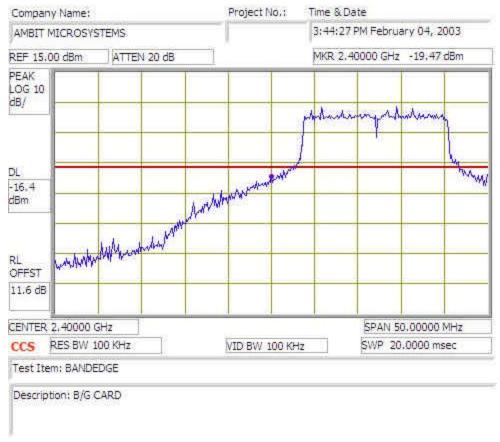
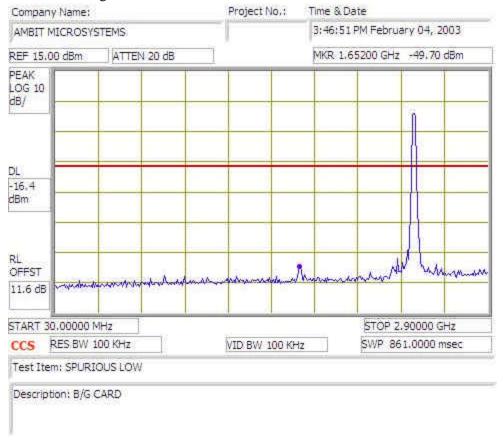
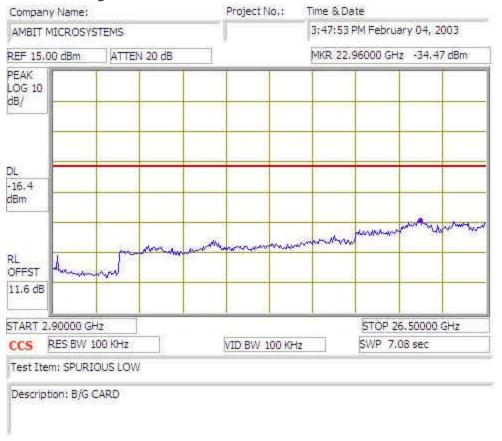
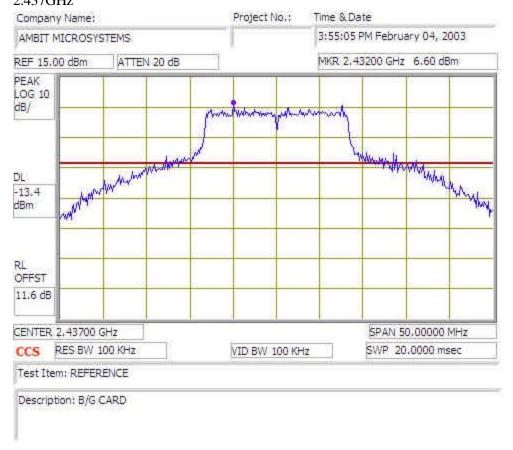
CONDUCTED SPURIOUS EMISSIONS (2.4 GHZ g BAND)

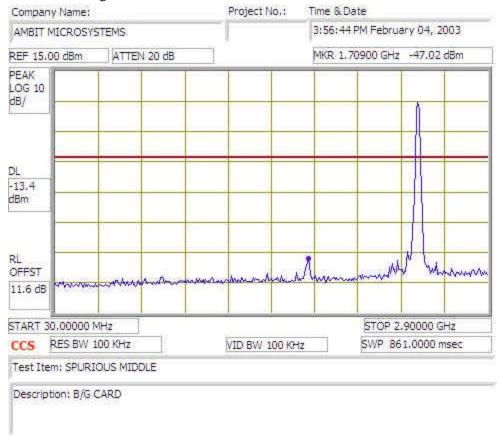
2.412GHz

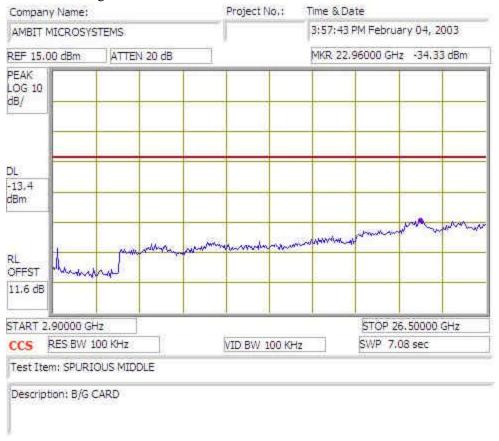


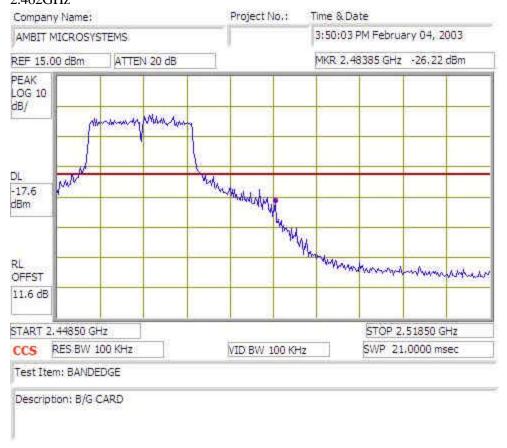


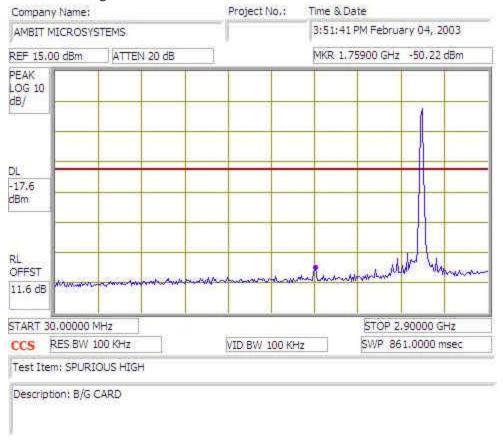


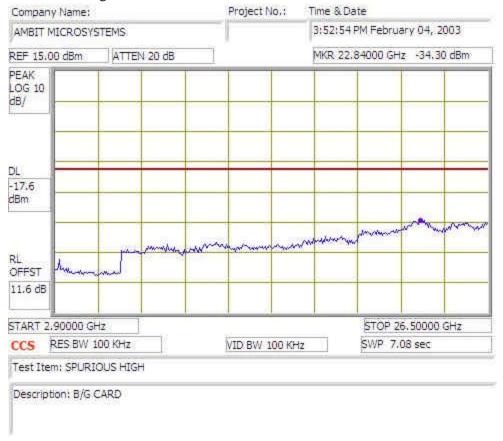




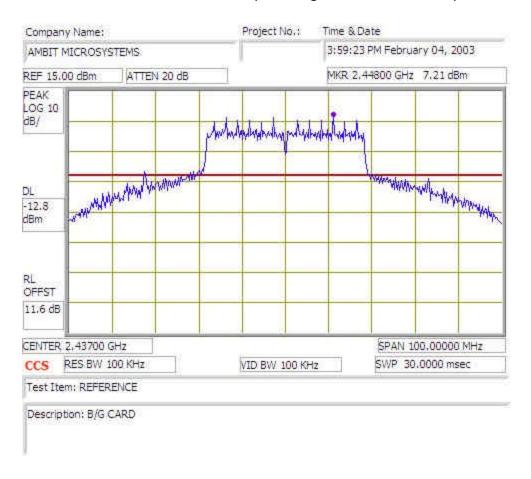


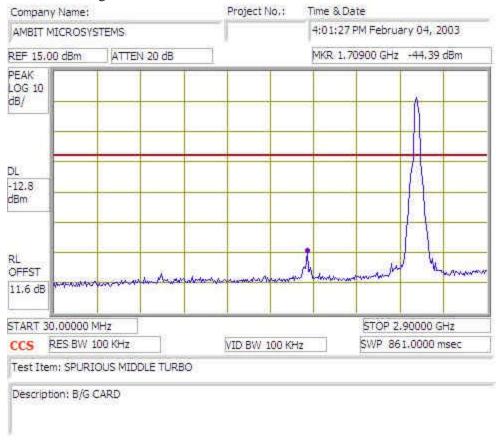


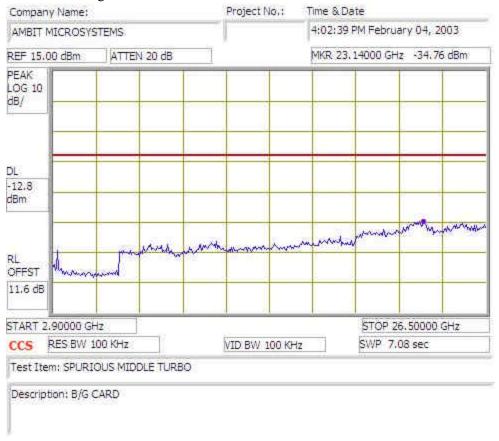




CONDUCTED SPURIOUS EMISSIONS (2.4 GHZ g BAND, TURBO MODE)







8.7. RADIATED EMISSIONS

TEST SETUP

The EUT is placed on the wooden table. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4/1992.

The EUT is set to transmit in a continuous mode.

TEST PROCEDURE

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz, the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

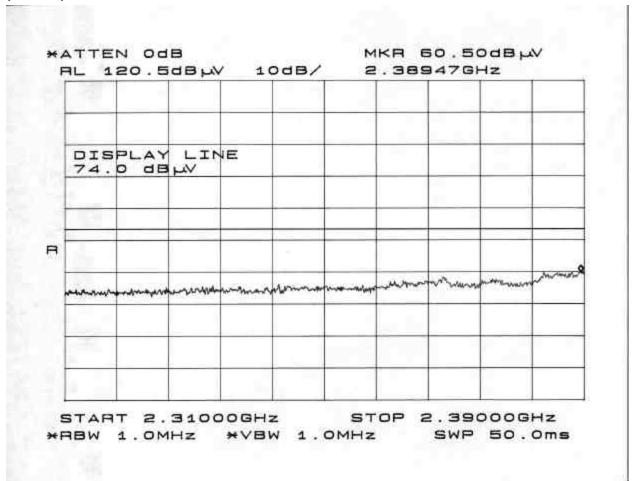
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels within the 2.4 GHz band.

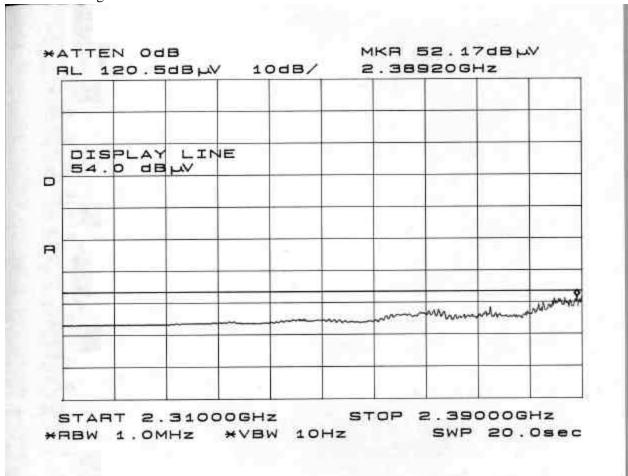
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The frequency span is set small enough to easily differentiate between broadcast stations, intermittent ambient signals and EUT emissions. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the suspected signal. Measurements were made with the antenna polarized in both the vertical and the horizontal positions.

TEST RESULTS

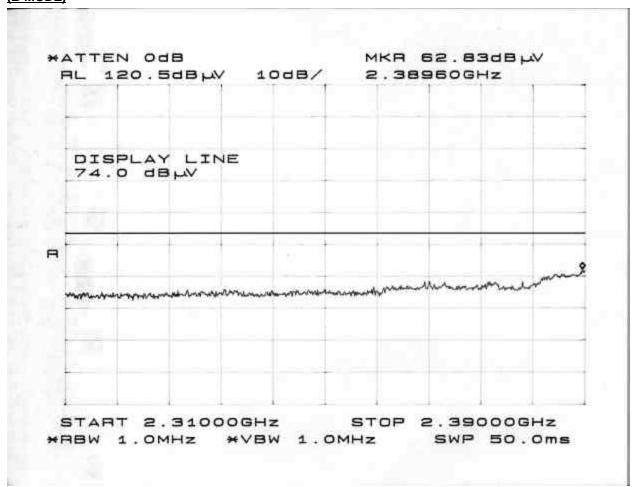
No non-compliance noted:

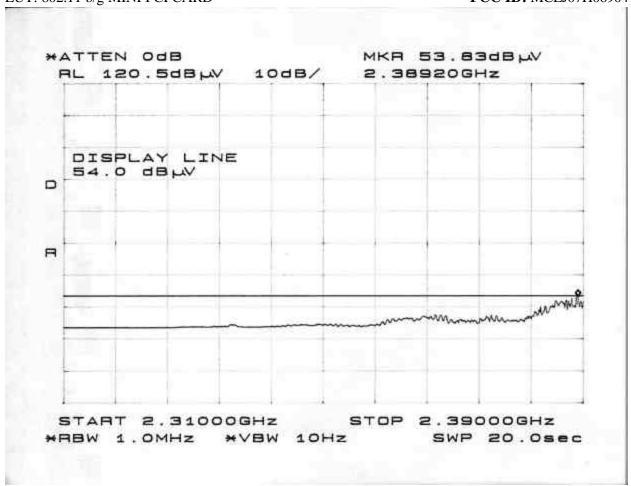
RESTRICTED BAND RADIATED EMISSIONS (LOW CHANNEL, HORIZONTAL POLARIZATION) (B MODE)



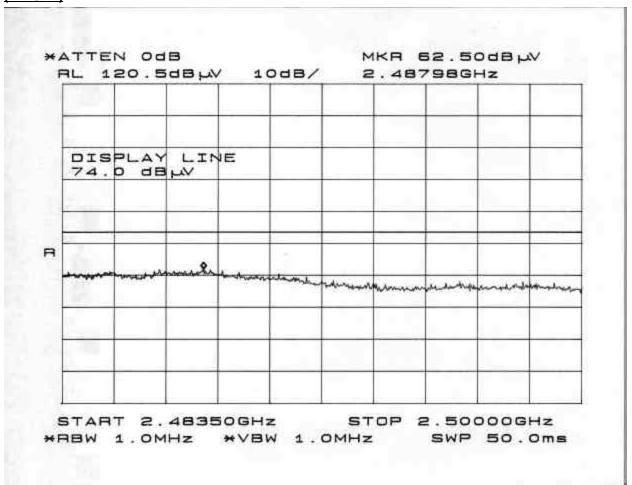


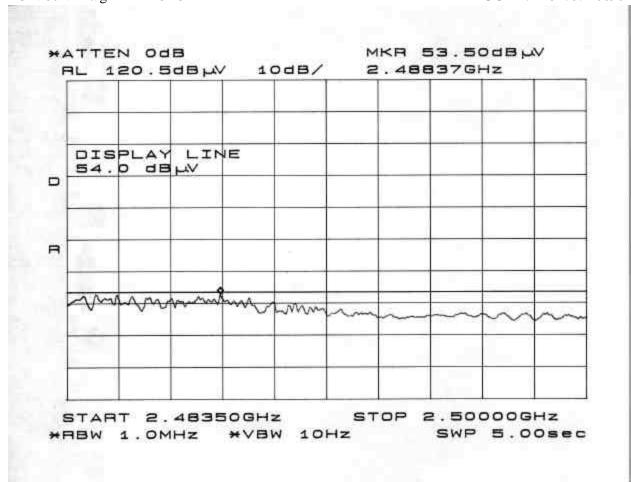
RESTRICTED BAND RADIATED EMISSIONS (LOW CHANNEL, VERTICAL POLARIZATION) (B MODE)



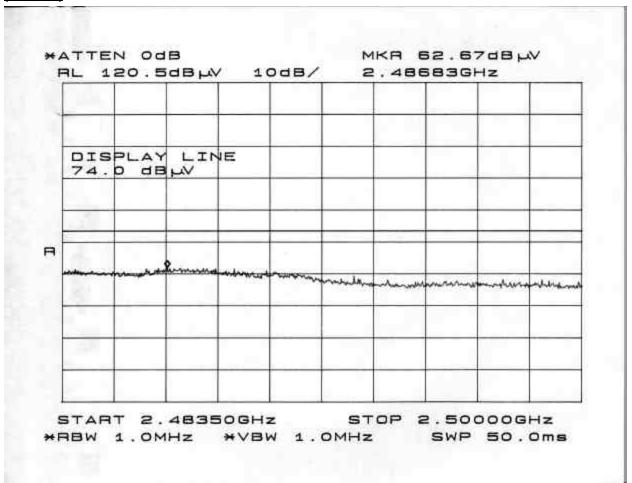


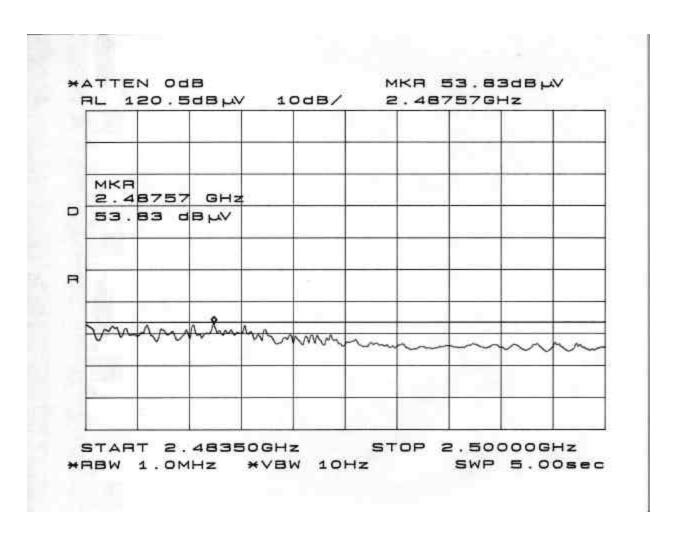
RESTRICTED BAND RADIATED EMISSIONS (HIGH CHANNEL, HORIZONTAL POLARIZATION) (B MODE)



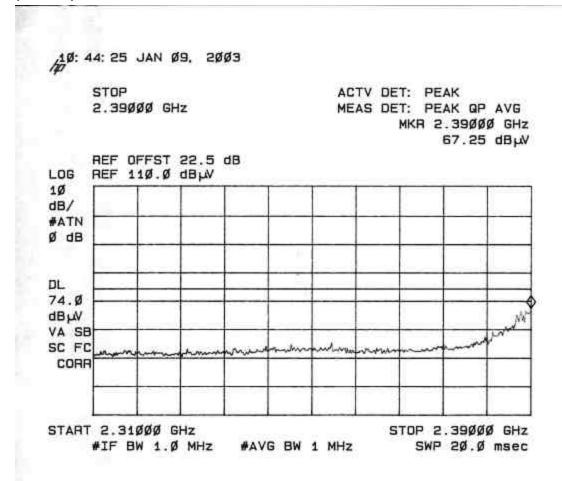


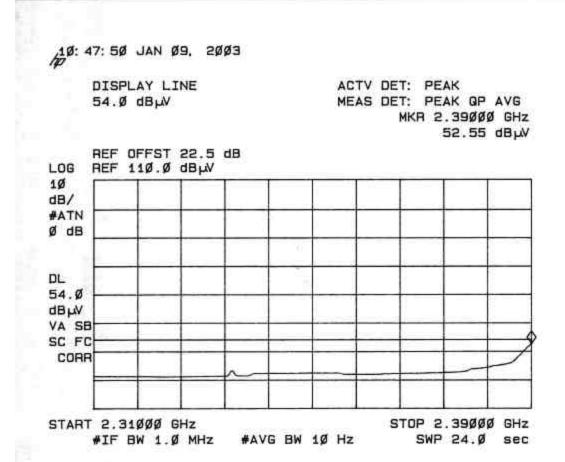
RESTRICTED BAND RADIATED EMISSIONS (HIGH CHANNEL, VERTICAL POLARIZATION) (B MODE)



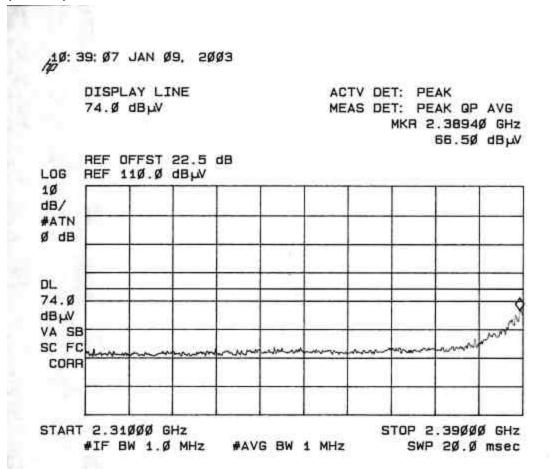


RESTRICTED BAND RADIATED EMISSIONS (LOW CHANNEL, HORIZONTAL POLARIZATION) (G MODE)





RESTRICTED BAND RADIATED EMISSIONS (LOW CHANNEL, VERTICAL POLARIZATION) (G MODE)



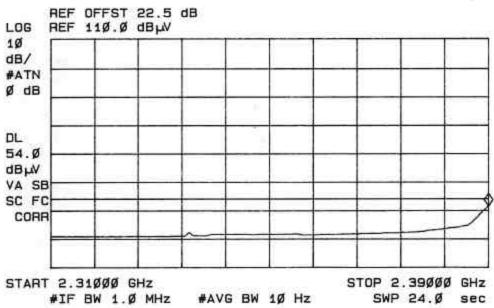
10: 36: 00 JAN 09, 2003

DISPLAY LINE 54.0 dBW ACTV DET: PEAK

MEAS DET: PEAK GP AVG

MKR 2.39ØØØ GHz

51.38 dB W



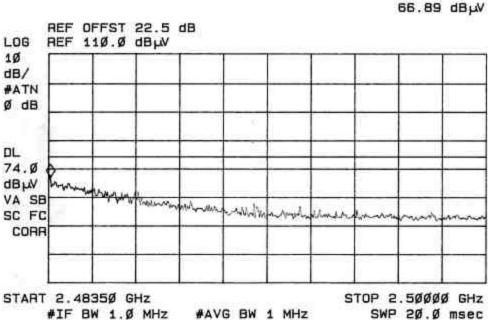
RESTRICTED BAND RADIATED EMISSIONS (HIGH CHANNEL, HORIZONTAL POLARIZATION) (G MODE)

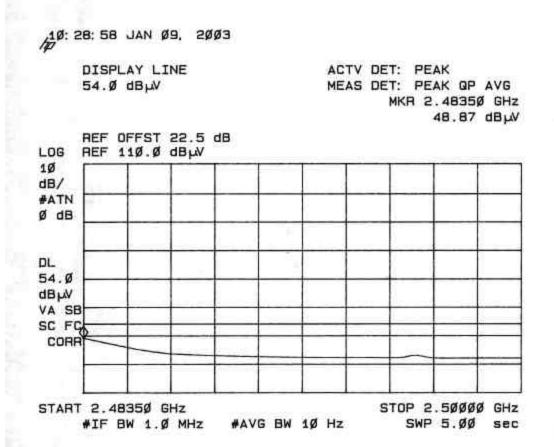
10: 26: 03 JAN 09, 2003

DISPLAY LINE 74.0 dBW ACTV DET: PEAK

MEAS DET: PEAK QP AVG

MKR 2.48358 GHz





RESTRICTED BAND RADIATED EMISSIONS (HIGH CHANNEL, VERTICAL POLARIZATION) (G MODE)

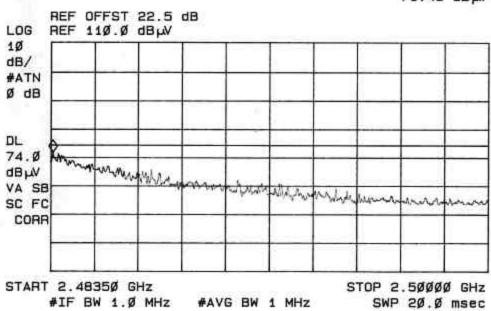
19: 17: 40 JAN 09, 2003

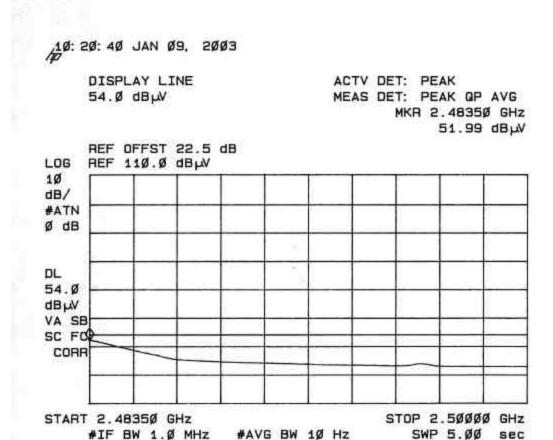
DISPLAY LINE 74.0 dBW ACTV DET: PEAK

MEAS DET: PEAK QP AVG

MKR 2.48358 GHz

71.46 dBpV





#IF BW 1.Ø MHz

Page 74 of 92

be altered or revised by Compliance Certification Services personnel only, and shall be noted in the revision section of the document.

HARMONIC AND SPURIOUS RADIATED EMISSIONS (B MODE)

2.412GHz

01/06/03 High Frequency Measurement

Compliance Certification Services, Morgan Hill Open Field Site

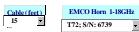
Frank Ibrahim Test Engr: 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: EUT Descrip.: 802.11 B/G MINI PCI CARD

B/G CARD EUT M/N: FCC

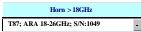
Test Target: 11b Base Mode, Fund = 2.412 GHz Mode Oper:

Test Faninment:









Peak Measurements: 1 MHz Resolution Bandwidth 1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth 10Hz 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	
4.824	9.8	44.2	41.8	33.9	5.7	-36.1	0.0	1.0	48.7	46.3	74.0	54.0	-25.3	-7.7	v
4.824	9.8	46.1	33.8	33.9	5.7	-36.1	0.0	1.0	50.6	38.3	74.0	54.0	-23.4	-15.7	Н
NOTE: NO	отне	R HARMON	ICS OR SPUR	RIOUS E	MISSIC	NS WER	E DETEC	TED AF	OVE THE	NOISE FLO	OR				

Avg Lim Average Field Strength Limit Measurement Frequency Amp Preamp Gain 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

REPORT NO: 03U1761-1 EUT: 802.11 b/g MINI PCI CARD 2.437GHz

DATE: FEBRUARY 21, 2003 FCC ID: MCLJ07H06904

 $01/06/03 \quad \ \ \textbf{High Frequency Measurement}$

Compliance Certification Services, Morgan Hill Open Field Site

Frank Ibrahim Test Engr: 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: 802.11 B/G MINI PCI CARD **EUT Descrip.:**

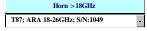
EUT M/N: Test Target:

11b Base Mode, Fund = 2.437 GHz Mode Oper:









Peak Measurements: 1 MHz Resolution Bandwidth 1MHz Video Bandwidth

Average Measurements: 1 MHz Resolution Bandwidth 10Hz Video Bandwidth

f GHz	Dist feet	Read Pk	Read Avg.	AF dB/m	CL dB	Amp dB	D Corr			Avg dBuV/m		Avg Lim		Avg Mar	Notes
4.874	9.8	48.5	47.3	34.0	5.8	-36.1	0.0	1.0	53.2	52.0	74.0	54.0	-20.8	-2.0	V
7.311	9.8	35.4	32.1	37.1	7.3	-36.3	0.0	1.0	44.5	41.2	74.0	54.0	-29.5	-12.8	v
4.874	9.8	38.8	34.2	34.0	5.8	-36.1	0.0	1.0	43.5	38.9	74.0	54.0	-30.5	-15.1	Н
7.311	9.8	35.9	30.4	37.1	7.3	-36.3	0.0	1.0	45.0	39.5	74.0	54.0	-29.0	-14.5	Н
NOTE: NO	ООТНЕ	R HARMON	ICS OR SPUR	RIOUS E	MISSIC	ONS WER	E DETEC	TED AE	OVE THE	NOISE FLO	OR				

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 Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit Avg AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit Cable Loss CL HPF High Pass Filter

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REPORT NO: 03U1761-1 EUT: 802.11 b/g MINI PCI CARD 2.462GHz

DATE: FEBRUARY 21, 2003 FCC ID: MCLJ07H06904

 $01/06/03 \quad \ \ \textbf{High Frequency Measurement}$

Compliance Certification Services, Morgan Hill Open Field Site

Frank Ibrahim Test Engr: 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: 802.11 B/G MINI PCI CARD **EUT Descrip.:**

EUT M/N:

Test Target: 11b Base Mode, Fund = 2.462 GHz Mode Oper:











Peak Measurements: 1 MHz Resolution Bandwidth 1MHz Video Bandwidth

Average Measurements: 1 MHz Resolution Bandwidth 10Hz Video Bandwidth

f GHz	Dist feet	Read Pk	Read Avg.	AF dB/m	CL dB	Amp dR	D Corr			Avg dBuV/m		Avg Lim		Avg Mar	Notes
4.924	9.8	48.5	45.6	34.2	5.8	-36.1	0.0	1.0	53.4	50.5	74.0	54.0	-20.6	-3.5	V
7.386	9.8	38.7	35.3	37.3	7.3	-36.2	0.0	1.0	48.0	44.6	74.0	54.0	-26.0	-9.4	v
4.924	9.8	40.5	35.9	34.2	5.8	-36.1	0.0	1.0	45.4	40.8	74.0	54.0	-28.6	-13.2	Н
7.386	9.8	36.2	30.1	37.3	7.3	-36.2	0.0	1.0	45.5	39.4	74.0	54.0	-28.5	-14.6	Н
NOTE: NO	ООТНЕ	R HARMON	ICS OR SPUR	RIOUS E	MISSIC	ONS WER	E DETEC	TED AE	OVE THE	NOISE FLO	OR				

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 Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit Avg AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit Cable Loss CL HPF High Pass Filter

REPORT NO: 03U1761-1

DATE: FEBRUARY 21, 2003 EUT: 802.11 b/g MINI PCI CARD FCC ID: MCLJ07H06904

HARMONIC AND SPURIOUS RADIATED EMISSION (G NORMAL MODE)

2.412GHz

01/06/03 High Frequency Measurement

Compliance Certification Services, Morgan Hill Open Field Site

Frank Ibrahim 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: 802.11 B/G MINI PCI CARD **EUT Descrip.:**

B/G CARD EUT M/N: ECC Test Target:

11g Base Mode, Fund = 2.412 GHz, Mode Oper:

Test Equipment:

Cable (feet) EMCO Horn 1-18GHz T72; S/N: 6739

Pre-amplifer 1-26GHz Miteq NSP2600-44

Spectrum Analyzer 8564E Analyzer

Horn > 18GHz T87; ARA 18-26GHz; S/N:1049

Avg Lim Average Field Strength Limit

Pk Lim Peak Field Strength Limit

Avg Mar Margin vs. Average Limit

Pk Mar Margin vs. Peak Limit

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		Amp dB	D Corr dB			U		Avg Lim dBuV/m		Avg Mar dB	Notes
4.824	9.8	48.6	42.1	33.9	5.7	-36.1	0.0	1.0	53.1	46.6	74.0	54.0	-20.9	-7.4	V
4.824	9.8	39.5	33.2	33.9	5.7	-36.1	0.0	1.0	44.0	37.7	74.0	54.0	-30.0	-16.3	Н
NOTE: N	о отне	R HARMON	ICS OR SPUR	IOUS E	MISSIC	NS WER	E DETEC	TED AI	BOVE THE	NOISE FLO	OR				

Measurement Frequency Amp Preamp Gain Distance to Antenna D Corr Distance Correct to 3 meters Average Field Strength @ 3 m Read Analyzer Reading Avg AF Antenna Factor Peak Calculated Peak Field Strength CL Cable Loss HPF High Pass Filter

REPORT NO: 03U1761-1 EUT: 802.11 b/g MINI PCI CARD 2.437GHz

DATE: FEBRUARY 21, 2003 FCC ID: MCLJ07H06904

 $01/06/03 \quad \ \ \textbf{High Frequency Measurement}$

Compliance Certification Services, Morgan Hill Open Field Site

Frank Ibrahim Test Engr: 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: 802.11 B/G MINI PCI CARD **EUT Descrip.:**

EUT M/N:

Test Target: 11g Base Mode, Fund = 2.437 GHz, Mode Oper:











Peak Measurements: 1 MHz Resolution Bandwidth 1MHz Video Bandwidth

Average Measurements: 1 MHz Resolution Bandwidth 10Hz Video Bandwidth

f GHz	Dist feet	Read Pk	Read Avg.	AF dB/m	CL dB	Amp dB	D Corr			Avg dBuV/m		Avg Lim		Avg Mar dB	Notes
4.874	9.8	41.5	30.8	34.0	5.8	-36.1	0.0	1.0	46.2	35.5	74.0	54.0	-27.8	-18.5	V
7.311	9.8	42.6	29.8	37.1	7.3	-36.3	0.0	1.0	51.7	38.9	74.0	54.0	-22.3	-15.1	v
4.874	9.8	37.3	29.5	34.0	5.8	-36.1	0.0	1.0	42.0	34.2	74.0	54.0	-32.0	-19.8	Н
7.311	9.8	39.5	29.7	37.1	7.3	-36.3	0.0	1.0	48.6	38.8	74.0	54.0	-25.4	-15.2	Н
NOTE: NO	ООТНЕ	R HARMON	ICS OR SPUR	IOUS E	MISSIC	ONS WER	E DETEC	TED AE	OVE THE	NOISE FLO	OR				

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 Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit Avg AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit Cable Loss CL

HPF High Pass Filter

REPORT NO: 03U1761-1 EUT: 802.11 b/g MINI PCI CARD 2.462GHz

DATE: FEBRUARY 21, 2003 FCC ID: MCLJ07H06904

 $01/06/03 \quad \ \ \textbf{High Frequency Measurement}$

Compliance Certification Services, Morgan Hill Open Field Site

Frank Ibrahim Test Engr: 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: 802.11 B/G MINI PCI CARD **EUT Descrip.:**

EUT M/N: Test Target:

11g Base Mode, Fund = 2.462 GHz, Mode Oper:











Peak Measurements: 1 MHz Resolution Bandwidth 1MHz Video Bandwidth

Average Measurements: 1 MHz Resolution Bandwidth 10Hz Video Bandwidth

f	Dist	Read Pk	Read Avg.	AF	CL	Amp	D Corr			Avg		U		Avg Mar	Notes
GHz	feet	dRuV	dRuV	dR/m	dB	dB	dB		dBuV/m	dRuV/m	dRuV/m	dRuV/m	dВ	dB	
4.924	9.8	46.5	36.1	34.2	5.8	-36.1	0.0	1.0	51.4	41.0	74.0	54.0	-22.6	-13.0	V
7.386	9.8	37.2	29.5	37.3	7.3	-36.2	0.0	1.0	46.5	38.8	74.0	54.0	-27.5	-15.2	V
4.924	9.8	39.1	29.7	34.2	5.8	-36.1	0.0	1.0	44.0	34.6	74.0	54.0	-30.0	-19.4	Н
7.386	9.8	35.8	30.0	37.3	7.3	-36.2	0.0	1.0	45.1	39.3	74.0	54.0	-28.9	-14.7	Н
NOTE: NO	отне	R HARMON	ICS OR SPUR	IOUS E	MISSIC	NS WER	E DETECT	TED AE	OVE THE	NOISE FLO	OR				

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 Average Field Strength @ 3 m Avg Mar Margin vs. Average Limit Avg AF Antenna Factor Peak Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit

Cable Loss CL HPF High Pass Filter

HARMONIC AND SPURIOUS RADIATED EMISSION (G TURBO MODE)

2.437GHz

01/06/03 High Frequency Measurement

Compliance Certification Services, Morgan Hill Open Field Site

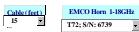
Frank Ibrahim Test Engr: 02U1750-1 Project #:

AMBIT MICROSYSTEMS Company: EUT Descrip.: 802.11 B/G MINI PCI CARD

B/G CARD EUT M/N: Test Target:

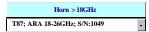
11g Turbo Mode, Fund = 2.437 GHz Mode Oper:

Test Faninment:









Peak Measurements: 1 MHz Resolution Bandwidth

1MHz Video Bandwidth

Average Measurements:
1 MHz Resolution Bandwidth 10Hz 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	
4.874	9.8	39.2	29.6	34.0	5.8	-36.1	0.0	1.0	43.9	34.3	74.0	54.0	-30.1	-19.7	v
7.311	9.8	43.4	31.5	37.1	7.3	-36.3	0.0	1.0	52.5	40.6	74.0	54.0	-21.5	-13.4	v
NOTE: NO	ООТНЕ	R HARMON	ICS OR SPUR	IOUS E	MISSIC	ONS WER	E DETEC	TED AI	BOVE THE	NOISE FLO	OR				
	£	Massurame	ont Eroauana	,		Amn	Droomn (Coin				Ava Lim	Avorago E	Field Strong	th I imit

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 Calculated Peak Field Strength Pk Mar Margin vs. Peak Limit CL Cable Loss HPF High Pass Filter

Project #:

Report #:

Test Engr:

Date& Time:

03U1761

021003C2

02/10/03 4:08 PM

NEELESH RAJ

DIGITAL DEVICE RADIATED EMISSIONS



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: AMBIT MICROSYSTEMS

EUT Description: 802 11 b/g MINI PCI CARD

Test Configuration: <u>EUT/AC ADAPTER/PRINTER/MODEM</u>

Type of Test: CISPR22-B

Mode of Operation: TX

<< Main Sheet

Frea	Reading	AF	Closs	Pre-amp	l evel	l imit	Margin	Pol	Az	Height	Mark
(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	FN B	(dB)	(H/\/)	(Dea)	(Meter)	(P/Q/A)
192.00	36.50	15.70	2.37	26.66	27.91	30.00	-2.09	10mV	180.00	1.00	QP
160.00	35.30	17.05	2.14	26.80	27.69	30.00	-2.31	10mV	180.00	1.00	QP
133.33	39.30	13.36	1.94	26.95	27.65	30.00	-2.35	10mV	180.00	1.00	QP
334.78	43.10	14.95	3.19	26.64	34.60	37.00	-2.40	10mV	180.00	1.00	QP
633.33	37.80	19.70	4.69	27.84	34.35	37.00	-2.65	10mV	45.00	1.00	QP
324.83	42.37	14.86	3.14	26.57	33.80	37.00	-3.20	10mV	180.00	1.00	QP
6 Worst	Data										

8.8. POWERLINE CONDUCTED EMISSIONS

TEST SETUP

The EUT is placed on a wooden table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane on the floor.

The EUT is set to transmit in a continuous mode.

TEST PROCEDURE

The resolution bandwidth is set to 10 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.

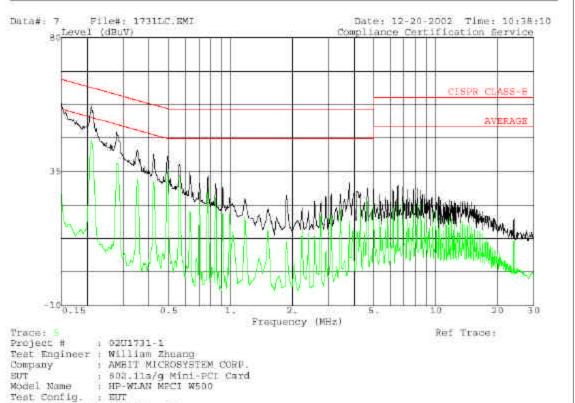
RESULTS

No non-compliance noted:

Freq.		Reading		Closs	Limit	EN_B	Marg	in	Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV(dB)	L1/L2
0.15	58.14	57	29.47	0.00	65.94	55.94	-7.80	-26.47	L1
0.21	56.96	35	46.08	0.00	64.31	54.31	-7.35	-8.23	L1
0.28	48.42	8	37.81	0.00	62.40	52.40	-13.98	-14.59	L1
0.16	57.92	88	29.62	0.00	65.80	55,80	-7.88	-26.18	L2
0.21	59.52	99	48.38	0.00	64.31	54.31	-4.79	-5.93	L2
0.28	49.76	94	39.58	0.00	62.31	52.31	-12.55	-12.73	L2



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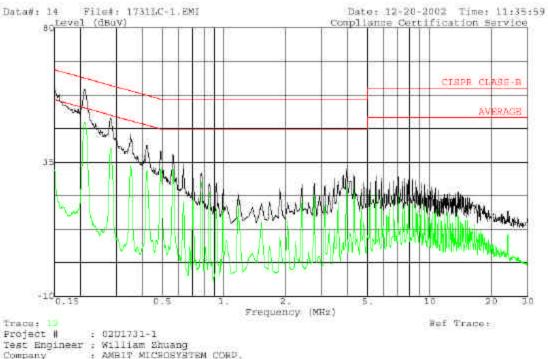
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Mode of Op. : EUT is Charging & Transmitting : 115VAc, 60Hz

| L1: Feak (Black), Ave (Green)



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: AMBIT MICHOSYSTEM CORD. : 802.11a/g Mini-PCI Card : HP-WLAN MPUI W500 Company BUT Model Name

Test Config. : EUT

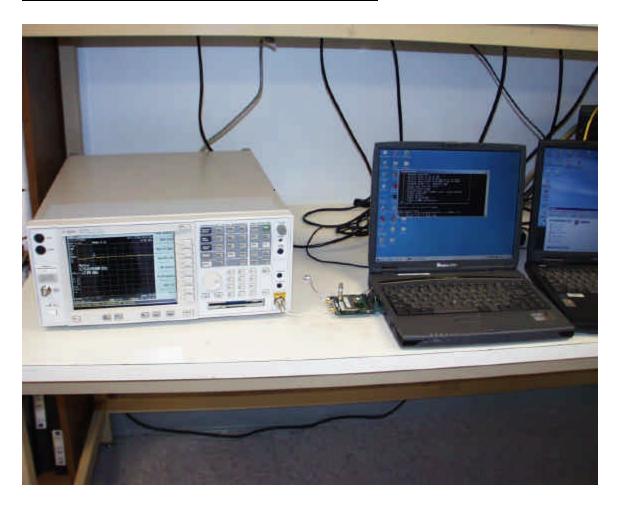
Test of Target: FCC Class B Mode of Op. : BUT is Charging & Transmitting

: 115VAc, 60Hz

: L2: Peak (BLACK), Ave (GREEN)

8.9. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP



RADIATED RF MEASUREMENT SETUP



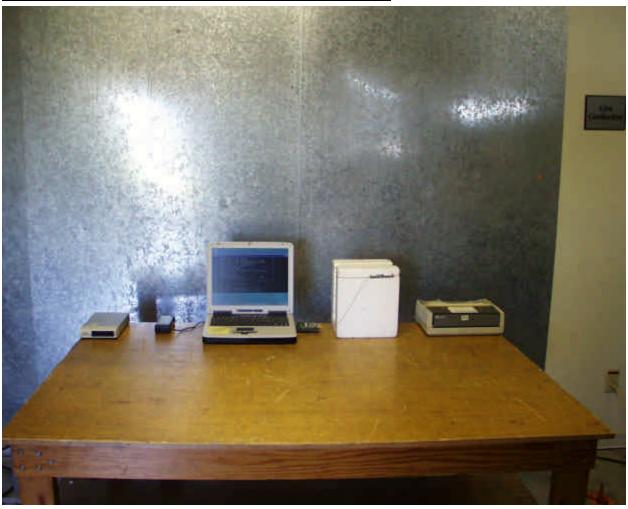


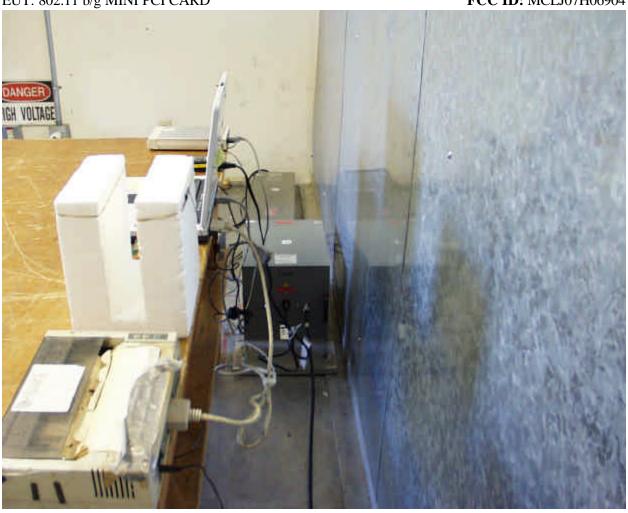
DIGITAL DEVICE RADIATED EMISSIONS MEASUREMENT SETUP





POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP





END OF REPORT