

RF Exposure evaluation

Product Description: bluetooth digital speaker

Model Number: F3, M3,F3C

FCC ID: 2AIGHF3

According to 447498 D01 General RF Exposure Guidance v06 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:

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

• $[\sqrt{f_{\text{(GHz)}}}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz

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

According to the follow transmitter output power (Pt) formula:

$$Pt = (E \times d)^2 / (30 \times gt)$$

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)

According to the formula described above:

$$Pt = 4,54 \text{ dBm} = 2,84 \text{ mW}$$

The result is rounded to one decimal place for comparison

Worse case is as below: [2402 MHz - 2,84 mW output power]

$$(2,84 \text{ mW} / 5 \text{ mm}) * [\sqrt{2402 \text{ (GHz)}}] = 0,88 < 3.0 \text{ for 1 - g SAR}$$

Then SAR evaluation is not required

NOTE: For the maximum power, you can refer FCC test report.