RF Exposure Report

Report No.:	SA171207E14
FCC ID:	YAISN10-22
Test Model:	SN10-22
Received Date:	Dec. 07, 2017
Test Date:	Jan. 08 to Feb. 09, 2018
Issued Date:	Feb. 14, 2018
Applicant:	InnoComm Mobile Technology Corp.
Address:	3F, No. 6, Hsin Ann Rd., Hsinchu Science Park, Hsinchu 30078, Taiwan
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.

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Release Control Record

Issue No.	Description	Date Issued
SA171207E14	Original release.	Feb. 14, 2018

1 Certificate of Conformity

Product:	SigFox module
Brand:	InnoComm
Test Model:	SN10-22
Sample Status:	ENGINEERING SAMPLE
Applicant:	InnoComm Mobile Technology Corp.
Test Date:	Jan. 08 to Feb. 09, 2018
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 : _____ , **Date:** Feb. 14, 2018

Claire Kuan / Specialist

Approved by : _____ , **Date:** Feb. 14, 2018

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

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

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

Antenna No.	Chain No.	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connecter Type
GPS	GPS	-2	1.570~1.580 GHz	IFA	None
SigFox	Sigfox	-2	868~930 MHz	IFA	None
Wi-Fi	WiFi	-3	2.4~2.4835GHz	IFA	None
BLE	BLE	-2.5	2.4~2.4835GHz	IFA	None

2.5 Calculation Result of Maximum Conducted Power

Bluetooth

LE 1M:

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2402-2480	3.199	-2.5	20	0.00036	1

LE 2M:

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2402-2480	3.467	-2.5	20	0.00039	1

SigFox

Frequency (MHz)	Max. Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
902.1375~ 904.6625	178.649	-2	20	0.02242	0.6031
920.1375 ~ 922.6625	187.499	-2	20	0.02354	0.6151

Note: Limit of Power Density= f/1500

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

Bluetooth (LE 2M) + SigFox = 0.00039 / 1 + 0.02354 / 1 = 0.03866

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

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