

FCC Part 15 EMI TEST REPORT of

E.U.T. : Wireless LAN Access Point

MODEL : WA211P

FCC ID. : PQP-WA211P-X

for

APPLICANT : PRIME ELECTRONICS & SATELLITICS INC.

ADDRESS : 69, Tung Yuan Rd., Chung Li Industrial Park,
Chung Li City, Tao Yuan, Taiwan, R.O.C.

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN

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Report Number : ET90S-11-041

TEST REPORT CERTIFICATION

Applicant : PRIME ELECTRONICS & SATELLITICS INC.
69, Tung Yuan Rd., Chung Li Industrial Park, Chung Li City, Tao Yuan,
Taiwan, R.O.C.

Manufacturer : PRIME ELECTRONICS & SATELLITICS INC.
69, Tung Yuan Rd., Chung Li Industrial Park, Chung Li City, Tao Yuan,
Taiwan, R.O.C.

Description of EUT :

- a) Type of EUT : Wireless LAN Access Point
- b) Trade Name : PESI
- c) Model No. : WA211P
- d) Seriall No. : 1000WA211P
- e) Power Supply : Adaptor:I/P:100~240Vac 47~63Hz;
O/P:5Vdc, 2.0A, 10W

Regulation Applied : FCC Rules and Regulations Part 15 Subpart B & C (1999)

I HEREBY CERTIFY THAT: The data shown in this report were made in accordance with the procedures given in ANSI C63.4, and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Note: 1. The result of the testing report relate only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of ETC.

Issued Date : Jan. 07, 2002

Test Engineer : 

Approve & Authorized Signer :



Win-Po Tsai, Manager, NVLAP Signatory
EMC Dept. I of ELECTRONICS
TESTING CENTER, TAIWAN

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT	: Wireless LAN Access Point
b) Trade Name	: PESI
c) Model No.	: WA211P
d) Serial No.	: 1000WA211P
e) Power Supply	: Adaptor:I/P:100~240Vac 47~63Hz; O/P:5Vdc, 2.0A, 10W

1.2 Characteristics of Device

The PESI-AP (IEEE 802.11b, 11Mbps WLAN Access Point) is an internetworking device for interconnecting a WLAN with other WLANs and legacy LANs, which provides a 2.4 GHz RF network and bridges to an Ethernet backbone. The Access Point is the wireless equivalent of a LAN hub. It receives, buffers and transmits data between the WLAN and the wired network, supporting a group of wireless user devices. An Access Point is typically connected with the wired backbone through a standard Ethernet cable, and communicates with wireless devices by means of an antenna. The Access Point, or the antenna connected to it, is generally mounted high on a wall or on the ceiling. Like the cells in a cellular phone network. It feature:

- Highly Efficient Dipole Antennas Provide Extensive Range of Operation
- Auto Fall-Back Data Rate for Long-Distance Communication and Noisy Environments
- High-Speed Data Transmitter Rate Up to 11 Mbps
- Interoperable with IEEE 802.11b (DSSS) 2.4GHz-Compliant Equipment
- Features Roaming, Best Access Point Selection, Load Balancing, and Network Traffic Filtering
- 40-Bit or 128-Bit (optional) Wired Equivalent Privacy
- Free Software Driver Upgrades

1.3 Test Methodology

The Wireless LAN Access Point designed with a transmitting method of direct sequence spread spectrum is for local area network operation, which operates at 2.4 GHz ISM band and data rate up to 11 Mbps. The rated output power is 20.8 dBm (120.2 mW). The Maximum Permissible Exposure (MPE) was performed according to the procedures illustrated in IEEE C95.1-1991.

1.4 Test Facility

The semi-anechoic chamber and conducted measurement facility used to collect the radiated and conducted data are located inside the Building at No.8, Lane 29, Wen-ming Road, Lo-shan Tsun, Kweishan Hsiang, Taoyuan, Taiwan, R.O.C.

This site has been accreditation as a FCC filing site.

2 OUTPUT POWER MEASUREMENT

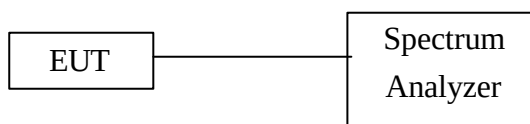
2.1 Standard Applicable

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

2.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 5. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 2 MHz and VBW to 3 MHz.
4. Measure the highest amplitude appearing on spectral display and record the level to calculate result data.
5. Repeat above procedures until all frequencies measured were complete.

Figure 5: Output power and measurement configuration.



2.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Plotter	Hewlett-Packard	7440A	N/A
Spectrum Analyzer	Hewlett-Packard	8564EC	09/10/2002

2.4 Measurement Data

Test Date : Dec. 25, 2001 Temperature : 18 °C Humidity: 63 %

- a) Channel 01 : Output Peak Power is 20.8 dBm or **120.2 mW**
- b) Channel 06 : Output Peak Power is 20.5 dBm or **112.2 mW**
- c) Channel 11 : Output Peak Power is 19.6 dBm or **91.2 mW**

Note: 1. Please see Appendix for plotted datas

2. Output peak power=reading + $10 \log \frac{6dB(BW)}{measure(BW)}$

$$(a) 15.2 + 10 \log \frac{7.25}{2} = 15.2 + 5.6 = 20.8$$

$$(b) 14.7 + 10 \log \frac{7.58}{2} = 14.7 + 5.8 = 20.5$$

$$(c) 14.0 + 10 \log \frac{7.33}{2} = 14.0 + 5.6 = 19.6$$

Appendix : Ploted Datas of Output Peak Power

