

Test Report

Report No. : MTi250107021-0201E7

Date of Issue : 2025-05-23

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.

Table of Contents

1	GENERAL DESCRIPTION	4
1.1	FEATURE OF EQUIPMENT UNDER TEST (EUT)	4
2	TESTING SITE	6
3	EN 62479 REQUIREMENT	7
3.1	GENERAL INFORMATION	7
3.2	LIMITS	8
3.3	RESULT	8

TEST REPORT

Report No.: MTi250107021-0201E7

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	HT-298B, HT-298C, HT-298D, HT-298G, HT-298P, HT-298S, HT-298T, HT-298Z
Standards	EN 62479:2010 EN 50663: 2017

Date of Test

Date of test	2025-04-23 to 2025-05-19	
Test result	Pass	
Prepared by	James Qin	
Reviewed by	David Lee	
Approved by	Lewis Lian	

1 General description

1.1 Feature of equipment under test (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
Hardware version:	V1.0.0
Software version:	V1.0.0
Test sample(s) number:	MTi250107021-02-R001
RF specification	
BLE:	
Bluetooth version:	V5.0
Operating frequency range:	2402-2480MHz
Channel number:	40
Modulation type:	GFSK
Antenna(s) type:	Ceramic
Antenna(s) gain:	1dBi
LoRa:	
Operating frequency range:	863.1-869.9MHz
Channel number:	32
Modulation type:	LoRa
Antenna(s) type:	Ceramic
Antenna(s) gain:	-0.01dBi

WPT:	
Operating frequency range:	115-205kHz(5W/ 7.5W/ 10W) 360kHz(15W)
Modulation type:	ASK
Antenna(s) type:	Coil

2 Testing site

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

3 EN 62479 requirement

3.1 General information

EN 62479: 2010 Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz).

Compliance of electromagnetic emissions from electronic and electrical equipment with the basic restrictions usually is determined by measurements and, in some cases, calculation of the exposure level. If the electrical power used by or radiated by the equipment is sufficiently low, the electromagnetic fields emitted will be incapable of producing exposures that exceed the basic restrictions. This standard provides simple EMF assessment procedures for this low power equipment.

Four routes described as follows, can be used to demonstrate compliance with this standard:

A Typical usage, installation and the physical characteristics of equipment make it inherently compliant with the applicable EMF exposure levels such as those listed in the bibliography. This low-power equipment includes unintentional (or non-intentional) radiators, for example incandescent light bulbs and audio/visual (A/V) equipment, information technology equipment (ITE) and multimedia equipment (MME) that does not contain radio transmitters.

NOTE Equipment is described as A/V equipment, ITE or MME if its main use is playback/recording of music, voice or images, or processing of digital information.

B The input power level to electrical or electronic components that are capable of radiating electromagnetic energy in the relevant frequency range is so low that the available antenna power and/or the average total radiated power cannot exceed the low-power exclusion level ($P_{\max}$).

C The available antenna power and/or the average total radiated power are limited by product standards for transmitters to levels below the low-power exclusion level ($P_{\max}$).

D Measurements or calculations show that the available antenna power and/or the average total radiated power are below the low-power exclusion level ($P_{\max}$).

3.2 Limits

Low-power exclusion level ($P_{\max}$):

Low-power electronic and electrical equipment is deemed to comply with the provisions of this standard if it can be demonstrated using routes B, C or D that the available antenna power and/or the average total radiated power is less than or equal to the applicable low-power exclusion level $P_{\max}$.

Guideline / Standard	SAR limit, $SAR_{\max}$ W/kg	Averaging mass, m g	$P_{\max}$	Exposure tier	Region of body
IEEE Std C95.1-2005	2	10	20	Action level	Body except extremities and pinnae
	4	10	40	Action level	Extremities and pinnae
	10	10	100	Controlled environment	Body except extremities and pinnae
	20	10	200	Controlled environment	Extremities and pinnae

3.3 Result

BLE:

Test Condition	Test Mode	Antenna	Frequency [MHz]	Burst Power [dBm]	Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [mW]	Ratio
NTNV	BLE_1M	Ant1	2402	5.66	1.00	6.66	4.63	20	0.232
			2440	5.55	1.00	6.55	4.52	20	0.226
			2480	5.64	1.00	6.64	4.61	20	0.231
LTVN	BLE_1M	Ant1	2402	5.67	1.00	6.67	4.65	20	0.233
			2440	5.55	1.00	6.55	4.52	20	0.226
			2480	5.63	1.00	6.63	4.60	20	0.230
HTNV	BLE_1M	Ant1	2402	5.66	1.00	6.66	4.63	20	0.232
			2440	5.55	1.00	6.55	4.52	20	0.226
			2480	5.64	1.00	6.64	4.61	20	0.231

The max ratio is 0.233

LoRA:

Frequency (MHz)	EIRP (dBm)	Correction (dB)	ERP (dBm)	ERP (mW)	Limits (mW)	Ratio
863.1	6.553	2.15	4.403	2.756	25	0.110
866.3	6.442	2.15	4.292	2.686	25	0.107
866.9	6.409	2.15	4.259	2.676	25	0.107

The max ratio is 0.11

TEST REPORT

Report No.: MTi250107021-0201E7

WPT:

Probe Position	E -field (V/m)		H-field (A/m)		Ratio
	Measure	Limit	Measure	Limit Instantaneous	
Top	16.4	87	2.26	5	0.452
Bottom	65		2.15		0.43
Left	18.6		2.02		0.404
Right	27.1		1.57		0.314
Front	21.8		1.69		0.338
Back	8.21		0.54		0.108

Probe Position	E -field (V/m)		H-field (A/m)		Ratio
	Measure	Limit	Measure	Limit Instantaneous	
Top	45.4	87	0.84	2.02	0.416
Bottom	23.7		0.09		0.045
Left	71.2		0.55		0.272
Right	13.9		0.56		0.277
Front	48.4		0.61		0.302
Back	13.5		0.41		0.203

Note: The limit of H-field strength is $0.73/f$ A/m, $f = 0.36$ MHz

The max ratio is 0.452

Conclusion:

Note: BLE, LoRa and WPT can work at the same time.

The max ratio is $BLE + LoRa + WPT = 0.233 + 0.11 + 0.452 = 0.795 < 1$, so we can suppose the EUT cannot produce exposures that exceed the restriction limit.

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 *****