

RF Exposure Evaluation

FCC ID: 2AXA9-GEF-11B

1. Client Information

Applicant	:	SHENZHEN ENSCA TECHNOLOGY LTD
Address	:	Floor5,Building1A,Environmental Protection Industrial Park,No31,South MaKan Road,XiLiTown,Nanshan District,Shenzhen,China
Manufacturer	:	SHENZHEN ENSCA TECHNOLOGY LTD
Address	:	Floor5,Building1A,Environmental Protection Industrial Park,No31,South MaKan Road,XiLiTown,Nanshan District,Shenzhen,China

2. General Description of EUT

EUT Name	:	Bluetooth Shooting Glasses
Model(s) No.	:	GEF-11B,GEF-11BC,GEF-11BD,GEF-11BE
Model Different	:	All these models are the same PCB, layout and electrical circuit, The only difference is the color.
Product Description	Operation Frequency:	Bluetooth 5.0(BT): 2402MHz~2480MHz
	Number of Channel:	Bluetooth 5.0(BT): 79 channels see note(3)
	RF Output Power:	3.073dBm(Max)
	Antenna Gain:	0dBi PCB Antenna
	Modulation Type:	GFSK π /4-DQPSK
Power Rating	:	USB Input: DC 5V DC 3.7V by 500mAh Li-ion battery
Software Version	:	V9
Hardware Version	:	7-36A-V11
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.

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	2.548	3±1	4	2.512	0.779	3.0
2.441	2.980	3±1	4	2.512	0.785	3.0
2.480	3.073	3±1	4	2.512	0.791	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	1.756	2±1	3	1.995	0.618	3.0
2.441	2.259	2±1	3	1.995	0.623	3.0
2.480	2.307	2±1	3	1.995	0.628	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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