



Report No.: SUZR/2021/C001404

Rev.: 01

Page: 1 of 7

TEST REPORT

Application No.: ZR/2021/C0014
Applicant: Fibocom Wireless Inc.
Address of Applicant: 1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China
Manufacturer: Fibocom Wireless Inc.
Address of Manufacturer: 1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China
EUT Description: 5G module
Model No.: FG360-NA
Trade Mark: Fibocom
FCC ID: ZMOFG360NA05
Standards: 47 CFR Part 2.1091
FCC KDB 447498 D01 v06
Date of Receipt: 2021/12/16
Date of Issue: 2022/2/24

Test Result:	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Panta Sun

Panta Sun
Wireless Laboratory Manager



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Report No.: SUZR/2021/C001404

Rev.: 01

Page: 2 of 7

1 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022/2/24		Original

Prepared By	Weller Liu
	(Weller Liu) / Engineer
Checked By	Well Wei
	(Well Wei) / Reviewer



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Report No.: SUZR/2021/C001404
Rev.: 01
Page: 3 of 7

Contents

1	VERSION	2
2	GENERAL INFORMATION	4
2.1	CLIENT INFORMATION	4
2.2	TEST FACILITY	4
2.3	GENERAL DESCRIPTION OF EUT	5
3	RF EXPOSURE EVALUATION	6
3.1	RF EXPOSURE COMPLIANCE REQUIREMENT	6
3.1.1	Limits	6
3.1.2	Test Procedure	7
3.1.3	EUT RF Exposure Evaluation	7



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Report No.: SUZR/2021/C001404
Rev.: 01
Page: 4 of 7

2 General Information

2.1 Client Information

Applicant:	Fibocom Wireless Inc.
Address of Applicant:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China
Manufacturer:	Fibocom Wireless Inc.
Address of Manufacturer:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

2.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number:717327



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Report No.: SUZR/2021/C001404

Rev.: 01

Page: 5 of 7

2.3 General Description of EUT

EUT Description:	5G module	
Model No.:	FG360-NA	
Trade Mark:	Fibocom	
Hardware Version:	V1.0	
Software Version:	81105.7000.00.08.01.08	
Sample Type:	<input type="checkbox"/> Portable Device, <input checked="" type="checkbox"/> Module	
Antenna Type:	<input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated	
Antenna Gain*:	<input checked="" type="checkbox"/> Provided by client	
	LTE Band 2: 2.63dBi	LTE Band 4: 2.86dBi
	LTE Band 5: 1.32dBi	LTE Band 12: 1.61dBi
	LTE Band 41: 1.52dBi	LTE Band 66: 2.76dBi
	LTE Band 71: 1.39dBi	
	LTE CA_2C: 2.63dBi	LTE CA_41C: 1.52dBi
	n25: 2.63dBi (ANT0)	n41: 1.52dBi (ANT0)
	n66: 2.76dBi (ANT0)	n71: 1.39dBi (ANT0)
CA Frequency Band:	LTE UL CA_2A-4A	LTE UL CA_2A-12A
	LTE UL CA_2A-66A	LTE UL CA_12A-66A
	NR CA_n25A-n41A	NR CA_n25A-n66A
	NR CA_n25A-n71A	NR CA_n41A-n66A
	NR CA_n41A-n71A	NR CA_n66A-n71A
Remark: *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information , SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.		



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3 RF Exposure Evaluation

3.1 RF Exposure Compliance Requirement

3.1.1 Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
 *=Plane-wave equivalent power density
 RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



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3.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

3.1.3 EUT RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 / 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Operating Band	Frequency (MHz)	Antenna Gain (dBi)	Max Conducted Average Output Power (dBm)	Output Power to Antenna (dBm)	EIRP(ERP) Limit (dBm)	Output Power to Antenna (mw)	Power Density at R = 20 cm (mW/cm2)	Limit (mW/cm2)	Gain according to EIRP (dBi)	Gain according to Pd (dBi)	Max Gain Allowed (dBi)	conclusion
LTE B2	1880	2.63	24.50	27.13	33.00	281.8383	0.1027	1.0000	8.50	12.51	8.50	Pass
LTE B4	1710.7	2.86	24.50	27.36	30.00	281.8383	0.1083	1.0000	5.50	12.51	5.50	Pass
LTE B5	824.70	1.32	24.50	23.67	38.45	281.8383	0.0760	0.5498	16.10	9.91	9.91	Pass
LTE B12	699.70	1.61	24.50	23.96	34.77	281.8383	0.0812	0.4665	12.42	9.20	9.20	Pass
LTE B41	2498.5	1.52	27.50	29.02	33.00	562.3413	0.1588	1.0000	5.50	9.51	5.50	Pass
LTE B66	1710.7	2.76	24.50	27.26	30.00	281.8383	0.1059	1.0000	5.50	12.51	5.50	Pass
LTE B71	665.5	1.39	24.50	23.74	34.77	281.8383	0.0772	0.4437	12.42	8.98	8.98	Pass
LTE CA_2C	1853.3	2.63	24.50	27.13	33.00	281.8383	0.1027	1.0000	8.50	12.51	8.50	Pass
LTE CA_41C	2499.3	1.52	27.50	29.02	33.00	562.3413	0.1588	1.0000	5.50	9.51	5.50	Pass
NR n25	1850.7	2.63	24.50	27.13	33.00	281.8383	0.1027	1.0000	8.50	12.51	8.50	Pass
NR n41	2498.5	1.52	27.50	29.02	33.00	562.3413	0.1588	1.0000	5.50	9.51	5.50	Pass
NR n66	1710.7	2.76	24.50	27.26	30.00	281.8383	0.1059	1.0000	5.50	12.51	5.50	Pass
NR n71	665.5	1.39	24.50	23.74	34.77	281.8383	0.0772	0.4437	12.42	8.98	8.98	Pass

Remark: all the LTE UL inter-band CA&NR UL inter-band CA&ENDC UL&n41 UL MIMO were evaluated, but only displayed the worst case in this report.

The End



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