

Test Report

Report No. : MTi250514013-0101E1
Date of issue : 2025-05-21
Applicant : Heltec Automation Technology Co., Ltd
Product : MeshPocket
Model(s) : HT-298A, HT-298B, HT-298C, HT-298D, HT-298G,
HT-298P, HT-298S, HT-298T, HT-298Z

Shenzhen Microtest Co., Ltd.



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Test Result Certification		
Applicant	Heltec Automation Technology Co., Ltd	
Applicant Address	1f, No.54, 56, 58, Zirui North Street, Gaoxin District, Chengdu	
Manufacturer	Heltec Automation Technology Co., Ltd	
Manufacturer Address	1f, No.54, 56, 58, Zirui North Street, Gaoxin District, Chengdu	
Product description		
Product name	MeshPocket	
Trademark		
Model name	HT-298A	
Series Model(s)	HT-298B, HT-298C, HT-298D, HT-298G, HT-298P, HT-298S, HT-298T, HT-298Z	
Standards	47 CFR Part 15, Subpart B	
Test Method	ANSI C63.4a-2017	
Testing Information		
Date of test	2025-05-15 to 2025-05-21	
Test result	Pass	
Prepared by:	Lyla Cao	
Reviewed by:	David Lee	
Approved by:	Lewis Lian	

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1 General Description

1.1 Description of the EUT

Product name:	MeshPocket
Model name:	HT-298A
Series Model(s):	HT-298B, HT-298C, HT-298D, HT-298G, HT-298P, HT-298S, HT-298T, HT-298Z
Model difference:	All the models are the same circuit and module, except the model name.
Electrical rating:	Type-C Input: DC 5V/3A, 9V/2.22A Type-C Output: DC 5V/3A, 9V/2.22A Battery: DC 3.87V 5000mAh 19.35Wh Wireless Output: 5W/7.5W/10W/15W
Accessories:	Cable: 1. USB-A Magnetic charging cable(60cm)*1 2. Type-C to Type-C cable(25cm) *1
Test sample(s) number:	MTi250514013-01-E001

1.2 Description of test modes

For test, the EUT has been pre-tested under the following test modes, Only the worst case data will be shown in the report.

No.	Emission test modes
Mode1	Charging(Type-C)+Wireless output: 5W
Mode2	Charging(Type-C)+Wireless output: 7.5W
Mode3	Wireless output: 5W+Type-C Output: 10W
Mode4	Type-C Output: DC 5V/3A
Mode5	Type-C Output: DC 9V/2.22A

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1.3 Environmental Conditions

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

Temperature:	15°C ~ 35°C
Humidity:	20% RH ~ 75% RH
Atmospheric pressure:	98 kPa ~ 101 kPa

1.4 Description of support units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support equipment list

Description	Model	Serial No.	Manufacturer
Load	/	/	/
wireless charging load	YBZ1.1	/	YBZ
HUAWEI QUICK CHARGE(65W)	HW-200200ZP1	JN67LSN7N03451	HUAWEI

Support cable list

Description	Length (m)	From	To
/	/	/	/

1.5 Measurement uncertainty

Measurement	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	±3.1dB
Radiated emissions (30MHz~1GHz)	±4.7dB
Temperature	±1 °C
Humidity	± 5 %

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

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2 Summary of Test Result

No.	Item	Standard	Requirement	Result
1	Conducted emissions on AC mains	47 CFR Part 15, Subpart B	15.107, Class B	Pass
2	Radiated emissions (Below 1GHz)	47 CFR Part 15, Subpart B	15.109, Class B	Pass

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3 Test Facilities and accreditations

3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.
Test site location:	101, No.7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86-755)88850135
Fax:	(86-755)88850136
CNAS Registration No.:	CNAS L5868
FCC Registration No.:	448573
IC Registration No.:	21760
CABID:	CN0093

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4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due
Conducted emissions on AC mains						
1	EMI Test Receiver	Rohde&schwarz	ESCI3	101368	2025-03-14	2026-03-13
2	Artificial mains network	Schwarzbeck	NSLK 8127	183	2025-03-18	2026-03-17
3	Artificial Mains Network	Rohde & Schwarz	ESH2-Z5	100263	2025-03-18	2026-03-17
Radiated emissions (Below 1GHz)						
1	EMI Test Receiver	Rohde&schwarz	ESCI7	101166	2025-03-14	2026-03-13
2	TRILOG Broadband Antenna	schwarabeck	VULB 9163	9163-1338	2023-06-11	2025-06-10
3	Amplifier	Hewlett-Packard	8447F	3113A06184	2025-03-18	2026-03-17

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5 Emission Test Results (EMI)

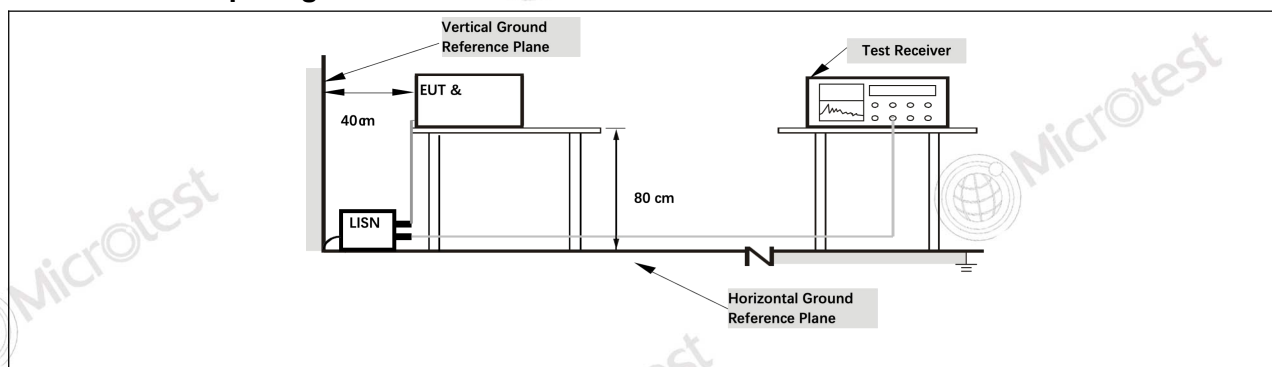
5.1 Conducted emissions on AC mains

Test Requirement:	15.107, Class B		
Test Limit:	Frequency of emission (MHz)	Conducted limit (dBμV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
	*Decreases with the logarithm of the frequency.		
Test Method:	ANSI C63.4a-2017		
Procedure:	An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected. Remark: Level= Read Level+ Cable Loss+ LISN Factor		

5.1.1 E.U.T. Operation:

Operating Environment:			
Temperature:	25.9 °C	Humidity:	69 %
		Atmospheric Pressure:	101 kPa
Pre test mode:	Mode1, Mode2		
Final test mode:	All of the listed pre-test mode were tested, only the data of the worst mode (Mode2) is recorded in the report		

5.1.2 Test Setup Diagram:

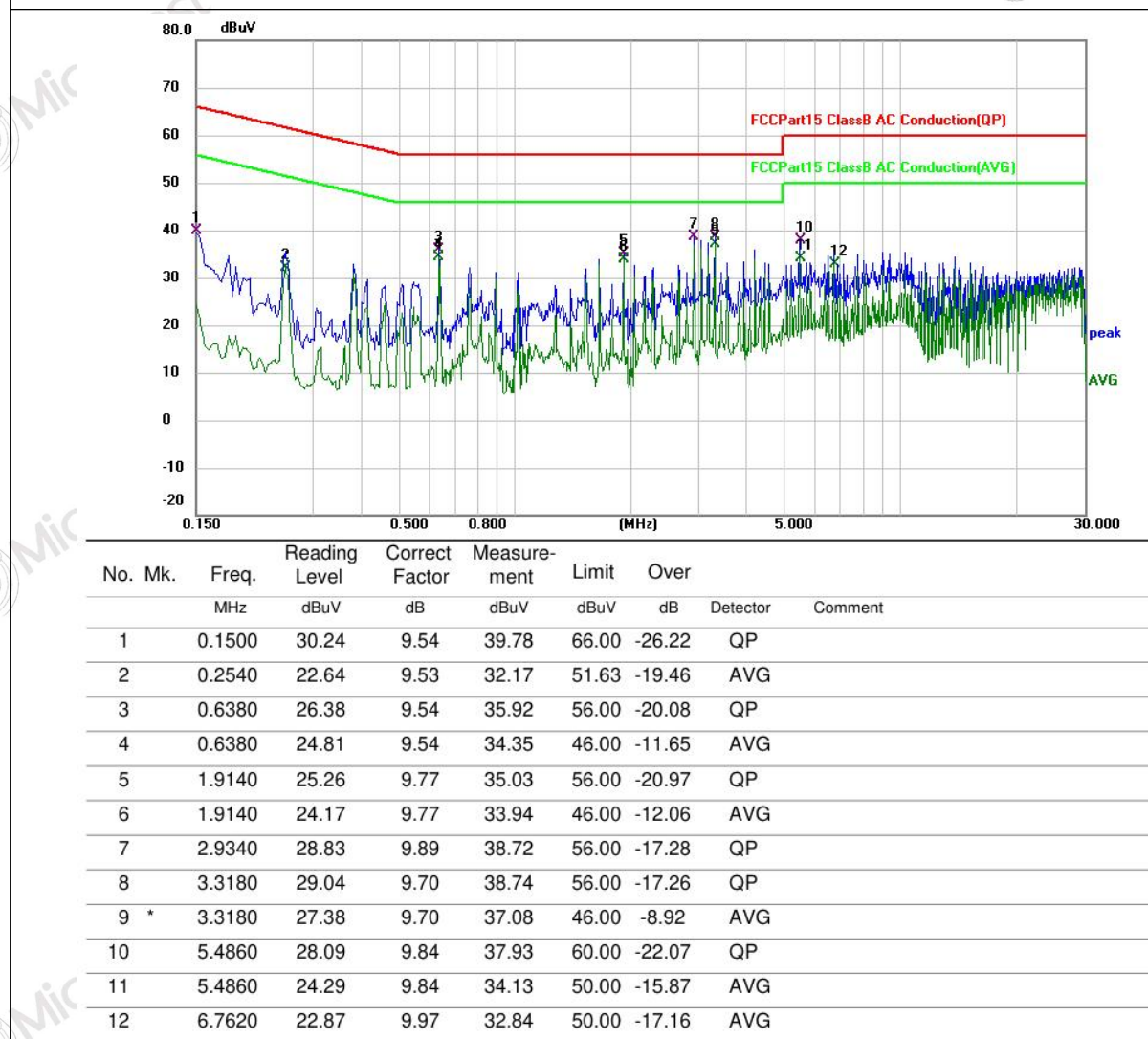


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5.1.3 Test Data:

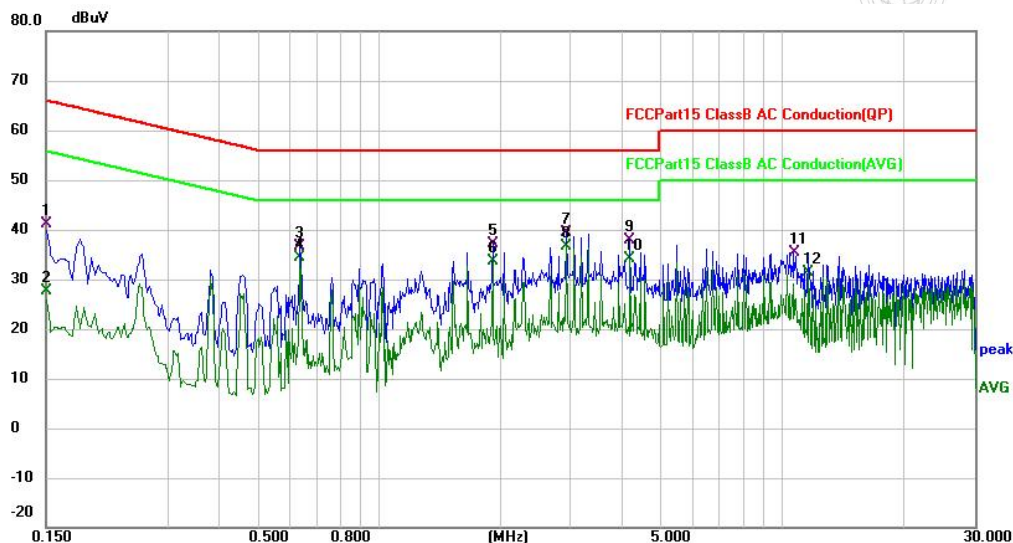
Mode2 / Line: Line



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Mode2 / Line: Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	31.26	9.83	41.09	66.00	-24.91	QP	
2		0.1500	17.82	9.83	27.65	56.00	-28.35	AVG	
3		0.6380	26.84	9.81	36.65	56.00	-19.35	QP	
4		0.6380	24.53	9.81	34.34	46.00	-11.66	AVG	
5		1.9140	27.34	9.75	37.09	56.00	-18.91	QP	
6		1.9140	23.92	9.75	33.67	46.00	-12.33	AVG	
7		2.9340	29.61	9.81	39.42	56.00	-16.58	QP	
8	*	2.9340	26.94	9.81	36.75	46.00	-9.25	AVG	
9		4.2100	27.76	10.01	37.77	56.00	-18.23	QP	
10		4.2100	24.14	10.01	34.15	46.00	-11.85	AVG	
11		10.7140	25.60	9.88	35.48	60.00	-24.52	QP	
12		11.6059	21.49	9.88	31.37	50.00	-18.63	AVG	

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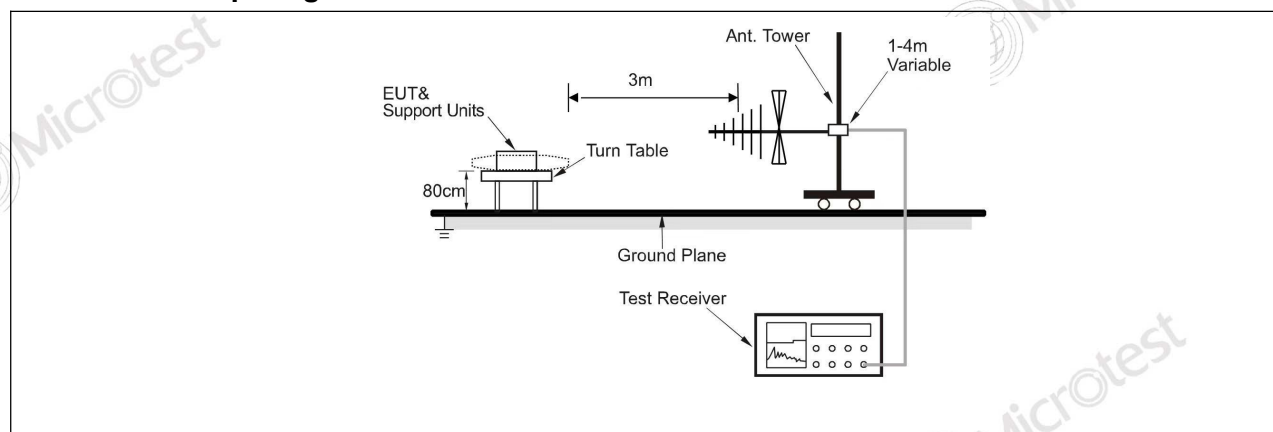
5.2 Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B				
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:				
	Frequency of emission (MHz)	Field strength @3m		Field strength @10m	
		(uV/m)	(dBuV/m)	(uV/m)	(dBuV/m)
	30 – 88	100	40	30	29.5
	88 – 216	150	43.5	45	33.1
	216 – 960	200	46	60	35.6
	Above 960	500	54	150	43.5
Test Method:	ANSI C63.4a-2017				
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor				

5.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	23.8 °C	Humidity:	71 %	Atmospheric Pressure:	99.8 kPa
Pre test mode:	Mode1, Mode2, Mode3, Mode4, Mode5				
Final test mode:	All of the listed pre-test mode were tested, only the data of the worst mode (Mode3) is recorded in the report				

5.2.2 Test Setup Diagram:

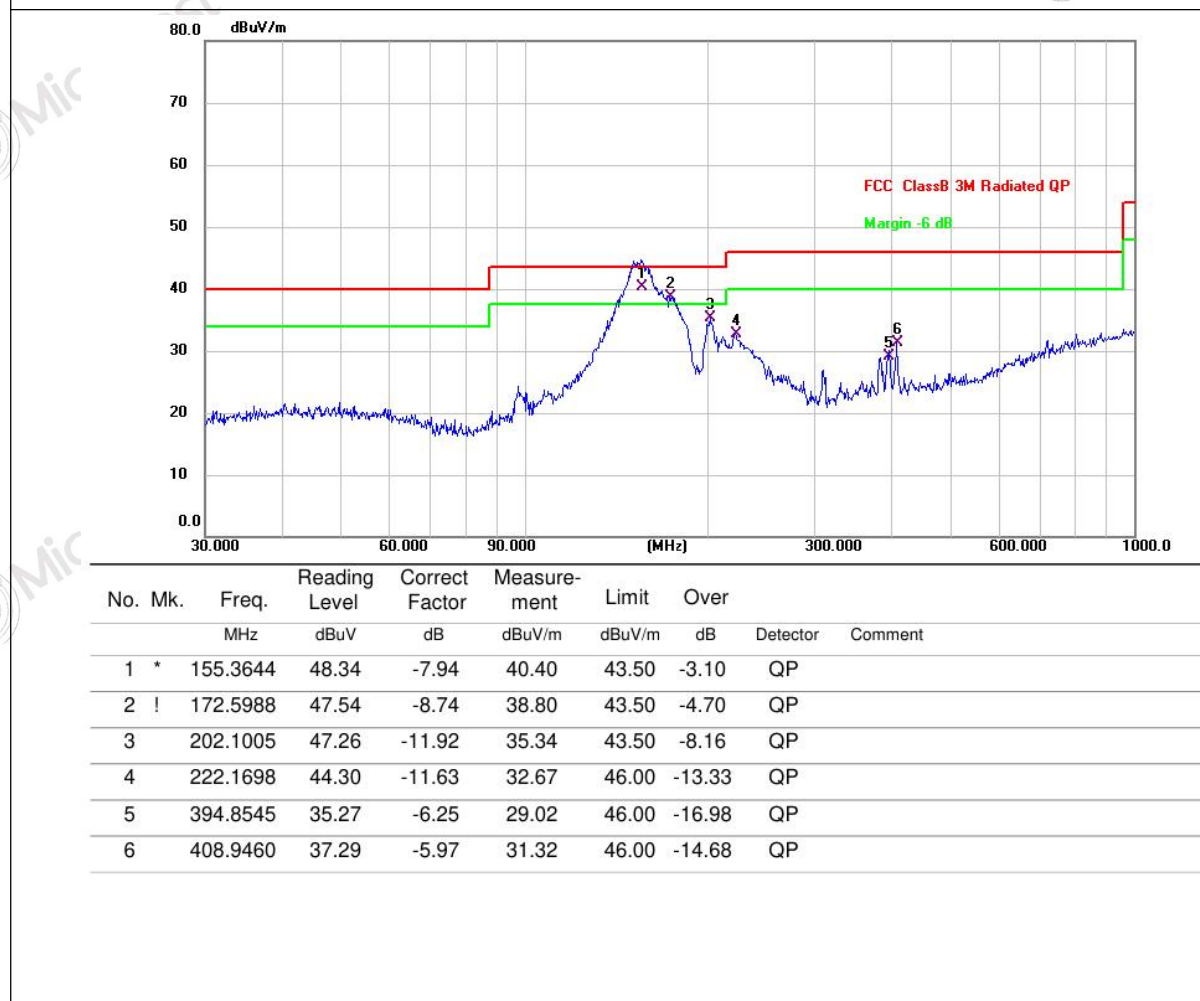


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5.2.3 Test Data:

Mode3 / Polarization: Horizontal



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Mode3 / Polarization: Vertical



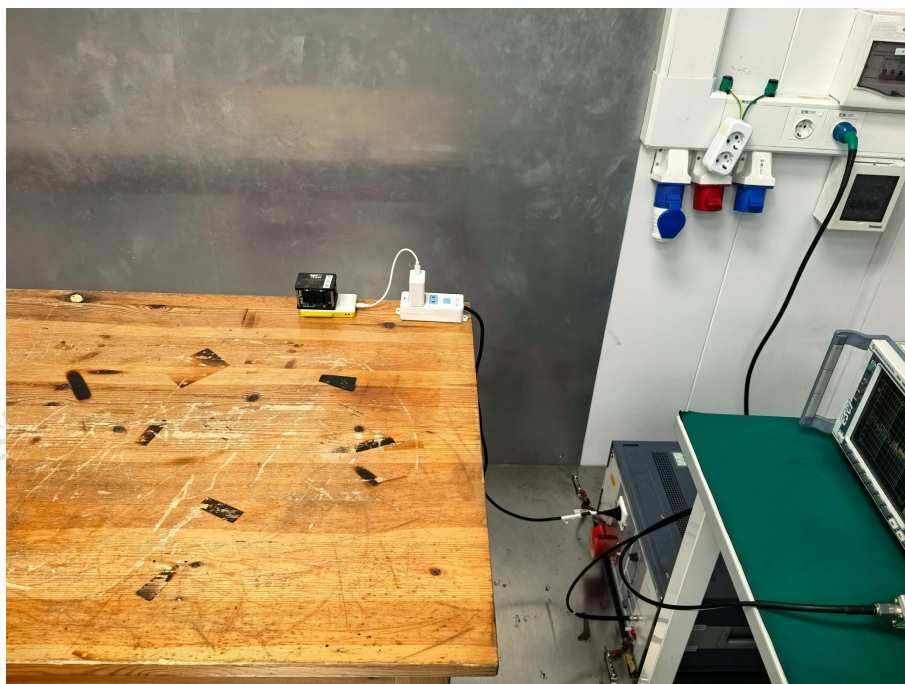
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		147.4036	33.92	-8.40	25.52	43.50	-17.98	QP	
2		183.2005	35.53	-10.51	25.02	43.50	-18.48	QP	
3		197.8928	37.65	-11.76	25.89	43.50	-17.61	QP	
4		231.7179	37.05	-11.26	25.79	46.00	-20.21	QP	
5		451.1350	31.30	-5.34	25.96	46.00	-20.04	QP	
6	*	694.4174	31.08	-0.18	30.90	46.00	-15.10	QP	

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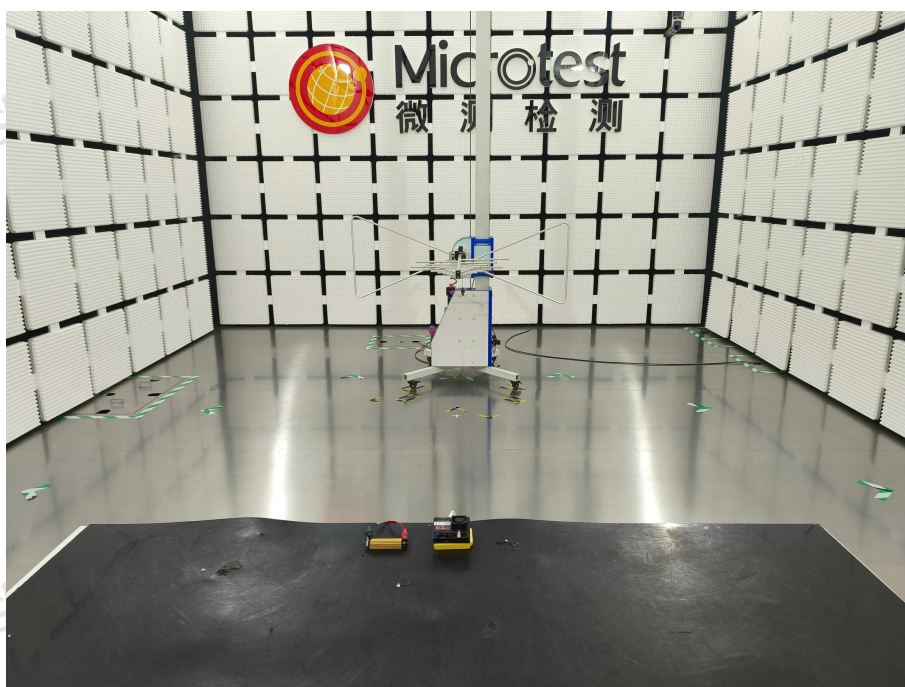
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Photographs of the test setup

Conducted emissions on AC mains



Radiated emissions (Below 1GHz)



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Photographs of the EUT

Refer to Appendix - EUT Photos

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Statement

1. This report is invalid without the seal and signature of the laboratory.
2. The test results of this report are only responsible for the samples submitted. Client shall be responsible for representativeness of the sample and authenticity of the material.
3. The report shall not be partially reproduced without the written consent of the Laboratory.
4. This report is invalid if transferred, altered or tampered with in any form without authorization.
5. The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

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