



ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

UNINTENTIONAL RADIATOR

433.92 MHz RECEIVER

MODEL: 200.0153

FCC ID: NATRX2000153

REPORT NUMBER: 05U3269-1

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Prepared for

**SmarTire SYSTEM INC.
#150 13151 VANIER PLACE
RICHMOND, BC V6V2J1
CANADA**

Prepared by

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LAB CODE:200065-0

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1. VERIFICATION OF COMPLIANCE

COMPANY NAME: SmarTire Systems Inc.
#150 13151 Vanier Place
Richmond, BC V6V2J1, Canada

EUT DESCRIPTION: 433.92 MHz RECEIVER

MODEL NUMBER: 200.0153

DATE TESTED: FEBRUARY 14, 2005

TYPE OF EQUIPMENT	SECURITY EQUIPMENT (UNINTENTIONAL RADIATOR)
EQUIPMENT TYPE	433.92 MHz SUPER HETERPDYNE RECEIVER
MEASUREMENT PROCEDURE	ANSI 63.4 / 2001
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15.109

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government.

Tested By:



THANH NGUYEN
EMC TECHNICIAN
COMPLIANCE CERTIFICATION SERVICES

Approved & Released By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

2. PRODUCT DESCRIPTION

The SmarTire 200.0153 is a 433.92MHz Tire Pressure Monitoring Receiver. It receives Data from TPMS Transmitter and sends to an on-vehicle CAN Bus.

3. TEST FACILITY

The test sites and measurement facility used to collect the radiated data is located at 561F Monterey Road, Morgan Hill, California, U.S.A. A detailed description of the test facilities was submitted to the Commission on May 27, 1994.

The measuring instrument which was utilized in performing the tests documented herein has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment which is traceable to recognized national standards.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

5. MEASUREMENT EQUIPMENT USED

TEST EQUIPMENT LIST				
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
Site B Preamplifier, 1300MHz	HP	8447D	2944A06589	08/20/2005
Quasi-Peak Adaptor	HP	85650A	2811A01155	05/24/2005
SA RF Section, 1.5 GHz	HP	85680B	2814A04227	02/22/2005
SA Display Section 2	HP	85662A	2816A16696	05/24/2005
30MHz---- 2Ghz	Sunol Sciences	JB1 Antenna	A121003	12/22/2005
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-	2023	08/30/2005
LISN, 10 kHz ~ 30 MHz	Solar	012-50-R-24-BN	8379443	10/21/2005
Site A Line Stabilizer / Conditioner	Tripplite	LC-1800a	A0051681	CNR
EMI Test Receiver	R & S	ESHS 20	827129/006	10/22/2005

6. MEASUREMENT EQUIPMENT USED

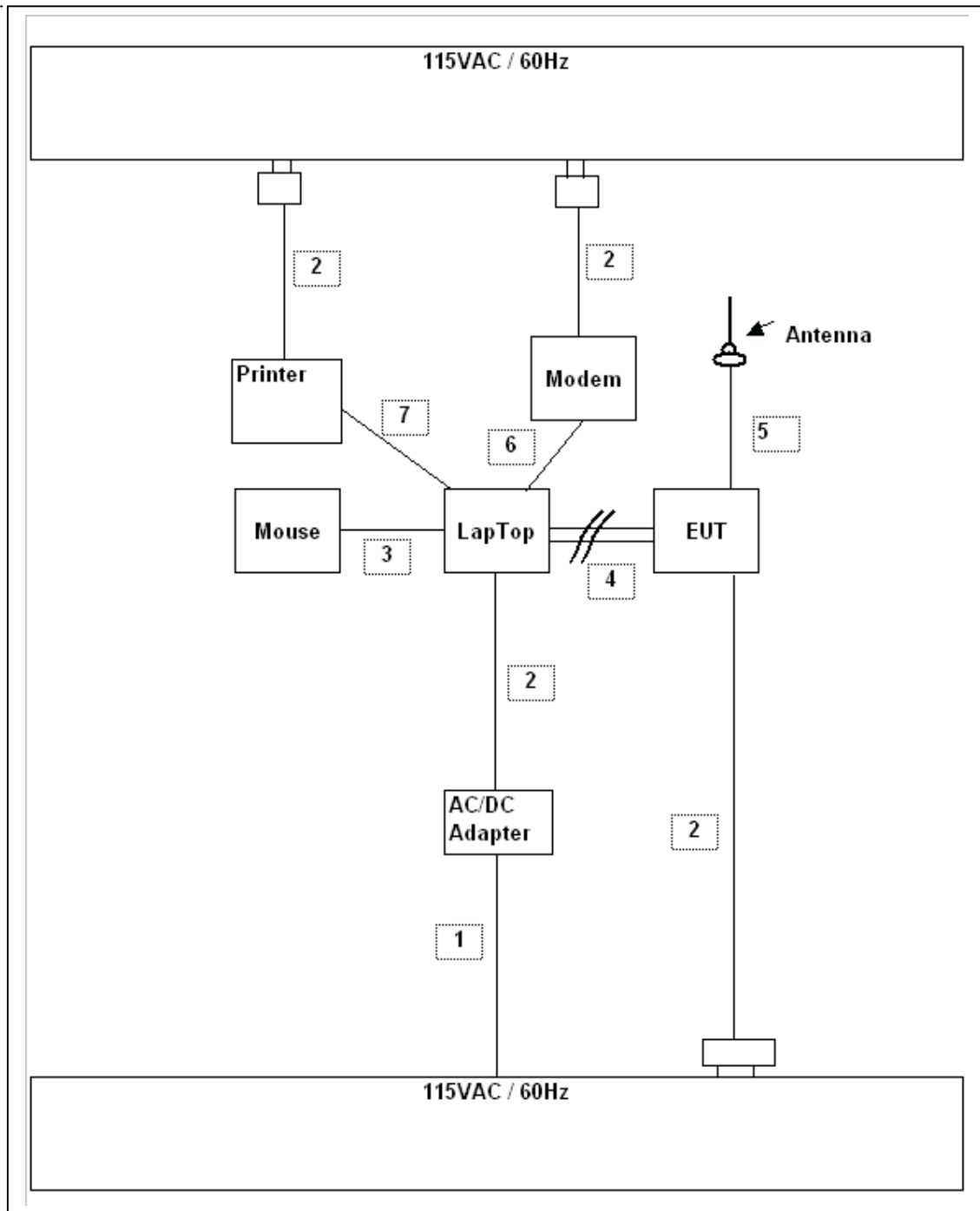
SUPPORT EQUIPMENT

TEST PERIPHERALS				
Device Type	Manufacturer	Model Number	Serial Number	FCC ID
Laptop	HP	Pavilion ze4101	CN24600055	N/A
Mouse	MS	MS X08	4942306	N/A
Printer	HP	2225C	2930S52614	DSI6XU2225
Modem	ACEEX	1414	NA	IFAXDM1415

I/O CABLES

TEST I / O CABLES								
Cable No	I/O Port	# of I/O Port	Connector Type	Type of Cable	Cable Length	Data Traffic	Bundled	Remark
1	AC	1	US 115V	Un-shielded	2m	No	No	N/A
2	DC	4	DC Plug	Un-shielded	2m	No	No	N/A
3	Mouse	1	PS2	Un-shielded	1.5m	No	No	N/A
4	Paralell	1	DB12	AW26	3m	Yes	No	Tie together
5	Antenna	1	Antenna Plug	Shielded	5m	Yes	No	N/A
6	Serial	1	DB15	Un-shielded	1.5m	No	Yes	N/A
7	Paralell	1	DB25	Shielded	1.5m	No	Yes	N/A

TEST SETUP



7. TEST CONFIGURATION

Turn on the EUT and set all the wires are placed on the turn-table to their maximum length to simulate the worse emission conditions.

8. TESTS CONDUCTED

CFR 47, 15.109 RADIATED EMISSION TESTS	CONDUCTED AT 3 METERS
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9. RADIATED EMISSION TEST PROCEDURE

The EUT and all other support equipment are placed on a wooden table 80 cm above the ground screen. Antenna to EUT distance is 3 meters. During the test, the table is rotated 360 degrees to maximize emissions and the antenna is positioned from 1 to 4 meters above the ground screen to further maximize emissions. The antenna is polarized in both vertical and horizontal positions.

Monitor the frequency range of interest at a fixed antenna height and EUT azimuth. Frequency span should be small enough to easily differentiate between broadcast stations and intermittent ambients. Rotate EUT 360 degrees to maximize emissions received from EUT. If emission increases by more than 1 dB, or if another emission appears that is greater by 1 dB, return to azimuth where maximum occurred and perform additional cable manipulation to further maximize received emission.

Move antenna up and down to further maximize suspected highest amplitude signal. If emission increased by 1 dB or more, or if another emission appears that is greater by 1dB or more, return to antenna height where maximum signal was observed and manipulate cables to produce highest emissions, noting frequency and amplitude.

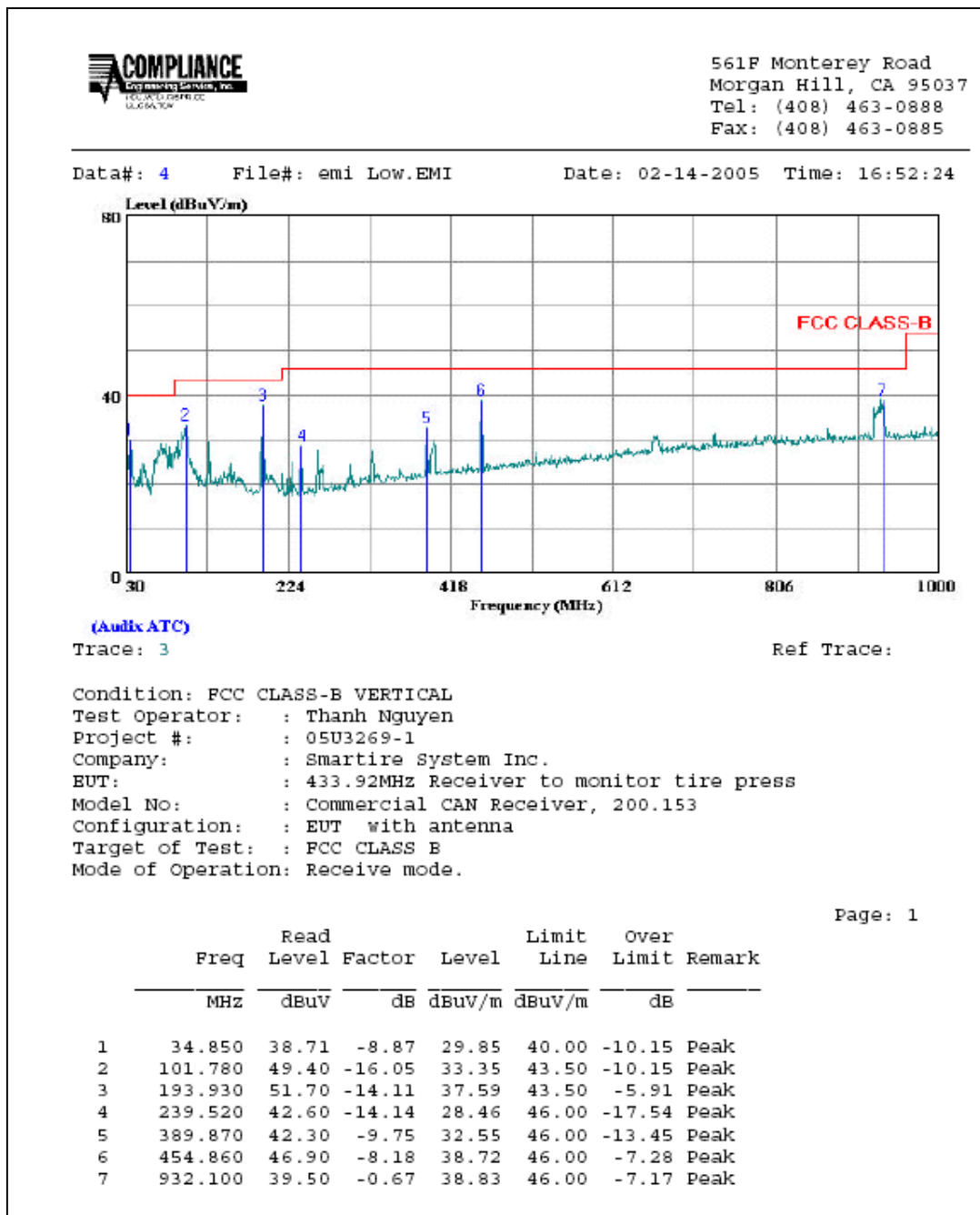
10. EQUIPMENT MODIFICATIONS

To achieve compliance to FCC section 15.109, the following change(s) were made during compliance testing:

No modifications were made to the EUT during testing.

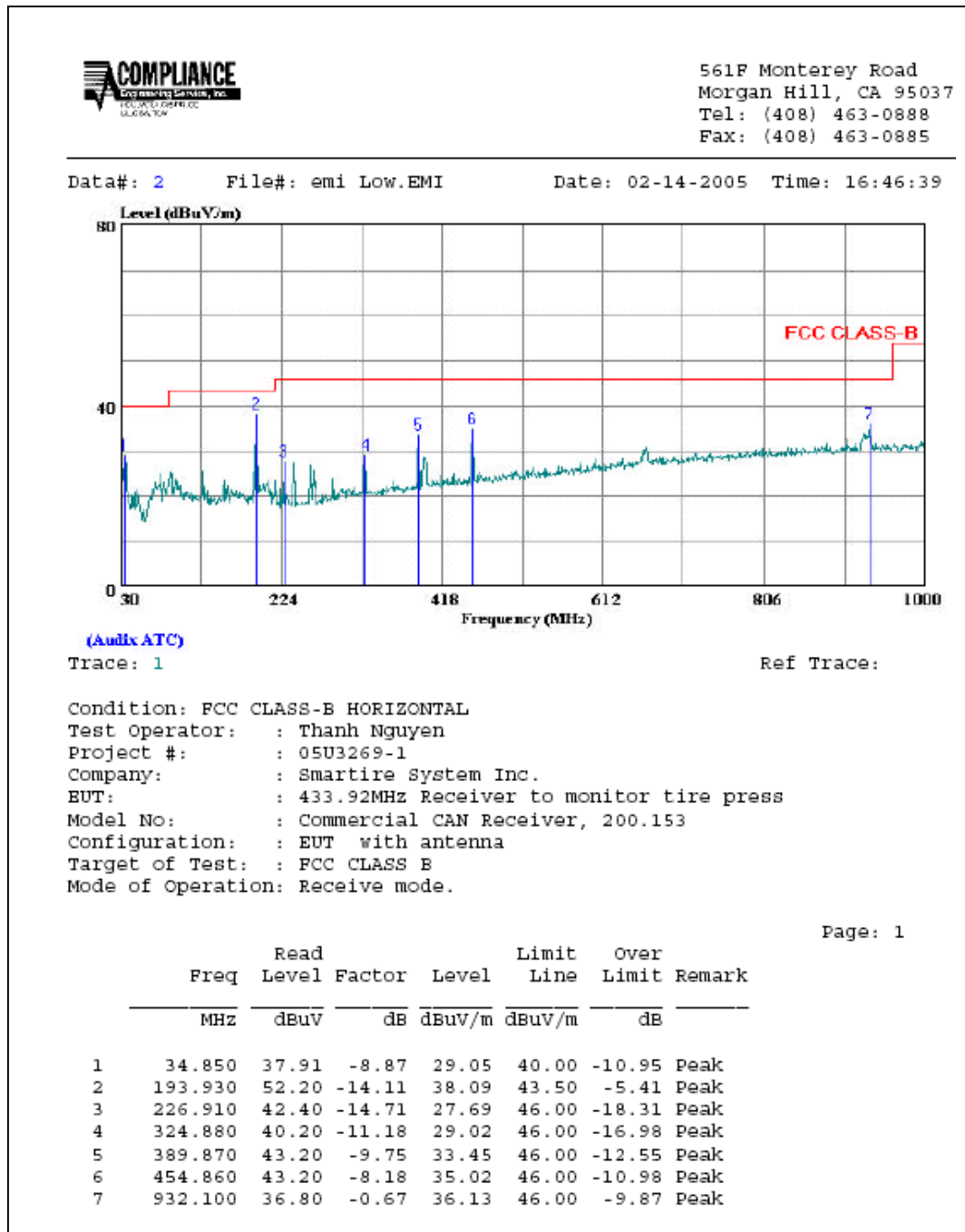
RADIATED EMISSION DATA

Vertical polarization



NOTE: No other emissions were detected above system noise floor up to 2GHz.

Horizontal polarization



NOTE: No other emissions were detected above system noise floor up to 2GHz

11. AC MAINS LINE CONDUCTED EMISSIONS

TEST PROCEDURE

ANSI C63.4

LIMIT

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Notes:
1. The lower limit shall apply at the transition frequencies
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

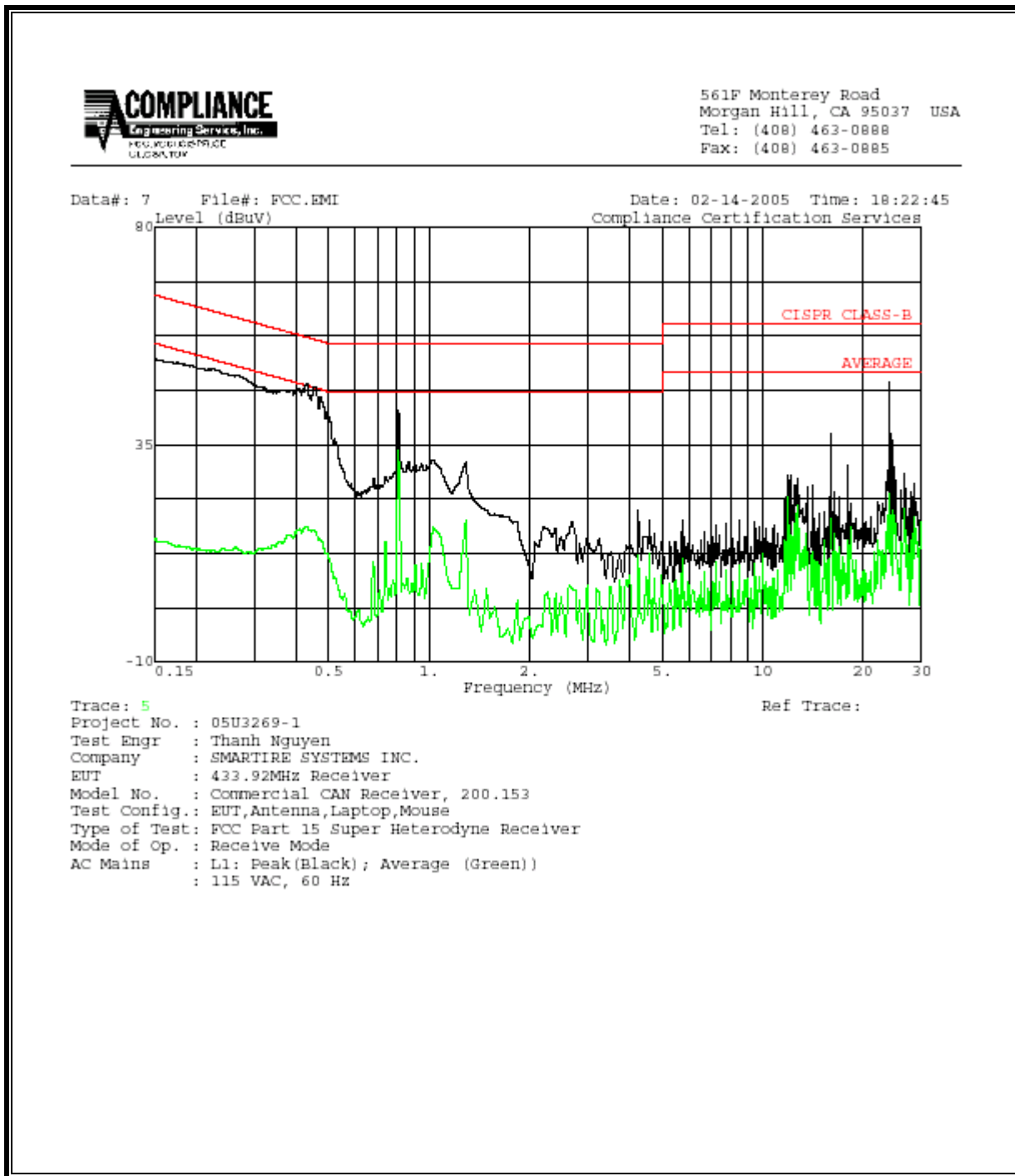
RESULTS

No non-compliance note.

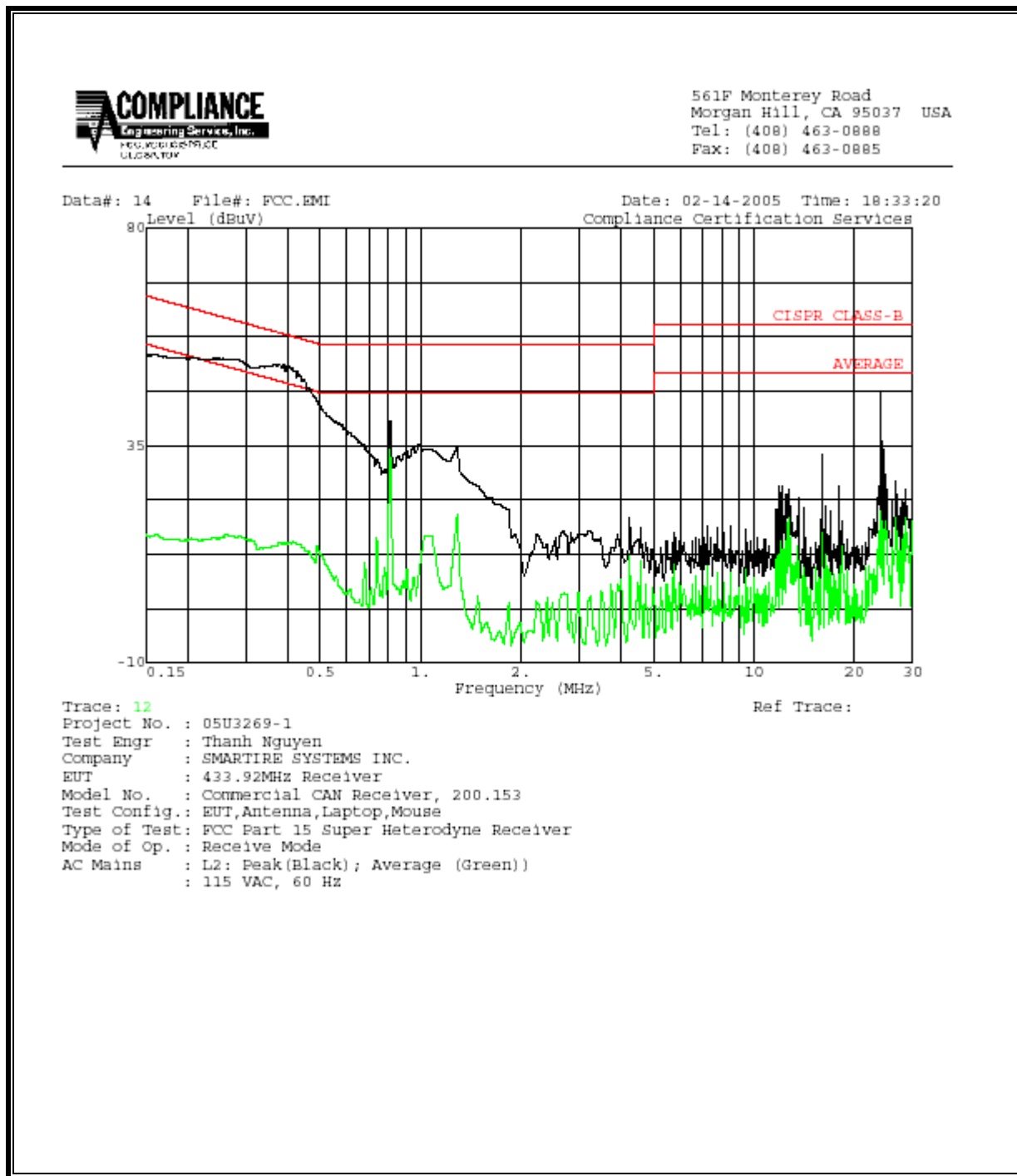
6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)										
Freq. (MHz)	Reading			Class (dB)	Limit QP	FCC B		Margin		Remark L1 / L2
	PK (dBuV)	QP (dBuV)	AV (dBuV)			AV	QP (dB)	AV (dB)		
0.43	46.66	--	17.74	0.00	57.23	47.23	-10.57	-29.49	L1	
0.81	42.16	--	35.75	0.00	56.00	46.00	-13.84	-10.25	L1	
24.01	47.98	--	43.02	0.00	60.00	50.00	-12.02	-6.98	L1	
0.28	52.74	--	16.43	0.00	60.73	50.73	-7.99	-34.30	L2	
0.81	40.14	--	34.71	0.00	56.00	46.00	-15.86	-11.29	L2	
24.01	46.14	--	40.95	0.00	60.00	50.00	-13.86	-9.05	L2	
6 Worst Data										

LINE 1 RESULT

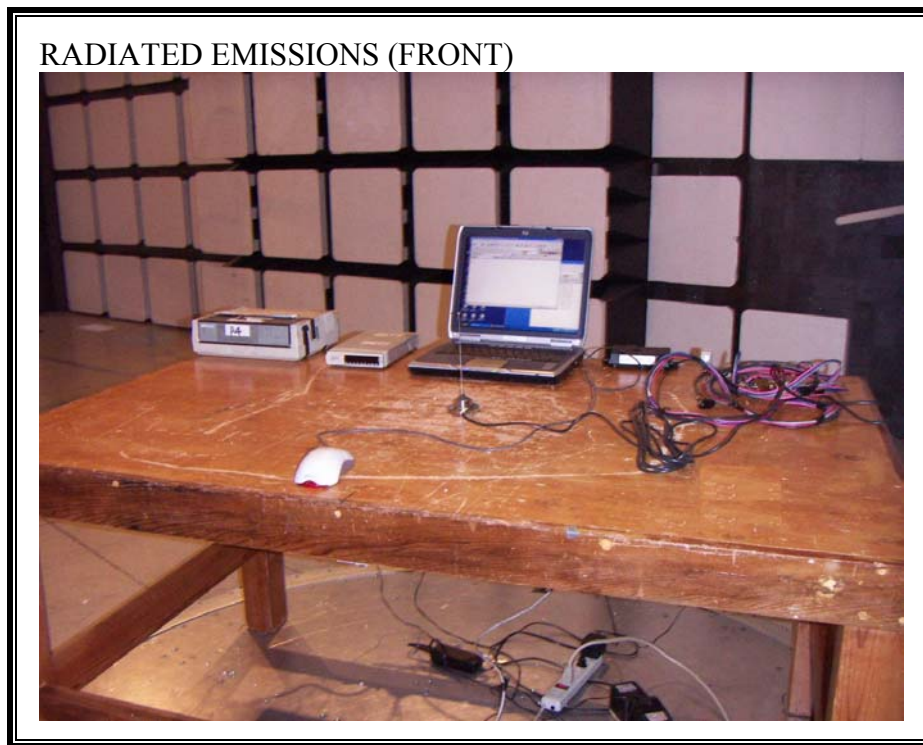


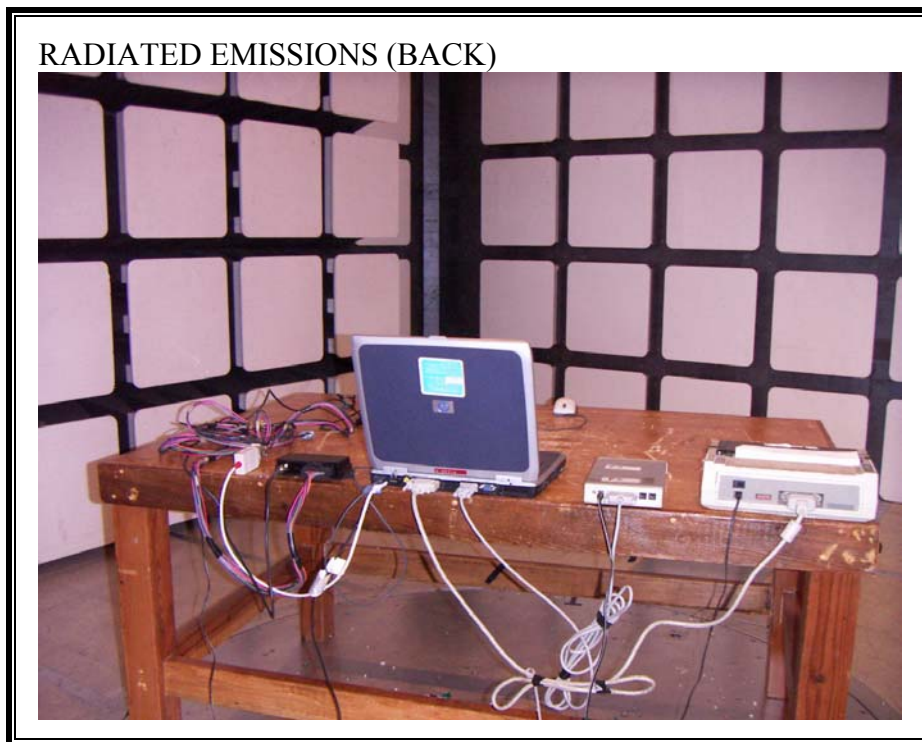
LINE 2 RESULT



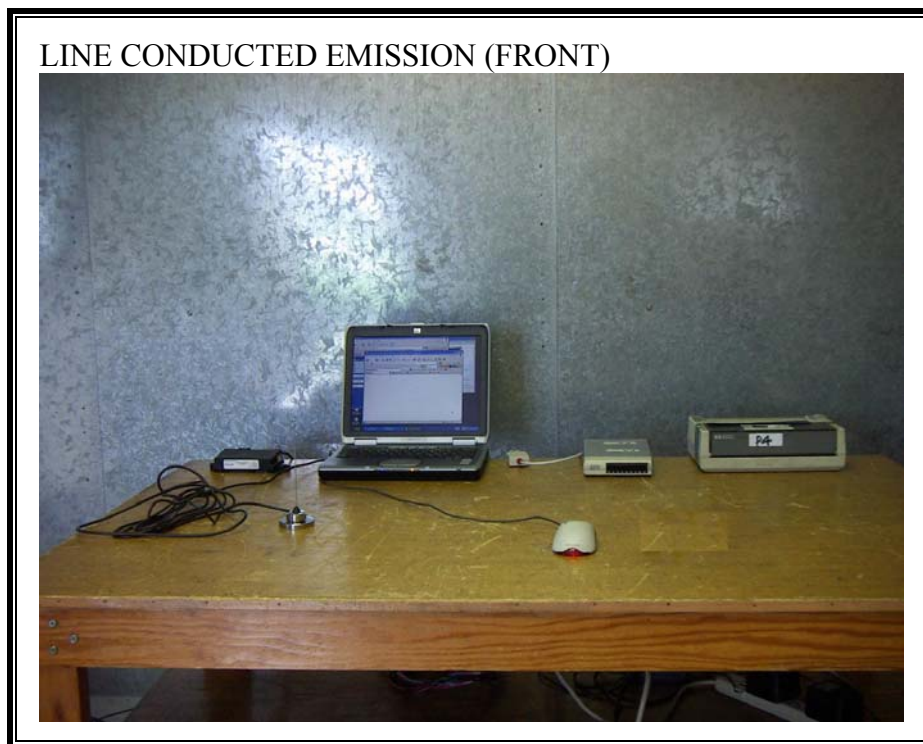
12. SETUP PHOTOS:

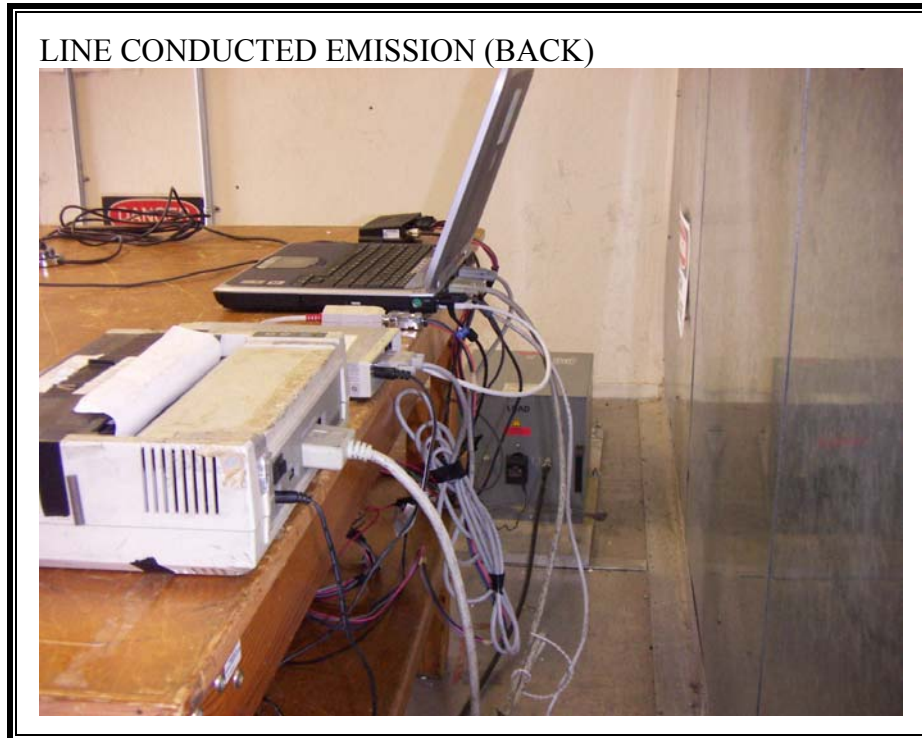
RADIATED EMISSION





AC MAINS LINE CONDUCTED EMISSION





END OF REPORT