

RF Exposure Evaluation

FCC ID: 2AFIH-BND503

1. Client Information

Applicant	:	Brand New Days Limited
Address	:	Unit B, 6/F Tong Yuen Factory Building, 505 Castle Peak Road, Lai Chi Kok, Kowloon, Hong Kong
Manufacturer	:	Shenzhen Casun Technologies Co., Ltd.
Address	:	4/F, B Building, No.8 Eastern Zone, Shangxue Technology Park, Bantian, Shenzhen, China

2. General Description of EUT

EUT Name	:	Bluetooth Speaker	
Models No.	:	BND503	
Model Difference	:	N/A	
Product Description	:	Operation Frequency:	Bluetooth 4.2(BT): 2402MHz~2480MHz
		RF Output Power:	GFSK: -0.116dBm π /4-DQPSK: -0.109dBm 8-DPSK: -0.111dBm
		Antenna Gain:	0.9dBi PCB Antenna
Power Supply	:	DC Voltage Supply from USB Port. DC Voltage supplied by Li-ion battery.	
Power Rating	:	DC 5.0V 1A by USB cable DC 3.7V by 600mAh Li-ion battery	
Software Version	:	010_lxw_STYX_5856T28_JS_CHILI -SPEAKER_0xa7c4a1	
Hardware Version	:	V1.2	
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:

- $$\frac{[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0 \text{ for 1-g SAR}}{}$$

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

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	-0.116	-1±1	0	1.000	0.310	3.0
2.441	-0.154	-1±1	0	1.000	0.312	3.0
2.480	-0.147	-1±1	0	1.000	0.315	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	-0.109	0±1	0	1.000	0.310	3.0
2.441	-0.168	0±1	0	1.000	0.312	3.0
2.480	-0.144	0±1	0	1.000	0.315	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	-0.111	0±1	0	1.000	0.310	3.0
2.441	-0.171	0±1	0	1.000	0.312	3.0
2.480	-0.157	0±1	0	1.000	0.315	3.0

Test separation: 5mm	
The worst RF Exposure Evaluation	
Worst Calculation Value	Threshold Value
0.315	3.0

The worst RF Exposure Evaluation is **0.315 / cm² < limit 3.0**, So standalone SAR measurements are not required.

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