

RF exposure Estimation

Applicant: Smart iBlue Technology Limited.

Address: Unit 12, 10/F., Hong Man Industrial Centre, 2 Hong Man Street, Chai Wan, HONG KONG

FCC ID: 2AKSEIRC-01

1. Product information

The EUT is a remote with Bluetooth 4.0BLE short range devices.

Model: Universal Remote

2. 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 v06, 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:

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

$[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 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.

3. Calculation method

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

Maximum output power: 5.10dBm = 3.24mW

Distance = 5 mm

$f = 2.440$ GHz

$[3.24/5] \cdot \text{SQRT}(2.440) = 1.01$

$1.01 \leq 3.0$

Therefore, excluded from SAR testing.

TUV SUD China, Guangzhou Branch

Reviewed by:



Peter Jia

Date: 2017-06-20

Prepared By:



Matt Zhang

Date: 2017-06-20