TEST REPORT

Report No.:	BCTC2407296642E
Applicant:	Pawious Inc.
Product Name:	GPS Outdoor Wireless Dog Fence System
Test Model:	XSentry
Tested Date:	2024-07-03 to 2024-07-09
Issued Date:	2024-09-06

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2BHI6-XSENTRY

Product Name:	GPS Outdoor Wireless Dog Fence System
Trademark:	N/A
Model/Type Reference:	XSentry F840
Prepared For:	Pawious Inc.
Address:	34 N Franklin Ave Ste 687 1790 Pinedale, WY, 82941, USA
Manufacturer:	Shenzhen Wellturn Technology Co., Ltd
Address:	Room 606, Building F, Lvkai Zhihui Park, Liuxian 2nd Road, 71 District, Xin'an Street, Bao'an District, Shenzhen City, 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:	2024-07-03
Sample tested Date:	2024-07-03 to 2024-07-09
Issue Date:	2024-09-06
Report No.:	BCTC2407296642E
Test Standards:	FCC Part 15B ANSI C63.4:2014
Test Results:	PASS

Tested by:

Brave Zeng

Brave Zeng/ 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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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2407296642E	2024-09-06	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

Standard	Test Item	Test result
FCC 15.107	Conducted Emission	Pass
FCC 15.109	Radiated Emission	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.

Test item	Value (dB)
Conducted Emission (150kHz-30MHz)	3.10
Radiated Emission(30MHz~200MHz)	4.60
Radiated Emission(200MHz~1GHz)	5.20
Radiated Emission(1GHz~6GHz)	5.20

4. Product Information And Test Setup

4.1 Product Information

Ratings:	DC 5V from adapter/DC 3.7V from battery
Model differences:	All models are identical except for the appearance color.
The highest frequency of the internal sources of the EUT is above 1 GHz:	☐ less than 1.705 MHz, the measurement shall only be made up to 30 MHz. ☐ between 1.705 MHz and 108 MHz, the measurement shall only be made up to 1 GHz. ☐ between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. ☐ between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz. ☒ above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40GHz, whichever is less.

Cable of Product

No.	Cable Type	Quantity	Provider	Length (m)	Shielded	Note
1	--	--	Applicant	---	Yes/No	No
2	--	--	BCTC	--	Yes/No	No

4.2 Test Setup Configuration

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

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	Adapter	UGREEN	CD122	---	---

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

Test item	Test Mode	Test Voltage
Conducted Emission (150KHz-30MHz) Class B	Charging	DC 5V from adapter
Radiated emission(30MHz-6GHz) Class B	Charging	DC 5V from adapter
	GPS	DC 3.7V
All test mode were tested and passed, only Conducted Emissions, Radiated Emissions shows (*) is the worst case mode which were recorded in this report.		

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.

5.2 Test Instrument Used

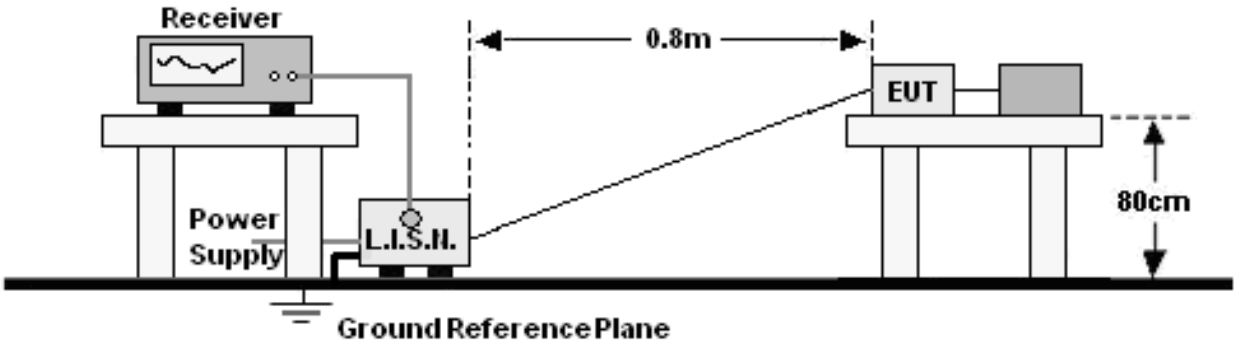
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD 9561-F	01323	May 16, 2024	May 15, 2025

Radiated Emissions Test (966 Chamber#01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
Amplifier	SKET	LAPA_01G18 G-45dB	SK2021040901	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
Horn Antenna	schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emission At The Mains Terminals Test

6.1 Block Diagram Of Test Setup

For mains ports:



6.2 Limit

Limits for Class B devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56*	56 to 46*
0,50 to 5	56	46
5 to 30	60	50

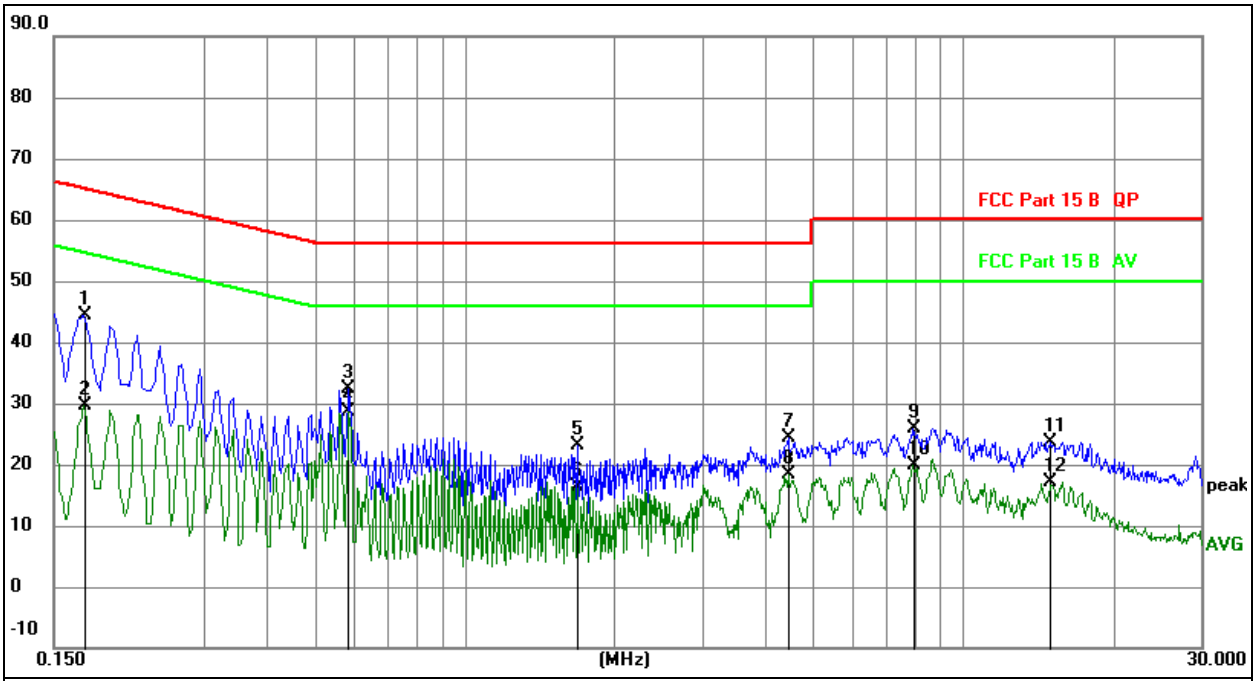
Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

For mains ports:
a. 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).
b. 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.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 Test Result

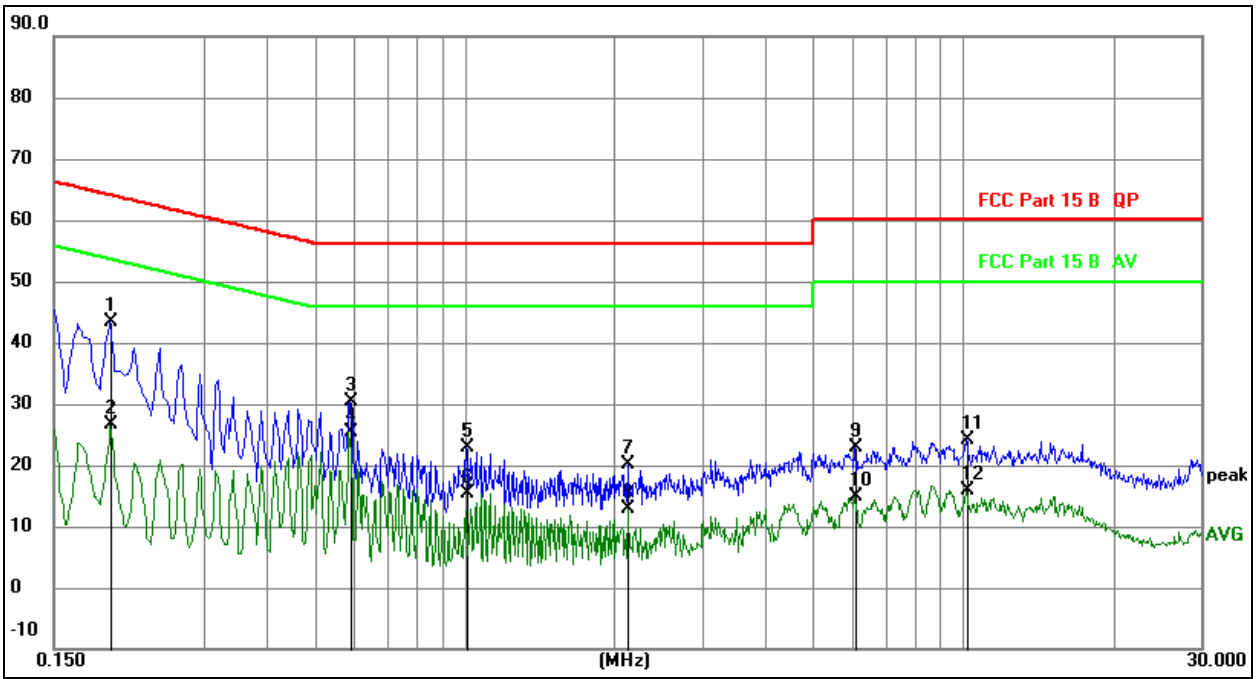
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Line
Test Voltage :	DC 5V from adapter	Test Mode:	Charging



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.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1722	24.35	20.07	44.42	64.85	-20.43	QP
2		0.1722	9.50	20.07	29.57	54.85	-25.28	AVG
3		0.5854	12.26	20.08	32.34	56.00	-23.66	QP
4	*	0.5854	8.61	20.08	28.69	46.00	-17.31	AVG
5		1.6802	2.91	20.10	23.01	56.00	-32.99	QP
6		1.6802	-3.61	20.10	16.49	46.00	-29.51	AVG
7		4.4540	4.34	20.14	24.48	56.00	-31.52	QP
8		4.4540	-1.72	20.14	18.42	46.00	-27.58	AVG
9		7.9353	5.72	20.16	25.88	60.00	-34.12	QP
10		7.9353	-0.30	20.16	19.86	50.00	-30.14	AVG
11		14.9860	3.42	20.31	23.73	60.00	-36.27	QP
12		14.9860	-3.28	20.31	17.03	50.00	-32.97	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Neutral
Test Voltage :	DC 5V from adapter	Test Mode:	Charging



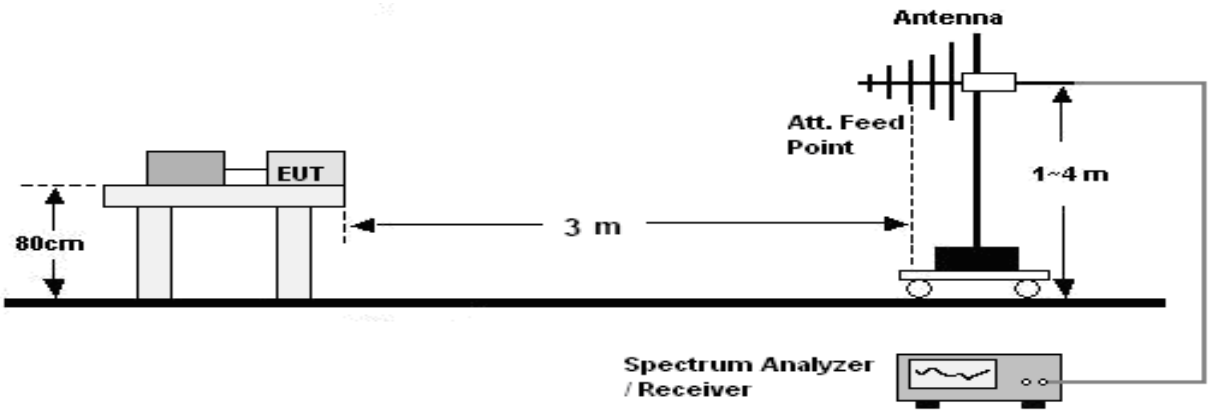
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1949	23.41	20.07	43.48	63.83	-20.35	QP
2		0.1949	6.45	20.07	26.52	53.83	-27.31	AVG
3		0.5910	10.30	20.08	30.38	56.00	-25.62	QP
4		0.5910	5.18	20.08	25.26	46.00	-20.74	AVG
5		1.0050	2.72	20.09	22.81	56.00	-33.19	QP
6		1.0050	-4.73	20.09	15.36	46.00	-30.64	AVG
7		2.1300	-0.08	20.10	20.02	56.00	-35.98	QP
8		2.1300	-7.13	20.10	12.97	46.00	-33.03	AVG
9		6.0765	2.78	20.15	22.93	60.00	-37.07	QP
10		6.0765	-5.26	20.15	14.89	50.00	-35.11	AVG
11		10.1580	4.00	20.17	24.17	60.00	-35.83	QP
12		10.1580	-4.30	20.17	15.87	50.00	-34.13	AVG

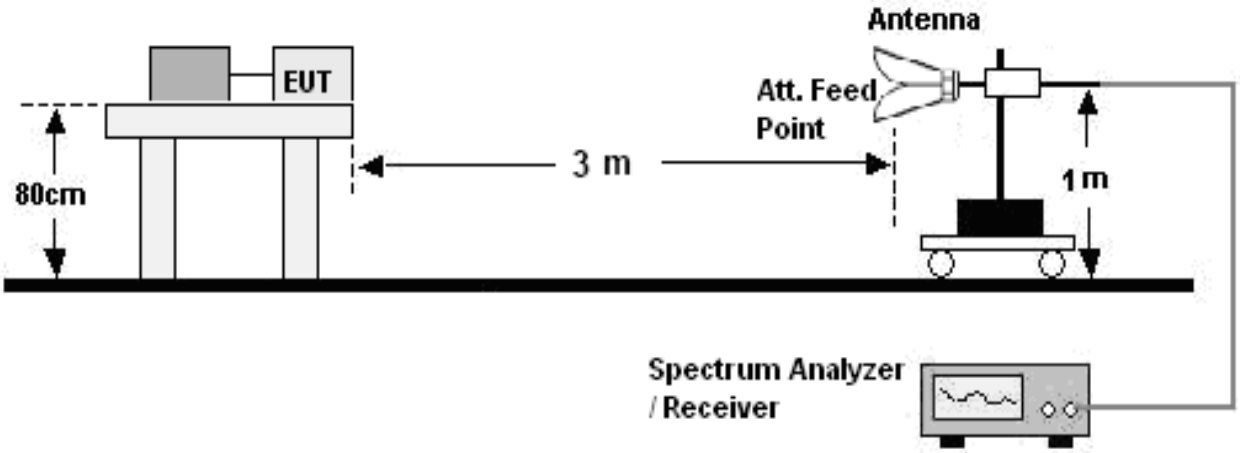
7. Radiation Emission Test

7.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



Above 1GHz:



7.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μV/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

Note: The lower limit shall apply at the transition frequencies.

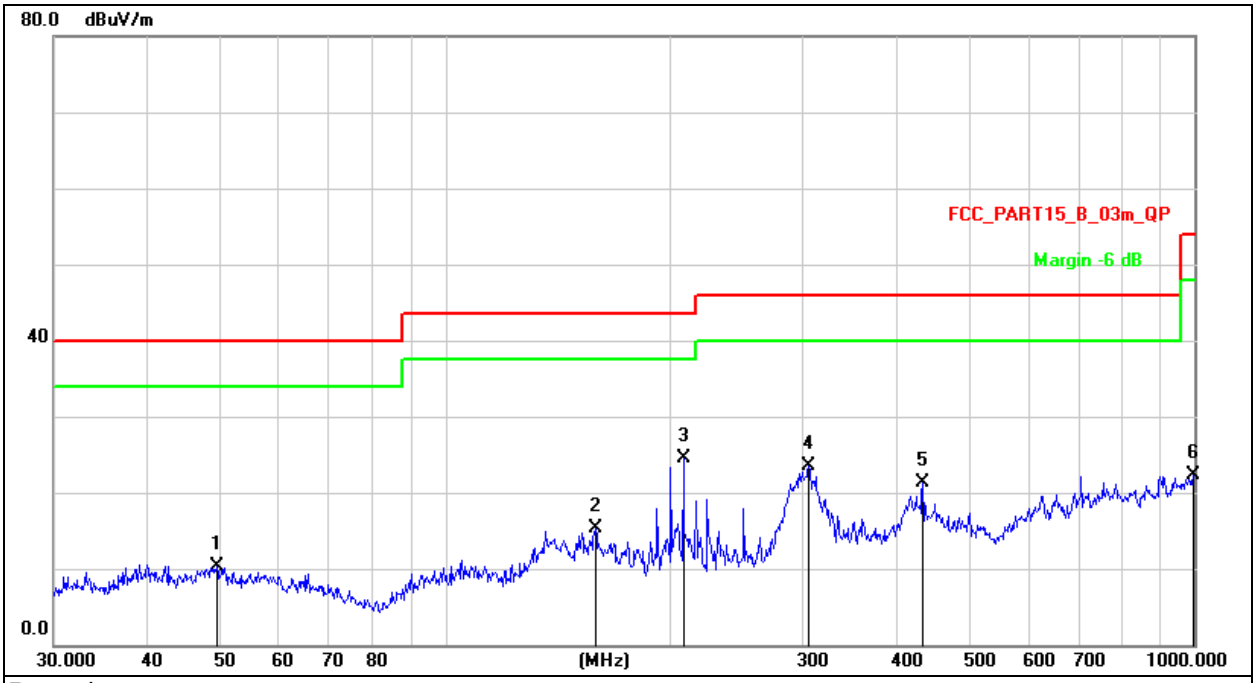
7.3 Test Procedure

30MHz ~ 1GHz:
a. The Product was placed on the nonconductive turntable 0.8 m above the ground at a chamber.
b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz:
a. The Product was placed on the non-conductive turntable 0.8 m above the ground in a full anechoic chamber.
b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
c. For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

7.4 Test Result

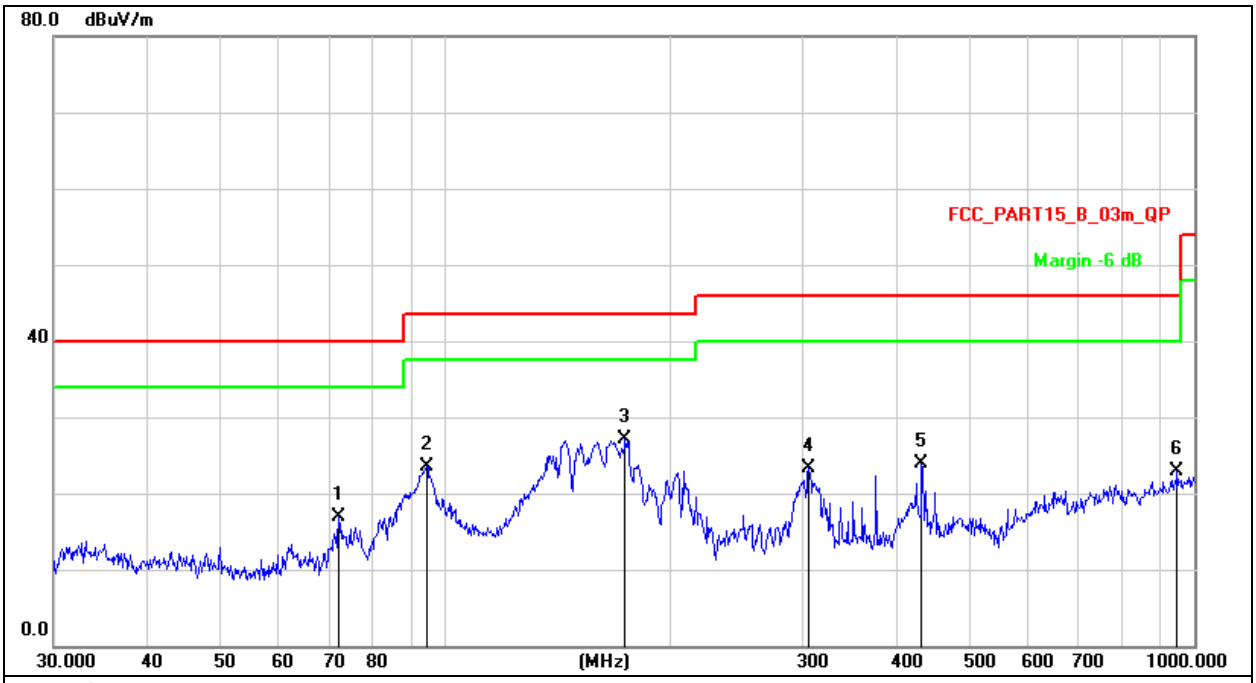
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	DC 5V from adapter	Test Mode:	The worst data (Charging)



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	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		49.5328	24.20	-13.94	10.26	40.00	-29.74	QP
2		158.6677	34.17	-18.79	15.38	43.50	-28.12	QP
3	*	207.8501	39.98	-15.50	24.48	43.50	-19.02	QP
4		305.6800	36.45	-13.04	23.41	46.00	-22.59	QP
5		434.0651	31.44	-10.17	21.27	46.00	-24.73	QP
6		996.4996	24.74	-2.40	22.34	54.00	-31.66	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	DC 5V from adapter	Test Mode:	The worst data (Charging)

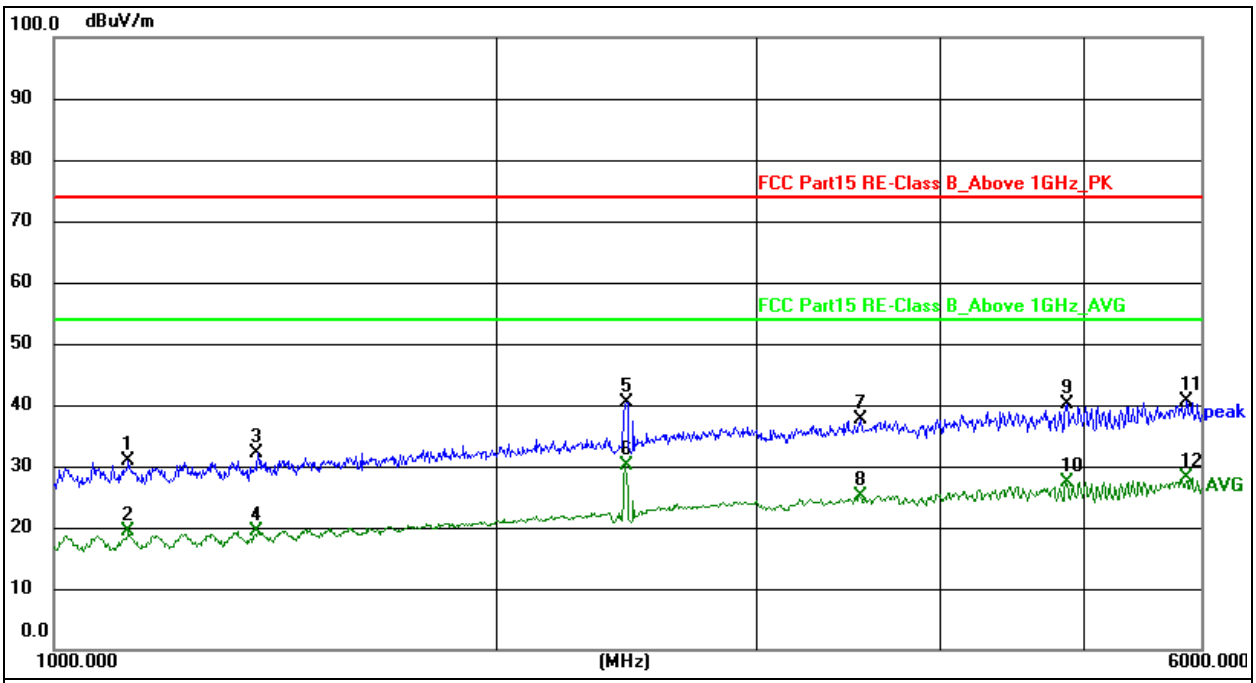


Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		72.0843	35.25	-18.36	16.89	40.00	-23.11	QP
2		94.4284	40.27	-16.75	23.52	43.50	-19.98	QP
3	*	173.8135	44.68	-17.66	27.02	43.50	-16.48	QP
4		305.6800	36.30	-13.04	23.26	46.00	-22.74	QP
5		432.5457	34.12	-10.20	23.92	46.00	-22.08	QP
6		948.7610	25.78	-2.94	22.84	46.00	-23.16	QP

Above 1GHz

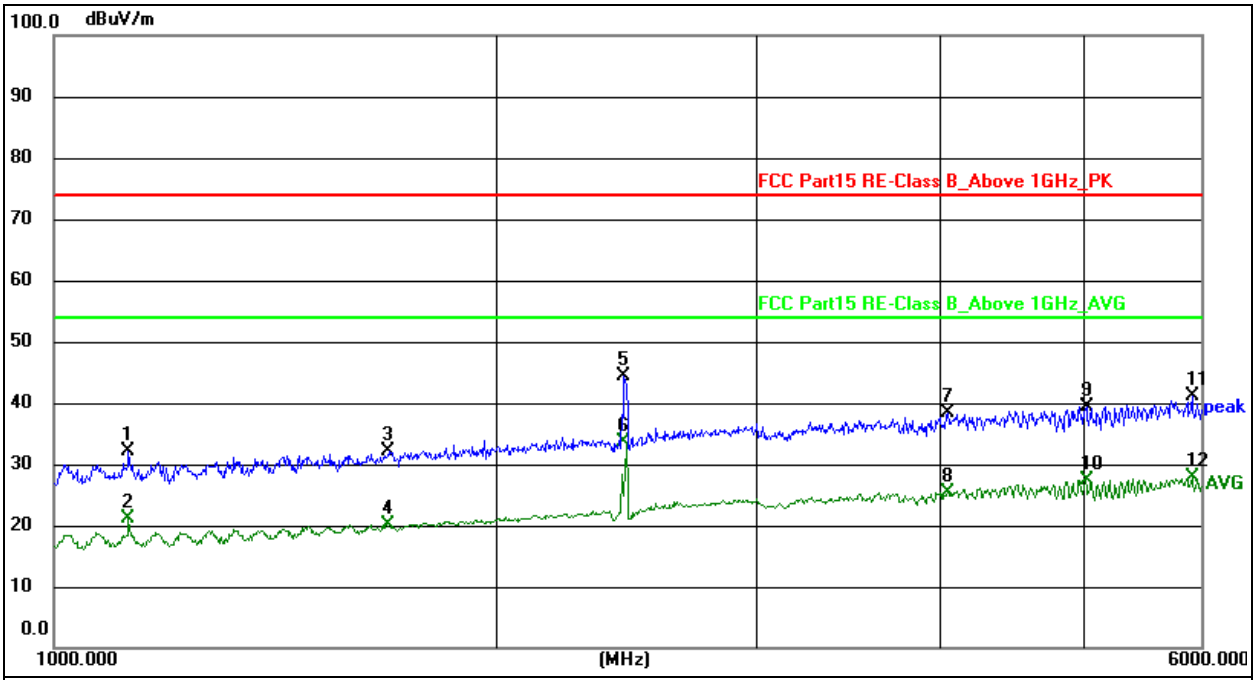
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	DC 5V from adapter	Test Mode:	The worst data (Charging)



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	1123.517	59.80	-28.87	30.93	74.00	-43.07	peak
2	1123.517	48.28	-28.87	19.41	54.00	-34.59	AVG
3	1375.659	60.09	-28.07	32.02	74.00	-41.98	peak
4	1375.659	47.49	-28.07	19.42	54.00	-34.58	AVG
5	2445.105	65.14	-24.79	40.35	74.00	-33.65	peak
6 *	2445.105	54.91	-24.79	30.12	54.00	-23.88	AVG
7	3524.036	59.88	-22.30	37.58	74.00	-36.42	peak
8	3524.036	47.43	-22.30	25.13	54.00	-28.87	AVG
9	4865.277	59.91	-19.70	40.21	74.00	-33.79	peak
10	4865.277	47.14	-19.70	27.44	54.00	-26.56	AVG
11	5861.858	59.28	-18.62	40.66	74.00	-33.34	peak
12	5861.858	46.64	-18.62	28.02	54.00	-25.98	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	DC 5V from adapter	Remark:	N/A



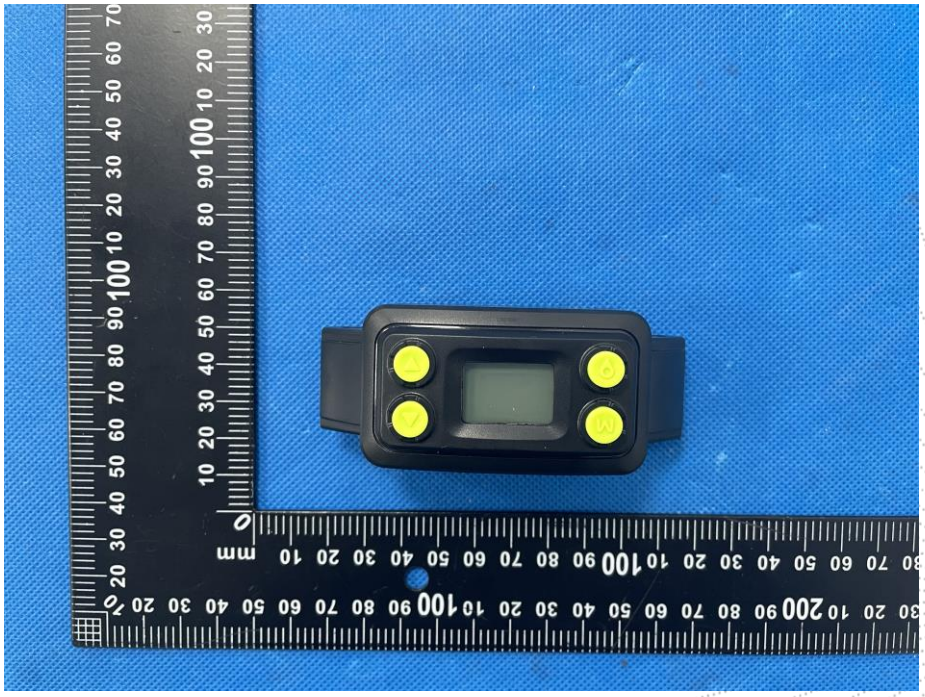
Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier
2. Measurement=Reading Level+ Correct Factor
3. Over= Measurement-Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1123.517	60.91	-28.87	32.04	74.00	-41.96	peak
2	1123.517	49.95	-28.87	21.08	54.00	-32.92	AVG
3	1687.408	59.14	-27.07	32.07	74.00	-41.93	peak
4	1687.408	47.24	-27.07	20.17	54.00	-33.83	AVG
5	2436.358	69.17	-24.81	44.36	74.00	-29.64	peak
6 *	2436.358	58.34	-24.81	33.53	54.00	-20.47	AVG
7	4038.126	59.79	-21.42	38.37	74.00	-35.63	peak
8	4038.126	46.87	-21.42	25.45	54.00	-28.55	AVG
9	5015.753	58.83	-19.41	39.42	74.00	-34.58	peak
10	5015.753	46.87	-19.41	27.46	54.00	-26.54	AVG
11	5914.609	59.59	-18.57	41.02	74.00	-32.98	peak
12	5914.609	46.45	-18.57	27.88	54.00	-26.12	AVG

8. EUT Photographs

EUT Photo 1

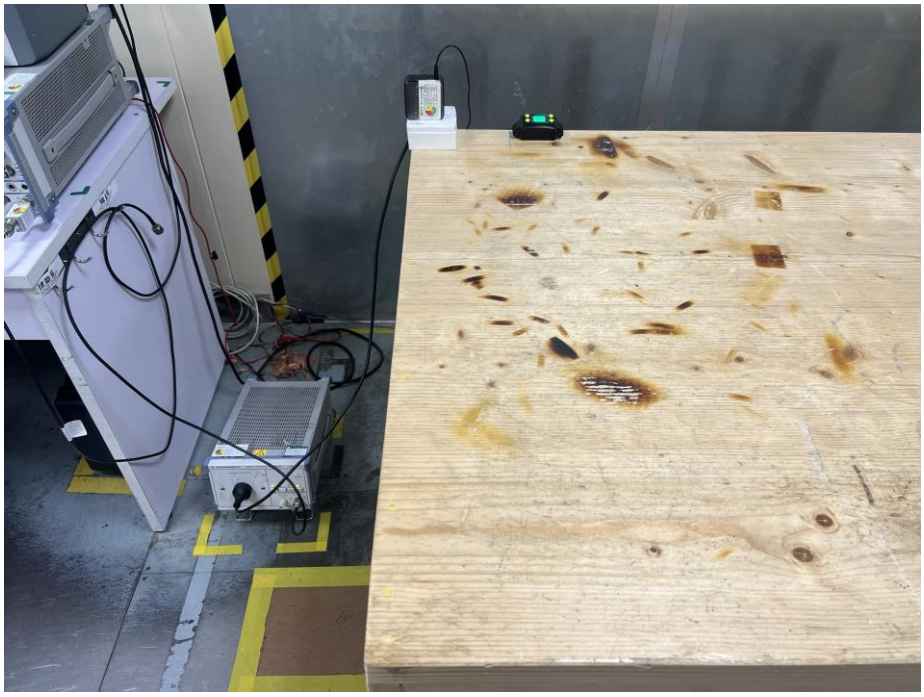
EUT Photo 2



NOTE: Appendix-Photographs Of EUT Constructional Details.

9. EUT Test Setup Photographs

Conducted emissions



Radiated emissions

BCTC
倍 测 检 测

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 the "special seal for inspection and testing".

4. The test report is invalid without the signature of the approver.

5. The test process and test result is only related to the Unit Under Test.

6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.

7. The quality system of our laboratory is in accordance with ISO/IEC17025.

8. If there is any objection to this test 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 ※※※※※