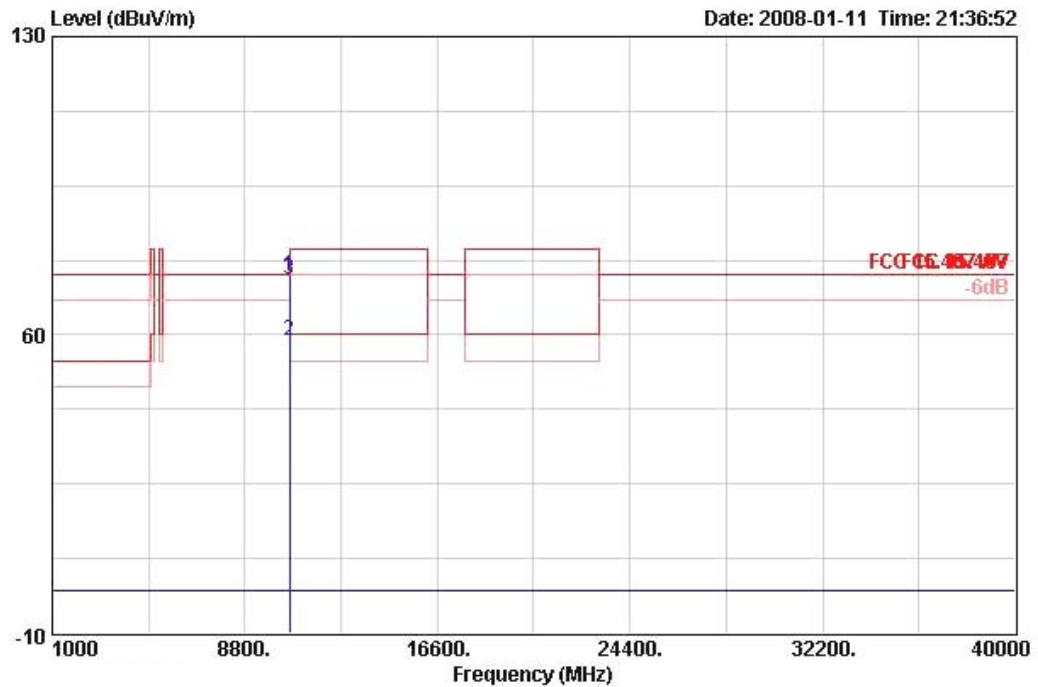


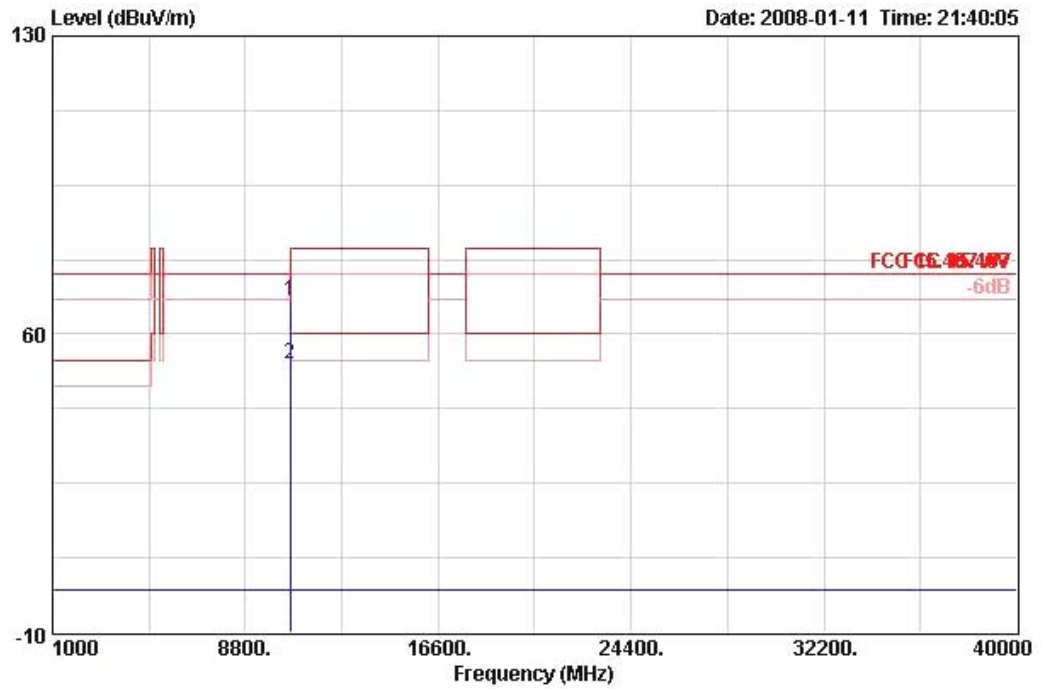
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 60 Ant. 3 + Ant. 5

Horizontal



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos	Pol/Phase
			dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10598.360	73.63	-0.67	74.30	60.68	38.38	9.47	34.90	PEAK	110	313	HORIZONTAL
2	10600.760	58.72	-1.28	60.00	45.75	38.38	9.48	34.89	AVERAGE	110	313	HORIZONTAL
3	10605.960	72.85	-7.15	80.00	59.87	38.38	9.48	34.89	PEAK	110	313	HORIZONTAL

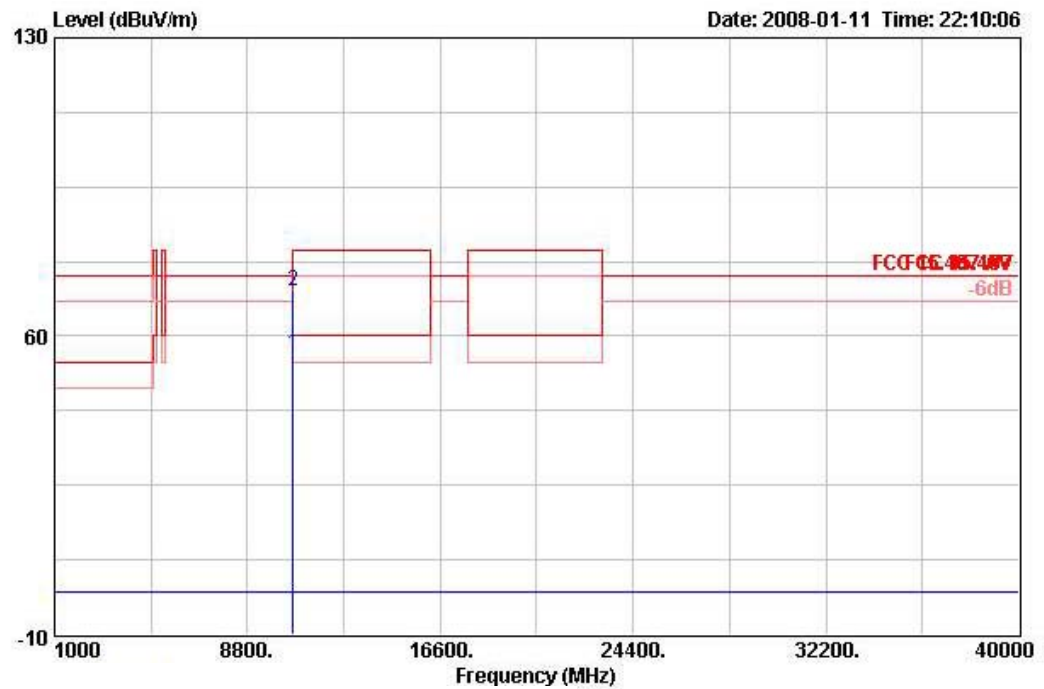
Vertical



	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 @	10599.880	67.70	-6.60	74.30	54.75	38.38	9.47	34.90	PEAK	114	331	VERTICAL
2	10599.980	53.21	-21.09	74.30	40.26	38.38	9.47	34.90	AVERAGE	114	331	VERTICAL

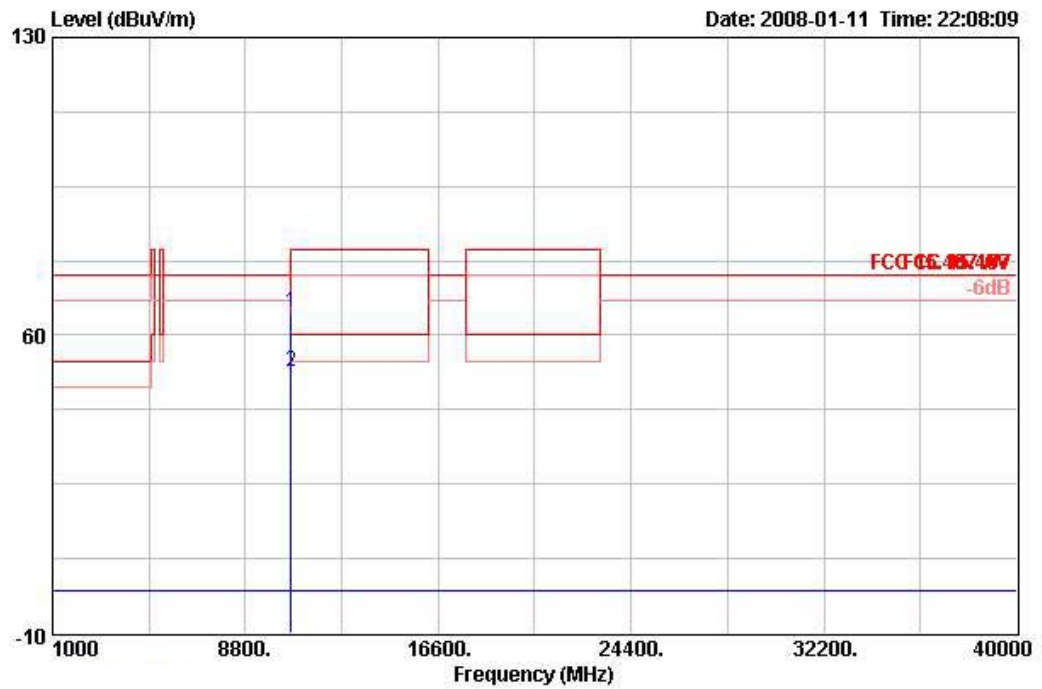
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 64 Ant. 3 + Ant. 5

Horizontal



	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	10640.400	55.77	-4.23	60.00	42.78	38.37	9.50	34.88	AVERAGE	110	316	HORIZONTAL
2	10640.560	70.69	-9.31	80.00	57.70	38.37	9.50	34.88	PEAK	110	316	HORIZONTAL

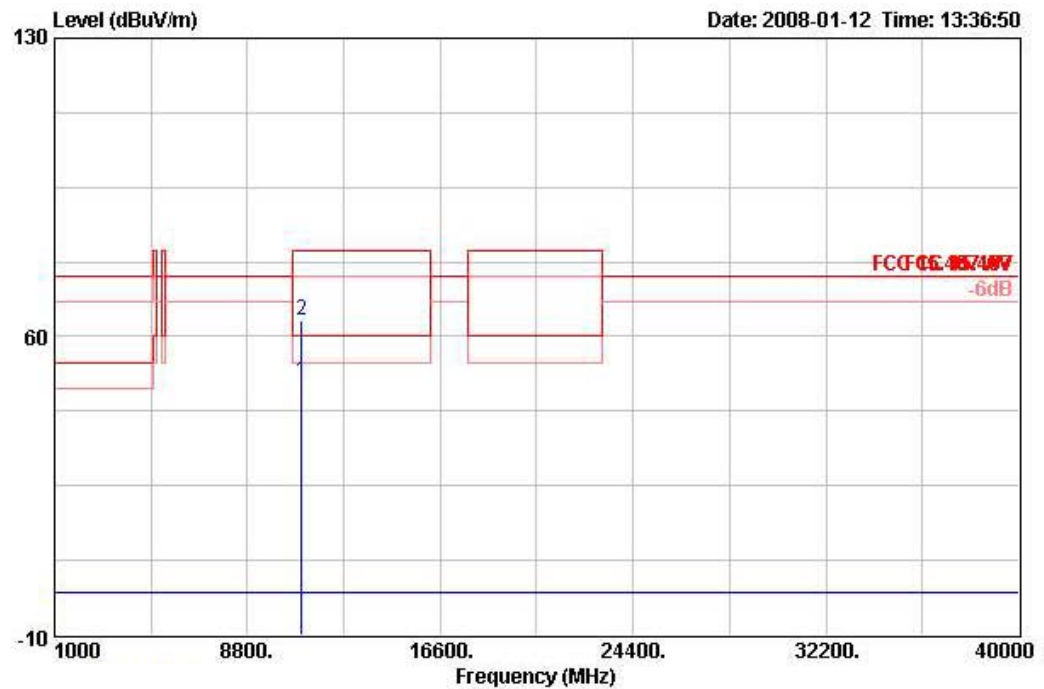
Vertical



	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	10639.680	65.30	-14.70	80.00	52.31	38.37	9.50	34.88	PEAK	113	342	VERTICAL
2	10639.960	51.24	-8.76	60.00	38.25	38.37	9.50	34.88	AVERAGE	113	342	VERTICAL

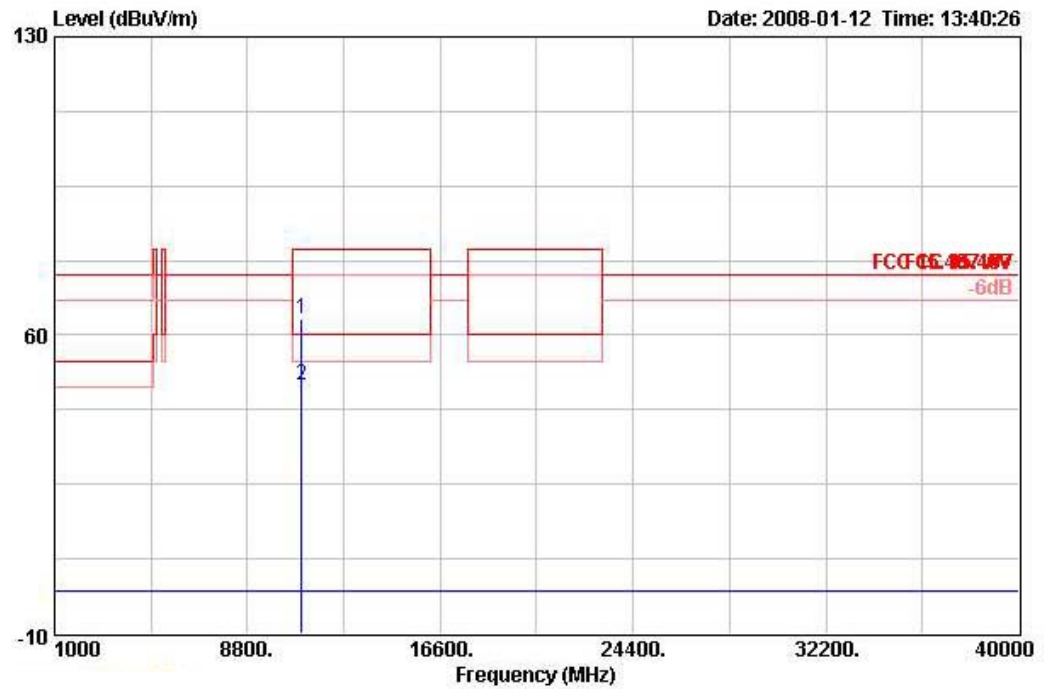
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 100 Ant. 3 + Ant. 5

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	10999.120	49.29	-10.71	60.00	36.06	38.30	9.69	34.76	AVERAGE	136	75	HORIZONTAL
2	11001.760	63.91	-16.09	80.00	50.68	38.30	9.69	34.76	PEAK	136	75	HORIZONTAL

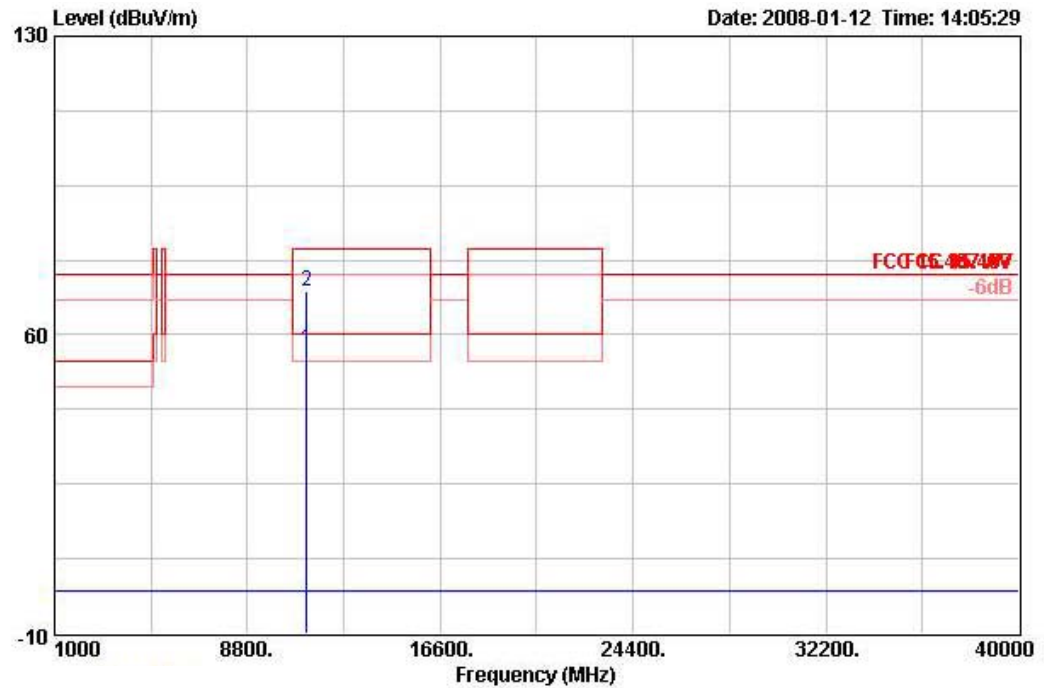
Vertical



	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	10997.800	63.97	-16.03	80.00	50.74	38.30	9.69	34.76	PEAK	105	12	VERTICAL
2	11000.440	48.25	-11.75	60.00	35.01	38.30	9.69	34.76	AVERAGE	105	12	VERTICAL

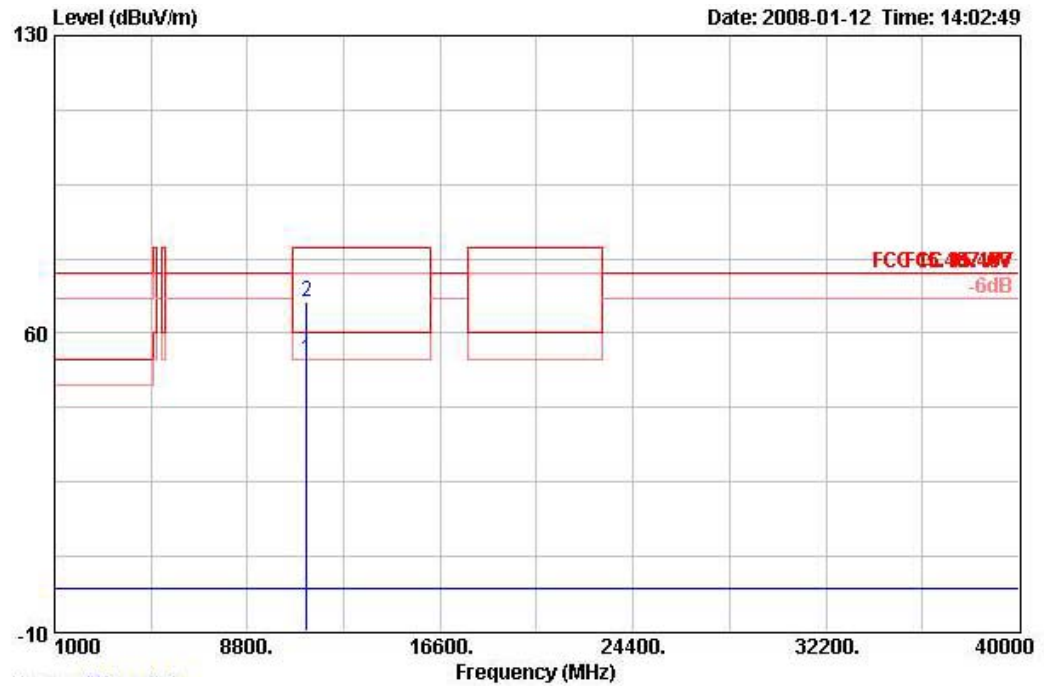
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 120 Ant. 3 + Ant. 5

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	11199.080	56.42	-3.58	60.00	43.04	38.50	9.73	34.85	AVERAGE	135	49	HORIZONTAL
2	11199.240	70.11	-9.89	80.00	56.74	38.50	9.73	34.85	PEAK	135	49	HORIZONTAL

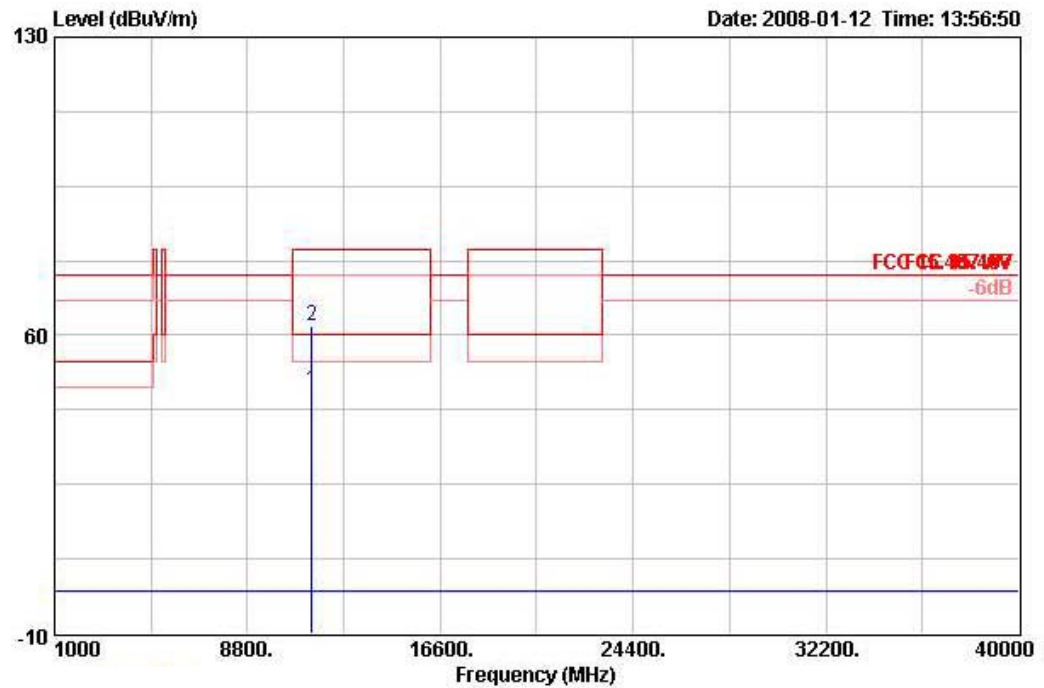
Vertical



	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 @	11199.440	53.82	-6.18	60.00	40.44	38.50	9.73	34.85	AVERAGE	107	1	VERTICAL
2	11202.600	67.57	-12.43	80.00	54.20	38.50	9.73	34.85	PEAK	107	1	VERTICAL

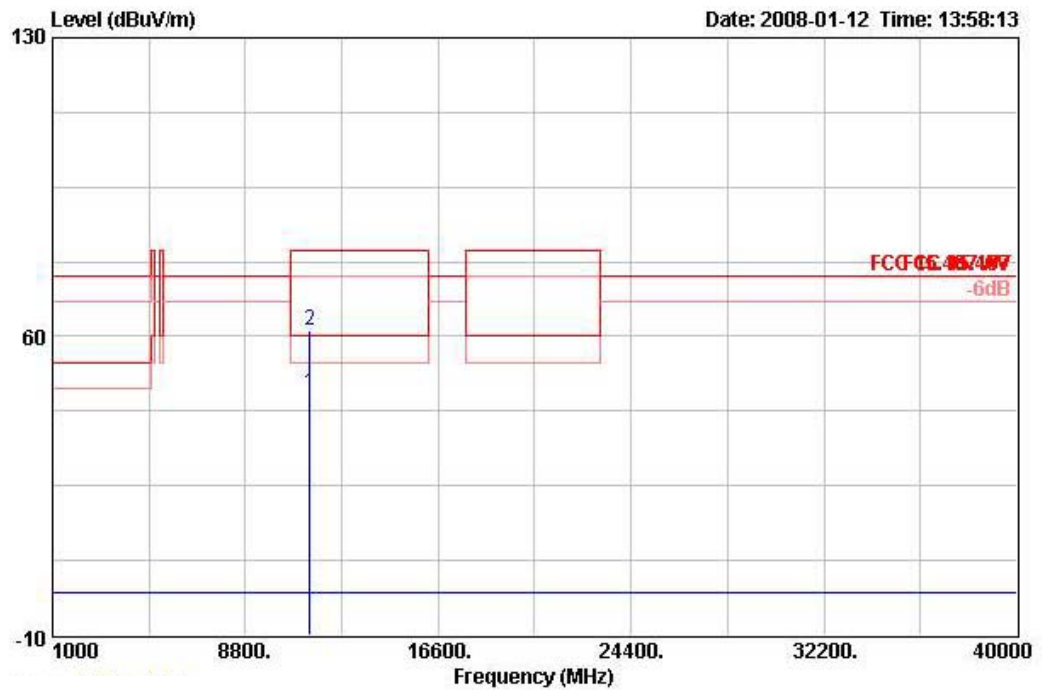
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 140 Ant. 3 + Ant. 5

Horizontal



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	MHz	dBUV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
			dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg
1	11401.120	47.04	-12.96	60.00	33.53	38.70	9.76	34.95	AVERAGE	111	61 HORIZONTAL
2	11401.120	62.21	-17.79	80.00	48.70	38.70	9.76	34.95	PEAK	111	61 HORIZONTAL

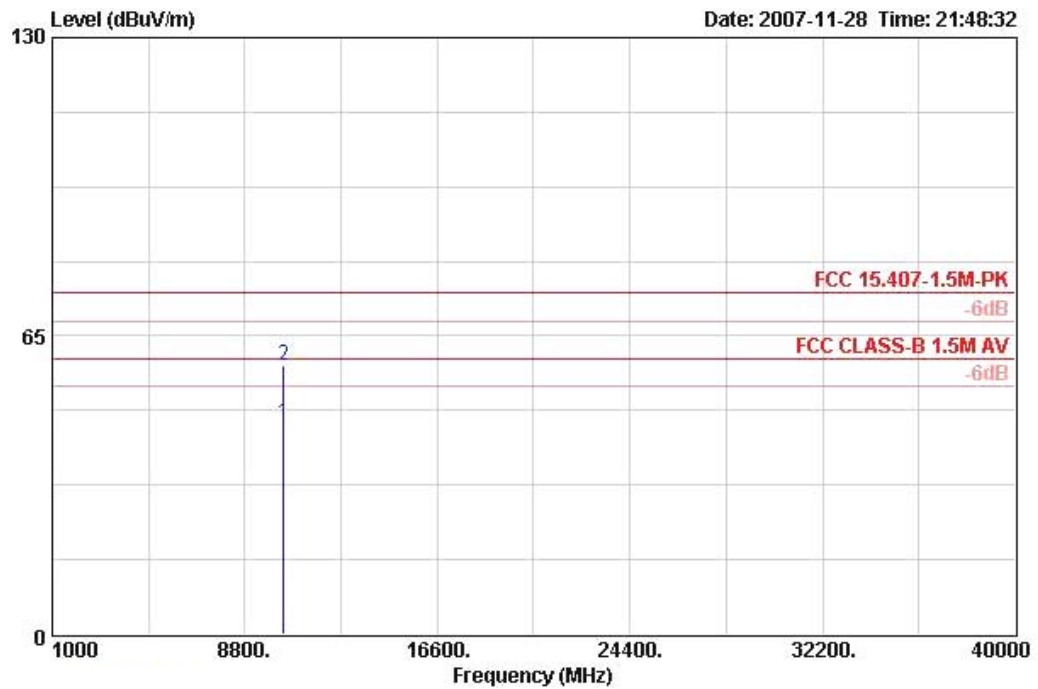
Vertical



	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	11400.960	46.45	-13.55	60.00	32.94	38.70	9.76	34.95	AVERAGE	107	360	VERTICAL
2	11401.040	61.30	-18.70	80.00	47.79	38.70	9.76	34.95	PEAK	107	360	VERTICAL

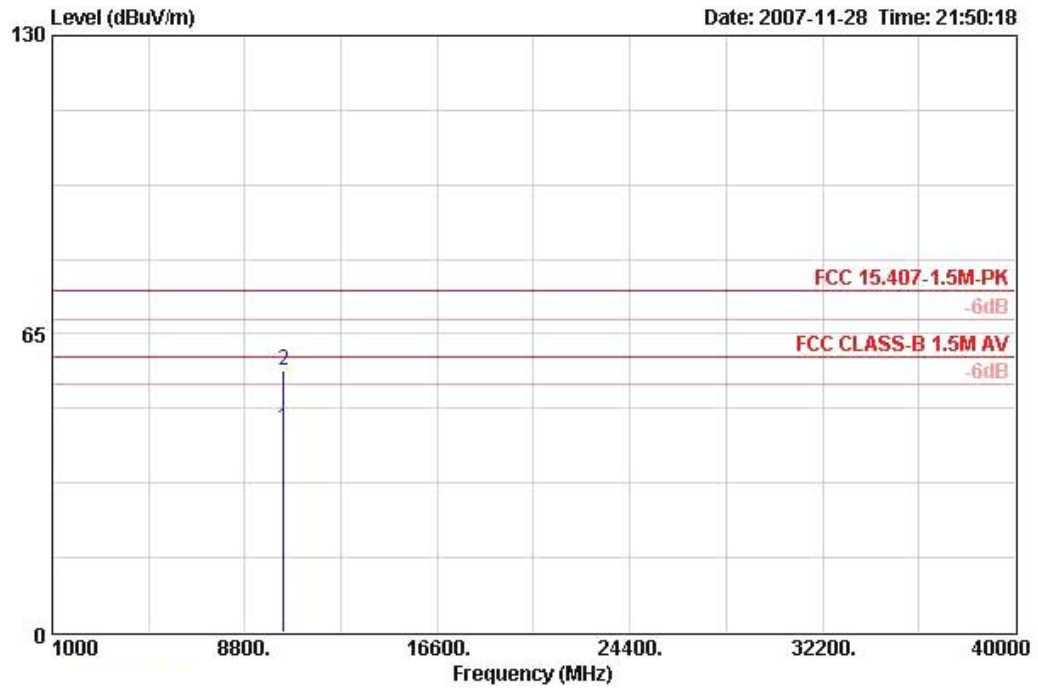
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 38 Ant. 3 + Ant. 5

Horizontal



	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB	dB
2	10381.000	58.57	-15.73	74.30	PEAK	HORIZONTAL	3	45.94	38.38	9.34	35.09

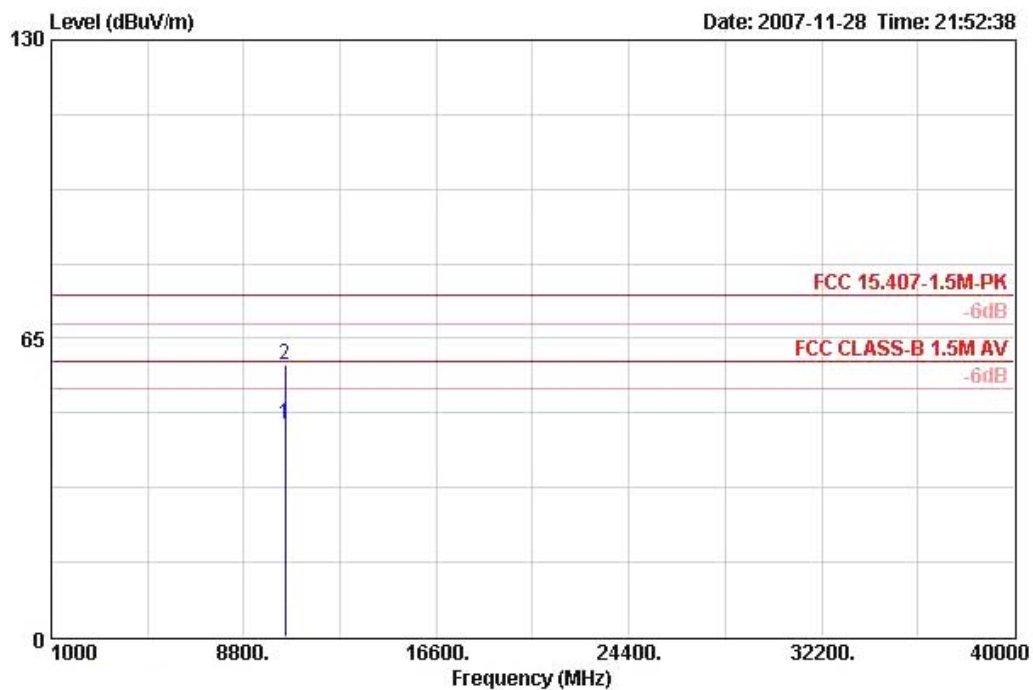
Vertical



	Freq	Level	Over	Limit				ReadAntenna	Cable	Preamp
	MHz	dBuV/m	Limit	Line	Remark	Pol/Phase	Distance	Level Factor	Loss	Factor
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB
2	10380.400	57.10	-17.20	74.30	PEAK	VERTICAL	3	44.47	38.38	9.34

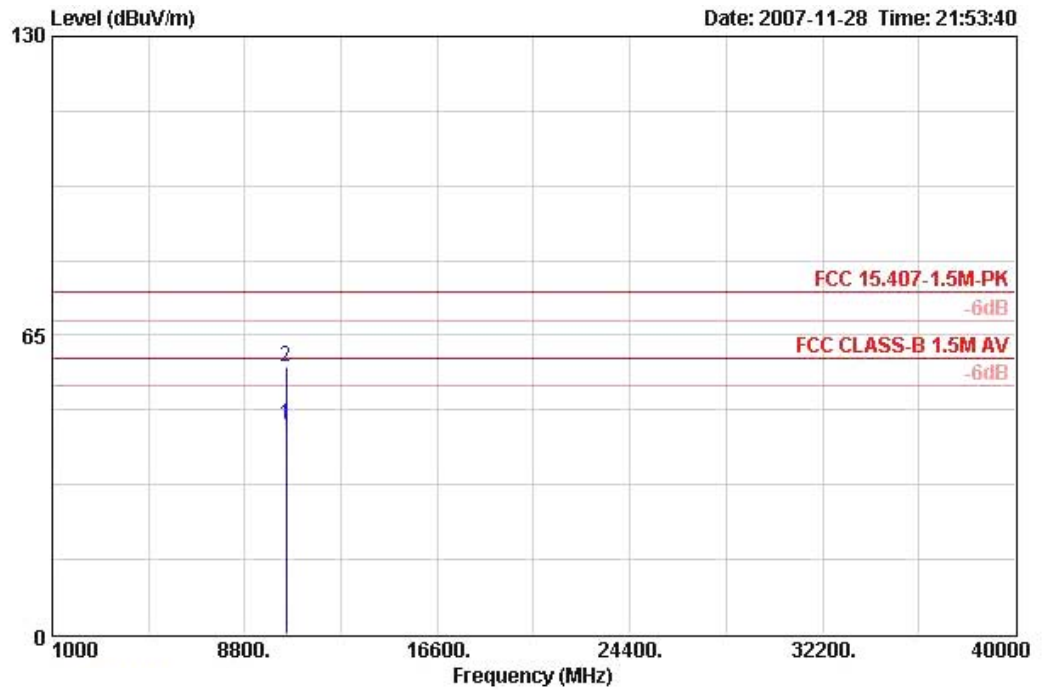
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 46 Ant. 3 + Ant. 5

Horizontal



	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB	dB
2	10460.400	59.36	-14.94	74.30	PEAK	HORIZONTAL	3	46.56	38.39	9.39	34.99

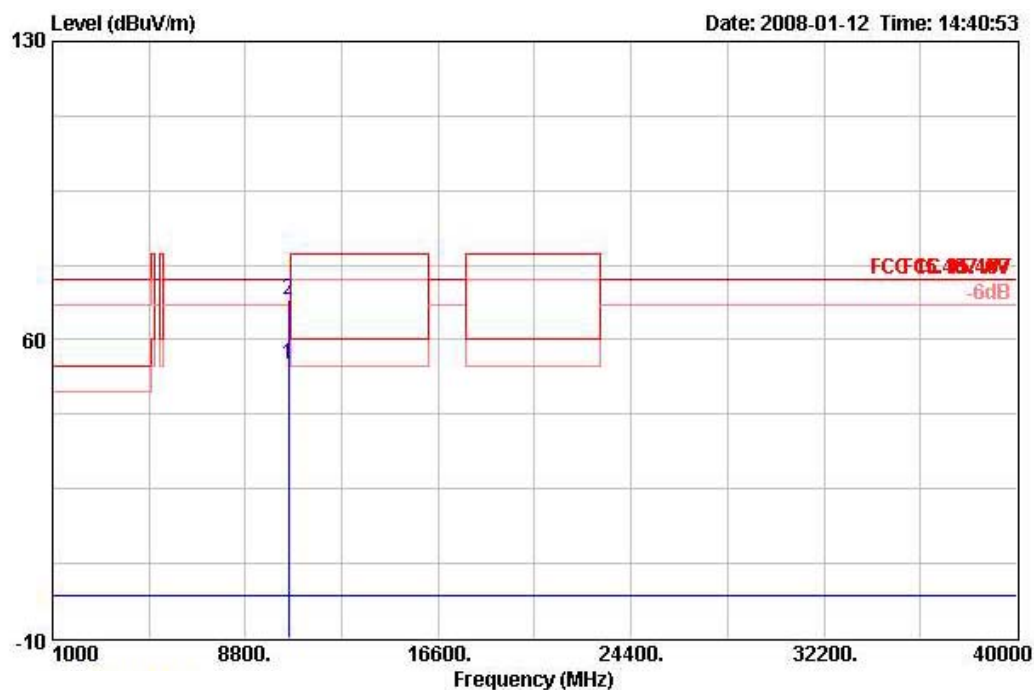
Vertical



	Freq	Level	Over	Limit				ReadAntenna	Cable	Preamp
	MHz	dBuV/m	Limit	Line	Remark	Pol/Phase	Distance	Level Factor	Loss	Factor
			dB	dBuV/m			m	dBuV	dB/m	dB
2	10462.780	58.29	-16.01	74.30	PEAK	VERTICAL	3	45.50	38.39	9.39
										34.99

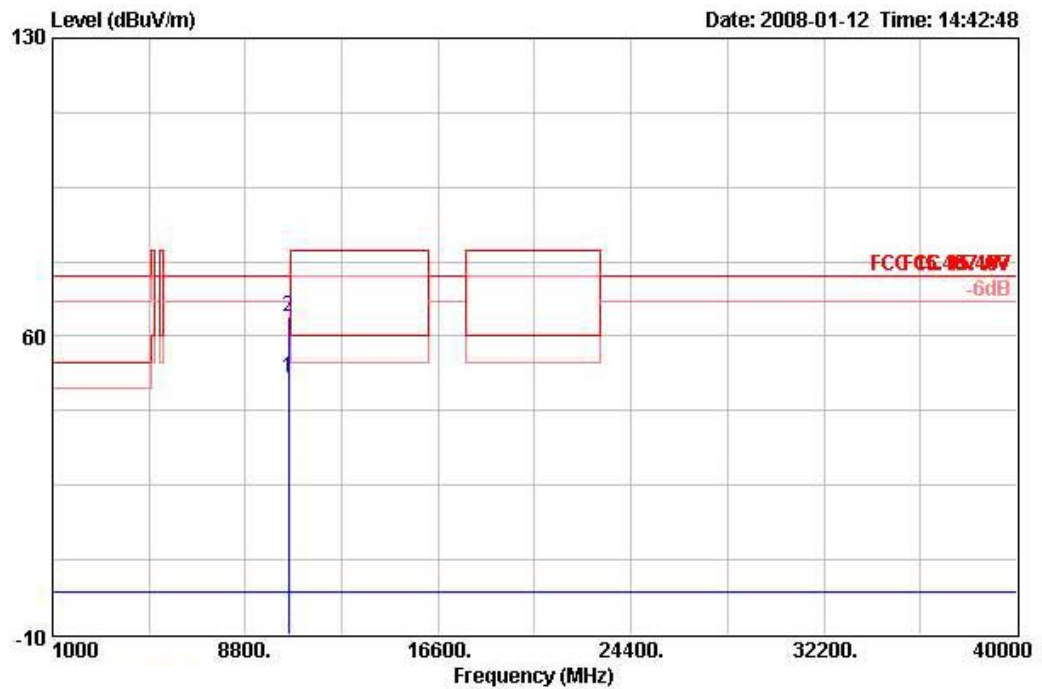
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 54 Ant. 3 + Ant. 5

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	10540.480	54.29	-20.01	74.30	41.38	38.39	9.44	34.92	AVERAGE	112	320	HORIZONTAL
2	10540.960	69.33	-4.97	74.30	56.41	38.39	9.44	34.92	PEAK	112	320	HORIZONTAL

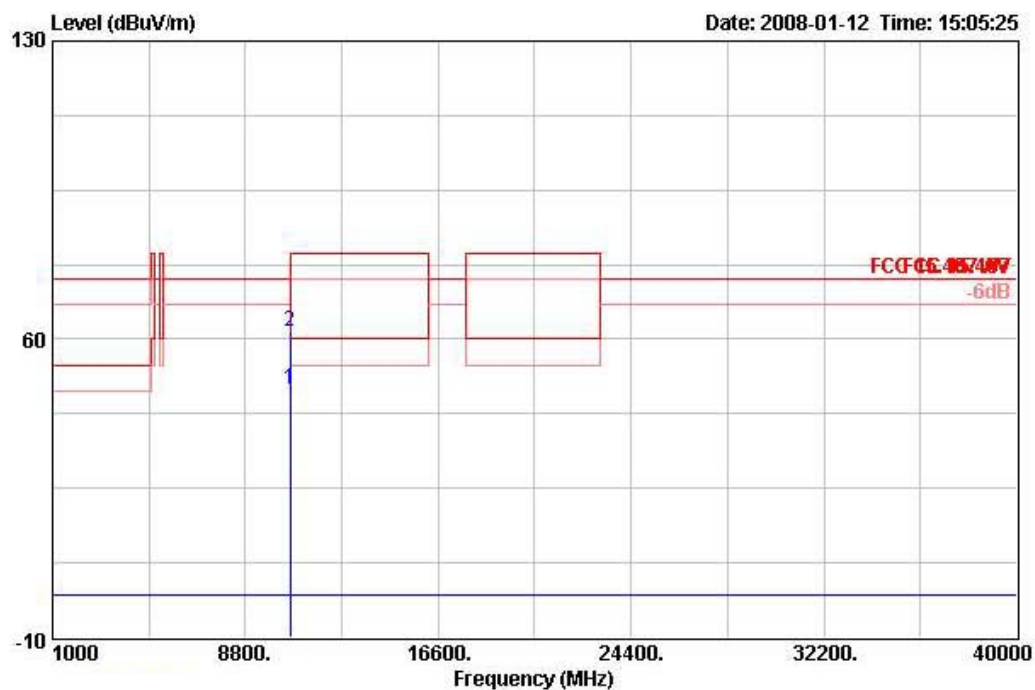
Vertical



	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	10540.040	50.04	-24.26	74.30	37.12	38.39	9.44	34.92	AVERAGE	108	38	VERTICAL
2	10542.360	64.51	-9.79	74.30	51.59	38.39	9.44	34.92	PEAK	108	38	VERTICAL

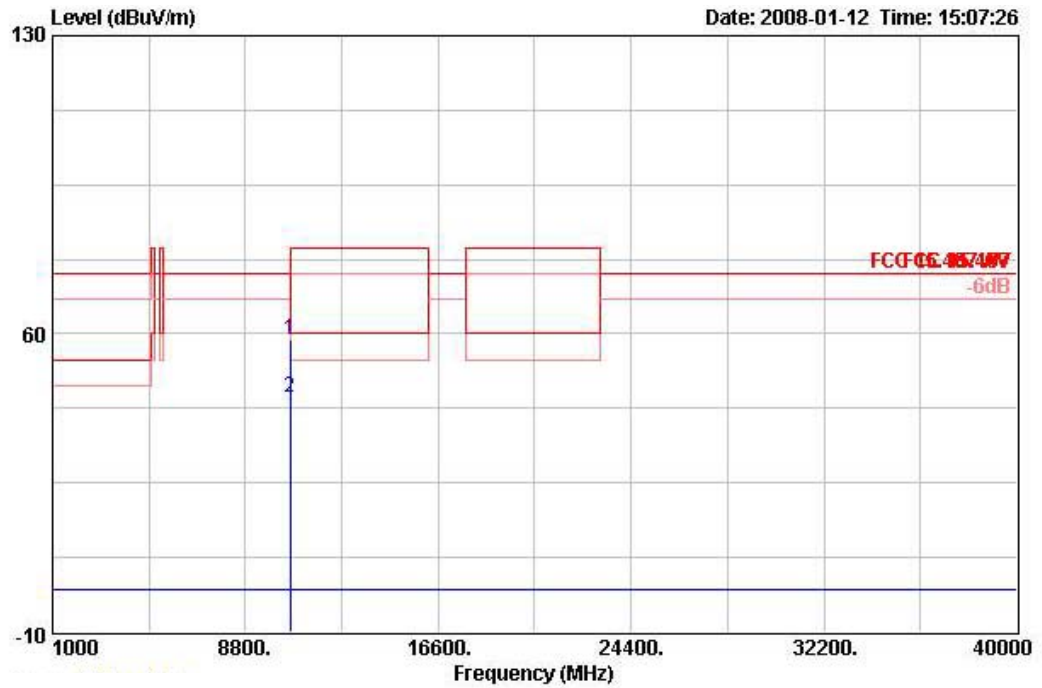
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 62 Ant. 3 + Ant. 5

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB	cm	deg	
1	10620.280	48.21	-11.79	60.00	35.24	38.38	9.48	34.89 AVERAGE	111	311	HORIZONTAL
2	10620.520	61.93	-18.07	80.00	48.96	38.38	9.48	34.89 PEAK	111	311	HORIZONTAL

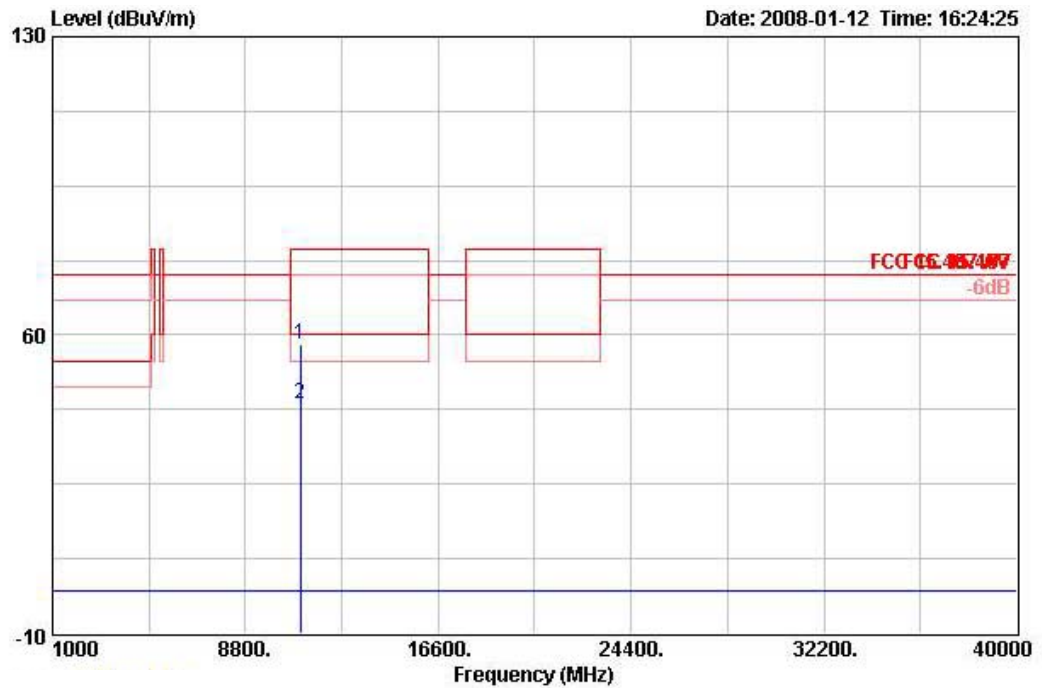
Vertical



	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	10617.760	58.78	-21.22	80.00	45.81	38.38	9.48	34.89	PEAK	108	26	VERTICAL
2	10620.280	44.89	-15.11	60.00	31.92	38.38	9.48	34.89	AVERAGE	108	26	VERTICAL

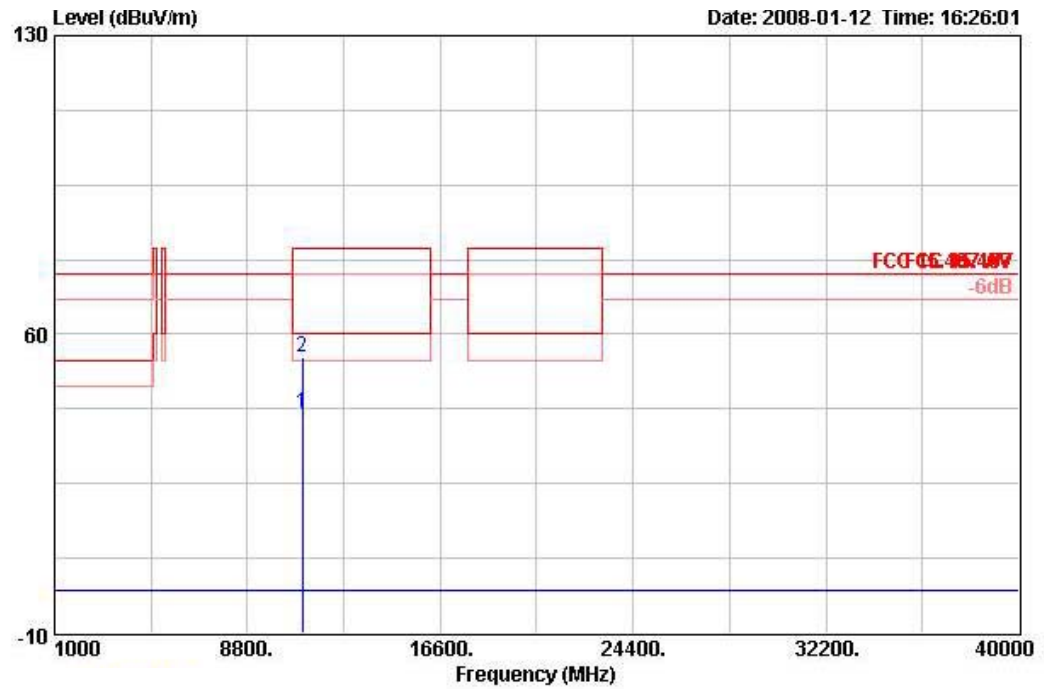
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 102 Ant. 3 + Ant. 5

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	11018.800	57.77	-22.23	80.00	44.52	38.32	9.69	34.77	137	71	HORIZONTAL
2	11018.960	43.72	-16.28	60.00	30.47	38.32	9.69	34.77	137	71	HORIZONTAL

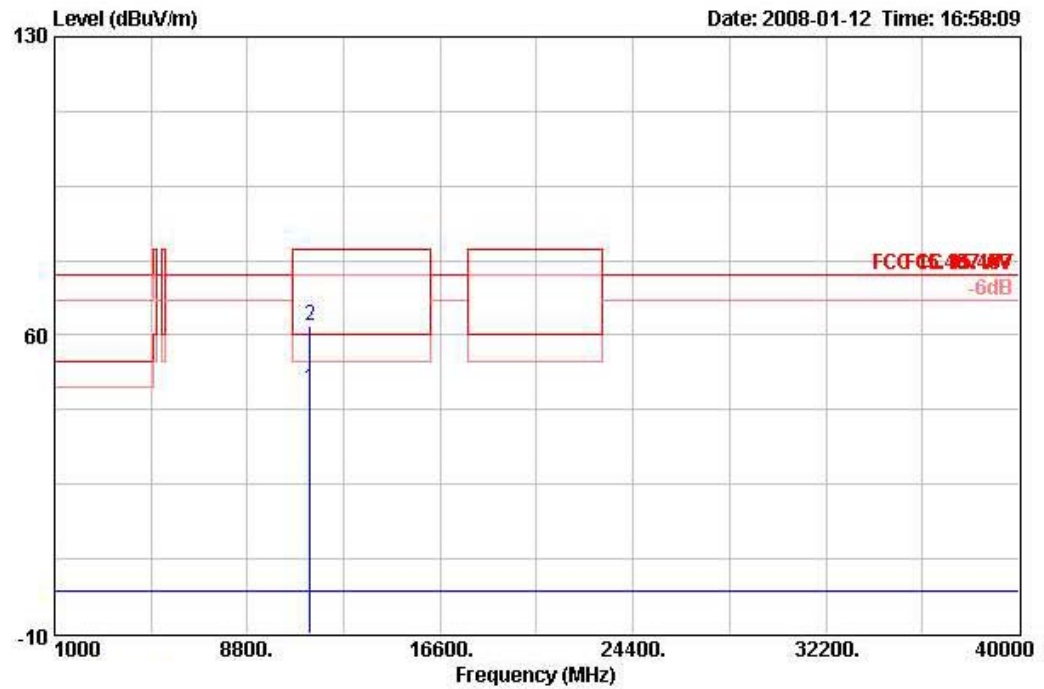
Vertical



	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	11019.840	41.49	-18.51	60.00	28.25	38.32	9.69	34.77	137	48	VERTICAL
2	11020.200	54.66	-25.34	80.00	41.41	38.32	9.69	34.77	137	48	VERTICAL

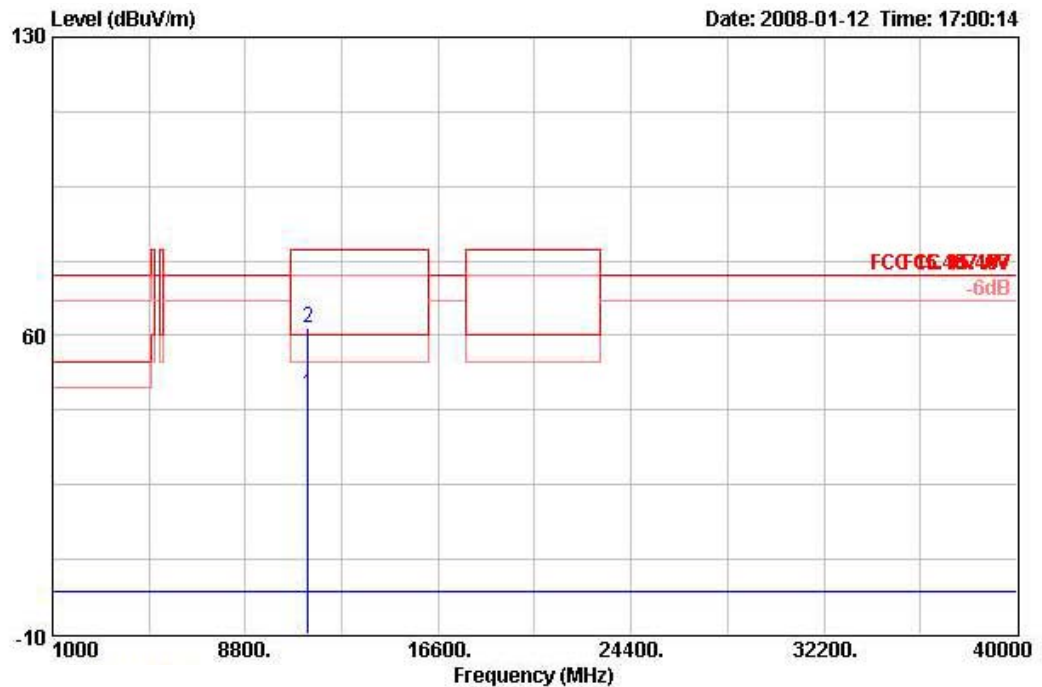
Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 118 Ant. 3 + Ant. 5

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	11339.080	47.28	-12.72	60.00	33.81	38.63	9.75	34.91	133	53	HORIZONTAL
2	11344.400	62.31	-17.69	80.00	48.85	38.63	9.75	34.92	133	53	HORIZONTAL

Vertical



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		Pos	Pos	Pol/Phase
1	11338.880	46.43	-13.57	60.00	32.96	38.63	9.75	34.91	AVERAGE	107	360	VERTICAL
2	11344.440	61.77	-18.23	80.00	48.30	38.63	9.75	34.92	PEAK	107	360	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.

The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.7. Band Edge Emissions Measurement

4.7.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m).; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, 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

4.7.2. 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)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1 MHz / 1 MHz for Peak

4.7.3. Test Procedures

1. The test procedure is the same as section 4.6.3, only the frequency 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.

4.7.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

4.7.5. Test Deviation

There is no deviation with the original standard.

4.7.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.7.7. Test Result of Band Edge and Fundamental Emissions

Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 36, 40, 48, 64 Ant. 3 + Ant. 5

Channel 36

	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB	dB
1 !	5150.000	59.76	-0.24	60.00	AVERAGE	VERTICAL	3	19.55	33.67	6.54	0.00
2	5150.000	75.52			PEAK	VERTICAL	3	25.20	33.67	6.54	0.00
3 @	5176.200	106.09			AVERAGE	VERTICAL			3.73	6.55	0.00
4	5183.400	117.71			PEAK	VERTICAL			3.73	6.55	0.00

Item 3, 4 are the fundamental frequency at 5180 MHz.

Note: Item 2 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Channel 40

	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB	dB
1 @	5195.200	106.52			AVERAGE	VERTICAL	3	66.19	33.76	6.57	0.00
2	5195.400	116.52			PEAK	VERTICAL	3	76.20	33.76	6.57	0.00

Item 1, 2 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB	dB
1	5235.600	118.08			PEAK	VERTICAL	3	77.68	33.82	6.58	0.00
2 @	5245.400	107.20			AVERAGE	VERTICAL	3	66.77	33.85	6.58	0.00

Item 1, 2 are the fundamental frequency at 5240 MHz.

Channel 64

	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 @	5325.200	104.92			64.33	33.97	6.63	0.00	AVERAGE	100	265	VERTICAL
2 @	5325.200	118.34			77.74	33.97	6.63	0.00	PEAK	100	265	VERTICAL
3 @	5350.200	59.22	-0.78	60.00	18.55	34.03	6.64	0.00	AVERAGE	100	265	VERTICAL
4 @	5350.240	79.60	-0.40	80.00	38.93	34.03	6.64	0.00	PEAK	100	265	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	23°C	Humidity	54%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 20MHz Ch 100, 140 Ant. 3 + Ant. 5

Channel 100

	Freq	Level	Over Limit	Limit Line	Read 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	5450.800	69.91	-10.09	80.00	29.01	34.21	6.69	0.00	Peak	100	272	VERTICAL
2	5460.000	57.63	-2.37	60.00	16.73	34.21	6.69	0.00	AVERAGE	100	272	VERTICAL
3	5469.900	74.09	-0.91	74.00	33.16	34.24	6.69	0.00	PEAK	100	272	VERTICAL
4	5503.800	115.22			74.20	34.30	6.71	0.00	Peak	100	272	VERTICAL
5	5505.600	103.72			62.71	34.30	6.71	0.00	AVERAGE	100	272	VERTICAL

Item 3, 4 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Over Limit	Limit Line	Read 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	5695.200	102.13			60.98	34.34	6.81	0.00	AVERAGE	100	289	VERTICAL
2	5695.800	113.42			72.28	34.34	6.81	0.00	PEAK	100	289	VERTICAL
3	5725.160	73.87	-0.43	74.30	32.71	34.34	6.82	0.00	PEAK	100	289	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	20°C	Humidity	70%
Test Engineer	Barry Chen	Configurations	Draft n MCS8 40MHz Ch 38, 46, 54, 62, 102, 118 Ant. 3 + Ant. 5

Channel 38

	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level Factor	Cable Loss Factor	Preamplifier Factor
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB
1 !	5150.000	59.80	-0.20	60.00	AVERAGE	VERTICAL	3	19.58	33.67	6.54
2 !	5150.000	72.32			PEAK	VERTICAL	3	32.11	33.67	6.54
3	5195.600	97.91			AVERAGE	VERTICAL	3	57.58	33.76	6.57
4	5197.600	110.21			PEAK	VERTICAL	3	69.88	33.76	6.57

Item 3, 4 are the fundamental frequency at 5190 MHz.

Item 2 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Channel 46

	Freq	Level	Over Limit	Limit Line	Remark	Pol/Phase	Distance	ReadAntenna Level Factor	Cable Loss Factor	Preamplifier Factor
	MHz	dBuV/m	dB	dBuV/m			m	dBuV	dB/m	dB
1	5235.200	98.07			AVERAGE	VERTICAL	3	57.67	33.82	6.58
2	5235.200	111.70			PEAK	VERTICAL	3	71.30	33.82	6.58

Item 3, 4 are the fundamental frequency at 5230 MHz.

Channel 54

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss Factor	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB		cm	deg	
1 @	5282.800	101.04			60.53	33.91	6.60	0.00 AVERAGE	100	268	VERTICAL
2 @	5286.000	117.19			76.67	33.91	6.60	0.00 PEAK	100	268	VERTICAL
3 @	5350.400	59.62	-0.38	60.00	18.95	34.03	6.64	0.00 AVERAGE	100	268	VERTICAL
4 @	5357.800	74.83	-5.17	80.00	34.16	34.03	6.64	0.00 PEAK	100	268	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss Factor	Preamplifier Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB		cm	deg	
1 @	5315.600	99.54			58.95	33.97	6.62	0.00 AVERAGE	102	264	VERTICAL
2 @	5325.600	113.69			73.10	33.97	6.63	0.00 PEAK	102	264	VERTICAL
3 @	5350.000	59.56	-0.44	60.00	18.89	34.03	6.64	0.00 Average	102	264	VERTICAL
4 @	5352.560	78.96	-1.04	80.00	38.30	34.03	6.64	0.00 PEAK	102	264	VERTICAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Channel 102

	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	5453.200	69.43	-10.57	80.00	28.53	34.21	6.69	0.00	PEAK	100	274	VERTICAL
2 @	5460.000	57.22	-2.78	60.00	16.32	34.21	6.69	0.00	AVERAGE	100	274	VERTICAL
3 @	5467.600	73.97	-0.34	74.30	33.04	34.24	6.69	0.00	PEAK	100	274	VERTICAL
4 @	5513.600	113.29			72.27	34.30	6.71	0.00	PEAK	100	274	VERTICAL
5 @	5515.200	99.35			58.33	34.30	6.71	0.00	AVERAGE	100	274	VERTICAL

Item 4, 5 are the fundamental frequency at 5510 MHz.

Channel 118

	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 @	5673.200	115.07			73.94	34.33	6.79	0.00	PEAK	100	274	VERTICAL
2 @	5675.200	101.29			60.16	34.33	6.79	0.00	AVERAGE	100	274	VERTICAL
3 @	5725.000	74.16	-0.14	74.30	33.00	34.34	6.82	0.00	PEAK	100	274	VERTICAL

Item 1, 2 are the fundamental frequency at 5590 MHz.

Note:

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

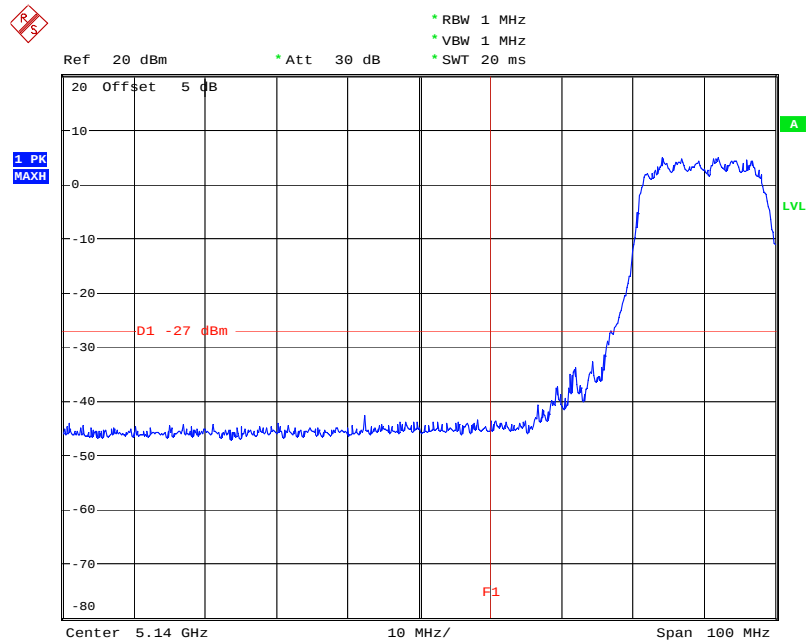
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamplifier Factor = Level

The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1.5m]) (dB);

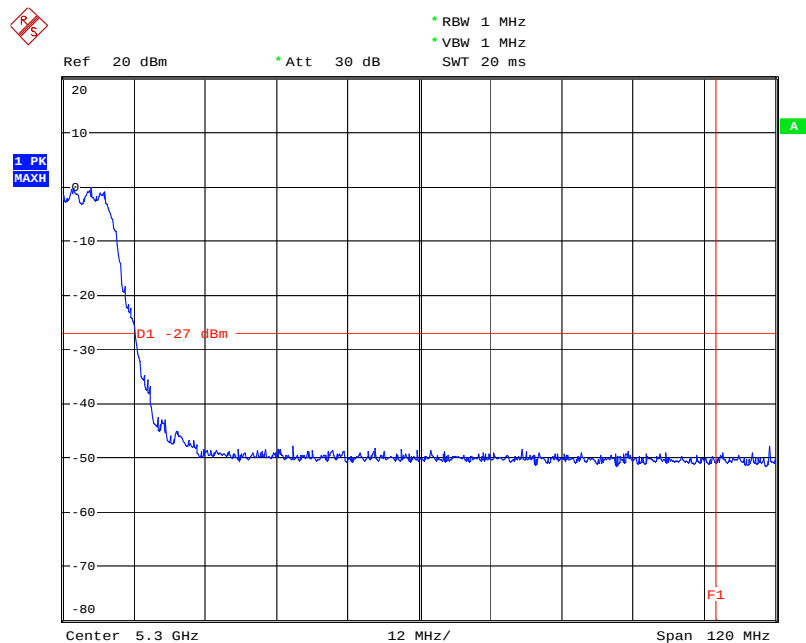
Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

EIRP Emission in Band on Configuration Drafft n MCS8 20MHz Ant. 3 + Ant. 5 / 5180 MHz



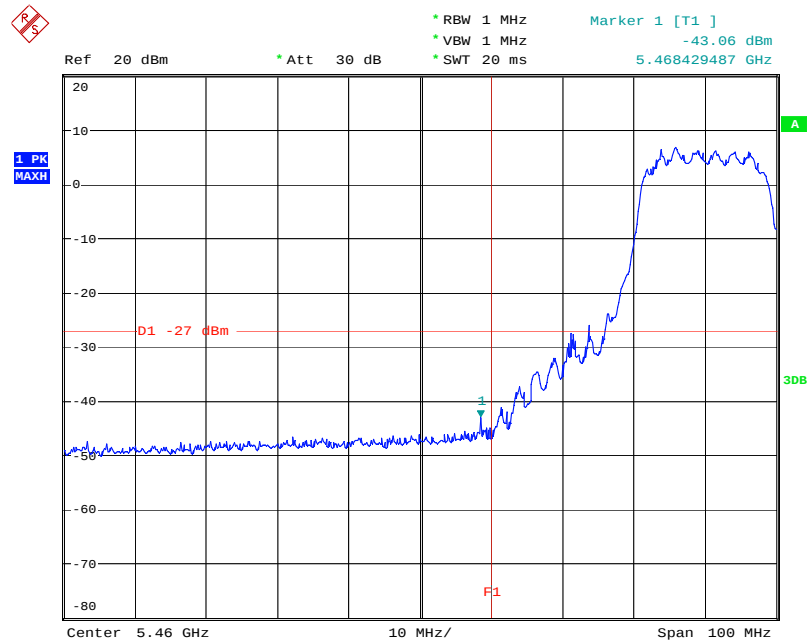
Date: 11.DEC.2007 12:17:35

EIRP Emission in Band on Configuration Drafft n MCS8 20MHz Ant. 3 + Ant. 5 / 5240 MHz



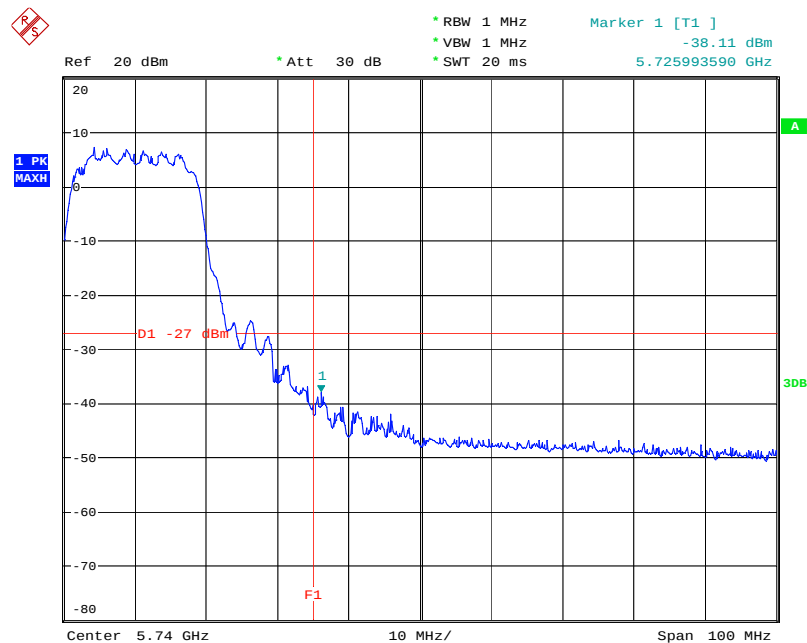
Date: 11.DEC.2007 12:26:15

EIRP Emission in Band on Configuration Drafft n MCS8 20MHz Ant. 3 + Ant. 5 / 5500 MHz



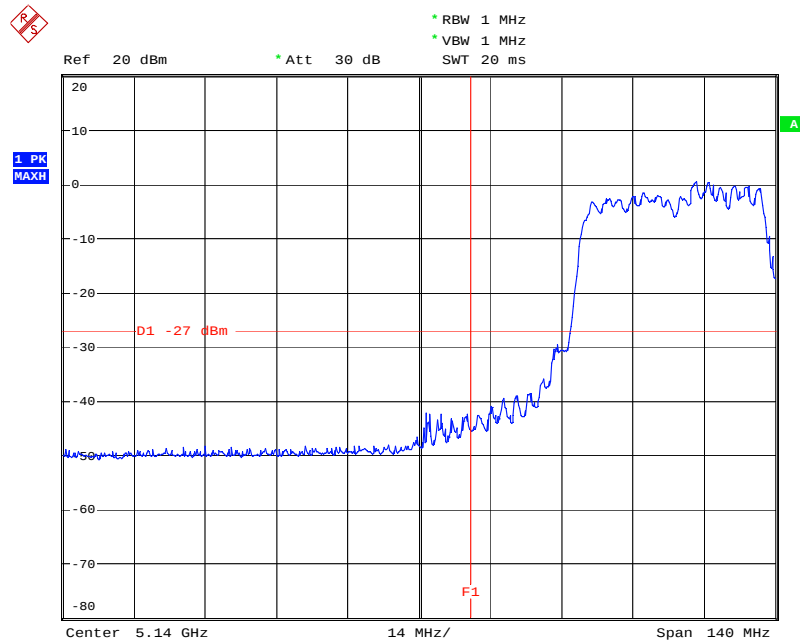
Date: 20.JAN.2008 00:26:34

EIRP Emission in Band on Configuration Drafft n MCS8 20MHz Ant. 3 + Ant. 5 / 5700 MHz



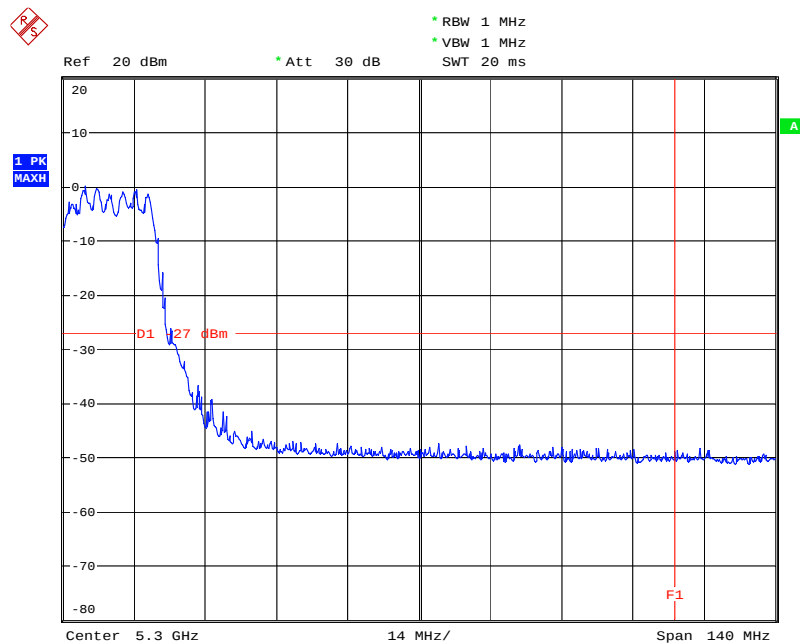
Date: 20.JAN.2008 00:36:08

EIRP Emission in Band on Configuration Drafft n MCS8 40MHz Ant. 3 + Ant. 5 / 5190 MHz



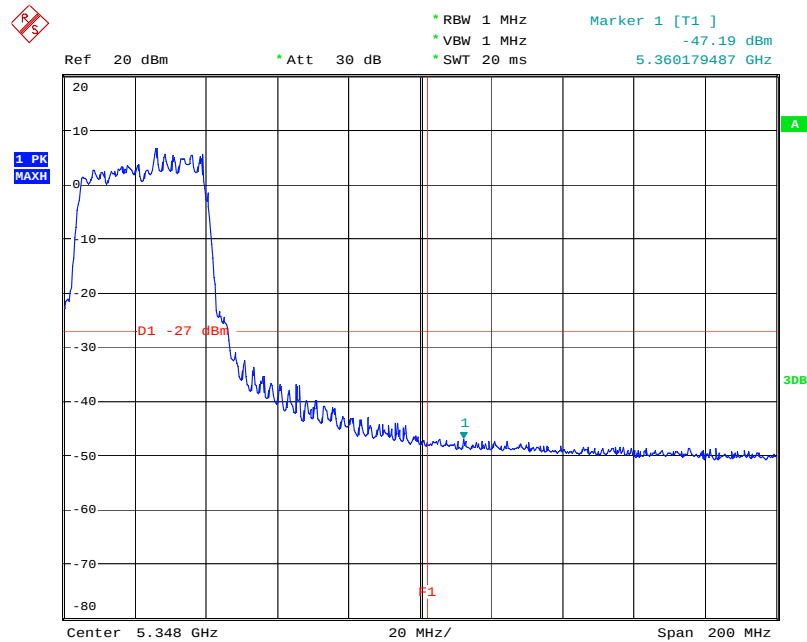
Date: 11.DEC.2007 12:31:19

EIRP Emission in Band on Configuration Drafft n MCS8 40MHz Ant. 3 + Ant. 5 / 5230 MHz



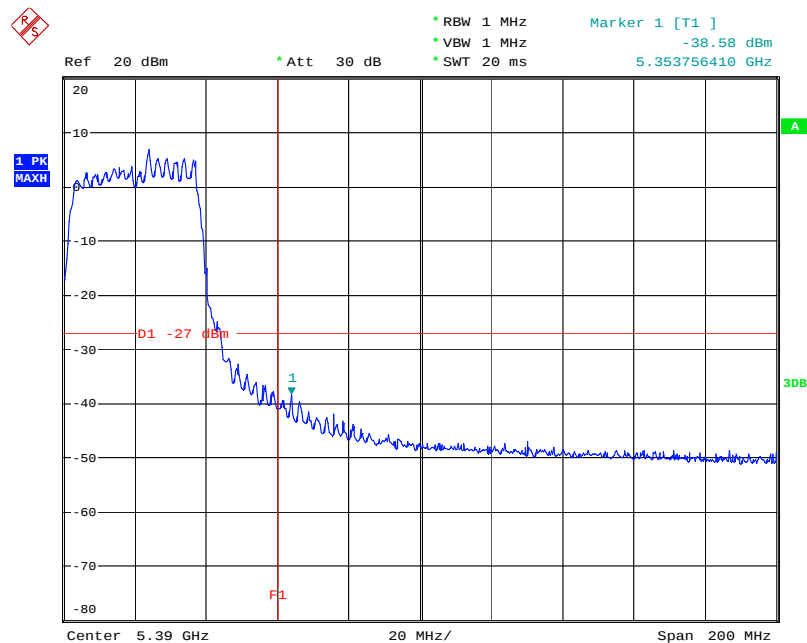
Date: 11.DEC.2007 12:34:45

EIRP Emission in Band on Configuration Drafft n MCS8 40MHz Ant. 3 + Ant. 5 / 5270 MHz



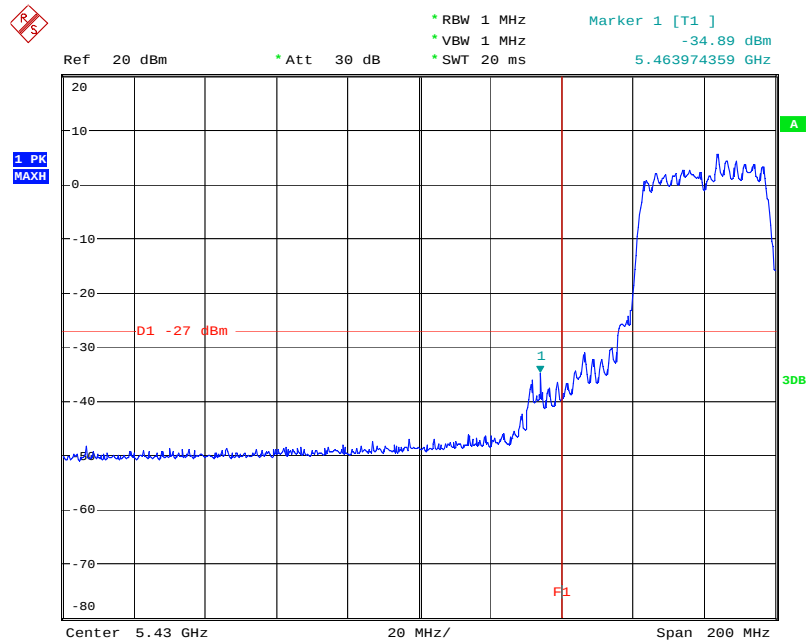
Date: 20.JAN.2008 00:15:14

EIRP Emission in Band on Configuration Drafft n MCS8 40MHz Ant. 3 + Ant. 5 / 5310 MHz



Date: 20.JAN.2008 00:10:31

EIRP Emission in Band on Configuration Drafft n MCS8 40MHz Ant. 3 + Ant. 5 / 5510 MHz



Date: 20.JAN.2008 00:03:21

4.8. Frequency Stability Measurement

4.8.1. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or $\pm 20\text{ppm}$ (Draft n specification).

4.8.2. Measuring Instruments and Setting

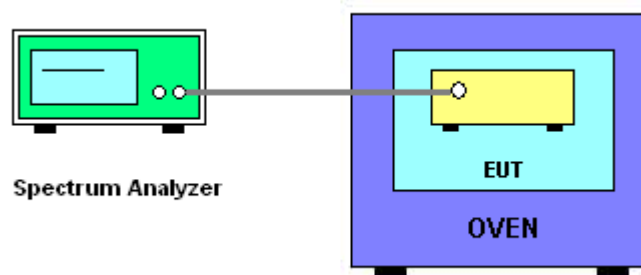
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RB	10 kHz
VB	10 kHz
Sweep Time	Auto

4.8.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm and the limit is less than $\pm 20\text{ppm}$ (Draft n specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature rule is $-30^\circ\text{C} \sim 50^\circ\text{C}$.
8. Measuring multiple antennas, the connector is required to link with Power Meter through a combiner.

4.8.4. Test Setup Layout



4.8.5. Test Deviation

There is no deviation with the original standard.

4.8.6. EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

4.8.7. Test Result of Frequency Stability

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	5200
126.50	5200.012400
110.00	5200.012400
93.50	5200.012400
Max. Deviation (MHz)	0.012400
Max. Deviation (ppm)	2.38

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	5200
-30	5200.065400
-20	5200.061200
-10	5200.061200
0	5200.043200
10	5200.034200
20	5200.012400
30	5199.998200
40	5199.998200
50	5199.996800
Max. Deviation (MHz)	0.065400
Max. Deviation (ppm)	12.58

Voltage	Measurement Frequency (MHz)
(V)	5300
126.50	5300.019300
110.00	5300.013500
93.50	5299.953200
Max. Deviation (MHz)	0.046800
Max. Deviation (ppm)	8.83

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	5300
-30	5300.056300
-20	5300.055700
-10	5300.045700
0	5300.023100
10	5300.012900
20	5299.983500
30	5299.965300
40	5299.961200
50	5299.955600
Max. Deviation (MHz)	0.056300
Max. Deviation (ppm)	10.62

4.9. Antenna Requirements

4.9.1. 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.

4.9.2. 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	100359	9kHz – 2.75GHz	Mar. 01, 2007	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2007	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2007	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2007	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz – 30MHz	May 09, 2007	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)
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	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)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Jul. 21, 2007	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	May 04, 2007	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	NCR	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	Dec. 17, 2007	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jun. 27, 2007	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100458	DC ~ 30GHz	Jun. 27, 2007	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jun. 27, 2007	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	May 04, 2007*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 03, 2007	Conducted (TH01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
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)

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 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.