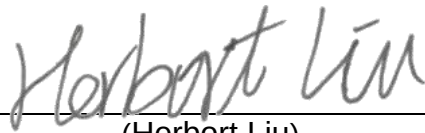


# Maximum Permissible Exposure Report

**FCC ID: WS2-WG7833B0**

Project No. : 1806T107A  
Equipment : Wireless module  
Test Model : WG7833-B0  
Series Model : N/A  
Applicant : Jorjin Technologies INC.  
Address : 17F., No 239, Sec. 1, Datong Rd., Xizhi Dist.,  
New Taipei City, 22161, TAIWAN, R.O.C.  
  
According: : FCC Guidelines for Human Exposure IEEE  
C95.1

Authorized Signatory

:   
(Herbert Liu)

**B T L I N C .**

No.18, Ln. 171, Sec. 2, Jiuzong Rd.,  
Neihu Dist., Taipei City, Taiwan (R.O.C.)  
TEL:+886-2-2657-3299 FAX: +886-2-2657-3331



Testing Laboratory

0659

## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

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

Table for Filed Antenna

| Ant. | Brand  | Model | Type | Connector | Gain (dBi) |        |        |
|------|--------|-------|------|-----------|------------|--------|--------|
|      |        |       |      |           | 2.4 GHz    | Band 1 | Band 4 |
| 1    | Liteon | Locix | PCB  | N/A       | 3.83       | 4.10   | 2.27   |

## TEST RESULTS

### Bluetooth EDR:

|             |                |
|-------------|----------------|
| Test Mode : | TX Mode _1Mbps |
|-------------|----------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2402            | 3.83               | 2.4155                 | 10.63                      | 11.5611                   | 0.00555841                              | 1                                                | Complies    |
| 2441            | 3.83               | 2.4155                 | 10.69                      | 11.7220                   | 0.00563573                              | 1                                                | Complies    |
| 2480            | 3.83               | 2.4155                 | 10.32                      | 10.7647                   | 0.00517548                              | 1                                                | Complies    |

|             |                |
|-------------|----------------|
| Test Mode : | TX Mode _3Mbps |
|-------------|----------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2402            | 3.83               | 2.4155                 | 5.16                       | 3.2810                    | 0.00157743                              | 1                                                | Complies    |
| 2441            | 3.83               | 2.4155                 | 5.04                       | 3.1915                    | 0.00153444                              | 1                                                | Complies    |
| 2480            | 3.83               | 2.4155                 | 4.55                       | 2.8510                    | 0.00137073                              | 1                                                | Complies    |

### Bluetooth LE:

|             |                   |
|-------------|-------------------|
| Test Mode : | CH00, CH19 , CH39 |
|-------------|-------------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2402            | 3.83               | 2.4155                 | 4.94                       | 3.1189                    | 0.00149951                              | 1                                                | Complies    |
| 2440            | 3.83               | 2.4155                 | 4.67                       | 2.9309                    | 0.00140913                              | 1                                                | Complies    |
| 2480            | 3.83               | 2.4155                 | 4.99                       | 3.1550                    | 0.00151688                              | 1                                                | Complies    |

## 2.4G:

|             |                              |
|-------------|------------------------------|
| Test Mode : | TX B MODE / CH01, CH06, CH11 |
|-------------|------------------------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2412            | 3.83               | 2.4155                 | 15.42                      | 34.8337                   | 0.01674751                              | 1                                                | Complies    |
| 2437            | 3.83               | 2.4155                 | 15.51                      | 35.5631                   | 0.01709820                              | 1                                                | Complies    |
| 2462            | 3.83               | 2.4155                 | 15.21                      | 33.1894                   | 0.01595697                              | 1                                                | Complies    |

|             |                              |
|-------------|------------------------------|
| Test Mode : | TX G MODE / CH01, CH06, CH11 |
|-------------|------------------------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2412            | 3.83               | 2.4155                 | 12.02                      | 15.9221                   | 0.00765509                              | 1                                                | Complies    |
| 2437            | 3.83               | 2.4155                 | 13.22                      | 20.9894                   | 0.01009138                              | 1                                                | Complies    |
| 2462            | 3.83               | 2.4155                 | 12.51                      | 17.8238                   | 0.00856940                              | 1                                                | Complies    |

|             |                                     |
|-------------|-------------------------------------|
| Test Mode : | TX N (HT20) Mode / CH01, CH06, CH11 |
|-------------|-------------------------------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2412            | 3.83               | 2.4155                 | 11.78                      | 15.0661                   | 0.00724353                              | 1                                                | Complies    |
| 2437            | 3.83               | 2.4155                 | 12.15                      | 16.4059                   | 0.00788770                              | 1                                                | Complies    |
| 2462            | 3.83               | 2.4155                 | 11.96                      | 15.7036                   | 0.00755006                              | 1                                                | Complies    |

|             |                                     |
|-------------|-------------------------------------|
| Test Mode : | TX N (HT40) Mode / CH03, CH06, CH09 |
|-------------|-------------------------------------|

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2422            | 3.83               | 2.4155                 | 10.64                      | 11.5878                   | 0.00557122                              | 1                                                | Complies    |
| 2437            | 3.83               | 2.4155                 | 11.97                      | 15.7398                   | 0.00756746                              | 1                                                | Complies    |
| 2452            | 3.83               | 2.4155                 | 10.90                      | 12.3027                   | 0.00591494                              | 1                                                | Complies    |

# 5G:

Test Mode : UNII-1\_TX A Mode /CH36, CH40, CH48

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5180            | 4.10               | 2.5704                 | 15.74                      | 37.4973                   | 0.01918449                              | 1                                                | Complies    |
| 5200            | 4.10               | 2.5704                 | 16.18                      | 41.4954                   | 0.02123002                              | 1                                                | Complies    |
| 5240            | 4.10               | 2.5704                 | 15.88                      | 38.7258                   | 0.01981301                              | 1                                                | Complies    |

Test Mode : UNII-1\_TX N (HT20) Mode /CH36, CH40, CH48

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5180            | 4.10               | 2.5704                 | 15.81                      | 38.1066                   | 0.01949622                              | 1                                                | Complies    |
| 5200            | 4.10               | 2.5704                 | 15.82                      | 38.1944                   | 0.01954116                              | 1                                                | Complies    |
| 5240            | 4.10               | 2.5704                 | 15.90                      | 38.9045                   | 0.01990446                              | 1                                                | Complies    |

Test Mode : UNII-1\_TX N (HT40) Mode / CH38, CH46

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5190            | 4.10               | 2.5704                 | 13.89                      | 24.4906                   | 0.01252998                              | 1                                                | Complies    |
| 5230            | 4.10               | 2.5704                 | 13.96                      | 24.8886                   | 0.01273358                              | 1                                                | Complies    |

Test Mode : UNII-3\_TX A Mode / CH149, CH157, CH161

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5745            | 2.27               | 1.6866                 | 11.33                      | 13.5831                   | 0.00455985                              | 1                                                | Complies    |
| 5785            | 2.27               | 1.6866                 | 14.69                      | 29.4442                   | 0.00988440                              | 1                                                | Complies    |
| 5825            | 2.27               | 1.6866                 | 14.46                      | 27.9254                   | 0.00937455                              | 1                                                | Complies    |

Test Mode : UNII-3\_TX N (HT20) Mode / CH149, CH157, CH161

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5745            | 2.27               | 1.6866                 | 10.51                      | 11.2460                   | 0.00377529                              | 1                                                | Complies    |
| 5785            | 2.27               | 1.6866                 | 14.26                      | 26.6686                   | 0.00895262                              | 1                                                | Complies    |
| 5825            | 2.27               | 1.6866                 | 14.08                      | 25.5859                   | 0.00858915                              | 1                                                | Complies    |

Test Mode : UNII-3\_TX N (HT40) Mode / CH151, CH159

| Frequency (MHz) | Antenna Gain (dBi) | Antenna Gain (numeric) | Average Output Power (dBm) | Average Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|-----------------|--------------------|------------------------|----------------------------|---------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5755            | 2.27               | 1.6866                 | 11.39                      | 13.7721                   | 0.00462328                              | 1                                                | Complies    |
| 5795            | 2.27               | 1.6866                 | 12.66                      | 18.4502                   | 0.00619370                              | 1                                                | Complies    |

Note:

(1) The calculated distance is 20 cm.