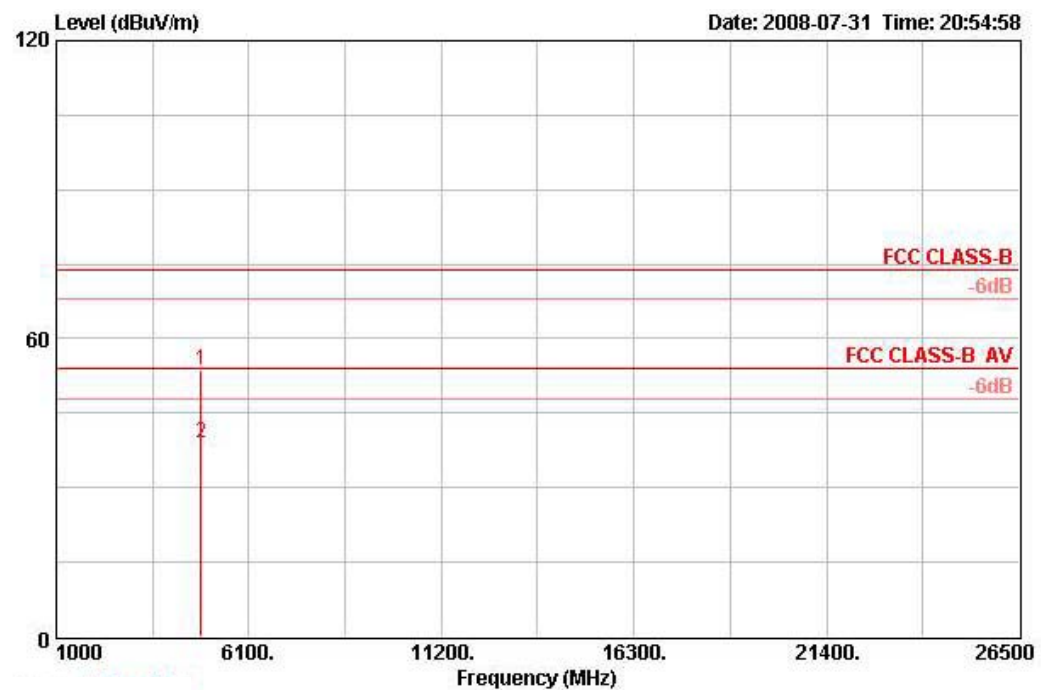


4.5.9. Results for Radiated Emissions (1GHz~10th Harmonic)

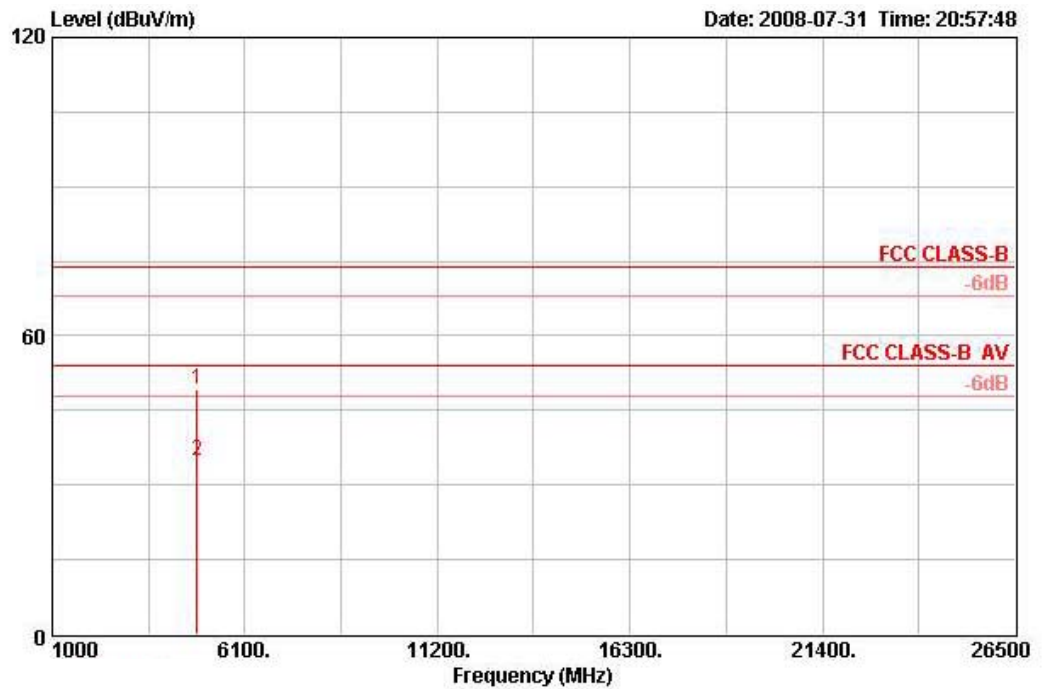
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 1 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4823.000	53.84	-20.16	74.00	52.02	33.06	3.94	35.16	PEAK	208	160	HORIZONTAL
2	4823.700	39.09	-14.91	54.00	37.27	33.06	3.94	35.16	AVERAGE	208	160	HORIZONTAL

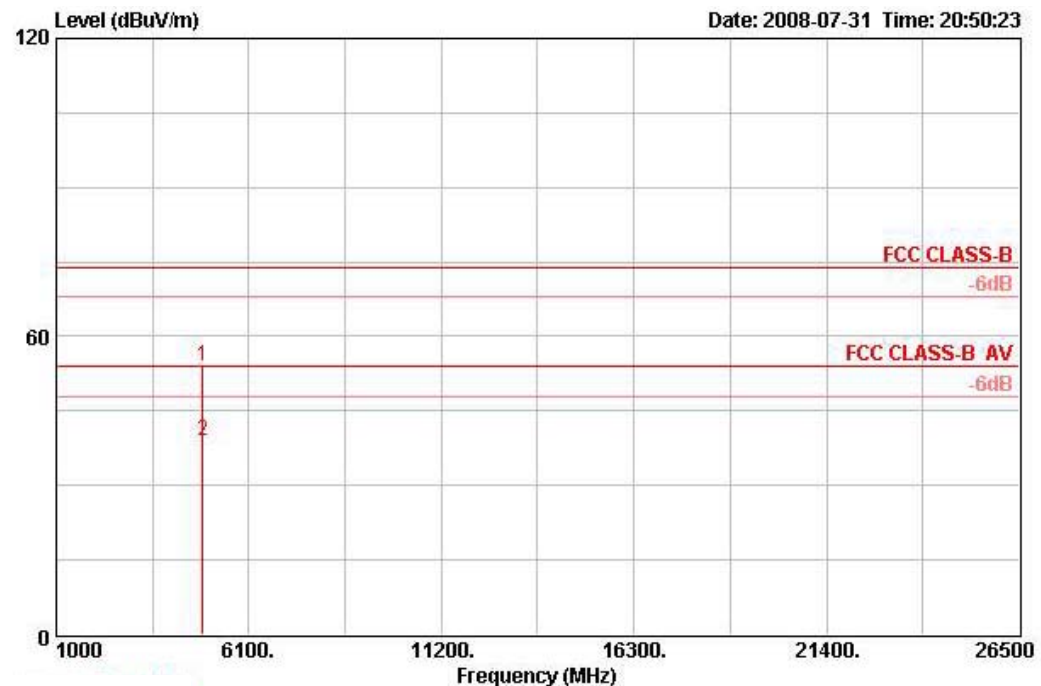
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4823.500	49.26	-24.74	74.00	47.44	33.06	3.94	35.16	PEAK	100	170	VERTICAL
2	4824.200	34.87	-19.13	54.00	33.04	33.06	3.94	35.16	AVERAGE	100	170	VERTICAL

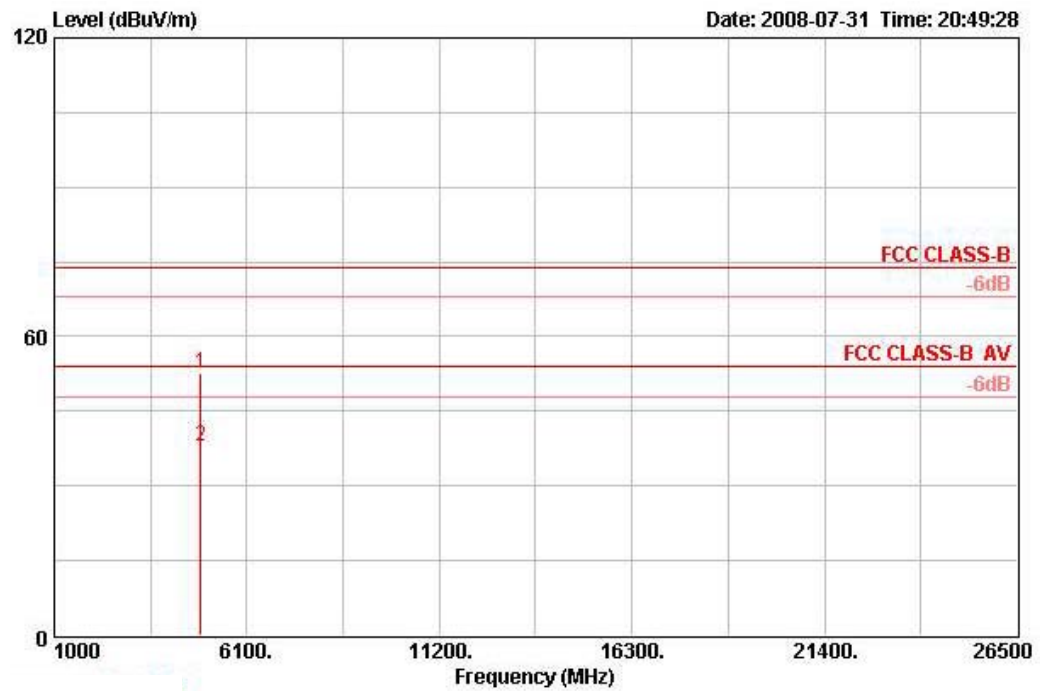
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 6 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4873.300	53.93	-20.07	74.00	51.97	33.16	3.96	35.15	PEAK	170	160	HORIZONTAL
2	4873.600	39.04	-14.96	54.00	37.07	33.16	3.96	35.15	AVERAGE	170	160	HORIZONTAL

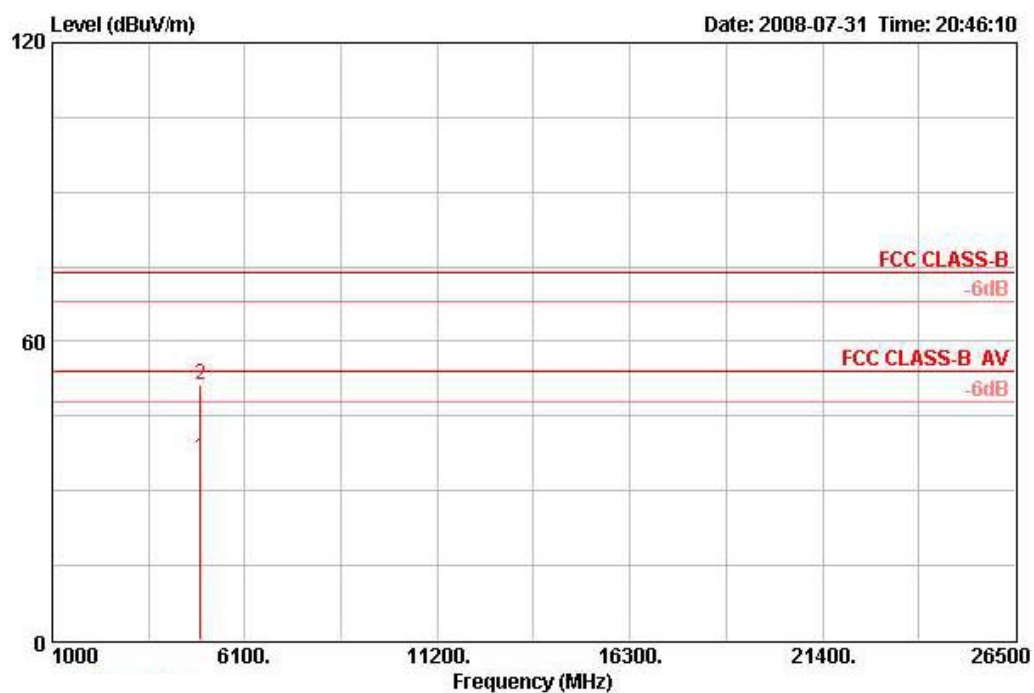
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4873.400	52.65	-21.35	74.00	50.68	33.16	3.96	35.15	PEAK	186	235	VERTICAL
2	4873.800	37.90	-16.10	54.00	35.94	33.16	3.96	35.15	AVERAGE	186	235	VERTICAL

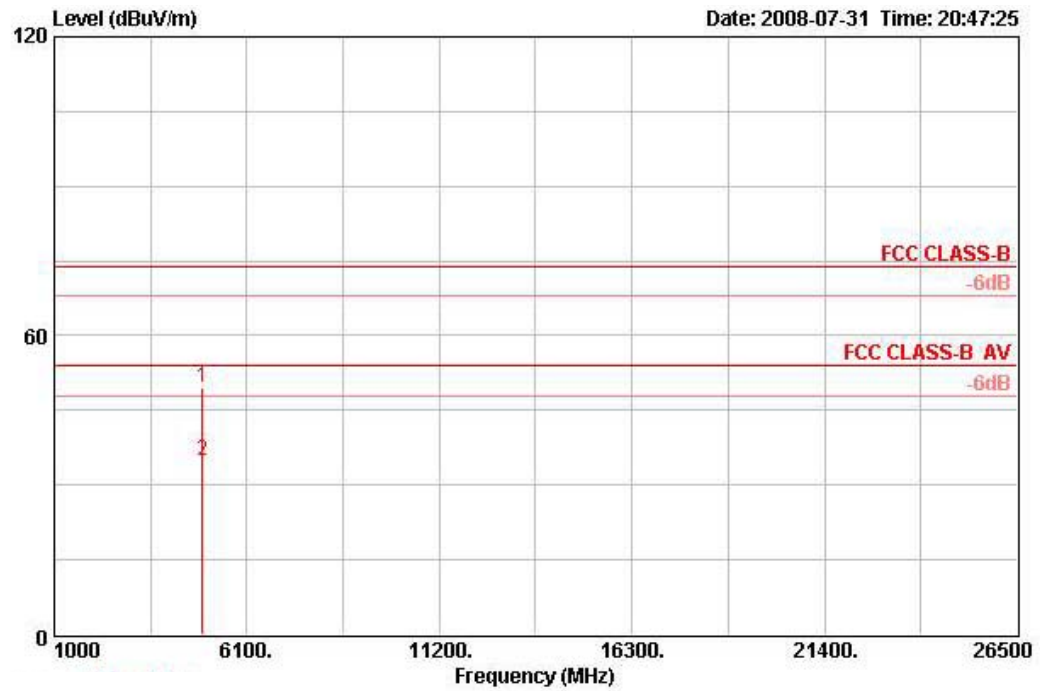
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch11 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4921.900	36.62	-17.38	54.00	34.52	33.26	3.98	35.14	AVERAGE	173	163	HORIZONTAL
2	4922.300	51.45	-22.55	74.00	49.34	33.26	3.98	35.14	PEAK	173	163	HORIZONTAL

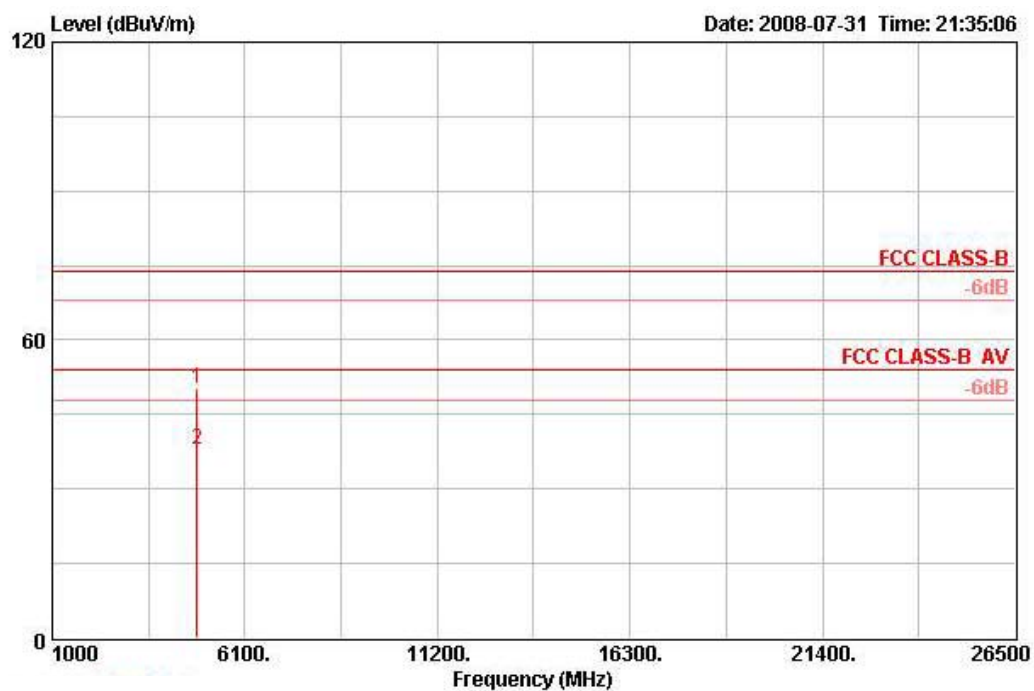
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4922.400	49.47	-24.53	74.00	47.37	33.26	3.98	35.14	PEAK	184	238	VERTICAL
2	4923.200	34.98	-19.02	54.00	32.88	33.26	3.98	35.14	AVERAGE	184	238	VERTICAL

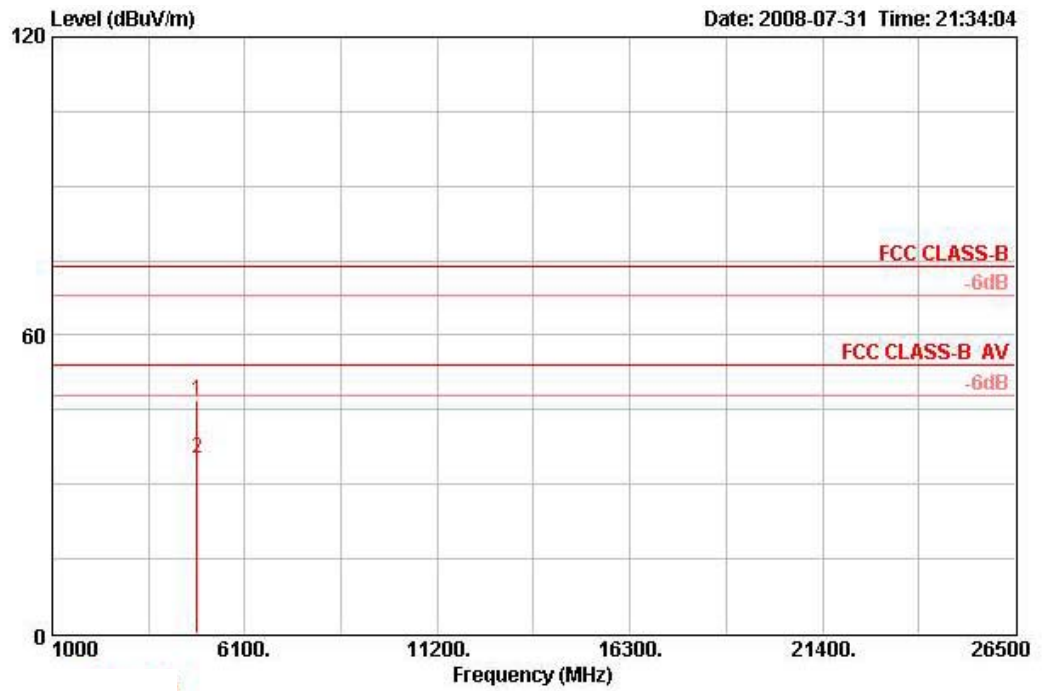
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 40MHz Ch 3 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4842.900	50.11	-23.89	74.00	48.23	33.09	3.95	35.16	PEAK	184	165	HORIZONTAL
2	4843.900	38.02	-15.98	54.00	36.14	33.09	3.95	35.16	AVERAGE	184	165	HORIZONTAL

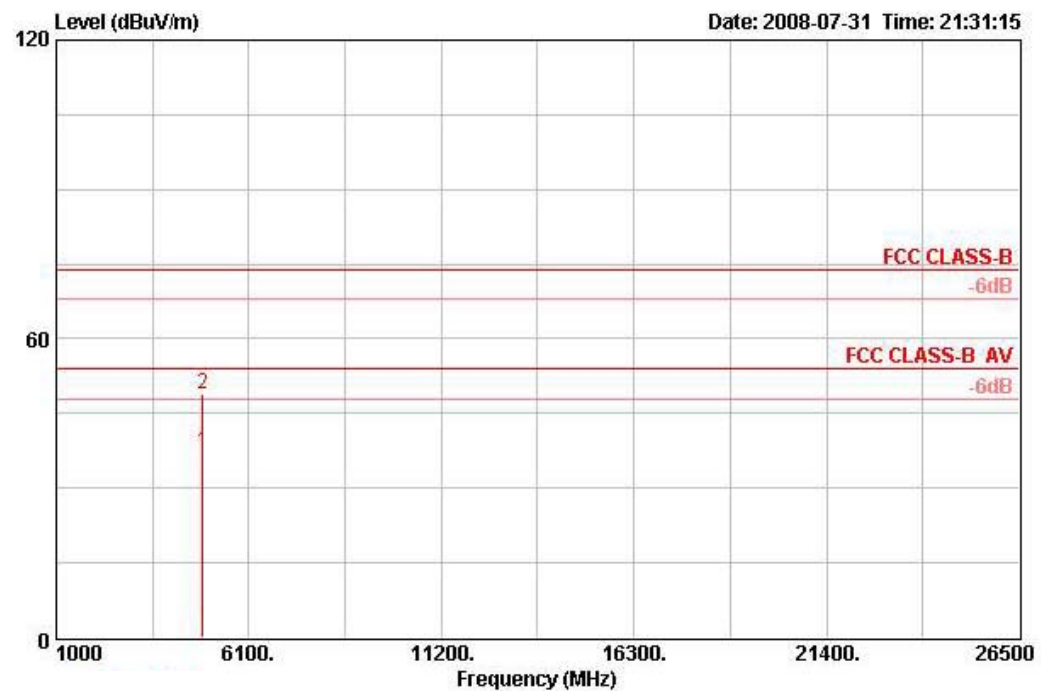
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4843.400	46.83	-27.17	74.00	44.95	33.09	3.95	35.16	PEAK	139	235	VERTICAL
2	4843.900	35.21	-18.79	54.00	33.33	33.09	3.95	35.16	AVERAGE	139	235	VERTICAL

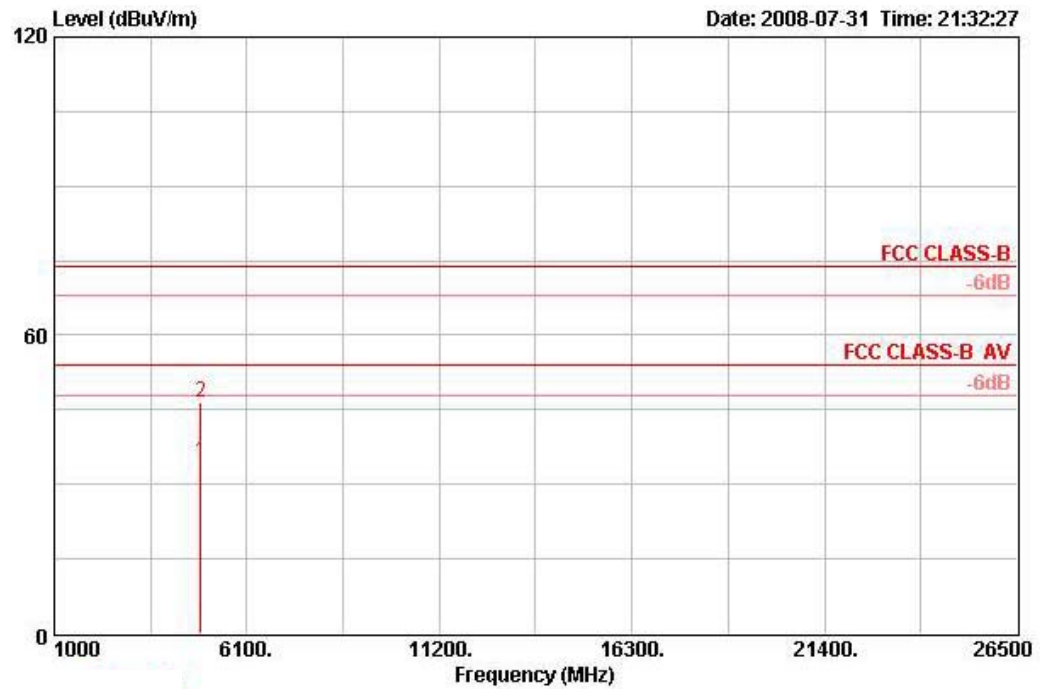
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 40MHz Ch 6 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4874.040	37.32	-16.68	54.00	35.35	33.16	3.96	35.15	AVERAGE	189	165	HORIZONTAL
2	4874.120	48.95	-25.05	74.00	46.98	33.16	3.96	35.15	PEAK	189	165	HORIZONTAL

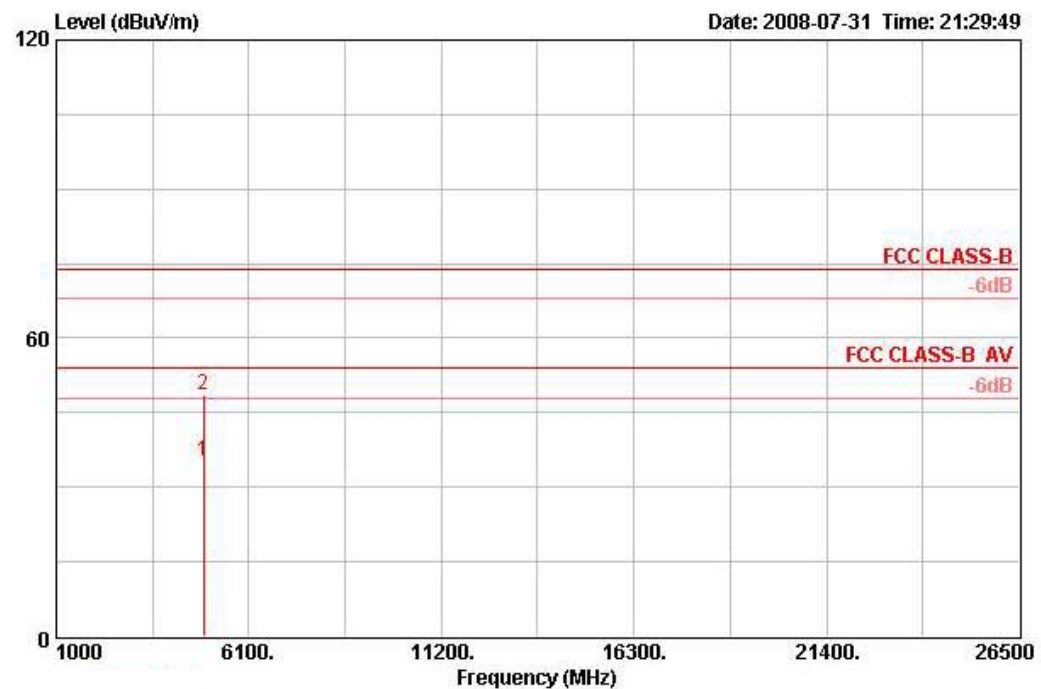
Vertical



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark	Pos	Pos	Pol/Phase
			dB	dBuV/m	dBuV	dB	dB		cm	deg	
1 ☒	4874.240	34.65	-19.35	54.00	32.68	33.16	3.96	35.15 AVERAGE	166	236	VERTICAL
2 ☒	4874.600	46.61	-27.39	74.00	44.64	33.16	3.96	35.15 PEAK	166	236	VERTICAL

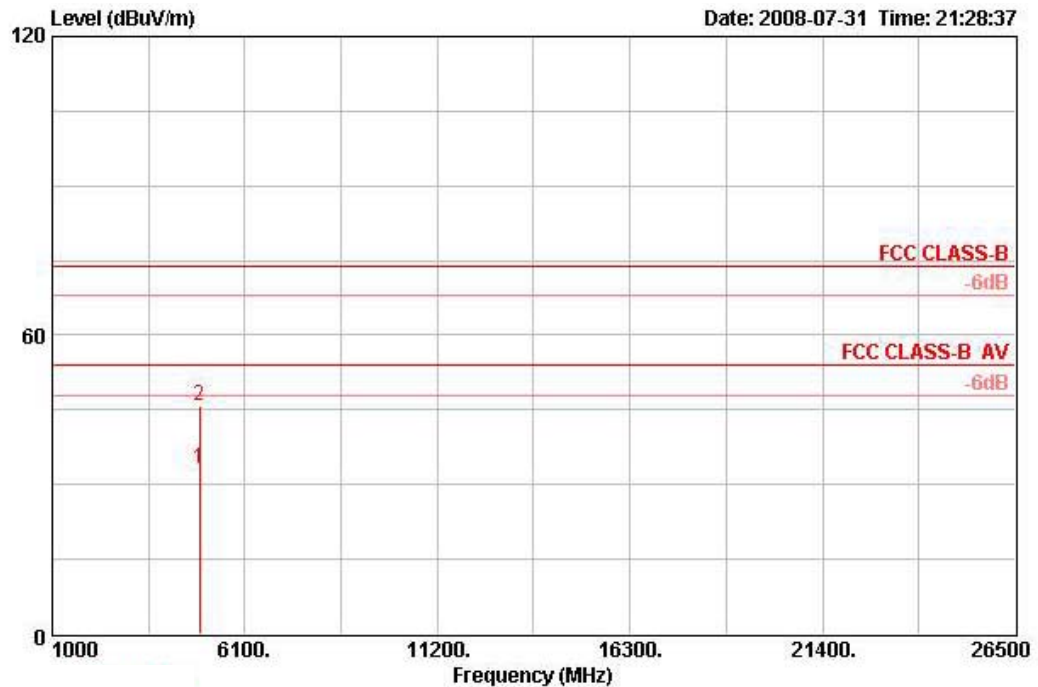
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 40MHz Ch 9 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4904.040	35.38	-18.62	54.00	33.36	33.19	3.97	35.15	AVERAGE	187	171	HORIZONTAL
2	4904.200	48.69	-25.31	74.00	46.67	33.19	3.97	35.15	PEAK	187	171	HORIZONTAL

Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4903.960	33.33	-20.67	54.00	31.31	33.19	3.97	35.15	AVERAGE	164	239	VERTICAL
2	4907.040	45.69	-28.31	74.00	43.62	33.23	3.98	35.14	PEAK	164	239	VERTICAL

Note:

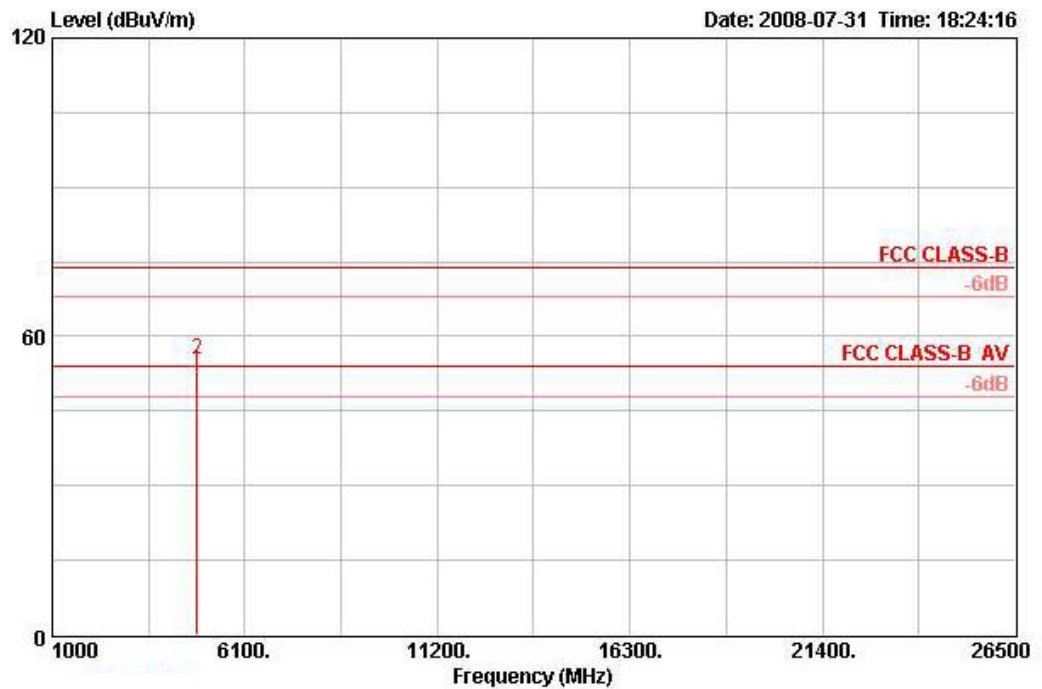
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

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

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

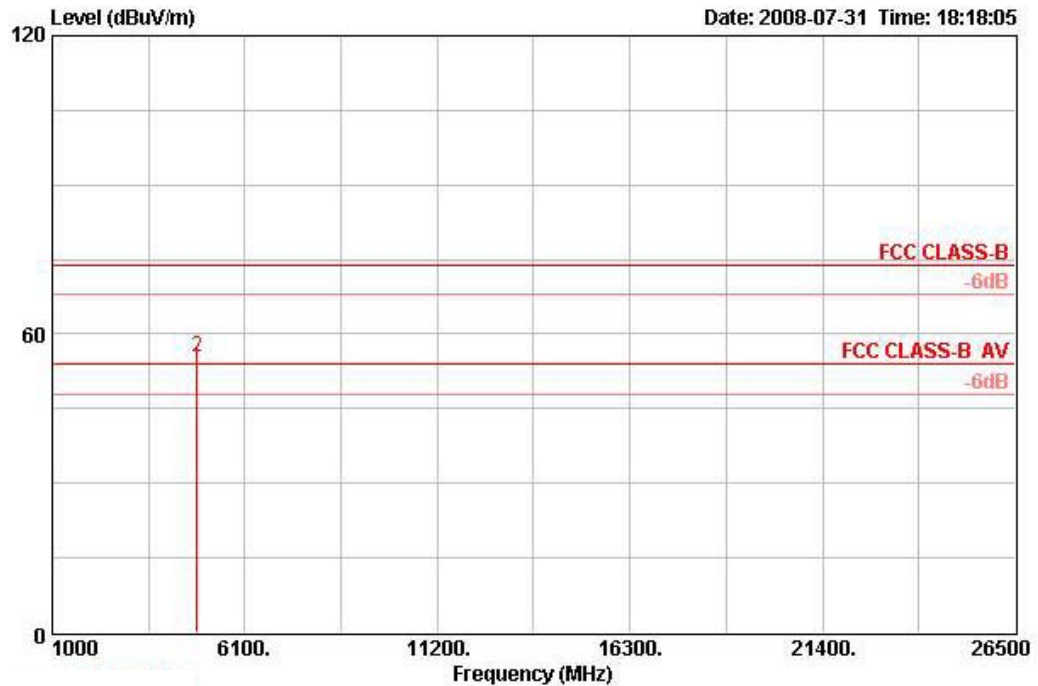
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11b CH 1 Ant. A

Horizontal



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Pol/Phase
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 ☺	4824.040	53.26	-0.74	54.00	51.44	33.06	3.94	35.16	193	178	HORIZONTAL
2 ☺	4824.190	55.44	-18.56	74.00	53.61	33.06	3.94	35.16	193	178	HORIZONTAL

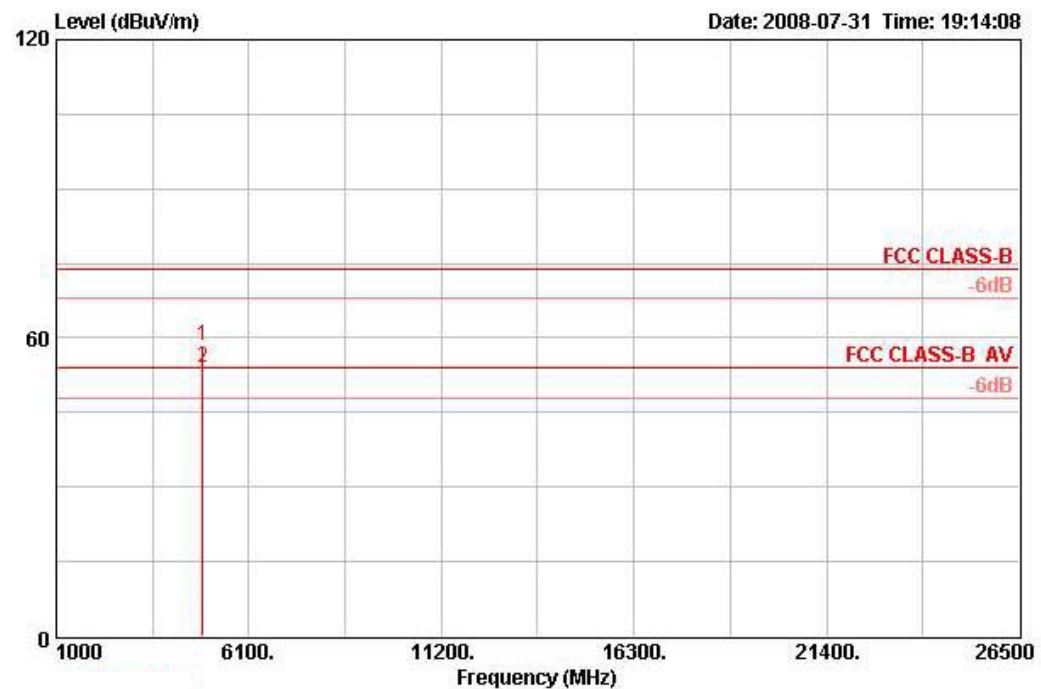
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4824.030	53.20	-0.80	54.00	51.37	33.06	3.94	35.16	AVERAGE	115	184	VERTICAL
2	4824.060	55.47	-18.53	74.00	53.64	33.06	3.94	35.16	PEAK	115	184	VERTICAL

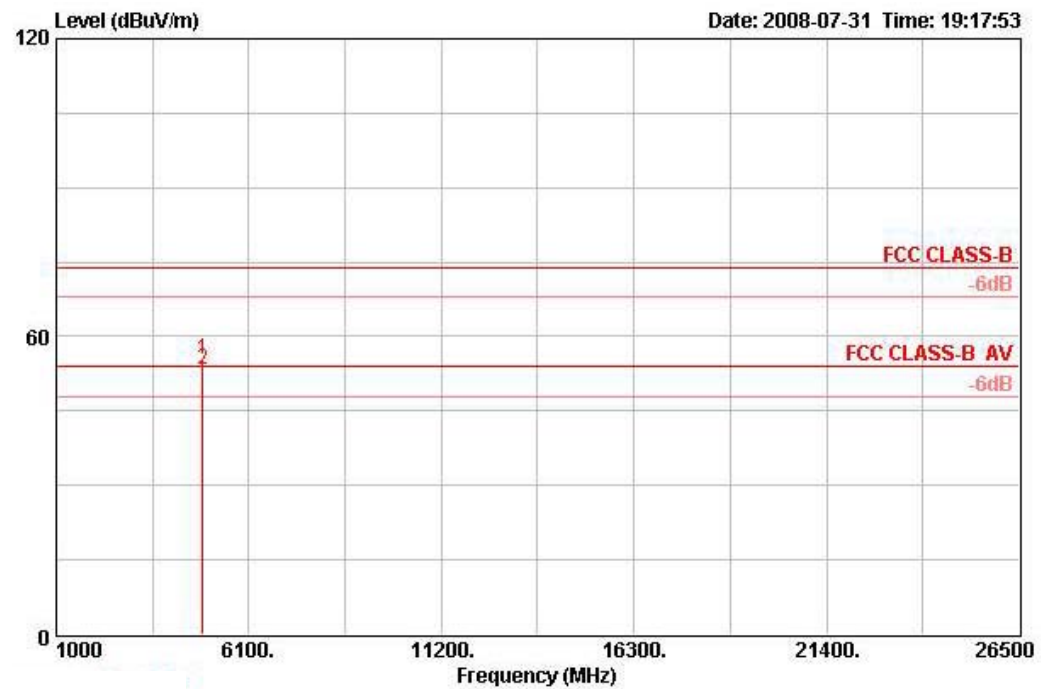
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11b CH 6 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4873.910	58.40	-15.60	74.00	56.43	33.16	3.96	35.15	PEAK	188	164	HORIZONTAL
2	4874.050	53.95	-0.05	54.00	51.98	33.16	3.96	35.15	AVERAGE	188	164	HORIZONTAL

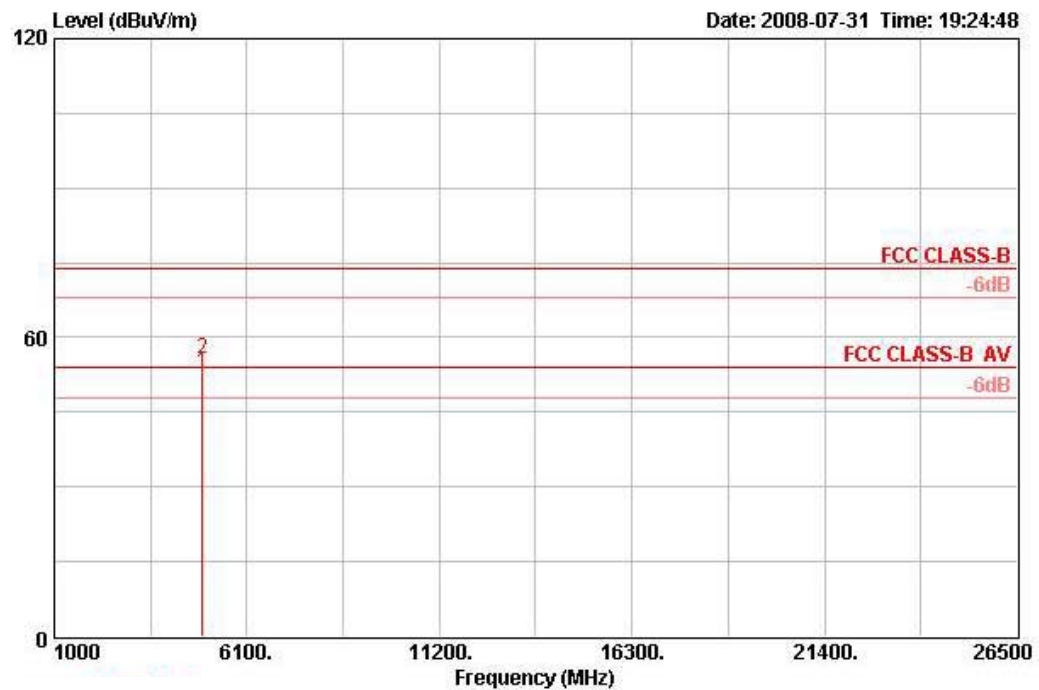
Vertical



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Pol/Phase
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4873.980	55.36	-18.64	74.00	53.39	33.16	3.96	35.15	114	3	VERTICAL
2	4874.030	53.18	-0.82	54.00	51.22	33.16	3.96	35.15	114	3	VERTICAL

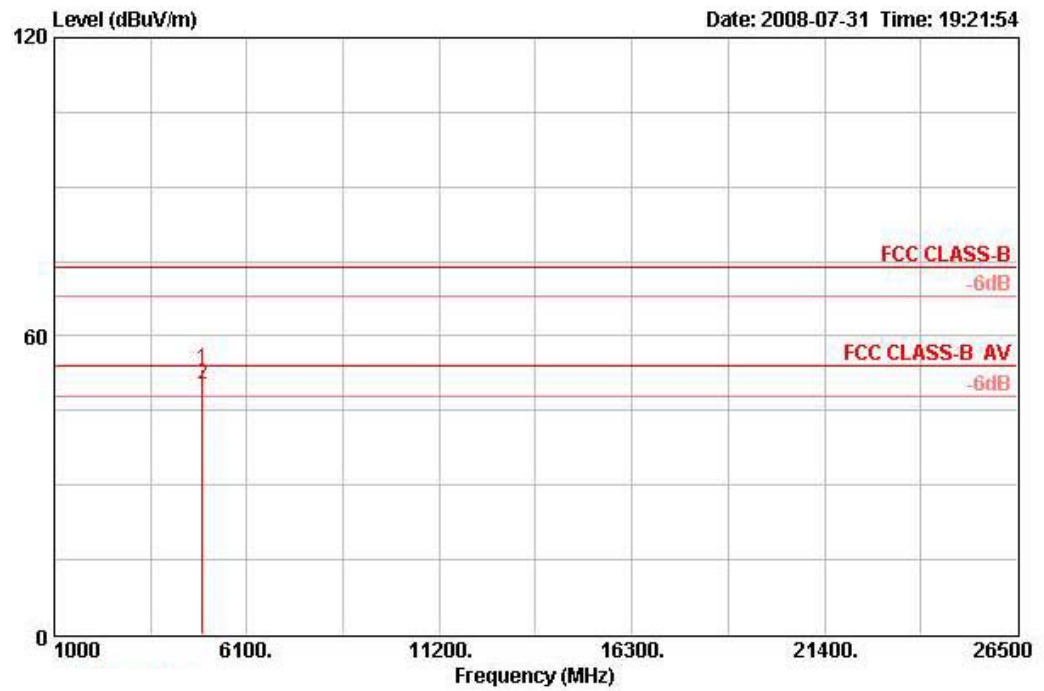
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11b CH 11 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4924.030	52.83	-1.17	54.00	50.73	33.26	3.98	35.14	AVERAGE	182	167	HORIZONTAL
2	4924.030	55.69	-18.31	74.00	53.59	33.26	3.98	35.14	PEAK	182	167	HORIZONTAL

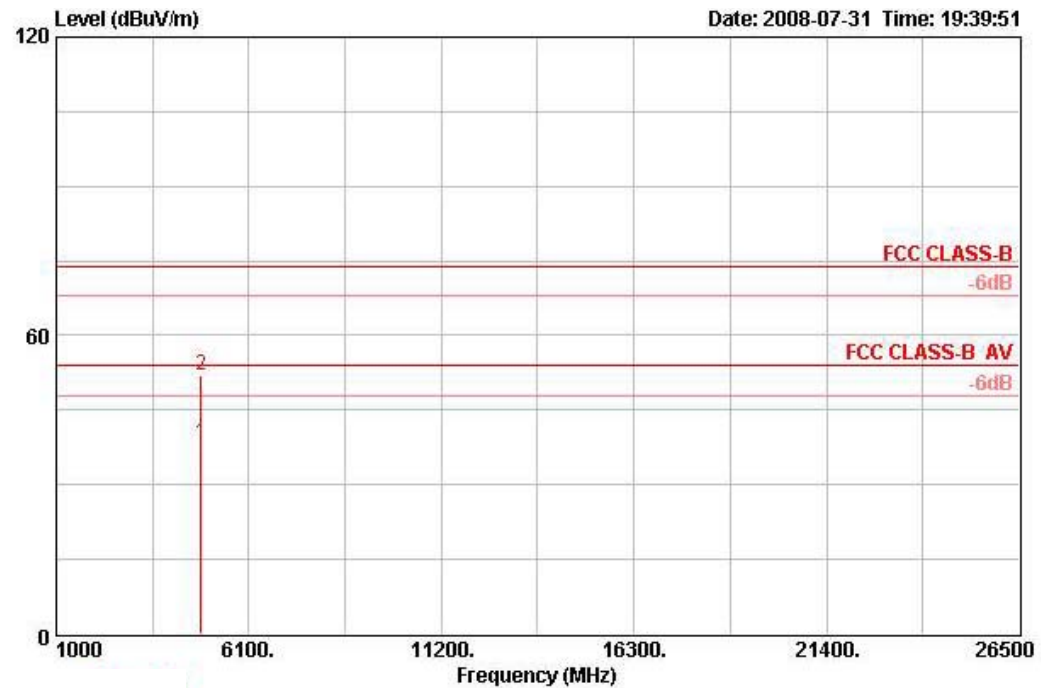
Vertical



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark	Pos	Pos	Pol/Phase
			dB	dBuV/m	dBuV	dB		dB	cm	deg	
1	4923.950	53.34	-20.66	74.00	51.23	33.26	3.98	35.14	114	5	VERTICAL
2	4924.030	50.12	-3.88	54.00	48.02	33.26	3.98	35.14	114	5	VERTICAL

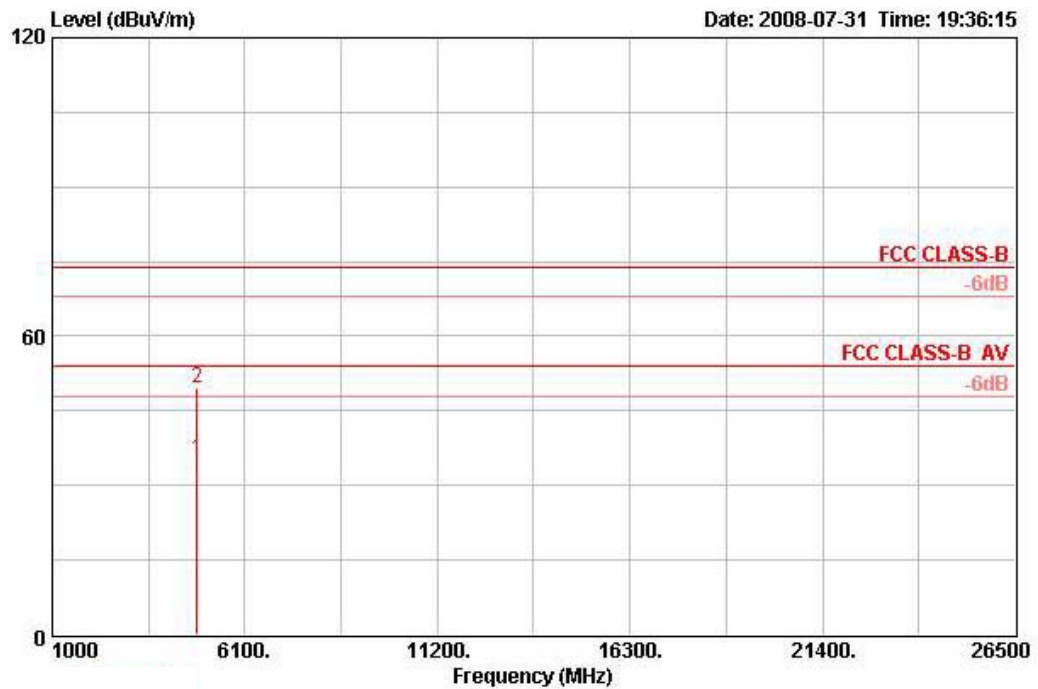
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11g CH 1 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☺	4824.200	38.13	-15.87	54.00	36.30	33.06	3.94	35.16	AVERAGE	140	169	HORIZONTAL
2 ☺	4826.300	51.87	-22.13	74.00	50.04	33.06	3.94	35.16	PEAK	140	169	HORIZONTAL

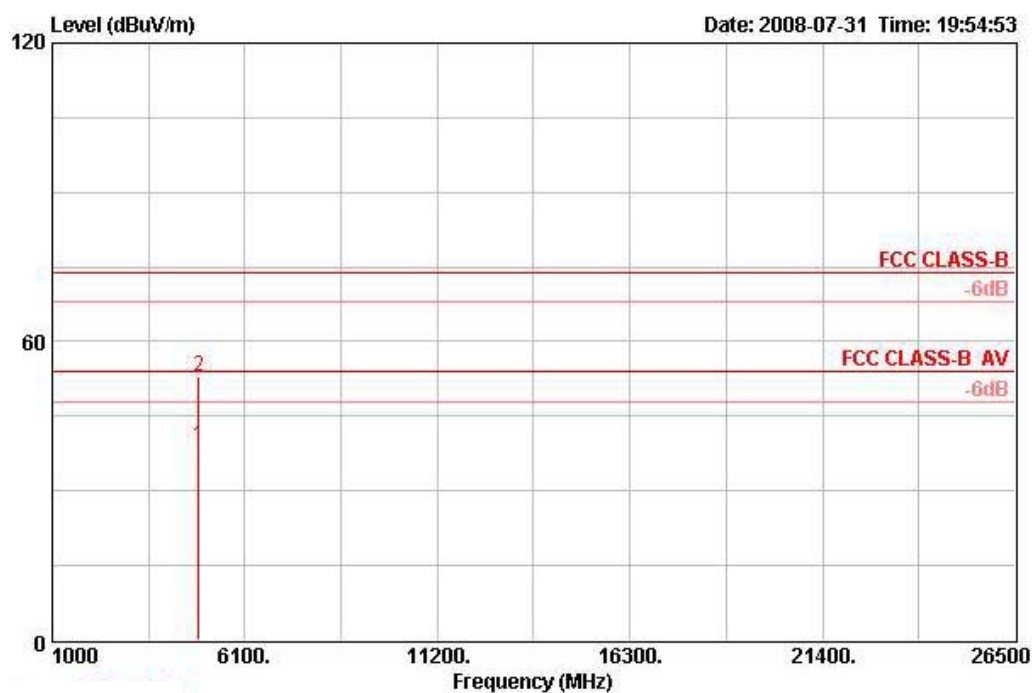
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4824.200	35.28	-18.72	54.00	33.46	33.06	3.94	35.16	AVERAGE	116	185	VERTICAL
2	4826.700	49.55	-24.45	74.00	47.72	33.06	3.94	35.16	PEAK	116	185	VERTICAL

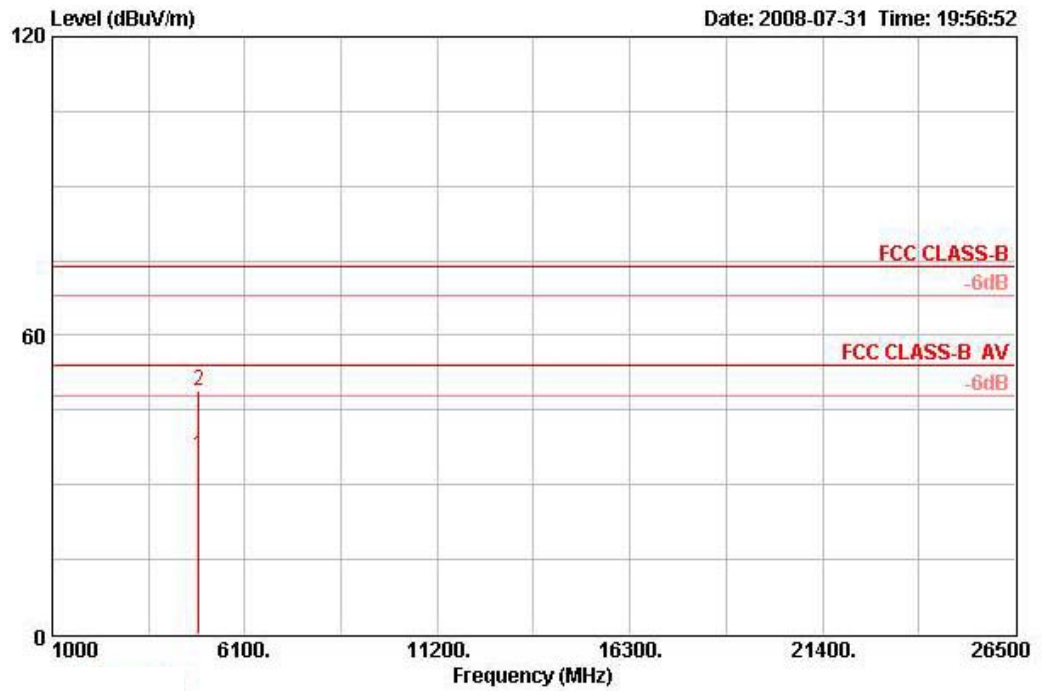
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11g CH 6 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☺	4874.000	38.93	-15.07	54.00	36.97	33.16	3.96	35.15	AVERAGE	210	162	HORIZONTAL
2 ☺	4876.400	53.03	-20.97	74.00	51.06	33.16	3.96	35.15	PEAK	210	162	HORIZONTAL

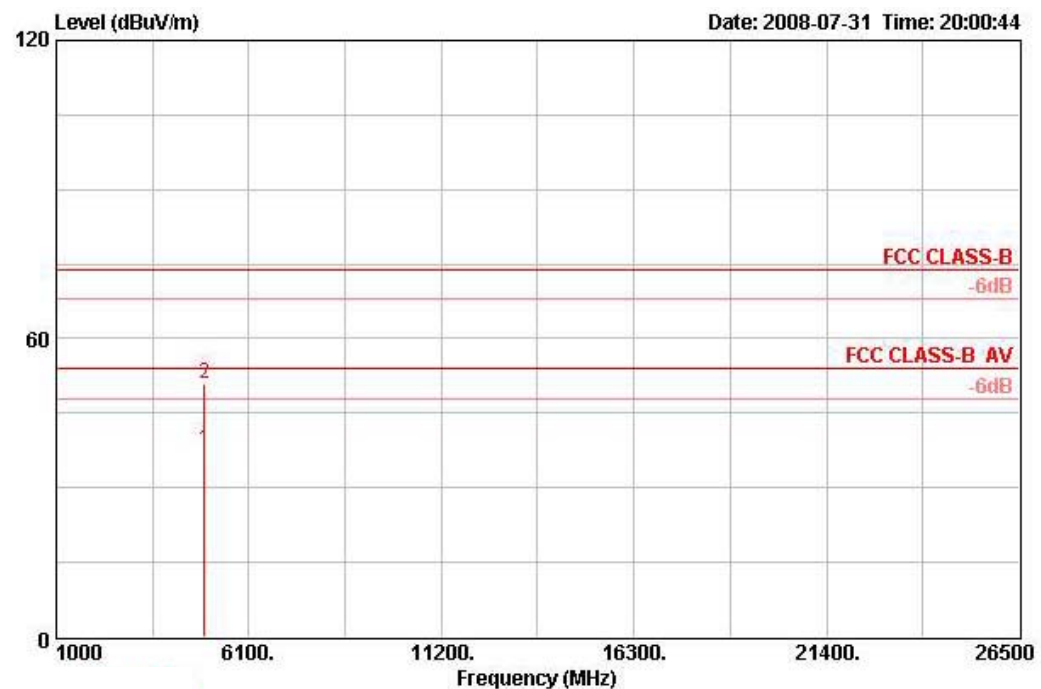
Vertical



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4874.100	35.85	-18.15	54.00	33.88	33.16	3.96	35.15	100	184	VERTICAL
2	4876.200	48.77	-25.23	74.00	46.81	33.16	3.96	35.15	100	184	VERTICAL

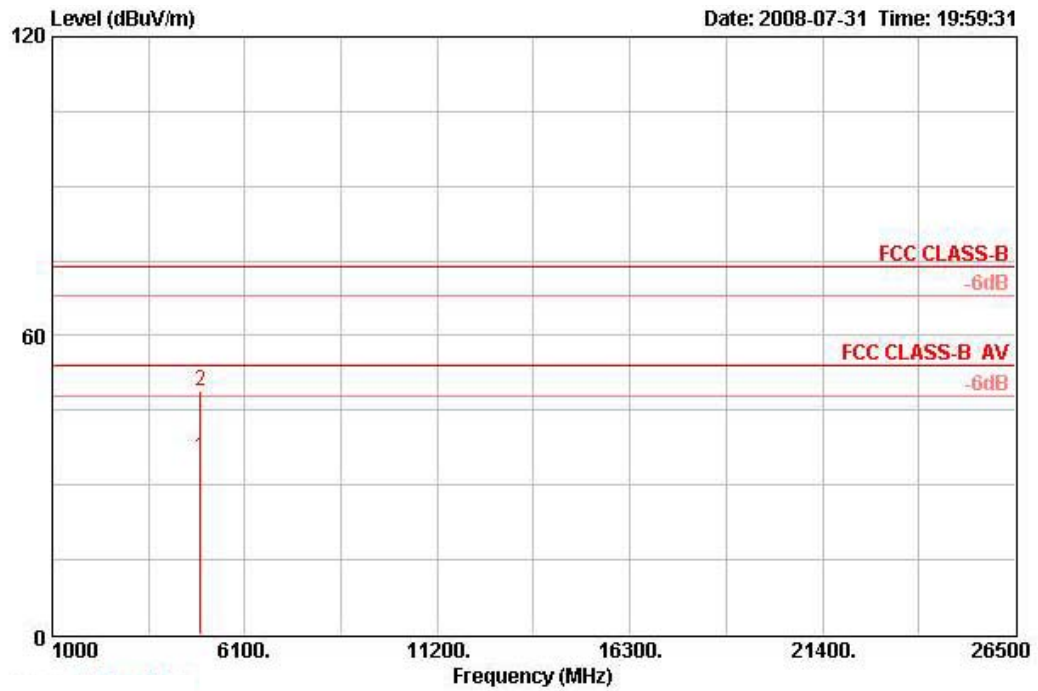
Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11g CH 11 Ant. A

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☺	4924.300	37.49	-16.51	54.00	35.39	33.26	3.98	35.14	AVERAGE	172	166	HORIZONTAL
2 ☺	4926.600	51.03	-22.97	74.00	48.93	33.26	3.98	35.14	PEAK	172	166	HORIZONTAL

Vertical



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor		Pos	Pos	Pol/Phase
			dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	4924.100	35.42	-18.58	54.00	33.32	33.26	3.98	35.14	AVERAGE	184	226	VERTICAL
2	4926.200	48.88	-25.12	74.00	46.77	33.26	3.98	35.14	PEAK	184	226	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

- The test procedure is the same as section 4.5.3, only the frequency range investigated is limited to 100MHz around bandedges.
- 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	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 1, 6, 11 Ant. A
Test Date	Jul. 31, 2008		

Channel 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2390.000	48.65	-5.35	54.00	17.77	28.17	2.71	0.00	AVERAGE	100	299	HORIZONTAL
2 ☒	2390.000	64.85	-9.15	74.00	33.97	28.17	2.71	0.00	PEAK	100	299	HORIZONTAL
3 ☒	2409.000	107.99			77.05	28.21	2.73	0.00	PEAK	100	299	HORIZONTAL
4 ☒	2413.600	98.13			67.19	28.21	2.73	0.00	AVERAGE	100	299	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2389.600	57.24	-16.76	74.00	26.36	28.17	2.71	0.00	PEAK	100	303	HORIZONTAL
2 ☒	2390.000	45.62	-8.38	54.00	14.74	28.17	2.71	0.00	AVERAGE	100	303	HORIZONTAL
3 ☒	2433.800	100.93			69.94	28.25	2.74	0.00	AVERAGE	100	303	HORIZONTAL
4 ☒	2434.000	110.82			79.79	28.29	2.74	0.00	PEAK	100	303	HORIZONTAL
5 ☒	2483.500	55.52	-18.48	74.00	24.37	28.38	2.77	0.00	PEAK	100	303	HORIZONTAL
6 ☒	2483.500	45.36	-8.64	54.00	14.21	28.38	2.77	0.00	AVERAGE	100	303	HORIZONTAL

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

Channel 11

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2459.200	102.73			71.64	28.33	2.76	0.00	PEAK	100	304	HORIZONTAL
2 ☒	2459.400	98.38			67.29	28.33	2.76	0.00	AVERAGE	100	304	HORIZONTAL
3 ☒	2483.500	46.02	-7.98	54.00	14.87	28.38	2.77	0.00	AVERAGE	100	304	HORIZONTAL
4 ☒	2483.900	57.72	-16.28	74.00	26.57	28.38	2.77	0.00	PEAK	100	304	HORIZONTAL

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

Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 40MHz Ch 3, 6, 9 Ant. A
Test Date	Jul. 31, 2008		

Channel 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2388.800	69.31	-4.69	74.00	38.43	28.17	2.71	0.00	PEAK	100	301	HORIZONTAL
2 ☒	2390.000	53.98	-0.02	54.00	23.09	28.17	2.71	0.00	AVERAGE	100	301	HORIZONTAL
3 ☒	2419.600	105.42			74.44	28.25	2.73	0.00	PEAK	100	301	HORIZONTAL
4 ☒	2420.400	95.90			64.93	28.25	2.73	0.00	AVERAGE	100	301	HORIZONTAL

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

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2389.200	59.08	-14.92	74.00	28.20	28.17	2.71	0.00	PEAK	100	303	HORIZONTAL
2 ☒	2390.000	46.82	-7.18	54.00	15.93	28.17	2.71	0.00	AVERAGE	100	303	HORIZONTAL
3 ☒	2433.400	96.23			65.24	28.25	2.74	0.00	AVERAGE	100	303	HORIZONTAL
4 ☒	2434.600	106.00			74.97	28.29	2.74	0.00	PEAK	100	303	HORIZONTAL
5 ☒	2483.500	57.65	-16.35	74.00	26.50	28.38	2.77	0.00	PEAK	100	303	HORIZONTAL
6 ☒	2483.500	46.31	-7.69	54.00	15.16	28.38	2.77	0.00	AVERAGE	100	303	HORIZONTAL

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

Channel 9

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2448.400	95.08			64.05	28.29	2.74	0.00	AVERAGE	100	303	HORIZONTAL
2 ☒	2450.000	104.47			73.44	28.29	2.74	0.00	PEAK	100	303	HORIZONTAL
3 ☒	2483.500	48.21	-5.79	54.00	17.06	28.38	2.77	0.00	AVERAGE	100	303	HORIZONTAL
4 ☒	2483.500	59.50	-14.50	74.00	28.35	28.38	2.77	0.00	PEAK	100	303	HORIZONTAL

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	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11b CH 1, 6, 11 Ant. A
Test Date	Jul. 31, 2008		

Channel 1

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2389.600	57.80	-16.20	74.00	26.91	28.17	2.71	0.00	PEAK	100	300	HORIZONTAL
2 ☒	2390.000	47.97	-6.03	54.00	17.08	28.17	2.71	0.00	AVERAGE	100	300	HORIZONTAL
3 ☒	2411.200	108.84			77.91	28.21	2.73	0.00	PEAK	100	300	HORIZONTAL
4 ☒	2411.200	104.93			73.99	28.21	2.73	0.00	AVERAGE	100	300	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	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2389.400	56.66	-17.34	74.00	25.78	28.17	2.71	0.00	PEAK	100	302	HORIZONTAL
2 ☒	2390.000	45.69	-8.31	54.00	14.80	28.17	2.71	0.00	AVERAGE	100	302	HORIZONTAL
3 ☒	2434.400	107.09			76.06	28.29	2.74	0.00	AVERAGE	100	302	HORIZONTAL
4 ☒	2436.200	110.57			79.54	28.29	2.74	0.00	PEAK	100	302	HORIZONTAL
5 ☒	2483.500	45.32	-8.68	54.00	14.17	28.38	2.77	0.00	AVERAGE	100	302	HORIZONTAL
6 ☒	2484.100	55.54	-18.46	74.00	24.39	28.38	2.77	0.00	PEAK	100	302	HORIZONTAL

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	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2459.400	104.89			73.80	28.33	2.76	0.00	AVERAGE	100	302	HORIZONTAL
2 ☒	2461.200	108.44			77.35	28.33	2.76	0.00	PEAK	100	302	HORIZONTAL
3 ☒	2483.500	46.15	-7.85	54.00	15.00	28.38	2.77	0.00	AVERAGE	100	302	HORIZONTAL
4 ☒	2484.700	56.51	-17.49	74.00	25.36	28.38	2.77	0.00	PEAK	100	302	HORIZONTAL

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

Temperature	23°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	802.11g CH 1, 6, 11 Ant. A
Test Date	Jul. 31, 2008		

Channel 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2390.000	47.61	-6.39	54.00	16.72	28.17	2.71	0.00	AVERAGE	100	301	HORIZONTAL
2 ☒	2390.000	61.24	-12.76	74.00	30.35	28.17	2.71	0.00	PEAK	100	301	HORIZONTAL
3 ☒	2410.800	98.38			67.44	28.21	2.73	0.00	AVERAGE	100	301	HORIZONTAL
4 ☒	2411.400	107.69			76.75	28.21	2.73	0.00	PEAK	100	301	HORIZONTAL

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

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2389.400	56.41	-17.59	74.00	25.53	28.17	2.71	0.00	PEAK	100	301	HORIZONTAL
2 ☒	2390.000	45.49	-8.51	54.00	14.61	28.17	2.71	0.00	AVERAGE	100	301	HORIZONTAL
3 ☒	2434.000	109.28			78.25	28.29	2.74	0.00	PEAK	100	301	HORIZONTAL
4 ☒	2434.400	99.76			68.73	28.29	2.74	0.00	AVERAGE	100	301	HORIZONTAL
5 ☒	2483.500	45.23	-8.77	54.00	14.08	28.38	2.77	0.00	AVERAGE	100	301	HORIZONTAL
6 ☒	2484.100	55.81	-18.19	74.00	24.66	28.38	2.77	0.00	PEAK	100	301	HORIZONTAL

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

Channel 11

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☒	2459.400	97.86			66.78	28.33	2.76	0.00	AVERAGE	100	303	HORIZONTAL
2 ☒	2460.200	107.07			75.99	28.33	2.76	0.00	PEAK	100	303	HORIZONTAL
3 ☒	2483.500	45.85	-8.15	54.00	14.69	28.38	2.77	0.00	AVERAGE	100	303	HORIZONTAL
4 ☒	2484.700	59.18	-14.82	74.00	28.03	28.38	2.77	0.00	PEAK	100	303	HORIZONTAL

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

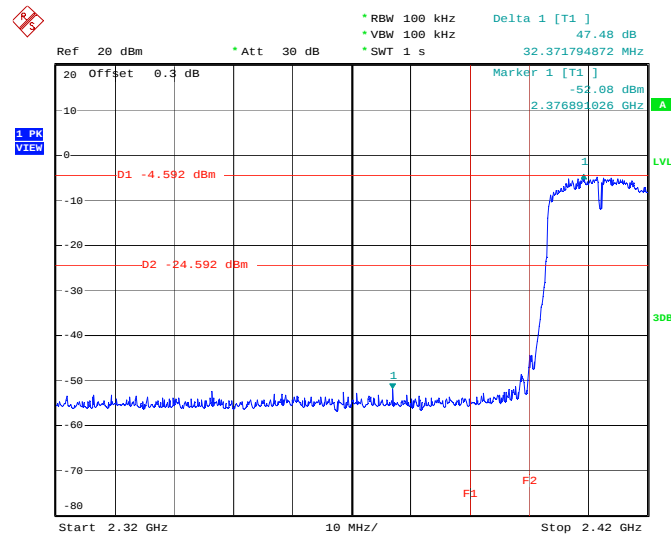
Note:

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

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

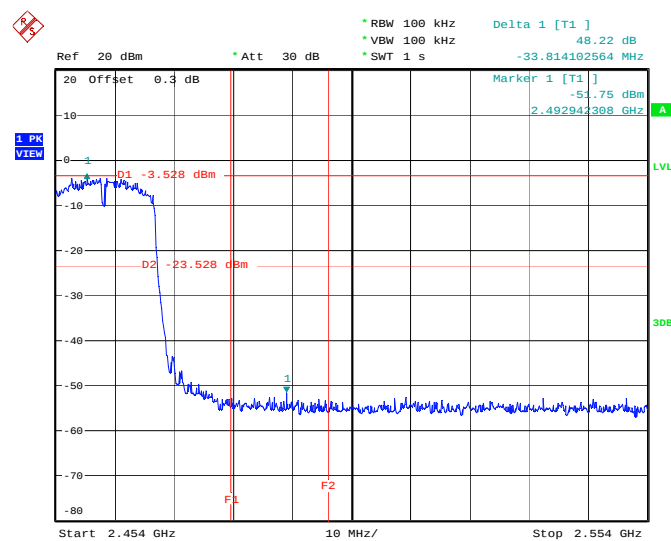
For Emission not in Restricted Band

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



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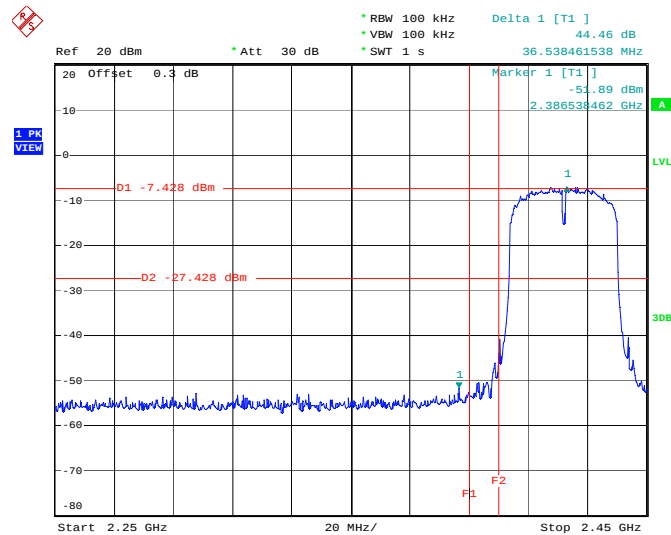
High Band Edge Plot on Configuration Draft n MCS0 20MHz Ant. A / 2462 MHz



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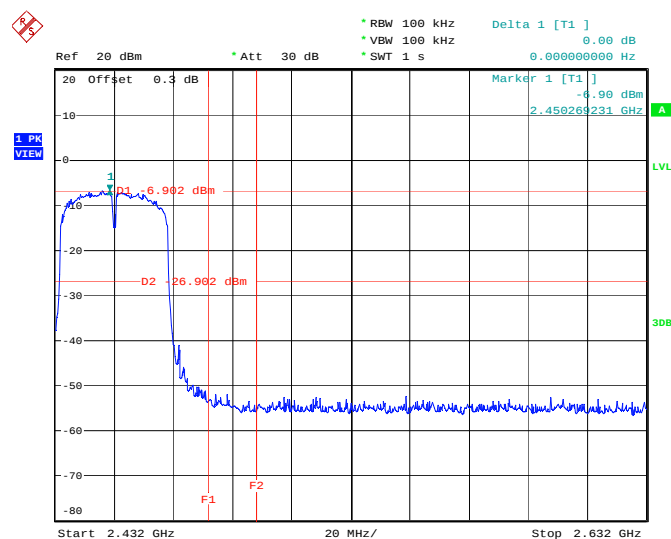
For Emission not in Restricted Band

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



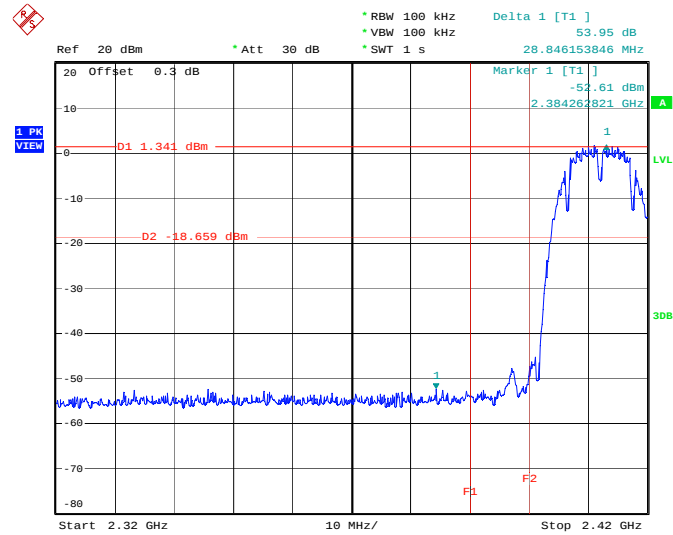
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High Band Edge Plot on Configuration Draft n MCS0 40MHz Ant. A / 2452 MHz



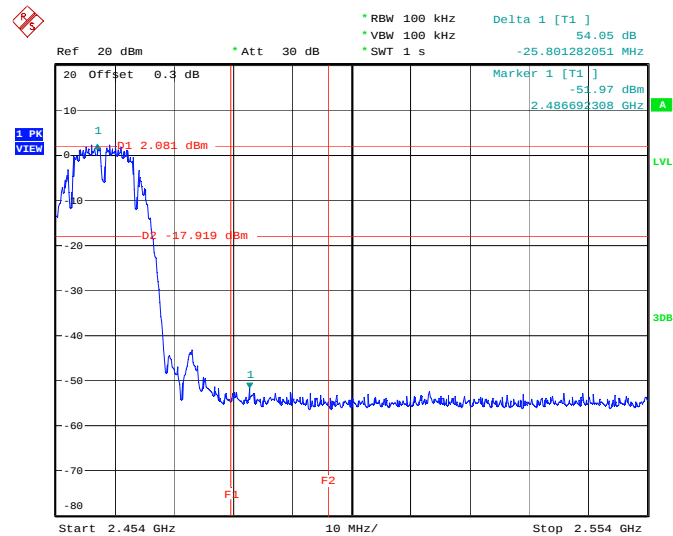
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Low Band Edge Plot on Configuration IEEE 802.11b Ant. A / 2412 MHz



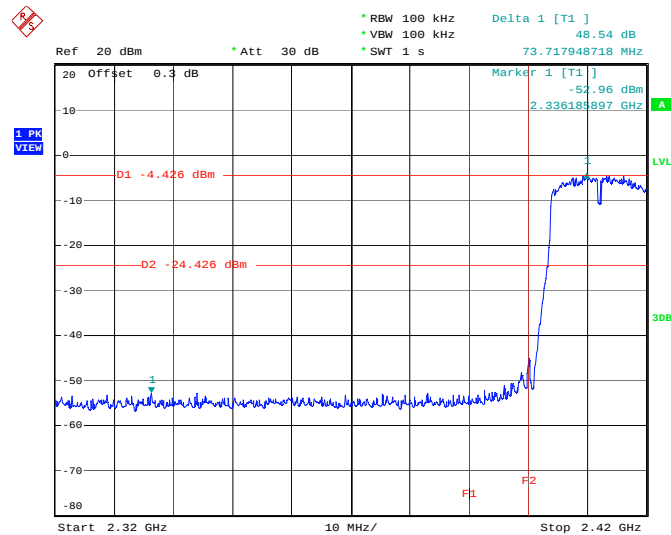
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High Band Edge Plot on Configuration IEEE 802.11b Ant. A / 2462 MHz



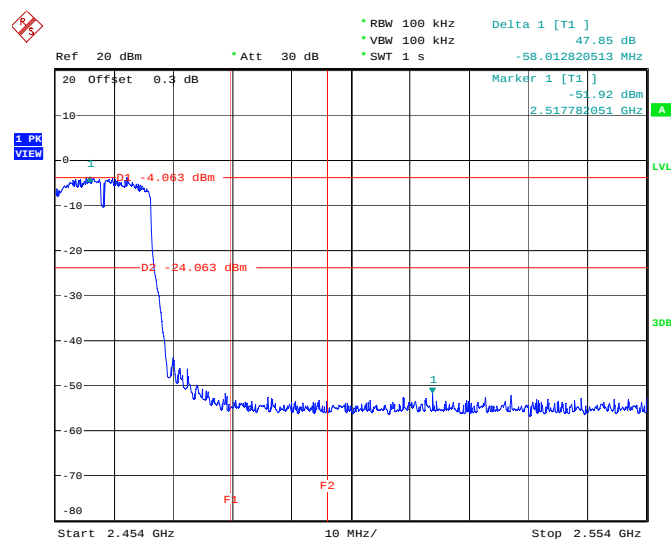
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Low Band Edge Plot on Configuration IEEE 802.11g Ant. A / 2412 MHz



Date: 4.AUG.2008 14:22:18

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



Date: 4.AUG.2008 14:24:19

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 T400	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	FSP40	100004	9 kHz - 40 GHz	Sep. 27, 2007	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	KSON	THS-C3L	612	N/A	Oct. 01, 2007	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 01, 2007	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 01, 2007	Conducted (TH01-HY)
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Nov. 14, 2007	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 10, 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 2 nd 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. : LI190-070110

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

P1, total 9 pages

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