

RF Exposure Report

Report No.: SA170209E07

FCC ID: SER1DX

Test Model: 1DX

Received Date: Feb. 09, 2017

Test Date: Mar. 14, 2017

Issued Date: Mar. 22, 2016

Applicant: Sintai Optical (Shenzhen) Co., Ltd.

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

Issue No.	Description	Date Issued
SA170209E07	Original release.	Mar. 22, 2016

1 Certificate of Conformity

Product: WLAN+BLE module

Brand: Sintai

Test Model: 1DX

Sample Status: ENGINEERING SAMPLE

Applicant: Sintai Optical (Shenzhen) Co., Ltd.

Test Date: Mar. 14, 2017

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 :

Cindy Hsin

Date:

Mar. 22, 2016

Cindy Hsin / Specialist

Approved by :

May Chen

Date:

Mar. 22, 2016

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

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

where

Pd = power density in mW/cm²

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

No.	Brand	Model	Antenna Gain (dBi)	Frequency range(GHz)	Antenna Type	Connector Type	Cable Length
1	Walsin	RFANT5220110A0T	2.66	2.4~2.4835GHz	Monopole (Chip Antenna)	N/A	N/A
2	Walsin	RFPCA280815EMAB301	1.17	2.4~2.4835GHz	PCB	I-Pex	15cm

2.5 Calculation Result Of Maximum Conducted Power

For WLAN:

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	243.781	2.66	20	0.08948	1

For BT-LE:

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	6.252	2.66	20	0.00229	1

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