

RF Exposure Evaluation

FCC ID: 2AMIU-5B

1. Client Information

Applicant : Shenzhen Benjun Technology Co., LTD
Address : 8-709 Runcheng garden xili Nanshan Shenzhen China
Manufacturer : Shenzhen Tianjiu Electronics Co., Ltd.
Address : Building 3, No. 21, Makan Road, Xili Town, Nanshan District, Shenzhen, Guangdong, China

2. General Description of EUT

EUT Name	:	Bone-conduction headphone and sunglasses	
Models No.	:	Vision 5B	
Product Description	:	Operation Frequency:	Bluetooth V4.0: 2402~2480 MHz
	:	RF Output Power:	Bluetooth: 5.489dBm(GFSK) BLE: 6.029dBm(GFSK)
	:	Antenna Gain:	0dBi PCB Antenna
Power Supply	:	DC power by USB cable. DC power by Li-ion battery.	
Power Rating	:	DC 5V by Host System. DC 3.7V by 250mAh Li-ion Battery.	
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	Threshold Value
2.402	4.037	5 ± 1	6	3.981	1.234	3.0
2.441	5.489	5 ± 1	6	3.981	1.244	3.0
2.480	4.364	5 ± 1	6	3.981	1.254	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	Threshold Value
2.402	2.226	3 ± 1.5	4.5	2.818	0.874	3.0
2.441	4.025	3 ± 1.5	4.5	2.818	0.881	3.0
2.480	2.333	3 ± 1.5	4.5	2.818	0.888	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	Threshold Value
2.402	2.862	3.5 ± 1.5	5	3.162	0.980	3.0
2.441	4.510	3.5 ± 1.5	5	3.162	0.988	3.0
2.480	2.914	3.5 ± 1.5	5	3.162	0.996	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	Threshold Value
2.402	5.044	5.5 ± 1	6.5	4.467	1.385	3.0
2.442	6.029	5.5 ± 1	6.5	4.467	1.396	3.0
2.480	5.341	5.5 ± 1	6.5	4.467	1.407	3.0

So standalone SAR measurements are not required.

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