

RF Exposure Evaluation

FCC ID: 2A4JQ-UG-01

1. Client Information

Applicant	:	Shenzhen Yongsheng Technology Co., LTD.
Address	:	No.4A-223,No.1,South China Avenue,Hehua Community, Pinghu Street, Shenzhen, China.
Manufacturer	:	Shenzhen Shenzhen Electronics CO., LTD.
Address	:	Building 6, No.1 Xuri East Road, Shanxia community, Pinghu, Longgang, Shenzhen, Guangdong, China, 518111

2. General Description of EUT

EUT Name	:	Wireless Headphone
Model(s) No.	:	UG-01, UG-01F
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is model name.
Product Description	:	Operation Frequency: Bluetooth 5.0: 2402MHz~2480MHz
	:	Number of Channel: Bluetooth 5.0: 79 channels
	:	Antenna Gain: 0.5 dBi PCB Antenna
	:	Modulation Type: GFSK, Pi/4-DQPSK, 8-DPSK
	:	Bit Rate of Transmitter: Bluetooth :1/2/3Mbps
Power Supply	:	Input: DC 5V DC 3.7V by 500mAh Rechargeable Li-ion battery
Software Version	:	V1.0.23.16.1
Hardware Version	:	V2.0
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:

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

- [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)] * $[\sqrt{f_{\text{GHz}}}] \leq 7.5.0$ 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	-2.834	-2 ± 1	-1	0.794	0.246	3.0
2.441	-2.428	-2 ± 1	-1	0.794	0.248	3.0
2.480	-1.993	-1 ± 1	0	1.000	0.315	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	-0.440	0 ± 1	1	0.794	0.246	3.0
2.441	-0.173	0 ± 1	1	0.794	0.248	3.0
2.480	0.147	0 ± 1	1	1.000	0.315	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	0.238	0 ± 1	1	1.259	0.390	3.0
2.441	0.449	0 ± 1	1	1.259	0.393	3.0
2.480	0.695	0 ± 1	1	1.259	0.397	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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