Test Report
And Application for Grant of Equipment Authorization

TEST REPORT PERTAINING TO:

Equipment Under Test	Model Number(s)
ProScope MOBILE	A1

CONFIGURATION
IEEE 802.11b with an internal antenna Continuously Transmitting

MEASUREMENTS PERFORMED IN ACCORDANCE WITH THE FOLLOWING STANDARD (S)

Regulatory Standard(s)
47 CFR Part 15, Subpart C Section 15.247 Test Method: ANSI C63.4: 2003 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

A2LA ACCREDITED
Certificate Number: 1111.01

PREPARED FOR:
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Test Report #: SSCOP-100330F

Test Report Revision: A2

	REPORT BODY	APPENDICES		TOTAL PAGES
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1.0 REGULATORY COMPLIANCE GUIDELINES

Aegis Labs, Inc. operates as both a Nevada and California Corporation with no organizational or financial relationship with any company, institution, or private individual. Testing and engineering functions provided by Aegis Labs were furnished by RF technicians and engineers with accredited qualifications and training credentials to carry out their duties.

The object of this report was to publish verifiable test results of an EUT subjected to the tests outlined in the standard listed on the cover page of this report.

1.1 Guidelines For Testing To Emissions Standards

This standard for EMC emission requirements apply to electrical equipment for Information Technology Equipment (ITE). Compliance to these standards and in combination with the other standards listed in this test report can be used to demonstrate presumption of compliance with the protection requirements of the appropriate agency standard.

The purpose of this standard is to specify minimum requirements for emissions regarding electromagnetic compatibility (EMC) and protect the radio frequency spectrum 9 kHz. – 400 GHz. from unwanted interference generated from electrical/digital systems that intentionally or unintentionally generated RF energy. The emissions standards, normative documents and/or publications were used to conduct all tests performed on the equipment herein referred to as “Equipment Under Test”.

2.0 SUMMARY OF TEST RESULTS

802.11b Mode (2400-2483.5 MHz)

EMISSIONS STANDARD			
FCC Part 15 Section	**Description**	**Results**	**Comments**
15.247(a)(2)	The minimum 6dB bandwidth shall be at least 500 kHz.	PASSED	2412 MHz = 9.92 MHz 2437 MHz = 10.00 MHz 2462 MHz = 10.25 MHz
15.247(b)(3)	The maximum conducted output power is the highest total transmit power occurring in any mode	PASSED	2412 MHz = 8.40 dBm = 6.92 mW 2437 MHz = 8.14 dBm = 6.52 mW 2462 MHz = 8.72 dBm = 7.45 mW
15.247(b)(5)	The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).	PASSED	Refer to MPE Calculations
15.247(d)	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.	PASSED	See Data Sheets (Appendix A)
15.247(d)	Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.	PASSED	See Data Sheets (Appendix A)
15.247(e)	The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.	PASSED	2412 MHz = -47.00 dB 2437 MHz = -48.83 dB 2462 MHz = -49.00 dB
15.207	AC Conducted Emissions	PASSED	N/A (Note 1)
15.209	Radiated Emissions (30-1000 MHz)	PASSED	See Data Sheets (Appendix A)

Note1: AC Conducted Emissions not tested because EUT is battery powered.

ANALYSIS AND CONCLUSIONS

Based upon the measurement results we find that this equipment is within the limits of the global standards listed on the cover page of this test report. All results are based on a test of one sample. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required.

Approval Signatories

Report Completed By:

Johnny Candelas 6/16/2010
Senior Test Engineer
Aegis Labs, Inc.

Report Approved By:

Rick Candelas 6/16/2010
Quality Assurance
Aegis Labs, Inc.

3.0 ADMINISTRATIVE DATA AND TEST DESCRIPTION

DEVICE TESTED:	ITE Type: ProScope MOBILE Model Number(s): A1 Serial Number: 000023 FCC ID: YIJ70D57E
DATE EUT RECEIVED:	April 8th, 2010
TEST DATE(S):	April 21st – 30th, 2010
ORIGIN OF TEST SAMPLE(S):	Production
EQUIPMENT CLASS:	EUT tested as CLASS B device
RESPONSIBLE PARTY:	Scalar Scopes 1F. Shinjuku San-Ei Bldg 1-22-2, Nishi-Shinjuku Shinjuku-ku, Tokyo 160-0023 JAPAN
CLIENT CONTACT:	Mr. Mitch Axsom
MANUFACTURER:	Scalar Scopes
TEST LOCATION:	Aegis Labs, Inc. 32231 Trabuco Creek Road Trabuco Canyon, CA 92678 Open Area Test Site #2
ACCREDITATION CERTIFICATE(s):	A2LA Certificate Number: 1111.01, Valid through February 28, 2012
PURPOSE OF TEST:	To demonstrate compliance with the standards as described in Sections 1.0 & 2.0 of this report.
UNCERTAINTY BUDGET:	Proficiency Testing and Uncertainty Calculations for all tests indicated in this report have been conducted in accordance with ISO 17025: 2005 requirements Section 5.4.6, and 5.9. Uncertainty Budgets and Proficiency Test results available upon request.
STATEMENT OF CALIBRATION:	All accredited equipment calibrations were performed by Liberty Labs, Inc. and World Cal. with typical calibration uncertainty estimates derived from ISO Guide to the determination of uncertainties with a Coverage Factor of k=2 for 95% level of confidence.

4.0 DESCRIPTION OF EUT CONFIGURATION

4.1 EUT Description

Equipment Under Test (EUT)	
Trade Name:	ProScope MOBILE
Model Number:	A1
Frequency Range:	802.11b = 2412 – 2462MHz
Type of Transmission:	Direct Sequence Spread Spectrum
Transfer Rate:	1/5.5/11 Mbps for 802.11b mode
Number of Channels:	802.11b mode (2400-2483.5 MHz) = 11
Modulation Type:	DSSS - direct sequence spread spectrum
Antenna Type:	TDK Antennas: Multilayer Chip
Antenna Gain (See Note 2):	2dBi @ 2.4 GHz
Transmit Output Power:	Please see Appendix A (Data Sheets) for actual output power.
Power Supply:	Battery Powered (3 AA)
Number of External Test Ports Exercised:	None

The ProScope MOBILE is an embedded IEEE 802.11b wireless network adapter that operates in the 2.4 GHz spectrum. ProScope is a microscope magnifying an image of an object with a convertible lens and sends it to PC etc through wireless LAN (IEEE 802.11b) to observe and record.

NOTE 1: For a more detailed description, please refer to the manufacture's specifications or User's Manual.

NOTE 2: The EUT was tested with a TDK Antennas. (Refer to the antenna information exhibits).

4.2 EUT Configuration

The EUT (MN: ProScope MOBILE) was tested as a standalone device. It was connected to a host laptop via the laptops USB port. The laptop was used to set the EUT to continuously transmit. Data for the TDK Antenna can be found in Appendix A (Data Sheets)

The low, middle, and high channels were tested in 802.11b mode. The EUT was placed in continuous transmit mode using a command prompt and software provided by the manufacturer.

4.3 List of EUT, Sub-Assemblies and Host Equipment

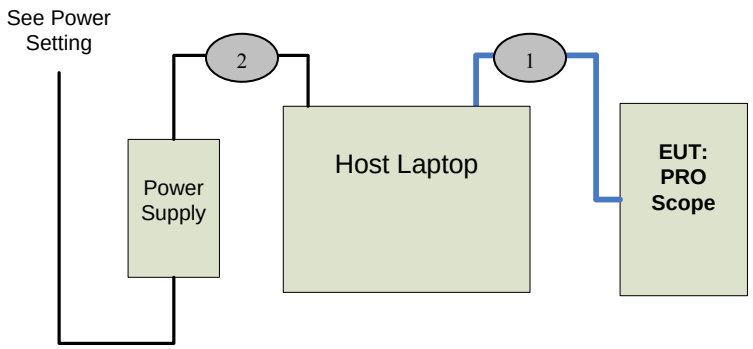
Equipment Under Test			
Manufacturer	**Equipment Name**	**Model or Part Number**	**Serial Number**
Scalar Scopes	ProScope MOBILE	A1	000023

EUT Sub Assemblies			
Manufacturer	**Equipment Name**	**Model or Part Number**	**Serial Number**
TDK	Multilayer Chip Antenna	ANT8030-2R4-01A	N/A

HOST EQUIPMENT LIST			
Manufacturer	**Equipment Name**	**Model or Part Number**	**Serial Number**
Acer	Host Laptop	KAVAO	LUS92069093330BCE1601
Delta Electronics, Inc	Power Supply	ADP-30JH B	202W97H0RMT

NOTE: All the power cords of the above support equipment are standard and non-shielded.

4.4 I/O Cabling Diagram and Description



Signal Line Cable Description							
Cable	**Length**	**Construction**	**Source Connector**	**Destination Connector**	**Bundled Length**	**Ferrite Attached**	**Note**
1	2m	Round, Braid & Foil Shielded	Host Laptop: USB Port	EUT: Proprietary Port	N/A	N/A	N/A
2	1.5m	Round, Braid & Foil Shielded	Host Laptop: Power Port	Power Supply: Hardwired	N/A	N/A	N/A

4.5 EMC Test Hardware and Software Measurement Equipment

TEST EQUIPMENT LIST - Emissions					
Equipment Name	**Manufacturer**	**Model Number**	**Serial Number**	**Calibration Due Date**	**Maintenance Calibration Cycle**
Spectrum Analyzer	Agilent	8564EC	4046A00387	07/24/2010	1 Year
Antenna – Horn	ETS	3117	00057423	12/23/2010	2 Year
Preamp	Aegis Labs, Inc.	AEGIS-OATS1-1-18	001	6/26/2010	1 Year
30 Foot Coax	Semflex	S130SFBS10360	0619	10/12/2010	1 Year
EMI Receiver - RF Section	Hewlett Packard	8546A	3325A00137	12/21/2011	2 Year
EMI Receiver - RF Filter Section	Hewlett Packard	85460A	3330A00138	12/21/2011	2 Year
10 dB Attenuator	Pasternack	PE7014-10	N/A	11/04/2010	1 Year
LISN (EUT)	Fisher Custom Communications	FCC-LISN-50-25-2	9931	06/03/2010	1 Year
LISN (Access)	EMCO	3825/2	9108-1848	06/03/2010	1 Year
Spectrum Analyzer	Hewlett Packard	8568B	2634A03093	10/06/2010	2 Year
Spectrum Analyzer Display Section	Hewlett Packard	8568B	1833A00389	10/06/2010	2 Year
RF Preselector	Hewlett Packard	85685B	2620A00281	10/06/2010	2 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2043A00176	10/06/2010	2 Year
Antenna - Biconical	EMCO	3110	9108-1421	06/05/2010	1 Year
Antenna - Log Periodic	EMCO	3148	4947	06/12/2010	1 Year
Power Meter	Anritsu	ML2487A	6K00001785	05/29/2010	1 Year
Wide Bandwidth Sensor	Anritsu	MA2491A	31193	05/29/2010	1 Year
12dB Attenuator	Narda	4779-12	203	06/09/2010	1 Year
Temperature/Humidity Monitor	Dickson	TH550	7255185	12/15/2010	1 Year

NCR – No Calibration Required.

5.0 CONDITIONS DURING EMISSIONS MEASUREMENTS

5.1 General

All measurements were made according to the procedures defined in or referred to by the standard listed on the cover page of this report. The measurements were made in the operating mode producing the largest emissions consistent with normal operation and connected to the minimum configuration of auxiliary devices.

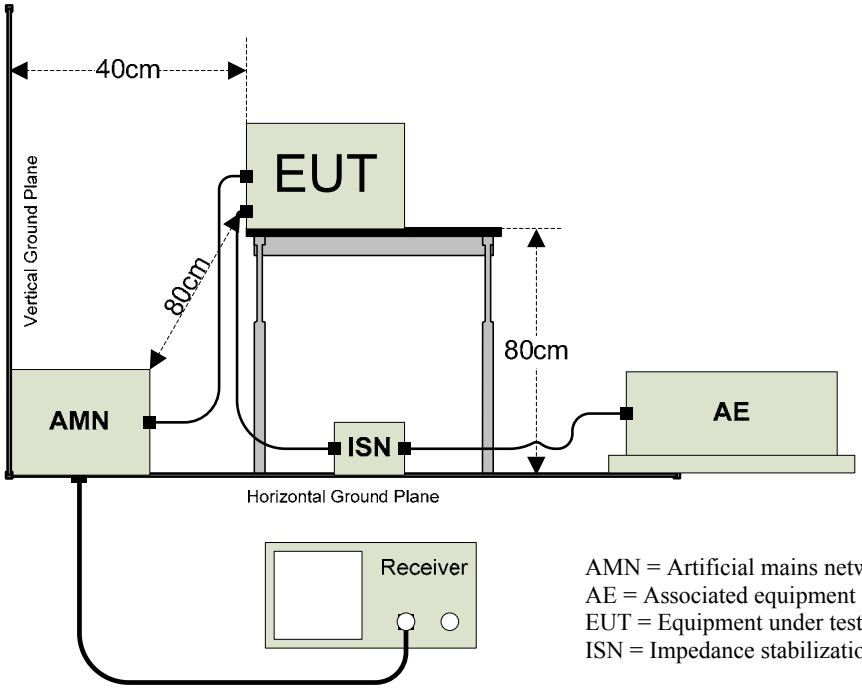
5.2 Conducted Emissions Test Setup

The following was the test configuration.

EUT signal cables that hung closer than 40 cm to the horizontal metal ground plane were folded back and forth forming a bundle 30 cm to 40 cm long. The power cord of the EUT was also bundled in the center and plugged into one of the artificial mains network (AMN). All peripheral equipment was powered from a second AMN via a multiple outlet strip placed at a distance on 10cm from each other. The AMN and ISN were positioned 80cm from the EUT. Signal cables that were not connected to an AE were terminated using the correct termination. If applicable, the current probe was placed at 0.1 m from the ISN.

Peak, quasi-peak and/or average detectors were used for testing performed between 150 kHz and 30 MHz. A swept frequency scan was performed for both Line 1 and Line 2. The six highest readings were compared against the limit and recorded in the data sheet along with a snapshot image of the sweep scan. The graphical scans in Appendix A only reflect peak readings while the tabulated data sheets reflect peak, average, and/or quasi-peak measurements.

Climatic Conditions:
The EUT was tested within its intended operating and climatic conditions.



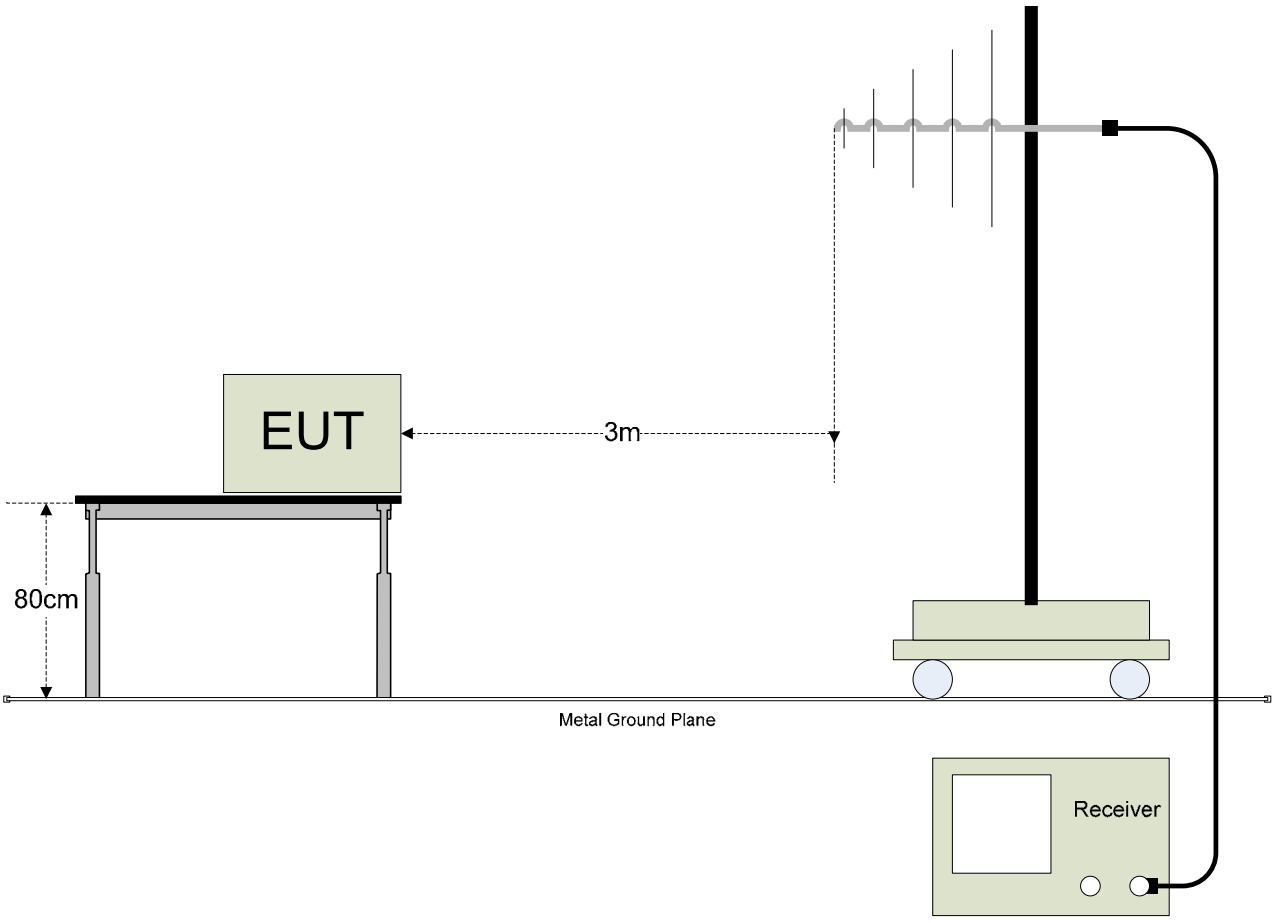
AMN = Artificial mains network
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

5.3 Radiated Emissions Test Setup

The Open Area Test Site (OATS) was used for radiated emission testing. The receiving (Rx) antenna(s) was placed 10m from the nearest side of the EUT facing the Rx antenna. The EUT (if floor-standing) was placed directly on the flush-mounted 360 degree rotating turntable. The EUT (if table-top) was placed directly on an 80cm high non-metallic table, and the table was placed on the rotating turntable. During the initial EMI scan, all the suspect frequencies, i.e.; harmonics, broadband signals were checked with the Rx broadband antennas in both vertical and horizontal polarities. The biconical Rx, log periodic Rx, and horn Rx antennas were used from 30MHz – 299.99MHz at 10m, 300MHz – 1000MHz at 10m, and 1GHz – 24GHz at 3 m respectively.

Upon completion of all harmonic and broadband measurements, the balance of any remaining frequencies was checked between 30MHz – 24GHz. Any signals appearing within 20 dB of the classification limit was measured. Each signal was maximized by first rotating the turntable at least 360 degrees and recording the azimuth in the data sheet. Lastly, the Rx antenna was raised and/or lowered to maximize the signal elevation. If the measured signal was obtained using the peak detector and that signal appeared within 3 dB of the regulatory limit line, then the same signal was re-measured using the quasi-peak detector on the EMI receiver. Both meter readings if necessary were recorded on the data sheet.

Climatic Conditions:
The EUT was tested within its intended operating and climatic conditions.



APPENDIX A

TEST DATA

RADIATED EMISSIONS TEST RESULTS

CLIENT:	Scalar Scopes	**DATE:**	04/30/2010
EUT:	ProScope MOBILE	**PROJECT NUMBER:**	SSCOP-100330
MODEL NUMBER:	A1	**TEST ENGINEER:**	JC
SERIAL NUMBER:	000023	**SITE #:**	2
CONFIGURATION:	Tested connected to the host laptop's USB port	**TEMPERATURE:**	19 deg. C
		HUMIDITY:	51%
		TIME:	9:00 AM

Description:	Radiated RF Emissions (30 MHz – 1000 MHz)
Results:	**PASSED** Horizontal and Vertical Antenna Polarizations Class B Limits
Note:	Radiated Emissions Measurements were performed on the EUT connected to the host laptop with the power supply set at the following voltage and frequency. • 120VAC / 60 Hz.

Radiated Emissions Sample Calculations

Corrected Meter Reading = Meter Reading + F +C - D

Where, F = Antenna Factor
C = Cable Factor
G = Amplifier Gain
D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

CML = Specification Limit - F - C + D

Radiated Emissions Test Results (Continued)

Continuously Transmitting @ 120VAC/60Hz (SSCOP-100330-04)

Horizontal Open Field Maximized Data

Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Effective Gain Cable + Amp (dB)*	*Antenna Factor (dB)*	*Corrected Reading (dBuV/m)*	*Limits (dBuV/m)*	*Diff (dB) +=FAIL*
45.31	48.90	400	180			-34.76	10.72	24.86	30.00	-5.14
61.62	47.80	400	0			-34.99	9.68	22.50	30.00	-7.50
126.02	41.90	400	270	42.00	Q	-34.21	11.40	19.20	30.00	-10.80
135.10	50.30	400	270	40.90	Q	-34.26	11.75	18.40	30.00	-11.60
174.28	50.40	400	90	44.40	Q	-33.79	13.69	24.29	30.00	-5.71
225.00	43.80	400	270	36.20	Q	-32.99	16.10	19.31	30.00	-10.69
337.52	44.20	400	180			-32.43	15.35	27.12	37.00	-9.88
386.60	44.90	400	90			-32.51	15.33	27.72	37.00	-9.28
432.02	40.30	400	90			-32.40	16.80	24.70	37.00	-12.30
526.44	52.90	400	270	37.80	Q	-31.17	18.74	25.37	37.00	-11.63

Vertical Open Field Maximized Data

Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Effective Gain Cable + Amp (dB)*	*Antenna Factor (dB)*	*Corrected Reading (dBuV/m)*	*Limits (dBuV/m)*	*Diff (dB) +=FAIL*
45.31	57.60	100	0	49.20	Q	-34.76	10.63	25.08	30.00	-4.92
61.62	55.10	100	270	50.60	Q	-34.99	9.69	25.30	30.00	-4.70
126.02	49.40	100	180	44.70	Q	-34.21	10.88	21.37	30.00	-8.63
135.10	50.10	100	0	40.10	Q	-34.26	11.26	17.10	30.00	-12.90
174.28	54.90	100	180	44.54	Q	-33.79	14.21	24.96	30.00	-5.04
225.00	45.10	100	0	37.40	Q	-32.99	17.40	21.81	30.00	-8.19
337.52	43.50	100	0			-32.43	15.70	26.77	37.00	-10.23
386.60	50.60	100	270	36.50	Q	-32.51	15.86	19.85	37.00	-17.15
432.02	48.60	100	0			-32.40	16.51	32.71	37.00	-4.29
526.44	50.90	100	180	43.50	Q	-31.17	19.65	31.99	37.00	-5.01

RADIATED EMISSIONS TEST RESULTS

CLIENT:	Scalar Scopes	**DATE:**	04/29/2010
EUT:	ProScope MOBILE	**PROJECT NUMBER:**	SSCOP-100330
MODEL NUMBER:	A1	**TEST ENGINEER:**	JC
SERIAL NUMBER:	000023	**SITE #:**	2
CONFIGURATION:	Tested connected to the host laptop's USB port in **802.11b (2400-2483.5 MHz) mode**	**TEMPERATURE:**	16° C
		HUMIDITY:	43% RH
		TIME:	9:30 AM

Description:	Radiated RF Emissions (1 GHz – 18 GHz)
Results:	**PASSED** Horizontal and Vertical Antenna Polarizations Class B Limits
Note:	Radiated Emissions Measurements were performed on the EUT connected to the host laptop with the power supply set at the following voltage and frequency. • 120VAC / 60 Hz.

Unwanted Spurious Emissions Limits			
Frequency (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m) (Emissions in the restricted bands)**	**Field Strength (dBm/MHz) (Emissions outside the restricted bands)**
Above 960	500	54.00 (Average) 74.00 (Peak)	< -20 dBc

Radiated Emissions Sample Calculations

Corrected Meter Reading = Meter Reading + F +C - D

Where, F = Antenna Factor
C = Cable Factor
G = Amplifier Gain
D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

CML = Specification Limit - F - C + D

Radiated Emissions Test Results (Continued)

*Fundamental Measurements in **802.11b mode (2400-2483.5 MHz)***
Channels 1, 6, & 11
Continuous TX** with **TDK Antenna
Aegis Labs, Inc. File #: SSCOP-100330-01

RADIATED EMISSIONS - Horizontal Antenna Polarization											
Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Cable Factor (dB)*	*Ant. Factor (dB)*	*Corrected Reading (dBuV/m)*	*Limits (dBuV/m)*	*Diff (dB) +=FAIL*	*Comments*
2412.00	65.33	100	180			2.85	32.18	100.36			**Ch. 1**
2412.00				56.83	A	2.85	32.18	91.86			
2437.00	65.00	100	180			2.89	32.21	100.10			**Ch. 6**
2437.00				56.50	A	2.89	32.21	91.60			
2462.00	65.50	100	225			2.94	32.25	100.68			**Ch. 11**
2462.00				57.17	A	2.94	32.25	92.35			

RADIATED EMISSIONS - Vertical Antenna Polarization											
Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Cable Factor (dB)*	*Ant. Factor (dB)*	*Corrected Reading (dBuV/m)*	*Limits (dBuV/m)*	*Diff (dB) +=FAIL*	*Comments*
2412.00	55.83	100	45			2.85	31.89	90.57			**Ch. 1**
2412.00				52.00	A	2.85	31.89	86.74			
2437.00	62.00	100	45			2.89	31.92	96.82			**Ch. 6**
2437.00				53.17	A	2.89	31.92	87.99			
2462.00	60.67	100	45			2.94	31.95	95.56			**Ch. 11**
2462.00				52.83	A	2.94	31.95	87.72			

NOTE: Fundamental signals measured to calculate the band edge field strengths using the “Marker Delta Method”.

Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in **802.11b mode (2400-2483.5 MHz)***
Channels 1 & 11
Continuous TX** with **TDK Antenna
Aegis Labs, Inc. File #: SSCOP-100330-01

RADIATED EMISSIONS - Horizontal Antenna Polarization											
Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Cable Factor (dB)*	*Ant. Factor (dB)*	*Corrected Reading (dBuV/m)*	*Limits (dBuV/m)*	*Diff (dB) +=FAIL*	*Comments*
2390.00								67.69	74.00	-6.31	**Ch. 1**
2390.00					A			53.03	54.00	-0.97	
2400.00	34.50	100	180			2.83	32.16	69.49	80.36	-10.87	
2483.50								66.85	74.00	-7.15	**Ch. 11**
2483.50					A			53.02	54.00	-0.98	

RADIATED EMISSIONS - Vertical Antenna Polarization											
Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Cable Factor (dB)*	*Ant. Factor (dB)*	*Corrected Reading (dBuV/m)*	*Limits (dBuV/m)*	*Diff (dB) +=FAIL*	*Comments*
2390.00								57.90	74.00	-16.10	**Ch. 1**
2390.00					A			47.91	54.00	-6.09	
2400.00	31.50	100	45			2.83	31.88	66.21	70.57	-4.36	
2483.50								61.73	74.00	-12.27	**Ch. 11**
2483.50					A			48.39	54.00	-5.61	

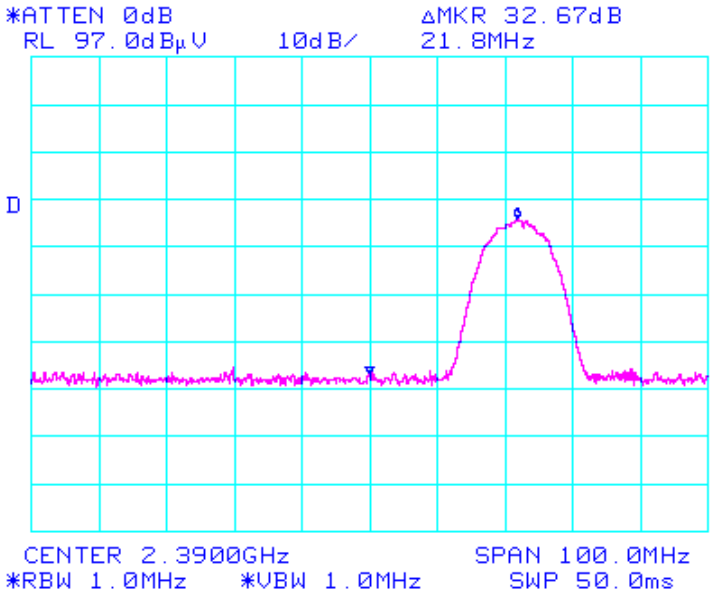
NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

BE = Fm – Δm

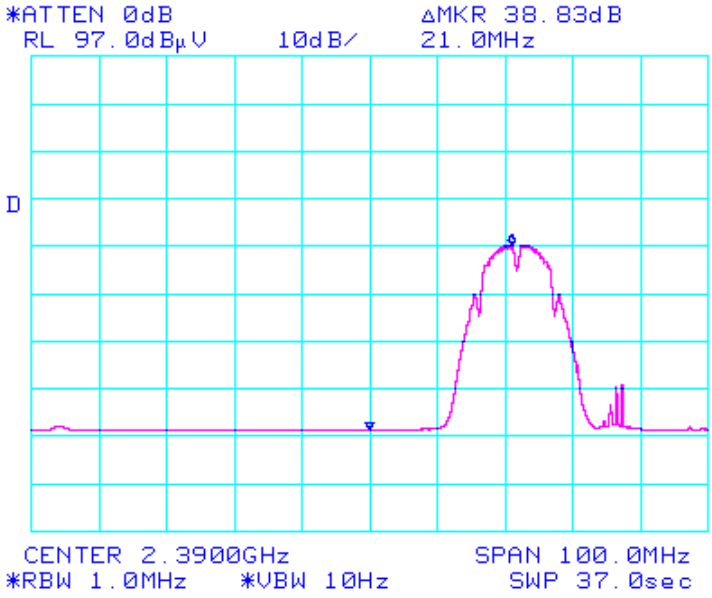
Where
BE = Band Edge Field Strength
Fm = Measured Fundamental (Peak or Average)
Δm = Measured Conducted Band Edge Delta (Peak or Average)

Band-Edge Plots (Continued)

Plot File Name	*Description (RBW/VBW)*	*Test Eng.*
SSCOP-100330-01a	Cond BE, Ch. 1, PK (1MHz/1MHz)	JC

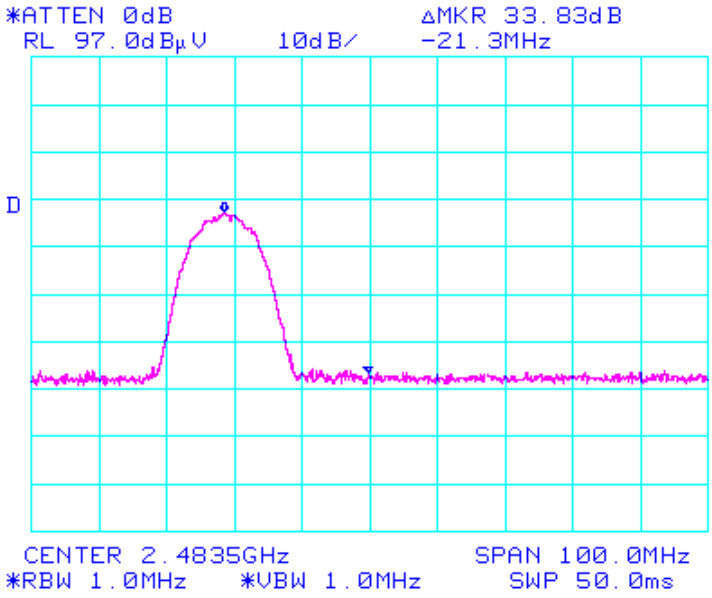


Plot File Name	*Description (RBW/VBW)*	*Test Eng.*
SSCOP-100330-01b	Cond BE, Ch. 1, AV (1MHz/10Hz)	JC

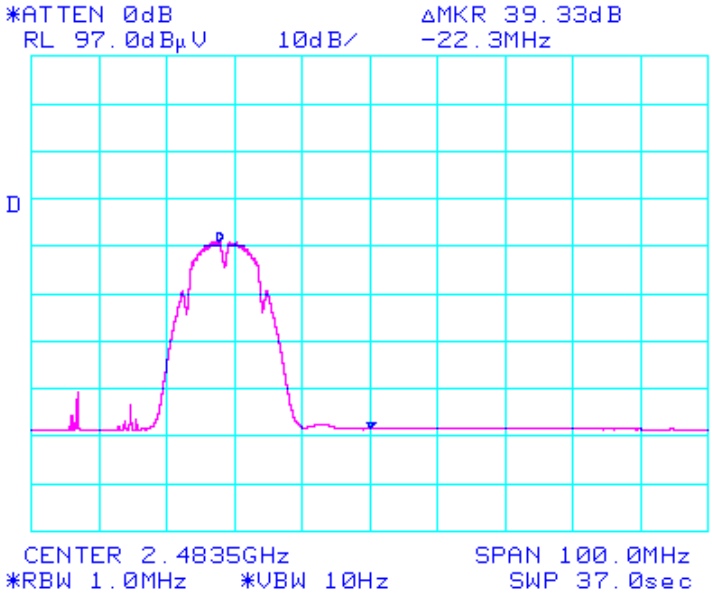


Band-Edge Plots (Continued)

Plot File Name	*Description (RBW/VBW)*	*Test Eng.*
SSCOP-100330-01c	Cond BE, Ch. 11, PK (1MHz/1MHz)	JC



Plot File Name	*Description (RBW/VBW)*	*Test Eng.*
SSCOP-100330-01d	Cond BE, Ch. 11, AV (1MHz/10Hz)	JC



Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in **802.11b mode (2400-2483.5 MHz)***
Channels 1, 6, & 11
Continuous TX** with **TDK Antenna
Aegis Labs, Inc. File #: SSCOP-100330-01

RADIATED EMISSIONS - Horizontal Antenna Polarization												
Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Preamp Factor (dB)*	*Cable Factor (dB)*	*Ant. Factor (dB)*	*Corrected Reading (dBuV)*	*Limits (dBuV)*	*Diff (dB) +=FAIL*	*Channel Tested*
3216.00	53.83	100	315			47.60	2.91	32.74	41.89	74.00	-32.11	**Ch. 1**
4824.00	56.83	100	315			47.51	3.59	34.14	47.04	74.00	-26.96	
4824.00		100	315	50.71	A	47.51	3.59	34.14	40.92	54.00	-13.08	
4873.98	56.83	100	225			47.50	3.64	34.13	47.09	74.00	-26.91	**Ch. 6**
4873.98		100	225	51.61	A	47.50	3.64	34.13	41.87	54.00	-12.13	
4923.99	54.83	100	45			47.49	3.67	34.12	45.13	74.00	-28.87	**Ch. 11**
4923.99		100	45	45.63	A	47.49	3.67	34.12	35.93	54.00	-18.07	

RADIATED EMISSIONS - Vertical Antenna Polarization												
Freq. (MHz)	*Meter Reading (dBuV)*	*Antenna Height (cm)*	*Azimuth (degrees)*	*Quasi pk or AVG (dBuV)*		*Preamp Factor (dB)*	*Cable Factor (dB)*	*Ant. Factor (dB)*	*Corrected Reading (dBuV)*	*Limits (dBuV)*	*Diff (dB) +=FAIL*	*Channel Tested*
4824.00	57.00	100	270			47.51	3.59	34.30	47.38	74.00	-26.62	**Ch. 1**
4824.00		100	270	52.42	A	47.51	3.59	34.30	42.80	54.00	-11.20	
6432.00	52.33	100	0			46.99	4.20	35.47	45.02	74.00	-28.98	
4873.98	58.50	100	45			47.50	3.64	34.30	48.94	74.00	-25.06	**Ch. 6**
4873.98		100	45	53.44	A	47.50	3.64	34.30	43.88	54.00	-10.12	
6498.64	52.50	100	90			46.93	4.22	35.50	45.29	74.00	-28.71	
4923.92	55.00	100	270			47.49	3.67	34.30	45.49	74.00	-28.51	**Ch. 11**
4923.92		100	270	48.09	A	47.49	3.67	34.30	38.58	54.00	-15.42	
6565.16	51.50	100	90			46.83	4.25	35.51	44.43	74.00	-29.57	

MAXIMUM OUTPUT POWER

CLIENT:	Scalar Scopes	**DATE:**	04/30/2010
EUT:	ProScope MOBILE	**PROJECT NUMBER:**	SSCOP-100330
MODEL NUMBER:	A1	**TEST ENGINEER:**	JC
SERIAL NUMBER:	000023	**SITE #:**	2
CONFIGURATION:	Tested connected to the host laptop's USB port	**TEMPERATURE:**	22 deg. C
		HUMIDITY:	54% RH
		TIME:	8:00 AM

Description:	The maximum conducted output power is the highest total transmit power occurring in any mode
Results:	Passed (See Data Sheet)
Note:	Conducted Emissions Measurements were performed on the EUT connected to the host laptop with the power supply set at the following voltage and frequency. • 120VAC / 60 Hz.

Maximum Conducted Output Power (Continued)

Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Output Power* (dBm)	Output Power* (mW)
802.11b	1	2412	1	8.40	**6.92**
802.11b	6	2437	1	8.14	**6.52**
802.11b	11	2462	1	8.72	**7.45**

*NOTE: The output power is measured radiated, using spectrum analyzer.

6dB EMISSIONS BANDWIDTH

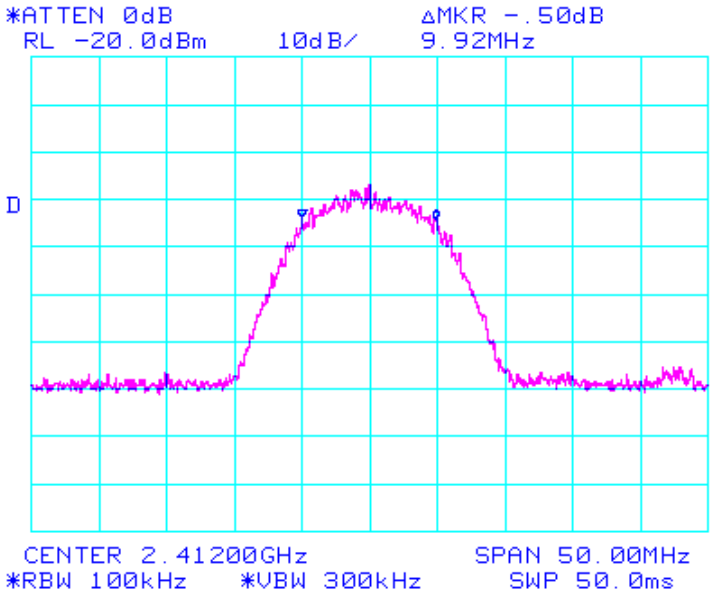
CLIENT:	Scalar Scopes	**DATE:**	04/29/10
EUT:	WiFi Scope	**PROJECT NUMBER:**	SSCOP-100330
MODEL NUMBER:	PreScope Mobile	**TEST ENGINEER:**	JC
SERIAL NUMBER:	000023	**SITE #:**	2
CONFIGURATION:	Tested connected to a host laptop via its USB port	**TEMPERATURE:**	21 deg. C
		HUMIDITY:	30% RH
		TIME:	2:30 PM

Description:	The minimum 6dB bandwidth shall be at least 500 kHz.
Results:	See Data Sheet
Note:	Emissions Measurements were performed on the EUT connected to the host laptop with the power supply set at the following voltage and frequency. • 120VAC / 60 Hz.

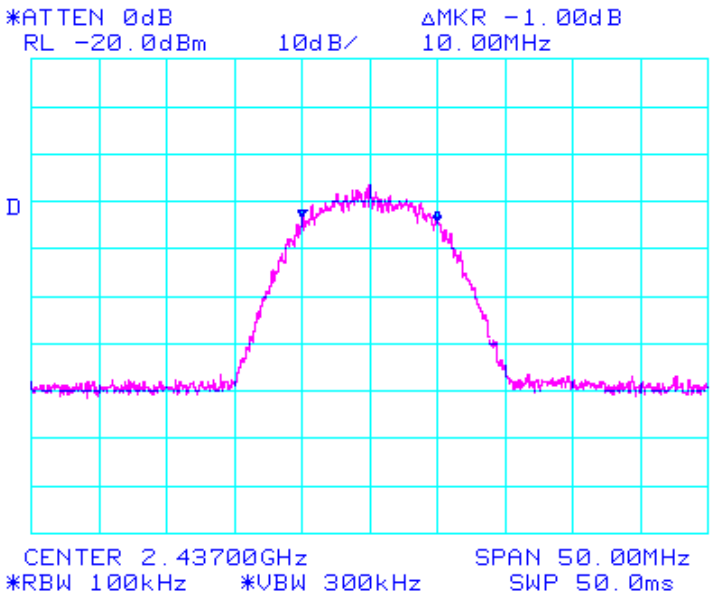
6dB Emissions Bandwidth (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.412 GHz	JC



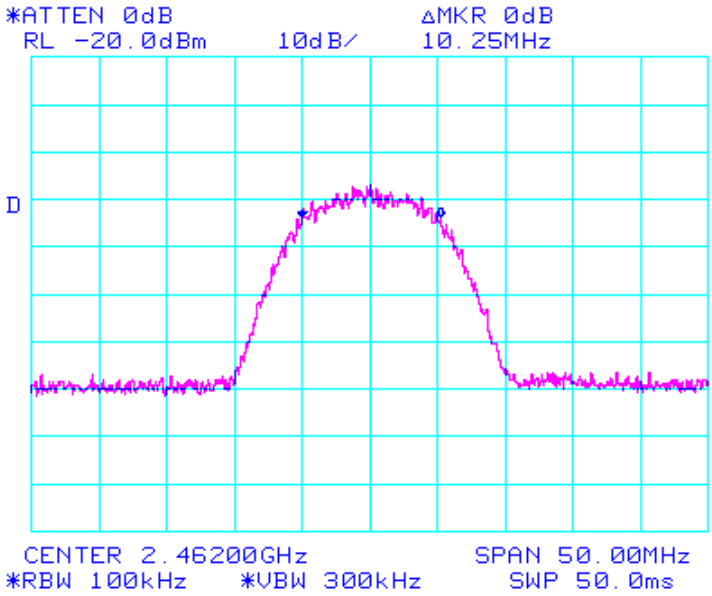
Test Date	*Data*	*Test Eng.*
04/29/10	2.437 GHz	JC



6dB Emissions Bandwidth (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.462 GHz	JC



PEAK POWER SPECTRAL DENSITY

CLIENT:	Scalar Scopes	**DATE:**	04/29/10
EUT:	WiFi Scope	**PROJECT NUMBER:**	SSCOP-100330
MODEL NUMBER:	PreScope Mobile	**TEST ENGINEER:**	JC
SERIAL NUMBER:	000023	**SITE #:**	2
CONFIGURATION:	Tested connected to a host laptop via its USB port	**TEMPERATURE:**	21 deg. C
		HUMIDITY:	30% RH
		TIME:	2:30 PM

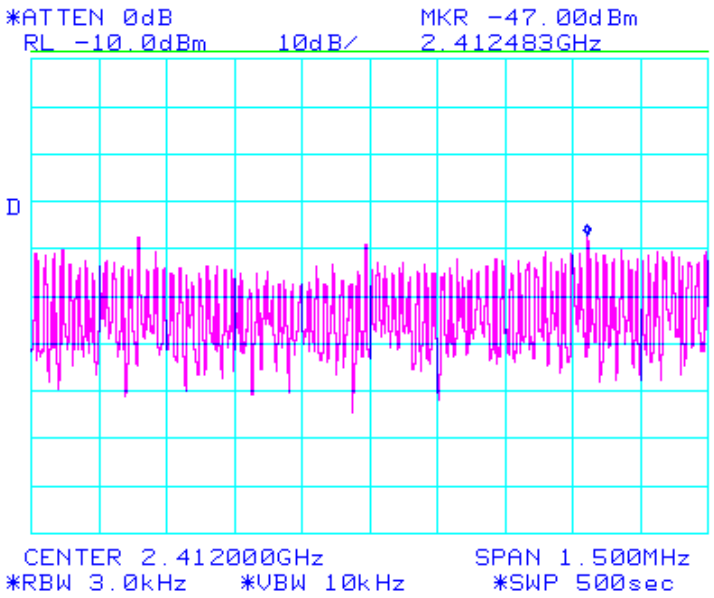
Description:	The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
Results:	See Data Sheet
Note:	Emissions Measurements were performed on the EUT connected to the host laptop with the power supply set at the following voltage and frequency. • 120VAC / 60 Hz.

Peak Power Spectral Density Limits	
Frequency (MHz)	**Limit (dBm)**
2412-2462	8

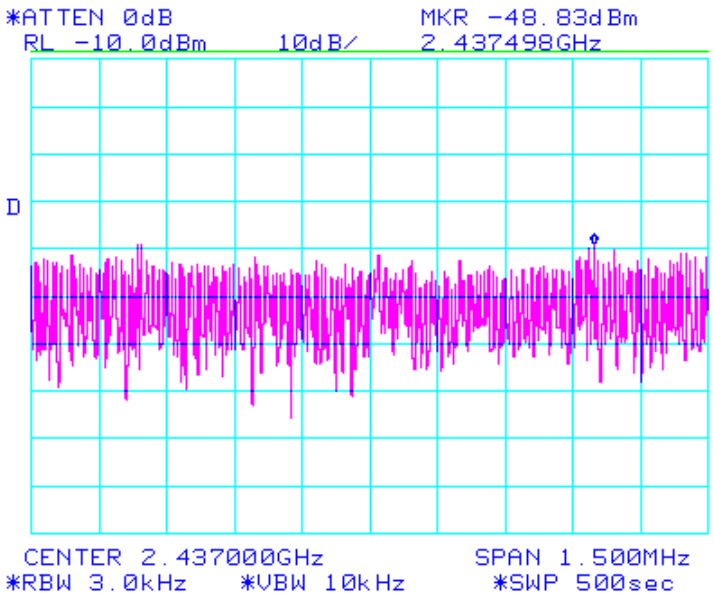
Peak Power Spectral Density (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.412 GHz	JC



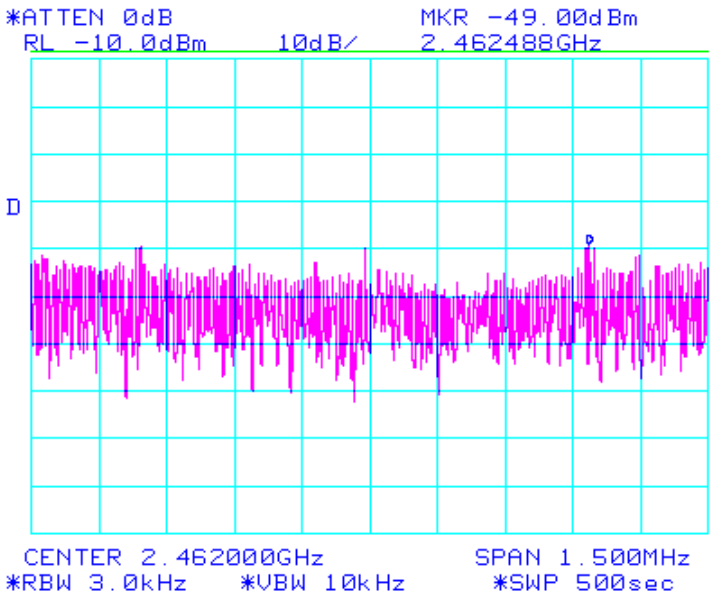
Test Date	*Data*	*Test Eng.*
04/29/10	2.437 GHz	JC



Peak Power Spectral Density (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.462 GHz	JC



CONDUCTED OUT OF BAND EMISSIONS

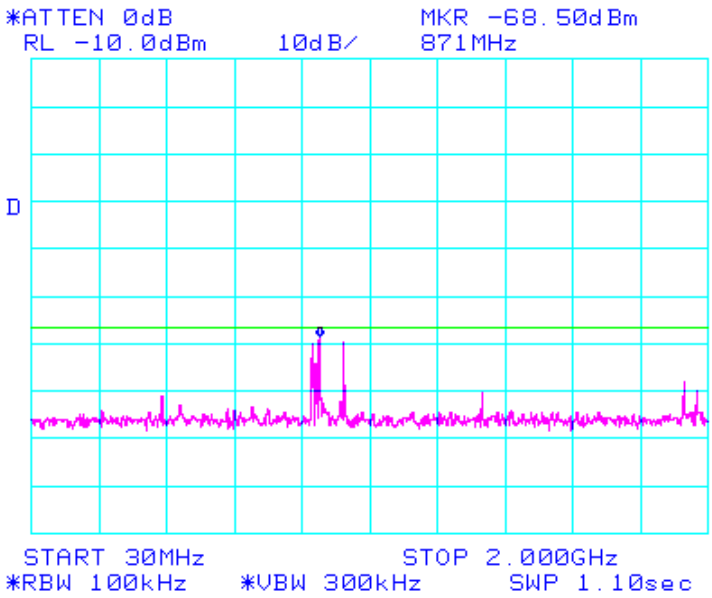
CLIENT:	Scalar Scopes	**DATE:**	04/29/10
EUT:	WiFi Scope	**PROJECT NUMBER:**	SSCOP-100330
MODEL NUMBER:	PreScope Mobile	**TEST ENGINEER:**	JC
SERIAL NUMBER:	000023	**SITE #:**	2
CONFIGURATION:	Tested connected to a host laptop via its USB port	**TEMPERATURE:**	21 deg. C
		HUMIDITY:	30% RH
		TIME:	2:30 PM

Description:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
Results:	See Data Sheet
Note:	Emissions Measurements were performed on the EUT connected to the host laptop with the power supply set at the following voltage and frequency. • 120VAC / 60 Hz.

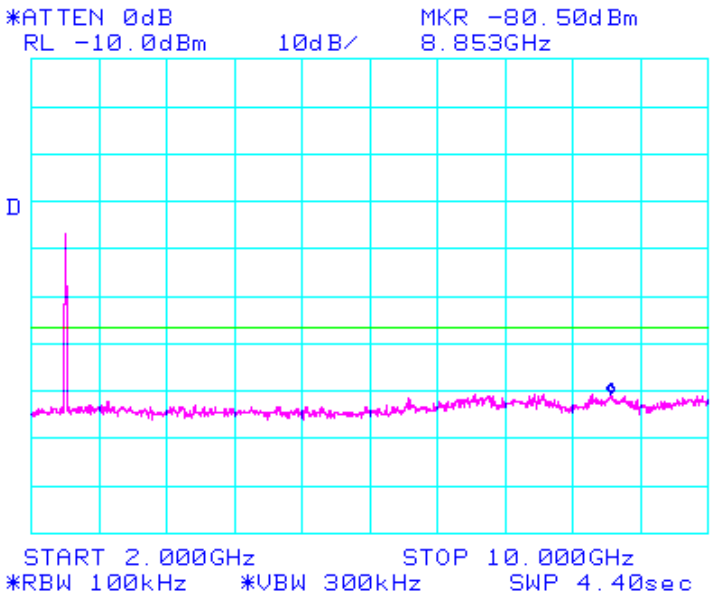
Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.412 GHz (30MHz-2GHz)	JC



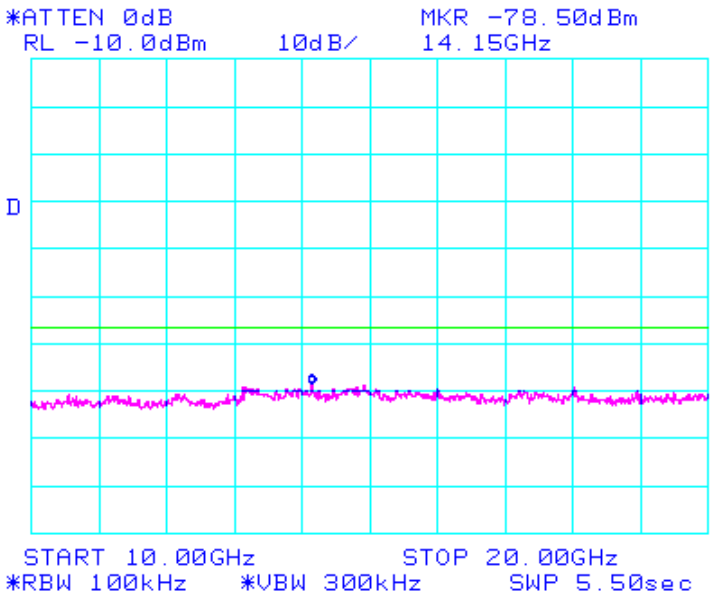
Test Date	*Data*	*Test Eng.*
04/29/10	2.412 GHz (2GHz-10GHz)	JC



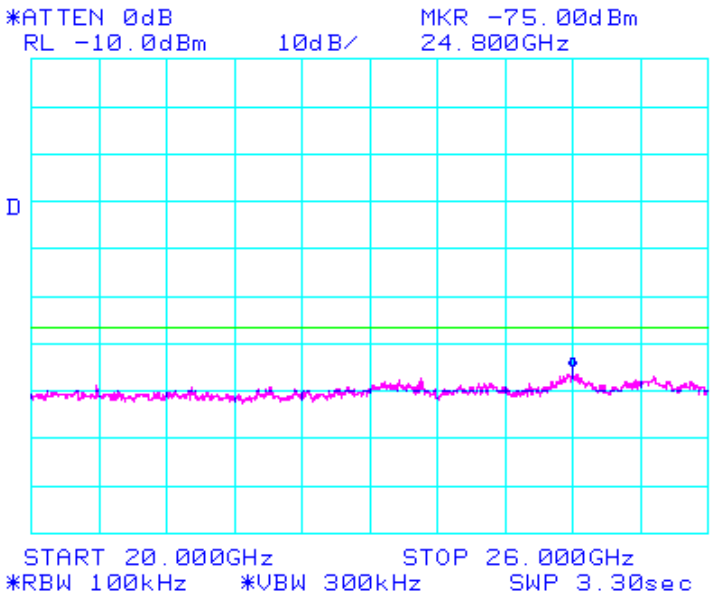
Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.412 GHz (10GHz-20GHz)	JC



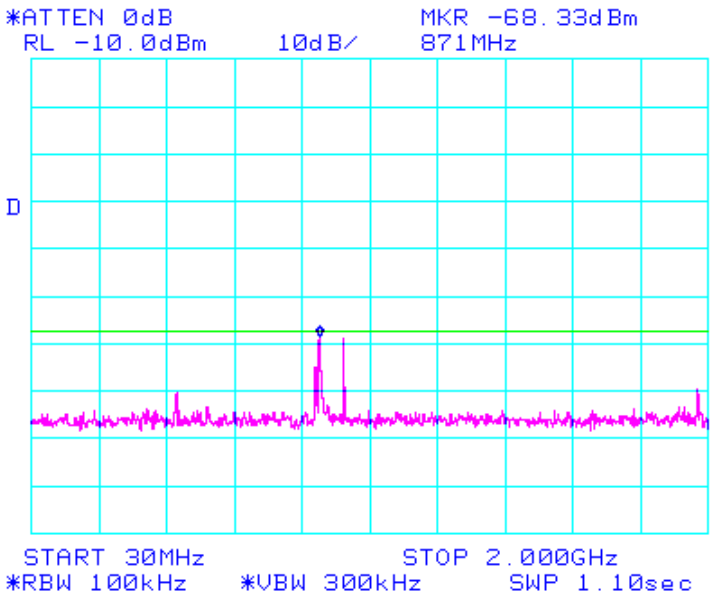
Test Date	*Data*	*Test Eng.*
04/29/10	2.412 GHz (20GHz-26GHz)	JC



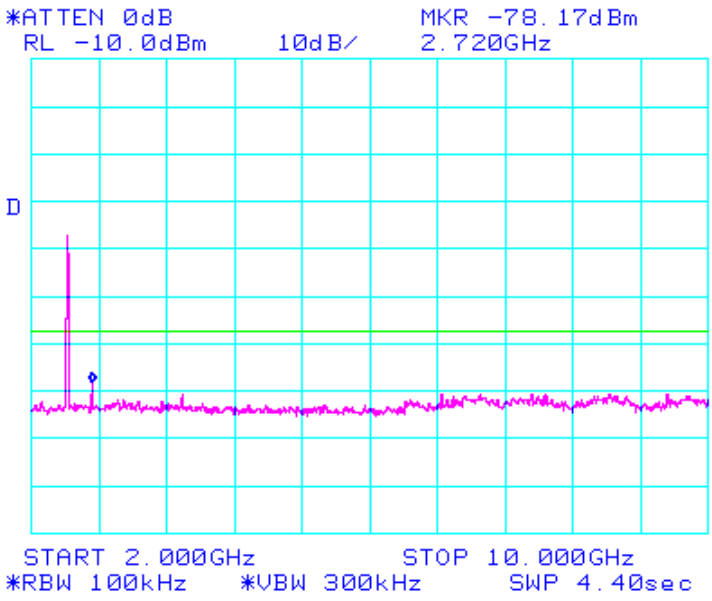
Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.437 GHz (30MHz-2GHz)	JC



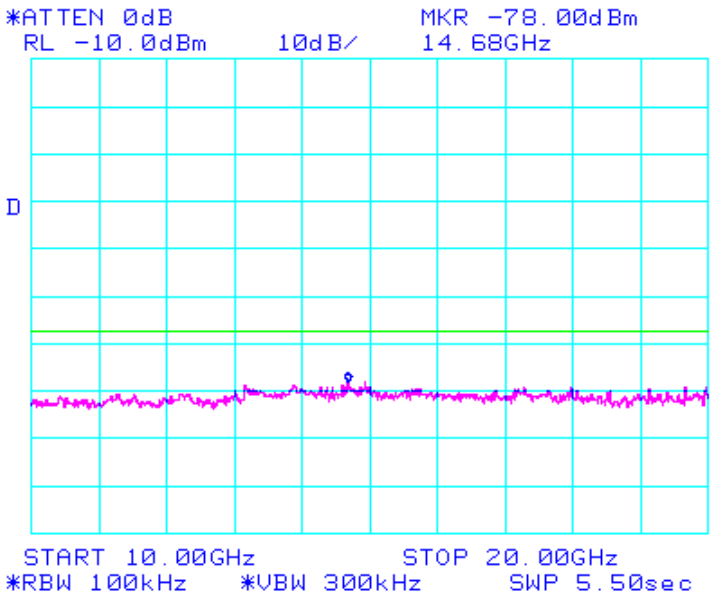
Test Date	*Data*	*Test Eng.*
04/29/10	2.437 GHz (2GHz-10GHz)	JC



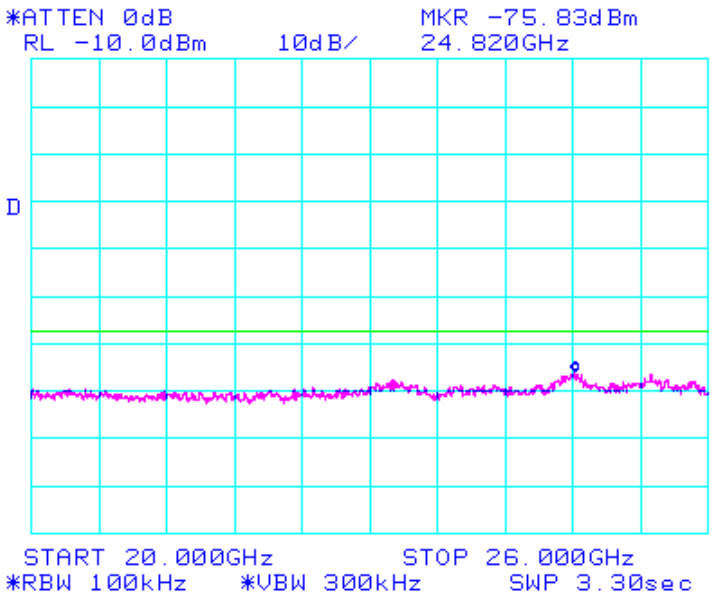
Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.437 GHz (10GHz-20GHz)	JC



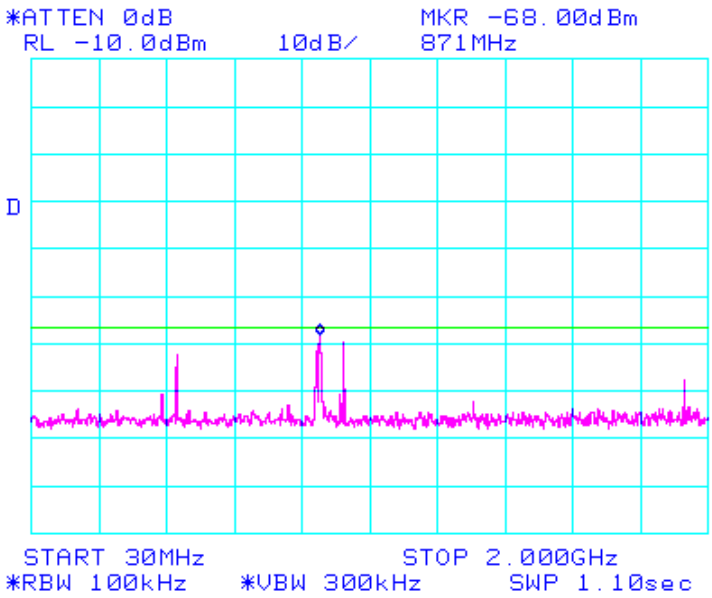
Test Date	*Data*	*Test Eng.*
04/29/10	2.437 GHz (20GHz-26GHz)	JC



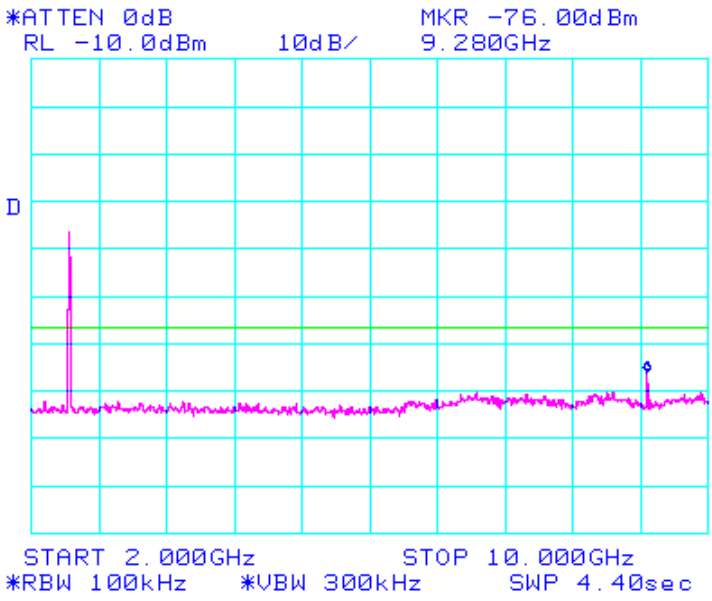
Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.462 GHz (30MHz-2GHz)	JC



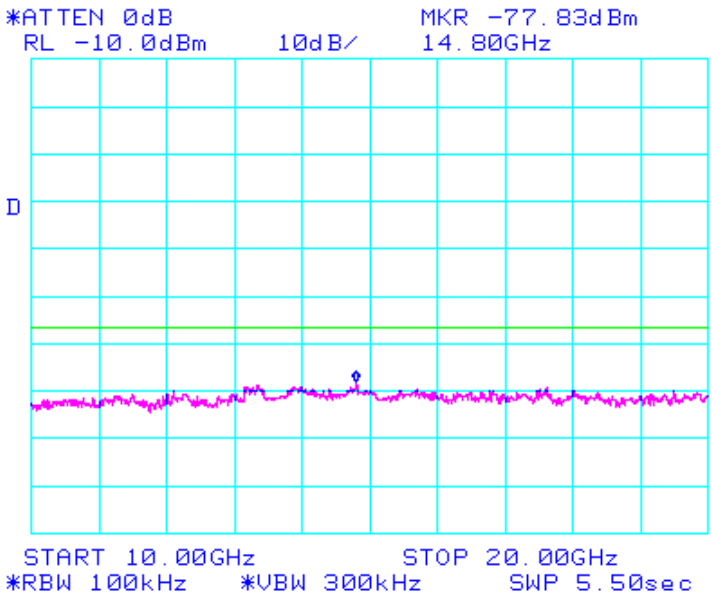
Test Date	*Data*	*Test Eng.*
04/29/10	2.462 GHz (2GHz-10GHz)	JC



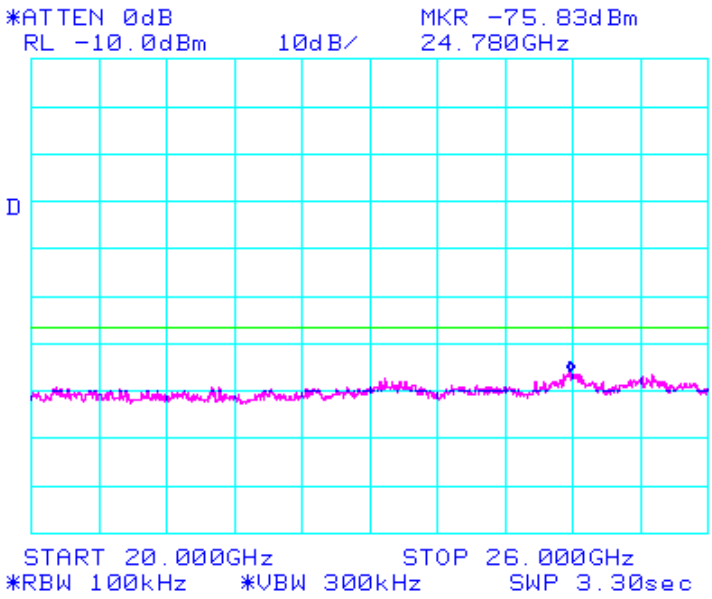
Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	*Data*	*Test Eng.*
04/29/10	2.462 GHz (10GHz-20GHz)	JC



Test Date	*Data*	*Test Eng.*
04/29/10	2.462 GHz (20GHz-26GHz)	JC



APPENDIX B

MODIFICATIONS AND RECOMMENDATIONS

1.0	NONE