Maximum Permissible Exposure Evaluation

FCC ID: 2AHASBT17

1. Client Information

Applicant	:	JEM ACCESSORIES INC.
Address	:	32 Brunswick Avenue Edison New Jersey United States 08817
Manufacturer	:	JEM ACCESSORIES INC.
Address	:	32 Brunswick Avenue Edison New Jersey United States 08817

2. General Description of EUT

EUT Name	:	Bluetooth Audio Transmitter &Receiver	
Models No.	:	BT17, MBA9-1011-BLK	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is Model name.	
Brand Name	:	Monster	
Product Description	:	Operation Frequency:	Bluetooth 5.0(BDR+EDR): 2402MHz~2480MHz
		Number of Channel:	79 channels
		RF Output Power:	-0.28 dBm (Max)
		Antenna Gain:	2.5dBi Dipole Antenna
Power Rating	:	USB Input: DC 5V	
Software Version	:	CGBT2064_BT17_V1.6	
Hardware Version	:	CGBT2064_2831_V1.0 20210408	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the MPE report used the EUT-2(20211126-04-02).	

MPE Calculations for Bluetooth

1. Antenna Gain:

Dipole Antenna: 2.5dBi.

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:

Bluetooth 5.0(BDR+EDR)

Bluetooth								
Test Mode	Frequency (MHz)	Max Conducted Power (dBm)	Tune-up Power (dBm)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm2) [S]	Limit of Power Density (mW/ cm2) (S)
GFSK	2402	-0.28	0±1	1	2.5	20	0.0004	1
	2441	-0.65	0±1	1	2.5	20	0.0004	1
	2480	-1.12	-1±1	0	2.5	20	0.0003	1
π /4-DQPSK	2402	-0.72	0±1	1	2.5	20	0.0004	1
	2441	-0.91	0±1	1	2.5	20	0.0004	1
	2480	-1.48	-1±1	0	2.5	20	0.0003	1
8-DPSK	2402	-0.45	0±1	1	2.5	20	0.0004	1
	2441	-0.9	0±1	1	2.5	20	0.0004	1
	2480	-1.5	-1±1	0	2.5	20	0.0003	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 Bluetooth 5.0(BDR+EDR):2402~2480 MHz

MPE limit S: 1mW/ cm^2

The MPE is calculated as ***0.0004mW / 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.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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