

RF Exposure Requirements

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: HOZO DESIGN CO., LIMITED
Address of applicant: UNIT 917A, 9/F., TOWER A, NEW MANDARIN PLAZA, NO.14 SCIENCE MUSEUM ROAD, TSIMSHATSUI, KOWLOON.

Manufacturer: HOZO DESIGN CO., LIMITED
Address of manufacturer: UNIT 917A, 9/F., TOWER A, NEW MANDARIN PLAZA, NO.14 SCIENCE MUSEUM ROAD, TSIMSHATSUI, KOWLOON.

General Description of EUT	
Product Name:	NeoRuler-Modular Digital Scale Ruler
Brand Name:	/
Model No.:	N01
Adding Model(s):	
Rated Voltage:	DC 3.7V from Battery
Battery Capacity:	
Software Version:	
Hardware Version:	/
Serial Number:	S05
FCC ID:	2BBKM-N01

Technical Characteristics of EUT	
Bluetooth Version:	V5.0BLE
Frequency Range:	2402-2480MHz
RF Output Power:	-1.38dBm
Data Rate:	1Mbps
Modulation:	GFSK
Quantity of Channels:	40
Channel Separation:	2MHz
Type of Antenna:	PCB
Antenna Gain:	1.9dBi

1.2 Standard Applicable

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

Where

-f(GHz) is the RF channel transmit frequency in GHz

-Power and distance are rounded to the nearest mW and mm before calculation

-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.

1.3 Calculation Method

Bluetooth

Tx frequency range: 2402~2480MHz

Min. test separation distance: 5mm

Maximum Tune-up Conducted Output Power: -1dBm

RF channel transmit frequency: 2440MHz

Result: 0.3749

Limit: 3.0

Result: 0.3749 < Limit: 3.0

So the transmitter complies with the RF exposure requirements and the SAR is not required.