



MPE Report

Report No.: STS2512337H01

Issued for

Radxa Computer (Shenzhen) Co.,Ltd.

1602, Smart Valley, tiezai Road, Gongle community, Xixiang,
Baoan, Shenzhen, China

Product Name: Radxa ZERO 3W

Brand Name: N/A

Model Name: Radxa ZERO 3W D4E32

Series Model(s): Ref. the Section 2.1

FCC ID: 2BC6T-ZERO3W

Test Standard: FCC 47CFR §2.1091

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.

**TEST REPORT**

Applicant's Name : Radxa Computer (Shenzhen) Co.,Ltd.
Address..... : 1602, Smart Valley, tiezai Road, Gongle community, Xixiang,
Baoan, Shenzhen, China
Manufacturer's Name : Radxa Computer (Shenzhen) Co.,Ltd.
Address..... : 1602, Smart Valley, tiezai Road, Gongle community, Xixiang,
Baoan, Shenzhen, China

Product Description

Product Name : Radxa ZERO 3W
Brand Name..... : N/A
Model Name..... : Radxa ZERO 3W D4E32
Series Model(s)..... : Ref. the Section 2.1

Test Standards : FCC 47CFR §2.1091
447498 D01 Interim General RF Exposure Guidance v06

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Date of Test

Date of receipt of test item : 13 Dec. 2025
Date (s) of performance of tests..... : 13 Dec. 2025 to 18 Dec. 2025
Date of Issue : 18 Dec. 2025
Test Result..... : **Pass**

Testing Engineer : *Aaron Bu*

(Aaron Bu)

Technical Manager : *Skylar Li*

(Skylar Li)

Authorized Signatory : *Bovey Yang*

(Bovey Yang)





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Draft



Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	18 Dec. 2025	STS2512337H01	ALL	Initial Issue

Draft



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Radxa ZERO 3W	
Brand Name	N/A	
Model Name	Radxa ZERO 3W D4E32	
Series Model(s)	Radxa ZERO 3W D1, Radxa ZERO 3W D1E8, Radxa ZERO 3W D2, Radxa ZERO 3W D2E16, Radxa ZERO 3W D2E32, Radxa ZERO 3W D4	
Model Difference	All the models are the same circuit and RF module, except model names and product memory.	
Product Description	The EUT is a Radxa ZERO 3W	
	Operation Frequency:	BT/BLE: 2402~2480 MHz 2.4G WIFI: 2412-2462MHz 5.1G WIFI: 5.8G WIFI:
	Modulation Type:	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: LE(Support 1M PHY, 2M PHY) 2.4G WIFI: DSSS, OFDM, OFDMA 5.1G WIFI: OFDM, OFDMA 5.8G WIFI: OFDM, OFDMA
	Number Of Channel:	BT: 79 BLE: 40 2.4G WIFI: 11 5.1G WIFI: 5.8G WIFI:
	Antenna Type:	External antenna
	Antenna Gain (dBi)	BT/BLE/2.4G WIFI: Antenna 1: 2.39 Antenna 2: 2.28 5.1G WIFI: Antenna 1: 2.36, Antenna 2: 2.36 5.8G WIFI: Antenna 1: -0.6, Antenna 2: 0.34
Power Rating	Input: DC 5V	
Adapter	N/A	
Battery	N/A	
Hardware Version	N/A	
Software Version	N/A	

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01



2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
3.0-30	1842/f	4.89/f	*(900/f ²)
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1.34-30	824/f	2.19/f	*(180f ²)
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.



2.3 TEST RESULT

Tune up

Mode	Detector	Tune up Power
BT	AV	6±1 dBm
BLE	AV	4±1 dBm
2.4G WIFI	AV	12±1 dBm
5.1G WIFI	AV	8±1 dBm
5.8G WIFI	AV	10±1 dBm

Antenna 1:

Protocol	Separation distance (cm)	Max Tune up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
BT	20	7	2.39	9.39	8.690	0.0017	1	0.0017	Pass
BLE	20	5	2.39	7.39	5.483	0.0011	1	0.0011	Pass
2.4G WIFI	20	13	2.39	15.39	34.594	0.0069	1	0.0069	Pass
5.1G WIFI	20	9	2.36	11.36	13.677	0.0027	1	0.0027	Pass
5.8G WIFI	20	11	-0.6	10.40	10.965	0.0022	1	0.0022	Pass

Antenna 2:

Protocol	Separation distance (cm)	Max Tune up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
BT	20	7	2.28	9.28	8.472	0.0017	1	0.0017	Pass
BLE	20	5	2.28	7.28	5.346	0.0011	1	0.0011	Pass
2.4G WIFI	20	13	2.28	15.28	33.729	0.0067	1	0.0067	Pass
5.1G WIFI	20	9	2.36	11.36	13.677	0.0027	1	0.0027	Pass
5.8G WIFI	20	11	0.34	11.34	13.614	0.0027	1	0.0027	Pass

For Multiple transmission:

the worst ratio=BT+2.4G WIFI+5.1G WIFI+5.8G WIFI=0.0017+0.0069+0.0027+0.0022=0.0135<=1

Note: 1. The Maximum power is less than the limit, complies with the exemption requirements.

2. ERP = EIRP - 2.15

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