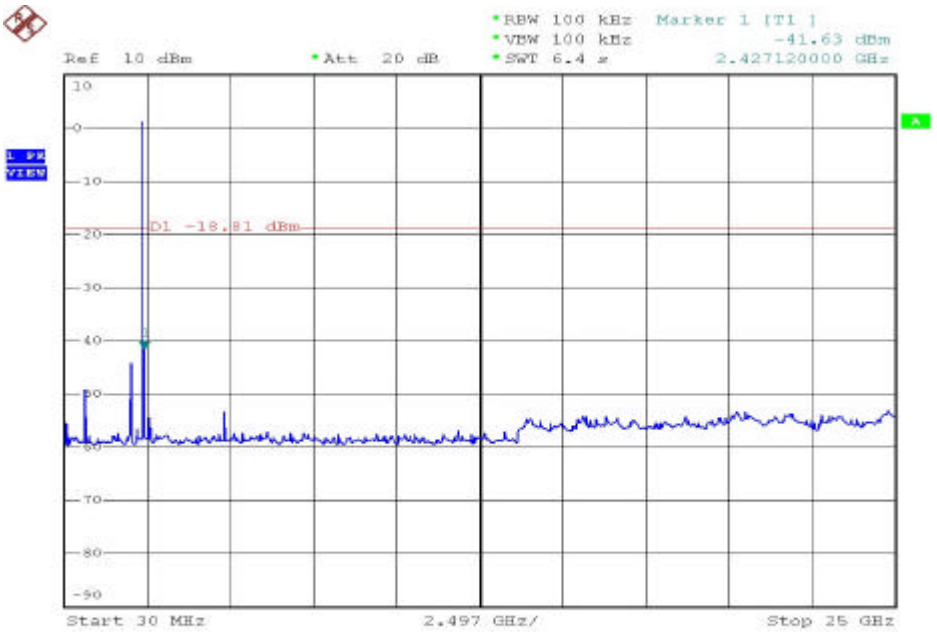
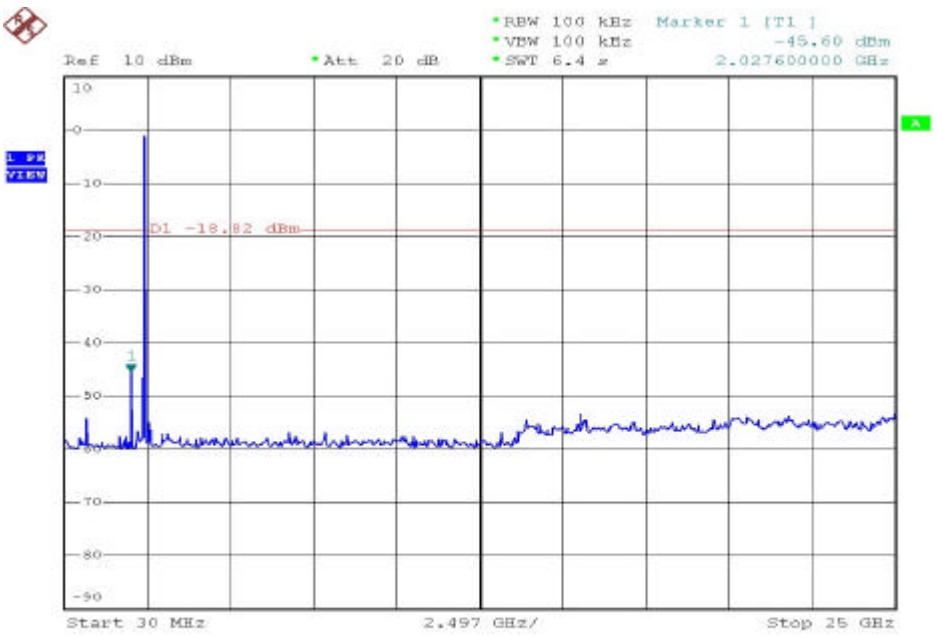
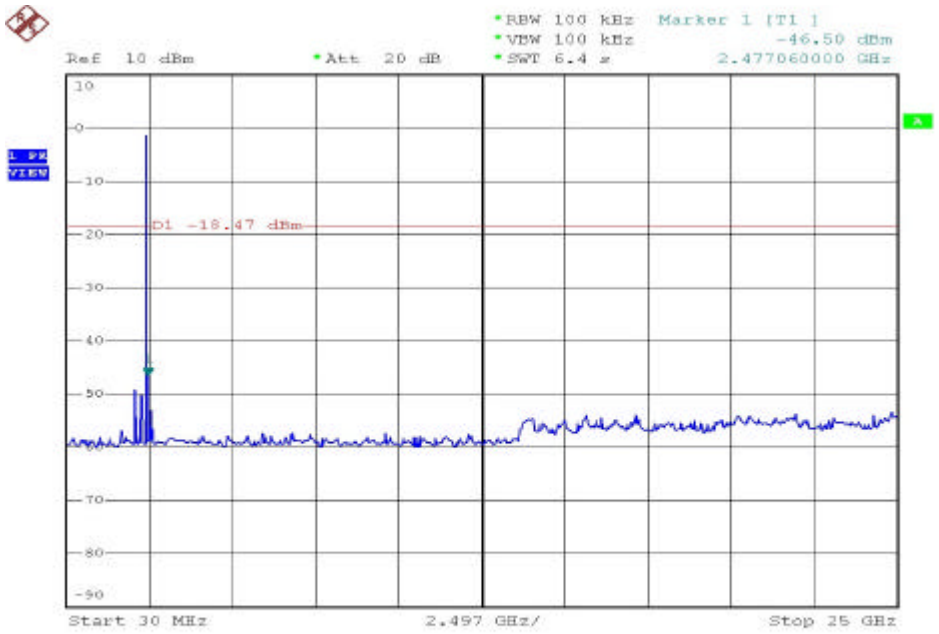
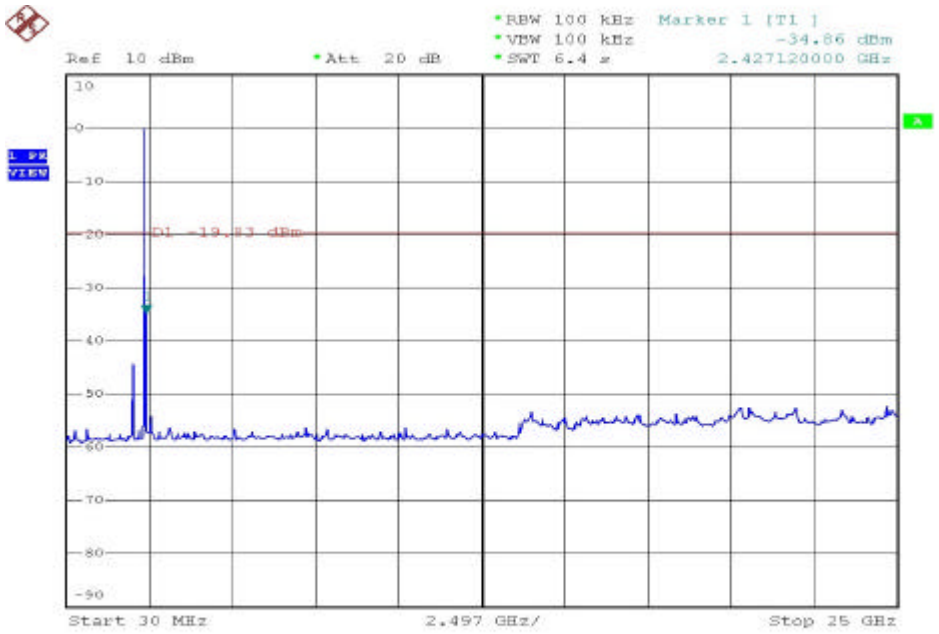
4.3. RF Portion

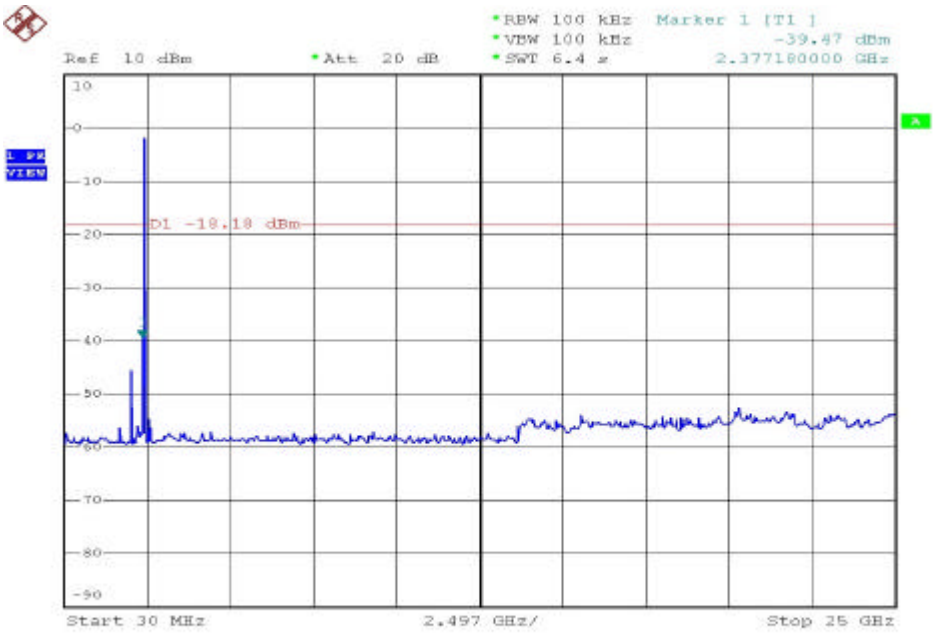
4.3.1. Test Result of Conducted Emission

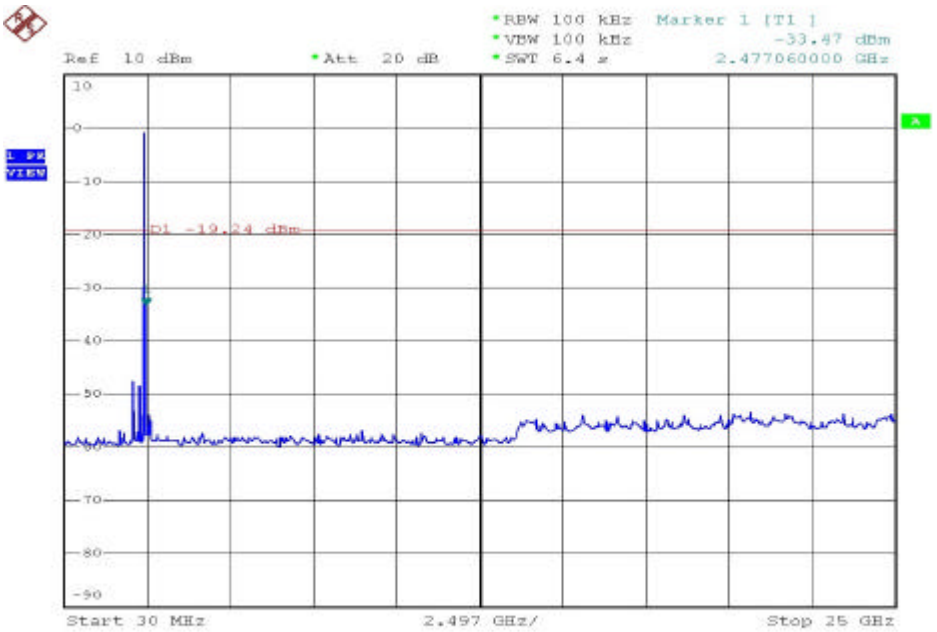





RBW 100 kHz
VBW 100 kHz
SWT 6.4 s
Marker 1 [T1]
-46.50 dBm
2.477060000 GHz
Ref 10 dBm
Att 20 dB
D1 -18.47 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 100 kHz
SWT 6.4 s
Marker 1 [T1]
-34.86 dBm
2.427120000 GHz
Ref 10 dBm
Att 20 dB
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 100 kHz
SWT 6.4 s
Marker 1 [T1]
-39.47 dBm
2.377100000 GHz
Ref 10 dBm
Att 20 dB
D1 -19.19 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 100 kHz
SWT 6.4 s
Marker 1 [T1]
-33.47 dBm
2.477060000 GHz
Ref 10 dBm
Att 20 dB
D1 -19.24 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

Modulation Standard: IEEE 802.11b Channel 1

a) Emission frequencies below 1 GHz

Test Date: Jul, 09, 2004 Temperature: 26 ℃ Humidity: 58%

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)
315.18	H	53.71	-11.87	41.84	46.0	-4.16	180	1.0
439.34	H	49.55	-8.21	41.34	46.0	-4.66	180	1.5
39.70	V	49.99	-14.32	35.67	40.0	-4.33	230	1.5
189.08	V	55.78	-18.06	37.72	43.5	-5.78	180	1.5

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier

b) Emission frequencies above 1 GHz

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
1061.6	H	63.98	-7.07	56.91	74	-17.09	Peak	230	1.0
1061.6	H	48.79	-7.07	41.72	54	-12.28	Ave	230	1.0
1187.6	H	58.69	-6.46	52.23	74	-21.77	Peak	190	1.5
1187.6	H	43.21	-6.46	36.75	54	-17.25	Ave	200	1.5
1061.6	V	67.97	-7.65	60.32	74	-13.68	Peak	236	1.0
1061.6	V	52.88	-7.65	45.23	54	-8.77	Ave	240	1.0
1187.6	V	64.17	-7.05	57.12	74	-16.88	Peak	280	1.5
1187.6	V	48.79	-7.05	41.74	54	-12.26	Ave	270	1.5
1310.8	V	56.42	-6.36	50.06	74	-23.94	Peak	180	1.0
1310.8	V	41.47	-6.36	35.11	54	-18.89	Ave	180	1.0
1688.8	V	56.31	-4.39	51.92	74	-22.08	Peak	230	1.5
1688.8	V	41.78	-4.39	37.39	54	-16.61	Ave	230	1.5
1814.8	V	56.89	-3.64	53.25	74	-20.75	Peak	190	1.5
1814.8	V	41.92	-3.64	38.28	54	-15.72	Ave	180	1.5
4824.2	V	58.43	6.49	64.92	74	-9.08	Peak	190	1.5
4824.2	V	43.22	6.49	49.71	54	-4.29	Ave	200	1.5

Modulation Standard: IEEE 802.11b Channel 6

a) Emission frequencies below 1 GHz

Test Date: Jul, 09, 2004 Temperature: 26 ℃ Humidity: 58%

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)
315.18	H	53.26	-11.87	41.39	46.0	-4.61	200	1.0
439.34	H	49.01	-8.21	40.80	46.0	-5.20	180	1.5
39.70	V	49.56	-14.32	35.24	40.0	-4.76	220	1.5
189.08	V	55.38	-18.06	37.32	43.5	-6.18	180	1.5

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier

b) Emission frequencies above 1 GHz

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
1061.6	H	62.67	-7.07	55.60	74	-18.40	Peak	240	1.0
1061.6	H	47.12	-7.07	40.05	54	-13.95	Ave	230	1.0
1187.6	H	57.21	-6.46	50.75	74	-23.25	Peak	190	1.5
1187.6	H	41.87	-6.46	35.41	54	-18.59	Ave	190	1.5
1061.6	V	66.84	-7.65	59.19	74	-14.81	Peak	220	1.0
1061.6	V	51.26	-7.65	43.61	54	-10.39	Ave	230	1.0
1187.6	V	62.98	-7.05	55.93	74	-18.07	Peak	270	1.5
1187.6	V	47.67	-7.05	40.62	54	-13.38	Ave	280	1.5
4874.1	V	57.12	6.66	63.78	74	-10.22	Peak	190	1.5
4874.1	V	41.53	6.66	48.19	54	-5.81	Ave	190	1.5

Modulation Standard: IEEE 802.11b Channel 11

a) Emission frequencies below 1 GHz

Test Date: Jul, 09, 2004 Temperature: 26 ℃ Humidity: 58%

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)
315.18	H	52.52	-11.87	40.65	46.0	-4.16	180	1.0
439.34	H	47.63	-8.21	39.42	46.0	-4.66	180	1.5
39.70	V	50.01	-14.32	35.69	40.0	-4.33	230	1.5
189.08	V	53.24	-18.06	35.18	43.5	-8.32	180	1.5

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier

b) Emission frequencies above 1 GHz

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)
1061.6	H	61.23	-7.07	54.16	74	-19.84	220	1.0
1061.6	H	46.88	-7.07	39.81	54	-14.19	200	1.0
1061.6	V	65.77	-7.65	58.12	74	-15.88	243	1.0
1061.6	V	50.36	-7.65	42.71	54	-11.29	250	1.0
4924.2	V	56.43	6.82	63.25	74	-10.75	190	1.5
4924.2	V	41.53	6.82	48.35	54	-5.65	210	1.5

Modulation Standard: IEEE 802.11g Channel 1

a) Emission frequencies below 1 GHz

Test Date: Jul, 09, 2004 Temperature: 24 ℃ Humidity: 58%

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)
39.70	V	48.72	-14.32	34.40	40	-5.60	200	1.5
188.52	V	55.21	-18.12	37.09	43.5	-6.41	190	1.0
316.24	H	53.25	-11.62	41.63	46.0	-4.37	270	1.5
439.34	H	49.42	-8.21	41.21	46.0	-4.79	180	1.5

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier

b) Emission frequencies above 1 GHz

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
1061.6	H	63.82	-7.07	56.75	74	-17.25	Peak	180	1.5
1061.6	H	49.04	-7.07	41.97	54	-12.03	Ave	180	1.5
1184.8	H	59.38	-6.46	52.92	74	-21.08	Peak	270	1.5
1184.8	H	44.62	-6.46	38.16	54	-15.84	Ave	270	1.5
1061.6	V	68.23	-7.65	60.58	74	-13.42	Peak	232	1.5
1061.6	V	53.20	-7.65	45.55	54	-8.45	Ave	230	1.5
1187.6	V	63.84	-6.96	56.88	74	-17.12	Peak	180	1.5
1187.6	V	48.90	-6.96	41.94	54	-12.06	Ave	190	1.5
1688.8	V	57.08	-4.39	52.69	74	-21.31	Peak	180	1.5
1688.8	V	42.16	-4.39	37.77	54	-16.23	Ave	192	1.5
1812.0	V	56.39	-3.64	52.75	74	-21.25	Peak	270	1.5
1812.0	V	41.92	-3.64	38.28	54	-15.72	Ave	282	1.5
4076.0	V	53.87	4.91	58.78	74	-15.22	Peak	270	1.5
4076.0	V	38.96	4.91	43.87	54	-10.13	Ave	276	1.5
4824.8	V	55.50	6.49	61.99	74	-12.01	Peak	192	1.0
4824.8	V	40.62	6.49	47.11	54	-6.89	Ave	200	1.0

Modulation Standard: IEEE 802.11g Channel 6

a) Emission frequencies below 1 GHz

Test Date: Jul, 09, 2004 Temperature: 24 ℃ Humidity: 58%

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)
39.70	V	48.80	-14.32	34.48	40	-5.52	210	1.5
188.52	V	55.13	-18.12	37.01	43.5	-6.49	196	1.0
316.24	H	52.75	-11.62	41.13	46.0	-4.87	282	1.5
439.34	H	49.52	-8.21	41.31	46.0	-4.69	205	1.5

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier

b) Emission frequencies above 1 GHz

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
1061.6	H	61.45	-7.07	54.38	74	-19.62	Peak	186	1.5
1061.6	H	46.45	-7.07	39.38	54	-14.62	Ave	190	1.5
1061.6	V	66.89	-7.57	59.32	74	-14.68	Peak	232	1.5
1061.6	V	51.63.	-7.57	44.06	54	-9.44	Ave	230	1.5
1187.6	V	61.31	-6.96	54.35	74	-19.65	Peak	162	1.5
1187.6	V	46.13	-6.96	39.17	54	-14.83	Ave	170	1.5
4136.0	V	51.53	4.97	56.50	74	-17.50	Peak	275	1.5
4136.0	V	36.86	4.97	41.83	54	-12.17	Ave	280	1.5
4874.6	V	54.01	6.66	60.67	74	-13.33	Peak	200	1.0
4874.6	V	39.72	6.66	46.38	54	-7.62	Ave	210	1.0

Modulation Standard: IEEE 802.11g Channel 11

a) Emission frequencies below 1 GHz

Test Date: Jul, 09, 2004 Temperature: 24 ℃ Humidity: 58%

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)
39.70	V	48.70	-14.32	34.38	40	-5.62	210	1.5
188.52	V	55.26	-18.12	37.14	43.5	-6.36	202	1.0
316.24	H	53.20	-11.62	41.58	46.0	-4.42	290	1.5
439.34	H	49.51	-8.21	41.30	46.0	-4.70	180	1.5

Notes:

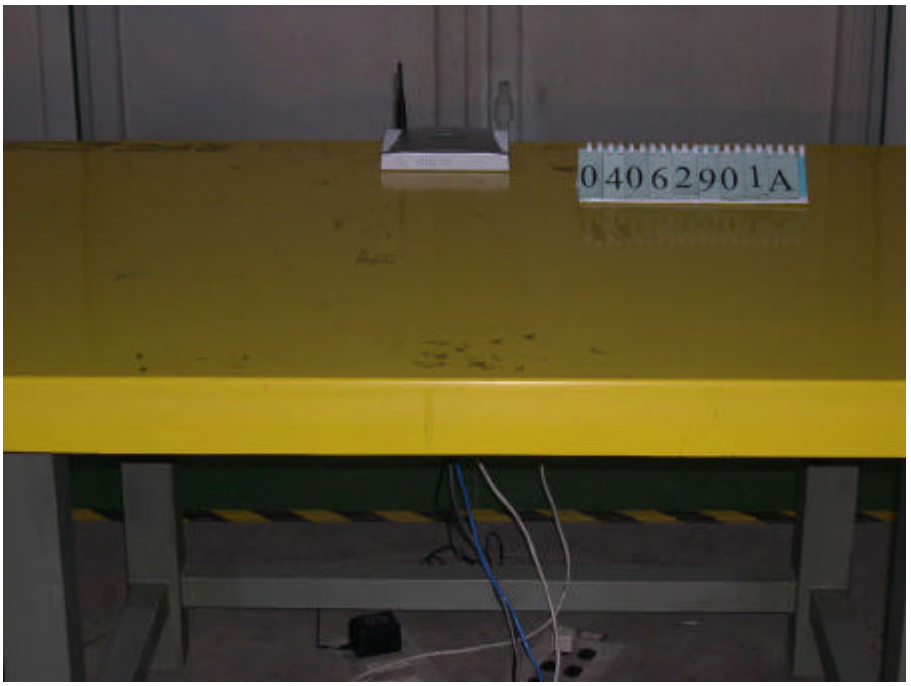
1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier

b) Emission frequencies above 1 GHz

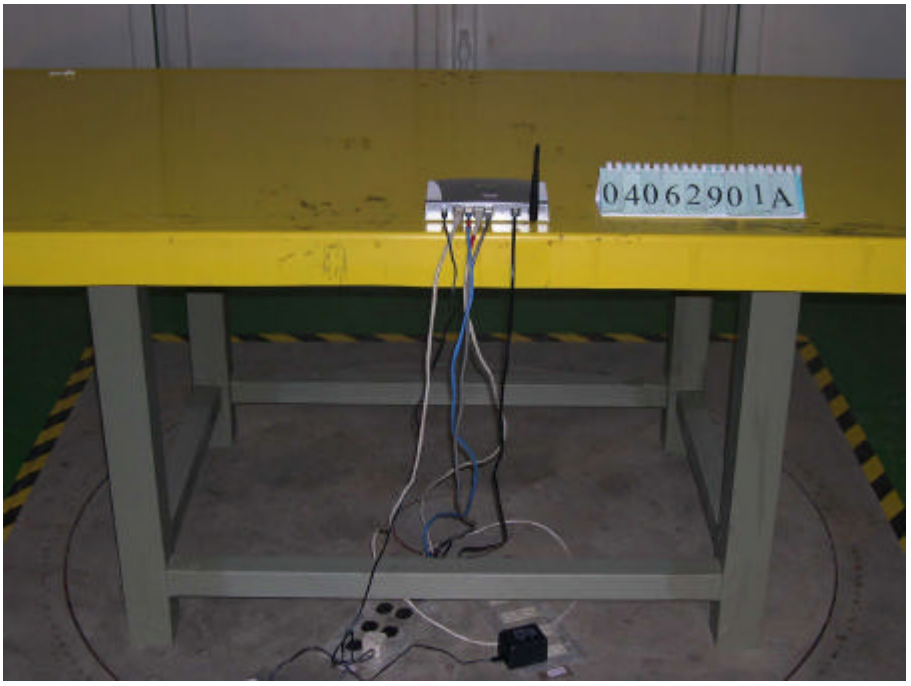
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
1061.6	H	60.68	-7.07	53.61	74	-20.39	Peak	190	1.5
1061.6	H	45.92	-7.07	38.85	54	-15.15	Ave	190	1.5
1061.6	V	66.11	-7.57	58.53	74	-15.47	Peak	232	1.5
1061.6	V	50.86	-7.57	43.29	54	-10.71	Ave	230	1.5
1187.6	V	61.44	-6.96	54.48	74	-19.52	Peak	180	1.5
1187.6	V	46.21	-6.96	39.25	54	-14.75	Ave	190	1.5
4196.0	V	51.59	5.05	56.64	74	-17.36	Peak	265	1.5
4196.0	V	36.72	5.05	41.77	54	-12.23	Ave	270	1.5
4924.6	V	53.27	6.77	60.04	74	-13.96	Peak	192	1.0
4924.6	V	38.27	6.77	45.04	54	-8.96	Ave	200	1.0

4.3.3. Photographs of Radiated Emission Test

FRONT VIEW



REAR VIEW



4.4. 6dB Bandwidth Measurement Data

(1) Modulation Standard: IEEE 802.11b

Test Date: Jul. 09, 2004 Temperature: 24℃ Humidity: 58%

a) Channel 01: 6dB Emission Bandwidth is 12.3 MHz

b) Channel 06: 6dB Emission Bandwidth is 12.7 MHz

c) Channel 11: 6dB Emission Bandwidth is 12.3 MHz

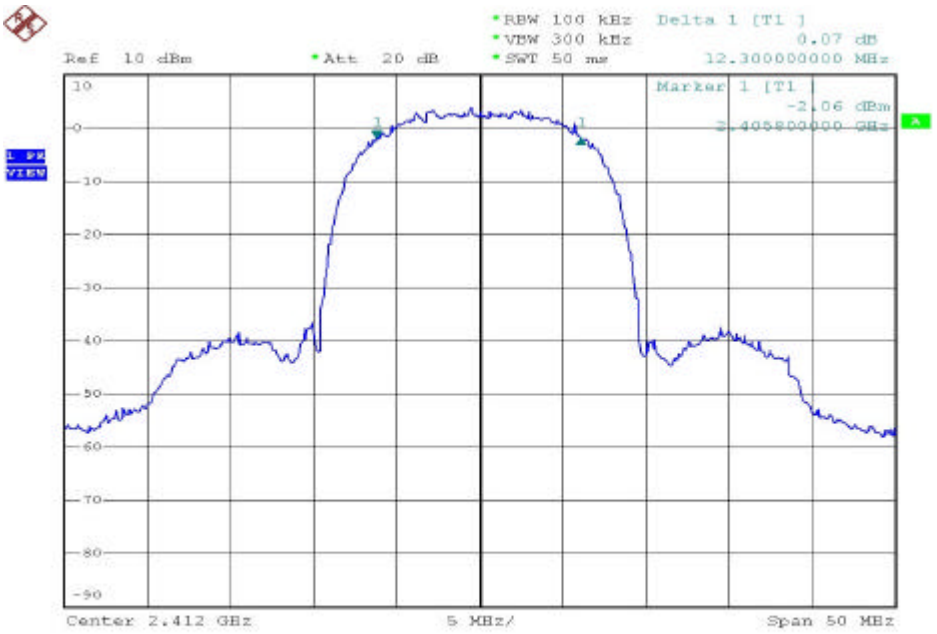
(2) Modulation Standard: IEEE 802.11g

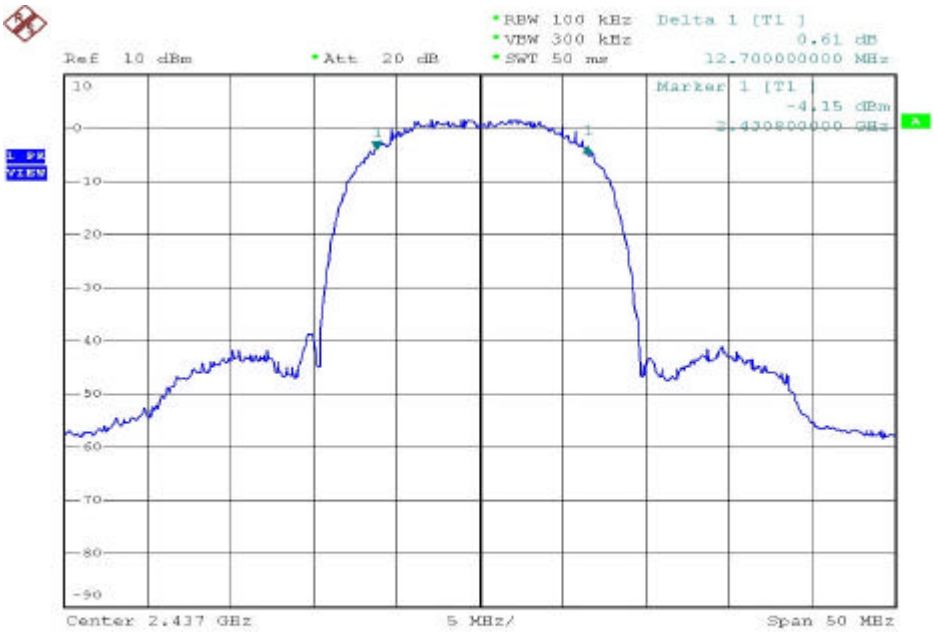
Test Date: Jul. 09, 2004 Temperature: 24℃ Humidity: 58%

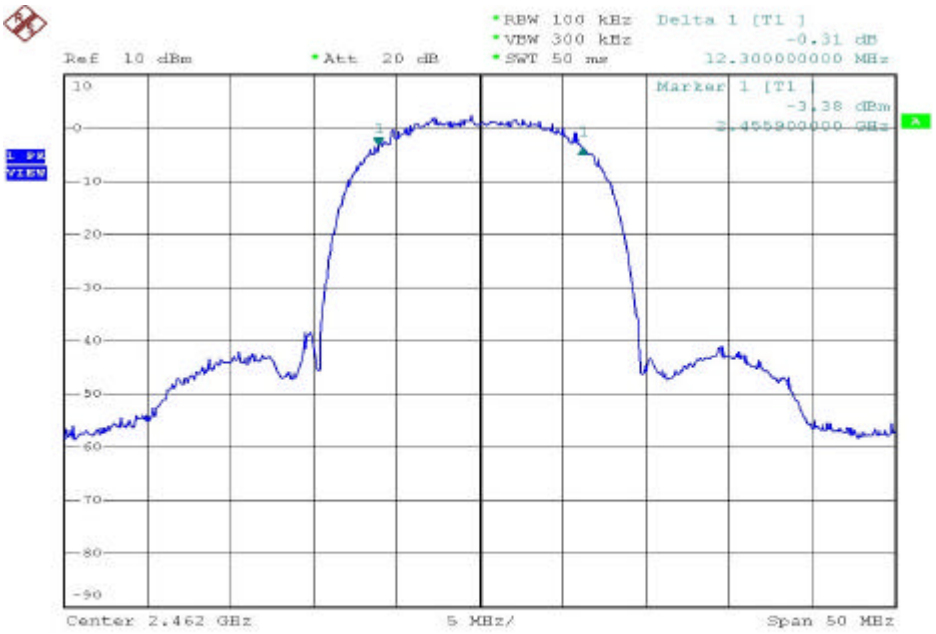
a) Channel 01: 6dB Emission Bandwidth is 16.5 MHz

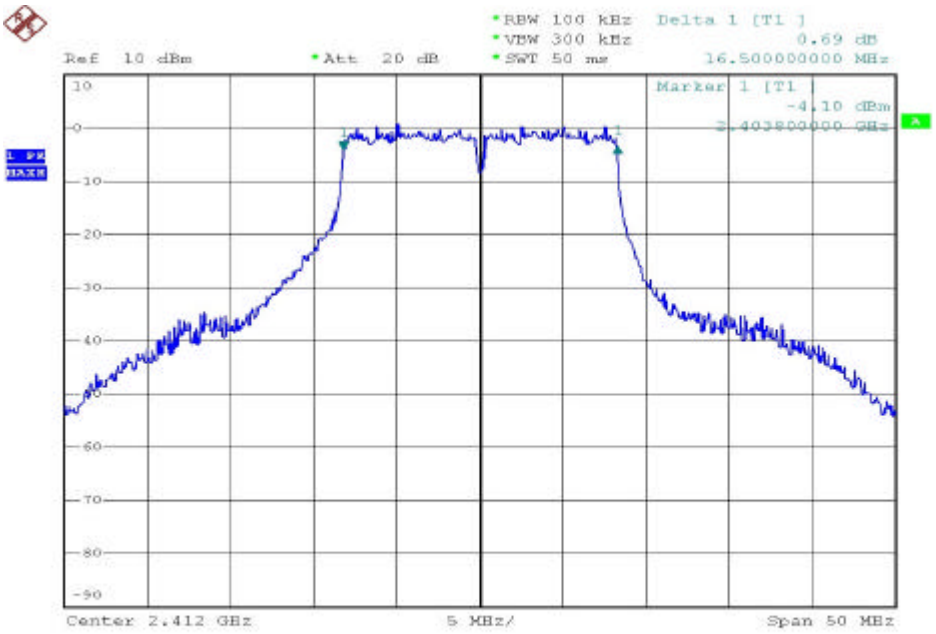
b) Channel 06: 6dB Emission Bandwidth is 16.5 MHz

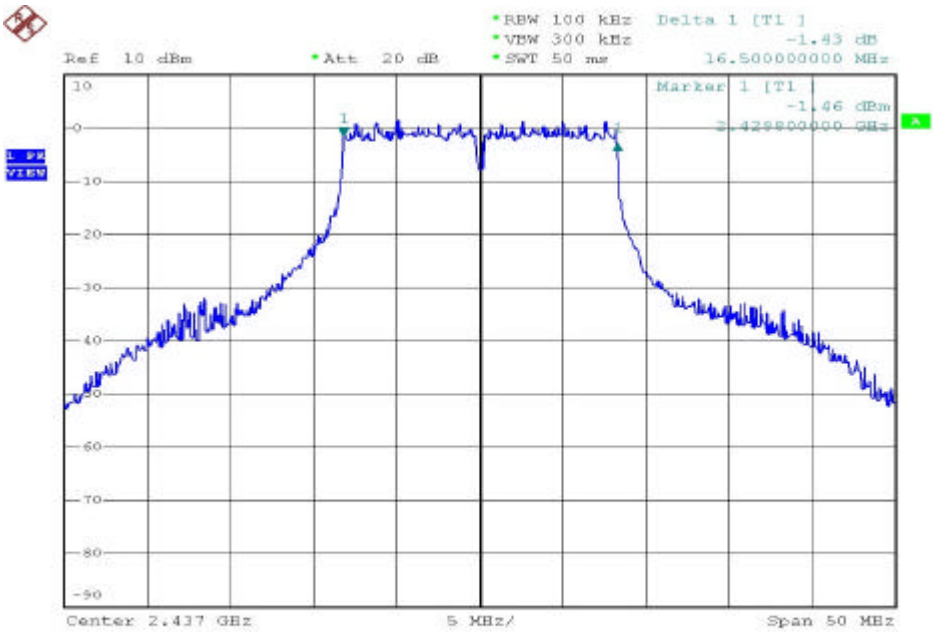
c) Channel 11: 6dB Emission Bandwidth is 16.5 MHz

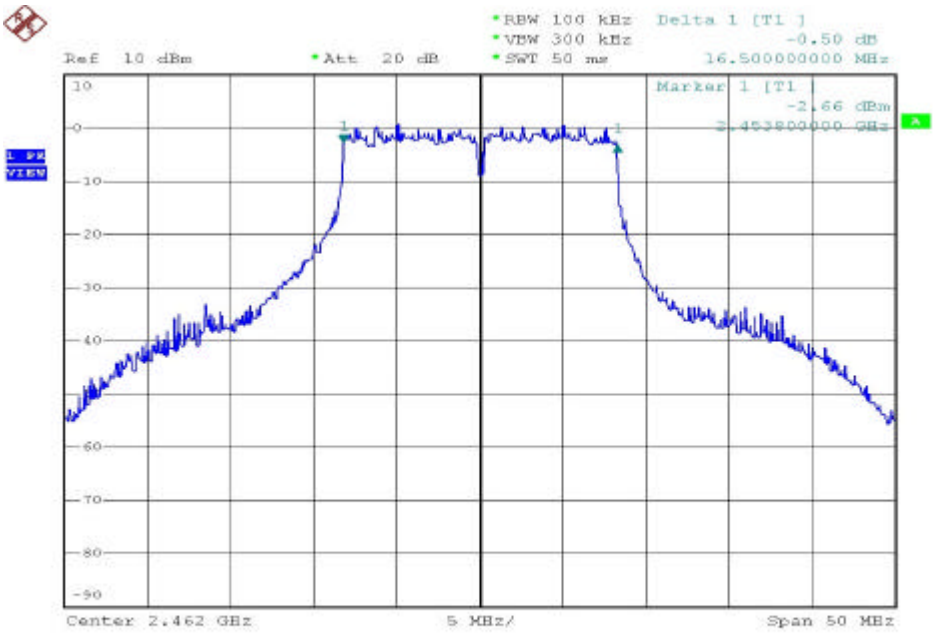

RBW 100 kHz
VBW 300 kHz
SWT 50 ms
Delta 1 [T1]
0.07 dB
12.300000000 MHz
Ref 10 dBm
Att 20 dB
Marker 1 [T1]
-2.06 dBm
2.405800000 GHz
Center 2.412 GHz
5 MHz/
Span 50 MHz


RBW 100 kHz
VBW 300 kHz
SWT 50 ms
Delta 1 [T1]
0.61 dB
12.700000000 MHz
Ref 10 dBm
Att 20 dB
Marker 1 [T1]
-4.15 dBm
2.430800000 GHz
Center 2.437 GHz
5 MHz/
Span 50 MHz


RBW 100 kHz
VBW 300 kHz
SWT 50 ms
Delta 1 [T1]
-0.31 dB
12.300000000 MHz
Ref 10 dBm
Att 20 dB
Marker 1 [T1]
-3.38 dBm
2.455900000 GHz
1 PK
VIEW
Center 2.462 GHz
5 MHz/
Span 50 MHz


RBW 100 kHz
VBW 300 kHz
SWT 50 ms
Delta 1 [T1]
0.69 dB
16.500000000 MHz
Ref 10 dBm
Att 20 dB
Marker 1 [T1]
-4.10 dBm
2.403800000 GHz
1 PK
MAXH
Center 2.412 GHz
5 MHz/
Span 50 MHz


RBW 100 kHz
VBW 300 kHz
SWT 50 ms
Delta 1 [T1]
-1.43 dB
16.500000000 MHz
Ref 10 dBm
Att 20 dB
Marker 1 [T1]
-1.46 dBm
2.429800000 GHz
Center 2.437 GHz
5 MHz/
Span 50 MHz


RBW 100 kHz
VBW 300 kHz
SWT 50 ms
Delta 1 [T1]
-0.50 dB
16.500000000 MHz
Ref 10 dBm
Att 20 dB
Marker 1 [T1]
-2.66 dBm
2.453800000 GHz
Center 2.462 GHz
5 MHz/
Span 50 MHz

4.5. Peak Output Power Measurement Data

(1) Modulation Standard: IEEE 802.11b

Test Date: Jul. 09. 2004 Temperature: 24℃ Humidity: 58%

a) Channel 01: Output Peak Power is 20.35dBm or 108.393mW

b) Channel 06: Output Peak Power is 19.06dBm or 80.538mW

c) Channel 11: Output Peak Power is 1713dBm or 51.642mW

(2) Modulation Standard: IEEE 802.11g

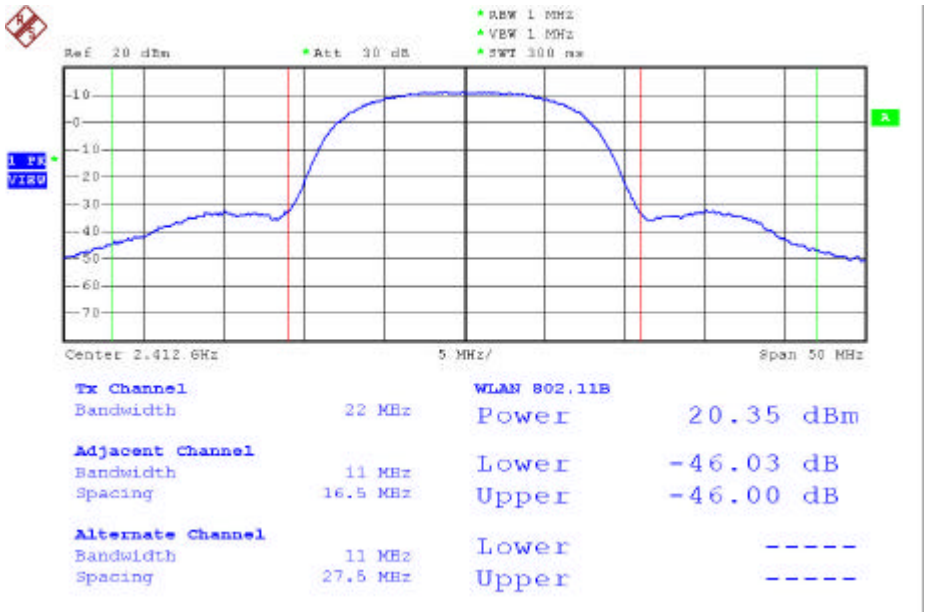
Test Date: Jul. 09. 2004 Temperature: 24℃ Humidity: 58%

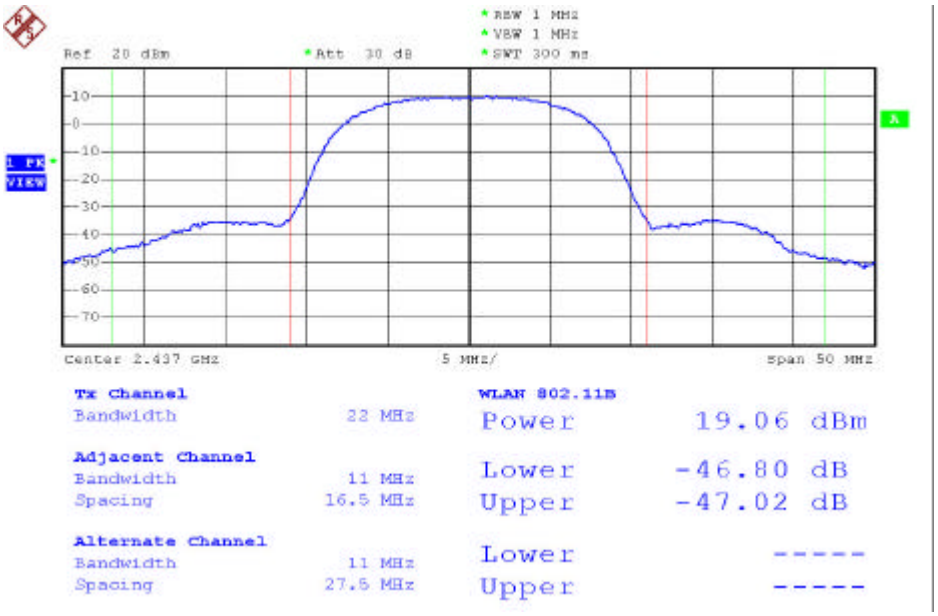
a) Channel 01: Output Peak Power is 16.51dBm or 44.763mW

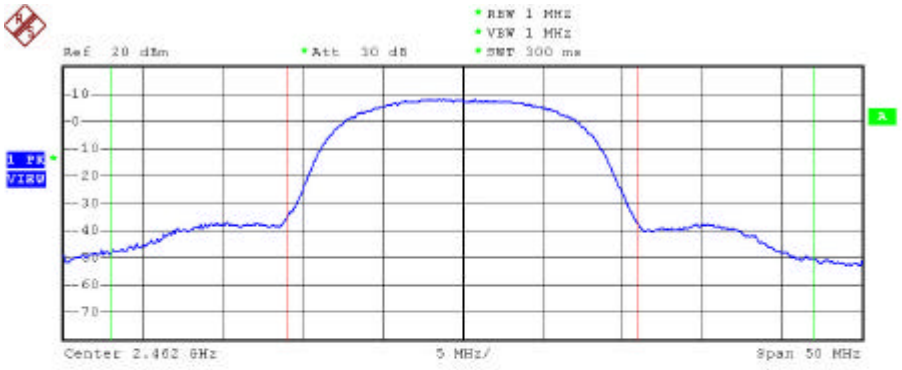
b) Channel 06: Output Peak Power is 16.81dBm or 47.981mW

c) Channel 11: Output Peak Power is 16.88dBm or 48.705mW

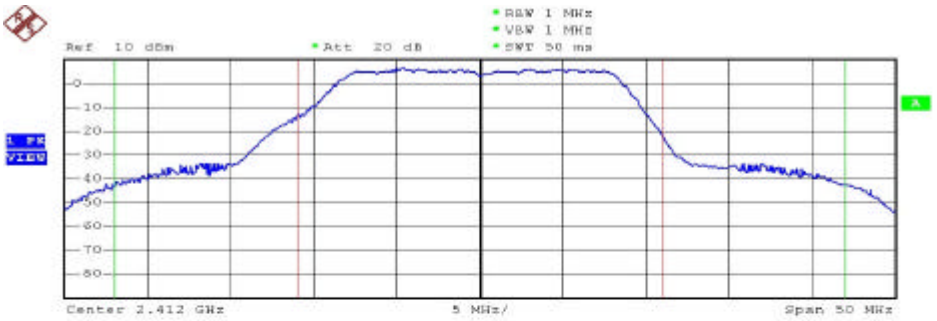
Note: Conducted Power = Reading Value + Cable Loss


RBW 1 MHz
VBW 1 MHz
SWT 300 ms
Ref 20 dBm
Att 30 dB
1 PK VIEW
A
Center 2.412 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth 22 MHz
Adjacent Channel
Bandwidth 11 MHz
Spacing 16.5 MHz
Alternate Channel
Bandwidth 11 MHz
Spacing 27.5 MHz
WLAN 802.11B
Power 20.35 dBm
Lower -46.03 dB
Upper -46.00 dB
Lower -----
Upper -----

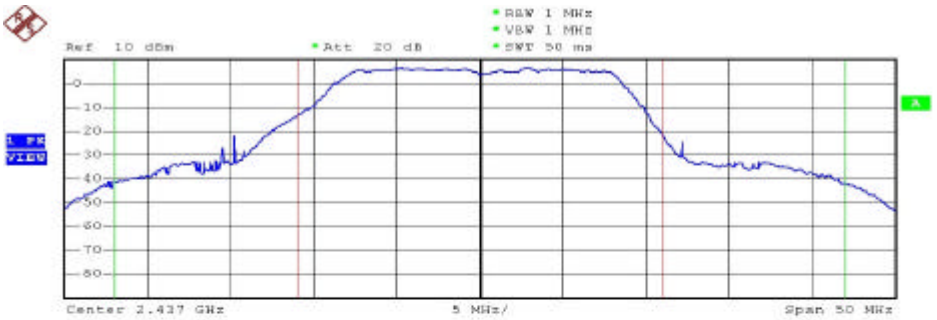

RBW 1 MHz
VBW 1 MHz
SWT 300 ms
Ref 20 dBm
Att 30 dB
1 PK VIEW
A
Center 2.437 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth 22 MHz
Adjacent Channel
Bandwidth 11 MHz
Spacing 16.5 MHz
Alternate Channel
Bandwidth 11 MHz
Spacing 27.5 MHz
WLAN 802.11B
Power 19.06 dBm
Lower -46.80 dB
Upper -47.02 dB
Lower -----
Upper -----



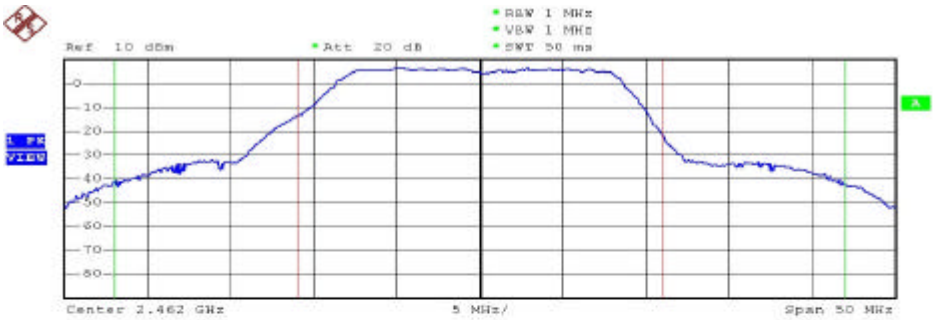
Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	17.13 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-46.85 dB
Spacing	16.5 MHz	Upper	-47.94 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----



Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	16.51 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-31.03 dB
Spacing	16.5 MHz	Upper	-39.52 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----



Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	16.81 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-30.73 dB
Spacing	16.5 MHz	Upper	-39.07 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----



Tx Channel		**WLAN 802.11B**	
Bandwidth	22 MHz	Power	16.88 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-30.82 dB
Spacing	16.5 MHz	Upper	-39.20 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

4.6. Band Edges Measurement Data

(1) Modulation Standard: IEEE 802.11b

Test Date: Jul. 09. 2004 Temperature: 24℃ Humidity: 58%

a) Lower Band Edge: maximum value is -21.60dBm that is attenuated more than 20dB

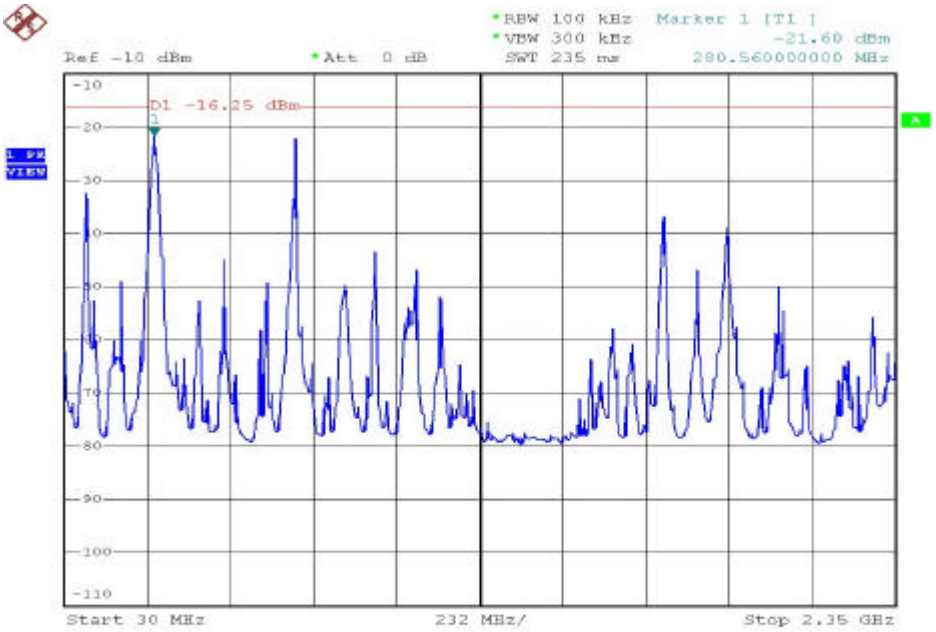
b) Upper Band Edge: maximum value is -23.11dBm that is attenuated more than 20dB

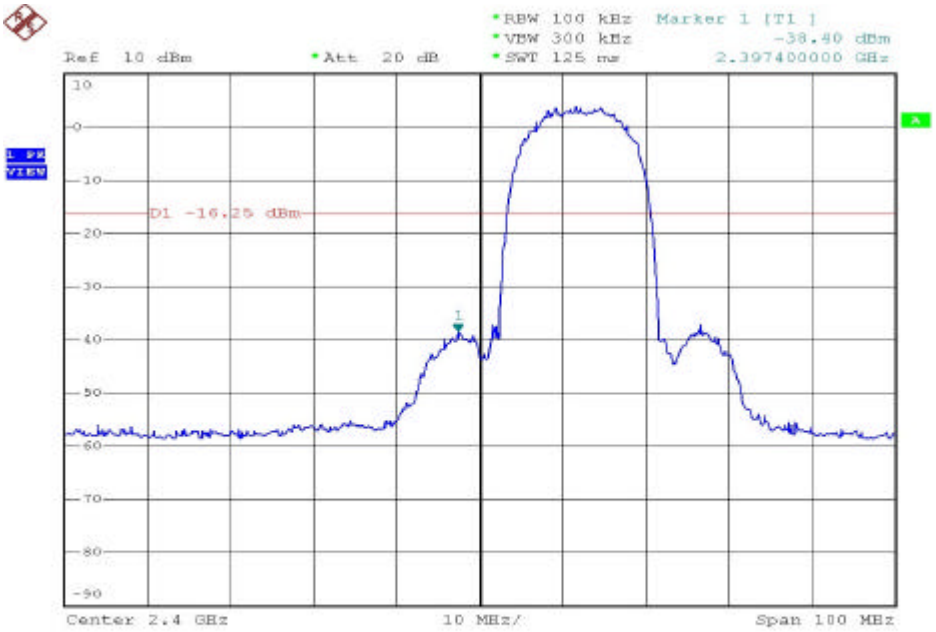
(2) Modulation Standard: IEEE 802.11g

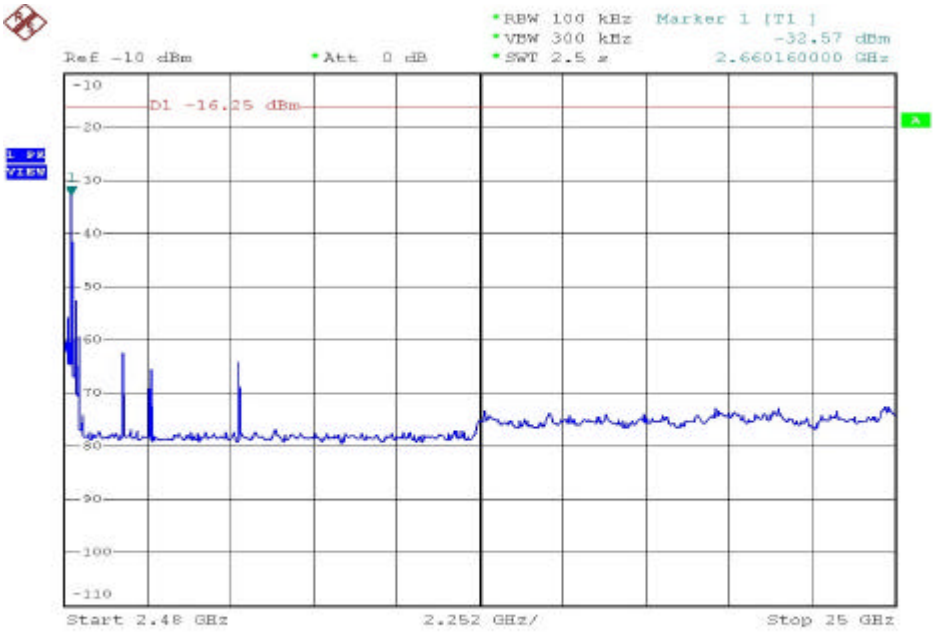
Test Date: Jul. 09. 2004 Temperature: 24℃ Humidity: 58%

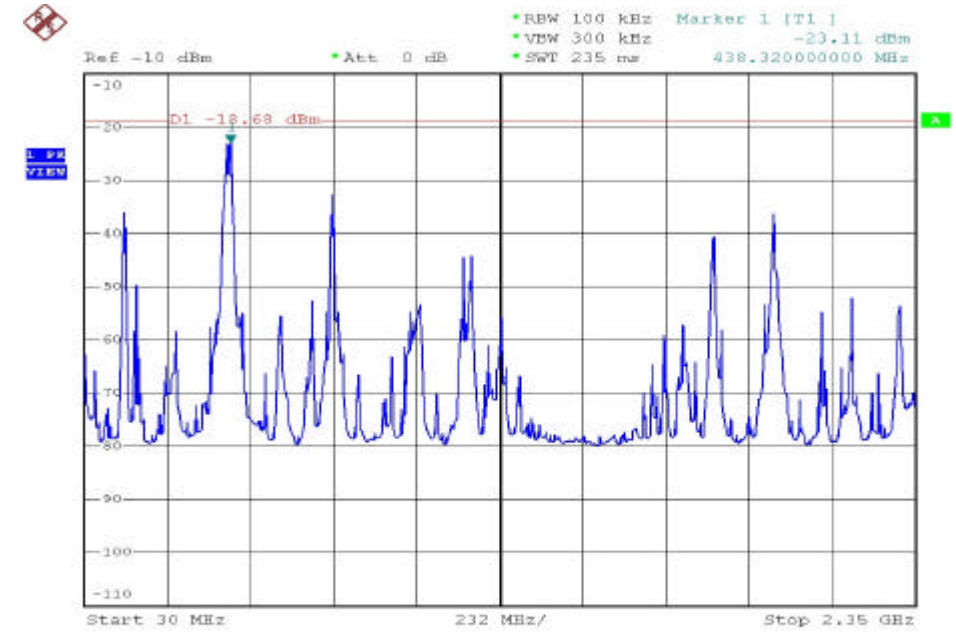
a) Lower Band Edge: maximum value is -32.75dBm that is attenuated more than 20dB

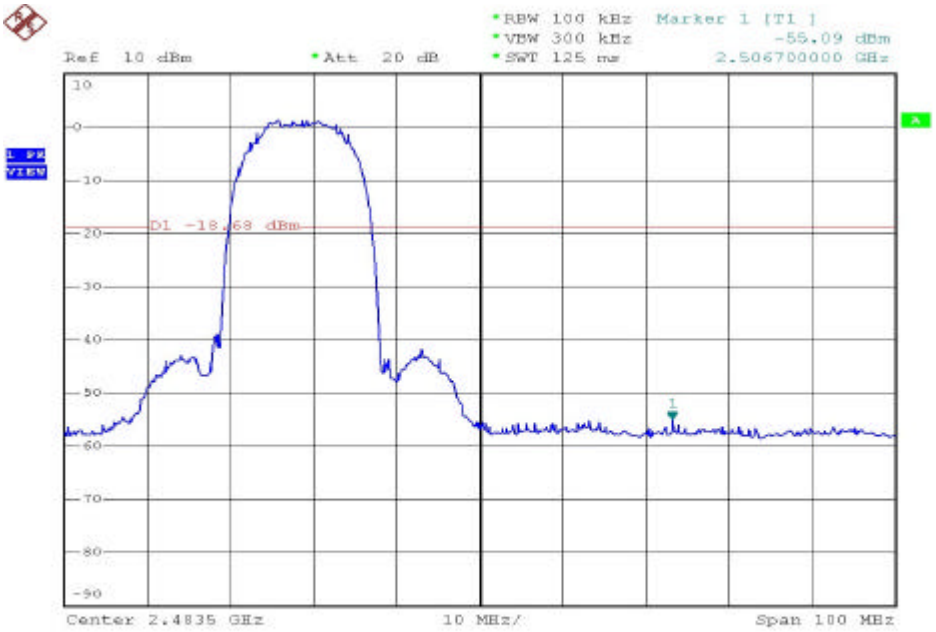
b) Upper Band Edge: maximum value is -31.28dBm that is attenuated more than 20dB

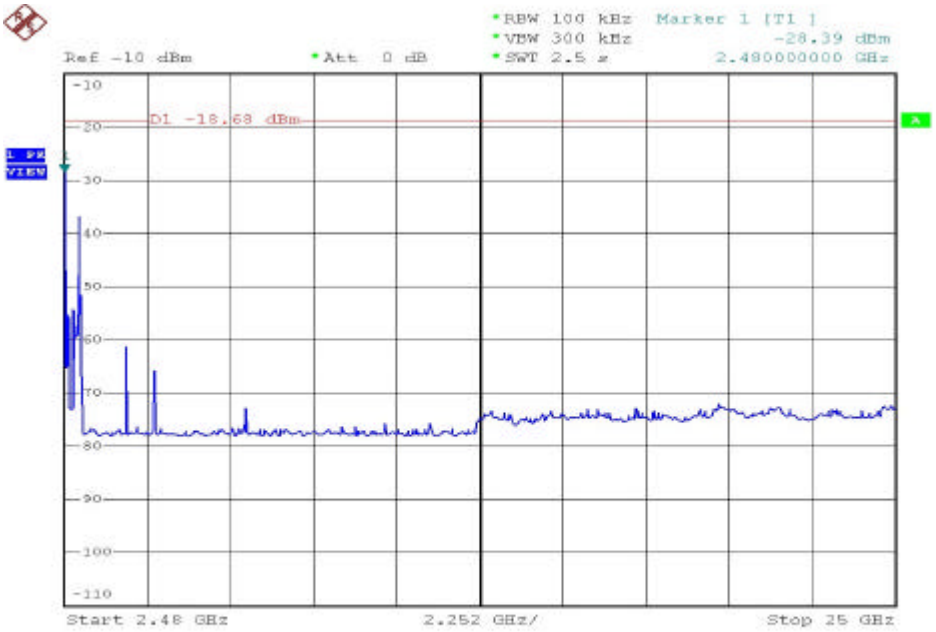

RBW 100 kHz
VBW 300 kHz
SWT 235 ms
Marker 1 [T1]
-21.60 dBm
280.560000000 MHz
Ref -10 dBm
Att 0 dB
D1 -16.25 dBm
Start 30 MHz
232 MHz/
Stop 2.35 GHz

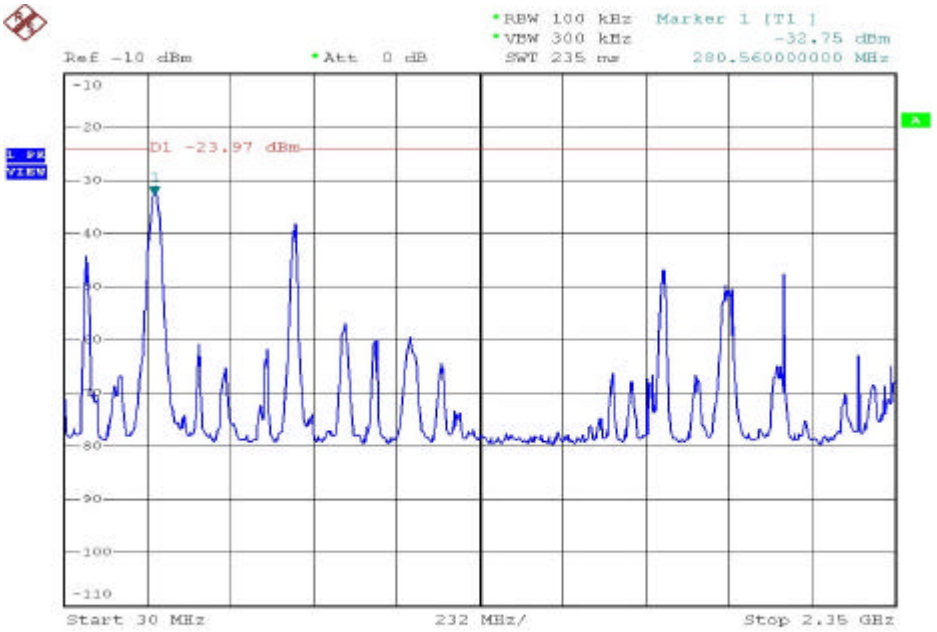

RBW 100 kHz
VBW 300 kHz
SWT 125 ms
Marker 1 [T1]
-38.40 dBm
2.397400000 GHz
Ref 10 dBm
Att 20 dB
D1 -16.25 dBm
Center 2.4 GHz
10 MHz/
Span 100 MHz

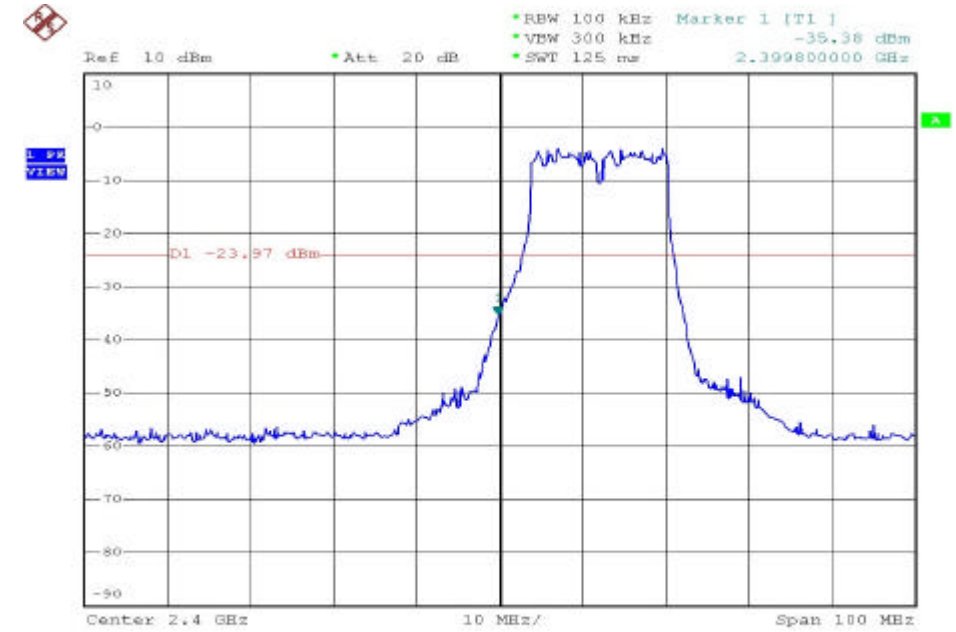

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
Marker 1 [T1]
-32.57 dBm
2.660160000 GHz
Ref -10 dBm
Att 0 dB
D1 -16.25 dBm
Start 2.48 GHz
2.252 GHz/
Stop 25 GHz

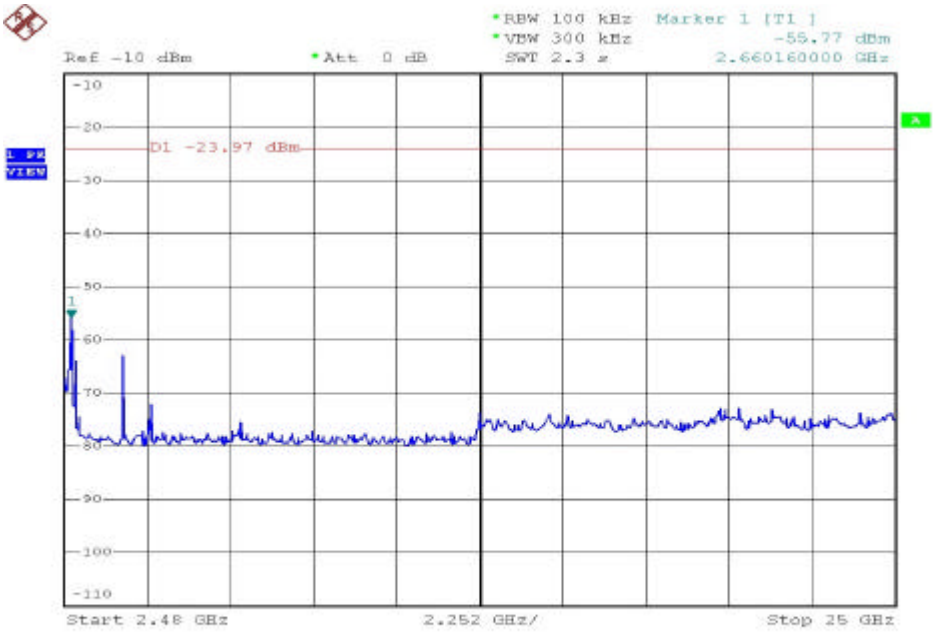

RBW 100 kHz
VBW 300 kHz
SWT 235 ms
Marker 1 [T1]
-23.11 dBm
438.320000000 MHz
Ref -10 dBm
Att 0 dB
D1 -18.68 dBm
Start 30 MHz
232 MHz/
Stop 2.35 GHz

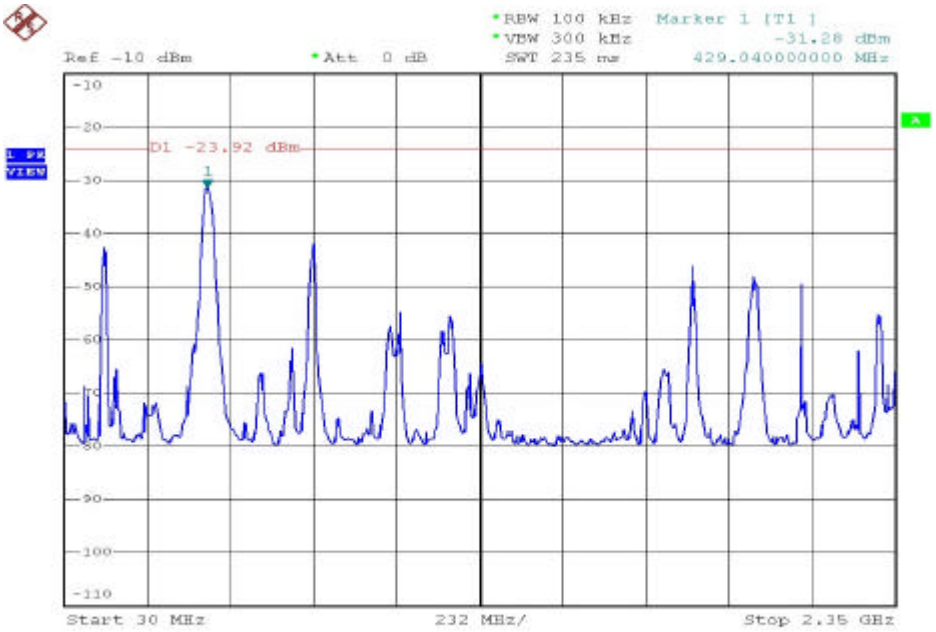

RBW 100 kHz
VBW 300 kHz
SWT 125 ms
Marker 1 [T1]
-55.09 dBm
2.506700000 GHz
Ref 10 dBm
Att 20 dB
D1 -18.68 dBm
Center 2.4835 GHz
10 MHz/
Span 100 MHz

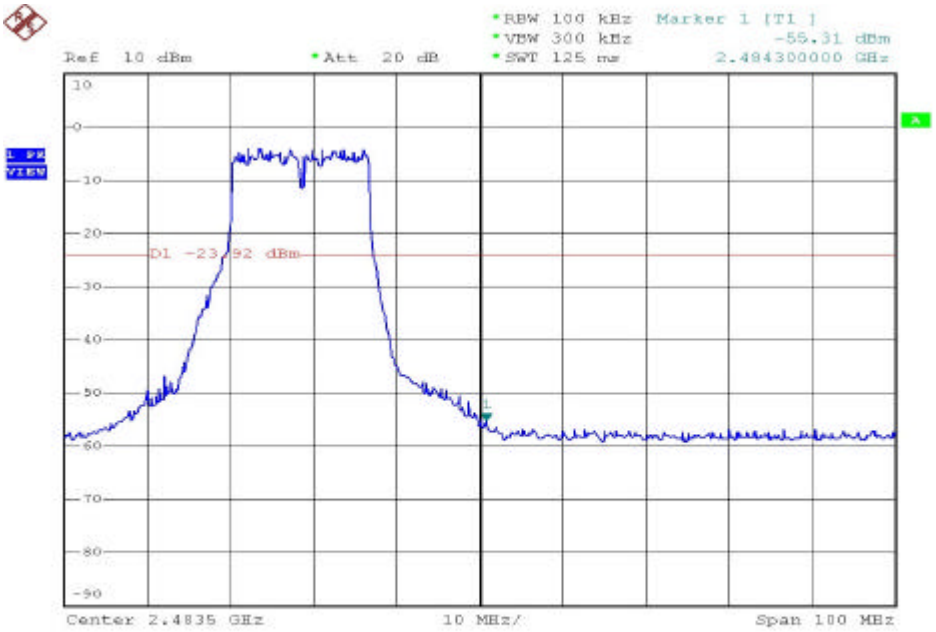

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
Marker 1 [T1]
-28.39 dBm
2.480000000 GHz
Ref -10 dBm
Att 0 dB
D1 -18.68 dBm
Start 2.48 GHz
2.252 GHz/
Stop 25 GHz

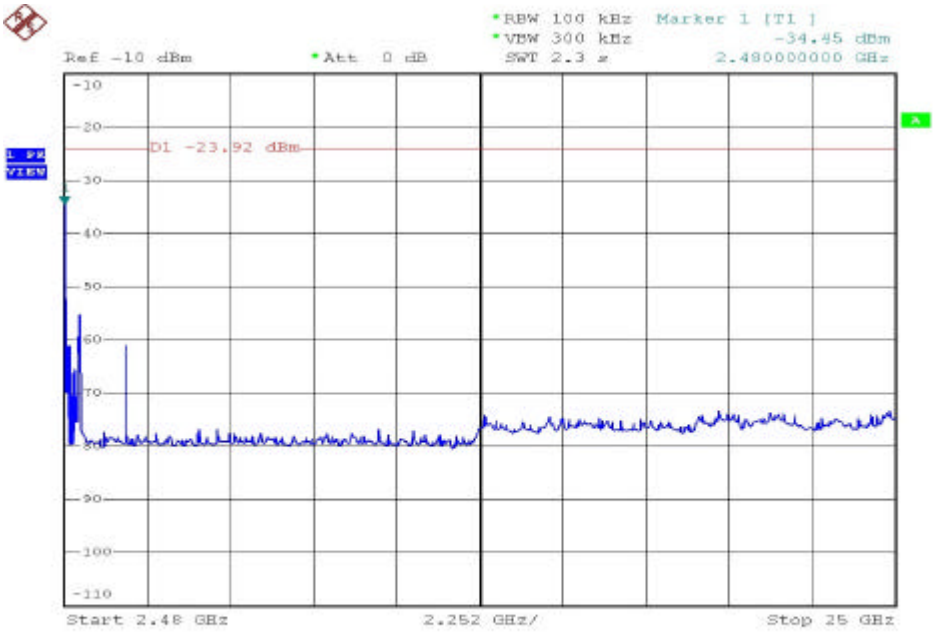

RBW 100 kHz
VBW 300 kHz
SWT 235 ms
Marker 1 [T1]
-32.75 dBm
280.560000000 MHz
Ref -10 dBm
Att 0 dB
D1 -23.97 dBm
Start 30 MHz
232 MHz/
Stop 2.35 GHz


RBW 100 kHz
VBW 300 kHz
SWT 125 ms
Marker 1 [T1]
-35.38 dBm
2.399800000 GHz
Ref 10 dBm
Att 20 dB
D1 -23.97 dBm
Center 2.4 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.3 s
Marker 1 [T1]
-55.77 dBm
2.660160000 GHz
Ref -10 dBm
Att 0 dB
D1 -23.97 dBm
Start 2.48 GHz
2.252 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 235 ms
Marker 1 [T1]
-31.28 dBm
429.040000000 MHz
Ref -10 dBm
Att 0 dB
D1 -23.92 dBm
Start 30 MHz
232 MHz/
Stop 2.35 GHz


RBW 100 kHz
VBW 300 kHz
SWT 125 ms
Marker 1 [T1]
-55.31 dBm
2.484300000 GHz
Ref 10 dBm
Att 20 dB
D1 -23.92 dBm
Center 2.4835 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.3 s
Marker 1 [T1]
-34.45 dBm
2.480000000 GHz
Ref -10 dBm
Att 0 dB
D1 -23.92 dBm
Start 2.48 GHz
2.252 GHz/
Stop 25 GHz

4.6.1. Note on Band edge Emission

Modulation Standard: IEEE 802.11b

Test Date: Jul. 09, 2004 Temperature: 24 ℃ Humidity: 58%

a) Channel 1

Fundamental Frequency: 2412 MHz

Frequency (MHz)	Level (dBuV)	polarization	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table Deg. (Deg.)	Ant High (m)
				Peak	Ave.			
2389.968	---	H	Peak	74	54	---	---	---
2389.968	32.90	H	Ave	74	54	-21.10	232	1.5
2389.968	---	V	Peak	74	54	---	---	---
2389.968	38.49	V	Ave	74	54	-15.51	190	1.5

b) Channel 11

Fundamental Frequency: 2462 MHz

Frequency (MHz)	Level (dBuV)	polarization	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table Deg. (Deg.)	Ant High (m)
				Peak	Ave.			
2499.088	---	H	Peak	74	54	---	---	---
2499.088	40.23	H	Ave	74	54	-13.77	270	1.5
2496.200	---	V	Peak	74	54	---	---	---
2496.200	44.27	V	Ave	74	54	-9.73	250	1.5

4.6.2. Modulation Standard: IEEE 802.11g

Test Date: Jul. 09, 2004 Temperature: 24 ℃ Humidity: 58%

c) Channel 1

Fundamental Frequency: 2412 MHz

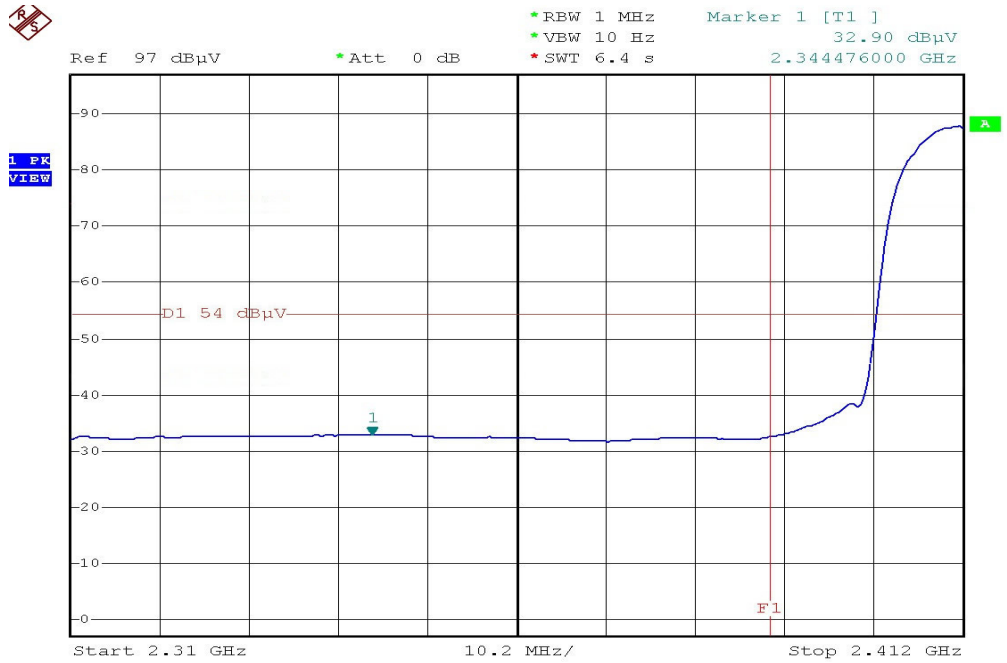
Frequency (MHz)	Level (dBuV)	polarization	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table Deg. (Deg.)	Ant High (m)
				Peak	Ave.			
2389.968	---	H	Peak	74	54	---	---	---
2389.968	39.70	H	Ave	74	54	-14.3	180	1.5
2389.968	---	V	Peak	74	54	---	---	---
2389.968	44.87	V	Ave	74	54	-9.13	130	1.0

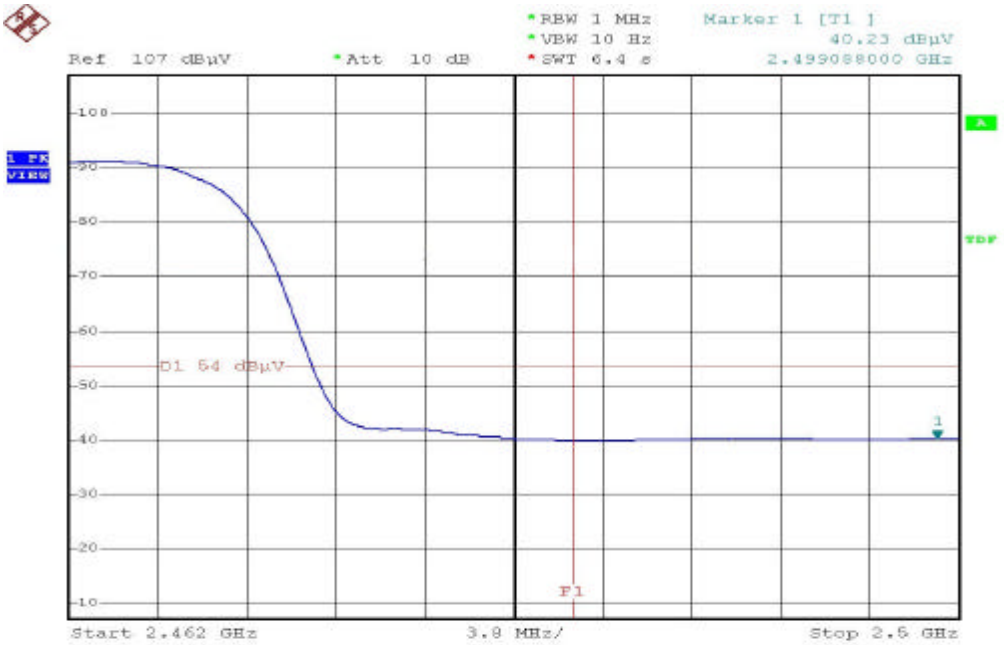
d) Channel 11

Fundamental Frequency: 2462 MHz

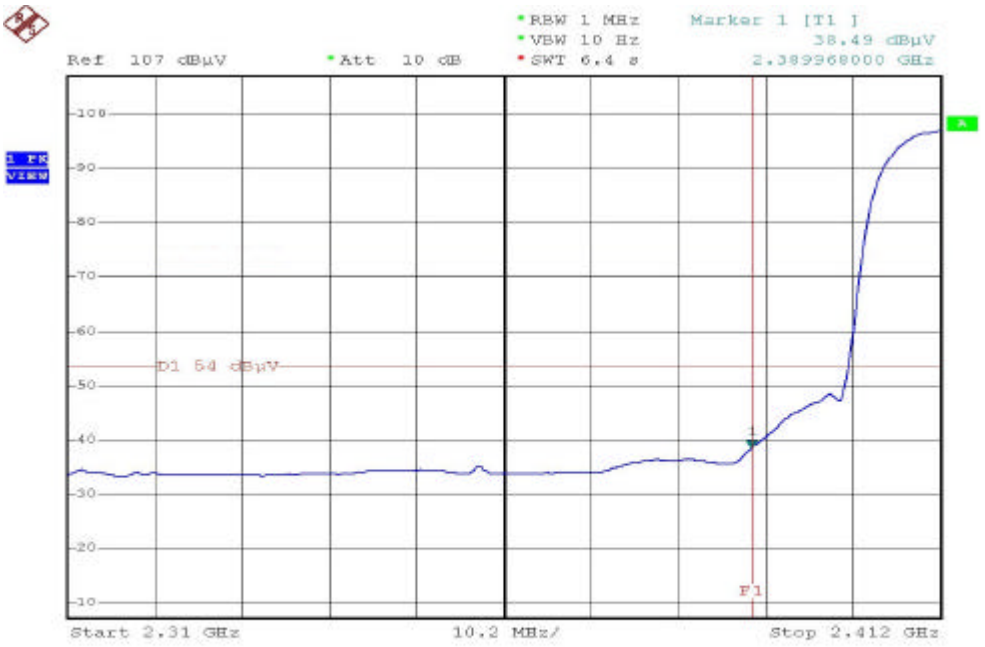
Frequency (MHz)	Level (dBuV)	polarization	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table Deg. (Deg.)	Ant High (m)
				Peak	Ave.			
2499.164	---	H	Peak	74	54	---	---	---
3499.640	40.32	H	Ave	74	54	-13.68	270	1.0
2483.584	---	V	Peak	74	54	---	---	---
2483.584	43.89	V	Ave	74	54	-10.11	250	1.5

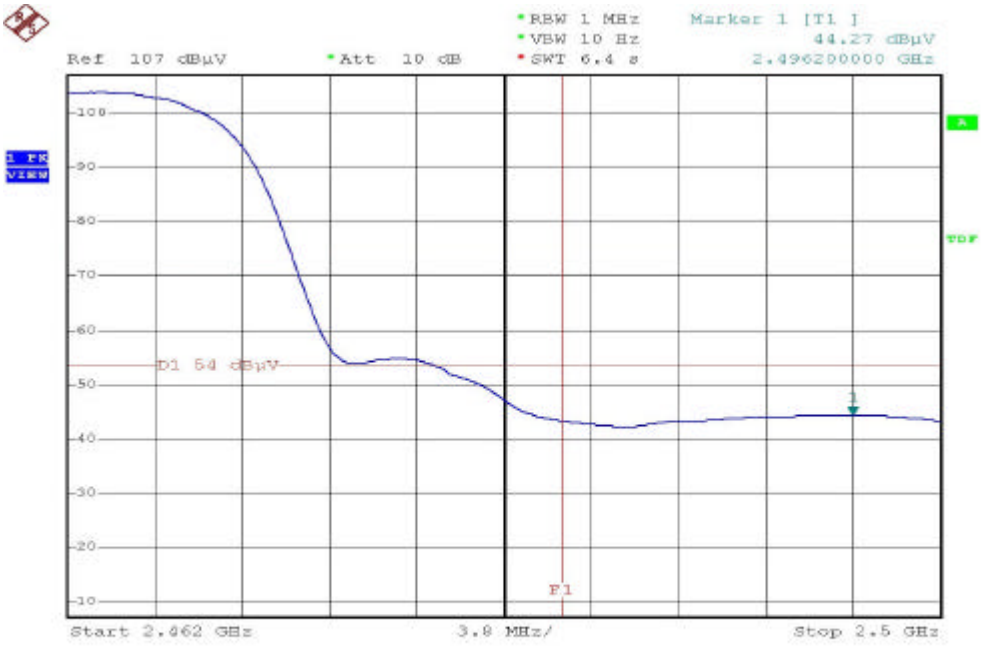
Modulation Standard: IEEE 802.11b
Pol/Phase: Horizontal



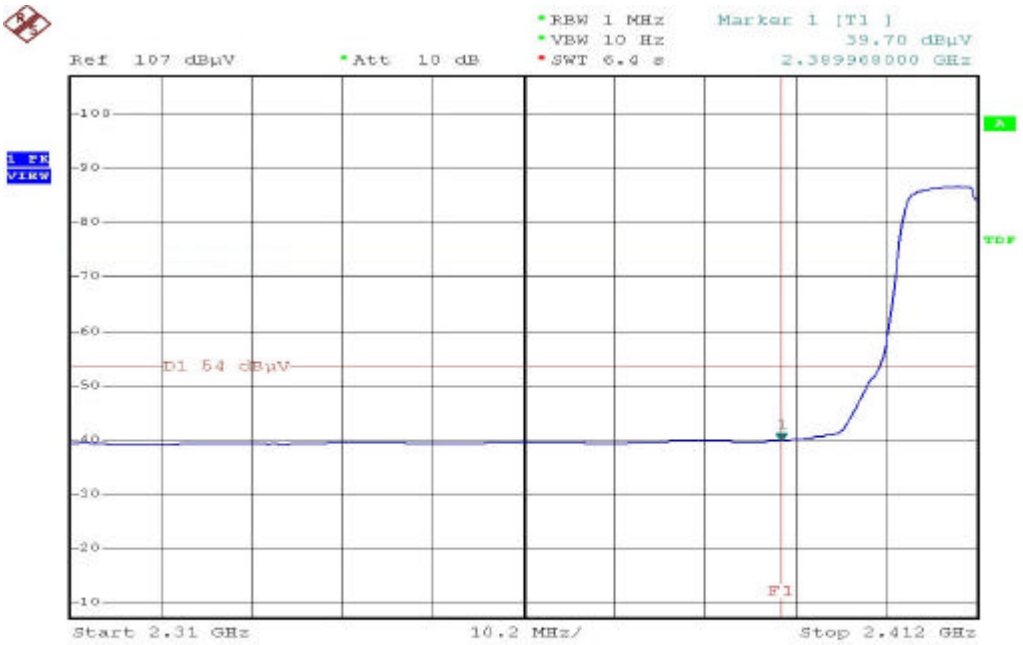


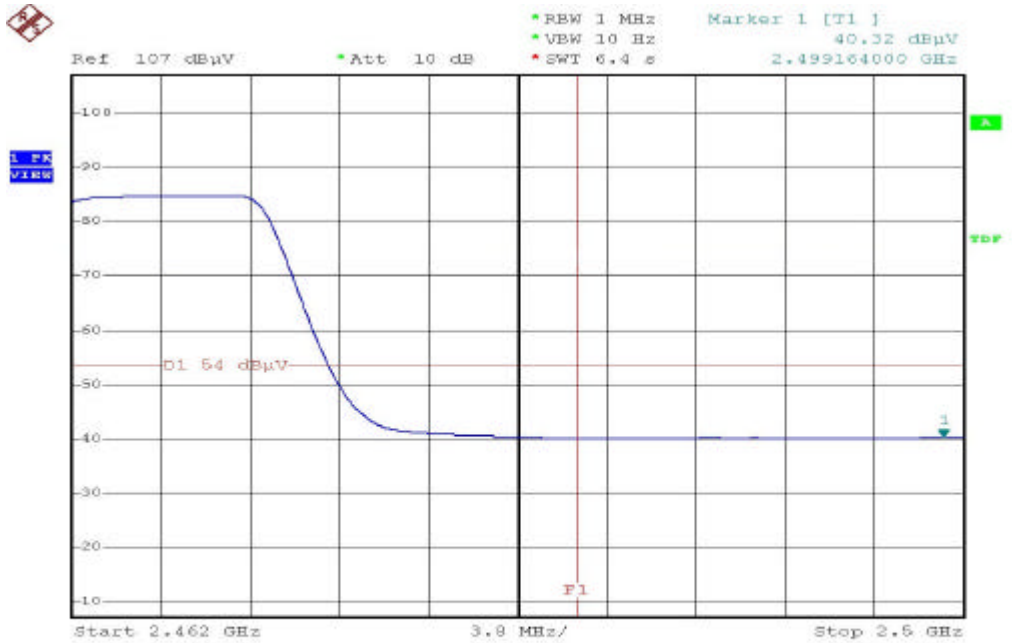
Modulation Standard: IEEE 802.11b
Pol/Phase: Vertical





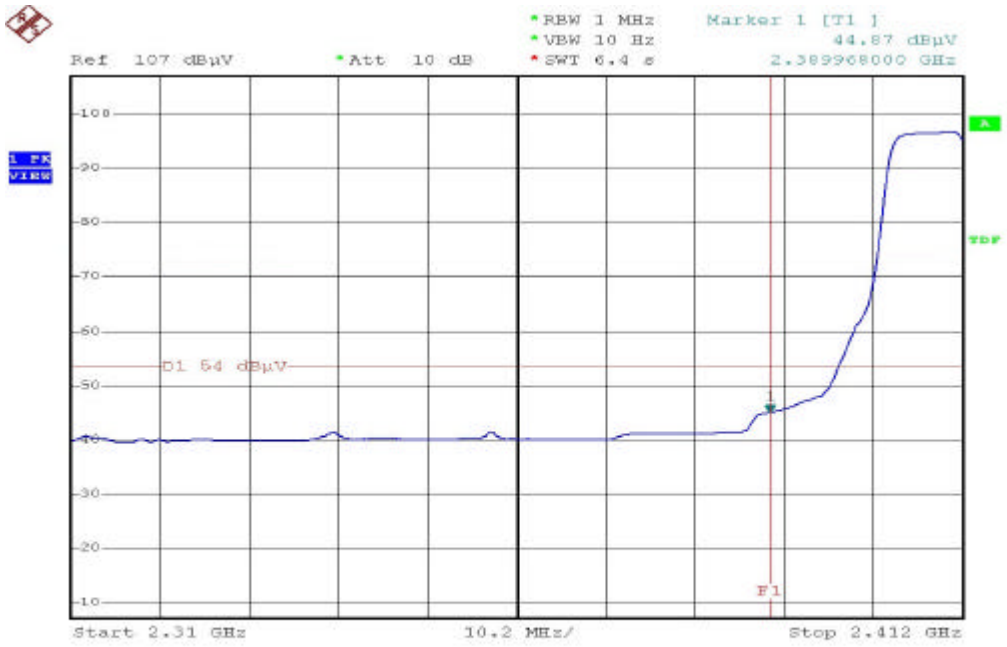
Modulation Standard: IEEE 802.11g
Pol/Phase: Horizontal

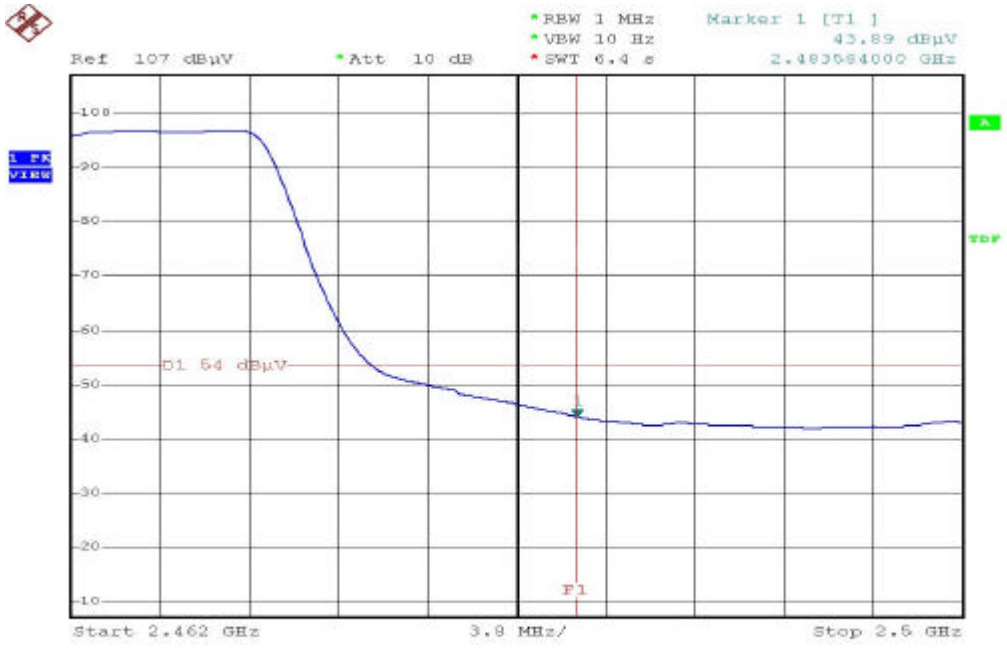




Modulation Standard: IEEE 802.11b

Pol/Phase: Vertical





4.7. Power Spectral Density Measurement Data

(1) Modulation Standard: IEEE 802.11b

Test Date: Jul. 09, 2004 Temperature: 24℃ Humidity: 58%

a) Channel 01: Maximum Power Density of 3 kHz Bandwidth is-12.84dBm

b) Channel 06: Maximum Power Density of 3 kHz Bandwidth is-12.84dBm

c) Channel 11: Maximum Power Density of 3 kHz Bandwidth is-12.00dBm

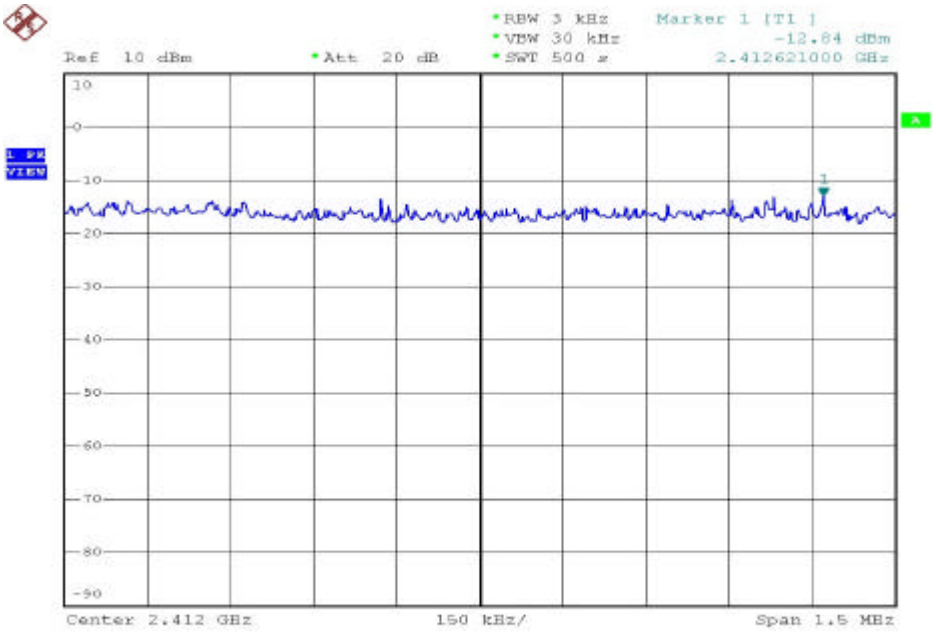
(2) Modulation Standard: IEEE 802.11g

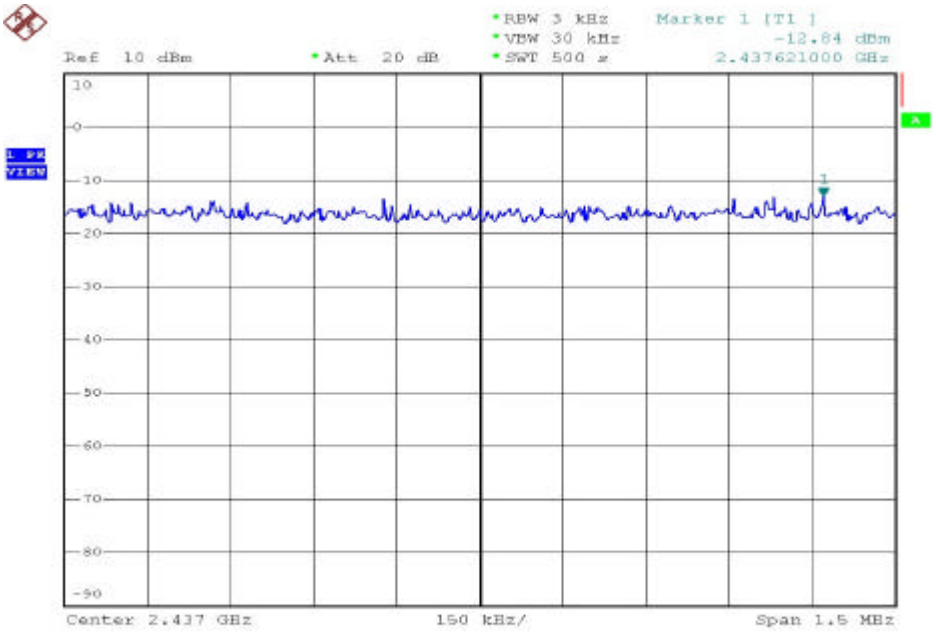
Test Date: Jul. 09, 2004 Temperature: 24℃ Humidity: 58%

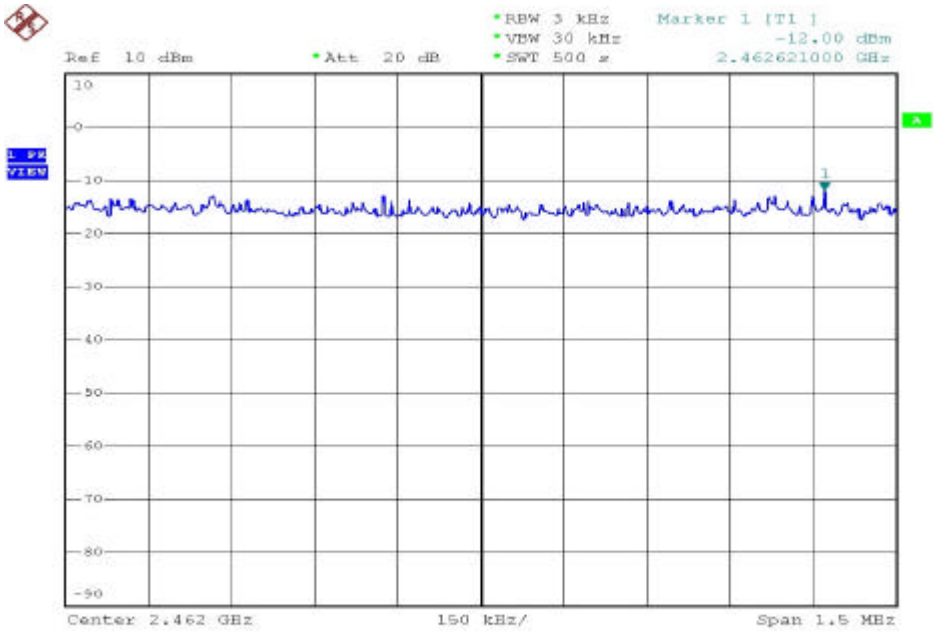
a) Channel 01: Maximum Power Density of 3 kHz Bandwidth is-17.77dBm

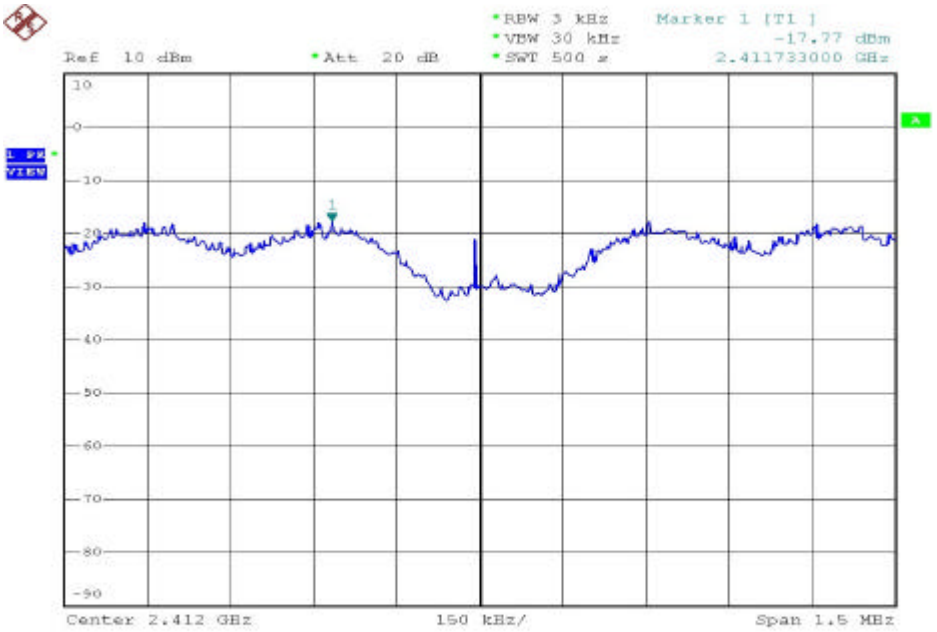
b) Channel 06: Maximum Power Density of 3 kHz Bandwidth is-17.61dBm

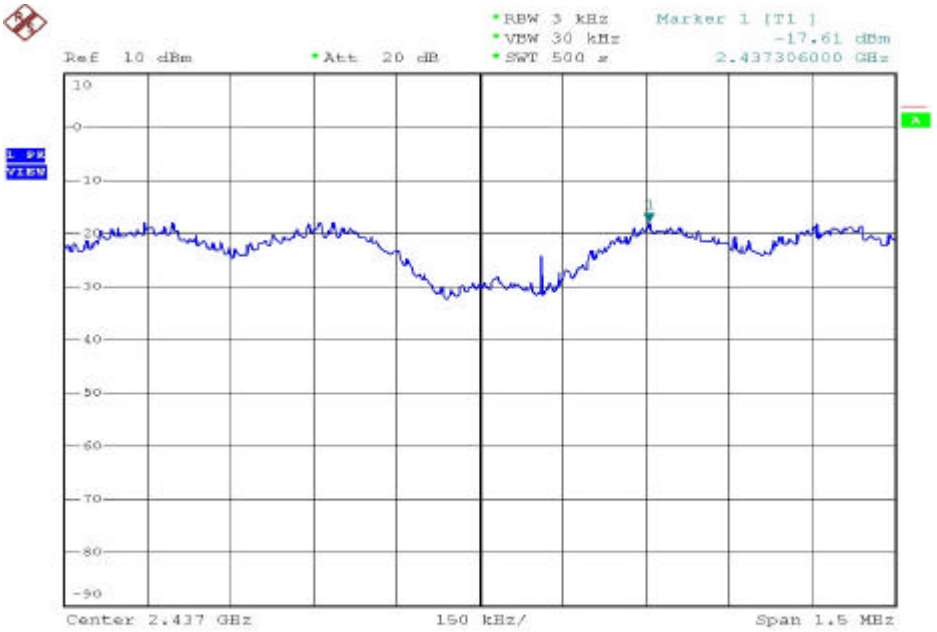
c) Channel 11: Maximum Power Density of 3 kHz Bandwidth is-17.56dBm

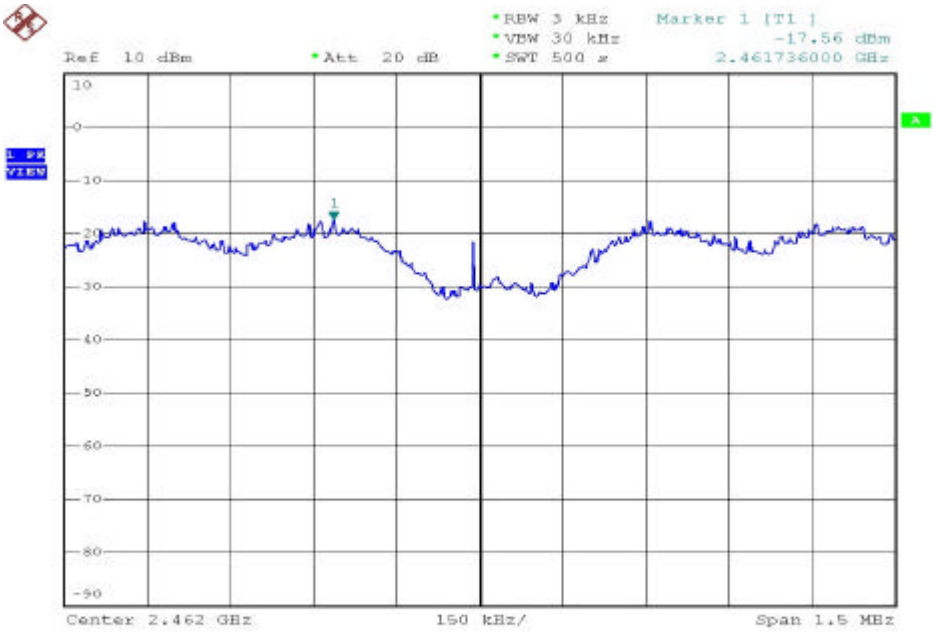

RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-12.84 dBm
2.412621000 GHz
Ref 10 dBm
Att 20 dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.412 GHz
150 kHz/
Span 1.5 MHz


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-12.84 dBm
2.437621000 GHz
Ref 10 dBm
Att 20 dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.437 GHz
150 kHz/
Span 1.5 MHz


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-12.00 dBm
2.462621000 GHz
Ref 10 dBm
Att 20 dB
Center 2.462 GHz
150 kHz/
Span 1.5 MHz


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-17.77 dBm
2.411733000 GHz
Ref 10 dBm
Att 20 dB
Center 2.412 GHz
150 kHz/
Span 1.5 MHz


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-17.61 dBm
2.437306000 GHz
Ref 10 dBm
Att 20 dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.437 GHz
150 kHz/
Span 1.5 MHz


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-17.56 dBm
2.461736000 GHz
Ref 10 dBm
Att 20 dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

4.8. Test Result of RF Exposure Evaluation

. Product: Wireless ADSL Router

. Test Item: RF Exposure Evaluation Data

. Test site: OATSI-SD

. Test Mode: Normal

4.8.1. Antenna Gain

The maximum Gain is 1.8dBi.

4.8.2. EUT Operation condition

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

4.8.3. Output Power into Antenna & RF Exposure Evaluation Distance

Modulation Standard: IEEE 802.11b

Test Date: Jul. 09, 2004 Temperature: 24℃ Humidity: 58%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Minimum allowable Distance ®From Skin (cm)
01	2412	17.81	2.942
06	2437	17.31	2.777
11	2462	16.98	2.673

Modulation Standard: IEEE 802.11g

Test Date: Jul. 09, 2004 Temperature: 24℃ Humidity: 58%

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Minimum allowable Distance ®From Skin (cm)
01	2412	16.51	2.532
06	2437	16.81	2.622
11	2462	16.88	2.641

The distance r (4th column) calculated from the Friis transmission formula is far shorter than 20 cm separation requirement. So, RF exposure limit warning or SAR test are not required.

5. List of Measuring Equipment Used

No	Instrument/Ancillary	Type	Manufacturer	Serial No.	Valid Date.
1	Bilog Antenna	CBL6111C	Schaffner	2762	2004/11/03
2	Preamplifier	RFP4002	Schaffner	010	2004/11/03
3	Receiver	SCR3501	Schaffner	437	2004/11/03
4	Signal Generator	8648B	HP	3629U00612	2006/02/09
5	Spectrum Analyzer	8594E	HP	3520A01913	2005/01/15
6	Amplifier	8447D	Agilent	2944A10593	2004/10/09
7	Amplifier	8447D	Agilent	2944A10531	2005/06/30
8	Series Power Meter	E4416A	Agilent	GB41292146	2004/11/05
9	Power Sensor	E9327A	Agilent	US40441392	2004/10/06
10	Dipole Antenna	AD-100	COM-Power	721011	2004/12/02
11	Dipole Antenna	AD-100	COM-Power	721010	2004/12/02
12	Spectrum Analyzer	R3131A	Advantest	131000021	2004/11/24
13	Spectrum Analyzer	FSP40	R&S	100047	2004/12/16
14	Preamplifier	8449B	Agilent	3008A01954	2005/01/04
15	Horn Antenna	3115	EMCO	31601	2005/01/13
16	Horn Antenna	3115	EMCO	31589	2005/01/13
17	Horn Antenna	3116	EMCO	31970	2005/01/29
18	Horn Antenna	3116	EMCO	31974	2005/01/29
19	EMI Receiver	8546A	HP	3807A00454	2005/02/12
20	RF Filter Section	85460A	HP	3704A00386	2005/02/12
21	Signal Generator	83640A	HP	2927A00107	2006/04/02
22	Attenuator	8491B	Agilent	50703	2004/12/16
23	Attenuator	8491B	Agilent	50705	2004/12/16
24	Temperature Chamber	TMJ-9712	T Machine	T-12-040111	2005/02/05
25	High Pass Filter	84300-80038	HP	002	N/A
26	High Pass Filter	84300-80038	HP	006	N/A
27	DC Power Supply	GPD-3030	GM	7020936	N/A
28	AC Power Converter	AFC-11005	APC	F103120008	N/A