

## 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.

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

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**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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## Table of Contents

<b>Release Control Record</b> .....	<b>3</b>
<b>1 Certificate of Conformity</b> .....	<b>4</b>
<b>2 RF Exposure</b> .....	<b>5</b>
2.1 Limits for Maximum Permissible Exposure (MPE).....	5
2.2 MPE Calculation Formula .....	5
2.3 Classification .....	5
<b>3 Calculation Result of Maximum Conducted Power</b> .....	<b>5</b>

### 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 <sup>2</sup> )	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 <sup>2</sup> )*	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

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

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	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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