

RF Exposure Evaluation

FCC ID: 2ACUS-2733

1. Client Information

Applicant : Shenzhen ShengHeDa Electronic Technology Co., Ltd
Address : 2nd Floor, Bada Industrial, Heping, Fuyong, Baoan District, Shenzhen, Guangdong, China
Manufacturer : Shenzhen ShengHeDa Electronic Technology Co., Ltd
Address : 2nd Floor, Bada Industrial, Heping, Fuyong, Baoan District, Shenzhen, Guangdong, China

2. General Description of EUT

| | | |
|-------------------------------|---|---|
| EUT Name | : | Bluetooth Speaker |
| Models No. | : | 2733 |
| Model Difference | : | N/A |
| Product Description | : | Operation Frequency: Bluetooth:2402~2480MHz |
| | : | Number of Channel: Bluetooth:79 Channels |
| | : | Max Peak Output Power: GFSK:-2.043 dBm |
| | : | Antenna Gain: 0 dBi PIFA 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 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 ≤ 50 mm are determined by:
$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] \times [\sqrt{f_{\text{(GHz)}}}]}{\leq 3.0 \text{ for 1-g SAR}}$$

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

2.

Calculation:

| Bluetooth Mode (GFSK) | | | | | | |
|-------------------------|-----------------------|----------------|---------------|---------------|-------------------|-----------------|
| Frequency (GHz) | Conducted Power (dBm) | Ant Gain (dBi) | TX Power (mW) | Distance (mm) | Calculation Value | Threshold Value |
| 2.402 | -2.043 | 0 | 0.625 | 5 | 0.194 | 3.0 |
| 2.441 | -2.275 | 0 | 0.592 | 5 | 0.185 | 3.0 |
| 2.480 | -2.971 | 0 | 0.505 | 5 | 0.159 | 3.0 |
| Bluetooth Mode (8-DPSK) | | | | | | |
| Frequency (GHz) | Conducted Power (dBm) | Ant Gain (dBi) | TX Power (mW) | Distance (mm) | Calculation Value | Threshold Value |
| 2.402 | -2.064 | 0 | 0.622 | 5 | 0.193 | 3.0 |
| 2.441 | -2.275 | 0 | 0.592 | 5 | 0.185 | 3.0 |
| 2.480 | -3.049 | 0 | 0.496 | 5 | 0.156 | 3.0 |

So standalone SAR measurements are not required.