

TEST REPORT

Report No.: BCTC2501454652-1E

Applicant: GoDirectInc.com,Inc.

Product Name: Power Bank with Stand

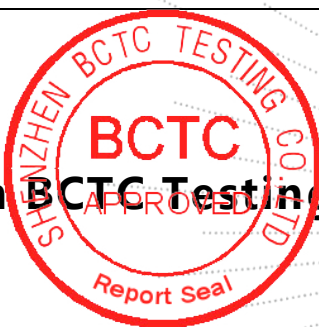
Test Model.: GI-PB10K-C2-BK

Tested Date: 2024-12-31 to 2025-01-08

Issued Date: 2025-05-22



Shenzhen **BCTC** Testing Co., Ltd.



FCC ID:2BKO4GI-PB10K-C2

Product Name: Power Bank with Stand

Trademark: N/A

Model/Type Ref.: GI-PB10K-C2-BK,GI-PB10K-C2-TN

Prepared For: GoDirectInc.com,Inc.

Address: 489 Yorbita Rd #B, La Puente, CA 91744 USA

Manufacturer: Vina International Holdings LTD

Address: 101-2,201-2, D building, No.26 East Chang Long RD, FuChengAo, Pinghu Town, LongGang District, ShenZhen, China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2024-12-31

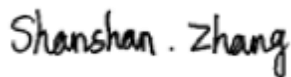
Sample tested Date: 2024-12-31 to 2025-01-08

Report No.: BCTC2501454652-1E

Test Standards: FCC Part15.209
ANSI C63.10-2013

Test Results: PASS

Tested by:



Shanshan. Zhang / Project Handler

Approved by:



Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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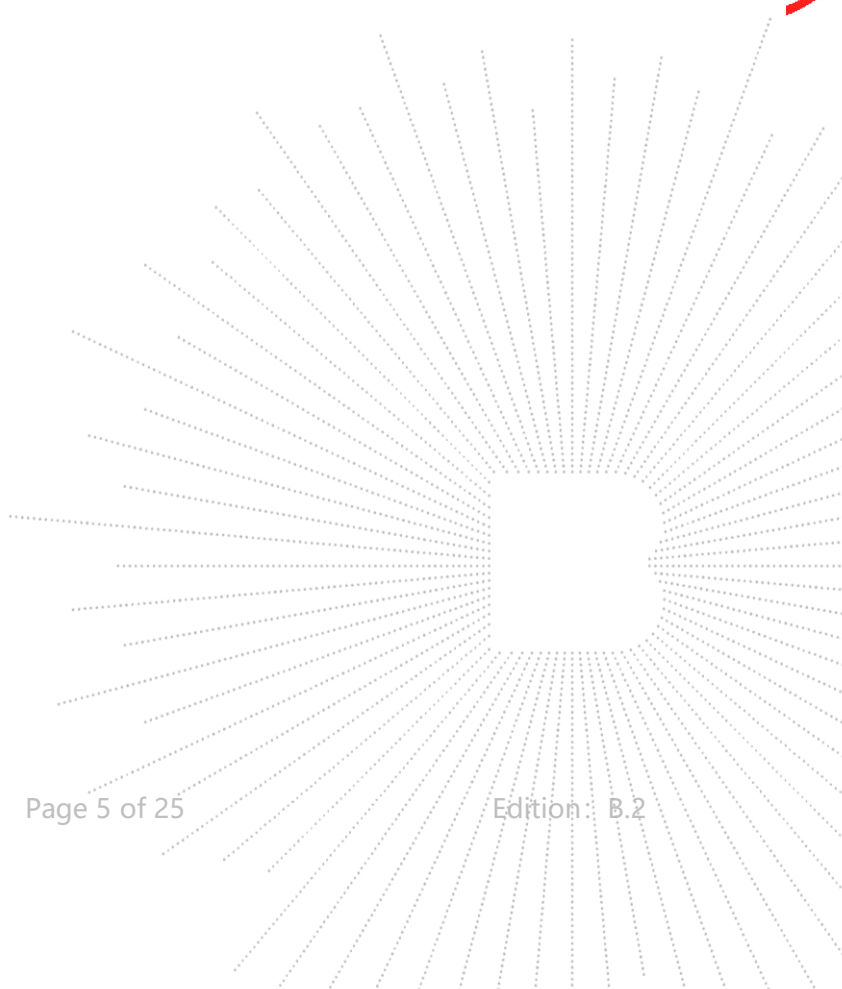
1. Version

Report No.	Issue Date	Description	Approved
BCTC2501454652-1E	2025-05-22	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	Conducted Emission	15.207	PASS
2	Radiated Emission	15.209	PASS
3	20dB Bandwidth	15.215	PASS
4	Antenna Requirement	15.203	PASS



3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product 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.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission(150kHz-30MHz)	U=3.20dB
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°C

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4. Product Information and Test Setup

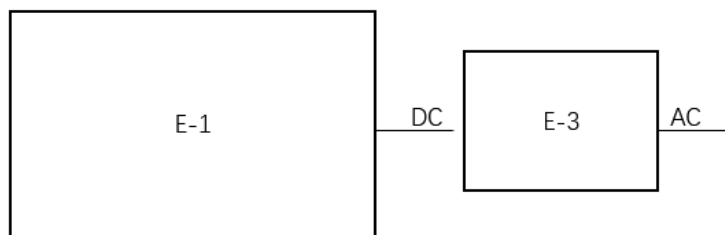
4.1 Product Information

Model/Type reference:	GI-PB10K-C2-BK,GI-PB10K-C2-TN
Model differences:	The following models of units we produce are identical in electrical, mechanical and physical structure; The difference is only in the model name and shell, we finally have GI-PB10K-C2-BK as test model.
Hardware Version:	N/A
Software Version:	N/A
Type of Modulation:	ASK
Operation Frequency:	112-205KHz
Antenna installation:	Loop coil antenna
Ratings:	Wireless Output: 15W Max USB-C Output: 5V==3A,9V==2.22A,12V==1.67A,20W Max USB-C Cable Output: 5V==3A,9V==2.22A,12V==1.67A,20W Max USB-C Input: 5V==2.4A,9V==2A,12V==1.5A,18W Max
Battery:	10000mAh/3.85V 38.5Wh

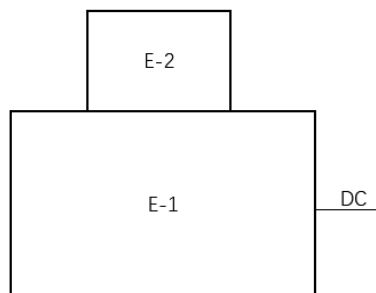
4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP Photographs for the actual connections between Product and support equipment.

Conducted Emission



Radiated Spurious Emission:



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Power Bank with Stand	N/A	GI-PB10K-C2-BK	N/A	EUT
E-2	Dummy load	N/A	DL01	N/A	Dummy load
E-3	Adapter	N/A	KA3601A-1252880 US	N/A	Auxiliary

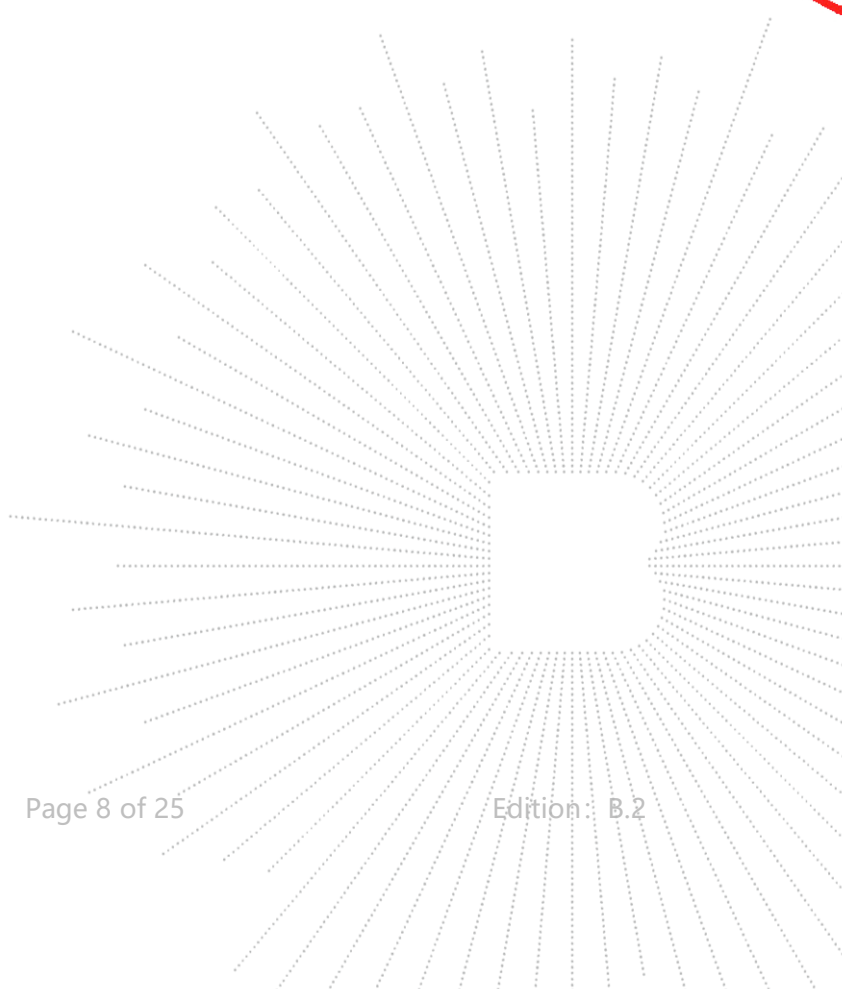
Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test config

Test Mode 1	Wireless :15W
Test Mode 2	Charging



5. Test Facility and Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 16, 2024	May 15, 2025

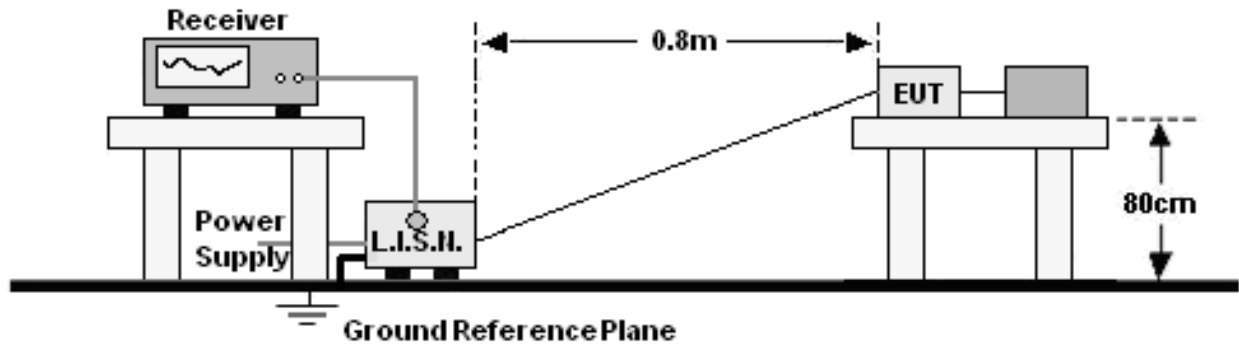
RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power meter	Keysight	E4419	\	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	\	May 16, 2024	May 15, 2025
Signal Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025

Radiated Emissions Test (966 Chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May 16, 2024	May 15, 2025
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

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6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

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

Notes:

- *Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

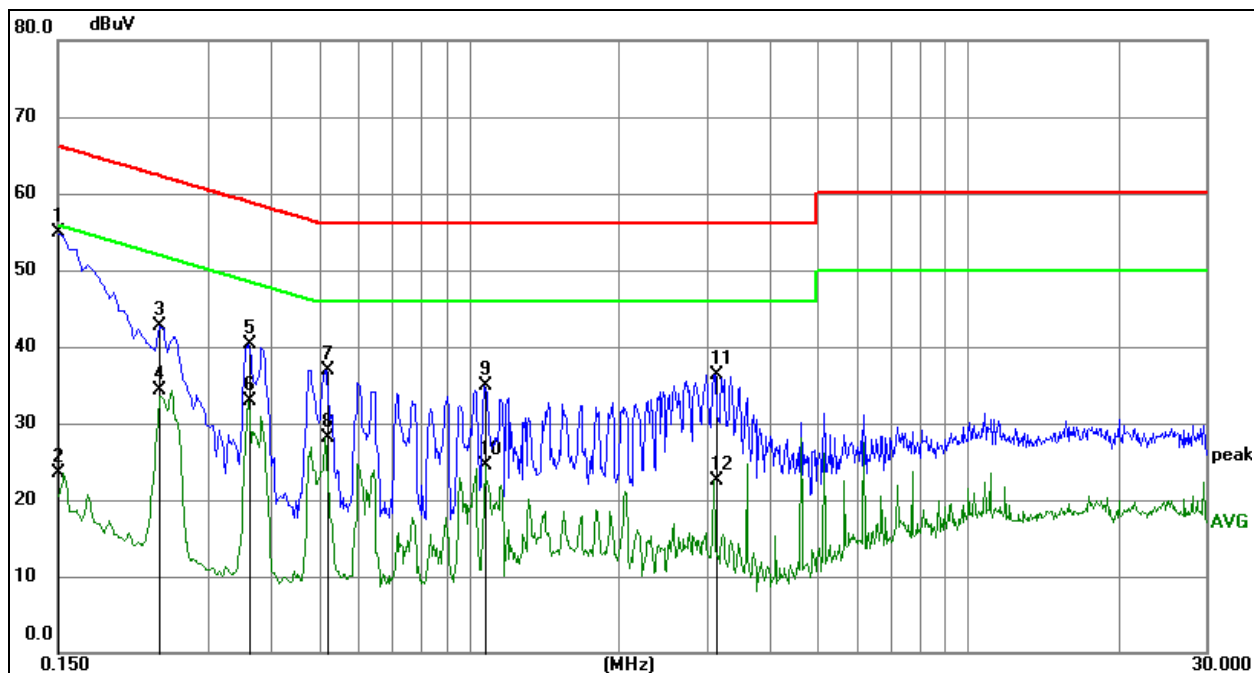
6.4 EUT Operating Conditions

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.

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6.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase:	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 2

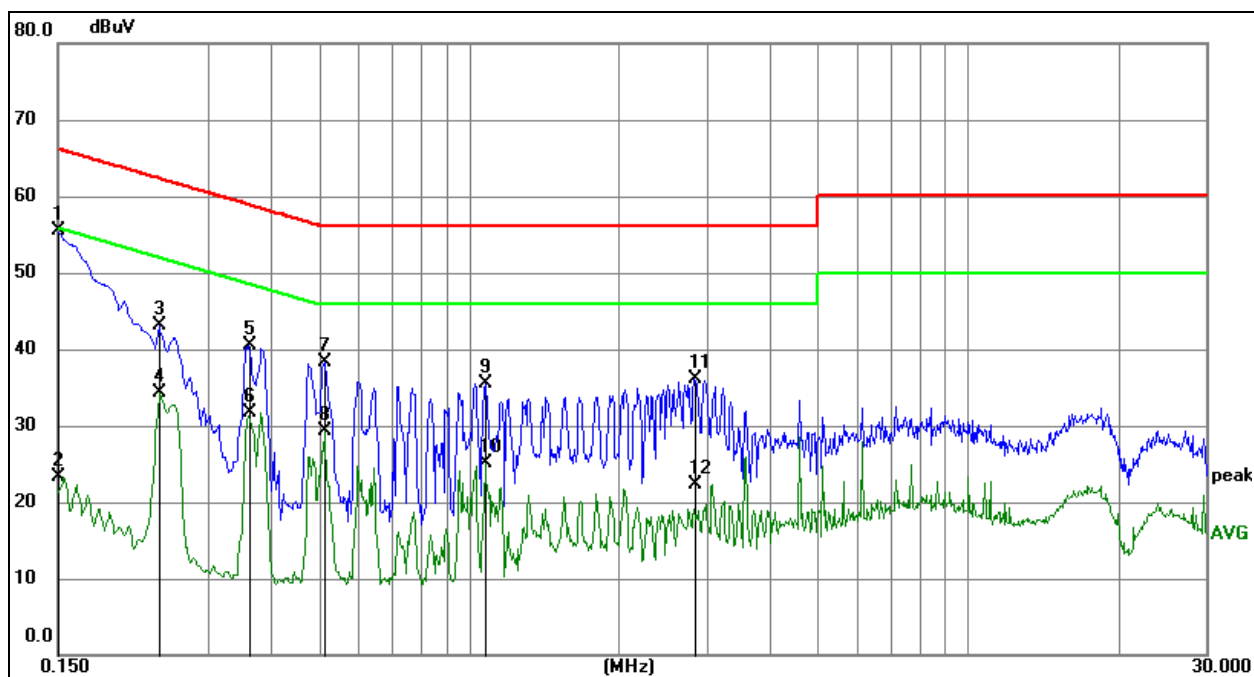


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over=Measurement-Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.1500	44.30	10.57	54.87	66.00	-11.13	QP
2	0.1500	12.89	10.57	23.46	56.00	-32.54	AVG
3	0.2400	32.18	10.59	42.77	62.10	-19.33	QP
4	0.2400	23.64	10.59	34.23	52.10	-17.87	AVG
5	0.3615	29.75	10.61	40.36	58.69	-18.33	QP
6	0.3615	22.28	10.61	32.89	48.69	-15.80	AVG
7	0.5190	26.25	10.64	36.89	56.00	-19.11	QP
8	0.5190	17.54	10.64	28.18	46.00	-17.82	AVG
9	1.0725	24.35	10.60	34.95	56.00	-21.05	QP
10	1.0725	13.91	10.60	24.51	46.00	-21.49	AVG
11	3.1335	25.34	10.91	36.25	56.00	-19.75	QP
12	3.1335	11.64	10.91	22.55	46.00	-23.45	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase:	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 2


Remark:

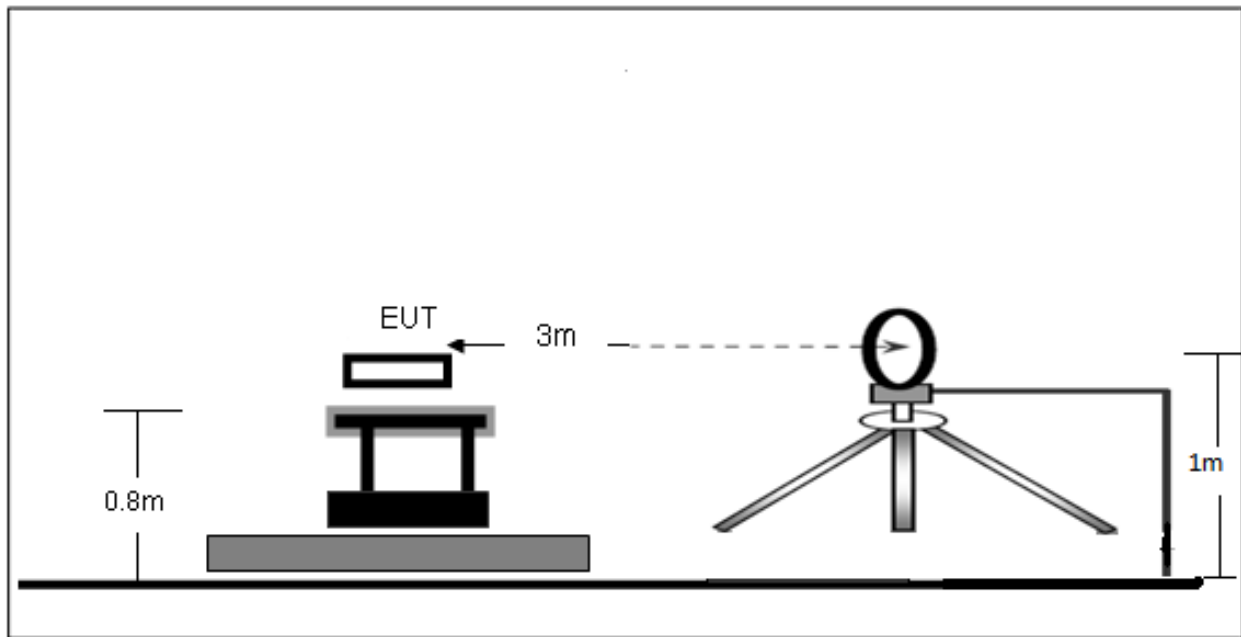
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over=Measurement-Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.1500	44.95	10.57	55.52	66.00	-10.48	QP
2	0.1500	12.83	10.57	23.40	56.00	-32.60	AVG
3	0.2400	32.44	10.59	43.03	62.10	-19.07	QP
4	0.2400	23.78	10.59	34.37	52.10	-17.73	AVG
5	0.3615	29.90	10.61	40.51	58.69	-18.18	QP
6	0.3615	21.10	10.61	31.71	48.69	-16.98	AVG
7	0.5144	27.64	10.64	38.28	56.00	-17.72	QP
8	0.5144	18.63	10.64	29.27	46.00	-16.73	AVG
9	1.0815	24.98	10.60	35.58	56.00	-20.42	QP
10	1.0815	14.46	10.60	25.06	46.00	-20.94	AVG
11	2.8320	25.30	10.88	36.18	56.00	-19.82	QP
12	2.8320	11.50	10.88	22.38	46.00	-23.62	AVG

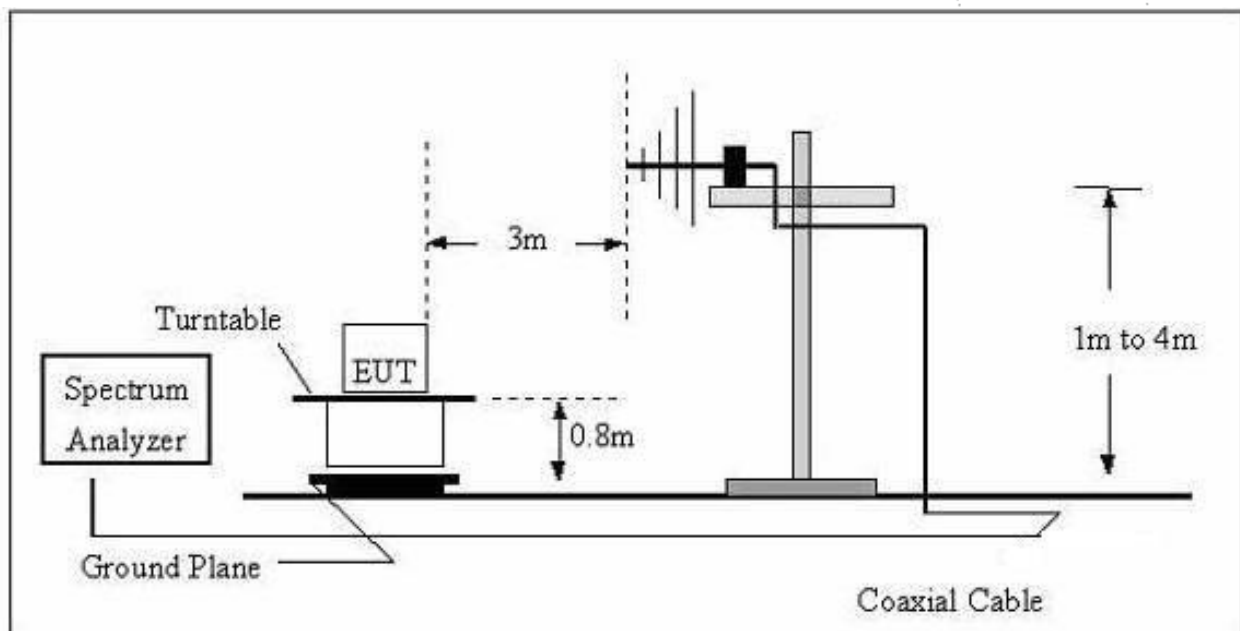
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

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



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



7.2 Limit

FCC §15.209; §15.205.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

7.3 Test Procedure

Receiver Parameter	Setting
Attenuation	Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna 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.
- 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- Test the EUT in the lowest channel ,the middle channel ,the Highest channel.

7.4 Test Result

Below 30MHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kpa	Test Voltage :	DC 3.85V
Test Mode :	Mode 1	Polarization:	Coaxial



Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

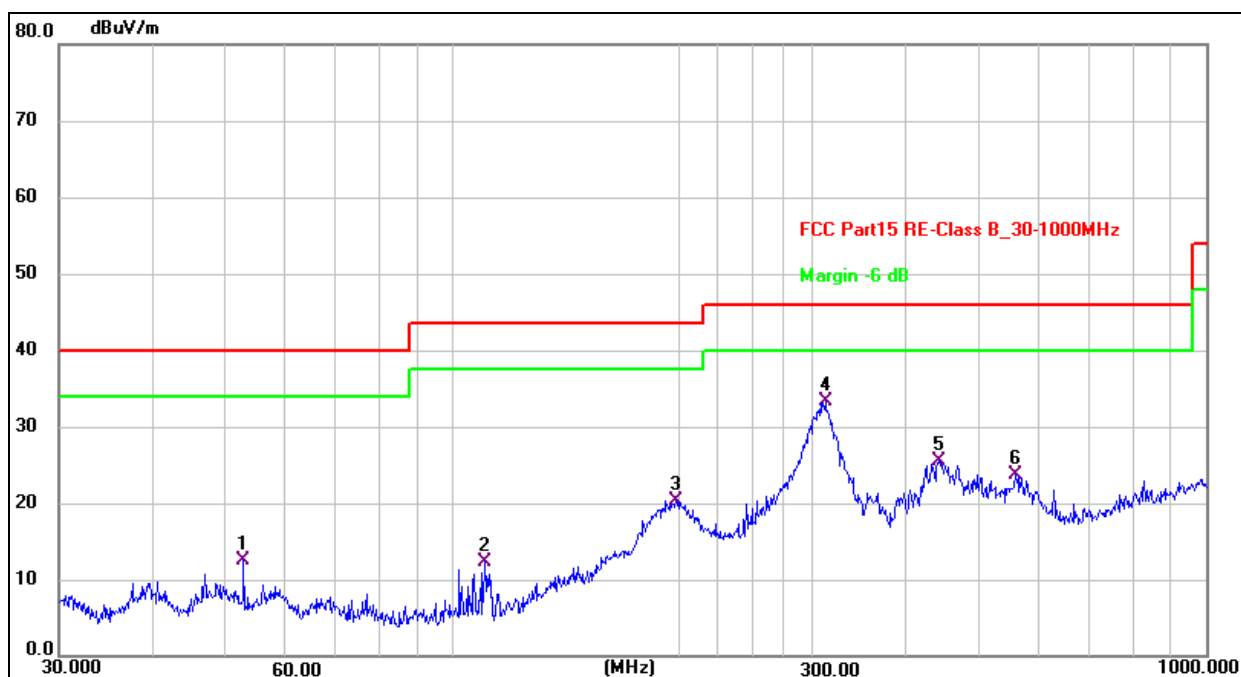
2. Measurement=Reading Level+ Correct Factor

3. Over=Measurement-Limit

No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
	MHz	dBuV	dB	dBuV/m	dB/m	dB	
1	0.1466	90.41	-7.57	82.84	104.2	-21.44	QP
2	0.3299	58.34	-7.69	50.65	97.24	-46.59	QP
3	0.4418	68.67	-7.61	61.06	94.70	-33.64	QP
4 *	0.7365	59.72	-7.36	52.36	70.27	-17.91	QP
5	1.0271	52.68	-7.36	45.32	67.39	-22.07	QP
6	1.3207	47.67	-7.35	40.32	65.21	-24.89	QP

Between 30MHz – 1GHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Test Voltage:	DC 3.85V
Test Mode:	Mode 1	Polarization:	Horizontal



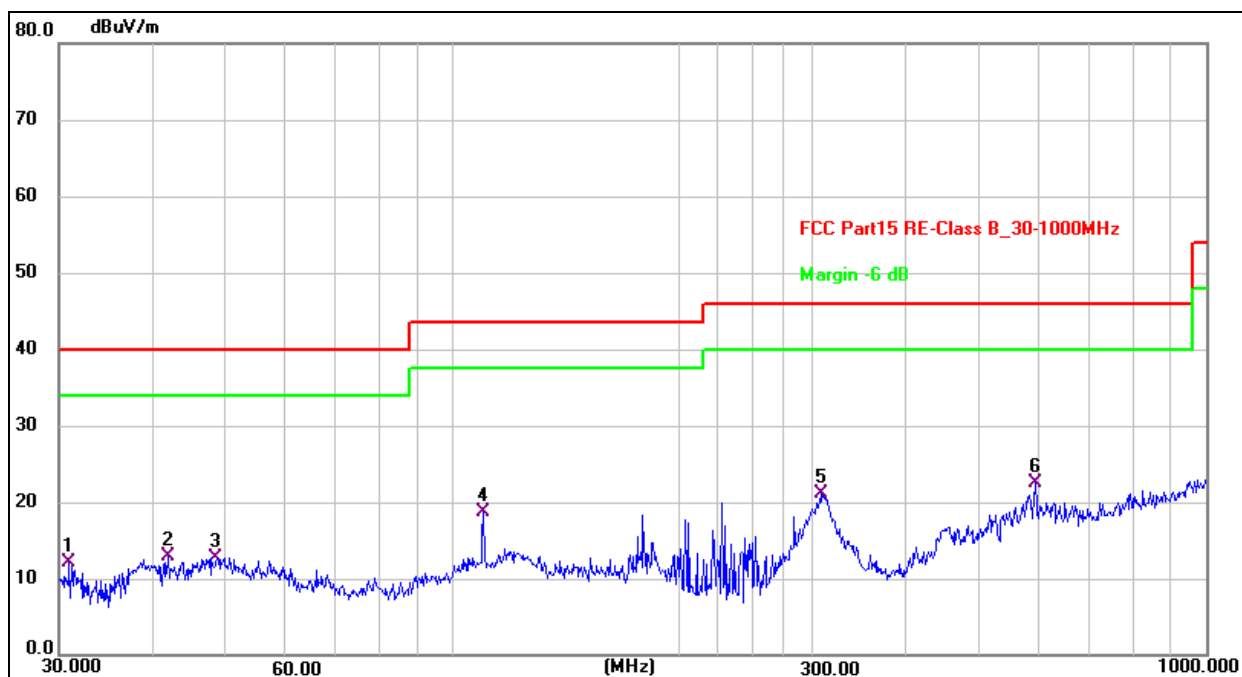
Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	52.7600	29.76	-17.25	12.51	40.00	-27.49	QP
2	110.1816	32.34	-20.13	12.21	43.50	-31.29	QP
3	197.8928	40.31	-19.99	20.32	43.50	-23.18	QP
4 *	312.1794	49.75	-16.47	33.28	46.00	-12.72	QP
5	441.7426	38.34	-12.93	25.41	46.00	-20.59	QP
6	558.7302	33.60	-9.98	23.62	46.00	-22.38	QP

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Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kpa	Test Voltage :	DC 3.85V
Test Mode:	Mode 1	Polarization:	Vertical



Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	30.9619	29.61	-17.48	12.13	40.00	-27.87
2	41.8596	30.09	-17.26	12.83	40.00	-27.17
3	48.6719	29.80	-17.07	12.73	40.00	-27.27
4	109.7960	38.81	-20.15	18.66	43.50	-24.84
5	307.8313	37.68	-16.63	21.05	46.00	-24.95
6 *	593.0497	31.40	-8.88	22.52	46.00	-23.48

8. Bandwidth Test

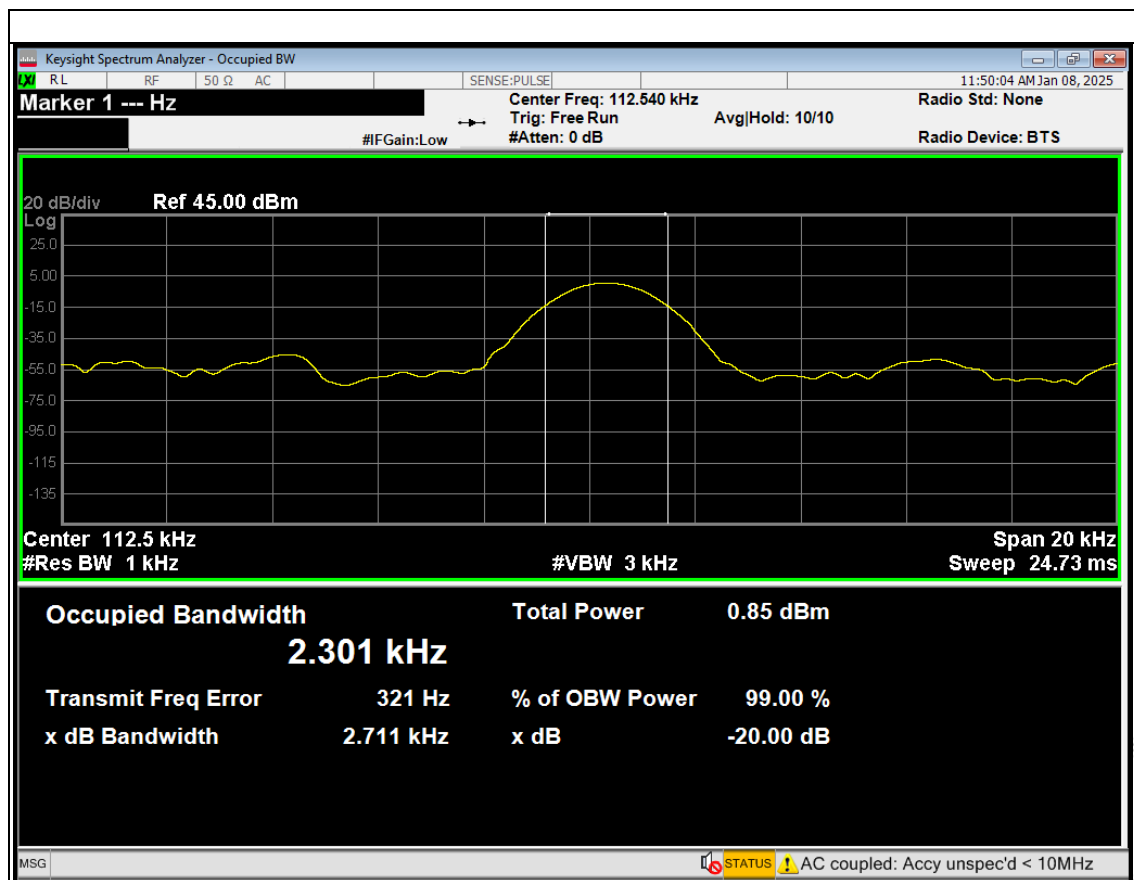
1. Set RBW = 1%~5% OBW.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude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

TEST SETUP



Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa		

Frequency (KHz)	20dB bandwidth (KHz)	Result
112.5	2.711	Pass

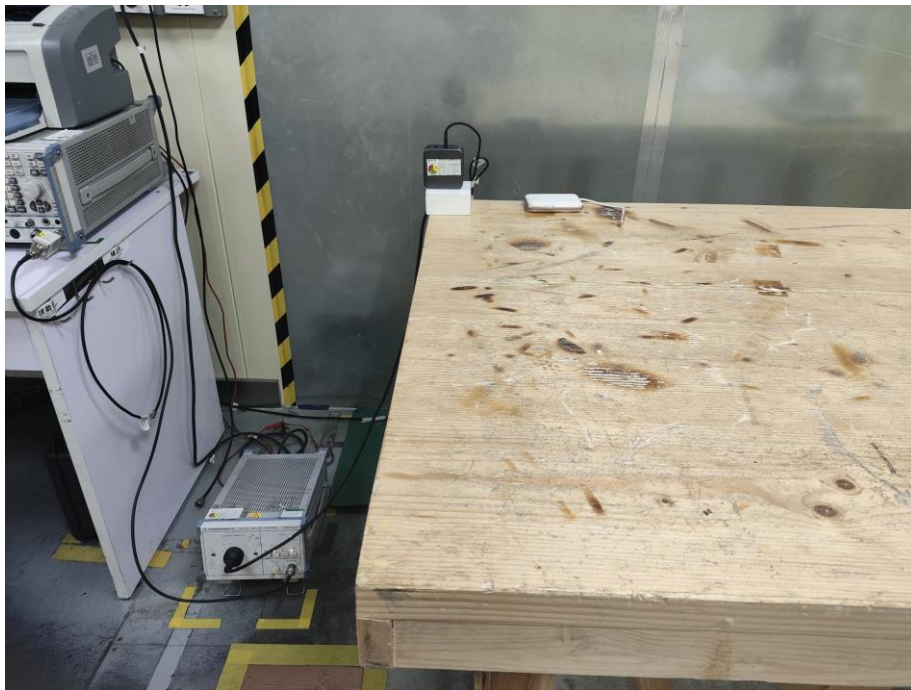


9. Antenna Requirements

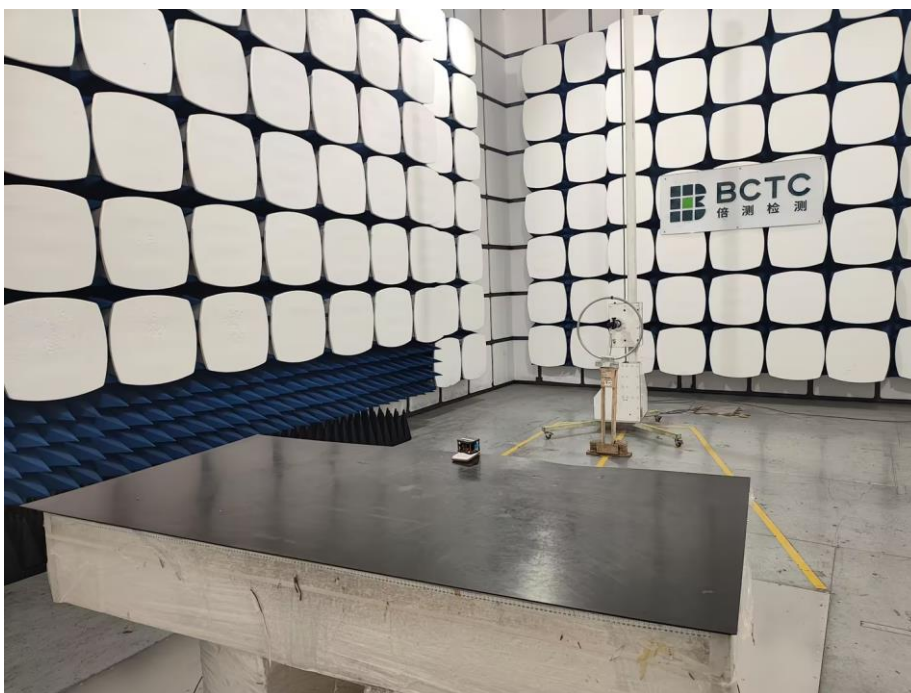
For intentional device, according to FCC 47 CFR Section 15.203, An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. 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. The antenna used for this product is Inductive loop coil antenna.

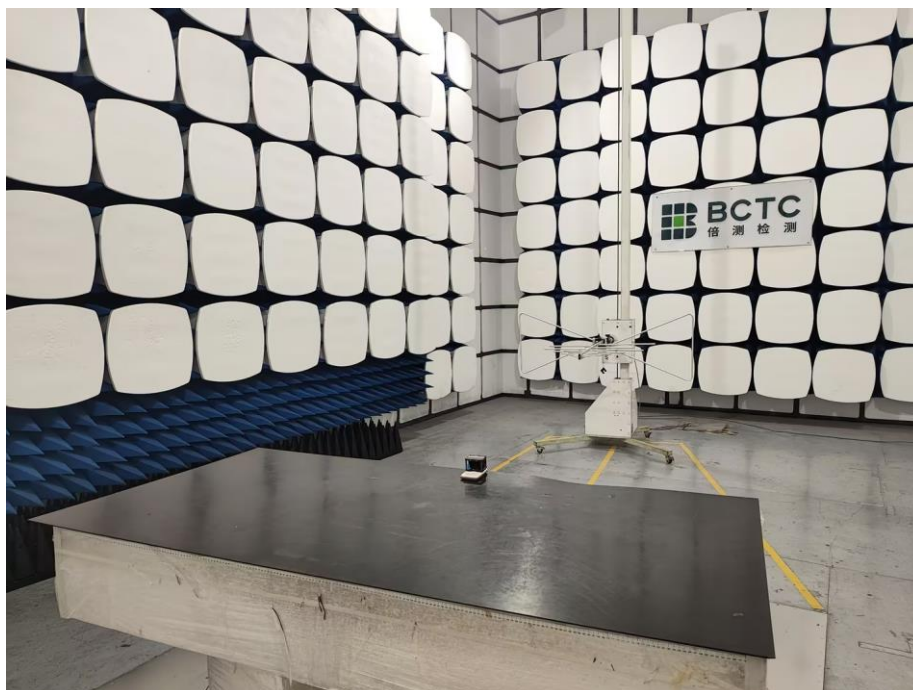
10. EUT Test Setup Photographs

Conducted emissions



Radiated Measurement Photos





STATEMENT

- 1.The equipment lists are traceable to the national reference standards.
- 2.The test report can not be partially copied unless prior written approval is issued from our lab.
- 3.The test report is invalid without stamp of laboratory.
- 4.The test report is invalid without signature of person(s) testing and authorizing.
- 5.The test process and test result is only related to the Unit Under Test.
- 6.The quality system of our laboratory is in accordance with ISO/IEC17025.
- 7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL:400-788-9558

P.C.: 518103

FAX:0755-33229357

Website:<http://www.chnbctc.com>

Consultation E-mail: bctc@bctc-lab.com.cn

Complaint/Advice E-mail: advice@bctc-lab.com.cn

***** END *****