

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	BLUETOOTH FM TRANSMITTER
Model Name	BH169A
FCC ID	2AIL4-BH169A

2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v05

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:

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

3. CALCULATION

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

BR/EDR

$P_t = 3.564 \text{ dBm} = 2.26 \text{ mW}$

The result for RF exposure evaluation

$\text{SAR} = (3.31 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 0.7 < 3.0$ for 1-g SAR

FM

$P_t = (45.61 - 95.2) \text{ dBm} = 0.000011 \text{ mW}$

The result for RF exposure evaluation

$\text{SAR} = (0.000011 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{0.0876(\text{GHz})}] = 0.00000065 < 3.0$ for 1-g SAR

For BT and FM transmit simultaneously

$(0.7/3)^2 + (0.00000065/3)^2 = 0.054 < 1$

4. CONCLUSION

The SAR evaluation is not required.