APPENDIX C

HARDWARE TEST RESULTS

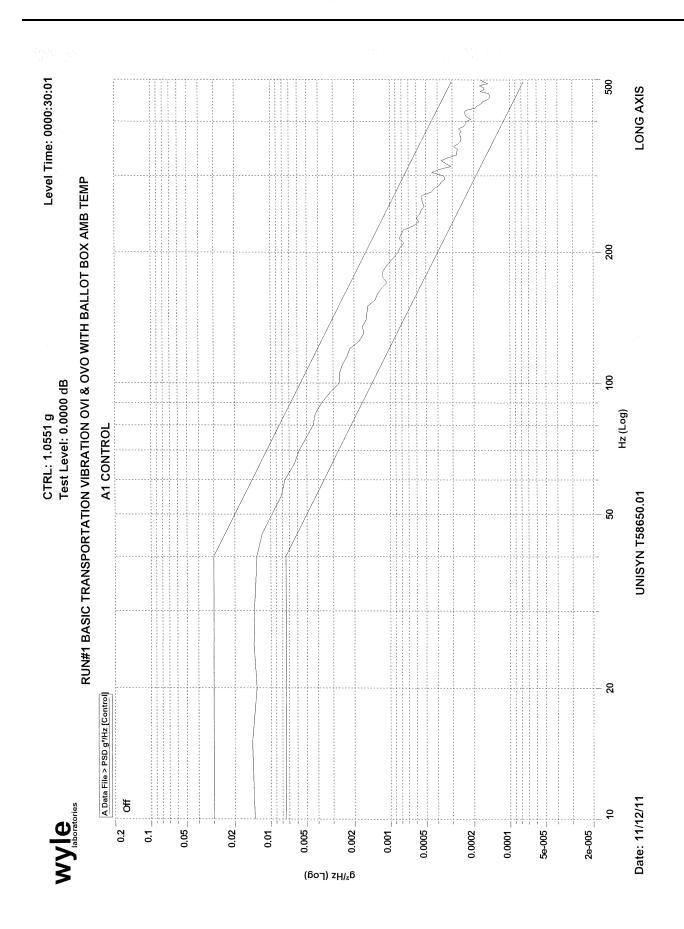
the UNISYN Spec. EAC 2005 VVSG Vol. II Specimen OVI o. TEBEBOJ1 Method Section 4.6.3 Procedure \longrightarrow Not Visition Antiont Yes \square No X Procedure \longrightarrow No X Procedure \longrightarrow No X Procedure \longrightarrow No (1150012) Specimen Temp. Antiont He Transportation Vitnation Time Axis $1^{(7)}$ ($1^{(7)}$)						•								
$\begin transformed from from from from from from from from$	Customer	N	ISYN		S	I	EAC 20	05 VVSG	Vol. II	Specim	·	1		
No No<	Job No.	T58(650.0	~	W	lethod	Secti	on 4.6.3		Part No		150013	Specimen Temp.	nbient
Tansportation Vibration Time Auts Form Auts SINISOIDAL Time Auts Temp SINISOIDAL East RANDOM Test SINISOIDAL 101 Auts Temp SINISOIDAL East Class Accold Final Final SINISOIDAL MARE 1206 Lune Amb I Io-do 015 GB/000 GB/000 GB/000 MARE MARE 1204 Amb I Io-do 015 I Io Imm# COMMENTS MARE 1344 Tasis Amb In Io-do 015 In Imm# COMMENTS 1344 Tasis Amb In Io-do 015 In In In In 1344 Tasis Amb In Io-do In Io In	GSI Yes			No		rocedur	I			I			Yes X	No
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Test Title	Tra	odsu	rtation	Nibratio	c								
Time Asis Tenp Tenp <th< td=""><td>\vdash</td><td></td><td></td><td></td><td>SIN</td><td>USOIDAL</td><td></td><td></td><td>SANDOM</td><td></td><td>TOTAL</td><td>Test</td><td></td><td></td></th<>	\vdash				SIN	USOIDAL			SANDOM		TOTAL	Test		
1206 Lung Amb Image: Construction of the construct	Date Ti		Axis	Temp (F)	Freq. (cps)	Disp. ("da)		1	PSD (g2/Hz)	Slope (dB/Oct)	Accel. (grms)	Time (min)	COMMENTS	NAME
1206 June Amb O	-												TEST REQUIREMENT	
101 104 1	11/17/11 12	╂────	Long	Amb				10-40	.015				Run#1 Basic Transportation	51
13.4 Tans Amb 015 M M 13.4 Tans Amb 015 M M M 13.4 Tans Amb 015 M M M M 13.4 Tans M M M M M M M 13.4 Tans M								500	.00015		1.04	30	Vibration	
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Report No. T28650.01-01 11/17/11 Page	+	+	Trans	Amb				10-40	.015				Run#2 Basic Transportation	21
Report No11//17/11 Report No11//17/11 Page of								500	.00015		1.05	30	Vibration	
1:251 Report No														
Report No	11/17/11 15	5:27	Vert	Amb				10-40	.015				Run#3 Basic Transportation	21
Report No. <u>T58650.01-01</u> Date <u>11/17/11</u>								500	.00015		1.05	30	Vibration	
Report No. <u>T58650.01-01</u> Date <u>11/17/11</u>														
ort No. <u>T58650.01-01</u> 11/17/11		1												Repo Date
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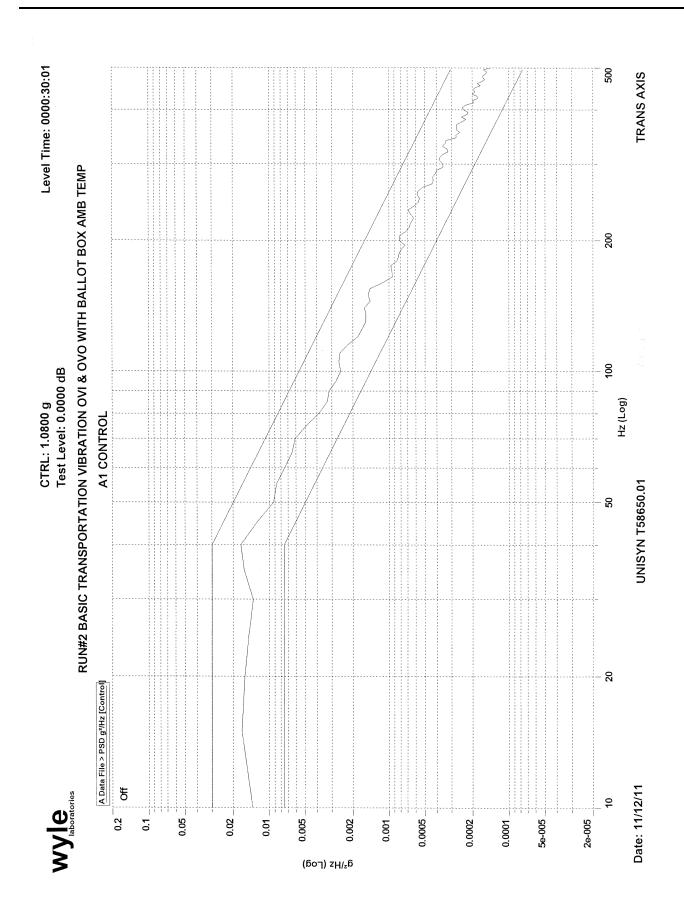
VIBRATION TEST DATA SHEET

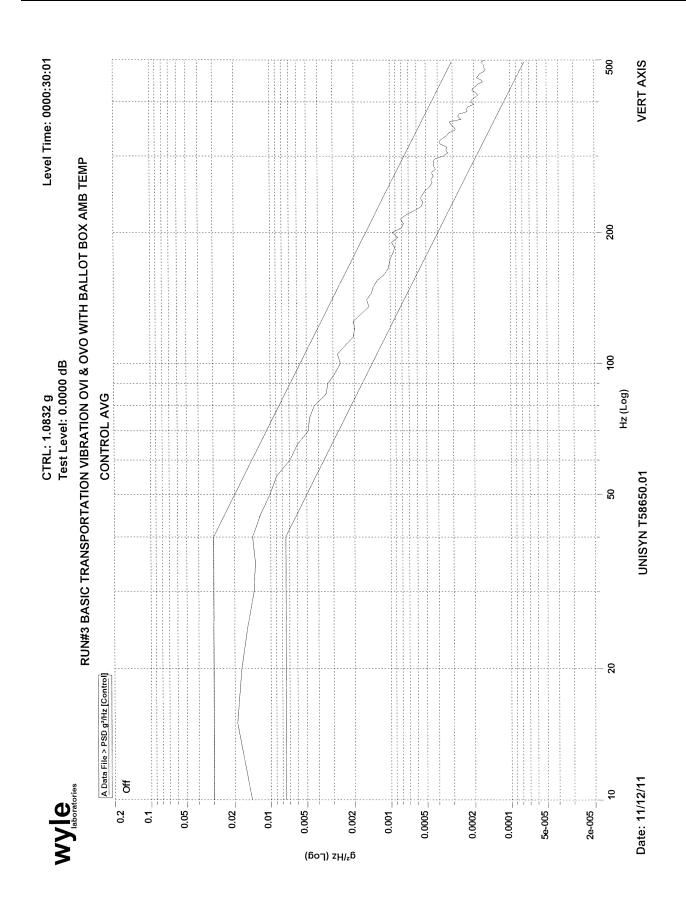
WYLE LABORATORIES, INC. Huntsville Facility

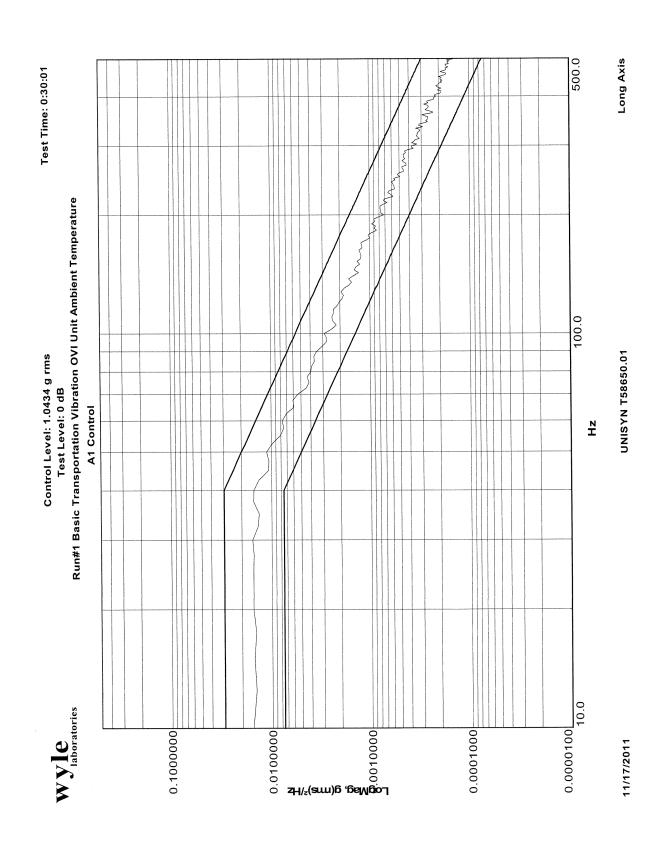
Page No. C-2 of 19 Wyle Test Report No. T58650.01-01

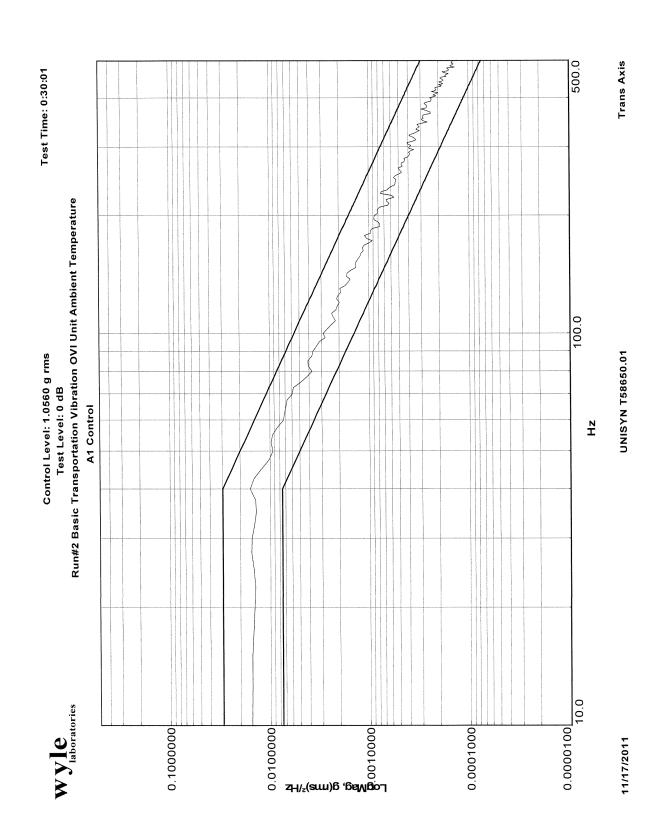
Page No. C-3 of 19 Wyle Test Report No. T58650.01-01

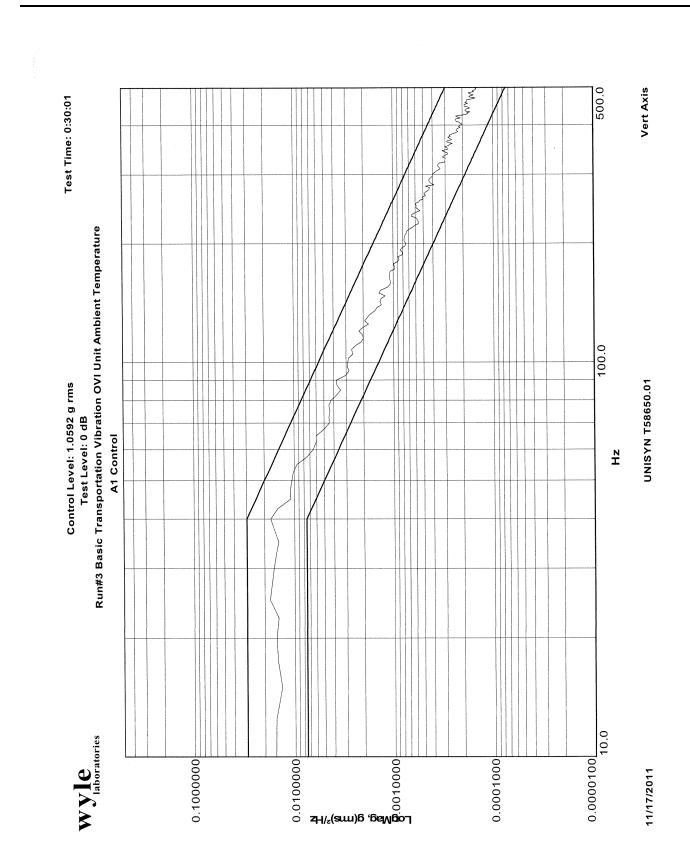












TETTT				Job No.:	T58650.01
	Le abonatories	DATA SHEET		Start Date:	3 Nov 2011
Customer:	Unisyn Voting Solutions	Temperature:	N/A	Humidity:	N/A
EUT:	OVI 15"	Measurement Point:	EU	T @ All Four Sides	5
Model No.:	OpenElect Voting Interface	Interference Signal:	-	l Khz @ 80% AM	
Serial No.:	UNI150012	Frequency Range:		80Mhz to 1Ghz	

Test Title _____ Electromagnetic Susceptibility

Test Frequency	Meets	Limit	Susceptibility Threshold Level	Maximum Signal Applied	Comments
()kHz (X)MHz ()GHz	Yes	No	()A ()V ()kV ()dBµA ()dBµV	(X)V/m ()Vrms ()dBµV/m ()dBpT	
80	X		>10	10	Vertical and Horizontal
\downarrow	↓		\rightarrow	\downarrow	\downarrow
1,000	X		>10	10	Vertical and Horizontal

Notice of Anomaly:_____

Witness:____

Date: 11/4/11 l Tested By: Technician Date: 11/4/11 A yo north Approved: 0 Project Engineer Page _____ of _____

WH-1432, Rev. Dec. 2004

****			Job No.:	T58650.01	
	le abonatories	DATA SHEET		Start Date:	10 Nov 2011
Customer:	Unisyn Voting Solutions	Temperature:	N/A	Humidity:	N/A
EUT: OVI 15"		Measurement Point:	Se	e Comments Below	
Model No.:	OpenElect Voting Interface	Interference Signal:		l Khz @ 80% AM	
Serial No.:	UNI150012	Frequency Range:		150Khz to 80Mhz	

Test Title Conducted RF Immunity

Test Frequency	Meets	Limit	Susceptibility Threshold Level	Maximum Signal Applied	Comments
()kHz (X)MHz ()GHz	Yes	No	()A (X)V ()kV ()dBµA ()dBµV (()V/m ()Vrms ()dBµV/m ()dBpT	
.150	X		>10	10	AC Power Cable
\downarrow	\downarrow		\downarrow	\downarrow	\downarrow
80	X		>10	10	AC Power Cable
					1

Notice of Anomaly:_____

Witness:_____

Date:_// /1(][[Tested By Technician Ŋ Date: 11/11/11 2 June Approved: Project Engineer Page _____ of ____

WH-1432, Rev. Dec. 2004

Page No. C-11 of 19 Wyle Test Report No. T58650.01-01

wy	le laboratories	DATA SHE	ET	Job No.: Start Date:	T58650.01 1/18/2011
Customer:	Unisyn	Temperature:	72°F	Humidity:	41%
EUT:	OVI 15"	Measurement Point:	See Test Points Below	-	
Model No.:	OpenElect Voting Interface	Interference Signal:	See Applied Signal		
Serial No.:	UNI150012	Frequency Range:	N/A		

Test Title _____ Electrostatic Disruption

	Meets	Limit	Applied Level	Discharge	Times	
Test Points	Yes	No	(kV)	Туре	Tested	Comments
Horizontal Coupling Plane	Х		±2, 4, 6, 8	Contact	10	Each Side of EUT
Vertical Coupling Plane	x		±2, 4, 6, 8	Contact	10	Each Side of EUT
Keyhole	x		±2, 4, 6, 8	Contact	10	
Right Side of OVI, Lower Chassis	Х		±2, 4, 6, 8	Contact	10	
Left Side of OVI, Lower Chassis	х		±2, 4, 6, 8	Contact	10	
Back of OVI Right Screen Brace	x		±2, 4, 6, 8	Contact	10	
Back of OVI, Right Side, Rivet	x		±2, 4, 6, 8	Contact	10	
Back of OVI, Left Side, ATI Connector	x		±2, 4, 6, 8	Contact	10	
Right Side of OVI, Screen Brace	x		±2, 4, 6, 8	Contact	10	
Monitor AC Adapter Light	х		±2, 4, 8, 15	Air	10	
Monitor AC Adapter Cord Connector	х		±2, 4, 8, 15	Air	10	
Monitor AC Adapter Side	x		±2, 4, 8, 15	Air	10	
Monitor Upper Left Corner	x		±2, 4, 8, 15	Air	10	
Monitor Lower Left Corner	х		±2, 4, 8, 15	Air	10	
Monitor Center	X		±2, 4, 8, 15	Air	10	
Monitor Status Light	X		±2, 4, 8, 15	Air	10	
Monitor Lower Right Corner	x		±2, 4, 8, 15	Air	10	
Monitor Upper Right Corner	x		±2, 4, 8, 15	Air	10	
Monitor Power Button	X		±2, 4, 8, 15	Air	10	
Monitor Right Side	x		±2, 4, 8, 15	Air	10	

Notice of Anomaly:_____

Witness:_

Tested By: Technician _Date: 11-22-11 Li Approved:_ **Project Engineer** Page 1 of 2

WH-1433, Rev. Dec. 2004

Wy	le aboratories	DATA SHE	ET	Job No.: Start Date:	T58650.01 1/18/2011
Customer:	Unisyn	Temperature:	72°F	Humidity:	41%
EUT:	OVI 15"	Measurement Point:	See Test Points Below	-	
Model No.:	OpenElect Voting Interface	Interference Signal:	See Applied Signal		
Serial No.:	UNI150012	Frequency Range:	N/A		

Test Title _____ Electrostatic Disruption

	Meets	Limit	Applied Level	Discharge	Times	
Test Points	Yes	No	(kV)	Туре	Tested	Comments
Monitor Left Side	x		±2, 4, 8, 15	Air	10	
OVI Case Left of Printer	X		±2, 4, 8, 15	Air	10	
OVI Case Below Printer	x		±2, 4, 8, 15	Air	10	
OVI Case Front, Gasket	X		±2, 4, 8, 15	Air	10	
OVI Case Right Side, Gasket	x		±2, 4, 8, 15	Air	10	
Power Switch	x		±2, 4, 8, 15	Air	10	
	_					

Notice of Anomaly:_____

Date: // - 27-11 Tested By: Technician Ryr Uit _Date: <u>/1 - 22-11</u> Page <u>2</u> of <u>2</u> Approved: Project Engineer

WH-1433, Rev. Dec. 2004

Witness:__



INSTRUMENTATION EQUIPMENT SHEET

	DATE: TECHNICL	11/11/2011 AN: D.MEDLEY		UMBER: T58650 OMER: UNISY				RATION LAB	
_	No. Description	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
1 2	ACCELEROMETER	ENDEVCO	7704A-50 7704A-50	12608 12607	04868 ¢ 04869 ¢	50pC/g 50pC/g	±5% ±5%	7/27/2011	1/27/2012 1/27/2012
3	CHARGE	ENDEVCO	2775A	EE30	112651 -	GAIN +	1.5%	7/21/2011	1/17/2012
4	CHARGE	ENDEVCO	2775A	ED75	112653 *	GAIN	1.5%	7/21/2011	1/21/2012
5	DMM	KEITHLEY	179A	196804	101203 🦘	1200VDC	±.04%DC	2/4/2011	2/4/2012
6	VIB CONTROL	SPECTRAL DYNAI	2400	1657	116969 -	MFG	MFG	3/9/2011	3/9/2012

This is to certify that the above instruments were calibrated using state-of-the-art techniques with standards whose calibration is traceable to the National Institute of Standards and Technology. INSTRUMENTATION: 0 Q.A.: WH-1029A, REV, APR'99 Page 1 of 1

Page No. C-14 of 19 Wyle Test Report No. T58650.01-01



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INSTRUMENTATION EQUIPMENT SHEET

	DATE:	11/17/20	11 JOE	3 NUMBER: T58650.01	61	TYPE	OF TEST V	IBRATION	
	TECHNICI	AN: D.MEDI	LEY CU	STOMER: UNISYN		TEST	ΓAREA: D	DYN LAB	
No.	Description	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
1	ACCELEROMETER	ENDEVCO	7704-50	13073	02600	50 pC/g / 20-5kF	±5%	7/27/2011	1/27/2012
2	ACCELEROMETER	ENDEVCO	7704A-50	12634	04866	50pC/g	±5%	10/11/2011	4/8/2012
3	CHARGE	ENDEVCO	2775A	EE31	112649	GAIN	±1.5%	6/9/2011	12/6/2011
4	CHARGE	ENDEVCO	2775A	EE24	112652	GAIN	1.5%	6/9/2011	12/6/2011

101203

02760

1200VDC

MULTI

±.04%DC

MFG

2/4/2011

5/4/2011

2/4/2012

5/3/2012

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10004048

This is to certify that the above-instruments were calibrated using state-of-the-art techniques with standards whose calibration is traceable to the National Institute of Standards and Technology.

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		Le boratories		RUMENTA	TION I	EQUIPME	INT SHEE	Г	
	DATE: TECHNIC	12/12/201 IAN: C. MORFO		JMBER: T58650.0 MER: UNISYN/			E OF TEST USA ST AREA: VST	BILITY ACC L LAB 4	CESSIBILITY
N	o. Description	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
1 2 3	MEASURE SET PUSH-PULL GAGE TAPE MEASURER	MITUTOYO CHATILLON LUFKIN	DIGIMATIC DPP-50 HV1048CME	7179294/0214 NSN	108976 101990 02710	1"/6" 50 lbs 26'/ 8meters	.0005" ±0.5 lb ±1in/±1mm	11/4/2011 7/6/2011 5/4/2011	11/4/2013 7/6/2012 5/4/2013

This is to certify that the above instruments were calibrated using state-of-the-art techniques with standards whose calibration is traceable to the National Institute of Standards and Technology.

Q.A.:

INSTRUMENTATION:

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12-12-11

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WH-1029A, REV, APR'99

Page 1 of 1

Page No. C-16 of 19 Wyle Test Report No. T58650.01-01

W		Contories		RUMENTA	ATION F	QUIPMEN	NT SHEET	ſ	
	DATE:	11/18/2011	JOB NUN	MBER: T58650		TYPE	OF TEST VVS	4.1.2.8,ESD	
	TECHNICIA	N: J.MCDERM	OTT CUSTOM	IER: UNISY	1	TEST	CAREA: EMII	LAB	
No. Desci	ription	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
DATA	LOGGER	EXTECH	42280	9051859	04926	-4°F to 144°F/0-	±1°F/±3%RH	2/10/2011	2/10/2012
DATA DISCH		EXTECH EMC-PARTNER	42280 ESD3000DM1	9051859 049	04926 03229	-4°F to 144°F/0- 150pF	±1°F / ±3%RH MFG	2/10/2011 12/17/2010	
	ARGE						Contraction of the second s		2/10/2012 12/17/201 12/17/201
DISCH ESD G	ARGE UN	EMC-PARTNER	ESD3000DM1	049	03229	150pF	MFG	12/17/2010	12/17/201

This is to certify that the above instruments were calibrated using state-of-the-art techniques with standards whose calibration is traceable to the National Institute of Standards and Technology.

INSTRUMENTATION:

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WH-1029A, REV, APR'99

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Page 1 of 1

Page No. C-17 of 19 Wyle Test Report No. T58650.01-01

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V laboratories	

INSTRUMENTATION EQUIPMENT SHEET

	DATE: TECHNICL	11/21/2011 AN: J. SMITH	JOB NUMB CUSTOMEI		I		OF TEST FCC P. FAREA: OATS		
N	o. Description	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
1 2 3	ANTENNA ATTEN EMI TEST RCVR	ELECTROMETRIC NARDA ROHDE SCHWAR2	776C-20	124116 1711 100386	114415 * 02173 ~ 117803*	30MHZ - 3GHZ 20dB MULTI	SEE DATA MFG MFG	7/20/2011 1/13/2011 12/8/2010	7/20/2013 1/13/2012 12/8/2011
4 5	LISN LISN	FISHER CC FISHER CC		02067 02068	117145 117146	10KHz to 100MI 10KHz to 100MI		8/20/2010 8/20/2010	8/20/2012 8/20/2012
6 7 8	LISN LISN LISN	SOLAR SOLAR SOLAR	8028-50 8028-50 8028-50-TS-24-BNC	956303 968418 974623	113693 113694 113973	10K-30MHZ 10K-30MHZ 10K-100MHZ	CERT CERT CERT	9/9/2010 9/9/2010 9/9/2010	9/9/2012 9/9/2012 9/9/2012

	bove instruments were calibrated usi nstitute of Standards and Technology		standards whose calibration is	
INSTRUMENTATION:	My Jouta 11/28/11	CHECKED & RECEIVED BY:	Robert Alaut 11/28	du
WH-1029A,REV,APR'99		Q.A.:	U[28/1/ Page 1 of	1
		V		1

WYLE LABORATORIES, I	NC.
Huntsville Facility	

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Ŵ		Le boratories		RUMENTA	TION E	CQUIPMEN	NT SHEET	Г	
	DATE:	11/3/2011	JOB NU	MBER: T58650		TYPE	OF TEST VSG	4.1.2.10	
	TECHNICI	AN: J. GALEON	E CUSTO	MER: UNISYN	/ILTS	TEST	AREA: EMI	LAB CHAM	BER 1
lo. Desc	ription	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
AMPL	IFIER	AMP RESEARCH	500W1000A	25361	03141	80MHz to 1GHz	NCR	8/10/2011	8/10/2012
ANTE	NNA	AR	AT6080	0330329	02247	80-6000MHz	NCR	3/28/2011	3/28/2020
DIR C	OUPLER	AMP RESEARCH	DC6080	21207	113788	80-1000MHZ	.5db	5/17/2011	5/17/2012
SIG G	EN	MARCONI	2023	112224/092	L12224	9kHz-1.2GHz	±0.8dB	1/4/2011	1/4/2012
	ANAL	AGILENT	E4446A	US42070108	110948	44 GHz	CERT	6/3/2011	6/3/2012
SPEC									

This is to certify that the above instruments were calibrated using state-of traceable to the National Institute of Standards and Technology.	the-art techniques with standards whose calibration is
INSTRUMENTATION: CHECKE	D& RECEIVED BY: (N. Bud 11/3/11
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WH-1029A,REV,APR'99	Page 1 of 1



INSTRUMENTATION EQUIPMENT SHEET

	DATE:	11/10/2011	JOB NUME	BER: T58650		TYPE	OF TEST VVSG	4.1.2.11	
	TECHNICI	AN: J. GALEON	IE CUSTOME	R: UNISYN/	ILTS	TEST	ΓAREA: EMI L	AB CHAMI	BER 1
N	o. Description	Manufacturer	Model	Serial #	WYLE #	RANGE	ACCURACY	Cal Date	Cal Due
1	AMPLIFIER	AR	2500A225	NSN	01308	MFG	NCR	8/11/2011	8/11/2013
2	ATTEN	BIRD	25-T-MN	0129	03142	50 OHMS 25 W.	MFG	5/23/2011	5/23/2012
3	ATTENUATOR	NARDA	769-6	03180	04860	DC to 6GHz	MFG	3/16/2011	3/16/2012
4	DIR COUPLER	AMP RESEARCH	DC3010	304022	117208	.01-1000MHz	±0.8dB	4/13/2011	4/13/2012
5	PASS IMP ADAPT	FISHER CC	FCC-801-150-50-CDN	9785	116853	150KHz-230MH	MFG	7/15/2011	7/15/2012
6	PASS IMP ADAPT	FISHER CC	FCC-801-150-50-CDN	9784	116854	150KHz-230MH	MFG	7/15/2011	7/15/2012
7	PASSIVE	FISHER CC	FCC-801-150-50-CDN	04049/04050	110405	150KHZ - 230M	MFG	7/15/2011	7/15/2012
8	SIG GEN	AEROFLEX	2023A	202306/068	R20230	9KHz-1.2GHz	MFG	10/4/2011	10/4/2012
9	SPEC ANAL	AGILENT	E4446A	US42070108	110948	44 GHz	CERT	6/3/2011	6/3/2012
10	SPEC ANAL	AGILENT	E4446A	MY46180335	R80335	MFG	MFG	7/25/2011	7/25/2013
11	TAPE MEASURER	LUFKIN	HV1048CME	NSN	02708	8meters	±1mm	4/14/2010	4/14/2012

This is to certify that the above instruments were calibrated using state-	-of-the-art techniques with standards whose calibration is
traceable to the National Institute of Standards and Technology	
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WH-1029A,REV,APR'99	Banda Morze II lie III

Page 1 of 1