RF Exposure Requirements

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: yongkangshihuarandianqiyouxiangongsi

Address of applicant: kangzhuanglu 196hao, zhiyingzhen, yongkangshi,

zhejiangsheng

Manufacturer: yongkangshihuarandianqiyouxiangongsi

Address of manufacturer: kangzhuanglu 196hao, zhiyingzhen, yongkangshi,

zhejiangsheng

General Description of EUT	
Product Name:	vibration plate
Brand Name:	AXV
Model No.:	FR-78
Adding Model(s):	FR-118, FR-138, FR-198, FR-268, FR-88, FR-278,
	FR-288, FR-298, FR-318
Rated Voltage:	AC 120V, 60Hz
Power Adapter:	1
Software Version:	1
Hardware Version:	1
Serial Number:	76453HY76709
FCC ID:	2A4YL-FR

Technical Characteristics of EUT	
Bluetooth Version:	V4.2 (BDR/EDR mode)
Frequency Range:	2402-2480MHz
RF Output Power:	3.90dBm (Conducted)
Data Rate:	1Mbps, 2Mbps, 3Mbps
Modulation:	GFSK, Pi/4 QDPSK, 8DPSK
Quantity of Channels:	79
Channel Separation:	1MHz
Type of Antenna:	PCB
Antenna Gain:	2.5dBi

1.2 Standard Applicable

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

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

Where

- -f(GHz) is the RF channel transmit frequency in GHz
- -Power and distance are rounded to the nearest mW and mm before calculation
- -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 4.1 f) is applied to determine SAR test exclusion.

1.3 Calculation Method

Bluetooth

Tx frequency range: 2402~2480MHz Min. test separation distance: 5mm

Maximum Conducted Output Power: 3.90dBm RF channel transmit frequency: 2402MHz

Result: 0.76 Limit: 3.0

So the transmitter complies with the RF exposure requirements and the SAR is not required.