FCC PART 15, SUBPART B and C
TEST REPORT

for

POPickup

Part Number: 31A000026

Prepared for

PERSAGE, INC.
18627 BROOKHURST STREET, SUITE 185
FOUNTAIN VALLEY, CALIFORNIA 92708

Prepared by:_____

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Approved by:_____

KYLE FUJIMOTO

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DATE: MARCH 12, 2008

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	POPickup P/N: 31A000026 S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified in order to meet the specifications.
Customer:	PerSage, Inc. 18627 Brookhurst Street, Suite 185 Fountain Valley, California 92708
Test Dates:	March 7, 10 and 11, 2008
Test Specifications:	EMI requirements CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15.209 and 15.249
Test Procedure:	ANSI C63.4
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.207.
2	Radiated RF Emissions, 10 kHz – 9050.01 MHz (Transmitter Portion)	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and 15.249.
3	Radiated RF Emissions, 10 kHz – 9050.01 MHz (Digital and Receiver Portions)	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the POPickup, P/N: 31A000026. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B for the digital and receiver portions; and the limits defined in Subpart C, sections 15.205, 15.207, 15.209, and 15.249 for the transmitter portion.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

PerSage, Inc.

Jim Carrigan	President/CEO
Justin Foster	Senior Software Engineer

Compatible Electronics, Inc.

Kyle Fujimoto	Test Engineer
James Ross	Test Engineer

2.4 Date Test Sample was Received

The test sample was received just prior to the initial test date of March 7, 2008.

2.5 Disposition of the Test Sample

The sample has not been returned to PerSage, Inc. as of the date of this report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
AC	Alternating Current
DC	Direct Current
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
DoC	Declaration of Conformity
USB	Universal Serial Bus

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
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

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description Of Test Configuration - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

Transmit and Receive Mode: The POPickup, P/N: 31A000026 (EUT) was connected to its AC adapter and a laptop computer via its power and mini USB ports, respectively. Further, the laptop computer was also connected to a printer via its printer port. The EUT was tested in two orthogonal axes. The EUT was set to continuously transmit and receive.

Note: The EUT contains an external antenna, which has a reverse polarity SMA connector.

The final radiated as well as conducted data was taken in both modes above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

Cable 1

This is a 2-meter braid and foil shielded cable connecting the EUT to the laptop. The cable contains a mini USB connector at the EUT end and a standard USB end. The cable was bundled to a length of 1 meter and its shield was terminated to the chassis via the connectors.

Cable 2

This is a 2-meter braid and foil shielded cable connecting the laptop to the printer. The cable contains a metallic D-25 connector at the laptop end and a metallic Centronics type connector at the printer end. The cable was bundled to a length of 1 meter and its shield was terminated to the chassis via the connectors.

Cable 3

This is a 2-meter unshielded cable connecting the laptop to its AC Adapter. The cable contains a 3-pin power connector at the laptop end and is hard wired at the AC Adapter. The cable also contains a molded ferrite at the laptop end.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
POPICKUP (EUT)	PERSAGE, INC.	P/N: 31A000026	N/A	**VOL31A000026**
POPICKUP	PERSAGE, INC.	P/N: 31A000025	N/A	VOL31A000025
LAPTOP COMPUTER	DELL	PPO4L	CN-07X092-12961-2CI	DoC
AC ADAPTER (LAPTOP)	DELL	AA20031	CN-09364U-16291-01TG	N/A
PRINTER	CITIZEN	LSP-10	1184398-72	DLK66TLSP-10

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
RF RADIATED EMISSIONS TEST EQUIPMENT (LAB B AND LAB D)					
EMI Receiver	Rohde & Schwarz	ESIB40	100172	November 27, 2006	November 27, 2008
Preamplifier	Com Power	PA-102	1017	January 11, 2008	January 11, 2009
Microwave Preamplifier	Com Power	PA-122	181921	March 3, 2008	March 3, 2009
Biconical Antenna	Com Power	AB-900	15226	February 28, 2008	February 28, 2009
Log Periodic Antenna	Com Power	AL-100	16060	July 9, 2007	July 9, 2008
Horn Antenna	Com Power	AH-118	10073	July 17, 2006	July 17, 2008
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF RADIATED AND CONDUCTED EMISSIONS TEST EQUIPMENT (LAB A)					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08768	August 14, 2007	August 14, 2008
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	August 14, 2007	August 14, 2008
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	August 14, 2007	August 14, 2008
Loop Antenna	Com Power	AL-130	17089	September 24, 2007	September 24, 2008
Biconical Antenna	Com Power	AB-900	15227	February 28, 2008	February 28, 2009
Log Periodic Antenna	Com Power	AL-100	16241	July 9, 2007	July 9, 2008
Preamplifier	Com-Power	PA-103	1582	January 11, 2008	January 11, 2009
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
LISN	Com Power	LI-215	12076	September 6, 2007	September 6, 2008
LISN	Com Power	LI-215	12090	September 6, 2007	September 6, 2008
Transient Limiter	Com Power	252A910	1	September 19, 2007	September 19, 2008
Computer	Hewlett Packard	4530	US91912319	N/A	N/A

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was grounded via the shield of its USB cable.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B. Please note that this test was performed on the laptop since it supplies the EUT power through the USB connection.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The EMI Receiver and spectrum analyzer (along with the quasi-peak adapter) were used as a measuring meter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Preamplifier, Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier, Model: PA-122 was used for frequencies above 1 GHz. For frequencies below 30 MHz, the loop antenna was used, which contains its own built-in amplifier. The EMI Receiver and spectrum analyzer were used in the peak detect mode with the "Max Hold" feature activated. In this mode, the EMI Receiver or spectrum analyzer records the highest measured reading over all the sweeps.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the EMI Receiver or spectrum analyzer to keep the amplitude reading calibrated.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.0501 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

7.1.3 Radiated Emissions (Spurious and Harmonics) Test (Continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3-meter test distance to obtain the final test data. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.

8. CONCLUSIONS

The POPickup, P/N: 31A000026 (EUT), as tested, meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B for the digital and receiver portions; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.249 for the transmitter portion.

APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 or FCC Class B specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST	POPickup P/N: 31A000026 S/N: N/A

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

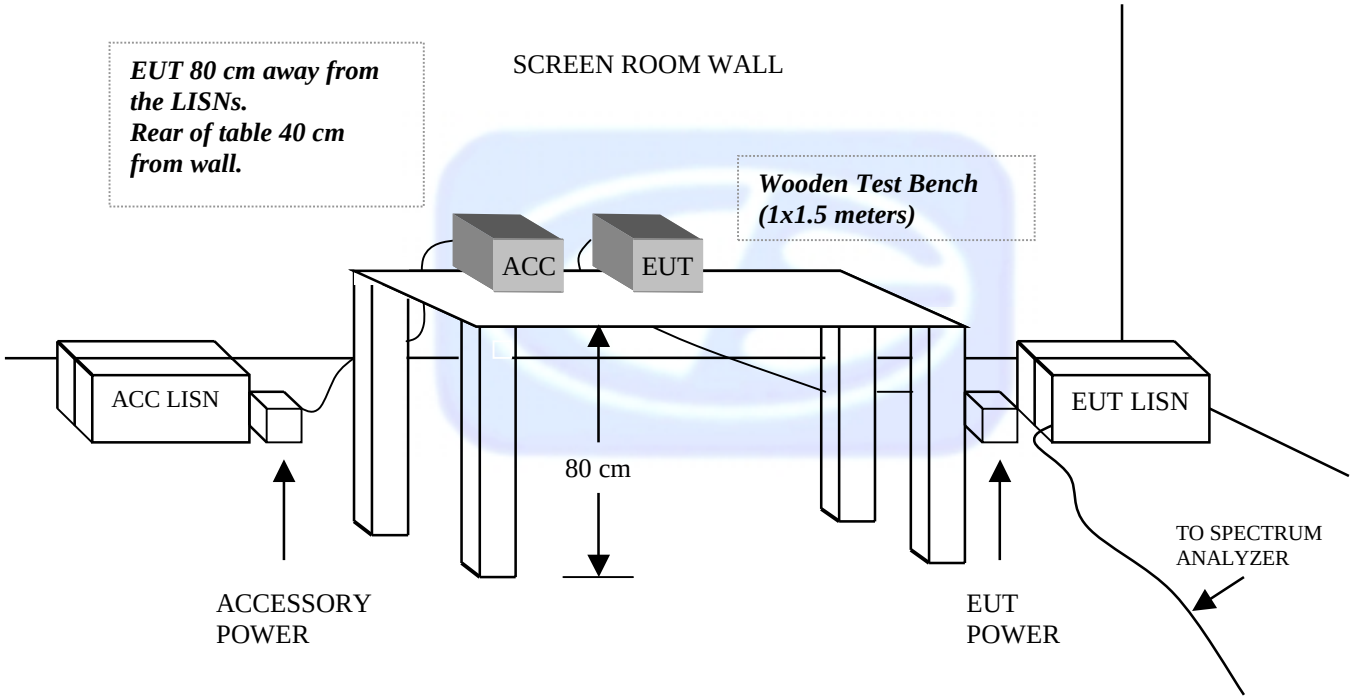
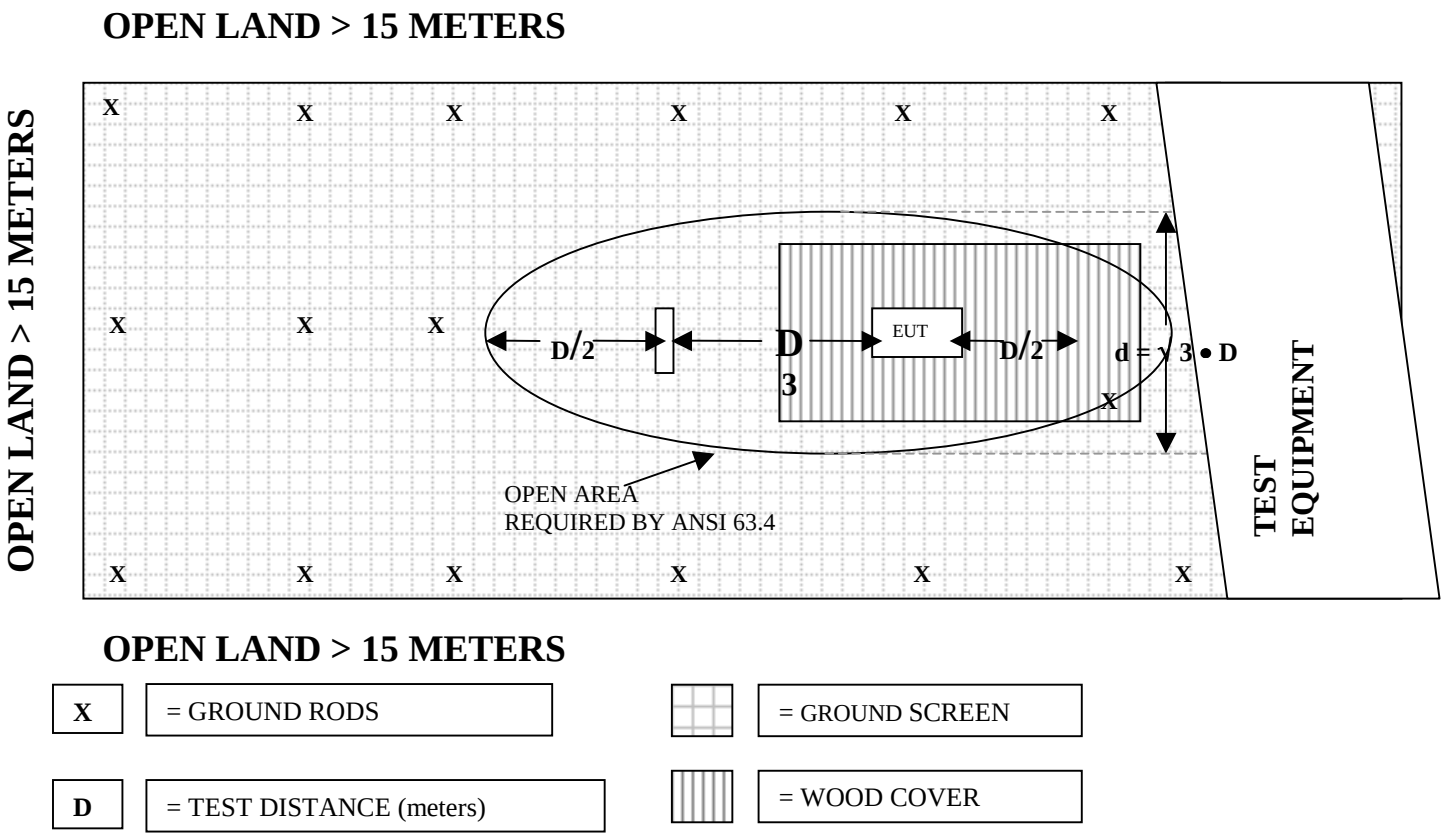


FIGURE 2: PLOT MAP AND LAYOUT OF THE 3 METER RADIATED SITE



COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15226

CALIBRATION DATE: FEBRUARY 28, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	12.1	100	10.7
35	12.2	120	13.6
40	11.7	140	12.1
45	9.9	160	12.2
50	11.3	180	15.2
60	9.4	200	16.5
70	7.6	250	16.5
80	6.0	275	18.1
90	6.8	300	21.5

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15227

CALIBRATION DATE: FEBRUARY 28, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	12.3	100	10.6
35	9.4	120	13.6
40	9.0	140	11.8
45	9.9	160	12.3
50	11.3	180	15.7
60	9.4	200	16.8
70	7.4	250	14.5
80	6.2	275	18.7
90	6.8	300	21.4

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16060

CALIBRATION DATE: JULY 9, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.5	700	20.5
400	15.8	800	21.6
500	17.0	900	21.3
600	19.2	1000	22.2

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16241

CALIBRATION DATE: JULY 9, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	15.2	700	19.9
400	15.4	800	22.3
500	17.0	900	22.3
600	19.1	1000	24.2

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: JANUARY 11, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.2	300	38.3
40	38.0	350	38.0
50	38.3	400	38.1
60	38.6	450	37.5
70	38.4	500	37.9
80	38.4	550	37.9
90	38.3	600	37.8
100	38.1	650	37.5
125	38.5	700	38.0
150	38.2	750	37.7
175	38.1	800	37.1
200	38.4	850	37.1
225	38.2	900	37.1
250	38.2	950	37.0
275	38.0	1000	36.5

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: JANUARY 11, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.9	300	32.4
40	32.7	350	32.4
50	32.8	400	32.2
60	32.9	450	31.7
70	32.9	500	32.1
80	32.9	550	31.8
90	32.7	600	32.0
100	32.8	650	32.0
125	32.9	700	32.1
150	32.6	750	32.0
175	32.7	800	31.6
200	32.7	850	31.6
225	32.5	900	31.5
250	32.7	950	31.7
275	32.5	1000	31.3

COM-POWER PA-122

PREAMPLIFIER

S/N: 181921

CALIBRATION DATE: MARCH 3, 2008

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	36.32	10.0	35.47
1.5	35.40	10.5	35.05
2.0	34.77	11.0	34.16
2.5	35.07	11.5	33.75
3.0	34.86	12.0	34.65
3.5	34.48	12.5	34.41
4.0	34.30	13.0	35.36
4.5	33.96	13.5	35.30
5.0	34.06	14.0	35.87
5.5	34.54	14.5	36.44
6.0	35.90	15.0	36.24
6.5	36.85	15.5	35.92
7.0	36.55	16.0	35.53
7.5	35.31	16.5	35.29
8.0	33.57	17.0	34.96
8.5	33.36	17.5	34.02
9.0	35.01	18.0	33.39
9.5	35.97	18.5	32.70

COM-POWER AH-118

DOUBLE RIDGE HORN ANTENNA

S/N: 10073

CALIBRATION DATE: JULY 17, 2006

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	25.331	10.0	42.391
1.5	27.507	10.5	39.194
2.0	31.581	11.0	38.504
2.5	30.906	11.5	40.724
3.0	30.276	12.0	41.079
3.5	30.396	12.5	41.014
4.0	30.881	13.0	41.201
4.5	32.77	13.5	42.335
5.0	34.067	14.0	43.248
5.5	33.914	14.5	45.639
6.0	34.028	15.0	43.197
6.5	35.779	15.5	41.751
7.0	38.347	16.0	42.462
7.5	39.096	16.5	41.908
8.0	39.377	17.0	40.277
8.5	38.646	17.5	48.117
9.0	37.438	18.0	54.113
9.5	38.403		

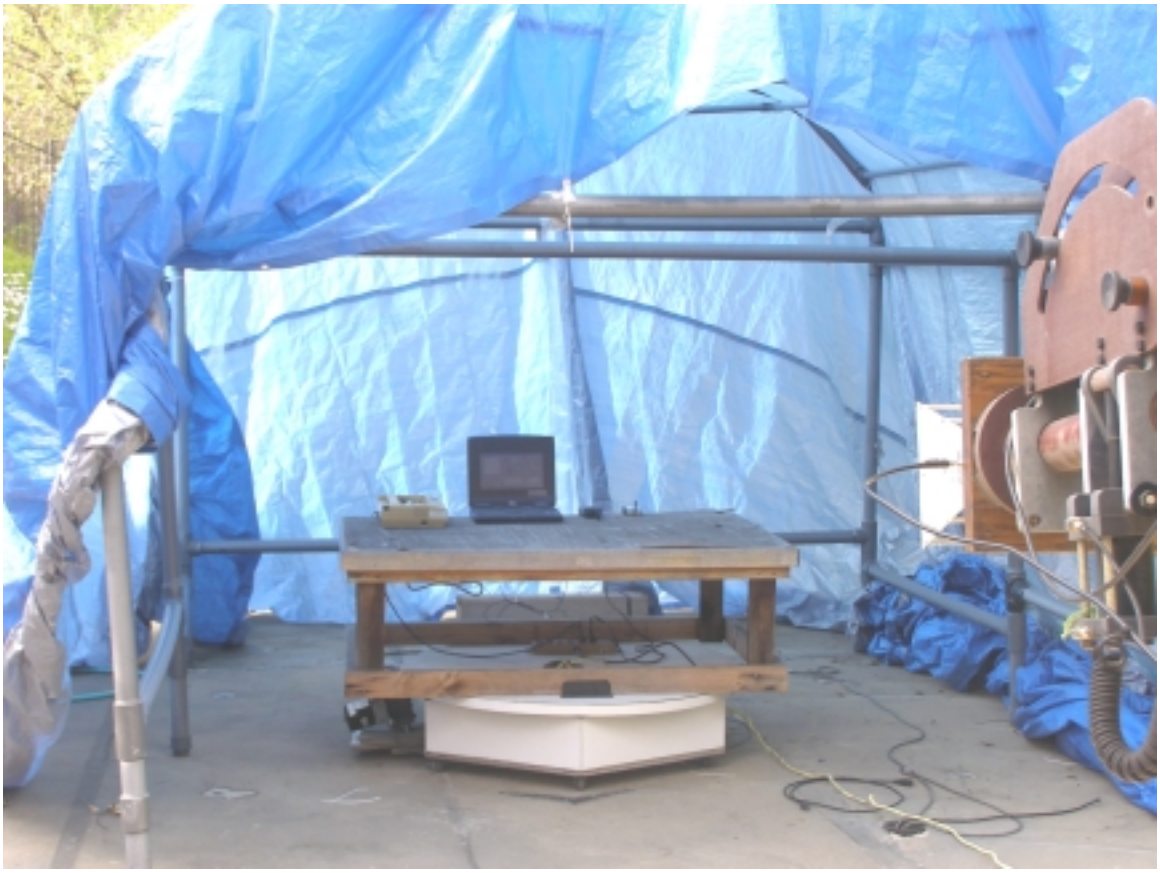
COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 24, 2007

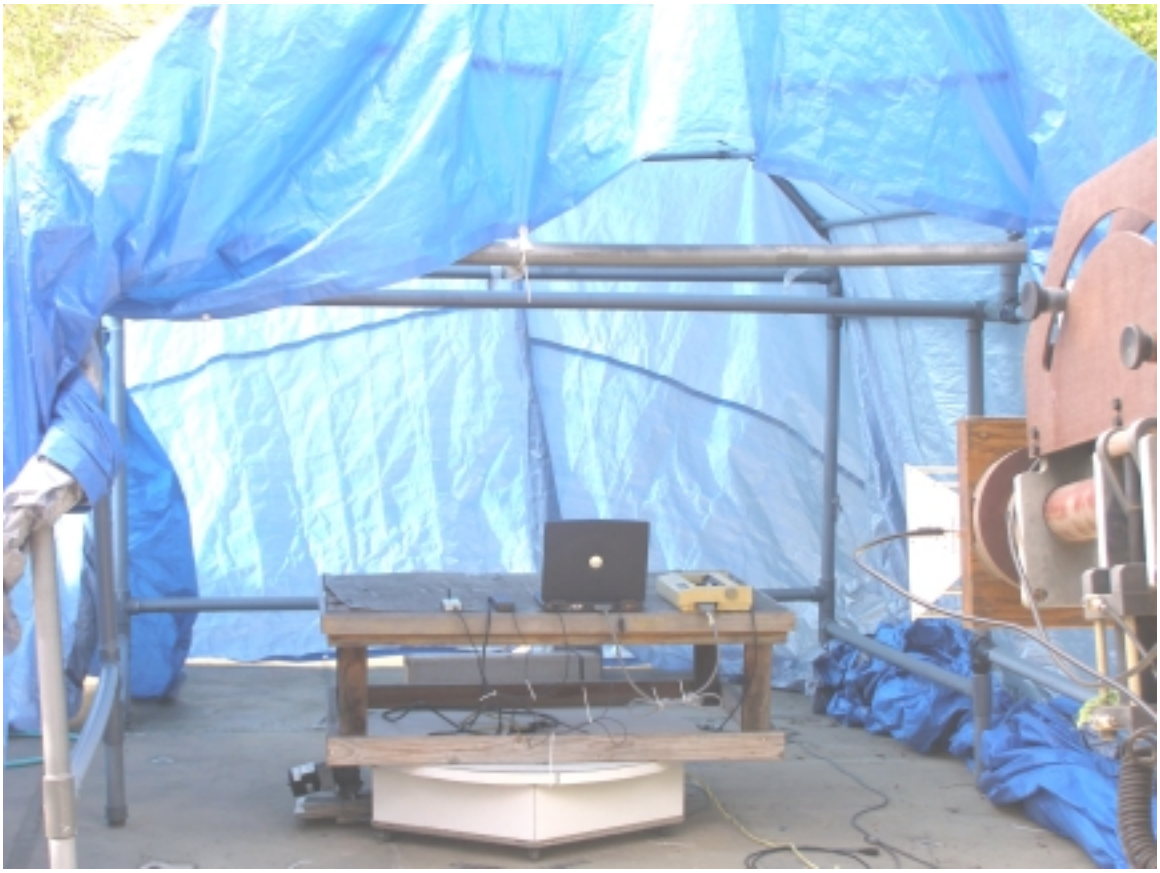
FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.27	10.23
0.01	-41.96	9.54
0.02	-41.73	9.77
0.03	-40.46	11.04
0.04	-40.56	10.94
0.05	-42.00	9.50
0.06	-41.30	10.20
0.1	-41.43	10.07
0.2	-43.90	7.60
0.3	-41.43	10.07
0.4	-41.40	10.10
0.5	-41.40	10.10
0.6	-40.93	10.57
1	-40.83	10.67
2	-40.3	11.20
5	-40.2	11.30
8	-40.6	10.90
9	-40.1	11.40
10	-40.4	11.10
15	-41.67	9.83
20	-41.10	10.40
25	-42.8	8.70
30	-42.8	8.70



FRONT VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – RADIATED EMISSIONS – LAB B

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – RADIATED EMISSIONS – LAB B

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – RADIATED EMISSIONS – LAB D

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – RADIATED EMISSIONS – LAB D

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – RADIATED EMISSIONS – LAB A

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – RADIATED EMISSIONS – LAB A

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – CONDUCTED EMISSIONS – LAB A

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

PERSAGE, INC.
POPickup
PART NUMBER: 31A000026
FCC SUBPART B AND C – CONDUCTED EMISSIONS – LAB A

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.249
PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/07/08
Labs: B and D
Tested By: Kyle Fujimoto

X-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
905.01	92.16	V	94	-1.84	Peak	1	315	
1810.02	39.63	V	74	-34.37	Peak	1.25	90	
1810	28.01	V	54	-25.99	Avg	1.25	90	
2715.03	41.41	V	74	-32.59	Peak	1.69	45	
2715	29.05	V	54	-24.95	Avg	1.69	45	
3620.04	43.41	V	74	-30.59	Peak	1.71	45	
3620.04	29.94	V	54	-24.06	Avg	1.71	45	
4525.05	45.77	V	74	-28.23	Peak	1.49	225	
4525.05	33.16	V	54	-20.84	Avg	1.49	225	
5430.06	48.69	V	74	-25.31	Peak	1.51	180	
5430.06	38.01	V	54	-15.99	Avg	1.51	180	
6335.07	51.86	V	74	-22.14	Peak	1.33	125	
6335.07	38.77	V	54	-15.23	Peak	1.33	125	
7240.08	46.65	V	74	-27.35	Peak	1.33	125	
7240.08	34.06	V	54	-19.94	Peak	1.33	125	
8145.09	48.41	V	74	-25.59	Peak	1.35	150	
8145.09	35.64	V	54	-18.36	Peak	1.35	150	
9050.1	47.79	V	74	-26.21	Peak	1.32	180	
9050.1	33.78	V	54	-20.22	Peak	1.32	180	

FCC 15.249
PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/07/08
Labs: B and D
Tested By: Kyle Fujimoto

X-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
905.01	90.06	H	94	-3.94	Peak	1	315	
1810.02	55.62	H	74	-18.38	Peak	2.14	135	
1810	33.57	H	54	-20.43	Avg	2.14	135	
2715.03	41.41	H	74	-32.59	Peak	2.15	225	
2715	28.98	H	54	-25.02	Avg	2.15	225	
3620.04	42.52	H	74	-31.48	Peak	2.14	135	
3620.04	29.79	H	54	-24.21	Avg	2.14	135	
4525.05	45.52	H	74	-28.48	Peak	2.16	135	
4525.05	33.09	H	54	-20.91	Avg	2.16	135	
5430.06	43.25	H	74	-30.75	Peak	1.71	135	
5430.06	32.09	H	54	-21.91	Avg	1.71	135	
6335.07	46.37	H	74	-27.63	Peak	1.65	180	
6335.07	32.86	H	54	-21.14	Avg	1.65	180	
7240.08	48.41	H	74	-25.59	Peak	1.65	225	
7240.08	36.28	H	54	-17.72	Avg	1.65	225	
8145.09	50.82	H	74	-23.18	Peak	1.51	135	
8145.09	37.97	H	54	-16.03	Avg	1.51	135	
9050.1	48.91	H	74	-25.09	Peak	1.71	315	
9050.1	35.83	H	54	-18.17	Avg	1.71	315	

FCC 15.249
PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/07/08
Labs: B and D
Tested By: Kyle Fujimoto

Z-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
905.01	93.66	V	94	-0.34	Peak	1	315	
1810.02	42.06	V	74	-31.94	Peak	1.69	225	
1810	27.65	V	54	-26.35	Avg	1.69	225	
2715.03	41.45	V	74	-32.55	Peak	1.69	225	
2715	29.67	V	54	-24.33	Avg	1.69	225	
3620.04	42.19	V	74	-31.81	Peak	1.69	225	
3620.04	29.97	V	54	-24.03	Avg	1.69	225	
4525.05	45.34	V	74	-28.66	Peak	1.75	150	
4525.05	33.16	V	54	-20.84	Avg	1.75	150	
5430.06	51.82	V	74	-22.18	Peak	1.69	135	
5430.06	36.99	V	54	-17.01	Avg	1.69	135	
6335.07	51.48	V	74	-22.52	Peak	1.75	150	
6335.07	38.84	V	54	-15.16	Avg	1.75	150	
7240.08	54.58	V	74	-19.42	Peak	1.69	150	
7240.08	42.27	V	54	-11.73	Avg	1.69	150	
8145.09	48.29	V	74	-25.71	Peak	1.69	125	
8145.09	35.66	V	54	-18.34	Avg	1.69	125	
9050.1	46.71	V	74	-27.29	Peak	1.69	125	
9050.1	33.85	V	54	-20.15	Avg	1.69	125	

FCC 15.249
PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/07/08
Labs: B and D
Tested By: Kyle Fujimoto

Z-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
905.01	89.69	H	94	-4.31	Peak	1	90	
1810.02	47.96	H	74	-26.04	Peak	1.37	135	
1810	24.19	H	54	-29.81	Avg	1.37	135	
2715.03	38.84	H	74	-35.16	Peak	1.65	225	
2715	25.82	H	54	-28.18	Avg	1.65	225	
3620.04	38.24	H	74	-35.76	Peak	1.65	180	
3620.04	26.22	H	54	-27.78	Avg	1.65	180	
4525.05	43.91	H	74	-30.09	Peak	1.66	270	
4525.05	29.65	H	54	-24.35	Avg	1.66	270	
5430.06	44.08	H	74	-29.92	Peak	1.67	180	
5430.06	33.82	H	54	-20.18	Avg	1.67	180	
6335.07	45.41	H	74	-28.59	Peak	1.68	90	
6335.07	32.94	H	54	-21.06	Avg	1.68	90	
7240.08	49.81	H	74	-24.19	Peak	1.65	135	
7240.08	36.31	H	54	-17.69	Avg	1.65	135	
8145.09	51.41	H	74	-22.59	Peak	1.68	180	
8145.09	37.84	H	54	-16.16	Avg	1.68	180	
9050.1	49.41	H	74	-24.59	Peak	1.65	225	
9050.1	35.81	H	54	-18.19	Avg	1.65	225	

FCC-B

PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/07/08
Labs: B and D
Tested By: Kyle Fujimoto

Radiated Emissions, 1 GHz to 9.0501 GHz, X-Axis (Worst Case)
Transmit and Receive Modes

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
5428.45	48.83	V	54	-5.17	Peak	1	90	Receive Mode
5428.08	47.44	H	54	-6.56	Peak	1	90	Receive Mode
								No other emissions
								detected from both modes
								vertical and horizontal
								polarizations

FCC-B
PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/11/08
Lab: A
Tested By: James Ross

Radiated Emissions, Transmit and Receive Modes, X-Axis (deemed worst case)
Test Frequency Range: 10 kHz to 30 MHz

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
No radiated emissions discovered within the above noted test frequency range								

FCC-B

PerSage, Inc.
POPickup
P/N: 31A000026

Date: 03/10/08
Lab: A
Tested By: Brandon Taylor

Radiated Emissions, Transmit and Receive Modes, X-Axis (deemed worst case)
Test Frequency Range: 30 MHz to 1 GHz

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
No radiated emissions discovered within the above noted test frequency range								

FCC 15.249

PerSage, Inc.
POPickup
P/N: 31A000026

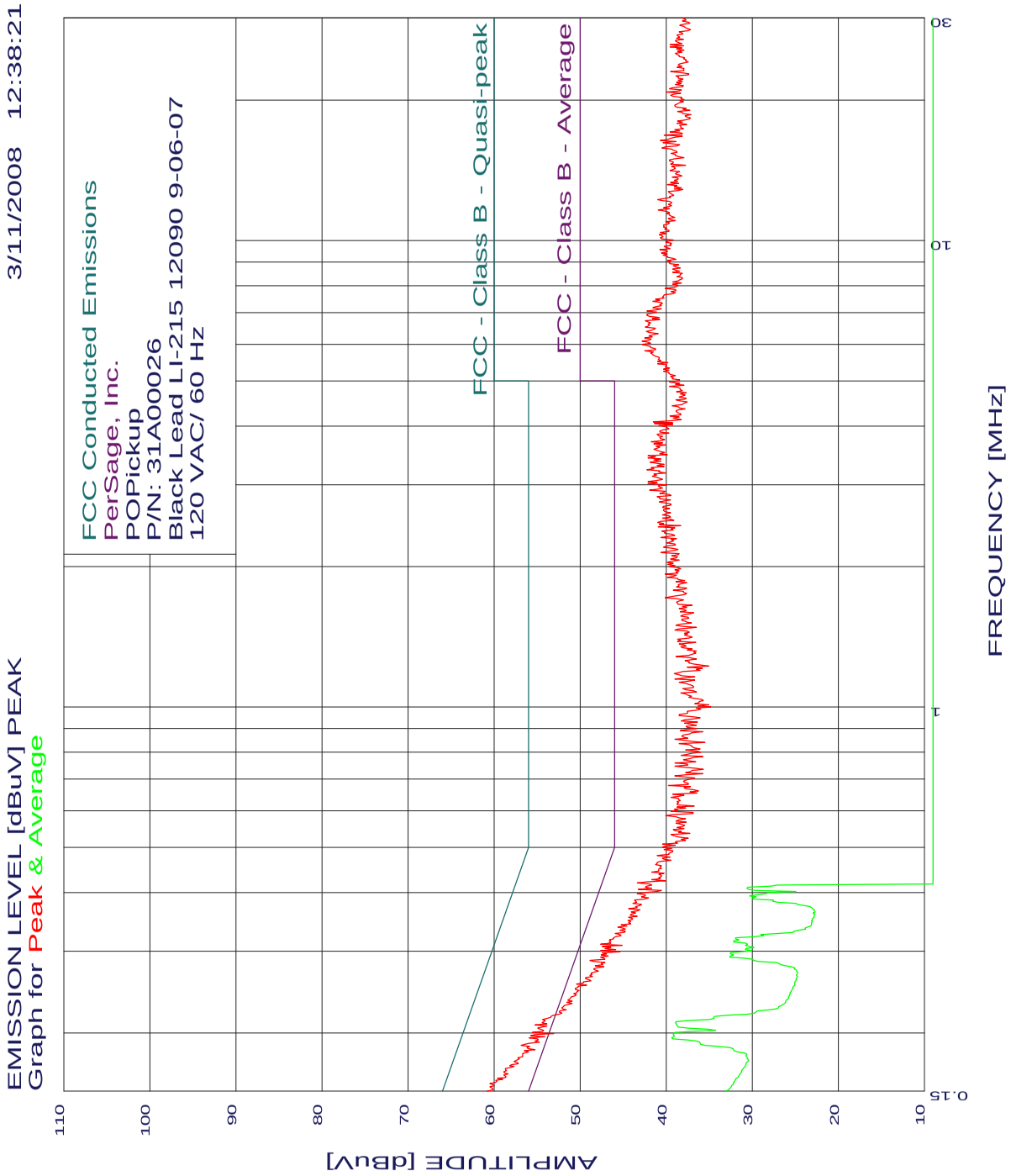
Date: 03/07/08
Labs: B and D
Tested By: Kyle Fujimoto

Band Edges in Worst Case Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902	29.58	V	46	-16.42	Peak	1	315	Z-Axis (Worst Case)
928	29.67	V	46	-16.33	Peak	1	315	Z-Axis (Worst Case)
902	26.65	H	46	-19.35	Peak	1	315	X-Axis (Worst Case)
928	25.43	H	46	-20.57	Peak	1	315	X-Axis (Worst Case)

CONDUCTED EMISSIONS

DATA SHEETS


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
3/11/2008 12:38:21
FCC Conducted Emissions
PerSage, Inc.
POPickup
P/N: 31A00026
Black Lead LI-215 12090 9-06-07
120 VAC/ 60 Hz
FCC - Class B - Quasi-peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30
FREQUENCY [MHz]

PerSage, Inc. 3/11/2008 12:38:21
POPickup
P/N: 31A00026
Black Lead - 120 VAC/ 60 Hz
Test Engineer: James Ross

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49 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

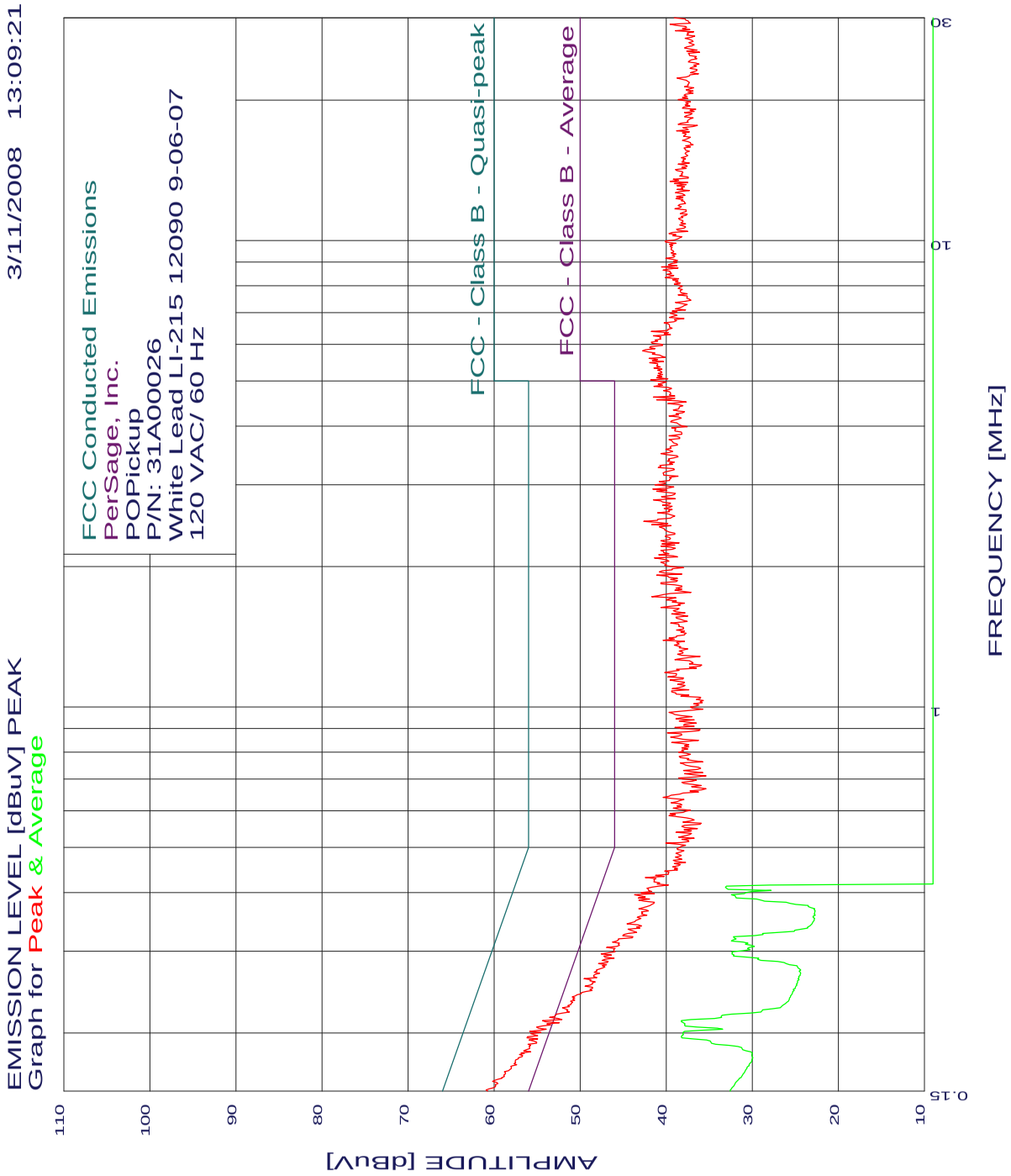
Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.150	60.77	56.00	4.77**
2	0.188	56.83	54.10	2.73**
3	0.196	55.93	53.80	2.13**
4	0.198	55.72	53.71	2.01**
5	0.208	55.22	53.27	1.95**
6	0.201	55.52	53.58	1.94**
7	0.255	50.42	51.60	-1.17**
8	0.286	48.82	50.63	-1.80**
9	0.310	47.62	49.97	-2.34**
10	0.300	47.62	50.23	-2.61**
11	0.279	48.22	50.85	-2.63**
12	0.307	47.42	50.05	-2.63**
13	3.226	42.21	46.00	-3.79
14	3.456	42.12	46.00	-3.88
15	3.043	42.11	46.00	-3.89
16	3.011	42.11	46.00	-3.89
17	2.916	41.90	46.00	-4.10
18	0.419	43.33	47.46	-4.13
19	3.346	41.82	46.00	-4.18
20	0.369	44.33	48.52	-4.19
21	3.702	41.73	46.00	-4.27
22	3.124	41.61	46.00	-4.39
23	0.379	43.83	48.29	-4.47**
24	0.406	43.23	47.72	-4.49
25	4.092	41.45	46.00	-4.55
26	3.565	41.43	46.00	-4.57
27	0.398	43.33	47.90	-4.57**
28	4.050	41.35	46.00	-4.65
29	2.826	41.00	46.00	-5.00
30	2.488	40.99	46.00	-5.01
31	2.436	40.89	46.00	-5.11
32	4.008	40.84	46.00	-5.16
33	2.751	40.80	46.00	-5.20
34	3.903	40.74	46.00	-5.26
35	0.481	41.03	46.32	-5.29
36	0.442	41.63	47.02	-5.39
37	2.310	40.58	46.00	-5.42
38	2.145	40.58	46.00	-5.42
39	2.384	40.48	46.00	-5.52
40	0.508	40.43	46.00	-5.57
41	0.500	40.43	46.01	-5.58
42	0.426	41.63	47.33	-5.70
43	2.201	40.28	46.00	-5.72
44	1.929	40.07	46.00	-5.93
45	1.717	40.06	46.00	-5.94
46	0.586	40.03	46.00	-5.97
47	2.250	39.88	46.00	-6.12
48	2.044	39.87	46.00	-6.13
49	1.899	39.87	46.00	-6.13

****Please see the previous graph and the following data sheet for the averaged information**

PerSage, Inc. 3/11/2008 12:38:21
POPickup
P/N: 31A00026
Black Lead - 120 VAC/ 60 Hz
Test Engineer: James Ross

---
7 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.211	38.90	53.18	-14.28
2	0.196	39.33	53.80	-14.47
3	0.409	30.62	47.68	-17.06
4	0.315	32.16	49.84	-17.67
5	0.393	30.26	47.99	-17.73
6	0.291	32.58	50.49	-17.91
7	0.150	33.08	56.00	-22.92


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
3/11/2008 13:09:21
FCC Conducted Emissions
PerSage, Inc.
POPickup
P/N: 31A00026
White Lead LI-215 12090 9-06-07
120 VAC/ 60 Hz
FCC - Class B - Quasi-peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30
FREQUENCY [MHz]

PerSage, Inc. 3/11/2008 13:09:21
POPickup
P/N: 31A00026
White Lead - 120 VAC/ 60 Hz
Test Engineer: James Ross

---
49 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.150	60.69	56.00	4.69**
2	0.196	56.13	53.80	2.33**
3	0.202	55.82	53.53	2.29**
4	0.206	55.02	53.35	1.67**
5	0.213	54.32	53.09	1.23**
6	0.216	53.52	52.96	0.56**
7	0.262	49.52	51.38	-1.86**
8	0.296	47.52	50.36	-2.84**
9	0.305	46.92	50.10	-3.18**
10	2.501	42.59	46.00	-3.41
11	2.462	41.69	46.00	-4.31
12	0.396	43.63	47.95	-4.32**
13	1.726	41.66	46.00	-4.34
14	2.932	41.50	46.00	-4.50
15	2.781	41.50	46.00	-4.50
16	4.624	41.47	46.00	-4.53
17	0.324	45.02	49.62	-4.59**
18	0.343	44.52	49.13	-4.61**
19	4.877	41.38	46.00	-4.62
20	2.089	41.37	46.00	-4.63
21	2.995	41.31	46.00	-4.69
22	0.431	42.43	47.24	-4.81
23	2.900	41.10	46.00	-4.90
24	0.334	44.42	49.35	-4.93**
25	0.400	42.93	47.86	-4.93**
26	1.918	41.07	46.00	-4.93
27	4.552	41.06	46.00	-4.94
28	2.610	40.99	46.00	-5.01
29	0.385	43.13	48.16	-5.04**
30	3.260	40.92	46.00	-5.08
31	2.123	40.87	46.00	-5.13
32	2.436	40.79	46.00	-5.21
33	1.950	40.77	46.00	-5.23
34	3.492	40.62	46.00	-5.38
35	0.369	43.13	48.52	-5.39**
36	2.274	40.58	46.00	-5.42
37	2.214	40.58	46.00	-5.42
38	1.849	40.57	46.00	-5.43
39	1.637	40.56	46.00	-5.44
40	2.826	40.50	46.00	-5.50
41	2.238	40.48	46.00	-5.52
42	1.389	40.36	46.00	-5.64
43	0.641	40.34	46.00	-5.66
44	3.175	40.31	46.00	-5.69
45	1.184	40.15	46.00	-5.85
46	0.435	41.23	47.15	-5.92
47	0.510	40.03	46.00	-5.97
48	1.699	39.96	46.00	-6.04
49	0.881	39.85	46.00	-6.15

**Please see the previous graph and the following data sheet for the averaged information

PerSage, Inc. 3/11/2008 13:09:21
POPickup
P/N: 31A00026
White Lead - 120 VAC/ 60 Hz
Test Engineer: James Ross

---
7 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.411	33.10	47.63	-14.54
2	0.213	38.21	53.09	-14.88
3	0.396	32.43	47.95	-15.52
4	0.197	38.22	53.75	-15.53
5	0.315	32.42	49.84	-17.41
6	0.299	32.37	50.28	-17.91
7	0.150	32.56	56.00	-23.44