

RF Exposure Report

Report No.: MFCEPG-WTW-P23010436

FCC ID: VECMP131

Test Model: MP131/HP, MP131-3B

Series Model: MP131-3, MP131, MP131-3/HP

Received Date: 2023/1/17

Test Date: 2023/2/13 ~ 2023/5/17

Issued Date: 2023/5/31

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

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

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

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



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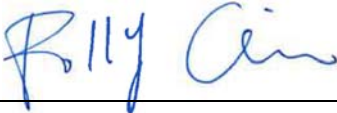
Release Control Record

Issue No.	Description	Date Issued
MFCEPG-WTW-P23010436	Original release.	2023/5/31

1 Certificate of Conformity

Product: K-band motion detector
Brand: ST Engineering Electronics Ltd.
Test Model: MP131/HP, MP131-3B
Series Model: MP131-3, MP131, MP131-3/HP
Sample Status: Engineering sample
Applicant: ST Electronics (Satcom & Sensor Systems) Pte Ltd
Test Date: 2023/2/13 ~ 2023/5/17
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 :  , **Date:** 2023/5/31
Polly Chien / Specialist

Approved by :  , **Date:** 2023/5/31
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				
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

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

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 20 cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Calculation Result

Model	Modulation Type	Evaluation Frequency (GHz)	Max Avg. Power (dBm)	Max Avg. Power (mW)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
MP131-3B	8kHz Pulse	24.06795	-16.86	0.021	20	0.000004	1	Pass
MP131/HP	1kHz Pulse	24.18825	-15.96	0.025	20	0.000005	1	Pass
MP131-3B	CW	24.17778	-9.26	0.119	20	0.000024	1	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:
 - $EIRP \text{ (dBm)} = \text{Radiated field strength (dBuV/m)} + 20 \cdot \text{Log}(d) - 104.7$
 - d is the measurement distance, in m
 - $EIRP = 78.3 + 20 \cdot \text{Log}(3) - 104.7 = -16.86 \text{ dBm}$
 - $EIRP = 79.2 + 20 \cdot \text{Log}(3) - 104.7 = -15.96 \text{ dBm}$
 - $EIRP = 85.9 + 20 \cdot \text{Log}(3) - 104.7 = -9.26 \text{ dBm}$

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