

Safety Human Exposure

1.1 Radio Frequency Exposure Compliance

1.1.1 Electromagnetic Fields

RESULT:

Pass

Test Specification

Test item	: Wireless Keyboard
Identification / Type No.	: THZ988, THZ989, THZ993
FCC ID	: OXM000156
Test standard	: CFR47 FCC Part 2: Section 2.1093 CFR47 FCC Part 1: Section 1.1310 FCC KDB Publication 447498 v06

➤ Product Classification

This device defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that the RF source's radiating structure(s) is/are within 20 centimeters of the body of the user.

Max 1.80 dBi for Bluetooth

➤ Radio Frequency Exposure Limit

For FCC:

- a) For 100 MHz to 6 GHz and *test separation distances* ≤ 50 mm, the 1-g and 10-g *SAR test exclusion thresholds* are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0$$
 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR,³⁰ where

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation³¹
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as *numeric thresholds* in step b) below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

- b) For 100 MHz to 6 GHz and *test separation distances* > 50 mm, the 1-g and 10-g *SAR test exclusion thresholds* are determined by the following (also illustrated in Appendix B):³²

- 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{\text{(MHz)}}/150)]\}$ mW, for 100 MHz to 1500 MHz
- 2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

- c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):³³
- 1) For *test separation distances* > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f_{\text{(MHz)}})]$
 - 2) For *test separation distances* ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½
 - 3) SAR measurement procedures are not established below 100 MHz.

a) EUT RF Exposure Evaluation standalone operations

FCC

Mode	Frequency [GHz]	*Measured RF Output Power [dBm]	Antenna Gain [dBi]	RF Output Power [mW]	EIRP [mW]	d [cm]	Limit- P_{th} [mW]
BLE	2.480	-3.2	1.80	0.48	0.72	0.50	2.72

Note:

1. *Bluetooth RF Output Power: Refer to CN24NH2P 001

➤ **Conclusion**

The maximum calculations result of above are meet the requirement of Radio Frequency Exposure limit.