

FCC RF EXPOSURE REPORT

FCC ID: ZMOSU806DEAU

Project No. : 2111C041
Equipment : LTE Module
Brand Name : Fibocom
Test Model : SU806D-EAU
Series Model : N/A
Applicant : Fibocom Wireless Inc.
Address : 1101,Tower A, Building 6, Shenzhen International Innovation Valley,
Dashi 1st Rd, Nanshan,Shenzhen,China
Manufacturer : Fibocom Wireless Inc.
Address : 1101,Tower A, Building 6, Shenzhen International Innovation Valley,
Dashi 1st Rd, Nanshan,Shenzhen,China
Factory : Huizhou HYE Technology Co., Ltd.
Address : No. 237, Sanhe group, Sanhe village, Tonghu Town, Zhongkai hi tech
Zone, Huizhou
Date of Receipt : Nov. 03, 2021
Date of Test : Dec. 27, 2021 ~ Mar. 11, 2022
Issued Date : Mar. 17, 2022
Report Version : R00
Test Sample : Engineering Sample No.: DG2021122849 for GSM, WCDMA and LTE,
DG20211227105 for BT, DG20211227104 for WIFI
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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TESTING CERT #5123.02

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-9-2111C041	R00	Original Report.	Mar. 17, 2022	Valid

1. TEST FACILITY

The test facilities used to collect the test data of WLAN in this report is at the location of No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China.

The test facilities used to collect the test data of WWAN in this report is at the location of Room 108, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

2. 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:

For BT/LE/WLAN 2.4GHz:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	Bogesl Organism Magnet Industry Co.,Ltd	GHT-019A	Dipole	SMA Male J	2.30

Note: The antenna gain is provided by the manufacturer.

For WLAN 5GHz:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	Bogesl Organism Magnet Industry Co.,Ltd	GHT-019A	Dipole	SMA Male J	3.66

Note: The antenna gain is provided by the manufacturer.

For GSM:

Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
shenzhen bogesi communication technology co., ltd	GHT-019A	Dipole	SMA	1.32	GSM 850
				1.93	PCS 1900

Note: The antenna gain is provided by the manufacturer.

For WCDMA:

Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
shenzhen bogesi communication technology co., ltd	GHT-019A	Dipole	SMA	1.93	WCDMA Band II
				1.32	WCDMA Band V

Note: The antenna gain is provided by the manufacturer.

For LTE:

Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
shenzhen bogesi communication technology co., ltd	GHT-019A	Dipole	SMA	1.93	LTE Band 2
				2.86	LTE Band 4
				1.32	LTE Band 5
				1.07	LTE Band 7
				0.93	LTE Band 38
				1.52	LTE Band 41

Note: The antenna gain is provided by the manufacturer.

3. TEST RESULTS

For BT:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.30	1.6982	8.75	7.4989	0.00253	1	Complies

For LE:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.30	1.6982	1.25	1.3335	0.00045	1	Complies

For WLAN 2.4GHz:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.30	1.6982	16.84	48.3059	0.01633	1	Complies

For WLAN 5GHz:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.66	2.3227	17.05	50.6991	0.02344	1	Complies

For GSM:

EGSM900	Max Burst Average Power (dBm)	Max Frame Average Power (dBm)
	Channel/Frequency(MHz)	Channel/Frequency(MHz)
	128/824.2	128/824.2
GSM (CS)	34.5	25.31
GSM1800	Max Burst Average Power (dBm)	Max Frame Average Power (dBm)
	Channel/Frequency(MHz)	Channel/Frequency(MHz)
	512/1850.2	512/1850.2
GSM (CS)	31.5	22.31

Note:

- The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power=10 x log (Burst-averaged power mW x Slot used/8)
- Max. Output Power = Max Frame Average Power

Band	Frequency (MHz)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Antenna Gain (linear)	Output Power to Antenna	Power Density (mW/cm ²)	Power Density Limit (mW/cm ²)	Test Result
GSM 850	824.2	25.31	1.32	1.36	460.26	0.0916	0.5495	Complies
PCS 1900	1850.2	22.31	1.93	1.56	265.46	0.0528	1.0000	Complies

For WCDMA:

Band	Frequency (MHz)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Antenna Gain (linear)	Output Power to Antenna	Power Density (mW/cm ²)	Power Density Limit (mW/cm ²)	Test Result
WCDMA II	1852.4	24.5	1.93	1.56	439.54	0.0874	1.0000	Complies
WCDMA V	826.4	24.5	1.32	1.36	381.94	0.0760	0.5509	Complies

For LTE:

Band	Frequency (MHz)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Antenna Gain (linear)	Output Power to Antenna	Power Density (mW/cm ²)	Power Density Limit (mW/cm ²)	Test Result
LTE Band 2	1850.7	24	1.93	1.56	391.74	0.0779	1.0000	Complies
LTE Band 4	1710.7	24	2.86	1.93	485.29	0.0965	1.0000	Complies
LTE Band 5	824.7	24	1.32	1.36	340.41	0.0677	0.5498	Complies
LTE Band 7	2502.5	24	1.07	1.28	321.37	0.0639	1.0000	Complies
LTE Band 38	2572.5	24	0.93	1.24	311.17	0.0619	1.0000	Complies
LTE Band 41	2537.5	24	1.52	1.42	356.45	0.0709	1.0000	Complies

For the max simultaneous transmission MPE:

Ratio		Total	Limit of Ratio	Test Result
WLAN 5GHz	GSM			
0.02344	0.1667	0.19014	1	Complies

Note: The calculated distance is 20 cm.
Output power including tune up tolerance

End of Test Report