RF Exposure Evaluation
FCC ID: 2ACSPNST-BS1

1. Client Information

Applicant	:	Beijing Natural Smart-Tech Co., Ltd.
Address	:	Room 11C, Building B, No.28 Xinxi Road, Haidian District, Beijing, China
Manufacturer	:	Beijing Natural Smart-Tech Co., Ltd.
Address	:	Room 11C, Building B, No.28 Xinxi Road, Haidian District, Beijing, China

2. General Description of EUT

EUT Name	:	Bluetooth Speaker	
Models No.	:	NST-BS1	
Model Difference	:	N/A.	
Product Description	:	Operation Frequency: Bluetooth:2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels
		Max Peak Output Power:	8-DPSK:8.892 dBm GFSK(BLE):9.560 dBm
		Antenna Gain:	0 dBi Chip Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π/4-DQPSK(2 Mbps) 8-DPSK(3 Mbps) GFSK (BLE)
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 1000mAh 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.

TB-RF-074-1.0

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:

   [(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:

Bluetooth Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Ant Gain (dBi)	TX Power (mW)	Distance (mm)	Calculation Value	Threshold Value
2.402	5.395	0	3.463	5	1.074	**3.0**
2.441	8.220	0	6.637	5	2.074	**3.0**
2.480	8.668	0	7.359	5	2.318	**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	6.258	0	4.225	5	1.310	**3.0**
2.441	8.451	0	7.000	5	2.187	**3.0**
2.480	8.892	0	7.748	5	2.440	**3.0**
BLE Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Ant Gain (dBi)	TX Power (mW)	Distance (mm)	Calculation Value	Threshold Value
2.402	7.271	0	5.335	5	1.654	**3.0**
2.442	9.078	0	8.087	5	2.528	**3.0**
2.480	9.560	0	9.036	5	2.846	**3.0**

So standalone SAR measurements are not required.