Exhibit: Spurious Radiated Emissions

FCC ID: PLF-ESCAN2

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:
Single

Operating Modes Investigated:
No Modulation - CW
Modulation
Receive mode

Antennas Investigated:
Whip

Data Rates Investigated:
Maximum

Output Power Setting(s) Investigated:
Maximum

Power Input Settings Investigated:
Battery

Frequency Range Investigated			
Start Frequency	30 MHz	Stop Frequency	5 GHz

Software\Firmware Applied During Test			
Exercise software	Special Test Software	Version	Unknown
Description			
The system was tested using special software developed to test all functions of the device during the test.			

Equipment Modifications

The following modifications were made for the product to achieve FCC compliance:

- R82 was changed to a value of 15K ohms.

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Enalasys	eScan2 Lx	30100
EUT	Enalasys	eScan2 Rx	092002
EUT	Enalasys	eScan2 Sx	20202
Antenna	Linx Technologies	ANT-418-CW-QW	N/A

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Serial	Yes	1.15	No	EUT	Unterminated

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	03/19/2002	12 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	03/19/2002	12 mo
Pre-Amplifier	Amplifier Research	LN1000A	APS	12/03/2001	12 mo
Antenna, Biconilog	EMCO	3141	AXE	12/31/2001	12 mo
Antenna, Horn	EMCO	3115	AHC	08/12/2002	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P	AOP	07/09/2002	12 mo
High Pass Filter	Hewlett-Packard	84300-80037	HFE	02/04/2002	12 mo
High Pass Filter	MicroLab	FH-1001	HFI	02/04/2002	12 mo
Oscilloscope	Tektronix	TDS 3052	TOF	07/24/2002	12 mo

Test Description

Requirement: The field strength of the spurious emissions shall meet the limits as defined in 47 CFR 15.231(e). If average emission measurements are employed, the provisions in 15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of 15.205 shall be demonstrated using the measurement instrumentation specified in that section.

Configuration: The EUT was configured for continuous operation at its single transmit frequency of 418 MHz. The spectrum was scanned from 30 MHz to 5 GHz.

While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT in 3 orthogonal planes (per ANSI C63.4:1992). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Since average emission measurements were employed, a duty cycle correction factor per 15.35(c) was utilized:

Duty Cycle = On time/100 milliseconds (or the period, whichever is less)

Where "On time" = $N_1L_1 + N_2L_2 + \ldots$.

Where N_1 is the number of type 1 pulses, L_1 is length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc.

Therefore, Duty Cycle = $(N_1L_1 + N_2L_2 + \ldots)/100$mS or T, whichever is less. Where T is the period of the pulse train.

The measured values for the EUT's pulse train are as follows:

Period = 100 mSec
Pulsewidth of Pulse-1 = 200uS
Pulsewidth of Pulse-2 = 400 uS
Pulsewidth of Pulse-3 = 600 uS
Number of Pulse-1 = 25
Number of Pulse-2 = 5
Number of Pulse-3 = 4

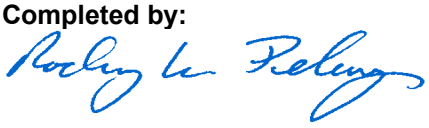
Duty Cycle = 20 log [((25)(200uS) + (5)(400uS) + (4)(600uS)) / 100mS] = -20.5 dB

The duty cycle correction factor of -20.5 dB was added to the peak readings to mathematically derive the average levels. Peak measurements were made with a resolution bandwidth of 120kHz and a video bandwidth of 300kHz for measurements at or below 1GHz. Above 1GHz, a resolution bandwidth of 1MHz and a video bandwidth of 1MHz was used.

Bandwidths Used for Measurements

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 – 0.15	1.0	0.2	0.2
0.15 – 30.0	10.0	9.0	9.0
30.0 – 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.			

Completed by:



NORTHWEST EMC

Spurious Radiated Emissions

REV df3.00 08/20/2002

EUT:	eScan2 Sx	Work Order:	ENAL0003
Serial Number:	20202	Date:	9/20/02 11:09
Customer:	Enalasys	Temperature:	73
Attendees:	none	Humidity:	39%
Cust. Ref. No.:		Barometric Pressure	30.15
Tested by:	Rod Peloquin Power: Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15.231(e) & 15.205	Year:	2001
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

eScan2 Sx, eScan2 Rx, and eScan2 Lx were scanned. eScan2 Sx and eScan Lx produced the highest spurious emissions.

EUT OPERATING MODES

CW Mode - no modulation

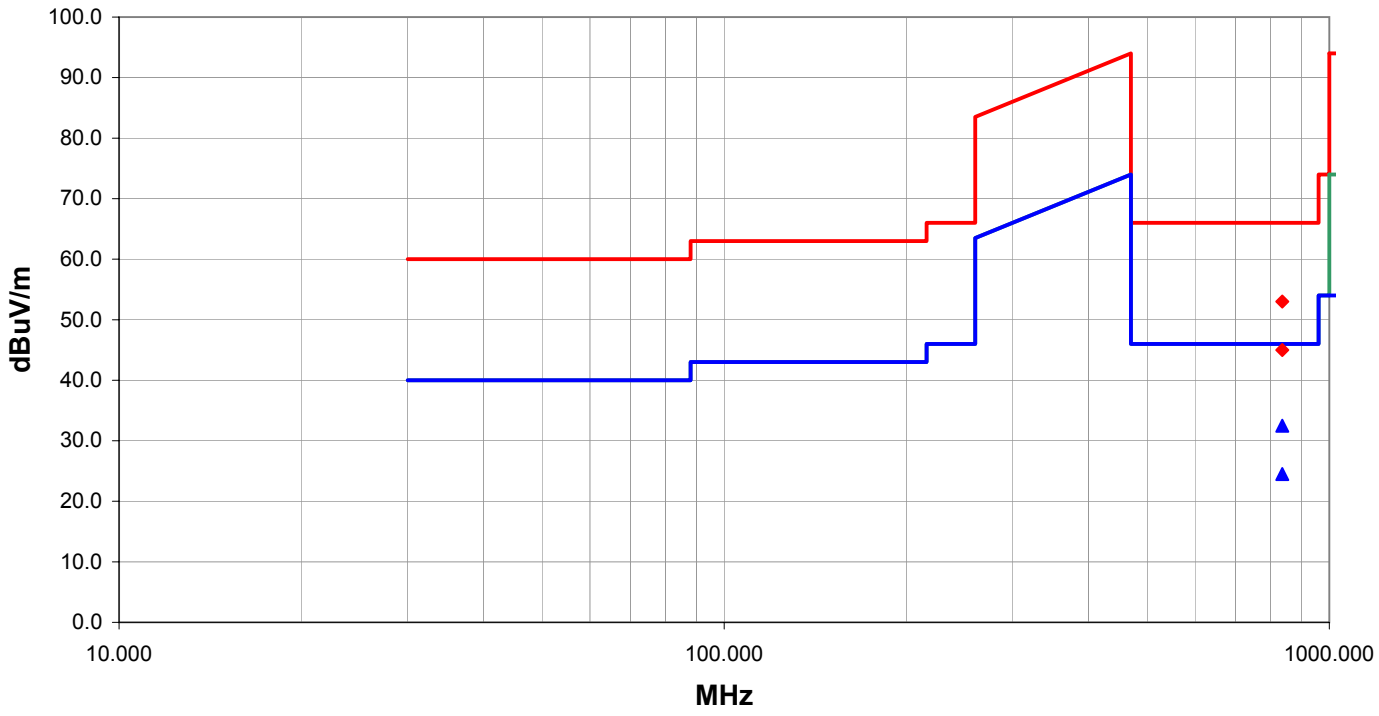
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Test Distance (m)	Run #
Evaluation	3	6

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
836.010	39.3	-6.3	318.0	1.2	20.5	20.0	V-Bilog	AV	0.0	32.5	46.0	-13.5
836.010	31.3	-6.3	288.0	1.0	20.5	20.0	H-Bilog	AV	0.0	24.5	46.0	-21.5
836.010	39.3	-6.3	318.0	1.2	0.0	20.0	V-Bilog	PK	0.0	53.0	66.0	-13.0
836.010	31.3	-6.3	288.0	1.0	0.0	20.0	H-Bilog	PK	0.0	45.0	66.0	-21.0

NORTHWEST EMC

Spurious Radiated Emissions

REV df3.00 08/20/2002

EUT:	eScan2 Lx			Work Order:	ENAL0003
Serial Number:	30100			Date:	9/20/02 11:54
Customer:	Enalasys			Temperature:	73
Attendees:	none			Humidity:	40%
Cust. Ref. No.:				Barometric Pressure	30.15
Tested by:	Rod Peloquin	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15.231(e) & 15.205	Year:	2001
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

eScan2 Sx, eScan2 Rx, and eScan2 Lx were scanned. eScan2 Sx and eScan Lx produced the highest spurious emissions.

EUT OPERATING MODES

CW Mode - no modulation

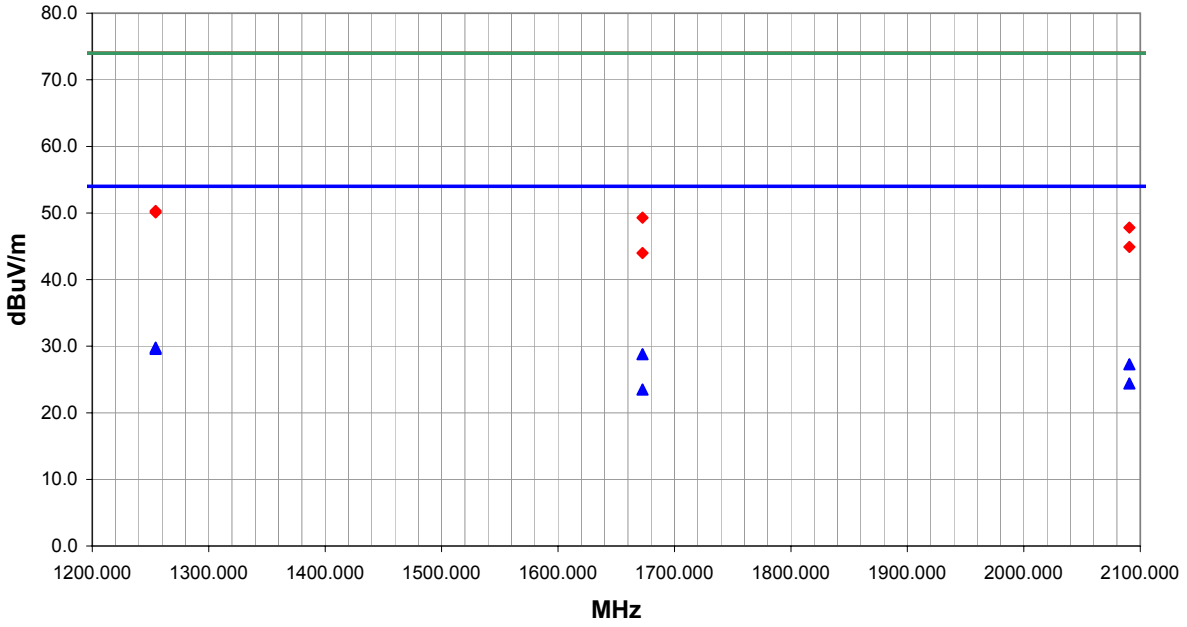
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Test Distance (m)	Run #
Evaluation	3	11

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
1254.362	55.7	-5.4	340.0	1.6	20.5	0.0	H-Horn	AV	0.0	29.8	54.0	-24.2
1254.362	55.5	-5.4	99.0	2.6	20.5	0.0	V-Horn	AV	0.0	29.6	54.0	-24.4
1672.484	52.1	-2.8	210.0	1.2	20.5	0.0	H-Horn	AV	0.0	28.8	54.0	-25.2
2090.600	48.2	-0.4	201.0	1.3	20.5	0.0	H-Horn	AV	0.0	27.3	54.0	-26.7
2090.600	45.3	-0.4	319.0	1.2	20.5	0.0	V-Horn	AV	0.0	24.4	54.0	-29.6
1672.484	46.8	-2.8	110.0	1.2	20.5	0.0	V-Horn	AV	0.0	23.5	54.0	-30.5
1254.362	55.7	-5.4	340.0	1.6	0.0	0.0	H-Horn	PK	0.0	50.3	74.0	-23.7
1254.362	55.5	-5.4	99.0	2.6	0.0	0.0	V-Horn	PK	0.0	50.1	74.0	-23.9
1672.484	52.1	-2.8	210.0	1.2	0.0	0.0	H-Horn	PK	0.0	49.3	74.0	-24.7
2090.600	48.2	-0.4	201.0	1.3	0.0	0.0	H-Horn	PK	0.0	47.8	74.0	-26.2
2090.600	45.3	-0.4	319.0	1.2	0.0	0.0	V-Horn	PK	0.0	44.9	74.0	-29.1
1672.484	46.8	-2.8	110.0	1.2	0.0	0.0	V-Horn	PK	0.0	44.0	74.0	-30.0

NORTHWEST
EMC

Duty Cycle Correction Factor

Rev BETA
01/30/01

EUT:	eScan2 SX			Work Order:	ENAL0003
Serial Number:	20202			Date:	09/20/02
Customer:	Enalasys			Temperature:	73
Attendees:	Art Chace	Tested by:	Greg Kiemel	Humidity:	40%
Customer Ref. No.:	N/A	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.231(e) & 15.35(c)	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Duty Cycle = ($N_1L_1 + N_2L_2 + \ldots$) / 100mS or T, whichever is less. Where T is the period of the pulse train, N_1 is the number of type 1 pulses, L_1 is the length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc. Duty Cycle Correction Factor = 20 * log (Duty Cycle)

COMMENTS

EUT OPERATING MODES

Modulated carrier.

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The duty cycle correction factor is added to the peak radiated emissions measurements to mathematically derive the average levels.

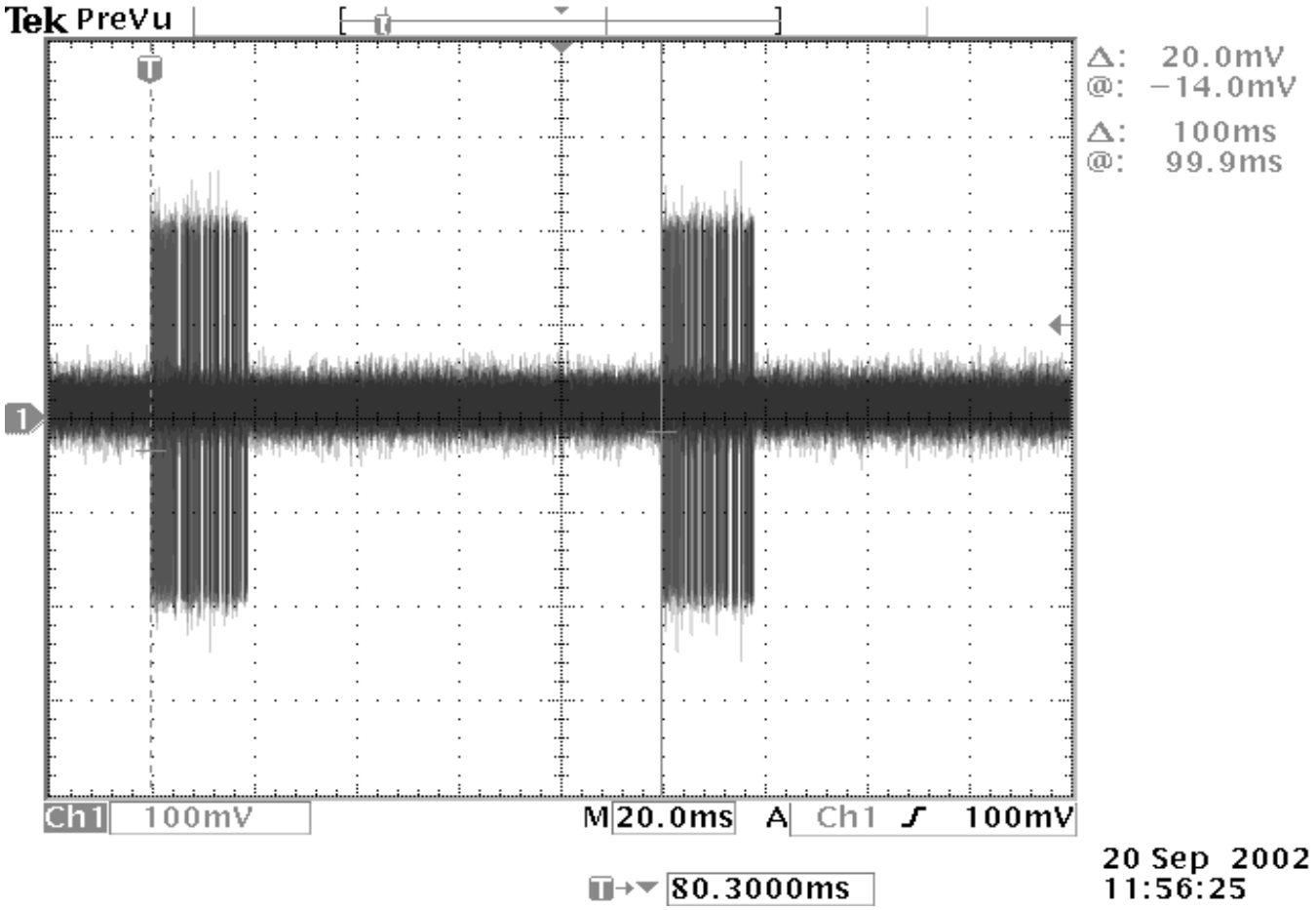
RESULTS	Period
Pass	100mS

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Period



NORTHWEST
EMC

Duty Cycle Correction Factor

Rev BETA
01/30/01

EUT:	eScan2 SX			Work Order:	ENAL0003
Serial Number:	20202			Date:	09/20/02
Customer:	Enalasys			Temperature:	73
Attendees:	Art Chace	Tested by:	Greg Kiemel	Humidity:	40%
Customer Ref. No.:	N/A	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.231(e) & 15.35(c)	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Duty Cycle = ($N_1L_1 + N_2L_2 + \ldots$) / 100mS or T, whichever is less. Where T is the period of the pulse train, N_1 is the number of type 1 pulses, L_1 is the length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc. Duty Cycle Correction Factor = 20 * log (Duty Cycle)

COMMENTS

EUT OPERATING MODES

Modulated carrier.

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The duty cycle correction factor is added to the peak radiated emissions measurements to mathematically derive the average levels.

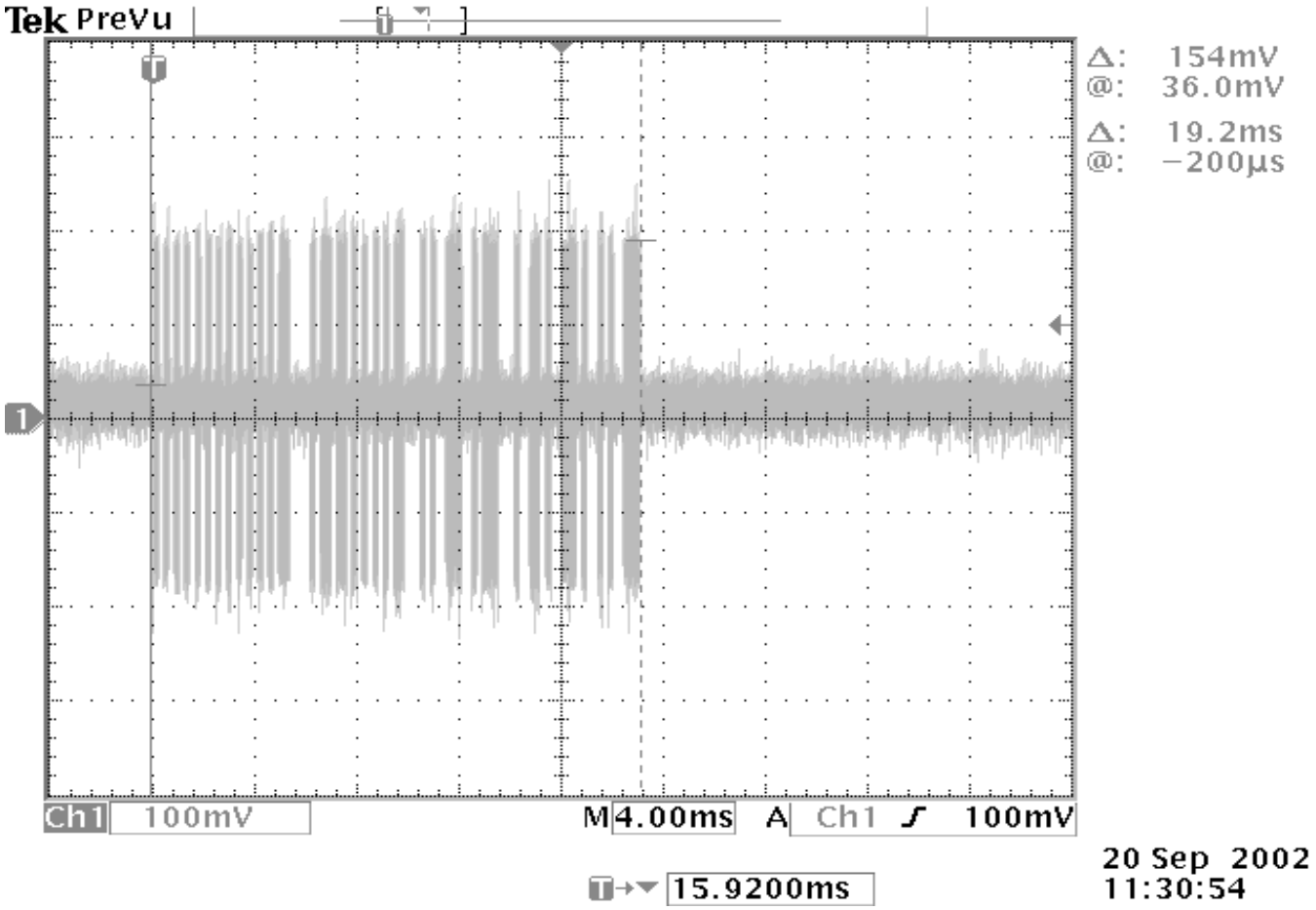
RESULTS	Single Transmission
Pass	19.2 mS

SIGNATURE

Tested By: A.J. U. Kiemel

DESCRIPTION OF TEST

Single Transmission



NORTHWEST
EMC

Duty Cycle Correction Factor

Rev BETA
01/30/01

EUT:	eScan2 SX			Work Order:	ENAL0003
Serial Number:	20202			Date:	09/20/02
Customer:	Enalasys			Temperature:	73
Attendees:	Art Chace	Tested by:	Greg Kiemel	Humidity:	40%
Customer Ref. No.:	N/A	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.231(e) & 15.35(c)	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Duty Cycle = ($N_1L_1 + N_2L_2 + \ldots$) / 100mS or T, whichever is less. Where T is the period of the pulse train, N_1 is the number of type 1 pulses, L_1 is the length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc. Duty Cycle Correction Factor = 20 * log (Duty Cycle)

COMMENTS

EUT OPERATING MODES

Modulated carrier.

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The duty cycle correction factor is added to the peak radiated emissions measurements to mathematically derive the average levels.

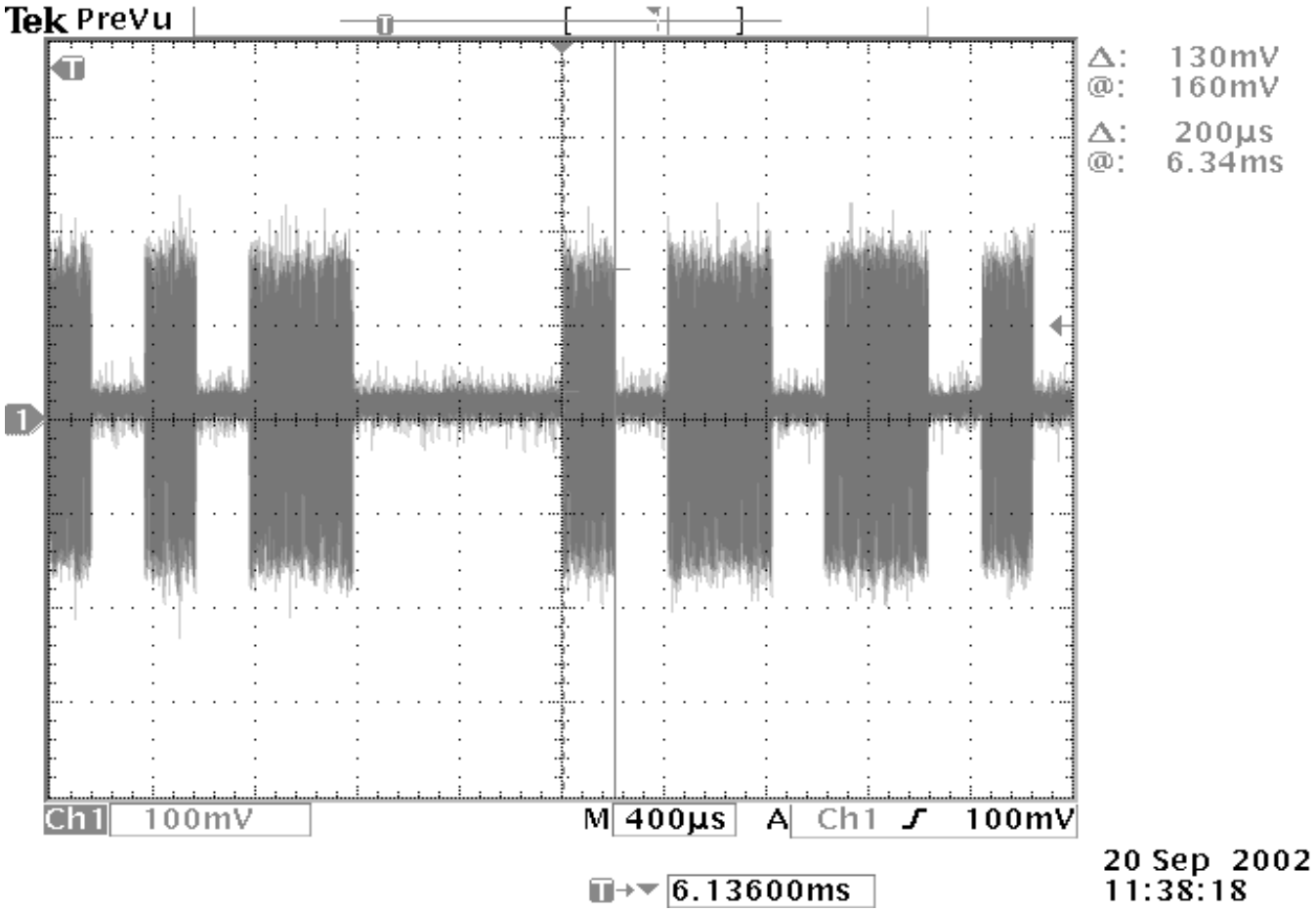
RESULTS	Length of Type 1 Pulse
Pass	200uS

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Length of Type 1 Pulse



NORTHWEST
EMC

Duty Cycle Correction Factor

Rev BETA
01/30/01

EUT:	eScan2 SX			Work Order:	ENAL0003
Serial Number:	20202			Date:	09/20/02
Customer:	Enalasys			Temperature:	73
Attendees:	Art Chace	Tested by:	Greg Kiemel	Humidity:	40%
Customer Ref. No.:	N/A	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.231(e) & 15.35(c)	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Duty Cycle = ($N_1L_1 + N_2L_2 + \ldots$) / 100mS or T, whichever is less. Where T is the period of the pulse train, N_1 is the number of type 1 pulses, L_1 is the length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc. Duty Cycle Correction Factor = 20 * log (Duty Cycle)

COMMENTS

EUT OPERATING MODES

Modulated carrier.

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The duty cycle correction factor is added to the peak radiated emissions measurements to mathematically derive the average levels.

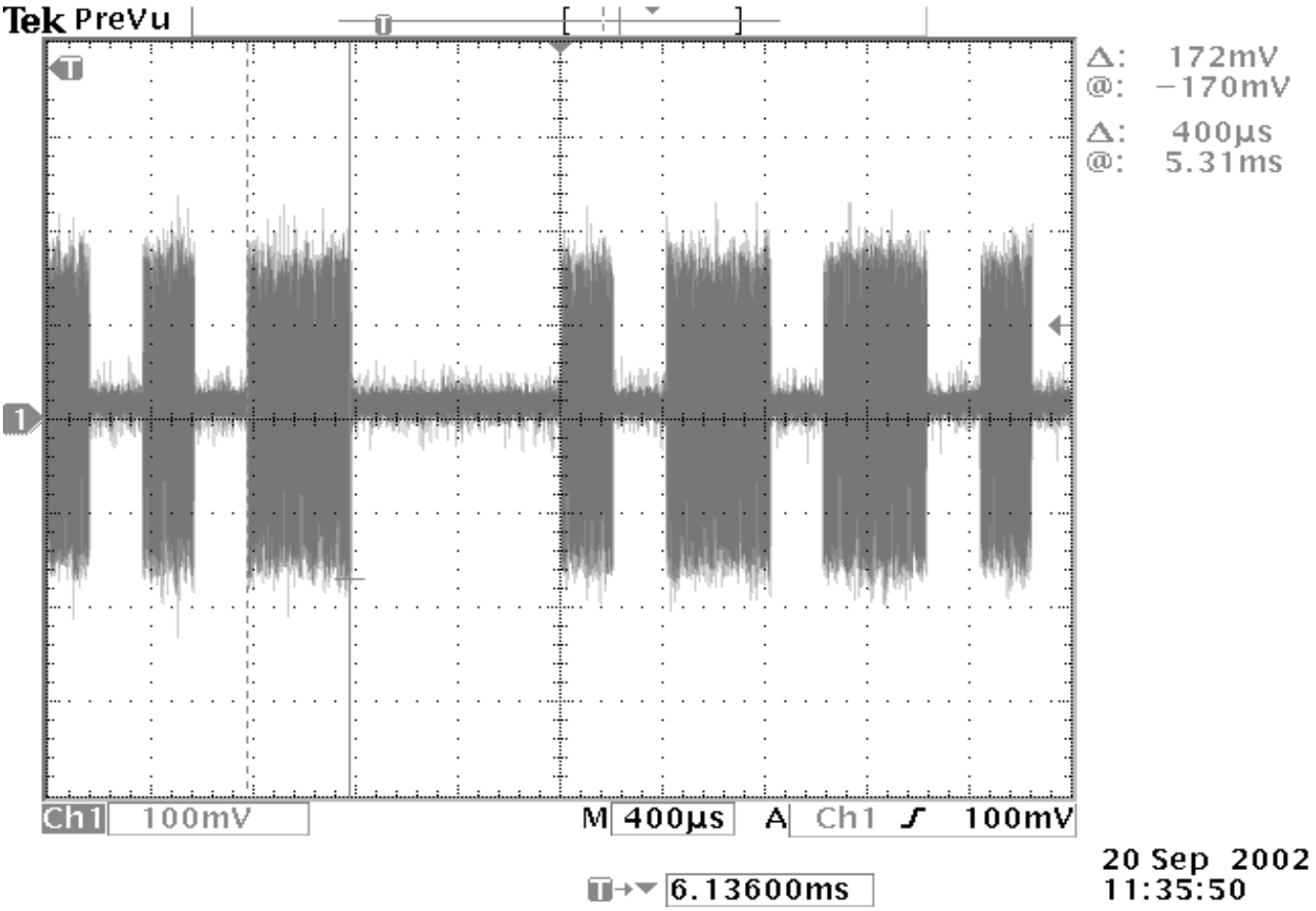
RESULTS	Length of Type 2 Pulse
Pass	400uS

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Length of Type 2 Pulse



NORTHWEST EMC

Duty Cycle Correction Factor

Rev BETA 01/30/01

EUT:	eScan2 SX			Work Order:	ENAL0003
Serial Number:	20202			Date:	09/20/02
Customer:	Enalasys			Temperature:	73
Attendees:	Art Chace	Tested by:	Greg Kiemel	Humidity:	40%
Customer Ref. No.:	N/A	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.231(e) & 15.35(c)	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Duty Cycle = ($N_1L_1 + N_2L_2 + \ldots$) / 100mS or T, whichever is less. Where T is the period of the pulse train, N_1 is the number of type 1 pulses, L_1 is the length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc. Duty Cycle Correction Factor = 20 * log (Duty Cycle)

COMMENTS

EUT OPERATING MODES

Modulated carrier.

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The duty cycle correction factor is added to the peak radiated emissions measurements to mathematically derive the average levels.

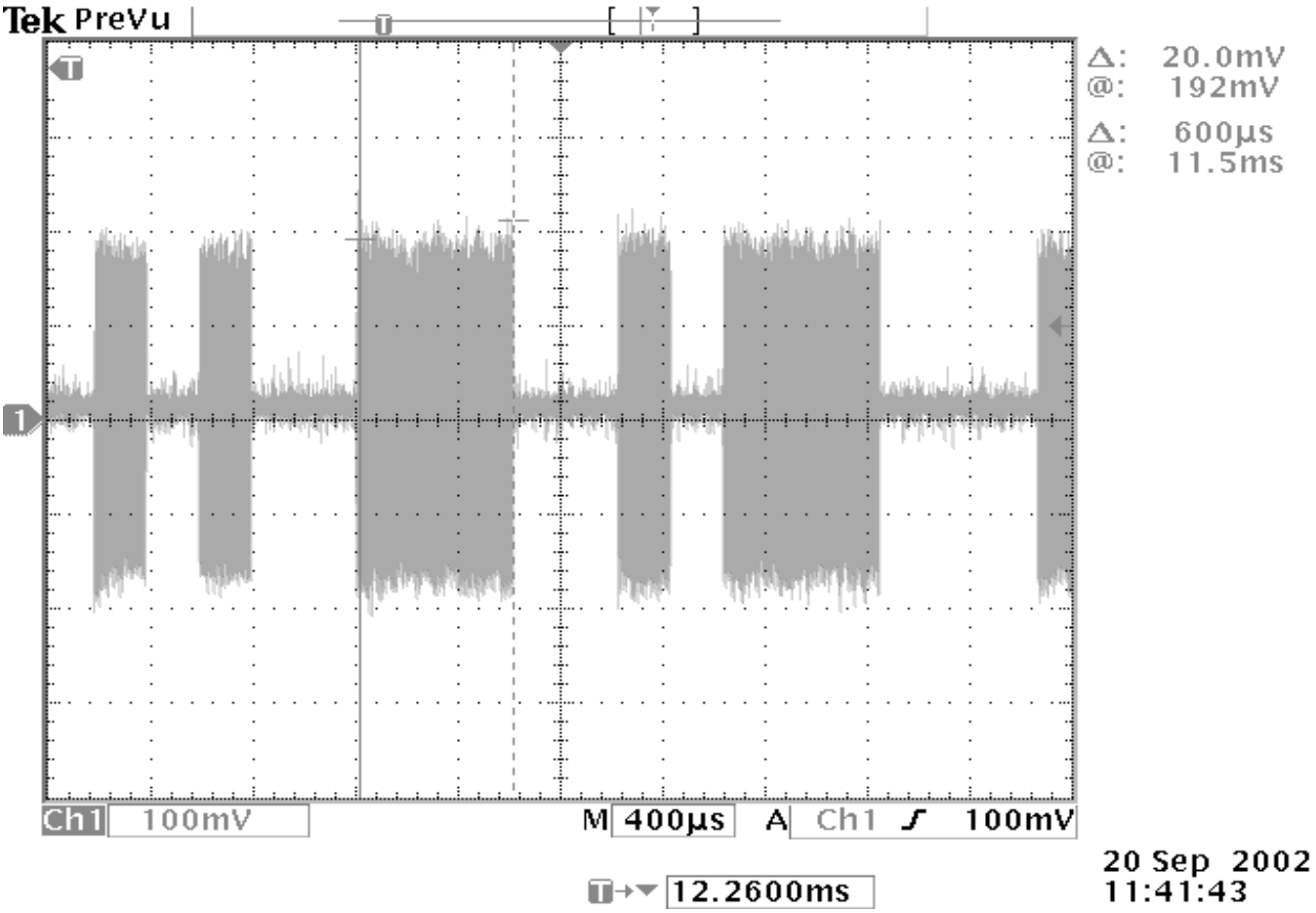
RESULTS	Length of Type 3 Pulse
Pass	600uS

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Length of Type 3 Pulse



NORTHWEST
EMC

Duty Cycle Correction Factor

Rev BETA
01/30/01

EUT:	eScan2 SX			Work Order:	ENAL0003
Serial Number:	20202			Date:	09/20/02
Customer:	Enalasys			Temperature:	73
Attendees:	Art Chace	Tested by:	Greg Kiemel	Humidity:	40%
Customer Ref. No.:	N/A	Power:	Battery	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.231(e) & 15.35(c)	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Duty Cycle = ($N_1L_1 + N_2L_2 + \ldots$) / 100mS or T, whichever is less. Where T is the period of the pulse train, N_1 is the number of type 1 pulses, L_1 is the length of type 1 pulses, N_2 is the number of type 2 pulses, L_2 is the length of type 2 pulses, etc. Duty Cycle Correction Factor = 20 * log (Duty Cycle)

COMMENTS

EUT OPERATING MODES

Modulated carrier.

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The duty cycle correction factor is added to the peak radiated emissions measurements to mathematically derive the average levels.

RESULTS	Number of Pulses
Pass	$N_1 = 25$, $N_2 = 5$, $N_3 = 4$

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Number of Pulses