

FCC ID: 2AZB9-H-D50

Portable device

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance V06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

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

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

The result is rounded to one decimal place for comparison;

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 is applied to determine SAR test exclusion.

We use 5mm as separation distance to calculate.

$$P_{\text{max}} \leq (3.0 * D_{\text{min}}) / f$$

Characteristics	Description
Product	HOTO Smart Laser Measure Pro
Model Number	H-D50

Device Type	BLE
Data Rate	1Mbps and 2Mbps
Modulation	GFSK
Operating Frequency Range	2402-2480MHz
Number of Channels	40 Channels
Antenna Type	PCB Antenna
Antenna Gain	2.5dBi
Power Supply	Battery 3.7V, 850mAh DC 5V by Type C port
Temperature Range	-10°C ~ 50°C

Maximum measured transmitter power:

Mode	Mode	Channel Freq. (MHz)	Max Transmit Power (dBm)	Max tune-up power (dBm)	Result calculation	1-g SAR
Bluetooth DTS_1M	GFSK	2402	3.24	4	0.779	3.0
		2440	3.1	4	0.785	3.0
		2480	3.58	4	0.791	3.0
Bluetooth DTS_2M	GFSK	2402	3.33	4	0.779	3.0
		2440	3.13	4	0.785	3.0
		2480	3.63	4	0.791	3.0

Conclusion:

For the max result : $0.791 \leq 3.0$ for 1-g SAR extremity SAR, no SAR is required.

----- The End -----