

RF Exposure Evaluation

FCC ID: 2APVO-B1322

1. Client Information

Applicant	:	Thinkedge CO., Ltd.
Address	:	12F., No.407, Sec. 4, Xinyi Rd., Xinyi Dist., Taipei City 110, Taiwan (R.O.C.)
Manufacturer	:	Dongguan SenDongLv Electronics Co.LTD
Address	:	111, Nanjiang Road, Danbandi Industry Estate, Daning, Humen, Dongguan, Guangdong, China

2. General Description of EUT

EUT Name	:	Bluetooth Headset	
Models No.	:	bliiq Hummingbird, B1322-01, B1322-02, B1322-03, B1322-05, B1322-06, B1322-07	
Model Difference	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is appearance of color.	
Product Description	:	Operation Frequency:	Bluetooth V4.2: 2402~2480 MHz
	:	Number of Channel:	Bluetooth: 79 Channels
	:	Max Peak Output Power:	Bluetooth: 2.192dBm(GFSK)
	:	Antenna Gain:	2.41dBi Ceramic Antenna
	:	Modulation Type:	GFSK (1 Mbps) π /4-DQPSK (2 Mbps) 8-DPSK (3 Mbps)
Power Rating	:	DC 5.0 V from the USB Cable. DC 3.7V by 2*100mAh Li-ion Battery.	
Software Version	:	1.0	
Hardware Version	:	1.0	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

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:

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

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

2. Calculation:

Test separation: 5mm						
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	-0.911	0 ± 1	1	1.259	0.390	3.0
2.441	0.542	0 ± 1	1	1.259	0.393	3.0
2.480	2.192	2 ± 1	3	1.995	0.628	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	-1.468	-1 ± 1	0	1.000	0.310	3.0
2.441	0.032	0 ± 1	1	1.259	0.393	3.0
2.480	1.733	1 ± 1	2	1.585	0.499	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	-1.281	-1 ± 1	0	1.000	0.310	3.0
2.441	0.169	0 ± 1	1	1.259	0.393	3.0
2.480	1.887	1 ± 1	2	1.585	0.499	3.0

So standalone SAR measurements are not required.

-----END OF REPORT-----