

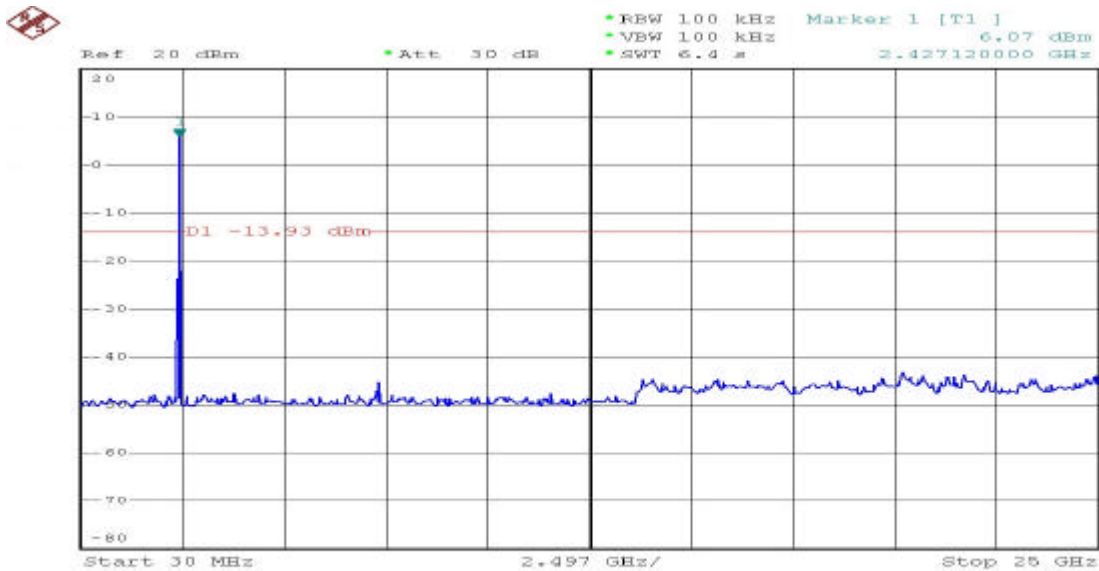
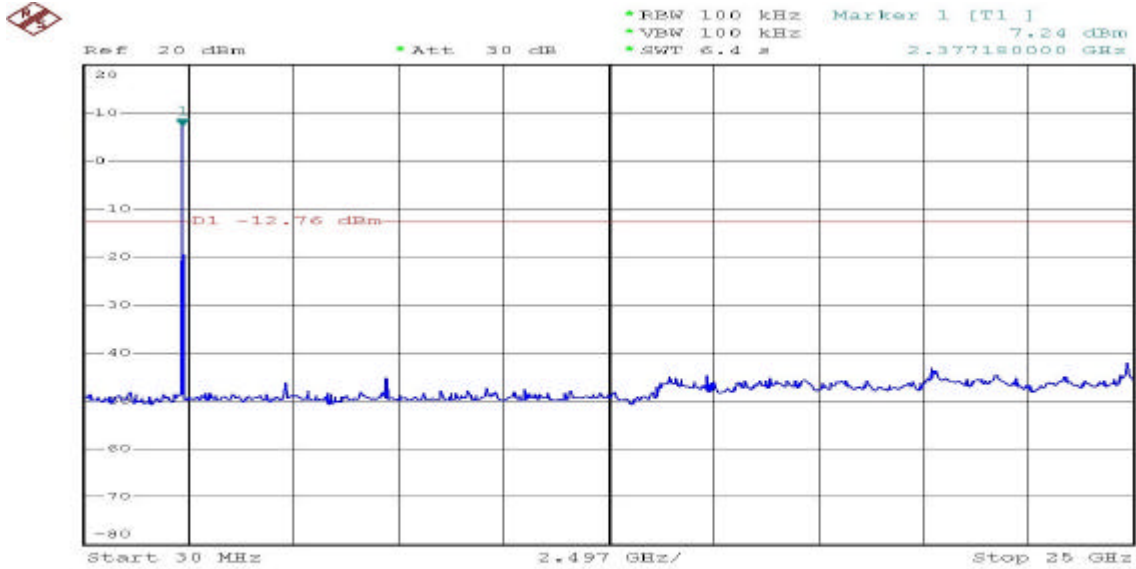
4.3. RF Portion

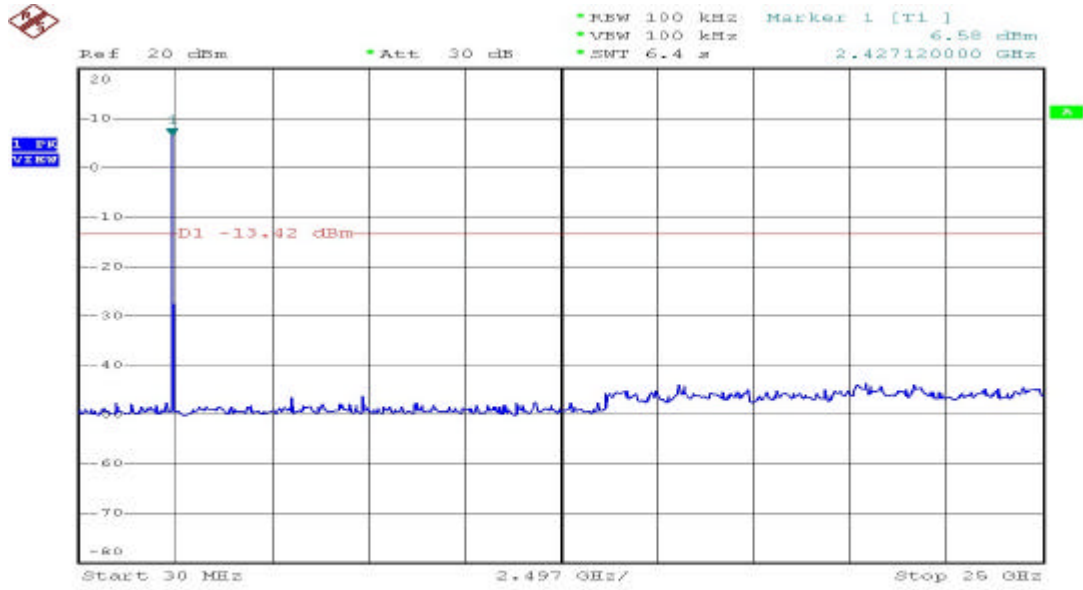
4.3.1. Test Result of Conducted Emission

Modulation Standard: IEEE 802.11b

Operation Mode: Receiving/ Transmitting

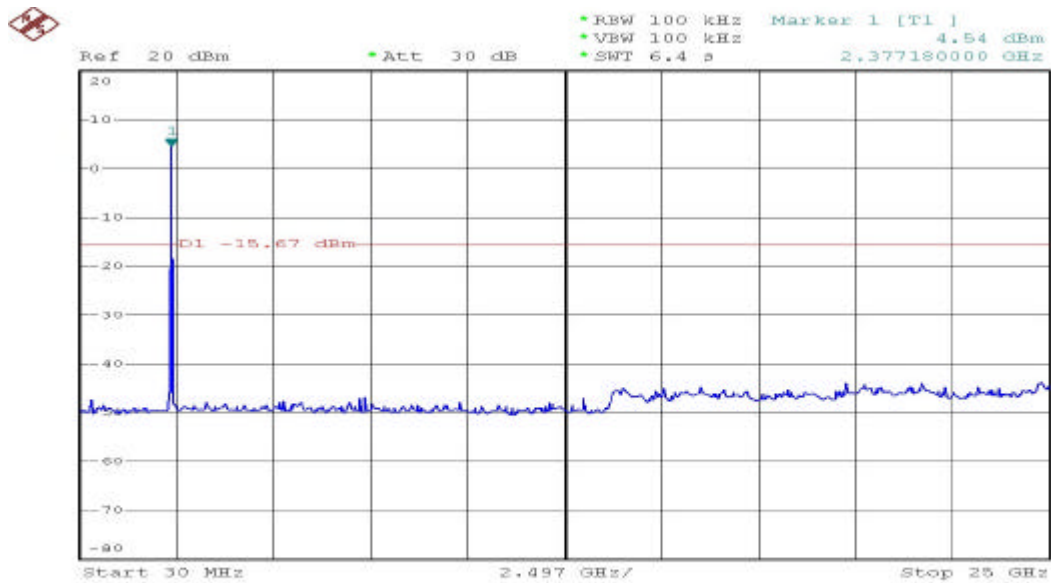
Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61 %

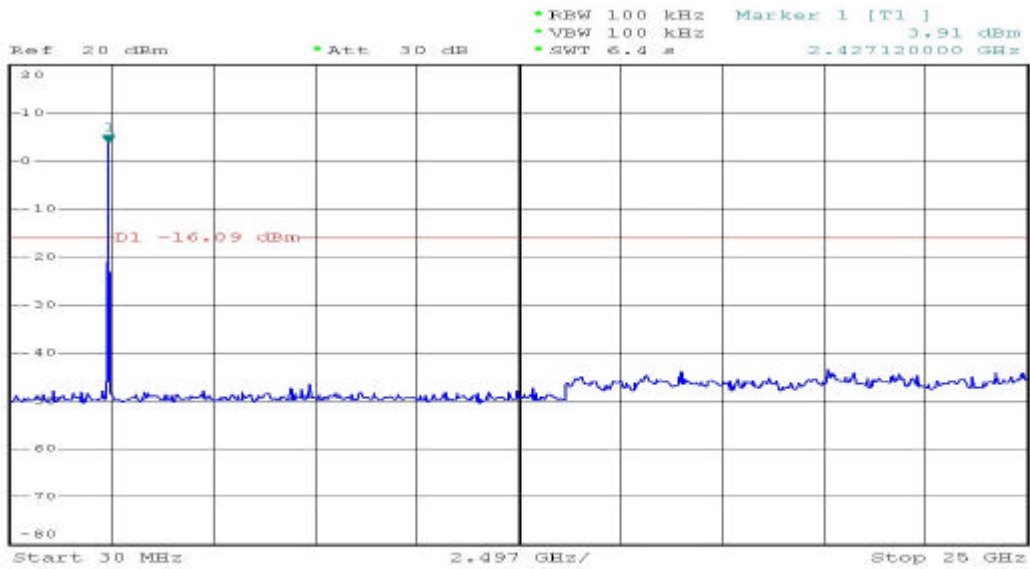
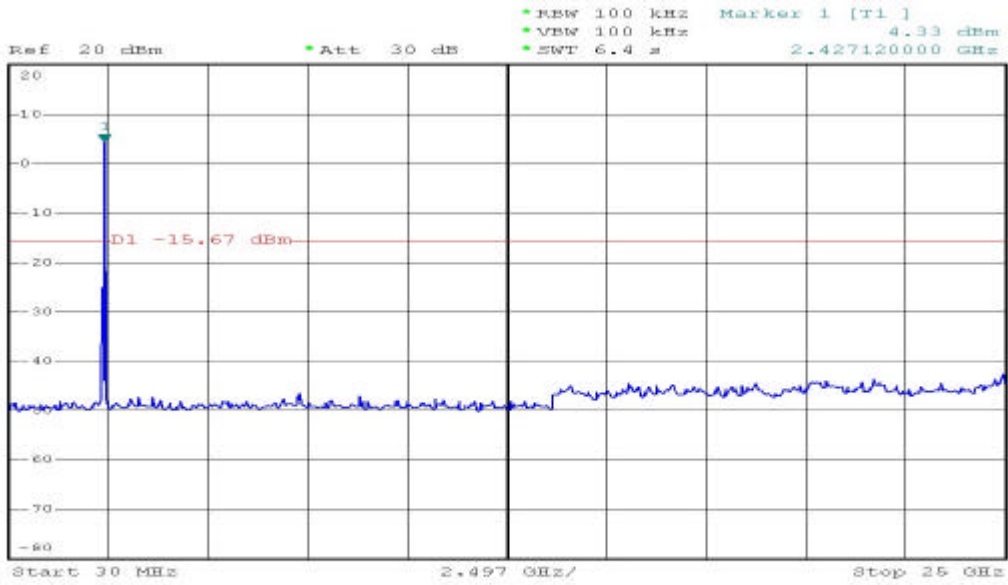




Date: 6.MAY.2004 14:05:08

Modulation Standard: IEEE 802.11g





4.3.2. Test Result of Radiated Emission

Antenna 1, Modulation Standard: IEEE 802.11b

a) Emission frequencies below 1 GHz

Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61%

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Table Deg.	Ant High (m)
729.80	H	40.78	1.32	42.10	46	-3.90	180	1.5
735.40	H	41.56	1.51	43.08	46	-2.92	180	1.5
918.80	H	36.59	3.46	40.04	46	-5.96	180	1.5
927.90	H	38.25	3.81	42.06	46	-3.94	180	1.5
932.80	H	38.46	3.93	42.38	46	-3.62	180	1.5
31.89	V	45.29	-10.18	35.11	40	-4.89	270	1.0
69.69	V	57.04	-21.92	35.12	40	-4.88	270	1.0
76.98	V	57.76	-20.75	37.01	40	-2.99	270	1.0
78.33	V	56.45	-20.55	35.90	40	-4.10	270	1.0
79.68	V	57.02	-20.33	36.69	40	-3.31	270	1.0
81.03	V	57.07	-20.09	36.98	40	-3.02	270	1.0
733.30	V	40.29	1.45	41.73	46	-4.27	270	1.0
927.90	V	38.35	3.81	42.16	46	-3.84	270	1.0
934.90	V	37.22	3.95	41.17	46	-4.83	270	1.0

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. example:
 $42.10 = 40.78 + 1.32$

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. example:
 $44.52 = 41.93 + 2.59$

Antenna 1, Modulation Standard: IEEE 802.11g

a) Emission frequencies below 1 GHz

Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Table Deg.	Ant High (m)
30.00	V	46.51	-8.98	37.53	40	-2.47	270	1.0
39.18	V	49.59	-14.06	35.54	40	-4.46	270	1.0
66.99	V	58.43	-22.32	36.11	40	-3.89	270	1.0
68.34	V	58.33	-22.15	36.17	40	-3.83	270	1.0
71.04	V	57.20	-21.69	35.52	40	-4.48	270	1.0
76.98	V	58.21	-20.75	37.46	40	-2.54	270	1.0
79.14	V	57.82	-20.42	37.40	40	-2.60	270	1.0
81.84	V	58.01	-19.94	38.07	40	-1.93	270	1.0
87.24	V	54.73	-19.10	35.63	40	-4.37	270	1.0
729.80	V	39.84	1.32	41.16	46	-4.84	270	1.0
735.40	V	39.98	1.51	41.49	46	-4.51	270	1.0
927.90	V	37.30	3.81	41.11	46	-4.89	270	1.0
927.90	H	37.25	3.81	41.06	46	-4.94	180	1.5
934.90	H	37.48	3.95	41.43	46	-4.57	180	1.5

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.

Antenna 2, Modulation Standard: IEEE 802.11b

a) Emission frequencies below 1 GHz

Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Table Deg.	Ant High (m)
197.13	H	56.78	-17.89	38.89	43.5	-4.61	270	1.5
735.40	H	38.96	1.51	40.47	46.0	-5.53	270	1.5
896.40	H	39.05	2.42	41.47	46.0	-4.53	270	1.5
899.90	H	39.21	2.47	41.67	46.0	-4.33	270	1.5
927.90	H	38.23	3.81	42.04	46.0	-3.96	270	1.5
934.90	H	38.04	3.95	41.99	46.0	-4.01	270	1.5
731.90	V	39.38	1.40	40.78	46.0	-5.22	180	1.0
735.40	V	39.31	1.51	40.82	46.0	-5.18	180	1.0
929.30	V	38.03	3.87	41.90	46.0	-4.10	180	1.0
934.90	V	36.94	3.95	40.89	46.0	-5.11	180	1.0

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.

Antenna 2, Modulation Standard: IEEE 802.11g

a) Emission frequencies below 1 GHz

Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Table Deg.	Ant High (m)
31.08	V	46.04	-9.67	36.38	40.0	-3.62	270	1.0
99.93	V	55.16	-17.45	37.71	43.5	-5.79	270	1.0
195.78	V	57.44	-17.80	39.64	43.5	-3.86	270	1.0
197.13	V	58.19	-17.89	40.30	43.5	-3.20	270	1.0
209.28	V	56.09	-18.20	37.89	43.5	-5.61	270	1.0
731.90	V	39.17	1.40	40.57	46.0	-5.43	270	1.0
735.40	V	39.70	1.51	41.21	46.0	-4.79	270	1.0
929.30	V	38.08	3.87	41.95	46.0	-4.05	270	1.0
934.90	V	36.34	3.95	40.29	46.0	-5.71	270	1.0
896.40	H	38.70	2.42	41.12	46.0	-4.88	180	1.5
901.30	H	38.85	2.58	41.43	46.0	-4.57	180	1.5
913.90	H	37.27	3.36	40.64	46.0	-5.36	180	1.5
929.30	H	38.87	3.87	42.74	46.0	-3.26	180	1.5
934.90	H	38.86	3.98	42.81	46.0	-3.19	180	1.5

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.

Antenna 3, Modulation Standard: IEEE 802.11b

a) Emission frequencies below 1 GHz

Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Table Deg.	Ant High (m)
33.24	V	45.53	-10.86	34.67	40.0	-5.33	180	1.0
160.68	V	55.97	-17.06	38.91	43.5	-4.59	180	1.0
729.80	V	38.85	1.32	40.17	46.0	-5.83	180	1.0
733.30	V	39.03	1.45	40.47	46.0	-5.53	180	1.0
913.90	V	37.34	3.36	40.70	46.0	-5.30	180	1.0
927.90	V	37.49	3.81	41.30	46.0	-4.70	180	1.0
934.90	V	36.73	3.95	40.68	46.0	-5.32	180	1.0
160.68	H	55.54	-17.06	38.48	43.5	-5.02	270	1.5
896.40	H	39.77	2.55	42.19	46.0	-3.81	270	1.5
901.30	H	39.13	2.58	41.71	46.0	-4.29	270	1.5
913.90	H	37.94	3.36	41.31	46.0	-4.69	270	1.5
929.30	H	40.37	3.87	44.24	46.0	-1.76	270	1.5
934.90	H	39.94	3.95	43.89	46.0	-2.11	270	1.5

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.

Antenna 3, Modulation Standard: IEEE 802.11g

a) Emission frequencies below 1 GHz

Test Date: Apr. 24, 2004 Temperature: 24 Humidity: 61 %

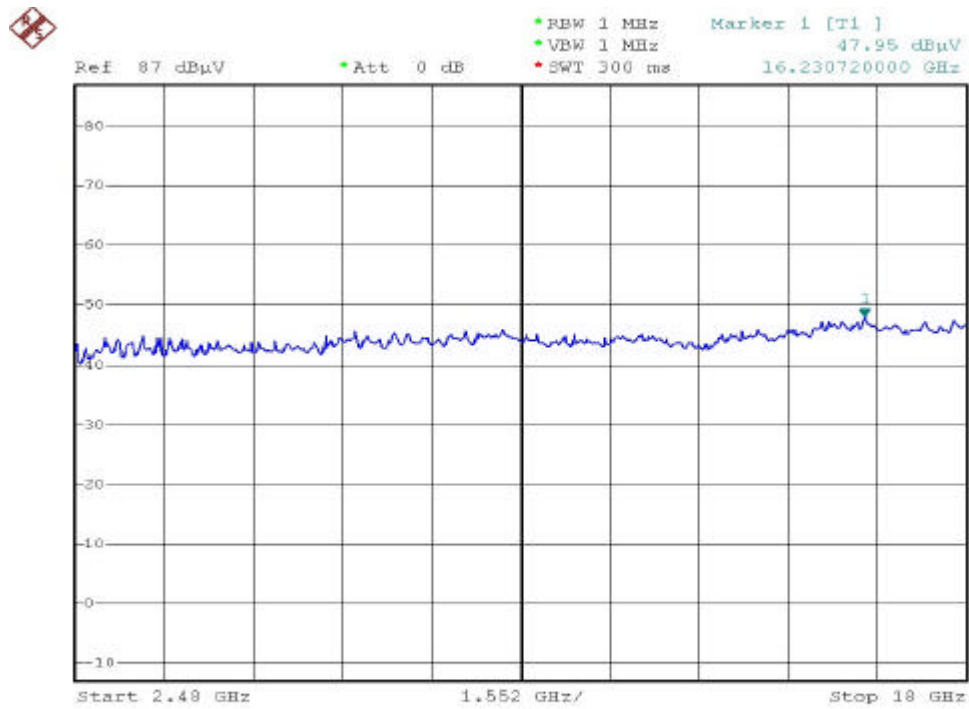
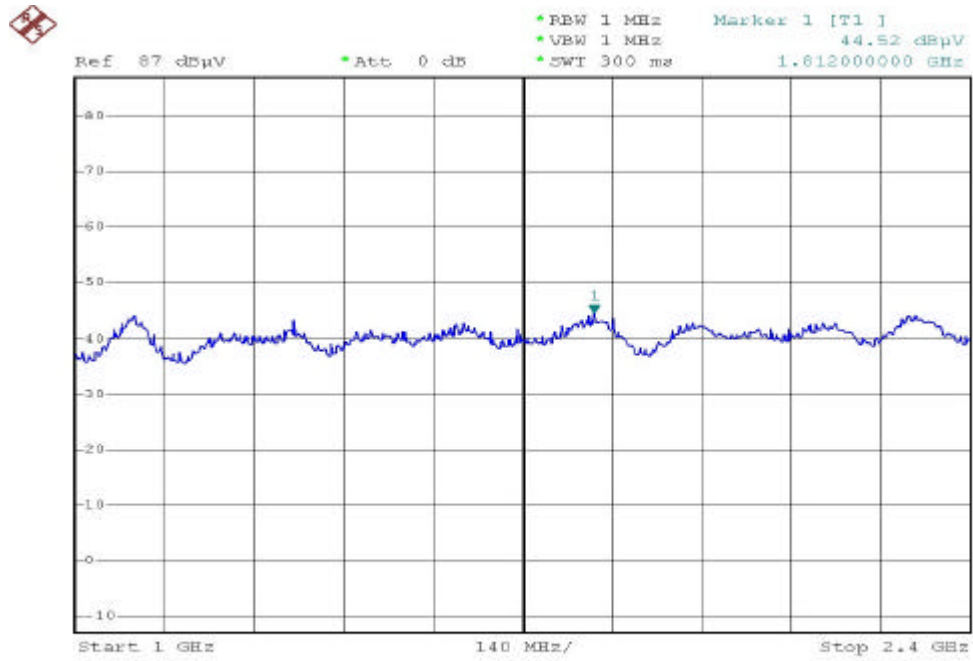
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Table Deg.	Ant High (m)
37.29	V	48.06	-13.11	34.95	40	-5.05	180	1.5
131.79	V	50.16	-15.54	34.62	43.5	-8.88	180	1.5
160.68	V	55.53	-17.06	38.47	43.5	-5.03	180	1.5
731.90	V	39.22	1.40	40.62	46	-5.38	270	1
735.40	V	39.24	1.51	40.75	46	-5.25	270	1
920.90	V	37.77	3.52	41.29	46	-4.71	270	1
929.30	V	36.75	3.87	40.62	46	-5.38	270	1
995.80	V	37.88	3.90	41.78	46	-4.22	270	1
999.30	V	35.83	3.93	39.77	46	-6.23	270	1
160.68	H	53.09	-17.06	36.03	43.5	-7.47	270	1.5
932.80	H	38.83	3.93	42.75	46	-3.25	270	1
994.40	H	38.71	3.89	42.60	46	-3.40	270	1.5

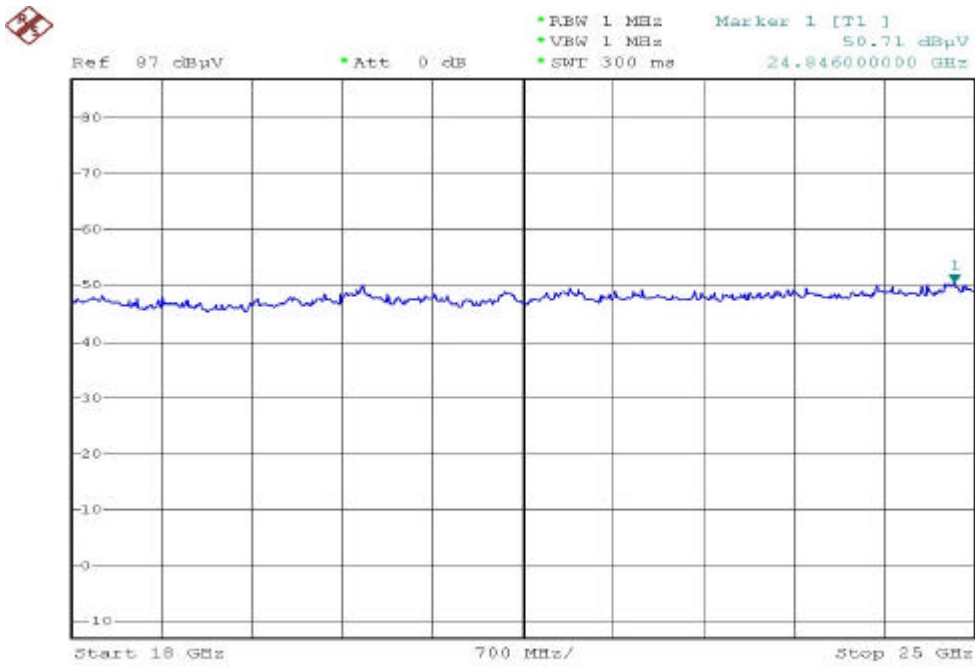
b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.

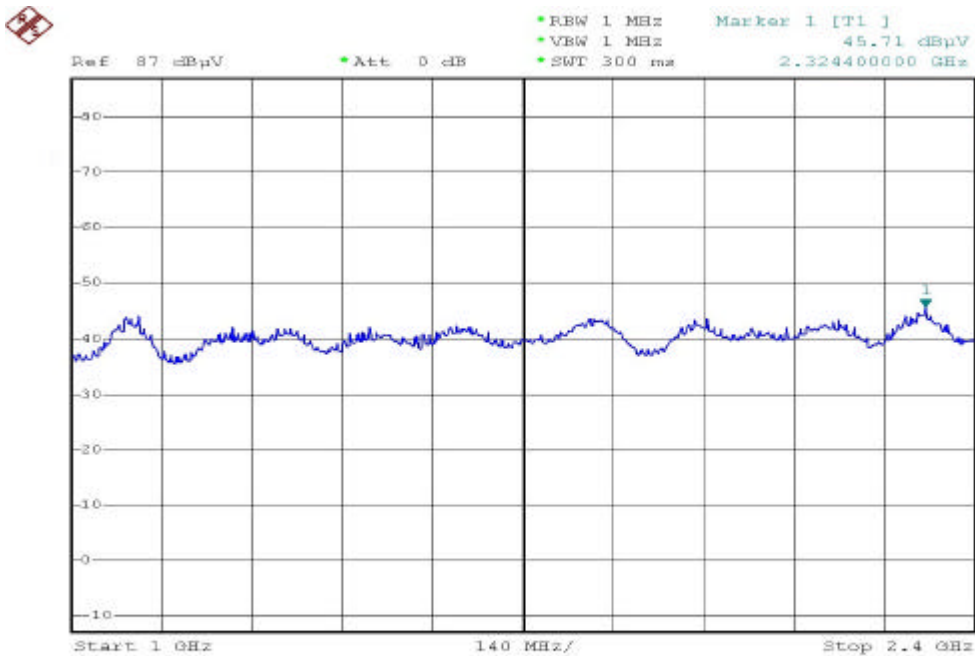
Antenna 1, Modulation Standard: IEEE 802.11b

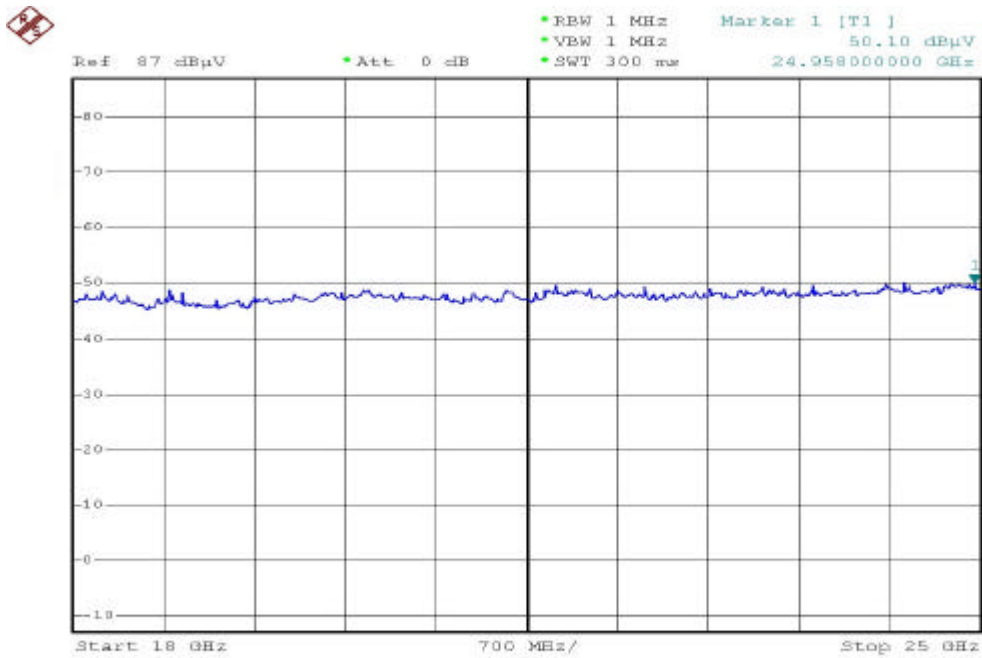
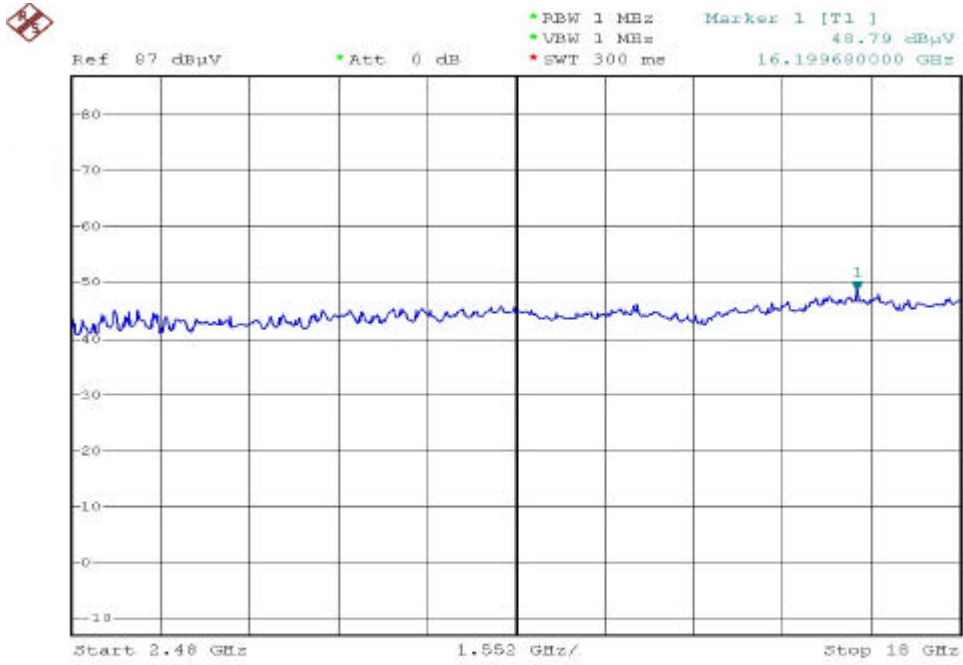
Pol/Phase: Horizontal



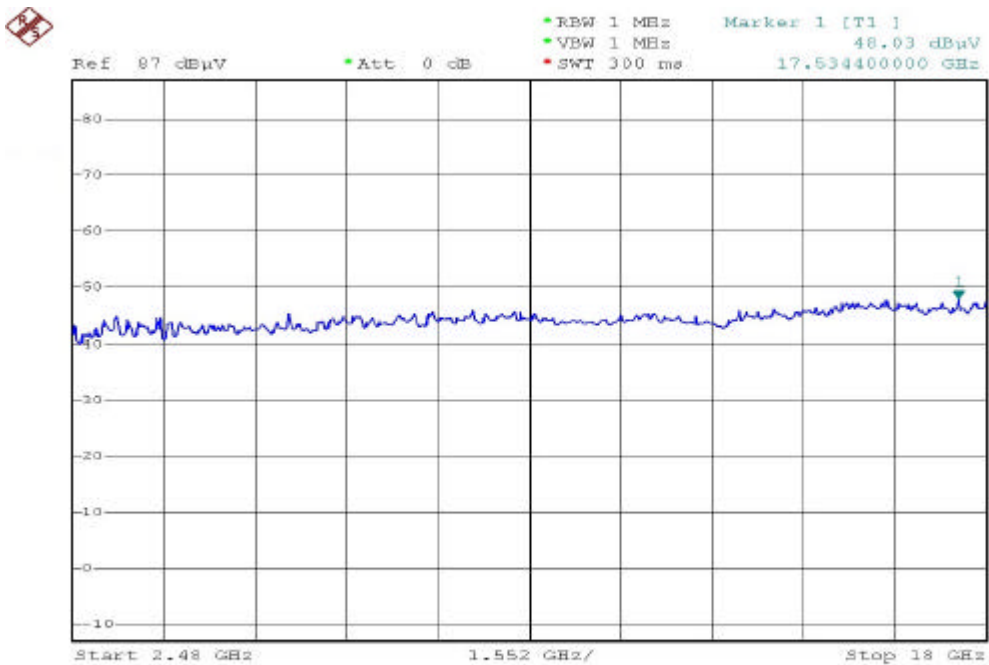
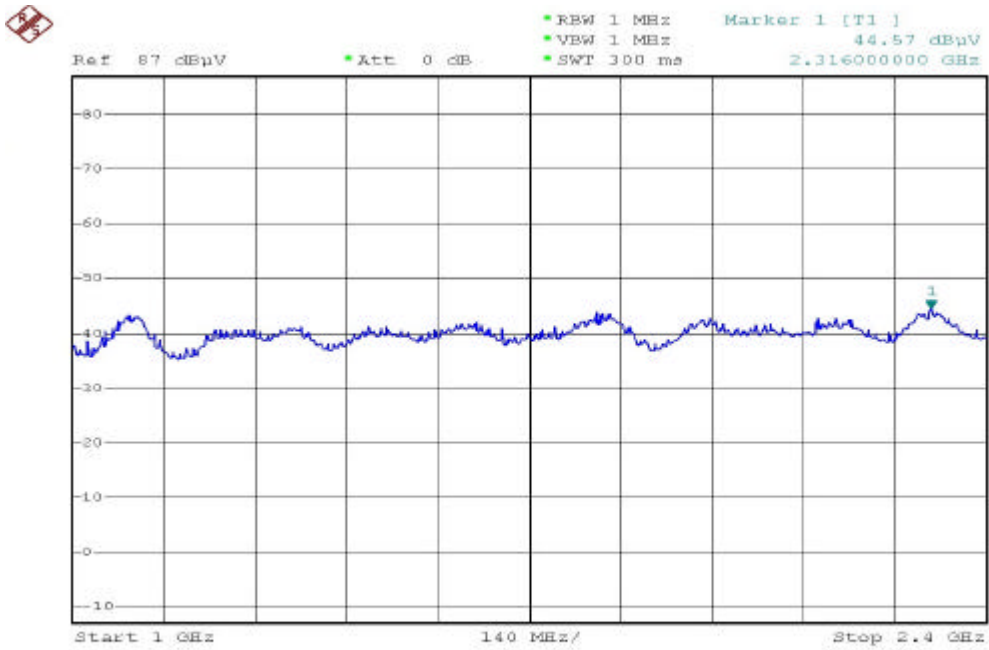


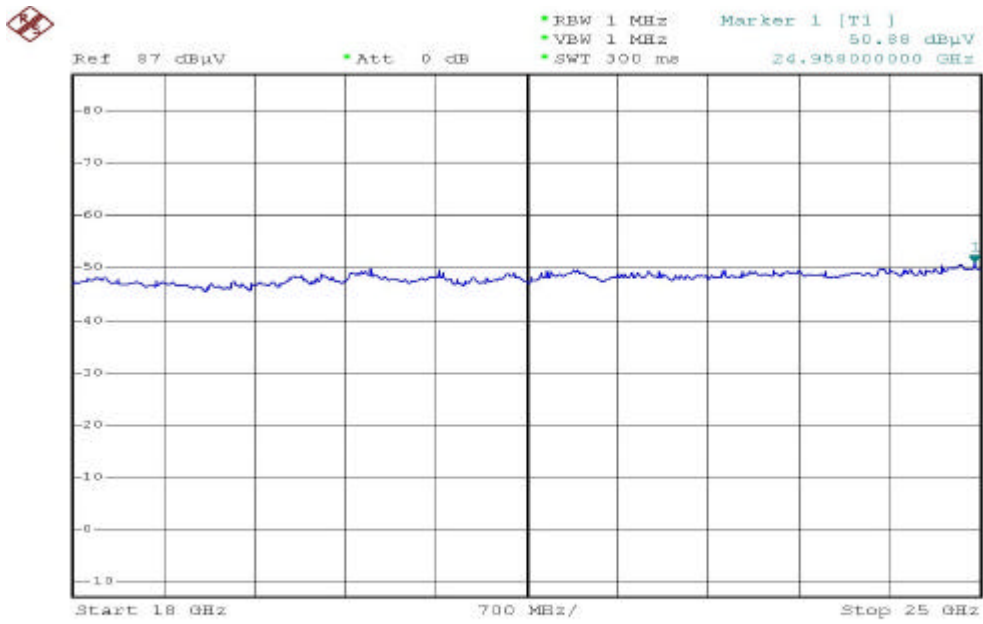
Antenna 1, Modulation Standard: IEEE 802.11b
Pol/Phase: Vertical



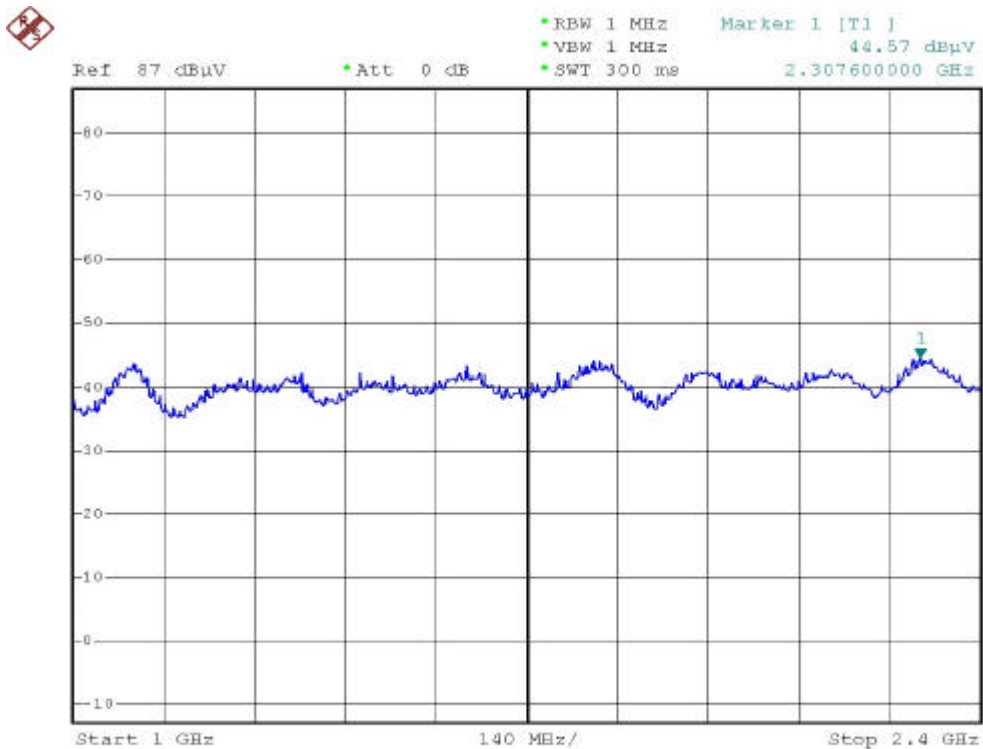


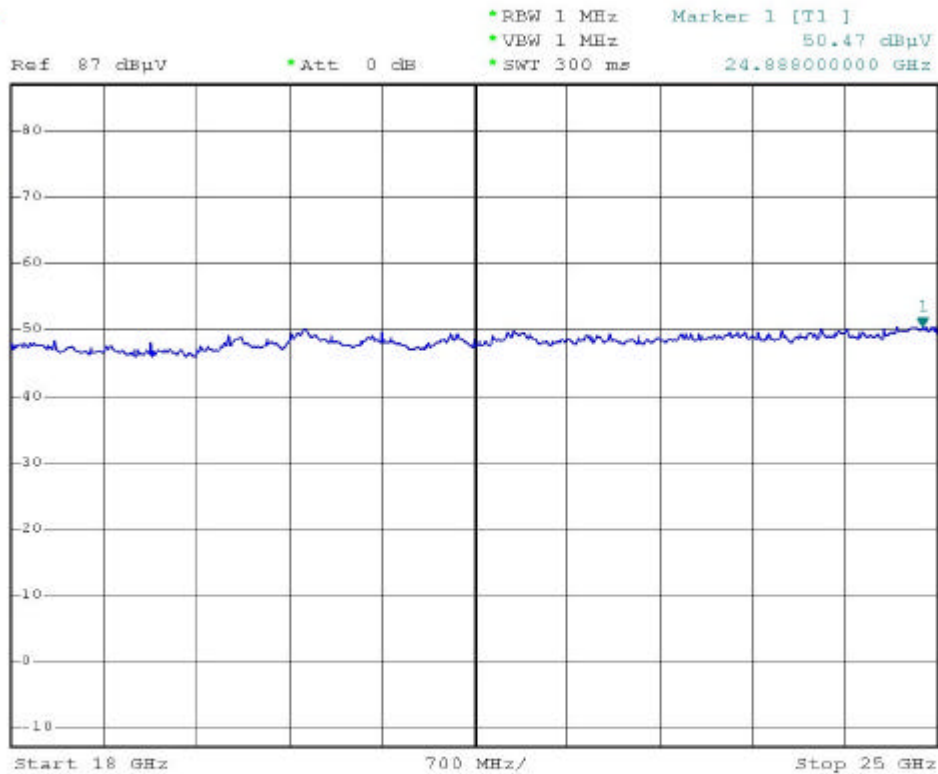
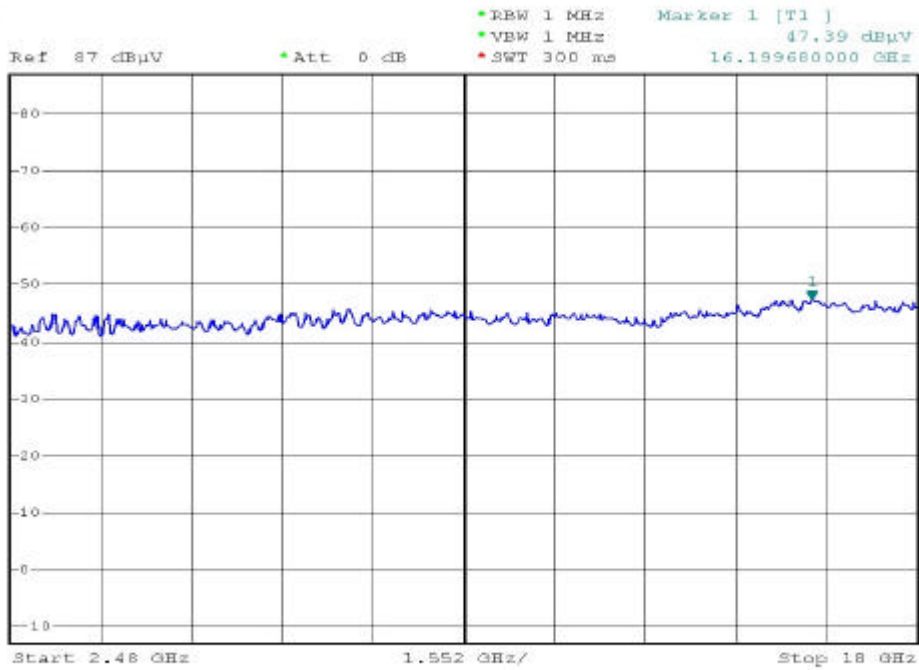
Antenna 1, Modulation Standard: IEEE 802.11g
Pol/Phase: Horizontal





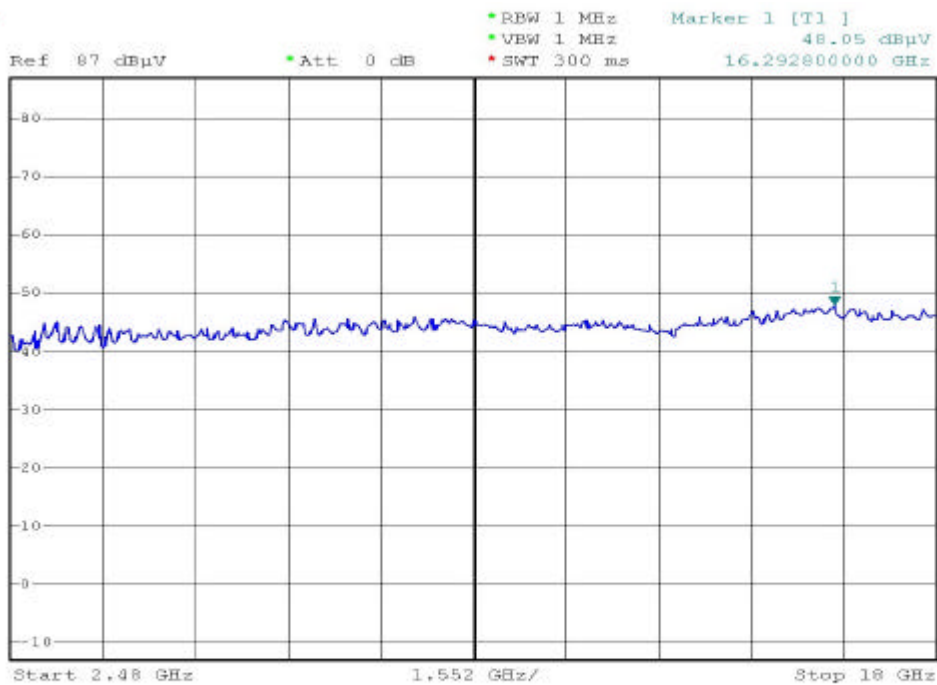
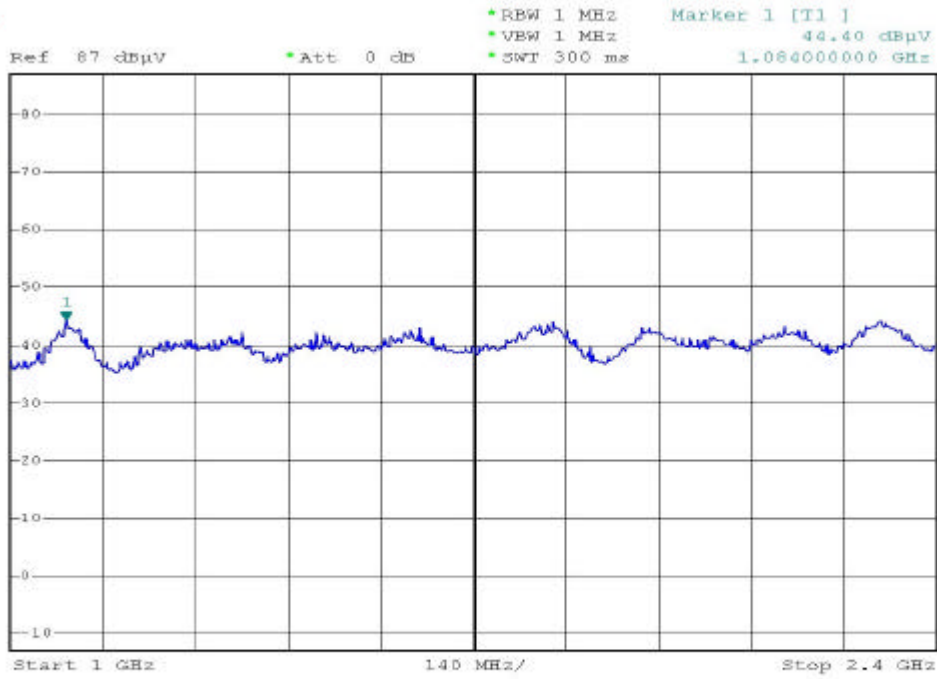
Antenna 1, Modulation Standard: IEEE 802.11g
 Pol/Phase: Vertical

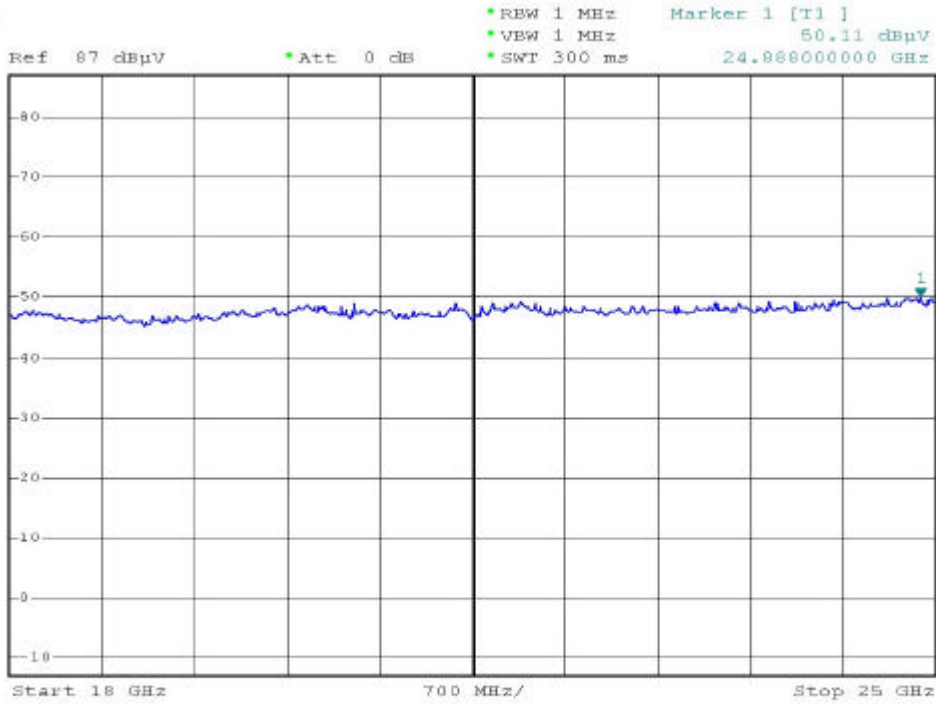




Antenna 2, Modulation Standard: IEEE 802.11b

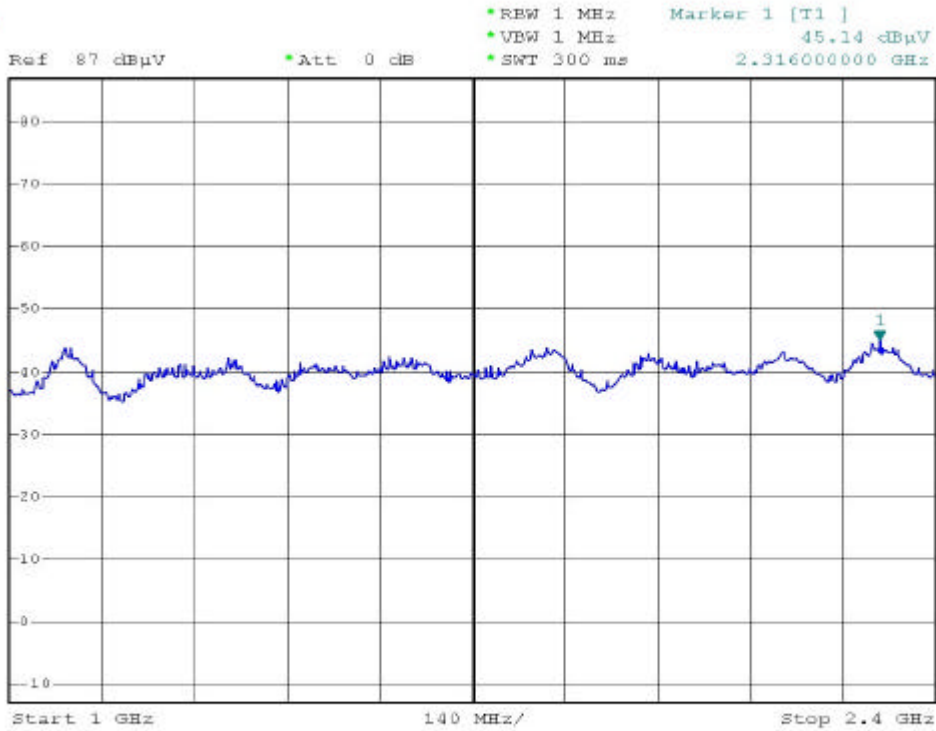
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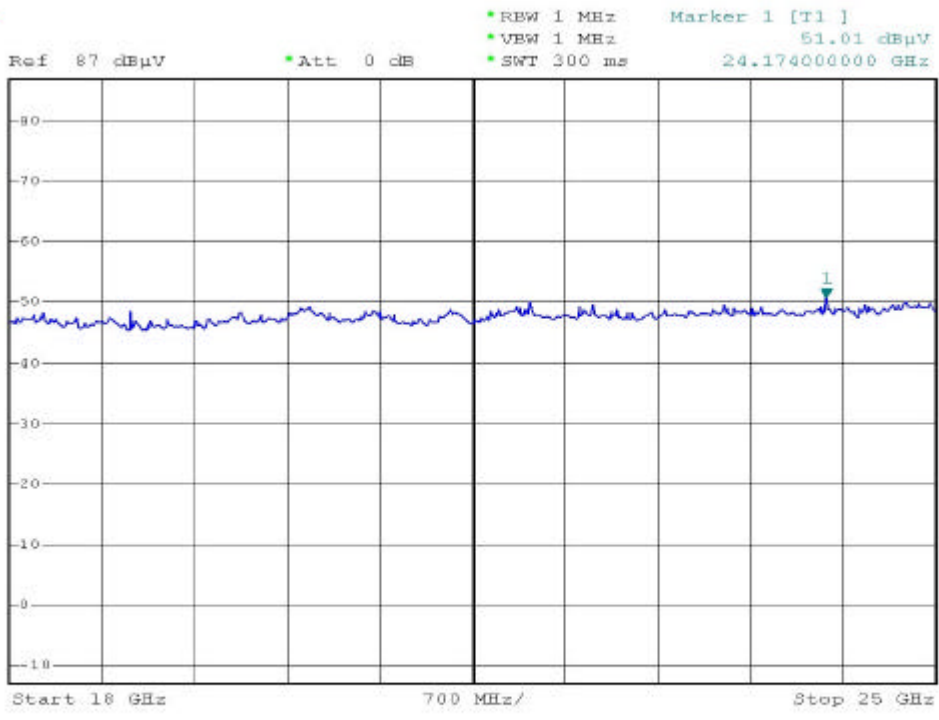
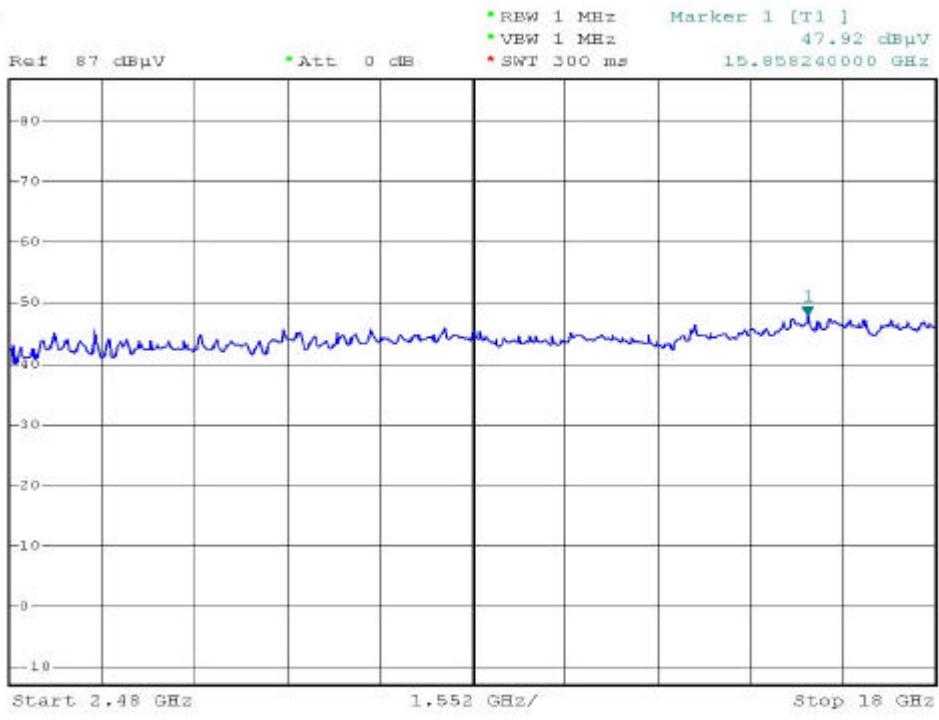




Antenna 2, Modulation Standard: IEEE 802.11b

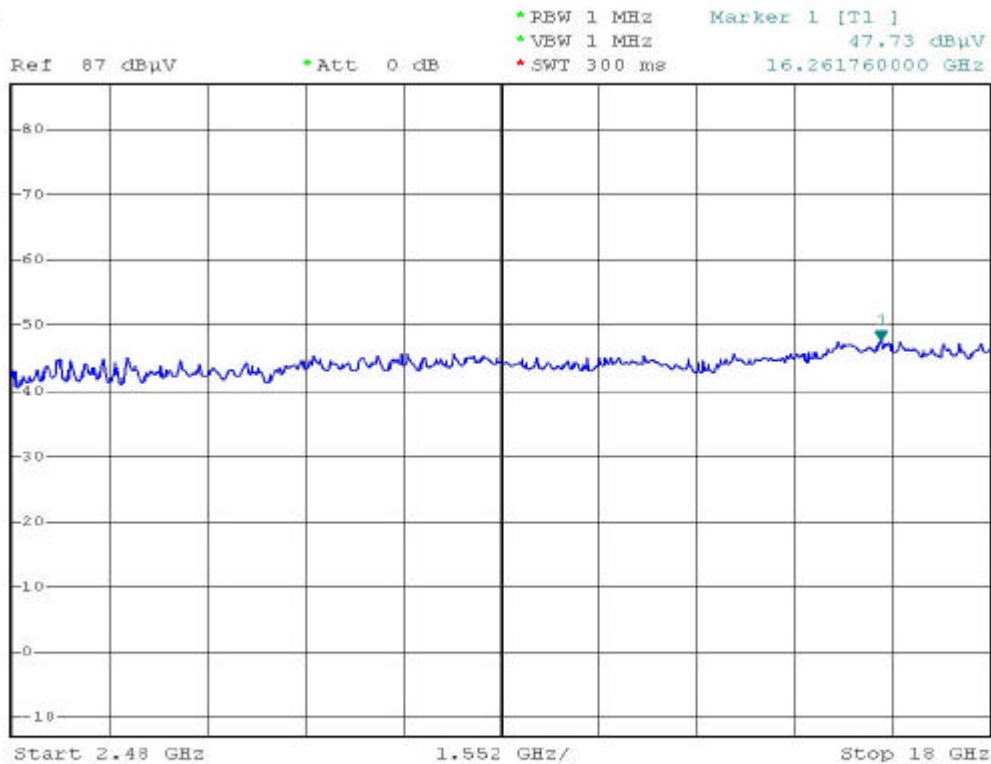
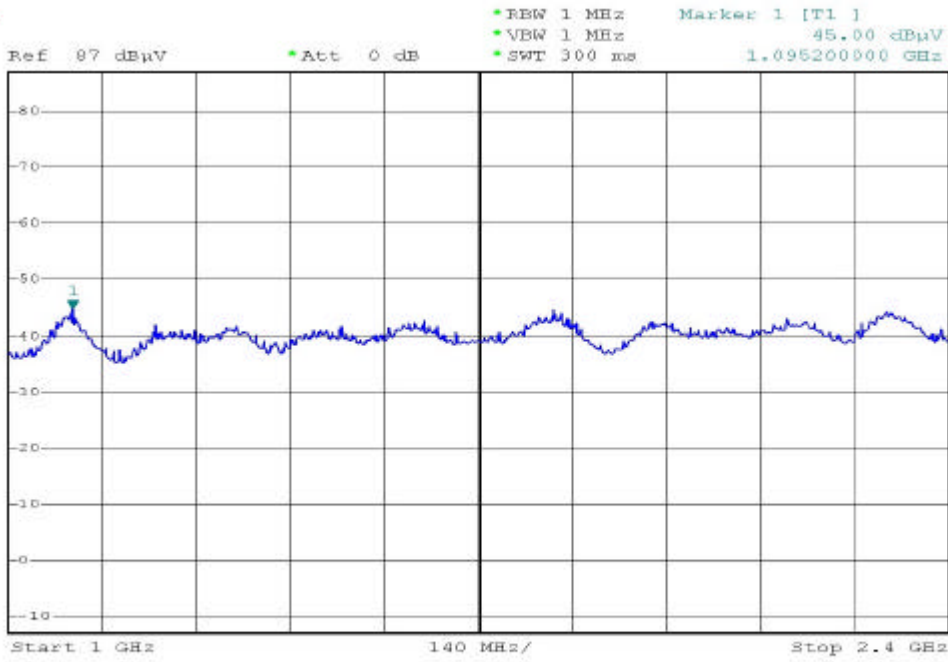
Pol/Phase: Vertical

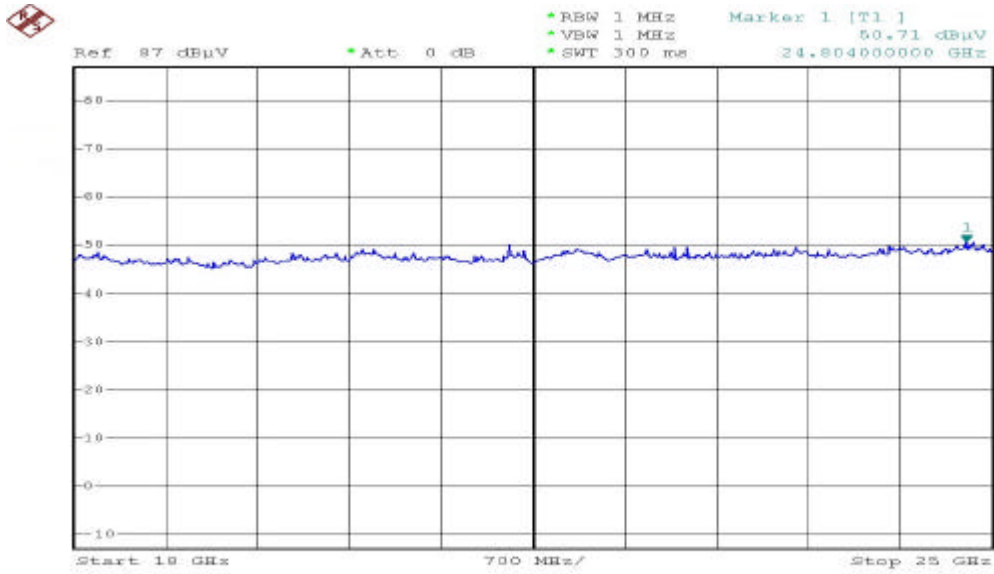




Antenna 2, Modulation Standard: IEEE 802.11g

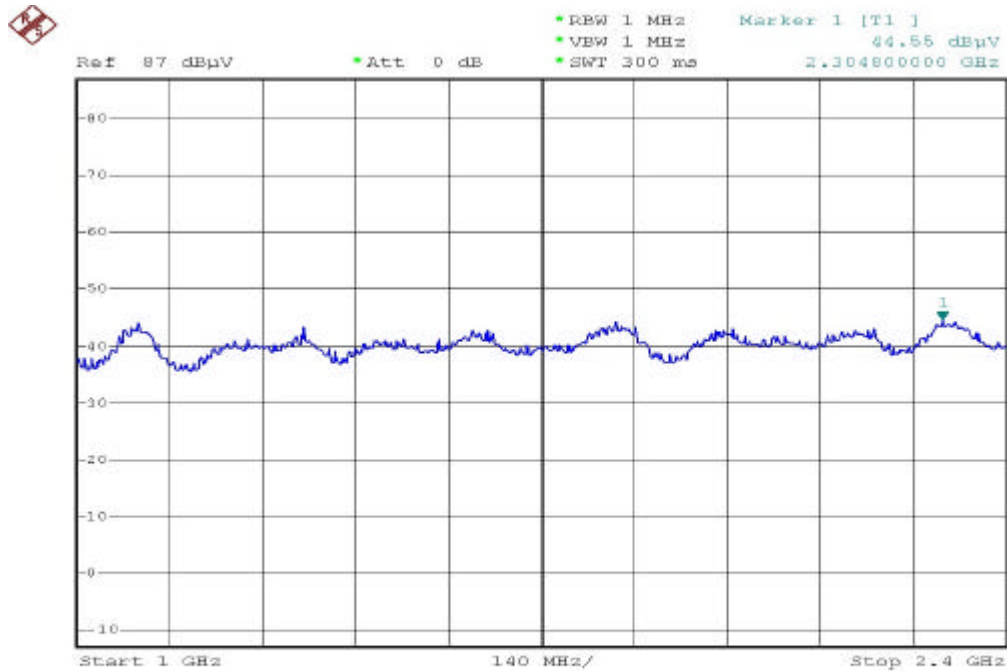
Pol/Phase: Horizontal

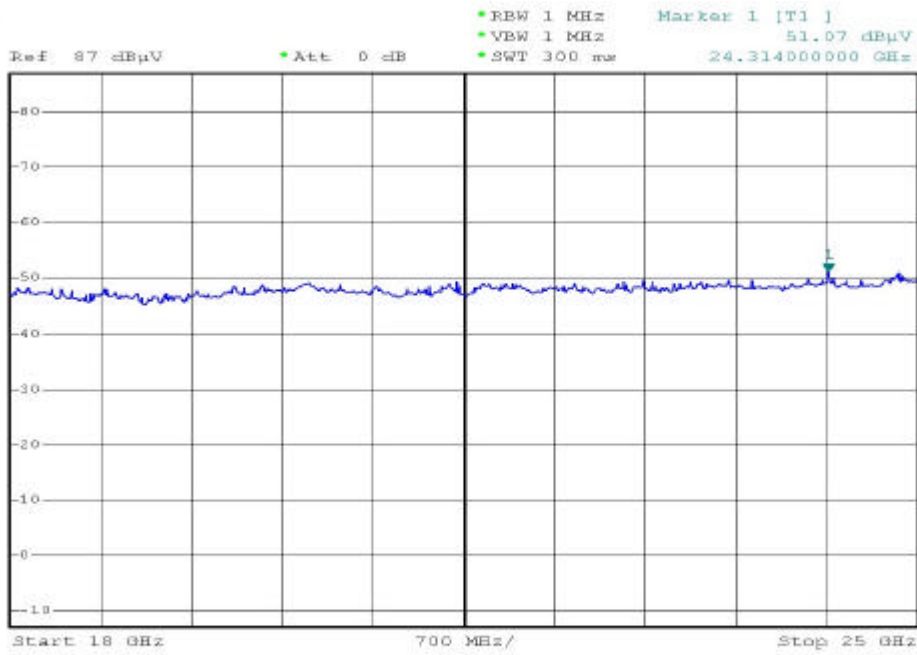
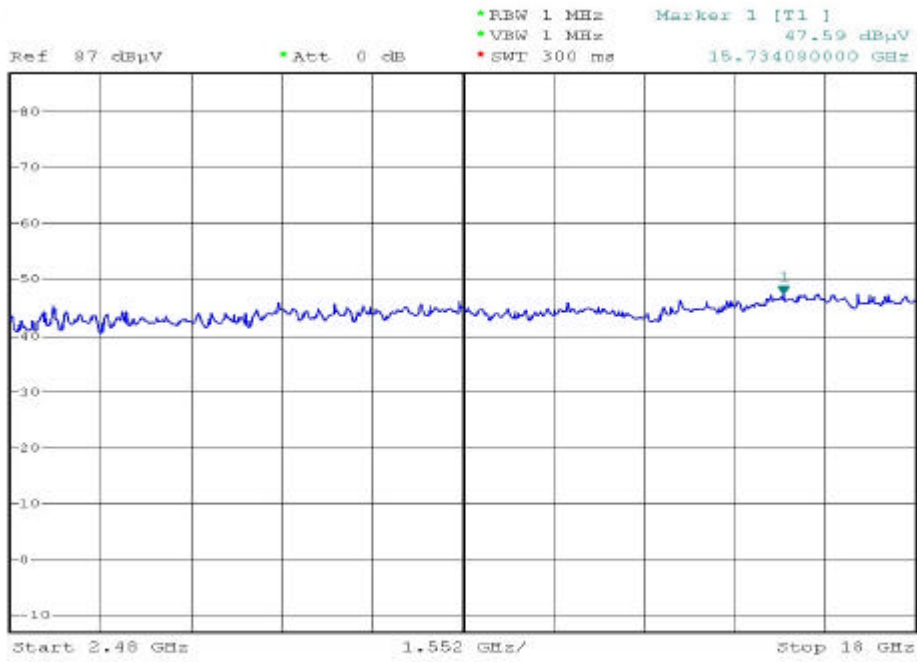




Antenna 2, Modulation Standard: IEEE 802.11g

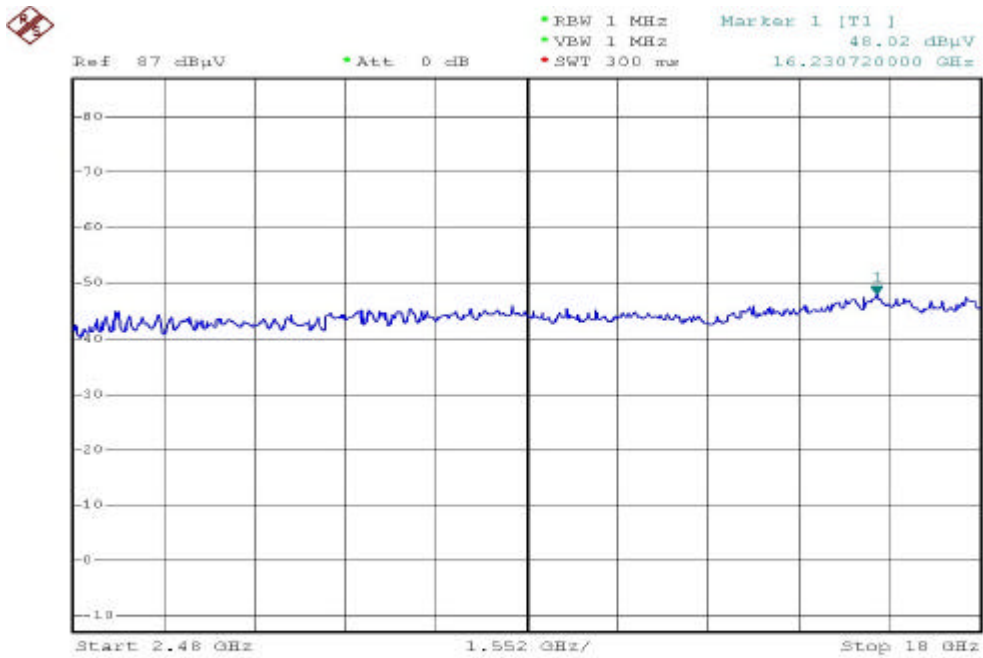
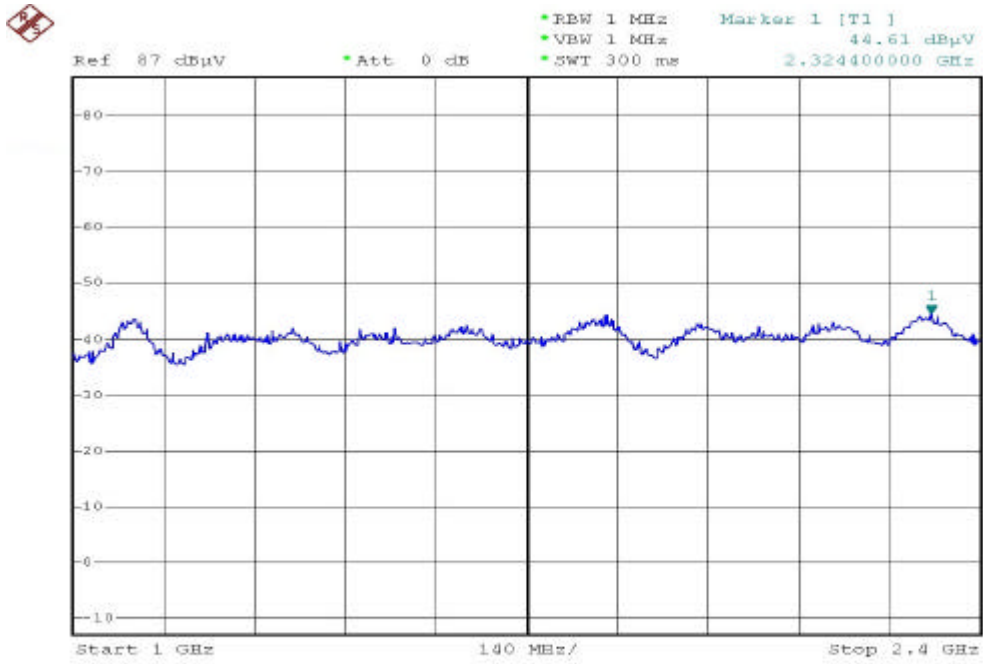
Pol/Phase: Vertical

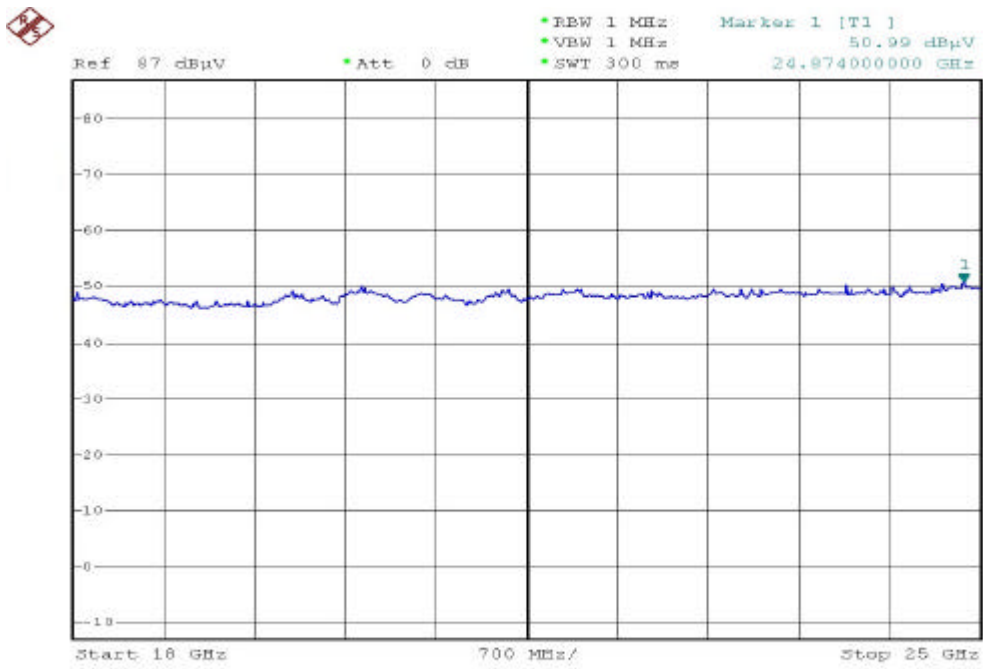




Antenna 3, Modulation Standard: IEEE 802.11b

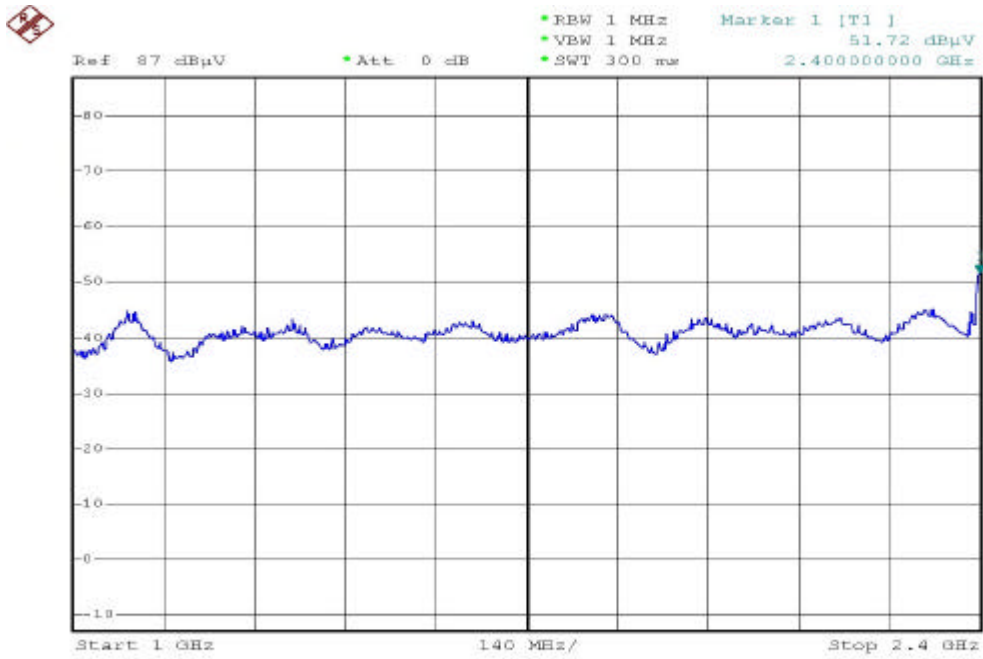
Pol/Phase: Horizontal

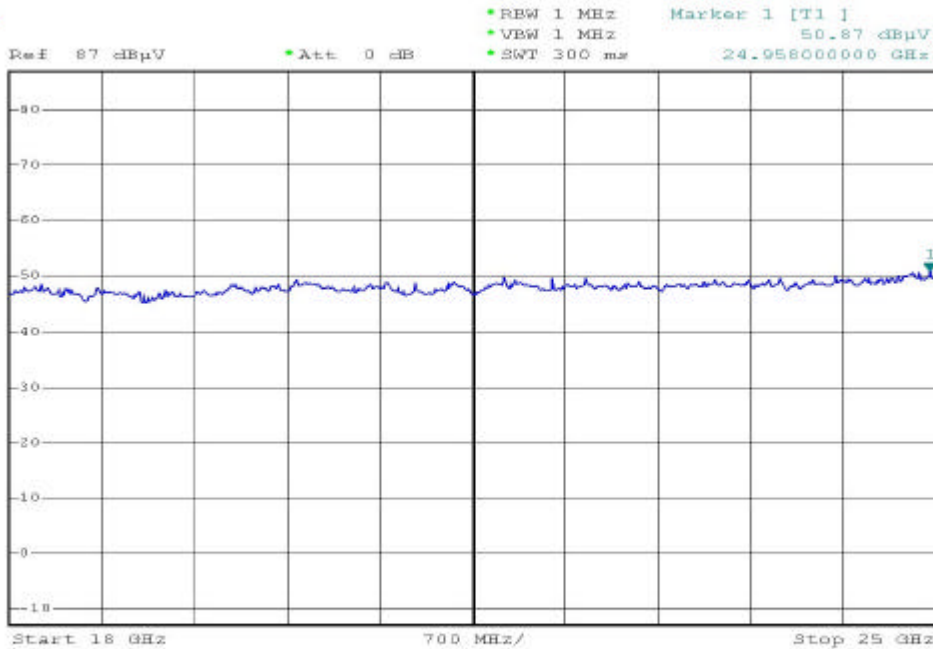
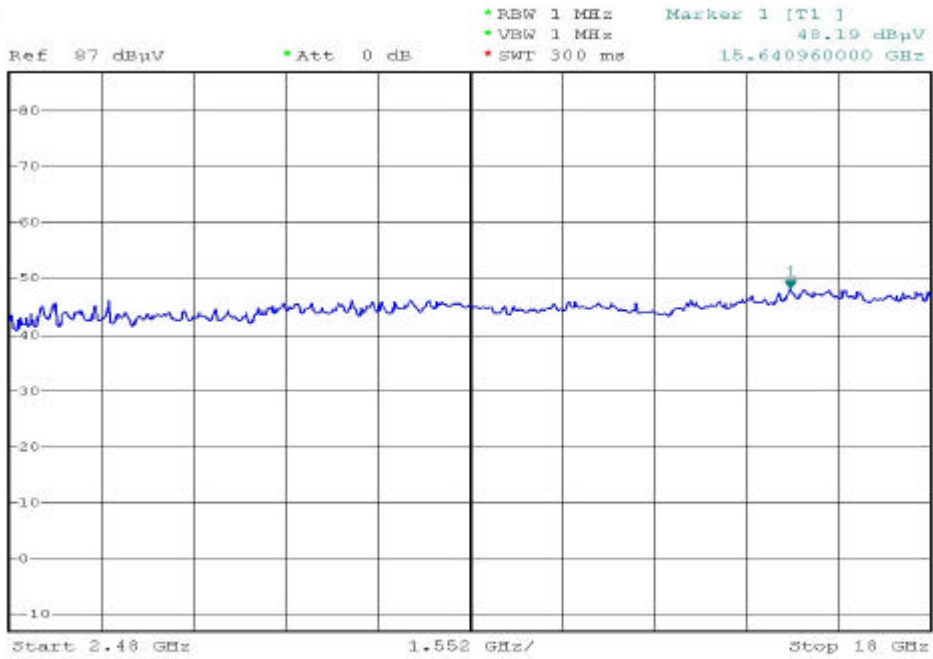




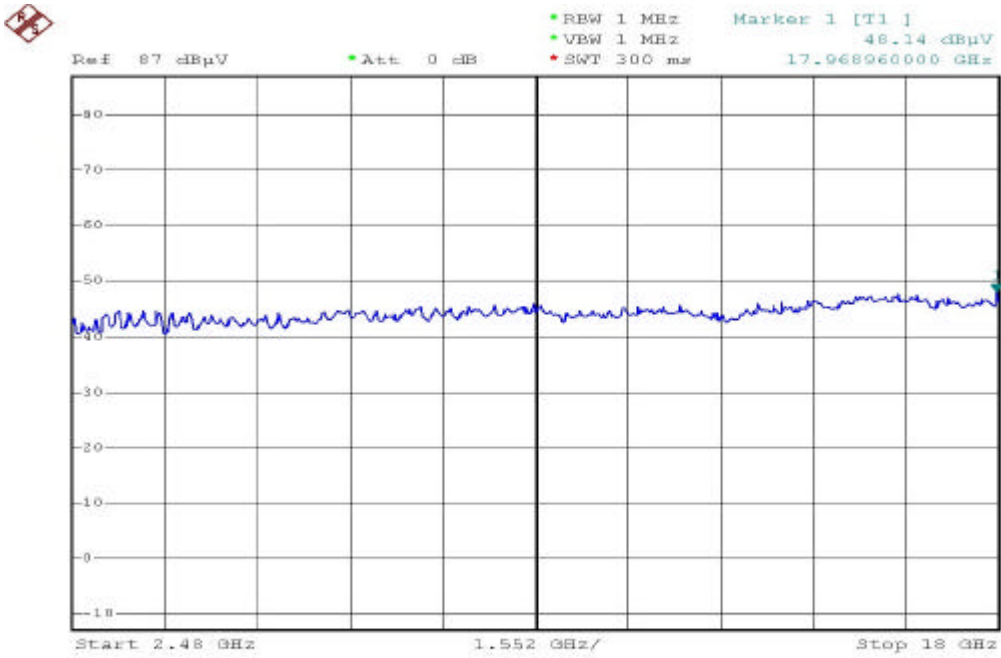
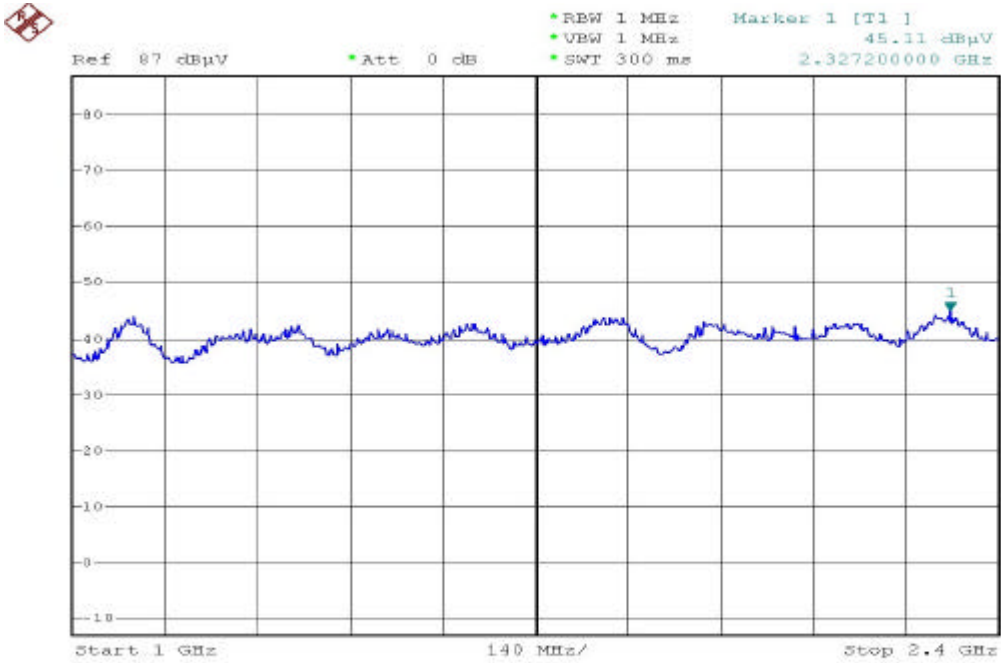
Antenna 3, Modulation Standard: IEEE 802.11b

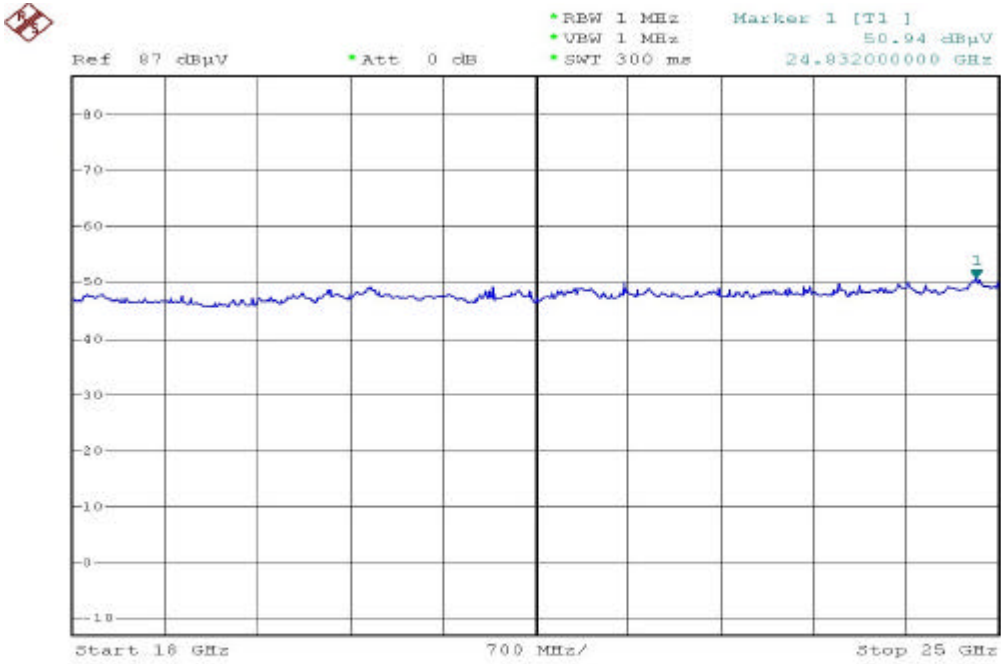
Pol/Phase: Vertical



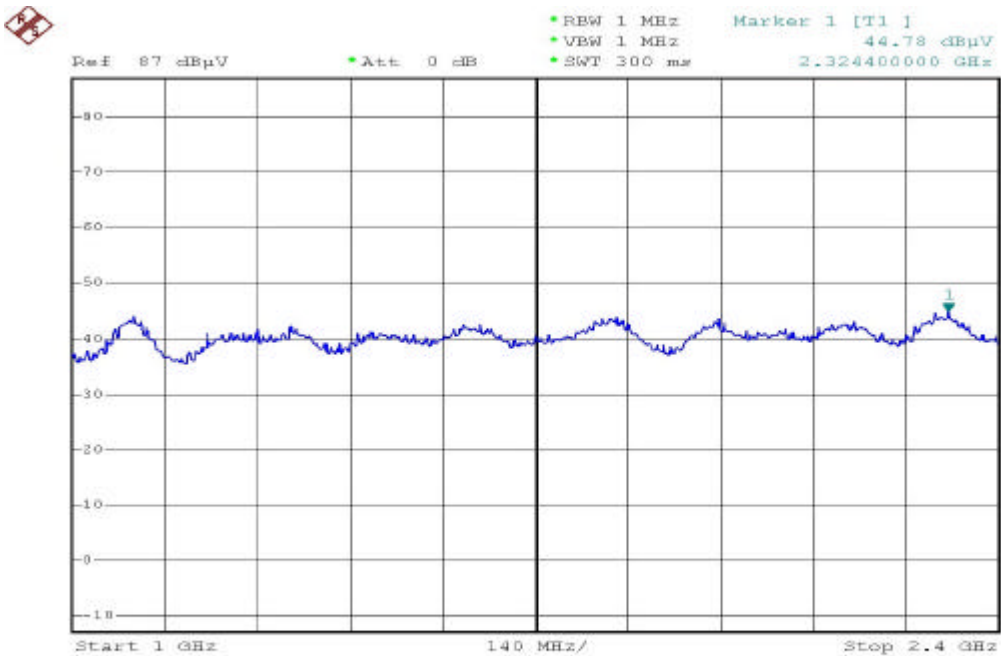


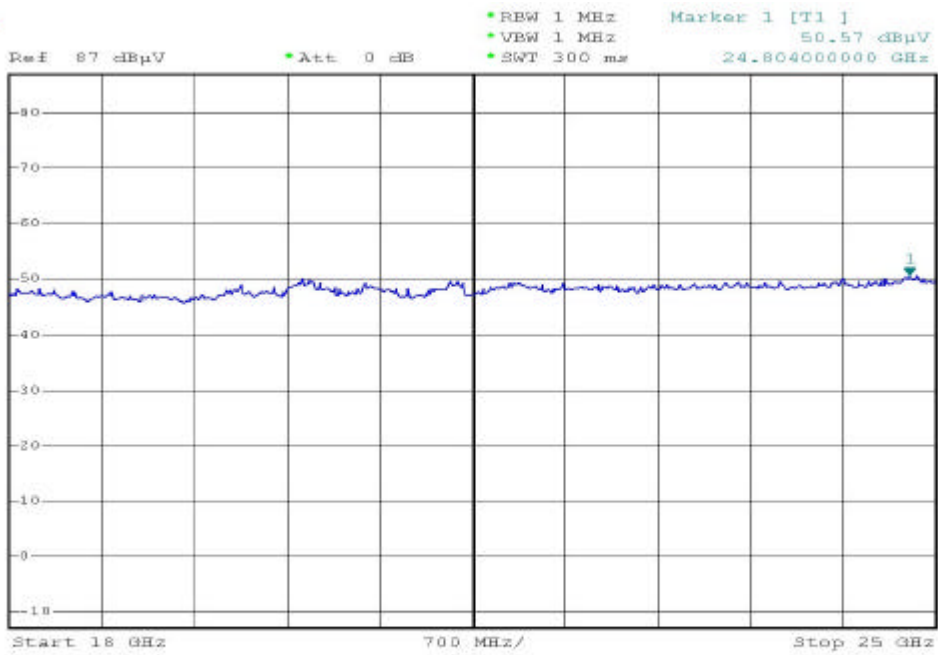
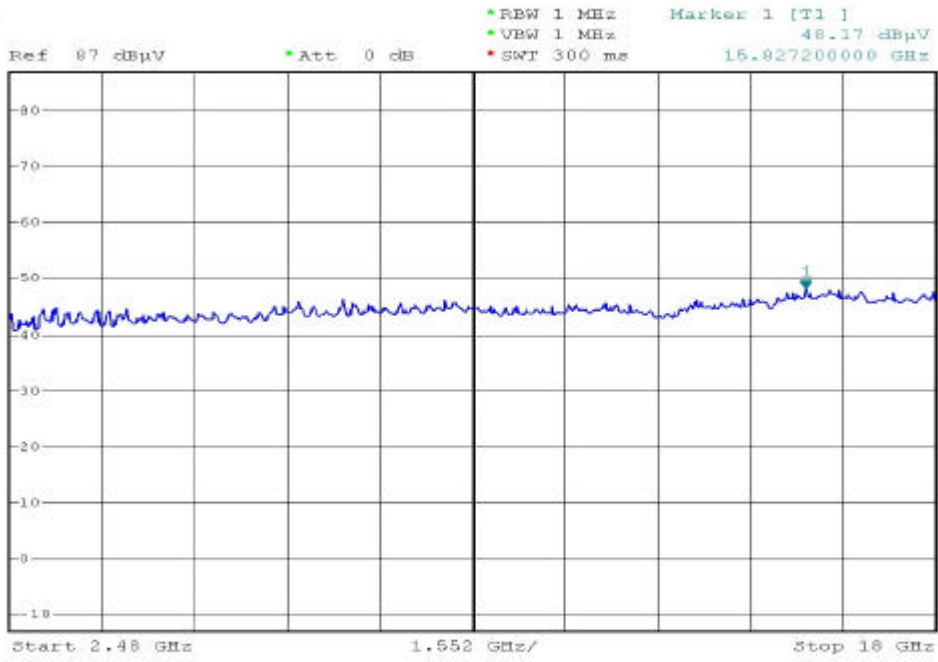
Antenna 3, Modulation Standard: IEEE 802.11g
Pol/Phase: Horizontal





Antenna 3, Modulation Standard: IEEE 802.11g
 Pol/Phase: Vertical





4.3.3. Photographs of Radiated Emission Test

Antenna 1

FRONT VIEW



REAR VIEW



Antenna 2

FRONT VIEW



REAR VIEW



Antenna 3

FRONT VIEW



REAR VIEW

