FCC TEST REPORT
FCC ID:2A5WU-F6

Report Number.....:	**ZKT-220322L1794E**
Date of Test.....	Mar. 21, 2022 to Mar. 25, 2022
Date of issue.....:	Mar. 28, 2022
Total number of pages.....	21
Test Result .....:	PASS
Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address .....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name .....:	**Shenzhen Wudi Dong Technology Co. , Ltd.**
Address .....:	701, Tengyao Intelligent Building, No. 74 Zaoxia Road, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province, China
Manufacturer's name .....:	**Shenzhen Wudi Dong Technology Co. , Ltd.**
Address .....:	701, Tengyao Intelligent Building, No. 74 Zaoxia Road, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province, China
Test specification:	
Standard.....:	FCC CFR Title 47 Part 15 Subpart C
Test procedure.....:	/
Non-standard test method .....:	N/A
Test Report Form No.....:	TRF-EL-107_V0
Test Report Form(s) Originator.....:	ZKT Testing
Master TRF .....:	Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Product name.....:	**Wireless Charging Station**
Trademark .....:	N/A
Model/Type reference.....:	F6
Ratings.....:	Input: DC 9V/2A Output Power: 10W Max.

Testing procedure and testing location:

Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address.....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Tested by (name + signature).....:	Jim Liu Jim Liu
Reviewer (name + signature).....:	Tom Zou Tom Zou
Approved (name + signature).....:	Lake Xie Shenzhen ZKT Technology Co., Ltd. Approved Lake Xie

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1. VERSION

Report No.	Version	Description	Approved
ZKT-220322L1794E	Rev.01	Initial issue of report	Mar. 28, 2022

2. TEST SUMMARY

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Spurious Emission	15.209(a)(f)	Pass
20dB Bandwidth	15.215	Pass

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U，where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2，providing a level of confidence of approximately 95 %。

No.	Item	Uncertainty
1	AC Conducted Emission Test	±1.38dB
2	3m camber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
3	3m camber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
4	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.9dB
5	3m chamber Radiated spurious emission(18GHz-40GHz)	U=5.0dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

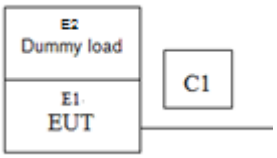
Product Name:	Wireless Charging Station
Model No.:	F6
Model Difference:	N/A
Hardware version:	H1.0
Software version:	S1.0
Operation Frequency:	110~ 205kHz
Modulation type:	MSK
Antenna Type:	Inductive loop coil Antenna
Antenna gain:	0dBi
Power supply:	Input: DC 9V/2A Output Power: 10W Max.

3.2 Test mode

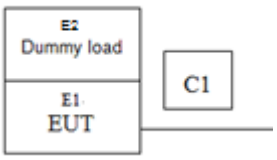
Test Modes:	
Mode 1	empty load mode
Mode 2	half load mode
Mode 3	full load mode
Note: All modes were tested, only the worst-case was recorded in the report. Mode 3 is the worst mode.	

3.3 Block Diagram of EUT Configuration

Conducted Emission



Radiated Emission



3.4 Test Conditions

Temperature: 23~26℃

Relative Humidity: 54~63 %

3.5 Description Of Support Units (Conducted Mode)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E1	Wireless Charging Station	N/A	F6	N/A	EUT
E2	Mobile Phone	HUAWEI	P30	N/A	Auxiliary
E3	Adapter	HUAWEI	HW-059200CHQ	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.
(3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY45109572	Sep. 22, 2021	Sep. 21, 2022
2	Spectrum Analyzer (1GHz-40GHz)	Agilent	E4446A	100363	Sep. 22, 2021	Sep. 21, 2022
3	Test Receiver (9kHz-7GHz)	R&S	ESCI7	101169	Sep. 22, 2021	Sep. 21, 2022
4	Bilog Antenna (30MHz-1400MHz)	Schwarzbeck	VULB9168	00877	Sep. 22, 2021	Sep. 21, 2022
5	Horn Antenna (1GHz-18GHz)	SCHWARZBECK	BBHA9120D	1541	Sep. 22, 2021	Sep. 21, 2022
6	Horn Antenna (18GHz-40GHz)	A.H. System	SAS-574	588	Sep. 22, 2021	Sep. 21, 2022
7	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	N/A	Sep. 22, 2021	Sep. 21, 2022
8	Amplifier (1GHz-40GHz)	QuanJuDa	DLE-161	097	Sep. 22, 2021	Sep. 21, 2022
9	Loop Antenna (9KHz-30MHz)	SCHWARZBECK	FMZB1519B	014	Sep. 22, 2021	Sep. 21, 2022
10	RF cables1 (9kHz-30MHz)	N/A	9kHz-30MHz	N/A	Sep. 22, 2021	Sep. 21, 2022
11	RF cables2 (30MHz-1GHz)	N/A	30MHz-1GHz	N/A	Sep. 22, 2021	Sep. 21, 2022
12	RF cables3 (1GHz-40GHz)	N/A	1GHz-40GHz	N/A	Sep. 22, 2021	Sep. 21, 2022
13	CMW500 Test	R&S	CMW500	106504	Sep. 22, 2021	Sep. 21, 2022
14	ESG Signal Generator	Agilent	E4421B	GB40051203	Sep. 22, 2021	Sep. 21, 2022
15	Signal Generator	Agilent	N5182A	MY47420215	Sep. 22, 2021	Sep. 21, 2022
16	D.C. Power Supply	LongWei	TPR-6405D	\	\	\
17	Software	Frad	EZ-EMC	FA-03A2 RE	\	\
18	Power Meter	MWRFtest	MW100-RFCB	\	Sep. 22, 2021	Sep. 21, 2022

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	Sep. 22, 2021	Sep. 21, 2022
2	LISN	CYBERTEK	EM5040A	E1850400149	Sep. 22, 2021	Sep. 21, 2022
3	Test Cable	N/A	C01	N/A	Sep. 22, 2021	Sep. 21, 2022
4	Test Cable	N/A	C02	N/A	Sep. 22, 2021	Sep. 21, 2022
5	EMI Test Receiver	R&S	ESRP3	101946	Sep. 22, 2021	Sep. 21, 2022
6	Absorbing Clamp	DZ	ZN23201	N/A	Sep. 22, 2021	Sep. 21, 2022

4. CONDUCTED EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

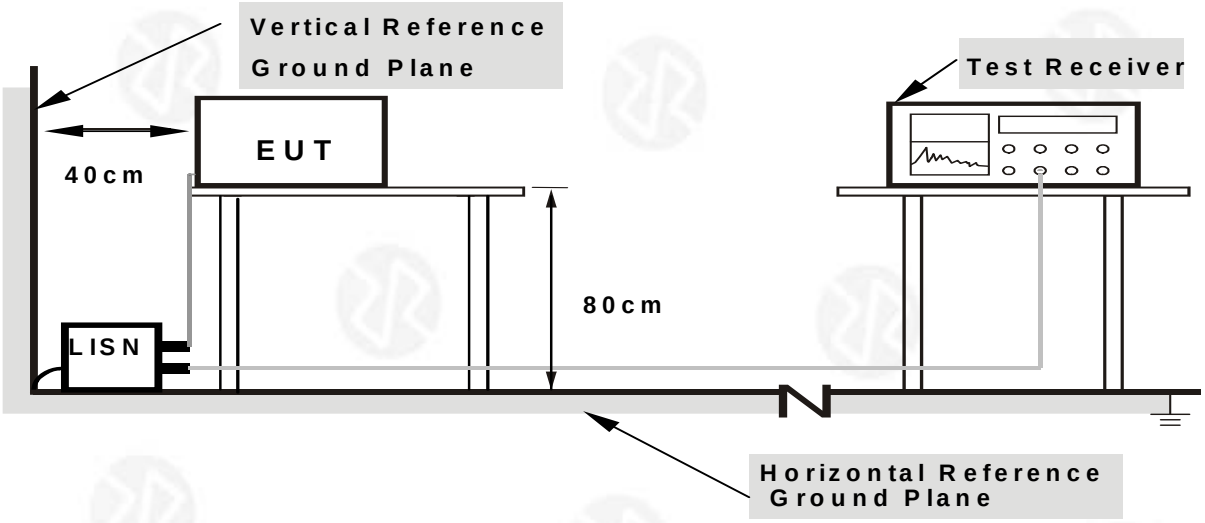
4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 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

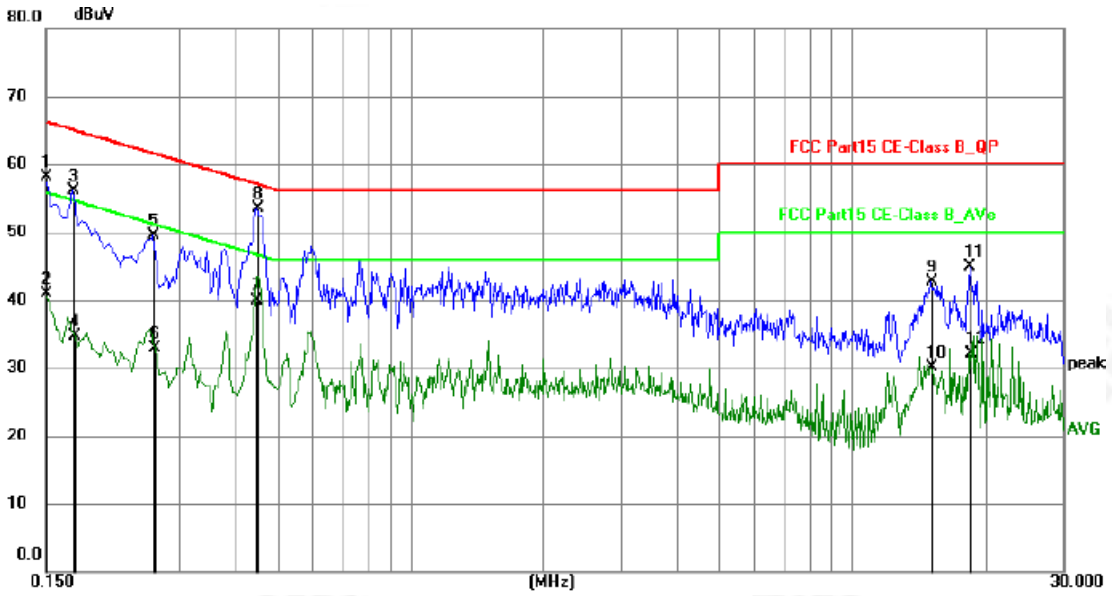
4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.

4.1.6 Test Result

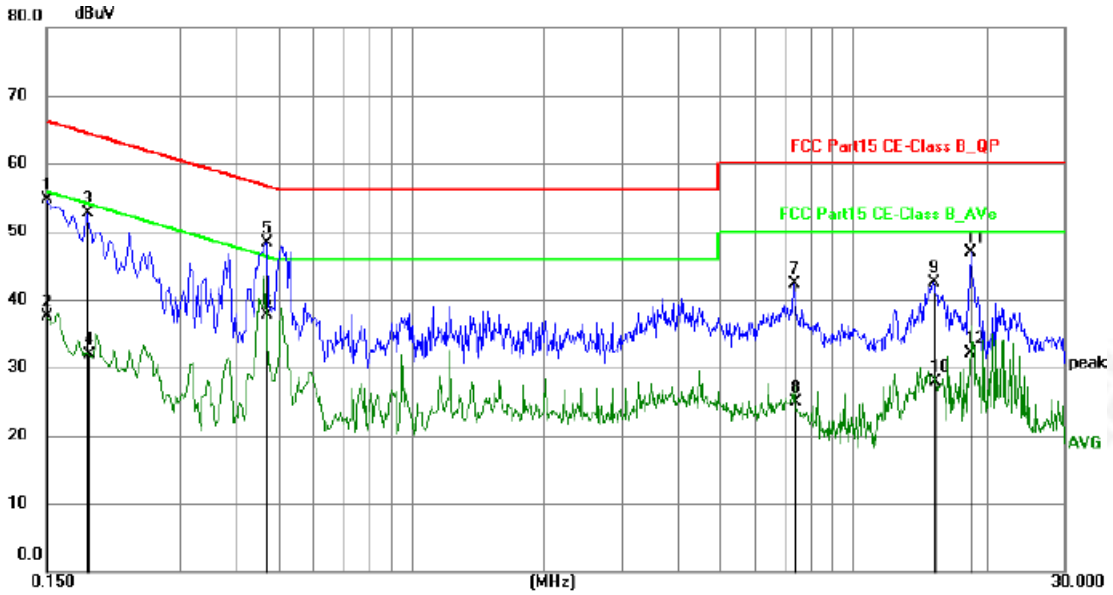
Temperature:	24.6℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	L
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1500	45.12	13.01	58.13	66.00	-7.87	QP	P
2	0.1500	27.85	13.01	40.86	56.00	-15.14	AVG	P
3	0.1724	43.61	12.52	56.13	64.84	-8.71	QP	P
4	0.1737	22.30	12.49	34.79	54.78	-19.99	AVG	P
5	0.2625	37.80	11.63	49.43	61.35	-11.92	QP	P
6	0.2644	21.19	11.62	32.81	51.29	-18.48	AVG	P
7	0.4470	29.05	10.79	39.84	46.93	-7.09	AVG	P
8	0.4515	42.73	10.77	53.50	56.85	-3.35	QP	P
9	15.0809	33.44	9.17	42.61	60.00	-17.39	QP	P
10	15.0809	20.87	9.17	30.04	50.00	-19.96	AVG	P
11	18.4875	35.25	9.65	44.90	60.00	-15.10	QP	P
12	18.5910	22.49	9.66	32.15	50.00	-17.85	AVG	P

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor

Temperature:	24.6℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	N
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1500	41.73	13.01	54.74	66.00	-11.26	QP	P
2	0.1500	24.47	13.01	37.48	56.00	-18.52	AVG	P
3	0.1859	40.49	12.23	52.72	64.22	-11.50	QP	P
4	0.1872	19.71	12.20	31.91	54.16	-22.25	AVG	P
5	0.4694	37.62	10.68	48.30	56.52	-8.22	QP	P
6	0.4711	27.07	10.67	37.74	46.49	-8.75	AVG	P
7	7.3544	33.70	8.56	42.26	60.00	-17.74	QP	P
8	7.4310	16.33	8.55	24.88	50.00	-25.12	AVG	P
9	15.1754	33.35	9.18	42.53	60.00	-17.47	QP	P
10	15.3644	18.74	9.21	27.95	50.00	-22.05	AVG	P
11	18.4830	37.33	9.65	46.98	60.00	-13.02	QP	P
12	18.4830	22.44	9.65	32.09	50.00	-17.91	AVG	P

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor

5. RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 1GHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

5.1 Radiated Emission Limits

Limits for frequency below 30MHz

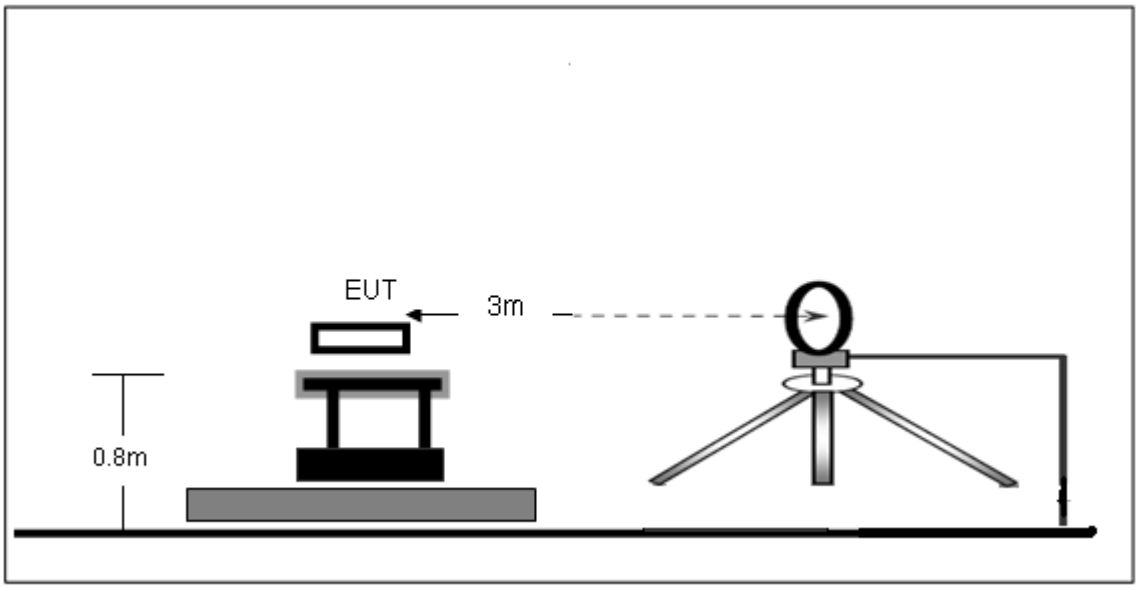
Frequency	Limit (uV/m)	Measurement Distance(m)	Remark
0.009-0.490	2400/F(kHz)	300	Quasi-peak Value
0.490-1.705	24000/F(kHz)	30	Quasi-peak Value
1.705-30	30	30	Quasi-peak Value

Limits for frequency Above 30MHz

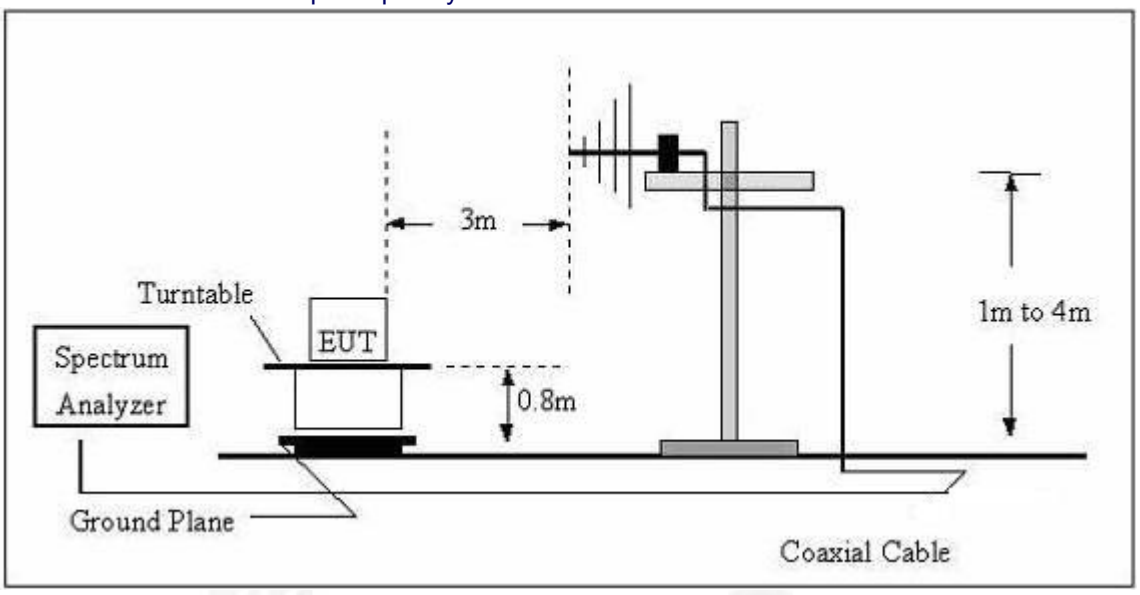
Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.00	Quasi-peak Value
88MHz-216MHz	43.50	Quasi-peak Value
216MHz-960MHz	46.00	Quasi-peak Value
960MHz-1GHz	54.00	Quasi-peak Value
Above 1GHz	54.00	Average Value
	74.00	Peak Value

5.2 Anechoic Chamber Test Setup Diagram

（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.

5.3 Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5 Test Result

Measurement data:

Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80
Limit dBuV/m @3m = Limit dBuV/m @30m + 40

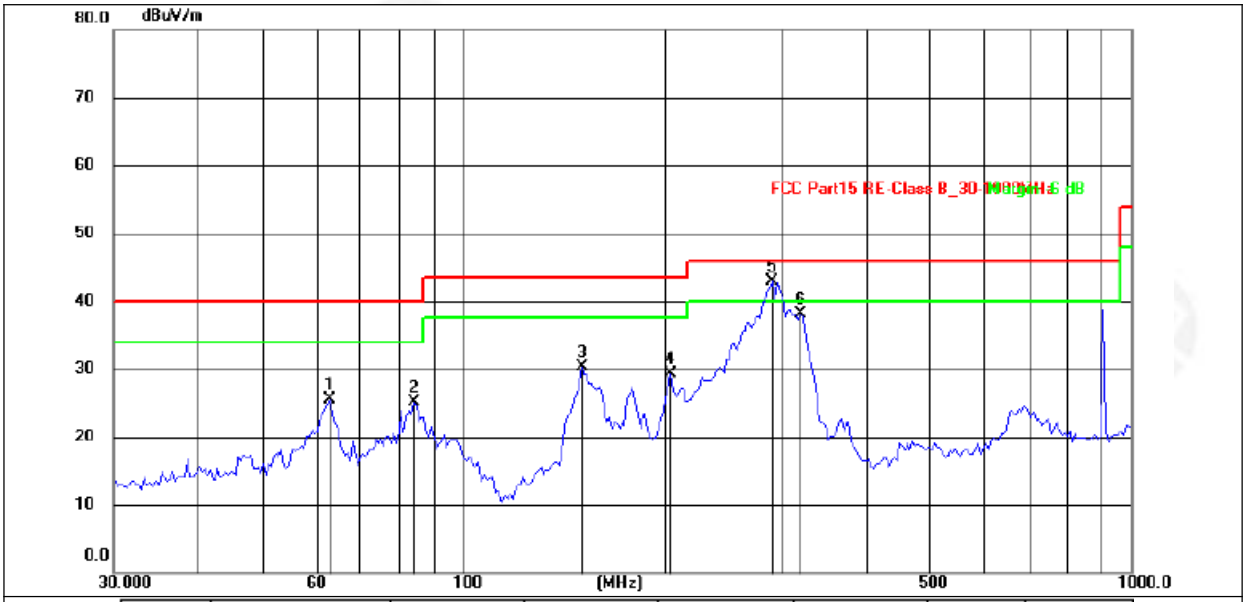
9 kHz~30 MHz

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(kHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
58.32	56.11	15.15	71.26	112.29	-41.03	AV
110.00	56.67	15.18	71.85	106.78	-34.93	AV
118.70	76.25	15.2	91.45	106.12	-14.67	AV
625.74	25.30	16.33	41.63	71.68	-30.05	QP
902.16	23.12	16.87	39.99	68.5	-28.51	QP
1366.83	17.02	17.62	34.64	64.89	-30.25	QP

Note:
Pre-scan in the all of mode, the worst case in of was recorded.
Factor = antenna factor + cable loss – pre-amplifier.
Margin = Emission Level- Limit.
The amplitude of emissions which are attenuated by more than 20db below the permissible value has no need to be reported.

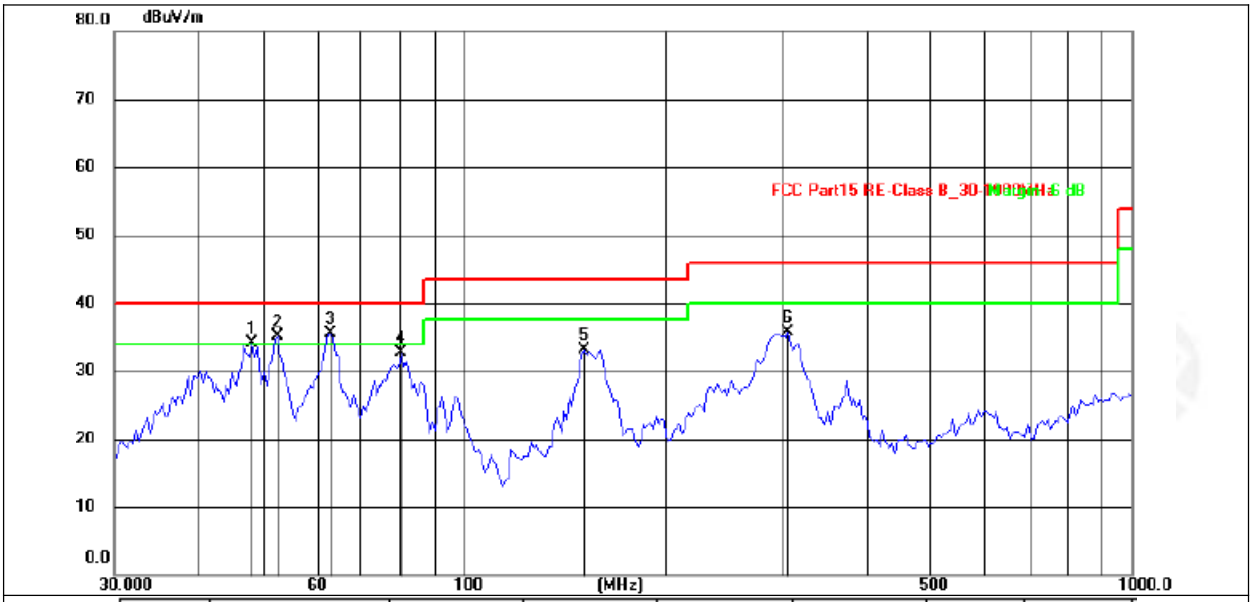
30MHz-1GHz

Temperature:	25.1℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	63.2023	40.57	-15.08	25.49	40.00	-14.51	QP
2	84.4054	44.87	-19.79	25.08	40.00	-14.92	QP
3	150.5377	47.44	-17.05	30.39	43.50	-13.11	QP
4	204.5961	49.00	-19.61	29.39	43.50	-14.11	QP
5	290.5261	60.49	-17.64	42.85	46.00	-3.15	QP
6	319.9369	57.09	-18.91	38.18	46.00	-7.82	QP

Temperature:	25.1℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	48.1625	51.38	-17.21	34.17	40.00	-5.83	QP
2	52.5753	52.63	-17.55	35.08	40.00	-4.92	QP
3	63.2023	54.19	-18.64	35.55	40.00	-4.45	QP
4	80.7857	54.55	-21.84	32.71	40.00	-7.29	QP
5	151.8632	54.12	-21.01	33.11	43.50	-10.39	QP
6	306.2163	55.86	-20.13	35.73	46.00	-10.27	QP

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.

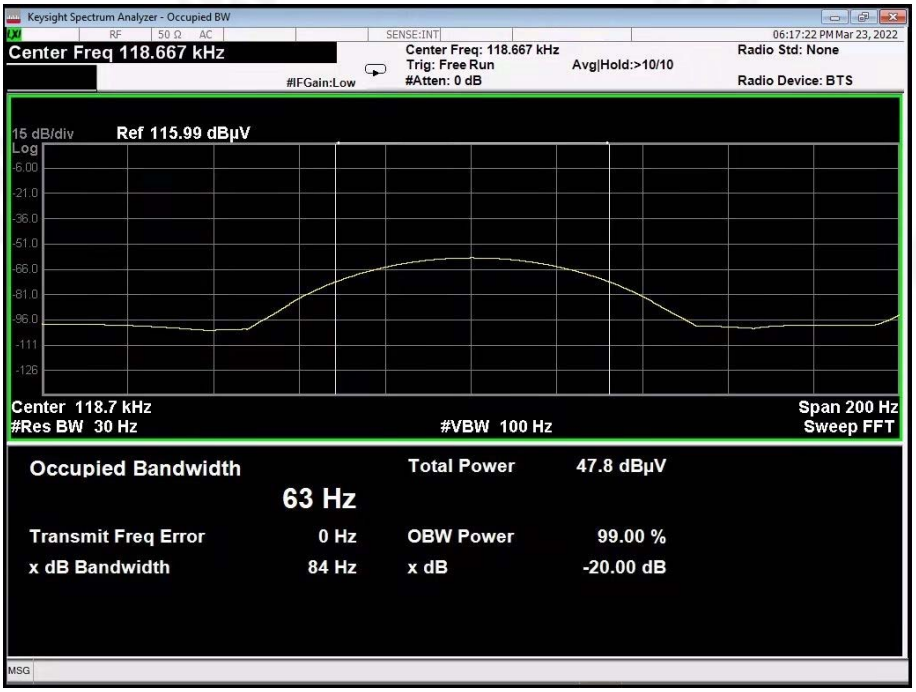
6. BANDWIDTH TEST

1. Set RBW = 30 Hz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP

Temperature：	24.5 ℃	Relative Humidity：	56%
Pressure：	101kPa		

Frequency (KHz)	20dB bandwidth (KHz)	99% bandwidth (KHz)	Result
118.7	0.084	0.063	Pass



7. TEST SETUP PHOTO

Reference to the appendix I for details.

8. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※