Project:	**06CA05511**
File:	**MC1324**
Report:	**060036B**
Date:	**June 18, 2006**
Model:	**42996 Transmitter**

Test Report

On

Electromagnetic Compatibility Testing

Hunter Fan Co

Memphis, TN USA

Test Report Details:

Tests Performed By:	**Underwriters Laboratories Inc.** **12 Laboratory Drive** **Research Triangle Park, NC 27709**
Tests Performed For:	**Hunter Fan Co** **2500 Frisco Avenue** **Memphis, TN 38114 USA**
Applicant Contact:	**Mr. Robert Davis** **Safety and Test Engineer - International** **(901) 248-2212** **(901) 248-2382 - FAX**
Test Report Number:	**060036B** Revision A – 6/12/06, Revised 99% OBW measurement. Revision B – 6/18/06, Added remark 7
Test Report Date:	**June 18, 2006**
Product Type:	**Low Powered Transmitter**
Model Number:	**42996**
Sample Serial Number:	**333 1968 426**
Sample Tag Number:	**0776053-001**
EUT Category:	**Transmitter - Low Powered**
EUT Type:	**Hand Held**
Sample Receive Date:	**April 03, 2006**
Testing Start Date:	**April 03, 2006**
Date Testing Complete:	**June 11, 2006**

Summary of Testing:

Test #	Test Name Test Requirement/Specification	Comply	Does Not Comply	See Remark
1	Radiated Disturbance Emissions - 30 MHz to 3600 MHz 47 CFR Part 15, Subpart C / 47 CFR Part 15, Subpart C, Section 15.209 and 15.231 Industry Canada RSS-210 Issue 6 / Industry Canada RSS-210 Issue 6	X	-	
2	Occupied Bandwidth 47 CFR Part 15, Subpart C / 47 CFR Part 15, Subpart C, Section 15.231 Industry Canada RSS-210 Issue 6 / Industry Canada RSS-210 Issue 6	X	-	
3	Peak-to-Average Ratio 47 CFR Part 15, Subpart C / 47 CFR Part 15, Subpart C, Section 15.231 Industry Canada RSS-210 Issue 6 / Industry Canada RSS-210 Issue 6	N/A	N/A	
4	Radiated Disturbance Emissions - Restricted Bands 47 CFR Part 15, Subpart C / 47 CFR Part 15, Subpart C, Section 15.205 Industry Canada RSS-210 Issue 6 / Industry Canada RSS-210 Issue 6, Section 2.6	X	-	
4	Holdover Time – Manually Activated Transmitter 47 CFR Part 15, Subpart C / 47 CFR Part 15, Subpart C, Section 15.231 Industry Canada RSS-210 Issue 6 / Industry Canada RSS-210 Issue 6, Annex 1, A1.1.1	X		

Remarks:

1) Antenna - This transmitter contains an integrated antenna that cannot be removed by the user.

2) Measurement Site & Accreditations - All measurements were performed on Industry Canada registered site IC-2953. All measurements were performed in accordance with NVLAP-accredited procedures.

3) RF Exposure - This device is exempt from routine evaluation to RF exposure requirements per FCC Part 2.1091. Output power is 4.65 uW EIRP (avg), therefore device is exempt from routine evaluation per Industry Canada RSS-102 Issue 2, Section 2.5.1.

4) Momentary Operation Requirements – It was observed that transmissions ceased immediately upon release of button (< 200 ms). This meets the holdover limit of five seconds or less found in FCC Part 15.231(a)(1) and Industry Canada RSS-210 Issue 6, Annex 1, Section A1.1.1 for manually activated transmitters. No periodic or automatically activated emissions requirements apply.

5) Canada Emissions Designator – Emissions Designator is L1D26K7.

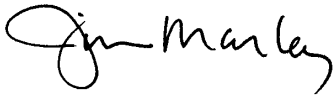
6) Receiver – Associated receiver was tested separately. Results documented in report 060038A.

7) Transmitter Dimensions – Transmitter measures 3.6" x 1.5" at the longest/widest points. Due to the size and curvature of the plastic, the manufacturer could not legibly fit the FCC Part 15 statement on the device. The FCC ID number is placed on the transmitter and the FCC Part 15 statement is moved to the user manual.

Conclusion:

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by Underwriters Laboratories Inc. in accordance with the procedures stated in each test requirement and specification. The test list was determined by the Applicant as being applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

Prepared By:



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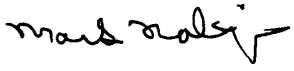
Reviewed By:



Mark Nolting
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Test Facilities:

Test Location A) 10-Meter Anechoic Chamber (Industry Canada - IC 2953, VCCI - R-722/C-2427)

Constructed by Lindgren RF Enclosures , this room consists of a 17.9 by 12 by 8.3 m (inside clearance) shielded room lined with TDK absorber material. The walls, floor (conducting ground plane) and ceiling are constructed of double sided galvanized sheet steel supported by 19 mm thick particle board. The interior walls and ceiling are covered with 10 by 10 cm, 4.6 mm thick ferrite tiles and partially covered with polystyrene absorber cones. Removable floor tiles and cones covering the floor between the EUT and antenna are provided when RF immunity testing is performed.

Room is provided with a 4.0 m diameter embedded turntable and a 1.2 by 2.1 m and 2.4 by 2.4 m double knife edge doors for access. Also, the room is fed electrical EUT power via permanently installed filters and is provided with a permanently mounted video surveillance camera. A remotely controllable antenna mast is located in the room for positioning the measuring antenna from 1 to 4 m above the ground plane.

Test Location F) Ground Reference Plane # 3

Horizontal floor ground reference plane constructed of galvanized sheet steel measuring 3.0 by 3.6 m x 2.5mm thick.

EUT Information:

Equipment Used During Test:

Use*	Product Type	Manufacturer	Model	Comments
EUT	Transmitter	Hunter Fan Co.	42996	
EUT	Receiver	Hunter Fan Co.	42996 (Rx)	Tested separately

* Use = EUT - Equipment Under Test, ACC - Accessory (Not Subjected to Test), or SIM - Simulator (Not Subjected to Test)

Input/Output Ports:

Port #	Name	Type*	Comments
0	Enclosure	N/E	No external ports

* AC = AC Power Port DC = DC Power Port I/O = Signal Input or Output Port

EUT Internal Operating Frequencies:

Frequency (MHz)*	Description
350	Transmit Frequency

Power Interface:

Mode #	Voltage (V)	Frequency (DC/AC-Hz)	Comments
Rated	12	DC	A fresh A23 battery was installed prior to test.
1	12	DC	

EUT Operation Modes:

Mode #	Description
1	Button is continuously depressed by a rubber band.

EUT Configuration Modes:

Mode #	Description
1	EUT is located on a small piece of polystyrene foam on top of an 80cm high wooden table. Positioned flat.
2	EUT is located on a small piece of polystyrene foam on top of an 80cm high wooden table. Positioned on side.
3	EUT is located on a small piece of polystyrene foam on top of an 80cm high wooden table. Positioned pointing upward.

Test 1: Radiated Disturbance Emissions - 30 MHz to 3600 MHz

Test Requirement: 47 CFR Part 15, Subpart C
Industry Canada RSS-210 Issue 6

Test Specification: 47 CFR Part 15, Subpart C, Section 15.209 and 15.231
Industry Canada RSS-210 Issue 6, Annex 1, Section A1.1.2

Test Procedure:

The test was performed in accordance with the Test Requirement and Specification and configured as noted in the Test Setup. The EUT was placed inside the anechoic chamber with a fresh battery installed. For frequencies below 1000 MHz, the receiver resolution bandwidth was set to 120 kHz and video bandwidth was set to 1 MHz. Above 1000 MHz, the receiver resolution and video bandwidths are set to 1 MHz. A peak measurement was first made by scanning the entire test frequency range and maximizing the EUT emissions by rotating the EUT and raising the antenna height from 1 to 4 meters above the ground reference plane. Then, a measurement was taken for all peak emissions to verify each were below the Test Limits.

Radiated Disturbance Limits for Manually Operated Transmitters - Section 15.231/RSS-210 Issue 6
at a measurement distance of 3 meters

Fundamental Frequency	Field Strength of Fundamental		Field Strength of Spurious	
(MHz)	(μV/m)	(dBμV/m)	(μV/m)	(dBμV/m)
40.66 to 40.70	2250	67.04	225	47.04
70 to 130	1250	61.94	125	41.94
130 to 174	1250 to 3750	61.94 to 71.48	125 to 375	41.94 to 51.48
174 to 260	3750	71.48	375	51.48
260 to 470	3750 to 12,500	71.48 to 81.93	375 to 1250	51.48 to 61.93
above 470	12,500	81.93	1250	61.93

** Linear Interpolations

Test Clarifications (Specific Limits for this transmit frequency):

This product operates at: 350 MHz

- At 350 MHz peak limit is 97.5 dBuV/m. Average limit is 77.5 dBuV/m
- At harmonics not residing in restricted bands, peak limit is 77.5 dBuV/m and average limit is 57.5 dBuV/m.
- At harmonics residing within restricted bands (1050 MHz, 1400 MHz, and 2800 MHz), peak limit is 74 dBuV/m and average limit is 54 dBuV/m

Test Deviations:

None

Test Setup: Only the following ports were tested. See EUT Information for details.

Test Item	Port #	Port Name	EUT Operation Mode	EUT Configuration	Power Interface
A	0	Enclosure	1	1 (Flat)	1
B	0	Enclosure	1	2 (On side)	1
C	0	Enclosure	1	3 (On end)	1

Test 1 - Results: Radiated Disturbance Emissions - 30 MHz to 1000 MHz

Test Results Summary:

Test Item	Test Location	Humidity (%)	Temperature (ºC)	Pressure (kPa)	Pass/Fail (P/F)	Date Completed	Comment #
A - C	A	38	21	100	P	4/20/06	

The EUT was considered to **Pass** the Requirements.

Comments:

Comment #	Description
1	Highest Emissions (Transmit Frequency) Highest Transmit Orientation (on end). Measured field strength at 350 MHz was 71.9 dBuV/m (avg), Or 3935 uV/m (avg in linear units) at a 3 meter measurement distance. (Equivalent Isotropic Radiated Power) Using free space range equation, TP = (FS x D) / (30 * G), transmit power is 4.65 uW EIRP (avg). (Equivalent Radiated Power – dipole reference) Using free space range equation, TP = (FS x D) / (30 * G) where dipole gain is 2.14 dBi, transmit power is 2.84 uW EIRP (avg).
2	Averaging Average field strength = Peak field strength minus Peak-to-Average ratio (-12.9 dB) from Test 3. Applies to all average measurements within this report.
3	Highest Spurious Emissions (EUT flat). Measured field strength at 700 MHz was 43.7 dBuV/m (avg), Or 153.1 uV/m (avg in linear units) at a 3 meter measurement distance.

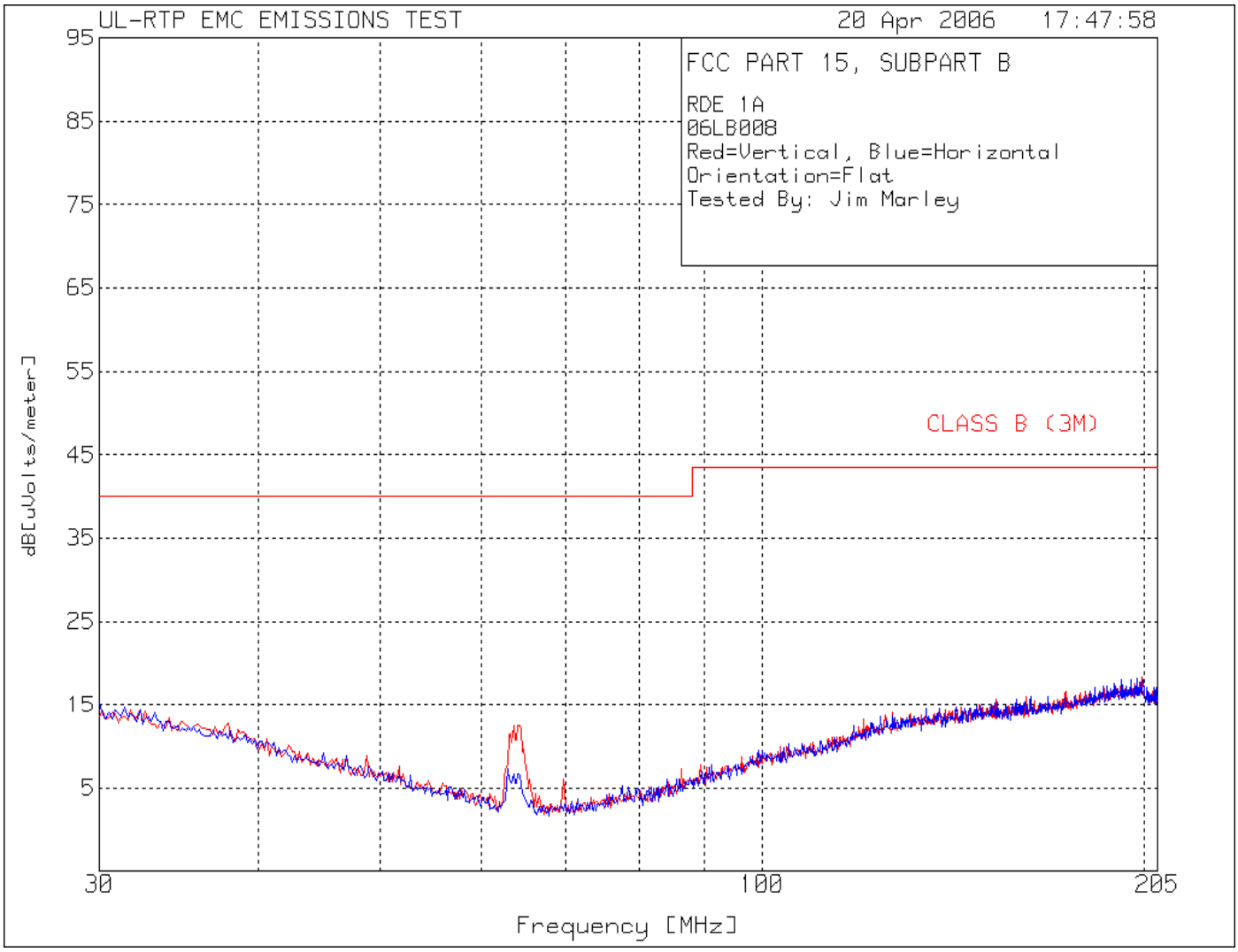
Test 1 - Test Equipment Used: Radiated Disturbance Emissions - 30 MHz to 1000 MHz

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
AT0025	Biconical Antenna, 30 to 300 MHz	Schaffner, EMC	VBA6106A	3/29/06	3/31/07
AT0026	Horn Antenna, 1 to 18 GHz	EMC Test Systems	3115	4/10/05	4/30/06
AT0030	Log periodic Antenna, 200 MHz to 1000 MHz	Schaffner, EMC	3160-07	3/24/06	3/31/07
ATA084	Attenuator 6 dB, 2 GHz	Pasternack	PE7002-6	3/23/06	3/31/07
ATA085	Attenuator 6 dB, 2 GHz	Pasternack	PE7002-6	3/23/06	3/31/07
ATA096	50 ft, N male - N male	Micro-Coax	Coaxial Cable	2/14/06	2/28/07
ATA108	10 m, N male - N male	UL	RG214	3/23/06	3/31/07
ATA124	RF Amplifier, 1 to 1000 MHz	Miteq	AM-3A-000110-N	3/23/06	3/31/07
ATA125	RF Amplifier, 1 to 1000 MHz	Miteq	AM-3A-000110-N	3/23/06	3/31/07
ATA140	RG214 Ferrite Cable	EMC Eupen	N/A	3/23/06	3/31/07
ATA143	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	2/14/06	8/31/06
ATA144	Amplifier, 0.1 to 18 GHz	Miteq	AFS42-00101800-2	3/30/06	3/31/07
ATA152	27 ft. N male - N male low loss cable	Micro-Coax	UFB293C-0-3149-50504	1/30/06	7/31/06
ATA168	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	12/21/05	12/31/06
SAR003	EMC Receiver	Rohde & Schwarz	1088.7490K40	8/10/05	8/31/06

The above equipment has been calibrated and is within the manufacturer's published limit of error. Calibration is traceable to the National Institute of Standards & Technology(NIST) and conforms to ISO 17025:2005.

Test 1, Item A - Peak Plot:

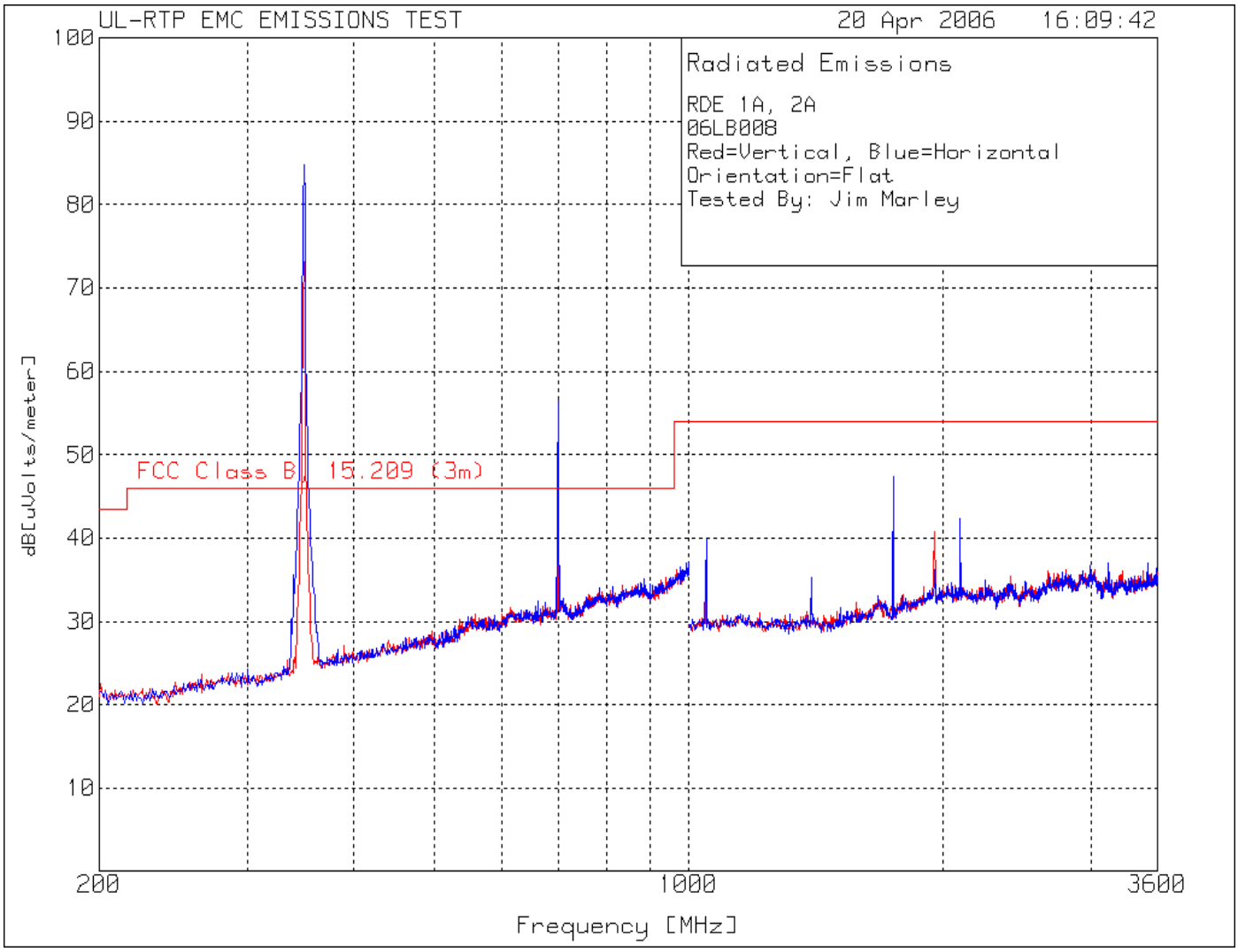
Radiated Disturbance Emissions - 30 MHz to 1000 MHz



Note: Only flat orientation was performed below 200 MHz, because no significant emissions were observed.

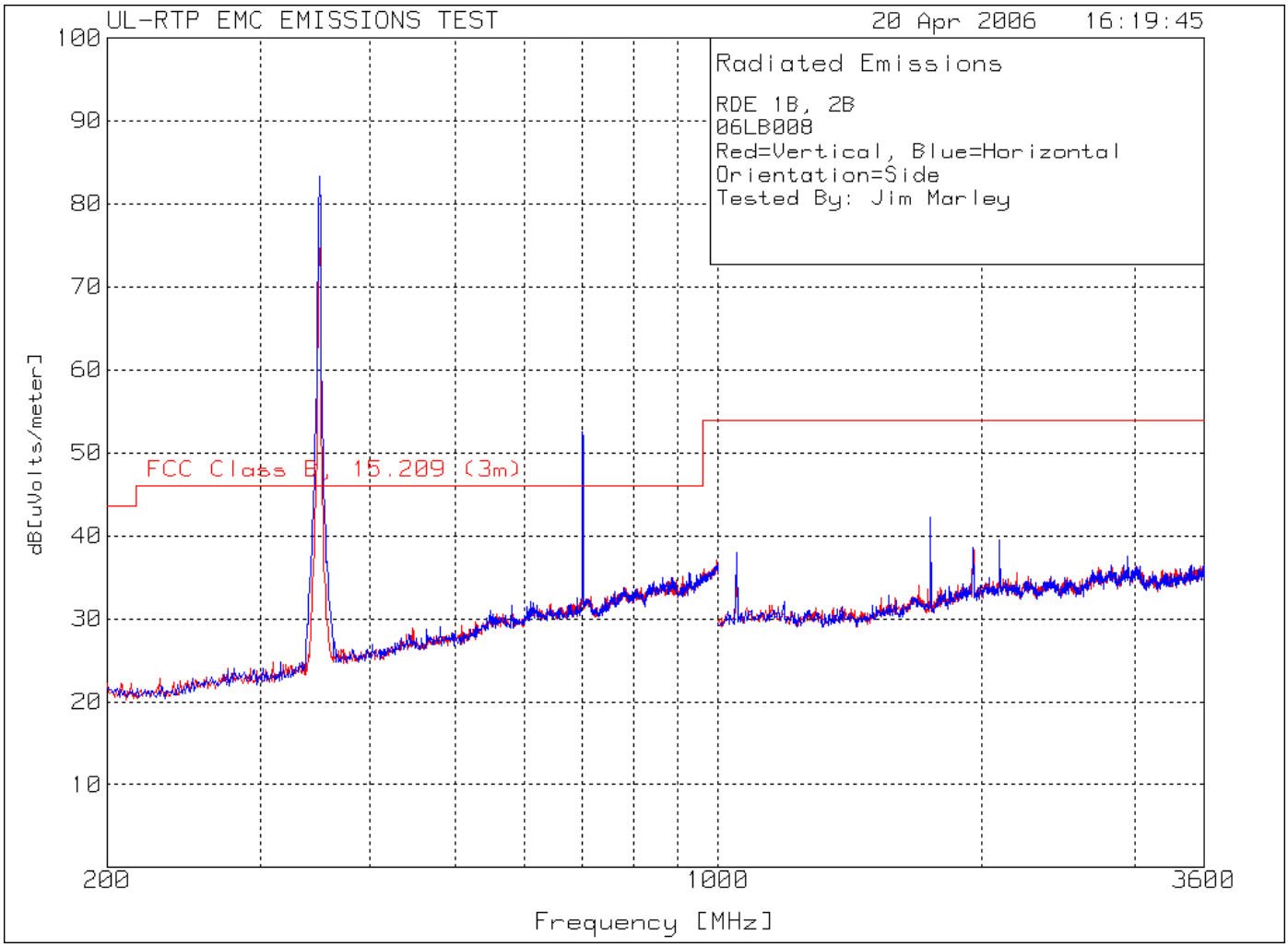
Test 1, Item A (Flat Orientation) - Peak Plot:

Radiated Disturbance Emissions - 30 MHz to 1000 MHz



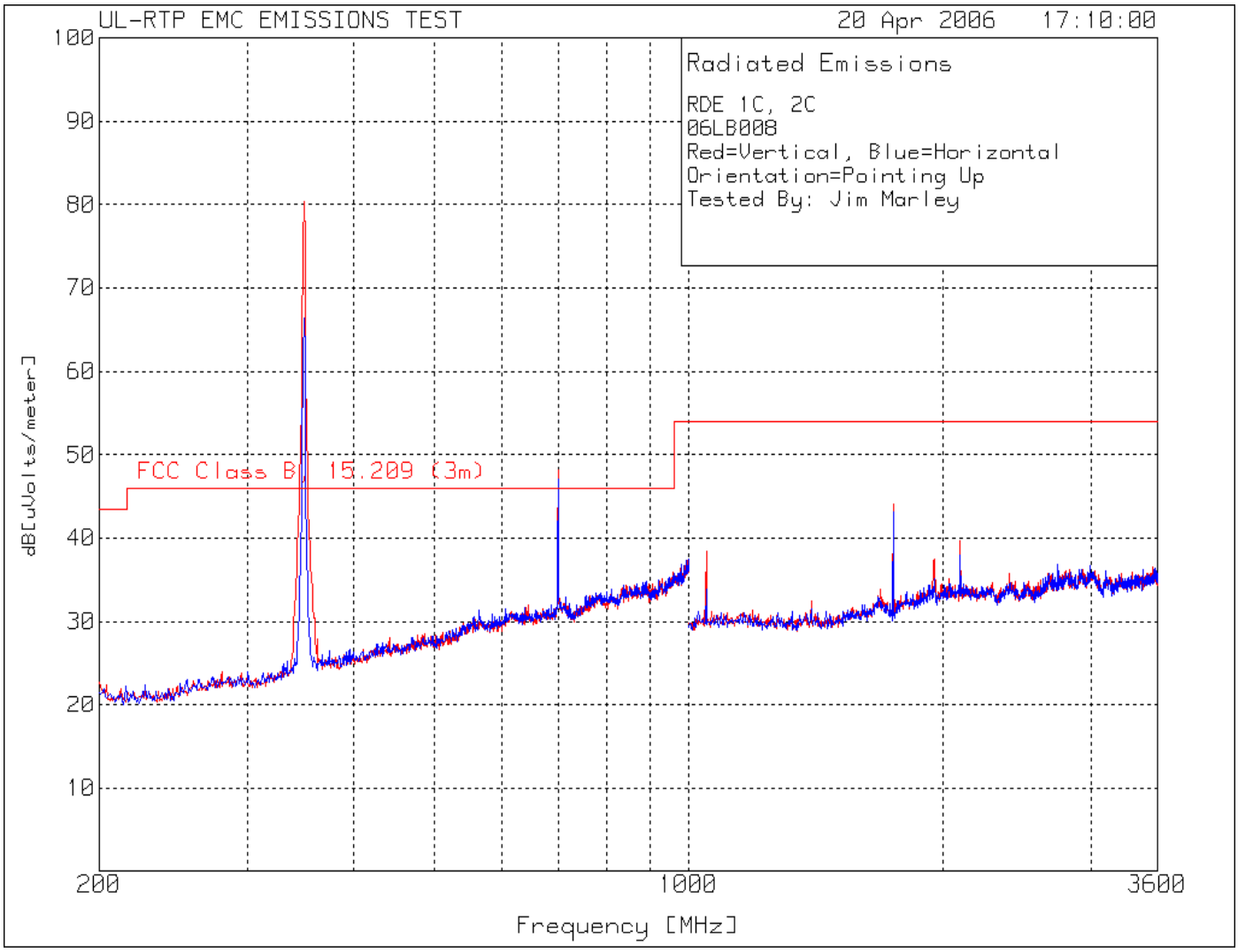
Test 1, Item B (Side Orientation) - Peak Plot:

Radiated Disturbance Emissions - 30 MHz to 1000 MHz



Test 1, Item C (End Orientation) - Peak Plot:

Radiated Disturbance Emissions - 30 MHz to 1000 MHz



Test 1, All Items - Discrete Data: Radiated Disturbance Emissions - 30 MHz to 1000 MHz

Test Item (A-Z)	Detector Type* (P/Q/A)	Antenna Polarity (H/V)	Antenna Distance (m)	Measured Frequency (MHz)	Measured Value (dBuV)	Equip Correction (dB/m)	Corrected Value (dBuV/m)	Specified Limit** (dBuV/m)	Spec Margin (dB)	See Comment (#)***
Orientation: Flat										
A	P	H	3	349.924	97.6	-12.8	84.8	97.5	-12.7	
A	A	H	3	349.924	-	-	71.9	77.5	-5.6	1, 2
A	P	H	3	699.838	62.4	-5.8	56.6	77.5	-20.9	
A	A	H	3	699.838	-	-	43.7	57.5	-13.8	3
A	P	H	3	1049.749	48.6	-8.7	39.9	74.0	-34.1	
A	A	H	3	1049.749	-	-	27.0	54.0	-27.0	
A	P	H	3	1399.651	42.7	-7.4	35.3	74.0	-38.7	
A	A	H	3	1399.651	-	-	22.4	54.0	-31.6	
A	P	H	3	1749.561	52.7	-5.3	47.4	77.5	-30.1	
A	A	H	3	1749.561	-	-	34.5	57.5	-23.0	
A	P	H	3	2099.481	45.8	-3.5	42.3	77.5	-35.2	
A	A	H	3	2099.481	-	-	29.4	57.5	-28.1	
A	P	H	3	3149.207	39.0	-2.0	37.0	77.5	-40.5	
A	A	H	3	3149.207	-	-	24.1	57.5	-33.4	
A	P	H	3	3499.122	37.6	-0.6	37.0	77.5	-40.5	
A	A	H	3	3499.122	-	-	24.1	57.5	-33.4	
Orientation: On Side										
B	P	H	3	349.924	96.1	-12.8	83.3	97.5	-14.2	
B	A	H	3	349.924	-	-	70.4	77.5	-7.1	
B	P	H	3	699.838	58.3	-5.8	52.5	77.5	-25.0	
B	A	H	3	699.838	-	-	39.6	57.5	-17.9	
B	P	H	3	1049.749	46.7	-8.7	38.0	74.0	-36.0	
B	A	H	3	1049.749	-	-	25.1	54.0	-28.9	
B	P	H	3	1749.561	47.5	-5.3	42.2	77.5	-35.3	
B	A	H	3	1749.561	-	-	29.3	57.5	-28.2	
B	P	H	3	2099.481	42.9	-3.5	39.4	77.5	-38.1	
B	A	H	3	2099.481	-	-	26.5	57.5	-31.0	
Orientation: On end										
C	P	V	3	349.924	93.2	-12.8	80.4	97.5	-17.1	
C	A	V	3	349.924	-	-	67.5	77.5	-10.0	
C	P	V	3	699.838	54.0	-5.8	48.2	77.5	-29.3	
C	A	V	3	699.838	-	-	35.3	57.5	-22.2	
C	P	V	3	1049.749	47.1	-8.7	38.4	74.0	-35.6	
C	A	V	3	1049.749	-	-	25.5	54.0	-28.5	
C	P	H	3	1399.651	39.9	-7.4	32.5	74.0	-41.5	
C	A	H	3	1399.651	-	-	19.6	54.0	-34.4	
C	P	H	3	1749.561	49.3	-5.3	44.0	77.5	-33.5	
C	A	H	3	1749.561	-	-	31.1	57.5	-26.4	
C	P	H	3	2099.481	43.1	-3.5	39.6	77.5	-37.9	
C	A	H	3	2099.481	-	-	26.7	57.5	-30.8	

* P = Peak, Q = Quasi-Peak, A = Average.

** The Specified Limit shown is the 15.231(a) limit or, if applicable, the 15.209 limit.

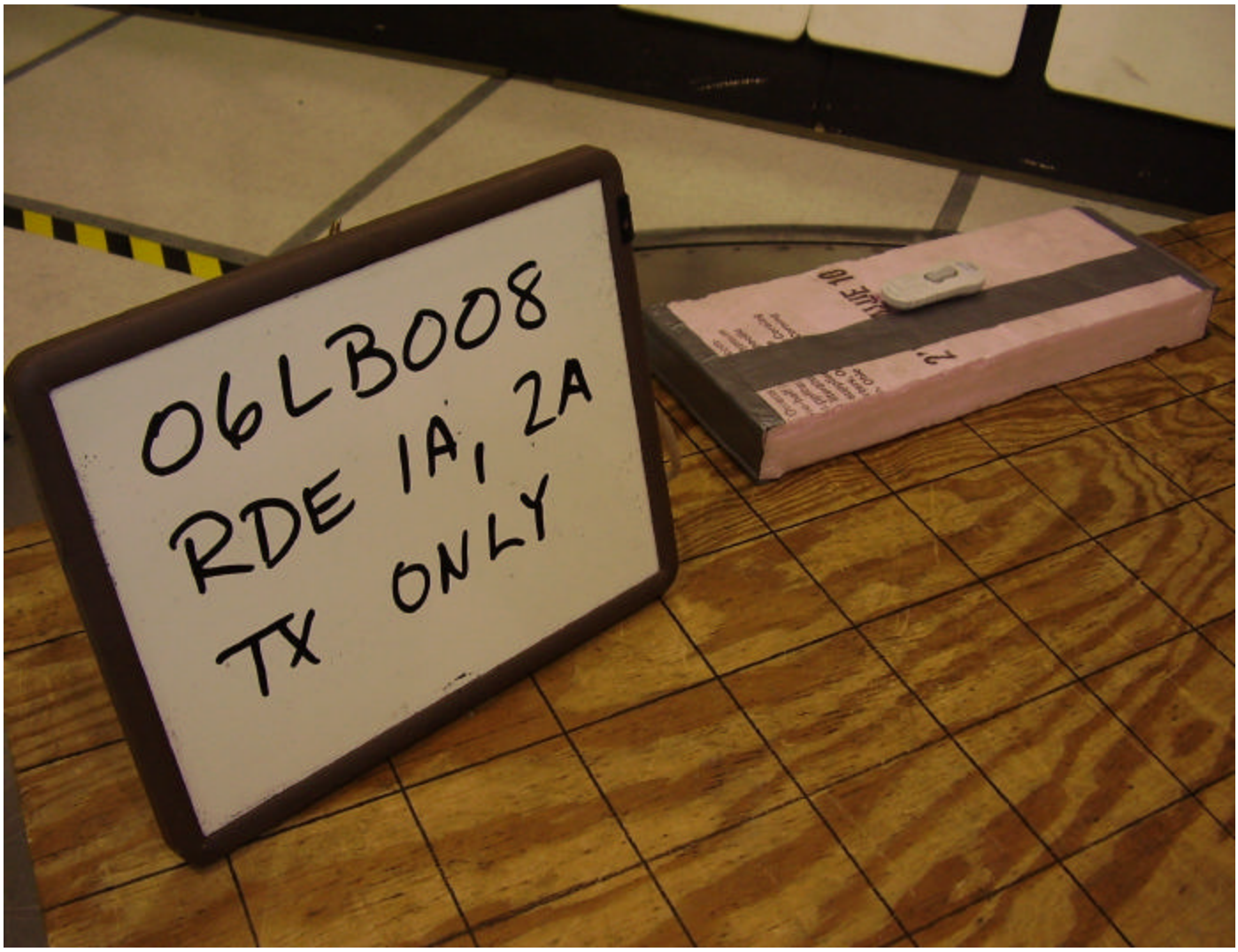
*** # = See Comment Number Under This Test's Comments Section on Page 7.

Sample Calculation: Corrected Value = Measured Value + Equip Correction

Sample Calculation: Equip Correction = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB, if used)

Test 1, Item A (Flat Orientation) - Test Set-Up Photo:

Radiated Disturbance Emissions - 30 MHz to 1000 MHz

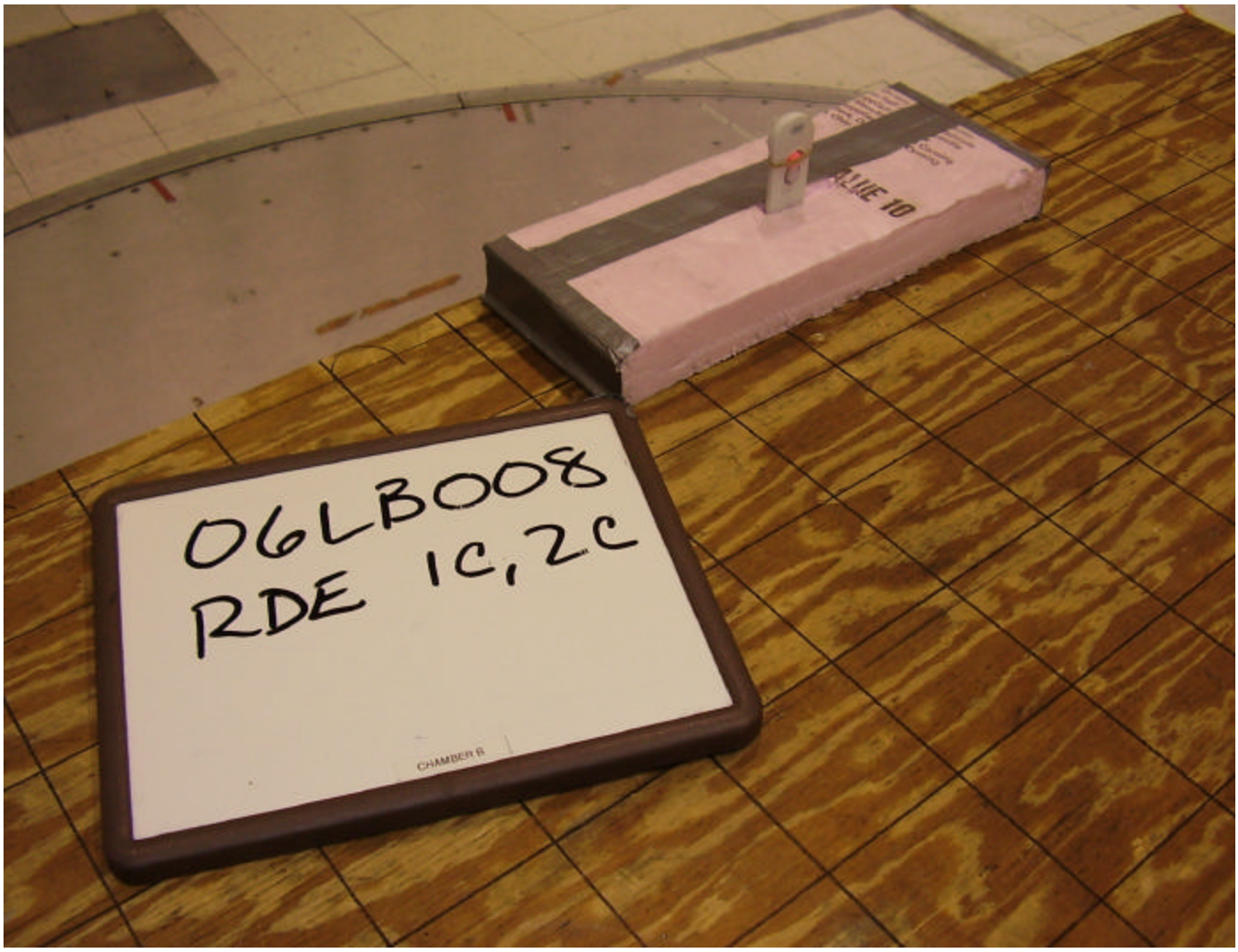


Test 1, Item B (Side Orientation) - Test Set-Up Photo:

Radiated Disturbance Emissions - 30 MHz to 1000 MHz

Test 1, Item C (End Orientation) - Test Set-Up Photo:

Radiated Disturbance Emissions - 30 MHz to 1000 MHz



Test 2: Occupied Bandwidth

Test Requirement: 47 CFR Part 15, Subpart C
Industry Canada RSS-210 Issue 6

Test Specification: 47 CFR Part 15, Subpart C, Section 15.209 and 15.231
Industry Canada RSS-210 Issue 6, Annex 1, Section A1.1.2

Test Procedure:

The test was performed in accordance with the Test Requirement and Specification and configured as noted in the Test Setup. The EUT was positioned so that the received signal was maximized. The receive antenna height and orientation were adjusted so that the received signal was maximized.

FCC
The spectrum analyzer Resolution Bandwidth to 10 kHz and Video Bandwidth to 100 kHz for the measurement. A plot of the spectrum analyzer display screen is produced with marker points displaying the center frequency and the left and right side points that are 20 dB below the field strength at the center frequency.

Canada
99% Power Occupied Bandwidth method is used. Resolution Bandwidth is set small compared to occupied BW (approx 1% to 3%). Span is set to include 20 dB BW, or all modulation skirts (whichever is greater). Datapoints are tabulated and weighted by power. Center 99% is recorded as Occupied BW.

Occupied Bandwidth Limit - Manually Operated Transmitter FCC Part 15, Section 15.231 and Canada RSS-210 Issue 6.

Transmit Frequency MHz	Bandwidth Limit (% of fundamental)
70 to 900	.25%
Above 900	.50%

Test Deviations:

None

Test Setup: Only the following ports were tested. See EUT Information for details.

Test Item	Port #	Port Name	EUT Operation Mode	EUT Configuration	Power Interface
A	0	Enclosure	1	1	1

Test 2 - Results: Occupied Bandwidth

Test Results Summary:

Test Item	Test Location	Pass/Fail (P/F)	Date Completed	Comment #
A	A	P	6/11/06	
B	A	P	4/26/06	

The EUT was considered to **Pass** the Requirements.

Comments:

Comment #	Description

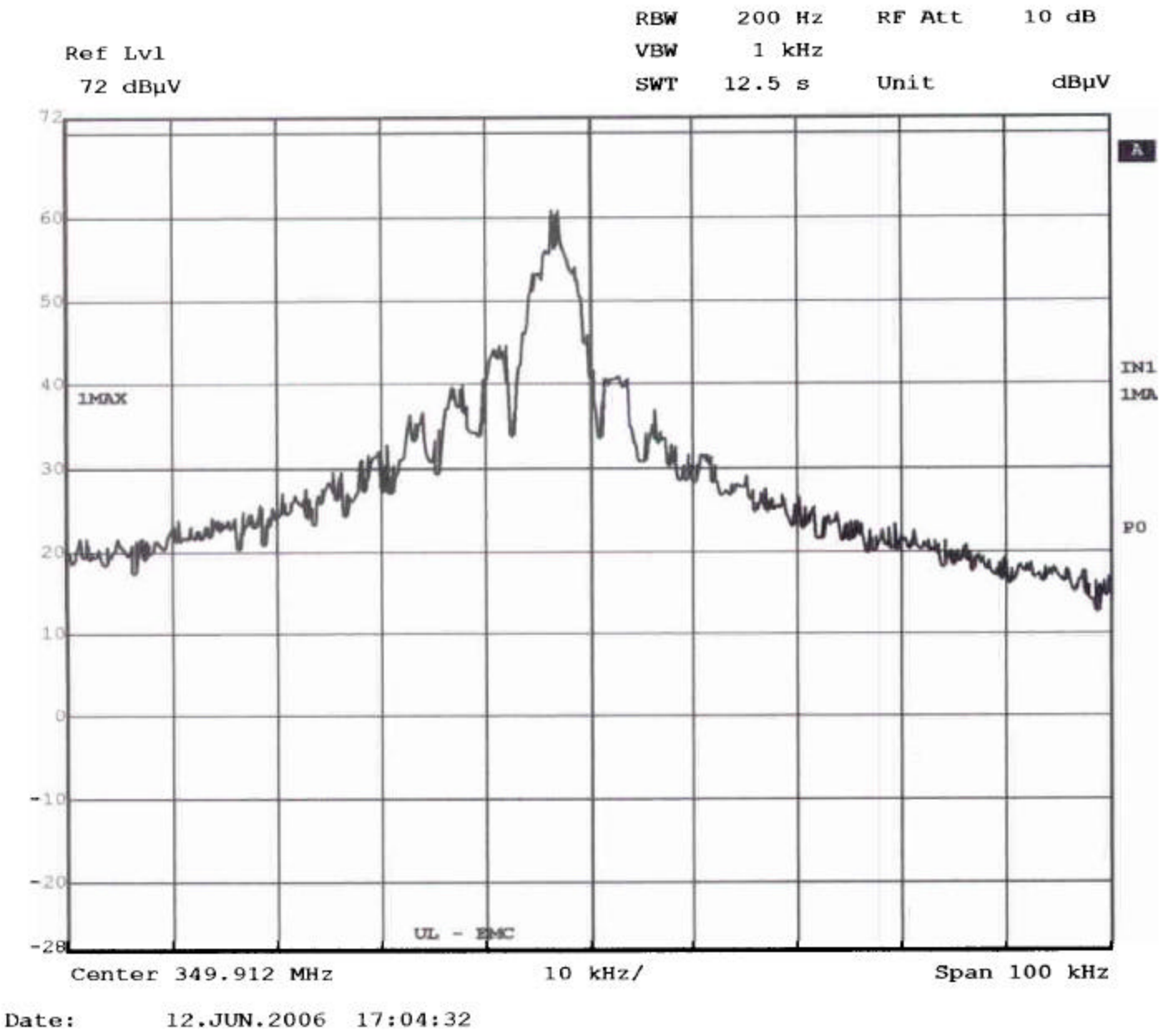
Test Equipment Used:

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
AT0030	Log periodic Antenna, 200 MHz to 1000 MHz	Schaffner, EMC	3160-07	3/24/06	3/31/07
ATA085	Attenuator 6 dB, 2 GHz	Pasternack	PE7002-6	3/23/06	3/31/07
ATA108	10 m, N male - N male	UL	RG214	3/23/06	3/31/07
ATA125	RF Amplifier, 1 to 1000 MHz	Miteq	AM-3A-000110-N	3/23/06	3/31/07
ATA143	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	2/14/06	8/31/06
ATA168	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	12/21/05	12/31/06
SAR003	EMC Receiver	Rohde & Schwarz	1088.7490K40	8/10/05	8/31/06

The above equipment has been calibrated and is within the manufacturer's published limit of error. Calibration is traceable to the National Institute of Standards & Technology(NIST) and conforms to ISO 17025:2005.

Test 2, Item A (Canada - RBW set to approximately 1% to 3% of signal bandwidth) - Peak Plot:

Occupied Bandwidth



Test 2, Item A (Canada - OBW) – Table:

Results:

Sum of Power x datapoints	216.520	
Left Bandedge point	349.8935	MHz
Right Bandedge point	349.9201	MHz

99% Occupied BW (Power) 0.02666 MHz

Data Points/Calculation:

Column A Data Point, Numbers 1-500
Column B Frequency (each freq. Equals 1/500th of span)
Column C Amplitude, Power (dBm)
Column D Amplitude, Linear Power (nW)
Column E Linear Amplitude (uV) using POWER(10,Column_B/10)
Column F Percent of total power.
Column G Cumulative power. Sum of power from each point beginning at lowest freq.
Column H Notes which points are between 0.5% and 99.5%

Data Point #	Frequency (MHz)	Amplitude (dBuV)	Amplitude (Power, dBm)	Amplitude (Power, nW)	Percent of Total Power	Cummulative Percentage	Within center 99% ?	Bandedge points
1)	349.862	19.20	-87.8	0.002	0.001%	0.001%	N	
2)	349.8622004	19.50	-87.5	0.002	0.001%	0.002%	N	
3)	349.8624008	18.31	-88.69	0.001	0.001%	0.002%	N	
4)	349.8626012	19.09	-87.91	0.002	0.001%	0.003%	N	
5)	349.8628016	19.70	-87.3	0.002	0.001%	0.004%	N	
6)	349.863002	20.40	-86.6	0.002	0.001%	0.005%	N	
7)	349.8632024	21.48	-85.52	0.003	0.001%	0.006%	N	
8)	349.8634028	20.09	-86.91	0.002	0.001%	0.007%	N	
9)	349.8636032	20.33	-86.67	0.002	0.001%	0.008%	N	
10)	349.8638036	21.28	-85.72	0.003	0.001%	0.009%	N	
11)	349.864004	20.53	-86.47	0.002	0.001%	0.010%	N	
12)	349.8642044	19.81	-87.19	0.002	0.001%	0.011%	N	
13)	349.8644048	19.66	-87.34	0.002	0.001%	0.012%	N	
14)	349.8646052	19.17	-87.83	0.002	0.001%	0.013%	N	
15)	349.8648056	19.28	-87.72	0.002	0.001%	0.014%	N	
16)	349.865006	20.20	-86.8	0.002	0.001%	0.015%	N	
17)	349.8652064	20.05	-86.95	0.002	0.001%	0.016%	N	
18)	349.8654068	20.25	-86.75	0.002	0.001%	0.016%	N	
19)	349.8656072	18.20	-88.8	0.001	0.001%	0.017%	N	
20)	349.8658076	20.34	-86.66	0.002	0.001%	0.018%	N	
21)	349.866008	19.47	-87.53	0.002	0.001%	0.019%	N	
22)	349.8662084	19.07	-87.93	0.002	0.001%	0.020%	N	
23)	349.8664088	19.97	-87.03	0.002	0.001%	0.021%	N	
24)	349.8666092	20.17	-86.83	0.002	0.001%	0.022%	N	
25)	349.8668096	21.32	-85.68	0.003	0.001%	0.023%	N	
26)	349.86701	20.66	-86.34	0.002	0.001%	0.024%	N	
27)	349.8672104	20.54	-86.46	0.002	0.001%	0.025%	N	
28)	349.8674108	20.15	-86.85	0.002	0.001%	0.026%	N	
29)	349.8676112	21.15	-85.85	0.003	0.001%	0.027%	N	
30)	349.8678116	19.43	-87.57	0.002	0.001%	0.028%	N	
31)	349.868012	19.63	-87.37	0.002	0.001%	0.029%	N	
32)	349.8682124	20.68	-86.32	0.002	0.001%	0.030%	N	

33)	349.8684128	18.95	-88.05	0.002	0.001%	0.031%	N
34)	349.8686132	21.13	-85.87	0.003	0.001%	0.032%	N
35)	349.8688136	21.17	-85.83	0.003	0.001%	0.033%	N
36)	349.869014	21.31	-85.69	0.003	0.001%	0.034%	N
37)	349.8692144	21.31	-85.69	0.003	0.001%	0.035%	N
38)	349.8694148	19.18	-87.82	0.002	0.001%	0.036%	N
39)	349.8696152	21.23	-85.77	0.003	0.001%	0.037%	N
40)	349.8698156	20.66	-86.34	0.002	0.001%	0.038%	N
41)	349.870016	19.50	-87.5	0.002	0.001%	0.039%	N
42)	349.8702164	20.18	-86.82	0.002	0.001%	0.040%	N
43)	349.8704168	21.05	-85.95	0.003	0.001%	0.041%	N
44)	349.8706172	21.01	-85.99	0.003	0.001%	0.043%	N
45)	349.8708176	20.53	-86.47	0.002	0.001%	0.044%	N
46)	349.871018	20.42	-86.58	0.002	0.001%	0.045%	N
47)	349.8712184	21.01	-85.99	0.003	0.001%	0.046%	N
48)	349.8714188	20.61	-86.39	0.002	0.001%	0.047%	N
49)	349.8716192	21.97	-85.03	0.003	0.001%	0.048%	N
50)	349.8718196	22.24	-84.76	0.003	0.002%	0.050%	N
51)	349.87202	22.54	-84.46	0.004	0.002%	0.052%	N
52)	349.8722204	22.77	-84.23	0.004	0.002%	0.053%	N
53)	349.8724208	21.23	-85.77	0.003	0.001%	0.054%	N
54)	349.8726212	23.51	-83.49	0.004	0.002%	0.057%	N
55)	349.8728216	21.13	-85.87	0.003	0.001%	0.058%	N
56)	349.873022	21.57	-85.43	0.003	0.001%	0.059%	N
57)	349.8732224	21.61	-85.39	0.003	0.001%	0.060%	N
58)	349.8734228	21.41	-85.59	0.003	0.001%	0.062%	N
59)	349.8736232	21.30	-85.7	0.003	0.001%	0.063%	N
60)	349.8738236	22.85	-84.15	0.004	0.002%	0.065%	N
61)	349.874024	21.85	-85.15	0.003	0.001%	0.066%	N
62)	349.8742244	21.39	-85.61	0.003	0.001%	0.067%	N
63)	349.8744248	22.31	-84.69	0.003	0.002%	0.069%	N
64)	349.8746252	22.29	-84.71	0.003	0.002%	0.070%	N
65)	349.8748256	21.63	-85.37	0.003	0.001%	0.072%	N
66)	349.875026	21.96	-85.04	0.003	0.001%	0.073%	N
67)	349.8752264	22.87	-84.13	0.004	0.002%	0.075%	N
68)	349.8754268	22.95	-84.05	0.004	0.002%	0.077%	N
69)	349.8756272	21.51	-85.49	0.003	0.001%	0.078%	N
70)	349.8758276	23.78	-83.22	0.005	0.002%	0.080%	N
71)	349.876028	22.79	-84.21	0.004	0.002%	0.082%	N
72)	349.8762284	23.72	-83.28	0.005	0.002%	0.084%	N
73)	349.8764288	23.64	-83.36	0.005	0.002%	0.086%	N
74)	349.8766292	22.30	-84.7	0.003	0.002%	0.088%	N
75)	349.8768296	23.39	-83.61	0.004	0.002%	0.090%	N
76)	349.87703	23.05	-83.95	0.004	0.002%	0.092%	N
77)	349.8772304	22.75	-84.25	0.004	0.002%	0.094%	N
78)	349.8774308	23.61	-83.39	0.005	0.002%	0.096%	N
79)	349.8776312	22.53	-84.47	0.004	0.002%	0.097%	N
80)	349.8778316	23.03	-83.97	0.004	0.002%	0.099%	N
81)	349.878032	23.75	-83.25	0.005	0.002%	0.101%	N
82)	349.8782324	23.70	-83.3	0.005	0.002%	0.104%	N
83)	349.8784328	20.23	-86.77	0.002	0.001%	0.105%	N
84)	349.8786332	22.17	-84.83	0.003	0.002%	0.106%	N
85)	349.8788336	24.73	-82.27	0.006	0.003%	0.109%	N
86)	349.879034	22.93	-84.07	0.004	0.002%	0.111%	N

87)	349.8792344	23.05	-83.95	0.004	0.002%	0.112%	N
88)	349.8794348	24.40	-82.6	0.005	0.003%	0.115%	N
89)	349.8796352	24.48	-82.52	0.006	0.003%	0.118%	N
90)	349.8798356	22.93	-84.07	0.004	0.002%	0.119%	N
91)	349.880036	22.95	-84.05	0.004	0.002%	0.121%	N
92)	349.8802364	23.80	-83.2	0.005	0.002%	0.123%	N
93)	349.8804368	25.37	-81.63	0.007	0.003%	0.127%	N
94)	349.8806372	25.17	-81.83	0.007	0.003%	0.130%	N
95)	349.8808376	21.02	-85.98	0.003	0.001%	0.131%	N
96)	349.881038	23.13	-83.87	0.004	0.002%	0.133%	N
97)	349.8812384	23.87	-83.13	0.005	0.002%	0.135%	N
98)	349.8814388	23.19	-83.81	0.004	0.002%	0.137%	N
99)	349.8816392	25.13	-81.87	0.007	0.003%	0.140%	N
100)	349.8818396	23.88	-83.12	0.005	0.002%	0.142%	N
101)	349.88204	24.65	-82.35	0.006	0.003%	0.145%	N
102)	349.8822404	24.24	-82.76	0.005	0.002%	0.147%	N
103)	349.8824408	24.40	-82.6	0.005	0.003%	0.150%	N
104)	349.8826412	26.92	-80.08	0.010	0.005%	0.154%	N
105)	349.8828416	25.64	-81.36	0.007	0.003%	0.158%	N
106)	349.883042	24.30	-82.7	0.005	0.002%	0.160%	N
107)	349.8832424	24.68	-82.32	0.006	0.003%	0.163%	N
108)	349.8834428	25.64	-81.36	0.007	0.003%	0.166%	N
109)	349.8836432	25.79	-81.21	0.008	0.003%	0.170%	N
110)	349.8838436	26.57	-80.43	0.009	0.004%	0.174%	N
111)	349.884044	25.97	-81.03	0.008	0.004%	0.178%	N
112)	349.8842444	26.09	-80.91	0.008	0.004%	0.181%	N
113)	349.8844448	25.43	-81.57	0.007	0.003%	0.185%	N
114)	349.8846452	26.08	-80.92	0.008	0.004%	0.188%	N
115)	349.8848456	27.31	-79.69	0.011	0.005%	0.193%	N
116)	349.885046	24.79	-82.21	0.006	0.003%	0.196%	N
117)	349.8852464	26.19	-80.81	0.008	0.004%	0.200%	N
118)	349.8854468	25.14	-81.86	0.007	0.003%	0.203%	N
119)	349.8856472	23.68	-83.32	0.005	0.002%	0.205%	N
120)	349.8858476	25.74	-81.26	0.007	0.003%	0.208%	N
121)	349.886048	26.54	-80.46	0.009	0.004%	0.213%	N
122)	349.8862484	25.68	-81.32	0.007	0.003%	0.216%	N
123)	349.8864488	27.43	-79.57	0.011	0.005%	0.221%	N
124)	349.8866492	27.08	-79.92	0.010	0.005%	0.226%	N
125)	349.8868496	27.71	-79.29	0.012	0.005%	0.231%	N
126)	349.88705	28.19	-78.81	0.013	0.006%	0.237%	N
127)	349.8872504	27.92	-79.08	0.012	0.006%	0.243%	N
128)	349.8874508	29.38	-77.62	0.017	0.008%	0.251%	N
129)	349.8876512	26.88	-80.12	0.010	0.004%	0.256%	N
130)	349.8878516	26.08	-80.92	0.008	0.004%	0.259%	N
131)	349.888052	28.63	-78.37	0.015	0.007%	0.266%	N
132)	349.8882524	29.29	-77.71	0.017	0.008%	0.274%	N
133)	349.8884528	27.81	-79.19	0.012	0.006%	0.279%	N
134)	349.8886532	24.03	-82.97	0.005	0.002%	0.282%	N
135)	349.8888536	26.94	-80.06	0.010	0.005%	0.286%	N
136)	349.889054	26.28	-80.72	0.008	0.004%	0.290%	N
137)	349.8892544	25.98	-81.02	0.008	0.004%	0.294%	N
138)	349.8894548	26.24	-80.76	0.008	0.004%	0.298%	N
139)	349.8896552	26.56	-80.44	0.009	0.004%	0.302%	N
140)	349.8898556	27.01	-79.99	0.010	0.005%	0.307%	N

141)	349.890056	30.55	-76.45	0.023	0.010%	0.317%	N	
142)	349.8902564	30.87	-76.13	0.024	0.011%	0.328%	N	
143)	349.8904568	29.52	-77.48	0.018	0.008%	0.336%	N	
144)	349.8906572	28.72	-78.28	0.015	0.007%	0.343%	N	
145)	349.8908576	31.29	-75.71	0.027	0.012%	0.356%	N	
146)	349.891058	30.38	-76.62	0.022	0.010%	0.366%	N	
147)	349.8912584	31.25	-75.75	0.027	0.012%	0.378%	N	
148)	349.8914588	31.17	-75.83	0.026	0.012%	0.390%	N	
149)	349.8916592	31.48	-75.52	0.028	0.013%	0.403%	N	
150)	349.8918596	31.75	-75.25	0.030	0.014%	0.417%	N	
151)	349.89206	31.95	-75.05	0.031	0.014%	0.431%	N	
152)	349.8922604	27.01	-79.99	0.010	0.005%	0.436%	N	
153)	349.8924608	30.01	-76.99	0.020	0.009%	0.445%	N	
154)	349.8926612	32.71	-74.29	0.037	0.017%	0.462%	N	
155)	349.8928616	26.86	-80.14	0.010	0.004%	0.467%	N	
156)	349.893062	30.31	-76.69	0.021	0.010%	0.477%	N	
157)	349.8932624	30.15	-76.85	0.021	0.010%	0.486%	N	
158)	349.8934628	29.08	-77.92	0.016	0.007%	0.494%	N	Left Edge
159)	349.8936632	31.94	-75.06	0.031	0.014%	0.508%	Y	
160)	349.8938636	30.98	-76.02	0.025	0.012%	0.520%	Y	
161)	349.894064	30.94	-76.06	0.025	0.011%	0.531%	Y	
162)	349.8942644	31.41	-75.59	0.028	0.013%	0.544%	Y	
163)	349.8944648	33.11	-73.89	0.041	0.019%	0.563%	Y	
164)	349.8946652	34.54	-72.46	0.057	0.026%	0.589%	Y	
165)	349.8948656	36.00	-71	0.079	0.037%	0.626%	Y	
166)	349.895066	34.24	-72.76	0.053	0.024%	0.650%	Y	
167)	349.8952664	33.36	-73.64	0.043	0.020%	0.670%	Y	
168)	349.8954668	35.13	-71.87	0.065	0.030%	0.700%	Y	
169)	349.8956672	34.95	-72.05	0.062	0.029%	0.729%	Y	
170)	349.8958676	35.04	-71.96	0.064	0.029%	0.758%	Y	
171)	349.896068	36.42	-70.58	0.087	0.040%	0.799%	Y	
172)	349.8962684	35.46	-71.54	0.070	0.032%	0.831%	Y	
173)	349.8964688	32.48	-74.52	0.035	0.016%	0.847%	Y	
174)	349.8966692	31.08	-75.92	0.026	0.012%	0.859%	Y	
175)	349.8968696	30.59	-76.41	0.023	0.011%	0.870%	Y	
176)	349.89707	30.84	-76.16	0.024	0.011%	0.881%	Y	
177)	349.8972704	33.15	-73.85	0.041	0.019%	0.900%	Y	
178)	349.8974708	31.94	-75.06	0.031	0.014%	0.914%	Y	
179)	349.8976712	34.43	-72.57	0.055	0.026%	0.940%	Y	
180)	349.8978716	32.54	-74.46	0.036	0.017%	0.957%	Y	
181)	349.898072	34.91	-72.09	0.062	0.029%	0.985%	Y	
182)	349.8982724	36.87	-70.13	0.097	0.045%	1.030%	Y	
183)	349.8984728	36.85	-70.15	0.097	0.045%	1.075%	Y	
184)	349.8986732	38.16	-68.84	0.131	0.060%	1.135%	Y	
185)	349.8988736	39.28	-67.72	0.169	0.078%	1.213%	Y	
186)	349.899074	39.13	-67.87	0.163	0.075%	1.288%	Y	
187)	349.8992744	38.53	-68.47	0.142	0.066%	1.354%	Y	
188)	349.8994748	37.24	-69.76	0.106	0.049%	1.403%	Y	
189)	349.8996752	39.23	-67.77	0.167	0.077%	1.480%	Y	
190)	349.8998756	39.68	-67.32	0.185	0.086%	1.566%	Y	
191)	349.900076	36.47	-70.53	0.089	0.041%	1.607%	Y	
192)	349.9002764	37.10	-69.9	0.102	0.047%	1.654%	Y	
193)	349.9004768	34.50	-72.5	0.056	0.026%	1.680%	Y	
194)	349.9006772	34.83	-72.17	0.061	0.028%	1.708%	Y	

195)	349.9008776	34.10	-72.9	0.051	0.024%	1.731%	Y
196)	349.901078	36.34	-70.66	0.086	0.040%	1.771%	Y
197)	349.9012784	34.48	-72.52	0.056	0.026%	1.797%	Y
198)	349.9014788	39.47	-67.53	0.177	0.082%	1.879%	Y
199)	349.9016792	35.47	-71.53	0.070	0.032%	1.911%	Y
200)	349.9018796	41.11	-65.89	0.258	0.119%	2.030%	Y
201)	349.90208	41.18	-65.82	0.262	0.121%	2.151%	Y
202)	349.9022804	40.95	-66.05	0.248	0.115%	2.266%	Y
203)	349.9024808	42.64	-64.36	0.366	0.169%	2.435%	Y
204)	349.9026812	43.20	-63.8	0.417	0.193%	2.627%	Y
205)	349.9028816	43.78	-63.22	0.476	0.220%	2.847%	Y
206)	349.903082	43.99	-63.01	0.500	0.231%	3.078%	Y
207)	349.9032824	42.86	-64.14	0.385	0.178%	3.256%	Y
208)	349.9034828	44.31	-62.69	0.538	0.249%	3.505%	Y
209)	349.9036832	42.84	-64.16	0.384	0.177%	3.682%	Y
210)	349.9038836	43.69	-63.31	0.467	0.216%	3.898%	Y
211)	349.904084	44.43	-62.57	0.553	0.256%	4.153%	Y
212)	349.9042844	39.96	-67.04	0.198	0.091%	4.245%	Y
213)	349.9044848	38.73	-68.27	0.149	0.069%	4.313%	Y
214)	349.9046852	35.05	-71.95	0.064	0.029%	4.343%	Y
215)	349.9048856	36.46	-70.54	0.088	0.041%	4.384%	Y
216)	349.905086	40.03	-66.97	0.201	0.093%	4.476%	Y
217)	349.9052864	41.87	-65.13	0.307	0.142%	4.618%	Y
218)	349.9054868	45.65	-61.35	0.733	0.338%	4.957%	Y
219)	349.9056872	45.83	-61.17	0.764	0.353%	5.309%	Y
220)	349.9058876	45.89	-61.11	0.774	0.358%	5.667%	Y
221)	349.906088	48.80	-58.2	1.514	0.699%	6.366%	Y
222)	349.9062884	50.29	-56.71	2.133	0.985%	7.351%	Y
223)	349.9064888	51.22	-55.78	2.642	1.220%	8.572%	Y
224)	349.9066892	53.15	-53.85	4.121	1.903%	10.475%	Y
225)	349.9068896	52.98	-54.02	3.963	1.830%	12.305%	Y
226)	349.90709	53.22	-53.78	4.188	1.934%	14.239%	Y
227)	349.9072904	53.13	-53.87	4.102	1.895%	16.134%	Y
228)	349.9074908	52.25	-54.75	3.350	1.547%	17.681%	Y
229)	349.9076912	55.46	-51.54	7.015	3.240%	20.921%	Y
230)	349.9078916	55.97	-51.03	7.889	3.643%	24.564%	Y
231)	349.908092	55.61	-51.39	7.261	3.354%	27.918%	Y
232)	349.9082924	56.11	-50.89	8.147	3.763%	31.680%	Y
233)	349.9084928	60.55	-46.45	22.646	10.459%	42.140%	Y
234)	349.9086932	56.20	-50.8	8.318	3.842%	45.981%	Y
235)	349.9088936	60.07	-46.93	20.277	9.365%	55.346%	Y
236)	349.909094	60.67	-46.33	23.281	10.752%	66.098%	Y
237)	349.9092944	57.14	-49.86	10.328	4.770%	70.868%	Y
238)	349.9094948	57.25	-49.75	10.593	4.892%	75.760%	Y
239)	349.9096952	55.92	-51.08	7.798	3.602%	79.362%	Y
240)	349.9098956	55.30	-51.7	6.761	3.122%	82.484%	Y
241)	349.910096	54.62	-52.38	5.781	2.670%	85.154%	Y
242)	349.9102964	53.53	-53.47	4.498	2.077%	87.232%	Y
243)	349.9104968	53.22	-53.78	4.188	1.934%	89.166%	Y
244)	349.9106972	53.76	-53.24	4.742	2.190%	91.356%	Y
245)	349.9108976	52.35	-54.65	3.428	1.583%	92.939%	Y
246)	349.911098	52.59	-54.41	3.622	1.673%	94.612%	Y
247)	349.9112984	50.20	-56.8	2.089	0.965%	95.577%	Y
248)	349.9114988	50.40	-56.6	2.188	1.010%	96.588%	Y

249)	349.9116992	44.72	-62.28	0.592	0.273%	96.861%	Y	
250)	349.9118996	45.68	-61.32	0.738	0.341%	97.202%	Y	
251)	349.9121	44.03	-62.97	0.505	0.233%	97.435%	Y	
252)	349.9123004	40.33	-66.67	0.215	0.099%	97.534%	Y	
253)	349.9125008	41.29	-65.71	0.269	0.124%	97.658%	Y	
254)	349.9127012	37.69	-69.31	0.117	0.054%	97.712%	Y	
255)	349.9129016	36.17	-70.83	0.083	0.038%	97.750%	Y	
256)	349.913102	33.34	-73.66	0.043	0.020%	97.770%	Y	
257)	349.9133024	37.63	-69.37	0.116	0.053%	97.824%	Y	
258)	349.9135028	40.43	-66.57	0.220	0.102%	97.925%	Y	
259)	349.9137032	40.36	-66.64	0.217	0.100%	98.026%	Y	
260)	349.9139036	39.53	-67.47	0.179	0.083%	98.108%	Y	
261)	349.914104	40.41	-66.59	0.219	0.101%	98.210%	Y	
262)	349.9143044	40.47	-66.53	0.222	0.103%	98.312%	Y	
263)	349.9145048	40.39	-66.61	0.218	0.101%	98.413%	Y	
264)	349.9147052	40.51	-66.49	0.224	0.104%	98.517%	Y	
265)	349.9149056	40.62	-66.38	0.230	0.106%	98.623%	Y	
266)	349.915106	39.95	-67.05	0.197	0.091%	98.714%	Y	
267)	349.9153064	39.37	-67.63	0.173	0.080%	98.794%	Y	
268)	349.9155068	40.05	-66.95	0.202	0.093%	98.887%	Y	
269)	349.9157072	40.32	-66.68	0.215	0.099%	98.986%	Y	
270)	349.9159076	39.52	-67.48	0.179	0.083%	99.069%	Y	
271)	349.916108	35.46	-71.54	0.070	0.032%	99.101%	Y	
272)	349.9163084	34.85	-72.15	0.061	0.028%	99.129%	Y	
273)	349.9165088	32.86	-74.14	0.039	0.018%	99.147%	Y	
274)	349.9167092	32.42	-74.58	0.035	0.016%	99.163%	Y	
275)	349.9169096	30.87	-76.13	0.024	0.011%	99.174%	Y	
276)	349.91711	30.66	-76.34	0.023	0.011%	99.185%	Y	
277)	349.9173104	30.68	-76.32	0.023	0.011%	99.196%	Y	
278)	349.9175108	33.81	-73.19	0.048	0.022%	99.218%	Y	
279)	349.9177112	32.91	-74.09	0.039	0.018%	99.236%	Y	
280)	349.9179116	33.64	-73.36	0.046	0.021%	99.257%	Y	
281)	349.918112	34.85	-72.15	0.061	0.028%	99.286%	Y	
282)	349.9183124	36.69	-70.31	0.093	0.043%	99.329%	Y	
283)	349.9185128	33.19	-73.81	0.042	0.019%	99.348%	Y	
284)	349.9187132	32.88	-74.12	0.039	0.018%	99.366%	Y	
285)	349.9189136	34.24	-72.76	0.053	0.024%	99.390%	Y	
286)	349.919114	33.39	-73.61	0.044	0.020%	99.410%	Y	
287)	349.9193144	33.73	-73.27	0.047	0.022%	99.432%	Y	
288)	349.9195148	33.08	-73.92	0.041	0.019%	99.451%	Y	
289)	349.9197152	30.21	-76.79	0.021	0.010%	99.460%	Y	
290)	349.9199156	32.55	-74.45	0.036	0.017%	99.477%	Y	
291)	349.920116	30.88	-76.12	0.024	0.011%	99.488%	Y	
292)	349.9203164	32.29	-74.71	0.034	0.016%	99.504%	N	Right Edge
293)	349.9205168	30.21	-76.79	0.021	0.010%	99.513%	N	
294)	349.9207172	28.48	-78.52	0.014	0.006%	99.520%	N	
295)	349.9209176	28.65	-78.35	0.015	0.007%	99.527%	N	
296)	349.921118	30.14	-76.86	0.021	0.010%	99.536%	N	
297)	349.9213184	28.28	-78.72	0.013	0.006%	99.542%	N	
298)	349.9215188	31.36	-75.64	0.027	0.013%	99.555%	N	
299)	349.9217192	30.22	-76.78	0.021	0.010%	99.565%	N	
300)	349.9219196	29.04	-77.96	0.016	0.007%	99.572%	N	
301)	349.92212	28.12	-78.88	0.013	0.006%	99.578%	N	
302)	349.9223204	30.25	-76.75	0.021	0.010%	99.588%	N	

303)	349.9225208	29.74	-77.26	0.019	0.009%	99.597%	N
304)	349.9227212	31.31	-75.69	0.027	0.012%	99.609%	N
305)	349.9229216	31.39	-75.61	0.027	0.013%	99.622%	N
306)	349.923122	31.17	-75.83	0.026	0.012%	99.634%	N
307)	349.9233224	31.32	-75.68	0.027	0.012%	99.646%	N
308)	349.9235228	30.34	-76.66	0.022	0.010%	99.656%	N
309)	349.9237232	31.13	-75.87	0.026	0.012%	99.668%	N
310)	349.9239236	28.12	-78.88	0.013	0.006%	99.674%	N
311)	349.924124	30.13	-76.87	0.021	0.009%	99.684%	N
312)	349.9243244	28.07	-78.93	0.013	0.006%	99.690%	N
313)	349.9245248	28.75	-78.25	0.015	0.007%	99.696%	N
314)	349.9247252	26.65	-80.35	0.009	0.004%	99.701%	N
315)	349.9249256	27.24	-79.76	0.011	0.005%	99.706%	N
316)	349.925126	27.07	-79.93	0.010	0.005%	99.710%	N
317)	349.9253264	27.48	-79.52	0.011	0.005%	99.715%	N
318)	349.9255268	26.70	-80.3	0.009	0.004%	99.720%	N
319)	349.9257272	27.76	-79.24	0.012	0.006%	99.725%	N
320)	349.9259276	27.17	-79.83	0.010	0.005%	99.730%	N
321)	349.926128	27.76	-79.24	0.012	0.006%	99.736%	N
322)	349.9263284	27.76	-79.24	0.012	0.006%	99.741%	N
323)	349.9265288	27.69	-79.31	0.012	0.005%	99.747%	N
324)	349.9267292	27.74	-79.26	0.012	0.005%	99.752%	N
325)	349.9269296	27.62	-79.38	0.012	0.005%	99.757%	N
326)	349.92713	28.87	-78.13	0.015	0.007%	99.764%	N
327)	349.9273304	27.08	-79.92	0.010	0.005%	99.769%	N
328)	349.9275308	26.20	-80.8	0.008	0.004%	99.773%	N
329)	349.9277312	27.08	-79.92	0.010	0.005%	99.778%	N
330)	349.9279316	24.55	-82.45	0.006	0.003%	99.780%	N
331)	349.928132	25.58	-81.42	0.007	0.003%	99.784%	N
332)	349.9283324	25.45	-81.55	0.007	0.003%	99.787%	N
333)	349.9285328	26.89	-80.11	0.010	0.005%	99.791%	N
334)	349.9287332	25.69	-81.31	0.007	0.003%	99.795%	N
335)	349.9289336	27.41	-79.59	0.011	0.005%	99.800%	N
336)	349.929134	25.10	-81.9	0.006	0.003%	99.803%	N
337)	349.9293344	25.84	-81.16	0.008	0.004%	99.806%	N
338)	349.9295348	26.09	-80.91	0.008	0.004%	99.810%	N
339)	349.9297352	25.00	-82	0.006	0.003%	99.813%	N
340)	349.9299356	25.32	-81.68	0.007	0.003%	99.816%	N
341)	349.930136	25.68	-81.32	0.007	0.003%	99.820%	N
342)	349.9303364	25.25	-81.75	0.007	0.003%	99.823%	N
343)	349.9305368	26.65	-80.35	0.009	0.004%	99.827%	N
344)	349.9307372	26.03	-80.97	0.008	0.004%	99.831%	N
345)	349.9309376	25.43	-81.57	0.007	0.003%	99.834%	N
346)	349.931138	24.12	-82.88	0.005	0.002%	99.836%	N
347)	349.9313384	23.65	-83.35	0.005	0.002%	99.838%	N
348)	349.9315388	22.80	-84.2	0.004	0.002%	99.840%	N
349)	349.9317392	25.44	-81.56	0.007	0.003%	99.843%	N
350)	349.9319396	24.73	-82.27	0.006	0.003%	99.846%	N
351)	349.93214	26.28	-80.72	0.008	0.004%	99.850%	N
352)	349.9323404	24.09	-82.91	0.005	0.002%	99.852%	N
353)	349.9325408	22.68	-84.32	0.004	0.002%	99.854%	N
354)	349.9327412	25.14	-81.86	0.007	0.003%	99.857%	N
355)	349.9329416	24.08	-82.92	0.005	0.002%	99.859%	N
356)	349.933142	24.29	-82.71	0.005	0.002%	99.862%	N

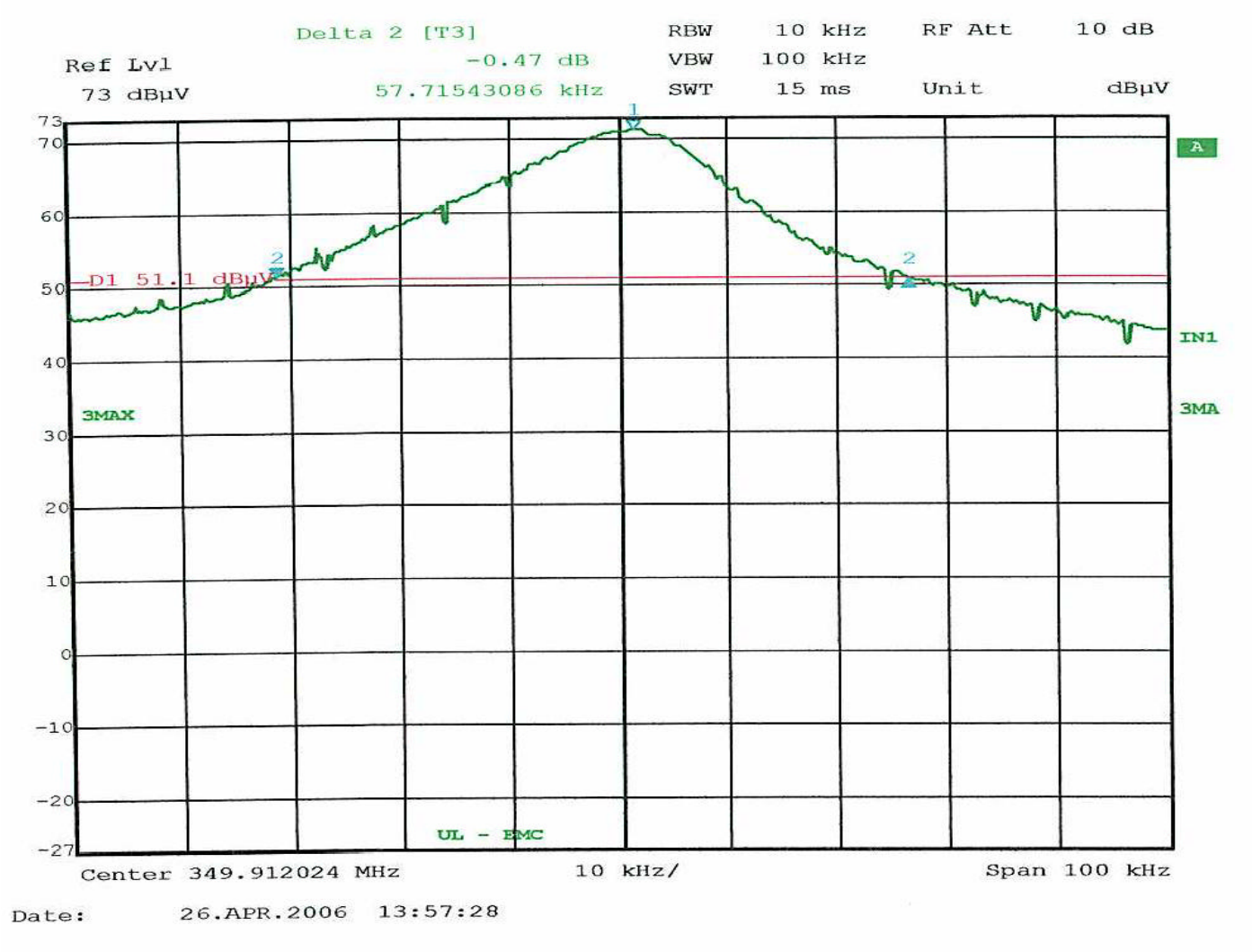
357)	349.9333424	24.57	-82.43	0.006	0.003%	99.865%	N
358)	349.9335428	25.20	-81.8	0.007	0.003%	99.868%	N
359)	349.9337432	24.98	-82.02	0.006	0.003%	99.870%	N
360)	349.9339436	21.46	-85.54	0.003	0.001%	99.872%	N
361)	349.934144	21.97	-85.03	0.003	0.001%	99.873%	N
362)	349.9343444	21.38	-85.62	0.003	0.001%	99.874%	N
363)	349.9345448	23.84	-83.16	0.005	0.002%	99.877%	N
364)	349.9347452	23.51	-83.49	0.004	0.002%	99.879%	N
365)	349.9349456	24.00	-83	0.005	0.002%	99.881%	N
366)	349.935146	23.07	-83.93	0.004	0.002%	99.883%	N
367)	349.9353464	23.46	-83.54	0.004	0.002%	99.885%	N
368)	349.9355468	23.29	-83.71	0.004	0.002%	99.887%	N
369)	349.9357472	24.50	-82.5	0.006	0.003%	99.890%	N
370)	349.9359476	23.42	-83.58	0.004	0.002%	99.892%	N
371)	349.936148	23.00	-84	0.004	0.002%	99.893%	N
372)	349.9363484	21.04	-85.96	0.003	0.001%	99.895%	N
373)	349.9365488	22.80	-84.2	0.004	0.002%	99.896%	N
374)	349.9367492	23.24	-83.76	0.004	0.002%	99.898%	N
375)	349.9369496	22.53	-84.47	0.004	0.002%	99.900%	N
376)	349.93715	23.35	-83.65	0.004	0.002%	99.902%	N
377)	349.9373504	21.47	-85.53	0.003	0.001%	99.903%	N
378)	349.9375508	23.48	-83.52	0.004	0.002%	99.905%	N
379)	349.9377512	23.42	-83.58	0.004	0.002%	99.907%	N
380)	349.9379516	21.90	-85.1	0.003	0.001%	99.909%	N
381)	349.938152	23.03	-83.97	0.004	0.002%	99.911%	N
382)	349.9383524	21.96	-85.04	0.003	0.001%	99.912%	N
383)	349.9385528	21.12	-85.88	0.003	0.001%	99.913%	N
384)	349.9387532	21.24	-85.76	0.003	0.001%	99.914%	N
385)	349.9389536	22.33	-84.67	0.003	0.002%	99.916%	N
386)	349.939154	21.43	-85.57	0.003	0.001%	99.917%	N
387)	349.9393544	19.81	-87.19	0.002	0.001%	99.918%	N
388)	349.9395548	21.73	-85.27	0.003	0.001%	99.920%	N
389)	349.9397552	20.78	-86.22	0.002	0.001%	99.921%	N
390)	349.9399556	21.21	-85.79	0.003	0.001%	99.922%	N
391)	349.940156	22.29	-84.71	0.003	0.002%	99.923%	N
392)	349.9403564	20.74	-86.26	0.002	0.001%	99.925%	N
393)	349.9405568	21.19	-85.81	0.003	0.001%	99.926%	N
394)	349.9407572	22.63	-84.37	0.004	0.002%	99.927%	N
395)	349.9409576	20.00	-87	0.002	0.001%	99.928%	N
396)	349.941158	20.59	-86.41	0.002	0.001%	99.929%	N
397)	349.9413584	23.01	-83.99	0.004	0.002%	99.931%	N
398)	349.9415588	21.15	-85.85	0.003	0.001%	99.932%	N
399)	349.9417592	21.12	-85.88	0.003	0.001%	99.934%	N
400)	349.9419596	21.97	-85.03	0.003	0.001%	99.935%	N
401)	349.94216	21.10	-85.9	0.003	0.001%	99.936%	N
402)	349.9423604	21.33	-85.67	0.003	0.001%	99.938%	N
403)	349.9425608	21.17	-85.83	0.003	0.001%	99.939%	N
404)	349.9427612	20.03	-86.97	0.002	0.001%	99.940%	N
405)	349.9429616	21.00	-86	0.003	0.001%	99.941%	N
406)	349.943162	22.43	-84.57	0.003	0.002%	99.942%	N
407)	349.9433624	21.04	-85.96	0.003	0.001%	99.944%	N
408)	349.9435628	20.45	-86.55	0.002	0.001%	99.945%	N
409)	349.9437632	20.05	-86.95	0.002	0.001%	99.946%	N
410)	349.9439636	20.15	-86.85	0.002	0.001%	99.947%	N

411)	349.944164	20.94	-86.06	0.002	0.001%	99.948%	N
412)	349.9443644	20.72	-86.28	0.002	0.001%	99.949%	N
413)	349.9445648	21.05	-85.95	0.003	0.001%	99.950%	N
414)	349.9447652	19.76	-87.24	0.002	0.001%	99.951%	N
415)	349.9449656	20.46	-86.54	0.002	0.001%	99.952%	N
416)	349.945166	21.17	-85.83	0.003	0.001%	99.953%	N
417)	349.9453664	19.73	-87.27	0.002	0.001%	99.954%	N
418)	349.9455668	20.62	-86.38	0.002	0.001%	99.955%	N
419)	349.9457672	19.49	-87.51	0.002	0.001%	99.956%	N
420)	349.9459676	17.93	-89.07	0.001	0.001%	99.956%	N
421)	349.946168	21.12	-85.88	0.003	0.001%	99.958%	N
422)	349.9463684	19.34	-87.66	0.002	0.001%	99.958%	N
423)	349.9465688	19.56	-87.44	0.002	0.001%	99.959%	N
424)	349.9467692	19.76	-87.24	0.002	0.001%	99.960%	N
425)	349.9469696	18.21	-88.79	0.001	0.001%	99.961%	N
426)	349.94717	19.60	-87.4	0.002	0.001%	99.962%	N
427)	349.9473704	19.86	-87.14	0.002	0.001%	99.962%	N
428)	349.9475708	18.51	-88.49	0.001	0.001%	99.963%	N
429)	349.9477712	19.01	-87.99	0.002	0.001%	99.964%	N
430)	349.9479716	20.35	-86.65	0.002	0.001%	99.965%	N
431)	349.948172	20.54	-86.46	0.002	0.001%	99.966%	N
432)	349.9483724	18.61	-88.39	0.001	0.001%	99.967%	N
433)	349.9485728	19.64	-87.36	0.002	0.001%	99.967%	N
434)	349.9487732	17.40	-89.6	0.001	0.001%	99.968%	N
435)	349.9489736	19.17	-87.83	0.002	0.001%	99.969%	N
436)	349.949174	19.21	-87.79	0.002	0.001%	99.969%	N
437)	349.9493744	19.29	-87.71	0.002	0.001%	99.970%	N
438)	349.9495748	18.29	-88.71	0.001	0.001%	99.971%	N
439)	349.9497752	19.00	-88	0.002	0.001%	99.972%	N
440)	349.9499756	18.29	-88.71	0.001	0.001%	99.972%	N
441)	349.950176	17.71	-89.29	0.001	0.001%	99.973%	N
442)	349.9503764	18.54	-88.46	0.001	0.001%	99.973%	N
443)	349.9505768	18.44	-88.56	0.001	0.001%	99.974%	N
444)	349.9507772	17.13	-89.87	0.001	0.000%	99.974%	N
445)	349.9509776	16.99	-90.01	0.001	0.000%	99.975%	N
446)	349.951178	17.74	-89.26	0.001	0.001%	99.975%	N
447)	349.9513784	18.26	-88.74	0.001	0.001%	99.976%	N
448)	349.9515788	16.47	-90.53	0.001	0.000%	99.977%	N
449)	349.9517792	18.99	-88.01	0.002	0.001%	99.977%	N
450)	349.9519796	19.01	-87.99	0.002	0.001%	99.978%	N
451)	349.95218	18.81	-88.19	0.002	0.001%	99.979%	N
452)	349.9523804	15.87	-91.13	0.001	0.000%	99.979%	N
453)	349.9525808	17.73	-89.27	0.001	0.001%	99.980%	N
454)	349.9527812	16.51	-90.49	0.001	0.000%	99.980%	N
455)	349.9529816	17.22	-89.78	0.001	0.000%	99.980%	N
456)	349.953182	17.86	-89.14	0.001	0.001%	99.981%	N
457)	349.9533824	18.12	-88.88	0.001	0.001%	99.982%	N
458)	349.9535828	17.60	-89.4	0.001	0.001%	99.982%	N
459)	349.9537832	17.39	-89.61	0.001	0.001%	99.983%	N
460)	349.9539836	18.20	-88.8	0.001	0.001%	99.983%	N
461)	349.954184	17.44	-89.56	0.001	0.001%	99.984%	N
462)	349.9543844	18.37	-88.63	0.001	0.001%	99.984%	N
463)	349.9545848	17.97	-89.03	0.001	0.001%	99.985%	N
464)	349.9547852	16.63	-90.37	0.001	0.000%	99.985%	N

465)	349.9549856	17.11	-89.89	0.001	0.000%	99.986%	N
466)	349.955186	17.00	-90	0.001	0.000%	99.986%	N
467)	349.9553864	16.82	-90.18	0.001	0.000%	99.987%	N
468)	349.9555868	17.25	-89.75	0.001	0.000%	99.987%	N
469)	349.9557872	17.87	-89.13	0.001	0.001%	99.988%	N
470)	349.9559876	17.12	-89.88	0.001	0.000%	99.988%	N
471)	349.956188	17.57	-89.43	0.001	0.001%	99.989%	N
472)	349.9563884	16.80	-90.2	0.001	0.000%	99.989%	N
473)	349.9565888	17.94	-89.06	0.001	0.001%	99.990%	N
474)	349.9567892	17.39	-89.61	0.001	0.001%	99.990%	N
475)	349.9569896	17.46	-89.54	0.001	0.001%	99.991%	N
476)	349.95719	16.70	-90.3	0.001	0.000%	99.991%	N
477)	349.9573904	16.44	-90.56	0.001	0.000%	99.992%	N
478)	349.9575908	16.00	-91	0.001	0.000%	99.992%	N
479)	349.9577912	17.55	-89.45	0.001	0.001%	99.993%	N
480)	349.9579916	17.30	-89.7	0.001	0.000%	99.993%	N
481)	349.958192	16.91	-90.09	0.001	0.000%	99.994%	N
482)	349.9583924	15.61	-91.39	0.001	0.000%	99.994%	N
483)	349.9585928	15.87	-91.13	0.001	0.000%	99.994%	N
484)	349.9587932	15.62	-91.38	0.001	0.000%	99.995%	N
485)	349.9589936	16.40	-90.6	0.001	0.000%	99.995%	N
486)	349.959194	16.28	-90.72	0.001	0.000%	99.995%	N
487)	349.9593944	17.31	-89.69	0.001	0.000%	99.996%	N
488)	349.9595948	17.26	-89.74	0.001	0.000%	99.996%	N
489)	349.9597952	14.42	-92.58	0.001	0.000%	99.997%	N
490)	349.9599956	15.69	-91.31	0.001	0.000%	99.997%	N
491)	349.960196	14.01	-92.99	0.001	0.000%	99.997%	N
492)	349.9603964	13.96	-93.04	0.000	0.000%	99.997%	N
493)	349.9605968	16.11	-90.89	0.001	0.000%	99.998%	N
494)	349.9607972	14.15	-92.85	0.001	0.000%	99.998%	N
495)	349.9609976	15.61	-91.39	0.001	0.000%	99.998%	N
496)	349.961198	15.37	-91.63	0.001	0.000%	99.999%	N
497)	349.9613984	16.04	-90.96	0.001	0.000%	99.999%	N
498)	349.9615988	14.34	-92.66	0.001	0.000%	99.999%	N
499)	349.9617992	16.56	-90.44	0.001	0.000%	100.000%	N
500)	349.962	14.60	-92.4	0.001	0.000%	100.000%	N

Test 2, Item B (FCC/ANSI Occupied BW, RBW = 10 kHz) - Peak Plot:

Occupied Bandwidth



Test 2, Item A - Discrete Data: Occupied Bandwidth

Test Item (A-Z)	Center Frequency (MHz)	Measured Bandwidth (MHz)	Bandwidth (% of Center Frequency)	Maximum Permitted Bandwidth (% of Center Frequency)	Pass/Fail (P/F)	See Comment (#)*
Canada						
A	349.912	0.02666	0.0076%	0.25%	P	
FCC / ANSI						
B	349.912	0.05772	0.0165%	0.25%	P	

* # = See Comment Number Under This Test's Comments Section.

Test 3: Peak-to-Average Ratio

Test Requirement: 47 CFR Part 15, Subpart C
Industry Canada RSS-210 Issue 6

Test Specification: 47 CFR Part 15, Subpart C, Section 15.209 and 15.231
Industry Canada RSS-210 Issue 6, Annex 1, Section A1.1.2

Test Procedure:

The test was performed in accordance with the Test Requirement and Specification and configured as noted in the Test Setup. The EUT was positioned so that the received signal was maximized. The receive antenna height and orientation were adjusted so that the received signal was maximized.

The spectrum analyzer reference level set to bring the signal close to the top of the screen. Next the signal is centered on the transmit frequency and span is reduced to 0 Hz to obtain a time domain measurement. The period of one complete transmit cycle is recorded. Next each button on the transmitter is depressed in sequence to determine which button produces the largest duty cycle. The duration of each pulse in the cycle is recorded and the percentage of time the EUT is transmitting is calculated.

No limit is expressed for this test, however the result of this test is used to calculate average values for the radiated transmit power and spurious emissions.

Test Deviations:

None

Test Setup: Only the following ports were tested. See EUT Information for details.

Test Item	Port #	Port Name	EUT Operation Mode	EUT Configuration	Power Interface
A	0	Enclosure	1	1	1

Test 3 - Results: Peak-to-Average Ratio

Test Results Summary:

Test Item	Test Location	Pass/Fail (P/F)*	Date Completed	Comment #
A	A	N/A	4/3/06	

*There is no Pass/Fail requirement for this test, however the results are used to calculate average emissions for Test 1.

Comments:

Comment #	Description

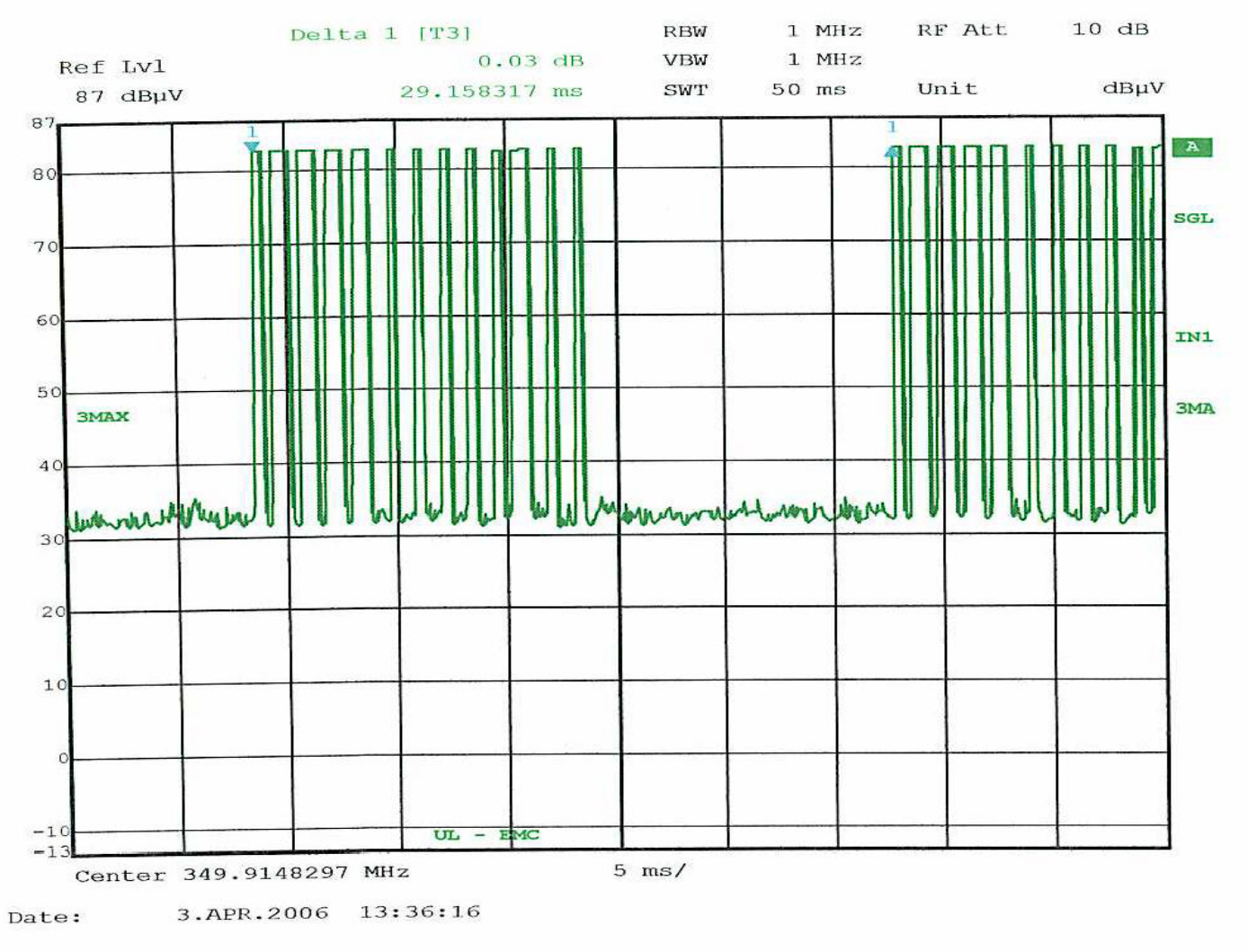
Test Equipment Used:

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
AT0030	Log periodic Antenna, 200 MHz to 1000 MHz	Schaffner, EMC	3160-07	3/24/06	3/31/07
ATA085	Attenuator 6 dB, 2 GHz	Pasternack	PE7002-6	3/23/06	3/31/07
ATA108	10 m, N male - N male	UL	RG214	3/23/06	3/31/07
ATA125	RF Amplifier, 1 to 1000 MHz	Miteq	AM-3A-000110-N	3/23/06	3/31/07
ATA143	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	2/14/06	8/31/06
ATA168	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	12/21/05	12/31/06
SAR003	EMC Receiver	Rohde & Schwarz	1088.7490K40	8/10/05	8/31/06

The above equipment has been calibrated and is within the manufacturer's published limit of error. Calibration is traceable to the National Institute of Standards & Technology(NIST) and conforms to ISO 17025:2005.

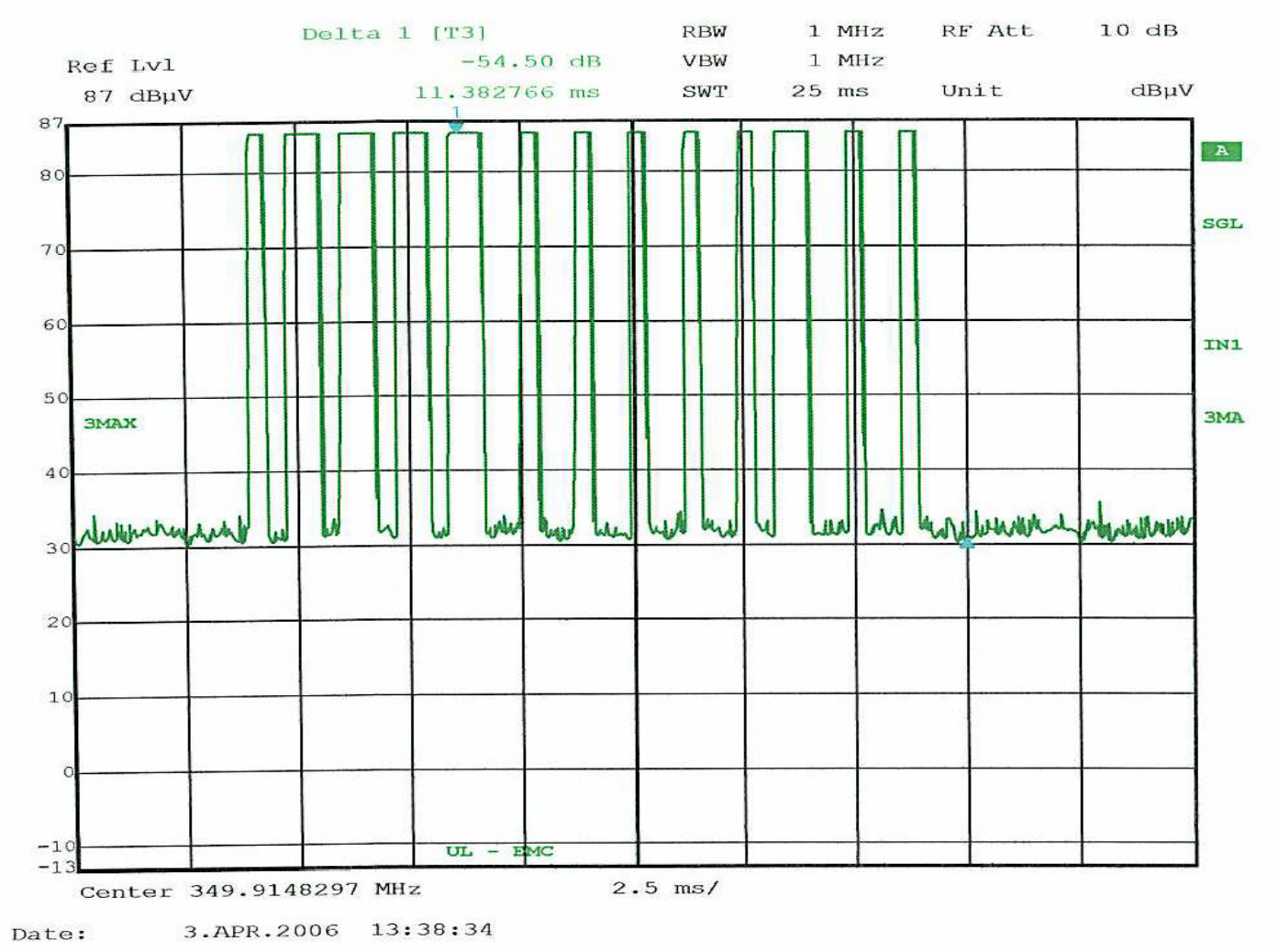
Test 3, Item A (Full Cycle) - Peak Plot:

Peak-to-Average Ratio



Test 3, Item A (Number of Pulses) - Peak Plot:

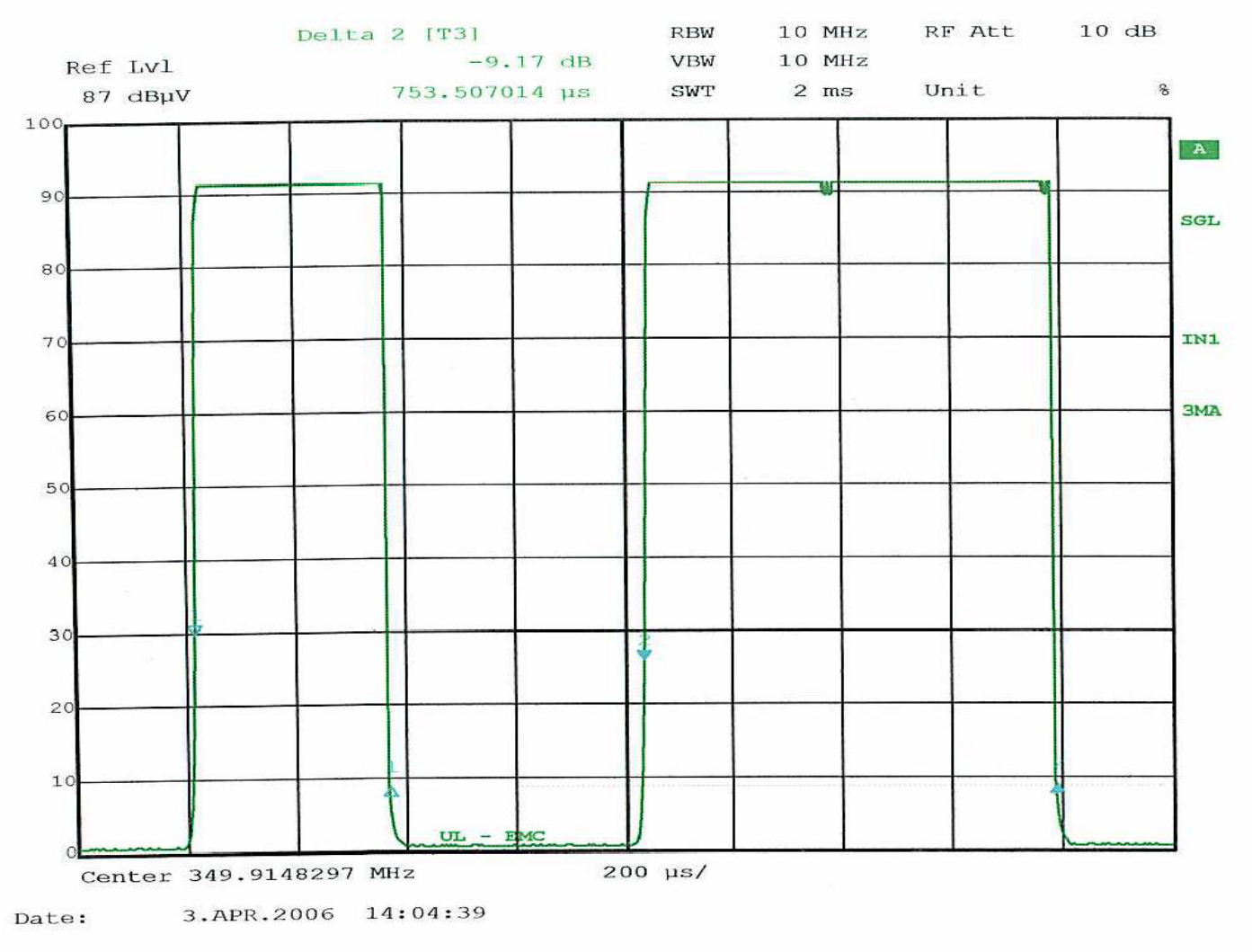
Peak-to-Average Ratio



Note: 13 pulses are observed – 8 short and 5 long duration.

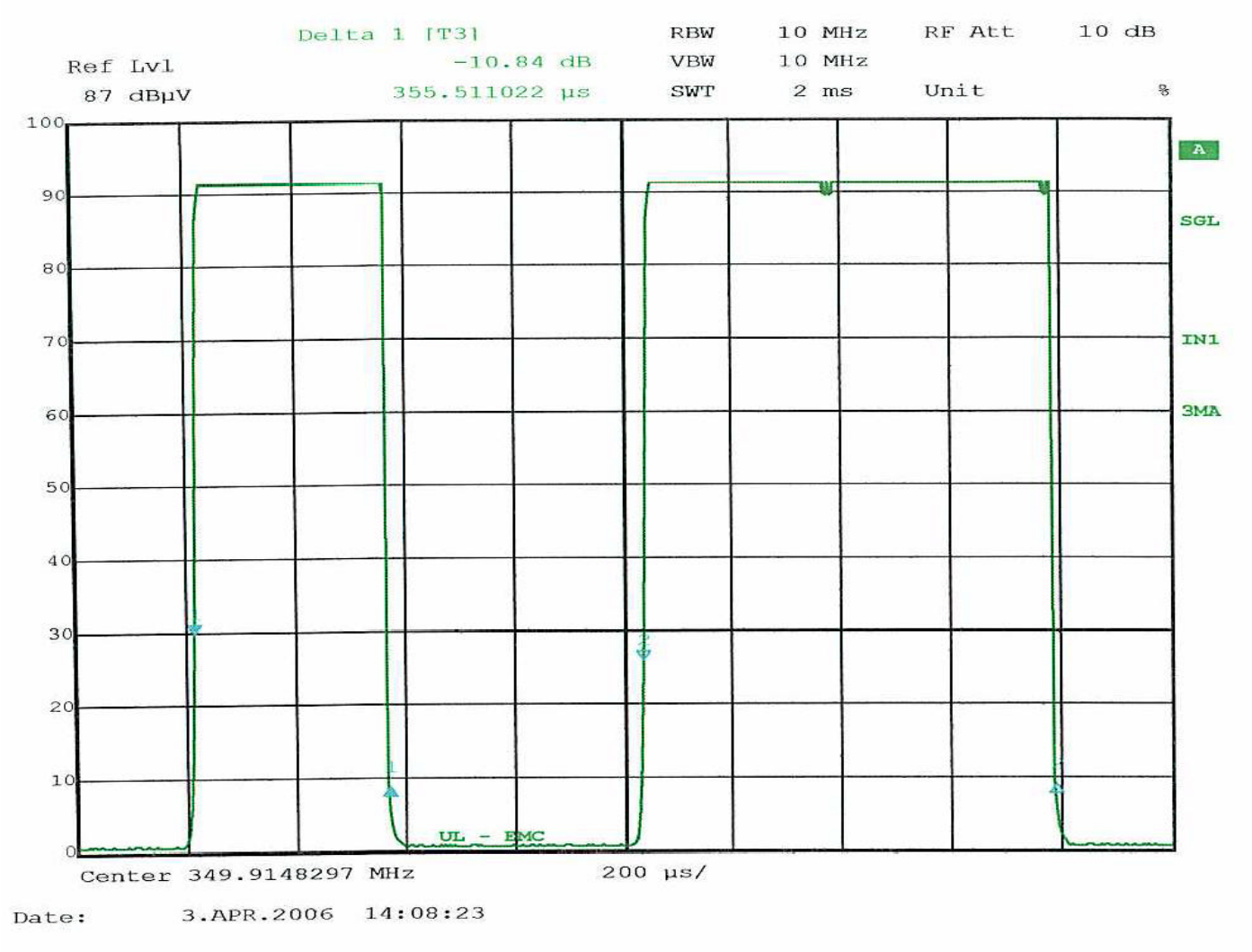
Test 3, Item A (Long Pulse Duration) - Peak Plot:

Peak-to-Average Ratio



Test 3, Item A (Short Pulse Duration) - Peak Plot:

Peak-to-Average Ratio



Test 3, Item A - Results:

Peak-to-Average Ratio

Test Item (A-Z)	Name of Pulse (short, long, header, etc)	Number of Pulses (#)	Duration of Each Pulse (ms)	Total ON Time for Pulse Type (Number x Duration)	See Comment (#)***
A	Short	8	0.3555	2.8440	
A	Long	5	0.7535	3.7675	
			Total ON Time per period (ms)	6.6115	
			Total Cycle Time (ms)*	29.158	
			Duty Cycle (fraction)	0.2267	
			Duty Cycle (dB)**	-12.9	

* Or 100 milliseconds, whichever is less
** Peak-to-Average Ratio = 20 * log (Duty Cycle)
*** # = See Comment Number Under The Preceeding Test Comments Section.

Test 4: Radiated Disturbance Emissions - Restricted Bands

Test Requirement: 47 CFR Part 15, Subpart C
Industry Canada, RSS-210, Issue 6

Test Specification: 47 CFR Part 15, Subpart C, Section 15.205
Industry Canada, RSS-210, Issue 6, Section 2.6

Test Procedure:

The EUT is verified to produce only spurious emissions in the bands listed below. Where spurious emissions exist they must comply with the general limits from 47 CFR Part 15, Section 15.209 and RSS-210 Issue 6 Section 2.6.

Results from measurements are examined to ensure that no spurious emission in a restricted band (below) exceeds the general limits. The restricted bands are:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	608 - 614	4.5 - 5.15
0.495 - 0.505	16.69475 - 16.69525	960 - 1240	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	1300 - 1427	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1435 - 1626.5	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1645.5 - 1646.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1660 - 1710	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1718.8 - 1722.2	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	2200 - 2300	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2310 - 2390	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2483.5 - 2500	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2655 - 2900	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	3260 - 3267	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3332 -3339	23.6 - 24.0
12.29 - 12.293	127.72 - 167.17	3345.8 - 3358	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3600 - 4400	36.43 - 36.5
12.57675 - 12.57725	332-335.4		Above 38.6
13.36 - 13.41	399.9 - 410		

All spurious emissions, including harmonics falling within restricted bands were observed to meet the general limits of 15.209 and RSS-210 Issue 6.

Test Results:

From data recorded in Test 1:

- The transmit frequency, 350 MHz, does not fall within a restricted band.
- All spurious emissions falling within a restricted band (1050 MHz, 1400 MHz, and 2800 MHz) comply with the general limit in 15.209.

Test 5: Holdover Duration – Manually Activated Transmitter

Test Requirement: 47 CFR Part 15, Subpart C
Industry Canada, RSS-210, Issue 6

Test Specification: 47 CFR Part 15, Subpart C, Section 15.231
Industry Canada, RSS-210, Issue 6, Annex 1, A1.1.1

Test Procedure:

The EUT is verified to cease emissions within 5 seconds after releasing transmit buttons. This measurement is performed as a benchtop measurement. A calibrated spectrum analyzer and a coupling antenna is used. The spectrum analyzer is set to a duration of 10 seconds, center frequency is set to the transmitter's center frequency, and span to zero Hz. A wide resolution bandwidth and video bandwidth is chosen (RBW=10 kHz or greater, VBW>RBW). The transmitter's button is depressed. The spectrum analyzer sweep is begun. The transmit button is released when the sweep reaches the first grid line.

If the transmitter ceases to transmit immediately, the spectrum analyzer screen is printed, and a comment added to show that the transmission ceased immediately.

If the transmitter continues to transmit, then two markers are positioned on the display to document the holdover time.

Test Deviations:

None

Test Setup: Only the following ports were tested. See EUT Information for details.

Test Item	Port #	Port Name	EUT Operation Mode	EUT Configuration	Power Interface
A	0	Enclosure	1	1	1

Test 5 - Results: Holdover Time – Manually Activated Transmitter

Test Results Summary:

Test Item	Test Location	Pass/Fail (P/F)*	Date Completed	Comment #
A	F	P	6/11/06	

*There is no Pass/Fail requirement for this test, however the results are used to calculate average emissions for Test 1.

Comments:

Comment #	Description

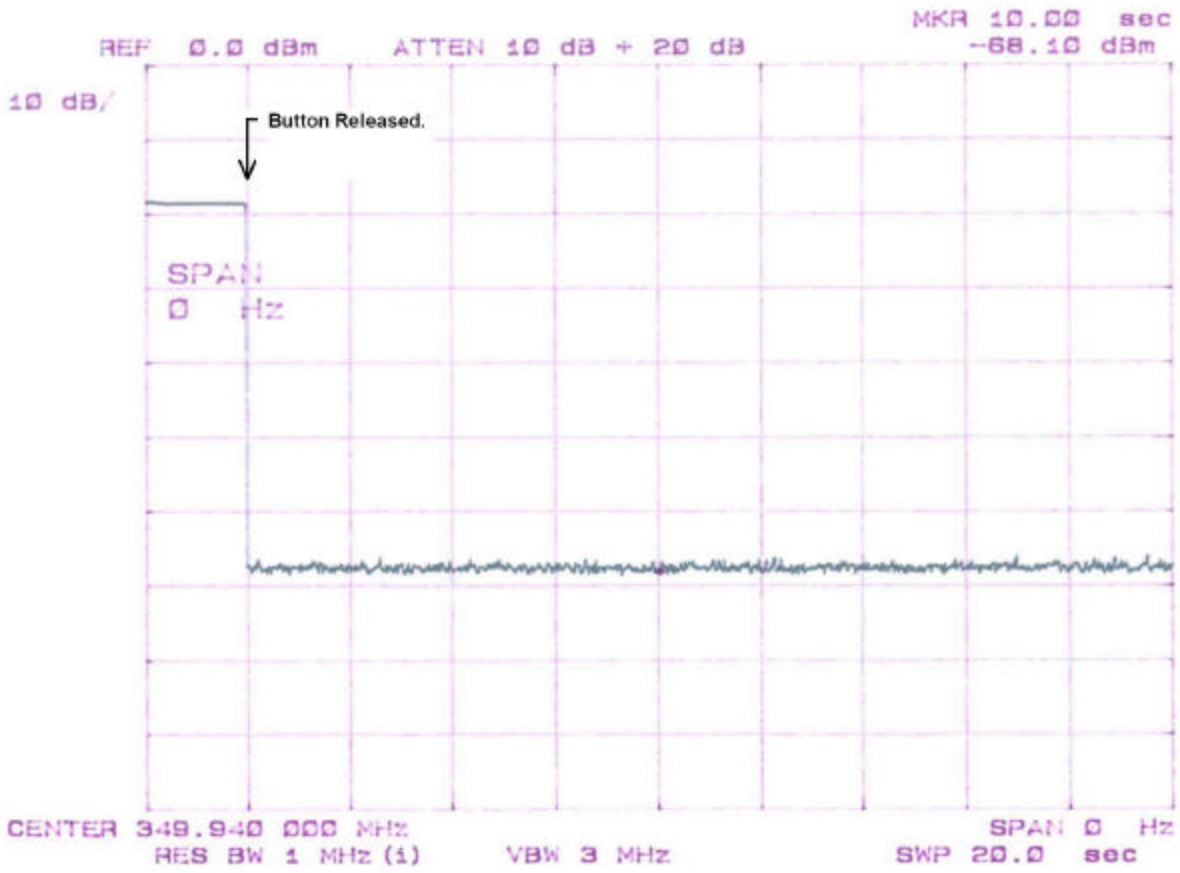
Test Equipment Used:

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
AT0030	Log periodic Antenna, 200 MHz to 1000 MHz	Schaffner, EMC	3160-07	3/24/06	3/31/07
ATA168	Cable, 6ft., N-male to N-male	Micro-Coax	N/A	12/21/05	12/31/06
SAR001	Spectrum Analyzer / Receiver	Hewlett-Packard	8572A	2/15/06	2/28/07

The above equipment has been calibrated and is within the manufacturer's published limit of error. Calibration is traceable to the National Institute of Standards & Technology(NIST) and conforms to ISO 17025:2005.

Test 5, Item A - Peak Plot:

Holdover Duration – Manually Activated Transmitter



Transmission was observed to cease immediately upon release of button (< 100 ms).

Test 5, Item A - Results:

Holdover Duration – Manually Activated Transmitter

Test Item (A-Z)	Holdover Time Measured (seconds)	Holdover Time Maximum (seconds)	Pass/Fail (P/F)	See Comment (#)***
A	<0.1	5	P	

Accreditation Certificates:

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:1999

Underwriters Laboratories, Inc.
12 Laboratory Drive
Research Triangle Park, NC 27709
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URL: http://www.ul.com

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS — **NVLAP LAB CODE 200246-0**

NVLAP Code	*Designation / Description*
Emissions Test Methods:	
12/CIS14	CISPR 14-1 (March 30, 2000): Limits and Methods of Measurement of Radio Interference Characteristics of Household Electrical Appliances, Portable Tools and Similar Electrical Apparatus - Part 1: Emissions
12/CIS14a	EN 55014-1 (1993), A1 (1997), A2 (1999):
12/CIS14b	AS/NZS 1044 (1995):
12/CIS14c	CNS 13783-1: Electromagnetic Compatibility Requirements for household appliances, electric tools and similar apparatus - Part 1: Emissions
12/CIS22	IEC/CISPR 22 (1997) & EN 55022 (1998) + A1(2000): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22a	IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)
12/CIS22b	CNS 13438 (1997): Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/EM02a	IEC 61000-3-2, Edition 2.1 (2001-10), EN 61000-3-2 (2000), and AS/NZS 2279.1 (2000): Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16 A)

2005-07-01 through 2006-06-30
Effective dates

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

NVLAP® National Voluntary Laboratory Accreditation Program

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS — **NVLAP LAB CODE 200246-0**

NVLAP Code	*Designation / Description*
12/EM03b	IEC 61000-3-3, Edition 1.1(2002-03) & EN 61000-3-3, A1(2001): EMC - Part 3-3: Limits - Limitations of voltage changes, voltage fluctuations and flicker, in public low-voltage supply-systems, for equipment with rated current <=16 A per phase and not subject to conditional connections
12/FCC15b	ANSI C63.4 (2003) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
12/TS1	AS/NZS CISPR 22 (2002) and AS/NZS 3548 (1997): Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
Immunity Test Methods:	
12/I01	IEC 61000-4-2, Ed. 1.2 (2001), A1, A2; EN 61000-4-2: Electrostatic Discharge Immunity Test
12/I02	IEC 61000-4-3, Ed. 2.0 (2002-03); EN 61000-4-3 (2002): Radiated Radio-Frequency Electromagnetic Field Immunity Test
12/I03	IEC 61000-4-4(1995), A1(2000), A2(2001); EN 61000-4-4: Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical Fast Transient/Burst Immunity Test
12/I04	IEC 61000-4-5, Ed. 1.1 (2001-04); EN 61000-4-5: Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
12/I05	IEC 61000-4-6, Ed. 2.0 (2003-05); EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
12/I06	IEC 61000-4-8, Ed. 1.1 (2001); EN 61000-4-8: Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
12/I07	IEC 61000-4-11, Ed. 1.1 (2001-03); EN 61000-4-11: Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests

2005-07-01 through 2006-06-30
Effective dates

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

NVLAP® National Voluntary Laboratory Accreditation Program

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS — **NVLAP LAB CODE 200246-0**

NVLAP Code	*Designation / Description*
Safety Test Methods:	
12/T41a	AS/NZS 60950 (2000): Safety of Information Technology Equipment (including Amdt1)
12/T50	AS/NZS 3260 (1993) + Supplement 1 (1996): Safety of Information Technology Equipment Including Electrical Business Equipment
Telecommunications Test Methods:	
12/1089d	GR-1089-CORE, Issue 3 (April 2002): EMC and Electrical Safety - Generic Criteria for Network Telecommunications Equipment (sections: 2.1.2.1, 2.1.2.2, 2.1.4, 2.2, 3.2, 3.3, 4.6.2, 4.6.5, 4.6.7 - 4.6.17, 4.7, 5.2, 5.3.1, 5.4, 6, 7.2 - 7.7, 8, and 9.2 - 9.12)
12/76200a	SBC-TP-76200, Issue 4 (May 2003): Network Equipment Power, Grounding, Environmental, and Physical Design Requirements (sections: 6.1B, 7.1, 7.2, 7.3, 7.4, and 10.1 - 10.4B)
12/GR63a	GR-63-CORE, Issue 2 (April 2002): NEBS (TM) Requirements: Physical Protection (sections: 2, 3, 4.1, 4.2.3, 4.3, 4.4.1, 4.4.3, 4.4.4, 4.5, 4.6, and 4.7)

2005-07-01 through 2006-06-30
Effective dates

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

Measurement Uncertainty Statement

Test	Expanded Estimate of Uncertainty (k = 2, for 95% of a normal distribution)	Units
Radiated Disturbance Emissions:		
• 3 and 10 meter measurement distances	+/- 3.8 dB	Volts/meter
• 1 meter measurement distance	+/- 2.3 dB	Volts/meter
Conducted Disturbance Emissions (9 kHz – 30 MHz):	+/- 3.4 dB	Volts
Electrostatic Discharge	+/- 2.2 %	Volts
Radiated RF Immunity (Chamber):	+/- 2.7 dB	Volts/meter
Electrical Fast Transients/Bursts Immunity	+/- 4.6 %	Volts
Surge Immunity	+/- 4.6 %	Volts
Conducted RF Immunity	+/- 2.8 dB	Volts
Power Frequency Magnetic Field Immunity	+/-13.6 %	Amps/meter
Voltage Dips and Short Interrupts	+/-4.2 %	Volts
Radiated RF Immunity (Tri-plate)	+/-3.2 %	Volts/meter
Disturbance Power (30 – 300 MHz)	+/-3.5%	Volts

CISPR 16-4:2000 Statement

The UL-RTP estimate of expanded measurement uncertainty listed above for Conducted Disturbance (+/- 3.4 dB), Disturbance Power (+/- 3.5 dB), and Radiated Disturbance (+/-3.8 dB) are less than the Values of U_{cispr} as listed in Table 1 of CISPR 16-4. Therefore:

- Compliance is deemed to occur if no measured disturbance reported exceeds the disturbance limits.
- Non-compliance is deemed to occur if any measured disturbance reported exceeds the disturbance limits.