RF Exposure Report

Report No.:	SA200504D06
FCC ID:	P27SCE4103CBV
Test Model:	SCE4103C-BV
Series Model:	SCE4103C-BVxxxxxx (the 2nd x should be "blank" or "-", or A to Z; the first and the rest x could be 0 to 9, A to Z, "blank", or "-" or "/", for marketing purpose)
Received Date:	May 4, 2020
Test Date:	Jun. 2 to Jul. 20, 2020
Issued Date:	Jul. 21, 2020
Applicant:	Sercomm Corp.
Address:	8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C. (NanKang Software Park)
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
FCC Registration / Designation Number:	198487 / TW2021

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
SA200504D06	Original release.	Jul. 21, 2020

1 Certificate of Conformity

Product:	Bridgewood 4G Femto cell
Brand:	Verizon, Sercomm
Test Model:	SCE4103C-BV
Series Model:	SCE4103C-BVxxxxxx (the 2nd x should be "blank" or "-", or A to Z; the first and the rest x could be 0 to 9, A to Z, "blank", or "-" or "/", for marketing purpose)
Sample Status:	Engineering sample
Applicant:	Sercomm Corp.
Test Date:	Jun. 2 to Jul. 20, 2020
Standards:	FCC Part 2 (Section 2.1091) IEEE C95.3 -2002
References Test Guidance:	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 : Celia Chen , **Date:** Jul. 21, 2020

Celia Chen / Supervisor

Approved by : Rex. Lai , **Date:** Jul. 21, 2020

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				
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/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**.

2.4 Antenna Gain

Function	Frequency Band (MHz)	Antenna Type	Antenna Connector	Antenna Gain (dBi)
LTE Band 4	2112.5 ~ 2152.5	PIFA	IPEX	4.2
LTE Band 66	2112.5 ~ 2177.5			4.2
LTE Band 13	751			1.2

Note: The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
LTE Band 4: 2112.5MHz ~ 2152.5MHz	27.22	20	0.1048890	1
LTE Band 66: 2112.5MHz ~ 2177.5MHz	27.22	20	0.1048890	1

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
LTE Band 13: 751MHz	24.14	26.29	20	0.0846701	0.50
Note: EIRP = ERP + 2.15					

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

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

LTE Band 4/66 + LTE Band 13
=0.1048890/1 + 0.0846701/0.50 = 0.2742292

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

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