



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

FCC PART 15 SUBPART C TEST REPORT

FCC PART 15 SUBPART C 15.249

Report Reference No......: **CTA24011700801**
FCC ID.....: **2BEJ8-T9**
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Date of issue.....: Jan. 20, 2024

Testing Laboratory Name: **Shenzhen CTA Testing Technology Co., Ltd.**
Address.....: Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name.....: **SHENZHEN WENELMICRO ELECTRONIC CO., LTD.**
Address: 2nd Floor, Annex Building, Corrente Building, No. 1 Ganli 5th Road, Jihua Street, Longgang District, Shenzhen, China

Test specification:
Standard.....: **FCC PART 15 SUBPART C 15.249**
TRF Originator.....: Shenzhen CTA Testing Technology Co., Ltd.

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Test item description: **WIRELESS GUITAR SYSTEM**
Trade Mark: N/A
Manufacturer: SHENZHEN WENELMICRO ELECTRONIC CO., LTD.
Model/Type reference.....: T9
Listed Models: N/A
Modulation: GFSK
Frequency.....: 5729MHz to 5848MHz
Ratings: DC 3.7V From battery and DC 5.0V From external circuit
Result.....: **PASS**

Shenzhen CTA Testing Technology Co., Ltd.

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TEST REPORT

Equipment under Test : WIRELESS GUITAR SYSTEM

Model /Type : T9

Serial Models : N/A

Applicant : SHENZHEN WENTELMICRO ELECTRONIC CO., LTD.

Address : 2nd Floor, Annex Building, Corrente Building, No. 1 Ganli 5th Road,
Jihua Street, Longgang District, Shenzhen, China

Manufacturer : SHENZHEN WENTELMICRO ELECTRONIC CO., LTD.

Address : 2nd Floor, Annex Building, Corrente Building, No. 1 Ganli 5th Road,
Jihua Street, Longgang District, Shenzhen, China

Test Result:	PASS
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

ANSI C63.10:2013 : American National Standard for Testing Unlicensed Wireless Devices

ANSI C63.4: 2014: –American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz
Range of 9 kHz to 40GHz

2 SUMMARY

2.1 General Remarks

Date of receipt of test sample	:	Jan. 15, 2024
Testing commenced on	:	Jan. 15, 2024
Testing concluded on	:	Jan. 20, 2024

2.2 Product Description

Product Description:	WIRELESS GUITAR SYSTEM
Model:	T9
Power supply:	DC 3.7V From battery and DC 5.0V From external circuit
Adapter information (Auxiliary test supplied by test Lab):	Model: EP-TA20CBC Input: AC 100-240V 50/60Hz Output: DC 5V 2A
testing sample ID:	CTA240117008-1# (Engineer sample), CTA240117008-2# (Normal sample)
Hardware version:	V1.0
Software version:	V1.0
SRD	
Operation frequency:	5729MHz to 5848MHz
Modulation:	GFSK
Antenna type:	PCB antenna
Antenna gain:	-0.05 dBi

2.3 Equipment Under Test

Power supply system utilised

Power supply voltage	:	<input type="radio"/> 230V / 50 Hz	<input type="radio"/> 120V / 60Hz
		<input type="radio"/> 12 V DC	<input type="radio"/> 24 V DC
		<input checked="" type="radio"/> Other (specified in blank below)	

DC 3.7V From battery and DC 5.0V From external circuit

2.4 Short description of the Equipment under Test (EUT)

This is a WIRELESS GUITAR SYSTEM.

For more details, refer to the user's manual of the EUT.

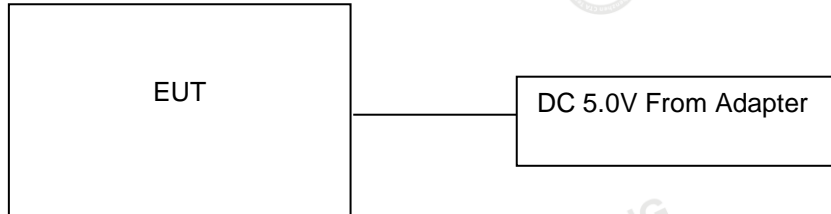
2.5 EUT operation mode

The Applicant provides communication tools software (CMD command) to control the EUT for staying in continuous transmitting (Duty Cycle more than 98%) and receiving mode for testing. All test performed at the low, middle and high of operational frequency range of each mode.

Testing Frequency List

Channel	Frequency
01	5729
02	5787
03	5848

2.6 Block Diagram of Test Setup



2.7 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended to comply with Section 15.407 of the FCC Part 15, Subpart E Rules.

2.8 Modifications

No modifications were implemented to meet testing criteria.

3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Radiated Emission:

Temperature:	25 ° C
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

Conducted testing:

Temperature:	25 ° C
Humidity:	44 %
Atmospheric pressure:	950-1050mbar

AC Power Conducted Emission

Temperature:	24 ° C
Humidity:	44 %
Atmospheric pressure:	950-1050mbar

3.4 Test Description

FCC PART 15.249		
FCC Part 15.249(a)	Field Strength of Fundamental	PASS
FCC Part 15.209	Spurious Emission	PASS
FCC Part 15.215(c)	20dB bandwidth	PASS
FCC Part 15.207	Conducted Emission	PASS
FCC Part 15.203	Antenna Requirement	PASS

Note 1: The measurement uncertainty is not included in the test result.

Note 2: NA = Not Applicable; NP = Not Performed

3.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen CTA Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen CTA Testing Technology Co., Ltd. :

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	9KHz~30MHz	3.02 dB	(1)
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)
Output Peak power	30MHz~18GHz	0.55 dB	(1)
Power spectral density	/	0.57 dB	(1)
Spectrum bandwidth	/	1.1%	(1)
Radiated spurious emission (30MHz-1GHz)	30~1000MHz	4.10 dB	(1)
Radiated spurious emission (1GHz-18GHz)	1~18GHz	4.32 dB	(1)
Radiated spurious emission (18GHz-40GHz)	18-40GHz	5.54 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.6 Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	CTA-308	2023/08/02	2024/08/01
LISN	R&S	ENV216	CTA-314	2023/08/02	2024/08/01
EMI Test Receiver	R&S	ESPI	CTA-307	2023/08/02	2024/08/01
EMI Test Receiver	R&S	ESCI	CTA-306	2023/08/02	2024/08/01

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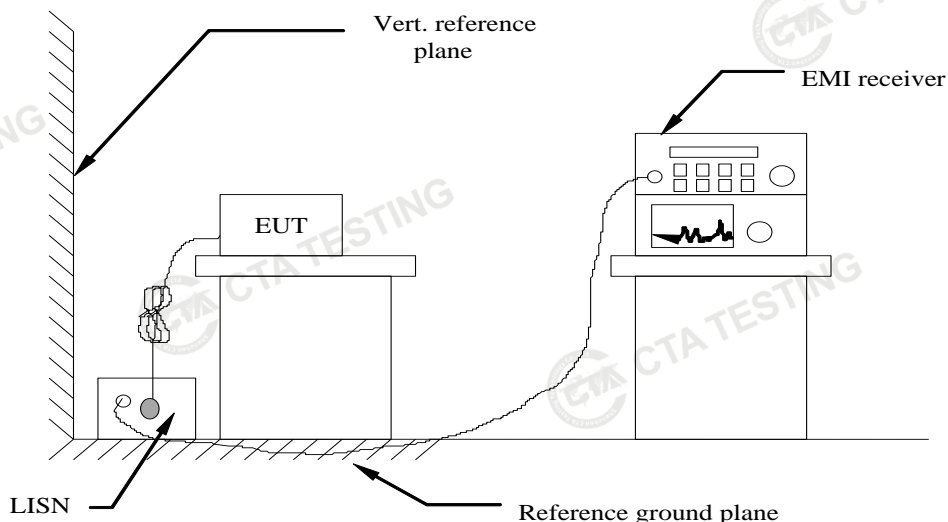
Spectrum Analyzer	Agilent	N9020A	CTA-301	2023/08/02	2024/08/01
Spectrum Analyzer	R&S	FSP	CTA-337	2023/08/02	2024/08/01
Vector Signal generator	Agilent	N5182A	CTA-305	2023/08/02	2024/08/01
Analog Signal Generator	R&S	SML03	CTA-304	2023/08/02	2024/08/01
Universal Radio Communication	CMW500	R&S	CTA-302	2023/08/02	2024/08/01
Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2023/08/02	2024/08/01
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2023/10/17	2024/10/16
Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2023/10/13	2024/10/12
Loop Antenna	Zhinan	ZN30900C	CTA-311	2023/10/17	2024/10/16
Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2021/08/07	2024/08/06
Amplifier	Schwarzbeck	BBV 9745	CTA-312	2023/08/02	2024/08/01
Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2023/08/02	2024/08/01
Directional coupler	NARDA	4226-10	CTA-303	2023/08/02	2024/08/01
High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2023/08/02	2024/08/01
High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2023/08/02	2024/08/01
Automated filter bank	Tonscend	JS0806-F	CTA-404	2023/08/02	2024/08/01
Power Sensor	Agilent	U2021XA	CTA-405	2023/08/02	2024/08/01
Amplifier	Schwarzbeck	BBV9719	CTA-406	2023/08/02	2024/08/01

Test Equipment	Manufacturer	Model No.	Version number	Calibration Date	Calibration Due Date
EMI Test Software	Tonscend	TS@JS32-RE	5.0.0.2	N/A	N/A
EMI Test Software	Tonscend	TS@JS32-CE	5.0.0.1	N/A	N/A
RF Test Software	Tonscend	TS@JS1120-3	3.1.65	N/A	N/A
RF Test Software	Tonscend	TS@JS1120	3.1.46	N/A	N/A

4 TEST CONDITIONS AND RESULTS

4.1 AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2013.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2013
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
- 4 The EUT received power from adapter, the adapter received AC120V/60Hz and AC 240V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

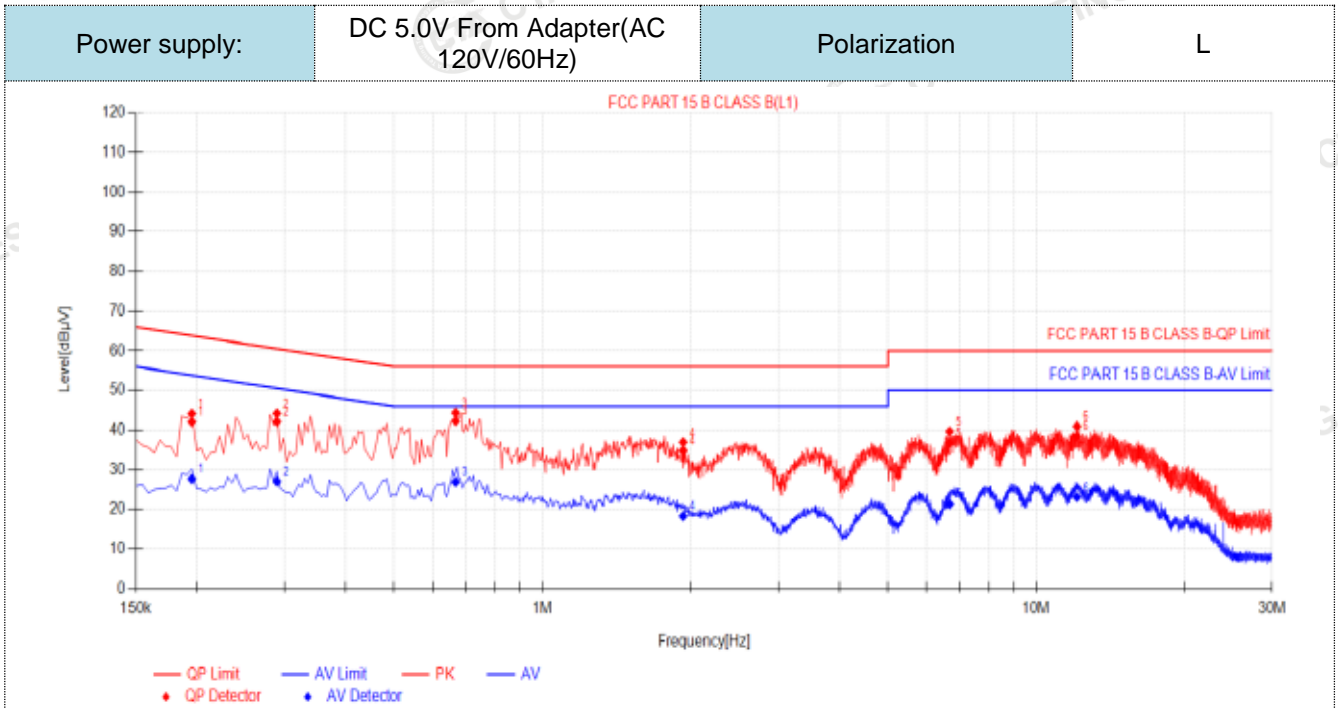
Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST RESULTS

Remark:

1. All modes were tested at Low, Middle, and High channel; only the worst result of Mid Channel was reported as below:
2. Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:

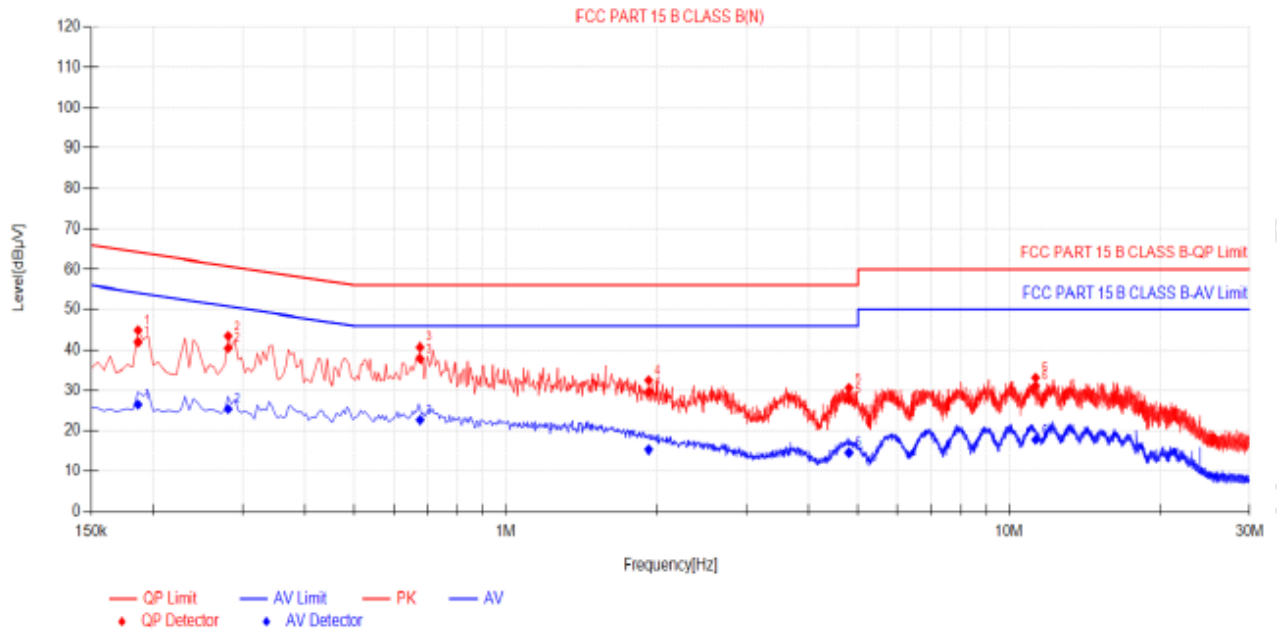


Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading[dB µV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.195	10.08	32.01	42.09	63.82	21.73	17.63	27.71	53.82	26.11	PASS
2	0.2895	9.95	32.20	42.15	60.54	18.39	17.14	27.09	50.54	23.45	PASS
3	0.6675	9.95	32.36	42.31	56.00	13.69	17.01	26.96	46.00	19.04	PASS
4	1.9275	9.92	24.95	34.87	56.00	21.13	8.41	18.33	46.00	27.67	PASS
5	6.684	10.25	26.48	36.73	60.00	23.27	11.09	21.34	50.00	28.66	PASS
6	12.1085	10.28	28.22	38.50	60.00	21.50	12.80	23.08	50.00	26.92	PASS

- Note:1).QP Value (dBµV)= QP Reading (dBµV)+ Factor (dB)
 2). Factor (dB)=insertion loss of LISN (dB) + Cable loss (dB)
 3). QPMargin(dB) = QP Limit (dBµV) - QP Value (dBµV)
 4). AVMargin(dB) = AV Limit (dBµV) - AV Value (dBµV)

Power supply:	DC 5.0V From Adapter(AC 120V/60Hz)	Polarization	N
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Final Data List											
NO.	Freq. [MHz]	Factor [dB]	QP Reading[dB µV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.186	10.01	31.97	41.98	64.21	22.23	16.56	26.57	54.21	27.64	PASS
2	0.2805	9.92	30.59	40.51	60.80	20.29	15.50	25.42	50.80	25.38	PASS
3	0.6785	10.08	27.75	37.83	56.00	18.17	12.55	22.63	46.00	23.37	PASS
4	1.923	10.18	19.46	29.64	56.00	26.36	5.14	15.32	46.00	30.68	PASS
5	4.7985	10.09	17.70	27.79	56.00	28.21	4.51	14.80	46.00	31.40	PASS
6	11.292	10.41	20.77	31.18	60.00	28.82	7.35	17.76	50.00	32.24	PASS

- Note:1).QP Value (dBµV)= QP Reading (dBµV)+ Factor (dB)
 2). Factor (dB)=insertion loss of LISN (dB) + Cable loss (dB)
 3). QPMargin(dB) = QP Limit (dBµV) - QP Value (dBµV)
 4). AVMargin(dB) = AV Limit (dBµV) - AV Value (dBµV)

4.2 Radiated Emissions

Limit

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Undesirable emission limits

Requirement	Limit(EIRP)	Limit (Field strength at 3m) ^{Note1}
15.407(b)(1)	PK:-27(dBm/MHz)	PK:68.2(dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)		

Note1: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m}, \text{ where } P \text{ is the eirp (Watts)}$$

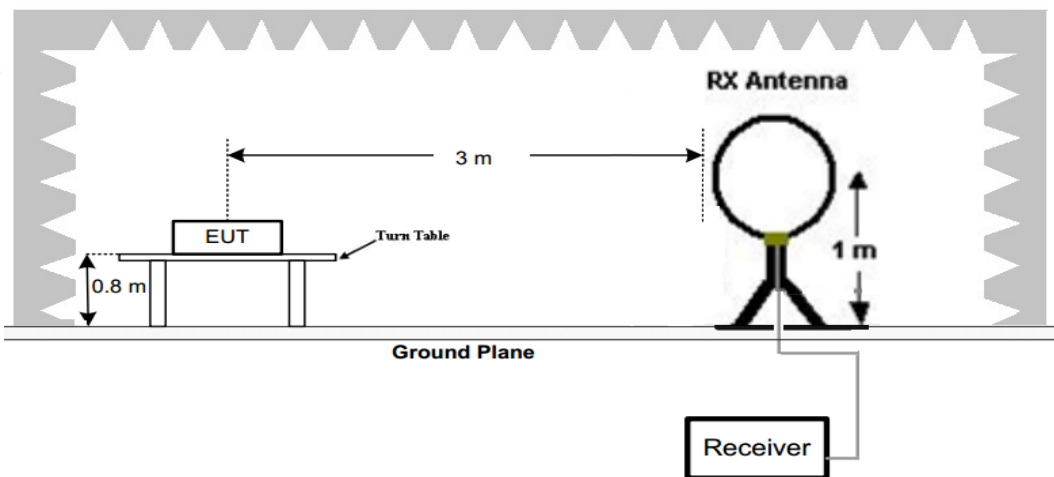
- (5) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209
- (6) In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Radiated emission limits

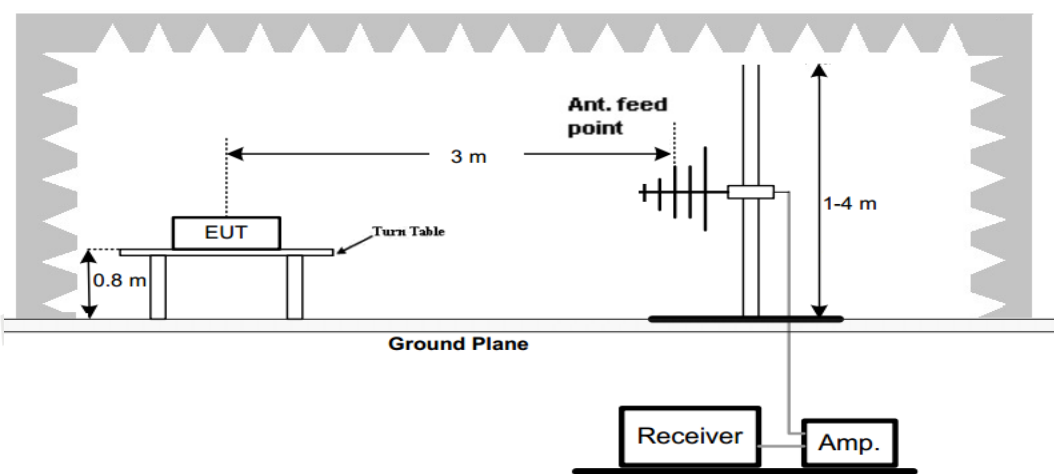
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST CONFIGURATION

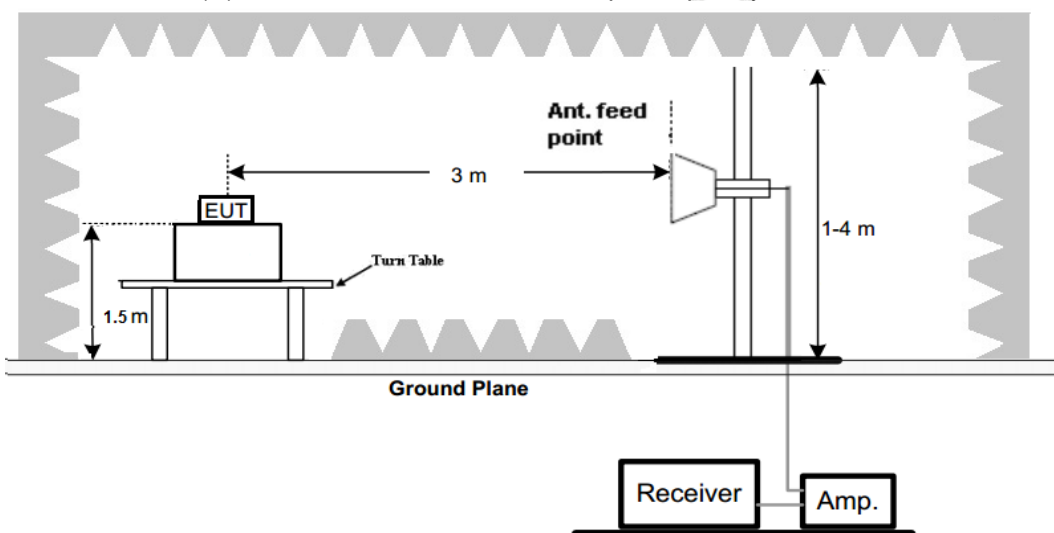
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



Test Procedure

- Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
- Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until all frequency measurements have been completed.
- Radiated emission test frequency band from 9KHz to 40GHz.
- The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3
1GHz-18GHz	Horn Antenna	3
18GHz-25GHz	Horn Antenna	1

- Setting test receiver/spectrum as following table states:

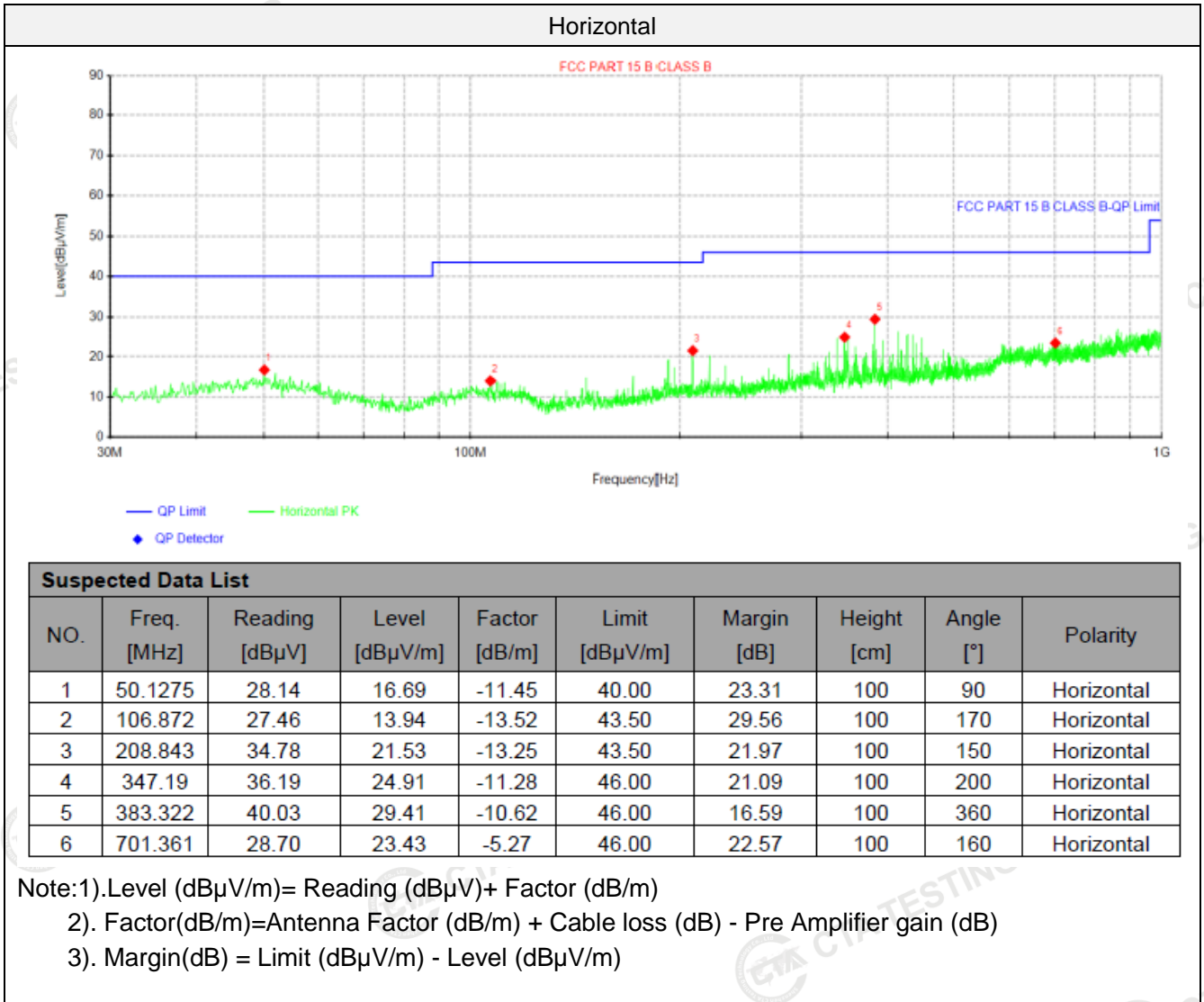
Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz, Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz, Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz, Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

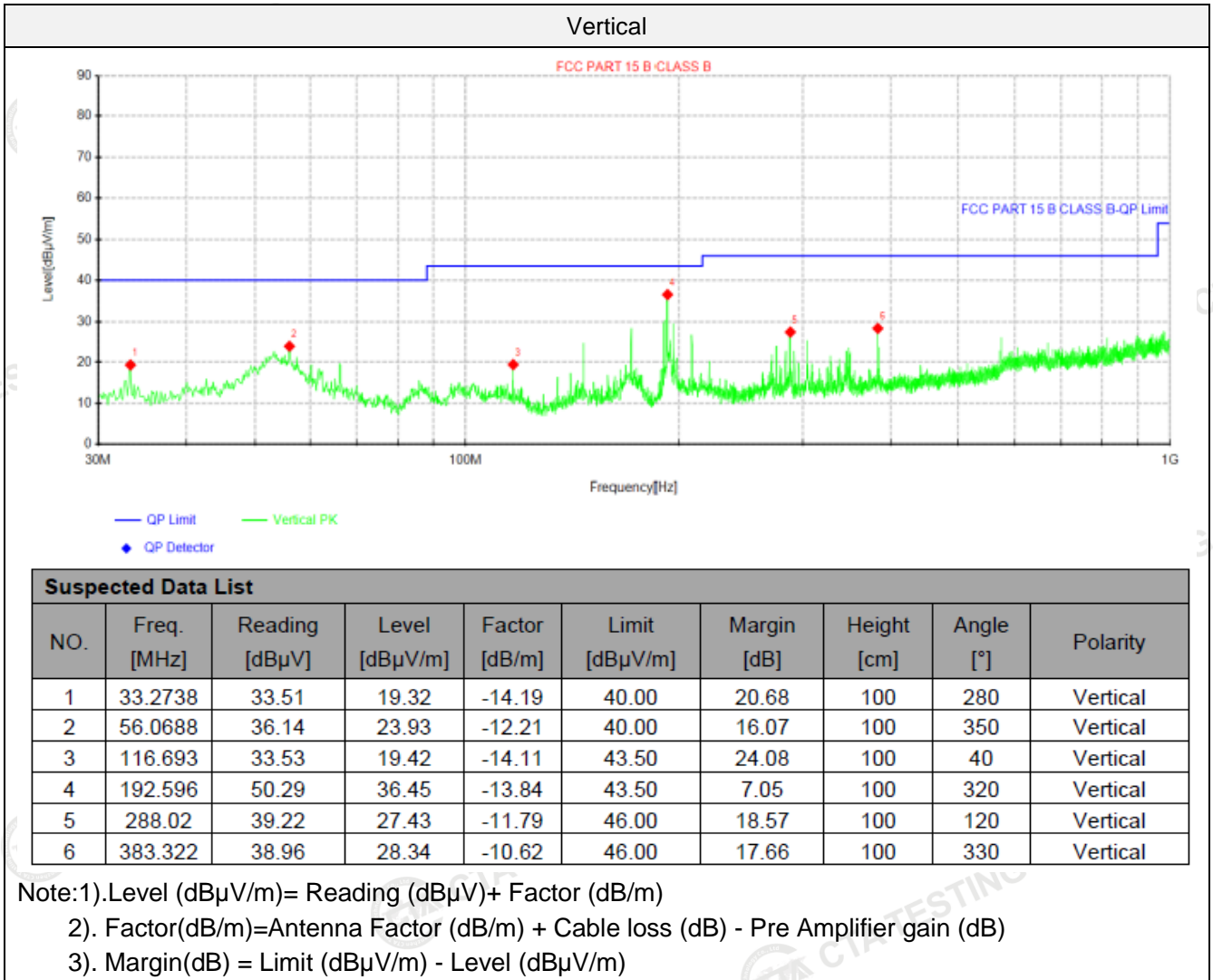
TEST RESULTS

Remark:

- This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
- All modes have been tested for below 1GHz test, only the worst case of Mid Channel was recorded
- Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz





For 1GHz to 40GHz

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low	5729.00	97.56	PK	H	114.00	16.44	100.30	33.44	6.05	42.23	-2.74
(5729MHz)	5729.00	78.32	AV	H	94.00	15.68	81.06	33.44	6.05	42.23	-2.74
	--	--	--	--	--	--	--	--	--	--	--
Mid	5785.00	98.05	PK	H	114.00	15.95	33.87	33.96	6.21	42.35	-2.18
(5785MHz)	5785.00	79.68	AV	H	94.00	14.32	33.87	33.96	6.21	42.25	-2.08
	--	--	--	--	--	--	--	--	--	--	--
Hig	5848.00	98.71	PK	H	114.00	15.29	100.76	34.01	6.35	42.41	-2.05
(5848MHz)	5848.00	78.49	AV	H	94.00	15.51	73.94	38.82	11.17	45.44	4.55
	--	--	--	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low	5729.00	98.83	PK	v	114.00	15.17	101.57	33.44	6.05	42.23	-2.74
(5729MHz)	5729.00	79.74	AV	v	94.00	14.26	82.48	33.44	6.05	42.23	-2.74
	--	--	--	--	--	--	--	--	--	--	--
Mid	5785.00	99.17	PK	v	114.00	14.83	33.87	33.96	6.21	42.35	-2.18
(5785MHz)	5785.00	80.52	AV	v	94.00	13.48	33.87	33.96	6.21	42.25	-2.08
	--	--	--	--	--	--	--	--	--	--	--
Hig	5848.00	98.44	PK	v	114.00	15.56	100.49	34.01	6.35	42.41	-2.05
(5848MHz)	5848.00	79.01	AV	v	94.00	14.99	74.46	38.82	11.17	45.44	4.55
	--	--	--	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low	5720.00	45.03	PK	H	79.60	34.57	47.78	33.43	6.04	42.22	-2.75
(5729MHz)	11458.00	50.52	PK	H	68.20	17.68	46.01	39.02	10.92	45.43	4.51
	--	--	--	--	--	--	--	--	--	--	--
Mid	11570.00	50.64	PK	H	68.20	17.56	46.19	38.93	10.96	45.44	4.45
(5785MHz)	--	--	--	--	--	--	--	--	--	--	--
Hig	5848.00	46.73	PK	H	79.60	32.87	48.99	33.87	6.17	42.3	-2.26
(5848MHz)	11696.00	49.29	PK	H	68.20	18.91	44.74	38.82	11.17	45.44	4.55
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Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low	5720.00	46.54	PK	V	79.60	33.06	49.29	33.43	6.04	42.22	-2.75
(5729MHz)	11458.00	51.79	PK	V	68.20	16.41	47.28	39.02	10.92	45.43	4.51
	--	--	--	--	--	--	--	--	--	--	--
Mid	11570.00	52.16	PK	V	68.20	16.04	47.71	38.93	10.96	45.44	4.45
(5785MHz)	--	--	--	--	--	--	--	--	--	--	--
Hig	5848.00	47.63	PK	V	79.60	31.97	49.89	33.87	6.17	42.3	-2.26
(5848MHz)	11696.00	50.38	PK	V	68.20	17.82	45.83	38.82	11.17	45.44	4.55
	--	--	--	--	--	--	--	--	--	--	--

REMARKS:

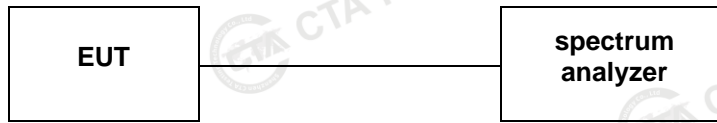
1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Limit value- Emission level.
4. -- Mean the other emission levels were very low against the limit.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

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4.3 20dB Bandwidth Measurement

TEST CONFIGURATION



TEST PROCEDURE

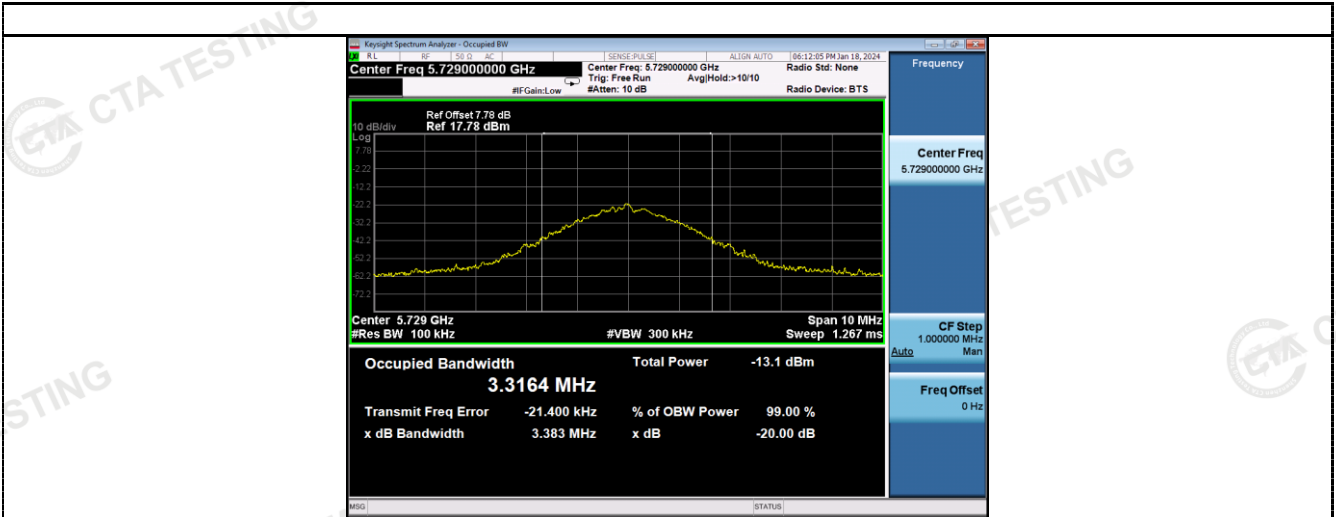
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30KHz RBW and 300KHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

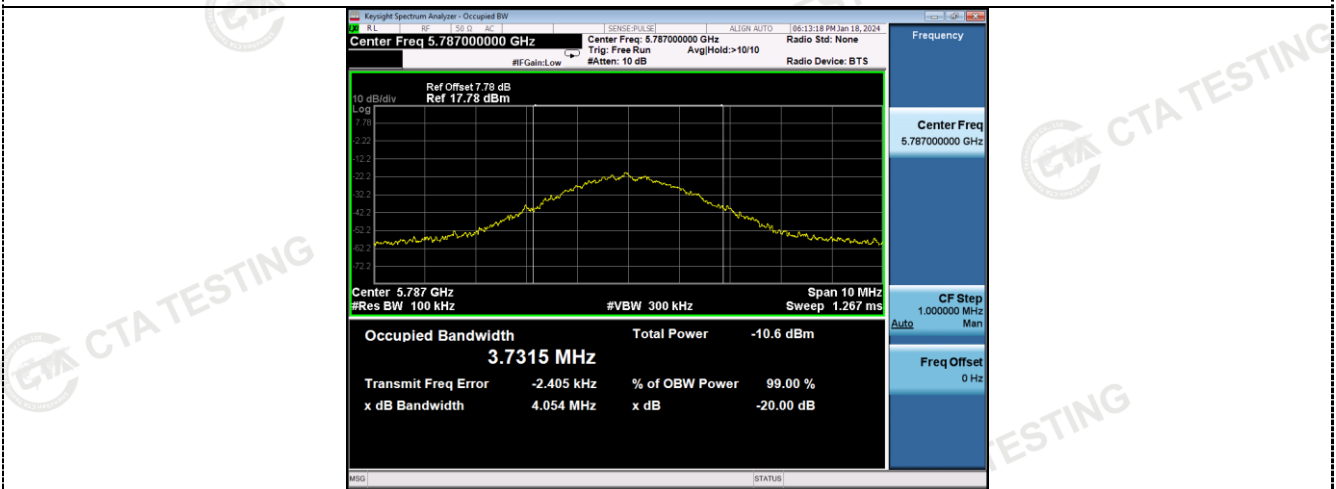
LIMIT

Test Results

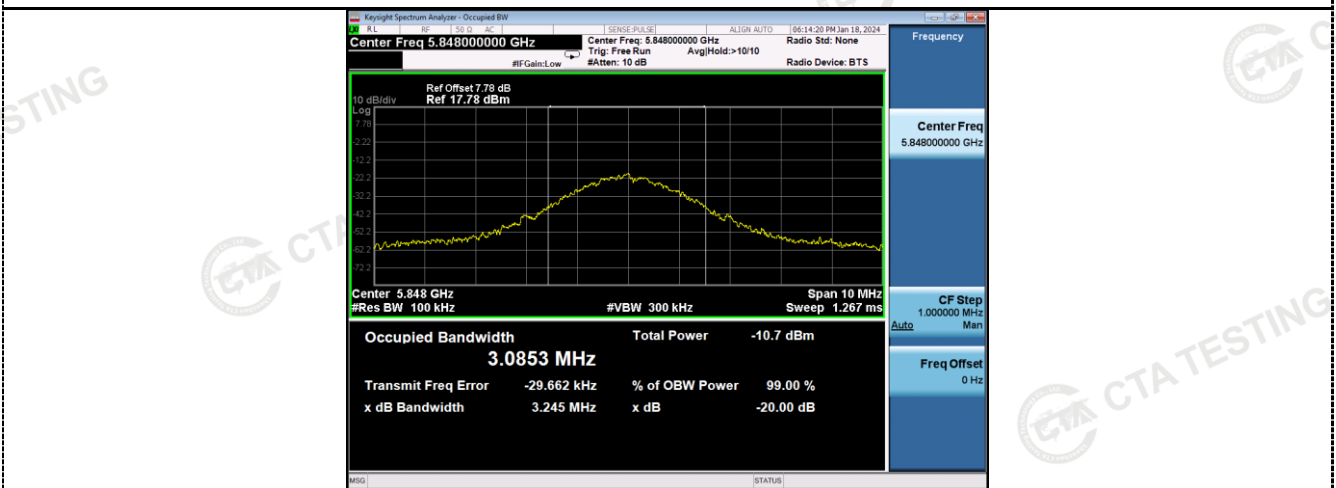
Type	Channel	20dB Bandwidth (MHz)	Result
GFSK	Low	3.383	Pass
	Mid	4.054	
	High	3.245	



Low



Mid



High

4.4 Antenna Requirement

Standard Applicable

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.

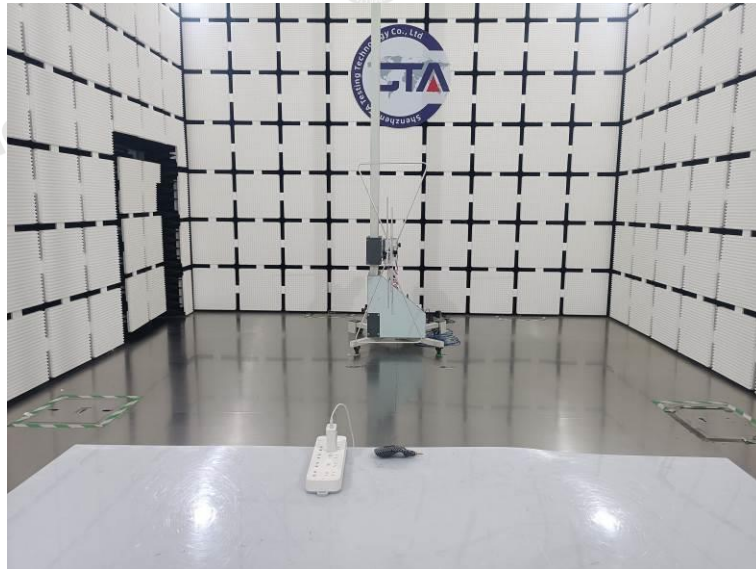
And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Antenna Information

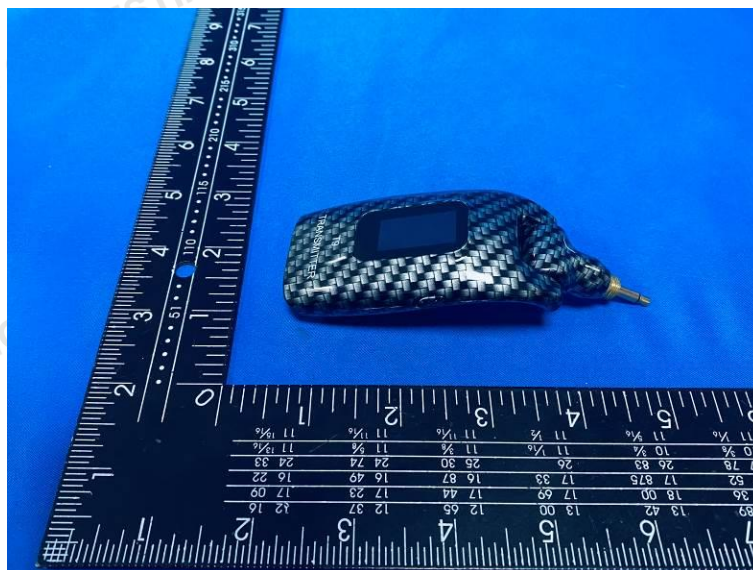
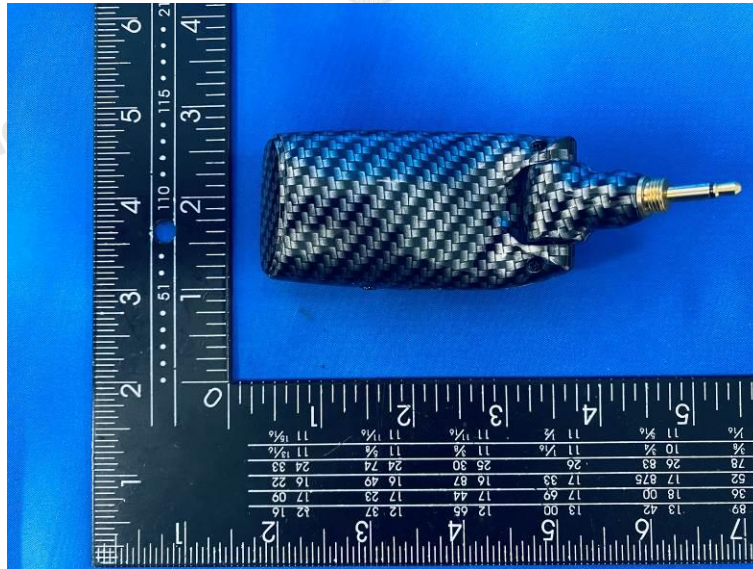
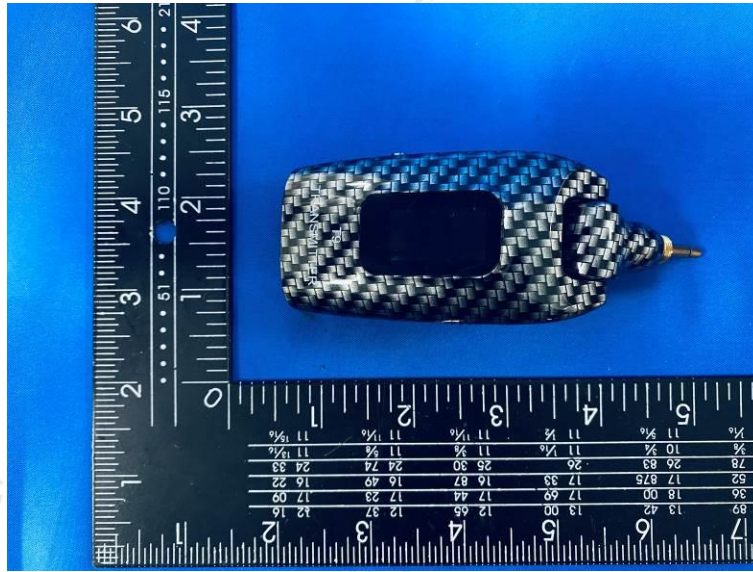
The maximum gain of antenna was -0.05 dBi.

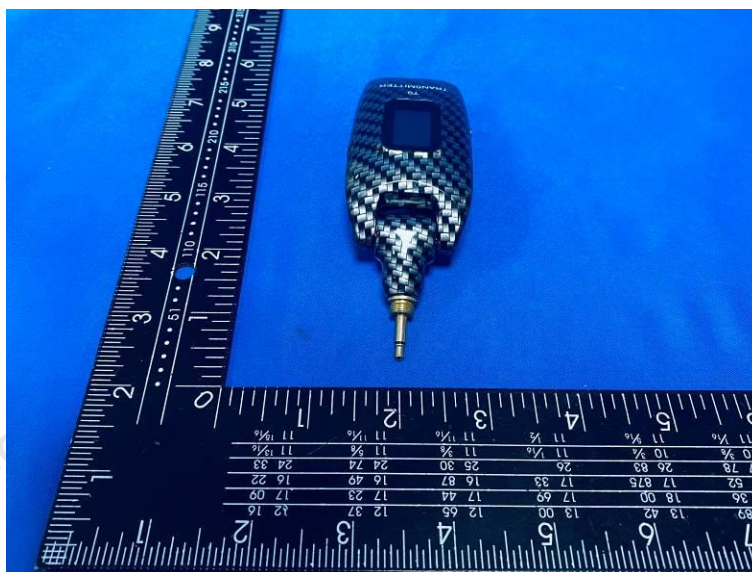
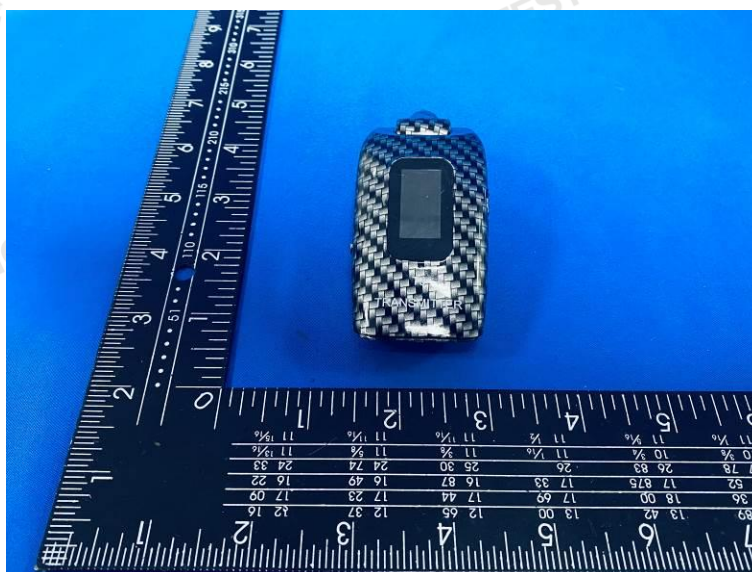
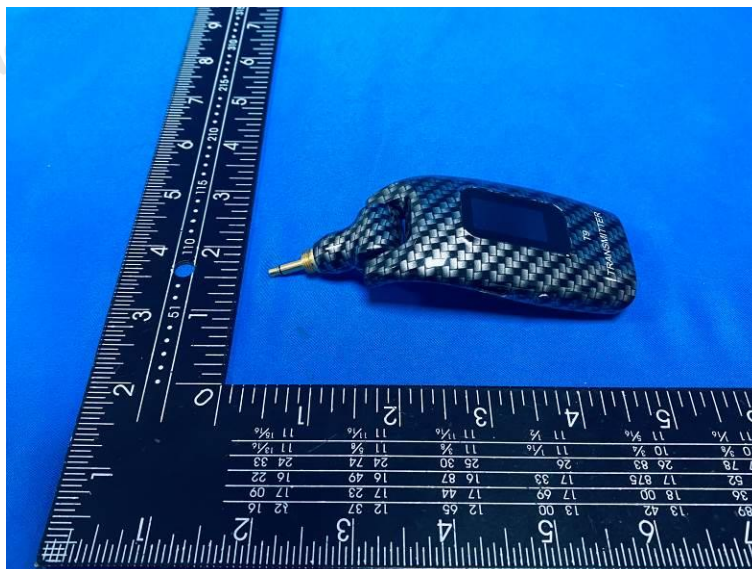
Remark: The antenna gain is provided by the customer, if the data provided by the customer is not accurate, Shenzhen CTA Testing Technology Co., Ltd. does not assume any responsibility.

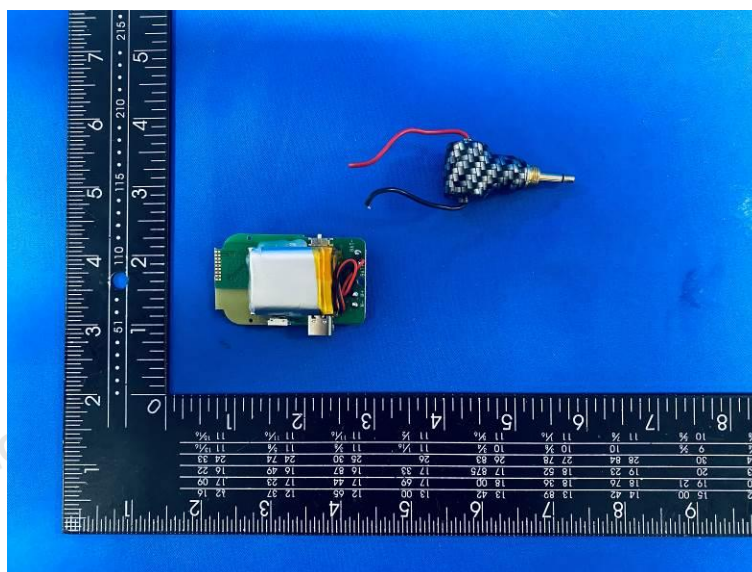
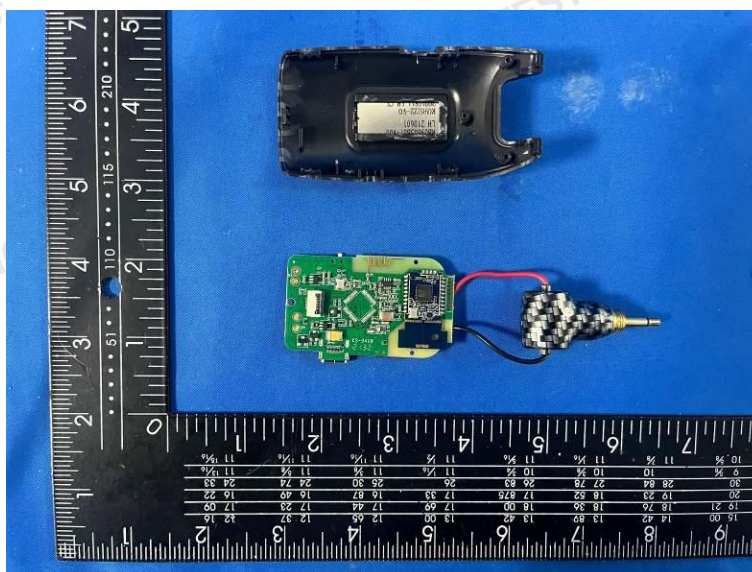
5 Test Setup Photos of the EUT

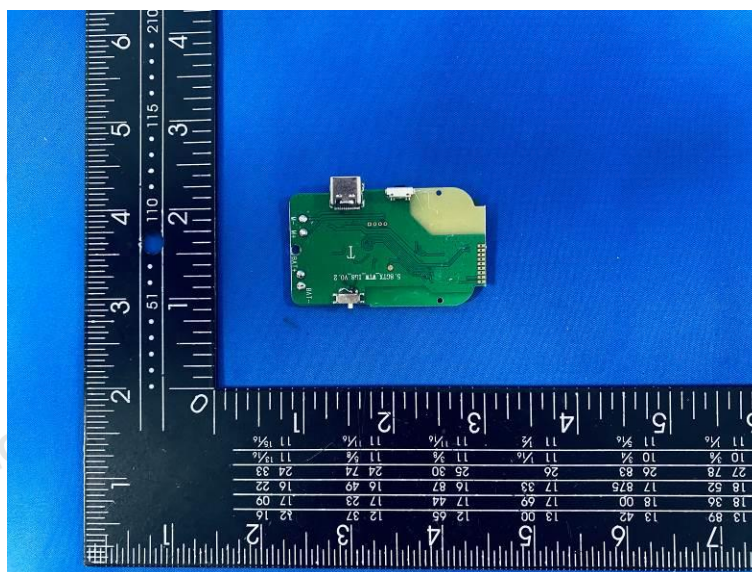
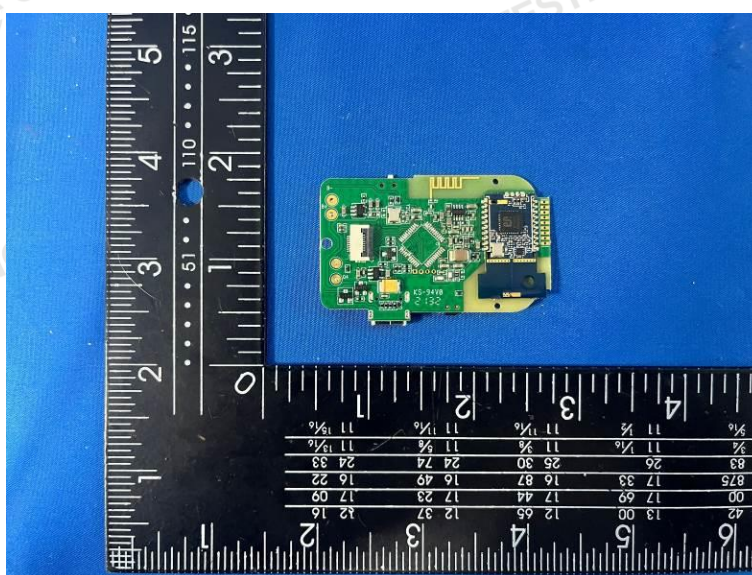
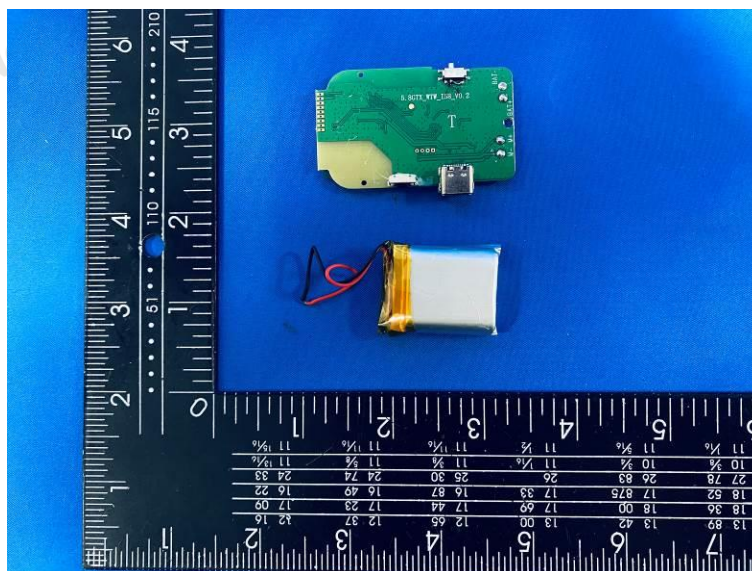


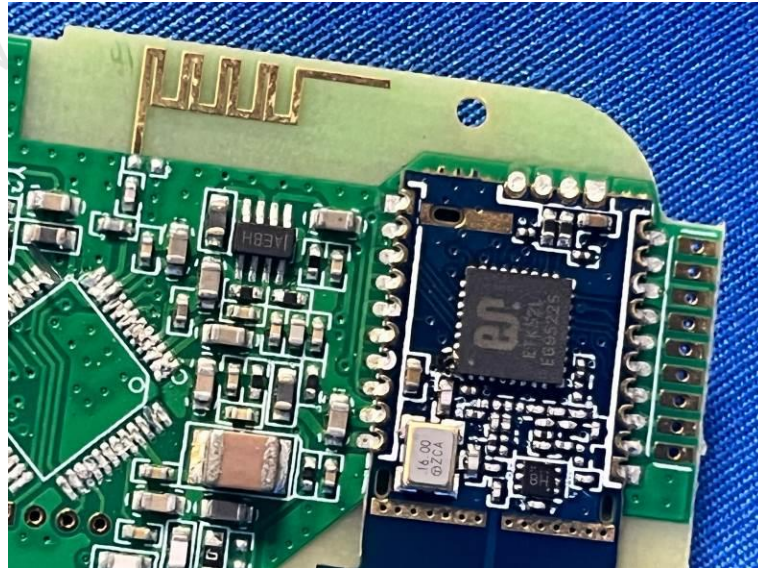
6 Photos of the EUT











***** End of Report *****