

KING DESIGN INDUSTRIAL CO., LTD.

4F, NO. 3, Lane 270, Pei Shen Road Sec. 3,
Shen Keng Dist., New Taipei City, 222, Taiwan, R.O.C
TEL: 886-2-2662-5100 FAX: 886-2-2662-3094

VIBRATION TEST LABORATORY

<http://www.kdi.tw>
<http://www.vibration.com.tw>
E-mail:service@kdi.tw

TESTING / INSPECTION REPORT

REPORT NO : ST-140416-2

COMPANY : AAEON Technology Inc.
ADDRESS : 5F, No.135, Lane 235, Pao Chiao Rd.
Hsin-Tien City, Taipei, Taiwan, R. O. C.
TEL : 886-2-8919-1234
FAX : 886-2-8919-1049
SPECIMEN : FWS-7350 (With HDD)
DATE OF RECEIVED : 2014/04/16
DATE OF TESTED : 2014/04/16

TEST / INSPECTION ITEMS : Shock Test

REMARKS :

- The laboratory is accredited by ISO/IEC 17025 General Requirements for the Competence of Calibration and Testing Laboratory.
- The results only apply to the device under test.
- This report is 19 pages, and no part of it may be abstracted or reproduced.

Test Engineer : 	
Approval Signatory :  2014.4.16	Laboratory Head : 



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TESTING EQUIPMENT :

- | | |
|-------------------------|---|
| 1.Vibration Tester | : KING DESIGN KD-9363EM-600F2K-50N120,
S/N : KDS11054986 |
| 2.Controller | : DACTRON Front-End Box, S/N : 4529465 |
| 3.Control Accelerometer | : Wilcoxon Research WR-777, S/N : 4207 |

TEST ENVIRONMENT :

- | | |
|-------------------|----------------------|
| Temperature | : 25°C (25±10°C) |
| Relative Humidity | : 65 %RH (50±25% RH) |

SPECIMEN :

- | | |
|----------|-----------------------|
| Model | : FWS-7350 (With HDD) |
| Quantity | : 1 unit |

TEST SPECIFICATION(1) :

As per applicant's requirement

- | | |
|------------------------|---------------------|
| Shock test (Operating) | |
| Wave Form | : Half Sine wave |
| Acceleration | : 10 g |
| Duration Time | : 11 mS |
| No. of Shock | : Each axis 3 times |
| Shock Direction | : ±X, ±Y, ±Z axis |

TEST SPECIFICATION(2) :

As per applicant's requirement

- | | |
|----------------------------|---------------------|
| Shock test (Non-Operating) | |
| Wave Form | : Half Sine wave |
| Acceleration | : 20 g |
| Duration Time | : 11 mS |
| No. of Shock | : Each axis 3 times |
| Shock Direction | : ±X, ±Y, ±Z axis |

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TESTING / INSPECTION REPORT

TEST RESULT :

Describe	PASS	FAIL	Non-Judgment
Function judgment ⁽¹⁾	√	—	—
Appearance check ⁽²⁾	√	—	—
(1)—Booting function was normal after the test. (2)—No visible damages were found.			

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TESTING / INSPECTION REPORT

Testing photos

Tester (Operating)



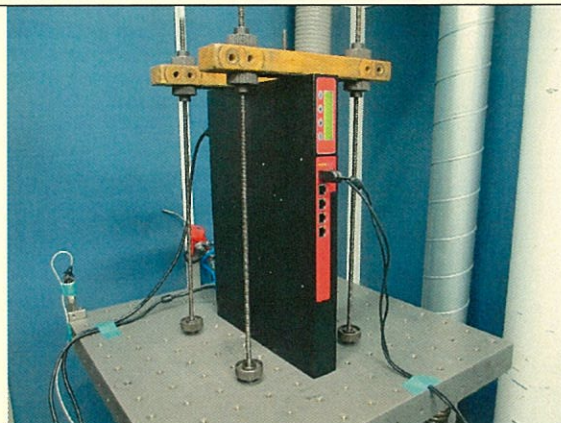
Tester (Non-Operating)



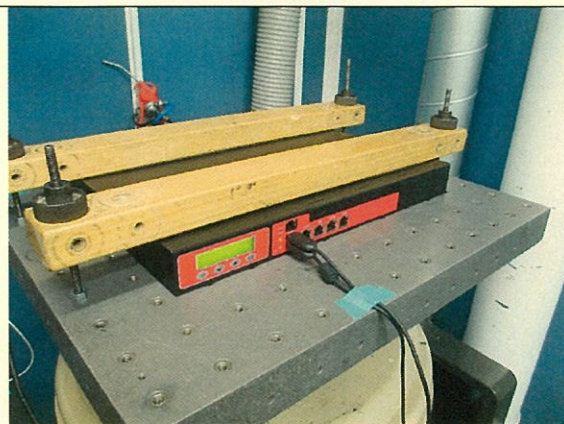
TESTING / INSPECTION REPORT

Testing photos (Operating)

+X axis

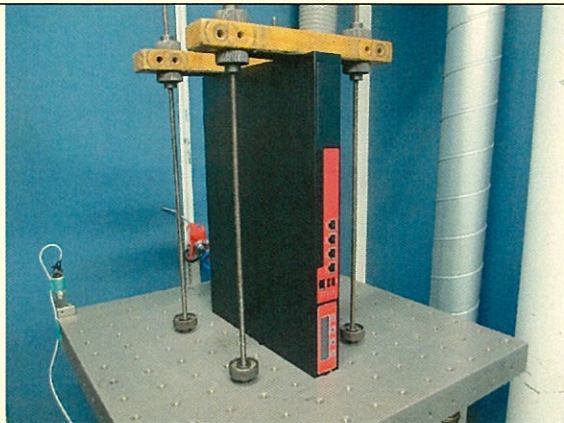
-X axis

+Y axis

-Y axis

+Z axis

-Z axis


TESTING / INSPECTION REPORT

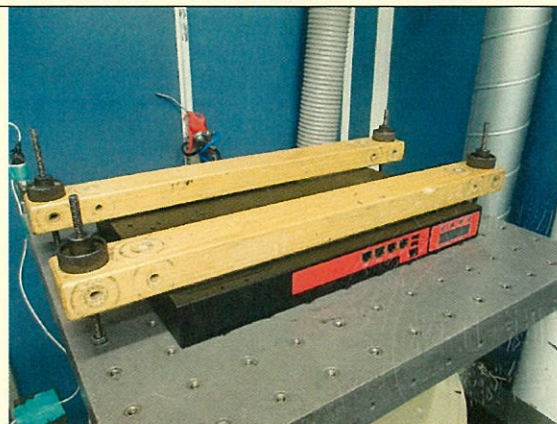
Testing photos (Non-Operating)

+X axis

-X axis

+Y axis

-Y axis

+Z axis

-Z axis


TESTING / INSPECTION REPORT

Testing photos

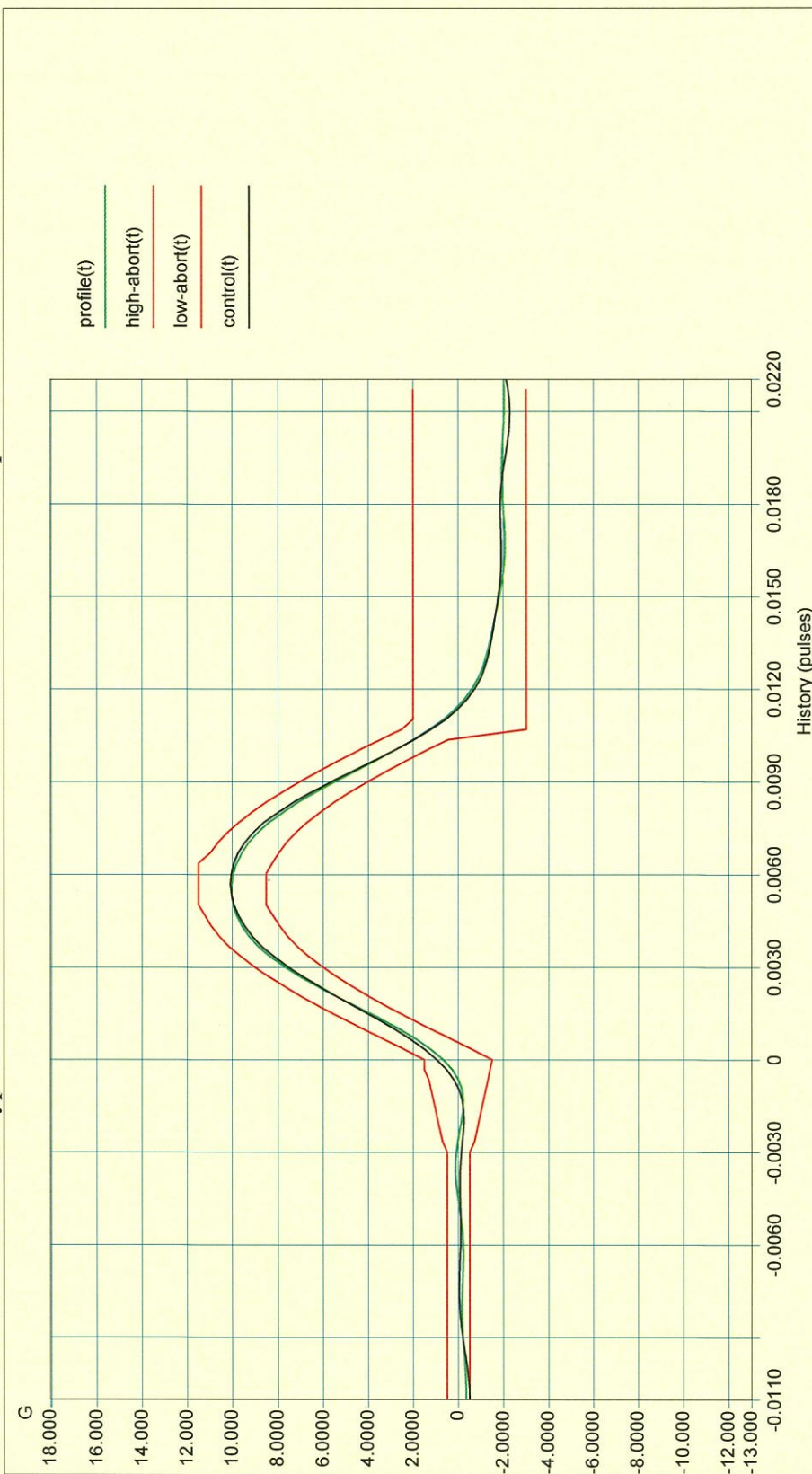
After test



+X axis Operating

Project File Name: 10g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: \Run Apr 16,2014 13-40-52

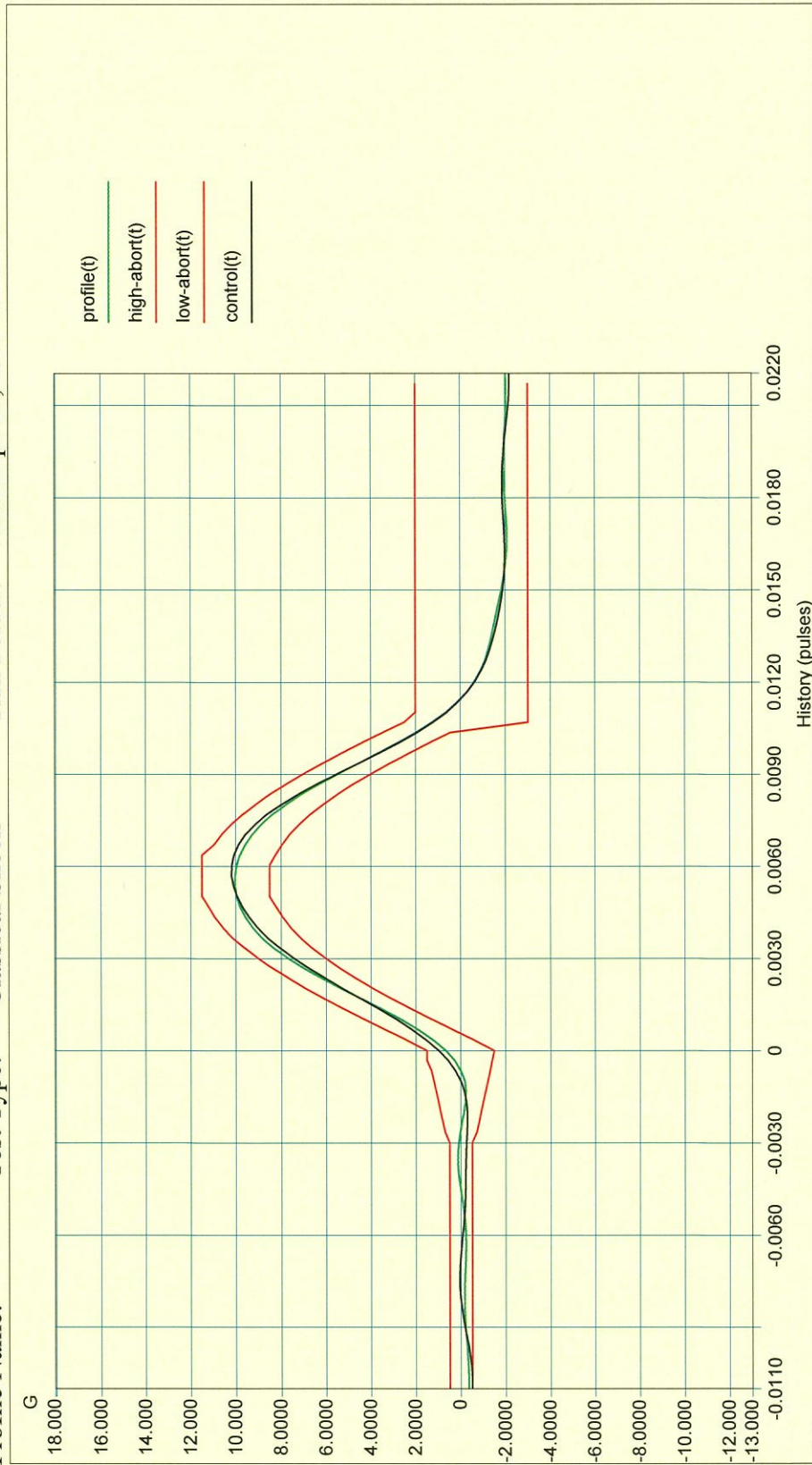


Level: 100 % Block Size: 2048 Elapsed Pulses: 11
 Frame Time: 0.682667 Seconds Control Peak: 10.043342 G Control RMS: 1.035401 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 10.000000 G Demand RMS: 1.022607 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 10.000000 G Pulse Width: 11.000001 ms

-X axis Operating

Project File Name: 10g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 13-43-27

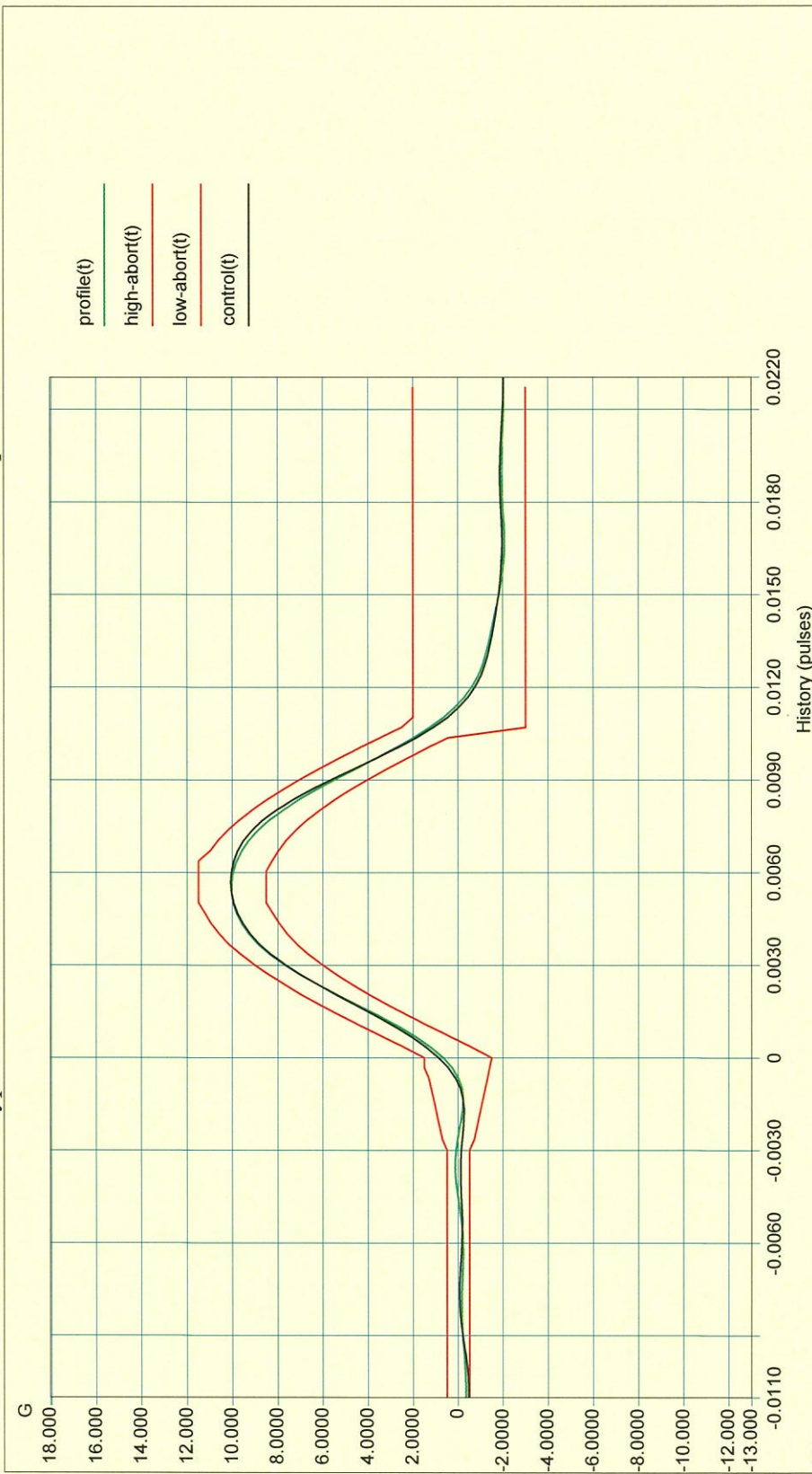


Level:	100 %	Block Size:	2048	Elapsed Pulses:	11
Frame Time:	0.682667 Seconds	Control Peak:	10.139886 G	Control RMS:	1.038368 G
dT:	0.000333 Seconds	Demand Peak:	10.000000 G	Demand RMS:	1.022607 G
Pulse Type:	Half Sine	Amplitude:	10.000000 G	Pulse Width:	11.000001 ms
				Full Level Elapsed Pulses:	3
				Remaining Pulses:	0

+Y axis Operating

Project File Name: 10g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: \Run Apr 16,2014 13-53-48

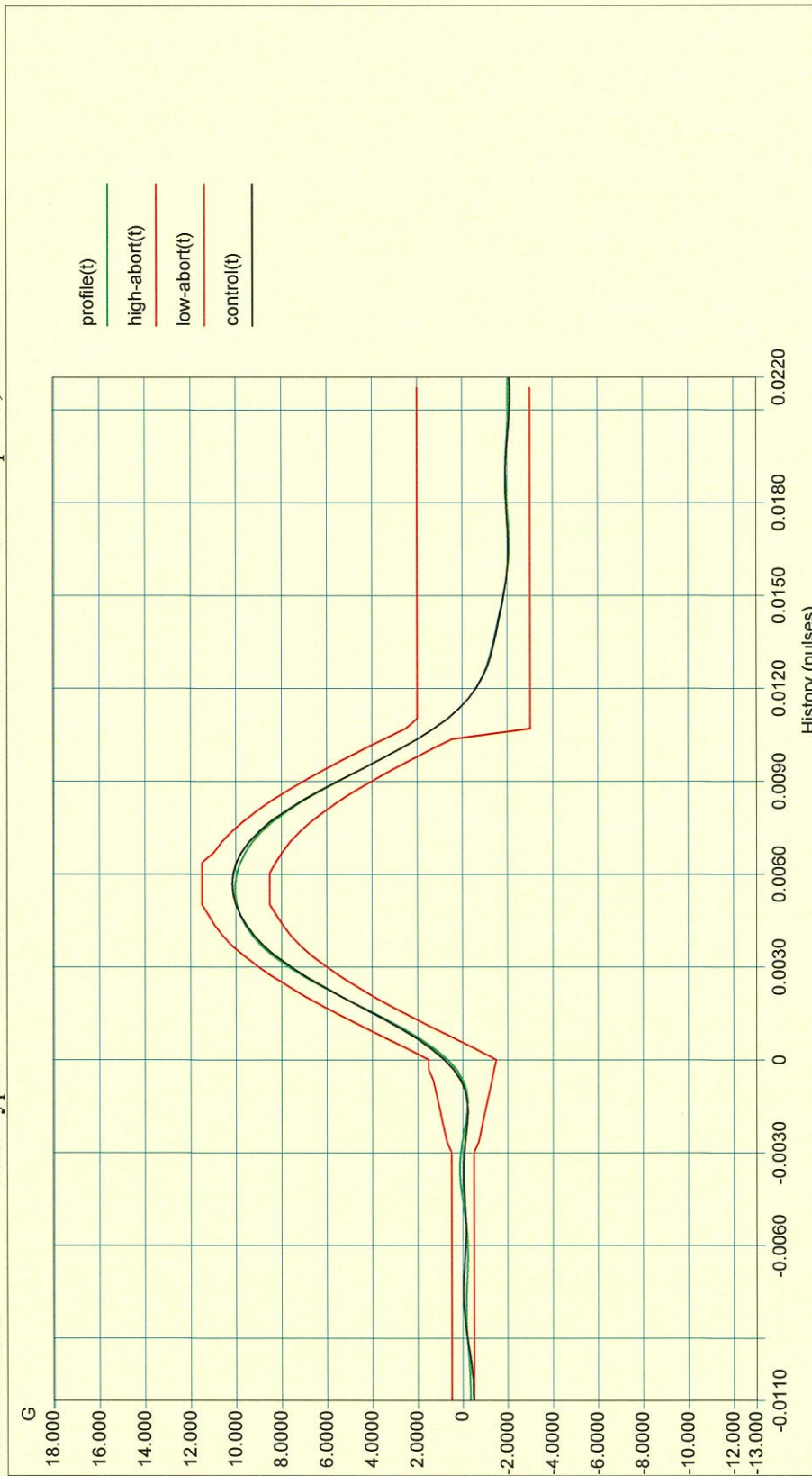


Level: 100 % Block Size: 2048 Elapsed Pulses: 11
 Frame Time: 0.682667 Seconds Control Peak: 10.026897 G Control RMS: 1.037769 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 10.000000 G Demand RMS: 1.022607 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 10.000000 G Pulse Width: 11.000001 ms

-Y axis Operating

Project File Name: 10g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 13-49-11

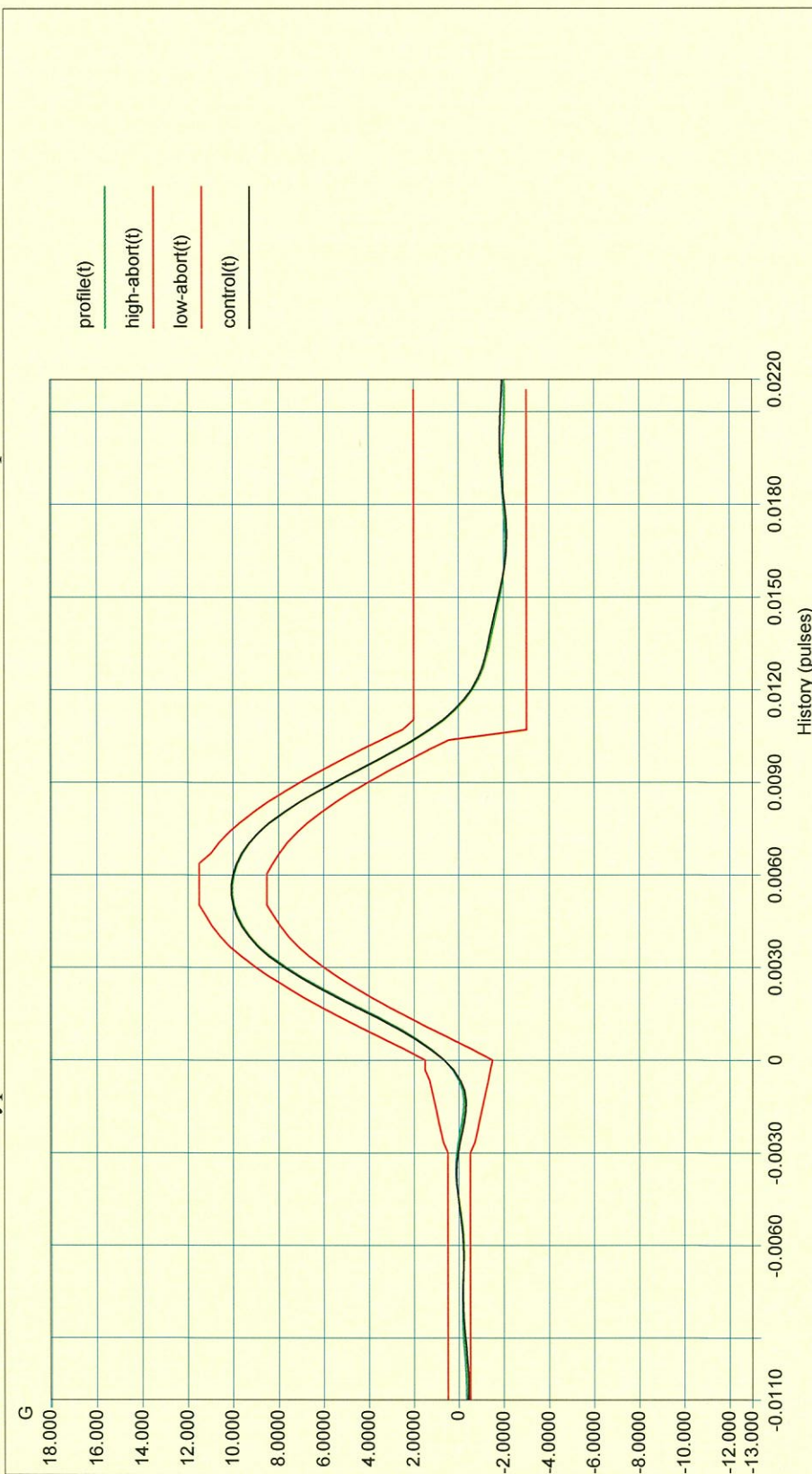


Level: 100 % Block Size: 2048 Elapsed Pulses: 11
 Frame Time: 0.682667 Seconds Control Peak: 10.119961 G Control RMS: 1.035651 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 10.000000 G Demand RMS: 1.022607 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 10.000000 G Pulse Width: 11.000001 ms

+Z axis Operating

Project File Name: 10g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: \Run Apr 16,2014 13-07-24

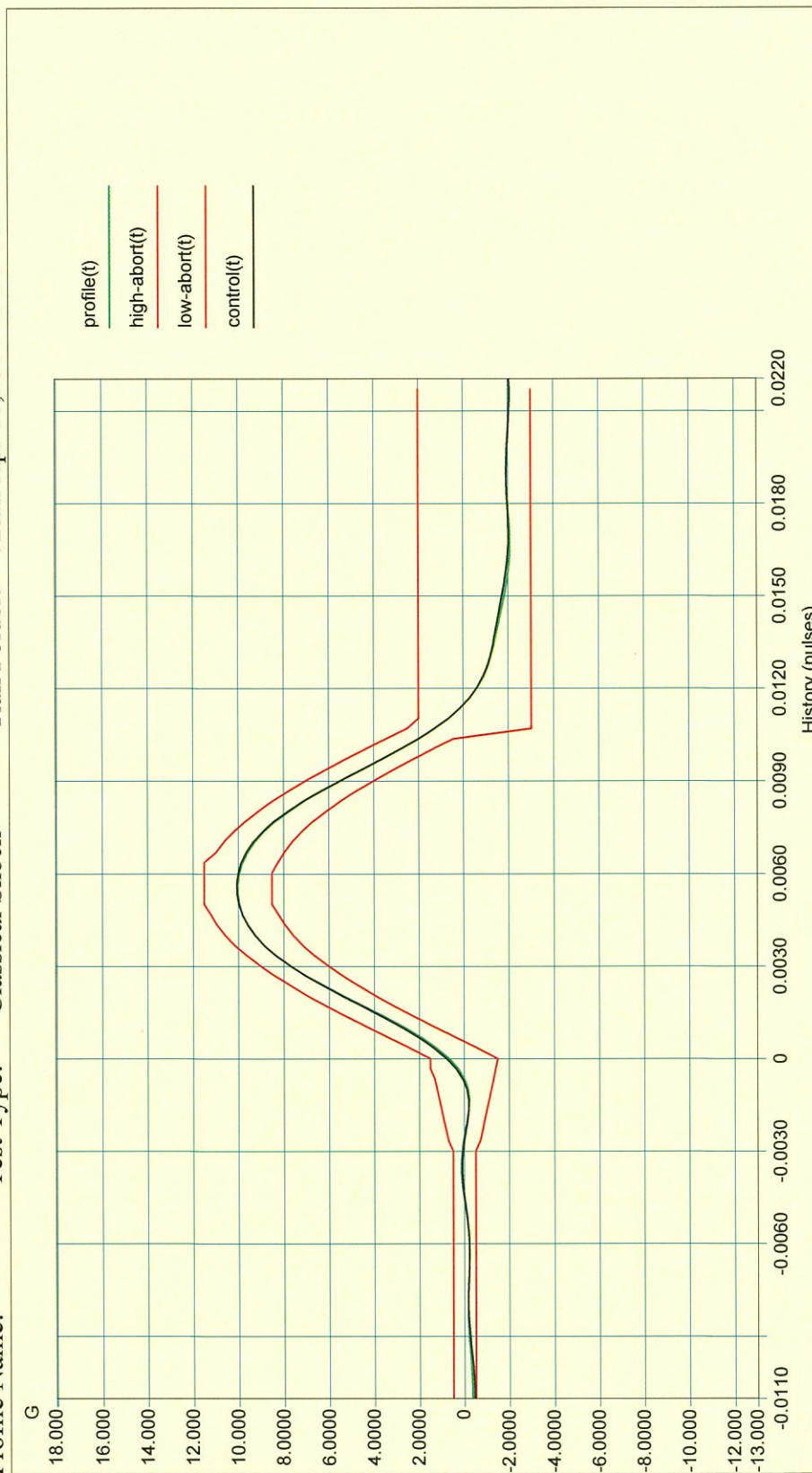


Level: 100 % Block Size: 2048 Elapsed Pulses: 11
 Frame Time: 0.682667 Seconds Control Peak: 10.031395 G Control RMS: 1.035865 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 10.000000 G Demand RMS: 1.022607 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 10.000000 G Pulse Width: 11.000001 ms

-Z axis Operating

Project File Name: 10g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 13-36-00

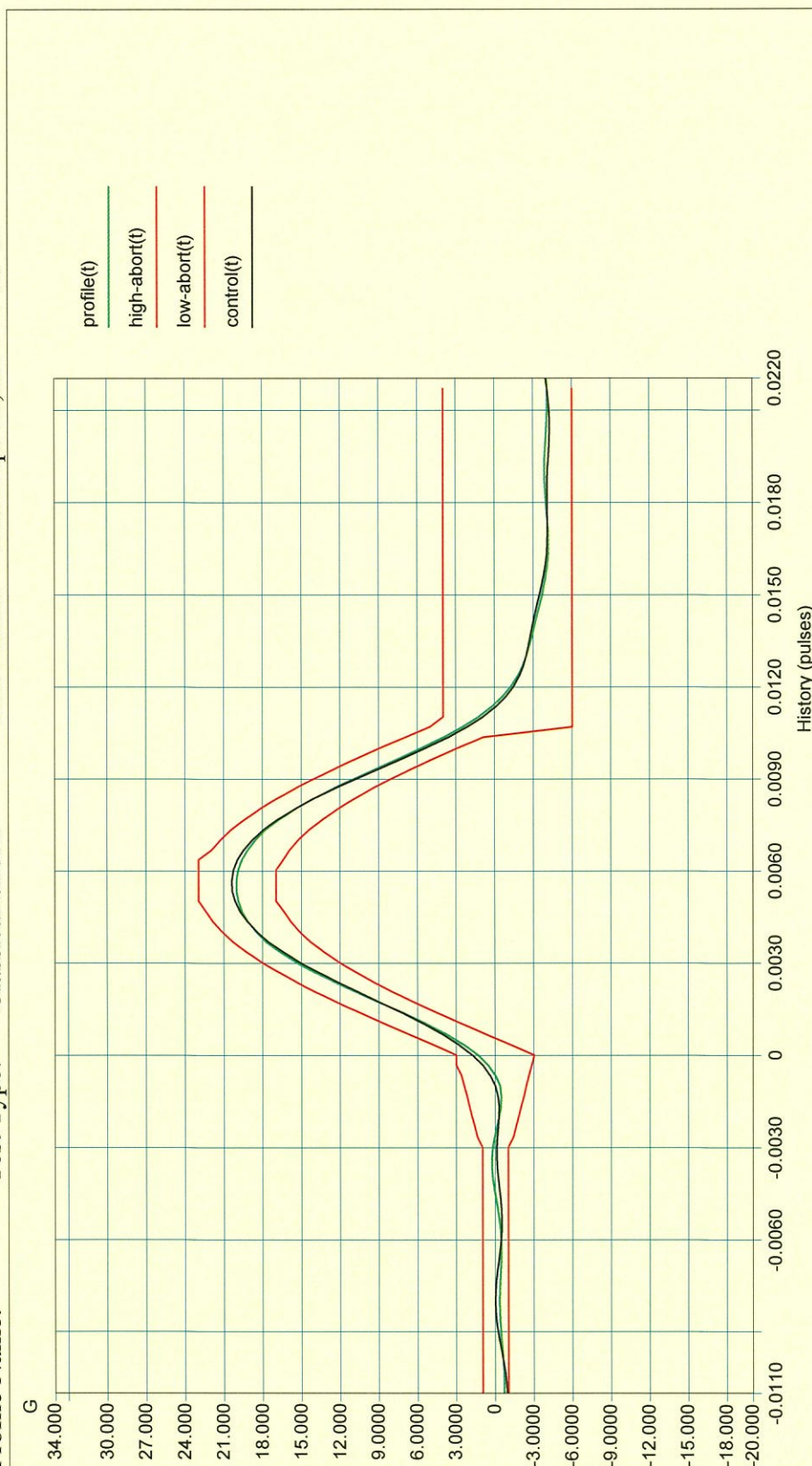


Level: 100 % Block Size: 2048 Elapsed Pulses: 11
 Frame Time: 0.682667 Seconds Control Peak: 10.029611 G Control RMS: 1.034045 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 10.000000 G Demand RMS: 1.022607 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 10.000000 G Pulse Width: 11.000001 ms

+X axis Non-Operating

Project File Name: 20g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 14-20-04

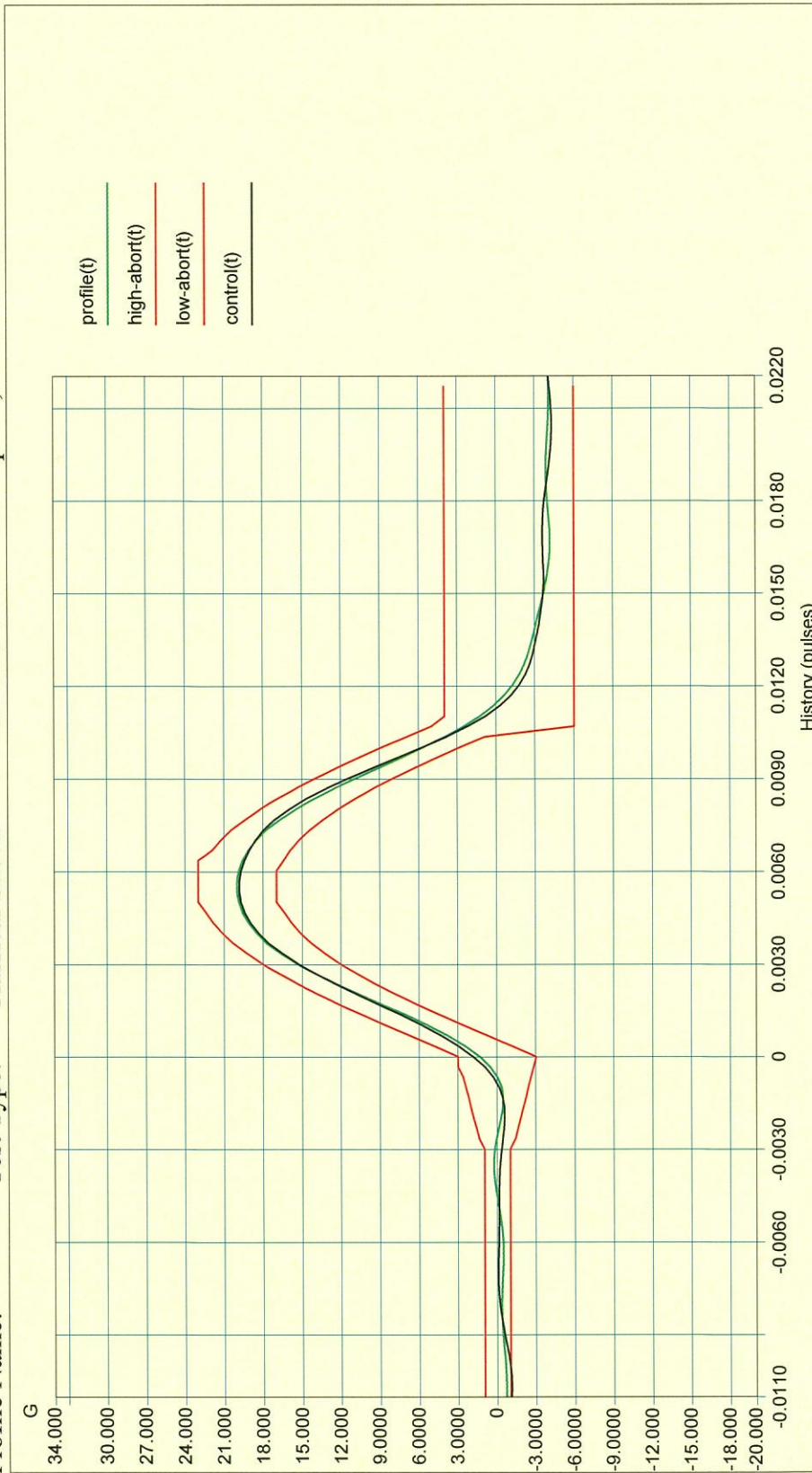


Level: 100 % Block Size: 2048 Elapsed Pulses: 12
 Frame Time: 0.682667 Seconds Control Peak: 20.352058 G Control RMS: 2.072428 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 20.000000 G Demand RMS: 2.045214 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 20.000000 G Pulse Width: 11.000001 ms

-X axis Non-Operating

Project File Name: 20g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 14-16-34

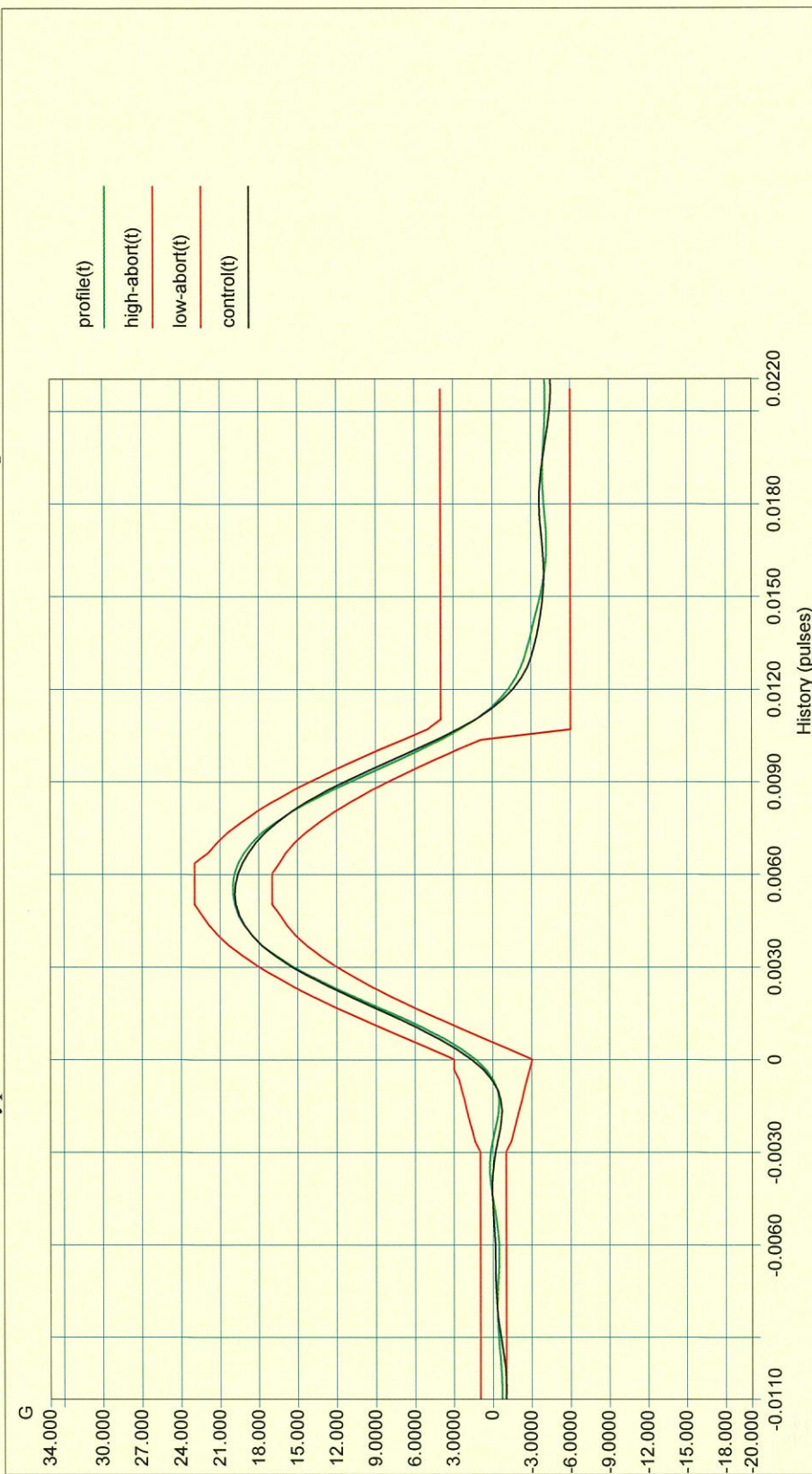


Level: 100 % Block Size: 2048 Elapsed Pulses: 12
 Frame Time: 0.682667 Seconds Control Peak: 19.826704 G Control RMS: 2.065915 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 20.000000 G Demand RMS: 2.045214 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 20.000000 G Pulse Width: 11.000001 ms

+Y axis Non-Operating

Project File Name: 20g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 14-24-41

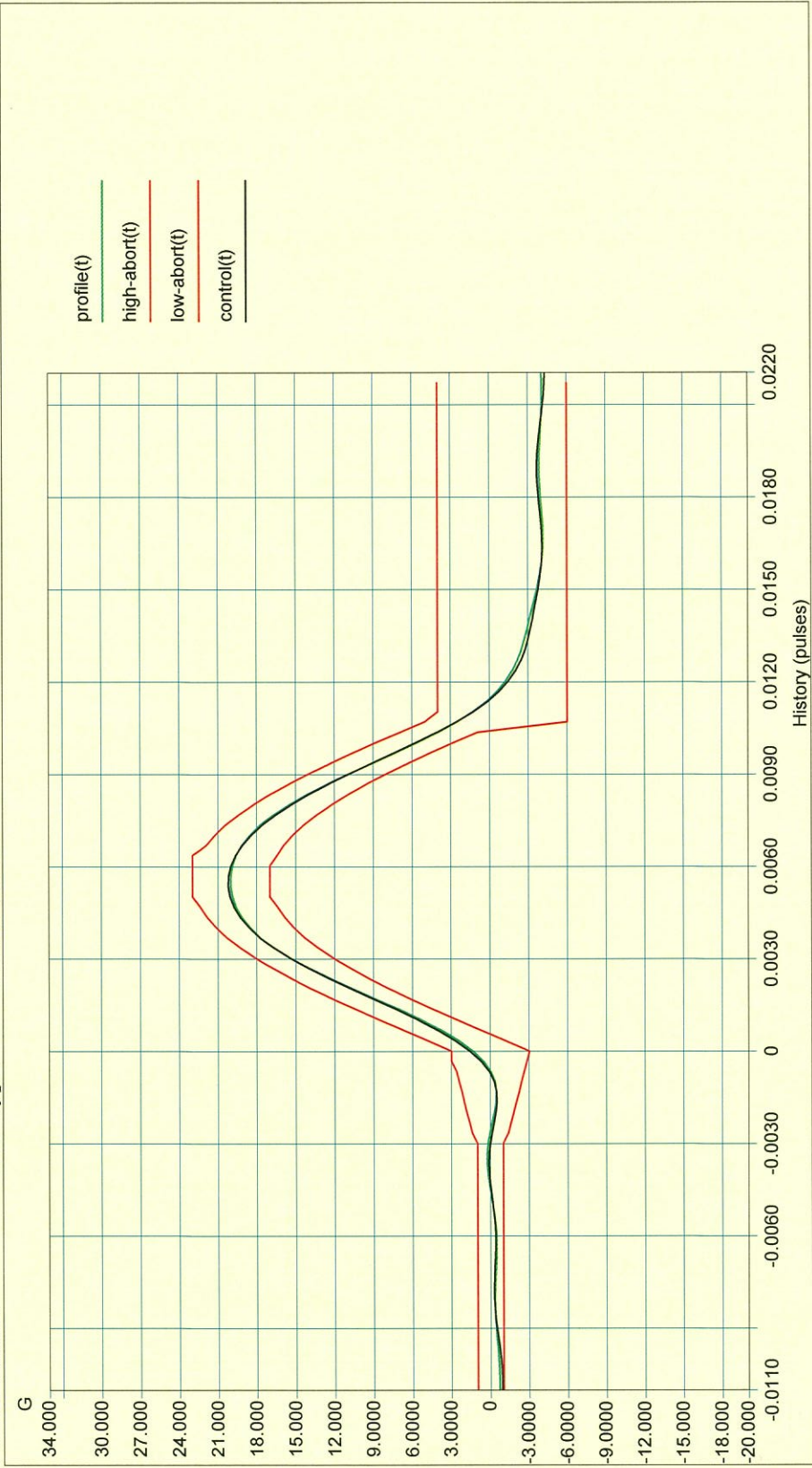


Level: 100 % Block Size: 2048 Elapsed Pulses: 12
 Frame Time: 0.682667 Seconds Control Peak: 19.858374 G Control RMS: 2.068053 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 20.000000 G Demand RMS: 2.045214 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 20.000000 G Pulse Width: 11.000001 ms

-Y axis Non-Operating

Project File Name: 20g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: \Run Apr 16,2014 14-27-13



Level: 100 % Block Size: 2048 Elapsed Pulses: 11

Frame Time: 0.682667 Seconds Control Peak: 20.170515 G Control RMS: 2.063373 G Full Level Elapsed Pulses: 3

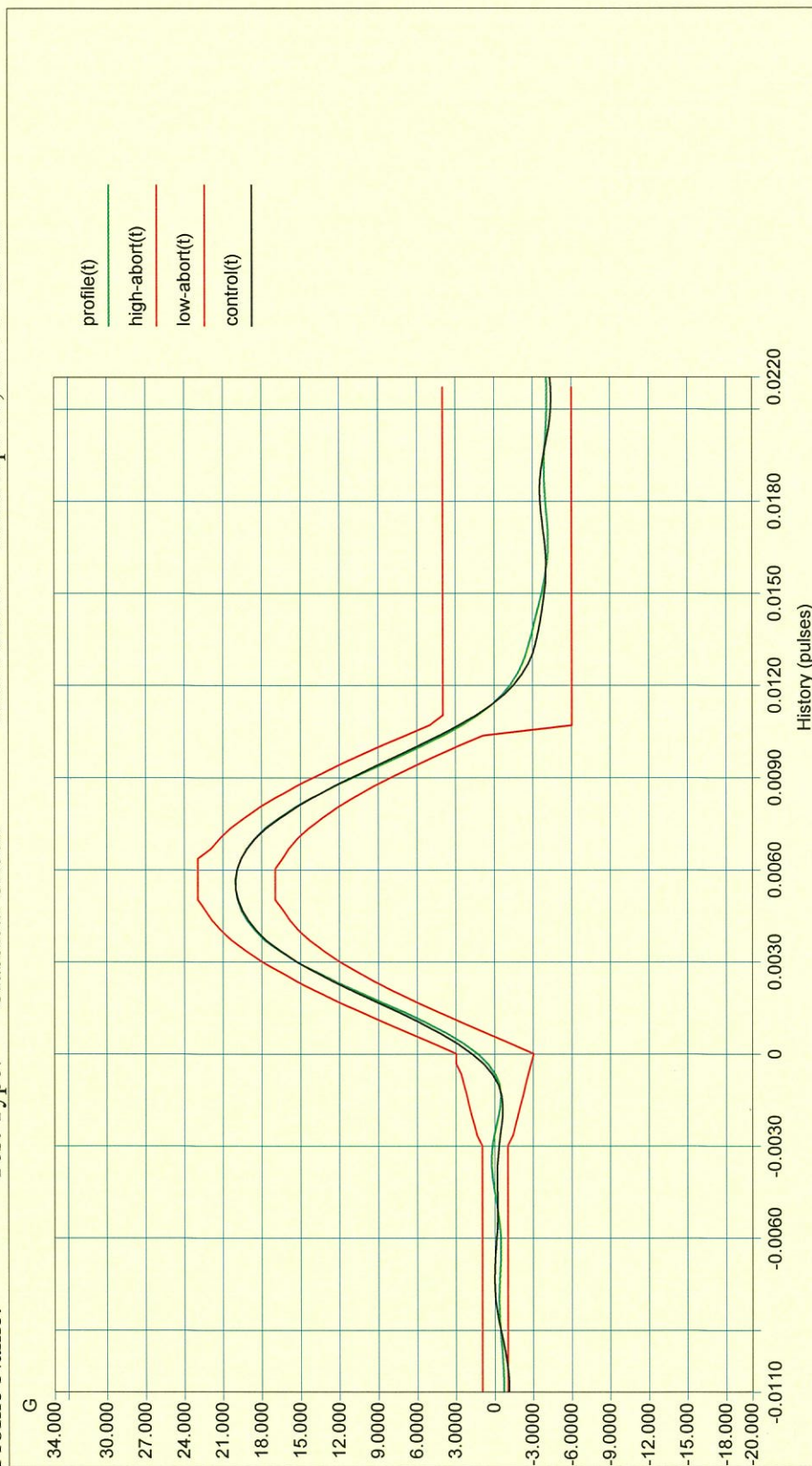
dT: 0.000333 Seconds Demand Peak: 20.000000 G Demand RMS: 2.045214 G Remaining Pulses: 0

Pulse Type: Half Sine Amplitude: 20.000000 G Pulse Width: 11.000001 ms

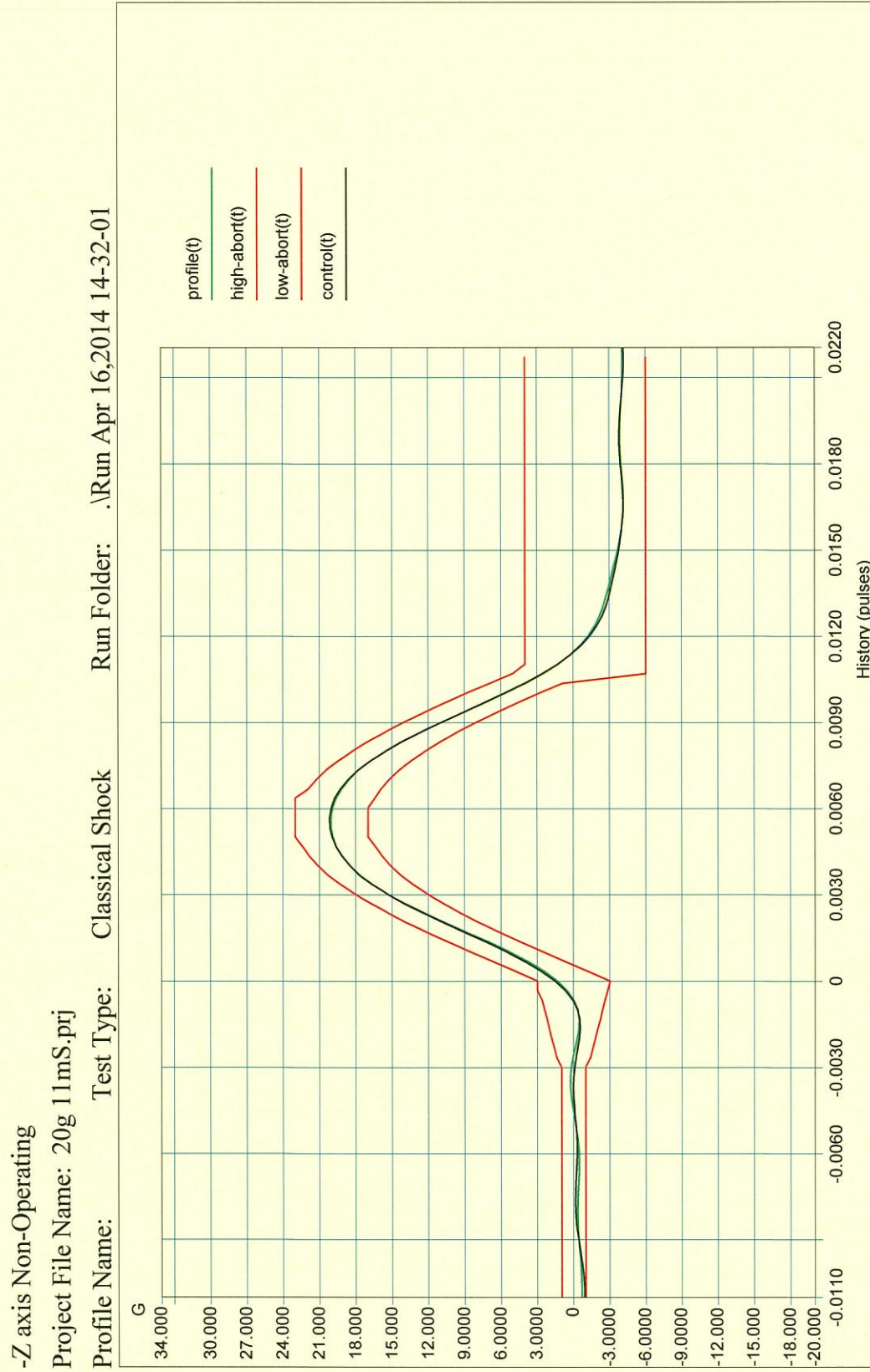
+Z axis Non-Operating

Project File Name: 20g 11mS.prj

Profile Name: Test Type: Classical Shock Run Folder: .\Run Apr 16,2014 14-33-32



Level: 100 % Block Size: 2048 Elapsed Pulses: 12
 Frame Time: 0.682667 Seconds Control Peak: 20.016136 G Control RMS: 2.068828 G Full Level Elapsed Pulses: 3
 dT: 0.000333 Seconds Demand Peak: 20.000000 G Demand RMS: 2.045214 G Remaining Pulses: 0
 Pulse Type: Half Sine Amplitude: 20.000000 G Pulse Width: 11.000001 ms



Level: 100 % Block Size: 2048 Elapsed Pulses: 12

Frame Time: 0.682667 Seconds Control Peak: 20.103249 G Control RMS: 2.066223 G Full Level Elapsed Pulses: 3

dT: 0.000333 Seconds Demand Peak: 20.000000 G Demand RMS: 2.045214 G Remaining Pulses: 0

Pulse Type: Half Sine Amplitude: 20.000000 G Pulse Width: 11.000001 ms

-END-



Certificate No. : L0424-110728

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

King Design Industrial Co., Ltd.

Vibration Laboratory

4F., No.3, Ln. 270, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City 22206, Taiwan
(R.O.C.)

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2005
Accreditation Number : 0424
Originally Accredited : May 01, 1998
Effective Period : July 28, 2011 to July 27, 2014
Accredited Scope : Testing Field, see described in the Appendix

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : July 28, 2011



Certificate No. : L0424-110728

財團法人全國認證基金會
Taiwan Accreditation Foundation

Accreditation Number : 0424

Laboratory Head : CHANG, Hsin Tai

■ 16.99 Machine and Equipment

Vibration Tester

A002 Vibration

CNS 3629

CNS 5424

Frequency:5 Hz to 3000 Hz

Acceleration:(0 to 100) Gpk

Approval Signatory: LEE, David;CHANG, Hsin Tai

■ 16.99 Machine and Equipment

Shock Test Equipment

A002 Vibration

IEST-RP-DTE 012.1

Shock Acceleration

Max. G:250 Gpk

Time Duration:0.1 ms to 50 ms

Approval Signatory: LEE, David;CHANG, Hsin Tai

■ 19.01 Electronic and Electric

Electrical Machine & Equipment

Electronic Device

A002 Vibration

CNS 5424

CNS 3629

IEC 60068-2-35 : 1973

Frequency:5 Hz to 2000 Hz

Acceleration:(0 to 50) Gpk

Approval Signatory: LEE, David;CHANG, Hsin Tai



Certificate No. : L0424-110728

財團法人全國認證基金會
Taiwan Accreditation Foundation

■ 19.01 Electronic and Electric
Electrical Machine & Equipment
Electronic Device
A002 Vibration
IEC 60068-2-27
Acceleration: 5 Gpk to 200 Gpk
Time Duration: 2 ms to 16 ms

Approval Signatory: LEE, David; CHANG, Hsin Tai

■ 19.99 Electronic and Electric
Electric & Electronic Products
E003 Environmental Reliability
IEC 60068-2-1
Temperature Range: $\geq -25^{\circ}\text{C}$

Approval Signatory: LEE, David; CHANG, Hsin Tai

■ 19.99 Electronic and Electric
Electric & Electronic Products
E003 Environmental Reliability
IEC 60068-2-2
Temperature Range: $\leq 100^{\circ}\text{C}$

Approval Signatory: LEE, David; CHANG, Hsin Tai

■ 19.99 Electronic and Electric
Electric & Electronic Products
E003 Environmental Reliability
IEC 60068-2-30
Temperature Range: -40°C to 120°C
Temperature Change Rate: rise $2^{\circ}\text{C}/\text{min}$ • fall $1^{\circ}\text{C}/\text{min}$

Approval Signatory: LEE, David; CHANG, Hsin Tai

E003 Environmental Reliability
IEC 60068-2-38
Temperature Range: -40°C to 120°C



Certificate No. : L0424-110728

財團法人全國認證基金會
Taiwan Accreditation Foundation

Humidity Range:15 %RH to 95 %RH
Temperature Change Rate:rise 2 °C/min 、 fall 1 °C/min

Approval Signatory: LEE, David;CHANG, Hsin Tai

E003 Environmental Reliability
MIL-STD-810F Method 501.4 、 502.4 、 503.4 、 514.5 (Procedure I 、 III 、 IV) 、
516.5 (Procedure I 、 II 、 III 、 IV 、 V 、 VI 、 VIII)
Temperature Range:-40 °C to 120 °C
Temperature Change Rate:rise 2 °C/min 、 fall 1 °C/min
Frequency:3 Hz to 2000 Hz
Displacement:(0 to 4) mm (peak to peak)
Acceleration:(0 to 10) Gpk

Approval Signatory: LEE, David;CHANG, Hsin Tai

(Null below)