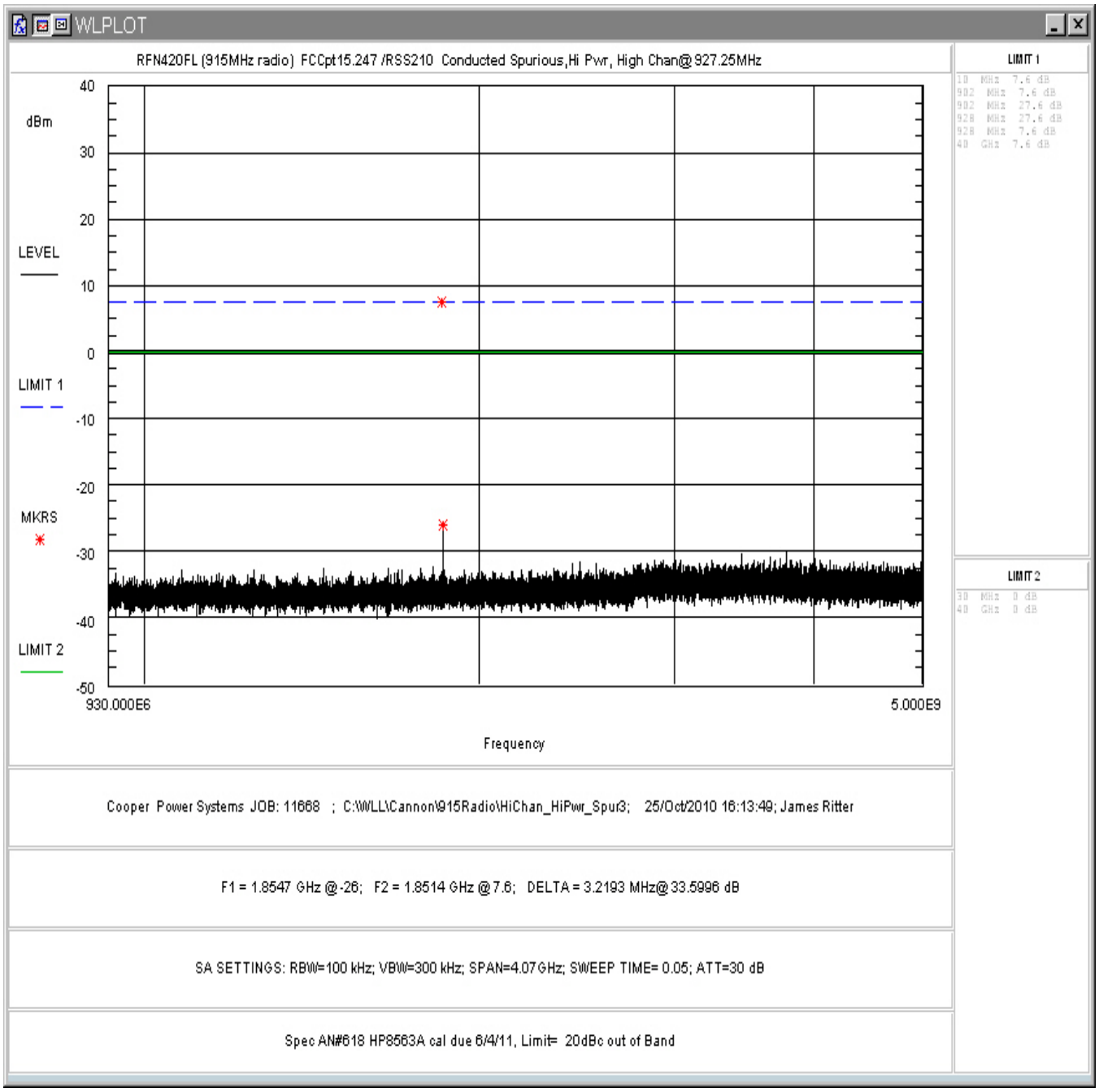

Figure 25: Conducted Spurious Emissions, High Power, High Channel 930-5000MHz

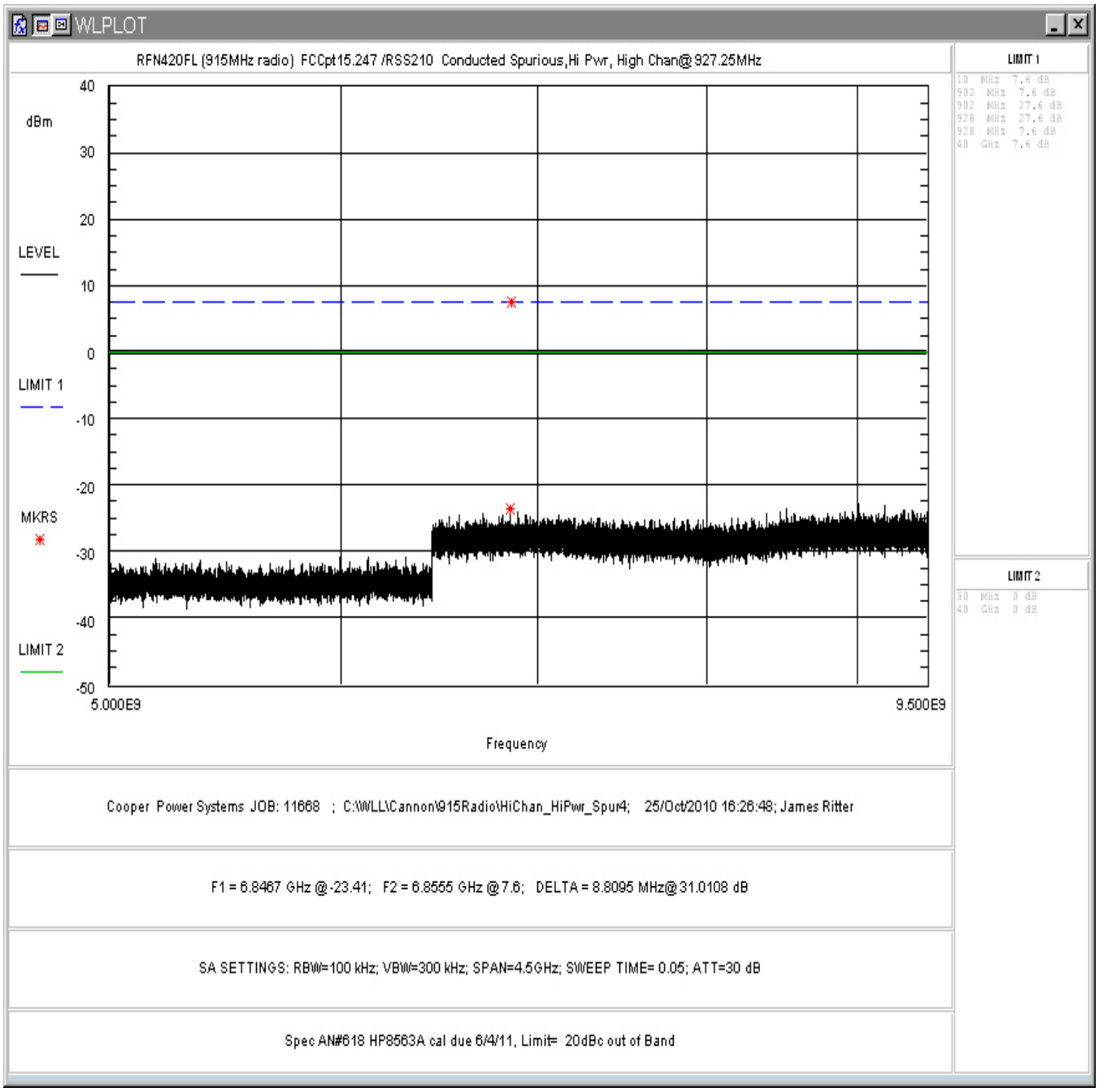

Figure 26: Conducted Spurious Emissions, High Power, High Channel 5-9.5GHz

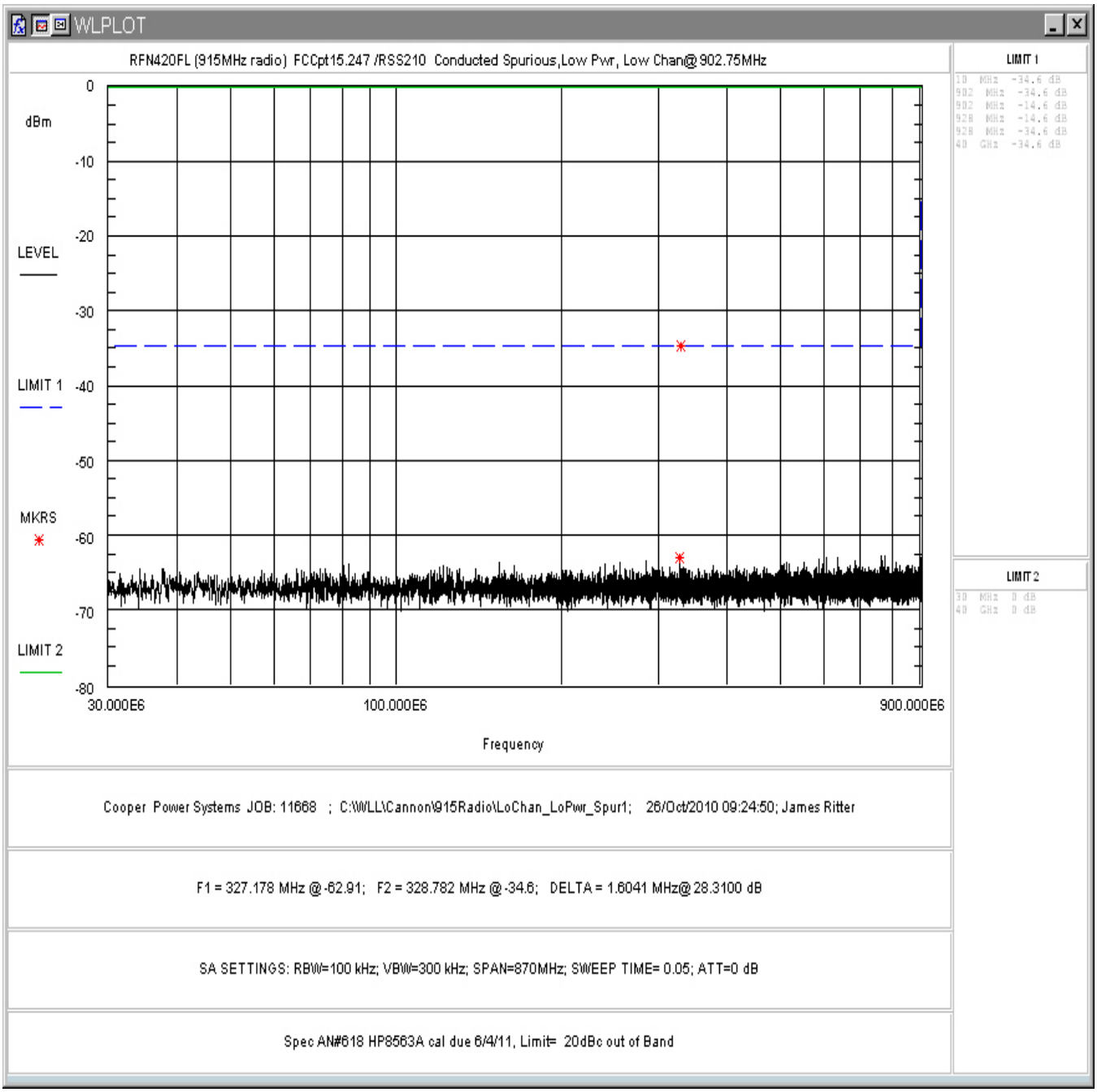

Figure 27: Conducted Spurious Emissions, Low Power, Low Channel 30 - 900MHz

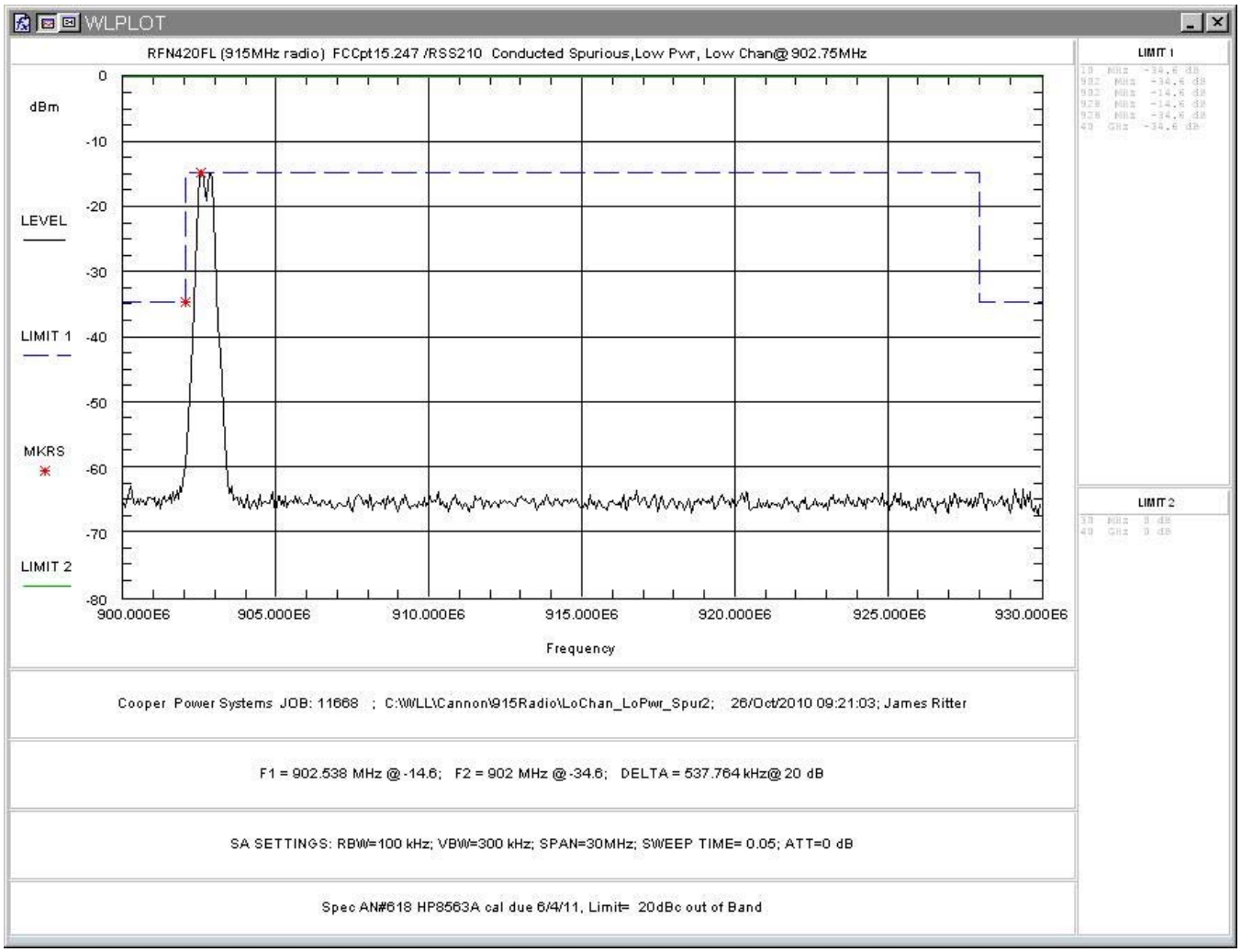

Figure 28: Conducted Spurious Emissions, Low Power, Low Channel 900 – 930MHz

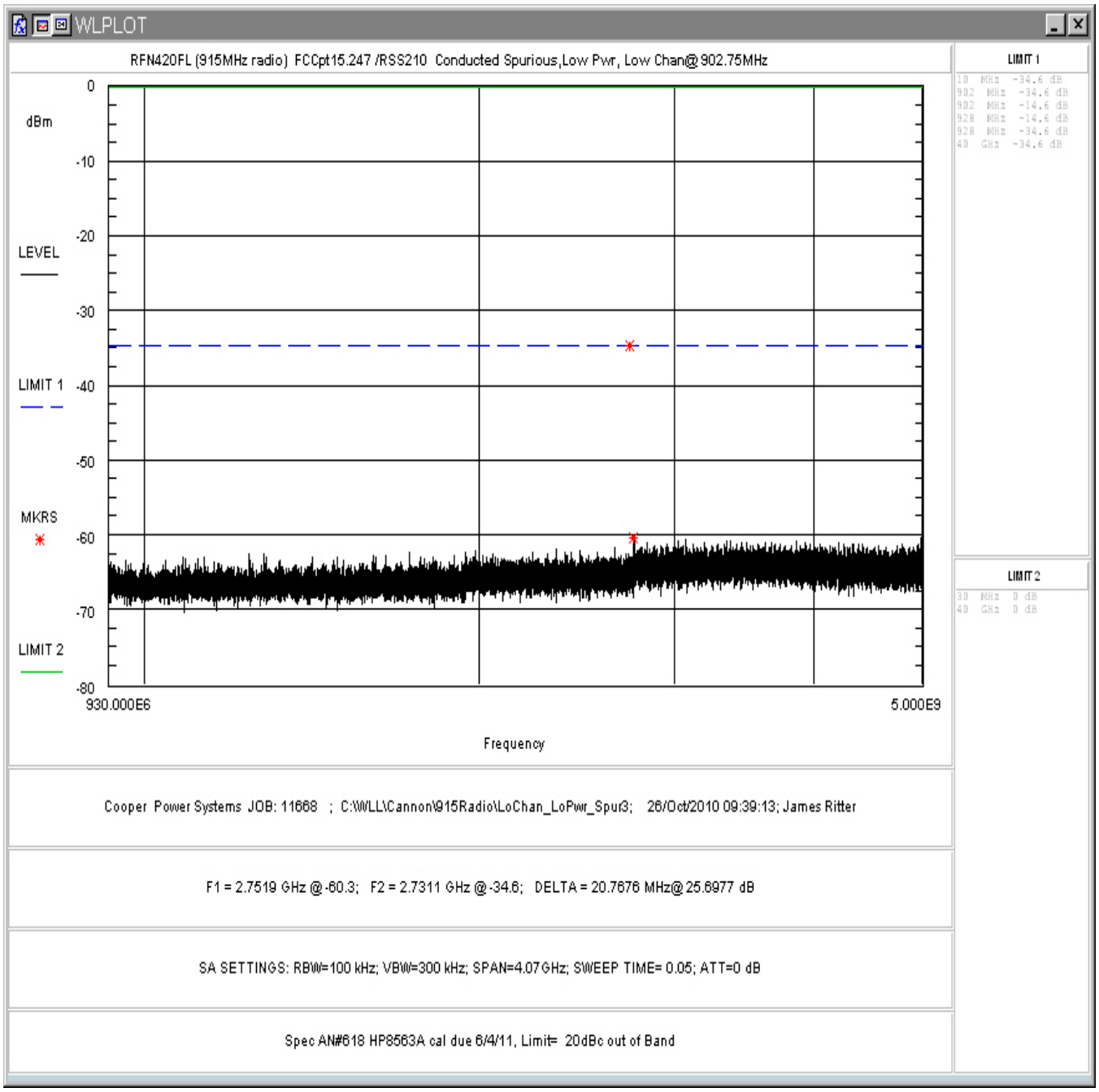

Figure 29: Conducted Spurious Emissions, Low Power, Low Channel 930-5000MHz

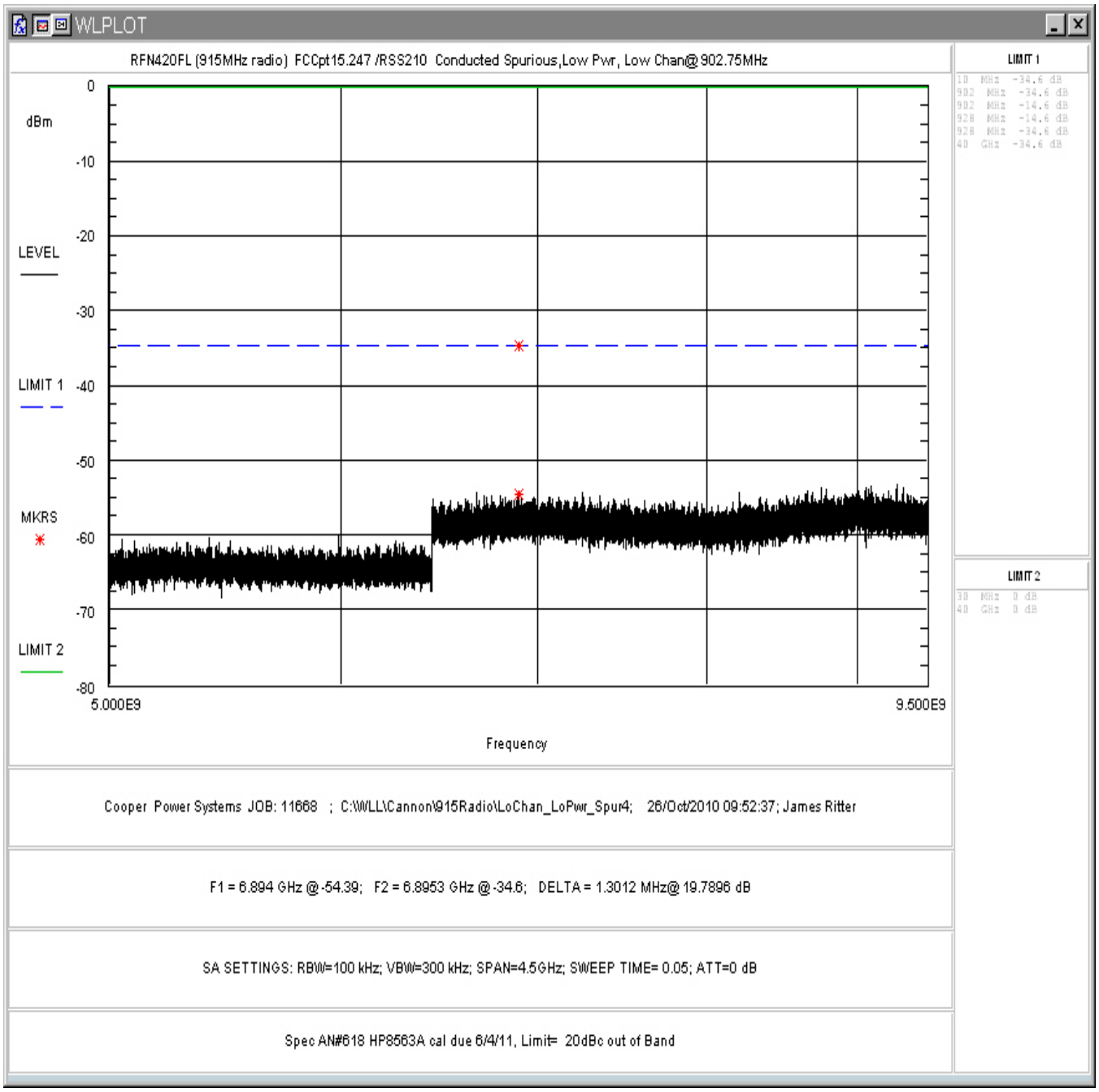

Figure 30: Conducted Spurious Emissions, Low Power, Low Channel 5-9.5GHz

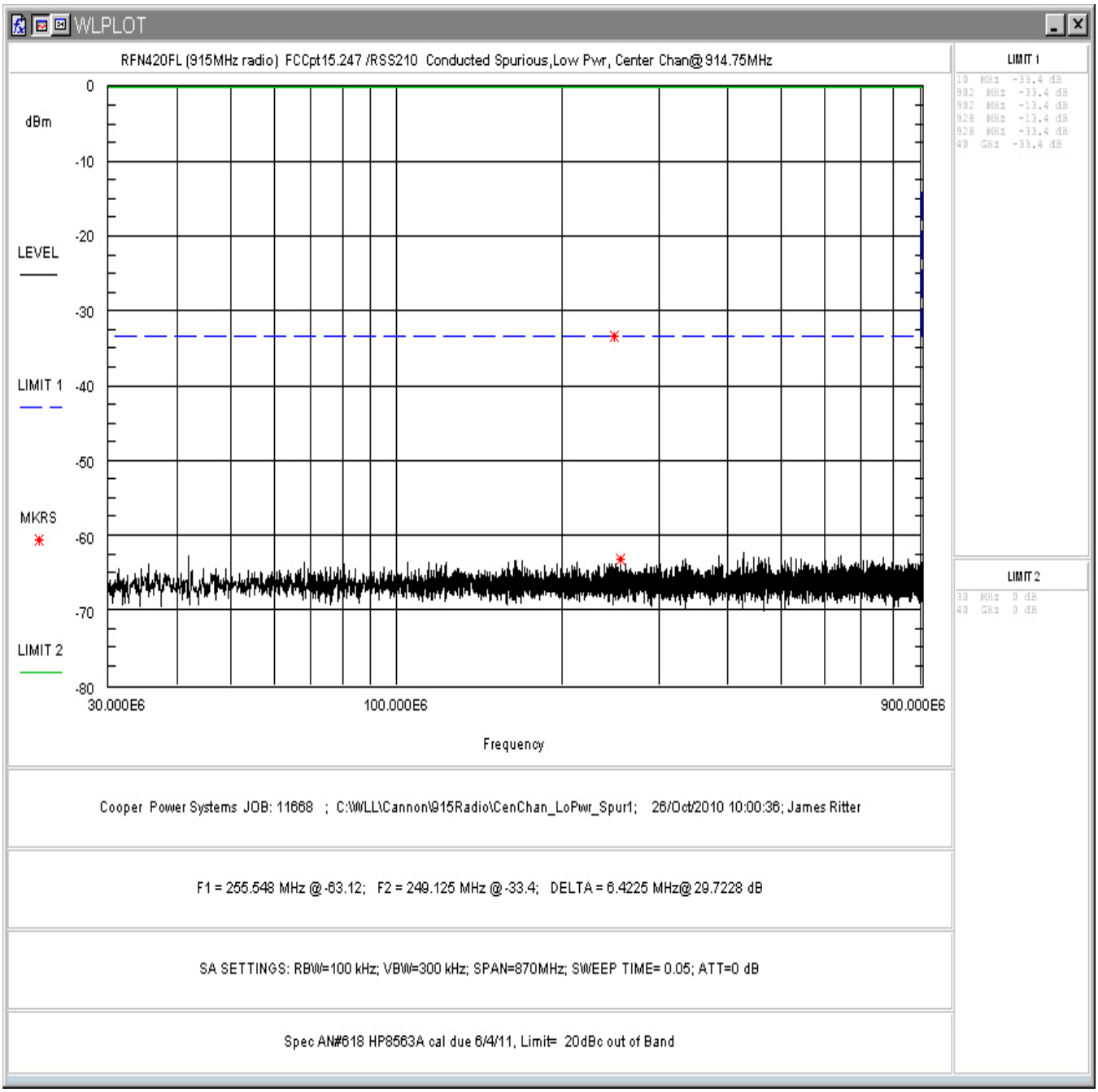

Figure 31: Conducted Spurious Emissions, Low Power, Center Channel 30 - 900MHz

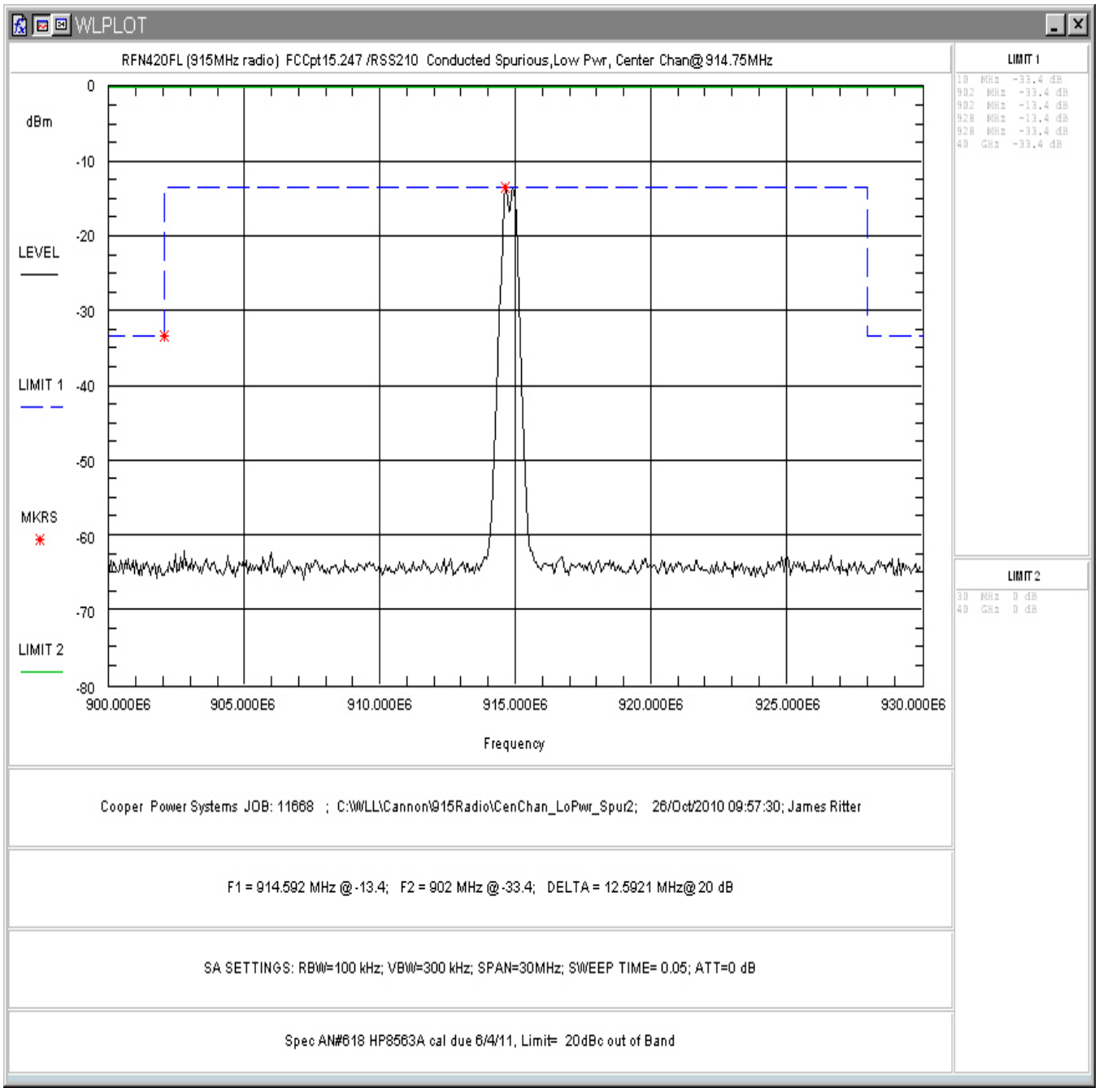

Figure 32: Conducted Spurious Emissions, Low Power, Center Channel 900 – 930MHz

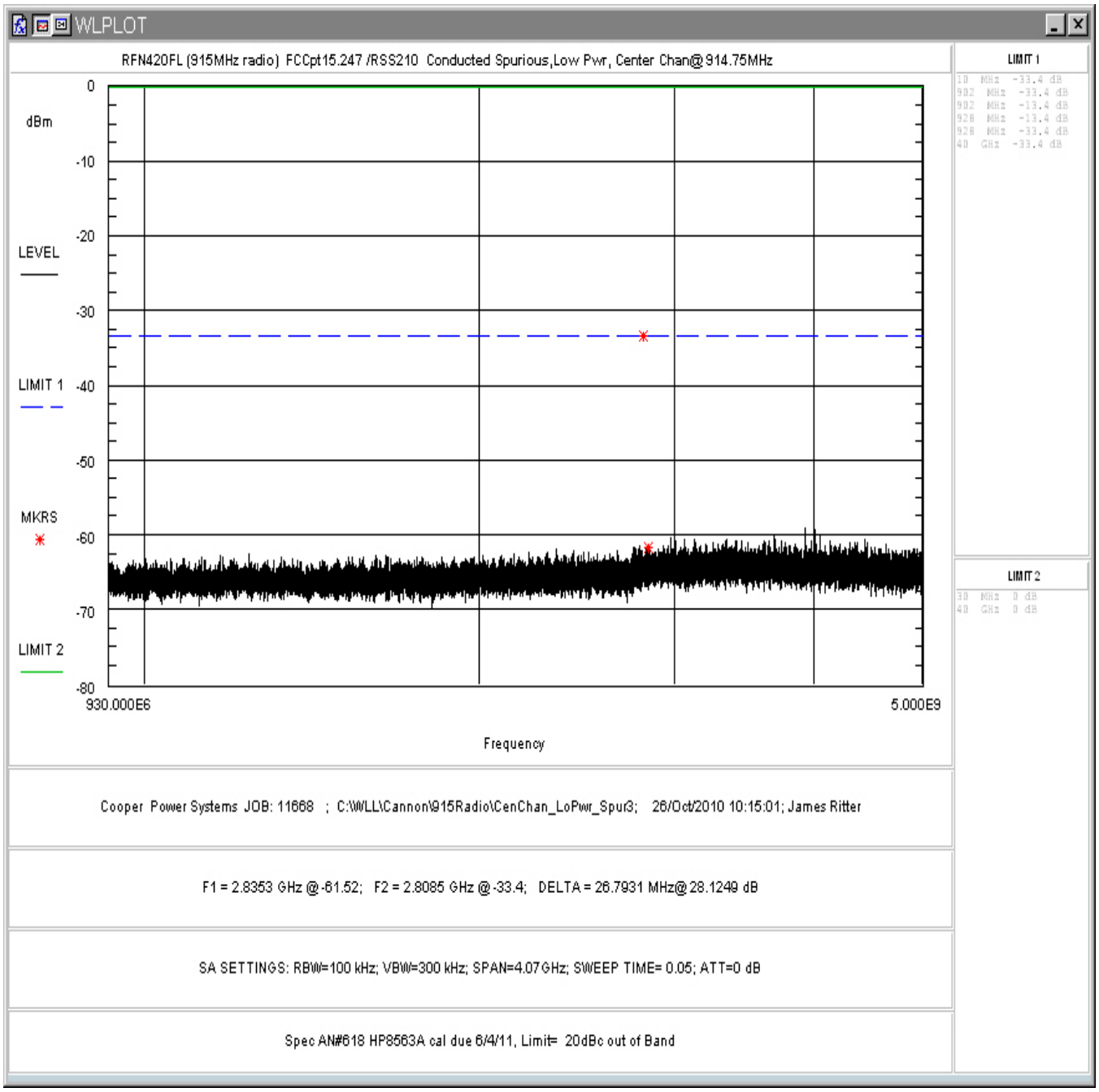

Figure 33: Conducted Spurious Emissions, Low Power, Center Channel 930-5000MHz

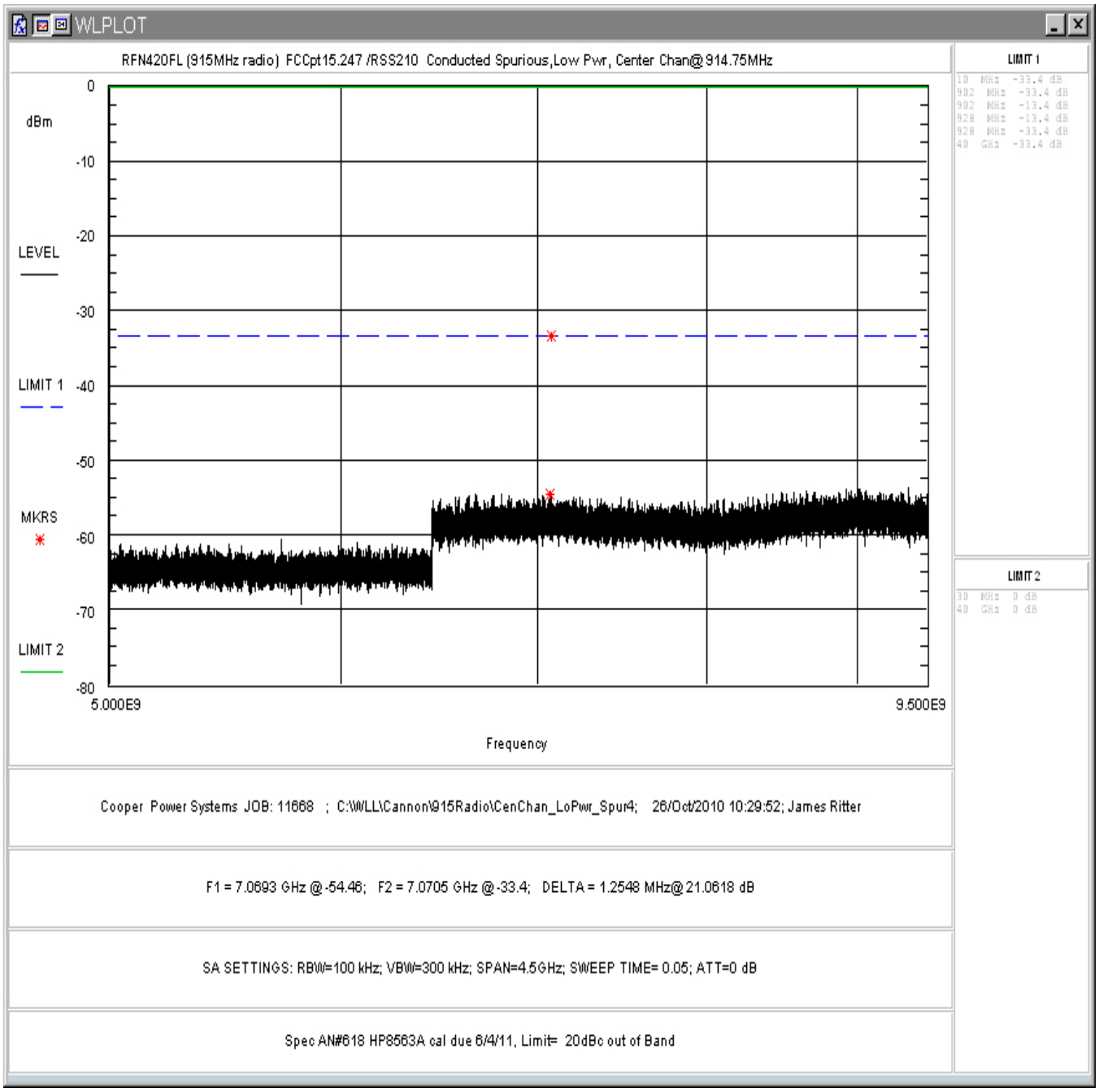

Figure 34: Conducted Spurious Emissions, Low Power, Center Channel 5-9.5GHz

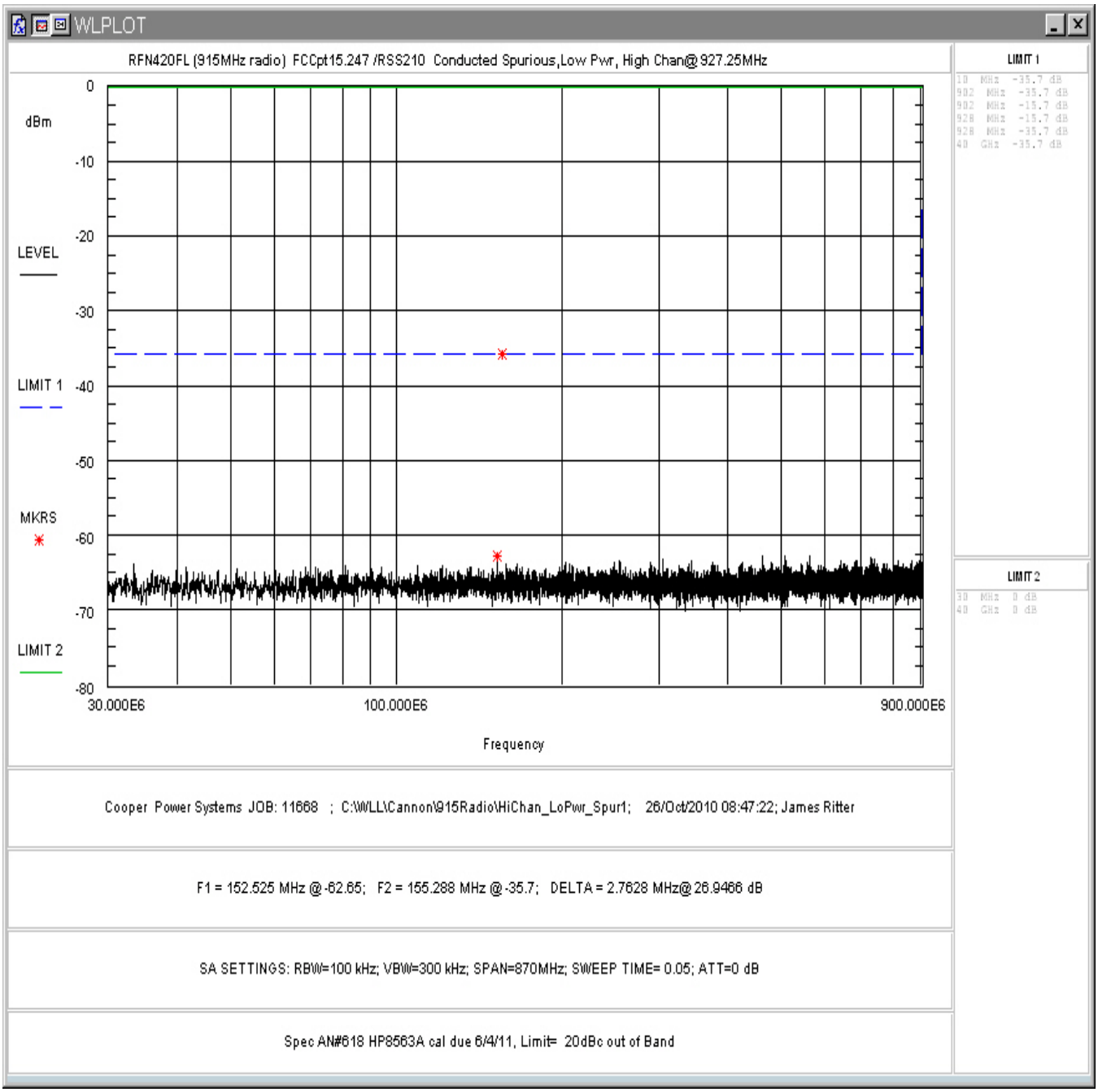

Figure 35: Conducted Spurious Emissions, Low Power, High Channel 30 - 900MHz

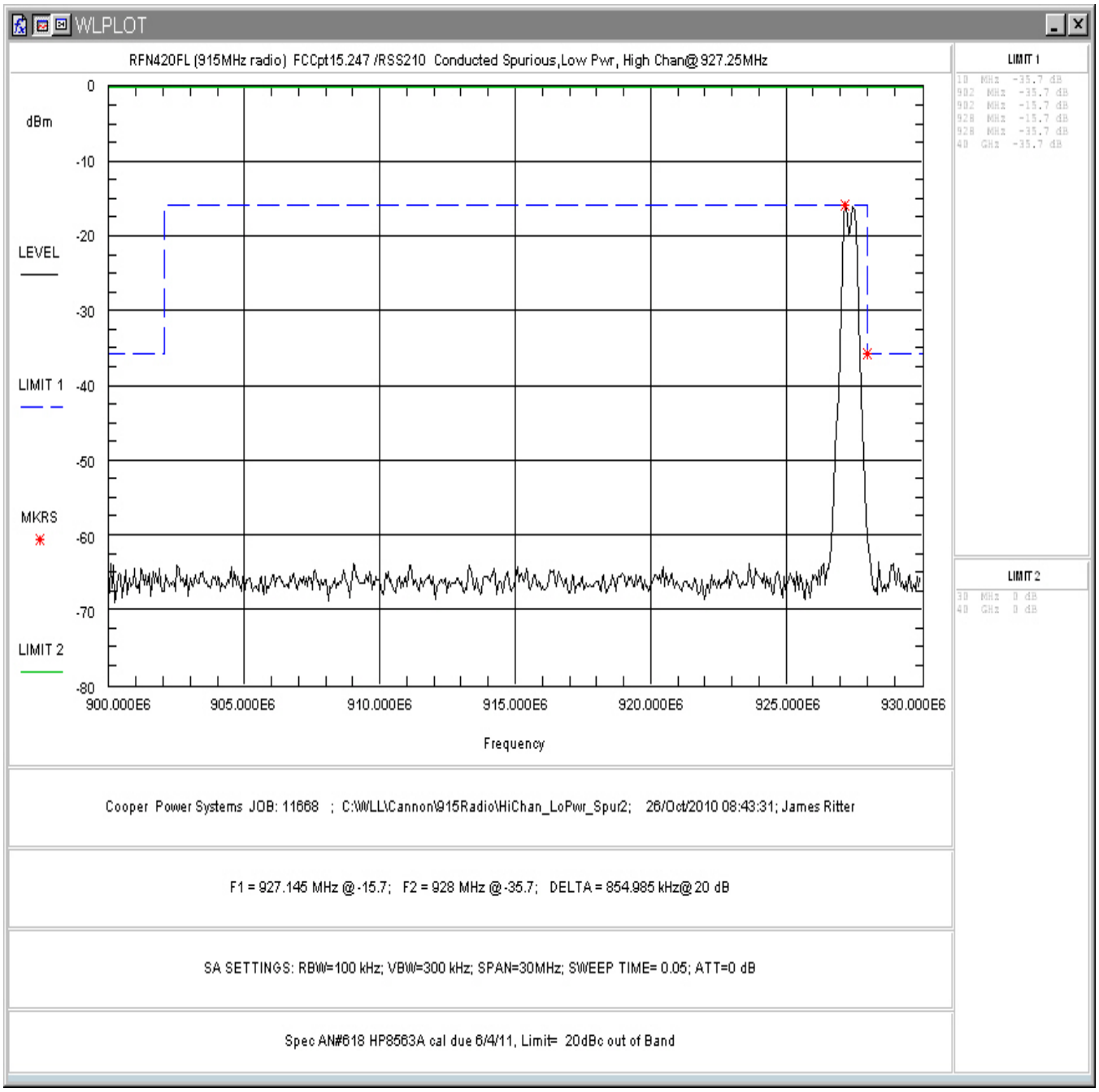

Figure 36: Conducted Spurious Emissions, Low Power, High Channel 900 – 930MHz

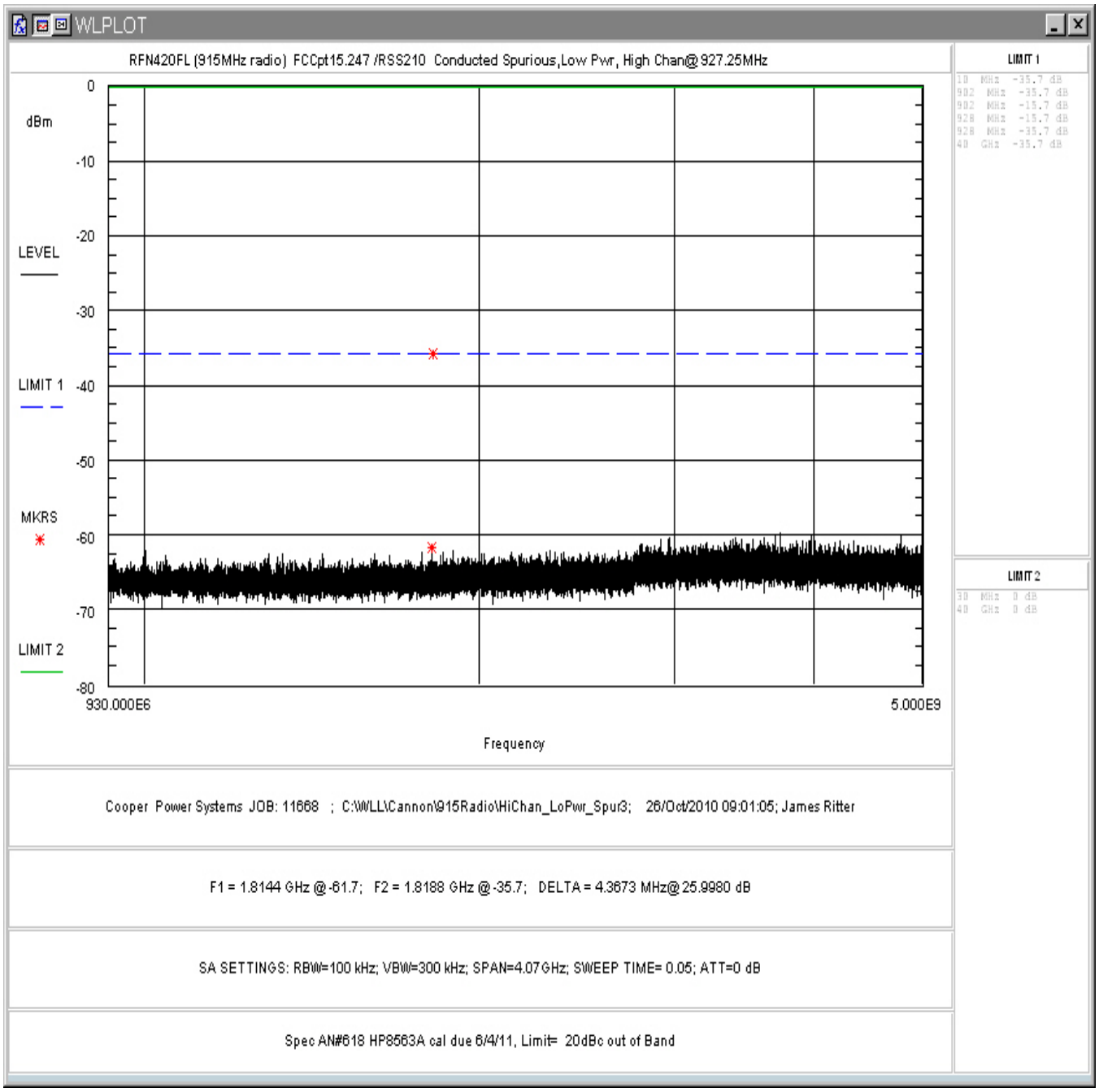

Figure 37: Conducted Spurious Emissions, Low Power, High Channel 930-5000MHz

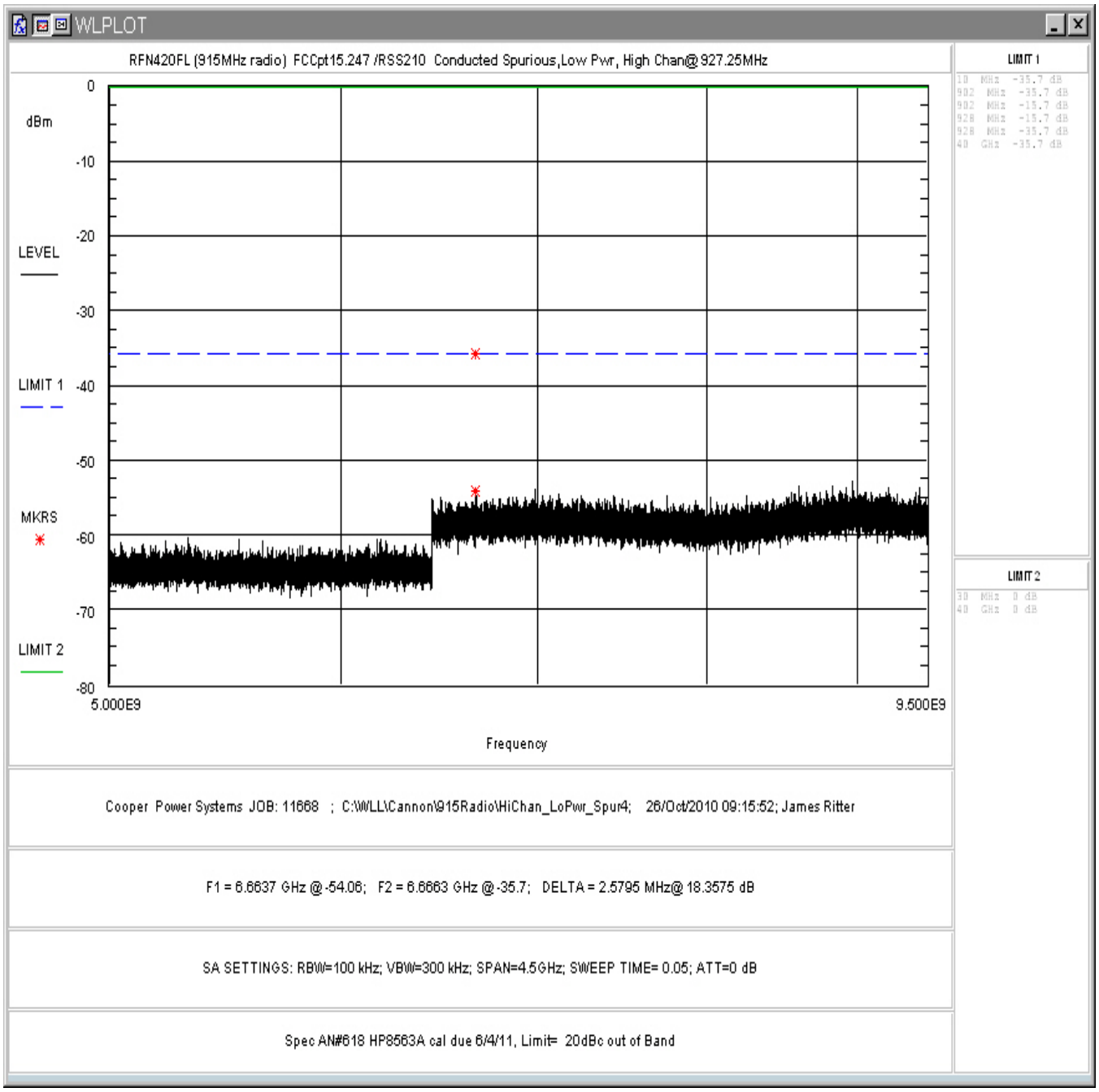

Figure 38: Conducted Spurious Emissions, Low Power, High Channel 5-9.5GHz

5.5.1 Band Edge Compliance

In accordance with FCC Public Notice DA-00-705 close-up plots of the upper and lower channels in both hopping and non-hopping modes with respect to the nearest authorized band-edges are provided below. The tests were performed in the same manner as the above conducted spurious emissions tests.

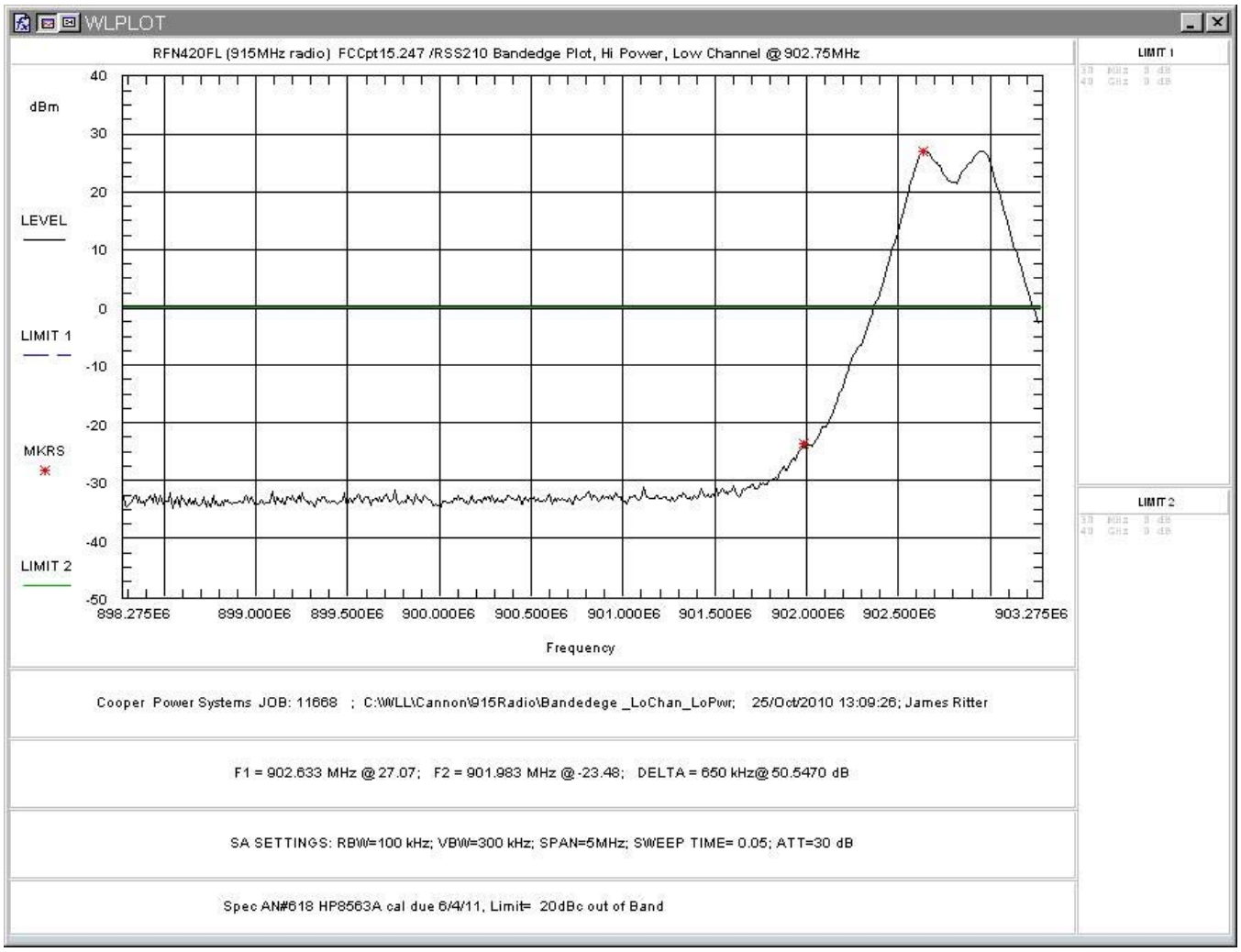

Figure 39: Lower Band-edge, Low Channel, High Power

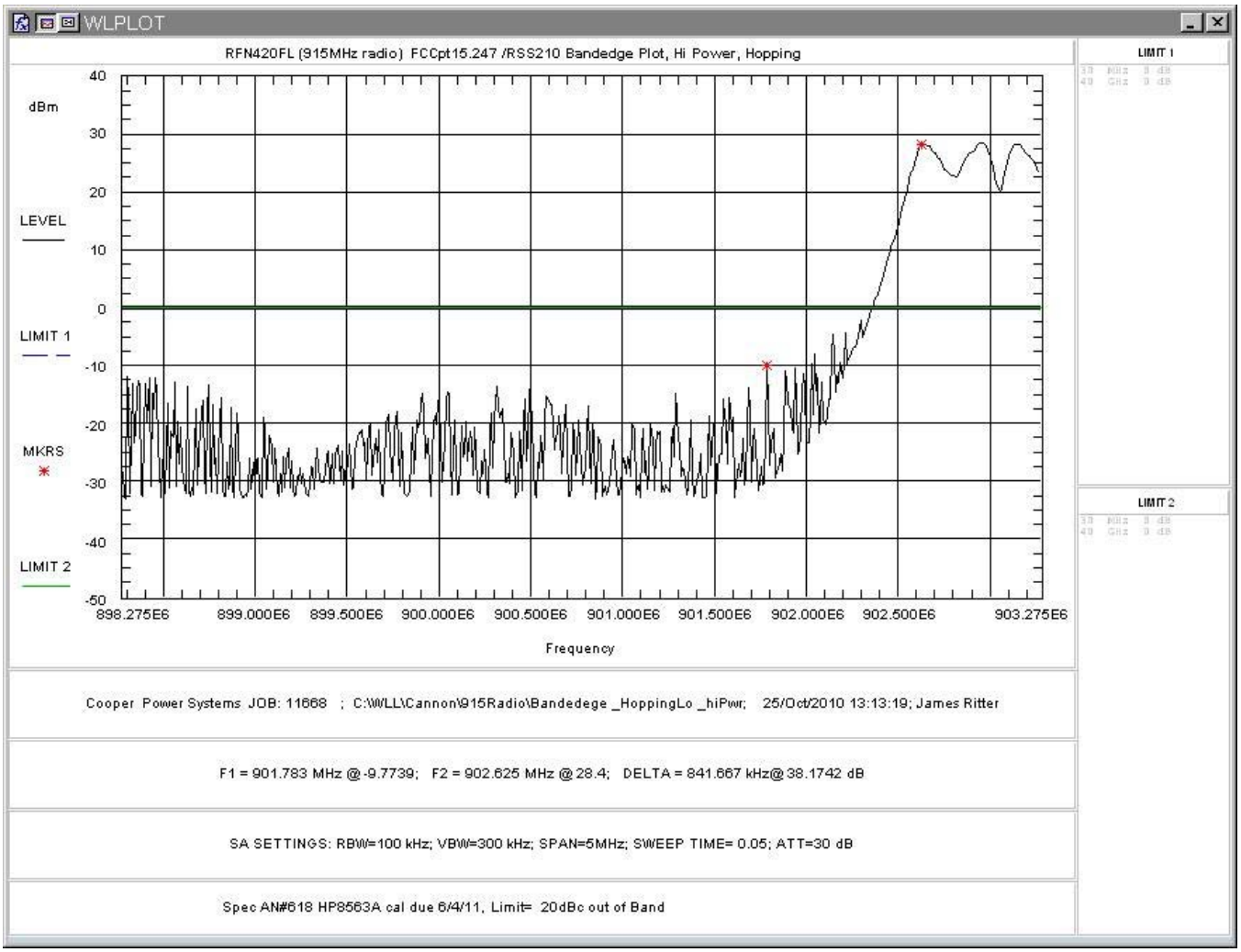

Figure 40: Lower Band-edge, Hopping Mode, High Power

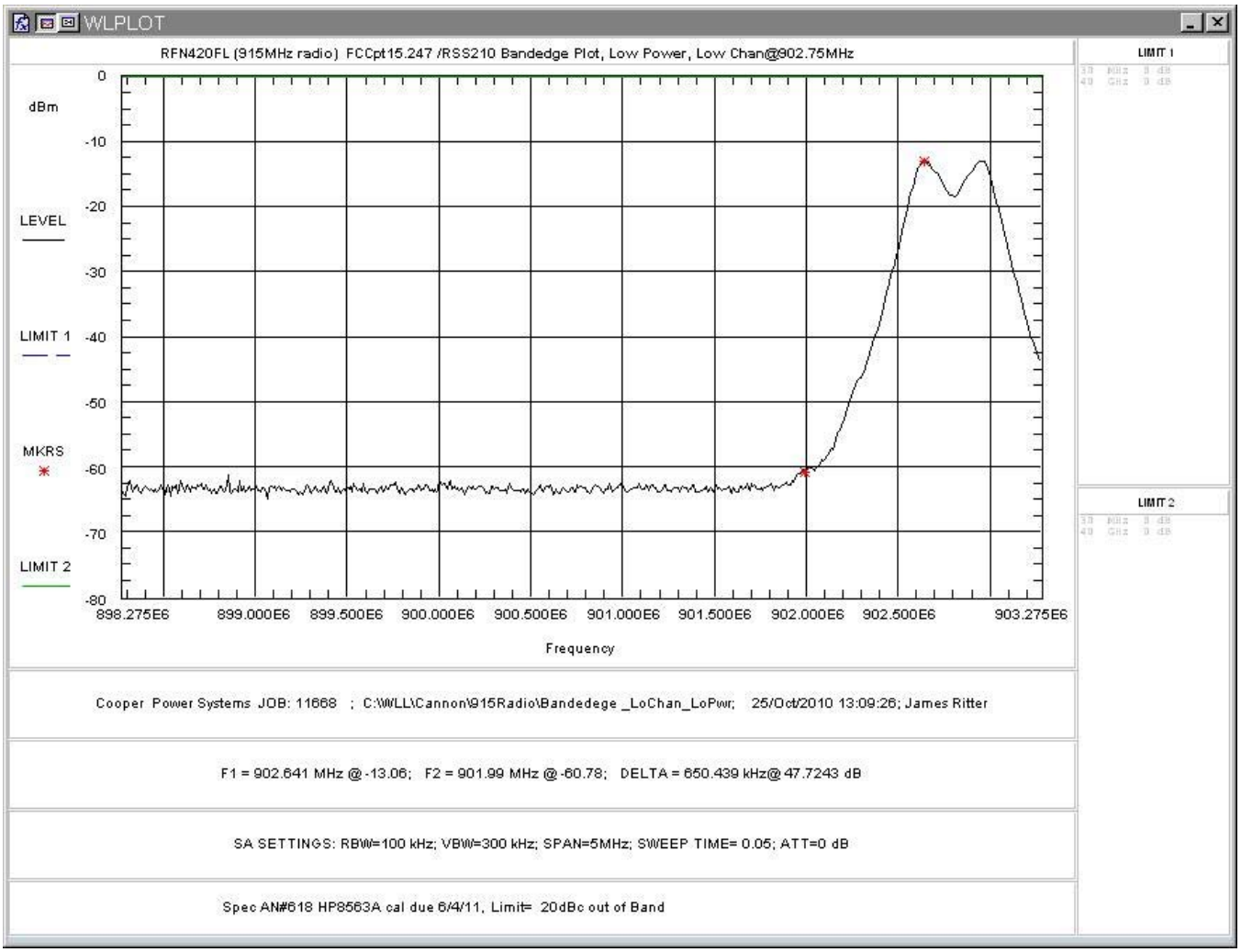

Figure 41: Lower Band-edge, Low Channel, Low Power

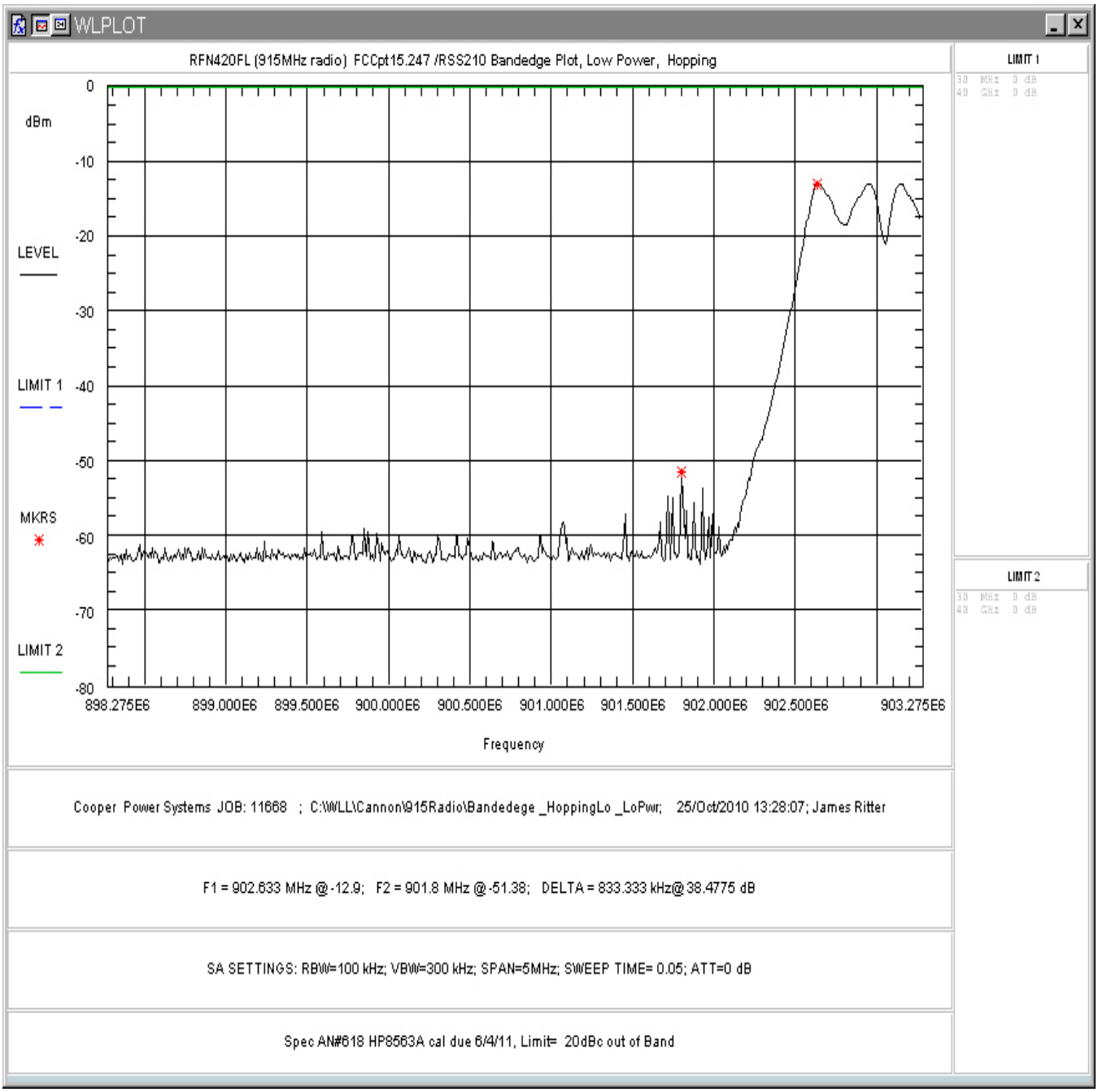

Figure 42: Lower Band-edge, Hopping Mode, Low Power

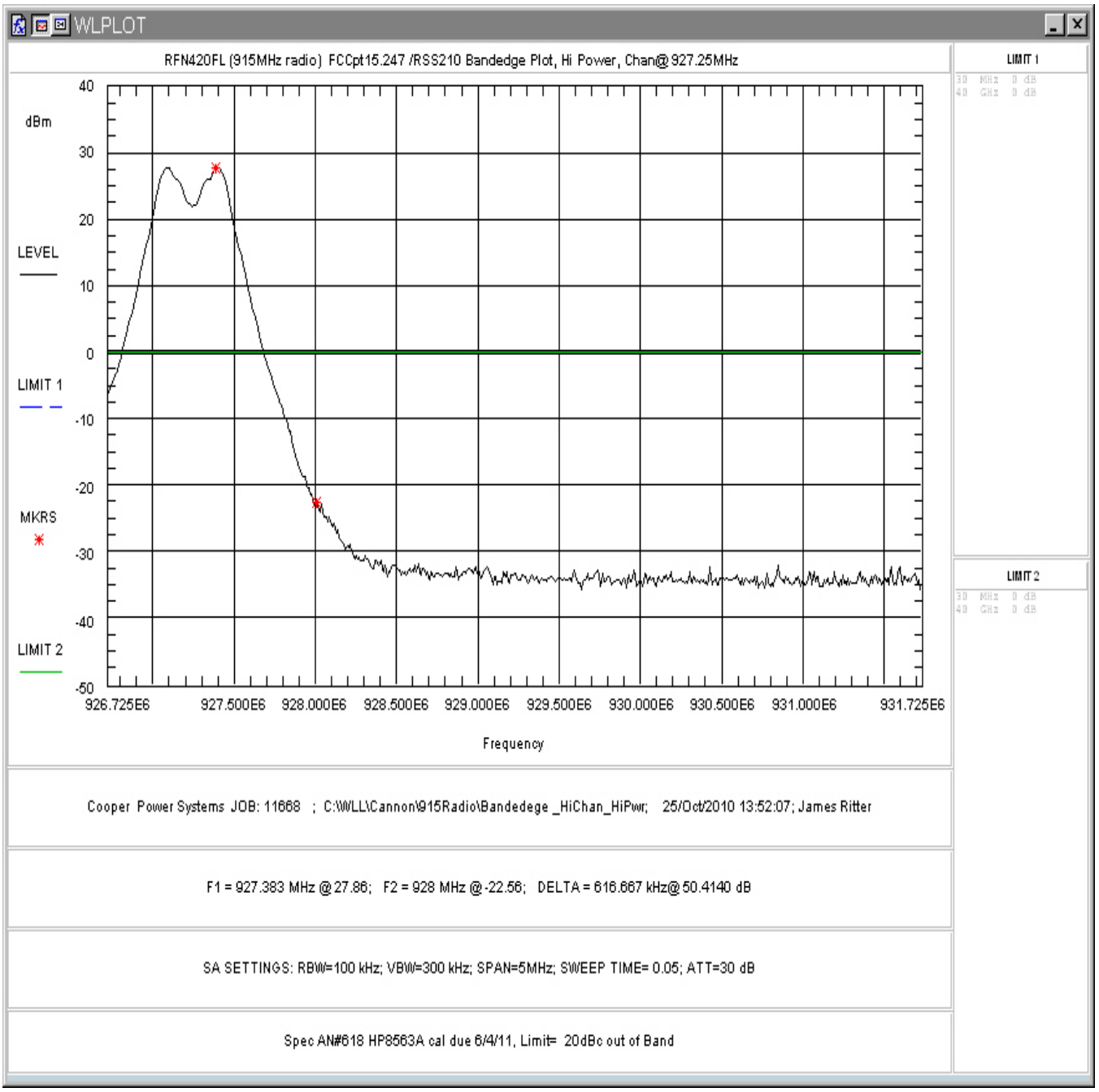

Figure 43: Upper Band-edge, High Channel, High Power

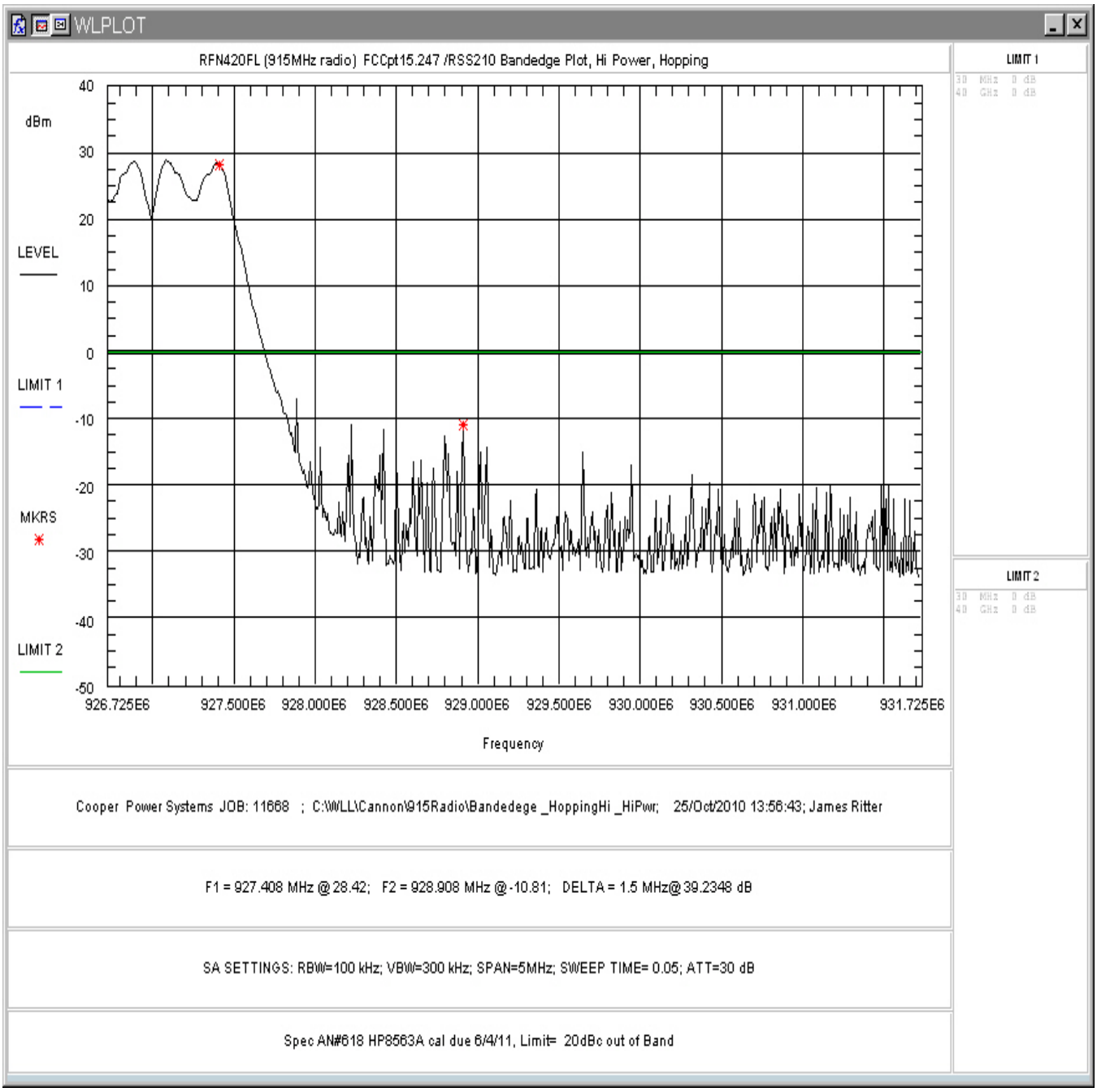

Figure 44: Upper Band-edge, Hopping Mode, High Power

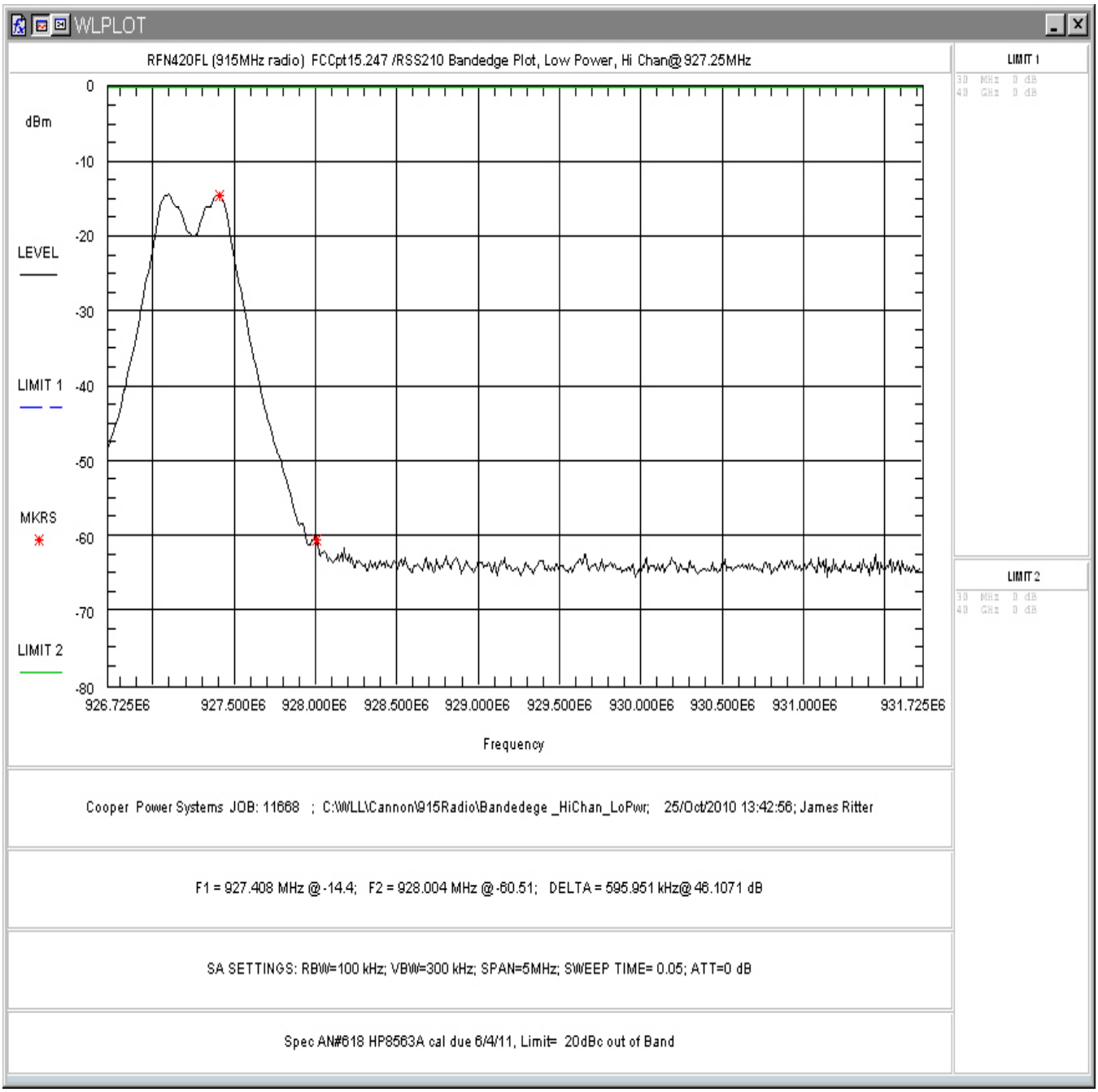

Figure 45: Upper Band-edge, High Channel, Low Power

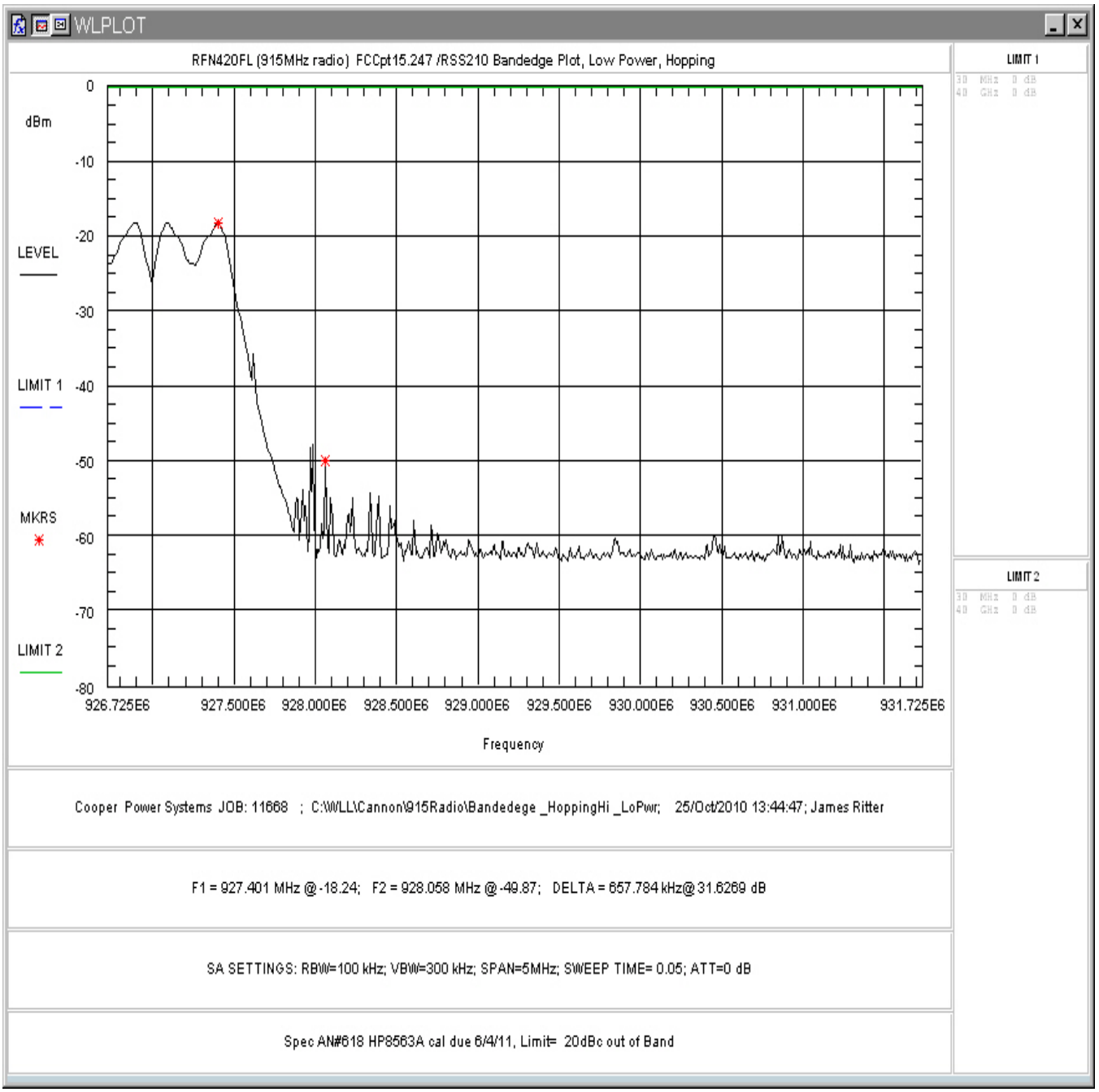

Figure 46: Upper Band-edge, Hopping Mode, Low Power

5.6 Radiated Spurious Emissions: (FCC Part §2.1053)

The EUT must comply with the requirements for radiated spurious emissions that fall within the restricted bands. These emissions must meet the limits specified in §15.209 and §15.35(b) for peak measurements.

5.6.1 Test Procedure

The EUT was placed on motorized turntable for radiated testing on a 3-meter open field test site. The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. Receiving antennas were mounted on an antenna mast to determine the height of maximum emissions. The height of the antenna was varied between 1 and 4 meters. The peripherals were placed on the table in accordance with ANSI C63.4-2003. Cables were varied in position to produce maximum emissions. Both the horizontal and vertical field components were measured. The unit was pre-scanned in 3 orthogonal positions with full testing performed in the worst case position. The below 1 GHz data was the same for all antenna types and was reported with the 8dBi antenna attached. Above 1GHz data was reported for each of the 3 antenna types.

From the measured conducted duty cycle and in accordance with FCC Public Notice DA 00-705, Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems an additional duty cycle correction is allowed for hopping systems. This duty cycle correction has been calculated at -8.1dB and has been added to the average measurements for harmonics of the transmit frequency.

The emissions were measured using the following resolution bandwidths:

Table 9: Spectrum Analyzer Settings

Frequency Range	Resolution Bandwidth	Video Bandwidth
30MHz-1000 MHz	120kHz	>100 kHz
>1000 MHz	1 MHz	10 Hz (Avg.), 1MHz (Peak)

Table 10: Radiated Emission Test Data < 1GHz, Low Channel (Restricted Bands-covers all 3 antenna configurations)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
73.89	V	180.00	1.20	11.10	10.6	12.2	100.0	-18.3
75.17	V	270.00	1.00	11.40	10.6	12.5	100.0	-18.0
112.65	V	180.00	1.38	11.60	15.3	22.0	150.0	-16.7
165.59	V	10.00	1.50	9.30	14.2	14.9	150.0	-20.0
169.71	V	0.00	1.44	10.40	14.1	16.8	150.0	-19.0
171.85	V	180.00	1.68	14.90	13.9	27.7	150.0	-14.7
171.97	V	180.00	1.68	13.70	13.9	24.1	150.0	-15.9
240.13	V	180.00	2.12	12.10	13.8	19.8	200.0	-20.1
257.42	V	90.00	2.18	9.80	14.8	16.9	200.0	-21.5
266.97	V	90.00	1.74	9.60	15.9	18.9	200.0	-20.5
275.24	V	120.00	2.46	7.80	16.5	16.4	200.0	-21.7
333.73	V	180.00	2.21	7.50	17.7	18.2	200.0	-20.8
401.82	V	0.00	1.89	13.90	19.0	44.0	200.0	-13.2
996.49	V	0.00	2.22	6.60	29.2	61.8	500.0	-18.2
73.89	H	180.00	3.83	10.90	10.6	11.9	100.0	-18.5
112.65	H	180.00	3.69	8.90	15.3	16.2	150.0	-19.4
165.59	H	0.00	3.61	11.30	14.2	18.8	150.0	-18.0
171.97	H	270.00	3.20	11.80	13.9	19.4	150.0	-17.8
240.13	H	170.00	2.84	14.50	13.8	26.1	200.0	-17.7
257.42	H	270.00	3.25	6.50	14.8	11.6	200.0	-24.8
266.97	H	180.00	3.17	7.20	15.9	14.3	200.0	-22.9
333.73	H	190.00	2.20	9.90	17.7	24.0	200.0	-18.4
401.82	H	180.00	1.67	9.80	19.0	27.4	200.0	-17.3
996.49	H	180.00	1.77	8.70	29.2	78.7	500.0	-16.1

Table 11: Radiated Emission Test Data >1GHz, Low Channel (8dbi –Omni directional Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2708.25	H	180.00	2.36	51.87	-1.6	0.0	327.0	5000.0	-23.7
3611.00	H	0.00	3.30	47.11	0.7	0.0	246.9	5000.0	-26.1
4513.75	H	170.00	2.60	44.63	2.5	0.0	228.1	5000.0	-26.8
5416.50	H	160.00	2.77	48.33	5.9	0.0	512.2	5000.0	-19.8
8124.75	H	120.00	3.28	44.52	10.1	0.0	536.7	5000.0	-19.4
9027.50	H	170.00	3.30	45.60	11.7	0.0	734.2	5000.0	-16.7
Average									
2708.25	H	180.00	2.36	44.80	-1.6	-8.1	57.0	500.0	-18.9
3611.00	H	0.00	3.30	37.81	0.7	-8.1	33.3	500.0	-23.5
4513.75	H	170.00	2.60	32.68	2.5	-8.1	22.7	500.0	-26.9
5416.50	H	160.00	2.77	35.98	5.9	-8.1	48.6	500.0	-20.2
8124.75	H	120.00	3.28	32.82	10.1	-8.1	54.9	500.0	-19.2
9027.50	H	170.00	3.30	32.50	11.7	-8.1	63.9	500.0	-17.9
Non Harmonics									
1397.57	H	120.00	3.10	36.50	-8.2	0.0	26.0	500.0	-25.7
1328.87	H	120.00	3.10	37.10	-8.7	0.0	26.4	500.0	-25.5
Peak									
2708.25	V	170.00	2.45	46.74	-1.6	0.0	181.1	5000.0	-28.8
3611.00	V	0.00	2.49	48.74	0.7	0.0	297.9	5000.0	-24.5
4513.75	V	10.00	2.08	43.47	2.5	0.0	199.6	5000.0	-28.0
5416.50	V	170.00	2.76	47.15	5.9	0.0	447.2	5000.0	-21.0
8124.75	V	180.00	3.00	44.98	10.1	0.0	565.8	5000.0	-18.9
9027.50	V	160.00	2.49	43.51	11.7	0.0	577.2	5000.0	-18.8
Average									
2708.25	V	170.00	2.45	36.24	-1.6	-8.1	21.3	500.0	-27.4
3611.00	V	0.00	2.49	37.45	0.7	-8.1	32.0	500.0	-23.9
4513.75	V	10.00	2.08	33.23	2.5	-8.1	24.2	500.0	-26.3
5416.50	V	170.00	2.76	35.95	5.9	-8.1	48.5	500.0	-20.3
8124.75	V	180.00	3.00	31.40	10.1	-8.1	46.6	500.0	-20.6
9027.50	V	160.00	2.49	31.50	11.7	-8.1	57.0	500.0	-18.9
Non Harmonics									
1397.57	V	180.00	2.50	36.20	-8.2	0.0	25.2	500.0	-26.0
1328.87	V	180.00	2.50	34.60	-8.7	0.0	19.8	500.0	-28.0

Table 12: Radiated Emission Test Data >1GHz, Low Channel (3dbi –Phantom Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2708.25	H	170.00	2.12	52.74	-1.6	0.0	322.1	5000.0	-23.8
3611.00	H	180.00	3.04	48.01	0.7	0.0	273.9	5000.0	-25.2
4513.75	H	45.00	3.03	44.95	2.5	0.0	236.7	5000.0	-26.5
5416.50	H	270.00	3.01	48.00	5.9	0.0	493.1	5000.0	-20.1
8124.75	H	250.00	2.99	45.52	10.1	0.0	602.1	5000.0	-18.4
9027.50	H	190.00	3.13	42.63	11.7	0.0	521.6	5000.0	-19.6
Average									
2708.25	H	170.00	2.12	44.93	-1.6	-8.1	57.9	500.0	-18.7
3611.00	H	180.00	3.04	38.12	0.7	-8.1	34.5	500.0	-23.2
4513.75	H	45.00	3.03	32.65	2.5	-8.1	22.6	500.0	-26.9
5416.50	H	270.00	3.01	35.88	5.9	-8.1	48.1	500.0	-20.3
8124.75	H	250.00	2.99	32.66	10.1	-8.1	53.9	500.0	-19.3
9027.50	H	190.00	3.13	32.66	11.7	-8.1	65.1	500.0	-17.7
Non Harmonics									
1397.57	H	190.00	1.65	36.50	-8.2	0.0	26.0	500.0	-25.7
1328.87	H	180.00	1.65	35.20	-8.7	0.0	21.2	500.0	-27.4
Peak									
2708.25	V	100.00	3.16	49.77	-1.6	0.0	228.8	5000.0	-26.8
3611.00	V	270.00	3.08	47.43	0.7	0.0	256.2	5000.0	-25.8
4513.75	V	250.00	2.71	45.03	2.5	0.0	238.9	5000.0	-26.4
5416.50	V	270.00	2.98	48.23	5.9	0.0	506.4	5000.0	-19.9
8124.75	V	180.00	3.03	43.37	10.1	0.0	470.1	5000.0	-20.5
9027.50	V	10.00	2.75	44.46	11.7	0.0	643.9	5000.0	-17.8
Average									
2708.25	V	100.00	3.16	41.46	-1.6	-8.1	38.8	500.0	-22.2
3611.00	V	270.00	3.08	38.33	0.7	-8.1	35.4	500.0	-23.0
4513.75	V	250.00	2.71	32.82	2.5	-8.1	23.0	500.0	-26.7
5416.50	V	270.00	2.98	36.36	5.9	-8.1	50.8	500.0	-19.9
8124.75	V	180.00	3.03	31.83	10.1	-8.1	49.0	500.0	-20.2
9027.50	V	10.00	2.75	31.72	11.7	-8.1	58.5	500.0	-18.6
Non Harmonics									
1397.57	V	150.00	2.90	36.00	-8.2	0.0	24.6	500.0	-26.2
1328.87	V	150.00	2.90	36.82	-8.7	0.0	25.6	500.0	-25.8

Table 13: Radiated Emission Test Data >1GHz, Low Channel (2dbi –Co-Linear Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2708.25	H	0.00	2.58	47.94	-1.6	0.0	185.4	5000.0	-28.6
3611.00	H	160.00	2.92	44.99	0.7	0.0	193.4	5000.0	-28.2
4513.75	H	270.00	2.60	45.70	2.5	0.0	258.0	5000.0	-25.7
5416.50	H	270.00	3.46	46.68	5.9	0.0	423.6	5000.0	-21.4
8124.75	H	180.00	3.05	42.81	10.1	0.0	440.8	5000.0	-21.1
9027.50	H	190.00	2.96	40.82	11.7	0.0	423.5	5000.0	-21.4
Average									
2708.25	H	0.00	2.58	36.74	-1.6	-8.1	22.5	500.0	-26.9
3611.00	H	160.00	2.92	33.83	0.7	-8.1	21.1	500.0	-27.5
4513.75	H	270.00	2.60	32.58	2.5	-8.1	22.4	500.0	-27.0
5416.50	H	270.00	3.46	34.09	5.9	-8.1	39.1	500.0	-22.1
8124.75	H	180.00	3.05	31.82	10.1	-8.1	48.9	500.0	-20.2
9027.50	H	190.00	2.96	30.92	11.7	-8.1	53.3	500.0	-19.4
Non Harmonics									
1397.57	V	130.00	3.00	36.30	-8.2	0.0	25.5	500.0	-25.9
1328.87	V	130.00	3.00	35.98	-8.7	0.0	23.2	500.0	-26.7
Peak									
2708.25	V	180.00	2.88	48.88	-1.6	0.0	206.5	5000.0	-27.7
3611.00	V	10.00	3.03	46.56	0.7	0.0	231.8	5000.0	-26.7
4513.75	V	270.00	3.10	44.51	2.5	0.0	225.0	5000.0	-26.9
5416.50	V	90.00	2.85	45.68	5.9	0.0	377.5	5000.0	-22.4
8124.75	V	270.00	3.14	42.37	10.1	0.0	419.0	5000.0	-21.5
9027.50	V	180.00	2.88	41.38	11.7	0.0	451.7	5000.0	-20.9
Average									
2708.25	V	180.00	2.88	39.98	-1.6	-8.1	32.7	500.0	-23.7
3611.00	V	10.00	3.03	35.78	0.7	-8.1	26.4	500.0	-25.6
4513.75	V	270.00	3.10	31.80	2.5	-8.1	20.5	500.0	-27.7
5416.50	V	90.00	2.85	33.85	5.9	-8.1	38.1	500.0	-22.4
8124.75	V	270.00	3.14	31.63	10.1	-8.1	47.9	500.0	-20.4
9027.50	V	180.00	2.88	31.18	11.7	-8.1	54.9	500.0	-19.2
Non Harmonics									
1397.57	V	180.00	2.85	34.90	-8.2	0.0	21.7	500.0	-27.3
1328.87	V	180.00	2.85	35.40	-8.7	0.0	21.7	500.0	-27.2

Table 14: Radiated Emission Test Data < 1GHz, Center Channel (Restricted bands-covers all 3 antenna configurations)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
37.66	V	190.00	1.00	8.50	14.6	14.3	100.0	-16.9
74.10	V	170.00	1.30	12.80	10.6	14.8	100.0	-16.6
112.69	V	160.00	1.10	13.50	15.3	27.4	150.0	-14.8
114.60	V	180.00	1.21	10.00	15.4	18.7	150.0	-18.1
163.38	V	0.00	1.30	7.30	14.3	12.1	150.0	-21.9
169.20	V	170.00	1.50	9.40	14.1	15.0	150.0	-20.0
171.84	V	0.00	1.30	15.00	13.9	28.0	150.0	-14.6
171.97	V	0.00	1.20	13.90	13.9	24.6	150.0	-15.7
242.17	V	10.00	1.68	11.00	13.9	17.6	200.0	-21.1
266.98	V	180.00	2.04	10.20	15.9	20.3	200.0	-19.9
275.00	V	90.00	2.10	6.80	16.5	14.7	200.0	-22.7
334.23	V	170.00	1.80	6.40	17.7	16.0	200.0	-21.9
405.98	V	90.00	2.35	15.40	19.1	52.9	200.0	-11.5
609.52	V	270.00	2.33	14.30	23.9	81.5	200.0	-7.8
610.14	V	270.00	2.33	13.40	24.0	73.8	200.0	-8.7
966.65	V	180.00	2.11	12.10	28.4	105.5	500.0	-13.5
973.27	V	0.00	1.96	7.50	28.7	64.4	500.0	-17.8
996.49	V	0.00	2.22	6.60	29.2	61.8	500.0	-18.2
74.10	H	180.00	4.00	9.80	10.6	10.5	100.0	-19.6
112.69	H	10.00	3.86	11.50	15.3	21.8	150.0	-16.8
114.60	H	0.00	3.80	8.20	15.4	15.2	150.0	-19.9
164.22	H	0.00	3.43	11.20	14.3	18.8	150.0	-18.1
169.94	H	180.00	2.62	11.30	14.1	18.7	150.0	-18.1
171.84	H	180.00	2.68	12.90	13.9	22.0	150.0	-16.7
242.17	H	180.00	1.96	11.50	13.9	18.6	200.0	-20.6
266.98	H	190.00	3.62	3.80	15.9	9.7	200.0	-26.3
275.00	H	0.00	3.40	5.40	16.5	12.5	200.0	-24.1
405.98	H	180.00	3.07	9.80	19.1	27.8	200.0	-17.1
609.52	H	180.00	1.90	6.60	23.9	33.6	200.0	-15.5
610.14	H	190.00	1.88	8.00	24.0	39.6	200.0	-14.1
407.18	H	190.00	3.10	8.30	19.1	23.5	200.0	-18.6
996.49	H	180.00	1.77	8.70	29.2	78.7	500.0	-16.1

Table 15: Radiated Emission Test Data >1GHz, Center Channel (8dbi –Omni directional Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2744.25	H	160.00	2.41	48.57	-1.7	0.0	221.8	5000.0	-27.1
3659.00	H	180.00	3.03	49.64	0.8	0.0	331.0	5000.0	-23.6
4573.75	H	45.00	3.08	46.07	2.6	0.0	270.7	5000.0	-25.3
7318.00	H	45.00	2.15	43.50	9.1	0.0	425.0	5000.0	-21.4
8232.75	H	170.00	2.89	44.11	10.3	0.0	523.3	5000.0	-19.6
9147.50	H	180.00	3.17	43.54	12.0	0.0	595.7	5000.0	-18.5
Average									
2744.25	H	160.00	2.41	38.20	-1.7	-8.1	26.5	500.0	-25.5
3659.00	H	180.00	3.03	39.36	0.8	-8.1	39.9	500.0	-22.0
4573.75	H	45.00	3.08	34.29	2.6	-8.1	27.4	500.0	-25.2
7318.00	H	45.00	2.15	31.29	9.1	-8.1	41.0	500.0	-21.7
8232.75	H	170.00	2.89	31.67	10.3	-8.1	49.2	500.0	-20.1
9147.50	H	180.00	3.17	31.78	12.0	-8.1	60.5	500.0	-18.3
Non harmonics									
1196.37	H	45.00	1.36	37.47	-8.9	0.0	26.7	500.0	-25.4
1329.24	H	190.00	1.45	36.12	-8.7	0.0	23.6	500.0	-26.5
Peak									
2744.25	V	190.00	3.29	47.37	-1.7	0.0	193.2	5000.0	-28.3
3659.00	V	0.00	2.40	48.92	0.8	0.0	304.7	5000.0	-24.3
4573.75	V	220.00	2.43	44.79	2.6	0.0	233.6	5000.0	-26.6
7318.00	V	350.00	3.23	43.67	9.1	0.0	433.4	5000.0	-21.2
8232.75	V	190.00	2.26	45.13	10.3	0.0	588.5	5000.0	-18.6
9147.50	V	270.00	2.78	45.11	12.0	0.0	713.7	5000.0	-16.9
Average									
2744.25	V	190.00	3.29	38.74	-1.7	-8.1	28.1	500.0	-25.0
3659.00	V	0.00	2.40	39.40	0.8	-8.1	40.1	500.0	-21.9
4573.75	V	220.00	2.43	32.77	2.6	-8.1	23.0	500.0	-26.7
7318.00	V	350.00	3.23	31.96	9.1	-8.1	44.3	500.0	-21.1
8232.75	V	190.00	2.26	31.42	10.3	-8.1	47.8	500.0	-20.4
9147.50	V	270.00	2.78	31.92	12.0	-8.1	61.5	500.0	-18.2
Non harmonics									
1196.37	V	180.00	2.30	33.80	-8.9	0.0	17.5	500.0	-29.1
1329.24	V	180.00	2.30	34.90	-8.7	0.0	20.5	500.0	-27.7

Table 16: Radiated Emission Test Data >1GHz, Center Channel (3dbi –Phantom Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2744.25	H	180.00	2.49	50.43	-1.7	0.0	244.9	5000.0	-26.2
3659.00	H	170.00	2.82	48.46	0.8	0.0	288.9	5000.0	-24.8
4573.75	H	270.00	3.12	44.59	2.6	0.0	228.3	5000.0	-26.8
7318.00	H	270.00	3.31	46.91	9.1	0.0	629.3	5000.0	-18.0
8232.75	H	350.00	3.20	46.42	10.3	0.0	682.7	5000.0	-17.3
9147.50	H	170.00	3.05	44.00	12.0	0.0	628.1	5000.0	-18.0
Average									
2744.25	H	180.00	2.49	41.47	-1.7	-8.1	38.5	500.0	-22.3
3659.00	H	170.00	2.82	37.75	0.8	-8.1	33.1	500.0	-23.6
4573.75	H	270.00	3.12	32.20	2.6	-8.1	21.6	500.0	-27.3
7318.00	H	270.00	3.31	34.86	9.1	-8.1	61.9	500.0	-18.2
8232.75	H	350.00	3.20	32.53	10.3	-8.1	54.3	500.0	-19.3
9147.50	H	170.00	3.05	31.81	12.0	-8.1	60.7	500.0	-18.3
Non Harmonics									
1196.37	H	180.00	2.50	36.98	-8.9	0.0	25.3	500.0	-25.9
1329.24	H	10.00	2.28	34.50	-8.7		19.6	500.0	-28.1
Peak									
2744.25	V	190.00	3.20	49.66	-1.7	0.0	224.1	5000.0	-27.0
3659.00	V	0.00	2.18	49.15	0.8	0.0	312.8	5000.0	-24.1
4573.75	V	0.00	2.19	45.59	2.6	0.0	256.1	5000.0	-25.8
7318.00	V	10.00	2.09	44.76	9.1	0.0	491.3	5000.0	-20.2
8232.75	V	180.00	3.30	44.15	10.3	0.0	525.7	5000.0	-19.6
9147.50	V	180.00	2.84	44.19	12.0	0.0	642.0	5000.0	-17.8
Average									
2744.25	V	190.00	3.20	38.19	-1.7	-8.1	26.4	500.0	-25.5
3659.00	V	0.00	2.18	39.28	0.8	-8.1	39.5	500.0	-22.0
4573.75	V	0.00	2.19	32.51	2.6	-8.1	22.4	500.0	-27.0
7318.00	V	10.00	2.09	32.55	9.1	-8.1	47.4	500.0	-20.5
8232.75	V	180.00	3.30	31.89	10.3	-8.1	50.4	500.0	-19.9
9147.50	V	180.00	2.84	31.63	12.0	-8.1	59.5	500.0	-18.5
Non Harmonics									
1196.37	V	45.00	1.53	36.73	-8.9	0.0	24.6	500.0	-26.2
1329.24	V	170.00	1.60	35.23	-8.7	0.0	21.3	500.0	-27.4

Table 17: Radiated Emission Test Data >1GHz, Center Channel (2dbi –Co-Linear Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2744.25	H	180.00	3.22	47.54	-1.7	0.0	175.6	5000.0	-29.1
3659.00	H	160.00	2.60	47.30	0.8	0.0	252.8	5000.0	-25.9
4573.75	H	280.00	3.17	42.99	2.6	0.0	189.9	5000.0	-28.4
7318.00	H	260.00	3.32	45.83	9.1	0.0	555.7	5000.0	-19.1
8232.75	H	180.00	3.08	42.84	10.3	0.0	452.1	5000.0	-20.9
9147.50	H	190.00	3.30	41.92	12.0	0.0	494.4	5000.0	-20.1
Average									
2744.25	H	180.00	3.22	37.75	-1.7	-8.1	25.1	500.0	-26.0
3659.00	H	160.00	2.60	37.15	0.8	-8.1	30.9	500.0	-24.2
4573.75	H	280.00	3.17	30.84	2.6	-8.1	18.4	500.0	-28.7
7318.00	H	260.00	3.32	32.34	9.1	-8.1	46.3	500.0	-20.7
8232.75	H	180.00	3.08	32.19	10.3	-8.1	52.2	500.0	-19.6
9147.50	H	190.00	3.30	31.11	12.0	-8.1	56.0	500.0	-19.0
Non Harmonics									
1196.37	H	200.00	2.40	35.80	-8.9	0.0	22.1	500.0	-27.1
1329.24	H	210.00	2.34	35.20	-8.7	0.0	21.2	500.0	-27.4
Peak									
2744.25	V	280.00	2.73	46.52	-1.7	0.0	156.1	5000.0	-30.1
3659.00	V	270.00	2.80	49.04	0.8	0.0	308.9	5000.0	-24.2
4573.75	V	0.00	2.88	43.34	2.6	0.0	197.7	5000.0	-28.1
7318.00	V	10.00	3.23	44.86	9.1	0.0	497.0	5000.0	-20.1
8232.75	V	180.00	1.98	43.97	10.3	0.0	514.9	5000.0	-19.7
9147.50	V	170.00	2.77	45.72	12.0	0.0	765.7	5000.0	-16.3
Average									
2744.25	V	280.00	2.73	36.15	-1.7	-8.1	20.9	500.0	-27.6
3659.00	V	270.00	2.80	39.35	0.8	-8.1	39.8	500.0	-22.0
4573.75	V	0.00	2.88	32.22	2.6	-8.1	21.6	500.0	-27.3
7318.00	V	10.00	3.23	33.57	9.1	-8.1	53.3	500.0	-19.4
8232.75	V	180.00	1.98	30.86	10.3	-8.1	44.8	500.0	-21.0
9147.50	V	170.00	2.77	32.57	12.0	-8.1	66.3	500.0	-17.5
Non Harmonics									
1196.37	V	180.00	2.50	36.90	-8.9	0.0	25.0	500.0	-26.0
1329.24	V	180.00	2.47	34.90	-8.7	0.0	20.5	500.0	-27.7

Table 18: Radiated Emission Test Data < 1GHz, High Channel (Restricted bands-covers all 3 antenna configurations)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
73.91	V	180.00	1.00	16.30	10.6	22.2	100.0	-13.1
75.31	V	190.00	1.00	14.90	10.6	18.7	100.0	-14.5
112.66	V	10.00	1.21	13.80	15.3	28.4	150.0	-14.5
171.61	V	0.00	1.46	12.20	14.0	20.3	150.0	-17.4
171.83	V	270.00	1.56	15.40	13.9	29.3	150.0	-14.2
240.59	V	180.00	2.18	13.30	13.8	22.7	200.0	-18.9
246.47	V	180.00	2.37	9.70	14.1	15.4	200.0	-22.3
255.57	V	170.00	2.40	10.20	14.5	17.2	200.0	-21.3
266.98	V	180.00	1.74	10.00	15.9	19.8	200.0	-20.1
334.21	V	270.00	1.54	8.60	17.7	20.6	200.0	-19.7
356.08	V	270.00	1.38	9.00	18.1	22.6	200.0	-18.9
996.49	V	0.00	2.22	6.60	29.2	61.8	500.0	-18.2
960.00	V	170.00	1.46	14.20	28.3	133.2	500.0	-11.5
983.36	V	180.00	1.43	10.50	28.8	92.7	500.0	-14.6
996.49	V	0.00	2.22	6.90	29.2	63.9	500.0	-17.9
75.31	H	190.00	3.44	9.90	10.6	10.5	100.0	-19.5
112.66	H	190.00	2.92	10.70	15.3	19.9	150.0	-17.6
171.61	H	10.00	2.75	11.40	14.0	18.6	150.0	-18.2
171.83	H	10.00	2.75	10.70	13.9	17.1	150.0	-18.9
240.59	H	290.00	2.82	10.30	13.8	16.1	200.0	-21.9
246.47	H	270.00	2.70	9.70	14.1	15.4	200.0	-22.3
255.57	H	180.00	2.80	9.60	14.5	16.1	200.0	-21.9
334.21	H	180.00	2.70	6.10	17.7	15.5	200.0	-22.2
356.08	H	180.00	2.69	6.40	18.1	16.7	200.0	-21.5
996.49	H	190.00	1.80	9.10	29.2	82.4	500.0	-15.7

Table 19: Radiated Emission Test Data >1GHz, High Channel (8dbi –Omni directional Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2781.75	H	170.00	2.15	46.60	-1.5	0.0	180.5	5000.0	-28.9
3709.00	H	270.00	2.20	48.18	0.8	0.0	282.7	5000.0	-25.0
4636.25	H	270.00	2.60	44.26	3.3	0.0	239.6	5000.0	-26.4
7418.00	H	90.00	2.74	45.85	9.6	0.0	595.1	5000.0	-18.5
8345.25	H	290.00	2.97	43.83	9.9	0.0	484.4	5000.0	-20.3
Average									
2781.75	H	170.00	2.15	34.80	-1.5	-8.1	18.3	500.0	-28.8
3709.00	H	270.00	2.20	36.21	0.8	-8.1	28.0	500.0	-25.0
4636.25	H	270.00	2.60	31.68	3.3	-8.1	22.2	500.0	-27.1
7418.00	H	90.00	2.74	33.83	9.6	-8.1	58.7	500.0	-18.6
8345.25	H	290.00	2.97	31.75	9.9	-8.1	47.5	500.0	-20.5
Non harmonics									
1195.58	H	0.00	1.88	36.35	-8.9	0.0	23.5	500.0	-26.6
Peak									
2781.75	V	10.00	2.67	47.37	-1.5	0.0	197.2	5000.0	-28.1
3709.00	V	10.00	2.65	49.04	0.8	0.0	312.1	5000.0	-24.1
4636.25	V	180.00	2.55	42.63	3.3	0.0	198.6	5000.0	-28.0
7418.00	V	290.00	2.28	45.27	9.6	0.0	556.7	5000.0	-19.1
8345.25	V	190.00	2.76	43.98	9.9	0.0	492.9	5000.0	-20.1
Average									
2781.75	V	10.00	2.67	37.01	-1.5	-8.1	23.5	500.0	-26.5
3709.00	V	10.00	2.65	38.31	0.8	-8.1	35.7	500.0	-22.9
4636.25	V	180.00	2.55	31.86	3.3	-8.1	22.6	500.0	-26.9
7418.00	V	290.00	2.28	33.44	9.6	-8.1	56.1	500.0	-19.0
8345.25	V	190.00	2.76	31.32	9.9	-8.1	45.2	500.0	-20.9
Non harmonics									
1195.58	V	45.00	1.89	35.70	-8.9	0.0	21.8	500.0	-27.2

Table 20: Radiated Emission Test Data >1GHz, High Channel (3dbi –Phantom Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Aditional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2781.75	H	180.00	2.65	49.38	-1.5	0.0	248.6	5000.0	-26.1
3709.00	H	190.00	3.25	47.40	0.8	0.0	258.4	5000.0	-25.7
4636.25	H	270.00	2.47	42.05	3.3	0.0	185.8	5000.0	-28.6
7418.00	H	90.00	2.65	44.64	9.6	0.0	517.7	5000.0	-19.7
8345.25	H	270.00	2.95	42.10	9.9	0.0	397.0	5000.0	-22.0
Average									
2781.75	H	180.00	2.65	42.92	-1.5	-8.1	46.5	500.0	-20.6
3709.00	H	190.00	3.25	37.06	0.8	-8.1	30.9	500.0	-24.2
4636.25	H	270.00	2.47	31.35	3.3	-8.1	21.3	500.0	-27.4
7418.00	H	90.00	2.65	32.68	9.6	-8.1	51.4	500.0	-19.8
8345.25	H	270.00	2.95	31.22	9.9	-8.1	44.6	500.0	-21.0
Non Harmonics									
1195.58	H	90.00	1.89	35.49	-8.9	0.0	21.3	500.0	-27.4
Peak									
2781.75	V	180.00	2.64	52.07	-1.5	0.0	338.8	5000.0	-23.4
3709.00	V	180.00	2.21	47.07	0.8	0.0	248.8	5000.0	-26.1
4636.25	V	190.00	3.17	42.93	3.3	0.0	205.6	5000.0	-27.7
7418.00	V	170.00	2.87	44.00	9.6	0.0	481.0	5000.0	-20.3
8345.25	V	190.00	2.75	43.11	9.9	0.0	445.9	5000.0	-21.0
Average									
2781.75	V	180.00	2.64	46.27	-1.5	-8.1	68.4	500.0	-17.3
3709.00	V	180.00	2.21	35.83	0.8	-8.1	26.8	500.0	-25.4
4636.25	V	190.00	3.17	31.53	3.3	-8.1	21.8	500.0	-27.2
7418.00	V	170.00	2.87	32.51	9.6	-8.1	50.4	500.0	-19.9
8345.25	V	190.00	2.75	31.36	9.9	-8.1	45.4	500.0	-20.8
Non Harmonics									
1195.58	V	120.00	1.90	36.20	-8.9	0.0	23.1	500.0	-26.7

Table 21: Radiated Emission Test Data >1GHz, High Channel (2dbi –Co-Linear Antenna)

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Additional Duty Cycle Correction	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
Peak									
2744.25	H	180.00	3.22	47.54	-1.7	0.0	175.6	5000.0	-29.1
3659.00	H	160.00	2.60	47.30	0.8	0.0	252.8	5000.0	-25.9
4573.75	H	280.00	3.17	42.99	2.6	0.0	189.9	5000.0	-28.4
7318.00	H	260.00	3.32	45.83	9.1	0.0	555.7	5000.0	-19.1
8232.75	H	180.00	3.08	42.84	10.3	0.0	452.1	5000.0	-20.9
9147.50	H	190.00	3.30	41.92	12.0	0.0	494.4	5000.0	-20.1
Average									
2744.25	H	180.00	3.22	37.75	-1.7	-8.1	25.1	500.0	-26.0
3659.00	H	160.00	2.60	37.15	0.8	-8.1	30.9	500.0	-24.2
4573.75	H	280.00	3.17	30.84	2.6	-8.1	18.4	500.0	-28.7
7318.00	H	260.00	3.32	32.34	9.1	-8.1	46.3	500.0	-20.7
8232.75	H	180.00	3.08	32.19	10.3	-8.1	52.2	500.0	-19.6
9147.50	H	190.00	3.30	31.11	12.0	-8.1	56.0	500.0	-19.0
Non Harmonics									
1196.37	H	200.00	2.40	35.80	-8.9	0.0	22.1	500.0	-27.1
1329.24	H	210.00	2.34	35.20	-8.7	0.0	21.2	500.0	-27.4
Peak									
2744.25	V	280.00	2.73	46.52	-1.7	0.0	156.1	5000.0	-30.1
3659.00	V	270.00	2.80	49.04	0.8	0.0	308.9	5000.0	-24.2
4573.75	V	0.00	2.88	43.34	2.6	0.0	197.7	5000.0	-28.1
7318.00	V	10.00	3.23	44.86	9.1	0.0	497.0	5000.0	-20.1
8232.75	V	180.00	1.98	43.97	10.3	0.0	514.9	5000.0	-19.7
9147.50	V	170.00	2.77	45.72	12.0	0.0	765.7	5000.0	-16.3
Average									
2744.25	V	280.00	2.73	36.15	-1.7	-8.1	20.9	500.0	-27.6
3659.00	V	270.00	2.80	39.35	0.8	-8.1	39.8	500.0	-22.0
4573.75	V	0.00	2.88	32.22	2.6	-8.1	21.6	500.0	-27.3
7318.00	V	10.00	3.23	33.57	9.1	-8.1	53.3	500.0	-19.4
8232.75	V	180.00	1.98	30.86	10.3	-8.1	44.8	500.0	-21.0
9147.50	V	170.00	2.77	32.57	12.0	-8.1	66.3	500.0	-17.5
Non Harmonics									
1196.37	V	180.00	2.50	36.90	-8.9	0.0	25.0	500.0	-26.0
1329.24	V	180.00	2.47	34.90	-8.7	0.0	20.5	500.0	-27.7

5.7 Receiver Radiated Spurious Emissions: (FCC Part §15.209)

The EUT must comply with the requirements for radiated spurious emissions while in receiver mode to the 3rd of the highest tunable frequency or local oscillator. These emissions must meet the limits specified in §15.209 and RSS210 section 2.6.

Test Arrangement: Table Top

Compliance Limits for Receivers	
Frequency	**Limits**
30-88 MHz	100 μV/m
88-216 MHz	150 μV/m
216-960 MHz	200 μV/m
>960MHz	500 μV/m

5.7.1 Test Procedure

The EUT was placed on motorized turntable for radiated testing on a 3-meter open field test site. The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. Receiving antennas were mounted on an antenna mast to determine the height of maximum emissions. The height of the antenna was varied between 1 and 4 meters. The peripherals were placed on the table in accordance with ANSI C63.4-2003. Cables were varied in position to produce maximum emissions. Both the horizontal and vertical field components were measured. The units were scanned from 30-3000MHz.

The unit was pre-scanned in 3 orthogonal positions with full testing performed in the worst case position. The data was the same for all antenna types and was reported with the 8dBi antenna attached. No emissions were noted above those shown.

The emissions were measured using the following resolution bandwidths:

Table 22: Spectrum Analyzer Settings

Frequency Range	Resolution Bandwidth	Video Bandwidth
30MHz-1000 MHz	120kHz	>100 kHz
>1000 MHz	1 MHz	10 Hz (Avg.)

Table 23: Receiver Radiated Emission Test Data

Frequency (MHz)	Polarity H/V	Azimuth (Degree)	Ant. Height (m)	SA Level (dBuV)	Corr Factors (dB)	Corr. Level (uV/m)	Limit (uV/m)	Margin (dB)
35.90	V	90.00	1.00	6.70	16.0	13.6	100.0	-17.3
53.19	V	90.00	1.10	9.00	7.9	7.0	100.0	-23.1
62.18	V	270.00	1.00	10.30	10.3	10.7	100.0	-19.4
82.79	V	170.00	1.16	10.10	10.2	10.3	100.0	-19.7
114.39	V	180.00	1.21	8.70	15.4	16.1	150.0	-19.4
133.48	V	180.00	1.31	5.60	14.8	10.5	150.0	-23.1
171.25	V	90.00	1.40	7.50	14.0	11.9	150.0	-22.0
184.69	V	270.00	1.85	6.90	13.7	10.7	150.0	-23.0
208.60	V	290.00	2.40	9.40	13.3	13.6	150.0	-20.8
235.90	V	300.00	2.51	7.80	13.6	11.8	200.0	-24.6
255.56	V	270.00	2.73	12.90	14.5	23.5	200.0	-18.6
275.25	V	180.00	2.38	8.70	16.5	18.2	200.0	-20.8
53.19	H	0.00	3.84	6.30	7.9	5.1	100.0	-25.8
62.18	H	180.00	3.48	6.60	10.3	7.0	100.0	-23.1
85.82	H	10.00	3.53	5.80	10.0	6.2	100.0	-24.2
114.39	H	90.00	3.85	6.30	15.4	12.2	150.0	-21.8
171.25	H	180.00	3.27	11.50	14.0	18.8	150.0	-18.0
208.60	H	90.00	2.97	10.40	13.3	15.3	150.0	-19.8
235.90	H	190.00	1.59	9.80	13.6	14.9	200.0	-22.6
255.56	H	10.00	1.79	7.50	14.5	12.6	200.0	-24.0
275.25	H	0.00	1.31	6.50	16.5	14.2	200.0	-23.0

5.8 AC Conducted Emissions (FCC Part §15.207)

5.8.1 Requirements

Test Arrangement: Table Top

Compliance Standard: FCC Class B

FCC Compliance Limits		
Frequency	**Quasi-peak**	**Average**
0.15 - 0.5MHz	66 to 56dBµV	56 to 46dBµV
0.5 - 5MHz	56dBµV	46dBµV
5 - 30MHz	60dBµV	50dBµV

5.8.2 Test Procedure

The EUT was placed on an 80 cm high 1 X 1.5 m non-conductive table above a ground plane. Power to the EUT was provided through a Solar Corporation 50 Ω/50 µH Line Impedance Stabilization Network bonded to a 3 X 2 meter ground plane. The LISN has its AC input supplied from a filtered AC power source. Power was supplied to the peripherals through a second LISN. The peripherals were placed on the table in accordance with ANSI C63.4-2003. Power and data cables were moved about to obtain maximum emissions.

The 50 Ω output of the LISN was connected to the input of the spectrum analyzer and the emissions in the frequency range of 150 kHz to 30 MHz were measured. The detector function was set to quasi-peak, peak, or average as appropriate, and the resolution bandwidth during testing was at least 9 kHz, with all post-detector filtering no less than 10 times the resolution bandwidth. For average measurements the post-detector filter was set to 10 Hz.

At frequencies where quasi-peak or peak measurements comply with the average limit, no average measurements need be performed.

At frequencies where quasi-peak or peak measurements comply with the average limit, no average measurements need be performed. The Conducted emissions level to be compared to the FCC limit is calculated as shown in the following example.

Example:

Spectrum Analyzer Voltage: VdBµV

LISN Correction Factor: LISN dB

Cable Correction Factor: CF dB

Electric Field: EdBµV = V dBµV + LISN dB + CF dB

5.8.3 Test Data

The EUT complied with the Class B Conducted Emissions requirements. This system runs off of 120 or 230VAC. Table 7 provides the test results for phase and neutral line power line conducted emissions.

As this unit contains 2 radios, Zigbee 2400MHz Band and 902-928MHz band, emissions were tested with both radios transmitting as a worst case.

Table 24: Conducted Emissions Data 120VAC, Transmit On

NEUTRAL

Frequency (MHz)	Level QP (dBµV)	Level AVG (dBµV)	Cable Loss (dB)	LISN Corr (dB)	Level QP Corr (dBµV)	Level Corr Avg (dBµV)	Limit QP (dBµV)	Limit AVG (dBµV)	Margin QP (dB)	Margin AVG (dB)
0.150	45.6	17.8	10.4	0.5	56.5	28.7	66.0	56.0	-9.5	-27.3
0.180	42.1	25.4	10.4	0.5	53.0	36.3	64.5	54.5	-11.5	-18.2
0.454	40.5	30.9	10.3	0.4	51.2	41.6	56.8	46.8	-5.6	-5.2
0.942	34.8	22.5	10.5	0.4	45.6	33.3	56.0	46.0	-10.4	-12.7
1.457	33.7	20.7	10.7	0.4	44.7	31.7	56.0	46.0	-11.3	-14.3
28.634	27.9	15.6	12.3	3.0	43.2	30.9	60.0	50.0	-16.8	-19.1

PHASE

Frequency (MHz)	Level QP (dBµV)	Level AVG (dBµV)	Cable Loss (dB)	LISN Corr (dB)	Level QP Corr (dBµV)	Level Corr Avg (dBµV)	Limit QP (dBµV)	Limit AVG (dBµV)	Margin QP (dB)	Margin AVG (dB)
0.150	45.7	9.7	10.4	0.7	56.8	20.8	66.0	56.0	-9.2	-35.2
0.180	43.0	19.3	10.4	0.7	54.1	30.4	64.5	54.5	-10.4	-24.1
0.454	23.3	11.9	10.3	0.4	34.1	22.7	56.8	46.8	-22.8	-24.2
0.742	17.4	6.2	10.4	0.4	28.2	17.0	56.0	46.0	-27.8	-29.0
14.190	21.5	11.9	11.5	1.7	34.7	25.1	60.0	50.0	-25.3	-24.9
28.413	30.8	17.1	12.3	4.3	47.4	33.7	60.0	50.0	-12.6	-16.3

Table 25: Conducted Emissions Data 230VAC, Transmit On

NEUTRAL

Frequency (MHz)	Level QP (dBµV)	Level AVG (dBµV)	Cable Loss (dB)	LISN Corr (dB)	Level QP Corr (dBµV)	Level Corr Avg (dBµV)	Limit QP (dBµV)	Limit AVG (dBµV)	Margin QP (dB)	Margin AVG (dB)
0.269	42.2	33.6	10.4	0.5	53.0	44.4	61.1	51.1	-8.1	-6.7
0.410	41.6	28.4	10.3	0.4	52.3	39.1	57.6	47.6	-5.4	-8.6
0.797	39.3	23.2	10.4	0.4	50.1	34.0	56.0	46.0	-5.9	-12.0
1.770	37.6	17.9	10.7	0.4	48.7	29.0	56.0	46.0	-7.3	-17.0
5.254	27.5	14.9	11.1	0.4	39.0	26.4	60.0	50.0	-21.0	-23.6
28.480	25.3	14.9	12.3	3.0	40.6	30.2	60.0	50.0	-19.4	-19.8

PHASE

Frequency (MHz)	Level QP (dBµV)	Level AVG (dBµV)	Cable Loss (dB)	LISN Corr (dB)	Level QP Corr (dBµV)	Level Corr Avg (dBµV)	Limit QP (dBµV)	Limit AVG (dBµV)	Margin QP (dB)	Margin AVG (dB)
0.170	38.0	17.2	10.4	0.7	49.1	28.3	65.0	55.0	-15.8	-26.6
0.266	33.0	18.0	10.4	0.6	43.9	28.9	61.2	51.2	-17.3	-22.3
0.464	24.7	11.9	10.3	0.4	35.4	22.6	56.6	46.6	-21.2	-24.0
0.799	20.9	5.4	10.4	0.4	31.7	16.2	56.0	46.0	-24.3	-29.8
13.970	19.5	10.8	11.5	1.7	32.7	24.0	60.0	50.0	-27.3	-26.0
28.665	27.4	15.5	12.3	4.3	44.0	32.1	60.0	50.0	-16.0	-17.9

5.9 Transceiver Co-location Attestation

The 902-928 transceiver antenna (except for the 8dBi omni whip) may be located within 20cm of the Zigbee transceiver antenna, which is located on the same module. Testing was performed to measure any potential spurious interactions between these 2 devices. The 902-928 MHz radio was tested with the highest gain of the antennas that could be used within 20cm of the Zigbee antenna (TRA9023NP - Antenex Phantom 902-928MHz , 3dBi) . This testing was performed in a radiated fashion with both transceivers continuously transmitting on a stationary frequency. The module was then scanned from up to 25GHz verifying that all spurious products that fall within the restricted bands remain under class B limits. This device complied with this requirement. Plots of this data are held at Washington laboratories.