

RF Exposure Evaluation

FCC ID: 2AN03-P2

1. Client Information

Applicant : ShenZhen SHIDU Digital Technolgy Co.,Ltd
Address : F6, Zhaofeng, Hangkong Rd, Bao'an, Shenzhen, China
Manufacturer : ShenZhen SHIDU Digital Technolgy Co.,Ltd
Address : F6, Zhaofeng, Hangkong Rd, Bao'an, Shenzhen, China

2. General Description of EUT

| | | | |
|-------------------------------|---|--|--|
| EUT Name | : | Bluetooth Speaker | |
| Models No. | : | P2, SD-T1, SD-T3, SD-T4, SD-T6, SD-T7, SD-T8, P3, P5, P6, P7 | |
| Model Difference | : | All models are identical in the same PCB layout interior structure and electrical circuits, The only difference is appearance color. | |
| Product Description | : | Operation Frequency: | Bluetooth V4.0+EDR: 2402~2480 MHz |
| | : | RF Output Power: | Bluetooth: 6.889dBm(Max) BLE: 3.738dBm(Max) |
| | : | Antenna Gain: | 1.2dBi PCB Antenna |
| Power Supply | : | DC Voltage supplied by USB cable DC Voltage supplied by Li-ion battery | |
| Power Rating | : | DC 5.0V by USB cable DC 3.7V by 1500mAh 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 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 | 2.304 | 3±1 | 4 | 2.512 | 0.779 | 3.0 |
| 2.441 | 2.868 | 3±1 | 4 | 2.512 | 0.785 | 3.0 |
| 2.480 | 3.569 | 3±1 | 4 | 2.512 | 0.791 | 3.0 |
| Bluetooth Mode (π/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 | 5.142 | 6±1 | 7 | 5.012 | 1.554 | 3.0 |
| 2.441 | 5.903 | 6±1 | 7 | 5.012 | 1.566 | 3.0 |
| 2.480 | 6.813 | 6±1 | 7 | 5.012 | 1.579 | 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 | 5.493 | 6±1 | 7 | 5.012 | 1.554 | 3.0 |
| 2.441 | 6.362 | 6±1 | 7 | 5.012 | 1.566 | 3.0 |
| 2.480 | 6.889 | 6±1 | 7 | 5.012 | 1.579 | 3.0 |
| BLE 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 | 2.225 | 3±1 | 4 | 2.512 | 0.779 | 3.0 |
| 2.442 | 2.911 | 3±1 | 4 | 2.512 | 0.785 | 3.0 |
| 2.480 | 3.738 | 3±1 | 4 | 2.512 | 0.791 | 3.0 |

So standalone SAR measurements are not required.

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