

*FCC PART 15, SUBPART B and C
TEST REPORT*
for
RF ID READER
MODEL: Power Tracker VII

Prepared for

 AVID IDENTIFICATION SYSTEMS, INC.
 3185 HAMNER AVENUE
 NORCO, CALIFORNIA 92860

 Prepared by: Kyle Fujimoto

KYLE FUJIMOTO

 Approved by: James Ross

JAMES ROSS

 COMPATIBLE ELECTRONICS INC.
 114 OLINDA DRIVE
 BREA, CALIFORNIA 92823
 (714) 579-0500

DATE: MAY 2, 2006

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	16	2	2	13	12	47	

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Brea Division
 114 Olinda Drive
 Brea, CA 92823
 (714) 579-0500

Agoura Division
 2337 Troutdale Drive
 Agoura, CA 91301
 (818) 597-0600

Silverado Division
 19121 El Toro Road
 Silverado, CA 92676
 (949) 589-0700

Lake Forest Division
 20621 Pascal Way
 Lake Forest, CA 92630
 (949) 587-0400

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2	Plot Map And Layout of Radiated Site

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: RF ID Reader
 Model: Power Tracker VII
 S/N: N/A

Product Description: See Expository Statement

Modifications: The EUT was not modified in order to meet the specifications.

Manufacturer: Avid Identification Systems, Inc.
 3185 Hamner Avenue
 Norco, California 92860

Test Dates: March 27 and 28, 2006

Test Specifications: EMI requirements
 CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15.207, and 15.209

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 Subpart C, section 15.207.
2	Radiated RF Emissions, 10 kHz - 1000 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, and 15.209.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the RF ID Reader Model: Power Tracker VII. 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; and Subpart C, sections 15.205, 15.207, and 15.209.



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

Avid Identification Systems, Inc.

Michael F. Cruz Director of Engineering

Compatible Electronics, Inc.

Kyle Fujimoto Test Engineer
James Ross Test Engineer

2.4 Date Test Sample was Received

The test sample was received on March 14, 2006

2.5 Disposition of the Test Sample

The sample has not yet been returned to Avid Identification Systems, Inc. as of May 2, 2006.

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
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

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

The RF ID Reader Model: Power Tracker VII (EUT) was connected to the computer via its RS-232 port. An AC Adapter was also connected to the power port on the interface cable going from the EUT to the serial port of the computer. The computer was also connected to the monitor, printer, keyboard, and mouse via its monitor, parallel, keyboard, and mouse ports, respectively. The EUT was continuously transmitting an RF signal. Also, the status of the RF ID reading was displayed on the monitor connected to the computer.

The antenna is a coil that is hard wired into the computer.

After the EUT is activated by pressing the button, the transmission will cease operation once the button is released.

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

4.1.1 **Cable Construction and Termination**

Cable 1

This is a 1.2 meter foil shielded cable connecting the EUT to the computer. It has a D-9 pin metallic connector at the EUT end and a D-9 pin metallic and a 1/8 inch power connector at the other end. The cable was bundled to a length of 1 meter. The shield of the cable was grounded to the chassis via the connectors. The 1/8 inch power connector was connected to an AC Adapter (see cable #5).

Cable 2

This is a 1.5 meter braid and foil shielded cable connecting the printer to the computer. It has a D-25 pin metallic connector at the computer end and a Centronics metallic type connector at the printer end. The cable was bundled to a length of 1 meter. The shield of the cable was grounded to the chassis via the connectors.

Cable 3

This is a 1.7 meter foil shielded cable connecting the computer to the keyboard. The cable has a metallic 6 pin mini DIN connector at the computer end and is hard wired into the keyboard. The shield of the cable was grounded to the chassis via the connector.

Cable 4

This is a 2 meter foil shielded cable connecting the computer to the mouse. The cable has a metallic 6 pin mini DIN connector at the computer end and is hard wired into the mouse. The shield of the cable was grounded to the chassis via the connector.

Cable 5

This is a 2 meter braid and foil shielded cable connecting the monitor to the computer. The cable has a high density D-15 pin metallic connector at the computer end and is hard wired into the monitor. The cable was bundled to a length of 1 meter. The shield of the cable was grounded to the chassis via the connector. The cable has a molded ferrite at the monitor end.

Cable 6

This is a 2 meter unshielded cable connecting cable #1 to the AC Adapter. It has a 1/8 inch power connector at the cable #1 end and is hard wired into the AC Adapter.

5. **LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**

5.1 **EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
RF ID READER (EUT)	AVID IDENTIFICATION SYSTEMS, INC.	Power Tracker VII	N/A	IOL-134-AV1028
AC ADAPTER FOR RF ID READER	FAIRWAY ELECTRONICS COMPANY, LIMITED	WN10A-120	N/A	N/A
PRINTER	CITIZEN	LSP-10	1130060-73	DLK66TLSP-10
MONITOR	DELL	OP-520-4001	N/A	DoC
COMPUTER	DELL	E77	C37000221N	DoC
KEYBOARD	DELL	SK-8110	CN-07N242-71616-377-D034	DoC
MOUSE	DELL	M-SAW34	HCD35312230	DZL211029
COMPUTER	DELL	MMS	9Z3R001	DoC



5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08784	June 10, 2005	June 10, 2006
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22279	June 10, 2005	June 10, 2006
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	June 11, 2005	June 11, 2006
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Preamplifier	Com Power	PA-103	1582	January 19, 2006	Jan. 19, 2007
Biconical Antenna	Com Power	AB-900	15251	March 9, 2006	March 9, 2007
Log Periodic Antenna	Com Power	AL-100	16247	August 22, 2005	Aug. 22, 2006
Loop Antenna	Com Power	AL-130	17089	September 21, 2005	Sept. 21, 2006
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
LISN	Com Power	LI-215	12090	September 1, 2005	Sept.1, 2006
LISN	Com Power	LI-215	12076	September 1, 2005	Sept. 1, 2006
Transient Limiter	Seaward	252A910	K39-0220	August 17, 2005	Aug. 17, 2006

6. TEST SITE DESCRIPTION

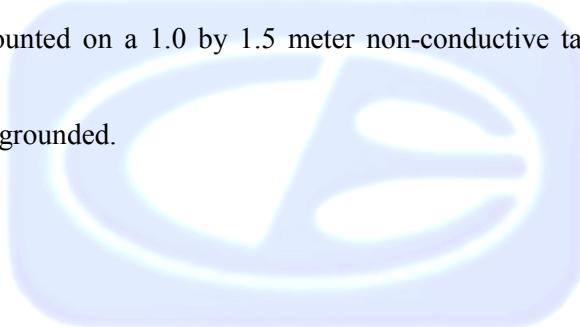
6.1 Test Facility Description

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 not grounded.



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 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 10 dB attenuation pad 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 conducted emissions 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:

The EUT 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 for conducted emissions.

7.2

Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Preamplifier Model: PA-103 was used for frequencies from 30 MHz to 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

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

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 loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

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 10 meter test distance below 30 MHz and a 3 meter test distance above 30 MHz to obtain the final test data. The final qualification data sheets are located in Appendix E.

7.3 Radiated Emissions (Spurious and Harmonics) Test (continued)**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 and 15.209.



8. CONCLUSIONS

The RF ID Reader Model: Power Tracker VII meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, and 15.209.



APPENDIX A

LABORATORY RECOGNITIONS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

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

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

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 during testing.



Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

RF ID Reader
Model: Power Tracker VII
S/N: N/A

There were no additional models covered under this report.



APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

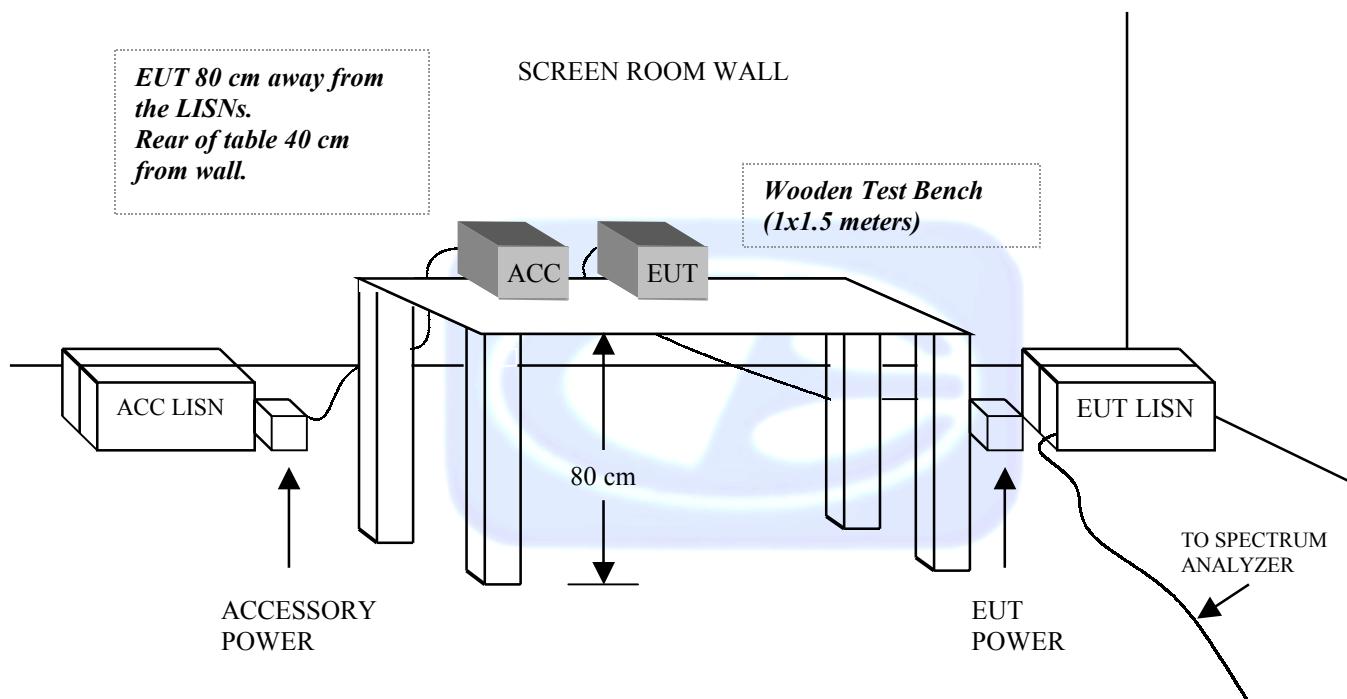
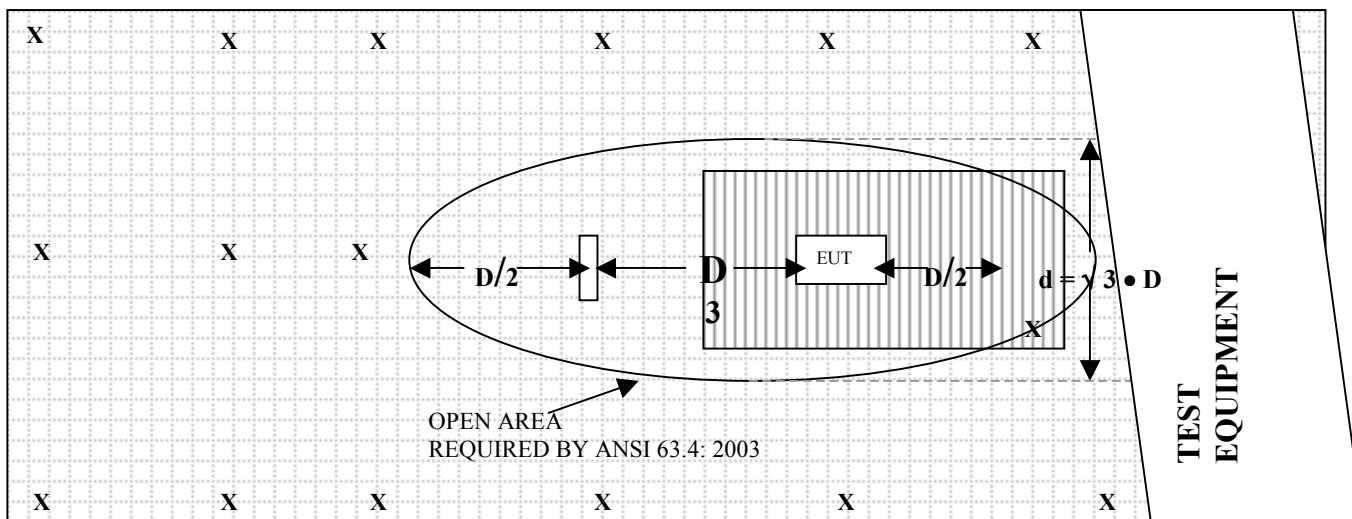
FIGURE 1: CONDUCTED EMISSIONS TEST SETUP


FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE
OPEN LAND > 15 METERS

OPEN LAND > 15 METERS

 = GROUND RODS	 = GROUND SCREEN
 = TEST DISTANCE (meters)	 = WOOD COVER

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15251

CALIBRATION DATE: MARCH 9, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.27	120	13.04
35	10.29	125	12.67
40	9.72	140	11.91
45	11.45	150	11.61
50	13.34	160	13.67
60	11.44	175	15.97
70	8.41	180	16.64
80	6.21	200	16.54
90	7.50	250	16.96
100	11.65	300	17.48

COM-POWER AL-100**LOG PERIODIC ANTENNA****S/N: 16247****CALIBRATION DATE: AUGUST 22, 2005**

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	12.70	700	19.72
400	13.19	800	20.59
500	14.99	900	21.10
600	15.95	1000	24.35

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: JANUARY 19, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.7	300	32.4
40	32.6	350	32.4
50	32.6	400	32.1
60	32.8	450	32.1
70	32.7	500	31.8
80	32.7	550	31.8
90	32.7	600	32.0
100	32.6	650	31.9
125	32.6	700	31.5
150	32.5	750	31.7
175	32.4	800	31.4
200	32.5	850	31.6
225	32.5	900	30.8
250	32.3	950	31.1
275	32.4	1000	30.9

COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 21, 2005

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-42.84	8.66
0.01	-41.93	9.57
0.02	-41.29	10.21
0.05	-42.37	9.13
0.07	-41.8	9.7
0.1	-41.83	9.67
0.2	-44.13	7.37
0.3	-41.73	9.77
0.5	-41.8	9.7
0.7	-41.53	9.97
1	-41.46	10.04
2	-41.14	10.36
3	-41.26	10.24
4	-41.46	10.04
5	-41.10	10.40
10	-40.83	10.67
15	-41.47	10.03
20	-35.44	16.06
25	-42.37	9.13
30	-42.94	8.56

**FRONT VIEW****AVID IDENTIFICATION SYSTEMS, INC.****RF ID READER****MODEL: Power Tracker VII****FCC SUBPART B AND FCC SUBPART C – RADIATED EMISSIONS – BELOW 30 MHz****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500**Agoura Division**
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600**Silverado Division**
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700**Lake Forest Division**
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

**REAR VIEW****AVID IDENTIFICATION SYSTEMS, INC.****RF ID READER****MODEL: Power Tracker VII****FCC SUBPART B AND FCC SUBPART C – RADIATED EMISSIONS – BELOW 30 MHz****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
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Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500**Agoura Division**
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600**Silverado Division**
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700**Lake Forest Division**
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

**FRONT VIEW****AVID IDENTIFICATION SYSTEMS, INC.****RF ID READER****MODEL: Power Tracker VII****FCC SUBPART B AND FCC SUBPART C – RADIATED EMISSIONS – ABOVE 30 MHz****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500**Agoura Division**
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600**Silverado Division**
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700**Lake Forest Division**
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

**REAR VIEW****AVID IDENTIFICATION SYSTEMS, INC.****RF ID READER****MODEL: Power Tracker VII****FCC SUBPART B AND FCC SUBPART C – RADIATED EMISSIONS – ABOVE 30 MHz****PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500**Agoura Division**
2337 Troutdale Drive
Agoura, CA 91301
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19121 El Toro Road
Silverado, CA 92676
(949) 589-0700**Lake Forest Division**
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

**FRONT VIEW**

AVID IDENTIFICATION SYSTEMS, INC.
RF ID READER
MODEL: Power Tracker VII
FCC SUBPART B AND FCC SUBPART C – CONDUCTED EMISSIONS

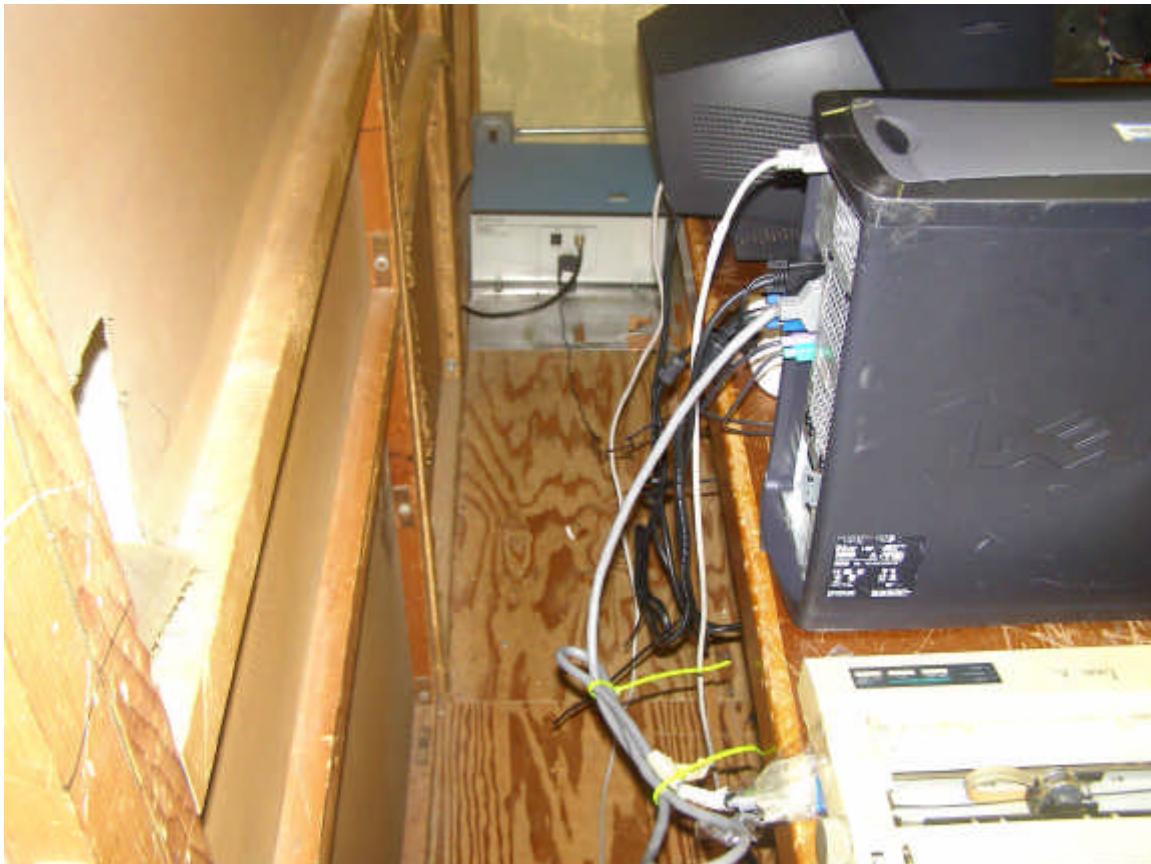
**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

**REAR VIEW**

AVID IDENTIFICATION SYSTEMS, INC.
RF ID READER
MODEL: Power Tracker VII
FCC SUBPART B AND FCC SUBPART C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

APPENDIX E

DATA SHEETS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

RADIATED EMISSIONS
DATA SHEETS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



**COMPATIBLE
ELECTRONICS**

Test Location : Compatible Electronics Page : 1/1
Customer : Avid Identification Systems, Inc. Date : 3/28/2006
Manufacturer : Avid Identification Systems, Inc. Time : 12:11:15
Eut name : RF ID Reader Lab : A
Model : Mini-Tracker Test Distance : 10 Meters
Serial # : N/A
Specification : FCC B
Distance correction factor (40 * log(test/spec)) : - 59.08
Test Mode : Test Type: Qualification
Test Range: 10 kHz to 30 MHz (Vertical and Horizontal)
Note: Reading #1 is X-Axis - Receive Antenna Facing EUT
Test Engineer: Kyle Fujimoto

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor' d rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	0.1340	61.40	0.10	9.10	00.00	11.52	25.06	-13.54
2V	Y-Axis - Receive Antenna Facing EUT 0.1340	53.90	0.10	9.10	00.00	04.02	25.06	-21.04
3V	Z-Axis - Receive Antenna Facing EUT 0.1340	57.90	0.10	9.10	00.00	08.02	25.06	-17.04
4H	X-Axis - Receive Antenna Perpendicular to the EUT 0.1340	66.80	0.10	9.10	00.00	16.92	25.06	-8.14
5H	Y-Axis - Receive Antenna Perpendicular to the EUT 0.1340	56.20	0.10	9.10	00.00	6.32	25.06	-18.74
6H	Z-Axis - Receive Antenna Perpendicular to the EUT 0.1340	59.80	0.10	9.10	00.00	9.92	25.06	-15.14



COMPATIBLE ELECTRONICS

Test Location : Compatible Electronics Page : 1/2
Customer : Avid Identification Systems, Inc. Date : 3/27/2006
Manufacturer : Avid Identification Systems, Inc. Time : 16:03:18
Eut name : RF ID Reader Lab : A
Model : Pwr Tracker VII Test Distance : 3 Meters
Serial # : N/A
Specification : FCC B
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Test Type: Qualification
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Temperature 65 Degrees F., Relative Humidity 72%
Test Engineer: Kyle Fujimoto

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor' d rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	38.993	50.60	1.77	9.83	32.61	29.59	40.00	-10.41
2V	61.244	58.60	2.14	11.04	32.79	38.99	40.00	-1.01
3V	61.244Qp	57.69	2.14	11.04	32.79	38.08	40.00	-1.92
4V	64.450	60.30	2.24	10.03	32.75	39.82	40.00	-0.18
5V	64.450Qp	59.95	2.24	10.03	32.75	39.47	40.00	-0.53
6H	70.908	60.30	2.41	8.20	32.70	38.21	40.00	-1.79
7H	70.908Qp	59.89	2.41	8.20	32.70	37.80	40.00	-2.20
8V	86.983	60.90	2.57	7.13	32.70	37.90	40.00	-2.10
9V	86.983Qp	58.81	2.57	7.13	32.70	35.81	40.00	-4.19
10V	103.097	61.60	2.75	11.88	32.60	43.64	43.50	0.14
11V	103.097Qp	61.04	2.75	11.88	32.60	43.08	43.50	-0.42
12V	112.765	59.20	2.92	12.57	32.60	42.08	43.50	-1.42
13V	112.765Qp	58.63	2.92	12.57	32.60	41.51	43.50	-1.99
14H	115.993	52.90	2.97	12.78	32.60	36.05	43.50	-7.45
15V	116.009	57.00	2.97	12.78	32.60	40.15	43.50	-3.35
16V	122.408	53.40	3.06	12.86	32.60	36.72	43.50	-6.78
17V	125.658	52.90	3.10	12.63	32.60	36.04	43.50	-7.46
18V	128.862	59.70	3.12	12.47	32.58	42.70	43.50	-0.80
19V	128.862Qp	58.86	3.12	12.47	32.58	41.86	43.50	-1.64
20H	128.880	53.50	3.12	12.47	32.58	36.50	43.50	-7.00
21V	135.310	60.30	3.14	12.14	32.56	43.03	43.50	-0.47
22V	135.310Qp	60.08	3.14	12.14	32.56	42.81	43.50	-0.69
23V	144.038	60.90	3.18	11.79	32.52	43.34	43.50	-0.16
24V	144.038Qp	60.36	3.18	11.79	32.52	42.80	43.50	-0.70
25H	144.059	46.00	3.18	11.79	32.52	28.44	43.50	-15.06
26V	167.533	56.00	3.27	14.85	32.43	41.69	43.50	-1.81
27V	167.533Qp	55.66	3.27	14.85	32.43	41.35	43.50	-2.15
28V	170.733	56.90	3.28	15.34	32.42	43.10	43.50	-0.40
29V	170.763Qp	55.86	3.28	15.34	32.42	42.07	43.50	-1.43
30V	186.817	51.60	3.45	16.60	32.45	39.20	43.50	-4.30
31V	196.516	50.20	3.56	16.56	32.49	37.83	43.50	-5.67
32V	202.944	51.10	3.62	16.57	32.50	38.79	43.50	-4.71
33V	206.144	51.00	3.65	16.60	32.50	38.75	43.50	-4.75
34V	212.622	49.40	3.70	16.66	32.50	37.26	43.50	-6.24
35V	302.776	47.60	4.24	12.72	32.40	32.16	46.00	-13.84



**COMPATIBLE
ELECTRONICS**

Test Location : Compatible Electronics Page : 2/2
Customer : Avid Identification Systems, Inc. Date : 3/27/2006
Manufacturer : Avid Identification Systems, Inc. Time : 16:03:18
Eut name : RF ID Reader Lab : A
Model : Pwr Tracker VII Test Distance : 3 Meters
Serial # : N/A
Specification : FCC B
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Test Type: Qualification
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Temperature 65 Degrees F., Relative Humidity 72%
Test Engineer: Kyle Fujimoto

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor' d rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
36V	306. 008	51. 00	4. 29	12. 73	32. 40	35. 62	46. 00	- 10. 38
37V	309. 253	52. 80	4. 34	12. 75	32. 40	37. 49	46. 00	- 8. 51
38V	312. 453	51. 90	4. 38	12. 77	32. 40	36. 65	46. 00	- 9. 35
39V	324. 245	47. 00	4. 55	12. 83	32. 40	31. 99	46. 00	- 14. 01
40H	324. 249	48. 10	4. 55	12. 83	32. 40	33. 09	46. 00	- 12. 91
41H	334. 990	43. 60	4. 70	12. 89	32. 40	28. 79	46. 00	- 17. 21
42V	347. 875	42. 40	4. 87	12. 95	32. 40	27. 82	46. 00	- 18. 18
43V	384. 675	33. 70	5. 18	13. 12	32. 19	19. 82	46. 00	- 26. 18
44V	399. 426	41. 30	5. 30	13. 19	32. 10	27. 68	46. 00	- 18. 32
45H	400. 294	45. 00	5. 30	13. 20	32. 10	31. 40	46. 00	- 14. 60
46H	409. 083	43. 60	5. 40	13. 37	32. 10	30. 27	46. 00	- 15. 73
47V	409. 112	40. 10	5. 40	13. 37	32. 10	26. 77	46. 00	- 19. 23
48H	412. 303	42. 40	5. 43	13. 43	32. 10	29. 16	46. 00	- 16. 84
49V	421. 948	44. 20	5. 53	13. 62	32. 10	31. 25	46. 00	- 14. 75
50H	421. 988	42. 20	5. 53	13. 62	32. 10	29. 25	46. 00	- 16. 75
51V	425. 182	44. 60	5. 56	13. 68	32. 10	31. 74	46. 00	- 14. 26
52H	425. 182	40. 60	5. 56	13. 68	32. 10	27. 74	46. 00	- 18. 26
53V	441. 270	47. 60	5. 72	13. 98	32. 10	35. 20	46. 00	- 10. 80
54H	454. 173	43. 70	5. 85	14. 21	32. 07	31. 69	46. 00	- 14. 31
55H	520. 076	46. 90	6. 57	15. 20	31. 80	36. 86	46. 00	- 9. 14
56V	534. 718	40. 70	6. 68	15. 34	31. 80	30. 93	46. 00	- 15. 07

CONDUCTED EMISSIONS
DATA SHEETS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

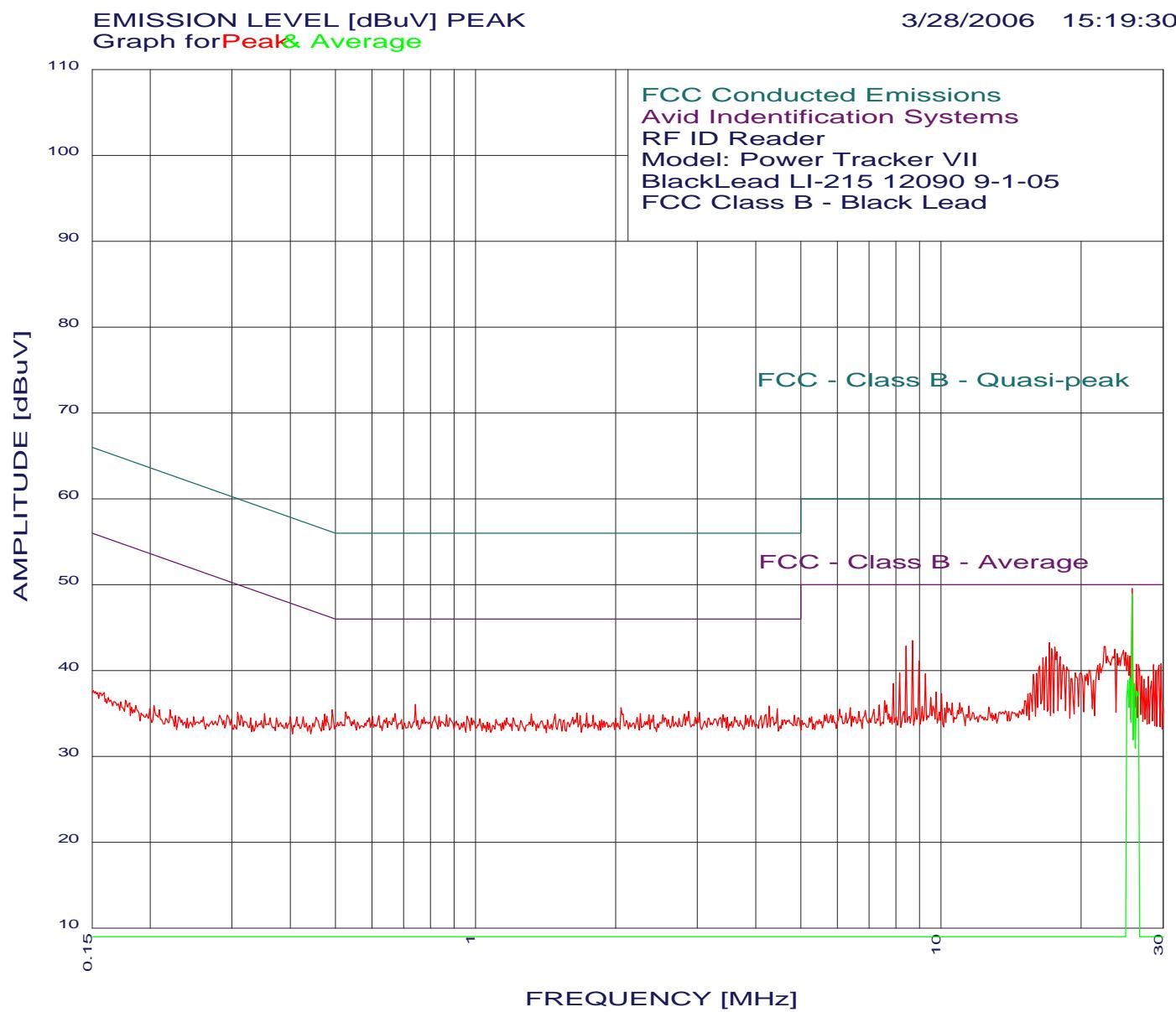
Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



COMPATIBLE ELECTRONICS





Avid Identification Systems

RF ID Reader

Model: Power Tracker VII

FCC Class B - Black Lead

TEST ENGINEER : Kyle Fujimoto

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	25.740	49.52	50.00	-0.48*
2	8.685	43.46	50.00	-6.54
3	17.116	43.21	50.00	-6.79
4	8.416	42.84	50.00	-7.16
5	22.428	42.78	50.00	-7.22
6	17.573	42.74	50.00	-7.26
7	17.294	42.52	50.00	-7.48
8	23.650	42.47	50.00	-7.53
9	24.664	42.35	50.00	-7.65
10	24.933	42.10	50.00	-7.90
11	23.901	41.96	50.00	-8.04
12	25.202	41.74	50.00	-8.26
13	25.471	41.68	50.00	-8.32
14	16.849	41.59	50.00	-8.41
15	18.050	41.57	50.00	-8.43
16	16.582	41.48	50.00	-8.52
17	8.969	41.08	50.00	-8.92
18	21.959	40.80	50.00	-9.20
19	29.696	40.76	50.00	-9.24
20	26.278	40.70	50.00	-9.30
21	18.336	40.69	50.00	-9.31
22	28.615	40.65	50.00	-9.35
23	26.566	40.64	50.00	-9.36
24	29.387	40.61	50.00	-9.39
25	21.724	40.61	50.00	-9.39
26	16.315	40.56	50.00	-9.44
27	18.622	40.40	50.00	-9.60
28	20.825	40.06	50.00	-9.94
29	0.743	36.05	46.00	-9.95
30	28.924	39.99	50.00	-10.01
31	4.272	35.82	46.00	-10.18
32	19.439	39.72	50.00	-10.28
33	8.148	39.72	50.00	-10.28
34	19.950	39.70	50.00	-10.30
35	16.059	39.64	50.00	-10.36
36	2.055	35.63	46.00	-10.37
37	9.256	39.61	50.00	-10.39
38	20.607	39.57	50.00	-10.43
39	15.810	39.53	50.00	-10.47
40	4.456	35.53	46.00	-10.47
41	26.999	39.34	50.00	-10.66
42	0.492	35.44	46.14	-10.70
43	27.864	39.28	50.00	-10.72
44	2.870	35.20	46.00	-10.80
45	0.527	35.14	46.00	-10.86
46	3.027	35.11	46.00	-10.89
47	19.133	39.03	50.00	-10.97
48	1.735	35.01	46.00	-10.99
49	1.654	35.00	46.00	-11.00

*Please See The Average Readings on the Next Page and on the Plot



**COMPATIBLE
ELECTRONICS**

3/28/2006 15:19:30

Avid Identification Systems

RF ID Reader

Model: Power Tracker VII

FCC Class B - Black Lead

TEST ENGINEER : Kyle Fujimoto

5 highest peaks above -50.00 dB of FCC - Class B - Average limit line

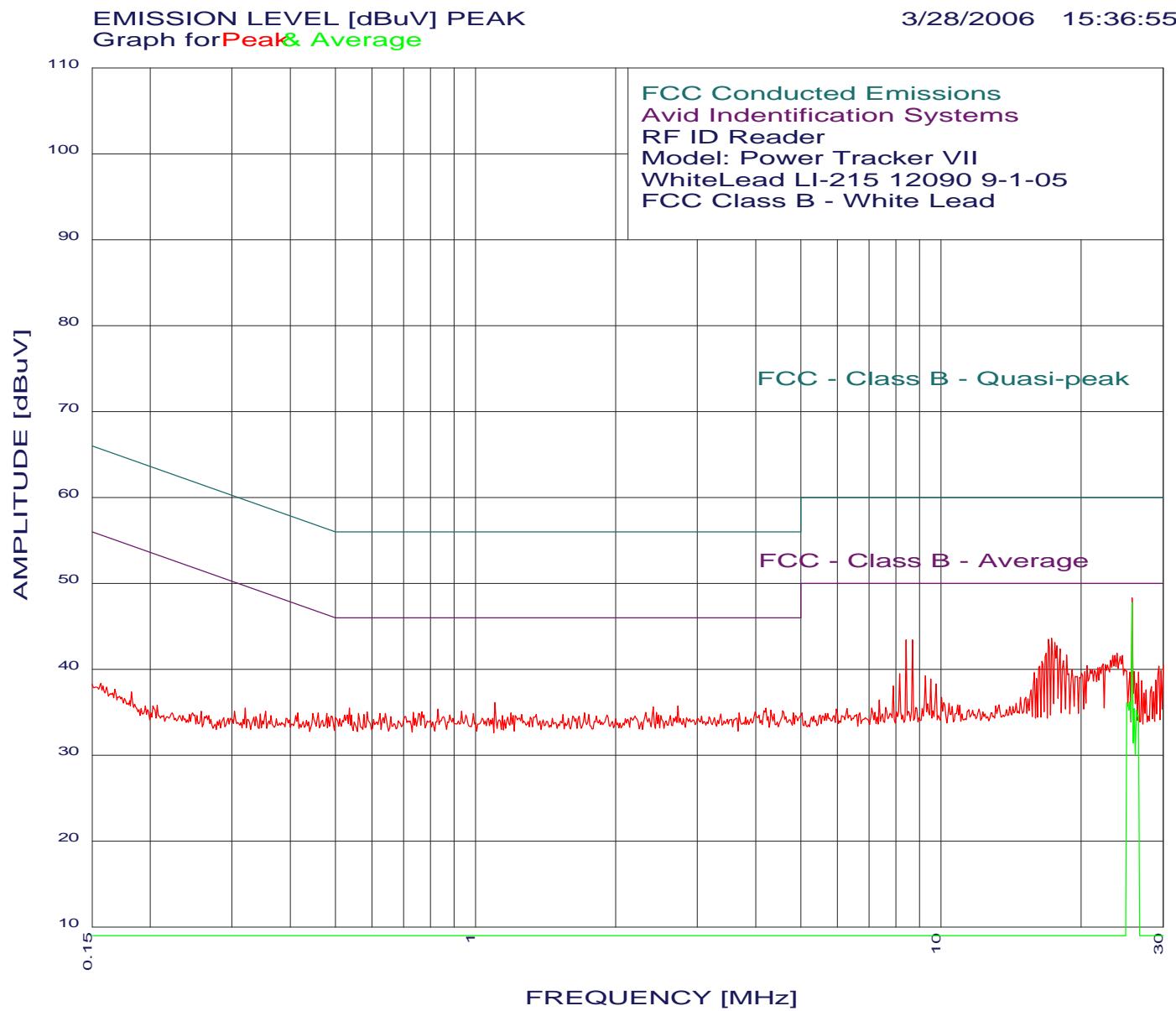
Peak criteria : 1.00 dB, Curve : Average

Peak# Freq(MHz)Amp(dBuV)Limit(dB) Delta(dB)

1	25.740	48.92	50.00	-1.08
2	25.471	39.10	50.00	-10.90
3	25.202	38.86	50.00	-11.14
4	26.009	38.45	50.00	-11.55
5	26.278	37.56	50.00	-12.44



COMPATIBLE ELECTRONICS





Avid Identification Systems

RF ID Reader

Model: Power Tracker VII

FCC Class B - White Lead

TEST ENGINEER : Kyle Fujimoto

49 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.00 dB, Curve : Peak

Peak# Freq(MHz)Amp(dBuV)Limit(dB) Delta(dB)

1	25.740	48.29	50.00	-1.71*
2	17.294	43.58	50.00	-6.42
3	17.027	43.46	50.00	-6.54
4	8.685	43.40	50.00	-6.60
5	8.416	43.38	50.00	-6.62
6	17.573	43.10	50.00	-6.90
7	17.764	42.71	50.00	-7.29
8	18.050	42.33	50.00	-7.67
9	16.849	41.85	50.00	-8.15
10	23.901	41.84	50.00	-8.16
11	18.622	41.67	50.00	-8.33
12	23.650	41.61	50.00	-8.39
13	24.529	41.59	50.00	-8.41
14	23.399	41.57	50.00	-8.43
15	24.278	41.45	50.00	-8.55
16	23.148	41.04	50.00	-8.96
17	18.336	40.95	50.00	-9.05
18	16.493	40.93	50.00	-9.07
19	22.310	40.62	50.00	-9.38
20	22.545	40.55	50.00	-9.45
21	30.000	40.50	50.00	-9.50
22	22.779	40.49	50.00	-9.51
23	20.607	40.41	50.00	-9.59
24	29.387	40.34	50.00	-9.66
25	16.315	40.32	50.00	-9.68
26	21.959	40.23	50.00	-9.77
27	21.724	40.16	50.00	-9.84
28	1.100	36.08	46.00	-9.92
29	24.798	40.03	50.00	-9.97
30	19.133	39.90	50.00	-10.10
31	20.935	39.89	50.00	-10.11
32	21.154	39.88	50.00	-10.12
33	21.373	39.87	50.00	-10.13
34	29.696	39.82	50.00	-10.18
35	20.388	39.72	50.00	-10.28
36	26.009	39.72	50.00	-10.28
37	2.722	35.70	46.00	-10.30
38	26.566	39.67	50.00	-10.33
39	25.471	39.66	50.00	-10.34
40	15.893	39.59	50.00	-10.41
41	2.410	35.57	46.00	-10.43
42	20.059	39.54	50.00	-10.46
43	18.826	39.48	50.00	-10.52
44	8.148	39.45	50.00	-10.55
45	0.535	35.44	46.00	-10.56
46	4.204	35.44	46.00	-10.56
47	0.831	35.36	46.00	-10.64
48	4.316	35.25	46.00	-10.75
49	9.256	39.25	50.00	-10.75

*Please See The Average Readings on the Next Page and on the Plot



**COMPATIBLE
ELECTRONICS**

3/28/2006 15:36:55

Avid Identification Systems
RF ID Reader

Model: Power Tracker VII

FCC Class B - White Lead

TEST ENGINEER : Kyle Fujimoto

6 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.00 dB, Curve : Average

Peak# Freq(MHz)Amp(dBuV)Limit(dB) Delta(dB)

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	25.740	47.73	50.00	-2.27
2	25.471	36.20	50.00	-13.80
3	25.067	36.10	50.00	-13.90
4	26.009	35.42	50.00	-14.58
5	26.278	35.22	50.00	-14.78
6	26.566	34.62	50.00	-15.38
