

RF Exposure Report

Report No.: SA181213E04

FCC ID: VECAP11

Test Model: AP11

Series Model: AP11-S

Received Date: Dec. 13, 2018

Test Date: Jan. 14, 2019

Issued Date: Mar. 05, 2019

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

Address: 1 Ang Mo Kio Electronics Park Road #06-02 Singapore 567710

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

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

**FCC Registration /
Designation Number:** 723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SA181213E04	Original release.	Mar. 05, 2019

1 Certificate of Conformity

Product: Miniature K-band Microwave Sensor

Brand: ST Engineering Electronics

Test Model: AP11

Series Model: AP11-S

Sample Status: ENGINEERING SAMPLE

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

Test Date: Jan. 14, 2019

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 :

Mary Ko

Date:

Mar. 05, 2019

Mary Ko / Specialist

Approved by :

May Chen

Date:

Mar. 05, 2019

May Chen / 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 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

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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**.

2.4 Antenna Gain

Patch antenna with 8dBi gain

2.5 Calculation Result

Frequency (GHz)	Field Strength of Fundamental (dBuV/m)	Pout EIRP (dBm)	Pout EIRP (mW)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
24.144	105	9.77	9.484	20	0.00189	1

Note: Pout EIRP (dBm) = Field Strength of Fundamental (dBuV/m) - 95.23 (dB)

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