

RF Exposure Report

Report No.: SA130812C17E

FCC ID: NKR-O1

Test Model: DNUB-O1

Received Date: Feb. 26, 2016

Test Date: Mar. 12 ~ Mar. 18, 2016

Issued Date: Mar. 22, 2016

Applicant: Wistron NeWeb Corp.

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

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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Release Control Record

Issue No.	Description	Date Issued
SA130812C17E	Original release.	Mar. 22, 2016

1 Certificate of Conformity

Product: 11abgn 2x2 USB Module

Brand: OKI

Test Model: DNUB-O1

Sample Status: Engineering sample

Applicant: Wistron NeWeb Corp.

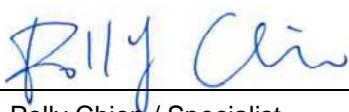
Test Date: Mar. 12 ~ Mar. 18, 2016

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03 (January 17, 2014)

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:** Mar. 22, 2016

Polly Chien / Specialist

Approved by :  , **Date:** Mar. 22, 2016

Ken Liu / Senior 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/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**.

3 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	26.69	3.08	20	0.189	1
5180-5240	16.35	4.85	20	0.026	1
5260-5320	16.54	5.44	20	0.031	1
5500-5700	16.54	6.18	20	0.037	1
5745-5825	23.73	7.38	20	0.257	1

*2.4GHz and 5GHz can't transmit simultaneously.

2.4GHz Band:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 3.08 \text{dBi}$$

5GHz Band:

5180-5240MHz:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.85 \text{dBi}$$

5260-5320MHz:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.44 \text{dBi}$$

5500-5700MHz:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.18 \text{dBi}$$

5745-5825MHz:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.38 \text{dBi}$$

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