

Product Name: WIFI&Bluetooth Module	Report No: FCC022022-5799RF14
Product Model: FC905A	Security Classification: Open
Version: V1.0	Total Page: 7

TIRT Testing Report



Prepared By:	Checked By:	Approved By:	A circular blue stamp for TIRT Shenzhen, with the text "Beijing TIRT Technology Service Co., Ltd." around the perimeter and "TIRT Shenzhen" in the center.
Stone Tang	Randy Lv	Daniel Chen	
<i>Stone Tang</i>	<i>Randy Lv</i>	<i>Daniel Chen</i>	

FCC RF EXPOSURE REPORT

FCC ID: XMR202208FC905A

Project No. : 022022-5799
Equipment : WIFI&Bluetooth Module
Brand Name : Quectel
Test Model : FC905A
Series Model : NA
Applicant : Quectel Wireless Solutions Co., Ltd
Address : Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Manufacturer : Quectel Wireless Solutions Co., Ltd
Address : Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Date of Receipt : Sep. 14, 2022
Date of Test : Sep. 14, 2022~Nov. 08, 2022
Issued Date : Nov. 11, 2022
Report Version : V1.0.0
Test Sample : Engineering Sample No.: 20221108019601
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091

- The test result referred exclusively to the presented test model /sample.
- Without written approval of TIRT Inc. the test report shall not reproduced except in full.

Lab: Beijing TIRT Technology Service Co.,Ltd Shenzhen

Add: 101, 3 # Factory Building, Gongjin Electronics Shatin Community, Kengzi Street, Pingshan District, Shenzhen, China
TEL: +86-0755-27087573

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
FCC022022-5799RF14	V1.0	Original Report	Nov. 11, 2022	Valid

1. TEST FACILITY

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	101, 3 # Factory Building, Gongjin Electronics Shatin Community, Kengzi Street, Pingshan District, Shenzhen, China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number:	6049.01
FCC Accredited Lab. Designation Number:	CN1309
FCC Test Firm Registration Number:	825524
Telephone:	+86-0755-27087573

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

For 2.4GHz:

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Dipole	N/A	0.52

Note:

- 1) The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:

Operating Mode	TX Mode
	12TX
IEEE 802.11b	V(Ant. 1)
IEEE 802.11g	V(Ant. 1)
IEEE 802.11n(HT20)	V(Ant. 1)

For 5GHz:

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Dipole	N/A	0.66

Note:

- 1) The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:

Operating Mode	TX Mode	1TX
IEEE 802.11a		V (Ant. 1)
IEEE 802.11n(HT20)		V (Ant. 1)
IEEE 802.11n(HT40)		V (Ant. 1)
IEEE 802.11ac(VHT20)		V (Ant. 1)
IEEE 802.11ac(VHT40)		V (Ant. 1)
IEEE 802.11ac(VHT80)		V (Ant. 1)

3. TEST RESULTS

For BT (BR/EDR):

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
0.52	1.1272	6.11	7.00	0.0011	1	Complies

For BT (BLE):

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
0.52	1.1272	5.81	6.00	0.0009	1	Complies

For 2.4GHz:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
0.52	1.1272	26.55	27.00	0.1124	1	Complies

For 5GHz:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
0.66	1.1641	18.60	19.00	0.0178	1	Complies

For the max simultaneous transmission MPE:

Ratio			Total	Limit of Ratio	Test Result
BT	2.4GHz	5GHz			
0.0011	0.1124	--	0.1135	1	Complies
Ratio			Total	Limit of Ratio	Test Result
BT	2.4GHz	5GHz			
0.0011	--	0.0178	0.0189	1	Complies

- Note:
1. The calculated distance is 20 cm.
 2. Max. Tune up Power is declared by the manufacturer.
 3. WIFI 2.4GHz and 5GHz cannot be simultaneously transmitted.

End of Test Report