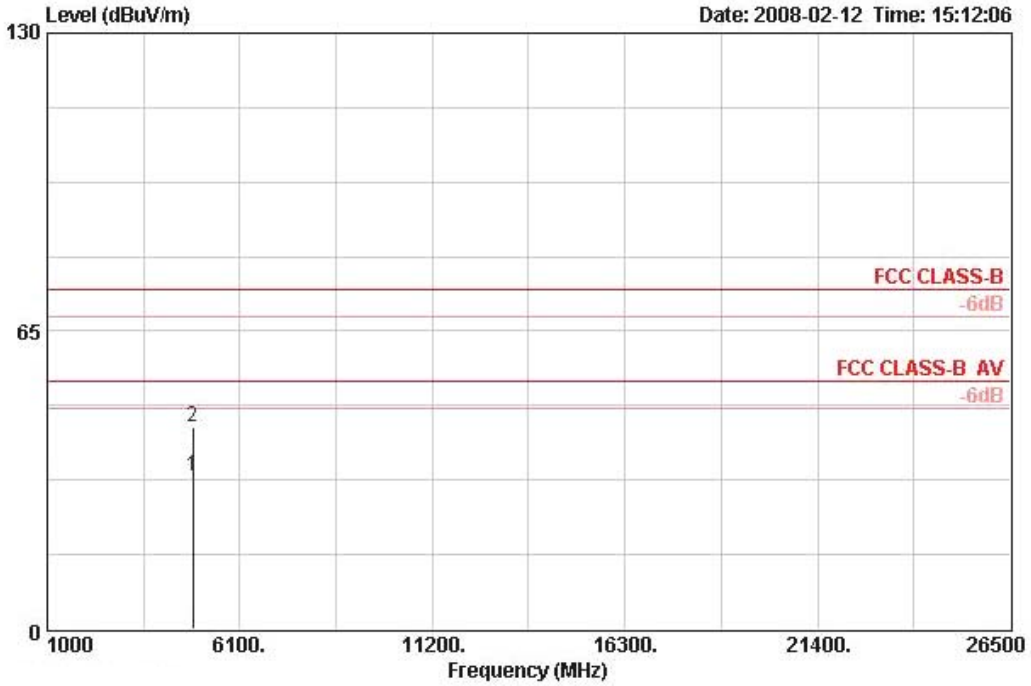
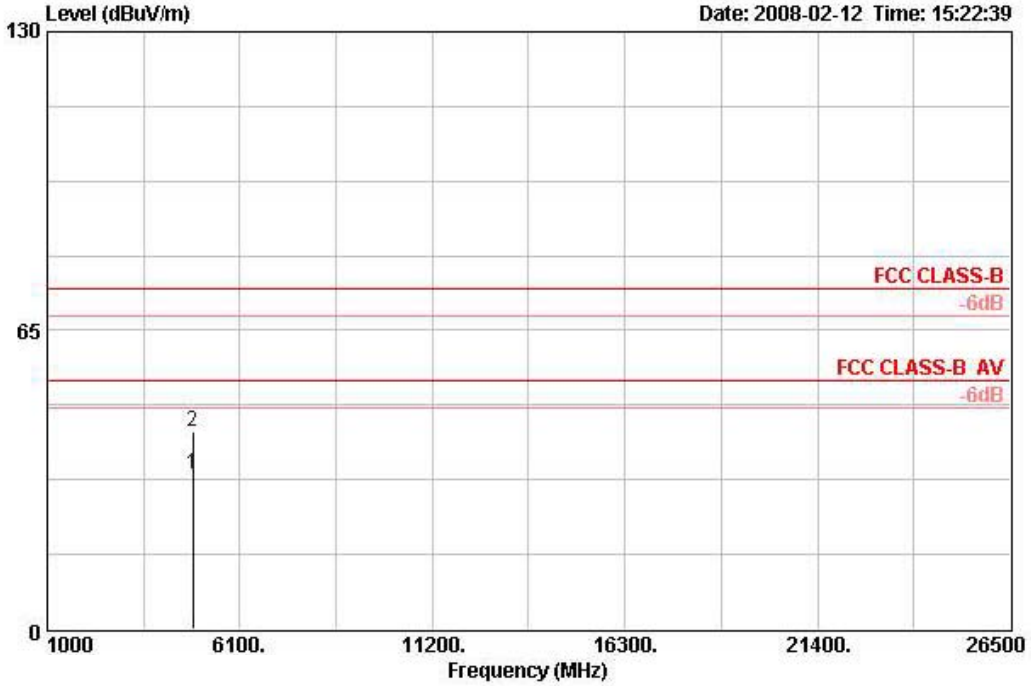
Vertical



	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	4845.920	33.47	-20.53	54.00	29.13	33.09	6.41	35.16	AVERAGE	100	0	VERTICAL
2	4845.950	43.93	-30.07	74.00	39.60	33.09	6.41	35.16	PEAK	100	0	VERTICAL

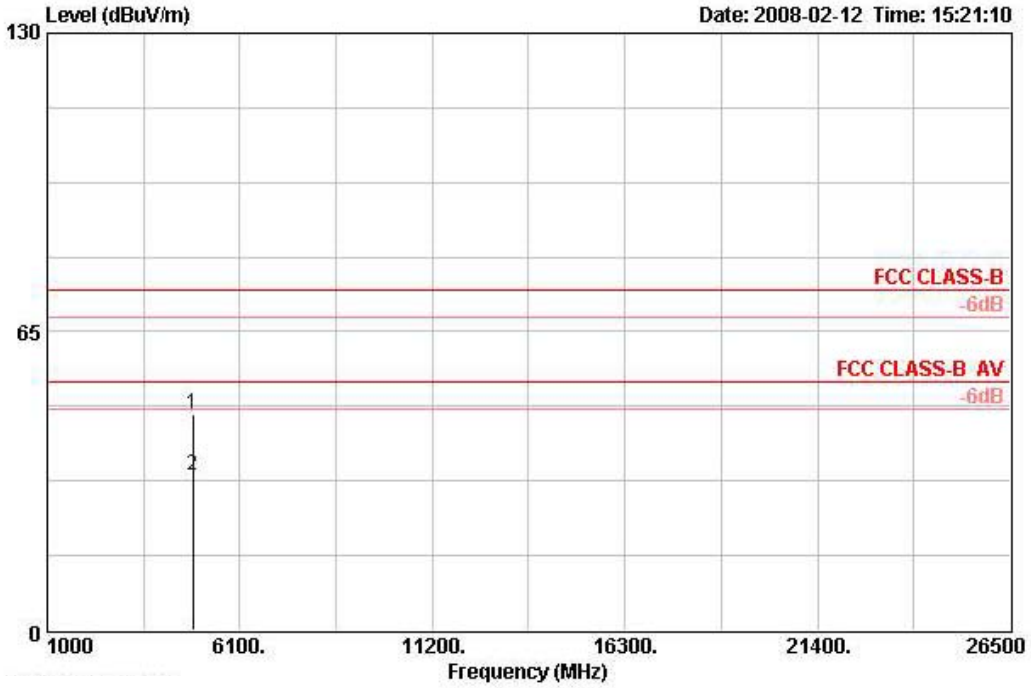
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	Draft n MCS8 40MHz Ch 6 Ant. B1+ Ant. B2+Ant. B3

Horizontal



	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	4856.500	33.55	-20.45	54.00	29.18	33.12	6.41	35.16	AVERAGE	100	0	HORIZONTAL
2	4857.270	43.03	-30.97	74.00	38.65	33.12	6.41	35.16	PEAK	100	0	HORIZONTAL

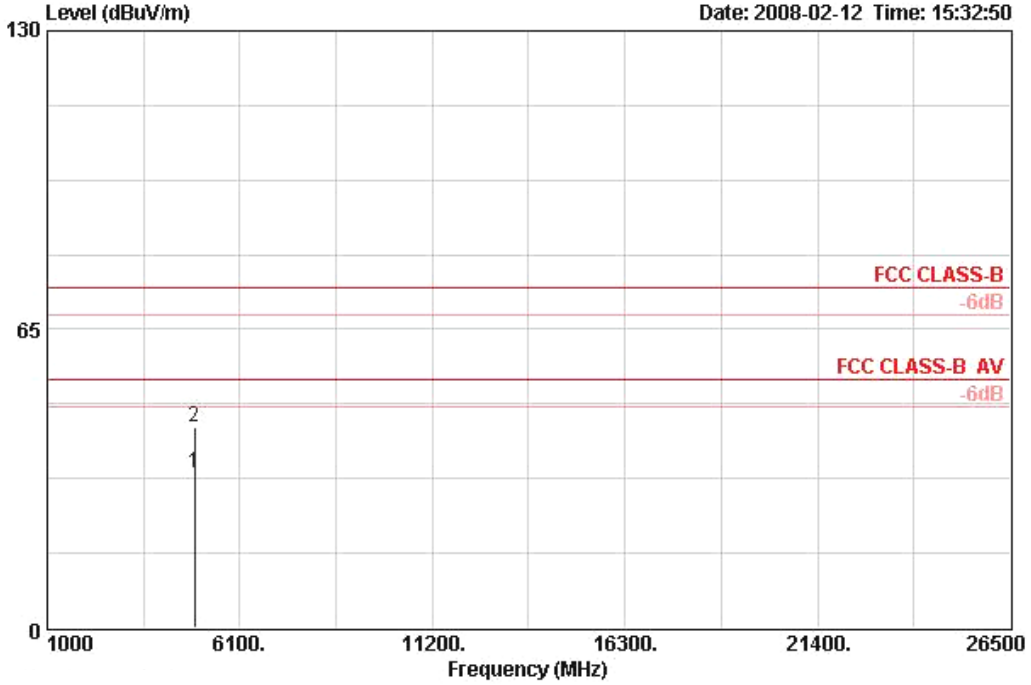
Vertical



	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	4856.620	46.96	-27.04	74.00	42.59	33.12	6.41	35.16	PEAK	100	360	VERTICAL
2	4856.880	33.57	-20.43	54.00	29.20	33.12	6.41	35.16	AVERAGE	100	360	VERTICAL

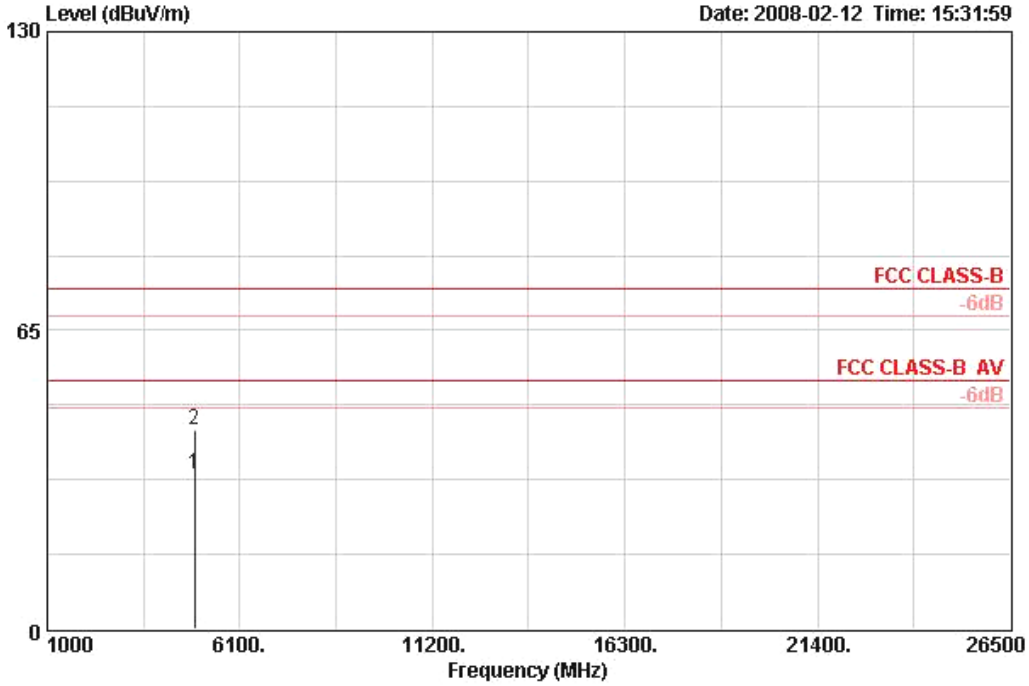
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	Draft n MCS8 40MHz Ch 9 Ant. B1+ Ant. B2+Ant. B3

Horizontal



	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	4902.280	33.56	-20.44	54.00	29.05	33.23	6.43	35.15	AVERAGE	100	360	HORIZONTAL
2	4906.070	43.81	-30.19	74.00	39.31	33.23	6.43	35.15	PEAK	100	360	HORIZONTAL

Vertical



	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	4902.420	33.55	-20.45	54.00	29.04	33.23	6.43	35.15	AVERAGE	100	230	VERTICAL
2	4904.010	43.19	-30.81	74.00	38.68	33.23	6.43	35.15	PEAK	100	230	VERTICAL

Note:

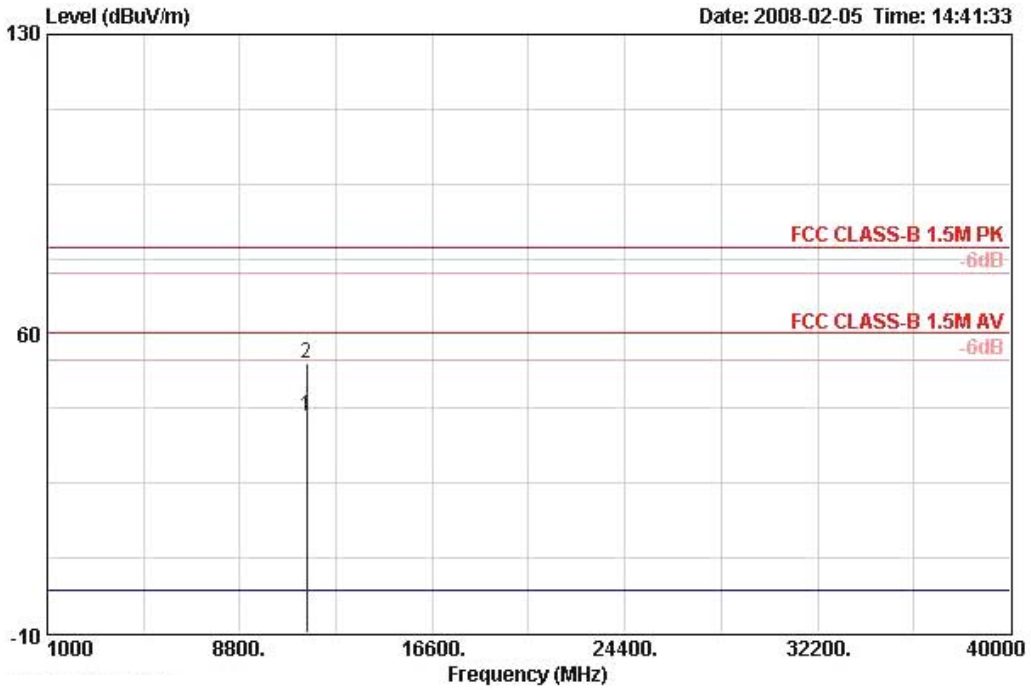
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

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

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

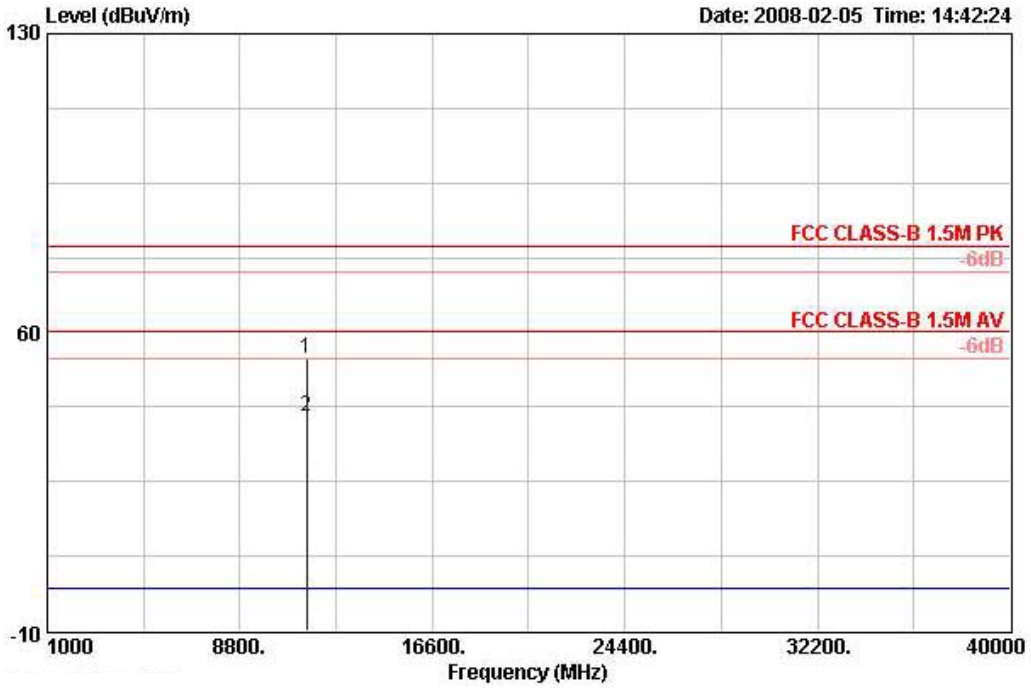
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	11a Draft n MCS8 20MHz CH 149 Ant. A1+Ant. A2+Ant. A3

Horizontal



	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	11491.550	40.63	-19.37	60.00	27.06	38.78	9.78	34.98	AVERAGE	109	144	HORIZONTAL
2	11492.170	52.99	-27.01	80.00	39.41	38.78	9.78	34.98	PEAK	109	144	HORIZONTAL

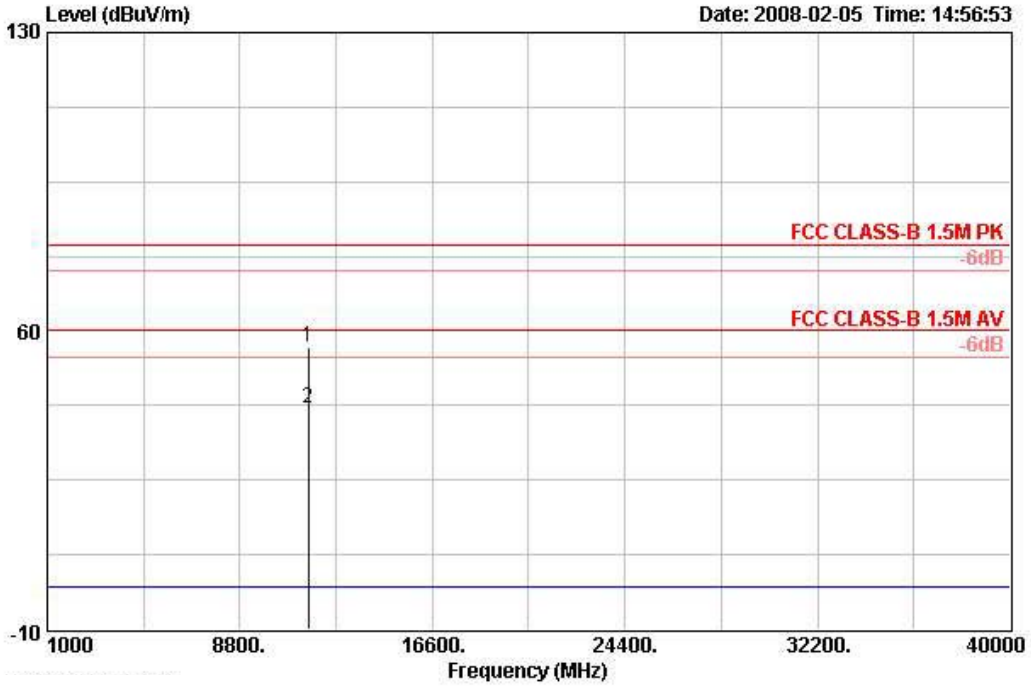
Vertical



	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	11491.310	53.75	-26.25	80.00	40.17	38.78	9.78	34.98	PEAK	113	60	VERTICAL
2	11491.390	40.44	-19.56	60.00	26.86	38.78	9.78	34.98	AVERAGE	113	60	VERTICAL

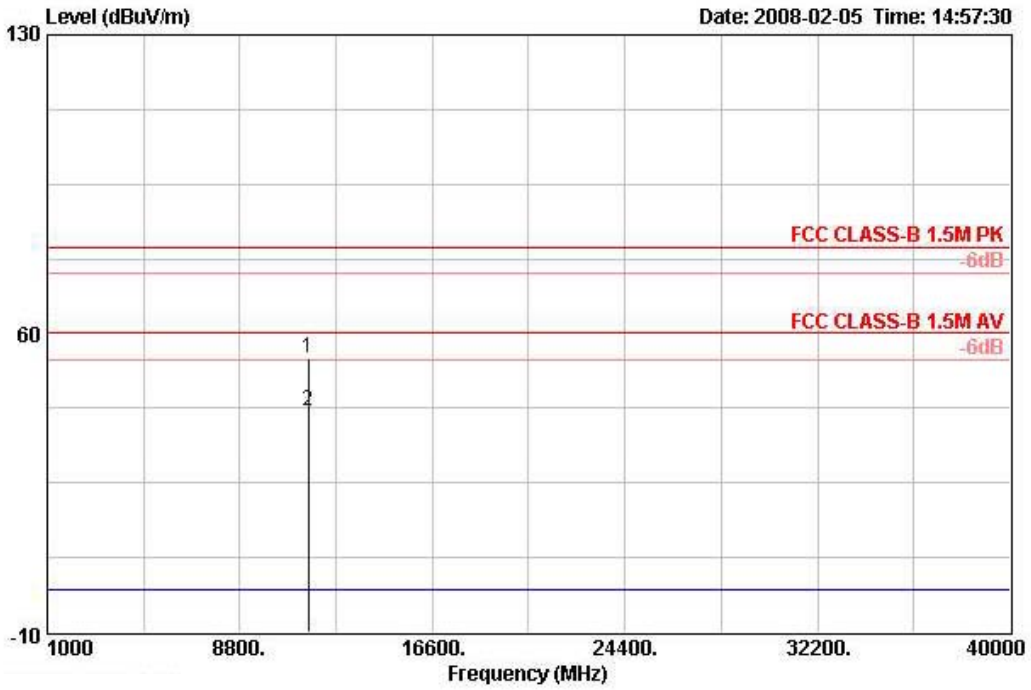
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	11a Draft n MCS8 20MHz CH 157 Ant. A1+Ant. A2+Ant. A3

Horizontal



	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	11568.030	56.22	-23.78	80.00	42.60	38.83	9.79	35.00	PEAK	100	215	HORIZONTAL
2 @	11572.500	42.04	-17.96	60.00	28.41	38.83	9.80	35.00	AVERAGE	100	215	HORIZONTAL

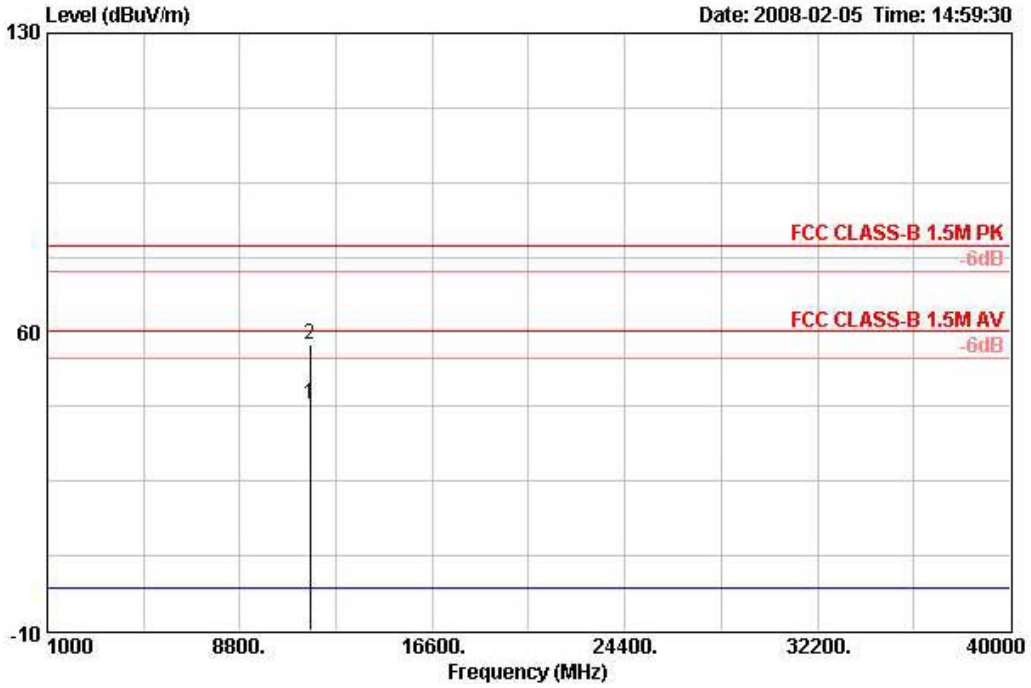
Vertical



	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	11568.210	54.10	-25.90	80.00	40.48	38.83	9.79	35.00	PEAK	100	252	VERTICAL
2 @	11569.220	41.79	-18.21	60.00	28.17	38.83	9.79	35.00	AVERAGE	100	252	VERTICAL

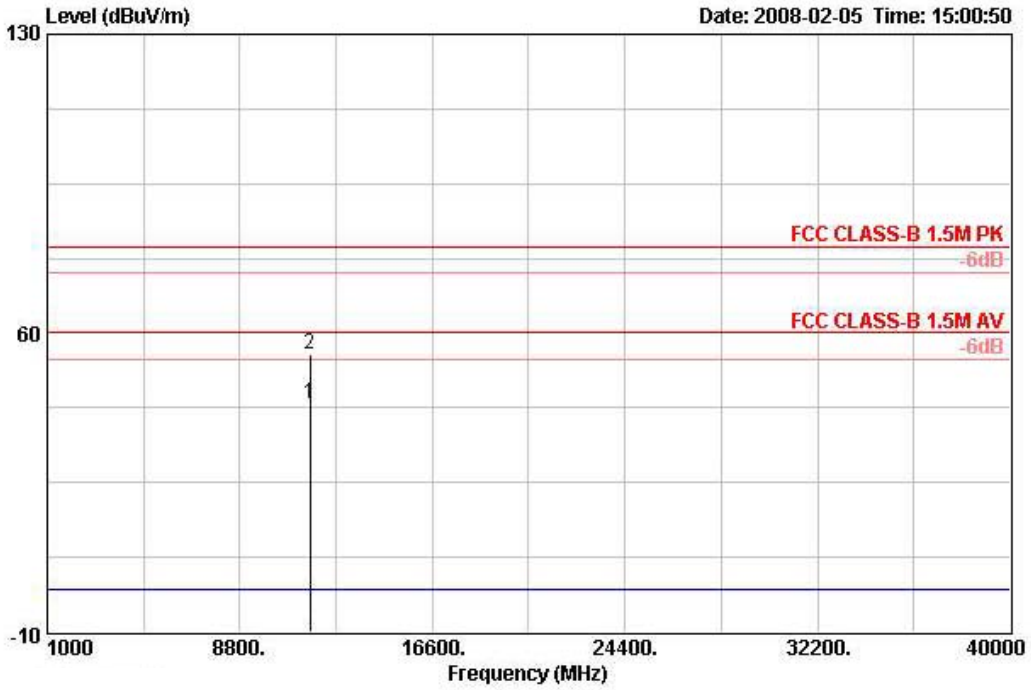
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	11a Draft n MCS8 20MHz CH 165 Ant. A1+Ant. A2+Ant. A3

Horizontal



	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 @	11649.530	43.21	-16.79	60.00	29.54	38.86	9.82	35.01	AVERAGE	100	222	HORIZONTAL
2	11651.120	57.10	-22.90	80.00	43.43	38.86	9.82	35.01	PEAK	100	222	HORIZONTAL

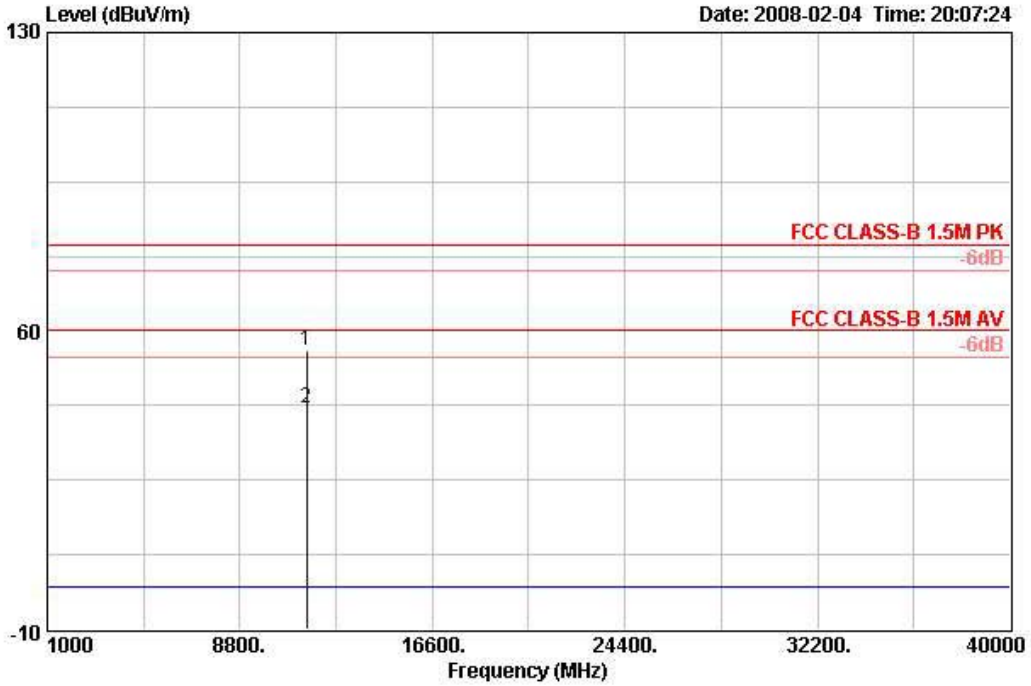
Vertical



	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 @	11649.050	43.54	-16.46	60.00	29.88	38.86	9.82	35.01	AVERAGE	100	244	VERTICAL
2	11649.970	54.87	-25.13	80.00	41.20	38.86	9.82	35.01	PEAK	100	244	VERTICAL

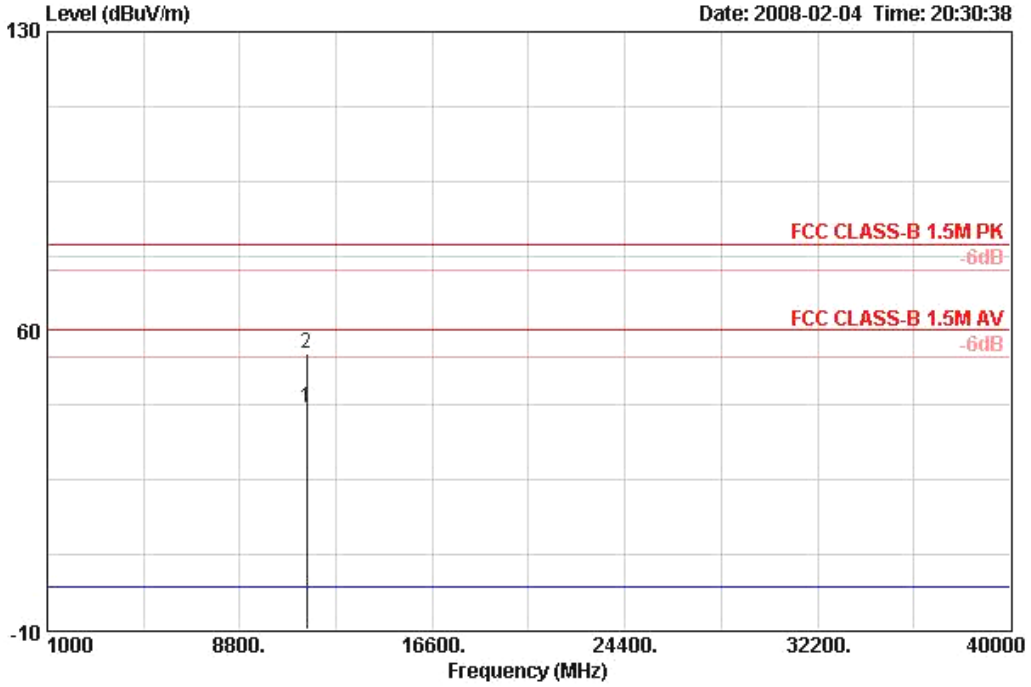
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	11a Draft n MCS8 40MHz CH 151 Ant. A1+Ant. A2+Ant. A3

Horizontal



	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	11510.550	55.52	-24.48	80.00	41.94	38.80	9.78	35.00	PEAK	130	334	HORIZONTAL
2 @	11510.630	41.75	-18.25	60.00	28.17	38.80	9.78	35.00	AVERAGE	130	334	HORIZONTAL

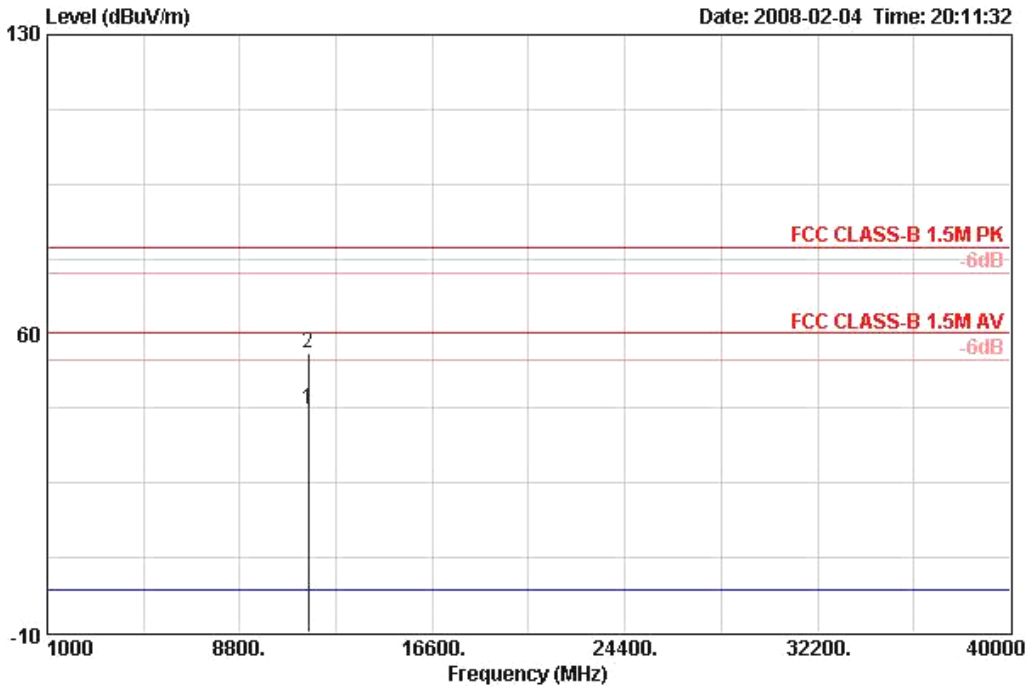
Vertical



	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 @	11508.790	41.83	-18.17	60.00	28.25	38.80	9.78	35.00	AVERAGE	100	224	VERTICAL
2	11511.650	54.67	-25.33	80.00	41.09	38.80	9.78	35.00	PEAK	100	224	VERTICAL

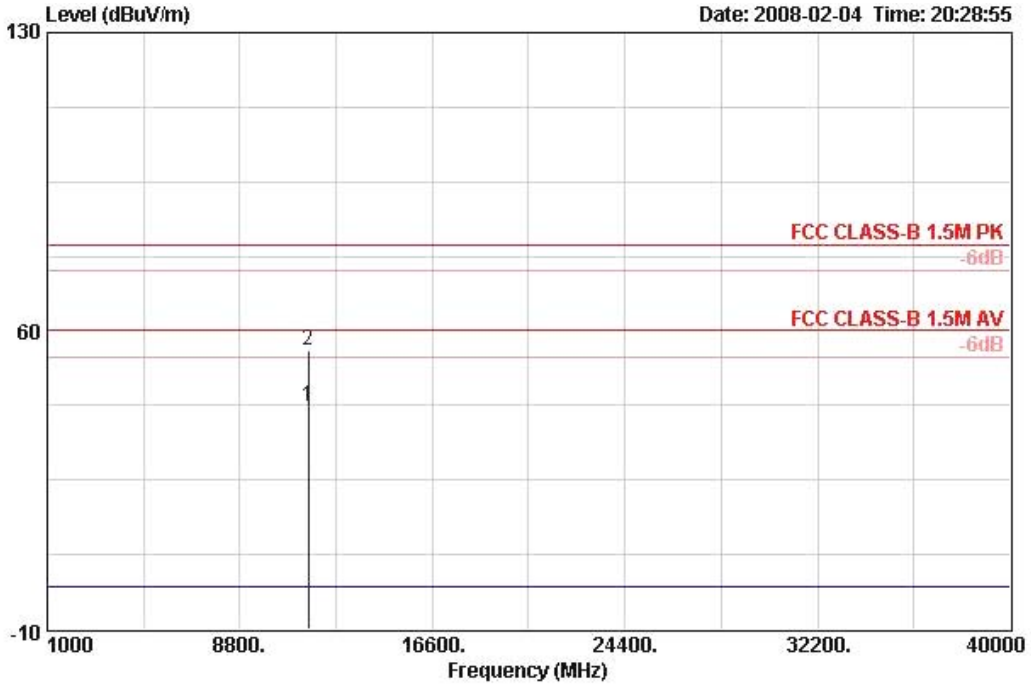
Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	11a Draft n MCS8 40MHz CH 159 Ant. A1+Ant. A2+Ant. A3

Horizontal



	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 @	11591.290	42.19	-17.81	60.00	28.55	38.83	9.80	35.00	AVERAGE	100	107	HORIZONTAL
2	11591.690	55.35	-24.65	80.00	41.71	38.83	9.80	35.00	PEAK	100	107	HORIZONTAL

Vertical



	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 @	11590.550	42.17	-17.83	60.00	28.54	38.83	9.80	35.00	AVERAGE	100	230	VERTICAL
2	11590.580	55.28	-24.72	80.00	41.64	38.83	9.80	35.00	PEAK	100	230	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. Radiated 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 Radiated Band Edge and Fundamental Emissions

Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	Draft n MCS8 20MHz Ch 1, 6, 11 Ant. B1+ Ant. B2+Ant. B3

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 @	2389.930	73.64	-0.36	74.00	41.31	28.17	4.15	0.00	PEAK	153	150	HORIZONTAL
2 @	2389.930	52.40	-1.60	54.00	20.07	28.17	4.15	0.00	AVERAGE	153	150	HORIZONTAL
3 @	2413.600	115.73			83.37	28.21	4.15	0.00	PEAK	153	150	HORIZONTAL
4 @	2415.400	102.36			69.97	28.21	4.18	0.00	AVERAGE	153	150	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 @	2389.840	72.93	-1.07	74.00	40.60	28.17	4.15	0.00	PEAK	153	149	HORIZONTAL
2 @	2390.000	53.57	-0.43	54.00	21.24	28.17	4.15	0.00	AVERAGE	153	149	HORIZONTAL
3 @	2435.000	109.11			76.68	28.25	4.18	0.00	AVERAGE	153	149	HORIZONTAL
4 @	2438.400	123.37			90.91	28.29	4.18	0.00	PEAK	153	149	HORIZONTAL
5 @	2483.500	53.31	-0.69	54.00	20.72	28.36	4.23	0.00	AVERAGE	153	149	HORIZONTAL
6 @	2483.500	72.39	-1.61	74.00	39.80	28.36	4.23	0.00	PEAK	153	149	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 @	2463.400	102.29			69.77	28.32	4.20	0.00	AVERAGE	148	150	HORIZONTAL
2 @	2464.000	115.68			83.15	28.32	4.20	0.00	PEAK	148	150	HORIZONTAL
3 @	2483.500	52.75	-1.25	54.00	20.16	28.36	4.23	0.00	AVERAGE	148	150	HORIZONTAL
4 @	2483.540	70.01	-3.99	74.00	37.42	28.36	4.23	0.00	PEAK	148	150	HORIZONTAL

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

Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	Draft n MCS8 40MHz Ch 3, 6, 9 Ant. B1+ Ant. B2+Ant. B3

Channel 3

	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 @	2389.960	71.36	-2.64	74.00	39.03	28.17	4.15	0.00	PEAK	156	150	HORIZONTAL
2 @	2390.000	53.92	-0.08	54.00	21.59	28.17	4.15	0.00	AVERAGE	156	150	HORIZONTAL
3 @	2416.400	95.76			63.37	28.21	4.18	0.00	AVERAGE	156	150	HORIZONTAL
4 @	2419.200	110.82			78.43	28.21	4.18	0.00	PEAK	156	150	HORIZONTAL
5	2483.500	62.33	-11.67	74.00	29.74	28.36	4.23	0.00	PEAK	156	150	HORIZONTAL
6 @	2483.500	49.70	-4.30	54.00	17.11	28.36	4.23	0.00	AVERAGE	156	150	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	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	2390.000	53.39	-0.61	54.00	21.06	28.17	4.15	0.00	AVERAGE	149	150	HORIZONTAL
2	2390.000	65.85	-8.15	74.00	33.52	28.17	4.15	0.00	PEAK	149	150	HORIZONTAL
3 @	2437.000	97.47			65.01	28.29	4.18	0.00	AVERAGE	149	150	HORIZONTAL
4 @	2438.800	112.63			80.17	28.29	4.18	0.00	PEAK	149	150	HORIZONTAL
5 @	2483.500	53.63	-0.37	54.00	21.04	28.36	4.23	0.00	AVERAGE	149	150	HORIZONTAL
6 @	2483.900	70.08	-3.92	74.00	37.49	28.36	4.23	0.00	PEAK	149	150	HORIZONTAL

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	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	2390.000	61.96	-12.04	74.00	29.63	28.17	4.15	0.00	Peak	149	150	HORIZONTAL
2	2390.000	50.80	-3.20	54.00	18.41	28.21	4.18	0.00	AVERAGE	149	150	HORIZONTAL
3 @	2436.800	95.56			63.10	28.29	4.18	0.00	AVERAGE	149	150	HORIZONTAL
4 @	2442.800	110.56			78.07	28.29	4.20	0.00	PEAK	149	150	HORIZONTAL
5 @	2483.500	53.31	-0.69	54.00	20.72	28.36	4.23	0.00	AVERAGE	149	150	HORIZONTAL
6 @	2483.600	72.22	-1.78	74.00	39.63	28.36	4.23	0.00	PEAK	149	150	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.

The Radiated Band-edge tests were performed at Vertical and Horizontal and the worst-case was found at Horizontal. All the results have been recorded in this report.

Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	11a Draft n MCS8 20MHz CH 149, 157, 165 Ant. A1+Ant. A2+Ant. A3

Channel 149

	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 @	5742.200	105.06			63.87	34.35	6.84	0.00	AVERAGE	133	322	HORIZONTAL
2 @	5743.400	118.26			77.07	34.35	6.84	0.00	PEAK	133	322	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5745 MHz.

Channel 157

	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 @	5786.000	105.92			64.70	34.36	6.86	0.00	AVERAGE	122	200	HORIZONTAL
2 @	5787.000	109.87			68.65	34.36	6.86	0.00	PEAK	122	200	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5785 MHz.

Channel 165

	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 @	5822.400	107.39			66.15	34.37	6.88	0.00	AVERAGE	118	195	HORIZONTAL
2 @	5827.600	121.11			79.87	34.37	6.88	0.00	PEAK	118	195	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Note:

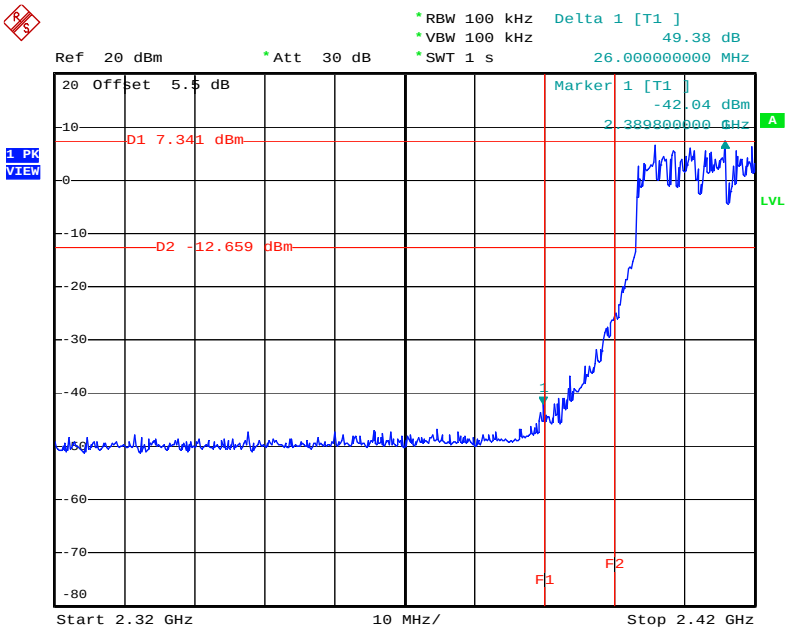
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

The Radiated Band-edge tests were performed at Vertical and Horizontal and the worst-case was found at Horizontal. All the results have been recorded in this report.

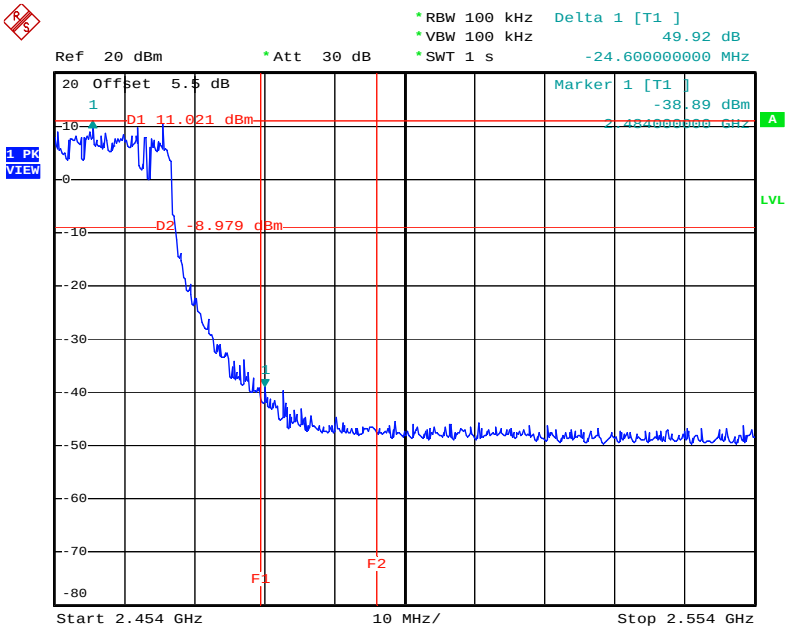
For Emission not in Restricted Band

Low Band Edge Plot on Configuration Draft n MCS8 20MHz Ant. B1+Ant. B2+Ant. B3 / 2412 MHz



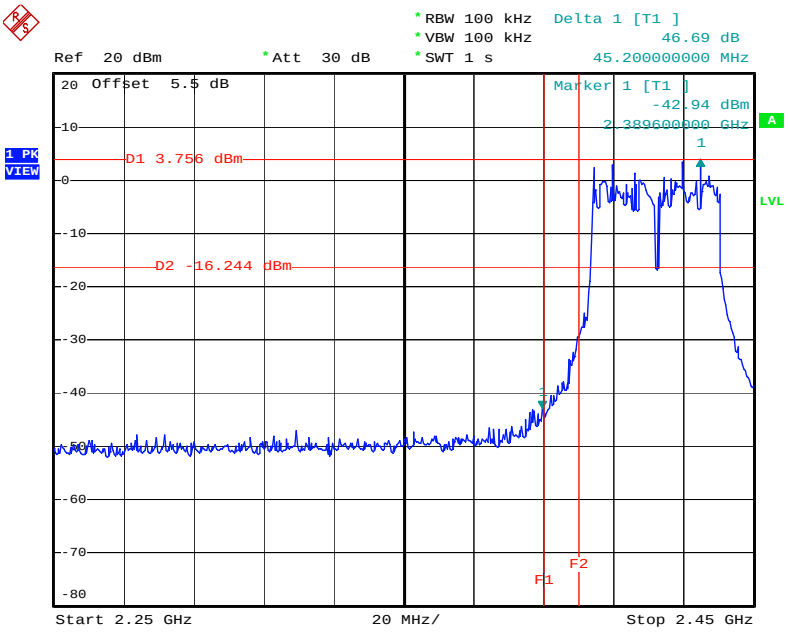
Date: 13.FEB.2008 08:00:09

High Band Edge Plot on Configuration Draft n MCS8 20MHz Ant. B1+Ant. B2+Ant. B3 / 2462 MHz



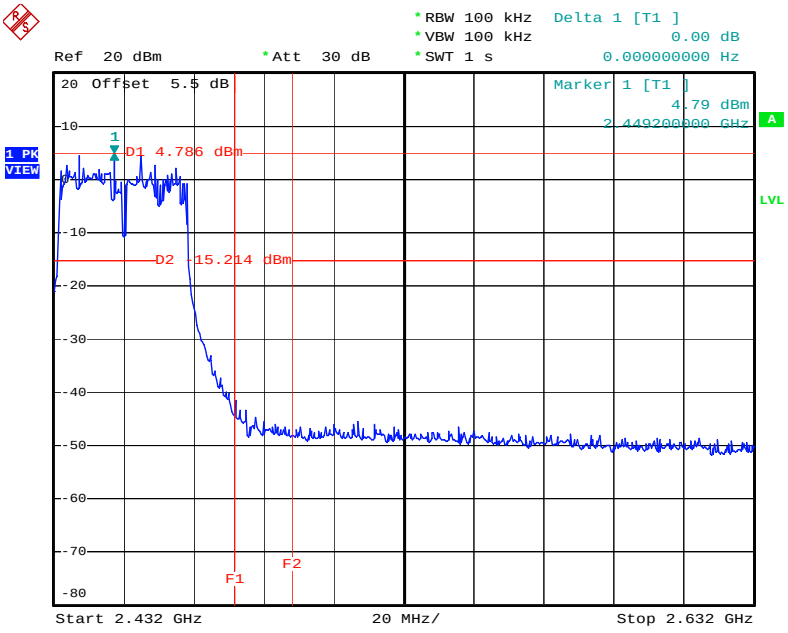
Date: 13.FEB.2008 10:36:58

Low Band Edge Plot on Configuration Draft n MCS8 40MHz Ant. B1+Ant. B2+Ant. B3 / 2422 MHz



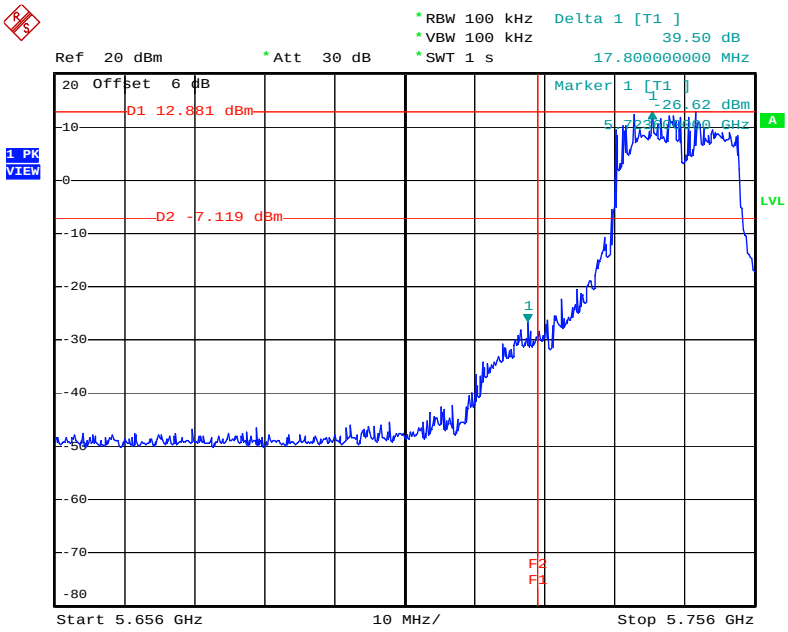
Date: 20.FEB.2008 13:07:42

High Band Edge Plot on Configuration Draft n MCS8 40MHz Ant. B1+Ant. B2+Ant. B3 / 2452 MHz



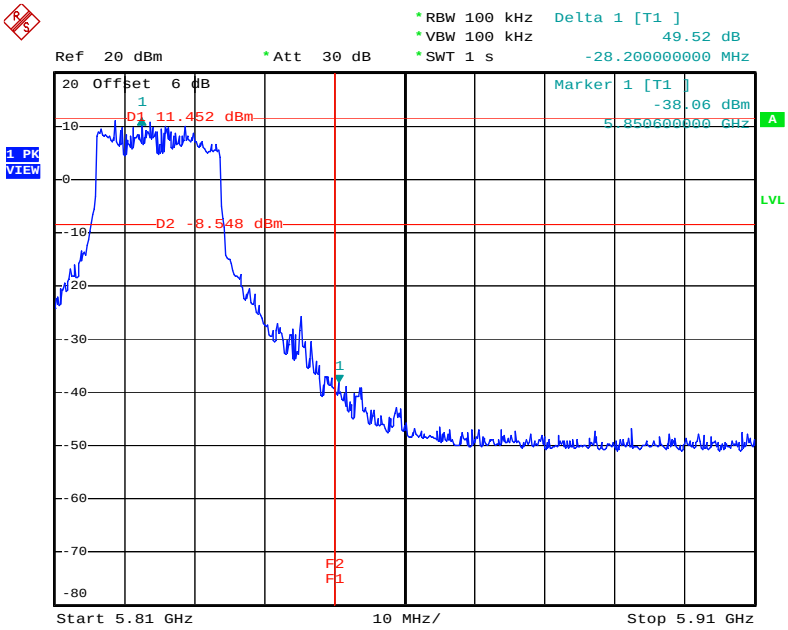
Date: 13.FEB.2008 07:52:44

Low Band Edge Plot on Configuration 11a Draft n MCS8 20MHz Ant. A1+Ant. A2+Ant. A3 / 5745 MHz



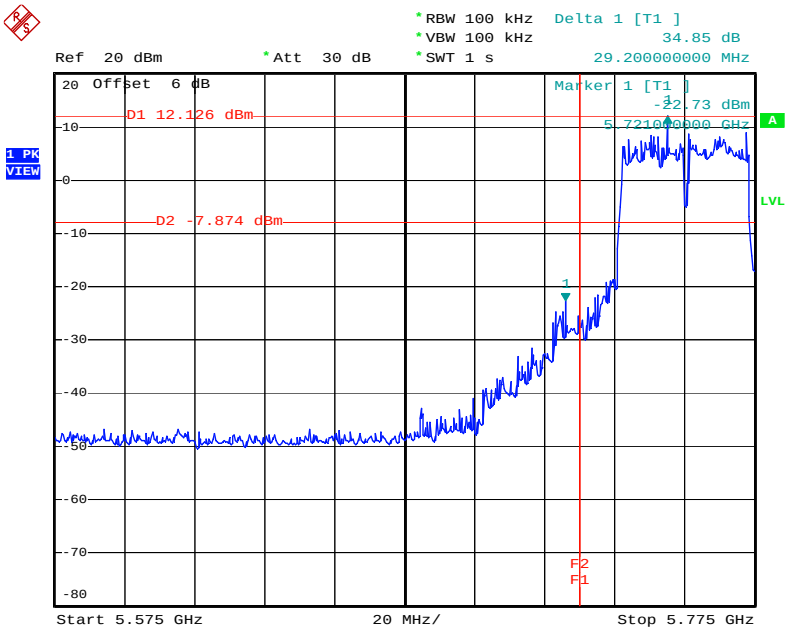
Date: 13.FEB.2008 09:30:19

High Band Edge Plot on Configuration 11a Draft n MCS8 20MHz Ant. A1+Ant. A2+Ant. A3 / 5825 MHz



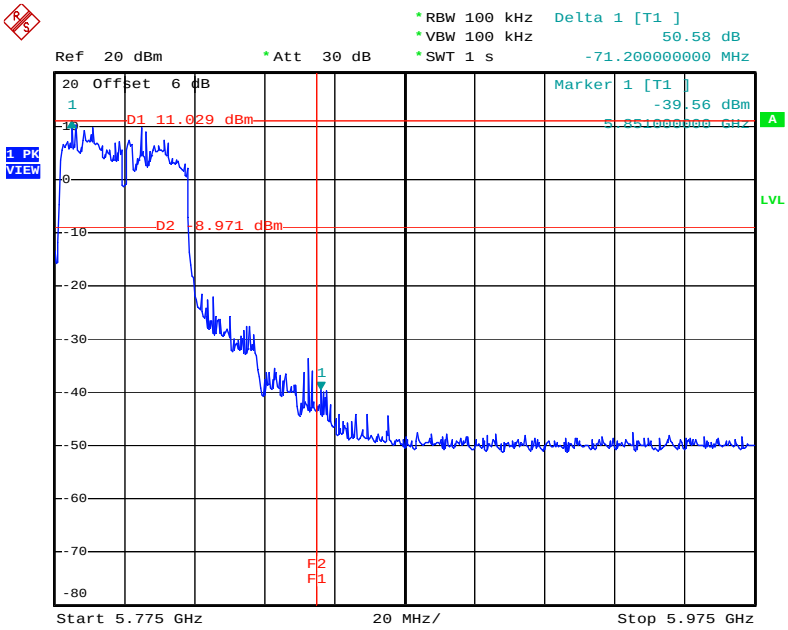
Date: 13.FEB.2008 11:22:56

Low Band Edge Plot on Configuration 11a Draft n MCS8 40MHz Ant. A1+Ant. A2+Ant. A3 / 5755 MHz



Date: 13.FEB.2008 09:24:42

High Band Edge Plot on Configuration 11a Draft n MCS8 40MHz Ant. A1+Ant. A2+Ant. A3 / 5795 MHz



Date: 13.FEB.2008 09:14:47

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	100132	9kHz – 2.75GHz	Jul. 14, 2007	Conduction (CO04-HY)
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, 2007	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, 2007	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, 2007	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	May 09, 2007	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)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 14, 2007	Radiation (03CH03-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	Jun. 07, 2007	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jul. 21, 2008	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	923364	26.5 GHz - 40 GHz	Jan. 22, 2007*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100305	9 kHz - 40 GHz	Sep. 27, 2007	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 23, 2006*	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 23, 2008*	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Jul. 21, 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	May 04, 2007	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	NCR	Radiation (03CH03-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
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	Dec. 17, 2007	Conducted (TH01-HY)
Spectrum Analyzer	R&S	FSP30	100023	9kHz ~ 30GHz	Jan. 10, 2008	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jun. 27, 2007	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	Jun. 27, 2007	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	Jun. 27, 2007	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 04, 2007*	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. 03, 2007	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)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 07, 2007	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.

* Calibration Interval of instruments listed above is two year.

NCR means Non-Calibration required.

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

TAF

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

P1, total 9 pages

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