

## RF Exposure Report

**Report No.:** MFCEPG-WTW-P24080312

**FCC ID:** VECHB192

**Test Model:** HB192

**Received Date:** 2024/8/14

**Test Date:** 2024/8/29 ~ 2024/9/6

**Issued Date:** 2024/9/30

**Applicant:** ST Electronics (Satcom & Sensor Systems) Pte Ltd

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Singapore 567710

**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 (1):** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City  
33383, Taiwan

**Test Location (2):** No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

**FCC Registration /** 788550 / TW0003  
**Designation Number (1):**

**FCC Registration /** 281270 / TW0032  
**Designation Number (2):**



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### Release Control Record

| Issue No.            | Description       | Date Issued |
|----------------------|-------------------|-------------|
| MFCEPG-WTW-P24080312 | Original release. | 2024/9/30   |

## 1 Certificate of Conformity

**Product:** X-band Microwave Sensor Module  
**Brand:** ST Engineering Urban Solutions Ltd.  
**Test Model:** HB192  
**Sample Status:** Engineering sample  
**Applicant:** ST Electronics (Satcom & Sensor Systems) Pte Ltd  
**Test Date:** 2024/8/29 ~ 2024/9/6  
**FCC Rule Part:** FCC Part 2 (Section 2.1091)  
**Standards:** 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:** 2024/9/30  
Celine Chou / Senior Specialist

**Approved by :** Jeremy Lin , **Date:** 2024/9/30  
Jeremy Lin / 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 |                               |                               |                                     |                        |
| 300-1500                                              | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000                                          | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

### 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

| Evaluation Frequency (GHz) | Max EIRP Power (dBm) | Max EIRP Power (mW) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Result |
|----------------------------|----------------------|---------------------|---------------|-------------------------------------|-----------------------------|--------|
| 10.521                     | 11.14                | 15.631              | 20            | 0.00259                             | 1.0                         | Pass   |

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- Calculate the EIRP from the radiated field strength:
  - EIRP (dBm) = Radiated field strength (dBuV/m) + 20\*Log(d) -104.7
  - d is the measurement distance, in m
  - EIRP = 106.3 + 20\*Log(3) -104.7 = 11.14 dBm

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