

RF EXPOSURE EVALUATION REPORT

FCC ID : SZG-G99E5
Equipment : Wireless Device
Model Name : G99E5
Applicant : Weifang Goertek Electronics Co., Ltd
Gaoxin 2 Road, Free Trade Zone, Weifang,
Shandong, 261205, P.R.China
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

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Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA550853	Rev. 01	Initial issue of report	Jun. 26, 2025
FA550853	Rev. 02	Update section 1	Jul. 18, 2025

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Wireless Device
Model Name	G99E5
FCC ID	SZG-G99E5
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz Thread: 2400 MHz ~ 2483.5 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/HE20/HE40/HE80 Bluetooth BR/EDR/LE Thread: QPSK
Remark: 1. The WLAN/Bluetooth/Thread cannot transmit simultaneously.	

Reviewed by: Jason Wang**Report Producer: Carlie Tsai****2. Maximum RF average output power among production units**

Band		Tune-Up Limit (dBm)
WLAN 2.4GHz		19.50
WLAN 5.2GHz		17.50
WLAN 5.3GHz		17.50
WLAN 5.5GHz		16.50
WLAN 5.8GHz		17.50
Bluetooth BR / EDR	1Mbps	13.00
	2Mbps	10.00
	3Mbps	10.00
Bluetooth LE	1 Mbps / 2 Mbps	17.00
Thread	Ch 11 / Ch 18 / Ch 25	21.00
	Ch 26	3.00

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

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 Exposures				
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
300-1500			f/300	6
1500-100,000			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
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

**4. Radio Frequency Radiation Exposure Evaluation**

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum PG (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
2.4GHz WLAN	0.70	19.50	20.20	104.71	0.021	1.000
5.2GHz WLAN	4.50	17.50	22.00	158.49	0.032	1.000
5.3GHz WLAN	3.90	17.50	21.40	138.04	0.027	1.000
5.5GHz WLAN	6.10	16.50	22.60	181.97	0.036	1.000
5.8GHz WLAN	6.10	17.50	23.60	229.09	0.046	1.000
Bluetooth	4.00	17.00	21.00	125.89	0.025	1.000
Thread	4.00	21.00	25.00	316.23	0.063	1.000

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.