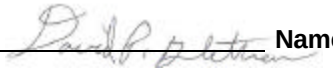
TABLE 4b PEAK RADIATED SPURIOUS EMISSIONS (Mid Channel)

Peak Radiated Emissions									
Test By:	Test:	FCC Part 15.247, Mid Channel			Client:	The Bodine Company			
DPB	Project:	05-0069	Class:	NA	Model:	FEBnet node			
Frequency (MHz)	**Test Data (dBm)**	**AF Table**	**Test Data (dBuV)**	**AF+CA-AMP (dB)**	**Results (uV/m)**	**Limits (uV/m)**	**Distance / Polarity**	**Margin (dB)**	**PK = n / QP**
910.30	-25.3	2LP3mV	81.7	30.7	414577.8		3m./VERT		**PK**
1820.55	-45.5	2HN3m	61.5	-6.9	538.6	41457.8	3m./HORZ	**37.7**	**PK**
2731	-53.0	2HN3m	54.0	-2.4	378.5	5000.0	3m./HORZ	**22.4**	**PK**
3641.23	-45.8	2HN3m	61.2	1.0	1294.2	5000.0	3m./HORZ	**11.7**	**PK**
4551.78	-64.7	2HN3m	42.3	4.8	225.9	5000.0	3m./HORZ	**26.9**	**PK**
5462.23	-71.2*	2HN3m	35.8	6.8	135.0	41457.8	3m./HORZ	**49.7**	**PK**
6372.4	-72.0*	2HN3m	35.0	8.1	142.7	41457.8	3m./HORZ	**49.3**	**PK**

Data corrected by 1 dB for loss of high pass filter except for fundamental frequency
* Data conversion from 1 meter to 3 meters = -9.54

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-45.5 + -6.9 + 107)/20) = 538.6
CONVERSION FROM dBm TO dBuV = 107 dB

Tester Signature:  **Name: David Blethen**

:

Figure 5b-1
Peak Radiated Spurious Emission 15.247(c) Mid Channel –
Fundamental

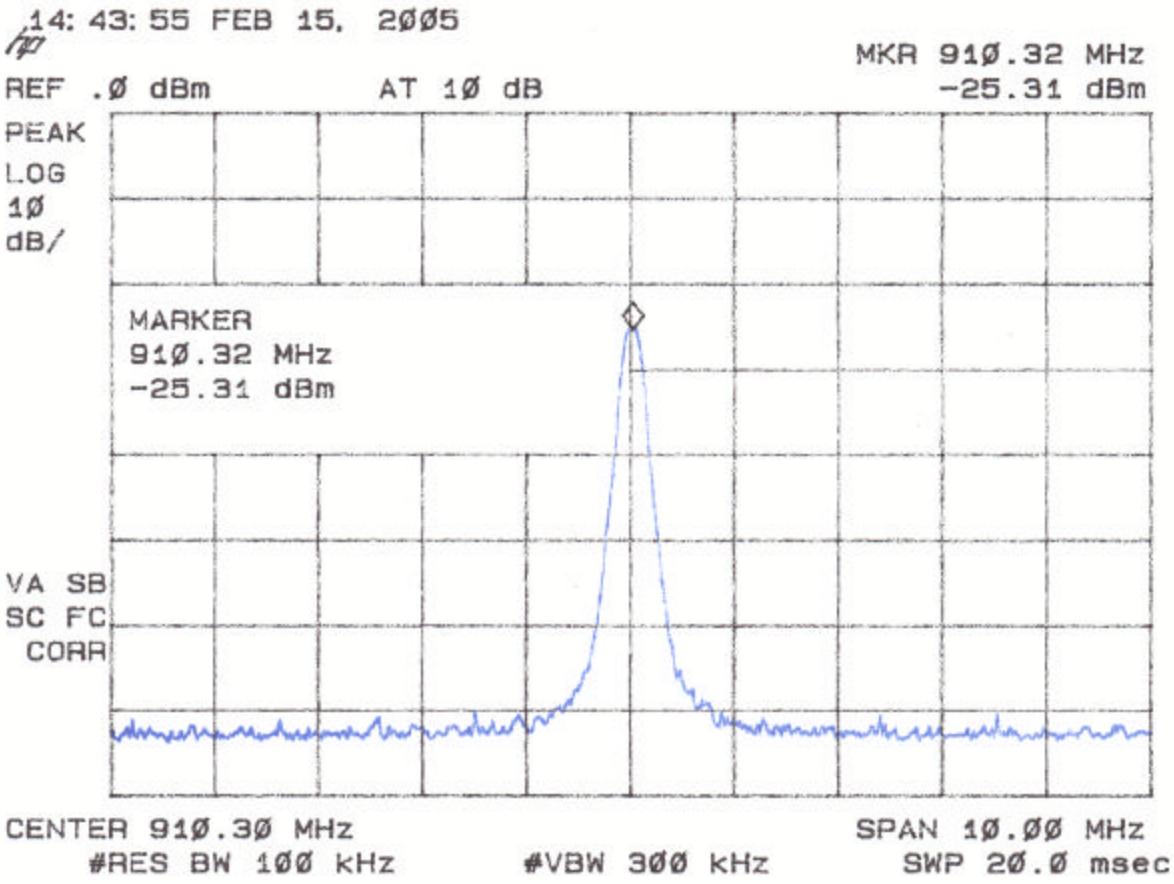


Figure 5b-2
Peak Radiated Spurious Emission 15.247(c) Mid Channel –
2nd Harmonic

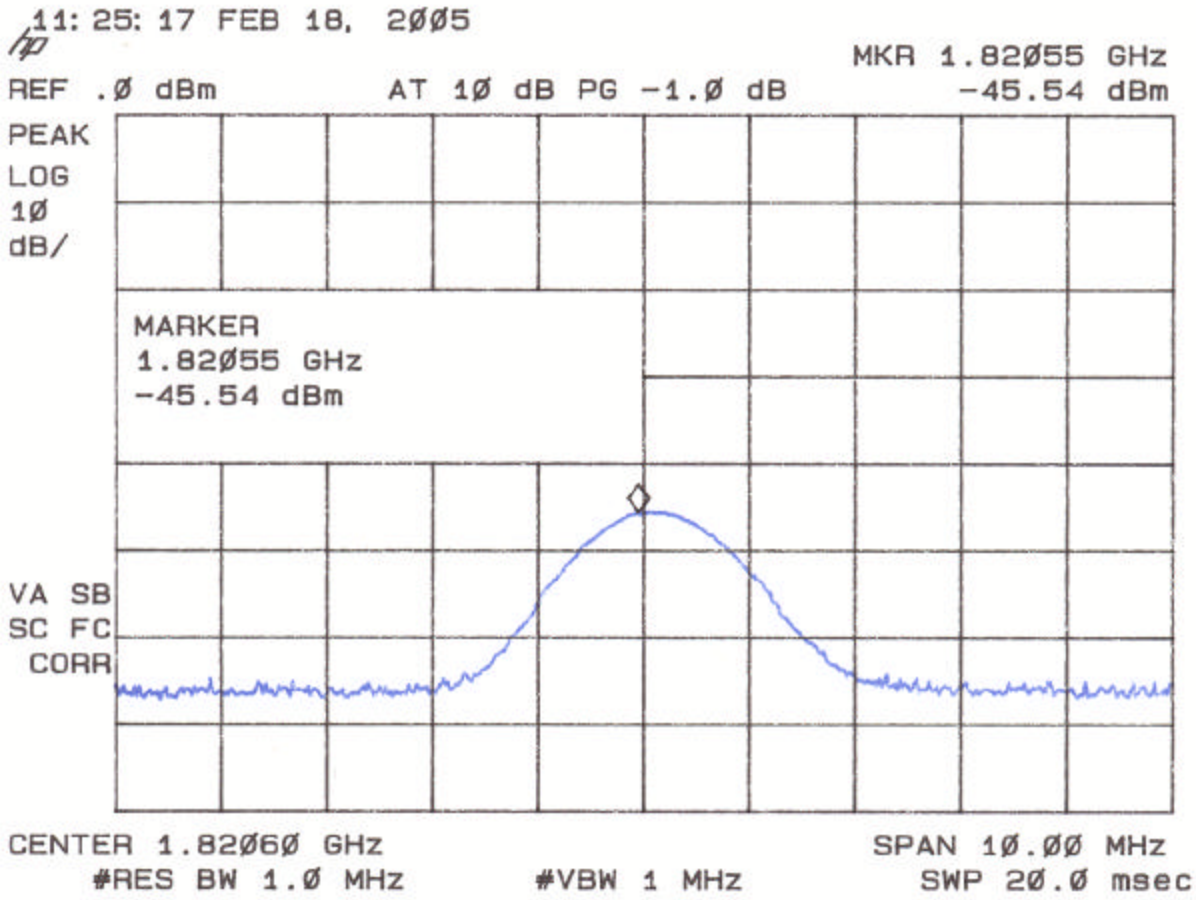


Figure 5b-3
Peak Radiated Spurious Emission 15.247(c) Mid Channel –
3rd Harmonic

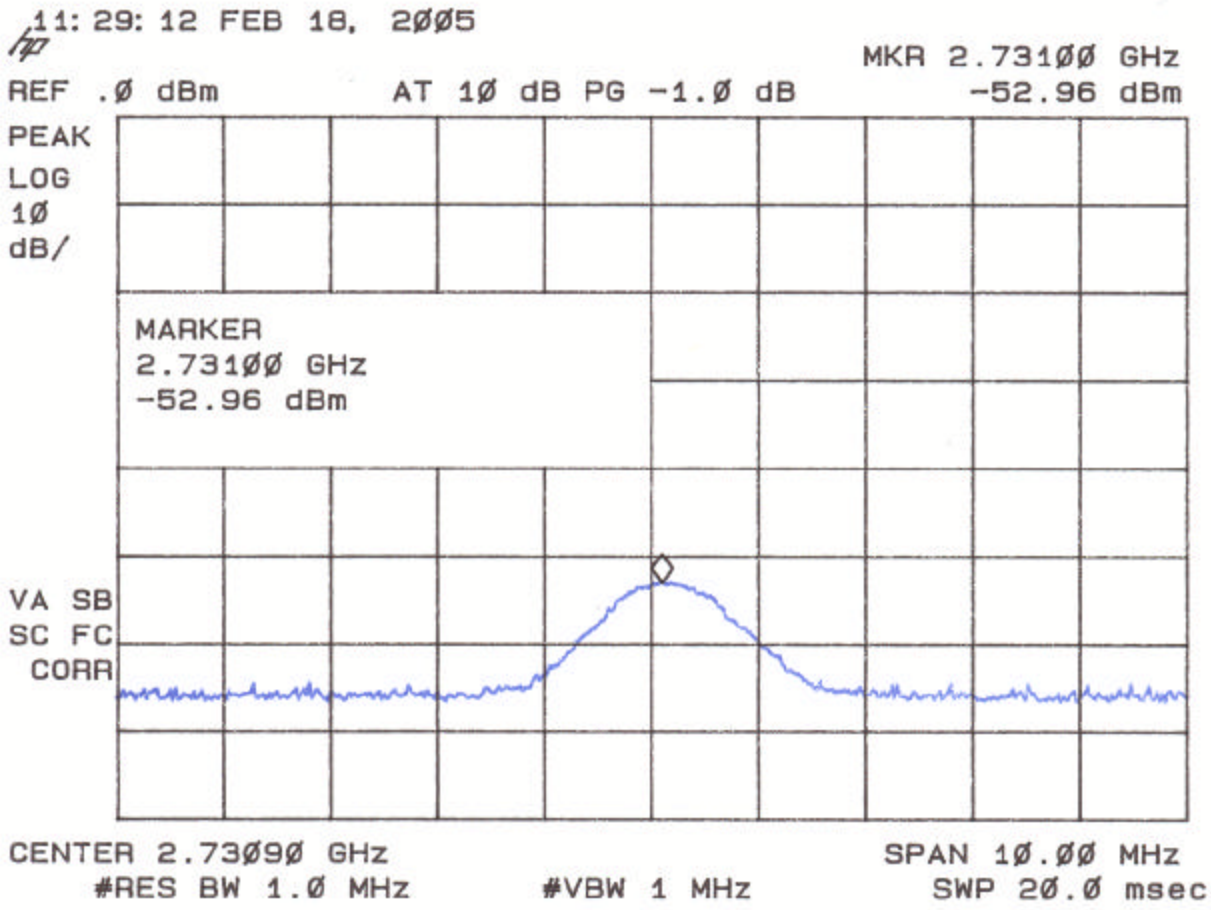


Figure 5b-4

Peak Radiated Spurious Emission 15.247(c) Mid Channel – 4rh Harmonic

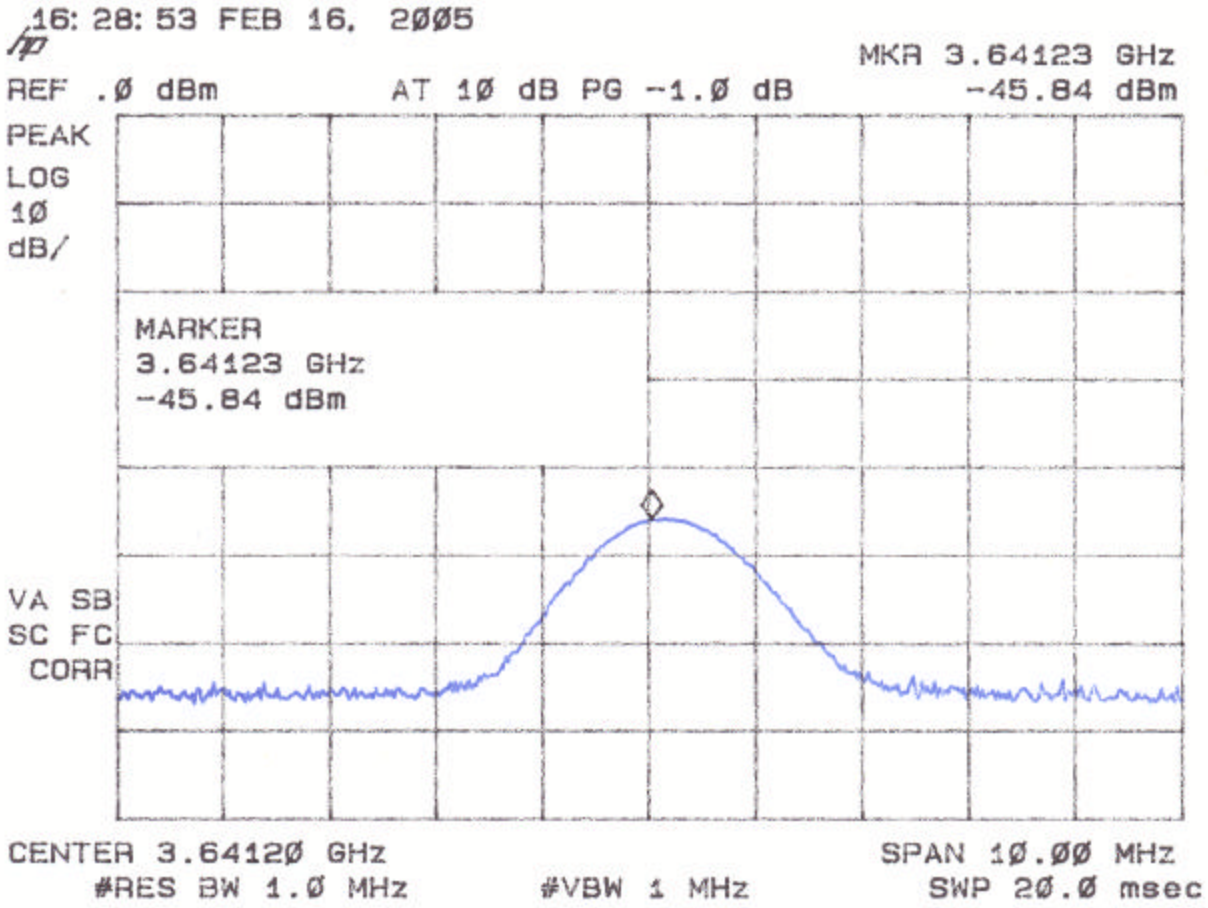


Figure 5b-5
Peak Radiated Spurious Emission 15.247(c) Mid Channel –
5rh Harmonic

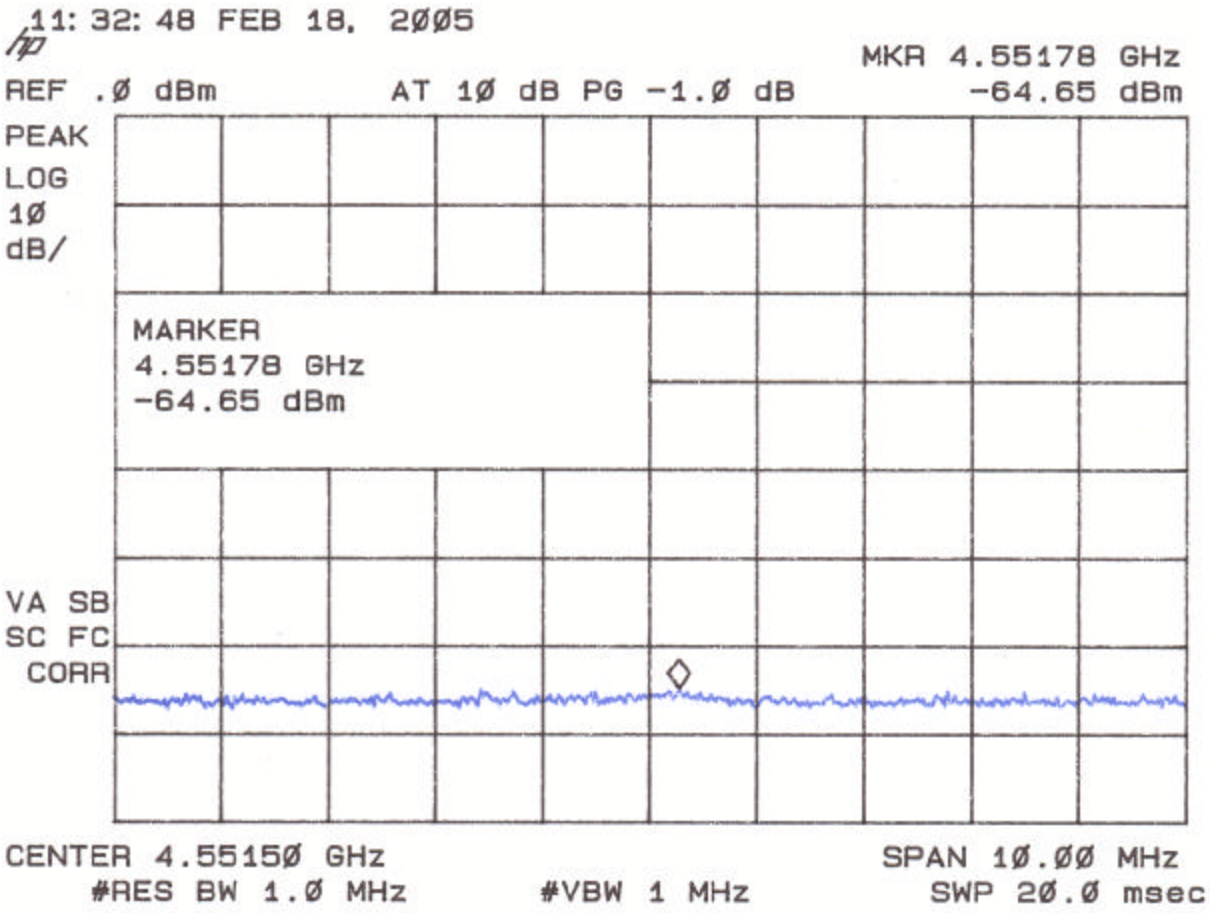


Figure 5b-6
Peak Radiated Spurious Emission 15.247(c) Mid Channel –
6rh Harmonic

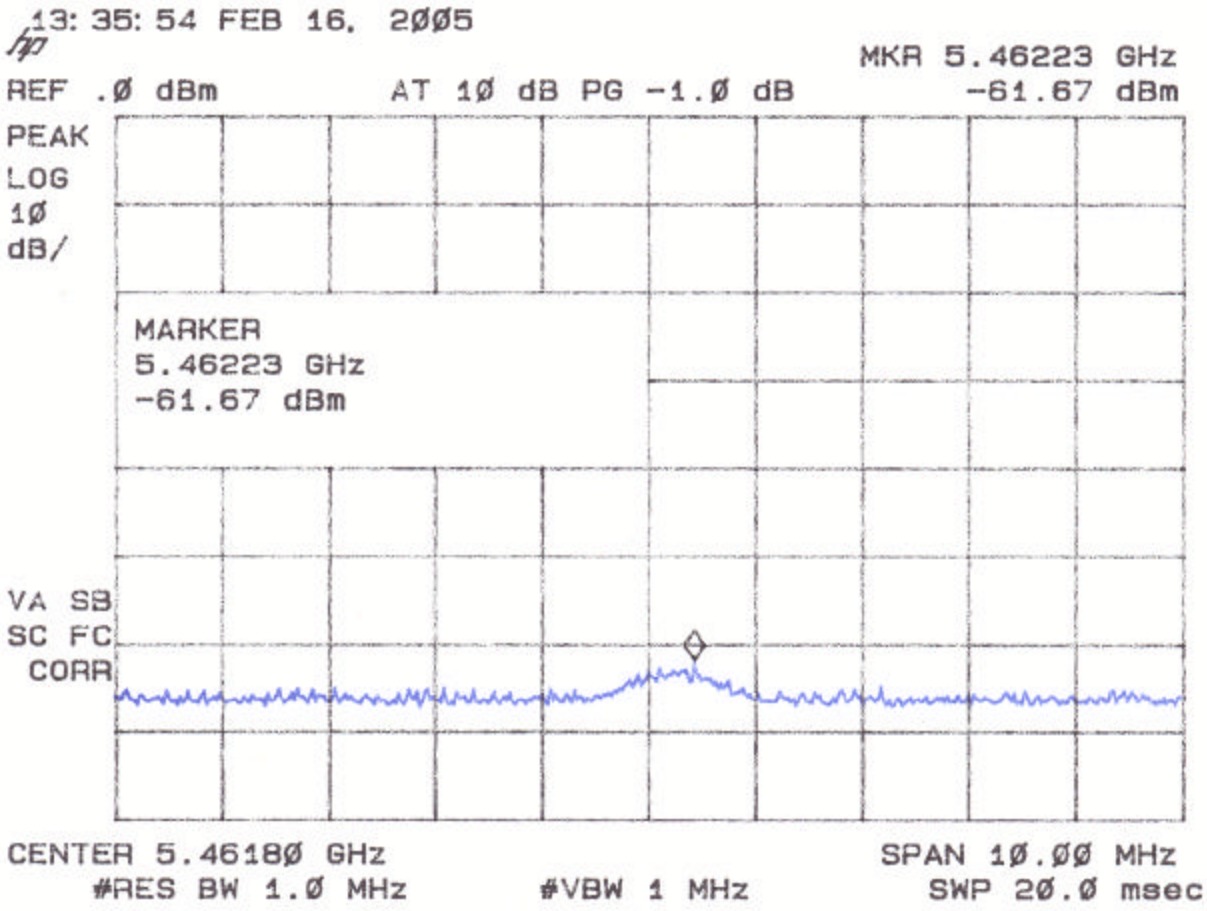


Figure 5b-7
Peak Radiated Spurious Emission 15.247(c) Mid Channel –
7rh Harmonic

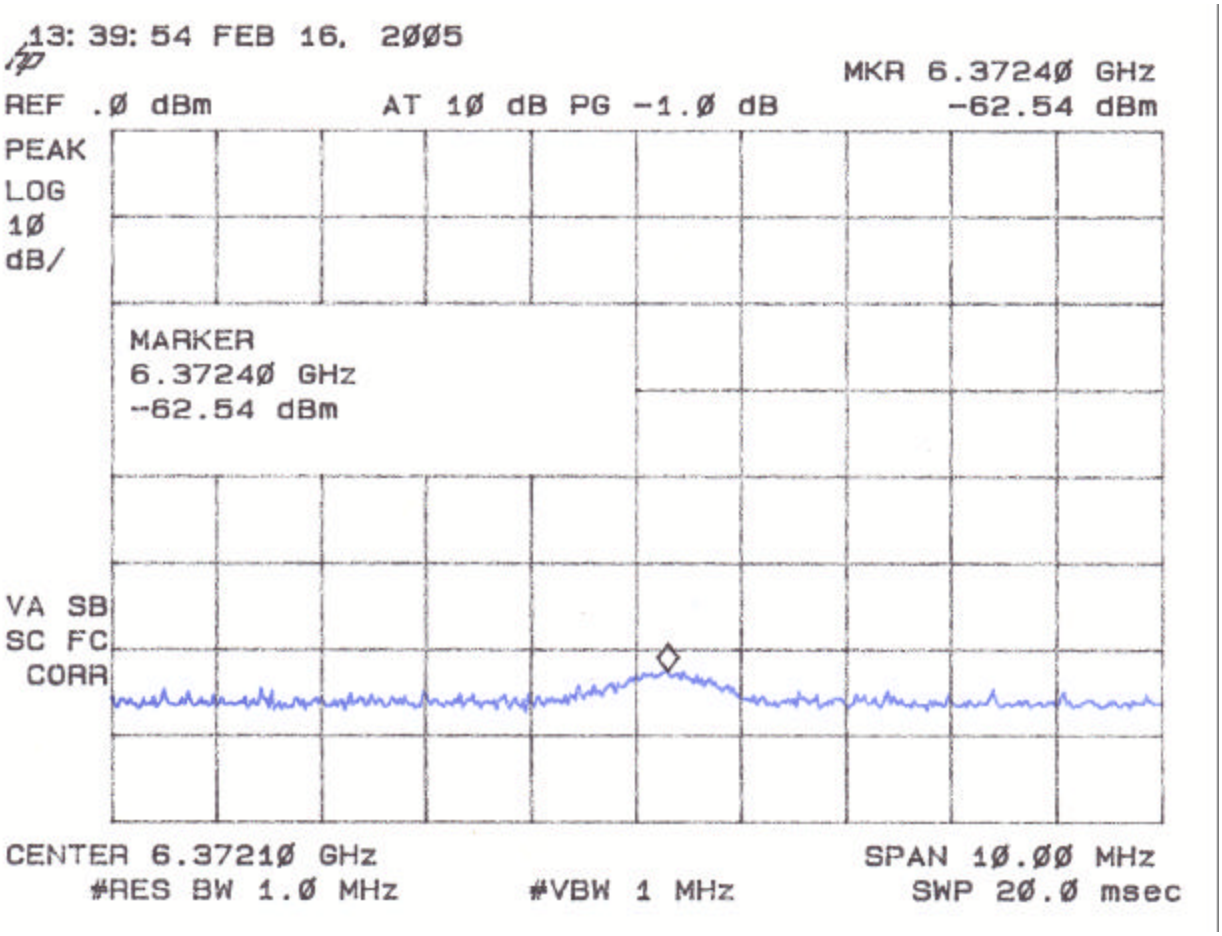


Table 4c. PEAK RADIATED SPURIOUS EMISSIONS (High Channel)

Peak Radiated Emission									
Test By:	Test:	FCC Part 15.247, High Channel				Client:	The Bodine Company		
DPB	Project:	05-0069		Class:	NA	Model:	FEBnet node		
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**
917.80	-25.1	2LP3mV	81.9	30.7	427815.0		3m./VERT		**PK**
1835.65	-46.0	2HN3m	61.0	-6.6	522.9	42781.5	3m./HORZ	**38.3**	**PK**
2753.5	-52.0	2HN3m	55.0	-2.4	428.2	5000.0	3m./HORZ	**21.3**	**PK**
3671.25	-48.2	2HN3m	58.8	1.2	1000.6	5000.0	3m./HORZ	**14.0**	**PK**
4589.05	-63.1	2HN3m	43.9	4.9	276.2	5000.0	3m./HORZ	**25.2**	**PK**
5507.03	-71.9*	2HN3m	35.1	6.8	125.1	42781.5	3m./HORZ	**50.7**	**PK**
6424.93	-71.3*	2HN3m	35.7	8.1	154.6	42781.5	3m./HORZ	**48.8**	**PK**

Data corrected by 1 dB for loss of high pass filter except for fundamental frequency
* Data conversion from 1 meter to 3 meters = -9.54

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-46.0 + -6.6 + 107)/20) = 522.9
CONVERSION FROM dBm TO dBuV = 107 dB

Tester Signature: _____ **Name: David Blethen**

Figure 5c-1
Peak Radiated Spurious Emission 15.247(c) High Channel – Fundamental

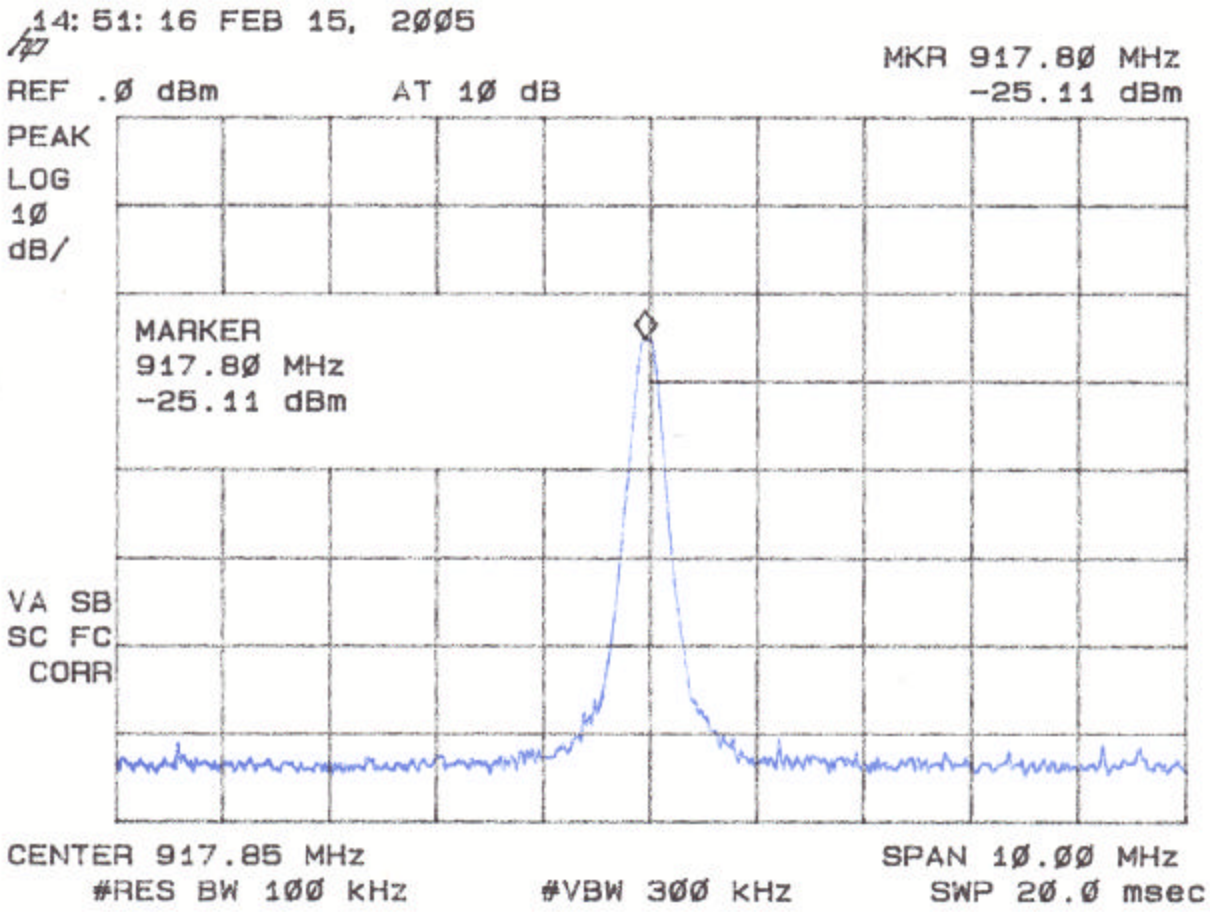


Figure 5c-2
Peak Radiated Spurious Emission 15.247(c) High Channel –
2nd Harmonic

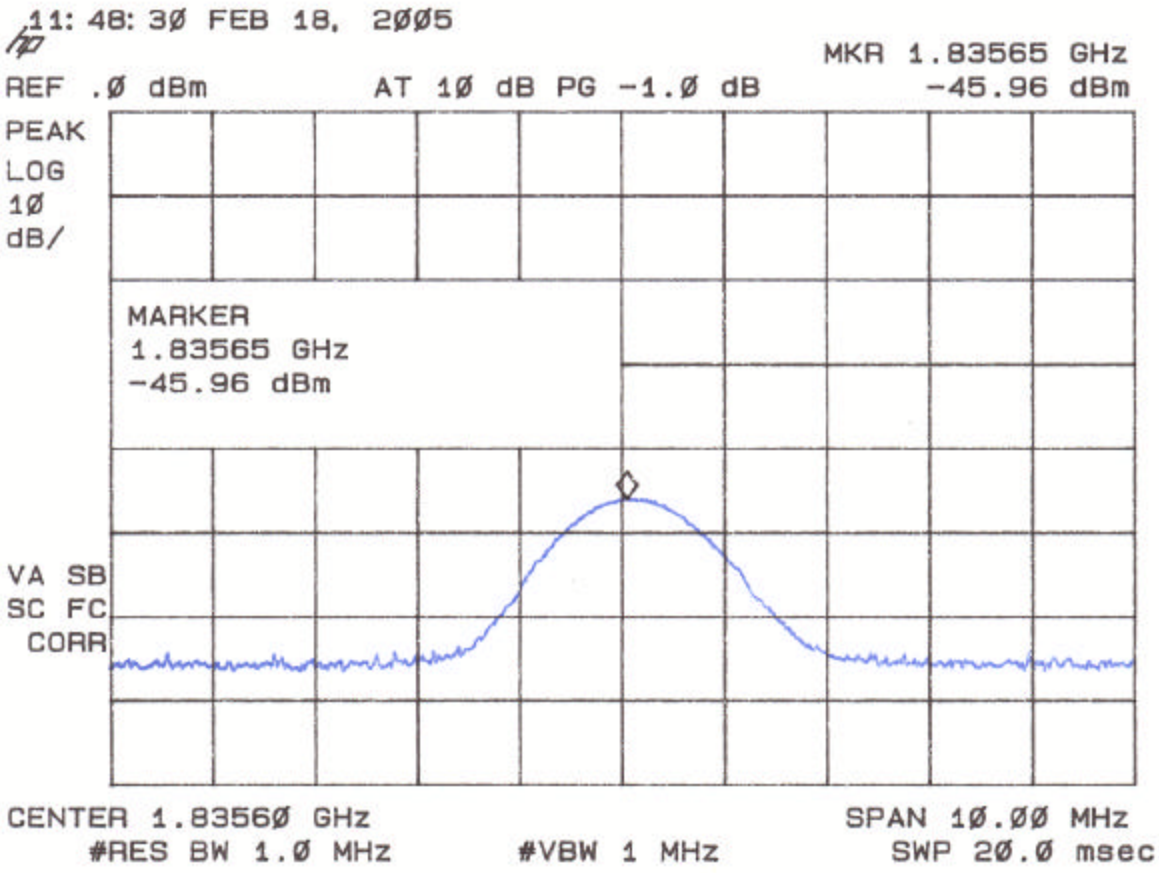


Figure 5c-3
Peak Radiated Spurious Emission 15.247(c) High Channel –
3rd Harmonic

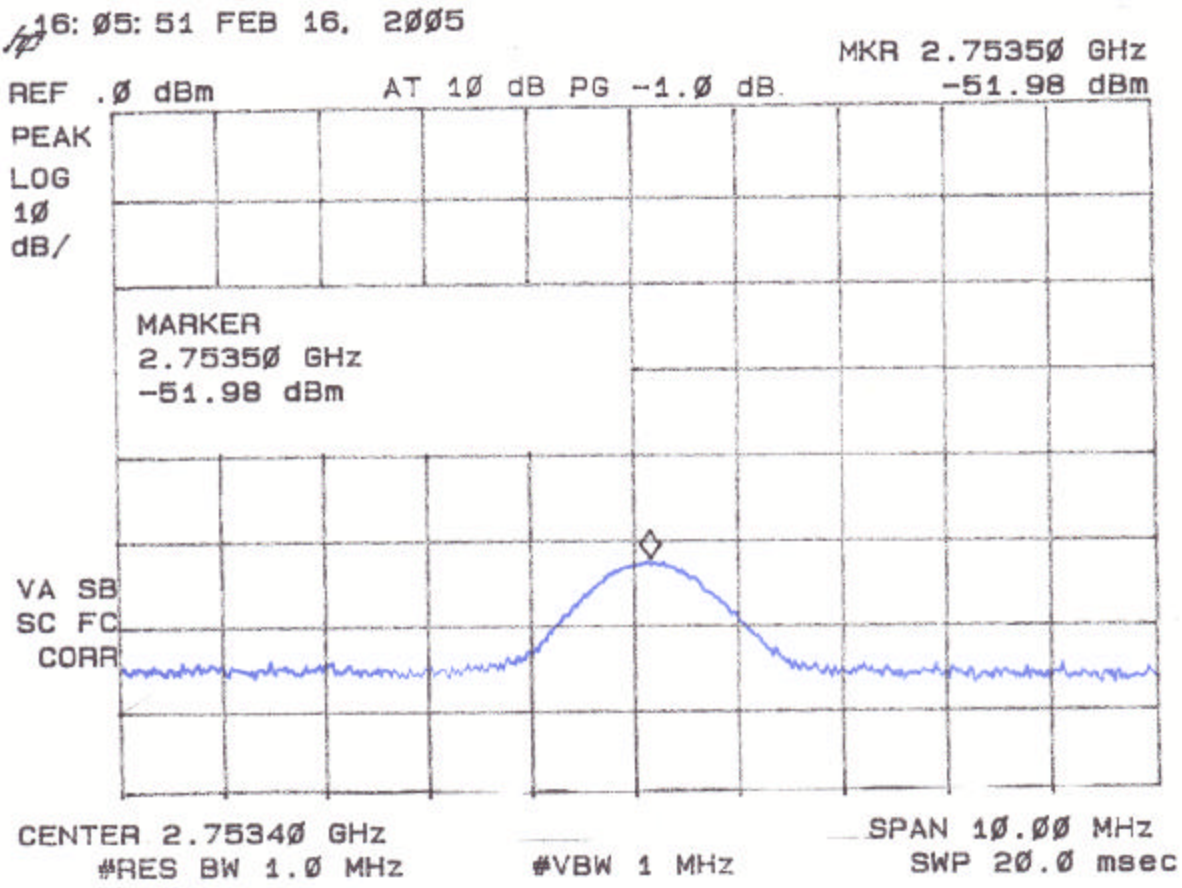


Figure 5c-4
Peak Radiated Spurious Emission 15.247(c) High Channel –
4rh Harmonic

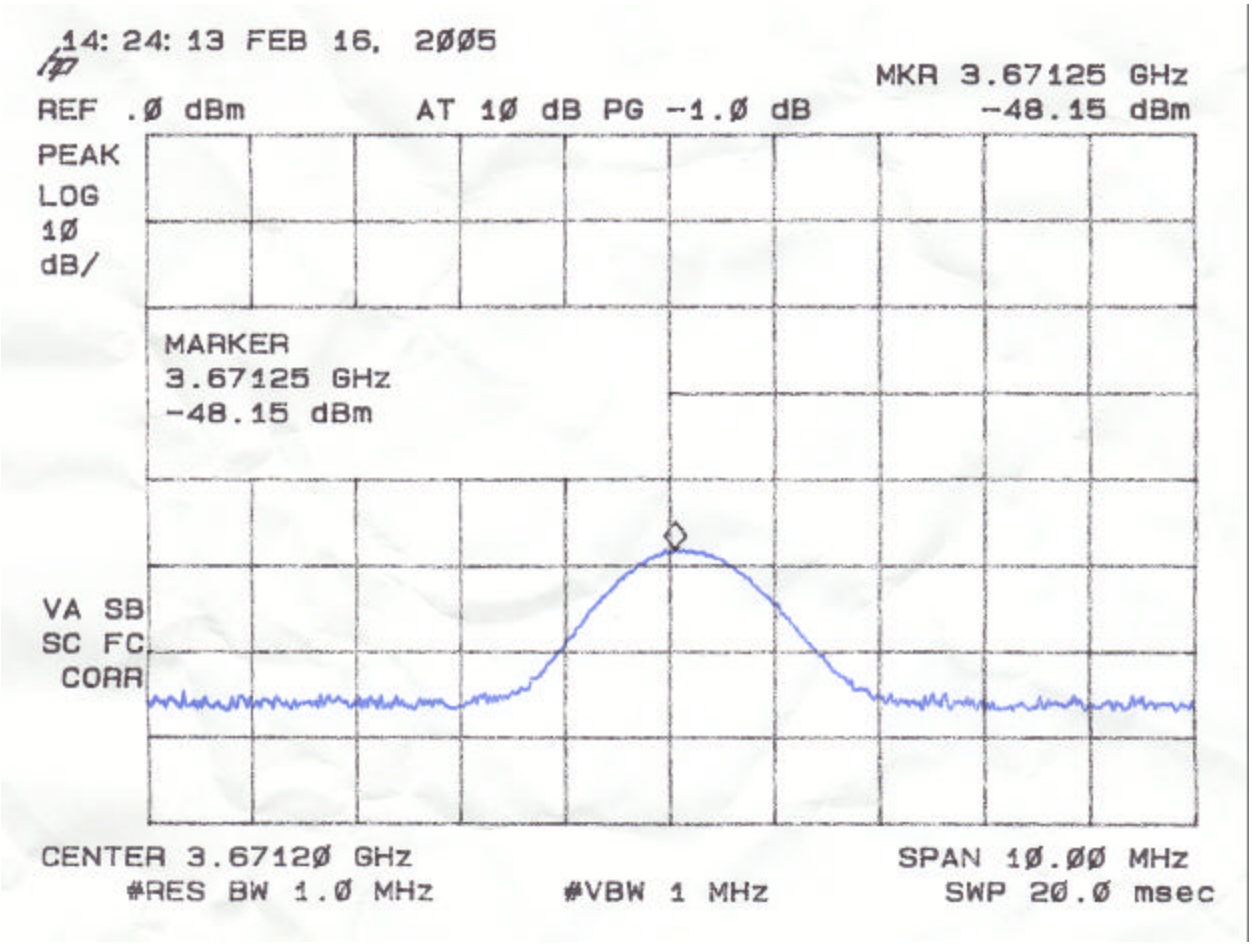


Figure 5c-5

Peak Radiated Spurious Emission 15.247(c) High Channel – 5rh Harmonic

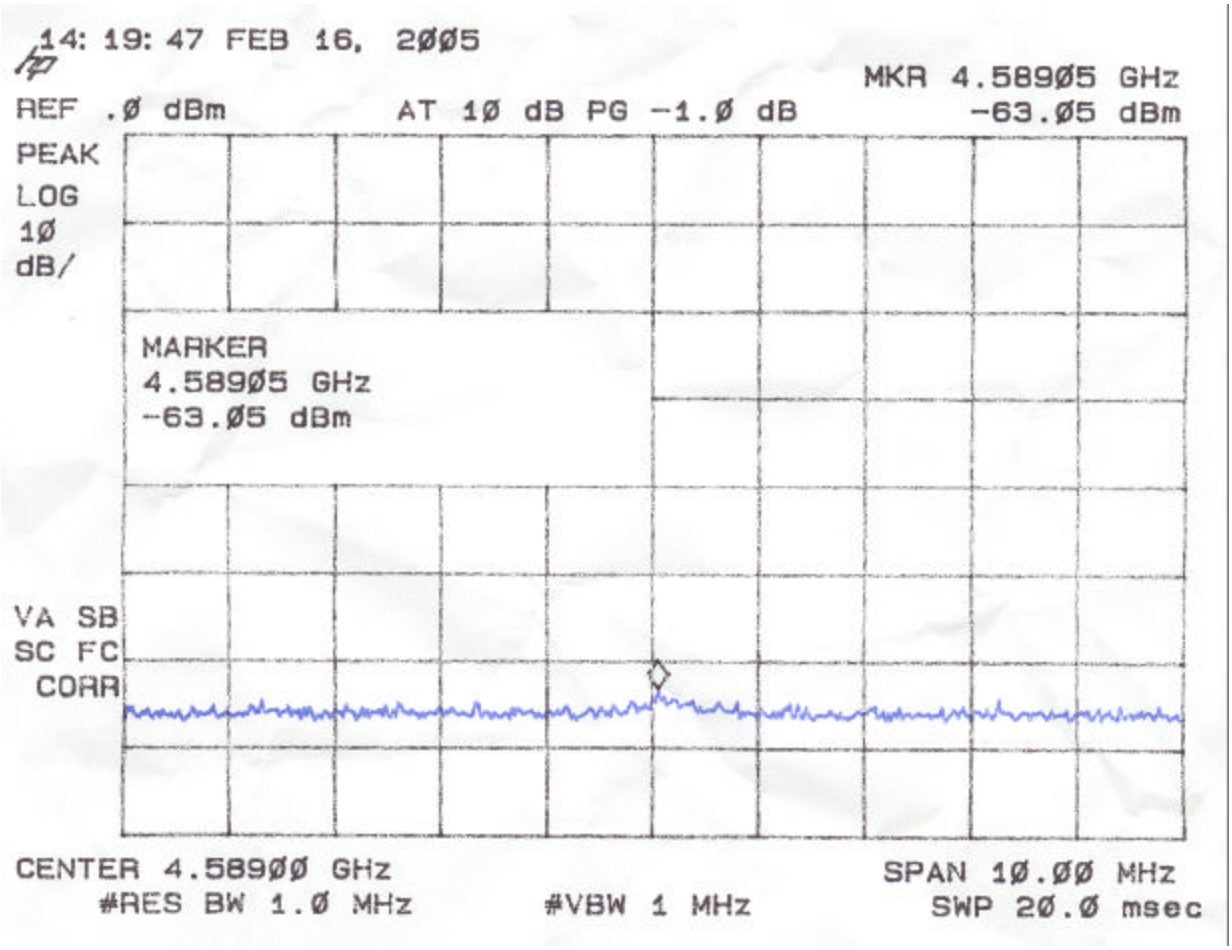


Figure 5c-6
Peak Radiated Spurious Emission 15.247(c) High Channel –
6rh Harmonic

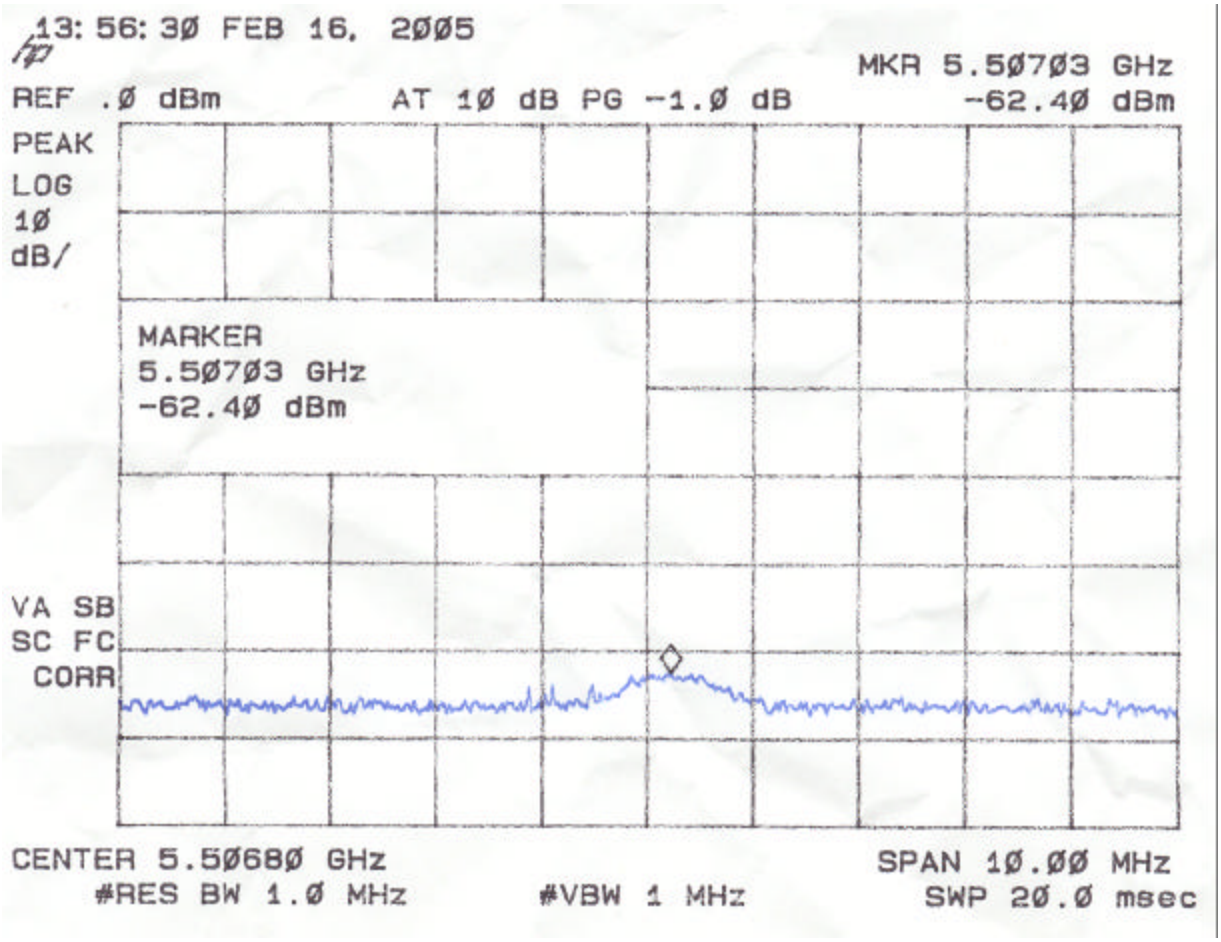
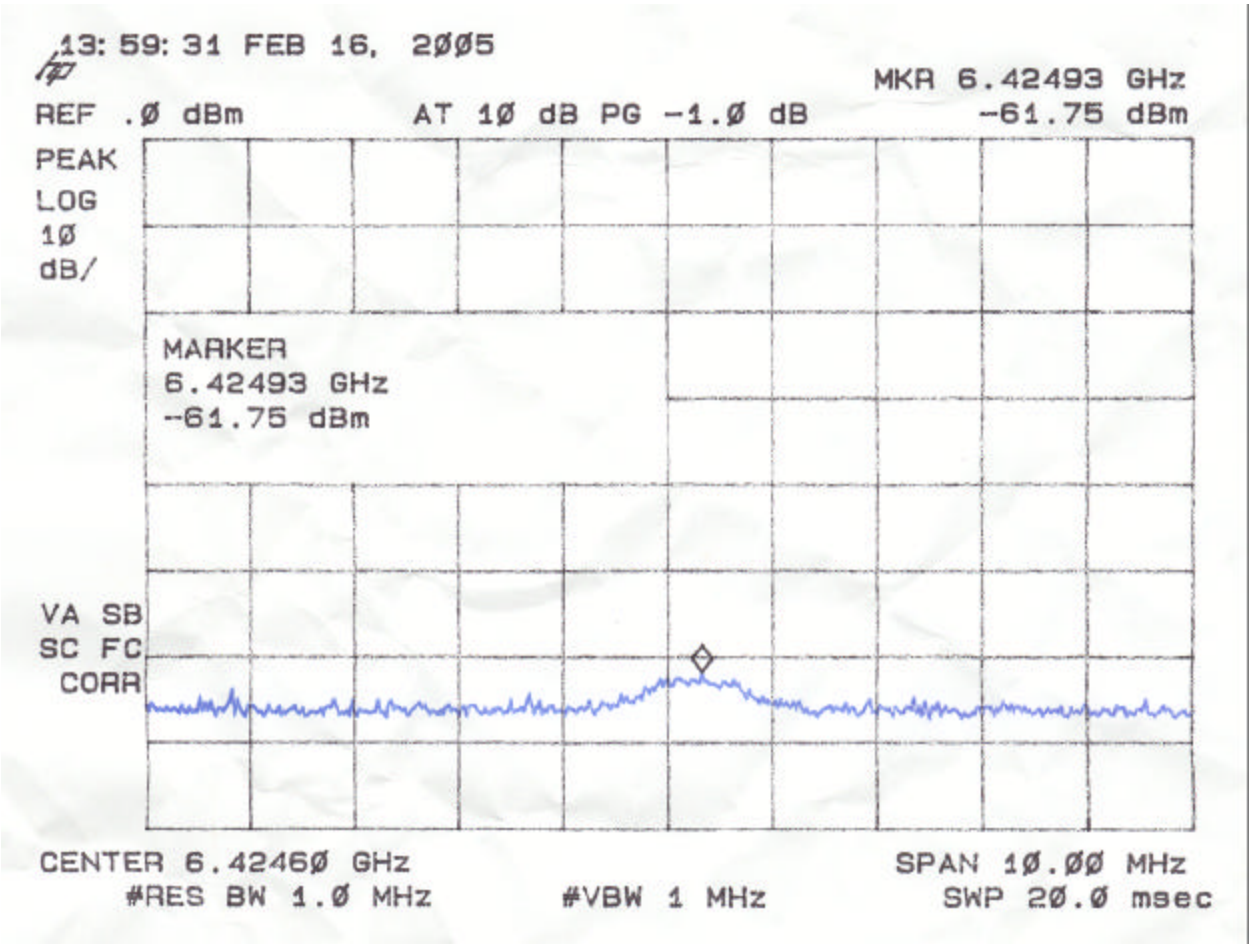


Figure 5c-7
Peak Radiated Spurious Emission 15.247(c) High Channel –
7rh Harmonic



2.10 Average Spurious Emission in the Frequency Range 30 - 25000 MHz (FCC Section 15.247(c))

The results of average radiated spurious emissions falling within restricted bands are given in Tables 5a – 5c. These values were calculated using the following duty cycle corrections:

The maximum transmit time of the EUT, based upon software and firmware settings, is 31.5 ms. Measured time of occupancy from Section 2.13 is 31.5 ms therefore:

31.50 ms/100 ms = 31.50% duty cycle
20^{log}(.3150)= -10 dB correction factor

Table 5a. AVERAGE RADIATED SPURIOUS EMISSIONS Low Channel

Average Radiated Emissions, Duty Cycle 31.5%, 10 dB correction									
Test By:	Test:	FCC Part 15.247, Low Channel				Client:	The Bodine Company		
DPB	Project:	05-0069		Class:	NA	Model:	FEBnet node		
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**
903.10	-36.4	2LP3mV	70.6	30.6	114317.3		3m./VERT		**AVG**
959.4	-98.1	2LP3mV	8.9	31.2	101.6	11431.7	3m./VERT	**41.0**	**AVG**
333.1	-100.7	2LP3mV	6.3	18.8	18.0	500.0	3m./VERT	**28.9**	**AVG**
975.3	-97.4	2LP3mV	9.6	31.4	112.7	500.0	3m./VERT	**12.9**	**AVG**
1806.25	-54.6	2HN3m	52.4	-7.1	183.9	11431.7	3m./HORZ	**35.9**	**AVG**
2709.35	-64.6	2HN3m	42.4	-2.5	98.8	500.0	3m./HORZ	**14.1**	**AVG**
3612.6	-56.7	2HN3m	50.3	0.9	362.4	500.0	3m./HORZ	**2.8**	**AVG**
4516.13	-74.5	2HN3m	32.5	4.6	71.9	500.0	3m./HORZ	**16.8**	**AVG**
5418.73	-80.0*	2HN3m	27.0	6.8	48.9	500.0	3m./HORZ	**20.2**	**AVG**
6322.2	-80.0*	2HN3m	27.0	8.1	56.8	11431.7	3m./HORZ	**46.1**	**AVG**

Data corrected by 1 dB for loss of high pass filter except for fundamental frequency
* Data conversion from 1 meter to 3 meters = -9.54

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-54.6 + 52.4 + 107)/20) = 183.9
CONVERSION FROM dBm TO dBuV = 107 dB

Tester
Signature: _____ **Name: David Blethen**

Table 5b. AVERAGE RADIATED SPURIOUS EMISSIONS Mid Channel

Average Radiated Emissions, 31.5% duty cycle, 10 dB correction									
Test By:	Test:	FCC Part 15.247 Mid Channel				Client:	The Bodine Company		
DPB	Project:	05-0069		Class:	NA	Model:	FEBnet node		
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**
910.30	-35.3	2LP3mV	71.7	30.7	131101.0		3m./VERT		**AVG**
1820.55	-55.5	2HN3m	51.5	-6.9	170.3	13628.0	3m./HORZ	**38.1**	**AVG**
2731	-63.0	2HN3m	44.0	-2.4	119.7	500.0	3m./HORZ	**12.4**	**AVG**
3641.23	-55.8	2HN3m	51.2	1.0	409.3	500.0	3m./HORZ	**1.7**	**AVG**
4551.78	-74.7	2HN3m	32.3	4.8	71.4	500.0	3m./HORZ	**16.9**	**AVG**
5462.23	-81.2*	2HN3m	25.8	6.8	42.7	13628.0	3m./HORZ	**50.1**	**AVG**
6372.4	-82.0*	2HN3m	25.0	8.1	45.1	13628.0	3m./HORZ	**49.6**	**AVG**

Data corrected by 1 dB for loss of high pass filter except for fundamental frequency
* Data conversion from 1 meter to 3 meters = -9.54

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-55.5 + -6.9 + 107)/20) = 170.3
CONVERSION FROM dBm TO dBuV = 107 dB

Tester Signature: **Name: David Blethen**

Table 5c. AVERAGE RADIATED SPURIOUS EMISSIONS High Channel

Average Radiated Emissions, 31.5% duty cycle, 10 dB correction									
Test By:	Test:	FCC Part 15.247 High Channel				Client:	The Bodine Company		
DPB	Project:	05-0069		Class:	NA	Model:	FEBnet node		
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**
917.80	-35.1	2LP3mV	71.9	30.7	135287.0		3m./VERT		**AVG**
1835.65	-56.0	2HN3m	51.0	-6.6	165.4	13528.7	3m./HORZ	**38.3**	**AVG**
2753.5	-62.0	2HN3m	45.0	-2.4	135.4	500.0	3m./HORZ	**11.3**	**AVG**
3671.25	-58.2	2HN3m	48.8	1.2	316.4	500.0	3m./HORZ	**4.0**	**AVG**
4589.05	-73.1	2HN3m	33.9	4.9	87.3	500.0	3m./HORZ	**15.2**	**AVG**
5507.03	-81.9*	2HN3m	25.1	6.8	39.6	13528.7	3m./HORZ	**50.7**	**AVG**
6424.93	-81.3*	2HN3m	25.7	8.1	48.9	13528.7	3m./HORZ	**48.8**	**AVG**

Data corrected by 1 dB for loss of high pass filter except for fundamental frequency
* Data conversion from 1 meter to 3 meters = -9.54

SAMPLE CALCULATION:
RESULTS (uV/m @ 3m) = Antilog ((-56.0 + -6.6 + 107)/20) = 165.4
CONVERSION FROM dBm TO dBuV = 107 dB

Tester Signature: **Name: David Blethen**