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FCC RF Exposure Report

FCC ID	:	**NKR-SP1**
Equipment	:	**11abgn WLAN/Bluetooth Combo Module**
Model No.	:	**DHUB-SP1**
Brand Name	:	**SHARP Corporation**
Applicant	:	**Wistron Neweb Corporation**
Address	:	**20 Park Avenue II, Hsinchu Science Park, Hsinchu 308,Taiwan,R.O.C./**
Standard	:	**47 CFR FCC Part 2.1091**
Received Date	:	**Aug. 21, 2013**
Tested Date	:	**Aug. 22 ~ Sep. 02, 2013**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:

Gary Chang / Manager

Testing Laboratory
2732

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Release Record

Report No.	Version	Description	Issued Date
FA382103	Rev. 01	Initial issue	Sep. 23, 2013

1 MPE EVALUATION OF MOBILE DEVICES

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm^2)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

1.2 MPE EVALUATION FORMULA

$$\mathbf{Pd} = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm^2
Pt= EIRP in Mw
Pi= 3.1416
R= Measurement distance

1.3 MPE EVALUATION RESULTS

Mode	Frequency Range (MHz)	Maximum Average Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
Wi-Fi	2412~2462	20.14	3.97	20	0.051	1
Wi-Fi	5180~5240	16.80	3.31	20	0.020	1
Wi-Fi	5260~5320	21.81	3.31	20	0.065	1
Wi-Fi	5500~5700	20.88	3.42	20	0.054	1
Wi-Fi	5745~5825	22.06	2.92	20	0.063	1
BT	2402~2480	3.59	1.75	20	0.001	1

CONCULSION:

Both of the WLAN 2.4G & BT, WLAN 5.0G & BT can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4G + BT = 0.052
2. WLAN 5.0G + BT = 0.066

Therefore, the maximum calculation of this situation is 0.066, which is less than the "1" limit.

==END==