



Shenzhen CTA Testing Technology Co., Ltd.

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

FCC CFR Title 47 Part 15 Subpart C TEST REPORT

FCC PART 15.231

Report Reference No...... : **CTA220114006**

FCC ID..... : **2AZIJ-AS276**

Compiled by
(position+printed name+signature)..: File administrators Kevin Liu

Kevin Liu

Supervised by
(position+printed name+signature)..: Project Engineer Kevin Liu

Kevin Liu

Approved by
(position+printed name+signature)..: RF Manager Eric Wang

Eric Wang

Date of issue.....: Mar. 22, 2022

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.....: **Dongguan AISI Health Care Product Co., Ltd.**

Address.....: Floor 4, Building J, Fulin Industrial Park, Taigongling Village,
Dalingshan Town, Dongguan, Guangdong, China

Test specification..... :

Standard.....: **FCC CFR Title 47 Part 15 Subpart C Section 15.231**
ANSI C63.10:2013

Shenzhen CTA Testing Technology Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen CTA Testing Technology Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen CTA Testing Technology Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Equipment description.....: **Prostate Massager**

Trade Mark.....: N/A

Manufacturer.....: Dongguan AISI Health Care Product Co., Ltd.

Model/Type reference.....: AS276

Listed Models: AS300

Modulation: ASK

Frequency.....: 433.927MHz

Ratings.....: DC 3.0V(CR2032)

Result.....: **PASS**

TEST REPORT

Equipment under Test : Prostate Massager

Model /Type : AS276

Listed Models : AS300

Applicant : Dongguan AISI Health Care Product Co., Ltd.

Address : Floor 4, Building J, Fulin Industrial Park, Taigongling Village,
Dalingshan Town, Dongguan, Guangdong, China

Manufacturer : Dongguan AISI Health Care Product Co., Ltd.

Address : Floor 4, Building J, Fulin Industrial Park, Taigongling Village,
Dalingshan Town, Dongguan, Guangdong, China

Test Result:	PASS
---------------------	-------------

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.

Table of Contents	Page
1. VERSION.....	5
2. SUMMARY OF TEST RESULTS.....	6
2.1 TEST FACILITY.....	7
2.2 MEASUREMENT UNCERTAINTY.....	7
3. GENERAL INFORMATION.....	8
3.1 GENERAL DESCRIPTION OF EUT.....	8
3.2 DESCRIPTION OF TEST MODES.....	9
3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED.....	9
3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE).....	9
3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS.....	10
4. EMC EMISSION TEST.....	11
4.1 CONDUCTED EMISSION MEASUREMENT.....	11
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS.....	11
4.1.2 TEST PROCEDURE.....	12
4.1.3 DEVIATION FROM TEST STANDARD.....	12
4.1.4 TEST SETUP.....	12
4.1.5 EUT OPERATING CONDITIONS.....	12
4.1.6 TEST RESULTS: N/A.....	12
4.2 RADIATED EMISSION MEASUREMENT.....	14
4.2.1 RADIATED EMISSION LIMITS.....	14
4.2.2 TEST PROCEDURE.....	15
4.2.3 TEST SETUP.....	16
4.2.4 EUT OPERATING CONDITIONS.....	17
4.2.5 TEST RESULTS	17
5.1 APPLIED PROCEDURES / LIMIT.....	21
5.2 TEST PROCEDURE.....	21
5.3 DEVIATION FROM STANDARD.....	21
5.4 TEST SETUP.....	21
5.5 EUT OPERATION CONDITIONS.....	21
5.6 TEST RESULTS.....	22
6. CALCULATION OF AVERAGE FACTOR.....	23
7. TRANSMITTING TIME OUT.....	25
7.1 APPLICABLE STANDARD.....	25
7.2 REQUIREMENTS.....	25
7.5 EUT OPERATION CONDITIONS.....	26
7.6 TEST RESULTS.....	27

Table of Contents

Page

8. ANTENNA REQUIREMENT..... 28

9. TEST SETUP PHOTO..... 29

10. EUT CONSTRUCTIONAL DETAILS.....30

1. VERSION

Report No.	Version	Description	Approved
CTA22031600501	Rev.01	Initial issue of report	Mar. 22, 2022

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.231) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	N/A	
15.209,15.231b	Fundamental & Radiated Spurious Emission Measurement	PASS	
15.231c	Occupy Bandwidth	PASS	
15.231a	Transmitting time out	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

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

2.1 TEST FACILITY

Shenzhen CTA Testing Technology Co., Ltd.

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

FCC Test Firm Registration Number: 517856

Designation Number: CN1318

A2LA-Lab Cert. No.: 6534.01

2.2 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	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)

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

3.GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Prostate Massager
Trade Name	N/A
Model Name	AS276
Serial Model	AS300
Model Difference	PCB board, circuit, structure and internal of these model(s) are the same, only model name is different for these models.
Hardware version	V1.0
Software version	V1.0
Operation Frequency:	433.927MHz
Modulation Type:	ASK
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Ratings	DC 3V

3.2 DESCRIPTION OF TEST MODES

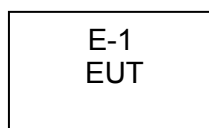
For All Emission	
Final Test Mode	Description
Transmitting mode	Keep the EUT in continuously transmitting mode

Note:

- (1) New battery is used during the test

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Spurious emissions



3.4 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
E-1	Prostate Massager	N/A	AS276	N/A	EUT

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".

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	CTA-308	2021/08/06	2022/08/05
LISN	R&S	ENV216	CTA-314	2021/08/06	2022/08/05
EMI Test Receiver	R&S	ESPI	CTA-307	2021/08/06	2022/08/05
EMI Test Receiver	R&S	ESCI	CTA-306	2021/08/06	2022/08/05
Spectrum Analyzer	Agilent	N9020A	CTA-301	2021/08/06	2022/08/05
Spectrum Analyzer	R&S	FSP	CTA-337	2021/08/06	2022/08/05
Vector Signal generator	Agilent	N5182A	CTA-305	2021/08/06	2022/08/05
Analog Signal Generator	R&S	SML03	CTA-304	2021/08/06	2022/08/05
Universal Radio Communication	CMW500	R&S	CTA-302	2021/08/06	2022/08/05
Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2021/08/06	2022/08/05
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2021/08/07	2022/08/06
Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2021/08/07	2022/08/06
Loop Antenna	Zhinan	ZN30900C	CTA-311	2021/08/07	2022/08/06
Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2021/08/06	2022/08/05
Amplifier	Schwarzbeck	BBV 9745	CTA-312	2021/08/06	2022/08/05
Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2021/08/06	2022/08/05
Directional coupler	NARDA	4226-10	CTA-303	2021/08/06	2022/08/05
High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2021/08/06	2022/08/05
High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2021/08/06	2022/08/05
Automated filter bank	Tonscend	JS0806-F	CTA-404	2021/08/06	2022/08/05
Power Sensor	Agilent	U2021XA	CTA-405	2021/08/06	2022/08/05
Amplifier	Schwarzbeck	BBV9719	CTA-406	2021/08/06	2022/08/05

4. EMC 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 Range 150KHz-30MHz)

FREQU NCY (MHz)	Limit (dBuV)		Standard
	Quasi-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) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

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

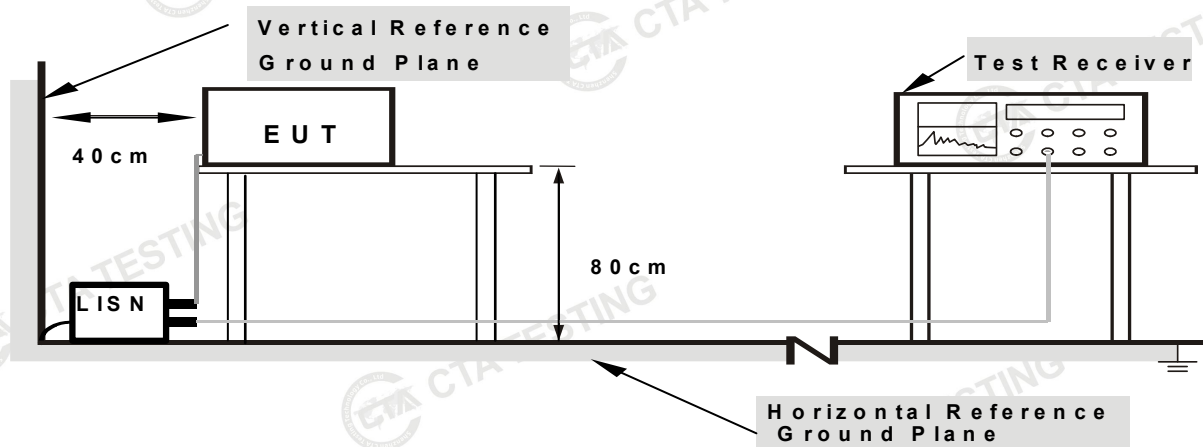
4.1.2 TEST PROCEDURE

- 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



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm 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.

4.1.6 TEST RESULTS: N/A

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Phase :	/
Test Voltage :	/	Test Mode :	/

Remark: EUT powered by button battery.

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 25GHz				
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

4.2.1 RADIATED EMISSION LIMITS

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.231(b) limit in the table below has to be followed.

Frequencies(MHz)	Field Strength(micorvolts/meter)	Measurement Distance(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel:+86-755 2322 5875 E-mail:cta@cta-test.cn Web:http://www.cta-test.cn

FUNDAMENTAL AND HARMONICS EMISSION LIMITS

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	¹ 1,250 to 3,750	¹ 125 to 375
174-260	3,750	375
260-470	¹ 3,750 to 12,500	¹ 375 to 1,250
Above 470	12,500	1,250

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz, $\mu\text{V/m}$ at 3 meters = $56.81818(F) - 6136.3636$; for the band 260-470 MHz, $\mu\text{V/m}$ at 3 meters = $41.6667(F) - 7083.3333$. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.]

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW setting	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2.2 TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

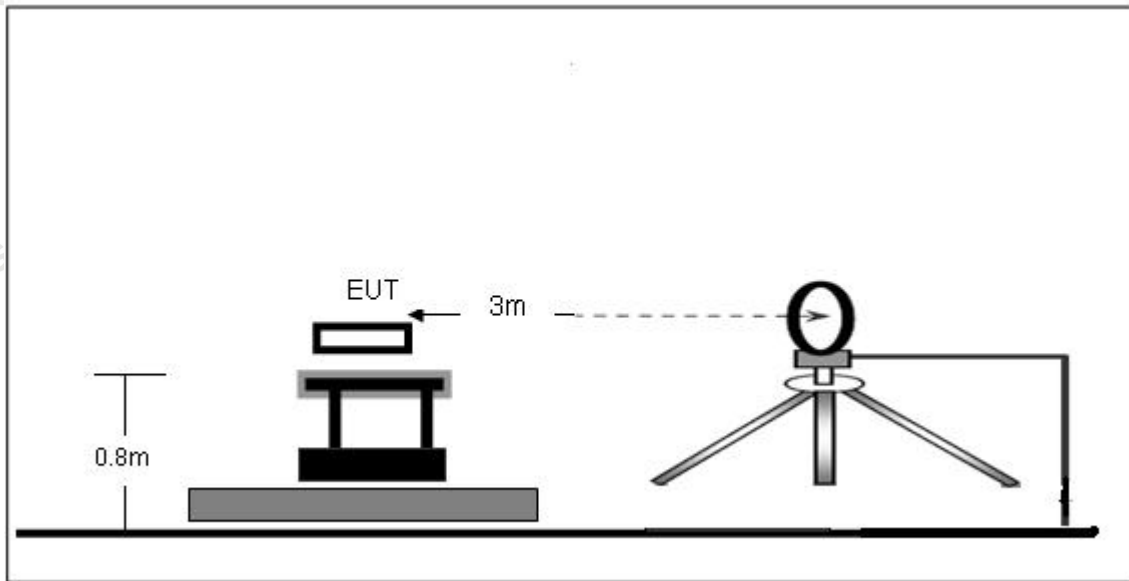
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case was X axis and the emissions were reported

Shenzhen CTA Testing Technology Co., Ltd.

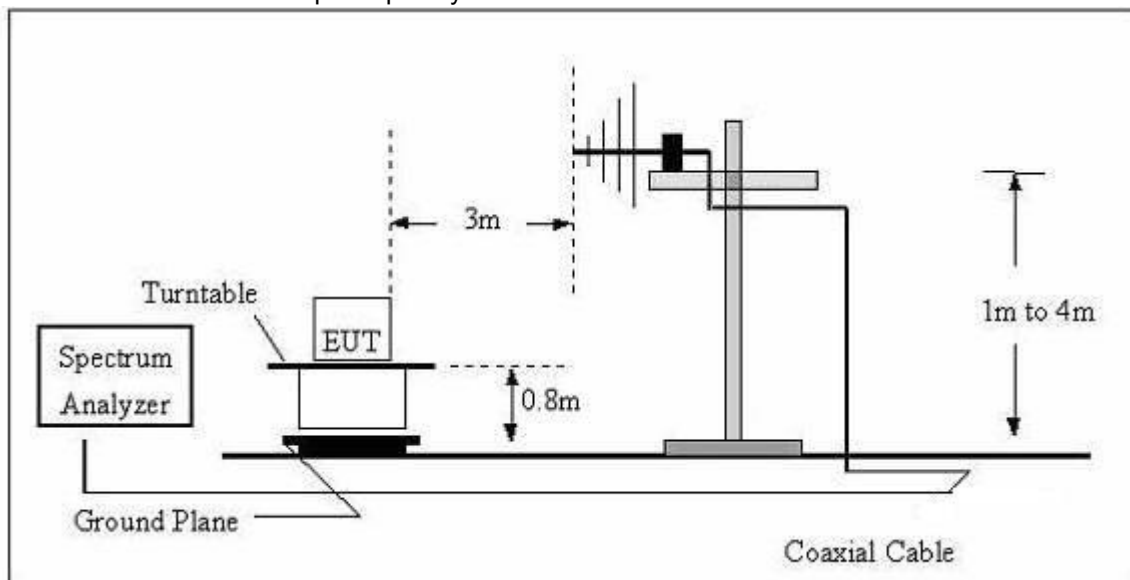
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: http://www.cta-test.cn

4.2.3 TEST SETUP

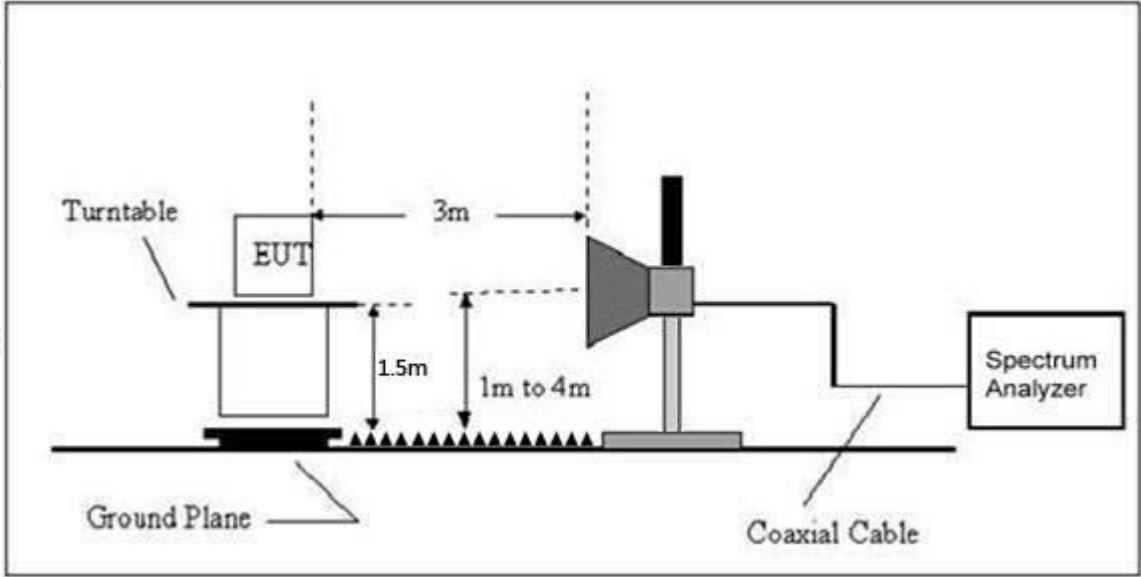
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.5 TEST RESULTS

Radiated Spurious Emission (Below 9KHz – 30MHz)

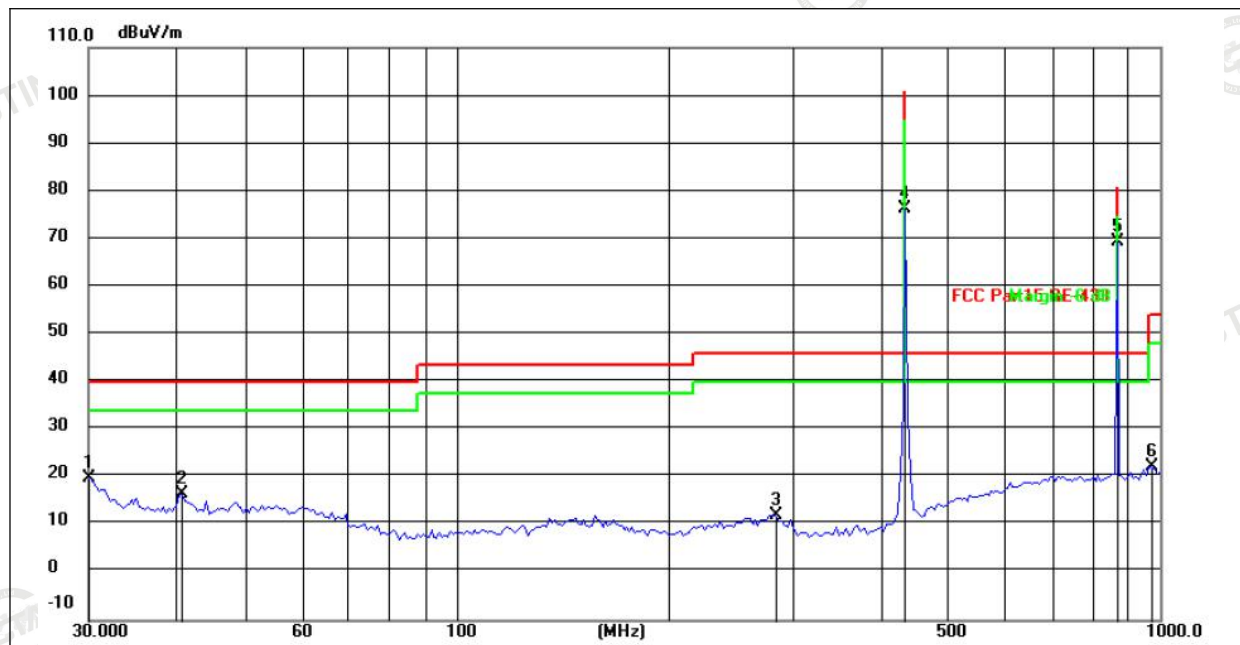
Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	---
Test Voltage :	DC 3V		
Test Mode :	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Radiated Spurious Emission (Between 30MHz – 1GHz)

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Horizontal
Test Voltage :	DC 3V		
Test Mode :	TX Mode		

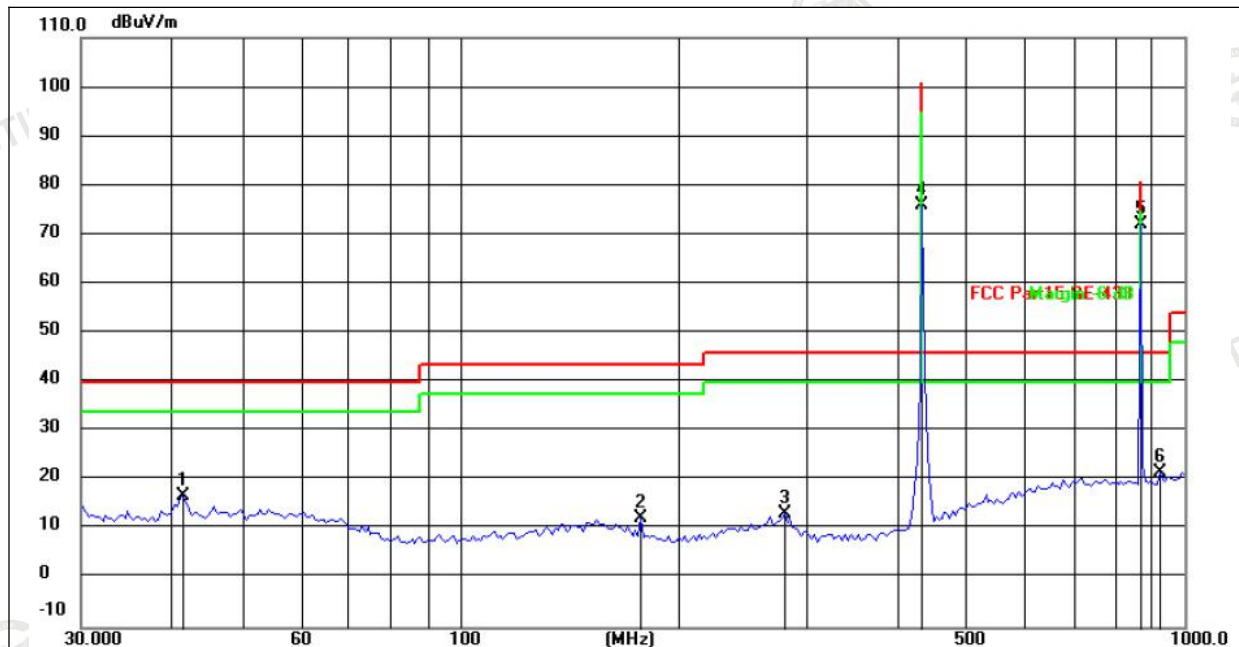


Frequency MHz	Reading dBuV	Factor dB/m	Level DBuV/m	Limit DBuV/m	Margin dB	Detector
30.2641	34.10	-14.26	19.84	40.00	-20.16	QP
40.7730	30.76	-14.13	16.63	40.00	-23.37	QP
282.9852	28.74	-16.56	12.18	46.00	-33.82	QP
965.5421	29.85	-7.61	22.24	54.00	-31.76	QP

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.

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Vertical
Test Voltage :	DC 3V		
Test Mode :	TX Mode		



Frequency MHz	Reading dBuV	Factor dB/m	Level DBuV/m	Limit DBuV/m	Margin dB	Detector
41.4942	30.87	-14.13	16.74	40.00	-23.26	QP
177.8206	30.76	-18.44	12.30	43.5	-31.20	QP
280.5152	29.56	-16.22	13.34	46.00	-32.66	QP
924.1345	30.24	-8.47	21.77	46.00	-24.23	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.

Radiated Spurious Emission (fundamental and harmonics)

Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit		Margin dB		Polarization
				PK	AV	PK	AV	
433.927	74.25	-12.69	61.56	100.8	80.8	-26.55	-19.24	Vertical
867.854	70.16	-12.69	57.47	80.8	60.8	-10.64	-3.33	Vertical
1301.781	54.63	-12.69	41.94	74	54	-19.37	-12.06	Vertical
1735.708	50.48	-12.69	37.79	74	54	-23.52	-16.21	Vertical
2169.635	48.63	-12.69	35.94	74	54	-25.37	-18.06	Vertical
2603.562	47.86	-12.69	35.17	74	54	-26.14	-18.83	Vertical
3037.489	46.52	-12.69	33.83	74	54	-27.48	-20.17	Vertical
3471.416	45.63	-12.69	32.94	74	54	-28.37	-21.06	Vertical
433.927	75.68	-12.69	62.99	100.8	80.8	-25.12	-17.81	Horizontal
867.854	65.25	-12.69	52.56	80.8	60.8	-15.55	-8.24	Horizontal
1301.781	50.46	-12.69	37.77	74	54	-23.54	-16.23	Horizontal
1735.708	45.85	-12.69	33.16	74	54	-28.15	-20.84	Horizontal
2169.635	44.36	-12.69	31.67	74	54	-29.64	-22.33	Horizontal
2603.562	42.15	-12.69	29.46	74	54	-31.85	-24.54	Horizontal
3037.489	40.25	-12.69	27.56	74	54	-33.75	-26.44	Horizontal
3471.416	40.16	-12.69	27.47	74	54	-33.84	-26.53	Horizontal

Notes: 1.Average emission Level = Peak Level + Duty cycle factor

2.Duty cycle level please see clause 6.

3.All other emissions are attenuated 30dB below the limit, so it does not record

5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

According to FCC 15.231(c) requirement:

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating between 70 MHz to 900 MHz. Those devices operating above 900 MHz, the emission spurious shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

$$B.W (20dBc) \text{ Limit} = 0.25\% * f(\text{MHz}) = 0.25\% * 433.927\text{MHz} = 1.0848\text{MHz}$$

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	100kHz
VB	≥RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



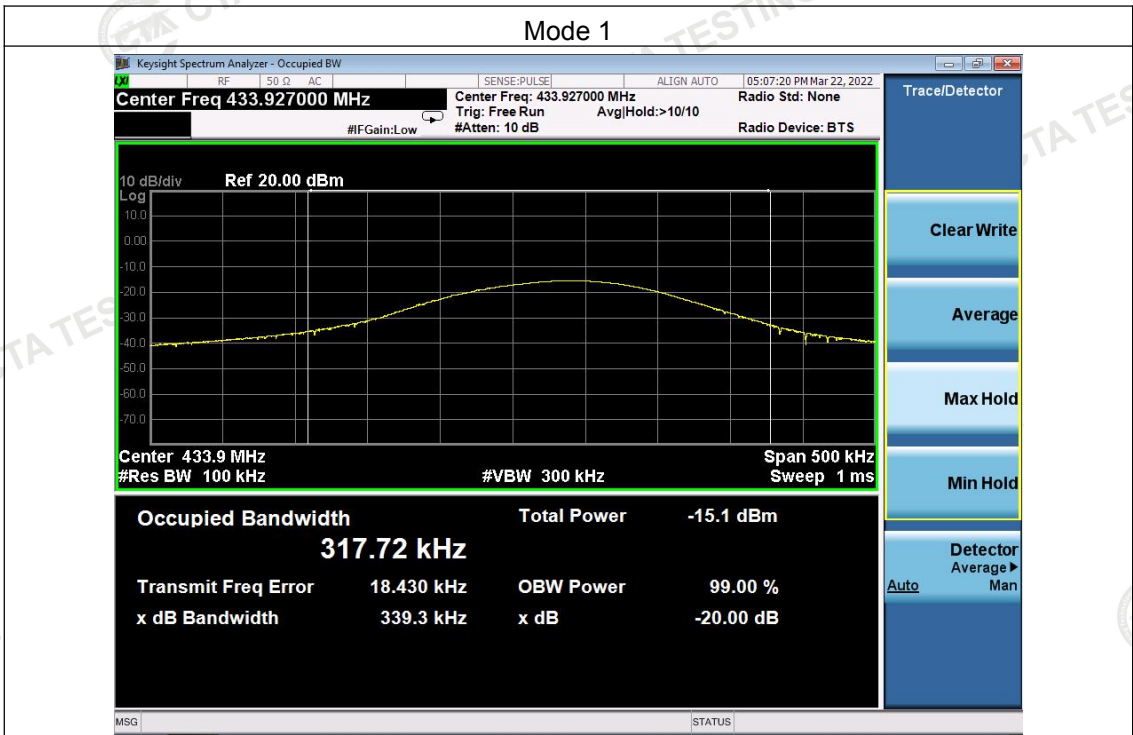
5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 3.0V
Test Mode :	TX Mode		

Frequency	20dB Bandwidth (kHz)	Limit (MHz)	Result
433.927MHz	339.3	1.0848	PASS



6. CALCULATION OF AVERAGE FACTOR

The output field strengths of specification in accordance with the FCC rules specify measurements with an average detector. During the test, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement instrumentation incorporating an average detector.

The duty cycle is measured in 100 ms or the repetition cycle period, whichever is a shorter time frame. The duty cycle is measured by placing the spectrum analyzer to set zero span at 100kHz resolution bandwidth.

Averaging factor in dB = $20\log(\text{duty cycle})$

The duration of one cycle = 83.20ms

The duty cycle is simply the on-time divided the duration of one cycle

Duty Cycle = $(1.155\text{ms} \times 19 + 0.325\text{ms} \times 27) / 83.20$

= $30.72\text{ms} / 83.20\text{ms}$

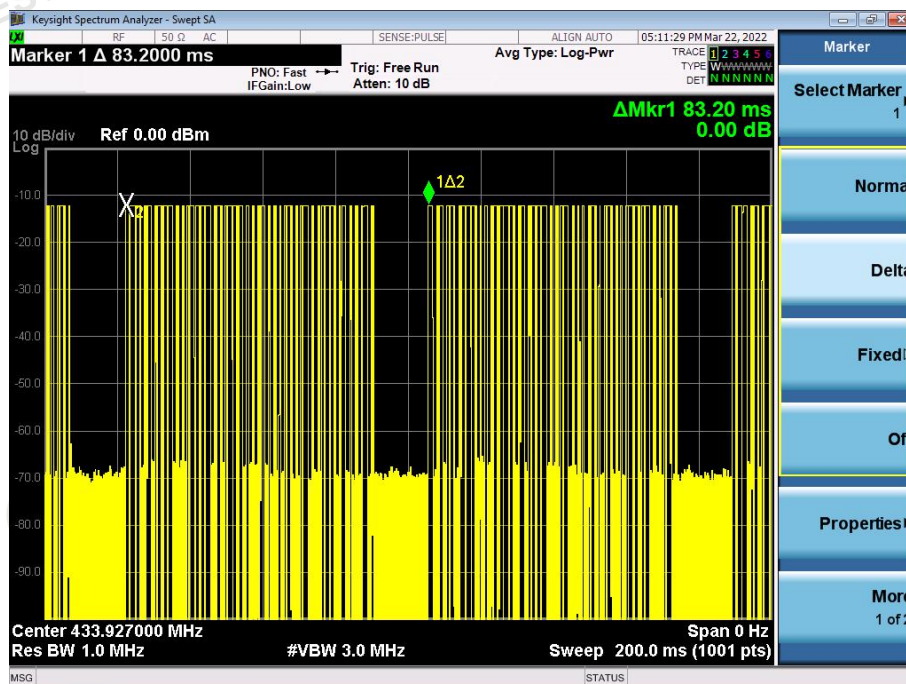
= 0.369

Therefore, the averaging factor is found by $20\log 0.369 = -8.66\text{dB}$

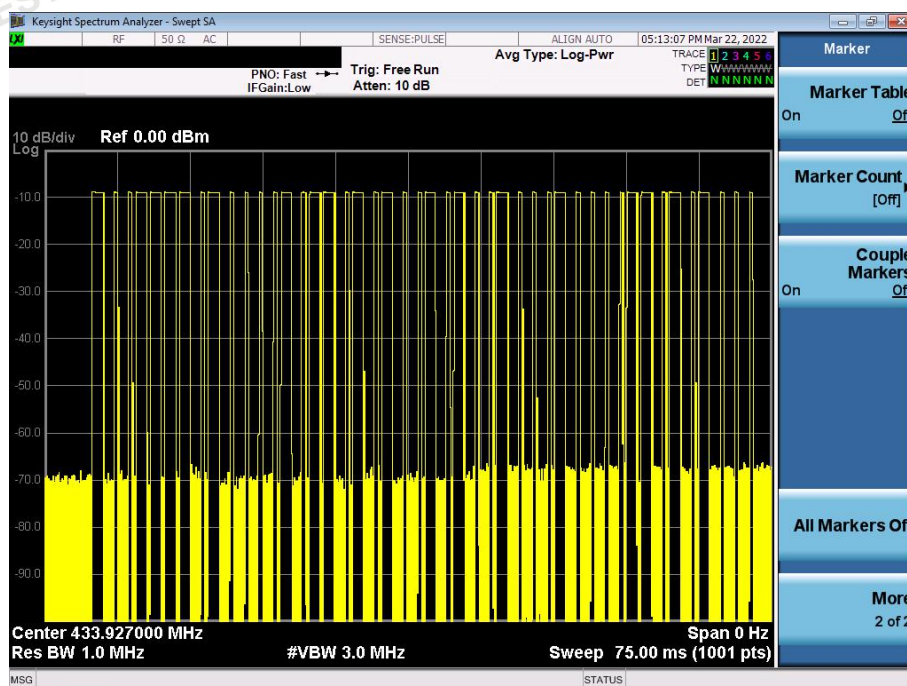
Test plot as follows:

Note: During the 100ms, the amount of pulse and on-time of pulse are the same for every pulse train.

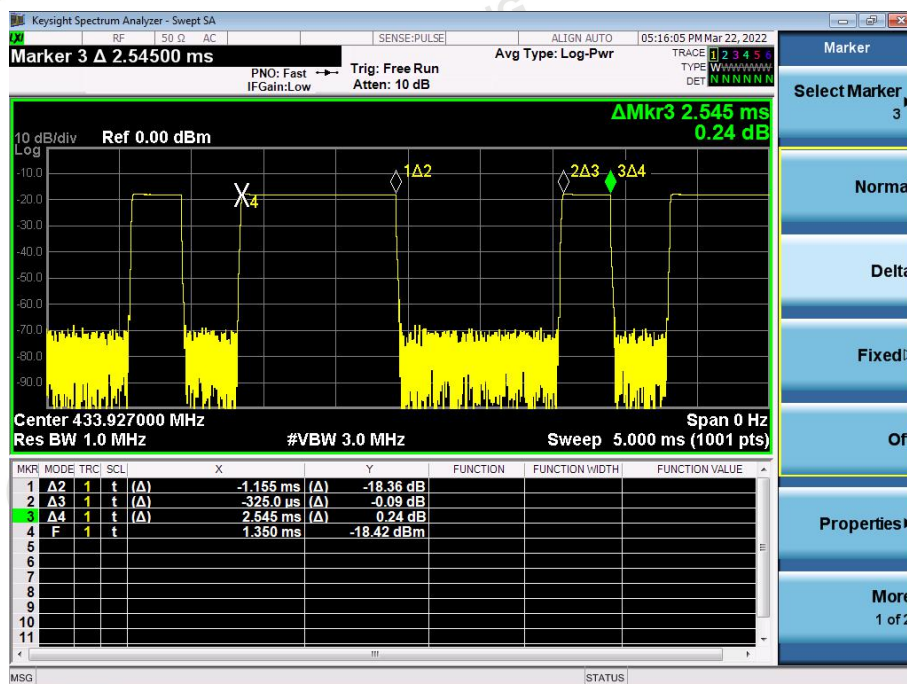
Cycle



Pulse



On-time



Shenzhen CTA Testing Technology Co., Ltd.

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

Tel: +86-755 2322 5875

E-mail: cta@cta-test.cn

Web: http://www.cta-test.cn

7. TRANSMITTING TIME OUT

7.1 APPLICABLE STANDARD

According to FCC 15.231(a) requirement:

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

7.2 REQUIREMENTS

- 1 A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

Result: The EUT has a manually activated transmitter, please refer to below detail data

- 2 A transmitter activated automatically shall cease transmission within 5 seconds after activation.

Result: The EUT does not have a automatically activated transmitter

- 3 Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour

Result: The EUT does not employ periodic transmission.

- 4 Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm condition.

Result: The section is not applicable to EUT.

Note: The transmission time of signal will not be affected no matter how long the button was pressed

Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: <http://www.cta-test.cn>

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



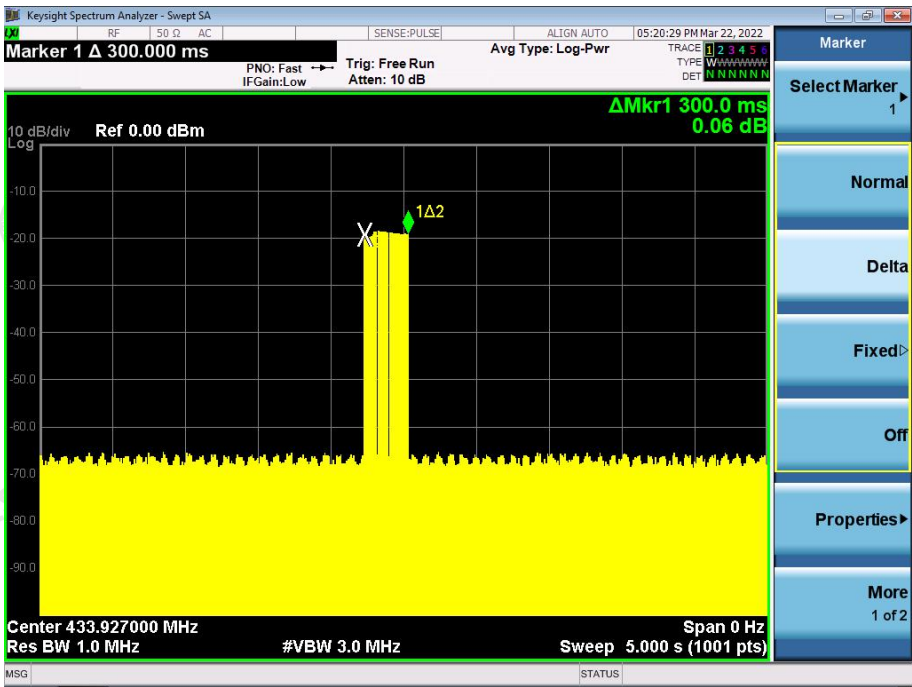
7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Dwell time (second)	Limit (second)	Result
300.0ms	<5s	Pass

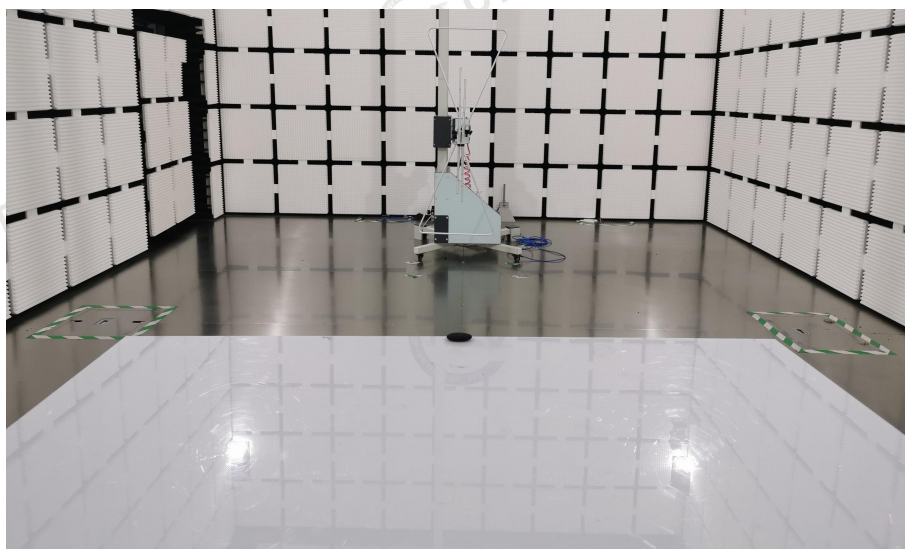
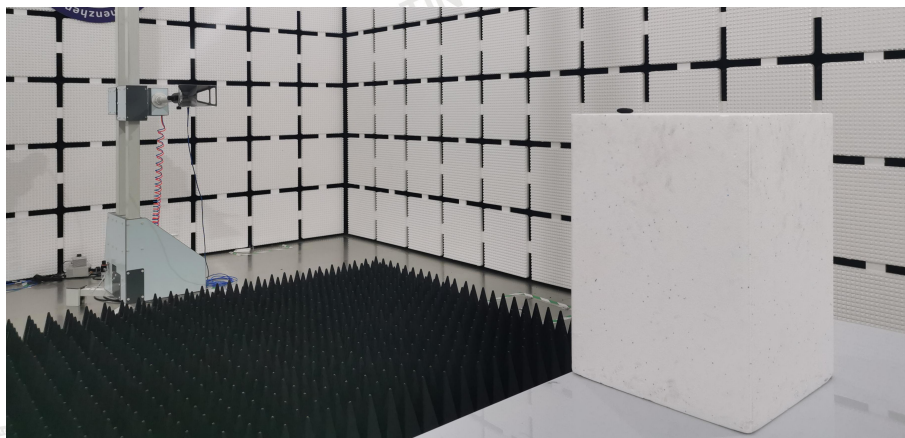
Test plot as follows:



8. 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 antennas are internal permanent antenna, the best case gain of the antennas are 0dBi, reference to the appendix II for details	

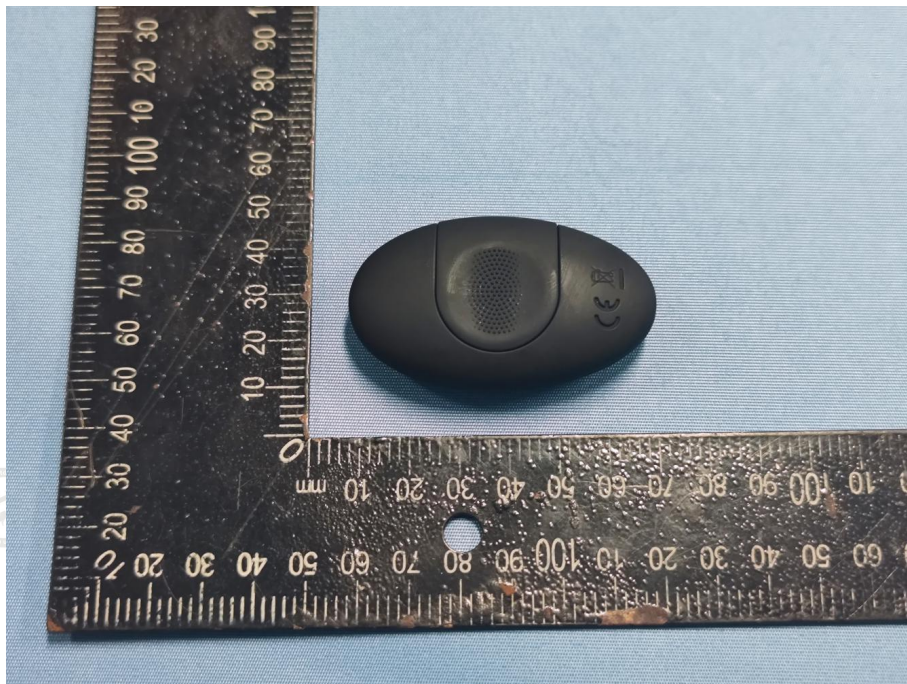
9. TEST SETUP PHOTO



Shenzhen CTA Testing Technology Co., Ltd.

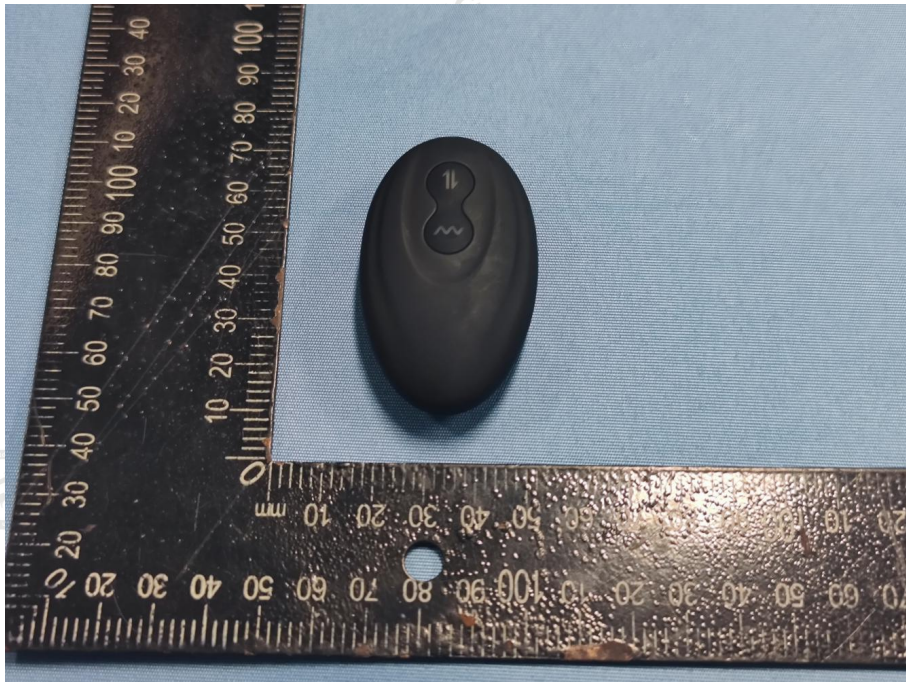
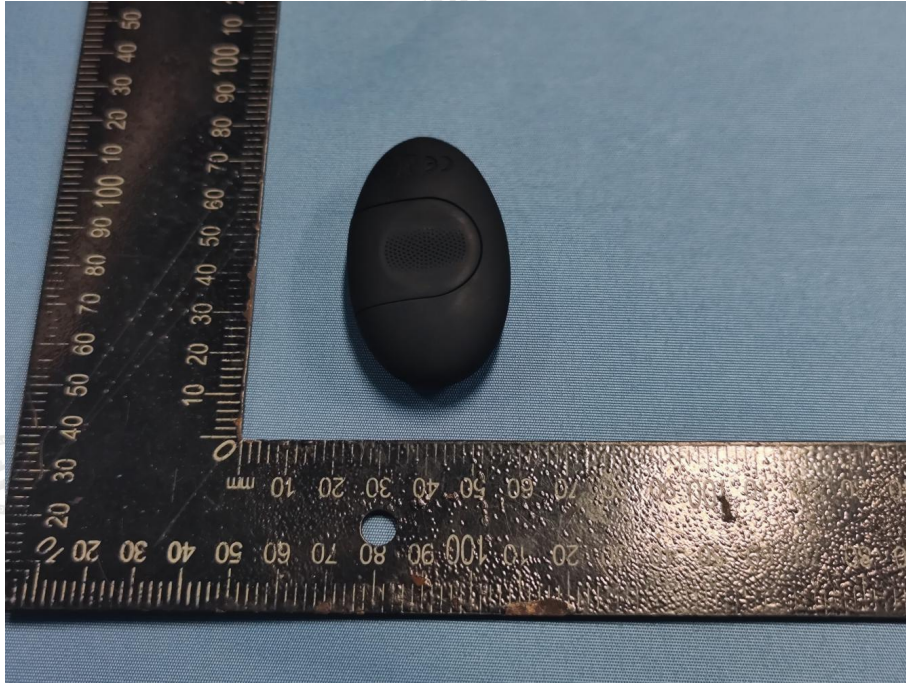
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: <http://www.cta-test.cn>

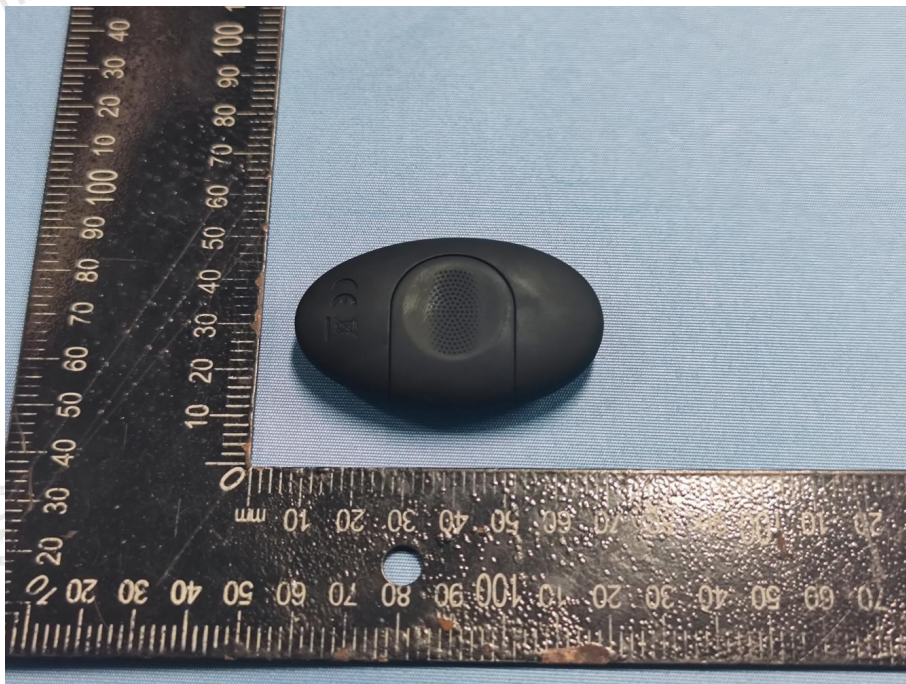
10. EUT CONSTRUCTIONAL DETAILS



Shenzhen CTA Testing Technology Co., Ltd.

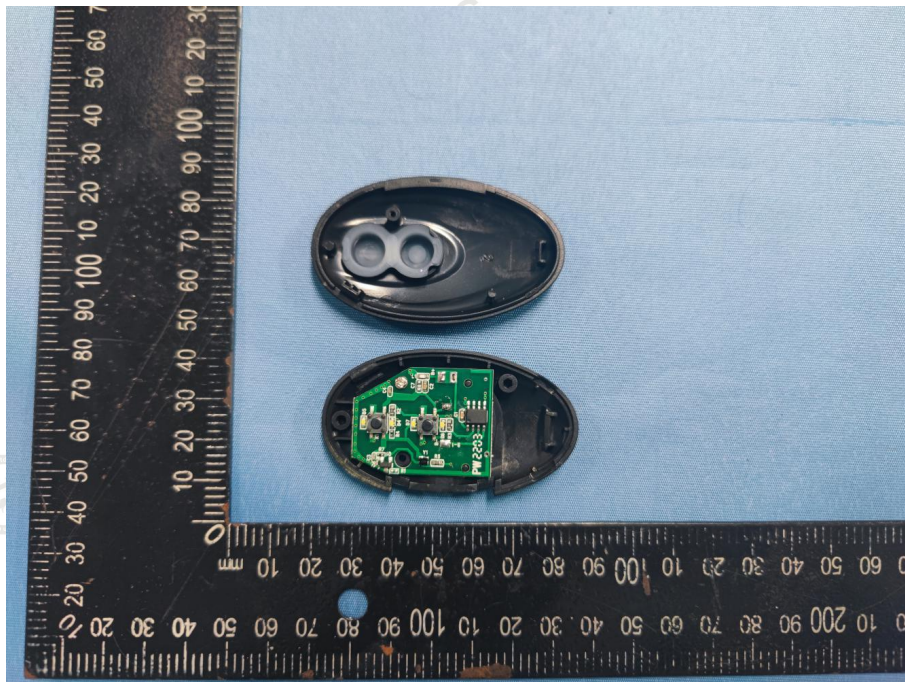
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: <http://www.cta-test.cn>

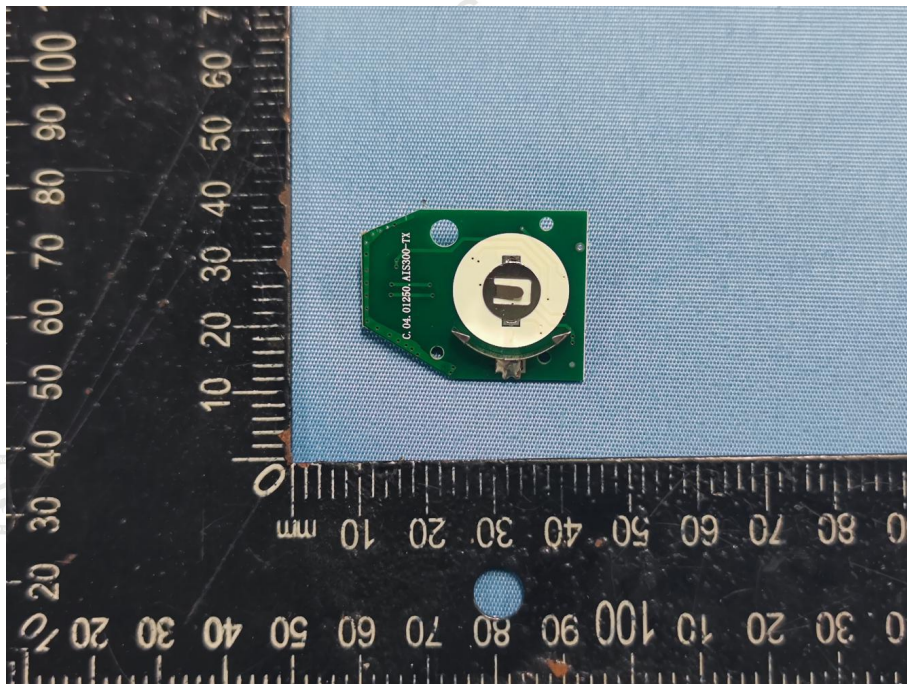
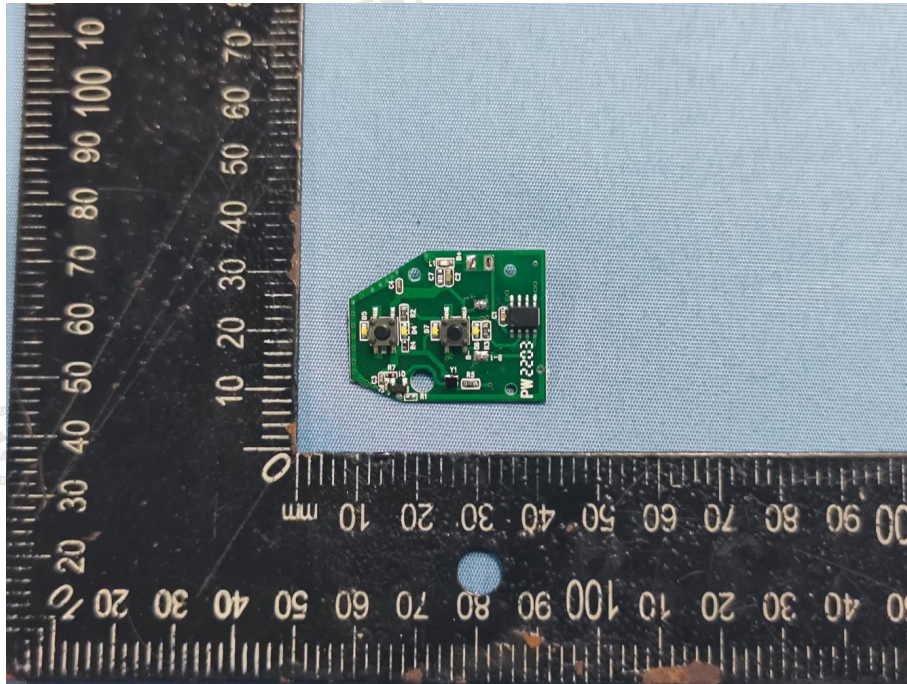




Shenzhen CTA Testing Technology Co., Ltd.

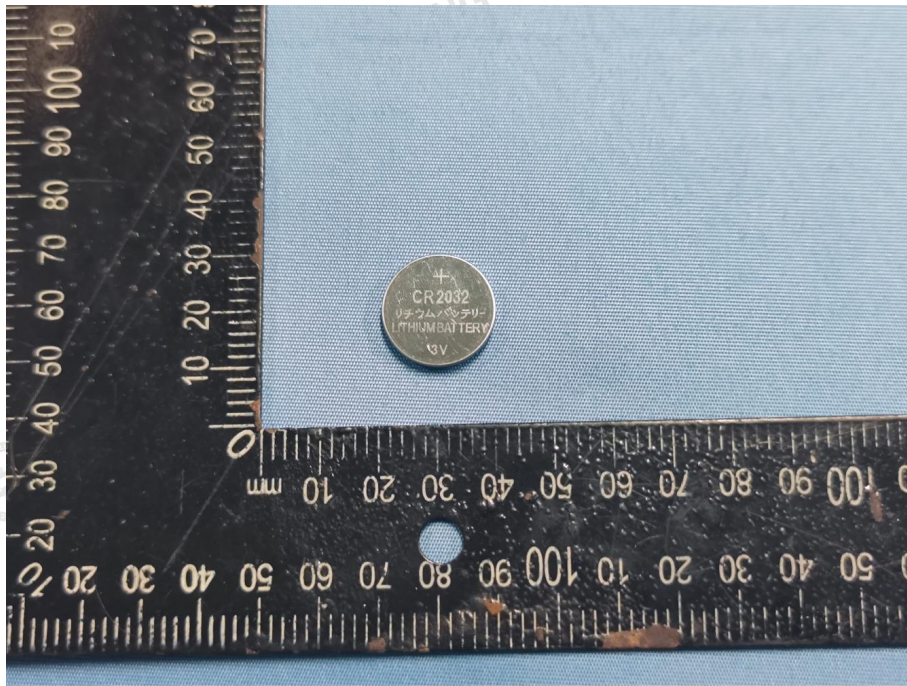
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: <http://www.cta-test.cn>





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: <http://www.cta-test.cn>



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