

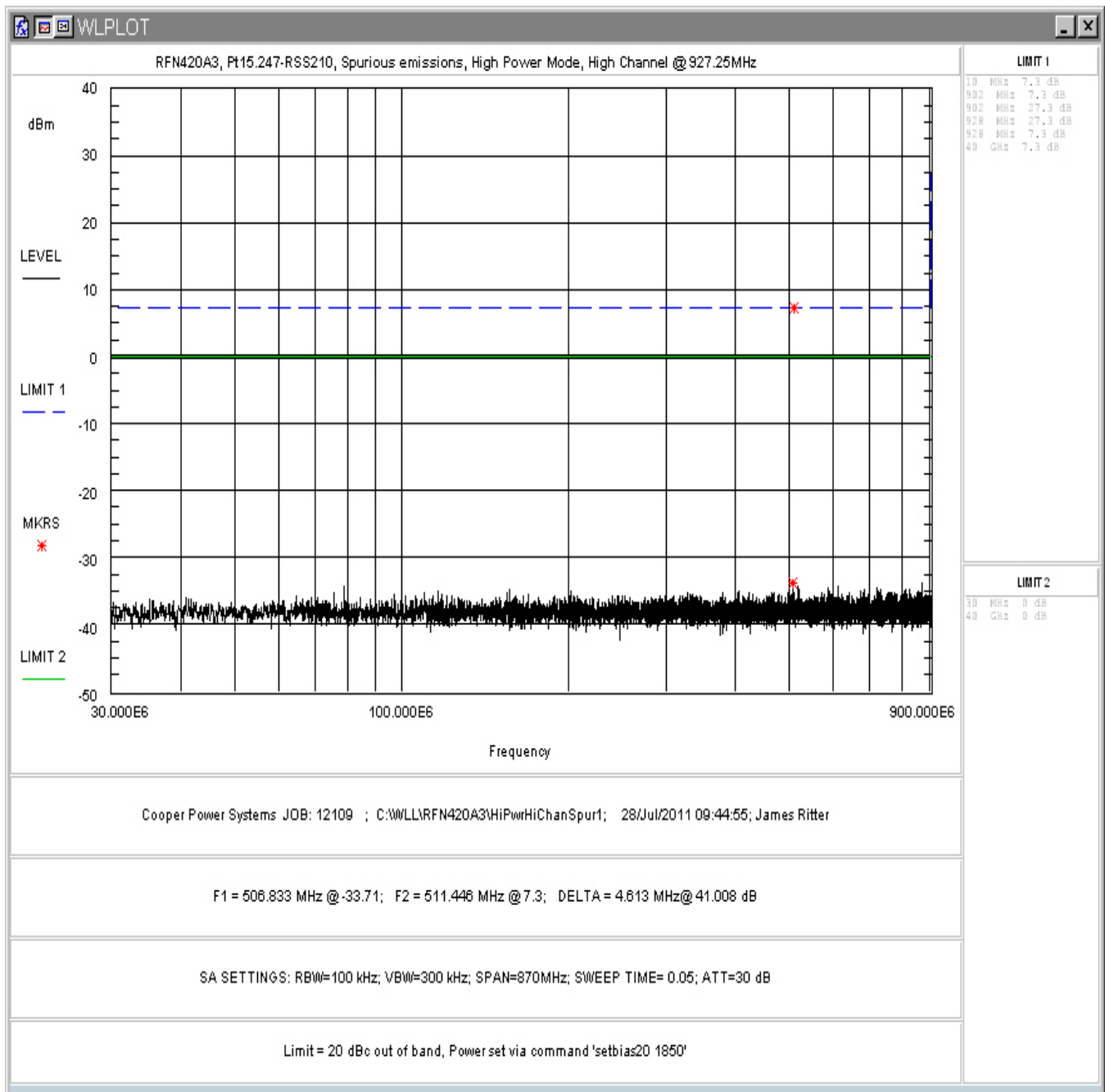


Figure 23: Conducted Spurious Emissions, High Power, High Channel 30 - 900MHz

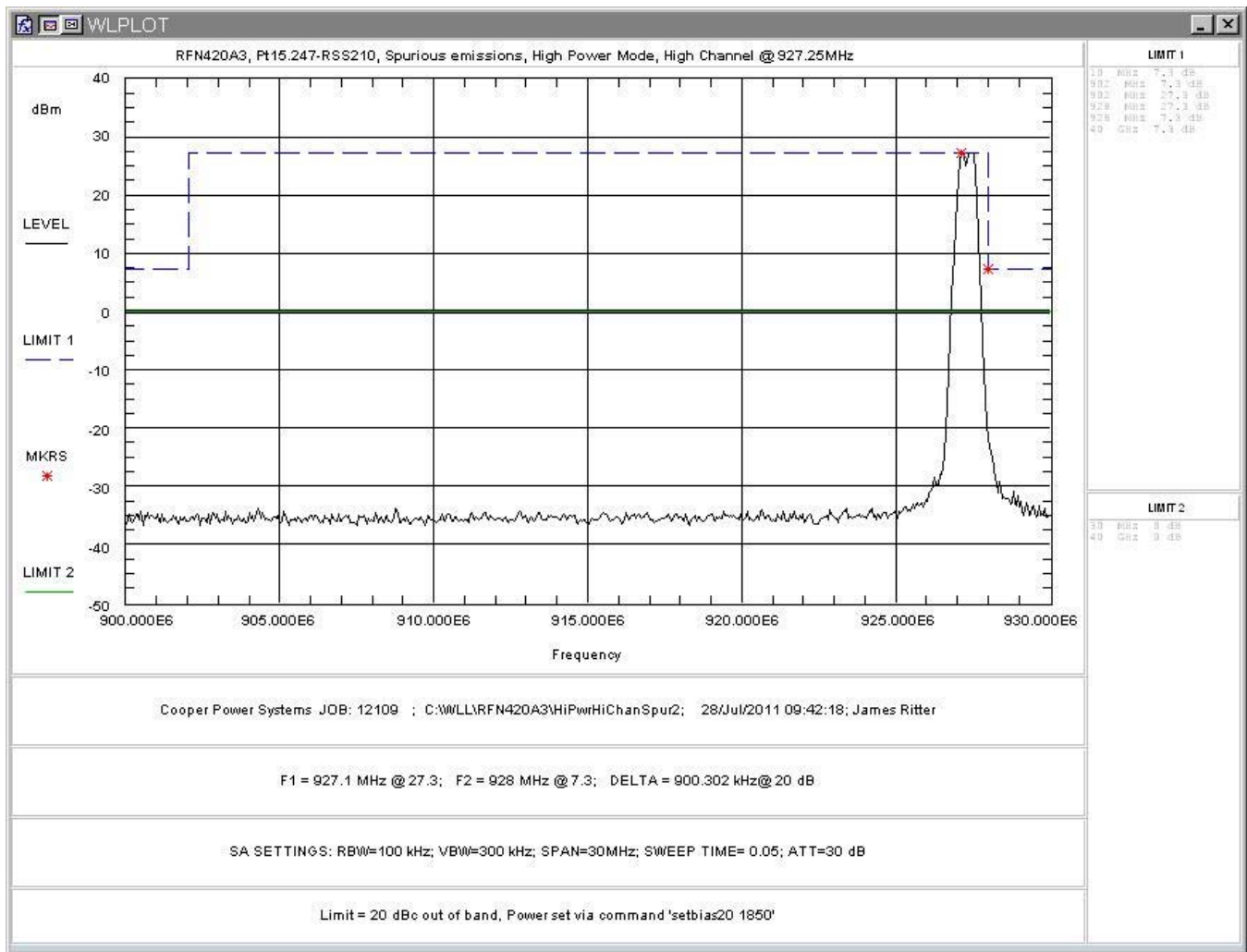


Figure 24: Conducted Spurious Emissions, High Power, High Channel 900 – 930MHz

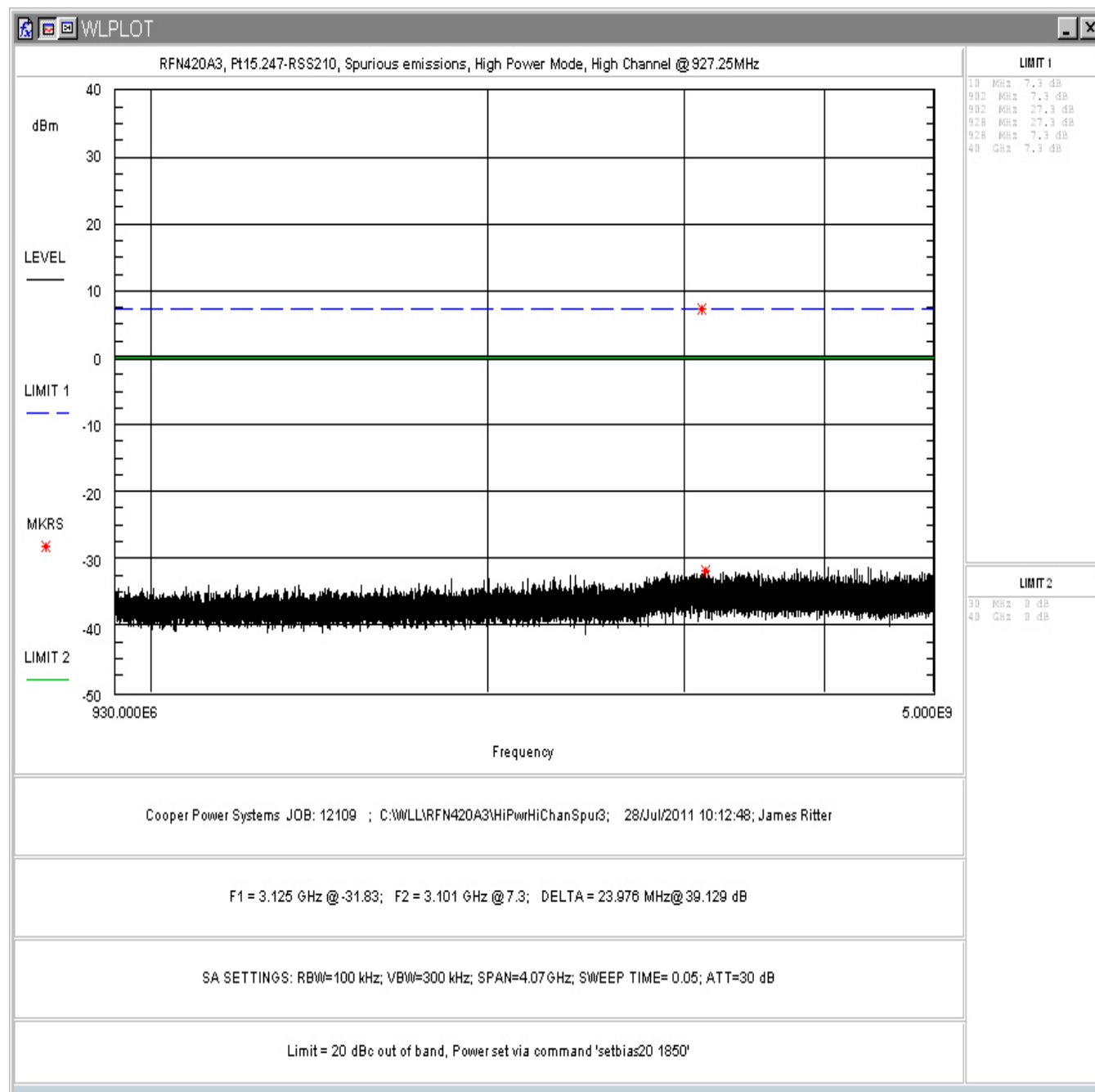


Figure 25: Conducted Spurious Emissions, High Power, High Channel 930-5000MHz

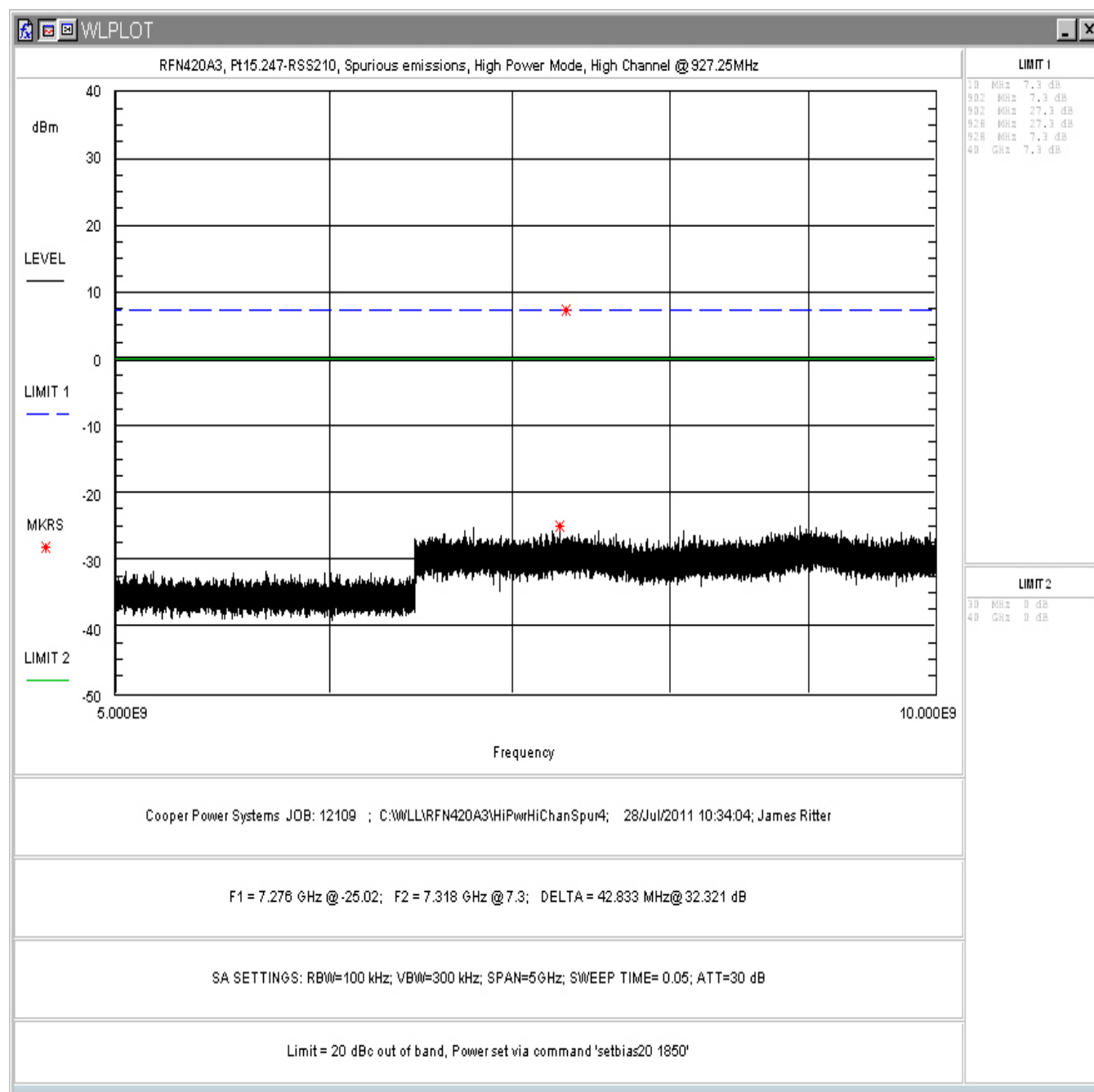


Figure 26: Conducted Spurious Emissions, High Power, High Channel 5-10GHz

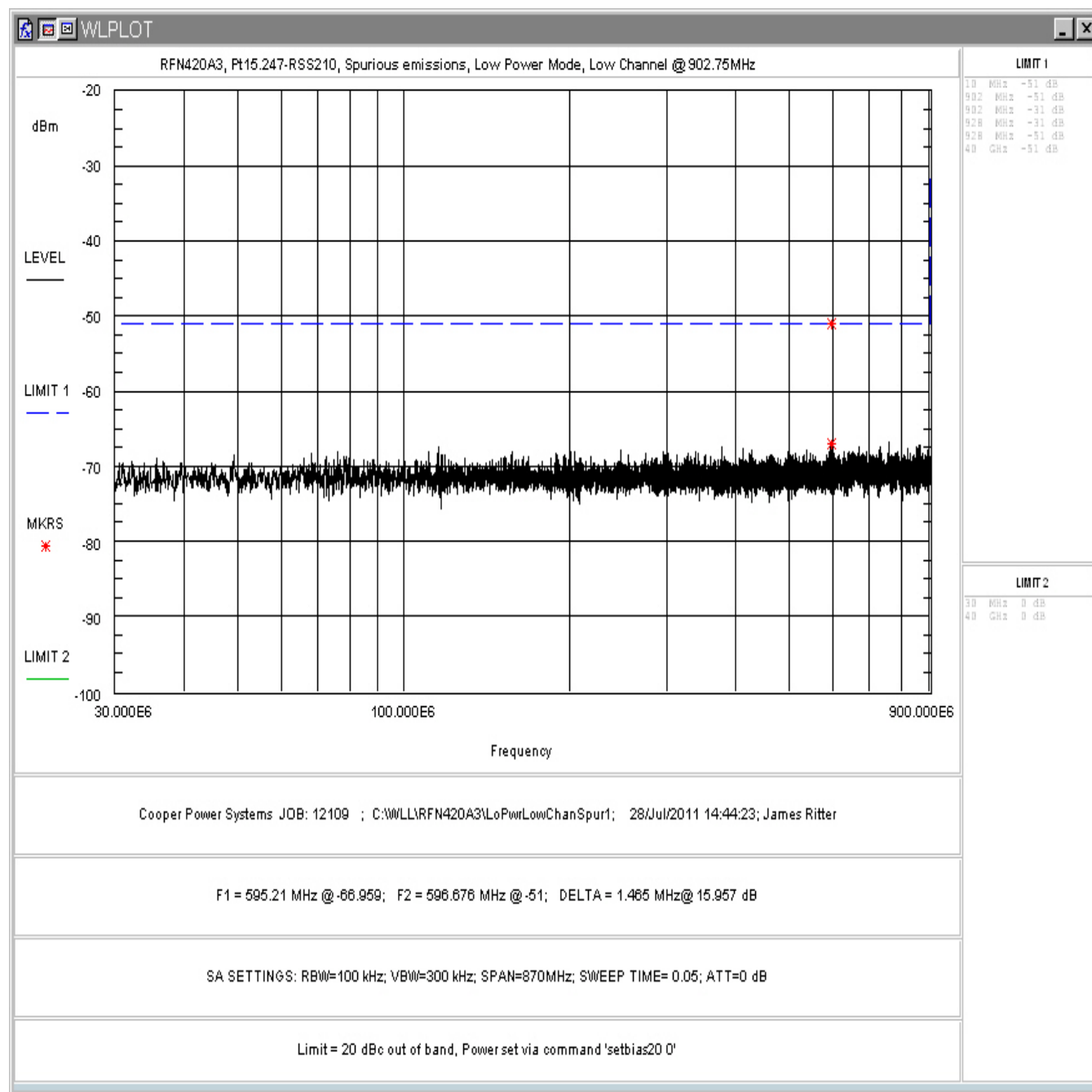


Figure 27: Conducted Spurious Emissions, Low Power, Low Channel 30 - 900MHz

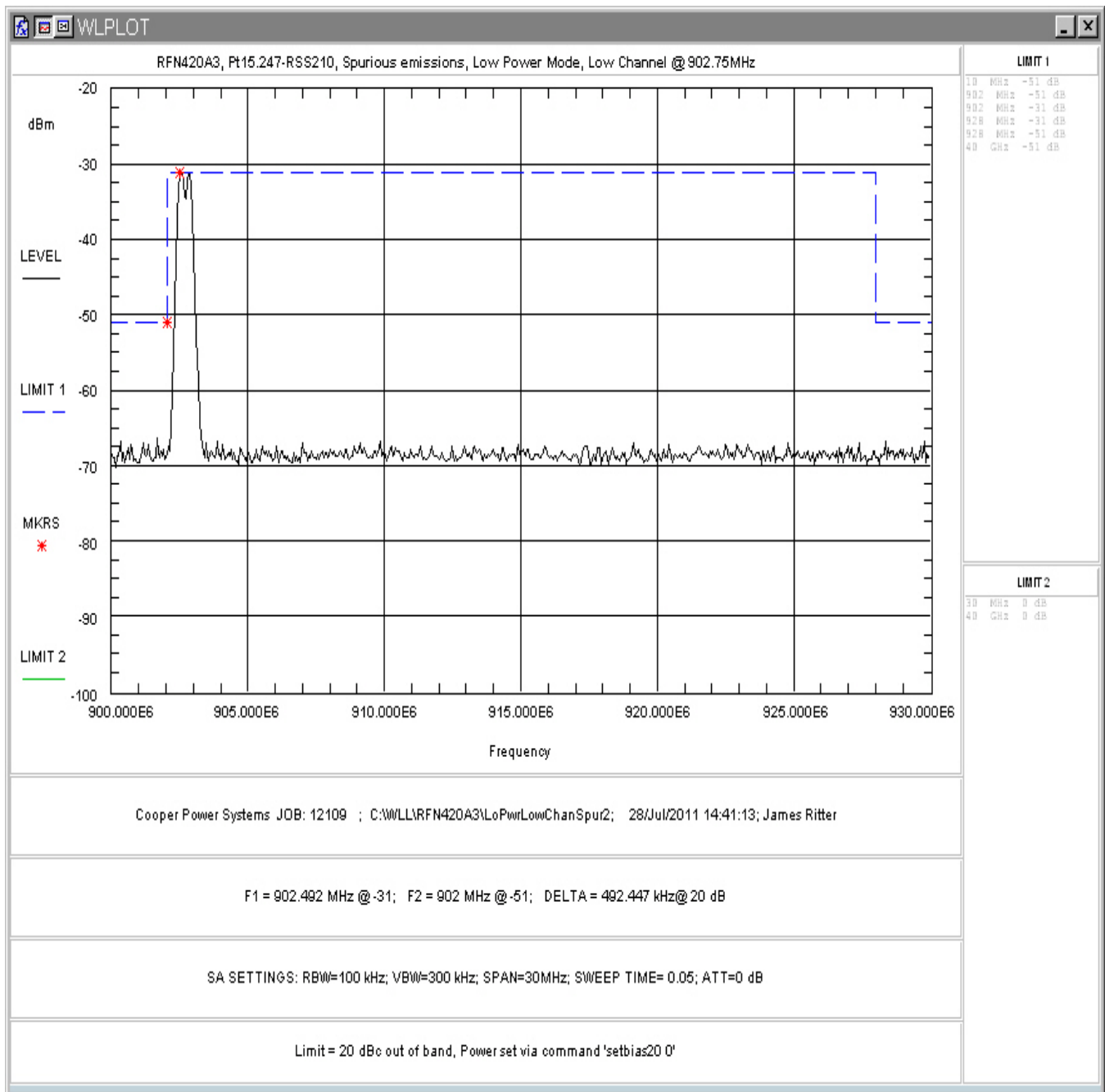


Figure 28: Conducted Spurious Emissions, Low Power, Low Channel 900 – 930MHz

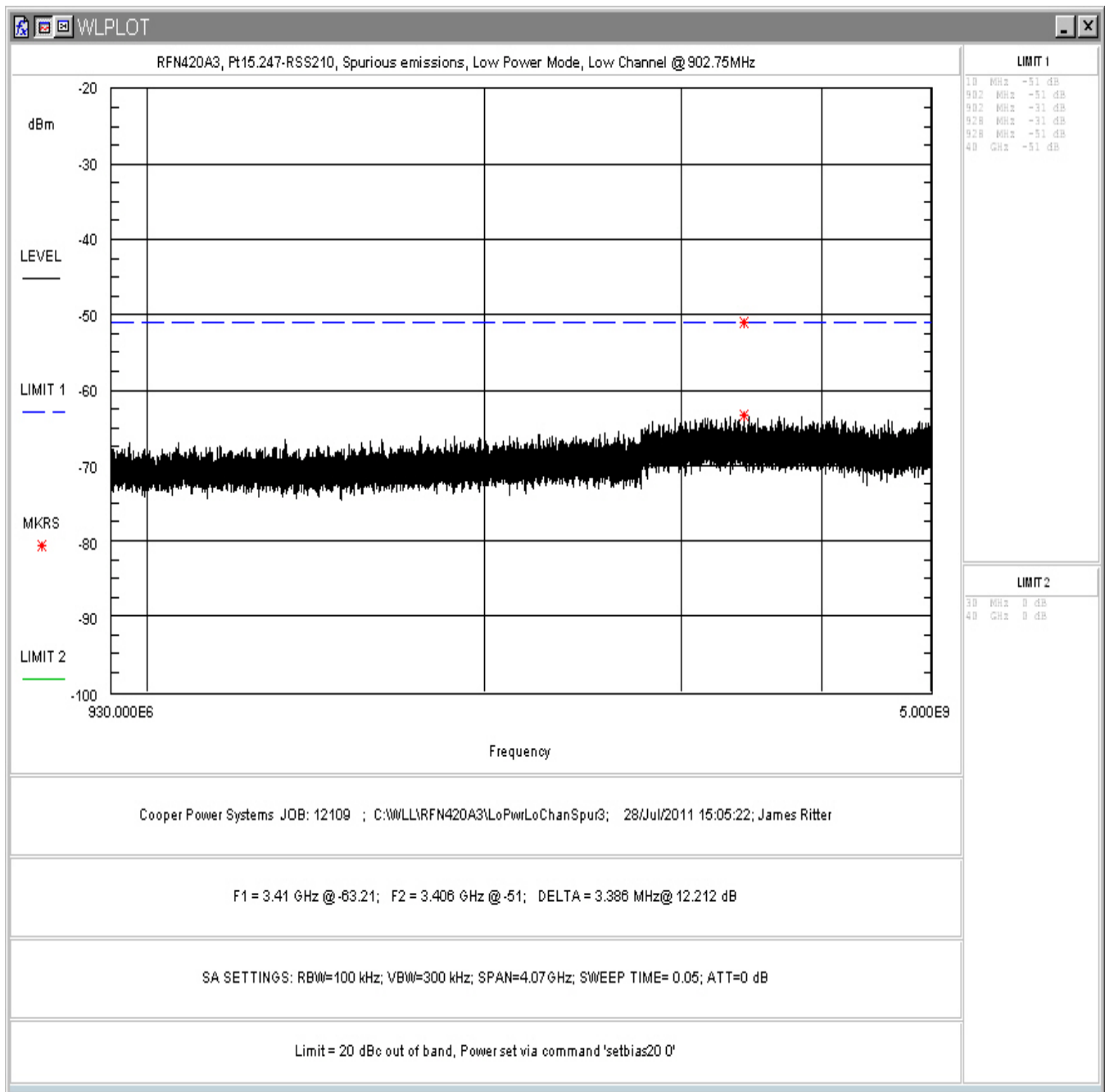


Figure 29: Conducted Spurious Emissions, Low Power, Low Channel 930-5000MHz

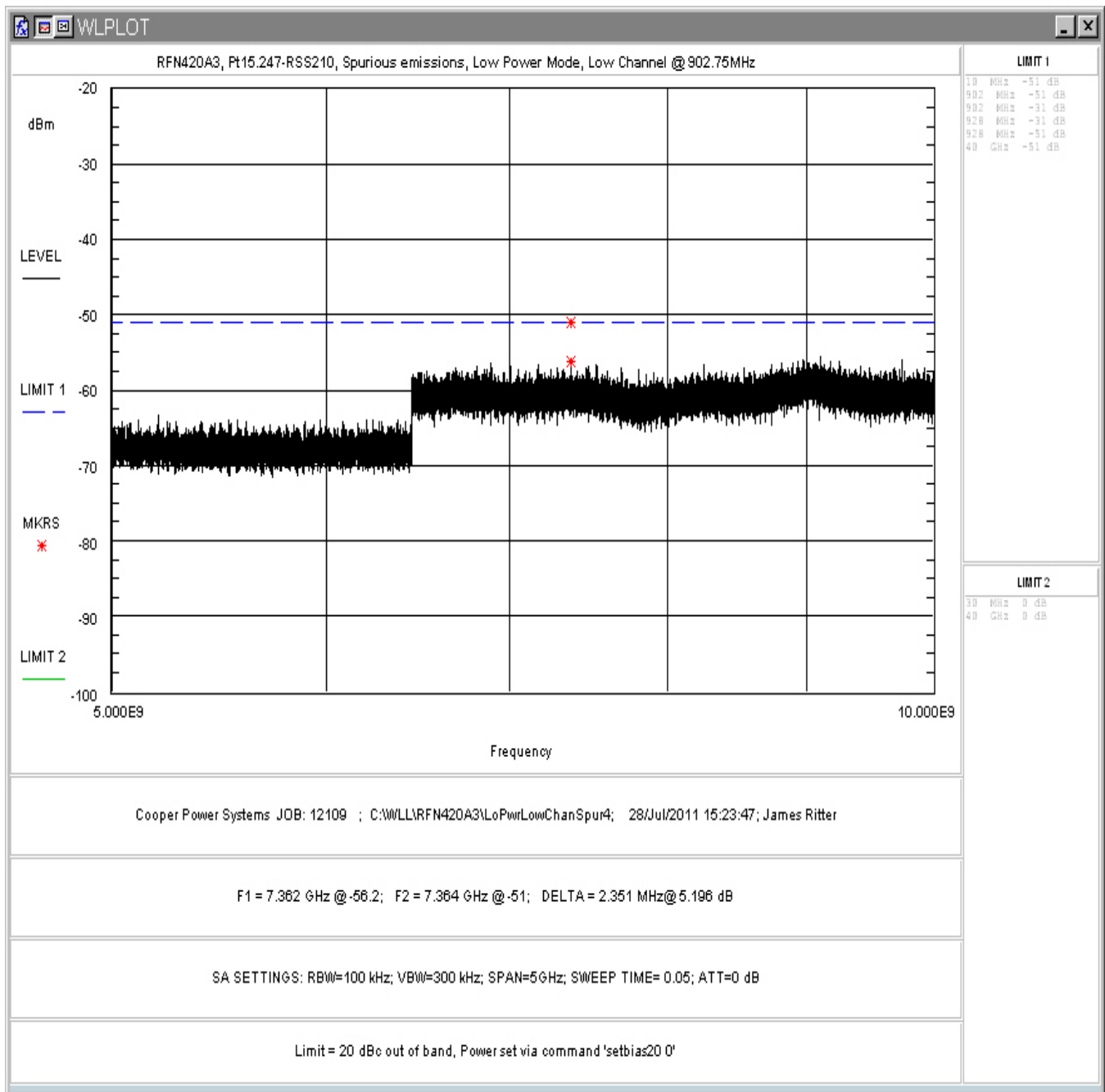


Figure 30: Conducted Spurious Emissions, Low Power, Low Channel 5-10GHz

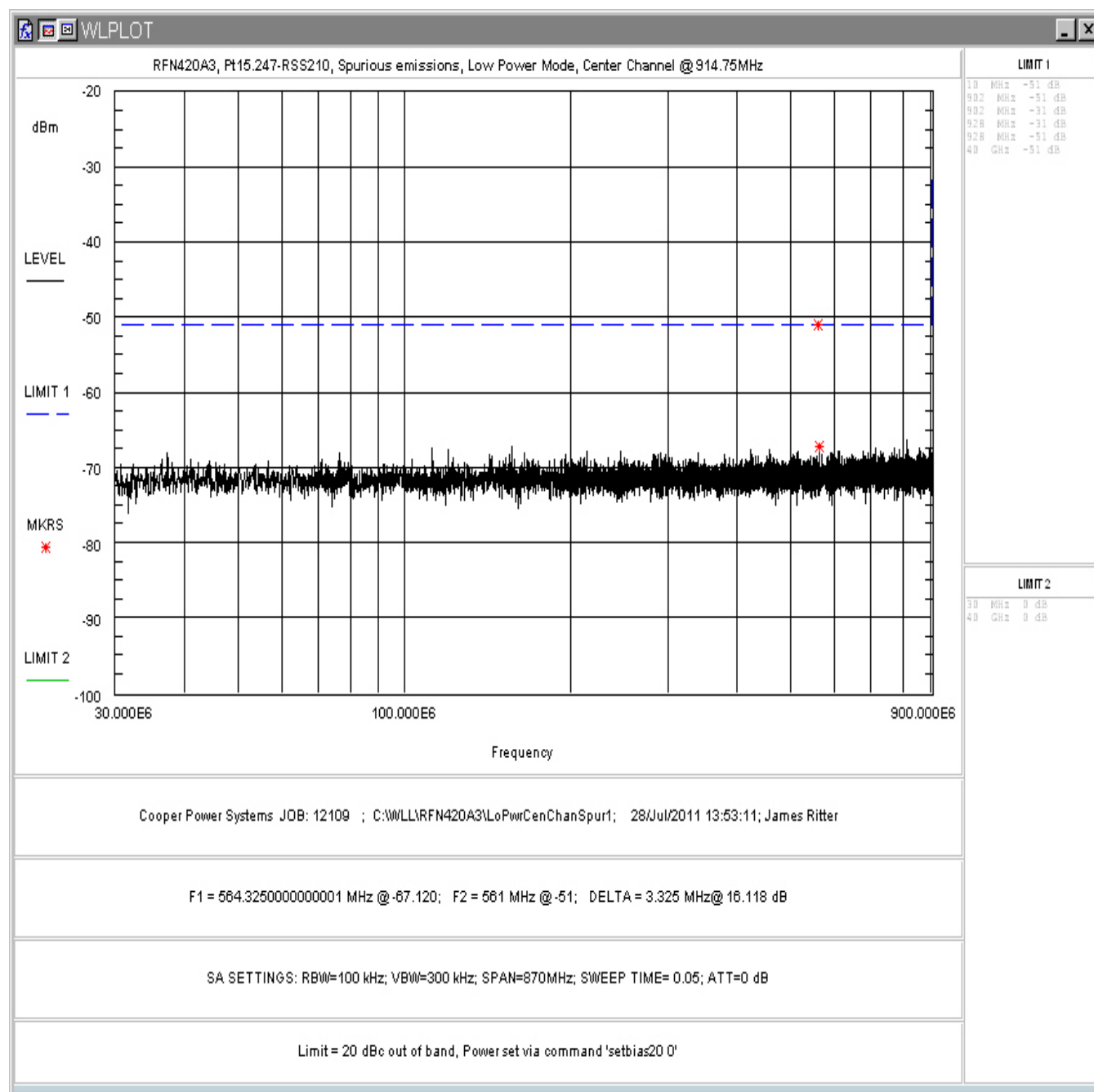


Figure 31: Conducted Spurious Emissions, Low Power, Center Channel 30 - 900MHz

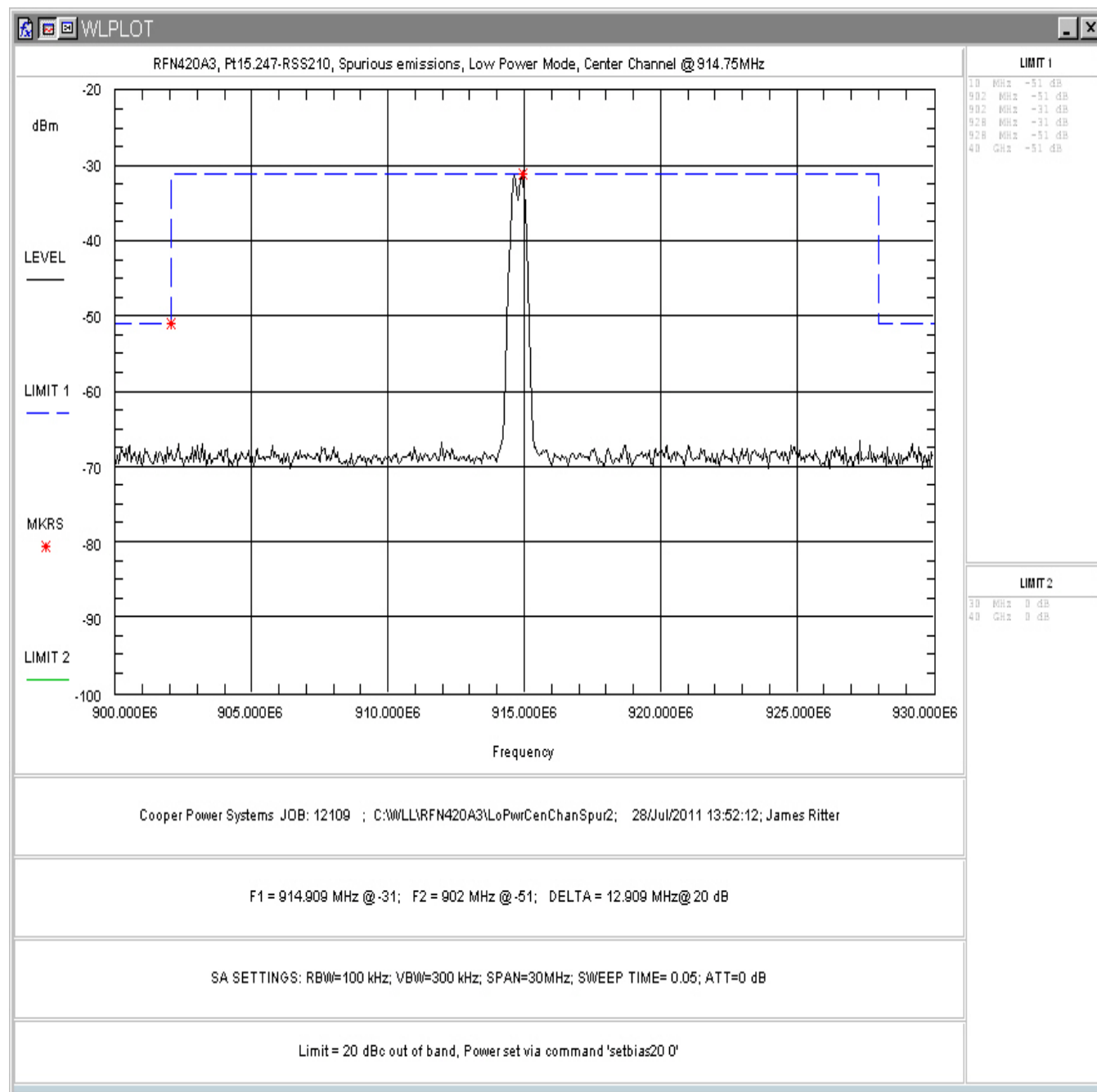


Figure 32: Conducted Spurious Emissions, Low Power, Center Channel 900 – 930MHz

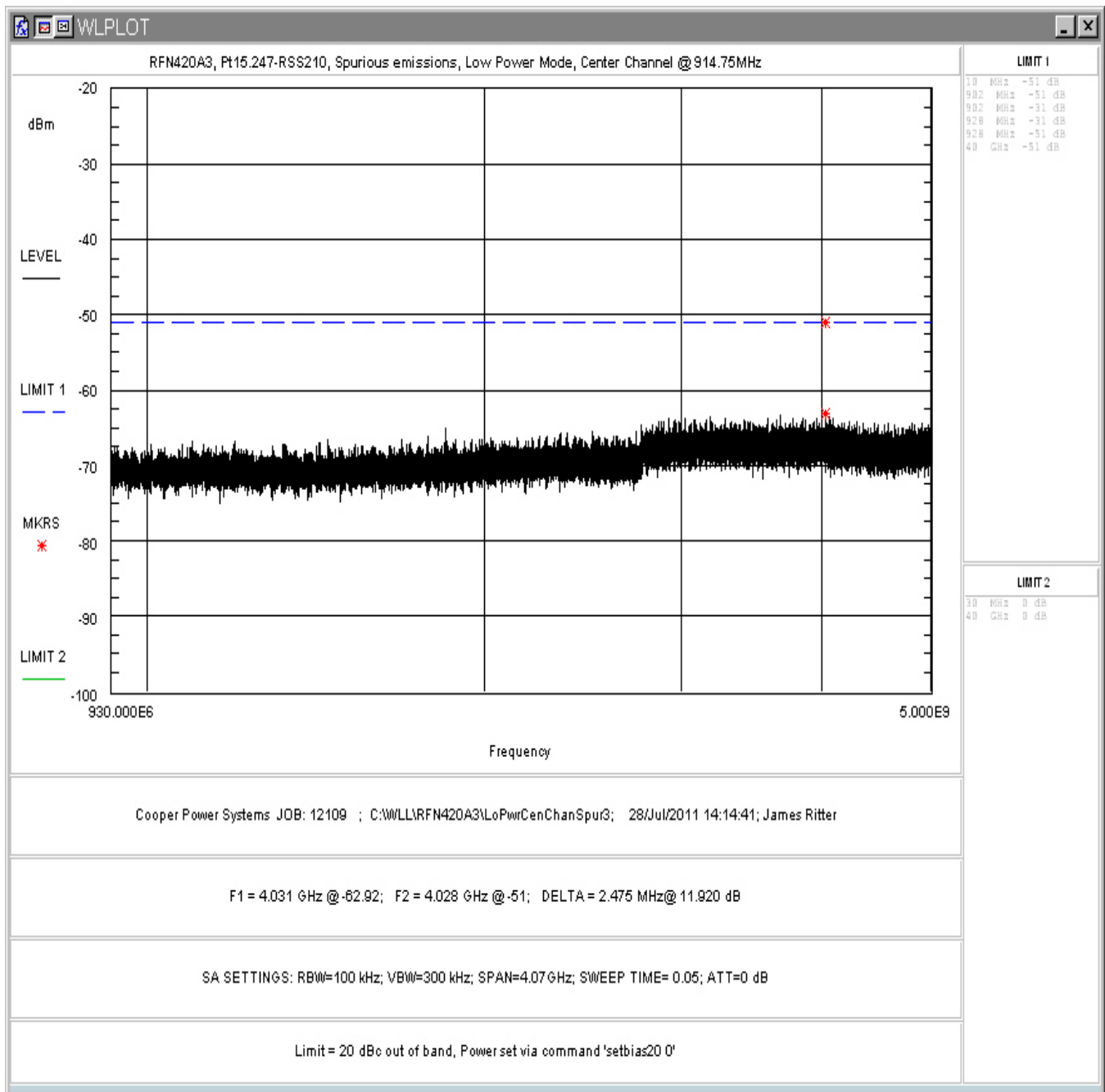


Figure 33: Conducted Spurious Emissions, Low Power, Center Channel 930-5000MHz

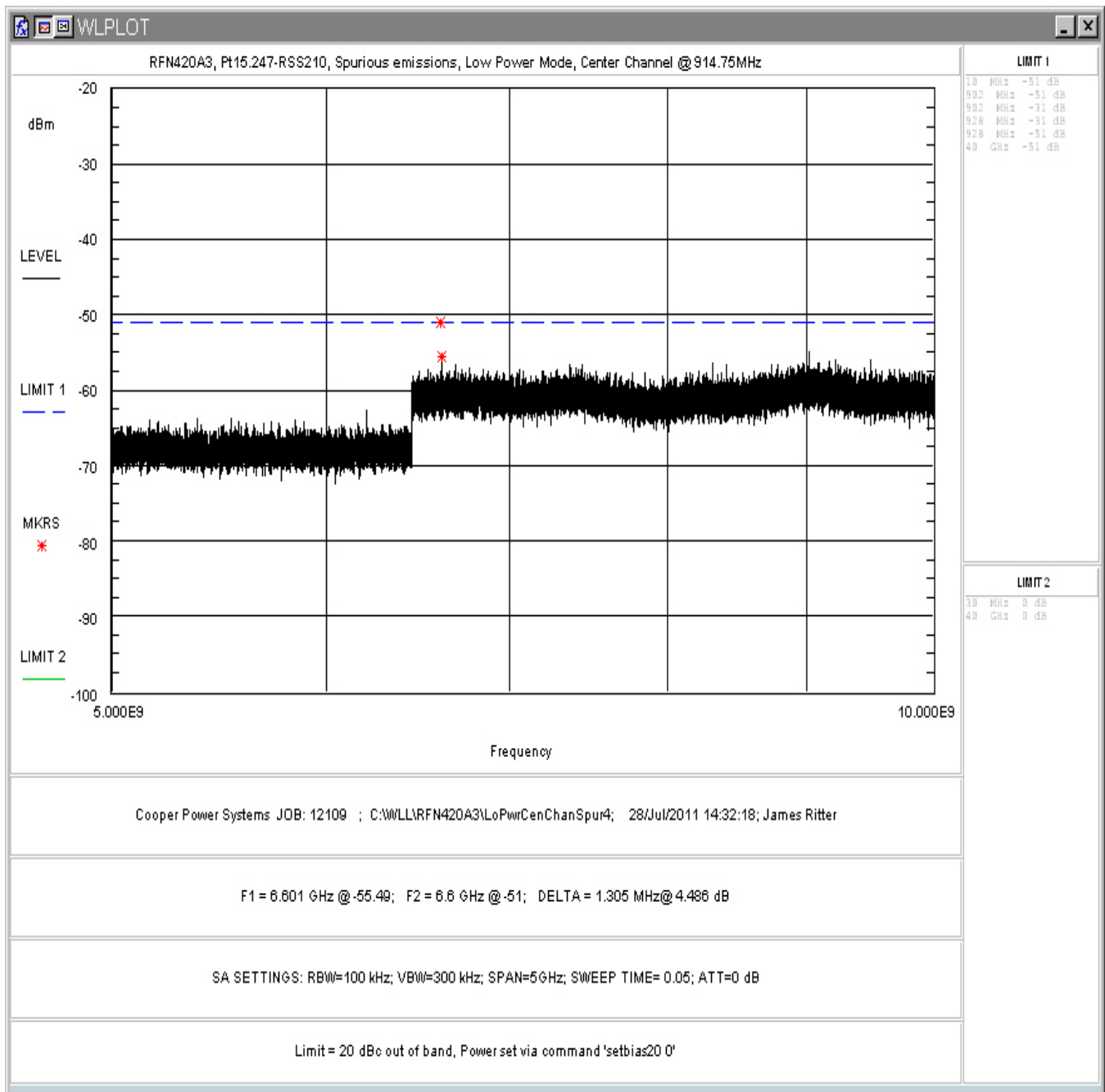


Figure 34: Conducted Spurious Emissions, Low Power, Center Channel 5-10GHz

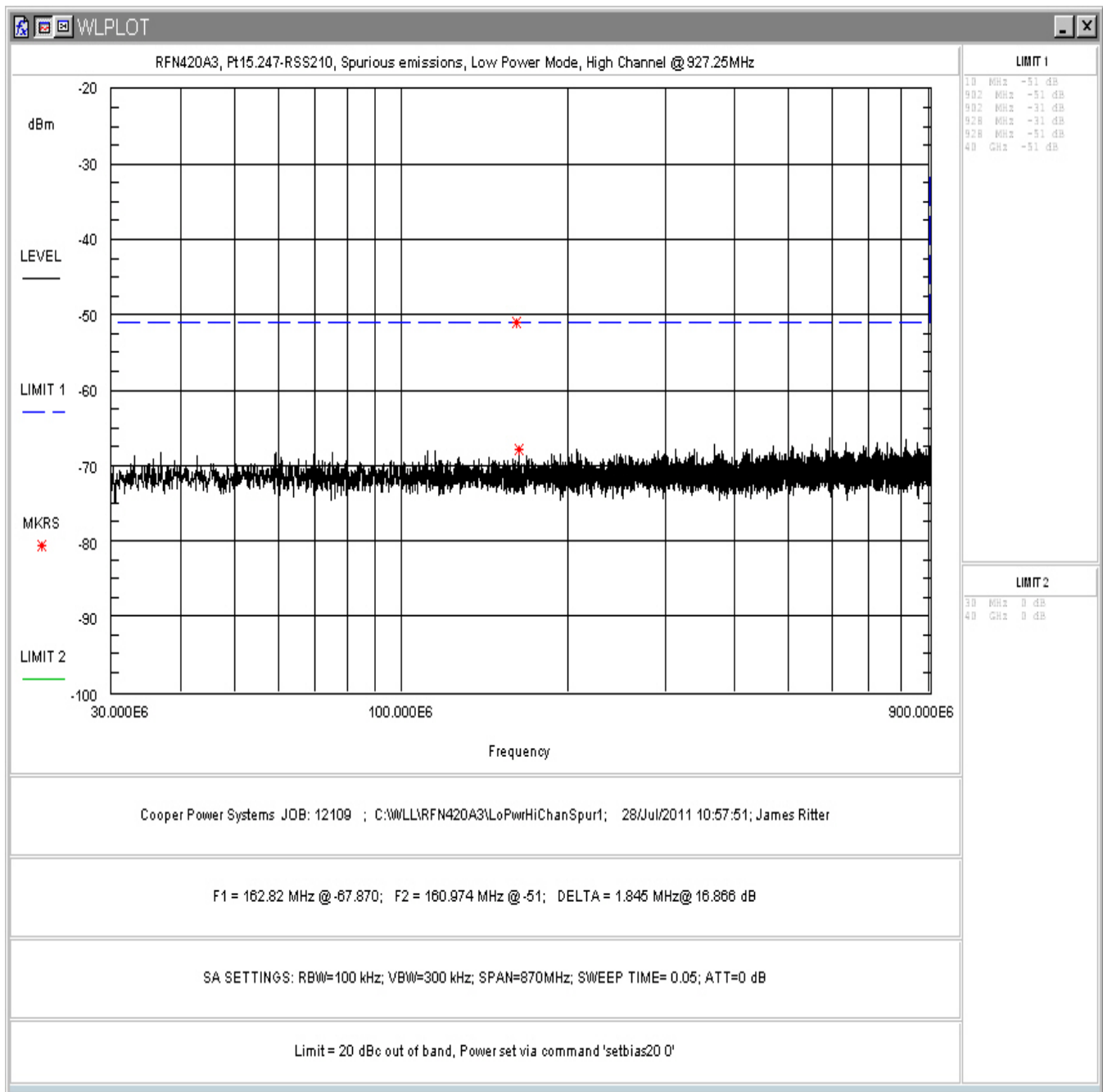


Figure 35: Conducted Spurious Emissions, Low Power, High Channel 30 - 900MHz

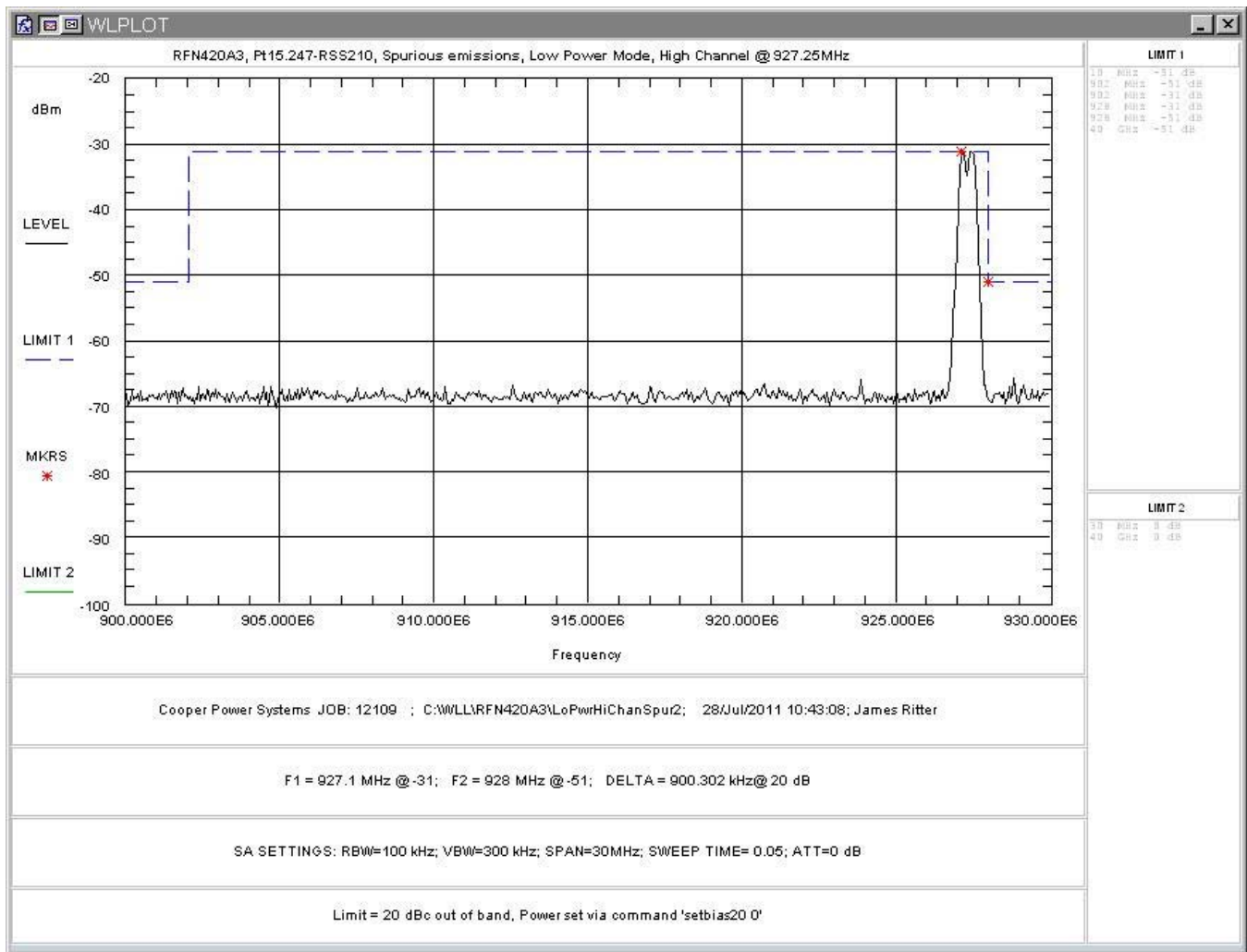


Figure 36: Conducted Spurious Emissions, Low Power, High Channel 900 – 930MHz

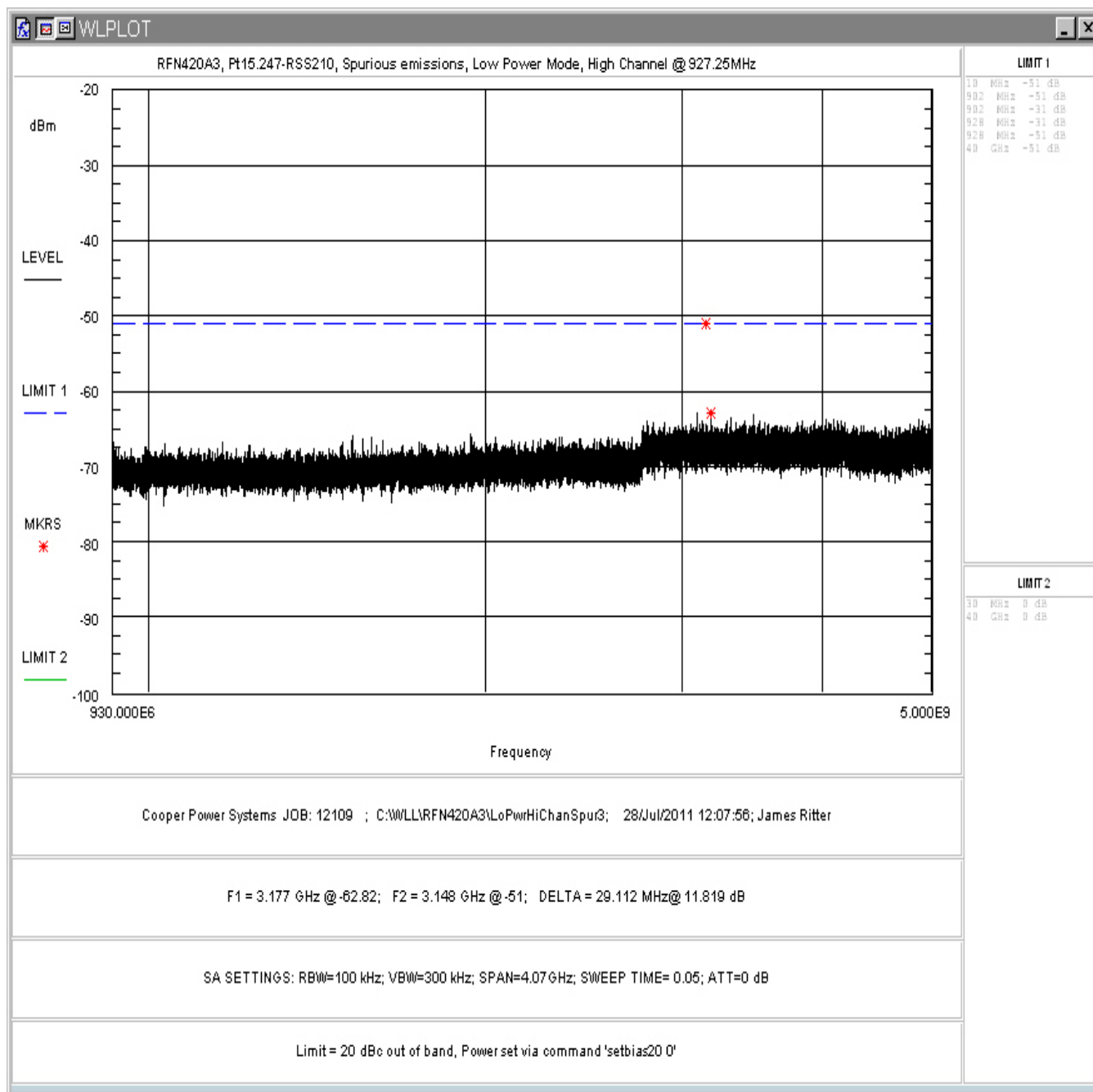


Figure 37: Conducted Spurious Emissions, Low Power, High Channel 930-5000MHz

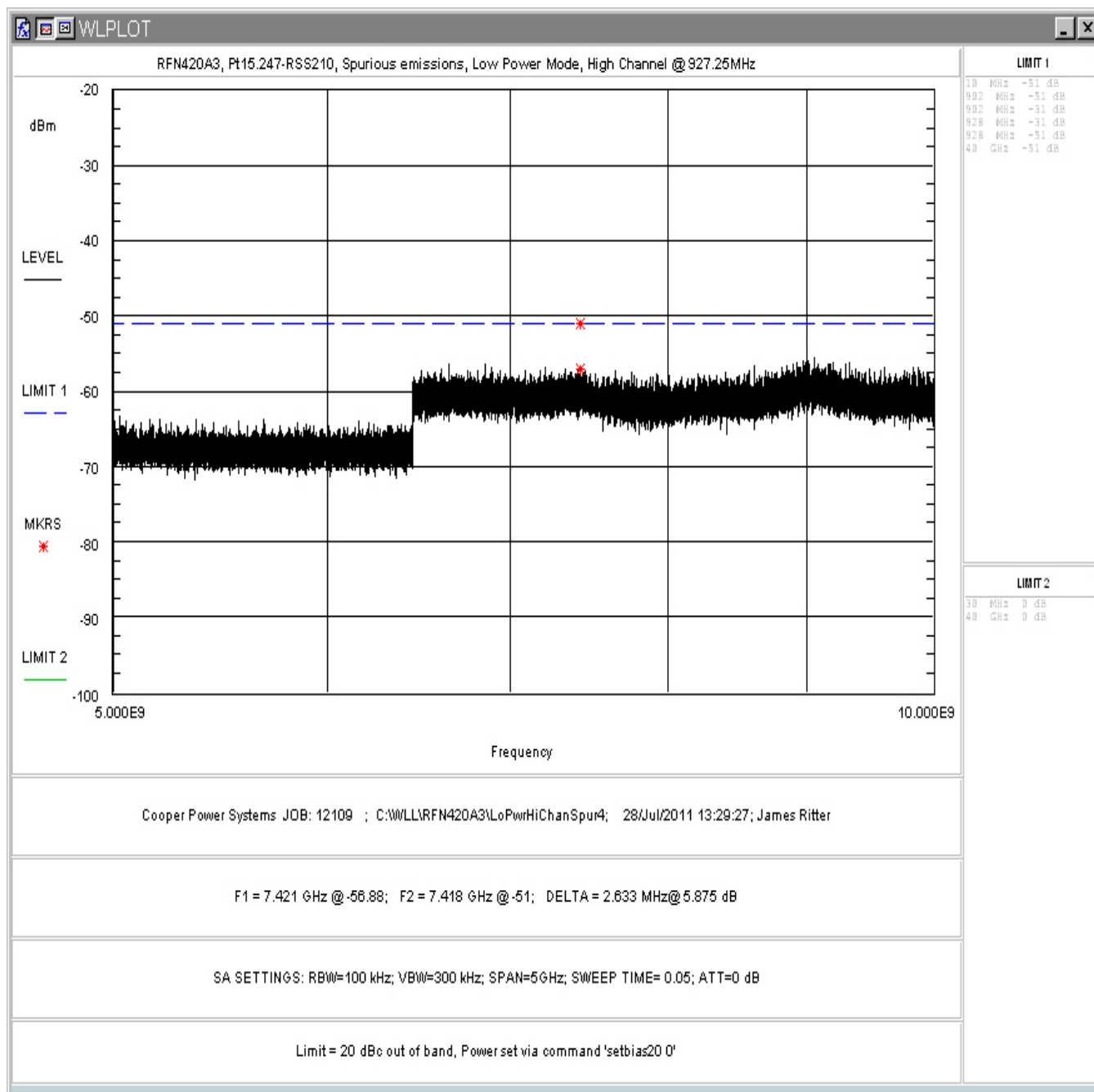


Figure 38: Conducted Spurious Emissions, Low Power, High Channel 5-10GHz

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.

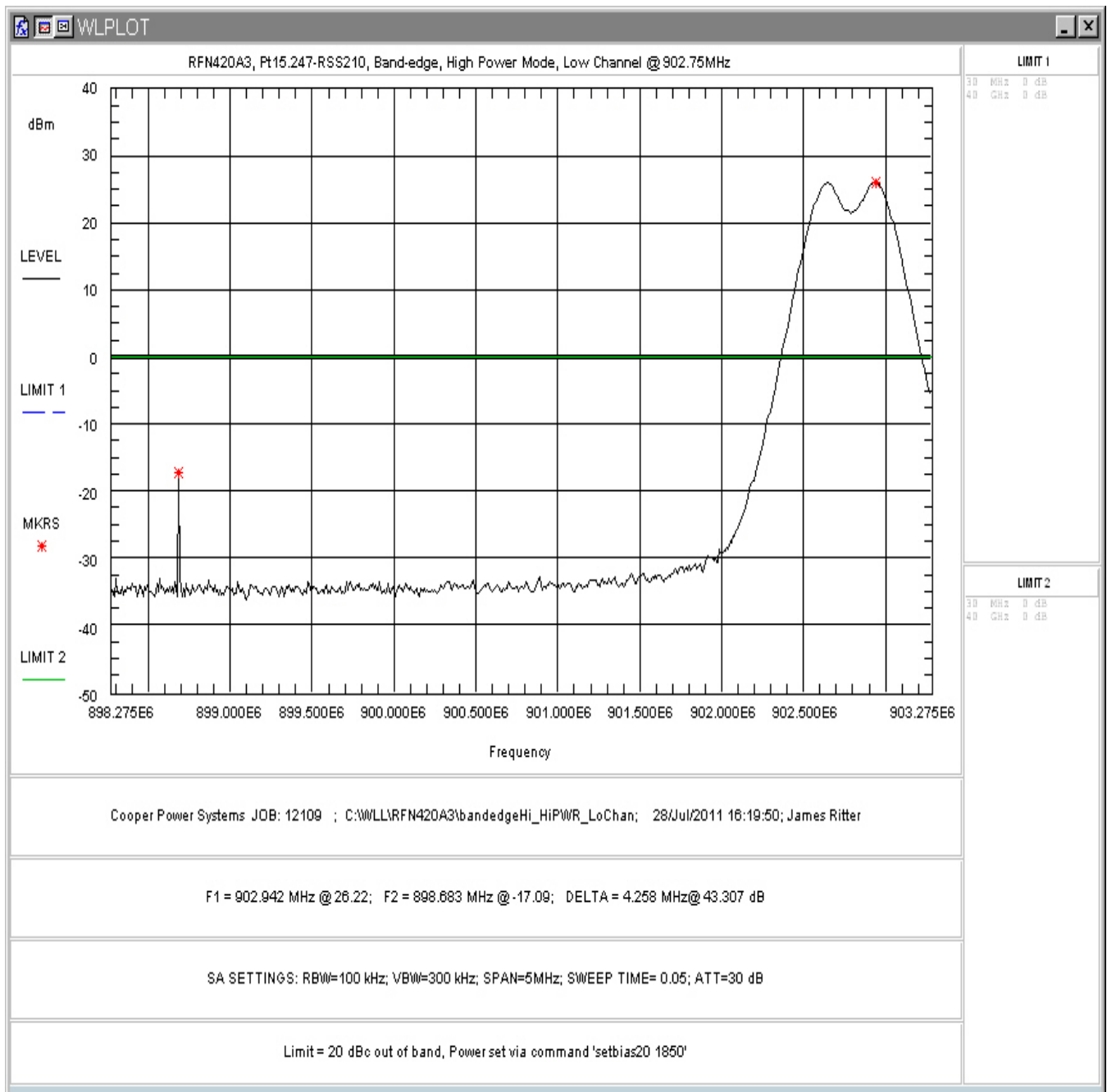


Figure 39: Lower Band-edge, Low Channel, High Power

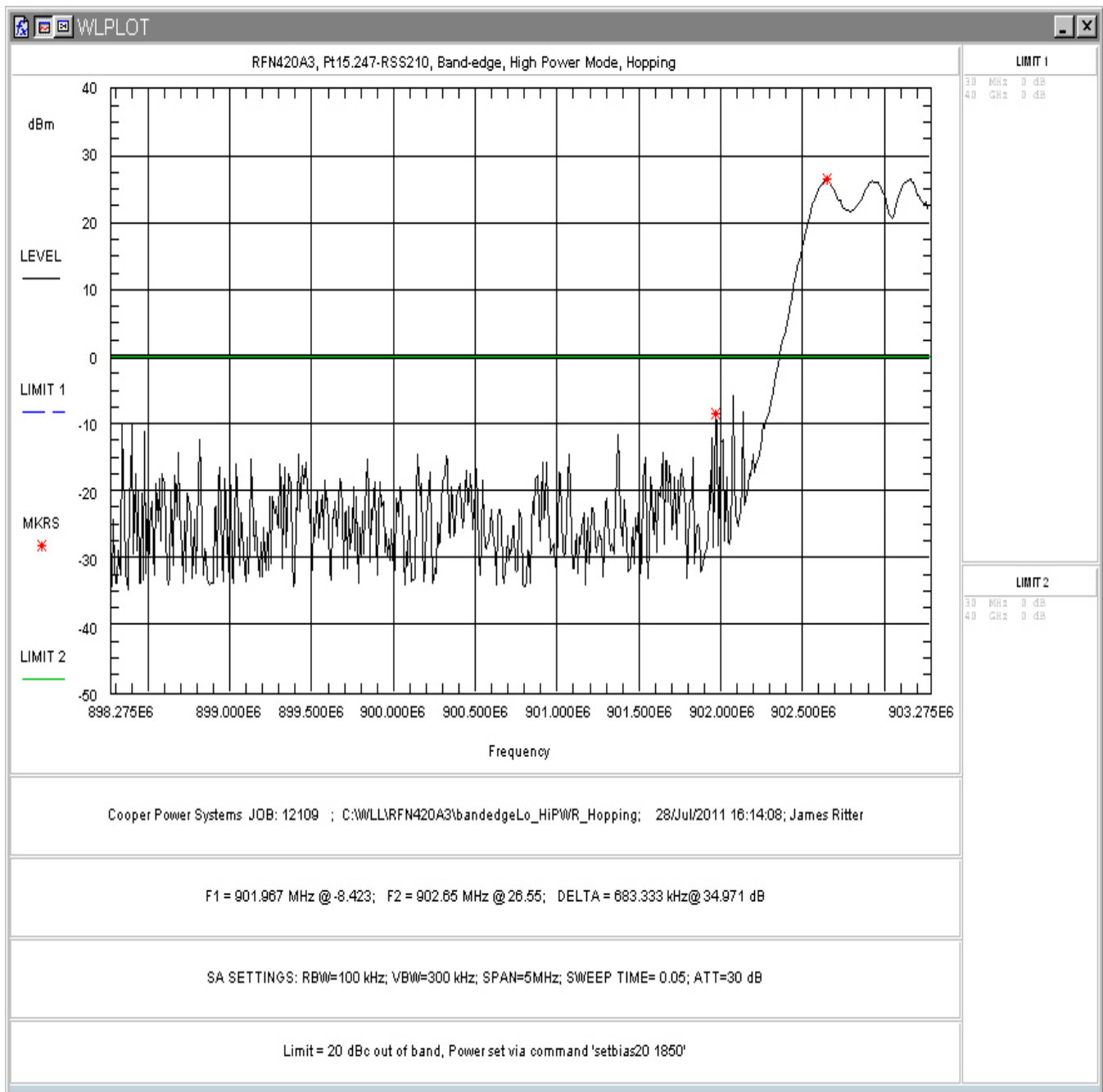


Figure 40: Lower Band-edge, Hopping Mode, High Power

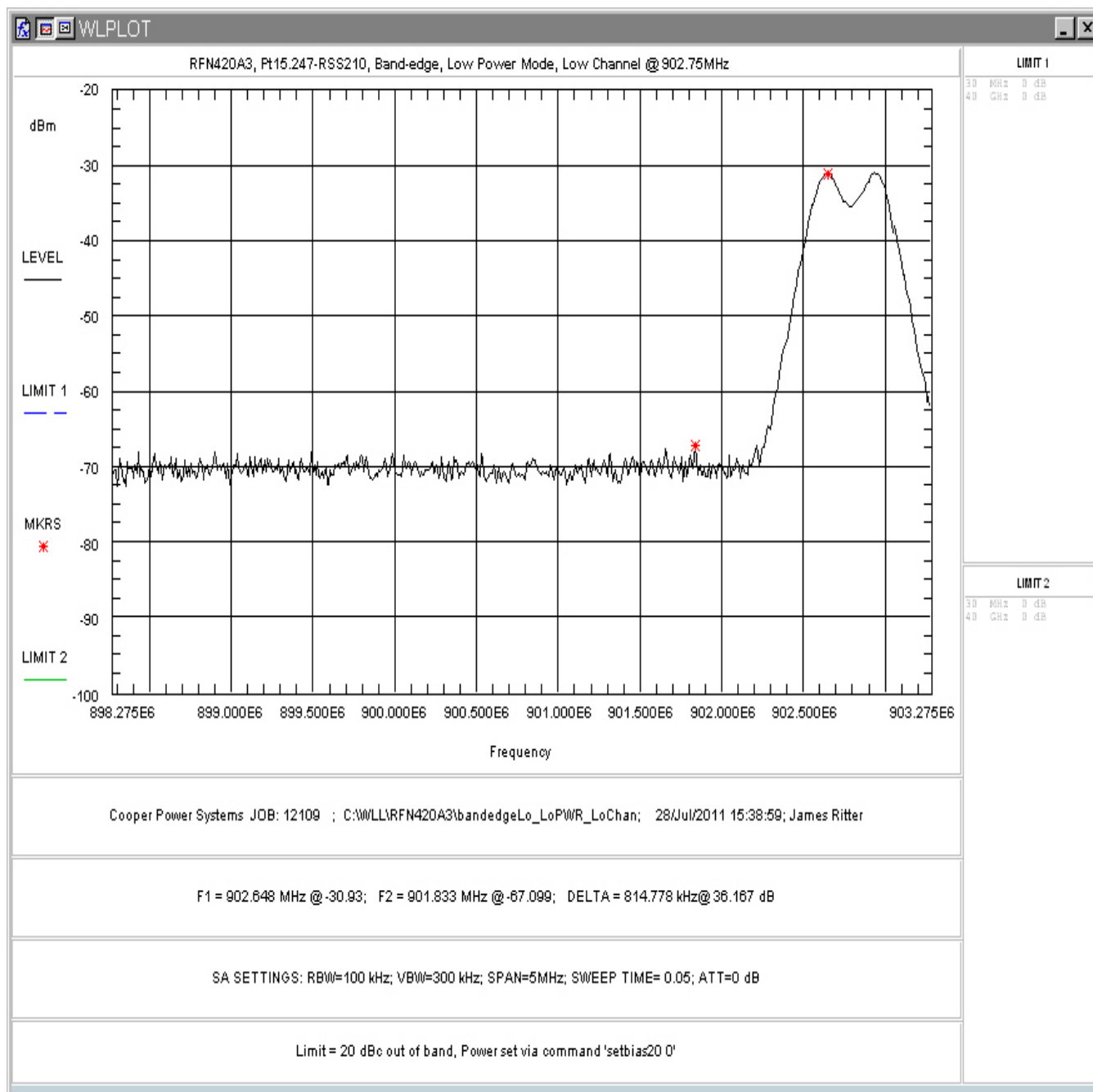


Figure 41: Lower Band-edge, Low Channel, Low Power

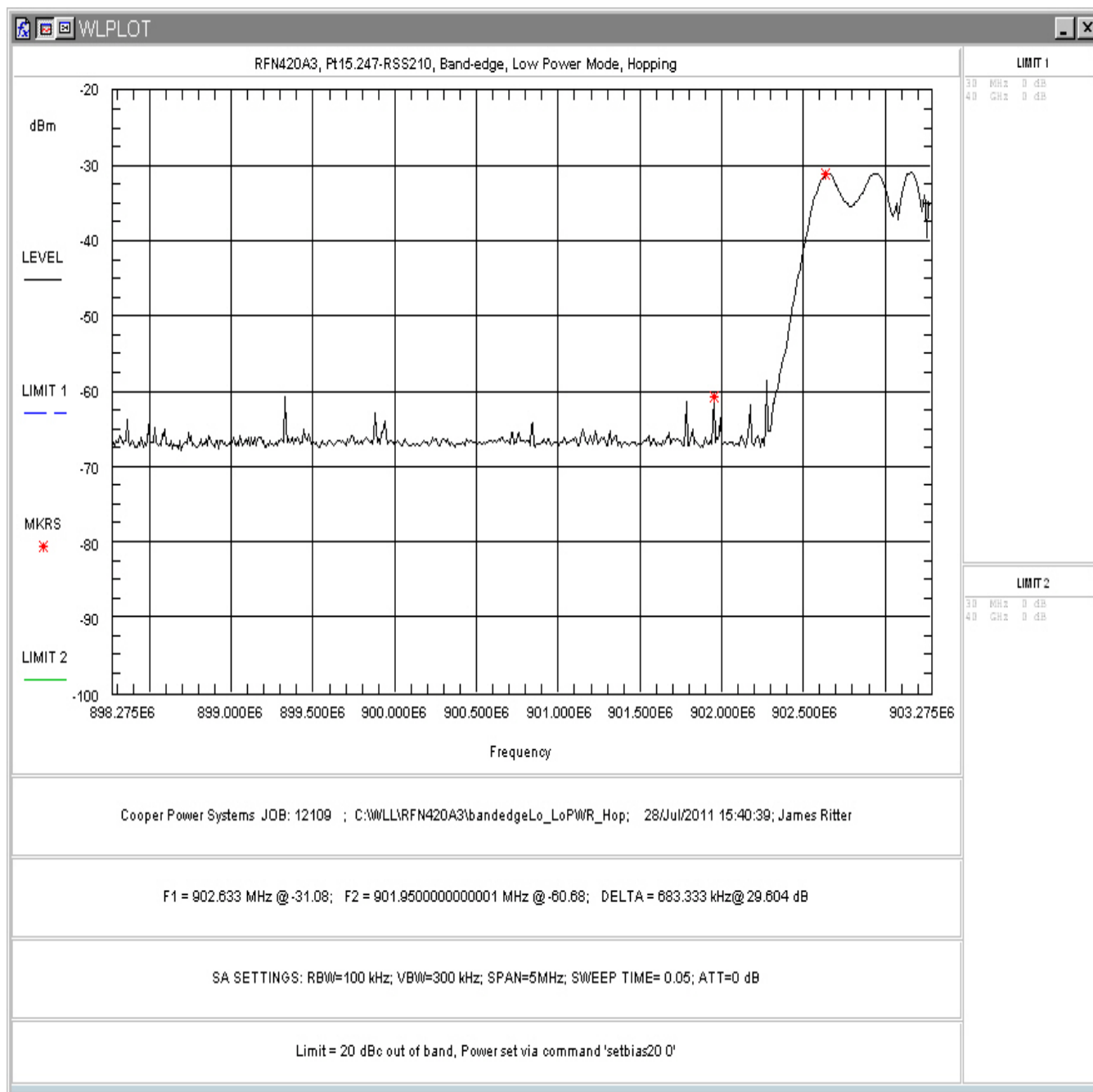


Figure 42: Lower Band-edge, Hopping Mode, Low Power

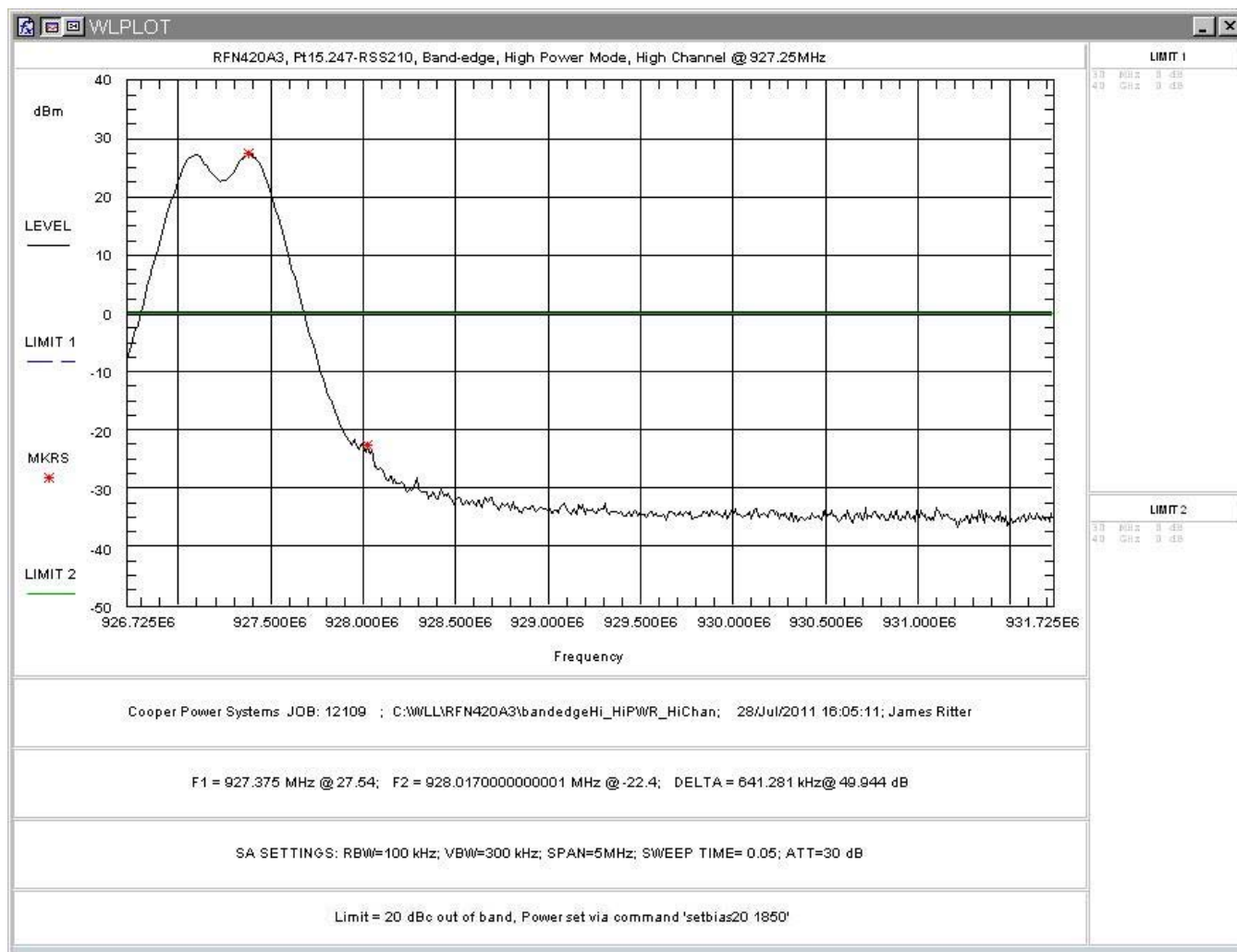


Figure 43: Upper Band-edge, High Channel, High Power

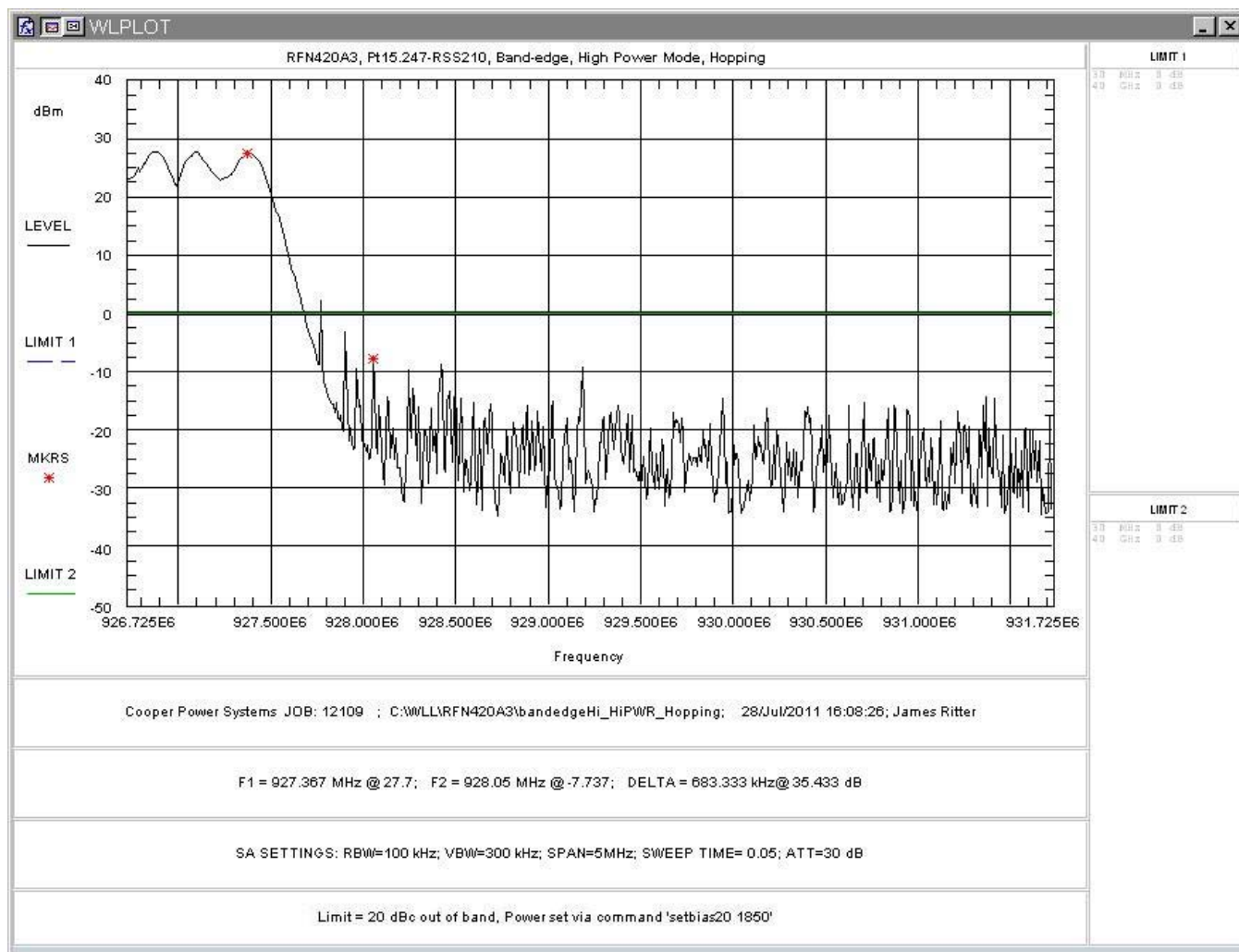


Figure 44: Upper Band-edge, Hopping Mode, High Power

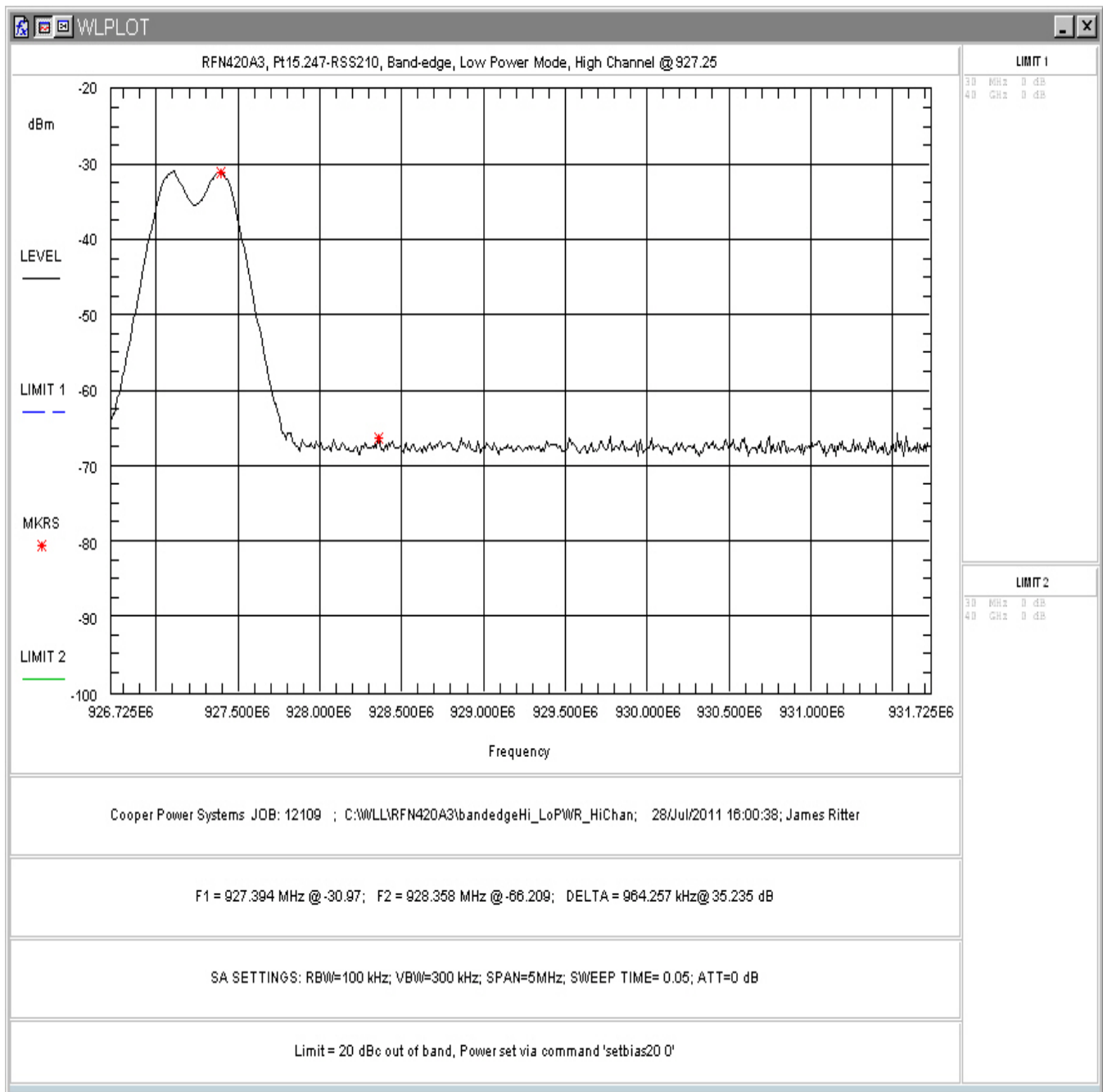


Figure 45: Upper Band-edge, High Channel, Low Power

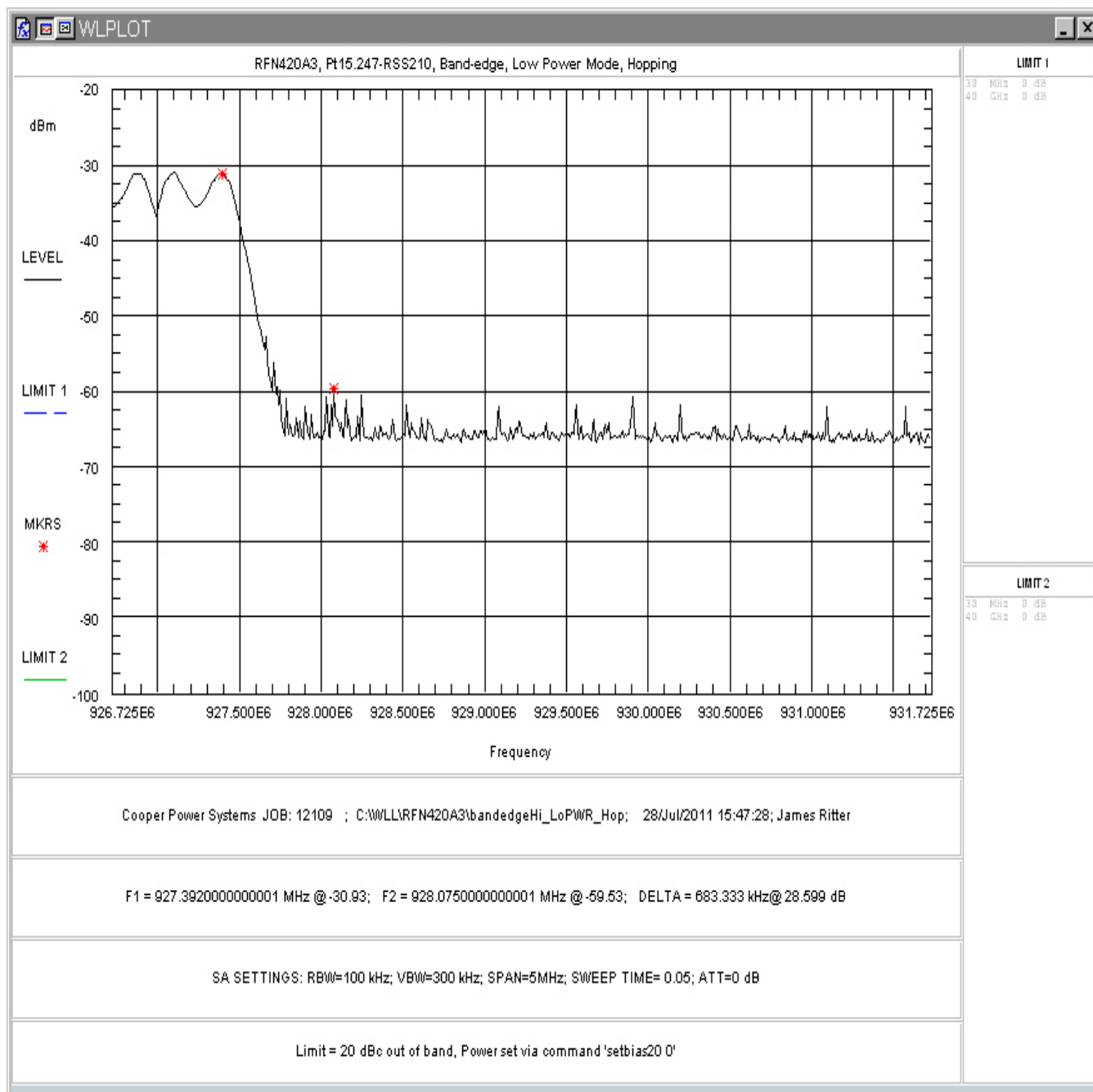


Figure 46: Upper Band-edge, Hopping Mode, Low Power

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 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
(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)
74.90	V	45.00	1.00	17.00	9.4	21.0	100.0	-13.6
117.71	V	45.00	1.00	18.30	15.5	48.9	150.0	-9.7
121.94	V	90.00	1.00	20.40	15.4	61.7	150.0	-7.7
130.55	V	270.00	1.00	15.00	15.7	34.4	150.0	-12.8
136.98	V	270.00	1.00	18.50	15.0	47.1	150.0	-10.1
164.82	V	200.00	1.00	17.70	14.9	42.6	150.0	-10.9
166.97	V	200.00	1.00	20.10	14.8	55.7	150.0	-8.6
280.40	V	180.00	1.00	14.80	17.7	41.9	200.0	-13.6
333.71	V	90.00	1.00	8.30	18.8	22.6	200.0	-18.9
610.00	V	180.00	1.00	5.40	28.0	46.8	200.0	-12.6
995.60	V	90.00	1.00	7.00	34.9	123.9	500.0	-12.1
74.58	H	175.00	4.00	17.40	9.4	21.9	100.0	-13.2
74.92	H	0.00	4.00	19.60	9.4	28.3	100.0	-11.0
111.30	H	5.00	4.00	14.70	14.4	28.4	150.0	-14.4
115.58	H	5.00	4.00	14.50	15.1	30.2	150.0	-13.9
121.90	H	355.00	3.37	20.70	15.4	63.9	150.0	-7.4
126.27	H	0.00	3.50	18.50	15.8	51.9	150.0	-9.2
130.57	H	0.00	3.50	16.40	15.7	40.4	150.0	-11.4
135.98	H	355.00	3.50	20.40	15.1	59.3	150.0	-8.1
163.32	H	100.00	2.66	16.70	14.9	37.8	150.0	-12.0
241.87	H	170.00	1.40	19.60	15.0	53.6	200.0	-11.4
282.55	H	175.00	1.36	19.20	17.6	69.1	200.0	-9.2
322.96	H	175.00	1.24	19.40	18.3	76.7	200.0	-8.3
333.88	H	175.00	1.00	15.50	18.8	51.9	200.0	-11.7
406.39	H	180.00	1.00	18.90	21.8	108.5	200.0	-5.3
966.58	H	350.00	1.00	6.80	34.5	116.2	500.0	-12.7

Same for all channels

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

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2708.30	V	100.00	2.57	42.20	-0.6	119.8	5000.0	-32.4	Peak
3611.00	V	0.00	2.57	44.70	4.4	285.2	5000.0	-24.9	Peak
4513.80	V	270.00	2.50	46.50	6.5	446.9	5000.0	-21.0	Peak
5416.50	V	190.00	2.48	45.00	9.9	559.1	5000.0	-19.0	Peak
8124.80	V	180.00	2.48	45.20	17.1	1301.8	5000.0	-11.7	Peak
9027.50	V	0.00	2.45	46.30	20.5	2182.1	5000.0	-7.2	Peak
2708.30	V	100.00	2.57	37.30	-8.7	26.8	500.0	-25.4	Average
3611.00	V	0.00	2.57	32.50	-3.7	27.6	500.0	-25.2	Average
4513.80	V	270.00	2.50	32.00	-1.6	33.1	500.0	-23.6	Average
5416.50	V	190.00	2.48	31.30	1.8	45.4	500.0	-20.8	Average
8124.80	V	180.00	2.48	32.00	9.0	112.1	500.0	-13.0	Average
9027.50	V	0.00	2.45	32.20	12.4	169.4	500.0	-9.4	Average
2708.30	H	225.00	2.52	44.70	-0.6	159.8	5000.0	-29.9	Peak
3611.00	H	125.00	2.66	47.20	4.4	380.3	5000.0	-22.4	Peak
4513.80	H	305.00	2.65	43.50	6.5	316.4	5000.0	-24.0	Peak
5416.50	H	180.00	2.23	44.00	9.9	498.3	5000.0	-20.0	Peak
8124.80	H	90.00	2.23	46.00	17.1	1427.4	5000.0	-10.9	Peak
9027.50	H	300.00	2.22	43.30	20.5	1544.8	5000.0	-10.2	Peak
2708.30	H	225.00	2.52	32.70	-8.7	15.8	500.0	-30.0	Average
3611.00	H	125.00	2.66	32.70	-3.7	28.2	500.0	-25.0	Average
4513.80	H	305.00	2.65	32.00	-1.6	33.1	500.0	-23.6	Average
5416.50	H	180.00	2.23	30.80	1.8	42.9	500.0	-21.3	Average
8124.80	H	90.00	2.23	31.80	9.0	109.5	500.0	-13.2	Average
9027.50	H	300.00	2.22	32.00	12.4	165.5	500.0	-9.6	Average

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

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2708.25	V	120.00	2.95	46.33	-0.6	192.8	5000.0	-28.3	Peak
3611.00	V	180.00	295.00	43.00	4.4	234.5	5000.0	-26.6	Peak
4513.75	V	85.00	2.83	43.20	6.5	305.6	5000.0	-24.3	Peak
5416.50	V	190.00	2.48	45.00	9.9	559.1	5000.0	-19.0	Peak
8124.75	V	180.00	2.48	45.20	17.1	1301.8	5000.0	-11.7	Peak
9027.50	V	0.00	2.45	46.30	20.5	2182.1	5000.0	-7.2	Peak
2708.25	V	120.00	2.95	34.70	-8.7	19.9	500.0	-28.0	Average
3611.00	V	180.00	295.00	32.70	-3.7	28.2	500.0	-25.0	Average
4513.75	V	85.00	2.83	32.20	-1.6	33.9	500.0	-23.4	Average
5416.50	V	190.00	2.48	31.30	1.8	45.4	500.0	-20.8	Average
8124.75	V	180.00	2.48	32.00	9.0	112.1	500.0	-13.0	Average
9027.50	V	0.00	2.45	32.20	12.4	169.4	500.0	-9.4	Average
2708.25	H	90.00	2.23	46.33	-0.6	192.8	5000.0	-28.3	Peak
3611.00	H	0.00	2.20	42.00	4.4	209.0	5000.0	-27.6	Peak
4513.75	H	350.00	2.20	43.50	6.5	316.4	5000.0	-24.0	Peak
5416.50	H	180.00	2.23	44.00	9.9	498.3	5000.0	-20.0	Peak
8124.75	H	90.00	2.23	46.00	17.1	1427.4	5000.0	-10.9	Peak
9027.50	H	300.00	2.22	43.30	20.5	1544.8	5000.0	-10.2	Peak
2708.25	H	90.00	2.23	33.50	-8.7	17.3	500.0	-29.2	Average
3611.00	H	0.00	2.20	32.60	-3.7	27.9	500.0	-25.1	Average
4513.75	H	350.00	2.20	32.20	-1.6	33.9	500.0	-23.4	Average
5416.50	H	180.00	2.23	30.80	1.8	42.9	500.0	-21.3	Average
8124.75	H	90.00	2.23	31.80	9.0	109.5	500.0	-13.2	Average
9027.50	H	300.00	2.22	32.00	12.4	165.5	500.0	-9.6	Average

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

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2708.25	V	90.00	2.23	47.22	0.3	237.1	5000.0	-26.5	Peak
3611.00	V	0.00	2.20	43.96	5.9	311.1	5000.0	-24.1	Peak
4513.75	V	350.00	2.20	43.78	8.1	393.1	5000.0	-22.1	Peak
5416.50	V	180.00	2.23	45.02	11.4	658.3	5000.0	-17.6	Peak
8124.75	V	90.00	2.23	45.90	19.3	1809.8	5000.0	-8.8	Peak
9027.50	V	300.00	2.22	46.47	22.4	2791.2	5000.0	-5.1	Peak
2708.25	V	90.00	2.23	35.09	-7.8	23.1	500.0	-26.7	Average
3611.00	V	0.00	2.20	33.56	-2.2	36.9	500.0	-22.6	Average
4513.75	V	350.00	2.20	32.86	0.0	44.0	500.0	-21.1	Average
5416.50	V	180.00	2.23	31.71	3.3	56.0	500.0	-19.0	Average
8124.75	V	90.00	2.23	32.53	11.2	152.8	500.0	-10.3	Average
9027.50	V	300.00	2.22	32.56	14.3	221.2	500.0	-7.1	Average
2708.25	H	270.00	2.50	47.32	0.3	239.9	5000.0	-26.4	Peak
3611.00	H	190.00	2.48	42.24	5.9	255.0	5000.0	-25.8	Peak
4513.75	H	180.00	2.48	44.00	8.1	403.1	5000.0	-21.9	Peak
5416.50	H	0.00	2.45	44.37	11.4	610.8	5000.0	-18.3	Peak
8124.75	H	90.00	2.23	46.50	19.3	1937.6	5000.0	-8.2	Peak
9027.50	H	0.00	2.20	44.06	22.4	2113.6	5000.0	-7.5	Peak
2708.25	H	270.00	2.50	34.39	-7.8	21.3	500.0	-27.4	Average
3611.00	H	190.00	2.48	33.55	-2.2	36.9	500.0	-22.6	Average
4513.75	H	180.00	2.48	32.25	0.0	41.0	500.0	-21.7	Average
5416.50	H	0.00	2.45	30.82	3.3	50.5	500.0	-19.9	Average
8124.75	H	90.00	2.23	32.14	11.2	146.0	500.0	-10.7	Average
9027.50	H	0.00	2.20	32.57	14.3	221.6	500.0	-7.1	Average

**Table 14: Radiated Emission Test Data >1GHz, Center Channel
(8dbi –Omni directional Antenna)**

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2744.25	V	2.41	0.00	45.00	-0.5	166.9	5000.0	-29.5	Peak
3659.00	V	2.40	185.00	44.83	4.6	297.6	5000.0	-24.5	Peak
4573.80	V	2.14	180.00	43.80	6.3	319.3	5000.0	-23.9	Peak
7318.00	V	1.88	90.00	54.20	18.2	4151.5	5000.0	-1.6	Peak
8232.80	V	1.88	250.00	47.33	17.0	1652.7	5000.0	-9.6	Peak
9147.50	V	1.88	0.00	44.30	21.7	2001.7	5000.0	-8.0	Peak
2744.25	V	2.41	0.00	33.00	-8.6	16.5	500.0	-29.6	Average
3659.00	V	2.40	185.00	32.80	-3.5	29.3	500.0	-24.6	Average
4573.80	V	2.14	180.00	32.20	-1.8	33.1	500.0	-23.6	Average
7318.00	V	1.88	90.00	33.00	10.1	142.3	500.0	-10.9	Average
8232.80	V	1.88	250.00	32.30	8.9	115.3	500.0	-12.7	Average
9147.50	V	1.88	0.00	33.00	13.6	214.5	500.0	-7.4	Average
2744.25	H	90.00	2.83	44.50	-0.5	157.6	5000.0	-30.0	Peak
3659.00	H	125.00	2.80	44.80	4.6	296.6	5000.0	-24.5	Peak
4573.80	H	185.00	2.80	43.80	6.3	319.3	5000.0	-23.9	Peak
7318.00	H	0.00	2.67	45.20	18.2	1473.0	5000.0	-10.6	Peak
8232.80	H	180.00	2.67	43.00	17.0	1003.9	5000.0	-13.9	Peak
9147.50	H	200.00	2.60	43.50	21.7	1825.6	5000.0	-8.8	Peak
2744.25	H	90.00	2.83	33.00	-8.6	16.5	500.0	-29.6	Average
3659.00	H	125.00	2.80	32.80	-3.5	29.3	500.0	-24.6	Average
4573.80	H	185.00	2.80	31.00	-1.8	28.8	500.0	-24.8	Average
7318.00	H	0.00	2.67	33.00	10.1	142.3	500.0	-10.9	Average
8232.80	H	180.00	2.67	32.33	8.9	115.7	500.0	-12.7	Average
9147.50	H	200.00	2.60	33.00	13.6	214.5	500.0	-7.4	Average

**Table 15: Radiated Emission Test Data >1GHz, Center Channel
(3dbi –Phantom Antenna)**

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2744.25	V	180.00	2.55	45.00	-0.5	166.9	5000.0	-29.5	Peak
3659.00	V	5.00	2.50	45.33	4.6	315.3	5000.0	-24.0	Peak
4573.80	V	125.00	2.50	43.60	6.3	312.0	5000.0	-24.1	Peak
7318.00	V	190.00	2.48	45.00	18.2	1439.5	5000.0	-10.8	Peak
8232.80	V	180.00	2.48	45.20	17.0	1293.3	5000.0	-11.7	Peak
9147.50	V	0.00	2.45	46.30	21.7	2520.0	5000.0	-6.0	Peak
2744.25	V	180.00	2.55	34.20	-8.6	18.9	500.0	-28.4	Average
3659.00	V	5.00	2.50	32.80	-3.5	29.3	500.0	-24.6	Average
4573.80	V	125.00	2.50	32.10	-1.8	32.7	500.0	-23.7	Average
7318.00	V	190.00	2.48	31.30	10.1	117.0	500.0	-12.6	Average
8232.80	V	180.00	2.48	32.00	8.9	111.3	500.0	-13.0	Average
9147.50	V	0.00	2.45	32.20	13.6	195.6	500.0	-8.2	Average
2744.25	H	90.00	2.50	45.33	-0.5	173.4	5000.0	-29.2	Peak
3659.00	H	45.00	2.45	43.20	4.6	246.7	5000.0	-26.1	Peak
4573.80	H	180.00	2.40	43.70	6.3	315.7	5000.0	-24.0	Peak
7318.00	H	180.00	2.23	44.00	18.2	1282.9	5000.0	-11.8	Peak
8232.80	H	90.00	2.23	46.00	17.0	1418.0	5000.0	-10.9	Peak
9147.50	H	300.00	2.22	43.30	21.7	1784.1	5000.0	-9.0	Peak
2744.25	H	90.00	2.50	34.30	-8.6	19.2	500.0	-28.3	Average
3659.00	H	45.00	2.45	32.80	-3.5	29.3	500.0	-24.6	Average
4573.80	H	180.00	2.40	32.20	-1.8	33.1	500.0	-23.6	Average
7318.00	H	180.00	2.23	30.80	10.1	110.5	500.0	-13.1	Average
8232.80	H	90.00	2.23	31.80	8.9	108.8	500.0	-13.2	Average
9147.50	H	300.00	2.22	32.00	13.6	191.2	500.0	-8.4	Average

**Table 16: Radiated Emission Test Data >1GHz, Center Channel
(2dbi –Co-Linear Antenna)**

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2744.25	V	125.00	2.50	45.32	0.4	192.1	5000.0	-28.3	Peak
3659.00	V	190.00	2.48	45.94	6.2	403.9	5000.0	-21.9	Peak
4573.80	V	180.00	2.48	43.85	7.9	385.2	5000.0	-22.3	Peak
7318.00	V	0.00	2.45	45.95	20.1	2000.3	5000.0	-8.0	Peak
8232.80	V	180.00	2.55	45.52	19.5	1779.7	5000.0	-9.0	Peak
9147.50	V	5.00	2.50	43.20	22.8	1993.3	5000.0	-8.0	Peak
2744.25	V	125.00	2.50	34.20	-8.6	18.9	500.0	-28.4	Average
3659.00	V	190.00	2.48	32.80	-3.5	29.3	500.0	-24.6	Average
4573.80	V	180.00	2.48	32.10	-1.8	32.7	500.0	-23.7	Average
7318.00	V	0.00	2.45	31.30	10.1	117.0	500.0	-12.6	Average
8232.80	V	180.00	2.55	32.00	8.9	111.3	500.0	-13.0	Average
9147.50	V	5.00	2.50	32.20	13.6	195.6	500.0	-8.2	Average
2744.25	H	125.00	2.50	45.39	0.4	193.7	5000.0	-28.2	Peak
3659.00	H	190.00	2.48	43.70	6.2	312.1	5000.0	-24.1	Peak
4573.80	H	270.00	1.80	44.39	7.9	409.9	5000.0	-21.7	Peak
7318.00	H	350.00	1.80	44.00	20.1	1599.0	5000.0	-9.9	Peak
8232.80	H	90.00	1.90	46.03	19.5	1885.3	5000.0	-8.5	Peak
9147.50	H	0.00	1.80	43.94	22.8	2171.1	5000.0	-7.2	Peak
2744.25	H	125.00	2.50	34.48	-7.7	21.7	500.0	-27.2	Average
3659.00	H	190.00	2.48	33.38	-1.9	37.4	500.0	-22.5	Average
4573.80	H	270.00	1.80	33.06	-0.2	43.8	500.0	-21.1	Average
7318.00	H	350.00	1.80	31.30	12.0	145.8	500.0	-10.7	Average
8232.80	H	90.00	1.90	32.34	11.4	153.5	500.0	-10.3	Average
9147.50	H	0.00	1.80	32.01	14.7	216.3	500.0	-7.3	Average

**Table 17: Radiated Emission Test Data >1GHz, High Channel
(8dbi –Omni directional Antenna)**

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2781.80	V	185.00	1.73	44.50	-0.5	159.1	5000.0	-29.9	Peak
3709.00	V	90.00	1.73	46.50	4.9	370.7	5000.0	-22.6	Peak
4636.30	V	265.00	1.70	46.47	6.6	452.6	5000.0	-20.9	Peak
7418.00	V	180.00	2.48	45.20	18.4	1518.3	5000.0	-10.4	Peak
8345.30	V	0.00	2.45	46.30	17.0	1467.4	5000.0	-10.6	Peak
2781.80	V	185.00	1.73	35.20	-8.6	21.5	500.0	-27.3	Average
3709.00	V	90.00	1.73	33.00	-3.2	30.8	500.0	-24.2	Average
4636.30	V	265.00	1.70	32.50	-1.5	35.7	500.0	-22.9	Average
7418.00	V	180.00	2.48	32.00	10.3	130.7	500.0	-11.7	Average
8345.30	V	0.00	2.45	32.20	8.9	113.9	500.0	-12.8	Average
2781.80	H	270.00	1.80	45.33	-0.5	175.0	5000.0	-29.1	Peak
3709.00	H	350.00	1.80	44.20	4.9	284.4	5000.0	-24.9	Peak
4636.30	H	90.00	1.90	42.80	6.6	296.6	5000.0	-24.5	Peak
7418.00	H	180.00	2.67	43.00	18.4	1178.6	5000.0	-12.6	Peak
8345.30	H	200.00	2.60	43.50	17.0	1063.1	5000.0	-13.4	Peak
2781.80	H	270.00	1.80	33.20	-8.6	17.0	500.0	-29.3	Average
3709.00	H	350.00	1.80	32.80	-3.2	30.1	500.0	-24.4	Average
4636.30	H	90.00	1.90	32.50	-1.5	35.7	500.0	-22.9	Average
7418.00	H	180.00	2.67	32.33	10.3	135.8	500.0	-11.3	Average
8345.30	H	200.00	2.60	33.00	8.9	124.9	500.0	-12.0	Average

**Table 18: Radiated Emission Test Data >1GHz, High Channel
(3dbi –Phantom Antenna)**

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2781.80	V	175.00	2.83	46.33	-0.5	196.4	5000.0	-28.1	Peak
3709.00	V	300.00	2.79	44.20	4.9	284.4	5000.0	-24.9	Peak
4636.30	V	180.00	2.46	42.50	6.6	286.6	5000.0	-24.8	Peak
7418.00	V	190.00	2.48	45.00	18.4	1483.8	5000.0	-10.6	Peak
8345.30	V	180.00	2.48	45.20	17.0	1292.9	5000.0	-11.7	Peak
2781.80	V	175.00	2.83	37.00	-8.6	26.4	500.0	-25.5	Average
3709.00	V	300.00	2.79	32.70	-3.2	29.8	500.0	-24.5	Average
4636.30	V	180.00	2.46	35.20	-1.5	48.7	500.0	-20.2	Average
7418.00	V	190.00	2.48	31.30	10.3	120.6	500.0	-12.4	Average
8345.30	V	180.00	2.48	32.00	8.9	111.3	500.0	-13.0	Average
2781.80	H	125.00	2.87	45.00	-0.5	168.5	5000.0	-29.4	Peak
3709.00	H	15.00	2.78	44.80	4.9	304.8	5000.0	-24.3	Peak
4636.30	H	180.00	2.70	42.80	6.6	296.6	5000.0	-24.5	Peak
7418.00	H	180.00	2.23	44.00	18.4	1322.4	5000.0	-11.6	Peak
8345.30	H	90.00	2.23	46.00	17.0	1417.6	5000.0	-10.9	Peak
2781.80	H	125.00	2.87	35.50	-8.6	22.2	500.0	-27.0	Average
3709.00	H	15.00	2.78	32.70	-3.2	29.8	500.0	-24.5	Average
4636.30	H	180.00	2.70	32.20	-1.5	34.5	500.0	-23.2	Average
7418.00	H	180.00	2.23	30.80	10.3	113.9	500.0	-12.9	Average
8345.30	H	90.00	2.23	31.80	8.9	108.8	500.0	-13.2	Average

**Table 19: Radiated Emission Test Data >1GHz, High Channel
(2dbi –Co-Linear Antenna)**

-8.1 dB of Duty Cycle Correction added to Average Correction Factors									
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)	Comments
2781.80	V	185.00	2.58	48.00	-0.5	238.0	5000.0	-26.4	Peak
3709.00	V	180.00	2.55	47.30	4.9	406.4	5000.0	-21.8	Peak
4636.30	V	200.00	2.50	45.30	6.6	395.6	5000.0	-22.0	Peak
7418.00	V	190.00	2.48	45.00	18.4	1483.8	5000.0	-10.6	Peak
8345.30	V	180.00	2.48	45.20	17.0	1292.9	5000.0	-11.7	Peak
2781.80	V	185.00	2.58	35.70	-8.6	22.7	500.0	-26.8	Average
3709.00	V	180.00	2.55	33.30	-3.2	31.9	500.0	-23.9	Average
4636.30	V	200.00	2.50	32.50	-1.5	35.7	500.0	-22.9	Average
7418.00	V	190.00	2.48	31.30	10.3	120.6	500.0	-12.4	Average
8345.30	V	180.00	2.48	32.00	8.9	111.3	500.0	-13.0	Average
2781.80	H	190.00	2.22	48.00	-0.5	238.0	5000.0	-26.4	Peak
3709.00	H	125.00	2.09	46.00	4.9	349.9	5000.0	-23.1	Peak
4636.30	H	180.00	2.01	45.80	6.6	419.0	5000.0	-21.5	Peak
7418.00	H	180.00	2.23	44.00	18.4	1322.4	5000.0	-11.6	Peak
8345.30	H	90.00	2.23	46.00	17.0	1417.6	5000.0	-10.9	Peak
2781.80	H	190.00	2.22	35.70	-8.6	22.7	500.0	-26.8	Average
3709.00	H	125.00	2.09	33.20	-3.2	31.5	500.0	-24.0	Average
4636.30	H	180.00	2.01	32.30	-1.5	34.9	500.0	-23.1	Average
7418.00	H	180.00	2.23	30.80	10.3	113.9	500.0	-12.9	Average
8345.30	H	90.00	2.23	31.80	8.9	108.8	500.0	-13.2	Average

5.7 Receiver Radiated Spurious Emissions: (RSS-210 sect 2.6)

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.

5.7.1 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 emissions were measured using the following resolution bandwidths:

Table 20: 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 21: Radiated Emission Test Data, Receiver

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)
46.25	V	120.00	1.00	15.80	10.1	19.7	100.0	-14.1
76.97	V	0.00	1.00	12.30	9.7	12.6	100.0	-18.0
79.00	V	90.00	1.00	14.10	9.5	15.2	100.0	-16.4
113.30	V	90.00	1.00	6.90	14.6	11.9	150.0	-22.0
123.95	V	60.00	1.00	13.80	15.6	29.5	150.0	-14.1
138.90	V	85.00	1.00	16.50	14.9	37.1	150.0	-12.1
145.39	V	45.00	1.00	12.80	14.8	23.9	150.0	-16.0
164.25	V	270.00	1.00	15.60	14.9	33.4	150.0	-13.0
173.18	V	0.00	1.00	15.00	14.3	29.2	150.0	-14.2
183.78	V	100.00	1.00	16.40	14.0	33.3	150.0	-13.1
200.90	V	0.00	1.00	17.50	15.4	44.3	150.0	-10.6
205.27	V	10.00	1.00	19.60	15.2	54.7	150.0	-8.8
207.35	V	10.00	1.00	20.50	14.7	57.7	150.0	-8.3
230.93	V	170.00	1.00	15.00	14.7	30.5	200.0	-16.3
282.23	V	180.00	1.00	17.30	17.6	55.6	200.0	-11.1
371.30	V	185.00	2.64	12.30	20.4	43.3	200.0	-13.3
421.06	V	90.00	2.23	13.70	22.4	63.7	200.0	-9.9
541.74	V	270.00	1.34	9.10	26.3	59.0	200.0	-10.6
654.23	V	350.00	1.00	6.70	28.8	59.3	200.0	-10.6
707.00	V	15.00	1.00	6.40	29.7	63.8	200.0	-9.9
43.25	H	275.00	4.00	9.10	11.7	11.0	100.0	-19.2
71.81	H	125.00	4.00	12.60	9.2	12.3	100.0	-18.2
79.00	H	175.00	4.00	16.40	9.5	19.8	100.0	-14.1
81.23	H	175.00	4.00	12.80	9.5	13.1	100.0	-17.7
112.69	H	175.00	4.00	15.30	14.5	31.0	150.0	-13.7
123.00	H	180.00	4.00	7.50	15.4	14.0	150.0	-20.6
138.92	H	0.00	3.40	23.30	14.9	81.1	150.0	-5.3
146.60	H	0.00	3.40	17.80	14.7	42.3	150.0	-11.0
164.25	H	10.00	2.08	20.40	14.9	58.0	150.0	-8.2
209.47	H	45.00	1.26	22.00	14.3	65.1	150.0	-7.2
220.08	H	180.00	1.41	26.92	14.5	117.3	200.0	-4.6
228.63	H	185.00	1.40	23.80	14.7	83.8	200.0	-7.6
280.00	H	190.00	1.21	24.40	17.7	126.8	200.0	-4.0
366.06	H	170.00	1.20	23.70	20.2	156.7	200.0	-2.1
459.49	H	10.00	1.00	14.80	23.8	84.9	200.0	-7.4
538.10	H	50.00	1.00	6.40	26.2	42.8	200.0	-13.4
729.00	H	185.00	1.00	9.10	30.3	93.8	200.0	-6.6

No frequencies noted above 1GHz

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 56dB μ V	56 to 46dB μ V
0.5 - 5MHz	56dB μ V	46dB μ V
5 - 30MHz	60dB μ V	50dB μ V

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 μ H 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: VdB μ V

LISN Correction Factor: LISN dB

Cable Correction Factor: CF dB

Electric Field: EdB μ V = V dB μ V + LISN dB + CF dB

5.8.3 Test Data

The EUT complied with the Class B Conducted Emissions requirements. This system runs off 13.5VDC provided from a host electric meter. This test was conducted using a 120VAC host typical S2 electric meter. The following tables provide the test results for phase and neutral line power line conducted emissions.

Conducted Emissions was tested with the 915MHz radio in the “transmit on” state.

Table 22: AC Conducted Emissions Results

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)
0.197	34.7	18.3	10.1	0.3	45.1	28.7	63.7	53.7	-18.6	-25.0
0.321	29.2	18.4	10.1	0.5	39.8	29.0	59.7	49.7	-19.9	-20.7
0.593	29.7	12.7	10.1	0.5	40.3	23.3	56.0	46.0	-15.7	-22.7
1.540	28.9	10.6	10.3	0.5	39.7	21.4	56.0	46.0	-16.3	-24.6
4.295	36.5	17.9	10.7	0.6	47.8	29.2	56.0	46.0	-8.2	-16.8
11.917	37.8	21.3	11.3	0.1	49.2	32.7	60.0	50.0	-10.8	-17.3

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)
0.195	45.0	17.2	10.1	0.2	55.3	27.5	63.8	53.8	-8.5	-26.3
0.331	25.6	13.5	10.1	0.5	36.2	24.1	59.4	49.4	-23.2	-25.3
0.594	21.7	7.9	10.1	0.7	32.4	18.6	56.0	46.0	-23.6	-27.4
3.880	18.5	6.5	10.7	0.8	30.0	18.0	56.0	46.0	-26.0	-28.0
13.276	24.8	14.8	11.3	0.2	36.3	26.3	60.0	50.0	-23.7	-23.7
29.640	23.5	13.4	12.5	0.3	36.3	26.2	60.0	50.0	-23.7	-23.8