

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Wireless hands free car kit
Model Name	BTFM4PD, BTFM4, BTFM4-SP, BTFM4-SP1
FCC ID	IKQBTFM4B

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

BT $P_t = -7.772\text{dBm} = 0.17\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47

§15.247.

The result for RF exposure evaluation $\text{SAR} = (0.17\text{mW} / 5\text{mm}) \cdot [\sqrt{2.441(\text{GHz})}] = 0.05 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

FM $P_t = -49.05\text{dBm} = 0.0000124\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR39

§15.239

The result for RF exposure evaluation $\text{SAR} = (0.0000124\text{mW} / 5\text{mm}) \cdot [\sqrt{0.0881(\text{GHz})}] = 0.000000736 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

Simultaneous transmission between Bluetooth and FM transmitter:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg}$, for test separation distances ≤ 50 mm;

where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.

$\text{SAR} = (0.05 + 0.000000736) / 7.5 = 0.007\text{W/kg} < 1.6\text{W/kg}$

4. CONCLUSION

The SAR evaluation is not required.