# **RF EXPOSURE EVALUATION**

### 1. PRODUCT INFORMATION

Product Description	Bluetooth FM Transmitter
Model Name	BH347A, BH347B, BH347C
FCC ID	2AIL4-BH347A

### 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  $\leq$  50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,

mm)]  $\cdot [\sqrt{f}(GHz)] \le 3.0$  for 1-g SAR and  $\le 7.5$  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

According to the follow transmitter output power  $(P_t)$  formula:  $P_{t}= (E \times d)^{2}/(30 \times g_t)$   $P_{t}$ =transmitter output power in watts  $g_{t}$ =numeric gain of the transmitting antenna (unitess) E=electric field strength in V/m d=measurement distance in meters (m)

BT Pt= 1.564dBm=1.43mW

The result for RF exposure evaluation SAR=(1.43mW /5mm) .[ $\sqrt{2.48}$ (GHz)]= 0.45<3.0 for 1-g SAR

FM Pt=0.0000042mW The result for RF exposure evaluation SAR=(0.0000042mW /5mm) .[ $\sqrt{0.98}$ (GHz)]= 0.00000083<3.0 for 1-g SAR

Simultaneous transmission between Bluetooth and FM transmitter [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] • [ $\sqrt{f(GHz)/x}$ ] W/kg, for test separation distances  $\leq$  50 mm; where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.

SAR=(0.45+0.00000083)/7.5=0.06W/kg<1.6W/kg

# 4. CONCLUSION

The SAR evaluation is not required.