



RF Exposure Evaluation

FCC ID: 2A4MJ-MS-T20

1. Client Information

Applicant	:	Jiaxing Yuejia Trading Co., Ltd.
Address	:	Room 1201-A3, Suyin Building, No. 999, Hongxing Road, Economic and Technological Development Zone, Jiaxing City, Zhejiang Province, China
Manufacturer	:	Jiaxing Yuejia Trading Co., Ltd.
Address	:	Room 1201-A3, Suyin Building, No. 999, Hongxing Road, Economic and Technological Development Zone, Jiaxing City, Zhejiang Province, China

2. General Description of EUT

EUT Name	:	Bluetooth headphones
Model(s)	:	MS-T20, MS-T30, MS-T40, X21, S19, BL08, M28, G1, MD04, E60, H11
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance and color.
Product Description	Operation Frequency:	Bluetooth 5.1(BDR+EDR): 2402MHz~2480MHz
	Number of Channel:	79 channels
	RF Output Power:	0.82dBm (Max)
	Antenna Gain:	1.5dBi Internal Antenna
	Modulation Type:	GFSK(1Mbps) π /4-DQPSK(2Mbps)
Power Supply (Earphone)	:	Input: DC 5V DC 3.7V by 60mAh Li-ion battery
Power Supply (Charger Box)	:	Input: 5V500mA DC 3.7V by 400mAh Li-ion battery
Software Version	:	v1.0
Hardware Version	:	v1.0
Connecting I/O Port(S)	:	Please refer to the User's Manual

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.

TB-RF-074-1.0

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:

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

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

2. Calculation:

Test separation: 5mm						
GFSK Mode (1Mbps)						
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	-0.14	0±1	1	1.259	0.390	3.0
2.441	-0.49	0±1	1	1.259	0.393	3.0
2.480	-1.17	-1±1	0	1.0	0.315	3.0

Test separation: 5mm						
$\pi/4$ -DQPSK Mode (2Mbps)						
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	0.82	0±1	1	1.259	0.390	3.0
2.441	0.21	0±1	1	1.259	0.393	3.0
2.480	-0.39	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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