
OET Bulletin 65 (MPE) Test Report

Report No.: AGC008110401F7

FCC ID : Y2PWR300NQ
PRODUCT DESIGNATION : 300M 802.11N Wireless Router
BRAND NAME : ReadyNet
TEST MODEL : WR300NQ
CLIENT : Phonex Broadband Corporation
DATE OF ISSUE : April 22, 2011
STANDARD(S) : OET Bulletin 65

Attestation of *Global Compliance Co., Ltd.*

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1. TEST RESULT CERTIFICATION

Applicant Name:	Phonex Broadband Corporation
Address:	6952 High Tech Dr, Midvale, Utah, 84047
Manufacturer Name:	QVS Manufacturing Services
Address:	10721 S Hidden Ridge Lane, Sandy, Utah 84092
Product Designation	300M 802.11N Wireless Router
Brand Name:	ReadyNet
Model Name:	WR300NQ
FCC ID	Y2PWR300NQ
Test Standard	OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01)
File Number:	AGC008110401F7
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We (AGC), Attestation of Global Compliance Co., Ltd. for compliance with the requirements set forth in the European Standard OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01) The results of testing in this report apply to the product/system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Checked By: 
Mary Liu Apr.22, 2011

Authorized By 
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2. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

2.1 EUT DESCRIPTION

Operation Frequency	2412MHZ~2462MHZ
Rated Output Power	11b:21.21dBm, 11g: 19.52 dBm, 11n(20): 19.46 dBm, 11n(40):17.74dBm
Modulation	BPSK,QPSK,16-QAM,64-QAM
Antenna Designation	Fixed Antenna
Power Supply	DC12V

Note:

1. For more details, please refer to the User's manual of the EUT.

3. RF EXPOSURE MEASUREMENT

3.1 INTRODUCTION

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 2.5 cm or more from persons.

The 1992 ANSI/IEEE standard (See Listed limit table) specifies a minimum separation distance of 1cm for performing reliable field measurements to determine adherence to MPE limits.

If the minimum separation distance between a transmitter and nearby persons is more than 2.5 cm under normal operating conditions, compliance with MPE limits may be determined at such distance from the transmitter. When applicable, operation instructions and prominent warning labels may be used to alert the exposed persons to maintain a specified distance from the transmitter or to limit their exposure durations and usage conditions to ensure compliance.

3.2 FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE(MPE)**LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE**

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (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

*Note:

1. f=Frequency in MHz * Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirements for mobile and portable transmitters.

4. CLASSIFICATION OF THE ASSESSMENT METHODS

According to user manual, The antenna of the product, under normal use condition is at least 0.2m away from the body of the user. Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. So, this product under normal use is located on electromagnetic far field between the human body.

$$S = \frac{PG}{4\pi R^2}$$

Where:

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

5. EUT OPERATION CONDITION

Make the EUT to transmit at lowest, middle and highest channel individually.

Since 802.11b mode generate the maximum RF Conducted Power than all other modes like 802.11g / 802.11n (20) / 802.11n (40), it will achieve the worst case for MPE Calculation.

6. TEST RESULTS

802.11b Antenna Gain=4.5dBi (Numeric2.8), $\Pi=3.1416$

Channel	Frequency	Output Power	Output Power	Power Density	Power Density Limit	Result
	MHz	dBm	mW	mW/cm ²	mW/cm ²	Pass/Fail
CH 1	2412	21.21	132.12	0.073	1	Pass
CH 7	2442	21.20	131.82	0.073	1	Pass
CH 13	2462	21.18	131.21	0.073	1	Pass

For 802.11g, 802.11n(20) and 802.11n(40), the maximum Output powers are less than 802.11b mode, so 802.11b will the worst result (0.073 mW/cm²) << 1 mW/cm² (the Limits), the final conclusion for all modes are PASS