

RF Exposure Evaluation

FCC ID: 2BDW8-BAM1

1. Client Information

Applicant	:	Micheon, INC
Address	:	14500 E 14th #3139, San Leandro, CA 94578, United States
Manufacturer	:	Shenzhen Pincun Digital Technology Co., Ltd.
Address	:	Rm 2407, Building 11, Phase II, Tian'An Yungu Industrial Park, Gangtou community, Bantian, Longgang, Shenzhen, Guangdong, China 518129

2. General Description of EUT

EUT Name	:	wireless headset	
Model(s) No.	:	BAM 1, BAM 2, BAM 3, BAM 4, BAM 5	
Model Difference	:	All PCB boards and circuit diagrams are the same, the only difference is that model name.	
Product Description	Operation Frequency:	Bluetooth V5.1: 2402MHz~2480MHz	
	Number of Channel:	Bluetooth 5.1: 79 channels	
	Antenna Gain:	-0.58dBi PCB Antenna	
	Modulation Type:	GFSK, Pi/4-DQPSK, 8-DPSK	
	Bit Rate of Transmitter:	1/2/3Mbps	
Power Supply	:	Input: DC 5V/1A	
Li-ion Polymer Battery	:	3.7V by 300mAh Rechargeable Li-ion battery	
Software Version	:	V1.0	
Hardware Version	:	V2.2	
Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.			

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:
$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR}$$
$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f_{(\text{GHz})}}] \leq 7.5.0 \text{ for 10-g SAR}$$

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	4.242	4±1	5	3.162	0.980	3.0
2.441	3.128	3±1	4	2.512	0.785	3.0
2.480	2.299	2±1	3	1.995	0.628	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	4.595	5±1	6	3.981	1.234	3.0
2.441	3.513	4±1	5	3.162	0.988	3.0
2.480	2.762	3±1	4	2.512	0.791	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	4.811	5±1	6	3.981	1.234	3.0
2.441	3.678	4±1	5	3.162	0.988	3.0
2.480	3.088	3±1	4	2.512	0.791	3.0

Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

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