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MPE TEST REPORT

To

FCC Part 2.1091

Report No.: HCT-RB09-0502

Client :	Vertex Wireless Co., Ltd.
Product :	CDMA 1xEVDO Rev.A Wireless Router
FCC ID :	XAVVW240
Manufacturer :	Vertex Wireless Co., Ltd
Date of issue :	2009/ 05/ 22

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1. LIMIT

(B) Limits for General Population/Uncontrolled Exposures				
Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
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

SAR test results: not applicable

2. Power Density Calculation

According to §1.1310 and § 2.1091 RF exposure is calculated.

Calculation standard	FCC Part 2.1091

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

3. Calculation:

CDMA 1xEVDO Rev.A Wireless Router

CDMA

Max Peak output Power at antenna input terminal	26.610	dBm
Max Peak output Power at antenna input terminal	458.142	mW
Prediction distance	20.000	cm
Prediction frequency	824.000	MHz
Antenna Gain(typical)	1.630	dBi
Antenna Gain(numeric)	1.455	-
Power density at prediction frequency(S)	0.133	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.549	mW/cm^2

PCS CDMA

Max Peak output Power at antenna input terminal	25.97000	dBm
Max Peak output Power at antenna input terminal	395.36662	mW
Prediction distance	20.00000	cm
Prediction frequency	1 850.00000	MHz
Antenna Gain(typical)	0.00000	dBi
Antenna Gain(numeric)	1.00000	-
Power density at prediction frequency (S)	0.07866	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.00000	mW/cm^2

Wireless LAN

Max Peak output Power at antenna input terminal	22.52000	dBm
Max Peak output Power at antenna input terminal	178.64876	mW
Prediction distance	20.00000	cm
Prediction frequency	2 400.00000	MHz
Antenna Gain(typical)	3.05000	dBi
Antenna Gain(numeric)	2.01837	-
Power density at prediction frequency (S)	0.07173	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.00000	mW/cm^2

4. RESULTS:

CDMA 1xEVDO Rev. A Wireless Router

CDMA

The power density level at 20.0 cm is **0.133 mW/cm²**, which is below the uncontrolled exposure limit of **0.549 mW/cm²** at 824.70 – 848.31 MHz for CDMA 1xEVDO Rev. A Wireless Router

PCS CDMA

The power density level at 20.0 cm is **0.079 mW/cm²**, which is below the uncontrolled exposure limit of **1.0 mW/cm²** at 1 851.25 – 1 908.75 MHz for CDMA 1xEVDO Rev. A Wireless Router

Wireless LAN

The power density level at 20.0 cm is **0.072 mW/cm²**, which is below the uncontrolled exposure limit of **1.0 mW/cm²** at 2 412 MHz ~ 2 462 MHz for CDMA 1xEVDO Rev. A Wireless Router