

RF Exposure Evaluation

FCC ID: 2ATPZJJ07632

1. Client Information

Applicant	:	JAXJOX INC
Address	:	Lincoln Square South Building 10400 NE 4th ST
Manufacturer	:	JAXJOX INC
Address	:	Lincoln Square South Building 10400 NE 4th ST

2. General Description of EUT

EUT Name	:	InteractiveStudio	
Models No.	:	JJ15003	
Model Difference	:	----	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz Bluetooth 4.2: 2402MHz~2480MHz
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM,64QAM) Bracke BLE: GFSK Screen BLE:GFSK BT:GFSK (1 Mbps) Pi/4-DQPSK (2 Mbps) 8-DPSK (3 Mbps)
	Antenna Gain:	2dBi PCB Antenna	
Power Rating	:	Input: 100-240V~50/60Hz 1.5Amax Output:STB+5.1V 0.04A~1.5A, V5 +5.1V 0.5A~4.0A, V12 +12V 0.3A~6.0A, V19 +19V 0.2A~6.0A, V24 +24V 0.5A~7A	
Software Version	:	11291517_r2087	
Hardware Version	:	EDU.MS848.9	
Remark	:	The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

Note: More test information about the EUT please refer the RF Test Report.

MPE Calculations for WIFI&BT

1. Antenna Gain:

PCB Ant:	Model	Frequency Range
	N/A	2400~2483.5MHz
		2dBi

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:

2.4G WIFI&BLE&BT

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)
(Bracket) BLE	3.870	3±1	4	2	20	0.0079	1
(Screen)BLE	5.557	5±1	6	2	20	0.0125	1
802.11B	15.03	15±1	16	2	20	0.1255	1
802.11G	14.02	14±1	15	2	20	0.0997	1
802.11N(HT20)	13.43	13±1	14	2	20	0.0792	1
802.11N(HT40)	12.18	12±1	13	2	20	0.0629	1
GFSK	5.065	5±1	6	2	20	0.0125	1
Pi/4-DQPSK	7.592	7±1	8	2	20	0.0198	1
8-DPSK	8.136	8±1	9	2	20	0.0250	1

The worst RF Exposure Evaluation					
Worst Calculation Value				Total Calculation Value	Threshold Value
2.4WiFi Mode	Bluetooth Mode	Bracke BLE Mode	Screen BLE Mode		
0.1255	0.0250	0.0079	N/A	0.1584	1.0
<p>Note:The sample supports BT and wifi can be beamed simultaneously According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission operations;</p> <p>Σ of MPE ratios ≤ 1.0</p>					

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&BLE:2402~2480 MHz

For WIFI: 802.11b/g/n(HT20): 2412MHz~2462MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.1584mW / cm² < limit 1mW / cm²**. 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.

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