

RF Exposure Report

Report No.: SA181129D01

FCC ID: P27-SRE4105T

Test Model: SRE4105T-B41

Series Model: SRE4105Txxxxxx
(1st x should be "blank" or "-", the rest x should be 0 to 9, A to Z, a to z, "blank" or "-", for marketing purpose.)

Received Date: Sep. 19, 2018

Test Date: Dec. 27, 2018 ~ Jan. 22, 2019

Issued Date: Jan. 23, 2019

Applicant: Sercomm Corp.

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

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**FCC Registration /
Designation Number:** 198487 / TW2021



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Release Control Record

Issue No.	Description	Date Issued
SA181129D01	Original release.	Jan. 23, 2019

1 Certificate of Conformity

Product: SOHO Magic Box

Brand: Sprint

Test Model: SRE4105T-B41

Series Model: SRE4105Txxxxxx
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Sample Status: Engineering sample

Applicant: Sercomm Corp.

Test Date: Dec. 27, 2018 ~ Jan. 22, 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 RF characteristics under the conditions specified in this report.

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Annie Chang / Senior Specialist

Approved by : Rex Lai, **Date:** Jan. 23, 2019
Rex Lai / Associate Technical 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				
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/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 25cm away from the body of the user.

So, this device is classified as **Mobile Device**.

2.4 Calculation Result Of Maximum Conducted Power

Function	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
Bluetooth LE	1.37	2.87	25	0.0003	1

The Max Power = Max tune up power

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 25: 1852.5~1912.5MHz, 1855~1910MHz	29.72	25	0.1194	1

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 41_CPE: 2502.5~2567.5MHz, 2622.5~2687.5MHz 2505.0~2565.0MHz, 2625.0~2685.0MHz 2507.5~2562.5MHz, 2627.5~2682.5MHz 2510.0~2560.0MHz, 2630.0~2680.0MHz	35.63	25	0.4655	1

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 41_BTS: 2510~2560MHz, 2630~2680MHz	32.55	25	0.2290	1

NOTE: BTS Band 41 low band and CPE Band 41 low band cannot transmit at same time.
BTS Band 41 high band and CPE Band 41 high band cannot transmit at same time.
CPE Band 25 and CPE Band 41 cannot transmit at same time.

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

BTS Band 41 (Low) + CPE Band 25 + Bluetooth LE = $0.2290 + 0.1194 + 0.0003 = 0.3487$

BTS Band 41 (Low) + CPE Band 41 (High) + Bluetooth LE = $0.2290 + 0.4655 + 0.0003 = 0.6948$

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

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