



# **Maximum Permissible Exposure Report**

FCC ID: WS2-WG7833B0

Project No. : 1806T107A

Equipment : Wireless module

**Test Model** : WG7833-B0

Series Model: N/A

: Jorjin Technologies INC. Applicant

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: FCC Guidelines for Human Exposure IEEE According:

C95.1

**Authorized Signatory** 

## BTL INC.

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### **MPE CALCULATION METHOD:**

Calculation Method of RF Safety Distance:

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

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

#### Table for Filed Antenna

Ant	Ant. Brand	Model	Type	Connector	Gain (dBi)		
Ant. Brand	iviouei i y	туре	Connector	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Density (S)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Density (S)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Density (S)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Density (S)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Density (S)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Gain	Average Output	Average Output	Density (S)	Limit of Power Density (S)	Test Result
2422	(dBi) 3.83	(numeric) 2.4155	Power (dBm) 10.64	Power (mW) 11.5878	(mW/cm <sup>2</sup> ) 0.00557122	(mW/cm <sup>2</sup> )	Complies
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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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)	Test Result
5180	4.10	2.5704	15.81	38.1066	0.01949622	,	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Density (S)	Limit of Power Density (S) (mW/cm²)	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	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	Antenna	Antenna	Average	Average	Power	Limit of Power	Test
	Gain	Gain	Output	Output	Density (S)	Density (S)	
(MHz)	(dBi)	(numeric)	Power (dBm)	Power (mW)	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	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)	Gain	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)	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.