RF Exposure Report

Report No.:	SA190528D02
FCC ID:	P27TP20213425
Test Model:	INTTP20213425
Received Date:	May 28, 2019
Test Date:	Jul. 5 to 18, 2019
Issued Date:	Jul. 19, 2019
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
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
FCC Registration / Designation Number:	198487 / TW2021

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Release Control Record

Issue No.	Description	Date Issued
SA190528D02	Original release.	Jul. 19, 2019

1   Certificate of Conformity

Product:	Verizon LTE
Brand:	Verizon
Test Model:	INTTP20213425
Sample Status:	Engineering sample
Applicant:	Sercomm Corp.
Test Date:	Jul. 5 to 18, 2019
Standards:	FCC Part 2 (Section 2.1091)
	KDB 447498 D01 General RF Exposure Guidance v06
	IEEE C95.3 -2002

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:**   Jul. 19, 2019

Celia Chen / Supervisor

Approved by :   _____   , **Date:**   Jul. 19, 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				
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 2	1935 ~ 1985	Dipole	RP-SMA	2.5
LTE Band 4	2115 ~ 2150			2.5
LTE Band 5	874 ~ 889			3.2
LTE Band 13	746 ~ 756			1.0

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 2: 1935MHz ~ 1985MHz	26.69	20	0.0928389	1
LTE Band 4: 2115MHz ~ 2150MHz	25.12	20	0.0646741	1

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
LTE Band 5: 874MHz ~ 889MHz	25.28	27.43	20	0.1100855	0.58
LTE Band 13: 746MHz ~ 756MHz	25.15	27.3	20	0.1068391	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 2 + LTE Band 4 + LTE Band 5 + LTE Band 13
=0.0928389/1 + 0.0646741/1 + 0.1100855/0.58 + 0.1068391/0.50 = 0.5609938

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

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