

1.1. Test Result of RF Exposure Evaluation

- . Product: Prosafe 802.11n Dual Band Wireless Access Point
- . Test Item: RF Exposure Evaluation Data
- . Test site: OATSI-SD
- . Test Mode: Normal Operation

1.1.1. Antenna Gain

Antenna L: The maximum Gain is 3dBi

Antenna M: The maximum Gain is 3dBi

Antenna R: The maximum Gain is 3dBi

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-L

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	21.56	0.057
06	2437	21.51	0.056
11	2462	22.03	0.063

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

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	21.38	0.055
06	2437	21.36	0.054
11	2462	21.93	0.062

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

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	22.03	0.050
06	2437	21.84	0.048
11	2462	21.88	0.048

(4) Modulation Standard: IEEE 802.11g(6Mbps), ANT-M

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	22.29	0.053
06	2437	21.48	0.044
11	2462	21.60	0.046

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

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	20.78	0.048
06	2437	20.27	0.042
11	2462	20.71	0.047

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

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	20.32	0.043
06	2437	20.22	0.042
11	2462	20.90	0.049

(7) Modulation Standard: IEEE 802.11n, HT20(6.5Mbps), ANT-L+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	23.60	0.091
06	2437	23.19	0.083
11	2462	23.94	0.098

(8) Modulation Standard: IEEE 802.11n, JT40(13.5Mbps), ANT-L+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	20.44	0.044
06	2437	20.62	0.046
11	2462	20.69	0.047

(9) Modulation Standard: IEEE 802.11n, HT20(6.5Mbps), ANT-L+ANT-M+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	26.09	0.161
06	2437	25.69	0.147
11	2462	26.16	0.164

(10)Modulation Standard: IEEE 802.11n, HT40(13.5Mbps), ANT-L+ANT-M+ANT-R

Test Date: May. 05, 2008

Temperature: 20

Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
01	2412	23.02	0.080
06	2437	23.10	0.081
11	2462	23.05	0.080

The MPE is calculated as $0.164\text{mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$. So, RF exposure limit warning or SAR test are not required.

For 2412-2462 MHz, 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.

For 5150-5250MHz

(1) Modulation Standard: IEEE 802.11a(6Mbps), ANT-L

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
36	5180	16.72	0.030
44	5220	16.77	0.030
48	5240	16.70	0.029

(2) Modulation Standard: IEEE 802.11a(6Mbps), ANT-M

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
36	5180	16.72	0.030
44	5220	16.92	0.031
48	5240	16.89	0.031

(3) Modulation Standard: IEEE 802.11a(6Mbps), ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
36	5180	16.67	0.029
44	5220	16.76	0.030
48	5240	16.90	0.031

(4) Modulation Standard: IEEE 802.11an, HT20(6.5Mbps), ANT-L+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
36	5180	16.56	0.028
44	5220	16.55	0.028
48	5240	16.58	0.029

(5) Modulation Standard: IEEE 802.11an, HT40(13.5Mbps), ANT-L+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
38	5190	16.63	0.029
42	5210	16.62	0.029
46	5230	16.67	0.029

(6) Modulation Standard: IEEE 802.11an, HT20(6.5Mbps), ANT-ALL

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
36	5180	16.51	0.028
44	5220	16.84	0.030
48	5240	16.89	0.031

(7) Modulation Standard: IEEE 802.11an, HT40(13.5Mbps), ANT-ALL

Test Date: May. 05, 2008

Temperature: 20

Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
38	5190	16.96	0.031
42	5210	16.95	0.031
46	5230	16.97	0.031

The MPE is calculated as $0.031 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$. So, RF exposure limit warning or SAR test are not required.

For 5725-5825MHz

(1) Modulation Standard: IEEE 802.11a(6Mbps), ANT-L

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
149	5745	21.02	0.080
157	5785	21.07	0.080
165	5825	21.32	0.085

(2) Modulation Standard: IEEE 802.11a(6Mbps), ANT-M

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
149	5745	21.15	0.082
157	5785	20.63	0.073
165	5825	21.10	0.081

(3) Modulation Standard: IEEE 802.11a(6Mbps), ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
149	5745	21.99	0.099
157	5785	22.20	0.104
165	5825	21.75	0.094

(4) Modulation Standard: IEEE 802.11an, HT20(6.5Mbps), ANT-L+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
149	5745	24.63	0.183
157	5785	24.58	0.181
165	5825	23.86	0.153

(5) Modulation Standard: IEEE 802.11an, HT40(13.5Mbps), ANT-L+ANT-R

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
151	5755	20.99	0.181
155	5775	20.80	0.172
159	5795	21.17	0.166

(6) Modulation Standard: IEEE 802.11an, HT20(6.5Mbps), ANT-ALL

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
149	5745	25.76	0.237
157	5785	25.99	0.250
165	5825	25.66	0.232

(7) Modulation Standard: IEEE 802.11an, HT40(13.5Mbps), ANT-ALL

Test Date: May. 05, 2008 Temperature: 20 Humidity: 60%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (S) (mW/cm ²)
151	5755	26.64	0.290
155	5775	26.24	0.265
159	5795	26.13	0.258

The MPE is calculated as $0.290 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$. So, RF exposure limit warning or SAR test are not required.