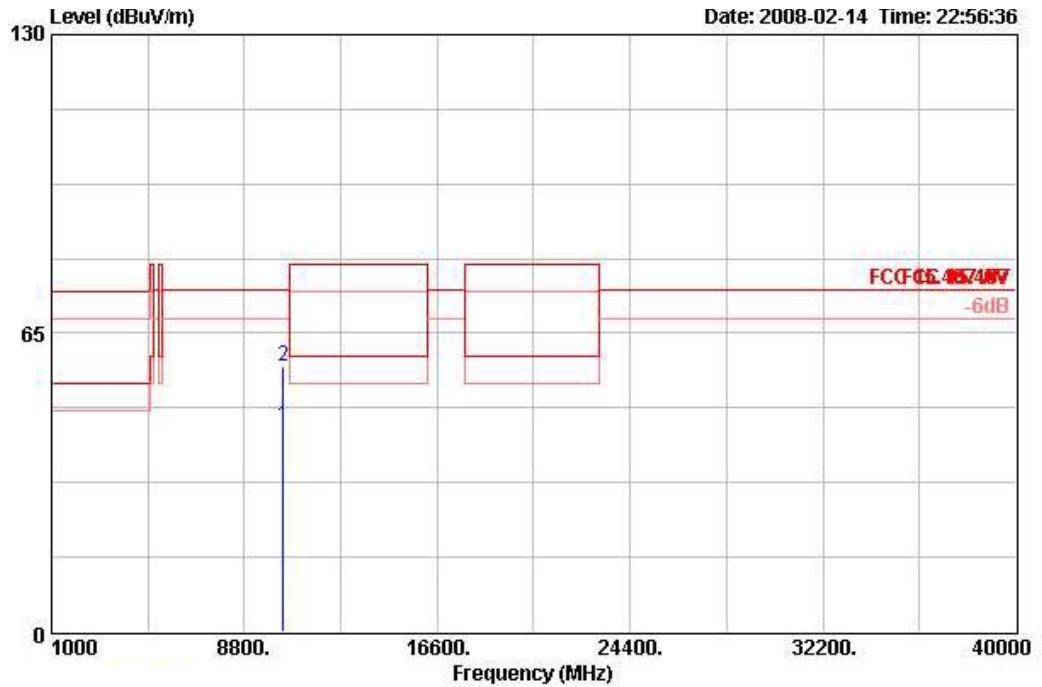


4.6.9. Results for Radiated Emissions (1GHz~40GHz)

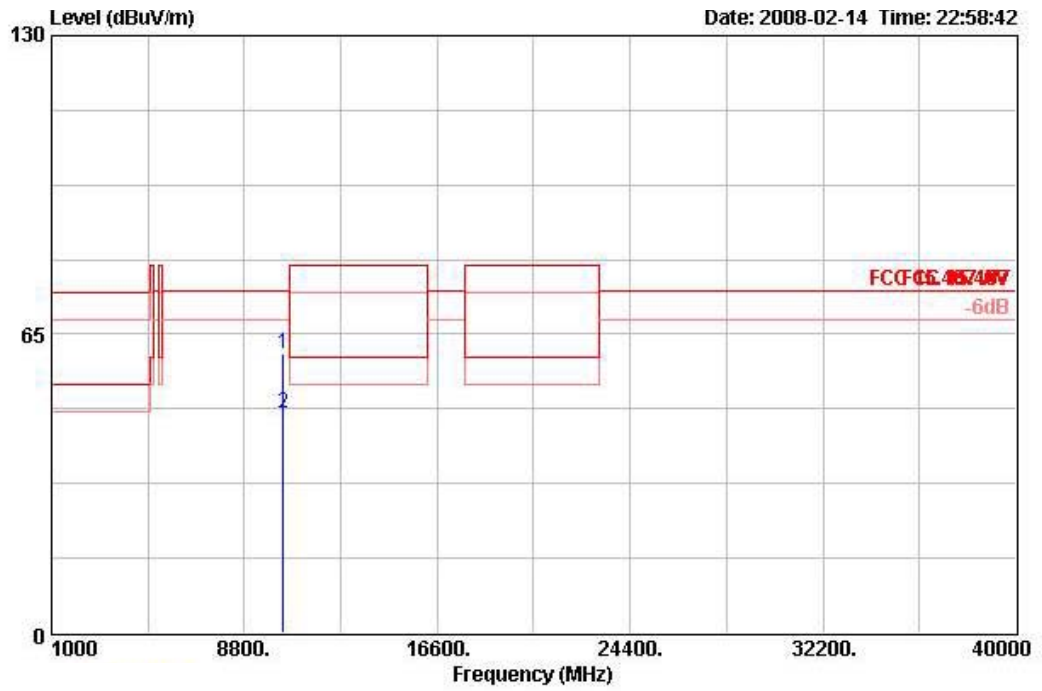
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 36 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
2	10356.400	57.81	-16.49	74.30	44.01	38.94	35.36	10.22	PEAK	281	100	HORIZONTAL

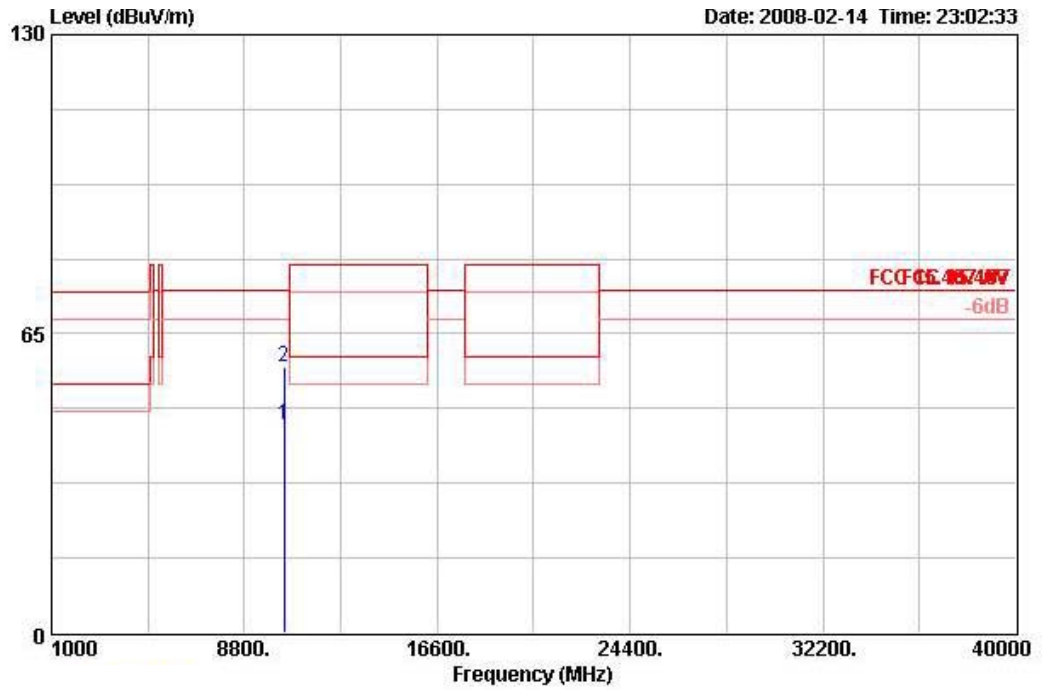
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10360.380	60.72	-13.58	74.30	46.92	38.94	35.36	10.22	PEAK	108	100	VERTICAL

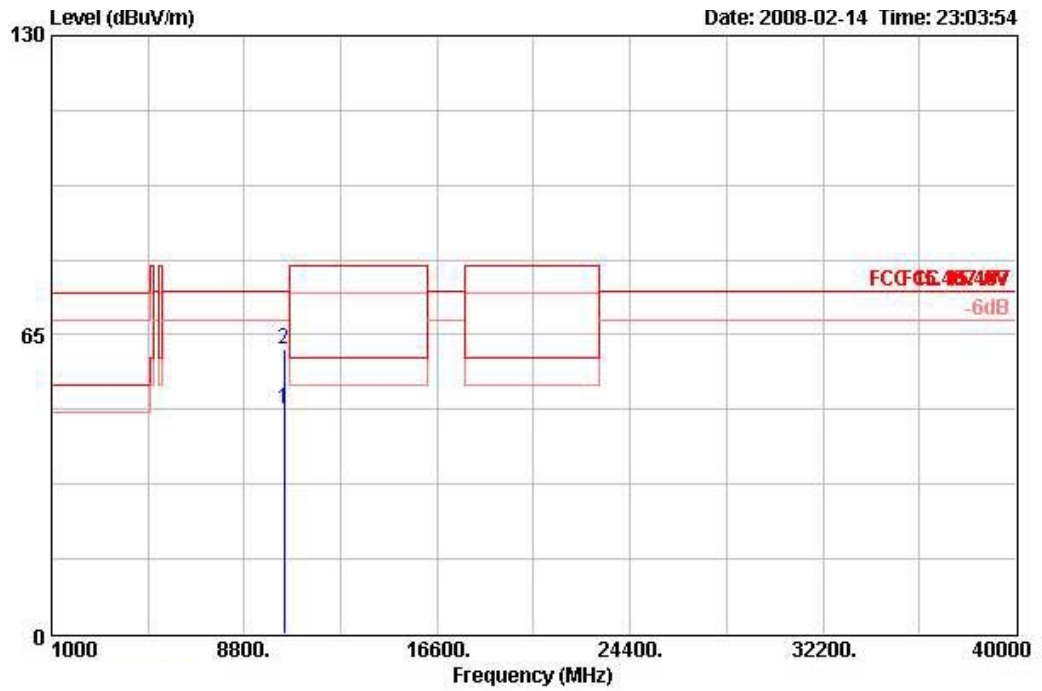
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 40 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		deg	cm	
2	10404.600	57.94	-16.36	74.30	44.01	38.97	35.30	10.27	PEAK	294	100	HORIZONTAL

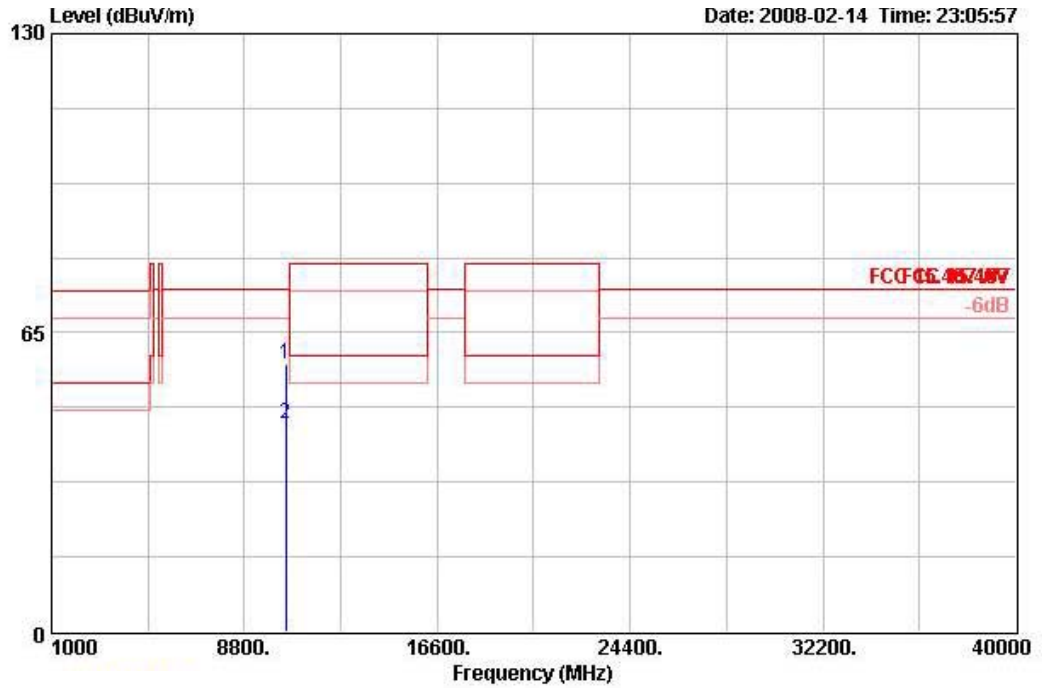
Vertical



2	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		deg	cm	
2	10401.000	61.98	-12.32	74.30	48.06	38.96	35.30	10.27	PERK	109	100	VERTICAL

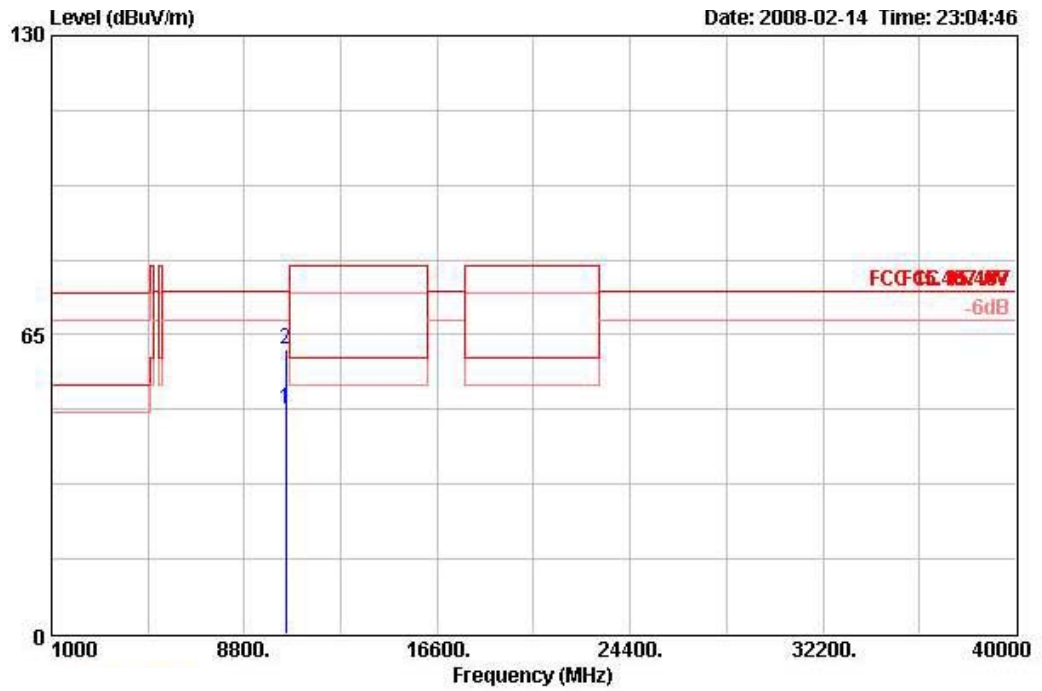
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 48 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10475.060	58.12	-16.18	74.30	43.99	38.99	35.21	10.35	PEAK	286	100	HORIZONTAL

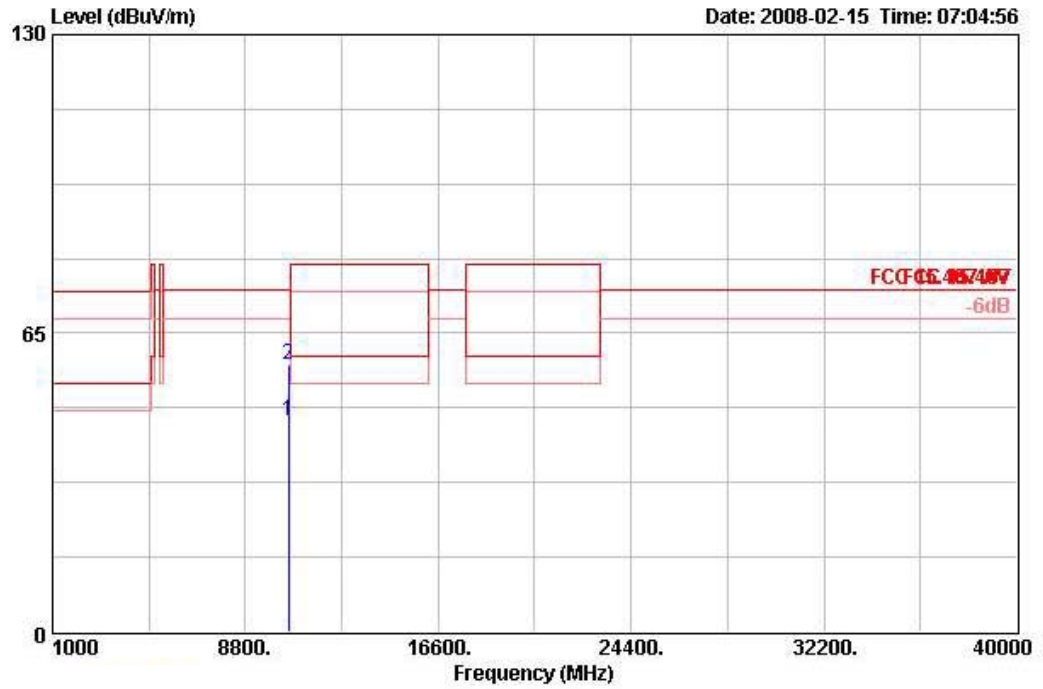
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		deg	cm	
2	10481.320	61.98	-12.32	74.30	47.85	38.99	35.21	10.35	PERK	109	100	VERTICAL

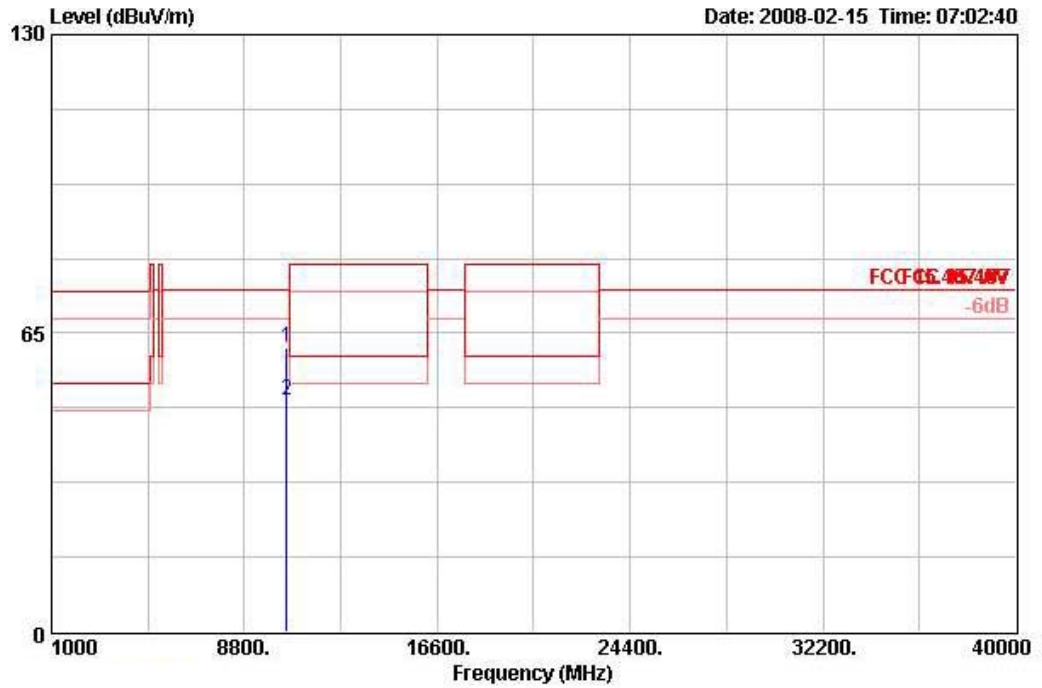
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 52 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		deg	cm	
2	10542.800	58.30	-16.00	74.30	44.11	38.98	35.15	10.37	PEAK	285	100	HORIZONTAL

Vertical

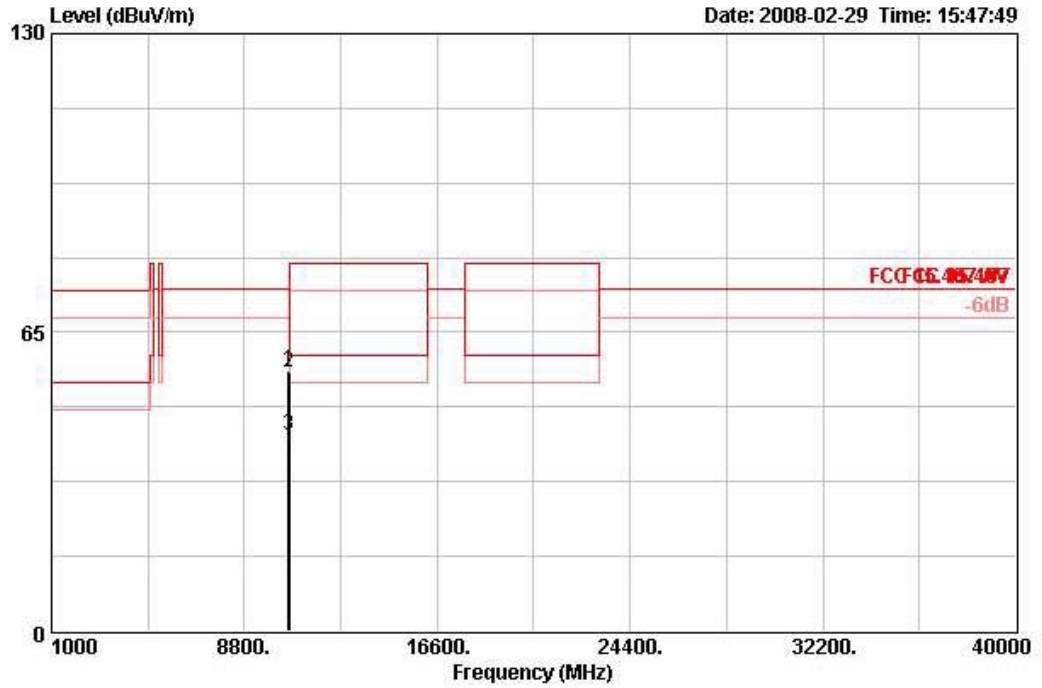


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10520.300	61.71	-12.59	74.30	47.52	38.99	35.18	10.37	PEAK	110	100	VERTICAL



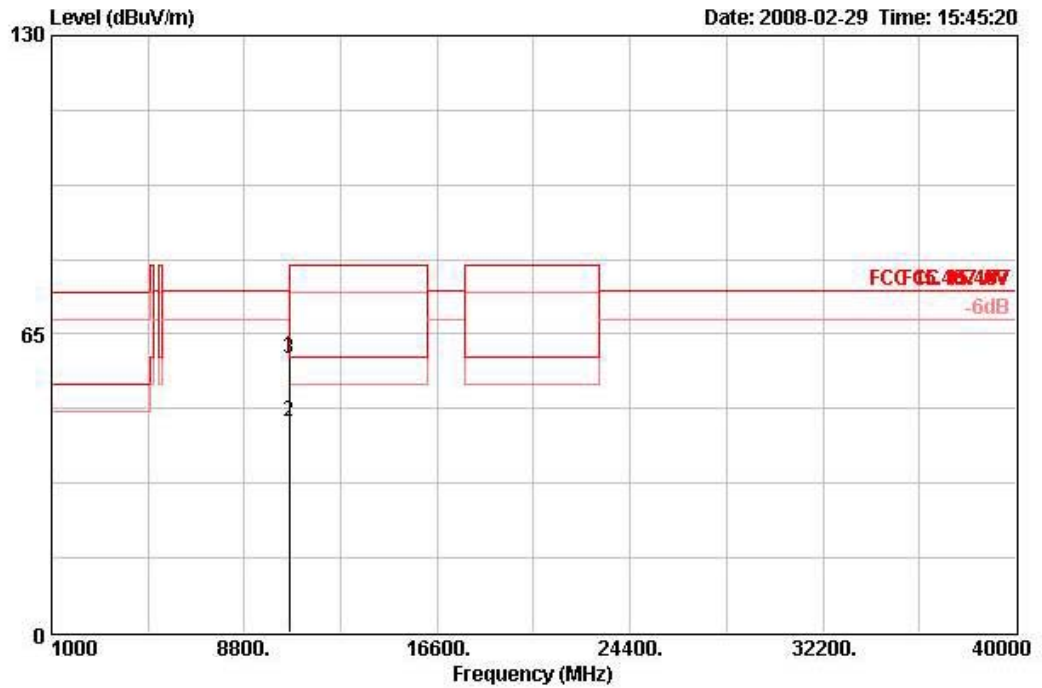
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 60 / Ant. A POE Mode (Horizontal)

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	10591.720	56.62	-17.68	74.30	43.67	38.38	9.47	34.90	PEAK	127	360	HORIZONTAL
2	10602.360	56.43	-23.57	80.00	43.45	38.38	9.48	34.89	PEAK	127	360	HORIZONTAL
3	10604.520	42.44	-17.56	60.00	29.47	38.38	9.48	34.89	AVERAGE	127	360	HORIZONTAL

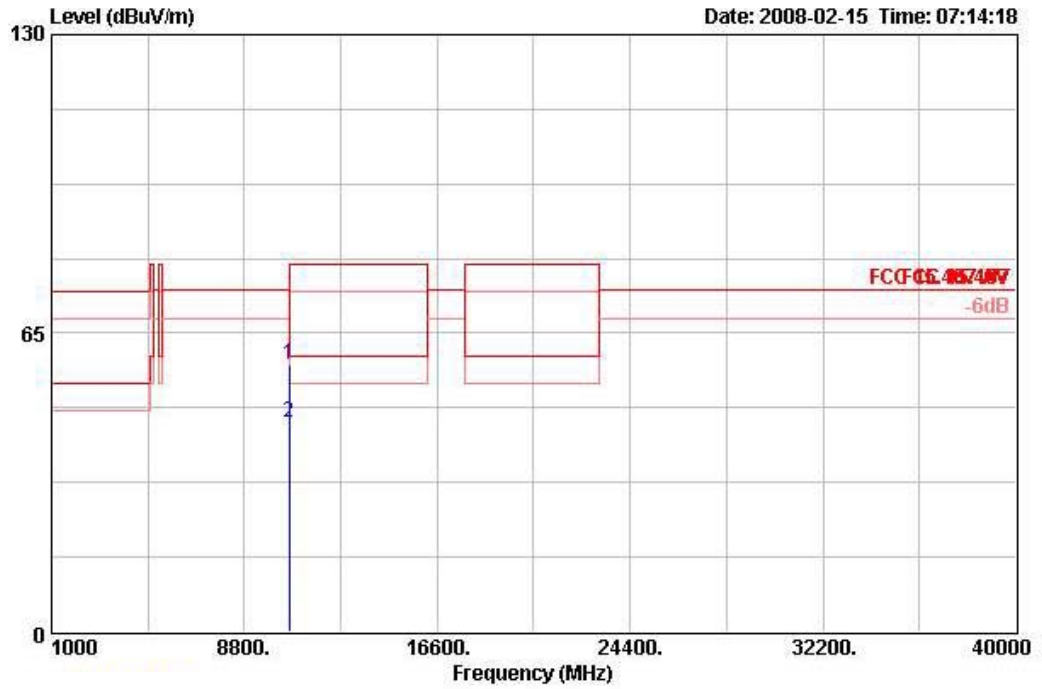
Vertical



	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	10596.480	59.89	-14.41	74.30	46.94	38.38	9.47	34.90	PEAK	128	101	VERTICAL
2	10601.120	45.95	-14.05	60.00	32.98	38.38	9.48	34.89	AVERAGE	128	101	VERTICAL
3	10601.640	59.75	-20.25	80.00	46.78	38.38	9.48	34.89	PEAK	128	101	VERTICAL

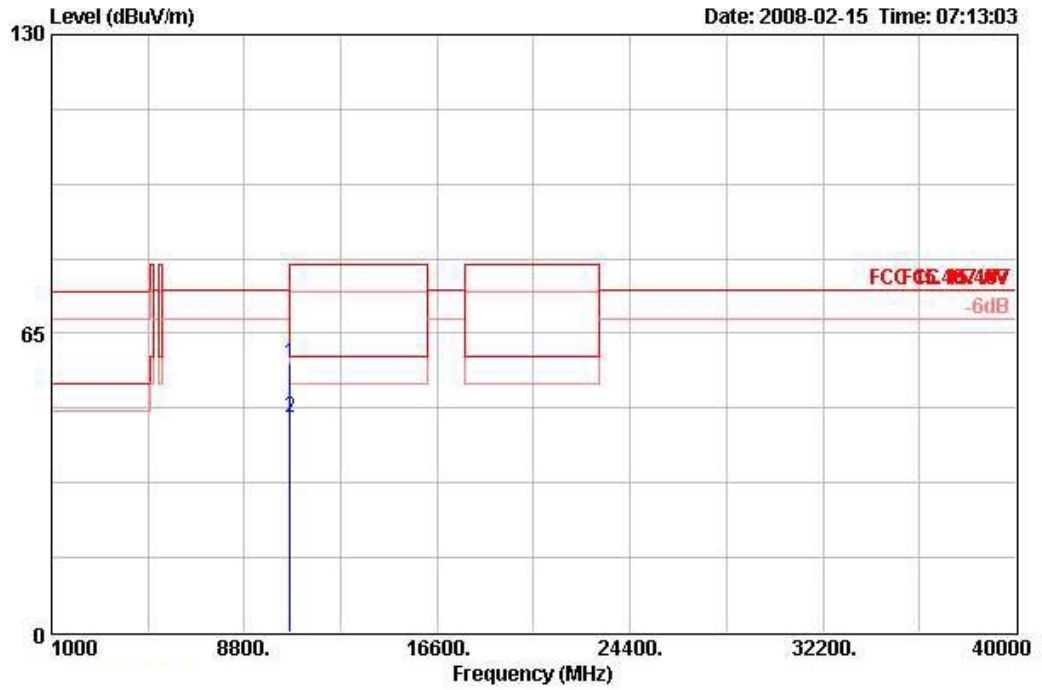
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 64 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10615.100	58.09	-21.91	80.00	43.86	38.95	35.08	10.35	PEAK	281	100	HORIZONTAL
2	10617.400	45.39	-14.61	60.00	31.17	38.95	35.08	10.35	AVERAGE	281	100	HORIZONTAL

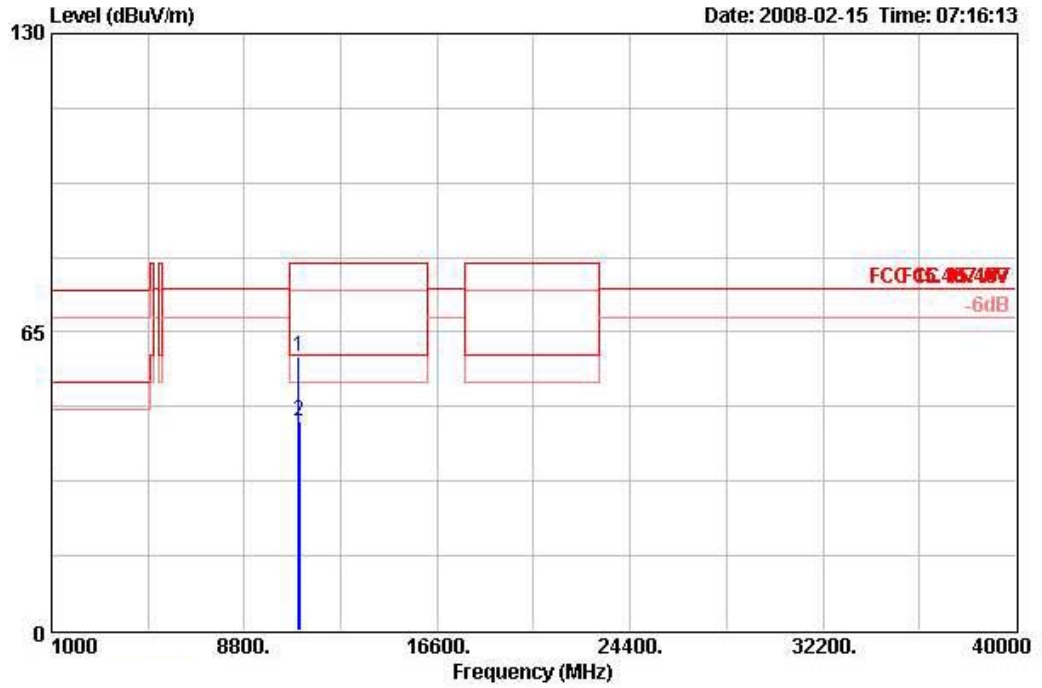
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10634.900	58.47	-21.53	80.00	44.23	38.94	35.05	10.35	PEAK	147	100	VERTICAL
2	10643.600	46.50	-13.50	60.00	32.27	38.94	35.05	10.35	AVERAGE	147	100	VERTICAL

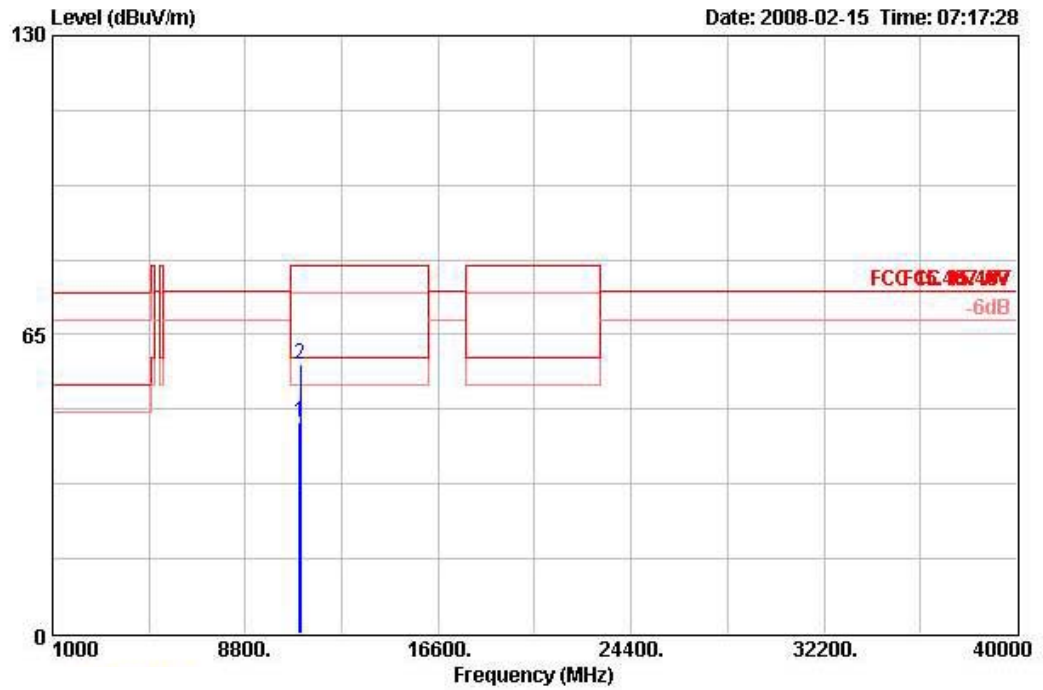
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 100 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10997.400	59.67	-20.33	80.00	45.28	38.80	34.69	10.28	PEAK	293	100	HORIZONTAL
2	11021.800	45.62	-14.38	60.00	31.19	38.81	34.69	10.31	AVERAGE	293	100	HORIZONTAL

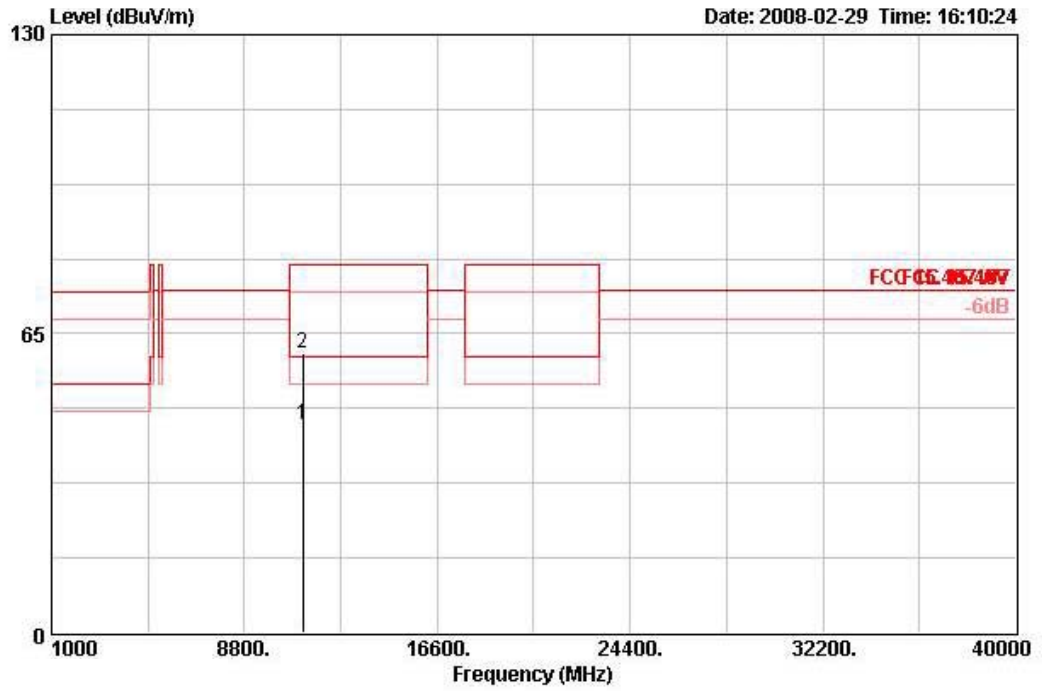
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	10996.200	46.05	-13.95	60.00	31.66	38.80	34.69	10.28	AVERAGE	100	100	VERTICAL
2	11023.000	58.46	-21.54	80.00	44.02	38.82	34.69	10.31	PEAK	100	100	VERTICAL

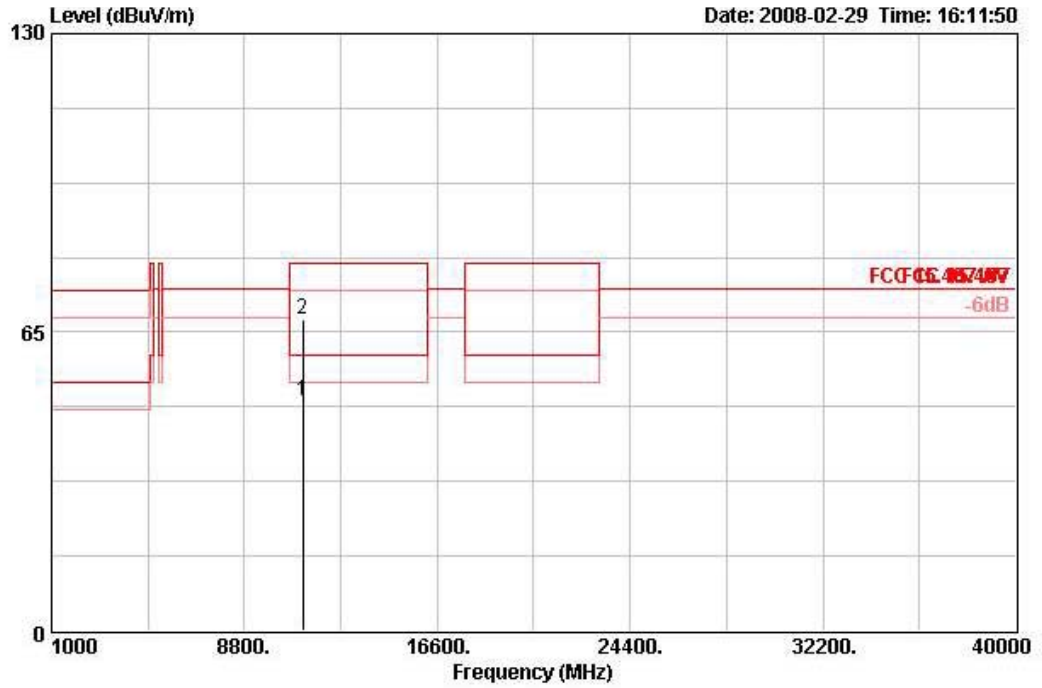
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 116 / Ant. A POE Mode (Horizontal)

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	11158.720	45.35	-14.65	60.00	31.99	38.47	9.72	34.83	AVERAGE	129	102	HORIZONTAL
2	11159.080	60.86	-19.14	80.00	47.51	38.47	9.72	34.83	PEAK	129	102	HORIZONTAL

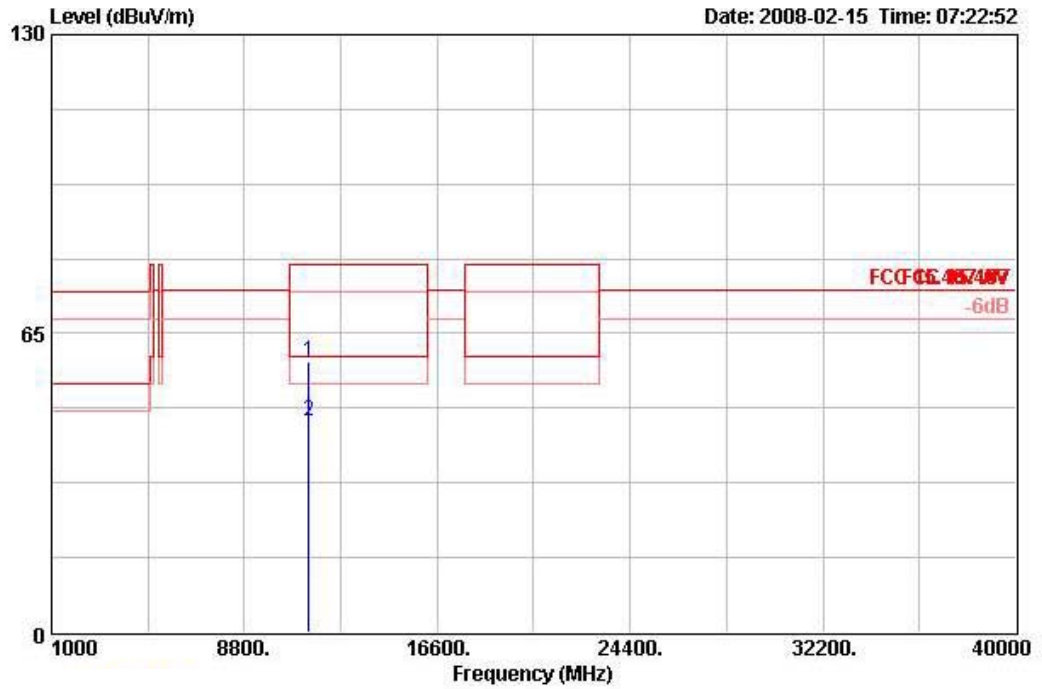
Vertical



	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	11157.700	49.89	-10.11	60.00	36.53	38.47	9.72	34.83	AVERAGE	120	9	VERTICAL
2	11157.800	67.93	-12.07	80.00	54.57	38.47	9.72	34.83	PEAK	120	9	VERTICAL

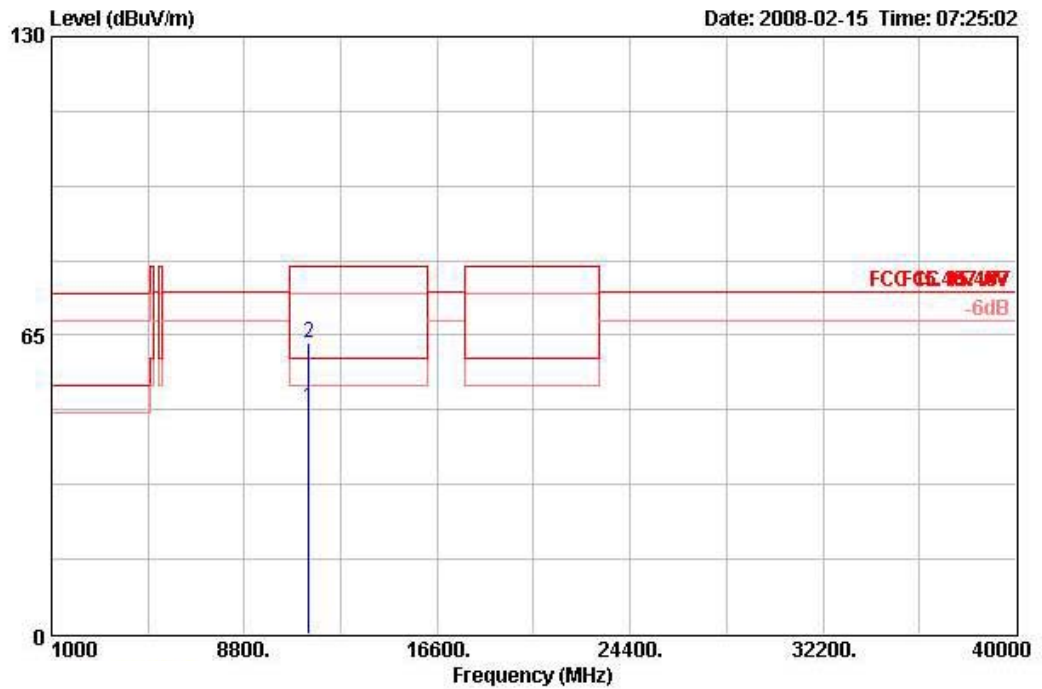
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 140 / Ant. A POE Mode (Horizontal)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	11394.100	58.77	-21.23	80.00	43.67	39.04	34.74	10.80	PEAK	277	100	HORIZONTAL
2	11396.800	46.06	-13.94	60.00	30.96	39.04	34.74	10.80	AVERAGE	277	100	HORIZONTAL

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1	11398.000	49.22	-10.78	60.00	34.12	39.04	34.74	10.80	AVERAGE	139	100	VERTICAL
2	11398.400	63.26	-16.74	80.00	48.16	39.04	34.74	10.80	PEAK	139	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.

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

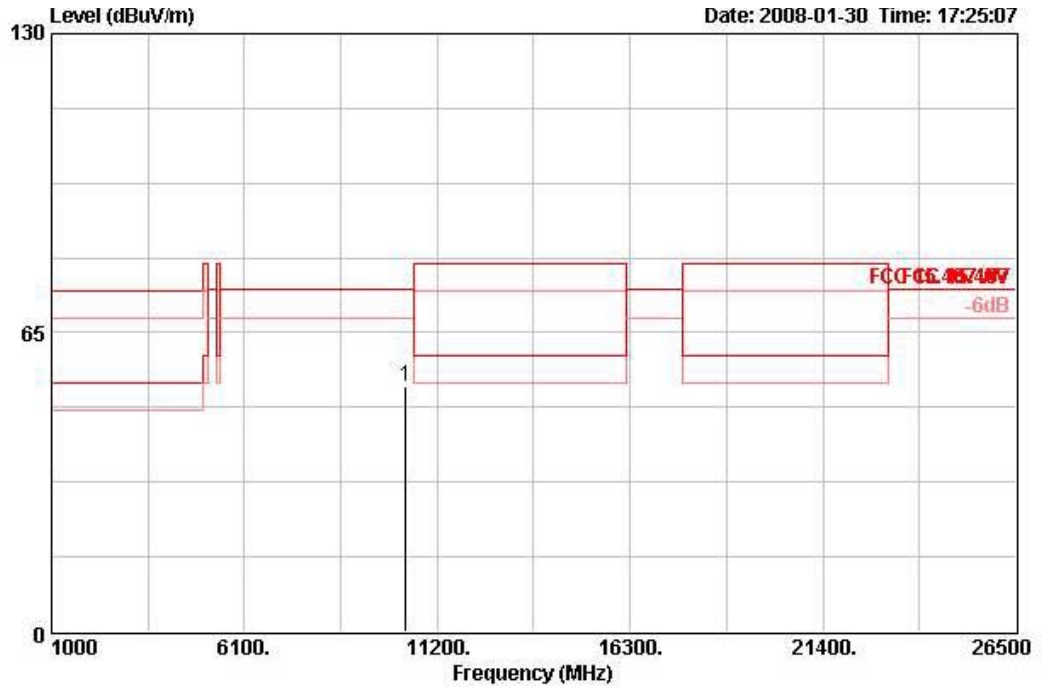
Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1.5m]) (dB);

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



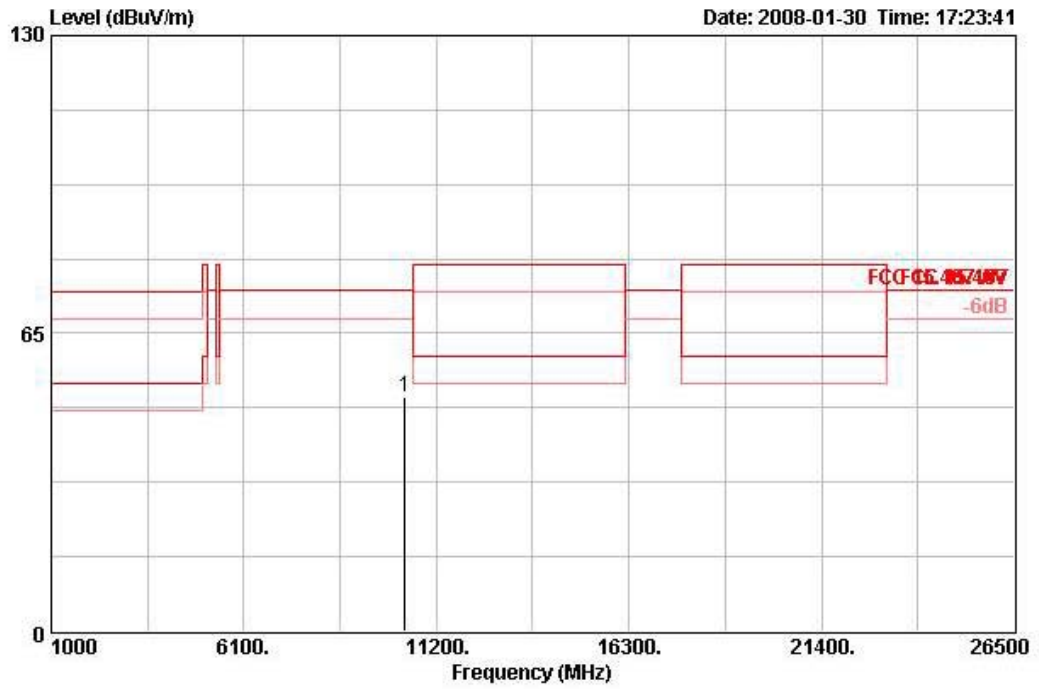
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 36 / Ant. B POE Mode (Horizontal)

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	10362.310	53.23	-21.07	74.30	40.66	38.37	9.32	35.12	PEAK	100	172	HORIZONTAL

Vertical

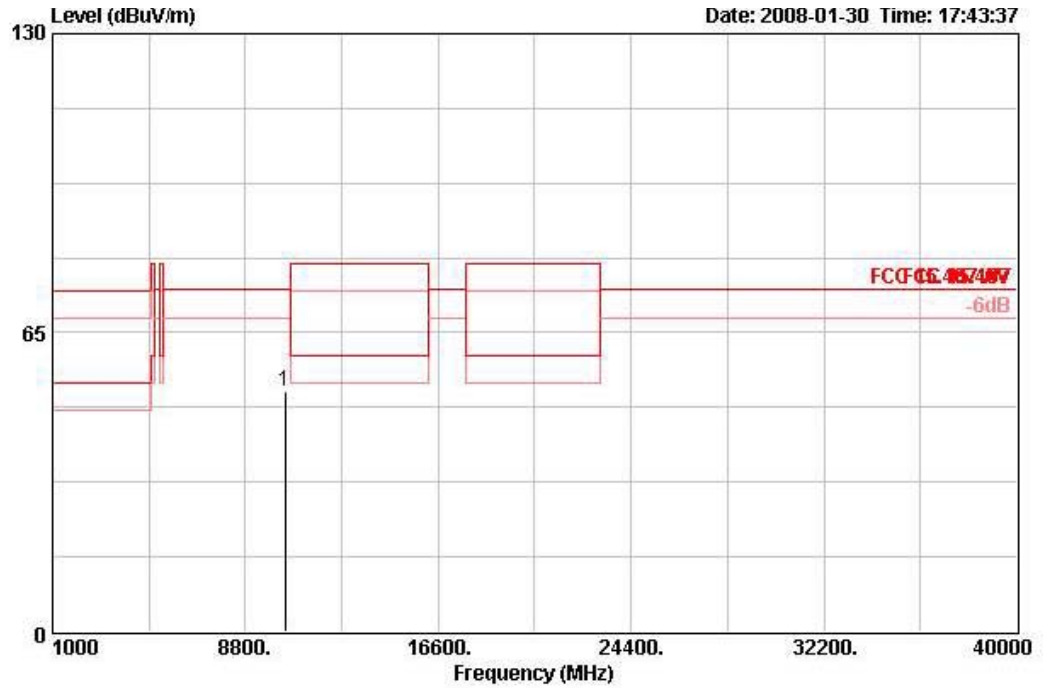


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB/m	dB	dB		cm	deg	
1	10360.660	51.12	-23.18	74.30	38.55	38.37	9.32	35.12	Peak	119	273	VERTICAL



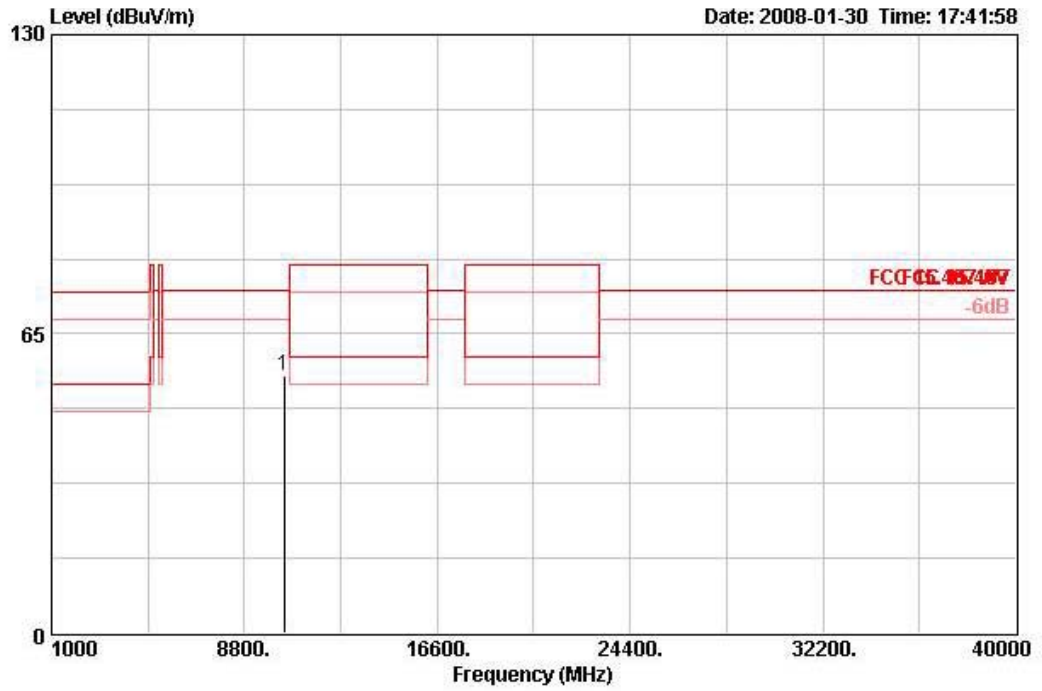
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 40 / Ant. B POE Mode (Horizontal)

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	10400.080	52.39	-21.91	74.30	39.71	38.38	9.36	35.05	PEAK	100	360	HORIZONTAL

Vertical

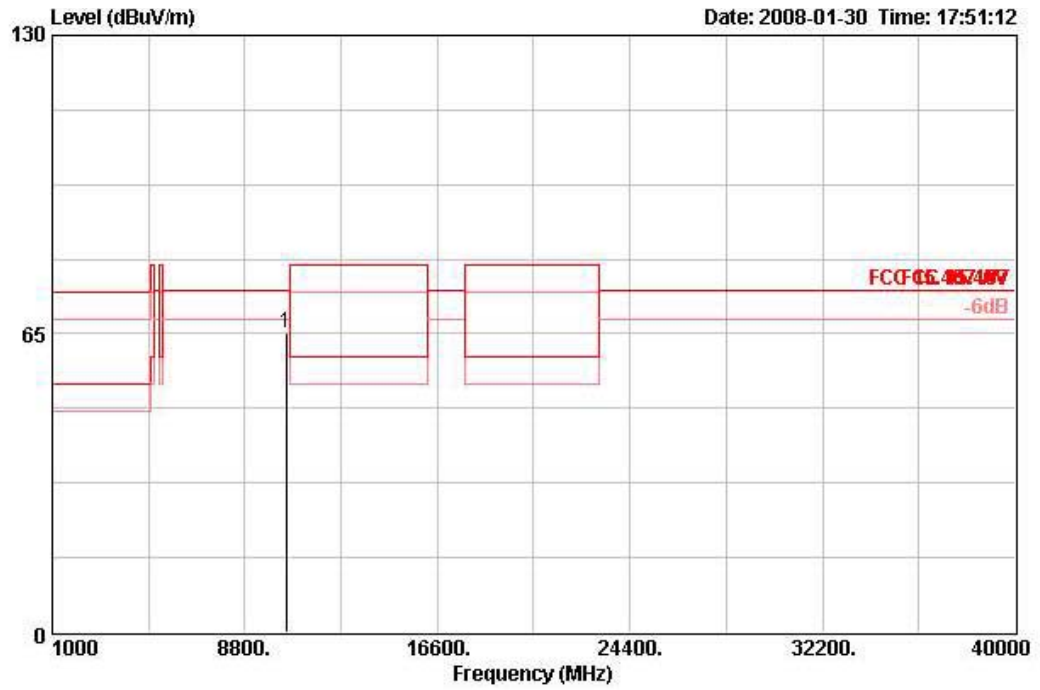


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10396.960	55.74	-18.56	74.30	43.06	38.38	9.36	35.05	PEAK	100	144	VERTICAL



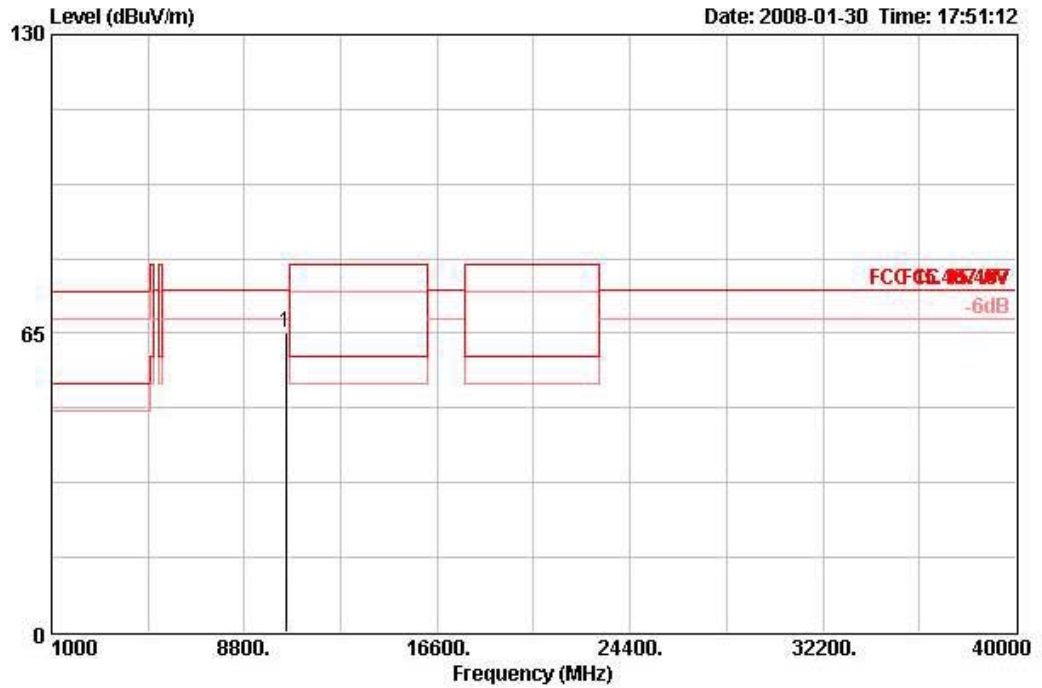
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 48 / Ant. B POE Mode (Horizontal)

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	10480.440	65.00	-9.30	74.30	52.15	38.40	9.41	34.96	PEAK	125	268	VERTICAL

Vertical

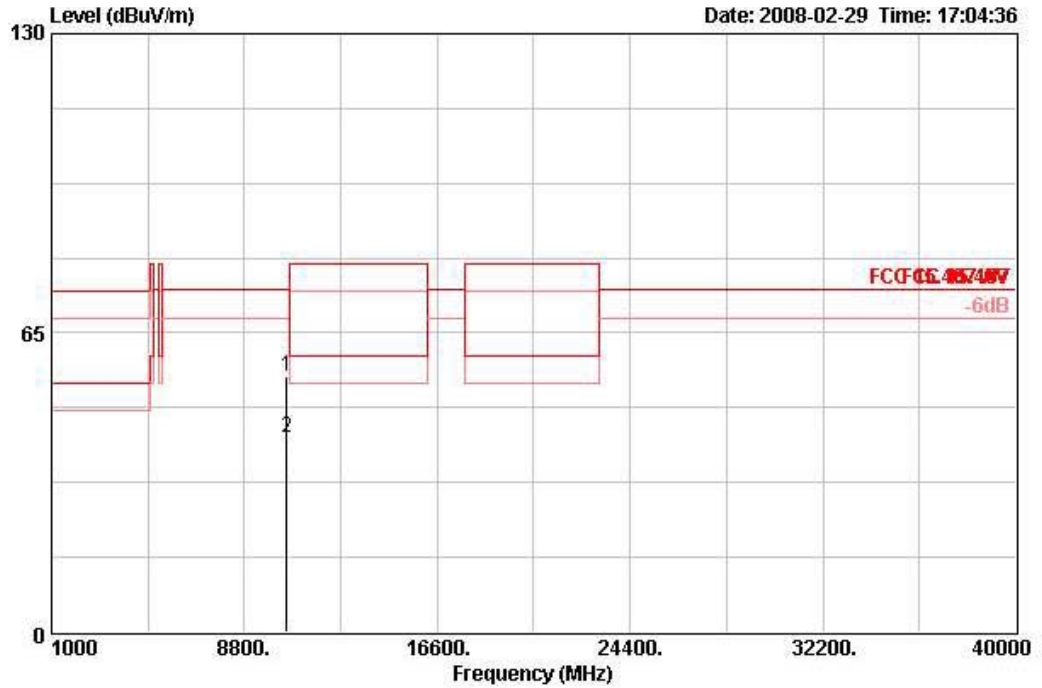


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10480.440	65.00	-9.30	74.30	52.15	38.40	9.41	34.96	PEAK	125	268	VERTICAL



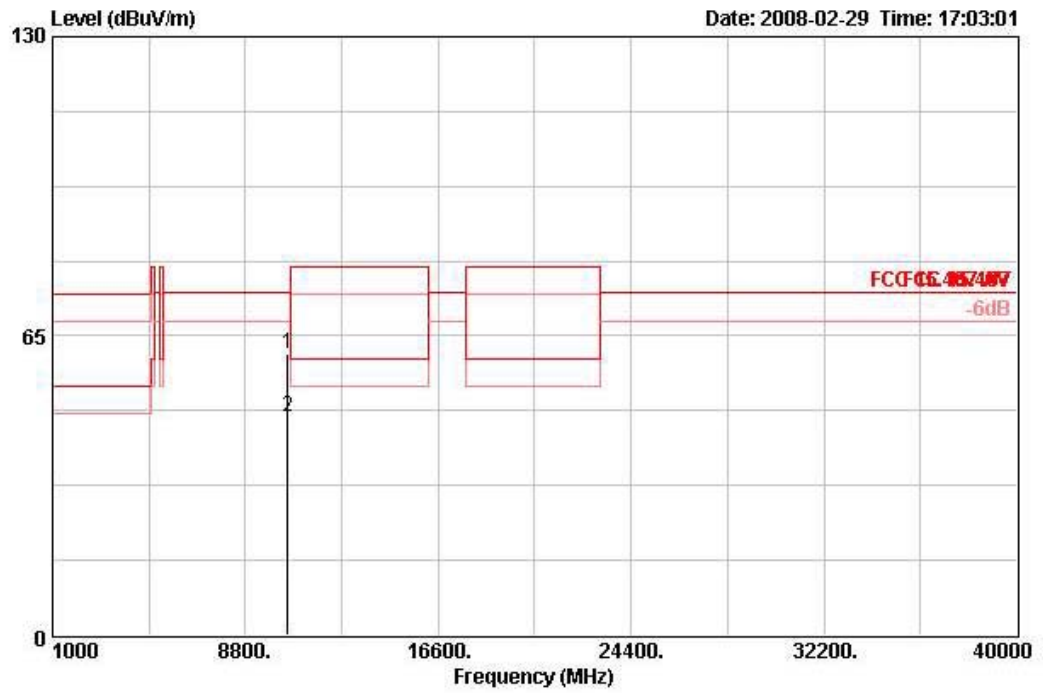
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 52 / Ant. B POE Mode (Horizontal)

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	10517.800	55.64	-18.66	74.30	42.74	38.40	9.43	34.93	PEAK	100	330	HORIZONTAL

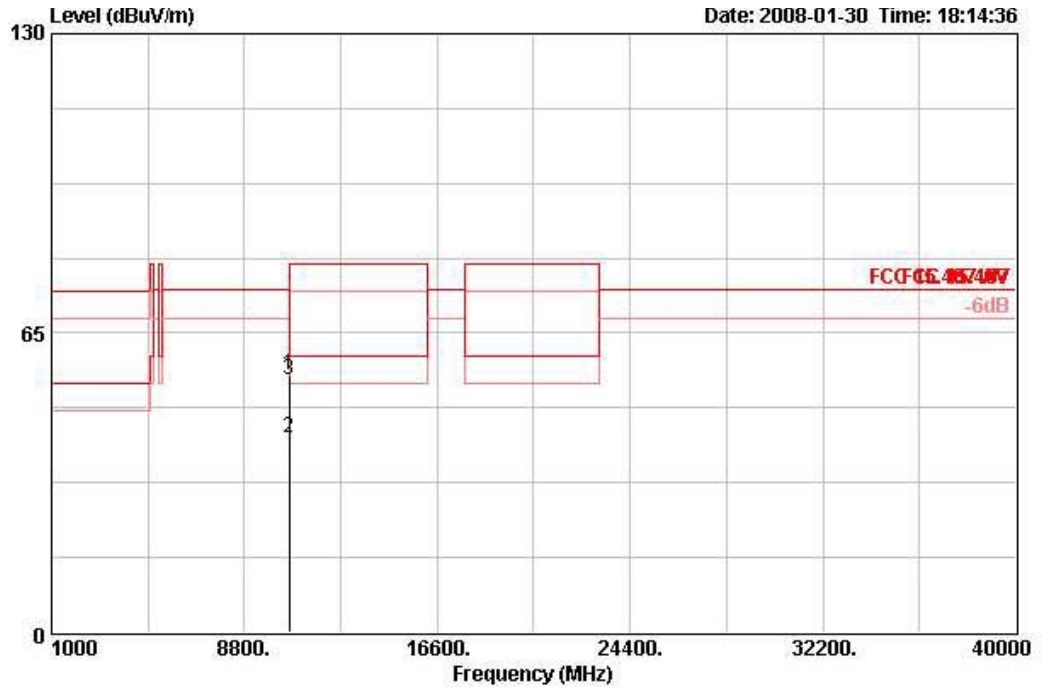
Vertical



	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	10515.320	60.95	-13.35	74.30	48.05	38.40	9.43	34.93	PEAK	119	119	VERTICAL

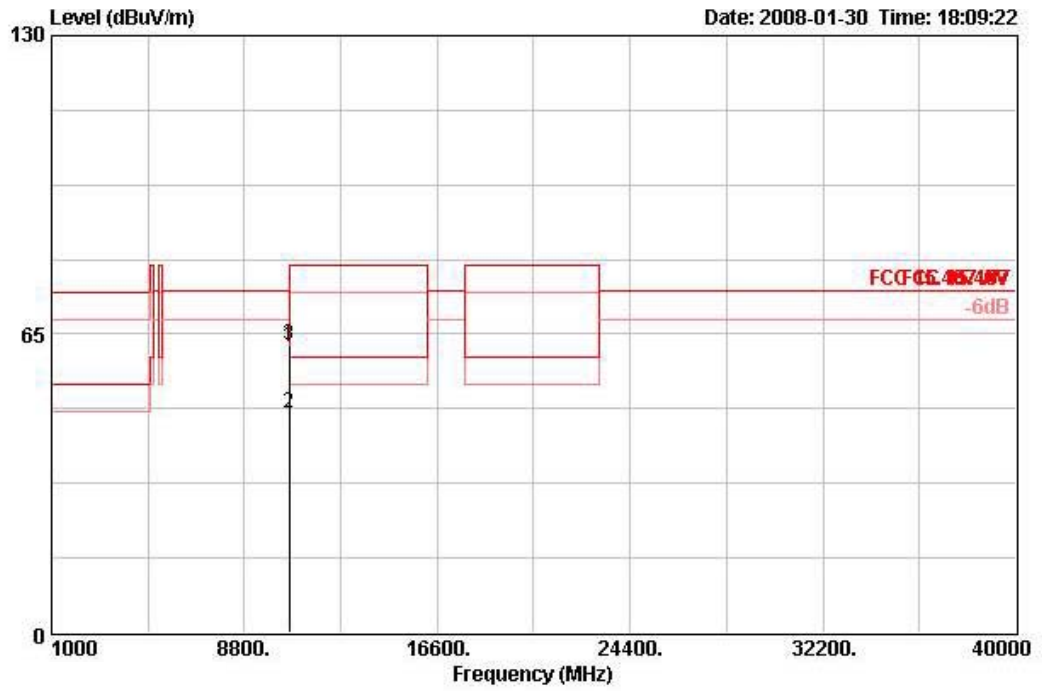
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 60 / Ant. B POE Mode (Horizontal)

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	10596.400	55.93	-18.37	74.30	42.97	38.38	9.47	34.90	PEAK	136	81	HORIZONTAL
2	10606.100	42.21	-17.79	60.00	29.23	38.38	9.48	34.89	AVERAGE	136	81	HORIZONTAL
3	10606.500	54.96	-25.04	80.00	41.98	38.38	9.48	34.89	PEAK	136	81	HORIZONTAL

Vertical

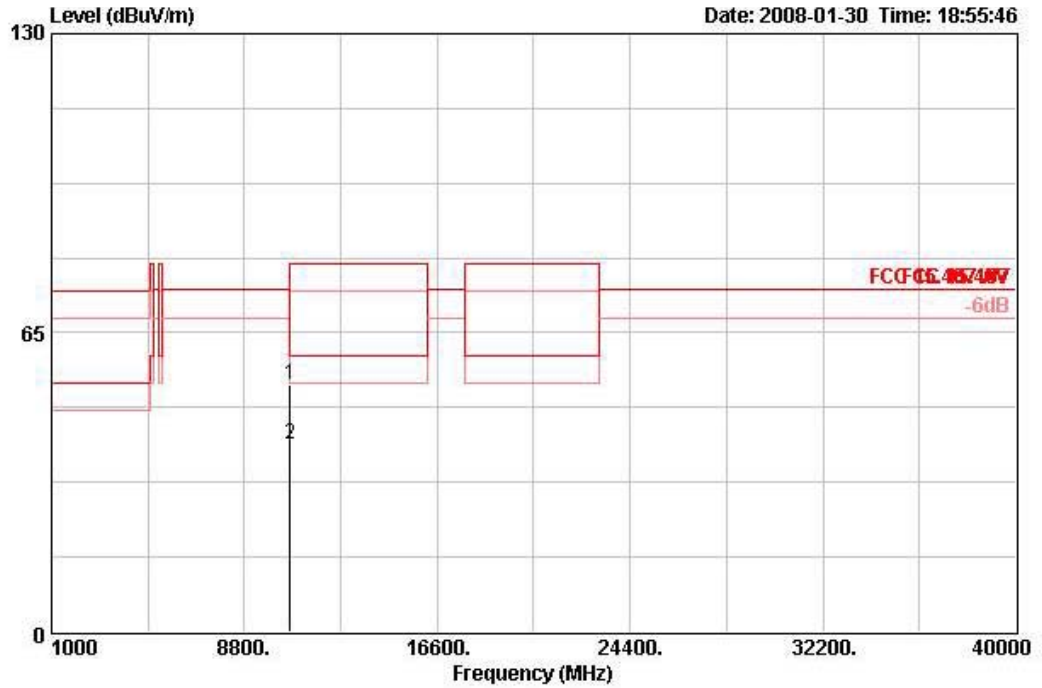


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10596.800	62.27	-12.03	74.30	49.32	38.38	9.47	34.90	PEAK	125	274	VERTICAL
2	10606.100	47.79	-12.21	60.00	34.82	38.38	9.48	34.89	AVERAGE	125	274	VERTICAL
3	10606.200	62.63	-17.37	80.00	49.66	38.38	9.48	34.89	PEAK	125	274	VERTICAL



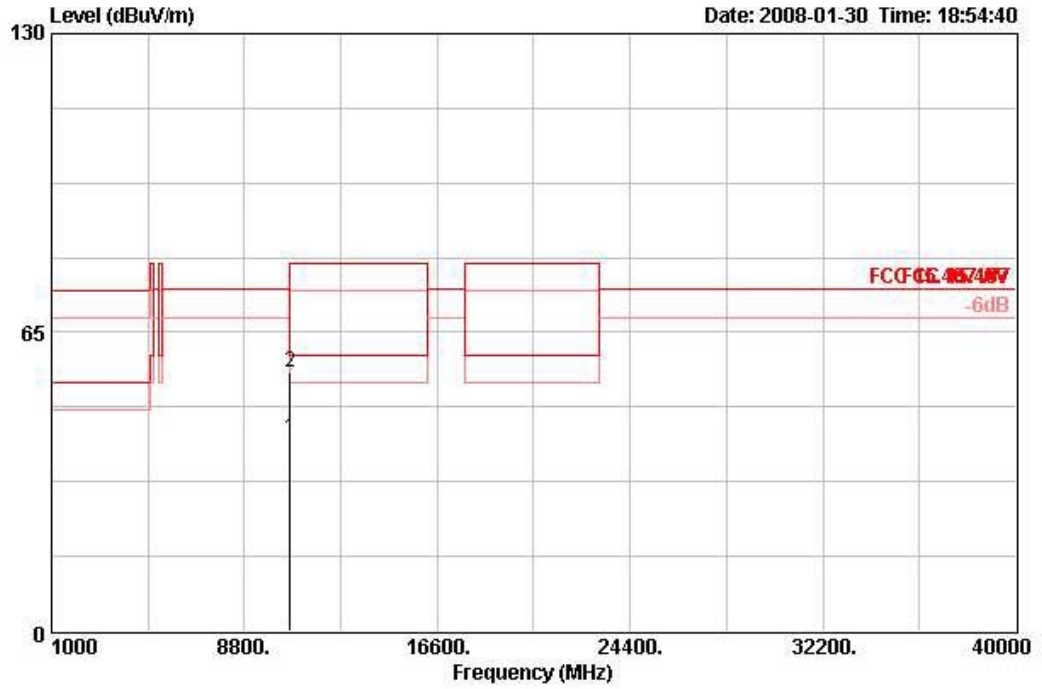
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 64 / Ant. B POE Mode (Horizontal)

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	10641.450	53.81	-26.19	80.00	40.82	38.37	9.50	34.88	PEAK	100	0	HORIZONTAL
2	10641.820	40.86	-19.14	60.00	27.87	38.37	9.50	34.88	AVERAGE	100	0	HORIZONTAL

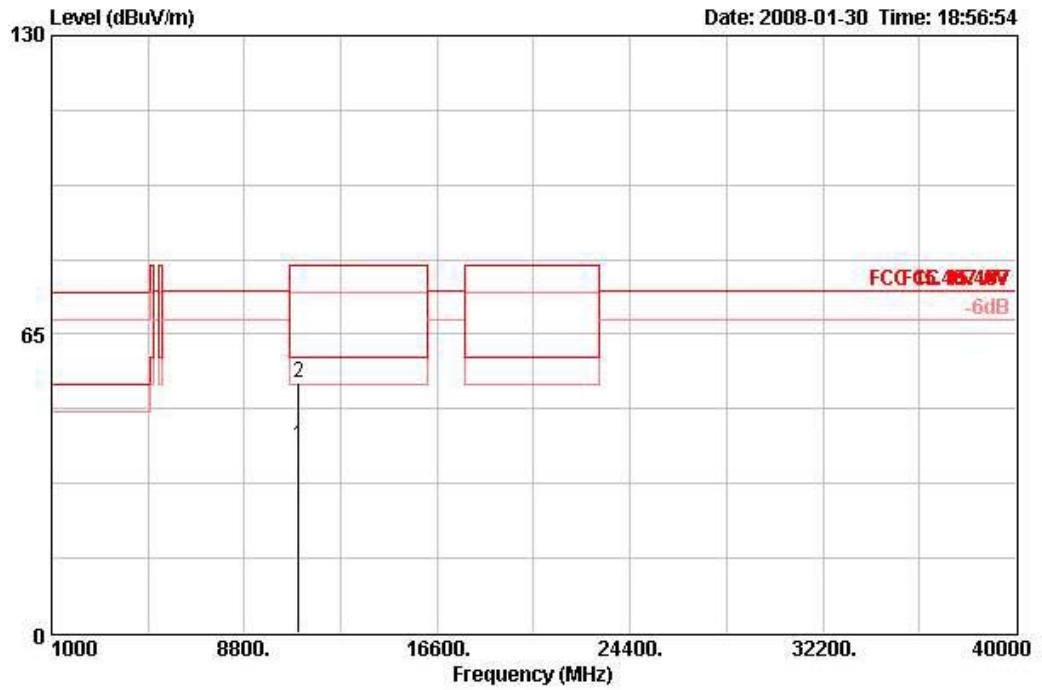
Vertical



	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	10637.500	41.72	-18.28	60.00	28.73	38.37	9.50	34.88	AVERAGE	100	301	VERTICAL
2	10637.560	56.25	-23.75	80.00	43.26	38.37	9.50	34.88	PEAK	100	301	VERTICAL

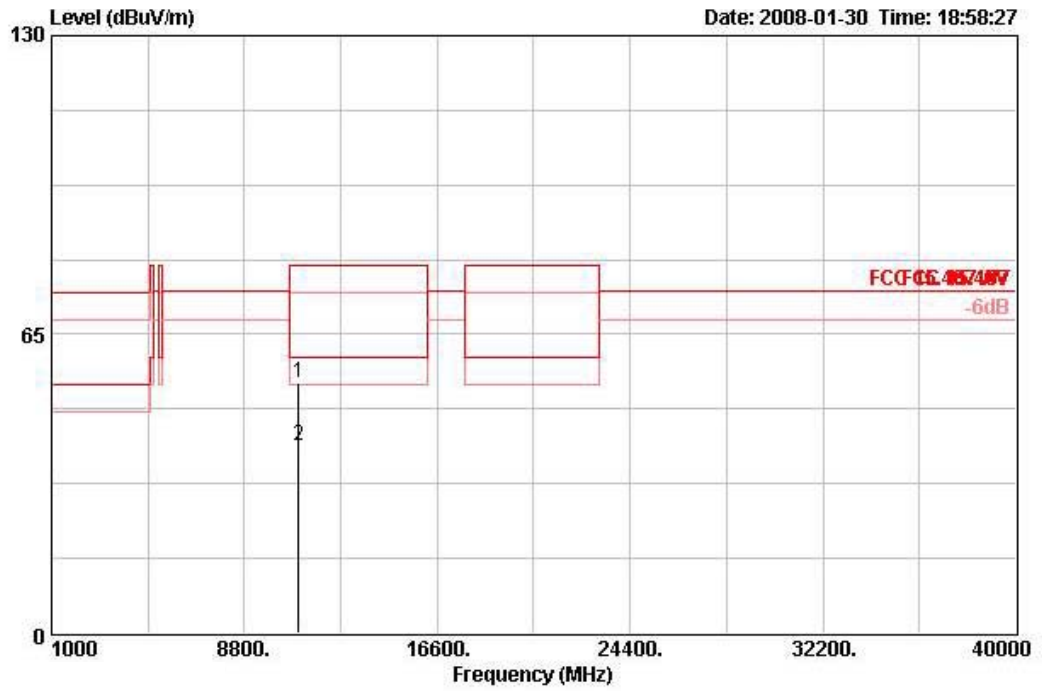
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 100 / Ant. B POE Mode (Horizontal)

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	10999.220	40.88	-19.12	60.00	27.65	38.30	9.69	34.76	AVERAGE	100	360	HORIZONTAL
2	10999.310	54.62	-25.38	80.00	41.38	38.30	9.69	34.76	PEAK	100	360	HORIZONTAL

Vertical

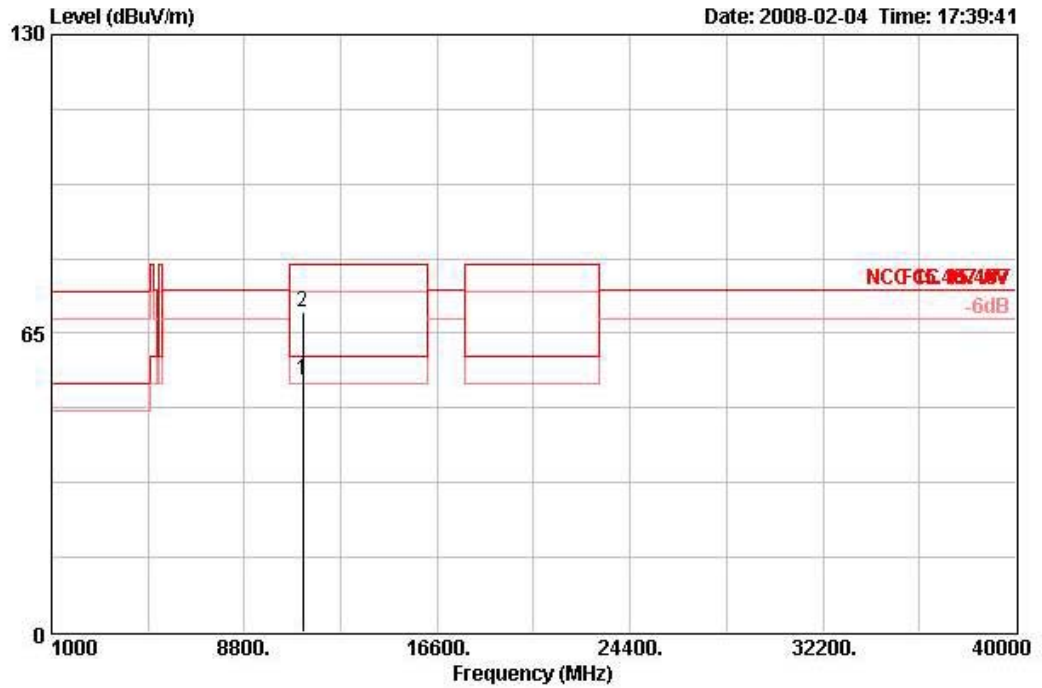


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10998.370	54.57	-25.43	80.00	41.34	38.30	9.69	34.76	PEAK	100	0	VERTICAL
2	10999.180	40.89	-19.11	60.00	27.65	38.30	9.69	34.76	AVERAGE	100	0	VERTICAL



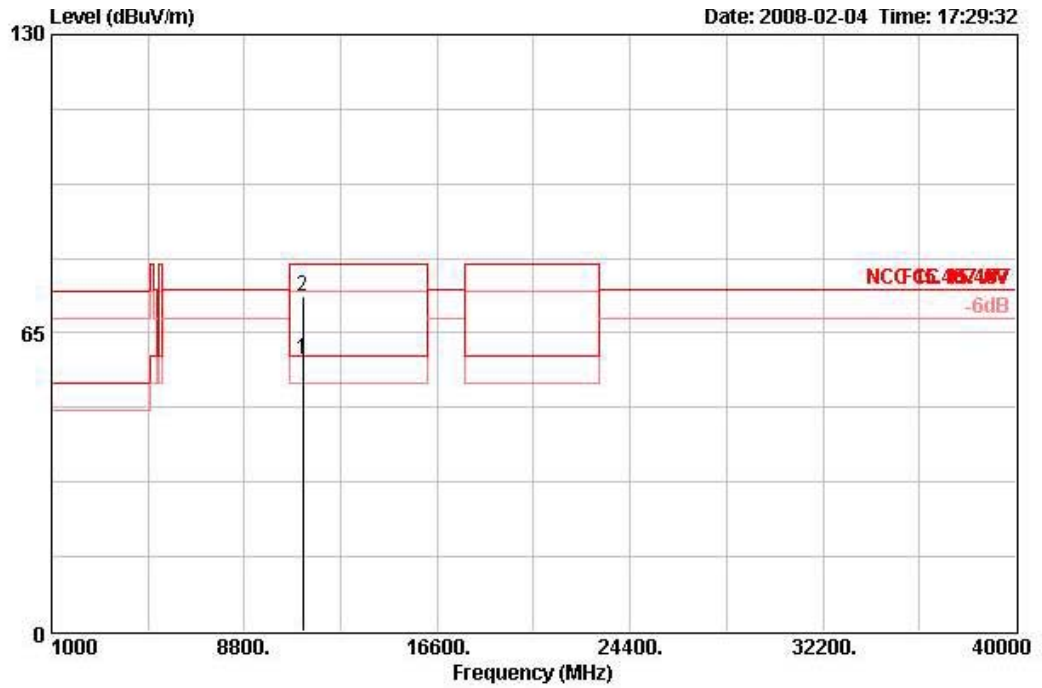
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 116 / Ant. B POE Mode (Horizontal)

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	11159.900	54.74	-5.26	60.00	41.39	38.47	9.72	34.83	AVERAGE	125	299	HORIZONTAL
2	11160.000	69.62	-10.38	80.00	56.27	38.47	9.72	34.83	PEAK	125	299	HORIZONTAL

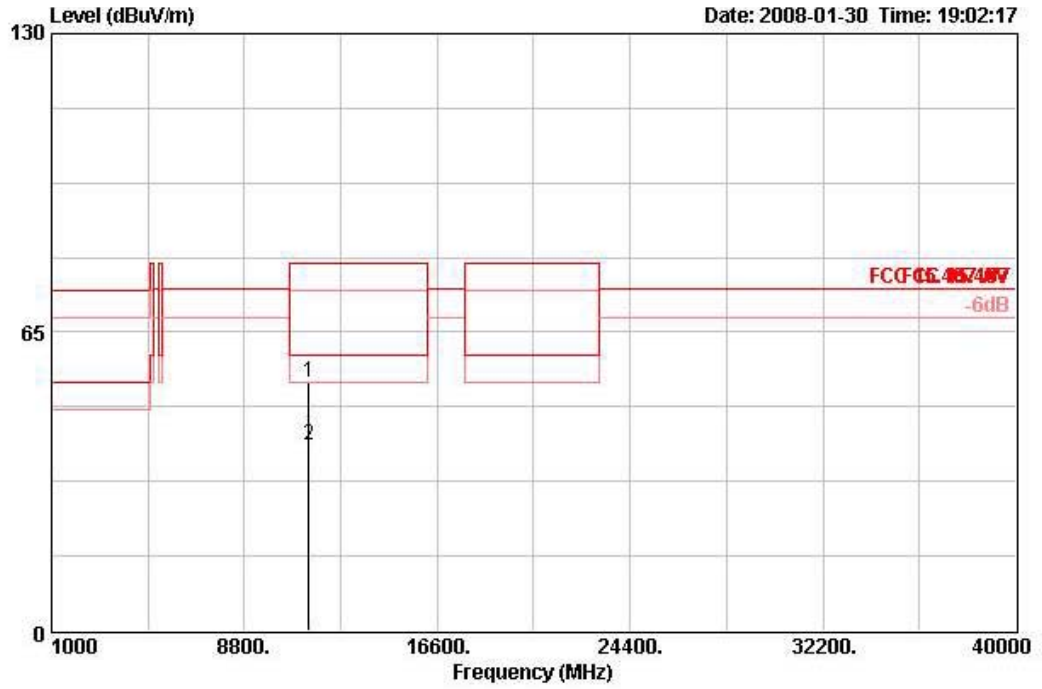
Vertical



	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	11159.600	59.24	-0.76	60.00	45.88	38.47	9.72	34.83	AVERAGE	121	83	VERTICAL
2	11160.000	73.02	-6.98	80.00	59.66	38.47	9.72	34.83	PEAK	121	83	VERTICAL

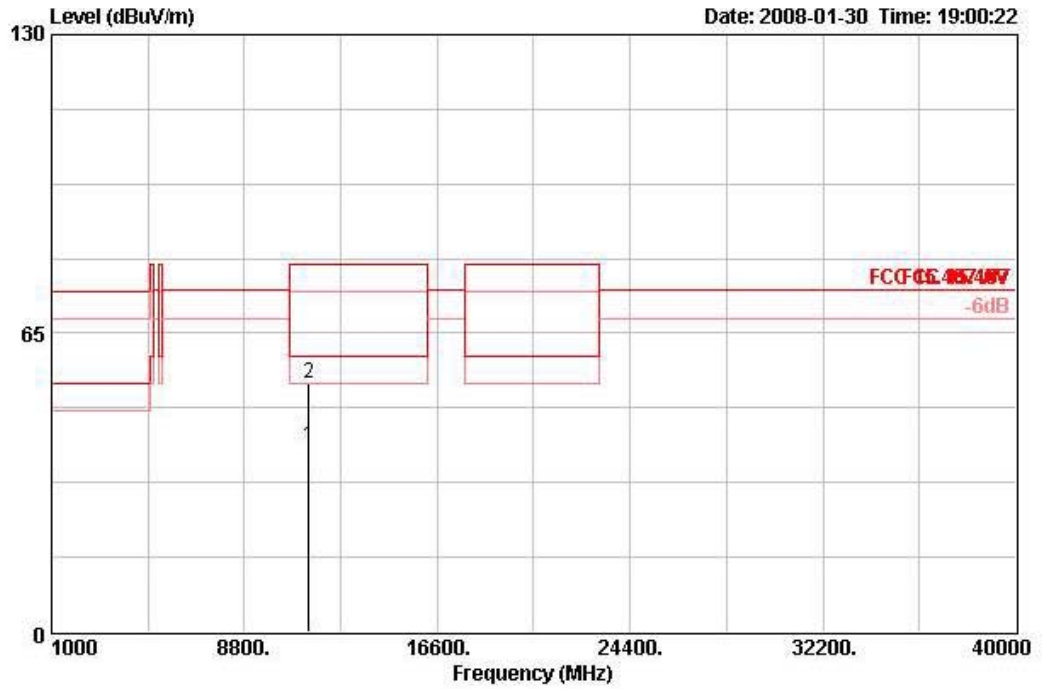
Temperature	18°C	Humidity	63%
Test Engineer	Aric Li	Configurations	802.11a Ch 140 / Ant. B POE Mode (Horizontal)

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	11398.040	53.97	-26.03	80.00	40.46	38.70	9.76	34.95	PEAK	100	322	HORIZONTAL
2	11401.980	40.19	-19.81	60.00	26.67	38.70	9.76	34.95	AVERAGE	100	322	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	11398.830	40.32	-19.68	60.00	26.80	38.70	9.76	34.95	AVERAGE	100	150	VERTICAL
2	11400.650	54.15	-25.85	80.00	40.64	38.70	9.76	34.95	PEAK	100	150	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 transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBuV/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 falls 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 (microrvolts/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)	1MHz / 1MHz 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	18°C	Humidity	56%
Test Engineer	Aric Li	Configurations	802.11a Ch 36, 52, 64 / Ant. A POE Mode (Horizontal)

Channel 36

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 ☺	5149.000	77.59	-2.41	80.00	39.07	34.07	0.00	4.44	PEAK	60	100	VERTICAL
2 ☺	5150.000	57.12	-2.88	60.00	18.60	34.07	0.00	4.44	AVERAGE	60	100	VERTICAL
3 ☺	5182.600	111.19			72.60	34.16	0.00	4.43	AVERAGE	60	100	VERTICAL
4 ☺	5183.200	123.76			85.17	34.16	0.00	4.43	PEAK	60	100	VERTICAL

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

Channel 48

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 ☺	5150.000	68.94	-11.06	80.00	28.72	33.67	6.54	0.00	PEAK	120	303	VERTICAL
2 ☺	5150.000	57.71	-2.29	60.00	17.49	33.67	6.54	0.00	AVERAGE	120	303	VERTICAL
3 ☺	5245.200	122.28			81.85	33.85	6.58	0.00	PEAK	120	303	VERTICAL
4 ☺	5246.000	109.76			69.32	33.85	6.59	0.00	AVERAGE	120	303	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Channel 64

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 ☺	5319.200	111.27			72.39	34.49	0.00	4.40	AVERAGE	58	100	VERTICAL
2 ☺	5323.800	123.06			84.19	34.49	0.00	4.39	PEAK	58	100	VERTICAL
3 ☺	5350.000	58.80	-1.20	60.00	19.85	34.57	0.00	4.38	AVERAGE	58	100	VERTICAL
4 ☺	5350.400	78.27	-1.73	80.00	39.32	34.57	0.00	4.38	PEAK	58	100	VERTICAL

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

Temperature	18°C	Humidity	56%
Test Engineer	Aric Li	Configurations	802.11a Ch 36, 52, 64 / Ant. B POE Mode (Horizontal)

Channel 36

	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 !	5148.800	79.29	-0.71	80.00	39.08	33.67	6.54	0.00	PEAK	153	105	HORIZONTAL
2 !	5150.000	58.98	-1.02	60.00	18.77	33.67	6.54	0.00	AVERAGE	153	105	HORIZONTAL
3 over	5178.600	107.72			67.44	33.73	6.55	0.00	AVERAGE	153	105	HORIZONTAL
4 over	5184.000	118.85			78.57	33.73	6.55	0.00	PEAK	153	105	HORIZONTAL

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

Channel 48

	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 @	5147.600	75.62	-4.38	80.00	35.41	33.67	6.54	0.00	PEAK	155	104	HORIZONTAL
2 @	5150.000	59.92	-0.08	60.00	19.71	33.67	6.54	0.00	AVERAGE	155	104	HORIZONTAL
3 @	5236.800	126.70			86.30	33.82	6.58	0.00	PEAK	155	104	HORIZONTAL
4 @	5237.600	114.88			74.48	33.82	6.58	0.00	AVERAGE	155	104	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Channel 64

	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 over	5317.400	119.50			78.92	33.97	6.62	0.00	PEAK	144	113	HORIZONTAL
2 over	5325.200	107.84			67.24	33.97	6.63	0.00	AVERAGE	144	113	HORIZONTAL
3 !	5350.200	59.96	-0.04	60.00	19.29	34.03	6.64	0.00	AVERAGE	144	113	HORIZONTAL
4 !	5350.200	77.11	-2.89	80.00	36.45	34.03	6.64	0.00	PEAK	144	113	HORIZONTAL

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



Temperature	18°C	Humidity	56%
Test Engineer	Aric Li	Configurations	802.11a Ch 100, 140 / Ant. A POE Mode (Horizontal)

Channel 100

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 ☺	5460.000	57.03	-2.97	60.00	17.86	34.82	0.00	4.35	AVERAGE	53	100	VERTICAL
2 ☺	5460.000	69.36	-10.64	80.00	30.19	34.82	0.00	4.35	PEAK	53	100	VERTICAL
3 ☺	5470.000	73.74	-0.56	74.30	34.54	34.86	0.00	4.35	PEAK	53	100	VERTICAL
4 ☺	5504.000	107.48			68.19	34.95	0.00	4.35	AVERAGE	53	100	VERTICAL
5 ☺	5505.200	120.15			80.86	34.95	0.00	4.35	PEAK	53	100	VERTICAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 ☺	5698.200	120.14			80.27	35.48	0.00	4.39	PEAK	38	100	VERTICAL
2 ☺	5699.400	106.78			66.90	35.48	0.00	4.39	AVERAGE	38	100	VERTICAL
3 ☺	5726.000	73.26	-1.04	74.30	33.33	35.53	0.00	4.40	PEAK	38	100	VERTICAL

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



Temperature	18°C	Humidity	56%
Test Engineer	Aric Li	Configurations	802.11a Ch 100, 140 / Ant. B POE Mode (Horizontal)

Channel 100

	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	5460.000	70.54	-9.46	80.00	29.64	34.21	6.69	0.00	PEAK	148	114	HORIZONTAL
2 !	5460.000	56.94	-3.06	60.00	16.04	34.21	6.69	0.00	AVERAGE	148	114	HORIZONTAL
3 !	5469.800	73.19	-1.11	74.30	32.27	34.24	6.69	0.00	PEAK	148	114	HORIZONTAL
4 over	5495.400	106.81			65.84	34.27	6.70	0.00	AVERAGE	148	114	HORIZONTAL
5 over	5496.200	118.89			77.92	34.27	6.70	0.00	PEAK	148	114	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	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 over	5699.400	105.50			64.36	34.34	6.81	0.00	PEAK	137	107	HORIZONTAL
2 over	5701.000	118.38			77.23	34.34	6.81	0.00	PEAK	137	107	HORIZONTAL
3 !	5725.000	74.08	-0.22	74.30	32.92	34.34	6.82	0.00	PEAK	137	107	HORIZONTAL

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

Note:

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

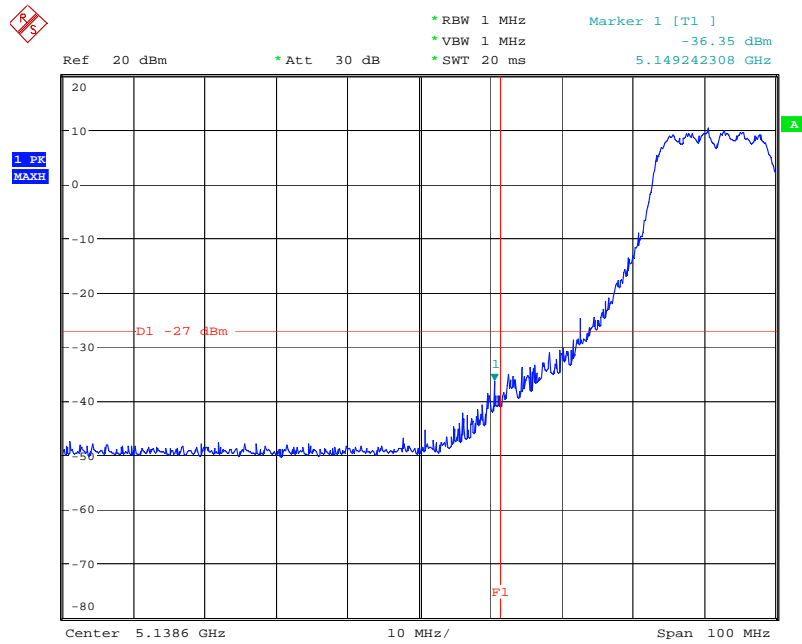
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

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

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

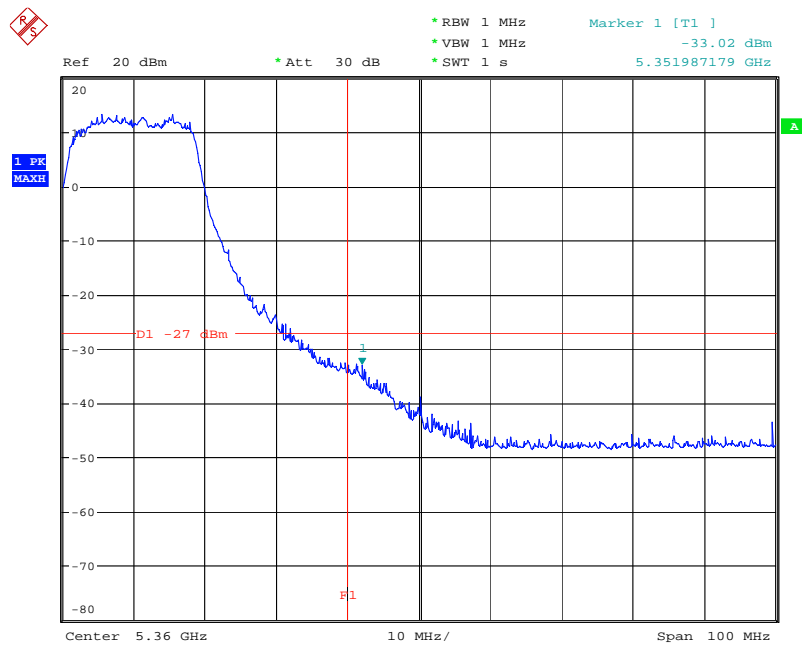
Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

EIRP Emission in Band on Configuration IEEE 802.11a Ant. A-1+A-2+A-3 / 5180 MHz



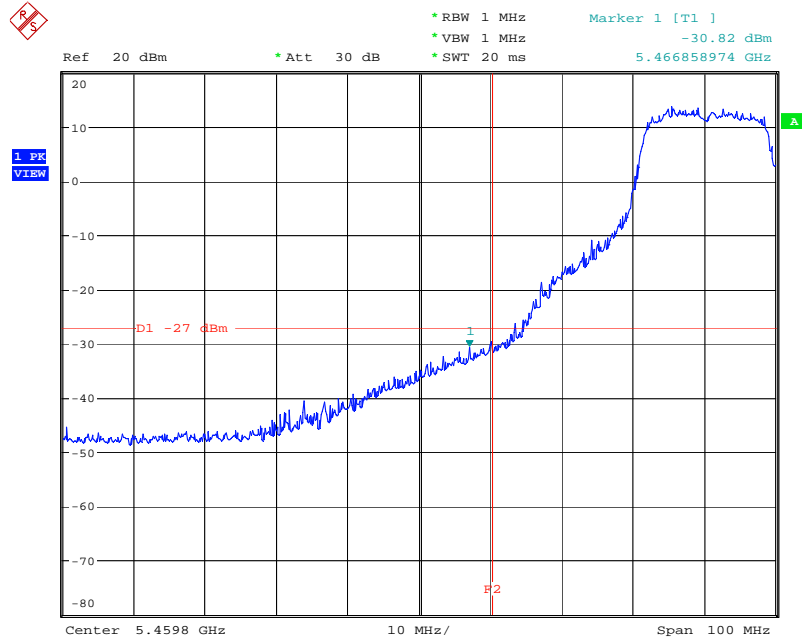
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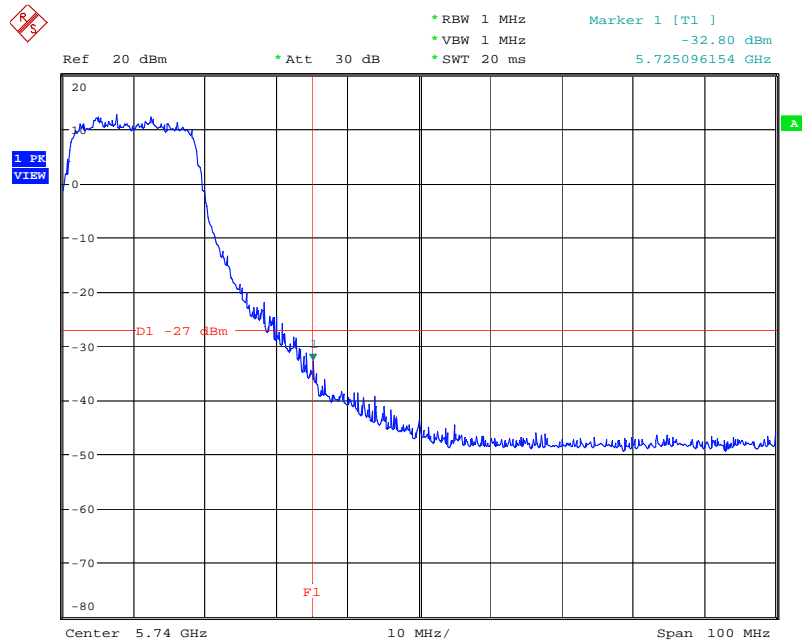
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EIRP Emission in Band on Configuration IEEE 802.11a Ant. A-1+A-2+A-3 / 5500 MHz



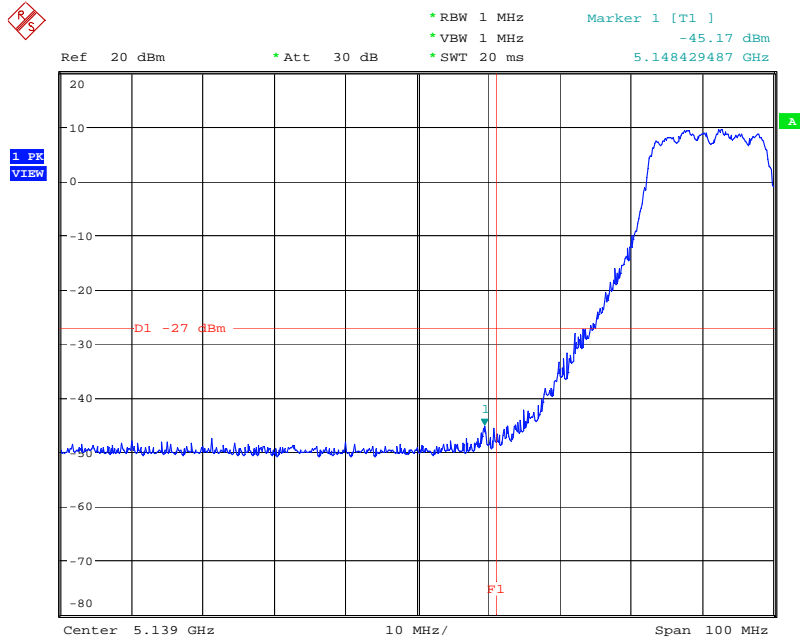
Date: 12.FEB.2008 14:29:30

EIRP Emission in Band on Configuration IEEE 802.11a Ant. A-1+A-2+A-3 / 5700 MHz



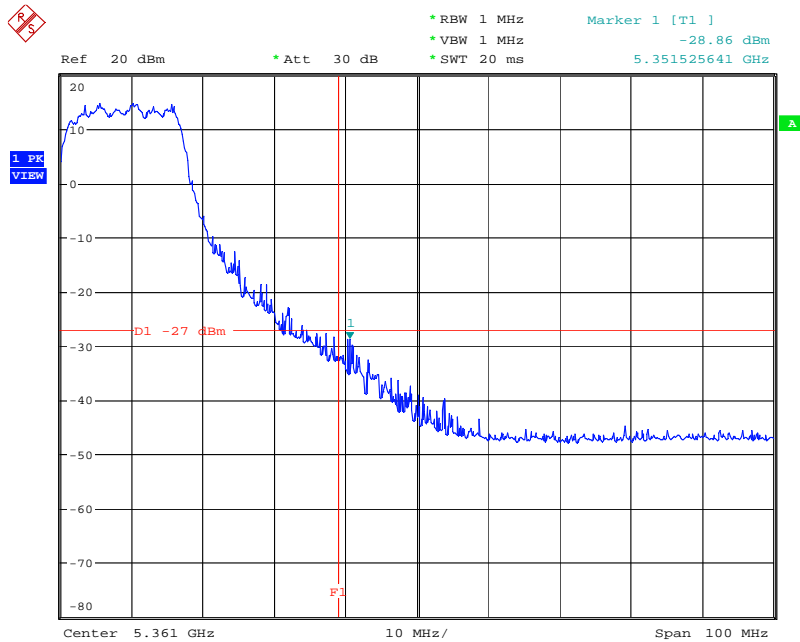
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EIRP Emission in Band on Configuration IEEE 802.11a Ant. B-1+B-2+B-3 / 5180 MHz



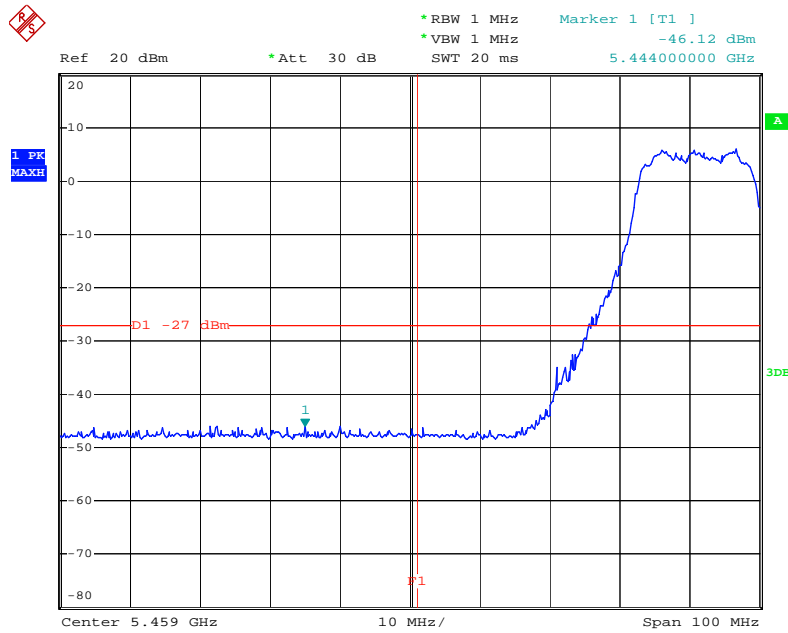
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EIRP Emission in Band on Configuration IEEE 802.11a Ant. B-1+B-2+B-3 / 5320 MHz



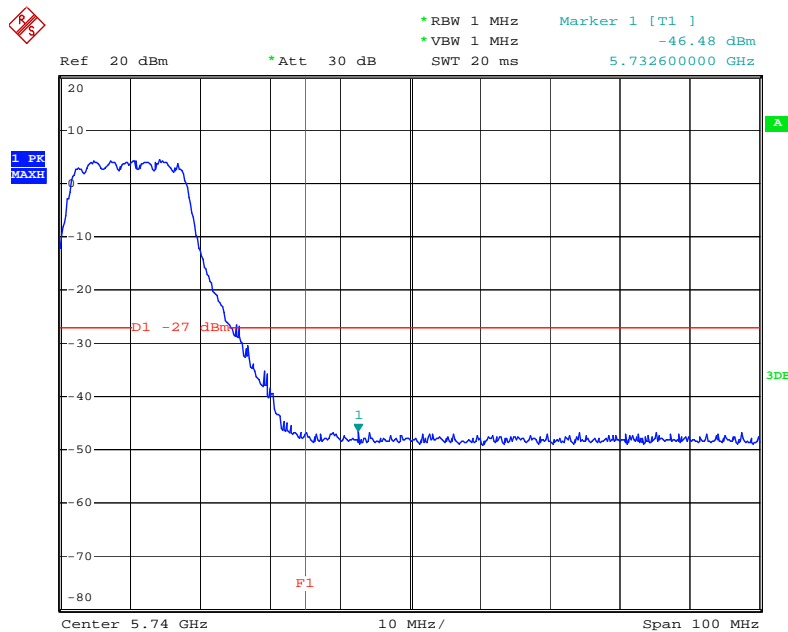
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EIRP Emission in Band on Configuration IEEE 802.11a Ant. B-1+B-2+B-3 / 5500 MHz



Date: 3.FEB.2008 16:52:00

EIRP Emission in Band on Configuration IEEE 802.11a Ant. B-1+B-2+B-3 / 5700 MHz



Date: 3.FEB.2008 16:53:49

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 $\pm 20\text{ppm}$ (IEEE 802.11a specification).

4.8.2. Measuring Instruments and Setting

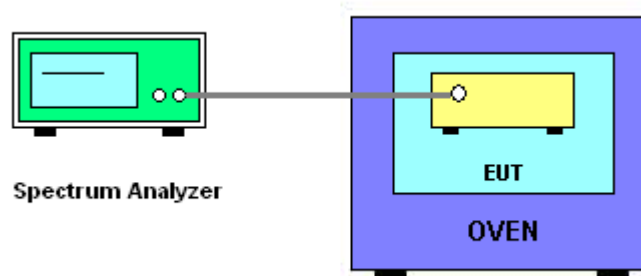
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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 $\pm 20\text{ppm}$ (IEEE 802.11a 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 spectrum analyser 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)	5260
126.50	5260.015300
110.00	5260.023700
93.50	5260.022800
Max. Deviation (MHz)	0.023700
Max. Deviation (ppm)	4.51

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	5260
-30	5260.066700
-20	5260.057600
-10	5260.032000
0	5260.000000
10	5259.998800
20	5259.967900
30	5259.966500
40	5259.956900
50	5259.951900
Max. Deviation (MHz)	0.066700
Max. Deviation (ppm)	12.68

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,

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	100174	9kHz – 2.75GHz	Mar. 03, 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 (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	Mar. 27, 2007	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, 2007	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 14, 2008	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02116	1 GHz - 26.5 GHz	Jun. 07, 2007	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	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	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	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
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 03, 2008	Conducted (TH01-HY)
Temp. and Humidity Chamber	KSON	THS-C3L	612	N/A	Jan. 14, 2008	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Jan. 04, 2008	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Jan. 04, 2008	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. 07, 2007	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 07, 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 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. : 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

PI, total 9 pages

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