

RF Exposure Evaluation

FCC ID: 2AGHDLSP-298

1. Client Information

Applicant : ORE SMART TECHNOLOGY CO.,LIMITED
Address : BAIYUNSHAN ROAD,CHENJIANG TOWN, HUIZHOU, GUANGDONG, CHINA
Manufacturer : ORE SMART TECHNOLOGY CO.,LIMITED
Address : BAIYUNSHAN ROAD,CHENJIANG TOWN, HUIZHOU, GUANGDONG, CHINA

2. General Description of EUT

EUT Name	:	Water Resistant Shower Bluetooth Speaker	
Models No.	:	LSP-298	
Model difference	:	N/A	
Product Description	:	Operation Frequency: Bluetooth:2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels
		Max Peak Output Power:	Bluetooth: 4.826 dBm(π /4-DQPSK)
		Antenna Gain:	-0.68 dBi PCB Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π /4-DQPSK(2 Mbps) 8-DPSK(3 Mbps)
Power Supply	:	DC Voltage supplied from Host System by USB cable. DC power by Li-ion Battery.	
Power Rating	:	DC 5.0V by USB cable. DC 3.7V 400mAh 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.

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v05r02.

- (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 (mw)	Calculation Value	Threshold Value
2.402	4.209	±0.5	2.957	0.917	3.0
2.441	4.319	±0.5	3.033	0.948	3.0
2.480	4.587	±0.5	3.226	1.016	3.0
Bluetooth Mode ($\pi/4$ -DQPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	3.569	±0.5	2.552	0.791	3.0
2.441	4.513	±0.5	3.172	0.991	3.0
2.480	4.826	±0.5	3.409	1.074	3.0
Bluetooth Mode (8-DPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	3.506	±0.5	2.515	0.780	3.0
2.441	4.519	±0.5	3.176	0.992	3.0
2.480	4.771	±0.5	3.366	1.060	3.0

So standalone SAR measurements are not required.