

FCC RF Exposure

EUT Description:MagicBox

ModelNo.:M-01

Series Model: M-02

FCC ID: 2BLUH-M-01

Test Report No.: FCS202410055

FCC ID:2BLUH-M-01

Equipment type: Portable Device

1. Test Procedure

According to KDB 447498 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:

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

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 6GHz.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2. Test Result of RF Exposure Evaluation

WIFI:

Modulation	Channel Freq. (MHz)	Maximum Conducted Output Power(PK)	Antenna Gain (dBi)	Antenna gain numeric	Max tune-up power (W)
802.11b	2412	4.63	3.37	2.17	0.002904023
	2437	4.01	3.37	2.17	0.002517677
	2462	4.42	3.37	2.17	0.002766942
802.11g	2412	3.59	3.37	2.17	0.002285599
	2437	4.04	3.37	2.17	0.002535129
	2462	3.83	3.37	2.17	0.002415461
802.11n	2412	3.60	3.37	2.17	0.002290868
	2437	3.98	3.37	2.17	0.002500345
	2462	3.78	3.37	2.17	0.002387811

WIFI:
$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]}{= 2.904023 / 5 \cdot \sqrt{2.412} = 0.9020 \leq 3.0}$$
 Threshold at which no SAR required is and ≤ 3.0 for 1-g SAR, Separation distance is 5mm.

Conclusion: no SAR required