

FCC RF Exposure

Applicant : SHENZHEN WEIKING TECHNOLOGY CO.,LTD
Room 1008,Jianshang Business Building,Longtang
Address : Community,Minzhi Subdistrict,Longhua
District,Shenzhen,China
Product Name : Bluetooth Speaker
Brand Mark : W-KING
Model : T12
Series model : BT412, T12+
FCC ID : Q8W-T12
Report Number : BLA-EMC-202608-A100-03
Date of Receipt : Aug. 25, 2026
Date of Test : Aug. 25, 2026 to Sep. 15, 2026
47 CFR Part 15, Part1.1307
Test Standard : 47 CFR Part 15, Part2.1091
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

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Review by: Xavier

Approved by: Blue Zheng

Issued Date: Sep. 17, 2026



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Revise Record

Version No.	Date	Description
01	Sep. 17, 2026	Original

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1 General information

1.1 General information

Applicant	SHENZHEN WEIKING TECHNOLOGY CO.,LTD
Address	Room 1008,Jianshang Business Building,Longtang Community,Minzhi Subdistrict,Longhua District,Shenzhen,China
Manufacturer	Guangdong WeiKing Acoustic Co.,Ltd
Address	17 Maonan Road, Zhongshan Torch Development Zone, ZhongShan, Guangdong, China
Factory	Guangdong WeiKing Acoustic Co.,Ltd
Address	17 Maonan Road, Zhongshan Torch Development Zone, ZhongShan, Guangdong, China

1.2 General description of EUT

Product name	Bluetooth Speaker
Model no.	T12
Series model	BT412, T12+
Differences of Series model	They have the same circuit design, layout, components and internal wiring, just a customer model and a own model
Operation Frequency	BLE/BT: 2402MHz-2480MHz
Modulation Type	BLE: GFSK BT: GFSK, $\pi/4$ -DQPSK, 8DPSK
Rate data	BLE: 1Mbps, 2Mbps BT: 1Mbps, 2Mbps, 3Mbps
Number of Channels	BLE: 40 Channels BT: 79 Channels
Antenna Type	Copper tube antenna
Antenna Gain	2.95dBi(Provided by customer)
Power supply	Input voltage/current: TYPE-C: 5V/3A or fast charge protocols (9V/3A, 12V/3A, 15V/3A, 20V/3A) up to 60W; Battery DC 11.1V
Test Voltage	DC 11.1V

Hardware Version	N/A
Software Version	N/A
<i>Remark: Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.</i>	

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2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.2 Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50	
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B. 1})$$

2.3 Result

$$\text{EIRP} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^{2/30}$$

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m,

d = measurement distance in meters (m)

$$\text{Spot} = (\text{E} \times \text{d})^{2/30} \times \text{gt}$$

Separation distance = 20cm

Ant gain = 2.95dBi

For BLE 1M(Worst case):

Max Output power = **0.952dBm @ 2442MHz**

$$\text{EIRP} = 0.952\text{dBm} + 2.95\text{dBi} = 3.902\text{dBm},$$

$$\text{So, ERP} = 3.902\text{dBm} - 2.15 = 1.752\text{dBm} = 1.497\text{mW} < 3060 \text{ mW}$$

For BT Classic(8DPSK):

Max Output power = **1.116dBm @ 2480MHz**

$$\text{EIRP} = 1.116\text{dBm} + 2.95\text{dBi} = 4.066\text{dBm},$$

$$\text{So, ERP} = 4.066\text{dBm} - 2.15 = 1.916\text{dBm} = 1.555\text{mW} < 3060 \text{ mW}$$

Comply with RF exposure exemption limit.

----END OF REPORT----

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