RF Exposure

The Equipment Under Test (EUT) is a Kids Karaoke Station 2 Mic with Remote with Bluetooth 5.2 (Single Mode EDR) function operating in in 2402-2480MHz. The EUT is powered by 5V=2A (Internal Li-ion battery:7.4V=,2000mAh,14.8Wh). For more detailed features description, please refer to the user's manual.

Antenna Type: Integral Antenna Modulation: GFSK, $\pi/4$ -DQPSK and 8-DPSK Antenna Gain: 1.7dBi Max. Bluetooth Version: 5.2 (Single Mode EDR)

According to the KDB 447498 D01 General RF Exposure Guidance v06

The maximum peak radiated emission for the EUT is $102.2dB\mu V/m$ at 3m in the frequency 2480MHz. The EIRP = [(FS*D) ^2 / 30] W = 7.0 dBm which is within the production variation. The minimum peak radiated emission for the EUT is 91.7dB μ V/m at 3m in the frequency 2441MHz. The EIRP = [(FS*D) ^2 / 30] W = -3.5 dBm which is within the production variation.

The nominal radiated output power (e.i.r.p) specified: 1.5 dBm (Tolerance: ±6dB) The nominal conducted output power specified: -0.2 dBm (Tolerance: ±6dB)

The maximum radiated output power (e.i.r.p) specified is 7.5 dBm= 5.6 mW The source- based time-averaging conducted output power = (5.6* Duty cycle) mW< (5.6*1) mW (Duty cycle<100%)

The SAR Exclusion Threshold Level:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] \cdot [Vf(GHz)] \leq 3.0 for 1-g SAR, and \leq 7.5 for 10-g extremity SAR,30 where f(GHz) is the RF channel transmit frequency in GHz.

When f(GHz)=2.402GHz, (min. test separation distance, mm) =5mm, Then the (max. power of channel, including tune-up tolerance, mW) =9.68mW

When f(GHz)=2.480GHz, (min. test separation distance, mm) =5mm, Then the (max. power of channel, including tune-up tolerance, mW) =9.53mW

Since the maximum radiated output power (e.i.r.p) is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.