

RF Exposure Evaluation

FCC ID: 2AFIH-BND500

1. Client Information

Applicant	: Brand New Days Limited
Address	: Flat B, 6/F, Tong Yuen Factory Building, 505 Castle Peak Road, Lai Chi Kok, Kowloon, Hongkong
Manufacturer	: Shenzhen Casun Electronic 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 Wireless Speaker	
Models No.	:	BND500 ECHO	
Model Difference	:	N/A	
Product Description	:	Operation Frequency: Bluetooth:2402~2480MHz	
	:	Number of Channel:	Bluetooth:79 Channels
	:	Max Peak Output Power:	GFSK: -0.11dBm
	:	Antenna Gain:	-0.68 dBi PCB Antenna
	:	Modulation Type:	GFSK 1Mbps(1 Mbps) π /4-DQPSK(2 Mbps)
Power Supply	:	DC Voltage supplied from Host System by USB cable DC power by Li-ion Battery	
Power Rating	:	DC 5V by USB Cable from PC system. DC 3.7V by 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 ≤ 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)	Ant Gain (dBi)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	-0.11	-0.68	±0.5	1.094	0.339	3.0
2.441	-1.32	-0.68	±0.5	0.828	0.259	3.0
2.480	-0.58	-0.68	±0.5	0.982	0.309	3.0
Bluetooth Mode ($\pi/4$ -DQPSK)						
Frequency (GHz)	Conducted Power (dBm)	Ant Gain (dBi)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	-4.90	-0.68	±0.5	0.363	0.113	3.0
2.441	-5.27	-0.68	±0.5	0.333	0.104	3.0
2.480	-5.70	-0.68	±0.5	0.302	0.095	3.0

So standalone SAR measurements are not required.