

## RF Exposure Report

**Report No.:** SA170302D08

**FCC ID:** P2713245

**Test Model:** 13245

**Received Date:** Mar. 2, 2017

**Test Date:** Apr. 18 ~ 27, 2017

**Issued Date:** May 4, 2017

**Applicant:** Sercomm Corp.

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

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### Release Control Record

| Issue No.   | Description       | Date Issued |
|-------------|-------------------|-------------|
| SA170302D08 | Original release. | May 4, 2017 |

## 1 Certificate of Conformity

**Product:** Verizon LTE

**Brand:** Verizon

**Test Model:** 13245

**Sample Status:** Engineering sample

**Applicant:** Sercomm Corp.

**Test Date:** Apr. 18 ~ 27, 2017

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

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 EMC characteristics under the conditions specified in this report.

**Prepared by :**



, **Date:** May 4, 2017

Celia Chen / Supervisor

**Approved by :**



, **Date:** May 4, 2017

Rex Lai / Assistant Manager

## 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 |                               |                               |                                     |                        |
| 300-1500                                              | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000                                          | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

### 2.2 MPE Calculation Formula

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

where

Pd = power density in mW/cm<sup>2</sup>

Pout = 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

| Frequency Band (MHz)             | ERP (dBm) | EIRP (dBm) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------------------------|-----------|------------|---------------|-------------------------------------|-----------------------------|
| LTE Band 5: 871.5MHz ~ 891.5MHz  | 22.89     | 25.04      | 20            | 0.0635                              | 0.58                        |
| LTE Band 13: 748.5MHz ~ 753.5MHz | 23.04     | 25.19      | 20            | 0.0657                              | 0.50                        |

Note: EIRP = ERP + 2.15

| Frequency Band (MHz)              | EIRP (dBm) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|-----------------------------------|------------|---------------|-------------------------------------|-----------------------------|
| LTE Band 2: 1932.5MHz ~ 1987.5MHz | 22.87      | 20            | 0.0385                              | 1                           |
| LTE Band 4: 2112.5MHz ~ 2152.5MHz | 23.17      | 20            | 0.0413                              | 1                           |

#### Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$LTE \text{ Band } 2 + LTE \text{ Band } 5 = 0.0385/1 + 0.0635/0.58 = 0.1479$

$LTE \text{ Band } 4 + LTE \text{ Band } 13 = 0.0413/1 + 0.0657/0.50 = 0.1727$

**Therefore the maximum calculations of above situations are less than the "1" limit.**

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