RF Exposure Report

Report No.:	SA130710E11H
FCC ID:	MCLT77H462
Test Model:	T77H462
Received Date:	Oct. 14, 2015
Test Date:	Nov. 24, 2015
Issued Date:	Dec. 14, 2015
Applicant:	Hon Hai PRECISION IND.CO.,LTD
Address:	5F-1,5 Hsin-An Road Hsinchu, Science-Based Industrial Park Taiwan, R.O.C.
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.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA130710E11H	Original release.	Dec. 14, 2015

1 Certificate of Conformity

Product:	802.11abgn+BT4.0 module
Brand:	FOXCONN
Test Model:	T77H462
Sample Status:	ENGINEERING SAMPLE
Applicant:	Hon Hai PRECISION IND.CO.,LTD
Test Date:	Nov. 24, 2015
Standards:	FCC Part 2 (Section 2.1093) 447498 D01 General RF Exposure Guidance v06 IEEE Std C95.1-2005

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:** Dec. 14, 2015

Midoli Peng / Specialist

Approved by : _____ , **Date:** Dec. 14, 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

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

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**.

3 Antenna Gain

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

Antenna Set 1						
Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi)	Frequency range (MHz to MHz)	Connecter Type
Chain (0)	Foxconn	T77H462	PIFA	-0.6	2400~2500	MHF4
				-2.3	5150~5850	
Chain (1)	Foxconn	T77H462	PIFA	-0.6	2400~2500	MHF4
				-2.3	5150~5850	

Antenna Set 2							
Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi) <Including cable loss>	Frequency range (MHz to MHz)	Cable Length (mm)	Connecter Type
Chain (0) & Chain (1)	Wistron Neweb Corporation	DC33001GL00	PIFA	1.32	2400~2500	55	MHF4 （i-pex)
				1.62	5150-5350		
				-1.84	5470-5725		
				-2.12	5725-5850		

Antenna Set 3							
Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi) <Including cable loss>	Frequency range (MHz to MHz)	Cable Length (mm)	Connecter Type
Chain (0) & Chain (1)	Wistron Neweb Corporation	DC33001GL10	PIFA	0.48	2400~2500	239	MHF4 （i-pex)
				-2.19	5150-5350		
				-2.70	5470-5725		
				-1.77	5725-5850		

Antenna Set 4							
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>	Antenna Gain (dBi) <Excluding cable loss>
Chain (0)	Main Antenna (P/N: LA22RF754-1H)	LUXSHARE-ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length:750 mm Diameter: Lowloss 1.13mm	2400-2500	0.43	2.68
					5150-5350	-8.70	-5.15
					5470-5725	-8.82	-5.15
					5725-5850	-8.98	-5.25
Chain (1)	Auxiliary Antenna (P/N: LA22RF755-1H)	LUXSHARE-ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length: 750 mm Diameter: Lowloss1.13 mm	2400-2500	0.43	2.68
					5150-5350	-8.70	-5.15
					5470-5725	-8.82	-5.15
					5725-5850	-8.98	-5.25

Antenna Set 5									
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>	Antenna Gain (dBi) <Excluding cable loss>	Cable loss max.(dB)	VSWR
Chain (0)	Main Antenna (P/N: LA22RF764-1H)	LUXSHARE -ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length:220 mm Diameter:1.13mm	2400-2500	2.34	3.0	0.66	2.5 max
					5150-5350	0.67	1.71	1.04	2.5 max
					5470-5725	0.15	1.22	1.07	2.5 max
					5725-5850	-0.54	0.55	1.09	2.5 max
Chain (1)	Auxiliary Antenna (P/N: LA22RF765-1H)	LUXSHARE -ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length: 250 mm Diameter:1.13 mm	2400-2500	0.83	1.58	0.75	2.5 max
					5150-5350	2.05	3.23	1.18	2.5 max
					5470-5725	0.61	1.84	1.23	2.5 max
					5725-5850	0.61	1.85	1.24	2.5 max

Antenna Set 6						
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>
Chain (0)	Main Antenna (P/N: 1415-04LN000)	WNC	PIFA	Black 1.13(dia) x 50mm	2400-2500	0.72
					5150-5350	1.75
					5470-5725	1.55
					5725-5850	0.41
Chain (1)	Auxiliary Antenna (P/N: 1415-04LP000)	WNC	PIFA	White 1.13(dia) x 190mm	2400-2500	-0.47
					5150-5350	-1.00
					5470-5725	0.77
					5725-5850	0.04

Antenna Set 7						
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>
Chain (0)	Main Antenna (P/N: 1415-04LR000)	WNC	PIFA	Black 1.13(dia) x 120mm	2400-2500	0.67
					5150-5350	0.6
					5470-5725	-0.75
					5725-5850	1.25
Chain (1)	Auxiliary Antenna (P/N: 1415-04LQ000)	WNC	PIFA	White 1.13(dia) x 143mm	2400-2500	-1.59
					5150-5350	1.12
					5470-5725	0.82
					5725-5850	0.33

Note : 1. For U-NII-1, UNII-2A: Antenna 5 was chosen for final test
Note : 2. For UNII-2C: Antenna 6 was chosen for final test
Note : 3. For UNII-3: Antenna 7 was chosen for final test

4 Calculation Result Of Maximum Conducted Power

For 2.4GHz, BT-EDR & BT-LE data was copied from the original test report. (Report No.: SA130710E11E)

For WLAN

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	319.012	2.34	20	0.10878	1
5180-5240	94.695	2.05	20	0.03020	1
5260-5320	97.486	2.05	20	0.03109	1
5500--5700	83.079	1.55	20	0.02362	1
5745-5825	137.568	1.25	20	0.03650	1

For BT-EDR

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2402-2480	9.099	2.34	20	0.00310	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	6.237	2.34	20	0.00213	1

--- END ---