FCC Part 15B Test Report

FCC ID: 2ALN5-RL19002

Report No.	:	TB-FCC184737
Applicant	:	Siffron
Equipment Under Test (EUT)		
EUT Name	:	Echo USB-Connect Box
Model No.	:	RL-19002-1
Series Model No.	:	----
Brand Name	:	siffron
Sample ID	:	20210816-04-01& 20210816-04-02
Receipt Date	:	2021-09-15
Test Date	:	2021-09-16 to 2021-11-16
Issue Date	:	2022-01-15
Standards	:	FCC 47 CFR Part 15 Subpart B
Conclusions	:	**PASS**

In the configuration tested, the EUT complied with the standards specified above

The EUT technically complies with the FCC requirements

Witness Engineer	:	Wade.Lv
Engineer Supervisor	:	Ivan Su
Engineer Manager	:	Ray Lai

Wade.Lv

Ivan Su

Ray Lai

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

1/F.,Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China
Tel: +86 75526509301 Fax: +86 75526509195

Contents

Revision History

Report No.	Version	Description	Issued Date
TB-FCC184737	Rev.01	Initial issue of report	2022-01-15

1. General Information

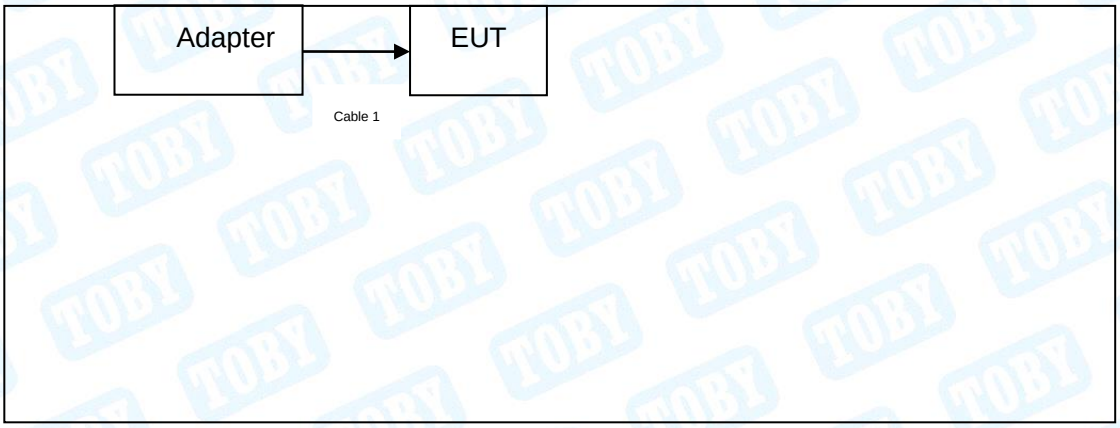
1.1 Client Information

Applicant	:	Siffron
Address	:	8181 Darrow Road Twinsburg, OH 44087 USA
Manufacturer	:	Shenzhen Allcomm Electronic Co. Ltd.
Address	:	Block A, 101A, 302, 401 of Block B, No. 272 Guangtian Road, Tangxiayong, Yanluo Street, Baoan District, Shenzhen City, Guangdong Province, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Echo USB-Connect Box
Model(s)	:	RL-19002-1
Model Difference	:	----
Fx	:	433MHz
Modulation Type	:	ASK
Antenna Designation	:	0dBi Internal Antenna1 0dBi Dipole Antenna2 0dBi Dipole Antenna3 0dBi Dipole Antenna4
Power Rating	:	USB Input: DC 5V1.0A Input: DC 4.5V by 3*1.5V AA Battery
Software Version	:	V1.0
Hardware Version	:	V1.0
Equipment	:	☐ Class A ☒ Class B
Class A Equipment: the Equipment is not intended primarily for use in a residential environment. **Class B Equipment:** the Equipment is intended primarily for use in a residential environment. **Fx:** Highest frequency generated or used in the device or on which the device operates or tunes (MHz).		

1.3 Block Diagram Showing The Configuration of System Tested



1.4 Description of Support Units

Equipment Information				
Name	**Model**	**FCC ID/SDOC**	**Manufacturer**	**Used "√"**
Adapter	HW-050200C01	----	HUAWEI	√
Cable Information				
Number	**Shielded Type**	**Ferrite Core**	**Length**	**Note**
Cable 1	Yes	NO	0.8M	Accessory
Note: The adapter and cable line provided by the laboratory.				

1.5 Description of 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 configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test	
Final Test Mode	**Description**
Mode 1	Charging + Working Mode (RX 433MHz)
For Radiated Test	
Final Test Mode	**Description**
Mode 1	Charging + Working Mode (RX 433MHz)

1.6 Test standards

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.107, 15.109 rules.
Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.7 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F.,Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)
The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01
The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

IC Registration No.: (11950A)
The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056.

1.8 Measurement Uncertainty

The reported uncertainty of measurement y ± U，where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2，providing a level of confidence of approximately 95 %.

Test	Parameters	Expanded Uncertainty (U_{Lab})	Expanded Uncertainty (U_{Cispr})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	±3.50 dB ±3.10 dB	±4.0 dB ±3.6 dB
Radiated Emission	Level Accuracy: Above 1000MHz	±4.50 dB	N/A
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	±4.40 dB	±5.2 dB

2. Test Software

Test Item	Test Software	Manufacturer	Version No.
Conducted Emission	EZ-EMC	EZ	CDI-03A2
Radiation Emission	EZ-EMC	EZ	FA-03A2RE

3. Test Summary

Test Items	Test Requirement	Test Method	Result
Conducted Emission	FCC 47 CFR Part 15 Section 15.107	ANSI C63.4-2014	Pass
Radiated Emission	FCC 47 CFR Part 15 Section 15.109	ANSI C63.4-214	Pass
Note: N/A is an abbreviation for Not Applicable.			

4. Test Equipment Used

Conducted Emission Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 02, 2021	Jul. 01, 2022
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 02, 2021	Jul. 01, 2022
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 02, 2021	Jul. 01, 2022
LISN	Rohde & Schwarz	ENV216	101131	Jul. 02, 2021	Jul. 01, 2022

Radiation Emission Test (A Site)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jul. 02, 2021	Jul. 01, 2022
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 02, 2021	Jul. 01, 2022
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 01, 2020	Feb.28, 2022
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 01, 2020	Feb.28, 2022
Horn Antenna	SCHWARZBECK	BBHA 9170	1118	May. 20, 2021	May. 19, 2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jul. 06, 2021	Jul. 05, 2022
Pre-amplifier	SONOMA	310N	185903	Feb. 25, 2021	Feb.24, 2022
Pre-amplifier	HP	8449B	3008A00849	Feb. 25, 2021	Feb.24, 2022
HF Amplifier	Tonscend	TAP0184050	AP21C806129	Sep. 03, 2021	Sep. 02, 2022

Radiation Emission Test (B Site)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
MXA Signal Analyzer	Agilent	N9020A	MY49100060	Sep. 03, 2021	Sep. 02, 2022
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jul. 02, 2021	Jul. 01, 2022
Bilog Antenna	SCHWARZBECK	VULB 9168	1225	Dec. 05, 2021	Dec. 04, 2023
Horn Antenna	SCHWARZBECK	BBHA 9120 D	2463	May 20, 2021	May 19, 2022
Horn Antenna	SCHWARZBECK	BBHA 9170	1118	May 20, 2021	May 19, 2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jul. 06, 2021	Jul. 05, 2022
HF Amplifier	Tonscend	TAP9E6343	AP21C806117	Sep. 03, 2021	Sep. 02, 2022
HF Amplifier	Tonscend	TAP051845	AP21C806141	Sep. 03, 2021	Sep. 02, 2022
HF Amplifier	Tonscend	TAP0184050	AP21C806129	Sep. 03, 2021	Sep. 02, 2022

5. Label Requirements & Statement Requirements

☒ **Class B**

Label Requirements

Class B digital device subject to certification by the FCC shall carry a warning label which includes the following statement:

*** * * W A R N I N G * * ***

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

☐ **Class A**

Statement Requirements

The operator's manual for a Class A digital device shall contain the following statements or their equivalent:

*** * * W A R N I N G * * ***

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment This equipment generates, uses, and can radiate radio frequency energy and, if not installed and uses in accordance with the instruction manual, may cause harmful interference to radio communications Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equivalent.

*** * * * * * * * ***

If the EUT was tested with special shielded cables the operator's manual for such product shall also contain the following statements or their equivalent:
Shielded interface cables and/or AC power cord, if any, must be used in order to comply with the emission limits.

6. Conducted Emission Test

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.107

6.1.2. Test Limit

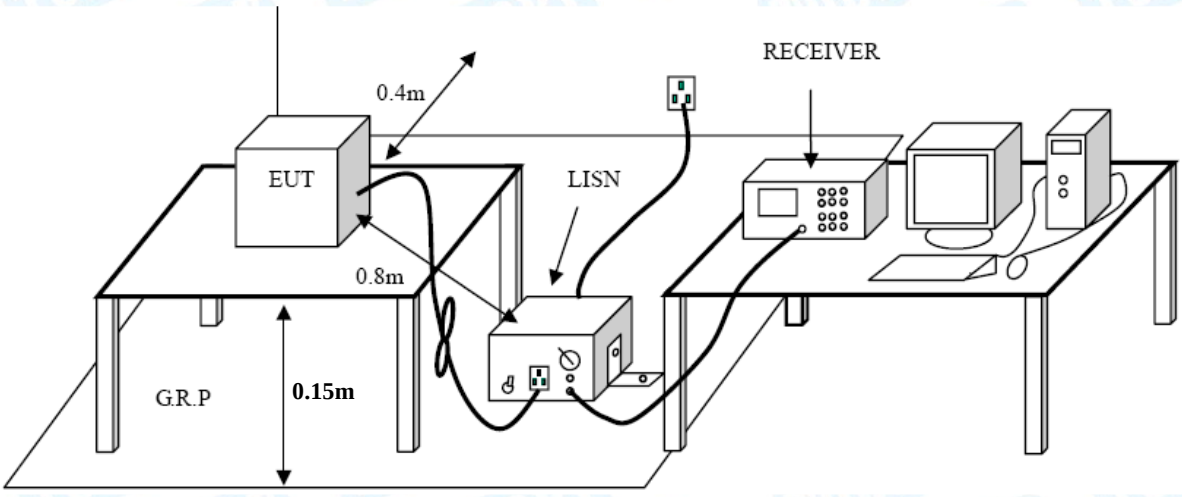
Conducted Emission Test Limit (Class A)

Frequency (MHz)	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
0.15~0.50	79	66
0.50~30	73	60

Conducted Emission Test Limit (Class B)

Frequency (MHz)	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
0.15~0.5	66 ~ 56 *	56 ~ 46 *
0.50~5	56	46
5~30	60	50
*decreasing linearly with logarithm of the frequency		

6.2 Test Setup



6.3 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.

The cables shall be insulated (by up to 15 cm) from the horizontal ground reference plane, and 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.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

6.4 Deviation From Test Standard

No deviation

6.5 Test Data

Please refer to the Attachment A.

7. Radiated Emission Test

7.1 Test Standard and Limit

7.1.1 Test Standard

FCC Part 15.109

7.1.2 Test Limit

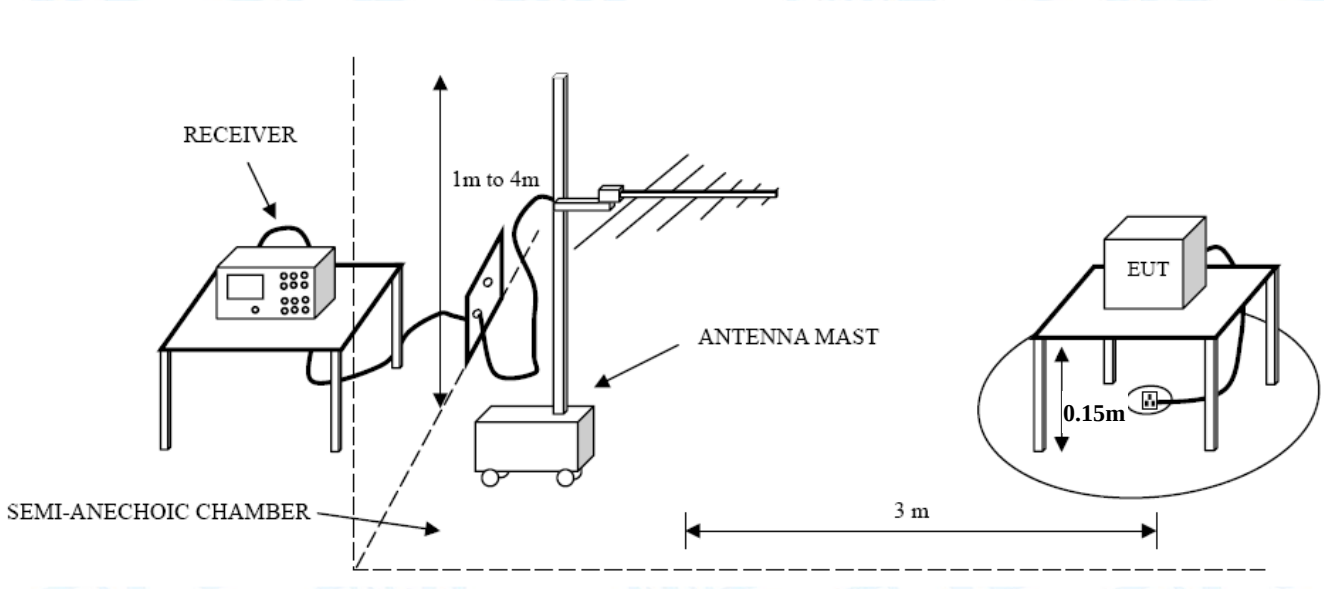
Radiated Emission Test Limit (Class A)	
Frequency MHz	**Field Strengths Limits dB(μV/m)**
30 ~ 88	49.0
88 ~ 216	53.5
216 ~ 960	56.4
Above 960	59.5
Radiated Emission Test Limit (Class B)	
Frequency MHz	**Field Strengths Limits dB(μV/m)**
30 ~ 88	40.0
88 ~ 216	43.5
216 ~ 960	46.0
Above 960	54.0
* The lower limit shall apply at the transition frequency.	
* The test distance is 3m.	

Frequency (MHz)	**Class A Radiated Limit (dBμV/m)- Distance of 3 metres**	
	Linear Average Detector	Peak Detector
＞1000	59.5	79.5
Frequency (MHz)	**Class B Radiated Limit (dBμV/m)-Distance of 3 metres**	
	Linear Average Detector	Peak Detector
＞1000	54	74

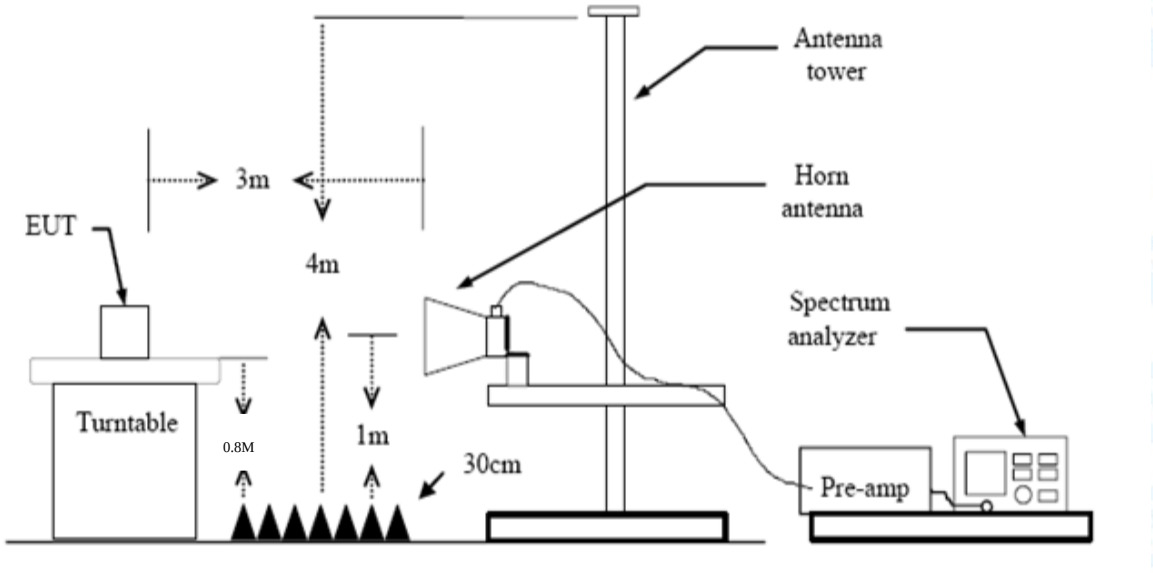
Note：

Highest Frequency Generated or Used in Device	**Upper Frequency of Radiated Measurement**
Below 1.705 MHz	No radiated testing required
1.705 MHz – 108 MHz	1 GHz
108 MHz – 500 MHz	2 GHz
500 MHz – 1 GHz	5 GHz
Above 1 GHz	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

7.2 Test Setup



Below 1G



Above 1G

7.3 Test Procedure

The EUT was placed on the top of a rotating table which is 0.8 meters above the ground. EUT is set 3.0 meters away from the receiving antenna that mounted on a antenna tower. The table was rotated 360 degrees to determine the position of the highest radiation, the antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

Measurements shall be made with a quasi-peak measuring receiver in the frequency range 30MHz to 1000MHz. 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. Measurements shall be made with a Peak and AVG measuring receiver in the frequency range Above 1000MHz.

7.4 Deviation From Test Standard

No deviation

7.5 Test Data

Please refer to the Attachment B.

8. Photographs - Constructional Details

Photo 1 Appearance of EUT

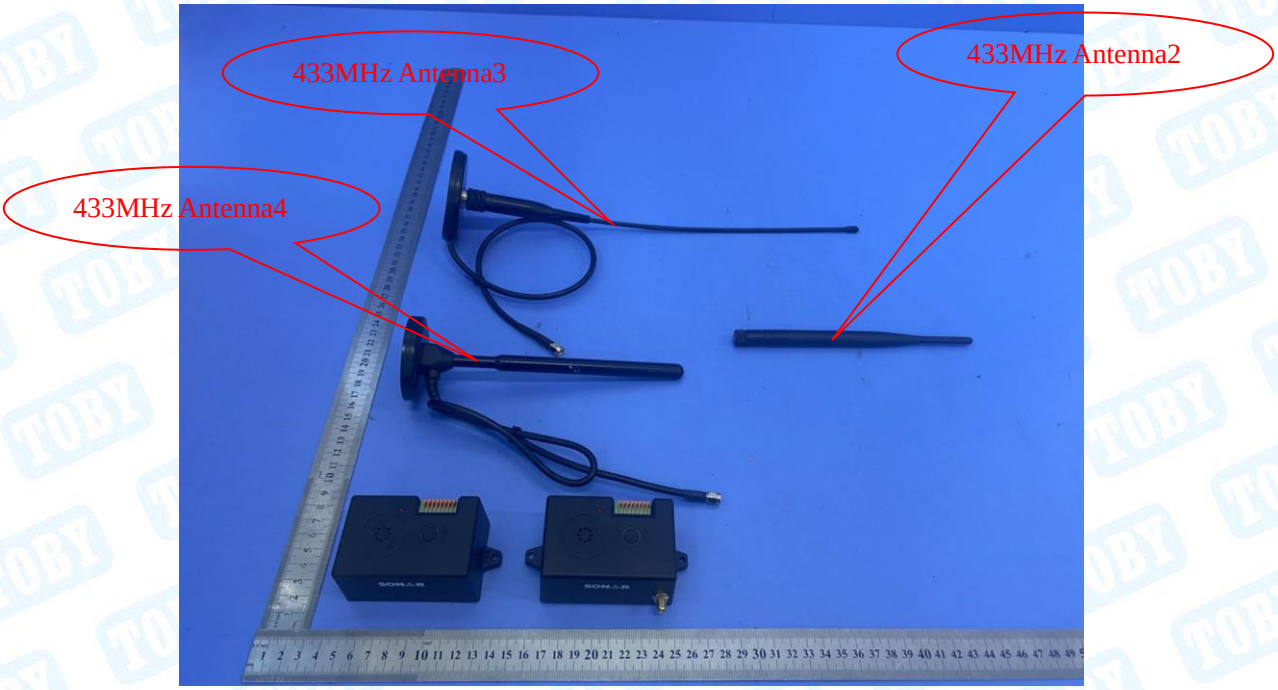


Photo 2 Appearance of EUT

Photo 3 Appearance of EUT

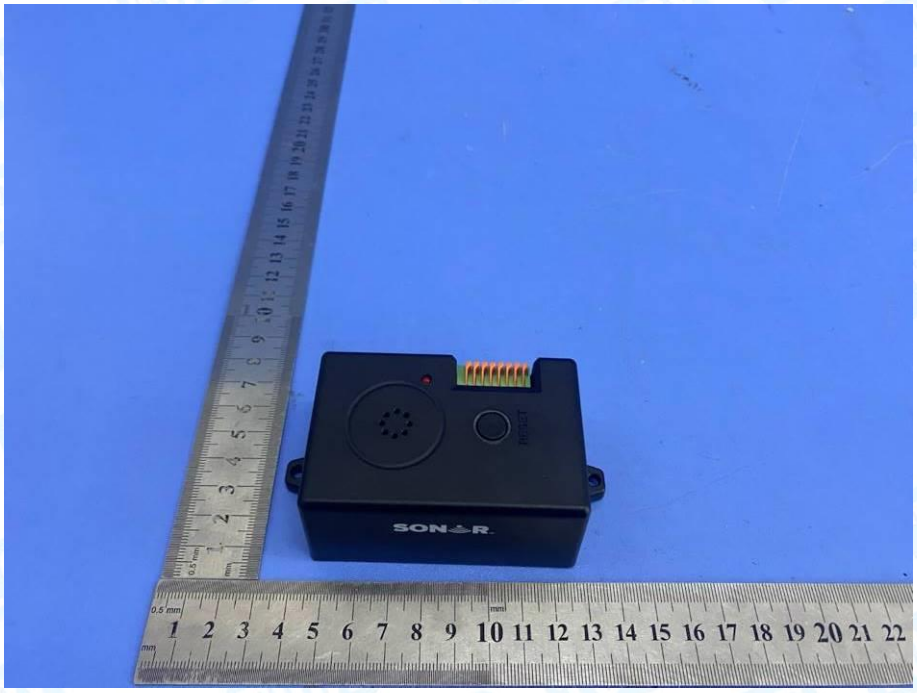


Photo 4 Appearance of EUT

Photo 5 Appearance of EUT

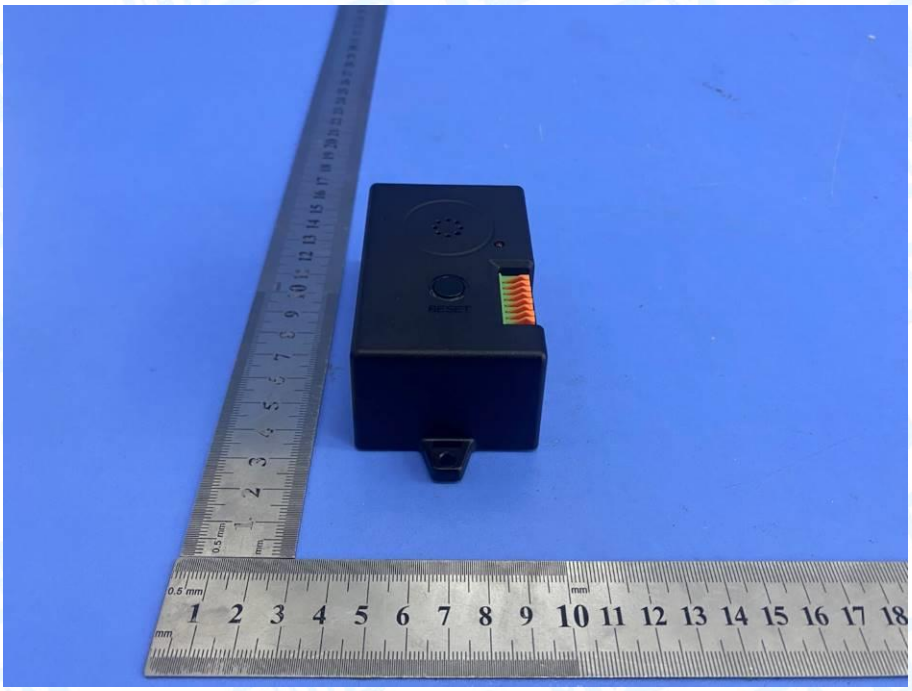


Photo 6 Appearance of EUT

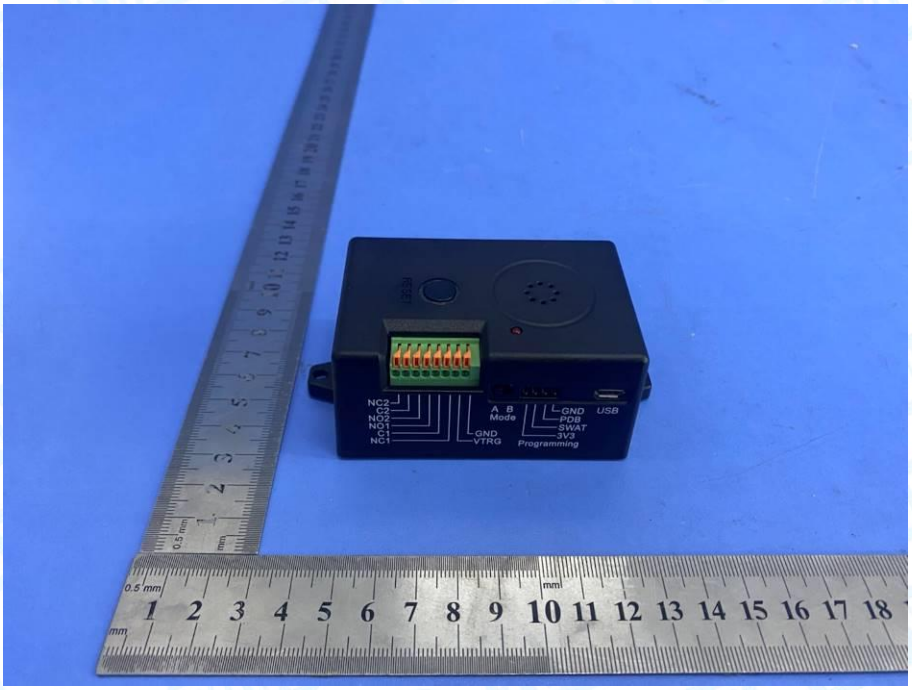


Photo 7 Appearance of EUT

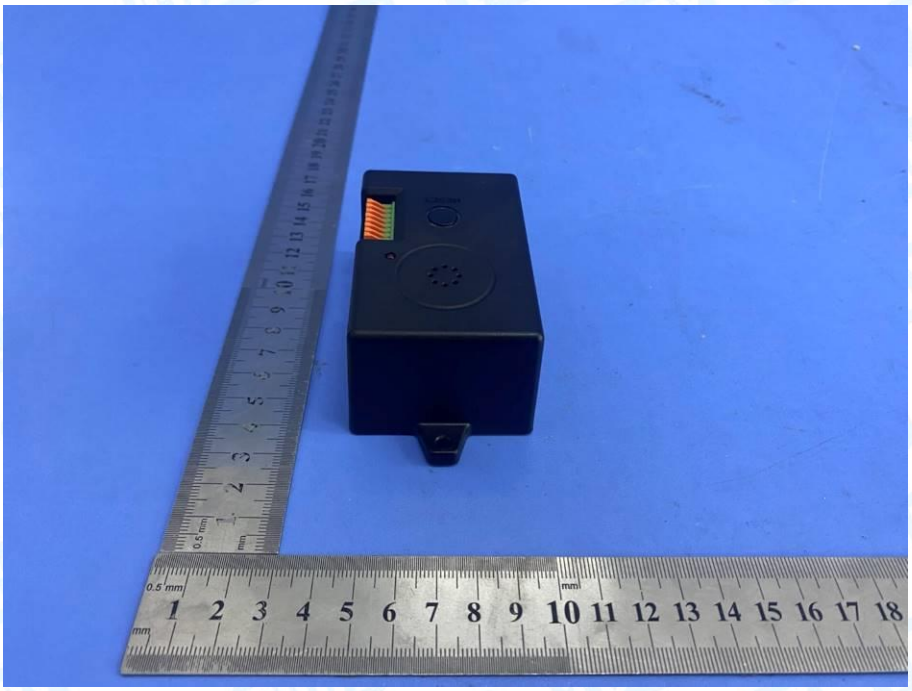


Photo 8 Appearance of EUT

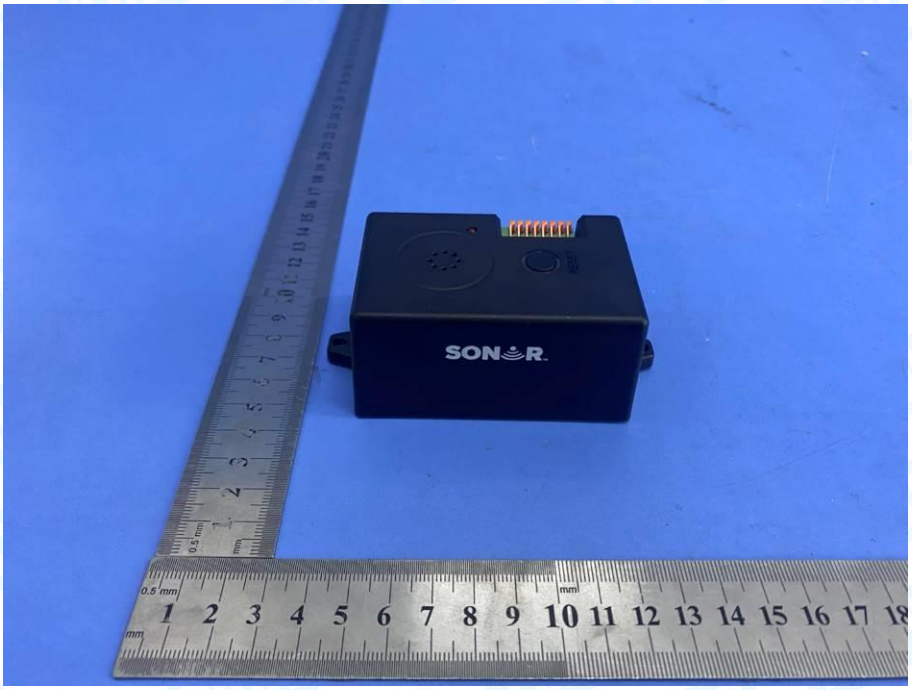


Photo 9 Internal of EUT

Photo 10 Internal of EUT

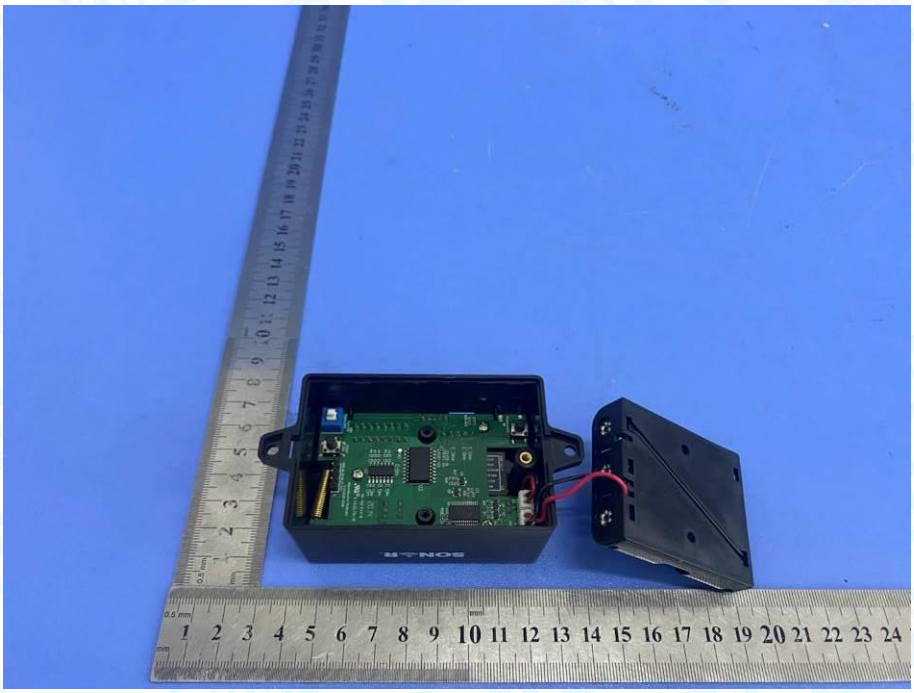


Photo 11 Appearance of PCB

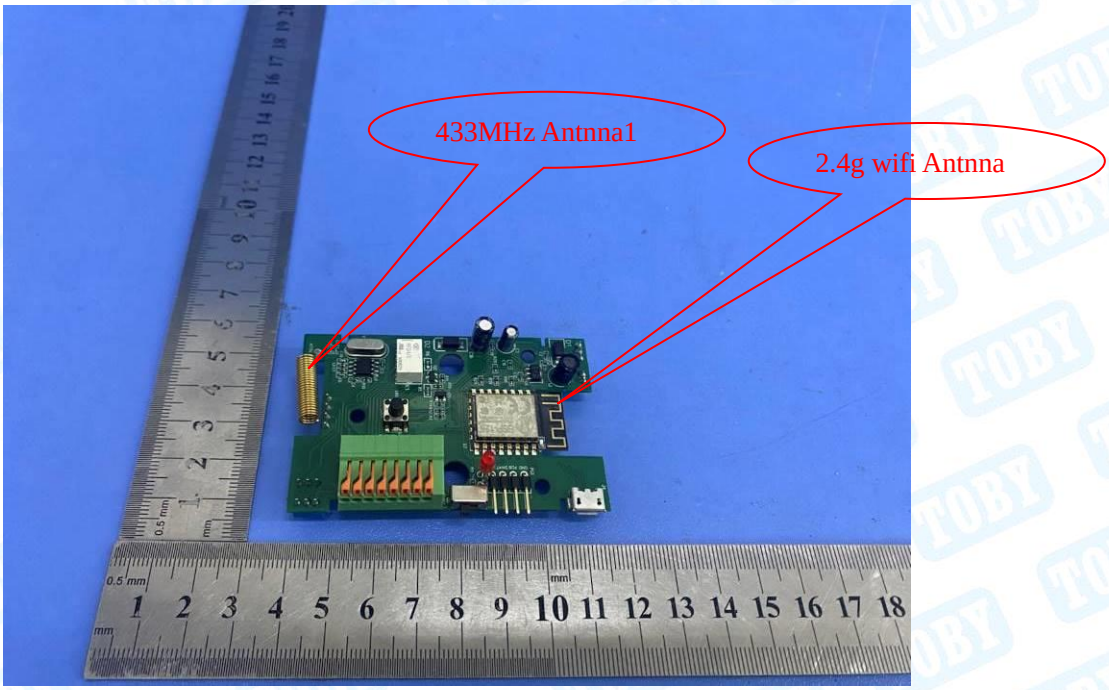


Photo 12 Appearance of PCB

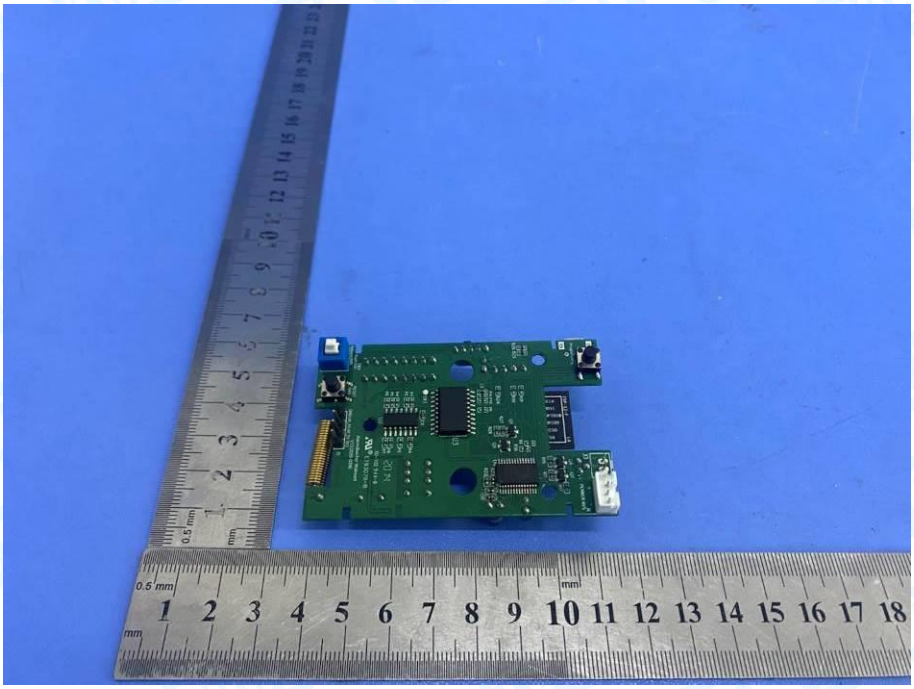


Photo 13 Appearance of PCB

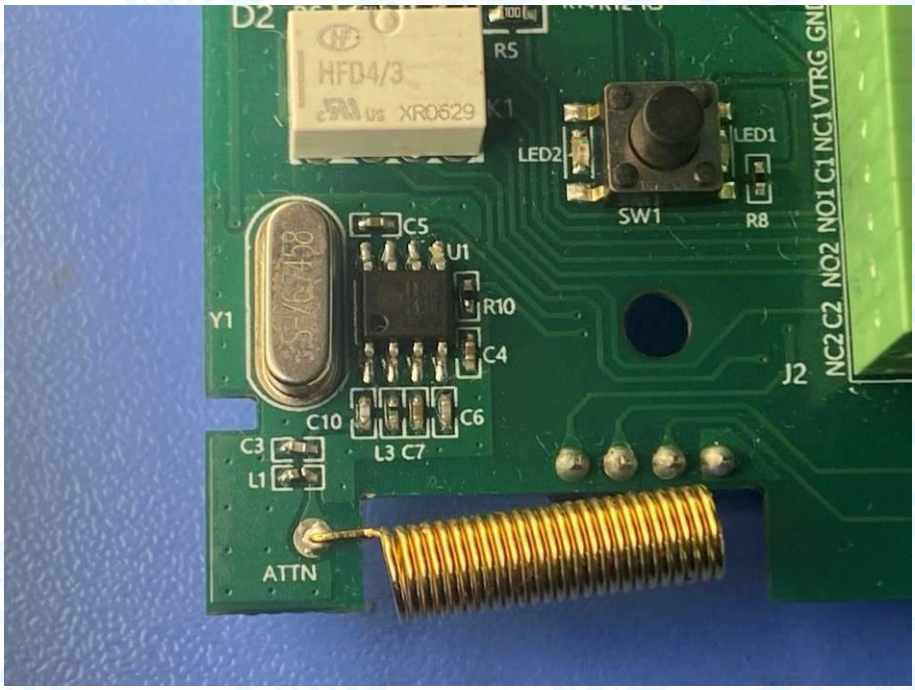


Photo 14 Appearance of PCB

Photo 15 Appearance of PCB

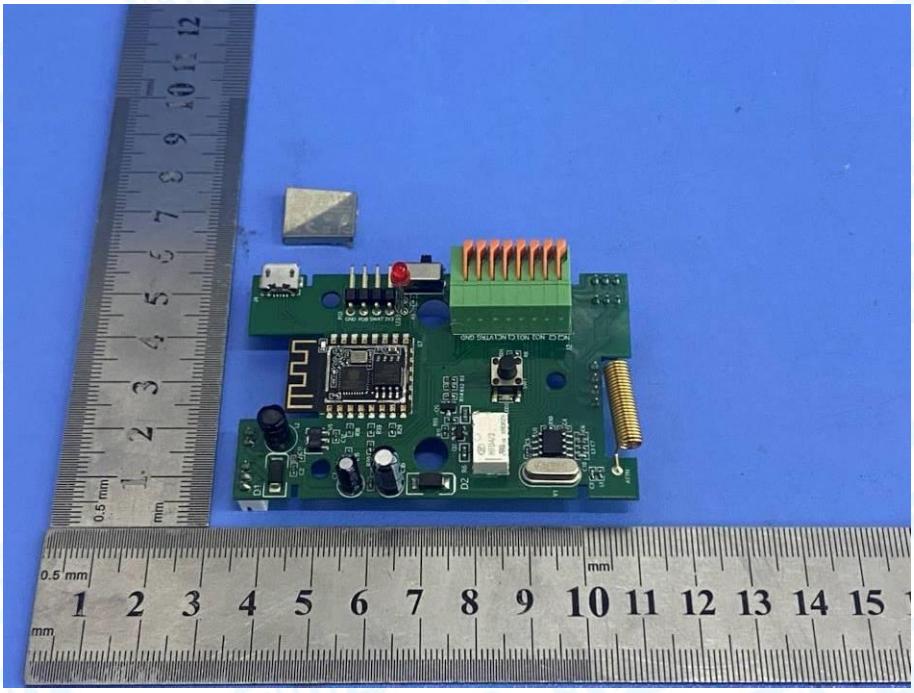


Photo 16 Appearance of PCB

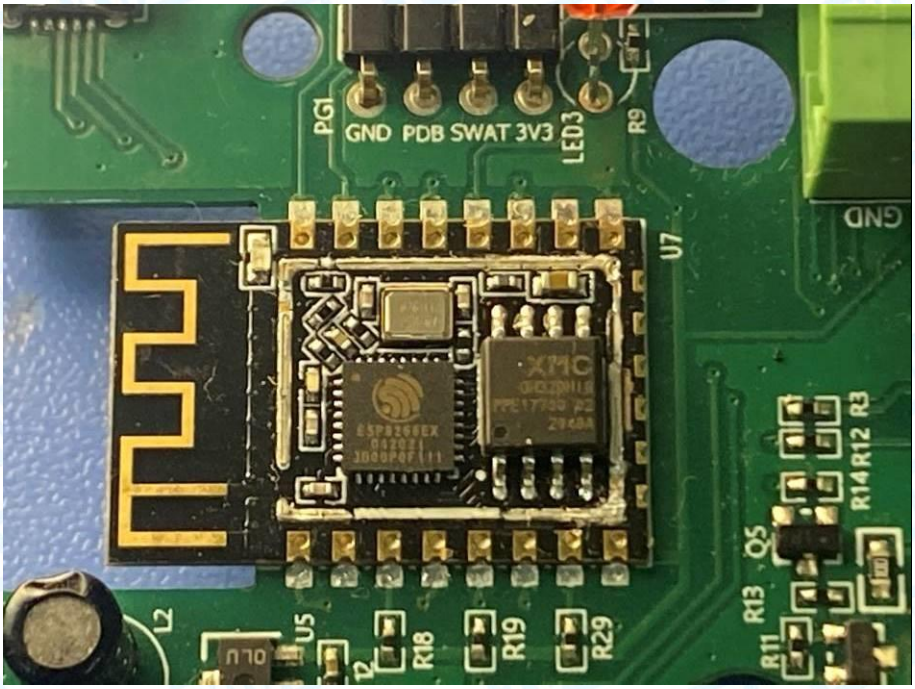


Photo 17 Appearance of EUT

Photo 18 Appearance of EUT

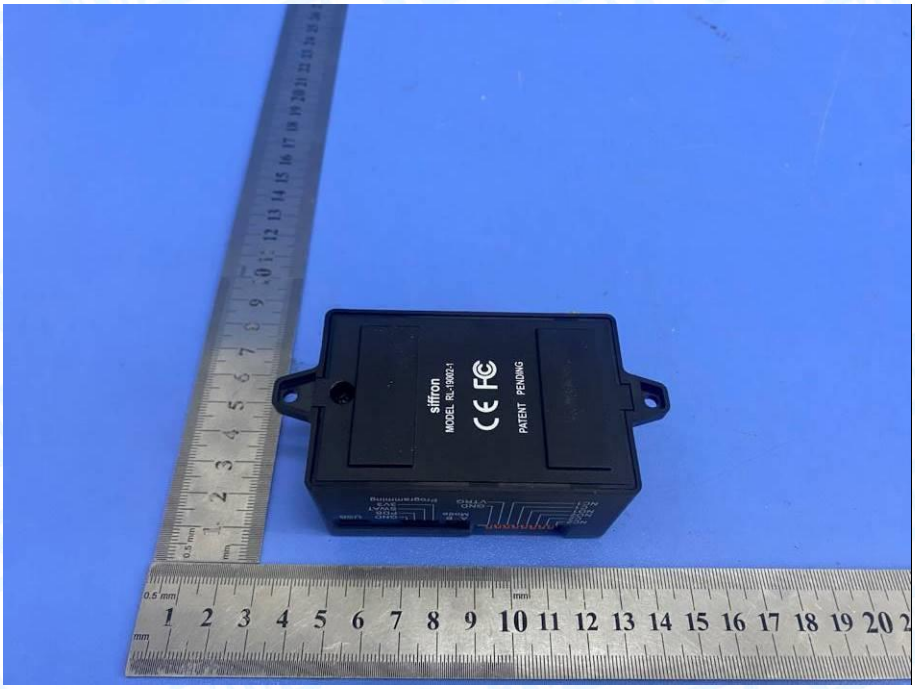


Photo 19 Appearance of EUT

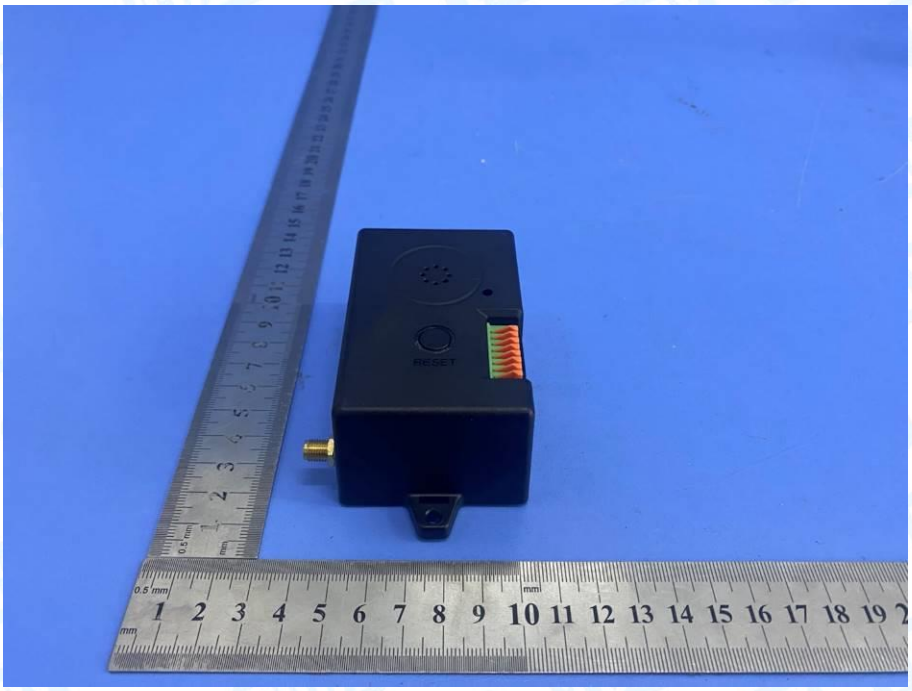


Photo 20 Appearance of EUT

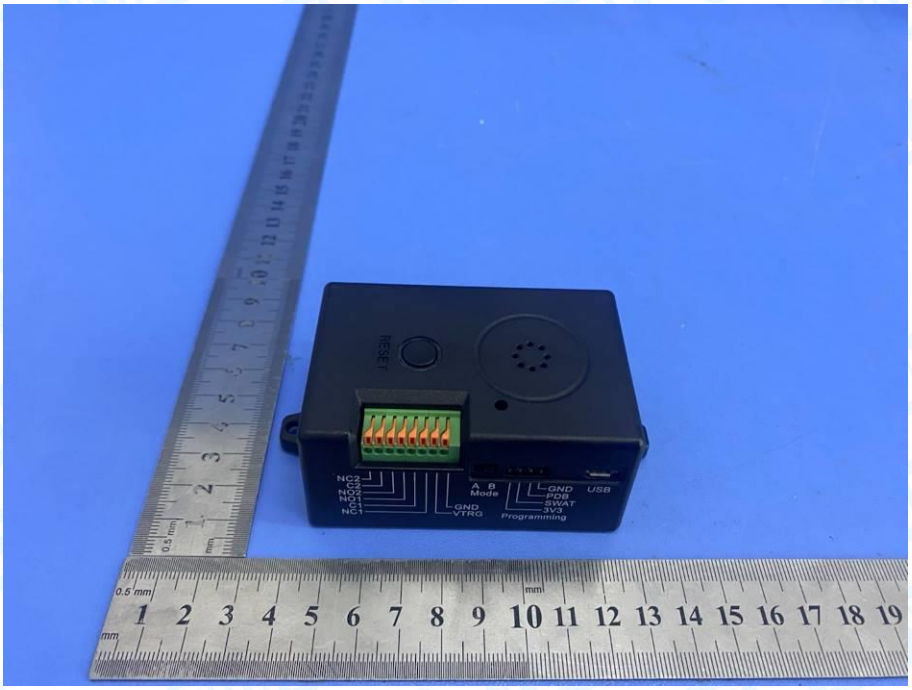


Photo 21 Appearance of EUT

Photo 22 Appearance of EUT

Photo 23 Internal of EUT

Photo 24 Internal of EUT

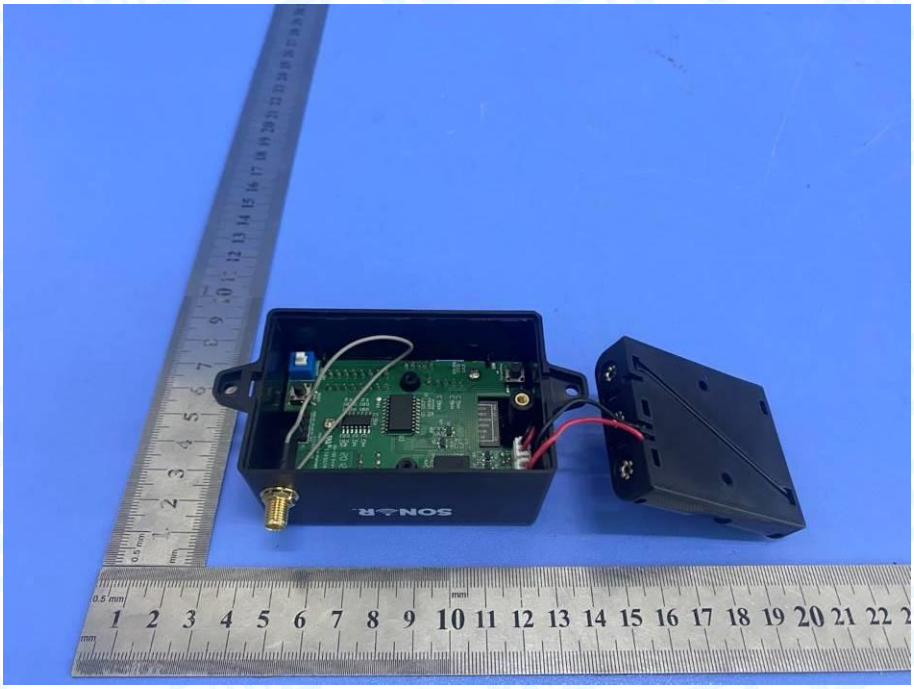


Photo 25 Appearance of PCB

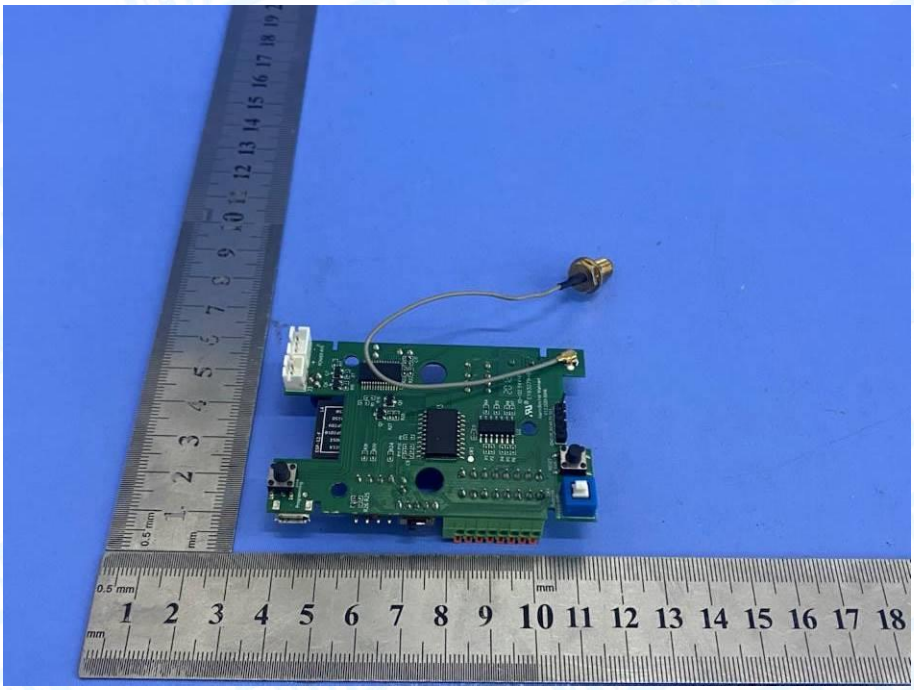


Photo 26 Appearance of PCB

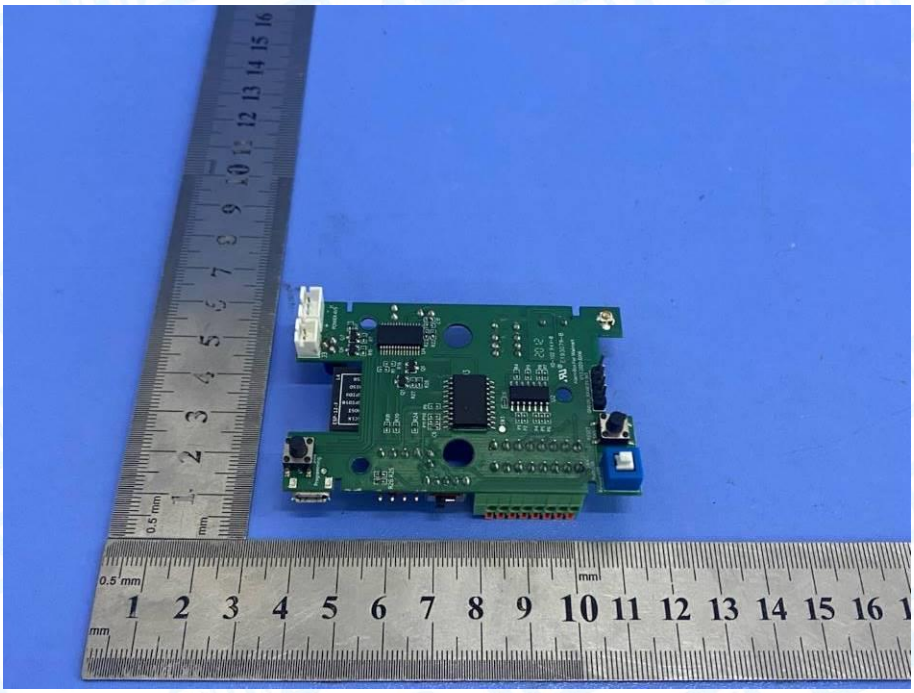


Photo 27 Appearance of PCB

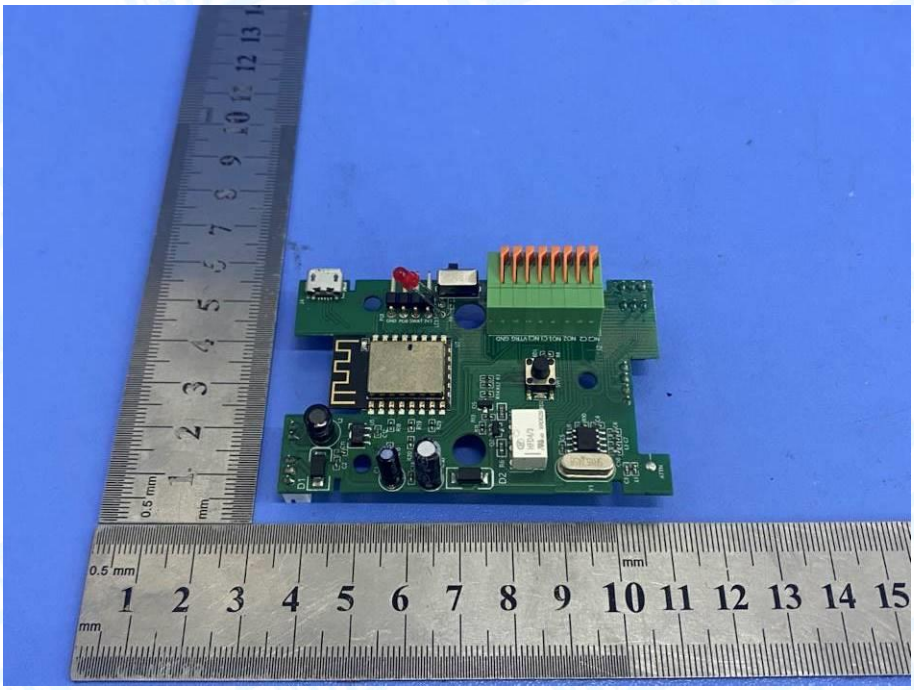


Photo 28 Appearance of PCB

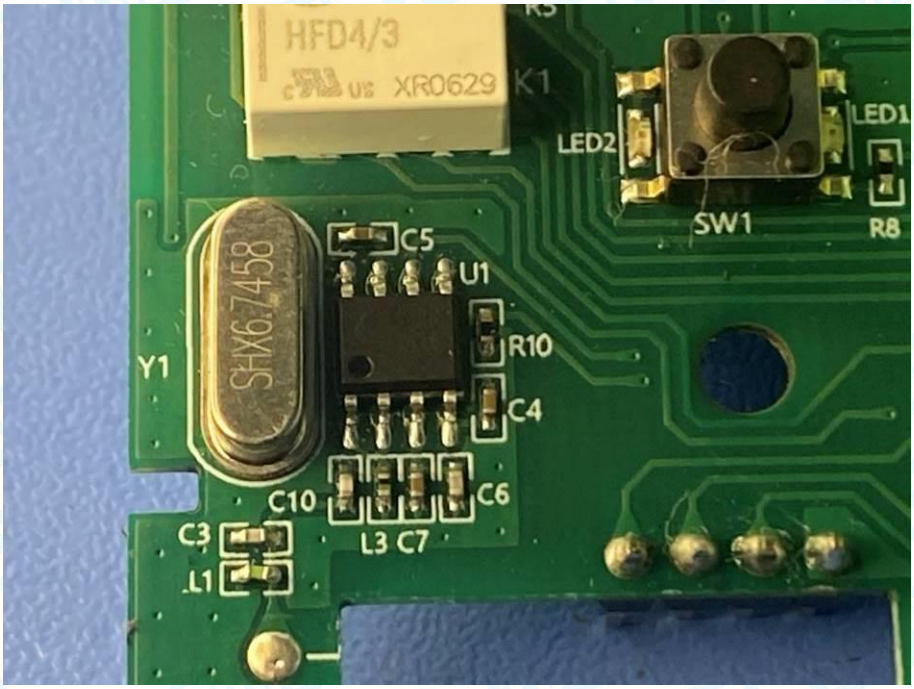


Photo 29 Appearance of PCB

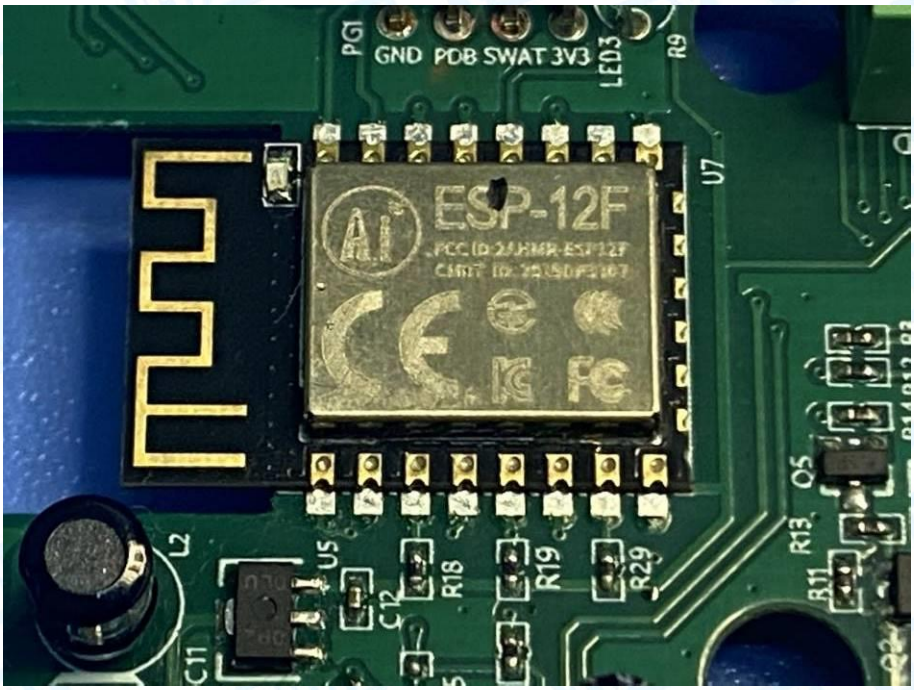


Photo 30 Appearance of PCB

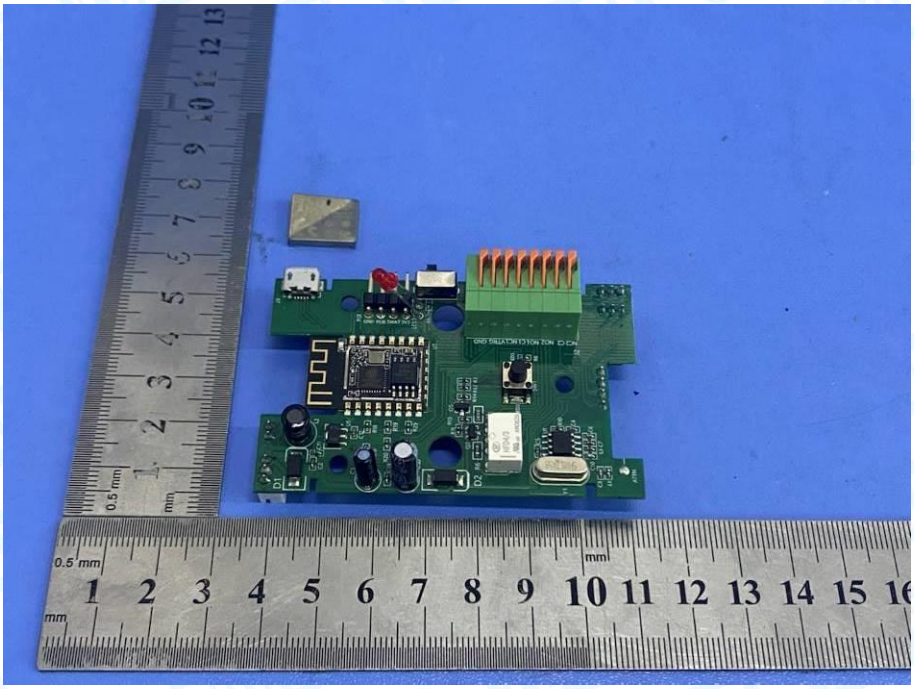


Photo 31 Appearance of PCB

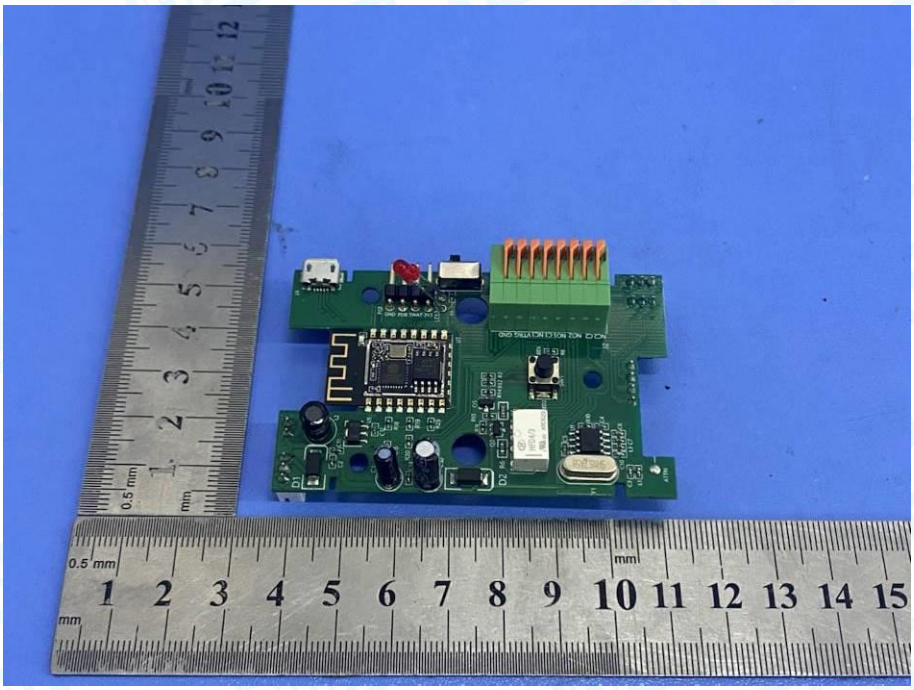
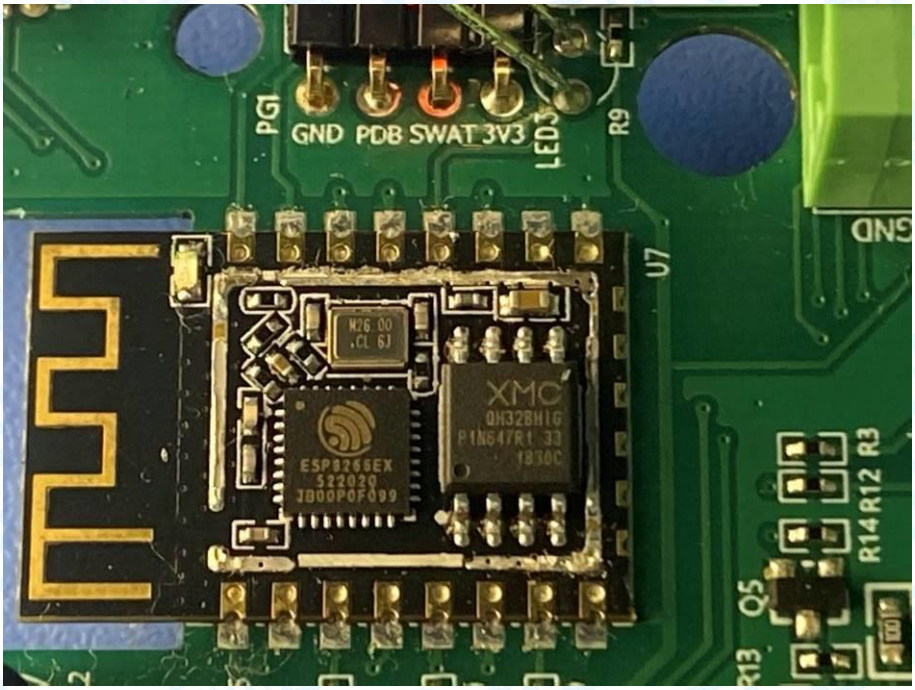


Photo 32 Appearance of PCB

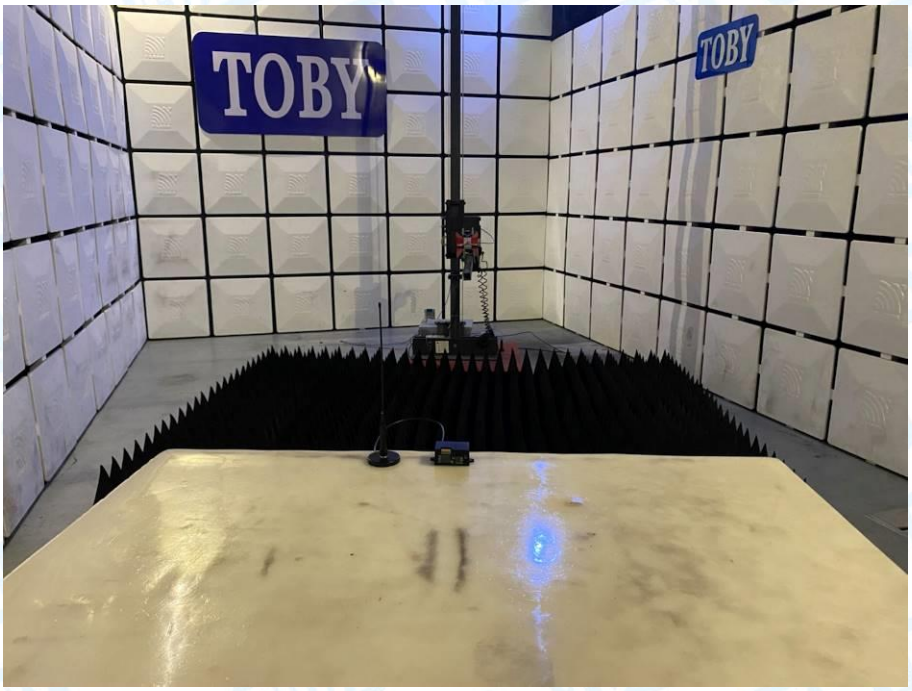


9. Photographs - Test Setup

Conducted Emission Test Setup

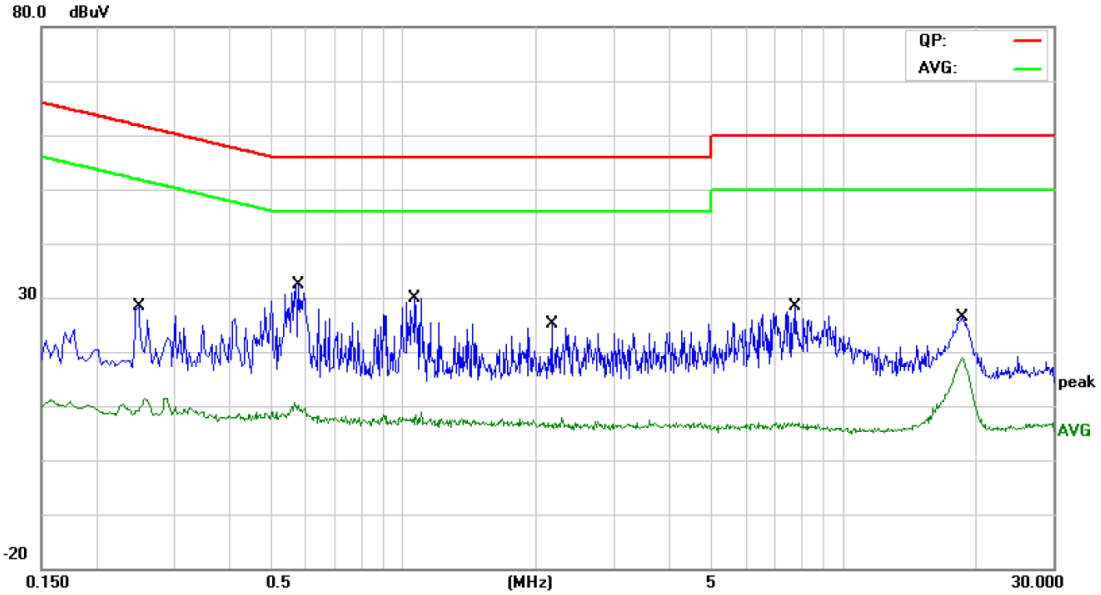
Radiated Emission Test Setup-Below 1GHz

Radiated Emission Test Setup-Above 1GHz



Attachment A--Conducted Emission Test Data

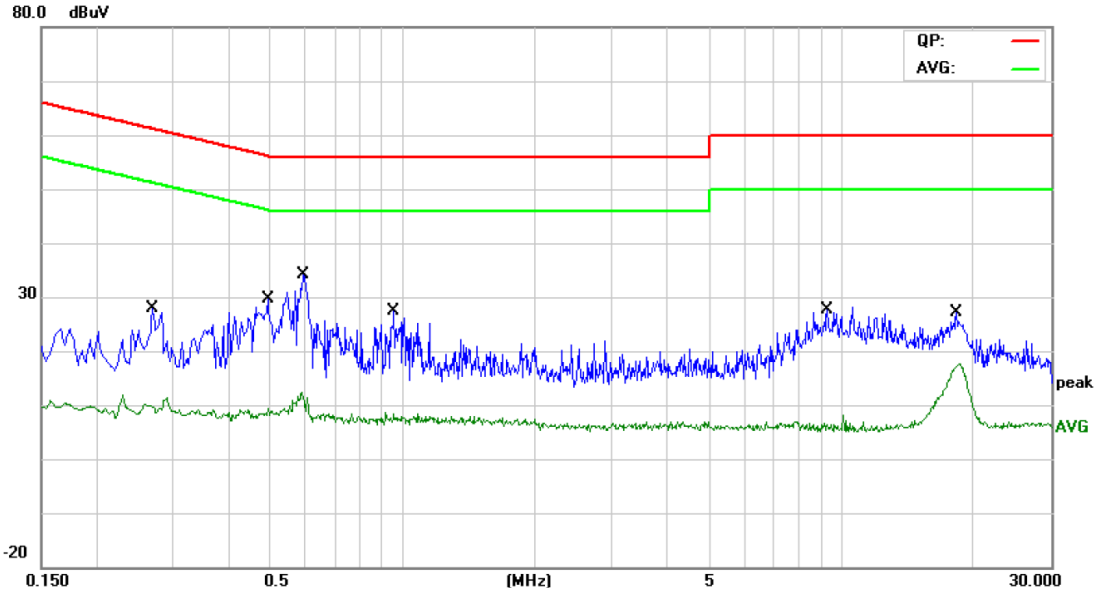
Temperature:	24.5℃	**Relative Humidity:**	45%
Test Voltage:	AC 120V/60Hz		
Terminal:	Line		
Test Mode:	Mode 1		
Remark:	Only worse case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.2500	2.50	11.62	14.12	61.75	-47.63	QP
2		0.2500	-3.75	11.62	7.87	51.75	-43.88	AVG
3		0.5780	5.77	11.45	17.22	56.00	-38.78	QP
4	*	0.5780	-3.26	11.45	8.19	46.00	-37.81	AVG
5		1.0620	2.59	11.15	13.74	56.00	-42.26	QP
6		1.0620	-4.80	11.15	6.35	46.00	-39.65	AVG
7		2.1700	0.21	10.49	10.70	56.00	-45.30	QP
8		2.1700	-4.84	10.49	5.65	46.00	-40.35	AVG
9		7.7940	1.40	10.14	11.54	60.00	-48.46	QP
10		7.7940	-4.51	10.14	5.63	50.00	-44.37	AVG
11		18.6940	0.77	10.25	11.02	60.00	-48.98	QP
12		18.6940	-4.16	10.25	6.09	50.00	-43.91	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Temperature:	24.5℃	**Relative Humidity:**	45%
Test Voltage:	AC 120V/60Hz		
Terminal:	Neutral		
Test Mode:	Mode 1		
Remark:	Only worse case is reported		



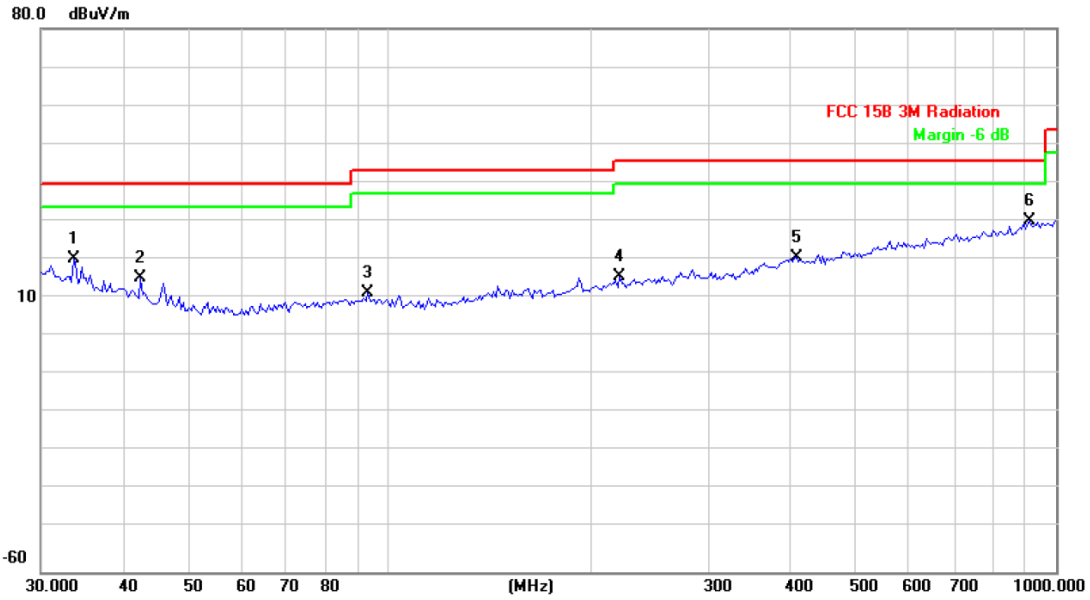
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.2700	3.55	11.60	15.15	61.12	-45.97	QP
2		0.2700	-3.74	11.60	7.86	51.12	-43.26	AVG
3		0.4940	7.39	11.51	18.90	56.10	-37.20	QP
4		0.4940	-4.07	11.51	7.44	46.10	-38.66	AVG
5	*	0.5940	14.22	11.48	25.70	56.00	-30.30	QP
6		0.5940	-1.18	11.48	10.30	46.00	-35.70	AVG
7		0.9580	3.65	11.24	14.89	56.00	-41.11	QP
8		0.9580	-4.71	11.24	6.53	46.00	-39.47	AVG
9		9.2980	4.87	10.12	14.99	60.00	-45.01	QP
10		9.2980	-5.15	10.12	4.97	50.00	-45.03	AVG
11		18.3180	8.77	10.50	19.27	60.00	-40.73	QP
12		18.3180	4.08	10.50	14.58	50.00	-35.42	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Attachment B--Radiated Emission Test Data

----Below 1G

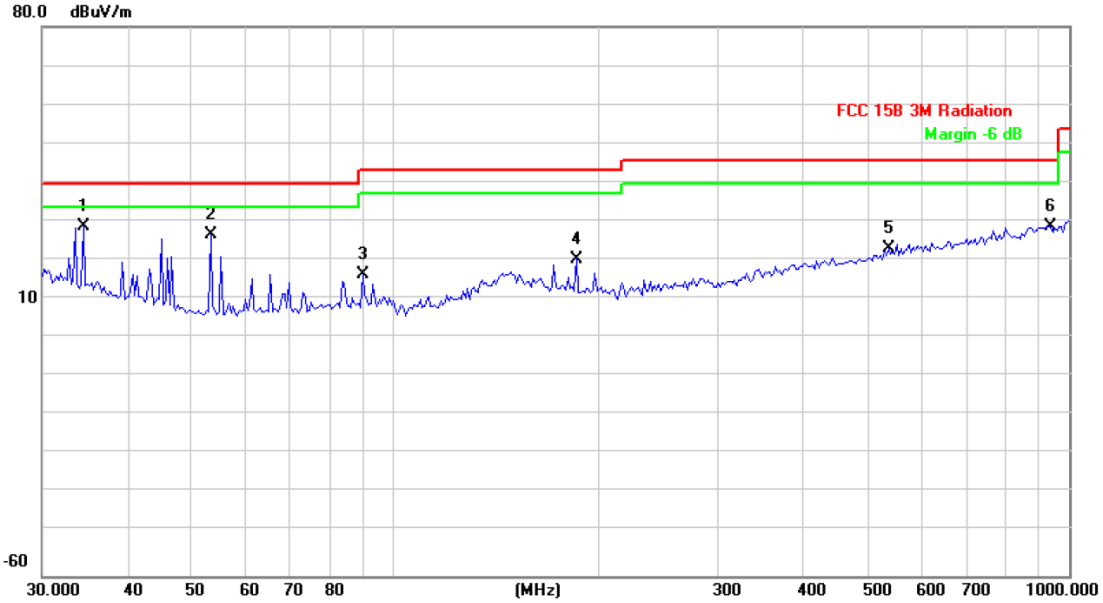
Temperature:	23.4℃	**Relative Humidity:**	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna1)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		33.5624	36.83	-16.06	20.77	40.00	-19.23	peak
2		42.3022	36.39	-20.59	15.80	40.00	-24.20	peak
3		92.7871	33.94	-22.15	11.79	43.50	-31.71	peak
4		221.3921	34.93	-18.90	16.03	46.00	-29.97	peak
5		407.5145	33.24	-12.35	20.89	46.00	-25.11	peak
6	*	912.8620	33.94	-3.31	30.63	46.00	-15.37	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

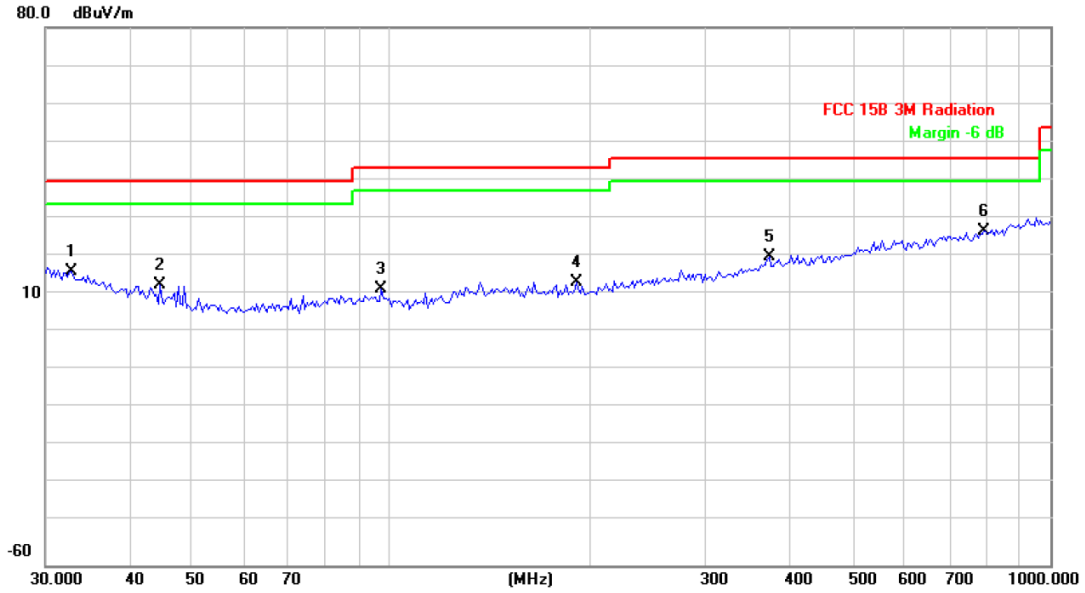
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna1)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	34.5173	45.71	-16.77	28.94	40.00	-11.06	peak
2		53.3179	50.78	-23.91	26.87	40.00	-13.13	peak
3		89.5899	38.87	-22.13	16.74	43.50	-26.76	peak
4		185.7882	40.96	-20.11	20.85	43.50	-22.65	peak
5		539.4775	32.77	-9.41	23.36	46.00	-22.64	peak
6		938.8326	32.38	-3.13	29.25	46.00	-16.75	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

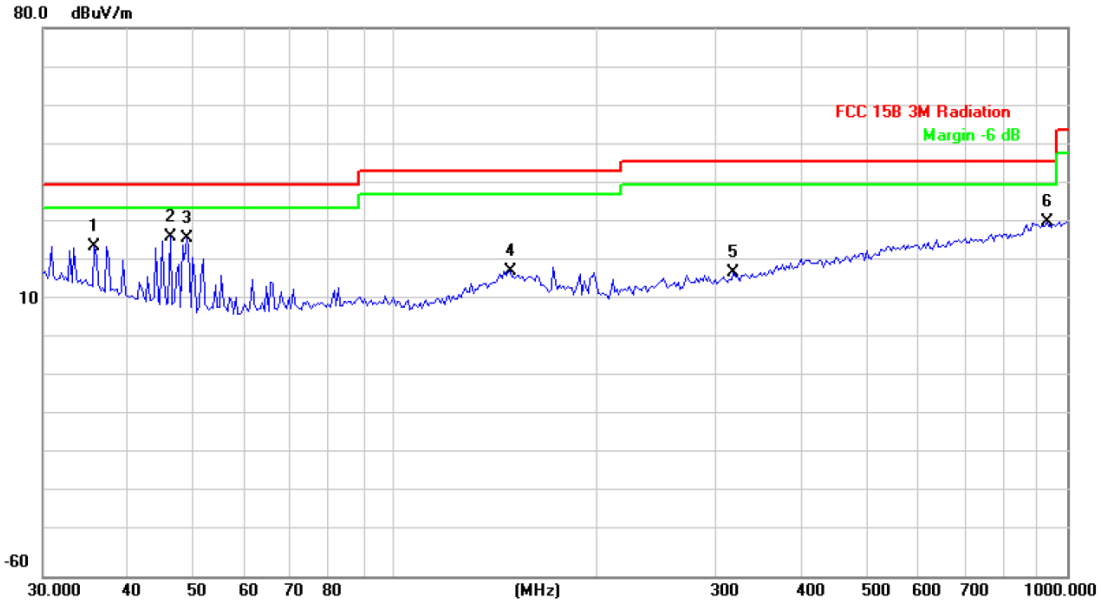
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna2)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		32.8637	32.09	-15.55	16.54	40.00	-23.46	peak
2		44.7433	34.60	-21.79	12.81	40.00	-27.19	peak
3		96.7749	33.96	-22.20	11.76	43.50	-31.74	peak
4		191.0738	33.71	-19.96	13.75	43.50	-29.75	peak
5		374.6225	33.98	-13.56	20.42	46.00	-25.58	peak
6	*	793.3960	32.53	-5.69	26.84	46.00	-19.16	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

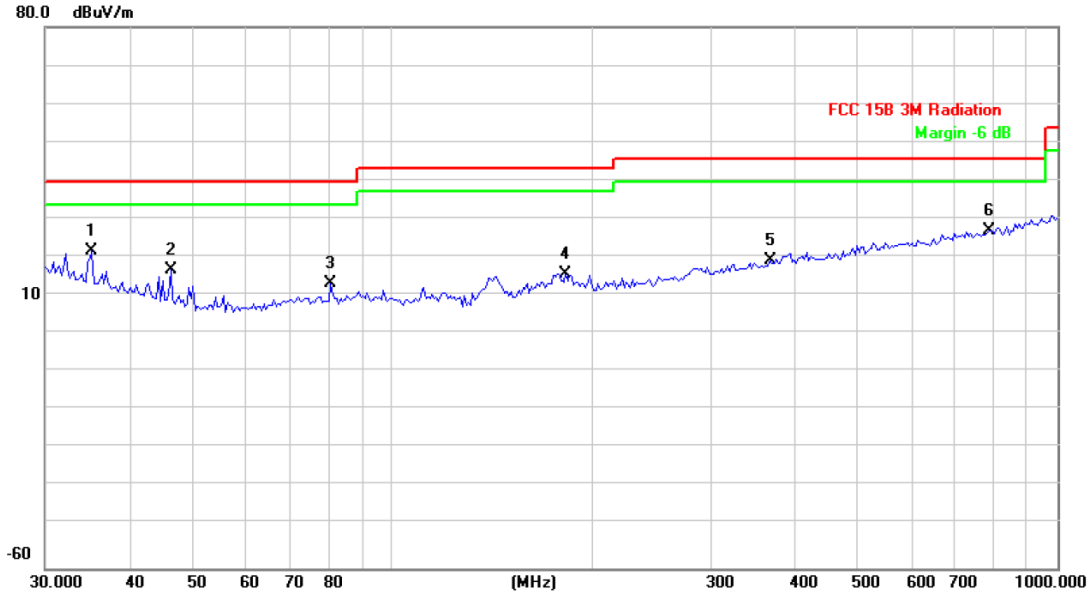
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna2)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	34.5173	45.71	-16.77	28.94	40.00	-11.06	peak
2		53.3179	50.78	-23.91	26.87	40.00	-13.13	peak
3		89.5899	38.87	-22.13	16.74	43.50	-26.76	peak
4		185.7882	40.96	-20.11	20.85	43.50	-22.65	peak
5		539.4775	32.77	-9.41	23.36	46.00	-22.64	peak
6		938.8326	32.38	-3.13	29.25	46.00	-16.75	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

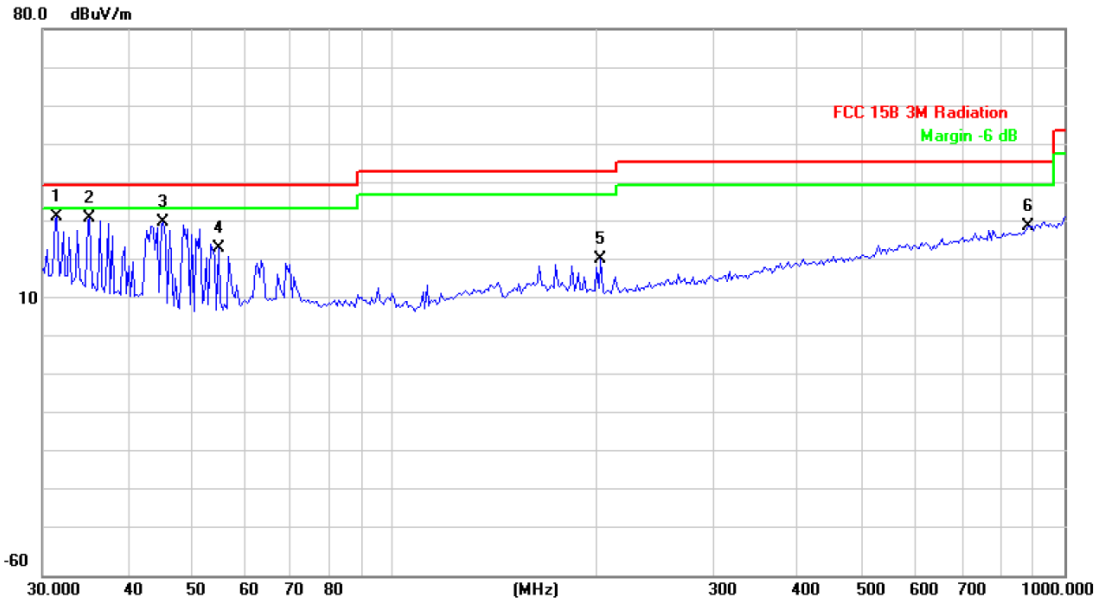
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna3)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	35.2512	39.23	-17.25	21.98	40.00	-18.02	peak
2		46.3402	39.54	-22.36	17.18	40.00	-22.82	peak
3		80.6442	36.19	-22.63	13.56	40.00	-26.44	peak
4		181.9202	36.23	-20.24	15.99	43.50	-27.51	peak
5		369.4047	33.36	-13.81	19.55	46.00	-26.45	peak
6		787.8513	33.11	-5.79	27.32	46.00	-18.68	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

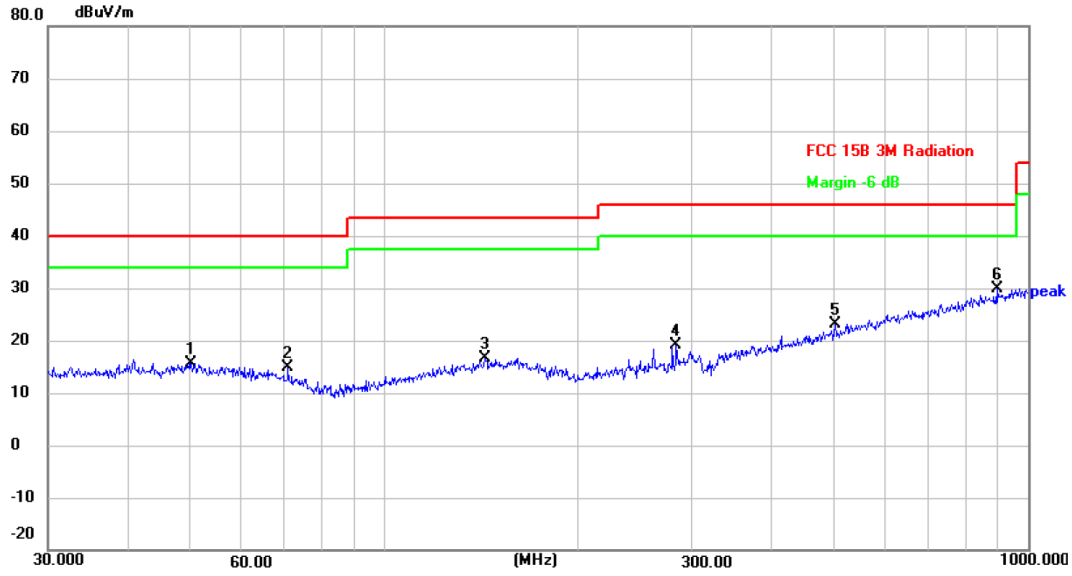
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna3)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	31.5095	46.27	-14.53	31.74	40.00	-8.26	peak
2		35.2512	48.88	-17.25	31.63	40.00	-8.37	peak
3		45.3755	52.53	-22.03	30.50	40.00	-9.50	peak
4		54.8348	48.07	-24.07	24.00	40.00	-16.00	peak
5		203.5228	41.03	-19.91	21.12	43.50	-22.38	peak
6		881.4067	33.71	-4.14	29.57	46.00	-16.43	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

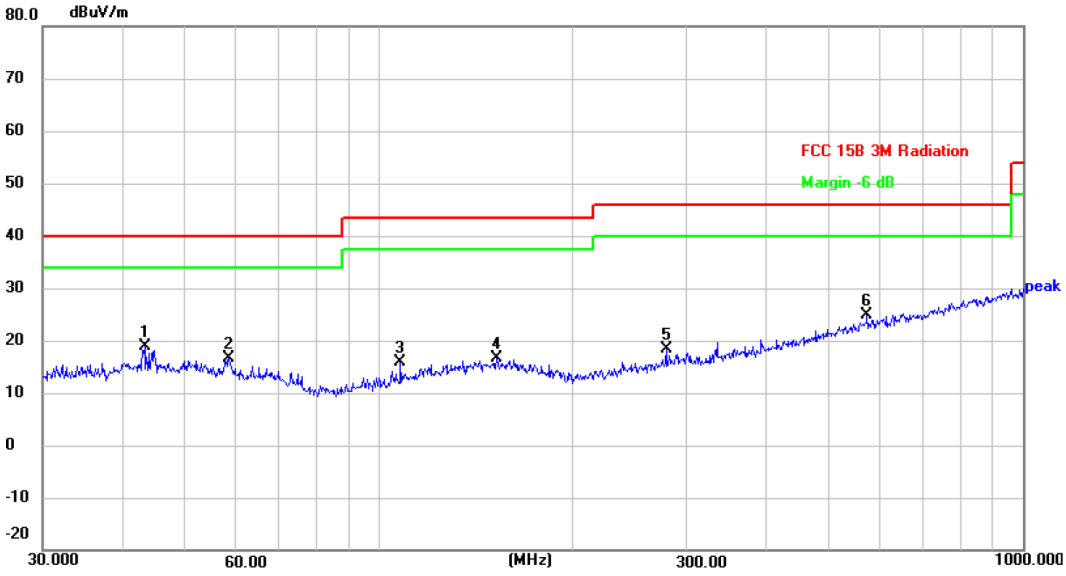
Temperature:	24.3℃	Relative Humidity:	45%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna4)		
Remark:	Only showed test data of the worst mode.		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	50.0566	38.29	-22.56	15.73	40.00	-24.27	peak
2	70.8315	39.29	-24.50	14.79	40.00	-25.21	peak
3	143.3260	38.69	-21.94	16.75	43.50	-26.75	peak
4	283.9791	40.12	-21.07	19.05	46.00	-26.95	peak
5	501.1790	38.74	-15.62	23.12	46.00	-22.88	peak
6 *	893.8566	38.42	-8.63	29.79	46.00	-16.21	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Temperature:	24.3℃	Relative Humidity:	45%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna4)		
Remark:	Only showed test data of the worst mode.		

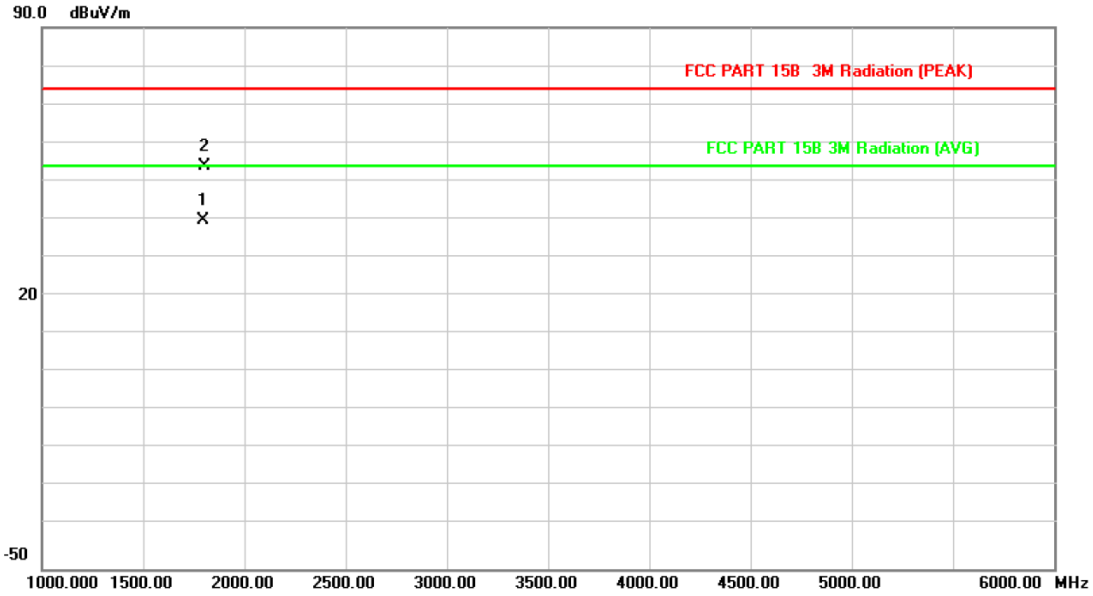


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	43.2017	41.82	-22.88	18.94	40.00	-21.06	peak
2	58.4074	40.07	-23.44	16.63	40.00	-23.37	peak
3	107.8877	40.24	-24.48	15.76	43.50	-27.74	peak
4	152.1297	38.38	-21.67	16.71	43.50	-26.79	peak
5	279.0436	39.59	-21.18	18.41	46.00	-27.59	peak
6	572.6144	38.74	-13.88	24.86	46.00	-21.14	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

---- Above 1G

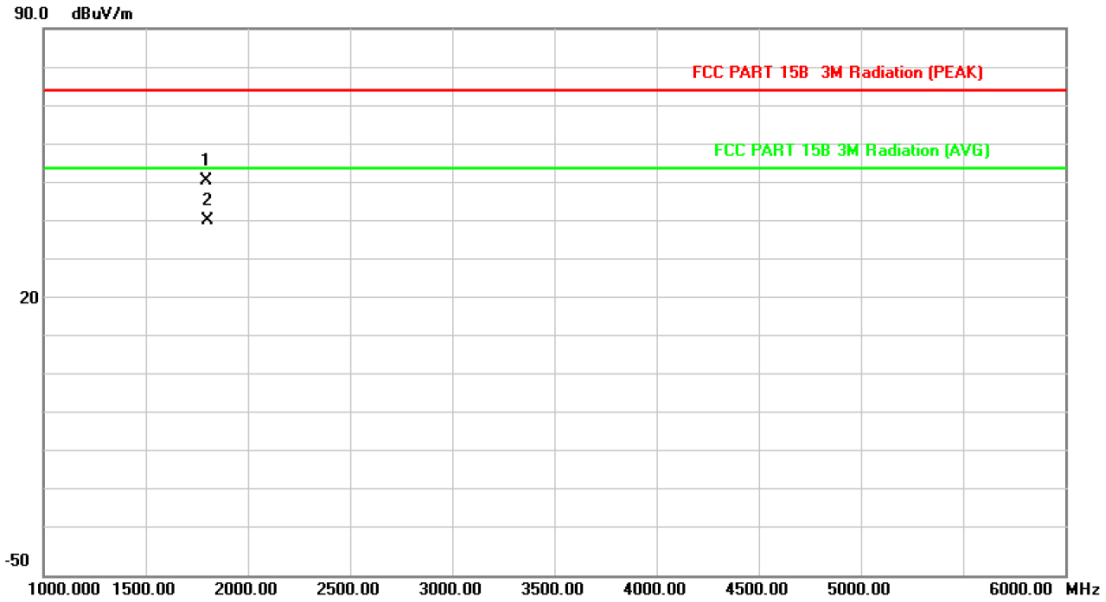
Temperature:	23.4℃	**Relative Humidity:**	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna1)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	1797.540	42.54	-2.31	40.23	54.00	-13.77	AVG
2		1804.860	56.21	-2.25	53.96	74.00	-20.04	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

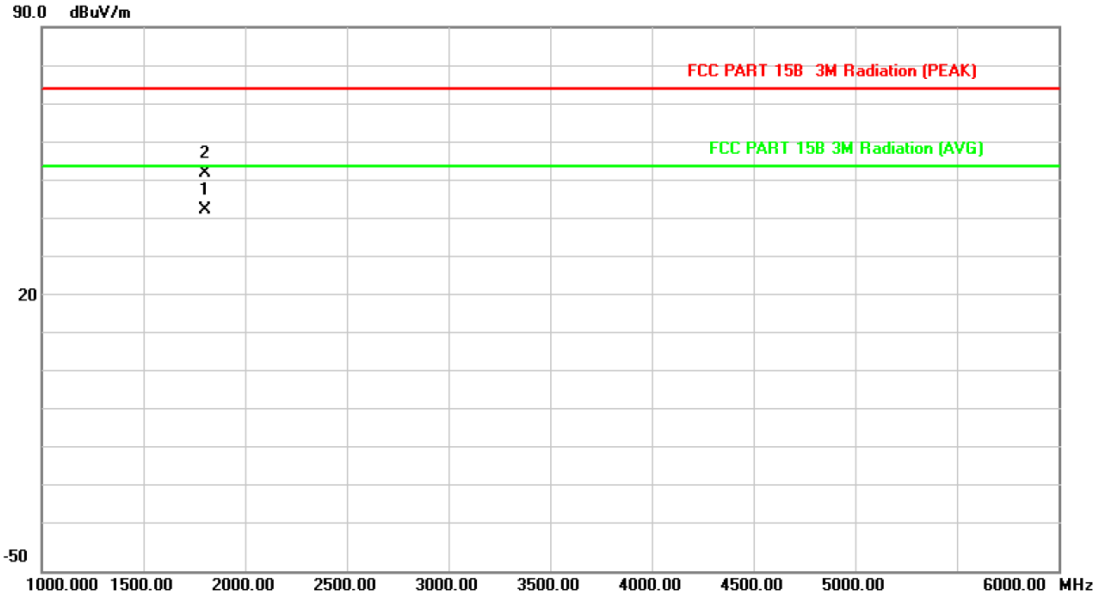
Temperature:	23.4℃	**Relative Humidity:**	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna1)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		1797.540	53.14	-2.31	50.83	74.00	-23.17	peak
2	*	1806.420	43.09	-2.24	40.85	54.00	-13.15	AVG

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

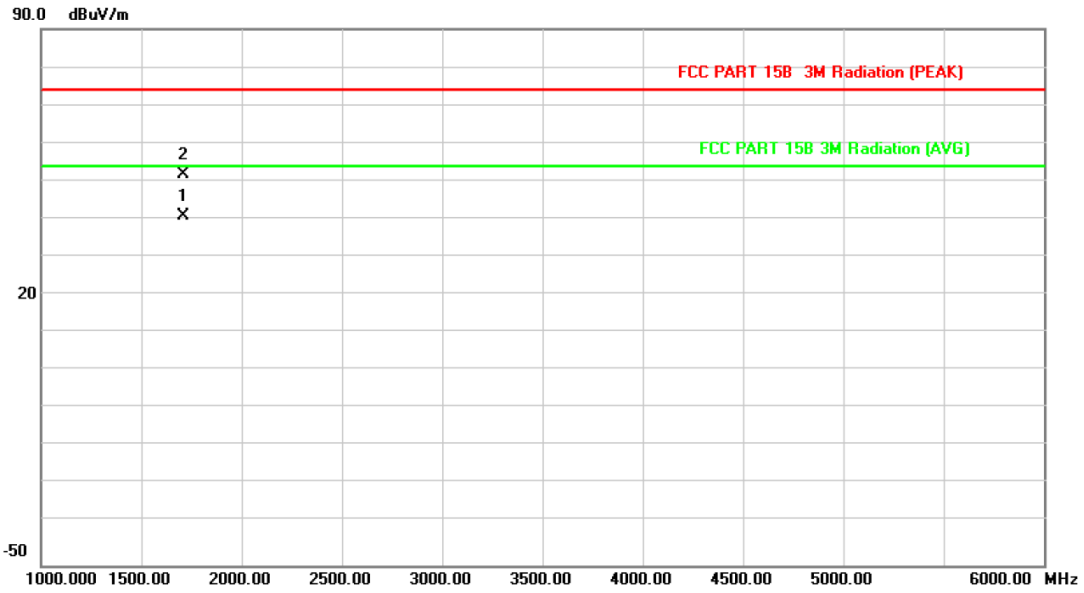
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna2)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	1804.860	45.21	-2.25	42.96	54.00	-11.04	AVG
2		1806.300	54.51	-2.24	52.27	74.00	-21.73	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

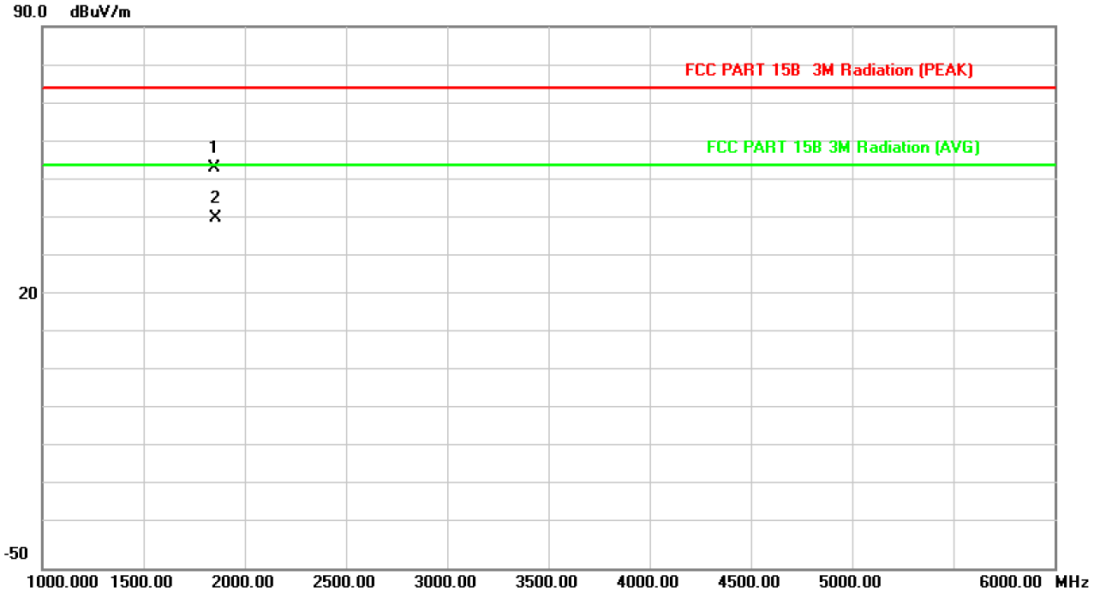
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna2)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	1711.210	43.44	-2.35	41.09	54.00	-12.91	AVG
2		1711.770	54.24	-2.35	51.89	74.00	-22.11	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

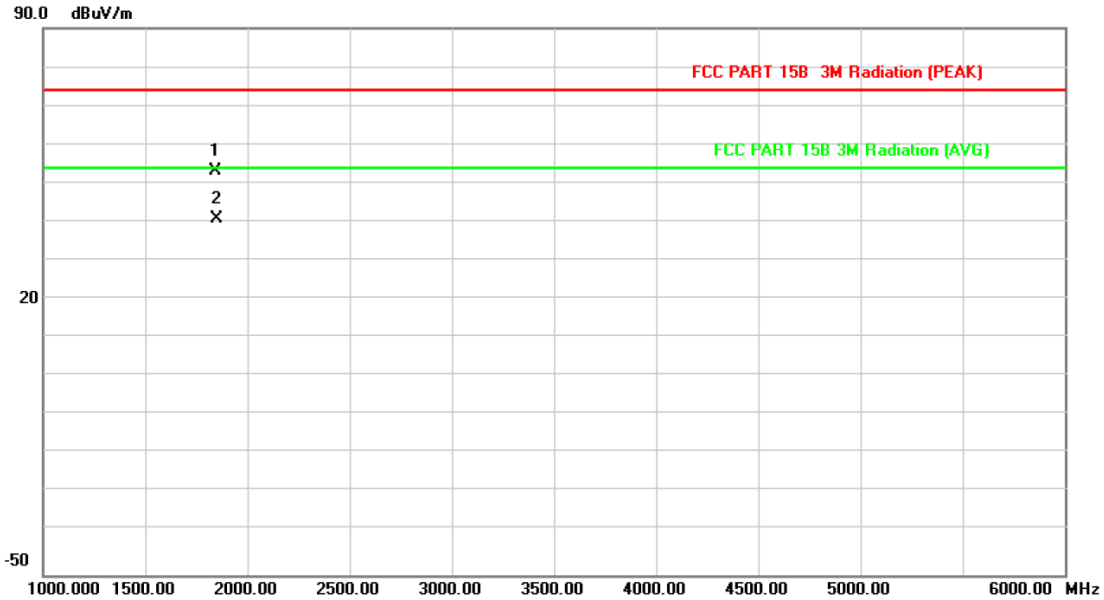
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna3)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		1851.918	55.01	-1.73	53.28	74.00	-20.72	peak
2	*	1859.998	42.21	-1.65	40.56	54.00	-13.44	AVG

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

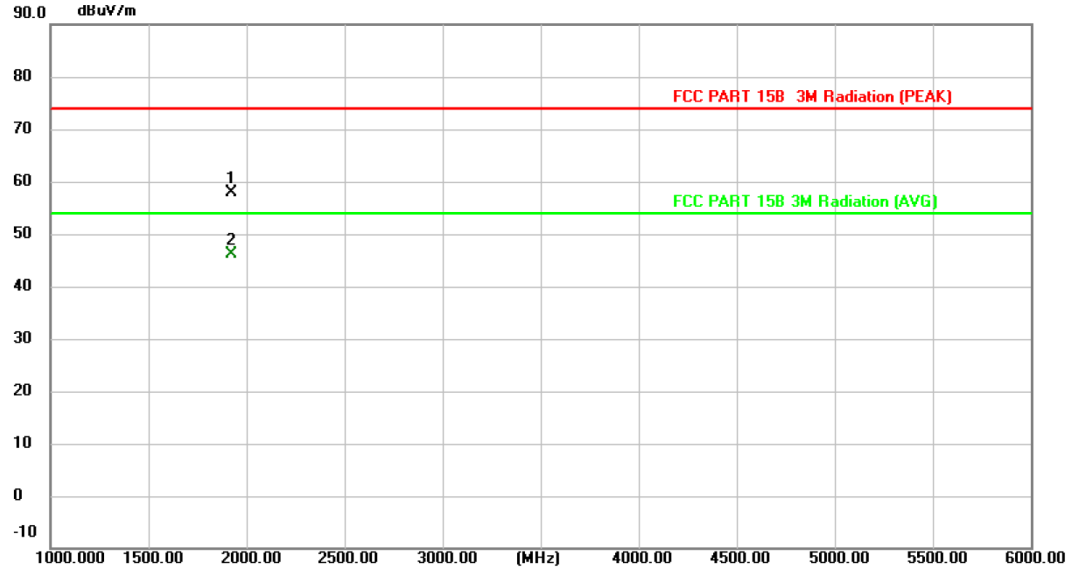
Temperature:	23.4℃	Relative Humidity:	48%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna3)		
Remark:	Only showed test data of the worst mode.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		1845.558	55.14	-1.80	53.34	74.00	-20.66	peak
2	*	1851.918	43.00	-1.73	41.27	54.00	-12.73	AVG

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

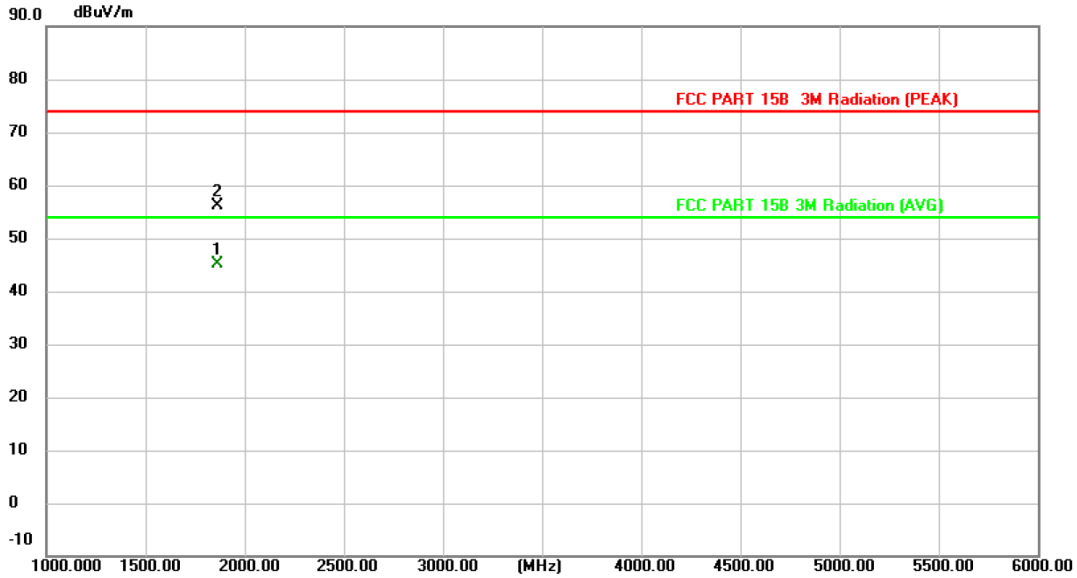
Temperature:	24.3℃	Relative Humidity:	45%
Test Voltage:	DC 4.5V		
Ant. Pol.	Horizontal		
Test Mode:	Mode 1(Antenna4)		
Remark:	Only showed test data of the worst mode.		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1924.540	94.41	-36.57	57.84	74.00	-16.16	peak
2 *	1925.360	82.77	-36.56	46.21	54.00	-7.79	AVG

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	24.3℃	**Relative Humidity:**	45%
Test Voltage:	DC 4.5V		
Ant. Pol.	Vertical		
Test Mode:	Mode 1(Antenna4)		
Remark:	Only showed test data of the worst mode.		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	1860.250	81.75	-36.54	45.21	54.00	-8.79	AVG
2	1862.350	92.80	-36.55	56.25	74.00	-17.75	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

-----END OF REPORT-----