



PLANAR MONOLITHICS INDUSTRIES, INC

## ENVIRONMENTAL TEST REPORT

FOR

**Hi-Intelligence Electronics, Inc.**

**PMI Model No:** ERDLVA-8G18G-65-70MV

**Environmental parameters per:** Environmental Specification (E.S.S.)  
Page 3 of 5 Section 1.0 through 5.0

**Serial Numbers:**

4pc PL23800 - PL23803

<p><b>COMPANY CONFIDENTIAL:</b> The information contained herein is the property of PMI. Its use or reproductions is prohibited except as provided for by prior written authorization from PMI.</p>	<h2>ENVIRONMENTAL TEST REPORT</h2>
Sales Order No. SO17-317-P-E	<h3>DETECTOR LOG AMPLIFIER</h3> <p>PMI P/N: 27333290</p>
DRAWN: R. Combs 11/15/18	
CHECKED: J. Peacher 10/29/2018	
PROJ ENGR: JOHN M 10/19/2018	
MFG: A. Mott 11/15/2018	

7311-F Grove Road Frederick, MD 21704 United States  
Ph: (301) 662-5019 Fax: (301) 662-1731

# STABILIZATION BAKE

STABILIZATION BAKE PARAMETERS:				
<b>Model Number:</b> ERDLVA-8G18G-65-70MV				
<b>Specification :</b> STABILIZATION BAKE, 24 HOURS @ +85°C				
Serial Numbers	Start Date	End Date	Technician	QA
PL23800 - PL23803	6/22/2019 11:24 Hours	6/23/2019 11:25 Hours	RLC	PMI QA1

Q.A. 

PMI  
QA1

DATE: 8/9/19

# THERMAL SHOCK

## THERMAL SHOCK PARAMETERS:

**Model Number:** ERDLVA-8G18G-65-70MV

**Specification:** Thermal Shock, -10°C to +85°C, 60 minute dwell,  
15°C /min. Transition, 10 Cycles.

Serial Numbers	Start Date	End Date	Technician	QA
PL23800 - PL23803 See attached data	6/24/2019 18:24 Hours	6/25/2019 14:46 Hours	RLC	PMI QA1

Q.A.



PMI  
QA1

DATE:

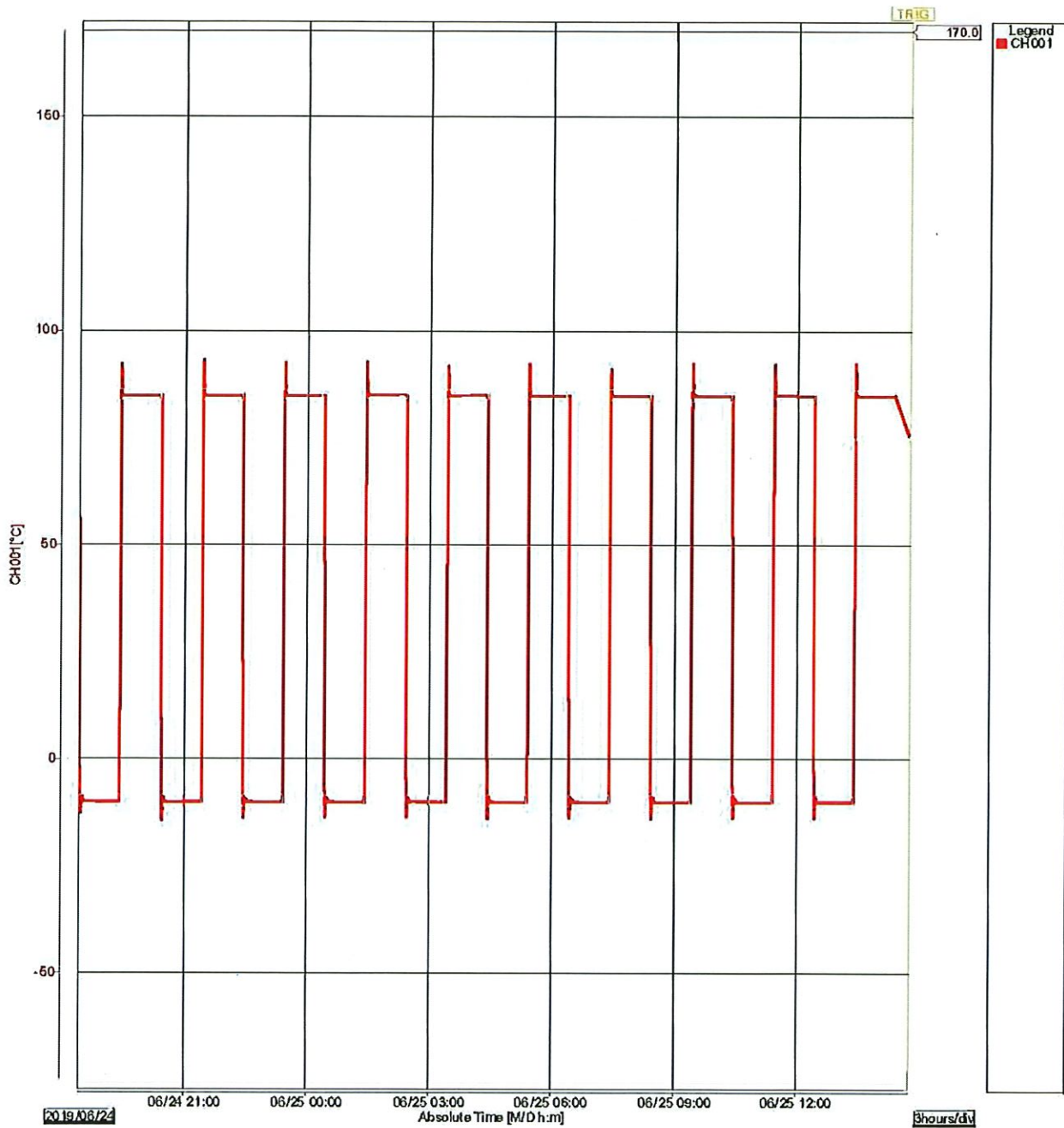
8/9/19

File Name : X3118263.DDS  
File Message :  
Device Type : FX100  
Serial No. : S5F909485  
Time Correct. : None  
Starting Cond. : Manual  
Dividing Cond. : Manual  
Meas Ch. : 3  
Math Ch. : 0

Data Count : 7329  
Sampling Int. : 10.000 sec  
Start Time : 2019/06/24 18:24:40.000  
Stop Time : 2019/06/26 14:46:00.000  
Trigger Time : 2019/06/26 14:46:00.000  
Trigger No. : 7328  
Damage Check : Not Damaged

1/1

Print Groups : GROUP 1  
Print Range : 2019/06/24 18:24:40.000 - 2019/06/26 14:46:00.000  
Comment :



# 48 HOUR BURN-IN

## BURN-IN PARAMETERS:

**Model Number:** ERDLVA-8G18G-65-70MV  
**Specification:** BURN-IN: +85°C, 48 Hours, DC power on.

Serial Numbers	Start Date	End Date	Technician	QA
PL23800 - PL23803	6/25/2019 16:15 Hours	6/27/2019 16:15 Hours	RLC	PMI QA1

Q.A. \_\_\_\_\_



PMI  
QA1

DATE: \_\_\_\_\_

8/9/19

# RANDOM VIBRATION

## RANDOM VIBRATION PARAMETERS:

**Model Number:** ERDLVA-8G18G-65-70MV

**Specification:** Random Vibration, 16.8RMS all three axis for 15 minutes.

Serial Numbers	Start Date	End Date	Technician	QA
PL23800 - PL23803 See attached data	7/5/2019	7/5/2019	Thomas @ Silicon Cert	PMI QA 1

Q.A.



PMI  
QA 1

DATE:

8/9/19



# CERTIFICATE OF TEST



4201 Pottsville Pike | Reading, PA 19605  
610.939.9500 | www.orslabs.com

CERTIFICATE NUMBER: *19-239942-001*

DATE: *July 5, 2019*

CUSTOMER: *Planar Monolithics Industries  
7311-F Grove Road  
Frederick, MD 21704*

CUSTOMER ORDER: *70190189*  
PART ID: *RF Modules*

TEST PERFORMED: *Random Vibration*  
REFERENCE *Customer Directed*  
CONDITIONS *20-2000 Hz; 16.8 Grms  
PSD = .3; 15 minutes per each of 3 axis*

TEST DATES:  
START: *07/05/19*  
COMPLETION : *07/05/19*

EQUIPMENT USED: *Ling Dynamics Systems LTD Air Cooled Vibrator Model No. 721; (SC0709)*  
& CALIBRATION: *LDS Ductron Comet Controller (SC1041); Calibration due 11/07/19  
Power Supply, Model No. FPS-1 0L, Serial No. 74761/3 (SC0715)  
Power Amplifier, Model No. PA-1000L, Serial No. 78017/3 (SC0716)  
PCB Model 353B03, Accelerometer (SC1142); Cal. Due 08/15/19  
PCB Model 353B03, Accelerometer (SC1151); Cal. Due 08/09/19*

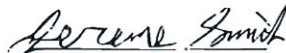
QUANTITY: *Four (4)*

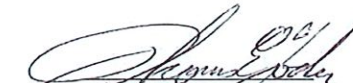
SAMPLE NUMBERS: *PL23800, PL23801, PL23802, PL23803*

RESULTS: *No obvious damage as a result of this test*

Note: *Calibration and run plot are on file at SCL*

This document certifies that the device listed has completed the test as shown.

  
Jereme Smith  
Lab Tech I

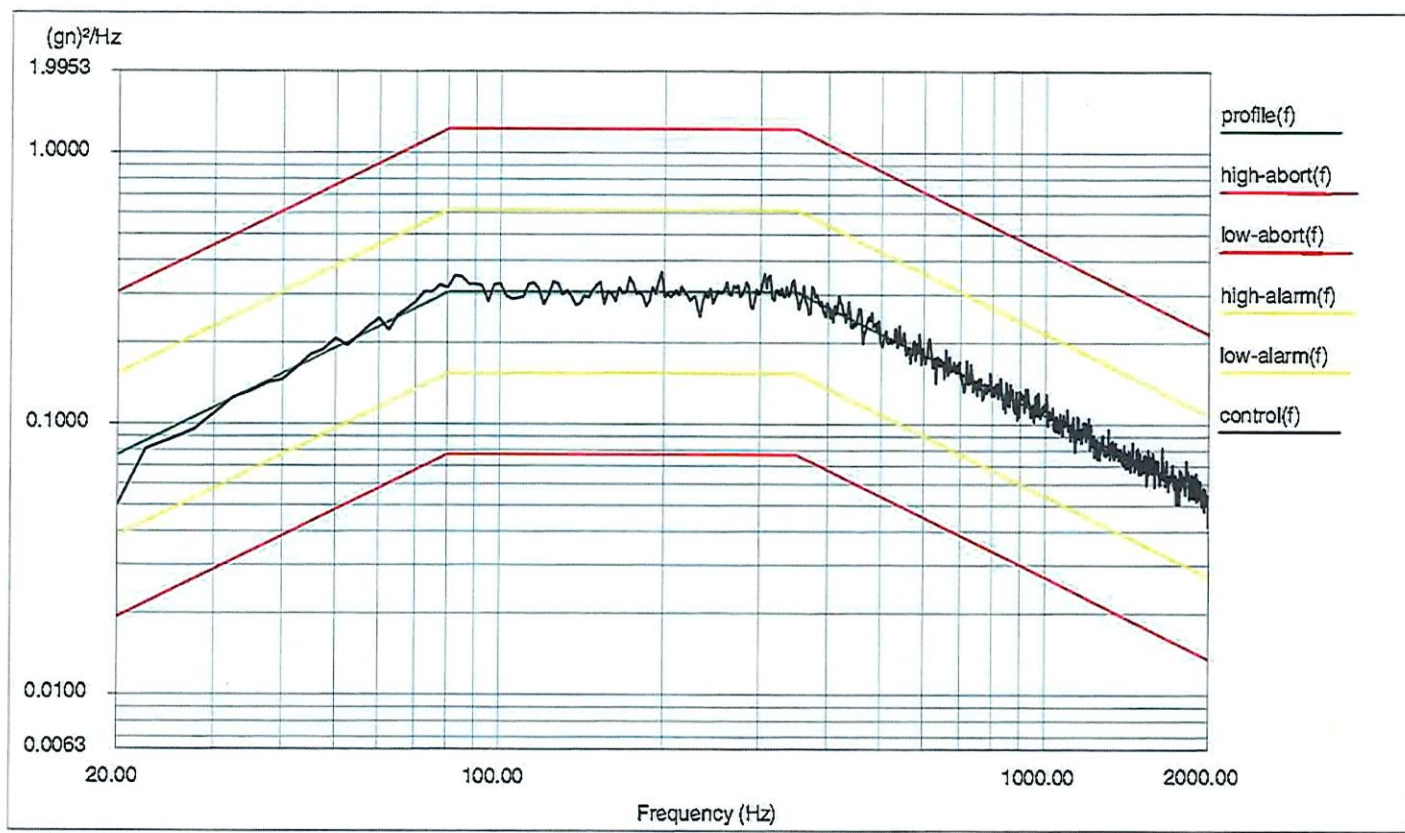
  
Thomas Yoder  
Scientist I

This Certificate of Test pertains only to the items listed above. This test certificate shall not be reproduced except in full without the written approval of Oneida Research Services, Inc.

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IP 239893

DUT: RF MODULES  
Serial Number: CAL RUN  
Project File Name: OEM248 Random 16.8Grms Customer Directed.prj  
Profile Name: Y AXIS Test Type: Random Run Folder: \RunFolder Jul 05, 2019 11-25-22



Level: 0 dB  
Control RMS: 16.855413 gn Full Level Elapsed Time: 00:15:00 Lines: 800 Frame Time: 0.400000 Seconds  
Demand RMS: 16.802904 gn Remaining Time: 00:00:00 DOF: 154 dF: 2.500000 Hz

Data saved at 12:17:29 PM, Tuesday, July 05, 2019 Report created at 12:17:29 PM, Tuesday, July 5, 2019

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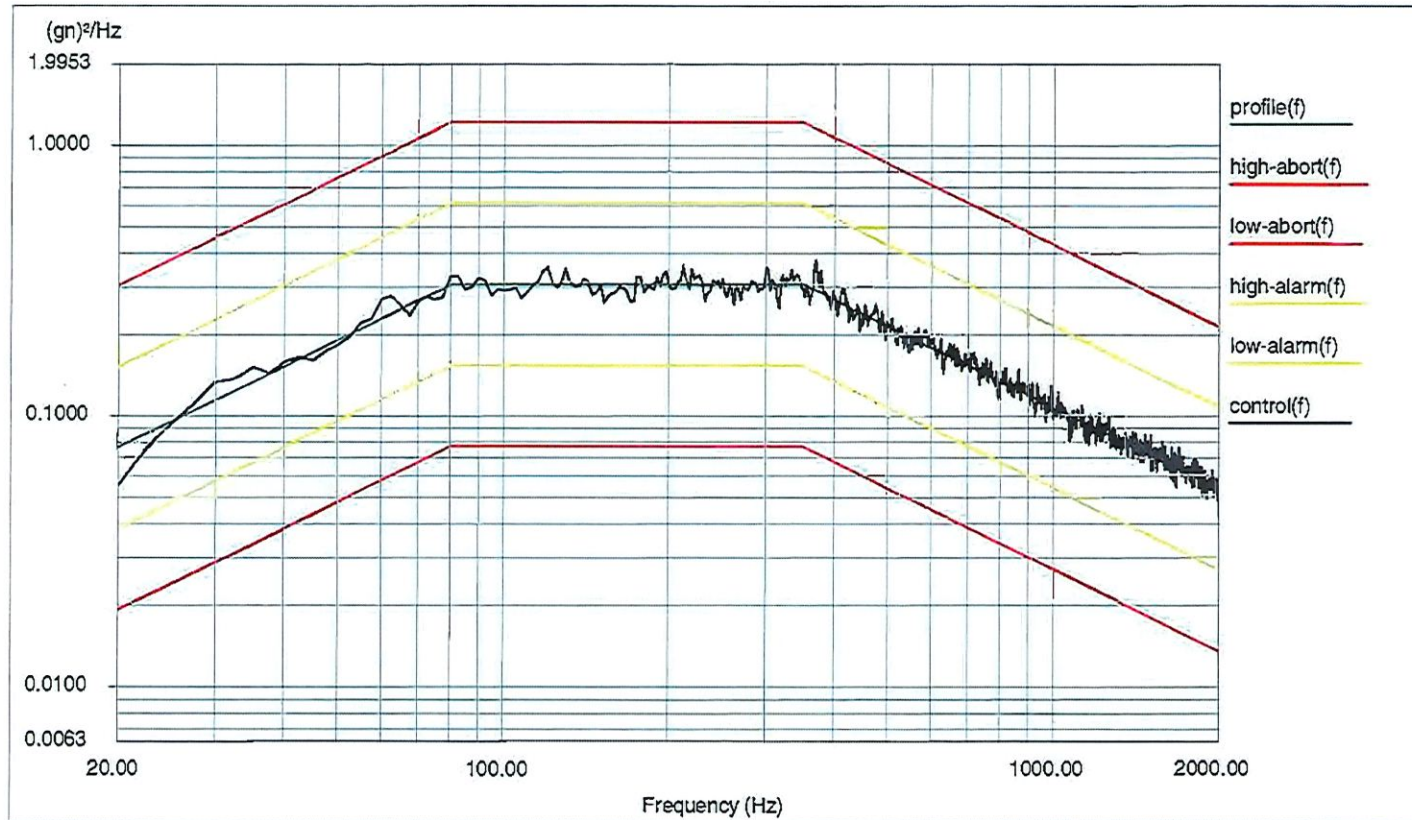
DUT: RF MODULES

Serial Number: PL23800, PL23801, PL23802, PL23803

Project File Name: OEM248 Random 16.8Grms Customer Directed.prj

Profile Name: P1 IN Y P2 IN X P3 IN X P4 IN X Test Type: Random

Run Folder: \RunFolder Jul 05, 2019 12-19-09



Level: 0 dB

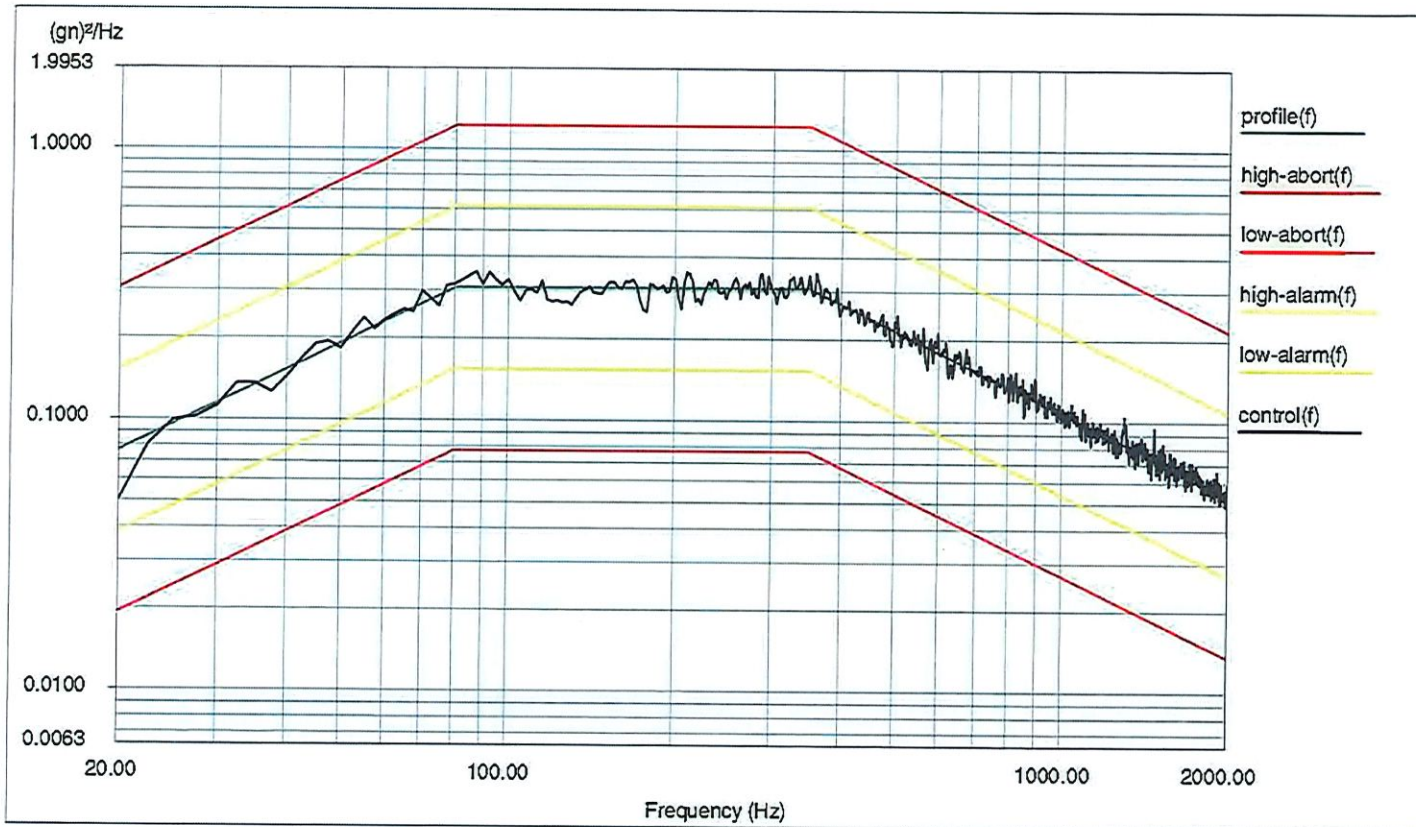
Control RMS: 16.989317 gn Full Level Elapsed Time: 00:15:00 Lines: 800 Frame Time: 0.400000 Seconds

Demand RMS: 16.802904 gn Remaining Time: 00:00:00 DOF: 154 dF: 2.500000 Hz

Data saved at 12:41:04 PM, Tuesday, July 05, 2019 Report created at 12:41 :05 PM, Tuesday, July 5, 2019

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DUT: RF MODULES  
 Serial Number: PL23800, PL23801, PL23802, PL23803  
 Project File Name: OEM248 Random 16.8Grms Customer Directed.prj  
 Profile Name: P1 IN Z P2 IN Y P3 IN Z P4 IN Z Test Type: Random Run Folder: \RunFolder Jul 05, 2019 12-42-04



Level: 0 dB  
 Control RMS: 16.986385 gn Full Level Elapsed Time: 00:15:00 Lines: 800 Frame Time: 0.400000 Seconds  
 Demand RMS: 16.802904 gn Remaining Time: 00:00:00 DOF: 154 dF: 2.500000 Hz

Data saved at 01:04:25 PM, Tuesday, July 05, 2019

Report created at 01:04:25 PM, Tuesday, July 5, 2019

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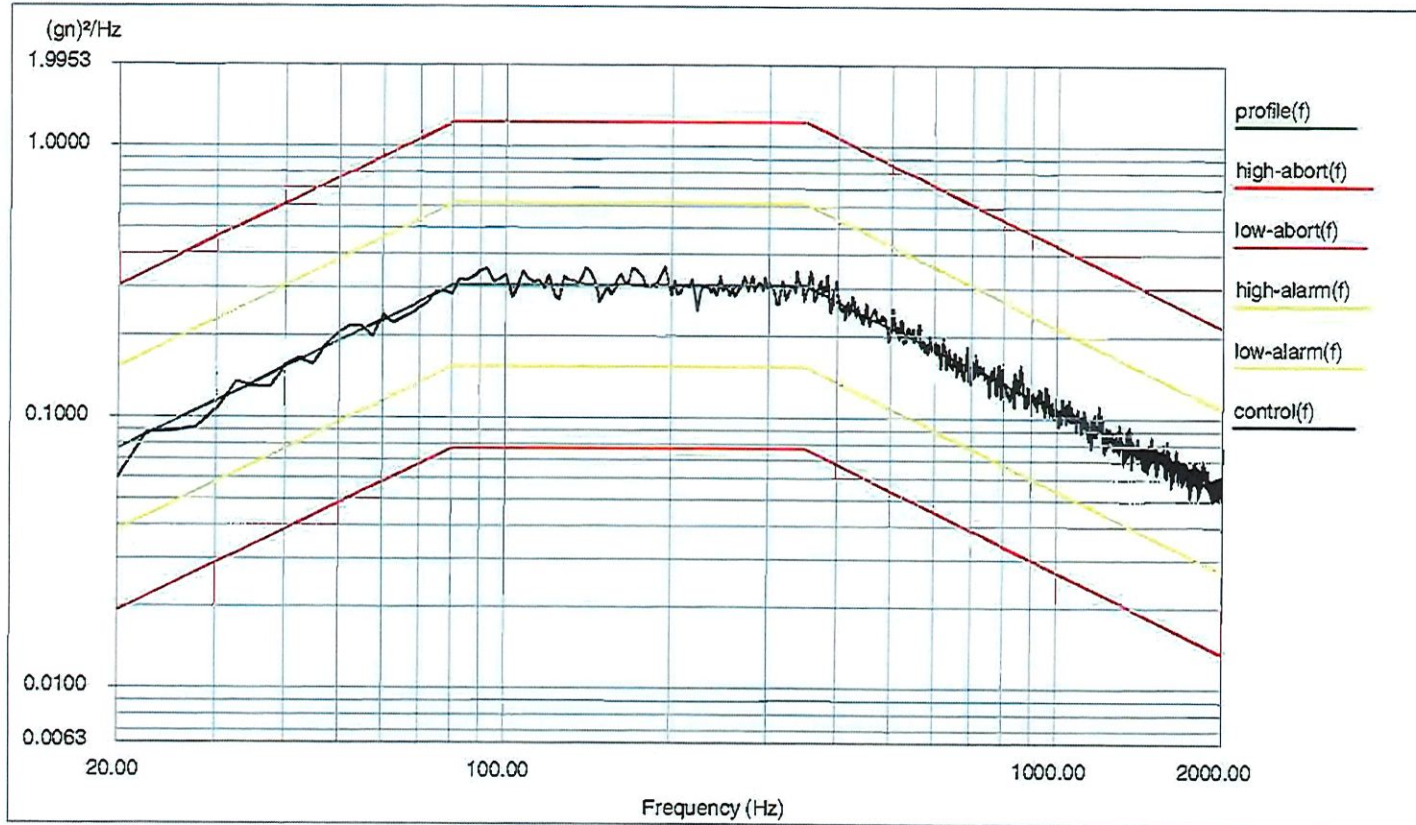
DUT: RF MODULES

Serial Number: PL23800, PL23801, PL23802, PL23803

Project File Name: OEM248 Random 16.8Grms Customer Directed.prj

Profile Name: P1 IN X P2 IN Z P3 IN Y Test Type: Random

Run Folder: .\RunFolder Jul 05, 2019 13-04-41



Level: 0 dB

Control RMS: 16.956856 gn Full Level Elapsed Time: 00:15:00 Lines: 800 Frame Time: 0.400000 Seconds

Demand RMS: 16.802904 gn Remaining Time: 00:00:00 DOF: 154 dF: 2.500000 Hz

Data saved at 01:24:20 PM, Tuesday, July 05, 2019 Report created at 01:24:20 PM, Tuesday, July 5, 2019

DUT: RF MODULES

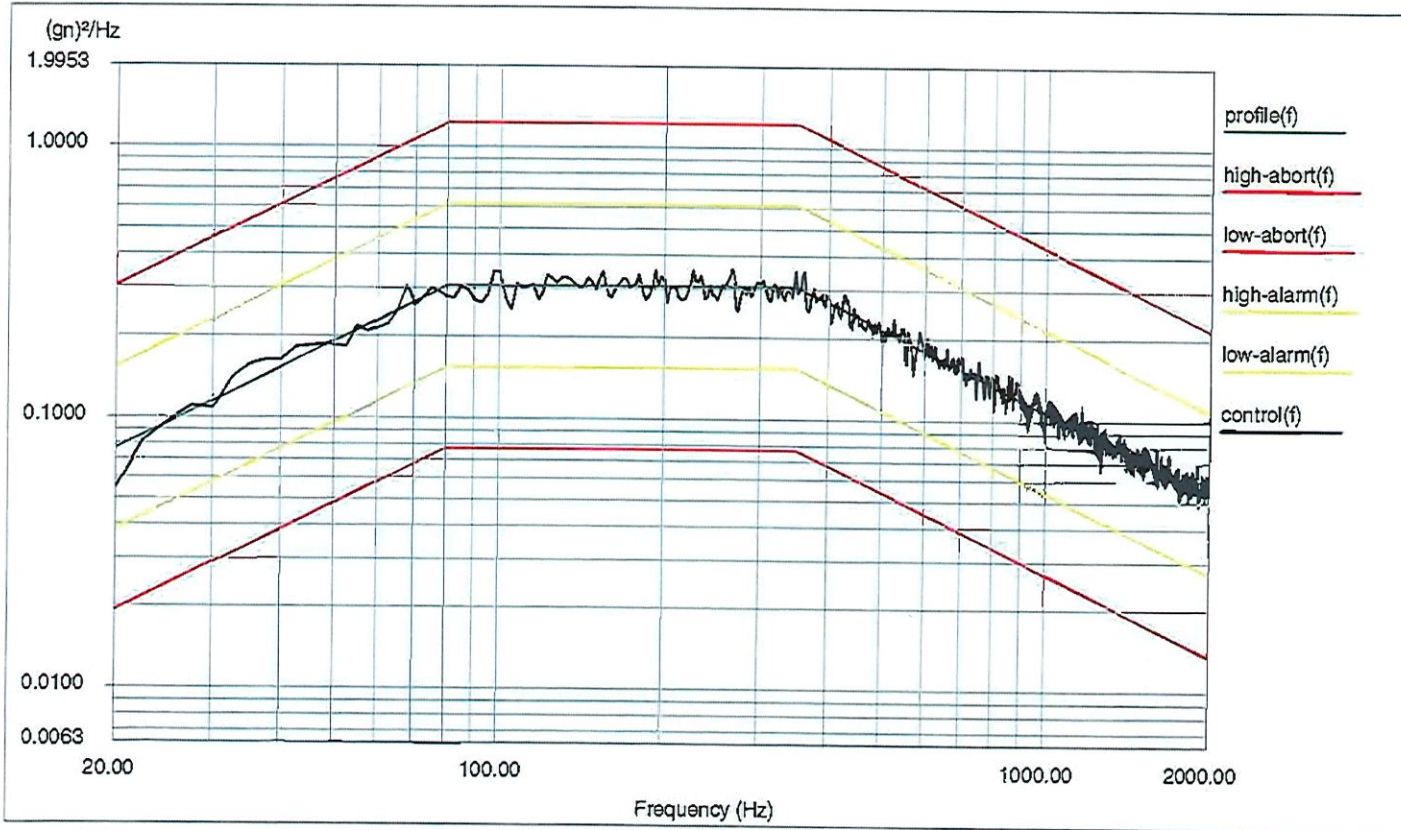
Serial Number: PL23800, PL23801, PL23802, PL23803

Project File Name: OEM248 Random 16.8Grms Customer Directed.prj

Profile Name: P4 IN Y

Test Type: Random

Run Folder: .\RunFolder Jul 05, 2019 13-24-27



Level: 0 dB

Control RMS: 16.856760 gn Full Level Elapsed Time: 00:15:00

Demand RMS: 16.802904 gn Remaining Time: 00:00:00

Lines: 800 Frame Time: 0.400000 Seconds

DOF: 154 dF: 2.500000 Hz

Data saved at 01:44:28 PM, Tuesday, July 05, 2019

Report created at 01:44:28 PM, Tuesday, July 5, 2019

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Ph: (301) 662-5019 Fax: (301) 662-1731