

2.8 Peak Radiated Spurious Emission in the Frequency Range 30 -25000 MHz (FCC Section 15.247(c))

The EUT was hop-stopped and when possible, placed into a continuous transmit mode of operation. A preliminary scan was performed on the EUT to determine frequencies that were caused by the transmitter portion of the product. Significant emissions that fell within restricted bands were then measured on an OAT's site. Radiated measurements below 1 GHz were tested with a RBW = 120 kHz. Radiated measurements above 1 GHz were measured using a RBW = VBW = 1 MHz. The results of peak radiated spurious emissions falling within restricted bands are given in Table 4a –4c and Figure 4a – Figure 4c.

Table 4a. PEAK RADIATED SPURIOUS EMISSIONS (Low)

Radiated Emissions									
Test By:	Test:	FCC Part 15 - Peak Harmonic (Low)				Client:	Ferguson Manufacturing Company, Inc.		
A.T.	Project:	06-0198		Class:	B	Model:	RFM10		
Frequency	Test Data	AF	Test Data	AF+CA-AMP	Results	Limits	Distance /	Margin	PK = n
(MHz)	(dBm)	Table	(dBuV)	(dB)	(uV/m)	(uV/m)	Polarity	(dB)	/ QP
904.00	-24.9	1HN3mV	82.1	24.8	222509.7		3m./VERT		PK
1807.88	-56.6	1HN3mV	50.4	-4.8	191.8	22251.0	3m./VERT	41.3	PK
2712.05	-54.3	1HN3mV	52.7	-1.7	355.7	5000.0	3m./VERT	23.0	PK
3616.13	-64.4	1HN3mV	42.6	2.2	172.8	5000.0	3m./VERT	29.2	PK
4519.93	-54.3	1HN3mV	52.7	4.2	694.3	5000.0	3m./VERT	17.1	PK
5424.03	-61.1	1HN3mV	45.9	6.8	430.0	5000.0	3m./VERT	21.3	PK
6327.9	-45.1	1HN3mV	61.9	8.0	3132.2	22251.0	3m./VERT	17.0	PK
7231.78	-60.6	1HN3mV	46.4	9.6	632.5	22251.0	3m./VERT	30.9	PK
8135.9	-65.6	1HN3mH	41.4	11.4	433.1	5000.0	3m./HORZ	21.2	PK
9039.85	-64.9	1HN3mV	42.1	12.0	509.8	5000.0	3m./VERT	19.8	PK
9944	-64.6	1HN3mV	42.4	13.3	613.7	22251.0	3m./VERT	31.2	PK
10848.33	-67.0	1HN3mV	40.0	15.3	579.5	5000.0	3m./VERT	18.7	PK
11752.4	-67.0	1HN3mV	40.0	17.0	706.7	5000.0	3m./VERT	17.0	PK
12655.92	-68.3	1HN3mV	38.8	18.8	754.0	5000.0	3m./VERT	16.4	PK
13560.53	-65.0	1HN3mV	42.0	22.3	1634.3	22251.0	3m./VERT	22.7	PK

Data corrected by 0.1 dB for loss of high pass filter, except to fundamental

** Conversion from 1 meter to 3 meters = -9.54 dB

SAMPLE CALCULATION:

RESULTS (uV/m @ 3m) = Antilog $((-56.6 + -4.8 + 107)/20)$ = 191.8

CONVERSION FROM dBm TO dBuV = 107 dB

TEST DATE: October 27, 2006

Tester

Signature:



Name: Austin Thompson

Figure 4a - 1
Peak Radiated Spurious Emission 15.247(c) Fundamental Low

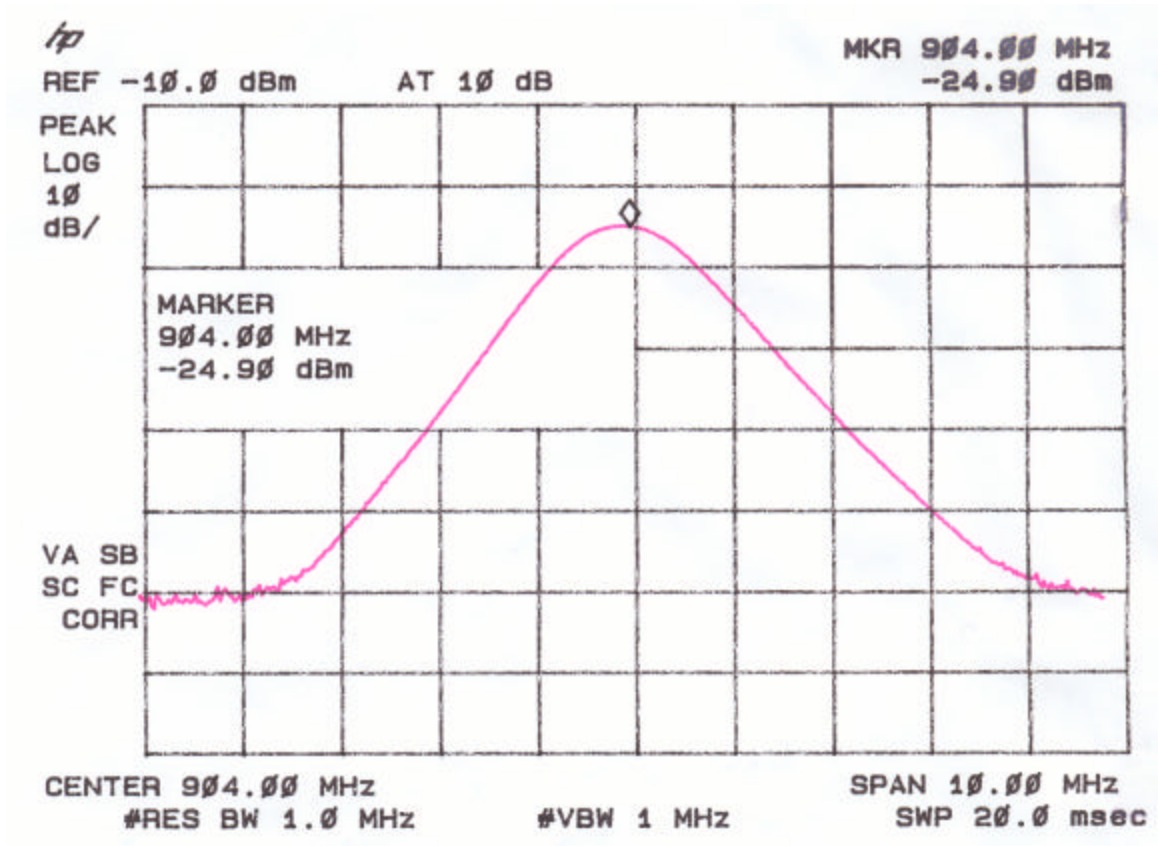


Figure 4a - 2
Peak Radiated Spurious Emission 15.247(c) Low

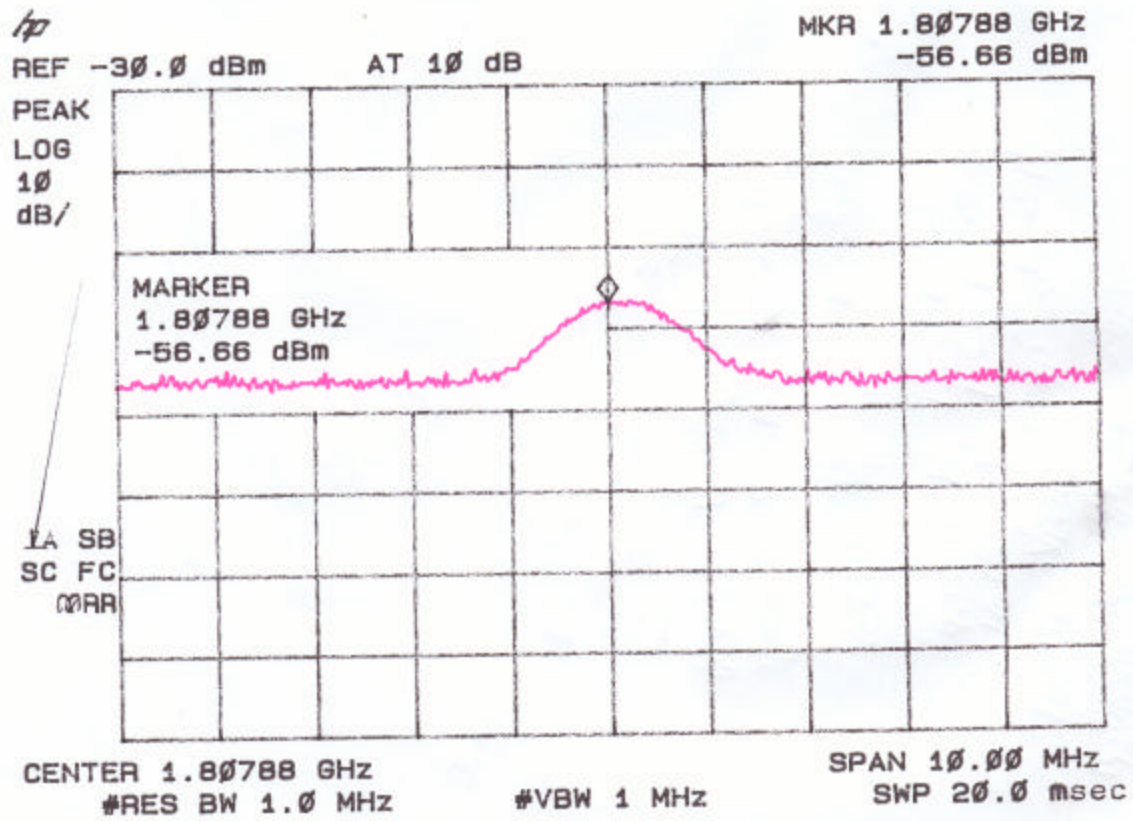


Figure 4a - 3
Peak Radiated Spurious Emission 15.247(c) Low

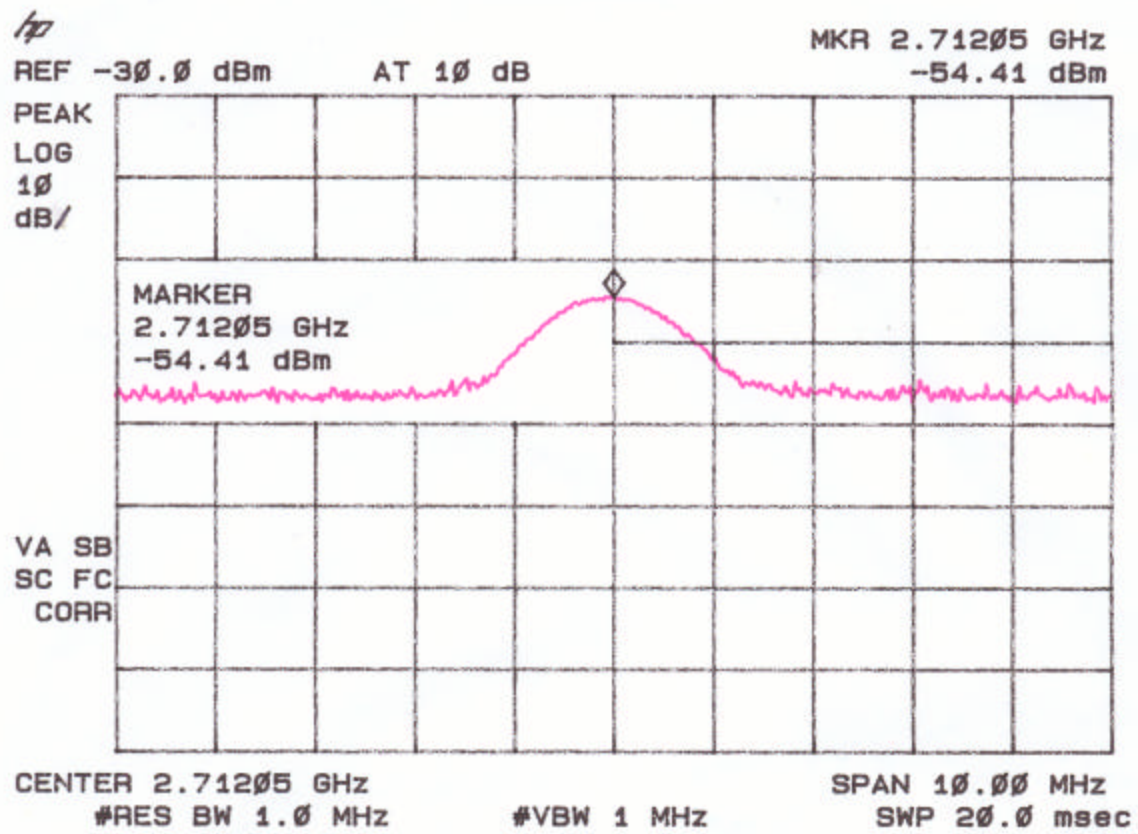


Figure 4a - 4
Peak Radiated Spurious Emission 15.247(c) Low

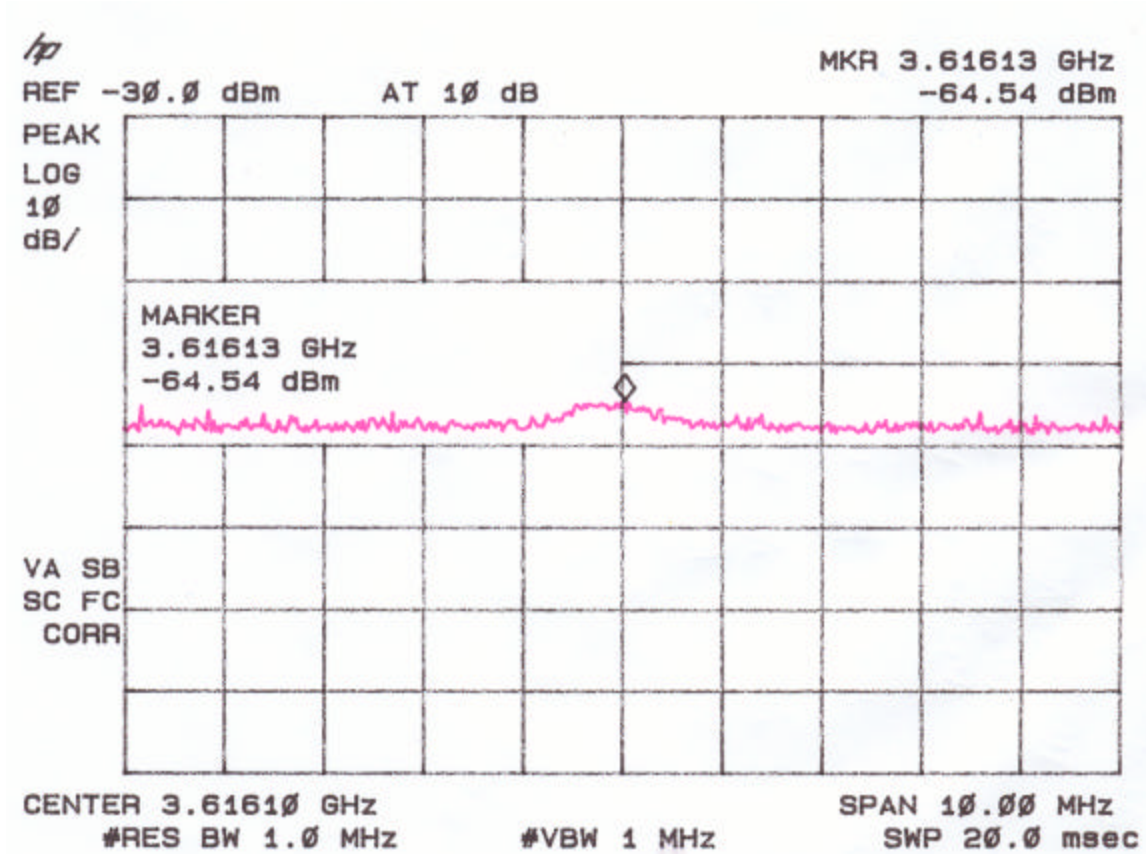


Figure 4a - 5
Peak Radiated Spurious Emission 15.247(c) Low

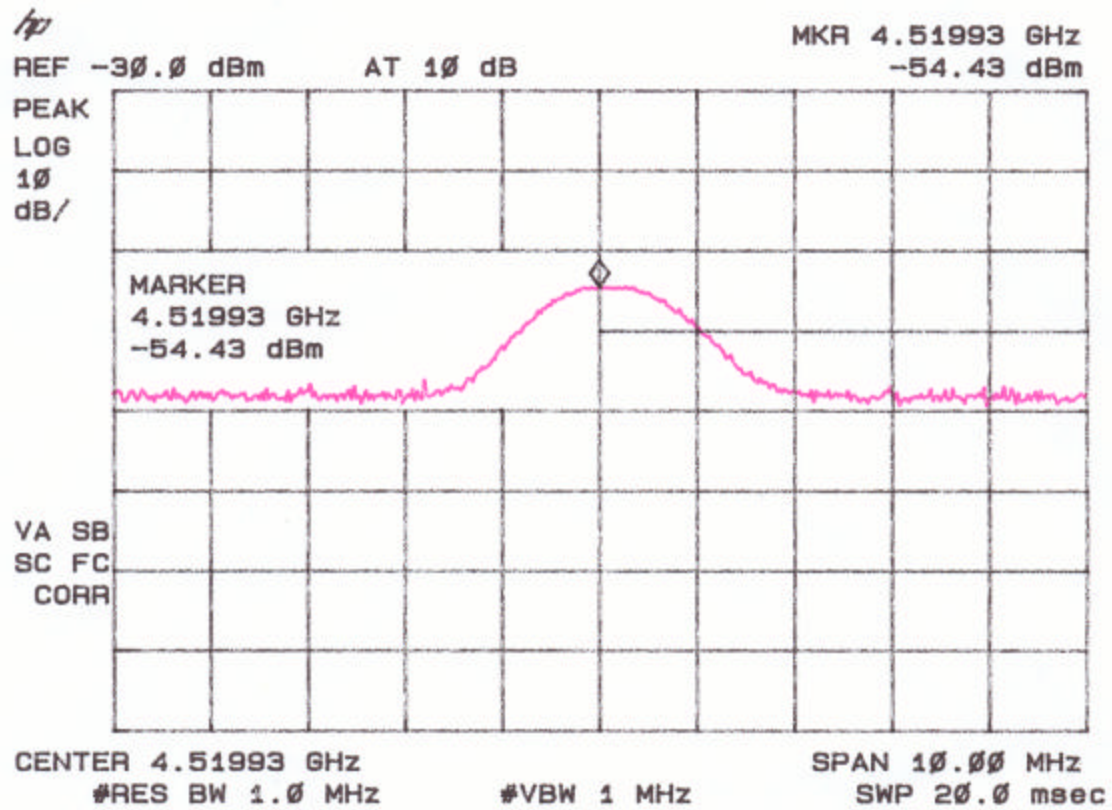


Figure 4a - 6
Peak Radiated Spurious Emission 15.247(c) Low

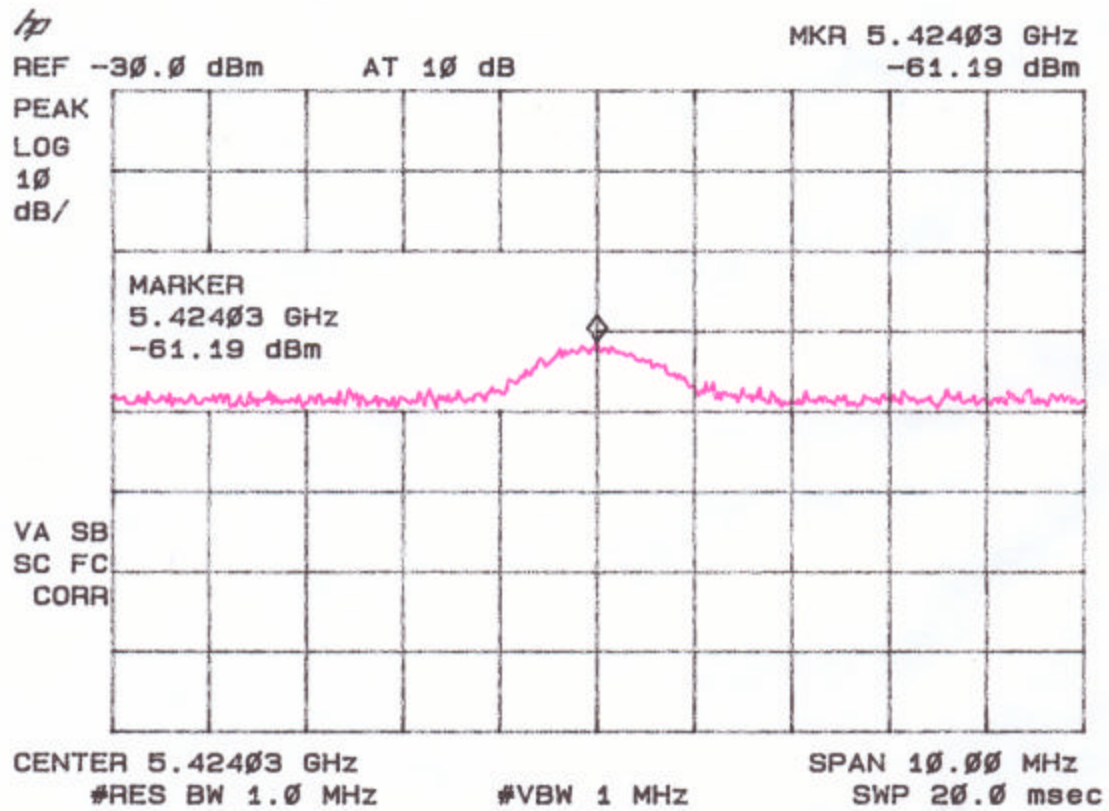


Figure 4a - 7
Peak Radiated Spurious Emission 15.247(c) Low

Figure 4a - 8
Peak Radiated Spurious Emission 15.247(c) Low

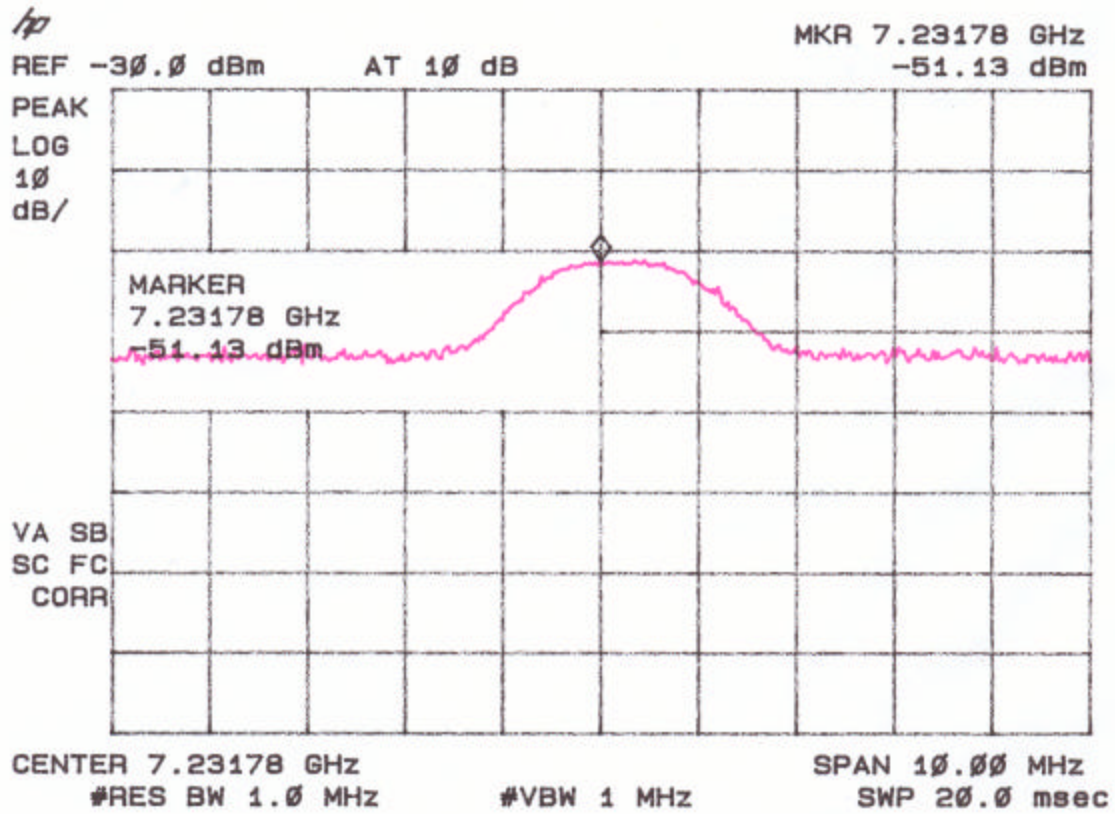


Figure 4a - 9
Peak Radiated Spurious Emission 15.247(c) Low

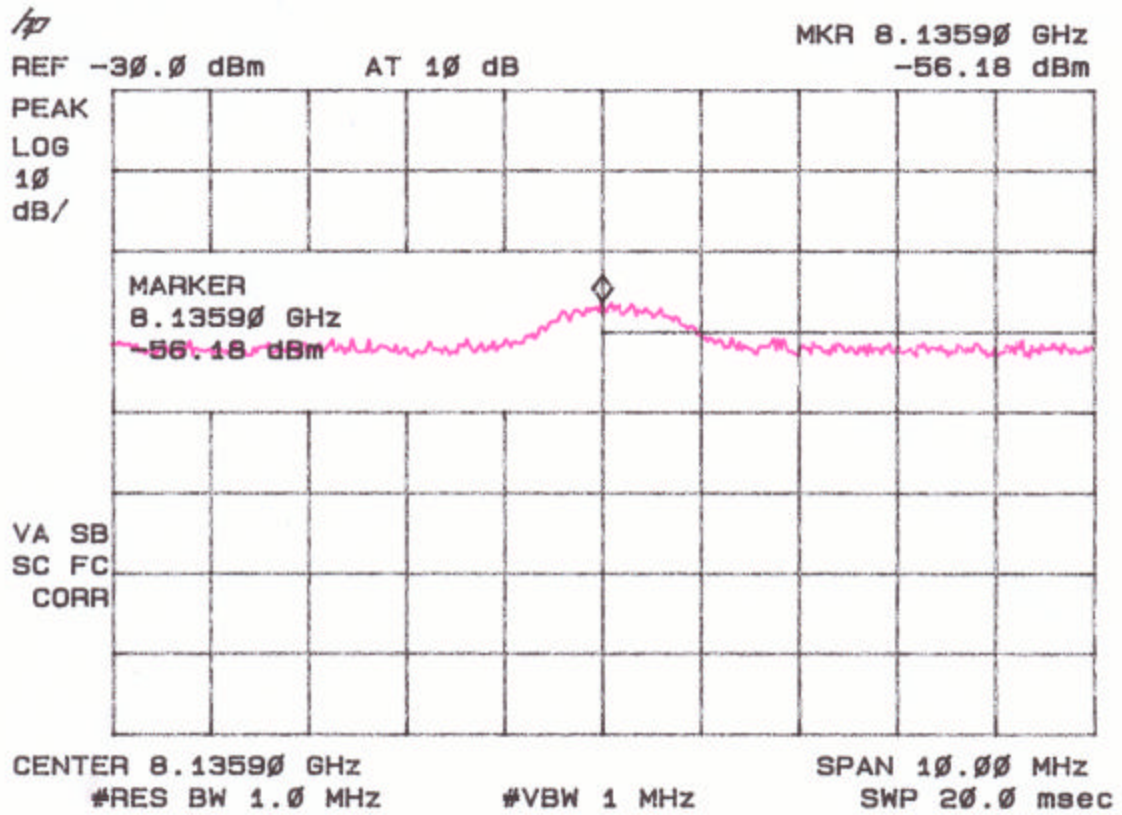


Figure 4a - 10
Peak Radiated Spurious Emission 15.247(c) Low

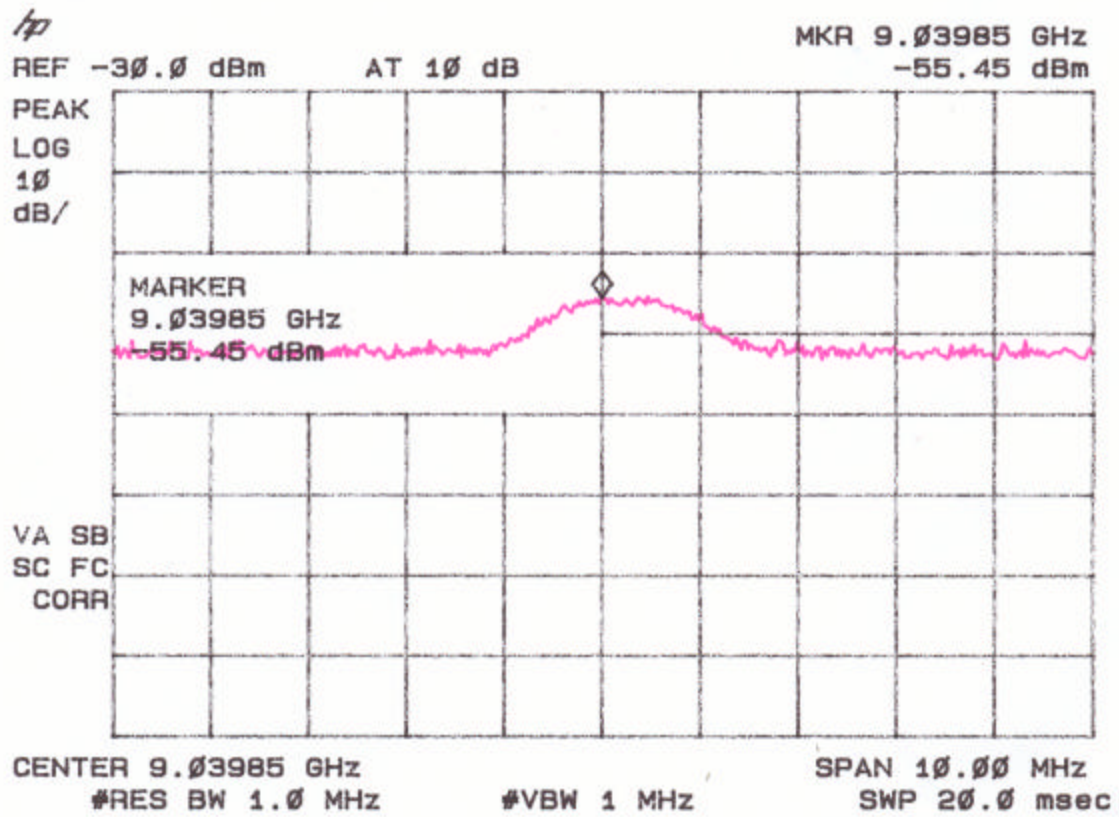


Figure 4a - 11
Peak Radiated Spurious Emission 15.247(c) Low

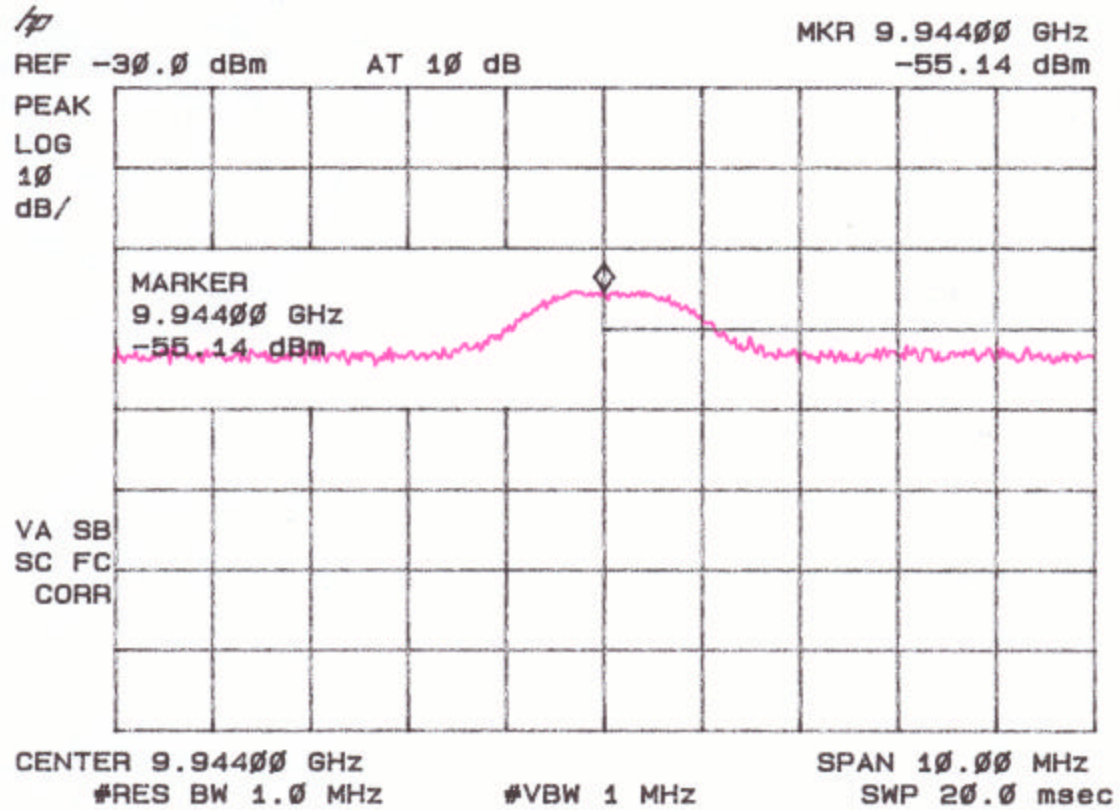


Figure 4a - 12
Peak Radiated Spurious Emission 15.247(c) Low

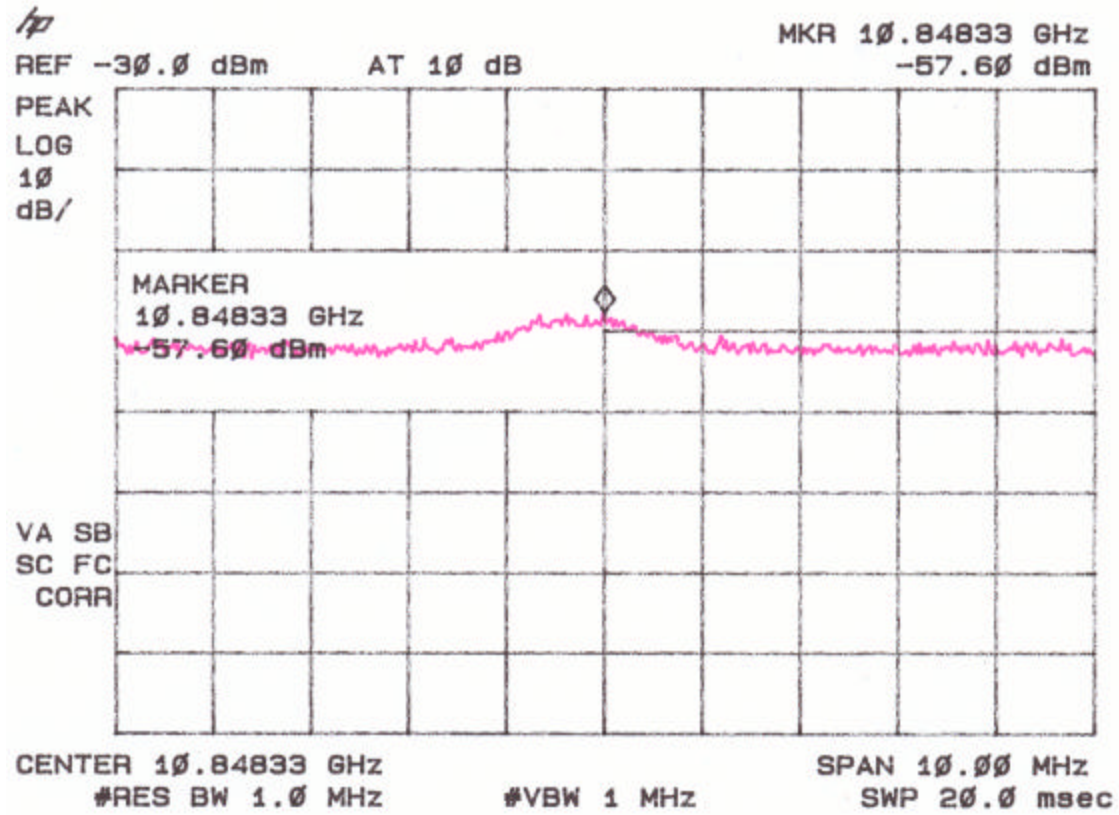


Figure 4a - 13
Peak Radiated Spurious Emission 15.247(c) Low

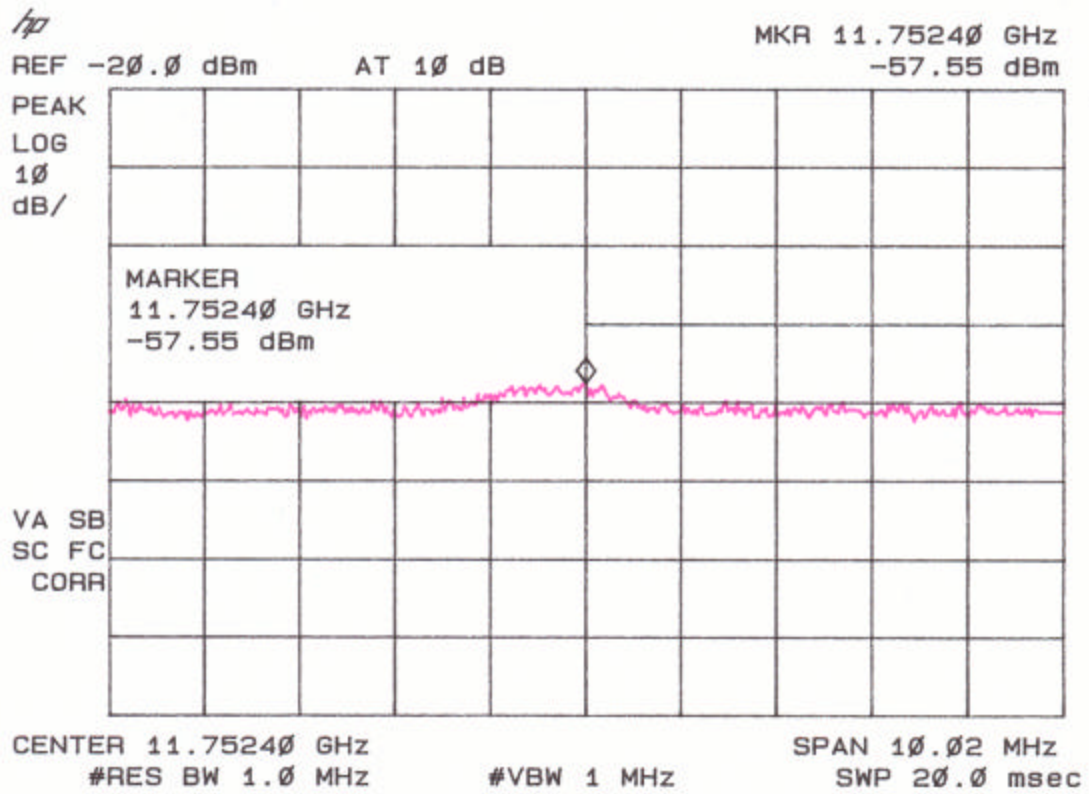


Figure 4a - 14
Peak Radiated Spurious Emission 15.247(c) Low

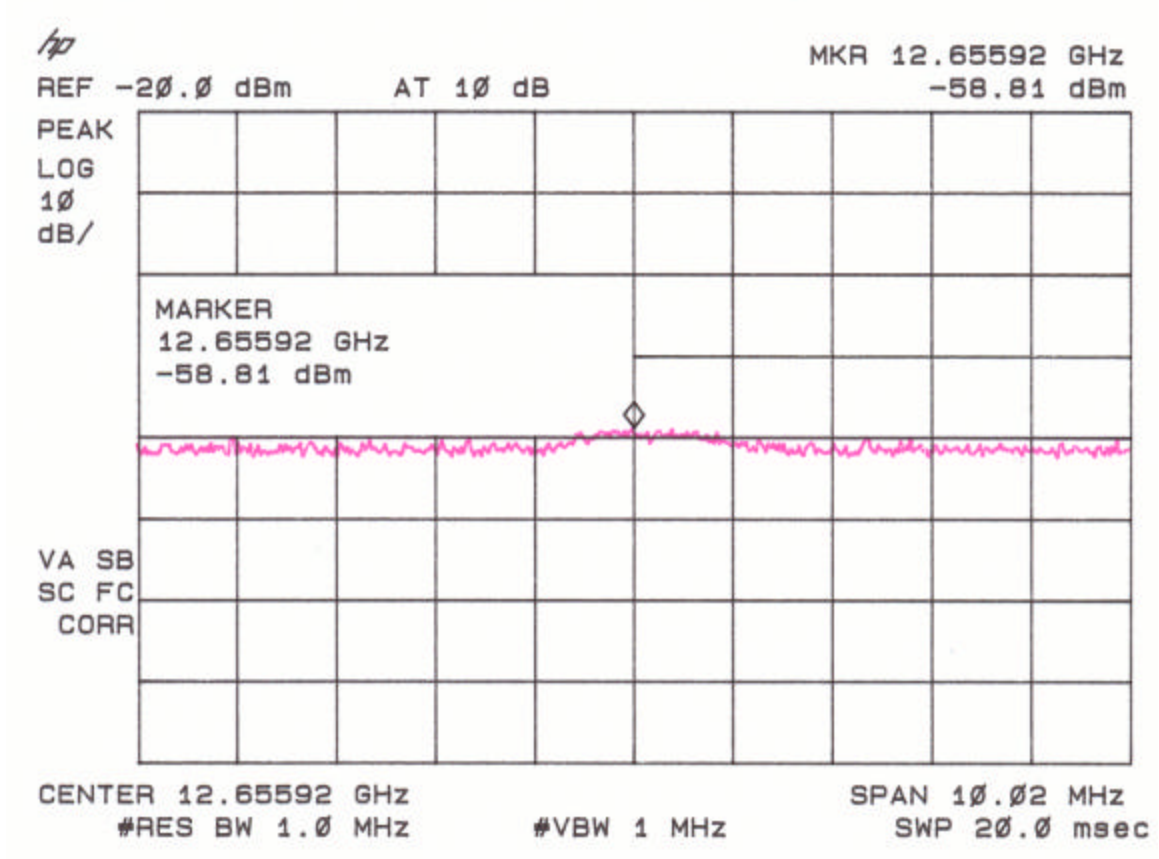


Figure 4a – 15
Peak Radiated Spurious Emission 15.247(c) Low

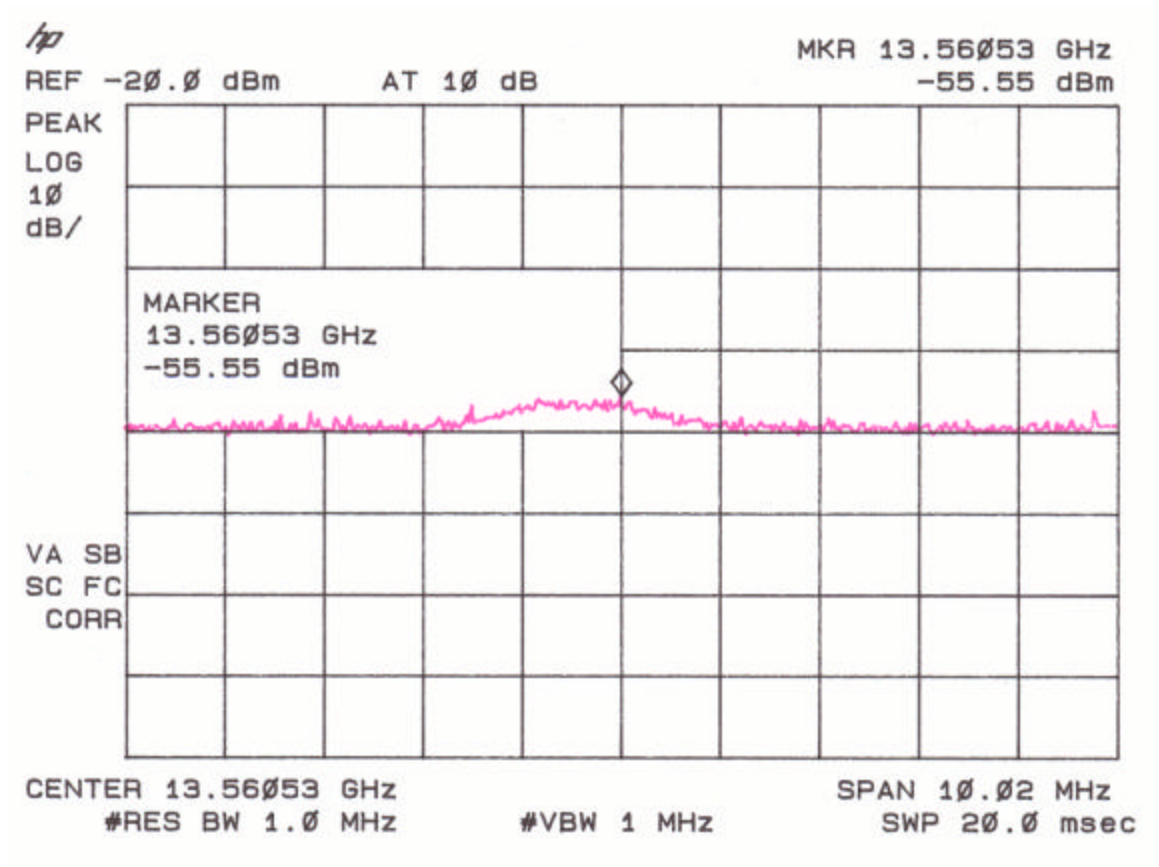


Table 4b. PEAK RADIATED SPURIOUS EMISSIONS (Mid)

Radiated Emissions									
Test By:	Test:	FCC Part 15 - Peak Harmonic (Mid)				Client:	Ferguson Manufacturing Company, Inc.		
	Project:	06-0198		Class:	B	Model:	RFM10		
Frequency	Test Data	AF	Test Data	AF+CA-AMP	Results	Limits	Distance /	Margin	PK = n
(MHz)	(dBm)	Table	(dBuV)	(dB)	(uV/m)	(uV/m)	Polarity	(dB)	/ QP
915.32	-23.2	1HN3mV	83.8	24.9	271653.4		3m./VERT		PK
1830.5	-52.4	1HN3mV	54.6	-4.6	314.4	27165.3	3m./VERT	38.7	PK
2745.83	-50.7	1HN3mV	56.3	-1.5	545.2	5000.0	3m./VERT	19.2	PK
3660.93	-61.7	1HN3mV	45.3	2.4	243.5	5000.0	3m./VERT	26.3	PK
4576.28	-52.4	1HN3mV	54.6	4.3	888.0	5000.0	3m./VERT	15.0	PK
5491.28	-58.1	1HN3mV	48.9	6.9	617.2	27165.3	3m./VERT	32.9	PK
6406.35	-40.9	1HN3mV	66.1	8.0	5083.0	27165.3	3m./VERT	14.6	PK
7321.45	-55.7	1HN3mV	51.3	9.8	1143.8	5000.0	3m./VERT	12.8	PK
8237.1	-62.7	1HN3mH	44.4	11.5	618.4	5000.0	3m./HORZ	18.2	PK
9151.98	-62.4	1HN3mV	44.6	12.2	695.2	5000.0	3m./VERT	17.1	PK
10066.9	-62.3	1HN3mV	44.7	13.5	819.7	27165.3	3m./VERT	30.4	PK
10982.65	-66.6	1HN3mV	40.4	15.7	640.1	5000.0	3m./VERT	17.9	PK
11897.58	-64.5	1HN3mV	42.5	17.1	963.6	5000.0	3m./VERT	14.3	PK
12812.65	-66.2	1HN3mV	40.8	19.5	1026.9	27165.3	3m./VERT	28.5	PK
13727.8	-65.6	1HN3mV	41.5	22.8	1626.5	27165.3	3m./VERT	24.5	PK

Data corrected by 0.1 dB for loss of high pass filter, except to fundamental

** Conversion from 1 meter to 3 meters = -9.54 dB

SAMPLE CALCULATION:

RESULTS (uV/m @ 3m) = Antilog $((-52.4 + -4.6 + 107)/20)$ = 314.4

CONVERSION FROM dBm TO dBuV = 107 dB

TEST DATE: October 27 & 28, 2006

Tester

Signature: _____



Name: Austin Thompson

Figure 4b - 1
Peak Radiated Spurious Emission 15.247(c) Fundamental Mid

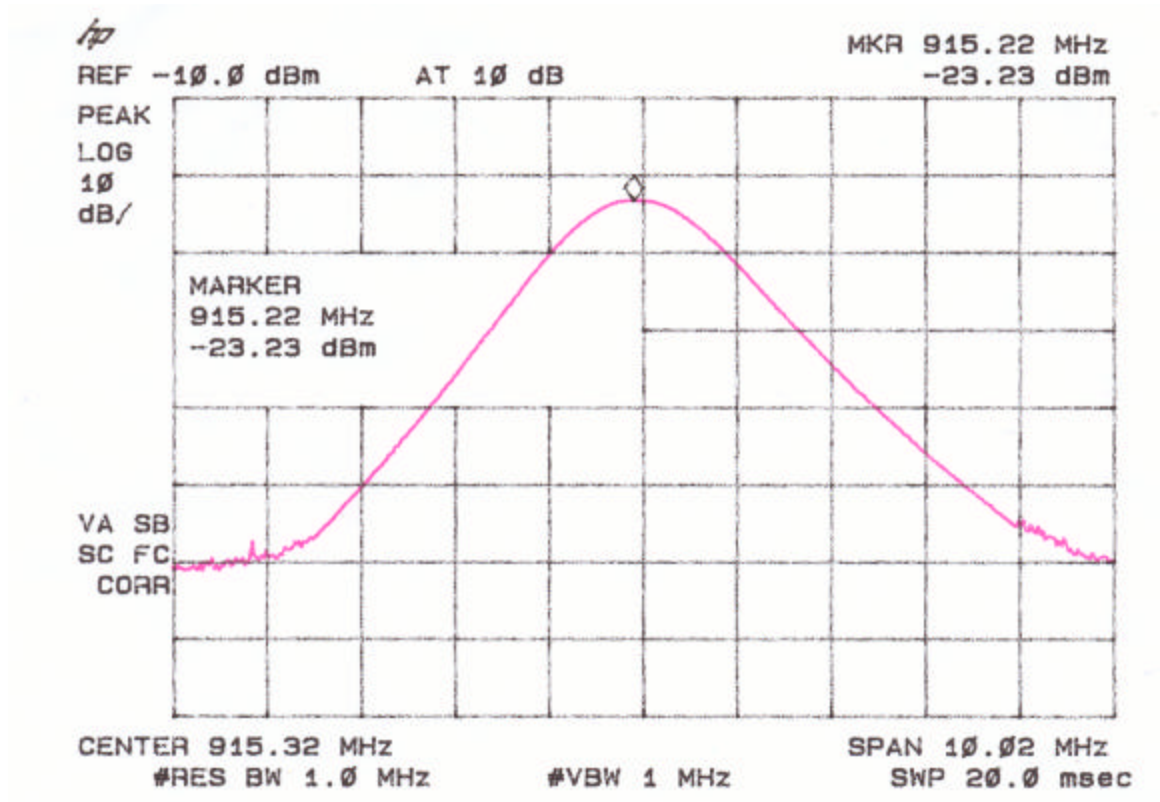


Figure 4b - 2
Peak Radiated Spurious Emission 15.247(c) Mid

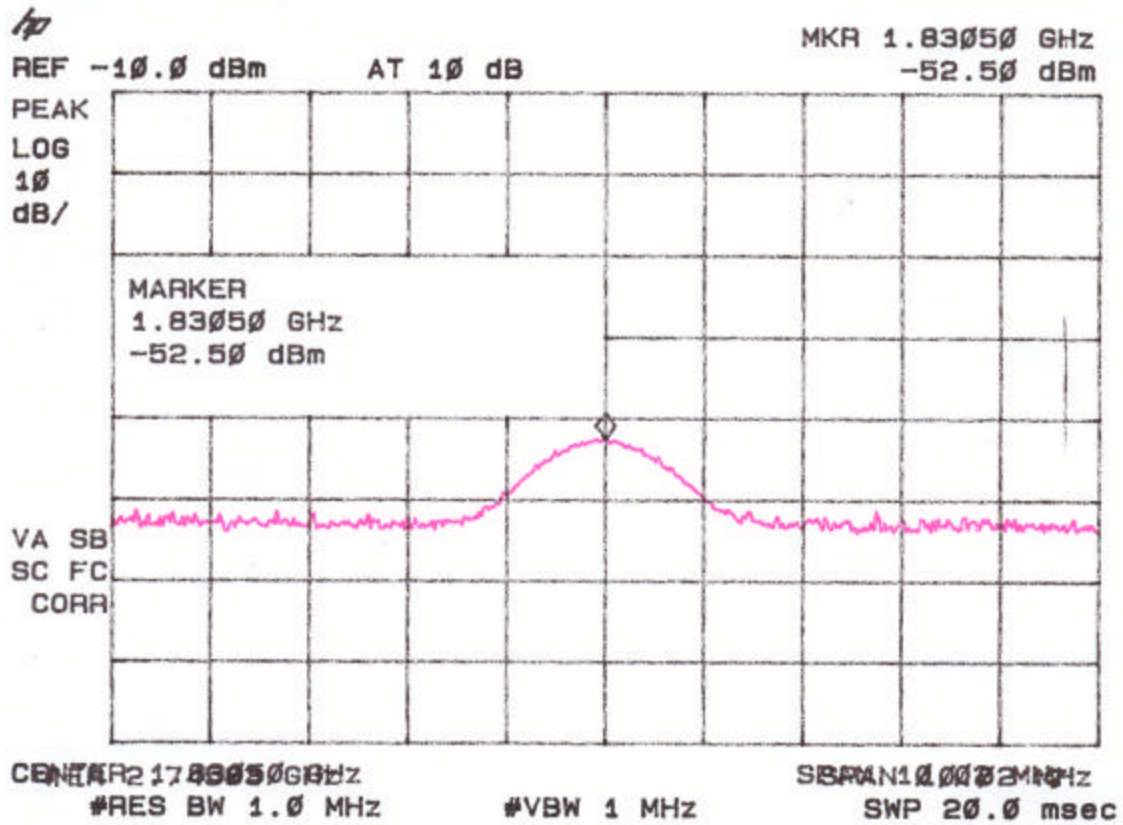


Figure 4b - 3
Peak Radiated Spurious Emission 15.247(c) Mid

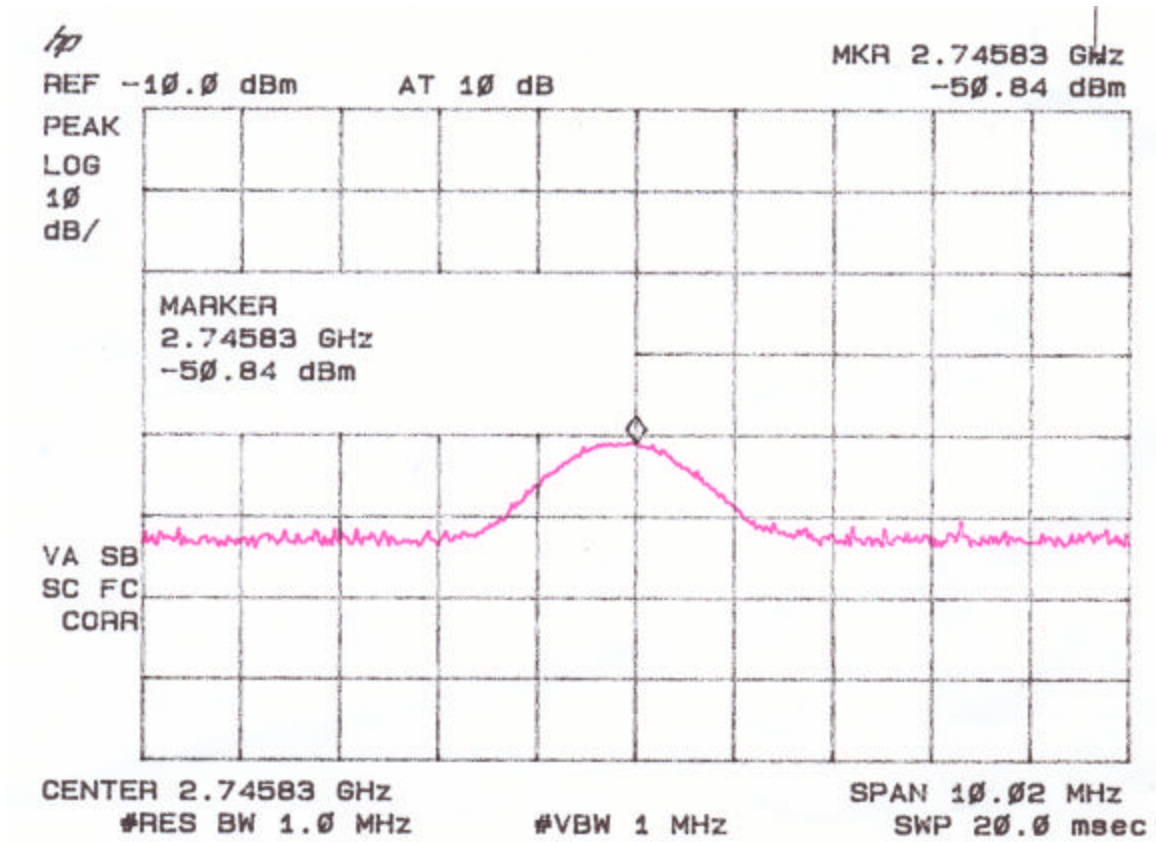


Figure 4b - 4
Peak Radiated Spurious Emission 15.247(c) Mid

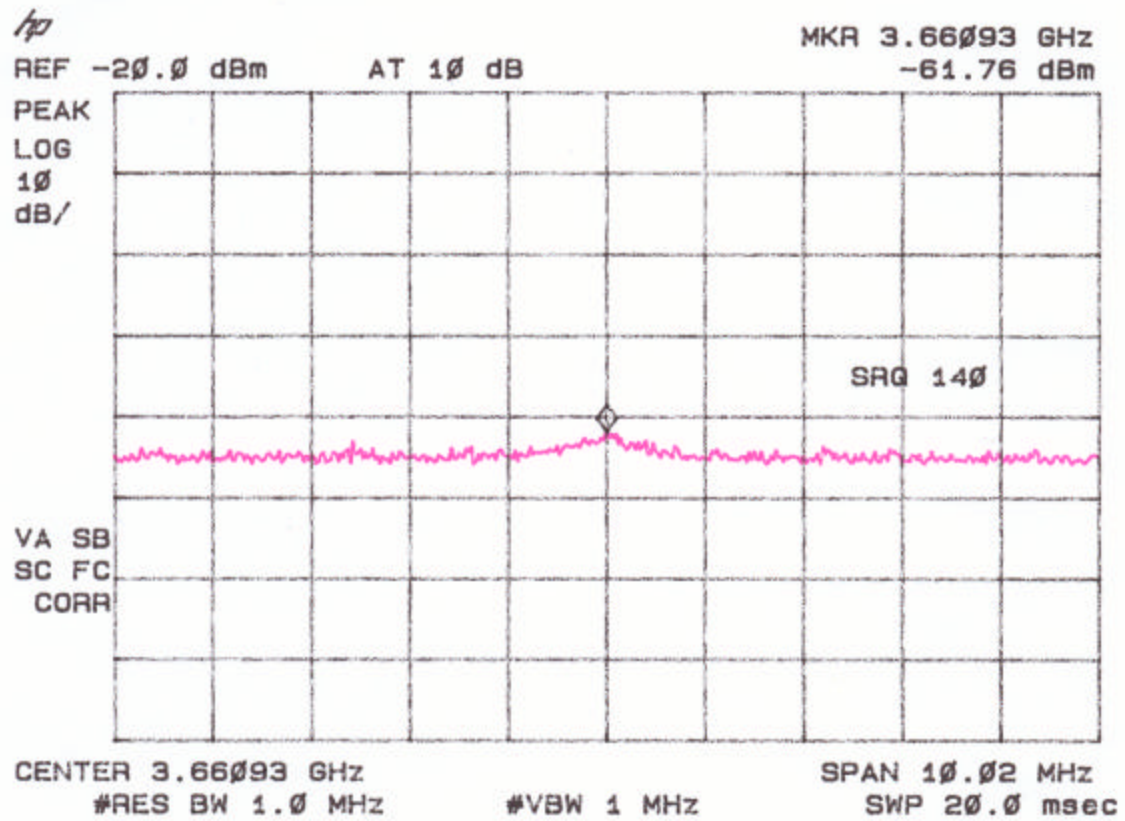


Figure 4b – 5
Peak Radiated Spurious Emission 15.247(c) Mid

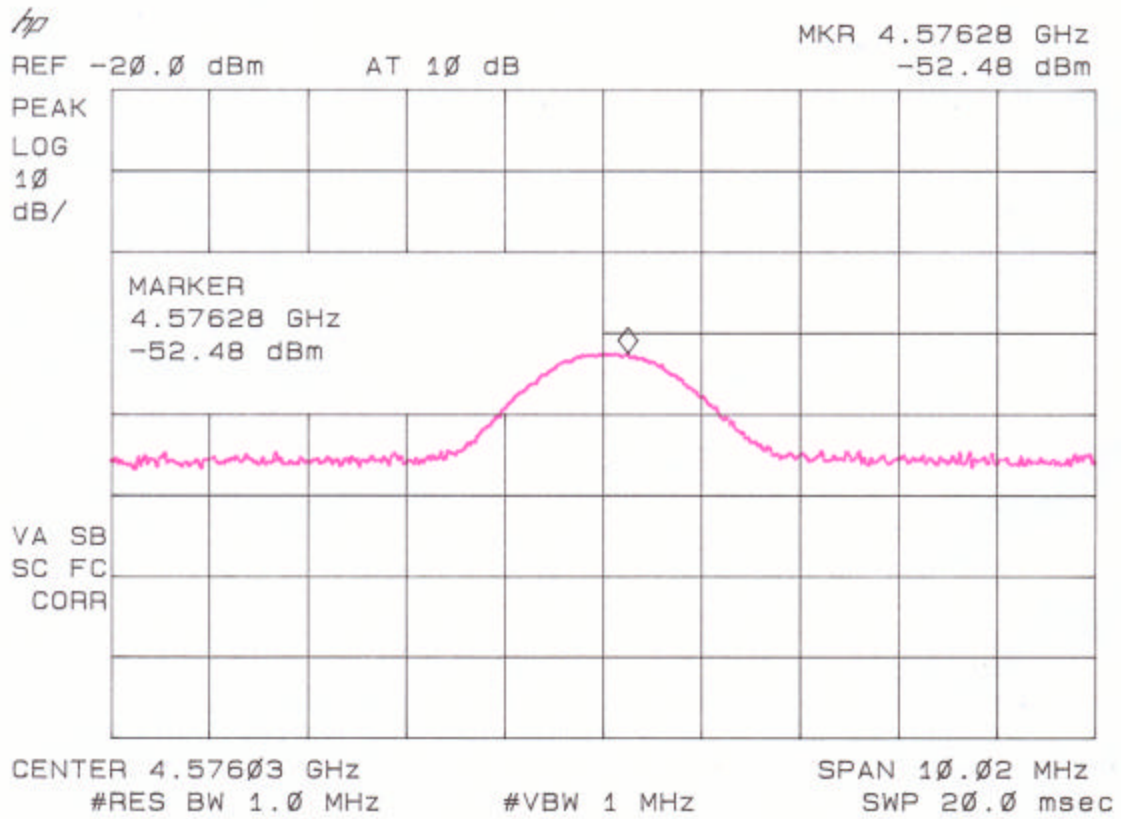


Figure 4b – 6
Peak Radiated Spurious Emission 15.247(c) Mid

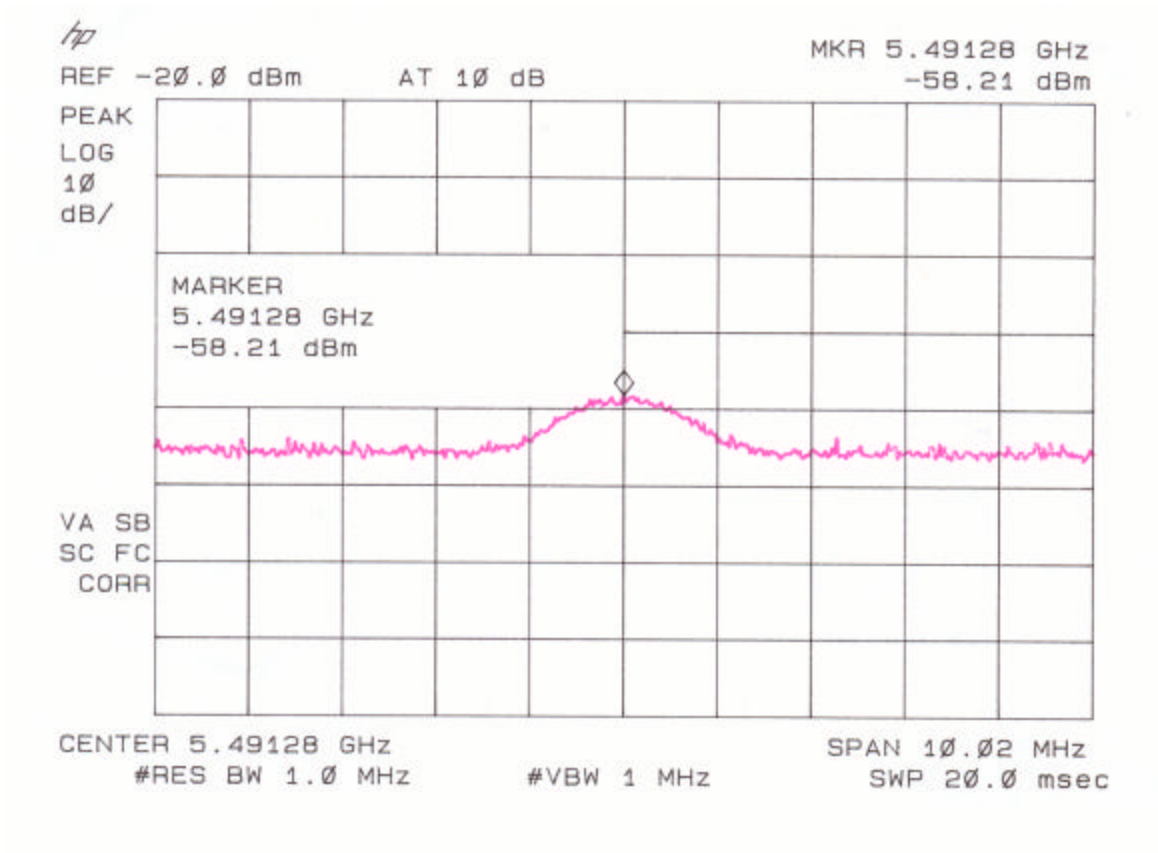


Figure 4b – 7
Peak Radiated Spurious Emission 15.247(c) Mid

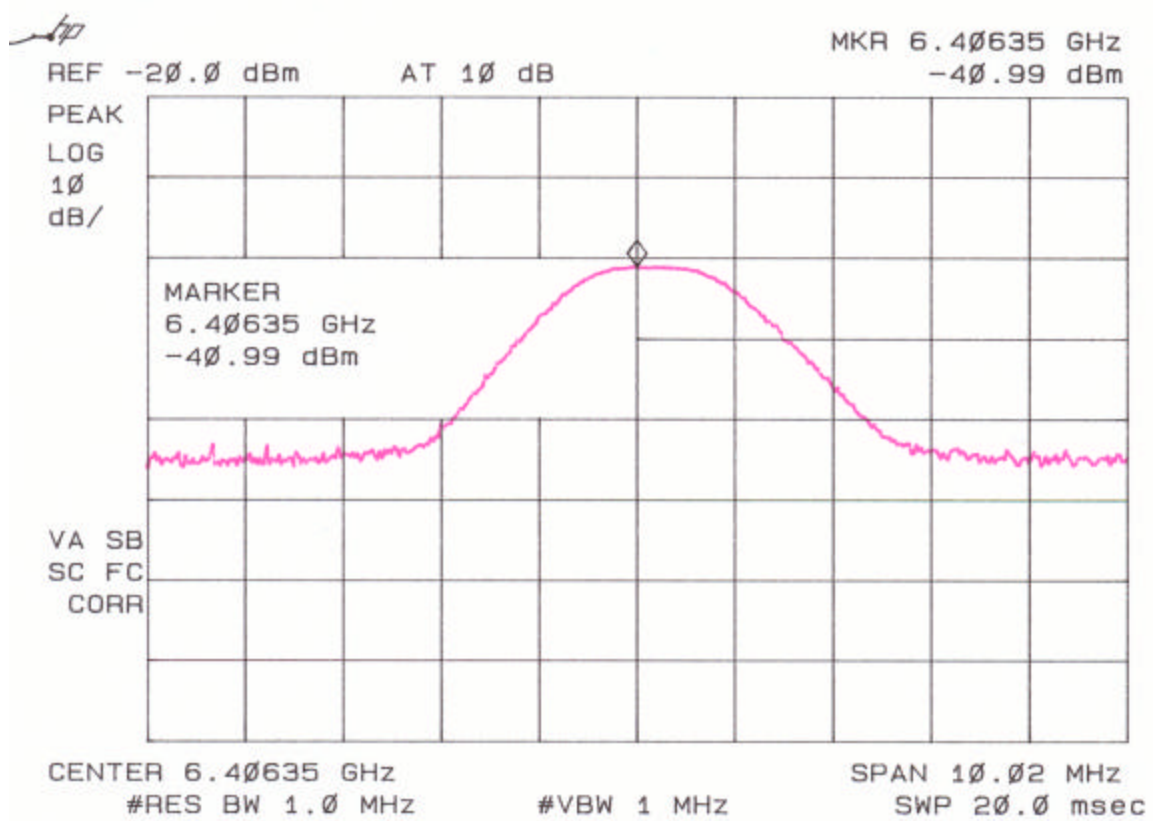


Figure 4b – 8
Peak Radiated Spurious Emission 15.247(c) Mid

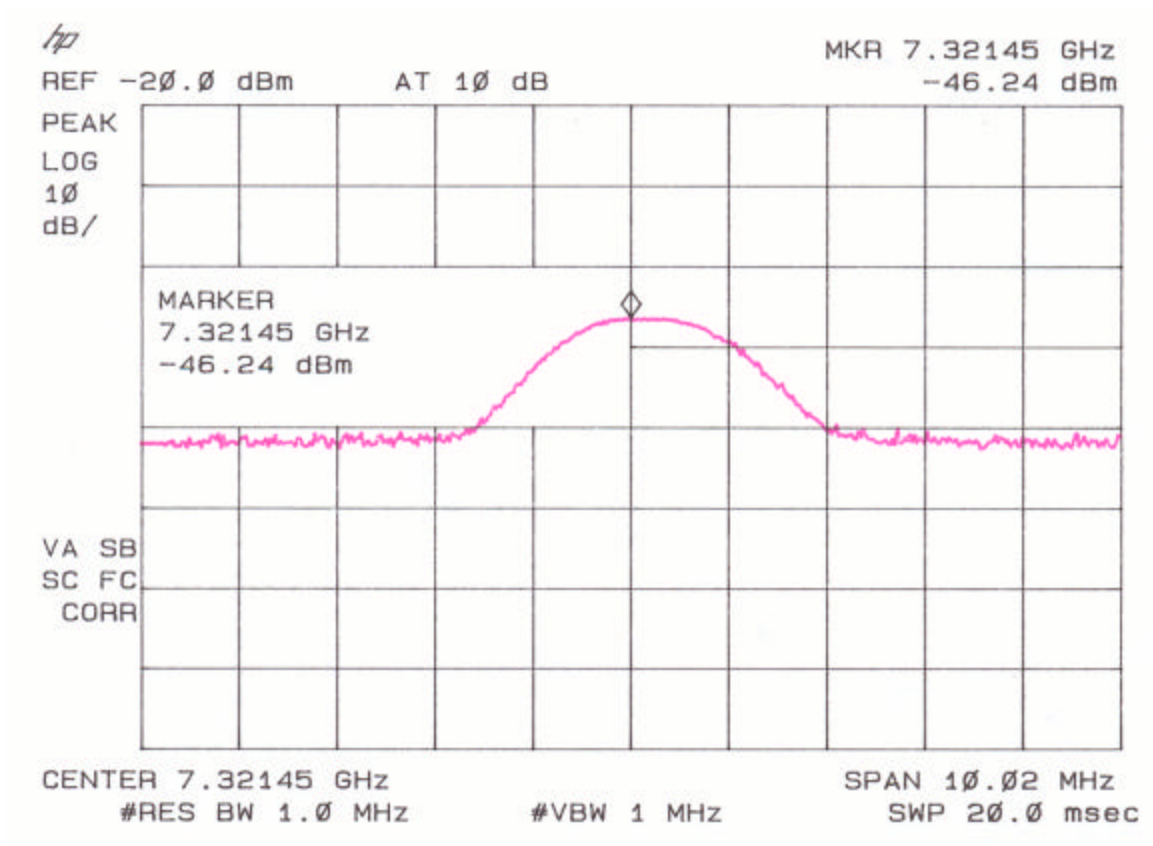


Figure 4b – 9
Peak Radiated Spurious Emission 15.247(c) Mid

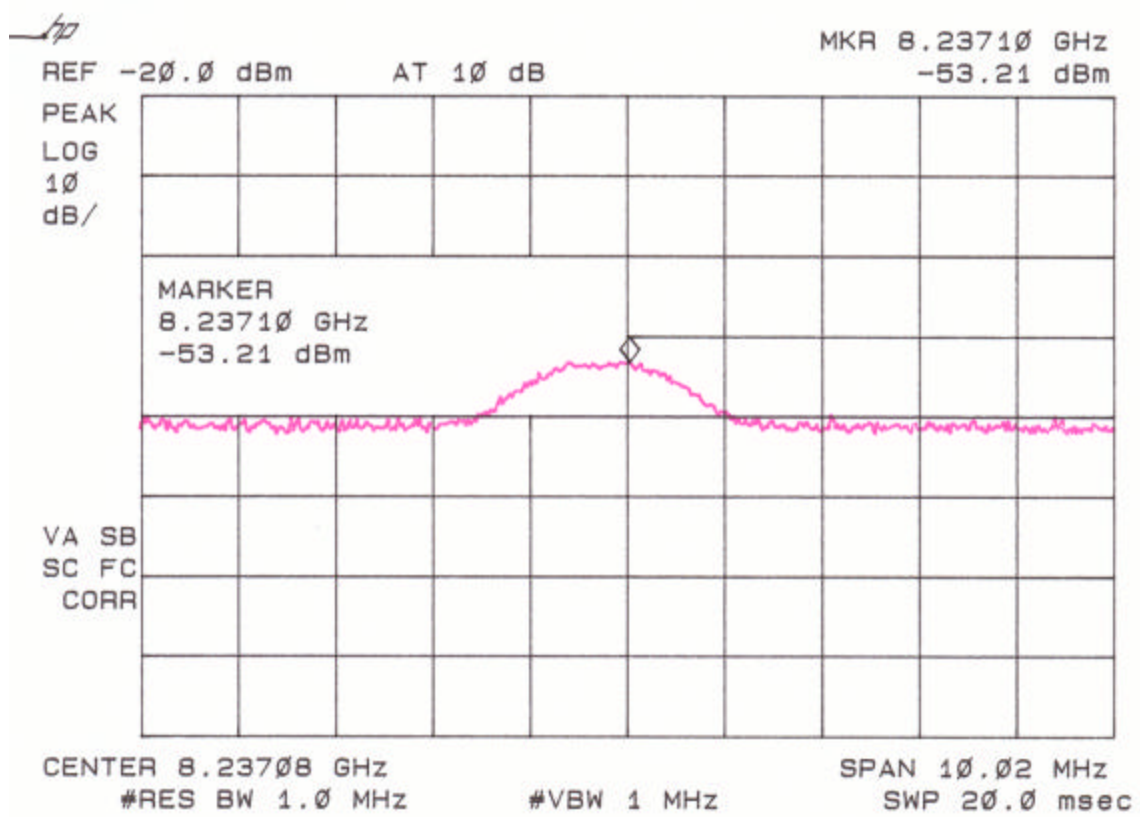


Figure 4b – 10
Peak Radiated Spurious Emission 15.247(c) Mid

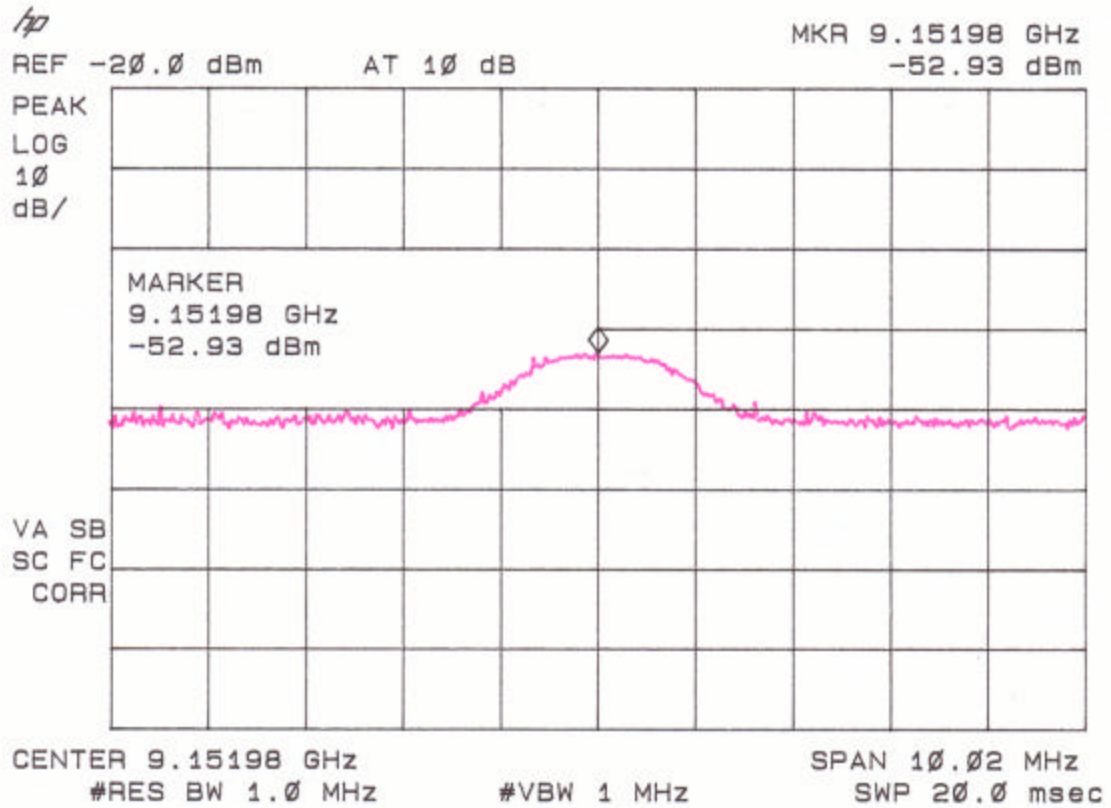


Figure 4b – 11
Peak Radiated Spurious Emission 15.247(c) Mid

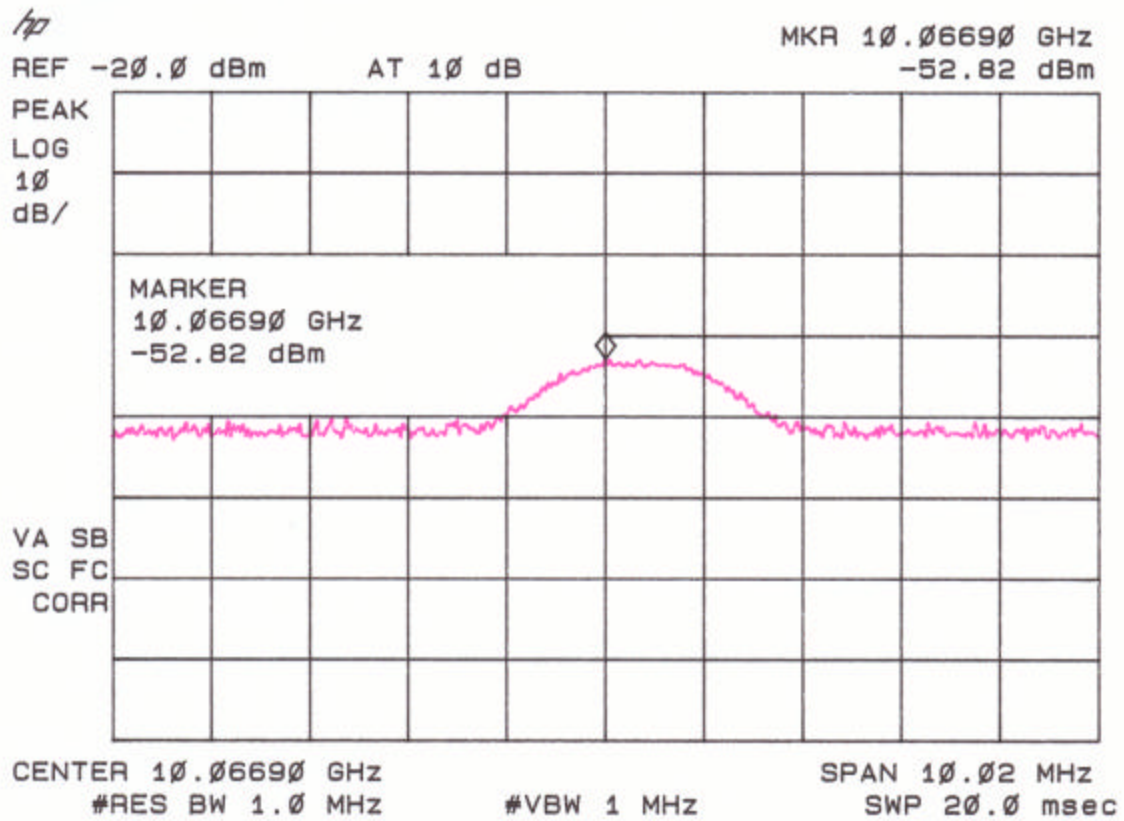


Figure 4b – 12
Peak Radiated Spurious Emission 15.247(c) Mid

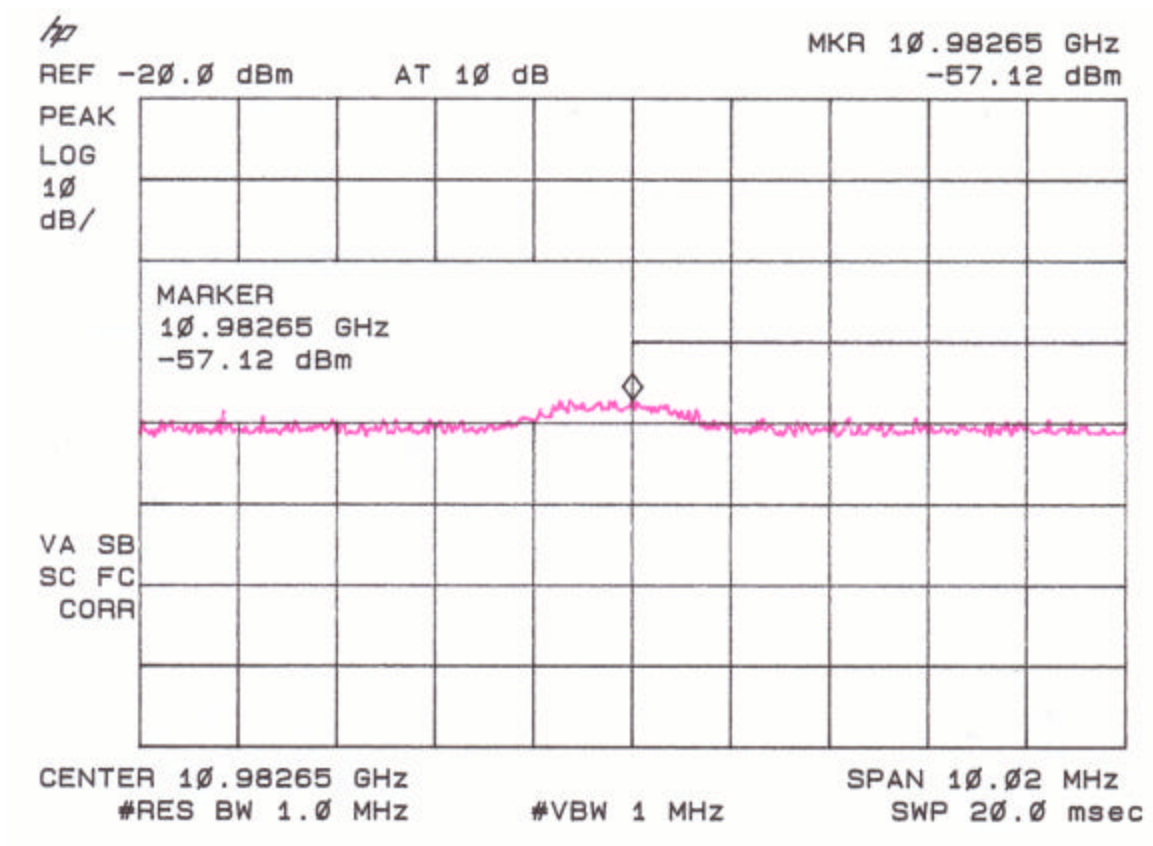


Figure 4b – 13
Peak Radiated Spurious Emission 15.247(c) Mid

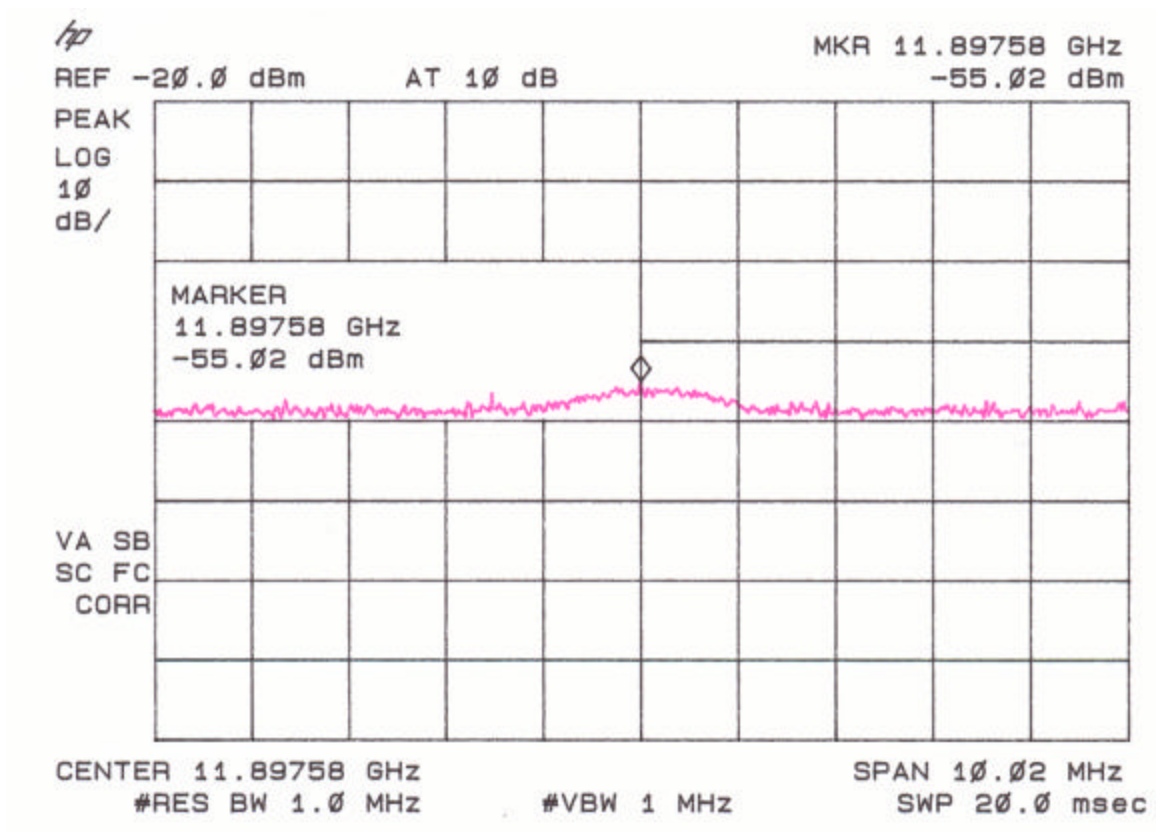


Figure 4b – 14
Peak Radiated Spurious Emission 15.247(c) Mid

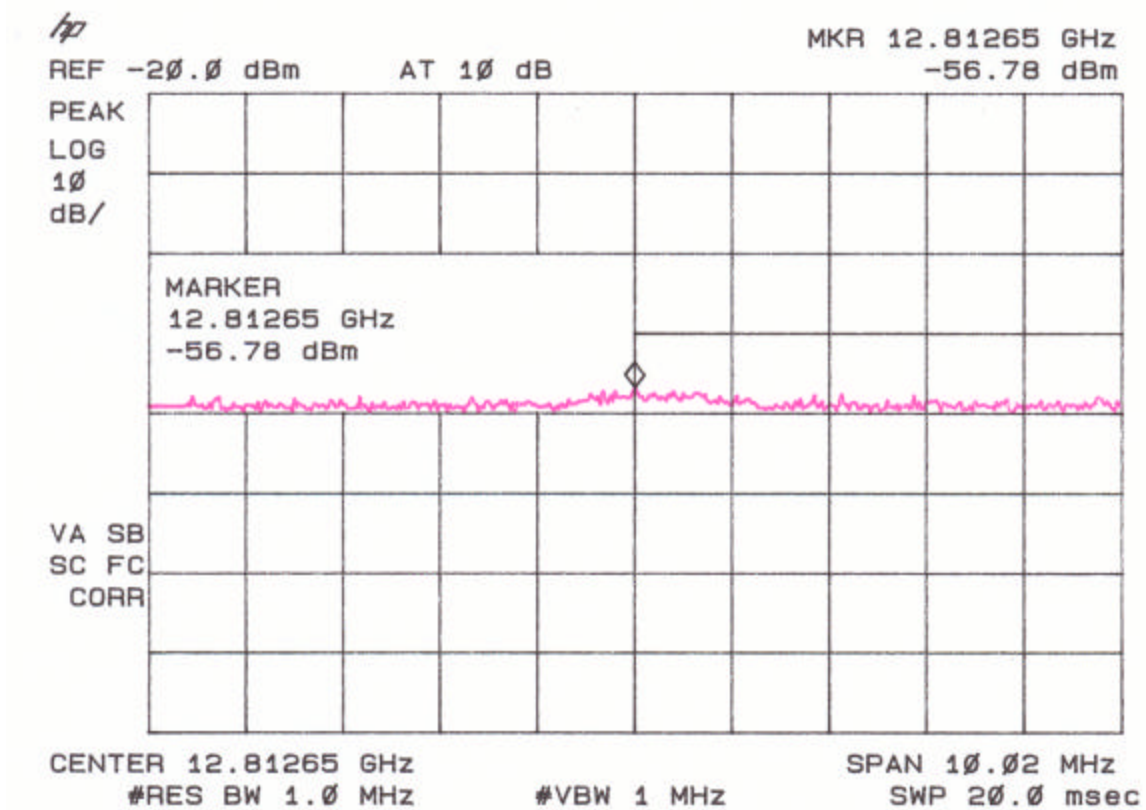


Figure 4b – 15
Peak Radiated Spurious Emission 15.247(c) Mid

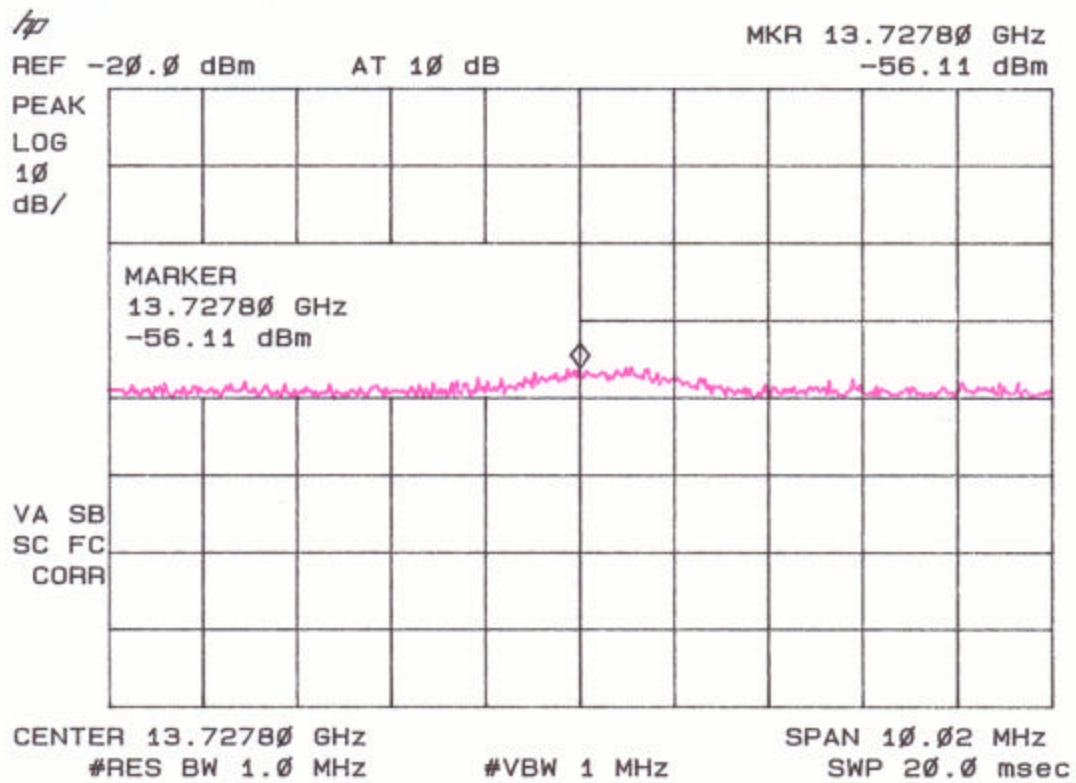


Table 4c. PEAK RADIATED SPURIOUS EMISSIONS (High)

Radiated Emissions									
Test By:	Test:	FCC Part 15 - Peak Harmonic (High)				Client:	Ferguson Manufacturing Company, Inc.		
	Project:	06-0198		Class:	B	Model:	RFM10		
Frequency	Test Data	AF	Test Data	AF+CA-AMP	Results	Limits	Distance /	Margin	PK = n
(MHz)	(dBm)	Table	(dBuV)	(dB)	(uV/m)	(uV/m)	Polarity	(dB)	/ QP
926.80	-24.3	1HN3mV	82.7	25.0	241950.2		3m./VERT		PK
1853.6	-53.2	1HN3mV	53.9	-4.5	293.0	24195.0	3m./VERT	38.3	PK
2780.35	-54.3	1HN3mV	52.7	-1.4	368.2	5000.0	3m./VERT	22.7	PK
3707.25	-63.6	1HN3mV	43.4	2.6	200.3	5000.0	3m./VERT	27.9	PK
4633.87	-55.3	1HN3mV	51.7	4.5	649.3	5000.0	3m./VERT	17.7	PK
5560.67	-58.0	1HN3mV	49.0	7.1	635.6	24195.0	3m./VERT	31.6	PK
6487.4	-46.2	1HN3mV	60.8	8.0	2769.8	24195.0	3m./VERT	18.8	PK
7414.5	-57.5	1HN3mV	49.5	10.1	959.6	5000.0	3m./VERT	14.3	PK
8341.25	-62.6	1HN3mV	44.5	11.4	618.1	5000.0	3m./VERT	18.2	PK
9268.12	-63.6	1HN3mH	43.4	12.6	630.7	24195.0	3m./HORZ	31.7	PK
10194.57	-65.7	1HN3mV	41.3	13.8	565.0	24195.0	3m./VERT	32.6	PK
11121.29	-67.3	1HN3mV	39.7	16.0	607.1	5000.0	3m./VERT	18.3	PK
12049.02	-67.4	1HN3mV	39.6	17.3	701.6	5000.0	3m./VERT	17.1	PK

Data corrected by 0.1 dB for loss of high pass filter, except to fundamental

** Conversion from 1 meter to 3 meters = -9.54 dB

SAMPLE CALCULATION:

RESULTS (uV/m @ 3m) = Antilog $((-53.2 + -4.5 + 107)/20) = 293.0$

CONVERSION FROM dBm TO dBuV = 107 dB

TEST DATE: October 29, & 30, 2006

Tester

Signature: _____



Name: Austin Thompson

Figure 4c – 1
Peak Radiated Spurious Emission 15.247(c) Fundamental High

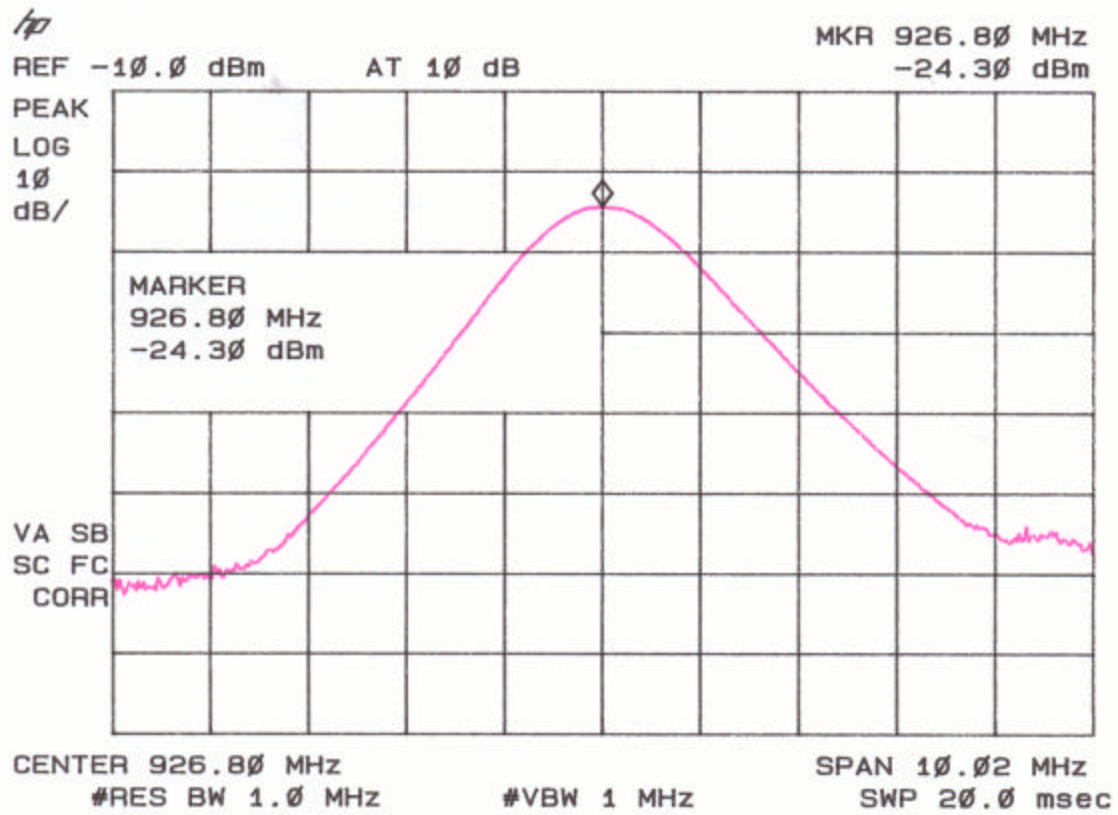


Figure 4c – 2
Peak Radiated Spurious Emission 15.247(c) High

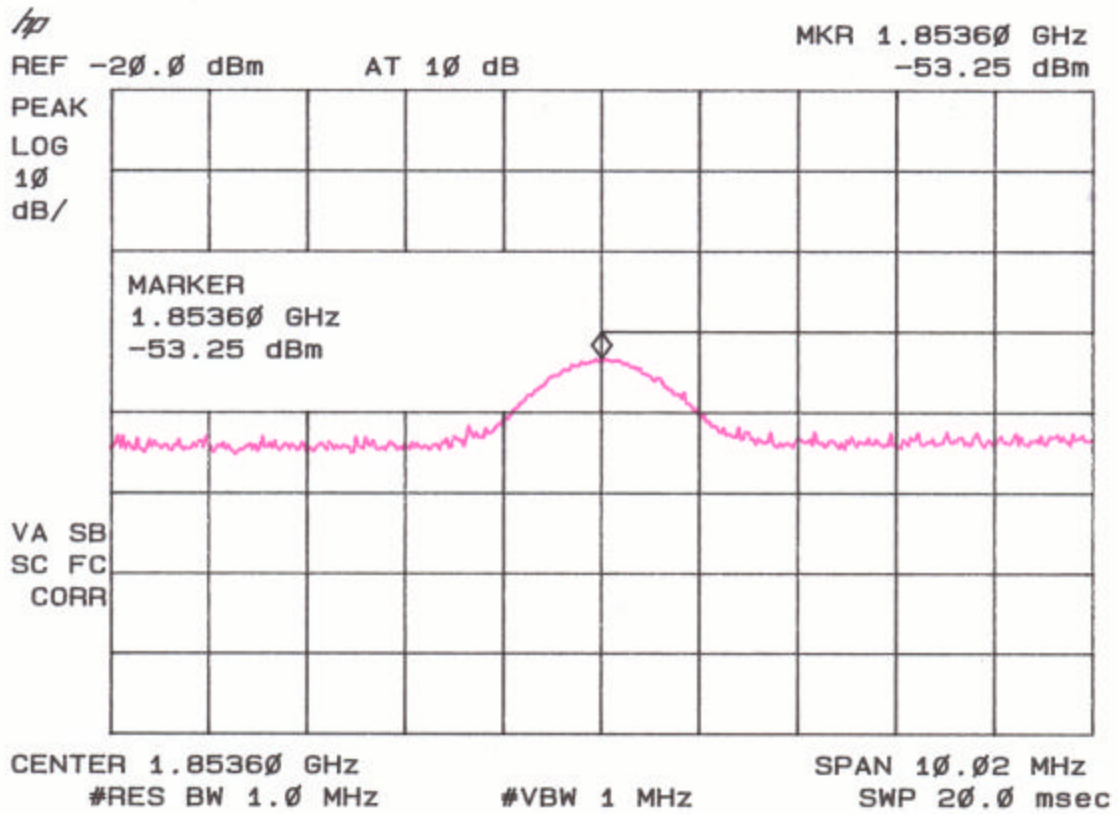


Figure 4c – 3
Peak Radiated Spurious Emission 15.247(c) High

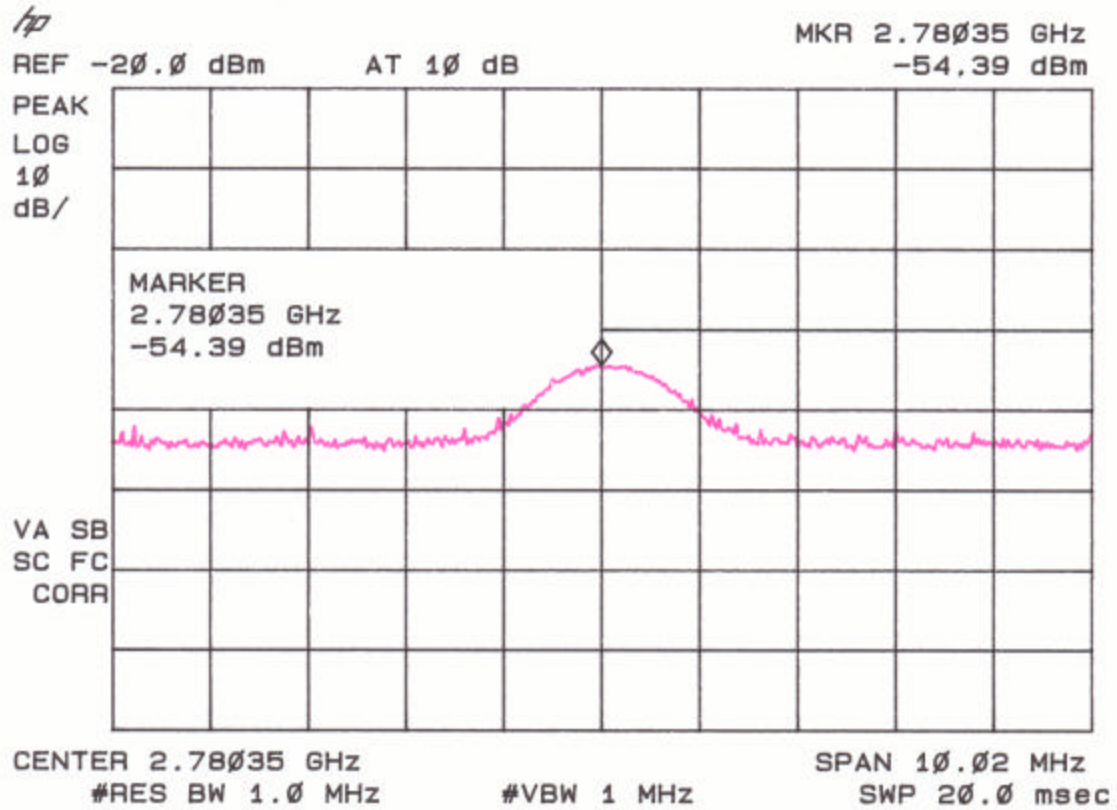


Figure 4c – 4
Peak Radiated Spurious Emission 15.247(c) High

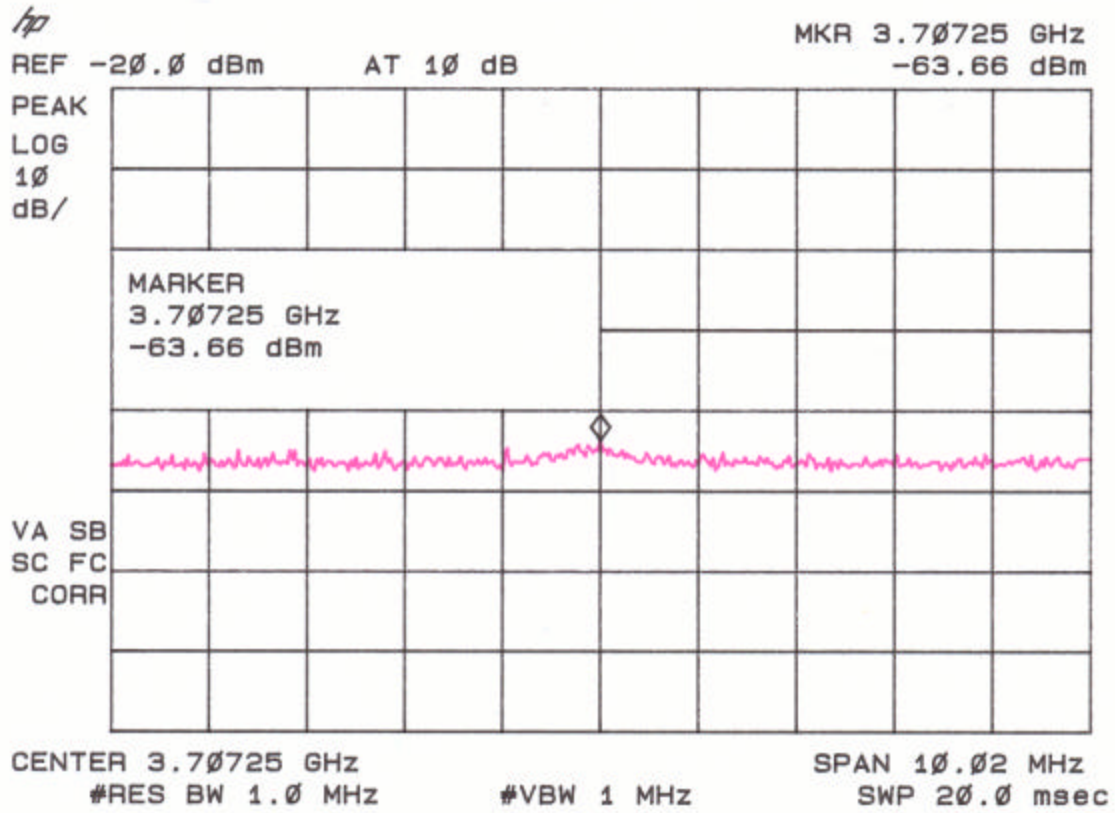


Figure 4c – 5
Peak Radiated Spurious Emission 15.247(c) High

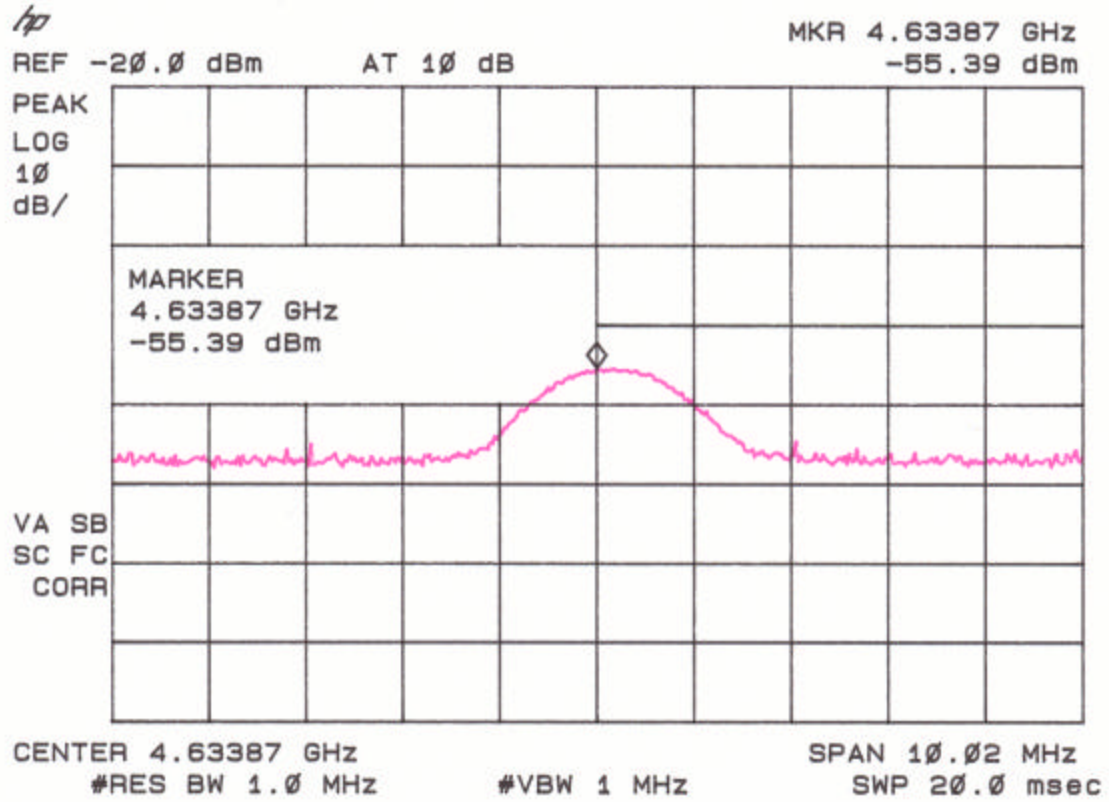


Figure 4c – 6
Peak Radiated Spurious Emission 15.247(c) High

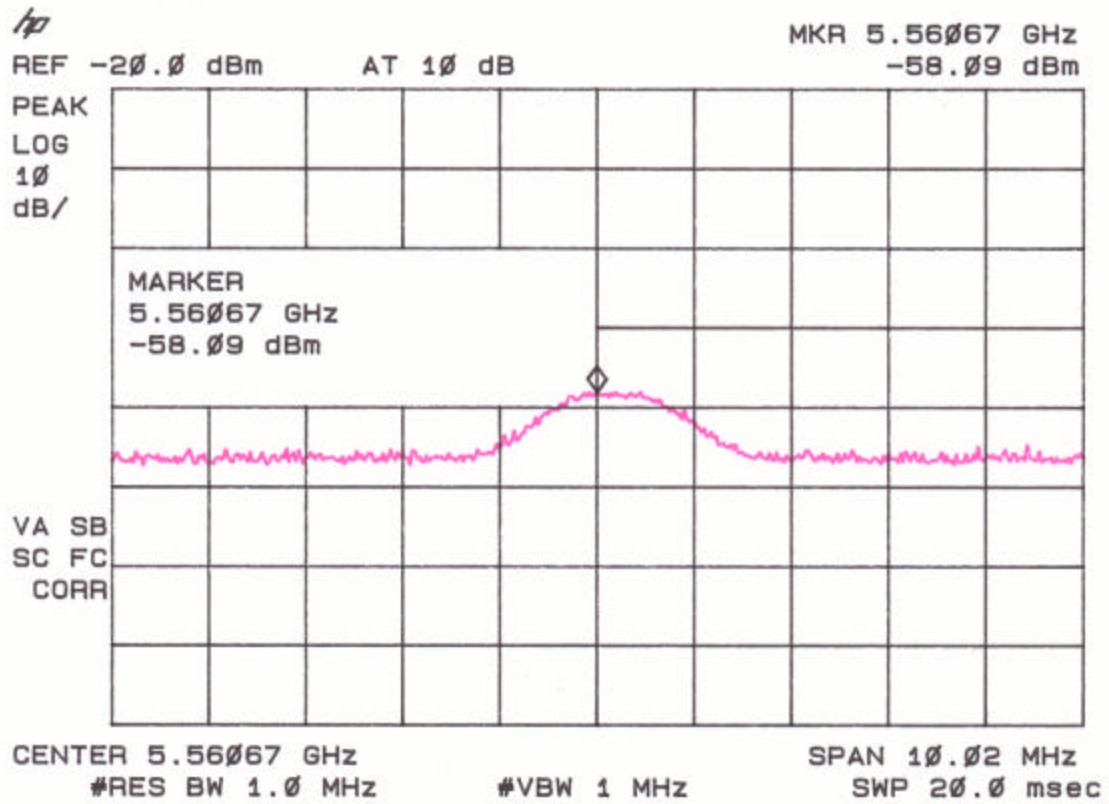


Figure 4c – 7
Peak Radiated Spurious Emission 15.247(c) High

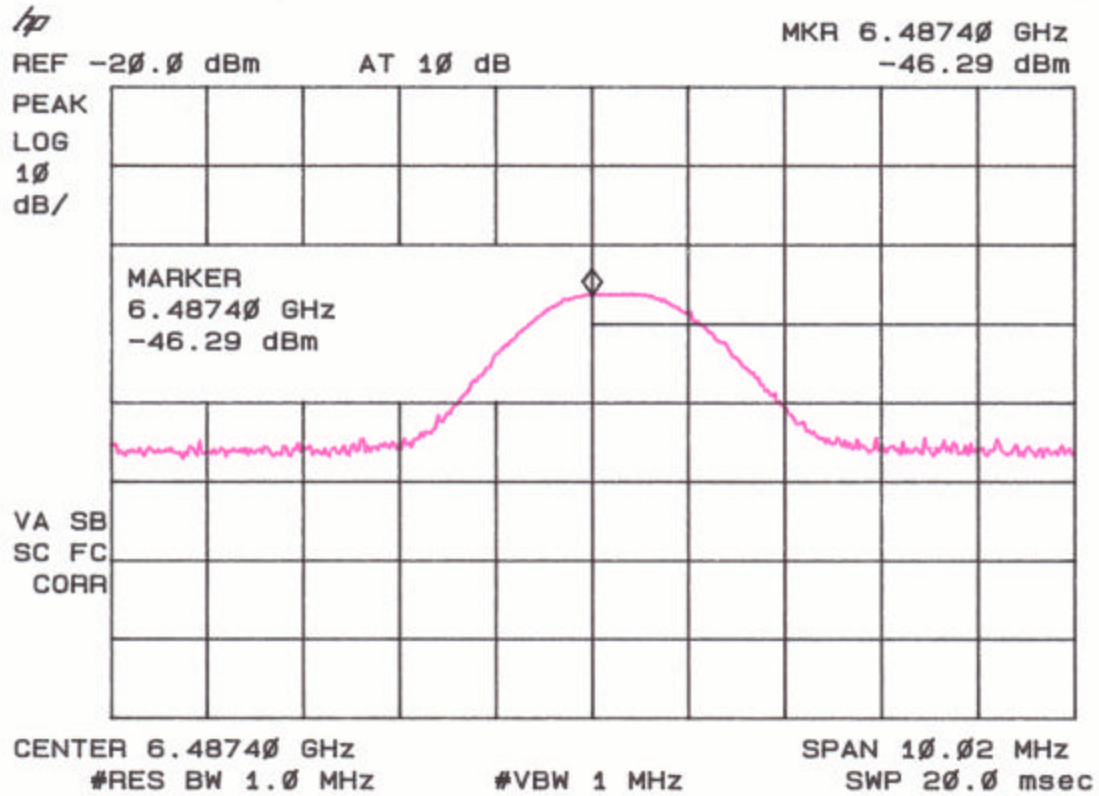


Figure 4c – 8
Peak Radiated Spurious Emission 15.247(c) High

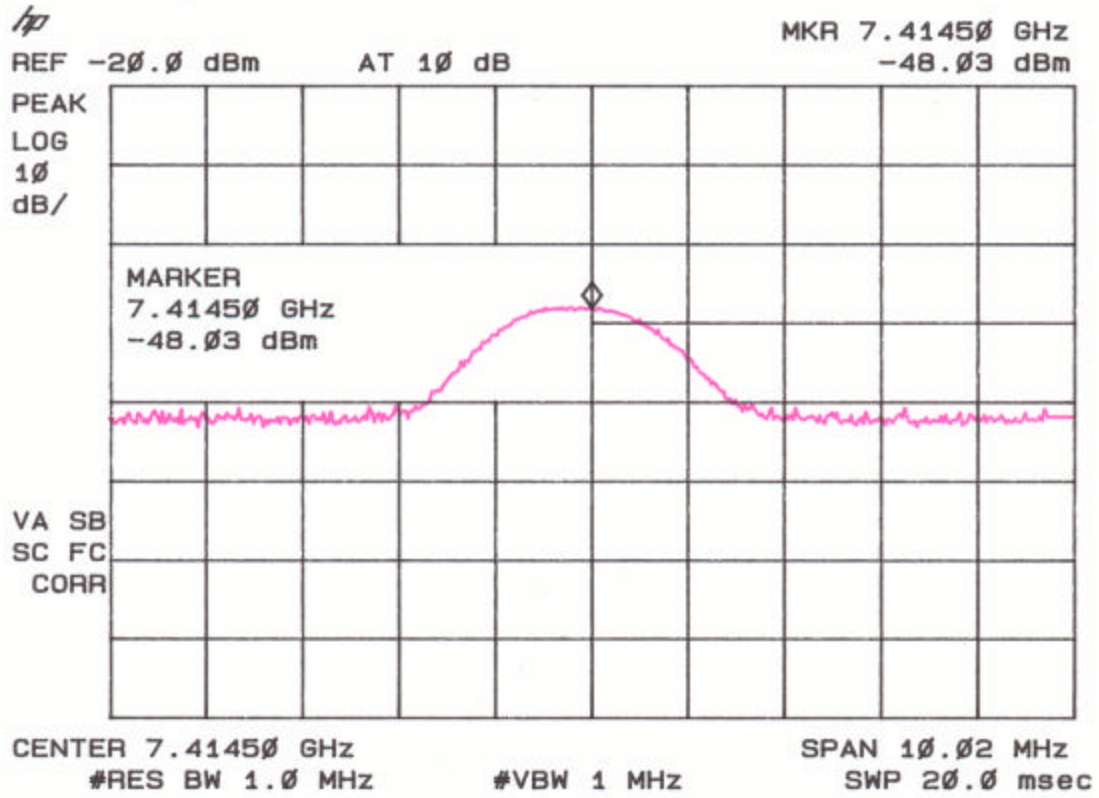


Figure 4c – 9
Peak Radiated Spurious Emission 15.247(c) High

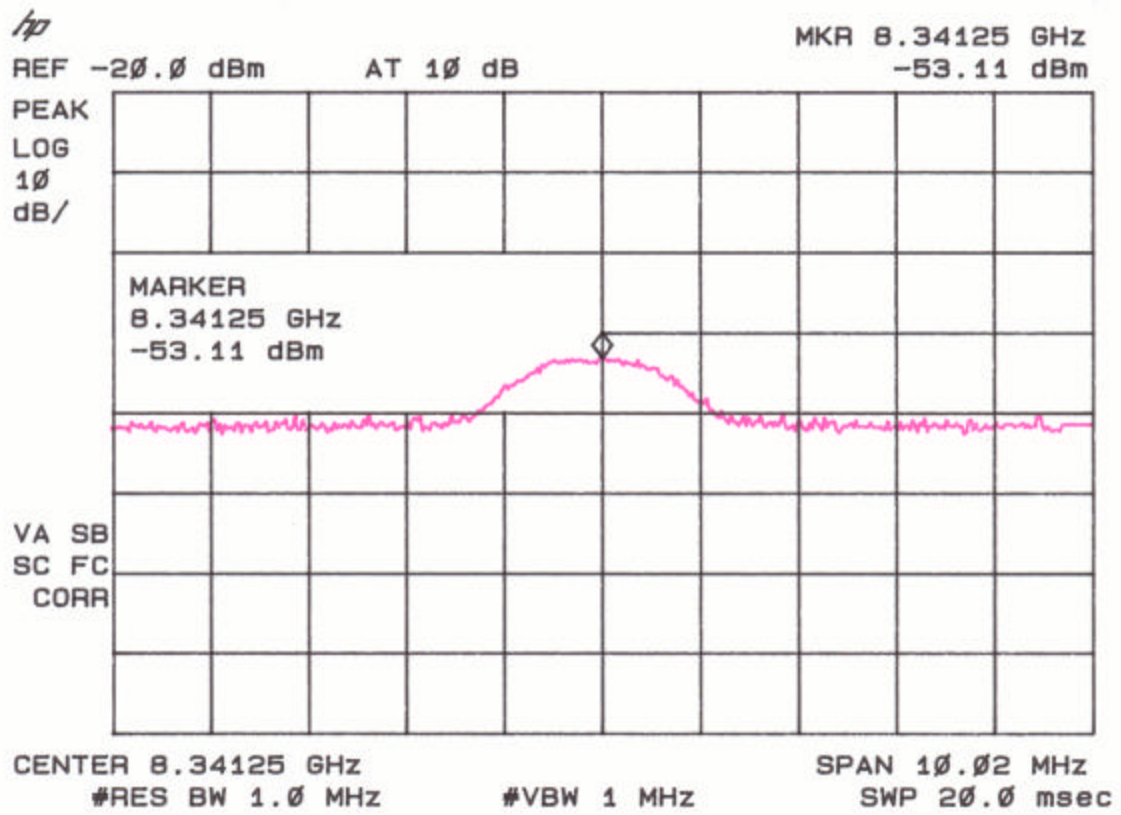


Figure 4c – 10
Peak Radiated Spurious Emission 15.247(c) High

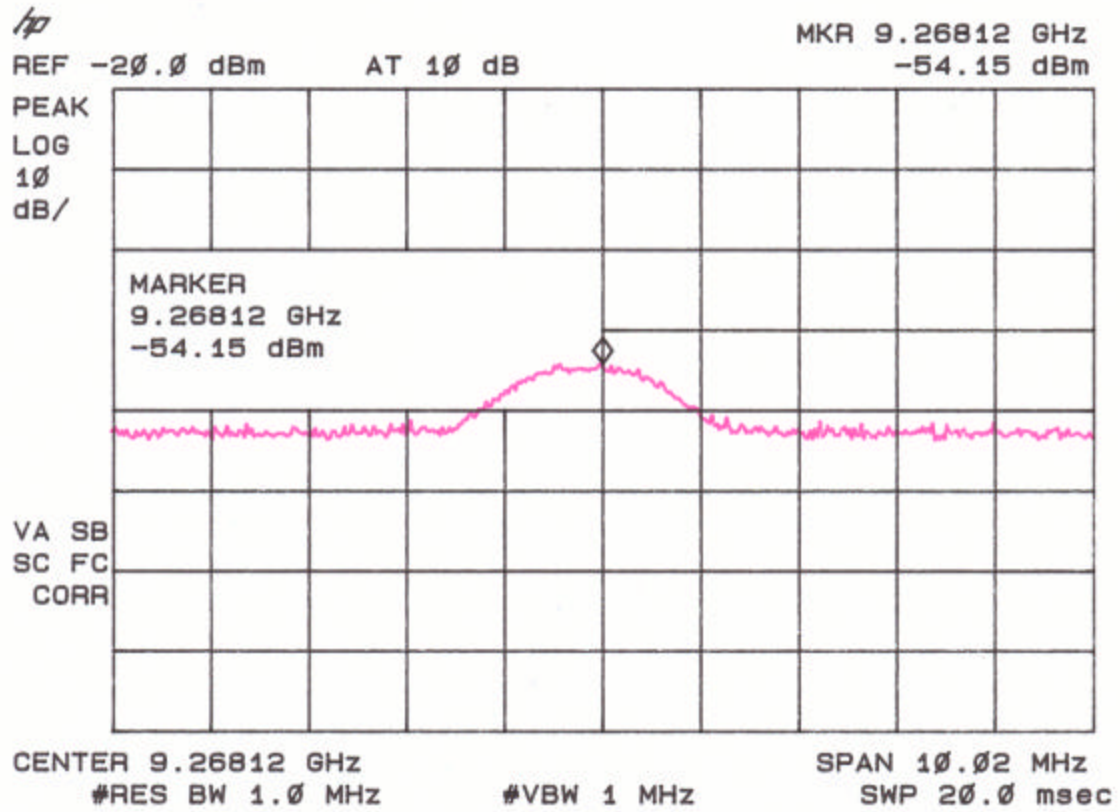


Figure 4c – 11
Peak Radiated Spurious Emission 15.247(c) High

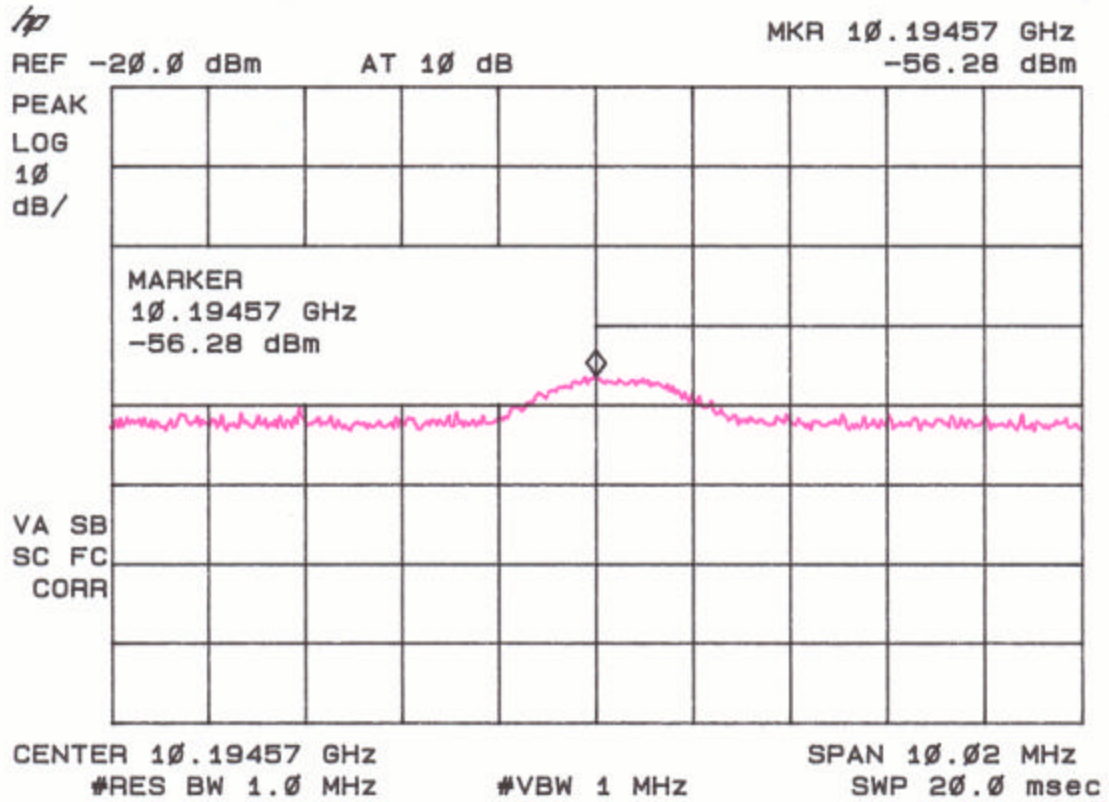


Figure 4c – 12
Peak Radiated Spurious Emission 15.247(c) High

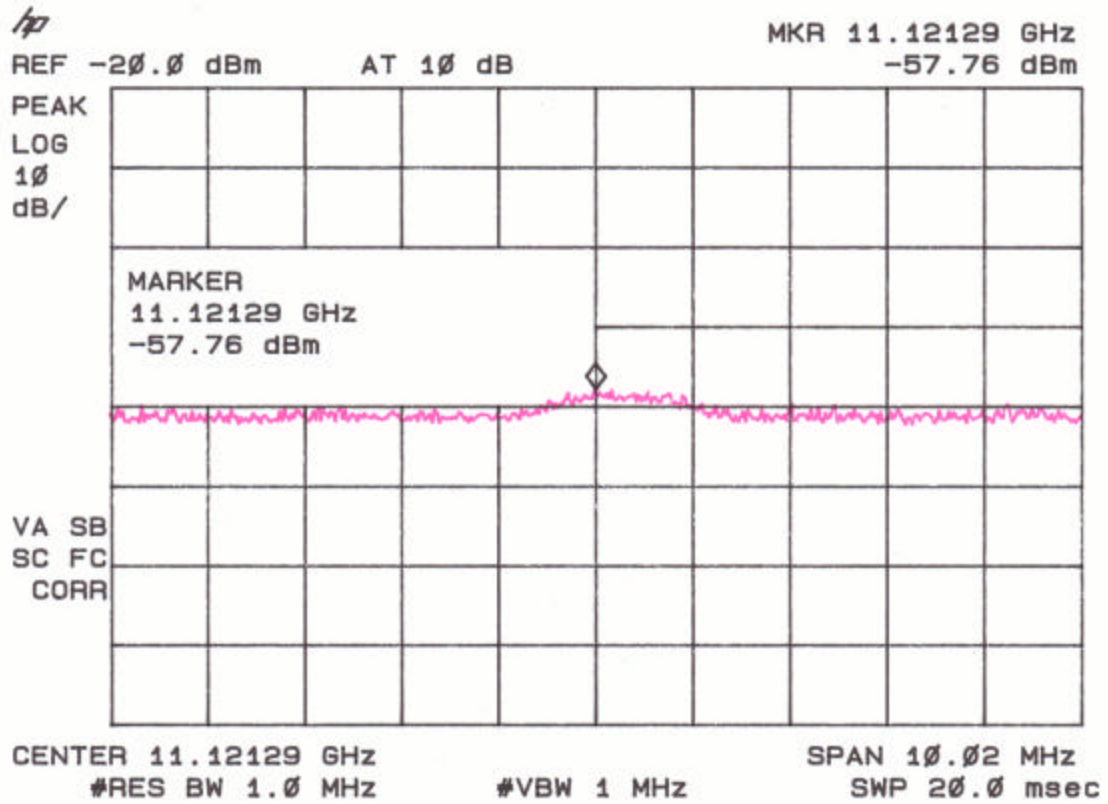


Figure 4c – 13
Peak Radiated Spurious Emission 15.247(c) High

