

# RF Exposure Evaluation

## FCC ID: 2AR3Z-PMG-6

### 1. Client Information

<b>Applicant</b>	:	POW AUDIO INC
<b>Address</b>	:	116 John Street, Suite 415, Lowell, MA,USA 01852
<b>Manufacturer</b>	:	Shenzhen Hi-FiD Electronics Tech Co., Ltd
<b>Address</b>	:	4F, B7 Building, Hengfeng industrial City, Hezhou Village, Xixiang Town, Bao'an District, Shenzhen City, China

### 2. General Description of EUT

<b>EUT Name</b>	:	MO
<b>Models No.</b>	:	PMG-6 POW MO Graphite PMS-6 Snow POW MO Snow
<b>Model Difference</b>	:	N/A
<b>Product Description</b>	Operation Frequency:	Bluetooth 4.2(BT): 2402MHz~2480MHz
	RF Output Power:	GFSK:-0.758dBm $\pi$ /4-DQPSK: 0.691dBm 8-DPSK: 0.816dBm
	Antenna Gain:	1.2dBi PCB Antenna
<b>Power Supply</b>	:	DC Voltage Supply from Adapter DC Voltage supplied by Li-ion battery.
<b>Power Rating</b>	:	Output: DC 5.0V by adapter DC 3.7V by 1400mAh Li-ion battery
<b>Software Version</b>	:	V1.1.9
<b>Hardware Version</b>	:	V2.0
<b>Connecting I/O Port(S)</b>	:	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  $\leq 5$  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	-0.758	-1±1	0	1.000	0.310	3.0
2.441	-1.904	-1±1	0	1.000	0.312	3.0
2.480	-3.419	-3±1	-2	0.631	0.199	3.0
Bluetooth Mode (π/4-QPSK)						
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	0.691	0±1	1	1.259	0.390	3.0
2.441	-0.550	0±1	1	1.259	0.393	3.0
2.480	-2.099	-2±1	-1	0.794	0.250	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	0.816	0±1	1	1.259	0.390	3.0
2.441	-0.331	0±1	1	1.259	0.393	3.0
2.480	-1.892	-1±1	0	1.000	0.315	3.0

Test separation: 5mm		
The worst RF Exposure Evaluation		
Worst Calculation Value	Total Calculation Value	Threshold Value
Bluetooth Mode		
0.393	0.393	3.0

The worst RF Exposure Evaluation is calculated as  $0.393 / \text{cm}^2 < \text{limit } 3.0$ , So standalone SAR measurements are not required.

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