RF Exposure Evaluation

FCC ID: 2ANO3-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.

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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:
   [(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 (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.

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