



FCC TEST REPORT

FCC ID: 2AVG9-STANDPOW

On Behalf of

Shenzhen Yostand Technology Co., Ltd.

Wireless Power Bank Stand

Model No.: StandPow TW10000, StandPow M10000, StandPow W10000, StandPow DM10000, StandPow DW10000, StandPow TM20000, StandPow TW20000, StandPow M20000, StandPow W20000, StandPow DM20000, StandPow DW20000

Prepared for : Shenzhen Yostand Technology Co., Ltd.
Address : East, 10th Floor, Mingzhuo Building, Mingzhuoxing Industrial Zone, No.1
Industrial Area, Loucun Community, Gongming Street, Guangming New District, Shenzhen

Prepared By : Shenzhen Alpha Product Testing Co., Ltd.
Address : Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

Report Number : A2202059-C01-R02
Date of Receipt : February 17, 2022
Date of Test : February 17, 2022–March 24, 2022
Date of Report : March 24, 2022
Version Number : V0

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TEST REPORT DECLARATION

Applicant : Shenzhen Yostand Technology Co., Ltd.
 Address : East, 10th Floor, Mingzhuo Building, Mingzhuoxing Industrial Zone, No.1 Industrial Area, Loucun Community, Gongming Street, Guangming New District, Shenzhen
 Manufacturer : Shenzhen Yostand Technology Co., Ltd.
 Address : East, 10th Floor, Mingzhuo Building, Mingzhuoxing Industrial Zone, No.1 Industrial Area, Loucun Community, Gongming Street, Guangming New District, Shenzhen
 EUT Description : Wireless Power Bank Stand

StandPow TW10000, StandPow M10000, StandPow W10000, StandPow DM10000, StandPow DW10000,
 (A) Model No. : StandPow TM20000, StandPow TW20000, StandPow M20000, StandPow W20000, StandPow DM20000, StandPow DW20000
 (B) Trademark : **YOSTAND**

Measurement Standard Used:

FCC CFR Title 47 Part 15 Subpart C Section 15.209

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC CFR Title 47 Part 15 Subpart C Section 15.209 requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....:

Yannis Wen
Project Engineer



Approved by (name + signature).....:

Simple Guan
Project Manager



Date of issue.....

March 24, 2022

Revision History

Revision	Issue Date	Revisions	Revised By
V0	March 24, 2022	Initial released Issue	Yannis Wen

1. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious Emission	§15.209(a)(f)	PASS
Occupied Bandwidth	§15.215 (c)	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.

2. General Information

2.1. Description of Device (EUT)

EUT Name	:	Wireless Power Bank Stand
Model No.	:	StandPow TW10000, StandPow M10000, StandPow W10000, StandPow DM10000, StandPow DW10000, StandPow TM20000, StandPow TW20000, StandPow M20000, StandPow W20000, StandPow DM20000, StandPow DW20000
DIFF.	:	There is no difference except the name of the model. All tests are made with the StandPow TW10000 model.
Trademark	:	YOSTAND
Power supply	:	Type C Input : 5V/2.6A, 9V/2A, 12V/1.5A Type C Output : 5V/3A, 9V/2.22A, 12V/1.67A Micro USB Input: 5V/2A, 9V/2A, 12V/1.5A USB-A Output: 5V/3A, 9V/2A, 12V/1.5A Wireless Output(Mobile): 5W, 7.5W, 10W, 15W Airpods Output: 5W(Max) iWatch Output: 3W(Max) Simultaneous output: 5V/3A
Operation frequency	:	120~205KHz
Modulation	:	MSK
Antenna Type	:	Coil Antenna, Maximum Gain is 0dBi (This value is supplied by applicant).
Software version	:	V1.0
Hardware version	:	V1.0
Connector cable loss	:	0.5dB (This value is supplied by applicant).
Intend use environment	:	Residential, commercial and light industrial environment

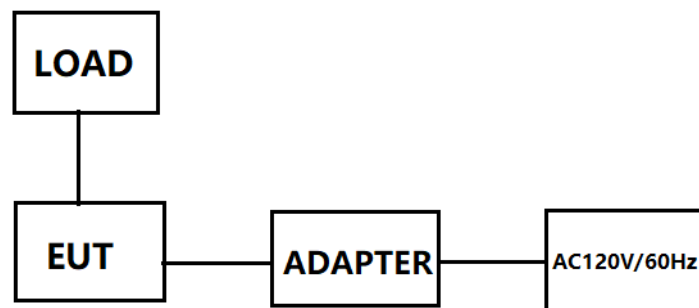
2.2. Accessories of Device (EUT)

Accessories1 : /
 Manufacturer : /
 Model : /
 Ratings : /

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification
1	Wireless load	--	--	--	--
2	Adapter	--	HNFCQC3024UU	--	--

2.4. Block Diagram of Connection between EUT and Simulators



2.5. Description of Test Modes

Channel	Frequency (KHz)
1	127
2	139

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35°C	24°C
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7. Test Facility

Shenzhen Alpha Product Testing Co., Ltd

Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission

Registration Number: 293961

July 15, 2019 Certificated by IC

Registration Number: CN0085

2.8. Measurement Uncertainty

(95% confidence levels, k=2)

Item	MU	Remark
Uncertainty for Conducted Emission Test	2.74dB	
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB	Polarize: V
	2.57dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.77dB	Polarize: V
	3.80dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	4.13dB	Polarize: H
	4.16dB	Polarize: V
Uncertainty for radio frequency	5.4×10^{-8}	
Uncertainty for conducted RF Power	0.37dB	

2.9. Test Equipment List

Equipment	Manufacture	Model No.	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	N/A	2020.09.02	3Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	102137	2021.08.25	1 Year
Spectrum analyzer	Agilent	N9020A	MY499100060	2021.08.25	1 Year
Receiver	ROHDE&SCHWARZ	ESR	1316.3003K03-102082-Wa	2021.08.25	1 Year
Receiver	R&S	ESCI	101165	2021.08.25	1 Year
Bilog Antenna	Schwarzbeck	VULB 9168	VULB9168-438	2020.04.12	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2020.04.12	2Year
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00059	2021.08.30	2Year
RF Cable	Resenberger	Cable 1	RE1	2021.08.25	1 Year
RF Cable	Resenberger	Cable 2	RE2	2021.08.25	1 Year
RF Cable	Resenberger	Cable 3	CE1	2021.08.25	1 Year
Pre-amplifier	HP	HP8347A	2834A00455	2021.08.25	1 Year
Pre-amplifier	Agilent	8449B	3008A02664	2021.08.25	1 Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126-466	2021.08.25	1 Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	101043	2021.08.25	1 Year
Horn Antenna	SCHWARZBECK	BBHA9170	00946	2021.08.30	2 Year
Preamplifier	SKET	LNPA_1840-50	SK2018101801	2021.08.25	1 Year
Power Meter	Agilent	E9300A	MY41496628	2021.08.25	1 Year
Power Sensor	DARE	RPR3006W	15100041SNO91	2021.08.25	1 Year
Temp. & Humid. Chamber	Wei Huang	WHTH-1000-40-880	100631	2021.04.21	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	20140927-6	2021.08.25	1 Year
Adjustable attenuator	MWRFtest	N/A	N/A	N/A	N/A

10dB Attenuator	Mini-Circuits	DC-6G	N/A	N/A	N/A
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Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EZ-EMC	EZ	Alpha-3A1
CE	EZ-EMC	EZ	Alpha-3A1
RF-CE	MTS 8310	MW	V2.0.0.0

3. Test Results and Measurement Data

3.1. Conducted Emission

3.1.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.207														
Test Method:	ANSI C63.10:2013														
Frequency Range:	150 kHz to 30 MHz														
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto														
Limits:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table>	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
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													
Test Setup:	<div><p>Reference Plane</p><p>40cm 80cm</p><p>E.U.T Adapter LISN Filter AC power EMI Receiver</p><p>Test table/Insulation plane</p><p>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p></div>														
Test Mode:	Charging + Transmitting Mode														
Test Procedure:	<div><div></div><div><ol style="list-style-type: none">1. The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.</div></div>														
Test Result:	PASS														

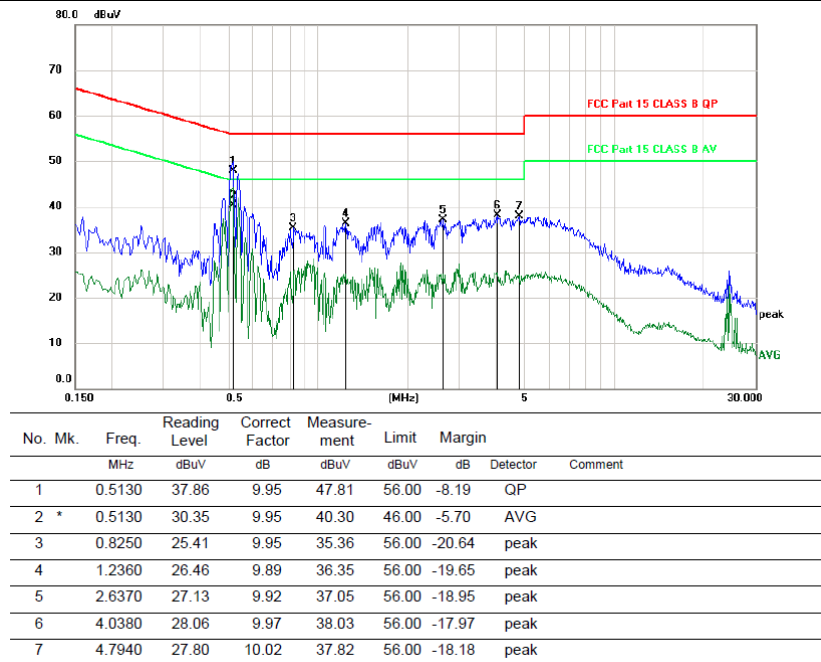
3.1.2. Test Data

Please refer to following diagram for individual

Test Mode	: Charging
Test Result	: PASS
Note: The test results are listed in next pages. All test modes has been tested, this report only reflected the worst mode. (Charging) If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.	

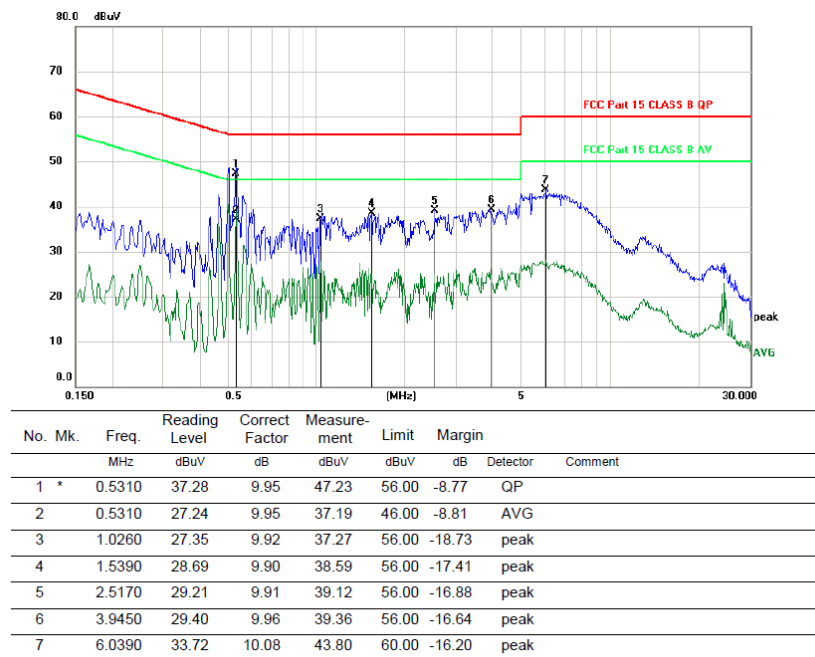
Pol

Line



Pol

Neutral

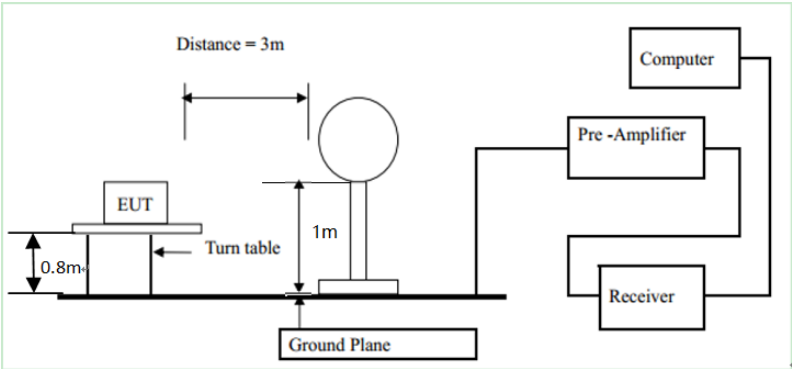


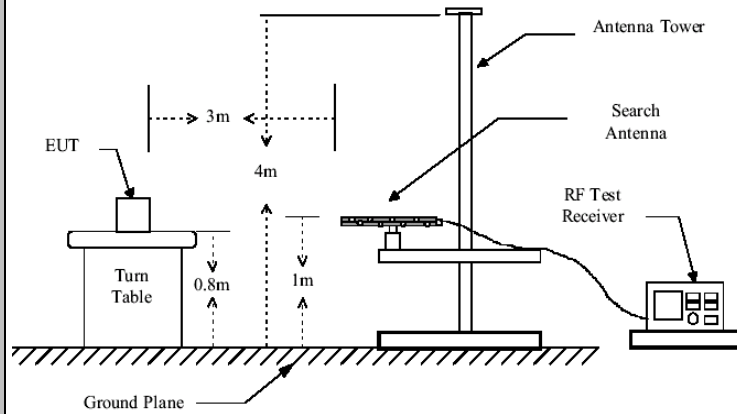
*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

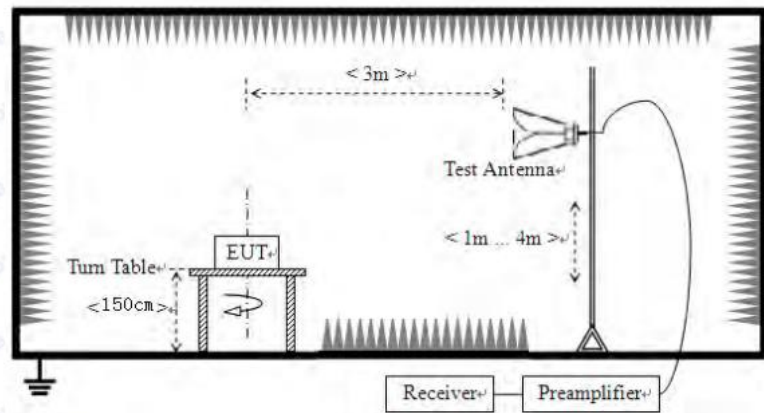
3.2. Radiated Spurious Emission Measurement

3.2.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209					
Test Method:	ANSI C63.10: 2013					
Frequency Range:	9 kHz to 25 GHz					
Measurement Distance:	3 m					
Antenna Polarization:	Horizontal & Vertical					
Operation mode:	Refer to item 4.1					
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark	
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value	
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value	
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value	
	Above 1GHz	Peak	1MHz	3MHz	Peak Value	
		Peak	1MHz	10Hz	Average Value	
Limit:	Frequency		Field Strength (microvolts/meter)		Measurement Distance (meters)	
	0.009-0.490		2400/F(KHz)		300	
	0.490-1.705		24000/F(KHz)		30	
	1.705-30		30		30	
	30-88		100		3	
	88-216		150		3	
	216-960		200		3	
	Above 960		500		3	
	Frequency		Field Strength (microvolts/meter)		Measurement Distance (meters)	
	Above 1GHz	500		3		
		5000		3		
	Test setup:	For radiated emissions below 30MHz				
						
		30MHz to 1GHz				



Above 1GHz



Test Procedure:

1. For the radiated emission test below 1GHz:

The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.

For the radiated emission test above 1GHz:

Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from

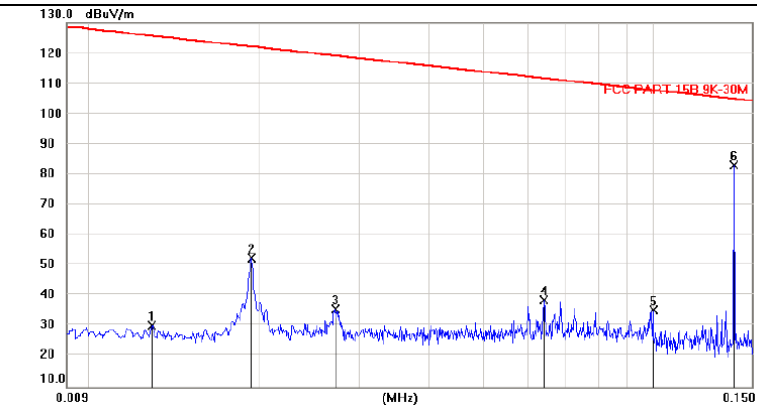
	<p>1 m to 4 m above the ground or reference ground plane.</p> <p>2. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level</p> <p>3. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.</p> <p>4. Use the following spectrum analyzer settings:</p> <p>(1) Span shall wide enough to fully capture the emission being measured;</p> <p>(2) Set RBW=100 kHz for $f < 1 \text{ GHz}$; $\text{VBW} \geq \text{RBW}$; Sweep = auto; Detector function = peak; Trace = max hold;</p> <p>(3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1 \text{ GHz}$ for peak measurement.</p> <p>For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. $\text{VBW} \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</p>
Test mode:	Refer to section 4.1 for details
Test results:	PASS

3.2.2. Test Data

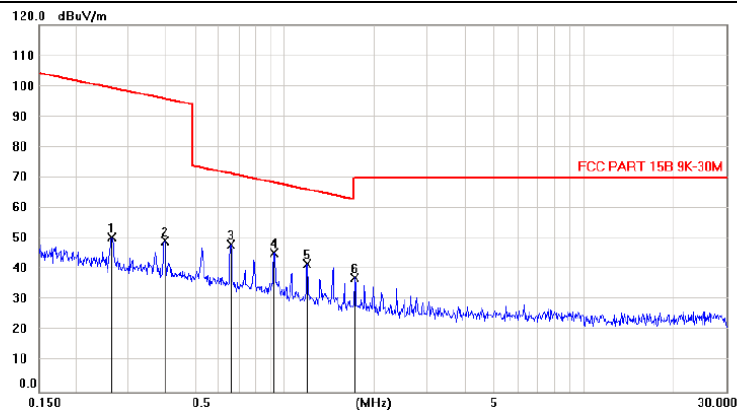
Please refer to following diagram for individual

Frequency Range	: 9KHz~30MHz
Test Mode	: TX: 127kHz, 139kHz
Test Results	: PASS
Note:	<ol style="list-style-type: none">1. The test results are listed in next pages.2. This mode is worst case mode, so this report only reflected the worst mode.3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the quasi-peak detector need not be carried out.

For signal coil



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		0.0128	8.94	21.43	30.37	125.5	-95.19	peak		
2		0.0192	31.05	21.27	52.32	122.0	-69.73	peak		
3		0.0270	14.45	21.07	35.52	119.0	-83.57	peak		
4		0.0640	18.63	20.11	38.74	111.6	-72.88	peak		
5		0.0997	15.50	19.80	35.30	107.7	-72.48	peak		
6	*	0.1396	63.03	20.04	83.07	104.8	-21.80	peak		

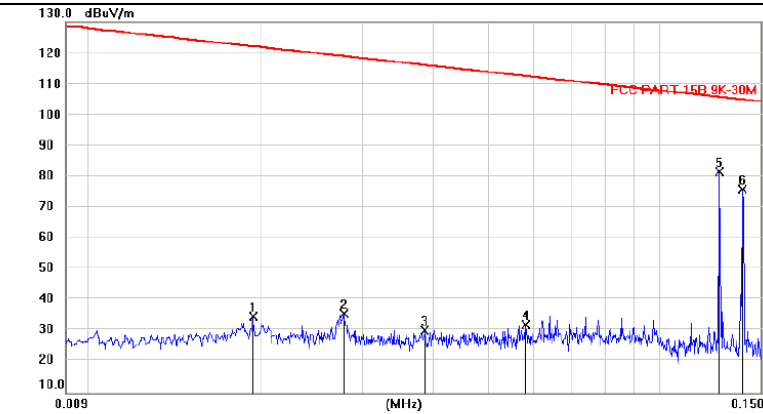


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		0.2640	30.50	20.04	50.54	99.35	-48.81	peak		
2		0.3956	29.60	19.85	49.45	95.85	-46.40	peak		
3		0.6582	28.30	19.79	48.09	71.40	-23.31	peak		
4	*	0.9229	25.64	19.95	45.59	68.41	-22.82	peak		
5		1.1854	21.76	20.05	41.81	66.21	-24.40	peak		
6		1.7142	17.11	20.18	37.29	70.00	-32.71	peak		

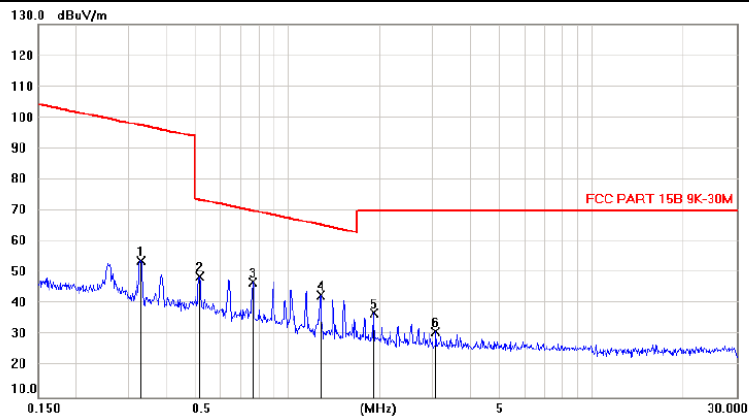
!:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

For three coils



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	dBuV	Factor	ment			Height	Degree	Comment
1		0.0191	13.38	21.27	34.65	122.0	-87.44	peak		
2		0.0278	14.70	21.05	35.75	118.8	-83.09	peak		
3		0.0386	9.81	20.52	30.33	116.0	-85.67	peak		
4		0.0580	12.07	20.02	32.09	112.4	-80.38	peak		
5	*	0.1272	61.69	19.87	81.56	105.6	-24.12	peak		
6		0.1396	55.75	20.04	75.79	104.8	-29.08	peak		



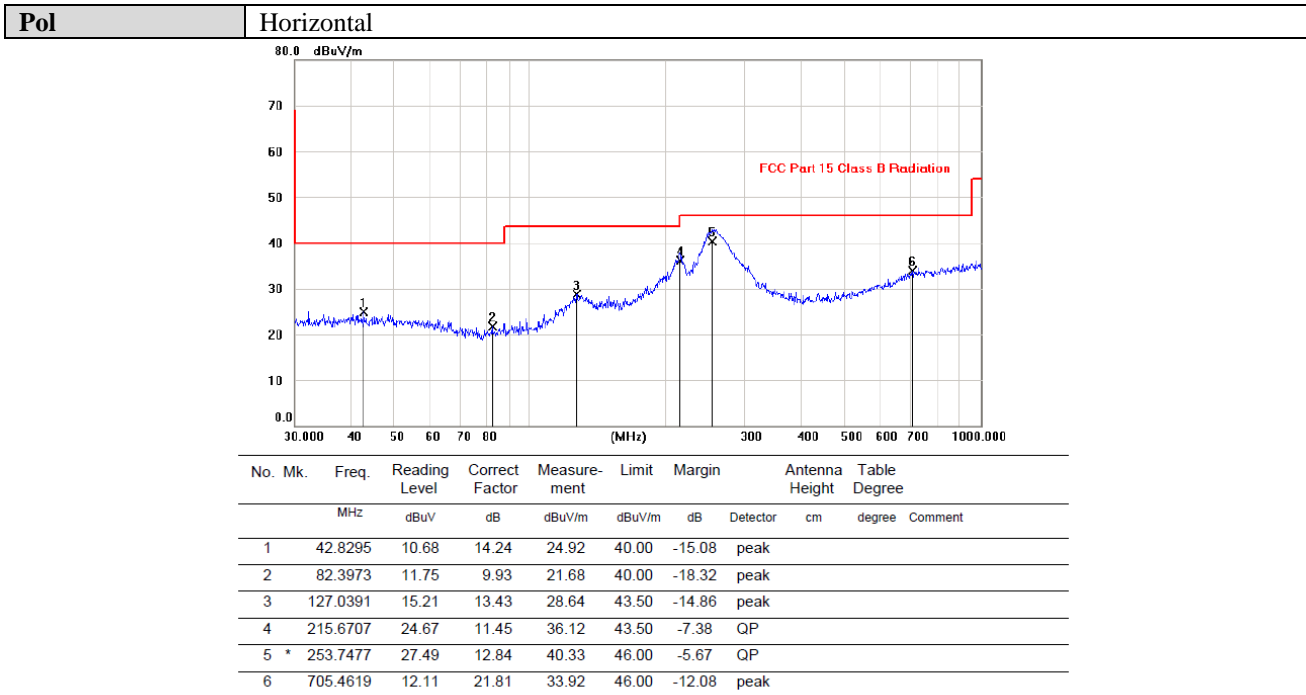
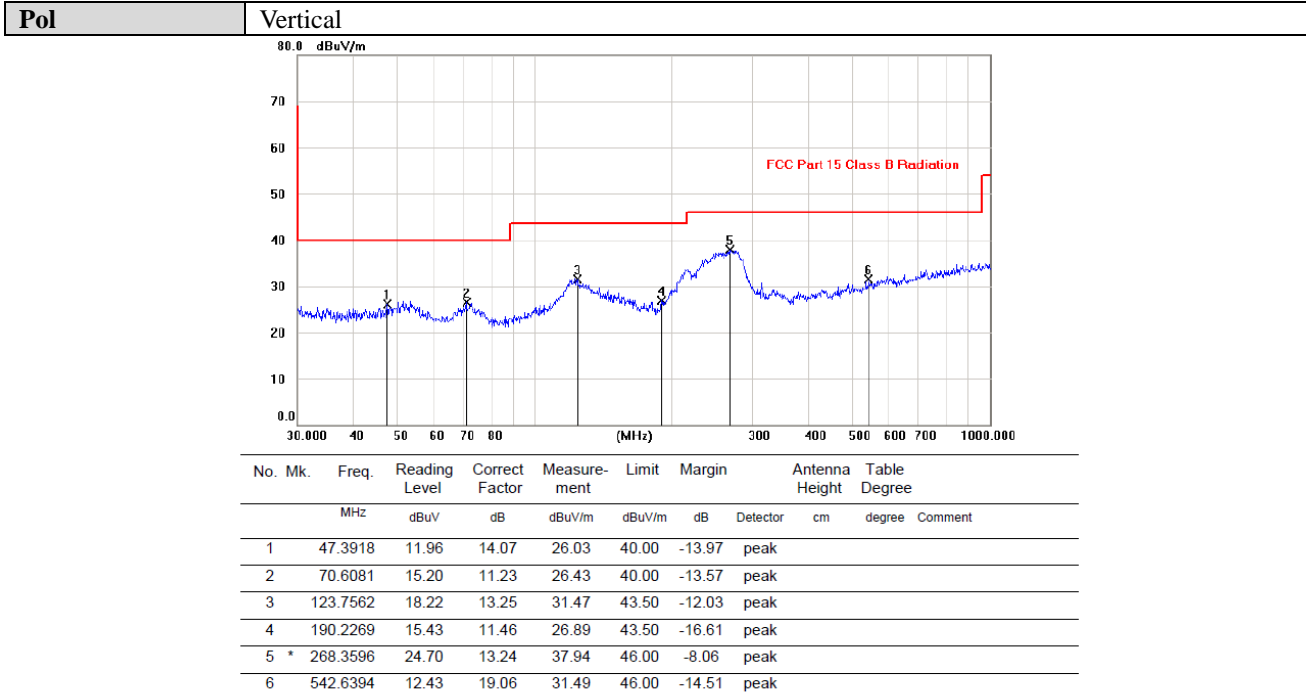
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	dBuV	Factor	ment			Height	Degree	Comment
1		0.3274	34.14	19.95	54.09	97.49	-43.40	peak		
2		0.5110	29.06	19.71	48.77	73.63	-24.86	peak		
3		0.7649	27.11	19.86	46.97	70.07	-23.10	peak		
4	*	1.2789	22.78	20.07	42.85	65.54	-22.69	peak		
5		1.9168	16.99	20.23	37.22	70.00	-32.78	peak		
6		3.0656	10.73	20.54	31.27	70.00	-38.73	peak		

*:Maximum data x:Over limit !:over margin

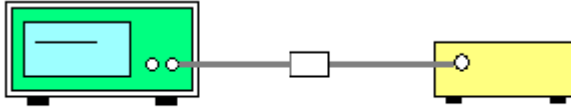
Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Frequency Range	: 30MHz~1000MHz
Test Mode	: Full Load, Half Load, Empty Load
Test Results	: PASS
Note:	<p>1. The test results are listed in next pages.</p> <p>2. All test modes has been tested, this report only reflected the worst mode. (Full Load)</p> <p>3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the quasi-peak detector need not be carried out.</p>

Frequency Range	: Above 1GHz	
EUT	: /	Test Date : /
M/N	: /	Temperature : /
Test Engineer	: /	Humidity : /
Test Mode	: /	
Test Results	: N/A	
Note:	<p>1. The highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. So the frequency rang above 1GHz radiation test not applicable.</p>	

30MHz-1GHz

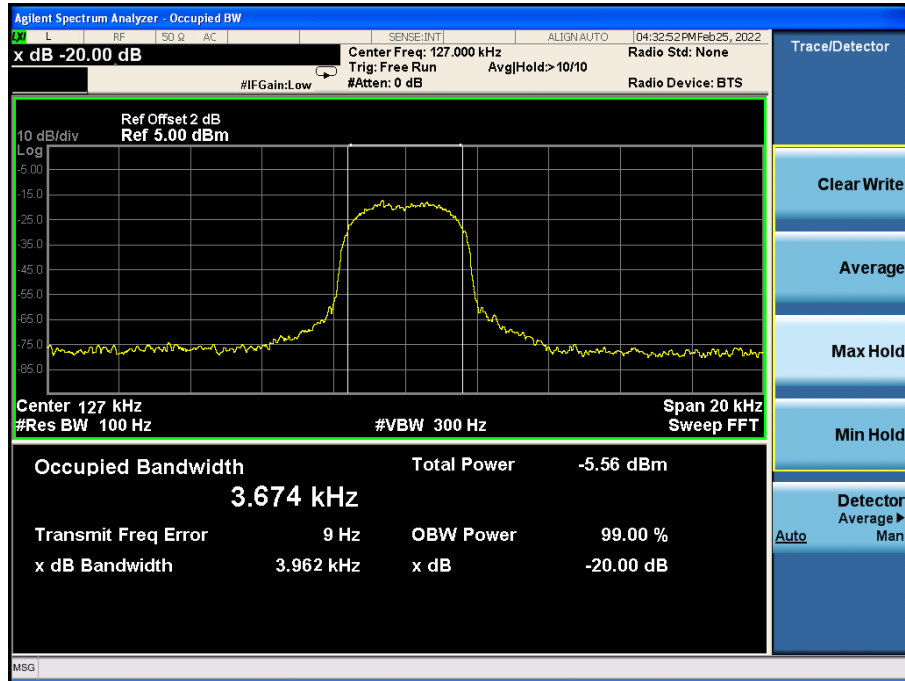
3.3. Test Specification

Test Requirement:	FCC Part15 C Section 15.215(c)
Test Method:	ANSI C63.10: 2013
Limit:	N/A
Test Procedure:	<ol style="list-style-type: none"> 1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel; $RBW \geq 1\%$ of the 20 dB bandwidth; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold. 4. Measure and record the results in the test report.
Test setup:	 <p>The diagram illustrates the test setup. On the left is a green rectangular box labeled 'Spectrum Analyzer' with a blue screen and two small red dots representing ports. A black cable connects this box to a yellow rectangular box on the right labeled 'EUT'. The cable has a small white square component in the middle. Below the Spectrum Analyzer box is the text 'Spectrum Analyzer', and below the EUT box is the text 'EUT'.</p>
Test Mode:	Refer to section 4.1 for details
Test results:	PASS

3.3.1. Test Data

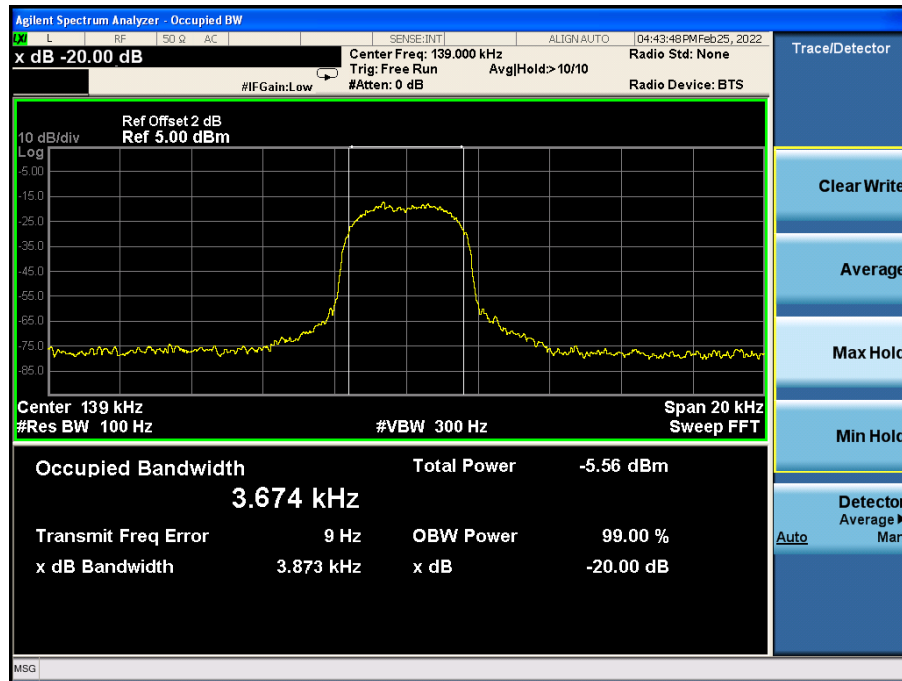
Frequency(KHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
127	3.962	---	PASS

Test plots as follows:



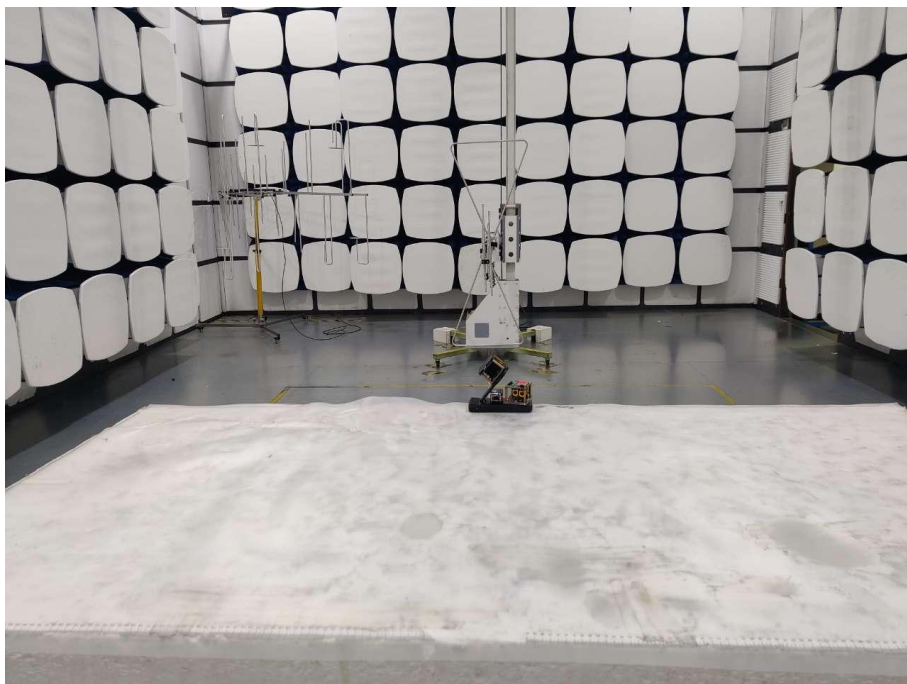
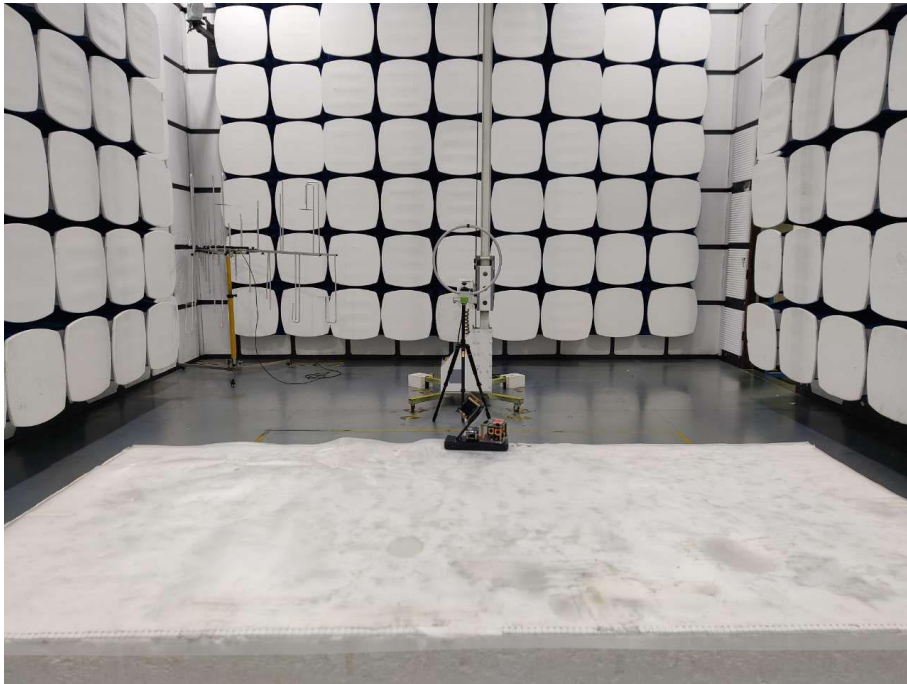
Frequency(KHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
139	3.873	---	PASS

Test plots as follows:



4. Photos of Test Setup

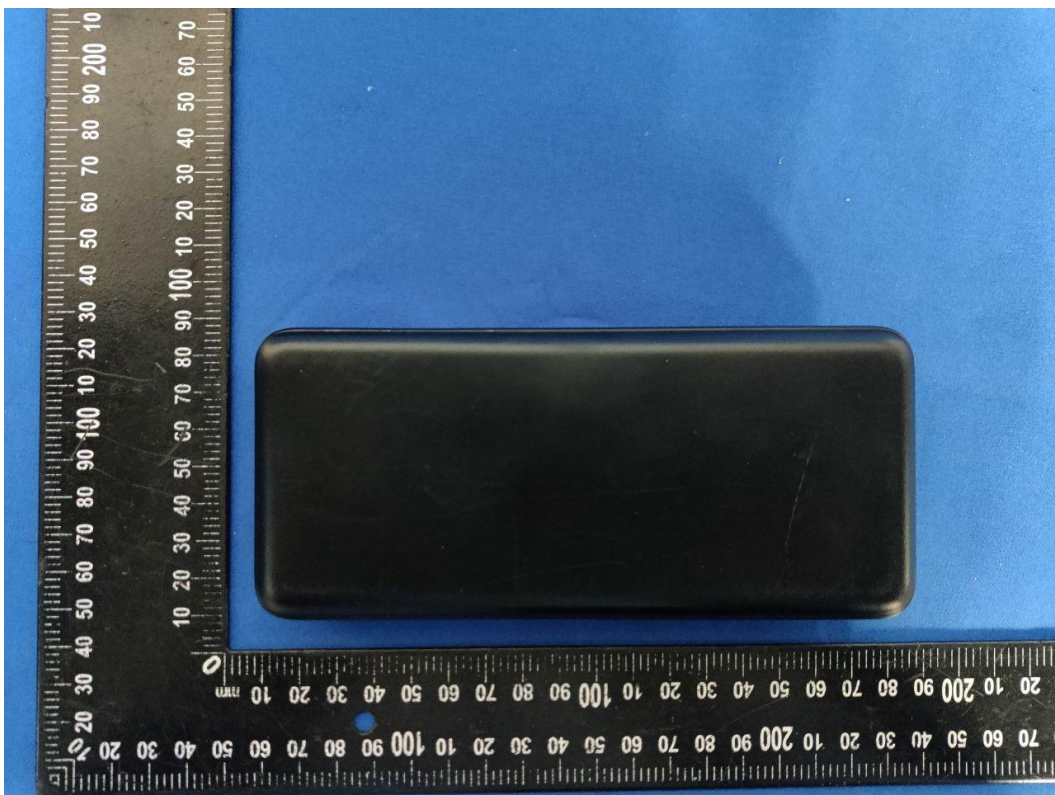
Radiated Emission

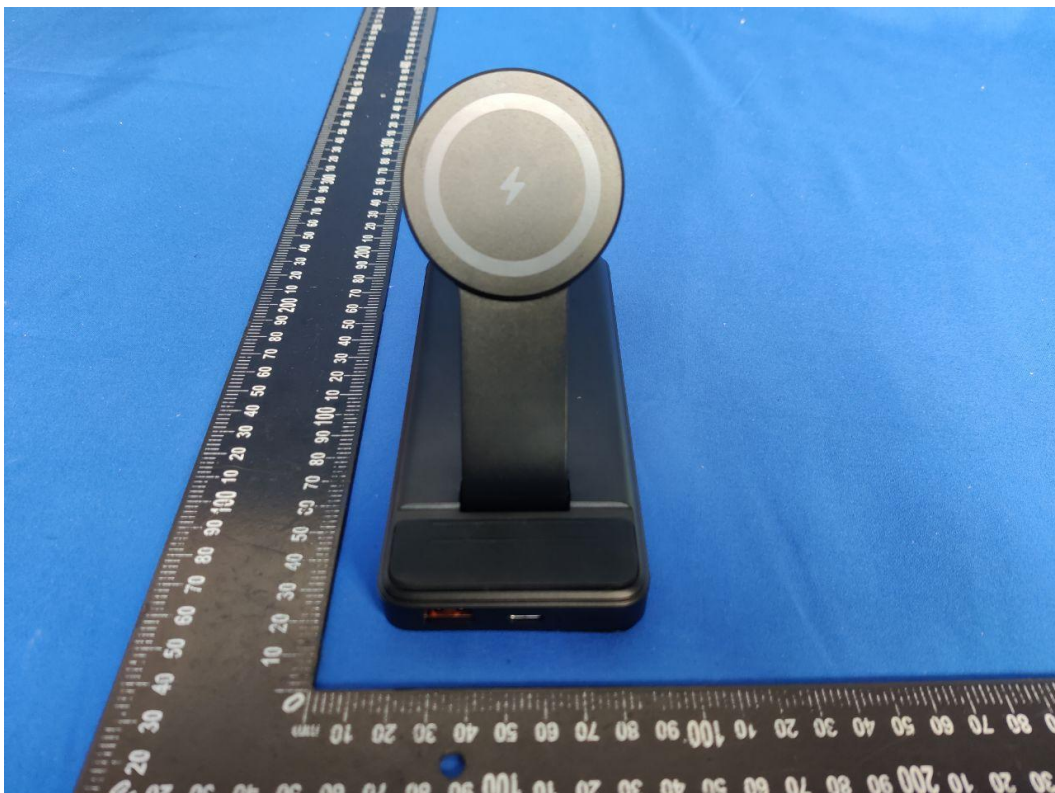
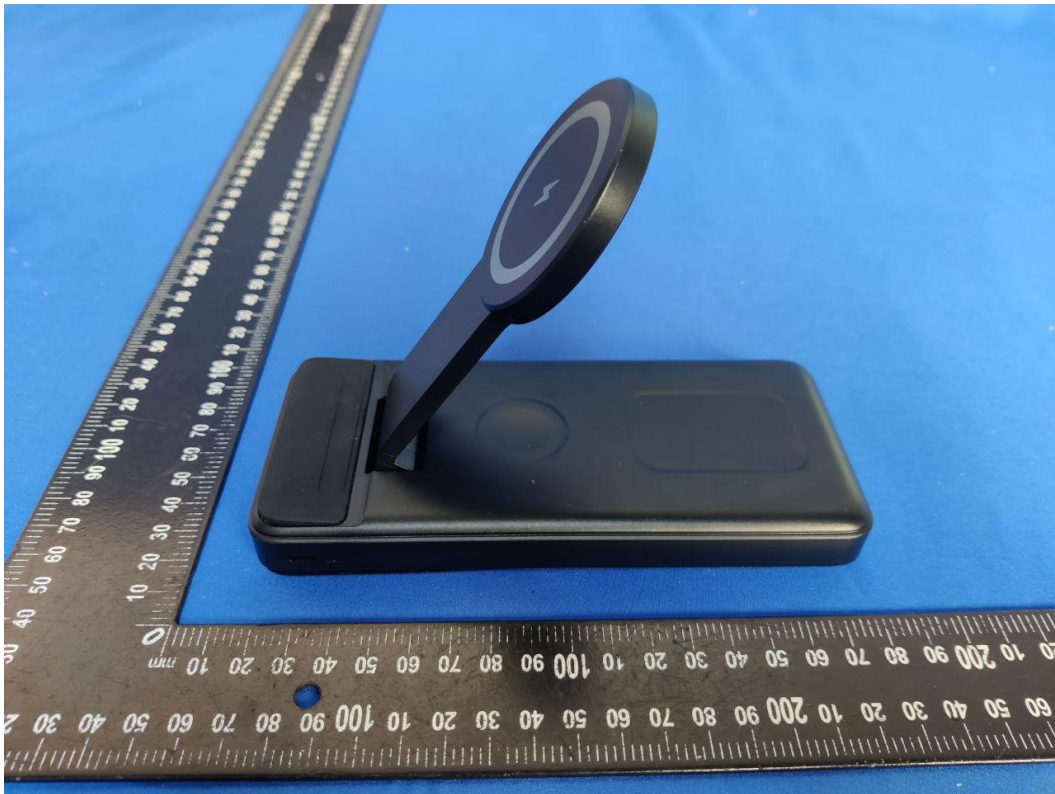


Conducted Emission

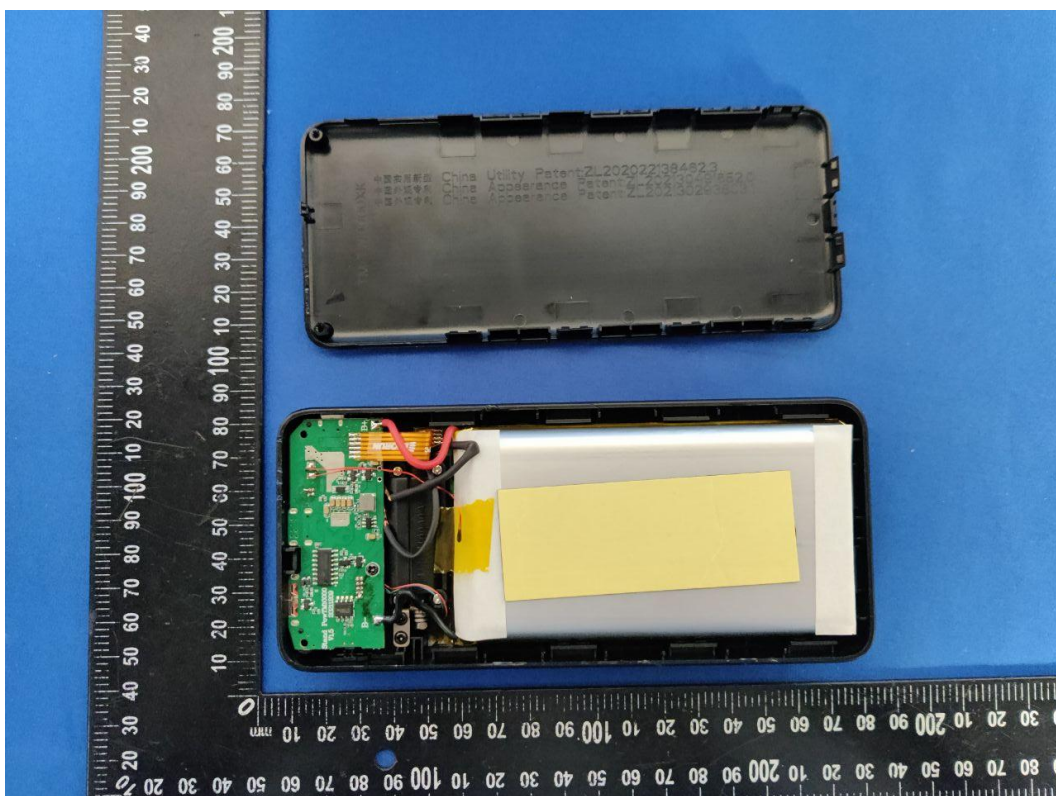


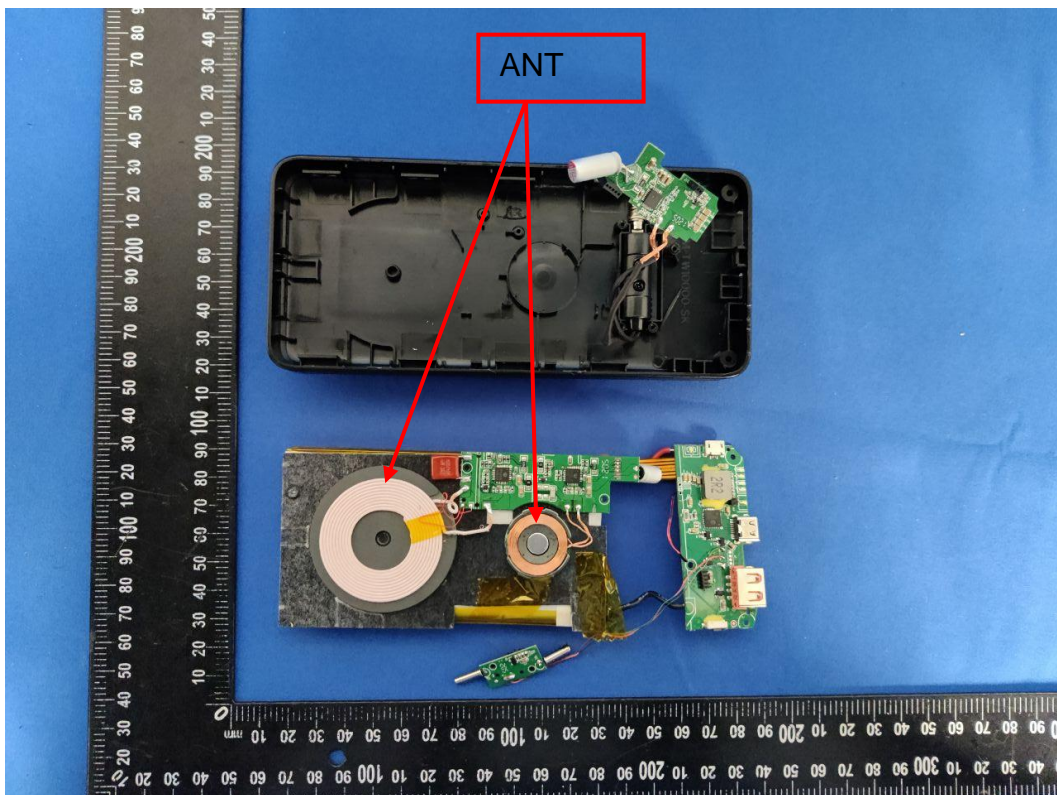
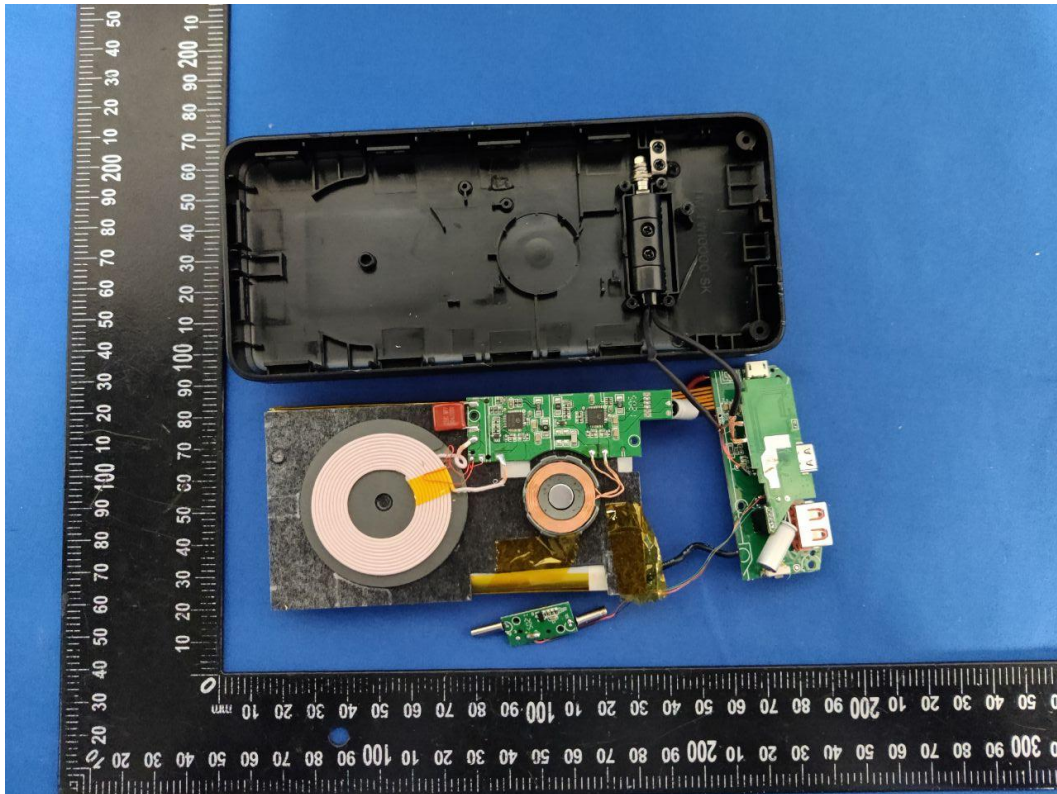
5. Photographs of EUT

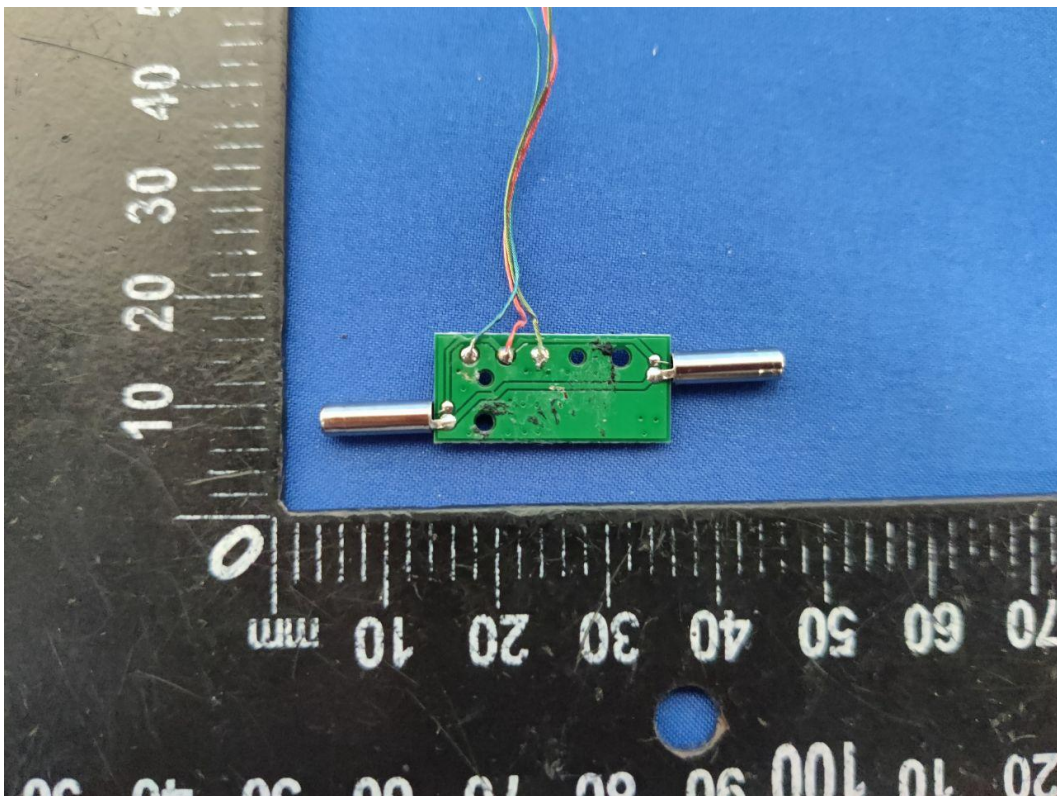
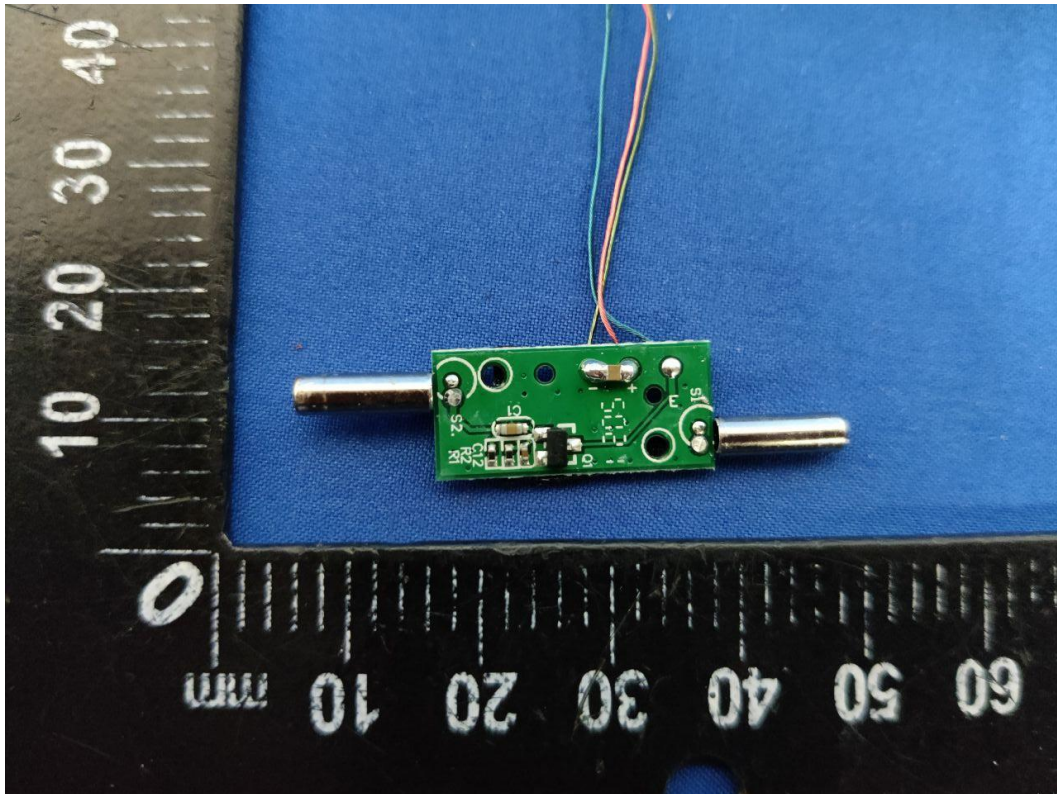


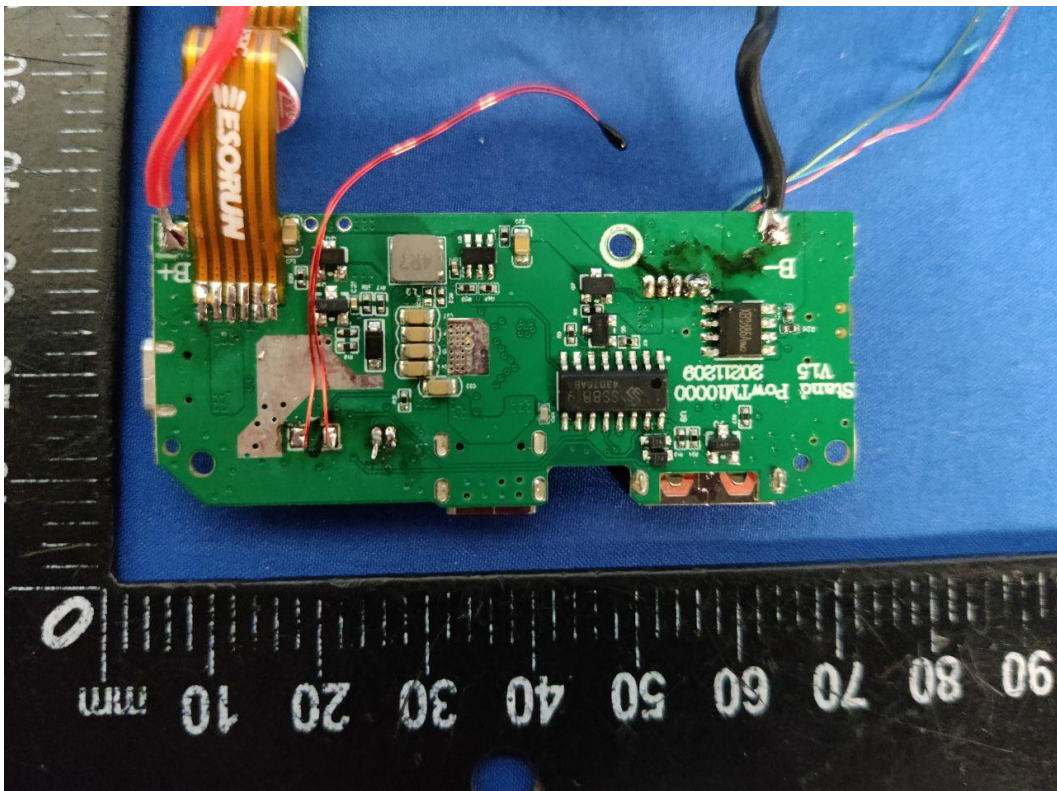
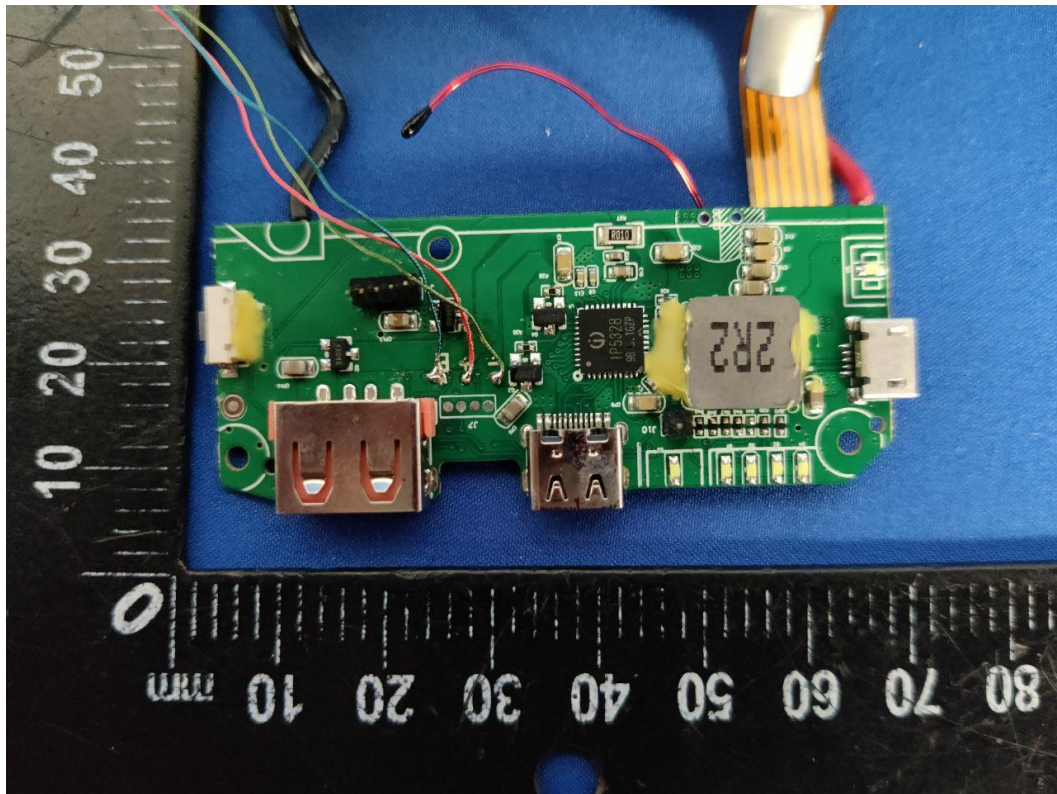


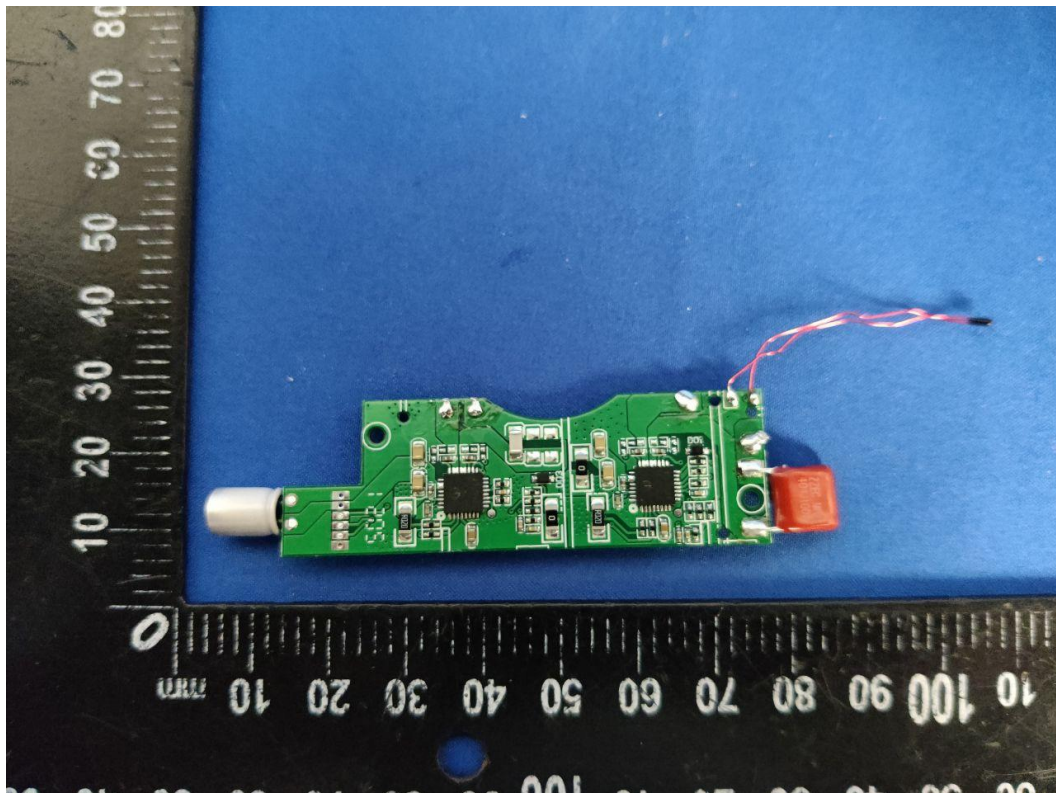
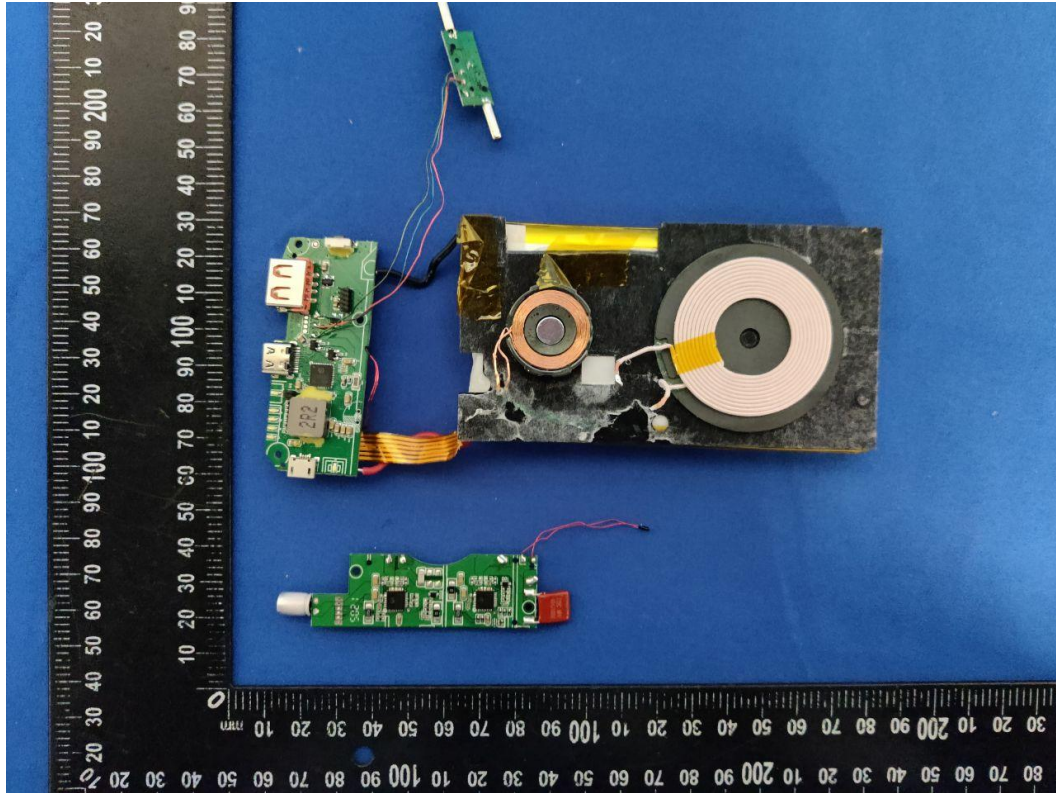


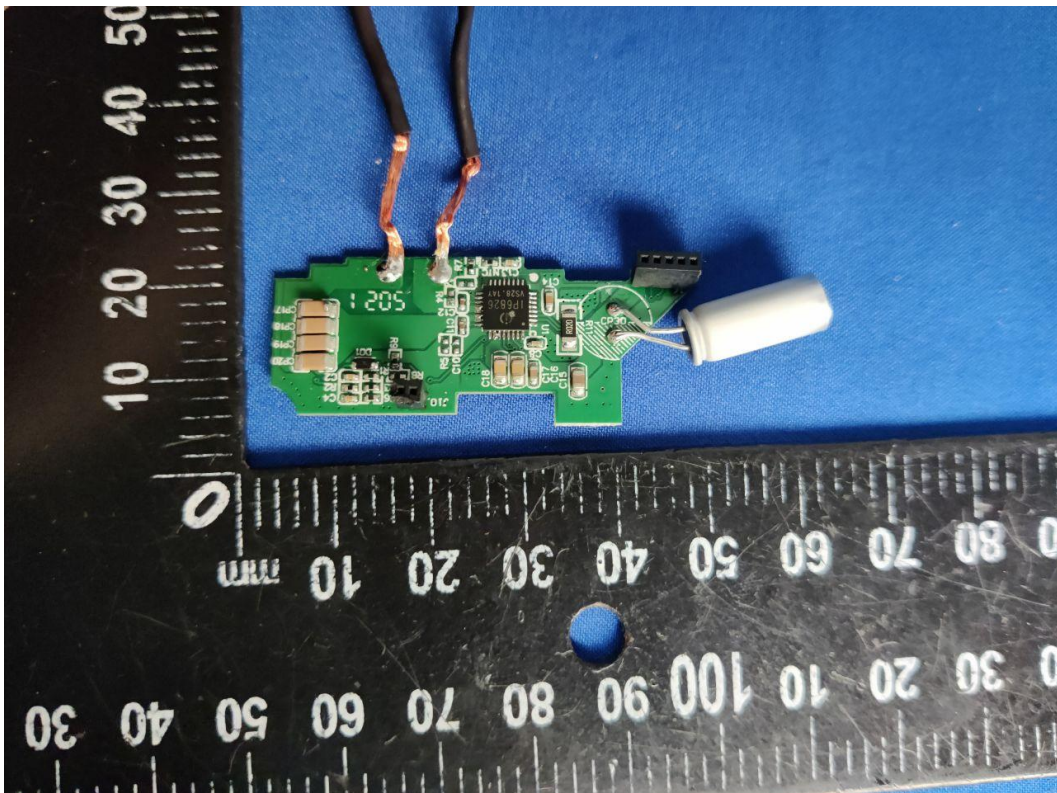
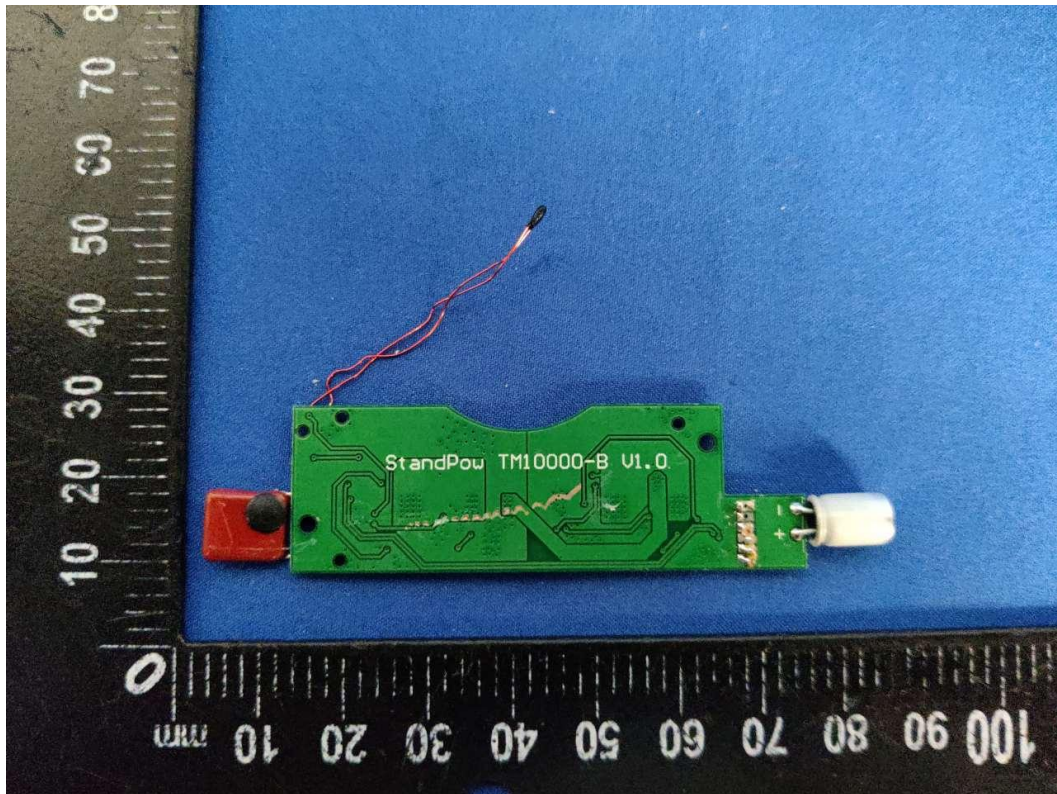


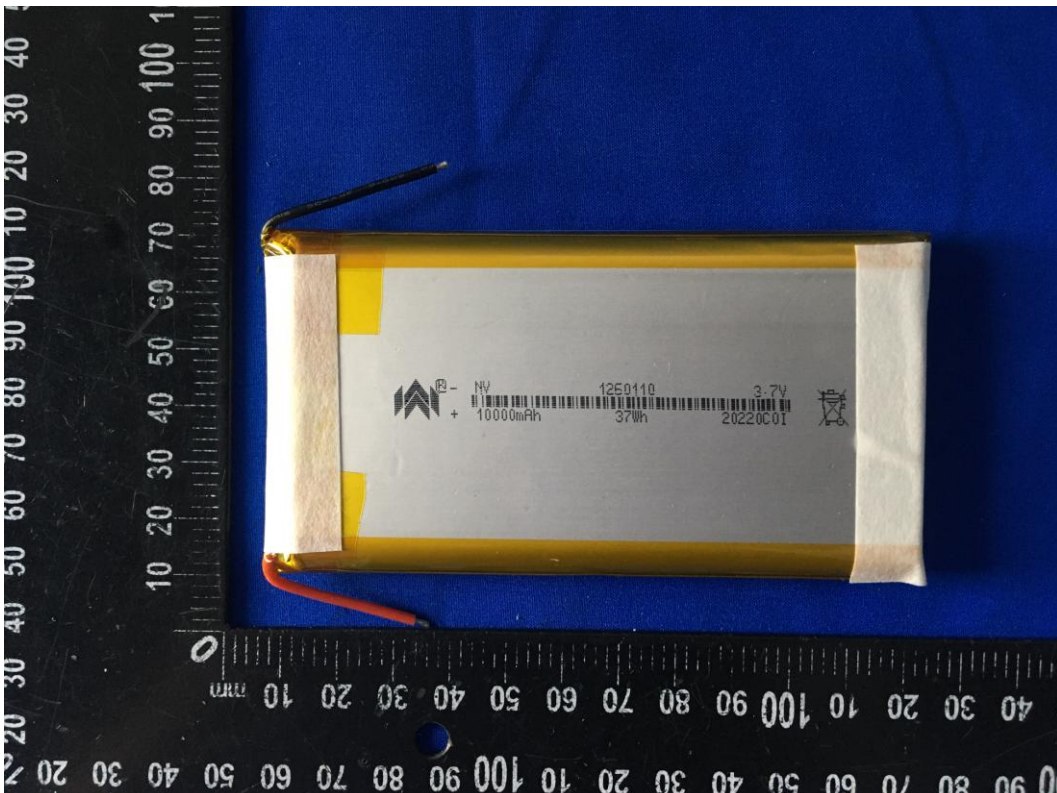
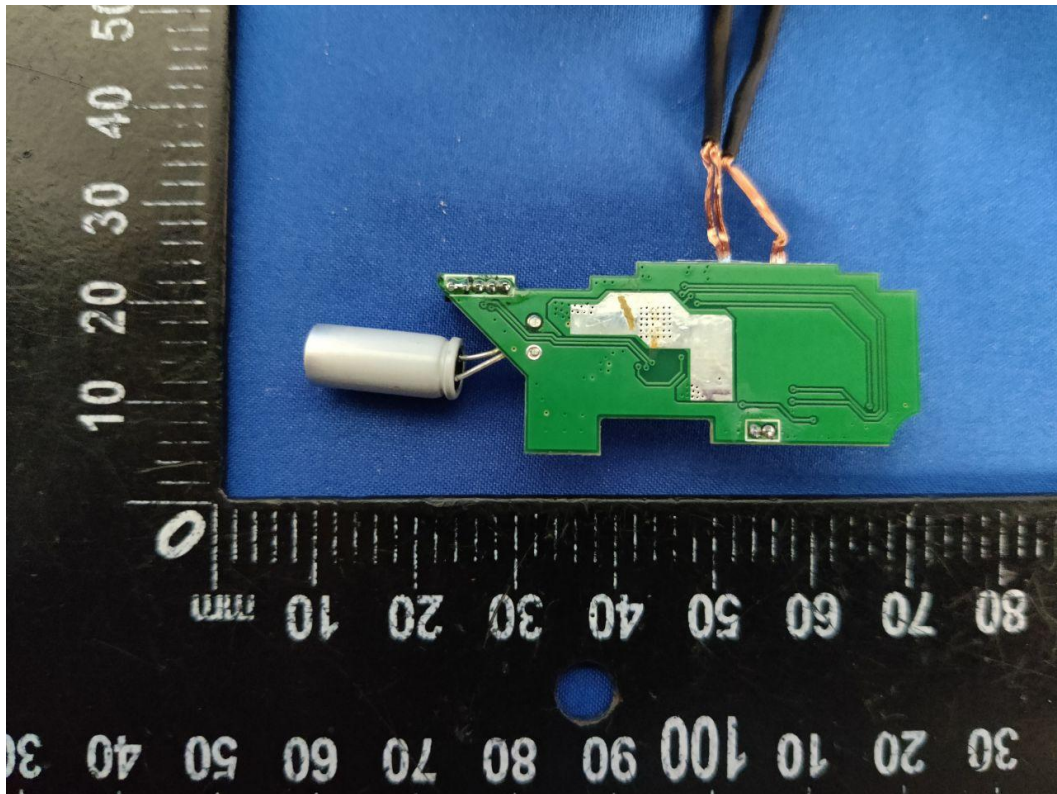


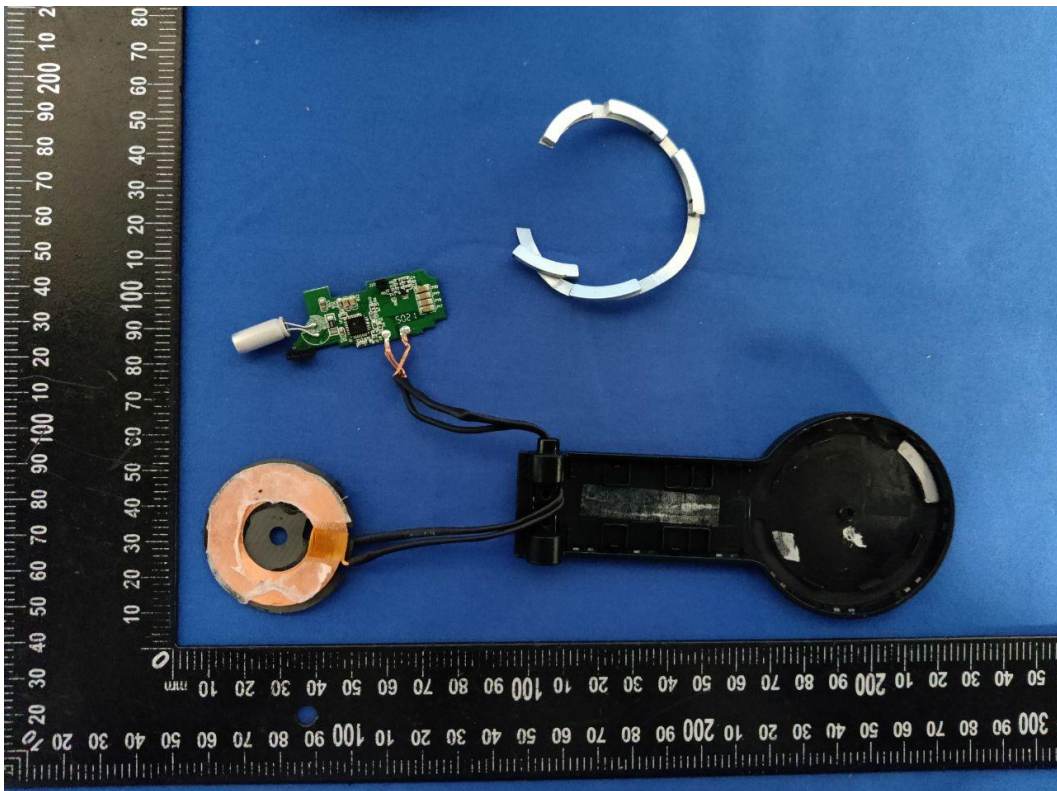












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