

## **2.7 Average Radiated Spurious Emissions in the Frequency Range 30 -10000 MHz (FCC Section 15.247(c))**

The results of average radiated spurious emissions falling within restricted bands are given in Table 5a (low), Table 5b (mid), Table 5c (high) and Figures 6a through 6c for the patch antenna and Table 5d (low), Table 5e (mid), Table 5f (high) and Figures 6d through 6f for the omni antenna.

**TABLE 5a AVERAGE RADIATED SPURIOUS EMISSIONS (Low) – Patch Antenna**

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) @3m	FCC Limits (uV/m) @3m
4.82376	-66.1	34.2	34.7	4.2	188.9	500

**TABLE 5b AVERAGE RADIATED SPURIOUS EMISSIONS (Mid) – Patch Antenna**

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) @3m	FCC Limits (uV/m) @3m
4.88420	-64.0	34.2	34.7	4.2	242.2	500

**TABLE 5c AVERAGE RADIATED SPURIOUS EMISSIONS (High)– Patch Antenna**

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) @3m	FCC Limits (uV/m) @3m
4.92400	-60.8	34.2	34.8	4.1	351.7	500

\* = Data adjusted by + 1 dB for high pass filter

\*\* = Instrumentation ground floor

**SAMPLE CALCULATION:**

**RESULTS (uV/m @ 3m) = Antilog ((-66.1 – 34.2 + 34.7 + 4.2 + 107)/20) = 188.9**

**CONVERSION FROM dBm TO dBuV = 107 dB**

**Test Results**

**Reviewed By: \_\_\_\_\_ Name: Tim R. Johnson**

**Figure 6a**  
**Average Radiated Spurious Emissions 15.247(c) Low**  
**(Patch Antenna – 0 dB Gain)**

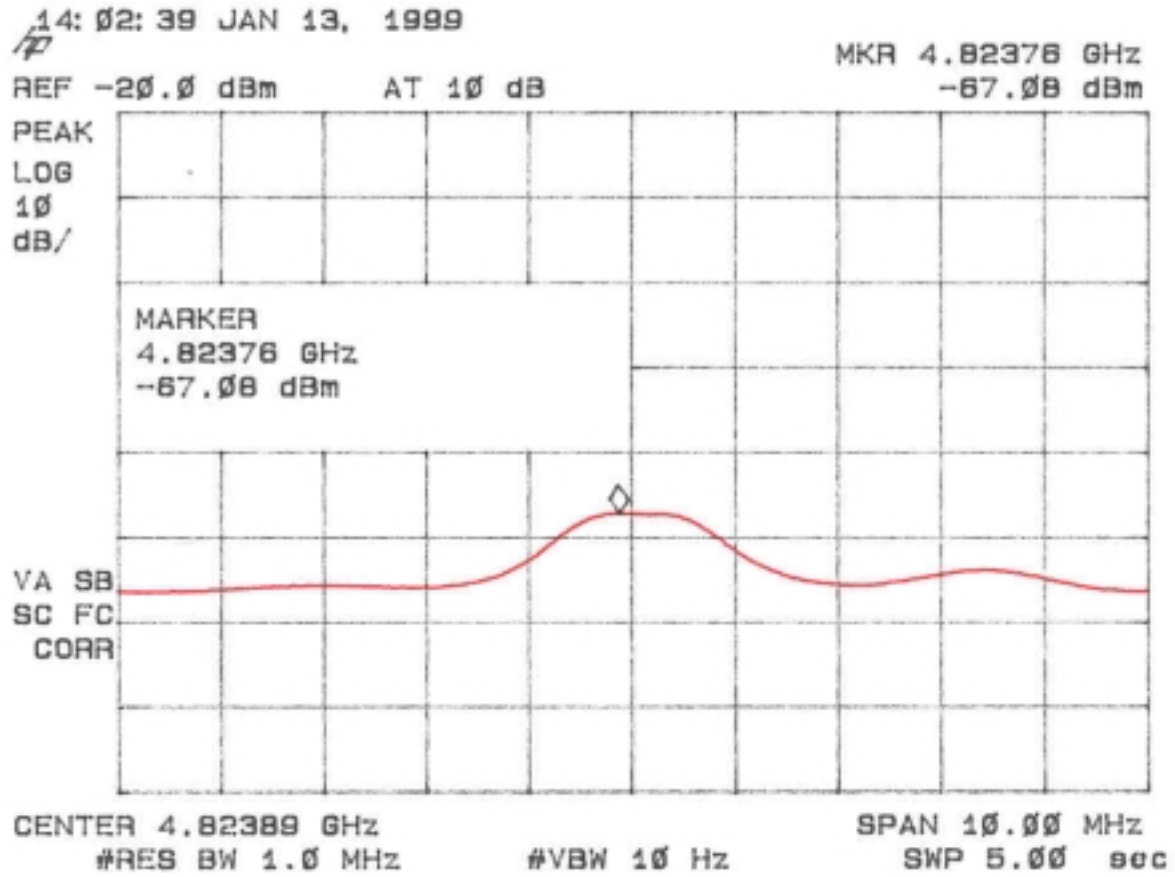


Figure 6b  
Average Radiated Spurious Emissions 15.247(c) Mid  
(Patch Antenna – 0 dB Gain)

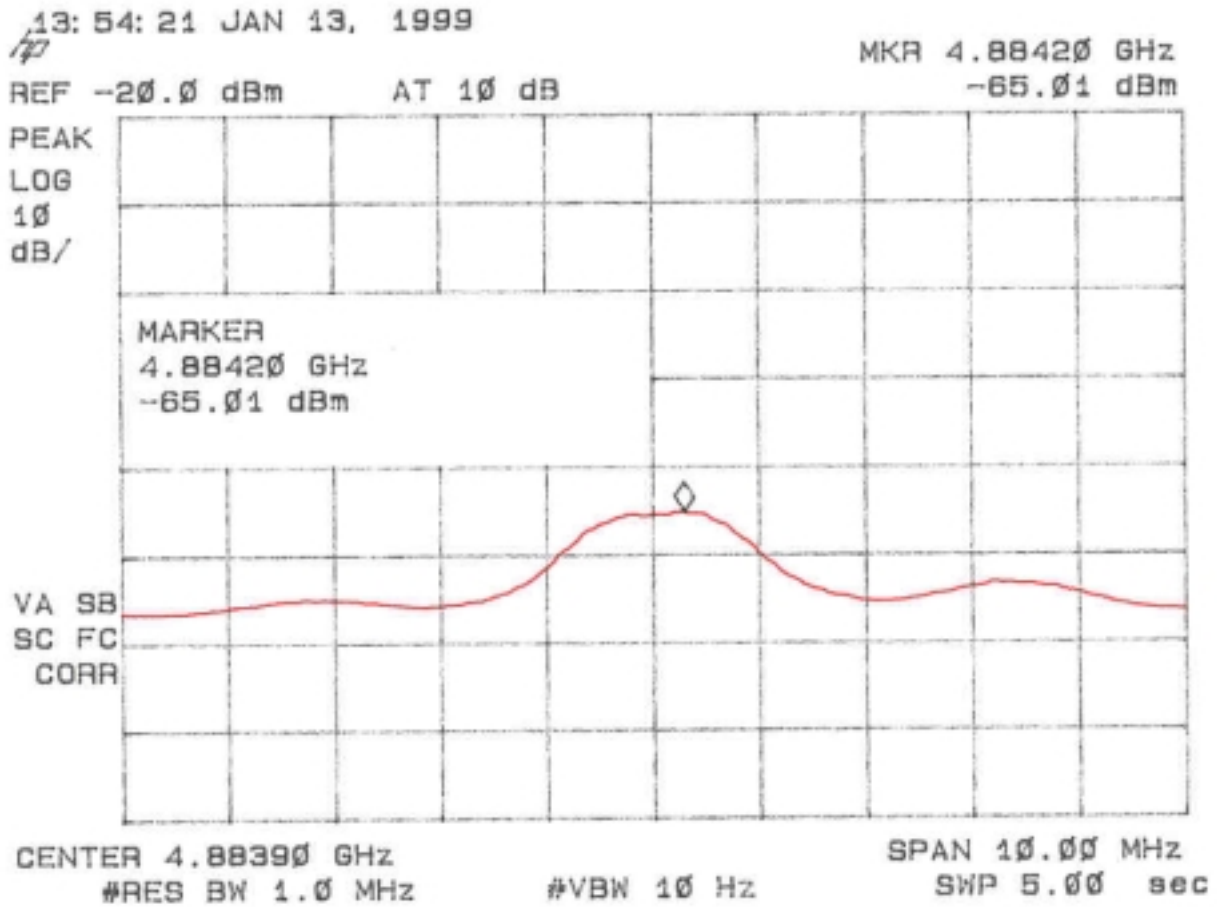
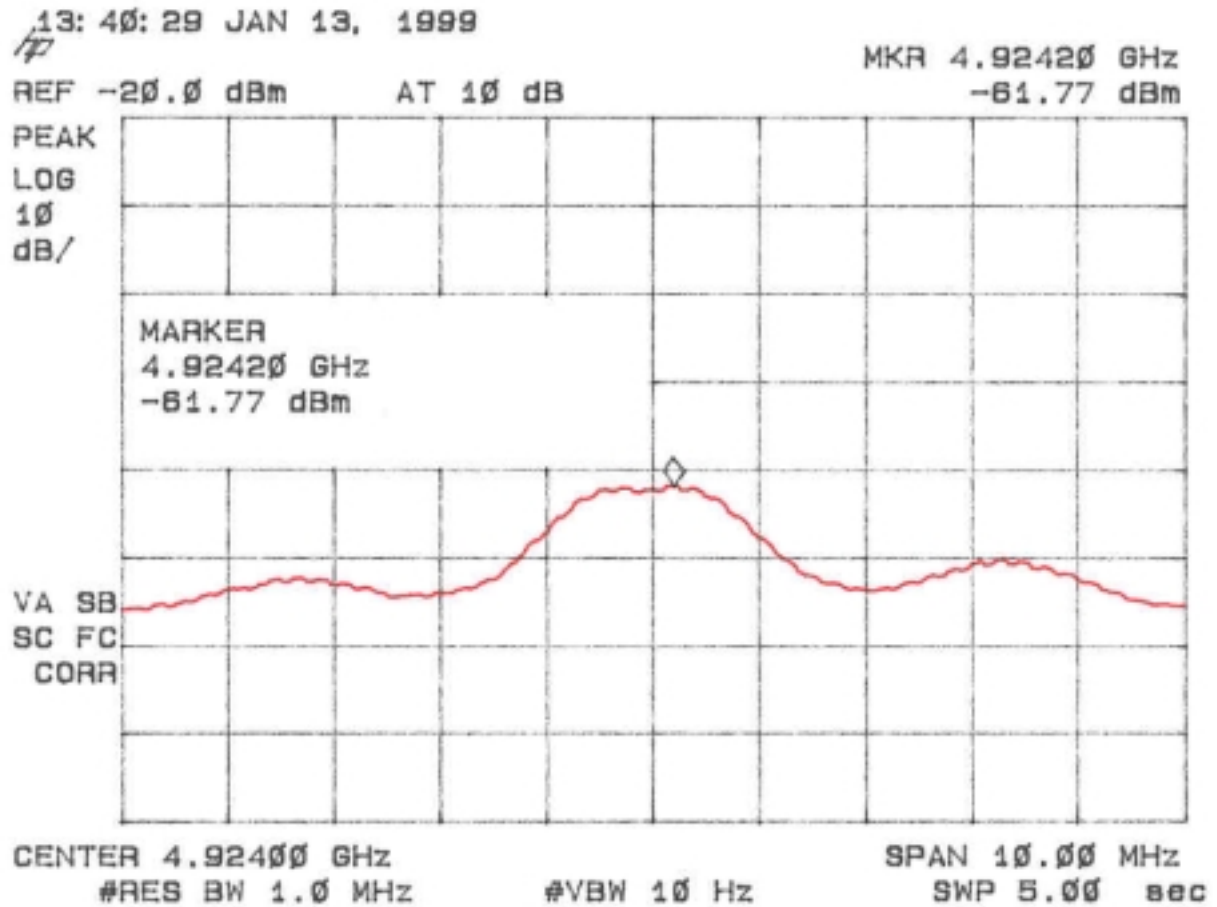


Figure 6c  
Average Radiated Spurious Emissions 15.247(c) High  
(Patch Antenna – 0 dB Gain)



**TABLE 5d AVERAGE RADIATED SPURIOUS EMISSIONS (Low) – Omni Antenna**

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) @3m	FCC Limits (uV/m) @3m
4.82395	-69.9	34.2	34.7	4.2	122.0	500

**TABLE 5e AVERAGE RADIATED SPURIOUS EMISSIONS (Mid) – Omni Antenna**

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) @3m	FCC Limits (uV/m) @3m
4.88390	-70.9	34.2	34.7	4.2	109.4	500

**TABLE 5f AVERAGE RADIATED SPURIOUS EMISSIONS (High)– Omni Antenna**

Freq. (GHz)	Test Data* (dBm) @3m	Amp. Gain (dB)	Antenna Factor (dB)	Cable Loss (dB)	Results (uV/m) @3m	FCC Limits (uV/m) @3m
4.92400	-70.8	34.2	34.8	4.1	111.2	500

\* = Data adjusted by + 1 dB for high pass filter

\*\* = Instrumentation ground floor

**SAMPLE CALCULATION:**

RESULTS (uV/m @ 3m) = Antilog ((-69.9 – 34.2 + 34.7 + 4.2 + 107)/20) = 122.0

CONVERSION FROM dBm TO dBuV = 107 dB

Test Results

Reviewed By: \_\_\_\_\_ Name: Tim R. Johnson

Figure 6d  
Peak Radiated Spurious Emissions 15.247(c) Low  
(Omni Antenna – 9 dB Gain)

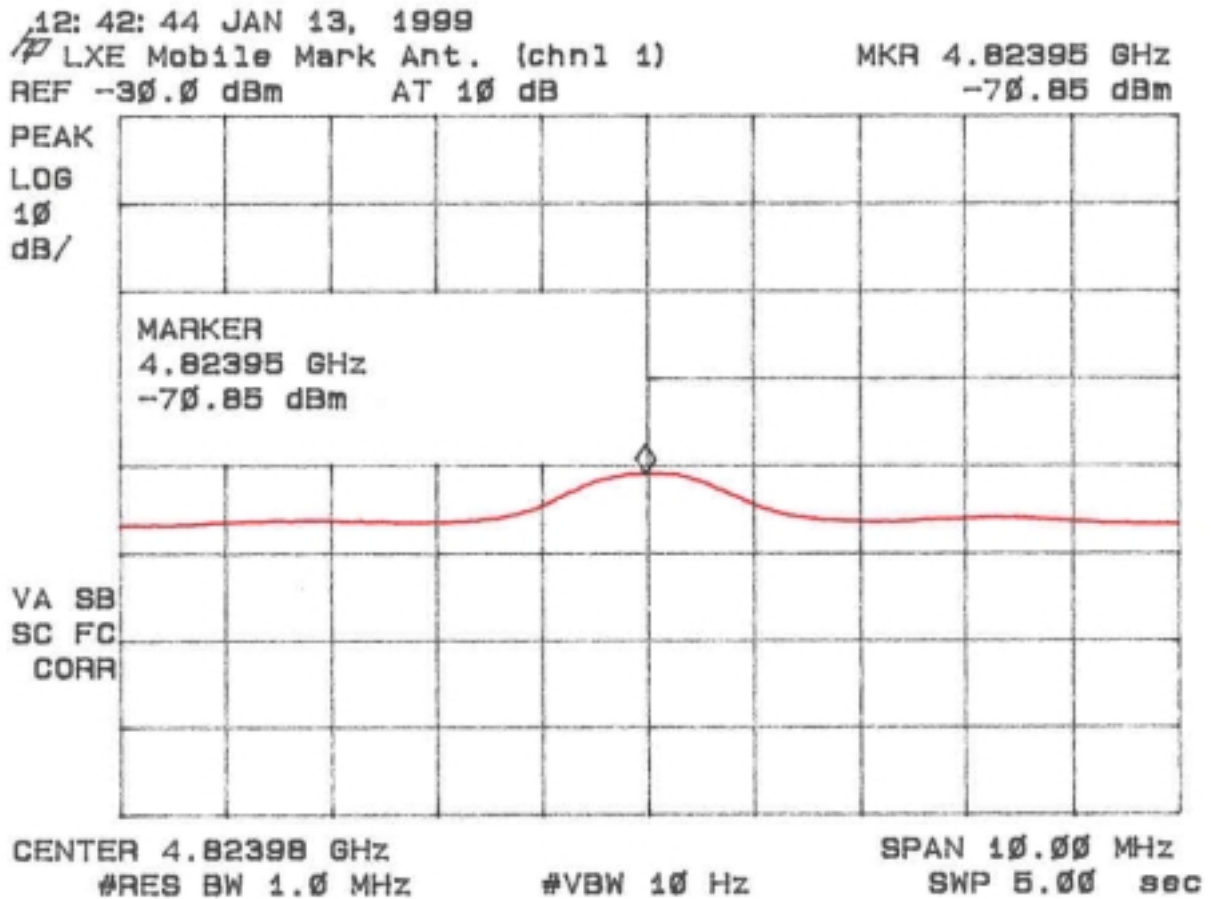
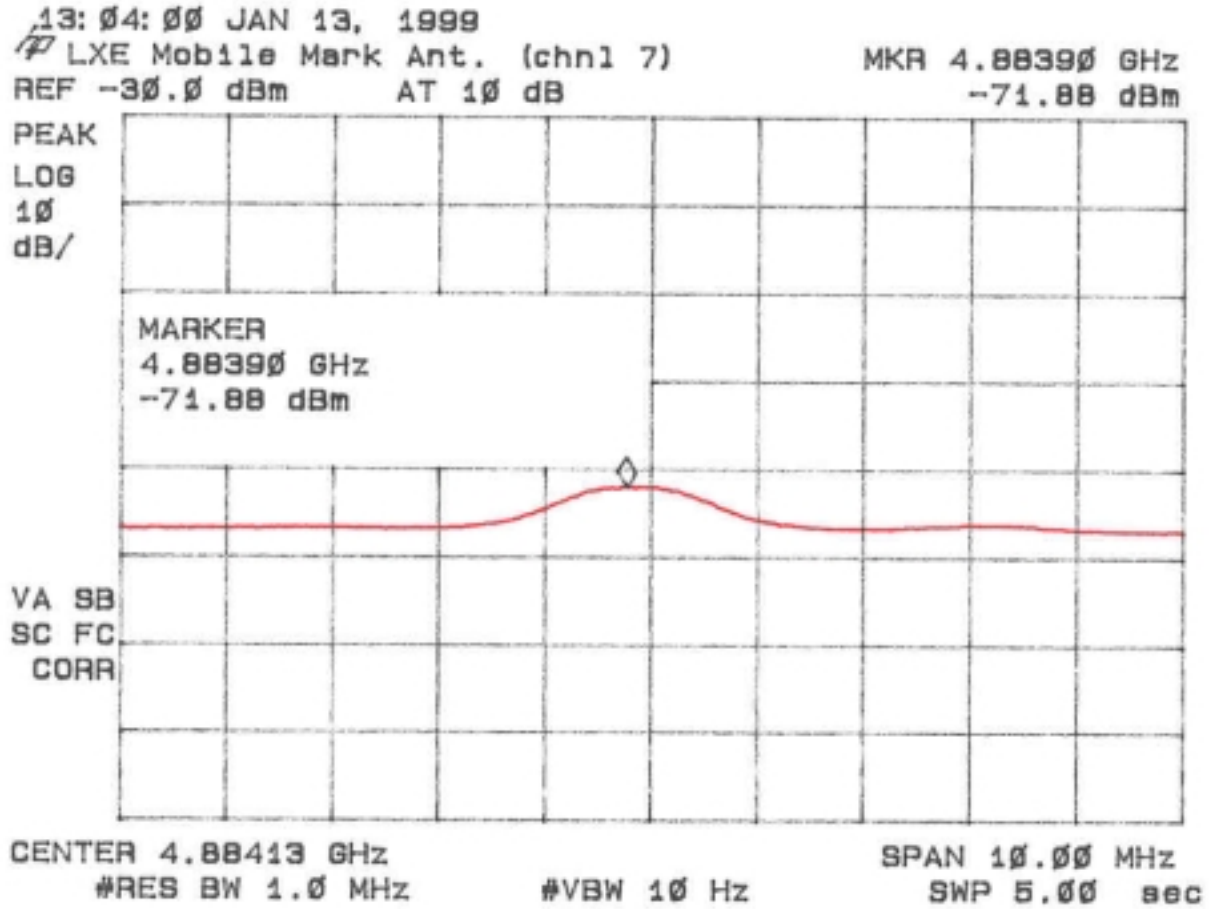
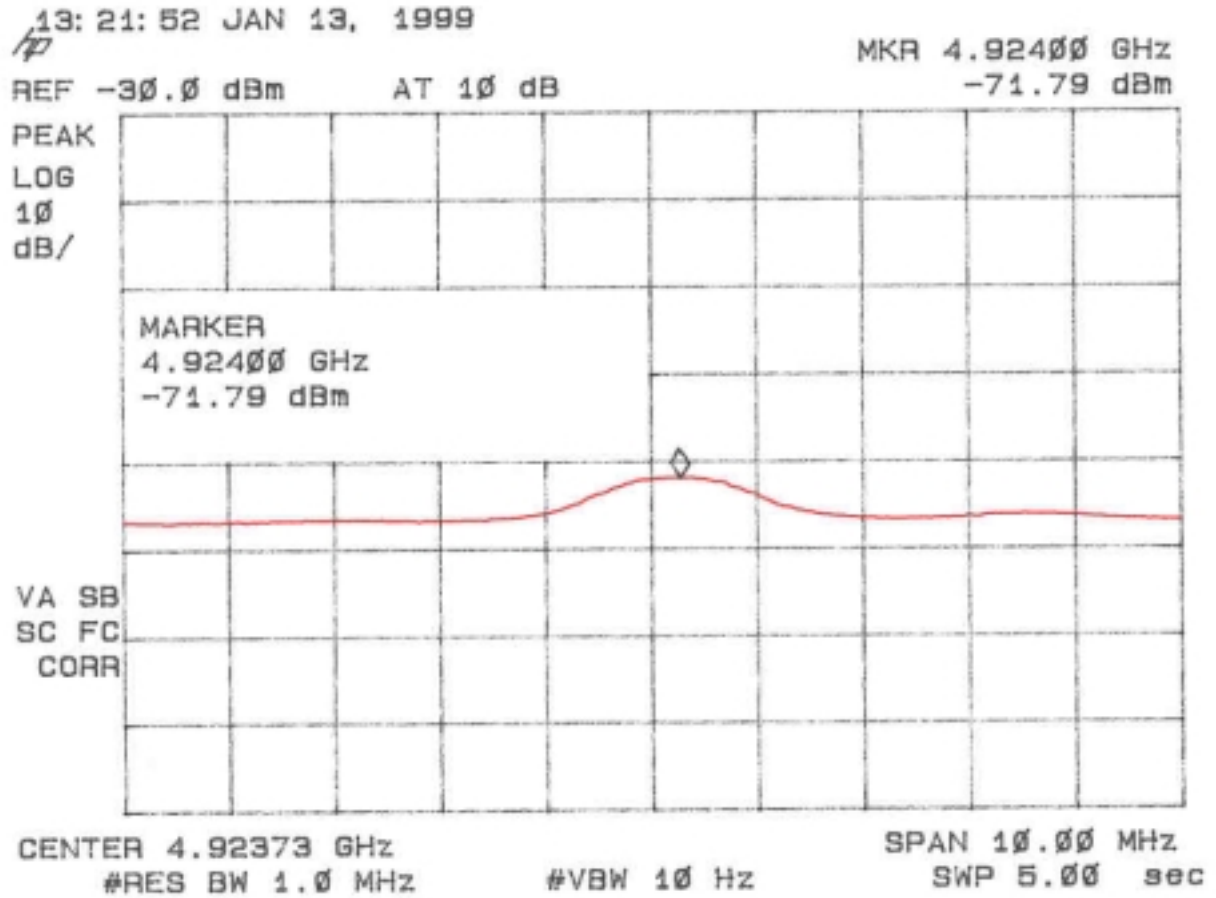


Figure 6e  
Peak Radiated Spurious Emissions 15.247(c) Mid  
(Omni Antenna – 9 dB Gain)





**Figure 6f**  
**Peak Radiated Spurious Emissions 15.247(c) High**  
**(Omni Antenna – 9 dB Gain)**





# **SECTION 5**

# **PHOTOGRAPHS**



## PHOTOS OF THE TESTED EUT

The following photos are attached:

Photo 1. EUT, Patch Antenna

Photo 2. EUT, Omni Antenna

Photo 1. EUT, Patch Antenna



Photo 2. EUT, Omni Antenna

