RF Exposure Evaluation

FCC ID: 2AAZR-HSD8023C

1. Client Information

Applicant : Shenzhen Highstar Electrical Co., Ltd

Address : 2F&4F,Building 6, Highstar Industrial zone, Gangtou,Bantian Street, Longgang District,Shenzhen,China

Manufacturer : Shenzhen Highstar Electrical Co., Ltd

Address : 2F&4F,Building 6, Highstar Industrial zone, Gangtou,Bantian Street, Longgang District,Shenzhen,China

2. General Description of EUT

EUT Name	:	ICAMP BLUETOOTH SPEAKER WITH NIGHT LIGHT	
Models No.	:	HSD8023C, HSD8023B	
Model Difference	:	All models are identical in the same PCB layout, interior structure and electrical circuits, The only difference is model name for commercial purpose.	
Product Description	:	Operation Frequency: Bluetooth 2.1+EDR: 2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels **See Note 3**
		Max Peak Output Power:	Bluetooth: 2.114 dBm(π /4-DQPSK)
		Antenna Gain:	-0.68dBi PCB Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π /4-DQPSK(2 Mbps)
Power Supply	:	DC Voltage supplied from Host System by USB cable. DC power by Li-ion Battery.	
Power Rating	:	DC 5V by USB Cable from PC system. DC 3.7V by Li-ion Battery.	
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.

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, China

Tel: +86 75526509301 Fax: +86 75526509195

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D1 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v05r03.

(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:

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

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤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 (mw)	Calculation Value	Threshold Value
2.402	1.690	±0.5	1.656	0.513	**3.0**
2.441	1.253	±0.5	1.497	0.468	**3.0**
2.480	0.949	±0.5	1.396	0.440	**3.0**
Bluetooth Mode (π /4-DQPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	2.114	±0.5	1.826	0.566	**3.0**
2.441	2.112	±0.5	1.825	0.570	**3.0**
2.480	1.909	±0.5	1.741	0.548	**3.0**

So standalone SAR measurements are not required.

-----End of Report-----