4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Normal Link

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

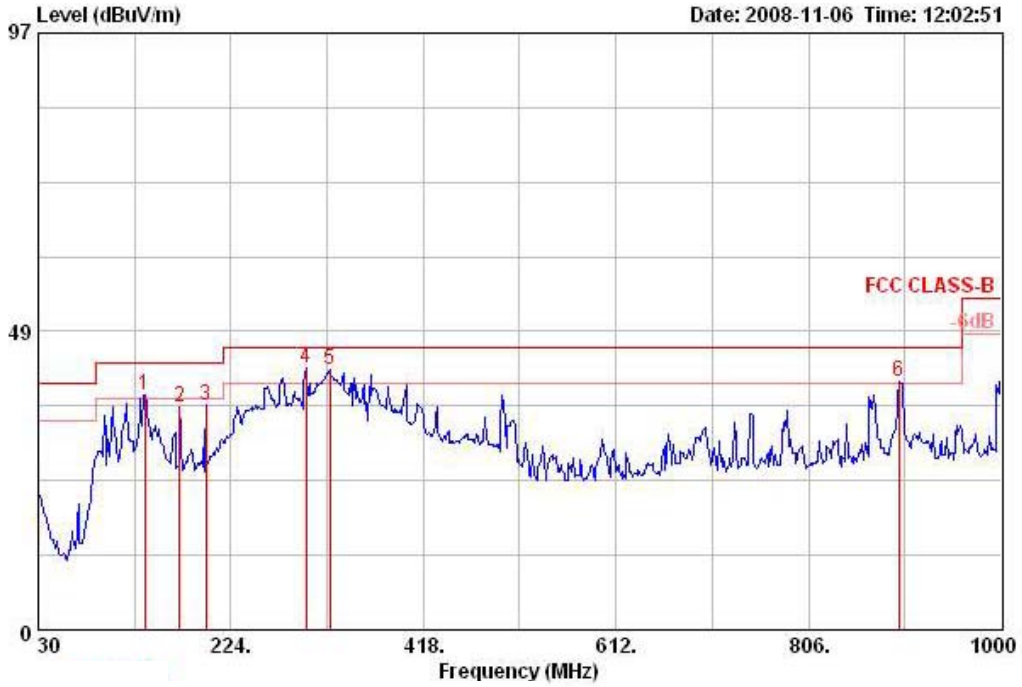
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.5.8. Results of Radiated Emissions (30MHz~1GHz)

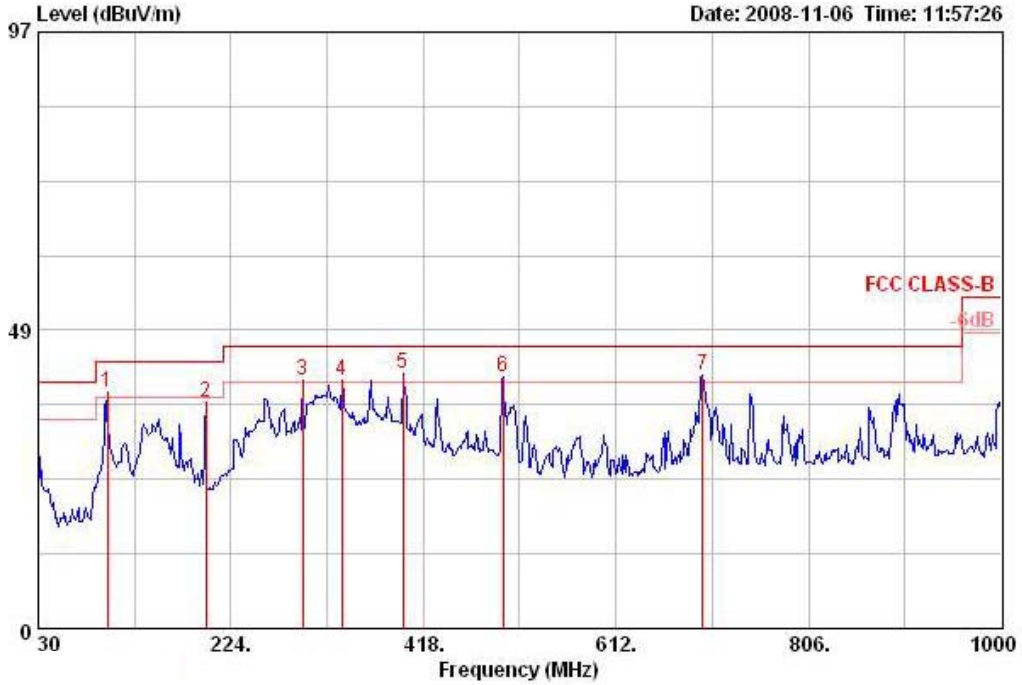
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Normal Link / Mode 1

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	137.670	38.23	-5.27	43.50	51.93	12.33	27.41	1.38	Peak	HORIZONTAL	0	100
2	172.590	36.19	-7.31	43.50	48.88	12.97	27.23	1.56	Peak	HORIZONTAL	0	100
3	198.780	36.60	-6.90	43.50	52.76	9.25	27.11	1.70	Peak	HORIZONTAL	0	100
4 @	299.660	42.47	-3.53	46.00	53.91	13.36	26.90	2.10	Peak	HORIZONTAL	256	100
5 @	323.910	42.33	-3.67	46.00	53.23	14.02	27.06	2.15	Peak	HORIZONTAL	0	100
6 !	897.180	40.35	-5.65	46.00	43.66	20.51	27.41	3.59	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	99.840	38.34	-5.16	43.50	53.75	10.99	27.60	1.20	Peak	VERTICAL	0	400
2	198.780	36.65	-6.85	43.50	52.81	9.25	27.11	1.70	Peak	VERTICAL	0	400
3 !	296.750	40.38	-5.62	46.00	51.87	13.33	26.91	2.09	Peak	VERTICAL	0	400
4 !	335.550	40.41	-5.59	46.00	51.06	14.33	27.15	2.17	Peak	VERTICAL	0	400
5 !	397.630	41.58	-4.42	46.00	50.86	16.01	27.58	2.30	Peak	VERTICAL	197	100
6 !	498.510	40.92	-5.08	46.00	48.71	17.60	28.09	2.70	Peak	VERTICAL	0	400
7 !	699.300	41.29	-4.71	46.00	46.90	19.09	28.00	3.30	Peak	VERTICAL	0	400

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

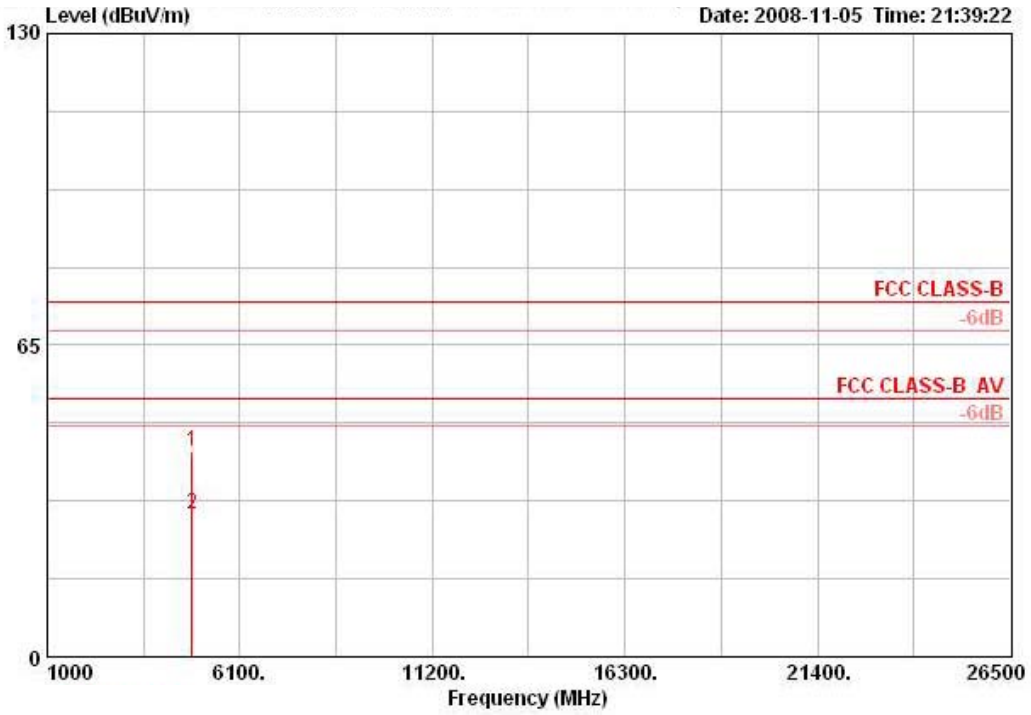
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.9. Results for Radiated Emissions (1GHz~10th Harmonic)

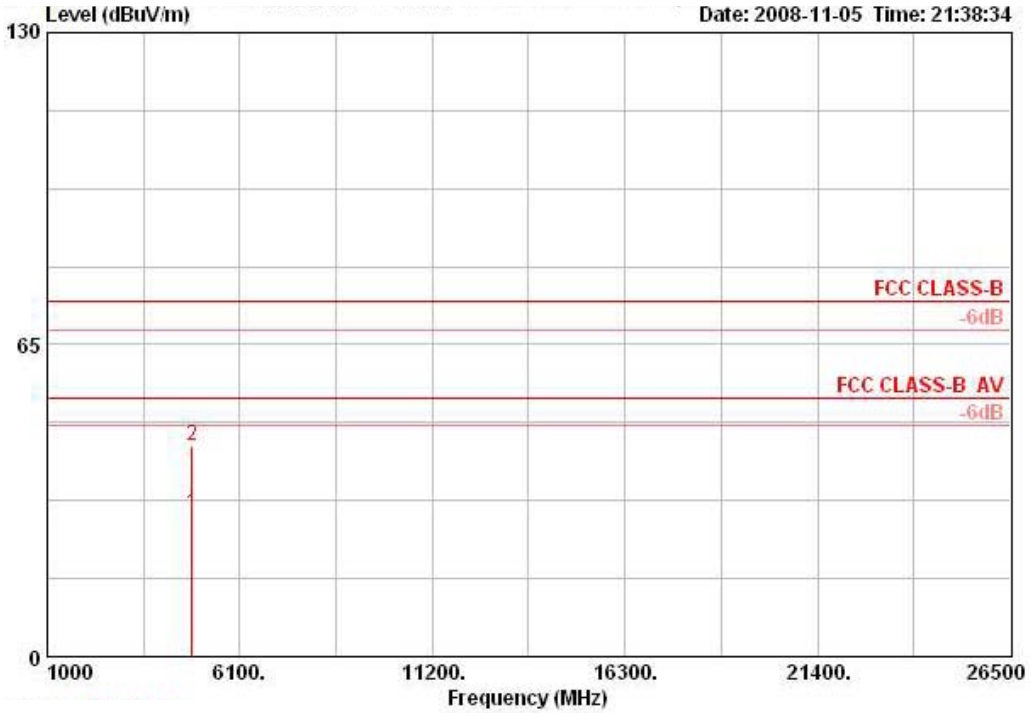
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 20MHz Ch 1 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4825.200	42.85	-31.15	74.00	41.02	33.06	3.94	35.16	PEAK	100	HORIZONTAL
2	4825.950	29.86	-24.14	54.00	28.04	33.06	3.94	35.16	AVERAGE	100	HORIZONTAL

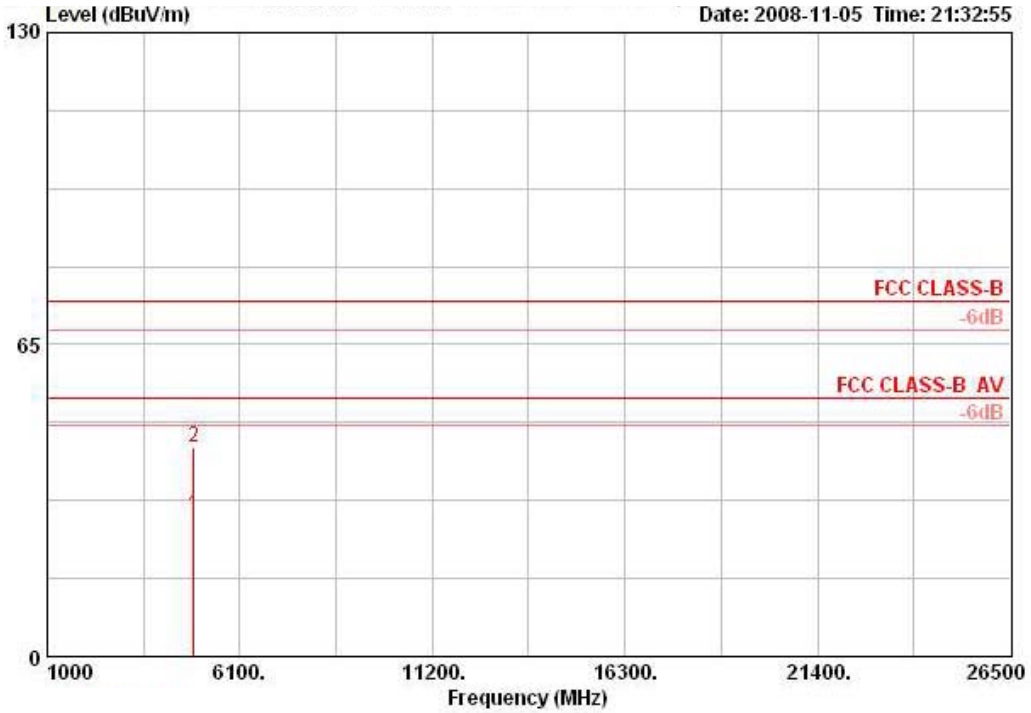
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4826.360	29.64	-24.36	54.00	27.82	33.06	3.94	35.16	AVERAGE	100	VERTICAL
2	4826.380	44.09	-29.91	74.00	42.26	33.06	3.94	35.16	PEAK	100	VERTICAL

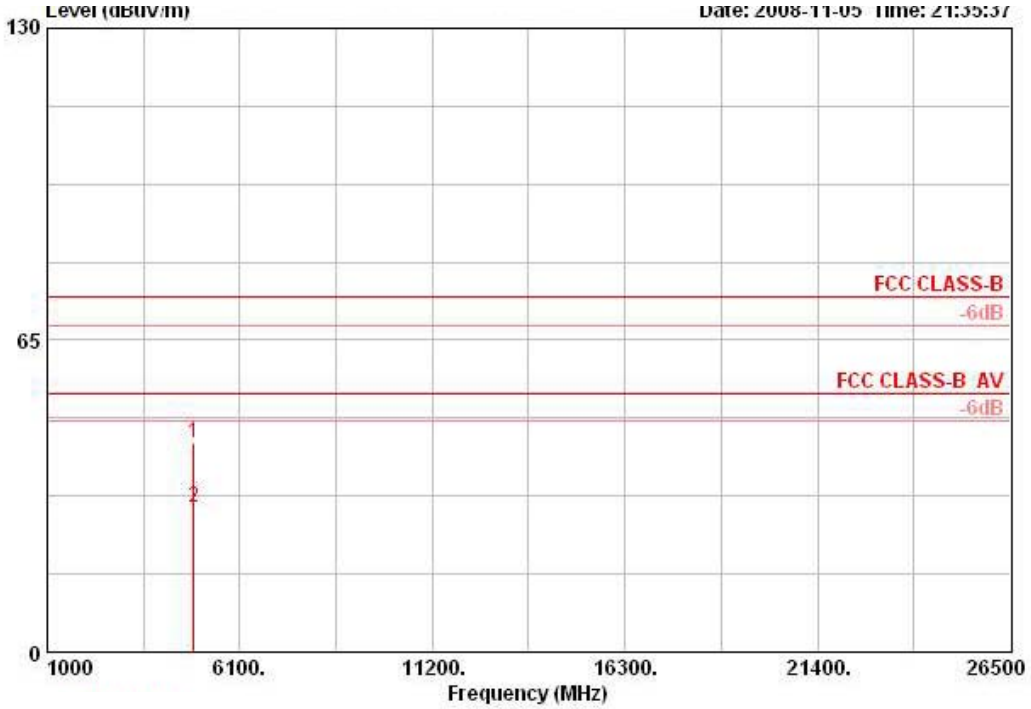
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 20MHz Ch 6 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4872.390	29.57	-24.43	54.00	27.60	33.16	3.96	35.15	AVERAGE	100	HORIZONTAL
2	4873.620	43.46	-30.54	74.00	41.49	33.16	3.96	35.15	PEAK	100	HORIZONTAL

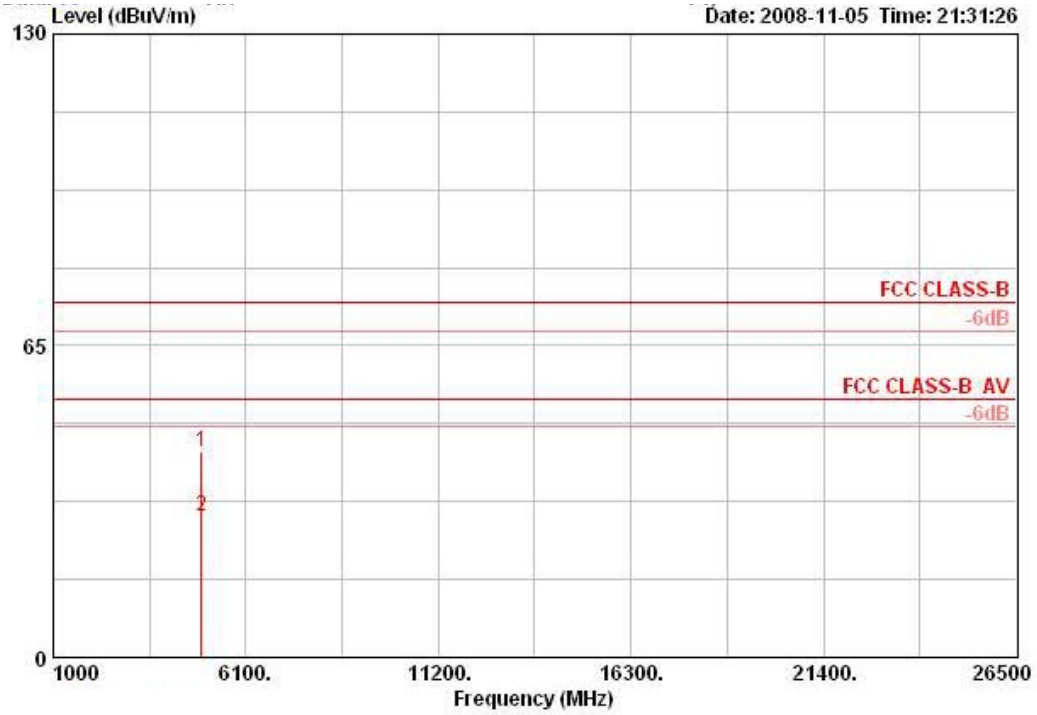
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4872.070	43.41	-30.59	74.00	41.45	33.16	3.96	35.15	PEAK	100	VERTICAL
2	4873.220	30.26	-23.74	54.00	28.29	33.16	3.96	35.15	AVERAGE	100	VERTICAL

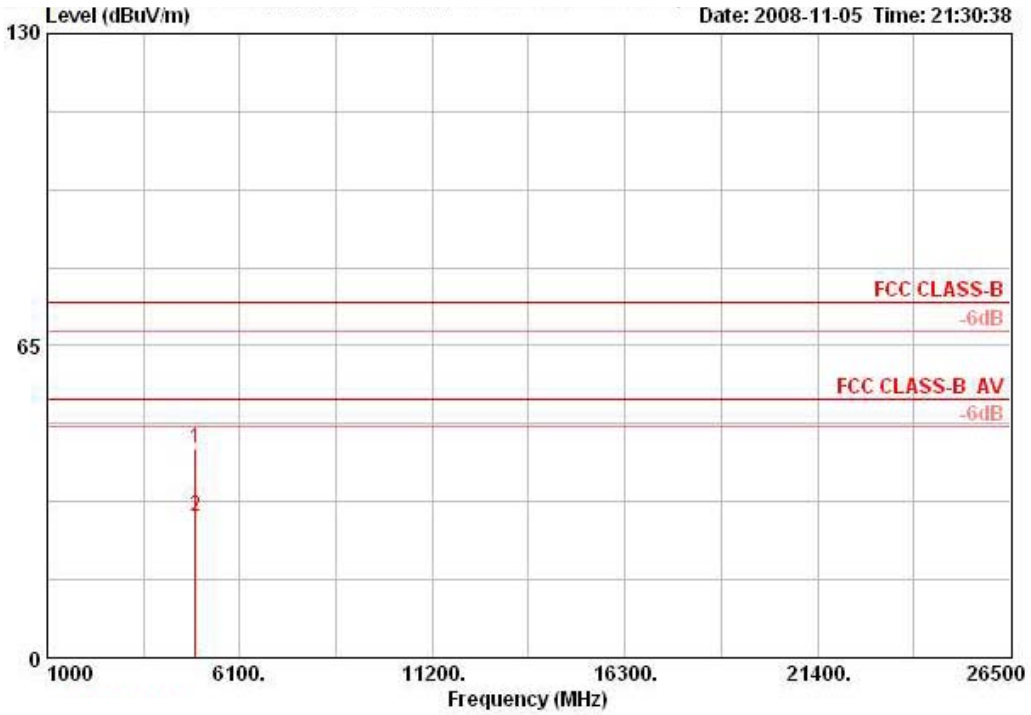
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 20MHz Ch11 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4925.220	42.96	-31.04	74.00	40.85	33.26	3.98	35.14	PEAK	100	HORIZONTAL
2	4925.820	29.50	-24.50	54.00	27.40	33.26	3.98	35.14	AVERAGE	100	HORIZONTAL

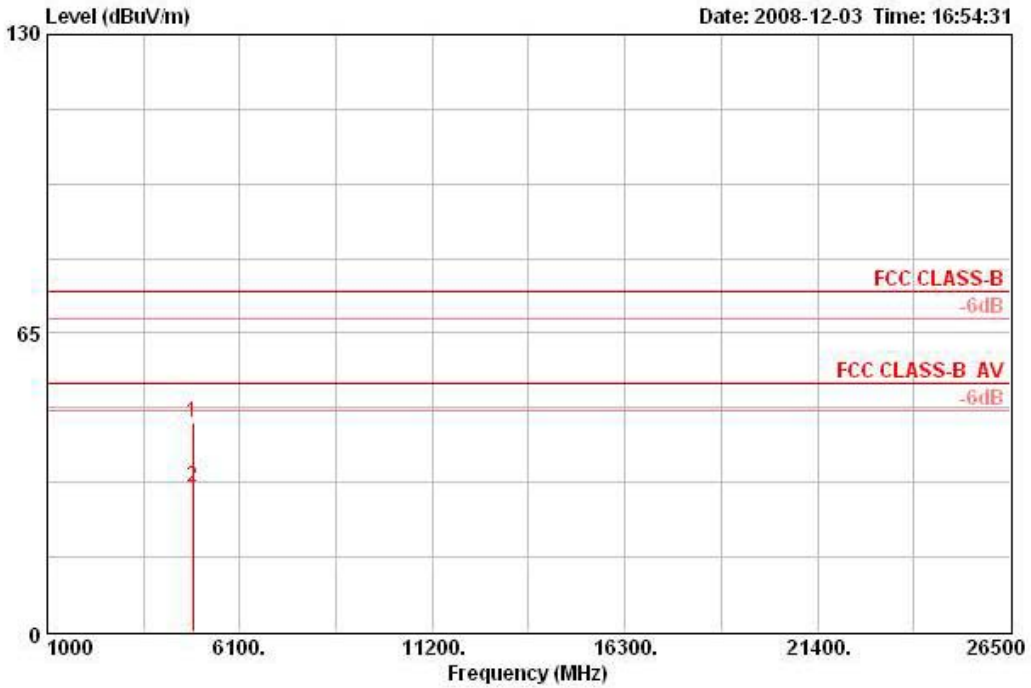
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4927.860	43.68	-30.32	74.00	41.57	33.26	3.98	35.14	PEAK	100	VERTICAL
2	4928.740	29.43	-24.57	54.00	27.33	33.26	3.98	35.14	AVERAGE	100	VERTICAL

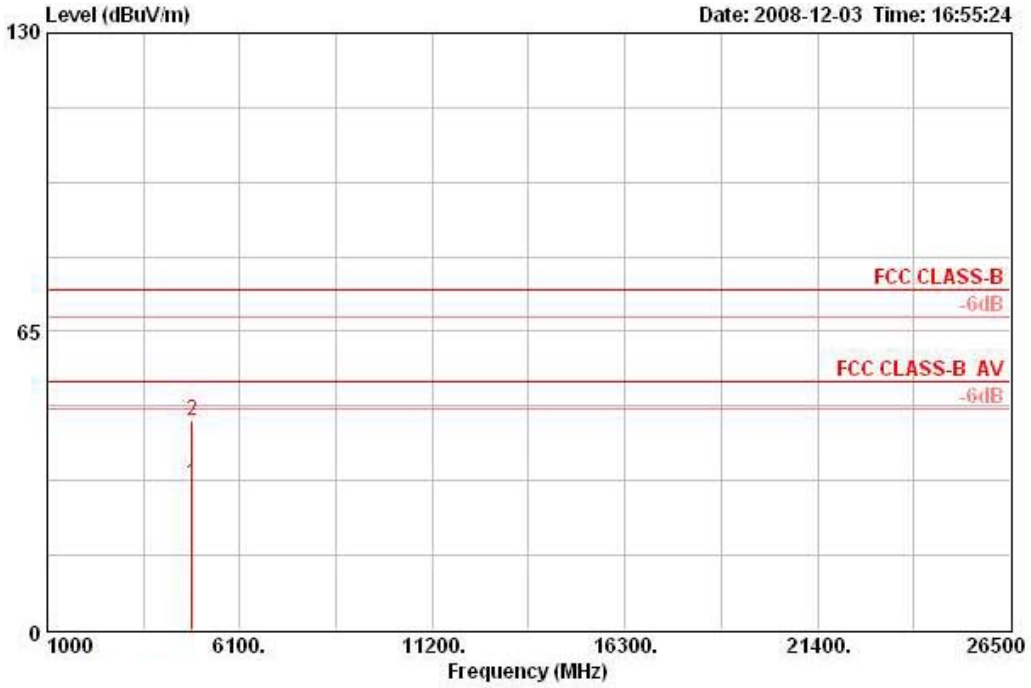
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 40MHz Ch 3 / Mode 2

Horizontal



	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	4845.280	45.38	-28.62	43.38	33.09	35.03	3.95	100	360	PEAK	HORIZONTAL
2	4846.480	31.56	-22.44	29.55	33.09	35.03	3.95	100	360	AVERAGE	HORIZONTAL

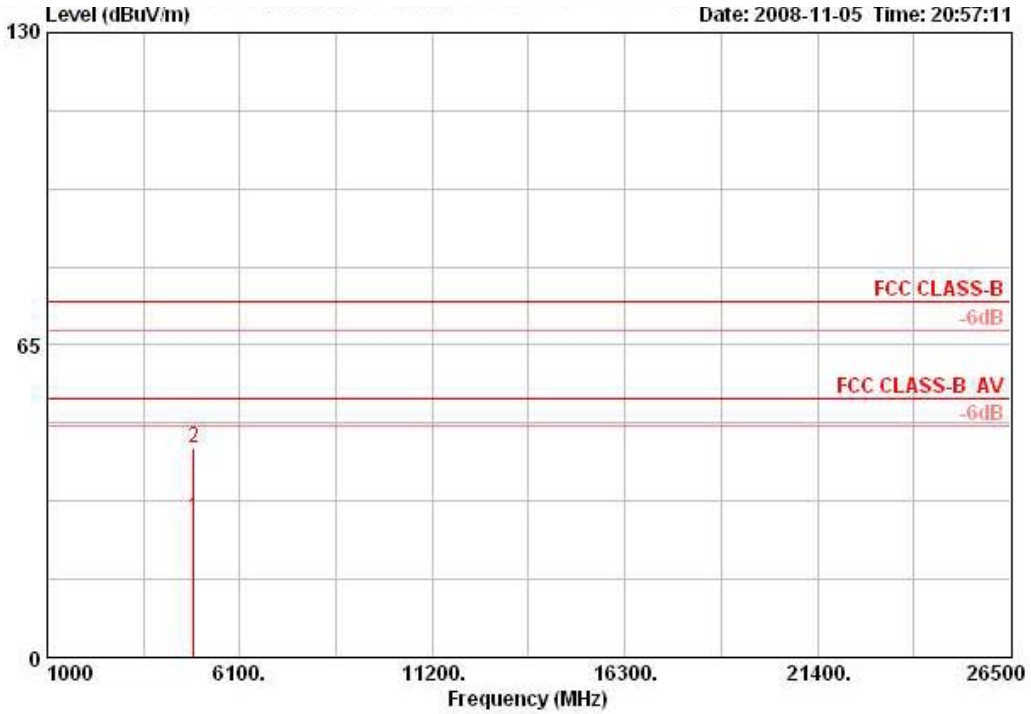
Vertical



	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1 @	4844.230	31.81	-22.19	29.80	33.09	35.03	3.95	100	0	AVERAGE	VERTICAL
2	4845.100	45.56	-28.44	43.55	33.09	35.03	3.95	100	0	PEAK	VERTICAL

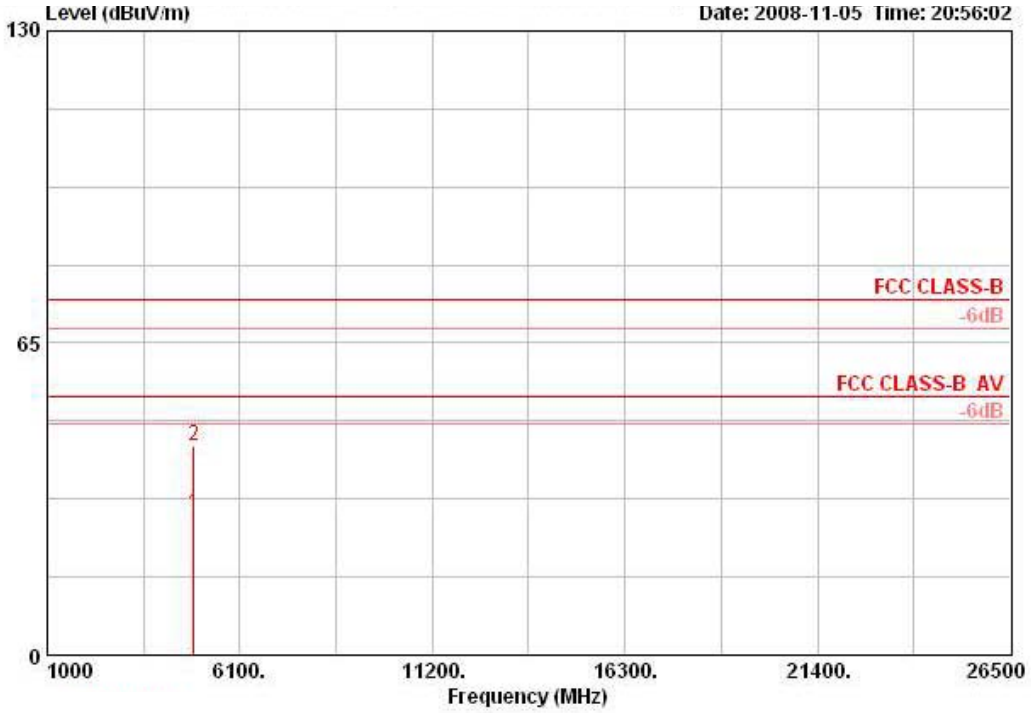
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 40MHz Ch 6 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4871.620	29.20	-24.80	54.00	27.24	33.16	3.96	35.15	AVERAGE	100	HORIZONTAL
2	4871.630	43.42	-30.58	74.00	41.46	33.16	3.96	35.15	PEAK	100	HORIZONTAL

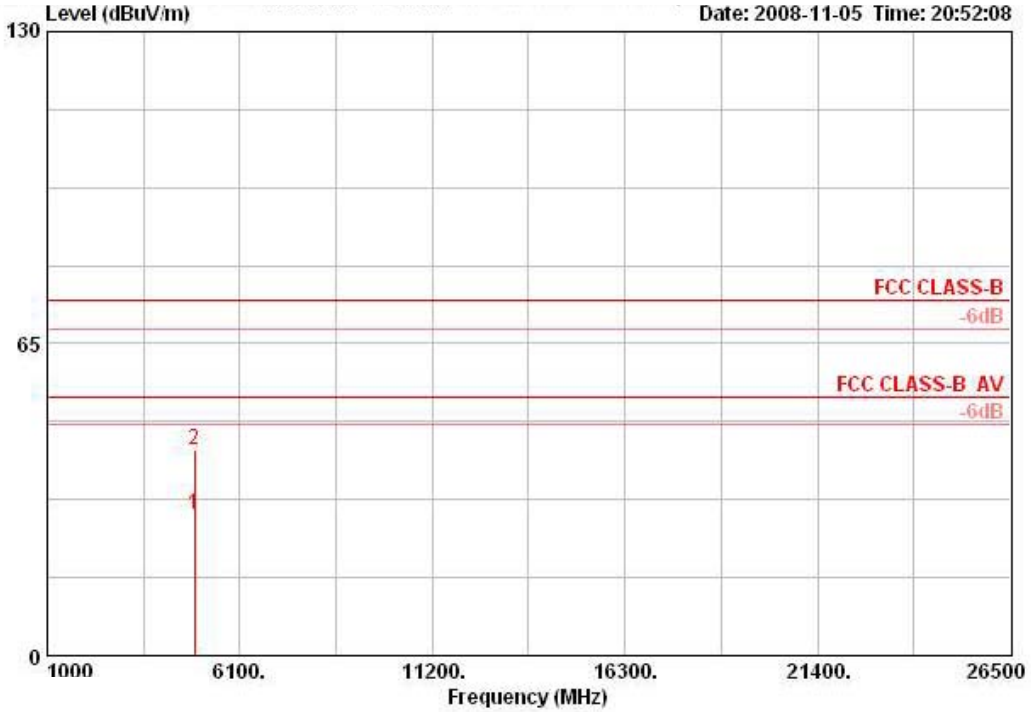
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4871.740	29.56	-24.44	54.00	27.59	33.16	3.96	35.15	AVERAGE	100	VERTICAL
2	4872.040	43.71	-30.29	74.00	41.75	33.16	3.96	35.15	PEAK	100	VERTICAL

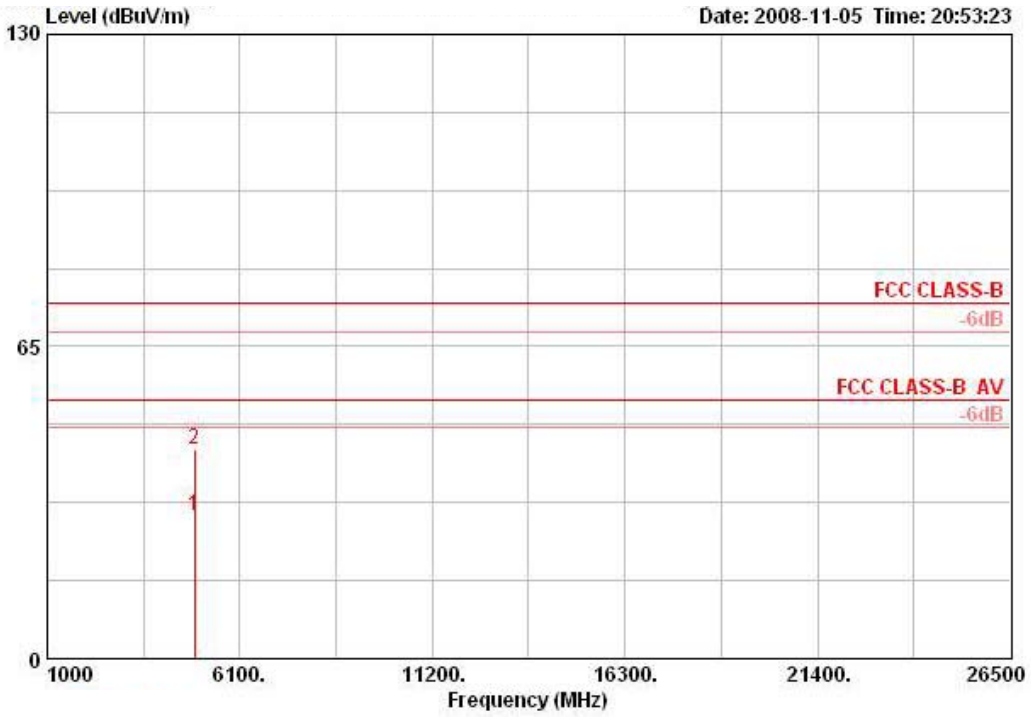
Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 40MHz Ch 9 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4904.780	29.48	-24.52	54.00	27.43	33.23	3.97	35.15	AVERAGE	100	HORIZONTAL
2	4905.750	42.97	-31.03	74.00	40.92	33.23	3.97	35.15	PEAK	100	HORIZONTAL

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4904.420	29.79	-24.21	54.00	27.77	33.19	3.97	35.15	AVERAGE	100	VERTICAL
2	4905.930	43.41	-30.59	74.00	41.36	33.23	3.97	35.15	PEAK	100	VERTICAL

Note:

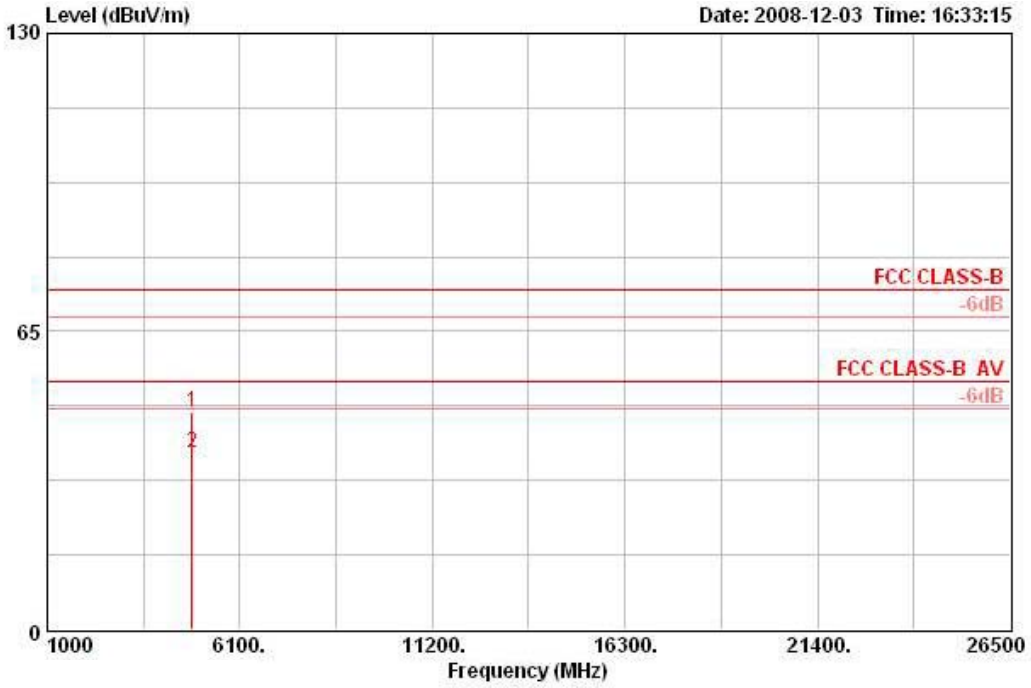
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

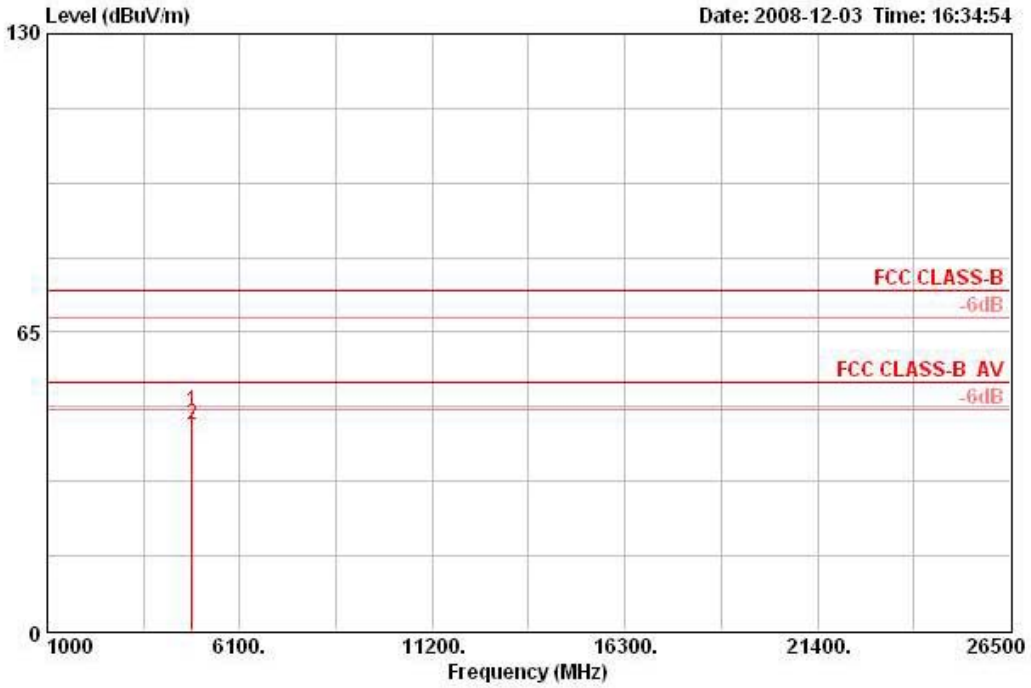
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11b CH 1 / Mode 2

Horizontal



	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	4824.120	47.33	-26.67	45.37	33.06	35.04	3.94	181	169	PEAK	HORIZONTAL
2 @	4824.230	38.67	-15.33	36.71	33.06	35.04	3.94	181	169	AVERAGE	HORIZONTAL

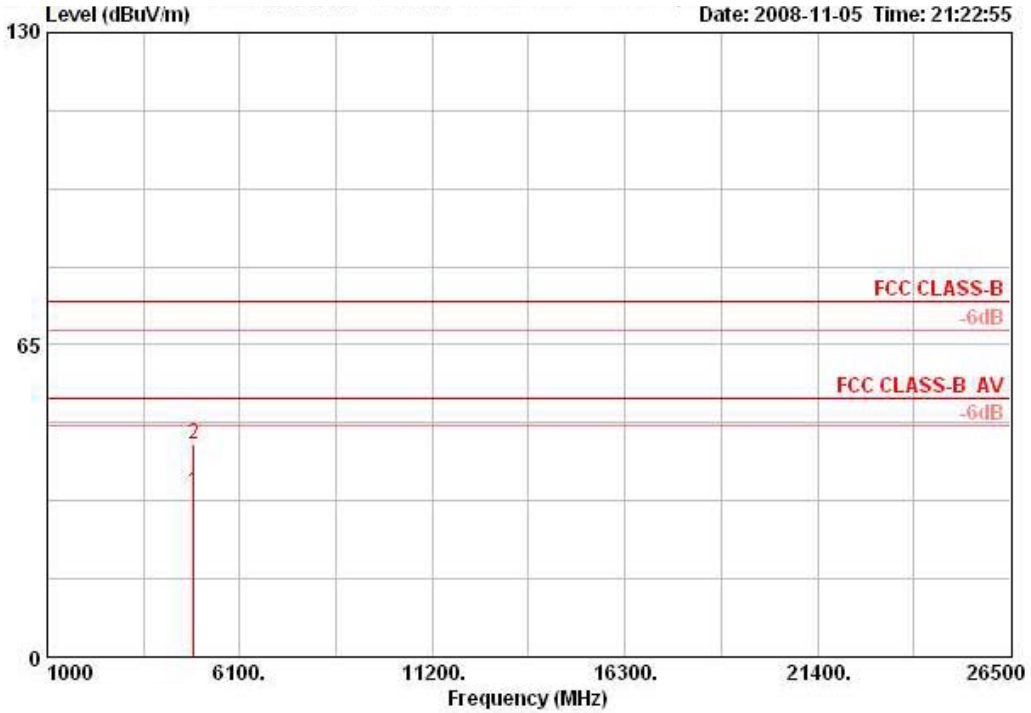
Vertical



	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	4824.150	47.89	-26.11	45.94	33.06	35.04	3.94	100	173	PEAK	VERTICAL
2 @	4824.250	44.66	-9.34	42.70	33.06	35.04	3.94	100	173	AVERAGE	VERTICAL

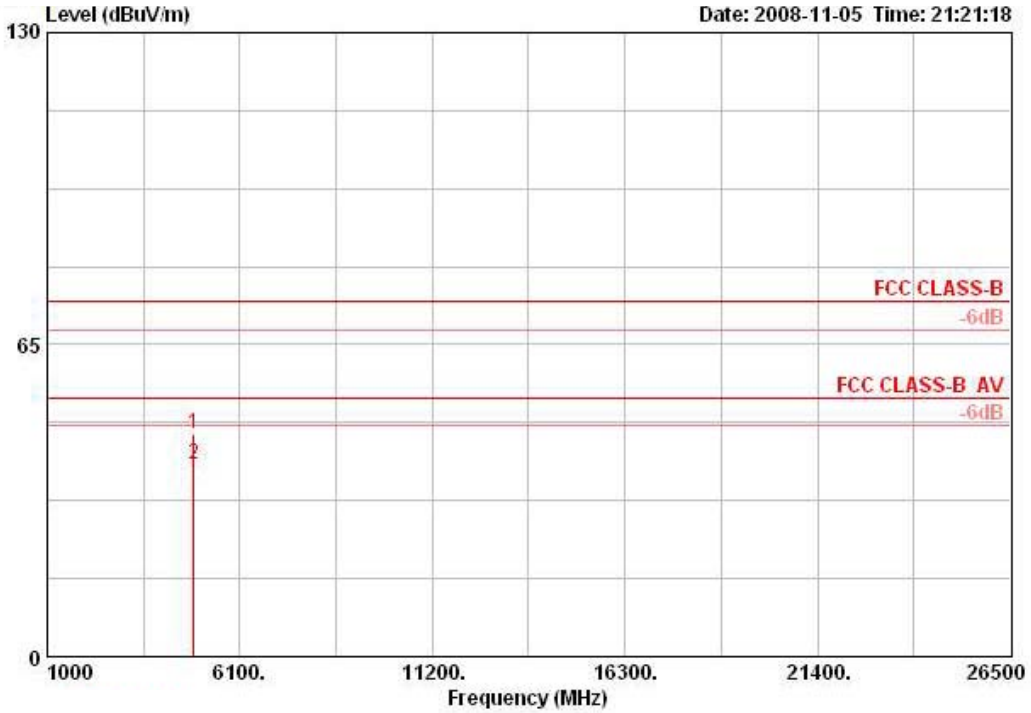
Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11b CH 6 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4874.240	34.35	-19.65	54.00	32.39	33.16	3.96	35.15	AVERAGE	150	HORIZONTAL
2	4874.540	44.32	-29.68	74.00	42.35	33.16	3.96	35.15	PEAK	150	HORIZONTAL

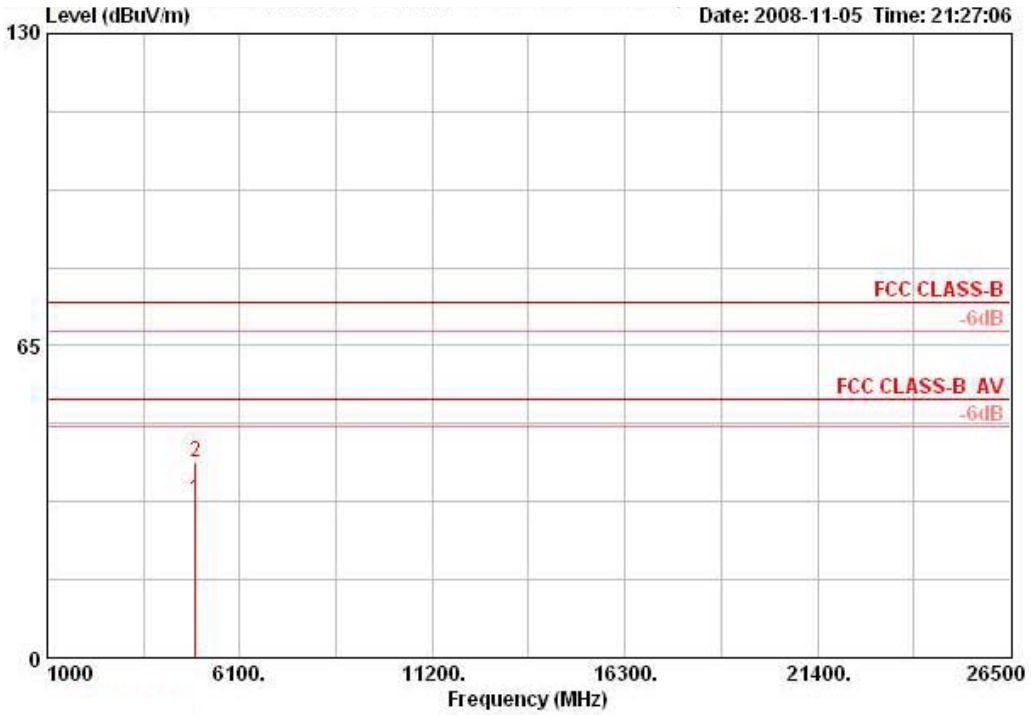
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4874.100	46.24	-27.76	74.00	44.27	33.16	3.96	35.15	PEAK	100	VERTICAL
2	4874.220	40.11	-13.89	54.00	38.14	33.16	3.96	35.15	AVERAGE	100	VERTICAL

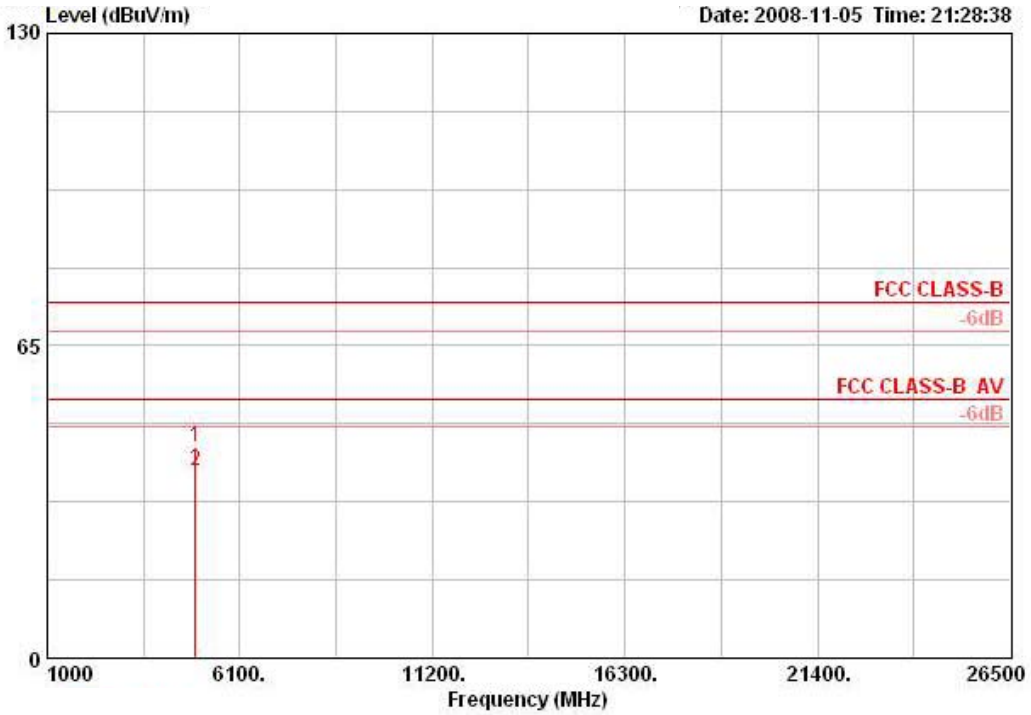
Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11b CH 11/ Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4924.240	32.82	-21.18	54.00	30.71	33.26	3.98	35.14	AVERAGE	148	HORIZONTAL
2	4924.480	40.82	-33.18	74.00	38.71	33.26	3.98	35.14	PEAK	148	HORIZONTAL

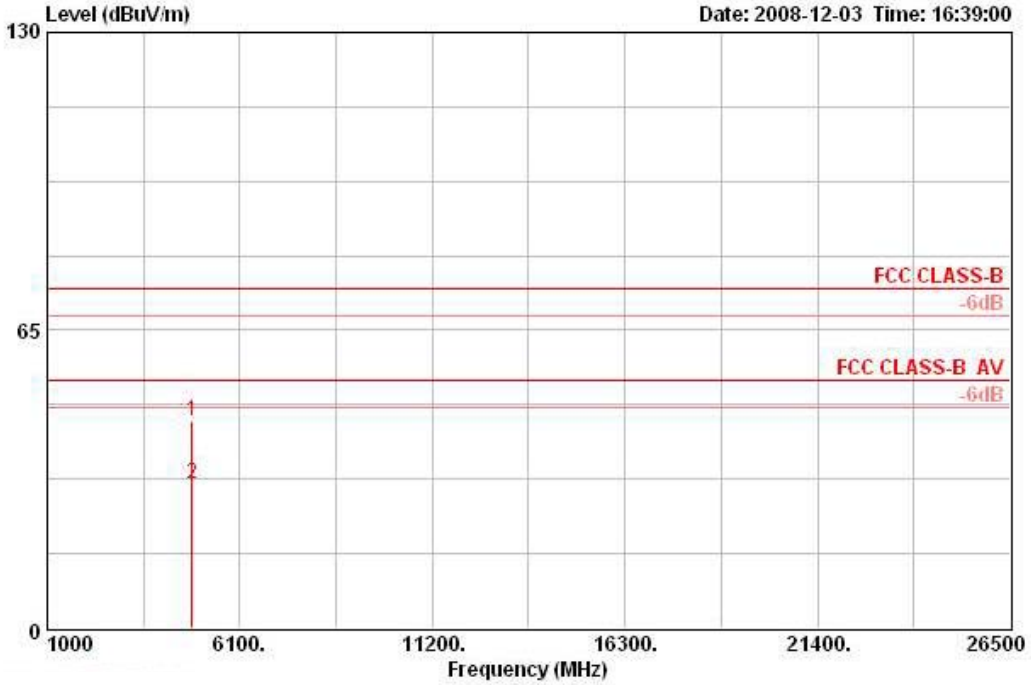
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4923.920	43.76	-30.24	74.00	41.66	33.26	3.98	35.14	PEAK	100	VERTICAL
2	4924.220	38.79	-15.21	54.00	36.68	33.26	3.98	35.14	AVERAGE	100	VERTICAL

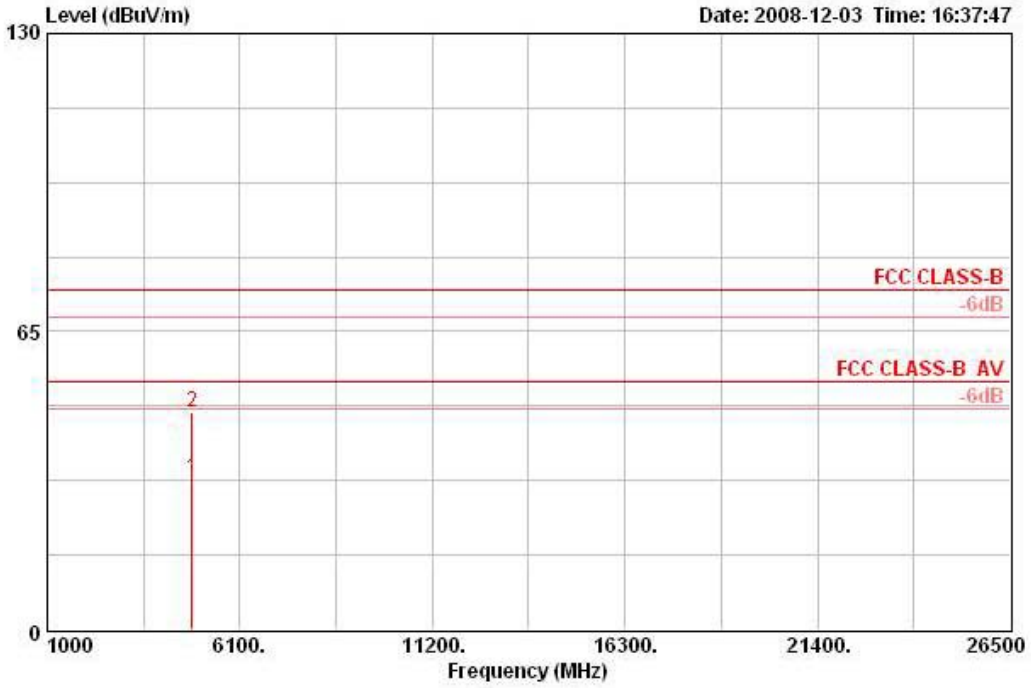
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11g CH 1 / Mode 2

Horizontal



	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	4827.750	45.01	-28.99	43.05	33.06	35.04	3.94	100	361	PEAK	HORIZONTAL
2	4827.960	31.34	-22.66	29.38	33.06	35.04	3.94	100	361	AVERAGE	HORIZONTAL

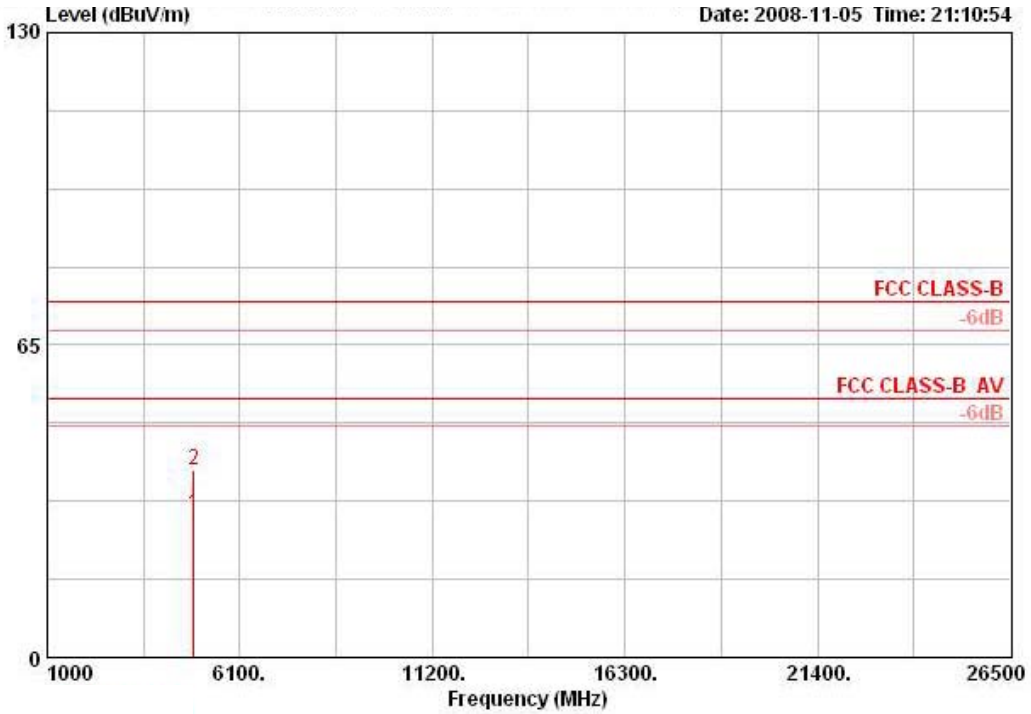
Vertical



	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1 @	4826.850	33.07	-20.93	31.11	33.06	35.04	3.94	100	173	AVERAGE	VERTICAL
2	4829.900	47.48	-26.52	45.51	33.06	35.04	3.95	100	173	PEAK	VERTICAL

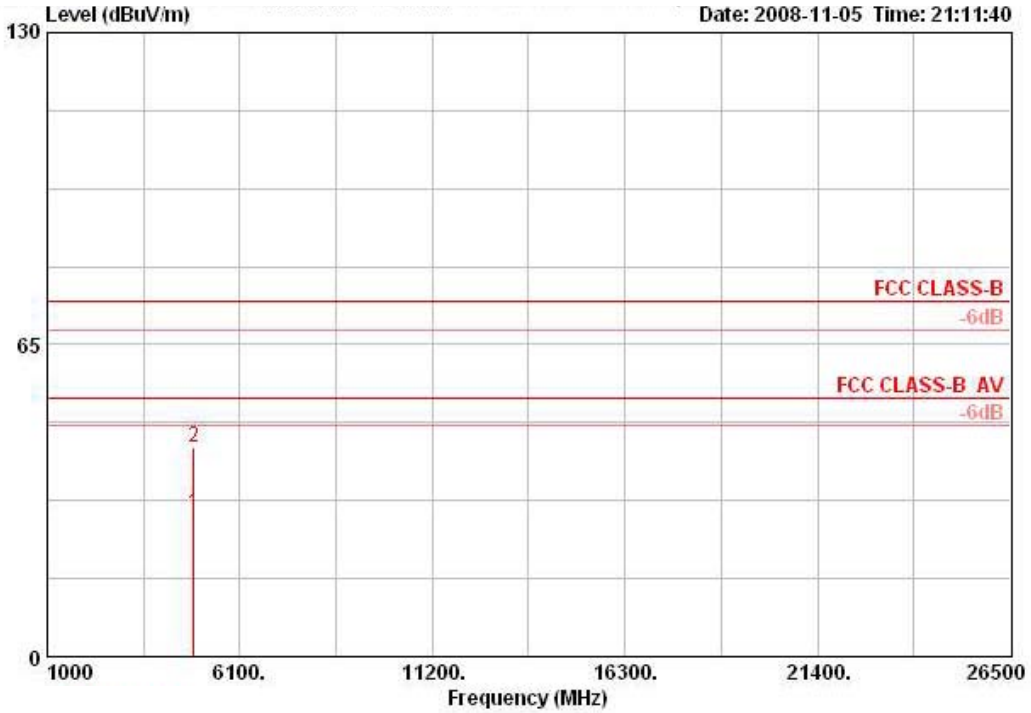
Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11g CH 6 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4869.180	29.72	-24.28	54.00	27.79	33.12	3.96	35.15	AVERAGE	100	HORIZONTAL
2	4872.000	38.81	-35.19	74.00	36.84	33.16	3.96	35.15	PEAK	100	HORIZONTAL

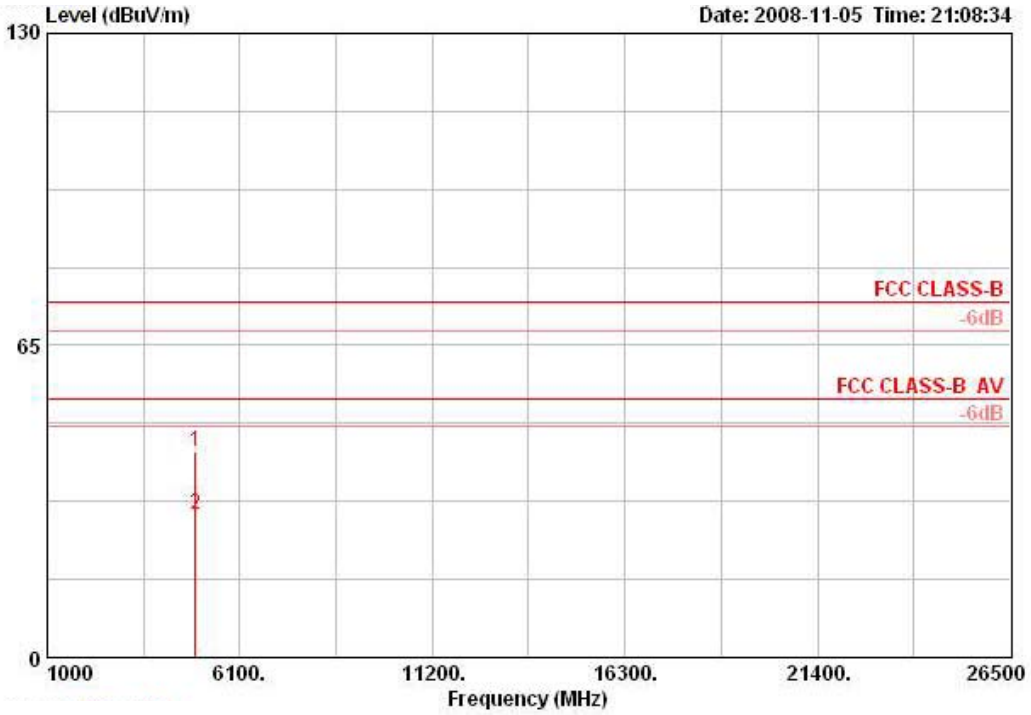
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4870.960	29.66	-24.34	54.00	27.69	33.16	3.96	35.15	AVERAGE	100	VERTICAL
2	4871.480	43.62	-30.38	74.00	41.65	33.16	3.96	35.15	PEAK	100	VERTICAL

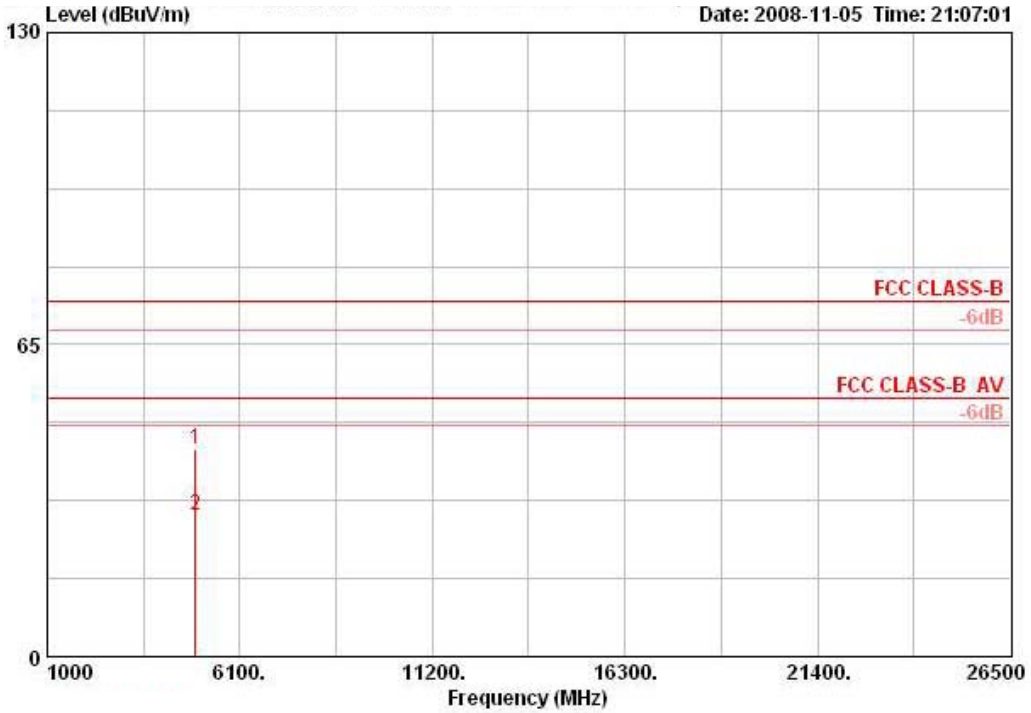
Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11g CH 11 / Mode 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4925.060	42.78	-31.22	74.00	40.67	33.26	3.98	35.14	PEAK	100	HORIZONTAL
2	4925.760	29.64	-24.36	54.00	27.53	33.26	3.98	35.14	AVERAGE	100	HORIZONTAL

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	4923.340	43.23	-30.77	74.00	41.12	33.26	3.98	35.14	PEAK	100	VERTICAL
2	4927.000	29.53	-24.47	54.00	27.43	33.26	3.98	35.14	AVERAGE	100	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6. Band Edge Emissions Measurement

4.6.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100 KHz /100 KHz for Peak

4.6.3. Test Procedures

1. The test procedure is the same as section 4.5.3, only the freqeuncy range investigated is limited to 100MHz around bandedges.
2. In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice DA00-705 will be followed.

4.6.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.5.4.

4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Test Result of Band Edge and Fundamental Emissions

Temperature	25°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 20MHz Ch 1, 6, 11 / Mode 2
Test Date	Nov. 05, 2008		

Channel 1

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1 *	2389.800	69.85	-4.15	74.00	38.97	28.17	2.71	0.00	PEAK	100	HORIZONTAL
2 *	2390.000	48.04	-5.96	54.00	17.16	28.17	2.71	0.00	AVERAGE	100	HORIZONTAL
3	2410.000	101.37			70.43	28.21	2.73	0.00	PEAK	100	HORIZONTAL
4	2413.800	90.64			59.70	28.21	2.73	0.00	AVERAGE	100	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz

Channel 6

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2380.200	55.61	-18.39	74.00	24.77	28.13	2.71	0.00	PEAK	100	VERTICAL
2	2385.000	42.94	-11.06	54.00	12.06	28.17	2.71	0.00	AVERAGE	100	VERTICAL
3	2440.200	89.42			58.39	28.29	2.74	0.00	AVERAGE	100	VERTICAL
4	2440.200	100.27			69.24	28.29	2.74	0.00	PEAK	100	VERTICAL
5 *	2489.100	48.21	-5.79	54.00	17.02	28.41	2.77	0.00	AVERAGE	100	VERTICAL
6	2489.400	59.61	-14.39	74.00	28.42	28.41	2.77	0.00	PEAK	100	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 11

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1 @	2465.200	93.10			62.02	28.33	2.76	0.00	AVERAGE	100	VERTICAL
2	2465.400	104.20			73.12	28.33	2.76	0.00	PEAK	100	VERTICAL
3	2483.900	47.15	-6.85	54.00	16.01	28.37	2.77	0.00	AVERAGE	100	VERTICAL
4	2485.700	65.76	-8.24	74.00	34.58	28.41	2.77	0.00	PEAK	100	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	Draft n MCS0 40MHz Ch 3, 6, 9 / Mode 2
Test Date	Nov. 05, 2008		

Channel 3

	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1 @	2385.600	69.89	-4.11	39.01	28.17	0.00	2.71	127	152	PEAK	HORIZONTAL
2 @	2390.000	53.09	-0.91	22.21	28.17	0.00	2.71	127	152	AVERAGE	HORIZONTAL
3 @	2416.400	91.95			28.21	0.00	2.73	127	152	AVERAGE	HORIZONTAL
4	2417.200	102.57			28.25	0.00	2.73	127	152	PEAK	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Channel 6

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2390.000	45.73	-8.27	54.00	14.85	28.17	2.71	0.00	AVERAGE	100	VERTICAL
2	2390.000	59.32	-14.68	74.00	28.44	28.17	2.71	0.00	PEAK	100	VERTICAL
3	2435.400	88.96			57.93	28.29	2.74	0.00	AVERAGE	100	VERTICAL
4	2442.600	99.32			68.29	28.29	2.74	0.00	PEAK	100	VERTICAL
5	2483.500	62.61	-11.39	74.00	31.47	28.37	2.77	0.00	PEAK	100	VERTICAL
6	2483.500	45.47	-8.53	54.00	14.33	28.37	2.77	0.00	AVERAGE	100	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 9

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2468.400	99.10			67.97	28.37	2.76	0.00	PEAK	105	VERTICAL
2	2468.400	89.03			57.90	28.37	2.76	0.00	AVERAGE	105	VERTICAL
3 *	2483.500	49.70	-4.30	54.00	18.55	28.37	2.77	0.00	AVERAGE	105	VERTICAL
4 *	2484.700	69.67	-4.33	74.00	38.53	28.37	2.77	0.00	PEAK	105	VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11b CH 1, 6, 11 / Mode 2
Test Date	Nov. 05, 2008		

Channel 1

	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1 @	2385.800	48.63	-5.37	17.74	28.17	0.00	2.71	128	153	AVERAGE	HORIZONTAL
2 @	2386.000	59.32	-14.68	28.44	28.17	0.00	2.71	128	153	PEAK	HORIZONTAL
3 @	2409.400	101.64			28.21	0.00	2.73	128	153	AVERAGE	HORIZONTAL
4 ^	2413.600	106.22			28.21	0.00	2.73	128	153	PEAK	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2381.600	55.44	-18.56	74.00	24.59	28.13	2.71	0.00	PEAK	100	VERTICAL
2	2381.600	44.32	-9.68	54.00	13.47	28.13	2.71	0.00	AVERAGE	100	VERTICAL
3	2438.600	103.12			72.09	28.29	2.74	0.00	PEAK	100	VERTICAL
4 @	2439.800	98.56			67.53	28.29	2.74	0.00	AVERAGE	100	VERTICAL
5	2492.700	47.23	-6.77	54.00	16.05	28.41	2.77	0.00	AVERAGE	100	VERTICAL
6	2493.100	58.66	-15.34	74.00	27.47	28.41	2.77	0.00	PEAK	100	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 11

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2463.800	101.33			70.24	28.33	2.76	0.00	PEAK	103	VERTICAL
2 @	2464.800	97.01			65.93	28.33	2.76	0.00	AVERAGE	103	VERTICAL
3	2487.900	60.82	-13.18	74.00	29.63	28.41	2.77	0.00	PEAK	103	VERTICAL
4 *	2488.300	52.62	-1.38	54.00	21.44	28.41	2.77	0.00	AVERAGE	103	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25℃	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11g CH 1, 6, 11 / Mode 2
Test Date	Nov. 05, 2008		

Channel 1

	Freq	Level	Over Limit	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark	Pol/Phase
	MHz	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1 @	2390.000	63.13	-10.87	32.25	28.17	0.00	2.71	128	153	PEAK	HORIZONTAL
2 @	2390.000	48.58	-5.42	17.70	28.17	0.00	2.71	128	153	AVERAGE	HORIZONTAL
3 @	2408.800	95.43			28.21	0.00	2.73	128	153	AVERAGE	HORIZONTAL
4	2413.800	104.41			28.21	0.00	2.73	128	153	PEAK	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2384.200	55.14	-18.86	74.00	24.25	28.17	2.71	0.00	PEAK	101	VERTICAL
2	2384.200	44.60	-9.40	54.00	13.72	28.17	2.71	0.00	AVERAGE	101	VERTICAL
3	2435.800	91.12			60.09	28.29	2.74	0.00	AVERAGE	101	VERTICAL
4	2441.000	101.10			70.07	28.29	2.74	0.00	PEAK	101	VERTICAL
5	2489.800	59.22	-14.78	74.00	28.04	28.41	2.77	0.00	PEAK	101	VERTICAL
6	2489.900	47.99	-6.01	54.00	16.81	28.41	2.77	0.00	AVERAGE	101	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	
1	2468.800	99.49			68.36	28.37	2.76	0.00	PEAK	101	VERTICAL
2	2469.400	92.56			61.43	28.37	2.76	0.00	AVERAGE	101	VERTICAL
3	2483.500	47.89	-6.11	54.00	16.74	28.37	2.77	0.00	AVERAGE	101	VERTICAL
4	2483.700	65.91	-8.09	74.00	34.77	28.37	2.77	0.00	PEAK	101	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

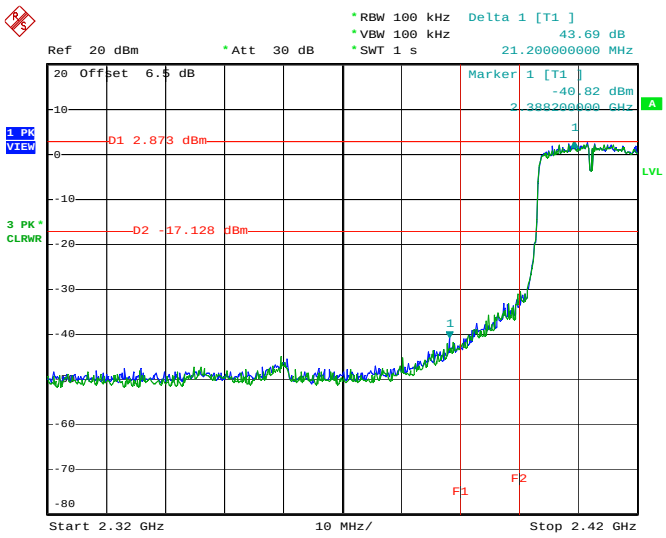
Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

For Emission not in Restricted Band

Low Band Edge Plot on Configuration Draft n MCS0 20MHz Ant. A / 2412 MHz



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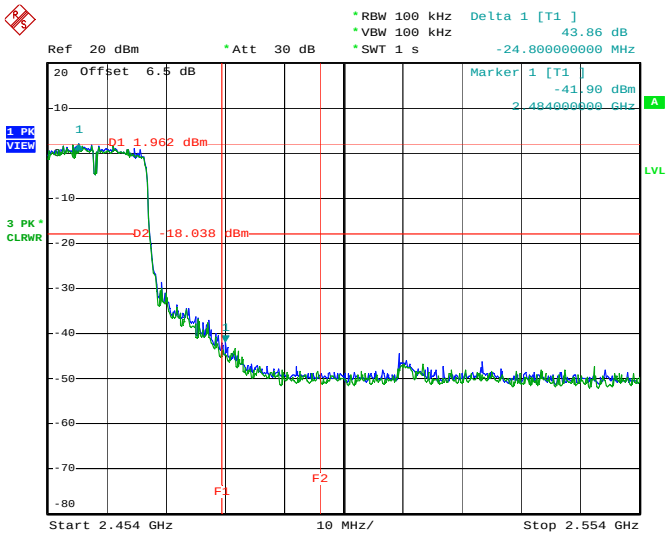
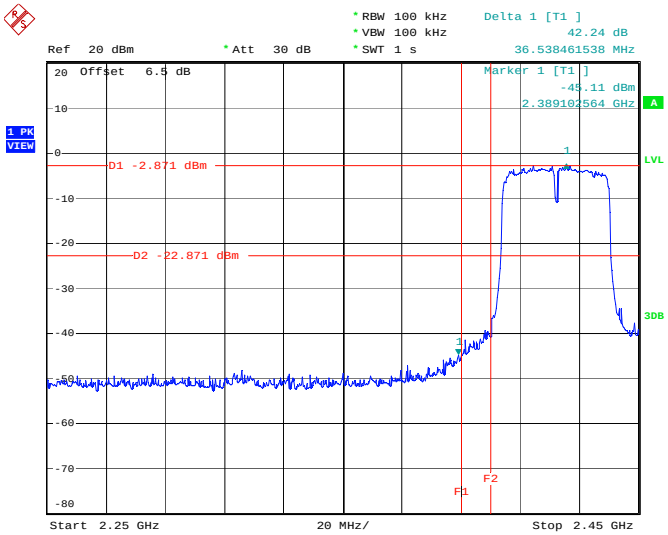
High Band Edge Plot on Configuration Draft n MCS0 20MHz Ant. A / 2462 MHz



Date: 6.NOV.2008 11:47:41

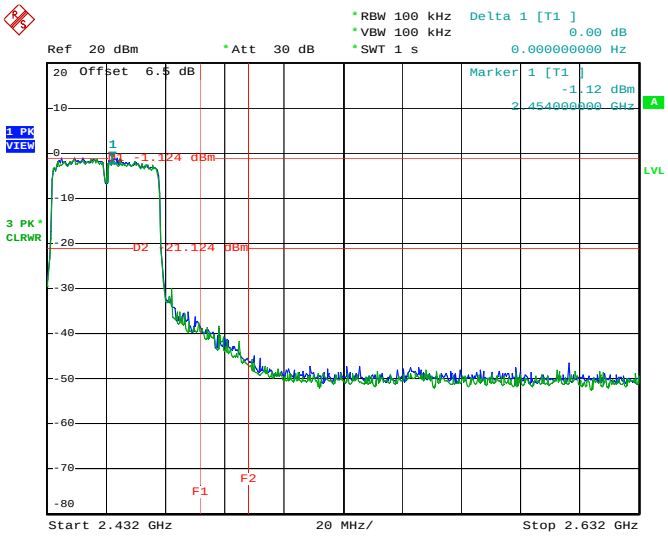
For Emission not in Restricted Band

Low Band Edge Plot on Configuration Draft n MCS0 40MHz Ant. A / 2422 MHz



Date: 3.DEC.2008 16:06:16

High Band Edge Plot on Configuration Draft n MCS0 40MHz Ant. A / 2452 MHz



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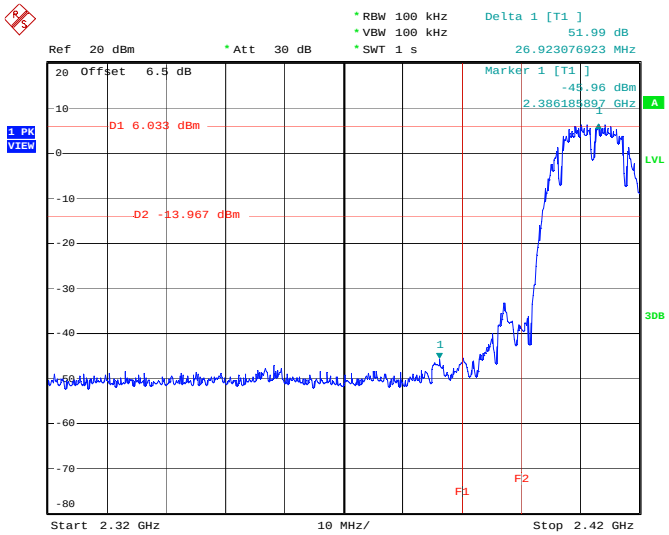
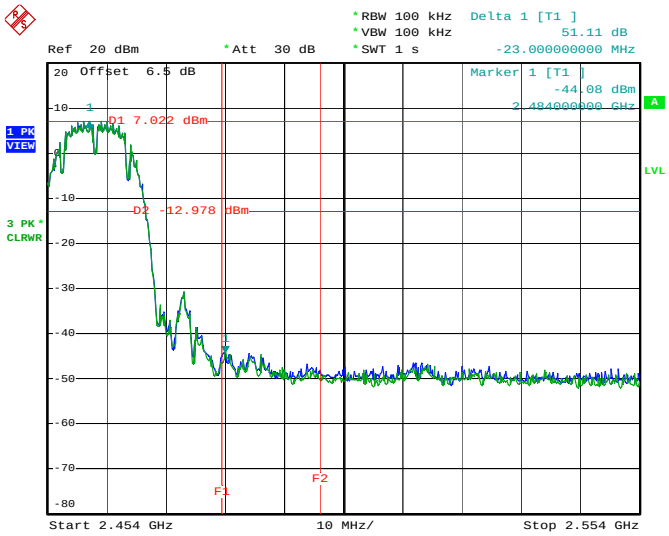
Low Band Edge Plot on Configuration IEEE 802.11b Ant. A / 2412 MHz



Date: 3.DEC.2008 16:22:36

High Band Edge Plot on Configuration IEEE 802.11b Ant. A / 2462 MHz



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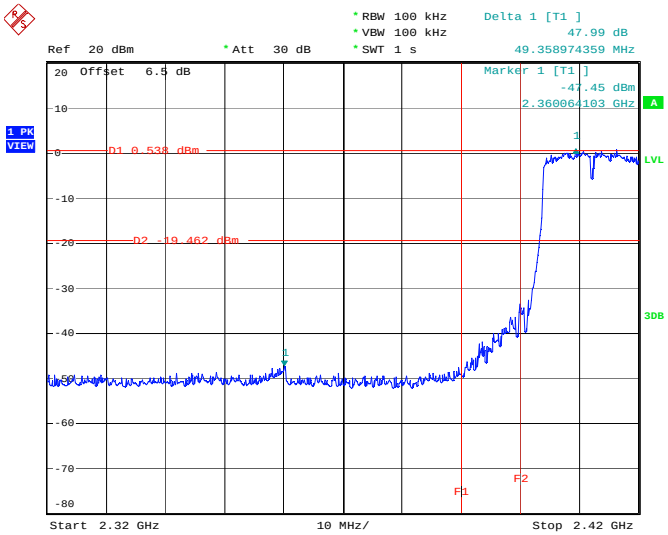
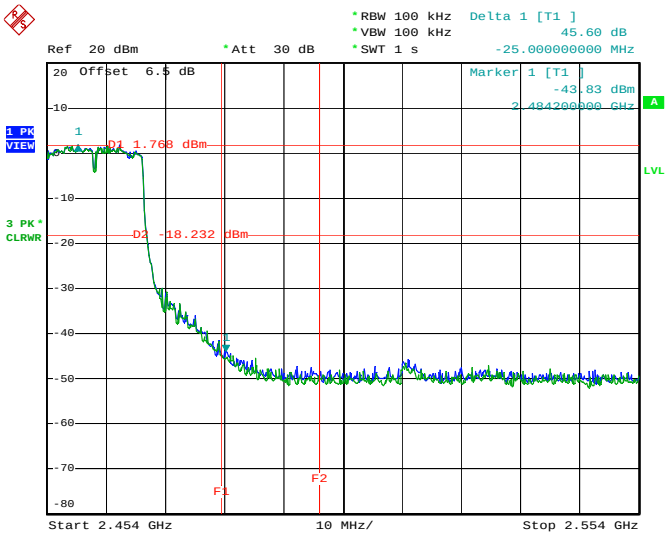
Low Band Edge Plot on Configuration IEEE 802.11g Ant. A / 2412 MHz



Date: 3.DEC.2008 16:00:51

High Band Edge Plot on Configuration IEEE 802.11g Ant. A / 2462 MHz



Date: 6.NOV.2008 11:42:57

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz – 2.75GHz	Mar. 03, 2008	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2008	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2008	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2008	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN ST08	21653	9kHz –30MHz	Mar. 27, 2008	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 14, 2008	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 14, 2008	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jul. 21, 2008	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	9121372	26.5 GHz - 40 GHz	Jan. 22, 2007*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP30	100023	9 kHz - 30 GHz	Oct. 08, 2008	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 23, 2007*	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Jul. 12, 2008	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	Apr. 04, 2008	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jan.18, 2008	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Dec. 03, 2007	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Dec. 03, 2007	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 – 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP30	100023	9kHz ~ 30GHz	Jan. 10, 2008	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jul. 11, 2008	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100458	DC ~ 30GHz	Jul. 11, 2008	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jul. 11, 2008	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	May 30, 2008*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 13, 2008	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Jul. 18, 2008	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 01, 2008	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 01, 2008	Conducted (TH01-HY)
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Nov. 14, 2008	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 10, 2008	Conducted (TH01-HY)
Oscilloscope	Tektonix	TDS380	B016197	400MHz/ 2GS/s	Jun. 27, 2008	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

Note: *Calibration Interval of instruments listed above is two year.

6. TEST LOCATION

SHIJR	ADD	:	6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	:	886-2-2696-2468
	FAX	:	886-2-2696-2255
HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	:	886-3-327-3456
	FAX	:	886-3-318-0055
LINKOU	ADD	:	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	:	886-2-2601-1640
	FAX	:	886-2-2601-1695
DUNGHU	ADD	:	No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	:	886-2-2631-4739
	FAX	:	886-2-2631-9740
JUNGHE	ADD	:	7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	:	886-2-8227-2020
	FAX	:	886-2-8227-2626
NEIHU	ADD	:	4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	:	886-2-2794-8886
	FAX	:	886-2-2794-9777
JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
	TEL	:	886-3-656-9065
	FAX	:	886-3-656-9085

7. TAF CERTIFICATE OF ACCREDITATION

Certificate No. : L1190-070110

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	:	ISO/IEC 17025:2005
Accreditation Number	:	1190
Originally Accredited	:	December 15, 2003
Effective Period	:	January 10, 2007 to January 09, 2010
Accredited Scope	:	Testing Field, see described in the Appendix
Specific Accreditation Program	:	Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 10, 2007

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The Appendix forms an integral part of this Certificate, which shall be invalid when used without the Appendix.