

RF Exposure Report

Report No.: SA130523E10B

FCC ID: MCLJ20H076

Test Model: J20H076

Received Date: Sep. 14, 2015

Test Date: Oct. 05, 2015

Issued Date: Oct. 21, 2015

Applicant: HON HAI PRECISION IND. CO., LTD.

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

Release Control Record

Issue No.	Description	Date Issued
SA130523E10B	Original release.	Oct. 21, 2015



A D T

1 Certificate of Conformity

Product: 802.11abgn wireless module

Brand: FOXCONN

Test Model: J20H076

Sample Status: ENGINEERING SAMPLE

Applicant: HON HAI PRECISION IND. CO., LTD.

Test Date: Oct. 05, 2015

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

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:** Oct. 21, 2015
Elsie Hsu / Specialist

Approved by : , **Date:** Oct. 21, 2015
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				
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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

1. The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi)	Connector	Frequency range (MHz to MHz)
Chain (0)	NA	NA	PCB	3.10	Murata	2400~2483.5
				4.51		5150~5350
				4.75		5470~5725
				4.80		5725~5845
Chain (1)	NA	NA	PCB	3.18	Murata	2400~2483.5
				4.54		5150~5350
				4.78		5470~5725
				4.98		5725~5845

3 Calculation Result of Maximum Conducted Power

The Max power (except U-NII-3 band) was refer to the original test report.

For 15.247(2.4GHz):

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	657.863	6.15	20	0.53934	1

NOTE:

$$2.4\text{GHz: Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 6.15\text{dBi}$$

For 15.407(5GHz):

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
5180-5240 5260-5320 5500-5580 & 5660-5700	235.624	7.78	20	0.28116	1
5745 ~ 5825	87.007	7.9	20	0.10673	1

NOTE:

$$5150\sim 5350\text{MHz: Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.52\text{dBi}$$

$$5470\sim 5725\text{MHz: Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.78\text{dBi}$$

$$5725\sim 5845\text{MHz: Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.9\text{dBi}$$

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