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
Address:	1 Ang Mo Kio Electronics Park Road #06-02 ST Engineering Hub, 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 / Designation Number (1):	788550 / TW0003
FCC Registration / Designation Number (2):	281270 / TW0032

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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^2)	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

$Pd = (Pout*G) / (4*pi*r^2)$
where
Pd = power density in mW/cm^2
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

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

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 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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