RF Exposure Evaluation

FCC ID: 2ARDV-8090

1. Client Information

Applicant	:	Shenzhen CBP Technology Co., Ltd
Address	:	307, No.73 Industrial East Road, Xinniu Community, Minzhi Street, Longhua District, Shenzhen, China
Manufacturer	:	Shenzhen CBP Technology Co., Ltd
Address	:	307, No.73 Industrial East Road, Xinniu Community, Minzhi Street, Longhua District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Wireless Bluetooth Speaker	
Models No.	:	YXSM8090BT, YXSM9010BT, YXSM9011BT, YXSM9012BT, YXSM9013BT, YXSM9014BT, YXSM9015BT, YXSM9016BT, YXSM9017BT, YXSM9018BT, YXSM9019BT, YXSM8010BT, YXSM8020BT, YXSM8030BT, YXSM8040BT, YXSM8050BT, YXSM8060BT, YXSM8070BT, YXSM8080BT, YXSM7010BT, YXSM7020BT, YXSM7030BT, YXSM7040BT, YXSM7050BT, YXSM7060BT, YXSM7070BT, YXSM7080BT, YXSM7090BT, SL-10, SL-20, SL-30, SL-40, SL-50, SL-60, SL-70, SL-80, SL-90, Foxnovon YXSM8090BT	
Model Difference	:	All models are in the same PCB layout interior structure and electrical circuits, The only difference is model name for commercial purpose.	
Product Description	:	Operation Frequency:	Bluetooth V5.0: 2402MHz~2480MHz
		RF Output Power:	GFSK: 3.209dBm π/4-DQPSK:3.900dBm
		Antenna Gain:	0dBi PCB Antenna
Power Rating	:	Input: AC 90V-256V 50/60Hz.	
Software Version	:	AC692x_SDK_release_V2.5.1	
Hardware Version	:	V11	
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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MPE Calculations for BT

1. **Antenna Gain:**
   PCB Antenna: 0dBi.

2. **EUT Operation Condition:**
   Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. **Exposure Evaluation:**
   Equation from page 18 of OET Bulletin 65, Edition 97-01
   $S=(PG)/4\pi R^2$
   Where
   S: power density
   P: power input to the antenna
   G: power gain of the antenna in the direction of interest relative to an isotropic radiator.
   R: distance to the center of radiation of the antenna

4. **Test Result:**

Mode	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/cm^2) [S]	Limit of Power Density (mW/cm^2) (S)
GFSK	3.209	3±1	4	0	20	0.00050	1
π/4-DQPSK	3.900	3±1	4	0	20	0.00050	1

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/cm^2)
300-1,500	F/1500
1,500-100,000	1.0

For BT:2402~2480 MHz
MPE limit S: $1mW/cm^2$
The MPE is calculated as ***$0.00050mW/cm^2 < limit\ 1mW/cm^2$***. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

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