

RED-EMC Test Report

Report No. : 1812C50296112501E

Applicant : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Address : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX China XXXX

Product Name : Wireless Power Bank

Report Date : 2025-07-18

Shenzhen Anbotek Compliance Laboratory Limited



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TEST REPORT

Applicant : XXXXXXXXXXXXXXXXXXXXXXXXXXXX CO., LTD
Manufacturer : XXXXXXXXXXXXXXXXXXXXXXXXXXXX CO., LTD
Product Name : Wireless Power Bank
Model No. : MPB50, MPB50B, MPB50W
Trade Mark : N/A
Rating(s) : Type-C Input: 5V=3A, 9V=2A
Type-C Output: 5V=3A, 9V=2.22A, 12V=1.67A
USB-A Output: 5V=4.5A, 9V=2A, 12V=1.5A
Wireless Charging Output: 5W/7.5W/10W/15W
Battery Capacity: 10000mAh/3.85V/38.5Wh

Test Standard(s) : ETSI EN 301 489-1 V2.2.3 (2019-11)
ETSI EN 301 489-3 V2.3.2 (2023-01)
EN 55032: 2015+A1:2020
EN 55035: 2017+A11:2020

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the EN 301 489-1, EN 301 489-3, EN 55032 & EN 55035 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt 2025-06-18

Date of Test 2025-06-18 to 2025-07-17

Prepared By

Cecilia Chen

(Cecilia Chen)

Approved & Authorized Signer

Kingkong Jin

(Kingkong Jin)



Revision History

Report Version	Description	Issued Date
R00	Original Issue.	2025-07-18

1812C50296112501E

1. General Information

1.1. Client Information

Applicant	:	XXXXXXXXXXXXXXXXXXXXXXXXXXXX CO., LTD
Address	:	XX XX China XXXX
Manufacturer	:	XXXXXXXXXXXXXXXXXXXXXXXXXXXX CO., LTD
Address	:	XX XX China XXXX
Factory	:	XXXXXXXXXXXXXXXXXXXXXXXXXXXX CO., LTD
Address	:	XX XX China XXXX

1.2. Description of Device (EUT)

Product Name	:	Wireless Power Bank
Model No.	:	MPB50, MPB50B, MPB50W (Note: All samples are the same except the model number, so we prepare "MPB50" for test only.)
Trade Mark	:	N/A
Test Power Supply	:	AC 230V, 50Hz for adapter
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	N/A
WPT		
Operation Frequency	:	112~205kHz
Modulation Type	:	ASK
Remark: 1) All of the RF specification are provided by customer. 2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

1.3. Auxiliary Equipment Used During Test

Title	Manufacturer	Model No.	Serial No.
Xiaomi 33W adapter	Xiaomi	MDY-11-EX	SA62212LA04358J
Wireless load	BAECOAR	15W Smart wireless charger fixture wireless charging	/

1.4. Description of Test Modes

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 bellow was evaluated respectively.

Test Mode	Description	Test Standards
Mode 1	Adapter+WPT Mode	EN 301489-3
Mode 2	Adapter+USB-A+WPT Mode	EN55032 or EN55035

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1.5. Test Equipment List

☒ Power Line Conducted Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	2024-09-09	1 Year
2.	Three Phase V- type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT0 01	2025-01-13	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	2025-01-13	1 Year
4.	Software Name EZ-EMC	Farad Technology	ANB-03A	N/A	N/A	N/A

☐ Wired Network Ports Conducted Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ISN	Schwarzbeck	NTFM 8158	#172	2025-01-13	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	2025-01-13	1 Year
3.	Software Name EZ-EMC	Farad Technology	ANB-03A	N/A	N/A	N/A
4.	Three Phase V- type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT0 01	2025-01-13	1 Year

☒ Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2025-01-14	1 Year
2.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	2022-10-23	3 Year
3.	Pre-amplifier	SONOMA	310N	186860	2025-01-14	1 Year
4.	Software Name EZ-EMC	Farad Technology	ANB-03A	N/A	N/A	N/A

☒ Electrostatic Discharge Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Simulators	emtest	ESD NX30.1	11936	2025-03-03	1 Year

☒ R/S Immunity Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	Agilent	N5181A	MY50143107	2025-01-13	1 Year
2.	Power Meter	Agilent	E4417A	MY45101384	2025-01-13	1 Year
3.	Amplifier	Micotop	MPA-80-1000-600	MPA2110318	2025-01-13	1 Year
4.	Amplifier	Micotop	MPA-1000-6000-100	MPA2110327	2025-01-13	1 Year
5.	Log.-Per.-Antenna	Schwarzbeck	VULP 9118E	01012	N/A	N/A
6.	Microwave Log.-Per. Antenna	Schwarzbeck	STLP 9149	00788	N/A	N/A
7.	Power Sensor	KEYSIGHT	E9323A	US40410647	2025-01-13	1 Year
8.	Power Sensor	KEYSIGHT	E9323A	MY53100007	2025-01-13	1 Year
9.	Electric field Probe	Narda S.T.S /PMM	EP 601	811ZX10351	2025-01-13	1 Year
10.	Software	EMtrace	EM 3	/	N/A	N/A

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1.6. Description of Test Facility

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

FCC-Registration No.: 279531

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 279531.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.

1.7. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.
7. The data in this report will be synchronized with the corresponding national market supervision and management departments and cross-border e-commerce platforms as required by regulatory agencies.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

1.8. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	3.2dB
Conducted emissions (AAN 150kHz~30MHz)	3.2dB
Radiated emissions (30MHz~1000MHz)	Horizontal: 3.70dB; Vertical: 4.42dB
Radiated emissions (above 1GHz)	1G-6GHz: 4.64dB 6G-18GHz: 4.82dB
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

2. Summary of Test Results

EMC Emission			
Test Items	Standard	Basic Standard	Results
Conducted Emission (Power Line)	ETSI EN 301 489-1 V2.2.3 Clause 8.3 & 8.4	EN 55032	PASS
Conducted Emission (Wired network ports)	ETSI EN 301 489-1 V2.2.3 Clause 8.7	EN 55032	N/A
Radiated Emission	ETSI EN 301 489-1 V2.2.3 Clause 8.2	EN 55032	PASS
Harmonic Current Emission	ETSI EN 301 489-1 V2.2.3 Clause 8.5	EN IEC 61000-3-2	N/A
Voltage Fluctuations&Flicker	ETSI EN 301 489-1 V2.2.3 Clause 8.6	EN 61000-3-3	N/A
EMC Immunity			
Test Items	Standard	Basic Standard	Results
Electrostatic Discharge	ETSI EN 301 489-1 V2.2.3 Clause 9.3	EN 61000-4-2	PASS
RF Electromagnetic Field	ETSI EN 301 489-1 V2.2.3 Clause 9.2	EN 61000-4-3	PASS
Fast transients, common mode	ETSI EN 301 489-1 V2.2.3 Clause 9.4	EN 61000-4-4	N/A
Surges	ETSI EN 301 489-1 V2.2.3 Clause 9.8	EN 61000-4-5	N/A
Radio frequency, common mode	ETSI EN 301 489-1 V2.2.3 Clause 9.5	EN 61000-4-6	N/A
Volt. Interruptions Volt. Dips	ETSI EN 301 489-1 V2.2.3 Clause 9.7	EN 61000-4-11	N/A
Transients and surges in the vehicular environment	ETSI EN 301 489-1 V2.2.3 Clause 9.6	ISO 7637-2	N/A
Note: (1) "N/A" denotes test is not applicable in this Test Report.			

3. Emission Test

3.1. Power Line Conducted Emission Test

3.1.1. Test Standard and Limit

Test Standard	ETSI EN 301 489-1 Clause 8.3 & 8.4
Basic Standard	EN 55032

☐ Limits for conducted emission at the AC mains power ports of Class A equipment

Frequency (MHz)	Limits (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	79.0	66.0
0.50 ~ 30.00	73.0	60.0

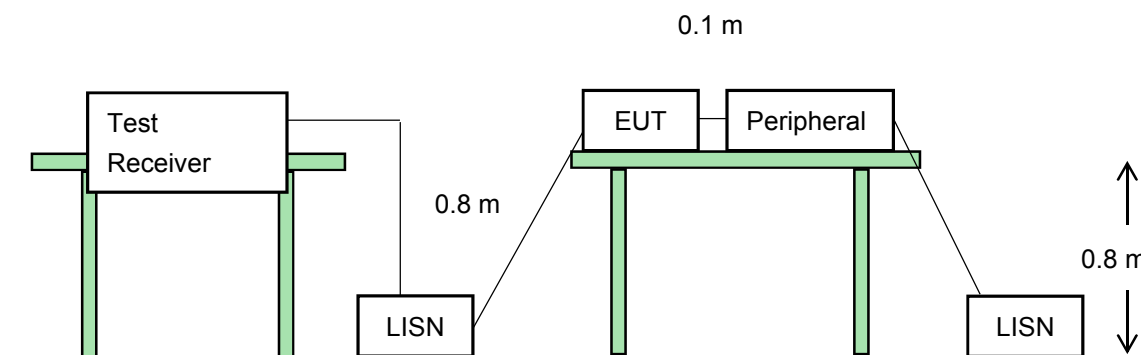
Remark: The lower limit shall apply at the transition frequencies.

☐ Limits for conducted emission at the AC mains power ports of Class B equipment

Frequency (MHz)	Limits (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0

Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

3.1.2. Test Setup



3.1.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ETSI EN 301 489-1 & EN55032 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.1.4. Test Data

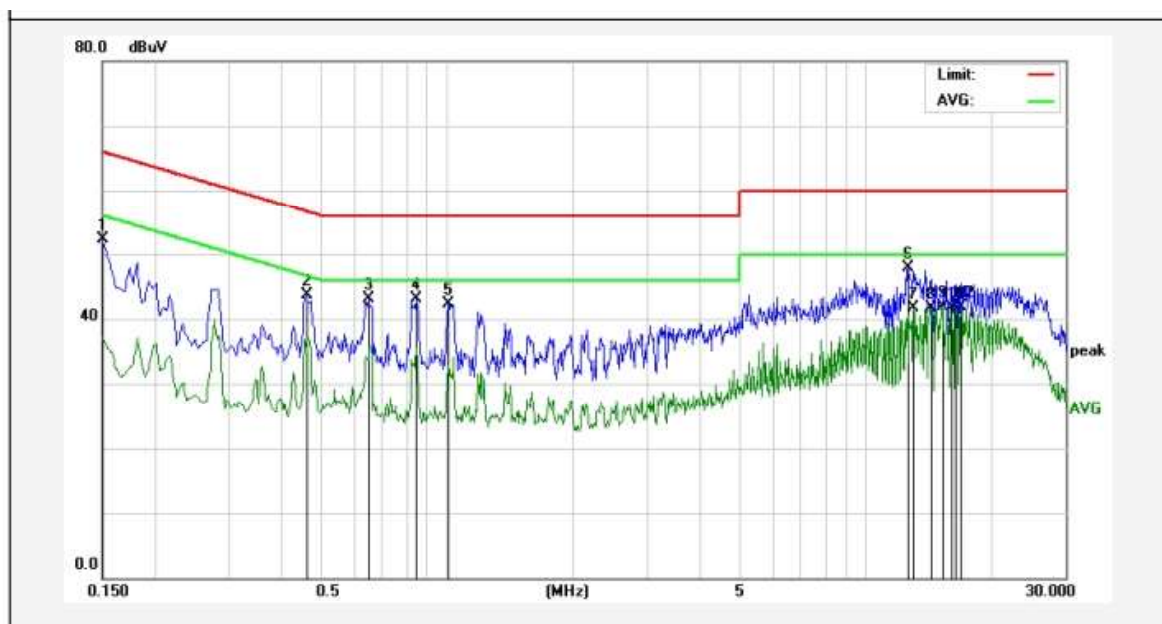
Only the worst case data was showed in the report, please to see the following pages.

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Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: Mode 2
 Test Specification: AC 230V, 50Hz for adapter
 Comment: Live Line
 Temp.(°C)/Hum.(%RH): 26.3°C/59%RH

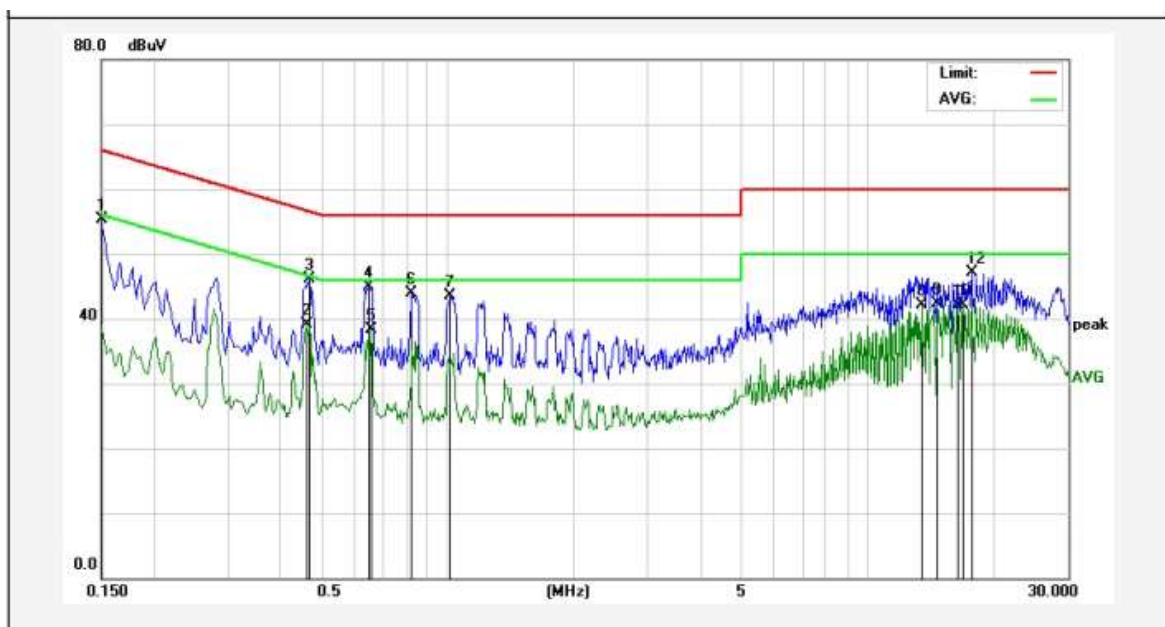


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1500	34.54	17.82	52.36	65.99	-13.63	QP	
2	0.4620	25.82	17.83	43.65	56.66	-13.01	QP	
3	0.6500	25.20	17.86	43.06	56.00	-12.94	QP	
4	0.8460	25.16	17.86	43.02	56.00	-12.98	QP	
5	1.0100	24.47	17.85	42.32	56.00	-13.68	QP	
6	12.6780	29.84	18.09	47.93	60.00	-12.07	QP	
7	12.9980	23.56	18.10	41.66	50.00	-8.34	AVG	
8	14.2860	23.60	18.15	41.75	50.00	-8.25	AVG	
9	15.1460	23.77	18.18	41.95	50.00	-8.05	AVG	
10	16.0060	23.57	18.21	41.78	50.00	-8.22	AVG	
11	16.4340	23.64	18.22	41.86	50.00	-8.14	AVG	
12	16.8620	23.61	18.22	41.83	50.00	-8.17	AVG	

Note: Result = Reading + Factor Over Limit = Result - Limit

Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: Mode 2
 Test Specification: AC 230V, 50Hz for adapter
 Comment: Neutral Line
 Temp.(°C)/Hum.(%RH): 26.3°C/59%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1500	37.57	17.82	55.39	65.99	-10.60	QP	
2	0.4620	21.29	17.83	39.12	46.66	-7.54	AVG	
3	0.4700	28.22	17.84	46.06	56.51	-10.45	QP	
4	0.6500	27.06	17.86	44.92	56.00	-11.08	QP	
5	0.6580	20.43	17.87	38.30	46.00	-7.70	AVG	
6	0.8260	26.07	17.86	43.93	56.00	-12.07	QP	
7	1.0180	25.58	17.85	43.43	56.00	-12.57	QP	
8	13.4300	23.95	18.11	42.06	50.00	-7.94	AVG	
9	14.7180	24.08	18.17	42.25	50.00	-7.75	AVG	
10	16.4380	23.89	18.22	42.11	50.00	-7.89	AVG	
11	16.8660	23.98	18.22	42.20	50.00	-7.80	AVG	
12	17.7260	28.87	18.25	47.12	60.00	-12.88	QP	

Note: Result = Reading + Factor Over Limit = Result - Limit



3.2. Wired Network Ports Conducted Emission Test

3.2.1. Test Standard and Limit

Test Standard	ETSI EN 301 489-1 Clause 8.7
Basic Standard	EN 55032

☐ Limits for asymmetric mode conducted emissions of Class A equipment

Frequency (MHz)	Limits (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	97.0 ~ 87.0 *	87.0 ~ 74.0 *
0.50 ~ 30.00	87.0	74.0

Remark:

The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

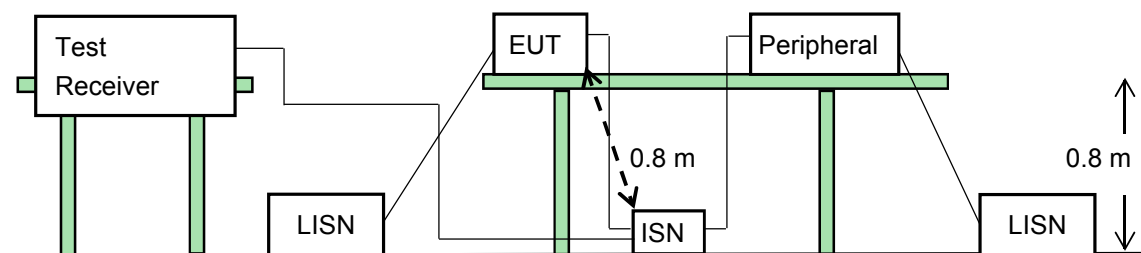
☐ Limits for asymmetric mode conducted emissions of Class B equipment

Frequency (MHz)	Limits (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	84.0 ~ 74.0 *	74.0 ~ 64.0 *
0.50 ~ 30.00	74.0	64.0

Remark:

The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

3.2.2. Test Setup



3.2.3. Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and connected to the wired network ports through Impedance Stabilization Network(ISN). and it is investigated to find out the maximum conducted emission according to the EN55032 regulations during conducted emission measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.2.4. Test Results

Not applicable.



3.3. Radiated Emission Test

3.3.1. Test Standard and Limit

Test Standard	ETSI EN 301 489-1 Clause 8.2
Basic Standard	EN 55032

☐ Limit for radiated emissions at frequencies up to 1 GHz for class A equipment

Frequency (MHz)	Distance (Meters)	Limit (dB μ V/m)
30 ~ 230	3	50
230 ~ 1000	3	57
Remark: The lower limit shall apply at the transition frequencies.		

☐ Limit for radiated emissions at frequencies above 1 GHz for class A equipment

Frequency (MHz)	Distance (Meters)	Limit (dB μ V/m)	
		Peak	Average
1000 MHz -3000 MHz	3	76	56
3000 MHz -6000 MHz	3	80	60
Remark: The lower limit shall apply at the transition frequencies.			

☒ Limit for radiated emissions at frequencies up to 1 GHz for class B equipment

Frequency (MHz)	Distance (Meters)	Limit (dB μ V/m)
30 ~ 230	3	40
230 ~ 1000	3	47
Remark: The lower limit shall apply at the transition frequencies.		

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☐ **Limit for radiated emissions at frequencies above 1 GHz for class B equipment**

Frequency (MHz)	Distance (Meters)	Limit (dB μ V/m)	
		Peak	Average
1000 MHz -3000 MHz	3	70	50
3000 MHz -6000 MHz	3	74	54

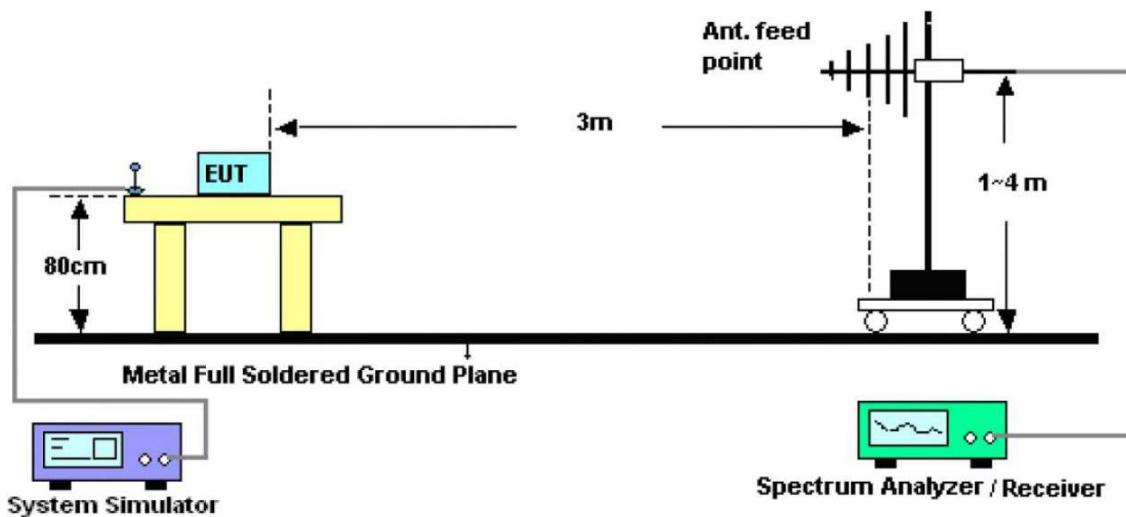
Remark: The lower limit shall apply at the transition frequencies.

☐ **Radiated emission test limit for FM receivers**

Frequency (MHz)	Distance (Meters)	Limit (dB μ V/m)	
		Fundamental	Harmonics
30MHz~230MHz	3	60	52
230MHz~300MHz	3	60	52
300MHz~1000MHz	3	60	56

Remark: The lower limit shall apply at the transition frequency.

3.3.2. Test Setup



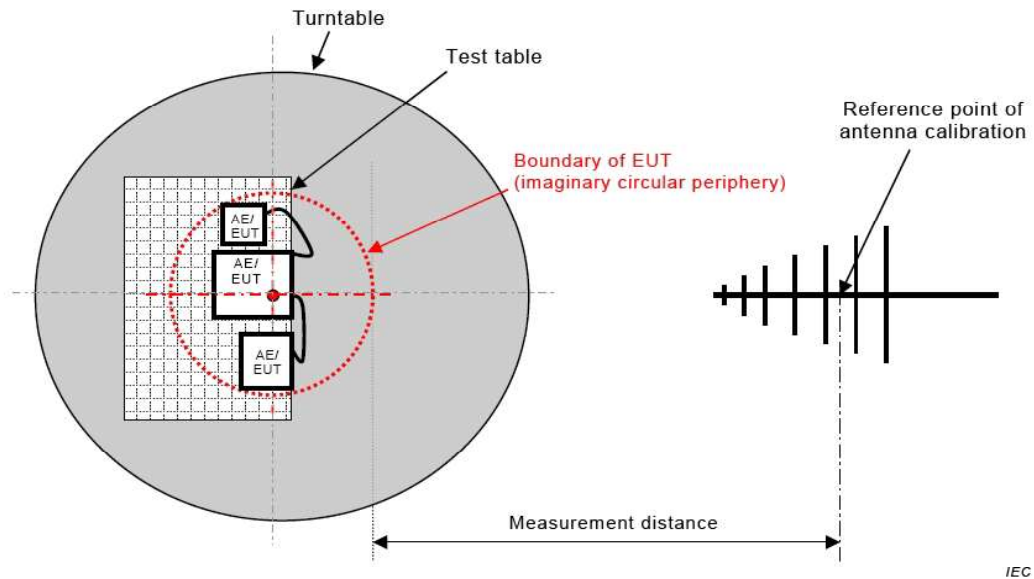
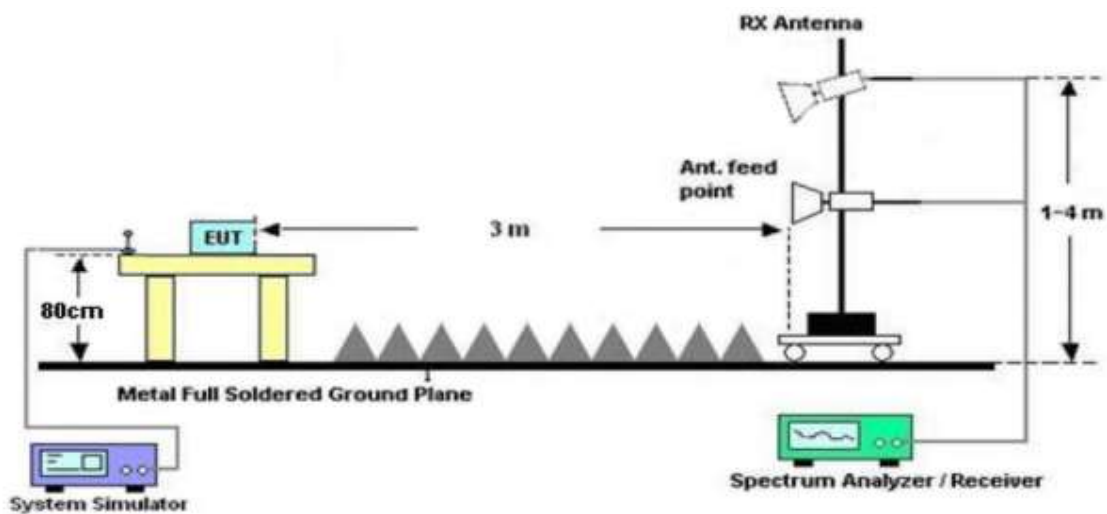


Figure C.1 – Measurement distance

30MHz to 1GHz



Above 1 GHz

3.3.3. Test Procedure

- 1) 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.
- 2) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- 3) The height of the equipment or of the substitution antenna shall be 0.8 m; 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.
- 4) The initial step in collecting radiated 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.
- 5) The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.

The test receiver/spectrum was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.

Note:

The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak/ Average detection at frequency above 1GHz.

3.3.4. Test Data

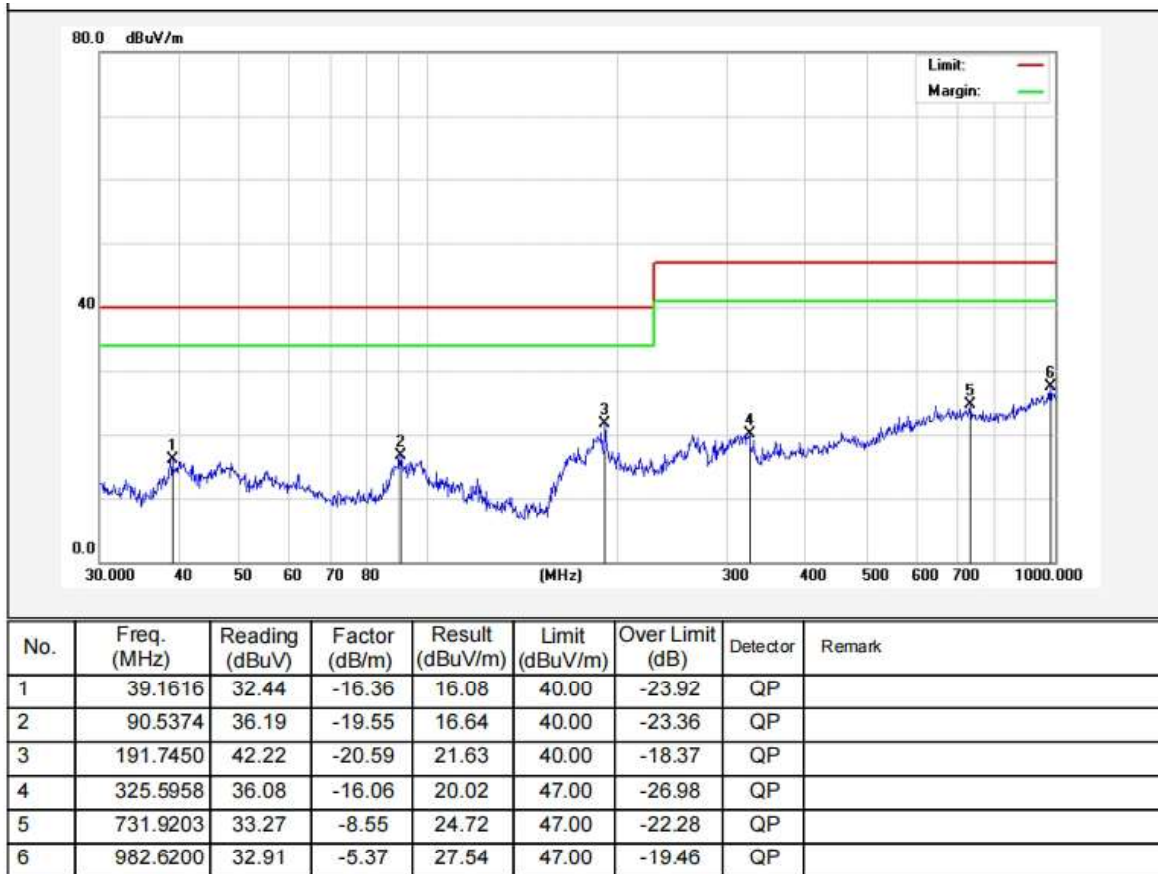
PASS

Only the worst case data was showed in the report, please to see the following pages.



Test Results (30~1000MHz)

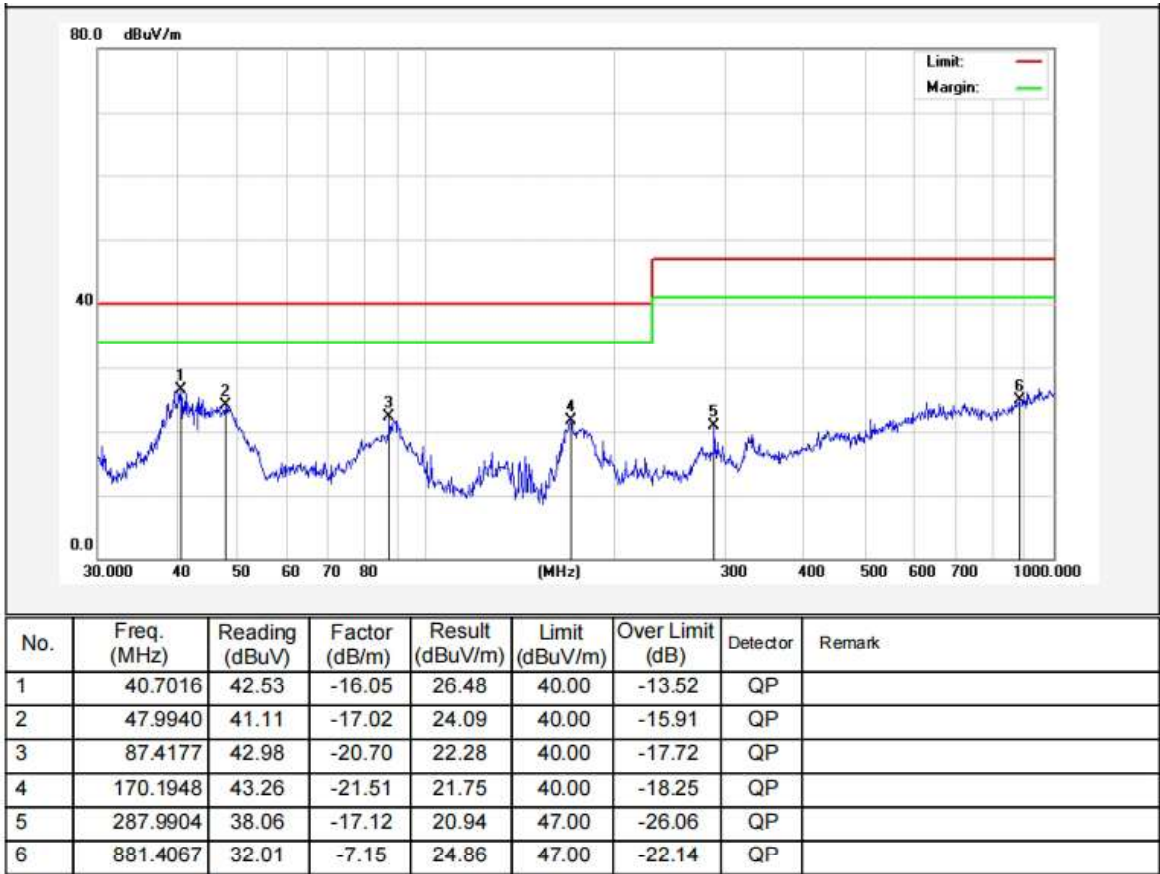
Test Mode: Mode 1
Power Source: AC 230V, 50Hz for adapter
Polarization: Horizontal
Temp.(°C)/Hum.(%RH): 22.5°C/55%RH



Note: Result = Reading + Factor Over Limit = Result - Limit

Test Results (30~1000MHz)

Test Mode: Mode 1
 Power Source: AC 230V, 50Hz for adapter
 Polarization: Vertical
 Temp.(°C)/Hum.(%RH): 22.5°C/55%RH



Note: Result = Reading + Factor Over Limit = Result - Limit

4. Immunity Test

Performance criteria for ETSI EN 301 489-3:

Table 2: Performance Requirements

Criterion	During test	After test
A	Operate as intended No loss of function No unintentional responses	Operate as intended No loss of function No degradation of performance No loss of stored data or user programmable functions
B	May show loss of function No unintentional responses	Operate as intended Lost function(s) shall be self-recoverable No degradation of performance No loss of stored data or user programmable functions

Anbotek



4.1. Electrostatic Discharge Test

4.1.1. Test Standard and Specification

Test Standard	ETSI EN 301 489-1 Clause 9.3
Basic Standard	EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Performance Criterion:	B
Discharge Voltage:	Air Discharge: 2kV/4kV/8kV Contact Discharge: 2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 200 times in total
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

4.1.2. Test Setup

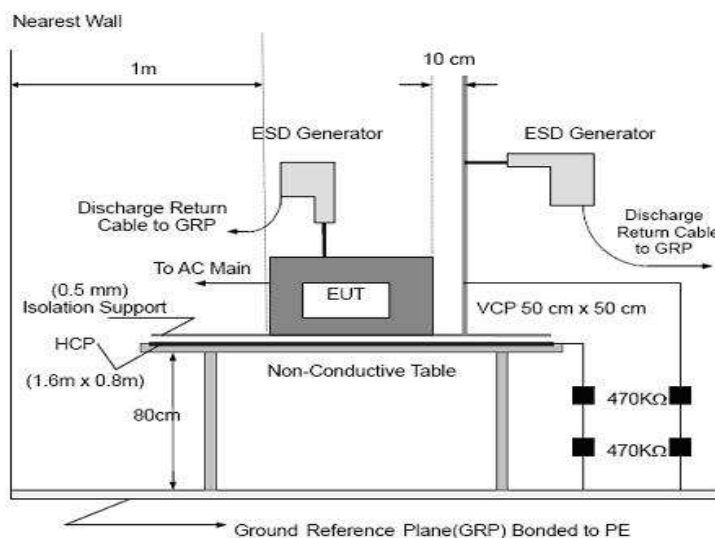


TABLE-TOP EQUIPMENT:

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940kohm total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of 1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT:

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

4.1.3. Test Procedure

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

- 1) Contact discharge was applied to conductive surfaces and coupling planes of the EUT.

During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second.

Vertical Coupling Plane (VCP):

The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge.

Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge.

- 2) Air discharges at insulation surfaces of the EUT.

It was at least ten single discharges with positive and negative at the same selected point.

4.1.4. Test Data

Pass

Only the worst case data was showed in the report, please to see the following pages.



Electrostatic Discharge Test Results				
Test Mode:	Please refers to clause 1.4			
Temp.(°C)/Hum.(%RH) :	Tem.: 25.1°C Hum.: 56%			
Test mode for EN 301489-3 standard				
Test Voltage	Coupling	Observation	Perform. Criteria	Results
±2KV, ±4kV	Contact Discharge	A	B	PASS
±2KV, ±4kV, ±8kV	Air Discharge	A	B	PASS
±2KV, ±4kV	Indirect Discharge HCP	A	B	PASS
±2KV, ±4kV	Indirect Discharge VCP	A	B	PASS

11 / 0 / A / A

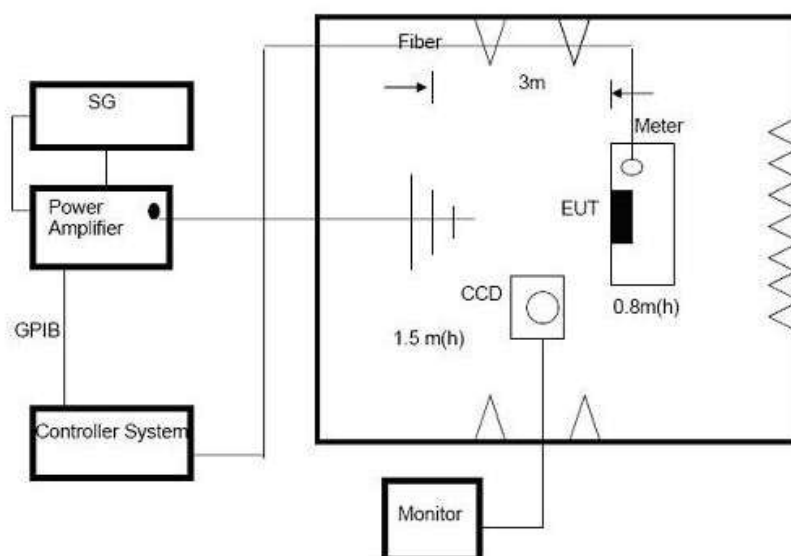


4.2. Radiated, RF Electromagnetic Fields Test

4.2.1. Test Standard and Specification

Test Standard	ETSI EN 301 489-1 Clause 9.2
Basic Standard	EN 61000-4-3
Required Performance	A
Frequency Range	80MHz to 6000MHz
Field Strength	3 V/m
Modulation	1kHz Sine Wave, 80%, AM Modulation
Frequency Step	1 % of preceding frequency value
Polarity of Antenna	Horizontal and Vertical
Test Distance	3 m
Antenna Height	1.5 m
Dwell Time	at least 0.5s

4.2.2. Test Setup



4.2.3. Test Procedure

The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber. The testing distance from antenna to the EUT was 3 meters.

- 1) The field strength level was 3V/m
- 2) The frequency range is swept from 80 MHz to 6000 MHz with the signal 80%amplitude modulated with a 1kHz sine wave.
- 3) The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond, but shall in no case be less than 0.5s.

4) The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

4.2.4. Test Data

Pass

Only the worst case data was showed in the report, please to see the following pages.

Radiated, RF Electromagnetic Fields Test Results						
Test Mode:		Please refers to clause 1.4				
Temp.(°C)/Hum.(%RH):		Tem.: 23.5°C Hum.: 51%				
Test mode for EN 301489-3 standard						
Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Observation	Perform. Criteria	Results
80~6000	H / V	3 V/m (rms) AM Modulated 1000Hz, 80%	Front	A	A	PASS
			Rear	A	A	PASS
			Left	A	A	PASS
			Right	A	A	PASS

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APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Power Line Conducted Emission Test

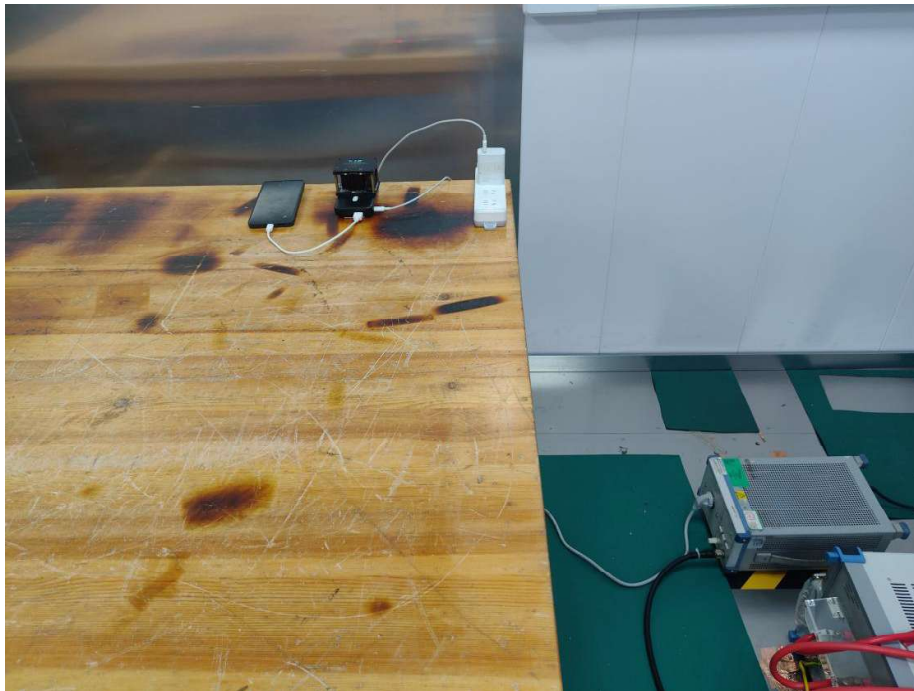


Photo of Radiation Emission Test (Below 1GHz)

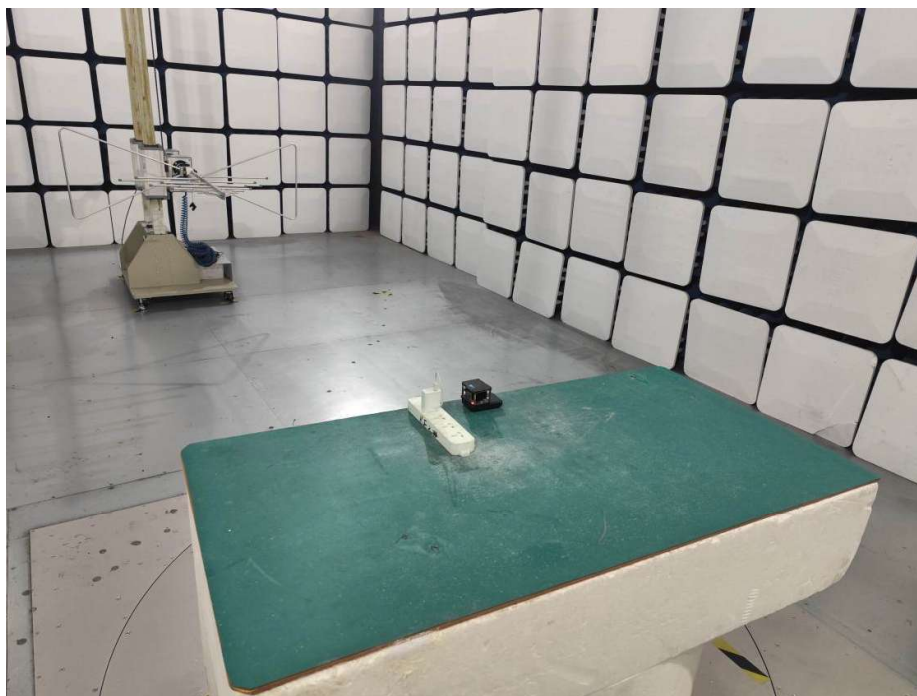
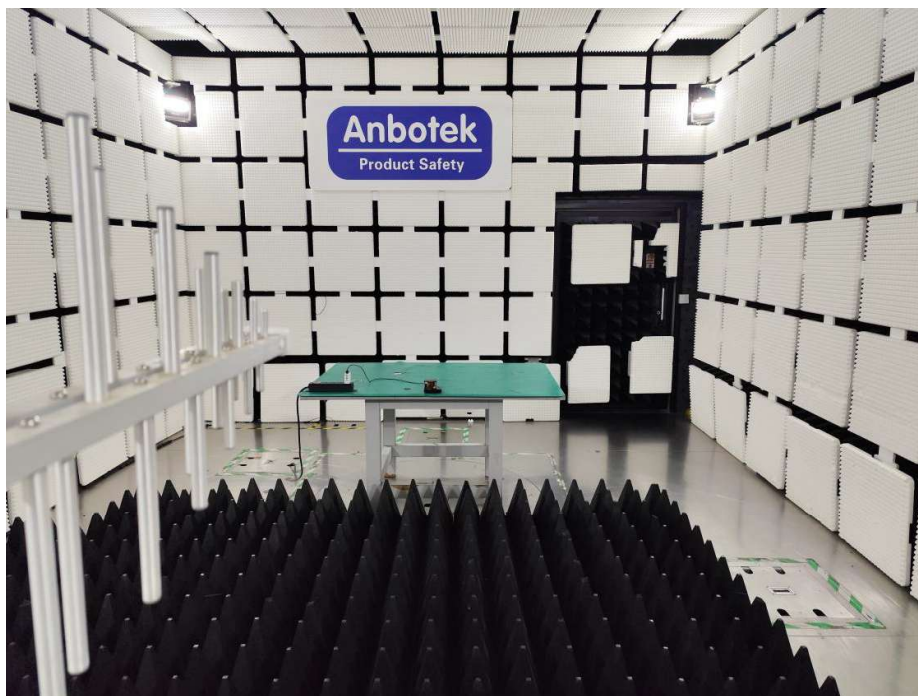


Photo of Electrostatic Discharge Test

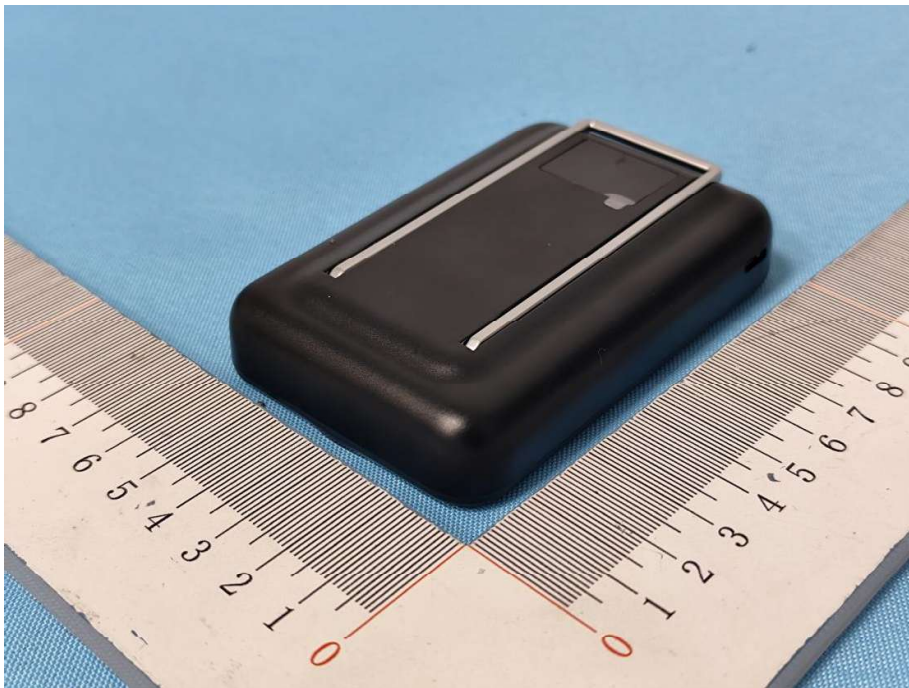


Photo of RF Field Strength Susceptibility Test



APPENDIX II -- EXTERNAL PHOTOGRAPH

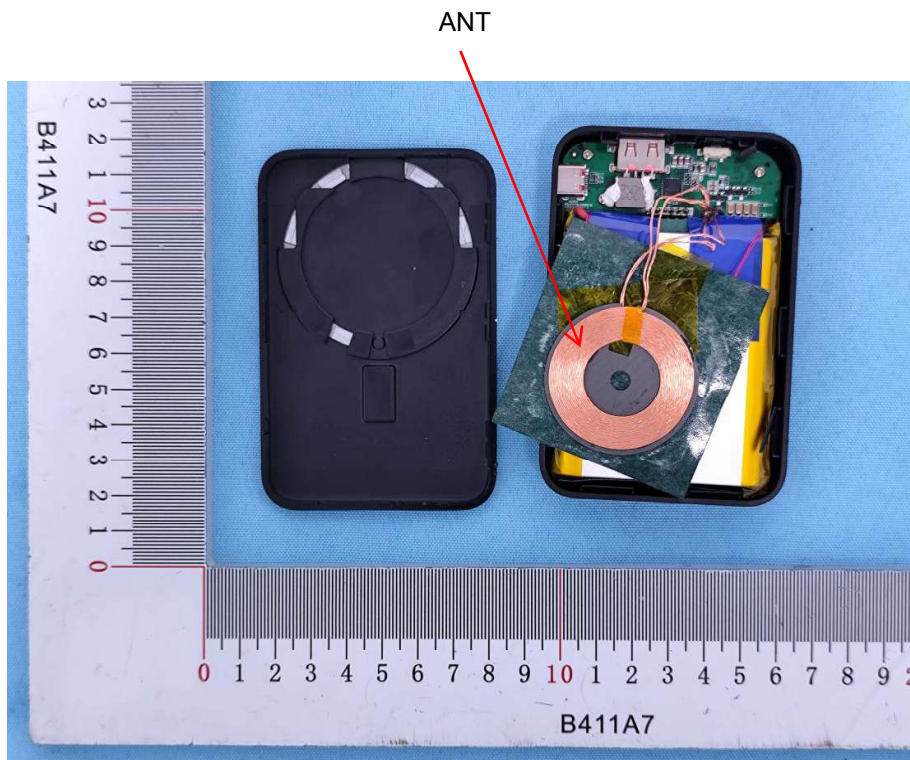




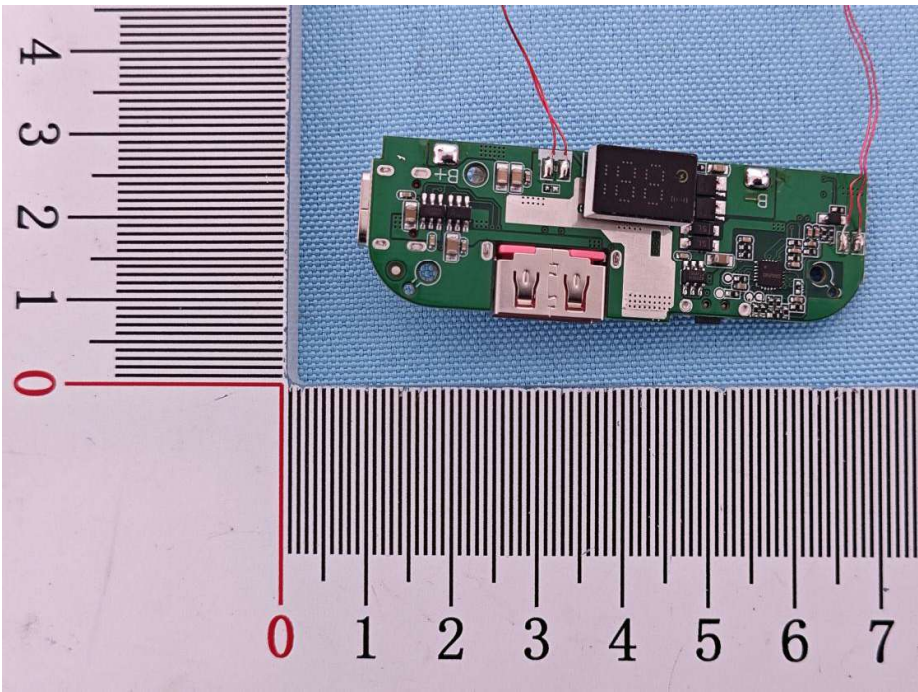
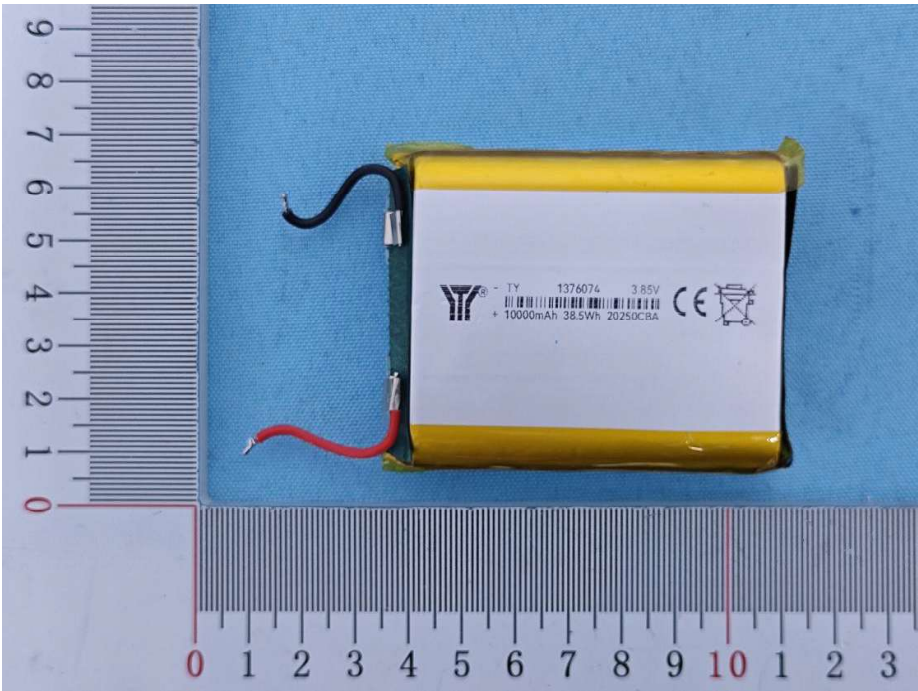


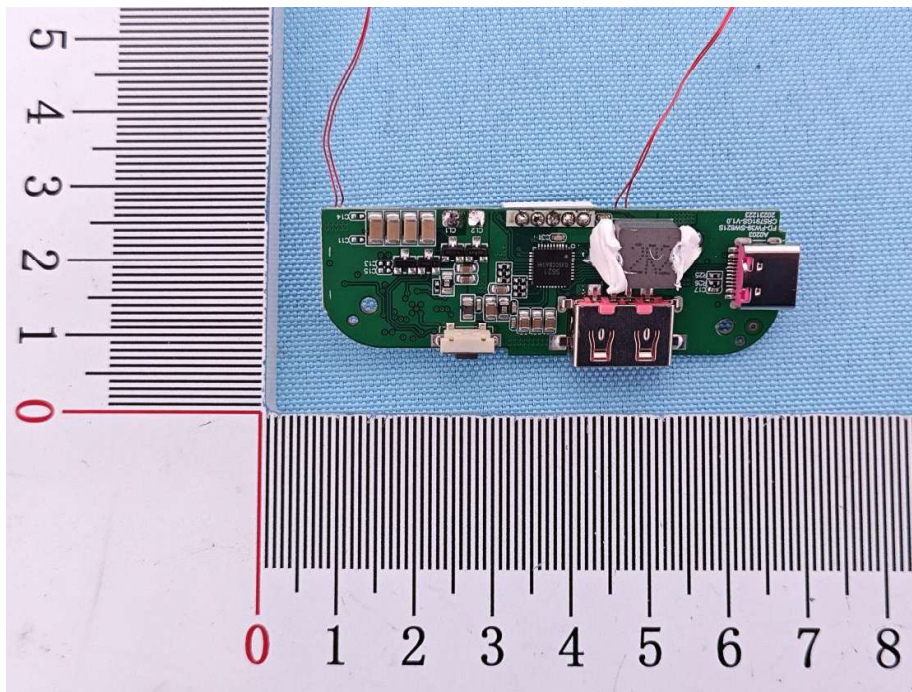


APPENDIX III -- INTERNAL PHOTOGRAPH



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----- End of Report -----