	39.26	57.24	-17.98
4	L1	0.4308	22.05	AVG	10.10	32.15	47.24	-15.09
5	L1	0.7233	18.54	QP	10.11	28.65	56.00	-27.35
6	L1	0.7233	15.74	AVG	10.11	25.85	46.00	-20.15
7	L1	2.5953	23.38	QP	10.16	33.54	56.00	-22.46
8	L1	2.5953	22.91	AVG	10.16	33.07	46.00	-12.93
9	L1	7.7892	19.99	QP	10.23	30.22	60.00	-29.78
10	L1	7.7892	17.35	AVG	10.23	27.58	50.00	-22.42
11	L1	14.7117	15.95	QP	10.33	26.28	60.00	-33.72
12	L1	14.7117	11.43	AVG	10.33	21.76	50.00	-28.24

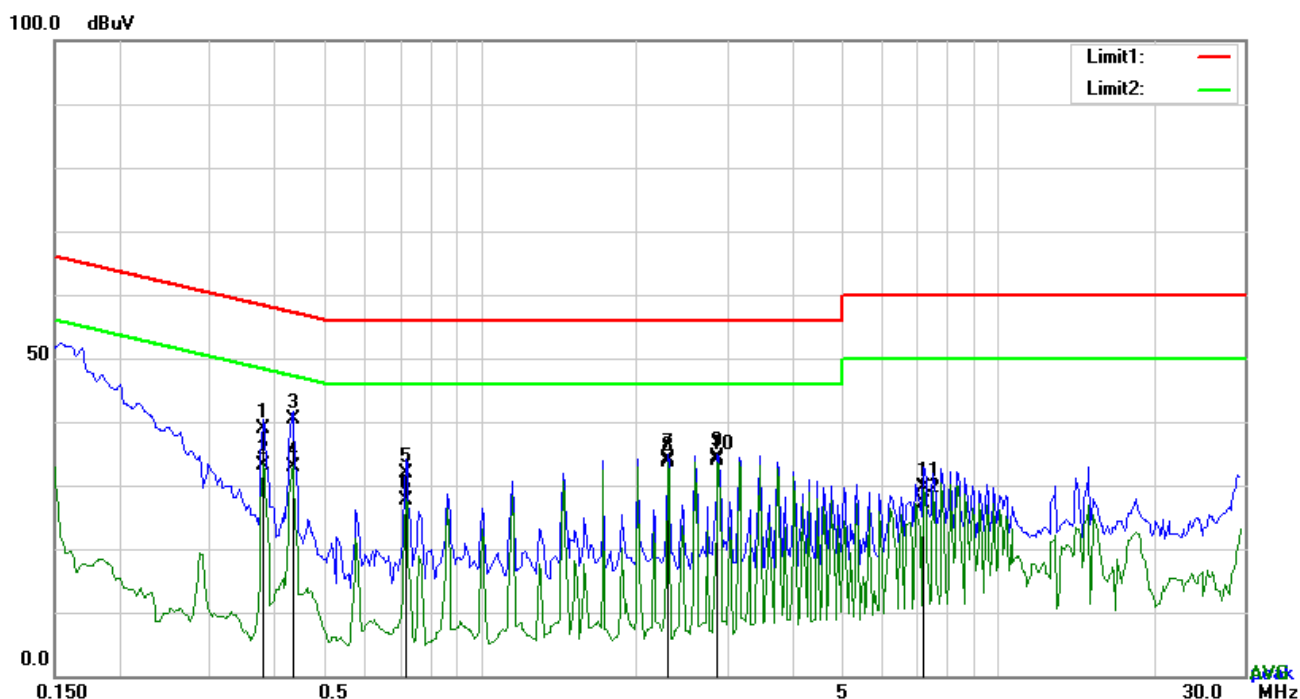
REMARKS: The emission levels of other frequencies were very low against the limit.



TEST MODE	wireless charging	6DB BANDWIDTH	9 kHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	25.2deg. C, 51% RH	TESTED BY	Evans He

No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	N	0.3801	28.77	QP	10.13	38.90	58.28	-19.38
2	N	0.3801	23.09	AVG	10.13	33.22	48.28	-15.06
3	N	0.4347	30.17	QP	10.12	40.29	57.16	-16.87
4	N	0.4347	22.76	AVG	10.12	32.88	47.16	-14.28
5	N	0.7194	21.83	QP	10.13	31.96	56.00	-24.04
6	N	0.7194	17.50	AVG	10.13	27.63	46.00	-18.37
7	N	2.3067	23.91	QP	10.17	34.08	56.00	-21.92
8	N	2.3067	23.44	AVG	10.17	33.61	46.00	-12.39
9	N	2.8839	24.11	QP	10.18	34.29	56.00	-21.71
10	N	2.8839	23.66	AVG	10.18	33.84	46.00	-12.16
11	N	7.2081	19.40	QP	10.23	29.63	60.00	-30.37
12	N	7.2081	16.78	AVG	10.23	27.01	50.00	-22.99

REMARKS: The emission levels of other frequencies were very low against the limit.



4.2 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

NOTE:

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.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESL6	1300.5001K06 -100262-eQ	Mar. 24,20	Mar. 24,21
Active Antenna	CMO-POWER	AL-130	121031	Mar. 27, 20	Mar. 26, 21
3m Semi-anechoic Chamber	SAEMC	9m*6m*6m	N/A	Mar. 24, 20	Mar. 24, 21
Test Software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

- NOTES:** 1. The test was performed in 3m 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 535293.

FREQUENCY 30MHz-1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESL6	1300.5001K06 -100262-eQ	Mar. 24,20	Mar. 24,21
Bilog Antenna	Sunol Sciences	JB6	A110712	Apr. 08, 20	Apr. 07, 21
Active Antenna	CMO-POWER	AL-130	121031	Mar. 27, 20	Mar. 26, 21
Signal Amplifier	HP	8447E	443008	Mar. 24, 20	Mar. 24, 21
3m Semi-anechoic Chamber	SAEMC	9m*6m*6m	N/A	Mar. 24, 20	Mar. 24, 21
Test Software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

- NOTES:** 1. The test was performed in 3m 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 535293.

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 3 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.

NOTE:

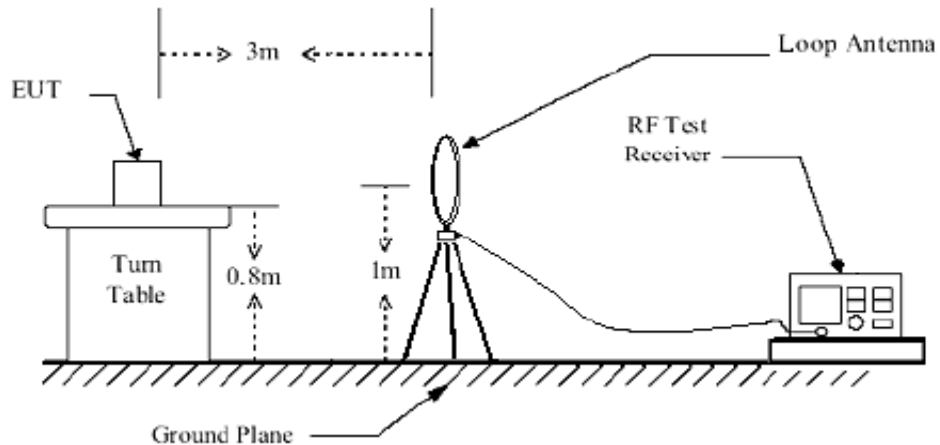
1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
3. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Gain (dB).
4. Margin value = Emission level – Limit value.

4.2.4 DEVIATION FROM TEST STANDARD

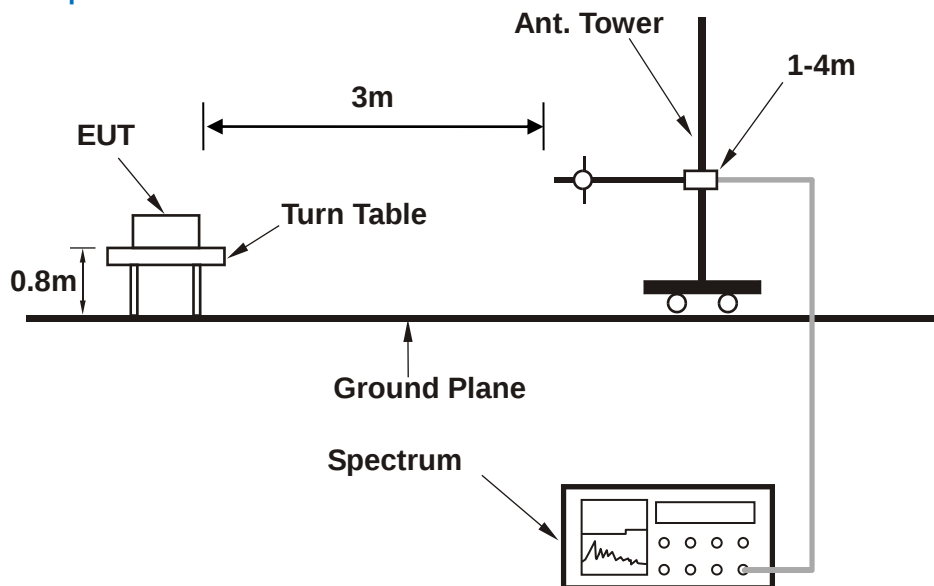
No deviation.

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

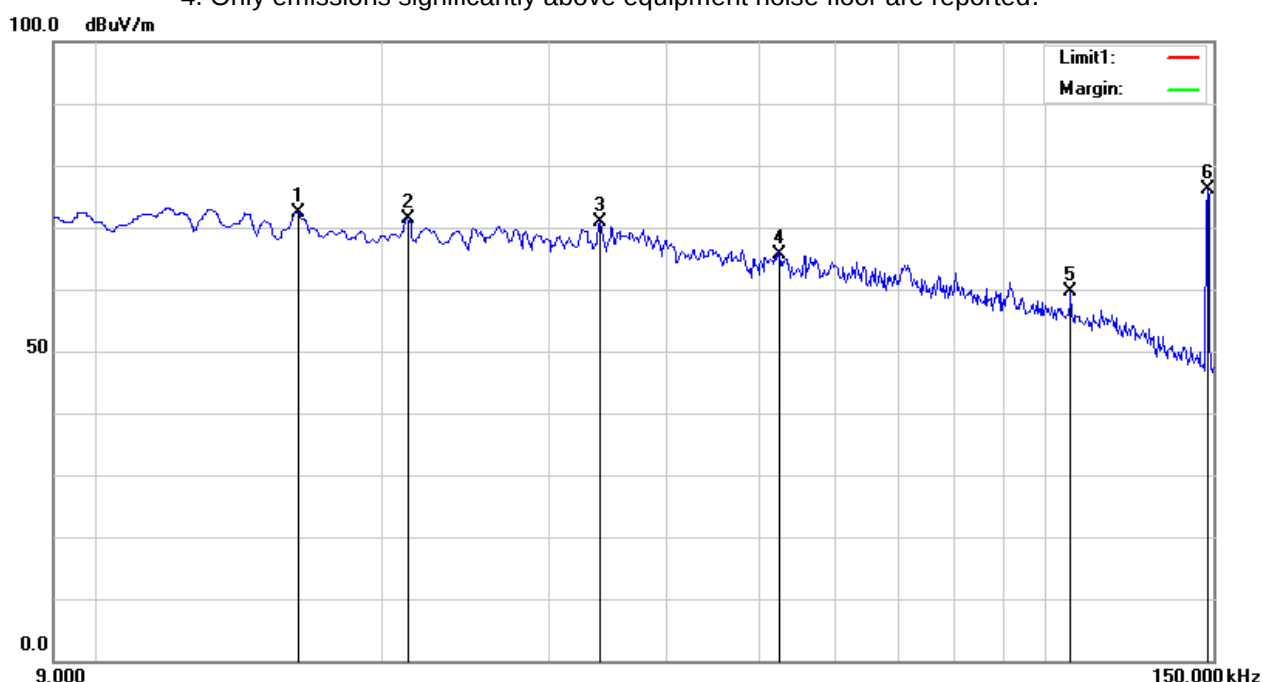
- Turn on the power supply of the EUT.
- EUT was operated according to the type description in manufacturer's specifications or the User's Manual.

4.2.7 TEST RESULTS

TEST MODE	wireless charging	FREQUENCY RANGE	9 -150KHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 200Hz
ENVIRONMENTAL CONDITIONS	26.3deg. C, 54% RH	TESTED BY:	Evans He

ANTENNA POLARITY & TEST DISTANCE: PARALLEL AT 3M									
No.	Frequency (MHz)	Reading (dBuV/m)	Ant_F (dB/m)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)
1	0.0163	57.49	14.82	0.01	72.32	123.36	-51.04	100	20
2	0.0213	56.86	14.56	0.01	71.43	121.04	-49.61	100	156
3	0.034	56.57	14.18	0.02	70.77	116.97	-46.2	100	71
4	0.0524	51.81	13.72	0.02	65.55	113.22	-47.67	100	157
5	0.1061	45.57	14.11	0.03	59.71	107.09	-47.38	100	328
6	0.1482	61.82	14.2	0.03	76.05	104.19	-28.14	100	110

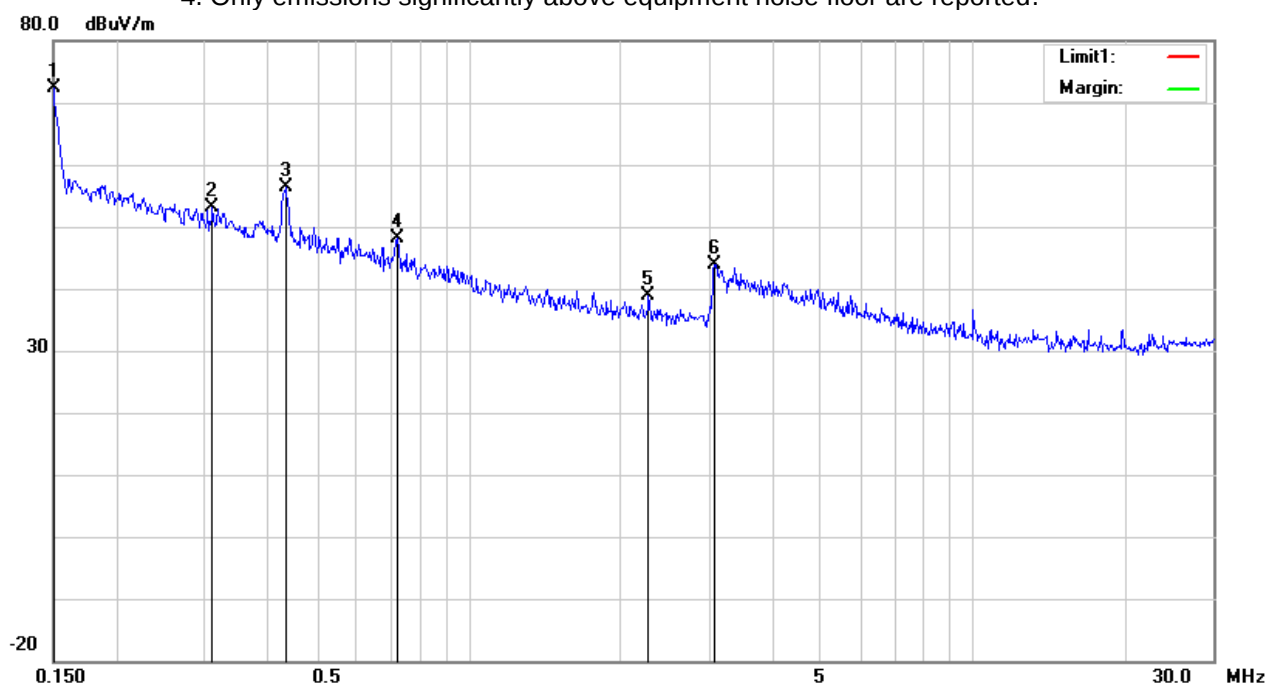
REMARKS: 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 0.009-0.15MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	wireless charging	FREQUENCY RANGE	150KHz-30MHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 200Hz
ENVIRONMENTAL CONDITIONS	26.3deg. C, 54% RH	TESTED BY: Evans He	

ANTENNA POLARITY & TEST DISTANCE: PARALLEL AT 3M									
No.	Frequency	Reading	Ant_F	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBuV/m)	(dB/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	0.15	58.12	14.2	0.03	72.35	104.08	-31.73	100	216
2	0.31	38.78	14.26	0.04	53.08	97.78	-44.7	100	318
3	0.4328	42.01	14.22	0.04	56.27	94.88	-38.61	100	39
4	0.7198	34.19	13.89	0.04	48.12	70.46	-22.34	100	248
5	2.2726	24.55	14.34	0.04	38.93	69.54	-30.61	100	231
6	3.0738	29.5	14.44	0.05	43.99	69.54	-25.55	100	322

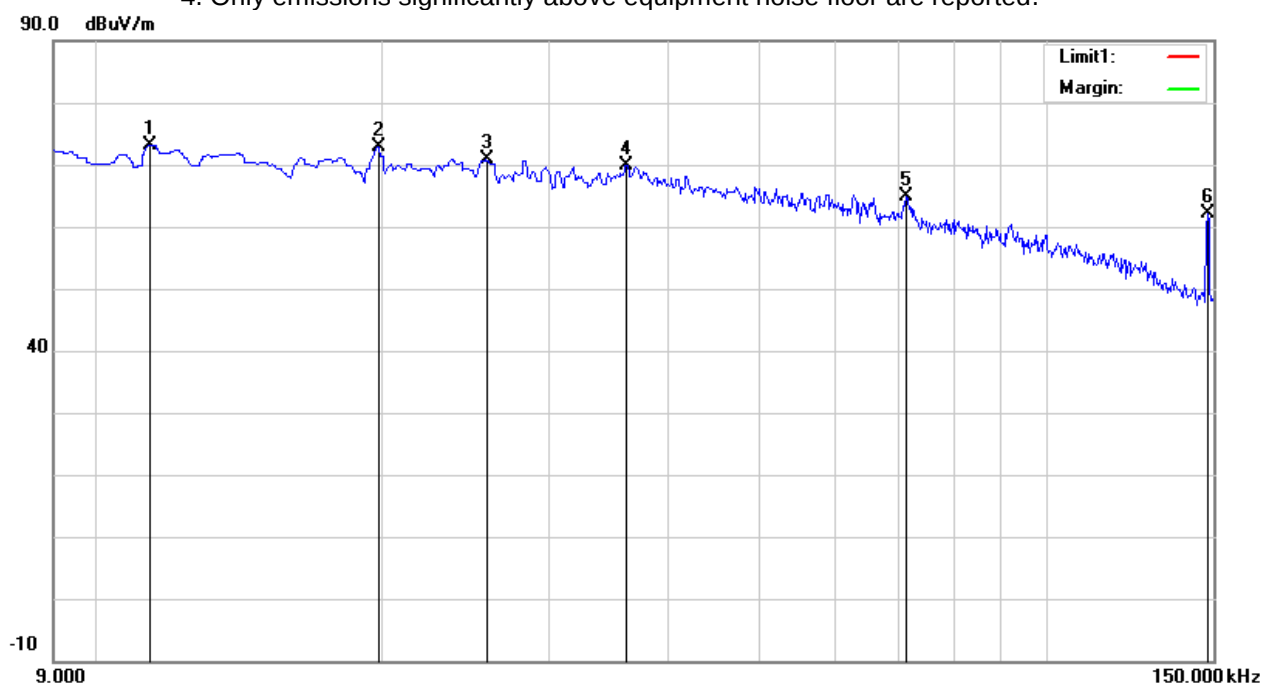
REMARKS: 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 0.15-30MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	wireless charging	FREQUENCY RANGE	9 -150KHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 200Hz
ENVIRONMENTAL CONDITIONS	26.3deg. C, 54% RH	TESTED BY: Evans He	

ANTENNA POLARITY & TEST DISTANCE: PERPENDICULAR AT 3M									
No.	Frequency	Reading	Ant_F	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBuV/m)	(dB/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	0.0114	58.1	15.12	0.01	73.23	126.47	-53.24	100	270
2	0.0199	58.23	14.61	0.01	72.85	121.63	-48.78	100	165
3	0.0258	56.32	14.43	0.01	70.76	119.37	-48.61	100	25
4	0.0361	55.76	14.12	0.02	69.9	116.45	-46.55	100	332
5	0.0713	50.91	13.87	0.02	64.8	110.54	-45.74	100	74
6	0.1482	47.96	14.2	0.03	62.19	104.19	-42	100	92

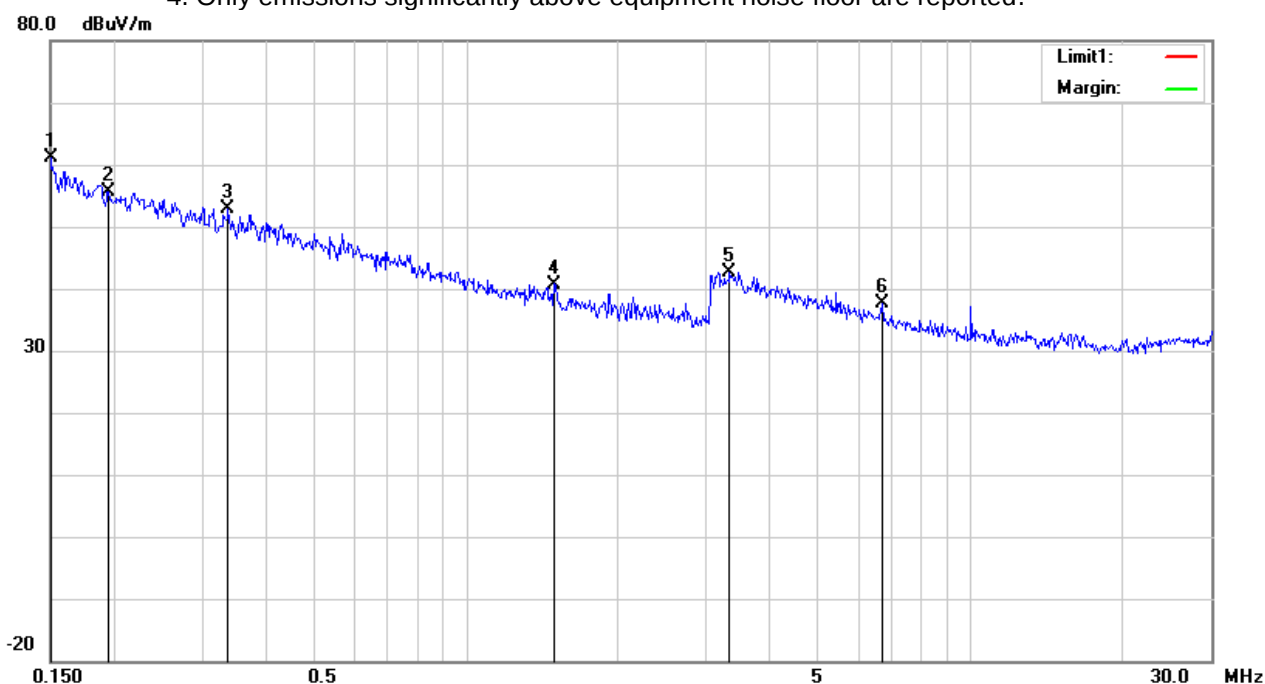
REMARKS: 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 0.009-0.15MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	wireless charging	FREQUENCY RANGE	150KHz-30MHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 200Hz
ENVIRONMENTAL CONDITIONS	26.3deg. C, 54% RH	TESTED BY: Evans He	

ANTENNA POLARITY & TEST DISTANCE: PERPENDICULAR AT 3M									
No.	Frequency	Reading	Ant_F	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBuV/m)	(dB/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	0.15	47.01	14.2	0.03	61.24	104.08	-42.84	100	114
2	0.1955	41.26	14.29	0.03	55.58	101.78	-46.2	100	332
3	0.3374	38.67	14.25	0.04	52.96	97.04	-44.08	100	159
4	1.4953	26.81	13.9	0.04	40.75	64.11	-23.36	100	42
5	3.3281	28.2	14.48	0.05	42.73	69.54	-26.81	100	159
6	6.6978	22.96	14.56	0.05	37.57	69.54	-31.97	100	327

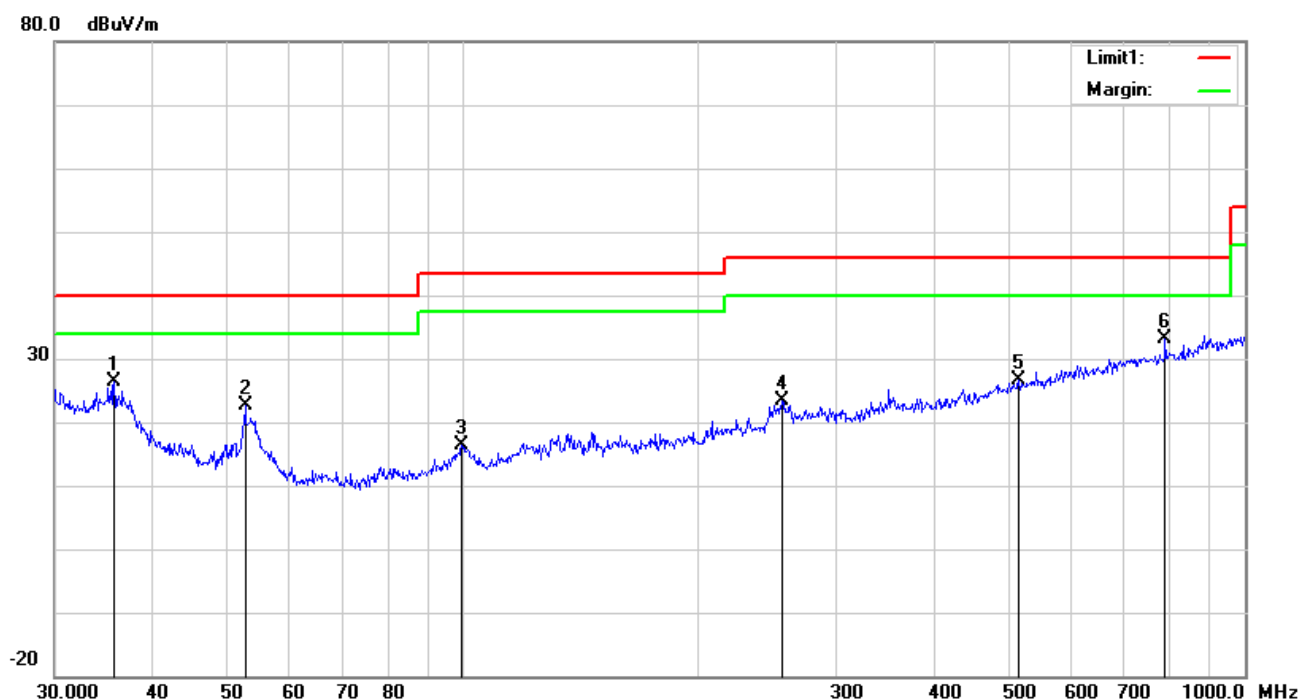
REMARKS: 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 0.15-30MHz
4. Only emissions significantly above equipment noise floor are reported.



TEST MODE	wireless charging	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	26.3deg. C, 54% RH	TESTED BY: Evans He	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 m										
No.	Frequency	Reading	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBuV/m)	(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	35.7491	32.29	16.27	22.25	0.16	26.47	40.00	-13.53	300	264
2	52.5753	37.33	7.55	22.39	0.25	22.74	40.00	-17.26	200	121
3	99.5281	29.35	8.65	22.32	0.82	16.50	43.50	-27.00	200	151
4	255.6231	31.76	12.17	22.29	1.62	23.26	46.00	-22.74	200	201
5	513.6331	27.27	18.97	21.78	2.17	26.63	46.00	-19.37	100	116
6	790.6188	29.67	22.11	21.17	2.54	33.15	46.00	-12.85	287	360

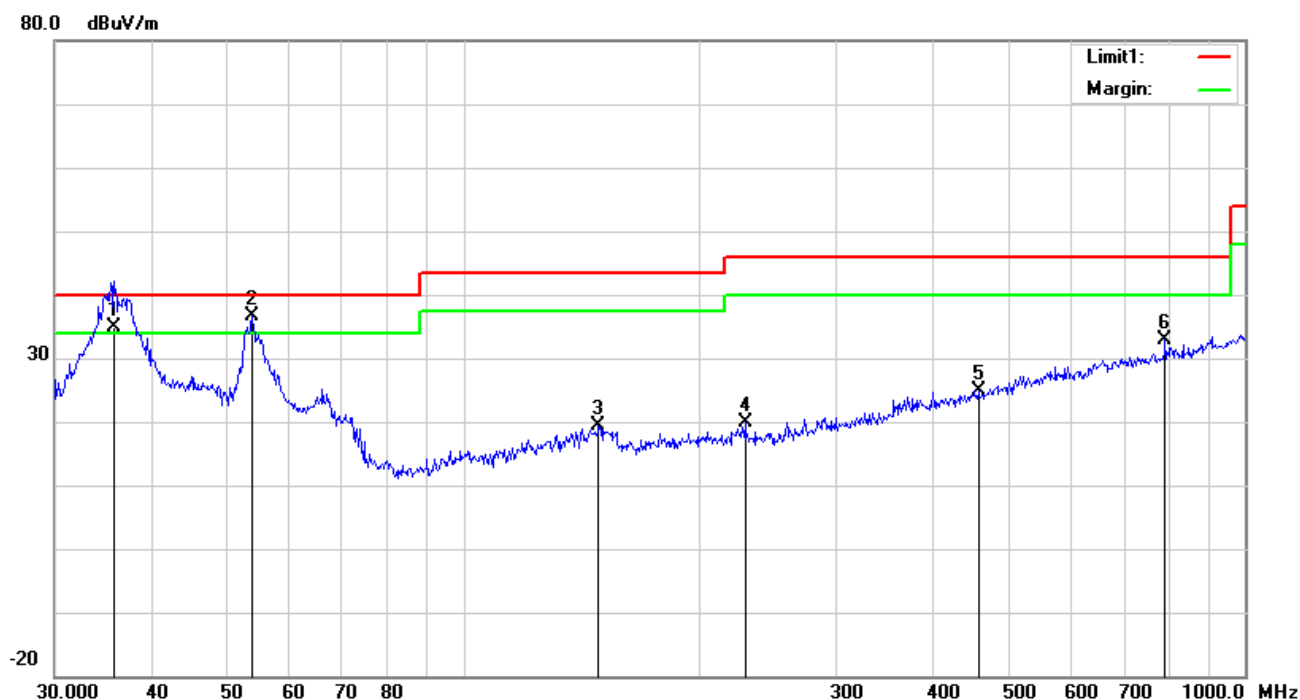
- REMARKS:**
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
 2. Negative sign (-) in the margin column signify levels below the limit.
 3. Frequency range scanned: 30MHz to 1000MHz.
 4.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



TEST MODE	wireless charging	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	AC 120V / 60Hz and DC 3V from battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	26.3deg. C, 54% RH	TESTED BY: Evans He	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 m										
No.	Frequency (MHz)	Reading (dBuV/m)	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)
1	35.7491	40.62	16.27	22.25	0.16	34.80	40.00	-5.20	100	168
2	53.6932	51.28	7.48	22.39	0.25	36.62	40.00	-3.38	300	112
3	148.9625	29.56	10.93	22.35	1.26	19.40	43.50	-24.10	300	96
4	229.2931	29.15	11.49	22.33	1.59	19.90	46.00	-26.10	100	84
5	455.9058	27.31	17.41	21.90	2.02	24.84	46.00	-21.16	100	321
6	790.6188	29.32	22.11	21.17	2.54	32.80	46.00	-13.20	100	318

- 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.



4.3. 20dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 20dB BANDWIDTH MEASUREMENT

The field strength of any emissions appearing between the band edges and out of band shall be attenuated at least 20 dB below the level of the unmodulated carrier or to the general limits in Section 15.209.

4.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Wireless Connectivity Tester	R&S	CMW270	1201.0002K75	Dec. 18, 19	Dec. 17, 20
MXA VEXTOR SIGNAL	Agilent	n5182a	MY50140530	Mar. 24,20	Mar. 24,21
MXA signal analyzer	Agilent	n9020a	MY49100060	Mar. 24,20	Mar. 24,21
RF Control Unit	Tonscend	JS0806-2	188060112	Mar. 24,20	Mar. 24,21
Signal Generation	Agilent	E4421B	US40051152	Dec. 18, 19	Dec. 17, 20
DC Power Supply	Agilent	E3640A	MY40004013	Mar. 30,20	Mar. 30,21
Programmable Temperature & Humidity Chamber	Hongjin	HYC-TH-225 DH	DG-180746	Mar. 24,20	Mar. 24,21
Test System	Tonscend	JS 1120-3	N/A	N/A	N/A
Power Splitter	Weinschel	1580-1	TL177	Mar. 27,20	Mar. 27,21

NOTE:

1. The test was performed in RF Oven room.
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.

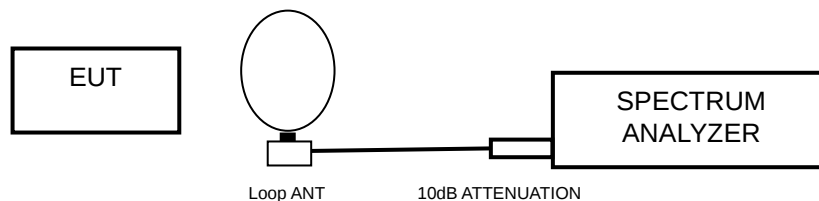
4.3.3 TEST PROCEDURE

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT, then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
- Repeat above procedures until all frequencies measured were complete.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITION

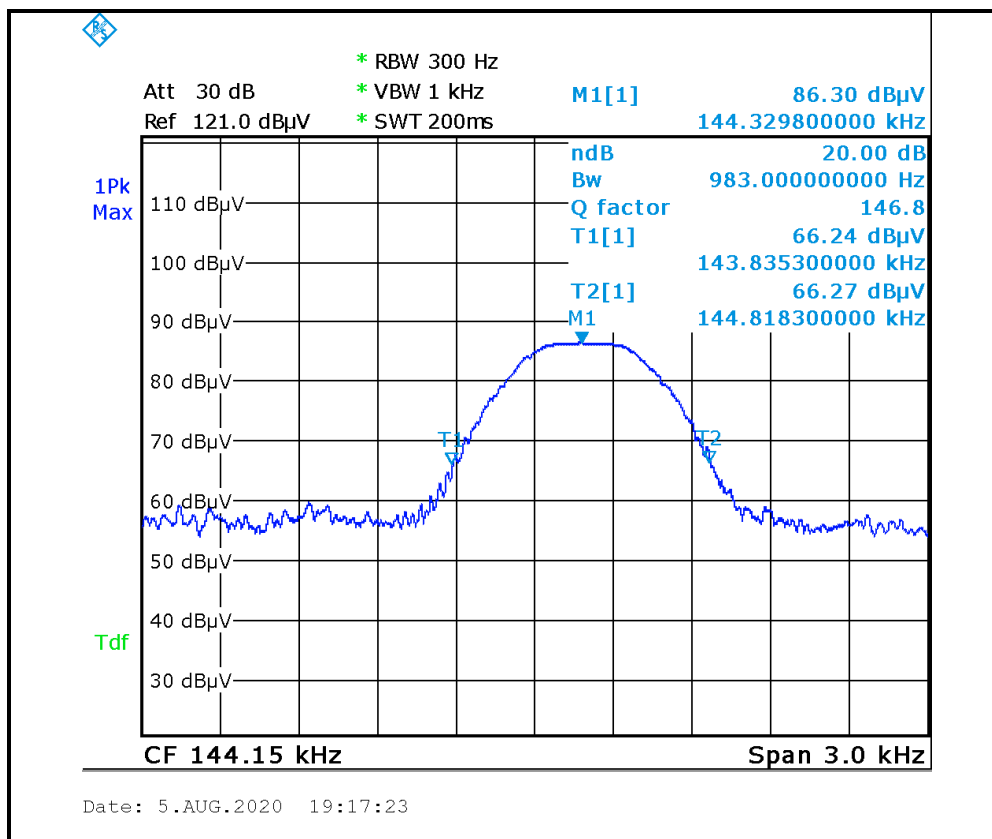
- Turn on the EUT.
- The EUT tested in charging mode and standby mode respectively.

4.3.7 TEST RESULTS

TEST MODE	CHANNEL FREQUENCY (KHz)	20dB BANDWIDTH (Hz)
Charging + Transmitting	144.3298	983

Lower & Upper Test Frequency Point (MHz)	Test Frequency (KHz)	P/F
Lower	143.8353	PASS
Upper	144.8183	PASS

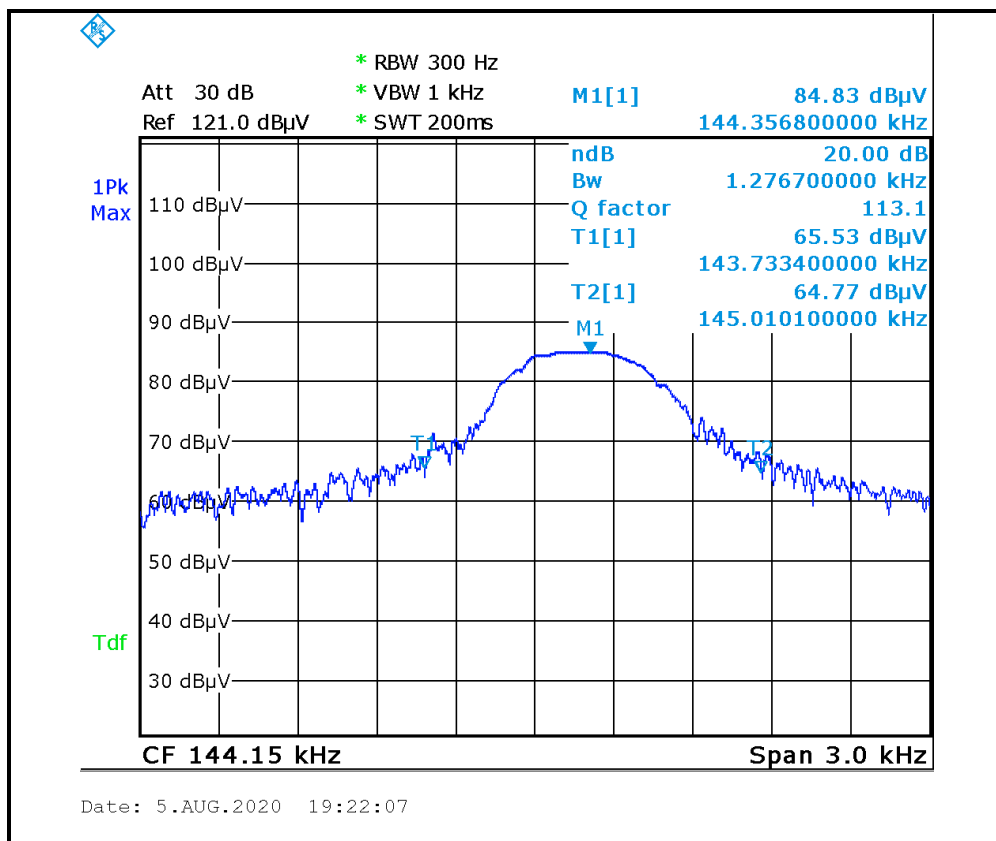
Test Data:



TEST MODE	CHANNEL FREQUENCY (KHz)	20dB BANDWIDTH (kHz)
Standby + Transmitting	144.3568	1.2767

Lower & Upper Test Frequency Point (MHz)	Test Frequency (KHz)	P/F
Lower	143.7334	PASS
Upper	145.0101	PASS

Test Data:



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.

---END---