FCC RF EXPOSURE REPORT

FCC ID: XMR202106EG95AUX

Project No.	:	2009H029A
Equipment	:	LTE Module
Brand Name	:	Quectel
Test Model	:	EG95-AUX
Series Model	:	N/A
Applicant	:	Quectel Wireless Solutions Company Limited
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	:	Apr. 16, 2021
Date of Test	:	Apr. 16, 2021 ~ May 10, 2021
Issued Date	:	Jun. 01, 2021
Report Version	:	R01
Test Sample	:	Engineering Sample No.: SH2020091136 for EUT, SH2020091134-2 for adapter.
Standard(s)	:	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.

Maker Qi

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Certificate # 5123.03

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	May. 26, 2021
R01	Revised report to address TCB's comments.	Jun. 01, 2021

1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210,China
BTL's Test Firm Registration Number for FCC: 476765
BTL's Designation Number for FCC: CN1241

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

3. TEST RESULTS

Band	Burst Turn up Power(dBm)	Division Factors(dB)	Time-Averaged Tune up Power(dBm)
GSM 850	35.00	-9.03	25.97
PCS 1900	32.00	-9.03	22.97

Note:

Division Factors

To average the power, the division factor is as follow:

1Txslot=1 transmit time slot out of 8 time slots=>conducted power divided by(8/1) =>-9.03dB

2Txslot=2 transmit time slot out of 8 time slots=>conducted power divided by(8/2) =>-6.02dB

3Txslot=3 transmit time slot out of 8 time slots=>conducted power divided by(8/3) =>-4.26dB

4Txslot=4 transmit time slot out of 8 time slots=>conducted power divided by(8/4) =>-3.01dB

For GSM 850

Antenna Gain (dBi)	Antenna Gain (numeric)	AVG Tune up Output Power (dBm)	AVG Tune up Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
7.00	5.01190	25.97	395.3666	0.39421400	0.55	Complies

For PCS 1900

Antenna Gain (dBi)	Antenna Gain (numeric)	AVG Tune up Output Power (dBm)	AVG Tune up Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3.00	1.99530	22.97	198.1527	0.07865700	1	Complies

For WCDMA Band 2

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3.00	1.99530	25.00	316.2278	0.12552700	1	Complies

For WCDMA Band 5

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
7.00	5.01190	25.00	316.2278	0.31530600	0.55	Complies

For LTE Band 2

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm2)	Test Result
3.00	1.99530	25.00	316.2278	0.12552700	1	Complies

For LTE Band 4

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
5.00	3.1623	25.00	316.2278	0.19894500	1	Complies

For LTE Band 5

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm2)	Test Result
7.00	5.01190	25.00	316.2278	0.31530600	0.55	Complies

For LTE Band 7

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
8.00	6.3096	25.00	316.2278	0.39694600	1	Complies

For LTE Band 66

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
5.00	3.1623	25.00	316.2278	0.19894500	1	Complies

For BT:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
5.00	3.1623	15.00	31.6228	0.019894	1	Complies

For 2.4GHz:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
6.00	3.98110	24.00	251.1886	0.198945	1	Complies

For 5GHz:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
6.00	3.98110	24.00	251.1886	0.198945	1	Complies

For the max simultaneous transmission MPE:

Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	CPD/LPD	Note
0.019894	1	0.019894	BT
0.198945	1	0.198945	2.4G
0.198945	1	0.198945	5G
GSM			
0.394214	0.55	0.716753	GSM 850
0.078657	1	0.078657	PCS 1900
WCDMA			
0.125527	1	0.125527	Band II
0.315306	0.55	0.573284	Band V
LTE			
0.125527	1	0.125527	Band 2
0.198945	1	0.198945	Band 4
0.315306	0.55	0.573284	Band 5
0.396946	1	0.396946	Band 7
0.198945	1	0.198945	Band 66

BT	WLAN	WWAN	Total	Limit	Test Result
0.019894	0.198945	0.716753	0.935592	1	Complies

Note: 1.The calculated distance is 20 cm.
2.Output power including tune up tolerance.
3.CPD=Calculation power density.
4.LPD=Limit of power density.
5.This MPE analysis is applicable to any collocated transmitters with Max. peak output power for WLAN2.4G & WLAN5G: 24dBm /BT 15dBm.
6.A maximum antenna gain of 6 dBi for WLAN/5 dBi for BT has been assumed for all collocated antennas.
7. All antenna gains in this report are the maximum gains calculated according to customer requirements.

End of Test Report