RF exposure test exclusion evaluation report

Product:	Smart Tag Finder
Model no.:	HG12823-US
FCC ID:	2AJ9O-HG12823
Earphones Rating:	3.0VDC supplied by 1pc “CR2032” non-rechargeable lithium battery
RF Transmission Frequency:	2402MHz-2480MHz
Modulation:	GFSK
Antenna Type:	PCB Antenna
Max Antenna Gain:	-0.54dBi Max
Description of the EUT:	The Equipment Under Test (EUT) is a Smart Tag Finder which support Low Energy Bluetooth(1Mbps).
Reference Report	68.950.24.1760.01

1. Limit and Guidelines on Exposure to Electromagnetic Fields

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

According to KDB 447498 D01 General RF Exposure Guidance v06, Mobile Portable RF Exposure, no SAR required if power is lower than the flowing threshold:
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 calculation25
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2. Calculation method

[(max. power of` channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0

Max Tune-up power = 1dBm
Distance = 5 mm
f = 2.402 GHz

[1.26/5] * SQRT(2.402) =0.39
0.39≤ 3.0

Therefore, excluded from SAR testing.

TUV SUD China, Shenzhen Branch

Reviewed by: Prepared By:

John Zhi/ EMC Project Manager Hayden Hu/EMC Project Engineer

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