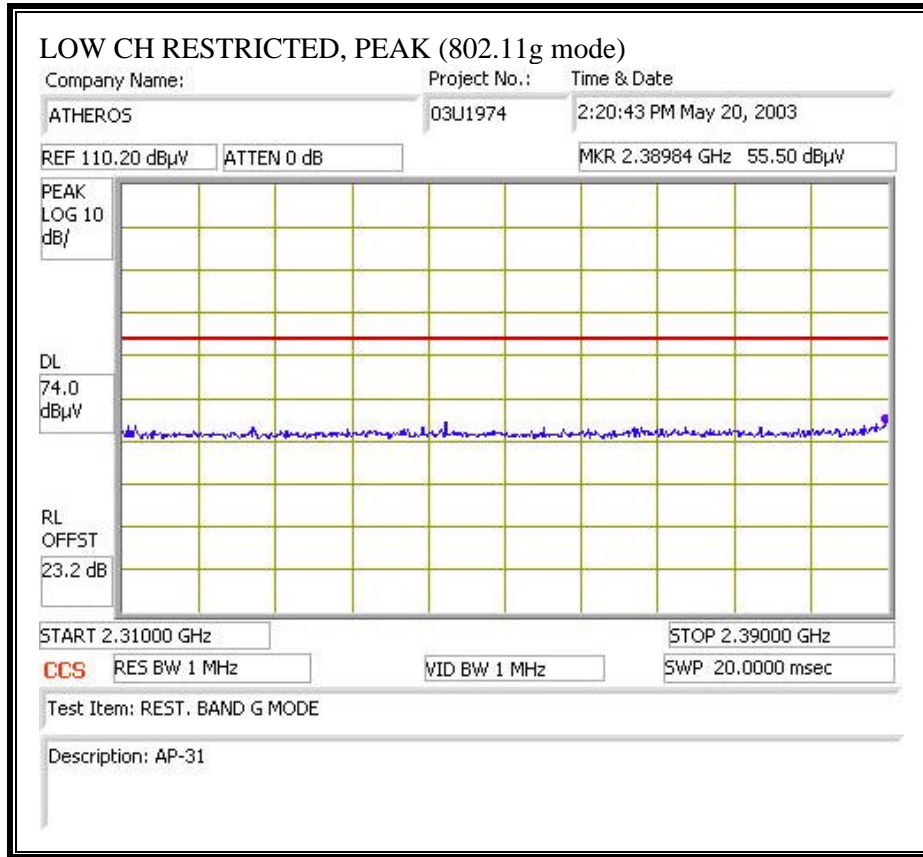
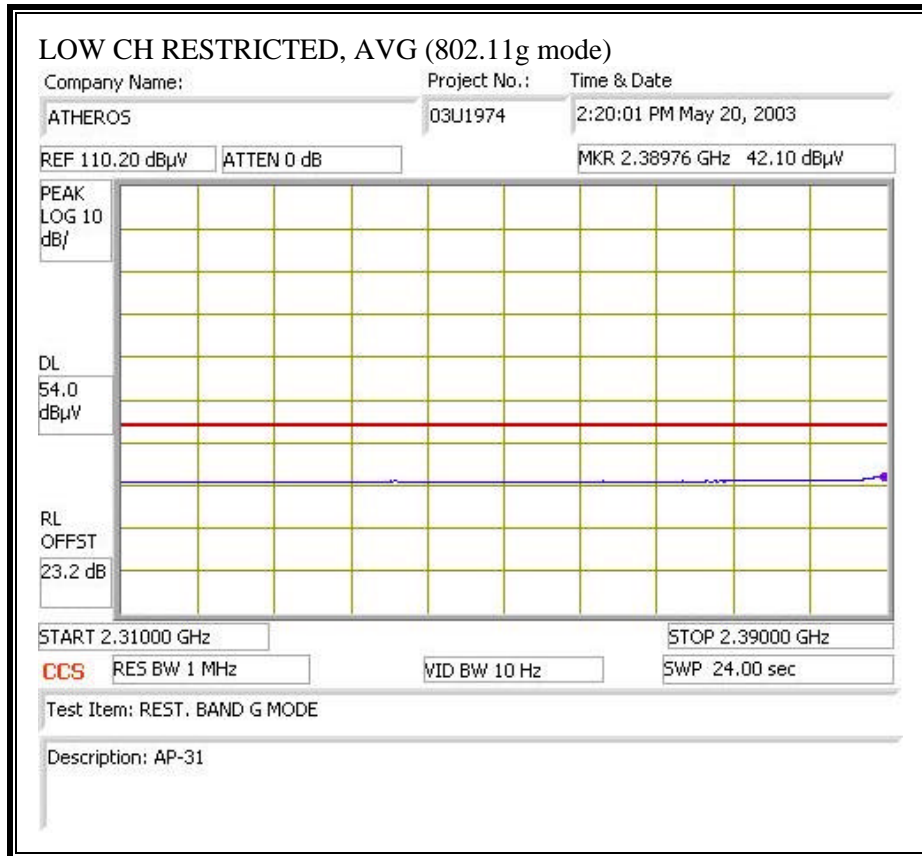
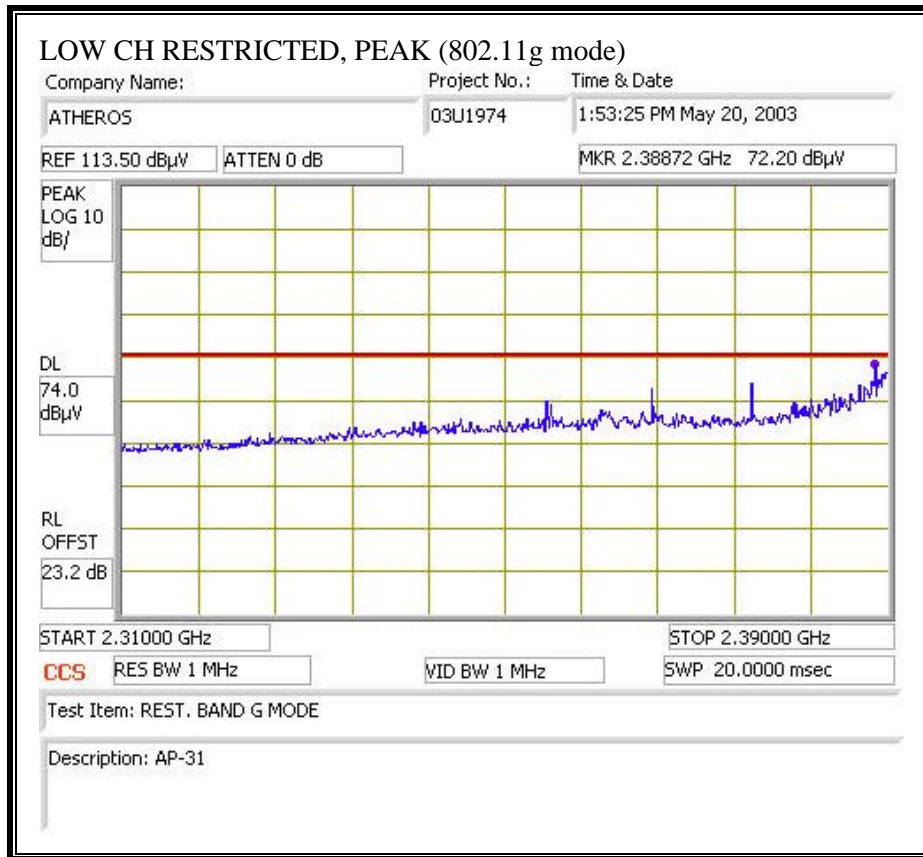


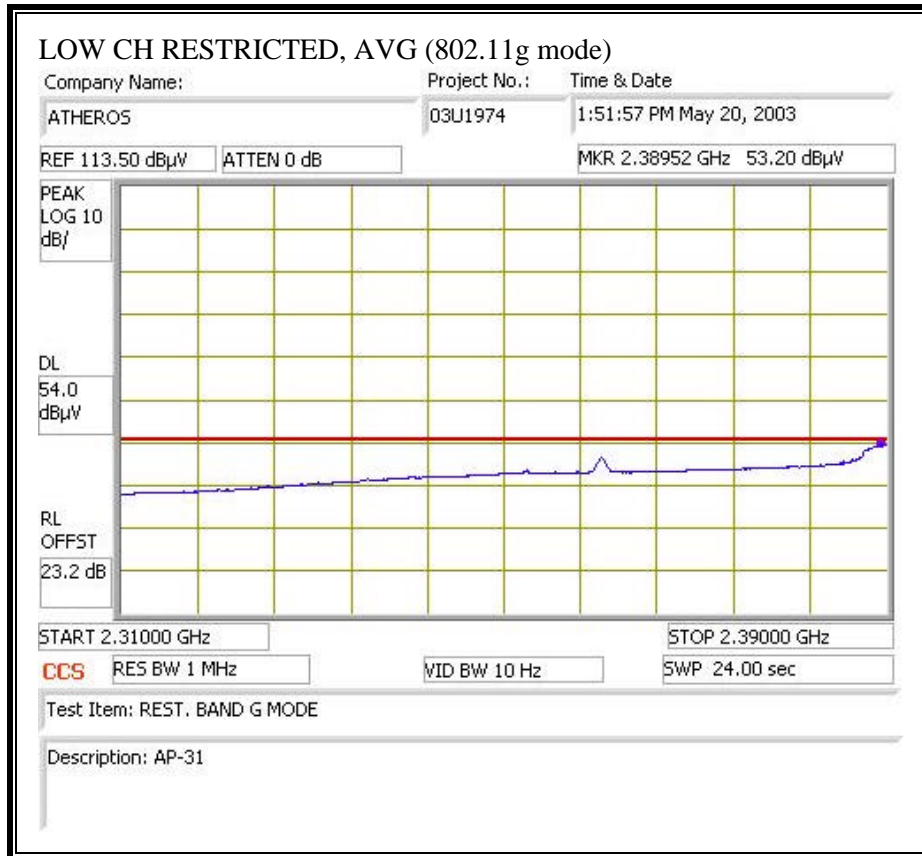
RESTRICTED BANDEGE (g NORMAL MODE, LOW CHANNEL, HORIZONTAL)



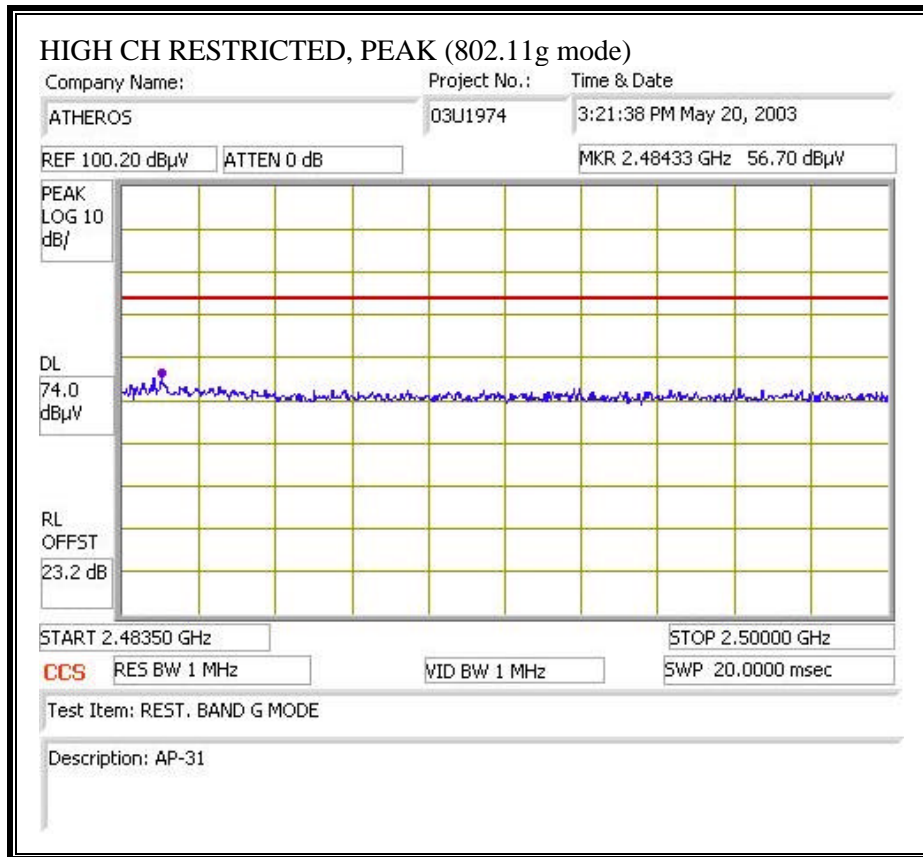


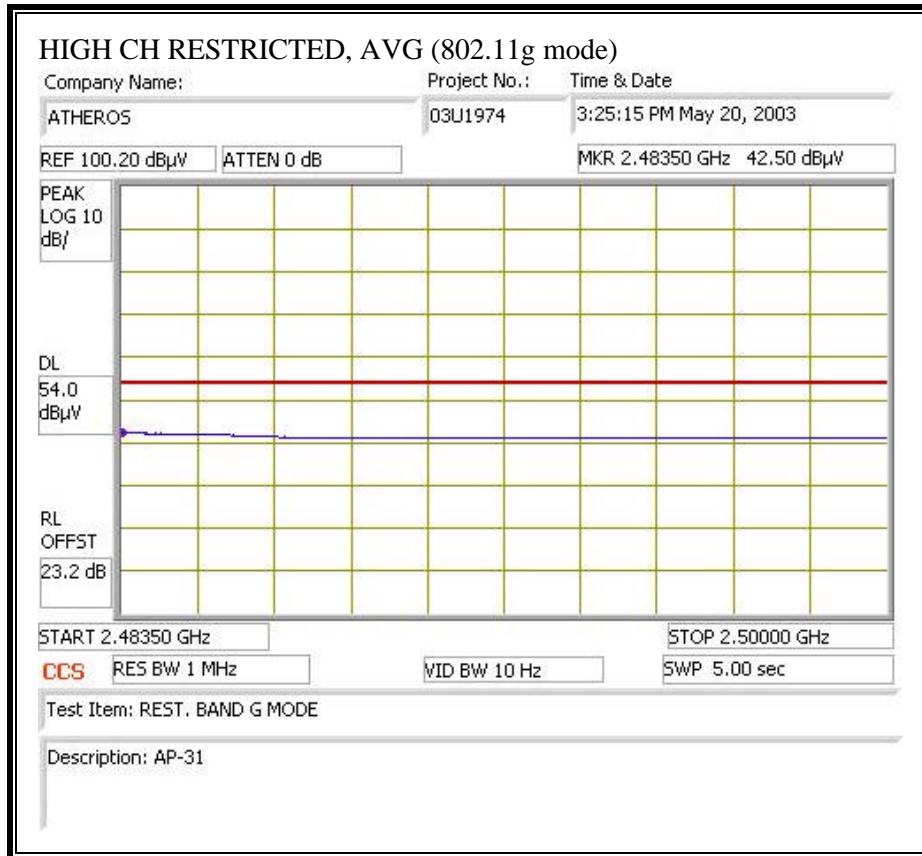
RESTRICTED BANDEGE (g NORMAL MODE, LOW CHANNEL, VERTICAL)



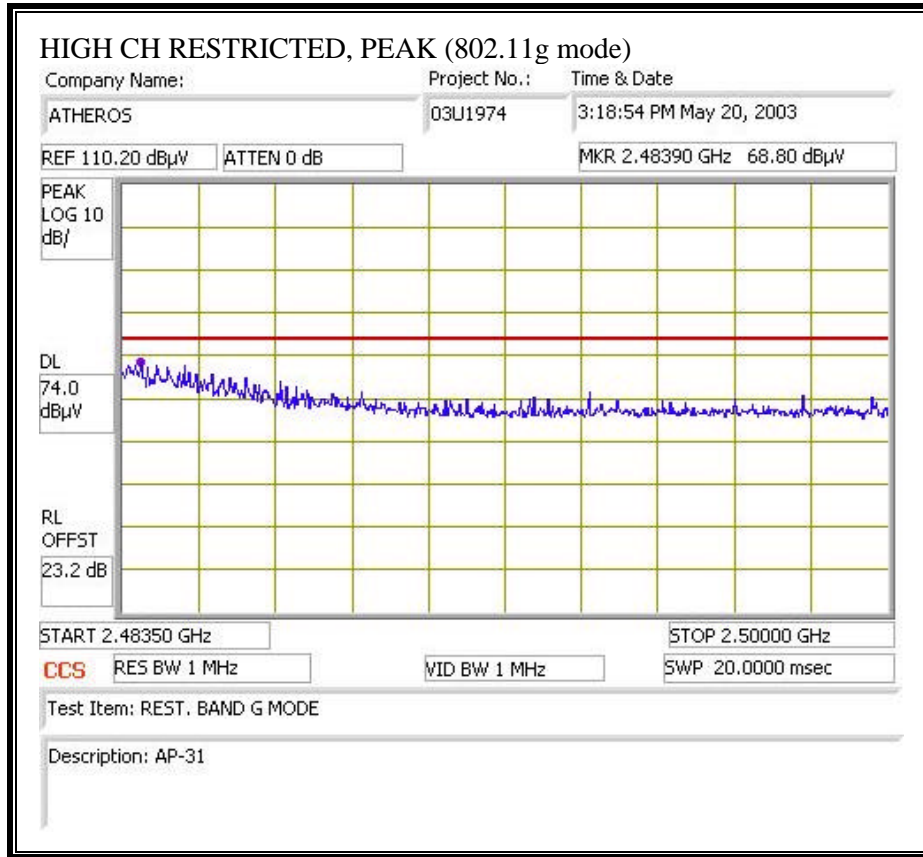


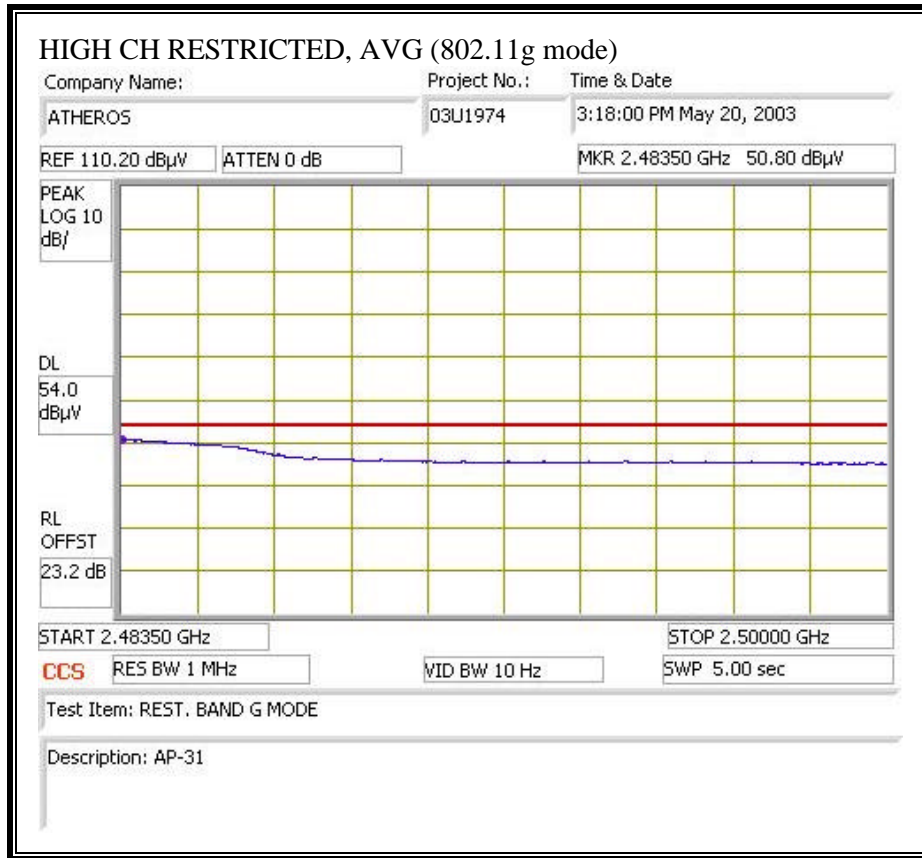
RESTRICTED BANDEDGE (g NORMAL MODE, HIGH CHANNEL, HORIZONTAL)





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





HARMONICS AND SPURIOUS EMISSIONS (g NORMAL MODE, LOW CHANNEL)

05/20/03 **High Frequency Measurement**
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
 Project #:
 Company: ATHEROS
 EUT Descr.:
 EUT M/N:
 Test Target:
 Mode Oper: G MODE

Test Equipment:

EMCO Horn 1-18GHz T60; S/N: 2238 @3m	Pre-amplifier 1-26GHz T86 Miteq 924341	Spectrum Analyzer HP 8566B Analyzer	Horn > 18GHz T87; ARA 18-26GHz; S/N:1049
---	---	--	---

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

Peak Measurements: 1 MHz Resolution Bandwidth
 1MHz Video Bandwidth
Average Measurements: 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
HARMONICS LOW CHANNEL=2412															
4.824	9.8	54.1	41.9	33.1	2.9	-45.6	0.0	1.0	45.5	33.3	74.0	54.0	-28.5	-20.7	V
12.059	9.8	45.7	37.0	39.3	5.1	-45.4	0.0	1.0	45.7	37.0	74.0	54.0	-28.3	-17.0	V
4.824	9.8	54.0	41.7	33.1	2.9	-45.6	0.0	1.0	45.4	33.1	74.0	54.0	-28.6	-20.9	V
12.059	9.8	46.6	36.1	39.3	5.1	-45.4	0.0	1.0	46.6	36.1	74.0	54.0	-27.4	-17.9	H
			spur					1.0							H
2.668	9.8	54.0	49.0	30.0	2.0	-44.0	0.0	1.0	43.1	38.1	74.0	54.0	-30.9	-15.9	V
2.668	9.8	54.2	48.9	30.0	2.0	-44.0	0.0	1.0	43.3	38.0	74.0	54.0	-30.7	-16.0	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

HARMONICS AND SPURIOUS EMISSIONS (g NORMAL MODE, MID CHANNEL)

05/20/03 **High Frequency Measurement**
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
 Project #:
 Company: ATHEROS
 EUT Descrip.:
 EUT M/N:
 Test Target:
 Mode Oper: G MODE

Test Equipment:

EMCO Horn 1-18GHz T60; S/N: 2238 @3m	Pre-amplifier 1-26GHz T86 Miteq 924341	Spectrum Analyzer HP 8566B Analyzer	Horn > 18GHz T87; ARA 18-26GHz; S/N:1049
---	---	--	---

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

Peak Measurements:
 1 MHz Resolution Bandwidth
 1MHz Video Bandwidth

Average Measurements:
 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
HARMONICS MIDDLE CHANNEL=2437															
4.875	9.8	53.7	42.3	33.1	3.0	-45.6	0.0	1.0	45.1	33.7	74.0	54.0	-28.9	-20.3	V
7.305	9.8	53.9	41.1	36.2	3.8	-46.6	0.0	1.0	48.3	35.5	74.0	54.0	-25.7	-18.5	V
12.186	9.8	49.6	37.0	39.4	5.2	-45.6	0.0	1.0	49.5	36.9	74.0	54.0	-24.5	-17.1	V
4.875	9.8	53.1	41.0	33.1	3.0	-45.6	0.0	1.0	44.5	32.4	74.0	54.0	-29.5	-21.6	H
7.305	9.8	49.7	39.3	36.2	3.8	-46.6	0.0	1.0	44.1	33.7	74.0	54.0	-29.9	-20.3	H
12.186	9.8	49.0	37.2	39.4	5.2	-45.6	0.0	1.0	48.9	37.1	74.0	54.0	-25.1	-16.9	H
								1.0							V
								1.0							V
			spur												
2.668	9.8	54.4	48.5	30.0	2.0	-44.0	0.0	1.0	43.5	37.5	74.0	54.0	-30.5	-16.5	V
2.668	9.8	53.2	47.2	30.0	2.0	-44.0	0.0	1.0	42.3	36.3	74.0	54.0	-31.7	-17.7	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

HARMONICS AND SPURIOUS EMISSIONS (g NORMAL MODE, HIGH CHANNEL)

05/20/03 High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
 Project #:
 Company: ATHEROS
 EUT Descrip.:
 EUT M/N:
 Test Target:
 Mode Oper: G MODE

Test Equipment:

EMCO Horn 1-18GHz T60; S/N: 2238 @3m	Pre-amplifier 1-26GHz T86 Miteq 924341	Spectrum Analyzer HP 8566B Analyzer	Horn > 18GHz T87; ARA 18-26GHz; S/N:1049
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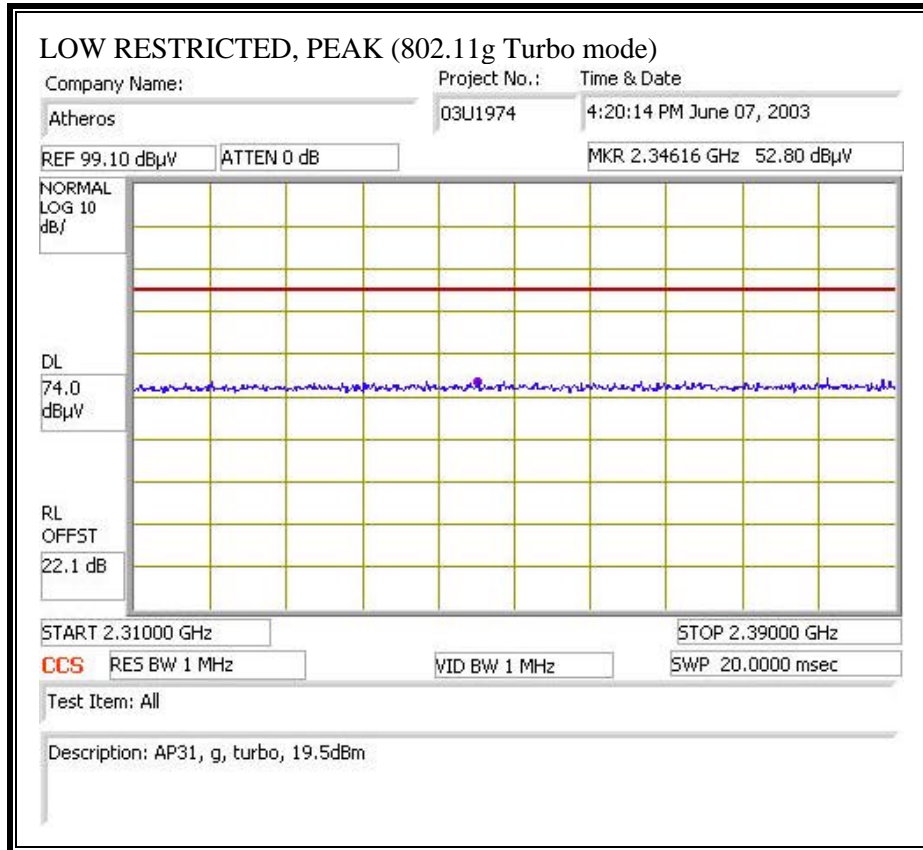
Hi Frequency Cables
 (2 ft) (2 ~ 3 ft) (4 ~ 6 ft) (12 ft)

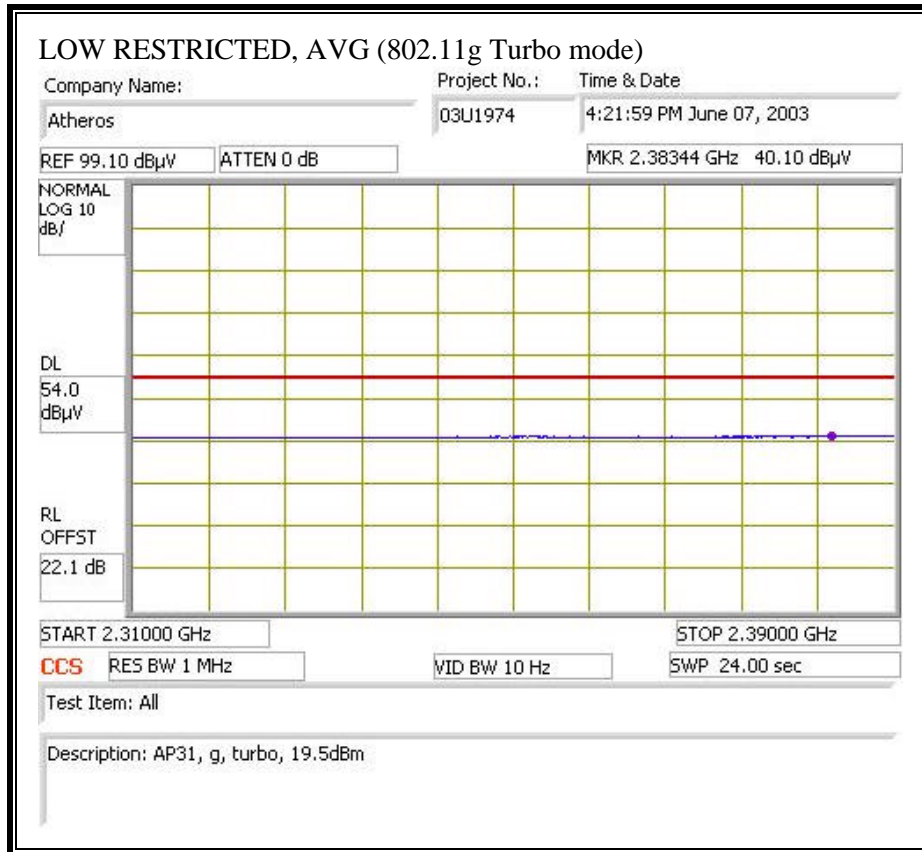
Peak Measurements: 1 MHz Resolution Bandwidth, 1 MHz Video Bandwidth
 Average Measurements: 1 MHz Resolution Bandwidth, 10Hz Video Bandwidth

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
HARMONICS HIGH CHANNEL=2462															
4.927	9.8	53.9	41.8	33.2	3.0	-45.7	0.0	1.0	45.3	33.2	74.0	54.0	-28.7	-20.8	V
7.380	9.8	55.3	43.2	36.3	3.8	-46.5	0.0	1.0	49.8	37.7	74.0	54.0	-24.2	-16.3	V
12.305	9.8	48.3	37.8	39.4	5.2	-45.7	0.0	1.0	48.1	37.6	74.0	54.0	-25.9	-16.4	V
4.927	9.8	52.6	41.1	33.2	3.0	-45.7	0.0	1.0	44.0	32.5	74.0	54.0	-30.0	-21.5	H
7.380	9.8	51.2	40.3	36.3	3.8	-46.5	0.0	1.0	45.7	34.8	74.0	54.0	-28.3	-19.2	H
12.305	9.8	48.5	37.9	39.4	5.2	-45.7	0.0	1.0	48.3	37.7	74.0	54.0	-25.7	-16.3	H
								1.0							V
								1.0							V
			spur												
2.668	9.8	55.3	49.9	30.0	2.0	-44.0	0.0	1.0	44.4	39.0	74.0	54.0	-29.6	-15.0	V
2.668	9.8	54.3	48.1	30.0	2.0	-44.0	0.0	1.0	43.4	37.2	74.0	54.0	-30.6	-16.8	V

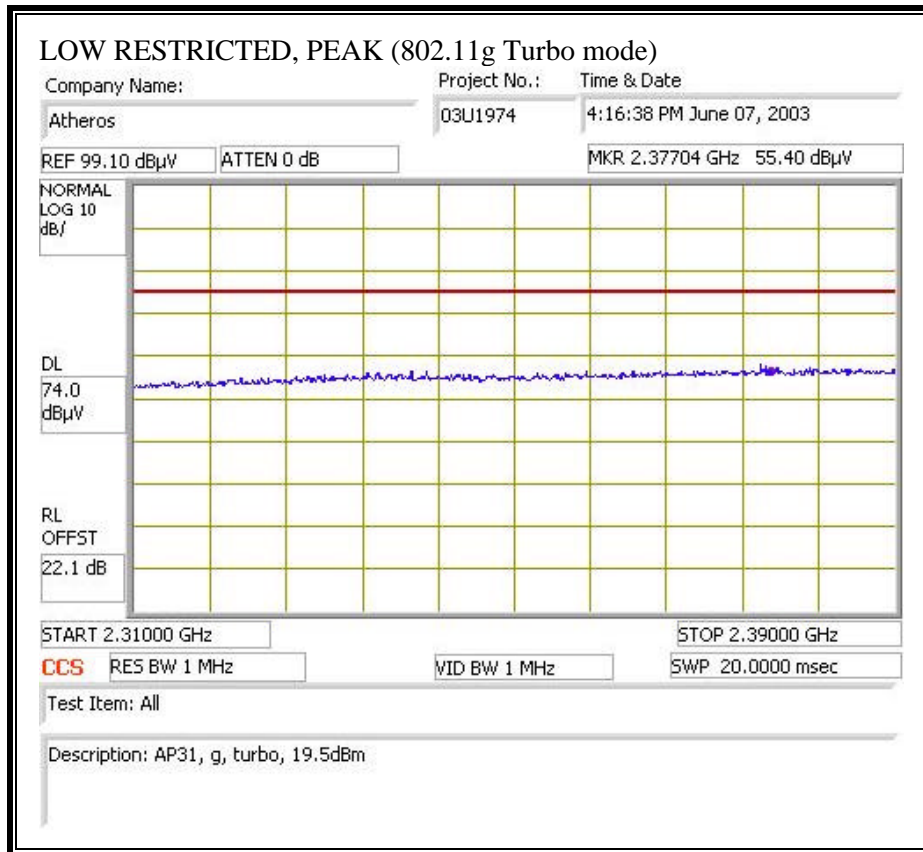
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field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

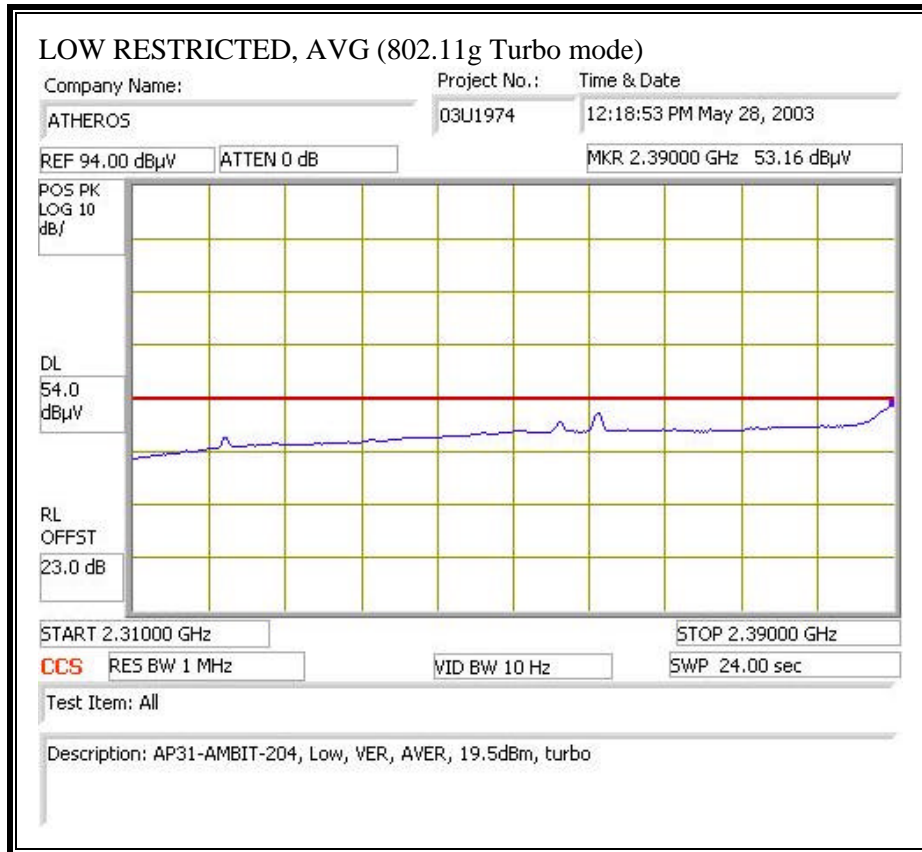
LOW RESTRICTED BANDEDGE (g TURBO MODE, HORIZONTAL)



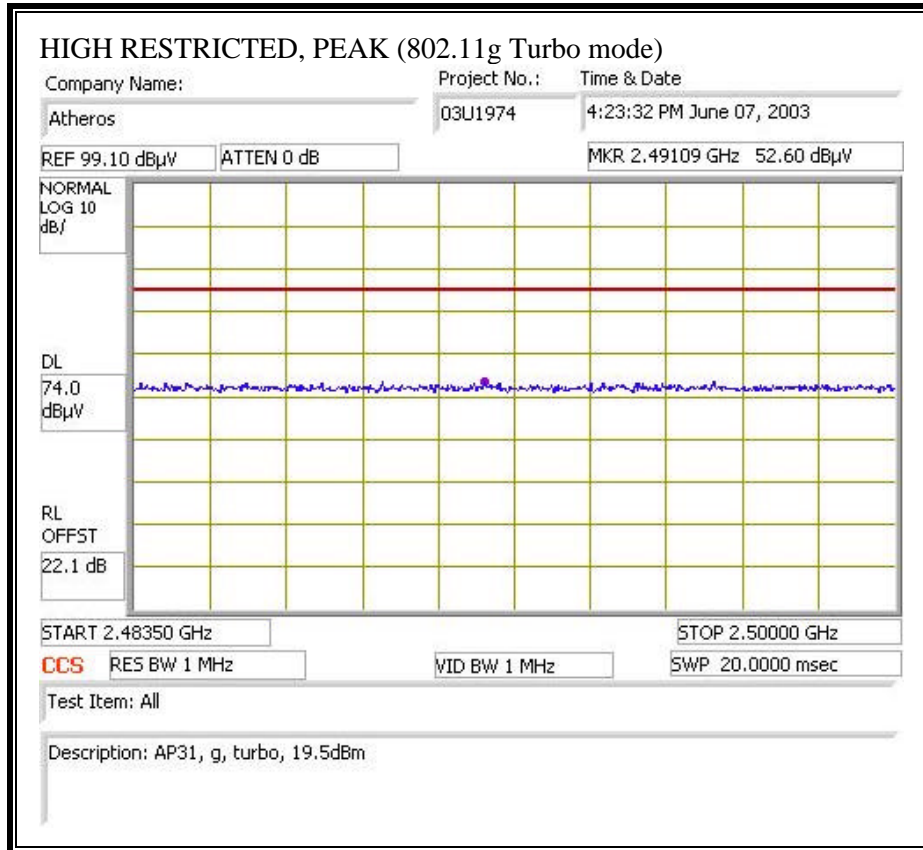


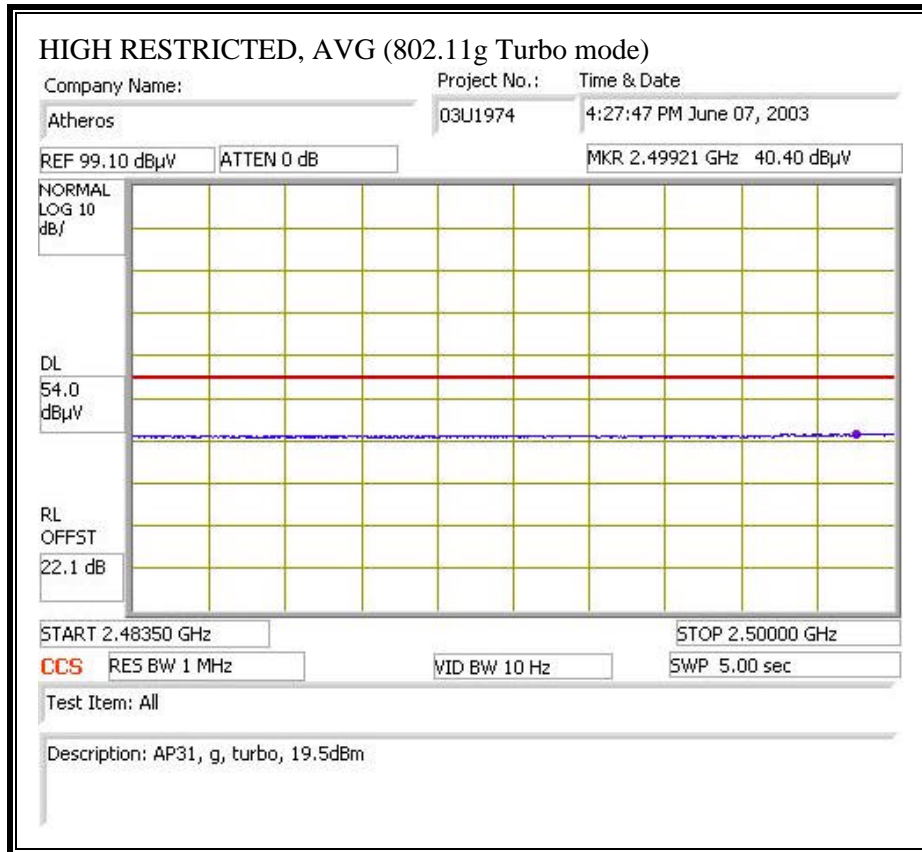
LOW RESTRICTED BANDEGE (g TURBO MODE, VERTICAL)



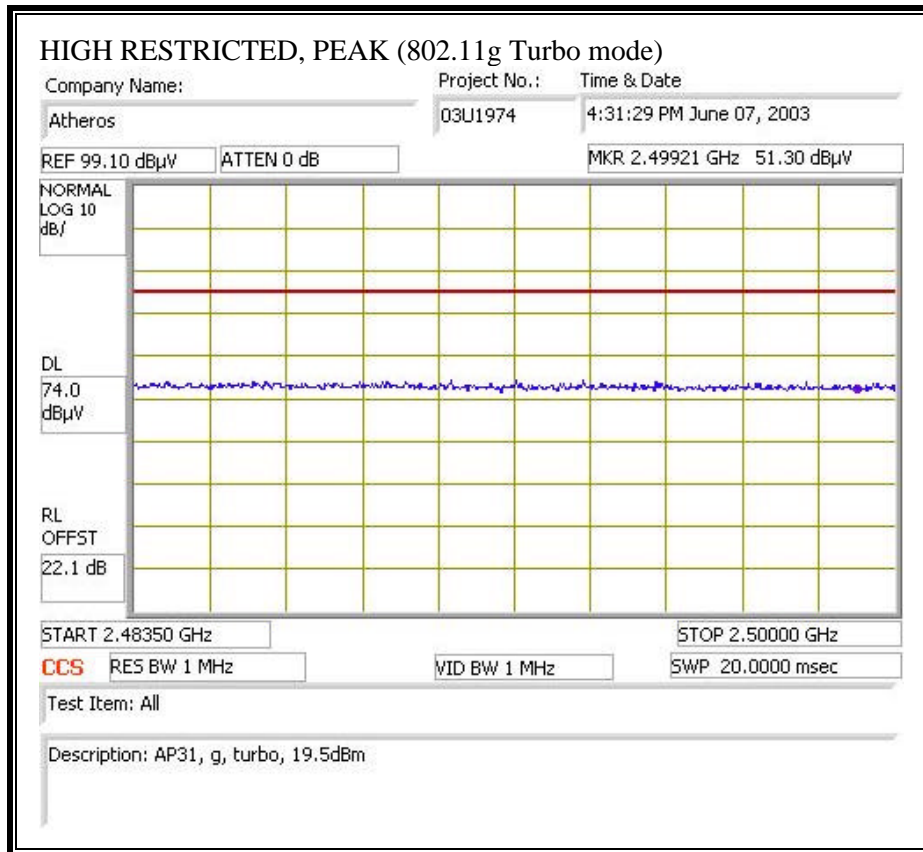


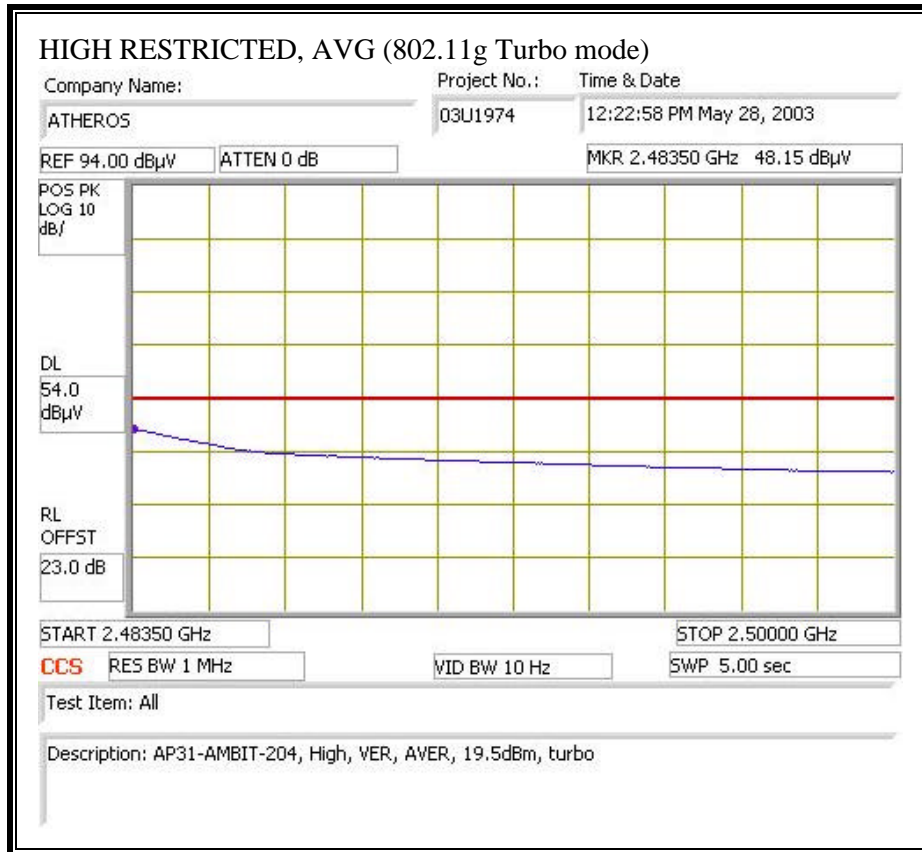
HIGH RESTRICTED BANDEDGE (g TURBO MODE, HORIZONTAL)





HIGH RESTRICTED BANDEDGE (g TURBO MODE, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS (g TURBO MODE)

05/20/03 **High Frequency Measurement**
 Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
 Project #:
 Company: ATHEROS
 EUT Descrip.:
 EUT M/N:
 Test Target:
 Mode Oper: G MODE

Test Equipment:

EMCO Horn 1-18GHz T60; S/N: 2238 @3m	Pre-amplifier 1-26GHz T86 Miteq924341	Spectrum Analyzer HP 8566B Analyzer	Horn > 18GHz T87; ARA 18-26GHz; S/N:1049
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Hi Frequency Cables
 (2 ft) (2 - 3 ft) (4 - 6 ft) (12 ft)

Peak Measurements: 1 MHz Resolution Bandwidth
 1MHz Video Bandwidth
Average Measurements: 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
HARMONICS MIDDLE CHANNEL-2437 TURBO															
4.875	9.8	53.1	41.5	33.1	3.0	-45.6	0.0	1.0	44.5	32.9	74.0	54.0	-29.5	-21.1	V
7.305	9.8	50.9	39.4	36.2	3.8	-46.6	0.0	1.0	45.3	33.8	74.0	54.0	-28.7	-20.2	V
12.186	9.8	48.3	37.0	39.4	5.2	-45.6	0.0	1.0	48.2	36.9	74.0	54.0	-25.8	-17.1	V
4.875	9.8	51.7	40.0	33.1	3.0	-45.6	0.0	1.0	43.1	31.4	74.0	54.0	-30.9	-22.6	H
7.305	9.8	50.3	39.0	36.2	3.8	-46.6	0.0	1.0	44.7	33.4	74.0	54.0	-29.3	-20.6	H
12.186	9.8	48.2	37.3	39.4	5.2	-45.6	0.0	1.0	48.1	37.2	74.0	54.0	-25.9	-16.8	H
								1.0							V
								1.0							V
			spur												
2.668	9.8	54.0	47.3	30.0	2.0	-44.0	0.0	1.0	43.1	36.4	74.0	54.0	-30.9	-17.6	V
2.668	9.8	54.1	47.2	30.0	2.0	-44.0	0.0	1.0	43.2	36.3	74.0	54.0	-30.8	-17.7	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

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

	Project #: 03U1974-1 Report #: 030514B1 Date & Time: 05/14/03 9:41 AM Test Engr: Chin Pang
	FCC, VCCI, CISPR, CE, AUSTEL, NZ UL, CSA, TUV, BSMI, DHHS, NVLAP 561F MONTEREY ROAD, SAN JOSE, CA 95037-9001 PHONE: (408) 463-0885 FAX: (408) 463-0888
Company: Atheros Communications, Inc. EUT Description: 802.11b/g w/Turbo Access Point Test Configuration: EUT/Netgear Hub Type of Test: FCC Class B Mode of Operation: Tx	<< Main Sheet

Freq. (MHz)	Reading (dBuV)	AF (dB)	Class (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC_B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
250.00	53.40	12.51	3.85	27.96	41.80	46.00	-4.20	3mV	0.00	1.50	P
900.00	40.40	20.40	7.83	28.38	40.25	46.00	-5.75	3mV	0.00	1.00	P
850.00	40.70	20.07	7.57	28.45	39.89	46.00	-6.11	3mV	0.00	1.50	P
400.00	48.00	15.42	4.96	28.53	39.85	46.00	-6.15	3mV	0.00	1.00	P
50.45	51.70	8.24	1.84	28.50	33.28	40.00	-6.72	3mV	0.00	1.00	P
50.00	51.60	8.33	1.83	28.50	33.26	40.00	-6.74	3mV	0.00	1.20	P
6 Worst Data											

7.7. 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 μ 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

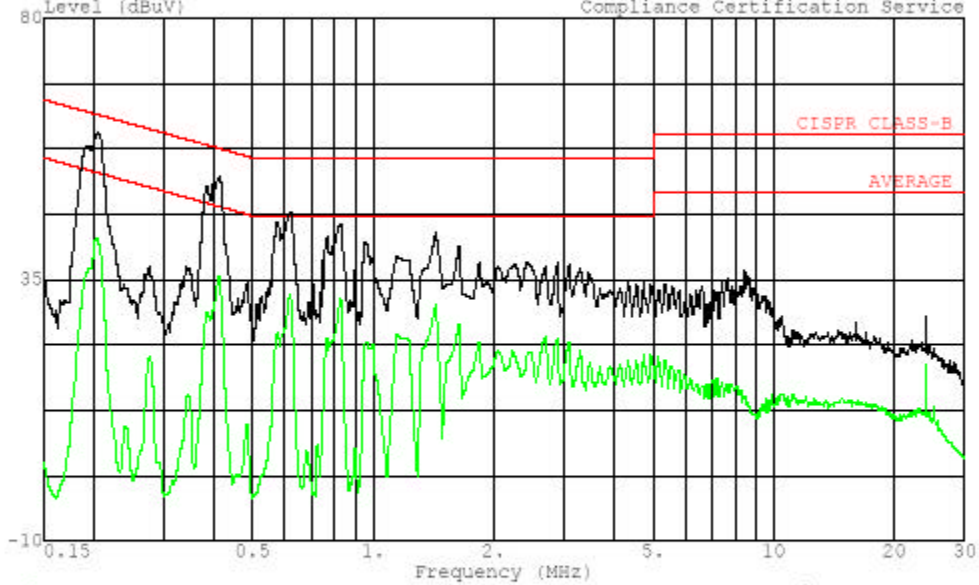
CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.21	60.28	--	41.92	0.00	64.43	54.43	-4.15	-12.51	L1
0.41	52.68	--	35.61	0.00	58.49	48.49	-5.81	-12.88	L1
0.62	46.58	--	33.04	0.00	56.00	46.00	-9.42	-12.96	L1
0.21	56.20	--	48.36	0.00	64.43	54.43	-8.23	-6.07	L2
0.41	52.82	--	45.13	0.00	58.57	48.57	-5.75	-3.44	L2
1.41	49.39	--	37.19	0.00	56.00	46.00	-6.61	-8.81	L2
6 Worst Data									

LINE 1 (LINE) RESULTS



561F Monterey Road,
San Jose, CA 95037 USA
Tel: (408) 463-0885
Fax: (408) 463-0888

Data#: 7 File#: 1974LC.EMI Date: 06-02-2003 Time: 17:25:16
Compliance Certification Service



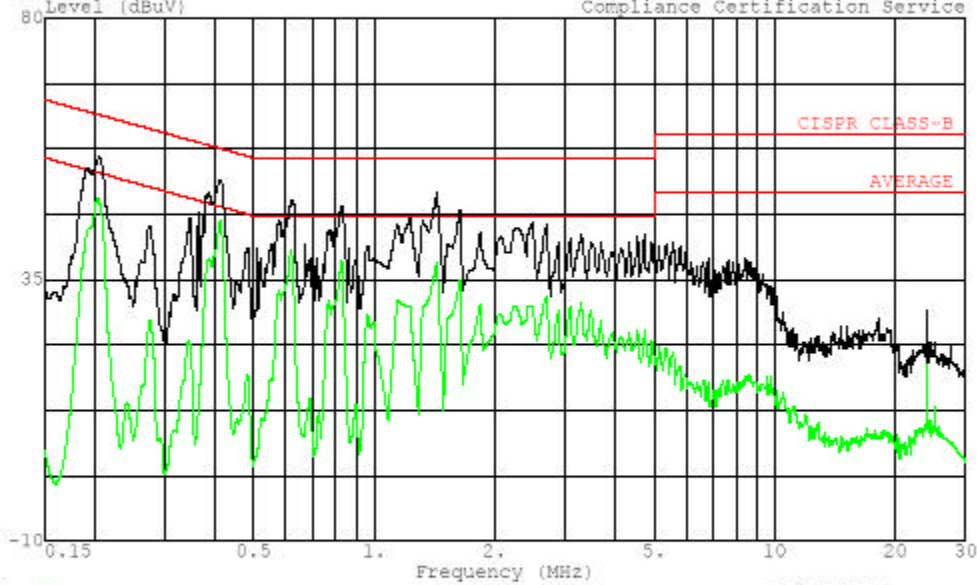
Trace: 5
Project #: 03U1974-1
Test Engineer: Chin Pang
Company: Atheros
EUT: 802.11 b/g w/Turbo Access Point
Model: TBA
Configuration: EUT/Netgear Hub
Target of Test: FCC Class B
: 115Vac, 60Hz
: L1: Peak | Black |, Ave | Green |

LINE 2 (NEUTRAL) RESULTS



561F Monterey Road,
San Jose, CA 95037 USA
Tel: (408) 463-0885
Fax: (408) 463-0888

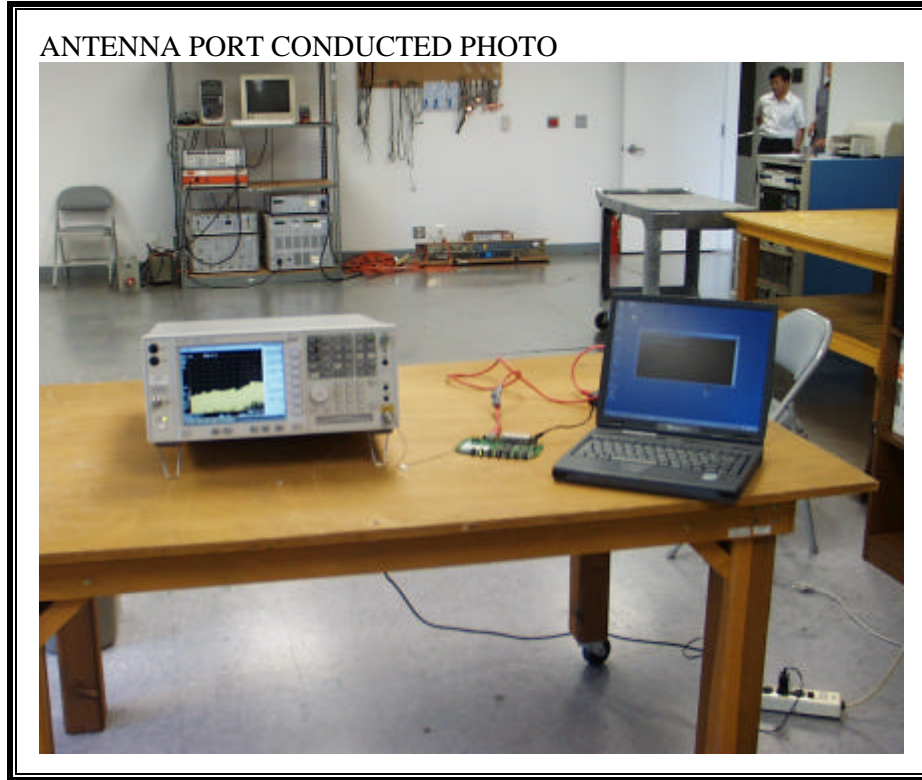
Data#: 14 File#: 1974LC.EMI Date: 06-02-2003 Time: 17:34:15
Compliance Certification Service



Trace: 12
Project # : 03U1974-1
Test Engineer : Chin Pang
Company : Atheros
EUT : 802.11 b/g w/Turbo Access Point
Model : TBA
Configuration : EUT/Netgear Hub
Target of Test: FCC Class B
: 115Vac, 60Hz
: L2: Peak | black |, Ave | Green |

8. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP

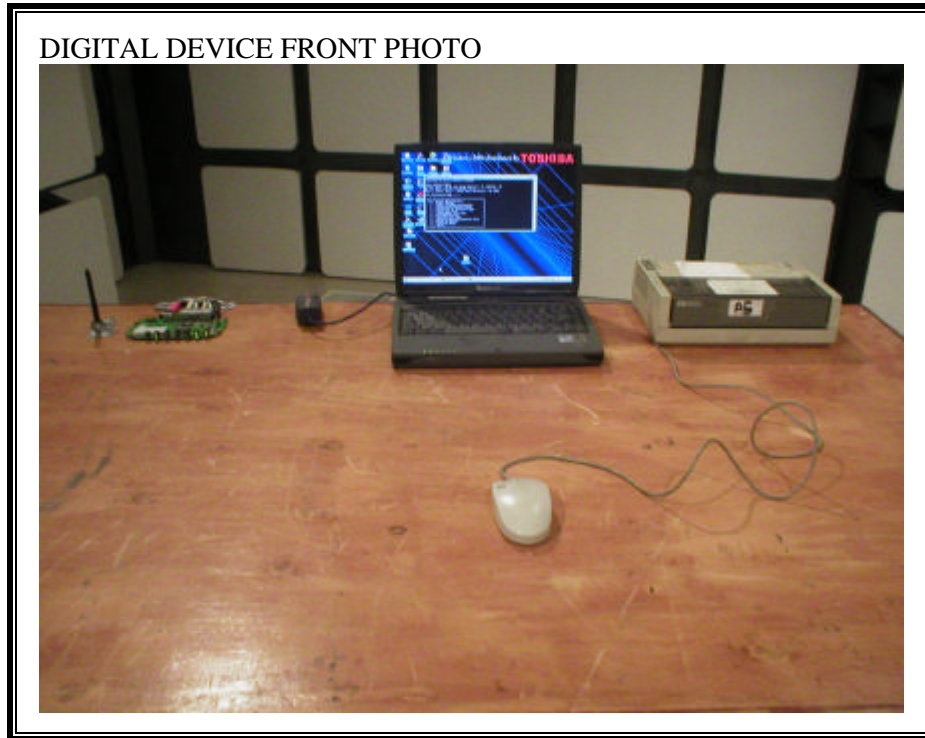


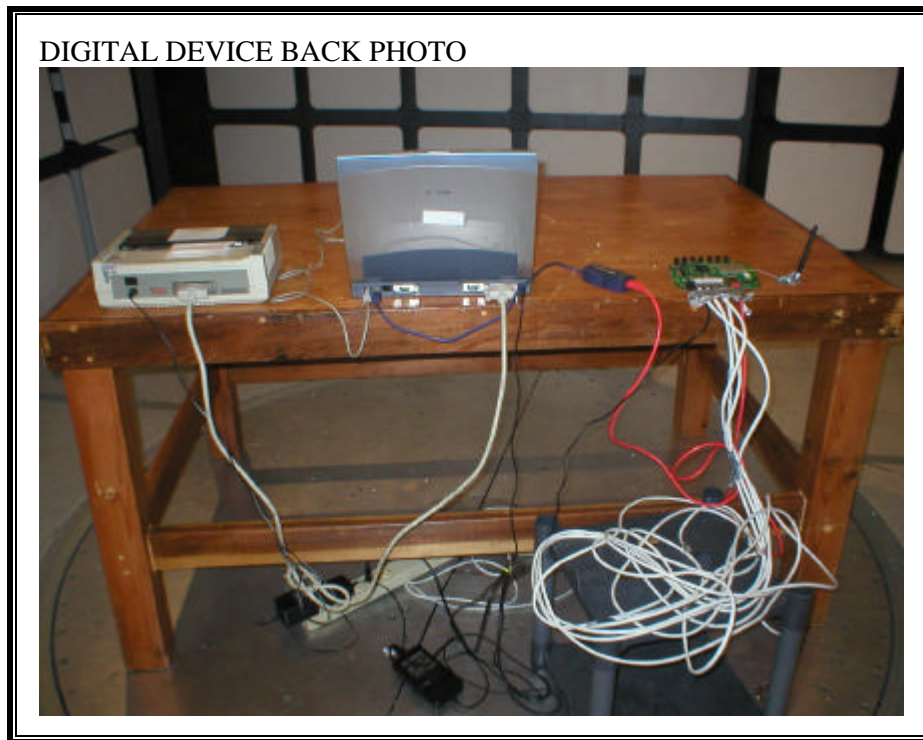
RADIATED RF MEASUREMENT SETUP





DIGITAL DEVICE MEASUREMENT SETUP





POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP





END OF REPORT