

Report Number: 06-0105

Issue Date: July 6, 2006

Customer: Nivis, LLC

Model: Nivis NRD Module Model IC-NRD2-01-01

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 – 4c and Figure 5a – Figure 5c.

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Table 4a. PEAK RADIATED SPURIOUS EMISSIONS Low Channel

Radiated Emissions									
Test By:	Test:	Spurious Harmonics Low Channel			Client:		Nivis, L.L.C.		
A. T.	Project:	06-0105		Class:	Configuration:		p9-06 w/ dual band		
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
910.41	-8.6	2HN3mH	98.4	25.3	1528077.2		3m./HORZ		
1820.901	-54.9	2HN3mH	52.1	-5.8	206.5	152807.7	3m./HORZ	57.4	
2731.5	-60.3	2HN3mH	46.7	-1.6	180.7	500.0	3m./HORZ	8.8	
3641.9	-64.3	2HN3mH	42.7	1.6	164.2	500.0	3m./HORZ	9.7	
4552.6	-58.9	2HN3mH	48.1	4.6	429.3	5000.0	3m./HORZ	21.3	Peak
4552.5	-62.6	2HN3mH	44.4	4.6	280.4	500.0	3m./HORZ	5.0	Average
5463.1	-66.8	2HN3mH	40.2	7.9	253.0	152807.7	3m./HORZ	55.6	
6373.3	-68.2	2HN3mH	38.8	9.1	247.6	152807.7	3m./HORZ	55.8	
7284.1	-64.2	2HN3mH	42.8	10.8	480.1	5000.0	3m./HORZ	20.4	Peak
7283.9	-68.2	2HN3mH	38.8	10.8	302.9	500.0	3m./HORZ	4.4	Average
8194.4	-68.7	2HN3mH	38.3	11.8	321.7	5000.0	3m./HORZ	23.8	Peak
8194.4	-76.9	2HN3mH	30.1	11.8	125.1	500.0	3m./HORZ	12.0	Average
9104.9	-66.1	2HN3mH	40.9	12.8	483.8	5000.0	3m./HORZ	20.3	Peak
9105	-73.2	2HN3mH	33.8	12.8	213.6	500.0	3m./HORZ	7.4	Average

Data corrected by 0.1 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 $((-54.9 + -5.8 + 107)/20) = 206.6$

CONVERSION FROM dBm TO dBuV = 107 dB

Test Date: May 20, 21, 2006

Tested by

Signature: _____

Name: Austin Thompson

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Table 4a. PEAK RADIATED SPURIOUS EMISSIONS Low Channel (Continued)

Radiated Emissions									
Test By:	Test:	Spurious Harmonics Low Channel			Client:		Nivis		
	Project:	06-0105		Class:	Configuration:		p9-06 w/ dual band		
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
910.41	-8.6	2HN3mH	98.4	25.3	1528077.2		3m./HORZ		
10015.2	-66.0	2HN3mH	41.0	13.8	549.9	152807.7	3m./HORZ	48.9	Peak
10015.4	-72.2	2HN3mH	34.8	13.8	269.4	15280.8	3m./HORZ	35.1	Average
10925.9	-68.2	2HN3mH	38.8	16.6	586.2	5000.0	3m./HORZ	18.6	Peak
10925.9	-77.8	2HN3mH	29.2	16.6	194.1	500.0	3m./HORZ	8.2	Average

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 ((-66.0 + 13.8 + 107)/20) = 549.9

CONVERSION FROM dBm TO dBuV = 107 dB

Test Date: May 20, 21, 2006

Tested by

Signature: _____

Name: Austin Thompson

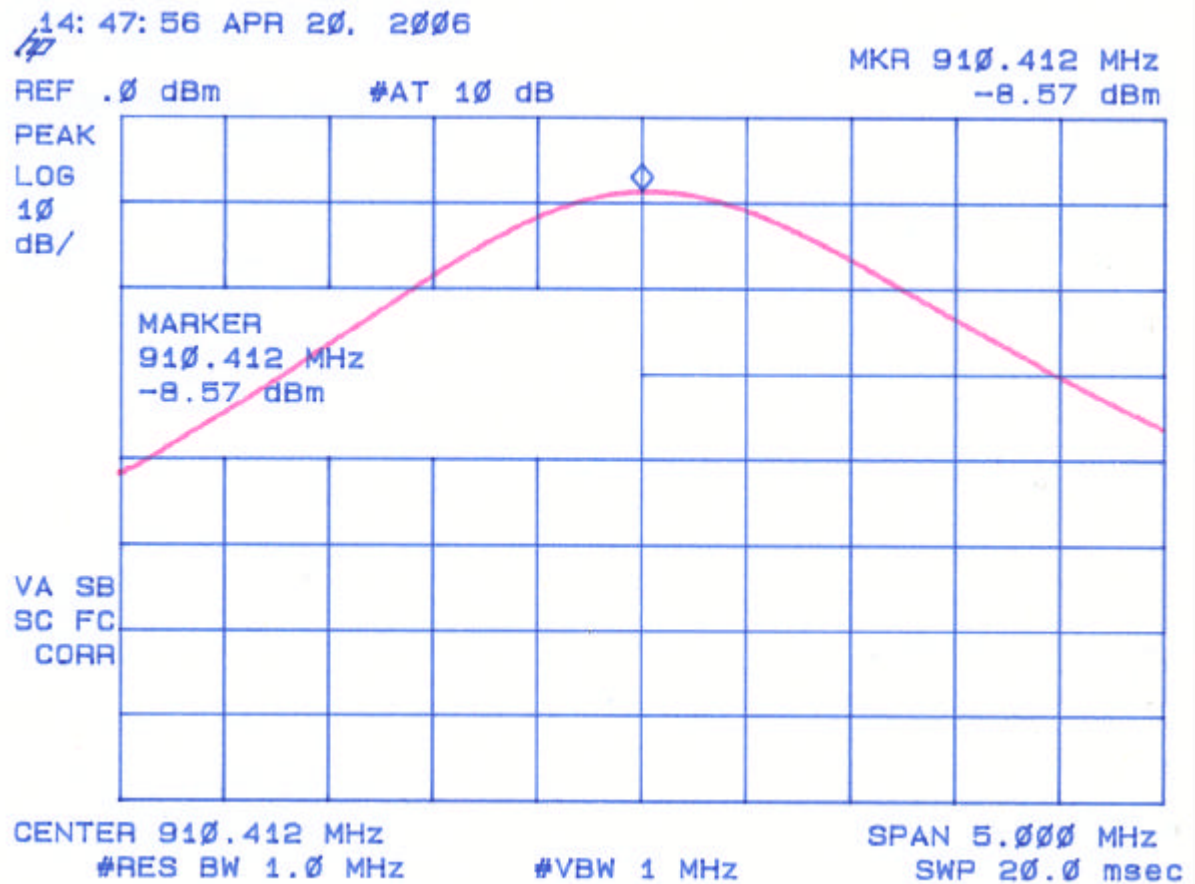
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Figure 5a-1
Peak Radiated Spurious Emission 15.247(c) Low –
Fundamental



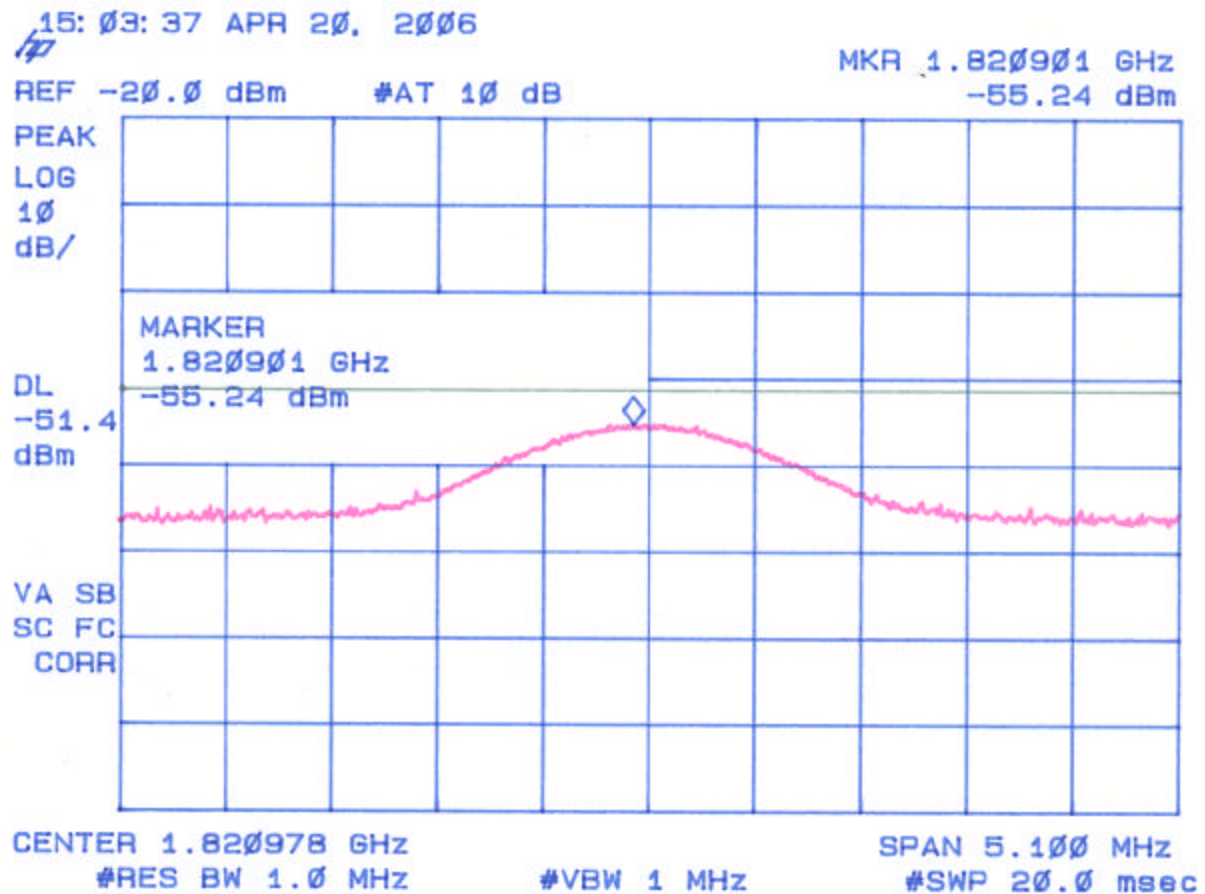
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Figure 5a-2
Peak Radiated Spurious Emission 15.247(c) Low –
2nd Harmonic



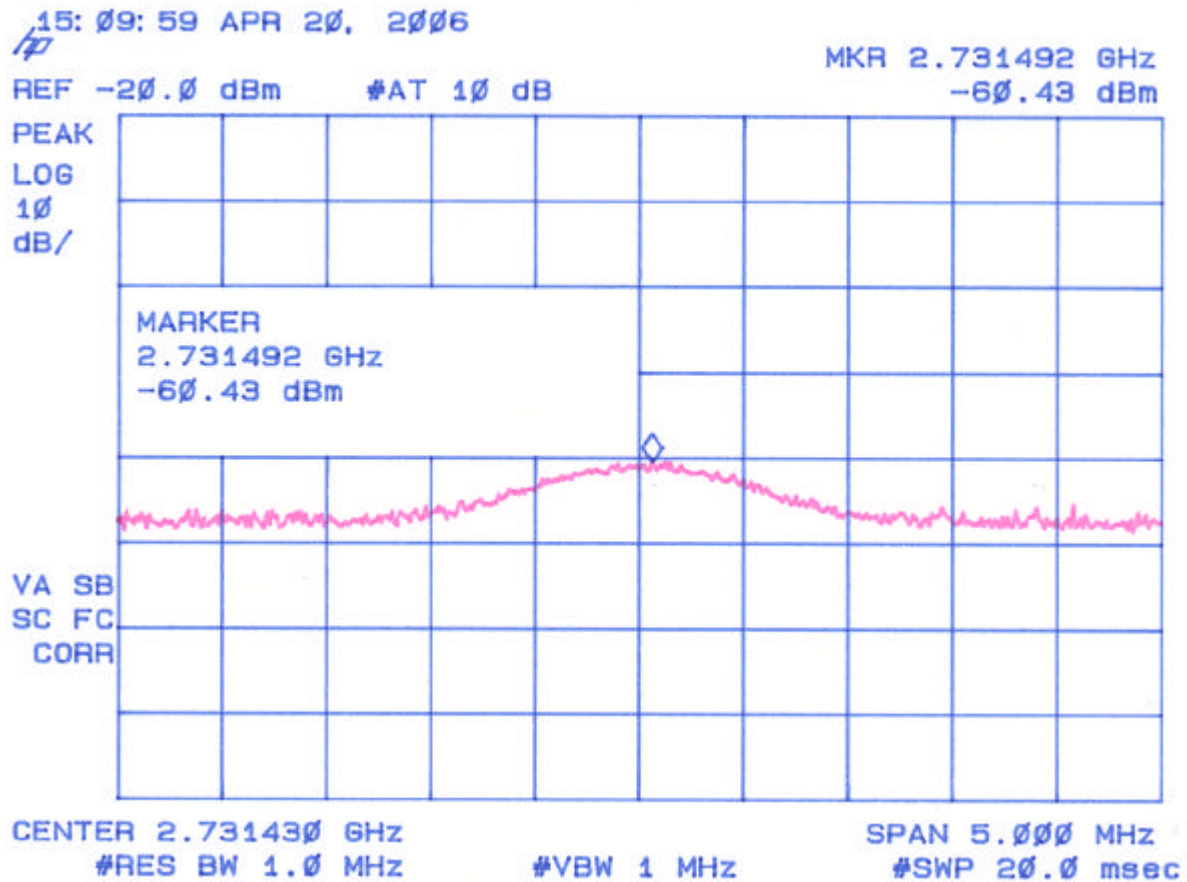
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Figure 5a-3
Peak Radiated Spurious Emission 15.247(c) Low –
3rd Harmonic



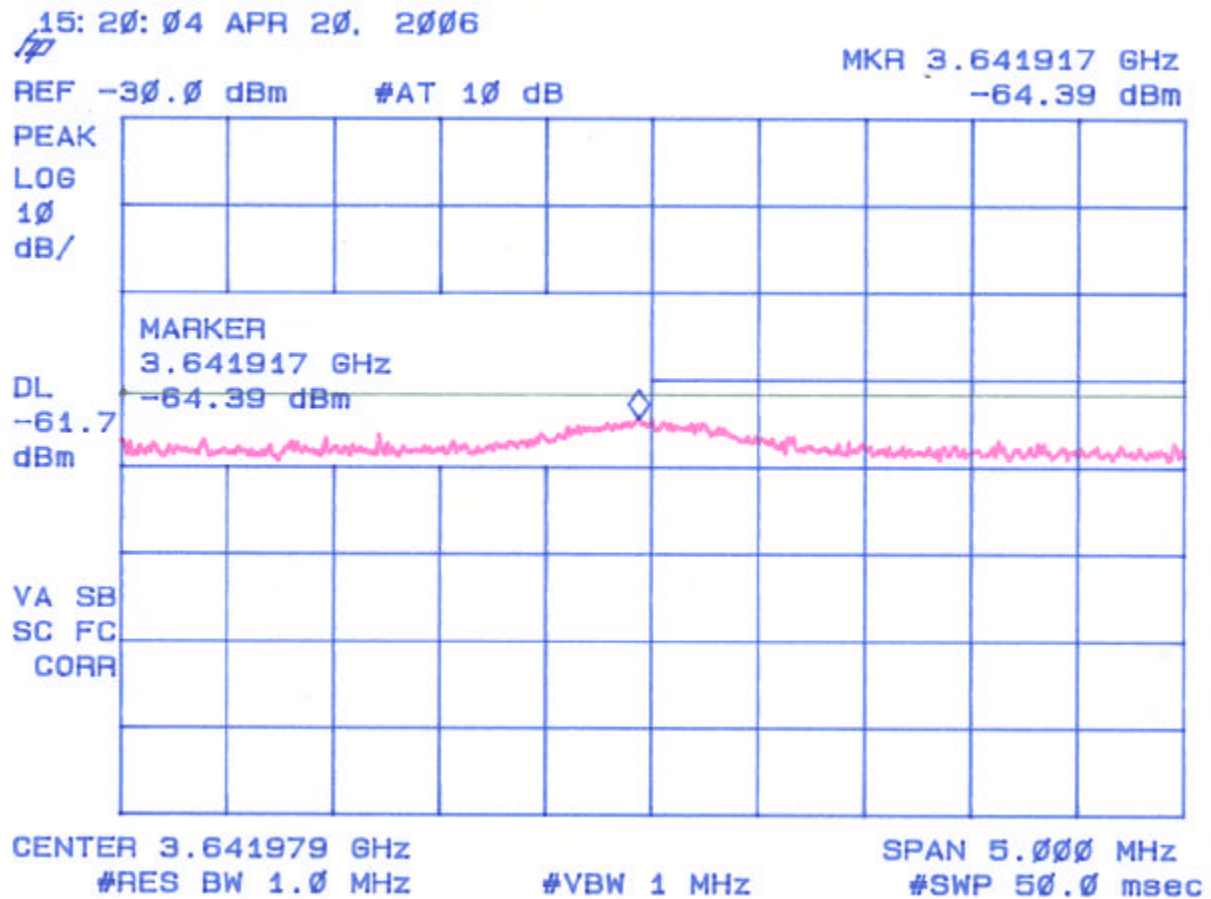
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Figure 5a-4
Peak Radiated Spurious Emission 15.247(c) Low –
4th Harmonic



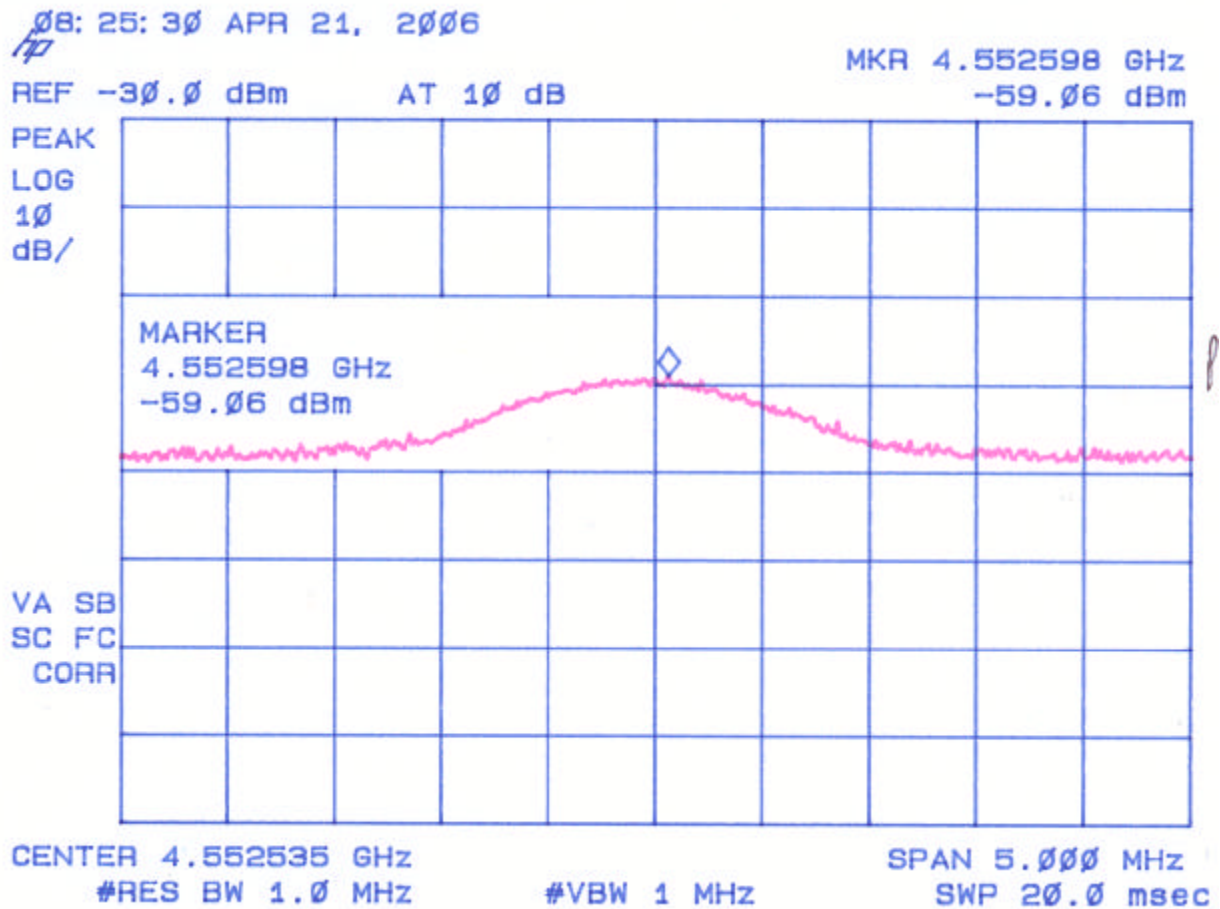
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Figure 5a-5
Peak Radiated Spurious Emission 15.247(c) Low –
5th Harmonic (Peak)



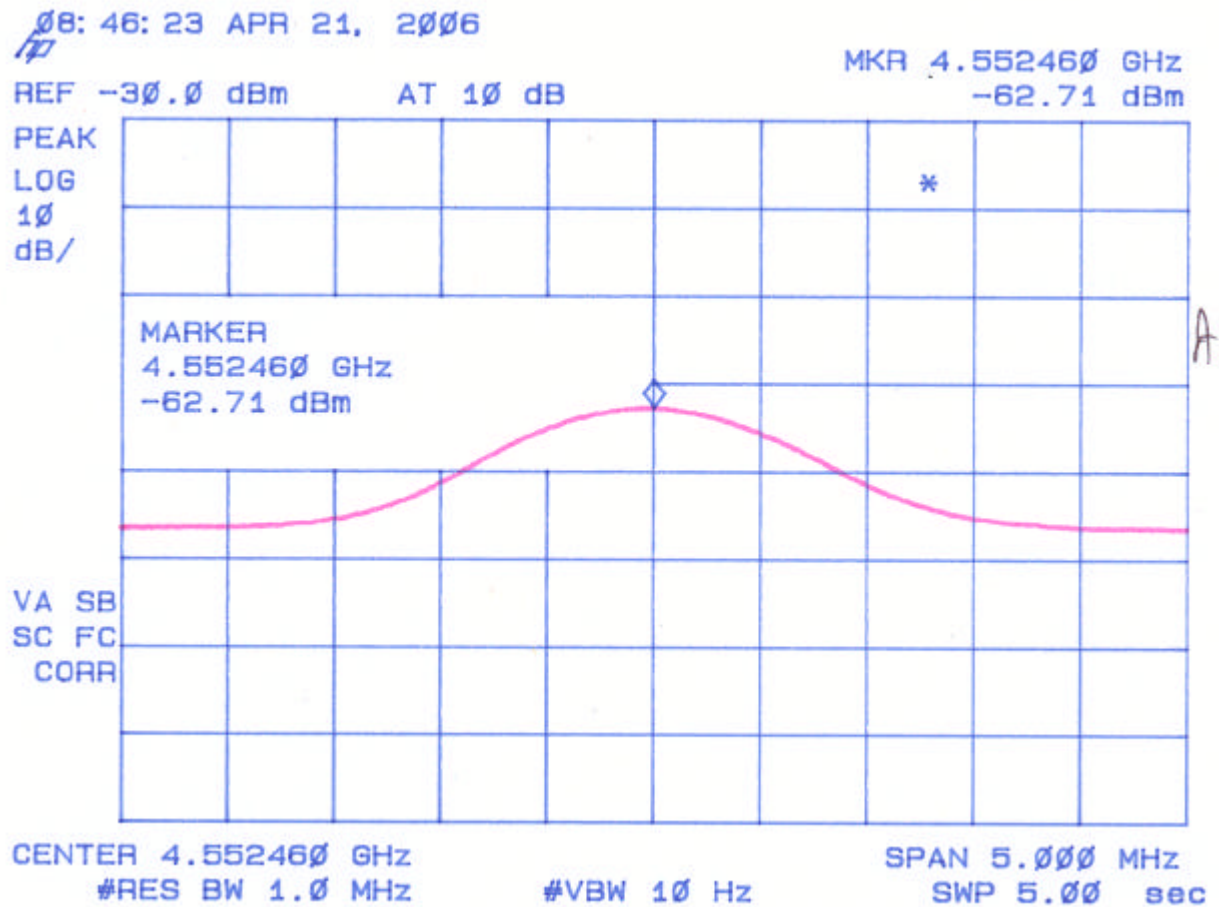
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Figure 5a-6
Peak Radiated Spurious Emission 15.247(c) Low –
5th Harmonic (Average)



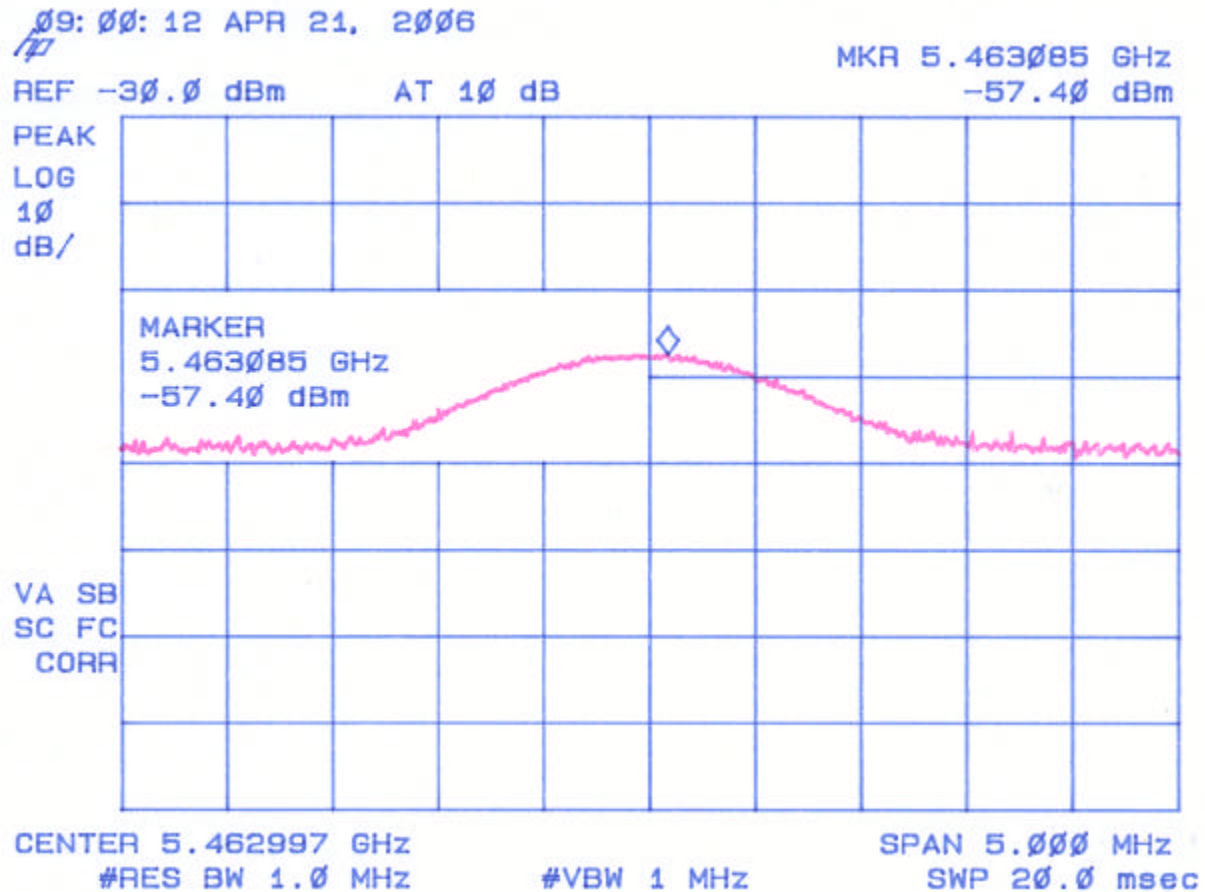
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Figure 5a-7
Peak Radiated Spurious Emission 15.247(c) Low –
6th Harmonic



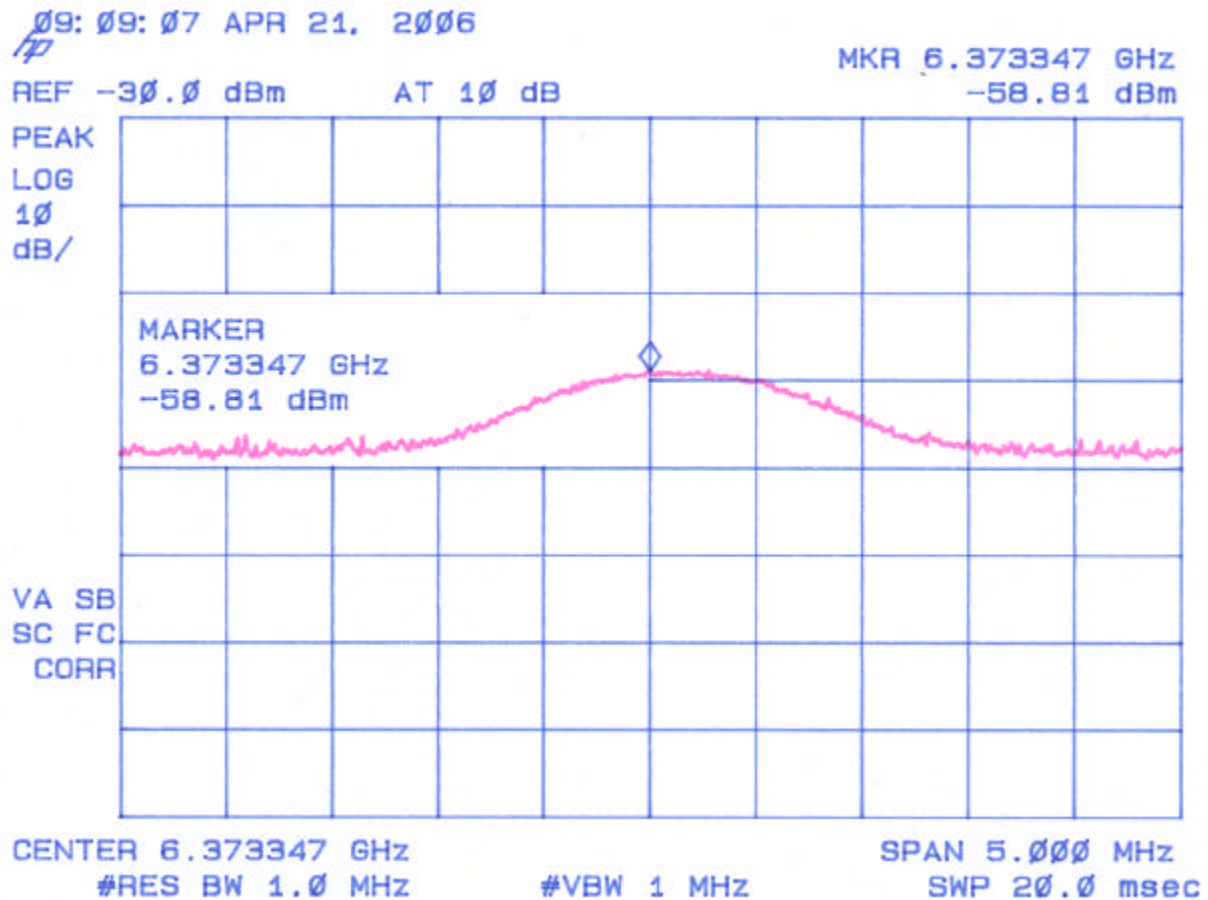
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Figure 5a-8
Peak Radiated Spurious Emission 15.247(c) Low –
7th Harmonic



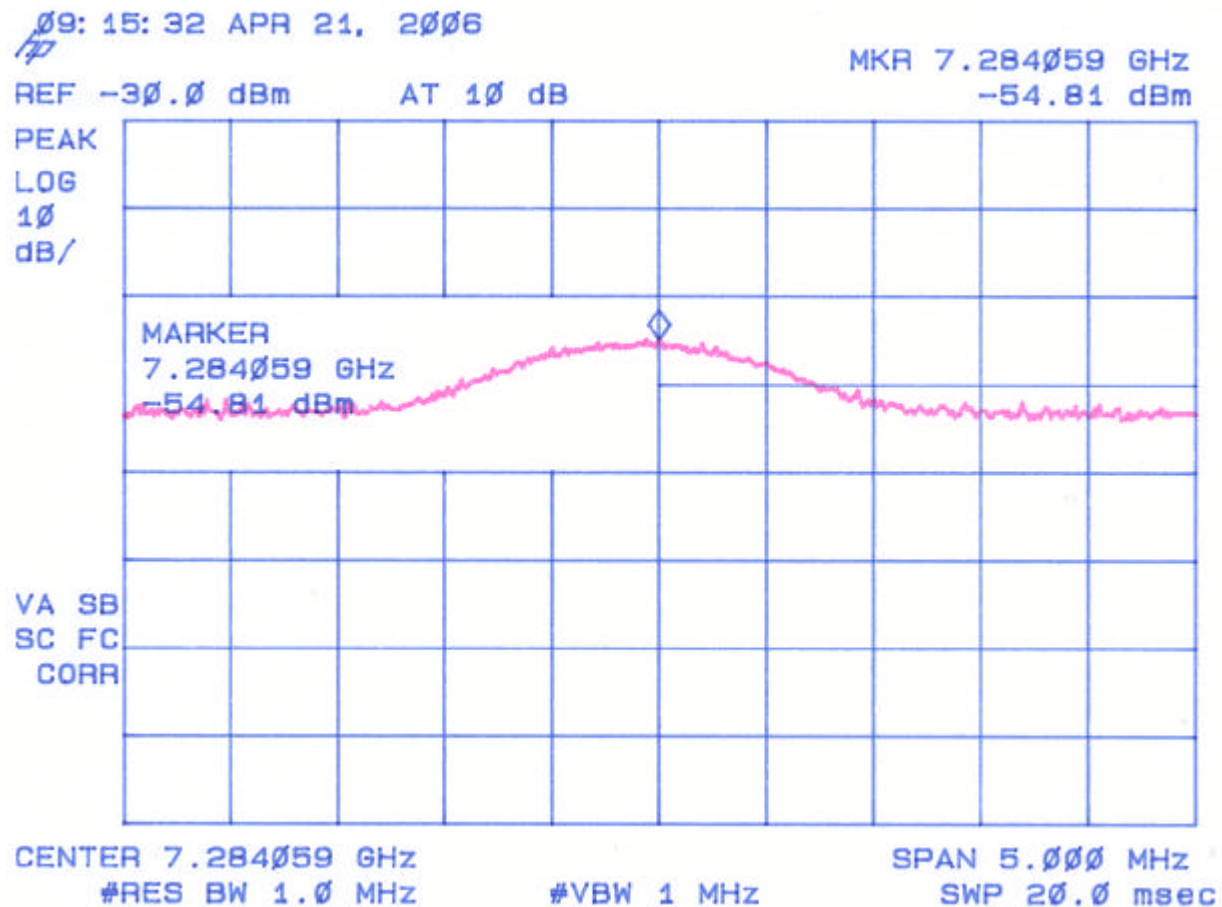
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Figure 5a-9
Peak Radiated Spurious Emission 15.247(c) Low –
8th Harmonic (Peak)



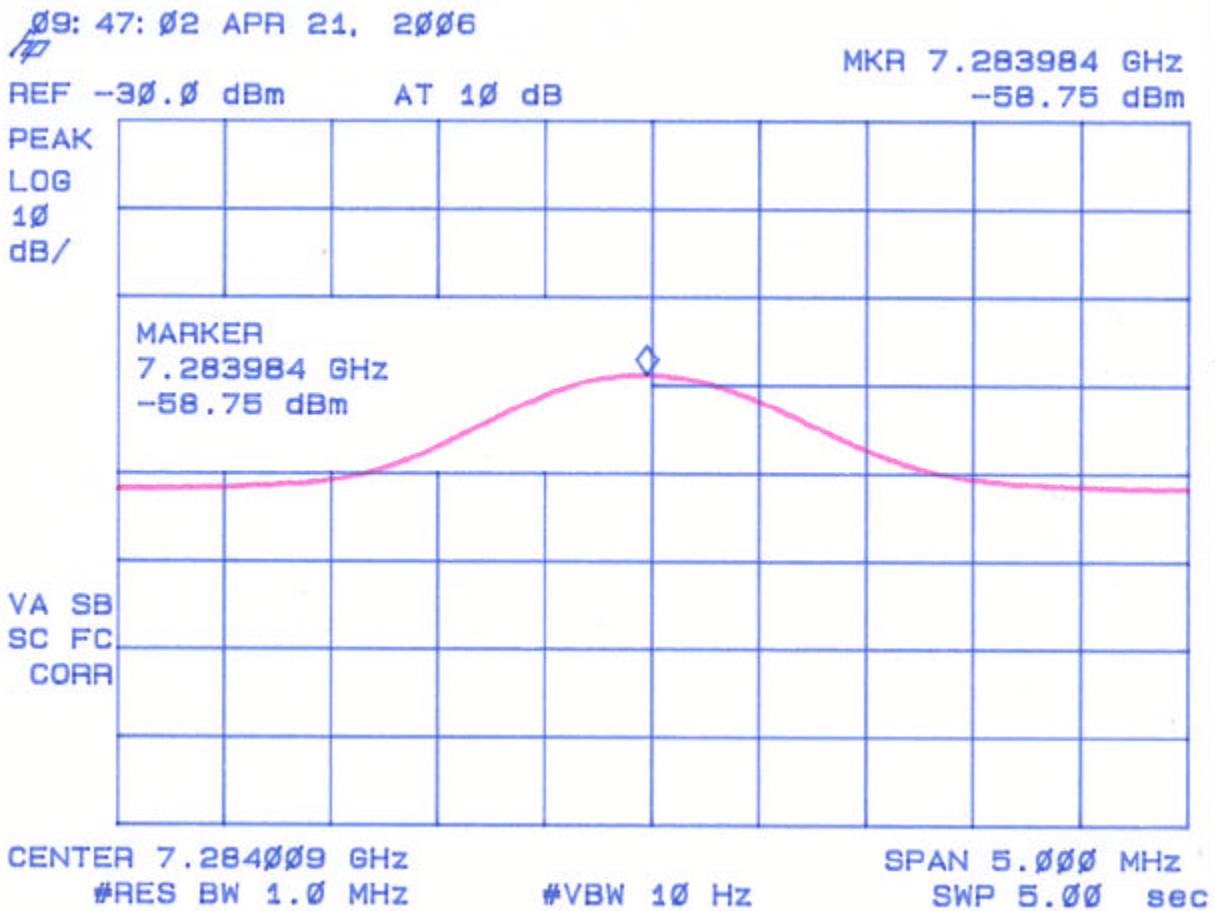
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Figure 5a-10
Peak Radiated Spurious Emission 15.247(c) Low –
8th Harmonic (Average)



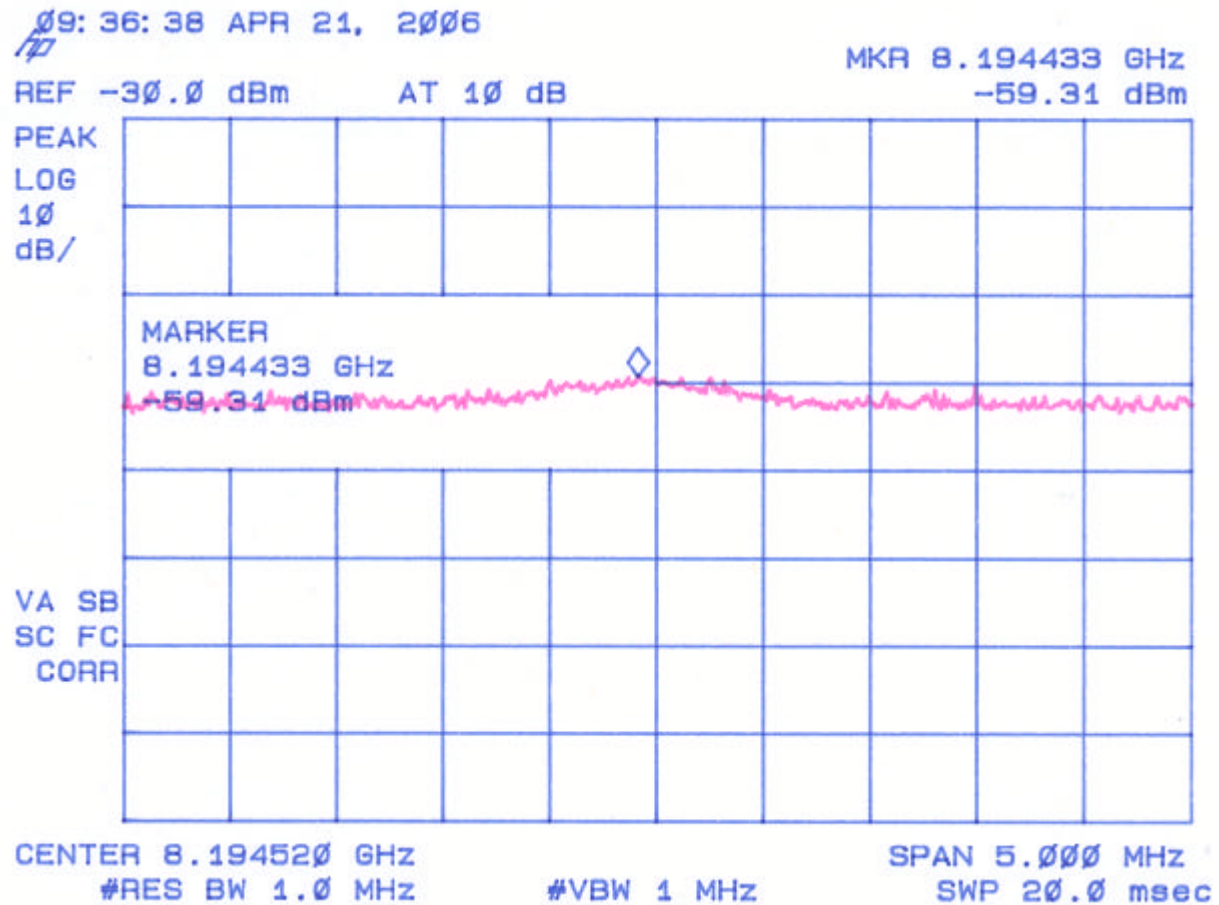
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Figure 5a-11
Peak Radiated Spurious Emission 15.247(c) Low –
9th Harmonic (Peak)



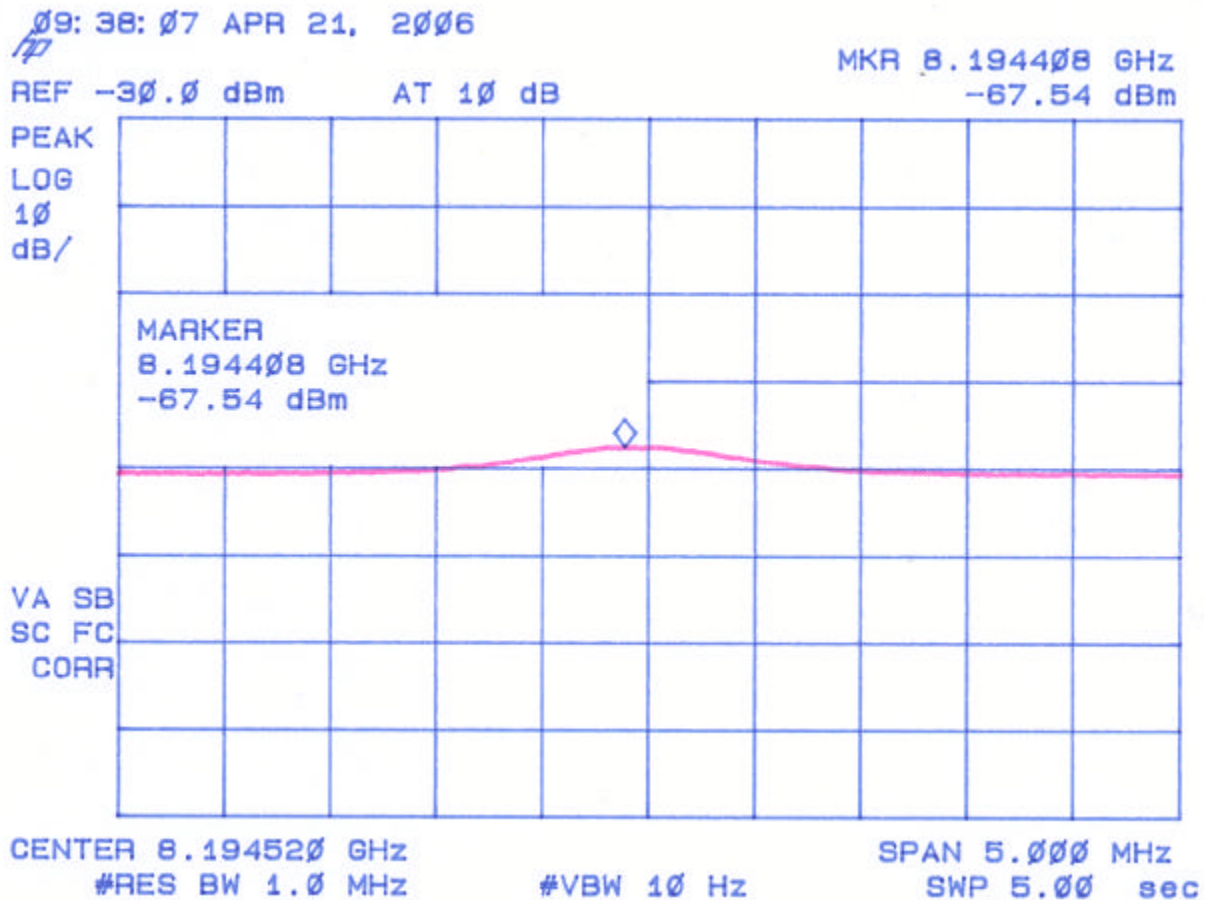
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Figure 5a-12
Peak Radiated Spurious Emission 15.247(c) Low –
9th Harmonic (Average)



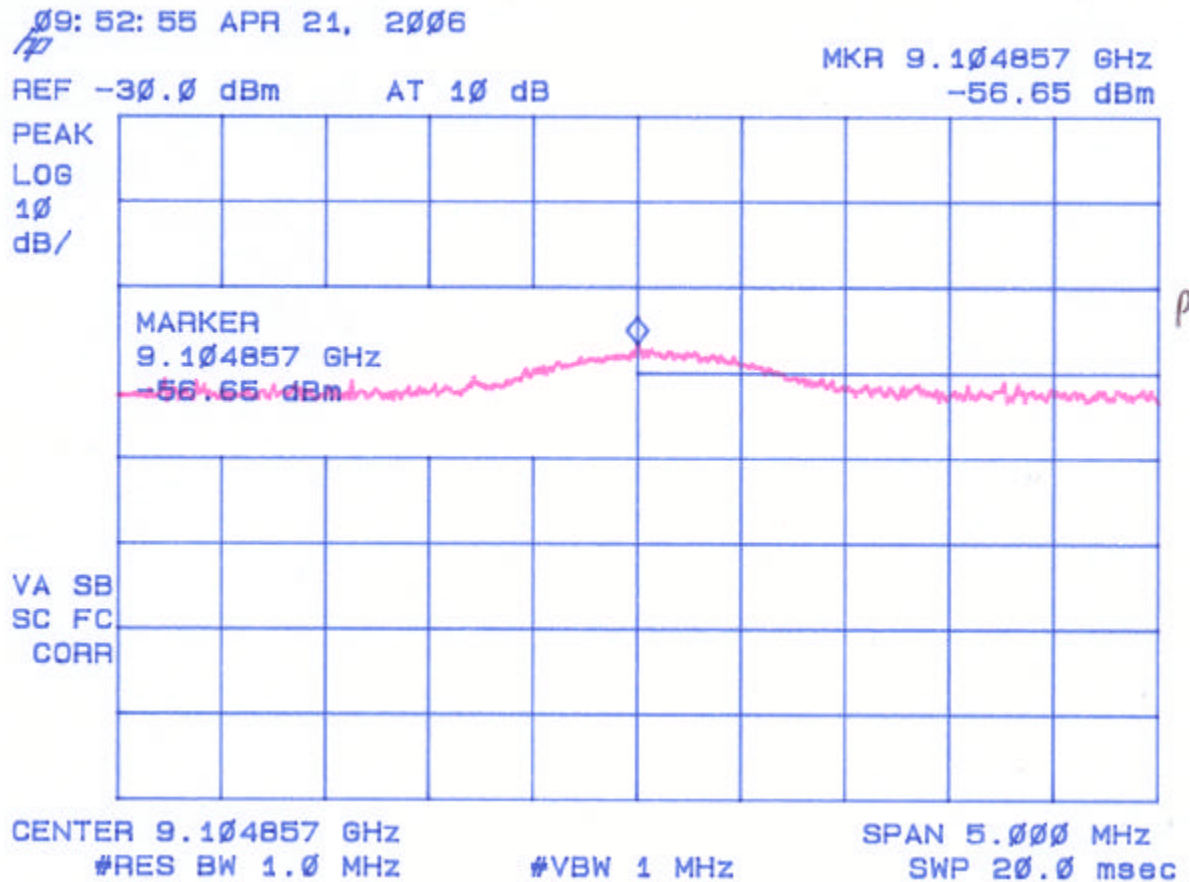
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Figure 5a-13
Peak Radiated Spurious Emission 15.247(c) Low –
10th Harmonic (Peak)



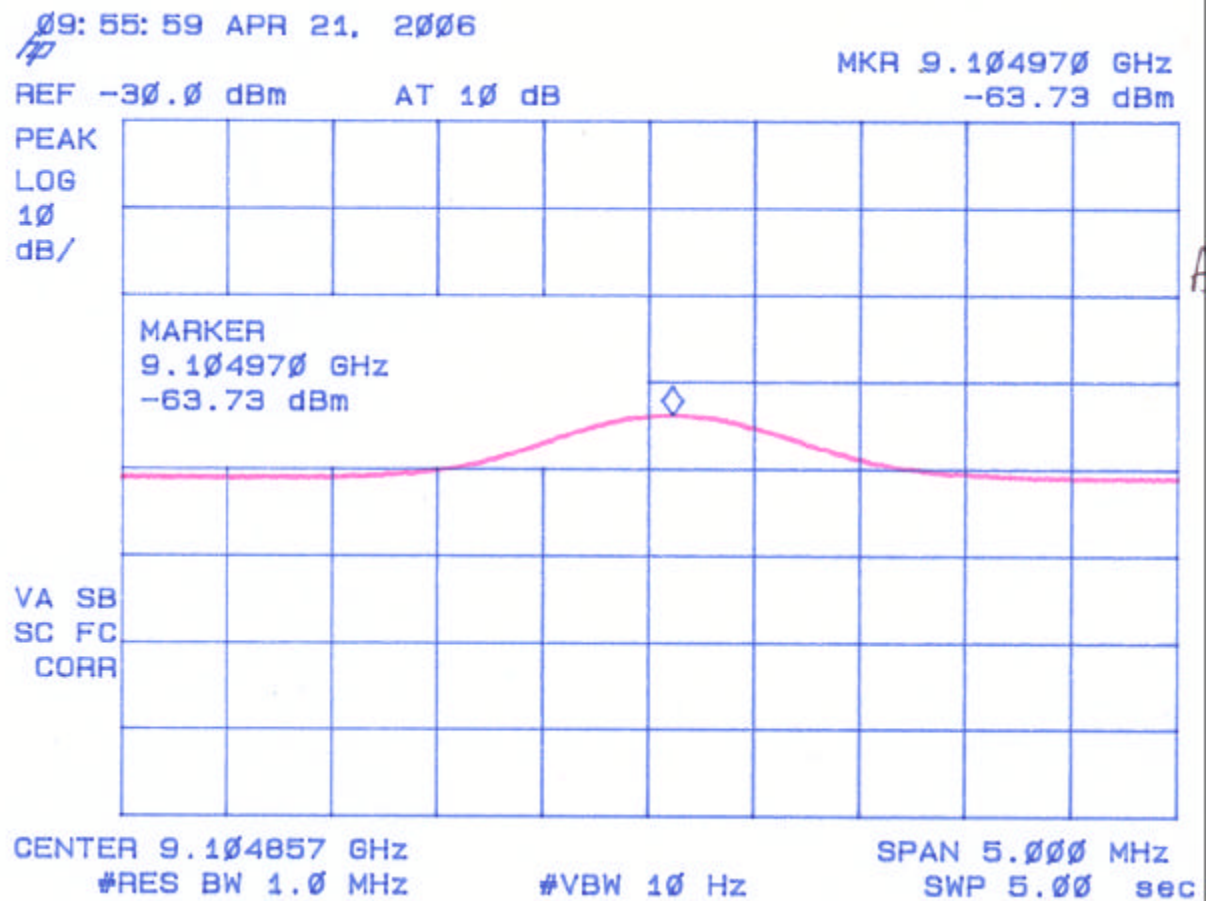
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Figure 5a-14
Peak Radiated Spurious Emission 15.247(c) Low –
10th Harmonic (Average)



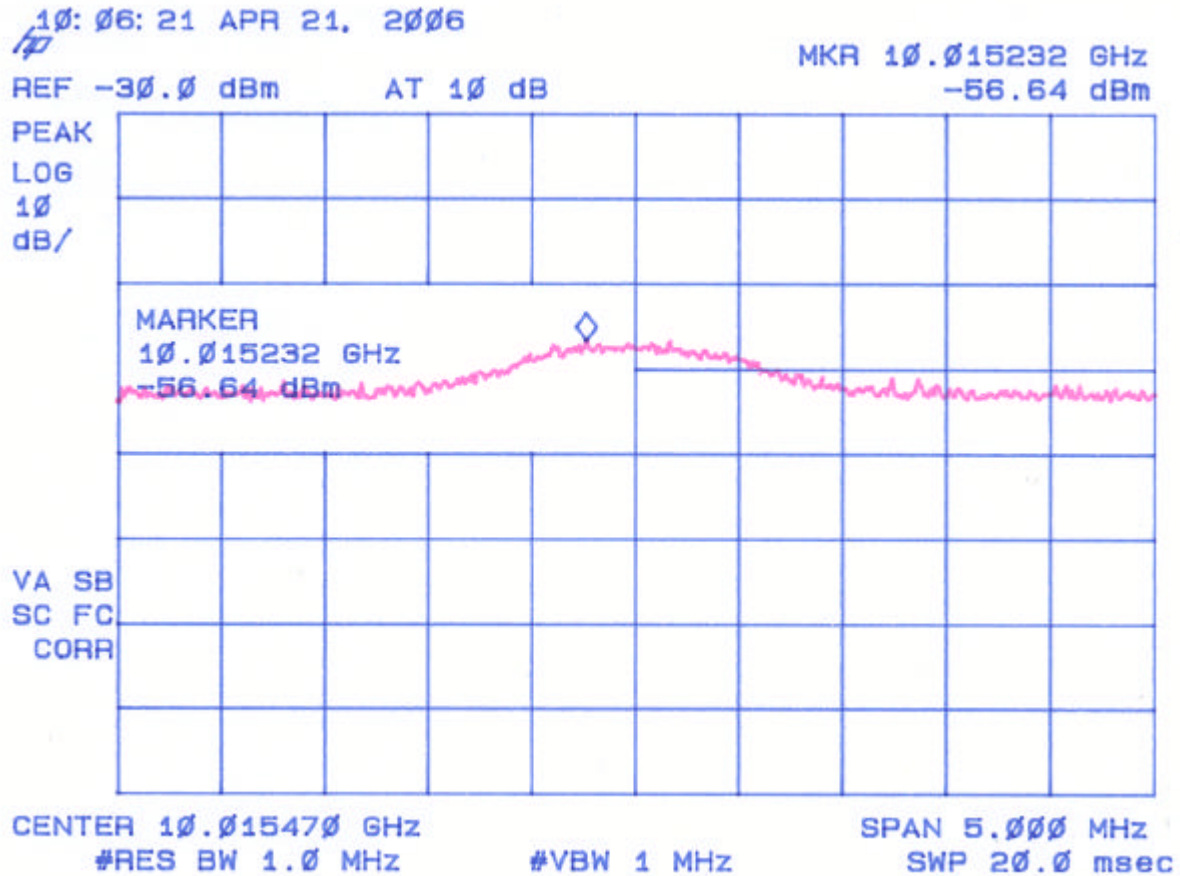
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Figure 5a-15
Peak Radiated Spurious Emission 15.247(c) Low –
11th Harmonic (Peak)



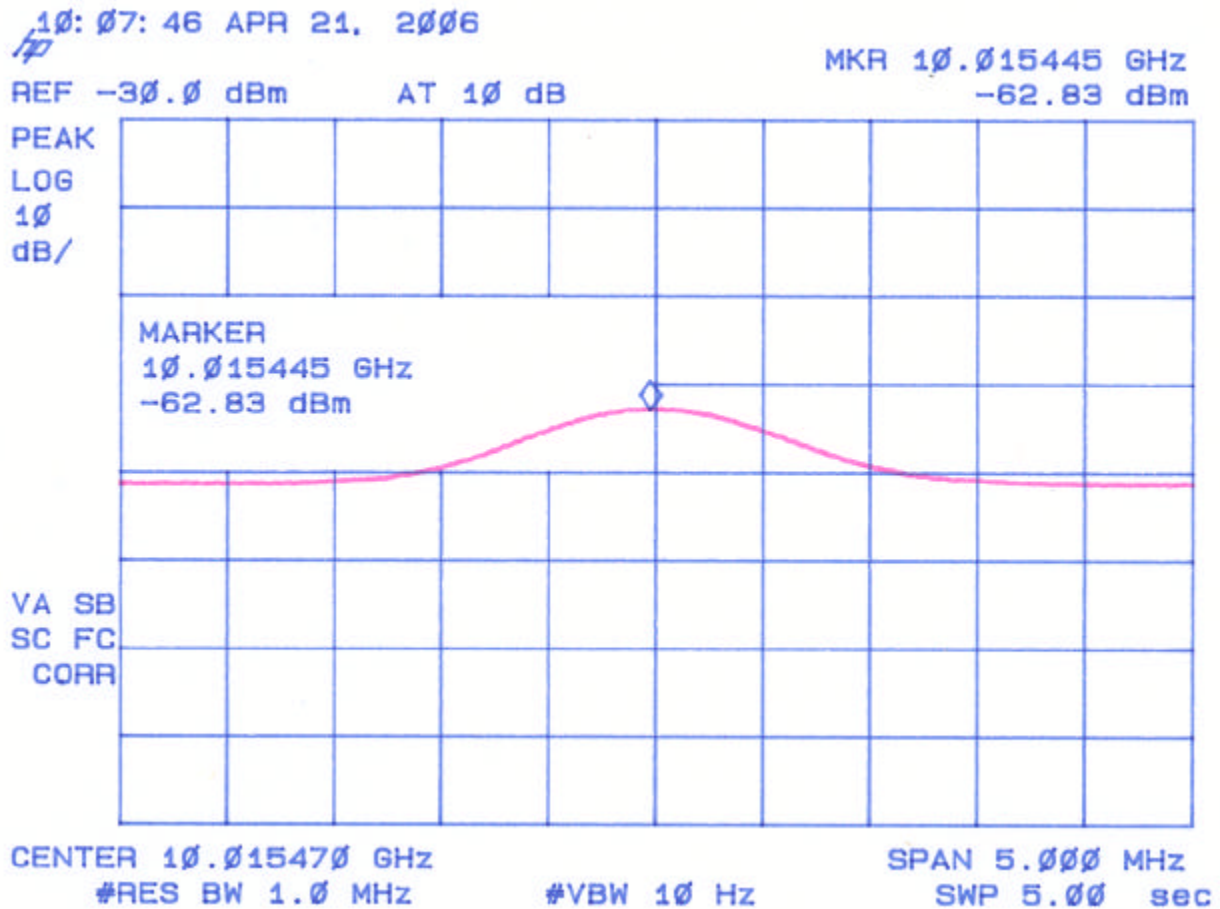
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Figure 5a-16
Peak Radiated Spurious Emission 15.247(c) Low –
11th Harmonic (Average)



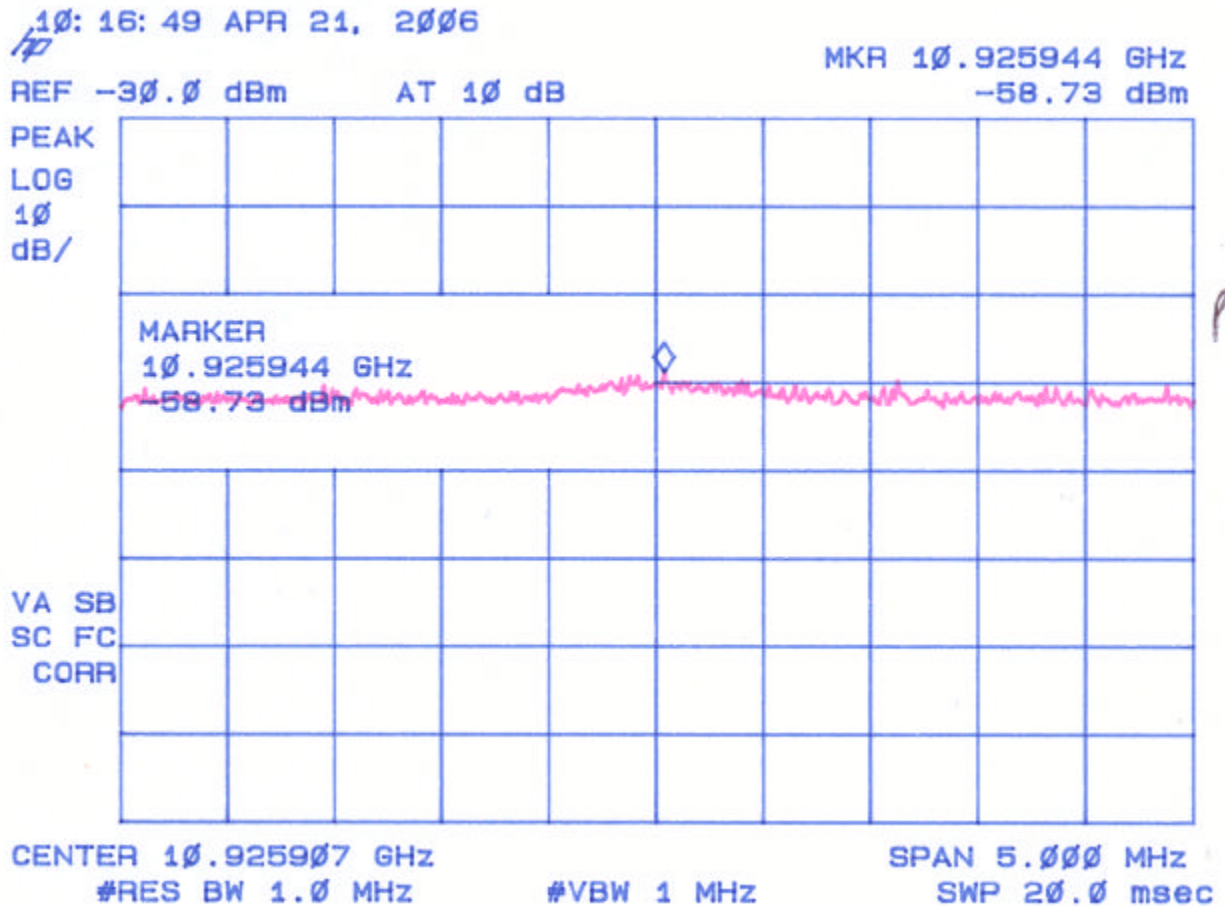
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Figure 5a-17
Peak Radiated Spurious Emission 15.247(c) Low –
12th Harmonic (Peak)



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Figure 5a-18
Peak Radiated Spurious Emission 15.247(c) Low –
12th Harmonic (Average)

