

RF EXPOSURE Test Report

Report No. : MTi250109035-0101E4
Date of Issue : 2025-07-21
Applicant : Etronicon (Zhejiang) Electronic Technologies Co., Ltd.
Product : Wireless Power Charger
Model(s) : YN-42V15A
FCC ID : 2BQKT-YN-42V15A

Shenzhen Microtest Co., Ltd.

TEST REPORT

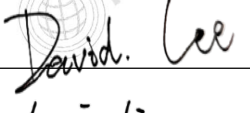
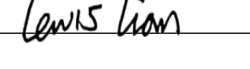
Report No.: MTI250109035-0101E4

Table of contents

1	RF EXPOSURE EVALUATION	4
2	Measurement Result	5

TEST REPORT

Report No.: MTI250109035-0101E4

Test Result Certification		
Applicant	Etronicon (Zhejiang) Electronic Technologies Co., Ltd.	
Applicant Address	No. 1 Building, No. 88, Binhe Road, Lin'an District, Hangzhou City, 311300 Zhejiang, P. R. China	
Manufacturer	Etronicon (Zhejiang) Electronic Technologies Co., Ltd.	
Manufacturer Address	No. 1 Building, No. 88, Binhe Road, Lin'an District, Hangzhou City, 311300 Zhejiang, P. R. China	
Factory	Etronicon (Zhejiang) Electronic Technologies Co., Ltd.	
Factory Address	No. 1 Building, No. 88, Binhe Road, Lin'an District, Hangzhou City, 311300 Zhejiang, P. R. China	
Product description		
Product name	Wireless Power Charger	
Trademark	Etronicon	
Model name	YN-42V15A	
Series Model(s)	N/A	
Standards	47 CFR Part 2.1091	
Test method	KDB 447498 D01 v06	
Testing Information		
Date of test	2025-03-19 to 2025-07-21	
Test Result	Pass	
Prepared by:	James Qin	
Reviewed by:	David Lee	
Approved by:	Lewis Lian	

1 RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

2 Measurement Result

2.4GWiFi:

Operation Frequency: WIFI 802.11n HT20: 2412-2462MHz,
Power density limited: 1mW/ cm²

Antenna Type: External mount antenna;

Antenna gain: 0.5dBi

R=20cm

$mW=10^{(dBm/10)}$

Antenna gain Numeric= $10^{(dBi/10)}=10^{(0.5/10)}=1.12$

2.4G WIFI

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm ²)	(mW/cm ²)
				(dBm)	(mW)	Numeric		
2412	802.11n H20	18.62	18±1	19	79.433	1.12	0.01773	1
2437		18.38	18±1	19	79.433	1.12	0.01773	1
2462		19.11	19±1	20	100.000	1.12	0.02232	1

WPT

Test condition 1: Mode 1 operating mode with client device (1 % battery status of client device)

Probe Position	E -field (V/m)			H-field (A/m)			
	Measurement	Limit	Percentage (%)	Measurement	Limit	Ratio	Percentage (%)
Z axis	4.13	614	27.36%	1.05	1.63	0.64417	64.42%
Left	168			1.02		0.62577	
Right	110			1.04		0.63804	
Front	106			0.89		0.54601	
Rear	87.3			0.98		0.60123	
Bottom	91.5			0.95		0.58282	

Test condition 2: Mode 1 operating mode with client device (50 % battery status of client device)

Probe Position	E -field (V/m)			H-field (A/m)			
	Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Ratio	Max. Percentage (%)
Z axis	4.13	614	26.87%	1.05	1.63	0.64417	64.42%
Left	165			1.01		0.61963	
Right	107			1.04		0.63804	
Front	105			0.89		0.54601	
Rear	86			0.99		0.60736	
Bottom	89			0.95		0.58282	

Test condition 3: Mode 1 operating mode with client device (99 % battery status of client device)

Probe Position	E -field (V/m)			H-field (A/m)			
	Measurement	Limit	Percentage (%)	Measurement	Limit	Ratio	Percentage (%)
Z axis	4.12	614	27.20%	1.04	1.63	0.63804	63.80%
Left	167			1.02		0.62577	
Right	108			1.04		0.63804	
Front	104			0.89		0.54601	
Rear	88			0.98		0.60123	
Bottom	90			0.94		0.57669	

Conclusion:

WPT and 2.4G WIFI can work simultaneously

WPT+2.4G WIFI+=0.64417+0.02232=0.66649

For the max result: $0.66649 \leq 1.0$ for 1g SAR test exclusion threshold, No SAR is required.

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 *****