6. 6dB Bandwidth Measurement Data (For 802.11b/g device)

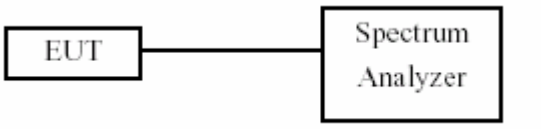
6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

6.2 Test Procedures

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 100 KHz and VBW to 100 KHz.
3. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

6.3 Test Setup Layout



6.4 Measurement equipment

Instrument/Ancillary	Type	Manufacturer	Serial No.	Valid Date.
Spectrum Analyzer	FSP40	R&S	100047	2005/12/28

6.5 Test Result and Data

(1) Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 25, 2005 Temperature: 25℃ Humidity: 68% Atmospheric pressure: 1028 mmHg

Channel	Frequency (MHz)	6dB Bandwidth (MHz)
01	2412	11.90
06	2437	11.80
11	2462	11.70

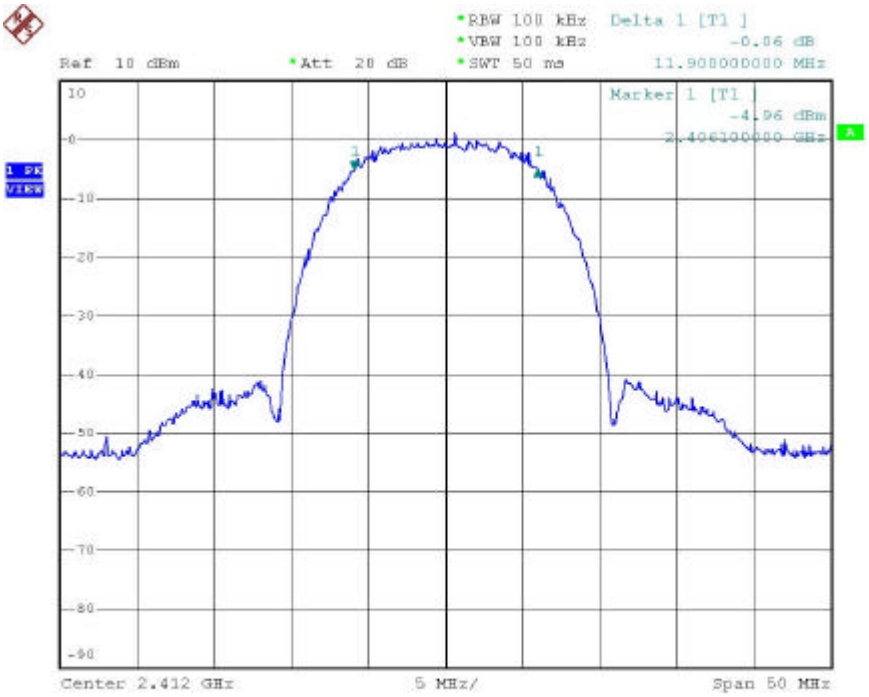
(2) Modulation Standard: IEEE 802.11g (54Mbps)

Test Date: Oct. 25, 2005 Temperature: 25℃ Humidity: 68% Atmospheric pressure: 1028 mmHg

Channel	Frequency (MHz)	6dB Bandwidth (MHz)
01	2412	16.70
06	2437	16.50
11	2462	16.50

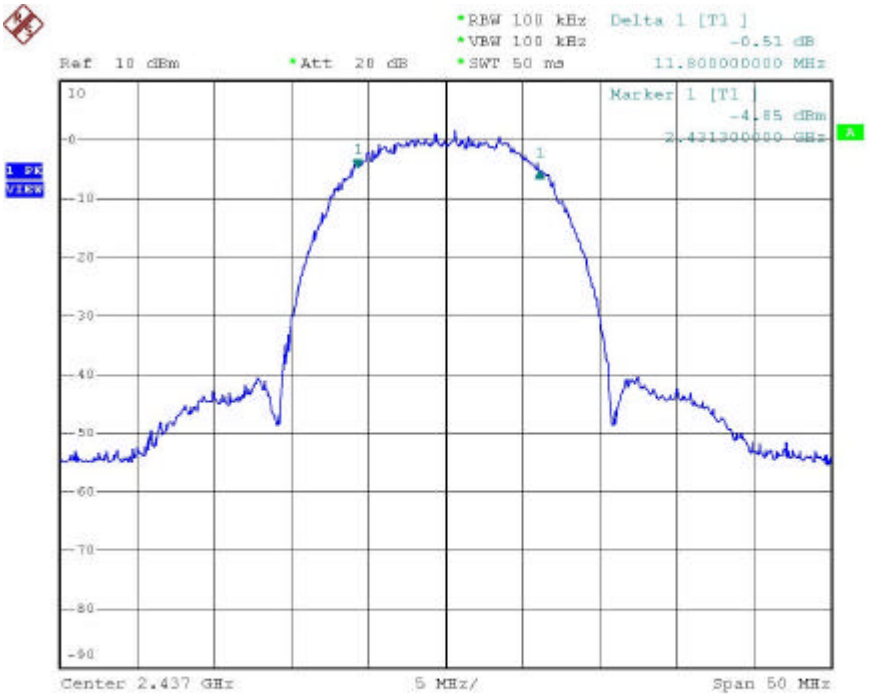
Modulation Standard: 802.11b (11Mbps)

Channel: 01



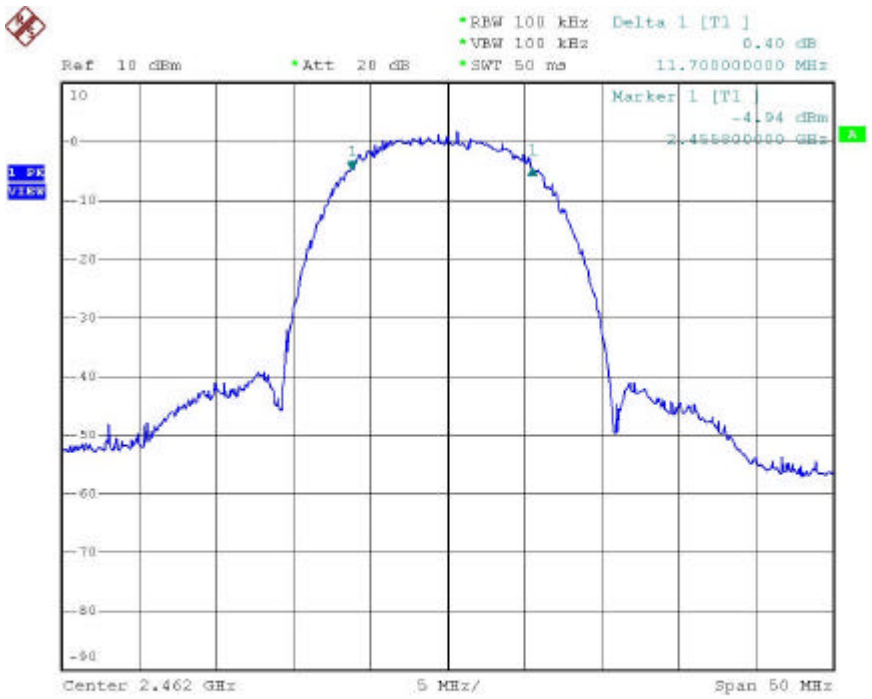
Date: 25.OCT.2005 14:07:20

Channel:06



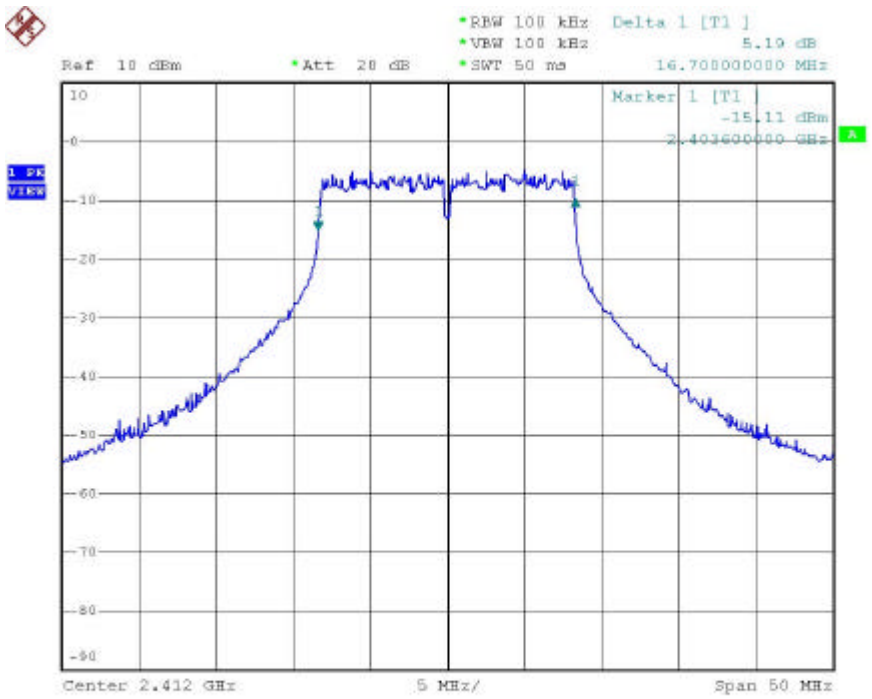
Date: 25.OCT.2005 14:05:01

Channel: 11



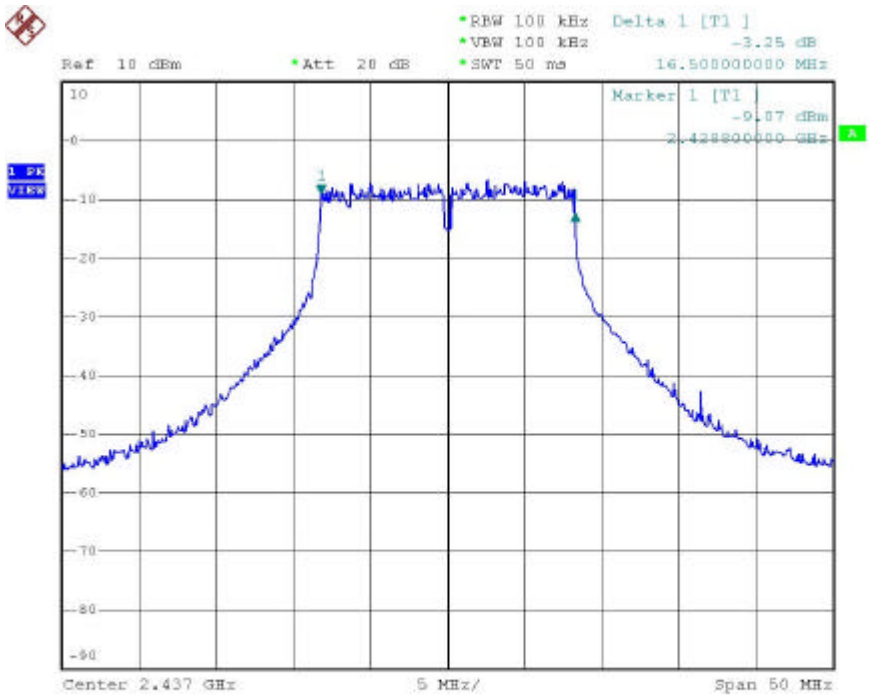
Date: 25.OCT.2005 10:32:59

Modulation Standard:802.11g (54Mbps)
Channel:01



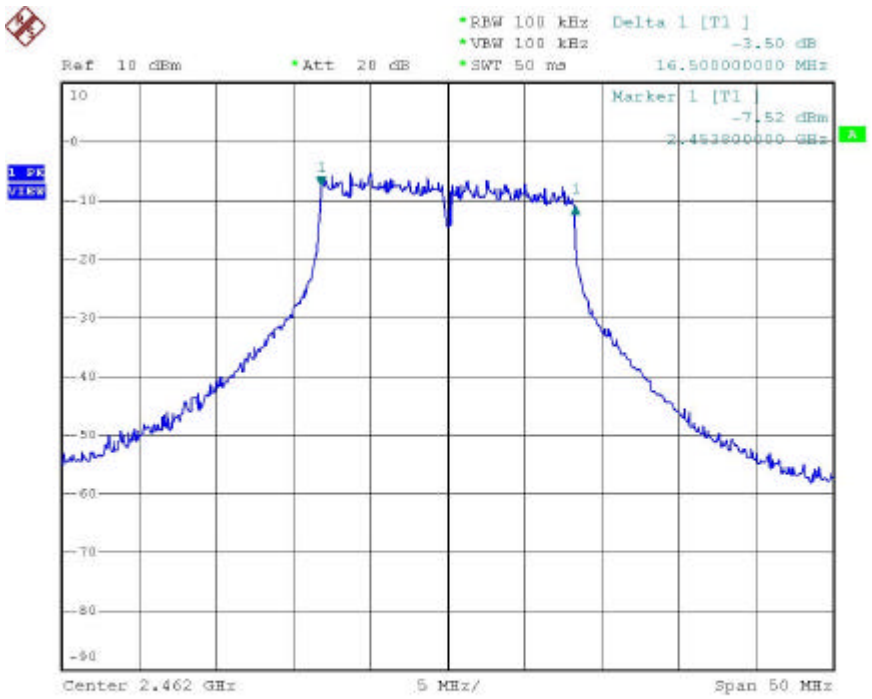
Date: 25.OCT.2005 13:48:10

Channel: 06



Date: 25.OCT.2005 13:50:56

Channel:11



Date: 25.OCT.2005 13:55:14

7. Maximum Peak Output Power (For 802.11b/g device)

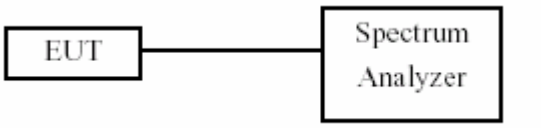
7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

7.2 Test Procedures

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

7.3 Test Setup Layout



7.4 List of Measuring Equipment Used

Instrument/Ancillary	Type	Manufacturer	Serial No.	Valid Date.
Spectrum Analyzer	FSP40	R&S	100047	2005/12/28

7.5 Test Result and Data

(1) Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 24, 2005 Temperature: 25℃ Humidity: 62% Atmospheric pressure: 1023 mmHg

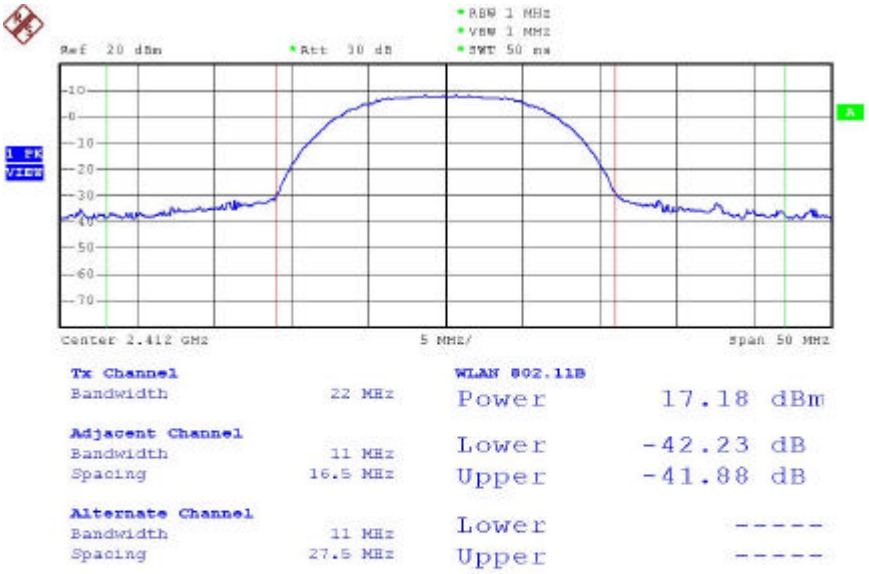
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
01	2412	17.18	52.240
06	2437	17.73	59.293
11	2462	17.87	61.235

(2) Modulation Standard: IEEE 802.11g (54Mbps)

Test Date: Oct. 24, 2005 Temperature: 25℃ Humidity: 62% Atmospheric pressure: 1023 mmHg

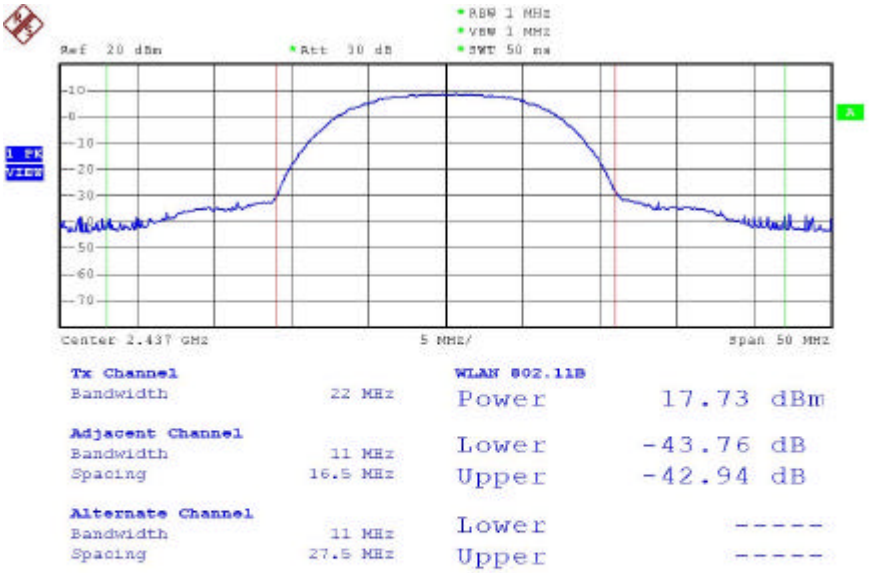
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
01	2412	16.28	42.462
06	2437	14.42	27.669
11	2462	15.13	32.584

Modulation Standard: 802.11b (11Mbps)
Channel: 01



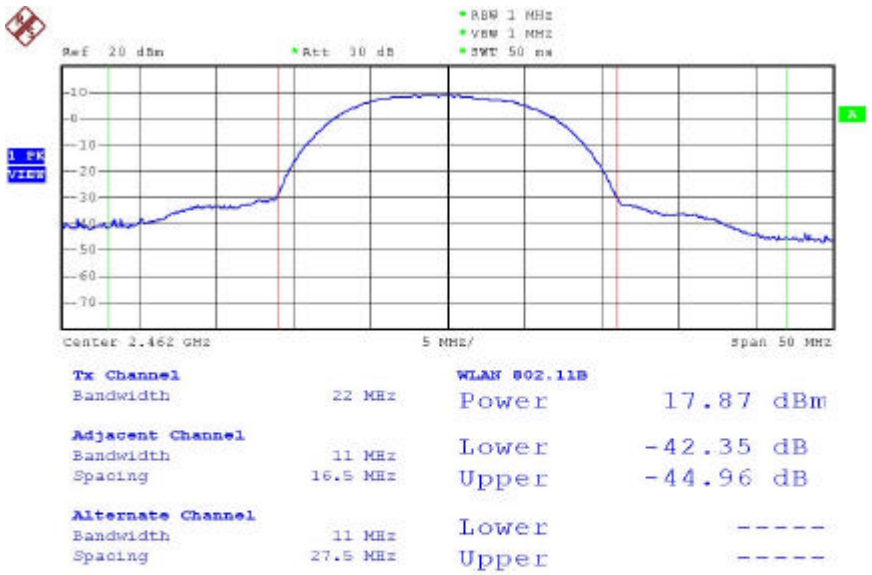
Date: 24.OCT.2005 20:12:24

Channel:06



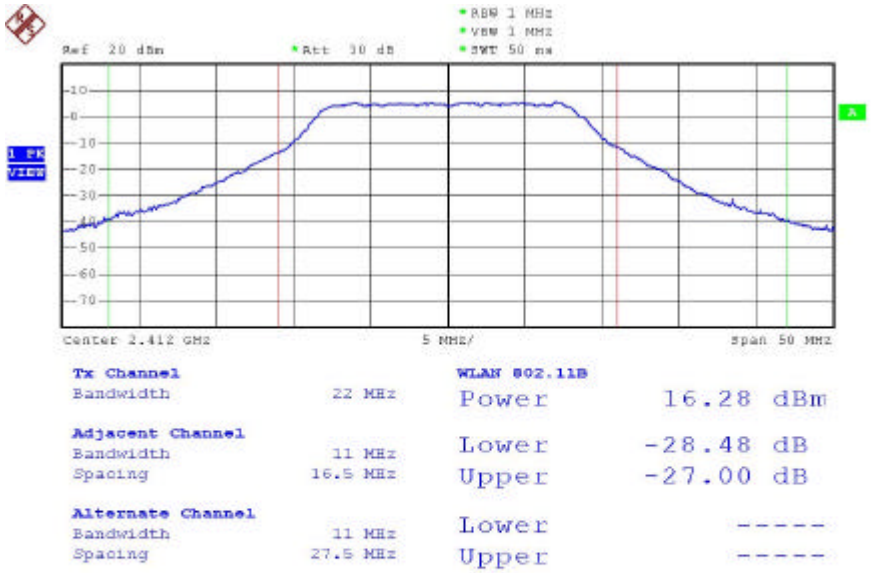
Date: 24.OCT.2005 20:09:52

Channel: 11



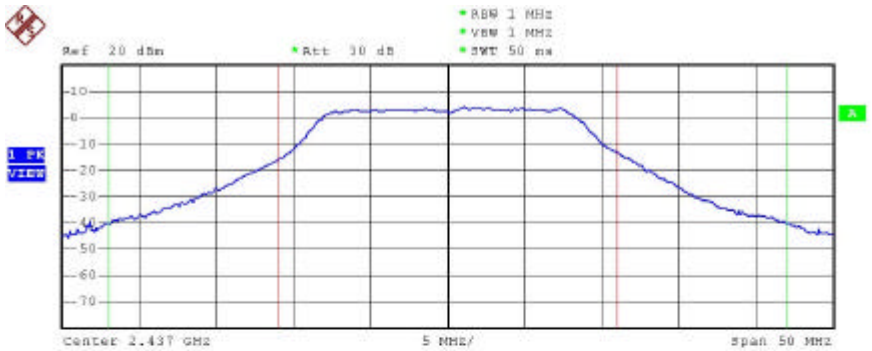
Date: 24.OCT.2005 20:07:26

Modulation Standard:802.11g (54Mbps)
Channel:01



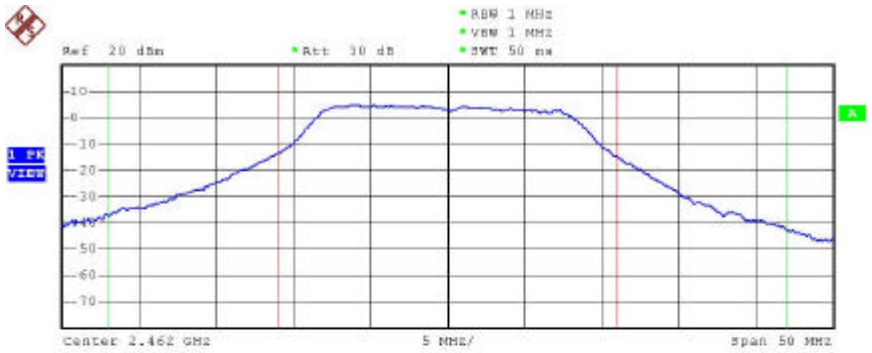
Date: 24.OCT.2005 19:55:17

Channel: 06



Date: 24.OCT.2005 19:59:02

Channel:11



Date: 24.OCT.2005 20:01:17

8. Band Edges Measurement (For 802.11b/g device)

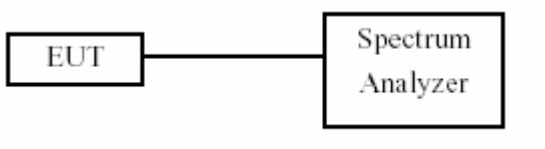
8.1 Test Limit

Below –20dB of the highest emission level of operating band
(in 100kHz Resolution Bandwidth).

8.2 Test Procedure：

1.The transmitter output was connected to the spectrum analyzer via a low lose cable.
2.Set both RBW and VBW of spectrum analyzer to 100 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
3.The band edges was measured and recorded.

8.3 Test Setup Layout



8.4 List of Measuring Equipment Used

Instrument/Ancillary	Type	Manufacturer	Serial No.	Valid Date.
Spectrum Analyzer	FSP40	R&S	100047	2005/12/28

8.5 Test Result and Data

(1) Modulation Standard: IEEE 802.11b (11Mbps)
Test Date: Oct. 25, 2005 Temperature: 25℃ Humidity: 68% Atmospheric pressure: 1028 mmHg

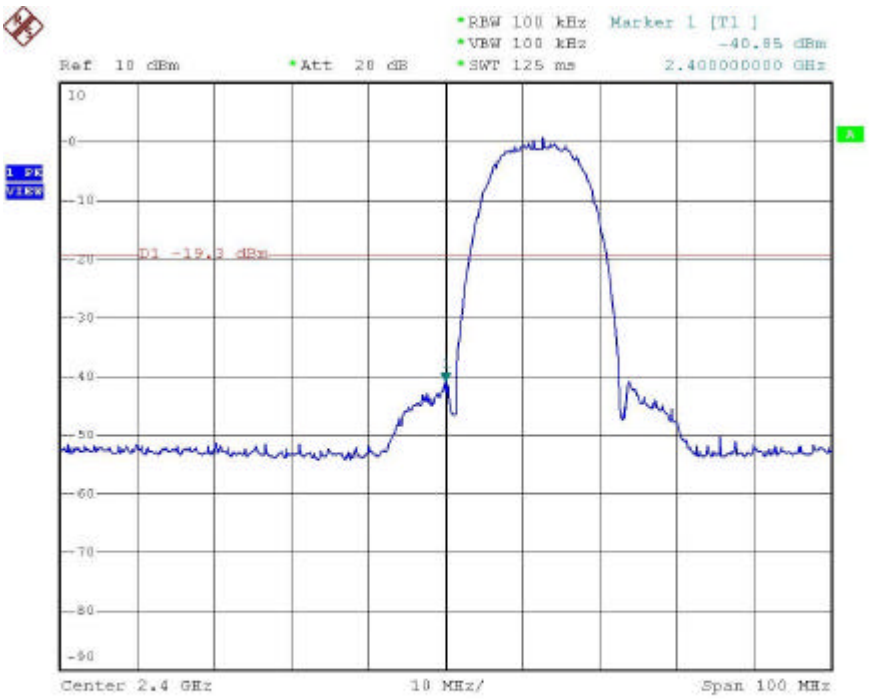
Channel	Frequency	maximum value in frequency (MHz)	maximum value is (dBm)
01	2412	2400.00	-40.85
11	2462	2860.00	-53.48

(2) Modulation Standard: IEEE 802.11g (24Mbps)
Test Date: Oct. 25, 2005 Temperature: 25℃ Humidity: 68% Atmospheric pressure: 1028 mmHg

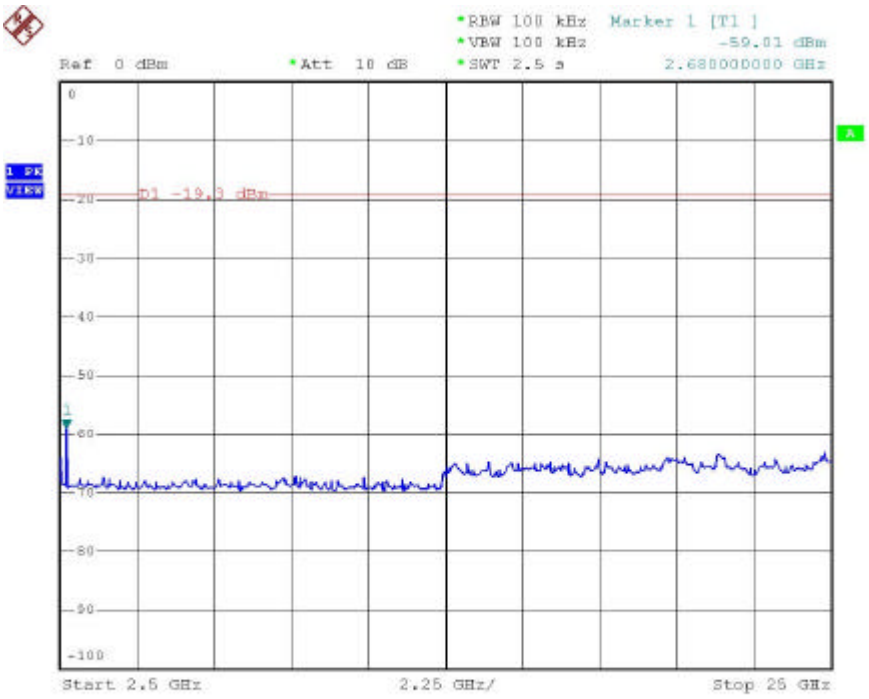
Channel	Frequency	maximum value in frequency (MHz)	maximum value is (dBm)
01	2412	2399.80	-34.20
11	2462	2483.50	-55.13

Modulation Standard: 802.11b (11Mbps)

Channel: 01

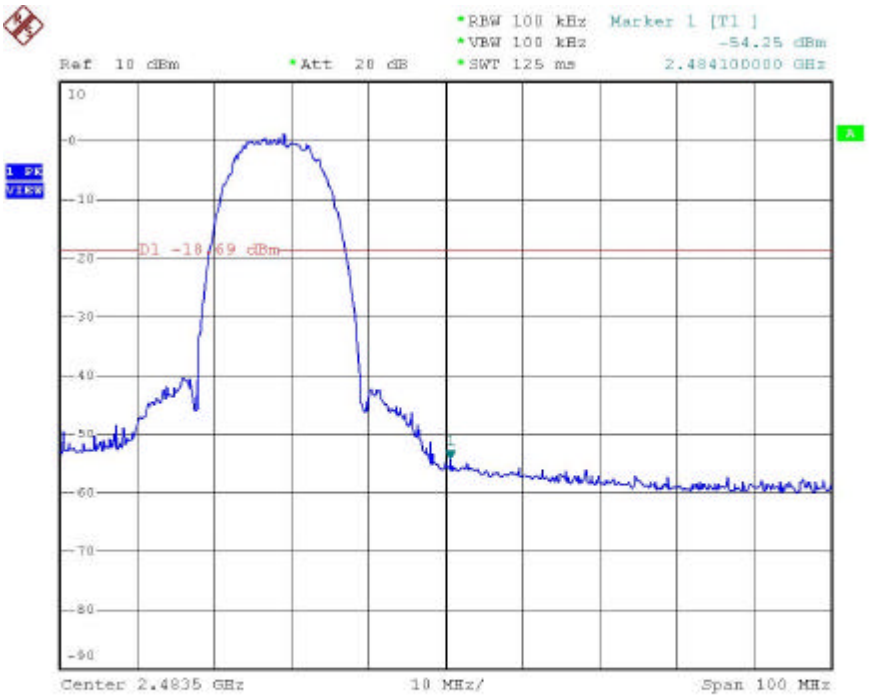


Date: 25.OCT.2005 10:35:46

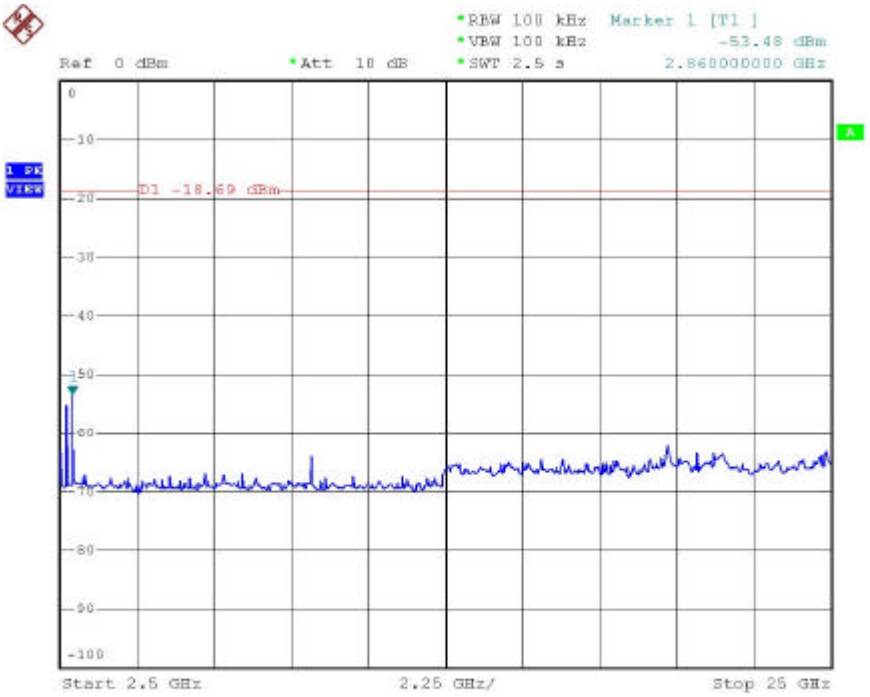


Date: 25.OCT.2005 10:36:43

Channel: 11



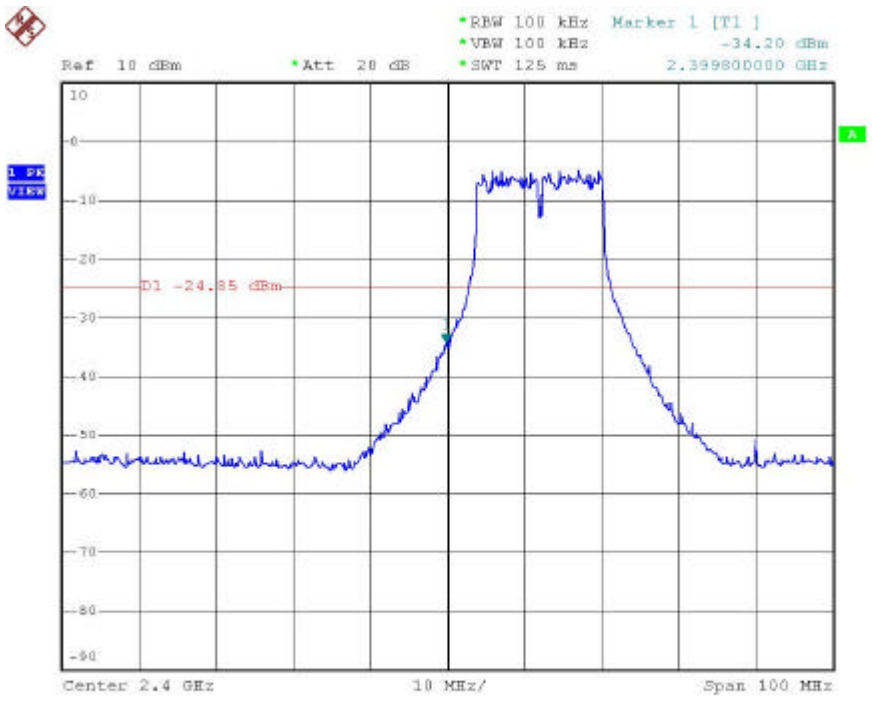
Date: 25.OCT.2005 10:41:44



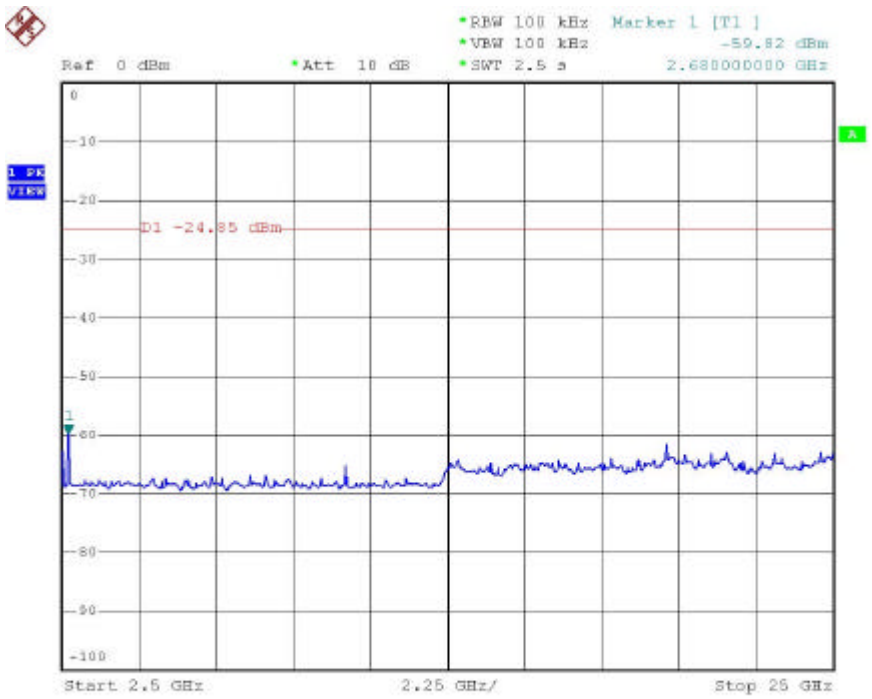
Date: 25.OCT.2005 10:43:31

Modulation Standard: 802.11g (54Mbps)

Channel: 01

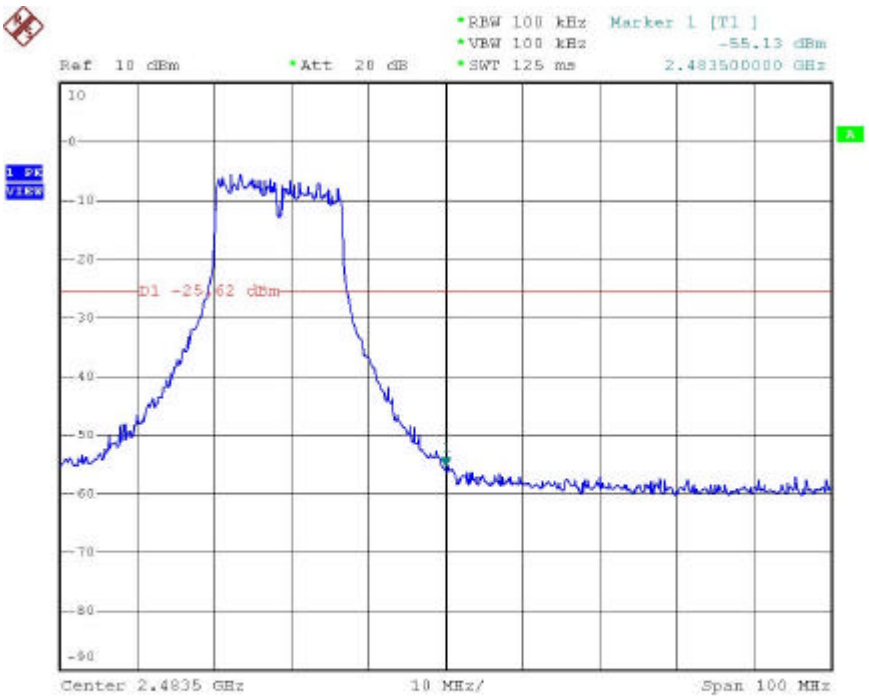


Date: 25.OCT.2005 10:46:02

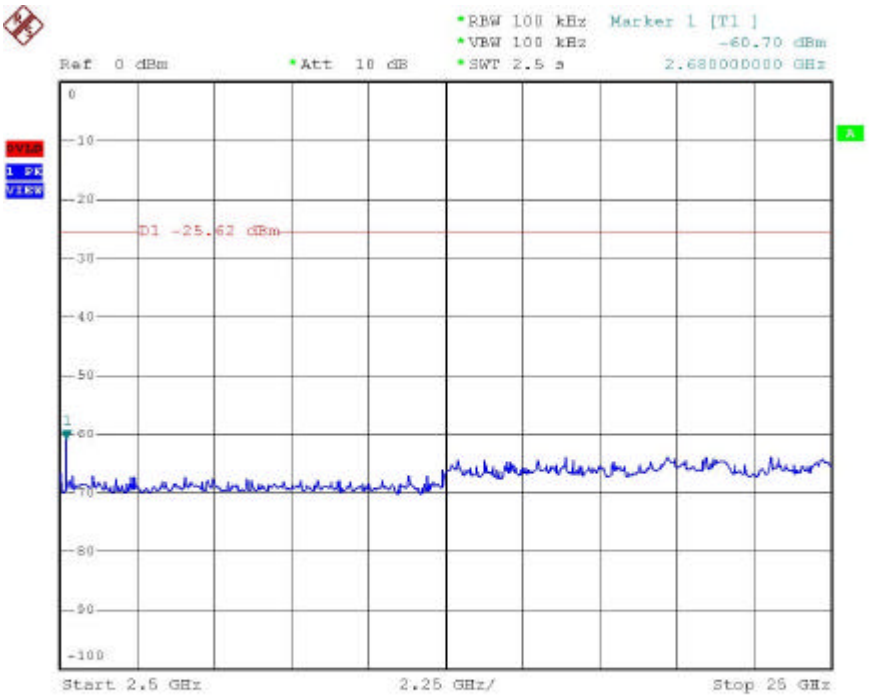


Date: 25.OCT.2005 10:48:41

Channel: 11



Date: 25.OCT.2005 10:56:37



Date: 25.OCT.2005 10:57:48

8.6 Restrict band emission Measurement Data

Test Model 1: Adapter: DSA-0131F-12

Test Antenna 1: Dipole antenna (Antenna gain 5dBi)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2369.568	H	58.84	1.18	60.02	Peak	74	54	-13.98	81	1.1
2320.914	H	45.82	1.01	46.83	Ave	74	54	-7.17	81	1.1
2386.704	V	62.39	0.54	62.93	Peak	74	54	-11.07	231	1.0
2320.404	V	46.43	0.31	46.74	Ave	74	54	-7.26	231	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2491.412	H	48.84	1.60	50.44	Peak	74	54	-23.56	81	1.1
2483.508	H	36.89	1.57	38.46	Ave	74	54	-15.54	81	1.1
2483.622	V	52.59	0.87	53.46	Peak	74	54	-20.54	231	1.0
2483.508	V	40.51	0.87	41.38	Ave	74	54	-12.62	231	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.968	H	64.53	1.25	65.78	Peak	74	54	-8.22	81	1.1
2389.968	H	45.95	1.25	47.20	Ave	74	54	-6.80	81	1.1
2389.968	V	66.69	0.55	67.24	Peak	74	54	-6.76	231	1.0
2389.968	V	47.74	0.55	48.29	Ave	74	54	-5.71	231	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2493.426	H	49.04	1.61	50.65	Peak	74	54	-23.35	81	1.0
2483.508	H	36.80	1.57	38.37	Ave	74	54	-15.65	81	1.0
2483.546	V	55.53	0.87	56.40	Peak	74	54	-17.60	231	1.0
2483.508	V	44.78	0.87	45.65	Ave	74	54	-8.35	231	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Antenna 2: Ceiling antenna (Antenna gain 5dBi-ANT2405)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2319.894	H	50.64	1.01	51.65	Peak	74	54	-22.35	242	1.1
2389.968	H	38.13	1.25	39.38	Ave	74	54	-14.62	242	1.1
2388.744	V	53.53	0.55	54.08	Peak	74	54	-19.92	50	1.0
2321.118	V	41.74	0.31	42.05	Ave	74	54	-11.95	50.	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2497.872	H	49.22	1.62	50.84	Peak	74	54	-23.16	242	1.1
2483.508	H	37.46	1.57	39.03	Ave	74	54	-14.97	242	1.1
2488.296	V	48.86	0.87	49.75	Peak	74	54	-24.25	50	1.0
2483.508	V	36.90	0.87	37.77	Ave	74	54	-16.23	50	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.764	H	56.23	1.25	57.48	Peak	74	54	-16.52	242	1.1
2389.968	H	40.84	1.25	42.09	Ave	74	54	-11.91	242	1.1
2389.968	V	60.74	0.55	61.29	Peak	74	54	-12.71	50	1.0
2321.118	V	44.89	0.31	45.20	Ave	74	54	-8.80	50	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2483.508	H	49.69	1.57	51.26	Peak	74	54	-22.74	242	1.0
2483.508	H	37.91	1.57	39.48	Ave	74	54	-14.52	242	1.0
2485.142	V	54.23	0.87	55.11	Peak	74	54	-18.89	50	1.0
2483.508	V	43.01	0.87	43.88	Ave	74	54	-10.12	50	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Antenna 3: GP Omni-directional antenna (Antenna gain 9dBi-ANT2409)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2359.674	H	49.36	1.14	50.50	Peak	74	54	-23.50	148	1.1
2389.764	H	37.58	1.25	38.83	Ave	74	54	-15.17	148	1.1
2385.684	V	60.79	0.53	61.32	Peak	74	54	-12.68	187	1.0
2360.898	V	45.82	0.45	46.27	Ave	74	54	-7.73	187	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2493.236	H	48.48	1.61	50.09	Peak	74	54	-23.91	148	1.1
2492.742	H	36.41	1.60	38.01	Ave	74	54	-15.99	148	1.1
2484.116	V	48.95	0.88	49.83	Peak	74	54	-24.17	187	1.0
2483.508	V	37.14	0.87	38.01	Ave	74	54	-15.99	187	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.458	H	52.08	1.25	53.32	Peak	74	54	-20.68	148	1.1
2389.968	H	37.30	1.25	38.55	Ave	74	54	-15.45	148	1.1
2389.458	V	59.24	0.55	59.79	Peak	74	54	-14.21	187	1.0
2389.968	V	44.79	0.55	45.34	Ave	74	54	-8.66	187	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2495.022	H	48.86	1.61	50.47	Peak	74	54	-23.53	148	1.0
2482.476	H	36.32	1.60	37.92	Ave	74	54	-16.08	148	1.0
2483.546	V	50.72	0.87	51.59	Peak	74	54	-22.41	187	1.0
2483.508	V	38.80	0.87	39.67	Ave	74	54	-14.33	187	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Antenna 4: Patch antenna (Antenna gain 18dBi-ANT24D18)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2382.114	H	48.08	1.22	49.30	Peak	74	54	-24.70	161	1.1
2386.194	H	36.13	1.24	37.37	Ave	74	54	-16.63	161	1.1
2339.988	V	45.05	0.28	45.43	Peak	74	54	-28.57	0	1.0
2312.754	V	32.97	0.28	33.25	Ave	74	54	-20.75	0	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2491.412	H	45.27	1.60	46.87	Peak	74	54	-27.13	161	1.1
2492.362	H	33.48	1.60	35.08	Ave	74	54	-18.92	161	1.1
2492.552	V	45.15	0.90	46.05	Peak	74	54	-27.95	0	1.0
2492.362	V	32.75	0.90	33.65	Ave	74	54	-20.35	0	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2333.868	H	45.24	1.06	46.30	Peak	74	54	-27.70	161	1.1
2388.744	H	33.64	1.25	34.89	Ave	74	54	-19.11	161	1.1
2360.388	V	45.79	0.45	46.24	Peak	74	54	-27.76	0	1.0
2330.808	V	33.98	0.34	34.32	Ave	74	54	-19.68	0	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2490.956	H	46.04	1.60	47.64	Peak	74	54	-23.36	161	1.0
2492.362	H	34.52	1.60	36.12	Ave	74	54	-17.88	161	1.0
2490.576	V	45.13	0.90	46.03	Peak	74	54	-27.97	0	1.0
2492.742	V	33.93	0.90	34.83	Ave	74	54	-19.17	0	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Model 2: PoE mode

Test Antenna 1: Dipole antenna (Antenna gain 5dBi)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2369.568	H	58.12	1.18	59.30	Peak	74	54	-14.70	81	1.1
2320.914	H	45.58	1.01	46.59	Ave	74	54	-7.41	81	1.1
2386.704	V	61.98	0.54	62.52	Peak	74	54	-11.48	231	1.0
2320.404	V	46.01	0.31	46.32	Ave	74	54	-7.68	231	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2491.412	H	49.11	1.60	50.71	Peak	74	54	-23.29	81	1.1
2483.508	H	37.04	1.57	38.61	Ave	74	54	-15.39	81	1.1
2483.622	V	52.36	0.87	53.23	Peak	74	54	-20.77	231	1.0
2483.508	V	41.05	0.87	41.92	Ave	74	54	-12.08	231	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.968	H	64.88	1.25	66.13	Peak	74	54	-7.87	81	1.1
2389.968	H	46.15	1.25	47.40	Ave	74	54	-6.60	81	1.1
2389.968	V	66.52	0.55	67.70	Peak	74	54	-6.93	231	1.0
2389.968	V	47.64	0.55	48.19	Ave	74	54	-5.81	231	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2493.426	H	49.56	1.61	51.17	Peak	74	54	-22.83	81	1.0
2483.508	H	36.93	1.57	38.50	Ave	74	54	-15.50	81	1.0
2483.546	V	55.66	0.87	50.53	Peak	74	54	-17.47	231	1.0
2483.508	V	44.74	0.87	45.61	Ave	74	54	-8.39	231	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Antenna 2: Ceiling antenna (Antenna gain 5dBi-ANT2405)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2319.984	H	50.75	1.01	51.76	Peak	74	54	-22.24	242	1.1
2389.968	H	37.99	1.25	39.24	Ave	74	54	-14.76	242	1.1
2388.744	V	53.28	0.55	53.83	Peak	74	54	-20.17	50	1.0
2321.118	V	41.98	0.31	42.29	Ave	74	54	-11.71	50	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2497.872	H	49.33	1.62	50.95	Peak	74	54	-23.05	242	1.1
2483.508	H	37.58	1.57	39.15	Ave	74	54	-14.85	242	1.1
2488.296	V	48.77	0.89	49.66	Peak	74	54	-23.34	50	1.0
2483.508	V	36.72	0.87	37.59	Ave	74	54	-16.41	50	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.764	H	56.15	1.25	57.40	Peak	74	54	-16.60	242	1.1
2389.968	H	40.92	1.25	42.17	Ave	74	54	-11.83	242	1.1
2389.968	V	60.52	0.55	61.07	Peak	74	54	-12.93	50	1.0
2321.118	V	45.00	0.31	45.31	Ave	74	54	-8.69	50	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2483.508	H	49.75	1.57	51.32	Peak	74	54	-22.68	242	1.0
2483.508	H	38.08	1.57	39.65	Ave	74	54	-14.35	242	1.0
2485.142	V	54.13	0.88	55.01	Peak	74	54	-18.99	50	1.0
2485.508	V	42.85	0.87	43.72	Ave	74	54	-10.28	50	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Antenna 3: GP Omni-directional antenna (Antenna gain 9dBi-ANT2409)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2359.674	H	49.43	1.14	50.57	Peak	74	54	-23.43	148	1.1
2389.764	H	37.62	1.25	38.87	Ave	74	54	-15.13	148	1.1
2385.684	V	60.55	0.53	61.08	Peak	74	54	-12.92	187	1.0
2360.898	V	45.78	0.45	46.23	Ave	74	54	-7.77	187	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2493.236	H	48.54	1.61	50.15	Peak	74	54	-23.85	148	1.1
2492.742	H	36.32	1.60	37.92	Ave	74	54	-16.08	148	1.1
2484.116	V	48.90	0.88	49.78	Peak	74	54	-24.22	187	1.0
2483.508	V	37.01	0.87	37.88	Ave	74	54	-16.12	187	1.0

Modulation Standard: 802.11g (544Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.458	H	52.15	1.25	53.40	Peak	74	54	-20.60	148	1.1
2389.968	H	37.41	1.25	38.66	Ave	74	54	-15.34	148	1.1
2389.458	V	59.18	0.55	59.73	Peak	74	54	-14.27	187	1.0
2389.968	V	44.60	0.55	45.21	Ave	74	54	-8.29	187	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2495.022	H	48.74	1.61	50.35	Peak	74	54	-23.65	148	1.0
2492.476	H	36.40	1.60	38.00	Ave	74	54	-16.00	148	1.0
2483.546	V	50.60	0.87	51.53	Peak	74	54	-22.47	187	1.0
2483.508	V	38.50	0.87	39.37	Ave	74	54	-14.63	187	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

Test Antenna 4: Patch antenna (Antenna gain 18dBi-ANT24D18)

Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2382.114	H	48.12	1.22	49.34	Peak	74	54	-24.66	161	1.1
2386.194	H	36.14	1.24	37.38	Ave	74	54	-16.62	161	1.1
2339.988	V	44.82	0.38	45.20	Peak	74	54	-28.80	0	1.0
2312.754	V	33.14	0.28	33.42	Ave	74	54	-20.58	0	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2491.412	H	45.42	1.60	47.02	Peak	74	54	-26.98	161	1.1
2492.362	H	33.60	1.60	35.20	Ave	74	54	-18.80	161	1.1
2492.552	V	45.10	0.90	46.00	Peak	74	54	-28.00	0	1.0
2492.362	V	32.60	0.90	33.50	Ave	74	54	20.50	0	1.0

Modulation Standard: 802.11g (54Mbps)

Test Date: Oct. 20, 2005 Temperature: 22℃ Humidity: 70% Atmospheric pressure: 1020 mmHg

a) Channel 1

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2333.868	H	45.35	1.06	46.41	Peak	74	54	-27.59	161	1.1
2388.744	H	33.66	1.25	34.91	Ave	74	54	-19.09	161	1.1
2360.388	V	45.64	0.45	46.09	Peak	74	54	-27.91	0	1.0
2330.808	V	34.01	0.34	34.35	Ave	74	54	-19.65	0	1.0

b) Channel 11

Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2490.956	H	45.90	1.60	47.50	Peak	74	54	-26.50	161	1.0
2492.362	H	34.44	1.60	36.04	Ave	74	54	-17.96	161	1.0
2490.576	V	45.05	0.90	45.95	Peak	74	54	-28.05	0	1.0
2492.742	V	33.88	0.90	34.78	Ave	74	54	-19.22	0	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz

9. Power Spectral Density (For 802.11b/g device)

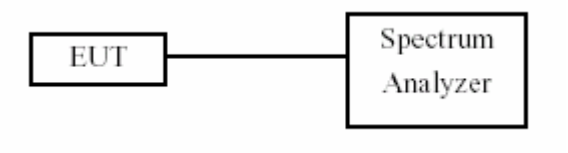
9.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

9.2 Test Procedures

1. The transmitter output was connected to spectrum analyzer.
2. The spectrum analyzer' s resolution bandwidth were set at 3KHz RBW and 30KHz VBW as that of the fundamental frequency. Set the sweep time=span/3KHz.
3. The power spectral density was measured and recorded.
4. The Sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

9.3 Test Setup Layout：



9.4 List of Measuring Equipment Used

Instrument/Ancillary	Type	Manufacturer	Serial No.	Valid Date.
Spectrum Analyzer	FSP40	R&S	100047	2005/12/28

9.5 Test Result and Data

(1) Modulation Standard: IEEE 802.11b (11Mbps)

Test Date: Oct. 25, 2005 Temperature: 25℃ Humidity: 68% Atmospheric pressure: 1028 mmHg

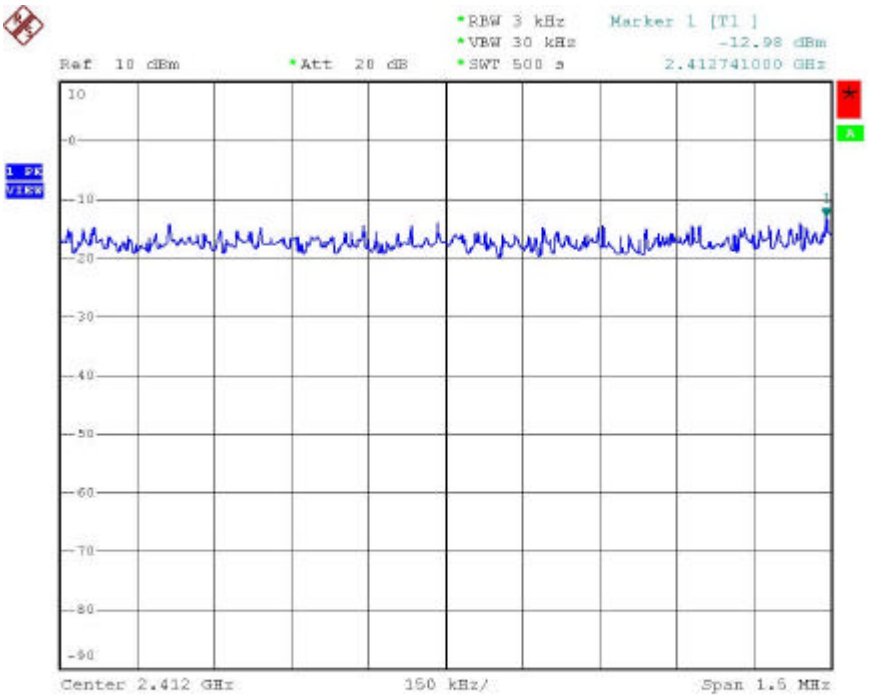
Channel	Frequency	Maximum Power Density of 3 kHz Bandwidth (dBm)
01	2412	-12.98
06	2437	-11.03
11	2462	-10.40

(2) Modulation Standard: IEEE 802.11g (54Mbps)

Test Date: Oct. 25, 2005 Temperature: 25℃ Humidity: 68% Atmospheric pressure: 1028 mmHg

Channel	Frequency	Maximum Power Density of 3 kHz Bandwidth (dBm)
01	2412	-15.95
06	2437	-20.53
11	2462	-19.83

Modulation Standard: 802.11b (11Mbps)
Channel: 01



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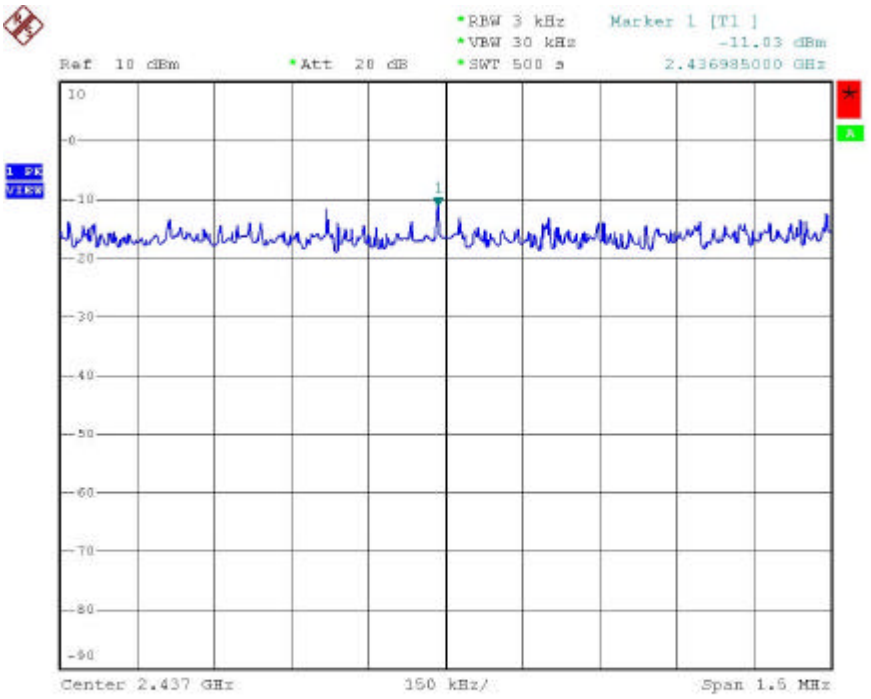
Channel:06



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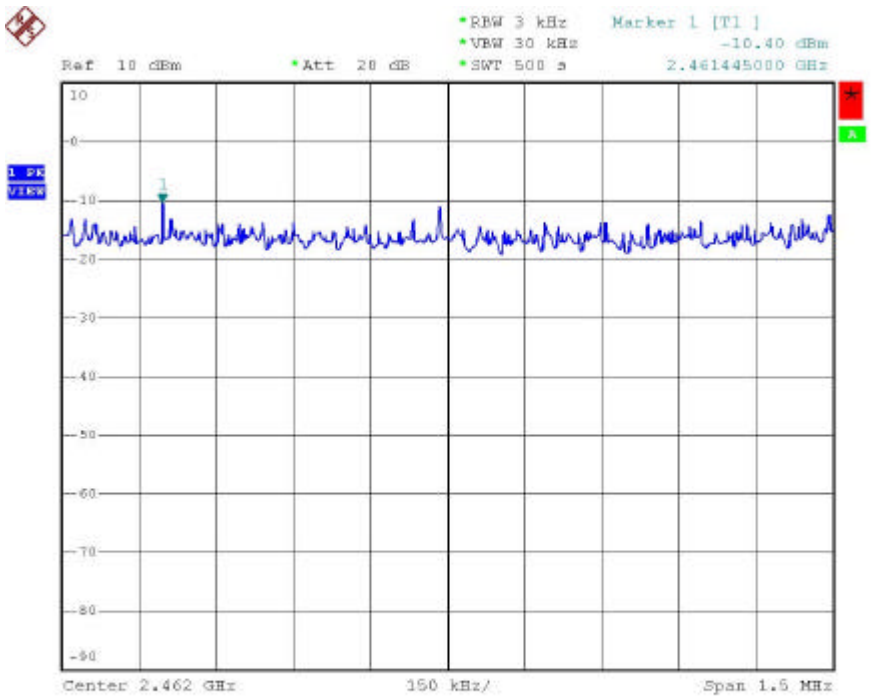
Channel: 11



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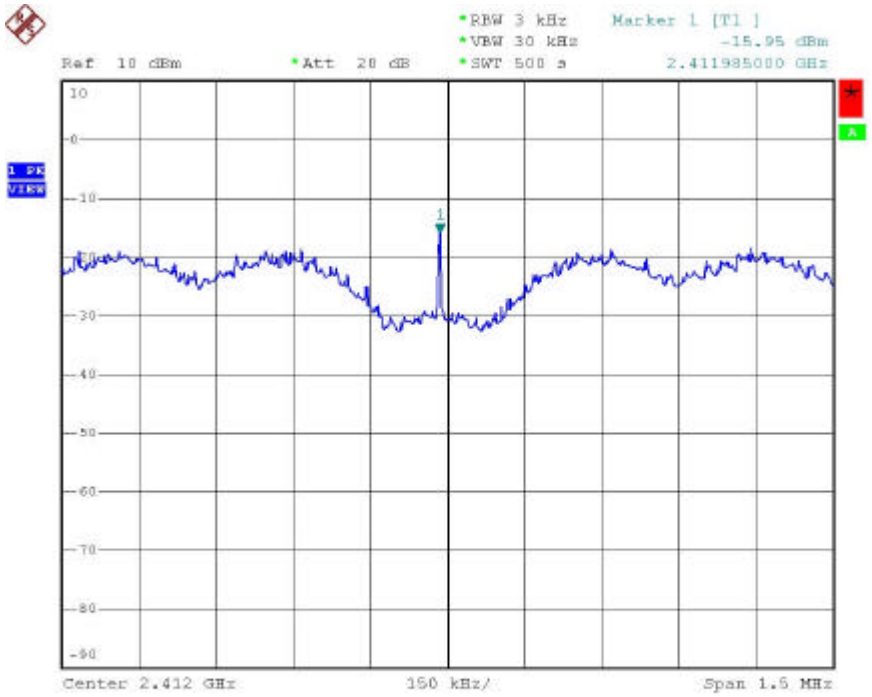
Modulation Standard:802.11g (54Mbps)
Channel:01



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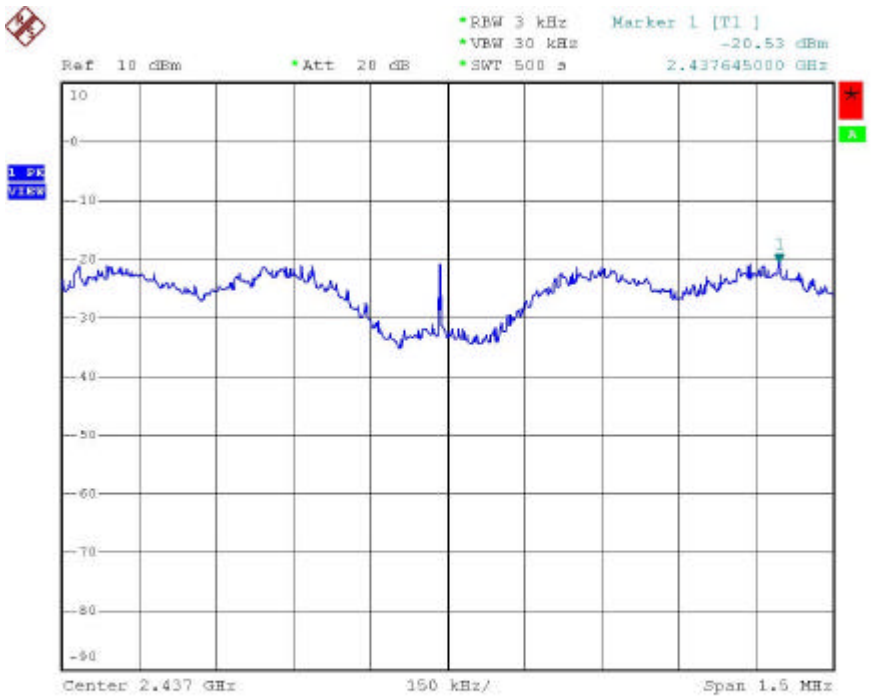
Channel: 06



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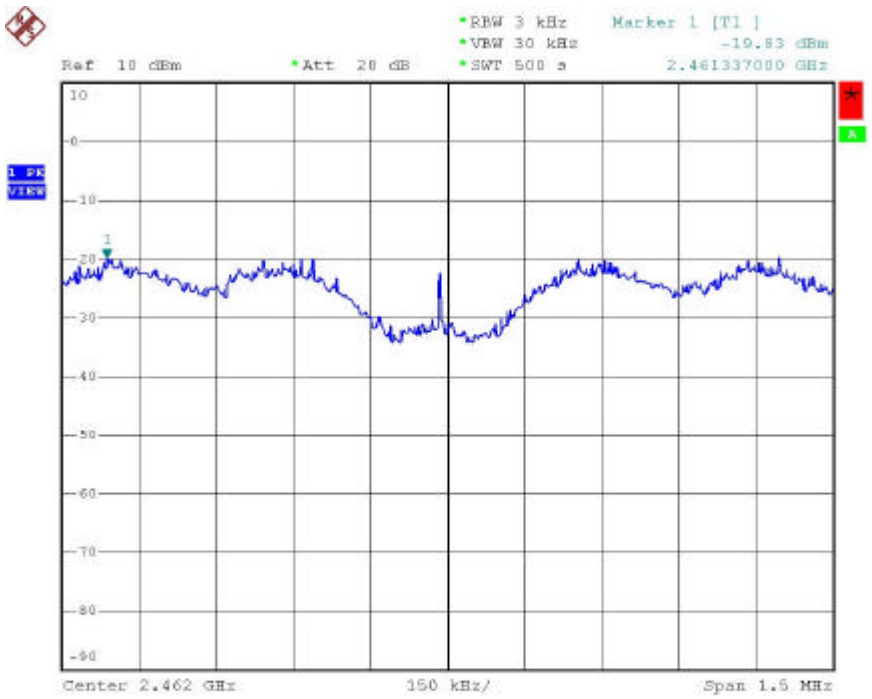
Channel:11



Date: 25.OCT.2005 11:04:15

10. Test of Conducted Emission (For 802.11a device)

10.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 115 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

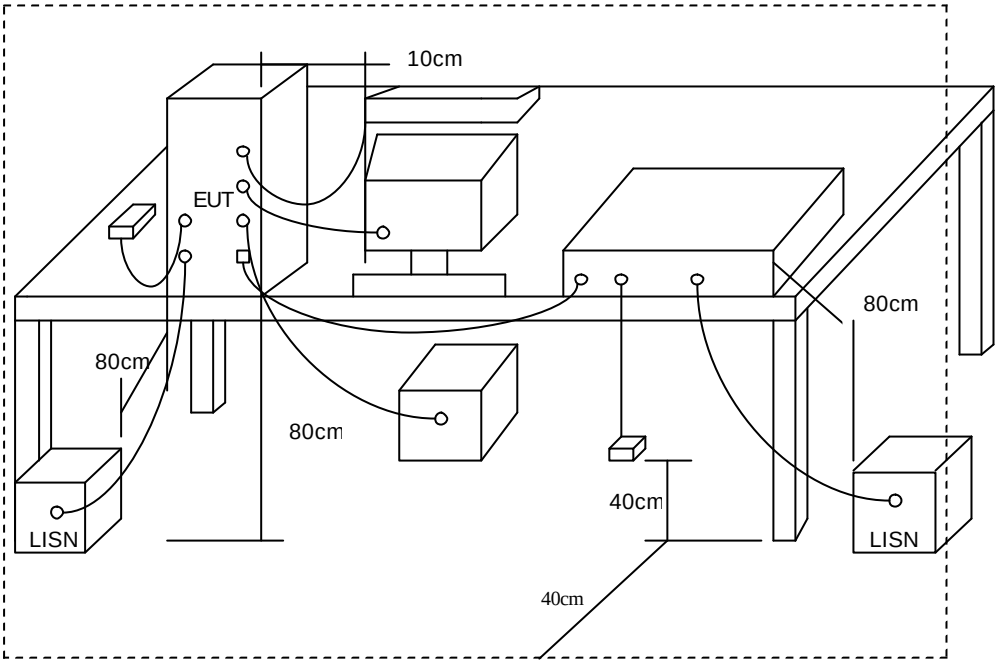
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

10.2 Test Procedures

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

10.3 Typical Test Setup



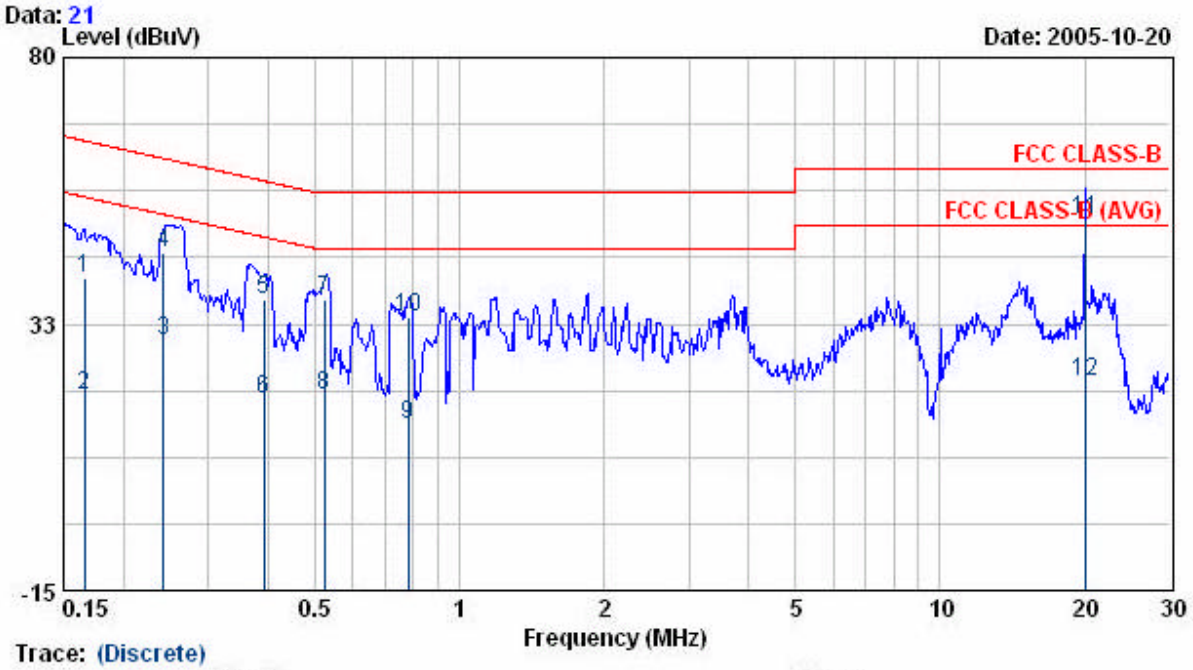
10.4 Measurement equipment

Instrument/Ancillary	Type	Manufacturer	Next Cal. Dat
Receiver	SCR3501	Schaffner	2005/11/03
LISN	NNB-2/16Z	MESS TEC	2006/03/30
LISN	NNB-2/16Z	ROLF HEINE	2006/05/01

10.5 Test Result and Data

EUT : WAG102
Power : AC 120V
Test Mode : 802.11a CH9
Memo : DSA-0131F-12

Pol/Phase : NEUTRAL
Temperature : 25 ℃
Humidity : 57 %



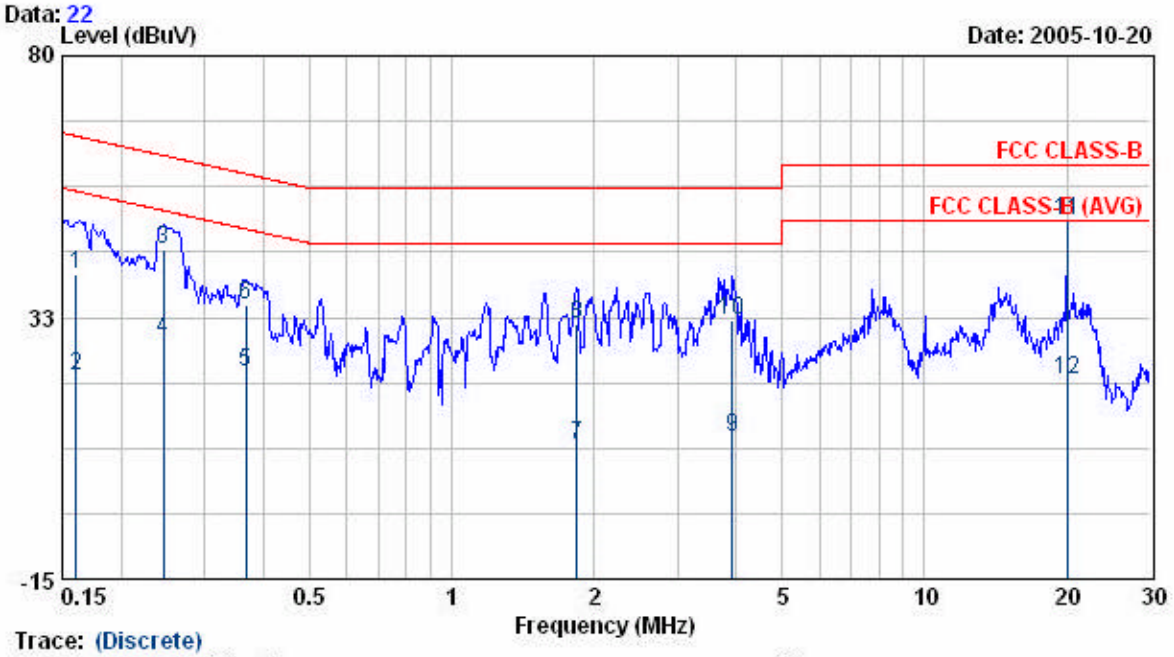
Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.17	40.45	0.28	40.73	65.18	-24.45	QP
0.17	19.42	0.28	19.70	55.18	-35.48	AVERAGE
0.24	29.35	0.28	29.63	52.02	-22.39	AVERAGE
0.24	44.83	0.28	45.11	62.02	-16.91	QP
0.39	36.26	0.49	36.75	58.01	-21.25	QP
0.39	18.58	0.49	19.07	48.01	-28.93	AVERAGE
0.52	36.24	0.50	36.74	56.00	-19.26	QP
0.52	19.29	0.50	19.79	46.00	-26.21	AVERAGE
0.78	14.23	0.50	14.73	46.00	-31.27	AVERAGE
0.78	33.14	0.50	33.64	56.00	-22.36	QP
20.00	50.27	0.80	51.07	60.00	-8.93	QP
20.00	21.35	0.80	22.15	50.00	-27.85	AVERAGE

Remarks: 1. Level = Read Level + Factor
2. Factor = LISN(ISN) Factor + Cable Loss

EUT : WAG102
Power : AC 120V
Test Mode : 802.11a CH9
Memo : DSA-0131F-12

Pol/Phase : LINE
Temperature : 25 ℃
Humidity : 57 %



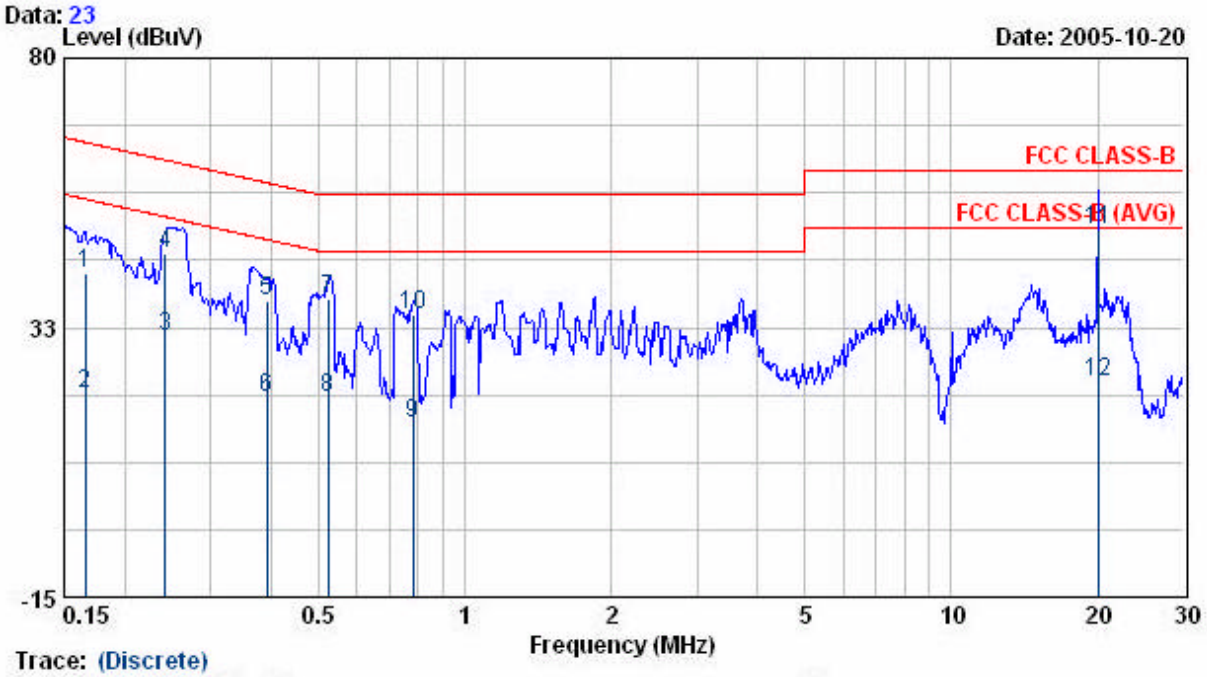
Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.16	39.96	0.36	40.32	65.44	-25.12	QP
0.16	21.56	0.36	21.92	55.44	-33.52	AVERAGE
0.25	44.63	0.39	45.02	61.91	-16.89	QP
0.25	27.95	0.39	28.34	51.91	-23.57	AVERAGE
0.37	22.18	0.56	22.74	48.58	-25.84	AVERAGE
0.37	34.35	0.56	34.91	58.58	-23.67	QP
1.84	8.55	0.68	9.23	46.00	-36.77	AVERAGE
1.84	30.77	0.68	31.45	56.00	-24.55	QP
3.93	10.12	0.70	10.82	46.00	-35.18	AVERAGE
3.93	31.22	0.70	31.92	56.00	-24.08	QP
20.00	49.56	0.60	50.16	60.00	-9.84	QP
20.00	20.53	0.60	21.13	50.00	-28.87	AVERAGE

Remarks: 1. Level = Read Level + Factor
2. Factor = LISN(ISN) Factor + Cable Loss

EUT : WAG102
Power : AC 120V
Test Mode : 802.11a CH11
Memo : DSA-0131F-12

Pol/Phase : NEUTRAL
Temperature : 25 ℃
Humidity : 57 %



Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.17	41.63	0.28	41.91	65.18	-23.27	QP
0.17	20.64	0.28	20.92	55.18	-34.26	AVERAGE
0.24	30.61	0.28	30.89	52.02	-21.13	AVERAGE
0.24	45.34	0.28	45.62	62.02	-16.40	QP
0.39	36.73	0.49	37.22	58.01	-20.78	QP
0.39	19.61	0.49	20.10	48.01	-27.90	AVERAGE
0.52	36.91	0.50	37.41	56.00	-18.59	QP
0.52	19.55	0.50	20.05	46.00	-25.95	AVERAGE
0.78	15.23	0.50	15.73	46.00	-30.27	AVERAGE
0.78	34.14	0.50	34.64	56.00	-21.36	QP
20.00	49.01	0.80	49.81	60.00	-10.19	QP
20.00	22.19	0.80	22.99	50.00	-27.01	AVERAGE

Remarks: 1. Level = Read Level + Factor
2. Factor = LISN(ISN) Factor + Cable Loss