

# RF Exposure Evaluation

## FCC ID: 2A22D-XT-18

### 1. Client Information

<b>Applicant</b>	:	Shenzhen Xizhe Technology Co., Ltd.
<b>Address</b>	:	5th Floor, Building A1, Anle Industrial Park, No.172, Hangcheng Avenue, Bao'an District, Shenzhen, China
<b>Manufacturer</b>	:	Shenzhen Xizhe Technology Co., Ltd.
<b>Address</b>	:	5th Floor, Building A1, Anle Industrial Park, No.172, Hangcheng Avenue, Bao'an District, Shenzhen, China

### 2. General Description of EUT

<b>EUT Name</b>	:	True Wireless Earphone	
<b>Model(s) No.</b>	:	XT-18, XT-16, XT-8, XT-5, XT-3	
<b>Model Different</b>	:	All PCB boards and circuit diagrams are the same, the only difference is that colors and names are different.	
<b>Product Description</b>	:	Operation Frequency:	Bluetooth V5.0(BT): 2402~2480 MHz
		Number of Channel:	Bluetooth: 79 Channels
		Max Peak Output Power:	Bluetooth: 6.410 dBm(8-DQPSK)
		Antenna Gain:	0.8 dBi Caremic Antenna
		Modulation Type:	GFSK(1Mbps) $\pi$ /4-DQPSK(2Mbps) 8-DPSK(3Mbps)
<b>Power Supply (Earphone)</b>	:	Input: Output DC 5V DC 3.7V by 45mAh Li-ion battery	
<b>Power Supply (Charger Box)</b>	:	Input: Output DC 5V DC 3.7V by 300mAh Li-ion battery	
<b>Software Version</b>	:	V003	
<b>Hardware Version</b>	:	V1.1	

**Remark:** The antenna gain and adapter provided by the applicant, the adapter and verified for the RF conduction test 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  $\leq 5$  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	5.391	5±1	6	3.981	1.234	3.0
2.441	4.508	4±1	5	3.162	0.988	3.0
2.480	5.785	5±1	6	3.981	1.254	3.0
Bluetooth Mode (π/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	5.905	5±1	6	3.981	1.234	3.0
2.441	5.103	5±1	6	3.981	1.244	3.0
2.480	6.298	6±1	7	5.012	1.579	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	6.410	6±1	7	5.012	1.554	3.0
2.441	5.568	5±1	6	3.981	1.244	3.0
2.480	4.347	4±1	5	3.162	0.996	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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