



RF Exposure Estimation Report

Applicant:	Shanghai Jiangxu trade Co., Ltd.
Address:	Section B,4F,Block1,No.158,Xuxiang Rd,Xujing Town,Qingpu District ,Shanghai
Product name :	Bluetooth Earphone
FCC-ID	2AFGA-KSP-ONE
Model No.:	KSP-ONE
RF report #	NTS-150624059R NTS-150624060R

1. Limit and Guidelines on Exposure to Electromagnetic Fields

According to §15.247(e)(i) and §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 Mobile Portable RF Exposure v05r02, 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})]$$

$$[\sqrt{f(\text{GHz})}] \leq \text{3.0 for 1-g SAR} \quad \text{and} \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- $f(\text{GHz})$ 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

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

Tune up tolerance : +/- 0.16dB



BT3.0 +EDR Conducted Power + tune up tolerance = 2.72 dBm

Distance = 5 mm f = 2.480 GHz

BT4.0 BLE Conducted Power + tune up tolerance = 2.72 dBm

Distance = 5 mm f = 2.480 GHz

$$[1.88] * \text{SQRT}(2.480) = \underline{0.592}$$

$$0.592 \leq 3.0$$

$$[1.87] * \text{SQRT}(2.480) = \underline{0.589}$$

$$0.589 \leq 3.0$$

Therefore, excluded from SAR testing.

Reviewed by:

A handwritten signature in black ink, appearing to read 'Andy'.

Andy Xie /Technical Manager

Date: 2015-09-06

Prepared By:

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Jack Wu /Testing Engineer

Date: 2015-09-06