Test Report:	2W06525
Applicant:	DESA International 2901 Industrial Drive Bowling Green, KY 42102
Equipment Under Test: (EUT)	6007TX
FCC ID:	BJ4-60WCP07TX
In Accordance With:	**FCC Part 15, Subpart C, 15.231**
Tested By:	Nemko Canada Inc. 303 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	 G. Westwell, Wireless Technologist
Date:	17 October 2002
Total Number of Pages:	28

Table of Contents

Section 1. Summary of Test Results

General

All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart C. All tests were conducted using measurement procedure ANSI C63.4-1992. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE. NONE
See " Summary of Test Data".

TESTED BY: _____ DATE: 17 October 2002
Kevin Carr, EMC Specialist

Summary Of Test Data

Name of Test	Para. Number	Results
Transmission Requirements	15.231(a)	Complied
Radiated Emissions	15.231(b)	Complied
Occupied Bandwidth	15.231(c)	Complied
Frequency Tolerance	15.231(d)	N/A
Periodic Alternate Field Strength Requirements	15.231(e)	N/A
Powerline Conducted Emissions	15.207	Complied

Test Conditions:

Indoor Temperature: 21?C
Humidity: 40%

Outdoor Temperature: 17?C
Humidity: 65%

Please note that fresh batteries were used for testing.

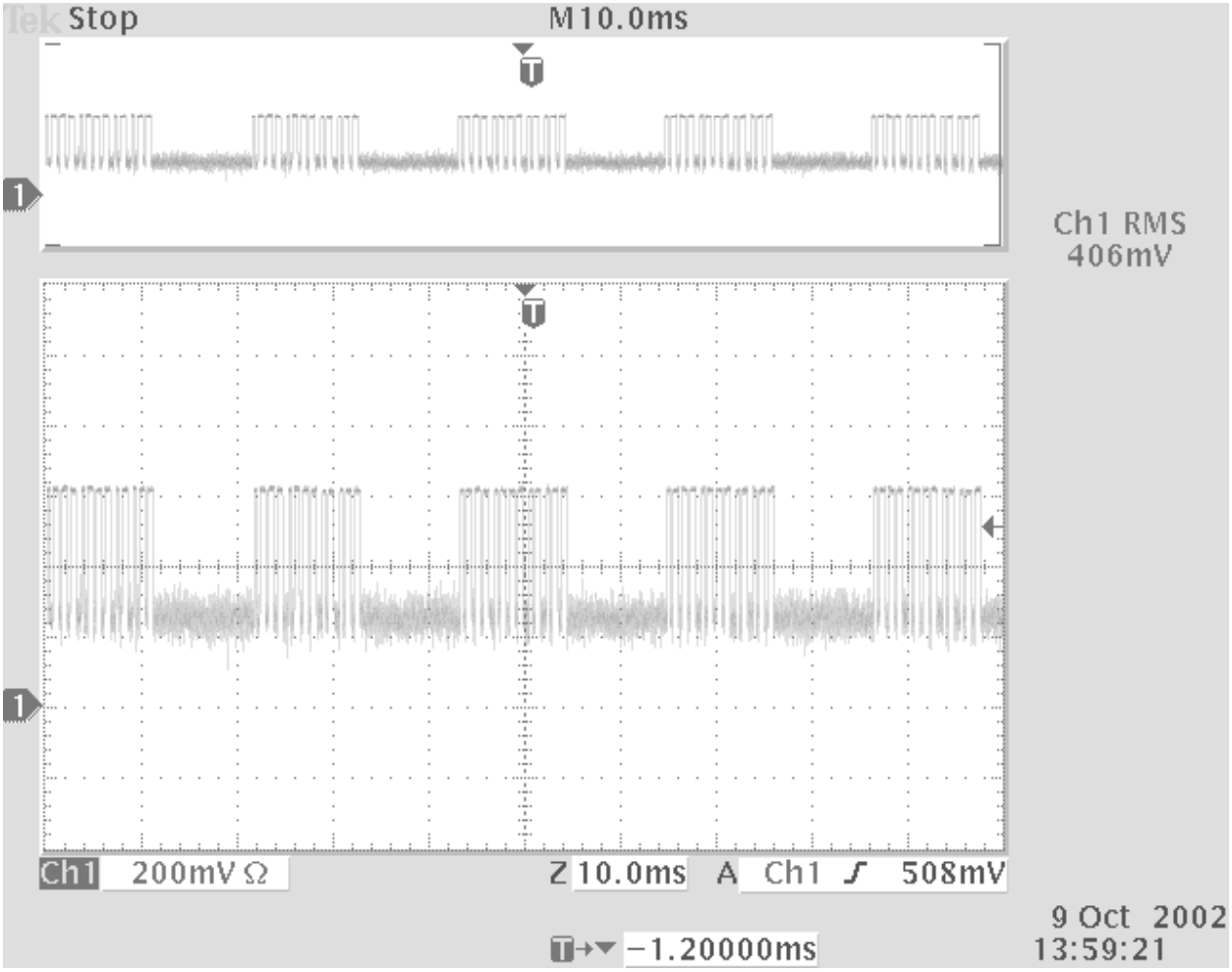
Section 2. Equipment Under Test

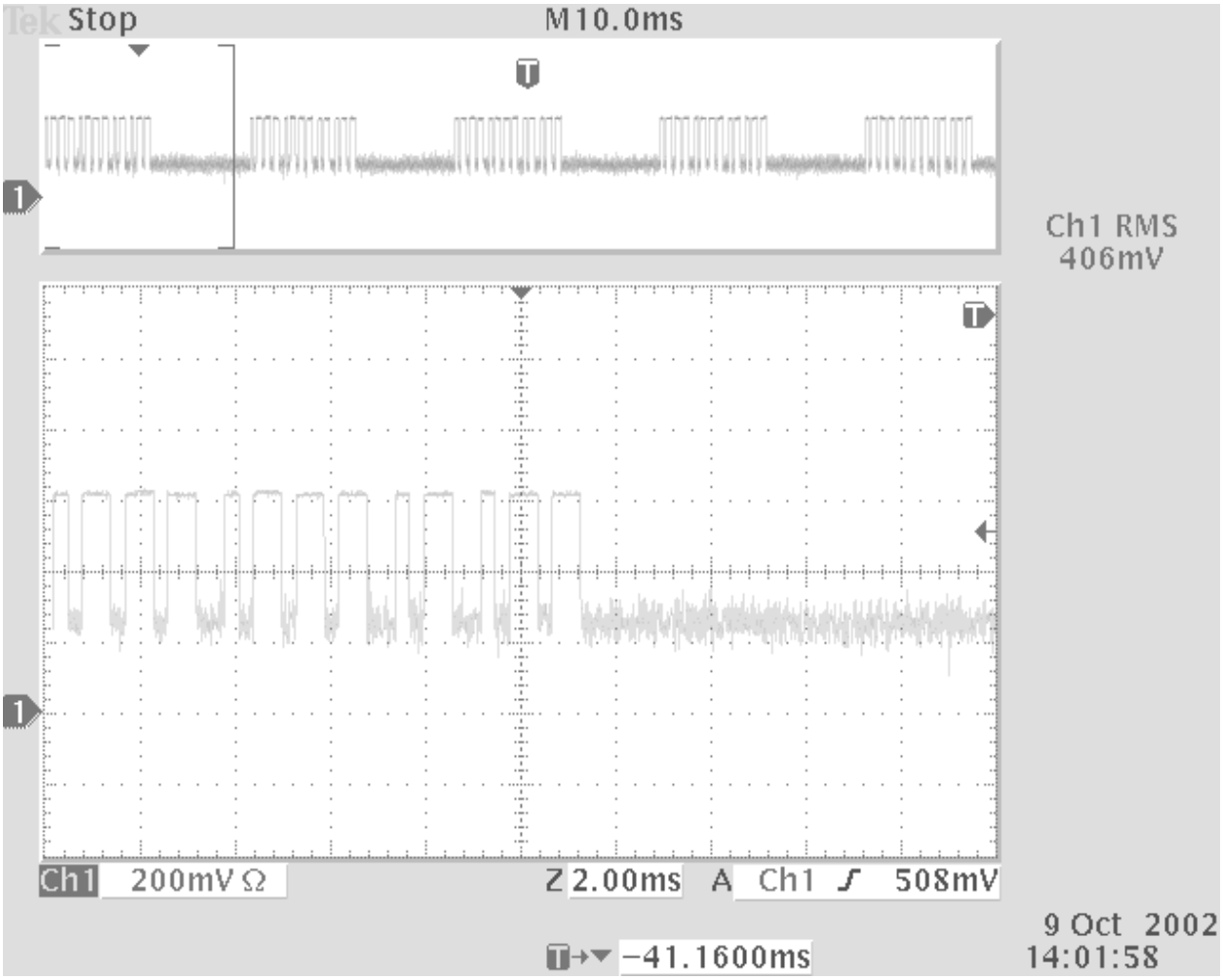
General Equipment Information

Manufacturer:	Desa International
Model No.:	6007TX
Serial No.:	N/A
Date Received In Laboratory:	10 Oct. 2002
Nemko Identification No.:	2
Frequency Range (*or fixed frequency*):	315MHz, fixed
RF Power in Watts:	0.00000105W
Field Strength (*distance*):	74.4dBuV
Occupied Bandwidth (99% BW):	147.5kHz
Type of Modulation:	PCM
Emission Designator:	147k5L1D
Primary Power:	120VAC, 60Hz

Duty Cycle Calculations:
20 Log {5X((4X0.288)+(9X0.592))/100}=-9.8dB

Duty Cycle Calculations Plots:

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Ch1 RMS
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Ch1 200mV Ω
Z 2.00ms
A Ch1 508mV
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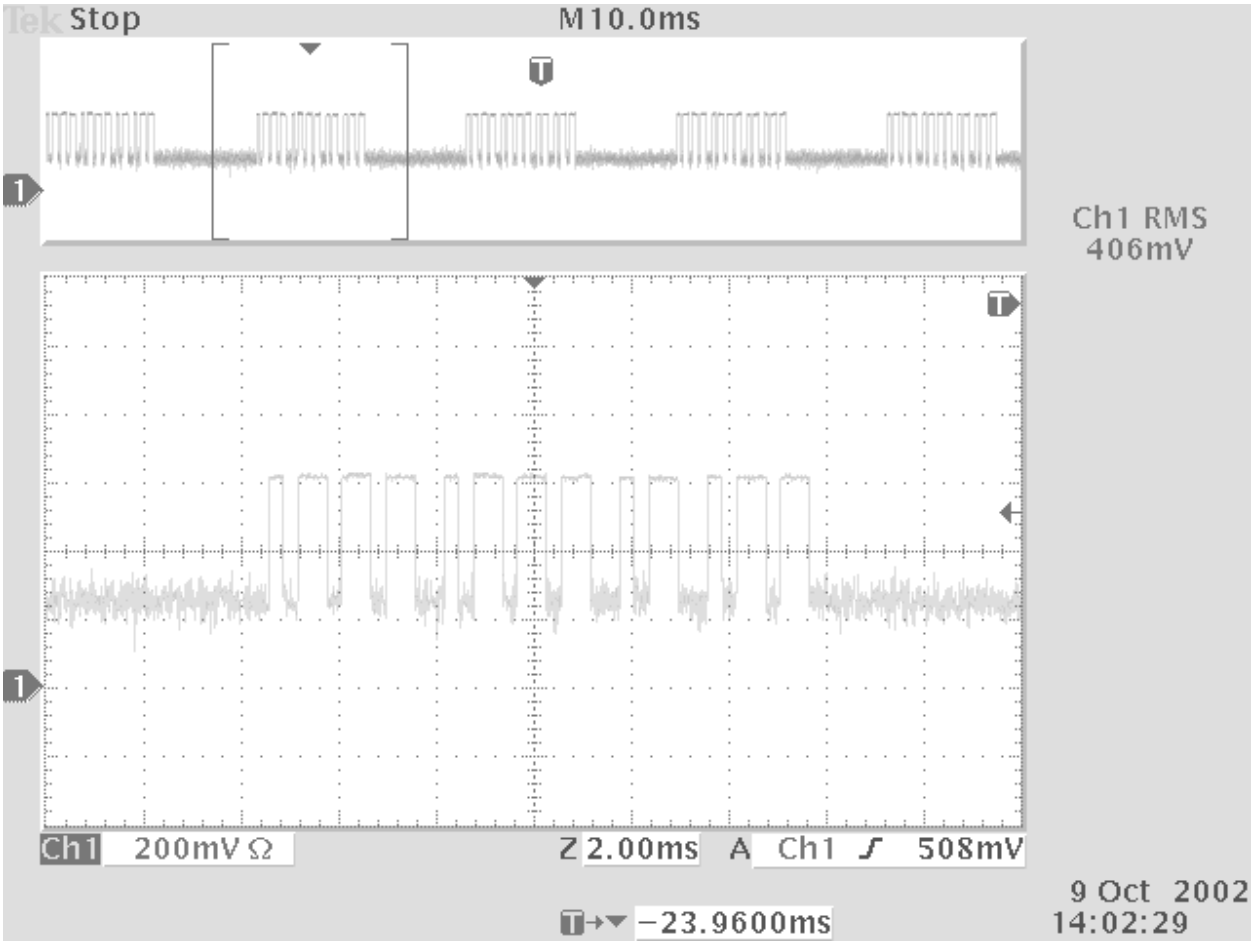
9 Oct 2002
14:01:58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Ch1 200mV Ω
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−23.9600ms
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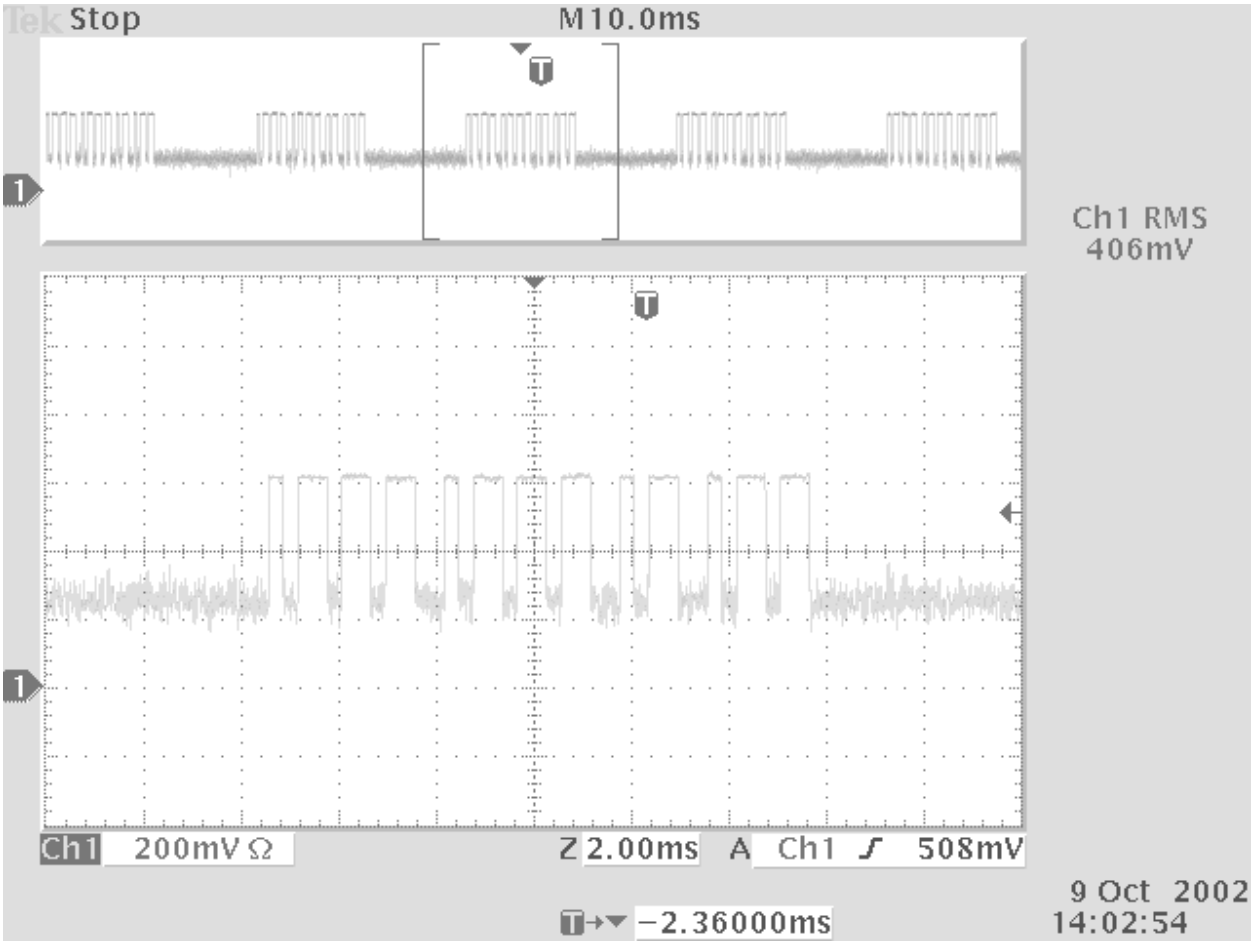
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Ch1 200mV Ω
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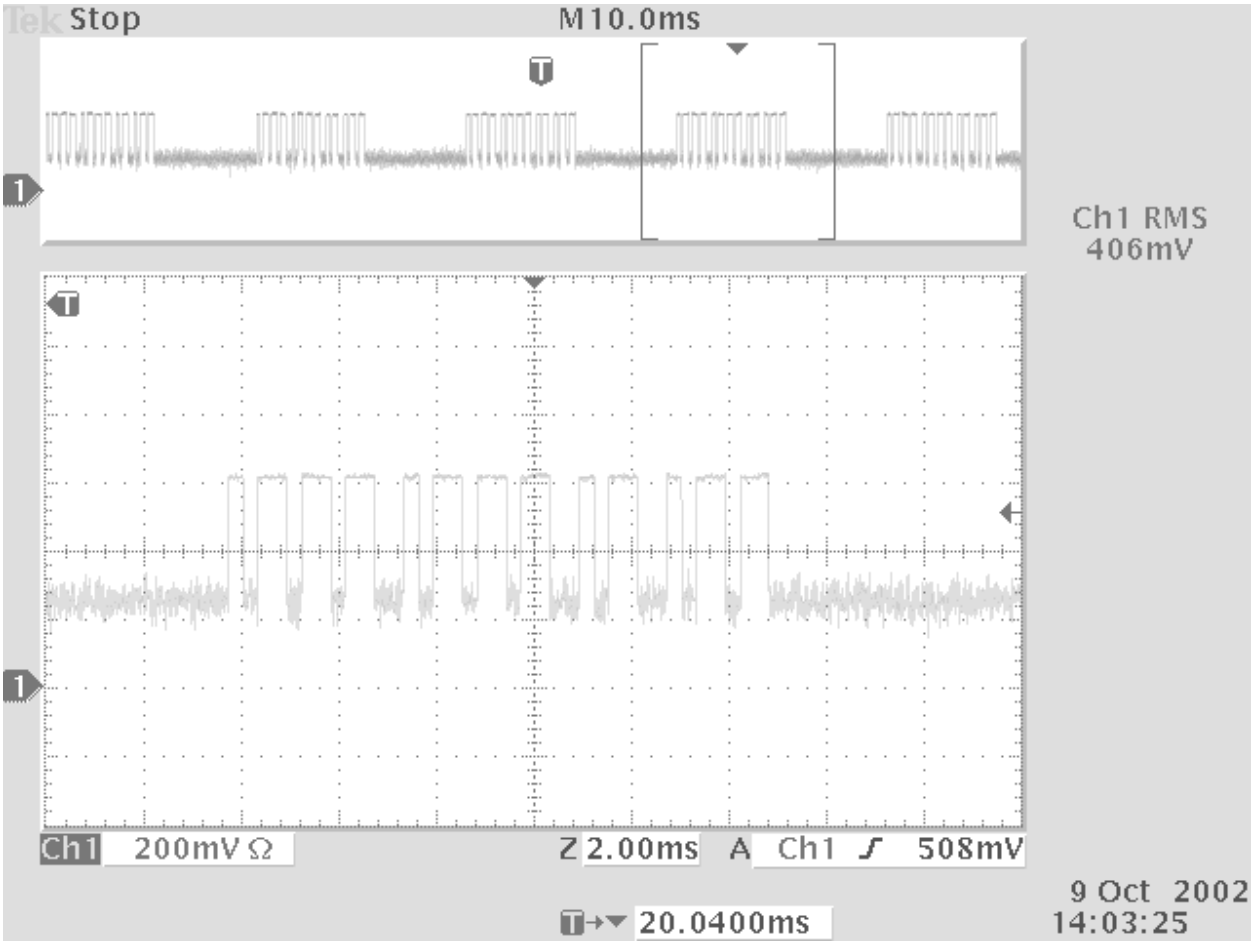
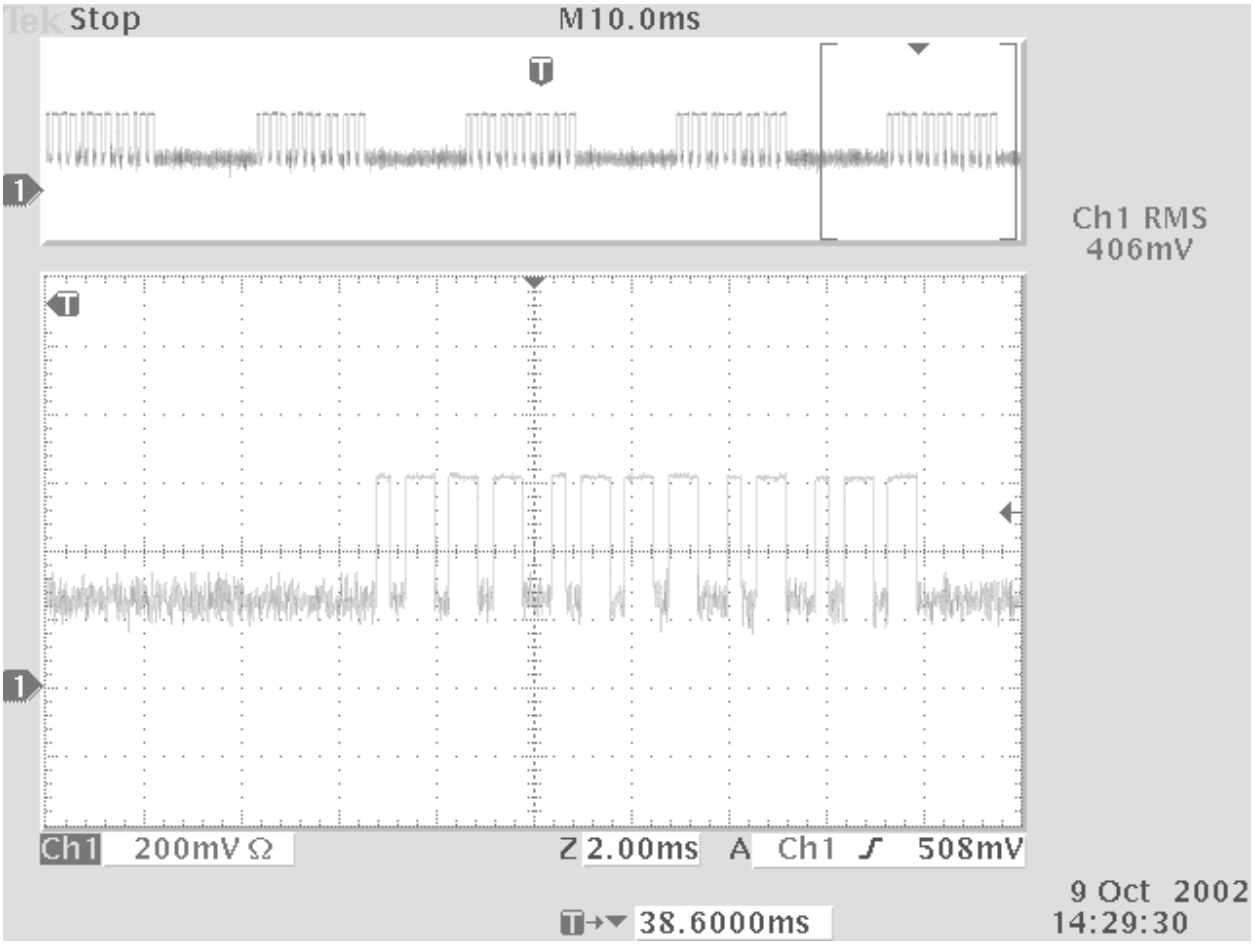
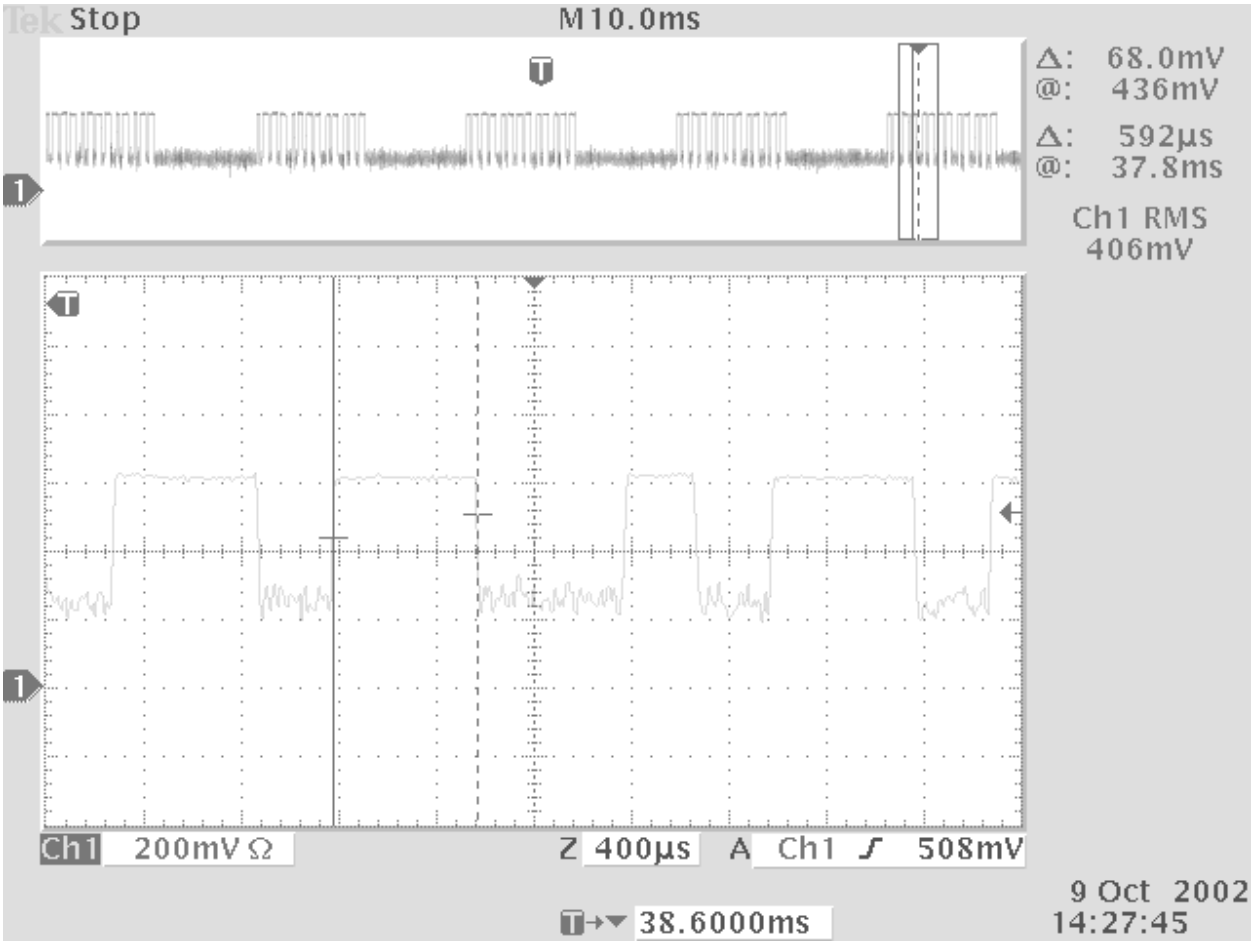
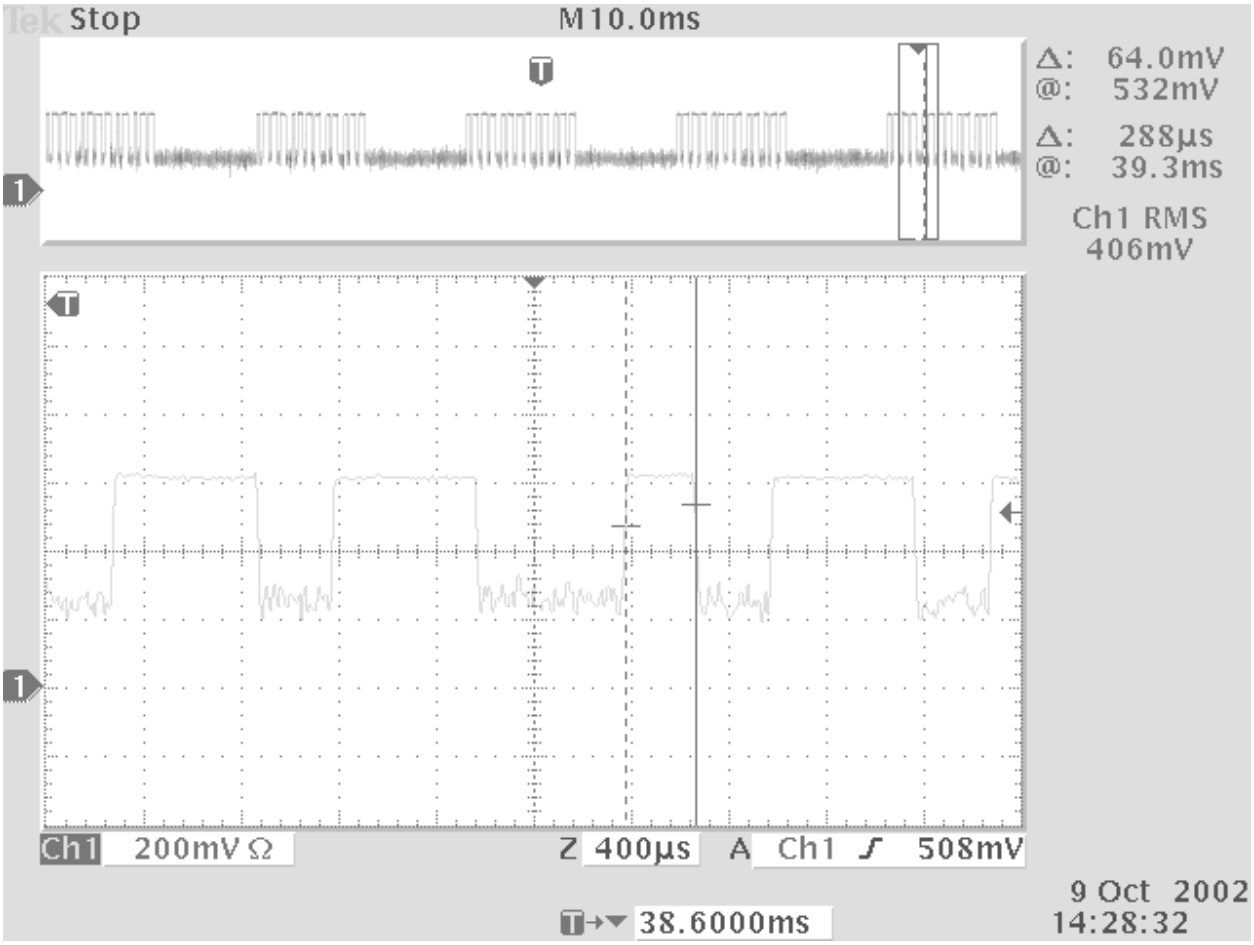
14:02:54

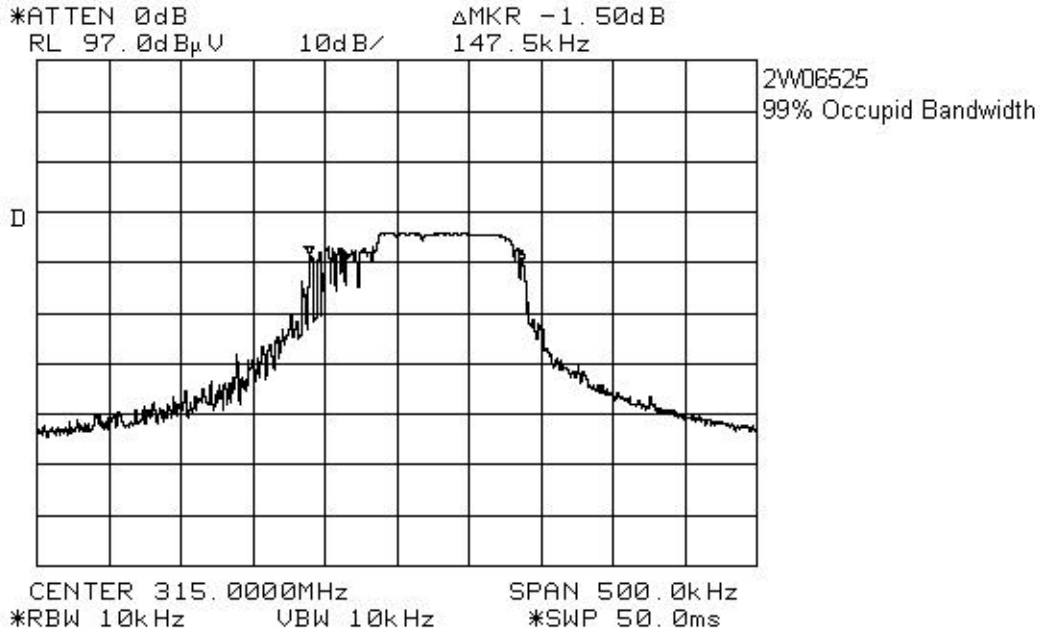

Stop
M10.0ms
Ch1 RMS
406mV
Ch1 200mV Ω
Z 2.00ms A Ch1 508mV
20.0400ms
9 Oct 2002
14:03:25


Stop
M10.0ms
Ch1 RMS
406mV
Ch1 200mV Ω
Z 2.00ms A Ch1 ∫ 508mV
38.6000ms
9 Oct 2002
14:29:30


Stop
M10.0ms
Δ: 68.0mV
@: 436mV
Δ: 592µs
@: 37.8ms
Ch1 RMS
406mV
Ch1 200mV Ω
Z 400µs A Ch1 ƒ 508mV
38.6000ms
9 Oct 2002
14:27:45


Stop
M10.0ms
Δ: 64.0mV
@: 532mV
Δ: 288µs
@: 39.3ms
Ch1 RMS
406mV
Ch1 200mV Ω
Z 400µs A Ch1 508mV
38.6000ms
9 Oct 2002
14:28:32

99% Occupied Bandwidth



Section 3. Transmission Requirements

Para. No.: 15.231(a)

Test Performed By: Kevin Carr	**Date of Test: 10 Oct. 2002**

Minimum Standard:

15.231(a) Continuous transmissions such as voice, video or data transmissions are not permitted.

15.231(a)(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds after being released.

15.231(a)(2) A transmitter activated automatically shall cease transmission within 5 seconds of activation.

15.231(a)(3) Periodic transmissions at regular pre-determined intervals are not permitted. However polling or supervisory transmissions to determine system integrity of transmitters used in security or safety applications are allowed if the periodic rate of transmission does not exceed one transmission of not more than one second duration per hour for each transmitter.

15.231(a)(4) Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm.

Test Results: Complied

Test Data: Compliance was determined by verification of technical specifications and a functional test on the equipment.

Rationale for Compliance with Transmission Requirements

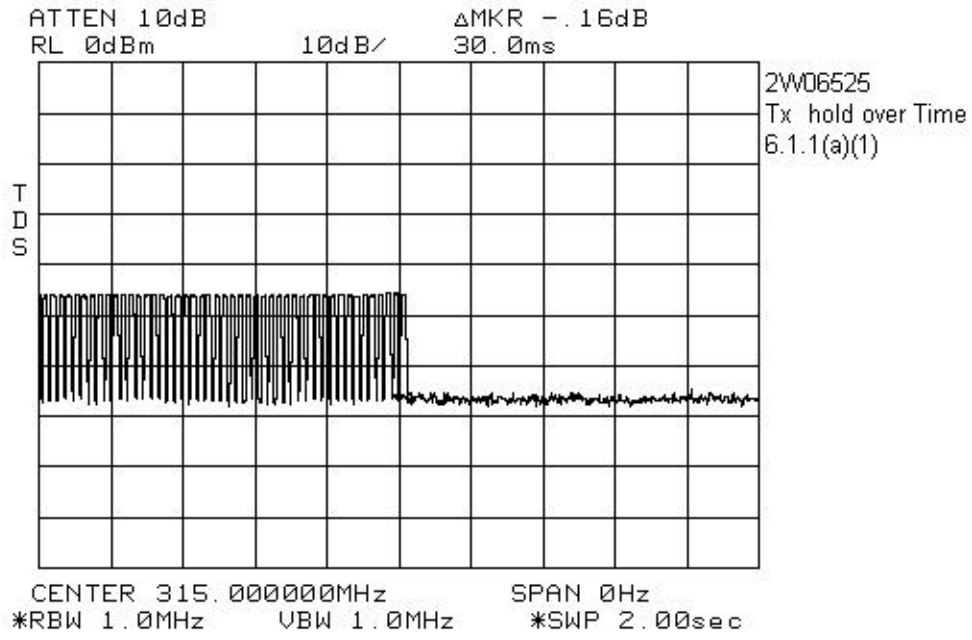
15.231(a)(1) : Complied, The EUT shut off after 0.03 sec. after the Tx button was released

15.231(a)(2) : N/A, The EUT does not activate automatically

15.231(a)(3) : Complied, The EUT does not periodically transmit

15.231(a)(4) : N/A, The EUT is not used as per one of the listed devices

15.231(a)(1)



Start of measurement was from the center graticule

Section 4. Radiated Emissions

Para. No.: 15.231(b)

Test Performed By: Kevin Carr	**Date of Test: 10 Oct. 2002**

Minimum Standard:

Fundamental Frequency (MHz)	**Field Strength of Fundamental (? V/m @ 3m)**	**Field Strength of Spurious Emissions (? V/m @ 3m)**
40.66 - 40.70	2,250	225
70-130	1, 250	125
130-174	1,250 to 3,750*	125 to 375
174-260 (note 1)	3,750	375
260-470 (note 1)	3,750 to 12,500*	375 to 1,250
Above 470	12,500	1,250

Restricted Band Limits		
Frequency (MHz)	**Field Strength (? V/m @ 3m)**	**Field Strength (dB? V/m @ 3m)**
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

Test Results: Complied

Test Data: As per attached tabulated data (worst Case)

Test Data - Radiated Emissions-Peak

Test Distance (meters) : 3		Range: A		Receiver: HP8565E			RBW(kHz): 100/1000		Detector: PEAK	
No.	Freq. (MHz)	Ant. *	Pol (V/H)	RCVD Signal (dB? V)	Ant. Factor (dB)**	Amp. Gain (dB)***	Duty Cycle Corr. (dB)	Field Strength (dB? V/m)	Limit (dB? V/m)	Margin (dB)
1	629.99	L/P1	V	33.4	23.6			57	74	17
2	629.99	L/P1	H	31.8	23.6			55.4	74	18.6

Notes:
B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole
* Re-measured using dipole antenna.
** Includes cable loss when amplifier is not used.
*** Includes cable loss.
( ) Denotes failing emission level.
N.D. = Not Detected
All emissions within 20 dB of the limit have been reported

Test Data - Radiated Emissions-Average

Test Distance (meters) : 3		Range: A		Receiver: HP8565E			RBW(kHz): 100/1000		Detector: PEAK	
No.	Freq. (MHz)	Ant. *	Pol (V/H)	RCVD Signal (dB? V)	Ant. Factor (dB)**	Amp. Gain (dB)***	Duty Cycle Corr. (dB)	Field Strength (dB? V/m)	Limit (dB? V/m)	Margin (dB)
1	314.98	E/D1	V	55.3	20.7		-9.8	66.2	75.6	9.4
2	314.96	E/D1	H	63.5	20.7		-9.8	74.4	75.6	1.2
3	629.99	L/P1	V	33.4	23.6		-9.8	47.2	55.6	8.4
4	629.99	L/P1	H	31.8	23.6		-9.8	45.6	55.6	10
5	944.96	L/P1	V	20.5	28.9		-9.8	39.6	55.6	16
6	944.99	L/P1	H	17.4	28.9		-9.8	36.5	55.6	19.1

Notes:
B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole
* Re-measured using dipole antenna.
** Includes cable loss when amplifier is not used.
*** Includes cable loss.
( ) Denotes failing emission level.
N.D. = Not Detected
All emissions within 20dB of the limit have been reported

Test Data - Radiated Emissions-Digital

Test Distance (meters) : 3		**Range: A**		**Receiver: ESVP**			**RBW(kHz): 120**		**Detector: CISPR, Q-PEAK**	
No.	**Freq. (MHz)**	**Ant. ***	**Pol (V/H)**	**RCVD Signal (dB? V)**	**Ant. Factor (dB)****	**Amp. Gain (dB)*****	**Duty Cycle Corr. (dB)**	**Field Strength (dB? V/m)**	**Limit (dB? V/m)**	**Margin (dB)**
1	40	B/C1	V	16.7	13.6			30.3	40	9.7
2	40	B/C1	H	7.3	13.6			20.9	40	19.1
3	36.41	B/C1	V	9.1	14.1			23.2	40	16.8
4	36.41	B/C1	H	6	14.1			20.1	40	19.9
5	80	B/C1	V	15.3	8.7			24	40	16

Notes:

B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole

* Re-measured using dipole antenna.

** Includes cable loss when amplifier is not used.

*** Includes cable loss.

( ) Denotes failing emission level.

N.D. = Not Detected

All emissions within 20dB of the limit have been reported

OATS Set-up Photos

Front

Rear

Section 5. Occupied Bandwidth

Para. No.: 15.231(c)

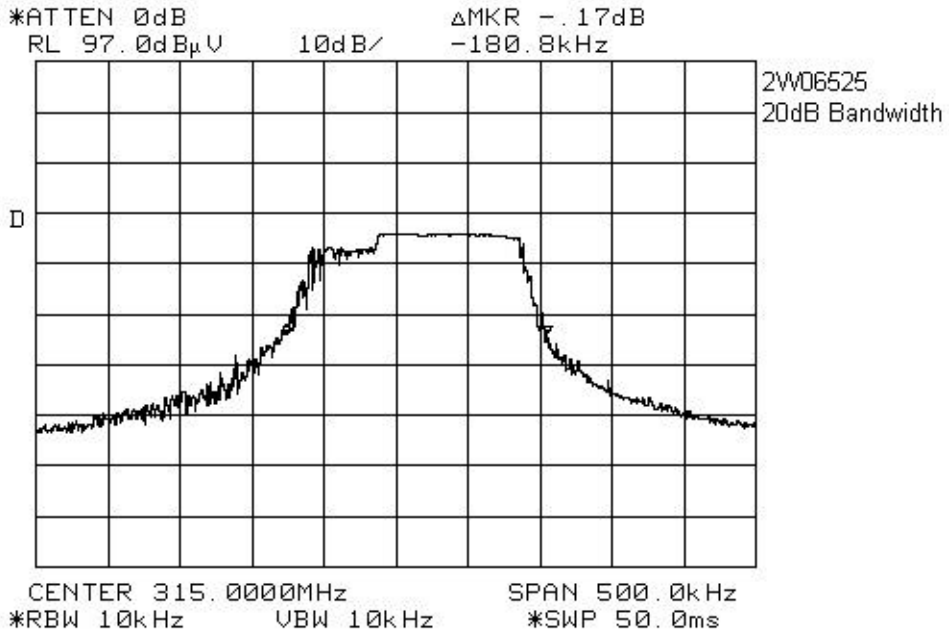
Test Performed By: Kevin Carr	**Date of Test: 9 Oct. 2002**

Minimum Standard: 15.231(c) The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

Test Results: Complied

Test Data: See attached graph.

20dB Occupied Bandwidth Plot



Section 6. Powerline Conducted Emissions

Para. No.: 15.207

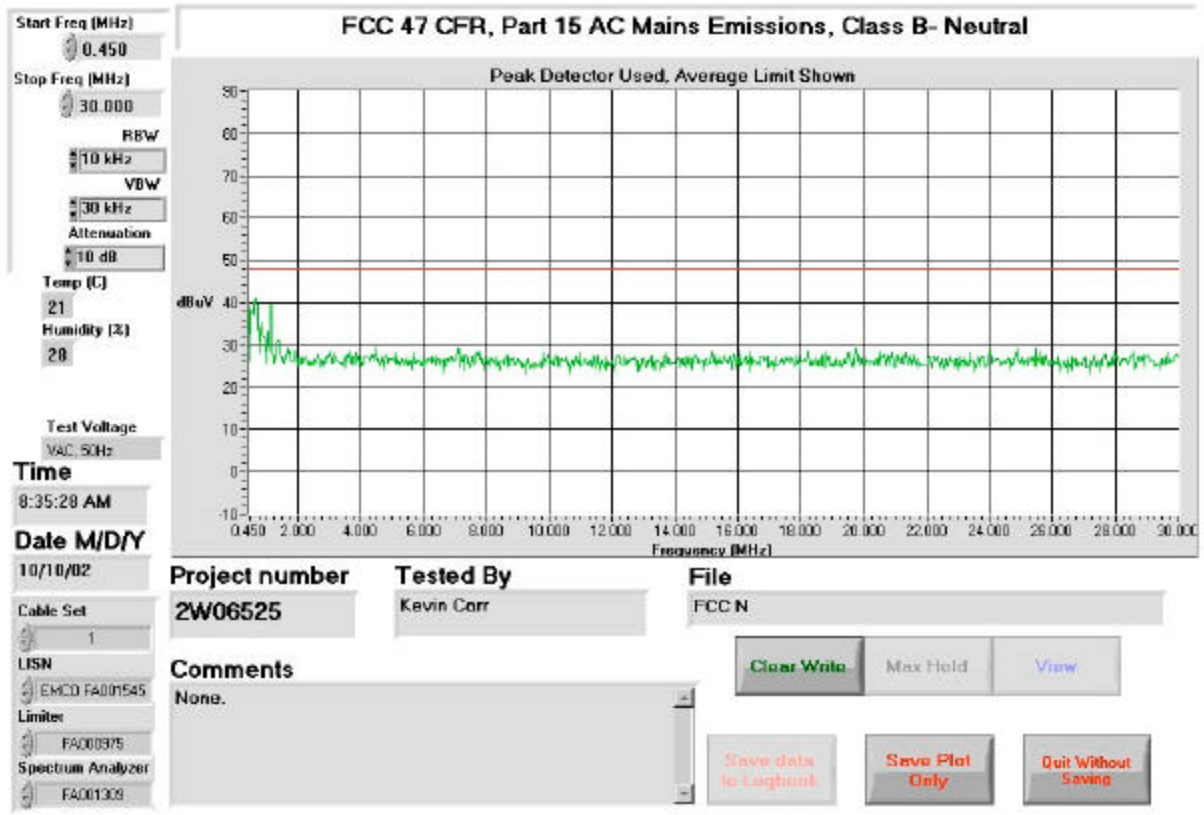
Test Performed By: Kevin Carr	**Date of Test: 9 Oct 2002**

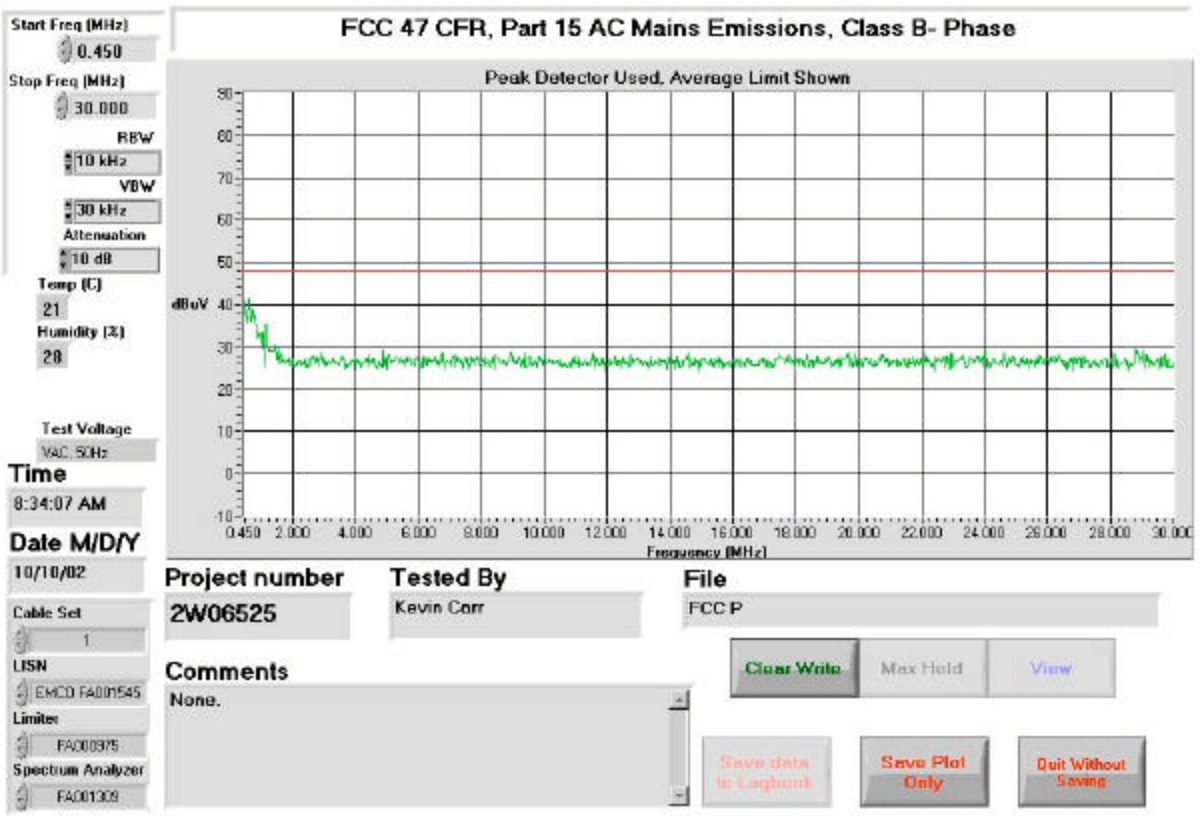
Minimum Standard:

Frequency(MHz)	**Maximum Powerline Conducted RF Voltage**	
	? **V**	**dB**? **V**
0.45 - 30.0	250	48

Test Results: Complied

Test Data: As per attached graphs.


FCC 47 CFR, Part 15 AC Mains Emissions, Class B- Neutral
Peak Detector Used, Average Limit Shown
Start Freq (MHz)
0.450
Stop Freq (MHz)
30.000
RBW
10 kHz
VBW
30 kHz
Attenuation
10 dB
Temp (C)
21
Humidity (%)
28
Test Voltage
VAC, 50Hz
Time
8:35:28 AM
Date M/D/Y
10/10/02
Cable Set
1
LISN
EMCO FA001545
Limiter
FA000975
Spectrum Analyzer
FA001309
dBuV
Frequency (MHz)
Project number
2W06525
Tested By
Kevin Corr
File
FCC N
Comments
None.
Clear Write
Max Hold
View
Save data to Logbook
Save Plot Only
Quit Without Saving


FCC 47 CFR, Part 15 AC Mains Emissions, Class B- Phase
Peak Detector Used, Average Limit Shown
Start Freq (MHz)
0.450
Stop Freq (MHz)
30.000
RBW
10 kHz
VBW
30 kHz
Attenuation
10 dB
Temp (C)
21
Humidity (%)
28
Test Voltage
VAC, 50Hz
Time
8:34:07 AM
Date M/D/Y
10/10/02
Cable Set
1
LISN
EMCO FA001545
Limiter
FA000975
Spectrum Analyzer
FA001309
dBuV
Frequency (MHz)
Project number
2W06525
Tested By
Kevin Corr
File
FCC P
Comments
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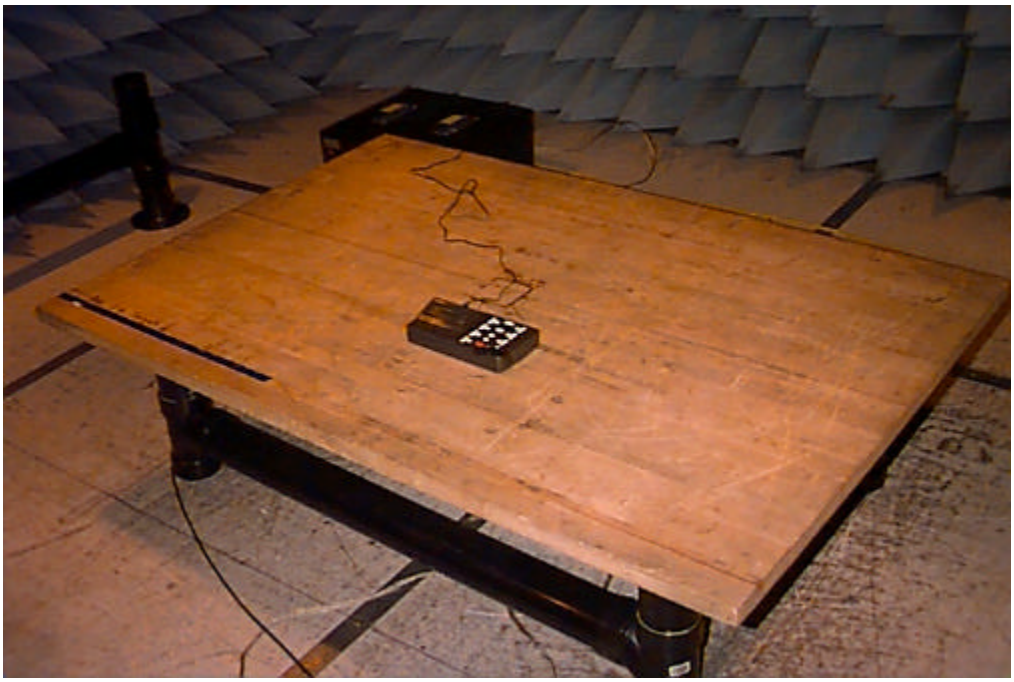
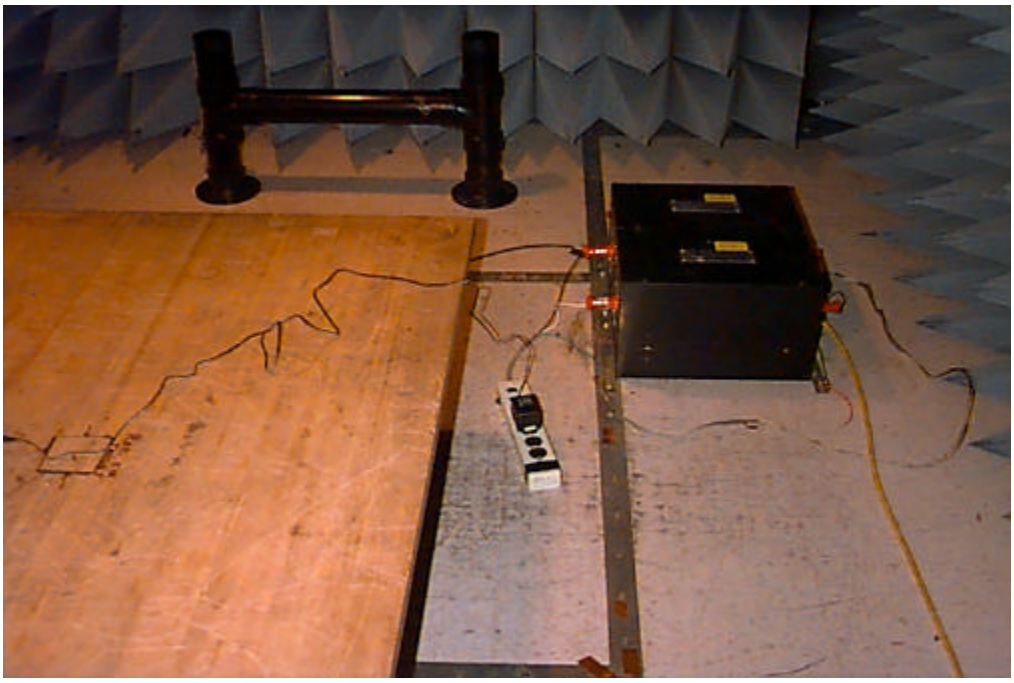
Clear Write
Max Hold
View
Save data to Logbook
Save Plot Only
Quit Without Saving

Setup Photos

Front

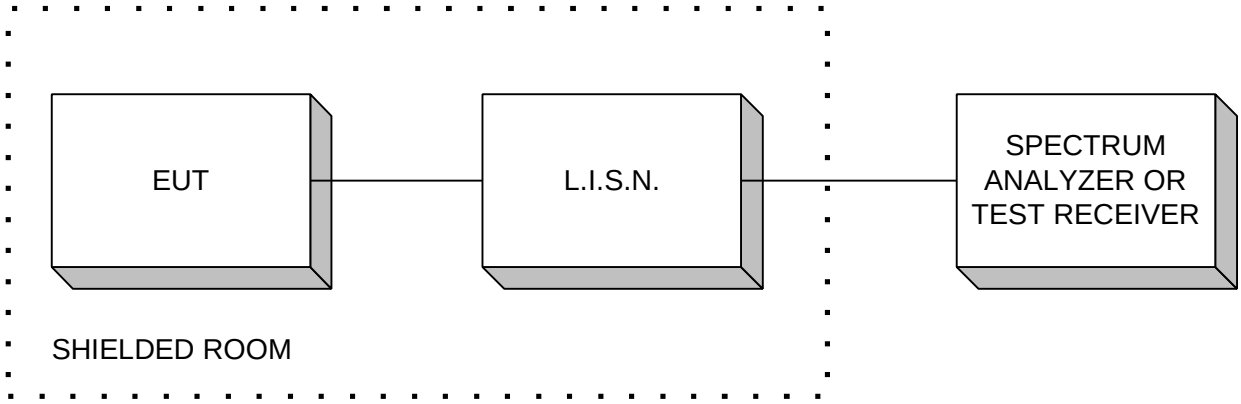


Side

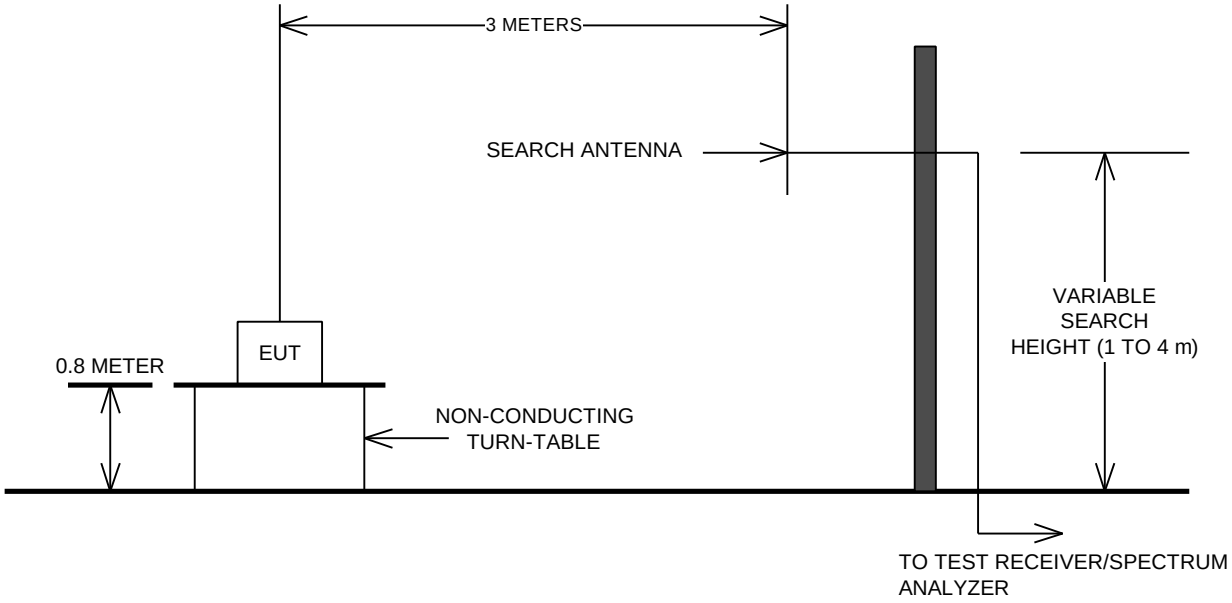


Section 7. Block Diagrams

Conducted Emissions



Outdoor Test Site For Radiated Emissions



The spectrum was searched up to the 10th harmonic of the fundamental frequency of operation.

Section 8. Test Equipment List

Equipment List – Conducted Emissions

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	LISN(peripheral)	Tegam	95300-50	FA000986	Oct. 22/01	Oct. 22/02
1 Year	LISN(peripheral)	Tegam	95300-50	FA000986	Oct. 22/01	Oct. 22/02
1 Year	Spectrum Analyzer	Hewlett-Packard	8564E	FA001367	Mar. 06/02	Mar. 06/03
1 Year	Spectrum Analyzer	Hewlett-Packard	8565E	FA000981	July. 15/02	July. 15/03
1 Year	Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	Nov. 27/01	Nov. 27/02
1 Year	Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	Nov. 27/01	Nov. 27/02
1 Year	Quasi-Peak Adapter	Hewlett-Packard	85650A	FA000801	Nov. 27/01	Nov. 27/02
1 Year	Transient Limiter	Hewlett-Packard	1194 7A	FA000975	Oct. 19/01	Oct. 19/02

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair

Equipment List – Prescan for Radiated Emissions - Anechoic Chamber

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	Nov. 27/01	Nov. 27/02
1 Year	Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	Nov. 27/01	Nov. 27/02
1 Year	Quasi-Peak Adapter	Hewlett-Packard	85650A	FA000801	Nov. 27/01	Nov. 27/02
NCR	Bilog	Schaffner	CBL6112B	FA001504	NCR	NCR
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 01/01	Dec. 01/02
NCR	0.1 – 1300 MHz Amplifier	Hewlett Packard	8447D	FA001748	NCR	NCR
1 Year	1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	June. 04/02	June. 04/03
1 Year	2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	June. 04/02	June. 04/03

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair

Equipment List - Radiated Emissions

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	Receiver	Rohde & Schwarz	ESVP	FA000951	May. 02/02	May. 02/03
1 Year	Spectrum Analyzer	Hewlett-Packard	8565E	FA000981	July. 15/02	July. 15/03
1 Year	Dipole Antenna Set	EMCO #1	3121C	FA000814	May. 06/02	May. 06/03
1 Year	Biconical (1) Antenna	EMCO	3109	FA000805	Aug. 22/02	Aug. 22/03
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 01/01	Dec. 01/02
1 Year	Log Periodic Antenna #2	EMCO	3148	FA001355	May. 10/02	May. 10/03
1 Year	1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	June. 04/02	June. 04/03
1 Year	2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	June. 04/02	June. 04/03

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair