RF Exposure evaluation

Product Description:Bluetooth Speaker
Model Number: B51
FCC ID: QIFB51

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: [(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

According to the follow transmitter output power (P_t) formula :
P_t= (E x d) ^{2}/ (30 x 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)

According to the above test data,
Emax=97.05dBuv/m=0.071V/m,d=3m,g_t=1.32
P_t= (E x d) ^{2}/ (30 x g_t) =(0.071x3)^2/(30x1.32)=0.001146W=1.15mW

   The result is rounded to one decimal place for comparison
   Worse case is as below: [2402MHz -1.15mW output power]
   (1.15mW /5mm) .[√2.402(GHz)]= 0.356<3.0 for 1-g SAR
   Then SAR evaluation is not required

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