RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Bluetooth FM TRANSMITTER
Model Name	RAX-FM1
FCC ID	2AZMERAX-FM1

2. EVALUATION METHOD

According to 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:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 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

3. CALCULATION

P_t=3.581dBm=2.28mW

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 SAR=(2.28mW /5mm) .[√2.441(GHz)]=0.71<3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

§15.239

FM Pt= -50.93dBm=0.000008mW

The value of the Maximum output power P_t is referred to the test report of the CFR47
For frequencies below 100 MHz and test separation distances ≤ 50 mm , the power threshold determined by the following:

P_{max} =0.5 * 474 * [1+log(100/f)] mW, where f is MHz

For 88.1MHz, P_{max}=250mW. Pt< $P_{max.}$

For 107.9MHz, P = 3 x 5 / 0.1079^0.5 = 45.7 mW
P_{max}=45.7mW. Pt< $P_{max.}$

Simultaneous transmission between Bluetooth and FM transmitter:
[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)/x] W/kg, for test separation distances ≤ 50 mm;
where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.
SAR=(0.71+0. 000008)/7.5=0.095W/kg<1.6W/kg

4. CONCLUSION

The SAR evaluation is not required.