

RF Exposure Report

Report No.: SA190807C25

FCC ID: XMR201909EG12GT

Test Model: EG12-GT

Received Date: Aug. 07, 2019

Test Date: Dec. 18, 2019 ~ Jan. 20, 2020

Issued Date: Jan. 20, 2020

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

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, TAIWAN

**FCC Registration/
Designation Number:** 788550 / TW0003



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Release Control Record

| Issue No. | Description | Date Issued |
|-------------|------------------|---------------|
| SA190807C25 | Original release | Jan. 20, 2020 |

1 Certificate of Conformity

Product: LTE-A Cat 12 LGA Module

Brand: Quectel

Test Model: EG12-GT

Sample Status: Engineering sample

Applicant: Quectel Wireless Solutions Co., Ltd.

Test Date: Dec. 18, 2019 ~ Jan. 20, 2020

Standards: FCC Part 2 (Section 2.1091)

References Test IEEE C95.3 -2002

Guidance: KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Jan. 20, 2020
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Jan. 20, 2020
Bruce Chen / Senior Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) | Average Time (minutes) |
|---|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| 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

2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

| Function | Frequency Band (MHz) | Max Power (dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) | EIRP Limit (dBm) | Max. Allowable Antenna Gain (dBi) |
|------------------|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|------------------|-----------------------------------|
| LTE Band 48 | 3552.5 ~ 3697.5 | 21.15 | 0.14 | 20 | 0.027 | 1 | 23 | 1.85 |
| LTE Band 42 (CA) | 3560 ~ 3590 | 17.00 | 0.14 | 20 | 0.010 | 1 | 23 | 6.00 |

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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