

RF Exposure Evaluation

FCC ID: 2AMIU-VISION650

1. Client Information

Applicant	:	Shenzhen Benjun Technology Co., LTD
Address	:	8-709 Runcheng garden xili town, Nanshan District, Shenzhen City, Guangdong province, China
Manufacturer	:	Shenzhen Tianjiu electronics CO., LTD
Address	:	3 Bldg. No. 21Makan Road, Xili town, Nanshan District, shenzhen city, Guangdong, province, China

2. General Description of EUT

EUT Name	:	WIRELESS HEADPHONES	
Models No.	:	Vision 650, Vision 680	
Model Difference	:	All these models are in the same PCB, layout and electrical circuit, the only difference is horn and the honk.	
Product Description	:	Operation Frequency:	Bluetooth 4.0: 2402~2480 MHz
		RF Output Power:	Bluetooth: 1.227 dBm(Max) BLE: -0.77 dBm(Max)
		Antenna Gain:	1.5dBi Ceramic Antenna
Power Supply	:	DC Voltage Supply from USB Interface. DC Voltage supplied by Li-ion battery.	
Power Rating	:	USB Input:5V 0.15A DC 3.7V by 250mAh Li-ion battery	
Software Version	:	1.0	
Hardware Version	:	1.0	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note: More test information about the EUT please refer the RF Test Report.

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

- (1) Clause 4.3: General SAR test reduction and exclusion guidance

- Sub clause 4.31: Standalone SAR test exclusion considerations

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance ≤ 5 mm are determined by:

- $$\frac{[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation, mm})] * [\sqrt{f_{\text{(GHz)}}}] \leq 3.0 \text{ for 1-g SAR}$$

- $$\frac{[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation, mm})] * [\sqrt{f_{\text{(GHz)}}}] \leq 7.5.0 \text{ for 10-g SAR}$$

2. Calculation:

Test separation: 5mm

Bluetooth Mode (GFSK)

Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Thres hold Value
2.402	1.011	1±1	2	1.585	0.491	3.0
2.441	1.227	1±1	2	1.585	0.495	3.0
2.480	0.840	1±1	2	1.585	0.499	3.0

Bluetooth Mode (Pi/4-DQPSK)

Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Thres hold Value
2.402	0.458	0±1	1	1.259	0.390	3.0
2.441	0.796	0±1	1	1.259	0.393	3.0
2.480	0.421	0±1	1	1.259	0.397	3.0

Bluetooth Mode (8-DPSK)

Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Thres hold Value
2.402	0.877	1±1	2	1.585	0.491	3.0
2.441	1.188	1±1	2	1.585	0.495	3.0
2.480	0.763	1±1	2	1.585	0.499	3.0

BLE Mode (GFSK)

Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Thres hold Value
2.402	-0.778	0±1	1	1.259	0.390	3.0
2.442	-0.692	0±1	1	1.259	0.393	3.0
2.480	-1.092	-1±1	0	1.000	0.315	3.0

Test separation: 5mm

The worst RF Exposure Evaluation

Worst Calculation Value	Threshold Value
0.491	3.0

The worst RF Exposure Evaluation is **0.499 / cm2 < limit 3.0**, So standalone SAR measurements are not required.

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