

RF Exposure Evaluation

FCC ID:2AZWI-3493LEQI

IC: 27649-3493LEQI

1. Client Information

Applicant	:	Shenzhen Leqi Network Technology Co., LTD
Address	:	Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park, Nos. 1301-50 Guanguang Road, Longhua District, Shenzhen, Guangdong, China.
Manufacturer	:	Shenzhen Leqi Network Technology Co., LTD
Address	:	Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park, Nos. 1301-50 Guanguang Road, Longhua District, Shenzhen, Guangdong, China.

2. General Description of EUT

EUT Name	:	Wireless Lavalier Microphone
HVIN/Model(s)	:	Wave W2-C, Wave W2, Wave W2-L
Model Different	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is that names.
Product Description	:	Operation Frequency: Bluetooth 4.0(BLE): 2402MHz~2480MHz
	:	Number of Channel: Bluetooth 4.0 (BLE): 40 channels
	:	RF Output Power: BLE: 2.971dBm (Max)
	:	Antenna Gain: 1.4 dBi FPC Antenna
	:	Modulation Type: GFSK
	:	Bit Rate of Transmitter: 1/2Mbps
Power Supply	:	Input: DC 5V, 1A DC 3.7V by 100mAh Rechargeable Li-ion battery
Software Version	:	V1.1
Hardware Version	:	V1.0
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.

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:

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

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

2. Calculation:

Test separation: 5mm						
BLE 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	2.506	3±1	4	2.512	0.779	3.0
2.440	2.456	2±1	3	1.995	0.623	3.0
2.480	2.95	3±1	4	2.512	0.791	3.0
BLE 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	2.645	3±1	4	2.512	0.779	3.0
2.440	2.539	3±1	4	2.512	0.785	3.0
2.480	2.971	3±1	4	2.512	0.791	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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