



DIGITAL PATH NETWORKS TEST REPORT

FOR THE

ASKEY ATHEROS RADIO, DOWNLINK

FCC PART 15 SUBPART C SECTIONS 15.207, 15.209, 15.247 & 15.407
AND SUBPART B SECTIONS 15.107 & 15.109, CLASS A

COMPLIANCE

DATE OF ISSUE: DECEMBER 3, 2004

PREPARED FOR:

Digital Path Networks
275 Air Park Blvd., Suite 500
Chico, CA 95973

W.O. No.: 82775

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

Date of test: November 8-22, 2004

Report No.: FC04-083

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ADMINISTRATIVE INFORMATION

DATE OF TEST: November 8-22, 2004

DATE OF RECEIPT: November 8, 2004

PURPOSE OF TEST: To demonstrate the compliance of the Askey Atheros Radio, Downlink with the requirements for FCC Part 15 Subpart C Sections 15.207, 15.209, 15.247 & 15.407 and Subpart B Sections 15.107 & 15.109 Class A devices.

TEST METHOD: ANSI C63.4 (2001)

FREQUENCY RANGE TESTED: 30 MHz-40 GHz

MANUFACTURER: Digital Path Networks
275 Air Park Blvd., Suite 500
Chico, CA 95973

REPRESENTATIVE: Brock Eastman

TEST LOCATION: CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

SUMMARY OF RESULTS

As received, the Digital Path Networks Askey Atheros Radio, Downlink was found to be fully compliant with the following standards and specifications:

United States

- FCC Part 15 Subpart C Sections 15.207, 15.209, 15.247 & 15.407 and Subpart B Sections 15.107 & 15.109 Class A
- ANSI C63.4 (2001) method

CONDITIONS FOR COMPLIANCE

For the PCEngines based equipment, one ferrite is installed on the antenna lead near the antenna. A ferrite was installed on the power over ethernet cable.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

TEST PERSONNEL:



DRAFT



Joyce Walker, Quality Assurance Administrative Manager

Randy Clark, EMC Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

Askey Atheros Radio

Manuf: Digital Path Networks
Model: Downlink
Serial: 111504-003
FCC ID: pending

Radio Power Supply

Manuf: Digital Path Networks
Model: CHMON v5.1
Serial: 110804-001a
FCC ID: DoC

Askey Atheros Radio

Manuf: Digital Path Networks
Model: Relay
Serial: 111504-002
FCC ID: pending

Askey Atheros Radio

Manuf: Digital Path Networks
Model: Relay & Downlink
Serial: 111804-001*
FCC ID: pending

*This is a phantom number representing testing with the Relay and Downlink together.

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Radio Power Supply

Manuf: Digital Path Networks
Model: CHMON v5.1
Serial: 110804-001a
FCC ID: DoC

Support Computer

Manuf: Toshiba
Model: PS426U-0M151
Serial: 50683063U
FCC ID: DoC

Laptop Power Supply

Manuf: Toshiba
Model: PA3049U-1ACA
Serial: 0003A0221552G
FCC ID: DoC

FCC 15.31(e) Voltage Variations

Voltage variations performed at $\pm 15\%$ of nominal mains input; there was no measureable change in power output from values reported.

FCC 15.31(m) Number Of Channels

This device tested on three channels.

FCC 15.33(a) Frequency Ranges Tested

15.107 Conducted Emissions: 150 kHz – 30 MHz

15.109 Radiated Emissions: 30 MHz – 1000 MHz

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.209/15.247 Radiated Emissions: 30 MHz – 1000 MHz

FCC 15.203 Antenna Requirements

The antenna requires professional installation; therefore the EUT complies with Section 15.203 of the FCC rules.

FCC 15.205 Restricted Bands

The fundamental operating frequency lies outside the restricted bands and therefore complies with the requirements of Section 15.205 of the FCC rules. Any spurious emission coming from the EUT was investigated to determine if any portion lies inside the restricted band. If any portion of a spurious emissions signal was found to be within a restricted band, investigation was performed to ensure compliance with Section 15.209.

Eut Operating Frequency

The EUT was operating at 2400 MHz – 2483.5 MHz, 5250 MHz – 5350 MHz and 5725 MHz – 5850 MHz.

FCC 15.107 – AC CONDUCTED EMISSIONS

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.107(b) Class A - AVE**
 Work Order #: **82775** Date: 11/23/2004
 Test Type: **Conducted Emissions** Time: 4:14:50 PM
 Equipment: **Askey Atheros Radio** Sequence#: 49
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
LISN Model 8028-50-TS-24-BNC	8379276 & 8379280	06/05/2003	06/05/2005	00330

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Askey Atheros Radio	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT operating in a mode representative of worst case using PCEngines motherboard. EUT is in continuous receive mode. Motherboard powered by 28VDC. Power over ethernet option bypassed using power adapter dongle. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 17°C, Relative Humidity: 48%.

Transducer Legend:

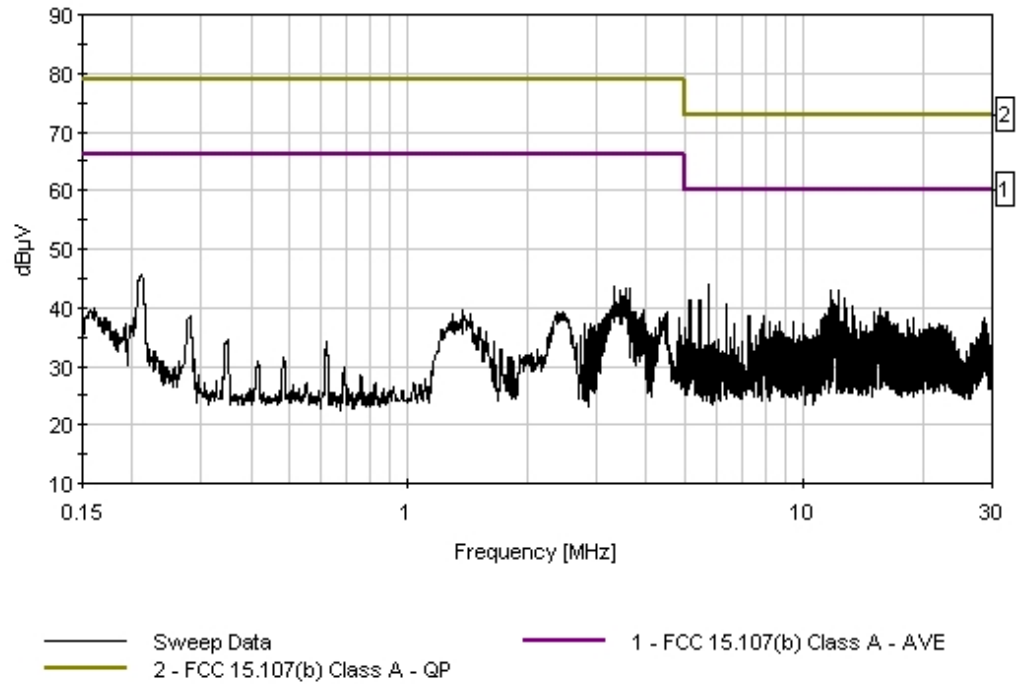
T1=Cable - Internal + cab T2=LISN Insertion Loss s/n280
 T3=HP Filter AN02608

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5.769M	43.1	+0.3	+0.3	+0.1		+0.0	43.8	60.0	-16.2	Black
2	12.201M	42.2	+0.4	+0.4	+0.1		+0.0	43.1	60.0	-16.9	Black
3	11.715M	42.1	+0.4	+0.4	+0.1		+0.0	43.0	60.0	-17.0	Black
4	11.652M	41.5	+0.4	+0.4	+0.1		+0.0	42.4	60.0	-17.6	Black

5	12.751M	40.8	+0.4	+0.4	+0.1	+0.0	41.7	60.0	-18.3	Black
6	5.462M	40.7	+0.3	+0.3	+0.1	+0.0	41.4	60.0	-18.6	Black
7	5.156M	40.5	+0.3	+0.3	+0.1	+0.0	41.2	60.0	-18.8	Black
8	11.904M	40.3	+0.4	+0.4	+0.1	+0.0	41.2	60.0	-18.8	Black
9	6.372M	39.8	+0.3	+0.3	+0.1	+0.0	40.5	60.0	-19.5	Black
10	12.138M	39.4	+0.4	+0.4	+0.1	+0.0	40.3	60.0	-19.7	Black
11	13.363M	39.2	+0.4	+0.4	+0.1	+0.0	40.1	60.0	-19.9	Black
12	12.805M	39.1	+0.4	+0.4	+0.1	+0.0	40.0	60.0	-20.0	Black
13	11.588M	39.1	+0.3	+0.4	+0.1	+0.0	39.9	60.0	-20.1	Black
14	15.633M	39.0	+0.4	+0.4	+0.1	+0.0	39.9	60.0	-20.1	Black
15	15.561M	38.7	+0.4	+0.4	+0.1	+0.0	39.6	60.0	-20.4	Black
16	211.812k	45.0	+0.1	+0.3	+0.1	+0.0	45.5	66.0	-20.5	Black
17	15.021M	38.5	+0.4	+0.4	+0.1	+0.0	39.4	60.0	-20.6	Black
18	16.174M	38.5	+0.4	+0.4	+0.1	+0.0	39.4	60.0	-20.6	Black
19	16.246M	38.5	+0.4	+0.4	+0.1	+0.0	39.4	60.0	-20.6	Black
20	11.516M	38.2	+0.3	+0.4	+0.1	+0.0	39.0	60.0	-21.0	Black

CKC Laboratories, Inc. Date: 11/23/2004 Time: 4:14:50 PM Digital Path VWO#: 82775
FCC 15.107(b) Class A - AVE Test Lead: Black 120V 60Hz Sequence#: 49



Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.107(b) Class A - AVE**
 Work Order #: **82775**
 Test Type: **Conducted Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/23/2004
 Time: 4:21:02 PM
 Sequence#: 50
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
LISN Model 8028-50-TS-24-BNC	8379276 & 8379280	06/05/2003	06/05/2005	00330

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON V5.1	110804-001a
Askey Atheros Radio	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT operating in a mode representative of worst case using PCEngines motherboard. EUT is in continuous receive mode. Motherboard powered by 28VDC. Power over ethernet option bypassed using power adapter dongle. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 17°C, Relative Humidity: 48%.

Transducer Legend:

T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n276
T3=HP Filter AN02608	

Measurement Data:

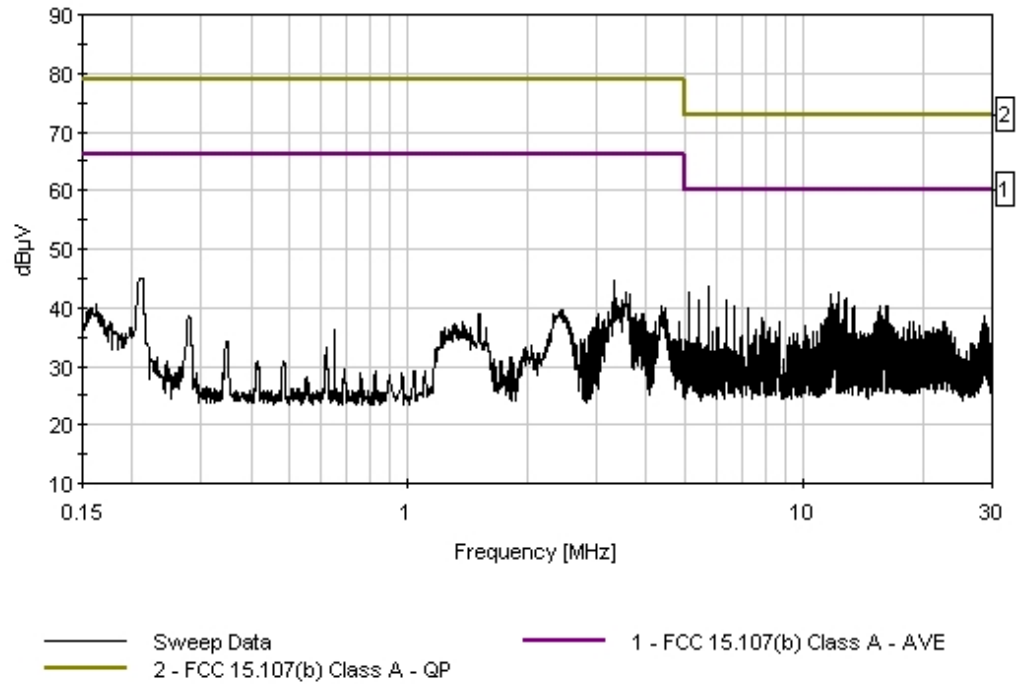
Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5.751M	42.7	+0.3	+0.4	+0.1		+0.0	43.5	60.0	-16.5	White
2	5.129M	41.8	+0.3	+0.4	+0.1		+0.0	42.6	60.0	-17.4	White
3	12.201M	41.6	+0.4	+0.5	+0.1		+0.0	42.6	60.0	-17.4	White
4	5.126M	41.7	+0.3	+0.4	+0.1		+0.0	42.5	60.0	-17.5	White
5	11.715M	41.3	+0.4	+0.5	+0.1		+0.0	42.3	60.0	-17.7	White

6	11.652M	40.7	+0.4	+0.5	+0.1	+0.0	41.7	60.0	-18.3	White
7	12.814M	40.7	+0.4	+0.5	+0.1	+0.0	41.7	60.0	-18.3	White
8	6.354M	40.6	+0.3	+0.4	+0.1	+0.0	41.4	60.0	-18.6	White
9	12.760M	40.2	+0.4	+0.5	+0.1	+0.0	41.2	60.0	-18.8	White
10	5.453M	40.3	+0.3	+0.4	+0.1	+0.0	41.1	60.0	-18.9	White
11	11.895M	39.7	+0.4	+0.5	+0.1	+0.0	40.7	60.0	-19.3	White
12	15.633M	39.5	+0.4	+0.4	+0.1	+0.0	40.4	60.0	-19.6	White
13	16.183M	39.5	+0.4	+0.4	+0.1	+0.0	40.4	60.0	-19.6	White
14	6.661M	39.3	+0.3	+0.4	+0.1	+0.0	40.1	60.0	-19.9	White
15	13.426M	39.1	+0.4	+0.5	+0.1	+0.0	40.1	60.0	-19.9	White
16	16.255M	39.2	+0.4	+0.4	+0.1	+0.0	40.1	60.0	-19.9	White
17	7.264M	39.1	+0.3	+0.4	+0.1	+0.0	39.9	60.0	-20.1	White
18	13.363M	38.9	+0.4	+0.5	+0.1	+0.0	39.9	60.0	-20.1	White
19	12.138M	38.3	+0.4	+0.5	+0.1	+0.0	39.3	60.0	-20.7	White
20	15.417M	38.2	+0.4	+0.4	+0.1	+0.0	39.1	60.0	-20.9	White

CKC Laboratories, Inc. Date: 11/23/2004 Time: 4:21:02 PM Digital Path WVO#: 82775
FCC 15.107(b) Class A - AVE Test Lead: White 120V 60Hz Sequence#: 50



Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.107(b) Class A - AVE**
 Work Order #: **82775**
 Test Type: **Conducted Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: **Digital Path**
 Model: **Relay & Downlink**
 S/N: **110804-001**

Date: 11/23/2004
 Time: 4:06:35 PM
 Sequence#: 48
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
LISN Model 8028-50-TS-24-BNC	8379276 & 8379280	06/05/2003	06/05/2005	00330

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT operating in a mode representative of worst case using Soekris motherboard. EUT is in continuous receive mode. Motherboard powered by 28VDC. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 17°C, Relative Humidity: 48%.

Transducer Legend:

T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n280
T3=HP Filter AN02608	

Measurement Data:

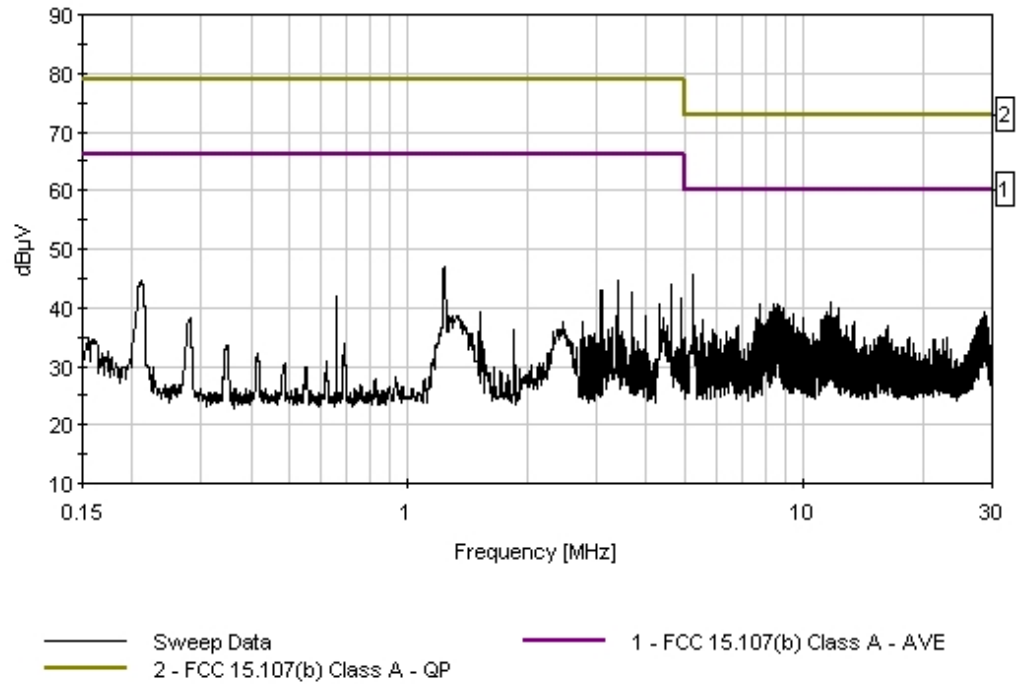
Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5.255M	45.0	+0.3	+0.3	+0.1		+0.0	45.7	60.0	-14.3	Black
2	1.239M	46.3	+0.2	+0.3	+0.2		+0.0	47.0	66.0	-19.0	Black
3	11.724M	40.1	+0.4	+0.4	+0.1		+0.0	41.0	60.0	-19.0	Black
4	7.751M	39.7	+0.3	+0.5	+0.1		+0.0	40.6	60.0	-19.4	Black
5	8.444M	39.6	+0.3	+0.5	+0.1		+0.0	40.5	60.0	-19.5	Black

6	8.579M	39.6	+0.3	+0.5	+0.1	+0.0	40.5	60.0	-19.5	Black
7	8.372M	39.5	+0.3	+0.5	+0.1	+0.0	40.4	60.0	-19.6	Black
8	8.652M	39.3	+0.3	+0.5	+0.1	+0.0	40.2	60.0	-19.8	Black
9	11.652M	39.3	+0.4	+0.4	+0.1	+0.0	40.2	60.0	-19.8	Black
10	8.507M	39.1	+0.3	+0.5	+0.1	+0.0	40.0	60.0	-20.0	Black
11	12.201M	39.0	+0.4	+0.4	+0.1	+0.0	39.9	60.0	-20.1	Black
12	8.913M	38.9	+0.3	+0.5	+0.1	+0.0	39.8	60.0	-20.2	Black
13	8.706M	38.5	+0.3	+0.5	+0.1	+0.0	39.4	60.0	-20.6	Black
14	8.850M	38.5	+0.3	+0.5	+0.1	+0.0	39.4	60.0	-20.6	Black
15	8.228M	38.4	+0.3	+0.5	+0.1	+0.0	39.3	60.0	-20.7	Black
16	28.629M	38.0	+0.6	+0.5	+0.2	+0.0	39.3	60.0	-20.7	Black
17	28.698M	38.0	+0.6	+0.5	+0.2	+0.0	39.3	60.0	-20.7	Black
18	8.300M	38.3	+0.3	+0.5	+0.1	+0.0	39.2	60.0	-20.8	Black
19	8.778M	38.2	+0.3	+0.5	+0.1	+0.0	39.1	60.0	-20.9	Black
20	11.444M	38.3	+0.3	+0.4	+0.1	+0.0	39.1	60.0	-20.9	Black

CKC Laboratories, Inc. Date: 11/23/2004 Time: 4:06:35 PM Digital Path VWO#: 82775
FCC 15.107(b) Class A - AVE Test Lead: Black 120V 60Hz Sequence#: 48



Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.107(b) Class A - AVE**
 Work Order #: **82775** Date: 11/23/2004
 Test Type: **Conducted Emissions** Time: 4:03:19 PM
 Equipment: **Askey Atheros Radio** Sequence#: 47
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
LISN Model 8028-50-TS-24-BNC	8379276 & 8379280	06/05/2003	06/05/2005	00330

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT operating in a mode representative of worst case using Soekris motherboard. EUT is in continuous receive mode. Motherboard powered by 28VDC. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 17°C, Relative Humidity: 48%.

Transducer Legend:

T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n276
T3=HP Filter AN02608	

Measurement Data:

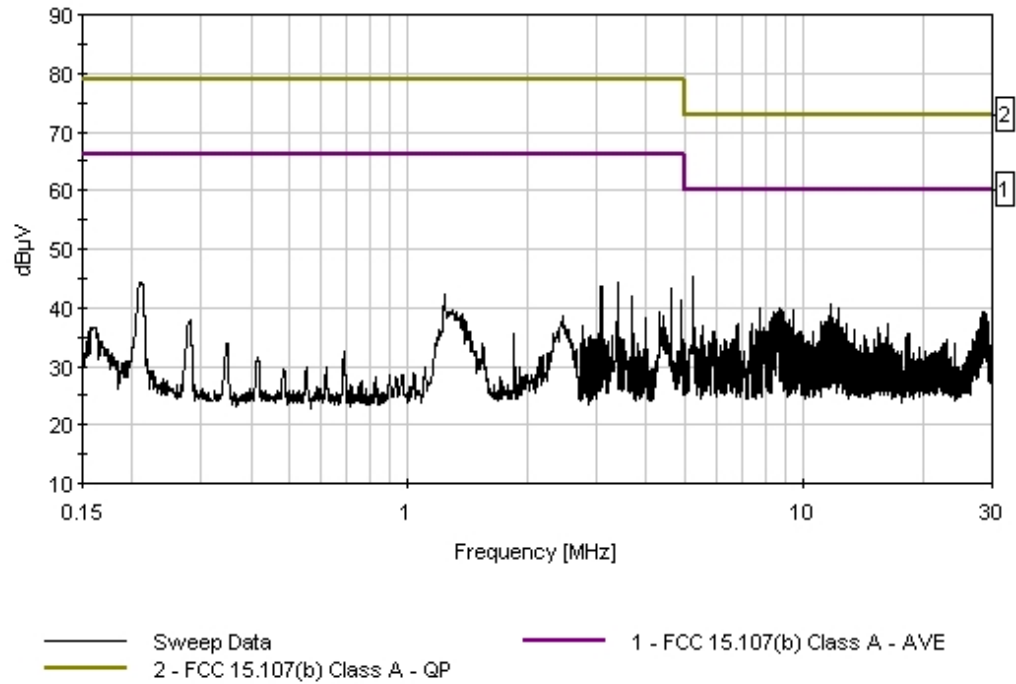
Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5.255M	44.4	+0.3	+0.4	+0.1		+0.0	45.2	60.0	-14.8	White
2	11.652M	39.7	+0.4	+0.5	+0.1		+0.0	40.7	60.0	-19.3	White
3	11.715M	39.2	+0.4	+0.5	+0.1		+0.0	40.2	60.0	-19.8	White
4	7.760M	39.1	+0.3	+0.5	+0.1		+0.0	40.0	60.0	-20.0	White
5	8.706M	38.9	+0.3	+0.5	+0.1		+0.0	39.8	60.0	-20.2	White

6	12.201M	38.8	+0.4	+0.5	+0.1	+0.0	39.8	60.0	-20.2	White
7	8.787M	38.6	+0.3	+0.5	+0.1	+0.0	39.5	60.0	-20.5	White
8	9.399M	38.6	+0.3	+0.5	+0.1	+0.0	39.5	60.0	-20.5	White
9	8.363M	38.5	+0.3	+0.5	+0.1	+0.0	39.4	60.0	-20.6	White
10	8.643M	38.4	+0.3	+0.5	+0.1	+0.0	39.3	60.0	-20.7	White
11	8.913M	38.3	+0.3	+0.5	+0.1	+0.0	39.2	60.0	-20.8	White
12	28.348M	38.0	+0.6	+0.4	+0.2	+0.0	39.2	60.0	-20.8	White
13	28.561M	38.0	+0.6	+0.4	+0.2	+0.0	39.2	60.0	-20.8	White
14	8.850M	38.2	+0.3	+0.5	+0.1	+0.0	39.1	60.0	-20.9	White
15	28.705M	37.9	+0.6	+0.4	+0.2	+0.0	39.1	60.0	-20.9	White
16	8.435M	38.1	+0.3	+0.5	+0.1	+0.0	39.0	60.0	-21.0	White
17	8.507M	38.1	+0.3	+0.5	+0.1	+0.0	39.0	60.0	-21.0	White
18	28.835M	37.6	+0.6	+0.4	+0.2	+0.0	38.8	60.0	-21.2	White
19	28.499M	37.5	+0.6	+0.4	+0.2	+0.0	38.7	60.0	-21.3	White
20	8.570M	37.7	+0.3	+0.5	+0.1	+0.0	38.6	60.0	-21.4	White

CKC Laboratories, Inc. Date: 11/23/2004 Time: 4:03:19 PM Digital Path WVO#: 82775
FCC 15.107(b) Class A - AVE Test Lead: White 120V 60Hz Sequence#: 47



FCC 15.109 – RADIATED EMISSIONS

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.109 CLASS A**
 Work Order #: **82775**
 Test Type: **Maximized Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/23/2004
 Time: 12:00:35
 Sequence#: 41
 Tested By: Randal Clark

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA	2403A08241	02/26/2003	02/26/2005	00489
Display				
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Chase CBL6111C	2456	12/13/2002	12/13/2004	01991
Bilog				
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2005	00099

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT power supply is located at the turn table. This test data represents data collected from the PCEngines motherboard. Test data is representative of both Relay and Downlink. Test data represents emissions from radio in receive mode, digital circuitry and power supply. Reported emissions represent the worst case. Test distance correction factor used in accordance with 15.31 20dB per decade. Frequency Range Investigated: 30-1000MHz. Temperature: 16°C, Relative Humidity: 36%. RBW = 120kHz, VBW = 120kHz.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site B
T3=Cable - 10 Meter	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	833.249M	48.5	-27.7	+21.9	+7.5		-10.0	40.2	46.4	-6.2	Verti
2	151.070M	59.8	-27.0	+10.4	+2.8		-10.0	36.0	43.5	-7.5	Horiz

3	833.404M	46.7	-27.7	+21.9	+7.5	-10.0	38.4	46.4	-8.0	Horiz
4	134.050M	59.0	-27.1	+11.0	+2.6	-10.0	35.5	43.5	-8.0	Horiz
5	135.280M	58.9	-27.1	+11.0	+2.6	-10.0	35.4	43.5	-8.1	Horiz
6	135.210M QP	58.7	-27.1	+11.0	+2.6	-10.0	35.2	43.5	-8.3	Verti
^	135.210M	60.5	-27.1	+11.0	+2.6	-10.0	37.0	43.5	-6.5	Verti
8	132.750M QP	58.3	-27.1	+11.0	+2.6	-10.0	34.8	43.5	-8.7	Verti
^	132.750M	60.5	-27.1	+11.0	+2.6	-10.0	37.0	43.5	-6.5	Verti
10	136.450M	58.2	-27.1	+11.0	+2.6	-10.0	34.7	43.5	-8.8	Horiz
11	131.590M QP	58.0	-27.1	+11.1	+2.6	-10.0	34.6	43.5	-8.9	Verti
^	131.590M	60.5	-27.1	+11.1	+2.6	-10.0	37.1	43.5	-6.4	Verti
13	132.790M	57.8	-27.1	+11.0	+2.6	-10.0	34.3	43.5	-9.2	Horiz
14	131.640M	57.4	-27.1	+11.1	+2.6	-10.0	34.0	43.5	-9.5	Horiz
15	147.970M	57.7	-27.0	+10.5	+2.8	-10.0	34.0	43.5	-9.5	Horiz
16	833.441M QP	45.0	-27.7	+21.9	+7.5	-10.0	36.7	46.4	-9.7	Verti
17	137.690M	57.2	-27.1	+10.9	+2.7	-10.0	33.7	43.5	-9.8	Horiz
18	146.770M	57.2	-27.0	+10.6	+2.8	-10.0	33.6	43.5	-9.9	Horiz
19	129.150M QP	56.8	-27.2	+11.1	+2.6	-10.0	33.3	43.5	-10.2	Verti
^	129.150M	59.8	-27.2	+11.1	+2.6	-10.0	36.3	43.5	-7.2	Verti
21	160.111M	57.0	-26.9	+10.1	+2.9	-10.0	33.1	43.5	-10.4	Horiz
22	140.107M	56.6	-27.1	+10.9	+2.7	-10.0	33.1	43.5	-10.4	Horiz
23	130.420M	56.4	-27.2	+11.1	+2.6	-10.0	32.9	43.5	-10.6	Horiz
24	134.944M QP	55.9	-27.1	+11.0	+2.6	-10.0	32.4	43.5	-11.1	Verti
^	134.944M	59.0	-27.1	+11.0	+2.6	-10.0	35.5	43.5	-8.0	Verti

26	137.040M	55.6	-27.1	+11.0	+2.7	-10.0	32.2	43.5	-11.3	Verti
	QP									
^	137.040M	58.7	-27.1	+11.0	+2.7	-10.0	35.3	43.5	-8.2	Verti
28	30.615M	45.8	-27.3	+17.8	+1.2	-10.0	27.5	39.1	-11.6	Verti
	QP									
^	30.615M	48.8	-27.3	+17.6	+1.2	-10.0	30.3	39.1	-8.8	Verti
30	145.530M	55.4	-27.0	+10.6	+2.8	-10.0	31.8	43.5	-11.7	Horiz
31	129.150M	55.2	-27.2	+11.1	+2.6	-10.0	31.7	43.5	-11.8	Horiz
32	138.584M	55.1	-27.1	+10.9	+2.7	-10.0	31.6	43.5	-11.9	Verti
	QP									
^	138.584M	58.2	-27.1	+10.9	+2.7	-10.0	34.7	43.5	-8.8	Verti
34	138.007M	55.1	-27.1	+10.9	+2.7	-10.0	31.6	43.5	-11.9	Verti
	QP									
^	138.007M	58.7	-27.1	+10.9	+2.7	-10.0	35.2	43.5	-8.3	Verti
36	126.740M	55.0	-27.2	+11.2	+2.5	-10.0	31.5	43.5	-12.0	Verti
	QP									
^	126.740M	59.0	-27.2	+11.2	+2.5	-10.0	35.5	43.5	-8.0	Verti
38	134.358M	55.0	-27.1	+11.0	+2.6	-10.0	31.5	43.5	-12.0	Verti
	QP									
^	134.358M	59.1	-27.1	+11.0	+2.6	-10.0	35.6	43.5	-7.9	Verti
40	150.094M	55.2	-27.0	+10.4	+2.8	-10.0	31.4	43.5	-12.1	Horiz
41	140.090M	54.9	-27.1	+10.9	+2.7	-10.0	31.4	43.5	-12.1	Horiz
42	162.470M	55.3	-26.9	+9.8	+2.9	-10.0	31.1	43.5	-12.4	Horiz
43	157.100M	54.8	-26.9	+10.2	+2.9	-10.0	31.0	43.5	-12.5	Verti
	QP									
^	157.100M	57.4	-26.9	+10.2	+2.9	-10.0	33.6	43.5	-9.9	Verti
45	158.970M	54.8	-26.9	+10.1	+2.9	-10.0	30.9	43.5	-12.6	Verti
	QP									
^	158.970M	57.5	-26.9	+10.1	+2.9	-10.0	33.6	43.5	-9.9	Verti
47	780.094M	43.3	-27.7	+21.2	+7.0	-10.0	33.8	46.4	-12.6	Verti
	QP									
^	780.064M	46.3	-27.7	+21.2	+7.0	-10.0	36.8	46.4	-9.6	Verti
49	127.960M	54.4	-27.2	+11.1	+2.5	-10.0	30.8	43.5	-12.7	Horiz

50	144.370M	54.1	-27.0	+10.7	+2.7	-10.0	30.5	43.5	-13.0	Horiz
51	126.180M	53.9	-27.2	+11.2	+2.5	-10.0	30.4	43.5	-13.1	Horiz
52	780.204M	42.5	-27.7	+21.2	+7.0	-10.0	33.0	46.4	-13.4	Horiz
53	163.750M	54.3	-26.9	+9.7	+2.9	-10.0	30.0	43.5	-13.5	Horiz
54	161.870M	54.0	-26.9	+9.9	+2.9	-10.0	29.9	43.5	-13.6	Horiz
55	160.680M QP	53.8	-26.9	+10.0	+2.9	-10.0	29.8	43.5	-13.7	Verti
^	160.680M	56.0	-26.9	+10.0	+2.9	-10.0	32.0	43.5	-11.5	Verti
57	143.730M	53.3	-27.0	+10.7	+2.7	-10.0	29.7	43.5	-13.8	Horiz
58	124.900M QP	53.2	-27.2	+11.2	+2.5	-10.0	29.7	43.5	-13.8	Verti
^	124.900M	56.6	-27.2	+11.2	+2.5	-10.0	33.1	43.5	-10.4	Verti
60	164.930M	53.9	-26.9	+9.6	+2.9	-10.0	29.5	43.5	-14.0	Horiz
61	180.101M	54.9	-26.8	+8.2	+3.1	-10.0	29.4	43.5	-14.1	Horiz
62	154.780M	52.7	-27.0	+10.3	+2.8	-10.0	28.8	43.5	-14.7	Verti
63	154.650M QP	52.6	-27.0	+10.3	+2.8	-10.0	28.7	43.5	-14.8	Verti
^	154.650M	55.7	-27.0	+10.3	+2.8	-10.0	31.8	43.5	-11.7	Verti
65	250.102M QP	52.3	-26.5	+12.0	+3.6	-10.0	31.4	46.4	-15.0	Verti
^	250.093M	53.5	-26.5	+12.0	+3.6	-10.0	32.6	46.4	-13.8	Verti
67	162.870M QP	52.7	-26.9	+9.8	+2.9	-10.0	28.5	43.5	-15.0	Verti
^	162.870M	54.9	-26.9	+9.8	+2.9	-10.0	30.7	43.5	-12.8	Verti
69	123.060M QP	52.1	-27.2	+11.1	+2.5	-10.0	28.5	43.5	-15.0	Verti
^	123.060M	56.2	-27.2	+11.1	+2.5	-10.0	32.6	43.5	-10.9	Verti
71	122.120M QP	52.0	-27.2	+11.0	+2.5	-10.0	28.3	43.5	-15.2	Verti
^	122.120M	55.3	-27.2	+10.9	+2.5	-10.0	31.5	43.5	-12.0	Verti
73	820.328M	39.7	-27.7	+21.7	+7.3	-10.0	31.0	46.4	-15.4	Horiz

74	143.130M	51.7	-27.1	+10.7	+2.7	-10.0	28.0	43.5	-15.5	Horiz
75	151.130M	51.8	-27.0	+10.4	+2.8	-10.0	28.0	43.5	-15.5	Verti
76	32.643M	42.9	-27.3	+16.6	+1.3	-10.0	23.5	39.1	-15.6	Verti
QP										
^	32.643M	47.0	-27.3	+16.5	+1.3	-10.0	27.5	39.1	-11.6	Verti
78	165.610M	52.3	-26.9	+9.5	+2.9	-10.0	27.8	43.5	-15.7	Horiz
79	140.730M	51.1	-27.1	+10.9	+2.7	-10.0	27.6	43.5	-15.9	Horiz
80	940.064M	36.3	-27.2	+23.4	+8.0	-10.0	30.5	46.4	-15.9	Verti
81	165.020M	52.1	-26.9	+9.5	+2.9	-10.0	27.6	43.5	-15.9	Verti
82	800.251M	39.7	-27.7	+21.4	+7.0	-10.0	30.4	46.4	-16.0	Verti
83	124.370M	50.9	-27.2	+11.2	+2.5	-10.0	27.4	43.5	-16.1	Horiz
84	155.390M	51.4	-27.0	+10.2	+2.8	-10.0	27.4	43.5	-16.1	Verti
85	866.641M	37.6	-27.6	+22.4	+7.8	-10.0	30.2	46.4	-16.2	Horiz
86	150.510M	51.0	-27.0	+10.4	+2.8	-10.0	27.2	43.5	-16.3	Verti
87	173.520M	52.1	-26.8	+8.7	+3.0	-10.0	27.0	43.5	-16.5	Verti
88	166.833M	51.5	-26.9	+9.4	+2.9	-10.0	26.9	43.5	-16.6	Verti
89	167.400M	51.5	-26.9	+9.3	+2.9	-10.0	26.8	43.5	-16.7	Horiz
90	150.520M	50.6	-27.0	+10.4	+2.8	-10.0	26.8	43.5	-16.7	Verti
91	167.970M	51.5	-26.9	+9.2	+2.9	-10.0	26.7	43.5	-16.8	Horiz
92	900.026M	36.0	-27.3	+22.8	+8.1	-10.0	29.6	46.4	-16.8	Verti
93	566.741M	42.7	-27.8	+18.6	+6.0	-10.0	29.5	46.4	-16.9	Verti
QP										
^	566.741M	45.5	-27.8	+18.6	+6.0	-10.0	32.3	46.4	-14.1	Verti
95	200.075M	51.7	-26.7	+8.3	+3.3	-10.0	26.6	43.5	-16.9	Verti
96	118.930M	50.5	-27.2	+10.8	+2.5	-10.0	26.6	43.5	-16.9	Verti
QP										
^	118.930M	53.8	-27.2	+10.8	+2.5	-10.0	29.9	43.5	-13.6	Verti

98	152.350M	50.5	-27.0	+10.3	+2.8	-10.0	26.6	43.5	-16.9	Verti
99	168.620M	51.1	-26.8	+9.2	+3.0	-10.0	26.5	43.5	-17.0	Horiz
100	114.070M	50.8	-27.2	+10.5	+2.4	-10.0	26.5	43.5	-17.0	Verti
	QP									
^	114.070M	55.0	-27.2	+10.5	+2.4	-10.0	30.7	43.5	-12.8	Verti
102	117.730M	50.4	-27.2	+10.8	+2.4	-10.0	26.4	43.5	-17.1	Verti
	QP									
^	117.730M	54.0	-27.2	+10.8	+2.4	-10.0	30.0	43.5	-13.5	Verti
104	155.990M	50.2	-26.9	+10.2	+2.9	-10.0	26.4	43.5	-17.1	Verti
105	180.200M	51.6	-26.8	+8.2	+3.1	-10.0	26.1	43.5	-17.4	Verti
106	117.110M	50.0	-27.2	+10.7	+2.4	-10.0	25.9	43.5	-17.6	Verti
	QP									
^	117.110M	53.9	-27.2	+10.7	+2.4	-10.0	29.8	43.5	-13.7	Verti
108	169.200M	50.5	-26.8	+9.1	+3.0	-10.0	25.8	43.5	-17.7	Horiz
109	123.100M	49.3	-27.2	+11.1	+2.5	-10.0	25.7	43.5	-17.8	Horiz
110	177.220M	51.1	-26.8	+8.4	+3.0	-10.0	25.7	43.5	-17.8	Verti
111	169.910M	50.5	-26.8	+9.0	+3.0	-10.0	25.7	43.5	-17.8	Verti
112	141.890M	49.3	-27.1	+10.8	+2.7	-10.0	25.7	43.5	-17.8	Verti
	QP									
^	141.890M	51.8	-27.1	+10.8	+2.7	-10.0	28.2	43.5	-15.3	Verti
114	112.860M	50.1	-27.2	+10.4	+2.4	-10.0	25.7	43.5	-17.8	Verti
	QP									
^	112.860M	53.3	-27.2	+10.4	+2.4	-10.0	28.9	43.5	-14.6	Verti
116	115.300M	49.9	-27.2	+10.6	+2.4	-10.0	25.7	43.5	-17.8	Verti
	QP									
^	115.300M	53.6	-27.2	+10.6	+2.4	-10.0	29.4	43.5	-14.1	Verti
118	899.820M	34.7	-27.3	+22.8	+8.1	-10.0	28.3	46.4	-18.1	Horiz
119	180.230M	50.7	-26.8	+8.2	+3.1	-10.0	25.2	43.5	-18.3	Verti
120	169.820M	49.6	-26.8	+9.0	+3.0	-10.0	24.8	43.5	-18.7	Horiz
121	900.016M	34.0	-27.3	+22.8	+8.1	-10.0	27.6	46.4	-18.8	Horiz

122	426.708M	43.9	-27.4	+16.0	+5.0	-10.0	27.5	46.4	-18.9	Verti
123	181.940M	50.0	-26.8	+8.2	+3.1	-10.0	24.5	43.5	-19.0	Horiz
124	179.010M	49.9	-26.8	+8.3	+3.1	-10.0	24.5	43.5	-19.0	Verti
125	175.330M	49.8	-26.8	+8.5	+3.0	-10.0	24.5	43.5	-19.0	Verti
126	179.040M	49.7	-26.8	+8.3	+3.1	-10.0	24.3	43.5	-19.2	Verti
127	184.380M	49.5	-26.8	+8.2	+3.1	-10.0	24.0	43.5	-19.5	Horiz
128	183.140M	49.3	-26.8	+8.2	+3.1	-10.0	23.8	43.5	-19.7	Horiz
129	866.881M	33.9	-27.6	+22.4	+7.8	-10.0	26.5	46.4	-19.9	Verti
130	120.690M	47.2	-27.2	+10.9	+2.5	-10.0	23.4	43.5	-20.1	Horiz
131	175.930M	48.8	-26.8	+8.4	+3.0	-10.0	23.4	43.5	-20.1	Verti
132	187.390M	48.6	-26.7	+8.2	+3.2	-10.0	23.3	43.5	-20.2	Horiz
133	177.820M	48.8	-26.8	+8.3	+3.0	-10.0	23.3	43.5	-20.2	Verti
134	112.190M	47.5	-27.2	+10.4	+2.4	-10.0	23.1	43.5	-20.4	Horiz
135	766.865M	35.7	-27.7	+21.1	+6.9	-10.0	26.0	46.4	-20.4	Verti
136	172.960M	48.1	-26.8	+8.7	+3.0	-10.0	23.0	43.5	-20.5	Verti
137	266.703M	46.2	-26.5	+12.3	+3.7	-10.0	25.7	46.4	-20.7	Verti
138	184.970M	48.1	-26.8	+8.2	+3.1	-10.0	22.6	43.5	-20.9	Horiz
139	140.110M	46.1	-27.1	+10.9	+2.7	-10.0	22.6	43.5	-20.9	Verti
QP										
^	140.110M	48.7	-27.1	+10.9	+2.7	-10.0	25.2	43.5	-18.3	Verti
141	186.770M	48.0	-26.8	+8.2	+3.1	-10.0	22.5	43.5	-21.0	Horiz
142	185.830M	48.0	-26.8	+8.2	+3.1	-10.0	22.5	43.5	-21.0	Horiz
143	460.068M	41.1	-27.6	+16.7	+5.1	-10.0	25.3	46.4	-21.1	Verti
144	840.056M	33.3	-27.7	+22.0	+7.6	-10.0	25.2	46.4	-21.2	Horiz
145	993.520M	41.2	-27.0	+24.1	+0.0	-10.0	28.3	49.5	-21.2	Verti

146	766.657M	34.8	-27.7	+21.0	+6.9	-10.0	25.0	46.4	-21.4	Horiz
147	800.018M	34.3	-27.7	+21.4	+7.0	-10.0	25.0	46.4	-21.4	Horiz
148	625.079M	37.2	-27.9	+19.4	+6.2	-10.0	24.9	46.4	-21.5	Verti
149	174.780M	47.2	-26.8	+8.5	+3.0	-10.0	21.9	43.5	-21.6	Verti
150	250.094M	45.6	-26.5	+12.0	+3.6	-10.0	24.7	46.4	-21.7	Horiz
151	30.454M	35.8	-27.3	+17.6	+1.2	-10.0	17.3	39.1	-21.8	Horiz
152	118.300M	45.6	-27.2	+10.8	+2.5	-10.0	21.7	43.5	-21.8	Horiz
153	188.580M	46.9	-26.7	+8.2	+3.2	-10.0	21.6	43.5	-21.9	Horiz
154	233.454M	46.4	-26.5	+10.9	+3.5	-10.0	24.3	46.4	-22.1	Horiz
155	566.749M	37.4	-27.8	+18.6	+6.0	-10.0	24.2	46.4	-22.2	Horiz
156	115.870M	45.3	-27.2	+10.6	+2.4	-10.0	21.1	43.5	-22.4	Horiz
157	600.043M	36.7	-27.8	+19.1	+5.9	-10.0	23.9	46.4	-22.5	Verti
158	700.059M	34.4	-27.8	+20.3	+6.8	-10.0	23.7	46.4	-22.7	Horiz
159	233.269M	45.8	-26.5	+10.9	+3.5	-10.0	23.7	46.4	-22.7	Verti
160	183.230M	46.2	-26.8	+8.2	+3.1	-10.0	20.7	43.5	-22.8	Verti
161	114.010M	44.9	-27.2	+10.5	+2.4	-10.0	20.6	43.5	-22.9	Horiz
162	700.040M	34.2	-27.8	+20.3	+6.8	-10.0	23.5	46.4	-22.9	Verti
163	666.775M	34.8	-27.9	+19.9	+6.5	-10.0	23.3	46.4	-23.1	Verti
164	499.857M	38.0	-27.8	+17.4	+5.5	-10.0	23.1	46.4	-23.3	Horiz
165	109.150M	44.7	-27.2	+10.2	+2.4	-10.0	20.1	43.5	-23.4	Horiz
166	200.061M	44.8	-26.7	+8.3	+3.3	-10.0	19.7	43.5	-23.8	Horiz
167	300.057M	42.2	-26.5	+12.8	+4.1	-10.0	22.6	46.4	-23.8	Verti
168	110.390M	44.1	-27.2	+10.3	+2.4	-10.0	19.6	43.5	-23.9	Horiz

169	154.150M QP	43.4	-27.0	+10.3	+2.8	-10.0	19.5	43.5	-24.0	Verti
^	154.150M	54.2	-27.0	+10.3	+2.8	-10.0	30.3	43.5	-13.2	Verti
171	190.480M	44.2	-26.7	+8.3	+3.2	-10.0	19.0	43.5	-24.5	Horiz
172	107.670M	43.3	-27.2	+10.1	+2.4	-10.0	18.6	43.5	-24.9	Horiz
173	450.095M	37.4	-27.5	+16.5	+5.0	-10.0	21.4	46.4	-25.0	Horiz
174	280.020M	41.5	-26.5	+12.5	+3.9	-10.0	21.4	46.4	-25.0	Verti
175	214.810M	42.1	-26.6	+9.5	+3.4	-10.0	18.4	43.5	-25.1	Verti
176	185.100M	43.9	-26.8	+8.2	+3.1	-10.0	18.4	43.5	-25.1	Verti
177	375.084M	38.6	-27.0	+14.8	+4.8	-10.0	21.2	46.4	-25.2	Verti
178	188.080M	43.5	-26.7	+8.2	+3.2	-10.0	18.2	43.5	-25.3	Verti
179	620.095M	33.4	-27.9	+19.4	+6.1	-10.0	21.0	46.4	-25.4	Horiz
180	500.085M	35.8	-27.8	+17.4	+5.5	-10.0	20.9	46.4	-25.5	Verti
181	275.110M	41.2	-26.5	+12.4	+3.8	-10.0	20.9	46.4	-25.5	Verti
182	533.399M	34.6	-27.8	+18.0	+5.8	-10.0	20.6	46.4	-25.8	Verti
183	450.103M	36.4	-27.5	+16.5	+5.0	-10.0	20.4	46.4	-26.0	Horiz
184	333.407M	38.4	-26.7	+13.8	+4.4	-10.0	19.9	46.4	-26.5	Verti
185	265.430M	40.4	-26.5	+12.3	+3.7	-10.0	19.9	46.4	-26.5	Verti
186	450.058M	35.8	-27.5	+16.5	+5.0	-10.0	19.8	46.4	-26.6	Verti
187	281.300M	39.9	-26.5	+12.5	+3.9	-10.0	19.8	46.4	-26.6	Verti
188	400.039M	36.4	-27.2	+15.4	+5.1	-10.0	19.7	46.4	-26.7	Verti
189	187.250M	41.9	-26.7	+8.2	+3.2	-10.0	16.6	43.5	-26.9	Verti
190	466.749M	34.9	-27.6	+16.8	+5.2	-10.0	19.3	46.4	-27.1	Horiz
191	460.061M	35.1	-27.6	+16.7	+5.1	-10.0	19.3	46.4	-27.1	Horiz
192	225.110M	42.0	-26.5	+10.3	+3.4	-10.0	19.2	46.4	-27.2	Verti

193	273.330M	39.3	-26.5	+12.4	+3.8	-10.0	19.0	46.4	-27.4	Verti
194	221.480M	42.1	-26.5	+10.0	+3.4	-10.0	19.0	46.4	-27.4	Verti
195	220.580M	42.2	-26.5	+9.9	+3.4	-10.0	19.0	46.4	-27.4	Verti
196	276.950M	39.2	-26.5	+12.4	+3.8	-10.0	18.9	46.4	-27.5	Verti
197	251.760M	39.8	-26.5	+12.0	+3.6	-10.0	18.9	46.4	-27.5	Verti
198	104.336M	41.0	-27.2	+9.8	+2.3	-10.0	15.9	43.5	-27.6	Horiz
199	252.970M	39.6	-26.5	+12.1	+3.6	-10.0	18.8	46.4	-27.6	Verti
200	320.093M	37.6	-26.6	+13.4	+4.3	-10.0	18.7	46.4	-27.7	Horiz
201	87.350M	38.7	-27.1	+7.7	+2.1	-10.0	11.4	39.1	-27.7	Horiz
202	226.640M	41.4	-26.5	+10.4	+3.4	-10.0	18.7	46.4	-27.7	Verti
203	301.870M	38.1	-26.5	+12.9	+4.1	-10.0	18.6	46.4	-27.8	Verti
204	278.740M	38.8	-26.5	+12.5	+3.8	-10.0	18.6	46.4	-27.8	Verti
205	218.410M	42.0	-26.6	+9.8	+3.4	-10.0	18.6	46.4	-27.8	Verti
206	189.910M	40.9	-26.7	+8.3	+3.2	-10.0	15.7	43.5	-27.8	Verti
207	304.220M	37.9	-26.5	+12.9	+4.1	-10.0	18.4	46.4	-28.0	Verti
208	222.980M	41.4	-26.5	+10.1	+3.4	-10.0	18.4	46.4	-28.0	Verti
209	216.930M	42.0	-26.6	+9.6	+3.4	-10.0	18.4	46.4	-28.0	Verti
210	420.122M	34.7	-27.3	+15.8	+5.1	-10.0	18.3	46.4	-28.1	Horiz
211	85.580M	38.5	-27.1	+7.5	+2.1	-10.0	11.0	39.1	-28.1	Horiz
212	400.113M	34.9	-27.2	+15.4	+5.1	-10.0	18.2	46.4	-28.2	Horiz
213	366.702M	35.8	-26.9	+14.6	+4.7	-10.0	18.2	46.4	-28.2	Horiz
214	267.870M	38.7	-26.5	+12.3	+3.7	-10.0	18.2	46.4	-28.2	Verti
215	246.000M	39.4	-26.5	+11.7	+3.6	-10.0	18.2	46.4	-28.2	Verti
216	261.090M	38.7	-26.5	+12.2	+3.7	-10.0	18.1	46.4	-28.3	Verti

217	235.740M	40.1	-26.5	+11.0	+3.5	-10.0	18.1	46.4	-28.3	Verti
218	86.760M	38.0	-27.1	+7.7	+2.1	-10.0	10.7	39.1	-28.4	Horiz
219	269.030M	38.4	-26.5	+12.3	+3.8	-10.0	18.0	46.4	-28.4	Verti
220	393.418M	34.7	-27.2	+15.3	+5.0	-10.0	17.8	46.4	-28.6	Verti
221	270.290M	38.2	-26.5	+12.3	+3.8	-10.0	17.8	46.4	-28.6	Verti
222	237.540M	39.6	-26.5	+11.2	+3.5	-10.0	17.8	46.4	-28.6	Verti
223	433.421M	34.0	-27.4	+16.1	+5.0	-10.0	17.7	46.4	-28.7	Verti
224	307.330M	37.0	-26.5	+13.0	+4.2	-10.0	17.7	46.4	-28.7	Verti
225	264.210M	38.3	-26.5	+12.2	+3.7	-10.0	17.7	46.4	-28.7	Verti
226	102.129M	39.9	-27.2	+9.7	+2.3	-10.0	14.7	43.5	-28.8	Horiz
227	305.480M	37.0	-26.5	+13.0	+4.1	-10.0	17.6	46.4	-28.8	Verti
228	244.730M	38.9	-26.5	+11.6	+3.6	-10.0	17.6	46.4	-28.8	Verti
229	104.938M	39.6	-27.2	+9.9	+2.3	-10.0	14.6	43.5	-28.9	Horiz
230	466.743M	33.1	-27.6	+16.8	+5.2	-10.0	17.5	46.4	-28.9	Verti
231	310.970M	36.8	-26.6	+13.1	+4.2	-10.0	17.5	46.4	-28.9	Verti
232	298.230M	37.1	-26.5	+12.8	+4.1	-10.0	17.5	46.4	-28.9	Verti
233	239.320M	39.2	-26.5	+11.3	+3.5	-10.0	17.5	46.4	-28.9	Verti
234	500.106M	32.3	-27.8	+17.4	+5.5	-10.0	17.4	46.4	-29.0	Horiz
235	100.631M	39.9	-27.2	+9.5	+2.3	-10.0	14.5	43.5	-29.0	Horiz
236	425.086M	33.9	-27.4	+15.9	+5.0	-10.0	17.4	46.4	-29.0	Verti
237	283.630M	37.4	-26.5	+12.6	+3.9	-10.0	17.4	46.4	-29.0	Verti
238	243.590M	38.7	-26.5	+11.6	+3.6	-10.0	17.4	46.4	-29.0	Verti
239	249.620M	38.3	-26.5	+12.0	+3.6	-10.0	17.4	46.4	-29.0	Verti
240	309.780M	36.6	-26.6	+13.1	+4.2	-10.0	17.3	46.4	-29.1	Verti

241	285.490M	37.3	-26.5	+12.6	+3.9	-10.0	17.3	46.4	-29.1	Verti
242	84.690M	37.5	-27.1	+7.4	+2.1	-10.0	9.9	39.1	-29.2	Horiz
243	303.070M	36.6	-26.5	+12.9	+4.1	-10.0	17.1	46.4	-29.3	Verti
244	247.820M	38.1	-26.5	+11.9	+3.6	-10.0	17.1	46.4	-29.3	Verti
245	289.130M	36.8	-26.5	+12.6	+4.0	-10.0	16.9	46.4	-29.5	Verti
246	231.780M	39.2	-26.5	+10.7	+3.5	-10.0	16.9	46.4	-29.5	Verti
247	299.430M	36.4	-26.5	+12.8	+4.1	-10.0	16.8	46.4	-29.6	Verti
248	295.190M	36.6	-26.5	+12.7	+4.0	-10.0	16.8	46.4	-29.6	Verti
249	254.830M	37.6	-26.5	+12.1	+3.6	-10.0	16.8	46.4	-29.6	Verti
250	296.410M	36.4	-26.5	+12.7	+4.1	-10.0	16.7	46.4	-29.7	Verti
251	290.970M	36.5	-26.5	+12.7	+4.0	-10.0	16.7	46.4	-29.7	Verti
252	241.150M	38.3	-26.5	+11.4	+3.5	-10.0	16.7	46.4	-29.7	Verti
253	229.370M	39.2	-26.5	+10.6	+3.4	-10.0	16.7	46.4	-29.7	Verti
254	284.180M	36.6	-26.5	+12.6	+3.9	-10.0	16.6	46.4	-29.8	Verti
255	293.970M	36.3	-26.5	+12.7	+4.0	-10.0	16.5	46.4	-29.9	Verti
256	234.170M	38.5	-26.5	+10.9	+3.5	-10.0	16.4	46.4	-30.0	Verti
257	300.093M	35.9	-26.5	+12.8	+4.1	-10.0	16.3	46.4	-30.1	Horiz
258	259.360M	36.6	-26.5	+12.2	+3.7	-10.0	16.0	46.4	-30.4	Verti
259	433.304M	32.0	-27.4	+16.1	+5.0	-10.0	15.7	46.4	-30.7	Horiz
260	220.111M	38.6	-26.5	+9.9	+3.4	-10.0	15.4	46.4	-31.0	Horiz
261	94.870M	37.6	-27.1	+8.8	+2.3	-10.0	11.6	43.5	-31.9	Horiz
262	300.059M	33.3	-26.5	+12.8	+4.1	-10.0	13.7	46.4	-32.7	Horiz
263	257.390M	34.3	-26.5	+12.1	+3.7	-10.0	13.6	46.4	-32.8	Horiz
264	259.200M	33.9	-26.5	+12.2	+3.7	-10.0	13.3	46.4	-33.1	Horiz

265	266.788M	33.7	-26.5	+12.3	+3.7	-10.0	13.2	46.4	-33.2	Horiz
266	260.070M	33.5	-26.5	+12.2	+3.7	-10.0	12.9	46.4	-33.5	Horiz
267	258.300M	33.5	-26.5	+12.1	+3.7	-10.0	12.8	46.4	-33.6	Horiz
268	256.450M	33.2	-26.5	+12.1	+3.7	-10.0	12.5	46.4	-33.9	Horiz
269	248.910M	33.5	-26.5	+11.9	+3.6	-10.0	12.5	46.4	-33.9	Horiz
270	254.950M	33.2	-26.5	+12.1	+3.6	-10.0	12.4	46.4	-34.0	Horiz
271	245.570M	32.3	-26.5	+11.7	+3.6	-10.0	11.1	46.4	-35.3	Horiz
272	244.060M	32.1	-26.5	+11.6	+3.6	-10.0	10.8	46.4	-35.6	Horiz
273	247.360M	31.7	-26.5	+11.8	+3.6	-10.0	10.6	46.4	-35.8	Horiz
274	237.370M	32.5	-26.5	+11.1	+3.5	-10.0	10.6	46.4	-35.8	Horiz
275	235.880M	32.4	-26.5	+11.0	+3.5	-10.0	10.4	46.4	-36.0	Horiz
276	238.340M	32.1	-26.5	+11.2	+3.5	-10.0	10.3	46.4	-36.1	Horiz
277	234.960M	32.2	-26.5	+11.0	+3.5	-10.0	10.2	46.4	-36.2	Horiz
278	239.490M	31.2	-26.5	+11.3	+3.5	-10.0	9.5	46.4	-36.9	Horiz
279	243.130M	30.9	-26.5	+11.5	+3.5	-10.0	9.4	46.4	-37.0	Horiz

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.109 CLASS A**
 Work Order #: **82775**
 Test Type: **Maximized Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/23/2004
 Time: 14:25:28
 Sequence#: 42
 Tested By: Randal Clark

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA	2403A08241	02/26/2003	02/26/2005	00489
Display				
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Chase CBL6111C	2456	12/13/2002	12/13/2004	01991
Bilog				
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2005	00099

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT power supply is located at the turn table. This test data is represents data collected from the Soekris motherboard. Test data is representative of both Relay and Downlink. Test data represents emissions from radio in receive mode, digital circuitry and power supply. Reported emissions represent the worst case. Two Ferrites installed on antenna lead from instance two radio. Test distance correction factor used in accordance with 15.31 20dB per decade. Frequency Range Investigated: 30-1000MHz. Temperature: 16°C, Relative Humidity: 36%. RBW = 120kHz, VBW = 120kHz.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site B
T3=Cable - 10 Meter	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	166.767M	66.5	-26.9	+9.4	+2.9	-10.0	41.9	43.5	-1.6	Verti
	QP									
^	166.744M	70.7	-26.9	+9.4	+2.9	-10.0	46.1	43.5	+2.6	Verti

3	566.743M QP	56.4	-27.8	+18.6	+6.0	-10.0	43.2	46.4	-3.2	Horiz
^	566.743M	61.1	-27.8	+18.6	+6.0	-10.0	47.9	46.4	+1.5	Horiz
5	300.072M QP	62.1	-26.5	+12.8	+4.1	-10.0	42.5	46.4	-3.9	Verti
^	300.076M	63.6	-26.5	+12.8	+4.1	-10.0	44.0	46.4	-2.4	Verti
7	300.086M QP	61.5	-26.5	+12.8	+4.1	-10.0	41.9	46.4	-4.5	Horiz
^	300.108M	63.8	-26.5	+12.8	+4.1	-10.0	44.2	46.4	-2.2	Horiz
9	633.337M QP	54.0	-27.9	+19.5	+6.2	-10.0	41.8	46.4	-4.6	Horiz
^	633.337M	57.9	-27.9	+19.5	+6.2	-10.0	45.7	46.4	-0.7	Horiz
11	433.399M	58.1	-27.4	+16.1	+5.0	-10.0	41.8	46.4	-4.6	Horiz
12	125.090M	61.9	-27.2	+11.2	+2.5	-10.0	38.4	43.5	-5.1	Verti
13	466.738M	56.3	-27.6	+16.8	+5.2	-10.0	40.7	46.4	-5.7	Horiz
14	766.600M	50.4	-27.7	+21.0	+6.9	-10.0	40.6	46.4	-5.8	Horiz
15	766.590M	50.1	-27.7	+21.0	+6.9	-10.0	40.3	46.4	-6.1	Horiz
16	600.048M	53.0	-27.8	+19.1	+5.9	-10.0	40.2	46.4	-6.2	Horiz
17	800.184M	48.8	-27.7	+21.4	+7.0	-10.0	39.5	46.4	-6.9	Horiz
18	133.411M	59.3	-27.1	+11.0	+2.6	-10.0	35.8	43.5	-7.7	Verti
19	389.020M	55.4	-27.1	+15.1	+5.0	-10.0	38.4	46.4	-8.0	Verti
20	211.380M	59.3	-26.6	+9.2	+3.3	-10.0	35.2	43.5	-8.3	Verti
21	366.780M	55.2	-26.9	+14.6	+4.7	-10.0	37.6	46.4	-8.8	Horiz
22	600.028M	50.4	-27.8	+19.1	+5.9	-10.0	37.6	46.4	-8.8	Horiz
23	666.661M	49.0	-27.9	+19.9	+6.5	-10.0	37.5	46.4	-8.9	Horiz
24	233.401M	59.1	-26.5	+10.9	+3.5	-10.0	37.0	46.4	-9.4	Horiz
25	66.745M	59.0	-27.2	+5.8	+1.8	-10.0	29.4	39.1	-9.7	Verti
26	166.735M	58.4	-26.9	+9.4	+2.9	-10.0	33.8	43.5	-9.7	Horiz

27	233.440M	58.4	-26.5	+10.9	+3.5	-10.0	36.3	46.4	-10.1	Verti
28	433.481M	52.5	-27.4	+16.1	+5.0	-10.0	36.2	46.4	-10.2	Verti
29	384.050M	53.3	-27.1	+15.0	+4.9	-10.0	36.1	46.4	-10.3	Verti
30	633.337M	48.1	-27.9	+19.5	+6.2	-10.0	35.9	46.4	-10.5	Verti
31	477.780M	51.2	-27.7	+17.0	+5.3	-10.0	35.8	46.4	-10.6	Horiz
32	576.100M	48.7	-27.8	+18.7	+5.9	-10.0	35.5	46.4	-10.9	Horiz
33	566.394M	48.6	-27.8	+18.6	+6.0	-10.0	35.4	46.4	-11.0	Verti
34	400.040M	51.9	-27.2	+15.4	+5.1	-10.0	35.2	46.4	-11.2	Horiz
35	866.470M	42.3	-27.6	+22.3	+7.8	-10.0	34.8	46.4	-11.6	Horiz
36	833.103M	43.0	-27.7	+21.9	+7.5	-10.0	34.7	46.4	-11.7	Verti
37	177.820M	57.2	-26.8	+8.3	+3.0	-10.0	31.7	43.5	-11.8	Verti
38	122.301M	55.4	-27.2	+11.0	+2.5	-10.0	31.7	43.5	-11.8	Horiz
39	250.097M	55.4	-26.5	+12.0	+3.6	-10.0	34.5	46.4	-11.9	Verti
40	867.054M	41.7	-27.6	+22.4	+7.8	-10.0	34.3	46.4	-12.1	Verti
41	500.053M	49.1	-27.8	+17.4	+5.5	-10.0	34.2	46.4	-12.2	Verti
42	200.120M	56.2	-26.7	+8.3	+3.3	-10.0	31.1	43.5	-12.4	Verti
43	133.419M	54.6	-27.1	+11.0	+2.6	-10.0	31.1	43.5	-12.4	Horiz
44	666.737M	45.2	-27.9	+19.9	+6.5	-10.0	33.7	46.4	-12.7	Verti
45	466.699M	49.3	-27.6	+16.8	+5.2	-10.0	33.7	46.4	-12.7	Verti
46	266.743M	54.2	-26.5	+12.3	+3.7	-10.0	33.7	46.4	-12.7	Verti
47	867.040M	41.0	-27.6	+22.4	+7.8	-10.0	33.6	46.4	-12.8	Verti
48	733.418M	43.4	-27.7	+20.7	+6.9	-10.0	33.3	46.4	-13.1	Horiz
49	125.104M	53.9	-27.2	+11.2	+2.5	-10.0	30.4	43.5	-13.1	Horiz
50	500.060M	48.1	-27.8	+17.4	+5.5	-10.0	33.2	46.4	-13.2	Horiz

51	400.024M	49.5	-27.2	+15.4	+5.1	-10.0	32.8	46.4	-13.6	Verti
52	250.098M	53.3	-26.5	+12.0	+3.6	-10.0	32.4	46.4	-14.0	Horiz
53	922.260M	38.2	-27.3	+23.1	+8.2	-10.0	32.2	46.4	-14.2	Verti
54	200.128M	53.7	-26.7	+8.3	+3.3	-10.0	28.6	43.5	-14.9	Verti
55	833.434M	39.4	-27.7	+21.9	+7.5	-10.0	31.1	46.4	-15.3	Horiz
56	200.100M	53.2	-26.7	+8.3	+3.3	-10.0	28.1	43.5	-15.4	Horiz
57	411.230M	47.2	-27.3	+15.6	+5.1	-10.0	30.6	46.4	-15.8	Verti
58	444.490M	46.8	-27.5	+16.3	+5.0	-10.0	30.6	46.4	-15.8	Horiz
59	900.404M	37.0	-27.3	+22.8	+8.1	-10.0	30.6	46.4	-15.8	Horiz
60	800.186M	39.6	-27.7	+21.4	+7.0	-10.0	30.3	46.4	-16.1	Verti
61	700.002M	41.0	-27.8	+20.3	+6.8	-10.0	30.3	46.4	-16.1	Verti
62	955.440M	36.1	-27.2	+23.6	+7.8	-10.0	30.3	46.4	-16.1	Horiz
63	655.520M	42.0	-28.0	+19.8	+6.4	-10.0	30.2	46.4	-16.2	Horiz
64	366.814M	47.7	-26.9	+14.6	+4.7	-10.0	30.1	46.4	-16.3	Horiz
65	266.676M	50.5	-26.5	+12.3	+3.7	-10.0	30.0	46.4	-16.4	Horiz
66	955.400M	35.6	-27.2	+23.6	+7.8	-10.0	29.8	46.4	-16.6	Verti
67	933.484M	35.6	-27.2	+23.3	+8.1	-10.0	29.8	46.4	-16.6	Horiz
68	899.905M	36.0	-27.3	+22.8	+8.1	-10.0	29.6	46.4	-16.8	Verti
69	655.580M	41.2	-28.0	+19.8	+6.4	-10.0	29.4	46.4	-17.0	Verti
70	922.590M	35.3	-27.3	+23.1	+8.2	-10.0	29.3	46.4	-17.1	Horiz
71	388.930M	46.1	-27.1	+15.1	+5.0	-10.0	29.1	46.4	-17.3	Horiz
72	766.785M	38.7	-27.7	+21.1	+6.9	-10.0	29.0	46.4	-17.4	Verti
73	355.530M	45.9	-26.8	+14.3	+4.6	-10.0	28.0	46.4	-18.4	Horiz
74	944.720M	33.5	-27.2	+23.4	+7.9	-10.0	27.6	46.4	-18.8	Verti

75	333.372M	46.0	-26.7	+13.8	+4.4	-10.0	27.5	46.4	-18.9	Verti
76	533.404M	41.5	-27.8	+18.0	+5.8	-10.0	27.5	46.4	-18.9	Horiz
77	733.529M	37.5	-27.7	+20.7	+6.9	-10.0	27.4	46.4	-19.0	Verti
78	978.060M	35.8	-27.1	+23.9	+7.9	-10.0	30.5	49.5	-19.0	Horiz
79	625.060M	39.7	-27.9	+19.4	+6.2	-10.0	27.4	46.4	-19.0	Horiz
80	336.070M	45.8	-26.7	+13.8	+4.4	-10.0	27.3	46.4	-19.1	Horiz
81	966.758M	35.4	-27.1	+23.8	+7.9	-10.0	30.0	49.5	-19.5	Verti
82	744.480M	36.9	-27.7	+20.8	+6.9	-10.0	26.9	46.4	-19.5	Horiz
83	244.510M	48.1	-26.5	+11.6	+3.6	-10.0	26.8	46.4	-19.6	Verti
84	240.030M	48.4	-26.5	+11.3	+3.5	-10.0	26.7	46.4	-19.7	Verti
85	144.570M	47.1	-27.0	+10.7	+2.7	-10.0	23.5	43.5	-20.0	Verti
86	600.056M	39.2	-27.8	+19.1	+5.9	-10.0	26.4	46.4	-20.0	Verti
87	240.082M	48.1	-26.5	+11.3	+3.5	-10.0	26.4	46.4	-20.0	Horiz
88	275.081M	46.6	-26.5	+12.4	+3.8	-10.0	26.3	46.4	-20.1	Verti
89	199.332M	48.5	-26.7	+8.3	+3.3	-10.0	23.4	43.5	-20.1	Horiz
90	175.090M	48.0	-26.8	+8.5	+3.0	-10.0	22.7	43.5	-20.8	Verti
91	495.330M	40.6	-27.8	+17.3	+5.5	-10.0	25.6	46.4	-20.8	Horiz
92	640.012M	37.6	-28.0	+19.6	+6.3	-10.0	25.5	46.4	-20.9	Horiz
93	489.320M	40.5	-27.7	+17.2	+5.4	-10.0	25.4	46.4	-21.0	Horiz
94	432.150M	41.7	-27.4	+16.1	+5.0	-10.0	25.4	46.4	-21.0	Horiz
95	333.460M	43.8	-26.7	+13.8	+4.4	-10.0	25.3	46.4	-21.1	Horiz
96	432.140M	41.5	-27.4	+16.1	+5.0	-10.0	25.2	46.4	-21.2	Verti
97	111.650M	46.6	-27.2	+10.3	+2.4	-10.0	22.1	43.5	-21.4	Verti
98	112.320M	46.4	-27.2	+10.4	+2.4	-10.0	22.0	43.5	-21.5	Verti

99	672.060M	36.0	-27.9	+20.0	+6.6	-10.0	24.7	46.4	-21.7	Horiz
100	811.120M	32.7	-27.7	+21.6	+7.2	-10.0	23.8	46.4	-22.6	Horiz
101	66.753M	46.1	-27.2	+5.8	+1.8	-10.0	16.5	39.1	-22.6	Horiz
102	422.390M	39.9	-27.3	+15.9	+5.1	-10.0	23.6	46.4	-22.8	Verti
103	480.256M	39.0	-27.7	+17.0	+5.3	-10.0	23.6	46.4	-22.8	Horiz
104	989.120M	31.5	-27.0	+24.1	+8.0	-10.0	26.6	49.5	-22.9	Horiz
105	366.800M	40.6	-26.9	+14.6	+4.7	-10.0	23.0	46.4	-23.4	Verti
106	642.190M	35.0	-28.0	+19.6	+6.3	-10.0	22.9	46.4	-23.5	Verti
107	218.804M	46.0	-26.5	+9.8	+3.4	-10.0	22.7	46.4	-23.7	Horiz
108	115.160M	43.3	-27.2	+10.6	+2.4	-10.0	19.1	43.5	-24.4	Verti
109	533.428M	35.9	-27.8	+18.0	+5.8	-10.0	21.9	46.4	-24.5	Verti
110	255.610M	42.3	-26.5	+12.1	+3.6	-10.0	21.5	46.4	-24.9	Verti
111	143.350M	42.1	-27.0	+10.7	+2.7	-10.0	18.5	43.5	-25.0	Horiz
112	377.900M	38.6	-27.0	+14.9	+4.8	-10.0	21.3	46.4	-25.1	Verti
113	750.050M	31.2	-27.7	+20.9	+6.9	-10.0	21.3	46.4	-25.1	Horiz
114	560.086M	34.5	-27.8	+18.5	+6.0	-10.0	21.2	46.4	-25.2	Horiz
115	288.950M	41.0	-26.5	+12.6	+4.0	-10.0	21.1	46.4	-25.3	Horiz
116	137.870M	41.4	-27.1	+10.9	+2.7	-10.0	17.9	43.5	-25.6	Horiz
117	377.880M	38.0	-27.0	+14.9	+4.8	-10.0	20.7	46.4	-25.7	Horiz
118	222.310M	43.6	-26.5	+10.1	+3.4	-10.0	20.6	46.4	-25.8	Verti
119	375.094M	38.0	-27.0	+14.8	+4.8	-10.0	20.6	46.4	-25.8	Verti
120	444.480M	36.7	-27.5	+16.3	+5.0	-10.0	20.5	46.4	-25.9	Verti
121	277.860M	40.6	-26.5	+12.5	+3.8	-10.0	20.4	46.4	-26.0	Verti
122	322.320M	39.2	-26.6	+13.4	+4.3	-10.0	20.3	46.4	-26.1	Verti

123	375.080M	37.2	-27.0	+14.8	+4.8	-10.0	19.8	46.4	-26.6	Horiz
124	625.046M	32.0	-27.9	+19.4	+6.2	-10.0	19.7	46.4	-26.7	Verti
125	144.130M	40.1	-27.0	+10.7	+2.7	-10.0	16.5	43.5	-27.0	Horiz
126	420.112M	35.7	-27.3	+15.8	+5.1	-10.0	19.3	46.4	-27.1	Horiz
127	147.520M	39.0	-27.0	+10.5	+2.8	-10.0	15.3	43.5	-28.2	Horiz
128	289.020M	37.5	-26.5	+12.6	+4.0	-10.0	17.6	46.4	-28.8	Verti
129	375.080M	35.0	-27.0	+14.8	+4.8	-10.0	17.6	46.4	-28.8	Horiz
130	384.060M	34.0	-27.1	+15.0	+4.9	-10.0	16.8	46.4	-29.6	Horiz
131	142.750M	37.5	-27.1	+10.8	+2.7	-10.0	13.9	43.5	-29.6	Horiz
132	311.140M	35.8	-26.6	+13.1	+4.2	-10.0	16.5	46.4	-29.9	Verti
133	146.170M	35.8	-27.0	+10.6	+2.8	-10.0	12.2	43.5	-31.3	Horiz
134	350.078M	32.8	-26.8	+14.2	+4.5	-10.0	14.7	46.4	-31.7	Horiz
135	225.087M	36.6	-26.5	+10.3	+3.4	-10.0	13.8	46.4	-32.6	Verti
136	141.920M	33.2	-27.1	+10.8	+2.7	-10.0	9.6	43.5	-33.9	Horiz
137	225.066M	34.9	-26.5	+10.3	+3.4	-10.0	12.1	46.4	-34.3	Horiz
138	149.550M	31.7	-27.0	+10.4	+2.8	-10.0	7.9	43.5	-35.6	Horiz

FCC 15.207 – AC CONDUCTED EMISSIONS

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **FCC 15.207 - AVE**

Work Order #: **82775**

Date: 11/23/2004

Test Type: **Conducted Emissions**

Time: 16:33:57

Equipment: **Askey Atheros Radio**

Sequence#: 52

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Downlink

120V 60Hz

S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
LISN Model 8028-50-TS-24-BNC	8379276 & 8379280	06/05/2003	06/05/2005	00330

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Askey Atheros Radio	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT operating in a mode representative of worst case using PCEngines motherboard. EUT is in continuous transmit mode. Motherboard powered by 28VDC. Power over ethernet option bypassed using power adapter dongle. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 17°C, Relative Humidity: 48%.

Transducer Legend:

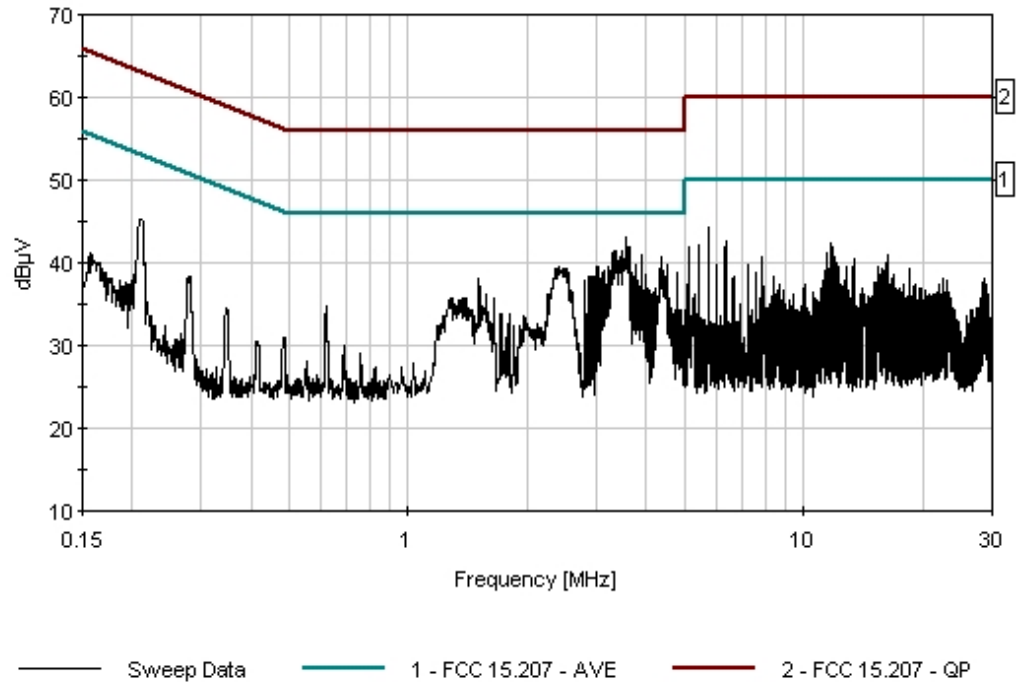
T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n280
T3=HP Filter AN02608	

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	3.305M	40.7	+0.3	+0.3	+0.1		+0.0	41.4	46.0	-4.6	Black
2	3.344M	40.7	+0.3	+0.3	+0.1		+0.0	41.4	46.0	-4.6	Black
3	3.284M	40.4	+0.3	+0.3	+0.1		+0.0	41.1	46.0	-4.9	Black
4	3.909M	40.1	+0.3	+0.4	+0.1		+0.0	40.9	46.0	-5.1	Black

5	4.373M	39.8	+0.3	+0.4	+0.1	+0.0	40.6	46.0	-5.4	Black
6	5.742M	43.6	+0.3	+0.3	+0.1	+0.0	44.3	50.0	-5.7	Black
7	3.761M	38.9	+0.3	+0.4	+0.1	+0.0	39.7	46.0	-6.3	Black
8	2.395M	38.9	+0.3	+0.3	+0.1	+0.0	39.6	46.0	-6.4	Black
9	3.008M	38.9	+0.3	+0.3	+0.1	+0.0	39.6	46.0	-6.4	Black
10	3.212M	38.8	+0.3	+0.3	+0.1	+0.0	39.5	46.0	-6.5	Black
11	4.305M	38.5	+0.3	+0.4	+0.1	+0.0	39.3	46.0	-6.7	Black
12	3.144M	38.4	+0.3	+0.3	+0.1	+0.0	39.1	46.0	-6.9	Black
13	3.080M	38.1	+0.3	+0.3	+0.1	+0.0	38.8	46.0	-7.2	Black
14	4.807M	38.1	+0.3	+0.3	+0.1	+0.0	38.8	46.0	-7.2	Black
15	3.692M	37.9	+0.3	+0.4	+0.1	+0.0	38.7	46.0	-7.3	Black
16	3.969M	37.8	+0.3	+0.4	+0.1	+0.0	38.6	46.0	-7.4	Black
17	6.345M	41.9	+0.3	+0.3	+0.1	+0.0	42.6	50.0	-7.4	Black
18	2.872M	37.7	+0.3	+0.3	+0.1	+0.0	38.4	46.0	-7.6	Black
19	2.940M	37.7	+0.3	+0.3	+0.1	+0.0	38.4	46.0	-7.6	Black
20	3.539M	10.4	+0.3	+0.4	+0.1	+0.0	11.2	46.0	-34.8	Black
Ave										
^	3.539M	42.3	+0.3	+0.4	+0.1	+0.0	43.1	46.0	-2.9	Black

CKC Laboratories, Inc. Date: 11/23/2004 Time: 16:33:57 Digital Path WO#: 82775
 FCC 15.207 - AVE Test Lead: Black 120V 60Hz Sequence#: 52



Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **FCC 15.207 - AVE**

Work Order #: **82775**

Date: 11/23/2004

Test Type: **Conducted Emissions**

Time: 16:28:51

Equipment: **Askey Atheros Radio**

Sequence#: 51

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Downlink

120V 60Hz

S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
LISN Model 8028-50-TS-24-BNC	8379276 & 8379280	06/05/2003	06/05/2005	00330

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON V5.1	110804-001a
Askey Atheros Radio	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT operating in a mode representative of worst case using PCEngines motherboard. EUT is in continuous transmit mode. Motherboard powered by 28VDC. Power over ethernet option bypassed using power adapter dongle. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 17°C, Relative Humidity: 48%.

Transducer Legend:

T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n276
T3=HP Filter AN02608	

Measurement Data:

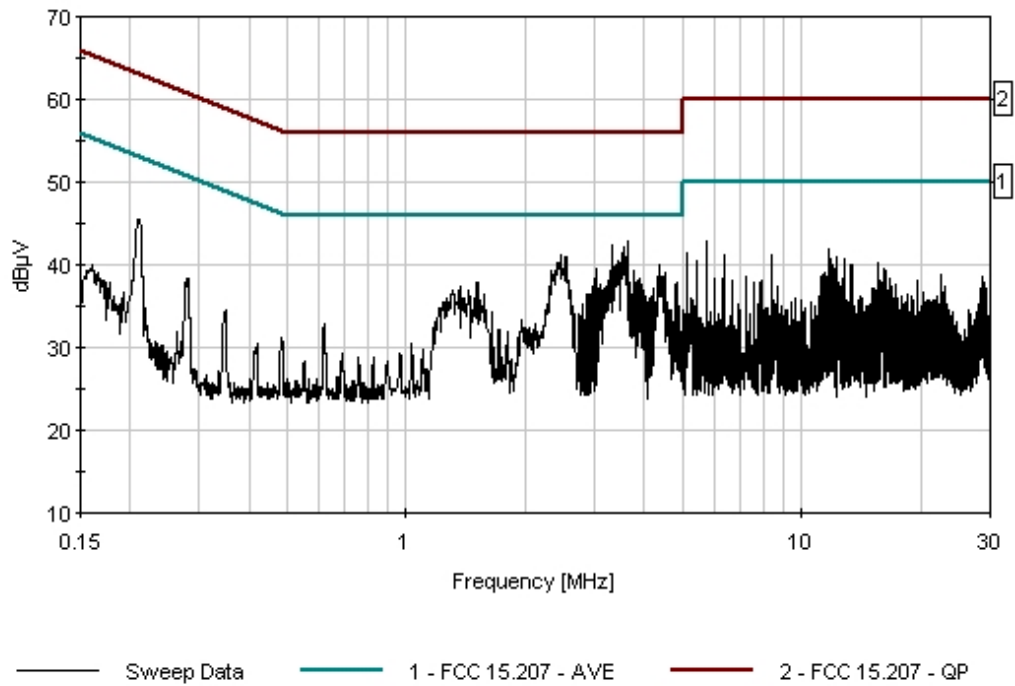
Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	3.316M	41.0	+0.3	+0.3	+0.1		+0.0	41.7	46.0	-4.3	White
2	2.468M	40.4	+0.3	+0.3	+0.1		+0.0	41.1	46.0	-4.9	White
3	4.373M	39.1	+0.3	+0.4	+0.1		+0.0	39.9	46.0	-6.1	White
4	3.012M	38.9	+0.3	+0.3	+0.1		+0.0	39.6	46.0	-6.4	White
5	3.761M	38.6	+0.3	+0.4	+0.1		+0.0	39.4	46.0	-6.6	White

6	4.513M	38.2	+0.3	+0.4	+0.1	+0.0	39.0	46.0	-7.0	White
7	5.742M	42.0	+0.3	+0.4	+0.1	+0.0	42.8	50.0	-7.2	White
8	3.319M	38.0	+0.3	+0.3	+0.1	+0.0	38.7	46.0	-7.3	White
9	3.897M	37.6	+0.3	+0.4	+0.1	+0.0	38.4	46.0	-7.6	White
10	210.358k	44.8	+0.1	+0.4	+0.1	+0.0	45.4	53.2	-7.8	White
11	3.833M	37.4	+0.3	+0.4	+0.1	+0.0	38.2	46.0	-7.8	White
12	11.715M	40.9	+0.4	+0.5	+0.1	+0.0	41.9	50.0	-8.1	White
13	1.511M	37.1	+0.2	+0.4	+0.1	+0.0	37.8	46.0	-8.2	White
14	3.688M	37.0	+0.3	+0.4	+0.1	+0.0	37.8	46.0	-8.2	White
15	4.820M	37.0	+0.3	+0.4	+0.1	+0.0	37.8	46.0	-8.2	White
16	3.080M	36.9	+0.3	+0.3	+0.1	+0.0	37.6	46.0	-8.4	White
17	1.370M	36.8	+0.2	+0.3	+0.2	+0.0	37.5	46.0	-8.5	White
18	2.944M	36.8	+0.3	+0.3	+0.1	+0.0	37.5	46.0	-8.5	White
19	5.138M	40.7	+0.3	+0.4	+0.1	+0.0	41.5	50.0	-8.5	White
20	8.426M	40.4	+0.3	+0.5	+0.1	+0.0	41.3	50.0	-8.7	White
21	3.619M	35.6	+0.3	+0.4	+0.1	+0.0	36.4	46.0	-9.6	White
Ave										
^	3.619M	43.4	+0.3	+0.4	+0.1	+0.0	44.2	46.0	-1.8	White

CKC Laboratories, Inc. Date: 11/23/2004 Time: 16:28:51 Digital Path WO#: 82775
FCC 15.207 - AVE Test Lead: White 120V 60Hz Sequence#: 51



FCC 15.247(c)/15.209/15.205 – SPURIOUS EMISSIONS

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.247 (c) / 15.209 / 15.205**
 Work Order #: **82775**
 Test Type: **Maximized Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Downlink
 S/N: 111504-003

Date: 11/16/2004
 Time: 13:31:01
 Sequence#: 31
 Tested By: Randal Clark

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2005	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band Modulation = 802.11b default (CCK) Data Rate = 11Mbps Antenna = 9dBi Gain Omni Channel 1 PCDAC = 50 Channel 6 PCDAC = 52 Channel 11 PCDAC = 53. Frequency Range Investigated: 1-40GHz. Temperature: 19°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 3.5GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable HF P01527	T4=WL Gore SN 1065 AN P004301
T5=Att 10dB AN02139	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2488.333M	45.0	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	54.7	54.0	+0.7	Verti
2	2483.500M	41.2	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	50.9	54.0	-3.1	Verti
3	2386.333M	36.8	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	45.9	54.0	-8.1	Verti
^	2386.333M	48.2	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	57.3	54.0	+3.3	Verti
5	2388.333M	35.8	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	44.9	54.0	-9.1	Verti
^	2388.333M	46.7	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	55.8	54.0	+1.8	Verti
7	2390.000M	34.8	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	43.9	54.0	-10.1	Verti
^	2390.000M	45.2	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	54.3	54.0	+0.3	Verti
9	2488.333M	32.3	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	42.0	54.0	-12.0	Verti
10	2483.500M	30.7	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	40.4	54.0	-13.6	Verti
11	2397.667M	56.7	+28.3 +9.9	-30.0	+0.4	+0.6	+0.0	65.9	83.0	-17.1	Verti
^	2397.667M	66.3	+28.3 +9.9	-30.0	+0.4	+0.6	+0.0	75.5	83.0	-7.5	Verti

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.247 (c) / 15.209 / 15.205**
 Work Order #: **82775** Date: 11/16/2004
 Test Type: **Maximized Emissions** Time: 13:07:06
 Equipment: **Askey Atheros Radio** Sequence#: 30
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Downlink
 S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps Antenna = 9dBi Gain Omni Channel 1 PCDAC = 47, Channel 6 PCDAC = 47, Channel 11 PCDAC = 48. Frequency Range Investigated: 1-40GHz. Temperature: 19°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 3.5GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable HF P01527	T4=WL Gore SN 1065 AN P004301
T5=Att 10dB AN02139	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	2390.000M	42.8	+28.2	-30.0	+0.4	+0.6	+0.0	51.9	54.0	-2.1	Verti
	Ave		+9.9								
^	2390.000M	53.0	+28.2	-30.0	+0.4	+0.6	+0.0	62.1	54.0	+8.1	Verti
			+9.9								
3	2483.500M	37.2	+28.5	-29.7	+0.4	+0.6	+0.0	46.9	54.0	-7.1	Verti
	Ave		+9.9								
^	2483.500M	46.3	+28.5	-29.7	+0.4	+0.6	+0.0	56.0	54.0	+2.0	Verti
			+9.9								
5	1666.667M	39.7	+25.7	-30.2	+0.3	+0.6	+0.0	46.0	54.0	-8.0	Verti
			+9.9								

DRAFT

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.247 (c) / 15.209 / 15.205**
 Work Order #: **82775**
 Test Type: **Maximized Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: **Digital Path**
 Model: **Downlink**
 S/N: **111504-003**

Date: 11/15/2004
 Time: 16:06:58
 Sequence#: 28
 Tested By: Randal Clark

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00589	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. Instance 1 Configuration: EUT is operating in the 2.4GHz band Modulation = 802.11b default (CCK) Data Rate = 11Mbps Antenna = 14.2dBi Gain Directional Channel 1 PCDAC = 50, Channel 6 PCDAC = 52, Channel 11 PCDAC = 53. Frequency Range Investigated: 1-40GHz. Temperature: 19°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 3.5GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable - 3 Meter to bulkhead	T4=Cable HF-005-20
T5=Cable HF P01527	T6=WL Gore SN 1065 AN P004301
T7=Att 10dB AN02139	T8=Pad 3dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 T8 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	1882.590M	42.7	+26.7 +0.4	-29.5 +0.6	+4.3 +9.9	+1.7 +3.2	+0.0	60.0	54.0	+6.0	Verti
2	2483.900M	33.9	+28.5 +0.4	-29.7 +0.6	+5.0 +9.9	+2.0 +3.2	+0.0	53.8	54.0	-0.2	Verti
^	2483.900M	43.7	+28.5 +0.4	-29.7 +0.6	+5.0 +9.9	+2.0 +3.2	+0.0	63.6	54.0	+9.6	Verti
4	2487.100M	33.8	+28.5 +0.4	-29.7 +0.6	+5.0 +9.9	+2.0 +3.2	+0.0	53.7	54.0	-0.3	Verti
^	2487.100M	43.1	+28.5 +0.4	-29.7 +0.6	+5.0 +9.9	+2.0 +3.2	+0.0	63.0	54.0	+9.0	Verti
6	2389.900M	34.3	+28.2 +0.4	-30.0 +0.6	+4.9 +9.9	+2.0 +3.1	+0.0	53.4	54.0	-0.6	Verti
^	2389.900M	41.6	+28.2 +0.4	-30.0 +0.6	+4.9 +9.9	+2.0 +3.1	+0.0	60.7	54.0	+6.7	Verti
8	2360.000M	33.4	+28.2 +0.4	-29.9 +0.6	+4.8 +9.9	+1.9 +3.1	+0.0	52.4	54.0	-1.6	Verti
^	2360.000M	39.5	+28.2 +0.4	-29.9 +0.6	+4.8 +9.9	+1.9 +3.1	+0.0	58.5	54.0	+4.5	Verti
10	2385.900M	31.5	+28.2 +0.4	-30.0 +0.6	+4.9 +9.9	+2.0 +3.1	+0.0	50.6	54.0	-3.4	Verti
^	2385.900M	42.7	+28.2 +0.4	-30.0 +0.6	+4.9 +9.9	+2.0 +3.1	+0.0	61.8	54.0	+7.8	Verti
12	2483.500M	30.5	+28.5 +0.4	-29.7 +0.6	+5.0 +9.9	+2.0 +3.2	+0.0	50.4	54.0	-3.6	Verti
^	2483.500M	43.5	+28.5 +0.4	-29.7 +0.6	+5.0 +9.9	+2.0 +3.2	+0.0	63.4	54.0	+9.4	Verti
14	2390.000M	30.7	+28.2 +0.4	-30.0 +0.6	+4.9 +9.9	+2.0 +3.1	+0.0	49.8	54.0	-4.2	Verti
^	2390.000M	41.7	+28.2 +0.4	-30.0 +0.6	+4.9 +9.9	+2.0 +3.1	+0.0	60.8	54.0	+6.8	Verti
16	1883.062M	31.9	+26.7 +0.4	-29.5 +0.6	+4.3 +9.9	+1.7 +3.2	+0.0	49.2	54.0	-4.8	Verti

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **FCC 15.247 (c) / 15.209 / 15.205**

Work Order #: **82775**

Date: 11/16/2004

Test Type: **Maximized Emissions**

Time: 11:24:53

Equipment: **Askey Atheros Radio**

Sequence#: 29

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Downlink

S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamplifier	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps Antenna = 14.2dBi Gain Directional Channel 1 PCDAC = 45, Channel 6 PCDAC = 47, Channel 11 PCDAC = 38. Note power at upper and lower frequencies reduced for band edge compliance. Frequency Range Investigated: 1-40GHz. Temperature: 19°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 3.5GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable - 3 Meter to bulkhead	T4=Cable HF-005-20
T5=Cable HF P01527	T6=WL Gore SN 1065 AN P004301
T7=Att 10dB AN02139	T8=Pad 3dB
T9=Amp - S/N 301	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	2483.500M	44.0	+28.5	-29.7	+0.0	+0.0	+0.0	53.7	54.0	-0.3	Verti
	Ave		+0.4	+0.6	+9.9	+0.0					
			+0.0								
^	2483.500M	55.7	+28.5	-29.7	+0.0	+0.0	+0.0	65.4	54.0	+11.4	Verti
			+0.4	+0.6	+9.9	+0.0					
			+0.0								
3	2390.000M	43.5	+28.2	-30.0	+0.0	+0.0	+0.0	52.6	54.0	-1.4	Verti
	Ave		+0.4	+0.6	+9.9	+0.0					
			+0.0								
^	2390.000M	54.3	+28.2	-30.0	+0.0	+0.0	+0.0	63.4	54.0	+9.4	Verti
			+0.4	+0.6	+9.9	+0.0					
			+0.0								
5	2360.000M	33.4	+28.2	-29.9	+4.8	+1.9	+0.0	52.4	54.0	-1.6	Verti
	Ave		+0.4	+0.6	+9.9	+3.1					
^	2360.000M	39.5	+28.2	-29.9	+4.8	+1.9	+0.0	58.5	54.0	+4.5	Verti
			+0.4	+0.6	+9.9	+3.1					
7	2484.500M	42.7	+28.5	-29.7	+0.0	+0.0	+0.0	52.4	54.0	-1.6	Verti
	Ave		+0.4	+0.6	+9.9	+0.0					
			+0.0								
^	2484.500M	52.0	+28.5	-29.7	+0.0	+0.0	+0.0	61.7	54.0	+7.7	Verti
			+0.4	+0.6	+9.9	+0.0					
			+0.0								
9	2485.833M	40.2	+28.5	-29.7	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Verti
	Ave		+0.4	+0.6	+9.9	+0.0					
			+0.0								
^	2485.833M	50.3	+28.5	-29.7	+0.0	+0.0	+0.0	60.0	54.0	+6.0	Verti
			+0.4	+0.6	+9.9	+0.0					
			+0.0								
11	1882.590M	31.9	+26.7	-29.5	+0.0	+0.0	+0.0	49.2	54.0	-4.8	Verti
	Ave		+0.4	+0.6	+9.9	+0.0					
^	1882.590M	42.7	+26.7	-29.5	+4.3	+1.7	+0.0	60.0	54.0	+6.0	Verti
			+0.4	+0.6	+9.9	+3.2					

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.247 (c) / 15.209 / 15.205**
 Work Order #: **82775** Date: 11/16/2004
 Test Type: **Maximized Emissions** Time: 14:34:49
 Equipment: **Askey Atheros Radio** Sequence#: 32
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Downlink
 S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00589	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band Modulation = 802.11b default (CCK) Data Rate = 11Mbps Antenna = 9.1dBi Gain Sector Channel 1 PCDAC = 50, Channel 6 PCDAC = 52, Channel 11 PCDAC = 53. Frequency Range Investigated: 1-40GHz. Temperature: 17°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 3.5GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable HF P01527	T4=WL Gore SN 1065 AN P004301
T5=Att 10dB AN02139	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2488.500M Ave	43.2	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	52.9	54.0	-1.1	Verti
^	2488.500M	52.8	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	62.5	54.0	+8.5	Verti
3	2385.833M Ave	43.7	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	52.8	54.0	-1.2	Verti
^	2385.833M	53.3	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	62.4	54.0	+8.4	Verti
5	2483.500M Ave	36.2	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	45.9	54.0	-8.1	Verti
^	2483.500M	48.8	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	58.5	54.0	+4.5	Verti
7	2499.500M Ave	35.5	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	45.2	54.0	-8.8	Verti
^	2499.500M	42.7	+28.5 +9.9	-29.7	+0.4	+0.6	+0.0	52.4	54.0	-1.6	Verti
9	2390.000M Ave	33.7	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	42.8	54.0	-11.2	Verti
^	2390.000M	45.5	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	54.6	54.0	+0.6	Verti
11	1735.667M Ave	35.5	+26.1 +9.9	-30.0	+0.3	+0.6	+0.0	42.4	54.0	-11.6	Verti
^	1735.667M	46.0	+26.1 +9.9	-30.0	+0.3	+0.6	+0.0	52.9	54.0	-1.1	Verti
13	2390.167M Ave	44.3	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	53.4	95.0	-41.6	Verti
^	2390.167M	52.7	+28.2 +9.9	-30.0	+0.4	+0.6	+0.0	61.8	95.0	-33.2	Verti

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **FCC 15.247 (c) / 15.209 / 15.205**

Work Order #: **82775**

Date: 11/16/2004

Test Type: **Maximized Emissions**

Time: 14:59:32

Equipment: **Askey Atheros Radio**

Sequence#: 33

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Downlink

S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamplifier	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps Antenna = 9.1dBi Gain Sector Channel 1 PCDAC = 43, Channel 6 PCDAC = 47, Channel 11 PCDAC = 44. Note power at upper and lower frequencies reduced for band edge compliance. Frequency Range Investigated: 1-40GHz. Temperature: 17°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 3.5GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable HF P01527	T4=WL Gore SN 1065 AN P004301
T5=Att 10dB AN02139	

Measurement Data:

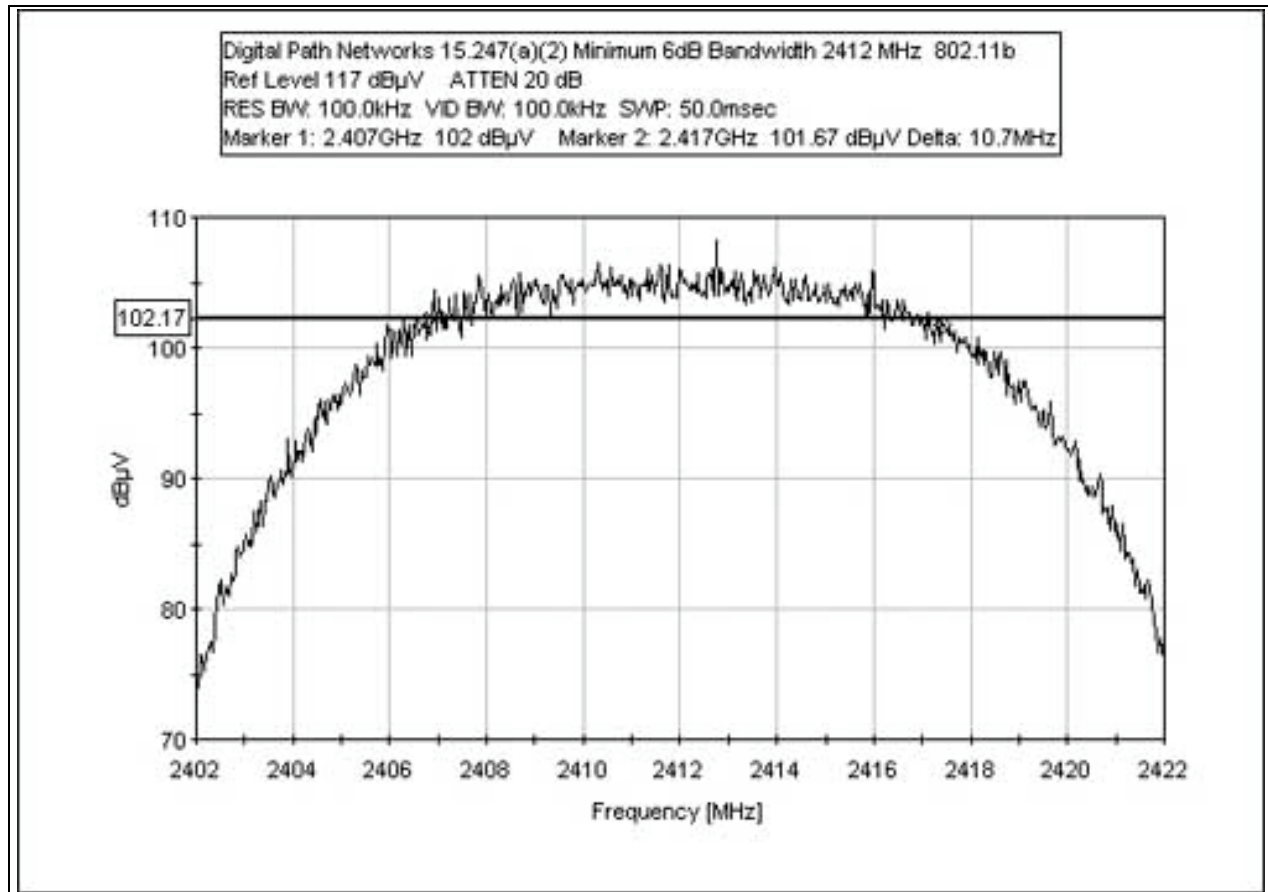
Reading listed by margin.

Test Distance: 3 Meters

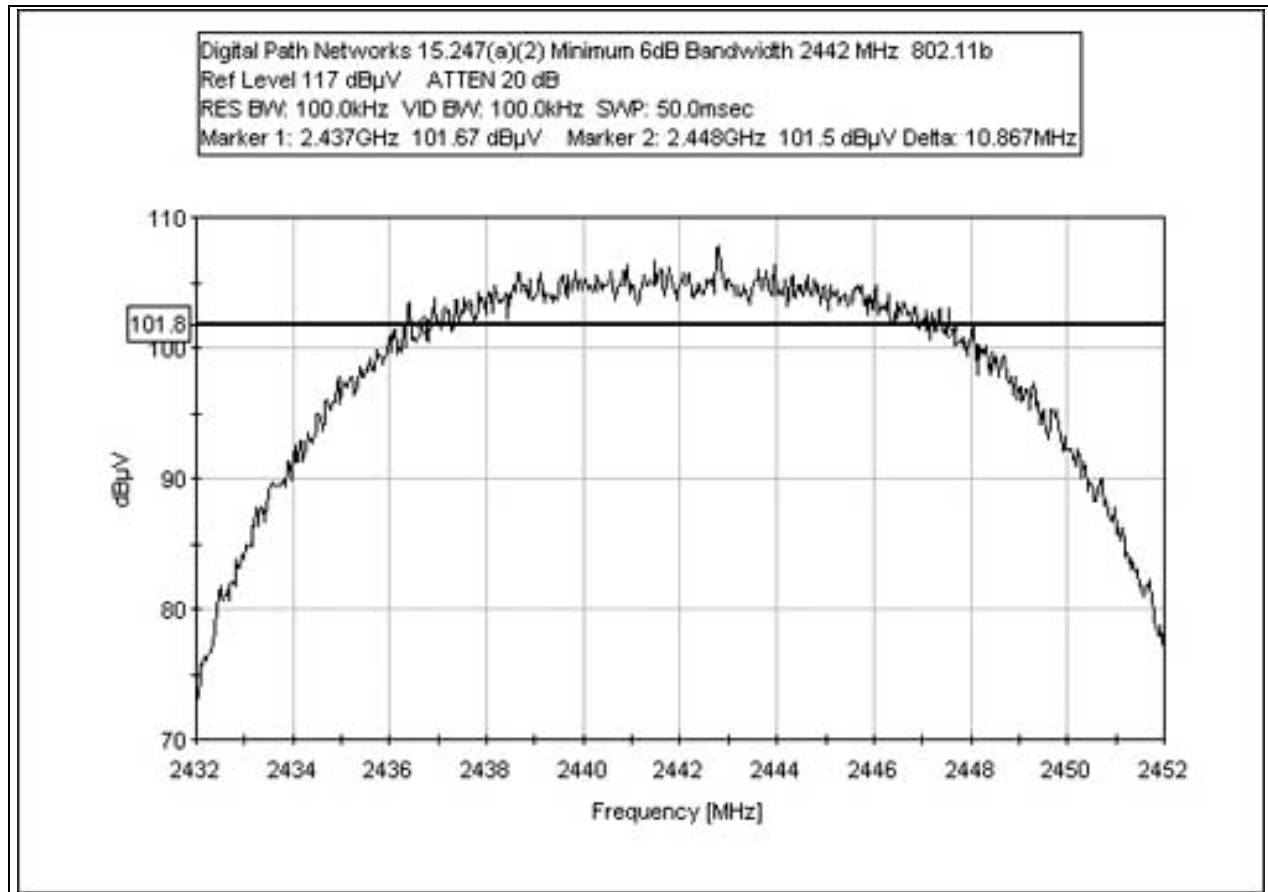
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	2390.000M	44.5	+28.2	-30.0	+0.4	+0.6	+0.0	53.6	54.0	-0.4	Verti
	Ave		+9.9								
^	2390.000M	56.8	+28.2	-30.0	+0.4	+0.6	+0.0	65.9	54.0	+11.9	Verti
			+9.9								
3	2483.500M	43.5	+28.5	-29.7	+0.4	+0.6	+0.0	53.2	54.0	-0.8	Verti
	Ave		+9.9								
^	2483.500M	54.8	+28.5	-29.7	+0.4	+0.6	+0.0	64.5	54.0	+10.5	Verti
			+9.9								
5	2291.980M	38.6	+28.0	-29.8	+0.4	+0.6	+0.0	47.7	54.0	-6.3	Verti
	Ave		+9.9								
^	2291.980M	43.3	+28.0	-29.8	+0.4	+0.6	+0.0	52.4	54.0	-1.6	Verti
			+9.9								
^	2292.000M	42.2	+28.0	-29.8	+0.4	+0.6	+0.0	51.3	54.0	-2.7	Verti
			+9.9								

DRAFT

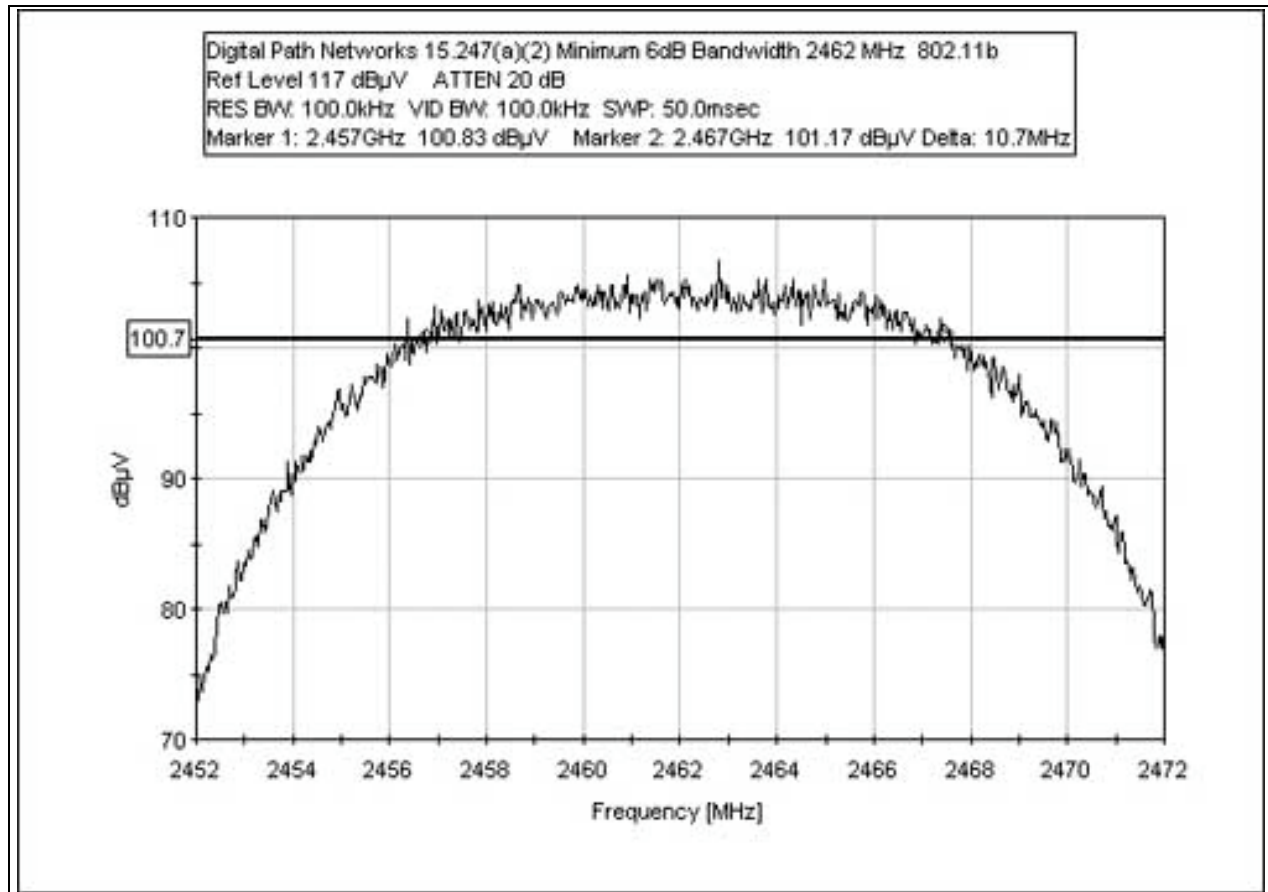
FCC 15.247(a)(2) 6dB BANDWIDTH 2412 MHz 802.11b



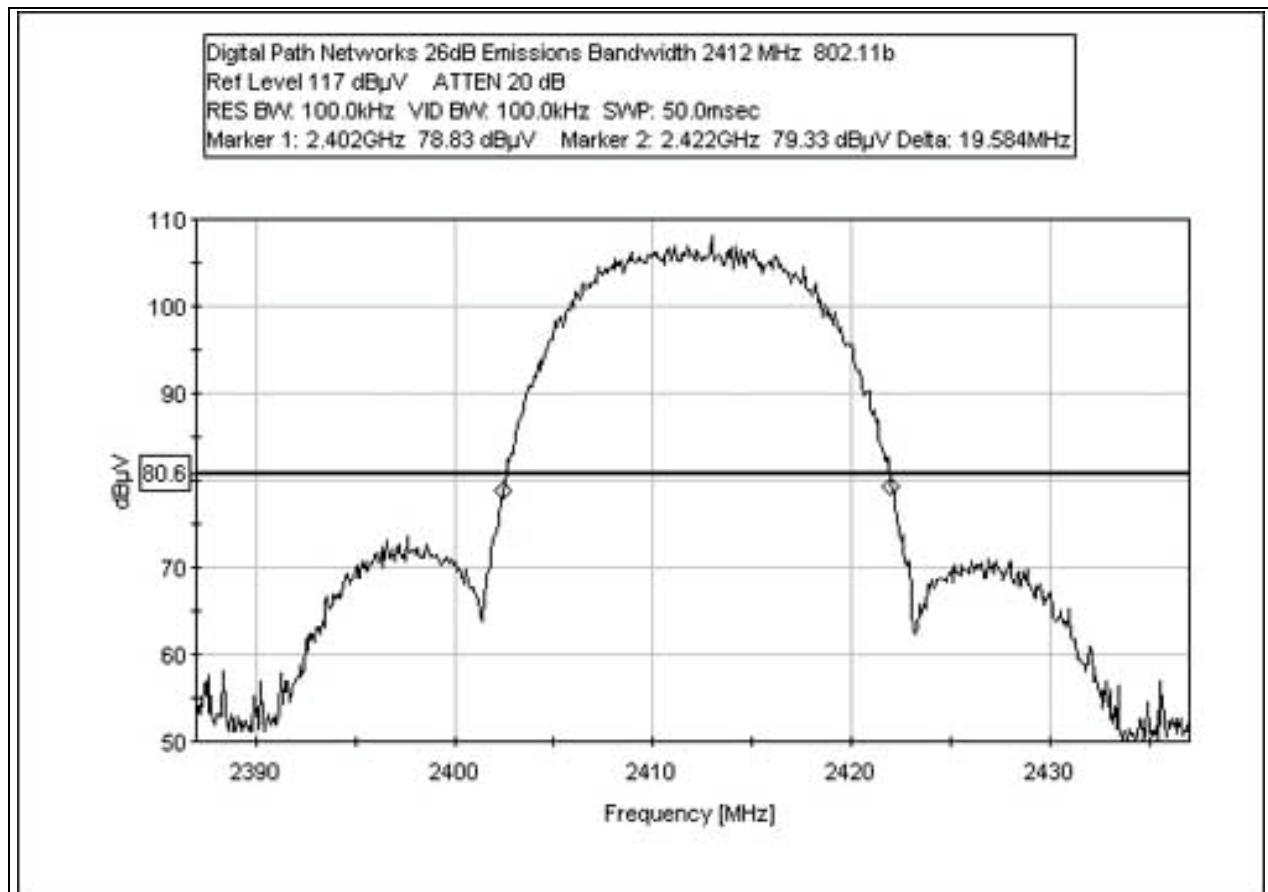
FCC 15.247(a)(2) 6dB BANDWIDTH 2442 MHz 802.11b



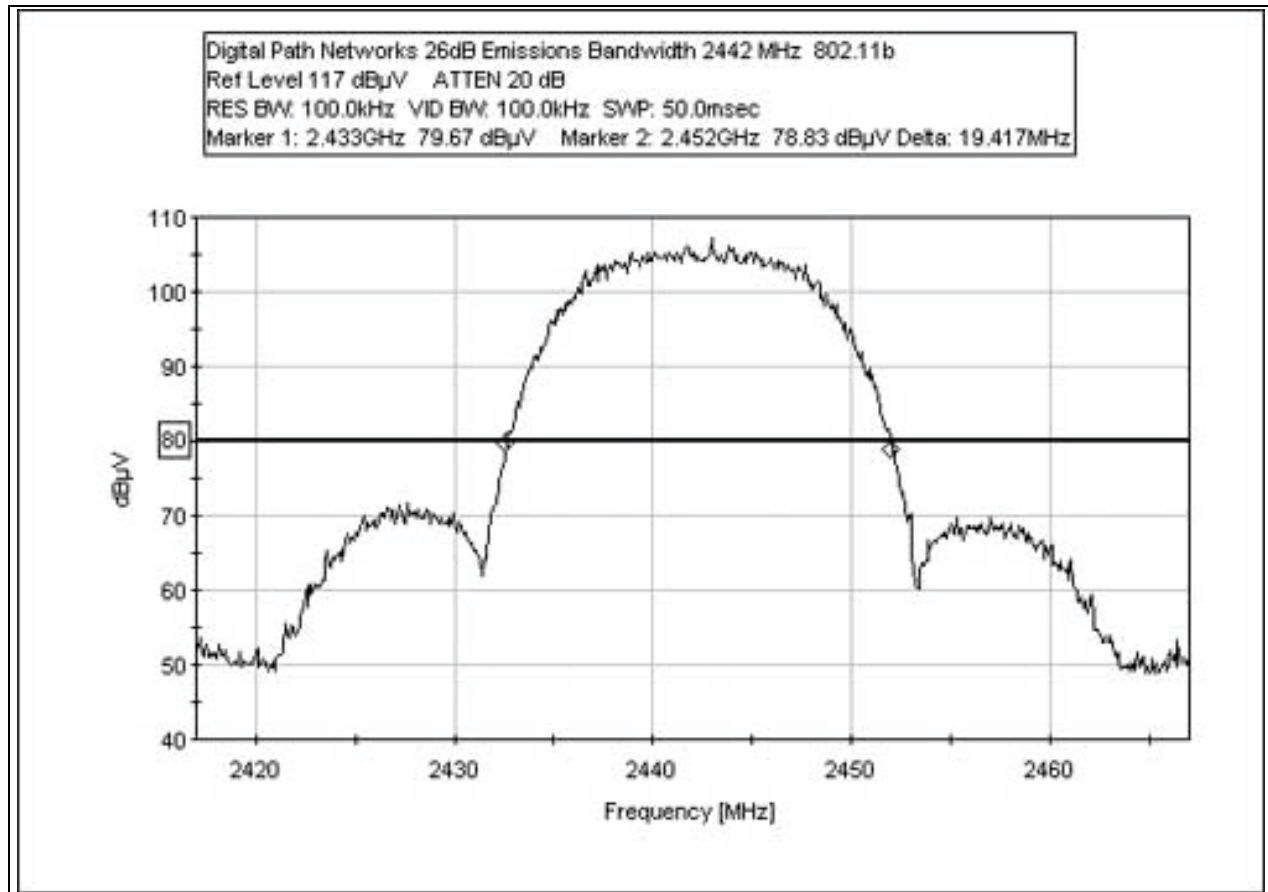
FCC 15.247(a)(2) 6dB BANDWIDTH 2462 MHz 802.11b



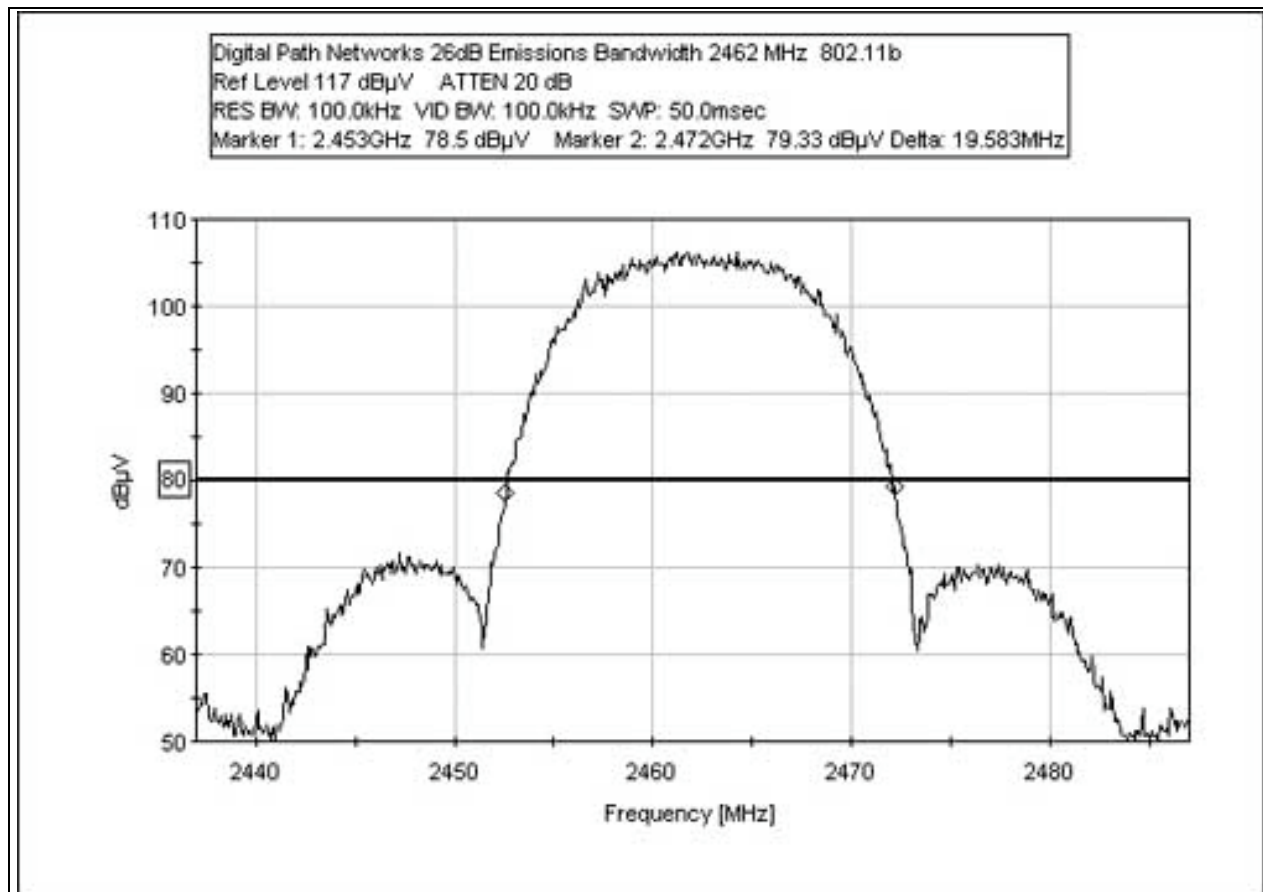
FCC 15.247(a)(2) 26dB BANDWIDTH 2412 MHz 802.11b



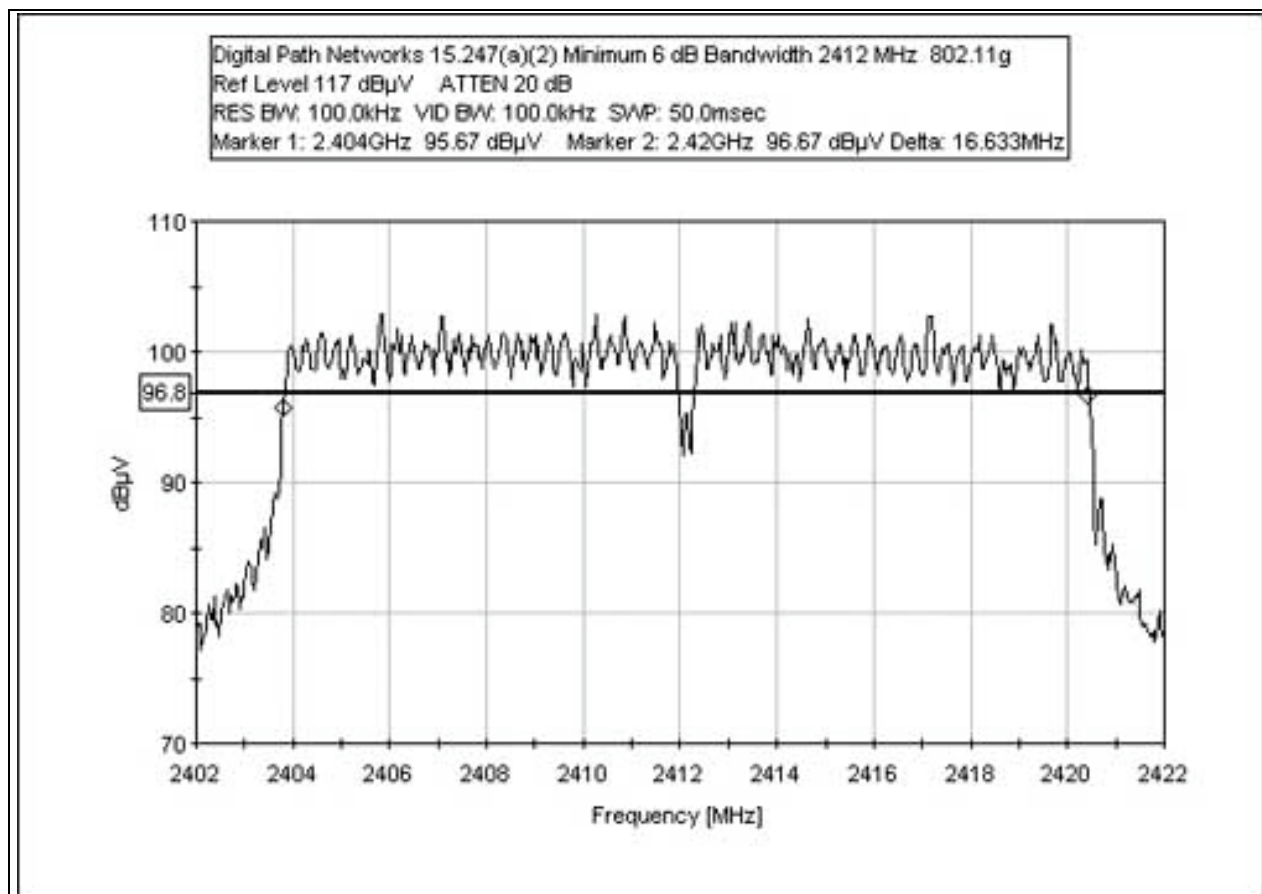
FCC 15.247(a)(2) 26dB BANDWIDTH 2442 MHz 802.11b



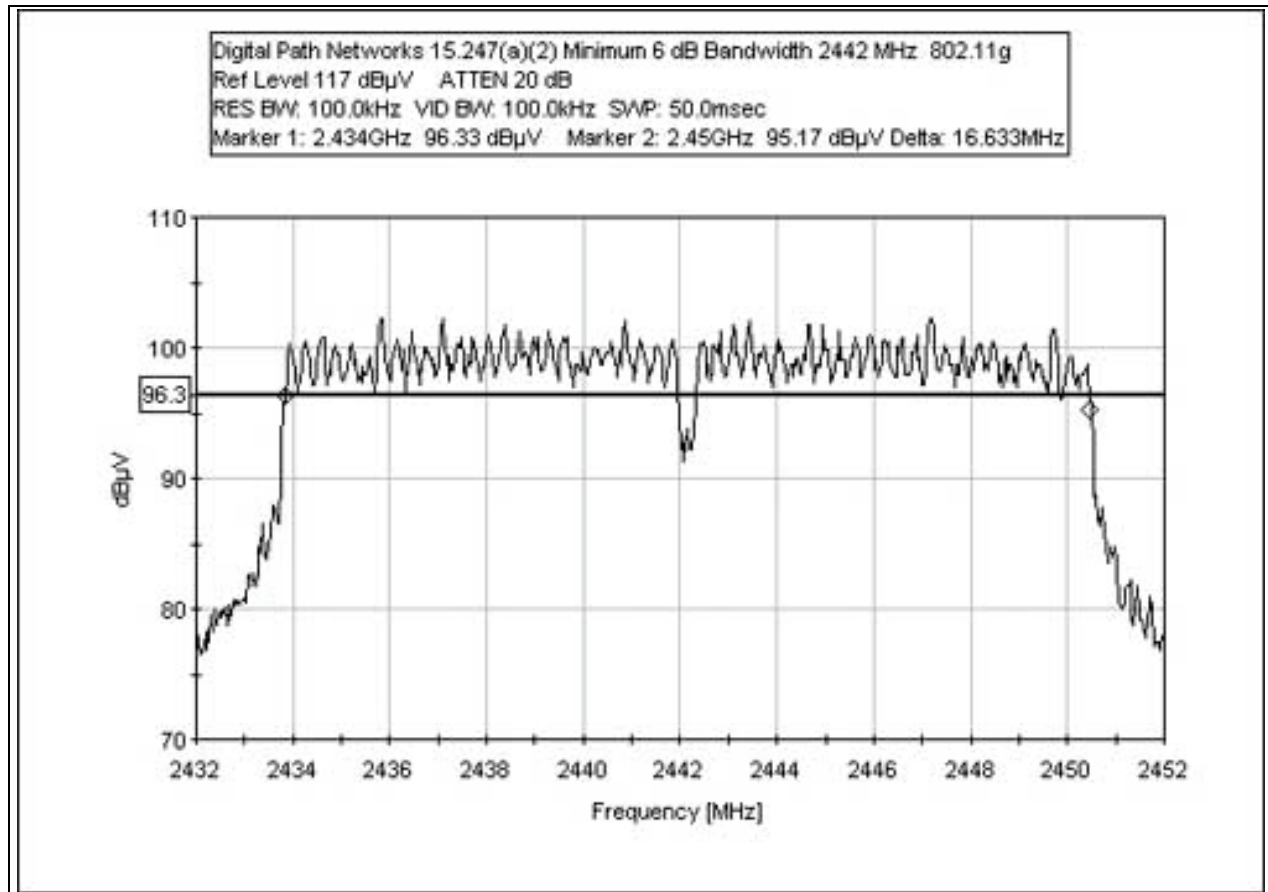
FCC 15.247(a)(2) 26dB BANDWIDTH 2462 MHz 802.11b



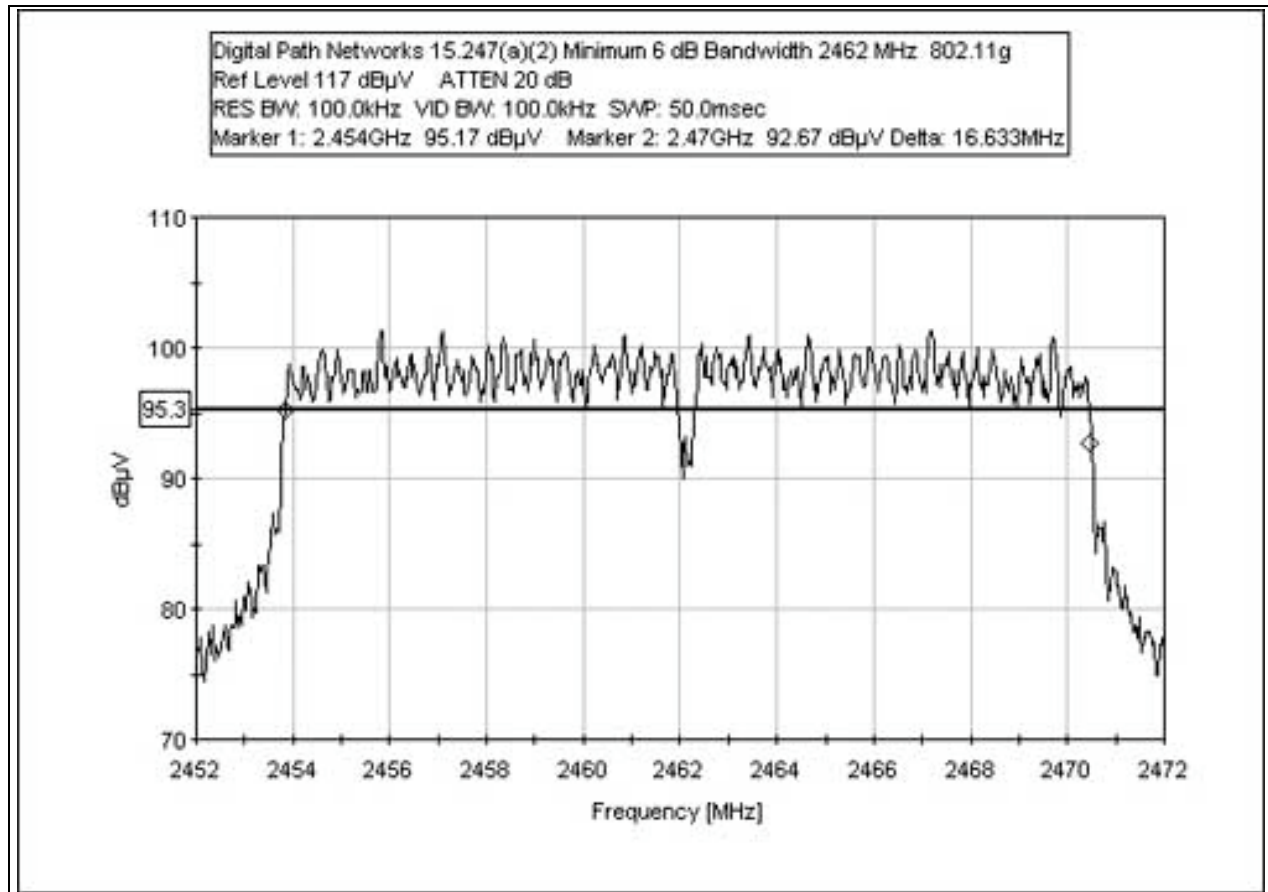
FCC 15.247(a)(2) 6dB BANDWIDTH 2412 MHz 802.11g



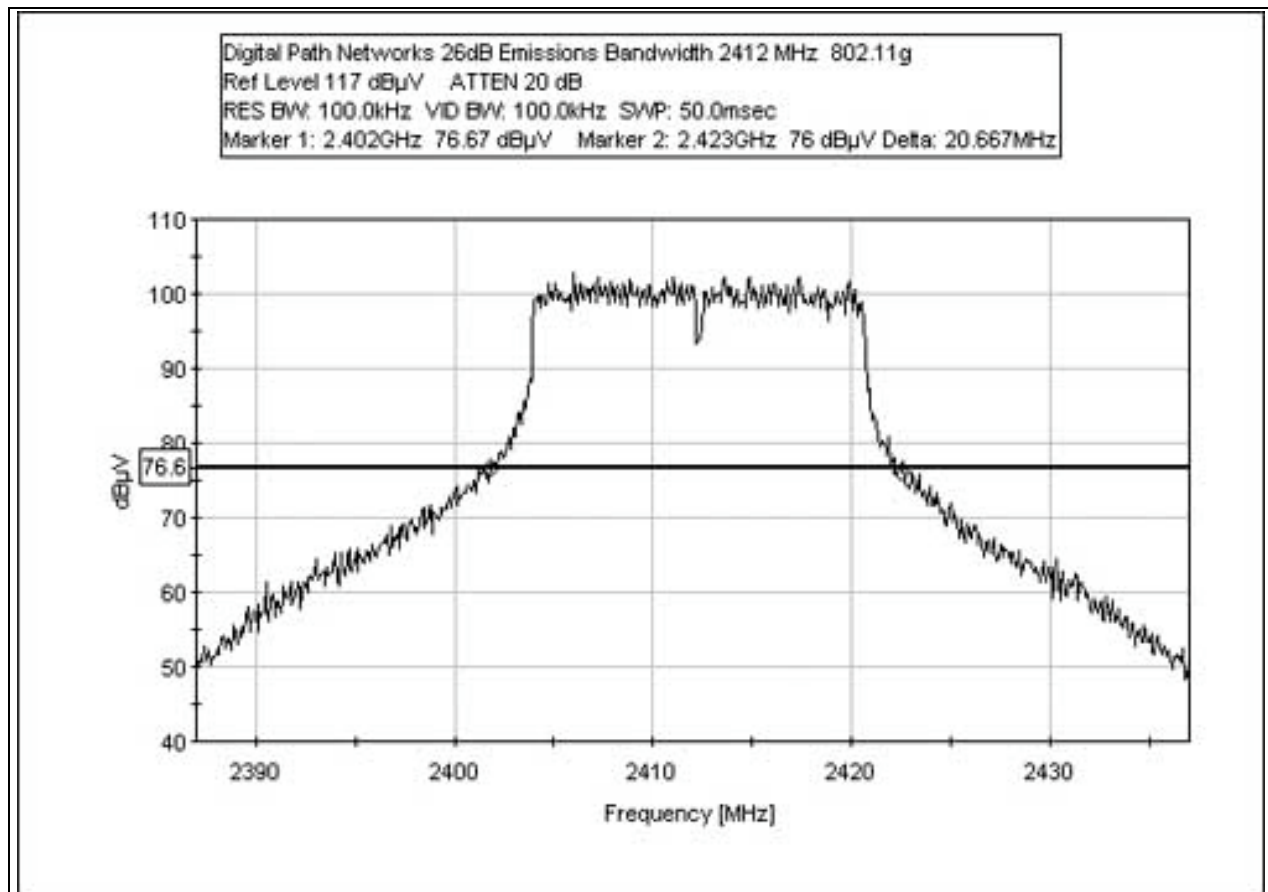
FCC 15.247(a)(2) 6dB BANDWIDTH 2442 MHz 802.11g



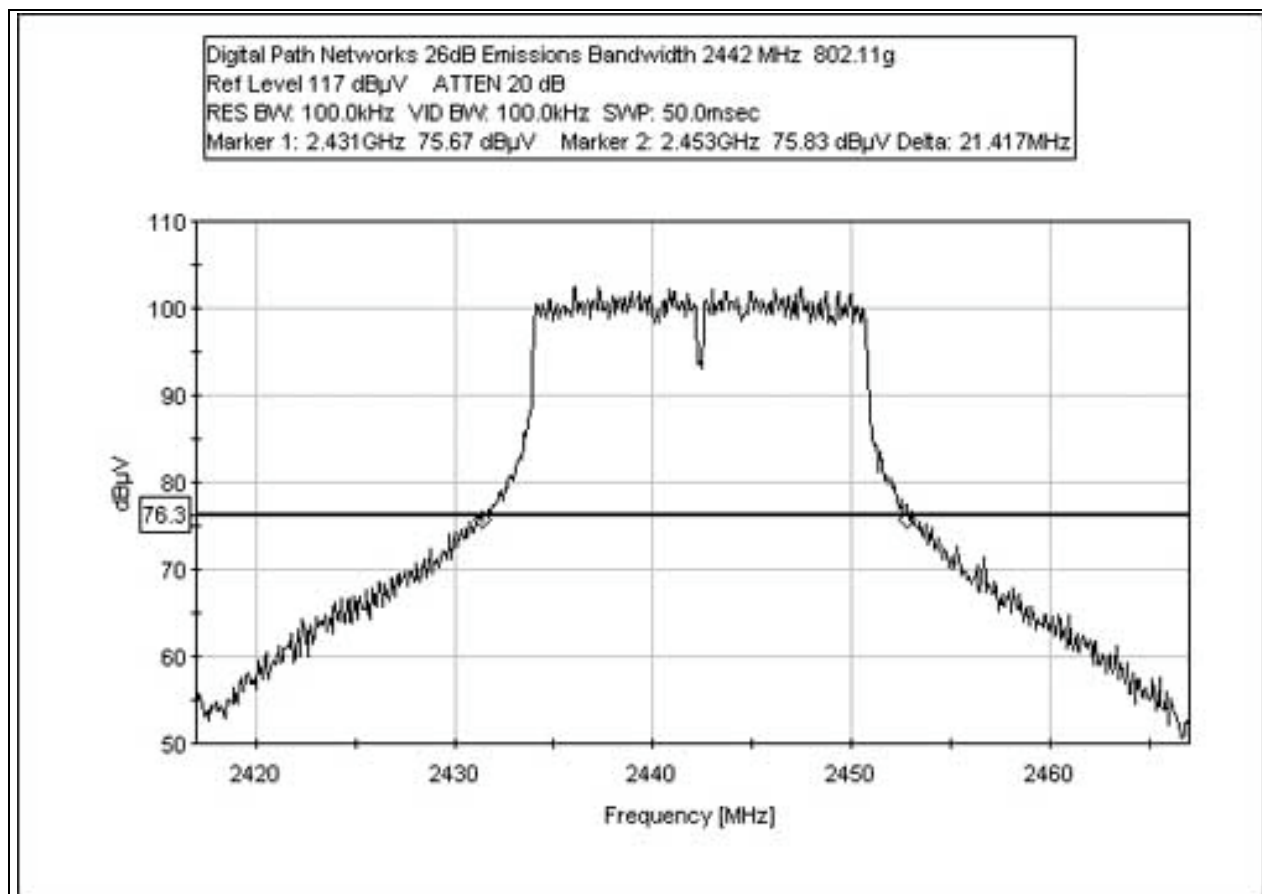
FCC 15.247(a)(2) 6dB BANDWIDTH 2462 MHz 802.11g



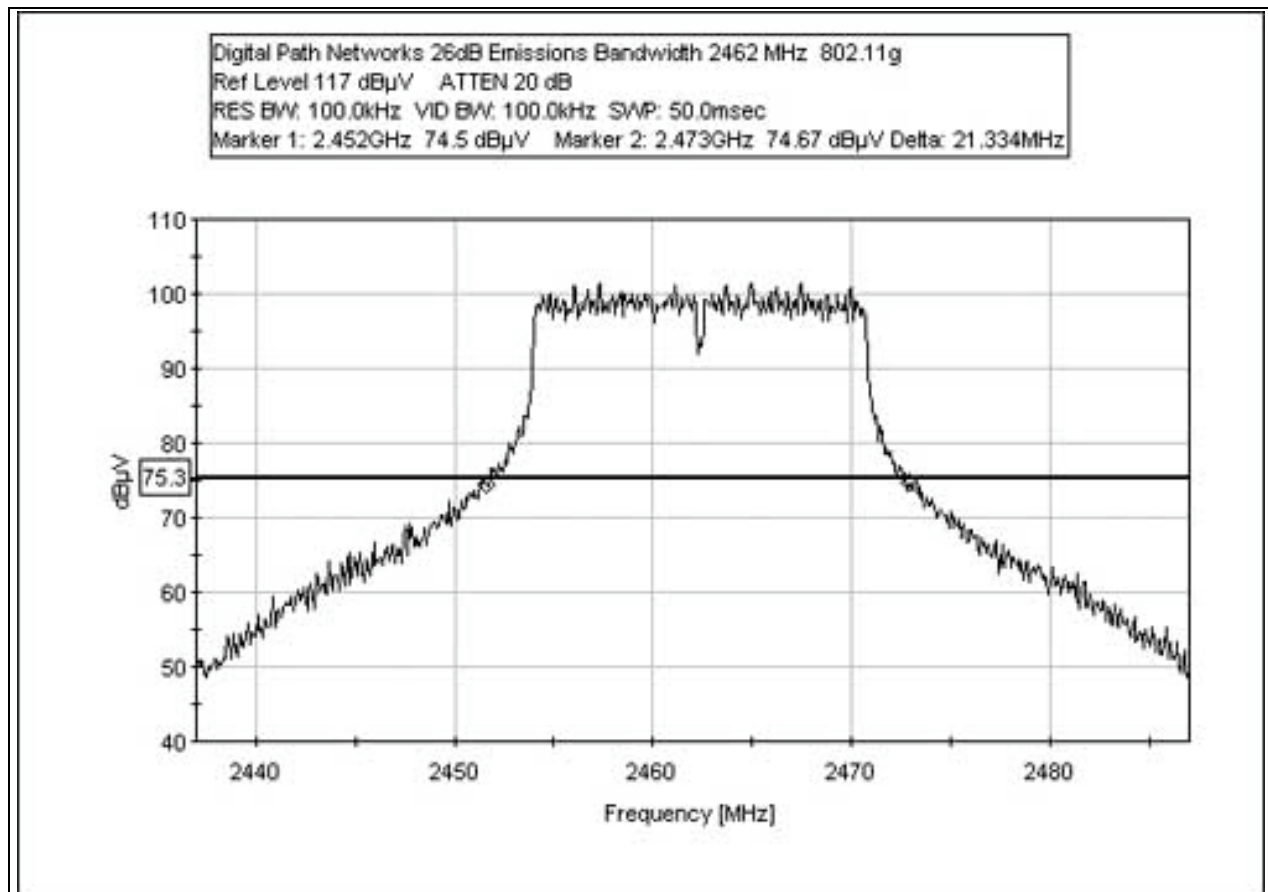
FCC 15.247(a)(2) 26dB BANDWIDTH 2412 MHz 802.11g



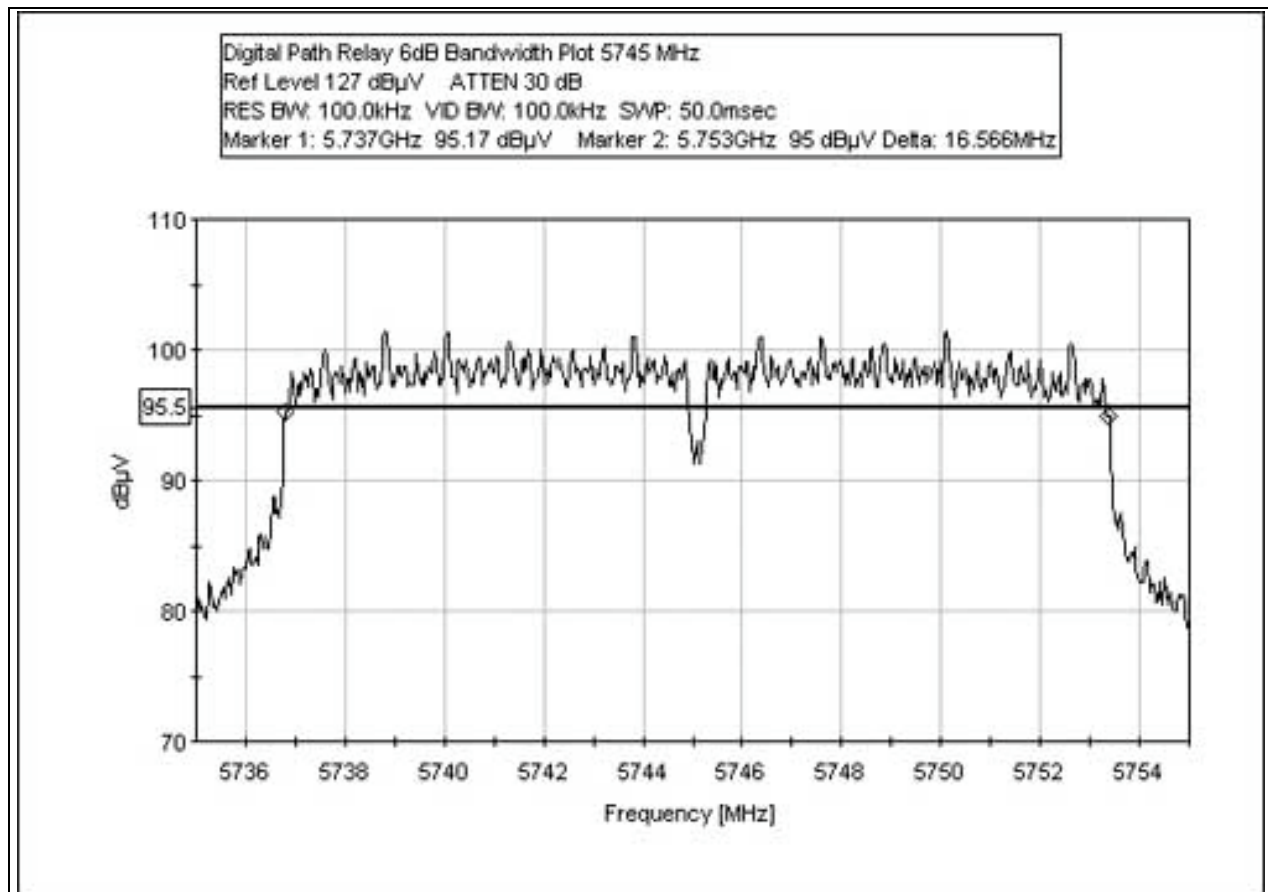
FCC 15.247(a)(2) 26dB BANDWIDTH 2442 MHz 802.11g



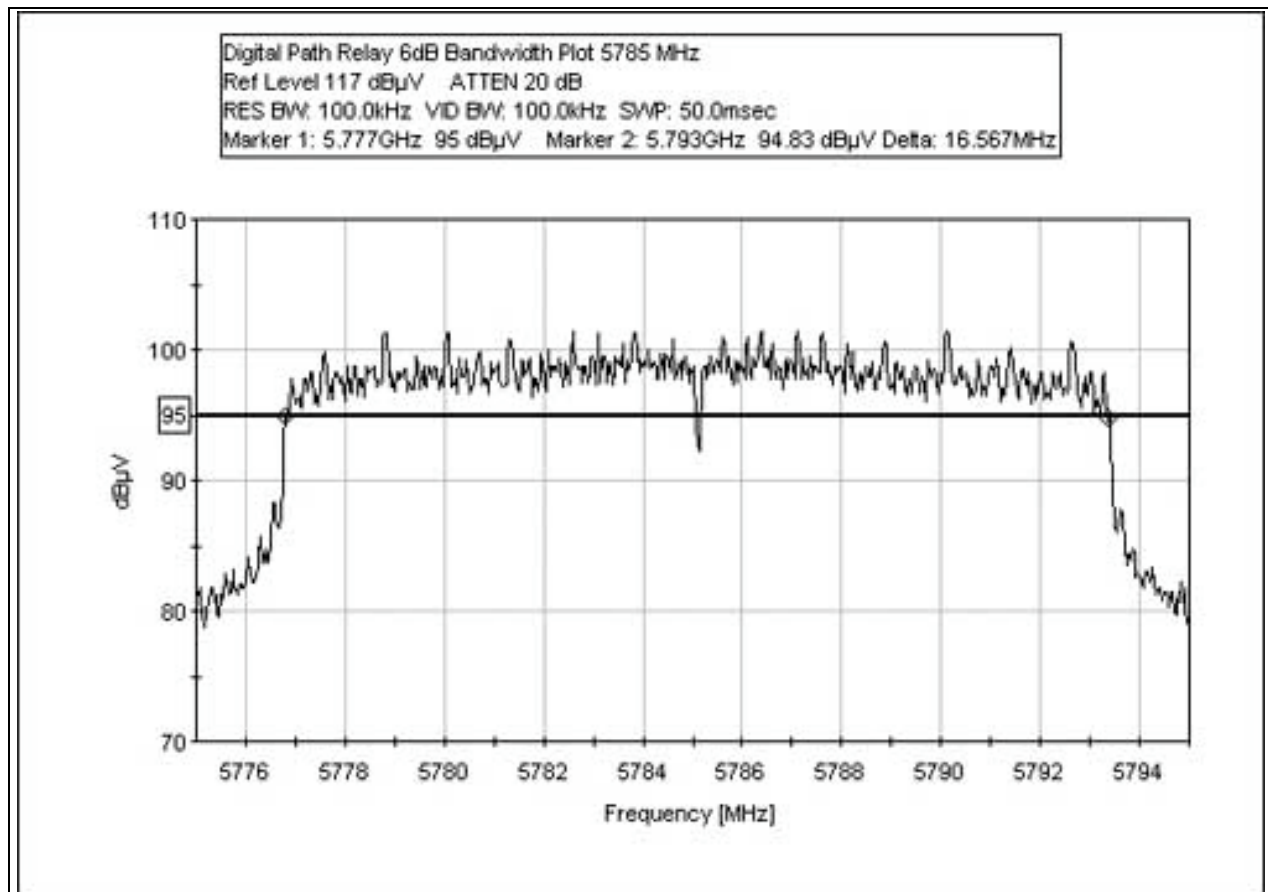
FCC 15.247(a)(2) 26dB BANDWIDTH 2462 MHz 802.11g



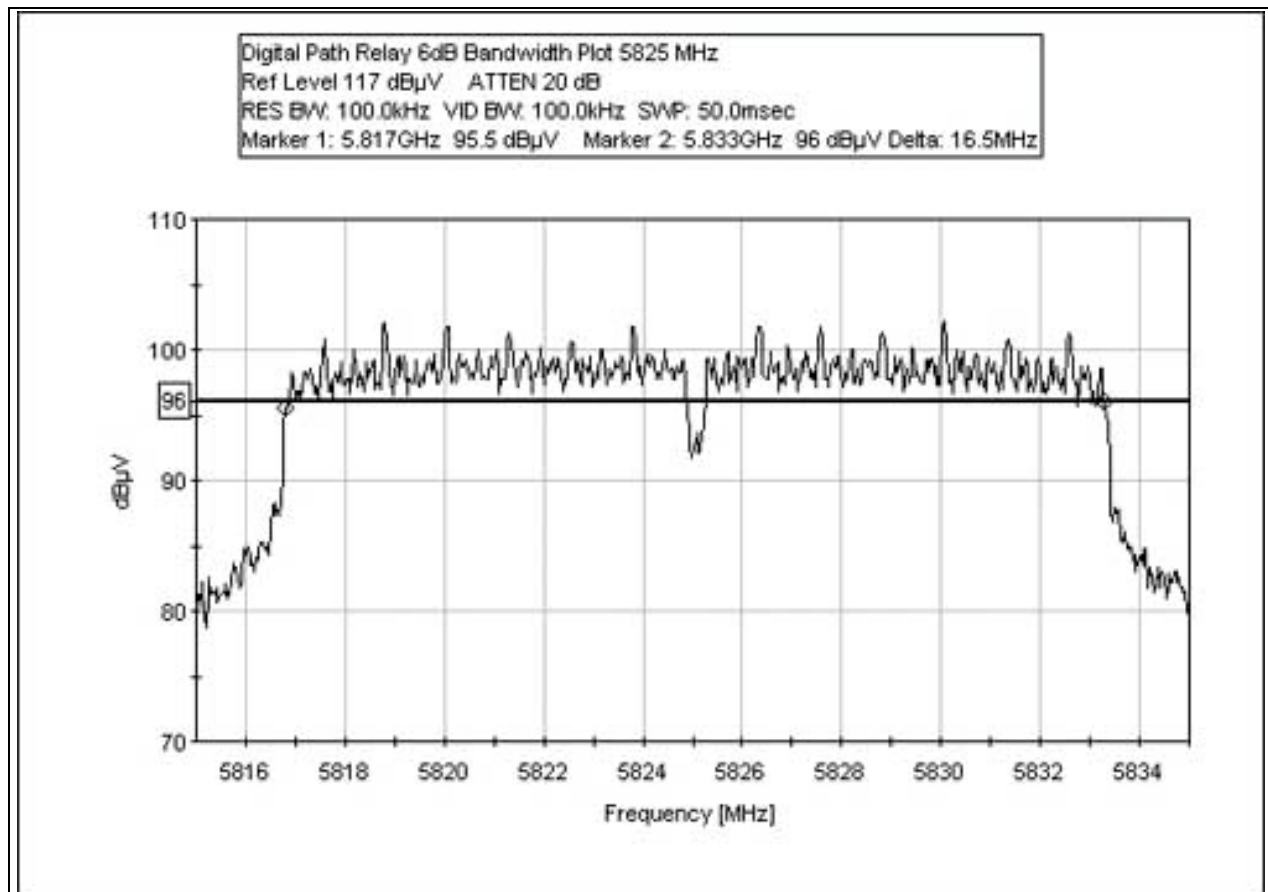
FCC 15.247(a)(2) 6dB BANDWIDTH 5745 MHz 802.11a



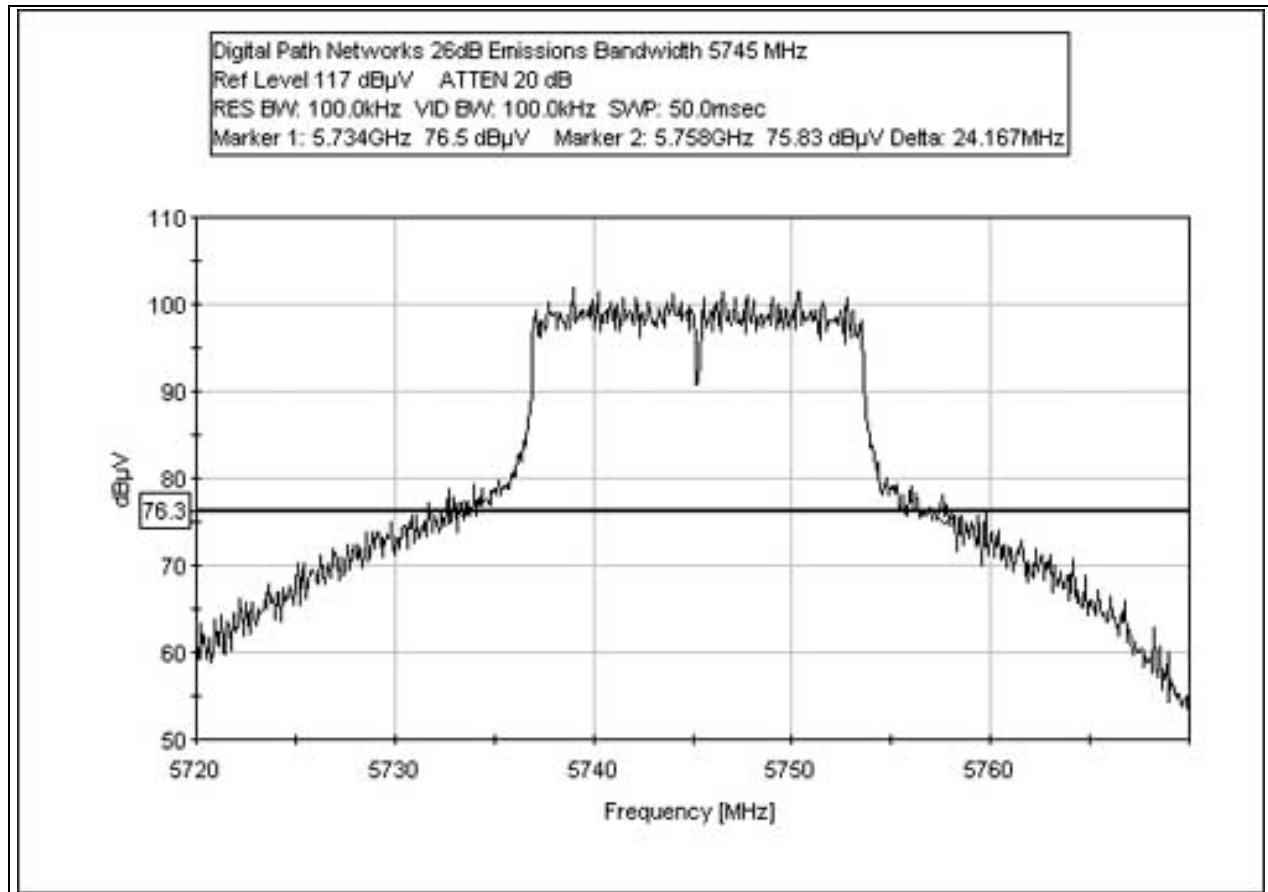
FCC 15.247(a)(2) 6dB BANDWIDTH 5785 MHz 802.11a



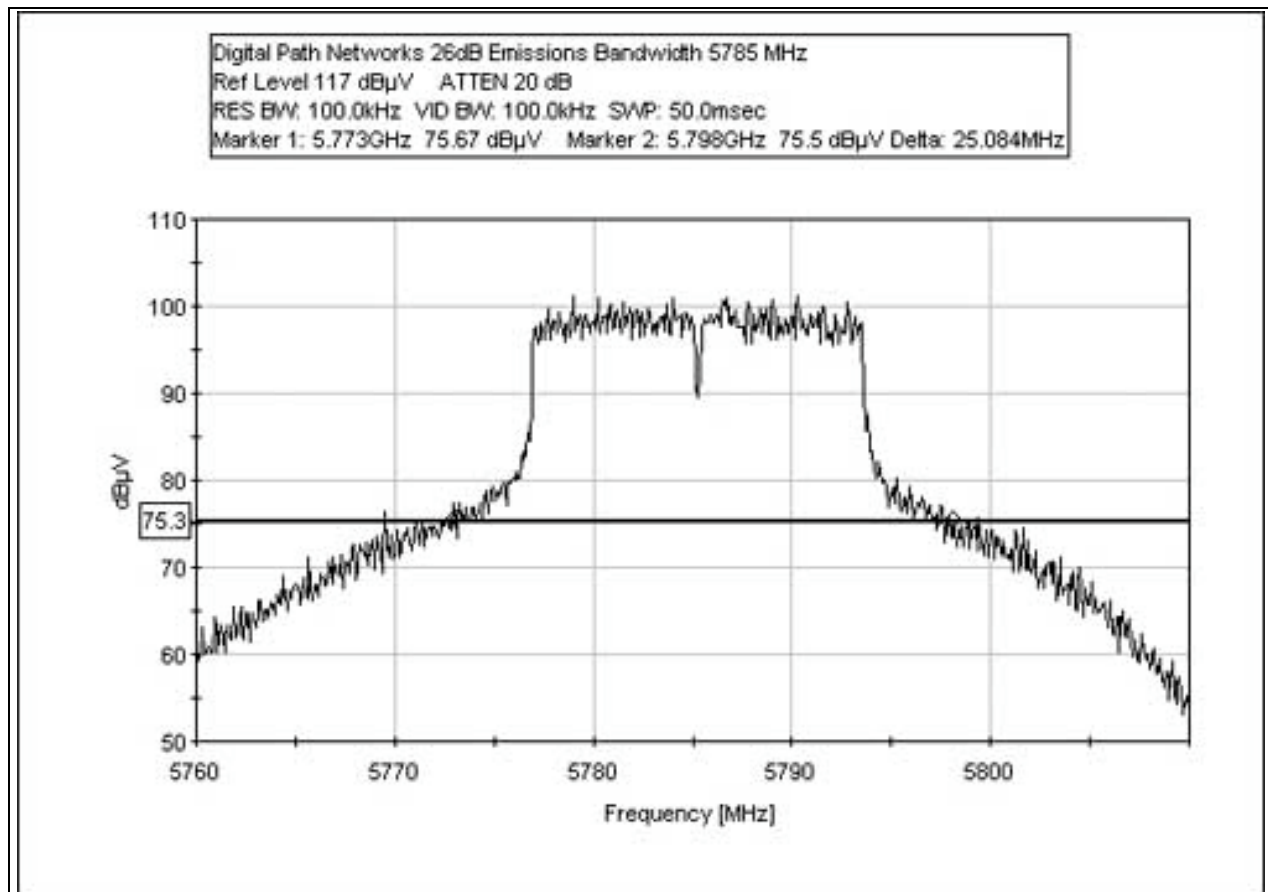
FCC 15.247(a)(2) 6dB BANDWIDTH 5825 MHz 802.11a



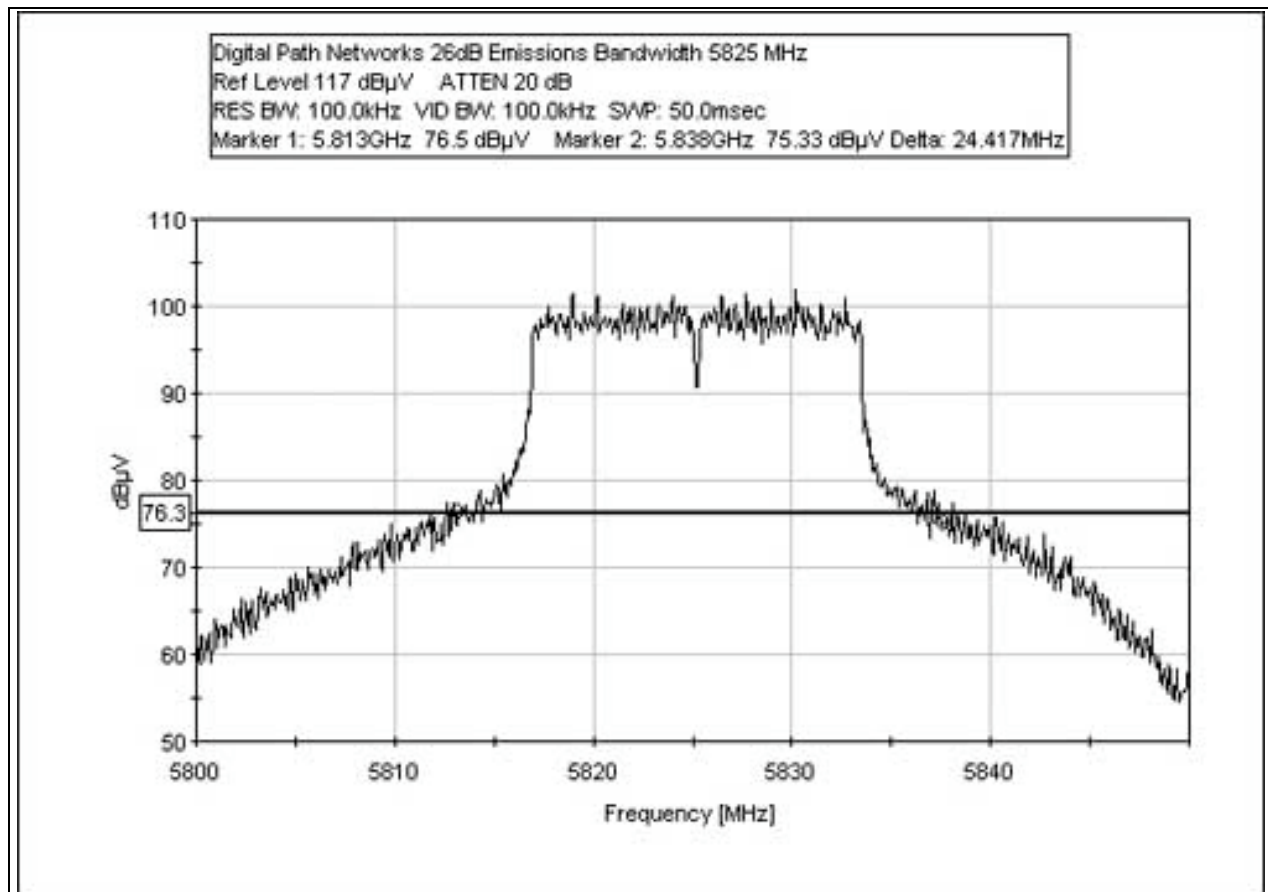
FCC 15.247(a)(2) 26dB BANDWIDTH 5745 MHz 802.11a



FCC 15.247(a)(2) 26dB BANDWIDTH 5785 MHz 802.11a



FCC 15.247(a)(2) 26dB BANDWIDTH 5825 MHz 802.11a



FCC 15.247(b)(1) PEAK OUTPUT POWER

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(b)(3)**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 13:08:46
 Sequence#: 15
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CLIMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11b default (CCK) Data Rate = 11Mbps. Channel 1 PCDAC = 50, Channel 6 PCDAC = 52, Channel 11 PCDAC = 53. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%. RBW = 2 MHz, VBW = 3 MHz. The power output is integrated over the emissions bandwidth by the following calculation: $\text{Power(dB/2 MHz RBW)} + 10 \cdot \text{LOG}(\text{EBW} / 2\text{MHz RBW})$. The measured 26dB Emissions Bandwidth is 20MHz, therefore the bandwidth correction is 10.0dB.

Test setup is in accordance with “New DTS Test Procedures” released in the FCC Information Database.

EUT operating in 802.11b mode

Frequency	Power Output (Watts)	Limit (Watts)	Result
2412	0.49	0.5	Pass
2442	0.48	0.5	Pass
2462	0.48	0.5	Pass

15.247(b)(4) Except as shown in paragraphs (b)(4)(i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(ii) Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

15.247(b)(3) limit is adjusted for use with a 9dBi gain omni-directional antenna and a 14.2dBi gain directional antenna as follows:

Antenna Gain (dBi)	Required Reduction	Limit Reduction (dB)	Limit (dBm)
9.0	1:1 above 6dB	3	27
14.2	3:1 above 6dB	3	27

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **15.247(b)(3)**

Work Order #: **82775**

Date: 11/11/2004

Test Type: **Antenna Port**

Time: 13:22:21

Equipment: **Radio**

Sequence#: 1

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Relay & Downlink

120V 60Hz

S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps Channel 1 PCDAC = 47, Channel 6 PCDAC = 47, Channel 11 PCDAC = 48. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%. RBW = 2 MHz, VBW = 3 MHz The power output is integrated over the emissions bandwidth by the following calculation: Power(dB/2 MHz RBW) + 10* LOG(EBW / 2MHz RBW). The measured 26dB Emissions Bandwidth is 22MHz, therefore the bandwidth correction is 10.4dB.

Test setup is in accordance with “New DTS Test Procedures” released in the FCC Information Database.

EUT operating in 802.11g mode

Frequency	Power Output (Watts)	Limit (Watts)	Result
2412	0.48	0.5	Pass
2442	0.47	0.5	Pass
2462	0.47	0.5	Pass

15.247(b)(4) Except as shown in paragraphs (b)(4)(i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(ii) Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

15.247(b)(3) limit is adjusted for use with a 9dBi gain omni-directional antenna and a 14.2dBi gain directional antenna as follows:

Antenna Gain (dBi)	Required Reduction	Limit Reduction (dB)	Limit (dBm)
9.0	1:1 above 6dB	3	27
14.2	3:1 above 6dB	3	27

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(b)(3)**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/10/2004
 Time: 16:57:04
 Sequence#: 2
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CLIMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

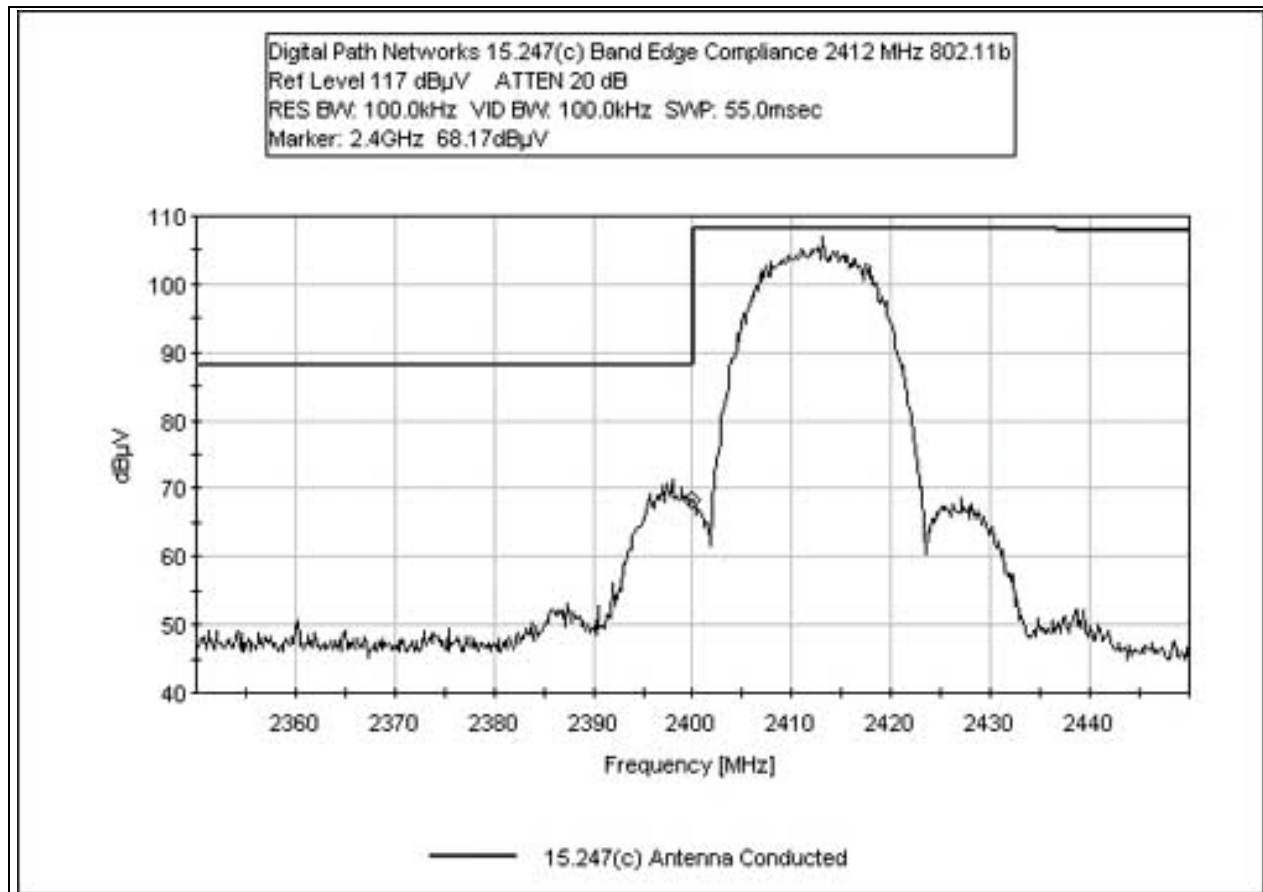
Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps PCDAC=50. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%. RBW = 2 MHz, VBW = 3 MHz. The power output is integrated over the emissions bandwidth by the following calculation: $\text{Power(dB/2 MHz RBW)} + 10 * \text{LOG(EBW / 2MHz RBW)}$. The measured 26dB Emissions Bandwidth is 25MHz, therefore the bandwidth correction is 10.9dB.

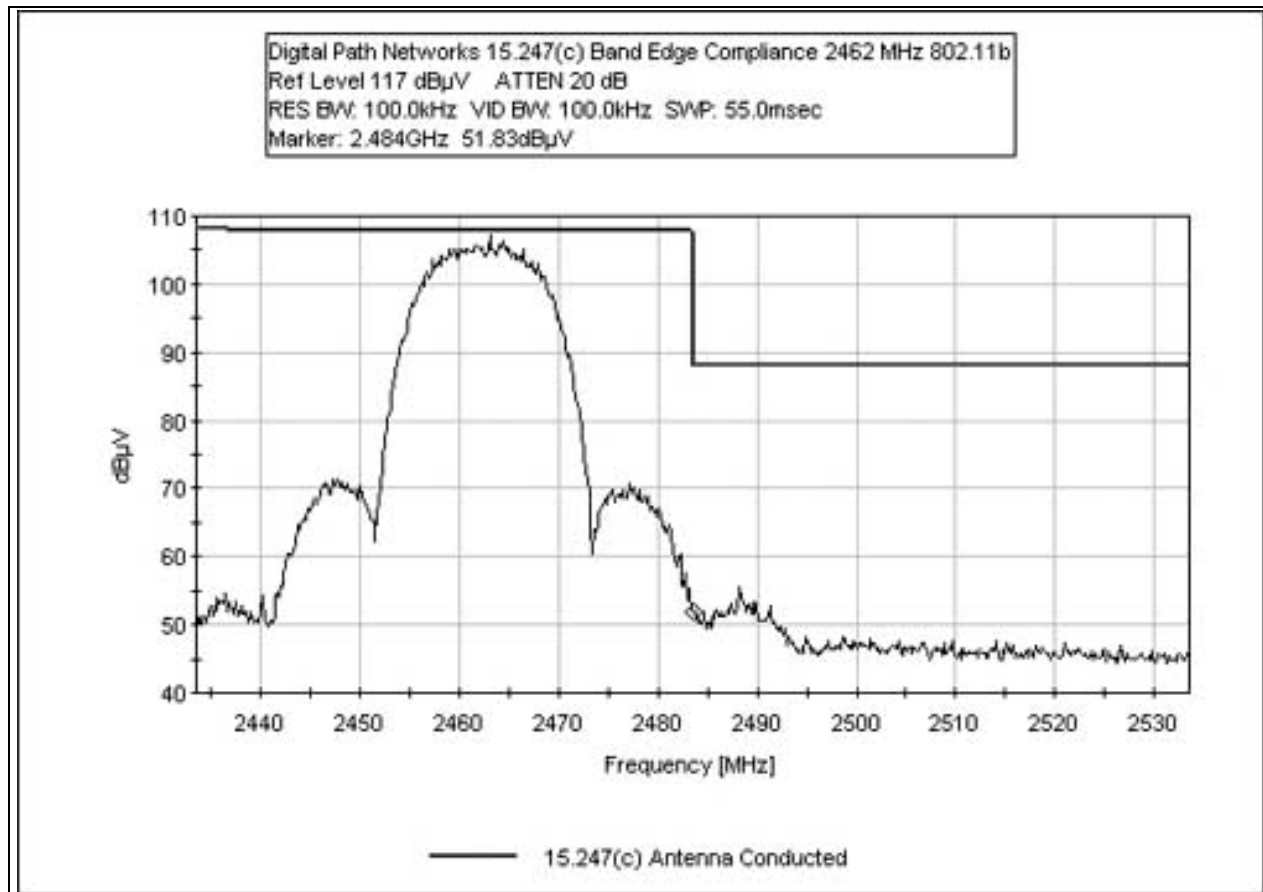
Test setup is in accordance with “New DTS Test Procedures” released in the FCC Information Database.

Frequency	Power Output (Watts)	Limit (Watts)	Result
5745	0.95	1.0	Pass
5785	0.93	1.0	Pass
5825	0.93	1.0	Pass

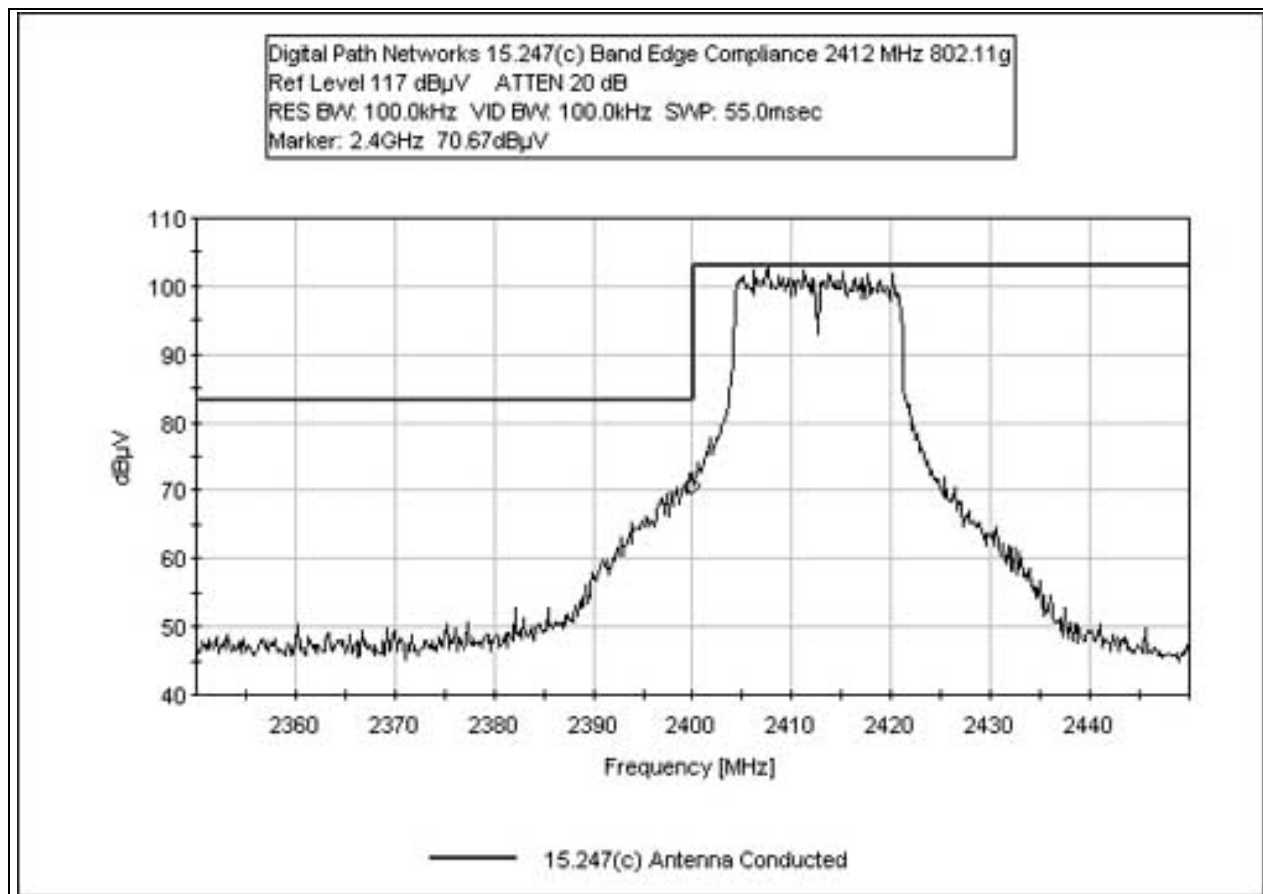
FCC 15.247(c) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
2412 MHz 802.11b



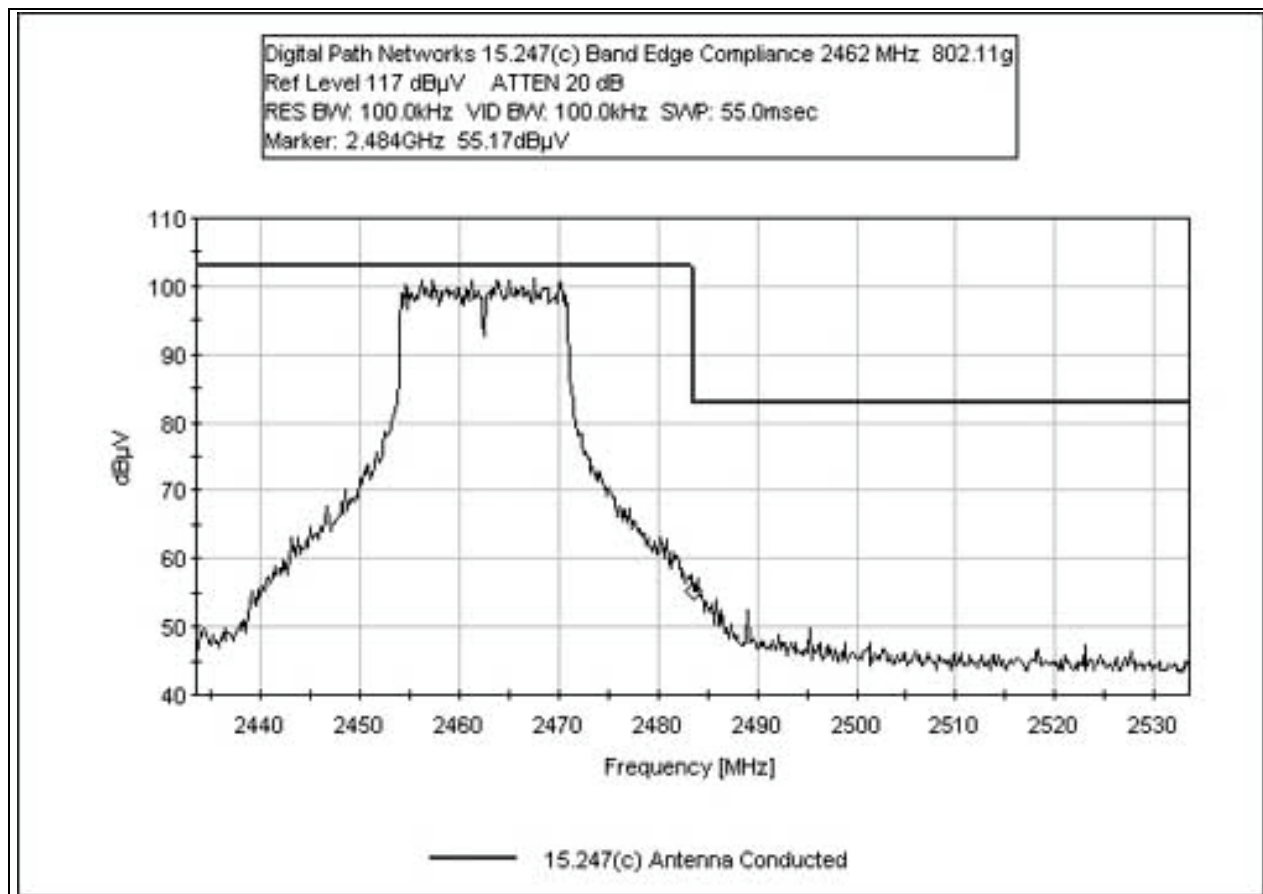
FCC 15.247(c) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
2462 MHz 802.11b



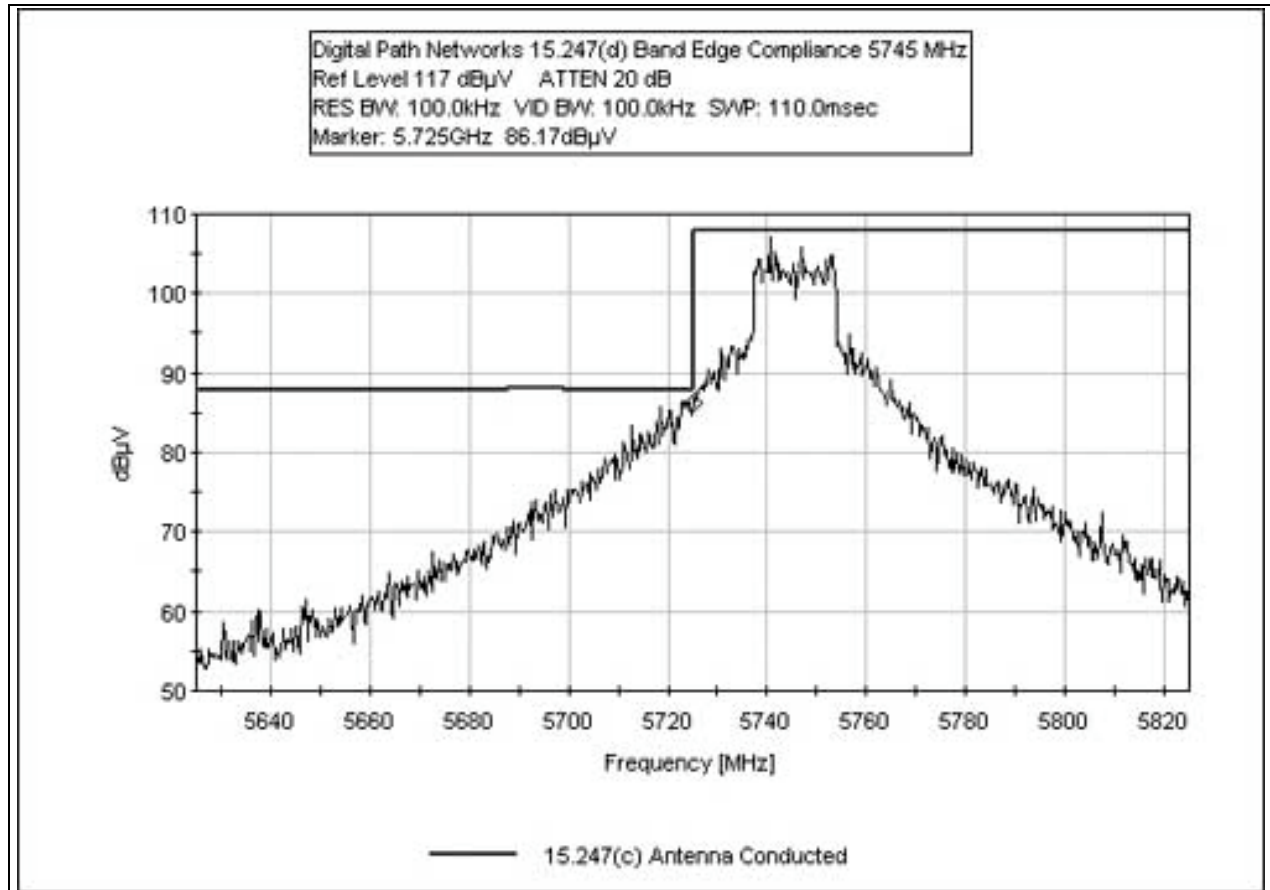
FCC 15.247(c) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
2412 MHz 802.11g



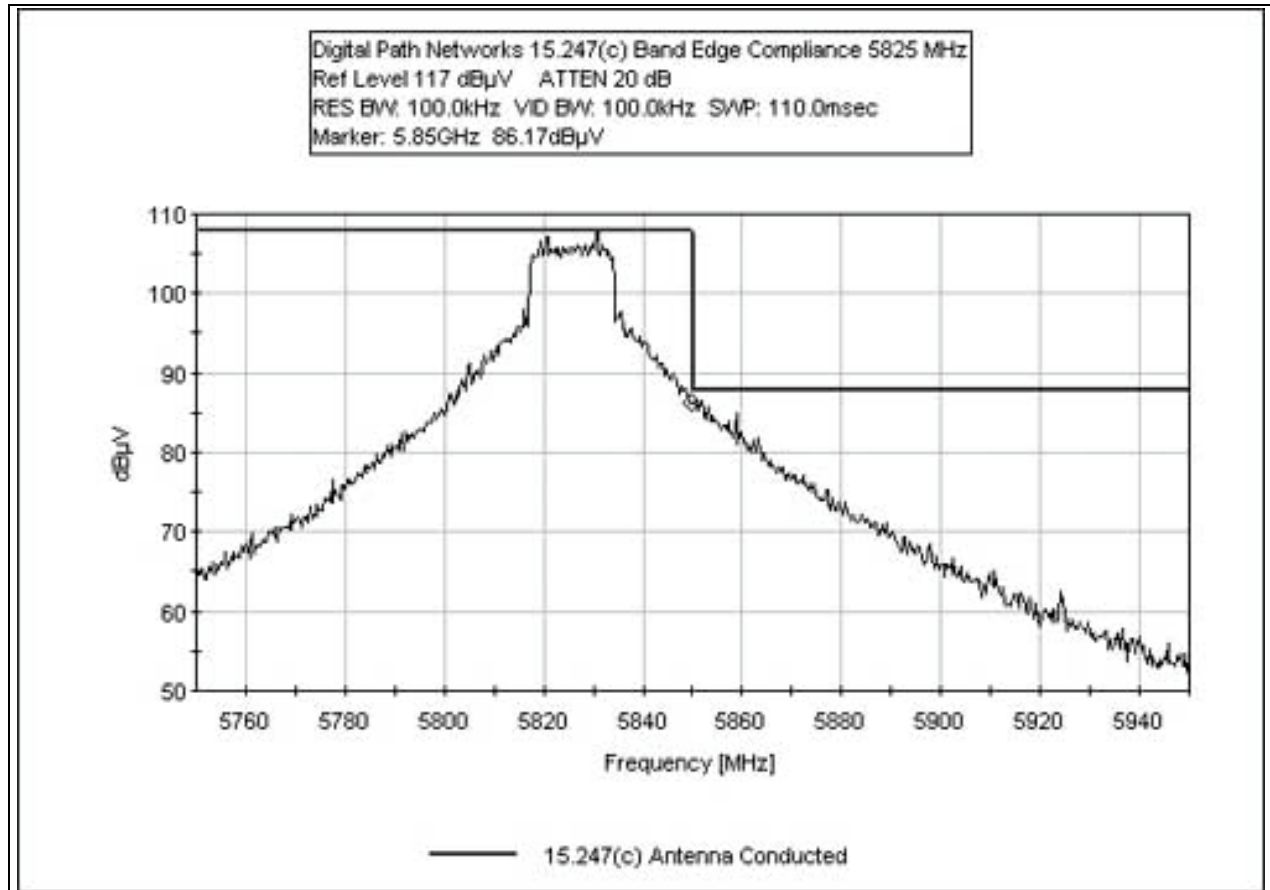
FCC 15.247(c) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
2462 MHz 802.11g



FCC 15.247(c) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
5745 MHz 802.11a



**FCC 15.247(c) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
5825 MHz 802.11a**



FCC 15.247(c) ANTENNA CONDUCTED SPURIOUS EMISSIONS

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362
 Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775** Date: 11/11/2004
 Test Type: **Antenna Port** Time: 16:11:57
 Equipment: **Askey Atheros Radio** Sequence#: 16
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11b default (CCK) Data Rate = 11Mbps PCDAC=53. Carrier Frequency: 2462 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz, Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2462.000M	106.5	+5.8	+1.2		+0.0	113.5	115.0	-1.5	Anten
								Carrier		
2	4924.000M	57.8	+5.8	+1.1		+0.0	64.7	95.0	-30.3	Anten
3	2488.533M	56.3	+5.8	+1.2		+0.0	63.3	95.0	-31.7	Anten
4	4925.029M	56.3	+5.8	+1.1		+0.0	63.2	95.0	-31.8	Anten
5	506.786M	51.5	+5.7	+0.5		+0.0	57.7	95.0	-37.3	Anten
6	2483.500M	50.3	+5.8	+1.2		+0.0	57.3	95.0	-37.7	Anten

7	24840.170M	49.7	+6.2	+1.3	+0.0	57.2	95.0	-37.8	Anten
8	23956.800M	49.8	+5.8	+1.4	+0.0	57.0	95.0	-38.0	Anten
9	2690.261M	49.5	+5.8	+1.2	+0.0	56.5	95.0	-38.5	Anten
10	24620.000M	48.7	+6.1	+1.2	+0.0	56.0	95.0	-39.0	Anten
11	26000.000M	48.3	+5.9	+1.1	+0.0	55.3	95.0	-39.7	Anten
12	37265.440M	53.0	+0.0	+1.9	+0.0	54.9	95.0	-40.1	Anten
13	21845.070M	47.2	+6.0	+1.1	+0.0	54.3	95.0	-40.7	Anten
14	17413.960M	46.7	+6.0	+1.2	+0.0	53.9	95.0	-41.1	Anten
15	11221.800M	46.0	+5.9	+1.3	+0.0	53.2	95.0	-41.8	Anten
16	262.574M	46.0	+5.7	+0.4	+0.0	52.1	95.0	-42.9	Anten
17	1798.482M	45.3	+5.7	+1.1	+0.0	52.1	95.0	-42.9	Anten
18	595.988M	45.7	+5.7	+0.5	+0.0	51.9	95.0	-43.1	Anten
19	1020.393M	45.2	+5.7	+0.5	+0.0	51.4	95.0	-43.6	Anten
20	150.164M	44.8	+5.7	+0.4	+0.0	50.9	95.0	-44.1	Anten
21	31025.040M	49.0	+0.0	+1.9	+0.0	50.9	95.0	-44.1	Anten
22	91.135M	44.7	+5.7	+0.4	+0.0	50.8	95.0	-44.2	Anten
23	51.516M	44.7	+5.7	+0.3	+0.0	50.7	95.0	-44.3	Anten
24	14772.000M	43.5	+5.9	+0.8	+0.0	50.2	95.0	-44.8	Anten
25	17234.000M	42.5	+6.0	+1.2	+0.0	49.7	95.0	-45.3	Anten
26	22158.000M	42.5	+6.0	+1.1	+0.0	49.6	95.0	-45.4	Anten
27	9848.001M	41.8	+5.9	+1.3	+0.0	49.0	95.0	-46.0	Anten
28	7386.000M	41.8	+5.8	+1.3	+0.0	48.9	95.0	-46.1	Anten
29	12310.000M	41.8	+5.9	+0.8	+0.0	48.5	95.0	-46.5	Anten
30	19696.000M	41.0	+6.1	+1.1	+0.0	48.2	95.0	-46.8	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 14:57:33
 Sequence#: 17
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11b default (CCK) Data Rate = 11Mbps PCDAC=52, Carrier Frequency: 2442 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2442.000M	108.0	+5.8	+1.2			+0.0	115.0	115.0	+0.0	Anten
									Carrier		
2	4884.034M	56.7	+5.8	+1.1			+0.0	63.6	95.0	-31.4	Anten
3	2361.920M	51.2	+5.7	+1.2			+0.0	58.1	95.0	-36.9	Anten
4	24792.960M	50.5	+6.1	+1.3			+0.0	57.9	95.0	-37.1	Anten
5	486.863M	51.2	+5.7	+0.5			+0.0	57.4	95.0	-37.6	Anten
6	2690.261M	49.2	+5.8	+1.2			+0.0	56.2	95.0	-38.8	Anten

7	25777.470M	49.3	+5.9	+1.0	+0.0	56.2	95.0	-38.8	Anten
8	23808.460M	48.5	+6.0	+1.4	+0.0	55.9	95.0	-39.1	Anten
9	17463.560M	48.0	+6.0	+1.2	+0.0	55.2	95.0	-39.8	Anten
10	26000.000M	47.8	+5.9	+1.1	+0.0	54.8	95.0	-40.2	Anten
11	36914.860M	52.5	+0.0	+2.0	+0.0	54.5	95.0	-40.5	Anten
12	11757.370M	46.2	+5.9	+0.8	+0.0	52.9	95.0	-42.1	Anten
13	1947.201M	45.7	+5.8	+1.1	+0.0	52.6	95.0	-42.4	Anten
14	953.589M	46.2	+5.7	+0.5	+0.0	52.4	95.0	-42.6	Anten
15	24420.030M	44.2	+6.2	+1.2	+0.0	51.6	95.0	-43.4	Anten
16	31141.900M	49.5	+0.0	+1.8	+0.0	51.3	95.0	-43.7	Anten
17	304.587M	44.8	+5.7	+0.4	+0.0	50.9	95.0	-44.1	Anten
18	59.289M	44.8	+5.7	+0.3	+0.0	50.8	95.0	-44.2	Anten
19	159.172M	44.5	+5.7	+0.4	+0.0	50.6	95.0	-44.4	Anten
20	48.801M	44.2	+5.7	+0.3	+0.0	50.2	95.0	-44.8	Anten
21	21978.030M	43.0	+6.0	+1.1	+0.0	50.1	95.0	-44.9	Anten
22	14652.030M	43.2	+5.9	+0.8	+0.0	49.9	95.0	-45.1	Anten
23	9768.033M	42.7	+5.9	+1.3	+0.0	49.9	95.0	-45.1	Anten
24	12210.030M	42.7	+5.9	+0.8	+0.0	49.4	95.0	-45.6	Anten
25	7326.033M	41.2	+5.8	+1.3	+0.0	48.3	95.0	-46.7	Anten
26	17094.030M	40.8	+5.9	+1.2	+0.0	47.9	95.0	-47.1	Anten
27	19536.030M	40.2	+6.0	+1.1	+0.0	47.3	95.0	-47.7	Anten
28	27752.920M	44.8	+0.0	+1.5	+0.0	46.3	95.0	-48.7	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 14:50:43
 Sequence#: 18
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11b default (CCK) Data Rate = 11Mbps PCDAC=50. Carrier Frequency: 2412 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2412.000M	108.0	+5.7	+1.2			+0.0	114.9	115.0	-0.1	Anten
									Carrier		
2	2397.467M Ave	64.7	+5.7	+1.2			+0.0	71.6	95.0	-23.4	Anten
^	2397.467M	77.0	+5.7	+1.2			+0.0	83.9	95.0	-11.1	Anten
4	2400.000M Ave	63.4	+5.7	+1.2			+0.0	70.3	95.0	-24.7	Anten
^	2400.000M	73.0	+5.7	+1.2			+0.0	79.9	95.0	-15.1	Anten
6	4824.083M	60.5	+5.8	+1.1			+0.0	67.4	95.0	-27.6	Anten

7	2386.583M	58.8	+5.7	+1.2	+0.0	65.7	95.0	-29.3	Anten
8	24671.840M	51.5	+6.1	+1.2	+0.0	58.8	95.0	-36.2	Anten
9	456.697M	51.2	+5.7	+0.5	+0.0	57.4	95.0	-37.6	Anten
10	2688.643M	49.7	+5.8	+1.2	+0.0	56.7	95.0	-38.3	Anten
11	23975.110M	49.0	+5.8	+1.4	+0.0	56.2	95.0	-38.8	Anten
12	25684.290M	49.3	+5.8	+0.9	+0.0	56.0	95.0	-39.0	Anten
13	4822.430M	48.8	+5.8	+1.1	+0.0	55.7	95.0	-39.3	Anten
14	17426.940M	47.3	+6.0	+1.2	+0.0	54.5	95.0	-40.5	Anten
15	37031.720M	52.5	+0.0	+2.0	+0.0	54.5	95.0	-40.5	Anten
16	26000.000M	47.3	+5.9	+1.1	+0.0	54.3	95.0	-40.7	Anten
17	2045.270M	45.7	+5.8	+1.1	+0.0	52.6	95.0	-42.4	Anten
18	7219.090M	44.8	+5.8	+1.4	+0.0	52.0	95.0	-43.0	Anten
19	174.564M	45.8	+5.7	+0.4	+0.0	51.9	95.0	-43.1	Anten
20	1080.433M	45.5	+5.7	+0.5	+0.0	51.7	95.0	-43.3	Anten
21	4215.779M	44.8	+5.8	+1.0	+0.0	51.6	95.0	-43.4	Anten
22	24120.000M	44.0	+5.8	+1.4	+0.0	51.2	95.0	-43.8	Anten
23	31025.040M	49.2	+0.0	+1.9	+0.0	51.1	95.0	-43.9	Anten
24	86.525M	44.8	+5.7	+0.4	+0.0	50.9	95.0	-44.1	Anten
25	36.173M	44.7	+5.7	+0.3	+0.0	50.7	95.0	-44.3	Anten
26	19296.000M	42.8	+6.0	+1.1	+0.0	49.9	95.0	-45.1	Anten
27	9648.000M	42.2	+5.8	+1.4	+0.0	49.4	95.0	-45.6	Anten
28	16884.000M	42.2	+5.9	+1.2	+0.0	49.3	95.0	-45.7	Anten

29	21708.000M	42.0	+6.0	+1.2	+0.0	49.2	95.0	-45.8	Anten
30	14472.000M	42.5	+5.9	+0.8	+0.0	49.2	95.0	-45.8	Anten
31	7236.083M	42.0	+5.8	+1.4	+0.0	49.2	95.0	-45.8	Anten
32	12060.000M	41.7	+5.9	+1.0	+0.0	48.6	95.0	-46.4	Anten

DRAFT

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 11:31:35
 Sequence#: 12
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band Modulation = 802.11g default (OFDM) Data Rate = 54Mbps PCDAC=48. Carrier Frequency: 2462 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2462.000M	101.5	+5.8	+1.2			+0.0	108.5	110.0	-1.5	Anten
									Carrier		
2	2483.583M	55.3	+5.8	+1.2			+0.0	62.3	90.0	-27.7	Anten
3	24718.790M	50.8	+6.1	+1.2			+0.0	58.1	90.0	-31.9	Anten
4	2690.261M	50.5	+5.8	+1.2			+0.0	57.5	90.0	-32.5	Anten
5	23943.320M	49.2	+5.8	+1.4			+0.0	56.4	90.0	-33.6	Anten
6	37569.280M	53.3	+0.0	+1.7			+0.0	55.0	90.0	-35.0	Anten

7	26000.000M	47.7	+5.9	+1.1	+0.0	54.7	90.0	-35.3	Anten
8	24620.000M	47.2	+6.1	+1.2	+0.0	54.5	90.0	-35.5	Anten
9	4930.013M	47.5	+5.8	+1.1	+0.0	54.4	90.0	-35.6	Anten
10	21663.200M	46.8	+5.9	+1.2	+0.0	53.9	90.0	-36.1	Anten
11	17513.160M	46.5	+6.0	+1.2	+0.0	53.7	90.0	-36.3	Anten
12	10931.320M	45.7	+5.9	+1.2	+0.0	52.8	90.0	-37.2	Anten
13	1655.771M	45.5	+5.7	+1.2	+0.0	52.4	90.0	-37.6	Anten
14	1541.603M	45.3	+5.7	+1.2	+0.0	52.2	90.0	-37.8	Anten
15	4924.000M	45.2	+5.8	+1.1	+0.0	52.1	90.0	-37.9	Anten
16	1083.074M	45.5	+5.7	+0.5	+0.0	51.7	90.0	-38.3	Anten
17	327.955M	45.3	+5.7	+0.4	+0.0	51.4	90.0	-38.6	Anten
18	427.093M	45.2	+5.7	+0.5	+0.0	51.4	90.0	-38.6	Anten
19	6569.664M	44.3	+5.8	+1.3	+0.0	51.4	90.0	-38.6	Anten
20	19696.000M	43.5	+6.1	+1.1	+0.0	50.7	90.0	-39.3	Anten
21	48.595M	44.7	+5.7	+0.3	+0.0	50.7	90.0	-39.3	Anten
22	89.037M	44.5	+5.7	+0.4	+0.0	50.6	90.0	-39.4	Anten
23	116.589M	44.5	+5.7	+0.4	+0.0	50.6	90.0	-39.4	Anten
24	31025.040M	48.7	+0.0	+1.9	+0.0	50.6	90.0	-39.4	Anten
25	14772.000M	43.2	+5.9	+0.8	+0.0	49.9	90.0	-40.1	Anten
26	22158.000M	42.5	+6.0	+1.1	+0.0	49.6	90.0	-40.4	Anten
27	9848.001M	42.3	+5.9	+1.3	+0.0	49.5	90.0	-40.5	Anten
28	12310.000M	42.2	+5.9	+0.8	+0.0	48.9	90.0	-41.1	Anten
29	17234.000M	41.5	+6.0	+1.2	+0.0	48.7	90.0	-41.3	Anten
30	7386.000M	41.3	+5.8	+1.3	+0.0	48.4	90.0	-41.6	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 11:44:41
 Sequence#: 13
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps PCDAC=47. Carrier Frequency: 2442 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20 °C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2442.000M	101.7	+5.8	+1.2			+0.0	108.7	110.0 Carrier	-1.3	Anten
2	24752.500M	50.7	+6.1	+1.3			+0.0	58.1	90.0	-31.9	Anten
3	4885.250M	51.0	+5.8	+1.1			+0.0	57.9	90.0	-32.1	Anten
4	2690.261M	49.8	+5.8	+1.2			+0.0	56.8	90.0	-33.2	Anten
5	25993.260M	49.3	+5.9	+1.1			+0.0	56.3	90.0	-33.7	Anten
6	23929.830M	48.7	+5.9	+1.4			+0.0	56.0	90.0	-34.0	Anten

7	26000.000M	48.0	+5.9	+1.1	+0.0	55.0	90.0	-35.0	Anten
8	36938.230M	52.5	+0.0	+2.0	+0.0	54.5	90.0	-35.5	Anten
9	21795.470M	46.7	+6.0	+1.1	+0.0	53.8	90.0	-36.2	Anten
10	17413.960M	46.5	+6.0	+1.2	+0.0	53.7	90.0	-36.3	Anten
11	15744.020M	46.7	+5.9	+0.9	+0.0	53.5	90.0	-36.5	Anten
12	19993.260M	46.3	+6.0	+1.1	+0.0	53.4	90.0	-36.6	Anten
13	4885.160M	46.2	+5.8	+1.1	+0.0	53.1	90.0	-36.9	Anten
14	24420.330M	45.2	+6.2	+1.2	+0.0	52.6	90.0	-37.4	Anten
15	21978.330M	45.5	+6.0	+1.1	+0.0	52.6	90.0	-37.4	Anten
16	10132.500M	45.5	+5.9	+1.2	+0.0	52.6	90.0	-37.4	Anten
17	1741.398M	45.3	+5.7	+1.1	+0.0	52.1	90.0	-37.9	Anten
18	6445.070M	44.7	+5.8	+1.3	+0.0	51.8	90.0	-38.2	Anten
19	871.939M	45.5	+5.7	+0.5	+0.0	51.7	90.0	-38.3	Anten
20	271.524M	45.2	+5.7	+0.4	+0.0	51.3	90.0	-38.7	Anten
21	31118.530M	49.3	+0.0	+1.8	+0.0	51.1	90.0	-38.9	Anten
22	447.469M	44.8	+5.7	+0.5	+0.0	51.0	90.0	-39.0	Anten
23	105.397M	44.7	+5.7	+0.4	+0.0	50.8	90.0	-39.2	Anten
24	14653.250M	43.0	+5.9	+0.8	+0.0	49.7	90.0	-40.3	Anten
25	19537.250M	42.3	+6.0	+1.1	+0.0	49.4	90.0	-40.6	Anten
26	7327.250M	41.8	+5.8	+1.3	+0.0	48.9	90.0	-41.1	Anten
27	17095.250M	41.3	+5.9	+1.2	+0.0	48.4	90.0	-41.6	Anten
28	12211.250M	40.8	+5.9	+0.8	+0.0	47.5	90.0	-42.5	Anten
29	9769.250M	40.0	+5.9	+1.3	+0.0	47.2	90.0	-42.8	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 11:59:58
 Sequence#: 14
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps PCDAC=47. Carrier Frequency: 2412 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2412.000M	102.2	+5.7	+1.2			+0.0	109.1	110.0	-0.9	Anten
									Carrier		
2	4822.833M	51.5	+5.8	+1.1			+0.0	58.4	90.0	-31.6	Anten
3	24671.590M	50.5	+6.1	+1.2			+0.0	57.8	90.0	-32.2	Anten
4	2687.524M	49.2	+5.8	+1.2			+0.0	56.2	90.0	-33.8	Anten
5	24030.980M	49.0	+5.8	+1.4			+0.0	56.2	90.0	-33.8	Anten
6	25737.010M	49.3	+5.8	+0.9			+0.0	56.0	90.0	-34.0	Anten

7	37686.140M	53.5	+0.0	+1.7	+0.0	55.2	90.0	-34.8	Anten
8	26000.000M	47.8	+5.9	+1.1	+0.0	54.8	90.0	-35.2	Anten
9	21944.280M	47.2	+6.0	+1.1	+0.0	54.3	90.0	-35.7	Anten
10	9506.149M	45.5	+5.8	+1.4	+0.0	52.7	90.0	-37.3	Anten
11	1986.259M	45.7	+5.8	+1.1	+0.0	52.6	90.0	-37.4	Anten
12	667.401M	46.2	+5.7	+0.5	+0.0	52.4	90.0	-37.6	Anten
13	24120.170M	45.0	+5.8	+1.4	+0.0	52.2	90.0	-37.8	Anten
14	4830.338M	45.3	+5.8	+1.1	+0.0	52.2	90.0	-37.8	Anten
15	3141.729M	44.8	+5.8	+1.2	+0.0	51.8	90.0	-38.2	Anten
16	6450.054M	44.7	+5.8	+1.3	+0.0	51.8	90.0	-38.2	Anten
17	138.972M	45.3	+5.7	+0.4	+0.0	51.4	90.0	-38.6	Anten
18	53.985M	45.3	+5.7	+0.3	+0.0	51.3	90.0	-38.7	Anten
19	448.827M	45.0	+5.7	+0.5	+0.0	51.2	90.0	-38.8	Anten
20	31025.040M	49.2	+0.0	+1.9	+0.0	51.1	90.0	-38.9	Anten
21	69.255M	45.0	+5.7	+0.3	+0.0	51.0	90.0	-39.0	Anten
22	205.148M	44.7	+5.7	+0.4	+0.0	50.8	90.0	-39.2	Anten
23	21708.170M	43.5	+6.0	+1.2	+0.0	50.7	90.0	-39.3	Anten
24	7235.750M	43.2	+5.8	+1.4	+0.0	50.4	90.0	-39.6	Anten
25	19296.170M	42.8	+6.0	+1.1	+0.0	49.9	90.0	-40.1	Anten
26	12059.750M	42.7	+5.9	+1.0	+0.0	49.6	90.0	-40.4	Anten
27	14472.170M	42.8	+5.9	+0.8	+0.0	49.5	90.0	-40.5	Anten
28	9647.750M	41.5	+5.8	+1.4	+0.0	48.7	90.0	-41.3	Anten
29	16884.170M	41.3	+5.9	+1.2	+0.0	48.4	90.0	-41.6	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/08/2004
 Time: 15:14:49
 Sequence#: 3
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps PCDAC=50. Carrier Frequency: 5785 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5824.000M	106.8	+5.8	+1.3			+0.0	113.9	115.0	-1.1	Anten
									Carrier		
2	24820.090M	49.7	+6.2	+1.3			+0.0	57.2	95.0	-37.8	Anten
3	23873.420M	48.7	+5.9	+1.4			+0.0	56.0	95.0	-39.0	Anten
4	37382.300M	53.0	+0.0	+1.8			+0.0	54.8	95.0	-40.2	Anten
5	26000.000M	47.2	+5.9	+1.1			+0.0	54.2	95.0	-40.8	Anten
6	17431.510M	46.2	+6.0	+1.2			+0.0	53.4	95.0	-41.6	Anten

7	2692.750M	46.0	+5.8	+1.2	+0.0	53.0	95.0	-42.0	Anten
8	13883.020M	46.3	+5.9	+0.8	+0.0	53.0	95.0	-42.0	Anten
9	3859.298M	46.0	+5.8	+1.1	+0.0	52.9	95.0	-42.1	Anten
10	7487.484M	45.2	+5.8	+1.2	+0.0	52.2	95.0	-42.8	Anten
11	1977.870M	45.2	+5.8	+1.1	+0.0	52.1	95.0	-42.9	Anten
12	23140.500M	44.0	+6.3	+1.4	+0.0	51.7	95.0	-43.3	Anten
13	2978.066M	44.3	+5.8	+1.2	+0.0	51.3	95.0	-43.7	Anten
14	3212.821M	44.2	+5.8	+1.2	+0.0	51.2	95.0	-43.8	Anten
15	150.980M	45.0	+5.7	+0.4	+0.0	51.1	95.0	-43.9	Anten
16	881.611M	44.8	+5.7	+0.5	+0.0	51.0	95.0	-44.0	Anten
17	81.433M	44.8	+5.7	+0.4	+0.0	50.9	95.0	-44.1	Anten
18	31025.040M	48.7	+0.0	+1.9	+0.0	50.6	95.0	-44.4	Anten
19	489.593M	44.3	+5.7	+0.5	+0.0	50.5	95.0	-44.5	Anten
20	17355.500M	43.2	+6.0	+1.2	+0.0	50.4	95.0	-44.6	Anten
21	33.007M	44.2	+5.7	+0.3	+0.0	50.2	95.0	-44.8	Anten
22	11570.500M	43.0	+5.9	+0.9	+0.0	49.8	95.0	-45.2	Anten
23	34710.000M	44.8	+0.0	+1.6	+0.0	46.4	95.0	-48.6	Anten
24	28925.000M	40.8	+0.0	+1.8	+0.0	42.6	95.0	-52.4	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 10:08:41
 Sequence#: 4
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps PCDAC=50. Carrier Frequency: 5825 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data:

Reading listed by margin.

Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5825.000M	107.7	+5.8	+1.3			+0.0	114.8	115.0	-0.2	Anten
									Carrier		
2	5850.000M Ave	75.8	+5.8	+1.3			+0.0	82.9	95.0	-12.1	Anten
^	5850.000M	86.5	+5.8	+1.3			+0.0	93.6	95.0	-1.4	Anten
4	24696.610M	50.8	+6.1	+1.2			+0.0	58.1	95.0	-36.9	Anten
5	24010.620M	49.3	+5.8	+1.4			+0.0	56.5	95.0	-38.5	Anten
6	3888.190M	48.0	+5.8	+1.1			+0.0	54.9	95.0	-40.1	Anten

7	26000.000M	47.7	+5.9	+1.1	+0.0	54.7	95.0	-40.3	Anten
8	36844.740M	52.7	+0.0	+2.0	+0.0	54.7	95.0	-40.3	Anten
9	17492.430M	46.2	+6.0	+1.2	+0.0	53.4	95.0	-41.6	Anten
10	6731.010M	45.5	+5.8	+1.2	+0.0	52.5	95.0	-42.5	Anten
11	2014.803M	45.5	+5.8	+1.1	+0.0	52.4	95.0	-42.6	Anten
12	120.980M	46.0	+5.7	+0.4	+0.0	52.1	95.0	-42.9	Anten
13	31048.410M	50.2	+0.0	+1.9	+0.0	52.1	95.0	-42.9	Anten
14	17474.670M	44.8	+6.0	+1.2	+0.0	52.0	95.0	-43.0	Anten
15	526.600M	45.0	+5.7	+0.5	+0.0	51.2	95.0	-43.8	Anten
16	857.466M	45.0	+5.7	+0.5	+0.0	51.2	95.0	-43.8	Anten
17	23299.670M	43.5	+6.1	+1.4	+0.0	51.0	95.0	-44.0	Anten
18	57.964M	45.0	+5.7	+0.3	+0.0	51.0	95.0	-44.0	Anten
19	132.290M	44.8	+5.7	+0.4	+0.0	50.9	95.0	-44.1	Anten
20	11649.670M	43.0	+5.9	+0.8	+0.0	49.7	95.0	-45.3	Anten

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/11/2004
 Time: 10:06:44
 Sequence#: 5
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps PCDAC=50. Carrier Frequency: 5745 MHz. Frequency Range Investigated: 30MHz to 40GHz. RBW = 100kHz, VBW = 100kHz. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
------------------------	----------------------------

Measurement Data:

Reading listed by margin.

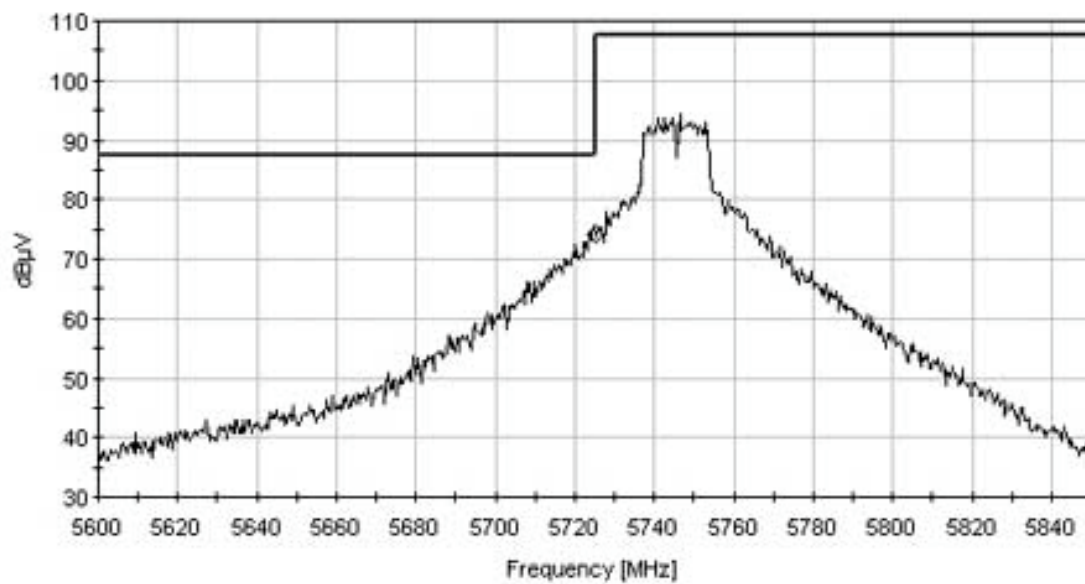
Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5745.000M	107.7	+5.8	+1.3			+0.0	114.8	115.0	-0.2	Anten
									Carrier		
2	5725.000M Ave	71.2	+5.8	+1.3			+0.0	78.3	95.0	-16.7	Anten
^	5725.000M	86.2	+5.8	+1.3			+0.0	93.3	95.0	-1.7	Anten
4	24641.730M	50.8	+6.1	+1.2			+0.0	58.1	95.0	-36.9	Anten
5	26000.000M	48.3	+5.9	+1.1			+0.0	55.3	95.0	-39.7	Anten
6	37522.540M	53.5	+0.0	+1.7			+0.0	55.2	95.0	-39.8	Anten

7	11491.250M	47.3	+5.9	+0.9	+0.0	54.1	95.0	-40.9	Anten
8	17431.510M	46.5	+6.0	+1.2	+0.0	53.7	95.0	-41.3	Anten
9	16670.030M	46.3	+6.0	+1.2	+0.0	53.5	95.0	-41.5	Anten
10	2710.808M	46.2	+5.8	+1.2	+0.0	53.2	95.0	-41.8	Anten
11	1503.005M	45.5	+5.7	+1.0	+0.0	52.2	95.0	-42.8	Anten
12	954.046M	45.2	+5.7	+0.5	+0.0	51.4	95.0	-43.6	Anten
13	153.872M	45.2	+5.7	+0.4	+0.0	51.3	95.0	-43.7	Anten
14	500.101M	45.0	+5.7	+0.5	+0.0	51.2	95.0	-43.8	Anten
15	1000.000M	44.8	+5.7	+0.5	+0.0	51.0	95.0	-44.0	Anten
16	100.394M	44.7	+5.7	+0.4	+0.0	50.8	95.0	-44.2	Anten
17	31025.040M	48.7	+0.0	+1.9	+0.0	50.6	95.0	-44.4	Anten
18	22980.000M	43.2	+6.1	+1.3	+0.0	50.6	95.0	-44.4	Anten
19	30.211M	44.5	+5.7	+0.3	+0.0	50.5	95.0	-44.5	Anten
20	11490.000M	42.7	+5.9	+0.9	+0.0	49.5	95.0	-45.5	Anten
21	17235.000M	40.8	+6.0	+1.2	+0.0	48.0	95.0	-47.0	Anten
22	34470.000M	43.5	+0.0	+1.5	+0.0	45.0	95.0	-50.0	Anten
23	28725.000M	40.2	+0.0	+1.7	+0.0	41.9	95.0	-53.1	Anten

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS ANTENNA 1 LOW AVERAGE

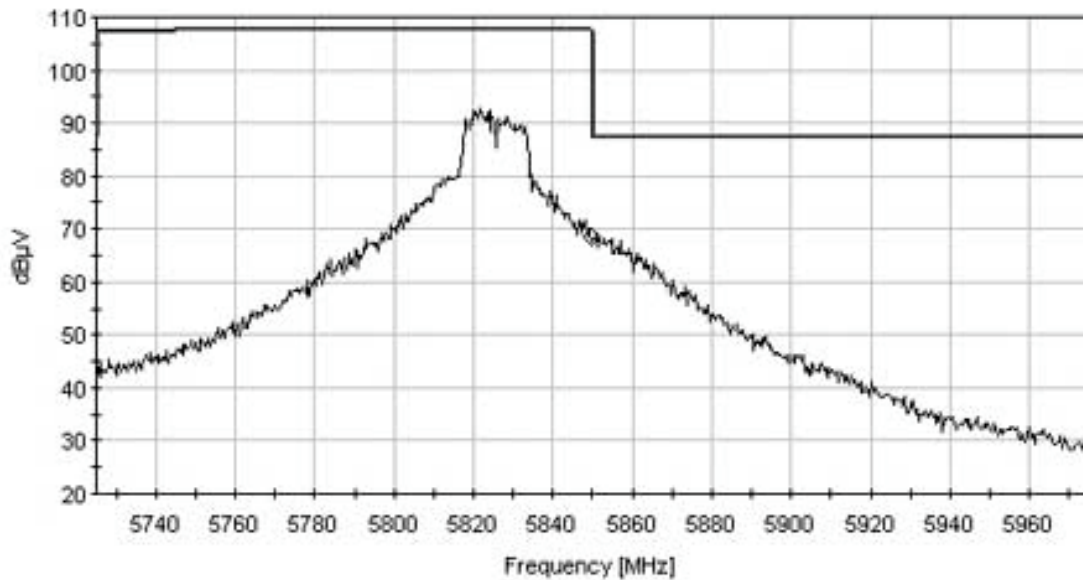
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 1 (18dBi) (Average Measurement)
Ref Level 107 dBμV ATTN 20 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 140.0msec
Marker: 5.725GHz 74.17dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 1 HIGH AVERAGE

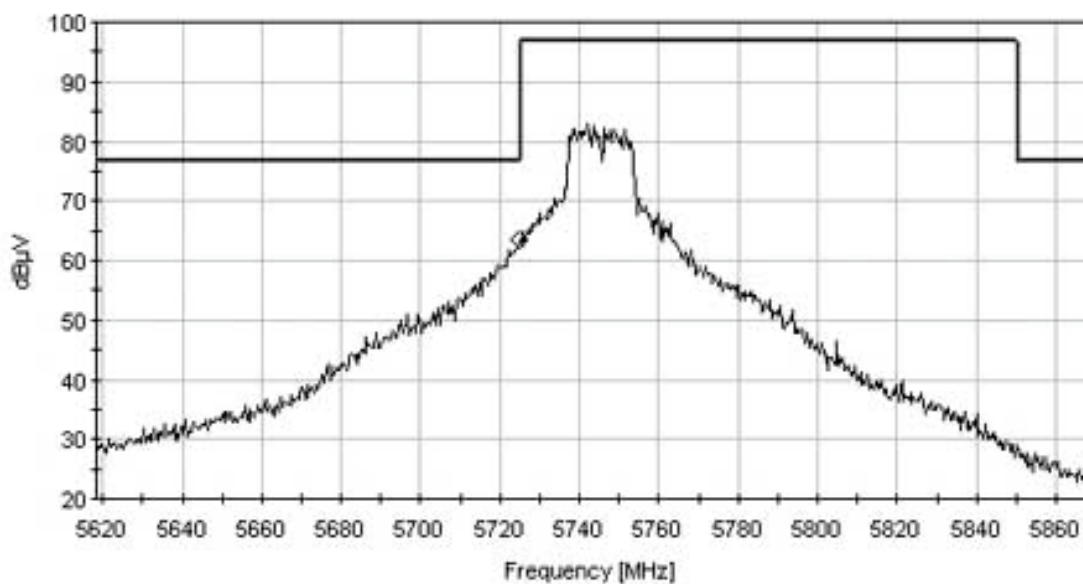
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 1 (18dBi) (Average Measurement)
Ref Level 107 dBμV ATTN 20 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 140.0msec
Marker: 5.85GHz 68.33dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 2 LOW AVERAGE

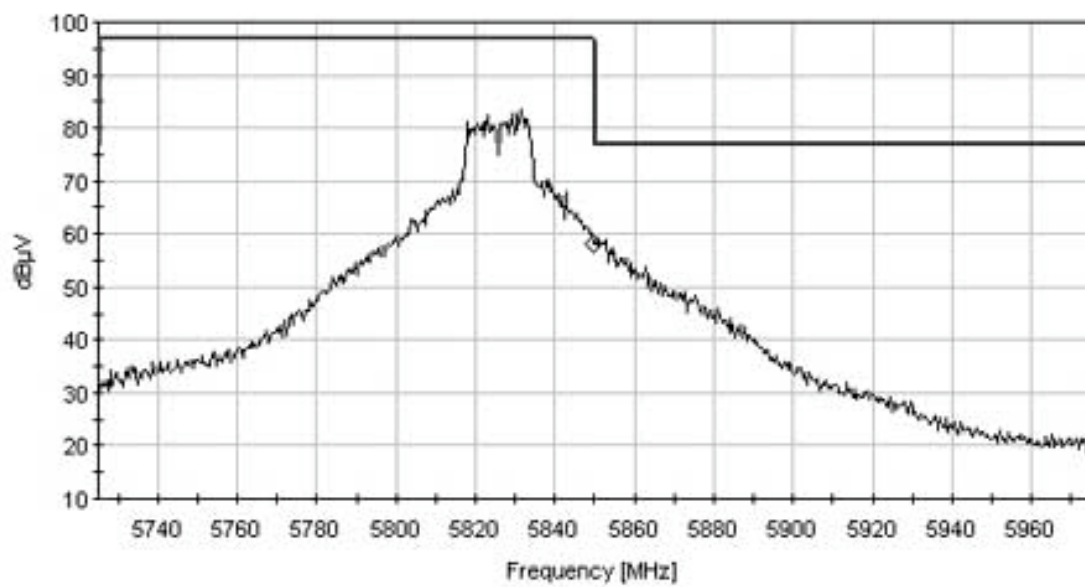
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 2 (29dBi) (Average Measurement)
Ref Level 107 dBμV ATTN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 140.0msec
Marker: 5.725GHz 63.5dBμV



— FCC 15.247 (c) / 15.209 / 15.205

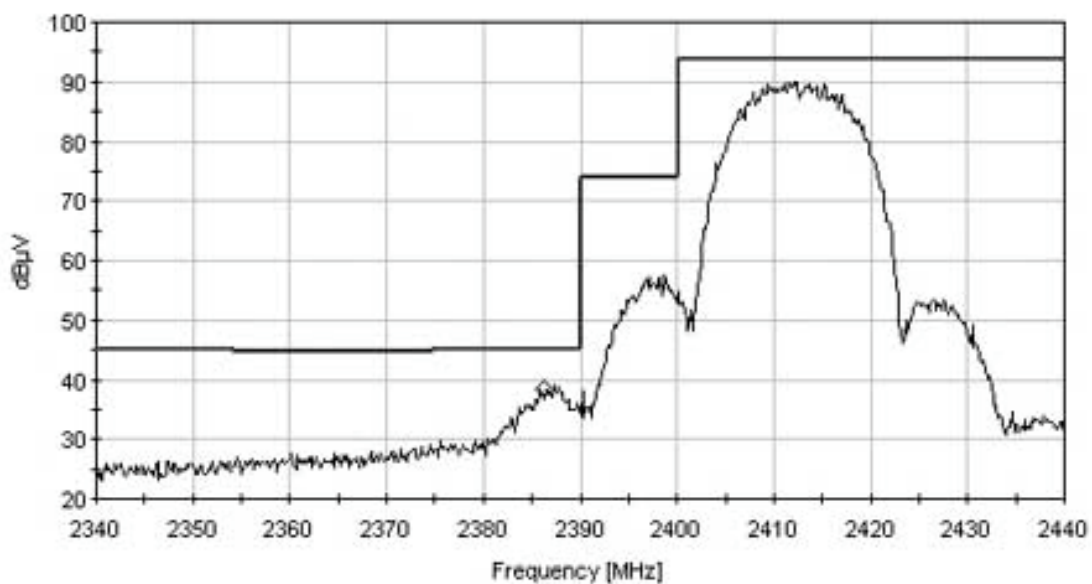
FCC 15.247(c) RADIATED SPURIOUS EMISSIONS **ANTENNA 2 HIGH AVERAGE**

Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 2 (29dBi) (Average Measurement)
 Ref Level 107 dBμV ATTN 10 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SWP: 140.0msec
 Marker: 5.85GHz 58dBμV



FCC 15.247(c) RADIATED SPURIOUS EMISSIONS ANTENNA 3 MODE B LOW AVERAGE

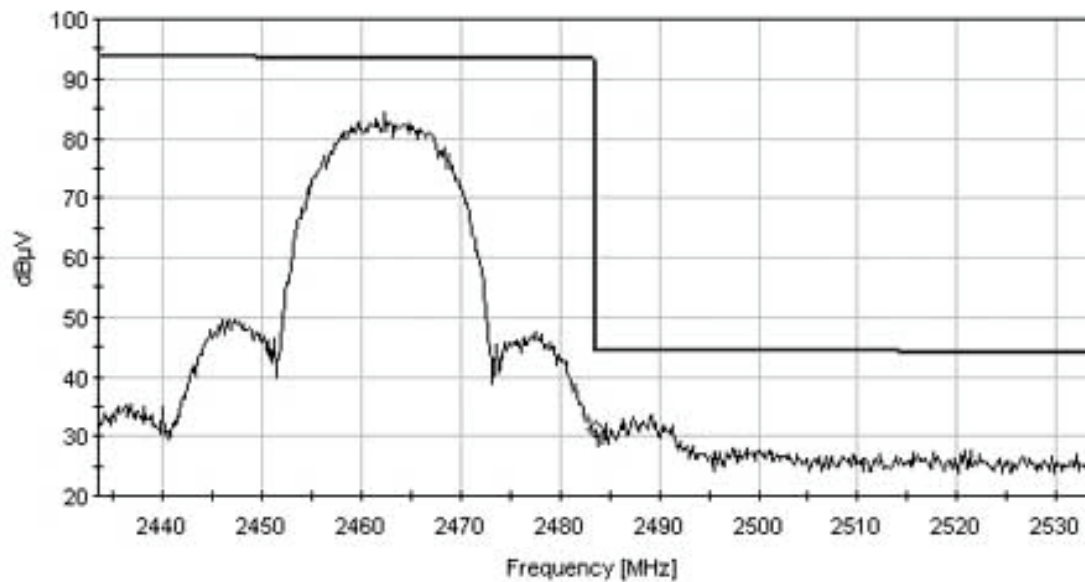
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 3 (9dBi) (Average Measurement)
 Ref Level 107 dBμV ATTN 10 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SWP: 55.0msec
 Marker: 2.386GHz 38.5dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 3 MODE B HIGH AVERAGE

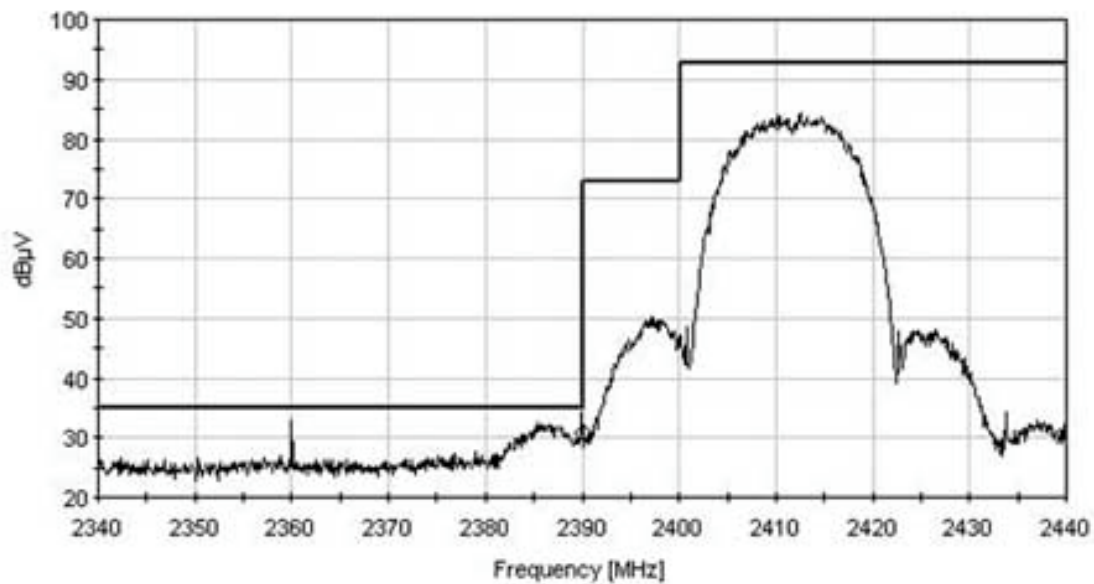
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 3 (9dBi) (Average Measurement)
 Ref Level 107 dBμV ATTN 10 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SWP: 55.0msec
 Marker: 2.484GHz 31dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS **ANTENNA 4 MODE B LOW AVERAGE**

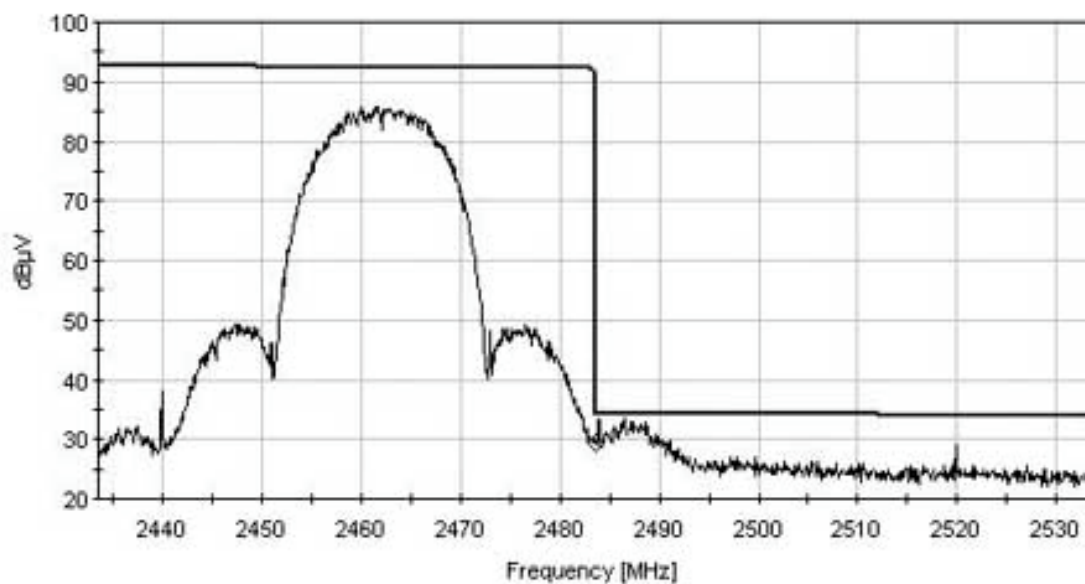
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 4 (14.2dBi) (Average Measurement)
 Ref Level 107 dBμV ATTN 10 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SWP: 75.0msec
 Marker: 2.39GHz 30.7dBμV Mode: 802.11b



— FCC 15.247 (c) / 15.209 / 15.205

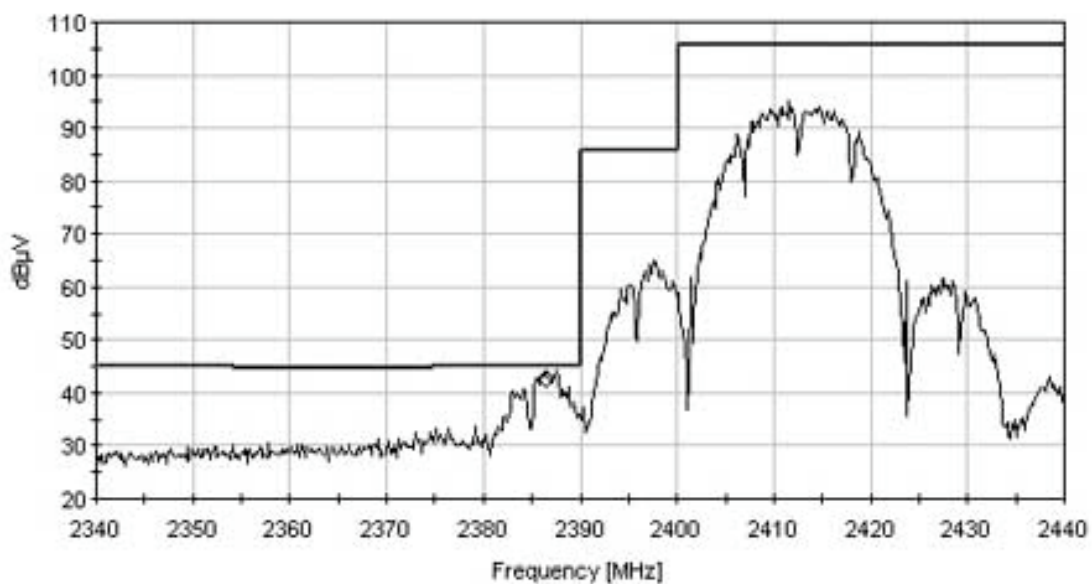
FCC 15.247(c) RADIATED SPURIOUS EMISSIONS ANTENNA 4 MODE B HIGH AVERAGE

Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 4 (14.2dBi) (Average Measurement)
 Ref Level 107 dBμV ATTN 10 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SWP: 75.0msec
 Marker: 2.484GHz 29.4dBμV Mode: 802.11b



FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 5 MODE B LOW AVERAGE

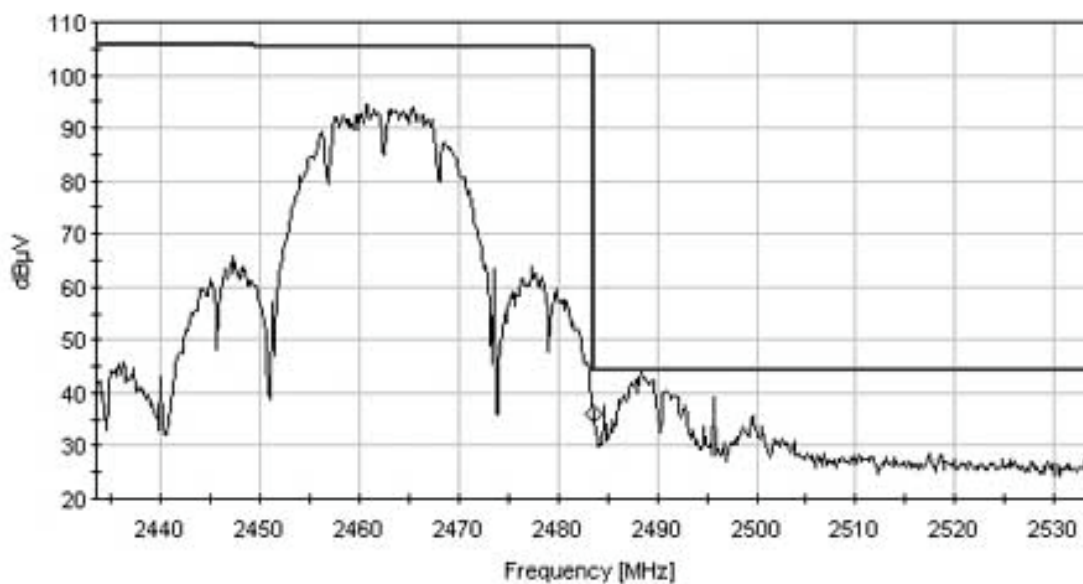
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 5 (9.1dBi) (Average Measurement)
Ref Level 107 dBuV ATTN 10 dB
RES BW: 100.0kHz SVP: 55.0msec
Marker: 2.387GHz 42.83dBuV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 5 MODE B HIGH AVERAGE

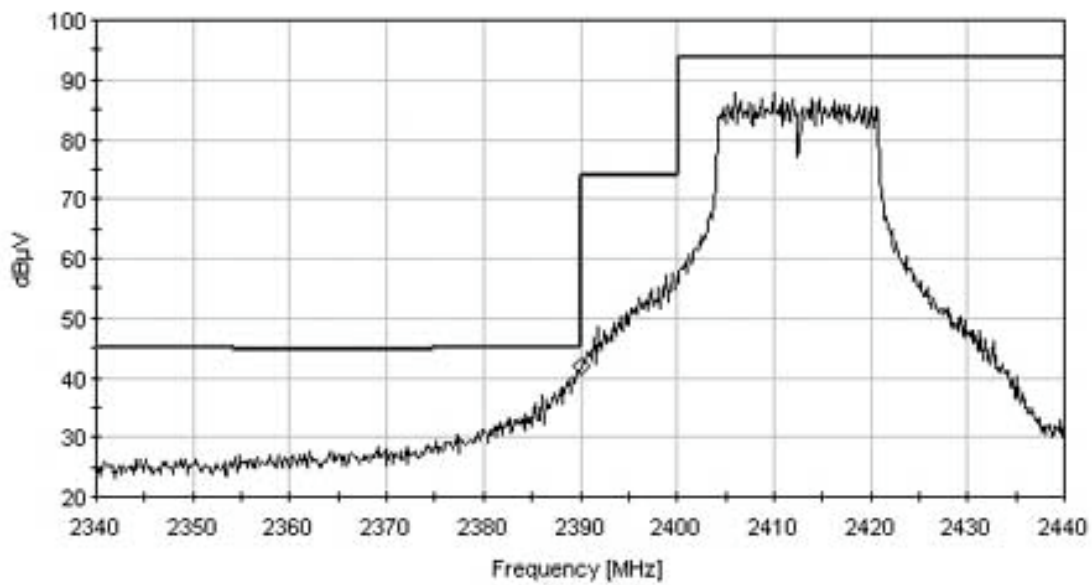
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 5 (9.1dBi) (Average Measurement)
Ref Level 107 dBuV ATTN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SVP: 55.0msec
Marker: 2.484GHz 36.17dBuV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 3 MODE G LOW AVERAGE

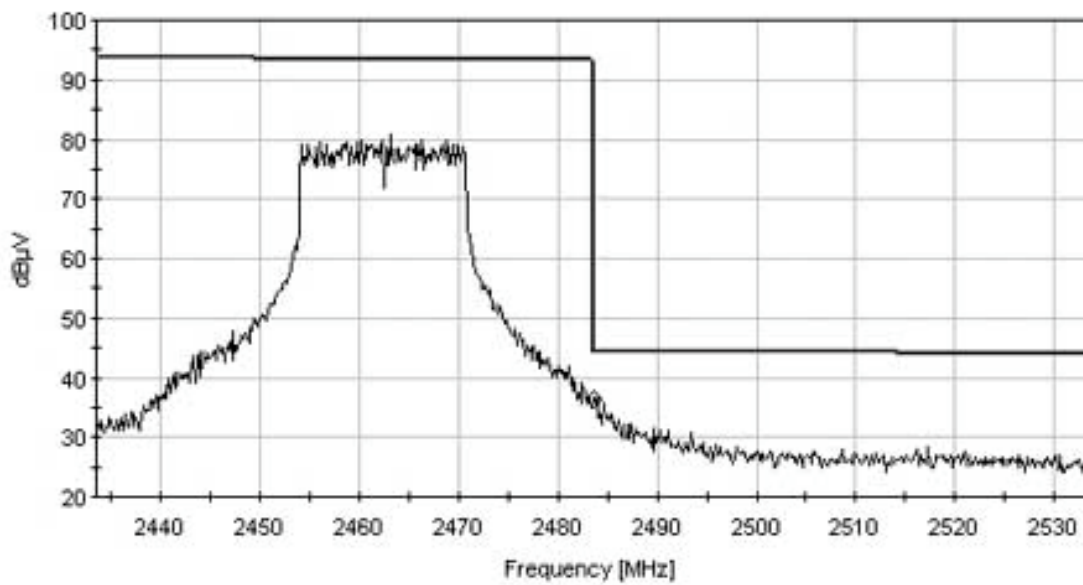
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 3 (9dBi) (Average Measurement)
Ref Level 107 dBμV ATTN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 55.0msec
Marker: 2.39GHz 42dBμV



— FCC 15.247 (c) / 15.209 / 15.205

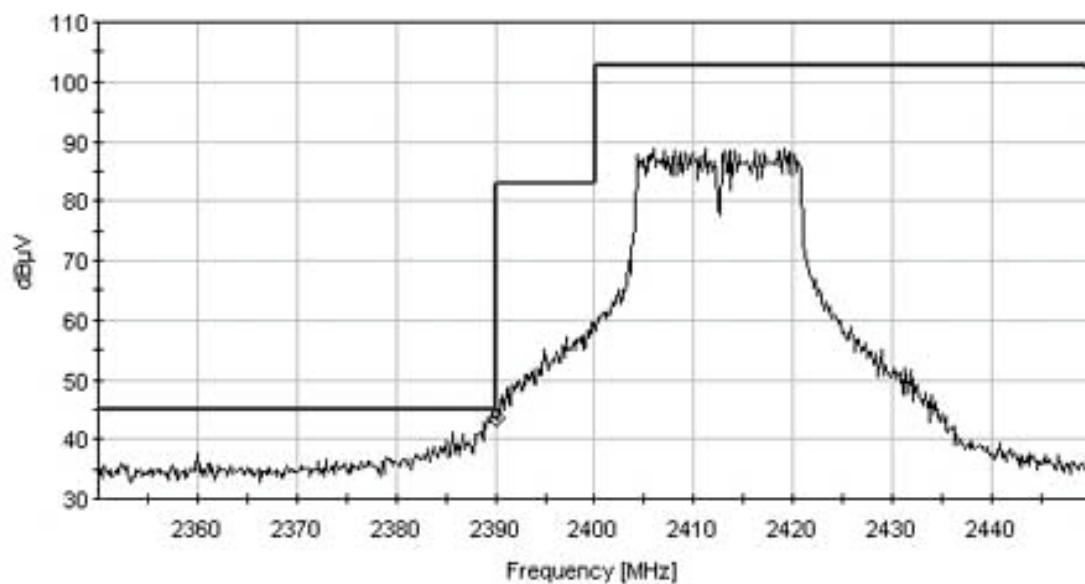
FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 3 MODE G HIGH AVERAGE

Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 3 (9dBi) (Average Measurement)
Ref Level 107 dBuV ATTN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 55.0msec
Marker: 2.484GHz 36.5dBuV



FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 4 MODE G LOW AVERAGE

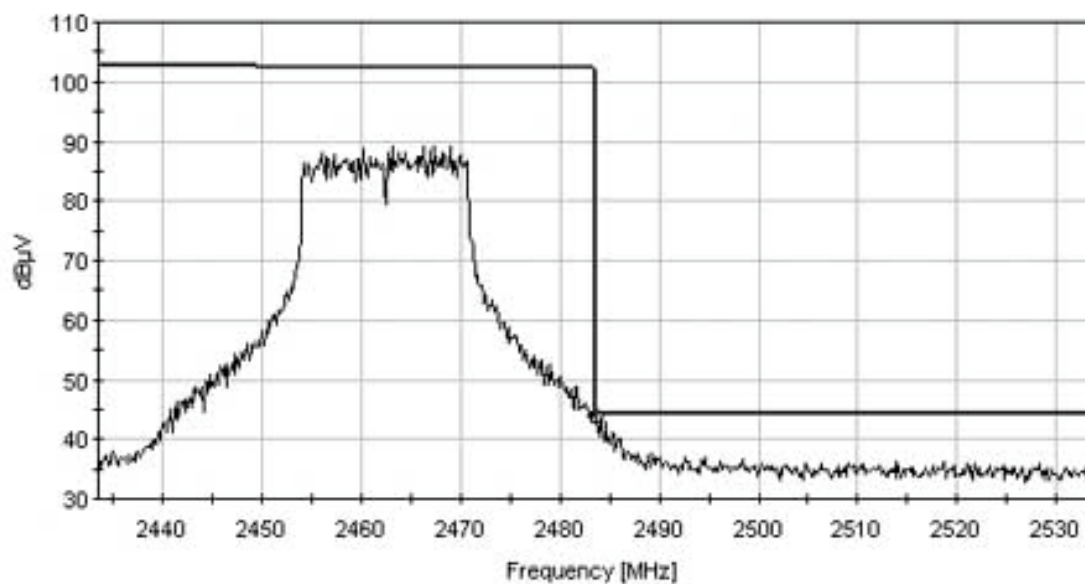
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 4 (14.2dBi) (Average Measurement)
Ref Level 117 dBμV ATTN 20 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 55.0msec
Marker: 2.39GHz 43.5dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 4 MODE G HIGH AVERAGE

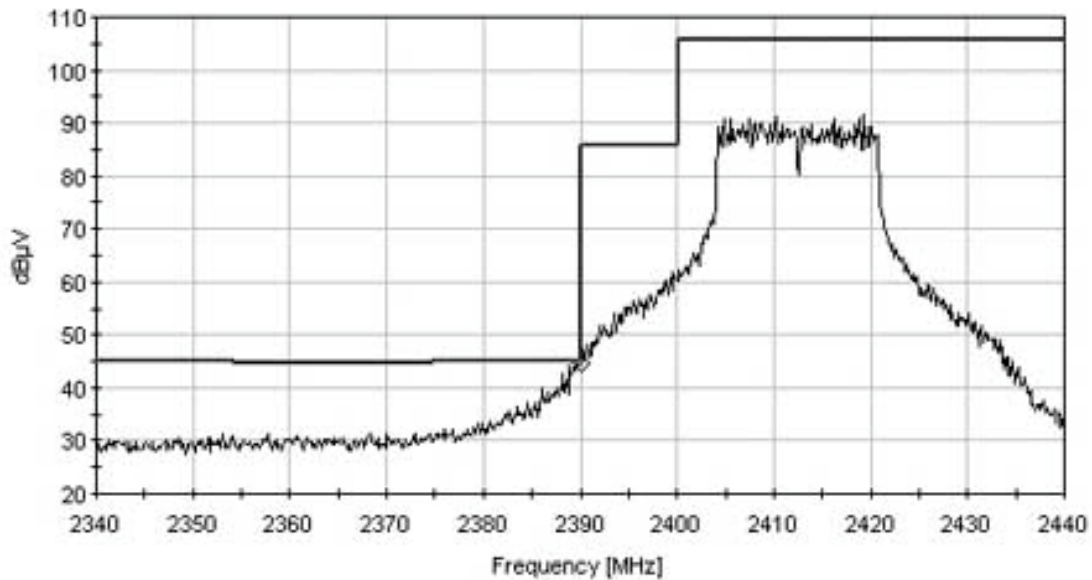
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 4 (14.2dBi) (Average Measurement)
 Ref Level 117 dBμV ATTN 20 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SWP: 55.0msec
 Marker: 2.484GHz 44dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 5 MODE G LOW AVERAGE

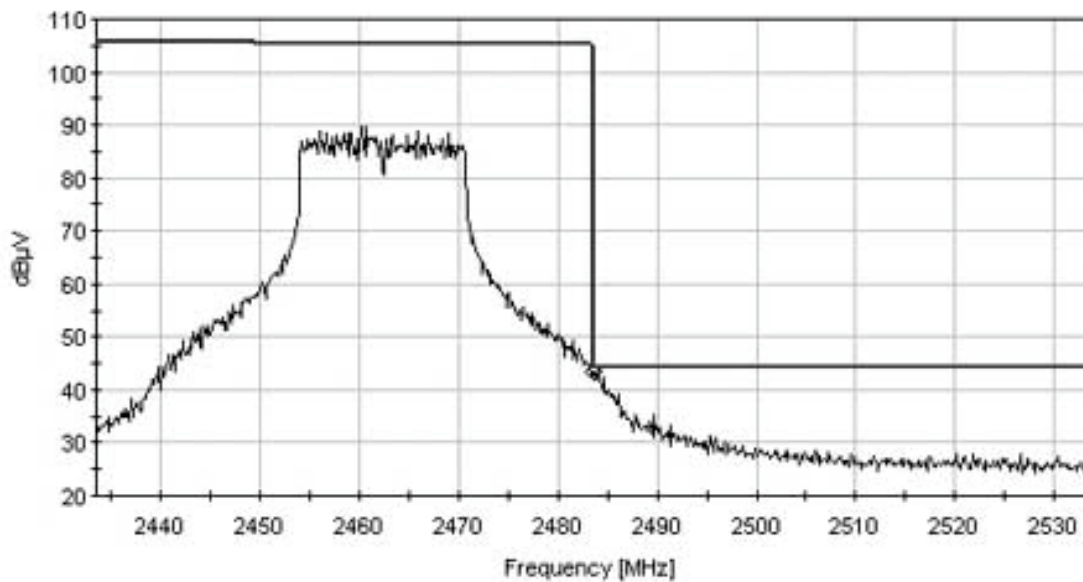
Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 5 (9.1dBi) (Average Measurement)
Ref Level 107 dBμV ATTN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SVP: 55.0msec
Marker: 2.39GHz 44.5dBμV



— FCC 15.247 (c) / 15.209 / 15.205

FCC 15.247(c) RADIATED SPURIOUS EMISSIONS
ANTENNA 5 MODE G HIGH AVERAGE

Digital Path Networks Downlink 15.247(c) Radiated Spurious Emissions - Antenna 5 (9.1dBi) (Average Measurement)
 Ref Level 107 dBμV ATTN 10 dB
 RES BW: 100.0kHz VID BW: 100.0kHz SVP: 55.0msec
 Marker: 2.484GHz 43.5dBμV



— FCC 15.247 (c) / 15.209 / 15.205

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.247 (c) / 15.209 / 15.205**
 Work Order #: **82775** Date: 11/23/2004
 Test Type: **Maximized Emissions** Time: 14:38:52
 Equipment: **Askey Atheros Radio** Sequence#: 43
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Downlink
 S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	01991
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2005	00099

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT power supply is located at the turn table. Test data represents emissions from radio in continuous transmit mode, digital circuitry and power supply. Test data is representative of all antenna configurations. Reported emissions represent the worst case. Frequency Range Investigated: 30-1000MHz. Temperature: 16°C, Relative Humidity: 36%. RBW = 120kHz VBW = 120kHz.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site B
T3=Cable - 10 Meter	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	200.080M	54.6	-26.7	+8.3	+3.3		+0.0	39.5	43.5	-4.0	Verti
2	700.082M	39.9	-27.8	+20.3	+6.8		+0.0	39.2	46.0	-6.8	Verti
^	700.052M	43.7	-27.8	+20.3	+6.8		+0.0	43.0	46.0	-3.0	Verti
4	500.048M	43.6	-27.8	+17.4	+5.5		+0.0	38.7	46.0	-7.3	Verti
5	60.300M	51.0	-27.3	+6.1	+1.7		+0.0	31.5	40.0	-8.5	Verti

6	599.788M	39.2	-27.8	+19.1	+5.9	+0.0	36.4	46.0	-9.6	Verti
7	860.368M	33.7	-27.6	+22.3	+7.8	+0.0	36.2	46.0	-9.8	Verti
8	240.102M	47.9	-26.5	+11.3	+3.5	+0.0	36.2	46.0	-9.8	Verti
9	400.072M	42.8	-27.2	+15.4	+5.1	+0.0	36.1	46.0	-9.9	Verti
10	739.850M	32.4	-27.7	+20.8	+6.9	+0.0	32.4	46.0	-13.6	Verti
11	720.106M	32.6	-27.8	+20.5	+6.8	+0.0	32.1	46.0	-13.9	Horiz
12	640.064M	33.9	-28.0	+19.6	+6.3	+0.0	31.8	46.0	-14.2	Horiz
13	680.088M	32.8	-27.9	+20.1	+6.6	+0.0	31.6	46.0	-14.4	Horiz
14	739.828M	31.1	-27.7	+20.8	+6.9	+0.0	31.1	46.0	-14.9	Horiz
15	480.128M	34.7	-27.7	+17.0	+5.3	+0.0	29.3	46.0	-16.7	Verti
16	560.086M	32.3	-27.8	+18.5	+6.0	+0.0	29.0	46.0	-17.0	Verti
17	480.052M	34.1	-27.7	+17.0	+5.3	+0.0	28.7	46.0	-17.3	Horiz
18	420.106M	35.0	-27.3	+15.8	+5.1	+0.0	28.6	46.0	-17.4	Horiz
19	960.116M	32.1	-27.2	+23.7	+7.9	+0.0	36.5	54.0	-17.5	Verti
20	579.368M	31.5	-27.8	+18.8	+5.9	+0.0	28.4	46.0	-17.6	Verti
21	560.084M	31.5	-27.8	+18.5	+6.0	+0.0	28.2	46.0	-17.8	Horiz
22	420.088M	34.4	-27.3	+15.8	+5.1	+0.0	28.0	46.0	-18.0	Verti
23	160.080M	39.2	-26.9	+10.1	+2.9	+0.0	25.3	43.5	-18.2	Verti
24	460.128M	32.7	-27.6	+16.7	+5.1	+0.0	26.9	46.0	-19.1	Verti
25	220.076M	35.4	-26.5	+9.9	+3.4	+0.0	22.2	46.0	-23.8	Verti

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **FCC 15.247 (c) / 15.209 / 15.205**

Work Order #: **82775**

Date: 11/17/2004

Test Type: **Maximized Emissions**

Time: 14:32:34

Equipment: **Askey Atheros Radio**

Sequence#: 39

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Downlink

S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00589	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band Modulation = 802.11a default (OFDM) Data Rate = 54Mbps, Antenna = 29dBi Gain Directional PCDAC=60. Frequency Range Investigated: 1-40GHz. Temperature: 17°C, Relative Humidity: 48%. RBW = 100kHz VBW = 100kHz. **No EUT emissions detected within 20dB of the limit above 8.2GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=WL Gore SN 1065 AN P004301
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Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	5725.000M	63.0	+34.3	+1.0	+0.0	98.3	112.0	-13.7	Verti
	Ave								
^	5725.000M	74.7	+34.3	+1.0	+0.0	110.0	112.0	-2.0	Verti

3	5850.000M Ave	58.7	+34.2	+1.0	+0.0	93.9	112.0	-18.1	Verti
^	5850.000M	71.3	+34.2	+1.0	+0.0	106.5	112.0	-5.5	Verti
5	5725.000M Ave	47.5	+34.3	+1.0	+0.0	82.8	112.0	-29.2	Horiz
6	5850.000M Ave	41.2	+34.2	+1.0	+0.0	76.4	112.0	-35.6	Horiz

DRAFT

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**

Specification: **FCC 15.247 (c) / 15.209 / 15.205**

Work Order #: **82775**

Date: 11/16/2004

Test Type: **Maximized Emissions**

Time: 16:41:15

Equipment: **Askey Atheros Radio**

Sequence#: 36

Manufacturer: Digital Path

Tested By: Randal Clark

Model: Downlink

S/N: 111504-003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA 8564E	3623A00589	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band Modulation = 802.11a default (OFDM) Data Rate = 54Mbps Antenna = 18dBi Gain Directional PCDAC = 60 Frequency Range Investigated: 1-40GHz. Temperature: 17°C, Relative Humidity: 48%. RBW = 100 kHz VBW = 100 kHz. **No EUT emissions detected within 20dB of the limit above 8.2GHz.**

Transducer Legend:

T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable HF P01527	T4=WL Gore SN 1065 AN P004301
T5=Att 10dB AN02139	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	5725.000M	74.7	+34.3	-28.3	+0.6	+1.0	+0.0	92.3	105.0	-12.7	Verti
	Ave		+10.0								
^	5725.000M	86.8	+34.3	-28.3	+0.6	+1.0	+0.0	104.4	105.0	-0.6	Verti
			+10.0								
3	5850.000M	69.3	+34.2	-28.3	+0.6	+1.0	+0.0	86.8	105.0	-18.2	Verti
	Ave		+10.0								
^	5850.000M	83.2	+34.2	-28.3	+0.6	+1.0	+0.0	100.7	105.0	-4.3	Verti
			+10.0								
5	5850.000M	51.0	+34.2	-28.3	+0.6	+1.0	+0.0	68.5	105.0	-36.5	Horiz
			+10.0								
6	5725.000M	48.5	+34.3	-28.3	+0.6	+1.0	+0.0	66.1	105.0	-38.9	Horiz
			+10.0								

DRAFT

FCC 15.247(d) PEAK POWER SPECTRAL DENSITY

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362
 Customer: **Digital Path**
 Specification: **15.247(d) Peak Power Spectral Density**
 Work Order #: **82775** Date: 11/11/2004
 Test Type: **Antenna Port** Time: 15:38:17
 Equipment: **Radio** Sequence#: 11
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Support Computer	Toshiba	PS426U-0M151	50683063U
Laptop Power Supply	Toshiba	PA2049U-1ACA	0003A0221552G

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 2.4GHz band. Modulation = 802.11g default (OFDM) Data Rate = 54Mbps Channel 1 PCDAC = 47, Channel 6 PCDAC = 47, Channel 11 PCDAC = 48. Modulation = 802.11b default (CCK) Data Rate = 11Mbps Channel 1 PCDAC = 50, Channel 6 PCDAC = 52, Channel 11 PCDAC = 53. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%.

Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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Measurement Data: Reading listed by margin. Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2462.000M	95.0	+5.8	+1.2		+0.0	102.0	115.0	-13.0	Anten
								802.11b (CCK)		
2	2412.000M	94.5	+5.7	+1.2		+0.0	101.4	115.0	-13.6	Anten
								802.11b (CCK)		
3	2442.000M	93.7	+5.8	+1.2		+0.0	100.7	115.0	-14.3	Anten
								802.11b (CCK)		
4	2412.000M	89.8	+5.7	+1.2		+0.0	96.7	115.0	-18.3	Anten
								802.11g (OFDM)		
5	2462.000M	89.0	+5.8	+1.2		+0.0	96.0	115.0	-19.0	Anten
								802.11g (OFDM)		
6	2442.000M	89.0	+5.8	+1.2		+0.0	96.0	115.0	-19.0	Anten
								802.11g (OFDM)		

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **15.247(d) Peak Power Spectral Density**
 Work Order #: **82775** Date: 11/11/2004
 Test Type: **Antenna Port** Time: 10:00:50
 Equipment: **Radio** Sequence#: 10
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA 8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Supply	Toshiba	PA3282U-1ACA	0322A0184076
Support Computer	Toshiba	AL5-S127	63161709P
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a

Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.8GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps PCDAC=60. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50% humidity: 50%.

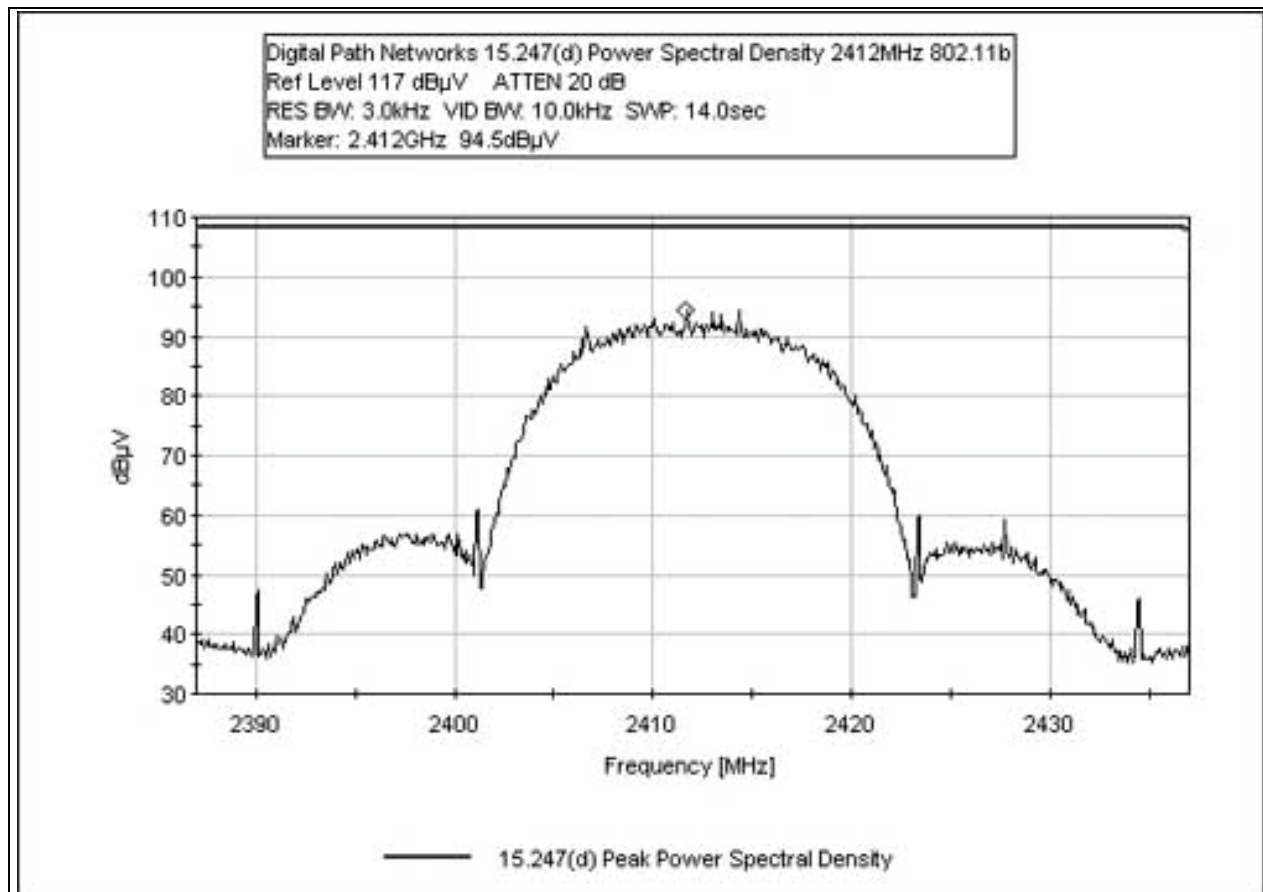
Transducer Legend:

T1=ATT WE 6dB ANP01950	T2=CABLE - HF Kit ANP04291
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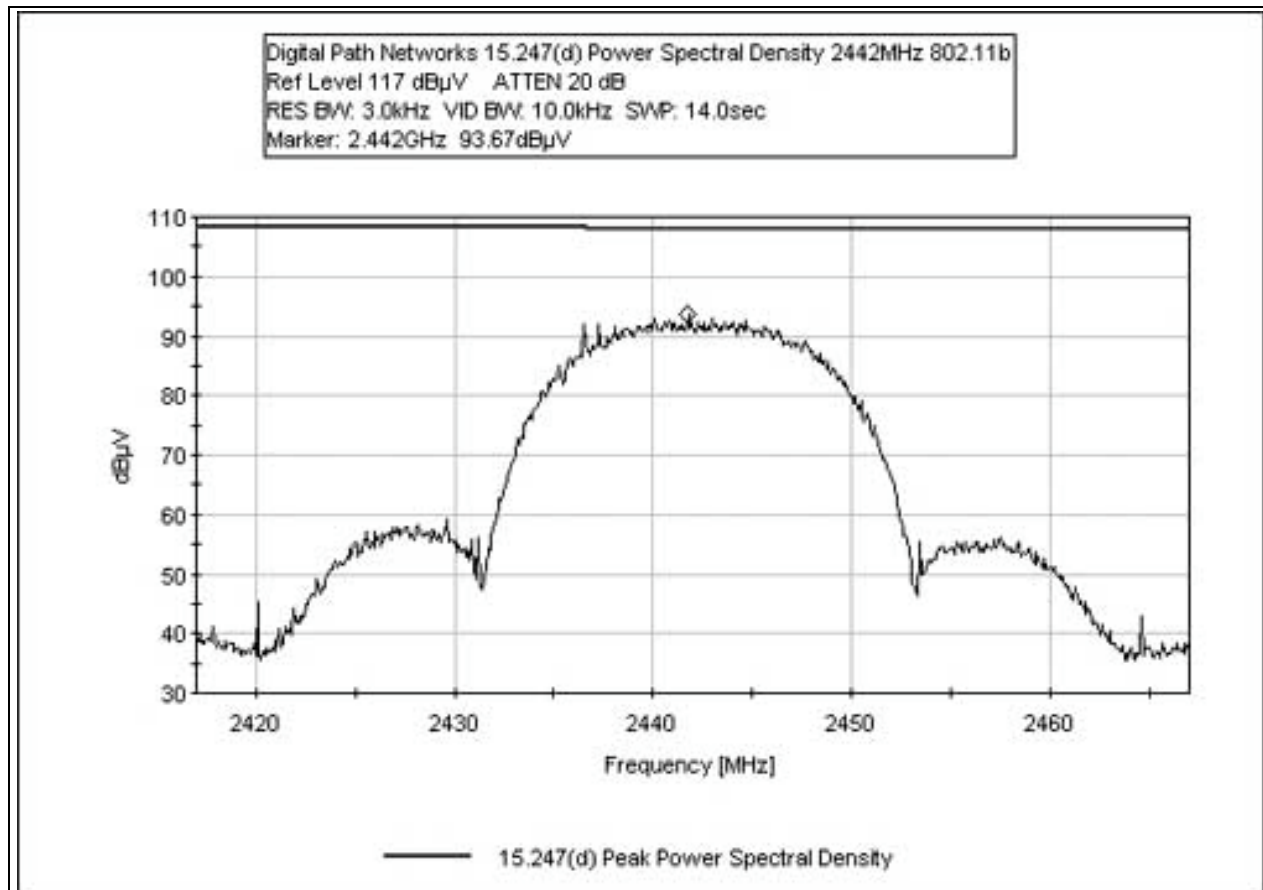
Measurement Data: Reading listed by margin. Test Lead: Antenna

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	5825.000M	94.0	+5.8	+1.3			+0.0	101.1	115.0	-13.9	Anten
2	5745.000M	93.8	+5.8	+1.3			+0.0	100.9	115.0	-14.1	Anten
3	5785.000M	93.5	+5.8	+1.3			+0.0	100.6	115.0	-14.4	Anten

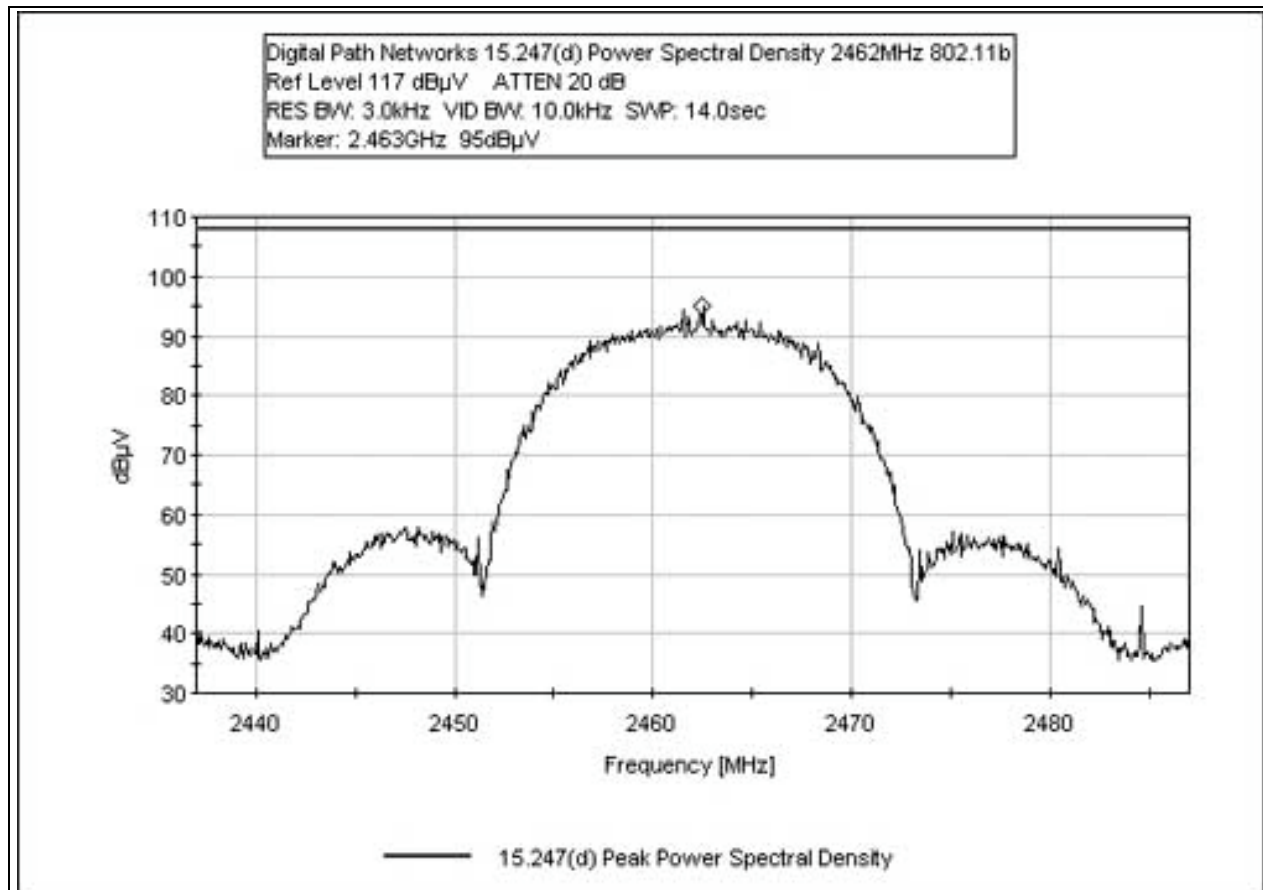
FCC 15.247(d) POWER SPECTRAL DENSITY 2412 MHz 802.11b



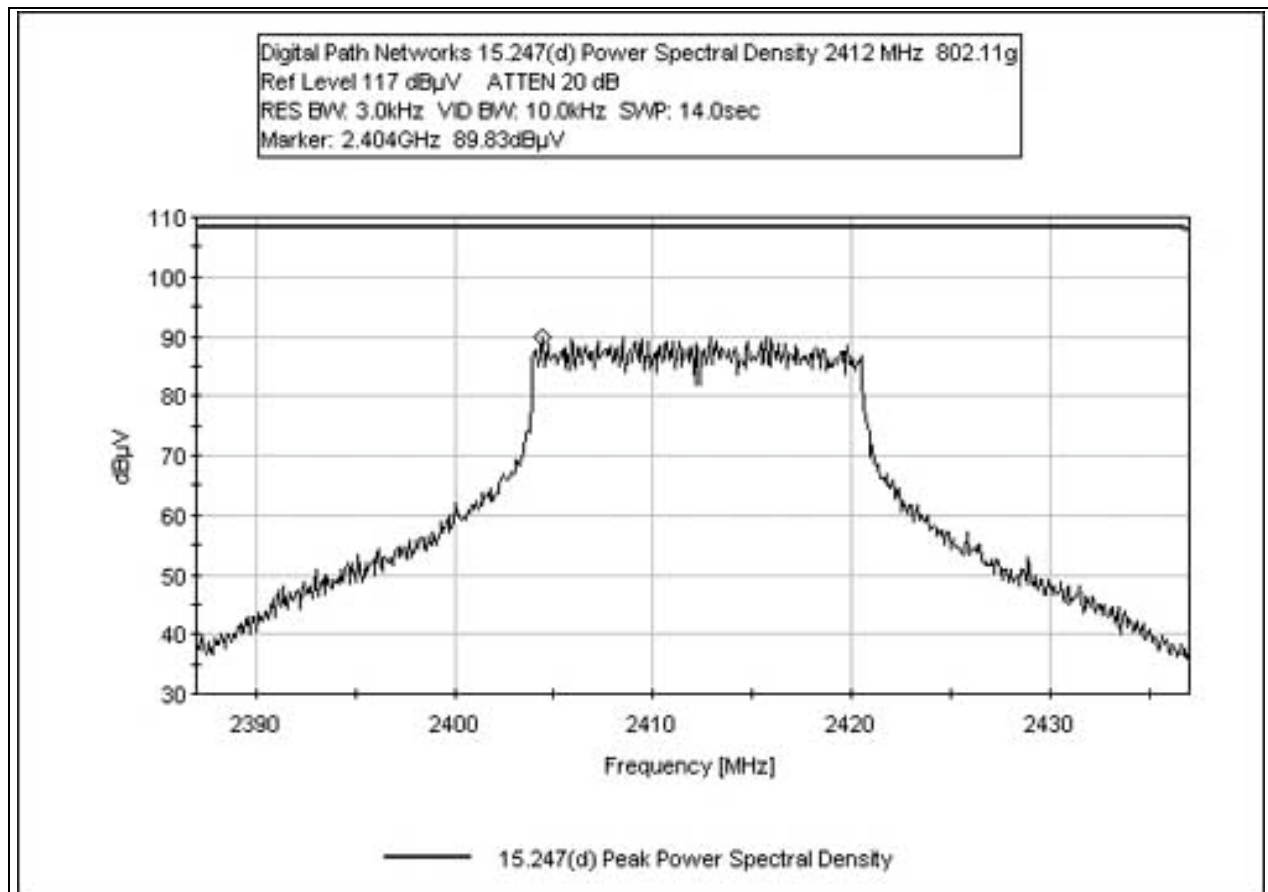
FCC 15.247(d) POWER SPECTRAL DENSITY 2442 MHz 802.11b



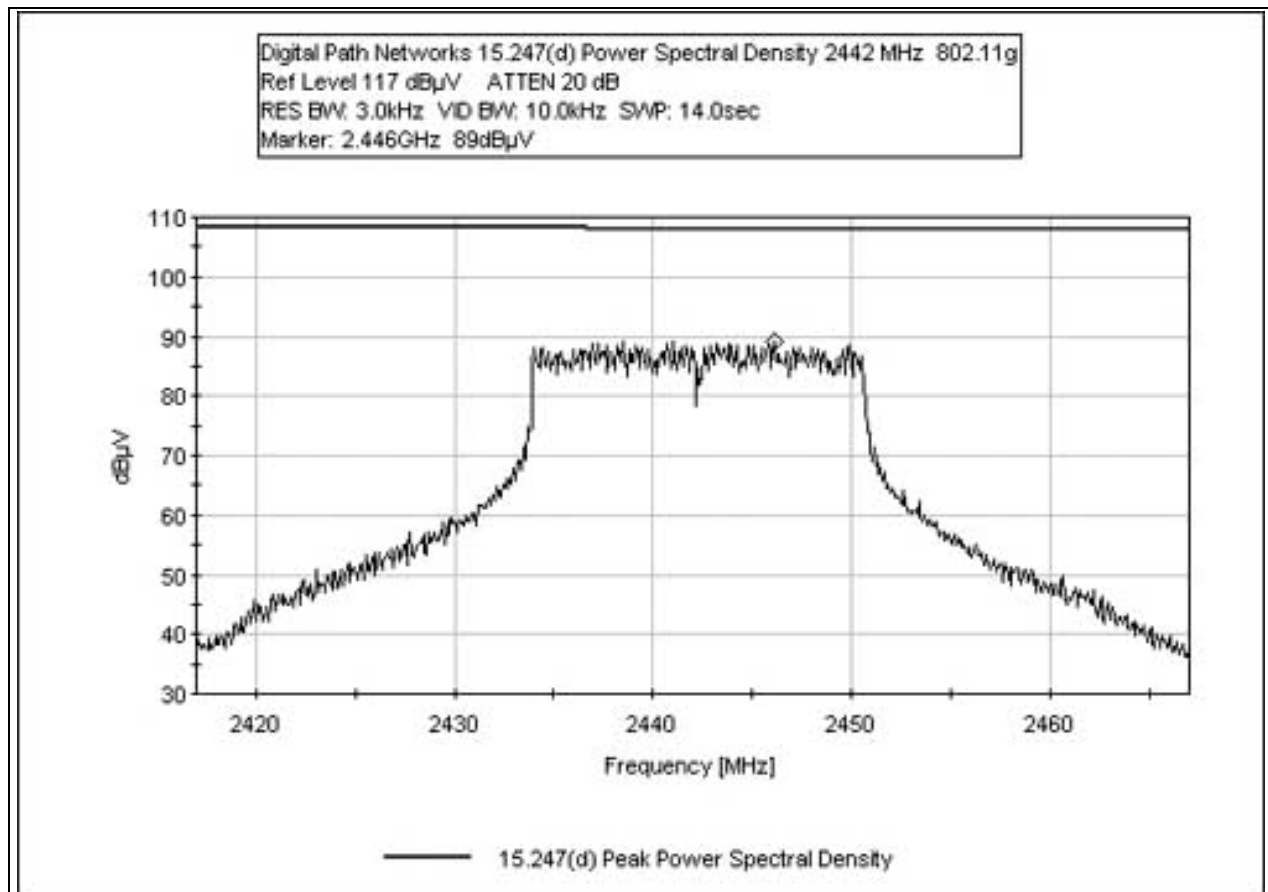
FCC 15.247(d) POWER SPECTRAL DENSITY 2462 MHz 802.11b



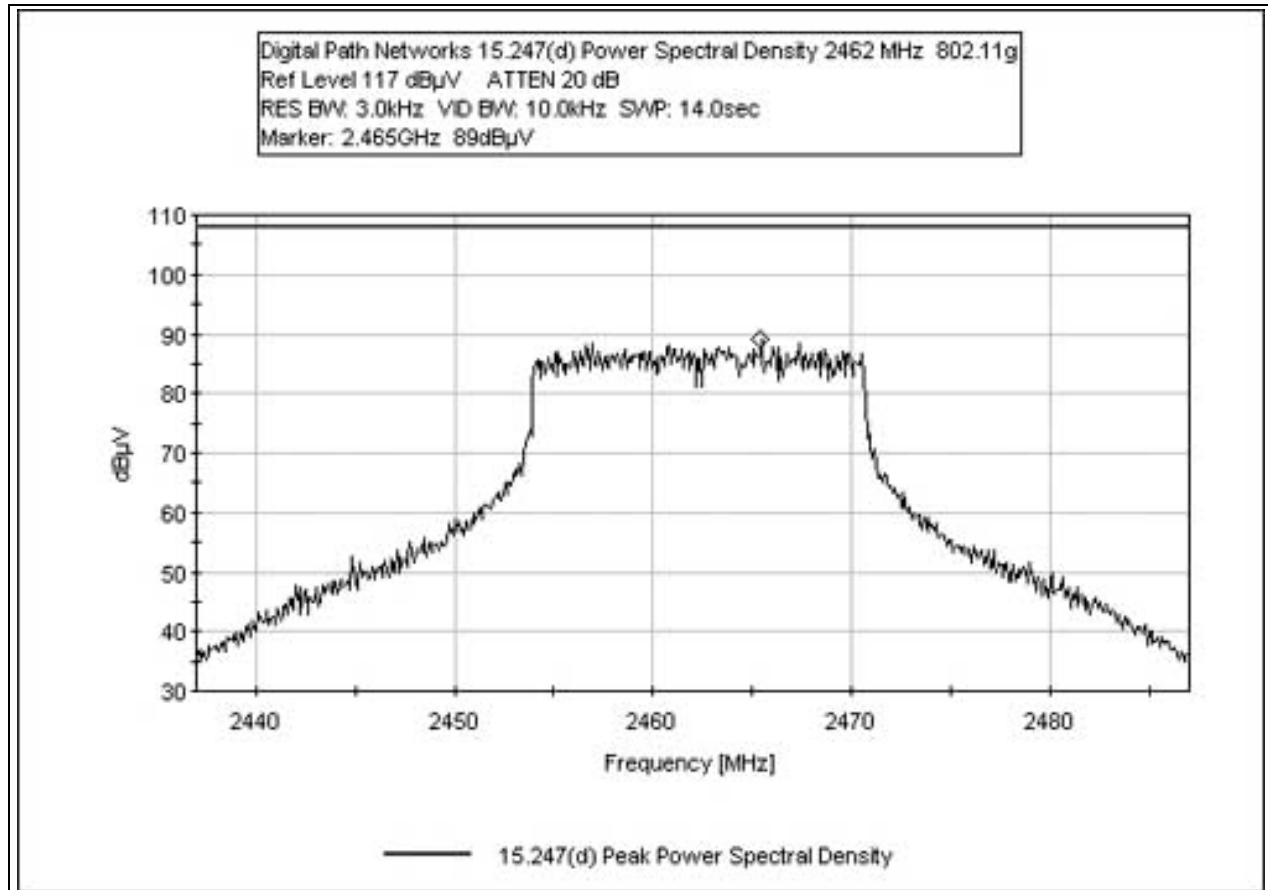
FCC 15.247(d) POWER SPECTRAL DENSITY 2412 MHz 802.11g



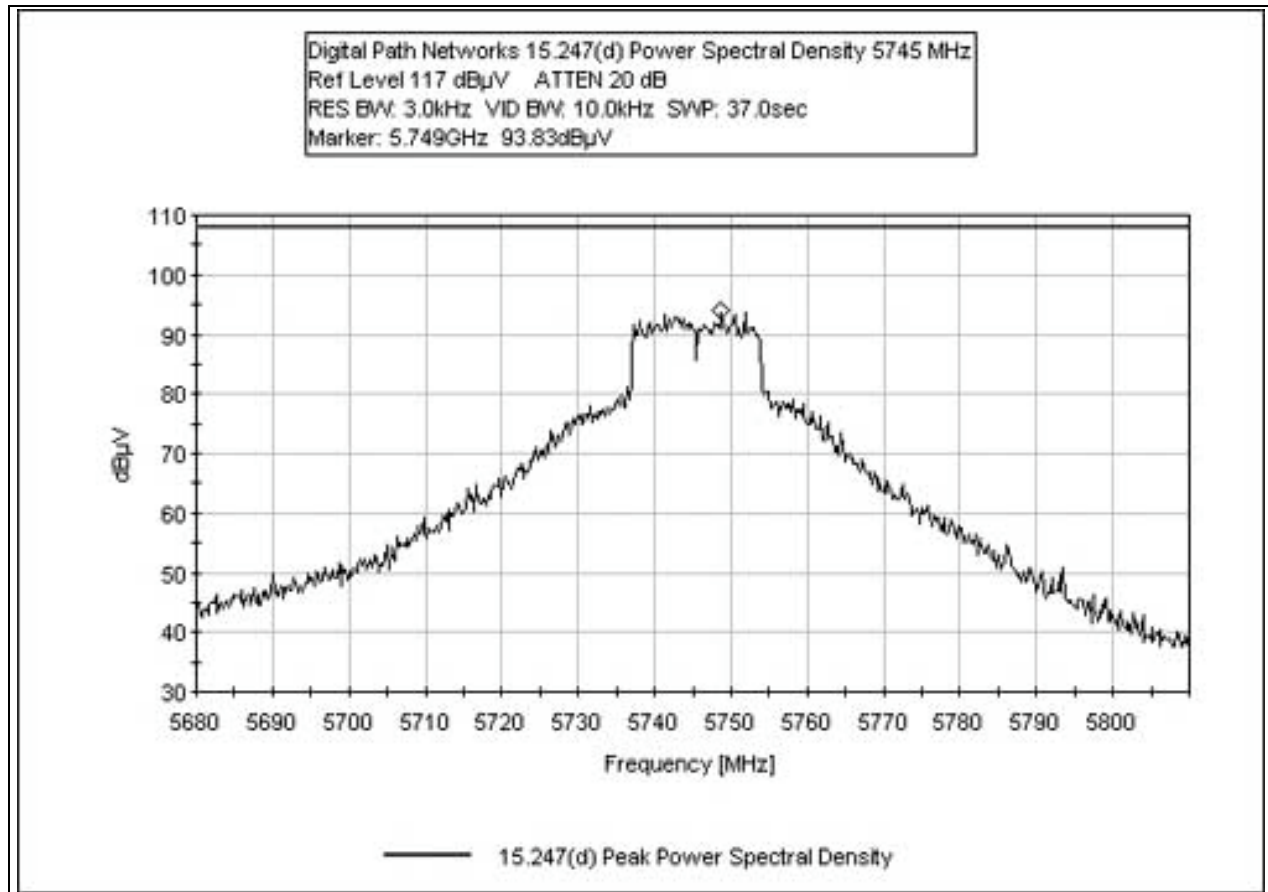
FCC 15.247(d) POWER SPECTRAL DENSITY 2442 MHz 802.11g



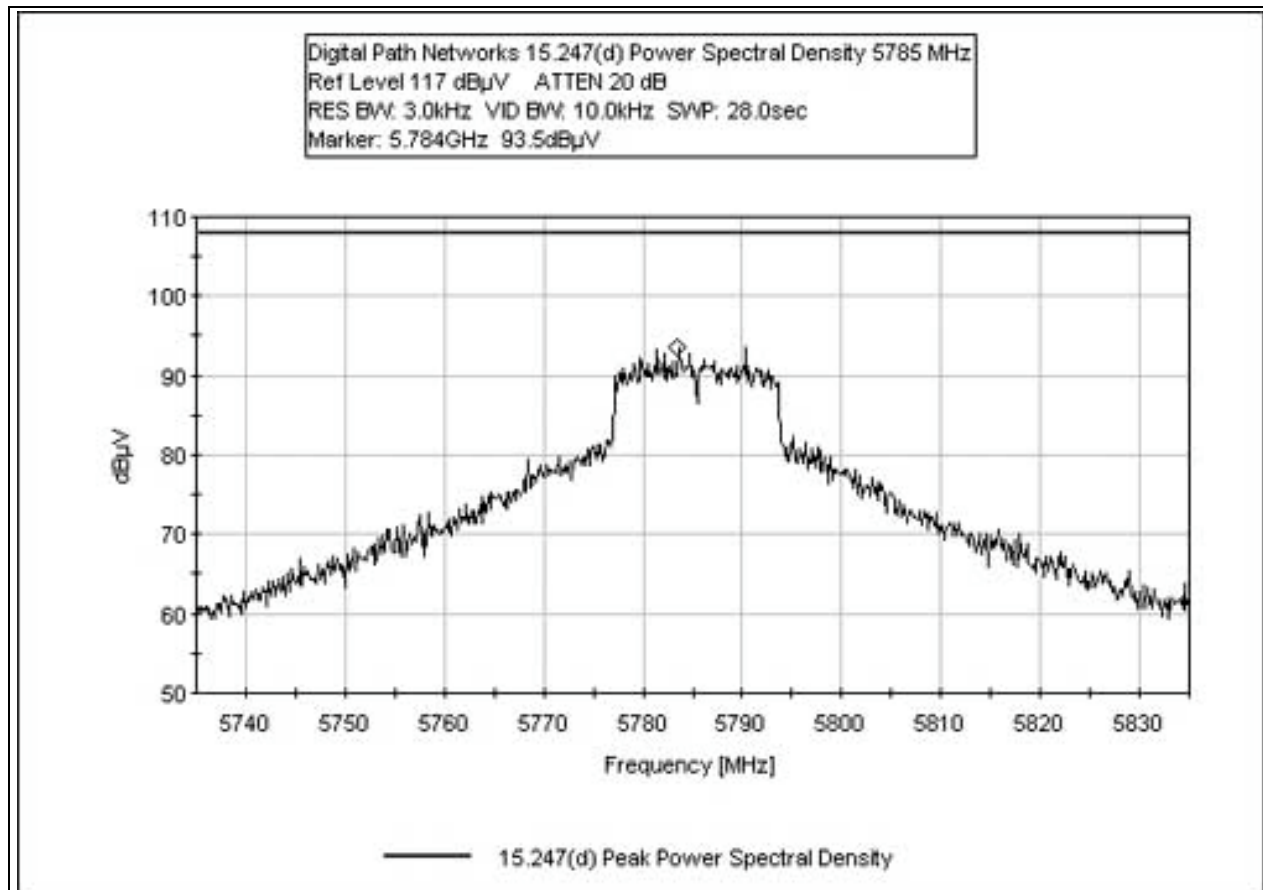
FCC 15.247(d) POWER SPECTRAL DENSITY 2462 MHz 802.11g



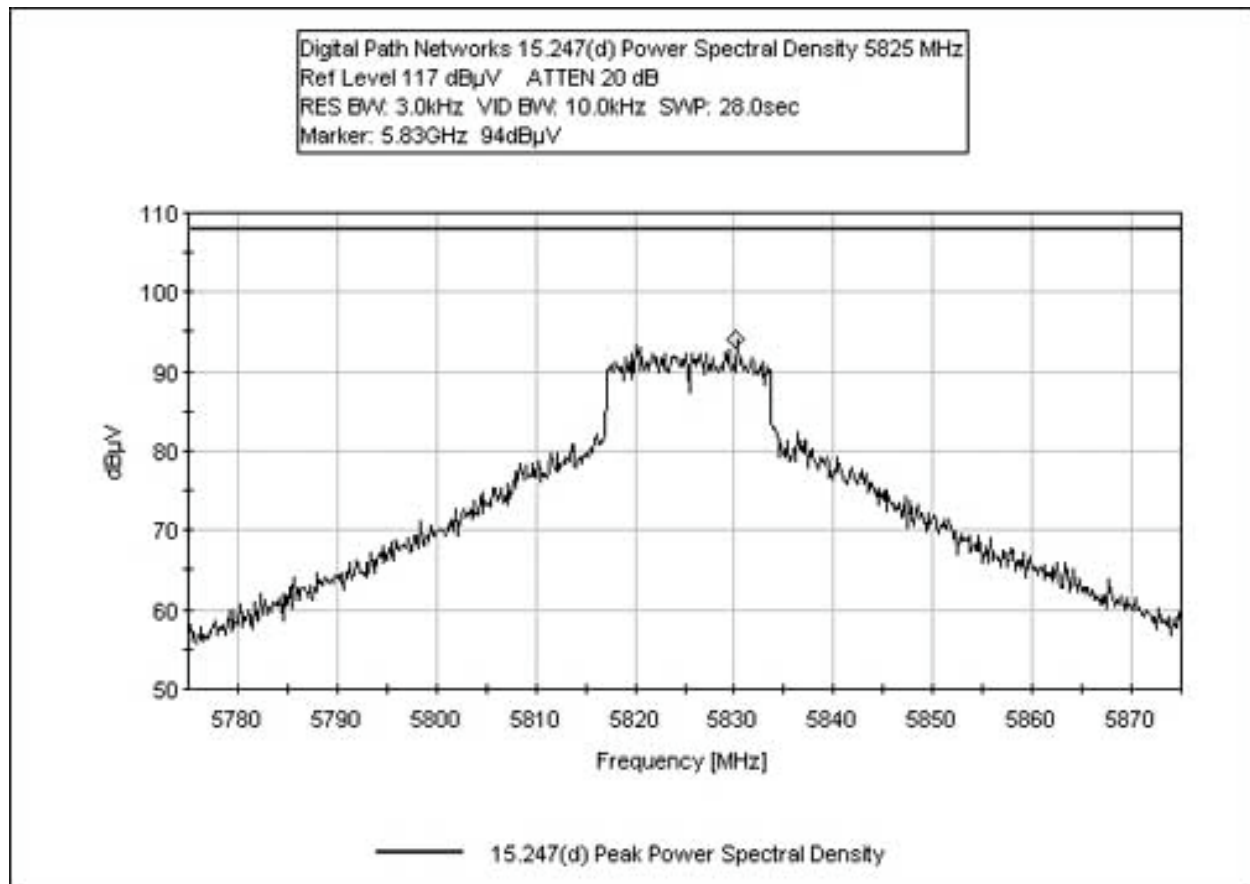
FCC 15.247(d) POWER SPECTRAL DENSITY 5745 MHz



FCC 15.247(d) POWER SPECTRAL DENSITY 5785 MHz



FCC 15.247(d) POWER SPECTRAL DENSITY 5825 MHz



FCC 15.407(a)(2) PEAK OUTPUT POWER

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.407(a)(2) Output Power**
 Work Order #: **82775** Date: 11/12/2004
 Test Type: **Antenna Port** Time: 08:19:57
 Equipment: **Askey Atheros Radio** Sequence#: 19
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CLIMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

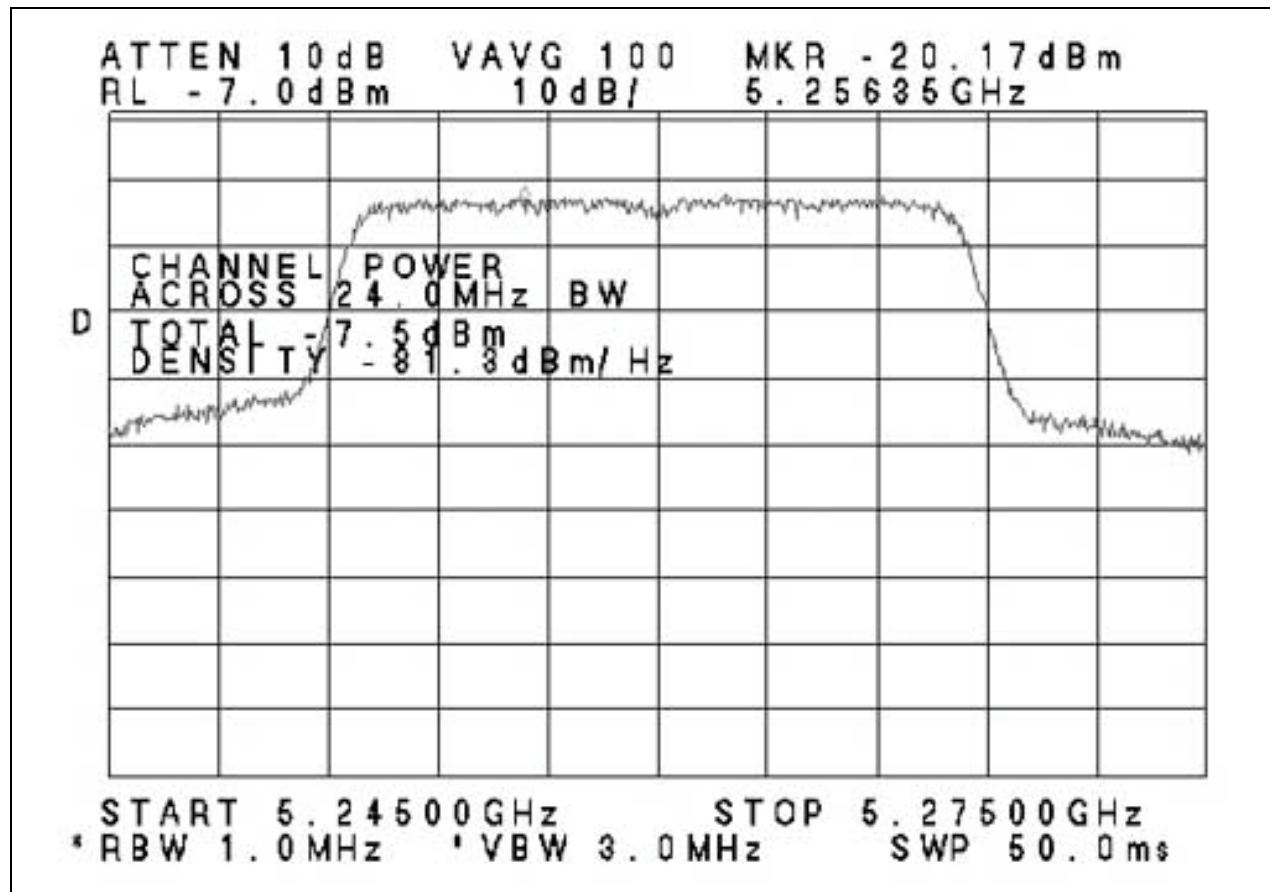
Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.3GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps. For Antenna 1 (18dBi) Low Channel PCDAC = 1, Mid Channel PCDAC = 43, High Channel PCDAC = 42. RBW = 1MHz, VBW = 3MHz. Detector = Video Sample @ 100 samples. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%.

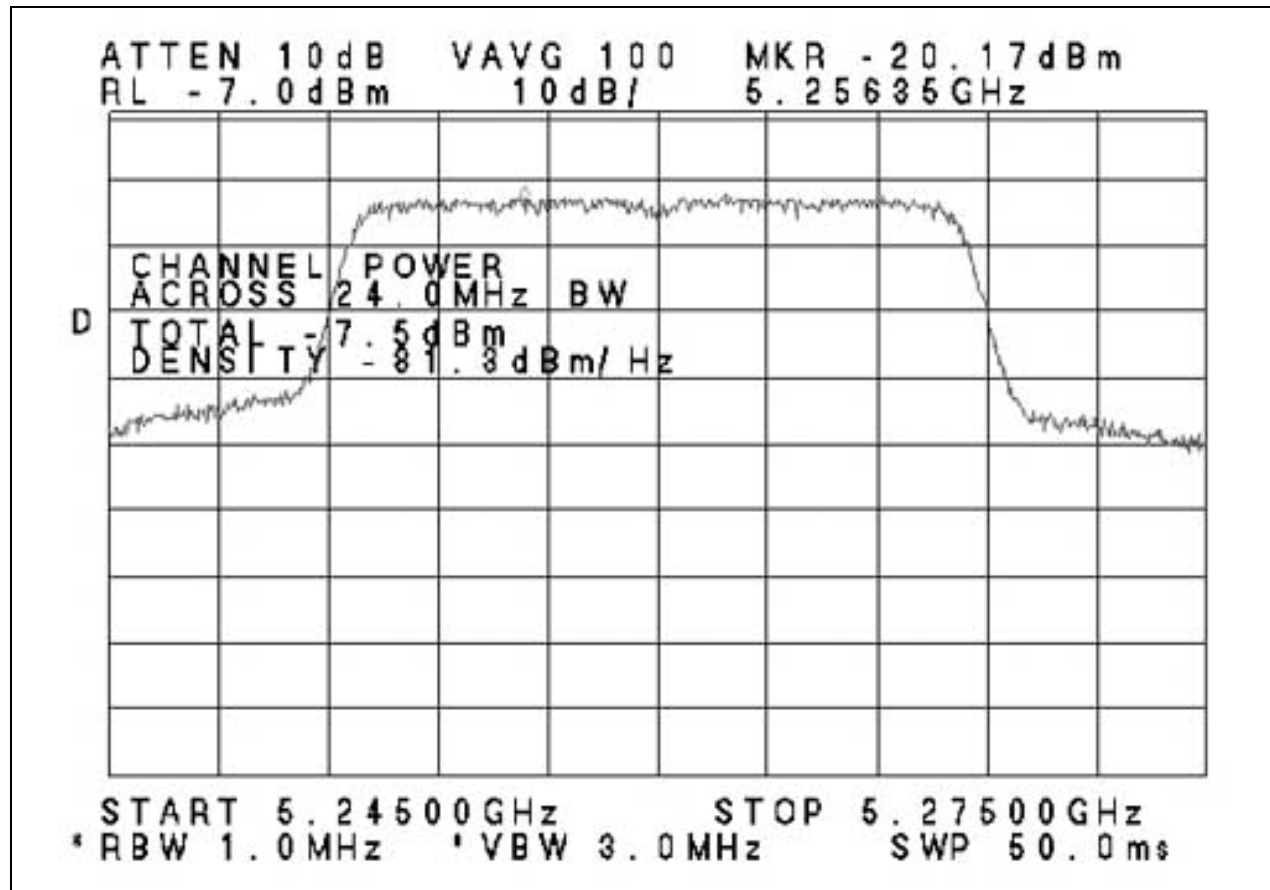
Test setup is in accordance with DA 02-2138 Method 1

Frequency	Antenna	Channel Power (dBm)	Limit (dBm)	Result
5260	18dBi	-7.5	24	Pass
5300	18dBi	10.8	24	Pass
5320	18dBi	11.0	24	Pass

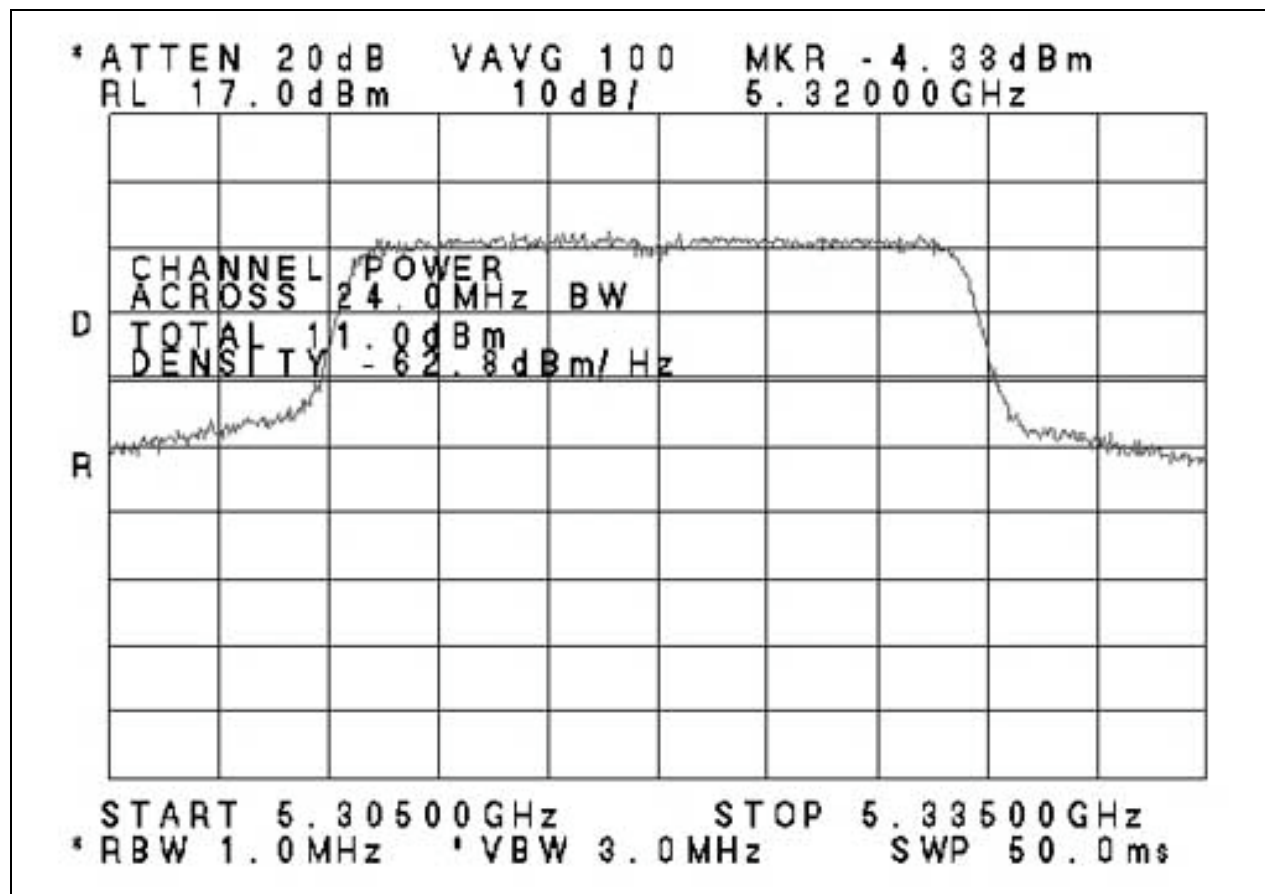
FCC 15.407(a)(2) PEAK OUTPUT POWER ANTENNA 1 LOW



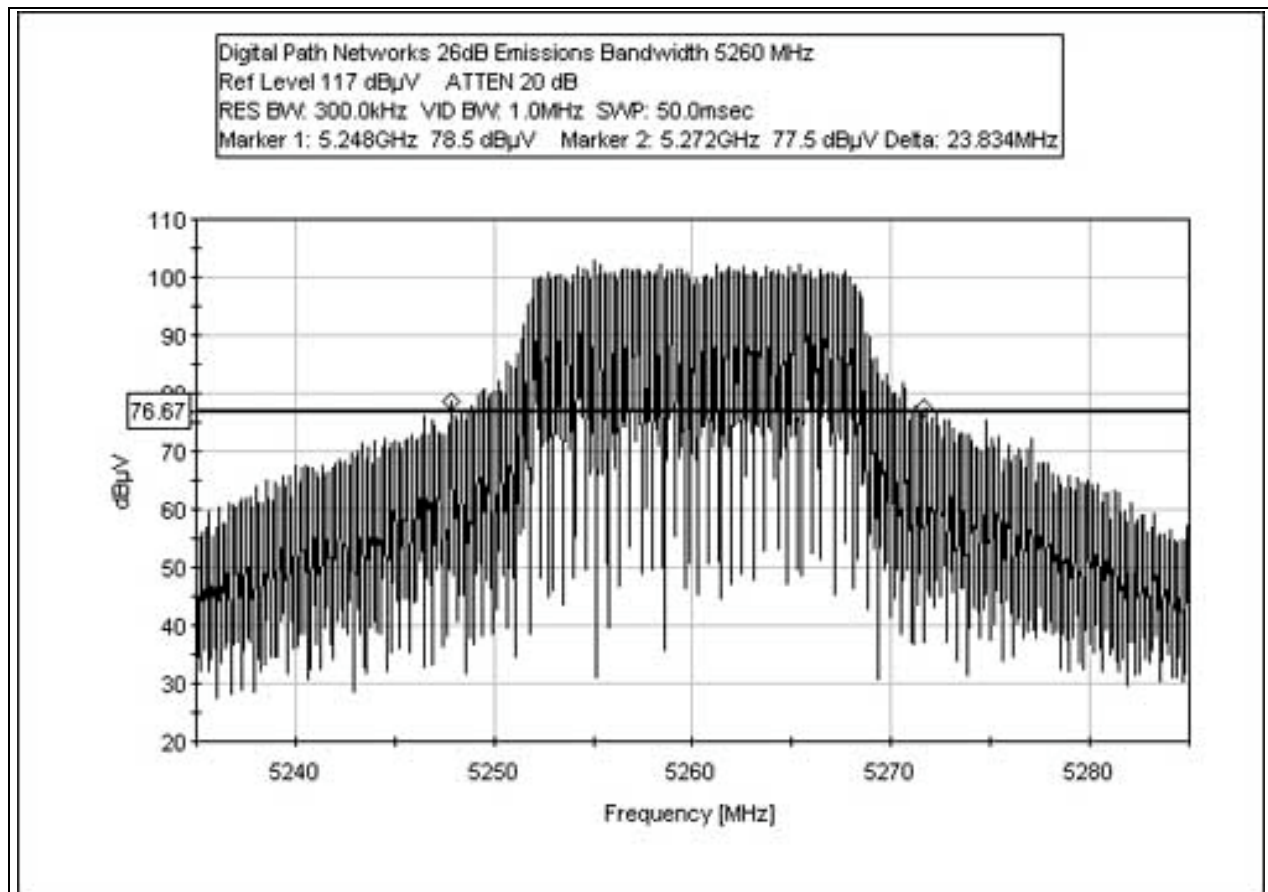
FCC 15.407(a)(2) PEAK OUTPUT POWER ANTENNA 1 MID



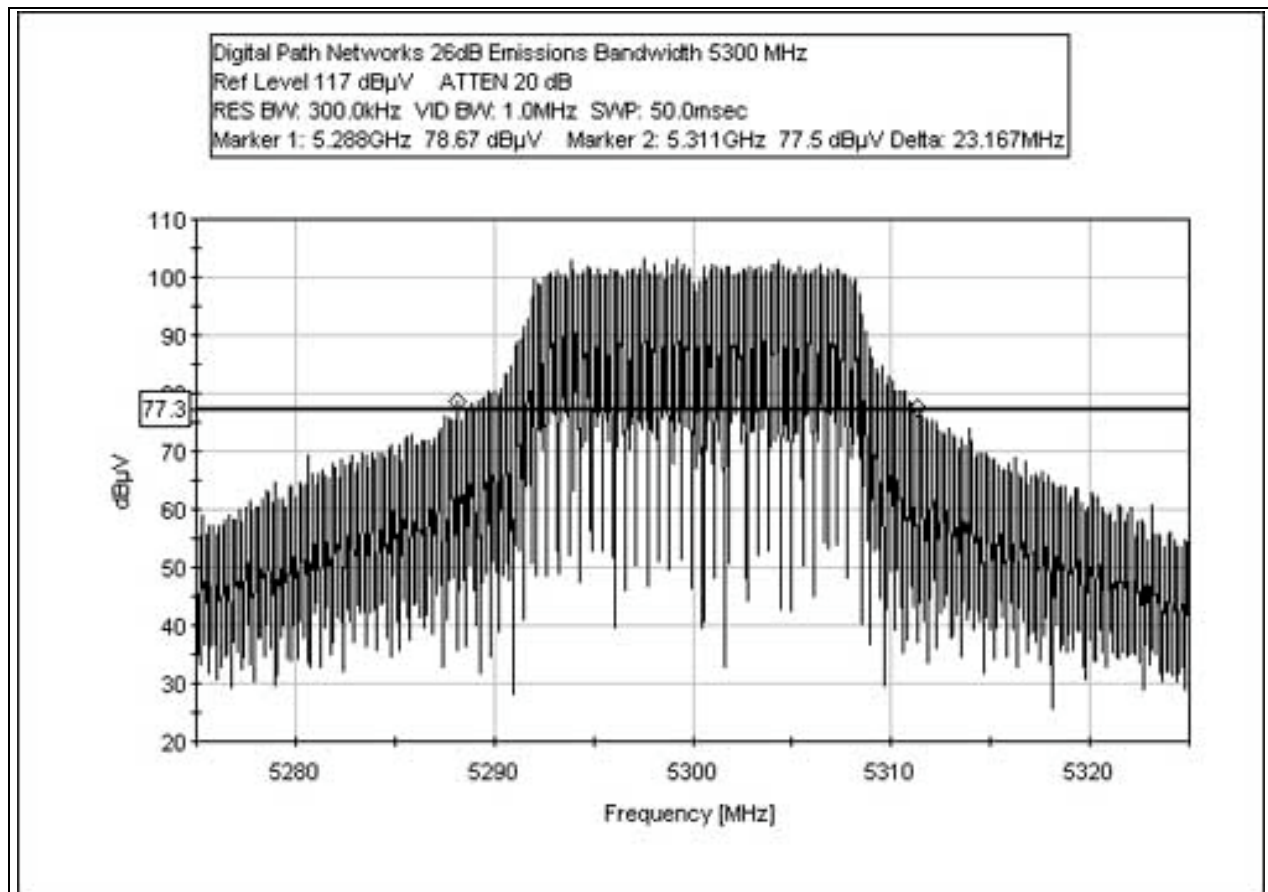
FCC 15.407(a)(2) PEAK OUTPUT POWER ANTENNA 1 HIGH



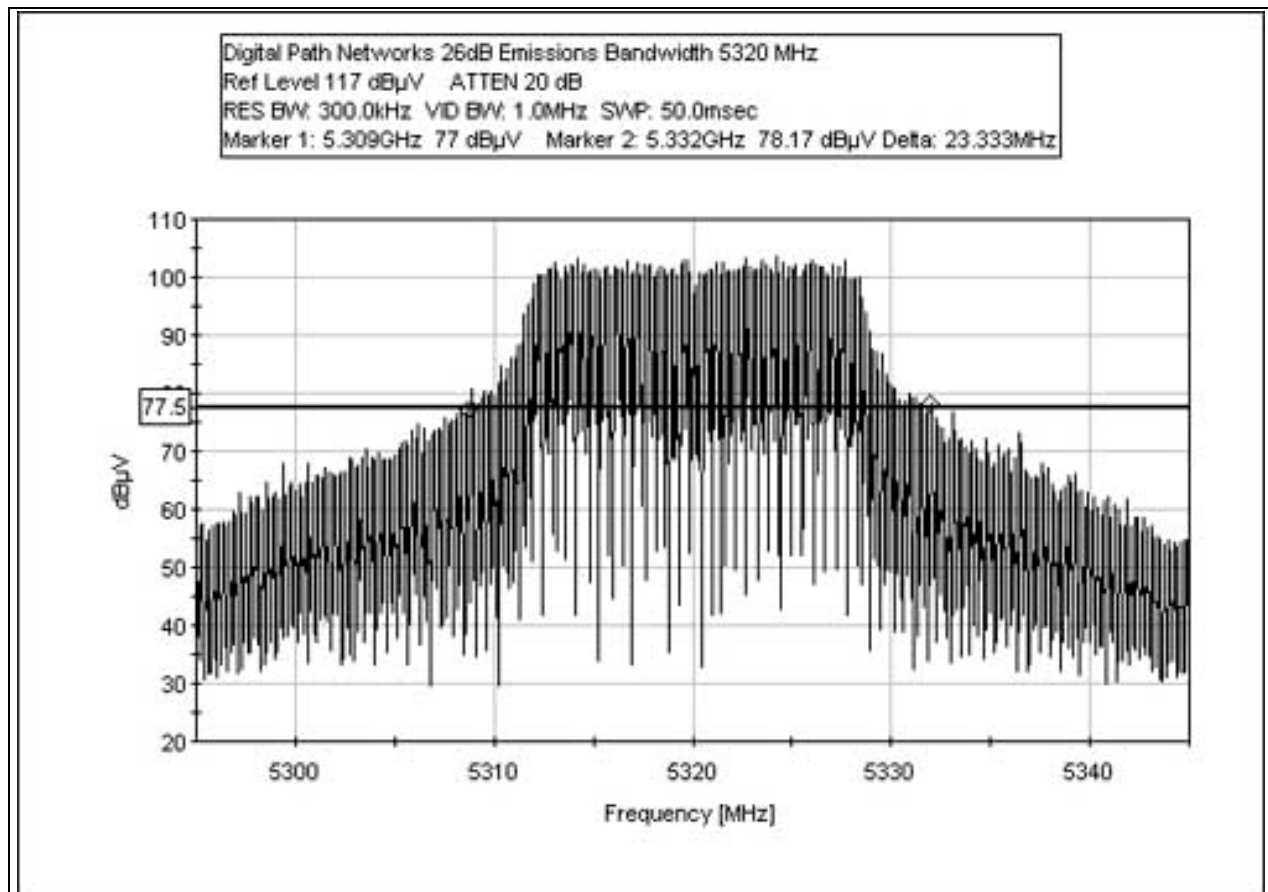
FCC 15.407(a)(2) 26dB BANDWIDTH 5260 MHz



FCC 15.407(a)(2) 26dB BANDWIDTH 5300 MHz



FCC 15.407(a)(2) 26dB BANDWIDTH 5320 MHz



FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.407(a)(5) PSD**
 Work Order #: **82775**
 Test Type: **Antenna Port**
 Equipment: **Askey Atheros Radio**
 Manufacturer: Digital Path
 Model: Relay & Downlink
 S/N: 110804-001

Date: 11/12/2004
 Time: 10:39:08
 Sequence#: 20
 Tested By: Randal Clark
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

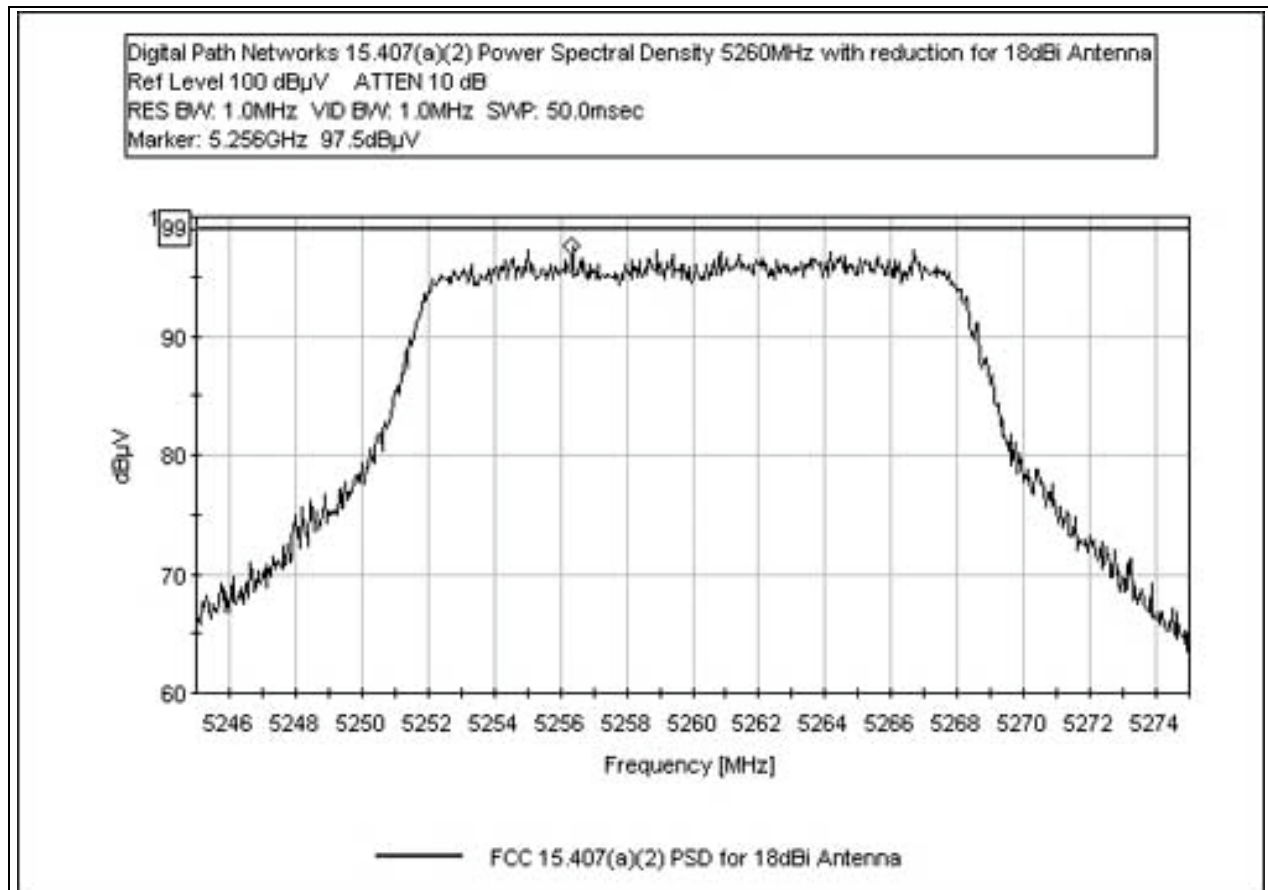
Test Conditions / Notes:

EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.3GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps. Low Channel PCDAC = 1, Mid Channel PCDAC = 43, High Channel PCDAC = 42. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%. RBW = 1 MHz, VBW = 1 MHz. Measurements are taken with video sample averaging over 100 sweeps. EUT is configured to transmit at 100% duty cycle over the sampling period. 15.407(a)(2) Limit is 11dBm/MHz with corresponding gain reduction of 12dB for use with an 18dBi gain antenna. Limit is therefore -1dBm/MHz (106dBuV/MHz). 15.407(a)(2) Limit is 11dBm/MHz with corresponding gain reduction of 23dB for use with a 29dBi gain antenna. Limit is therefore -12dBm/MHz (95dBuV/MHz).

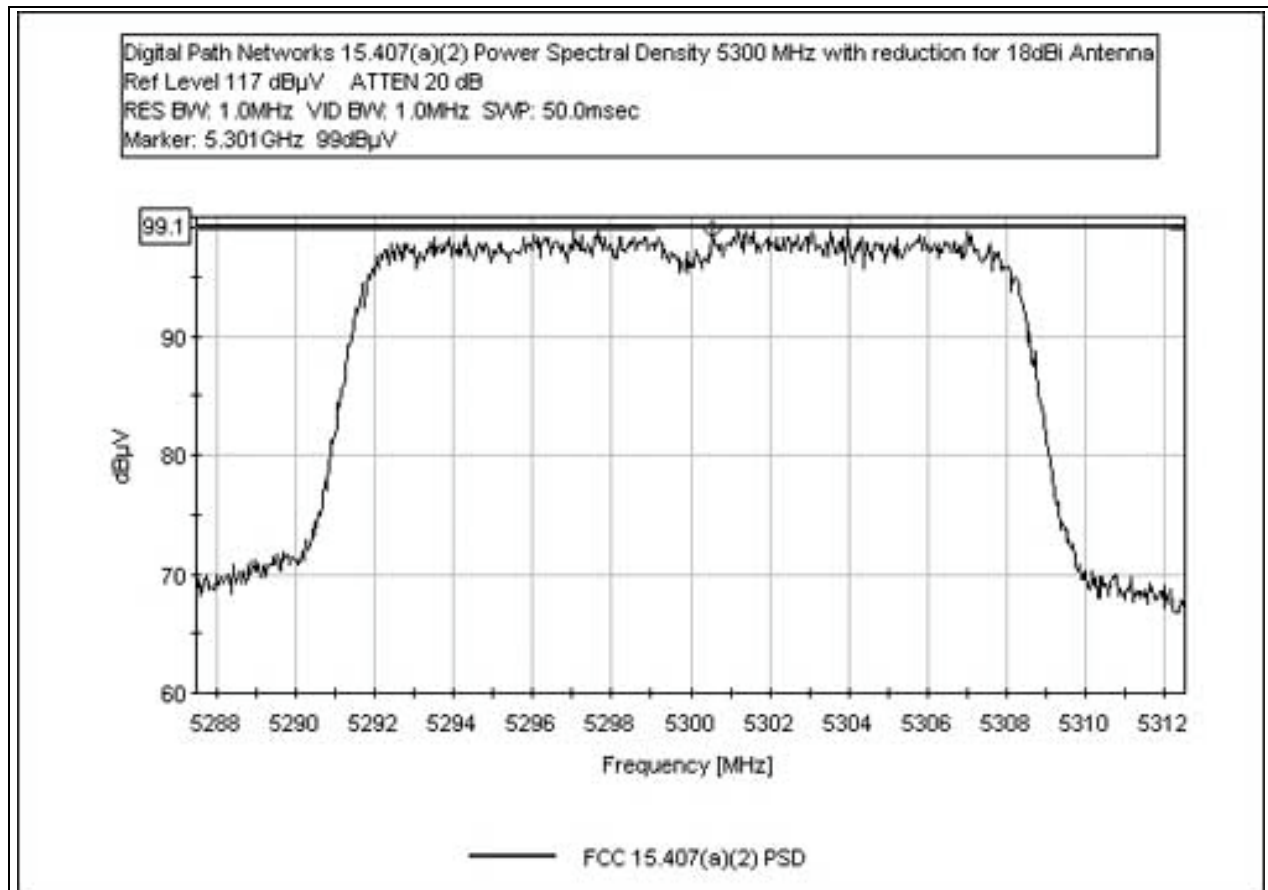
Test setup is in accordance with DA 02-2138 Method 1

Frequency	Antenna	Spectral Density (dBm)	Limit (dBm)	Result
5260	18dBi	-2.5	-1	Pass
5300	18dBi	-1.5	-1	Pass
5320	18dBi	-1.2	-1	Pass

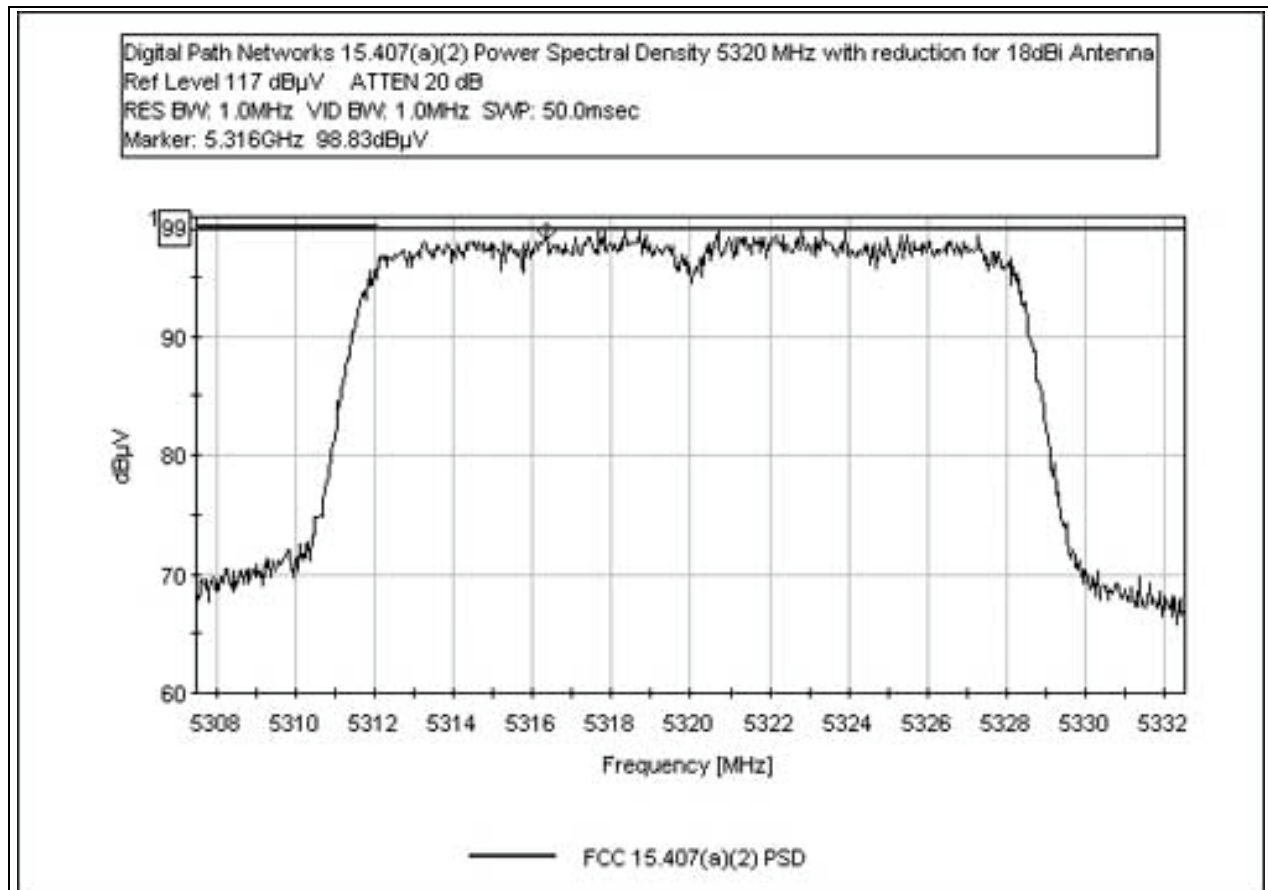
FCC 15.407(a)(5) POWER SPECTRAL DENSITY ANTENNA 1 5260 MHz



FCC 15.407(a)(5) POWER SPECTRAL DENSITY ANTENNA 1 5300 MHz



FCC 15.407(a)(5) POWER SPECTRAL DENSITY ANTENNA 1 5320 MHz



FCC 15.407(a)(6) PEAK EXCURSION

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.407(a)(6) Peak Excursion**
 Work Order #: **82775** Date: 11/12/2004
 Test Type: **Antenna Port** Time: 08:19:57
 Equipment: **Askey Atheros Radio** Sequence#: 19
 Manufacturer: Digital Path Tested By: Randal Clark
 Model: Relay & Downlink 120V 60Hz
 S/N: 110804-001

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
Weinchel 6dB attenuator	J7614	10/01/2004	10/01/2006	P01950
Hardline	NA	03/18/2003	03/18/2005	P04291

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Relay & Downlink	110804-001

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CLIMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

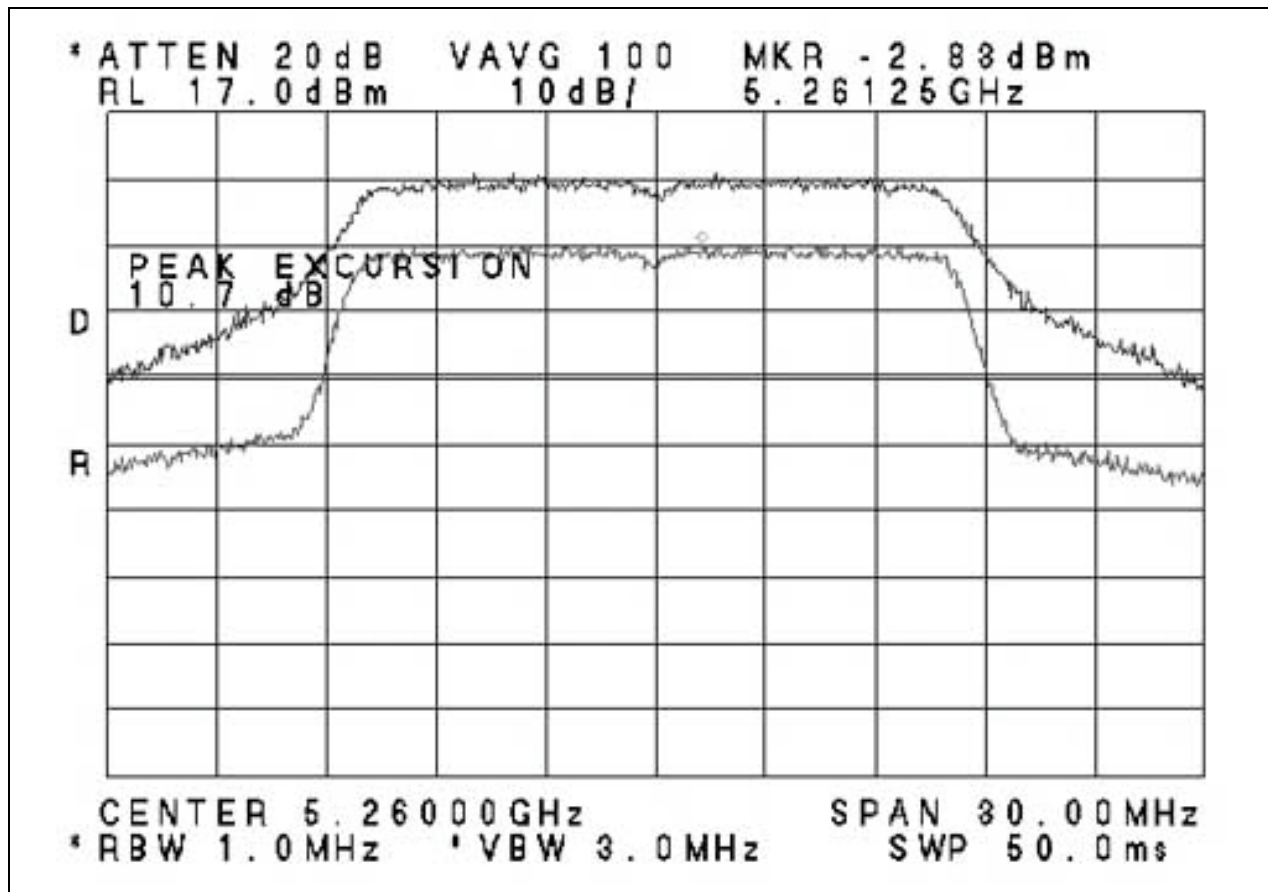
EUT is a wireless relay and downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.3GHz band. Modulation = 802.11a default (OFDM) Data Rate = 54Mbps. For Antenna 1 (18dBi) Low Channel PCDAC = 43, Mid Channel PCDAC = 43, High Channel PCDAC = 42. RBW = 1MHz, VBW = 3MHz. Detector = Video Sample @ 100 samples. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 50%.

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified in this paragraph) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

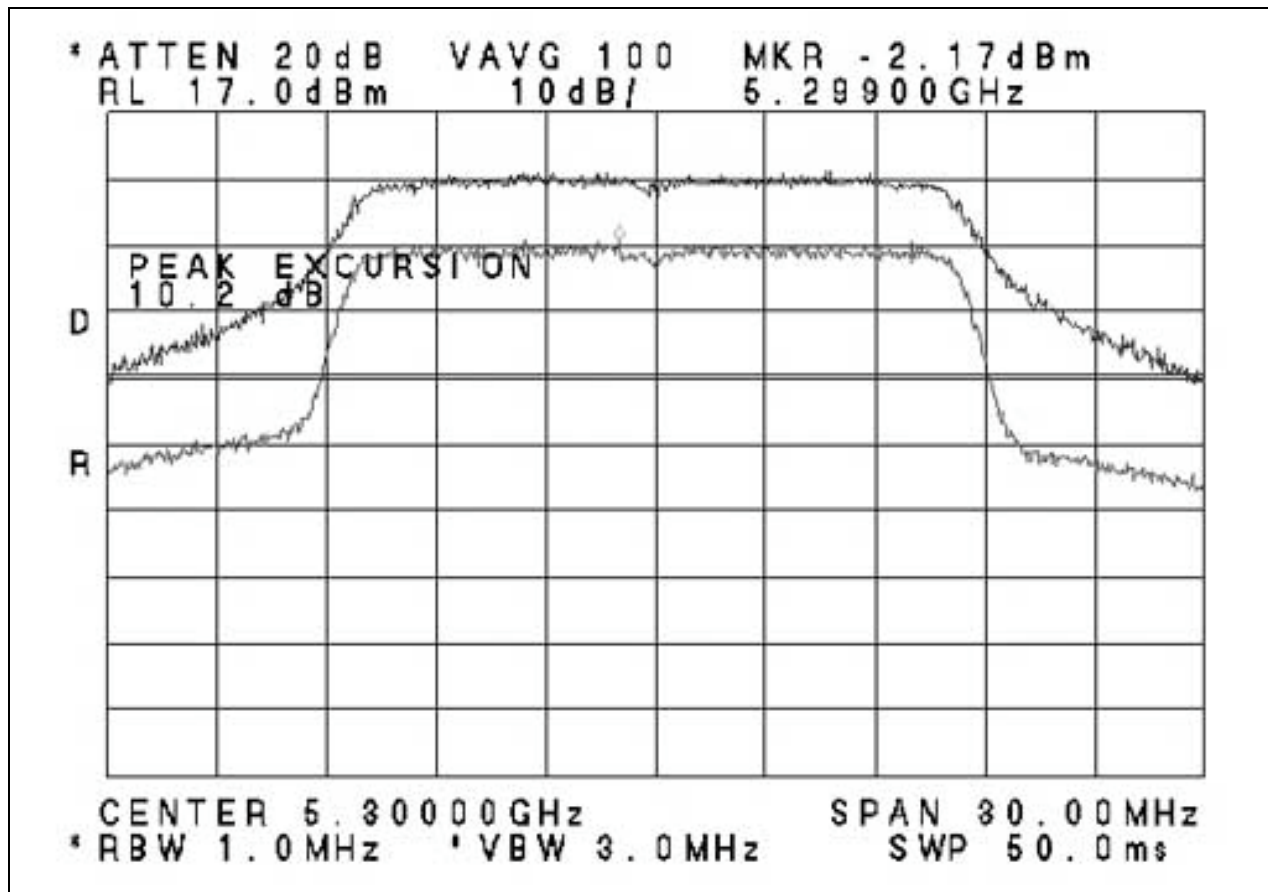
Test setup is in accordance with DA 02-2138 Method 1

Frequency	Peak Excursion (dB)	Limit (dB)	Result
5260	10.7	13	Pass
5300	10.2	13	Pass
5320	10.5	13	Pass

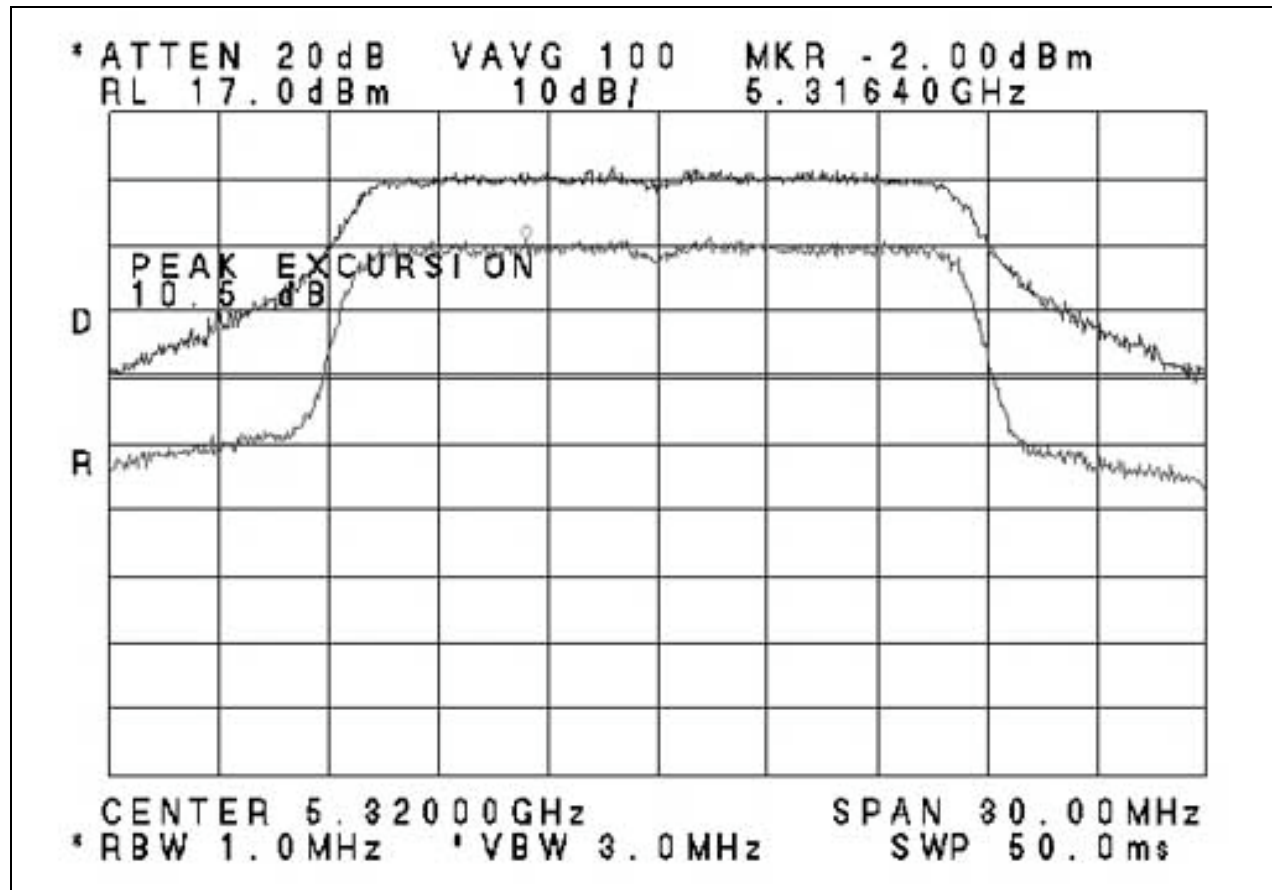
FCC 15.407(a)(6) PEAK EXCURSION LOW



FCC 15.407(a)(6) PEAK EXCURSION MID



FCC 15.407(a)(6) PEAK EXCURSION HIGH



FCC 15.407(b)(1) & (2) UNDESIRABLE EMISSIONS

Note: Refer to 15.247/15.209 Section for emissions below 1 GHz.

Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **Digital Path**
 Specification: **FCC 15.407(b)(1)&(2)**
 Work Order #: **82775**
 Test Type: **Maximized Emissions**
 Equipment: **Askey Atheros Radio**
 Manufacturer: **Digital Path**
 Model: **Downlink**
 S/N: **111504-003**

Date: 11/17/2004
 Time: 14:55:53
 Sequence#: 37
 Tested By: Randal Clark

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 83051A Preamp	3332A00309	03/17/2003	03/17/2005	02115
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
Cable, WL Gore 2'	149047	04/10/2003	04/10/2005	P01527
Cable, WL Gore	149047	04/10/2003	04/10/2005	P04301
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
HPF 3.5GHz	84300-80038	03/18/2003	03/18/2005	01416
Weinchel 10dB attenuator	C8597	10/01/2004	10/01/2006	P02139
Weinchel 3dB attenuator	C5338	10/01/2004	10/01/2006	P01950
SA_8564E	3623A00539	08/02/2004	08/02/2006	01406
ARA MWH-1826/B Horn Antenna	1005	11/05/2004	11/05/2006	02046
HP 26-40GHz Horn Antenna	84125-80001	11/05/2004	11/05/2006	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Askey Atheros Radio*	Digital Path	Downlink	111504-003

Support Devices:

Function	Manufacturer	Model #	S/N
Radio Power Supply	Digital Path	CHMON v5.1	110804-001a
Laptop Power Supply	Toshiba	PA3049U-1ACA	0003A0221552G
Support Computer	Toshiba	PS426U-0M151	50683063U

Test Conditions / Notes:

EUT is a wireless downlink station for internet connectivity. EUT operates in the 2.4, 5.8 and 5.3GHz bands. EUT is operating in the 5.3GHz band Modulation = 802.11a default (OFDM) Data Rate = 54Mbps Antenna = 18dBi Gain Directional Low Channel PCDAC = 1, Mid Channel PCDAC = 43, High Channel PCDAC = 42. Note power at lower channel reduced for band edge compliance. Frequency Range Investigated: 1-40GHz. Temperature: 17°C, Relative Humidity: 48%. RBW = 1MHz VBW = 1MHz. Emissions measurements at the lower band edge integrated to a 1MHz RBW from 100kHz RBW. **No EUT emissions detected within 20dB of the limit above 8.2GHz.**

Transducer Legend:

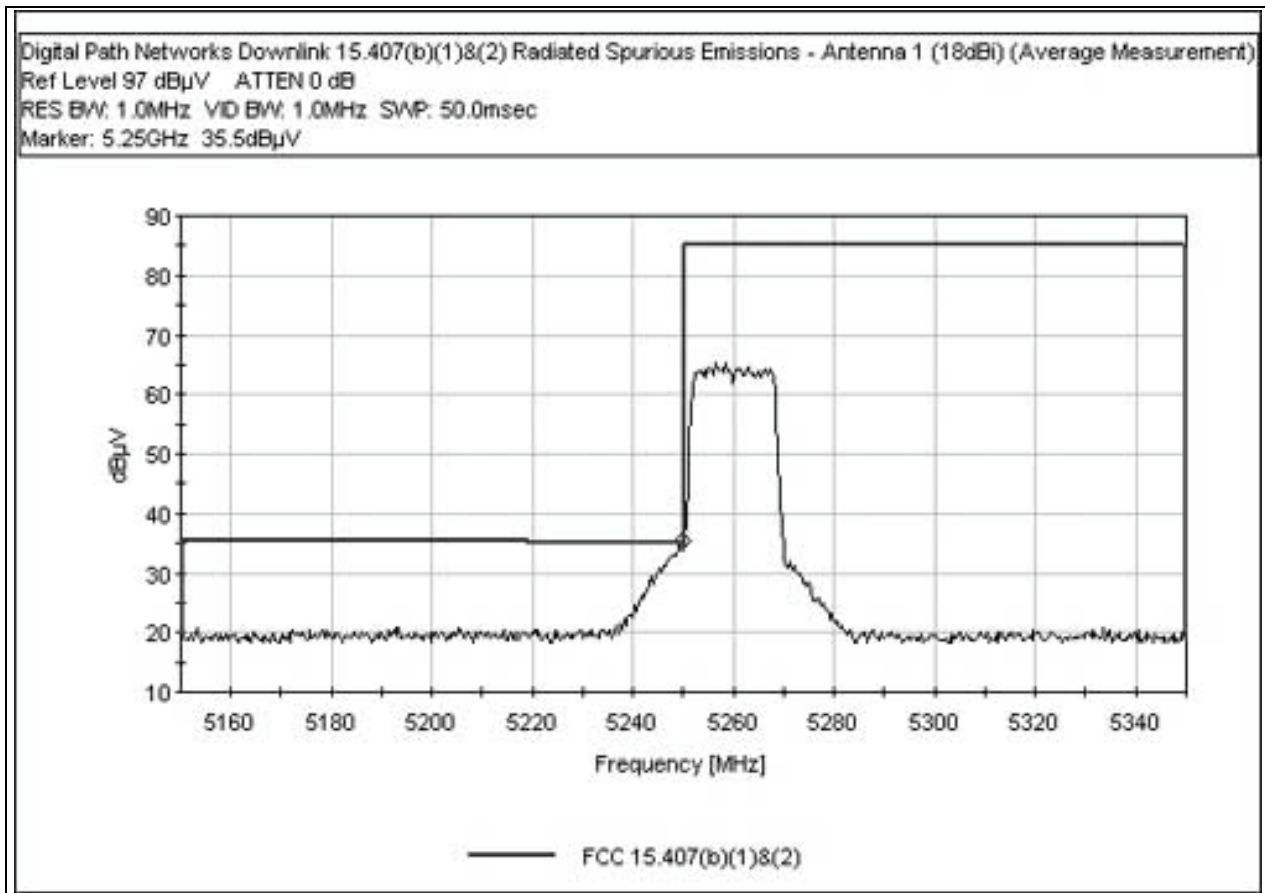
T1=Horn AN 00327 1-18GHz	T2=AMP AN00941A 50GHz
T3=Cable HF P01527	T4=WL Gore SN 1065 AN P004301
T5=Att 10dB AN02139	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

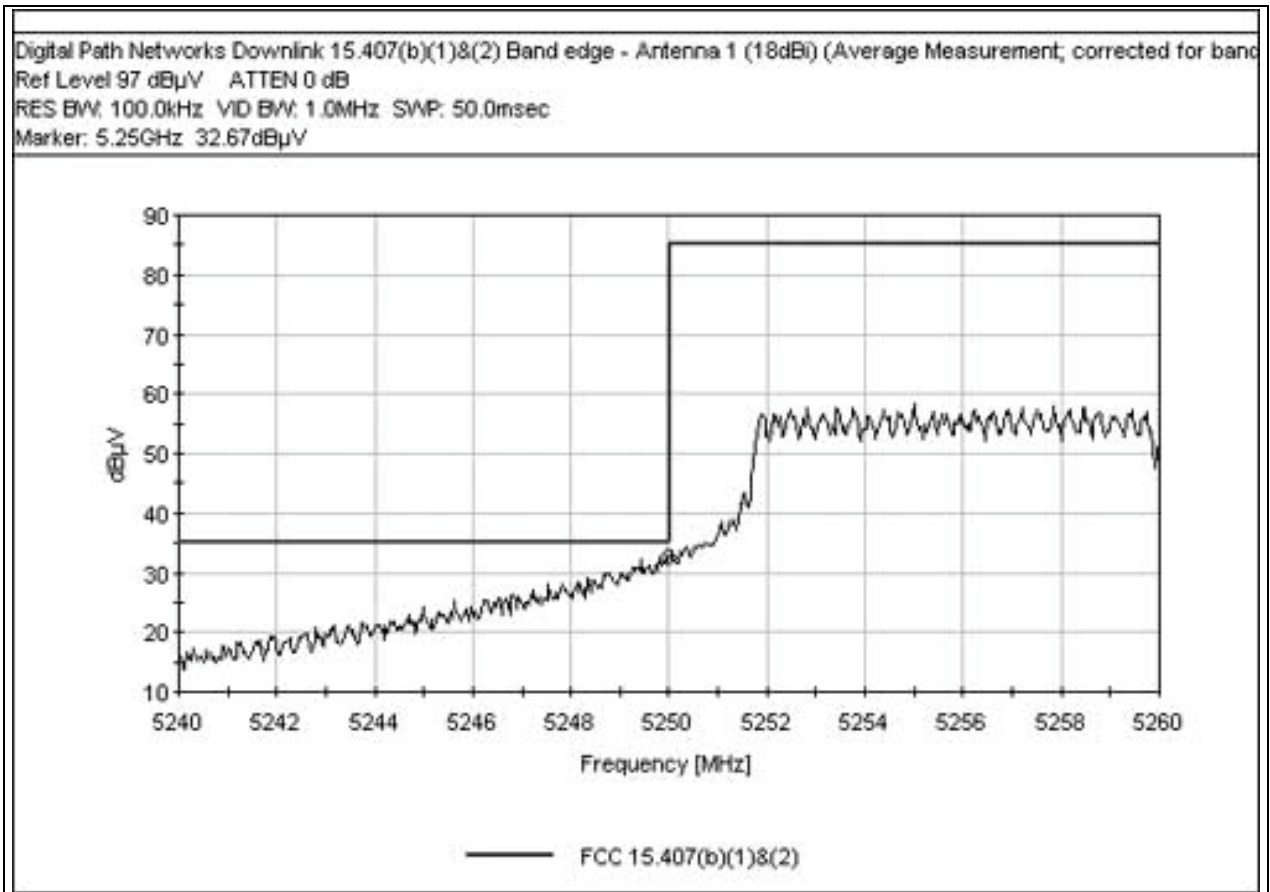
#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	5250.000M Ave	35.0	+33.9 +0.0	+0.0	+0.0	+0.9	+0.0	69.8	70.0	-0.2	Verti
^	5250.000M	55.0	+33.9 +0.0	+0.0	+0.0	+0.9	+0.0	89.8	70.0	+19.8	Verti
3	5350.000M Ave	32.3	+34.1 +10.0	-28.3	+0.5	+0.9	+0.0	49.5	54.0	-4.5	Verti
^	5350.000M	48.8	+34.1 +10.0	-28.3	+0.5	+0.9	+0.0	66.0	54.0	+12.0	Verti
5	5150.000M Ambient	31.0	+33.7 +10.0	-28.6	+0.6	+0.9	+0.0	47.6	54.0 Ambient Noise Floor	-6.4	Verti
6	5250.000M Ave	32.8	+33.9 +10.0	-28.4	+0.6	+0.9	+0.0	49.8	70.0	-20.2	Horiz
^	5250.000M	51.7	+33.9 +10.0	-28.4	+0.6	+0.9	+0.0	68.7	70.0	-1.3	Horiz

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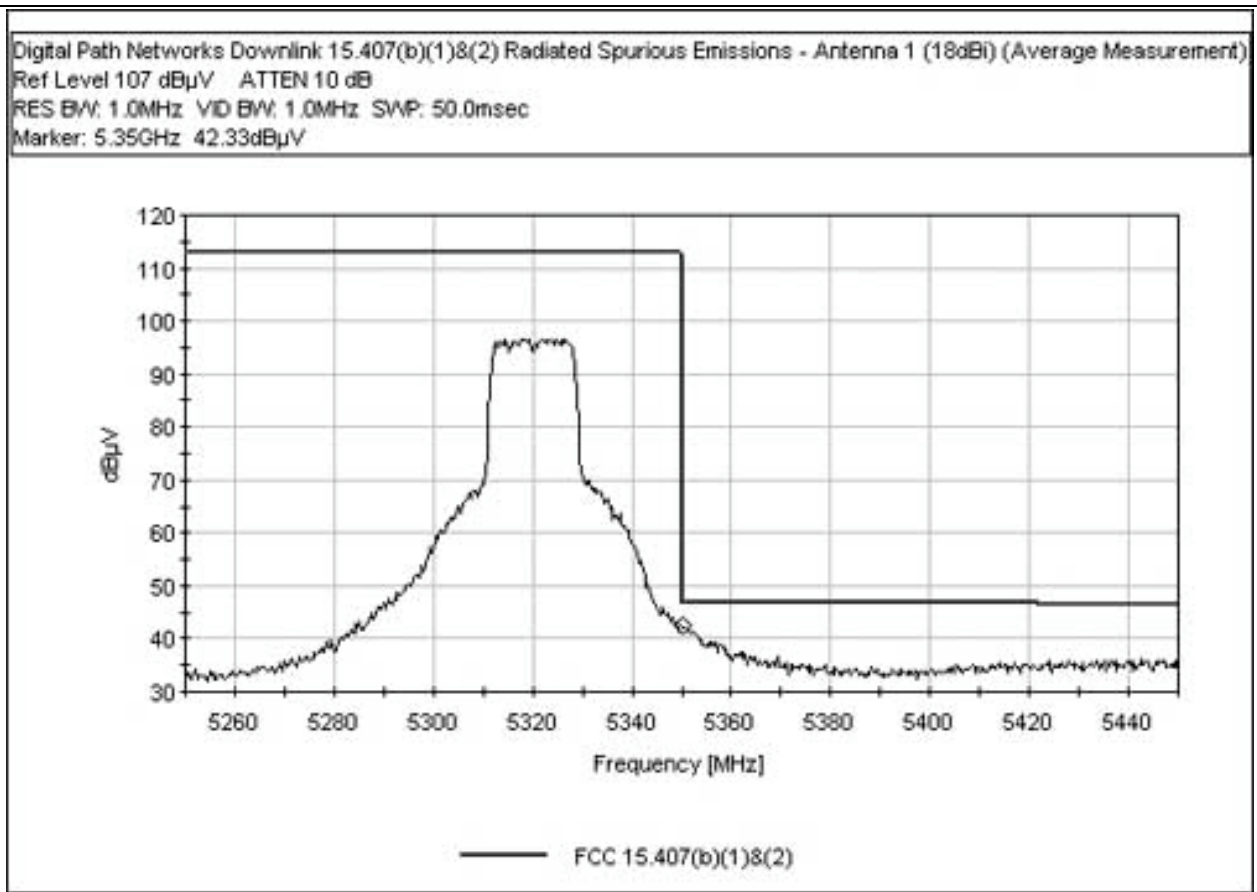
**FCC 15.407(b)(1) & (2) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
ANTENNA 1 LOW AVERAGE PLOT 1**



FCC 15.407(b)(1) & (2) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
ANTENNA 1 LOW AVERAGE PLOT 2



**FCC 15.407(b)(1) & (2) BANDEDGE ANTENNA CONDUCTED MEASUREMENT
ANTENNA 1 HIGH AVERAGE**



APPENDIX A
TEST SETUP PHOTOGRAPHS

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PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



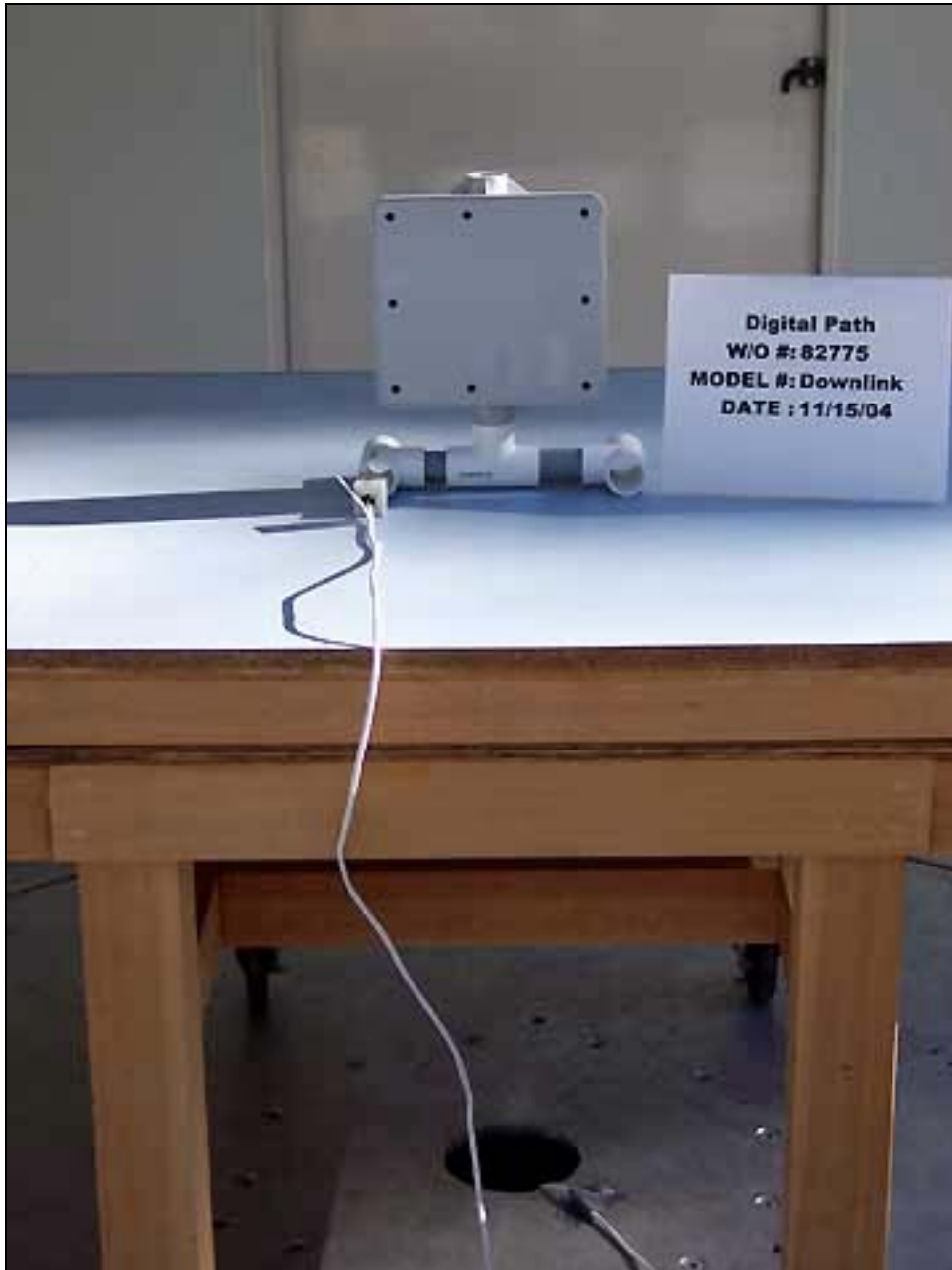
Mains Conducted Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions – Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Antenna 1

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Antenna 2 Front

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Antenna 2 Back

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Antenna 3

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Antenna 4

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Antenna 5

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

