

RF EXPOSURE Test Report

Report No. : MTi260420014-0106E4
Date of issue : 2026-04-30
Applicant : Shenzhen VIJIM Technology Co.,Ltd.
Product : MagiVol Charger
Model(s) : CW15, CW14, CW16
FCC ID : 2BTBM-CW15

Shenzhen Microtest Co., Ltd.

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Test Result Certification		
Applicant	Shenzhen VIJIM Technology Co.,Ltd.	
Applicant Address	A1705,Building A,Galaxy World, No.1 Yabao Road, Bantian Street, Longgang District, Shenzhen	
Manufacturer	Shenzhen VIJIM Technology Co.,Ltd.	
Manufacturer Address	A1705,Building A,Galaxy World, No.1 Yabao Road, Bantian Street, Longgang District, Shenzhen	
Factory	Shenzhen Ulanzi Technology Co.,Ltd.	
Factory Address	A1703,Building A,Galaxy World, No.1 Yabao Road, Bantian Street, Longgang District, Shenzhen	
Product description		
Product name	MagiVol Charger	
Trademark	Ulanzi	
Model name	CW15	
Series Model(s)	CW14, CW16	
Standards	47 CFR Part 2.1091	
Test method	KDB 447498 D01 v06	
Testing Information		
Date of test	2026-04-26 to 2026-04-30	
Test Result	Pass	
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Approved by:	Lewis Lian	<i>Lewis Lian</i>

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

BT&BLE:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

Antenna Type: PCB Antenna

Antenna gain: 1.75dBi

R=20cm

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

Antenna gain Numeric=10^{^(dBi/10)}= 10^{^(1.75/10)}=1.50

BLE:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm ²)	Power density Limits (mW/cm ²)
		(dBm)		tune-up power (dBm)	(mW)	Gain (dBi)	Numeric		
2402	GFSK-1M	-4.46	-4±1	-3	0.501	1.75	1.50	0.0001	1
2440		-3.55	-3±1	-2	0.631	1.75	1.50	0.0002	1
2480		-3.73	-3±1	-2	0.631	1.75	1.50	0.0002	1

SIMULTANEOUS TRANSMISSIONS

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E₂, H₂ (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

Band	Mode	Result calculation	1g SAR test exclusion threshold	Fraction of limit (%)
2402~2480MHz	BLE	0.0002	1	0.020%
Band	Mode	Exempted power Result (A/m)	Exempted power limit((A/m)	Fraction of limit (%)
0.115-0.205MHz	15W EPP	0.07	1.63	4.29%
0.36MHz	15W MPP	0.009	1.63	0.55%
Sum of Fraction (%)			4.31%	

For the max result: 0.0431≤ 1.0, 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 *****