

FCC TEST REPORT

FCC ID:2A4HG-TX26C

Report Number.....: **ZHT-230811024E**

Date of Test.....: August 11, 2023 to August 29, 2023

Date of issue.....: August 29, 2023

Test Result: PASS

Testing Laboratory.....: **Guangdong Zhonghan Testing Technology Co., Ltd.**

Address: Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Applicant's name: **Dongguan Oushi Electronic Technology Co., Ltd**

Address: Room 103, building 2, No.2, Jiaojiao Road, Xiegang Town, Dongguan City, Guangdong

Manufacturer's name: **Dongguan Oushi Electronic Technology Co., Ltd**

Address: Room 103, building 2, No.2, Jiaojiao Road, Xiegang Town, Dongguan City, Guangdong

Test specification:

Standard.....: FCC CFR Title 47 Part 15 Subpart C

Test procedure.....: /

Non-standard test method: N/A

This device described above has been tested by ZHT, 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.

This report shall not be reproduced except in full, without the written approval of ZHT, this document may be altered or revised by ZHT, personal only, and shall be noted in the revision of the document.

Product name.....: **Wireless charging LED desk lamp**

Trademark: /

Model/Type reference.....: TX26C

TC26, T26, TX26, TX26C0, T26U, TC26U, T25, TX25, TC25, TX25C, T25U, TC25U, TX2260, TC2260, TX226C0

Ratings.....: Adapter:

Input: AC 100-240V, 50/60Hz, 0.6A Max

Output: DC 12V/2A

LED desk lamp:

Input: DC 12V/2A

Wireless charging port: 10W

USB Output: DC 5V/2.1A

LED Max: 6W

Testing procedure and testing location:

Testing Laboratory.....: Guangdong Zhonghan Testing Technology Co., Ltd.

Address.....: Room 104, Building 1, Yibaolai Industrial Park, Qiaotou
Community, Fuhai Street, Bao'an District, Shenzhen,
Guangdong, China

Tested by (name + signature).....: Leon Li

Leon Li

Reviewer (name + signature).....: Baret Wu

Baret Wu

Approved (name + signature).....: Levi Lee

Levi Lee



TABLE OF CONTENTS

1. VERSION	4
2. TEST SUMMARY	5
2.1 TEST FACILITY	6
2.2 MEASUREMENT UNCERTAINTY	6
3. GENERAL INFORMATION	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 Test mode	7
3.3 Block Diagram of EUT Configuration	7
3.4 Test Conditions	7
3.5 Description Of Support Units (Conducted Mode)	8
3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS	9
4. CONDUCTED EMISSION TEST	11
4.1 CONDUCTED EMISSION MEASUREMENT	11
4.1.1 POWER LINE CONDUCTED EMISSION Limits	11
4.1.2 TEST PROCEDURE	11
4.1.3 DEVIATION FROM TEST STANDARD	11
4.1.4 TEST SETUP	12
4.1.5 EUT OPERATING CONDITIONS	12
4.1.6 Test Result	13
5. RADIATED EMISSION MEASUREMENT	15
5.1 Radiated Emission Limits	15
5.2 Anechoic Chamber Test Setup Diagram	16
5.3 Test Procedure	16
5.4 DEVIATION FROM TEST STANDARD	16
5.5 Test Result	17
6. BANDWIDTH TEST	20
7. ANTENNA REQUIREMENT	22
8. TEST SETUP PHOTO	23
9. EUT CONSTRUCTIONAL DETAILS	23

1. VERSION

Report No.	Version	Description	Approved
ZHT-230811024E	Rev.01	Initial issue of report	August 29, 2023

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

Guangdong Zhonghan Testing Technology Co., Ltd.
Add. : Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District
Shenzhen, Guangdong, China

FCC Registration Number:255941
Designation Number: CN0325
IC Registered No.: 29832
CAB identifier: CN0143

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power conducted	$\pm 0.16\text{dB}$
3	Spurious emissions conducted	$\pm 0.21\text{dB}$
4	All emissions radiated(9k-30MHz)	$\pm 4.68\text{dB}$
5	All emissions radiated(<1G)	$\pm 4.68\text{dB}$
6	All emissions radiated(>1G)	$\pm 4.89\text{dB}$
7	Temperature	$\pm 0.5^{\circ}\text{C}$
8	Humidity	$\pm 2\%$
9	Occupied Bandwidth	$\pm 4.96\text{dB}$

3. GENERAL INFORMATION

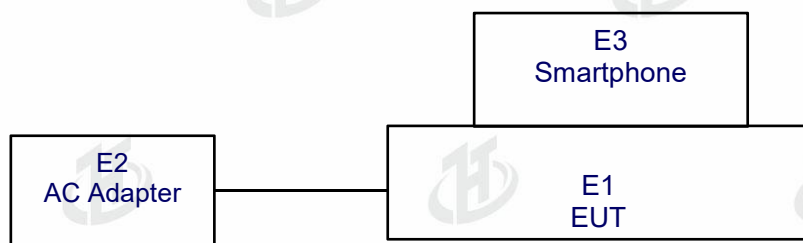
3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Wireless charging LED desk lamp
Model No.:	TX26C TC26, T26, TX26, TX26C0, T26U, TC26U, T25, TX25, TC25, TX25C, T25U, TC25U, TX2260, TC2260, TX226C0
Model Difference:	All the model are of the same circuit and RF module, and only the Model name and appearance are different, all tests are based on TX26C.
Hardware version:	V1.0
Software version:	V1.0
Operation Frequency:	115-205KHz
Modulation type:	MSK
Antenna Type:	Inductive loop coil Antenna
Antenna gain:	0dBi
Power supply:	Adapter: Input: AC 100-240V, 50/60Hz, 0.6A Max Output: DC 12V/2A LED desk lamp: Input: DC 12V/2A Wireless charging port: 10W USB Output: DC 5V/2.1A LED Max: 6W

3.2 Test mode

Test Modes:	
Mode 1	Wireless charging mode(10W)
Note: All modes were tested, only the worst-case was recorded in the report. Mode 1 is the worst mode.	

3.3 Block Diagram of EUT Configuration



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
E3	Smartphone	APPLE	iphone13	/	AE

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	Model	Last Cal.	Next Cal.
1	Receiver	R&S	ESCI	May 12, 2023	May 11, 2024
2	Loop antenna	EMCI	LAP600	May 12, 2023	May 11, 2024
3	Amplifier	Schwarzbeck	BBV 9743 B	May 12, 2023	May 11, 2024
4	Amplifier	Schwarzbeck	BBV 9718 B	May 12, 2023	May 11, 2024
5	Bilog Antenna	Schwarzbeck	VULB9162	May 17, 2023	May 16, 2024
6	Horn Antenna	Schwarzbeck	BBHA9120D	May 17, 2023	May 16, 2024
7	966 Anechoic Chamber	EMToni	9m6m6m	Nov. 25, 2021	Nov. 24, 2024
8	Spectrum Analyzer	KEYSIGHT	N9020A	May 12, 2023	May 11, 2024
9	Power Sensor	MWRFTest	MW100-RFCB	May 12, 2023	May 11, 2024
10	Power Amplifier Shielding Room	EMToni	2m3m3m	Nov. 25, 2021	Nov. 24, 2024

Conduction Test equipment

Equipment	Manufacturer	Model	Last Cal.	Next Cal.
Receiver	R&S	ESCI	May 12, 2023	May 11, 2024
LISN	R&S	ENV216	May 12, 2023	May 11, 2024
ISN CAT 6	Schwarzbeck	NTFM 8158	May 12, 2023	May 11, 2024
ISN CAT 5	Schwarzbeck	CAT5 8158	May 12, 2023	May 11, 2024
Capacitive Voltage Probe	Schwarzbeck	CVP 9222 C	May 12, 2023	May 11, 2024
Current Transformer Clamp	Schwarzbeck	SW 9605	May 12, 2023	May 11, 2024
CE Shielding Room	EMToni	9m4m3m	Nov. 25, 2021	Nov. 24, 2024

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
	QP	AVG	
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.

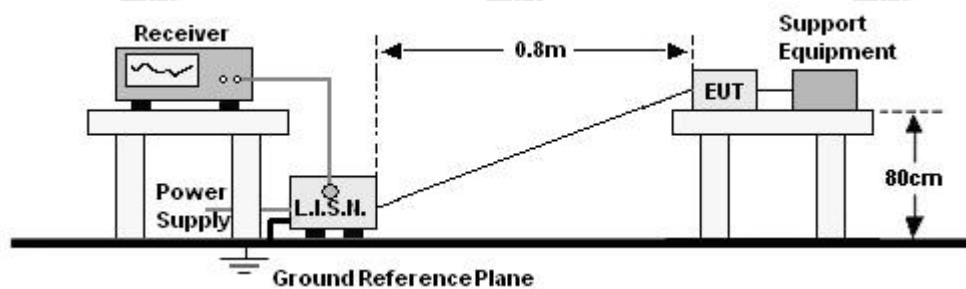
4.1.2 TEST PROCEDURE

- 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.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- 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

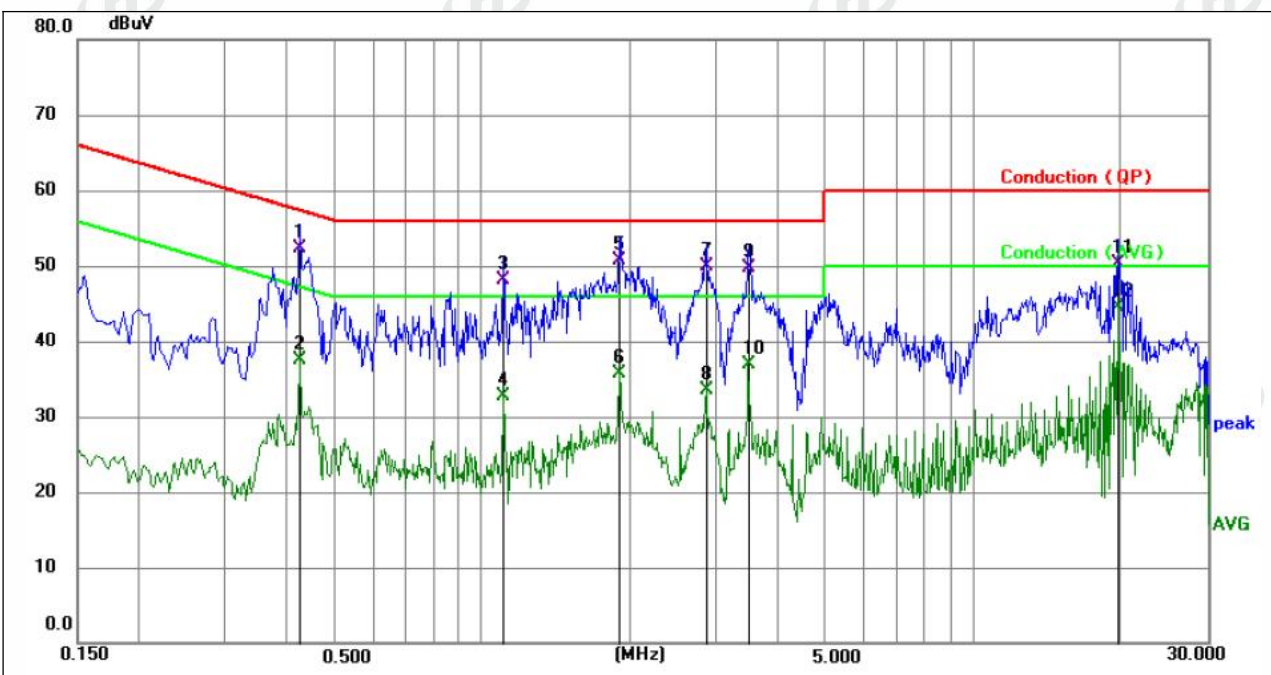


4.1.5 EUT OPERATING CONDITIONS

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.

4.1.6 Test Result

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	L
Test Voltage:	AC 120V/60Hz		

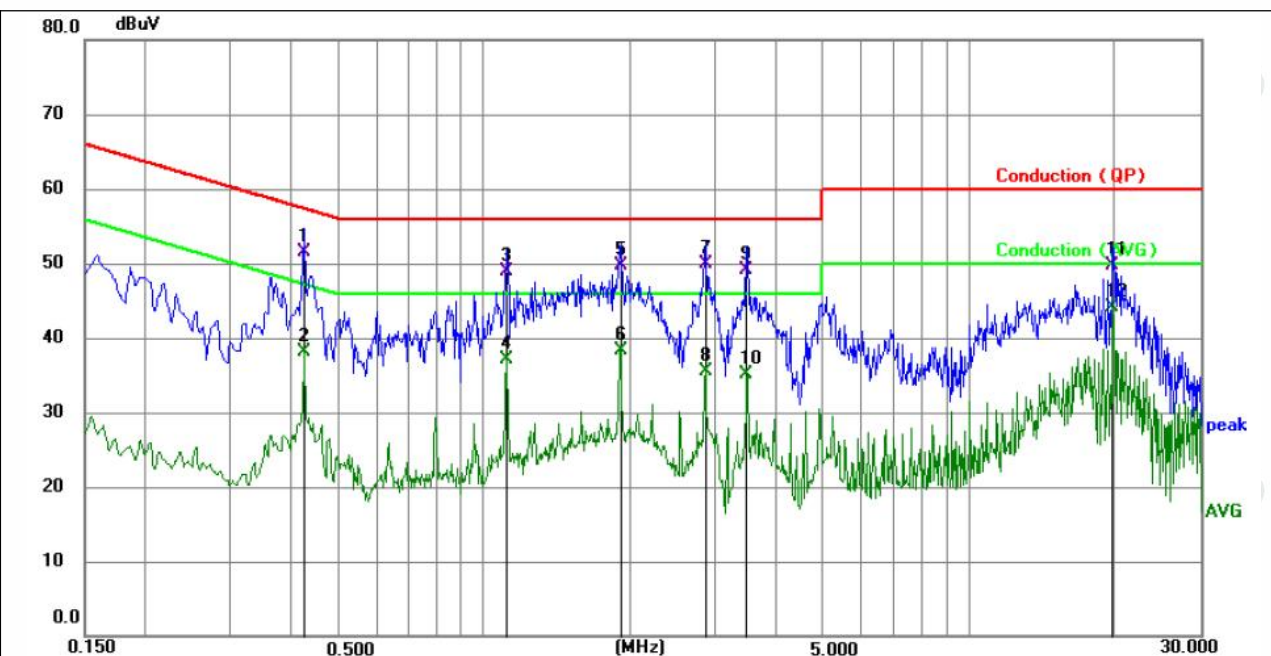


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1 *	0.4244	42.41	9.99	52.40	57.36	-4.96	QP	P
2	0.4244	27.51	9.99	37.50	47.36	-9.86	AVG	P
3	1.1085	38.14	10.06	48.20	56.00	-7.80	QP	P
4	1.1085	22.68	10.06	32.74	46.00	-13.26	AVG	P
5	1.9005	40.64	10.06	50.70	56.00	-5.30	QP	P
6	1.9005	25.65	10.06	35.71	46.00	-10.29	AVG	P
7	2.8544	39.83	10.07	49.90	56.00	-6.10	QP	P
8	2.8544	23.49	10.07	33.56	46.00	-12.44	AVG	P
9	3.4980	39.62	10.08	49.70	56.00	-6.30	QP	P
10	3.4980	26.85	10.08	36.93	46.00	-9.07	AVG	P
11	19.7384	40.29	10.11	50.40	60.00	-9.60	QP	P
12	19.7384	34.38	10.11	44.49	50.00	-5.51	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. Measurement Level = Reading level + Correct Factor

Temperature:	26℃	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 *	0.4244	41.61	9.99	51.60	57.36	-5.76	QP	P
2	0.4244	28.03	9.99	38.02	47.36	-9.34	AVG	P
3	1.1130	38.84	10.06	48.90	56.00	-7.10	QP	P
4	1.1130	27.11	10.06	37.17	46.00	-8.83	AVG	P
5	1.9094	39.64	10.06	49.70	56.00	-6.30	QP	P
6	1.9094	28.18	10.06	38.24	46.00	-7.76	AVG	P
7	2.8635	39.83	10.07	49.90	56.00	-6.10	QP	P
8	2.8635	25.40	10.07	35.47	46.00	-10.53	AVG	P
9	3.4845	39.12	10.08	49.20	56.00	-6.80	QP	P
10	3.4845	25.04	10.08	35.12	46.00	-10.88	AVG	P
11	19.7564	39.59	10.11	49.70	60.00	-10.30	QP	P
12	19.7564	34.09	10.11	44.20	50.00	-5.80	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. Measurement 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**

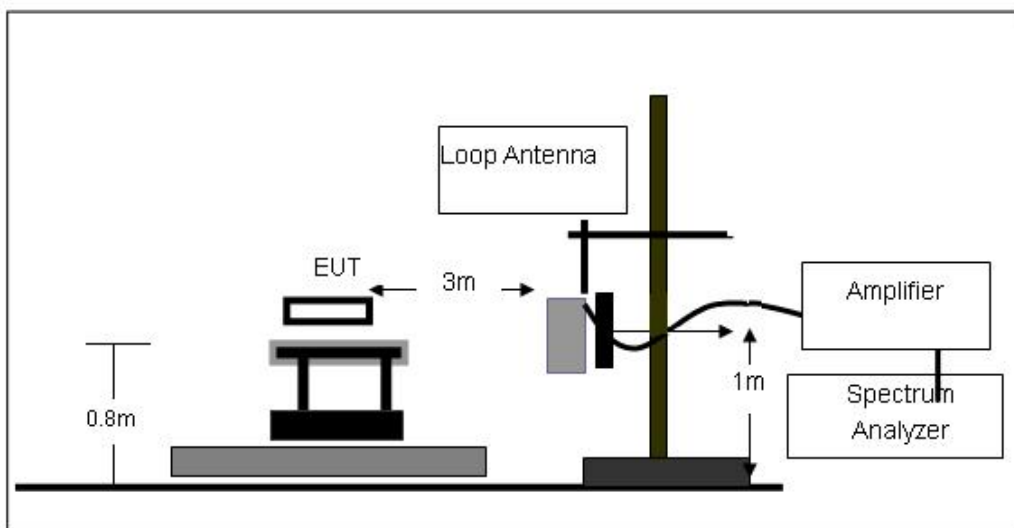
Frequency	Limit (uV/m)	Measurement Distance(m)	Remark
0.009-0.490	2400/F(kHz)	300	Quasi-peak Value
0.490-1.705	24000/F(kHz)	30	Quasi-peak Value
1.705-30	30	30	Quasi-peak Value

Limits for frequency Above 30MHz

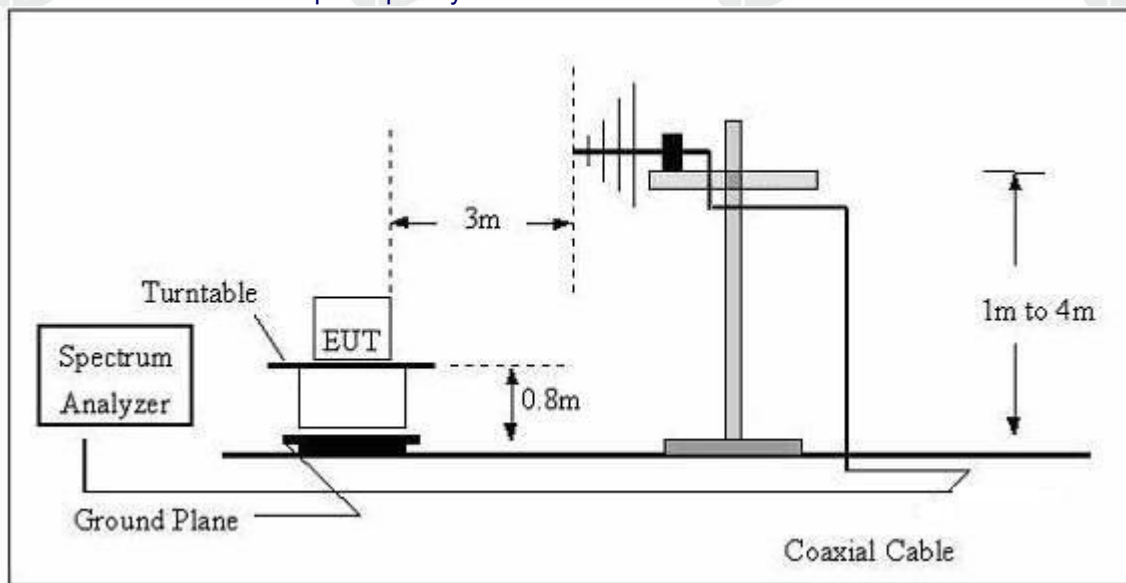
Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.00	Quasi-peak Value
88MHz-216MHz	43.50	Quasi-peak Value
216MHz-960MHz	46.00	Quasi-peak Value
960MHz-1GHz	54.00	Quasi-peak Value
Above 1GHz	54.00	Average Value
	74.00	Peak Value

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)	
53.05	55.64	15.15	70.79	111.85	-41.06	AVG
110.00	57.36	15.18	70.94	106.78	-35.84	AVG
126.12	75.1	15.2	90.97	105.58	-14.61	AVG
731.57	26.24	16.33	43.46	70.83	-27.37	QP
963.14	25.5	16.87	41.99	68.37	-26.38	QP
1302.05	21.14	17.62	38.17	65.29	-27.12	QP

Note:

Pre-scan in the all of mode, the worst case in of was recorded.

Factor = antenna factor + cable loss – pre-amplifier.

Emission Level = Meter Reading - Factor

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

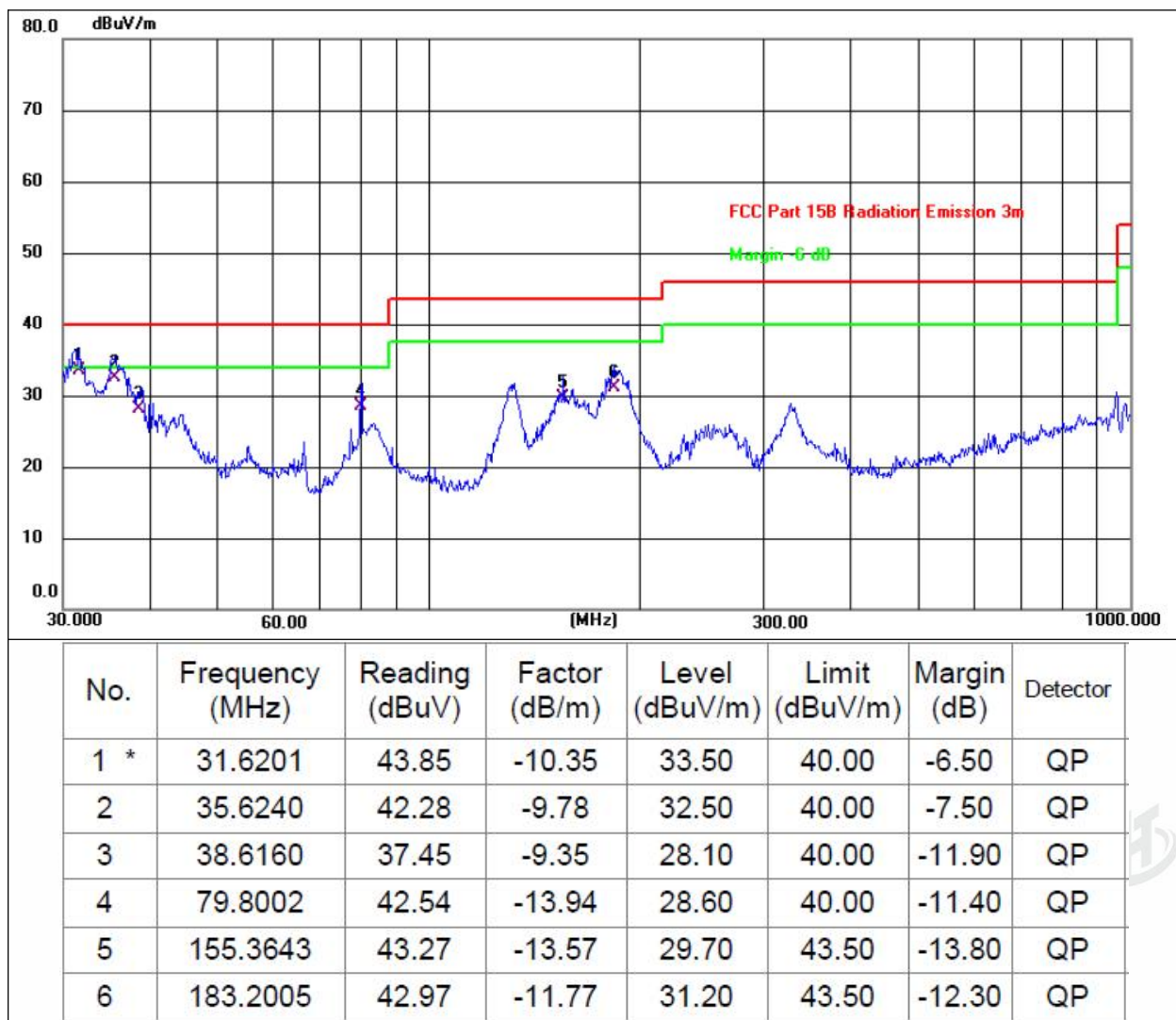
Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	37.2854	38.74	-9.54	29.20	40.00	-10.80	QP
2 *	82.9384	44.17	-13.47	30.70	40.00	-9.30	QP
3	131.2965	39.34	-13.14	26.20	43.50	-17.30	QP
4	154.2785	44.74	-13.64	31.10	43.50	-12.40	QP
5	163.1817	43.49	-13.09	30.40	43.50	-13.10	QP
6	180.6487	41.58	-11.98	29.60	43.50	-13.90	QP



Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



Remarks:

- Factor = Antenna Factor + Cable Loss – Preamplifier Factor
- Level = Reading + Factor
- Margin = Emission Level- Limit.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



6. BANDWIDTH TEST

1. Set RBW = 10 Hz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ 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.

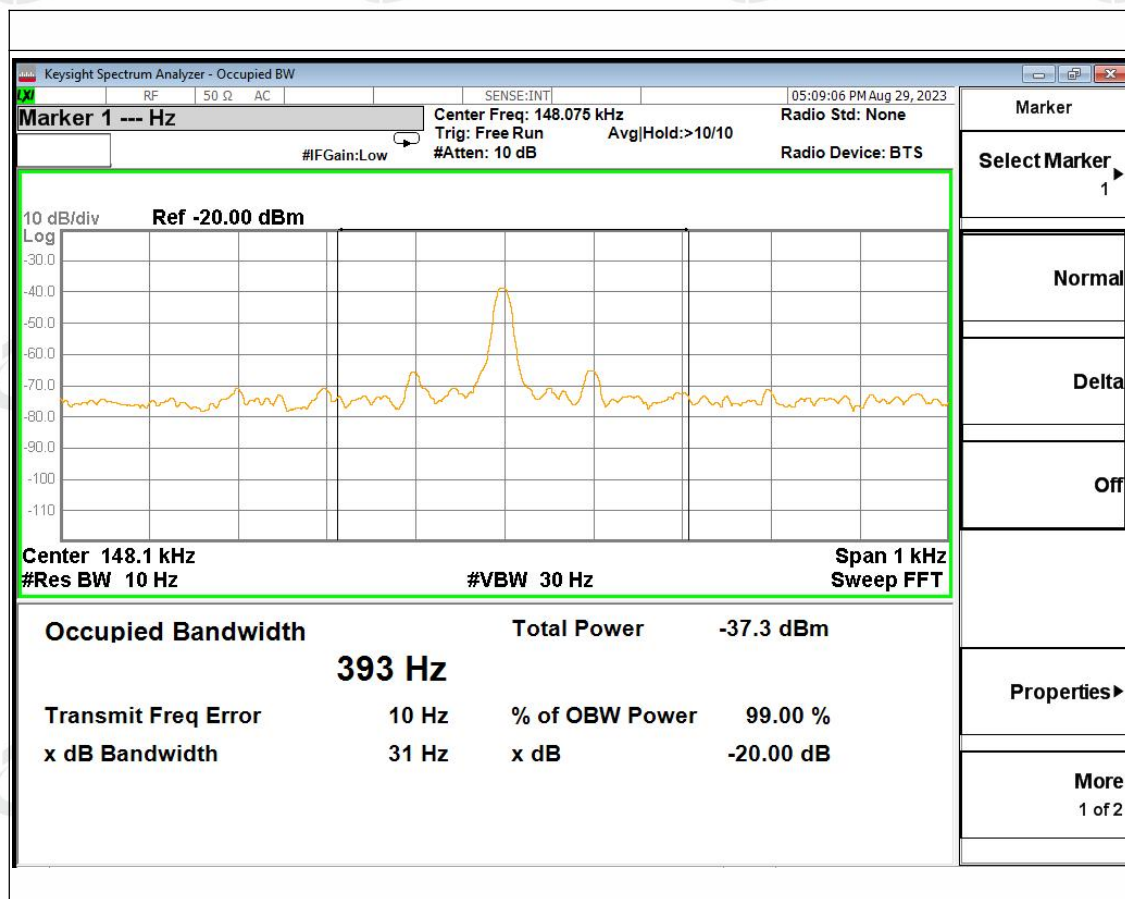
TEST SETUP





Temperature:	25.7 °C	Relative Humidity:	55%
Pressure:	101kPa		

Frequency (KHz)	20dB bandwidth (KHz)	Result
148.075	0.031	Pass



7. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antenna is Inductive loop coil Antenna, the best case gain of the antennas is 0dBi, reference to the appendix II for details	

8. TEST SETUP PHOTO

Reference to the appendix I for details.

9. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

***** END OF REPORT *****