

SERIAL # PL22446

TEST DATA SHEET

DATE 4-10-18

REF.	NOMENCLATURE	VALUE	TOL	UNITS	+25 ⁰ C
SCOPE	ESS DATA	N/A	N/A	N/A	SEE ATTACHED DATA
4.1	Dimensions	N/A	N/A	N/A	PASS / FAIL
4.2	Marking	N/A	N/A	N/A	PASS / FAIL
4.3	DC Power @+/-15VDC	+500	MAX	mA	+420
		-200		mA	-70
4.4	Input VSWR	2.0:1	MAX	1.4:1	GRAPH 1
4.4	Output VSWR	2.0:1	MAX	1.177:1	GRAPH 2
4.5	Log linearity	N/A	+/-1.5	+0.63 / -0.83 dB	Graph 3
4.5	Log slope	55.5	+/-5 %	54.6/56mV/dB	Graph 3
4.5	Absolute Log Video Output Voltage @-55dBm	0.0	+/-0.075	V	+0.025 / -.034
4.5	Average Log Video Output Voltage @ -55dBm	0.0	+/-0.05	V	-0.002
4.5	Average Log Video Output Voltage @ -10dBm	2.5	+/-0.05	V	2.454
4.5	Flatness from -55 to -45dBm	4.0	p-p	dB	1.6
4.5	Flatness from -45 to -10dBm	6.0	p-p	dB	1.6
4.6	No Signal Output Voltage	-100 to -300	N/A	mV	-155
4.7	Log Video Output Rise Time	20	MAX	ns	19.5



SIZE
A

CAGE CODE
71A34

SCALE

DWG. NO.
28033900

REVISION A 1

SHEET 16 OF 18

4.8	Pulse Overshoot @ -10dBm	138.7	MAX	mV	35
4.8	Pulse Overshoot @ -35dBm	55.5	MAX	mV	0
4.9	Pulse Fall Time and Recovery Time	50	MAX	ns	25
4.10	Log Video Output Pulse Delay	35	MAX	ns	26
4.11	RF Saturated Output Power	+15	MAX	dBm	11.2

TESTED BY JM

QA *J.R. Paul*
4/12/18



SIZE
A

CAGE CODE
71A34

SCALE

DWG. NO.
28033900

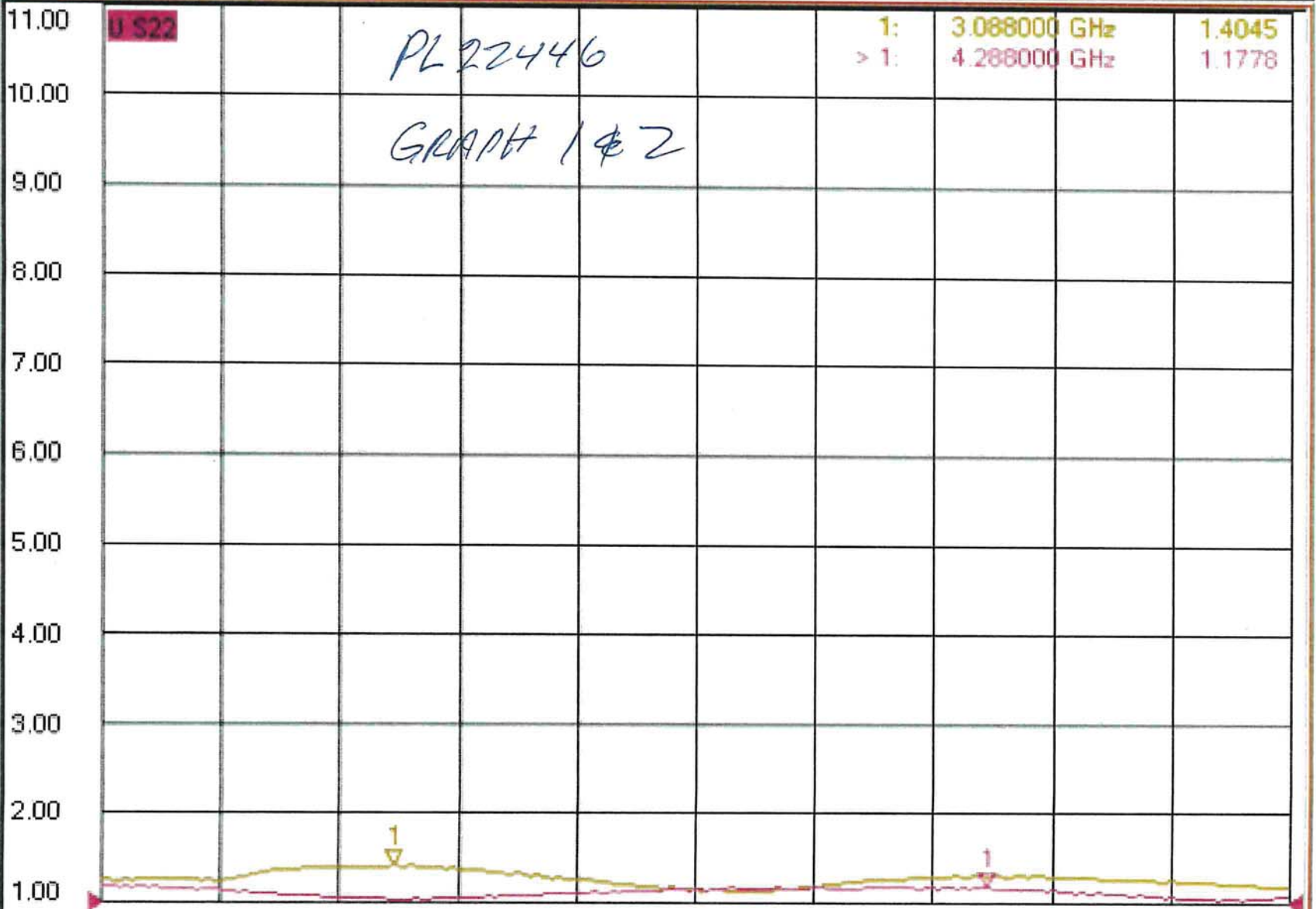
REVISION A 1

SHEET 17 OF 18

Stimulus Stop 4.900000000 GHz Start Stop Center Span

S11
1.000U/
1.00U SWR

S22
1.000U/
1.00U SWR



>Ch1: Start 2.50000 GHz Stop 4.90000 GHz

LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-2D5G4D9G-60-50MV
 TESTED BY: JOHNM
 DATE: 3-10-18
 SERIAL NO: #PL22446
 Test Temp: +25C

GRAPH # 3



PLANAR MONOLITHICS INDUSTRIES
 4921 Robert J. Mathews Parkway, Suite 1
 El Dorado Hills, CA 95762
 Phone: 916-542-1401 Fax: 301-662-1731
 Email: sales@pmi-rf.com | www.pmi-

Frequency

2.5 GHz	INTERCEPT (mV)	3034
	SLOPE (mV/dB)	55

2.9 GHz	INTERCEPT (mV)	3036
	SLOPE (mV/dB)	56

3.3 GHz	INTERCEPT (mV)	3019
	SLOPE (mV/dB)	55.4

3.7 GHz	INTERCEPT (mV)	3031
	SLOPE (mV/dB)	55.1

4.1 GHz	INTERCEPT (mV)	2995
	SLOPE (mV/dB)	55.1

4.5 GHz	INTERCEPT (mV)	3015
	SLOPE (mV/dB)	54.7

4.9 GHz	INTERCEPT (mV)	3007
	SLOPE (mV/dB)	54.6

Flatness +/-dB

Slope Avg(mv/dB)	55.1
Slope Min(mv/dB)	54.6
Slope Max(mv/dB)	56.0

V Out Min @ -55dBm	-0.034
V Out Max @ -55dBm	0.025
V Avg @ -55dBm	-0.002
V Avg @ -10dBm	2.454

Max Delta -55 to -45dBm	1.52	dB
Max Delta -45 to -10dBm	1.58	dB

-55	-50	-45	-40	-35	-30	-25	-20	-15	-10
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

-12	250	555	867	1138	1413	1694	1938	2172	2458
-22	-35	-5	32	28	28	34	4	-37	-26
-0.41	-0.64	-0.09	0.58	0.51	0.51	0.63	0.06	-0.68	-0.48

-34	202	492	811	1093	1366	1663	1930	2174	2454
11	-33	-23	16	18	11	28	15	-21	-22
0.20	-0.59	-0.41	0.29	0.32	0.19	0.50	0.26	-0.38	-0.38

-18	225	496	811	1095	1382	1666	1921	2163	2444
10	-24	-30	8	15	25	32	10	-25	-21
0.18	-0.43	-0.54	0.14	0.27	0.45	0.58	0.18	-0.45	-0.38

7	269	517	825	1111	1397	1675	1932	2184	2471
9	-5	-33	0	10	20	23	4	-20	-8
0.16	-0.09	-0.59	0.00	0.18	0.37	0.41	0.07	-0.36	-0.15

-6	236	471	780	1065	1368	1650	1901	2144	2440
28	-5	-46	-12	-2	25	32	8	-25	-4
0.51	-0.09	-0.83	-0.22	-0.04	0.46	0.58	0.14	-0.45	-0.07

25	281	511	817	1102	1401	1675	1926	2178	2457
18	1	-43	-10	1	27	28	5	-16	-11
0.33	0.01	-0.78	-0.19	0.03	0.49	0.50	0.09	-0.30	-0.20

25	279	506	809	1089	1391	1669	1921	2172	2455
23	4	-43	-13	-6	23	28	6	-16	-6
0.42	0.07	-0.78	-0.23	-0.11	0.42	0.51	0.12	-0.29	-0.11

0.5	0.7	0.8	0.8	0.7	0.4	0.4	0.3	0.4	0.3
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

RF Input Power (dBm)

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

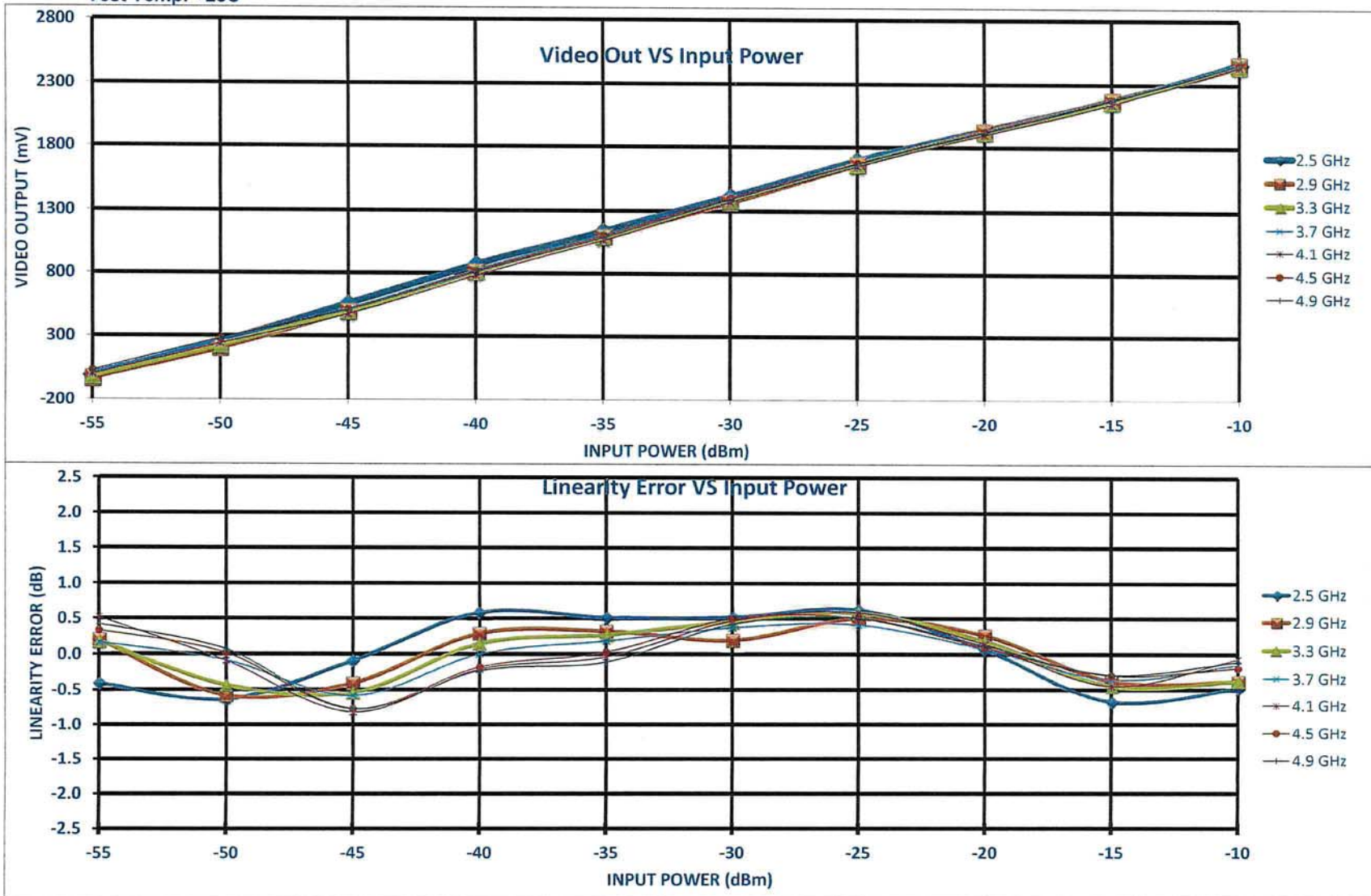
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

LOG TRANSFER WITH FREQUENCY
MODEL: SDLVA-2D5G4D9G-60-50MV
SERIAL NO: #PL22446
Test Temp: +25C

GRAPH # 3





CERTIFICATE OF CONFORMANCE

Martin Testing Laboratories
 Sacramento Division
 North Highlands, Ca. 95660
 Tel: 916-920-4110
 Fax: 916-920-4390

Customer Name:		Planar Monolithics Industries, Inc.		MTL MJO No.:		3769-19.1	
Address:		4921 Robert J. Mathews Pkwy, Ste. 1		MTL Company Inspection:		Yes X No	
City, State, Zip:		El Dorado Hills, CA 95762		Customer P.O. No.:		PO18-0436	
Attention:		John Merriner		Source Inspection:		Yes X No	
Date Test Started:		04/04/18		Government Contract No.		N/A	
Date Test Completed:		04/04/18		Government Inspection:		Yes No X	
Cert. Authorized by:		Perry Martin, Technical Director					
Qty.	Part Name and Part Number	Serial Number	Specification Number	Para. No.	Test Title	Anomalies Yes No	
3	Test Unit 8410075-1	PL22445, PL22446, PL22447	Fig 4		Random Vibration Test		X
Remarks:							

CERTIFICATE OF CONFORMANCE: We hereby certify that the above parts/materials were processed in full compliance with all the drawing specification and/or technical provisions described in the Purchase Order.

Certificate No.: 3769-19.1

Signed **MTL**
QA
 Quality Assurance Department

Issue Date: 04/04/18

This certificate shall not be reproduced except in full, without written approval of the laboratory.
 Certificate of Conformance CO-1.0 Rev 1 (6/16/2013)

MARTIN
TESTING
LABORATORIES

SACRAMENTO DIVISION
P.O. BOX 2019
N. HIGHLANDS, CA 95660
TEL: 916-920-4110
FAX: 916-920-4390

TEST EQUIPMENT
page 1 of 1

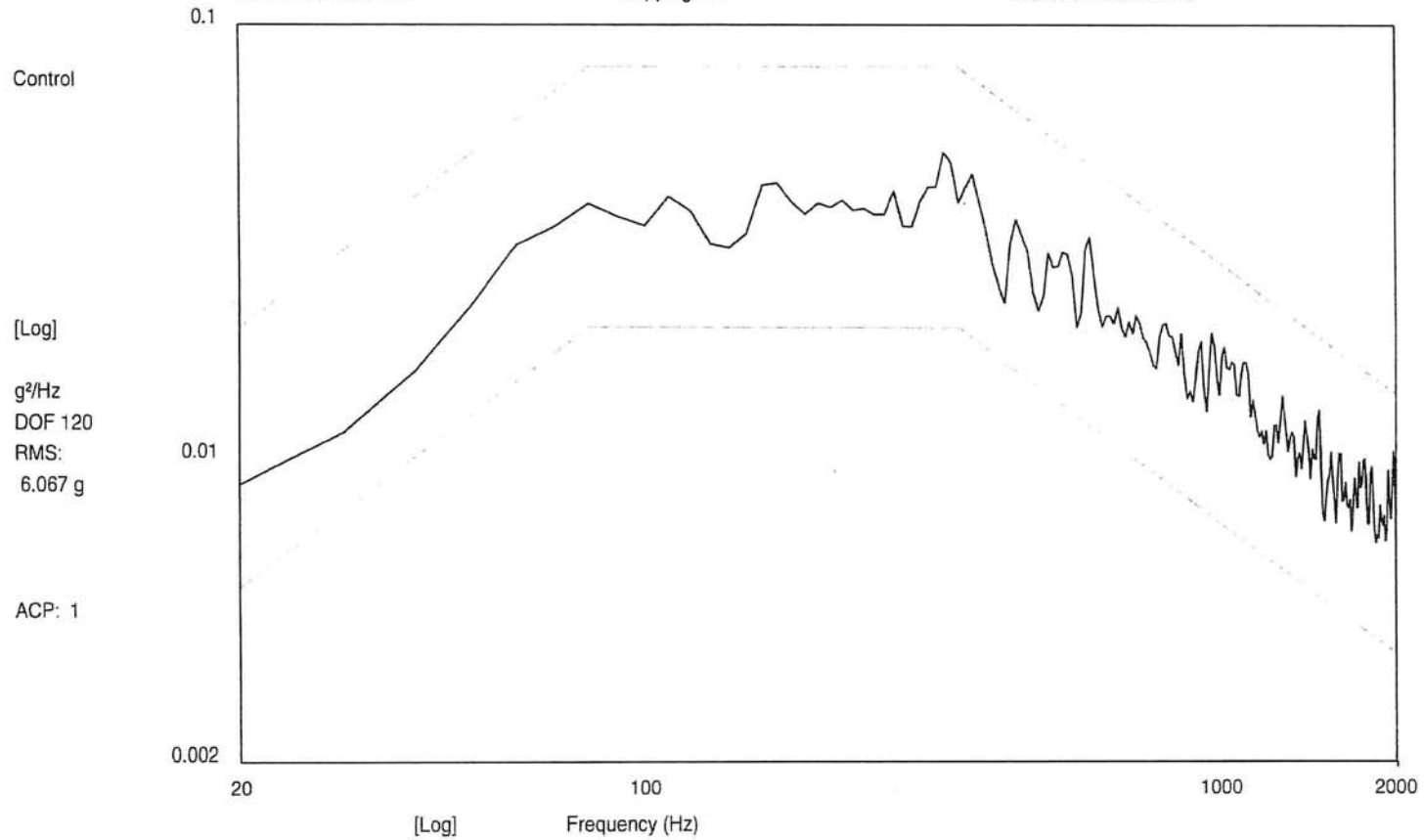
Customer:	Planar Monolithics Industries, Inc.			MJO:	3769-19.1	
Test Specimen:	Test Unit			Date:	04/04/18	
Part No.:	8410075-1	Serial No.	PL22445 – PL22447			
Test Spec.:	Fig. 4	Rev.:		Para.:		
Test Title:	Random Vibration Test					
In Use	Equipment	Manufacturer/ Model	MTL I.D.#	Cal. Date ¹	Cal. Due Date	
X	Vibration Exciter S/N:494	Unholtz Dickie/ T-1000 32w	D3034M	Maintenance only		
X	Power Amplifier S/N:2596	Unholtz Dickie / 2XSA60	D3033M	Maintenance only		
X	Control System	Spectral Dynamics/2560	1549	10/09/17	04/09/18	
X	Graphics Printer	HP Laser Jet 4	D3036M	Maintenance only		
	Accelerometer Power Supply	Unholtz Dickie / CVA-8	D3000M			
	Accelerometer Power Supply	Endevco / 2775A	D3027M			
	Accelerometer Power Supply	Endevco / 2775A	D3028M			
	Accelerometer Power Supply	Endevco / 2775A	D3029M			
	Accelerometer Power Supply	Endevco / 2775A	D3030M			
	Accelerometer Power Supply	Endevco / 2775A	D3031M			
	Accelerometer	Unholtz Dickie / 10B10T	D3021M			
	Accelerometer	Unholtz Dickie / 10B10T	D3017M			
	Accelerometer	Unholtz Dickie / 10B10T	D3019M			
X	Accelerometer	Piezotronics/PCB353B33	LW173625	08/15/17	08/15/18	
	Accelerometer	Piezotronics/PCB353B15				
	Accelerometer	Endevco /2222C				
	Accelerometer	Endevco /				
	Variable Analog Filter					
	Temperature Conditioner			Maintenance only		
	Digital Thermometer					
	Torque Wrench					
	Test Fixture	MTL Sac.		Maintenance only		
	Test Fixture			Maintenance only		
	Oscilloscope			Indication only		
Accel. Label	Accel. Sens. (mV/m/s ²)	Accel. S/N	Mfr/Model	Accel. Label	Accel. Sens. (pC/g)	Accel. S/N
Control	10.29	LW173625	Piezotronics PCB353B33			
channel 2						

¹ In-service date of accelerometers

Test Level: 0.000 dB
Test Time: 000:15:00

Reference RMS: 6.071
Clipping: Off

Test Range: 20.000, 2000.000 Hz
Resolution: 10.000 Hz



10:39:25
04-Apr-2018

PMI Random 4.6.2
6 Units Z-Axis
Test Name: PMIESS.tmp