

## 1.1. Test Result of RF Exposure Evaluation

- . Product: Prosafe Wireless-N VPN Firewall
- . Test Item: RF Exposure Evaluation Data
- . Test site: OATSI-SD
- . Test Mode: Normal Operation

### 1.1.1. Antenna Gain

Antenna L, R: Dipole Antenna, 3dBi(2.4GHz Band)  
5dBi(5GHz Band)  
Antenna M: Patch Antenna, 2dBi(2.4GHz Band)  
3dBi(5GHz Band).

### 1.1.2. EUT Operation condition

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 1.1.3. Output Power into Antenna & RF Exposure Evaluation Distance

(1) Modulation Standard: IEEE 802.11b (11Mbps), ANT-R

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	21.62	0.058
06	2437	21.74	0.059
11	2462	21.81	0.060

(2) Modulation Standard: IEEE 802.11b (11Mbps), ANT-M

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	21.58	0.045
06	2437	21.71	0.047
11	2462	21.74	0.047

(3) Modulation Standard: IEEE 802.11b (11Mbps), ANT-L

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	21.80	0.060
06	2437	21.79	0.060
11	2462	22.04	0.063

(4) Modulation Standard: IEEE 802.11g (54Mbps), ANT-R

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	21.82	0.060
06	2437	21.80	0.060
11	2462	21.90	0.061

(5) Modulation Standard: IEEE 802.11g (54Mbps), ANT-M

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	22.06	0.051
06	2437	21.94	0.049
11	2462	21.87	0.048

(6) Modulation Standard: IEEE 802.11g (54Mbps), ANT-L

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	21.49	0.056
06	2437	22.35	0.068
11	2462	22.14	0.065

(7) Modulation Standard: IEEE 802.11n, HT20 (130Mbps), ANT-R+ANT-L

Test Date: Jul. 10, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	23.35	0.086
06	2437	23.36	0.086
11	2462	23.41	0.087

(8) Modulation Standard: IEEE 802.11n, HT20 (130Mbps), ANT-R+ANT-M+ANT-L

Test Date: Jul. 22, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
01	2412	25.10	0.128
06	2437	24.68	0.117
11	2462	24.75	0.119

(9) Modulation Standard: IEEE 802.11n, HT40 (270Mbps), ANT-R+ANT-L

Test Date: Jul. 22, 2008      Temperature: 20      Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
03	2422	20.02	0.040
06	2437	20.02	0.040
19	2452	19.95	0.039

(10) Modulation Standard: IEEE 802.11n, HT40 (270Mbps), ANT-R+ANT-M+ANT-L

Test Date: Jul. 22, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
03	2422	22.66	0.073
06	2437	22.88	0.077
19	2452	23.07	0.080

(11) Modulation Standard: IEEE 802.11a (54Mbps), ANT-R

Test Date: Jul. 23, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
149	5475	21.09	0.081
157	5785	21.14	0.082
165	5825	21.09	0.081

(12) Modulation Standard: IEEE 802.11a (54Mbps), ANT-M

Test Date: Jul. 23, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
149	5475	20.60	0.046
157	5785	20.98	0.050
165	5825	20.96	0.050

(13) Modulation Standard: IEEE 802.11a (54Mbps), ANT-L

Test Date: Jul. 23, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
149	5475	20.95	0.078
157	5785	20.51	0.071
165	5825	20.61	0.072

(14) Modulation Standard: IEEE 802.11an, HT20 (130Mbps), ANT-R+ANT-L

Test Date: Jul. 23, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
149	5475	25.18	0.207
157	5785	25.21	0.209
165	5825	25.03	0.200

(15) Modulation Standard: IEEE 802.11an, HT20 (130Mbps), ANT-R+ANT-M+ANT-L

Test Date: Jul. 23, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
149	5475	26.16	0.260
157	5785	25.68	0.233
165	5825	26.12	0.257

(16) Modulation Standard: IEEE 802.11an, HT40 (270Mbps), ANT-R+ANT-L

Test Date: Jul. 23, 2008

Temperature: 20

Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
151	5455	25.15	0.206
155	5785	25.35	0.216
159	5795	25.27	0.212

(17) Modulation Standard: IEEE 802.11an, HT40 (270Mbps), ANT-R+ANT-M+ANT-L

Test Date: Jul. 23, 2008

Temperature: 20

Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm <sup>2</sup> )
151	5455	25.65	0.231
155	5785	25.59	0.228
159	5795	25.50	0.223

The MPE is calculated as  $0.257 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$ . So, RF exposure limit warning or SAR test are not required.

For 2412-2462 MHz, 5725-5825MHz, the EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.