2.9 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 –4g and Figure 5a – Figure 5ai.

Report Number: 04-0282 Issue Date: January 21, 2005
Customer: Nivis, LLC
Model: Amplified Radio Modem RF-P9-05-01-03

Table 4a. PEAK RADIATED SPURIOUS EMISSIONS Low Channel

Dual Band Antenna`

Freq. (MHz)	Test Data (dBm) @ 3m	AF + CA - AMP (dB)	Results (uV/m) 3m	FCC Limits (uV/m)	MARGIN BELOW FCC Limits (dB)
910.52	-16.4	30.7	1156832.6	-	-
1821.06	-22.6	-6.9	7527.5	115683.3	23.7
2731.51	-52.2	-2.4	415.1	5000.0	21.6
3641.93	-49.9	1.0	807.6	5000.0	15.8
4552.58	-56.0	4.8	615.3	5000.0	18.2
5463.01	-44.7**	6.8	2853.8	115683.3	32.2
6373.48	-61.0**	8.1	506.2	115683.3	47.2
7283.96	-57.7**	9.9	914.8	5000.0	14.8

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 ((-22.6 + -6.9 + 107)/20) = 7527.5``
CONVERSION FROM dBm TO dBuV = 107 dB

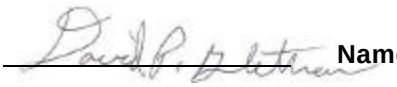
Tester Signature:  **Name: David Blethen**

Figure 5a-1
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band Fundamental

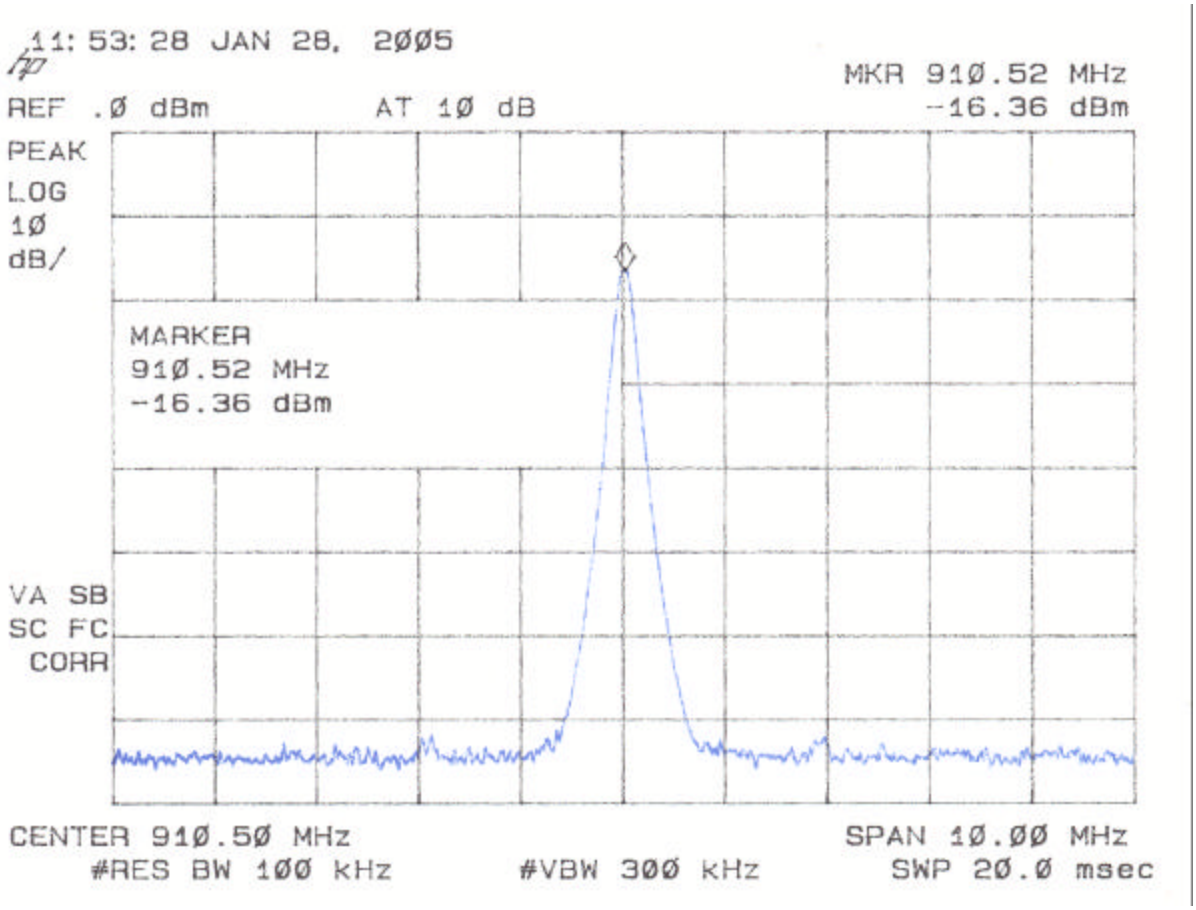


Figure 5a-2
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 2nd Harmonic

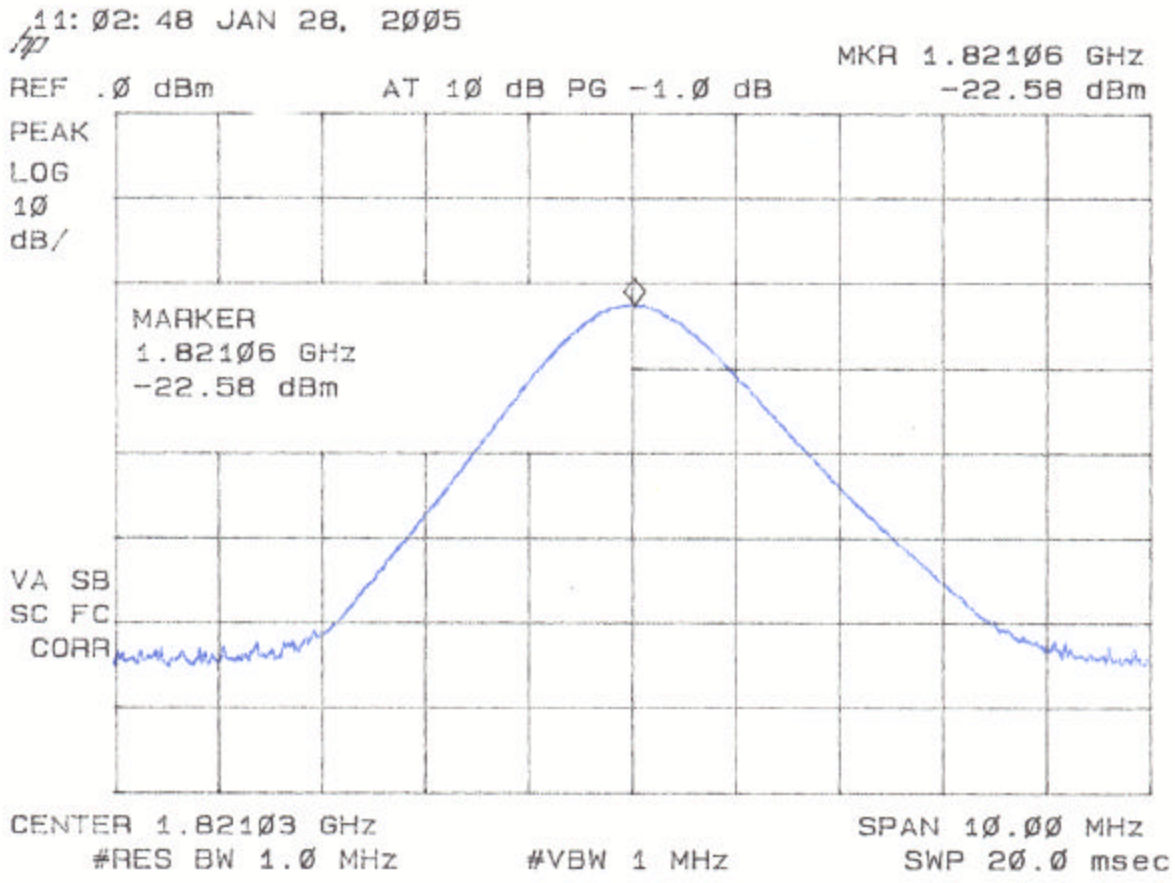


Figure 5a-3
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 3rd Harmonic

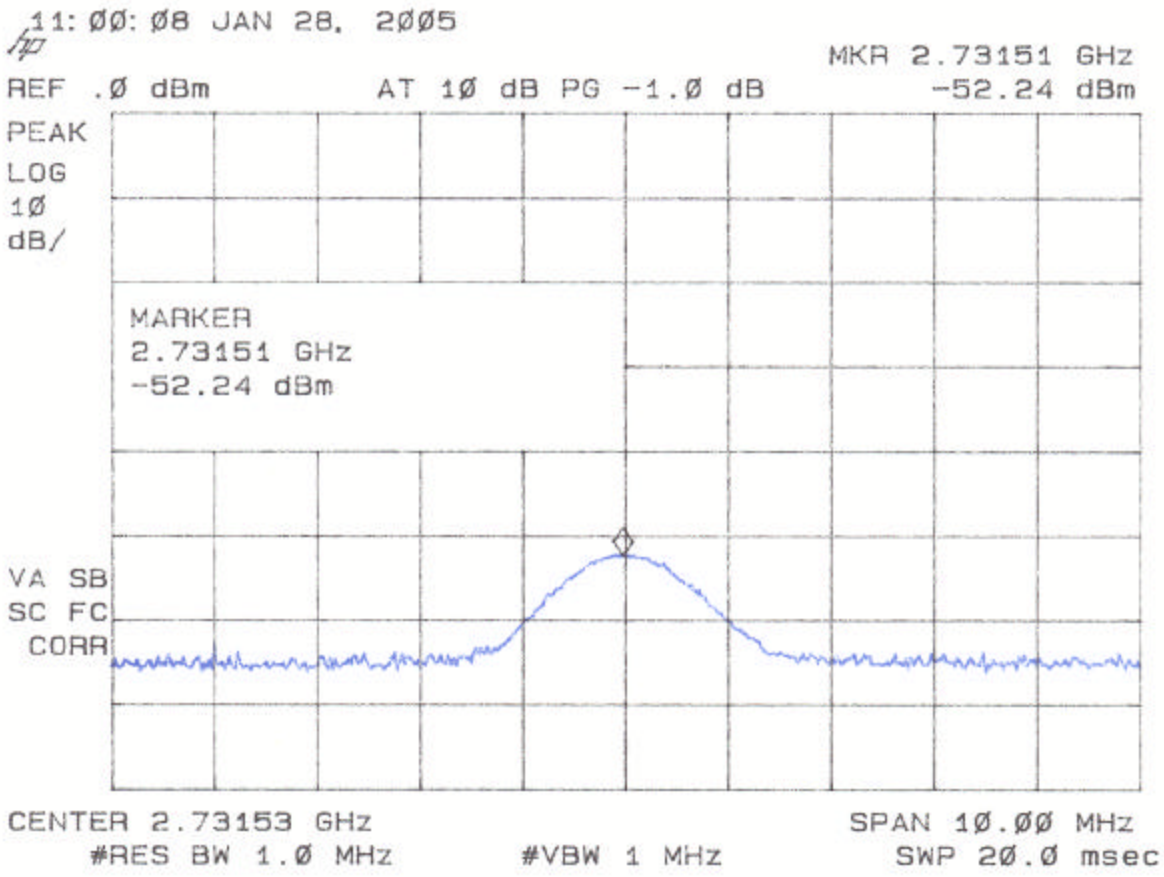


Figure 5a-4
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 4rh Harmonic

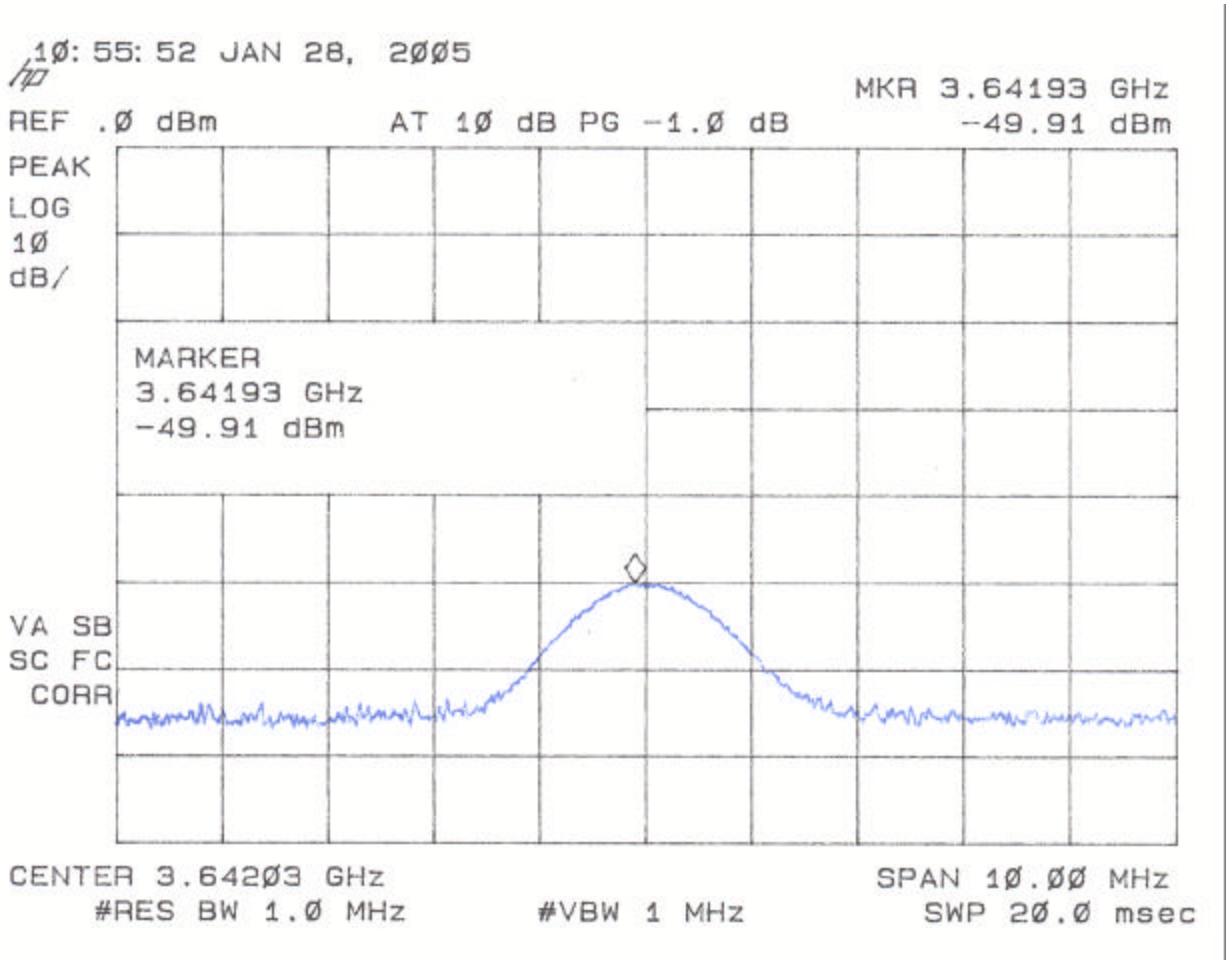


Figure 5a-5
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 5rh Harmonic

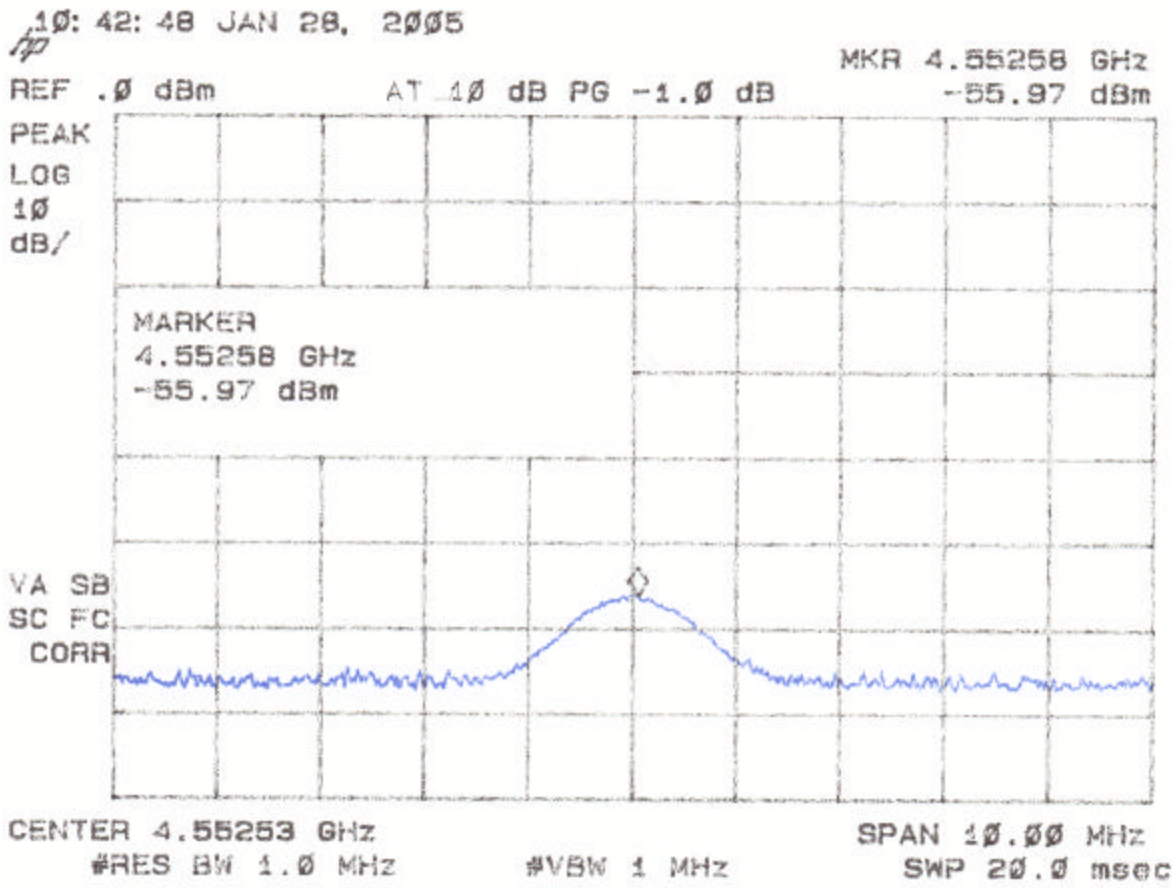


Figure 5a-6
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 6rh Harmonic

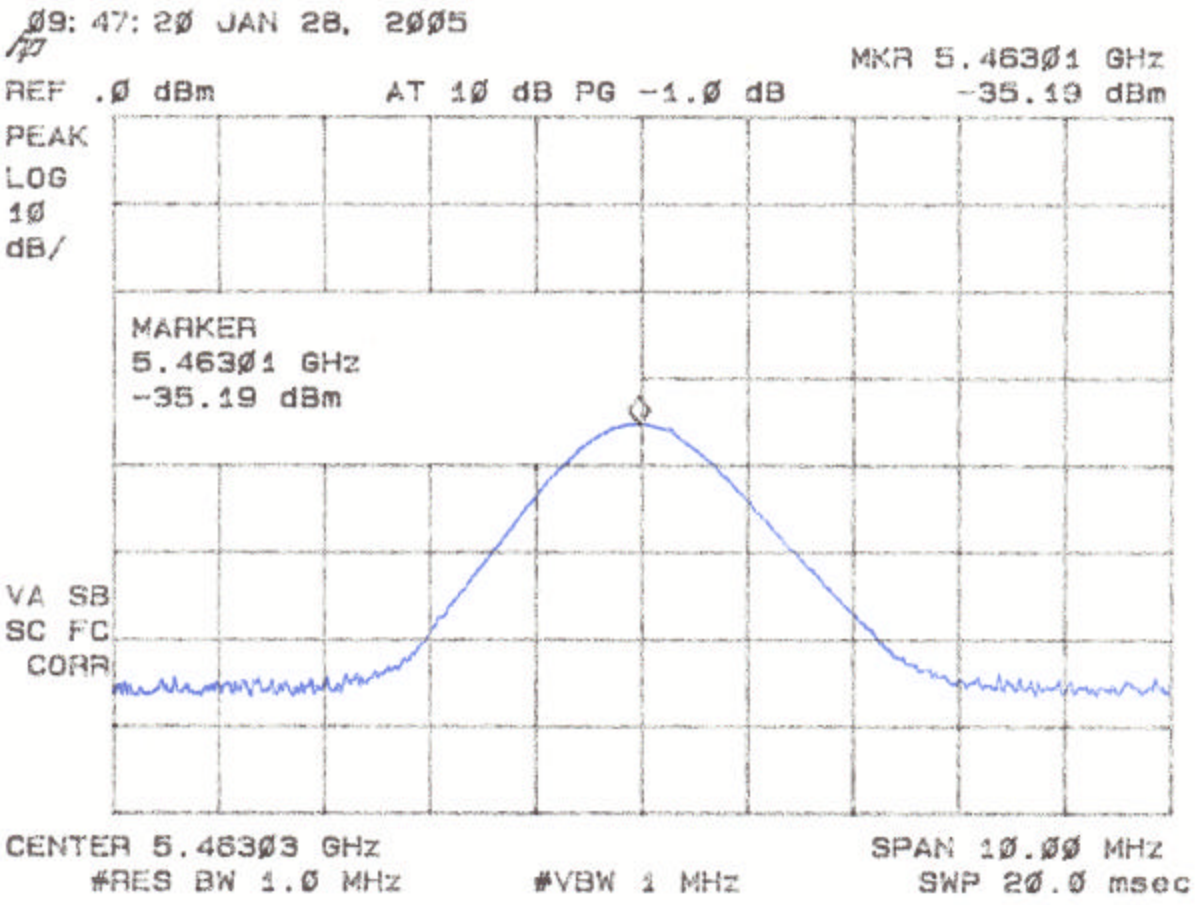


Figure 5a-7
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 7rh Harmonic

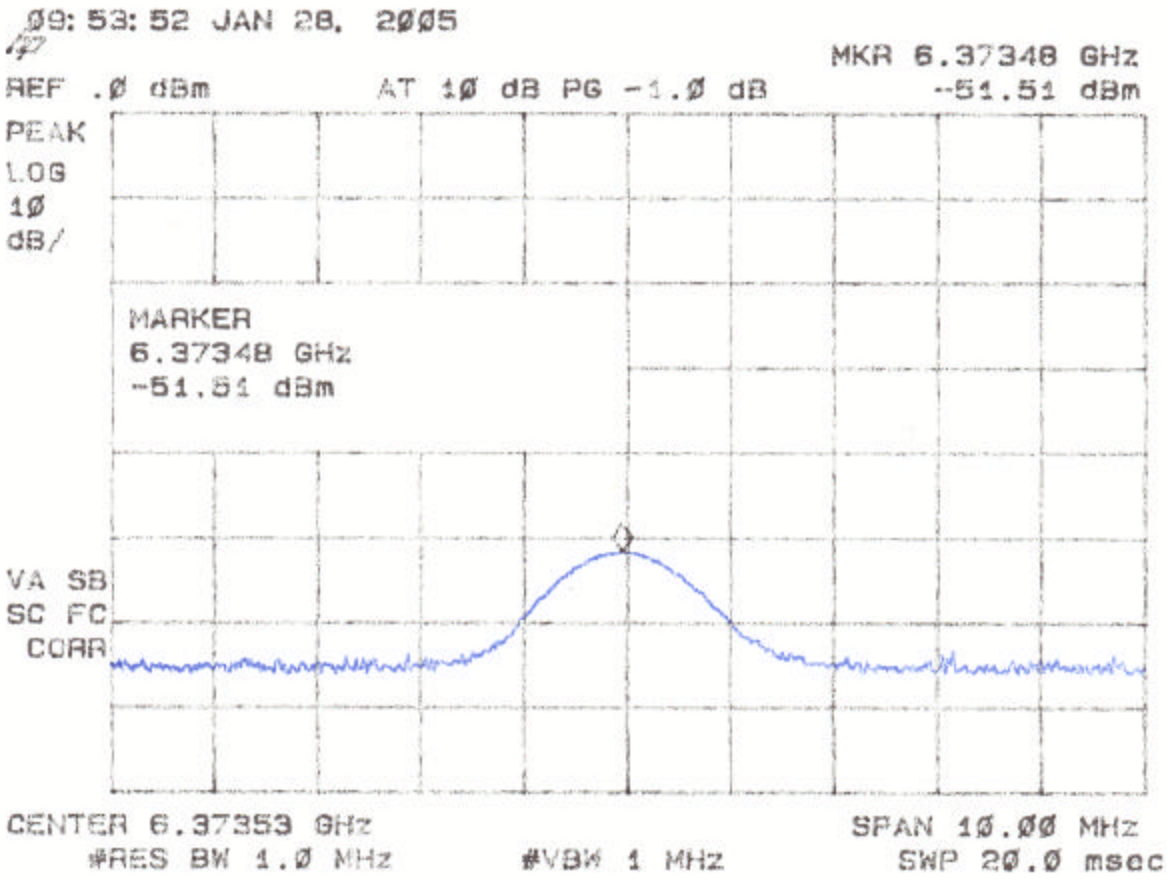


Figure 5a-8
Peak Radiated Spurious Emission 15.247(c) Low –
Dual Band 8rh Harmonic

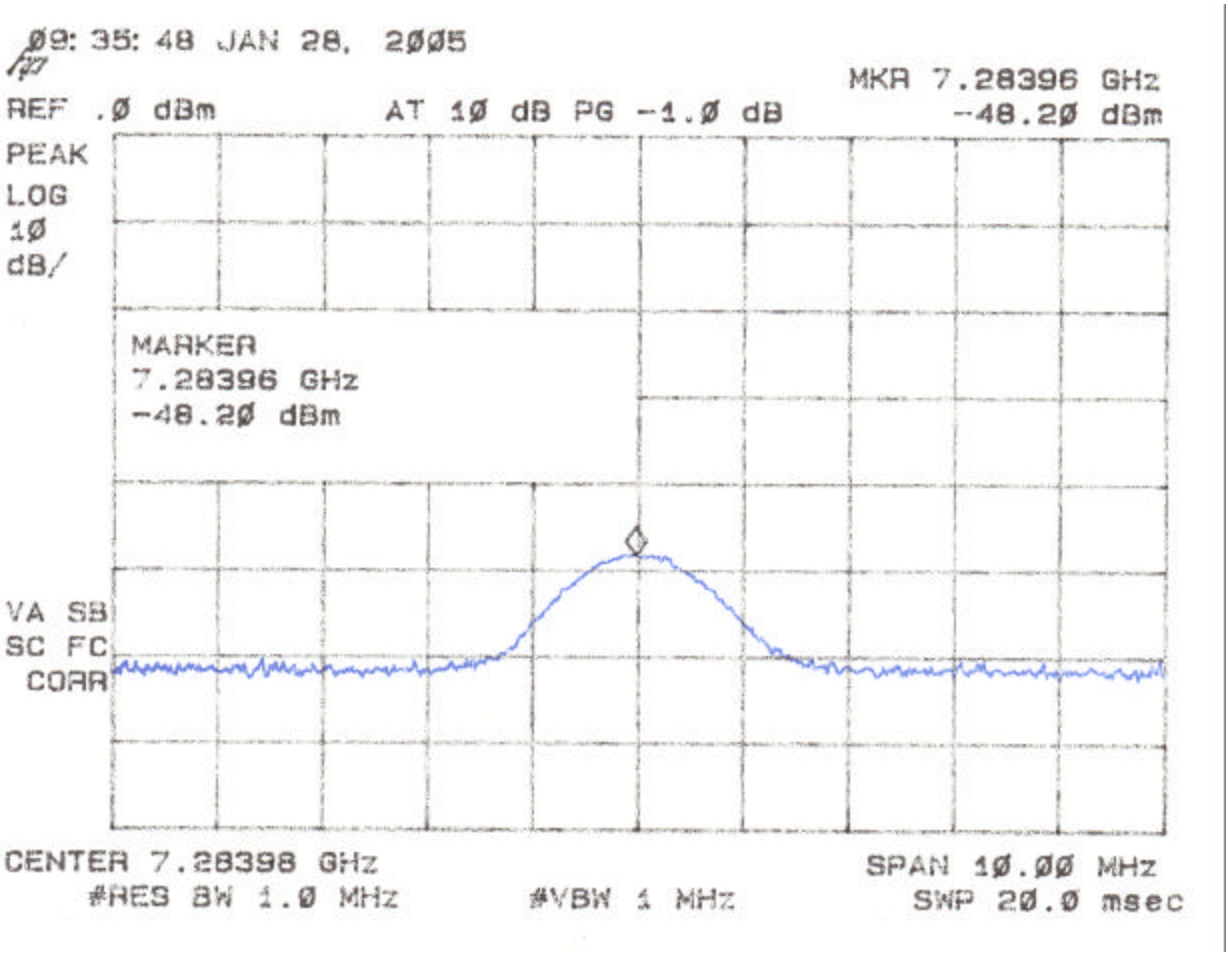


Table 4b. PEAK RADIATED SPURIOUS EMISSIONS Mid Channel

Dual Band Antenna

Freq. (MHz)	Test Data (dBm) @ 3m	AF + CA - AMP (dB)	Results (uV/m) 3m	FCC Limits (uV/m)	MARGIN BELOW FCC Limits (dB)
918.97	-15.3	30.7	1322404.8	-	-
1838.13	-22.1	-6.6	8231.3	132240.5	24.1
2756.88	-50.9	-2.4	486.7	5000.0	20.2
3676.35	-52.9	1.2	584.3	5000.0	18.6
4595.23	-55.0	4.9	703.8	5000.0	17.0
5513.93	-47.1**	6.9	2179.2	132240.5	35.7
6432.93	-60.8**	8.1	517.7	132240.5	48.1
7351.98	-65.2**	9.9	386.8	5000.0	22.2

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 ((-21.1 + -6.6 + 107)/20) = 8231.3
CONVERSION FROM dBm TO dBuV = 107 dB

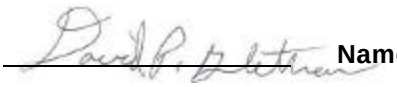
Tester Signature:  **Name: David Blethen**

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

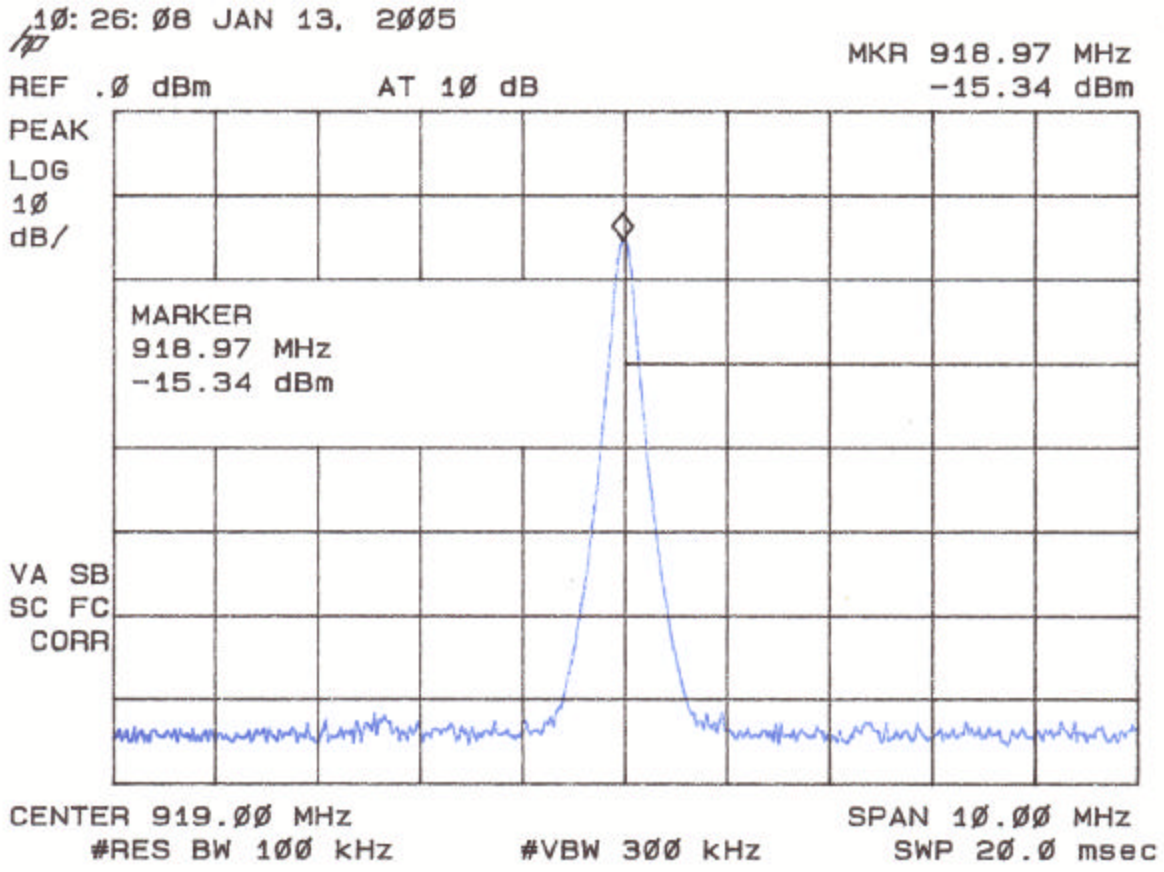


Figure 5b-2
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 2nd Harmonic

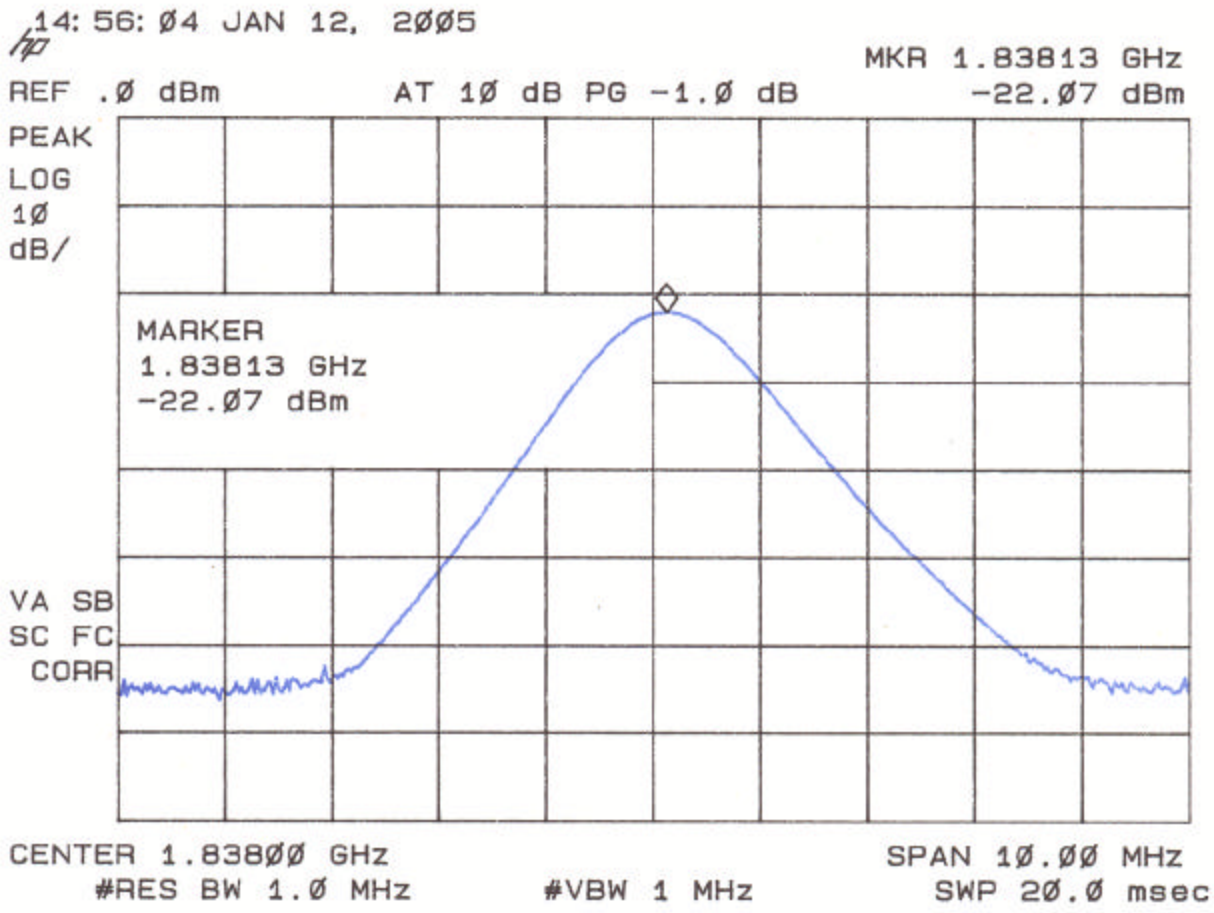


Figure 5b-3
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 3rd Harmonic

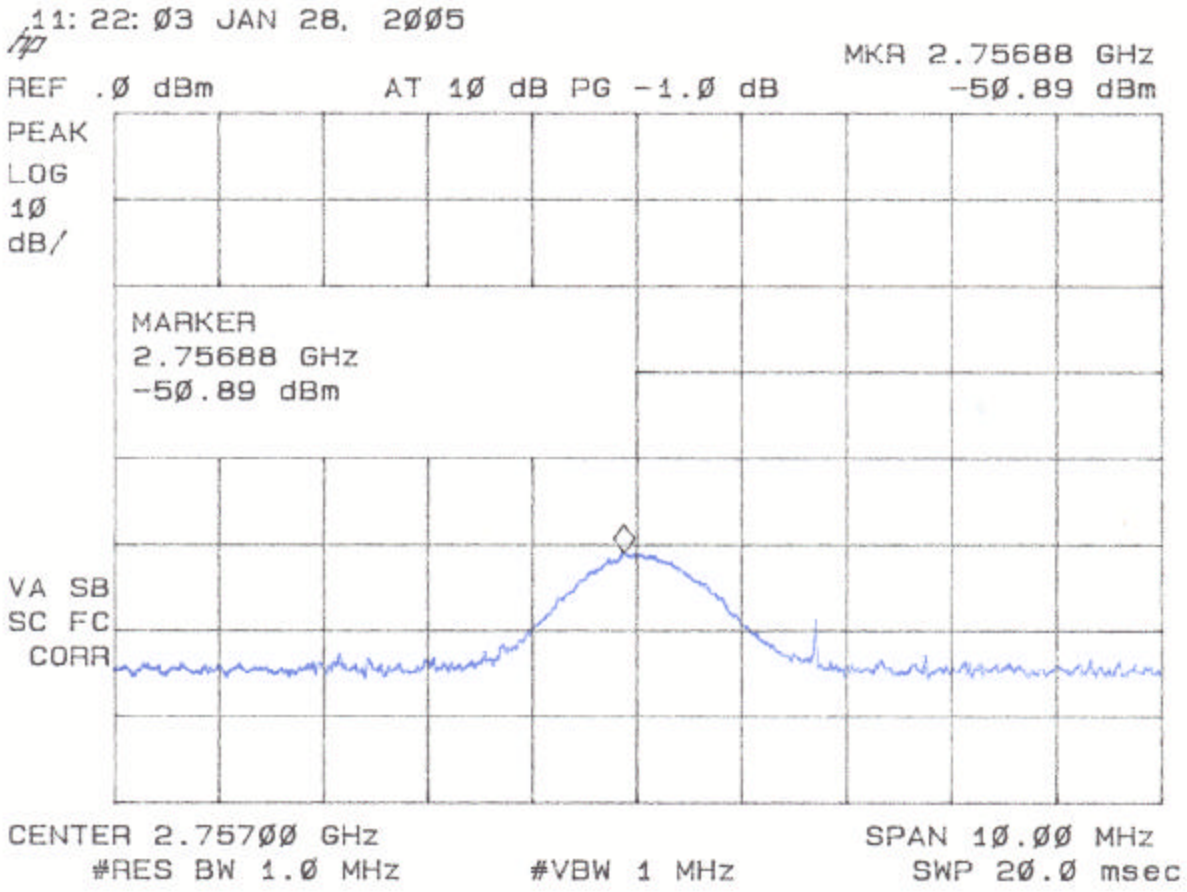


Figure 5b-4
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 4rh Harmonic

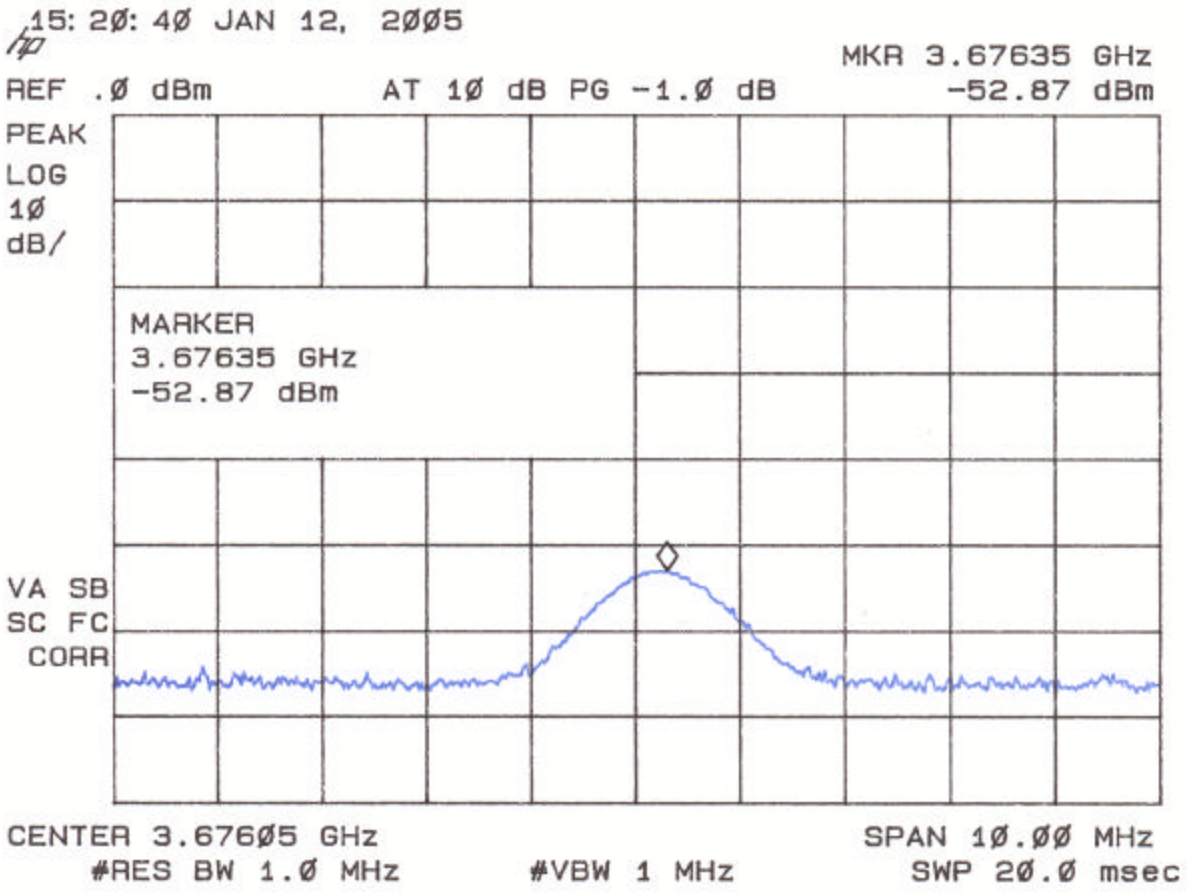


Figure 5b-5
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 5rh Harmonic

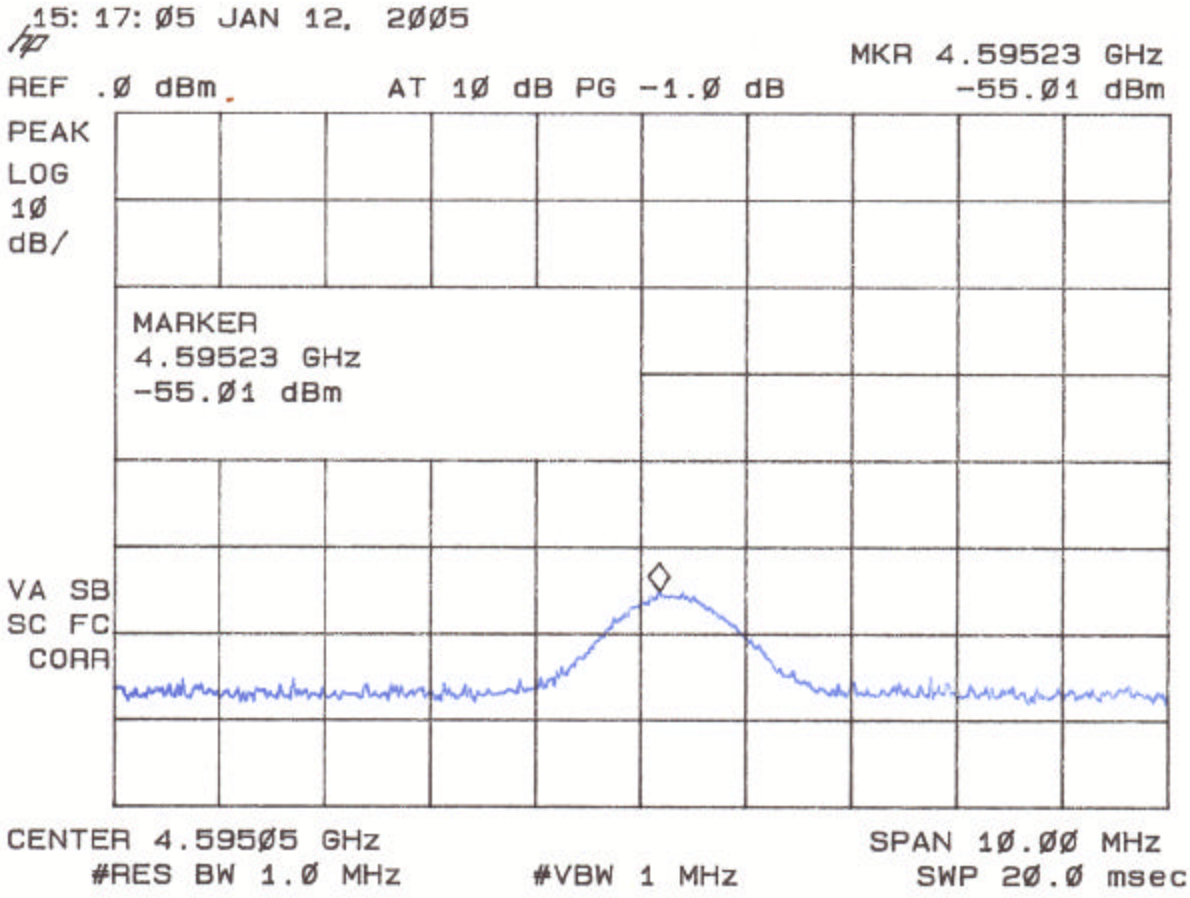


Figure 5b-6
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 6rh Harmonic

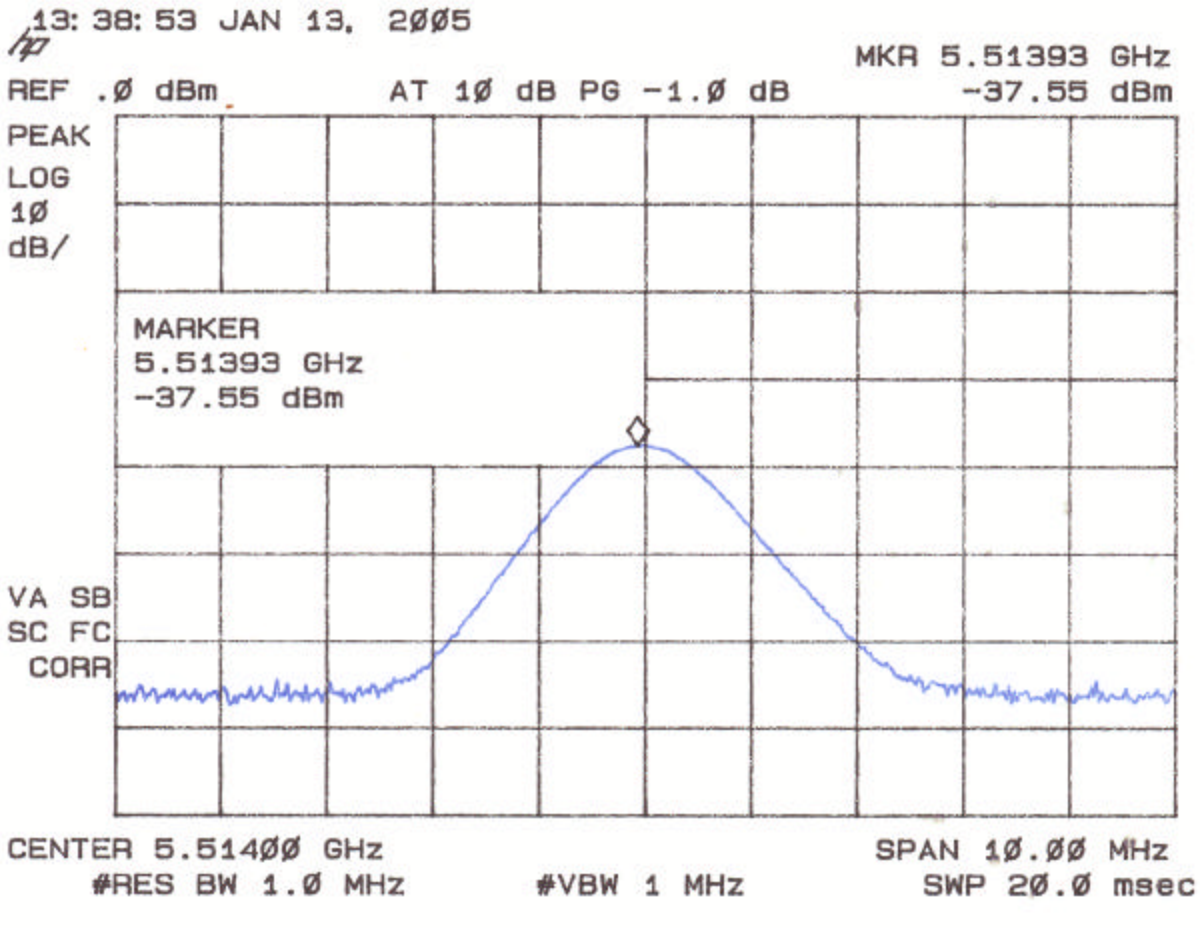


Figure 5b-7
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 7rh Harmonic

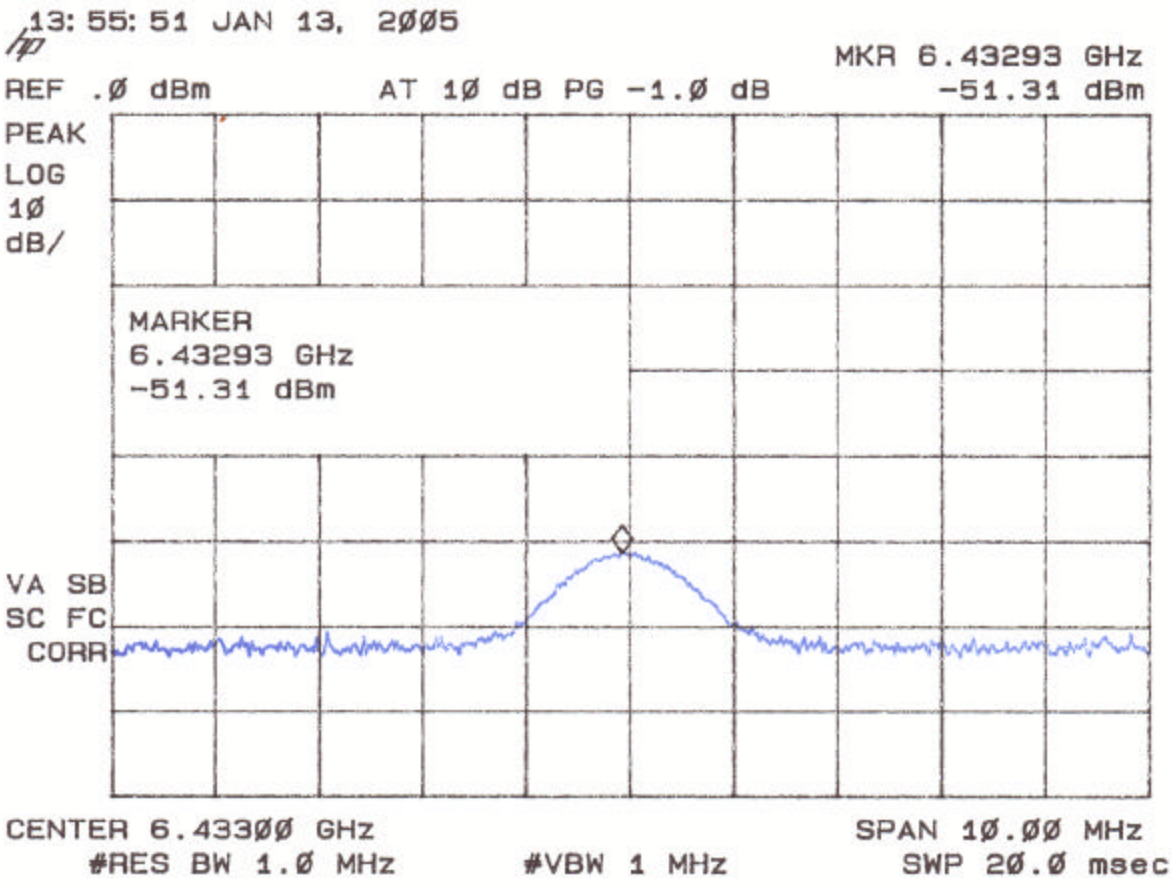


Figure 5b-8
Peak Radiated Spurious Emission 15.247(c) Mid –
Dual Band 8rh Harmonic

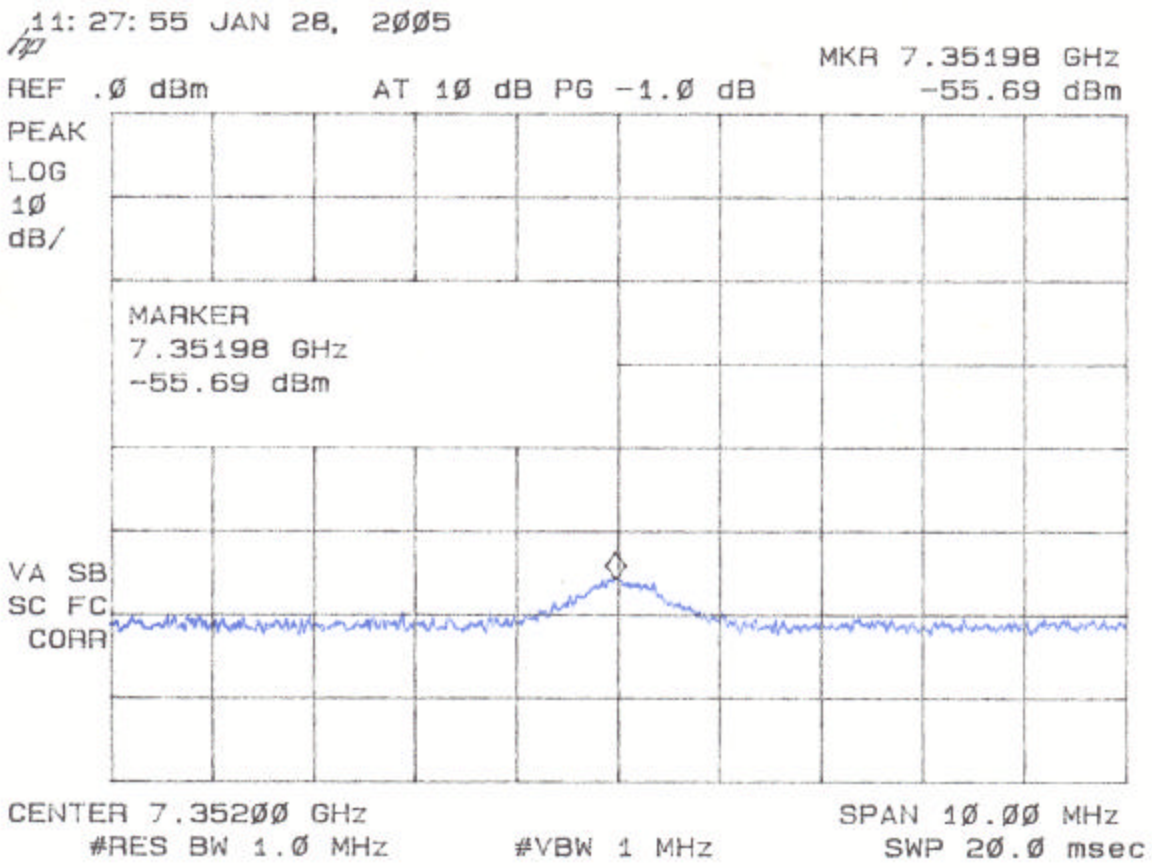


Table 4c. PEAK RADIATED SPURIOUS EMISSIONS High Channel

Dual Band Antenna

Freq. (MHz)	Test Data (dBm) @ 3m	AF + CA - AMP (dB)	Results (uV/m) 3m	FCC Limits (uV/m)	MARGIN BELOW FCC Limits (dB)
927.47	-15.9	30.7	1236962.2	-	-
1855.1	-23.7	-6.3	7066.5	123696.2	24.9
2782.63	-45.9	-2.3	873.6	5000.0	15.2
3710.2	-52.2	1.4	647.1	5000.0	17.8
4637.88	-56.8	5.1	583.2	5000.0	18.7
5565.0	-50.6**	7.0	1478.7	123696.2	38.4
6492.45	-62.3**	8.1	435.3	123696.2	49.1
7419.93	-60.4**	10.0	674.0	5000.0	17.4

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 ((-23.7 + -6.3 + 107)/20) = 7066.5
CONVERSION FROM dBm TO dBuV = 107 dB

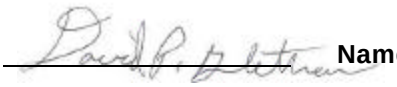
Tester Signature:  **Name: David Blethen**

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

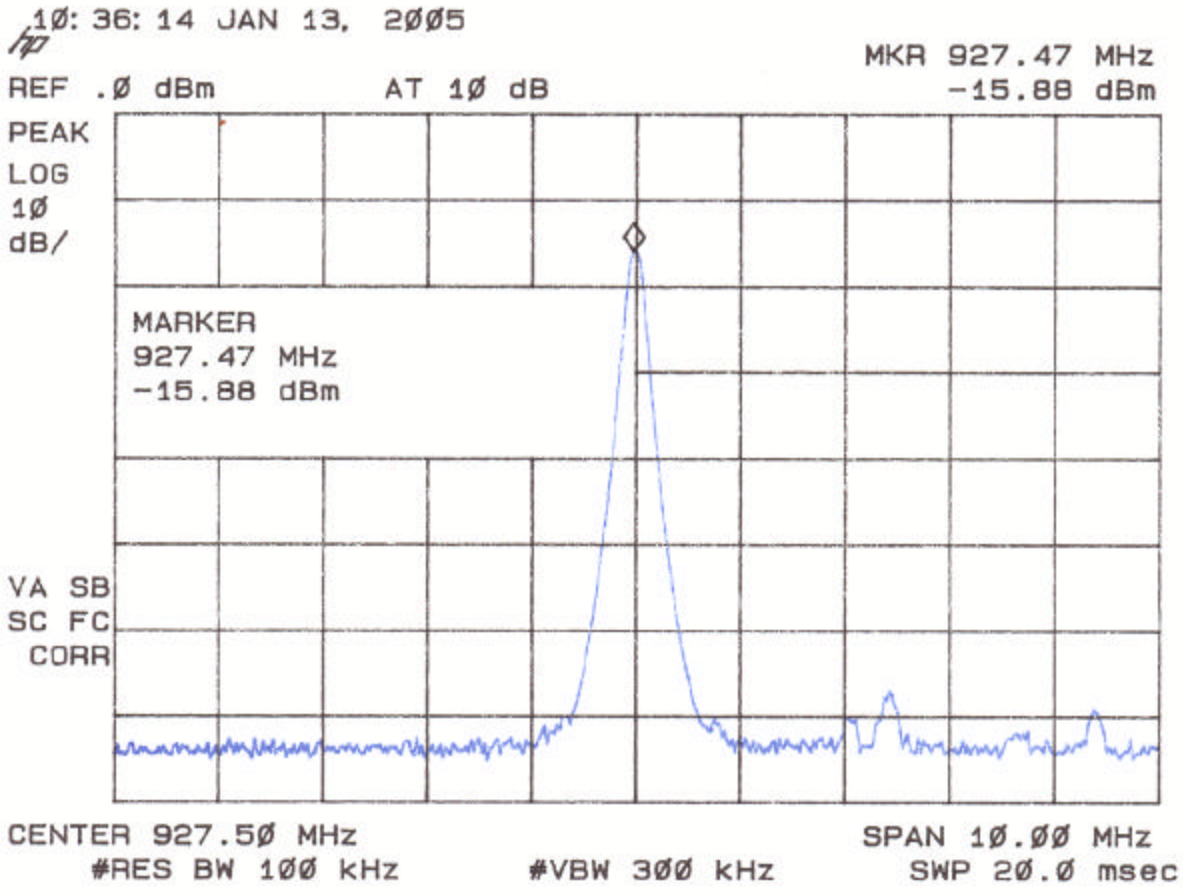


Figure 5c-2
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 2nd Harmonic

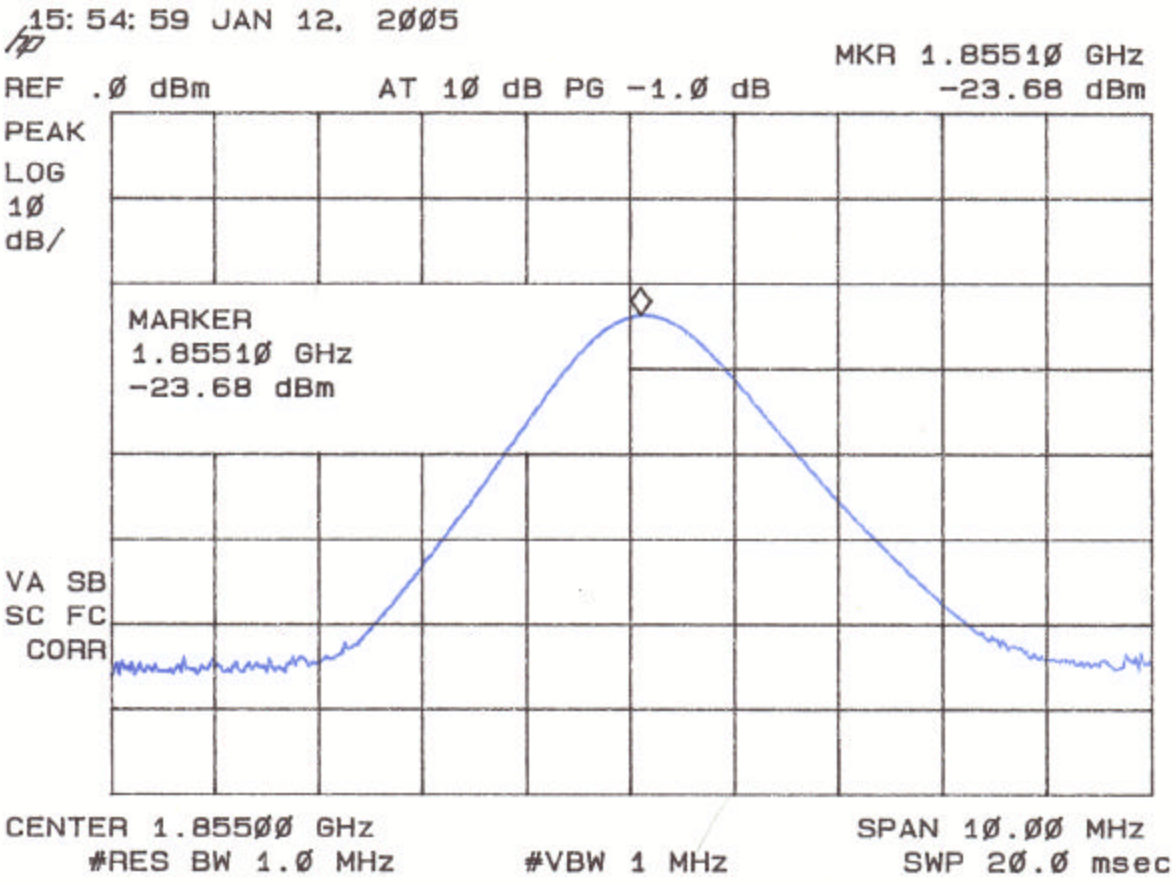


Figure 5c-3
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 3rd Harmonic

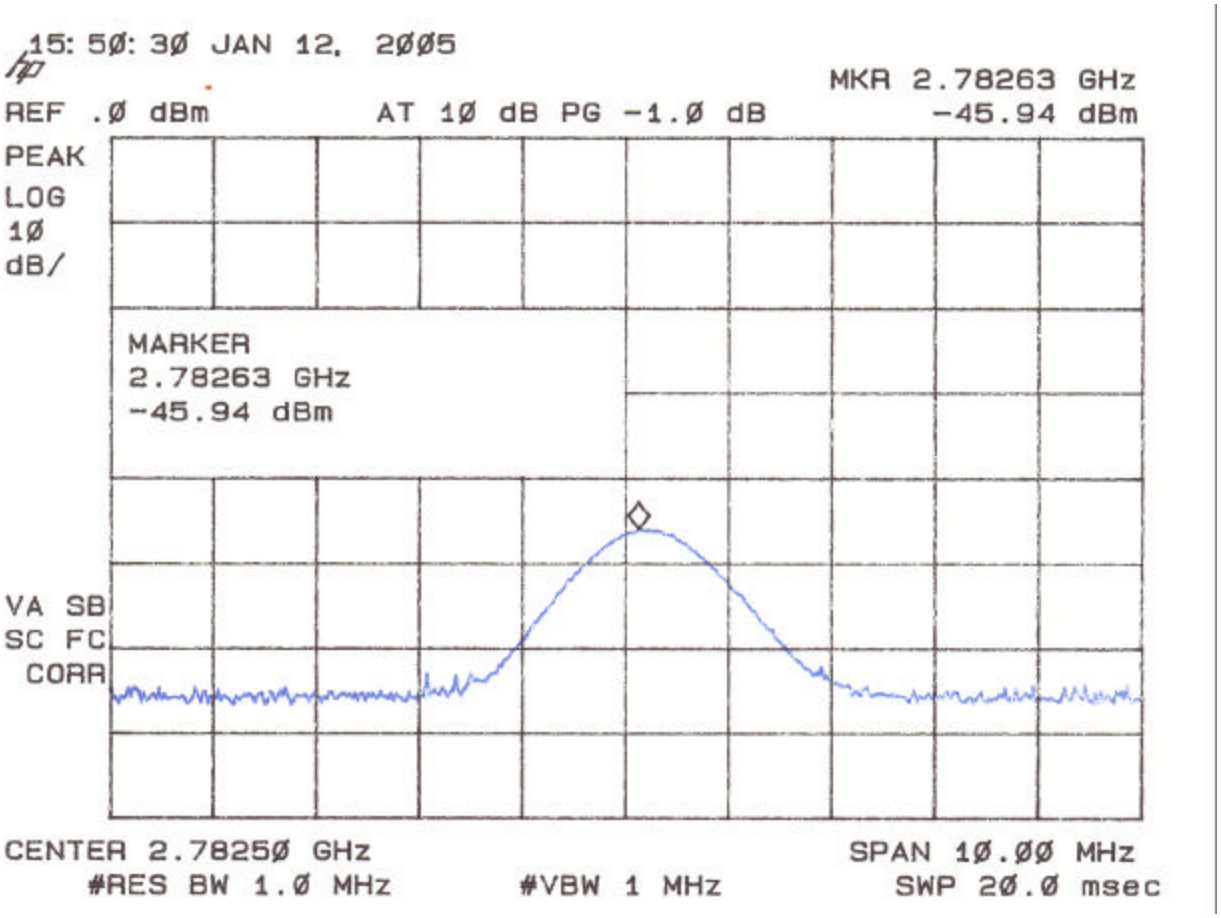


Figure 5c-4
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 4rh Harmonic

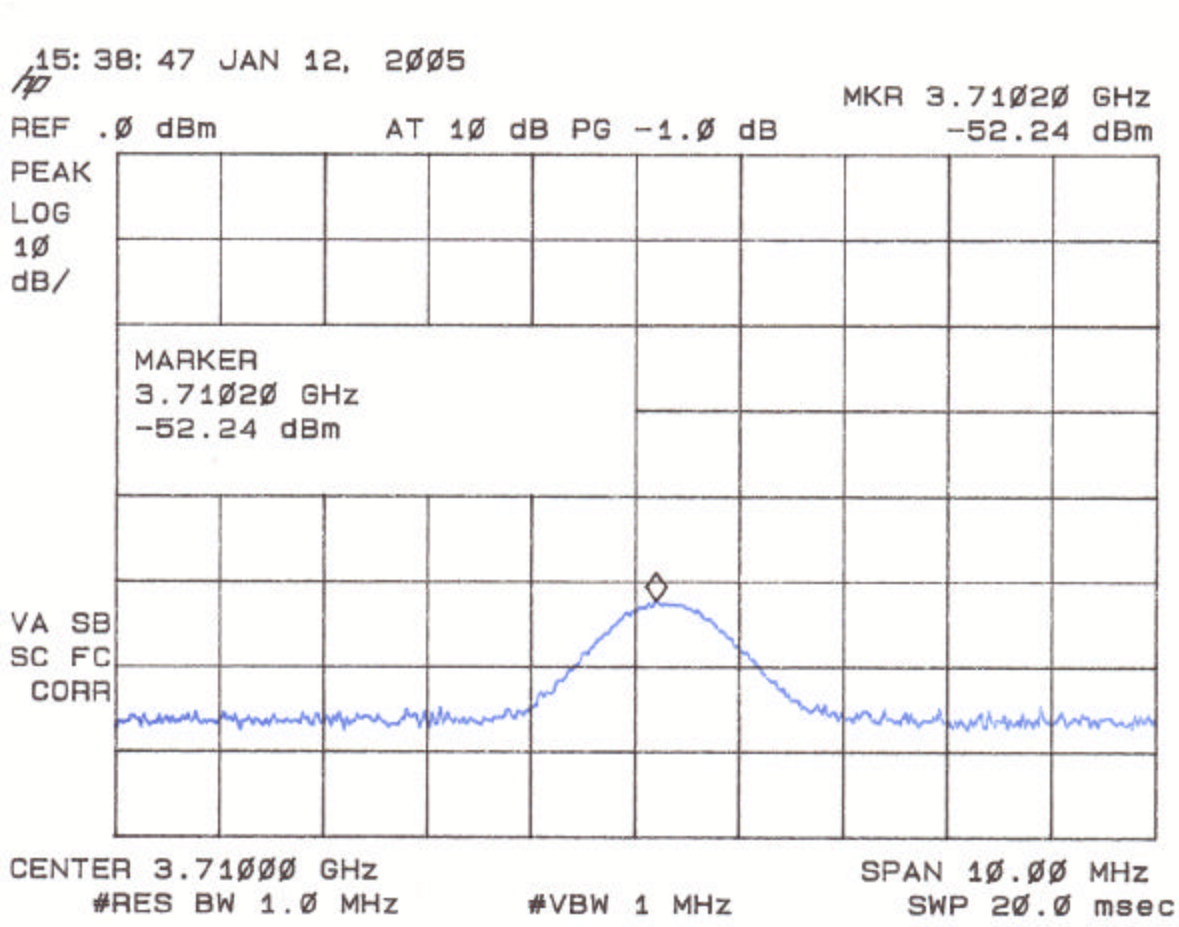


Figure 5c-5
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 5rh Harmonic

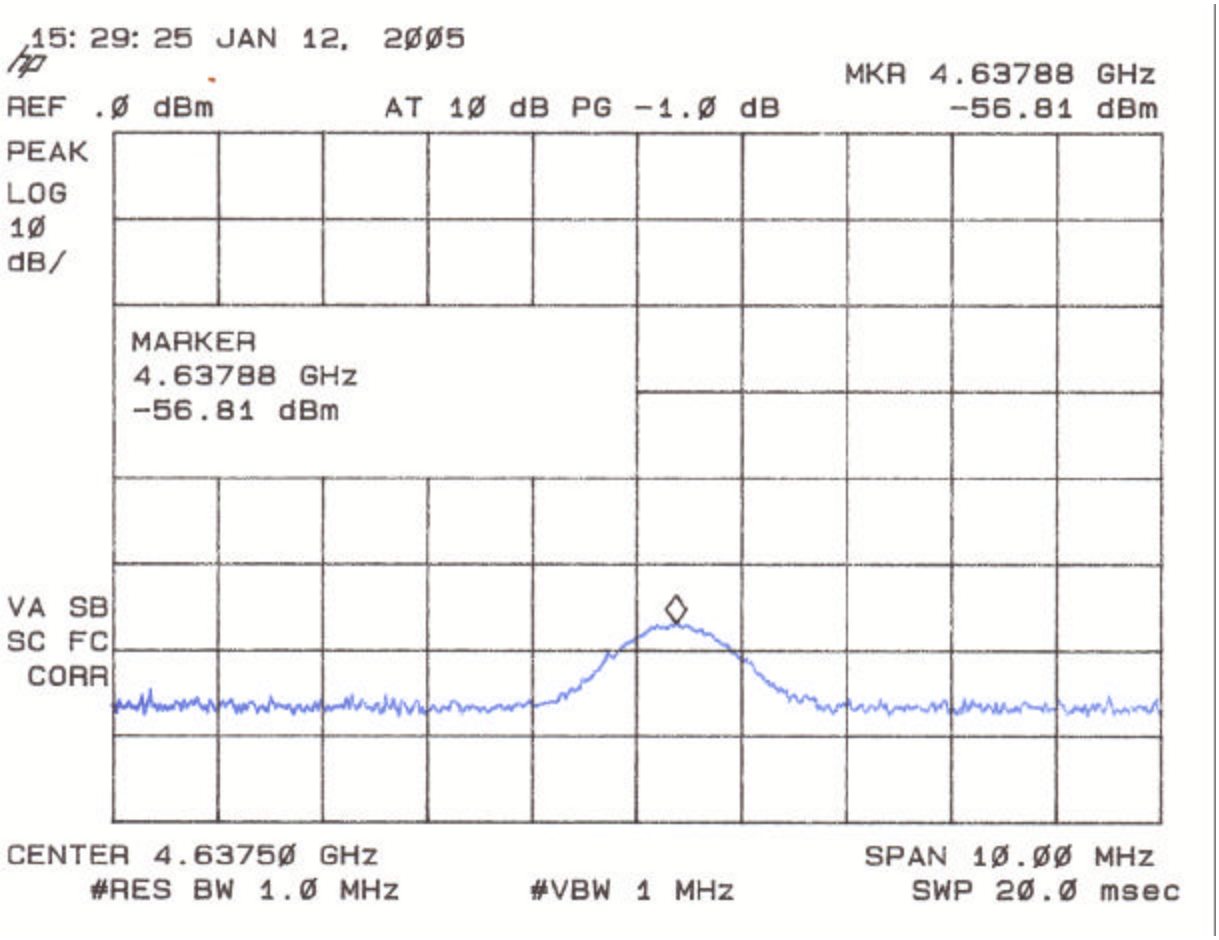


Figure 5c-6
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 6rh Harmonic

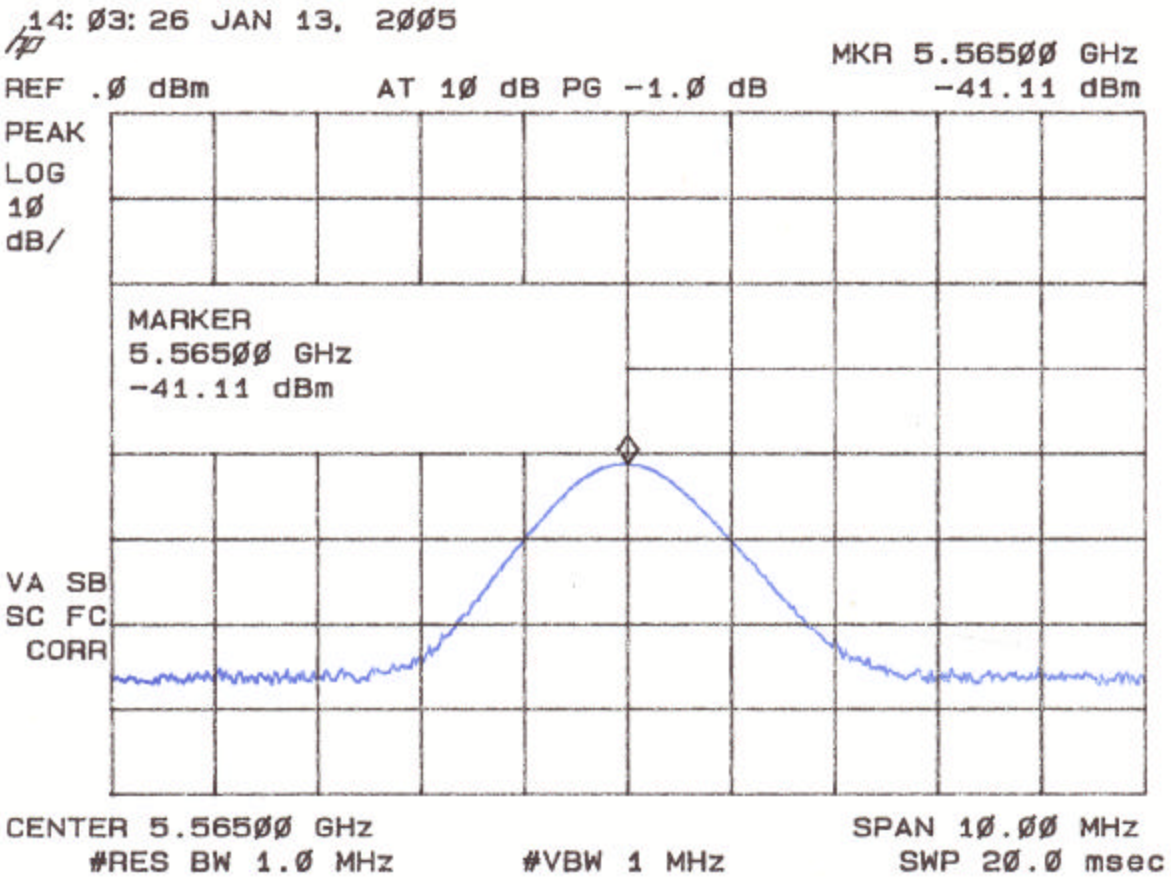


Figure 5c-7
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 7rh Harmonic

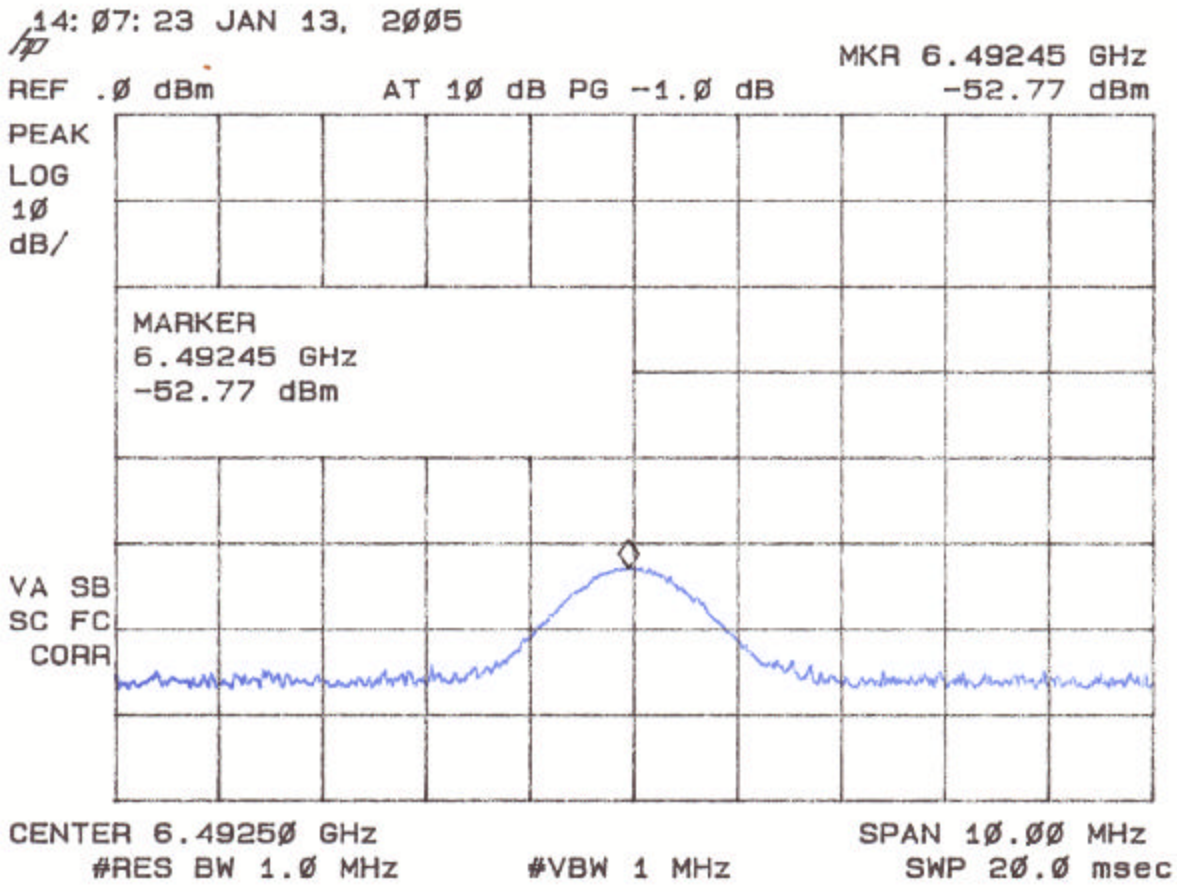


Figure 5c-8
Peak Radiated Spurious Emission 15.247(c) High –
Dual Band 8rh Harmonic