

## **RF** Exposure evaluation

Product Description: Bluetooth Speaker Model Number: BTS-519 FCC ID: R8HBTS519

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

According to the follow transmitter output power (Pt) formula: Pt= (E x d) 2/ (30 x gt) Pt=transmitter output power in watts gt=numeric gain of the transmitting antenna (unitess) E=electric field strength in V/m d=measurement distance in meters (m)

According to the formula described above:

Emax=<u>89.92</u>dBuv/m=<u>0.031</u>V/m, d=3m, g<sub>t</sub>=0.82

 $P_t$ = ( E x d ) <sup>2</sup>/ ( 30 x g<sub>t</sub> ) =(0.031x3)<sup>2</sup>/ (30x0.82)=0.0003515854W=0.35mW

The result is rounded to one decimal place for comparison Worse case is as below: [2402MHz -**0.35**mW output power] (**0.35**mW / 5mm)\*[ $\sqrt{2.402GHz}$ )] = <u>**0.11**</u> < 3.0 for 1 - g SAR Then SAR evaluation is not required

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

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