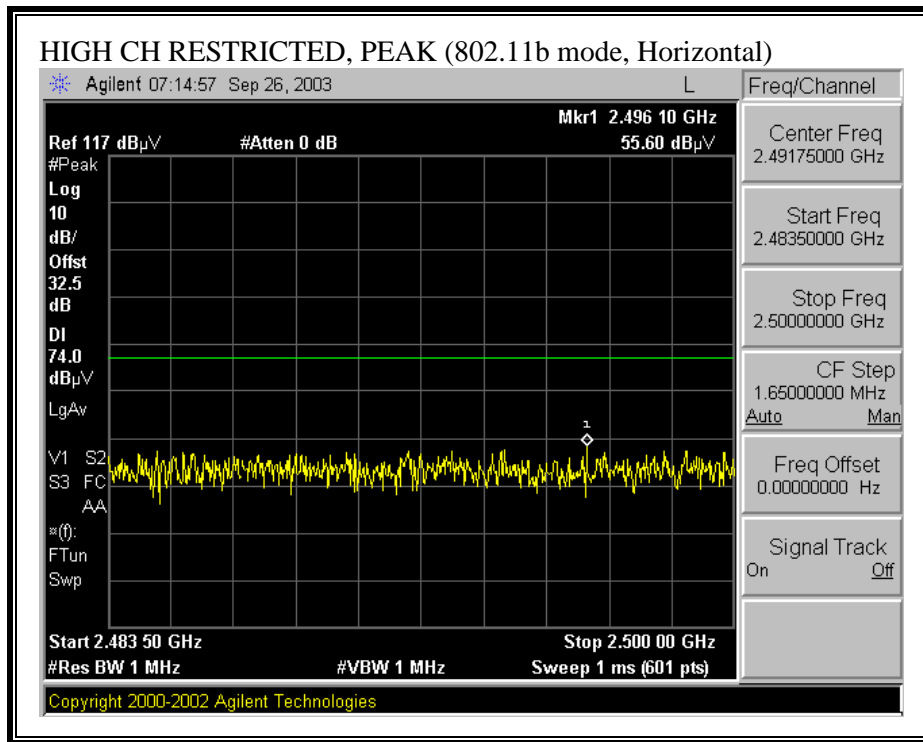
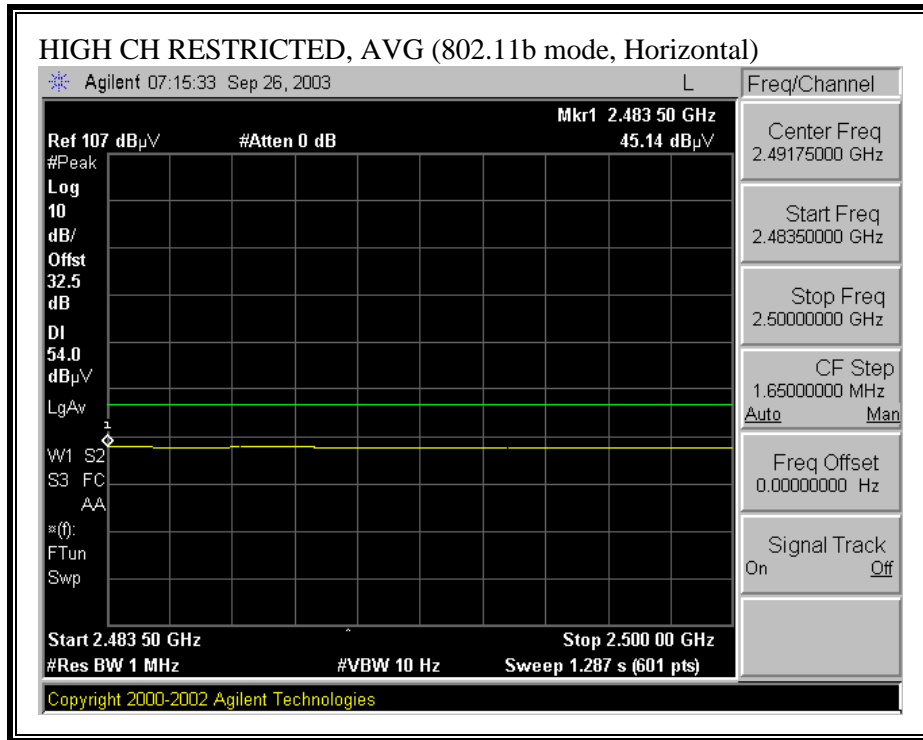
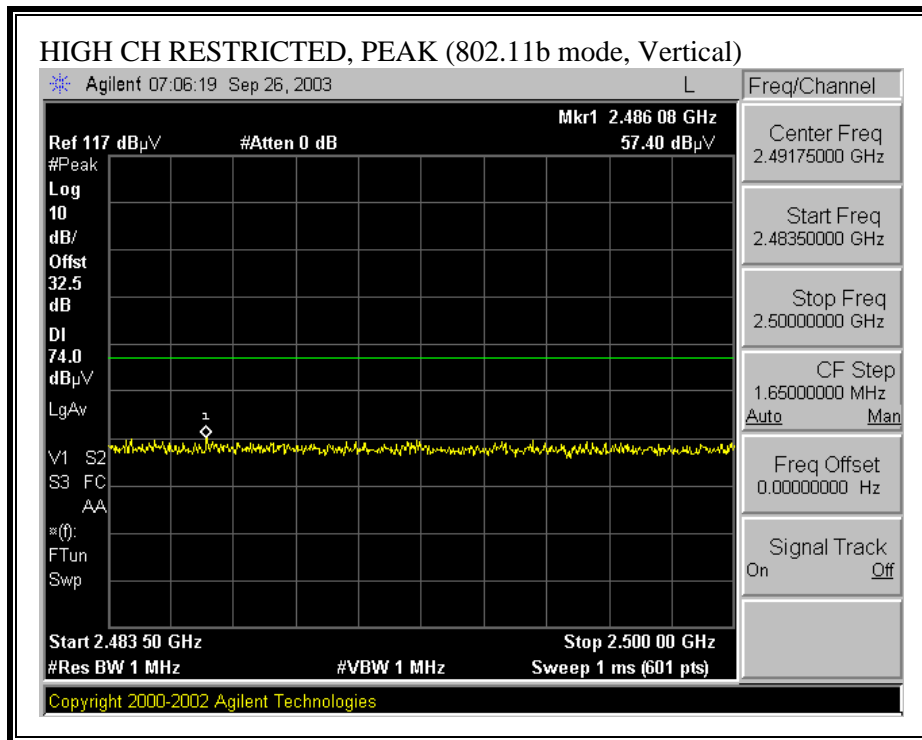


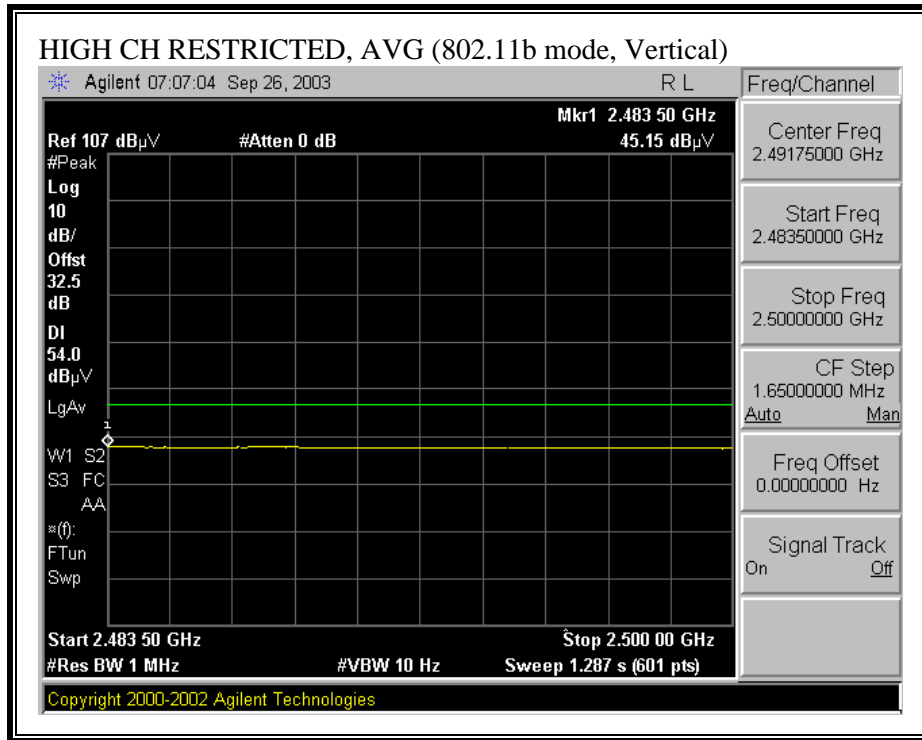
**RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)**





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





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

10/02/03 High Frequency Measurement  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: William Zhuang  
 Project #: 03U2214  
 Company Name: Atheros Communications  
 EUT Descrip.: 802.11 b/g Cardbus AP33  
 EUT M/N: AP33-022-58  
 Test Target: FCC 15.247  
 Mode Oper: Tx, b mode, internal antenna

**Test Equipment:**

EMCO Horn 1-18GHz	Pre-amplifier 1-26GHz	Spectrum Analyzer	Horn > 18GHz	Limit
T73; S/N: 6717 @1m	T86 Miteq 924341			FCC 15.205

Hi Frequency Cables:  (2 ft)  (2~3 ft)  (4~6 ft)  (12 ft)

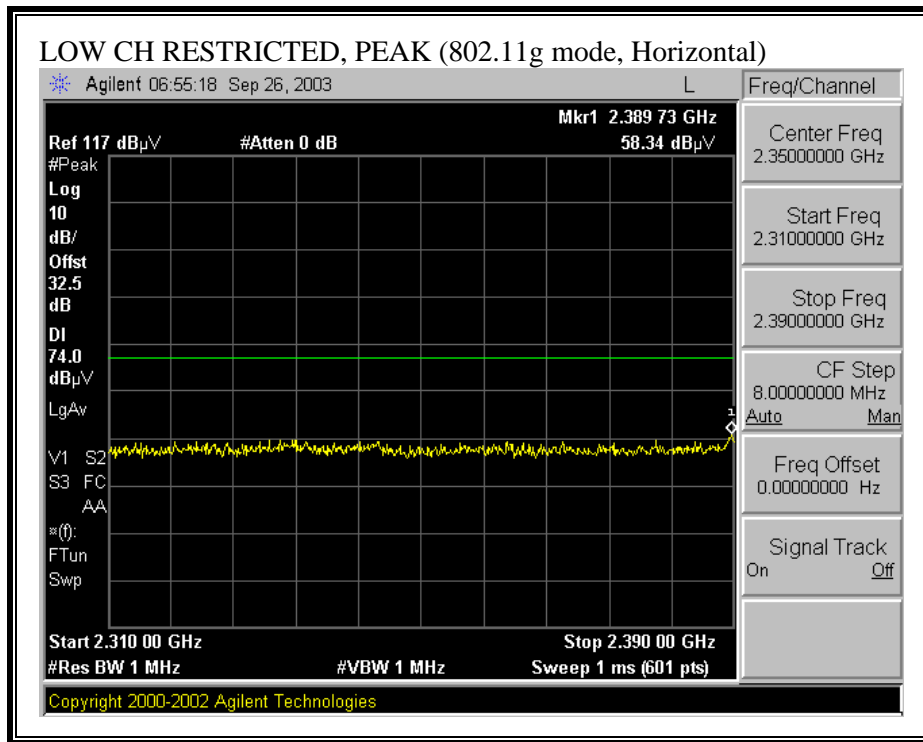
**Peak Measurements:** 1 MHz Resolution Bandwidth  
 1 MHz Video Bandwidth

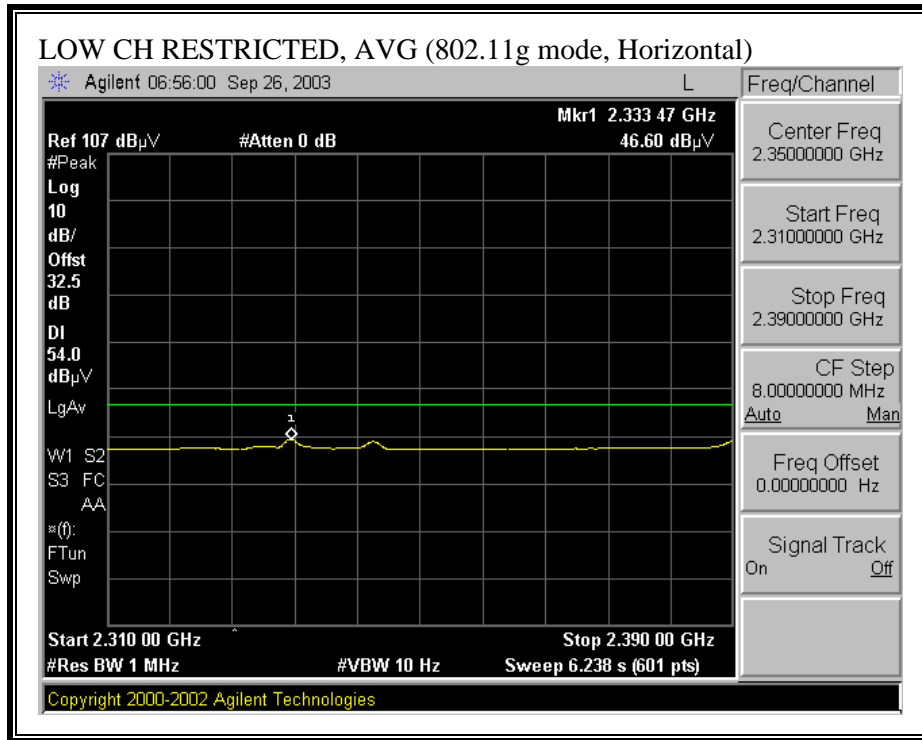
**Average Measurements:** 1 MHz Resolution Bandwidth  
 10 Hz Video Bandwidth

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
LOW CHANNEL															
4.824	9.8	57.6	54.0	33.9	3.9	-45.6	0.0	1.0	50.7	47.1	74.0	54.0	-23.3	-6.9	V
4.824	9.8	52.3	39.9	33.9	3.9	-45.6	0.0	1.0	45.4	33.0	74.0	54.0	-28.6	-21.0	H
MIDDLE CHANNEL															
4.874	9.8	59.3	56.0	33.9	3.9	-45.6	0.0	1.0	52.5	49.2	74.0	54.0	-21.5	-4.8	V
4.874	9.8	52.3	40.9	33.9	3.9	-45.6	0.0	1.0	45.5	34.1	74.0	54.0	-28.5	-19.9	H
7.311	9.8	55.0	41.0	36.8	4.9	-46.6	0.0	1.0	51.1	37.1	74.0	54.0	-22.9	-16.9	V
7.311	9.8	54.2	41.3	36.8	4.9	-46.6	0.0	1.0	50.3	37.4	74.0	54.0	-23.7	-16.6	H
HIGH CHANNEL															
4.924	9.8	60.1	56.8	34.0	3.9	-45.7	0.0	1.0	53.3	50.0	74.0	54.0	-20.7	-4.0	V
4.924	9.8	52.9	41.3	34.0	3.9	-45.7	0.0	1.0	46.1	34.5	74.0	54.0	-27.9	-19.5	H
7.386	9.8	53.2	42.1	36.9	5.0	-46.5	0.0	1.0	49.5	38.4	74.0	54.0	-24.5	-15.6	V
7.386	9.8	54.3	42.0	36.9	5.0	-46.5	0.0	1.0	50.6	38.3	74.0	54.0	-23.4	-15.7	H
NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE NOISE FLOOR															

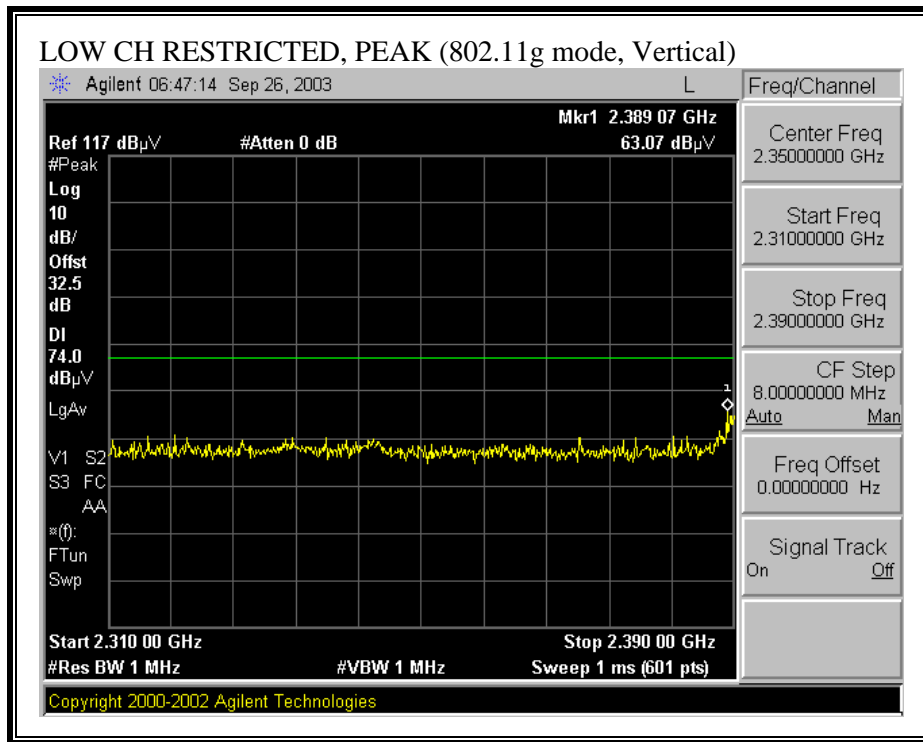
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field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

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

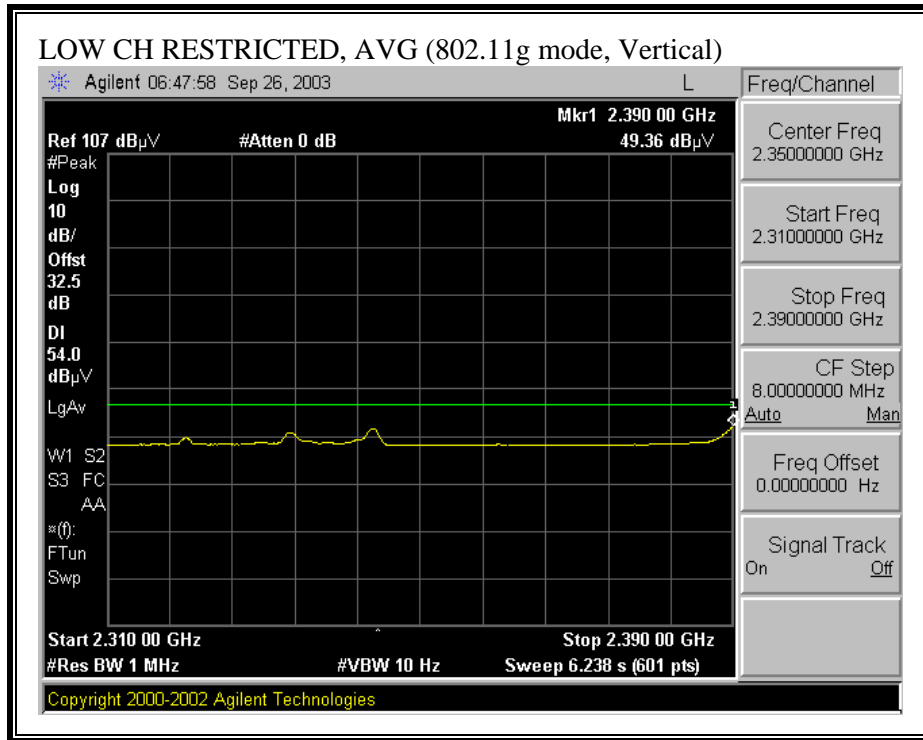




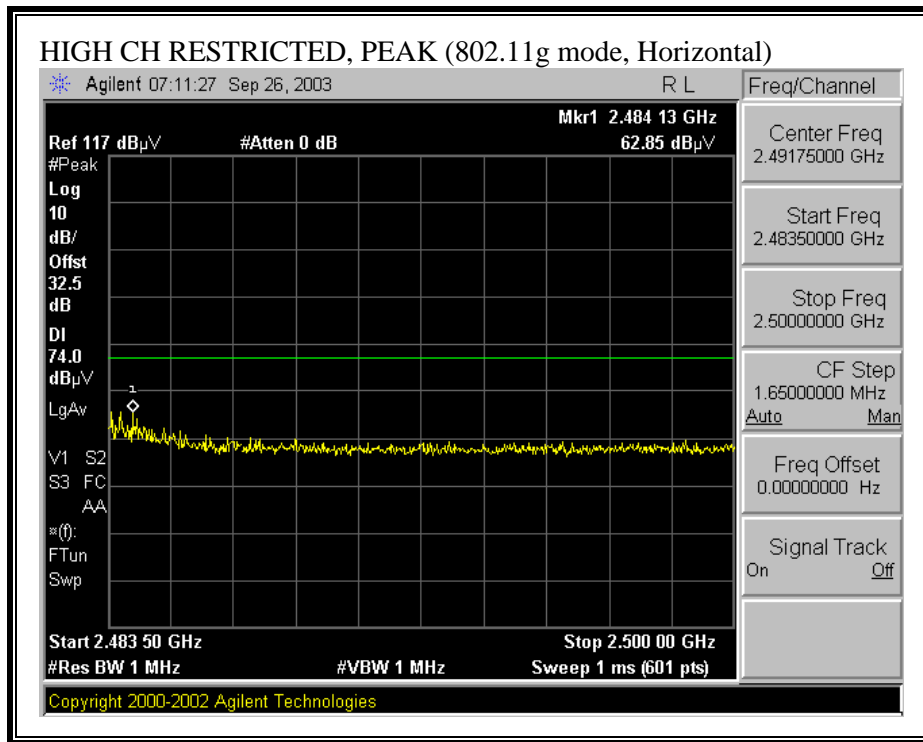
**RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)**

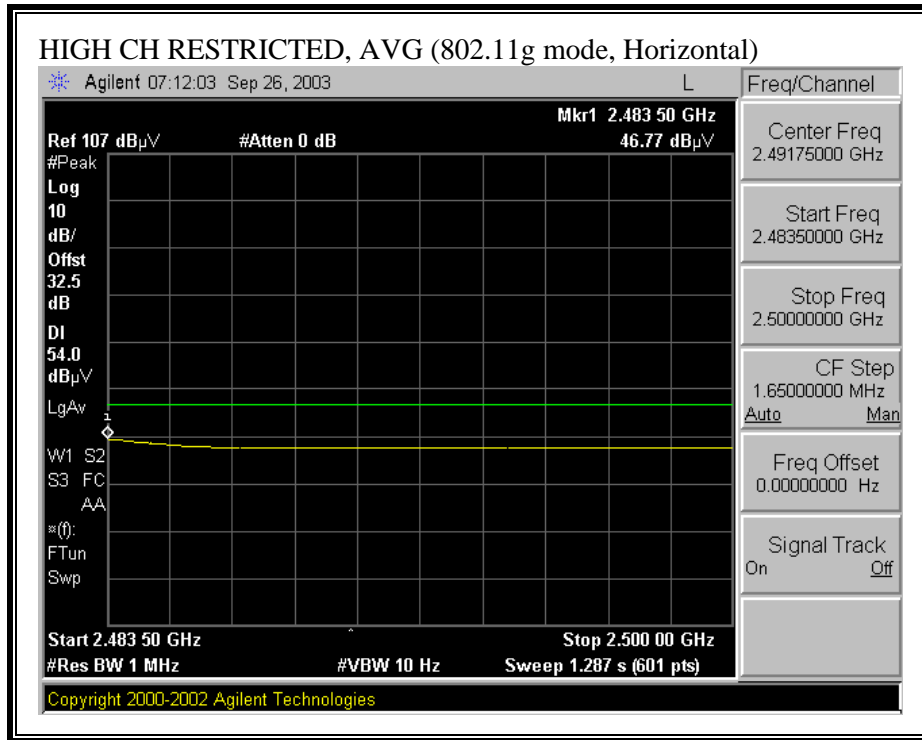




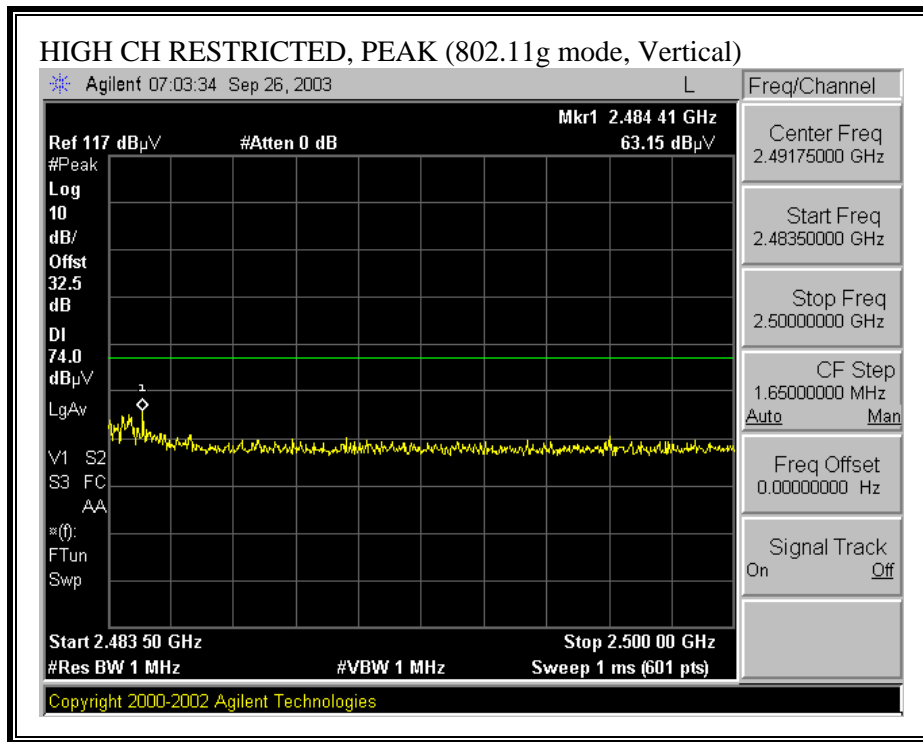


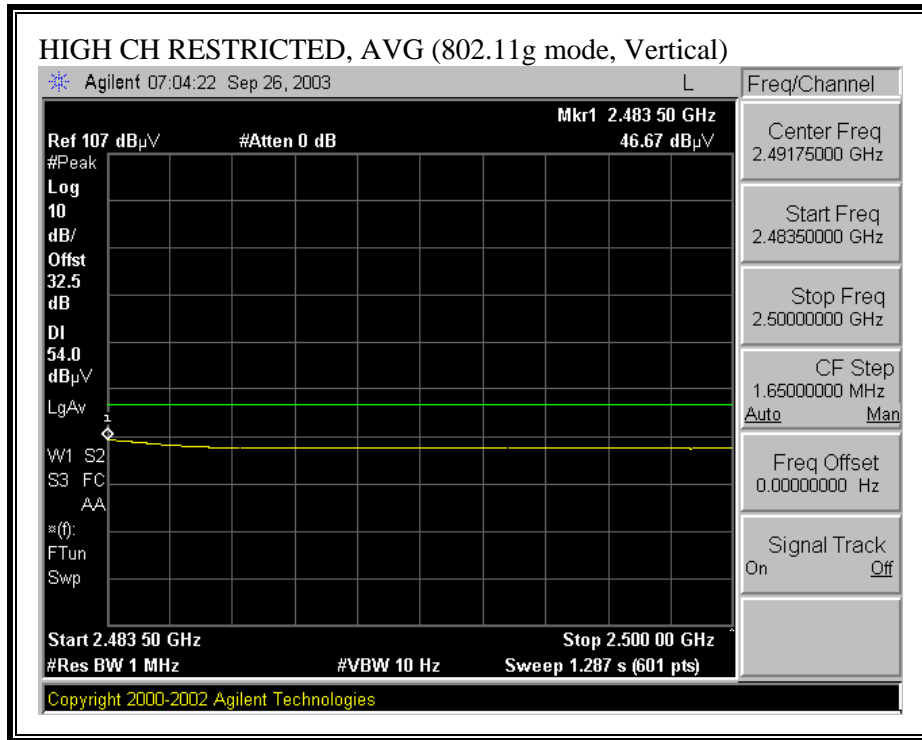
**RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)**





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





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

10/02/03 High Frequency Measurement  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: William Zhuang  
 Project #: 03U2214  
 Company Name: Atheros Communications  
 EUT Descr.: 802.11 b/g Cardbus AP33  
 EUT M/N: AP33-022-58  
 Test Target: FCC 15.247  
 Mode Oper: Tx, g mode, internal antenna

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @1m	Pre-amplifier 1-26GHz T86 Mitreq 924341	Spectrum Analyzer	Horn > 18GHz	Limit FCC 15.205
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Hi Frequency Cables:  
 (2 ft)    (2~3 ft)    (4~6 ft)    (12 ft)

Peak Measurements: 1 MHz Resolution Bandwidth, 1 MHz Video Bandwidth  
 Average Measurements: 1 MHz Resolution Bandwidth, 10 Hz 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
LOW CHANNEL															
4.824	9.8	55.0	41.2	33.9	3.9	-45.6	0.0	1.0	48.1	34.3	74.0	54.0	-25.9	-19.7	V
4.824	9.8	51.9	38.4	33.9	3.9	-45.6	0.0	1.0	45.0	31.5	74.0	54.0	-29.0	-22.5	H
MIDDLE CHANNEL															
4.874	9.8	58.0	43.2	33.9	3.9	-45.6	0.0	1.0	51.2	36.4	74.0	54.0	-22.8	-17.6	V
4.874	9.8	53.3	40.0	33.9	3.9	-45.6	0.0	1.0	46.5	33.2	74.0	54.0	-27.5	-20.8	H
7.311	9.8	55.3	40.6	36.8	4.9	-46.6	0.0	1.0	51.4	36.7	74.0	54.0	-22.6	-17.3	V
7.311	9.8	54.7	40.3	36.8	4.9	-46.6	0.0	1.0	50.8	36.4	74.0	54.0	-23.2	-17.6	H
HIGH CHANNEL															
4.924	9.8	53.0	40.0	34.0	3.9	-45.7	0.0	1.0	46.2	33.2	74.0	54.0	-27.8	-20.8	V
4.924	9.8	53.2	40.3	34.0	3.9	-45.7	0.0	1.0	46.4	33.5	74.0	54.0	-27.6	-20.5	H
7.386	9.8	53.9	42.3	36.9	5.0	-46.5	0.0	1.0	50.2	38.6	74.0	54.0	-23.8	-15.4	V
7.386	9.8	55.1	42.3	36.9	5.0	-46.5	0.0	1.0	51.4	38.6	74.0	54.0	-22.6	-15.4	H
NO OTHER SPURIOUS EMISSIONS DETECTED ABOVE THE 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		

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

10/02/03 High Frequency Measurement  
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: William Zhuang  
 Project #: 03U2214  
 Company Name: Atheros Communications  
 EUT Descr.: 802.11 b/g Cardbus AP33  
 EUT M/N: AP33-022-58  
 Test Target: FCC 15.247  
 Mode Oper: Tx, g turbo mode, Mid Ch. internal antenna

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifier 1-26GHz	Spectrum Analyzer	Horn > 18GHz	Limit
T73; S/N: 6717 @1m	T86 Miteq 924341			FCC 15.205

Hi Frequency Cables:

(2 ft)    (2~3 ft)    (4~6 ft)    (12 ft)

Peak Measurements:   Average Measurements:  
 1 MHz Resolution Bandwidth   1 MHz Resolution Bandwidth  
 1 MHz Video Bandwidth   10 Hz Video Bandwidth

f	Dist	Read Pk	Read Avg	AF	CL	Amp	D Corr	HPF	Peak	Avg	Pk Lim	Avg Lim	Pk Mar	Avg Mar	Notes
GHz	feet	dBuV	dBuV	dB/m	dB	dB	dB		dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB	
MIDDLE CHANNEL TURBO															
4.874	9.8	55.0	43.1	33.9	3.9	-45.6	0.0	1.0	48.2	36.3	74.0	54.0	-25.8	-17.7	Y
4.874	9.8	52.2	40.0	33.9	3.9	-45.6	0.0	1.0	45.4	33.2	74.0	54.0	-28.6	-20.8	H
7.311	9.8	54.9	42.0	36.8	4.9	-46.6	0.0	1.0	51.0	38.1	74.0	54.0	-23.0	-15.9	Y
7.311	9.8	54.5	41.3	36.8	4.9	-46.6	0.0	1.0	50.6	37.4	74.0	54.0	-23.4	-16.6	H
NO OTHER SPURIOUS EMISSIONS DETECTED ABOVE THE 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		