RF Exposure

AM09 is an Audio System with built-in rechargeable lithium battery with two passive radiators to enhance the bass and with Bluetooth in. It has function of audio play through Bluetooth audio player. It has NFC function, so it very easy to connect Bluetooth devices which had NFC built-in.

Antenna Type: Integral antenna
Antenna Gain: -0.5dBi
The nominal conducted output power specified: 5dBm +/-5dB.
The nominal radiated output power (e.i.r.p) specified: 4.5dBm (Tolerance: +/- 5dB)

Modulation Type: GFSK, $\pi/4$ –DQPSK and 8-DPSK.

According to the KDB 447498:
> The maximun peak radiated emission for the EUT is 103.9dBμV/m at 3m in the frequency 2402MHz
> The EIRP = [(FS*D) ^2 / 30] mW = 8.7dBm
> which is within the production variation.

> The minimum peak radiated emission for the EUT is 101.0dBμV/m at 3m in the frequency 2441MHz
> The EIRP = [(FS*D) ^2 / 30] mW = 5.8dBm
> which is within the production variation.

> The maximun conducted output power specified is 10dBm = 10mW
> The source- based time-averaging conducted output power
> = 10 * Duty Cycle mW= 8.3 mW

> The SAR Exclusion Threshold Level:
> = 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
> = 3.0 * 5 / sqrt (2.480) mW
> = 9.53 mW

> Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

Transmitter Duty Cycle Calculation
> Based on the Bluetooth Specification (BT version: 3.0 + EDR), the duty cycle is dependent of packet type (DH1, DH3 and DH5).For one period for a pseudo-random hopping through all 79 RF channels, for DH5:
> One hop set consists of 5 TX slot and 1 RX slot.
> Duty cycle = 5 / 6 = 0.833
> This requirement is according to KDB 865664 D02

FCC ID: 2AA3H-AM09