

## 7.4. PANEL ANTENNA RESULTS

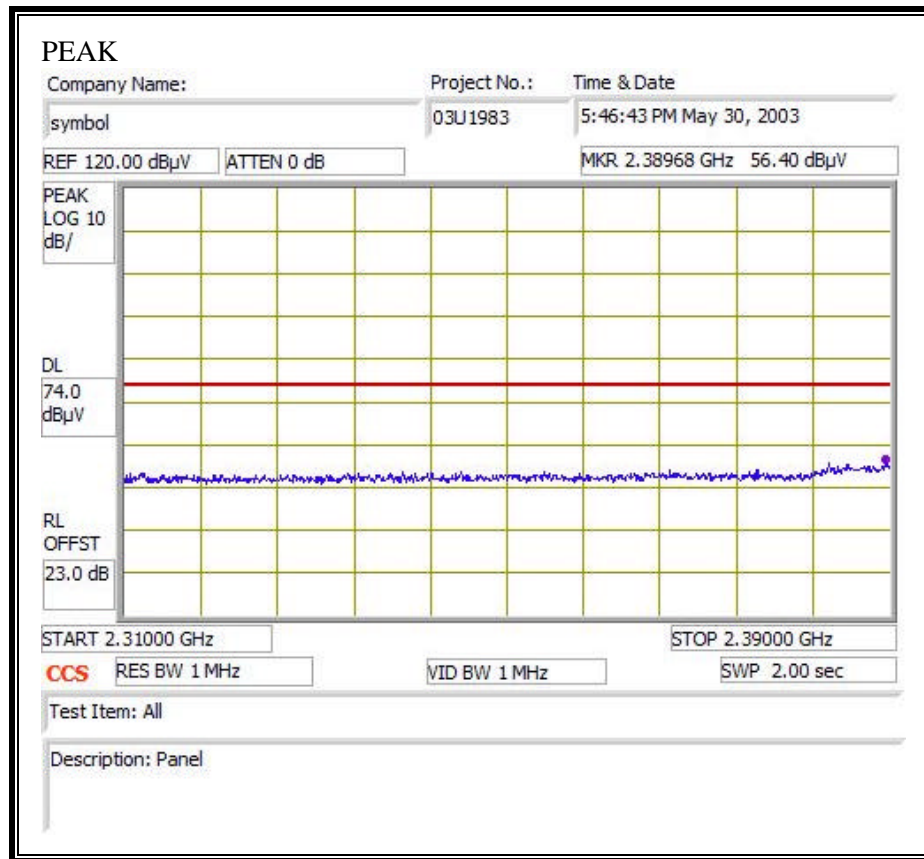
### SETUP PHOTOS

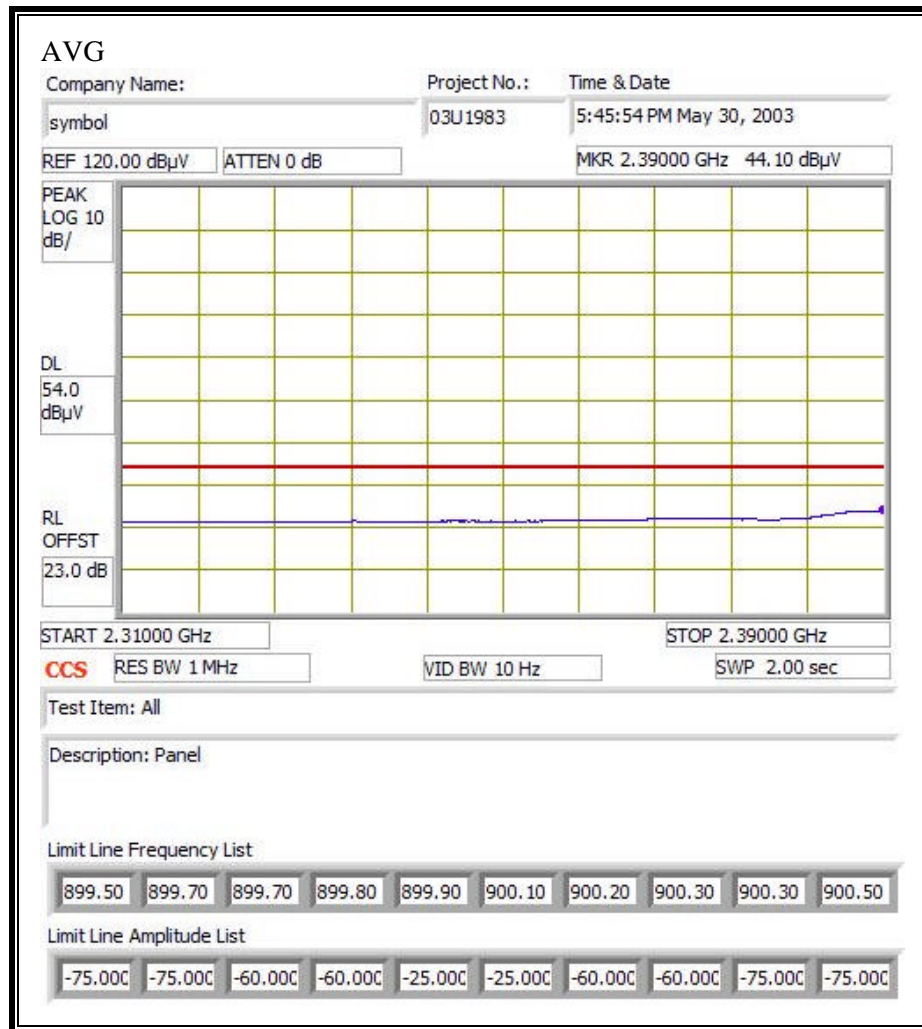


RADIATED BACK PHOTO

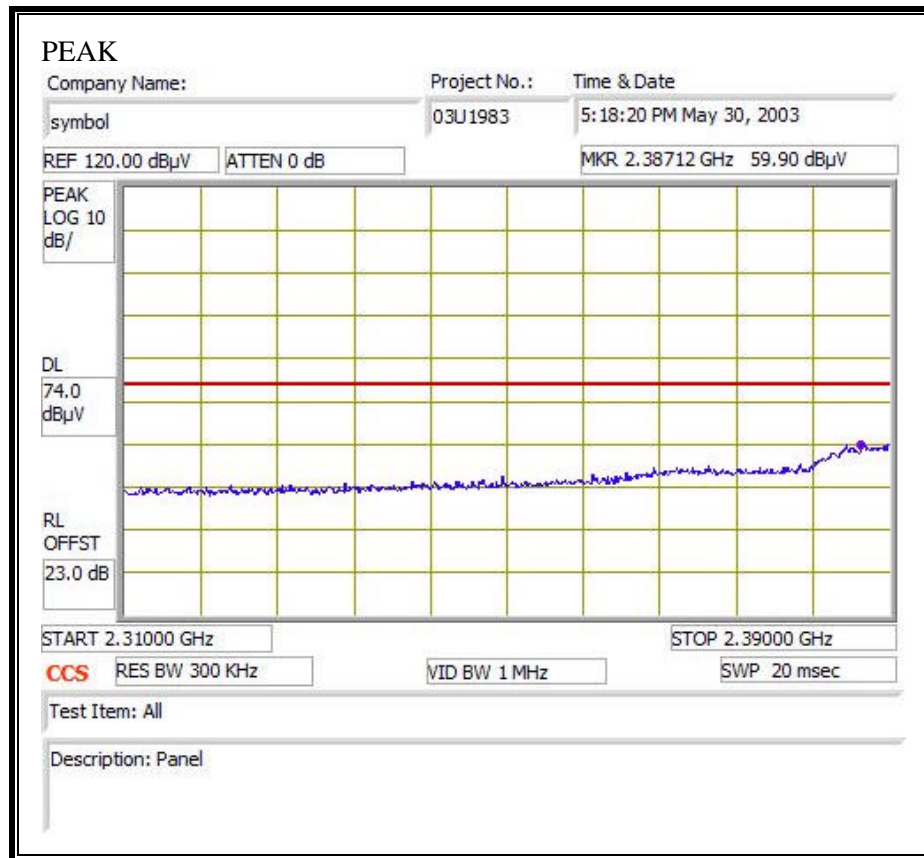


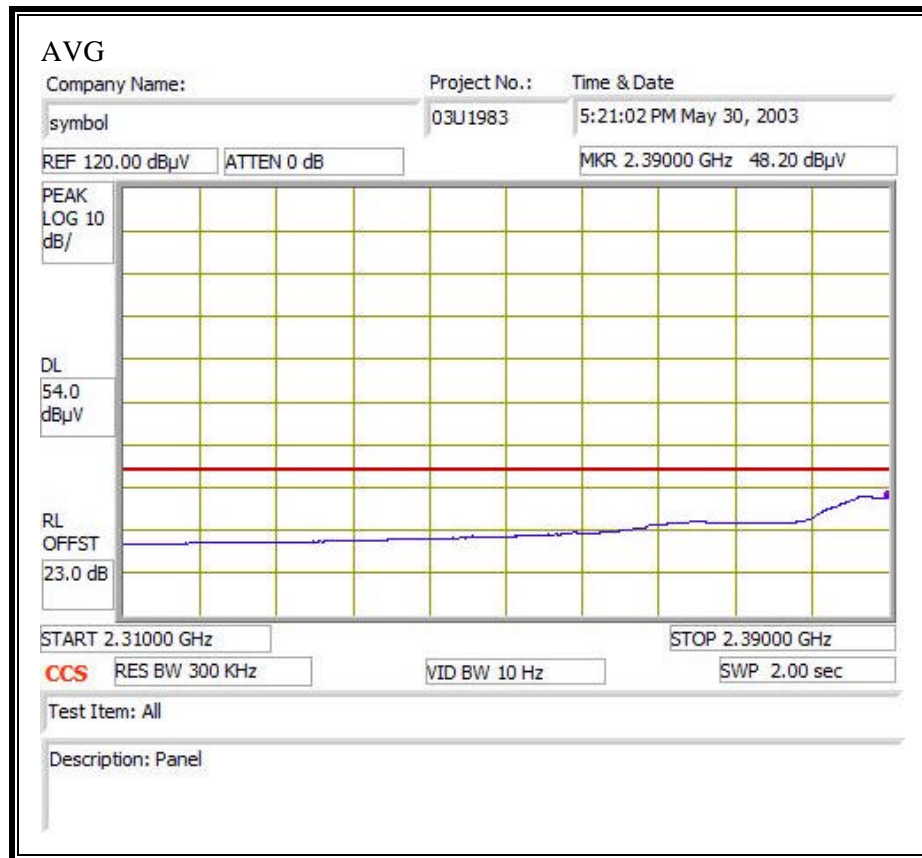
**ADJACENT RESTRICTED BAND (LOW CHANNEL, HORIZONTAL)**



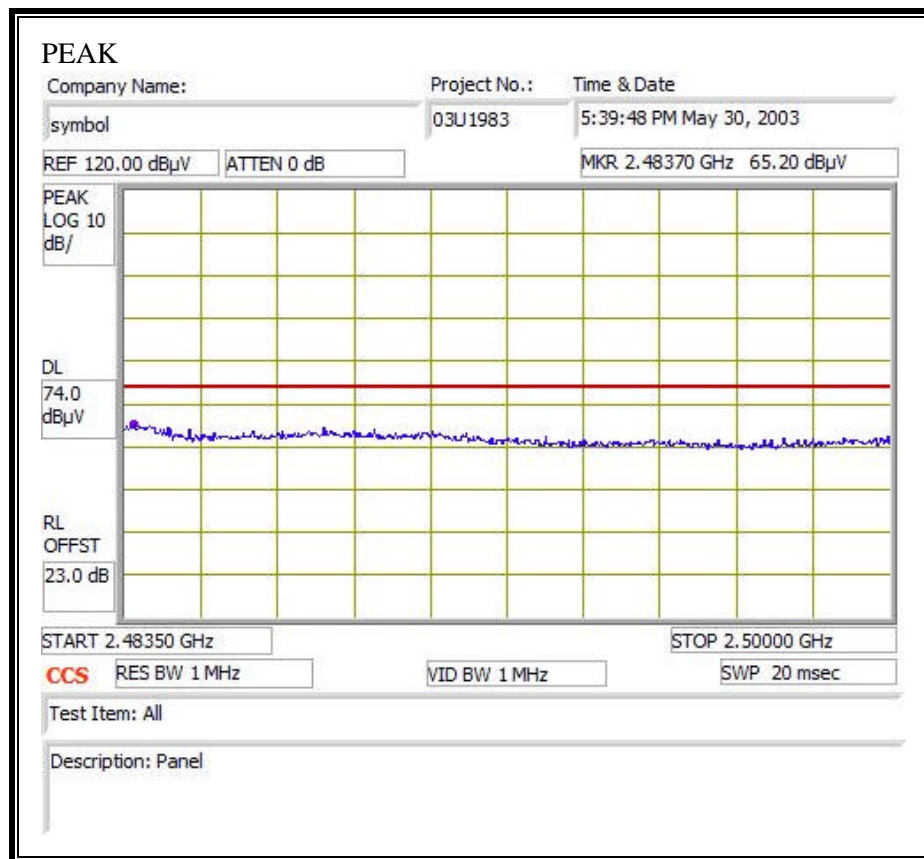


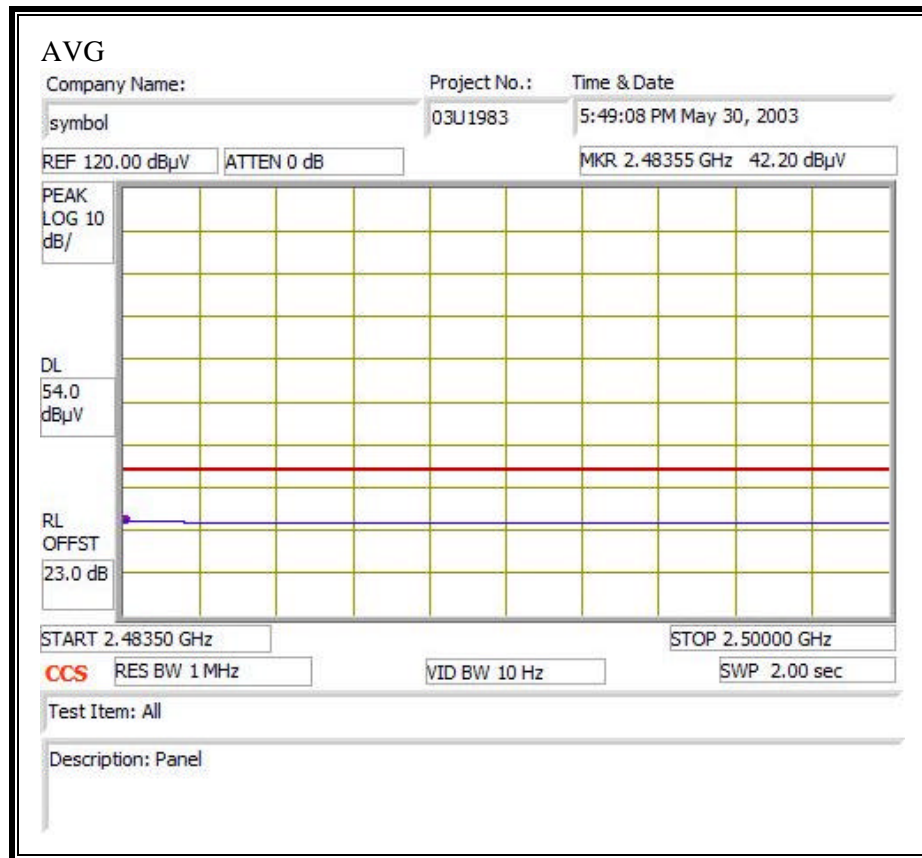
**ADJACENT RESTRICTED BAND (LOW CHANNEL, VERTICAL)**



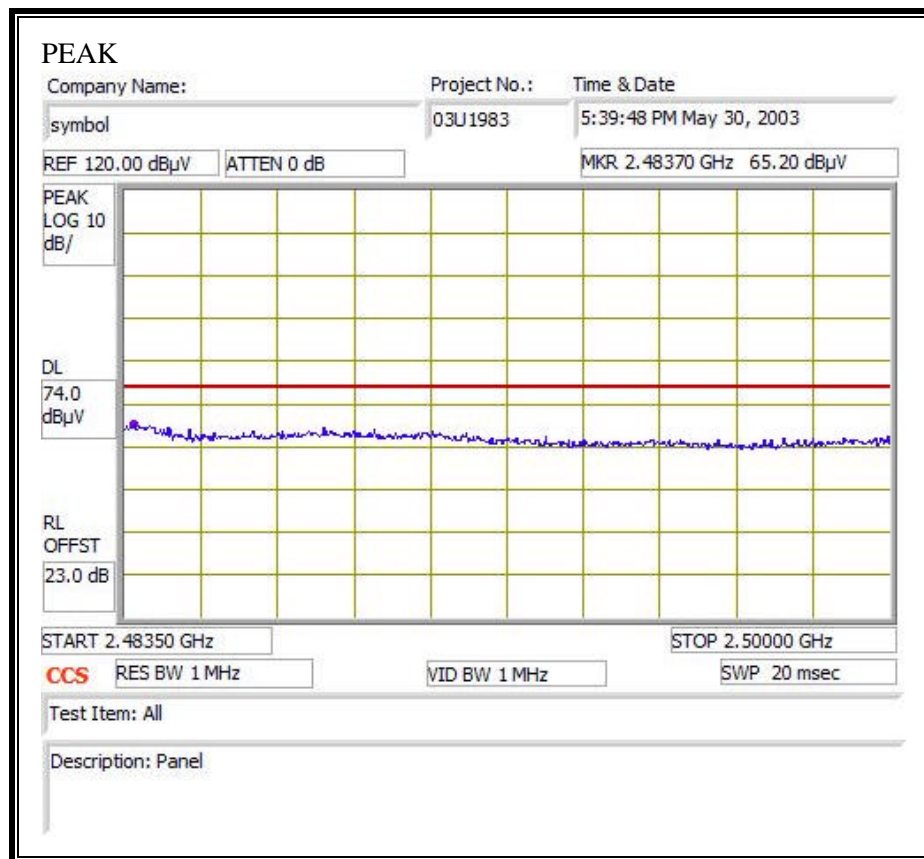


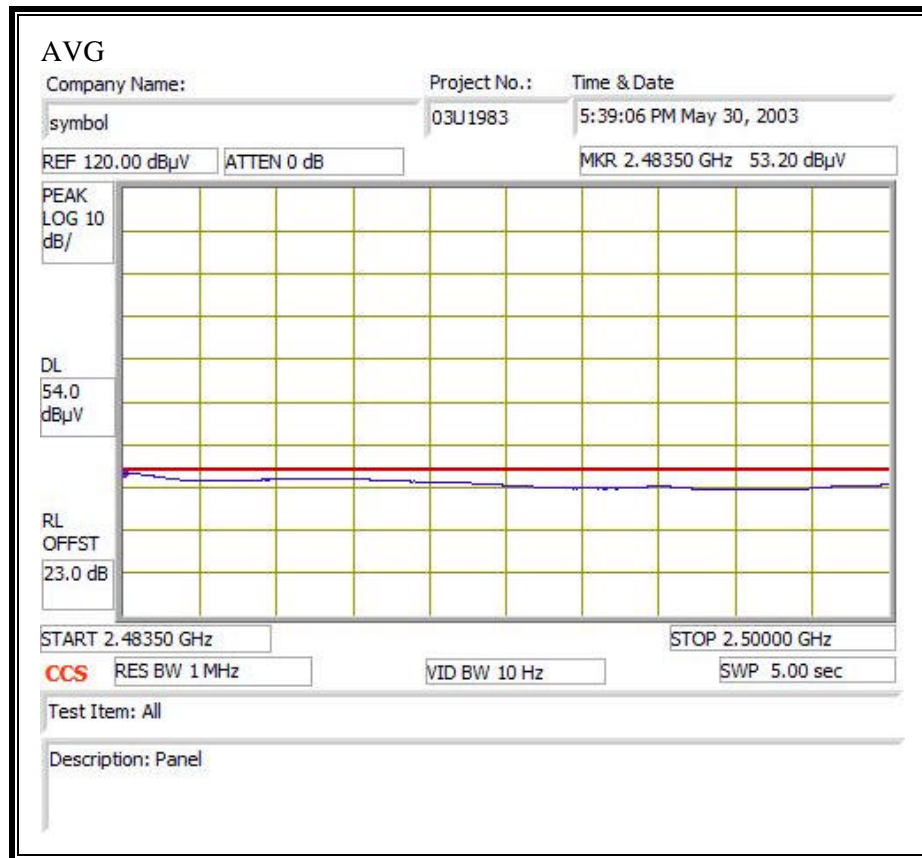
**ADJACENT RESTRICTED BAND (HIGH CHANNEL, HORIZONTAL)**





**ADJACENT RESTRICTED BAND (HIGH CHANNEL, VERTICAL)**





## HARMONICS AND SPURIOUS EMISSIONS

06/05/03 <b>High Frequency Measurement</b> <b>Compliance Certification Services, Morgan Hill Open Field Site</b>																
<b>Test Engr:</b>		Yan Zheng														
<b>Project #:</b>		03U1983														
<b>Company:</b>		Symbol														
<b>EUT Descr.:</b>		802.11b														
<b>EUT M/N:</b>		LA4121														
<b>Test Target:</b>																
<b>Mode Oper:</b>		Transmitt														
<b>Test Equipment:</b>																
EMCO Horn 1-18GHz				Pre-amplifier 1-26GHz				Spectrum Analyzer				Horn > 18GHz				
T73; S/N: 6717 @ 1m				T86 Miteq 924341				HP 8566B Analyzer				T117; ARA 18-26GHz; S/N:1013				
<b>Hi Frequency Cables</b>																
<input type="checkbox"/> (2 ft) <input checked="" type="checkbox"/> (2 ~ 3 ft) <input type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft)																
<b>Peak Measurements:</b> 1 MHz Resolution Bandwidth 1MHz Video Bandwidth																
<b>Average Measurements:</b> 1 MHz Resolution Bandwidth 10Hz Video Bandwidth																
f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes	
Channel 11 (2462MHz)																
4.924	9.8	51.0	38.3	34.0	4.5	-45.7	0.0	1.0	44.7	32.0	74.0	54.0	-29.3	-22.0	H	
4.924	9.8	57.9	43.0	34.0	4.5	-45.7	0.0	1.0	51.6	36.7	74.0	54.0	-22.4	-17.3	V	
Channel 6 (2437MHz)																
4.874	9.8	52.0	38.9	33.9	4.4	-45.6	0.0	1.0	45.7	32.6	74.0	54.0	-28.3	-21.4	H	
4.874	9.8	55.5	42.2	33.9	4.4	-45.6	0.0	1.0	49.2	35.9	74.0	54.0	-24.8	-18.1	V	
Channel 1 (2412MHz)																
4.824	9.8	59.1	44.9	33.9	4.4	-45.6	0.0	1.0	52.8	38.6	74.0	54.0	-21.2	-15.4	H	
4.824	9.8	57.2	43.6	33.9	4.4	-45.6	0.0	1.0	50.9	37.3	74.0	54.0	-23.1	-16.7	V	
f	Measurement Frequency					Amp	Preamp Gain					Avg Lim	Average Field Strength Limit			
Dist	Distance to Antenna					D Corr	Distance Correct to 3 meters					Pk Lim	Peak Field Strength Limit			
Read	Analyzer Reading					Avg	Average Field Strength @ 3 m					Avg Mar	Margin vs. Average Limit			
AF	Antenna Factor					Peak	Calculated Peak Field Strength					Pk Mar	Margin vs. Peak Limit			
CL	Cable Loss					HPF	High Pass Filter									

Note: no other harmonics or spurious detected above 1 GHz.

## 7.5. PATCH ANTENNA RESULTS

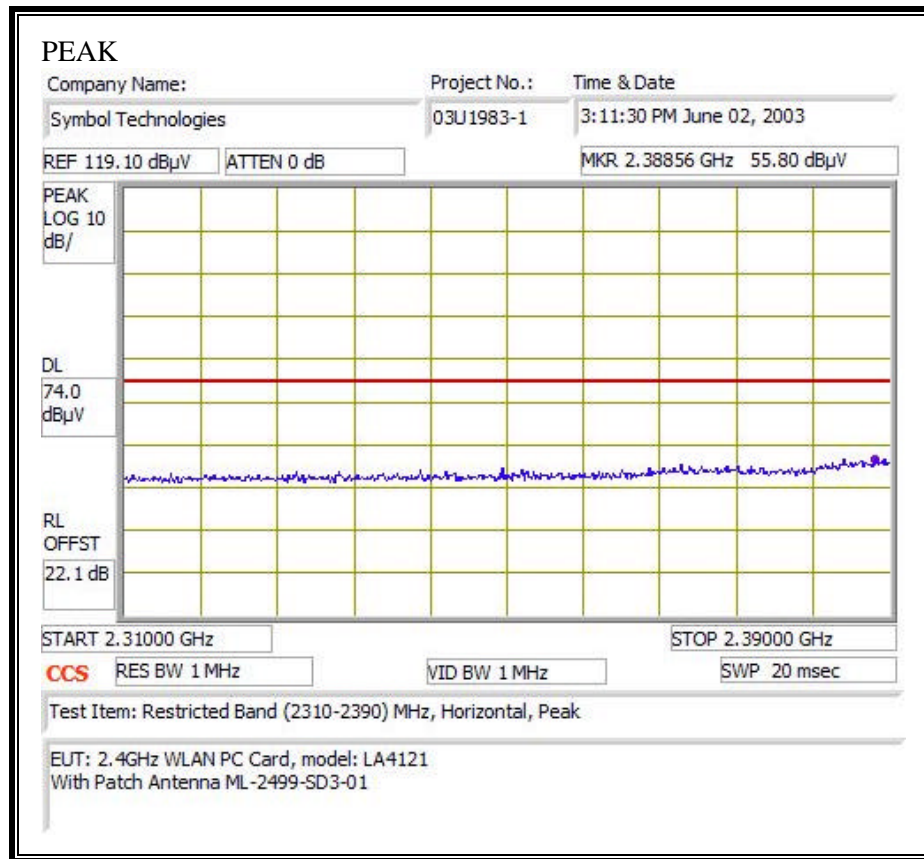
### SETUP PHOTOS

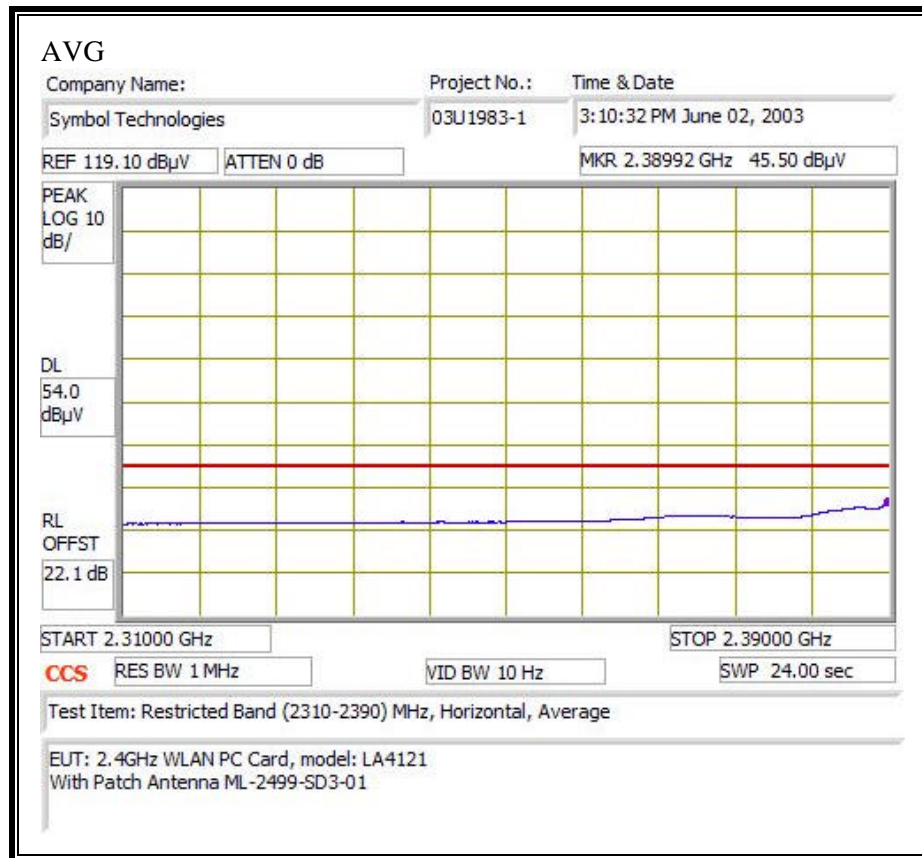


RADIATED BACK PHOTO

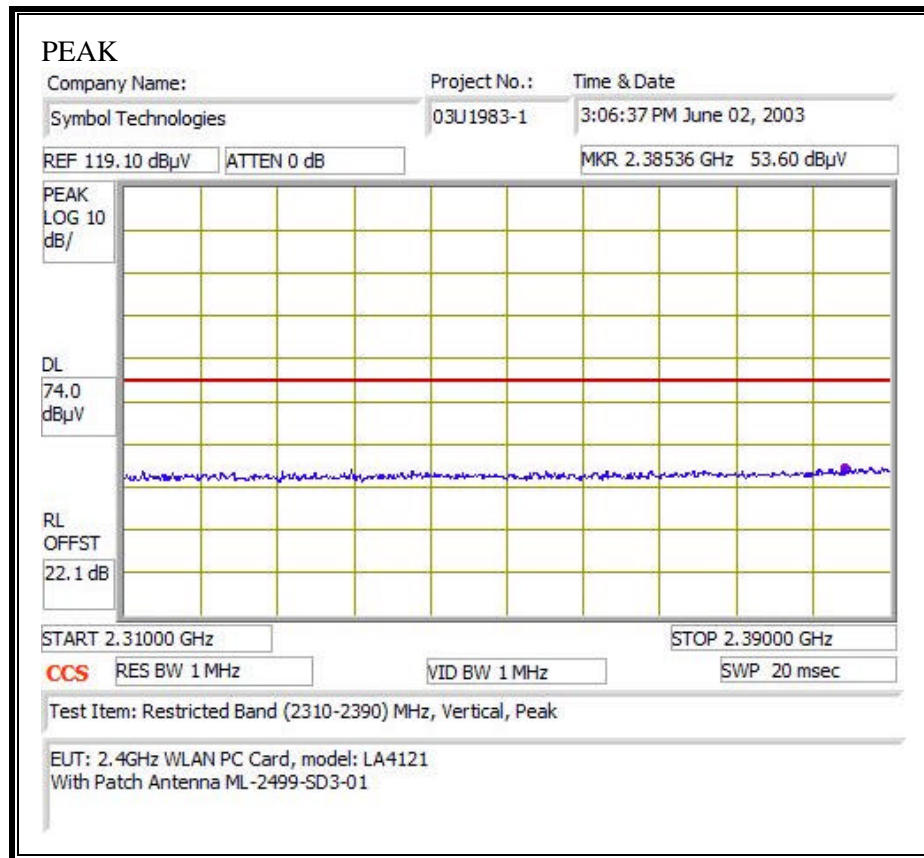


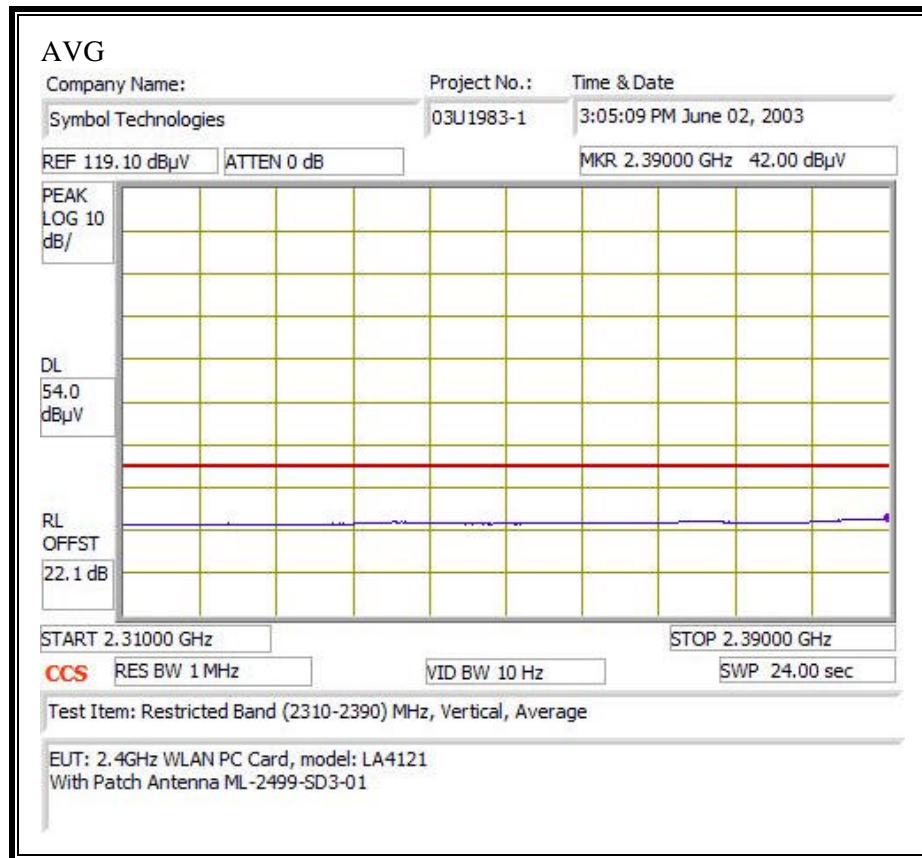
**ADJACENT RESTRICTED BAND (LOW CHANNEL, HORIZONTAL)**



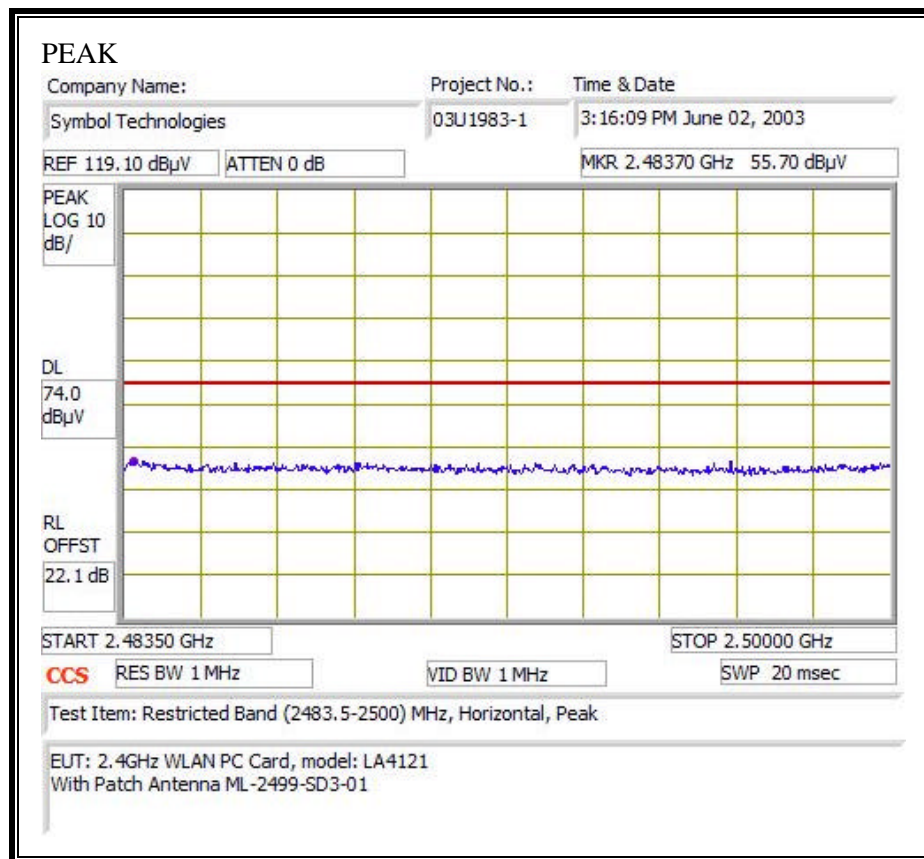


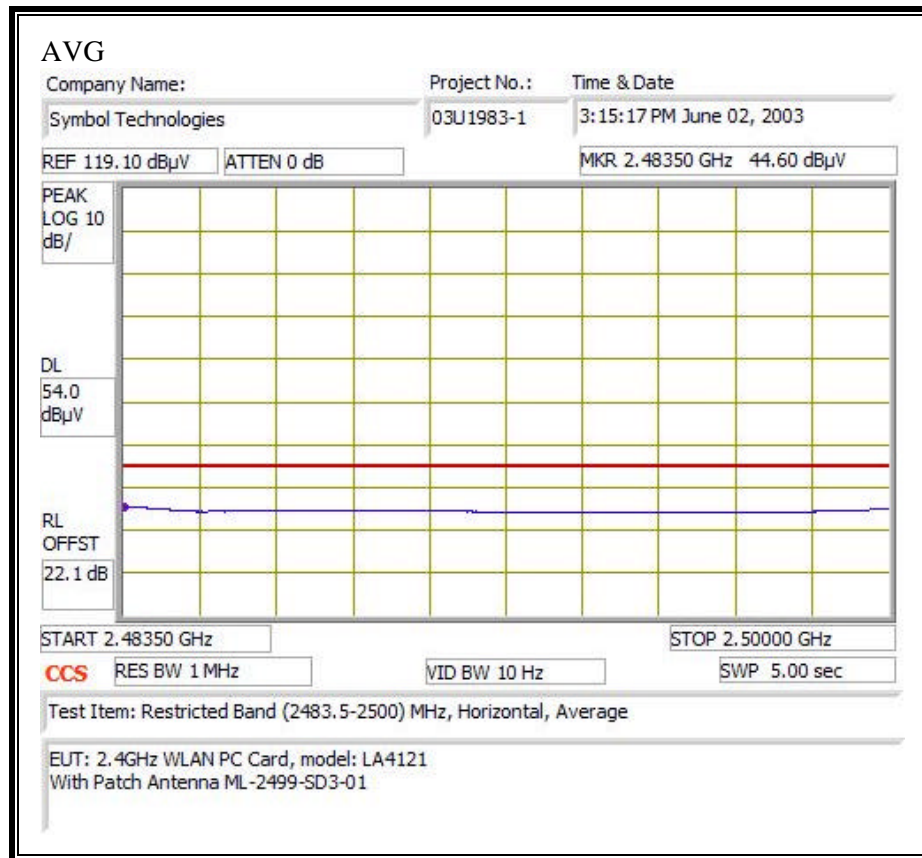
**ADJACENT RESTRICTED BAND (LOW CHANNEL, VERTICAL)**



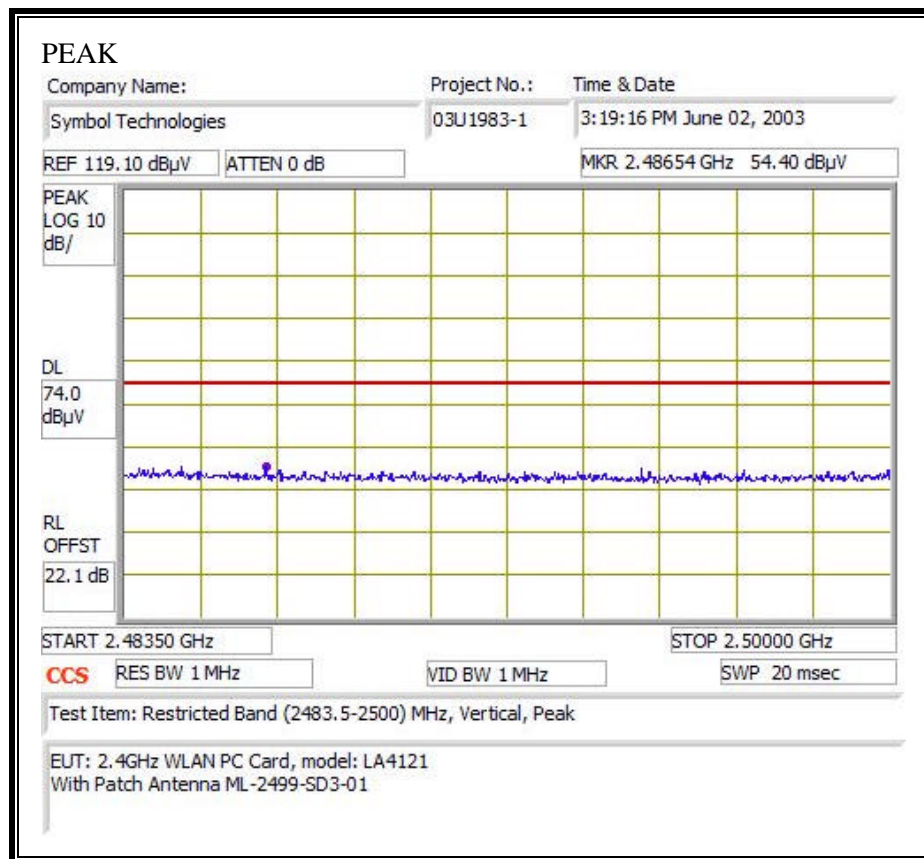


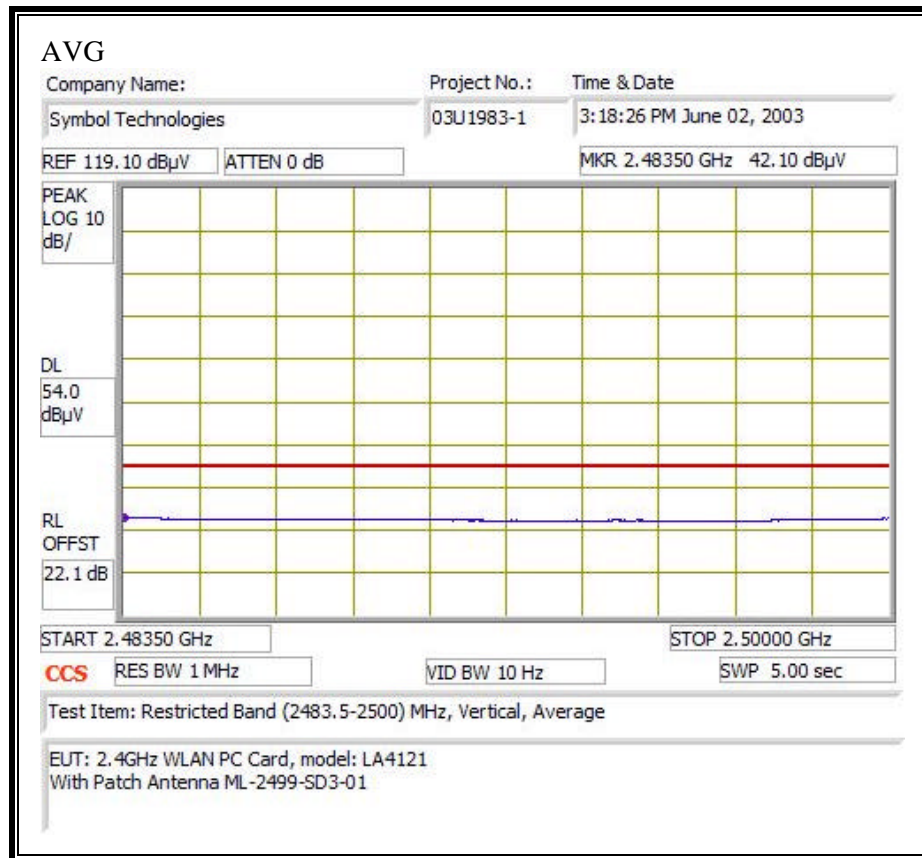
**ADJACENT RESTRICTED BAND (HIGH CHANNEL, HORIZONTAL)**





**ADJACENT RESTRICTED BAND (HIGH CHANNEL, VERTICAL)**





## HARMONICS AND SPURIOUS EMISSIONS

06/05/03 <b>High Frequency Measurement</b> <b>Compliance Certification Services, Morgan Hill Open Field Site</b>															
<b>Test Engr:</b>		Frank Ibrahim													
<b>Project #:</b>		03U1983													
<b>Company:</b>		Symbol													
<b>EUT Descrip.:</b>		802.11b													
<b>EUT M/N:</b>		LA4121													
<b>Test Target:</b>		FCC 15.247													
<b>Mode Oper:</b>		Transmit													
<b>Test Equipment:</b>															
EMCO Horn 1-18GHz T60; S/N: 2238 @3m				Pre-amplifier 1-26GHz T87 Miteq 924342				Spectrum Analyzer HP 8566B Analyzer				Horn > 18GHz T117; ARA 18-26GHz; S/N:1013			
<div>             Hi Frequency Cables  <input type="checkbox"/> (2 ft)    <input checked="" type="checkbox"/> (2 ~ 3 ft)    <input type="checkbox"/> (4 ~ 6 ft)    <input checked="" type="checkbox"/> (12 ft)           </div> <div> <b>Peak Measurements:</b>              1 MHz Resolution Bandwidth              1MHz Video Bandwidth           </div> <div> <b>Average Measurements:</b>              1 MHz Resolution Bandwidth              10Hz Video Bandwidth           </div>															
f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
<b>Channel 1 (2412MHz)</b>															
4.924	9.8	54.6	42.9	33.2	4.5	-44.8	0.0	1.0	48.4	36.7	74.0	54.0	-25.6	-17.3	V
4.924	9.8	50.7	38.8	33.2	4.5	-44.8	0.0	1.0	44.5	32.6	74.0	54.0	-29.5	-21.4	H
<b>Channel 6 (2437MHz)</b>															
4.874	9.8	52.7	41.0	33.1	4.4	-44.7	0.0	1.0	46.5	34.8	74.0	54.0	-27.5	-19.2	V
4.874	9.8	50.0	38.4	33.1	4.4	-44.7	0.0	1.0	43.8	32.2	74.0	54.0	-30.2	-21.8	H
<b>Channel 11 (2462MHz)</b>															
4.824	9.8	51.5	40.0	33.1	4.4	-44.7	0.0	1.0	45.3	33.8	74.0	54.0	-28.7	-20.2	V
4.824	9.8	47.3	35.3	33.1	4.4	-44.7	0.0	1.0	41.1	29.1	74.0	54.0	-32.9	-24.9	H
<div>             f      Measurement Frequency              Dist    Distance to Antenna              Read    Analyzer Reading              AF      Antenna Factor              CL      Cable Loss           </div> <div>             Amp    Preamp Gain              D Corr    Distance Correct to 3 meters              Avg      Average Field Strength @ 3 m              Peak     Calculated Peak Field Strength              HPF      High Pass Filter           </div> <div>             Avg Lim    Average Field Strength Limit              Pk Lim     Peak Field Strength Limit              Avg Mar    Margin vs. Average Limit              Pk Mar     Margin vs. Peak Limit           </div>															

Note: no other harmonics or spurious detected above 1 GHz.

## 7.6. DIPOLE ANTENNA RESULTS

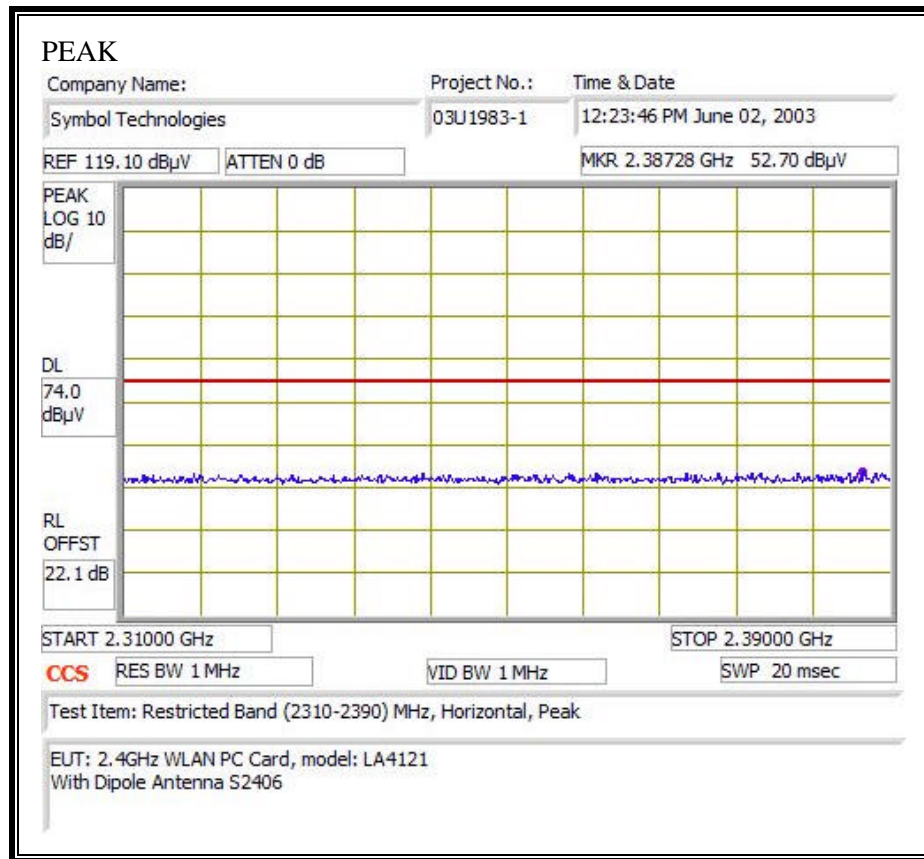
### SETUP PHOTOS

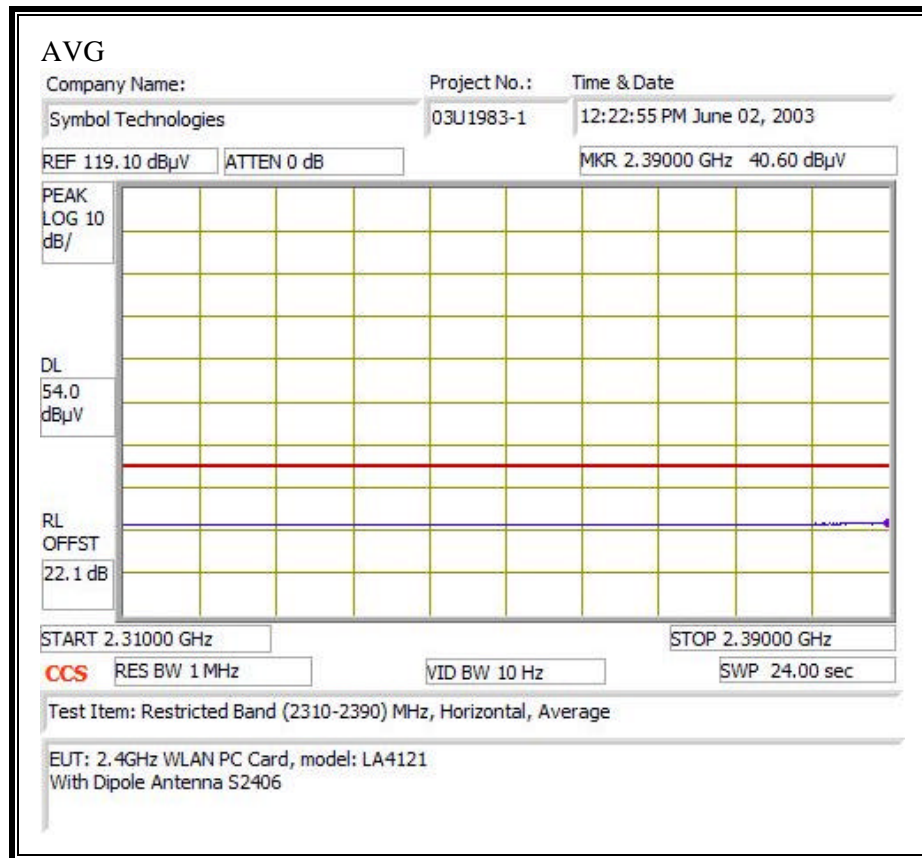


RADIATED BACK PHOTO

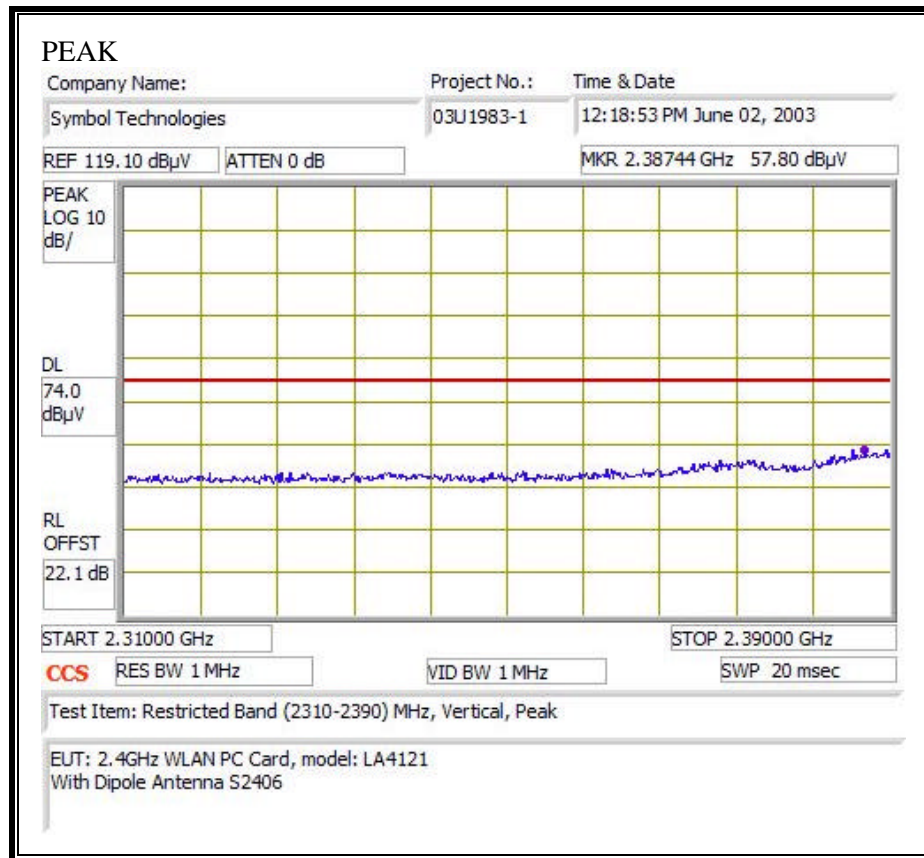


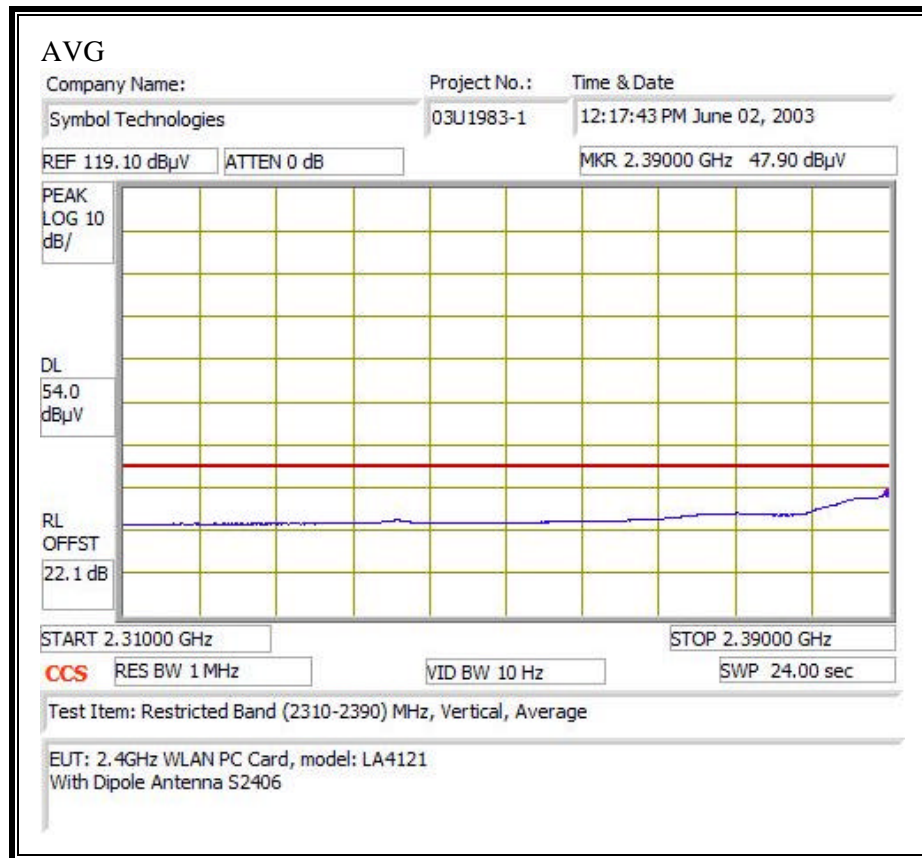
**ADJACENT RESTRICTED BAND (LOW CHANNEL, HORIZONTAL)**



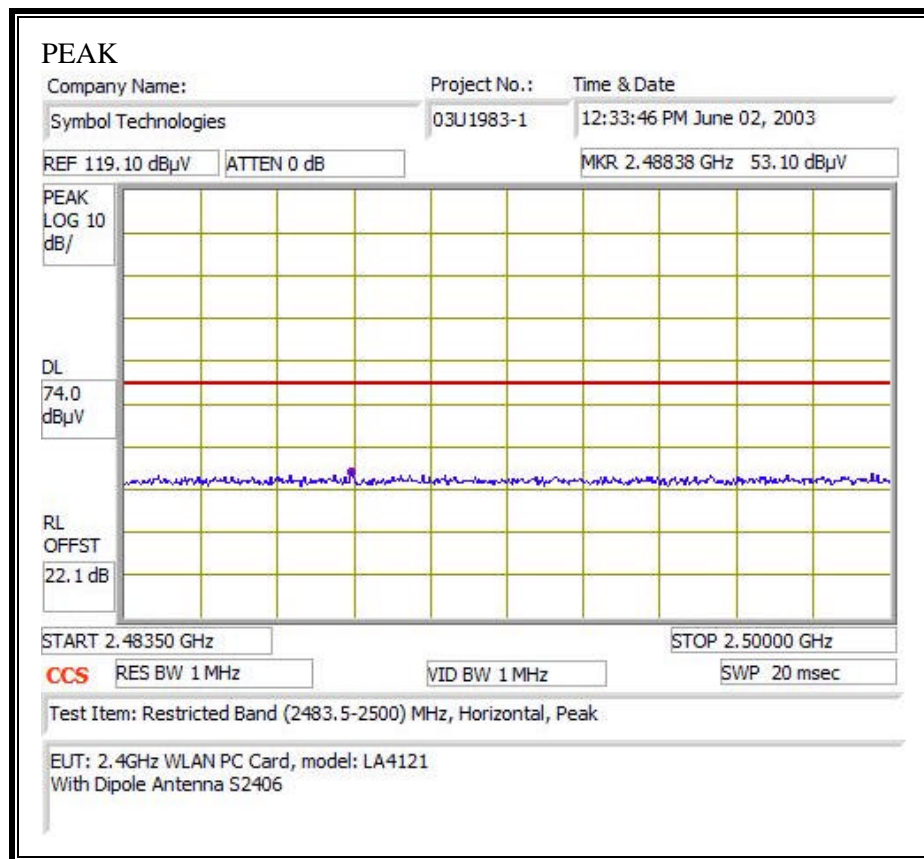


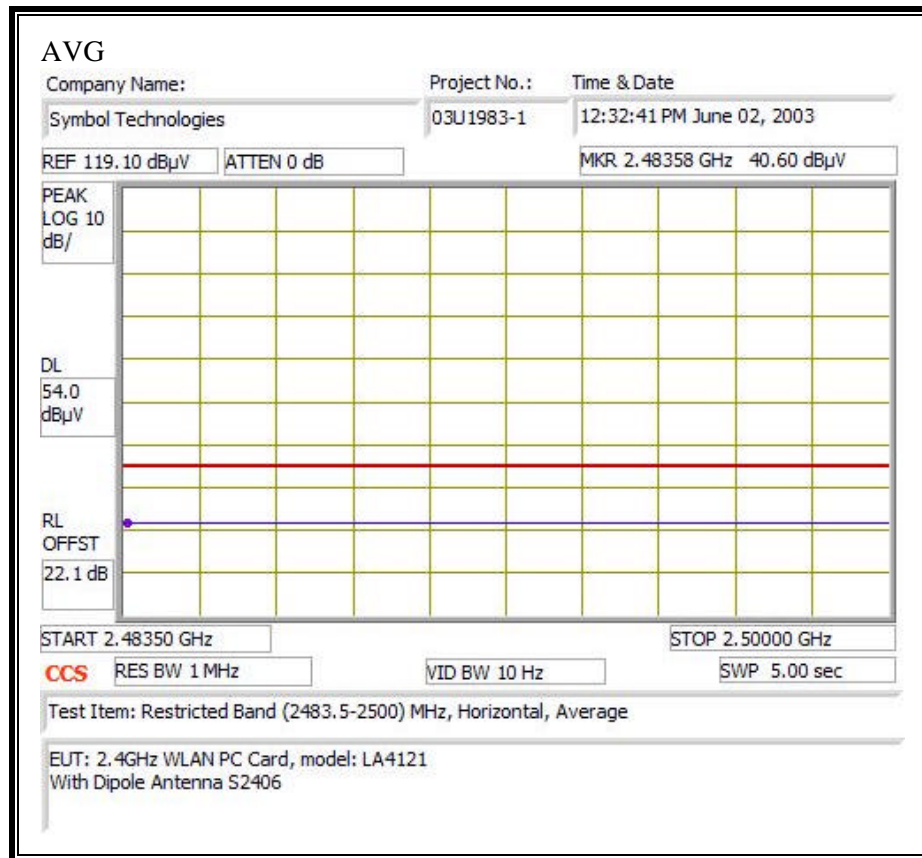
**ADJACENT RESTRICTED BAND (LOW CHANNEL, VERTICAL)**



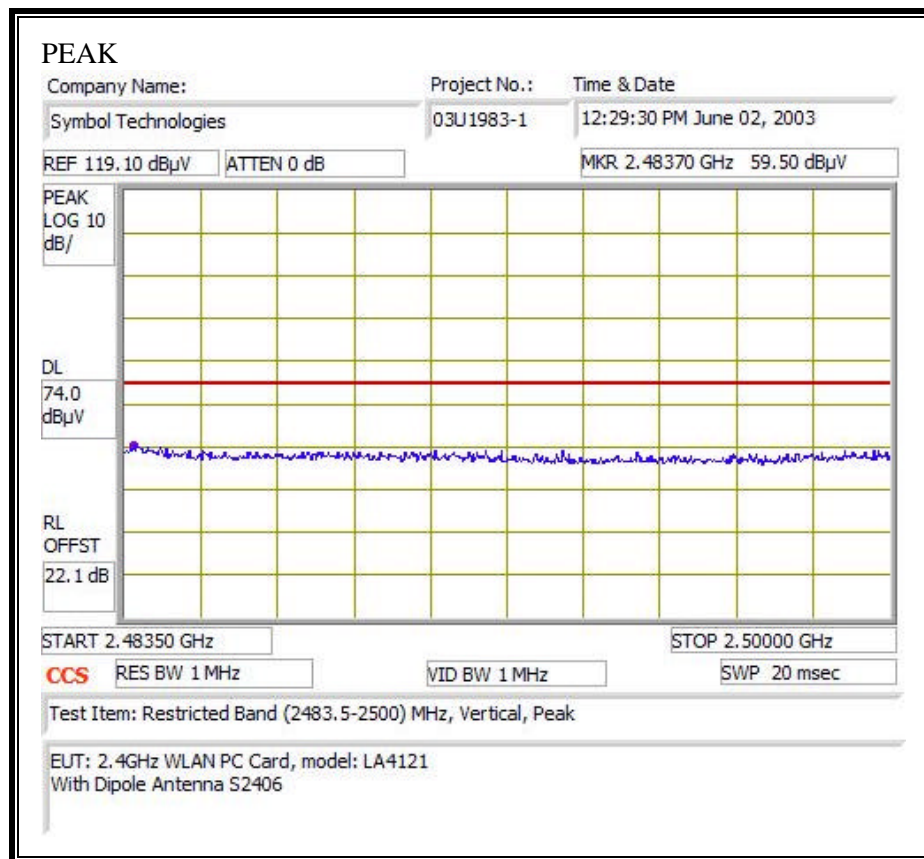


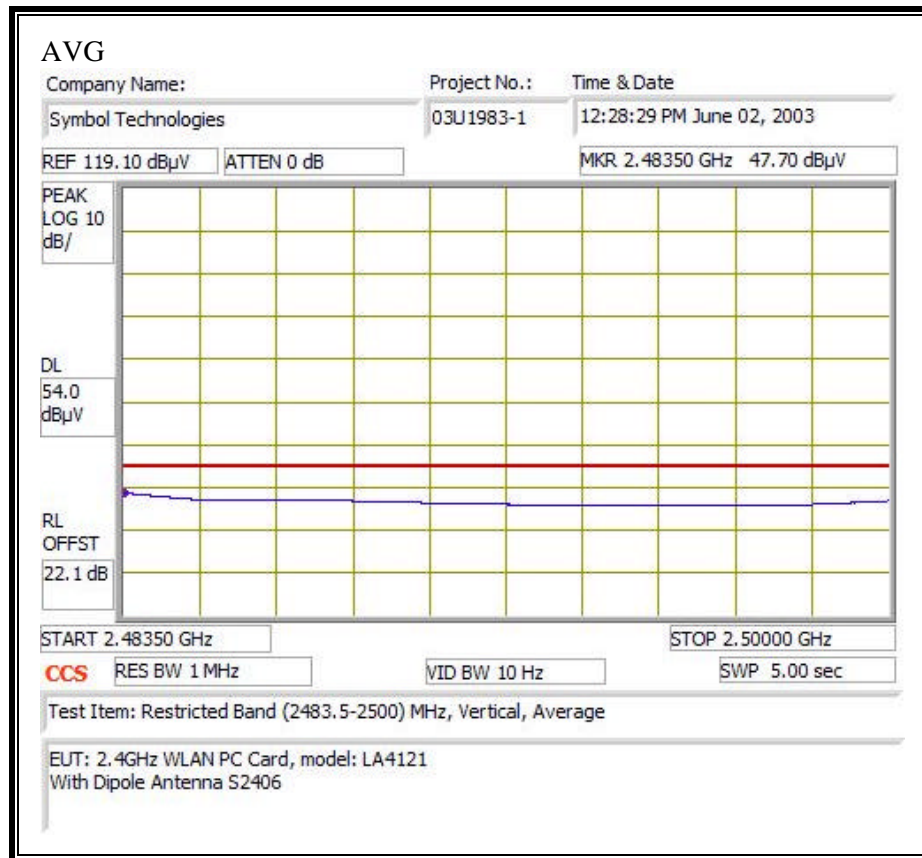
**ADJACENT RESTRICTED BAND (HIGH CHANNEL, HORIZONTAL)**





**ADJACENT RESTRICTED BAND (HIGH CHANNEL, VERTICAL)**






## HARMONICS AND SPURIOUS EMISSIONS

06/05/03 <b>High Frequency Measurement</b> <b>Compliance Certification Services, Morgan Hill Open Field Site</b>															
<b>Test Engr:</b>		Frank Ibrahim													
<b>Project #:</b>		03U1983													
<b>Company:</b>		Symbol													
<b>EUT Descrip.:</b>		802.11b													
<b>EUT M/N:</b>		LA4121													
<b>Test Target:</b>		FCC 15.247													
<b>Mode Oper:</b>		Transmit													
<b>Test Equipment:</b>															
EMCO Horn 1-18GHz				Pre-amplifier 1-26GHz				Spectrum Analyzer				Horn > 18GHz			
T60; S/N: 2238 @3m				T87 Miteq 924342				HP 8566B Analyzer				T117; ARA 18-26GHz; S/N:1013			
<div>             Hi Frequency Cables:             <input type="checkbox"/> (2 ft)             <input checked="" type="checkbox"/> (2 ~ 3 ft)             <input type="checkbox"/> (4 ~ 6 ft)             <input checked="" type="checkbox"/> (12 ft) </div> <div> <b>Peak Measurements:</b>              1 MHz Resolution Bandwidth              1MHz Video Bandwidth           </div> <div> <b>Average Measurements:</b>              1 MHz Resolution Bandwidth              10Hz Video Bandwidth           </div>															
f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
<b>Channel 11 (2462MHz)</b>															
4.924	9.8	54.8	42.8	33.2	4.5	-44.8	0.0	1.0	48.6	36.6	74.0	54.0	-25.4	-17.4	V
4.924	9.8	49.0	36.8	33.2	4.5	-44.8	0.0	1.0	42.8	30.6	74.0	54.0	-31.2	-23.4	H
<b>Channel 6 (2437MHz)</b>															
4.874	9.8	52.5	40.9	33.1	4.4	-44.7	0.0	1.0	46.3	34.7	74.0	54.0	-27.7	-19.3	V
4.874	9.8	51.0	38.7	33.1	4.4	-44.7	0.0	1.0	44.8	32.5	74.0	54.0	-29.2	-21.5	H
<b>Channel 1 (2412MHz)</b>															
4.824	9.8	57.2	45.5	33.1	4.4	-44.7	0.0	1.0	51.0	39.3	74.0	54.0	-23.0	-14.7	V
4.824	9.8	51.6	39.7	33.1	4.4	-44.7	0.0	1.0	45.4	33.5	74.0	54.0	-28.6	-20.5	H
<div>             f      Measurement Frequency              Dist   Distance to Antenna              Read   Analyzer Reading              AF      Antenna Factor              CL      Cable Loss           </div> <div>             Amp    Preamp Gain              D Corr   Distance Correct to 3 meters              Avg      Average Field Strength @ 3 m              Peak     Calculated Peak Field Strength              HPF      High Pass Filter           </div> <div>             Avg Lim   Average Field Strength Limit              Pk Lim     Peak Field Strength Limit              Avg Mar   Margin vs. Average Limit              Pk Mar     Margin vs. Peak Limit           </div>															

## 7.7. WORST-CASE EMISSIONS 30 TO 1000 MHz

### RESULTS

						<p><i>Project #:</i> 03u1983-1</p> <p><i>Report #:</i> 030605B1</p> <p><i>Date &amp; Time:</i> 06/05/03 5:15 PM</p> <p><i>Test Engr:</i> Chin pang</p>					
<p>FCC, VCCI, CISPR, CE, AUSTEL, NZ UL, CSA, TUV, BSMI, DHHS, NVLAP</p> <p>561F MONTEREY ROAD, SAN JOSE, CA 95037-9001 PHONE: (408) 463-0885 FAX: (408) 463-0888</p>											
<p><i>Company:</i> Symbol</p> <p><i>EUT Description:</i> LA4121 with Yagi Antenna</p> <p><i>Test Configuration:</i> EUT/Laptop/Yagi Antenna</p> <p><i>Type of Test:</i> FCC Class B</p> <p><i>Mode of Operation:</i> Tx</p>											
<a href="#" style="background-color: #e0f0ff; padding: 2px 10px; text-decoration: none;">&lt;&lt; Main Sheet</a>											

Freq.	Reading	AF	Closs	Pre-amp	Level	Limit	Margin	Pol	Az	Height	Mark
(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	FCC_B	(dB)	(H/V)	(Deg)	(Meter)	(P/Q/A)
573.70	46.80	18.56	6.05	28.90	42.50	46.00	-3.50	3mV	0.00	1.50	P
395.20	50.20	15.29	4.92	28.50	41.91	46.00	-4.09	3mH	0.00	1.50	P
485.60	47.30	17.45	5.53	28.79	41.49	46.00	-4.51	3mV	0.00	1.20	P
573.70	45.50	18.56	6.05	28.90	41.20	46.00	-4.80	3mH	0.00	2.00	P
801.60	42.40	19.75	7.32	28.51	40.96	46.00	-5.04	3mV	0.00	1.00	P
503.30	45.70	17.82	5.65	28.83	40.34	46.00	-5.66	3mV	0.00	1.00	P
6 Worst Data											

**END OF REPORT**