

INDEX OF SUBMITTED MEASURED DATA

This exhibit contains the measured data for this equipment as follows:

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EXHIBIT 6A – RF OUTPUT DATA

DC (battery) input power was measured for this test, AC Current values are provided for reference at a nominal 120 Vac input Voltage

HIGH POWER SETTING, FREQUENCY 438 MHz

Measured RF Output Power: 37.07 dBm = 5.09 Watts
Measured DC Voltage: 12.2 Volts
Measured DC Input Current: 1.48 Amperes, AC Current: 0.24 Amperes
Measured DC Input Power: 18.06 Watts

LOW POWER SETTING, FREQUENCY 438 MHz

Measured RF Output Power: 29.5 dBm = 0.891 Watts
Measured DC Voltage: 12.2 Volts
Measured DC Input Current: 0.80 Amperes, AC Current: 0.17 Amperes
Measured DC Input Power: 9.76 Watts

HIGH POWER SETTING, FREQUENCY 455 MHz

Measured RF Output Power: 37.35 dBm = 5.43 Watts
Measured DC Voltage: 12.2 Volts
Measured DC Input Current: 1.39 Amperes, AC Current: 0.22 Amperes
Measured DC Input Power: 16.96 Watts

LOW POWER SETTING, FREQUENCY 455 MHz

Measured RF Output Power: 29.00 dBm = 0.794 Watts
Measured DC Voltage: 12.2 Volts
Measured DC Input Current: 0.74 Amperes, AC Current: 0.16 Amperes
Measured DC Input Power: 9.84 Watts

HIGH POWER SETTING, FREQUENCY 470 MHz

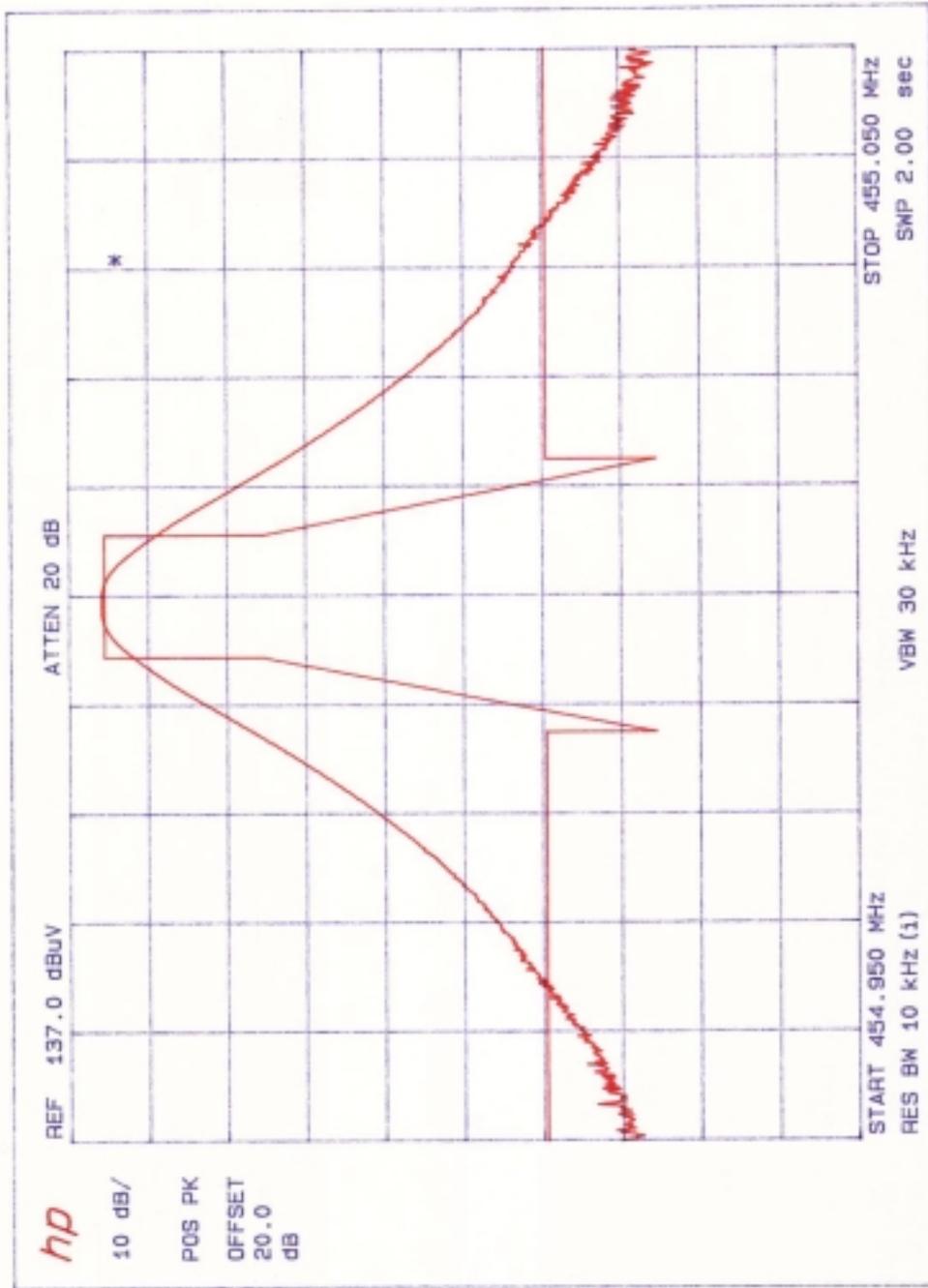
Measured RF Output Power: 36.72 dBm = 4.70 Watts
Measured DC Voltage: 12.2 Volts
Measured DC Input Current: 1.99 Amperes, AC Current: 0.25 Amperes
Measured DC Input Power: 19.03 Watts

LOW POWER SETTING, FREQUENCY 470 MHz

Measured RF Output Power: 27.8 dBm = 0.602 Watts
Measured DC Voltage: 12.2 Volts
Measured DC Input Current: 0.76 Amperes, AC Current: 0.16 Amperes
Measured DC Input Power: 9.27 Watts

EXHIBIT 6B OCCUPIED BANDWIDTH

6B-1 UNMODULATED CARRIER



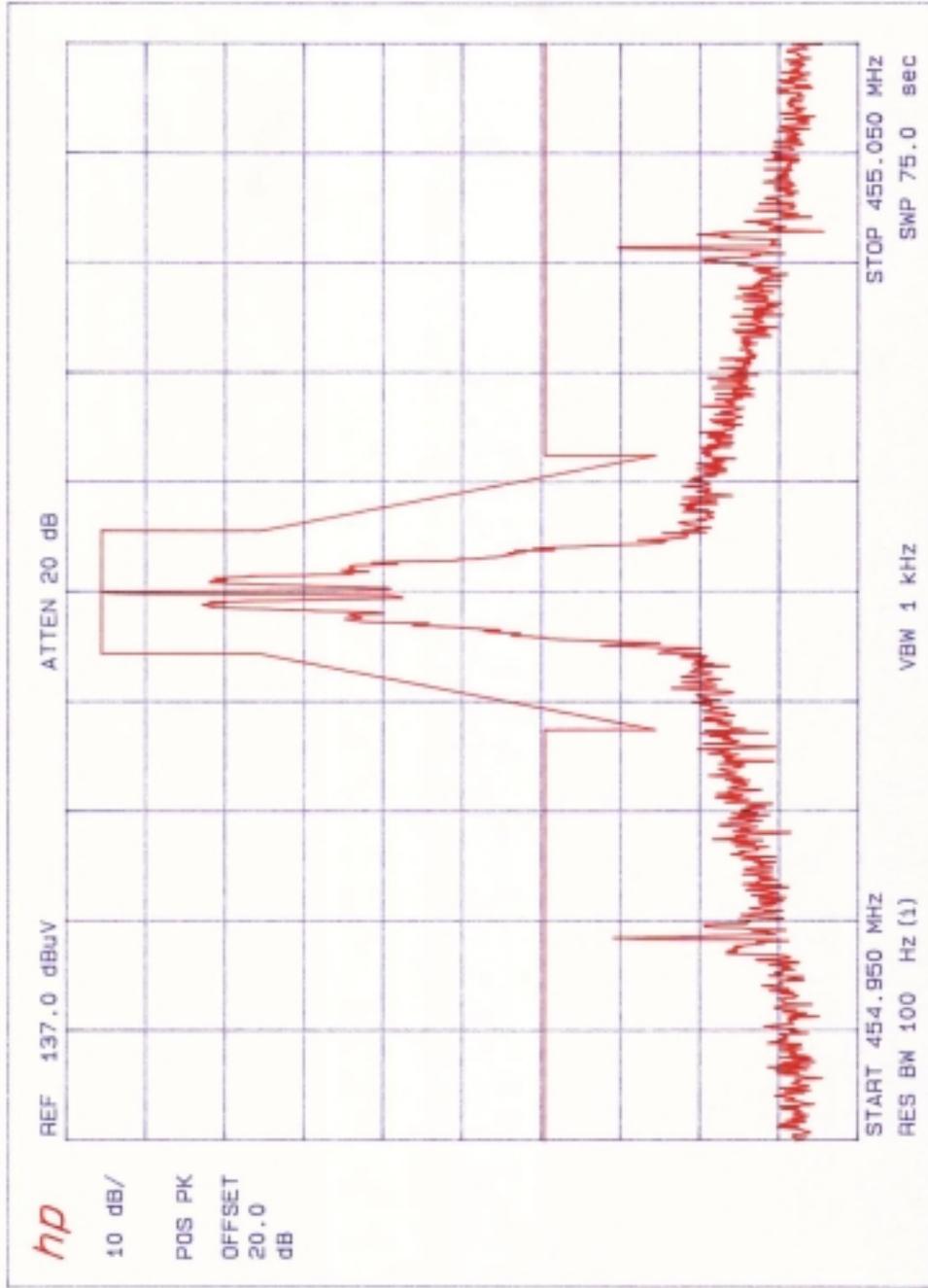
EMISSION MASK D, 12.5 KHz BW, 132.5 dBuV / 25.5 dBm power at S/A input

CENTER FREQUENCY: 455 MHz
VIDEO BANDWIDTH: 30 kHz
SWEEP TIME: 40 Sec. / 2 sec
REFERENCE LEVEL: 137 dBuV / 30 dBm

RESOLUTION BANDWIDTH: 10 kHz
SPAN: 100 kHz
VERTICAL SCALE: 10 dB/DIV
ATTENUATION: 20 dB INT/ 10 dB EXT

6B-2

DPSK 1200 BPS, 1.0 V pk-pk Input to radio, 2KHz Deviation

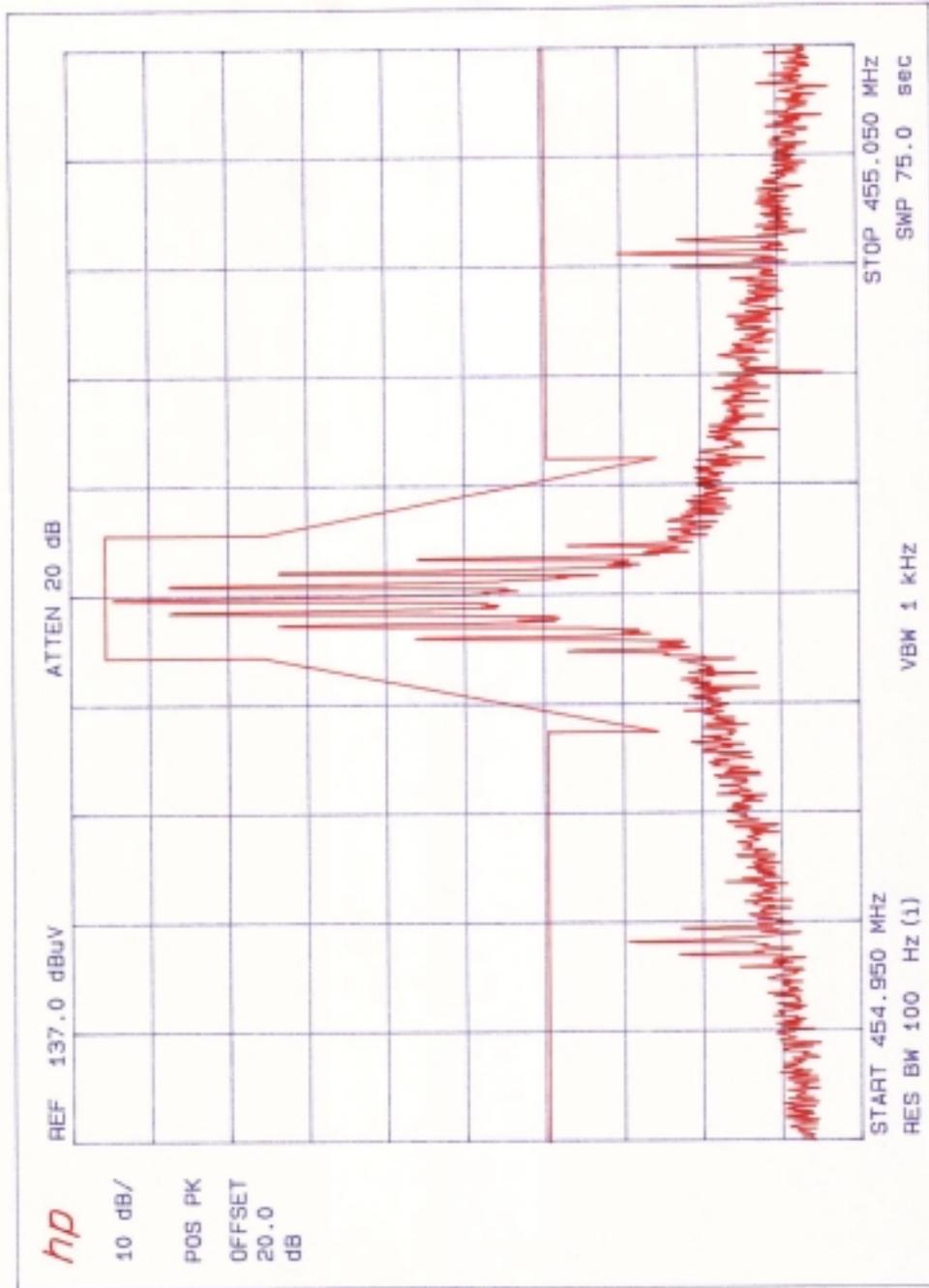


CENTER FREQUENCY: 455 MHz
VIDEO BANDWIDTH: 1 KHz
SWEEP TIME: 75 Sec
REFERENCE LEVEL: 137 dBuV / 30 dBm

RESOLUTION BANDWIDTH: 100 Hz
SPAN: 100 kHz
VERTICAL SCALE: 10 dB/div
ATTENUATION: INT 20 dB/ EXT 10 dB

6B-3

FSK 2400 BPS, 1.1V pk-pk Input to radio, 2KHz Deviation

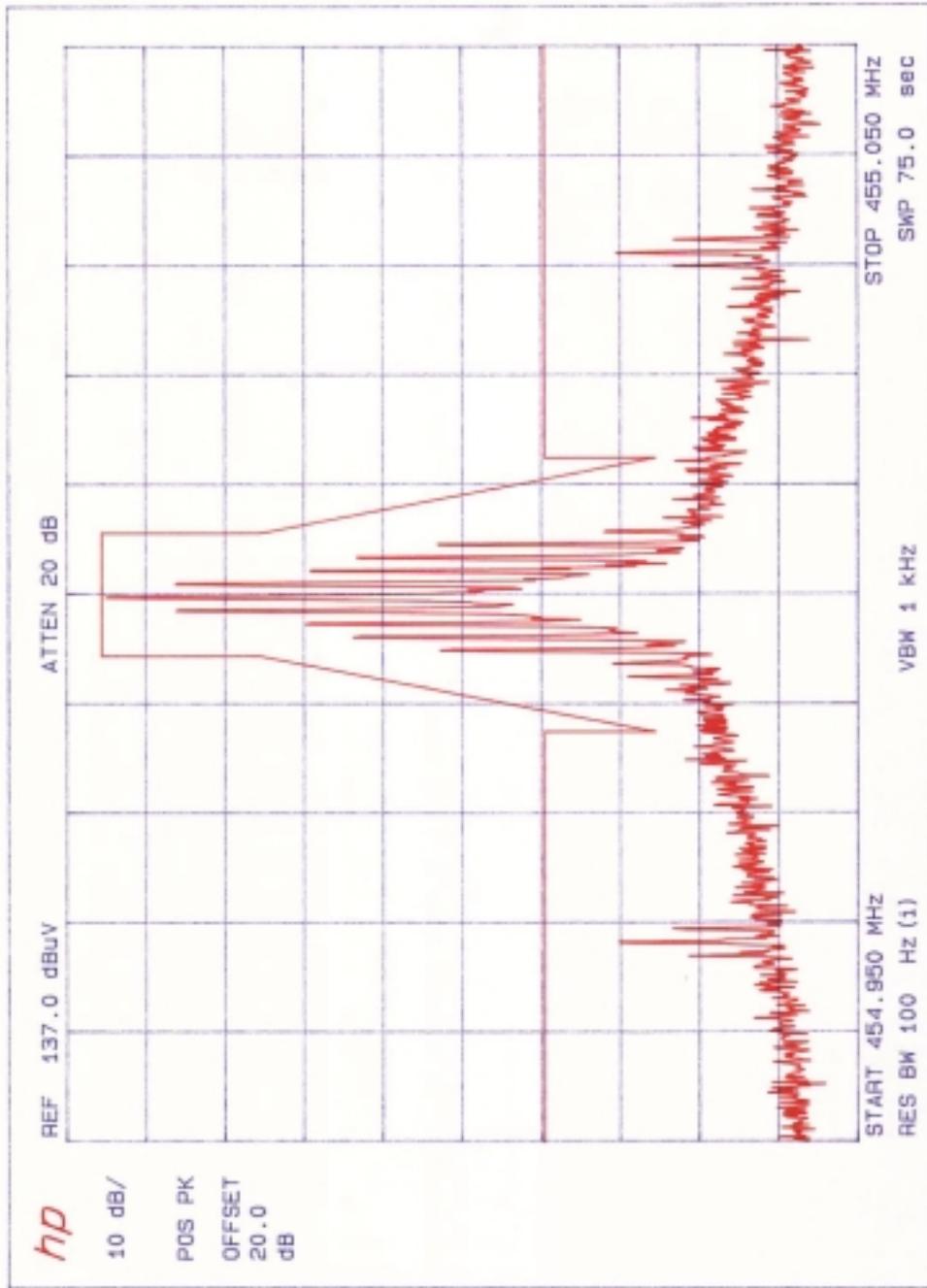


CENTER FREQUENCY: 455 MHz
VIDEO BANDWIDTH: 1 KHz
SWEEP TIME: 75 Sec
REFERENCE LEVEL: 137 dBuV / 30 dBm

RESOLUTION BANDWIDTH: 100 Hz
SPAN: 100 kHz
VERTICAL SCALE: 10 dB/div
ATTENUATION: INT 20 dB/ EXT 10 dB

6B-4

DFM 4800 BPS, 1.1V pk-pk Input to radio, 2KHz Deviation

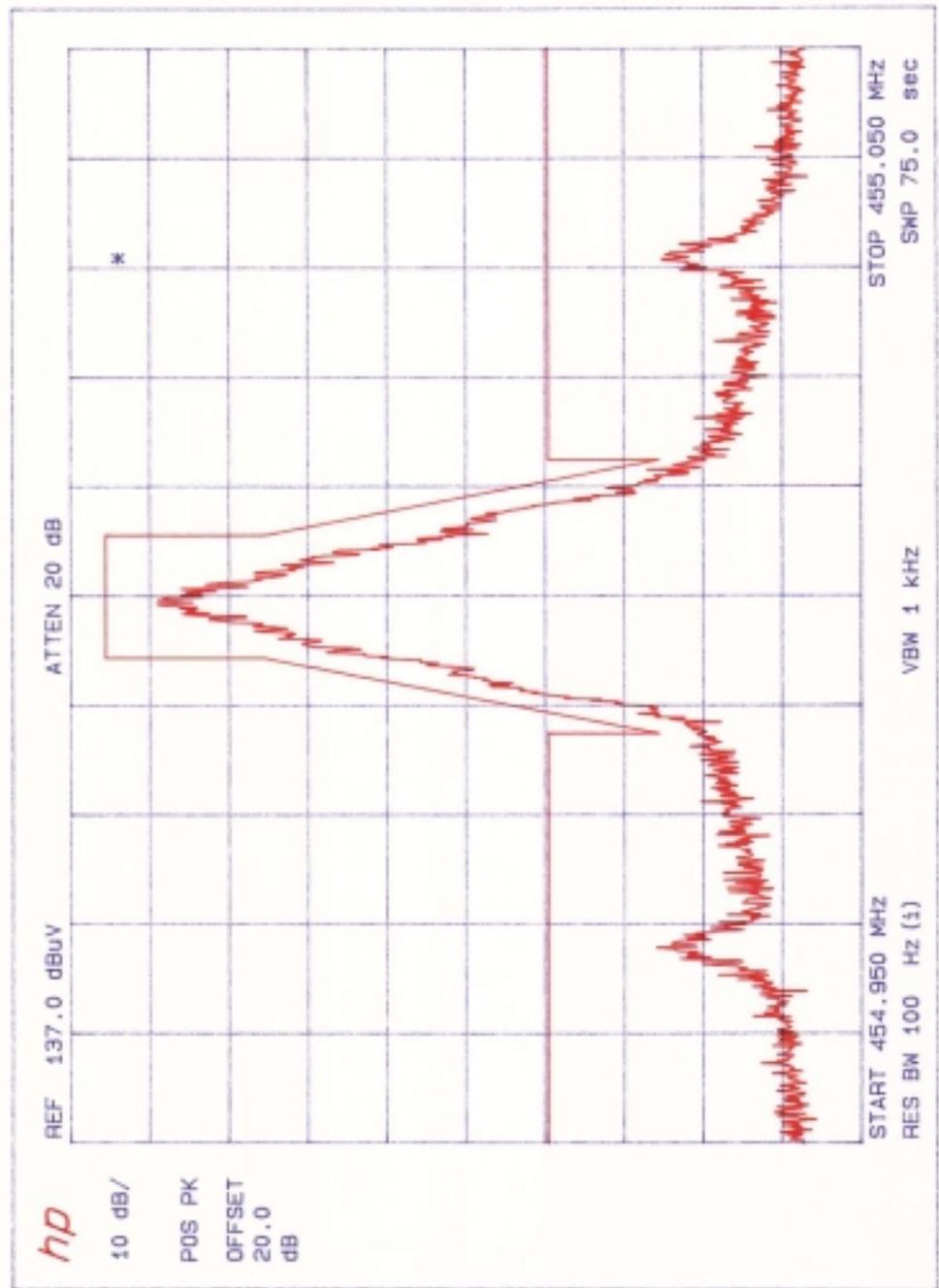


CENTER FREQUENCY: 455 MHz
VIDEO BANDWIDTH: 1 KHz
SWEEP TIME: 75 Sec
REFERENCE LEVEL: 137 dBuV / 30 dBm

RESOLUTION BANDWIDTH: 100 Hz
SPAN: 100 kHz
VERTICAL SCALE: 10 dB/div
ATTENUATION: INT 20 dB/ EXT 10 dB

6B-4

Dual Binary (COS) 9600 BPS, 1.16V pk-pk Input to radio, 2.3 KHz Deviation

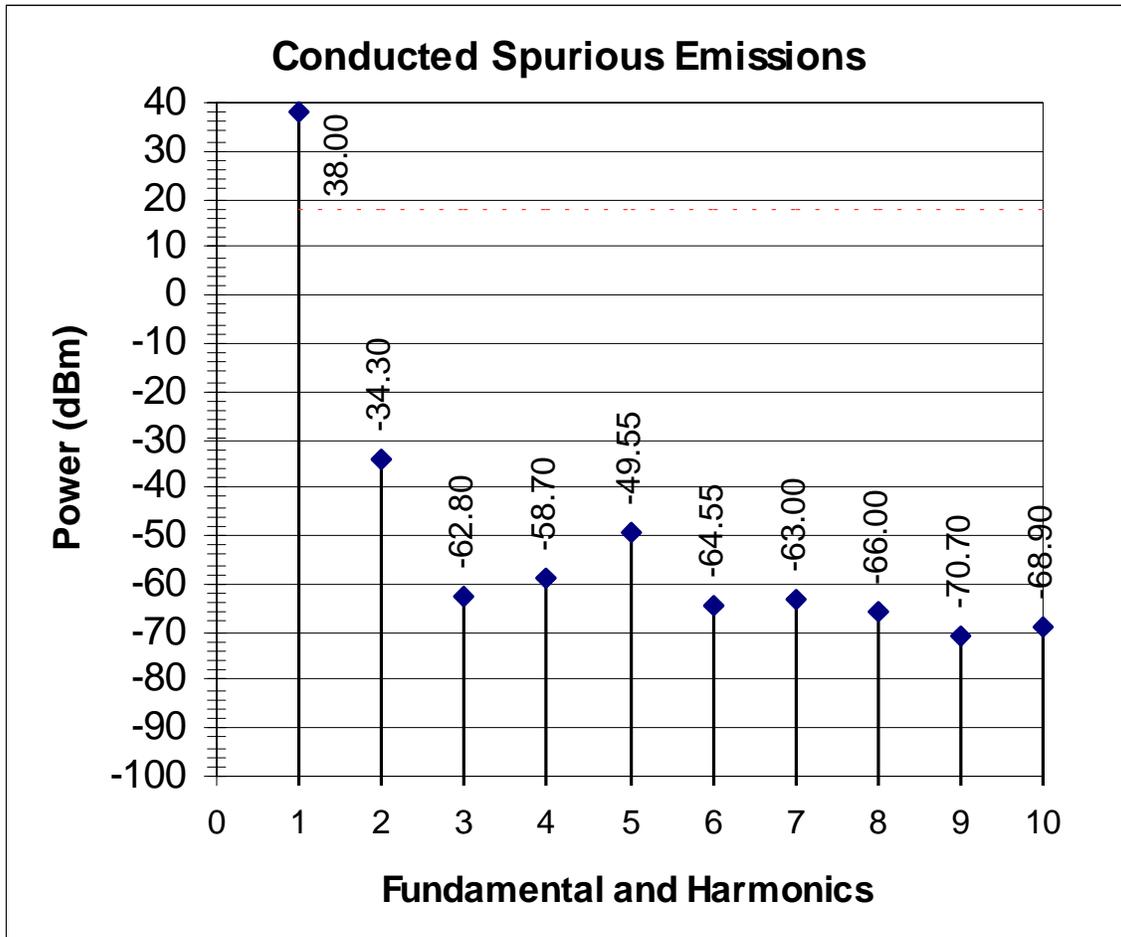


CENTER FREQUENCY: 455 MHz
VIDEO BANDWIDTH: 1 KHz
SWEEP TIME: 75 Sec
REFERENCE LEVEL: 137 dBuV / 30 dBm

RESOLUTION BANDWIDTH: 100 Hz
SPAN: 100 kHz
VERTICAL SCALE: 10 dB/div
ATTENUATION: INT 20 dB/ EXT 10 dB

EXHIBIT 6C CONDUCTED SPURIOUS EMISSIONS

6C-1 4 Watts, 438 MHz

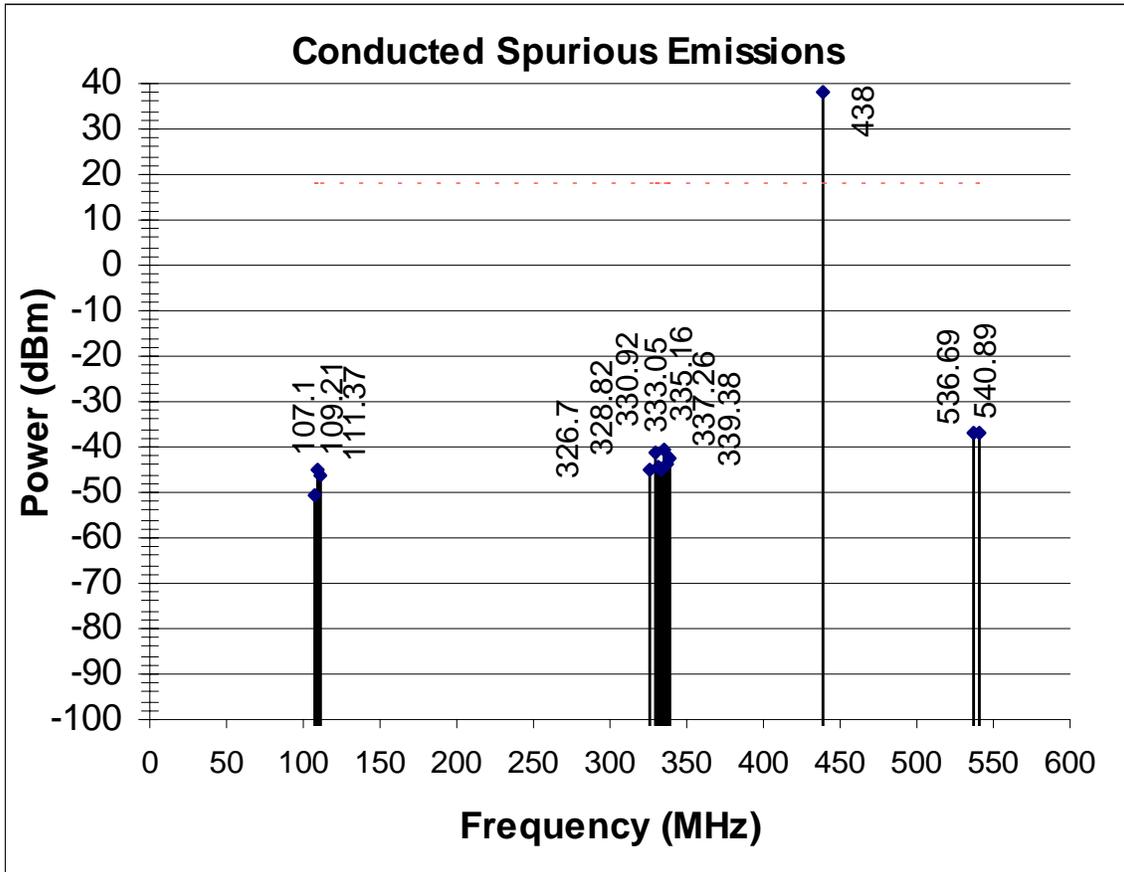


Freq (MHz)	Harmonic	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
438	1st	35.5	2.5	38
876	2nd	-38	3.7	-34.3
1314	3rd	-67.6	4.8	-62.8
1752	4th	-64.6	5.9	-58.7
2190	5th	-56.3	6.75	-49.55
2628	6th	-72	7.45	-64.55
3066	7th	-71.6	8.6	-63
3504	8th	-75.5	9.5	-66
3942	9th	-80.9	10.2	-70.7
4380	10th	-79.7	10.8	-68.9

Limit = 38 dBm – 20
= 18 dBm

6C-1

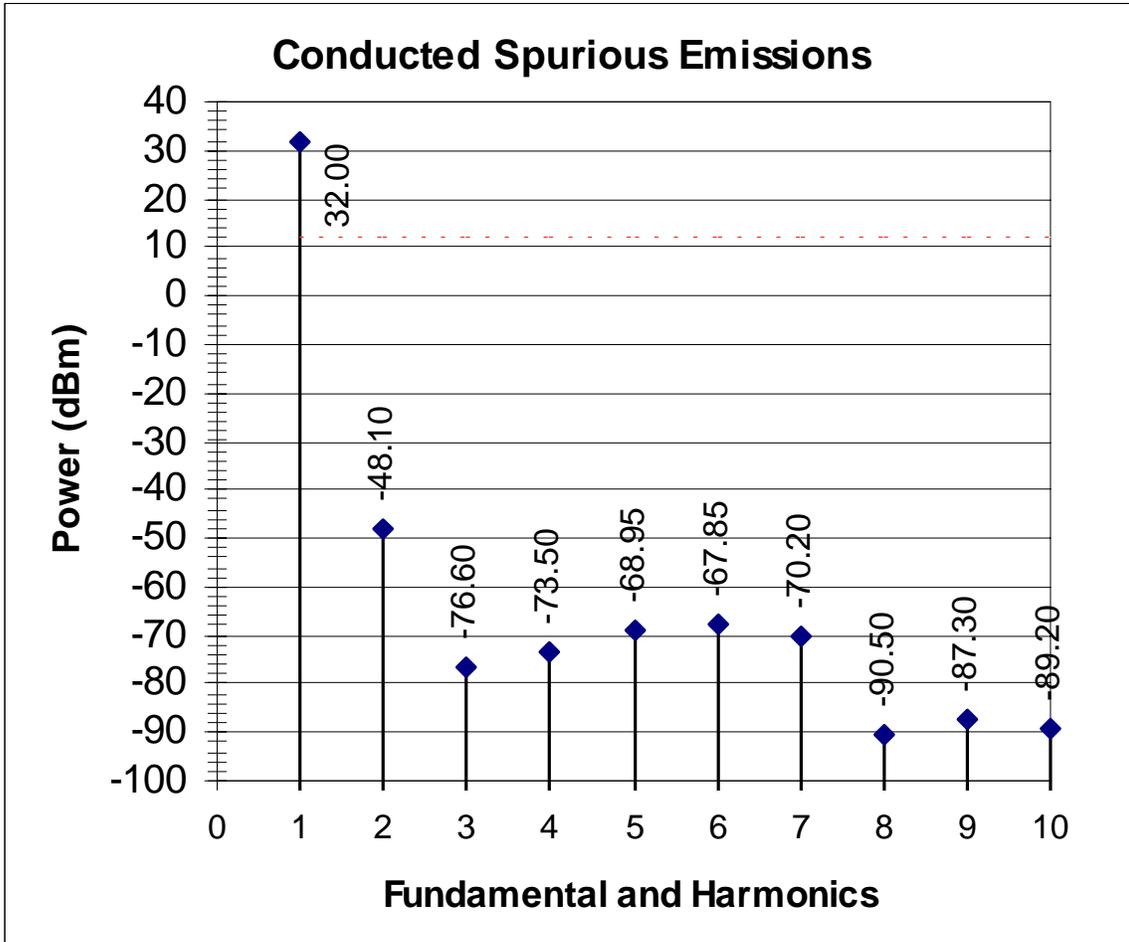
4 Watts, 408 MHz



Freq (MHz)	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
109.21	-46.4	1.4	-45
107.1	-51.9	1.4	-50.5
111.37	-47.7	1.4	-46.3
326.7	-47.1	2.2	-44.9
333.05	-47	2.2	-44.8
330.92	-46.8	2.2	-44.6
328.82	-43.7	2.2	-41.5
335.16	-43.1	2.2	-40.9
339.38	-44.4	2.2	-42.2
337.26	-46.1	2.2	-43.9
438	35.5	2.5	38
540.89	-39.6	2.9	-36.7
536.69	-39.9	2.9	-37

6C-2

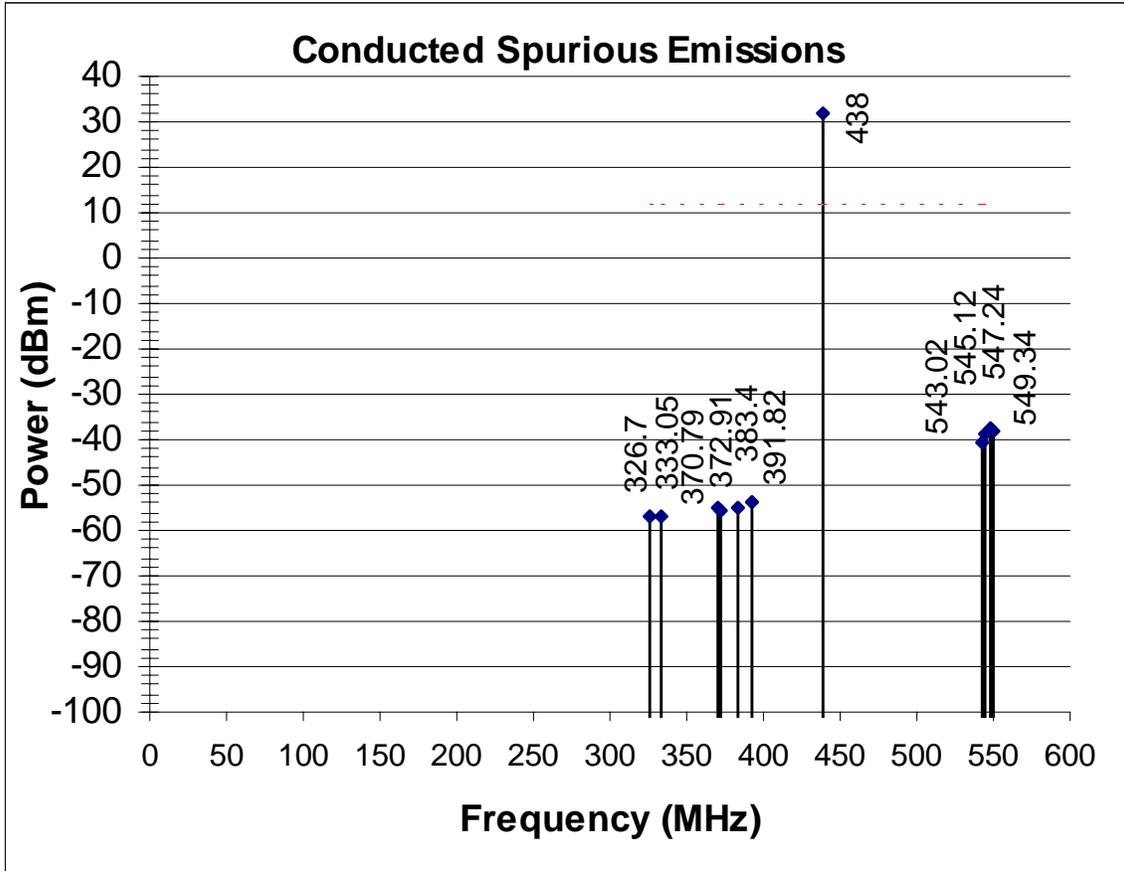
0.5 Watts, 438 MHz



Freq (MHz)	Harmonic	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
438	1st	29.5	2.5	32
876	2nd	-51.8	3.7	-48.1
1314	3rd	-81.4	4.8	-76.6
1752	4th	-79.4	5.9	-73.5
2190	5th	-75.7	6.75	-68.95
2628	6th	-75.3	7.45	-67.85
3066	7th	-78.8	8.6	-70.2
3504	8th	-100	9.5	-90.5
3942	9th	-97.5	10.2	-87.3
4380	10th	-100	10.8	-89.2

Limit = 32.0 dBm – 20 dB
 = 12 dBm

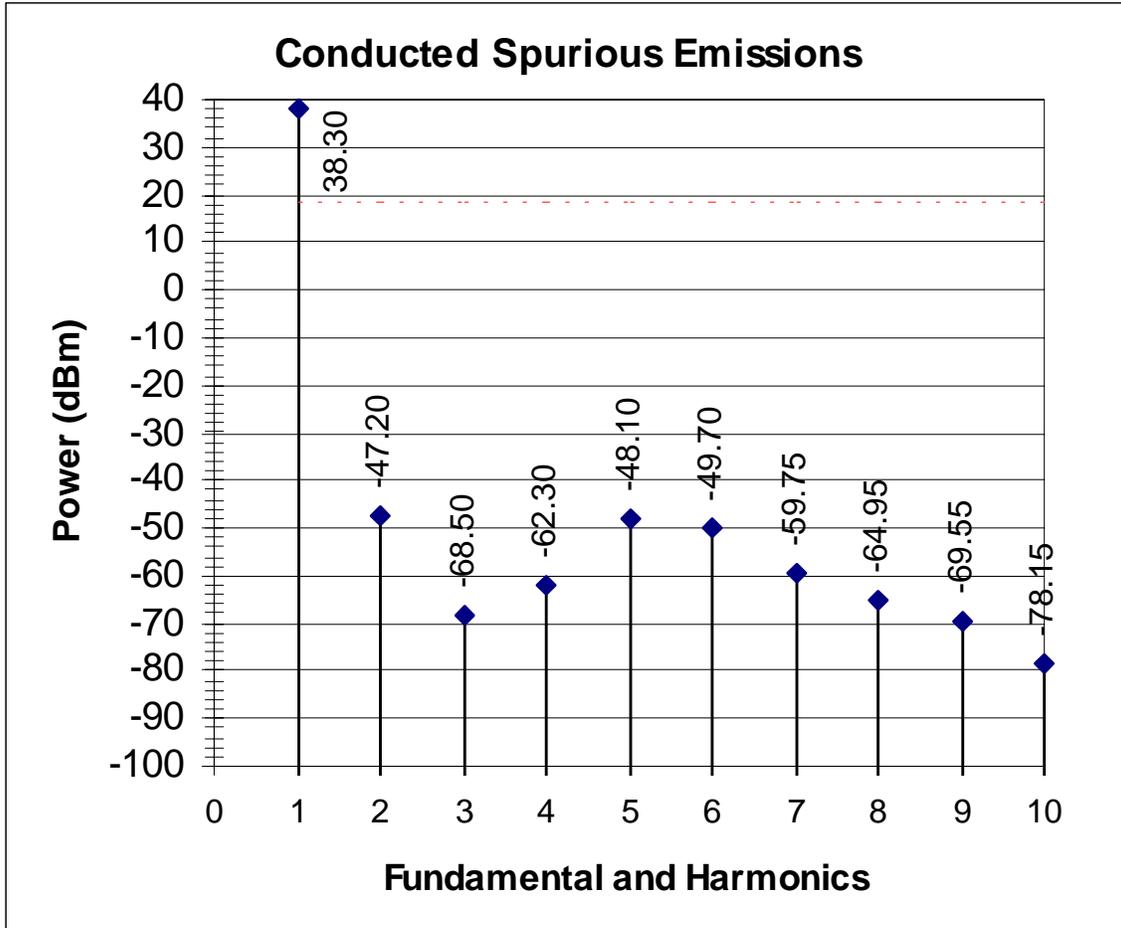
6C-2 0.5 Watts, 438 MHz



Freq (MHz)	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
326.7	-59.2	2.2	-57
333.05	-59.2	2.2	-57
370.79	-57.4	2.4	-55
372.91	-58	2.4	-55.6
383.4	-57.5	2.4	-55.1
391.82	-56.3	2.4	-53.9
438	29.5	2.5	32
543.02	-43.4	2.9	-40.5
545.12	-41.6	2.9	-38.7
547.24	-40.6	2.9	-37.7
549.34	-41.2	2.9	-38.3
555.02	-43.4	2.9	-40.5

6C-3

4.0 Watts, 455 MHz

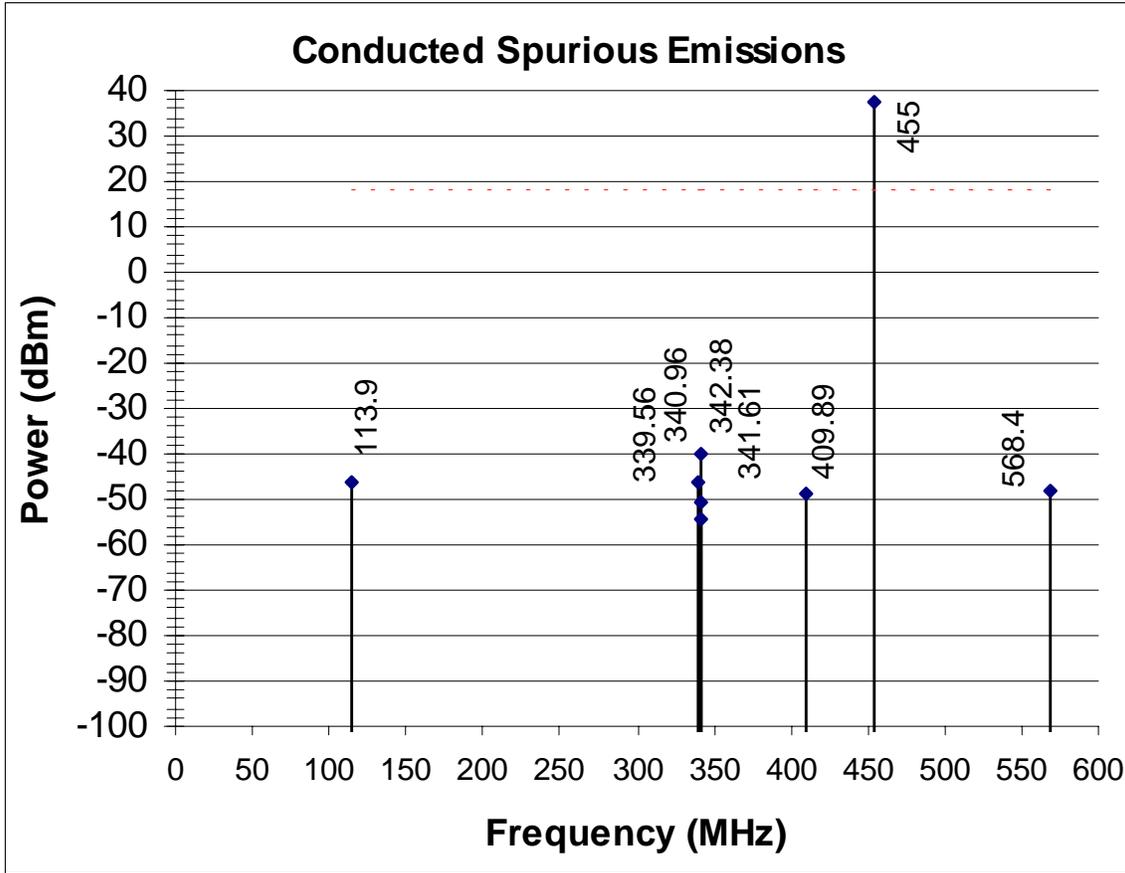


Freq (MHz)	Harmonic	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
455	1st	35.6	2.7	38.3
910	2nd	-50.7	3.5	-47.2
1365	3rd	-73.5	5	-68.5
1820	4th	-68.4	6.1	-62.3
2275	5th	-55	6.9	-48.1
2730	6th	-57.5	7.8	-49.7
3185	7th	-68.6	8.85	-59.75
3640	8th	-74.6	9.65	-64.95
4095	9th	-79.9	10.35	-69.55
4550	10th	-89.2	11.05	-78.15

Limit = 38.3 dBm – 20 dB
 = 18.3 dBm

6C-3

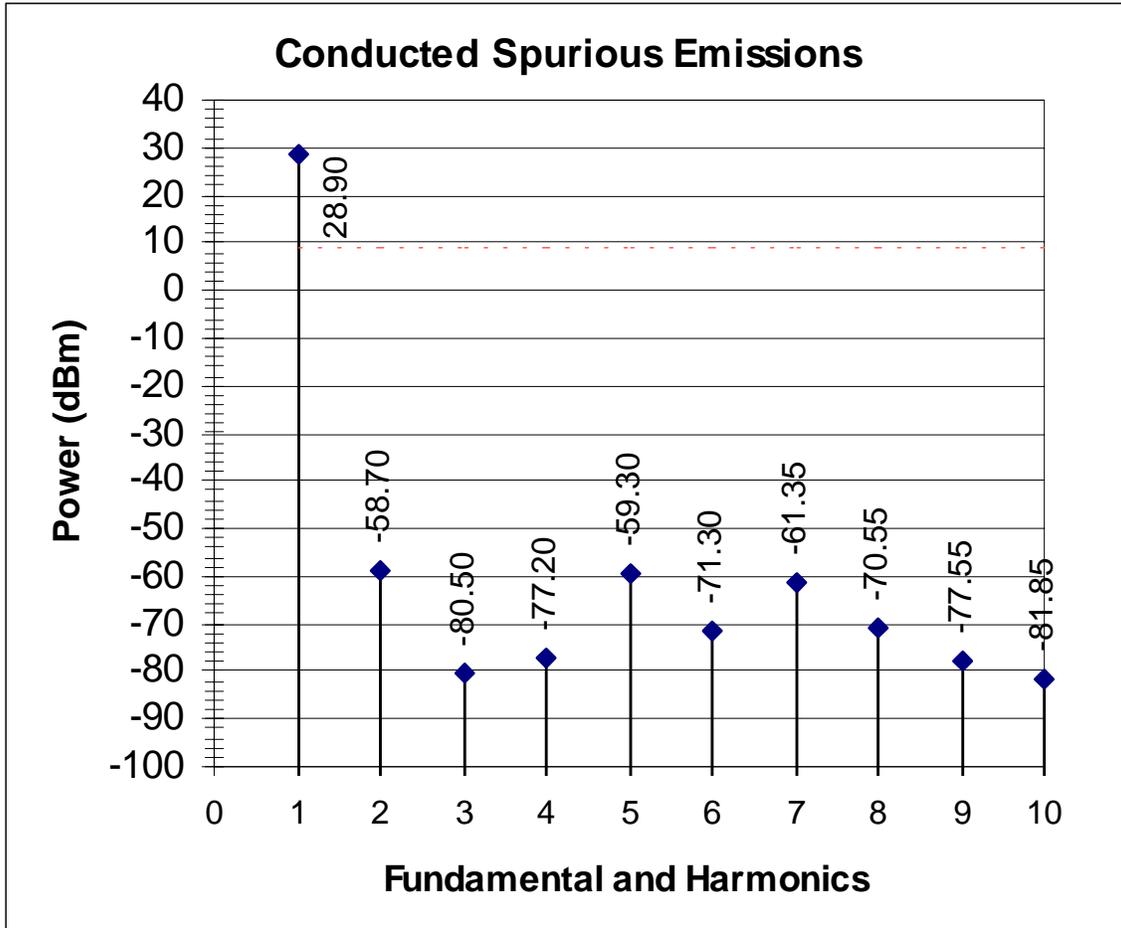
4.0 Watts, 455 MHz



Freq (MHz)	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
113.9	-47.8	1.5	-46.3
339.56	-48.6	2.1	-46.5
340.96	-56.6	2.1	-54.5
341.61	-42.3	2.1	-40.2
342.38	-53	2.1	-50.9
409.89	-51.3	2.5	-48.8
455	35.6	2.1	37.7
568.4	-51.4	3	-48.4

6C-4

0.5 Watts, 455 MHz

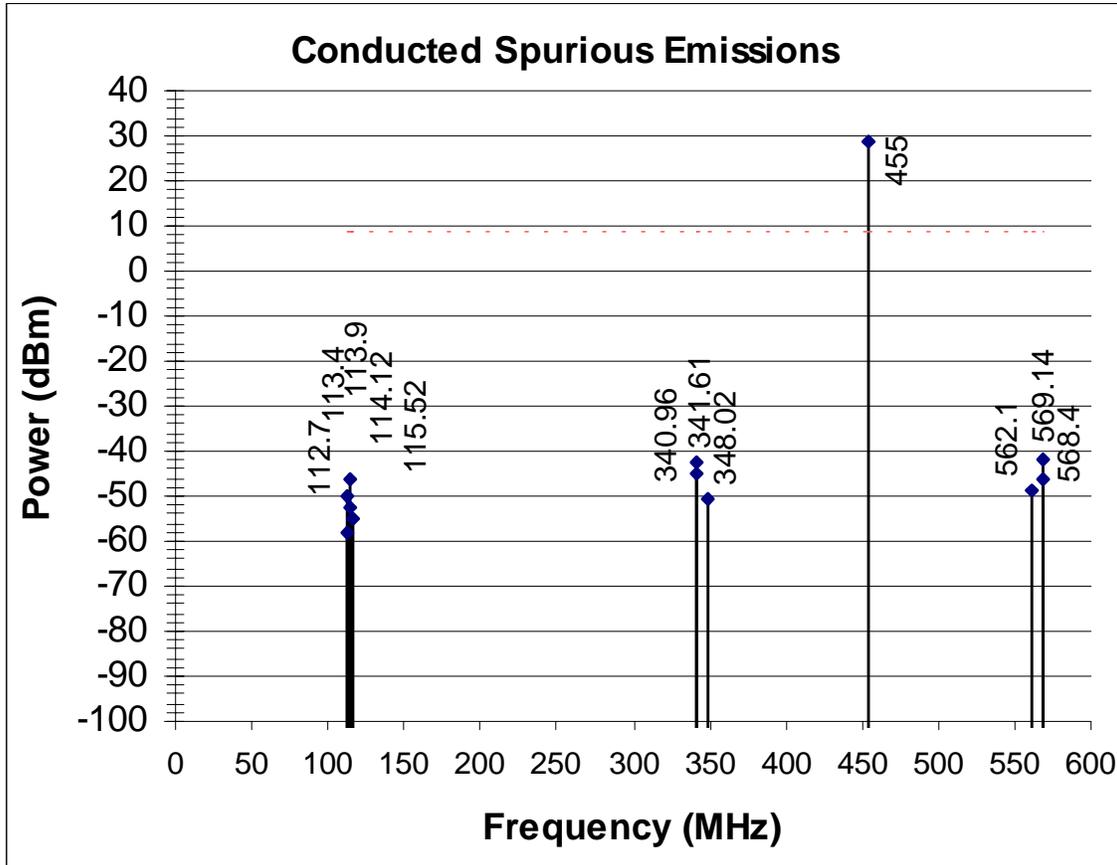


Freq (MHz)	Harmonic	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
455	1st	26.2	2.7	28.9
910	2nd	-62.2	3.5	-58.7
1365	3rd	-85.5	5	-80.5
1820	4th	-83.3	6.1	-77.2
2275	5th	-66.2	6.9	-59.3
2730	6th	-79.1	7.8	-71.3
3185	7th	-70.2	8.85	-61.35
3640	8th	-80.2	9.65	-70.55
4095	9th	-87.9	10.35	-77.55
4550	10th	-92.9	11.05	-81.85

Limit = 28.9 dBm – 20 dB
 = 8.9 dBm

6C-4

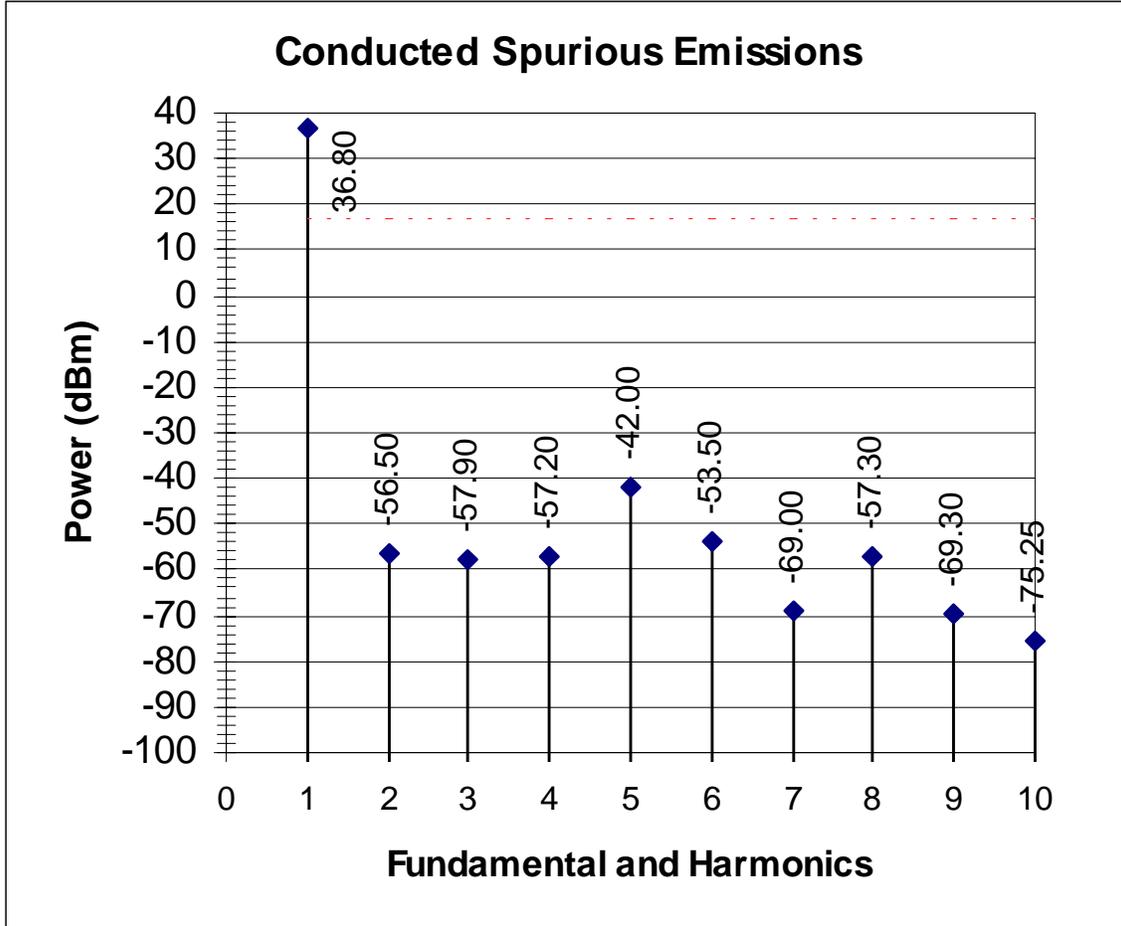
0.5 Watts, 455 MHz



Freq (MHz)	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
112.7	-59.9	1.5	-58.4
113.4	-51.5	1.5	-50
114.12	-54	1.5	-52.5
115.52	-56.2	1.5	-54.7
113.9	-47.8	1.5	-46.3
340.96	-47	2.1	-44.9
341.61	-44.8	2.1	-42.7
348.02	-52.5	2.1	-50.4
455	26.2	2.7	28.9
562.1	-51.8	3	-48.8
568.4	-45.1	3	-42.1
569.14	-49.4	3	-46.4

6C-5

4.0 Watts, 470 MHz

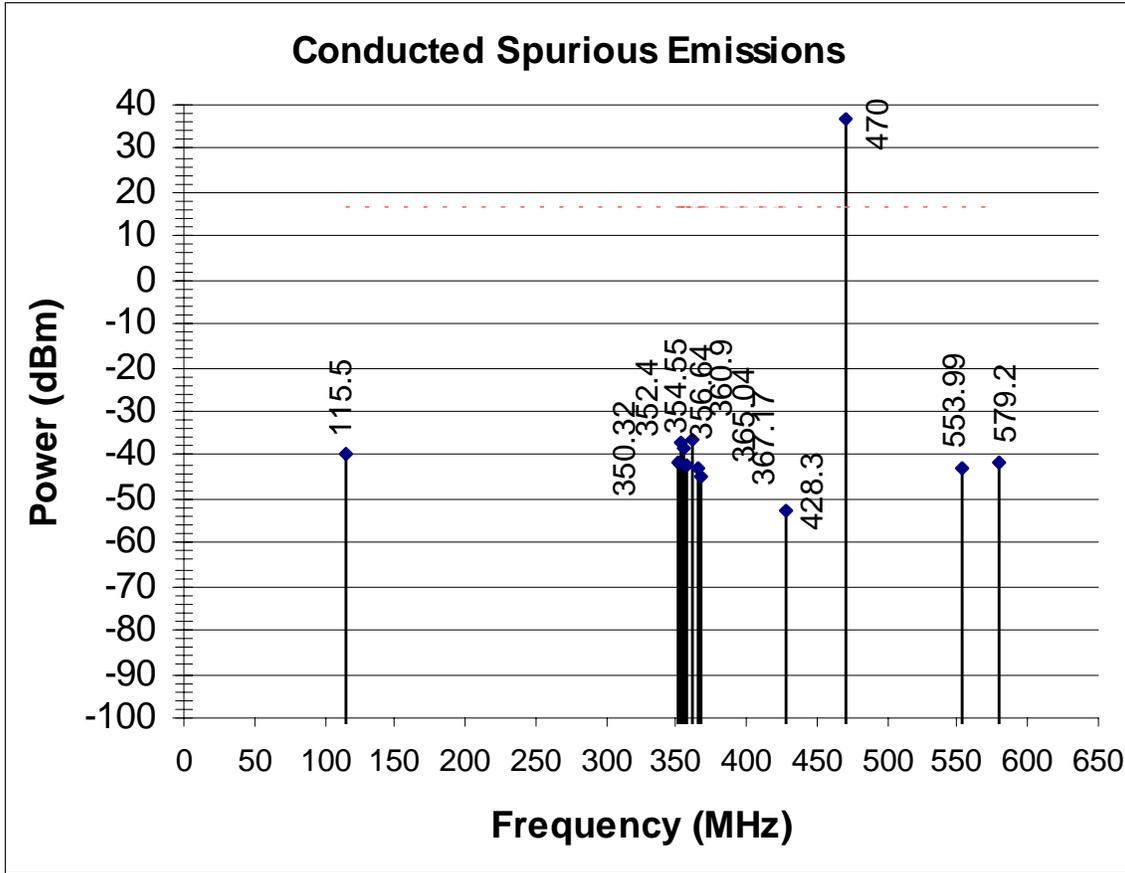


Freq (MHz)	Harmonic	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
470	1st	34.1	2.7	36.8
940	2nd	-60.4	3.9	-56.5
1410	3rd	-63	5.1	-57.9
1880	4th	-63.4	6.2	-57.2
2350	5th	-49	7	-42
2820	6th	-61.6	8.1	-53.5
3290	7th	-78.1	9.1	-69
3760	8th	-67	9.7	-57.3
4230	9th	-79.7	10.4	-69.3
4700	10th	-86.4	11.15	-75.25

Limit = 36.8 dBm – 20 dB
 = 16.8 dBm

6C-5

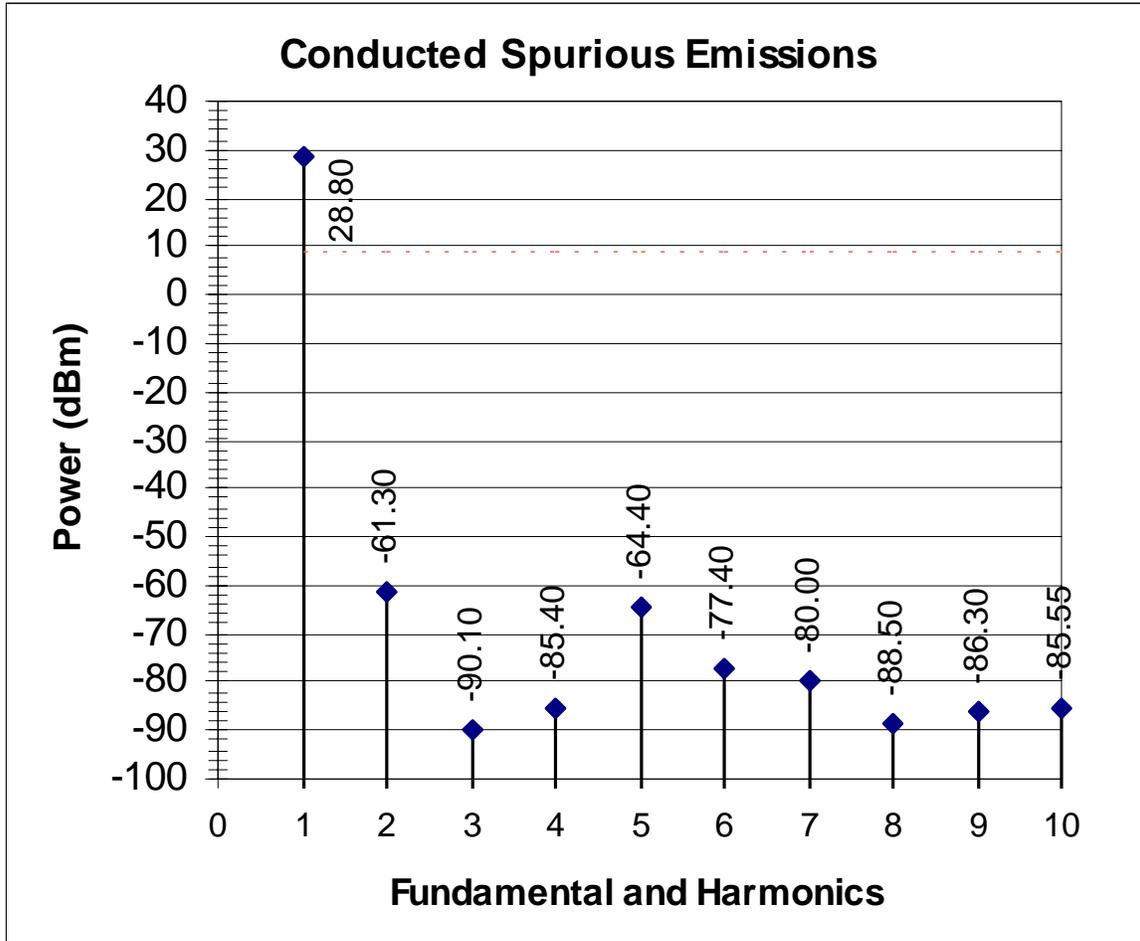
4.0 Watts, 470 MHz



Freq (MHz)	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
115.5	-41.5	1.5	-40
350.32	-43.8	2.4	-41.4
352.4	-39.6	2.4	-37.2
354.55	-40.9	2.4	-38.5
356.64	-44.4	2.4	-42
360.9	-39.1	2.4	-36.7
365.04	-45.3	2.4	-42.9
367.17	-47.4	2.4	-45
428.3	-55.5	2.5	-53
470	34.1	2.7	36.8
553.99	-45.9	2.9	-43
579.2	-44.3	2.9	-41.4

6C-6

0.5 Watts, 470 MHz

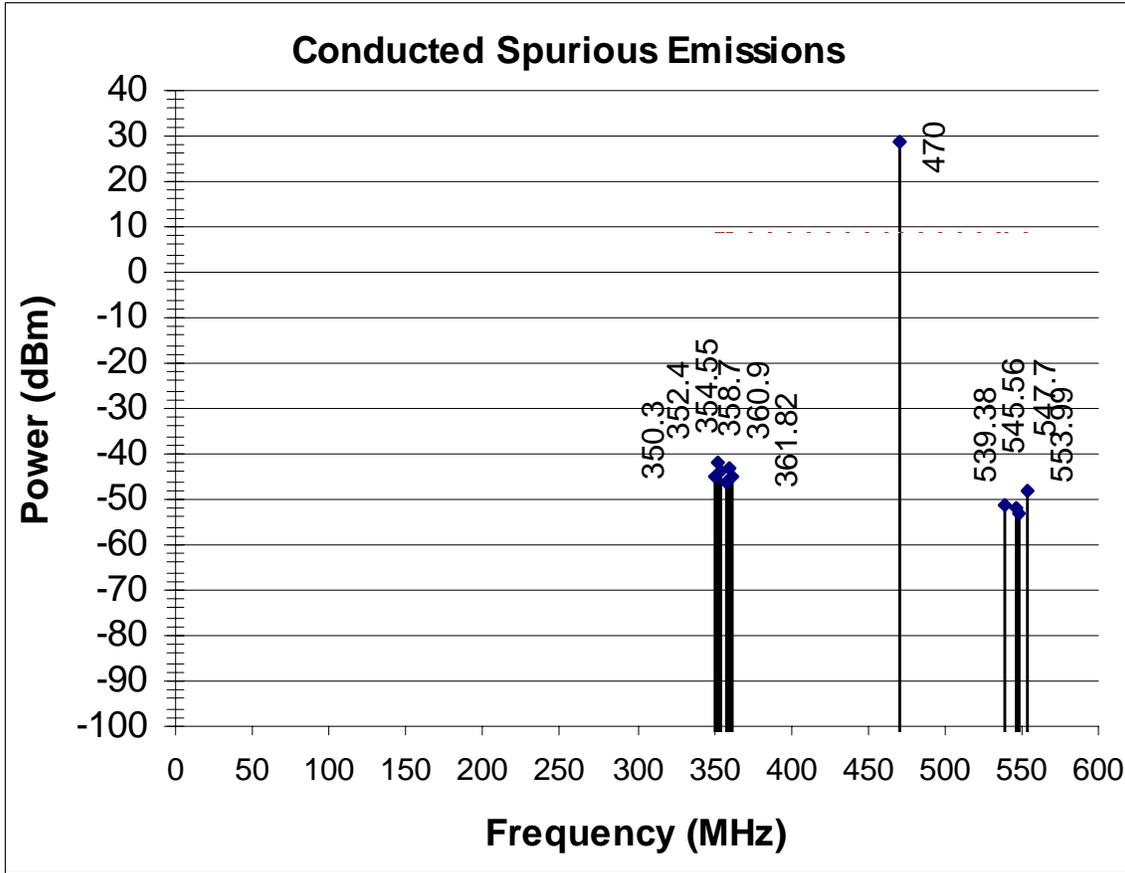


Freq (MHz)	Harmonic	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
470	1st	26.1	2.7	28.8
940	2nd	-65.2	3.9	-61.3
1410	3rd	-95.2	5.1	-90.1
1880	4th	-91.6	6.2	-85.4
2350	5th	-71.4	7	-64.4
2820	6th	-85.5	8.1	-77.4
3290	7th	-89.1	9.1	-80
3760	8th	-98.2	9.7	-88.5
4230	9th	-96.7	10.4	-86.3
4700	10th	-96.7	11.15	-85.55

Limit = 28.8 dBm - 20 dB
 = 8.8 dBm

6C-6

0.5 Watts, 470 MHz



Freq (MHz)	Uncor. Signal (dB)	Cable Loss (dB)	Signal (dBm)
350.3	-47.6	2.4	-45.2
352.4	-44	2.4	-41.6
354.55	-46	2.4	-43.6
358.7	-48.5	2.4	-46.1
360.9	-45.3	2.4	-42.9
361.82	-47.6	2.4	-45.2
470	26.1	2.7	28.8
539.38	-53.9	2.9	-51
545.56	-54.9	2.9	-52
547.7	-56	2.9	-53.1
553.99	-51	2.9	-48.1

EXHIBIT 6D Powerline Conducted Emissions (2 Graphs)

6D-1 4 Watts, 419 MHz, Line 1
 6D-2 4 Watts, 419 MHz, Line 2

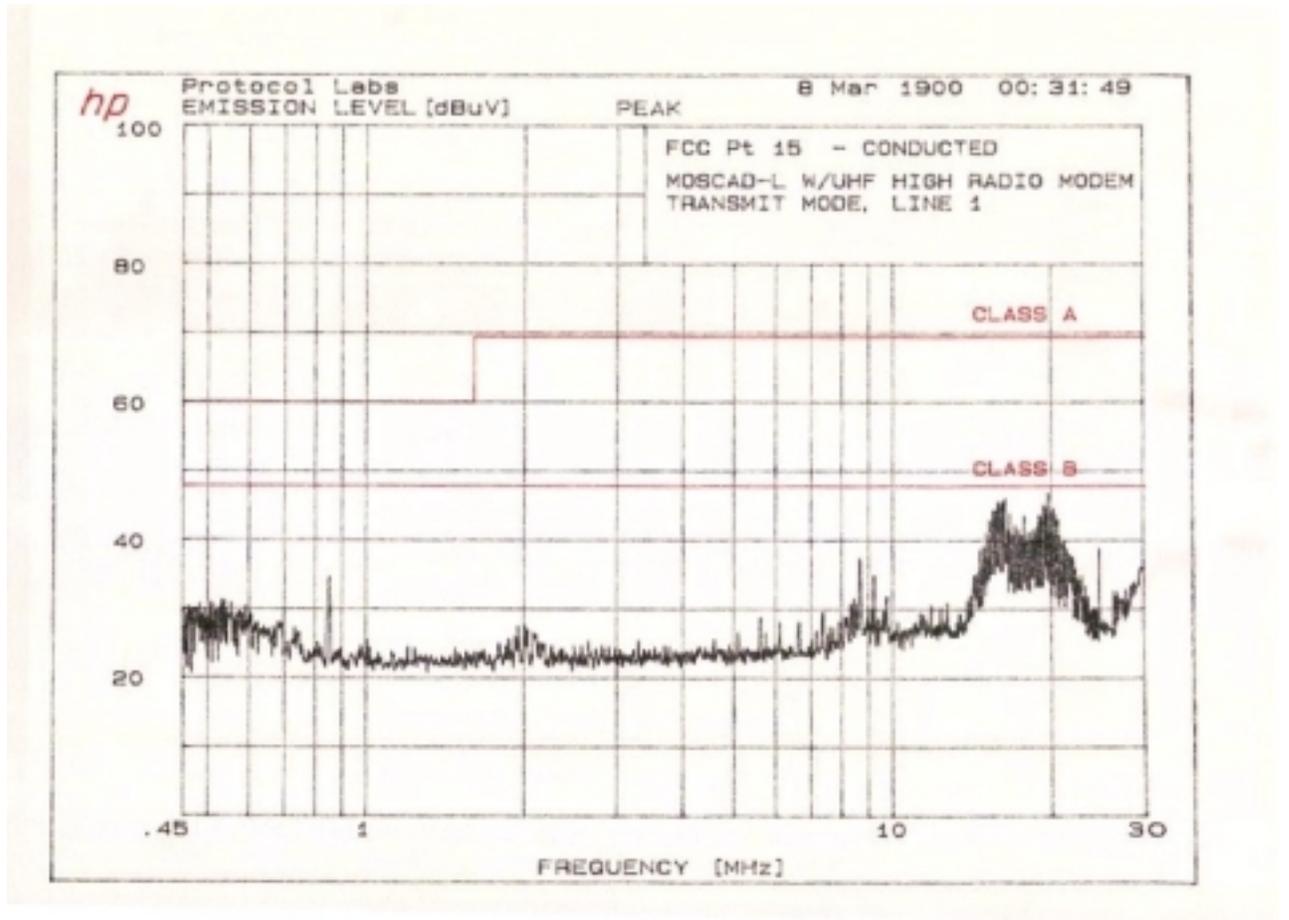
DataTables

Line 1 Conducted Emissions

Frequency MHz	Peak(dBuV) / Q-Peak (dBuV)	Peak Δ-Limit / Q-Peak Δ-Limit
19.72	46.8	-1.2
16.33	46	-2.0
15.85	45.5	-2.5
16.12	45.4	-2.6
19.31	45.1	-2.9
19.56	44.9	-3.1

Line 2 Conducted Emissions

Frequency MHz	Peak(dBuV) / Q-Peak (dBuV)	Peak Δ-Limit / Q-Peak Δ-Limit
19.64	48.0 / 42.2	0 / - 5.8
19.15	46.4	-1.6
18.99	46.3	-1.7
16.33	45.9	-2.1
18.75	45.8	-2.2
16.12	45.6	-2.4



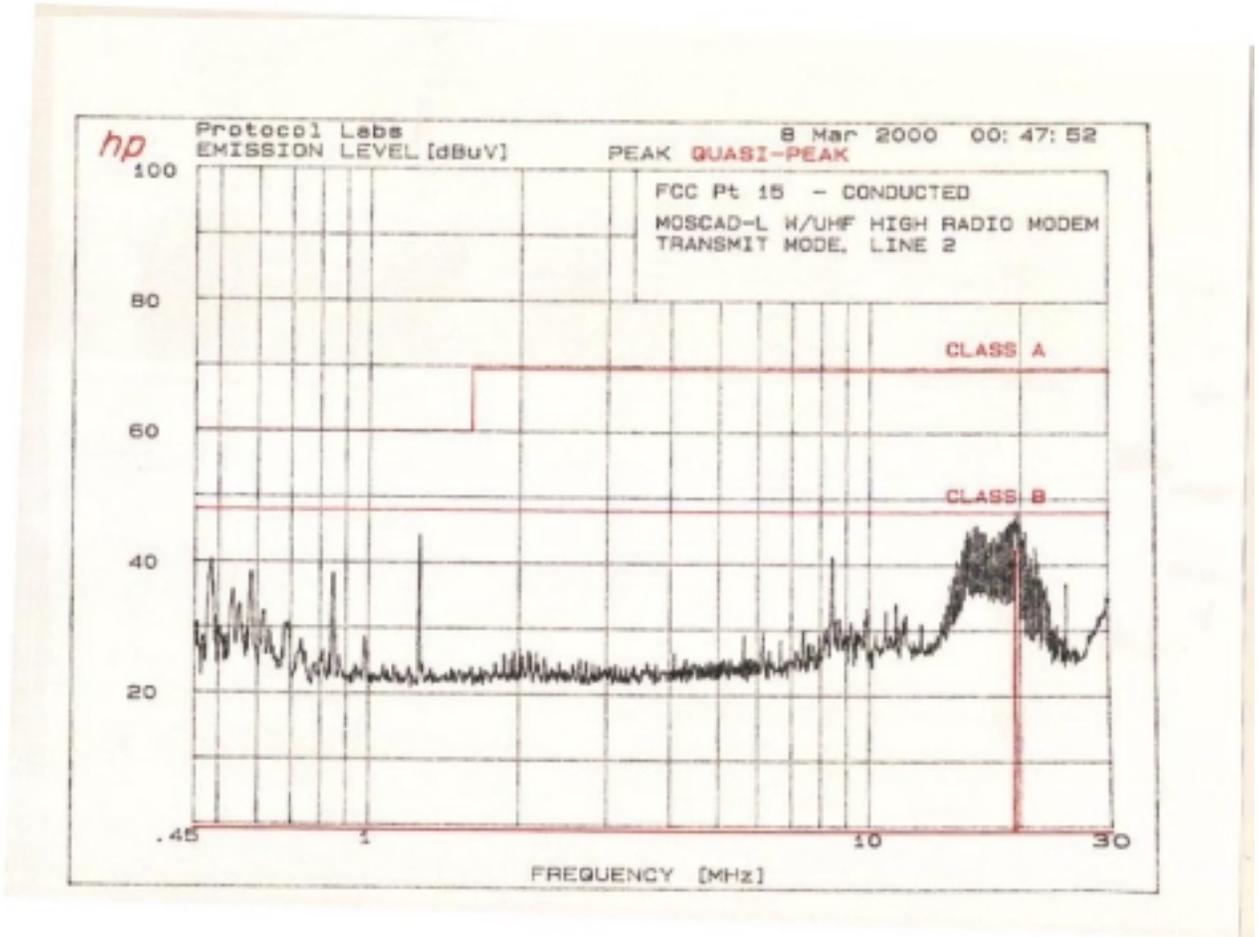


EXHIBIT 6E Radiated Spurious Emissions

RADIATED SPURIOUS EMISSIONS

HIGH POWER, 455.0 MHz, HORIZONTAL AND VERTICAL POLARIZATION
OUTPUT POWER = 4.0 WATTS

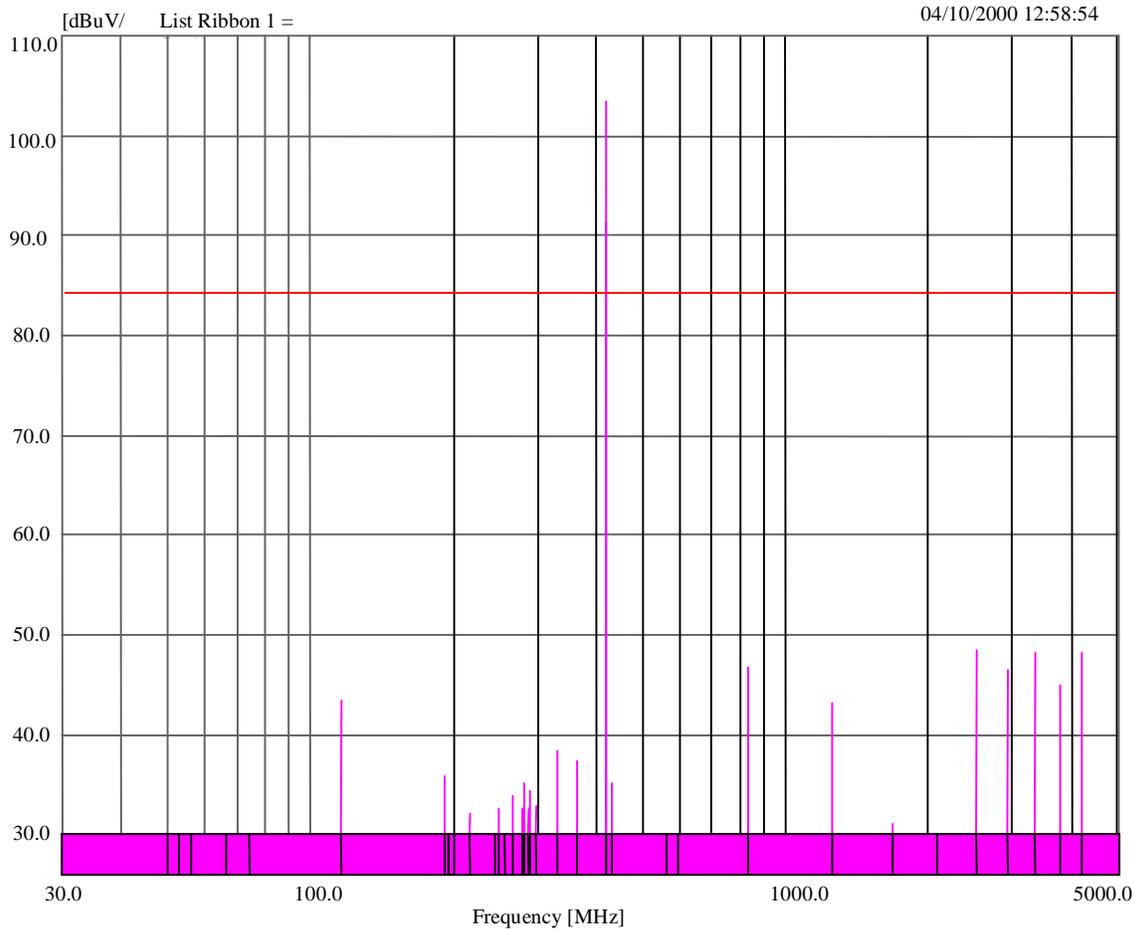


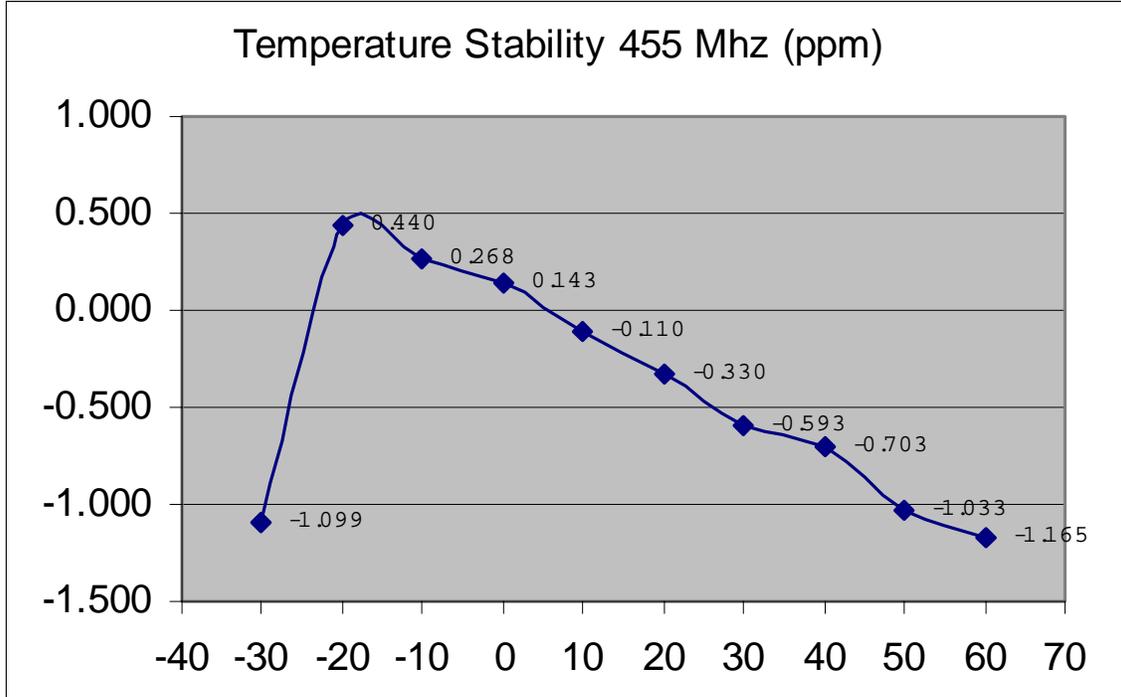
EXHIBIT 6E Radiated Spurious Emissions

Limit: 106.58 dBm – 20 dB = 86.58 dBm

Frequency (MHz)	Polarity	Uncor-Pk (dBuV)	Tot Corr (dB)	Peak (dBuV/m)	DelLim-Pk (dB)
43.817610	Vert	25.00	9.19	34.19	-52.39
45.500000	Vert	15.30	13.04	28.34	-58.24
66.090797	Vert	13.20	9.93	23.13	-63.45
91.000000	Vert	15.30	13.04	28.34	-58.24
111.732608	Vert	19.20	11.31	30.51	-56.07
116.180933	Vert	24.80	11.20	36.00	-50.58
124.146042	Vert	19.40	11.08	30.48	-56.1
128.945108	Vert	22.20	11.05	33.25	-53.33
132.733960	Vert	25.20	11.23	36.43	-50.15
136.274989	Vert	20.20	11.47	31.67	-54.91
144.528651	Vert	20.50	11.96	32.46	-54.12
157.507316	Vert	22.60	12.59	35.19	-51.39
177.452168	Vert	25.00	12.91	37.91	-48.67
180.796664	Vert	30.80	12.90	43.70	-42.88
182.517742	Vert	32.00	12.89	44.89	-41.69
190.604821	Vert	20.30	12.88	33.18	-53.4
195.227756	Vert	15.30	13.04	28.34	-58.24
215.729389	Horz	23.50	14.04	37.54	-49.04
232.204669	Horz	14.80	14.72	29.52	-57.06
265.416072	Horz	16.60	15.78	32.38	-54.2
298.480804	Horz	11.90	17.28	29.18	-57.4
331.798322	Horz	18.20	18.40	36.60	-49.98
364.856341	Horz	14.50	19.20	33.70	-52.88
431.327471	Horz	10.10	20.22	30.32	-56.26
454.999998	Vert	85.80	20.78	106.58	20
497.566121	Horz	11.00	21.66	32.66	-53.92
595.064743	Horz	5.50	24.29	29.79	-56.79
909.999997	Vert	11.10	28.49	39.59	-46.99
1364.998830	Vert	24.40	21.35	45.75	-40.83
1819.998830	Vert	13.10	22.40	35.50	-51.08
2274.995378	Vert	2.50	23.50	25.0	-61.58
2729.988459	Vert	22.40	24.57	46.97	-39.61
3184.990653	Vert	21.80	25.89	47.69	-38.89
3639.994138	Vert	22.00	26.60	48.60	-37.98
4094.999431	Vert	23.10	25.85	48.95	-37.63
4549.993980	Vert	22.50	24.96	47.46	-39.12

EXHIBIT 6F Frequency Stability (3 Graph)

6F-1 Frequency Stability vs. Temperature

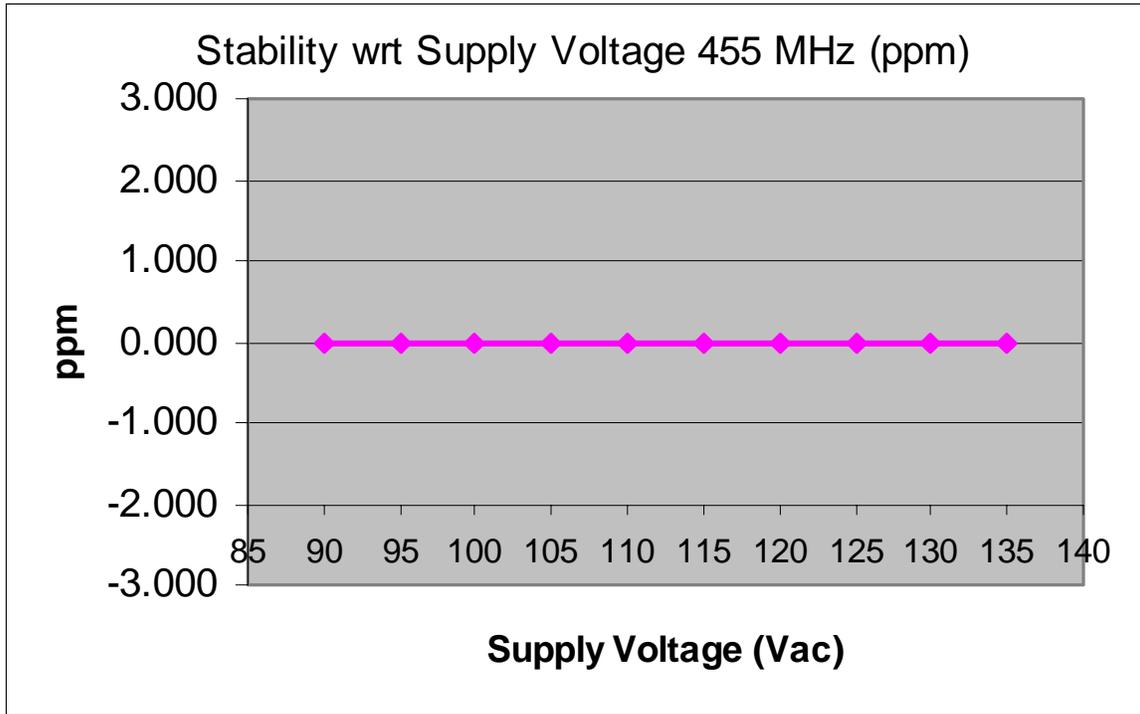


FREQUENCY STABILITY VS. TEMPERATURE
SPECIFIED LIMITS: +/- 1.5 PPM (-30 TO +60 DEGREES C)

Temp (deg C)	Stability (ppm)	Deviation (MHz)
-30	-1.099	-0.0005
-20	0.440	0.0002
-10	0.268	0.000122
0	0.143	0.000065
10	-0.110	-0.00005
20	-0.330	-0.00015
30	-0.593	-0.00027
40	-0.703	-0.00032
50	-1.033	-0.00047
60	-1.165	-0.00053

6F-2 Frequency Stability vs. Voltage

FREQUENCY STABILITY VS. SUPPLY VOLTAGE
REFERENCE 0% = 115 Vac



6F-3 Transient Behavior on Power-up

Frequency Stability at T_{on} showing stable frequency at 50 μ S

