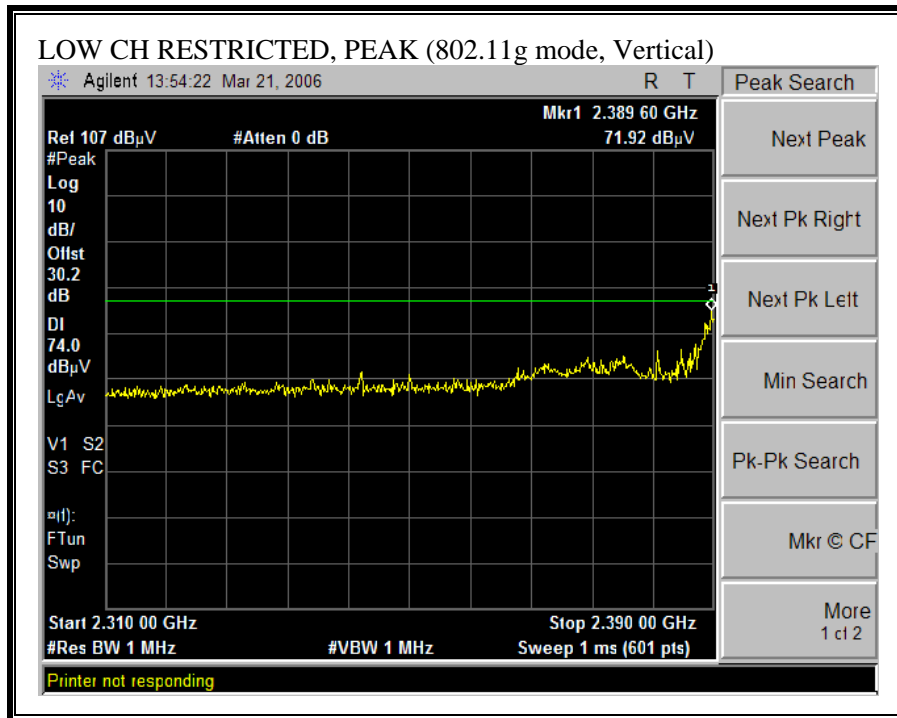
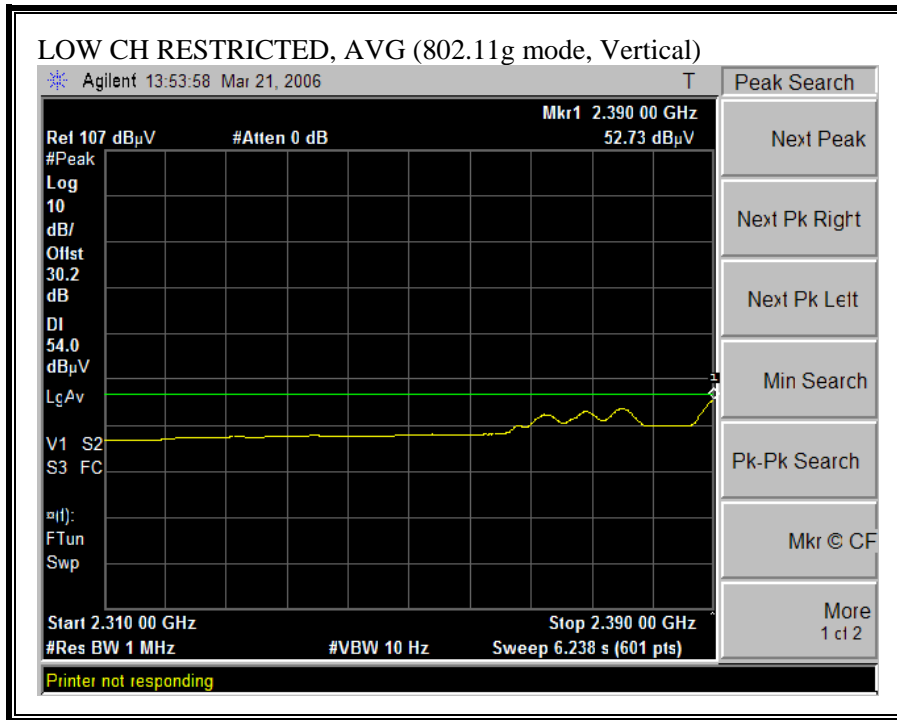
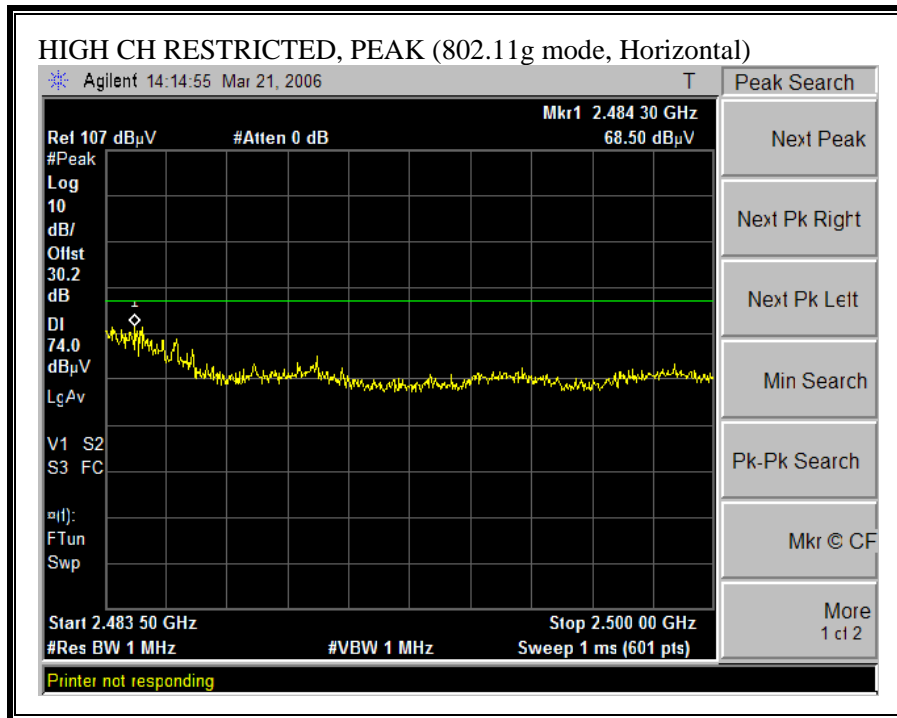


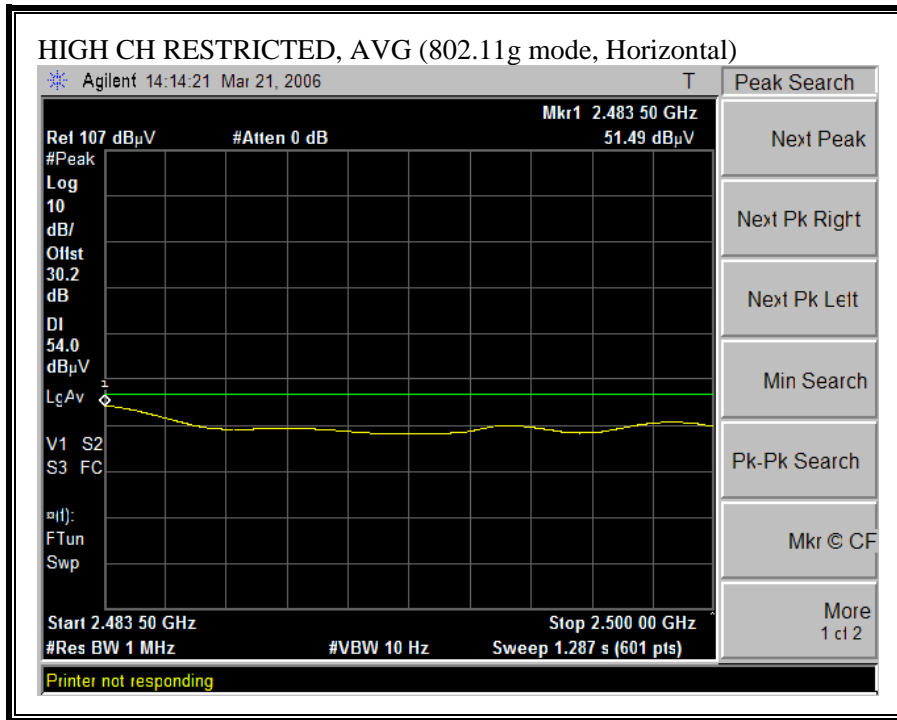
**RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)**



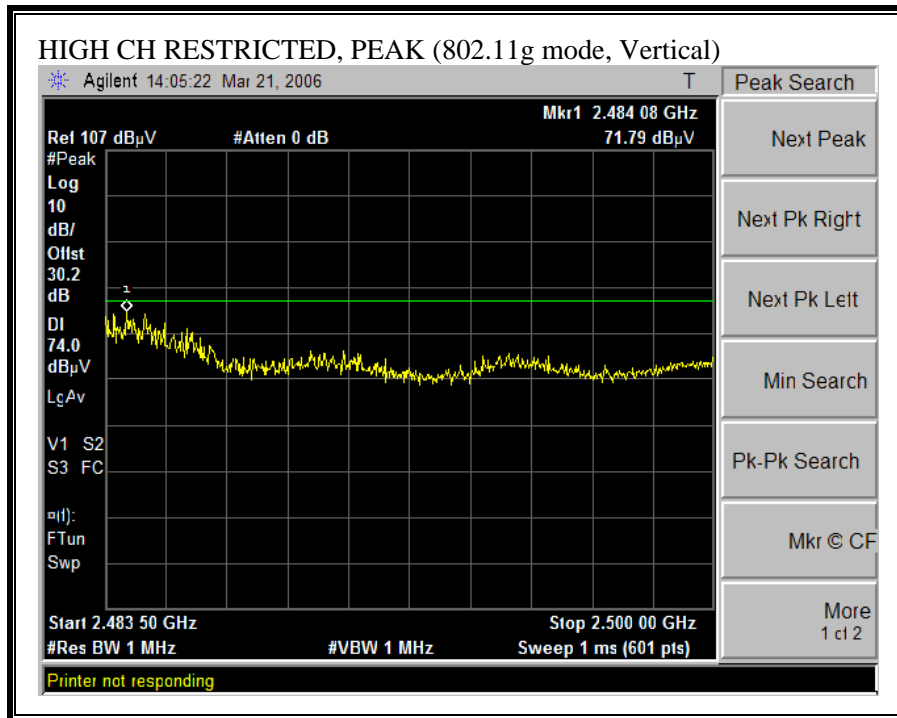


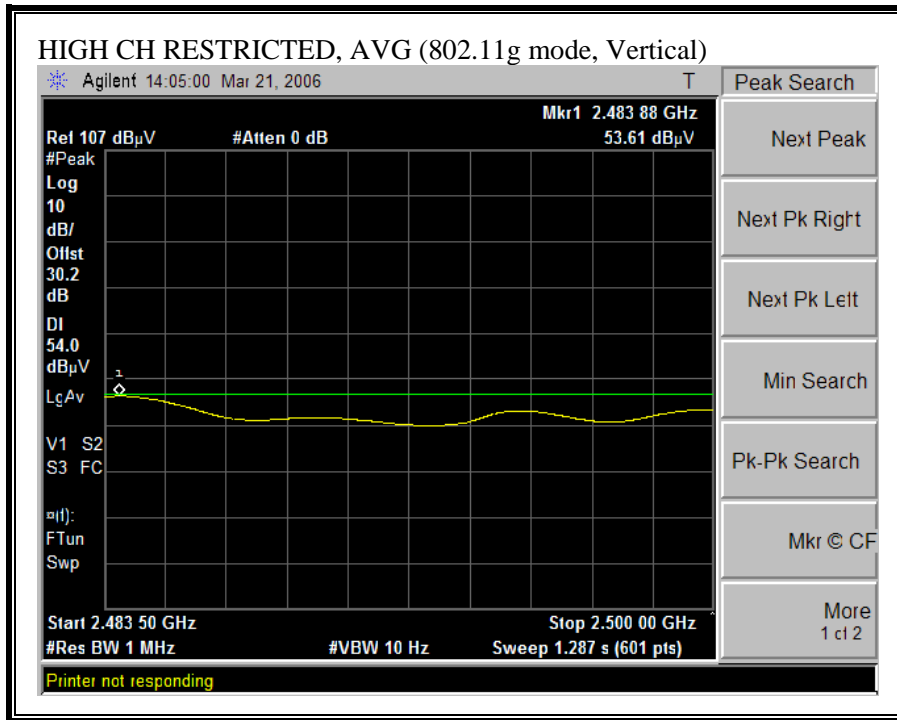
**RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)**





**RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)**





**HARMONICS AND SPURIOUS EMISSIONS (g MODE)**

03/21/06 **High Frequency Measurement**  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engineer:Chin Pang  
 Project #:06U10183  
 Company:Atheros  
 EUT Description:802.11n MIMO Cardbus  
 EUT M/N:CB71  
 Test Target:FCC 15.247  
 Mode Of Operation:TX, g mode  
 Average Power Meter: Low = 17 dBm, Mid = 20.7dBm, High = 18.2dBm

**Test Equipment:**

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T87 Miteq 924342			FCC 15.205

Hi Frequency Cables

2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz
	Chin 197538001	Chin 200354001		R_001	Average Measurements RBW=1MHz ; VBW=10Hz

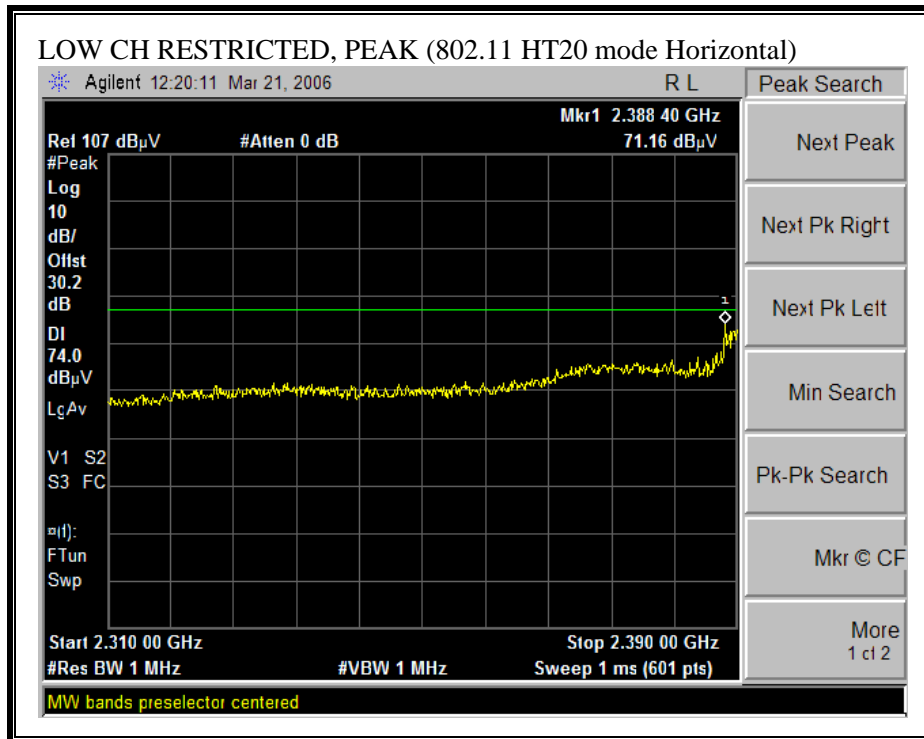
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
<b>Low Ch, 2412MHz</b>															
4.824	3.0	59.0	45.5	33.7	3.2	-45.3	0.0	0.0	50.6	37.1	74	54	-23.4	-16.9	V
4.842	3.0	53.2	42.0	33.7	3.2	-45.3	0.0	0.0	44.8	33.6	74	54	-29.2	-20.4	H
<b>Mid Ch, 2437MHz</b>															
4.874	3.0	63.0	51.2	33.8	3.2	-45.3	0.0	0.0	54.7	42.9	74	54	-19.3	-11.1	V
7.311	3.0	66.5	55.0	35.5	3.6	-43.2	0.0	0.0	62.4	50.9	74	54	-11.6	-3.1	V
4.874	3.0	56.0	43.2	33.8	3.2	-45.3	0.0	0.0	47.7	34.9	74	54	-26.3	-19.1	H
7.311	3.0	61.0	48.0	35.5	3.6	-43.2	0.0	0.0	56.9	43.9	74	54	-17.1	-10.1	H
<b>High Ch, 2462MHz</b>															
4.924	3.0	61.1	48.0	33.8	3.2	-45.4	0.0	0.0	52.8	39.7	74	54	-21.2	-14.3	V
7.386	3.0	64.3	52.0	35.6	3.6	-43.1	0.0	0.0	60.4	48.1	74	54	-13.6	-5.9	V
4.924	3.0	56.0	40.5	33.8	3.2	-45.4	0.0	0.0	47.7	32.2	74	54	-26.3	-21.8	H
7.386	3.0	62.0	49.0	35.6	3.6	-43.1	0.0	0.0	58.1	45.1	74	54	-15.9	-8.9	H

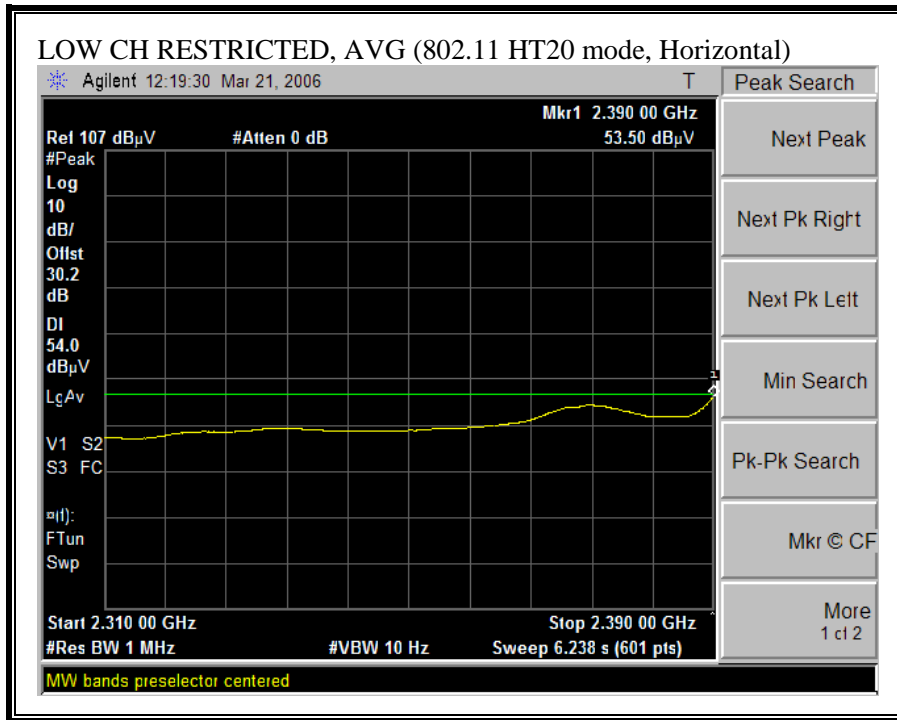
Note: No other emissions were detected above the system noise floor.

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		

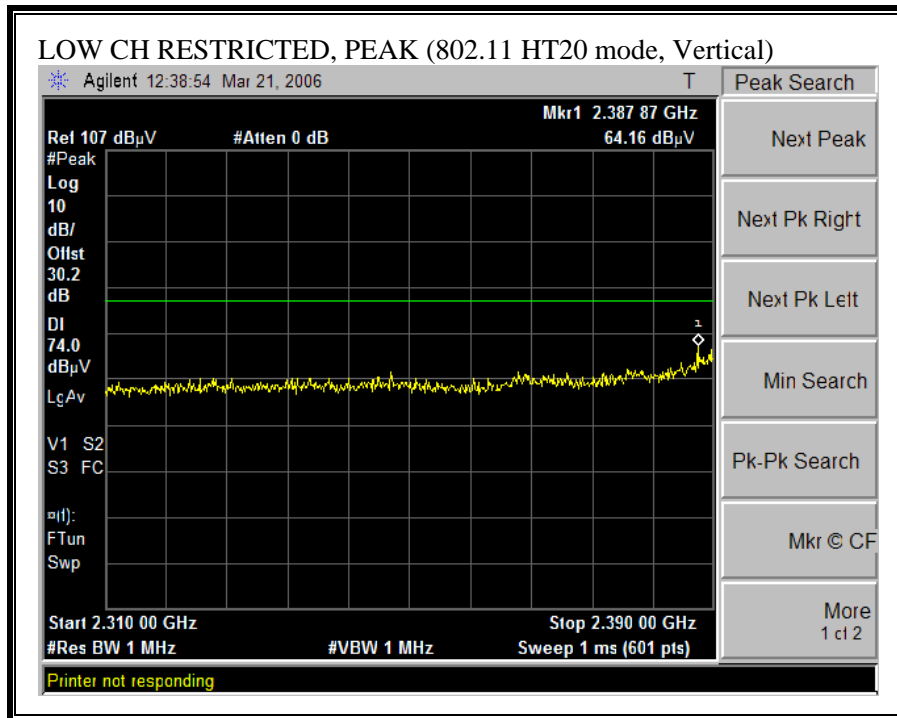


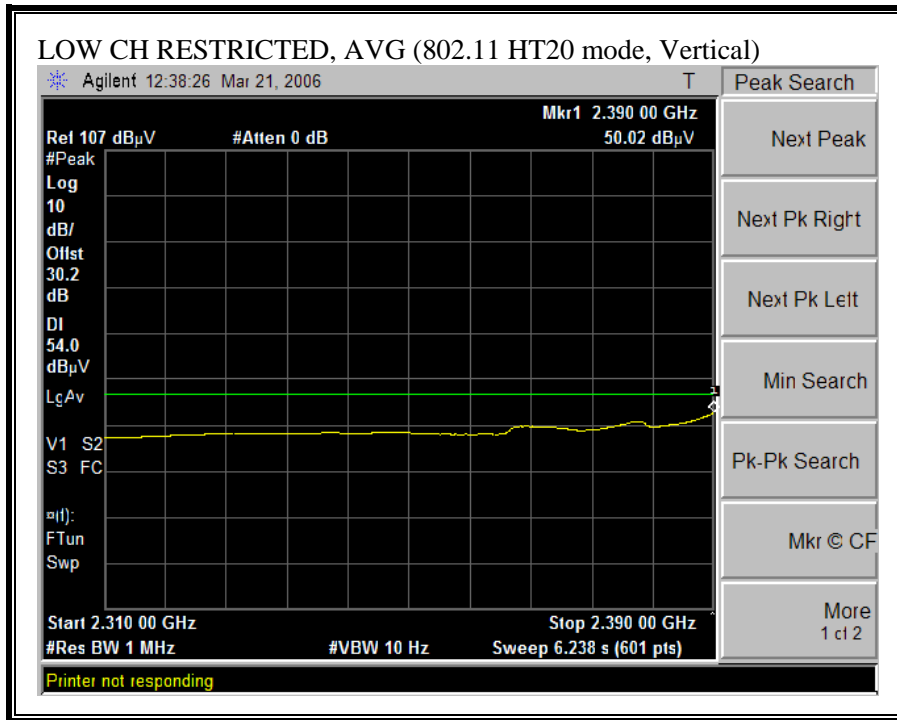
**RESTRICTED BANDEDGE 802.11 (HT20 MODE, LOW CHANNEL, HORIZONTAL)**



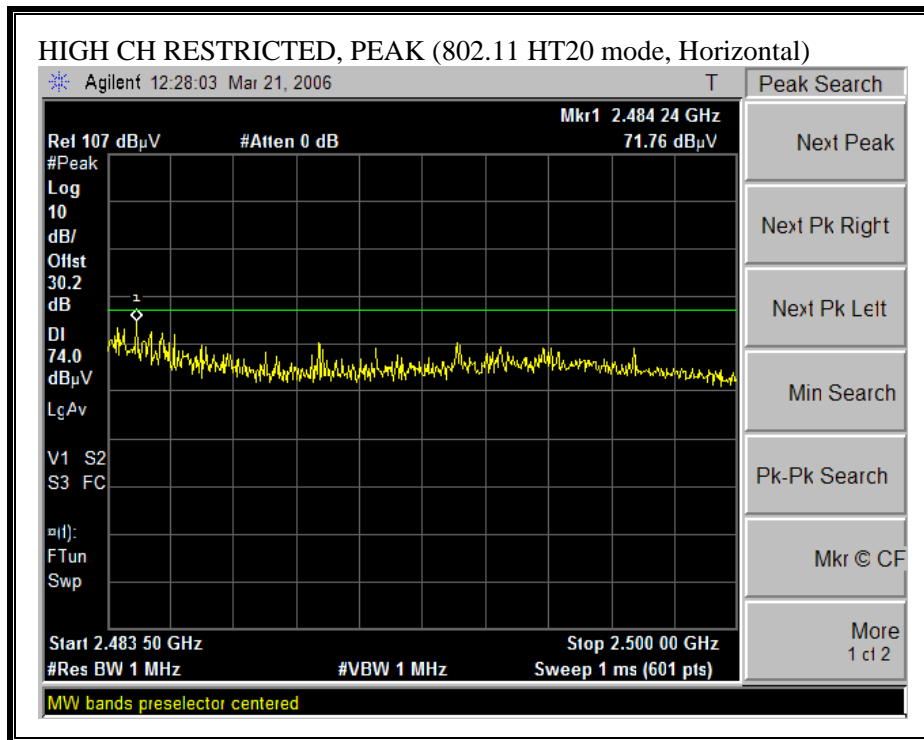


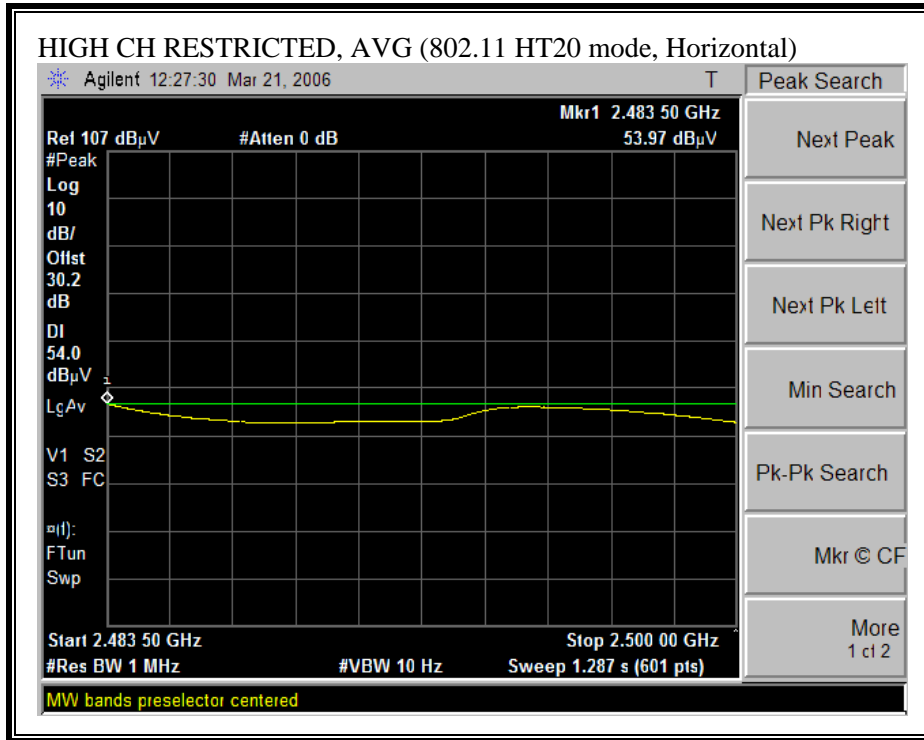
**RESTRICTED BANDEDGE (802.11 HT20 MODE, LOW CHANNEL, VERTICAL)**



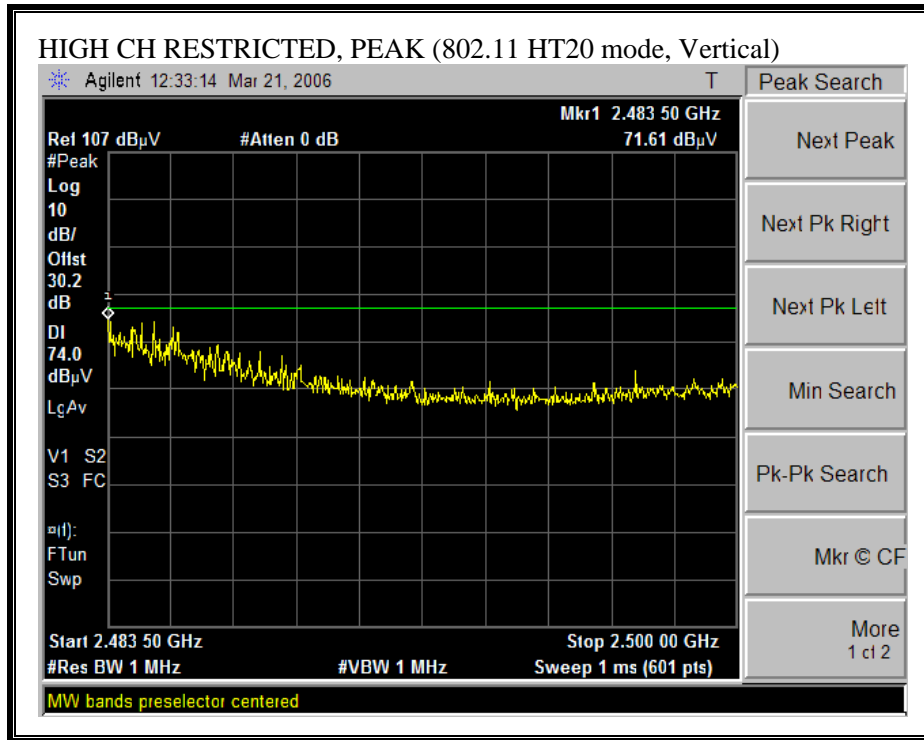


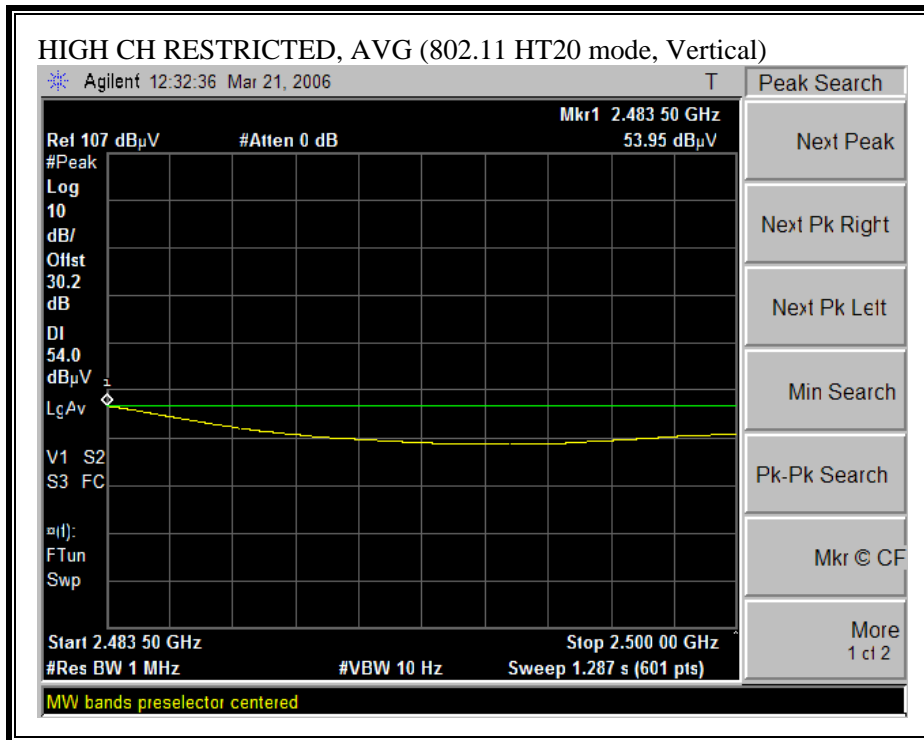
**RESTRICTED BANDEDGE (802.11 HT20 MODE, HIGH CHANNEL, HORIZONTAL)**





**RESTRICTED BANDEDGE (802.11 HT20 MODE, HIGH CHANNEL, VERTICAL)**







**HARMONICS AND SPURIOUS EMISSIONS ( HT20 MODE)**

03/21/06 **High Frequency Measurement**  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engineer:Chin Pang  
 Project #:06U10183  
 Company:Atheros  
 EUT Description:802.11n MIMO Cardbus  
 EUT M/N:CB71  
 Test Target:FCC 15.247  
 Mode Of Operation:TX, HT20  
 Average Power Meter: Low = 16.5 dBm, Mid = 20.8dBm, High = 17.8 dBm

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T87 Miteq 924342			FCC 15.205

Hi Frequency Cables

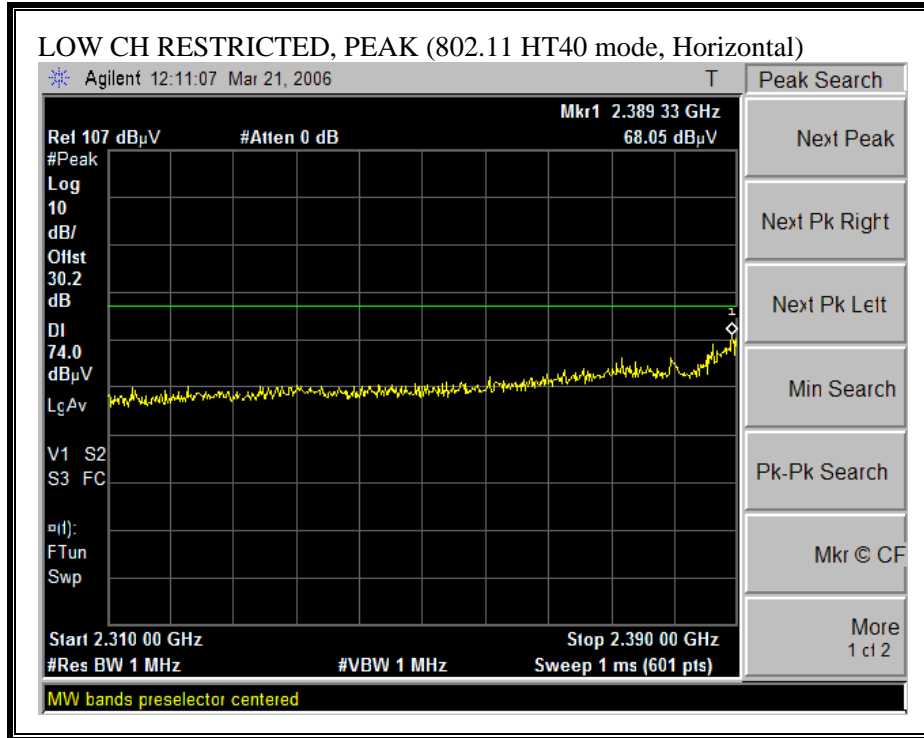
2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz
	Chin 197538001	Chin 200354001		R_001	Average Measurements RBW=1MHz ; VBW=10Hz

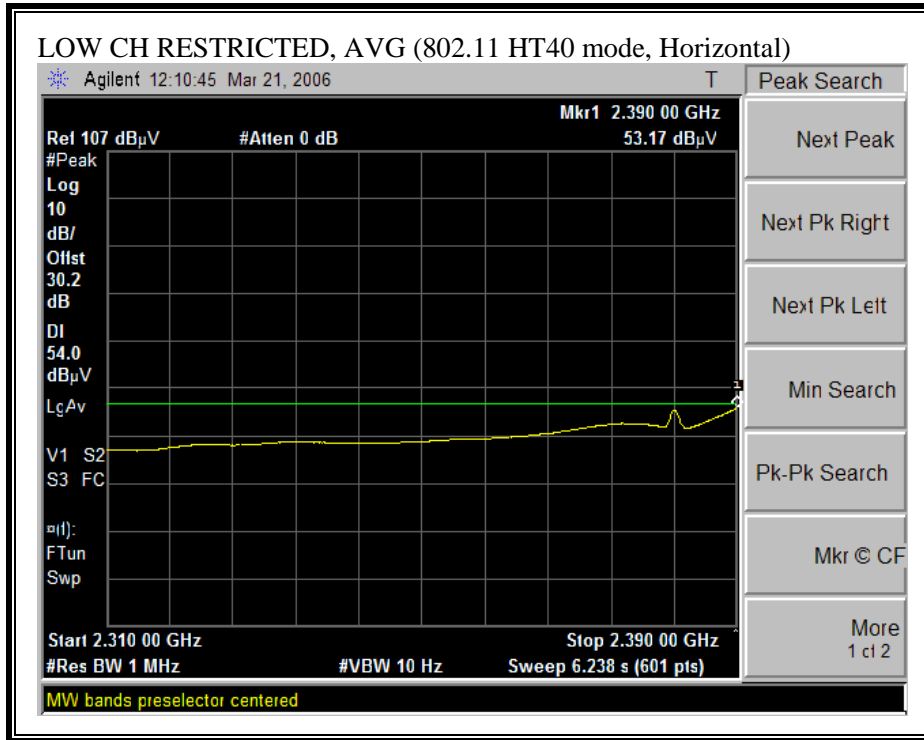
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fldr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
<b>Low Ch, 2412MHz</b>															
4.824	3.0	58.4	45.3	33.7	3.2	-45.3	0.0	0.0	50.0	36.9	74	54	-24.0	-17.1	V
4.824	3.0	55.0	42.0	33.7	3.2	-45.3	0.0	0.0	46.6	33.6	74	54	-27.4	-20.4	H
<b>Mid Ch, 2437MHz</b>															
4.874	3.0	61.0	47.3	33.8	3.2	-45.3	0.0	0.0	52.7	39.0	74	54	-21.3	-15.0	V
7.311	3.0	68.0	56.0	35.5	3.6	-43.2	0.0	0.0	63.9	51.9	74	54	-10.1	-2.1	V
4.874	3.0	54.0	45.0	33.8	3.2	-45.3	0.0	0.0	45.7	36.7	74	54	-28.3	-17.3	H
7.311	3.0	60.0	47.8	35.5	3.6	-43.2	0.0	0.0	55.9	43.7	74	54	-18.1	-10.3	H
<b>High Ch, 2462MHz</b>															
4.924	3.0	61.0	47.5	33.8	3.2	-45.4	0.0	0.0	52.7	39.2	74	54	-21.3	-14.8	V
7.386	3.0	60.7	48.0	35.6	3.6	-43.1	0.0	0.0	56.8	44.1	74	54	-17.2	-9.9	V
4.924	3.0	56.0	44.0	33.8	3.2	-45.4	0.0	0.0	47.7	35.7	74	54	-26.3	-18.3	H
7.386	3.0	62.6	48.5	35.6	3.6	-43.1	0.0	0.0	58.7	44.6	74	54	-15.3	-9.4	H

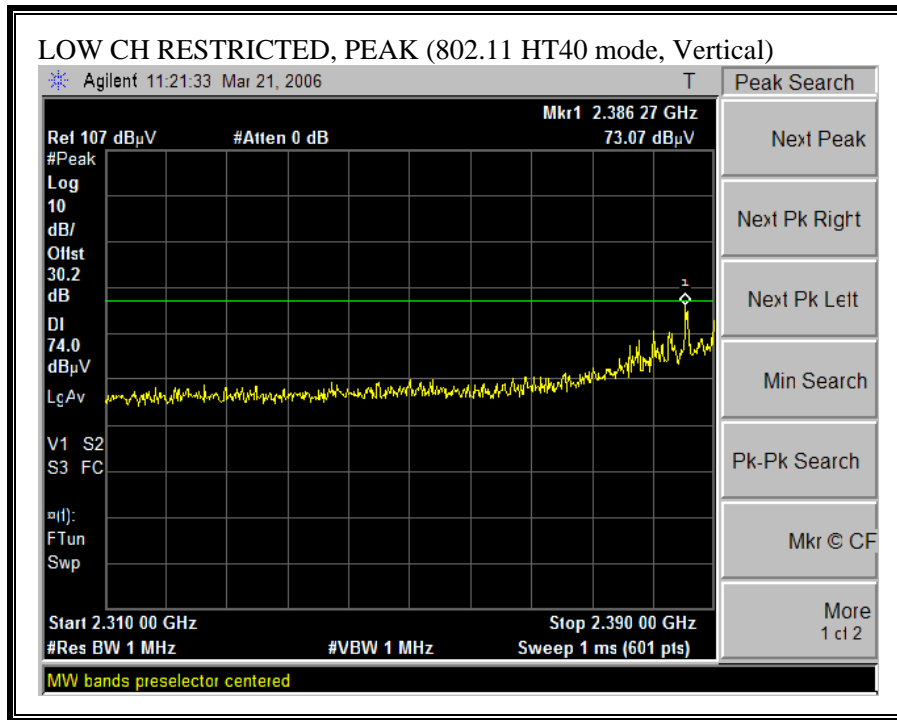
Note: No other emissions were detected above the system noise floor.

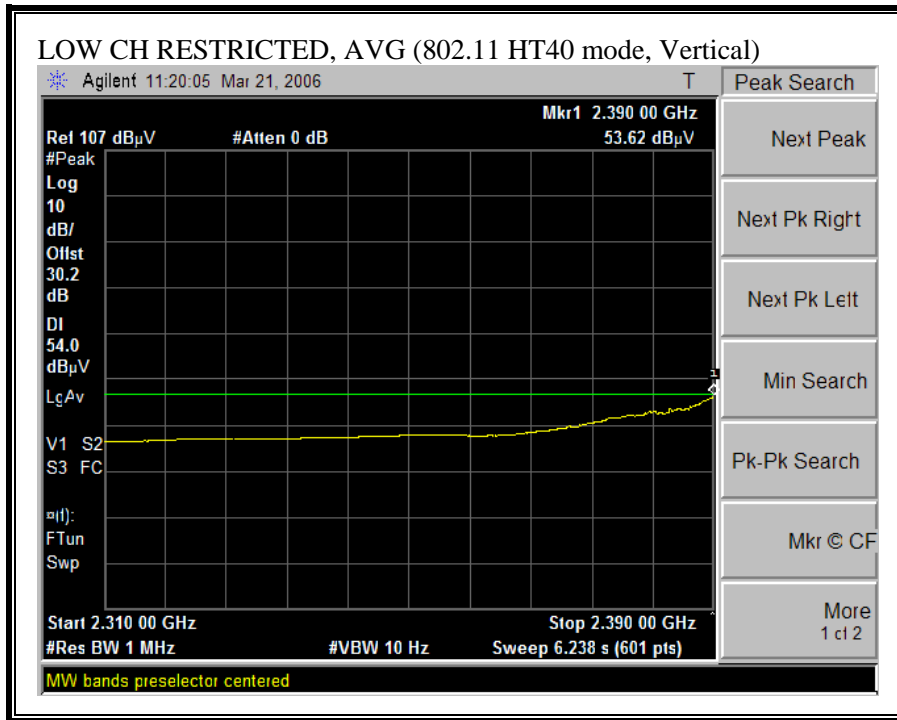
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

**LOW CH, 2422MHz RESTRICTED BANDEDGE (802.11 HT40 MODE, LOW CHANNEL, HORIZONTAL)**

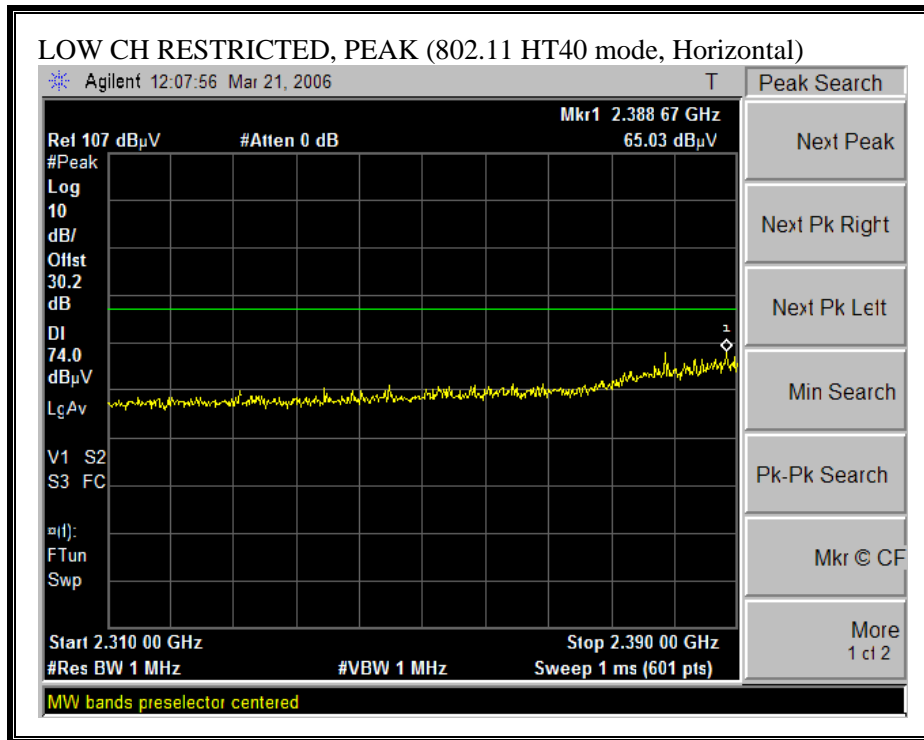


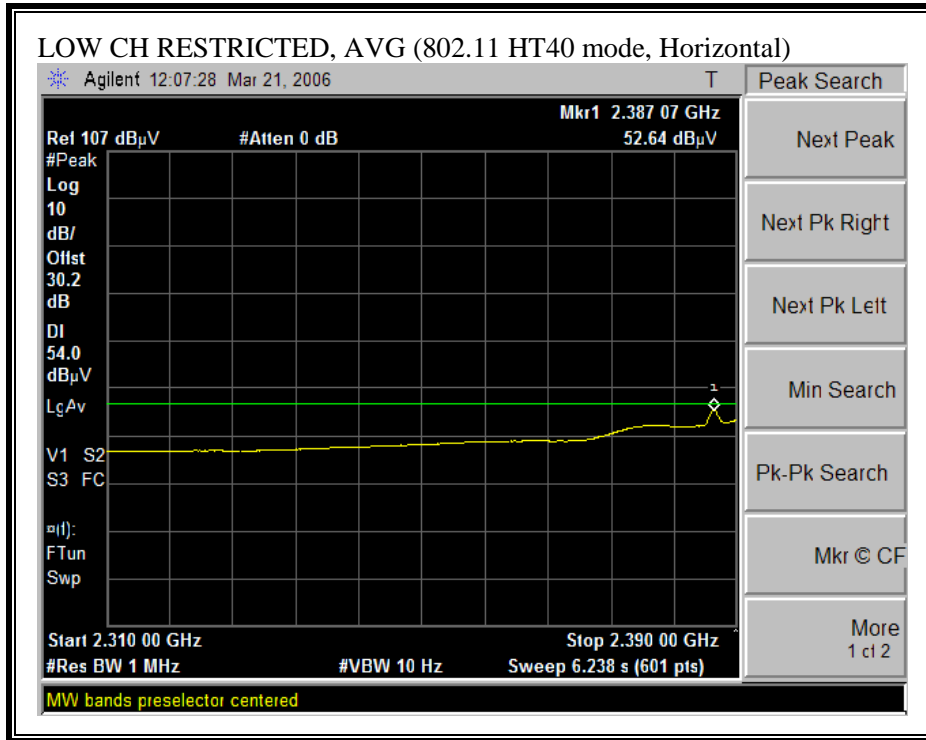


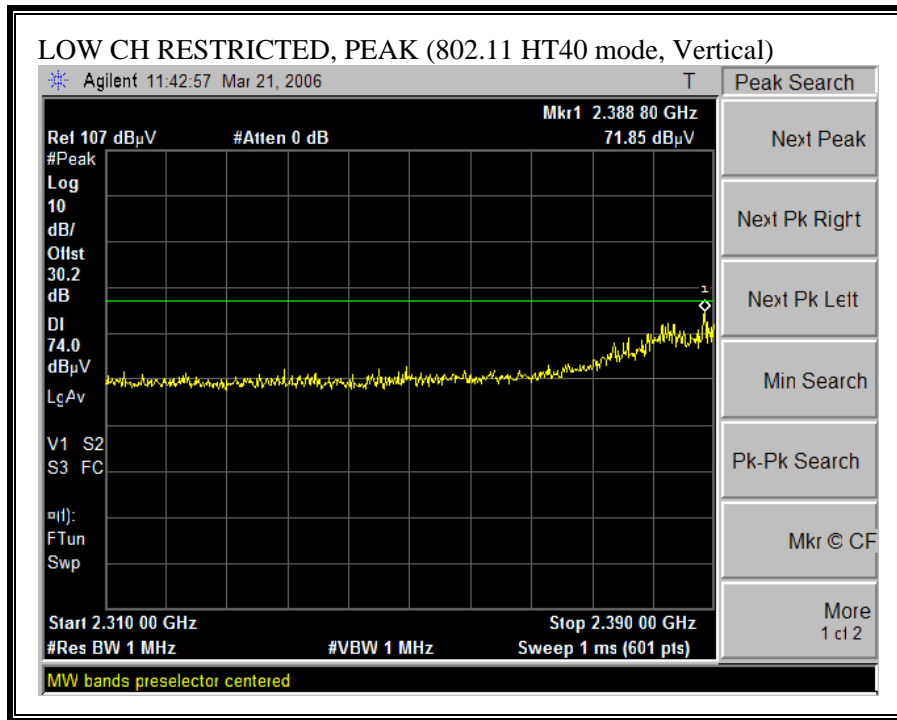




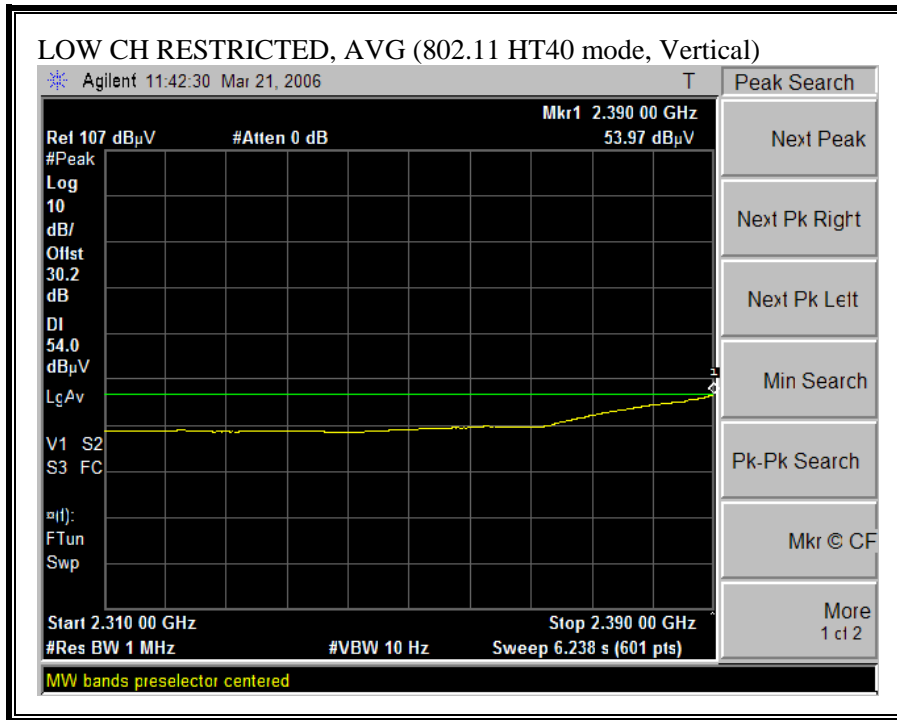
**SECOND LOW CH, 2427MHz RESTRICTED BANDEDGE (802.11 HT40 MODE, LOW CHANNEL, HORIZONTAL)**



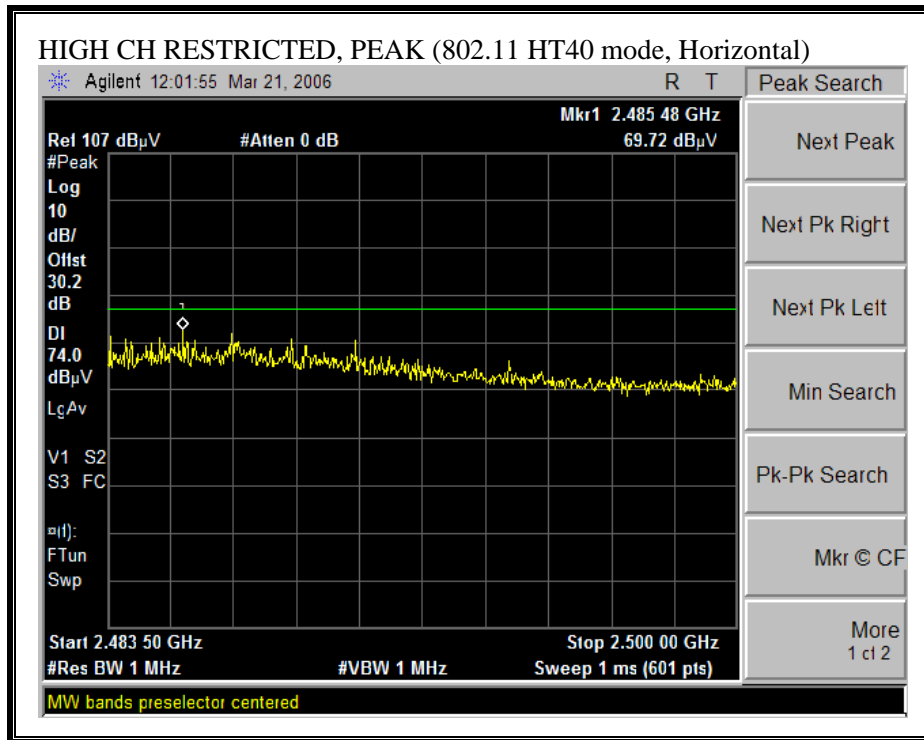


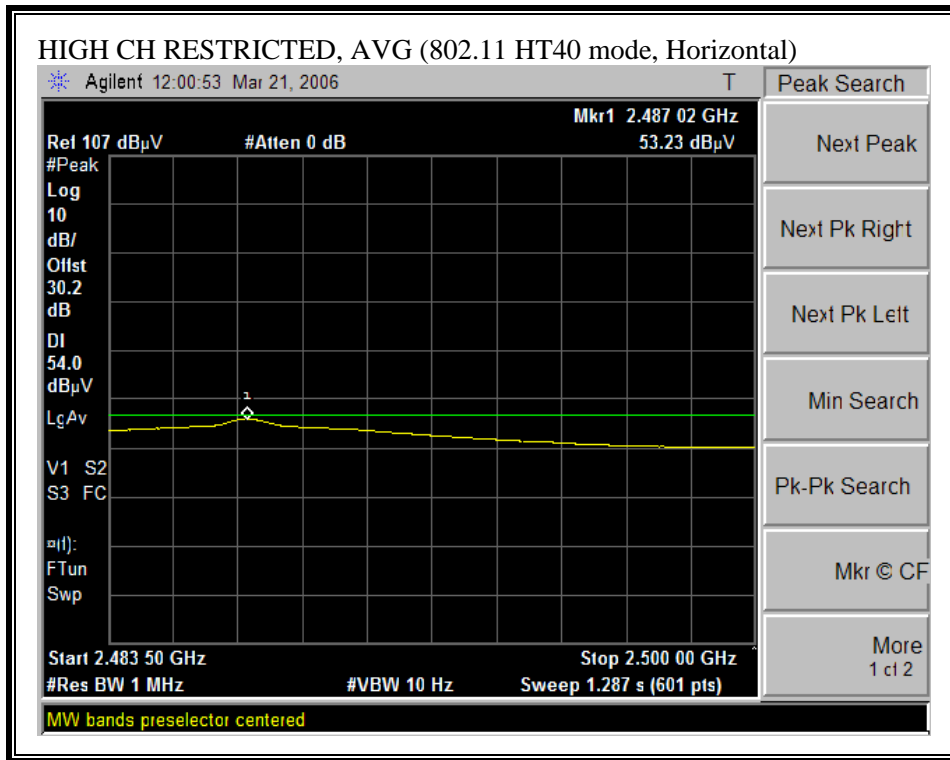




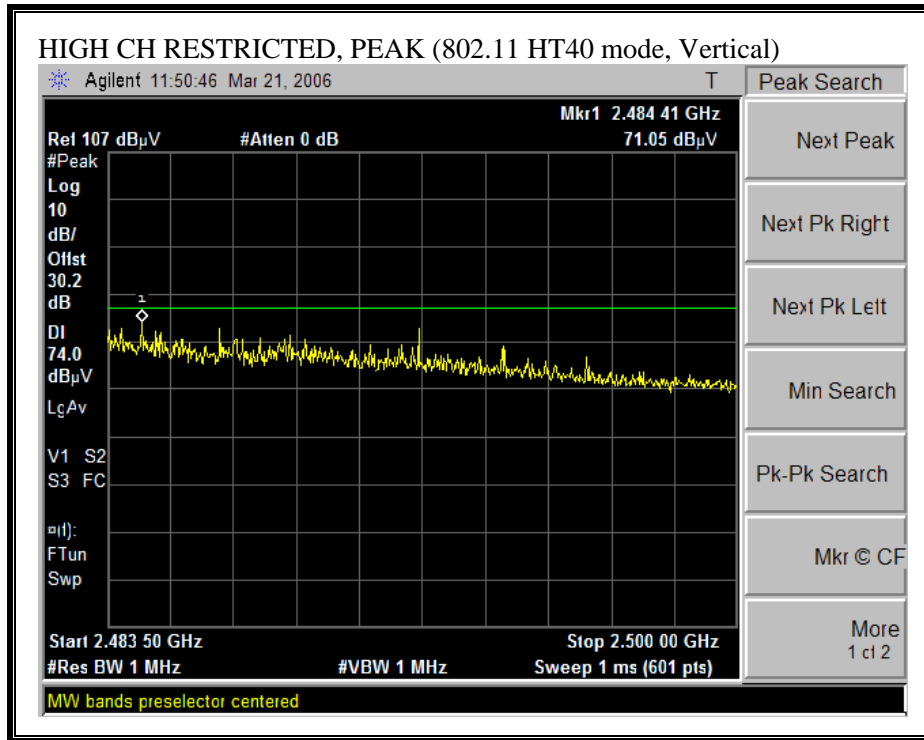


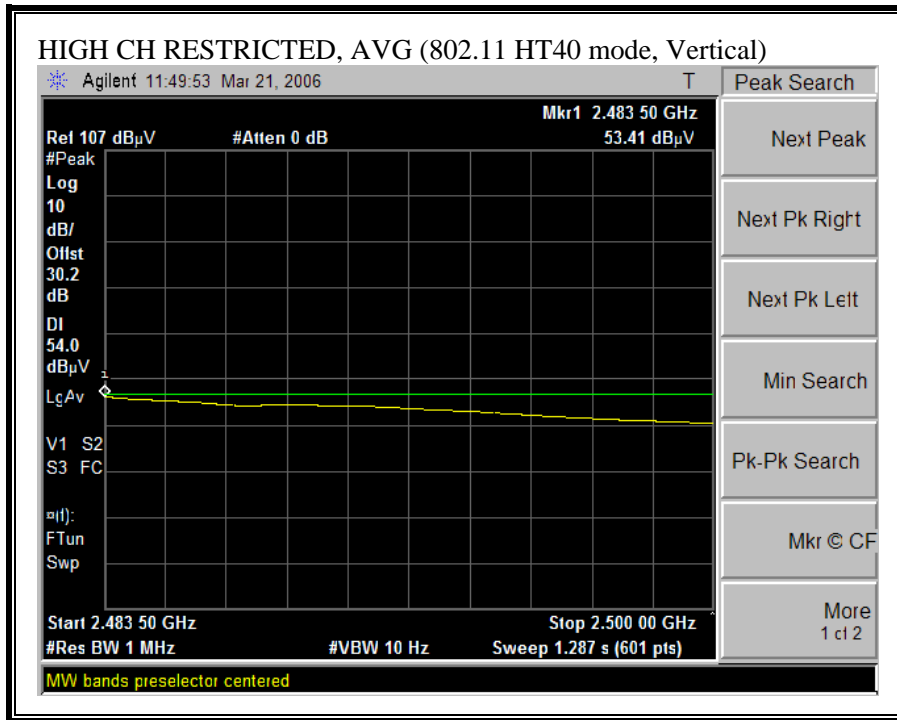
**SECOND HIGH CH, 2447MHz RESTRICTED BANDEDGE ( HT40 MODE, HIGH CHANNEL, Horizontal)**



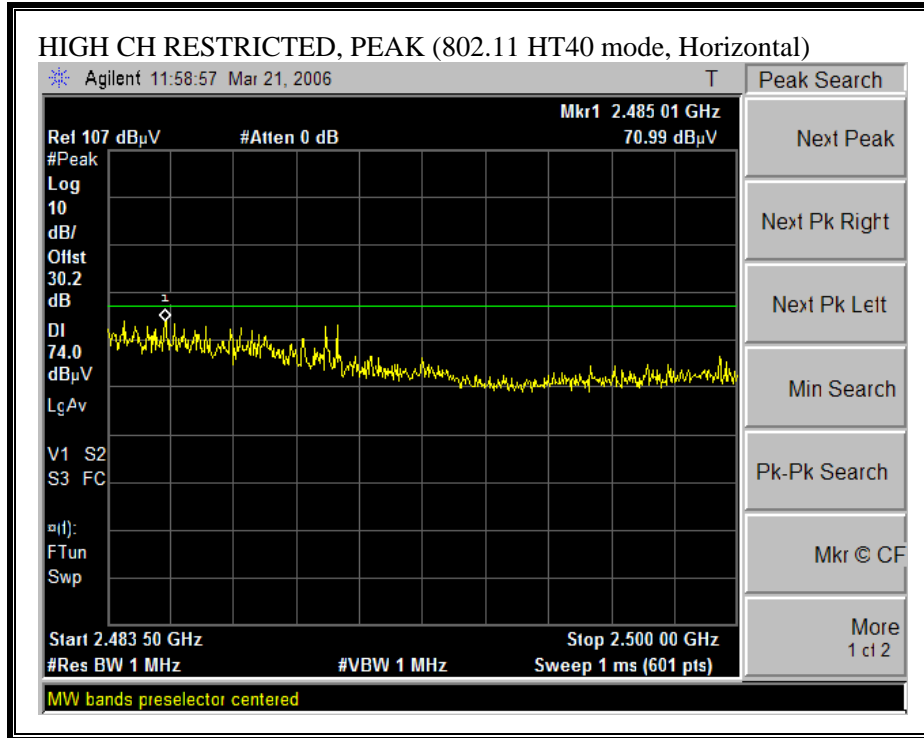


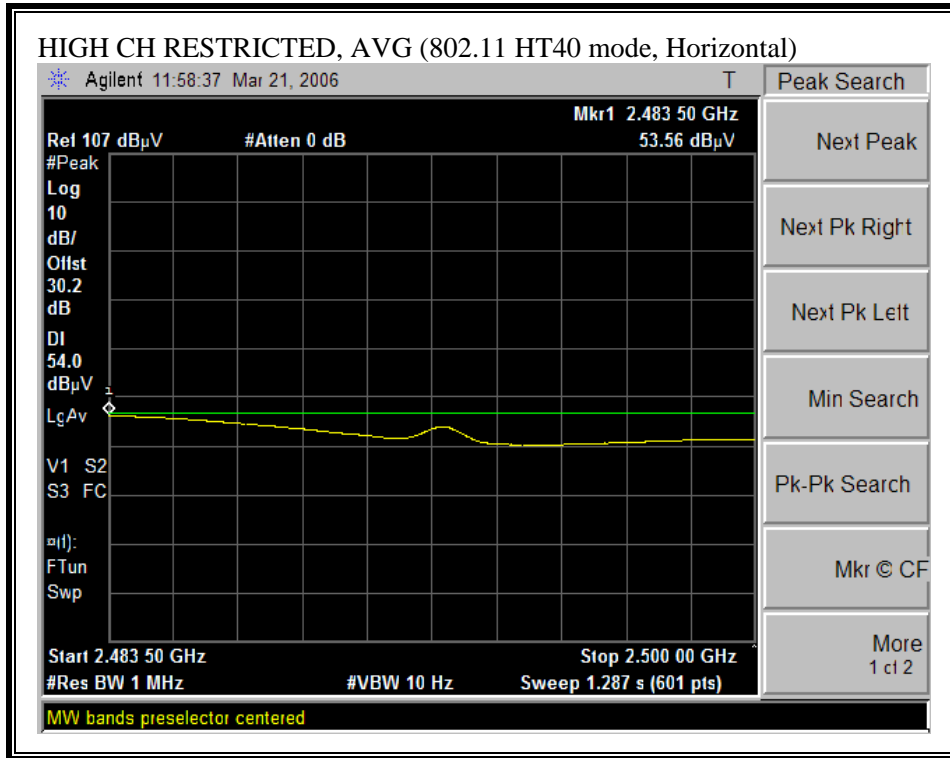
**RESTRICTED BANDEDGE (802.11 HT40 MODE, HIGH CHANNEL, Vertical)**



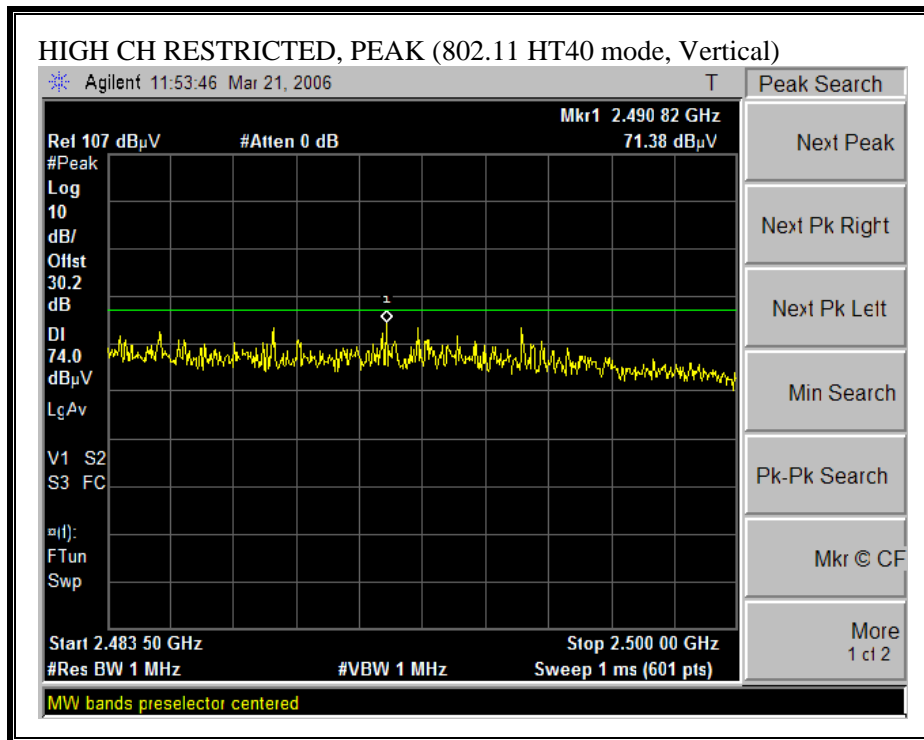


**HIGH CH, 2452MHz RESTRICTED BANDEDGE (802.11 HT40 MODE, HIGH CHANNEL, Horizontal)**

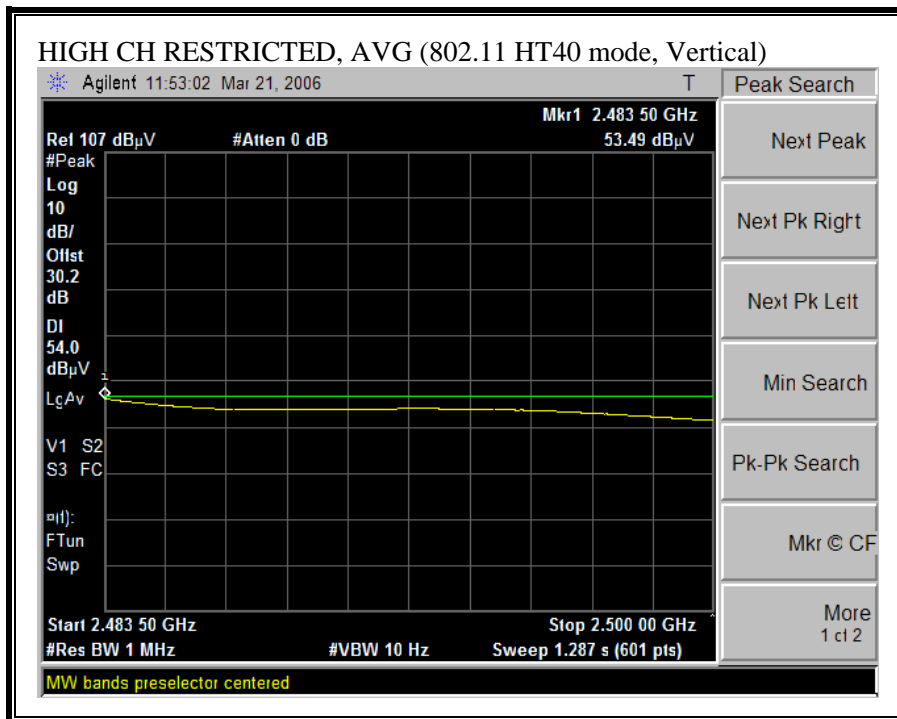




**RESTRICTED BANDEDGE (802.11 HT40 MODE, HIGH CHANNEL, Vertical)**







**HARMONICS AND SPURIOUS EMISSIONS (802.11 HT40 MODE)**

03/21/06 **High Frequency Measurement**  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engineer:Chin Pang  
 Project #:06U10183  
 Company:Atheros  
 EUT Description:802.11n MIMO Cardbus  
 EUT M/N:CB71  
 Test Target:FCC 15.247  
 Mode Of Operation:TX, HT40  
 Average Power Meter: Low = 15.2 dBm, Mid = 19.9 dBm, High = 16.5dBm

Test Equipment:

<b>Horn 1-18GHz</b> T73; S/N: 6717 @3m	<b>Pre-amplifier 1-26GHz</b> T87 Miteq 924342	<b>Pre-amplifier 26-40GHz</b>	<b>Horn &gt; 18GHz</b>	<b>Limit</b> FCC 15.205
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Hi Frequency Cables

<b>2 foot cable</b>	<b>3 foot cable</b> Chin 197538001	<b>12 foot cable</b> Chin 200354001	<b>HPF</b>	<b>Reject Filter</b> R_001	<b>Peak Measurements</b> RBW=VBW=1MHz <b>Average Measurements</b> RBW=1MHz ; VBW=10Hz
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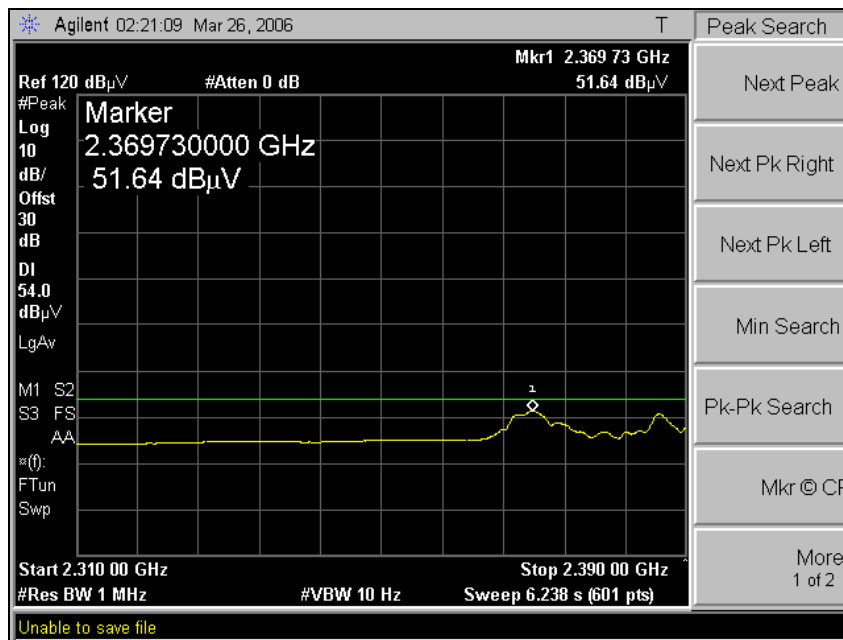
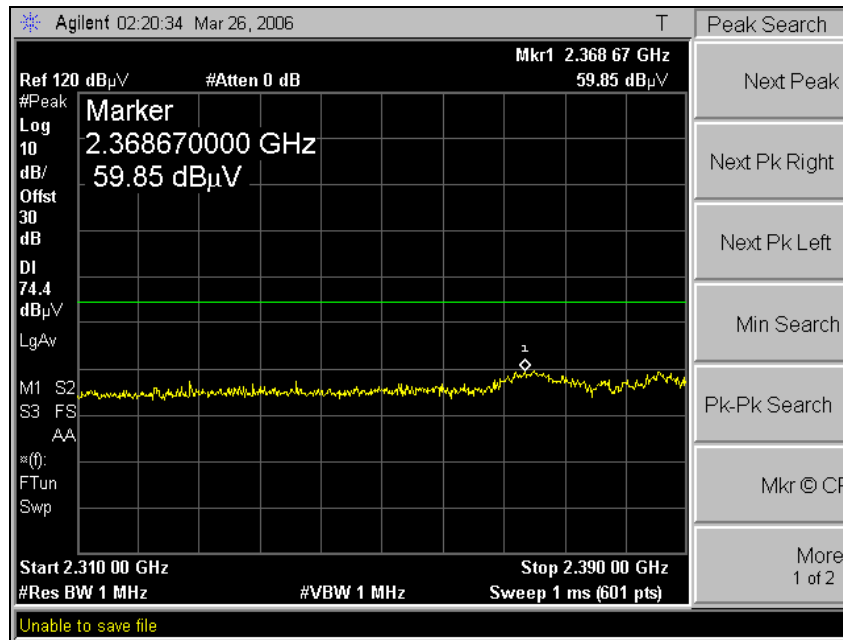
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Ftr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
<b>Low Ch. 2422MHz</b>															
4.842	3.0	55.0	42.0	33.7	3.2	-45.3	0.0	0.0	46.6	33.6	74	54	-27.4	-20.4	V
7.266	3.0	60.5	47.0	35.4	3.6	-43.3	0.0	0.0	56.2	42.7	74	54	-17.8	-11.3	V
4.842	3.0	53.0	40.0	33.7	3.2	-45.3	0.0	0.0	44.6	31.6	74	54	-29.4	-22.4	H
7.266	3.0	55.0	42.0	35.4	3.6	-43.3	0.0	0.0	50.7	37.7	74	54	-23.3	-16.3	H
<b>Mid Ch. 2437MHz</b>															
4.874	3.0	57.0	45.0	33.8	3.2	-45.3	0.0	0.0	48.7	36.7	74	54	-25.3	-17.3	V
7.311	3.0	64.0	51.4	35.5	3.6	-43.2	0.0	0.0	59.9	47.3	74	54	-14.1	-6.7	V
4.874	3.0	56.0	44.0	33.8	3.2	-45.3	0.0	0.0	47.7	35.7	74	54	-26.3	-18.3	H
7.311	3.0	62.7	50.5	35.5	3.6	-43.2	0.0	0.0	58.6	46.4	74	54	-15.4	-7.6	H
<b>High Ch. 2452MHz</b>															
4.904	3.0	57.0	44.6	33.8	3.2	-45.3	0.0	0.0	48.7	36.3	74	54	-25.3	-17.7	V
7.356	3.0	58.0	45.5	35.6	3.6	-43.1	0.0	0.0	54.0	41.5	74	54	-20.0	-12.5	V
4.904	3.0	54.0	41.0	33.8	3.2	-45.3	0.0	0.0	45.7	32.7	74	54	-28.3	-21.3	H
7.356	3.0	56.3	45.1	35.6	3.6	-43.1	0.0	0.0	52.3	41.1	74	54	-21.7	-12.9	H

Note: No other emissions were detected above the system noise floor.

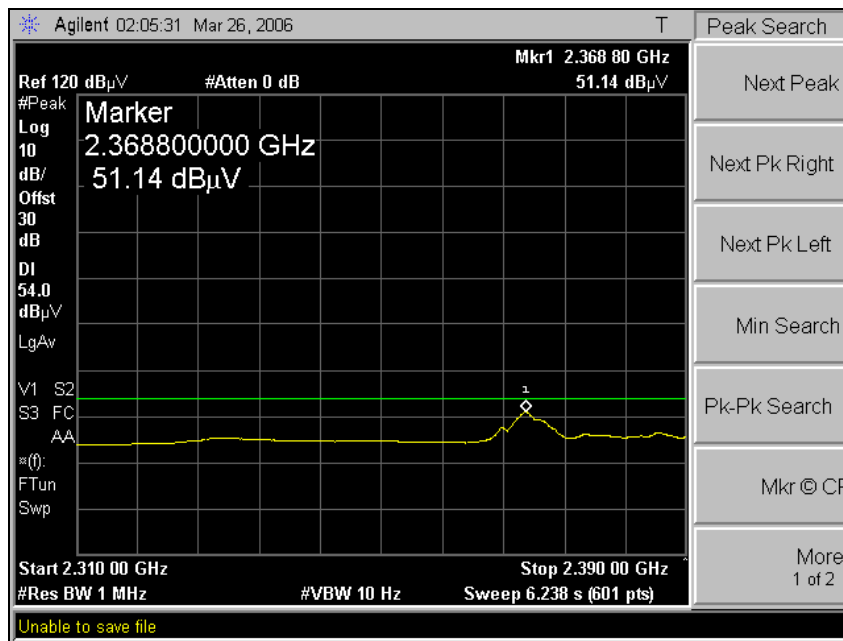
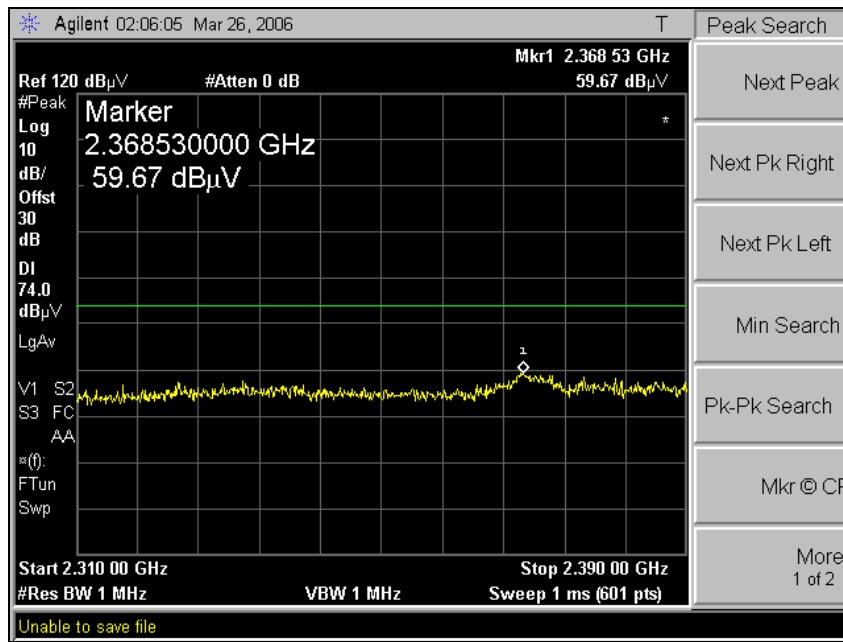
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

### 7.2.3. TRANSMITTER ABOVE 1 GHz FOR 2400 TO 2483.5 MHz BAND (Alternate Housing)

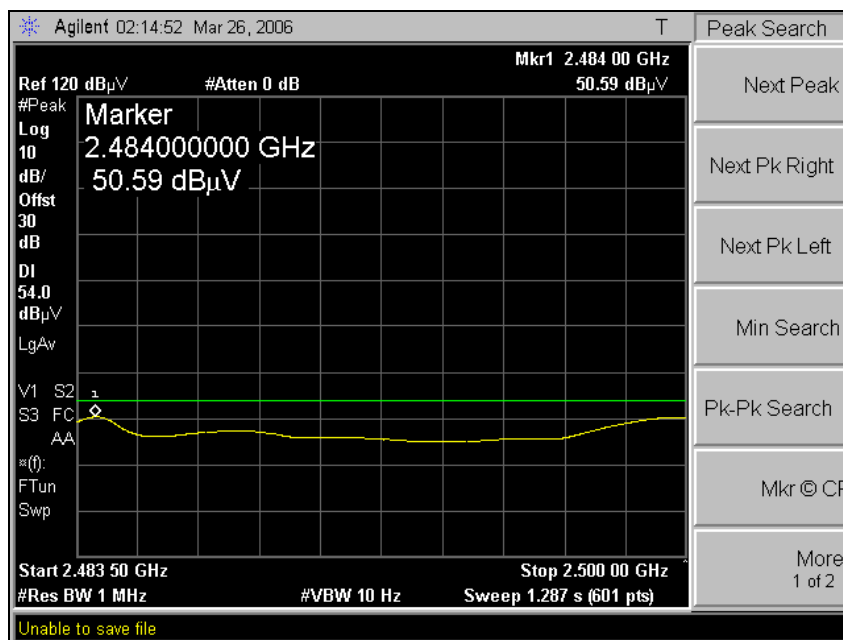
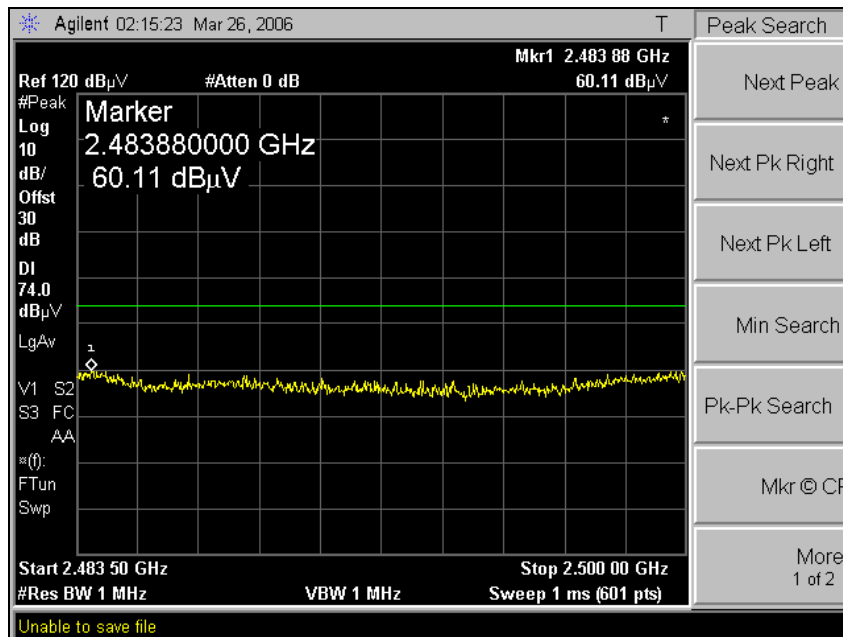
#### RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



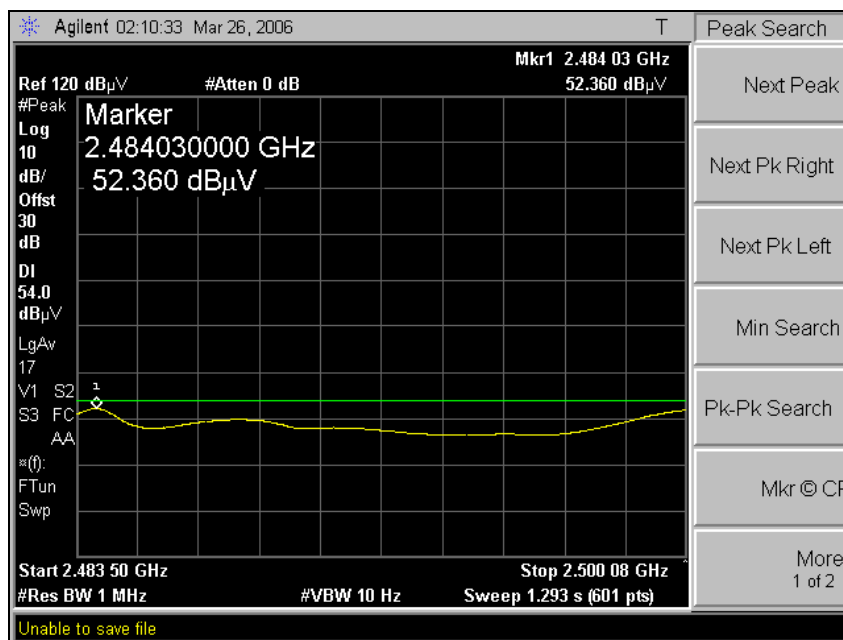
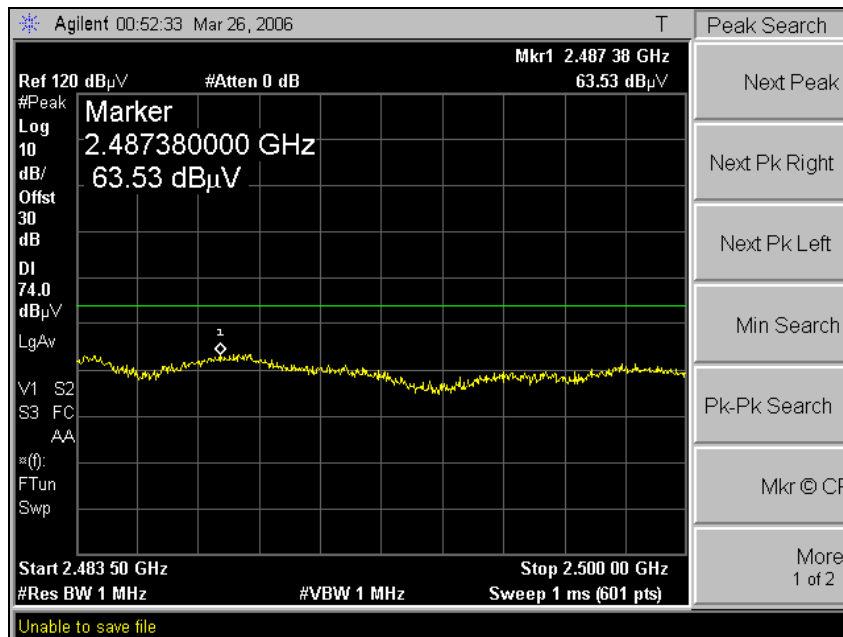
**RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)**



**RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)**



**RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)**



**HARMONICS AND SPURIOUS EMISSIONS (b MODE)**

04/01/06 **High Frequency Measurement**  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engineer: David Garcia  
 Project #: 06U10183  
 Company: Atheros  
 EUT Description: 802.11n WLAN card, w/shield gasket installed  
 EUT M/N: CB71  
 EUT S/N: CB71-CB34  
 Test Target: 802.11n  
 Mode Of Operation: Tx, b mode  
 Average Power Meter: Low = 21.3 dBm, High = 20 dBm  
 Verify compliance of alternate case with RF gasketing added.

Test Equipment:

Hom 1-18GHz T73; S/N: 6717 @3m	Pre-amplifier 1-26GHz T144 Miteq 3008A00931	Pre-amplifier 26-40GHz	Horn > 18GHz
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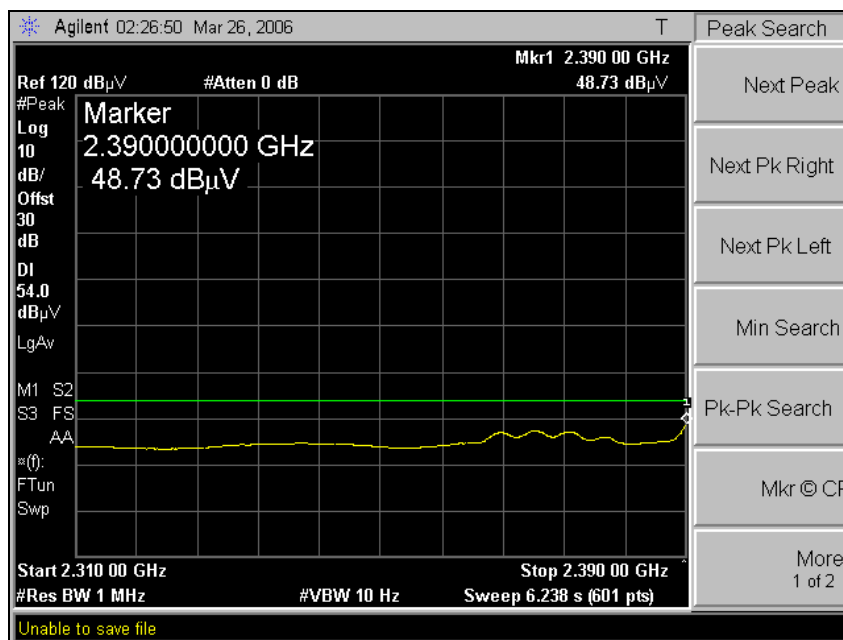
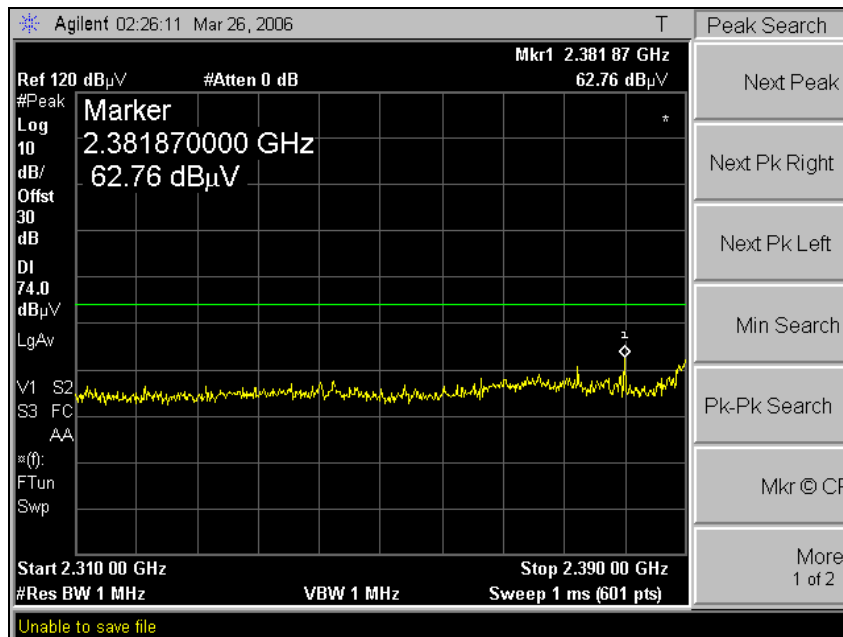
HI Frequency Cables

2 foot cable	3 foot cable Gordon 177080004	12 foot cable Gordon 203134001	HPF	Reject Filter R_001	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz
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f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
<b>3412 Channel</b>															
4.824	3.0	54.4	52.3	33.7	3.3	-36.5	0.0	0.0	54.9	52.8	74	54	-19.1	-1.2	V
4.824	3.0	52.9	49.0	33.7	3.3	-36.5	0.0	0.0	53.4	49.5	74	54	-20.6	-4.5	H
<b>2462 Channel</b>															
4.924	3.0	56.7	50.3	33.8	3.3	-36.5	0.0	0.0	57.4	51.0	74	54	-16.6	-3.0	H
7.386	3.0	50.3	44.6	35.6	3.8	-36.2	0.0	0.0	53.5	47.8	74	54	-20.5	-6.2	H
4.924	3.0	51.7	49.0	33.8	3.3	-36.5	0.0	0.0	52.4	49.7	74	54	-21.6	-4.3	V
7.386	3.0	48.0	41.5	35.6	3.8	-36.2	0.0	0.0	51.2	44.7	74	54	-22.8	-9.3	V

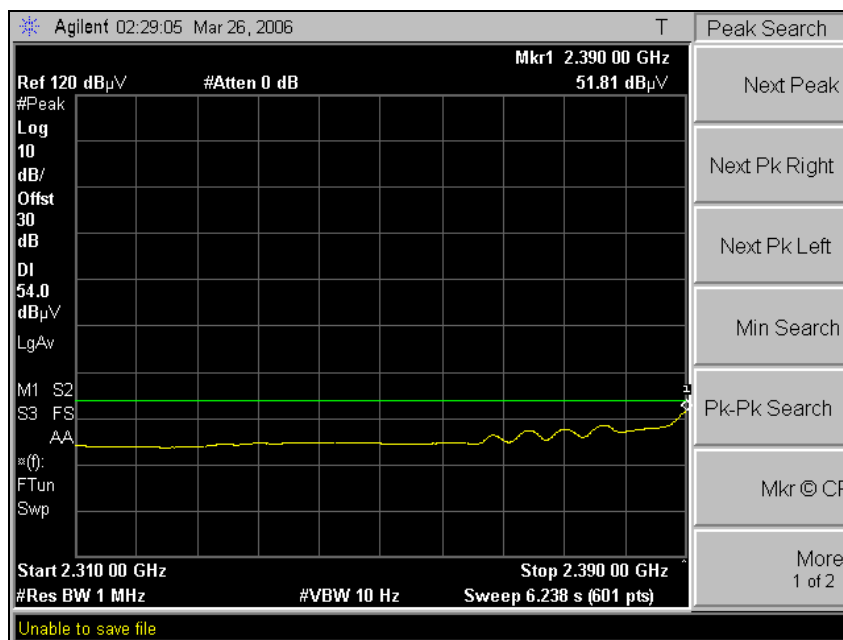
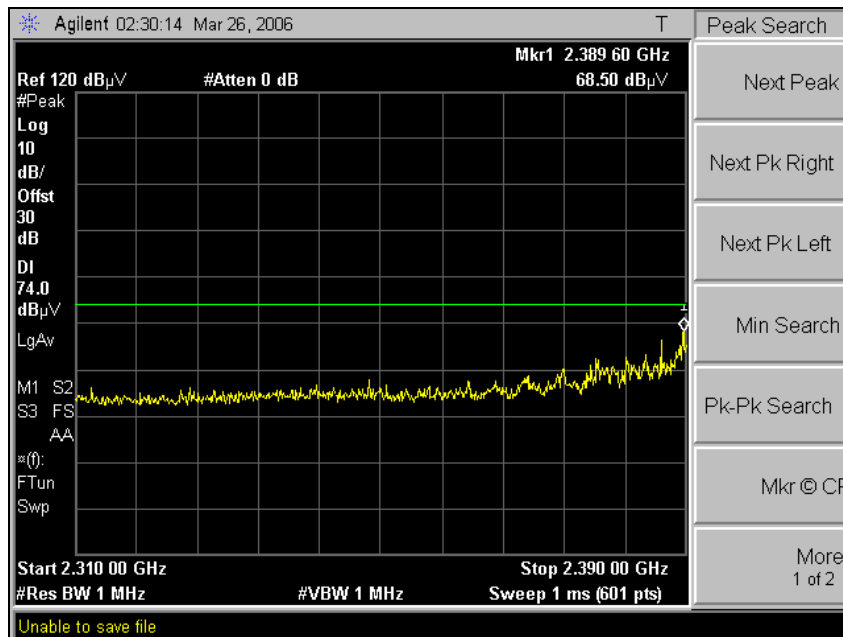
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

**RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)**

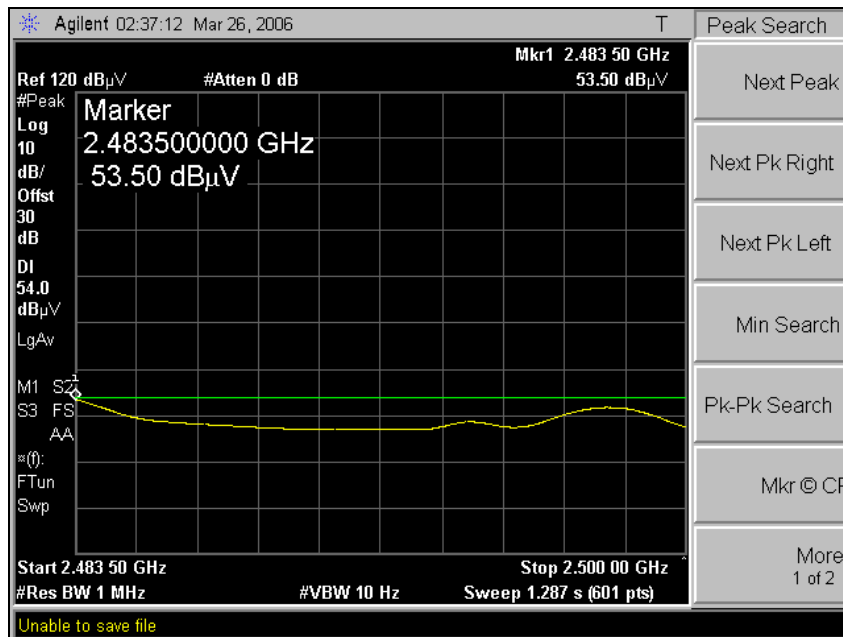
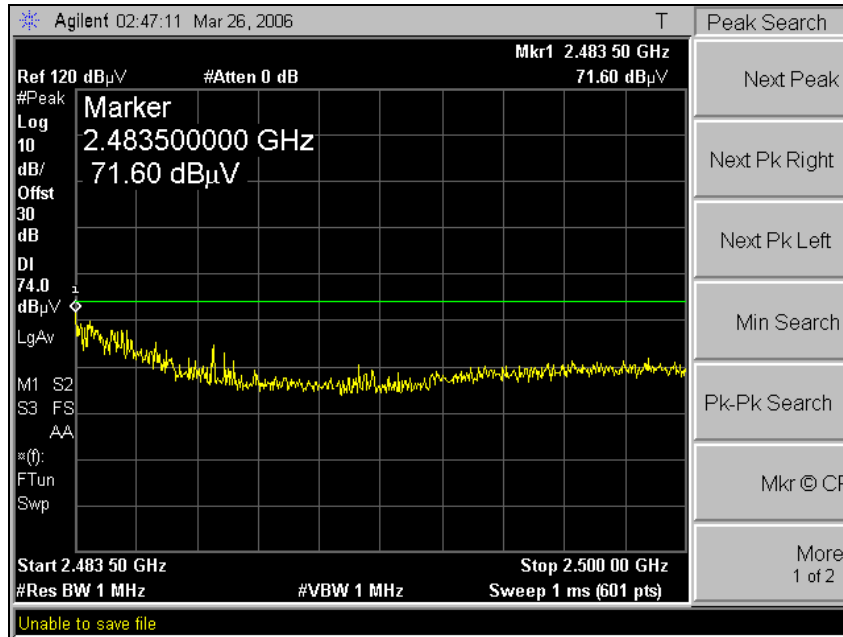




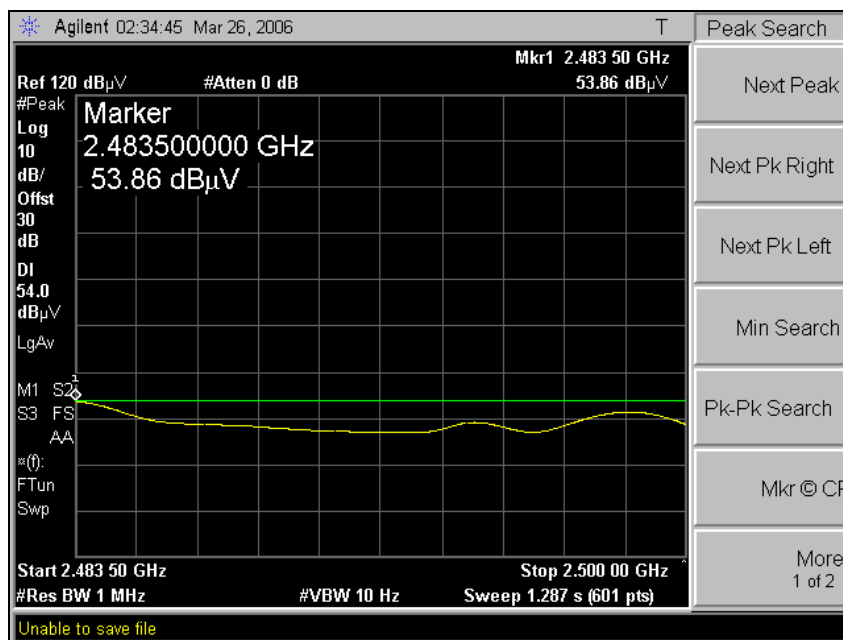
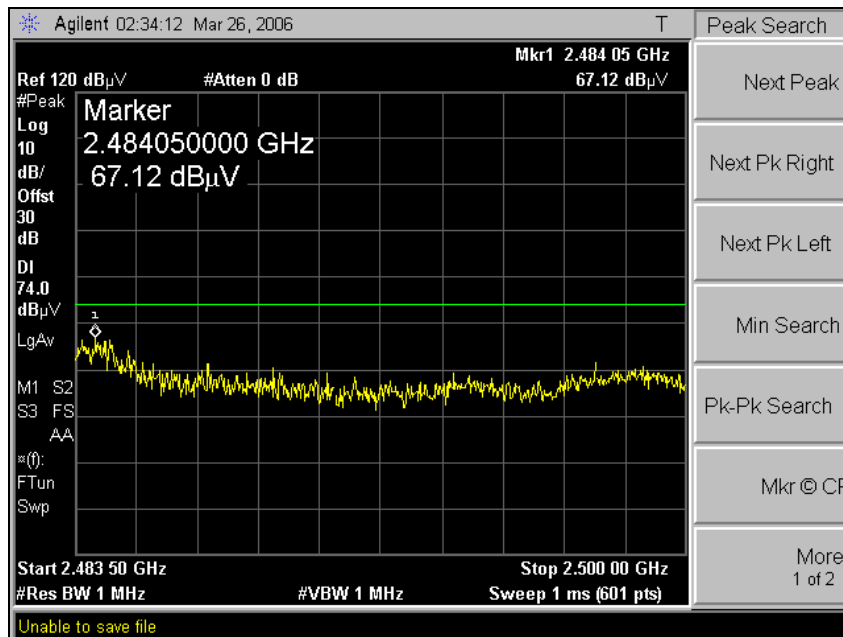
**RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)**



**RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)**



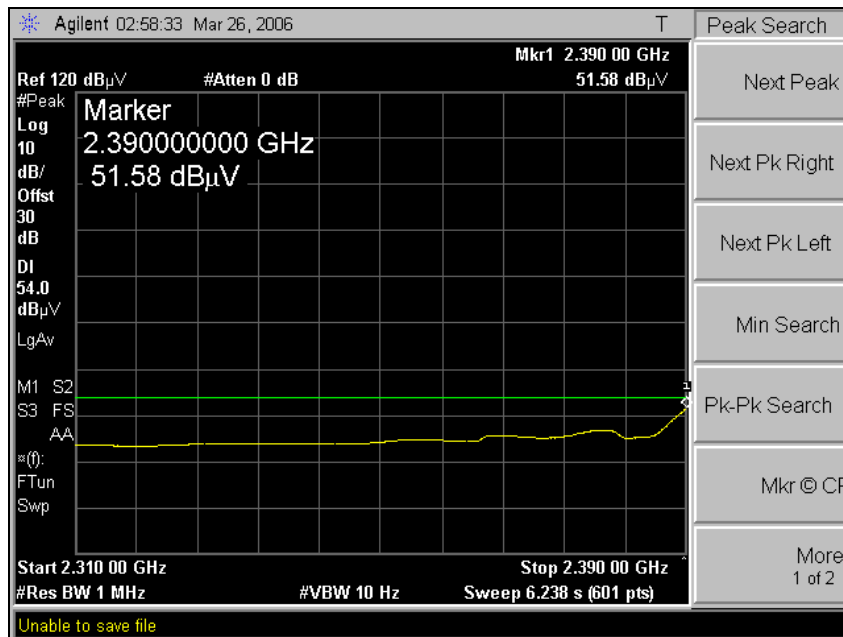
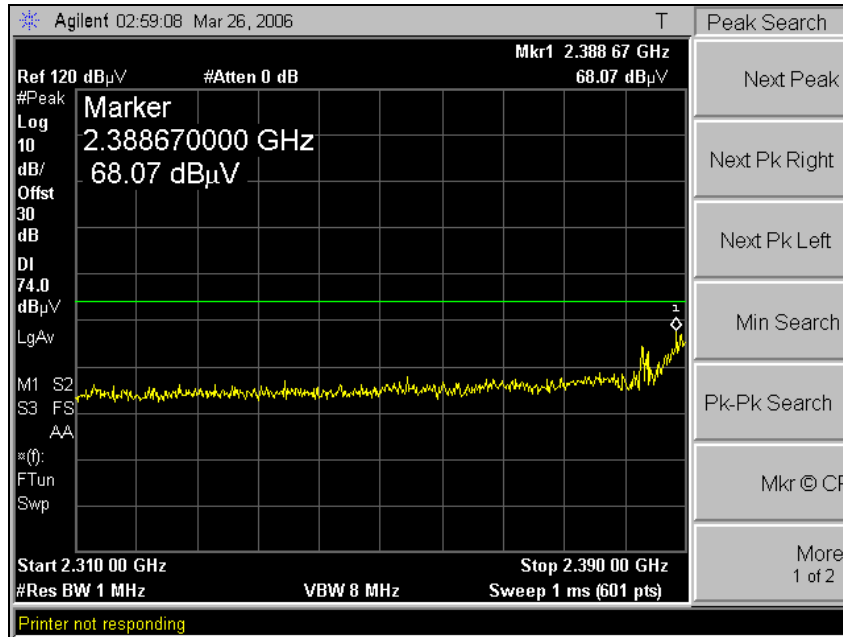
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)



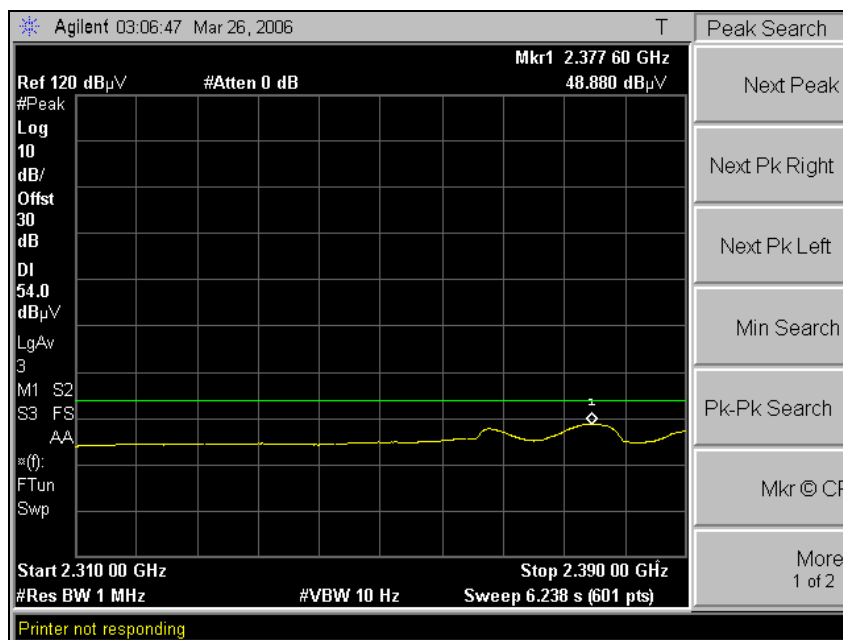
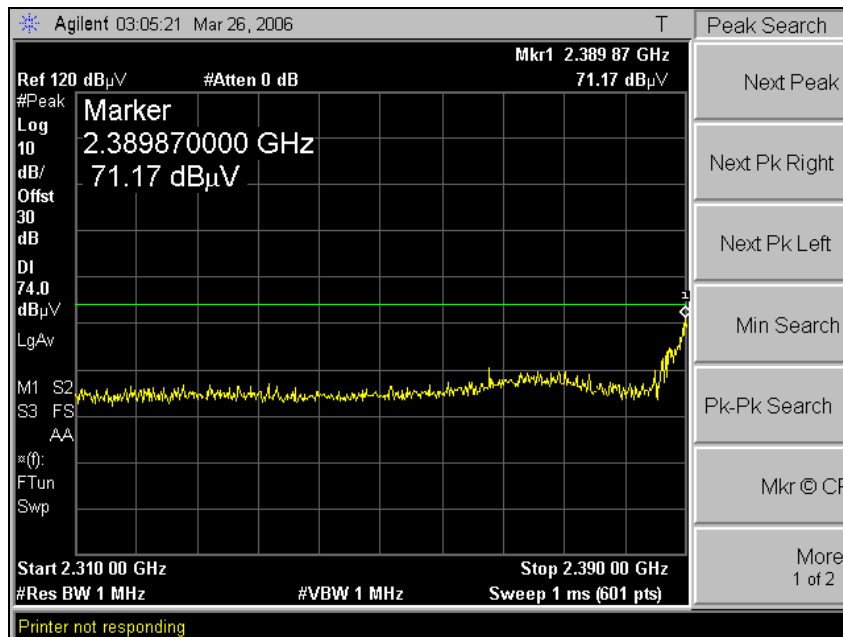
**HARMONICS AND SPURIOUS EMISSIONS (g MODE)**

04/01/06 High Frequency Measurement Compliance Certification Services, Morgan Hill Open Field Site  Test Engineer: David Garcia Project #: 06U10183 Company: Atheros EUT Description: 802.11n WLAN card, w/shield gasket installed EUT M/N: CB71 EUT S/N: CB71-CB34 Test Target: 802.11n Mode Of Operation: Tx, g mode Average Power Meter: Low = 17 dBm, High = 18.2 dBm Verify compliance of alternate case with RF gasketing added.  Test Equipment:																	
Horn 1-18GHz T73; S/N: 6717 @3m				Pre-amplifier 1-26GHz T144 Mite q 3008A00931				Pre-amplifier 26-40GHz				Horn > 18GHz					
HI Frequency Cables																	
2 foot cable				3 foot cable Gordon 177080004				12 foot cable Gordon 203134001				HPF		Reject Filter R_001		Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz, VBW=10Hz	
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)		
<b>3412 Channel</b>																	
4.824	3.0	49.9	38.0	33.7	3.3	-36.5	0.0	0.0	50.4	38.5	74	54	-23.6	-15.5	V		
4.824	3.0	51.6	40.9	33.7	3.3	-36.5	0.0	0.0	52.1	41.4	74	54	-21.9	-12.6	H		
<b>2462 Channel</b>																	
4.924	3.0	50.7	40.6	33.8	3.3	-36.5	0.0	0.0	51.4	41.3	74	54	-22.6	-12.7	H		
7.386	3.0	47.2	35.8	35.6	3.9	-36.2	0.0	0.0	50.4	39.0	74	54	-23.6	-15.0	H		
4.924	3.0	51.7	49.0	33.8	3.3	-36.5	0.0	0.0	52.4	49.7	74	54	-21.6	-4.3	V		
7.386	3.0	48.0	41.5	35.6	3.9	-36.2	0.0	0.0	51.2	44.7	74	54	-22.8	-9.3	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										

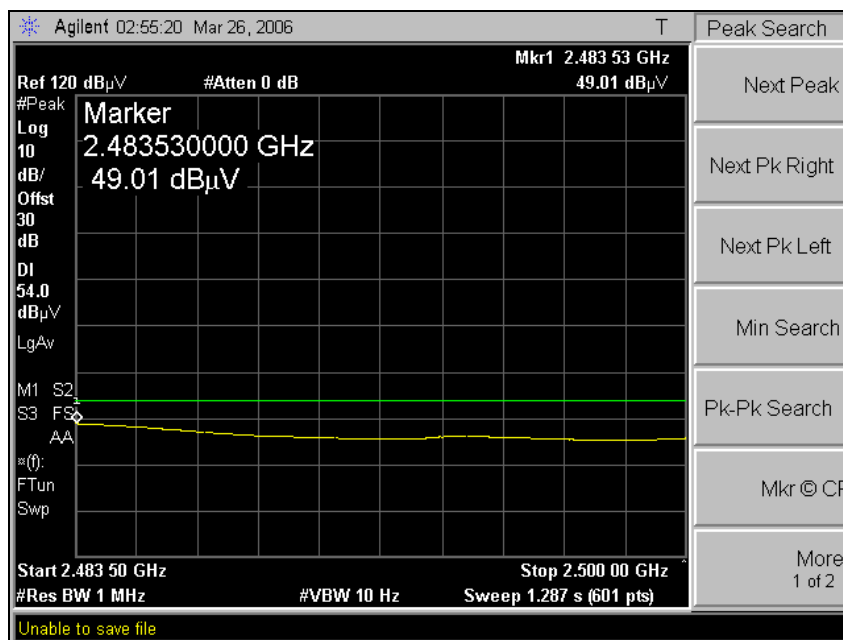
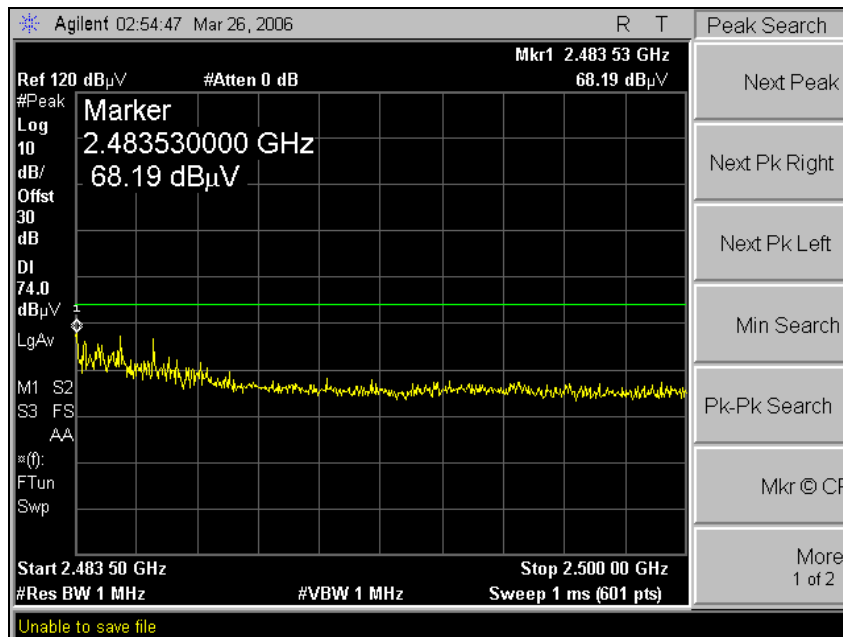
**RESTRICTED BANDEDGE 802.11 (HT20 MODE, LOW CHANNEL, HORIZONTAL)**



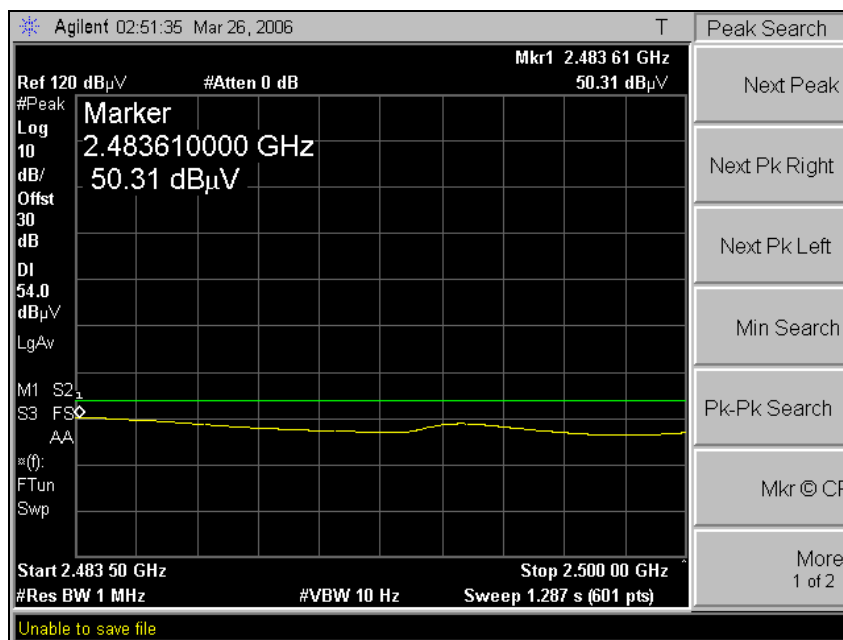
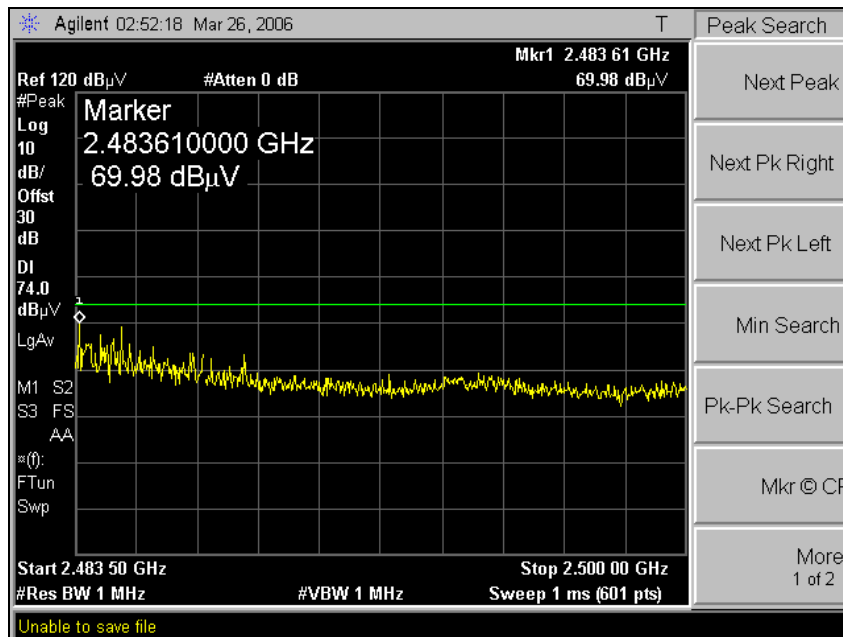
**RESTRICTED BANDEDGE 802.11 (HT20 MODE, LOW CHANNEL, VERTICAL**



**RESTRICTED BANDEDGE 802.11 (HT20 MODE, HIGH CHANNEL, HORIZONTAL)**



**RESTRICTED BANDEDGE 802.11 (HT20 MODE, HIGH CHANNEL, VERTICAL)**





**HARMONICS AND SPURIOUS EMISSIONS (H20 MODE)**

04/01/06 High Frequency Measurement  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engineer: David Garcia  
 Project #: 06U10183  
 Company: Atheros  
 EUT Description: 802.11n WLAN card, w/shield gasket installed  
 EUT M/N: CB71  
 EUT S/N: CB71-CB34  
 Test Target: 802.11n  
 Mode Of Operation: Tx, HT20 mode  
 Average Power Meter: Low = 16.5 dBm, High = 17.8 dBm  
 Verify compliance of alternate case with RF gasketing added.

Test Equipment:

Hom 1-18GHz T73; S/N: 6717 @3m	Pre-amplifier 1-26GHz T144 Miteq 3008A00931	Pre-amplifier 26-40GHz	Horn > 18GHz
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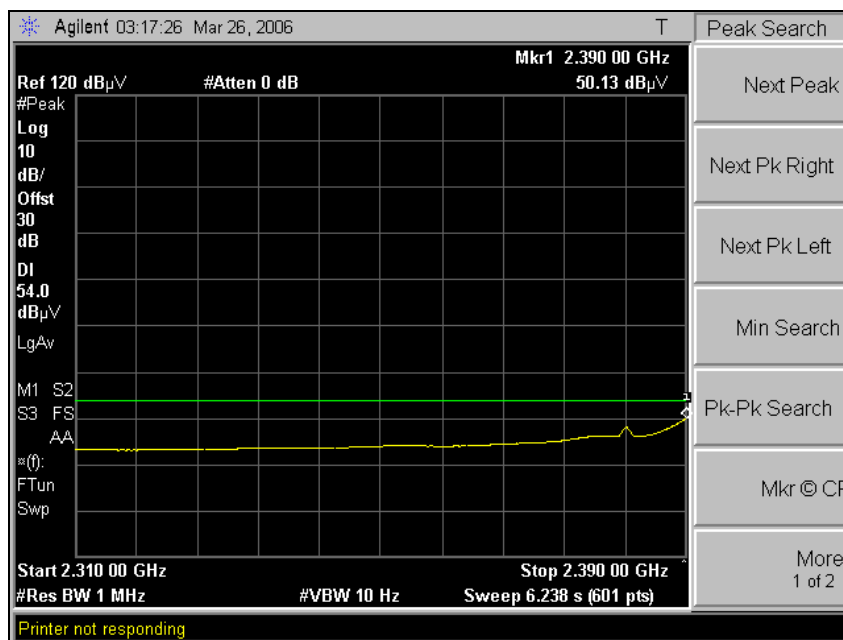
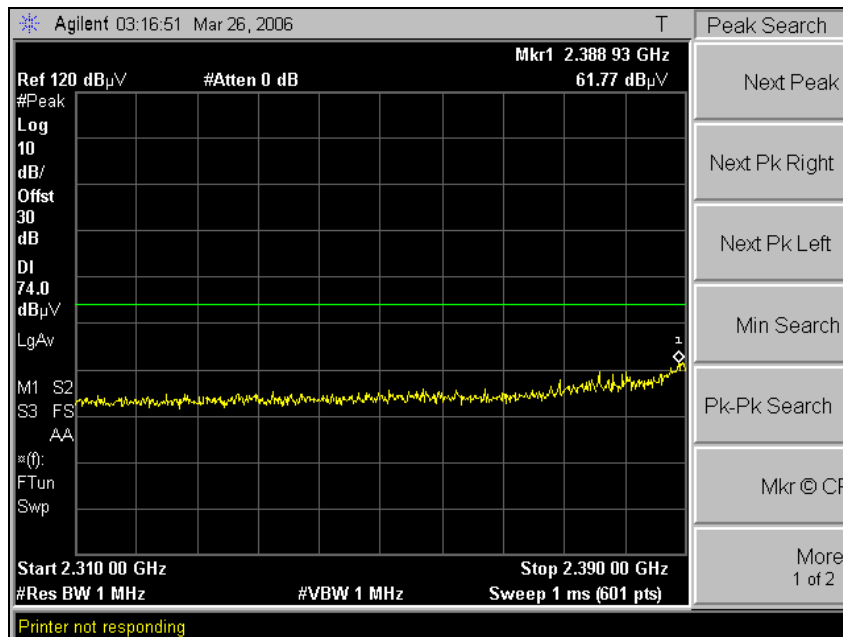
Hi Frequency Cables

2 foot cable	3 foot cable Gordon 177080004	12 foot cable Gordon 203134001	HPF	Reject Filter R_001	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz
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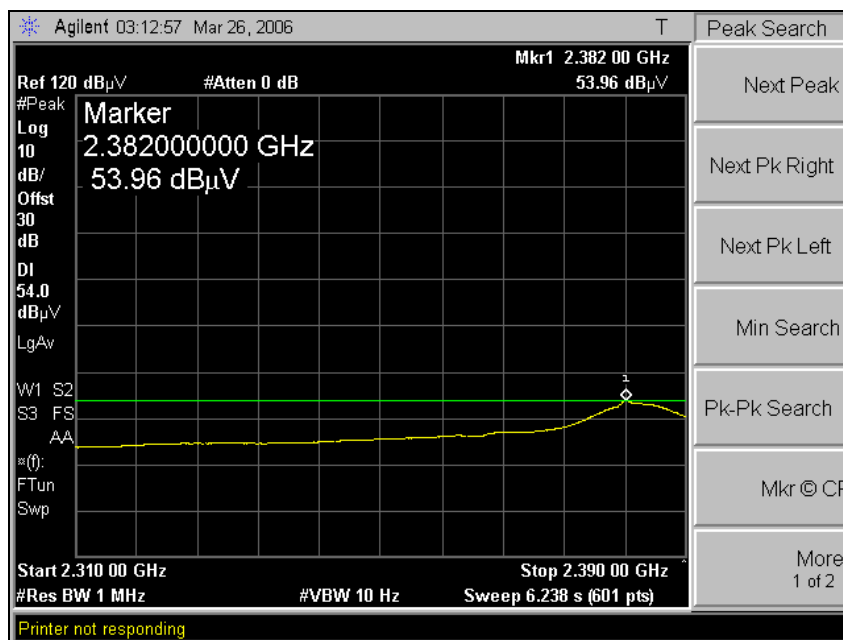
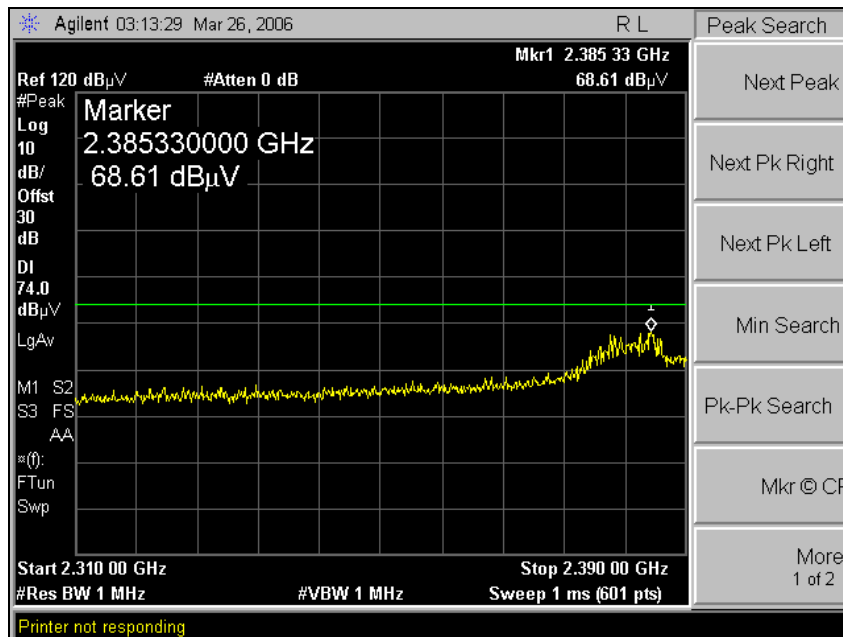
f C-Hz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
<b>2412 Channel</b>															
4.824	3.0	49.6	39.1	33.7	3.3	-36.5	0.0	0.0	50.1	39.6	74	54	-23.9	-14.4	V
4.824	3.0	52.8	39.8	33.7	3.3	-36.5	0.0	0.0	53.3	39.3	74	54	-20.7	-14.7	H
<b>2462 Channel</b>															
4.924	3.0	48.0	37.9	33.8	3.3	-36.5	0.0	0.0	48.7	38.6	74	54	-25.3	-15.4	V
7.386	3.0	44.3	33.4	35.6	3.8	-36.2	0.0	0.0	47.5	36.6	74	54	-26.5	-17.4	V
4.924	3.0	52.7	43.0	33.8	3.3	-36.5	0.0	0.0	53.4	43.7	74	54	-20.6	-10.3	H
7.386	3.0	46.7	34.9	35.6	3.8	-36.2	0.0	0.0	49.9	38.1	74	54	-24.1	-15.9	H

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		

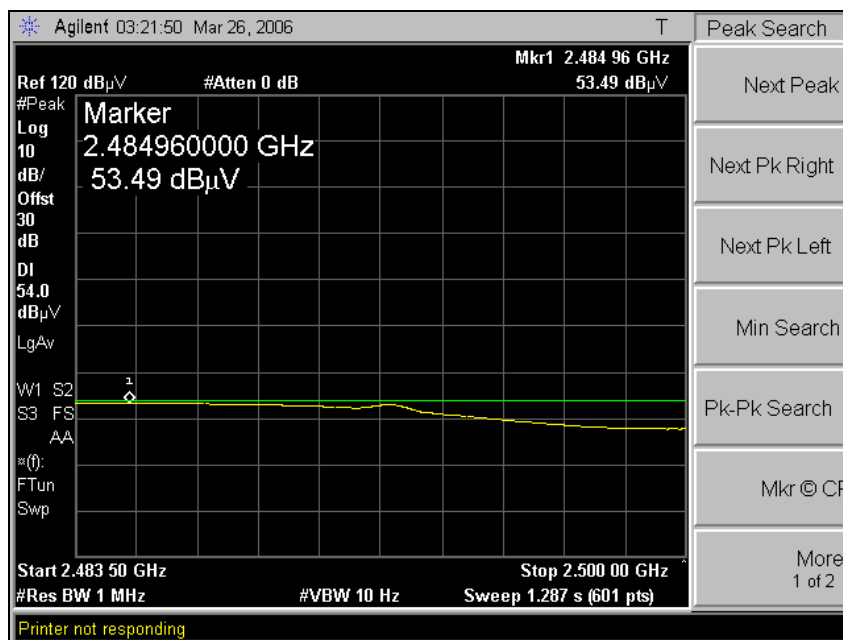
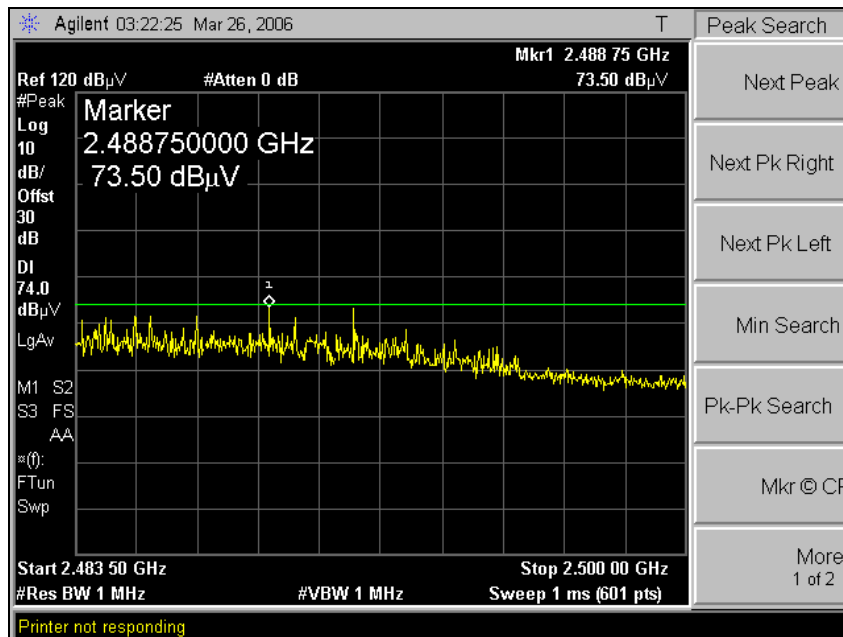
**RESTRICTED BANDEDGE 802.11 (HT40 MODE, LOW CHANNEL, HORIZONTAL)**



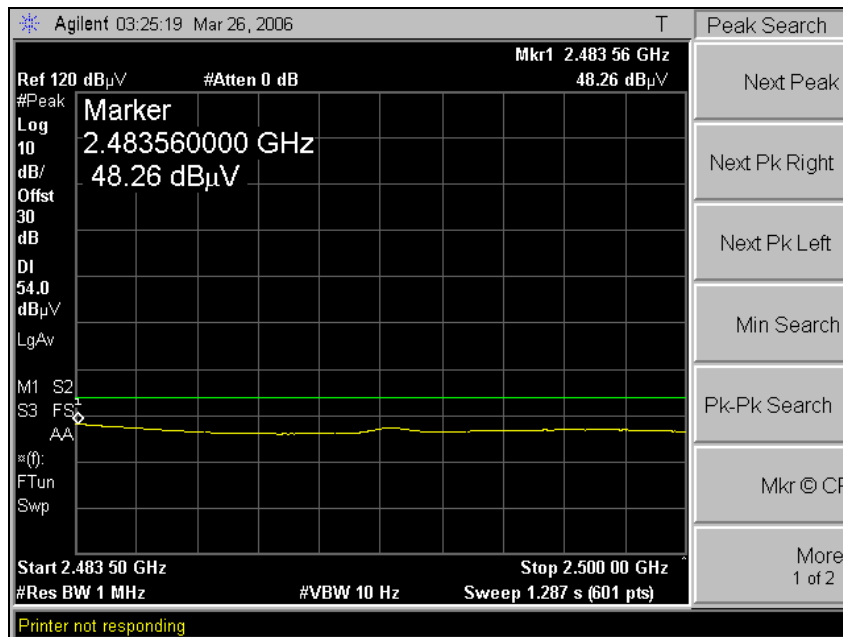
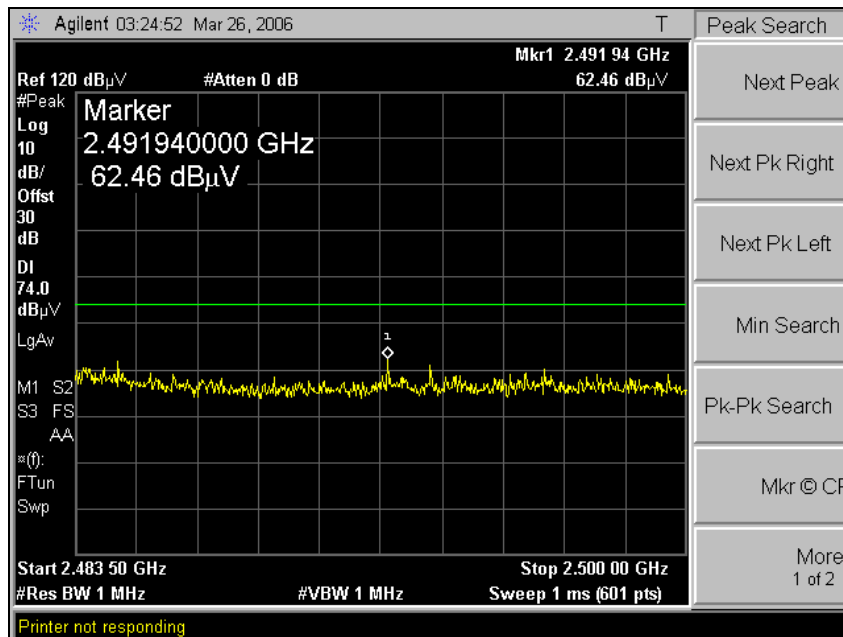
**RESTRICTED BANDEDGE 802.11 (HT40 MODE, LOW CHANNEL, VERTICAL)**



**RESTRICTED BANDEDGE 802.11 (HT40 MODE, HIGH CHANNEL, HORIZONTAL)**



**RESTRICTED BANDEDGE 802.11 (HT40 MODE, HIGH CHANNEL, VERTICAL)**

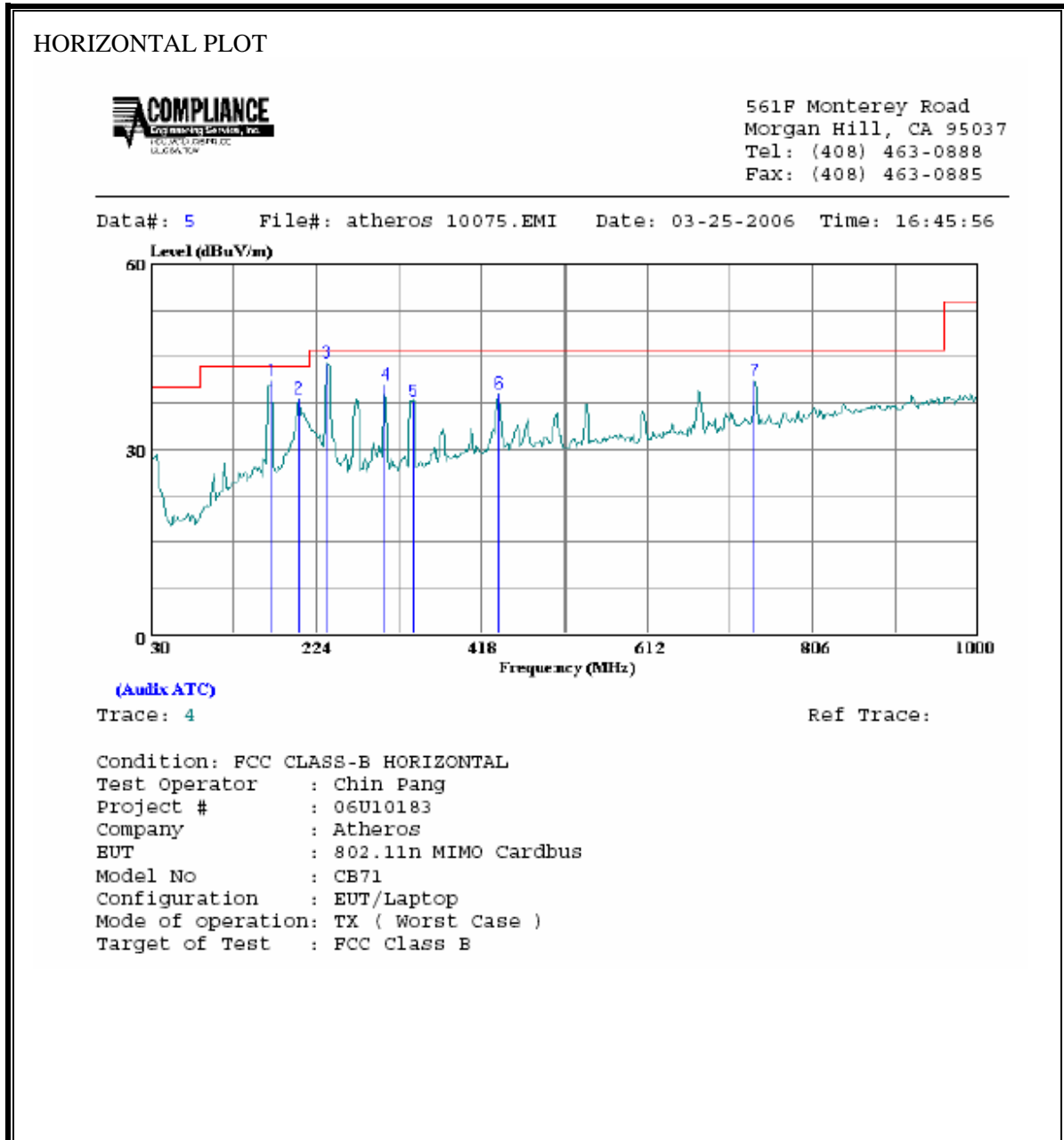


**HARMONICS AND SPURIOUS EMISSIONS (H40 MODE)**

04/01/06 High Frequency Measurement																	
Compliance Certification Services, Morgan Hill Open Field Site																	
Test Engineer:		David Garcia															
Project #:		06U10183															
Company:		Atheros															
EUT Description:		802.11n WLAN card, w/shield gasket installed															
EUT M/N:		CB71															
EUT S/N:		CB71-CB34															
Test Target:		802.11n															
Mode Of Operation:		Tx, HT 40															
Average Power Meter:		Low = 15.2 dBm, High = 16.5 dBm															
		Verify compliance of alternate case with RF gasketing added.															
Test Equipment:																	
Horn 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz					
T73; S/N: 6717 @3m				T144 Mite q 3008A00931													
HF Frequency Cables																	
2 foot cable				3 foot cable				12 foot cable				HPF		Reject Filter		Peak Measurements RBW=VBW=1MHz	
				Gordon 177080004				Gordon 203134001						R_001		Average Measurements RBW=1MHz, VBW=10Hz	
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)		
3422 Channel																	
4.844	3.0	49.8	32.6	33.7	3.3	-36.5	0.0	0.0	50.4	33.2	74	54	-23.6	-20.8	V		
7.266	3.0	40.7	30.3	35.4	3.8	-36.2	0.0	0.0	43.7	33.3	74	54	-30.3	-20.7	V		
4.844	3.0	45.6	33.0	33.7	3.3	-36.5	0.0	0.0	46.2	33.6	74	54	-27.8	-20.4	H		
7.266	3.0	38.7		35.4	3.8	-36.2	0.0	0.0	41.7	3.0	74	54	-32.3	-51.0	H		
2452 Channel																	
4.904	3.0	46.0	34.9	33.8	3.3	-36.5	0.0	0.0	46.7	35.6	74	54	-27.3	-18.4	V		
7.356	3.0	42.3	33.0	35.6	3.8	-36.2	0.0	0.0	45.4	36.1	74	54	-28.6	-17.9	V		
4.904	3.0	44.7	32.9	33.8	3.3	-36.5	0.0	0.0	45.4	33.6	74	54	-28.6	-20.4	H		
7.356	3.0	43.3	31.9	35.6	3.8	-36.2	0.0	0.0	46.4	35.0	74	54	-27.6	-19.0	H		
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										

### 7.2.4. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz

#### SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



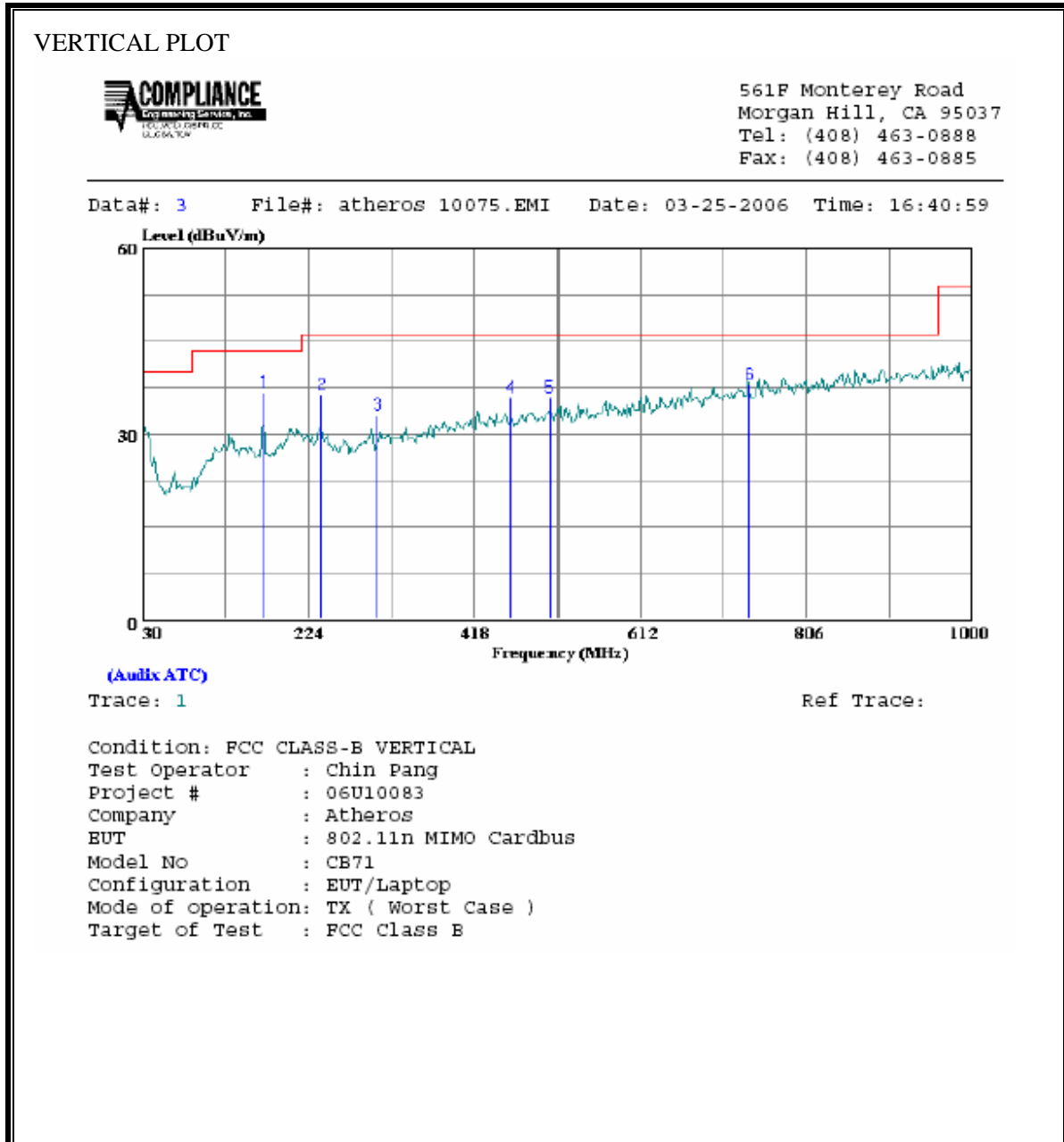
HORIZONTAL DATA

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	172.590	27.86	13.31	41.17	43.50	-2.33	Peak
2	203.630	24.25	14.01	38.26	43.50	-5.24	Peak
3	237.580	30.71	13.39	44.10	46.00	-1.90	Peak
4	305.480	24.75	15.80	40.55	46.00	-5.45	Peak
5	338.460	21.31	16.59	37.90	46.00	-8.10	Peak
6	439.340	20.07	18.96	39.03	46.00	-6.97	Peak
7	737.130	17.36	23.67	41.03	46.00	-4.97	Peak



**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

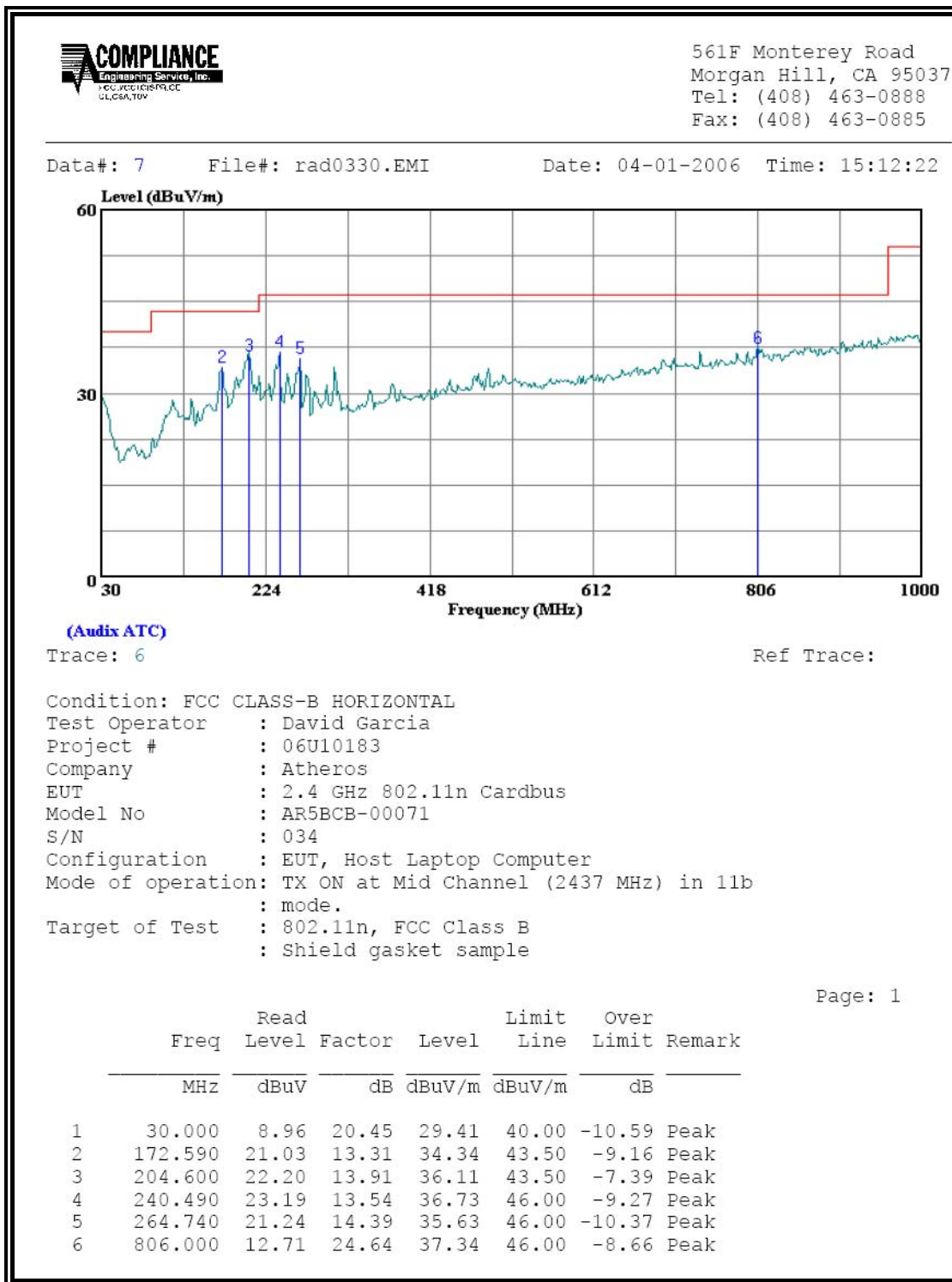


VERTICAL DATA

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	172.590	23.44	13.31	36.75	43.50	-6.75	Peak
2	239.520	22.97	13.47	36.44	46.00	-9.56	Peak
3	305.480	17.29	15.80	33.09	46.00	-12.91	Peak
4	460.680	16.54	19.44	35.98	46.00	-10.02	Peak
5	507.240	15.53	20.31	35.84	46.00	-10.16	Peak
6	739.070	14.38	23.70	38.07	46.00	-7.93	Peak

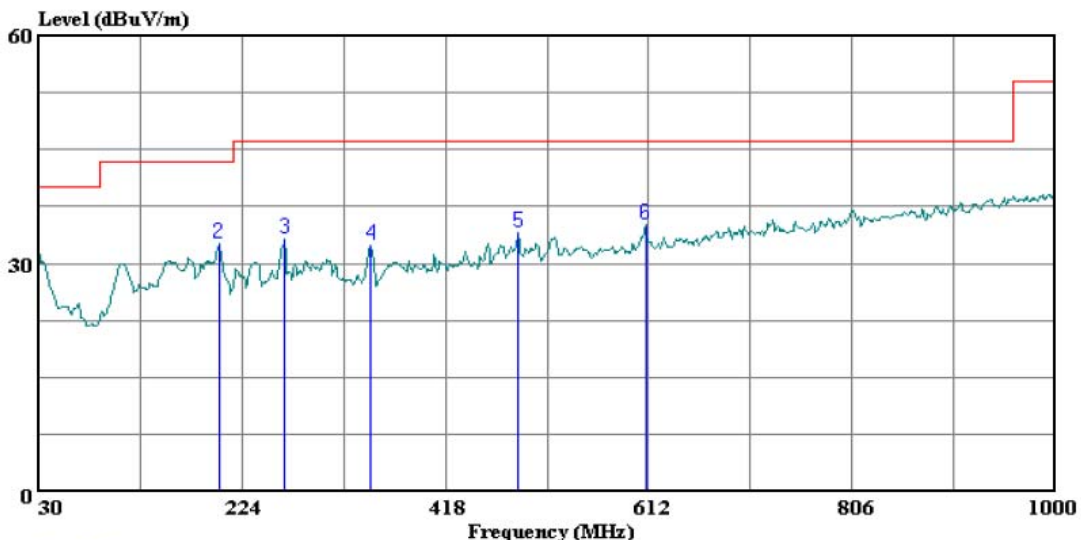
**7.2.5. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz ( With alternate housing )**





561F Monterey Road  
 Morgan Hill, CA 95037  
 Tel: (408) 463-0888  
 Fax: (408) 463-0885

Data#: 9 File#: rad0330.EMI Date: 04-01-2006 Time: 15:17:26



(Auxil ATC)

Trace: 8

Ref Trace:

Condition: FCC CLASS-B VERTICAL  
 Test Operator : David Garcia  
 Project # : 06U10183  
 Company : Atheros  
 EUT : 2.4 GHz 802.11n Cardbus  
 Model No : AR5BCB-00071  
 S/N : 034  
 Configuration : EUT, Host Laptop Computer  
 Mode of operation: TX ON at Mid Channel (2437 MHz) in 11b  
 : mode.  
 Target of Test : 802.11n, FCC Class B  
 : Shield gasket sample

Page: 1

	Freq	Read	Limit	Over		
	MHz	Level	Factor	Level	Line	
		dBuV	dB	dBuV/m	dBuV/m	
1	30.000	10.95	20.45	31.40	40.00	-8.60 Peak
2	201.690	18.25	14.32	32.57	43.50	-10.93 Peak
3	264.740	18.78	14.39	33.17	46.00	-12.83 Peak
4	347.190	15.61	16.85	32.46	46.00	-13.54 Peak
5	487.840	14.01	20.00	34.01	46.00	-11.99 Peak
6	609.090	13.49	21.66	35.15	46.00	-10.85 Peak

## 7.2.6. POWERLINE CONDUCTED EMISSIONS

### LIMIT

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

### TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both peak detection and quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Line conducted data is recorded for both NEUTRAL and HOT lines.

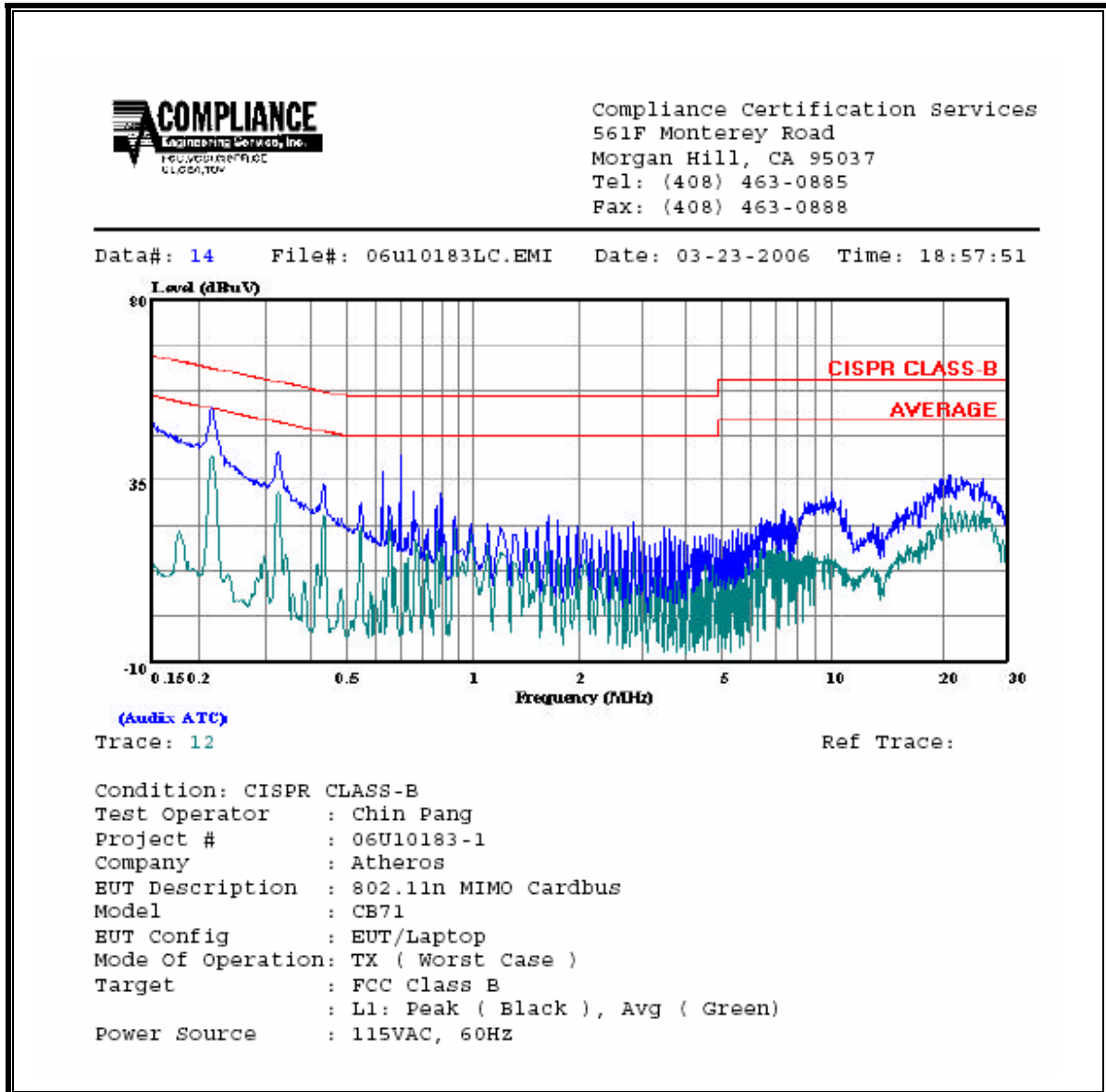
### RESULTS

No non-compliance noted:

**6 WORST EMISSIONS**

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.22	53.20	--	40.60	0.00	62.93	52.93	-9.73	-12.33	L1
0.70	41.48	--	30.51	0.00	56.00	46.00	-14.52	-15.49	L1
20.81	36.32	--	29.60	0.00	60.00	50.00	-23.68	-20.40	L1
0.22	51.62	--	39.56	0.00	62.97	52.97	-11.35	-13.41	L2
0.33	41.70	--	31.11	0.00	59.53	49.53	-17.83	-18.42	L2
1.25	38.16	--	29.45	0.00	56.00	46.00	-17.84	-16.55	L2
6 Worst Data									

**LINE 1 RESULTS**



**LINE 2 RESULTS**

