



**ENVIRONMENTAL TEST REPORT**

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Planar Monolithic Industries  
7311-F Grove Road, PMI  
Federick, MD 21704

Date : 04/25/2013  
P.O. NO : PO13-0367  
Job # : T-48508-11  
Quantity : 55  
Part No :  
Item ID : RF Module  
Serial No : See Below

Tektronix certifies that the above referenced items have been subjected to the specified environmental test set forth in the above referenced purchase order.

<u>TEST</u>	<u>CONDITIONS</u>	<u>QUANTITY ACCEPTED</u>	<u>QUANTITY REJECTED</u>
Random Vibration	MIL-STD-883H, Method 2026, Test Condition 1B Frequency: 50--2000Hz G level: 7.3 g's Duration: 10min Y Axis only	55*	0
Mechanical Shock	MIL-STD-883H, Method 2002, Test Condition B Pulse Amplitude: 1500G Pulse Duration: 0.5mS Pulse Type: Half Sine 3 shocks in Y1 direction only.	55*	0

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF TEKTRONIX.  
RESULTS SHOWN RELATE ONLY TO ITEMS TESTED AND REFERENCED ON THIS REPORT  
All the equipment used in the performance of the testing referenced in this report, meets or exceeds the tolerances specified within the stated methods.

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\*Test completed 04/23/2013. \*No physical damage was noted as a result of the above referenced test(s). The final evaluation is to be performed by Planar Monolithics Industries, Inc.

Prepared by:



**Daniel Lesage**  
Test Technician

Approved by:



**William Keefe**  
Lab Supervisor

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## L I S T O F A P P A R A T U S

DESCRIPTION	MANUFACTURER/MODEL NUMBER
----- ITEM # 1 VIBRATION CONTROL SYSTEM	INVENTORY ID: N50-072 UNHOLTZ DICKIE UD-WIN
ACCY: CONTROL +/- 1DB	CAL:05/15/2012 DUE:05/15/2013
----- ITEM # 2 VIBRATION SYSTEM	INVENTORY ID: N30-031 LING ELECTRONICS DMA5/390-3
ACCY: N/A	CAL: EXT EQUIP DUE:EXT EQUIP
----- ITEM # 3 PIEZOELECTRIC ACCELEROMETER	INVENTORY ID: N31-273 ENDEVCO 2229C
ACCY: +/-5%	CAL:03/28/2013 DUE:09/28/2013
----- ITEM # 4 CHARGE AMPLIFIER	INVENTORY ID: N31-290 ENDEVCO CORP. 2730
ACCY: SERVO +/-2% SETTING	CAL:11/26/2012 DUE:05/26/2013
----- ITEM # 5 TRANSIENT CAPTURE COMPUTER SYSTEM	INVENTORY ID: N50-076 GHI SYSTEMS INC. WinCAT-4
ACCY: SEE MANUAL	CAL:05/08/2012 DUE:05/08/2013
----- ITEM # 6 SHOCK ACCELEROMETER	INVENTORY ID: N31-277 ENDEVCO 2225
ACCY: +/- 5%	CAL:12/27/2012 DUE:06/27/2013
----- ITEM # 7 CHARGE AMPLIFIER	INVENTORY ID: N31-177 ENDEVCO CORP. 2735PS
ACCY: SERVO +/-2% SETTING	CAL:11/26/2012 DUE:05/26/2013
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## L I S T   O F   A P P A R A T U S

DESCRIPTION	MANUFACTURER/MODEL NUMBER
-----	-----
ITEM #        8	INVENTORY ID: N25-007
DROP TESTER	LAB
	SD 4.5-30-4
ACCY: Ext Equip	CAL: EXT EQUIP DUE:EXT EQUIP
-----	-----

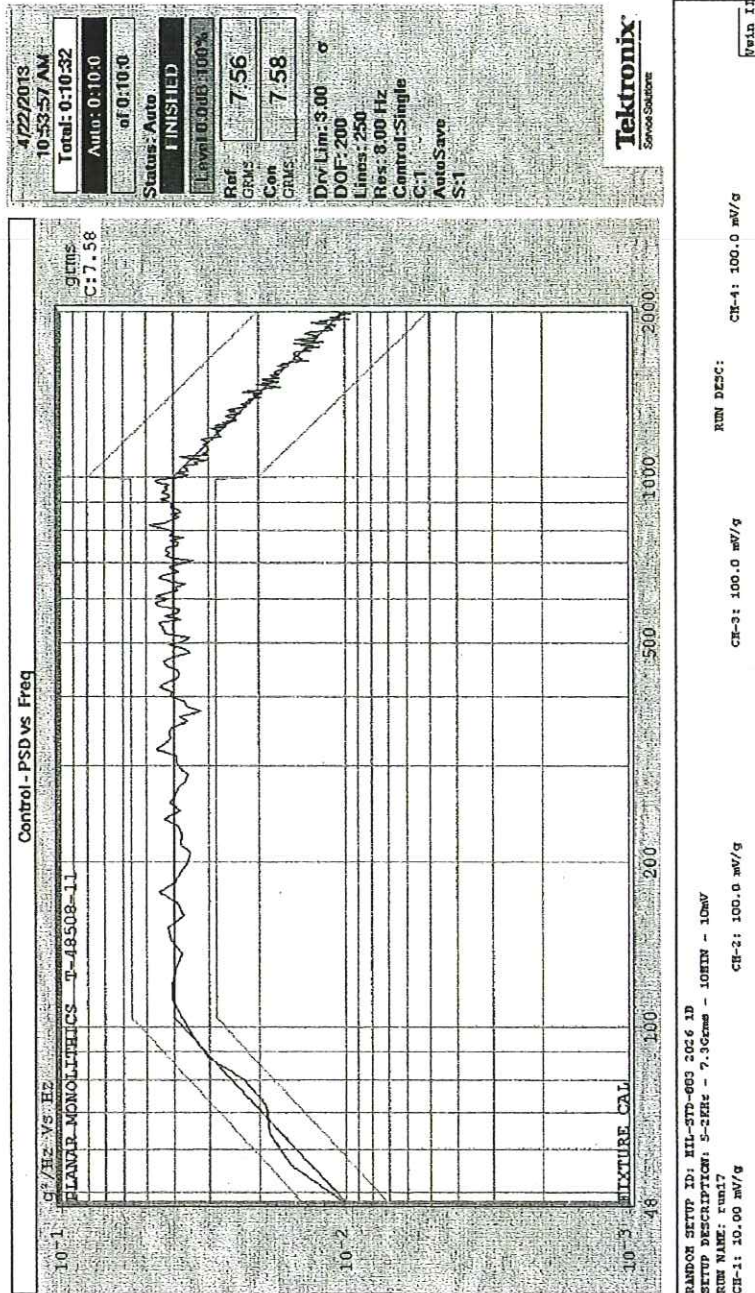
All the equipment used in the performance of the testing referenced in this report, meets or exceeds the tolerances specified within the stated test methods.

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## Random Vibration Plots

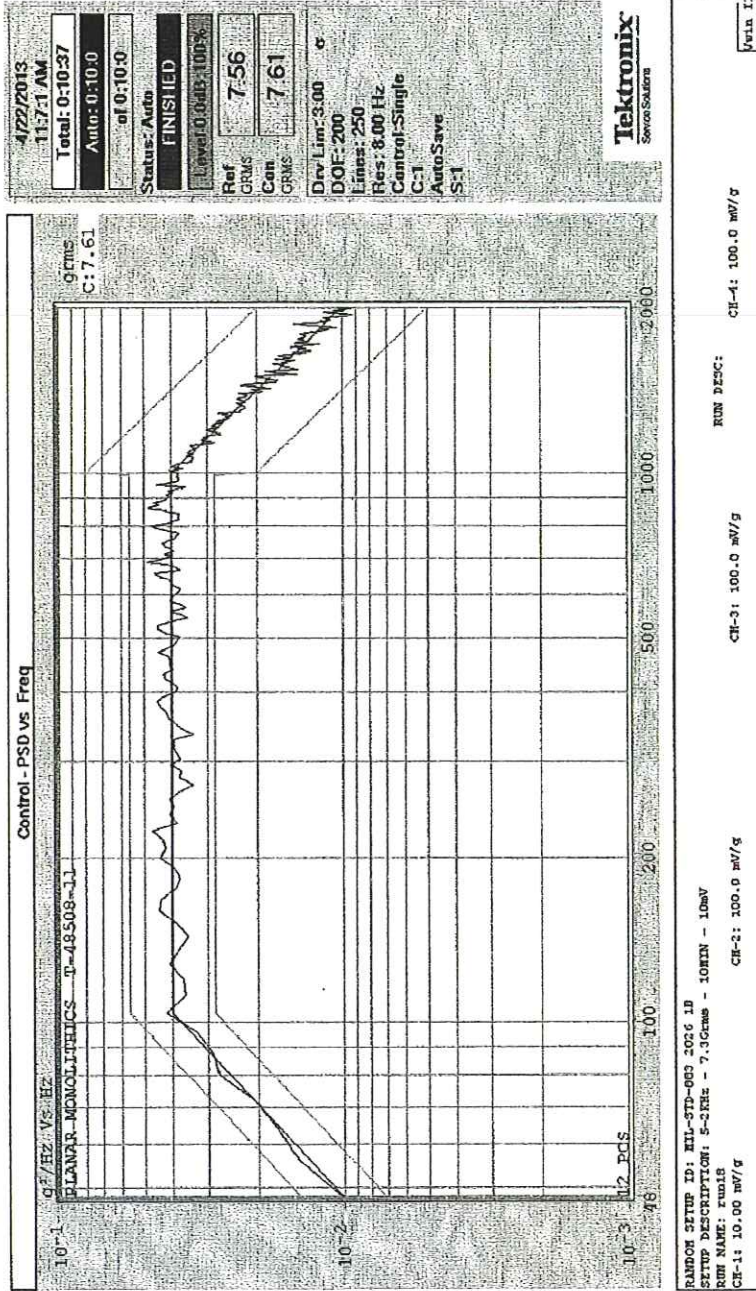




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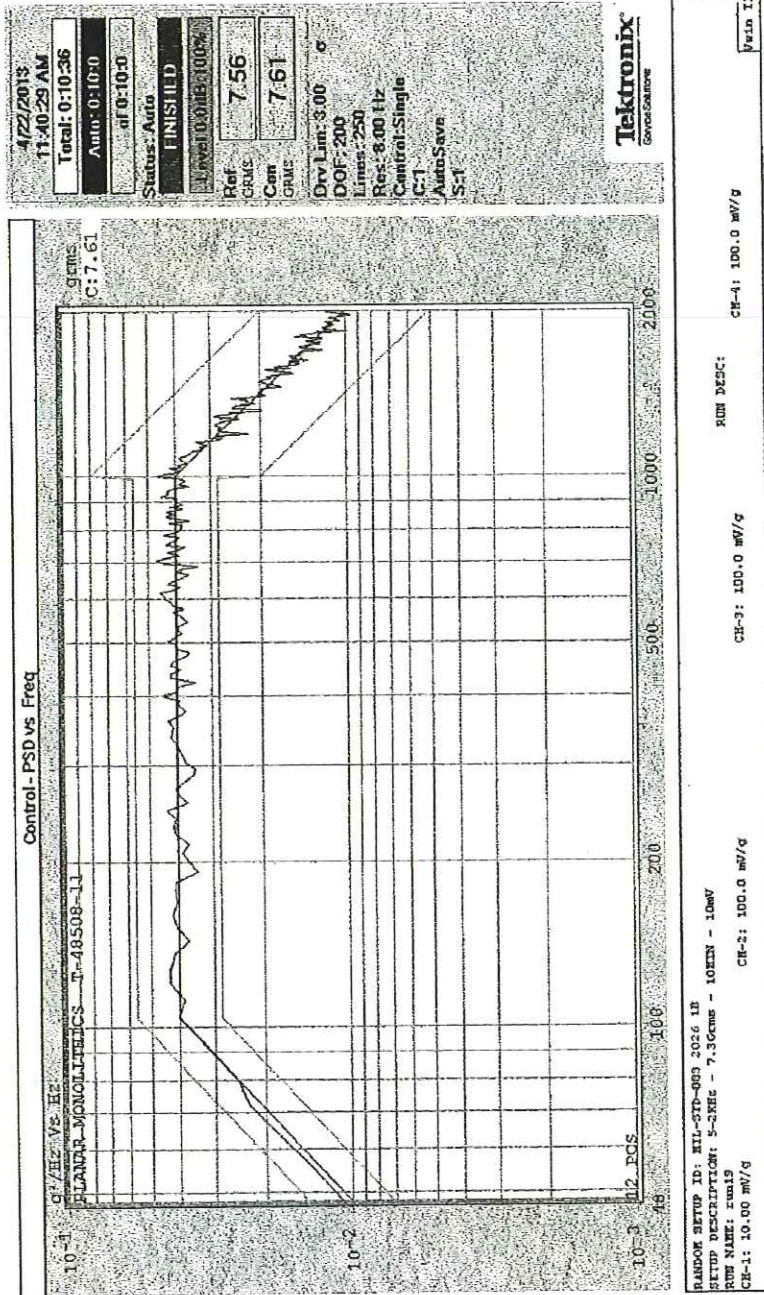
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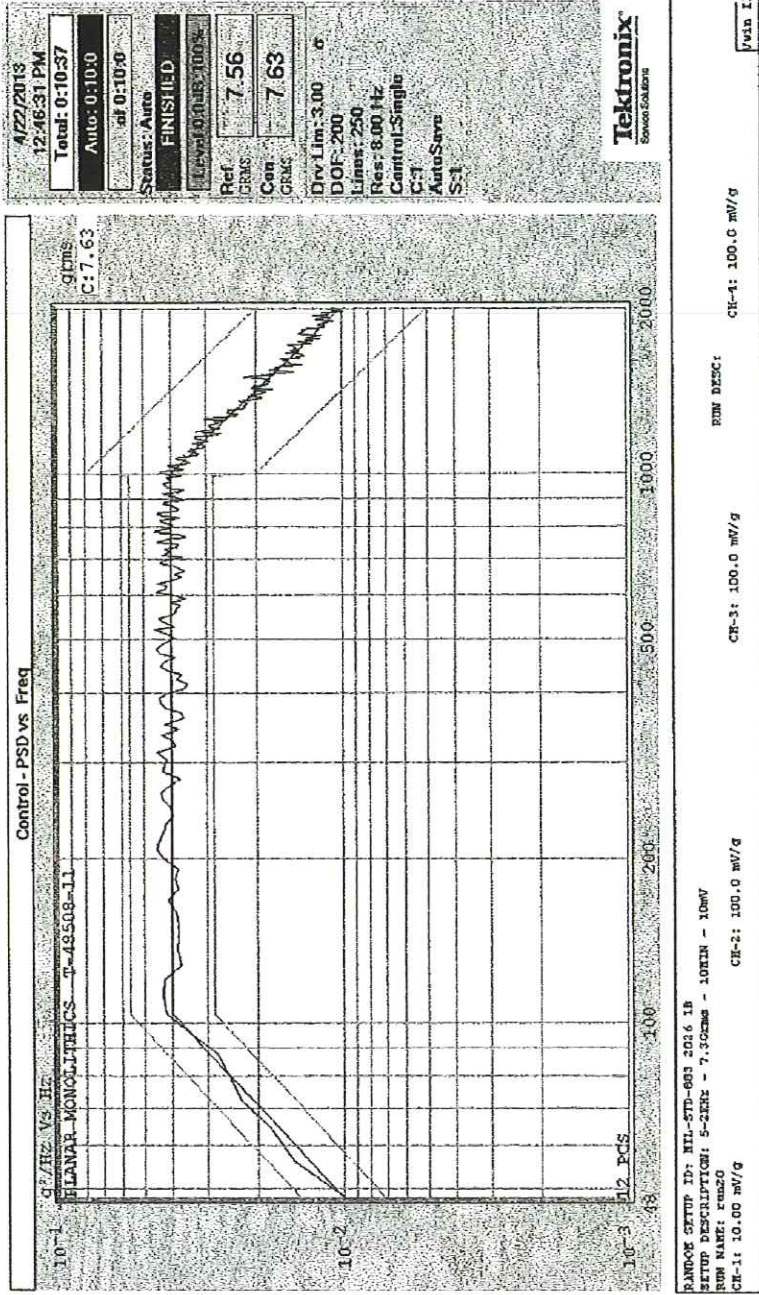




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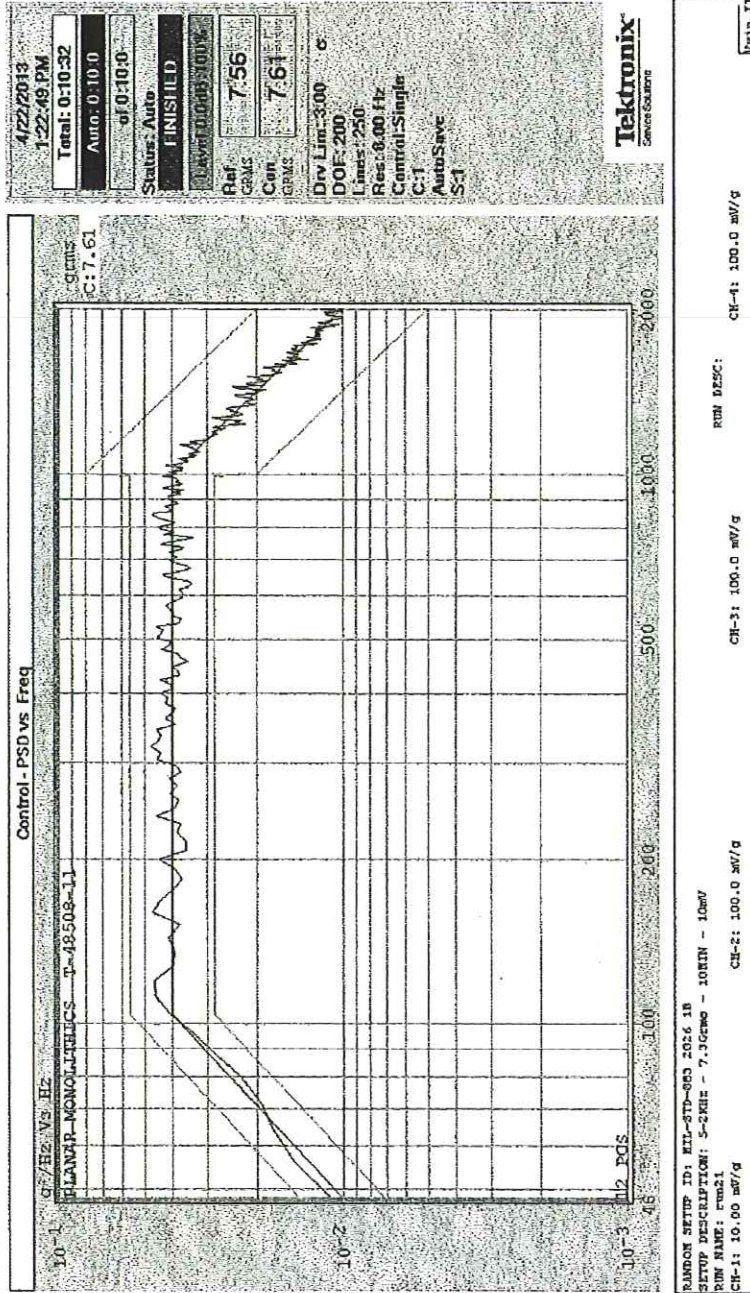




# ENVIRONMENTAL TEST REPORT

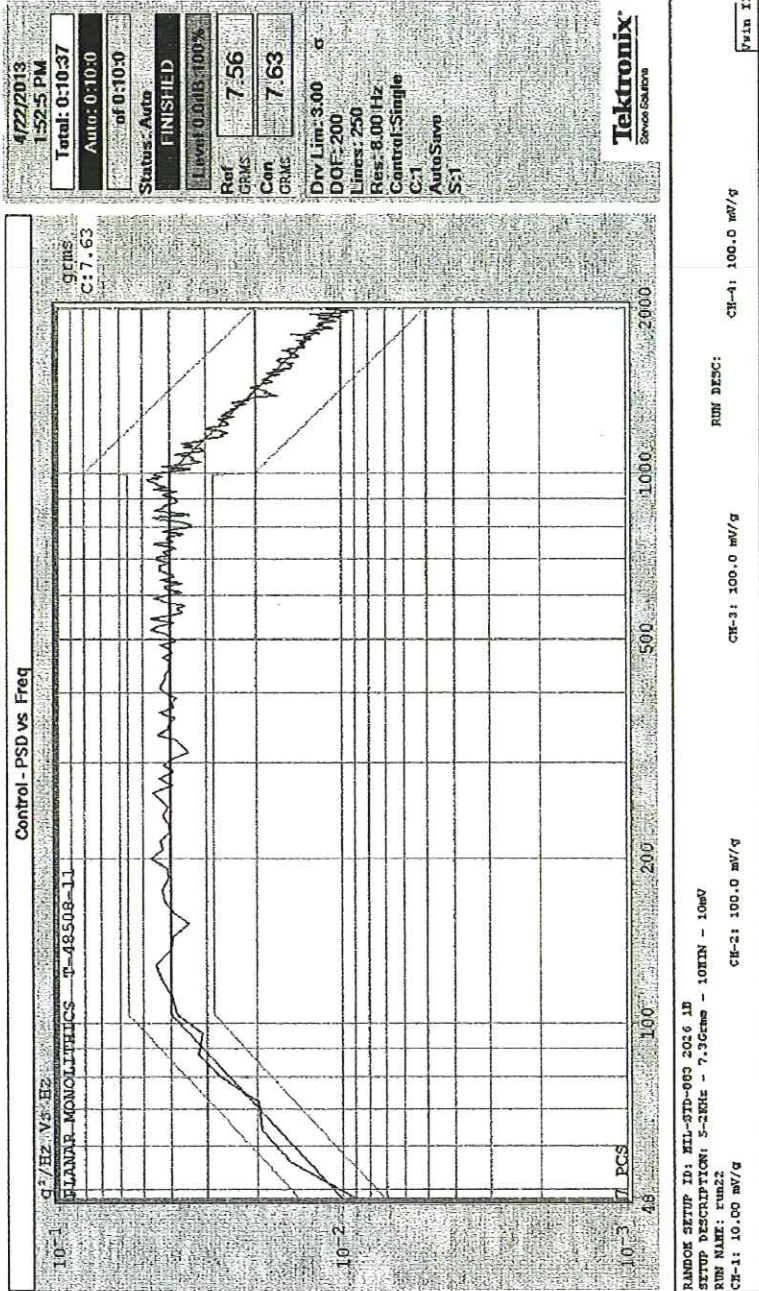
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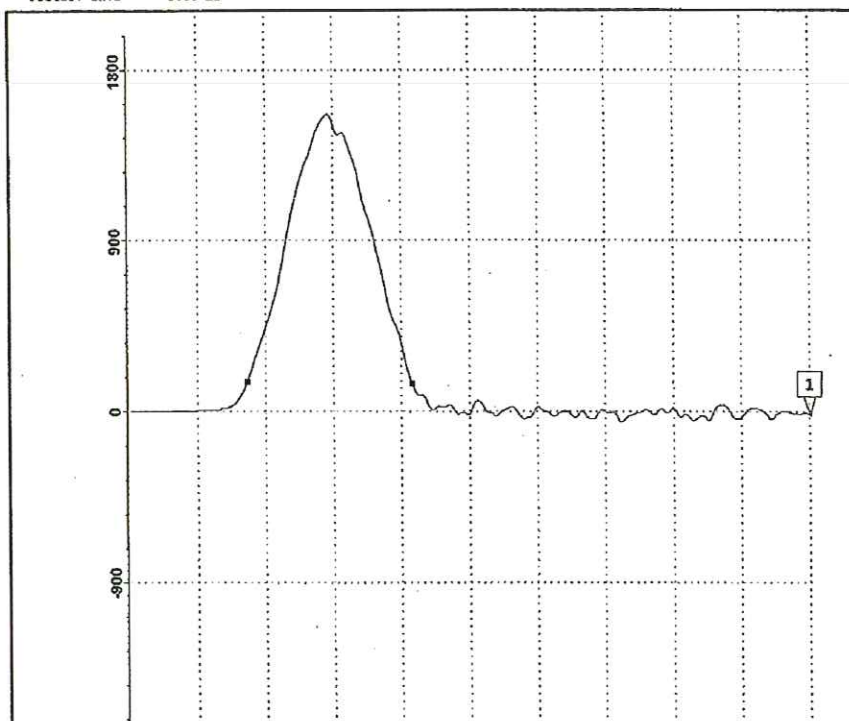
## Mechanical Shock Calibration Plots

### Waveform Test Report

Produced on GHI CAT SYSTEM

Time : Apr 23 2013 8:58 Test Engineer: DL  
Test Item : DEVICE Test Type : Mechanical Shock  
Test Spec : MIL-STD-883H Test Machine : Lab Corp.

Filter: Ch.1 = 5000 Hz



Ch.	Time	Curr Amp	Peak Amp	1st Int	Time/Div	Hexp	Vexp
1	496. uS	147.52 g's	1564.51 g's	177.05 In/s	205 uS	1	2

Remarks:

Mil-Std 883H  
Method 2002 Test Cond. A 1500g's, 0.5 ms, 1/2 sine.  
3 shocks, Y1 AXIS ONLY

FIXTURE CAL #2

GHI SYSTEMS, INC. CAT SYSTEM



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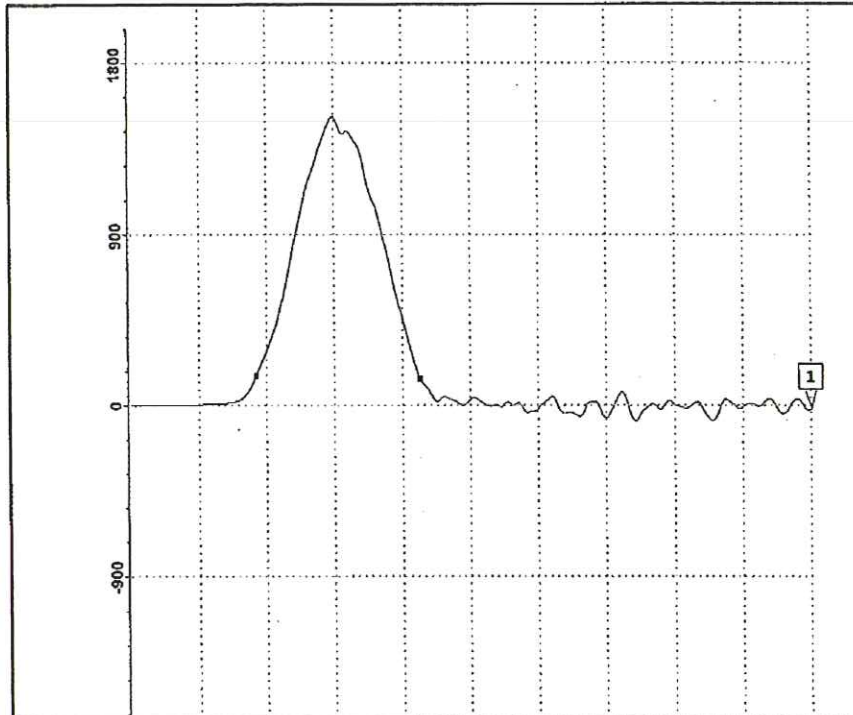
Job No : T-48508-11

## Waveform Test Report

Produced on GHI CAT SYSTEM

Time : Apr 23 2013 8:56 Test Engineer: DL  
Test Item : DEVICE Test Type : Mechanical Shock  
Test Spec : MIL-STD-883H Test Machine : Lab Corp.

Filter: Ch.1 = 5010 Hz



Ch.	Time	Curr Amp	Peak Amp	1st Int	Time/Div	Exp	Verp
1	492. uS	140.93 g's	1516.42 g's	170.43 In/s	205 uS	1	2

Remarks:

Mil-Std 883H  
Method 2002 Test Cond. A 1500g's, 0.5 ms, 1/2 sine.  
3 shocks, Y1 AXIS ONLY

FIXTURE CAL #1

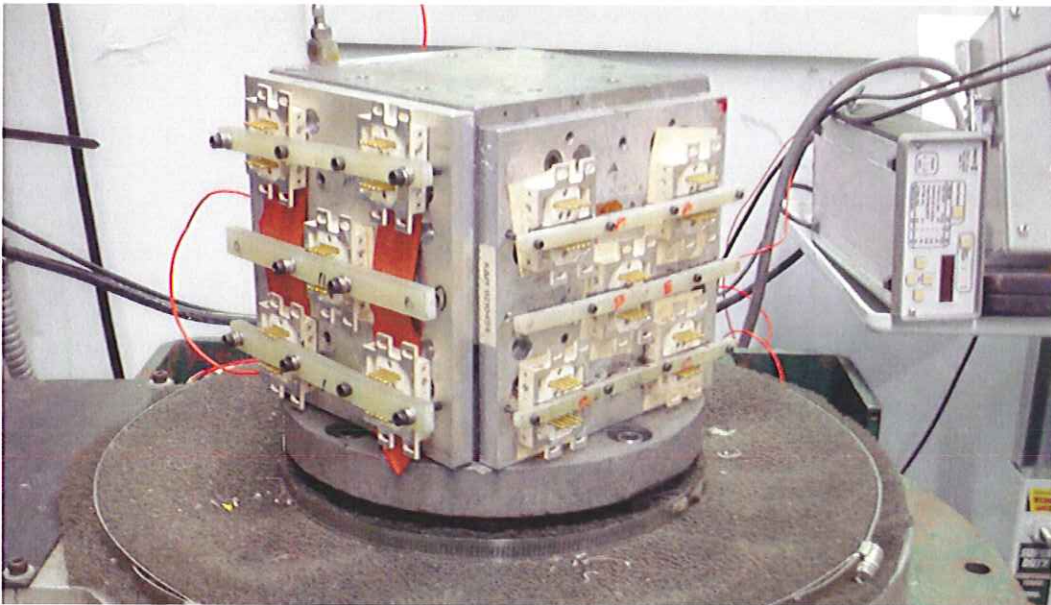
GHI SYSTEMS, INC. CAT SYSTEM

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## Test Photographs



Typical Random Vibration Set-up

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Typical Mechanical Shock Set-up