

REPORT NUMBER: 201UI-CAL-09-04

**SAFETY COMPLIANCE TESTING FOR FMVSS 201  
OCCUPANT PROTECTION IN INTERIOR IMPACT  
UPPER INTERIOR HEAD IMPACT PROTECTION**

**NISSAN MOTOR COMPANY, LTD.  
2009 NISSAN MURANO**

NHTSA NUMBER: C95204

CALSPAN TEST NUMBER: 8877-04

CALSPAN  
TRANSPORTATION SCIENCES CENTER  
P.O. BOX 400  
BUFFALO, NEW YORK 14225



Test Date: January 27, 2009

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION  
National Highway Traffic Safety Administration  
Enforcement  
Office of Vehicle Safety Compliance  
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**TECHNICAL REPORT STANDARD TITLE PAGE**

1. <i>Report No.</i> 201UI-CAL-09-04		2. <i>Government Accession No.</i>		3. <i>Recipient's Catalog No.</i>																			
4. <i>Title and Subtitle</i> Final Report of FMVSS 201 Compliance Testing of a 2009 Nissan Murano NHTSA No. C95204				5. <i>Report Date</i> January 27, 2009																			
				6. <i>Performing Organization Code</i> CAL																			
7. <i>Author(s)</i> David J. Travale, Program Manager James Czarnecki, Project Engineer				8. <i>Performing Organization Report No.</i>																			
9. <i>Performing Organization Name and Address</i> Calspan 4455 Genesee Street Buffalo, New York 14225				10. <i>Work Unit No.</i>																			
				11. <i>Contract or Grant No.</i> DTNH22-04-C-01027																			
12. <i>Sponsoring Agency Name and Address</i> U.S. Department of Transportation National Highway Traffic Safety Administration Office of Vehicle Safety Compliance Mail Code: NVS-220, West building 4 <sup>th</sup> Floor 1200 New Jersey Avenue, SE Washington, D.C. 20590				13. <i>Type of Report and Period Covered</i> Final Report January 2009																			
				14. <i>Sponsoring Agency Code</i> NVS-220																			
15. <i>Supplementary Notes</i>																							
16. <i>Abstract</i>  Compliance tests were conducted on the subject vehicle, a 2009 Nissan Murano, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure TP-201U-01 for determination of FMVSS 201 compliance. Test failures identified were as follows in the table below:																							
<table border="1"> <thead> <tr> <th>Target Point</th> <th>Horizontal</th> <th>Vertical</th> <th>Velocity</th> <th>HIC</th> <th>HICd</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>None</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>						Target Point	Horizontal	Vertical	Velocity	HIC	HICd	None	-	-	-	-	-	None	-	-	-	-	-
Target Point	Horizontal	Vertical	Velocity	HIC	HICd																		
None	-	-	-	-	-																		
None	-	-	-	-	-																		
17. <i>Key Words</i> Compliance Testing Safety Engineering FMVSS 201				18. <i>Distribution Statement</i> <u>Copies of this report are available from:</u> NHTSA Technical Information Services National Highway Traffic Safety Admin. 1200 New Jersey Avenue, SE Washington, DC 20590																			
19. <i>Security Classif. (of this report)</i> UNCLASSIFIED		20. <i>Security Classif. (of this page)</i> UNCLASSIFIED		21. <i>No. of Pages</i>	22. <i>Price</i>																		

**Form DOT F1700.7 (8-69)**

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## **SECTION 1**

### **PURPOSE AND TEST PROCEDURE**

This head impact compliance test is part of the FMVSS 201 Upper Interior Head Impact Protection Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-04-C-01027. The purpose of this head impact compliance test was to determine whether the subject vehicle, a 2009 Nissan Murano, NHTSA No. C95204, meets the performance requirements of FMVSS 201, Occupant Protection in Interior Impact. The compliance test was conducted in accordance with the OVSC Laboratory Test Procedure No. TP-201U-01 dated April 03, 1998.

## SECTION 2

### SUMMARY OF UPPER INTERIOR HEAD IMPACTS

A 2009 Nissan Murano, NHTSA No. C95204, was tested at various upper interior locations by a 4.54 kg 50<sup>th</sup> percentile headform. A total of twelve (12) impacts were performed in this test series. The target area impacts were chosen by the NHTSA Contracting Officer's Technical Representative (COTR). A summary of test results can be found on Data Sheet 2-1, Summary of Upper Interior Head Impact Tests. The twelve (12) area chosen for testing were:

OP1	UROP	RP2	URRP	SR3
BP3	BP1	AP3	AP1	BP2
URBP	AP2			

The selected impact areas on the test vehicle appeared to comply with the performance requirements of FMVSS 201.

Five Free Motion Headforms (FMH) were used in this test series. All five FMH's were calibrated prior to and after the test series. Calibration information are included in Appendix B. Each FMH weighed  $4.54 \pm 0.5$  kg and had an orthogonal tri-axis accelerometer pack mounted at the headform's center of gravity (c.g.).

A total of three (3) channels of data for each test were recorded on a Keyser-Threde data acquisition system. Data plots, along with still images, can be found in Section 3, Summary of Test Results and Data Plots.

To document each target area impact test, a Weinberger high-speed video camera was placed at an appropriate location to record the headform contact with the selected target area.

## DATA SHEET 2-1

### SUMMARY OF UPPER INTERIOR HEAD IMPACT TESTS

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08 (SEE CERTIFICATION LABEL)
COLOR:	Merlot

TARGET CODE	Target Coordinates						Approach Angles (degrees)		Velocity (kph)	FMH HIC	HIC(d)
	Driver Side			Passenger Side			Horizontal	Vertical			
	X(mm)	Y(mm)	Z(mm)	X(mm)	Y(mm)	Z(mm)					
AP1	1178.028	-588.374	1130.951	1166.256	579.780	1147.658	113°	18°	18.32	112.9	251.6
AP2	961.529	-642.009	1043.552	993.641	635.032	1060.197	236°	50°	18.76	440.5	498.8
AP3	853.976	-661.092	995.818	863.898	659.582	1004.679	142°	45°	18.44	461.4	514.5
BP1	1720.491	-518.653	1243.247	1720.525	513.775	1245.229	90°	25°	18.51	378.4	451.9
BP2	1691.994	-650.406	974.194	1691.655	649.535	977.825	270°	6°	23.44	705.2	698.5
BP3	1635.120	-666.965	1017.950	1634.572	664.397	1020.811	90°	-2°	23.44	367.2	443.5
BP4	1755.006	-730.263	906.602	1752.473	722.797	906.756	-	-	-	-	-
FH1	1095.681	-496.951	1184.699	1083.602	477.671	1192.570	RELOCATED 2 CIRCLES		-	-	-
FH1 R2	1083.352	-453.777	1193.440	1075.073	444.033	1194.795	-	-	-	-	-
FH2	1065.134	-351.554	1199.907	1055.977	331.133	1201.483	-	-	-	-	-
OP1	2509.518	-619.896	1003.100	2511.997	612.670	999.045	90°	6°	23.54	514.8	554.8
OP2	2528.082	-631.448	1042.643	2531.834	624.633	1037.448	-	-	-	-	-
RP1	2910.021	-525.838	1145.446	2913.579	527.408	1134.797	-	-	-	-	-
RP2	2792.353	-654.820	994.962	2783.158	646.486	989.215	72°	-5°	23.60	301.6	393.9
SR1	1327.156	-540.690	1193.973	1318.972	536.626	1199.918	RELOCATED 1 CIRCLE		-	-	-
SR1_R1	1343.638	-545.754	1188.161	1342.384	544.337	1190.915	-	-	-	-	-
SR2A	1476.998	-527.498	1214.205	1480.687	526.750	1212.742	RELOCATED 1 CIRCLE		-	-	-
SR2A_R1	-	-	-	1468.000	539.530	1232.847	-	-	-	-	-
SR2B	1421.675	-543.495	1230.189	1418.635	541.898	1231.918	RELOCATED 2 CIRCLES		-	-	-
SR2B_R2	1423.044	-567.557	1186.067	1419.124	566.268	1187.348	-	-	-	-	-
SR3F	2019.396	-513.115	1231.376	2018.802	507.434	1231.428	-	-	-	-	-
SR3R	2189.933	-512.416	1227.773	2186.405	503.082	1227.743	90°	42°	18.78	266.1	367.2
URAP	1312.002	-398.093	1206.557	1323.957	402.857	1212.372	-	-	-	-	-
URBP	1720.526	-387.925	1291.148	1721.465	383.072	1291.768	270°	50°	23.83	645.0	653.0
UROP	2444.905	-381.853	1284.522	2445.493	372.468	1283.710	90°	50°	23.70	616.6	631.6
URRP	2726.908	-384.876	1252.089	2711.726	387.424	1257.877	52°	50°	23.59	554.4	584.7
URRSR	2084.353	-396.191	1291.981	2071.790	399.162	1289.586	-	-	-	-	-

\*HIC(d)=0.75446(Free Motion Headform HIC)+166.4



**DATA SHEET 2-2**

**GENERAL TEST AND VEHICLE PARAMETER DATA**

<b>TEST VEHICLE INFORMATION:</b>									
Year/Make/Model/Body Style:				2009 Nissan Murano					
VIN:				JN8AZ18W19W127671					
Month & Year of Manufacture:				03/08 (SEE CERTIFICATION LABEL)					
Vehicle Body Color:				Merlot					
Engine Data:	6	Cylinders;	-	CID;	3.5	Liters;	-	cc	
Engine Placement:		x	Longitudinal;	or		-	Lateral		
Transmission:	CVT	Speed;	-	Manual;	x	Automatic;	-	Overdrive	
Final Drive:	-	Rear Wheel Drive;	-	Front Wheel Drive;	x	Four Wheel Drive			
Odometer Reading:		87	km						
Options:	x	A/C;	x	Power Steering;	x	Pwr.Brakes;	x	Pwr. Windows	
Interior Trim Information :									
1. Grab handles located on side rails of all outboard seating positions									
2. Adjustable seat belt anchorages on both B and Other Pillars									
3. Non-sunroof vehicle									

<b>DATA FROM TIRE PLACARD:</b>									
Tire Pressure (at capacity);				230		kPa FRONT			
				230		kPa REAR			
Recommended Tire Size:				P235/65R18					
Tires on Test Vehicle:		P235/65R18		Manufacturer:			Bridgestone		
Vehicle Capacity Data:									
Number of Occupants:	2	Front;	3	Rear;	-	3rd Seat;	5	Total	
Type of Front Seats:	x	Bucket;	-	Bench;	-	Split Bench			
Type of Front Seat Back:	-	Fixed;	x	Adjustable with	x	Lever or	-	Knob	
Vehicle Capacity Weight (VCW)=				408		kg (A)			
No. of Occupants x 68 kg. =				340		kg (B)			
Rated Cargo/Luggage Weight (RCLW) =				68		kg (A-B) Max. RCLW = 136 kg.			

**DATA SHEET 2-2**

**GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)**

<b>TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:</b>							
Left Front	=	<b>532.0</b>	<b>kg</b>	Left Rear	=	<b>384.0</b>	<b>kg</b>
Right Front	=	<b>537.0</b>	<b>kg</b>	Right Rear	=	<b>374.0</b>	<b>kg</b>
TOTAL FRONT	=	<b>1069.0</b>	<b>kg</b>	TOTAL REAR	=	<b>758.0</b>	<b>kg</b>
% of Total Weight	=	<b>58.5%</b>	<b>%</b>	% of Total Weight	=	<b>41.5%</b>	<b>%</b>
TOTAL WEIGHT	=	<b>1827.0</b>				<b>kg</b>	

<b>CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:</b>		
Total Test Vehicle Delivered Weight=	<b>1827.0</b>	kg (A)
+ Rated Cargo/Luggage Weight =	<b>68.0</b>	kg (B)
TEST VEHICLE TARGET WEIGHT =	<b>1895.0</b>	kg (A+B)

<b>WEIGHT OF TEST VEHICLE (FULLY LOADED):</b>							
Left Front	=	<b>532.0</b>	<b>kg</b>	Left Rear	=	<b>417.0</b>	<b>kg</b>
Right Front	=	<b>537.0</b>	<b>kg</b>	Right Rear	=	<b>404.0</b>	<b>kg</b>
TOTAL FRONT	=	<b>1069.0</b>	<b>kg</b>	TOTAL REAR	=	<b>821.0</b>	<b>kg</b>
% of Total Weight	=	<b>56.6%</b>	<b>%</b>	% of Total Weight	=	<b>43.4%</b>	<b>%</b>
TOTAL TEST WEIGHT	=	<b>1890.0</b>					
Weight of vehicle secured in test vehicles cargo area	=	<b>63.0</b>				<b>kg</b>	

<b>TEST VEHICLE ATTITUDE (all dimensions in millimeters):</b>				
AS DELIVERED:	Left Front	<b>876</b>	Left Rear	<b>904</b>
	Right Front	<b>876</b>	Right Rear	<b>902</b>
FULLY LOADED:	Left Front	<b>875</b>	Left Rear	<b>896</b>
	Right Front	<b>874</b>	Right Rear	<b>894</b>
Test Vehicle Wheelbase:	<b>2825</b>		millimeters	

<b>TEST VEHICLE PITCH AND ROLL ANGLES:</b>				
AS DELIVERED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	<b>↓0.6↑</b>	Front Bumper	<b>↑0.1↓</b>
	Right Door Sill	<b>↑0.4↓</b>	Rear Bumper	<b>↑0.2↓</b>
FULLY LOADED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	<b>↓0.3↑</b>	Front Bumper	<b>0.0</b>
	Right Door Sill	<b>↑0.2↓</b>	Rear Bumper	<b>↑0.4↓</b>
AS TESTED:	PITCH ANGLES		ROLL ANGLES	
	Left Door Sill	<b>↓0.3↑</b>	Front Bumper	<b>0.0</b>
	Right Door Sill	<b>↑0.2↓</b>	Rear Bumper	<b>↑0.4↓</b>

DATA SHEET 2-3

APPROACH ANGLE LIMITS

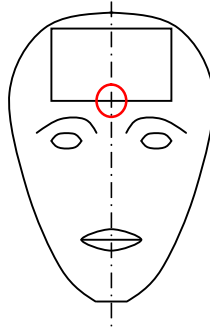
Target Code	Left Side				Target Code	Right Side			
	Horizontal Angles (deg.)		Vertical Angles (deg.)			Horizontal Angles (deg.)		Vertical Angles (deg.)	
	Minimum	Maximum	Minimum	Maximum		Minimum	Maximum	Minimum	Maximum
AP1	200	255	-5	18	AP1	105	160	-5	18
AP2	200	255	-5	50	AP2	105	160	-5	50
AP3	200	255	-5	45	AP3	105	160	-5	45
BP1	199	285	-10	25	BP1	75	161	-10	25
BP2	ANY		0	6	BP2	ANY		0	6
BP3	199	285	-10	-2	BP3	75	161	-10	-2
BP4	199	285	-10	-10	BP4	75	161	-10	-10
OP1	ANY		0	6	OP1	ANY		0	6
OP2	270		-10	6	OP2	90		-10	6
RP2	270	345	-10	-5	RP2	15	90	-10	-5
FH1	180		0	50	FH1	180		0	50
FH2	180		0	50	FH2	180		0	50
RH	360		0	50	RH	0		0	50
SR1	270		0	30	SR1	90		0	30
SR2A	270		0	36	SR2A	90		0	36
SR2B	270		0	36	SR2B	90		0	36
SR3F	270		0	42	SR3F	90		0	42
SR3R	270		0	42	SR3R	90		0	42
URAP	ANY		0	45	URAP	ANY		0	45
URBP	ANY		0	50	URBP	ANY		0	50
UROP	ANY		0	50	UROP	ANY		0	50
URRP	ANY		0	50	URRP	ANY		0	50

Note : BP2 and OP1 target locations – Seat belt anchorage

**DATA SHEET 2-4**

**SUMMARY TARGET IMPACT LOCATION ON FMH**

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot



ã RIGHT SIDE OF FACE

TARGET	Distance Above Point 0 (mm)	Distance Over From Pt. O (mm)
OP1	<b>10</b>	<b>6L</b>
UROP	<b>47</b>	<b>5L</b>
RP2	<b>4</b>	<b>13L</b>
URRP	<b>32</b>	<b>8R</b>
SR3	<b>2</b>	<b>6L</b>
BP3	<b>16</b>	<b>26R</b>
BP1	<b>20</b>	<b>14R</b>
AP3	<b>17</b>	<b>0</b>
AP1	<b>5</b>	<b>34R</b>
BP2	<b>5</b>	<b>7L</b>
URBP	<b>34</b>	<b>4L</b>
AP2	<b>17</b>	<b>0</b>

**SECTION 3**

**SUMMARY OF TEST RESULTS AND DATA PLOTS**

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	01
Test Date:	01/26/09
Target Location:	OTHER PILLAR
Target Code:	OP1
Horizontal Impact Angle:	90°
Vertical Impact Angle:	6°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	9:00
Headform Number:	1142

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	6	<input type="checkbox"/>	mm right	<input checked="" type="checkbox"/>	mm left
On Centerline	10				mm up



POST-IMPACT OP1 HEADFORM

Free Motion HIC	514.8
HIC(d)	554.8
Impact Velocity (kph)	23.54
HIC T1 (msec)	1.7
HIC T2 (msec)	11.1

# FMVSS 201U 09 Nissan Murano C95204 - OP1

FMH Headform 1142

Location: OP1

Test Date: January 26, 2009

Work File: OP1

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 554.8

Lab Humidity: 13 %

HIC (36ms): 514.8

Velocity at Impact: 23.54 KPH

t1: 1.7 msec

t2: 11.1 msec

Free Flight Distance: 217.46 mm

Duration: 9.4 msec

Average Acceleration: 8.9 g

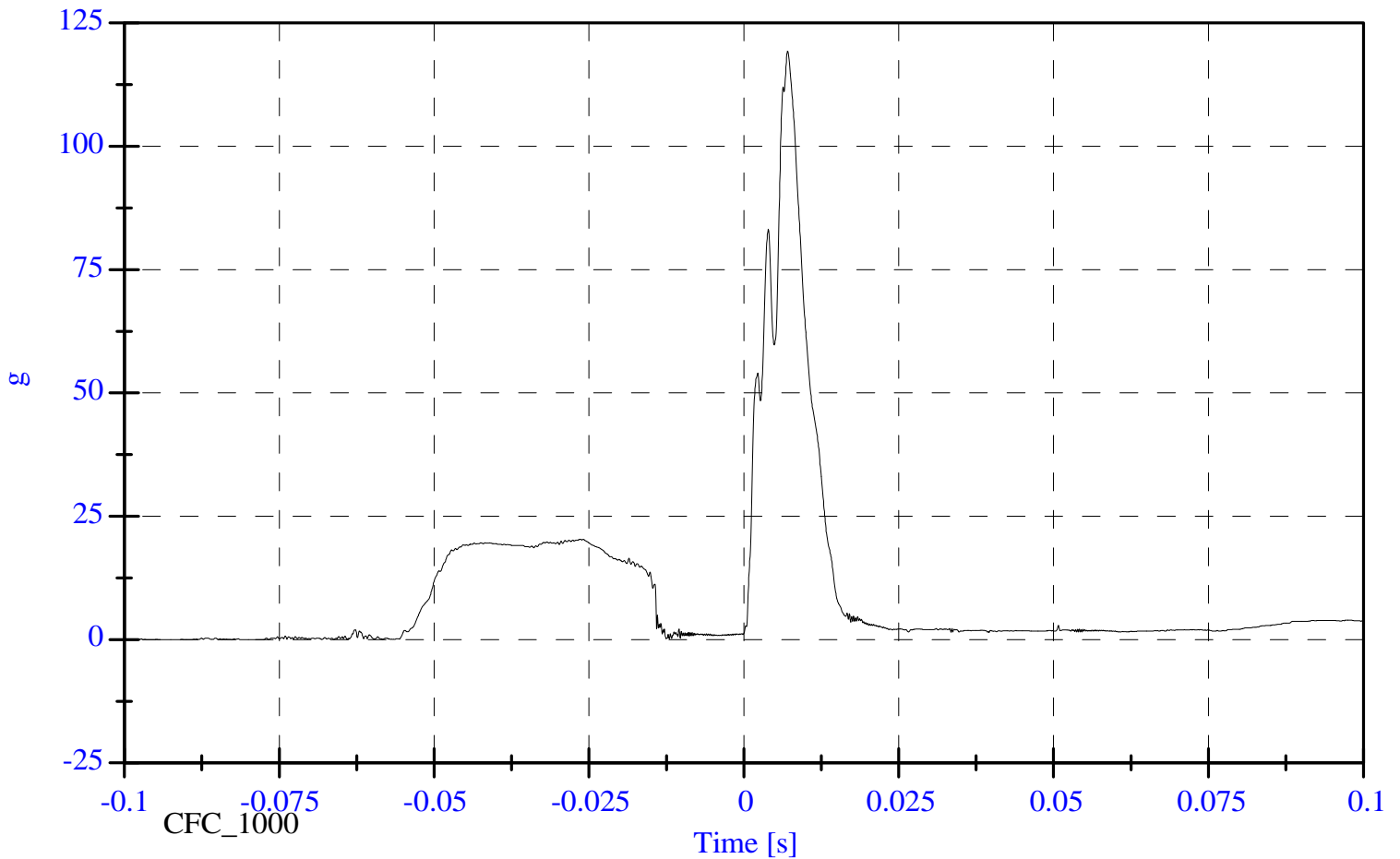
Maximum: 119.3 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 119.3 [g] at 0.007 [s]

Min: -0.0 [g] at -0.094 [s]



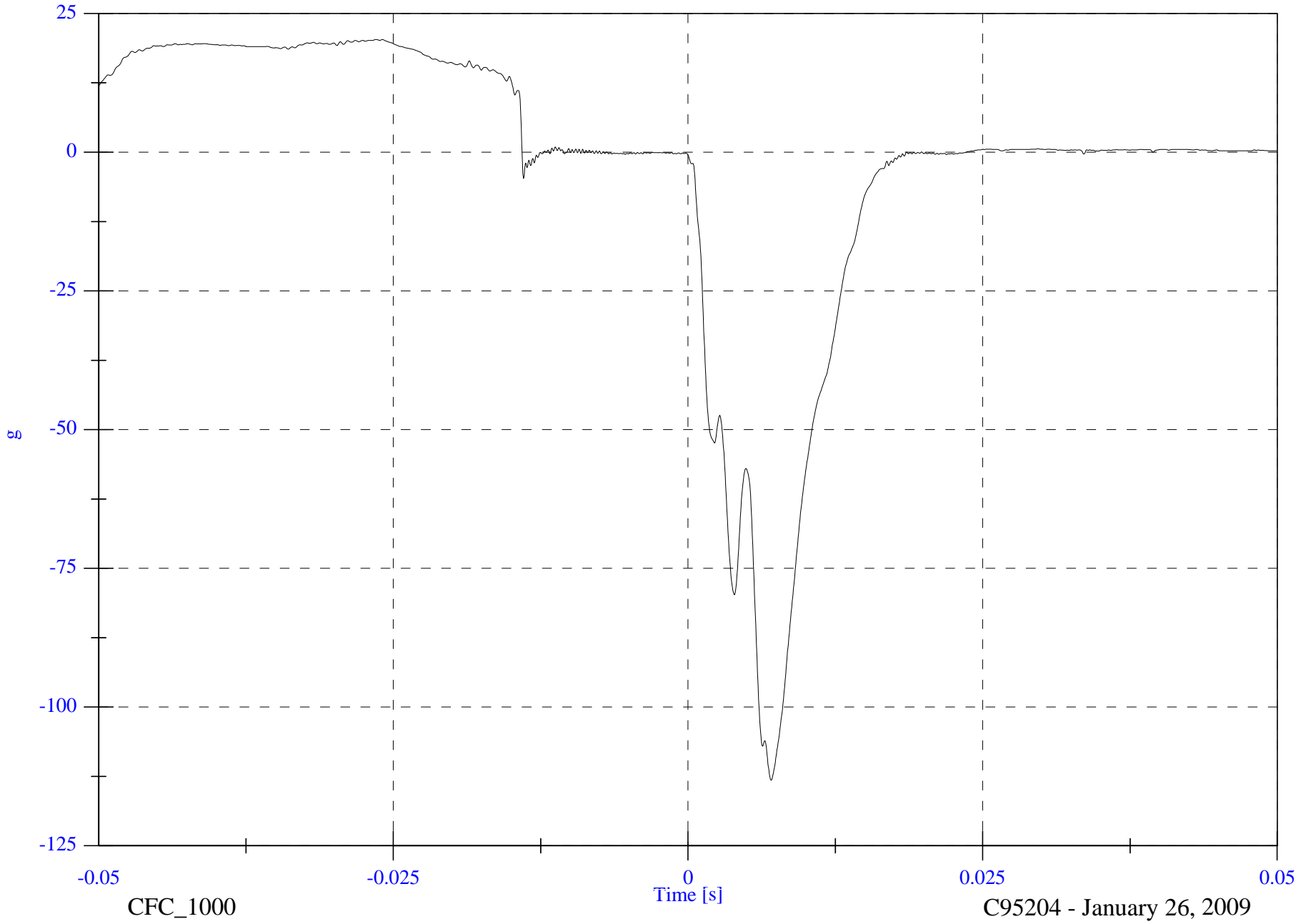
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 20.3 [g] at -0.026 [s]

Min: -113.2 [g] at 0.007 [s]

C95204 PASSENGER SIDE OP1 IMPACT PLOT #1



CFC\_1000

C95204 - January 26, 2009



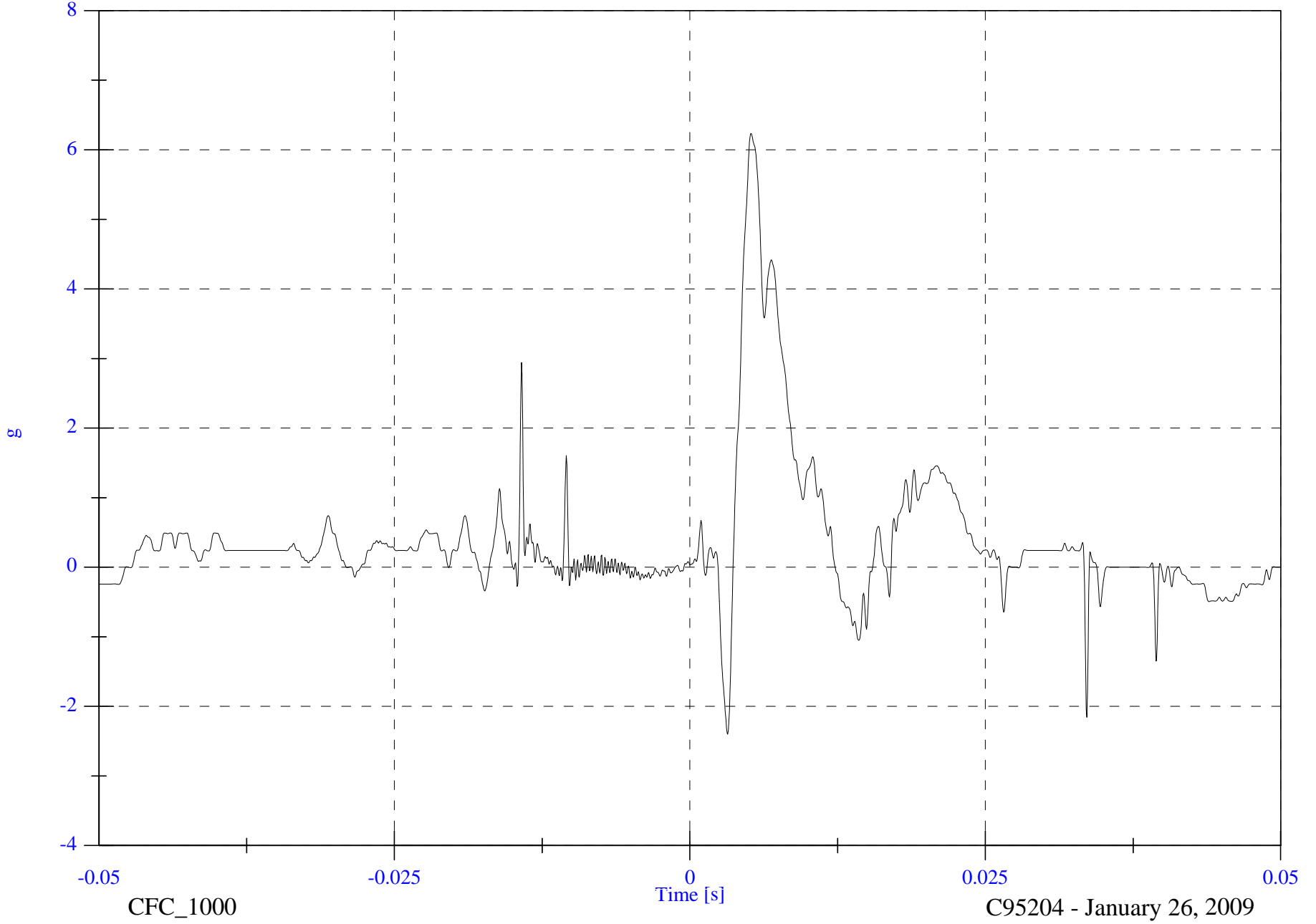
FMVSS 201U 09 Nissan Murano

### Headform Y Acceleration

Max: 6.2 [g] at 0.005 [s]

Min: -2.4 [g] at 0.003 [s]

C95204 PASSENGER SIDE OP1 IMPACT PLOT #2



CFC\_1000

C95204 - January 26, 2009

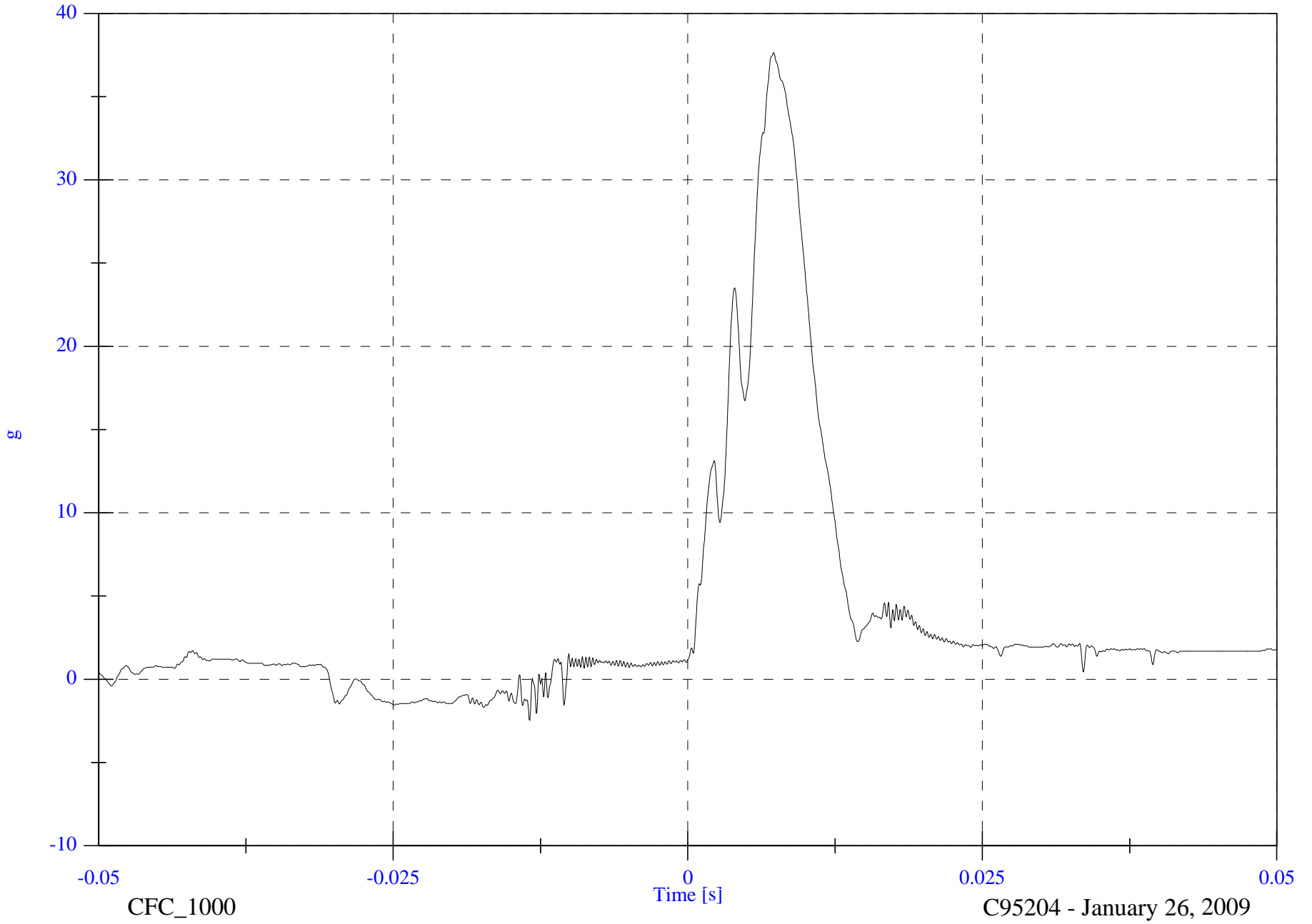
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 37.6 [g] at 0.007 [s]

Min: -2.5 [g] at -0.013 [s]

C95204 PASSENGER SIDE OP1 IMPACT PLOT #3



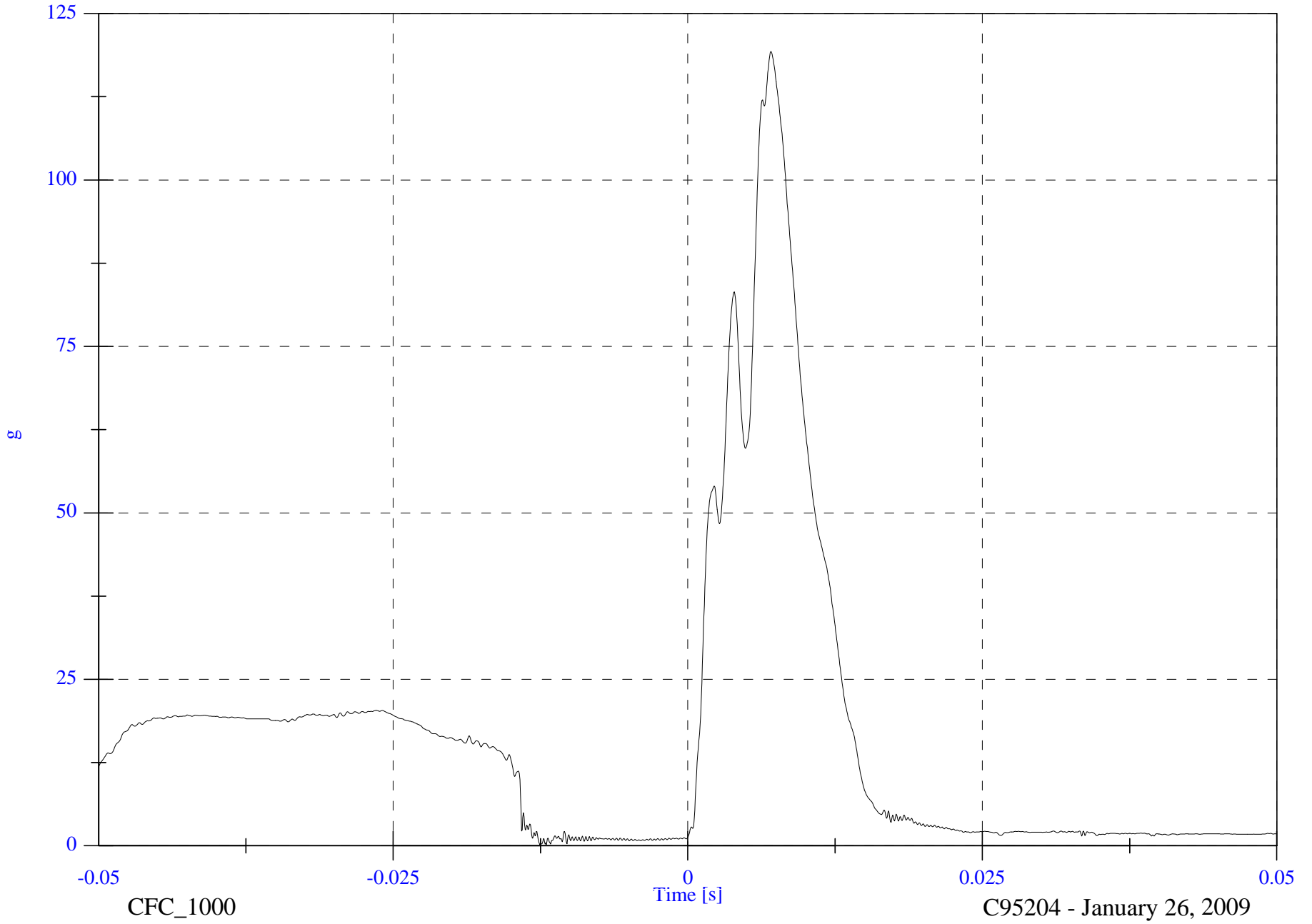
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 119.3 [g] at 0.007 [s]

Min: 0.1 [g] at -0.012 [s]

C95204 PASSENGER SIDE OP1 IMPACT PLOT #4



CFC\_1000

C95204 - January 26, 2009

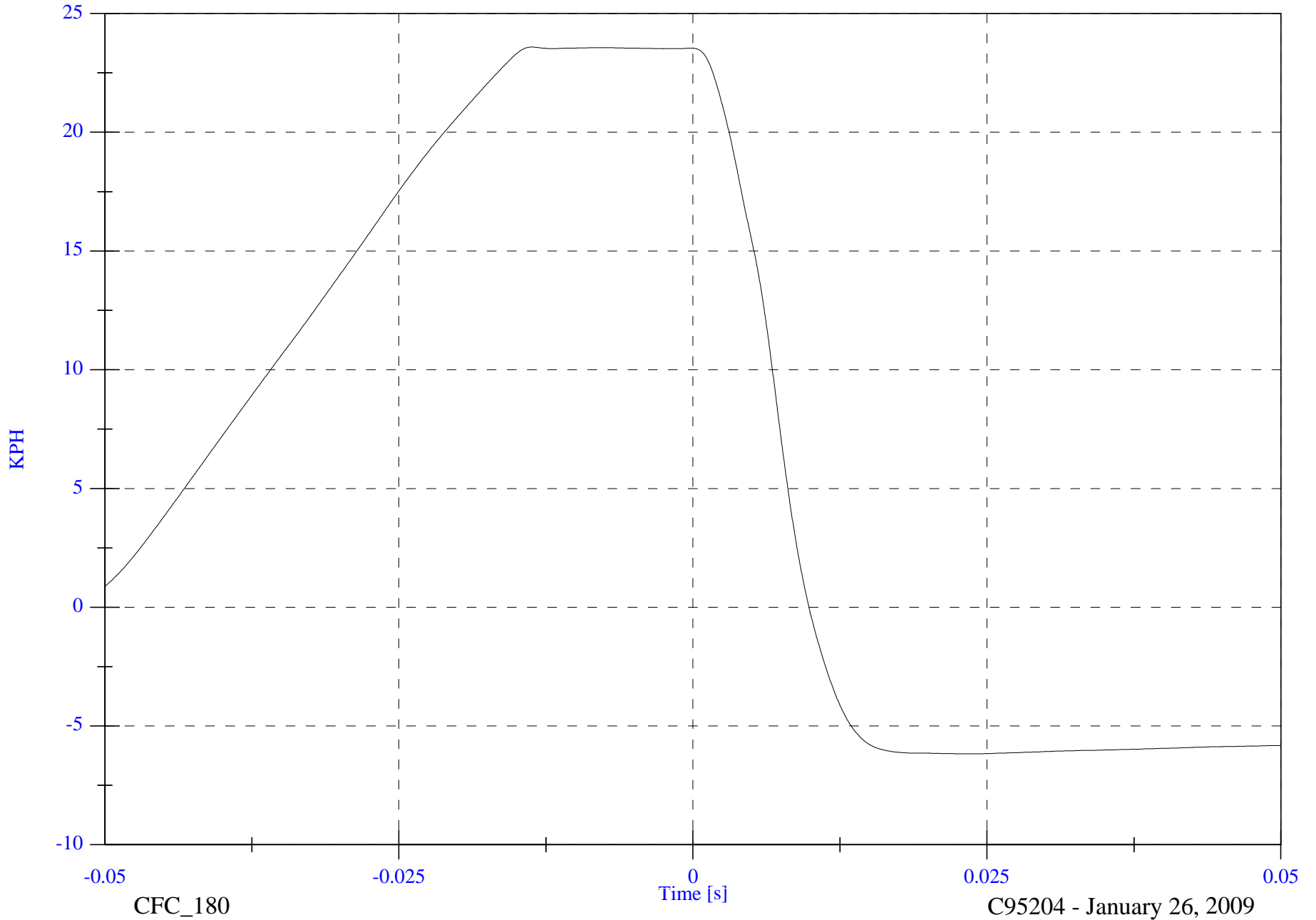
FMVSS 201U 09 Nissan Murano

Max: 23.6 [KPH] at -0.014 [s]

Min: -6.2 [KPH] at 0.024 [s]

### Headform Velocity

C95204 PASSENGER SIDE OP1 IMPACT PLOT #5



CFC\_180

C95204 - January 26, 2009



PRE-IMPACT OP1

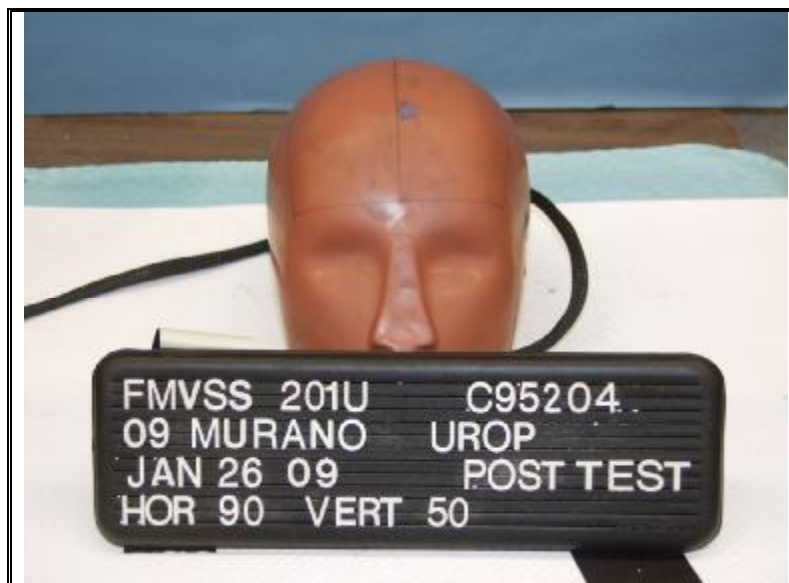


POST-IMPACT OP1

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	02
Test Date:	01/26/09
Target Location:	UPPER ROOF
Target Code:	UROP
Horizontal Impact Angle:	90°
Vertical Impact Angle:	50°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	9:30
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	5	<input type="checkbox"/>	mm right <input checked="" type="checkbox"/> mm left
On Centerline	47		mm up



POST-IMPACT UROP HEADFORM

Free Motion HIC	616.6
HIC(d)	631.6
Impact Velocity (kph)	23.70
HIC T1 (msec)	3.7
HIC T2 (msec)	12.8

# FMVSS 201U 09 Nissan Murano C95204 - UROP

FMH Headform 0355

Location: UROP

Test Date: January 26, 2009

Work File: UROP

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 631.6

Lab Humidity: 13 %

HIC (36ms): 616.6

Velocity at Impact: 23.70 KPH

t1: 3.7 msec

t2: 12.8 msec

Free Flight Distance: 224.31 mm

Duration: 9.1 msec

Average Acceleration: 9.6 g

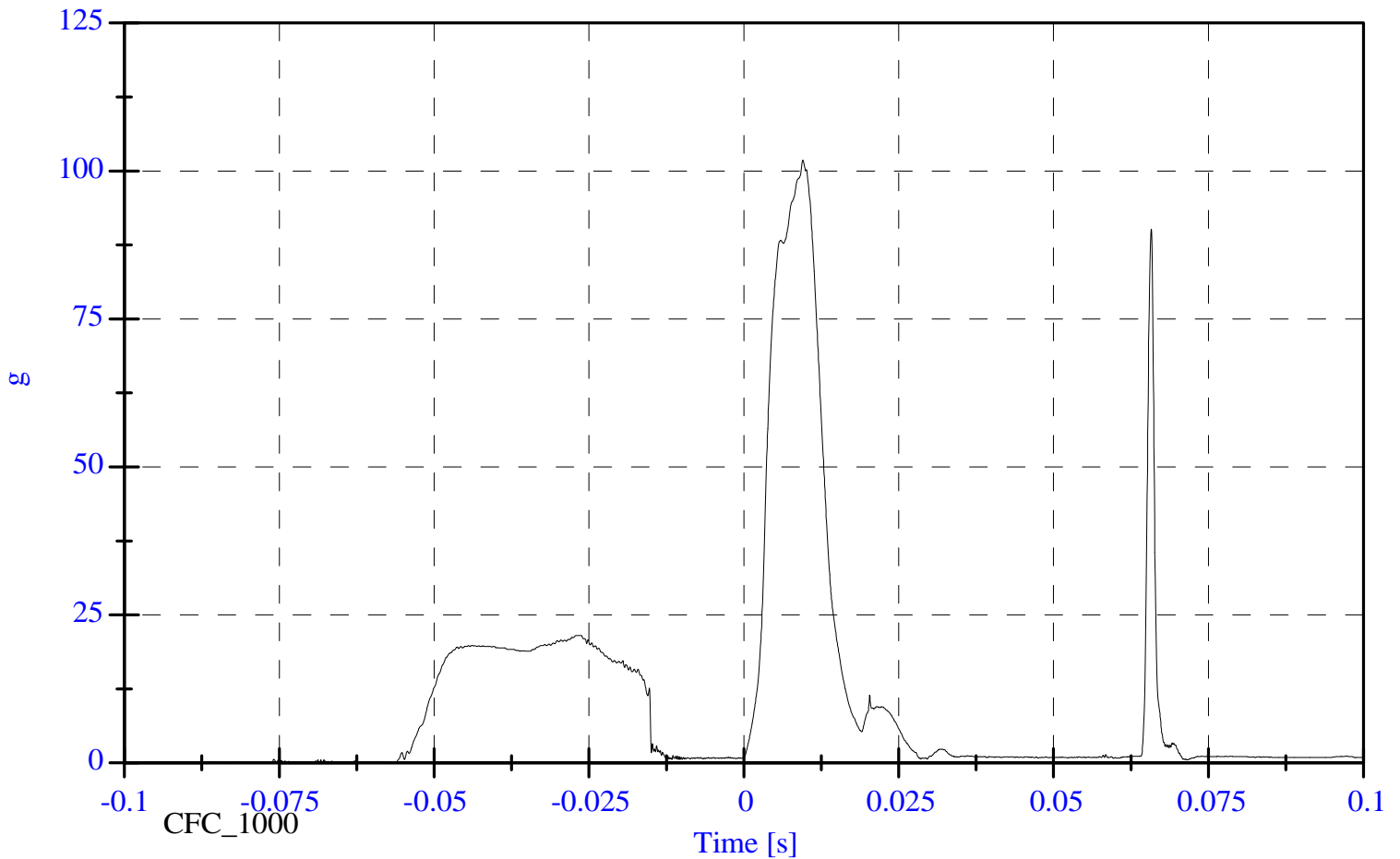
Maximum: 101.8 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 101.8 [g] at 0.010 [s]

Min: 0.0 [g] at -0.091 [s]





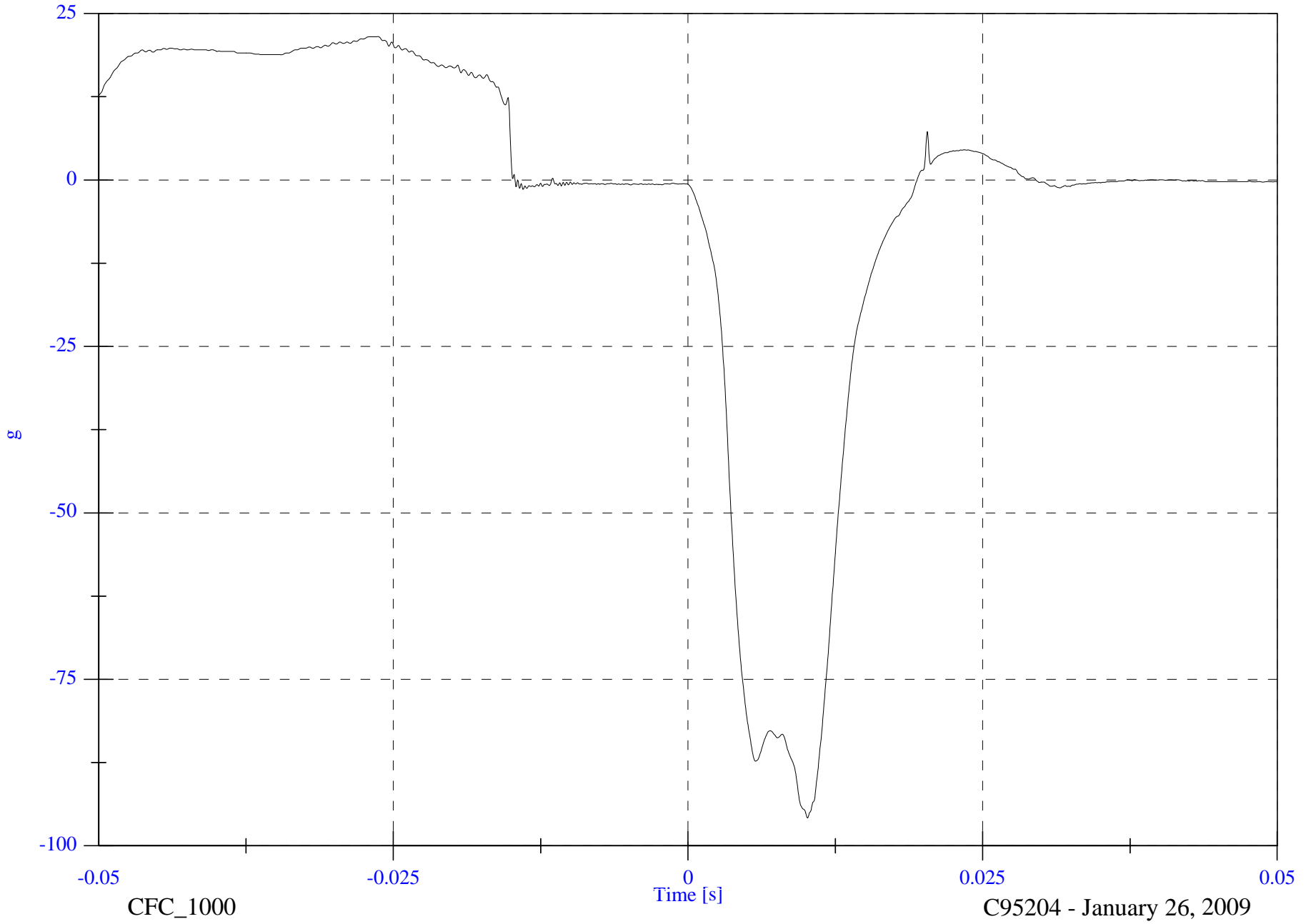
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 21.5 [g] at -0.026 [s]

Min: -95.8 [g] at 0.010 [s]

C95204 PASSENGER SIDE UROP IMPACT PLOT #1



CFC\_1000

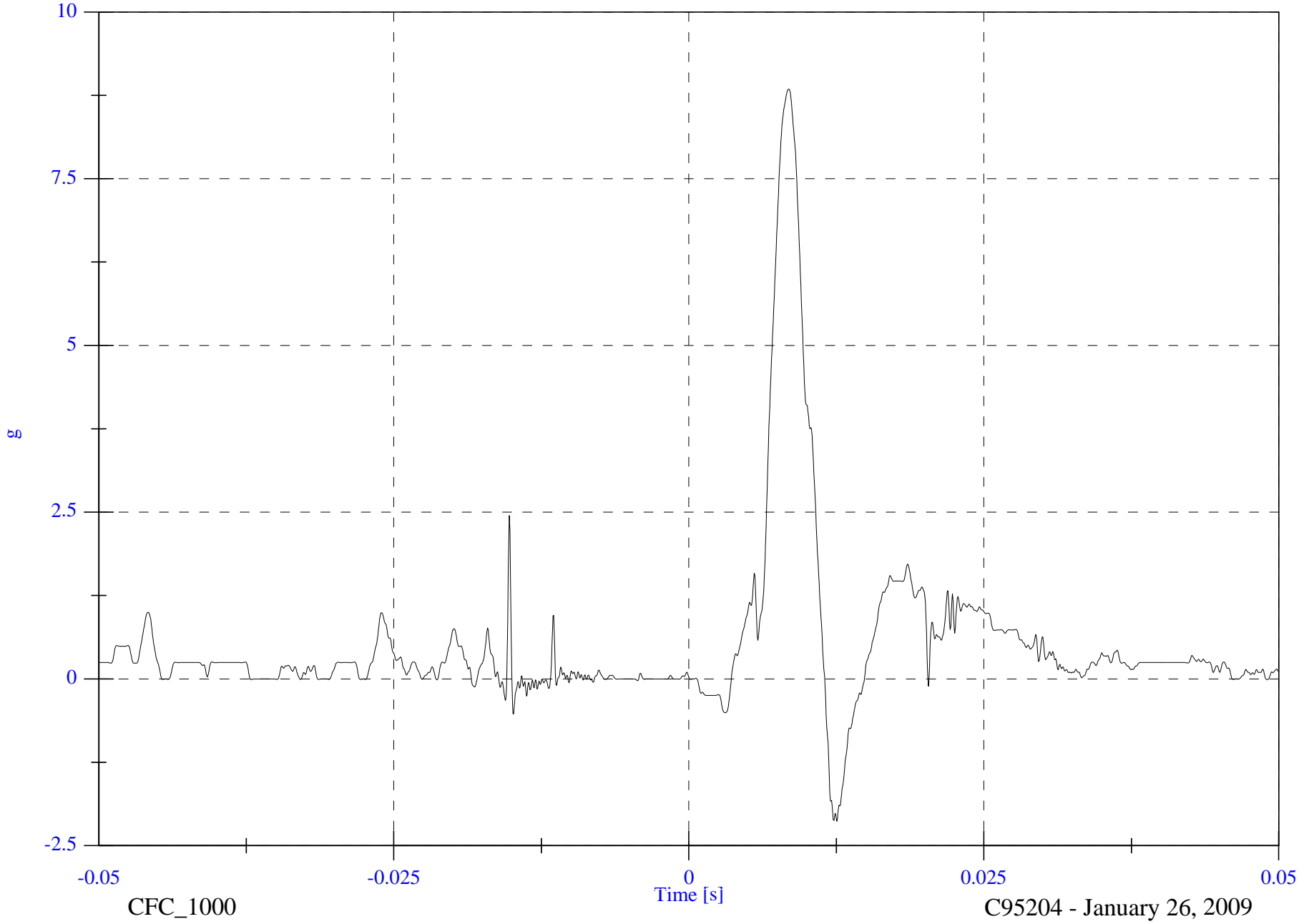
C95204 - January 26, 2009

FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 8.8 [g] at 0.008 [s]  
Min: -2.1 [g] at 0.013 [s]

C95204 PASSENGER SIDE UROP IMPACT PLOT #2



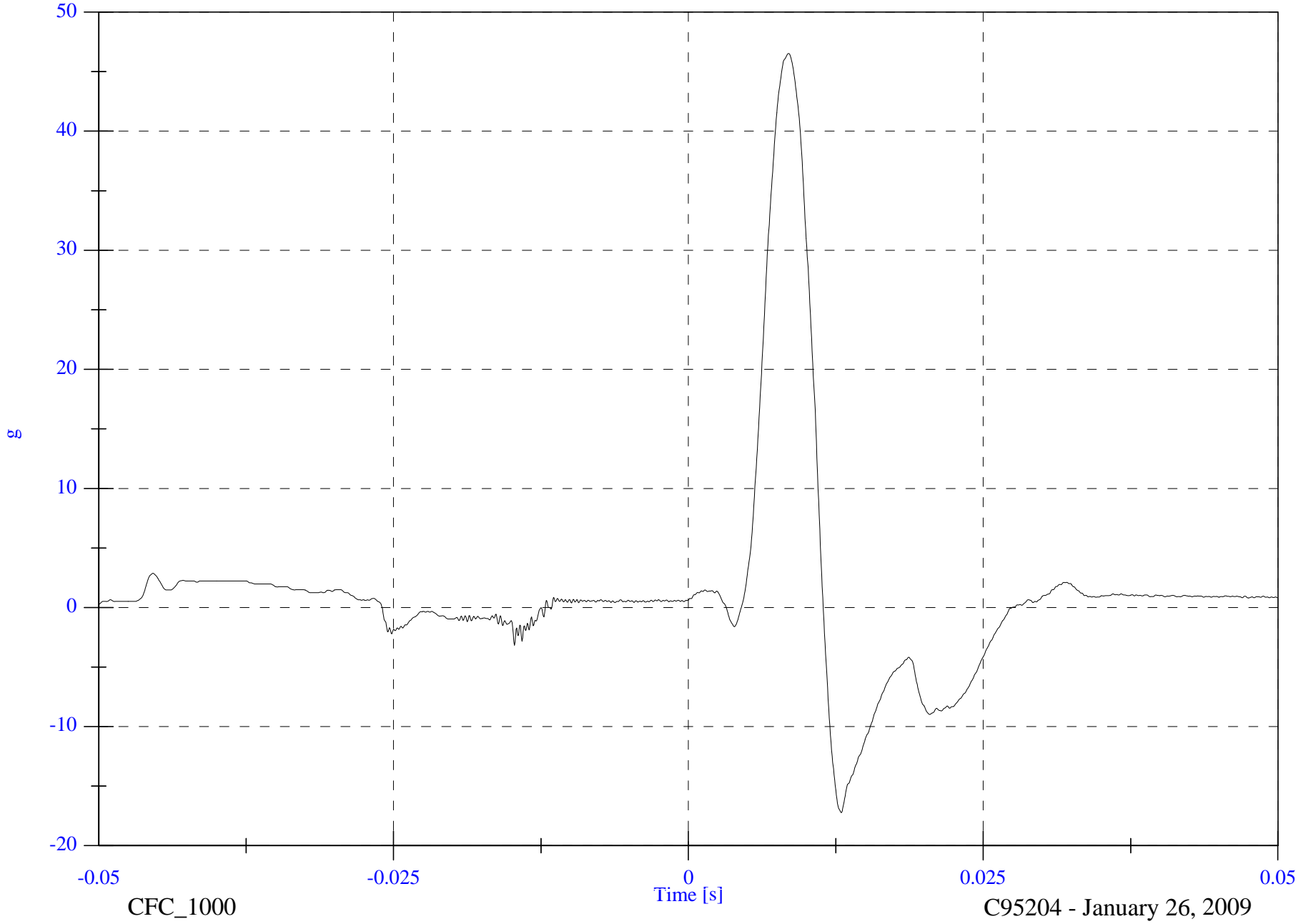
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 46.5 [g] at 0.009 [s]

Min: -17.2 [g] at 0.013 [s]

C95204 PASSENGER SIDE UROP IMPACT PLOT #3



CFC\_1000

C95204 - January 26, 2009

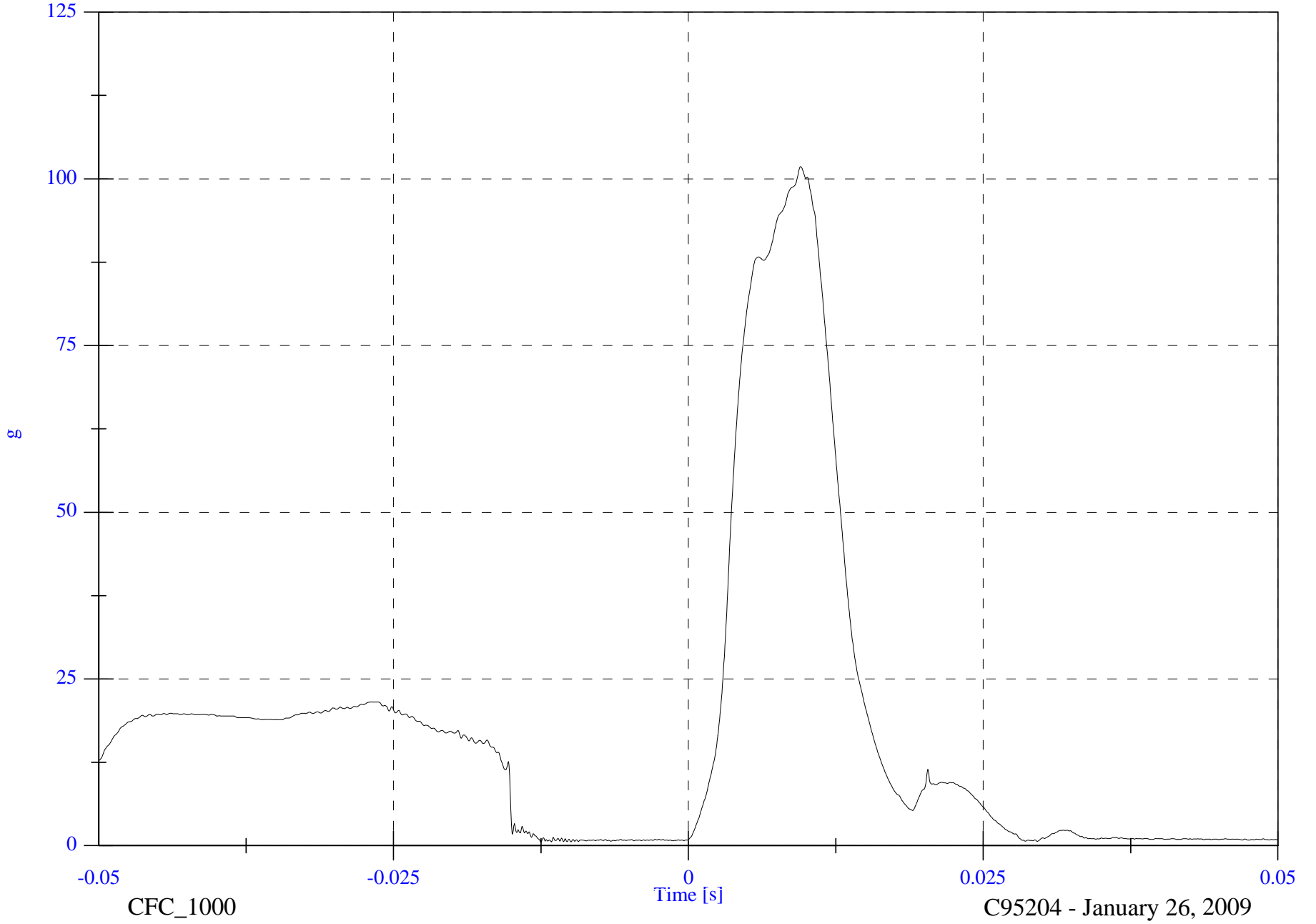
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 101.8 [g] at 0.010 [s]

Min: 0.5 [g] at -0.013 [s]

C95204 PASSENGER SIDE UROP IMPACT PLOT #4



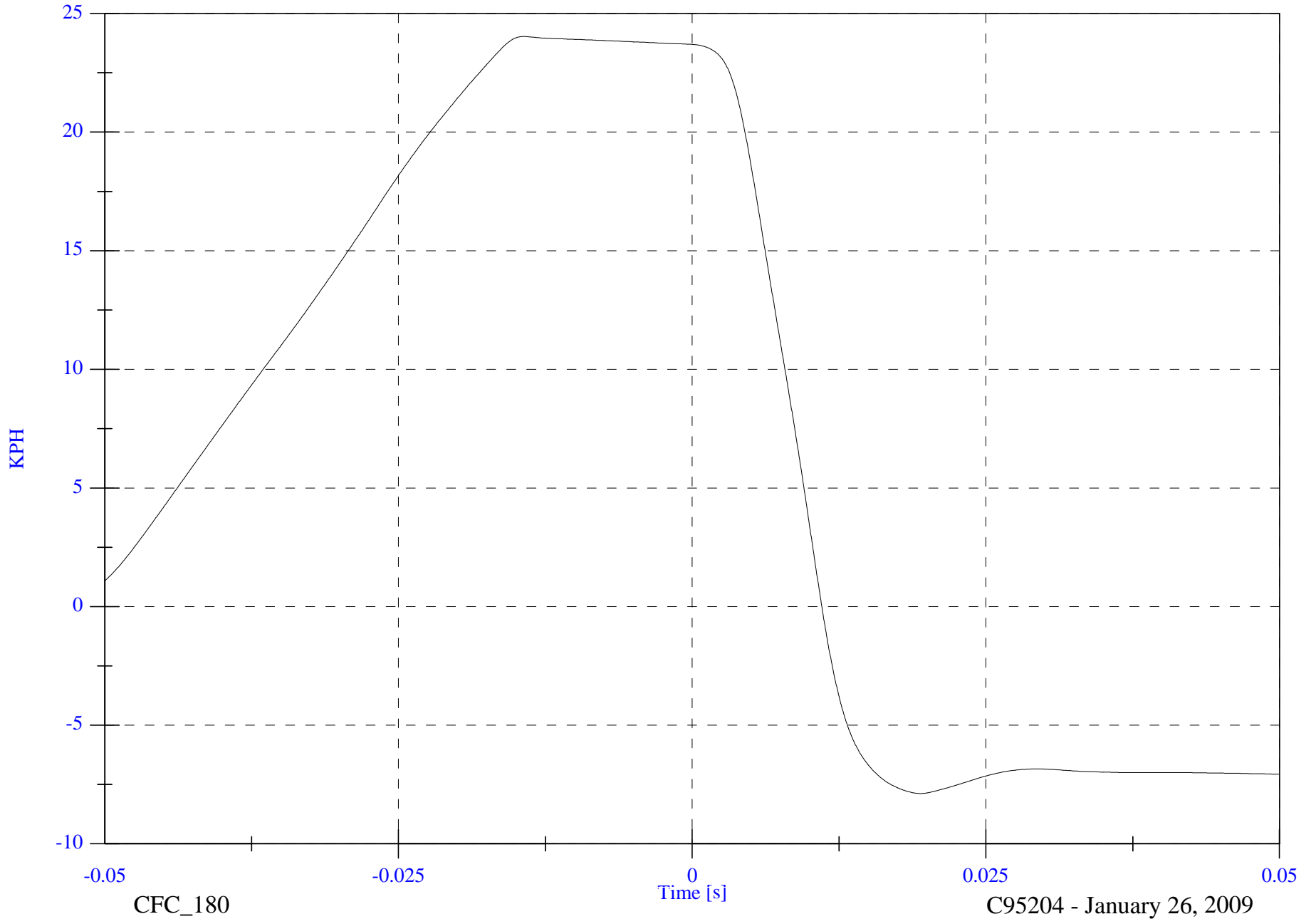
FMVSS 201U 09 Nissan Murano

Max: 24.0 [KPH] at -0.014 [s]

Min: -7.9 [KPH] at 0.019 [s]

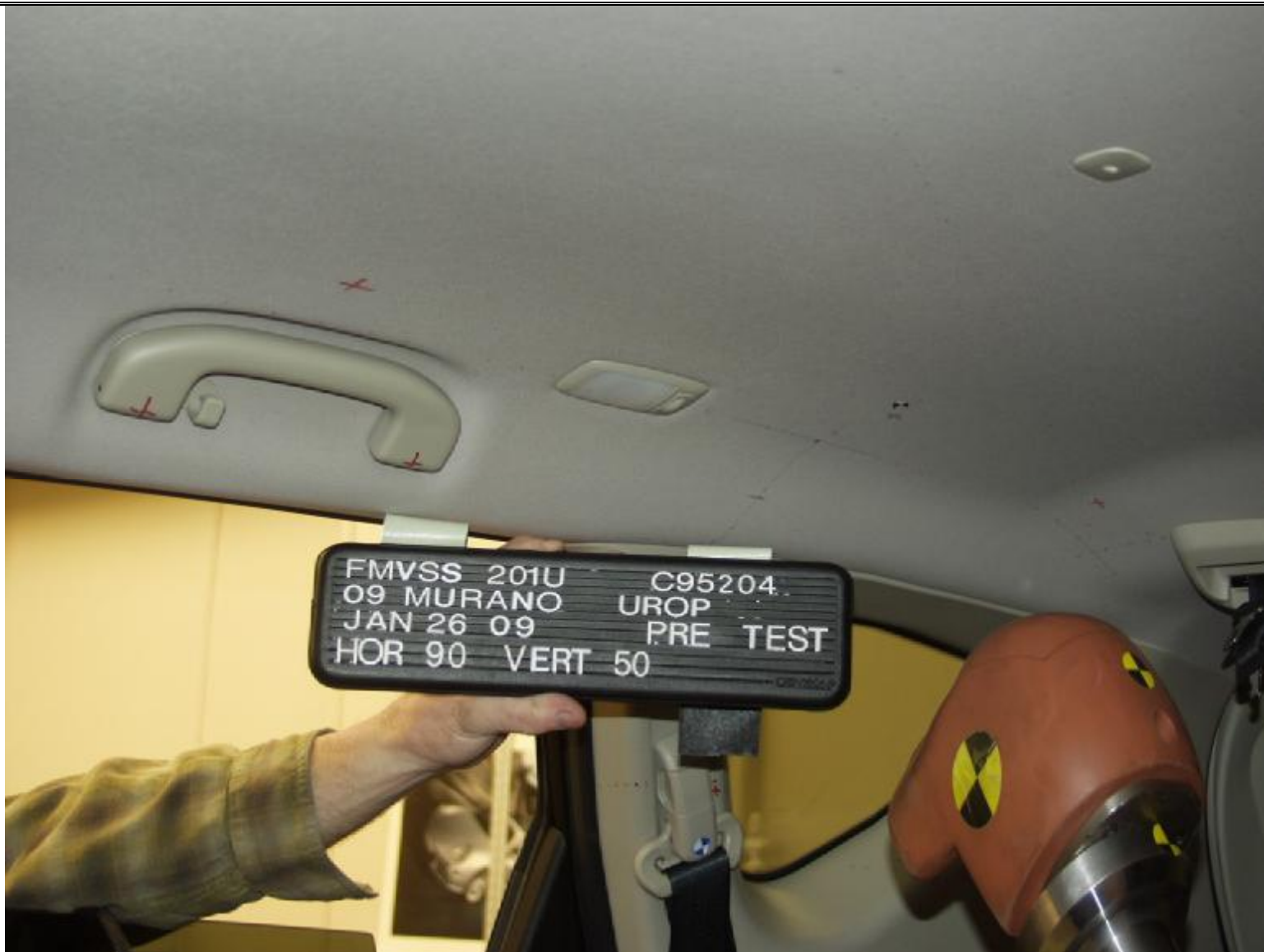
### Headform Velocity

C95204 PASSENGER SIDE UROP IMPACT PLOT #5



CFC\_180

C95204 - January 26, 2009



PRE-IMPACT UROP



POST-IMPACT UROP

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	03
Test Date:	01/26/09
Target Location:	REAR PILLAR
Target Code:	RP2
Horizontal Impact Angle:	72°
Vertical Impact Angle:	-5°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	10:00
Headform Number:	1140

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	13	<input type="checkbox"/>	mm right	<input checked="" type="checkbox"/>	mm left
On Centerline	4				mm up



POST-IMPACT RP2 HEADFORM

Free Motion HIC	301.6
HIC(d)	393.9
Impact Velocity (kph)	23.60
HIC T1 (msec)	1.5
HIC T2 (msec)	17.4



# FMVSS 201U 09 Nissan Murano C95204 - RP2

FMH Headform 1140

Location: RP2

Test Date: January 26, 2009

Work File: RP2

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 393.9

Lab Humidity: 13 %

HIC (36ms): 301.6

Velocity at Impact: 23.60 KPH

t1: 1.5 msec

t2: 17.4 msec

Free Flight Distance: 220.51 mm

Duration: 15.9 msec

Average Acceleration: 10.0 g

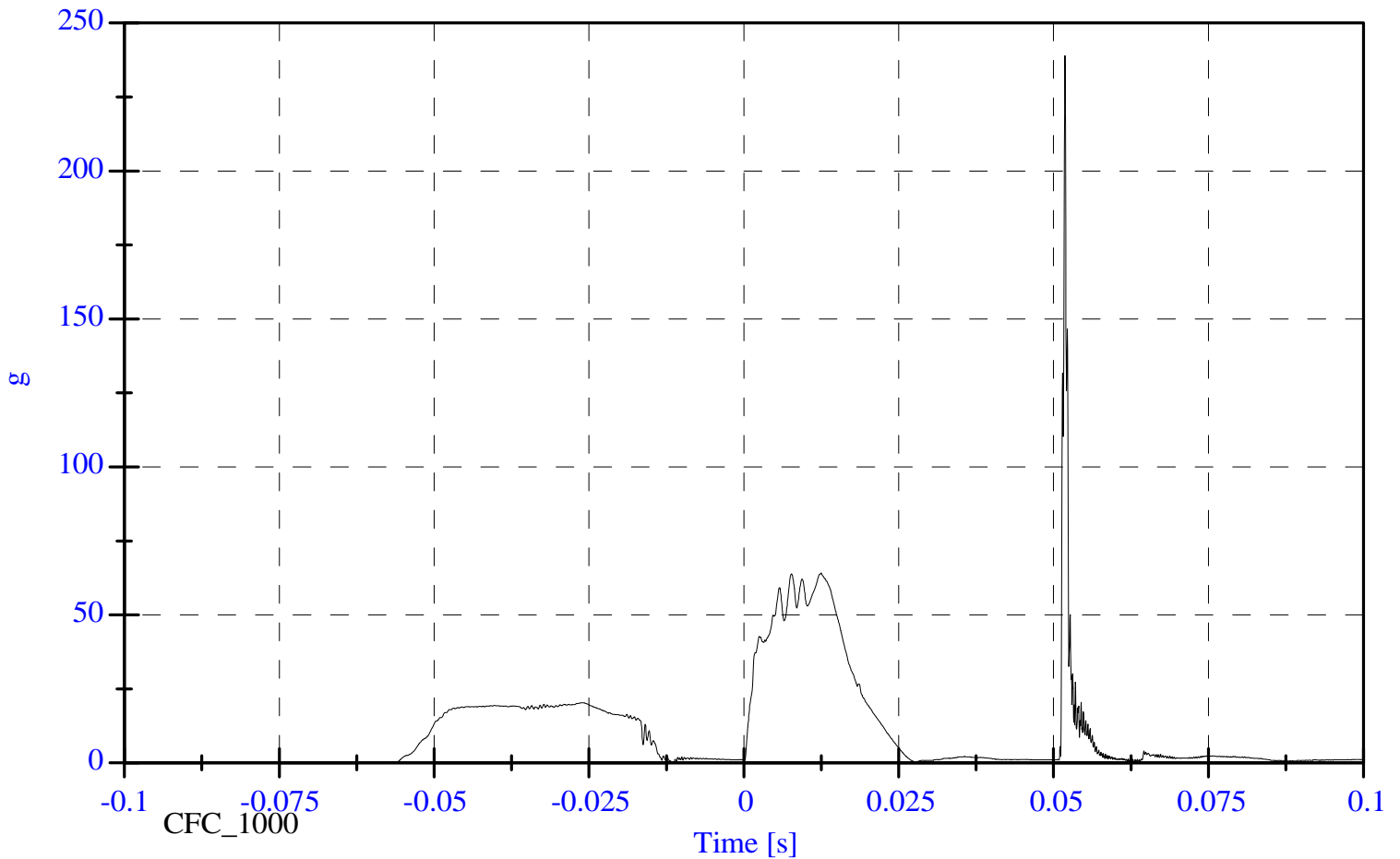
Maximum: 64.1 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 64.1 [g] at 0.012 [s]

Min: 0.0 [g] at -0.094 [s]



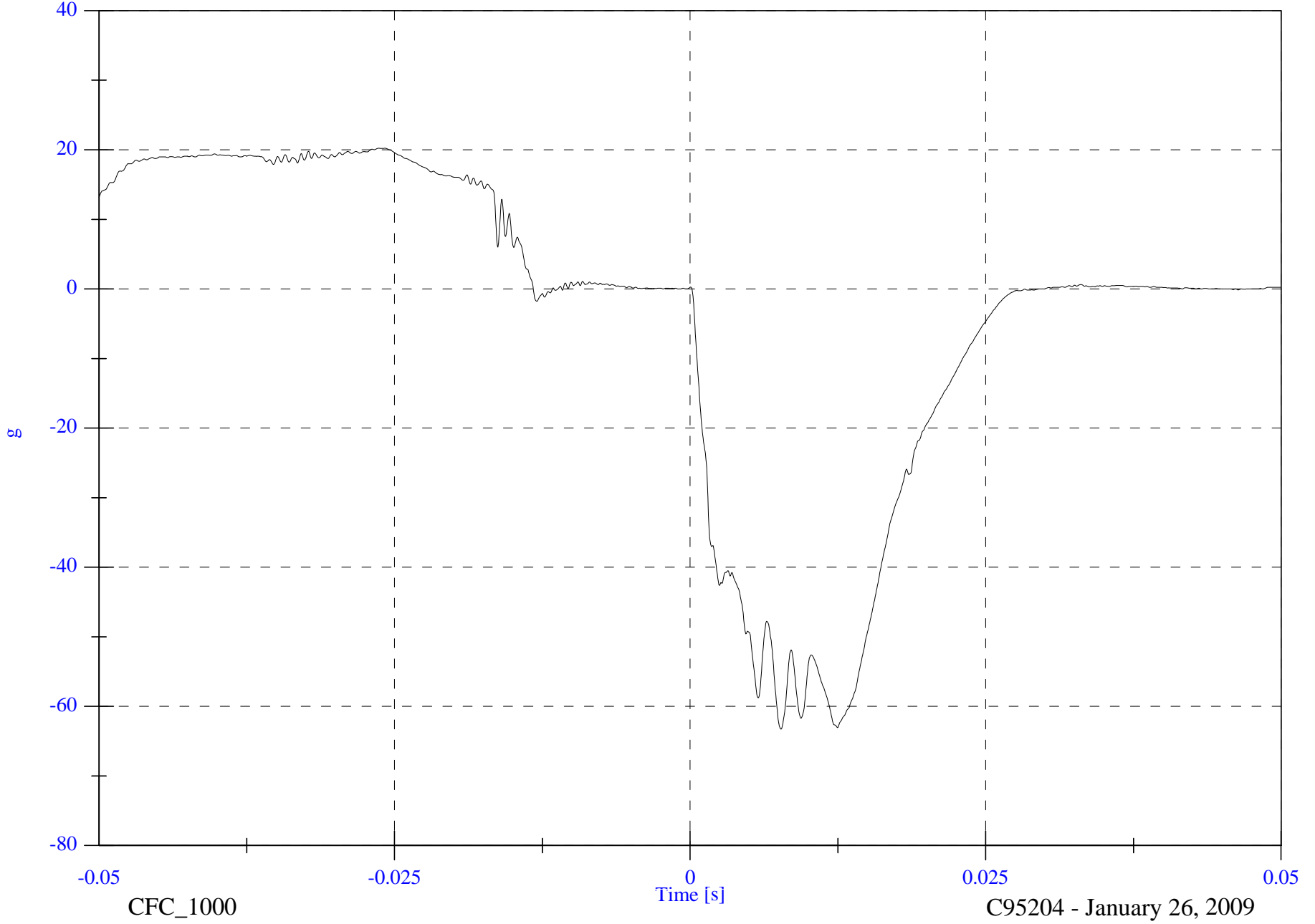
FMVSS 201U 09 Nissan Murano

Headform X Acceleration

Max: 20.2 [g] at -0.026 [s]

Min: -63.3 [g] at 0.008 [s]

C95204 PASSENGER SIDE RP2 IMPACT PLOT #1



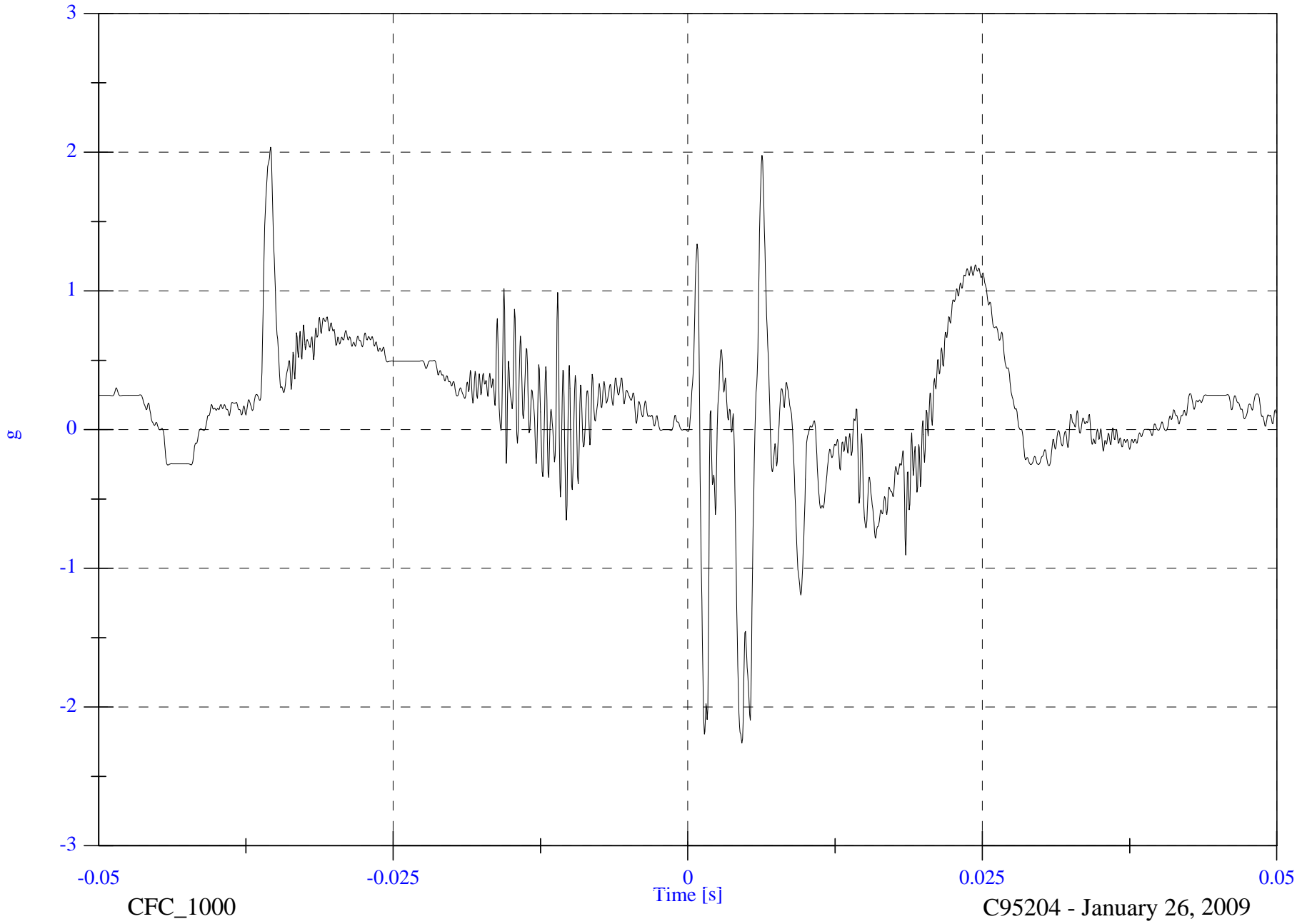
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 2.0 [g] at -0.035 [s]

Min: -2.3 [g] at 0.005 [s]

C95204 PASSENGER SIDE RP2 IMPACT PLOT #2



CFC\_1000

C95204 - January 26, 2009

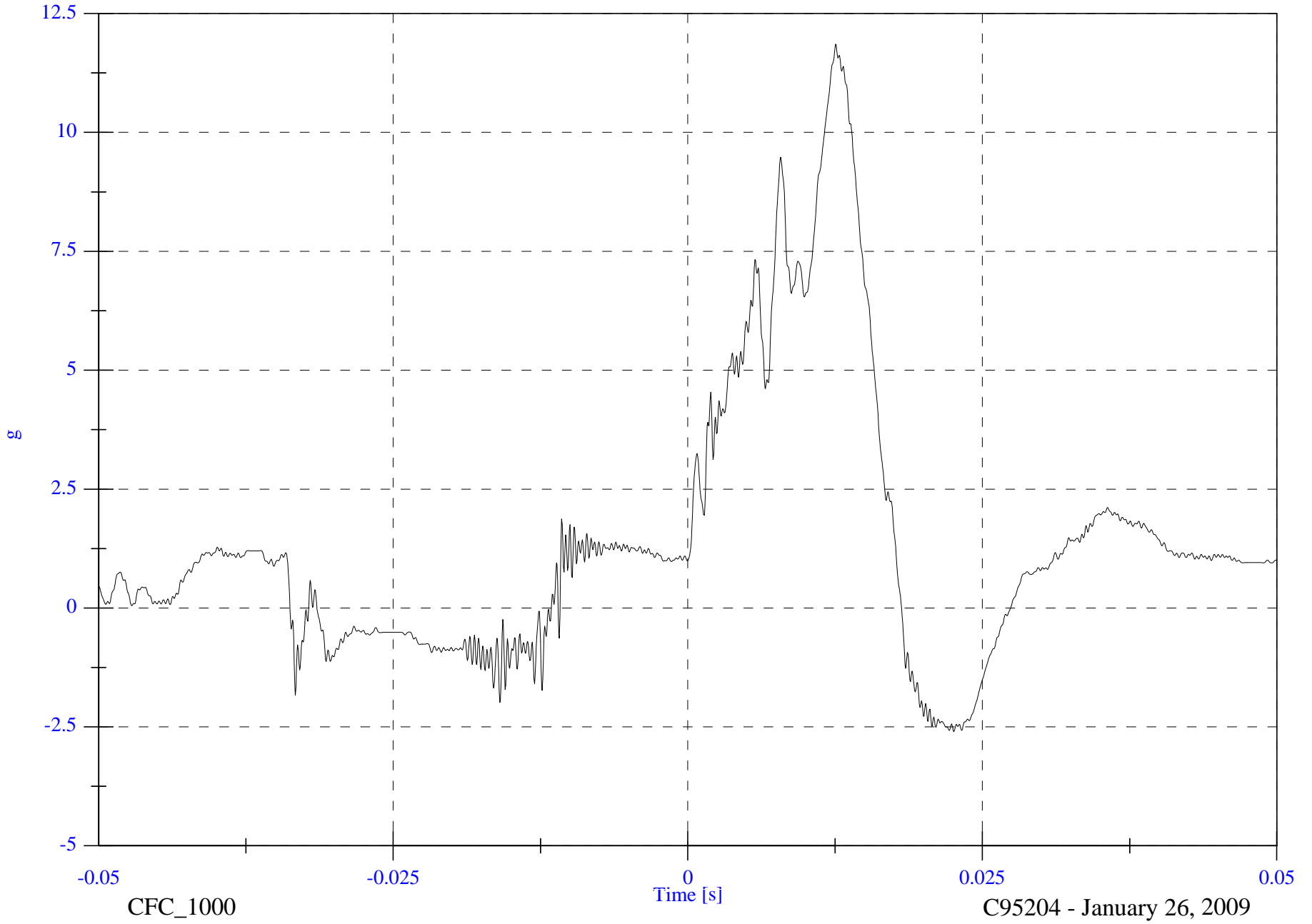
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 11.9 [g] at 0.013 [s]

Min: -2.6 [g] at 0.023 [s]

C95204 PASSENGER SIDE RP2 IMPACT PLOT #3



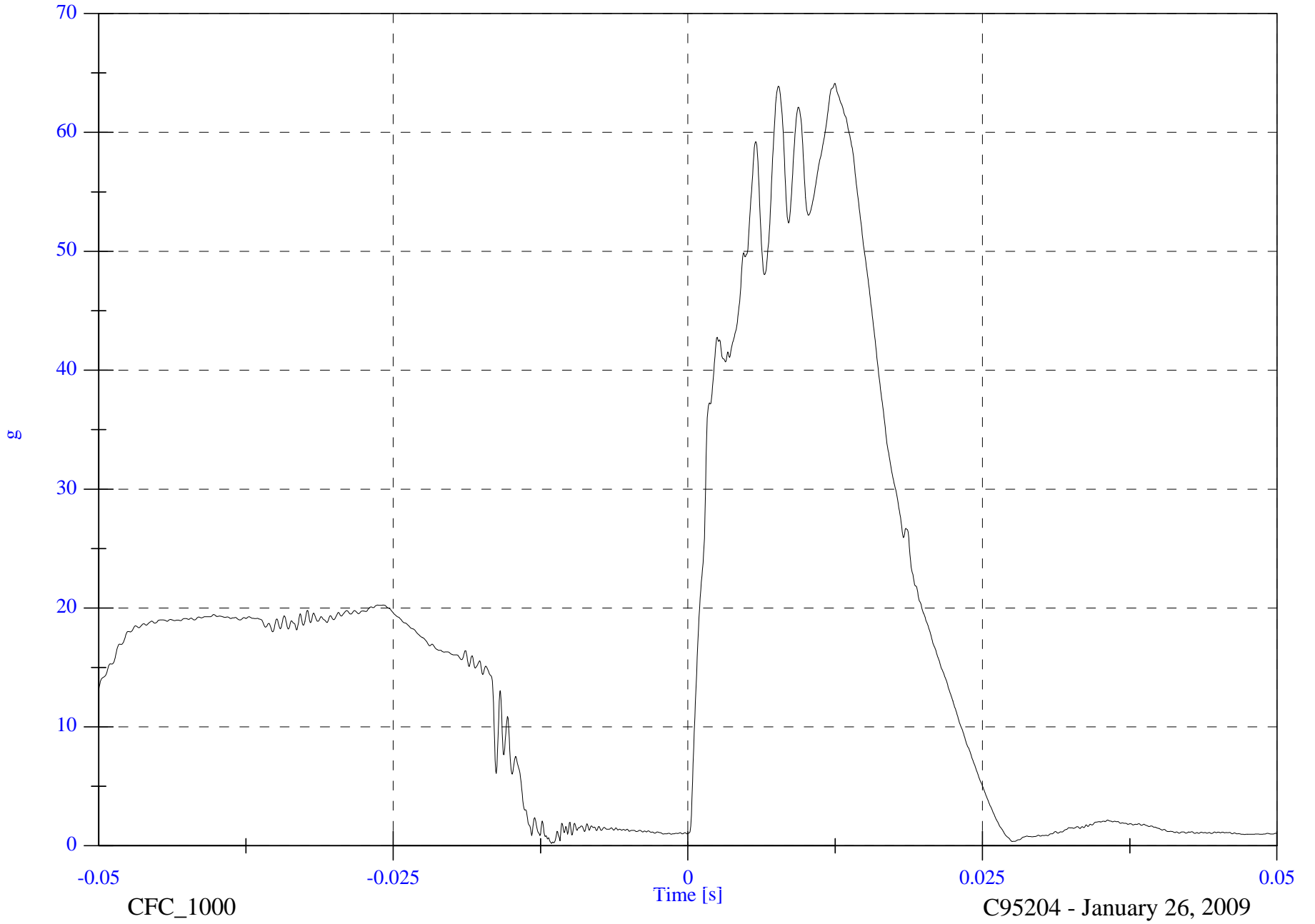
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 64.1 [g] at 0.012 [s]

Min: 0.2 [g] at -0.012 [s]

C95204 PASSENGER SIDE RP2 IMPACT PLOT #4

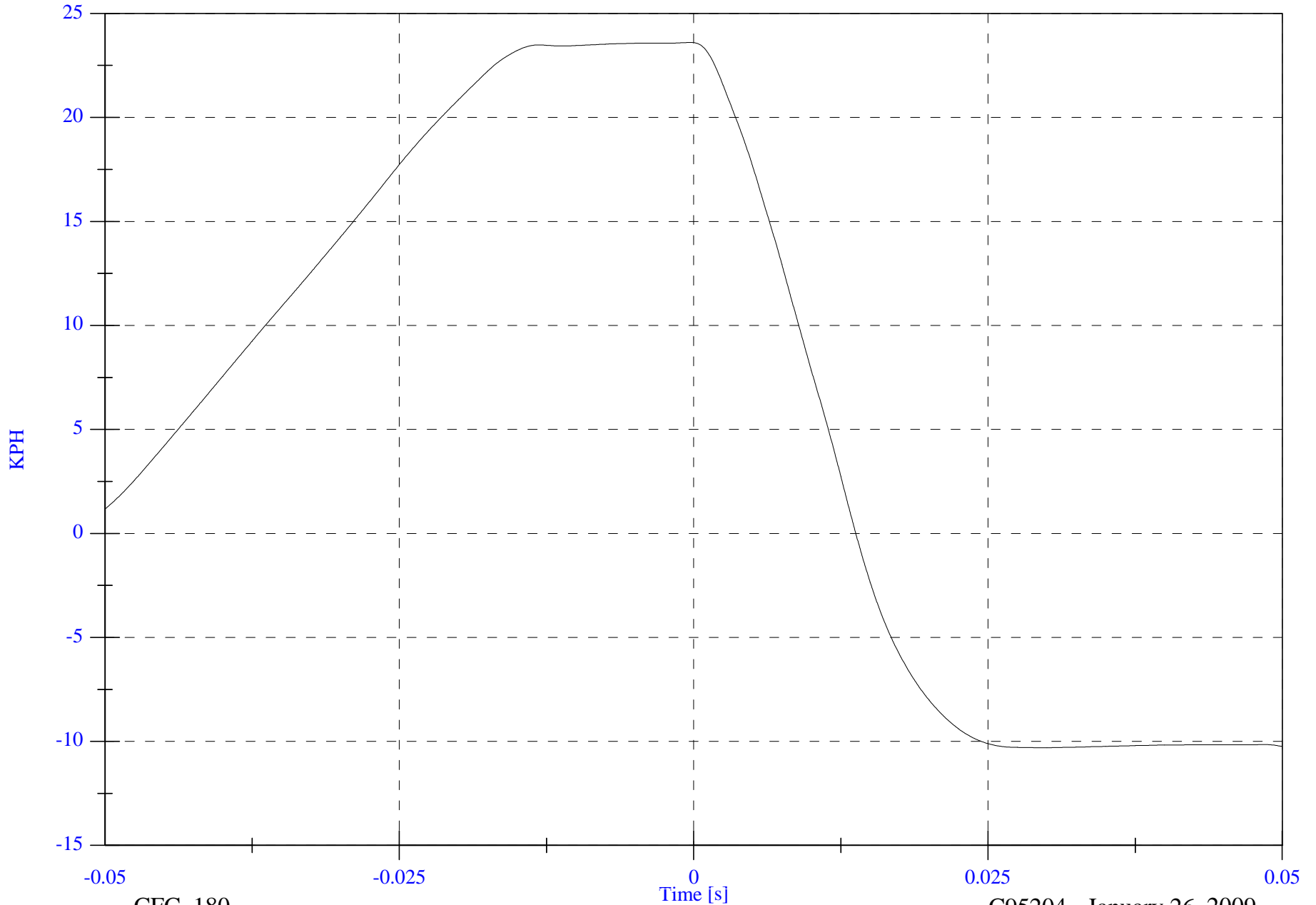


FMVSS 201U 09 Nissan Murano

Max: 23.6 [KPH] at -0.000 [s]

Min: -10.3 [KPH] at 0.030 [s]

### Headform Velocity



C95204 PASSENGER SIDE RP2 IMPACT PLOT #5

CFC\_180

C95204 - January 26, 2009



PRE-IMPACT RP2



POST-IMPACT RP2



VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	04
Test Date:	01/26/09
Target Location:	UPPER ROOF
Target Code:	URRP
Horizontal Impact Angle:	52°
Vertical Impact Angle:	50°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	11:00
Headform Number:	0805

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	8	<input checked="" type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	32				mm up



POST-IMPACT URRP HEADFORM

Free Motion HIC	554.4
HIC(d)	584.7
Impact Velocity (kph)	23.59
HIC T1 (msec)	3.8
HIC T2 (msec)	12.5

# FMVSS 201U 09 Nissan Murano C95204 - URRP

FMH Headform 805

Location: URRP

Test Date: January 26, 2009

Work File: URRP

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 584.7

Lab Humidity: 13 %

HIC (36ms): 554.4

Velocity at Impact: 23.59 KPH

t1: 3.8 msec

t2: 12.5 msec

Free Flight Distance: 219.64 mm

Duration: 8.6 msec

Average Acceleration: 10.0 g

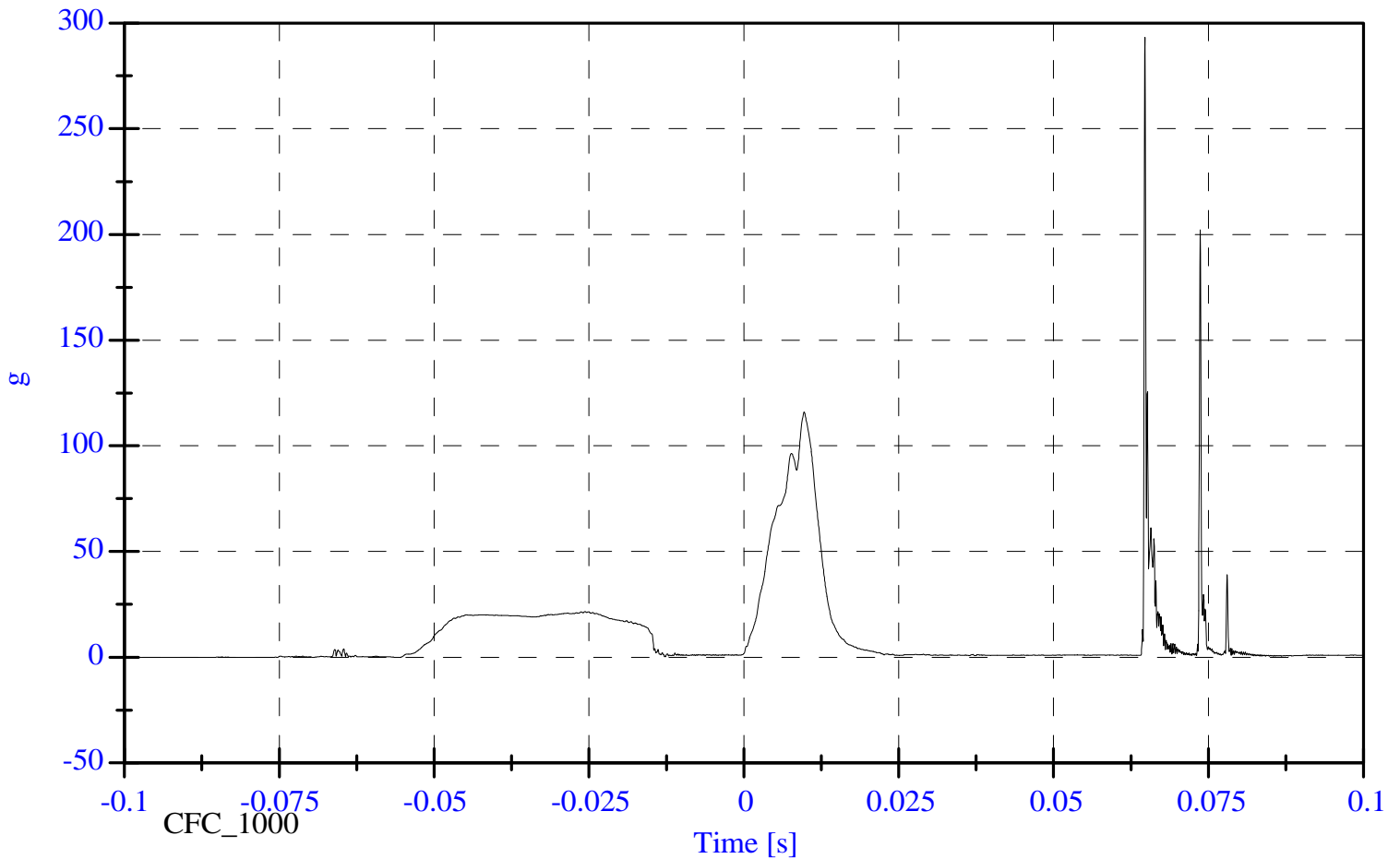
Maximum: 116.0 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 116.0 [g] at 0.010 [s]

Min: -0.0 [g] at -0.099 [s]



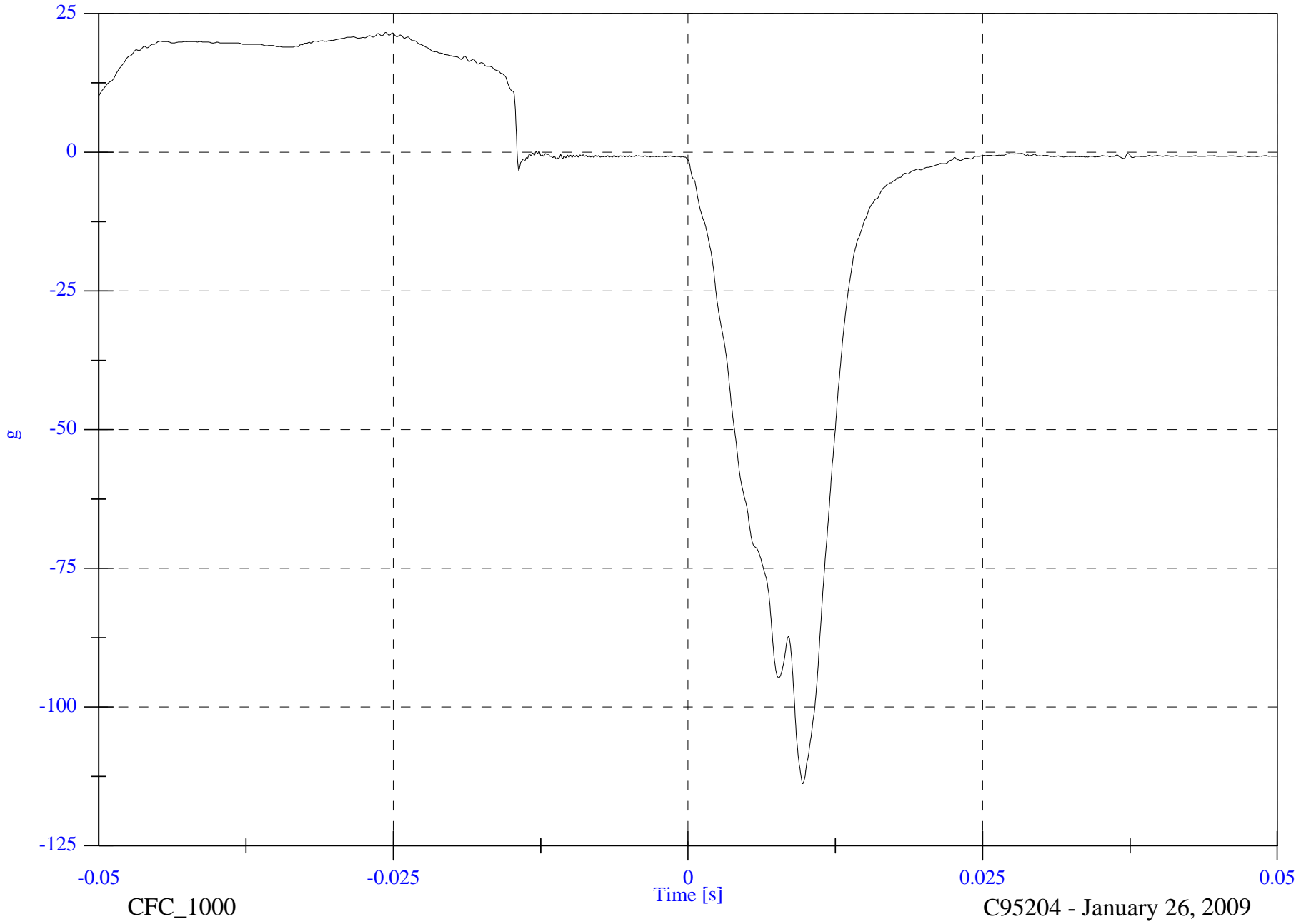
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 21.6 [g] at -0.026 [s]

Min: -113.8 [g] at 0.010 [s]

C95204 PASSENGER SIDE URRP IMPACT PLOT #1



CFC\_1000

C95204 - January 26, 2009

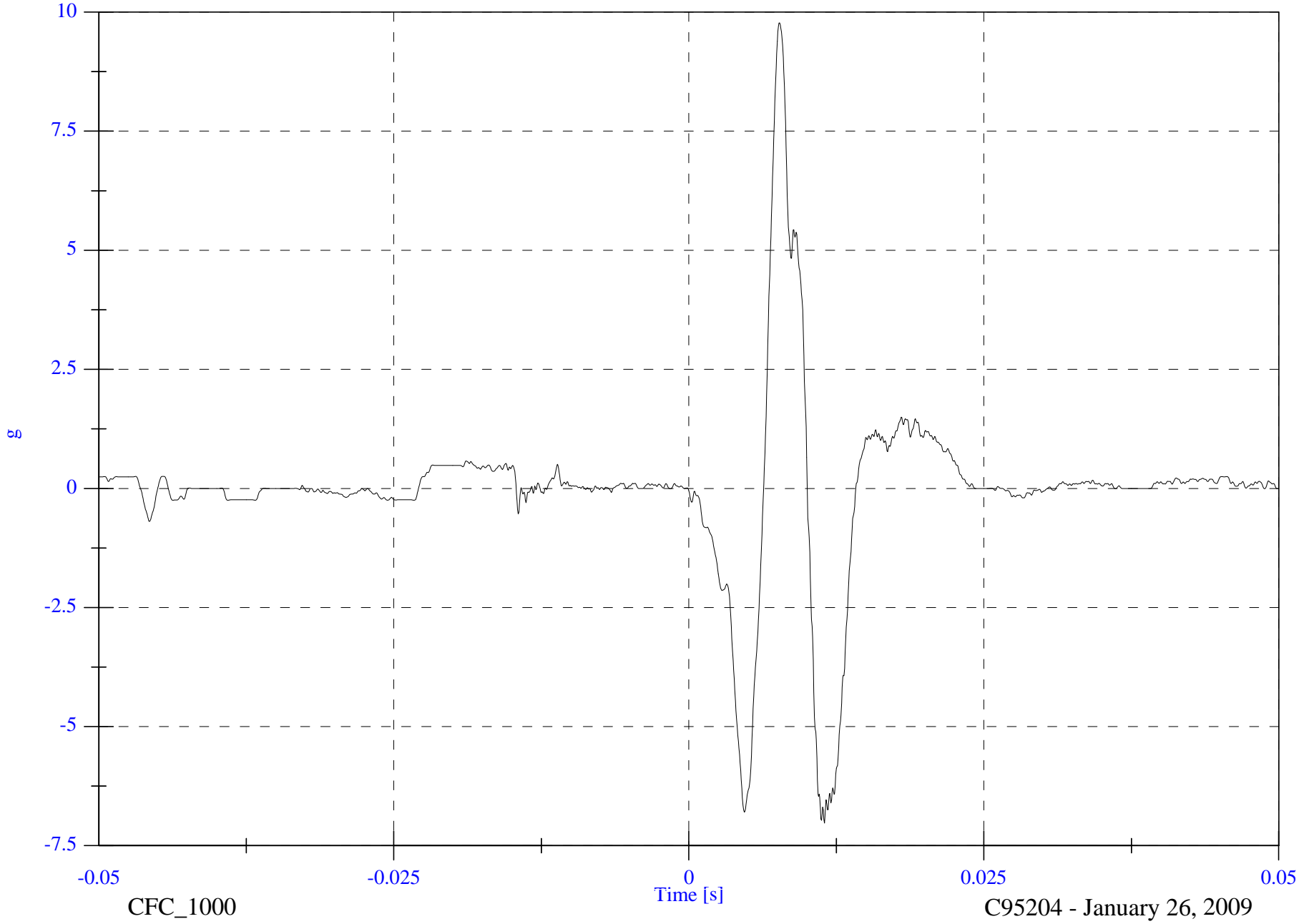
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 9.8 [g] at 0.008 [s]

Min: -7.0 [g] at 0.012 [s]

C95204 PASSENGER SIDE URRP IMPACT PLOT #2



CFC\_1000

C95204 - January 26, 2009

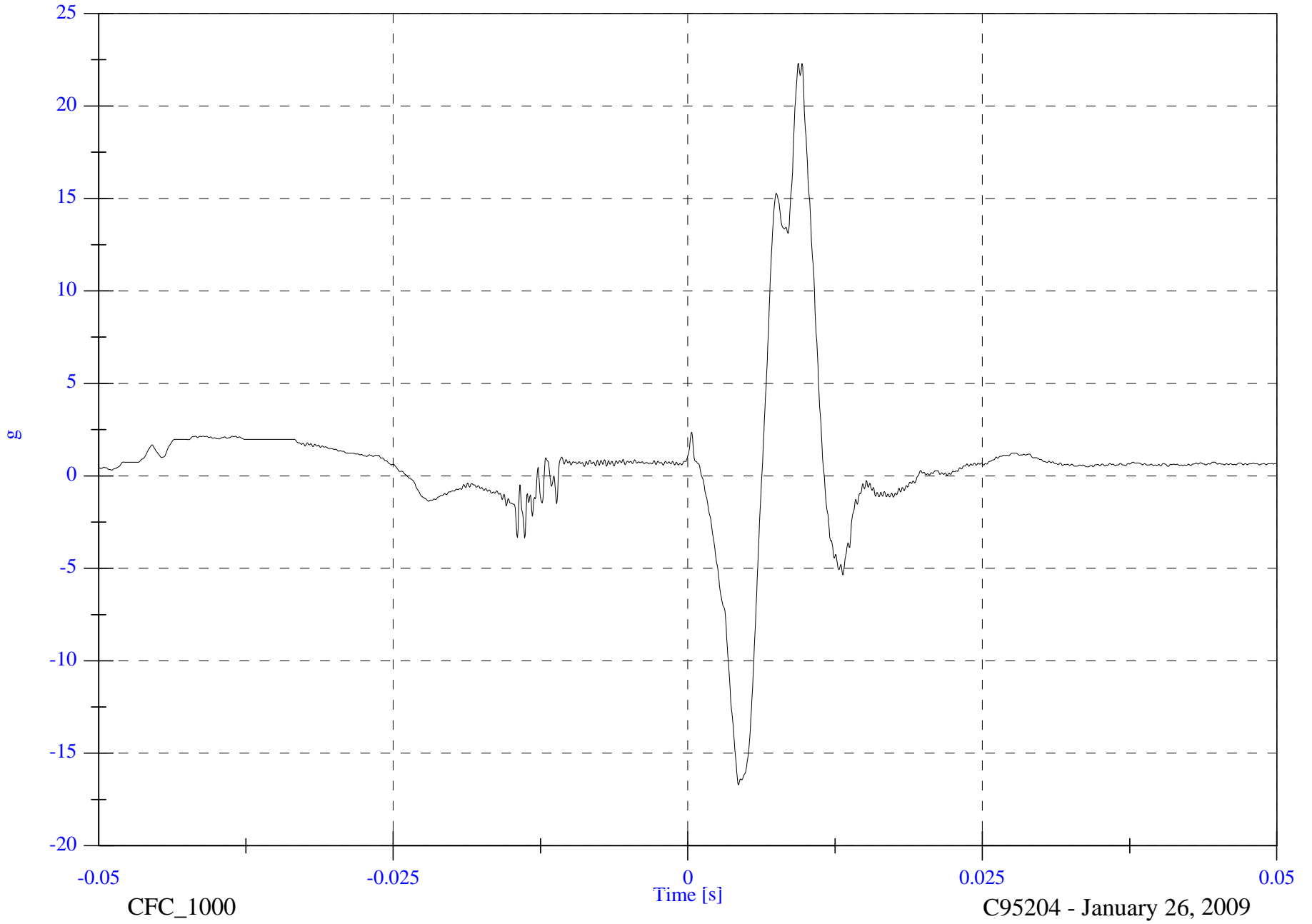
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 22.3 [g] at 0.009 [s]

Min: -16.7 [g] at 0.004 [s]

C95204 PASSENGER SIDE URRP IMPACT PLOT #3



CFC\_1000

C95204 - January 26, 2009

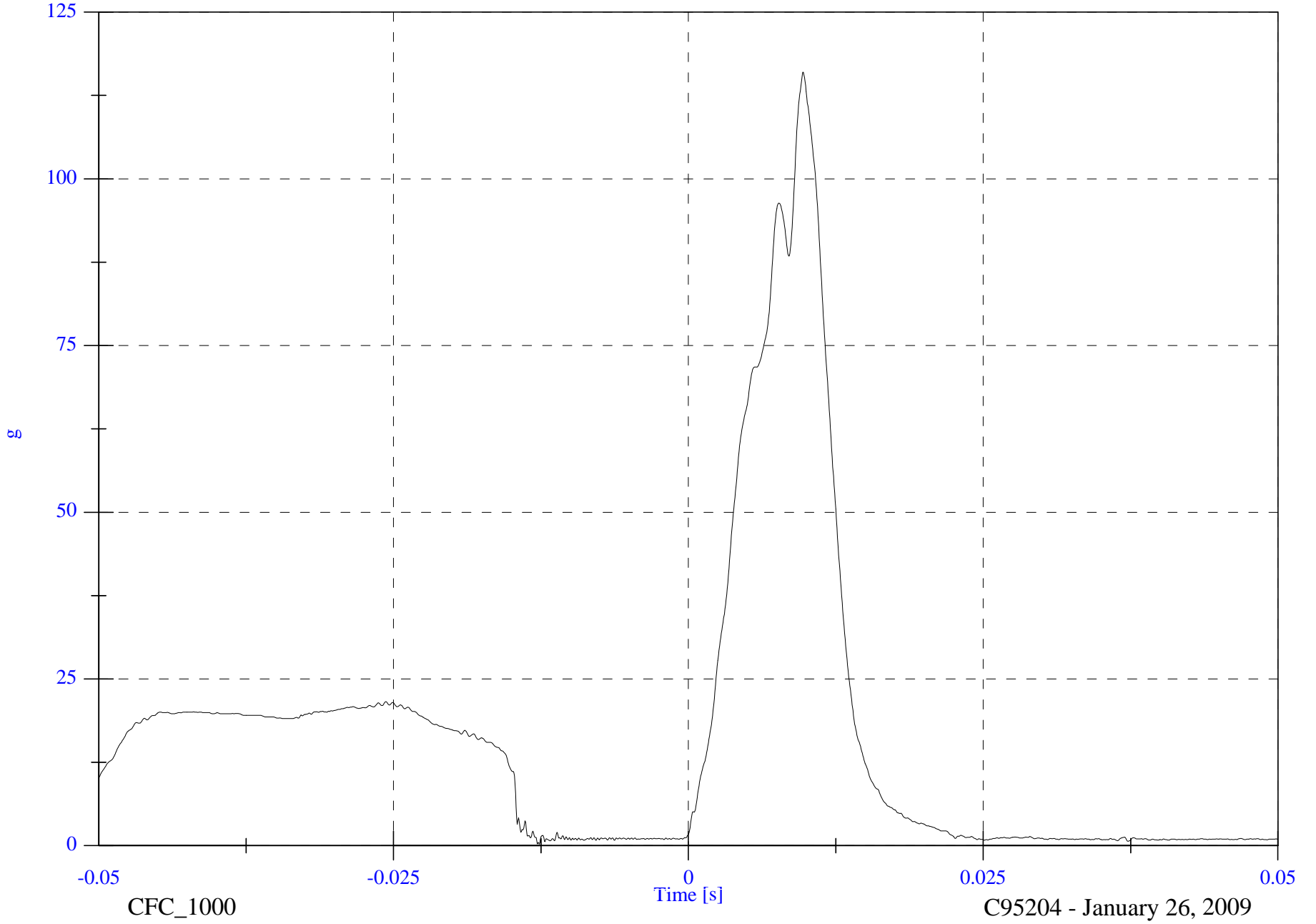
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 116.0 [g] at 0.010 [s]

Min: 0.2 [g] at -0.013 [s]

C95204 PASSENGER SIDE URRP IMPACT PLOT #4

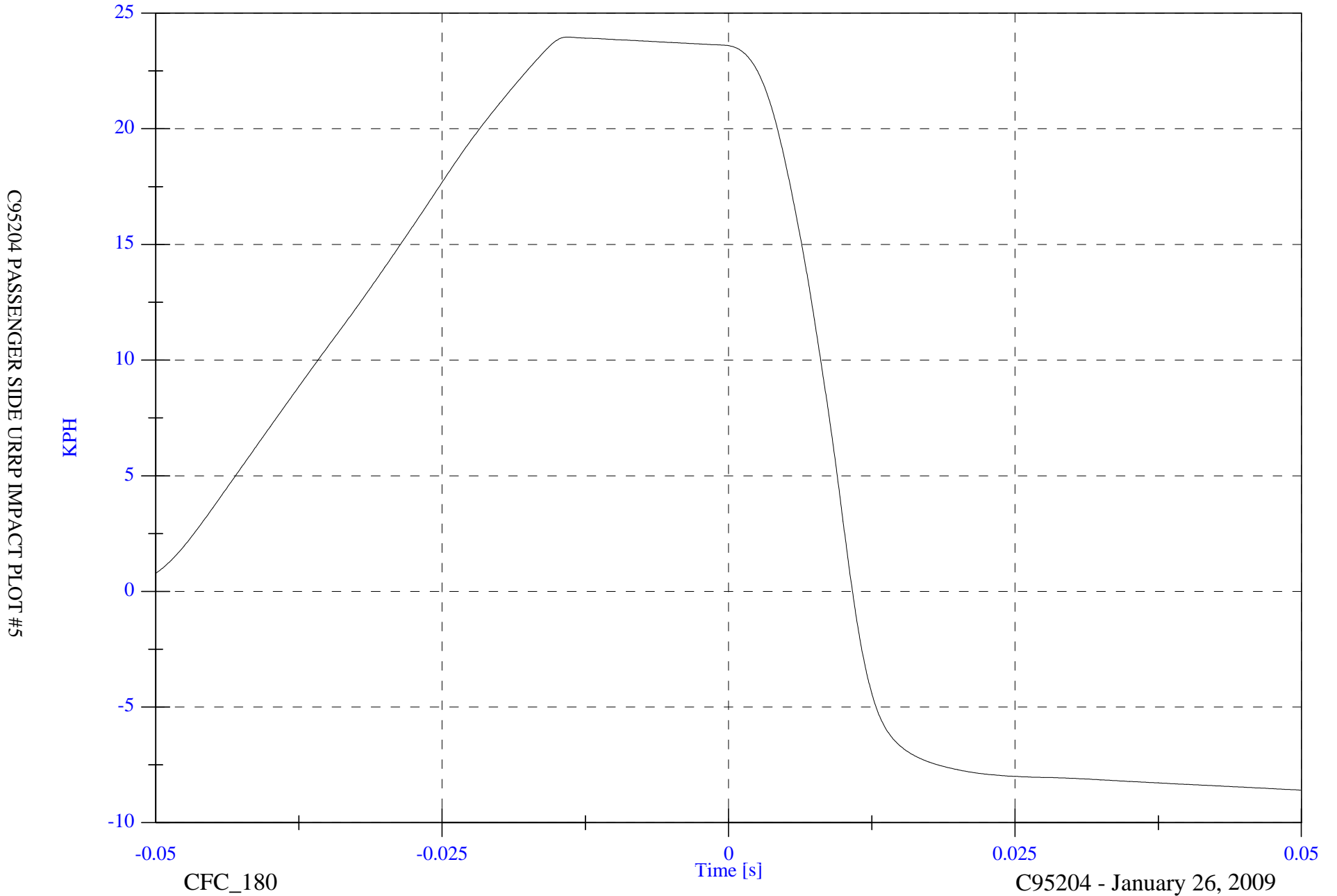


FMVSS 201U 09 Nissan Murano

Max: 24.0 [KPH] at -0.014 [s]

Min: -8.6 [KPH] at 0.050 [s]

### Headform Velocity



C95204 PASSENGER SIDE URRP IMPACT PLOT #5

CFC\_180

C95204 - January 26, 2009



PRE-IMPACT URRP



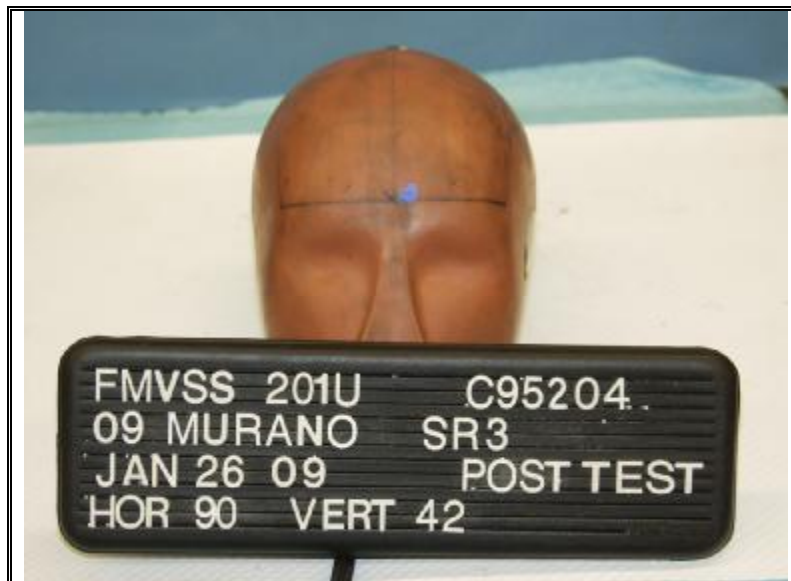


POST-IMPACT URRP

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	05
Test Date:	01/26/09
Target Location:	SIDE RAIL
Target Code:	SR3
Horizontal Impact Angle:	90°
Vertical Impact Angle:	42°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	11:25
Headform Number:	0062

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	6	<input type="checkbox"/>	mm right <input checked="" type="checkbox"/> mm left
On Centerline	2		mm up



POST-IMPACT SR3 HEADFORM

Free Motion HIC	266.1
HIC(d)	367.2
Impact Velocity (kph)	18.78
HIC T1 (msec)	1.1
HIC T2 (msec)	9.3

# FMVSS 201U 09 Nissan Murano C95204 - SR3

FMH Headform 0062

Location: SR3

Test Date: January 26, 2009

Work File: SR3

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 367.2

Lab Humidity: 13 %

HIC (36ms): 266.1

Velocity at Impact: 18.78 KPH

t1: 1.1 msec

t2: 9.3 msec

Free Flight Distance: 217.44 mm

Duration: 8.2 msec

Average Acceleration: 6.7 g

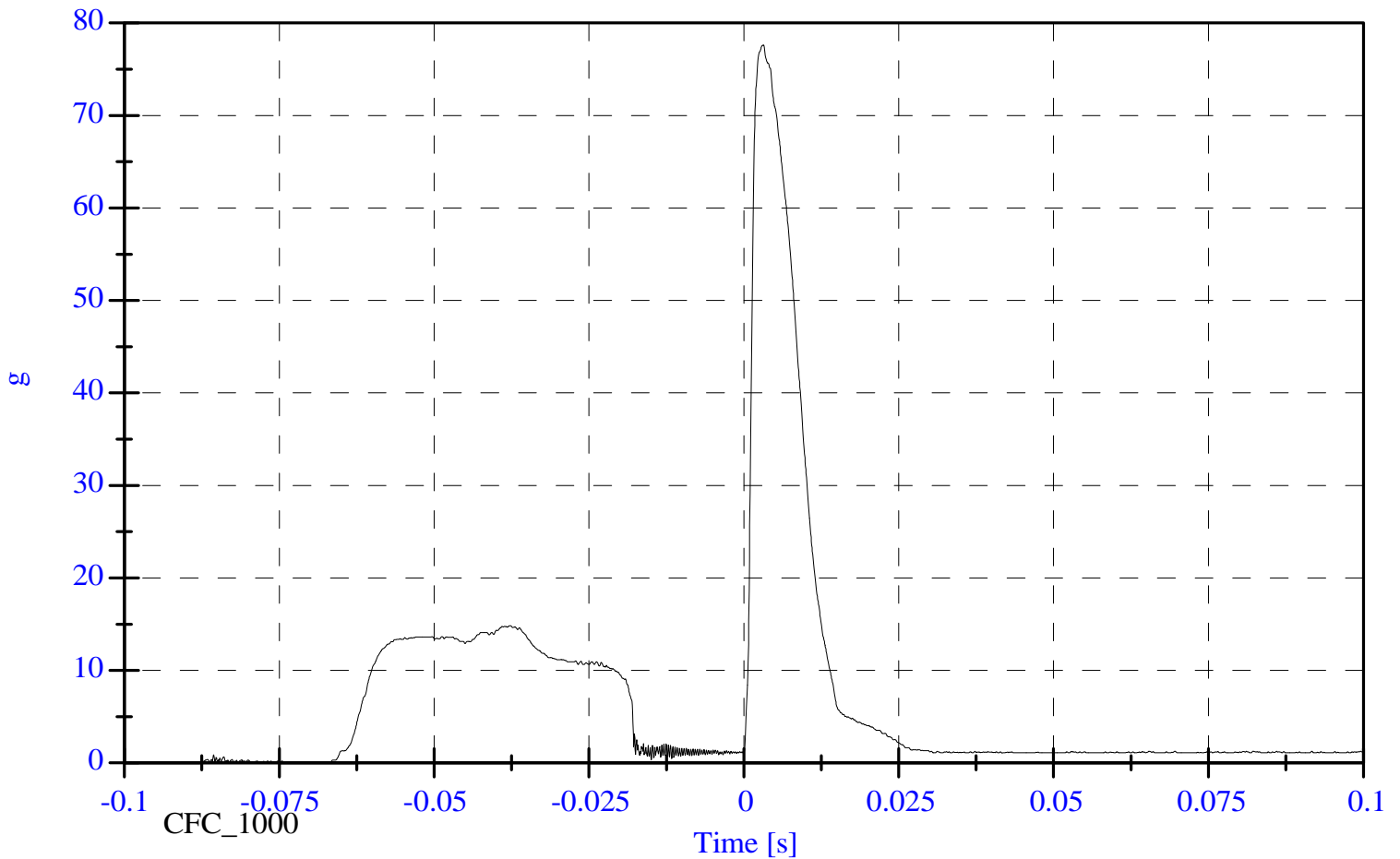
Maximum: 77.6 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 77.6 [g] at 0.003 [s]

Min: 0.0 [g] at -0.098 [s]



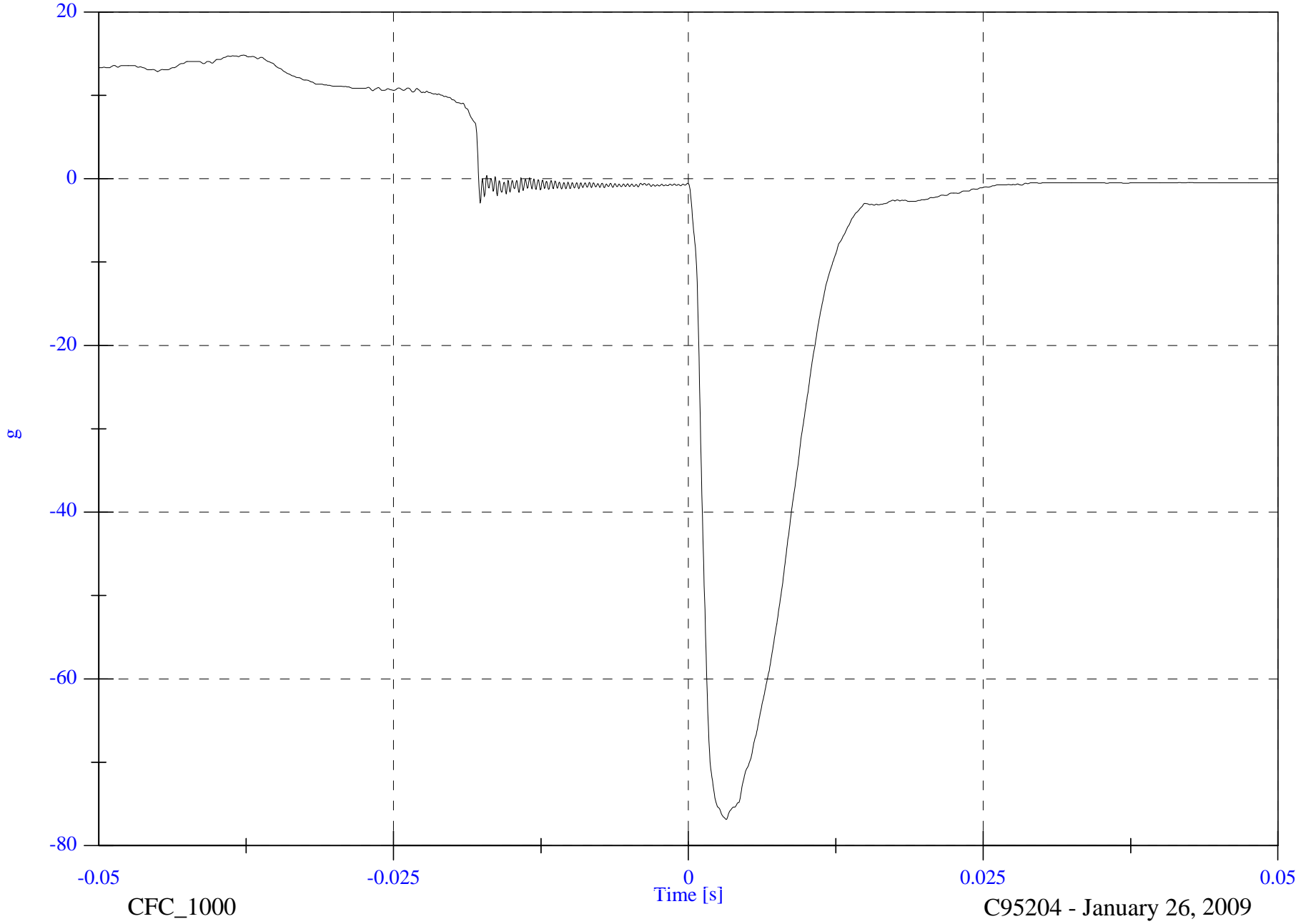
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 14.8 [g] at -0.038 [s]

Min: -76.8 [g] at 0.003 [s]

C95204 PASSENGER SIDE SR3 IMPACT PLOT #1



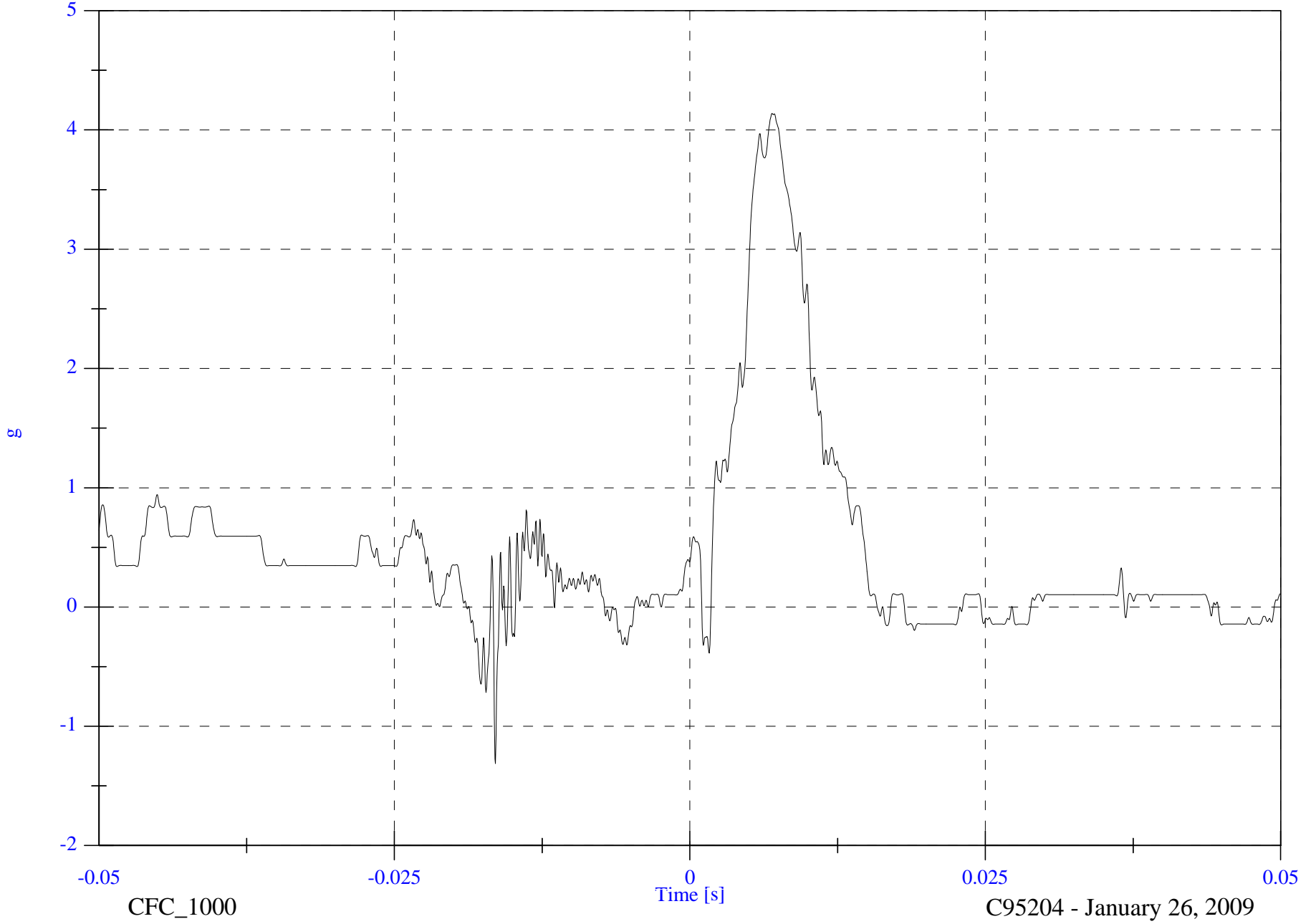
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 4.1 [g] at 0.007 [s]

Min: -1.3 [g] at -0.016 [s]

C95204 PASSENGER SIDE SR3 IMPACT PLOT #2



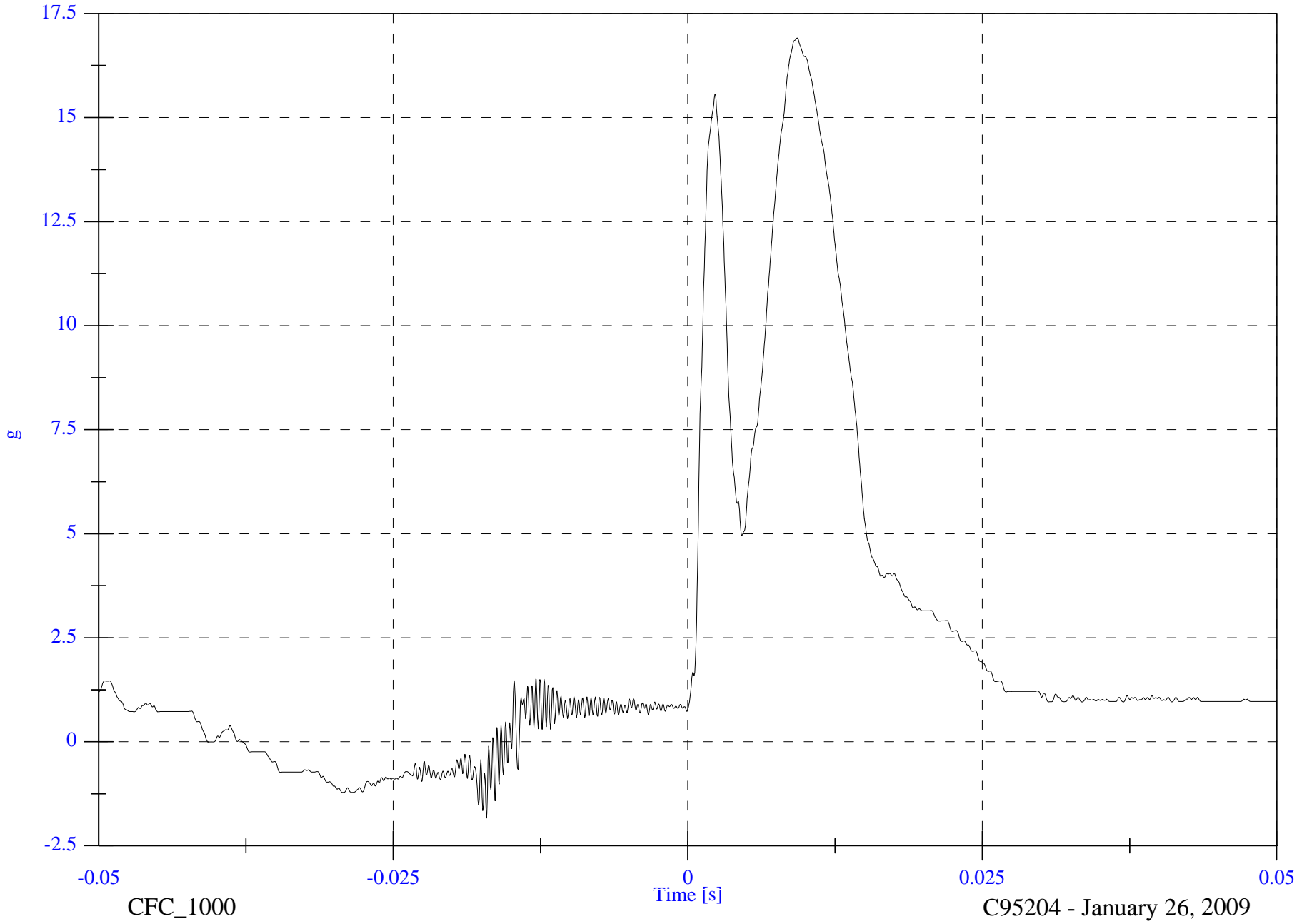
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 16.9 [g] at 0.009 [s]

Min: -1.8 [g] at -0.017 [s]

C95204 PASSENGER SIDE SR3 IMPACT PLOT #3



CFC\_1000

C95204 - January 26, 2009

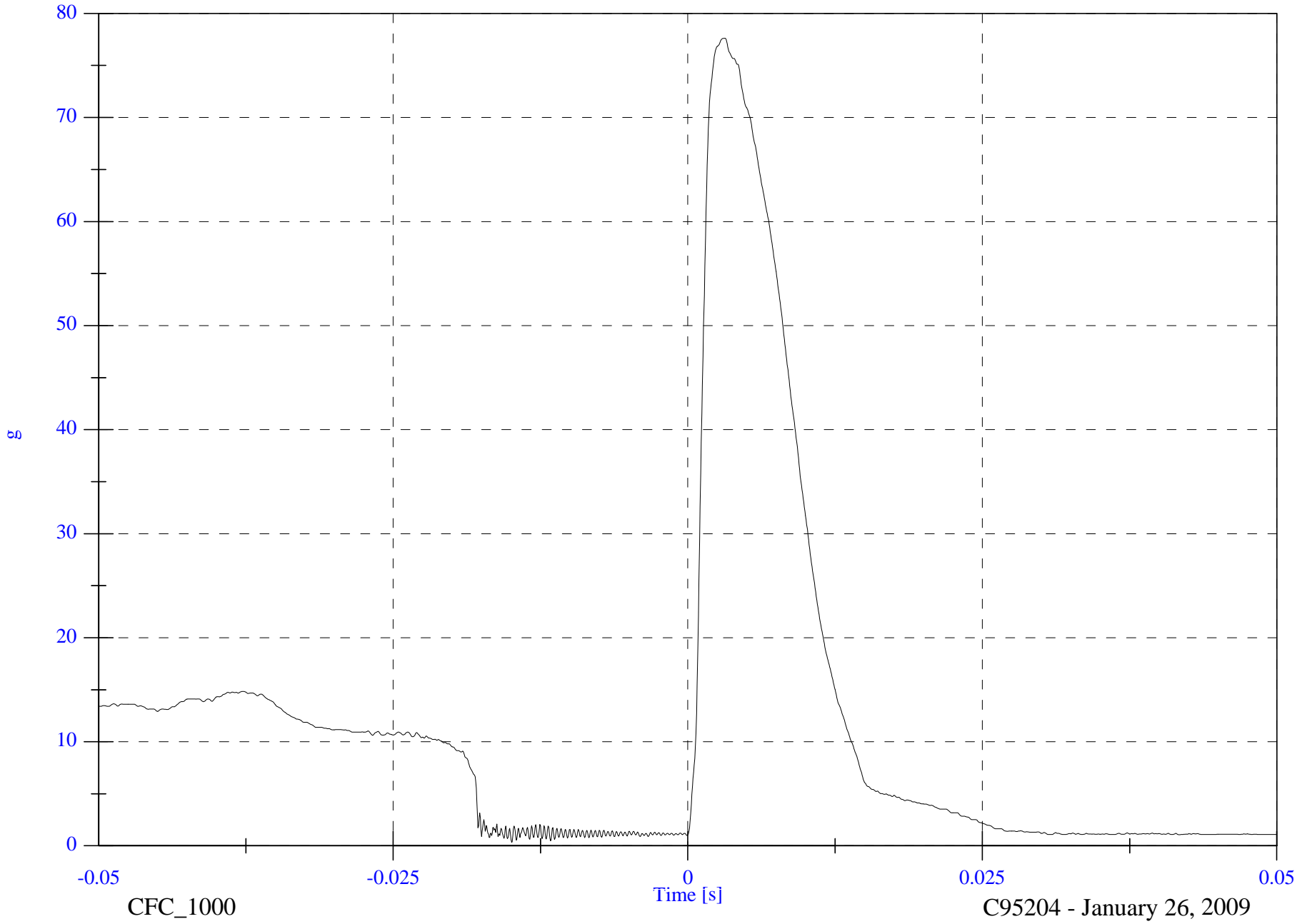
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 77.6 [g] at 0.003 [s]

Min: 0.3 [g] at -0.015 [s]

C95204 PASSENGER SIDE SR3 IMPACT PLOT #4

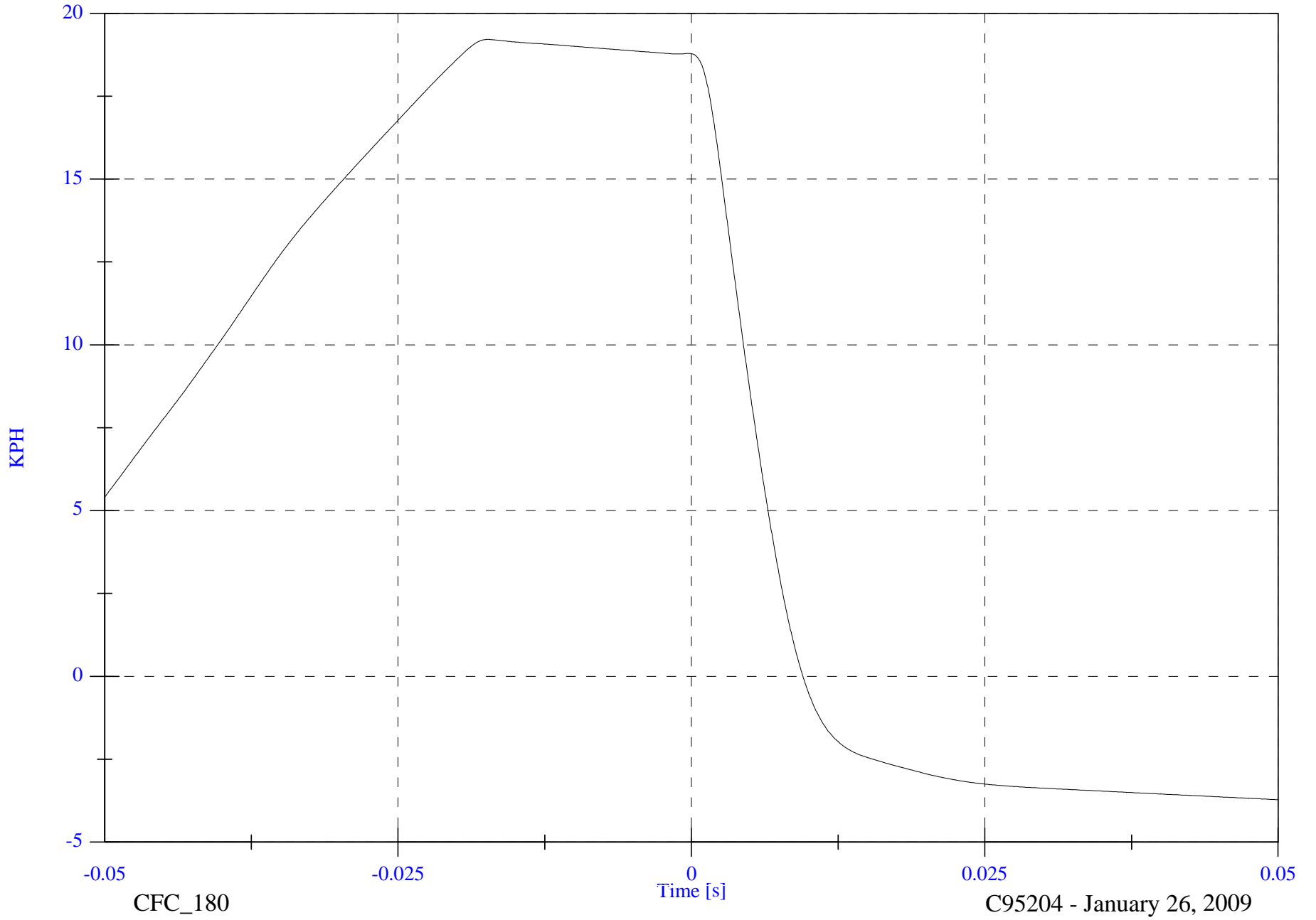


FMVSS 201U 09 Nissan Murano

Max: 19.2 [KPH] at -0.017 [s]  
Min: -3.7 [KPH] at 0.050 [s]

Headform Velocity

C95204 PASSENGER SIDE SR3 IMPACT PLOT #5



CFC\_180

C95204 - January 26, 2009





PRE-IMPACT SR3

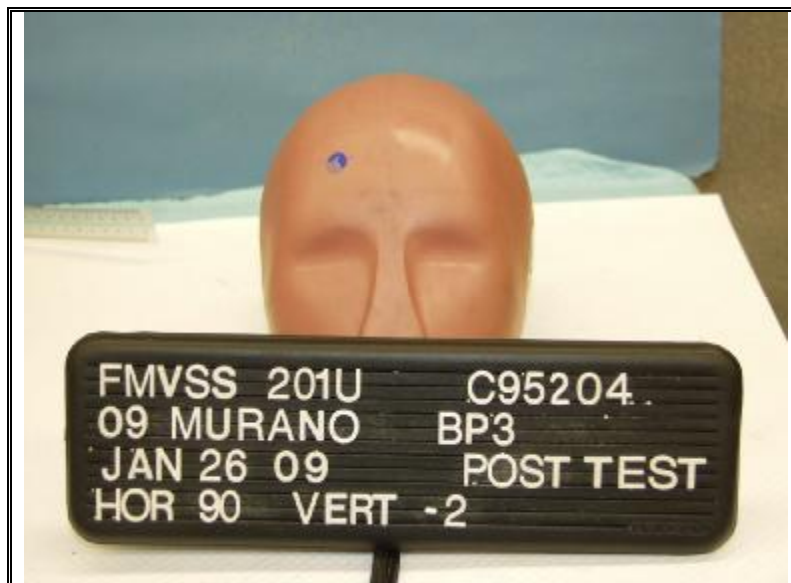


POST-IMPACT SR3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	06
Test Date:	01/26/09
Target Location:	B-PILLAR
Target Code:	BP3
Horizontal Impact Angle:	90°
Vertical Impact Angle:	-2°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	13:15
Headform Number:	1142

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	26	<input checked="" type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	16				mm up



POST-IMPACT BP3 HEADFORM

Free Motion HIC	367.2
HIC(d)	443.5
Impact Velocity (kph)	23.44
HIC T1 (msec)	1.9
HIC T2 (msec)	11.3

# FMVSS 201U 09 Nissan Murano C95204 - BP3

FMH Headform 1142

Location: BP3

Test Date: January 26, 2009

Work File: BP3

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 443.5

Lab Humidity: 13 %

HIC (36ms): 367.2

Velocity at Impact: 23.44 KPH

t1: 1.9 msec

t2: 11.3 msec

Free Flight Distance: 222.12 mm

Duration: 9.4 msec

Average Acceleration: 8.4 g

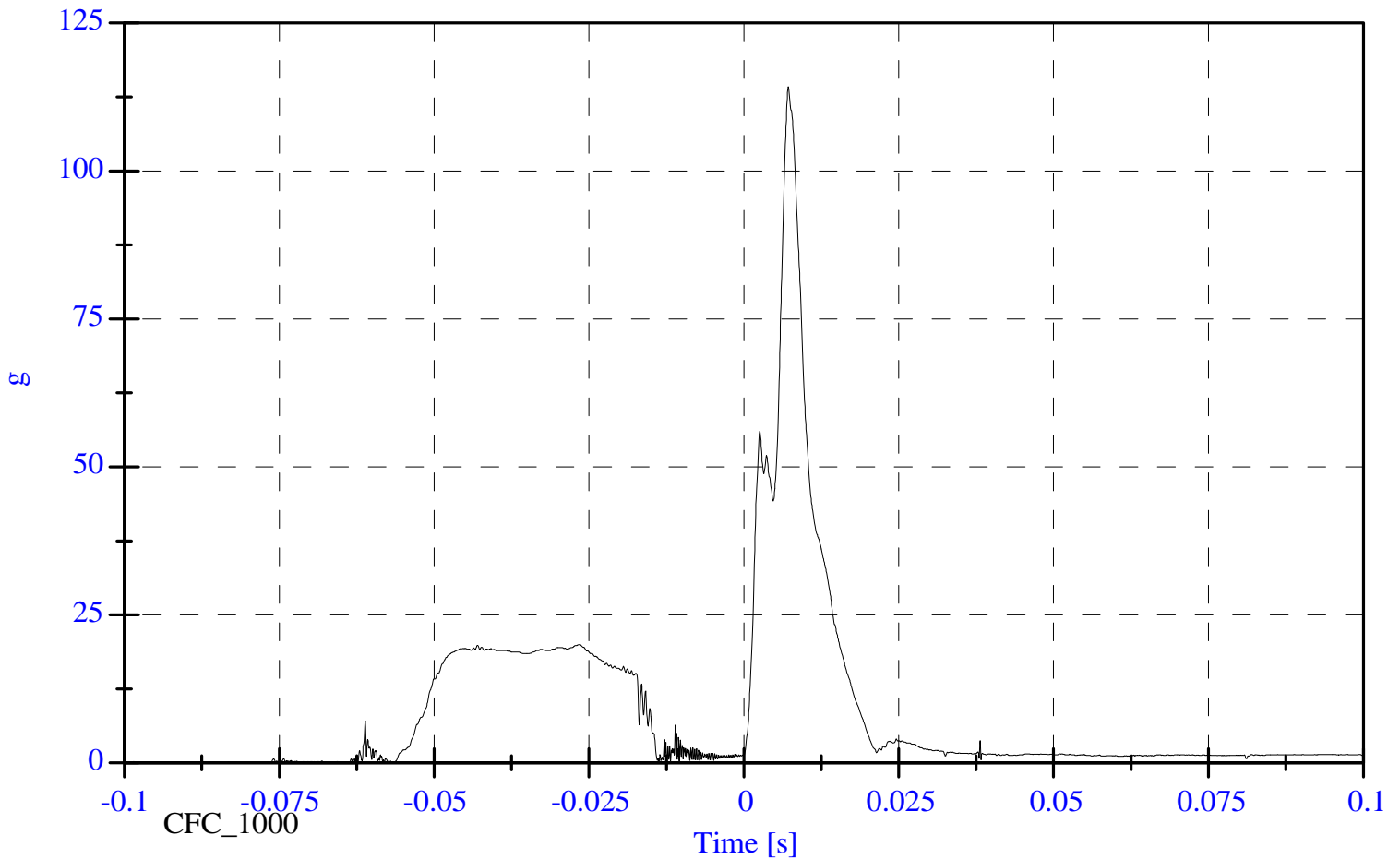
Maximum: 114.2 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 114.2 [g] at 0.007 [s]

Min: 0.0 [g] at -0.093 [s]



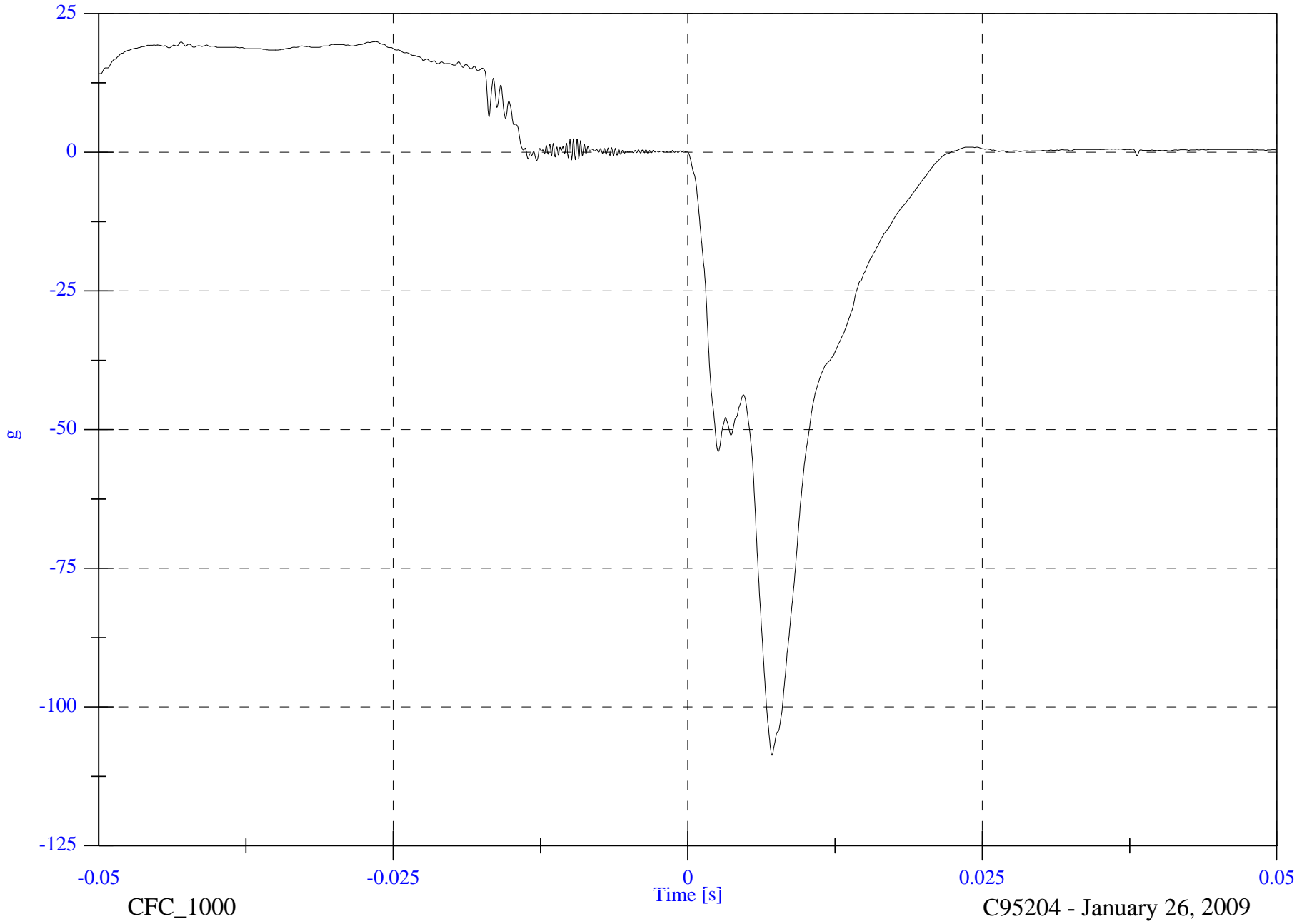
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 19.9 [g] at -0.026 [s]

Min: -108.7 [g] at 0.007 [s]

C95204 PASSENGER SIDE BP3 IMPACT PLOT #1



CFC\_1000

C95204 - January 26, 2009

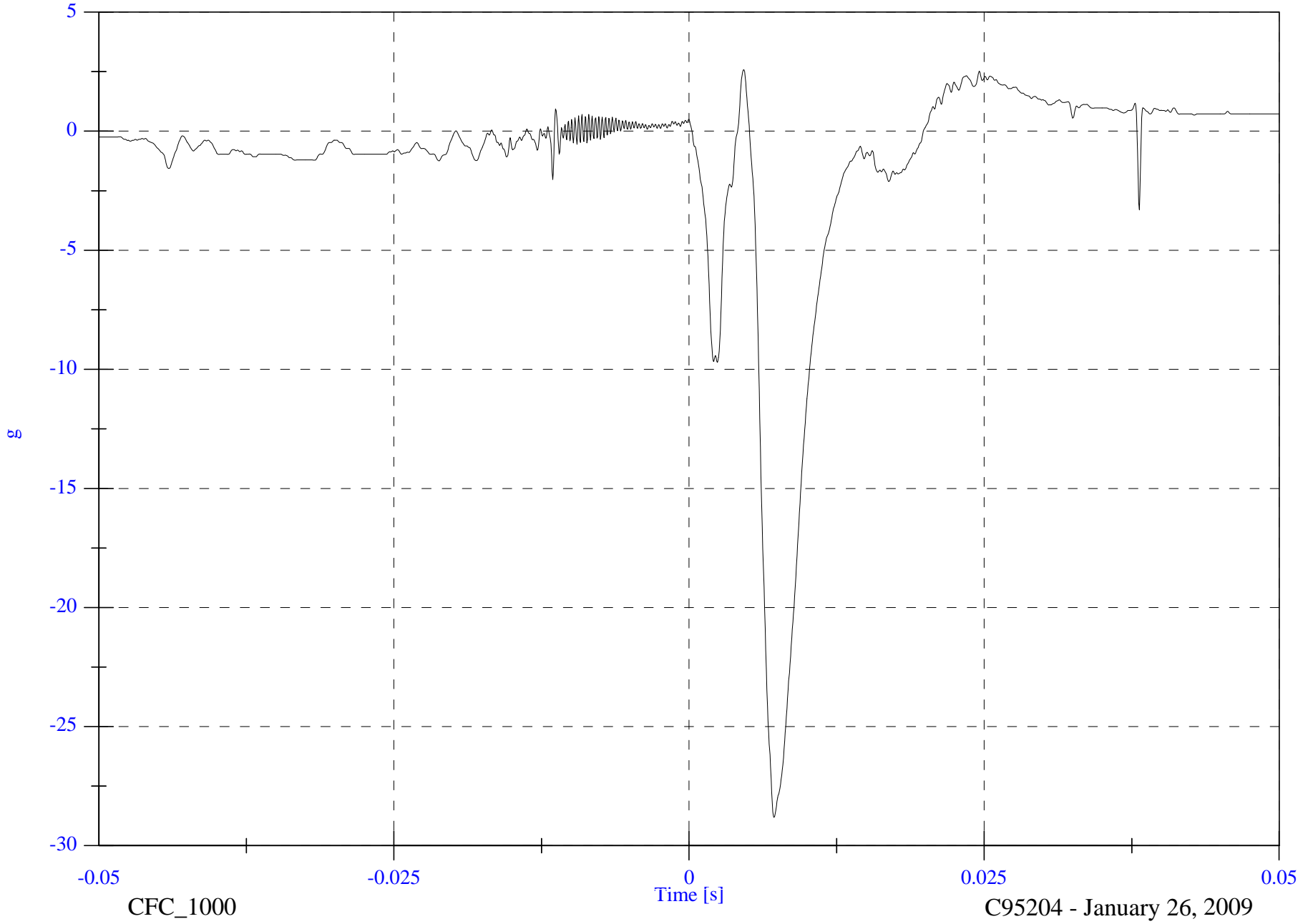
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 2.6 [g] at 0.005 [s]

Min: -28.8 [g] at 0.007 [s]

C95204 PASSENGER SIDE BP3 IMPACT PLOT #2



CFC\_1000

C95204 - January 26, 2009

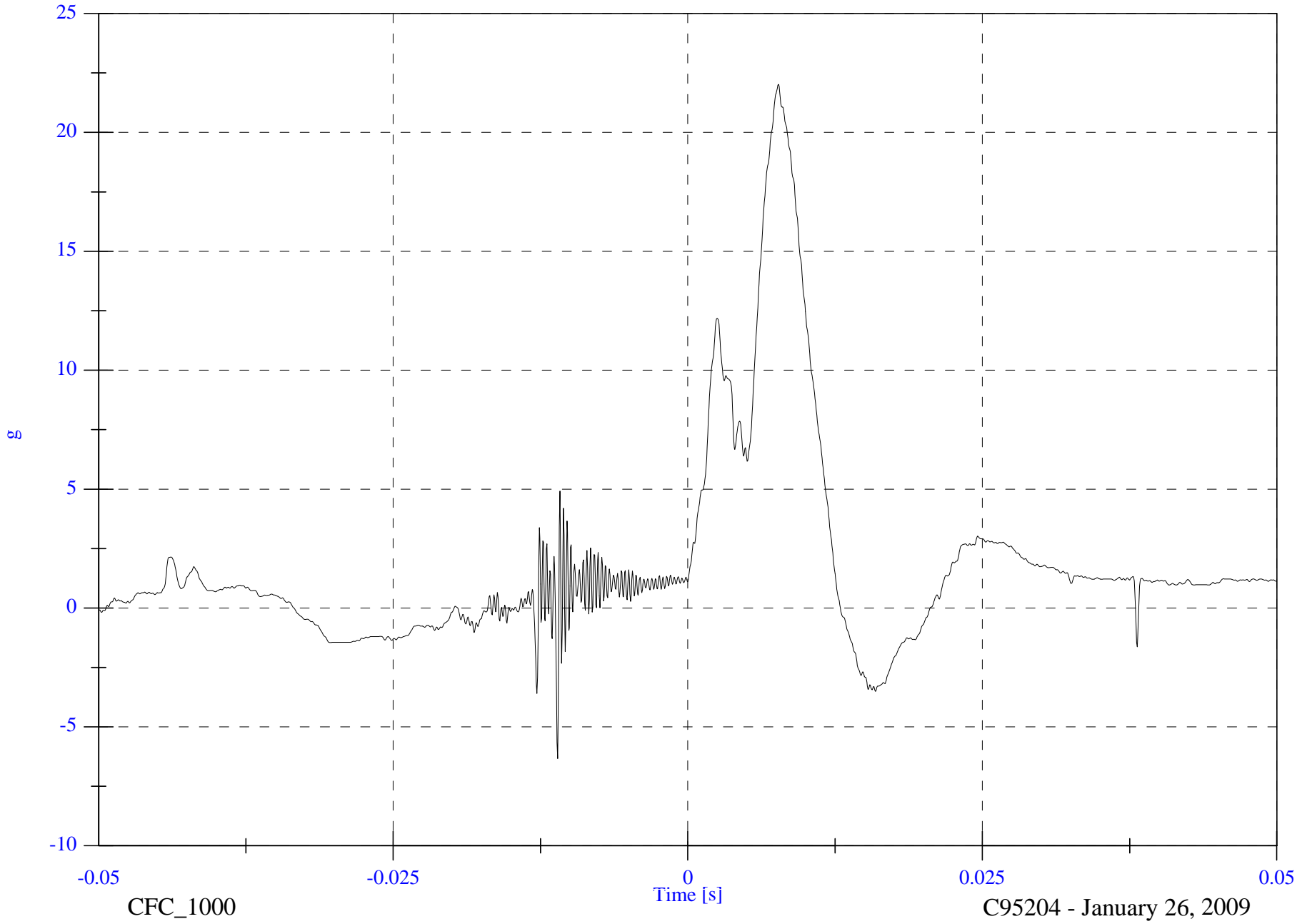
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 22.0 [g] at 0.008 [s]

Min: -6.3 [g] at -0.011 [s]

C95204 PASSENGER SIDE BP3 IMPACT PLOT #3



CFC\_1000

C95204 - January 26, 2009

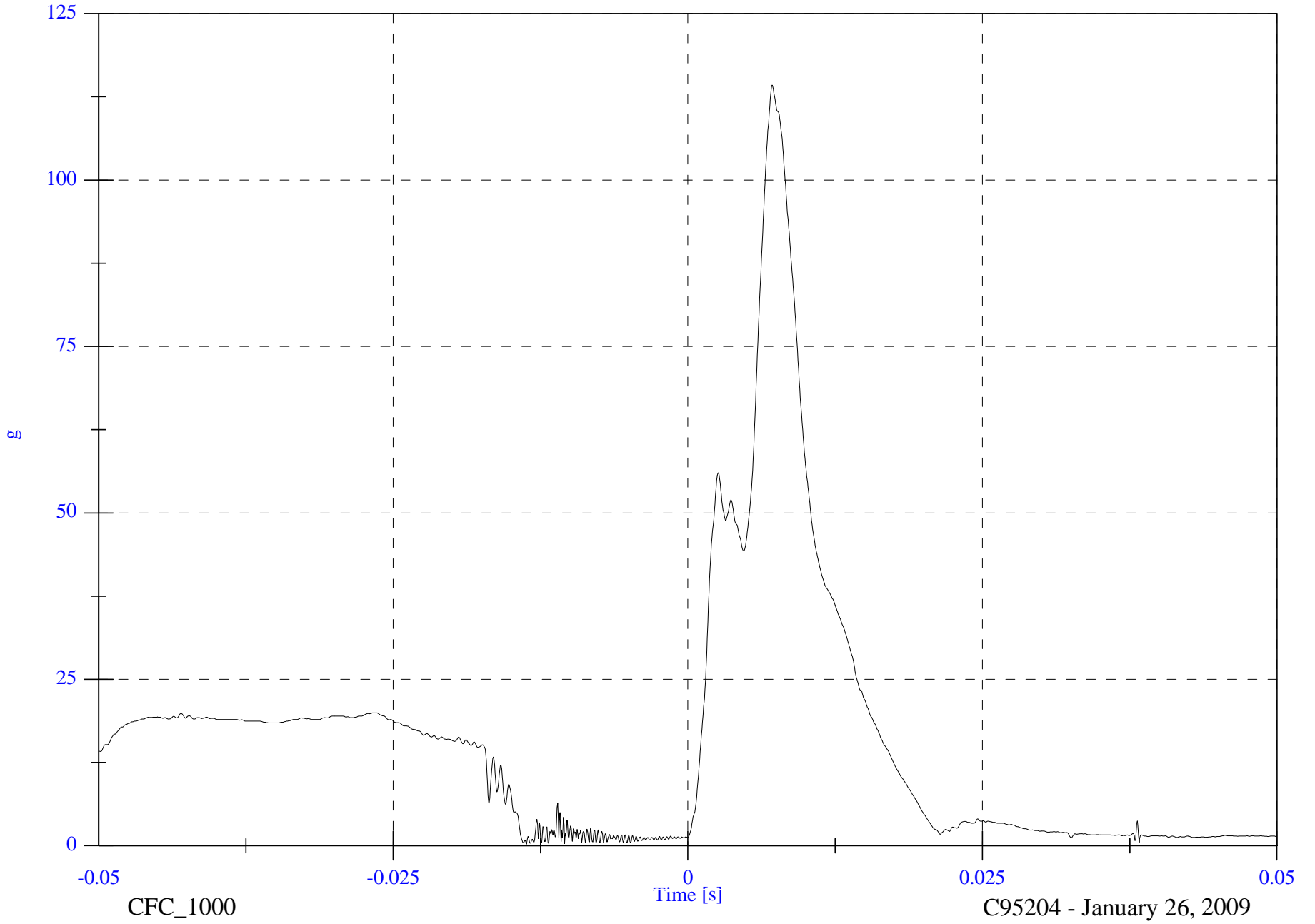
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 114.2 [g] at 0.007 [s]

Min: 0.2 [g] at -0.014 [s]

C95204 PASSENGER SIDE BP3 IMPACT PLOT #4



CFC\_1000

C95204 - January 26, 2009

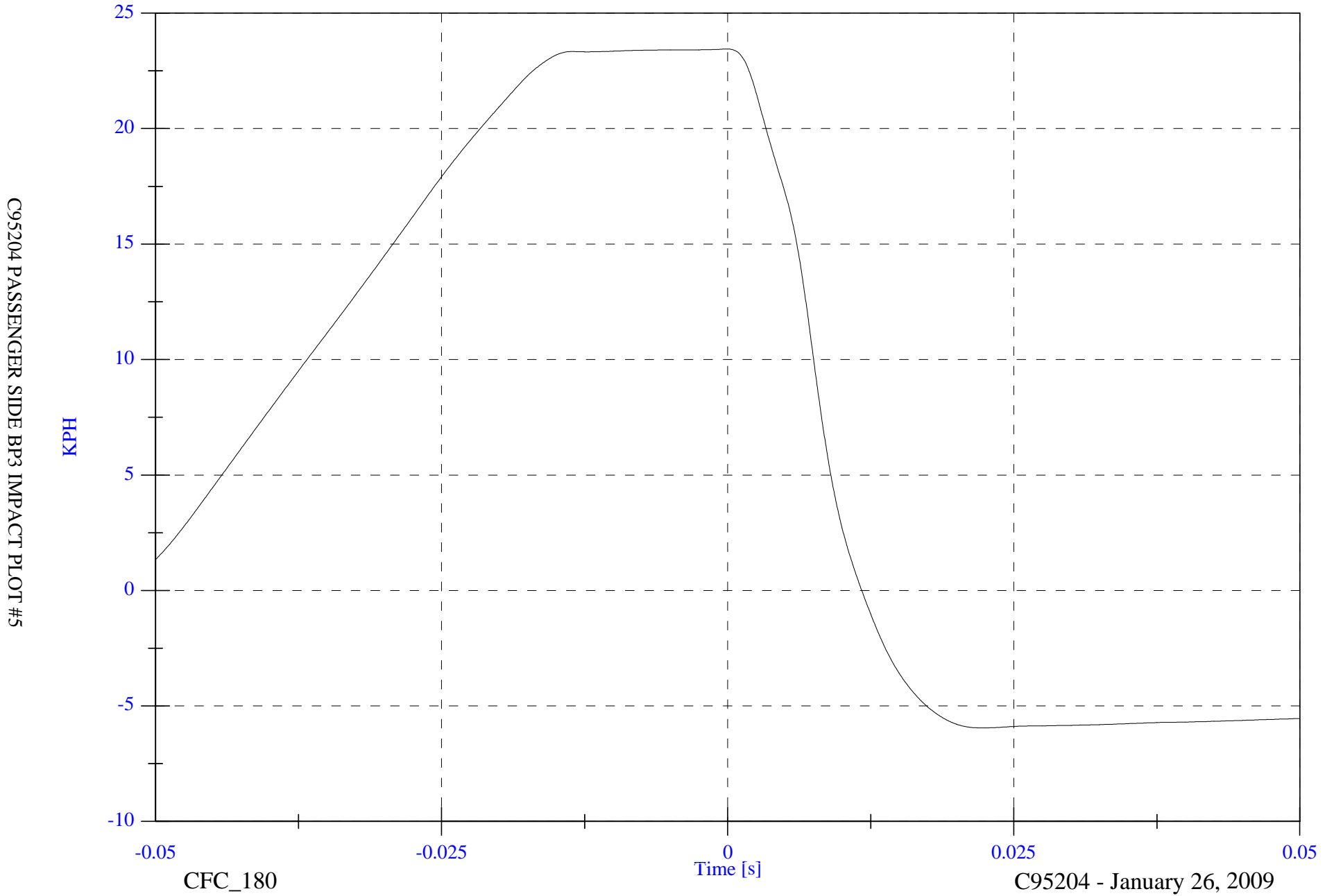


FMVSS 201U 09 Nissan Murano

Max: 23.4 [KPH] at -0.000 [s]

Min: -6.0 [KPH] at 0.022 [s]

### Headform Velocity



C95204 PASSENGER SIDE BP3 IMPACT PLOT #5

CFC\_180

C95204 - January 26, 2009



PRE-IMPACT BP3



POST-IMPACT BP3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	07
Test Date:	01/26/09
Target Location:	B-PILLAR
Target Code:	BP1
Horizontal Impact Angle:	90°
Vertical Impact Angle:	25°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	13:30
Headform Number:	0355

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	14	<input checked="" type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	20				mm up



POST-IMPACT BP1 HEADFORM

Free Motion HIC	378.4
HIC(d)	451.9
Impact Velocity (kph)	18.51
HIC T1 (msec)	7.0
HIC T2 (msec)	12.5

# FMVSS 201U 09 Nissan Murano C95204 - BP1

FMH Headform 0355

Location: BP1

Test Date: January 26, 2009

Work File: BP1

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 451.9

Lab Humidity: 13 %

HIC (36ms): 378.4

Velocity at Impact: 18.51 KPH

t1: 7.0 msec

t2: 12.5 msec

Free Flight Distance: 226.61 mm

Duration: 5.4 msec

Average Acceleration: 9.0 g

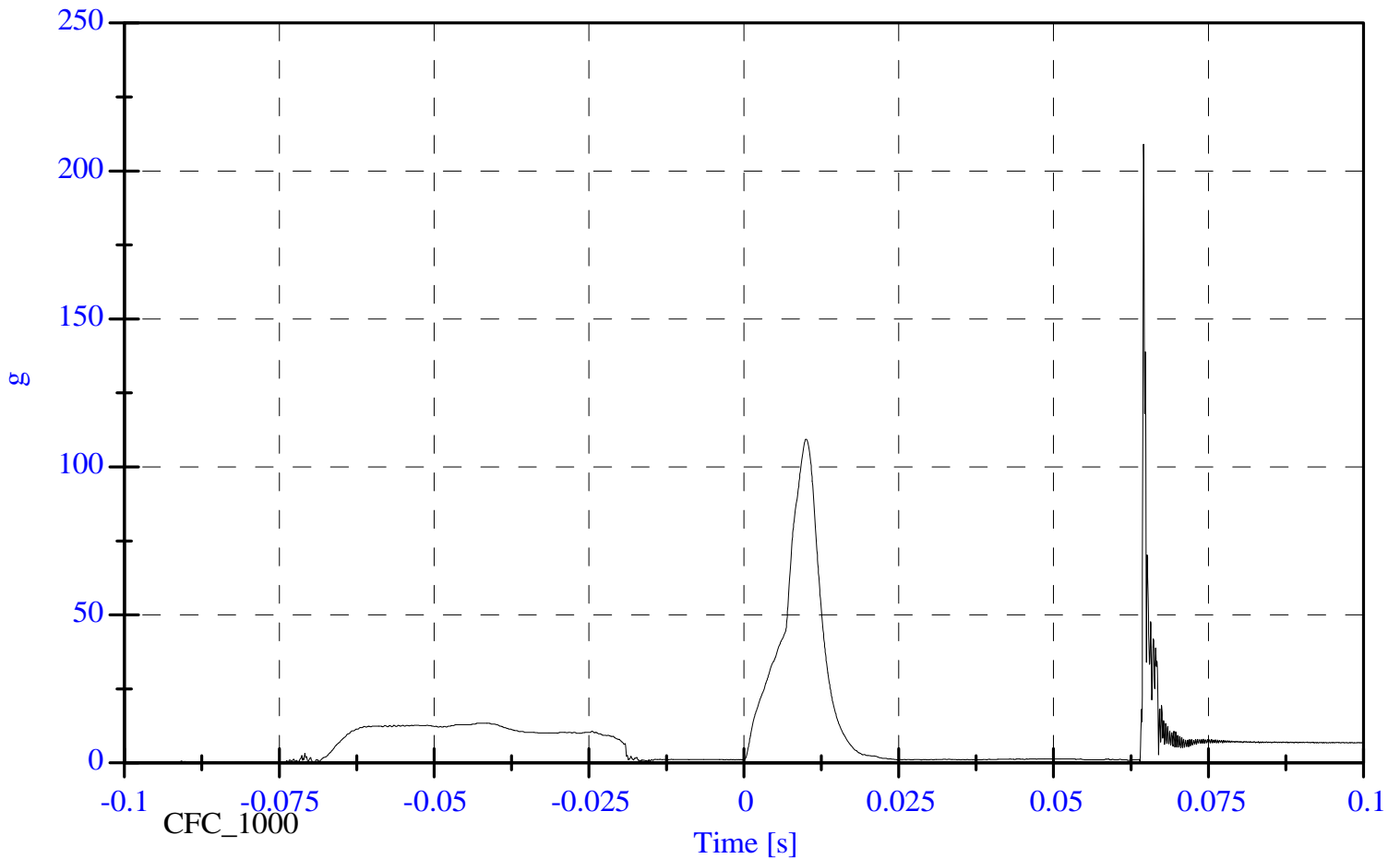
Maximum: 109.4 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 109.4 [g] at 0.010 [s]

Min: 0.0 [g] at -0.096 [s]



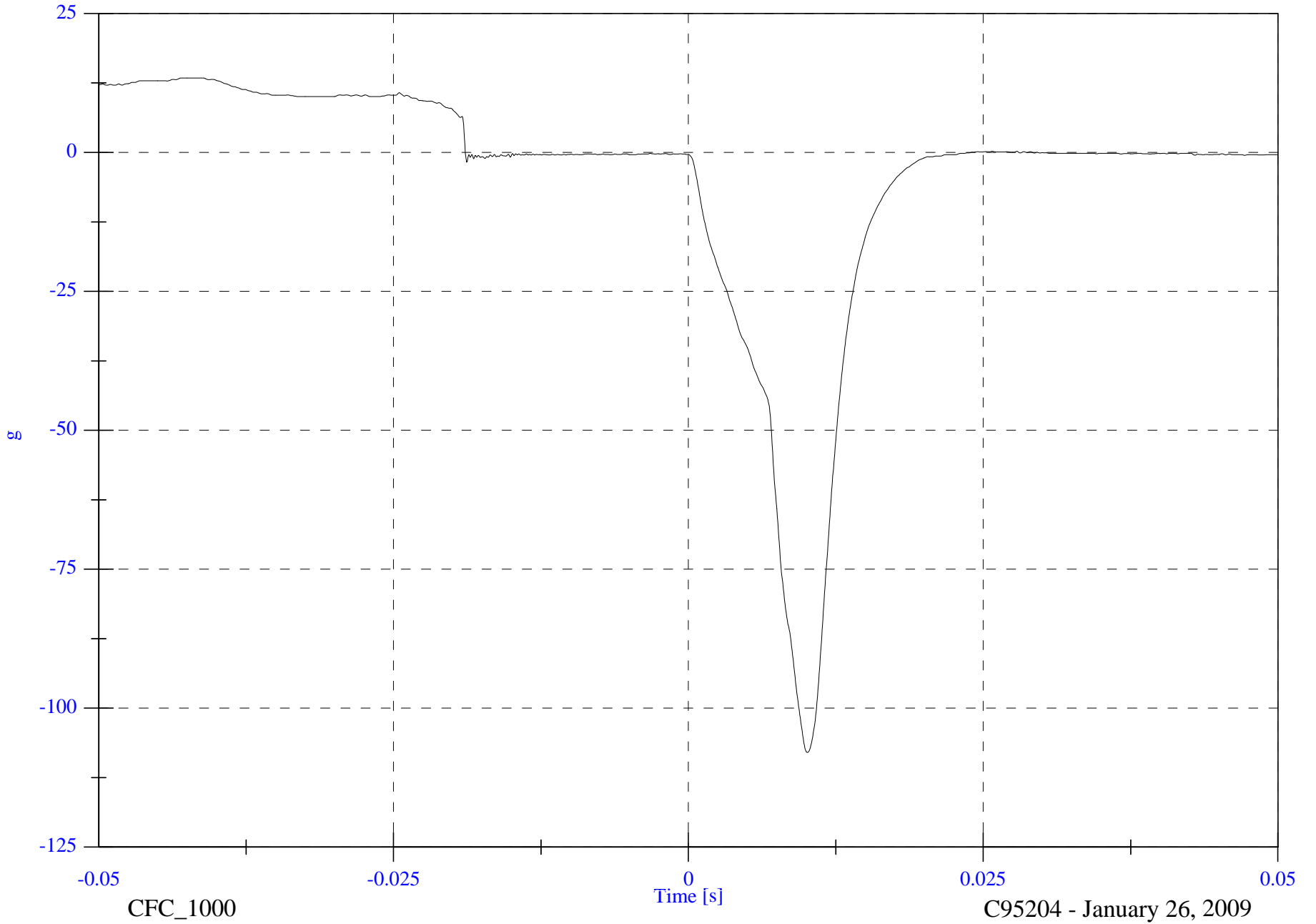
FMVSS 201U 09 Nissan Murano

Headform X Acceleration

Max: 13.4 [g] at -0.043 [s]

Min: -108.0 [g] at 0.010 [s]

C95204 PASSENGER SIDE BPI IMPACT PLOT #1



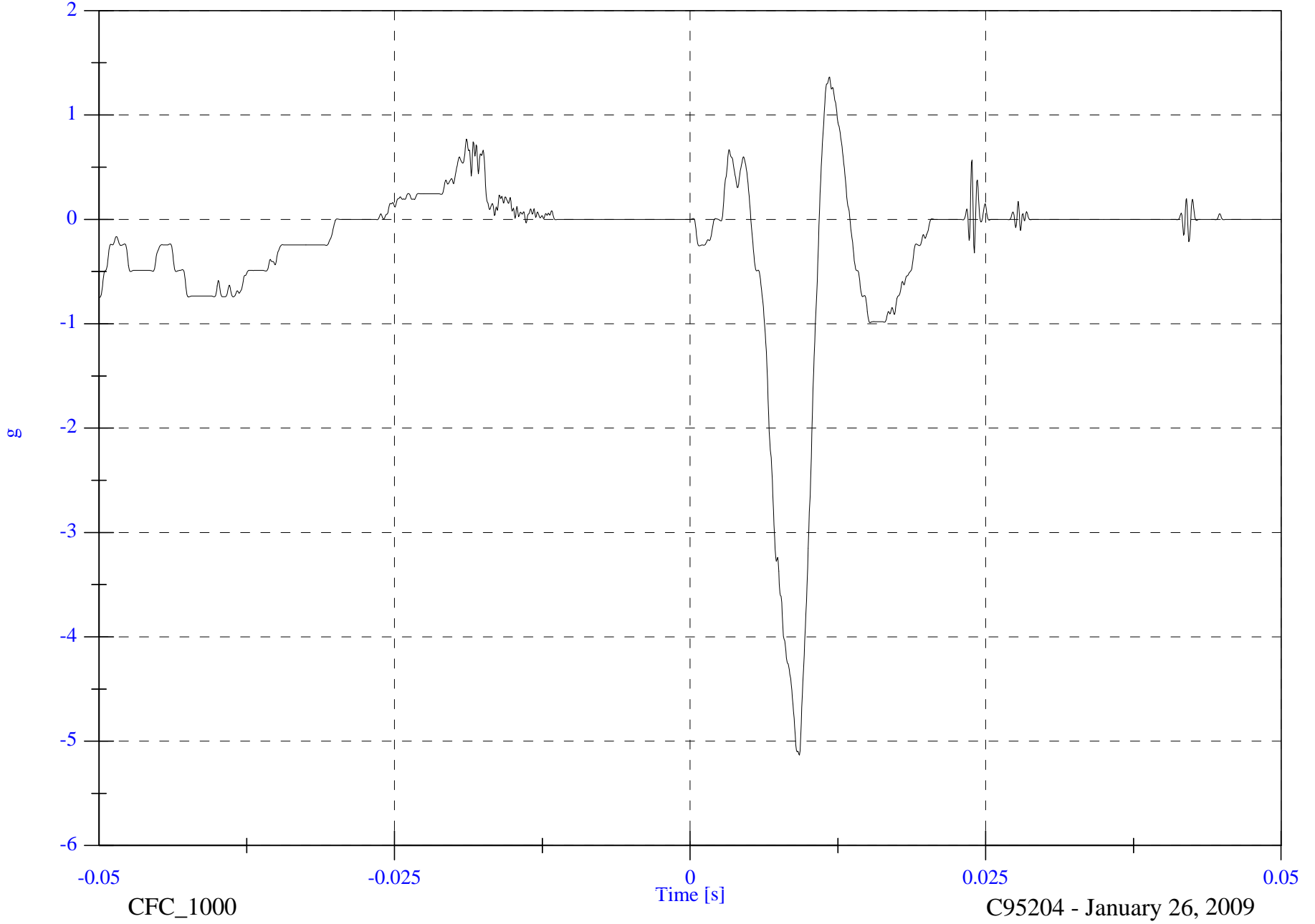
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 1.4 [g] at 0.012 [s]

Min: -5.1 [g] at 0.009 [s]

C95204 PASSENGER SIDE BP1 IMPACT PLOT #2



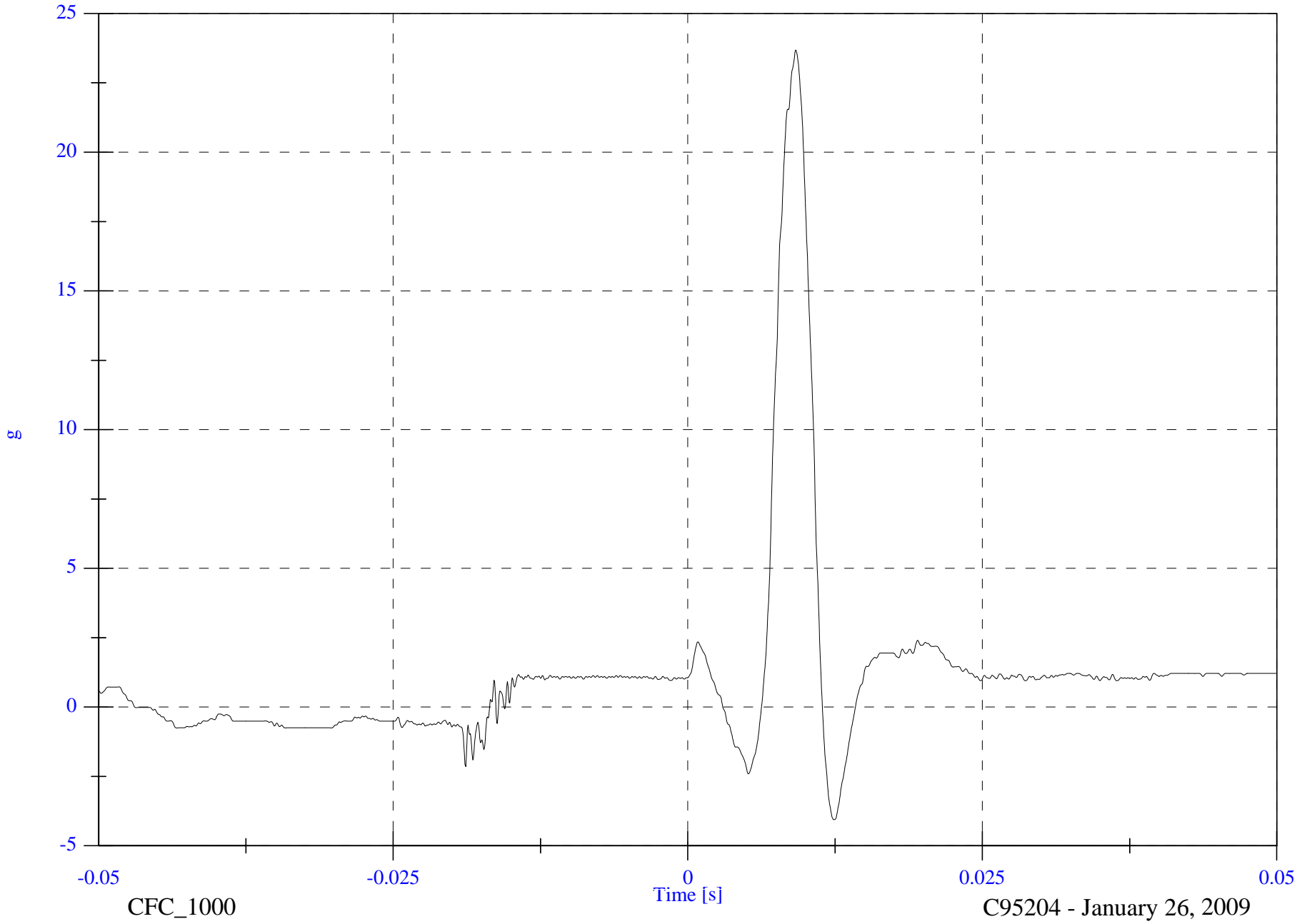
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 23.7 [g] at 0.009 [s]

Min: -4.1 [g] at 0.012 [s]

C95204 PASSENGER SIDE BP1 IMPACT PLOT #3





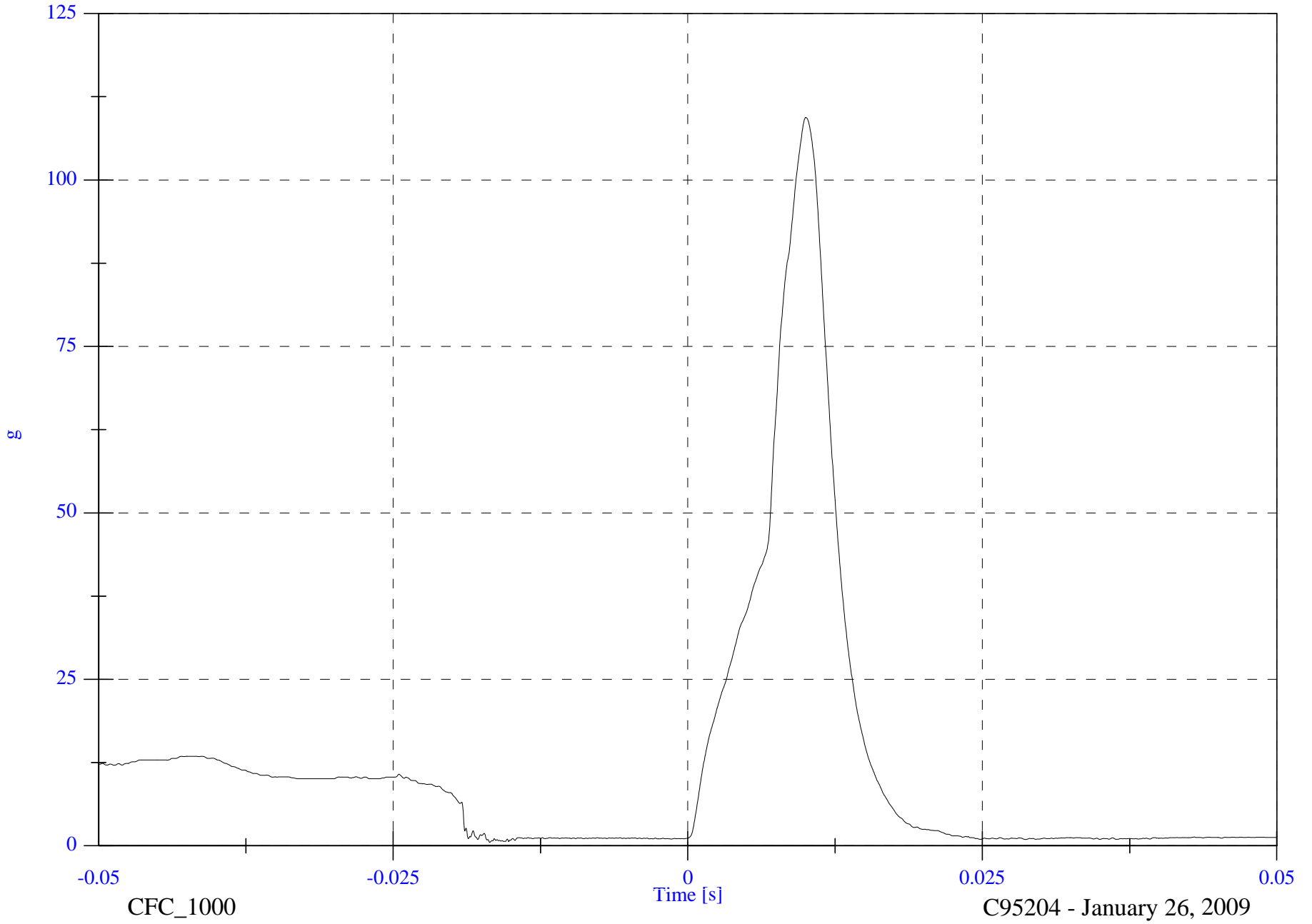
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 109.4 [g] at 0.010 [s]

Min: 0.5 [g] at -0.017 [s]

C95204 PASSENGER SIDE BP1 IMPACT PLOT #4

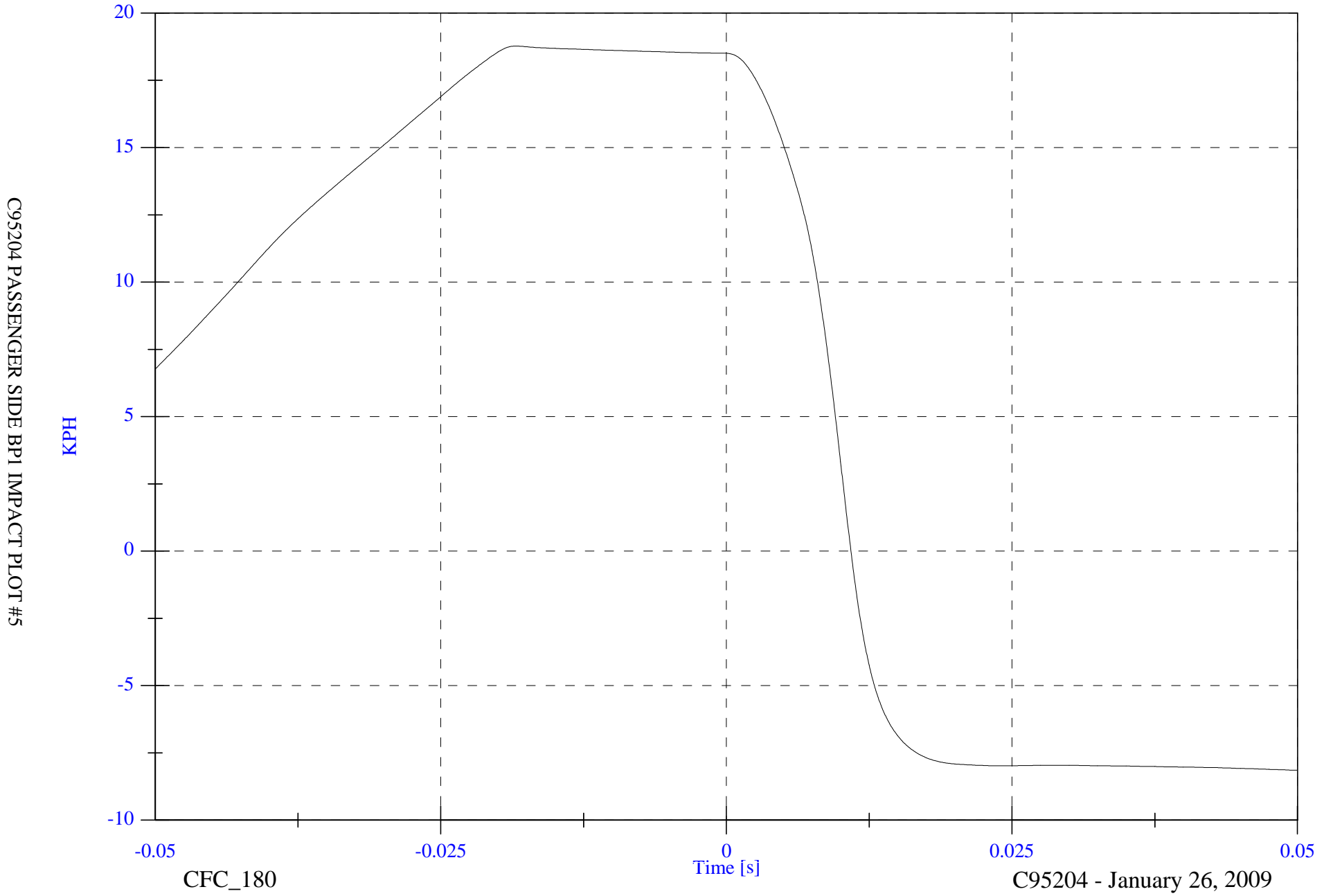


FMVSS 201U 09 Nissan Murano

Max: 18.8 [KPH] at -0.018 [s]

Min: -8.1 [KPH] at 0.050 [s]

### Headform Velocity



C95204 PASSENGER SIDE BP1 IMPACT PLOT #5

CFC\_180

C95204 - January 26, 2009



PRE-IMPACT BP1

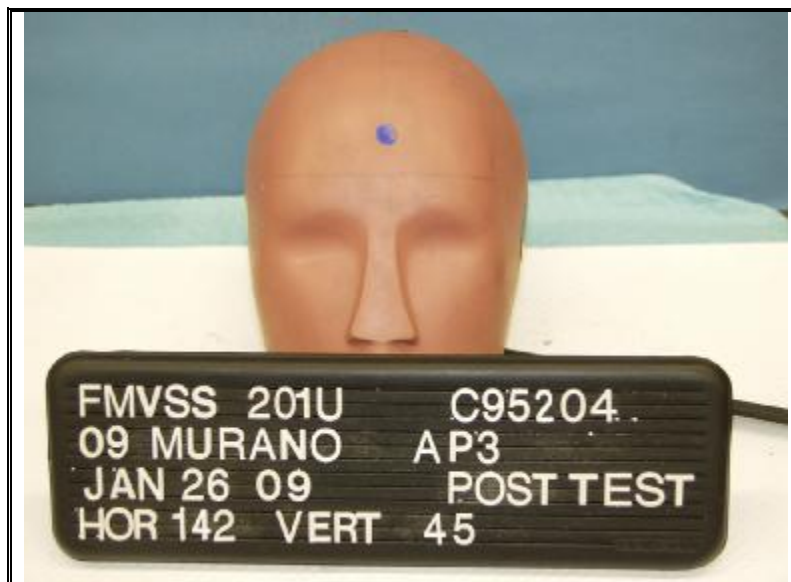


POST-IMPACT BP1

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	08
Test Date:	01/26/09
Target Location:	A-PILLAR
Target Code:	AP3
Horizontal Impact Angle:	142°
Vertical Impact Angle:	45°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	13:55
Headform Number:	1140

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	0	<input type="checkbox"/>	mm right <input type="checkbox"/> mm left
On Centerline	17		mm up



POST-IMPACT AP3 HEADFORM

Free Motion HIC	461.4
HIC(d)	514.5
Impact Velocity (kph)	18.44
HIC T1 (msec)	5.8
HIC T2 (msec)	9.8

# FMVSS 201U 09 Nissan Murano C95204 - AP3

FMH Headform 1140

Location: AP3

Test Date: January 26, 2009

Work File: AP3

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 514.5

Lab Humidity: 13 %

HIC (36ms): 461.4

Velocity at Impact: 18.44 KPH

t1: 5.8 msec

t2: 9.8 msec

Free Flight Distance: 221.03 mm

Duration: 3.9 msec

Average Acceleration: 9.4 g

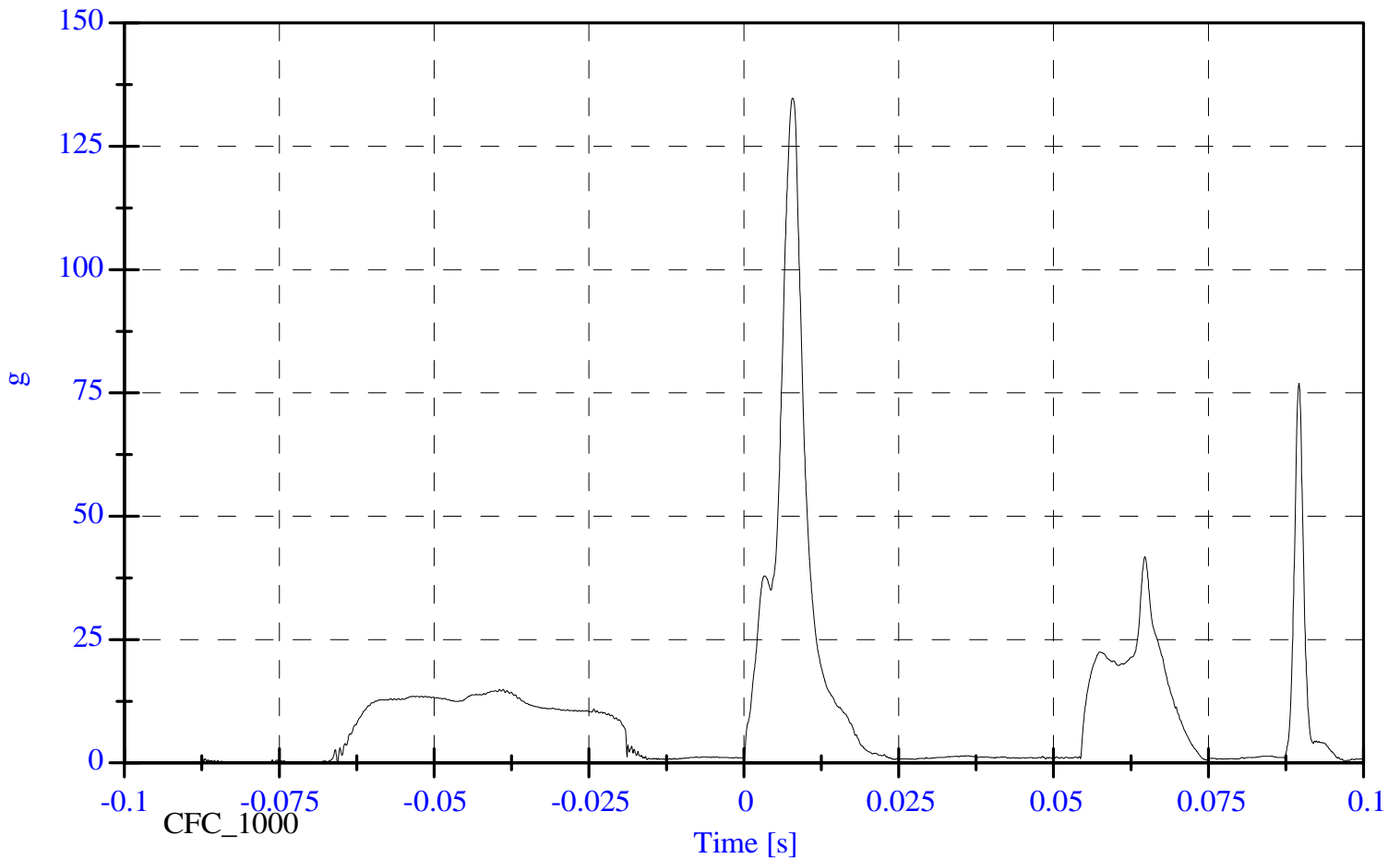
Maximum: 134.8 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 134.8 [g] at 0.008 [s]

Min: 0.0 [g] at -0.095 [s]



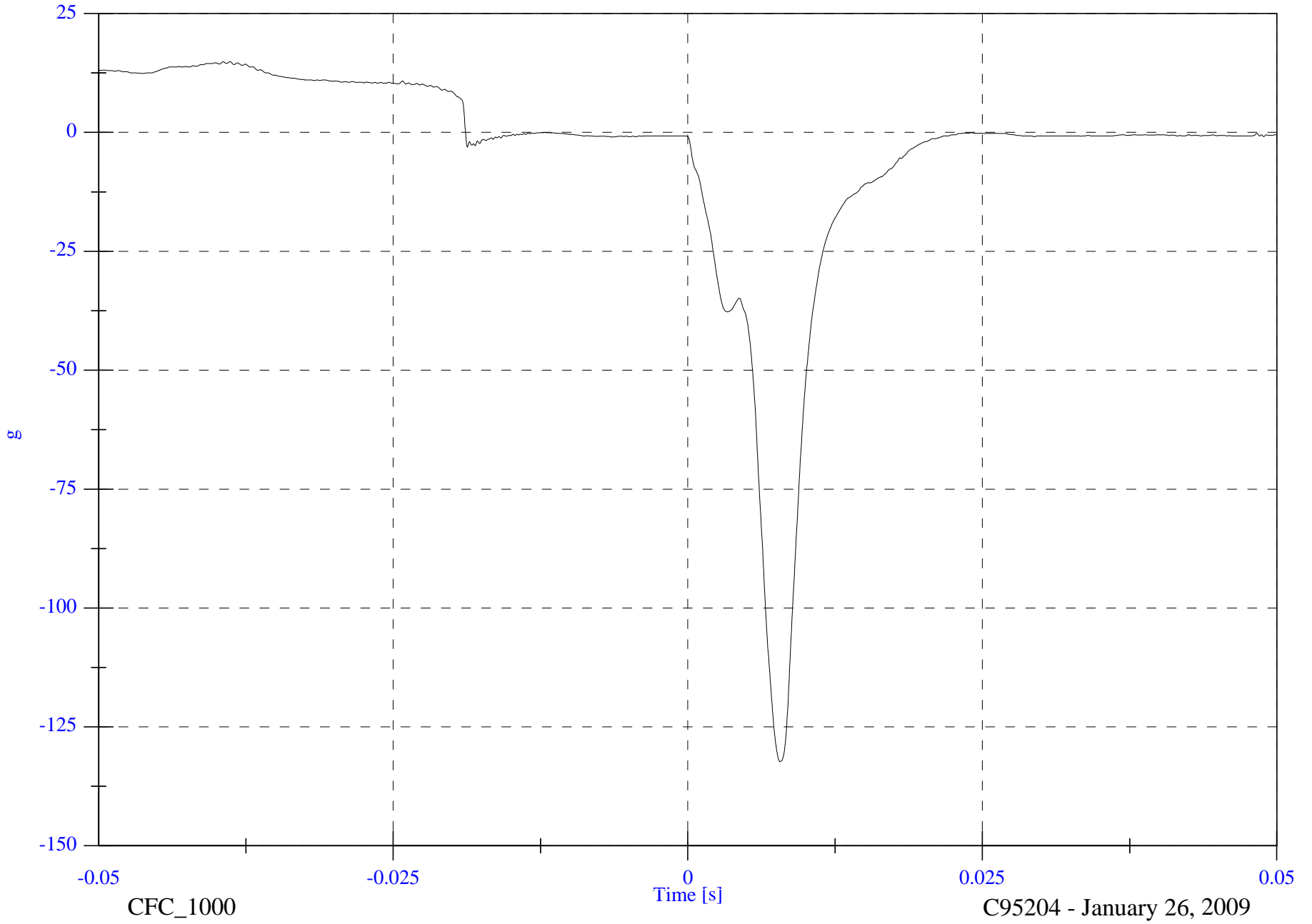
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 14.9 [g] at -0.039 [s]

Min: -132.3 [g] at 0.008 [s]

C95204 PASSENGER SIDE AP3 IMPACT PLOT #1



CFC\_1000

C95204 - January 26, 2009

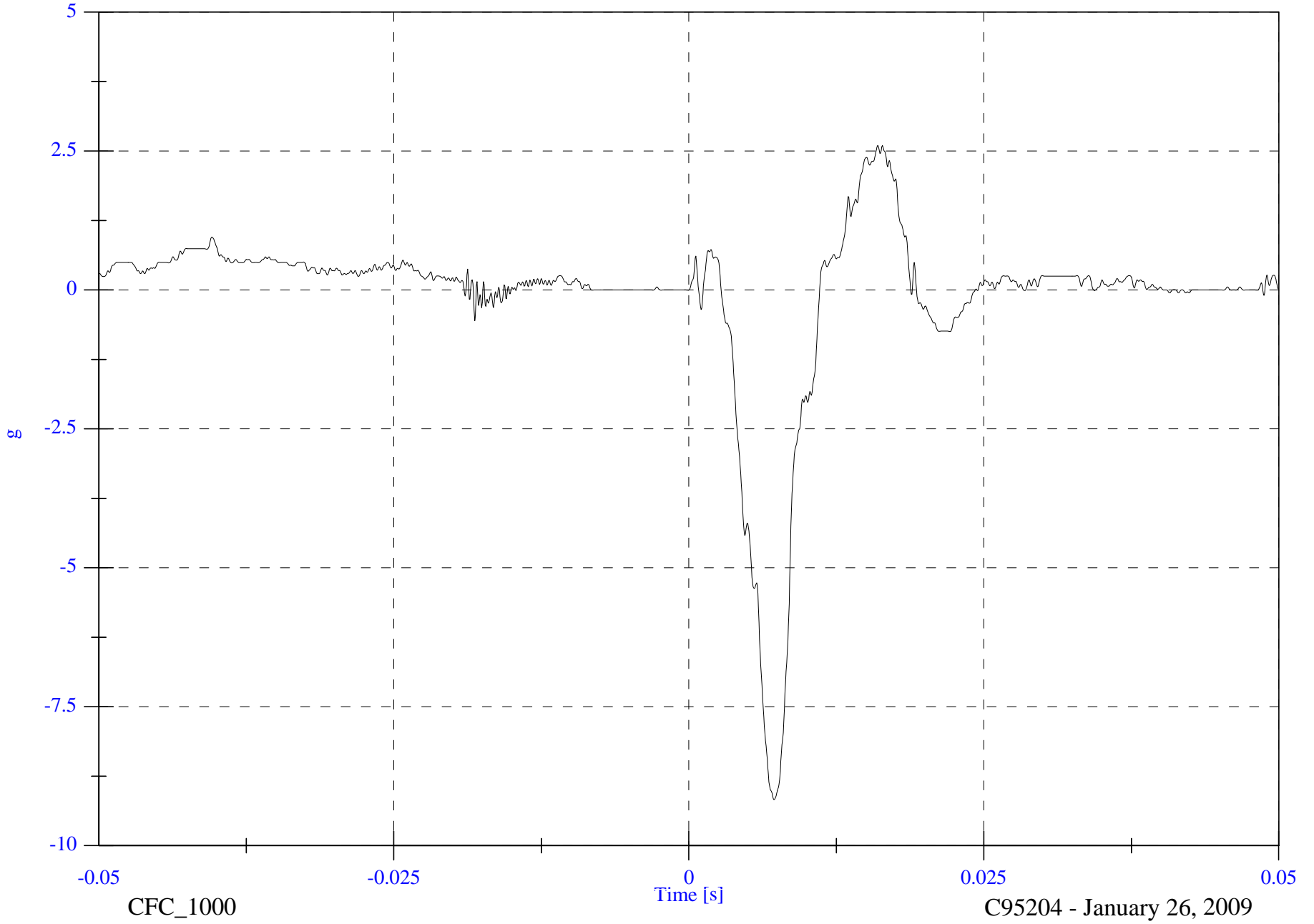
FMVSS 201U 09 Nissan Murano

### Headform Y Acceleration

Max: 2.6 [g] at 0.016 [s]

Min: -9.2 [g] at 0.007 [s]

C95204 PASSENGER SIDE AP3 IMPACT PLOT #2



CFC\_1000

C95204 - January 26, 2009



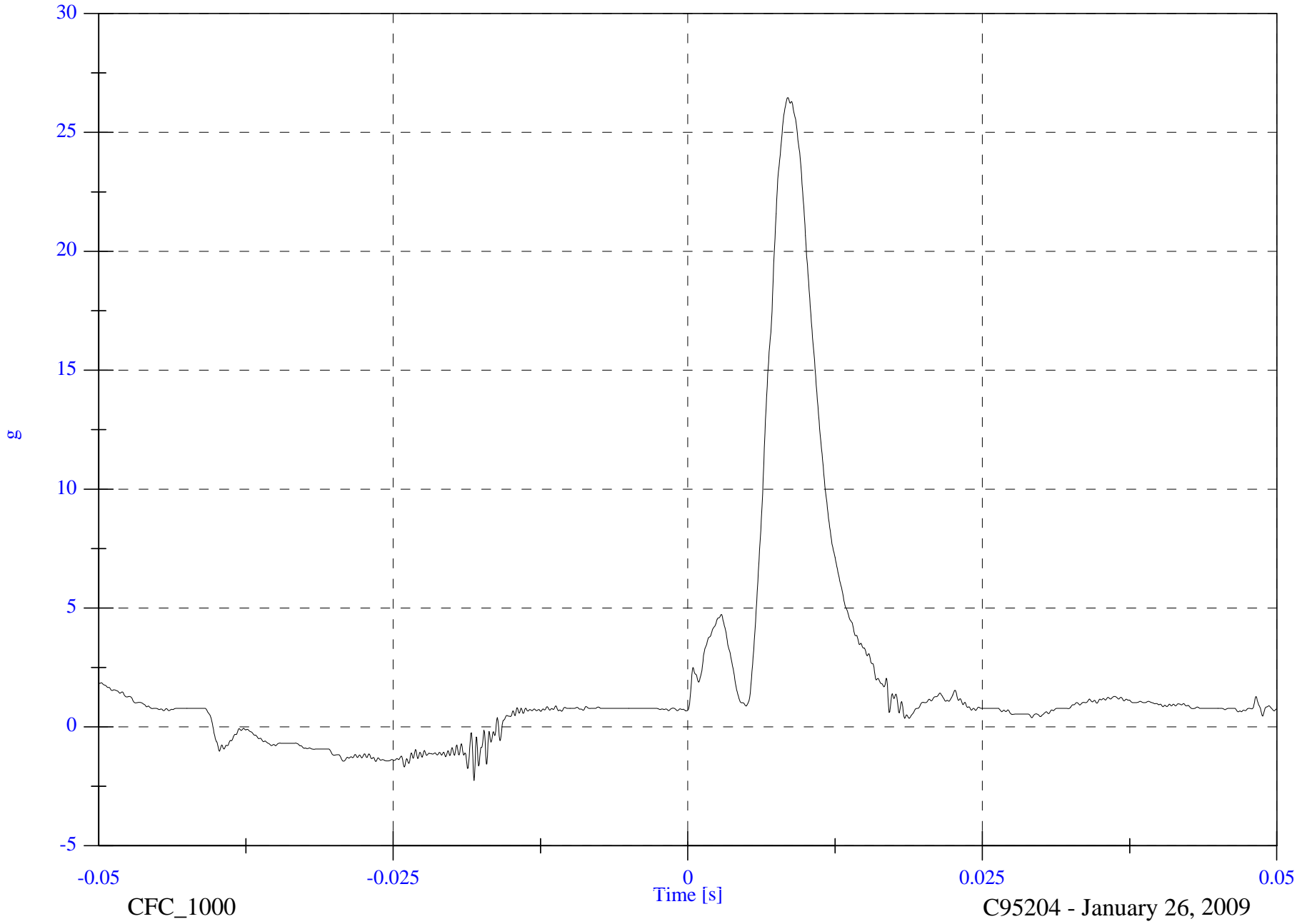
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 26.5 [g] at 0.008 [s]

Min: -2.3 [g] at -0.018 [s]

C95204 PASSENGER SIDE AP3 IMPACT PLOT #3



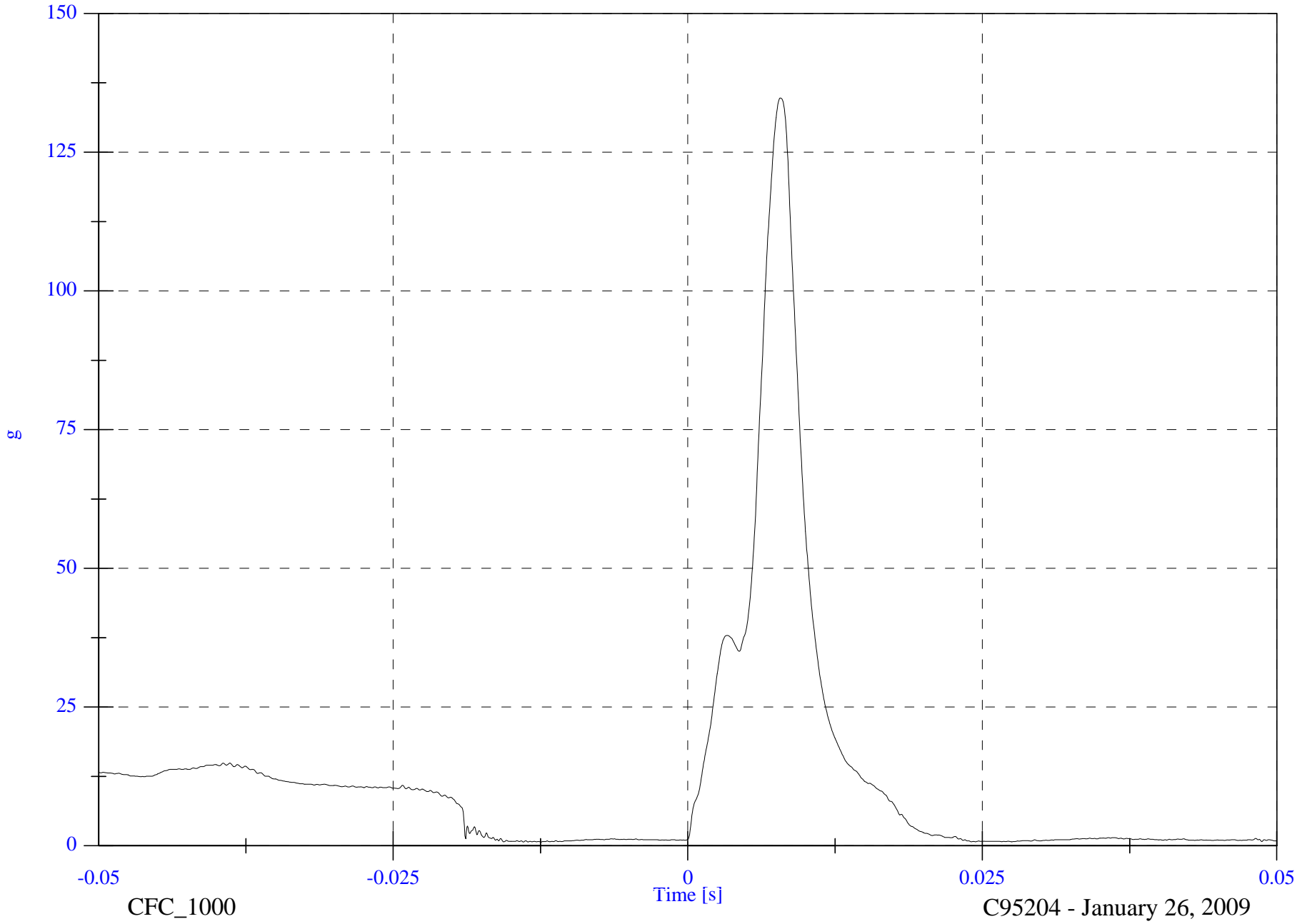
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 134.8 [g] at 0.008 [s]

Min: 0.7 [g] at -0.014 [s]

C95204 PASSENGER SIDE AP3 IMPACT PLOT #4

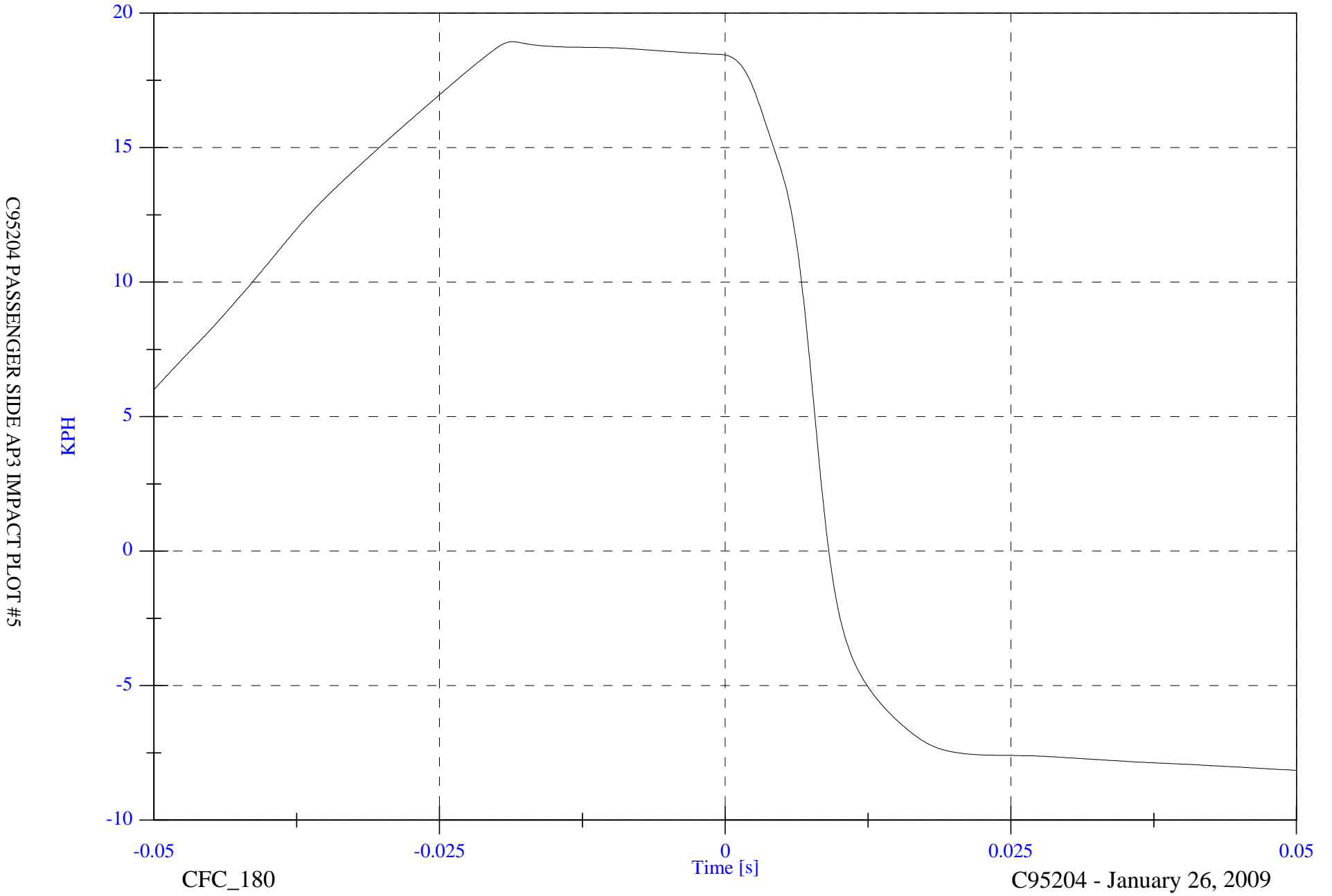


FMVSS 201U 09 Nissan Murano

Max: 18.9 [KPH] at -0.019 [s]

Min: -8.1 [KPH] at 0.050 [s]

### Headform Velocity



C95204 PASSENGER SIDE AP3 IMPACT PLOT #5

CFC\_180

C95204 - January 26, 2009



PRE-IMPACT AP3



POST-IMPACT AP3

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	09
Test Date:	01/26/09
Target Location:	A-PILLAR
Target Code:	AP1
Horizontal Impact Angle:	113°
Vertical Impact Angle:	18°
Ambient Temperature:	21°C
Relative Humidity:	13
Time of Impact:	14:30
Headform Number:	0805

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	34	<input checked="" type="checkbox"/>	mm right	<input type="checkbox"/>	mm left
On Centerline	5				mm up



POST-IMPACT AP1 HEADFORM

Free Motion HIC	112.9
HIC(d)	251.6
Impact Velocity (kph)	18.32
HIC T1 (msec)	3.0
HIC T2 (msec)	18.4

# FMVSS 201U 09 Nissan Murano C95204 - AP1

FMH Headform 805

Location: AP1

Test Date: January 26, 2009

Work File: AP1

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 251.6

Lab Humidity: 13 %

HIC (36ms): 112.9

Velocity at Impact: 18.32 KPH

t1: 3.0 msec

t2: 18.4 msec

Free Flight Distance: 220.85 mm

Duration: 15.4 msec

Average Acceleration: 6.6 g

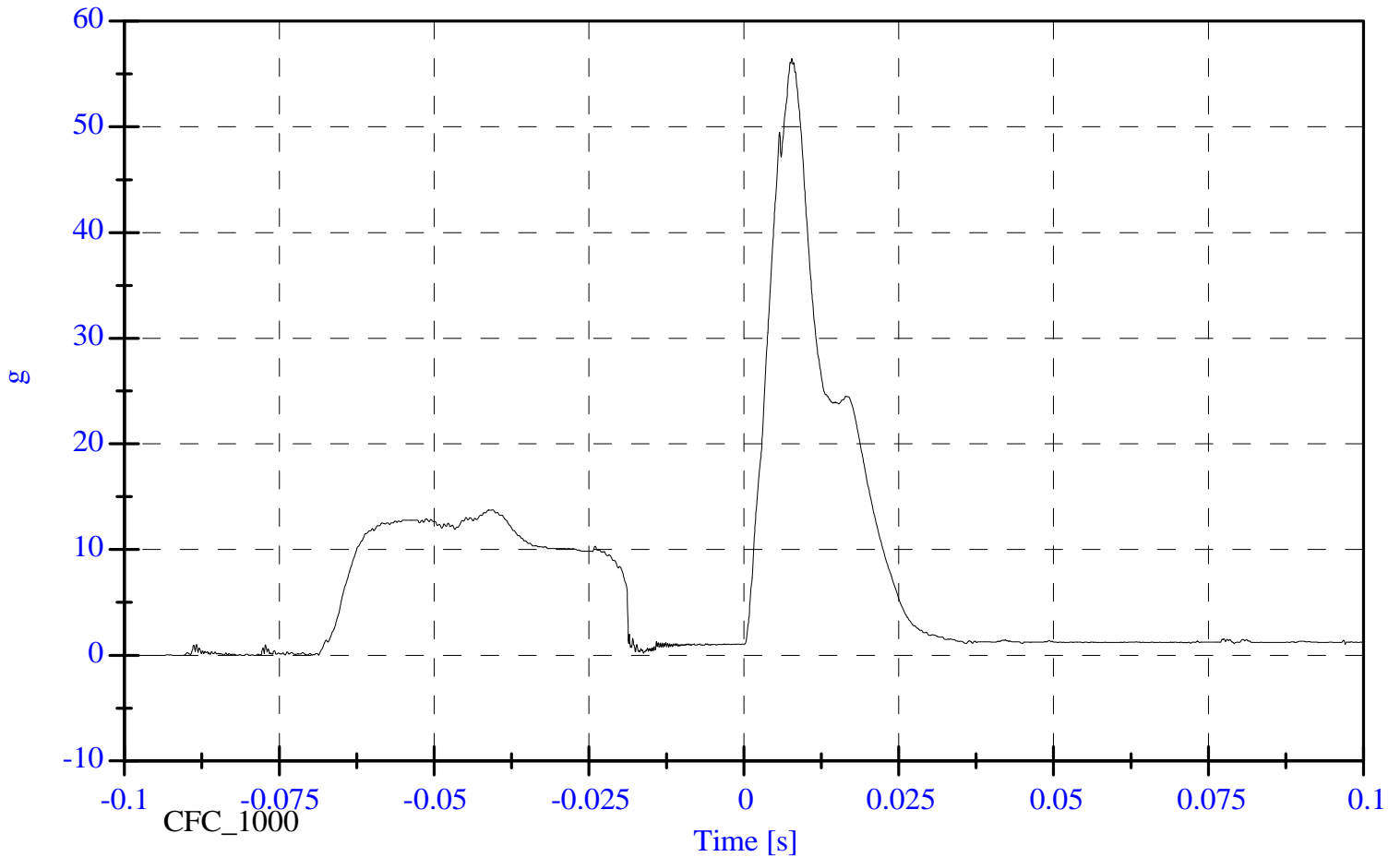
Maximum: 56.5 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 56.5 [g] at 0.008 [s]

Min: -0.0 [g] at -0.099 [s]



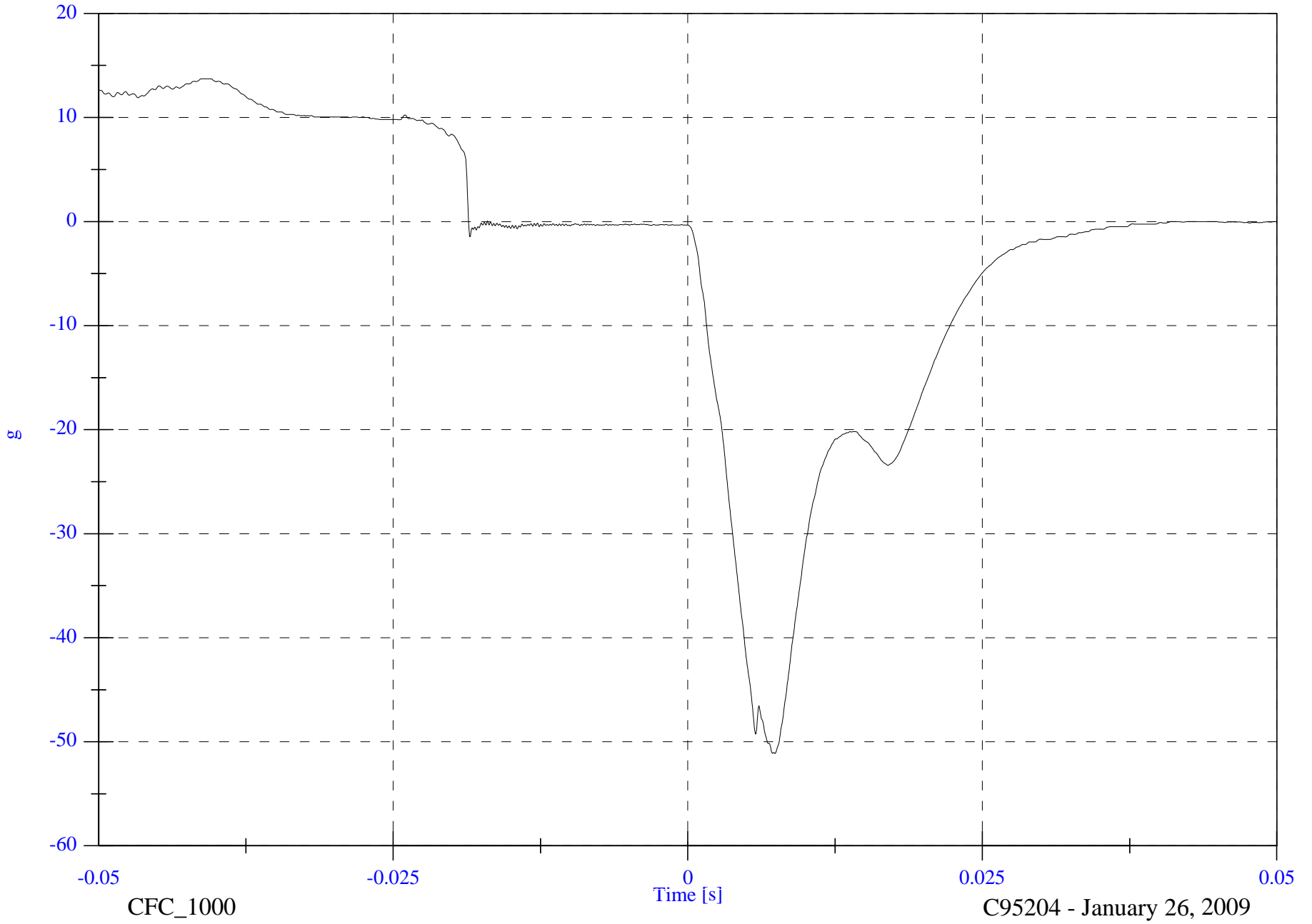
FMVSS 201U 09 Nissan Murano

Headform X Acceleration

Max: 13.7 [g] at -0.041 [s]

Min: -51.1 [g] at 0.007 [s]

C95204 PASSENGER SIDE AP1 IMPACT PLOT # 1



CFC\_1000

C95204 - January 26, 2009



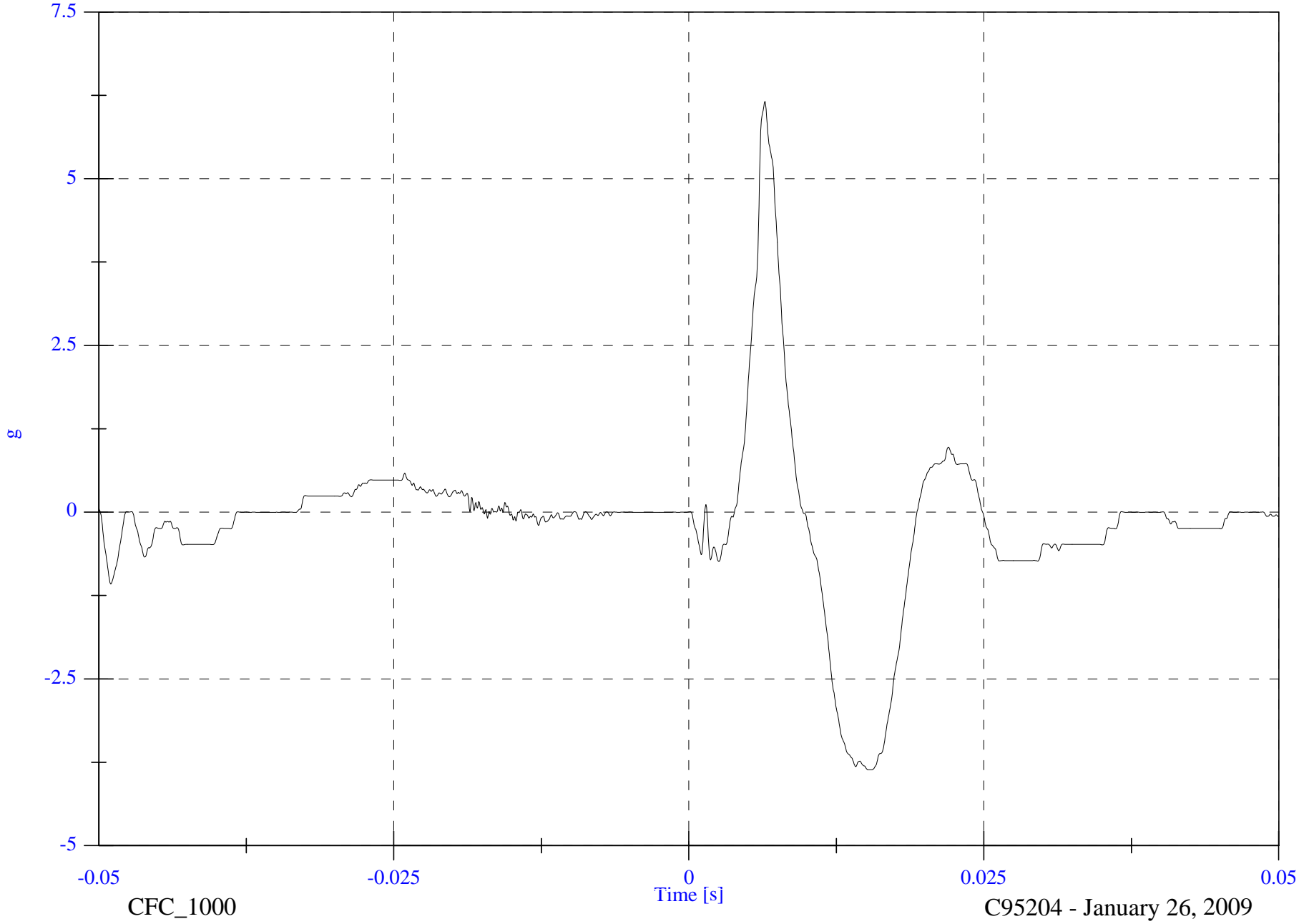
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 6.2 [g] at 0.006 [s]

Min: -3.9 [g] at 0.015 [s]

C95204 PASSENGER SIDE API IMPACT PLOT # 2



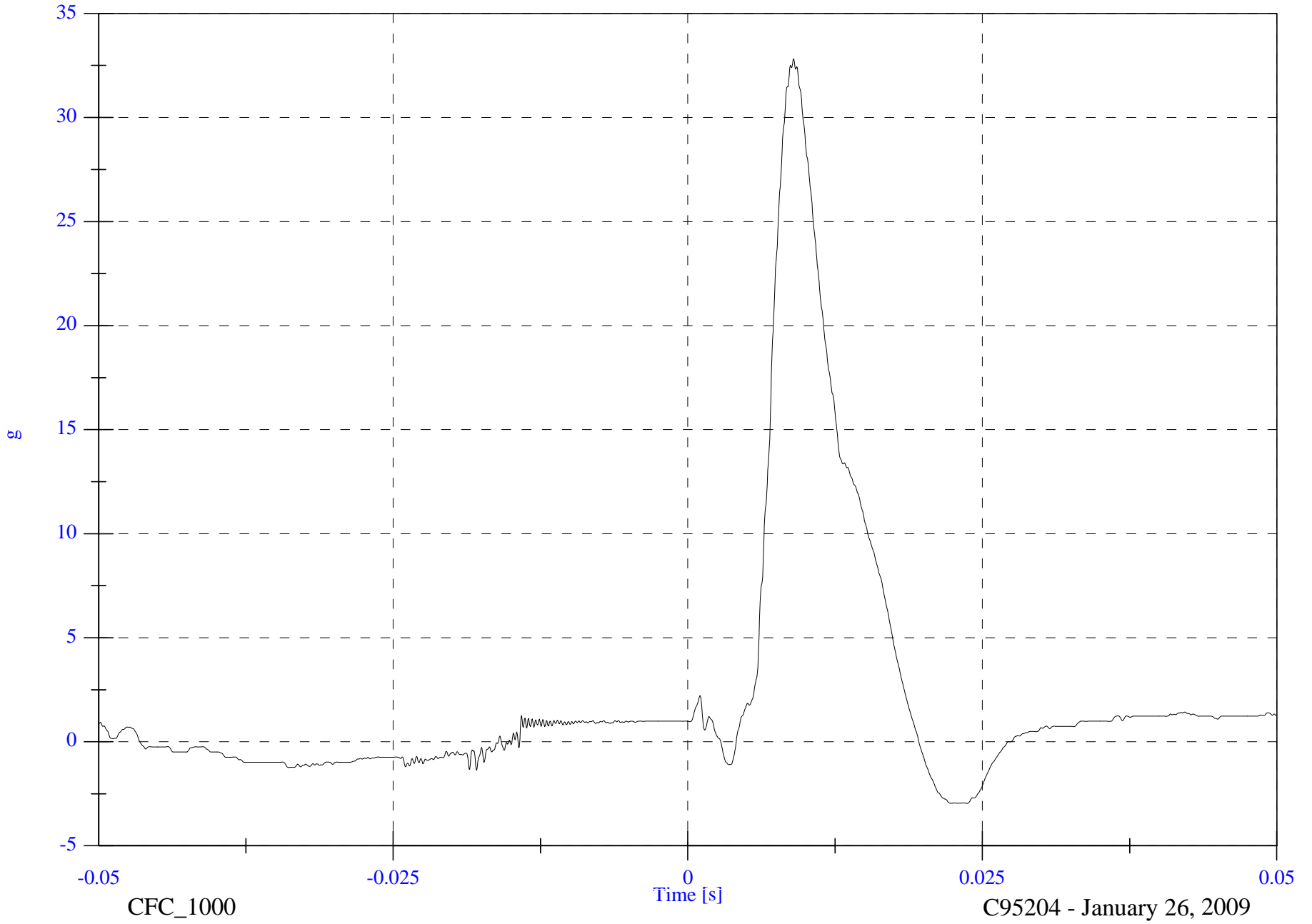
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 32.8 [g] at 0.009 [s]

Min: -3.0 [g] at 0.024 [s]

C95204 PASSENGER SIDE AP1 IMPACT PLOT # 3



CFC\_1000

C95204 - January 26, 2009

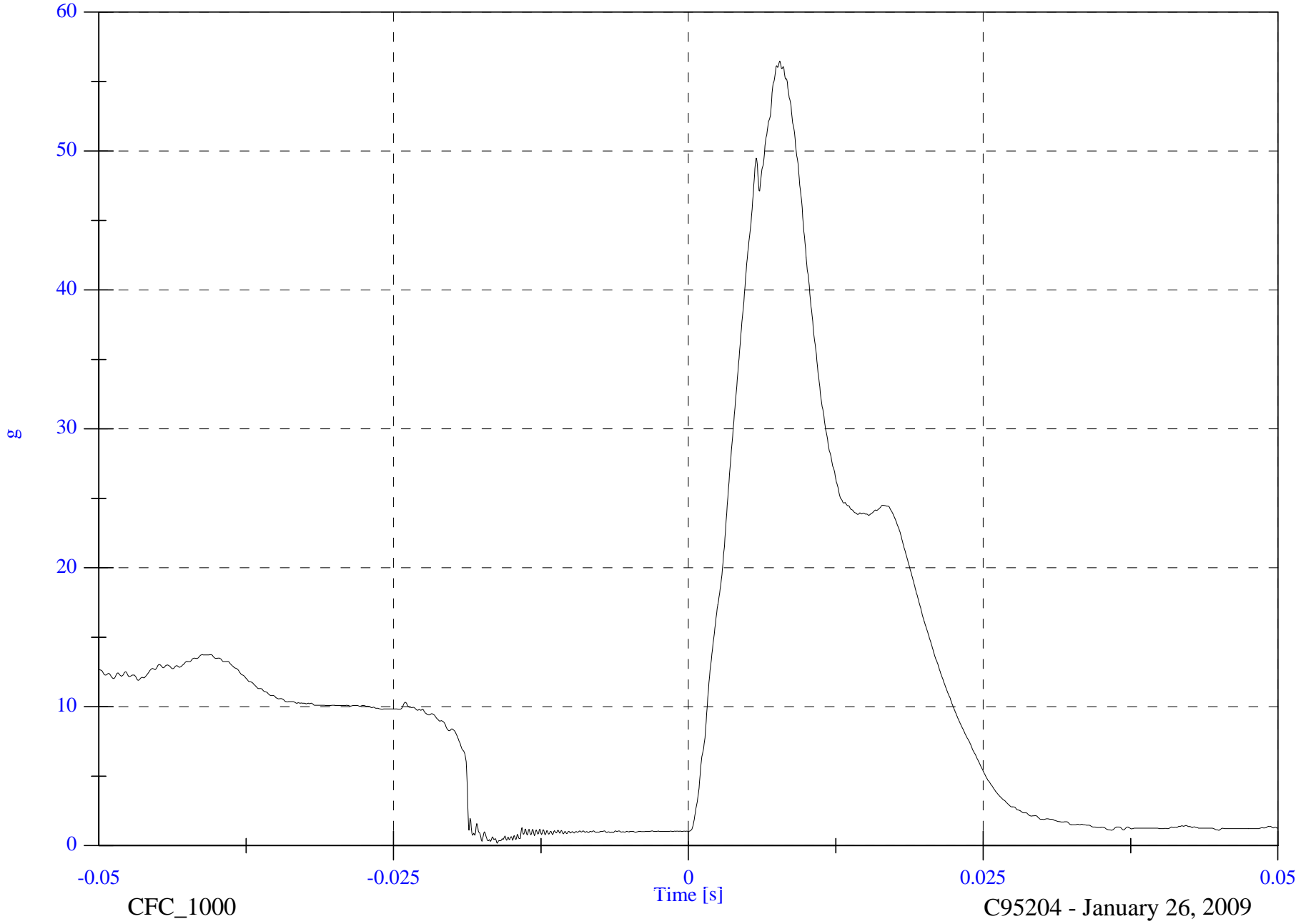
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 56.5 [g] at 0.008 [s]

Min: 0.2 [g] at -0.016 [s]

C95204 PASSENGER SIDE AP1 IMPACT PLOT # 4



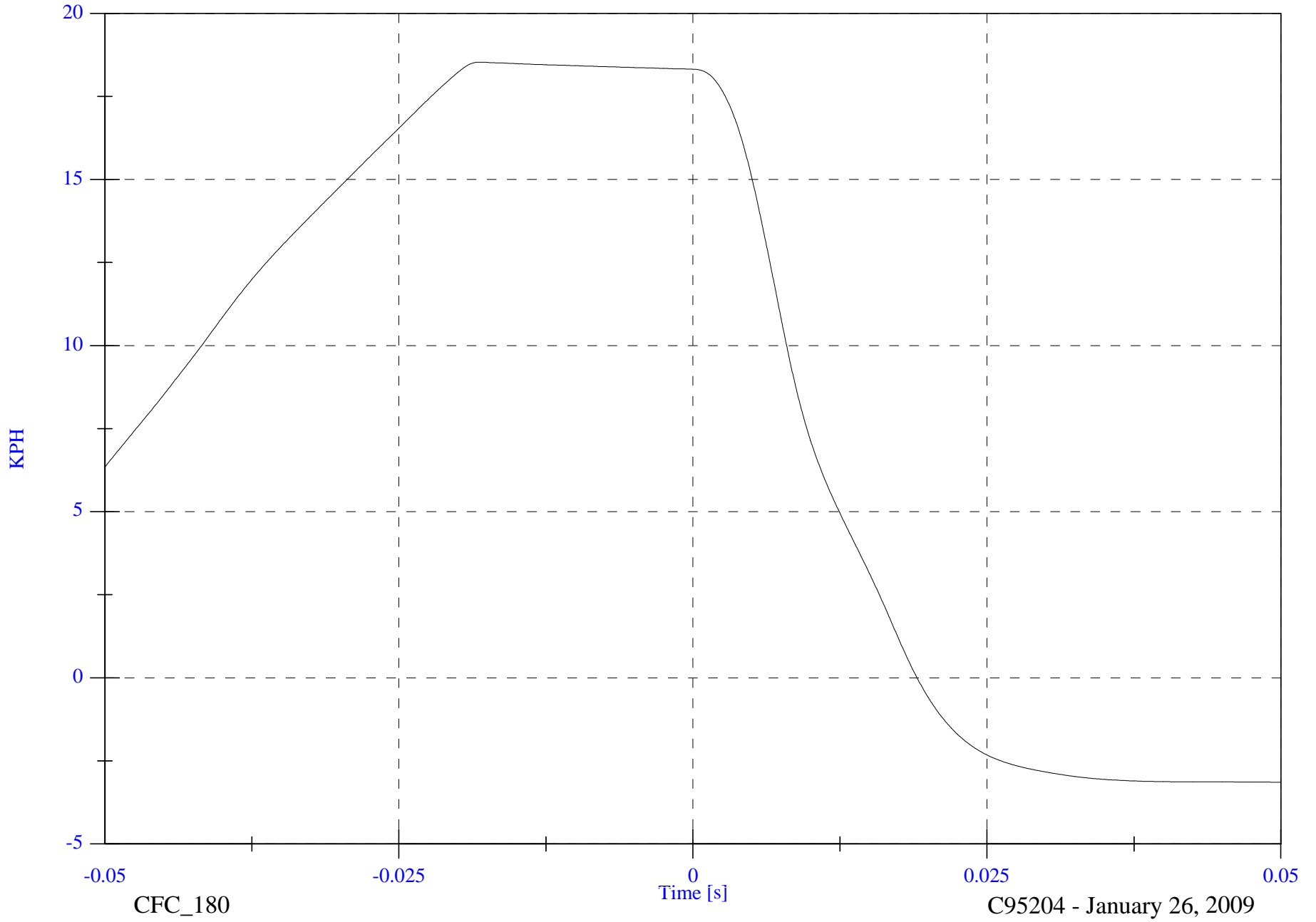
FMVSS 201U 09 Nissan Murano

### Headform Velocity

Max: 18.5 [KPH] at -0.018 [s]

Min: -3.1 [KPH] at 0.050 [s]

C95204 PASSENGER SIDE AP1 IMPACT PLOT # 5



CFC\_180

C95204 - January 26, 2009



PRE-IMPACT API

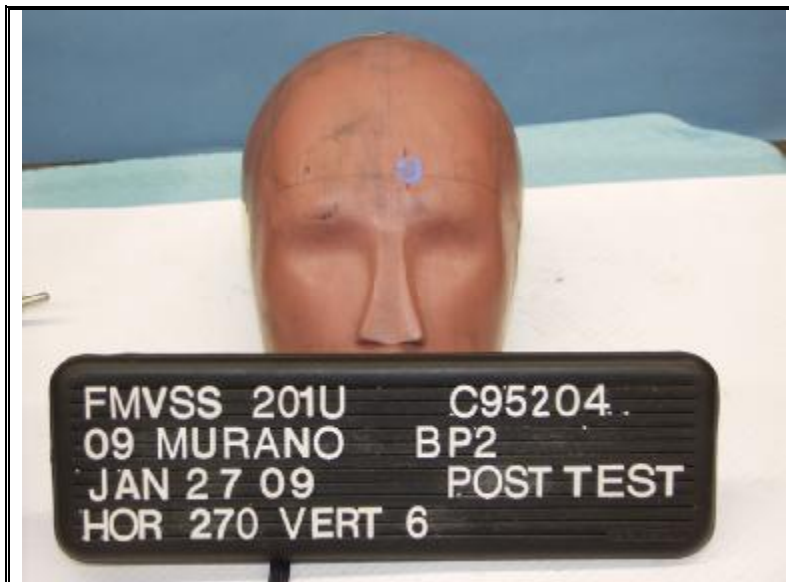


POST-IMPACT API

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	10
Test Date:	01/27/09
Target Location:	B-PILLAR
Target Code:	BP2
Horizontal Impact Angle:	270°
Vertical Impact Angle:	6°
Ambient Temperature:	21°C
Relative Humidity:	14
Time of Impact:	9:30
Headform Number:	0805

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	7	<input type="checkbox"/>	mm right <input checked="" type="checkbox"/> mm left
On Centerline	5		mm up



POST-IMPACT BP2 HEADFORM

Free Motion HIC	705.2
HIC(d)	698.5
Impact Velocity (kph)	23.44
HIC T1 (msec)	2.9
HIC T2 (msec)	8.9

# FMVSS 201U 09 Nissan Murano C95204 - BP2

FMH Headform 805

Location: BP2

Test Date: January 27, 2009

Work File: BP2

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 698.5

Lab Humidity: 14 %

HIC (36ms): 705.2

Velocity at Impact: 23.44 KPH

t1: 2.8 msec

t2: 8.9 msec

Free Flight Distance: 227.50 mm

Duration: 6.1 msec

Average Acceleration: 8.6 g

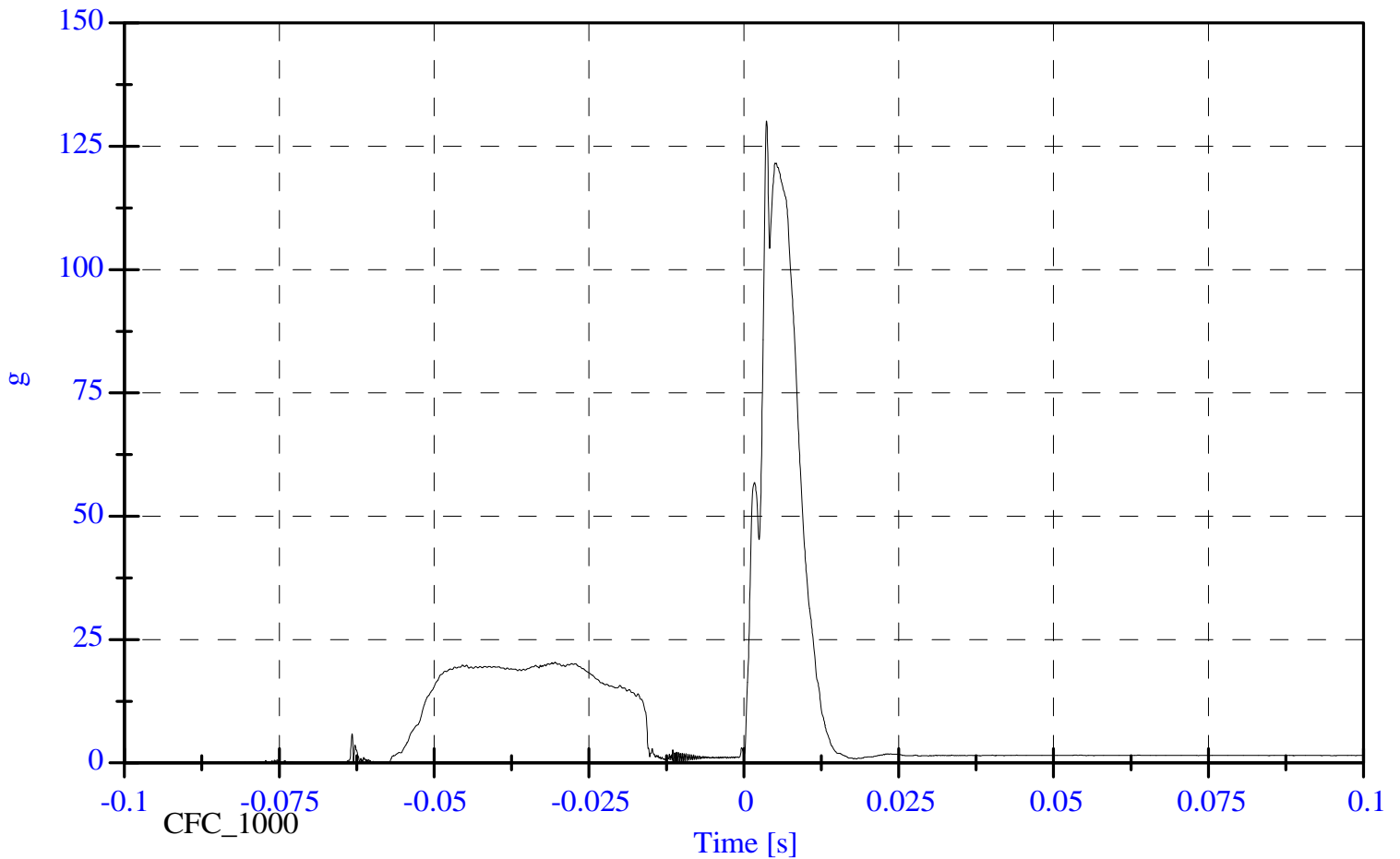
Maximum: 130.2 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 130.2 [g] at 0.004 [s]

Min: 0.0 [g] at -0.082 [s]





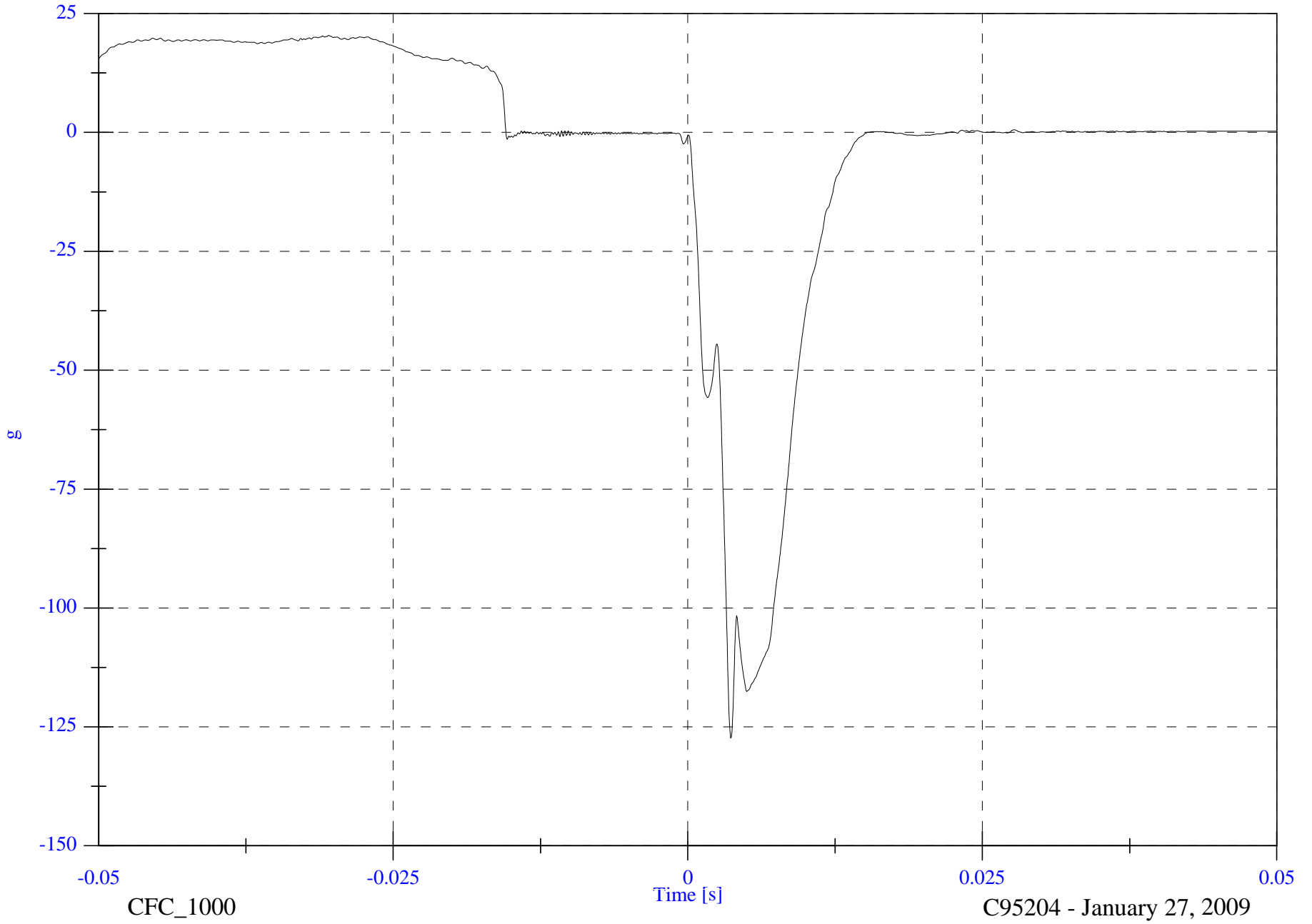
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 20.4 [g] at -0.030 [s]

Min: -127.4 [g] at 0.004 [s]

C95204 DRIVER SIDE BP2 IMPACT PLOT #1



CFC\_1000

C95204 - January 27, 2009

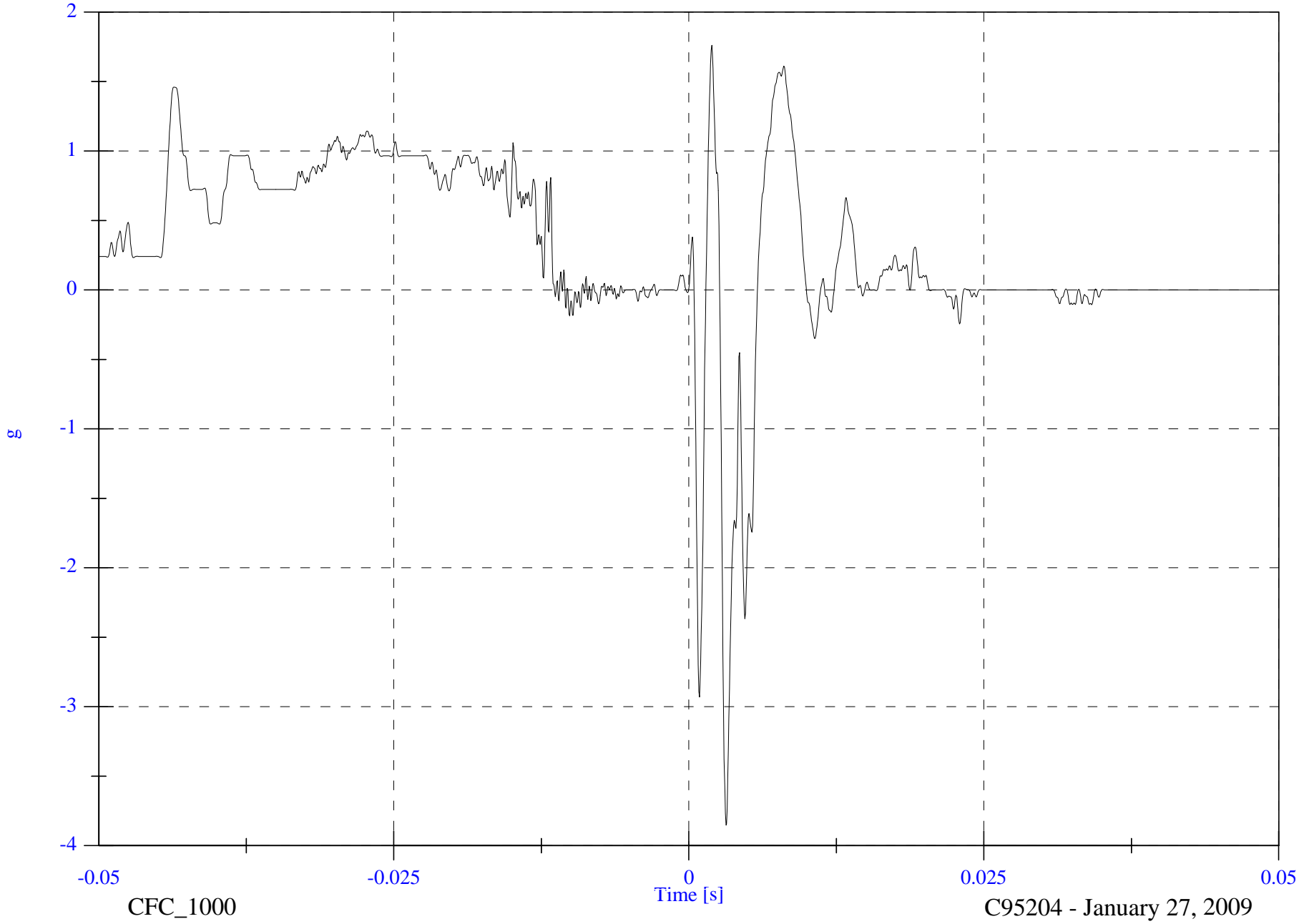
FMVSS 201U 09 Nissan Murano

### Headform Y Acceleration

Max: 1.8 [g] at 0.002 [s]

Min: -3.9 [g] at 0.003 [s]

C95204 DRIVER SIDE BP2 IMPACT PLOT #2



CFC\_1000

C95204 - January 27, 2009

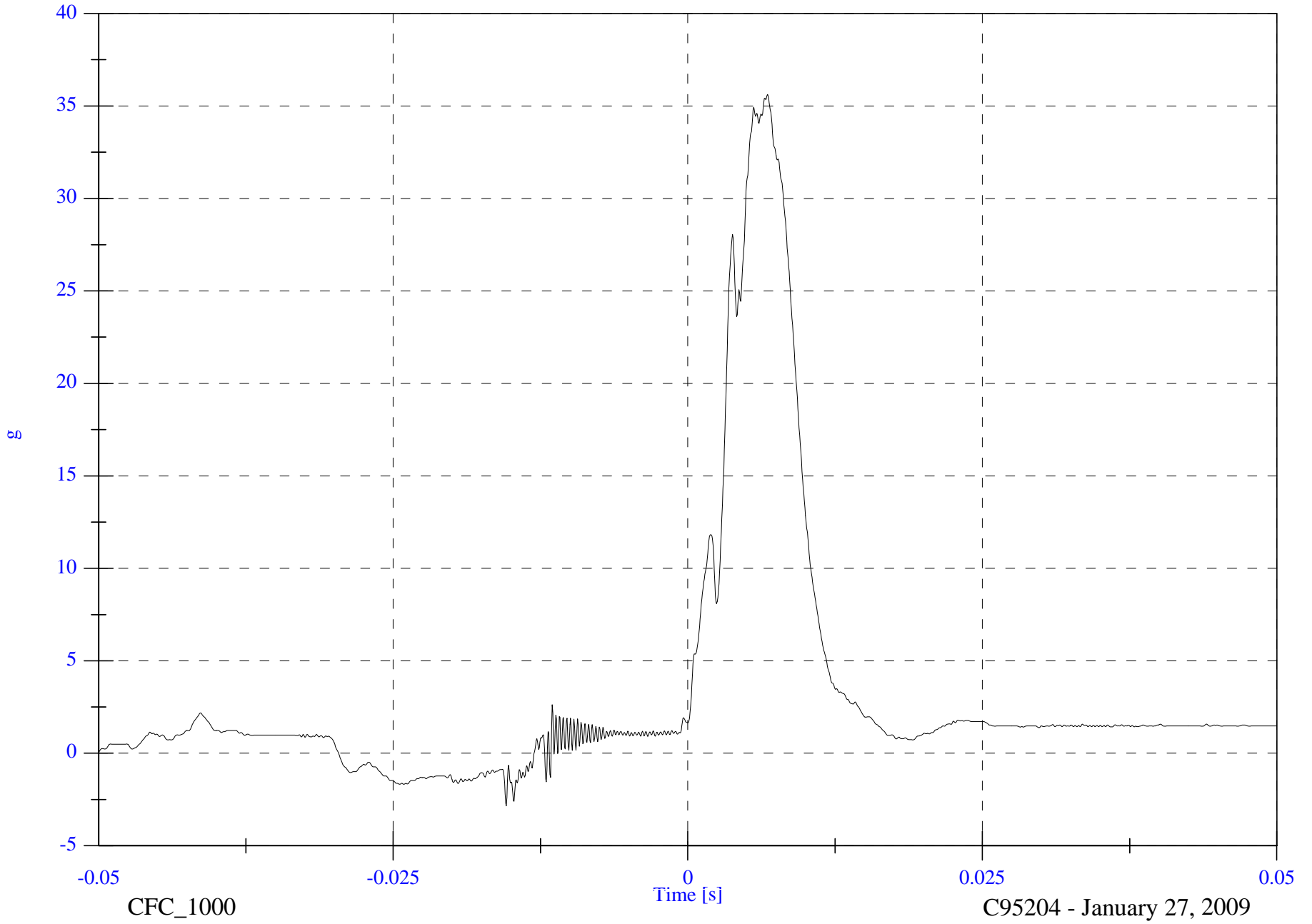
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 35.6 [g] at 0.007 [s]

Min: -2.8 [g] at -0.015 [s]

C95204 DRIVER SIDE BP2 IMPACT PLOT #3



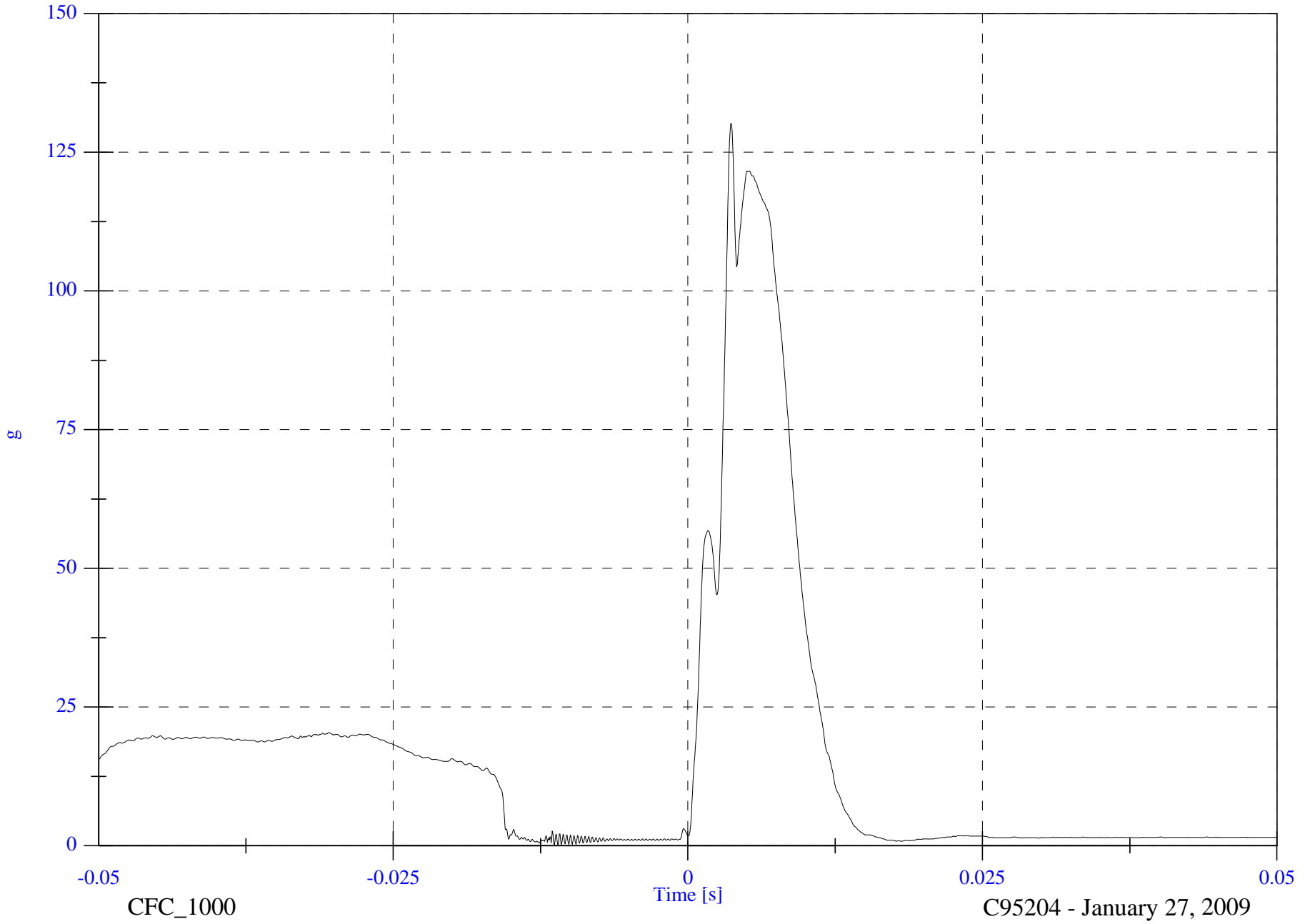
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 130.2 [g] at 0.004 [s]

Min: 0.2 [g] at -0.011 [s]

C95204 DRIVER SIDE BP2 IMPACT PLOT #4



CFC\_1000

C95204 - January 27, 2009

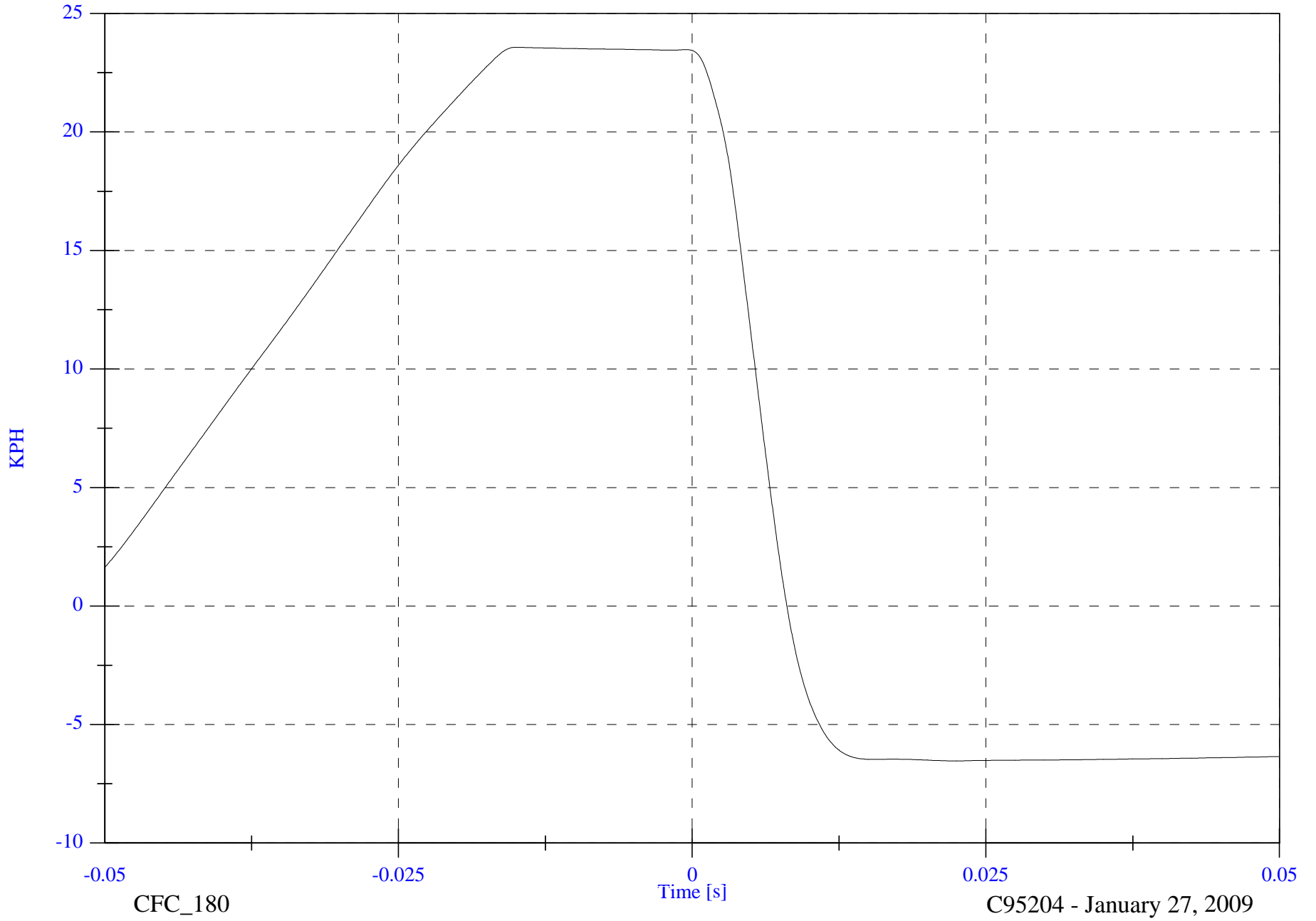
FMVSS 201U 09 Nissan Murano

### Headform Velocity

Max: 23.6 [KPH] at -0.015 [s]

Min: -6.5 [KPH] at 0.022 [s]

C95204 DRIVER SIDE BP2 IMPACT PLOT #5



CFC\_180

C95204 - January 27, 2009



PRE-IMPACT BP2



POST-IMPACT BP2

VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	11
Test Date:	01/27/09
Target Location:	UPPER ROOF
Target Code:	URBP
Horizontal Impact Angle:	270°
Vertical Impact Angle:	50°
Ambient Temperature:	21°C
Relative Humidity:	14
Time of Impact:	10:08
Headform Number:	0062

Impact Point Description (from lower midpoint on midsagittal line)					
On Centerline	4	<input type="checkbox"/>	mm right	<input checked="" type="checkbox"/>	mm left
On Centerline	34				mm up



POST-IMPACT URBP HEADFORM

Free Motion HIC	645.0
HIC(d)	653.0
Impact Velocity (kph)	23.83
HIC T1 (msec)	3.1
HIC T2 (msec)	10.3



# FMVSS 201U 09 Nissan Murano C95204 - URBP

FMH Headform 0062

Location: URBP

Test Date: January 27, 2009

Work File: URBP

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 653.0

Lab Humidity: 14 %

HIC (36ms): 645.0

Velocity at Impact: 23.83 KPH

t1: 3.1 msec

t2: 10.3 msec

Free Flight Distance: 221.76 mm

Duration: 7.1 msec

Average Acceleration: 9.5 g

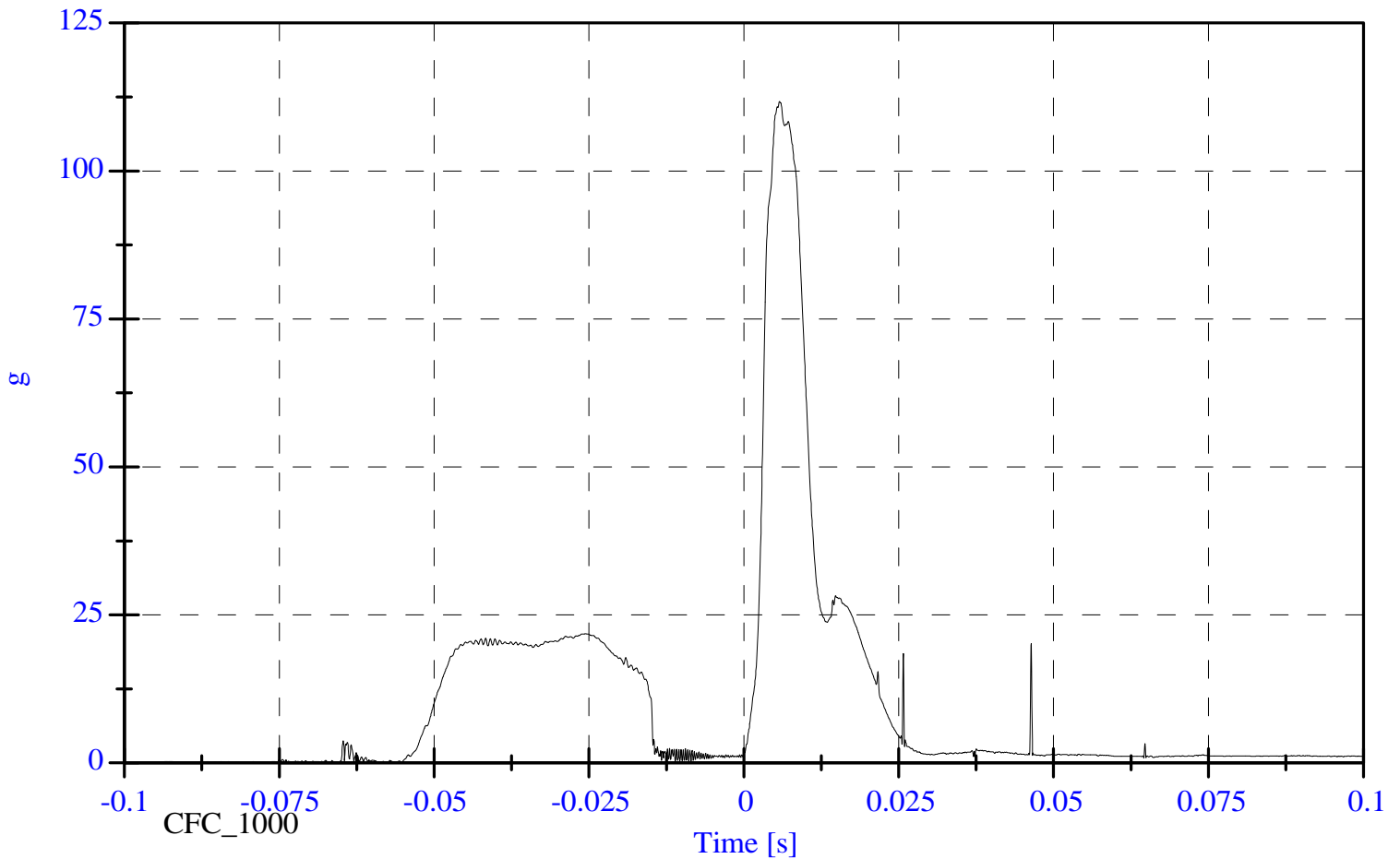
Maximum: 111.8 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 111.8 [g] at 0.006 [s]

Min: 0.0 [g] at -0.080 [s]



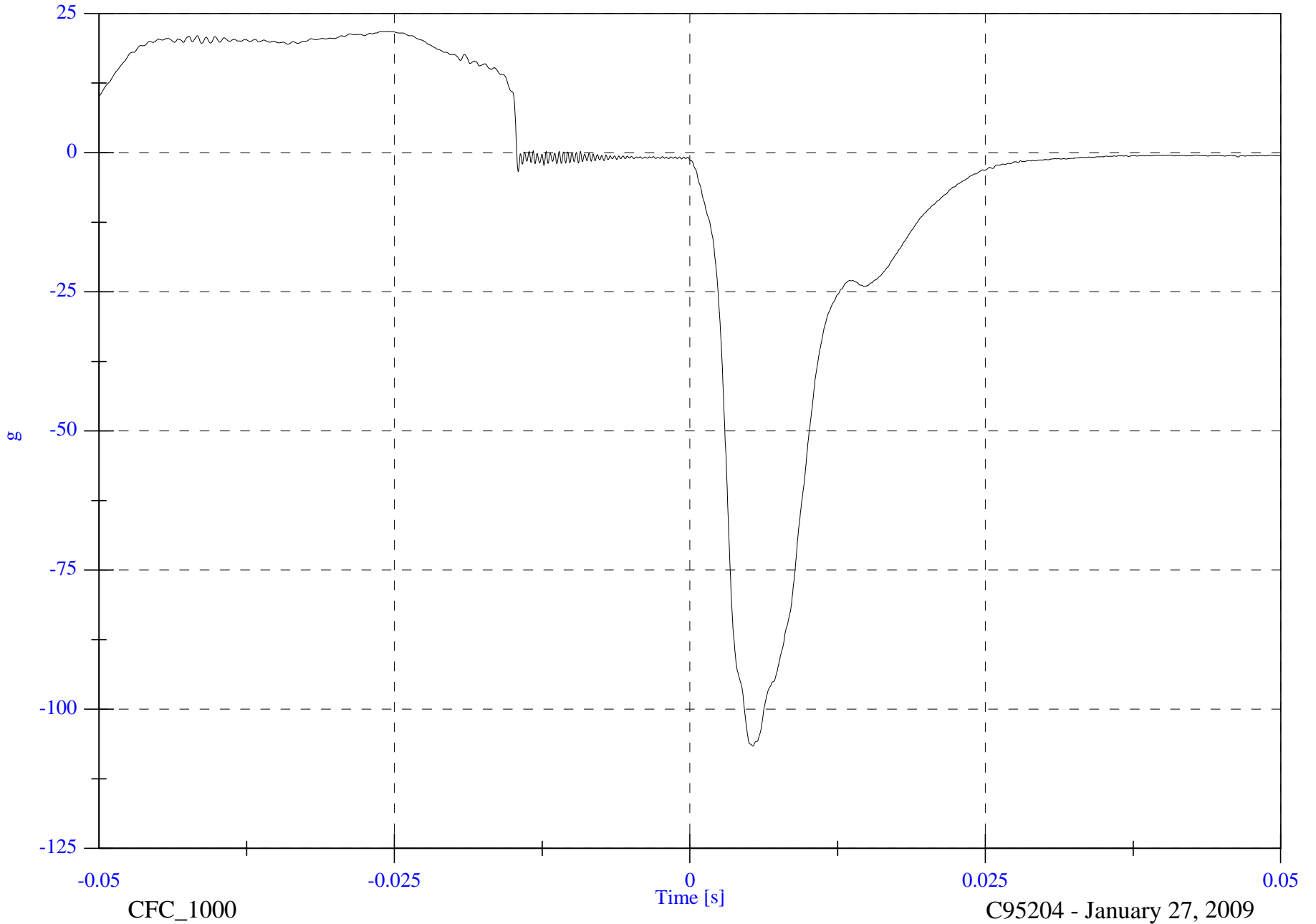
FMVSS 201U 09 Nissan Murano

### Headform X Acceleration

Max: 21.8 [g] at -0.026 [s]

Min: -106.6 [g] at 0.005 [s]

C95204 DRIVER SIDE URBP IMPACT PLOT #1



CFC\_1000

C95204 - January 27, 2009

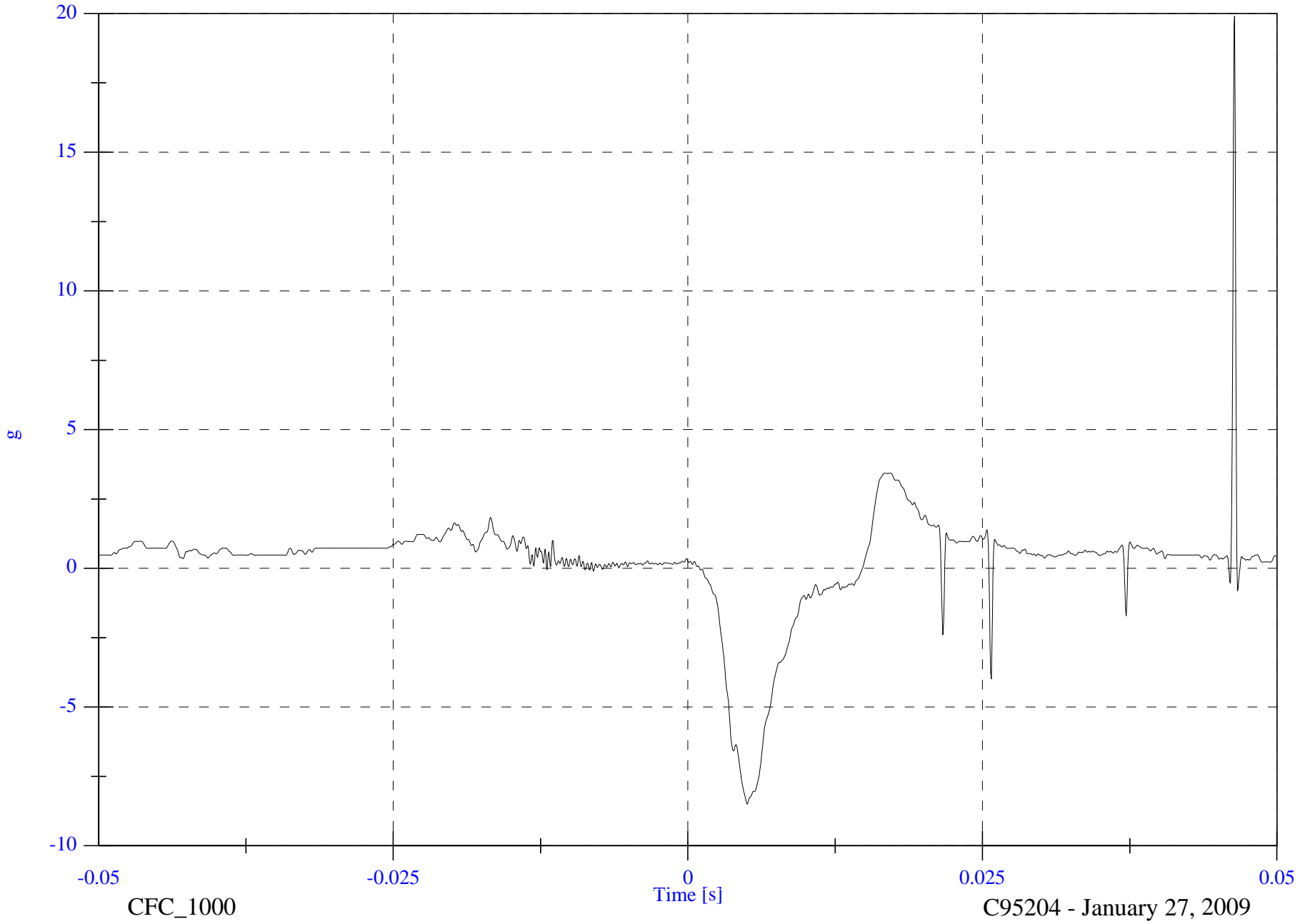
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 19.9 [g] at 0.046 [s]

Min: -8.5 [g] at 0.005 [s]

C95204 DRIVER SIDE URBP IMPACT PLOT #2



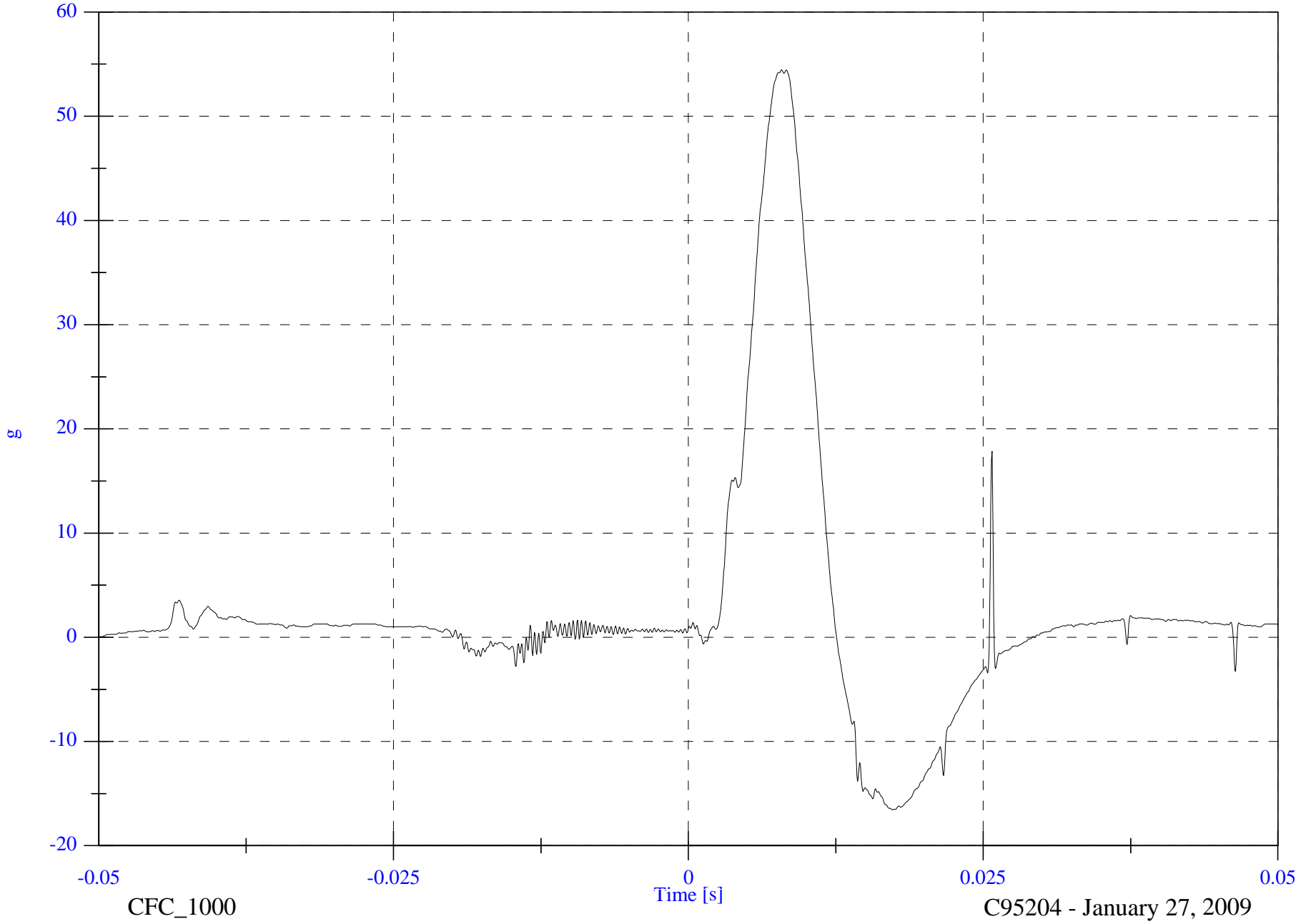
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 54.5 [g] at 0.008 [s]

Min: -16.6 [g] at 0.017 [s]

C95204 DRIVER SIDE URBP IMPACT PLOT #3



CFC\_1000

C95204 - January 27, 2009

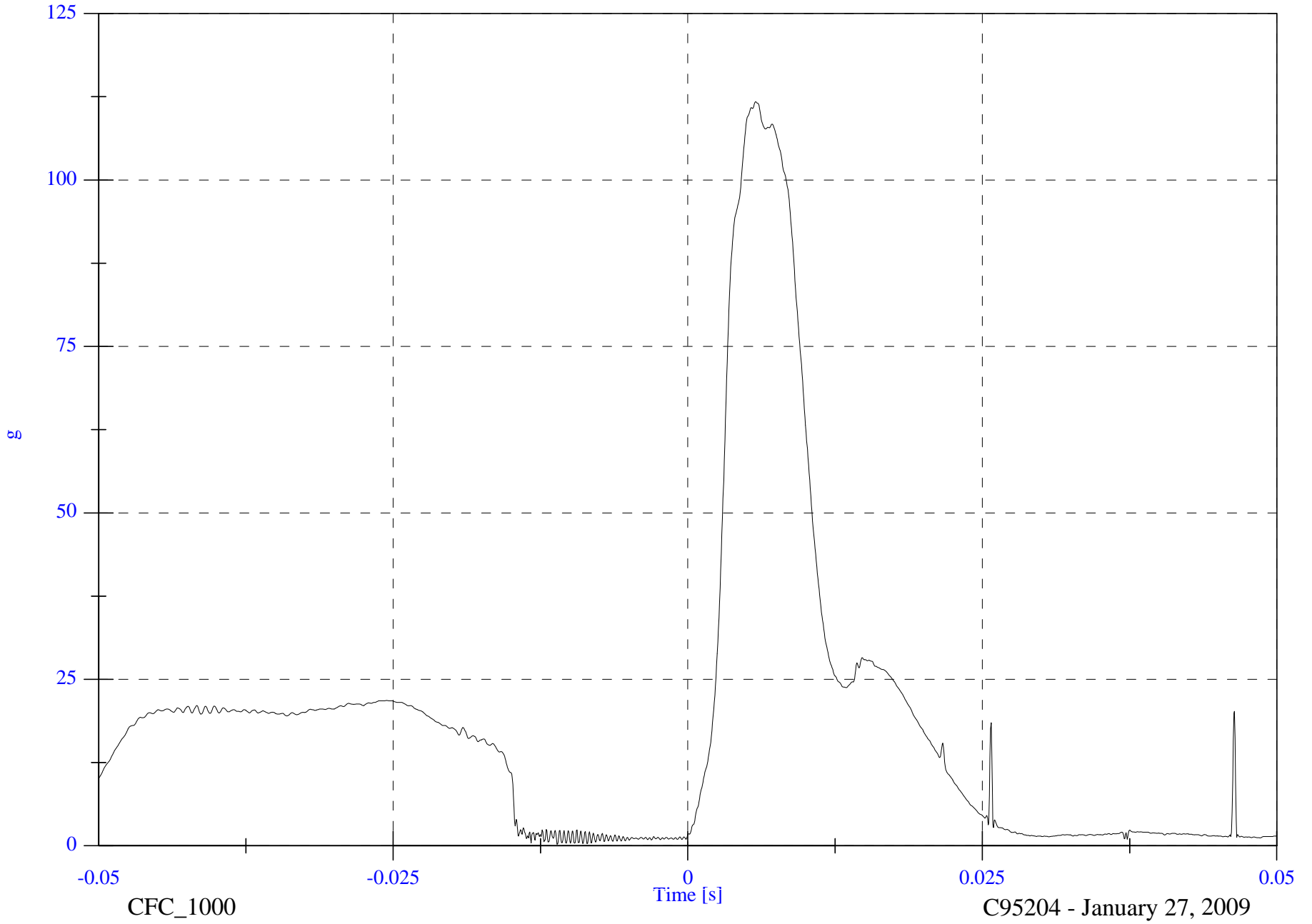
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 111.8 [g] at 0.006 [s]

Min: 0.2 [g] at -0.011 [s]

C95204 DRIVER SIDE URBP IMPACT PLOT #4



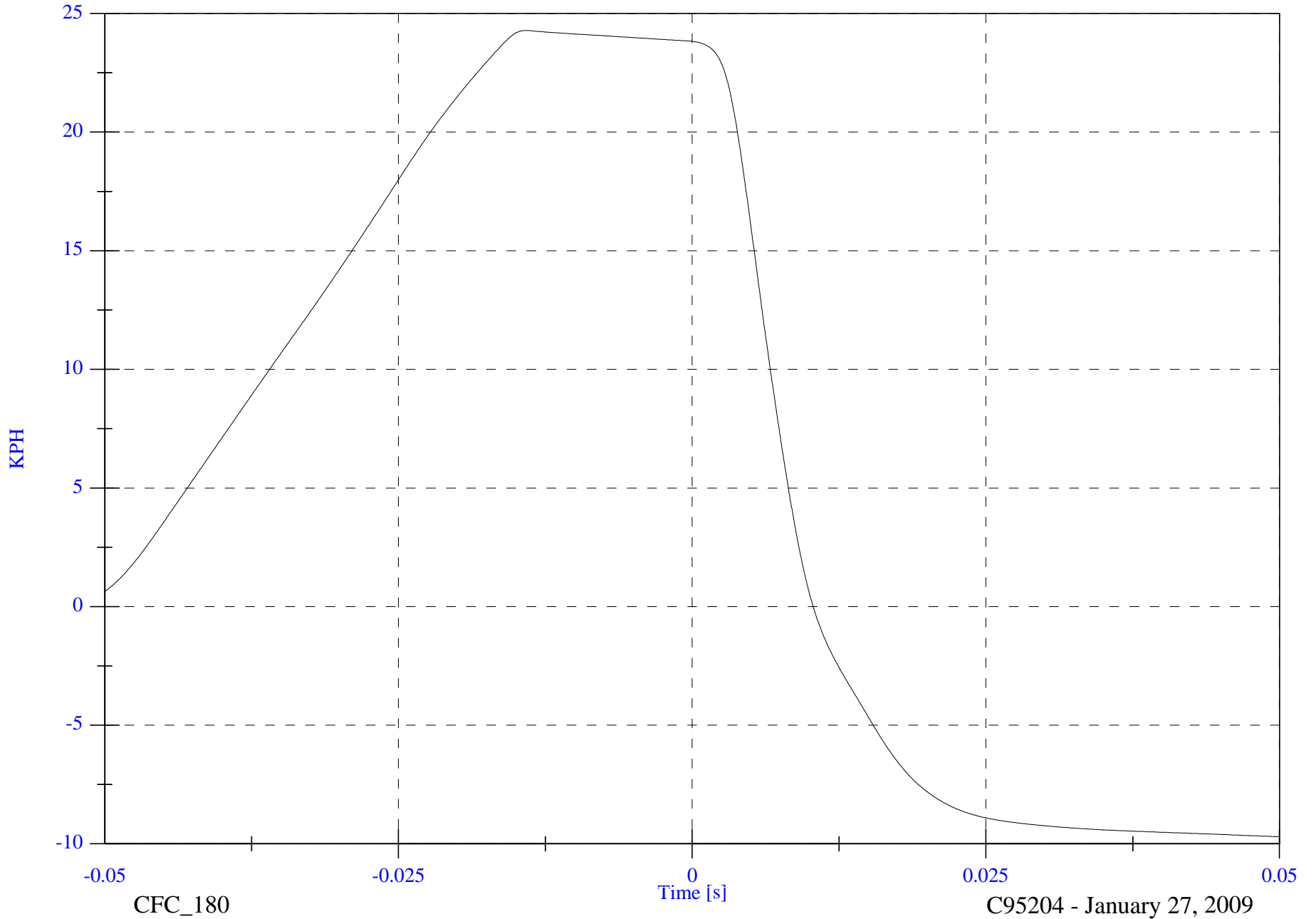
FMVSS 201U 09 Nissan Murano

Max: 24.3 [KPH] at -0.014 [s]

Min: -9.7 [KPH] at 0.050 [s]

### Headform Velocity

C95204 DRIVER SIDE URBP IMPACT PLOT #5



CFC\_180

C95204 - January 27, 2009



PRE-IMPACT URBP



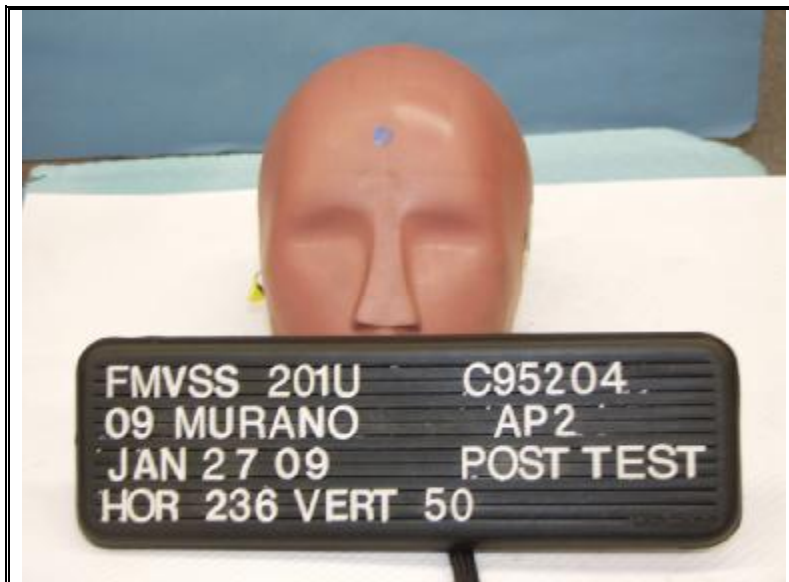
POST-IMPACT URBP



VEHICLE YEAR/MAKE/MODEL/STYLE:	2009 Nissan Murano
VIN:	JN8AZ18W19W127671
DATE OF MANUFACTURE:	03/08(SEE CERTIFICATION LABEL)
COLOR:	Merlot

Test Number:	12
Test Date:	01/27/09
Target Location:	A-PILLAR
Target Code:	AP2
Horizontal Impact Angle:	236°
Vertical Impact Angle:	50°
Ambient Temperature:	21°C
Relative Humidity:	14
Time of Impact:	10:50
Headform Number:	1142

Impact Point Description (from lower midpoint on midsagittal line)			
On Centerline	0	<input type="checkbox"/>	mm right <input type="checkbox"/> mm left
On Centerline	17		mm up



POST-IMPACT AP2 HEADFORM

Free Motion HIC	440.5
HIC(d)	498.8
Impact Velocity (kph)	18.76
HIC T1 (msec)	6.1
HIC T2 (msec)	10.3

# FMVSS 201U 09 Nissan Murano C95204 - AP2

FMH Headform 1142

Location: AP2

Test Date: January 27, 2009

Work File: AP2

## -----TEST RESULTS-----

Lab Temperature: 21 C

HICd: 498.8

Lab Humidity: 14 %

HIC (36ms): 440.5

Velocity at Impact: 18.76 KPH

t1: 6.1 msec

t2: 10.3 msec

Free Flight Distance: 223.21 mm

Duration: 4.2 msec

Average Acceleration: 9.6 g

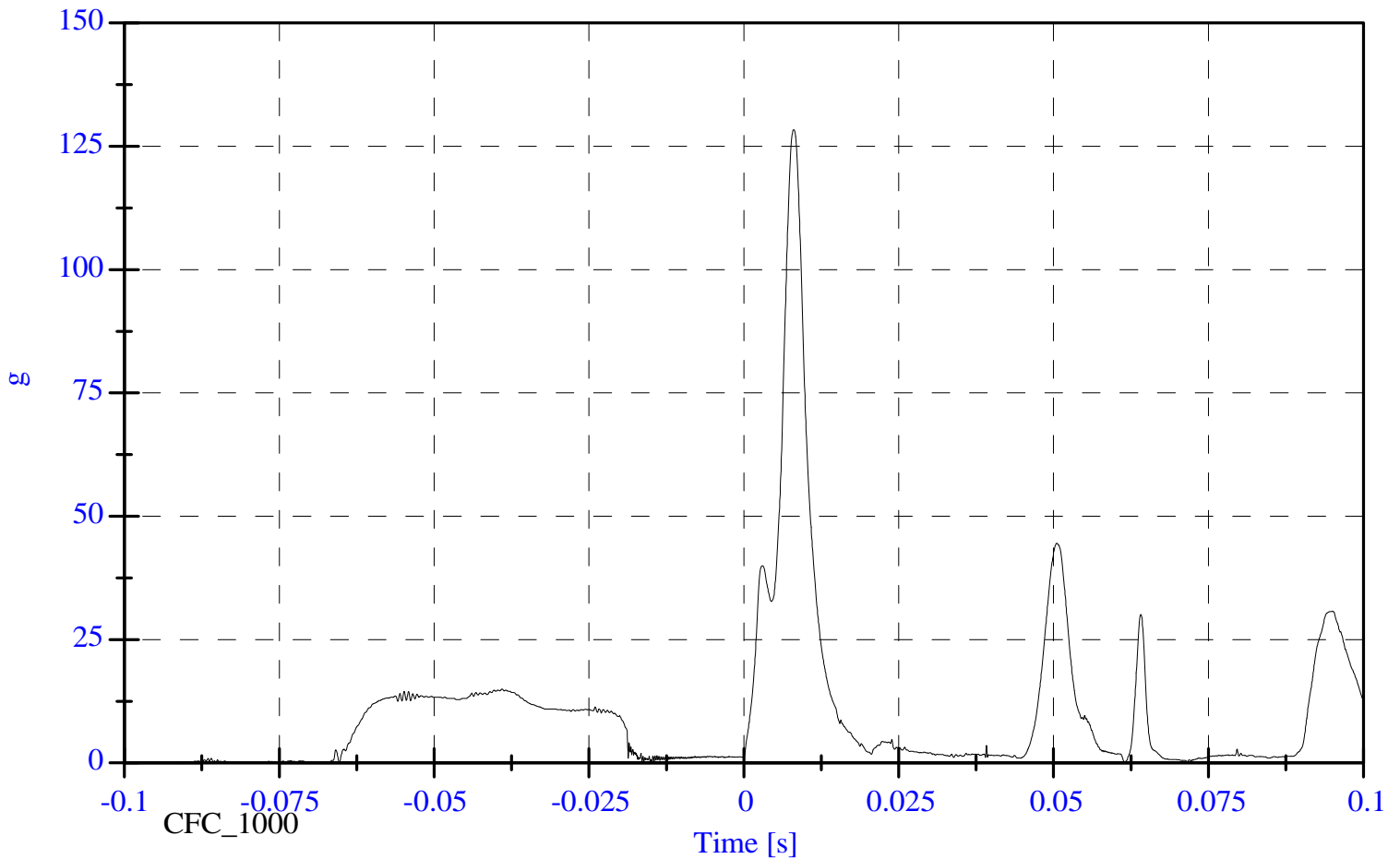
Maximum: 128.4 g

FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 128.4 [g] at 0.008 [s]

Min: 0.0 [g] at -0.097 [s]

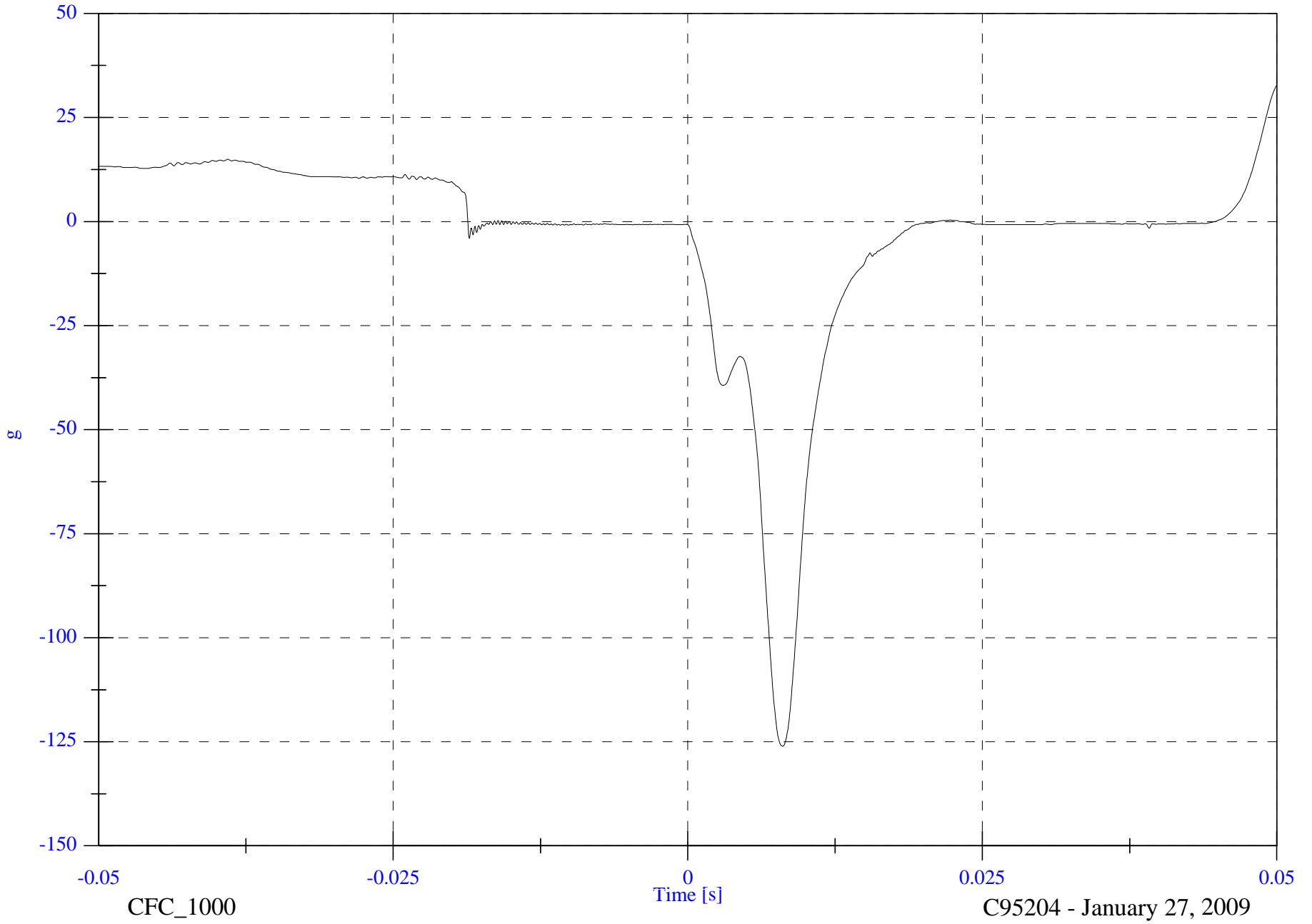


FMVSS 201U 09 Nissan Murano

Headform X Acceleration

Max: 32.6 [g] at 0.050 [s]  
Min: -126.1 [g] at 0.008 [s]

C95204 DRIVER SIDE AP2 IMPACT PLOT #1



CFC\_1000

C95204 - January 27, 2009

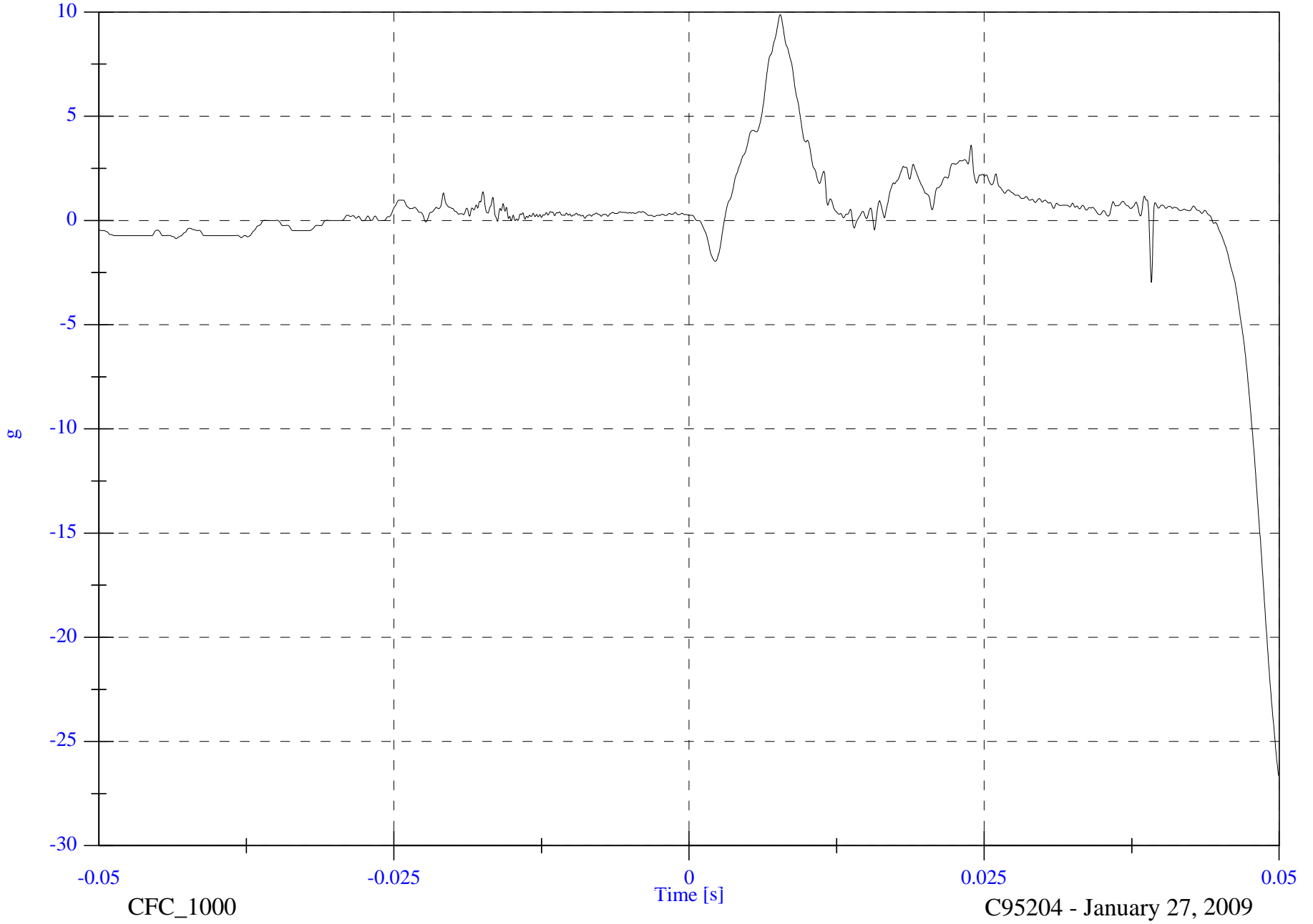
FMVSS 201U 09 Nissan Murano

Headform Y Acceleration

Max: 9.9 [g] at 0.008 [s]

Min: -26.6 [g] at 0.050 [s]

C95204 DRIVER SIDE AP2 IMPACT PLOT #2



CFC\_1000

C95204 - January 27, 2009

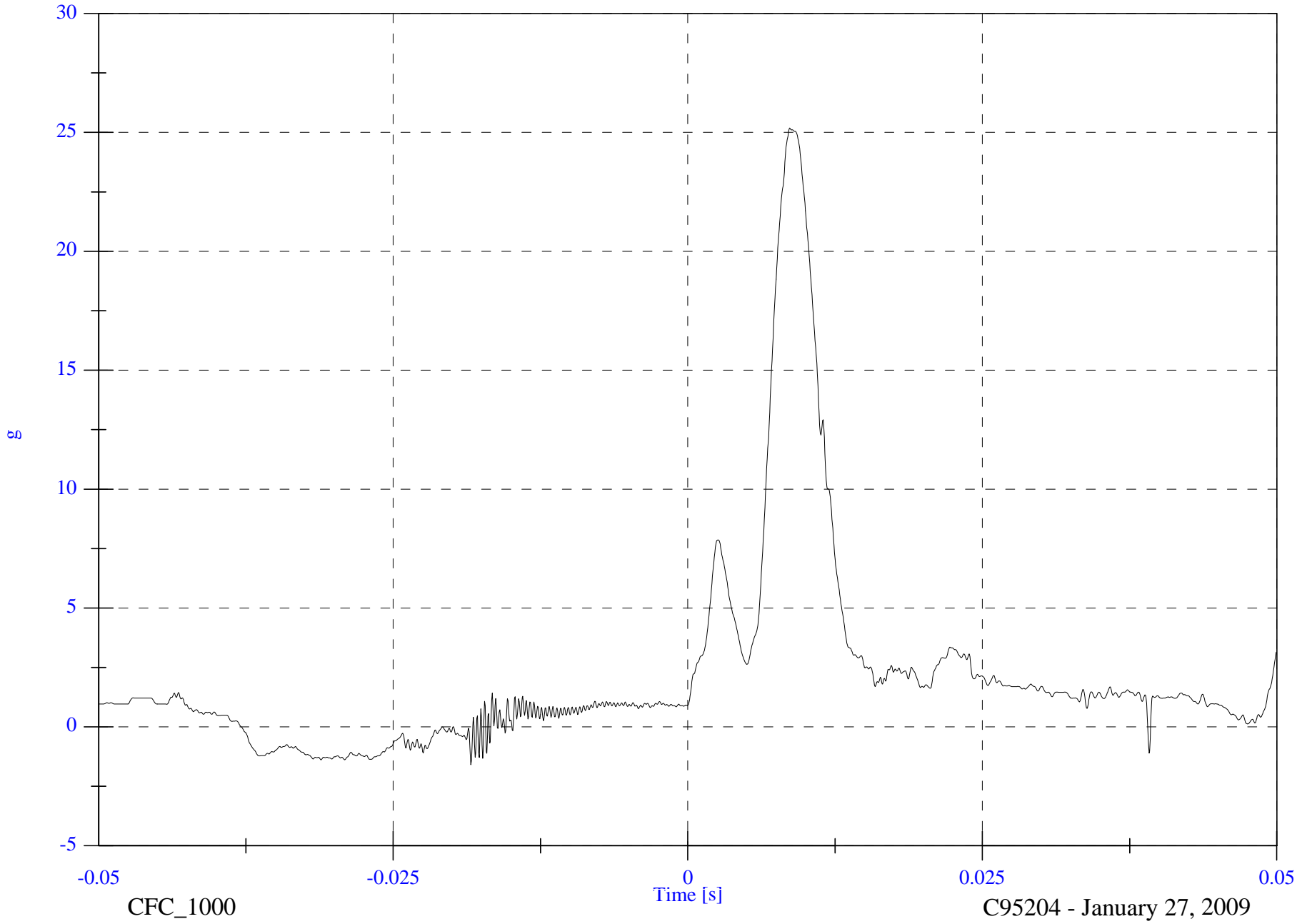
FMVSS 201U 09 Nissan Murano

Headform Z Acceleration

Max: 25.2 [g] at 0.009 [s]

Min: -1.6 [g] at -0.018 [s]

C95204 DRIVER SIDE AP2 IMPACT PLOT #3



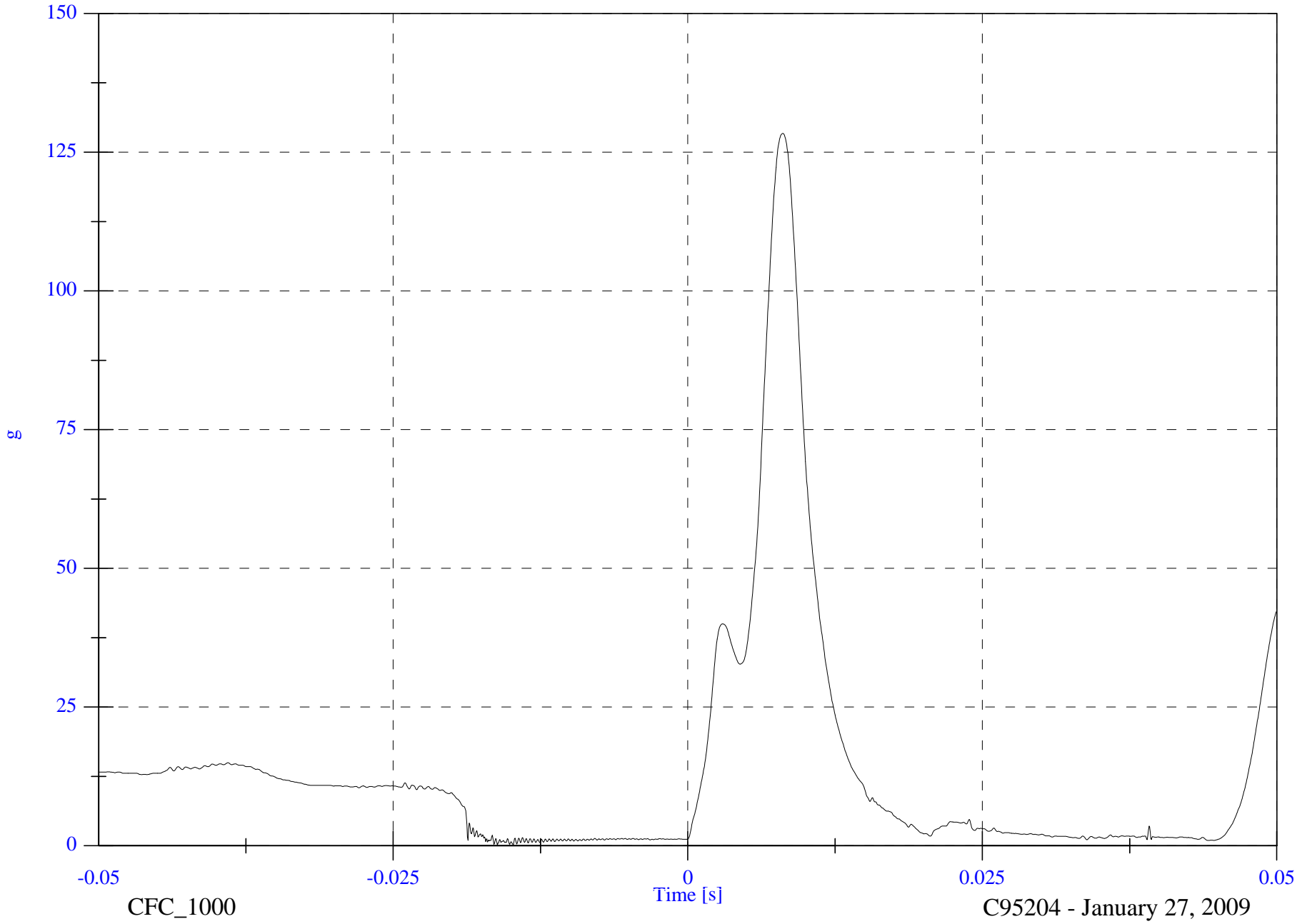
FMVSS 201U 09 Nissan Murano

Headform Resultant

Max: 128.4 [g] at 0.008 [s]

Min: 0.1 [g] at -0.016 [s]

C95204 DRIVER SIDE AP2 IMPACT PLOT #4



CFC\_1000

C95204 - January 27, 2009

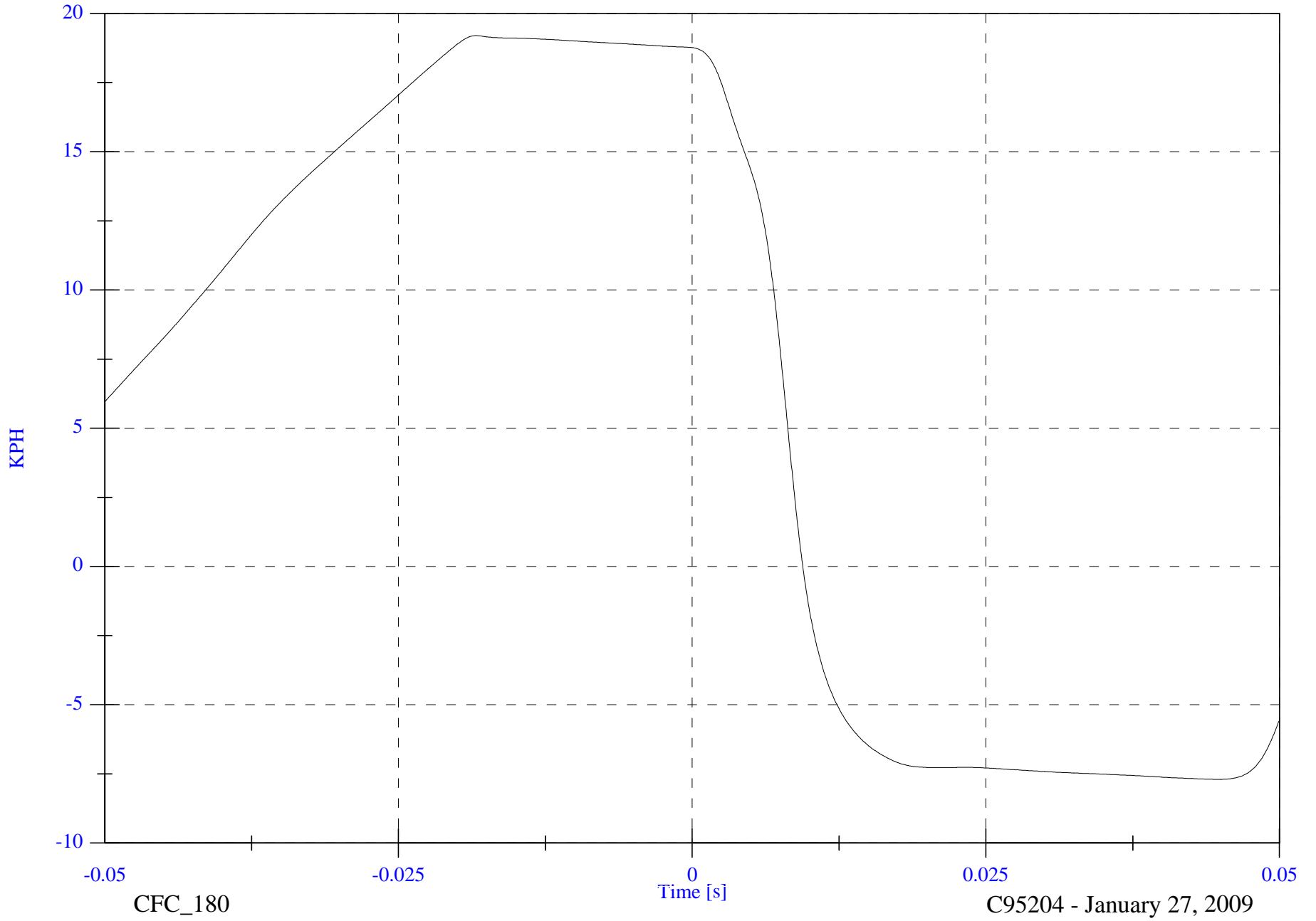
FMVSS 201U 09 Nissan Murano

### Headform Velocity

Max: 19.2 [KPH] at -0.018 [s]

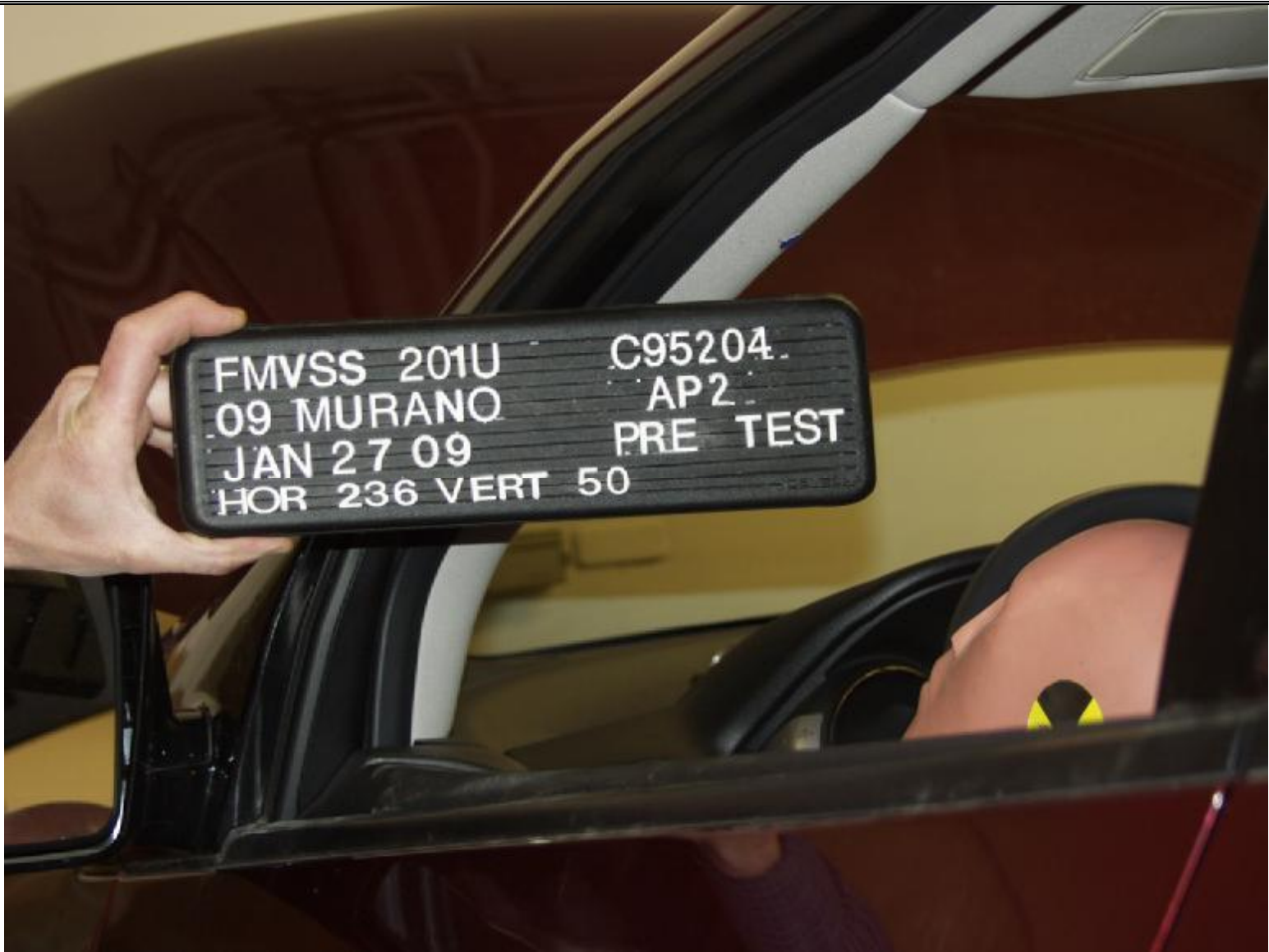
Min: -7.7 [KPH] at 0.045 [s]

C95204 DRIVER SIDE AP2 IMPACT PLOT #5



CFC\_180

C95204 - January 27, 2009



PRE-IMPACT AP2





POST-IMPACT AP2

**APPENDIX A**

**PHOTOGRAPHS**

## PHOTOGRAPHS

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Figure A-1 : LEFT SIDE VIEW OF VEHICLE



A-4

8877-04

Figure A-2 : RIGHT SIDE VIEW OF VEHICLE



Figure A-3 : 3/4 FRONTAL VIEW FROM LEFT SIDE OF VEHICLE



Figure A-4 : 3/4 REAR VIEW FROM RIGHT SIDE OF VEHICLE



Figure A-5 : VEHICLE'S CERTIFICATION LABEL





TIRE AND LOADING INFORMATION RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT				TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS A FROID	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION  VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS
SEATING CAPACITY NOMBRE DE SIÈGES	TOTAL	0		FRONT AVANT	P235/65R18 104T	230kPa , 33PSI	
				REAR ARRIÈRE	P235/65R18 104T	230kPa , 33PSI	
				SPARE DE RECHANGE	T165/90D18	420kPa , 60PSI	

The combined weight of occupants and cargo should never exceed **408 kg or 900 lbs.**  
 Le poids total des occupants et des marchandises ne doit jamais dépasser **408 kg ou 900 lb.**

D1 1AA1A

Figure A-6 : VEHICLE'S TIRE INFORMATION LABEL



Figure A-7 : PRE-TEST DRIVER SIDE A-PILLAR



Figure A-8 : PRE-TEST DRIVER SIDE FRONT HEADER



Figure A-9 : PRE-TEST DRIVER SIDE SIDE RAIL



Figure A-10 : PRE-TEST DRIVER SIDE B-PILLAR



Figure A-11 : PRE-TEST DRIVER SIDE OTHER PILLAR



Figure A-12 : PRE-TEST PASSENGER SIDE A-PILLAR



Figure A-13 : PRE-TEST PASSENGER SIDE FRONT HEADER





Figure A-14 : PRE-TEST PASSENGER SIDE SIDE RAIL



Figure A-15 : PRE-TEST PASSENGER SIDE B-PILLAR



Figure A-16 : PRE-TEST PASSENGER SIDE OTHER PILLAR



Figure A-17 : POST-TEST DRIVER SIDE A-PILLAR



Figure A-18 : POST-TEST DRIVER SIDE FRONT HEADER



Figure A-19 : POST-TEST DRIVER SIDE SIDE RAIL



Figure A-20 : POST-TEST DRIVER SIDE B-PILLAR



Figure A-21 : POST-TEST DRIVER SIDE OTHER PILLAR





Figure A-22 : POST-TEST PASSENGER SIDE A-PILLAR



Figure A-23 : POST-TEST PASSENGER SIDE FRONT HEADER



Figure A-24 : POST-TEST PASSENGER SIDE SIDE RAIL



Figure A-25 : POST-TEST PASSENGER SIDE B-PILLAR



Figure A-26 : POST-TEST PASSENGER SIDE OTHER PILLAR

## **APPENDIX B**

### **PART 572L PERFORMANCE CALIBRATION IN SUPPORT OF VEHICLE SAFETY COMPLIANCE TESTING FOR OCCUPANT PROTECTION IN INTERIOR IMPACT**

Appendix B contains the results from certification tests performed on the Free Motion Headforms utilized in this test program. The results indicate that the headforms meet all of the performance specifications given in 49 CFR Part 572 Subpart L.

The tests were conducted at the Dummy Certification Test Facility of Calspan Corporation. A summary of the test results are included in this Appendix.

**PART 572L  
HEAD DROP PRE-TEST**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>1140</b>	
<b>CALIBRATION DATE:</b>		<b>January 20, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>14</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>236.1</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>6.9</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

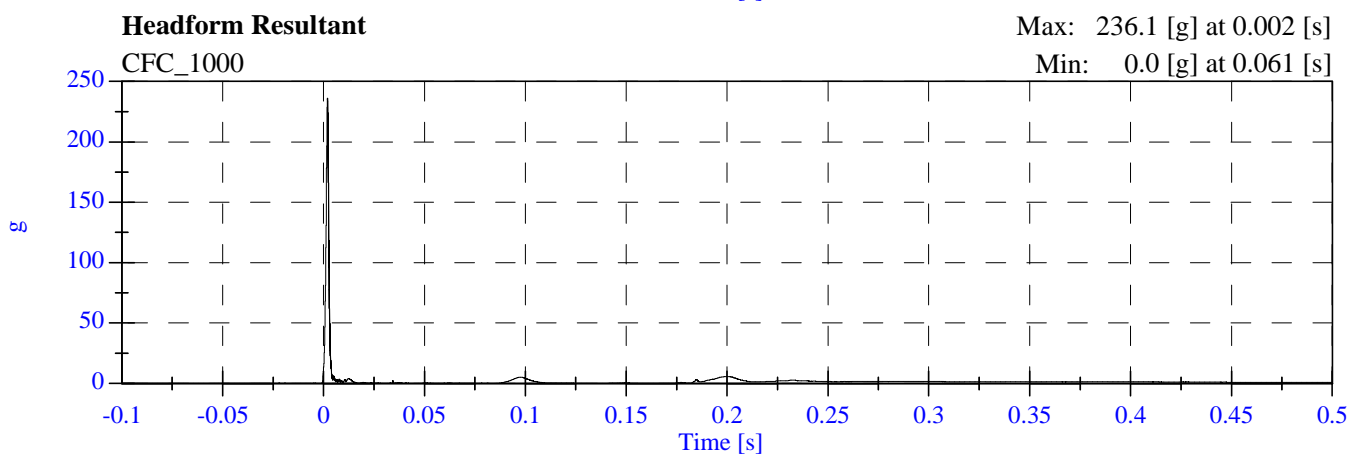
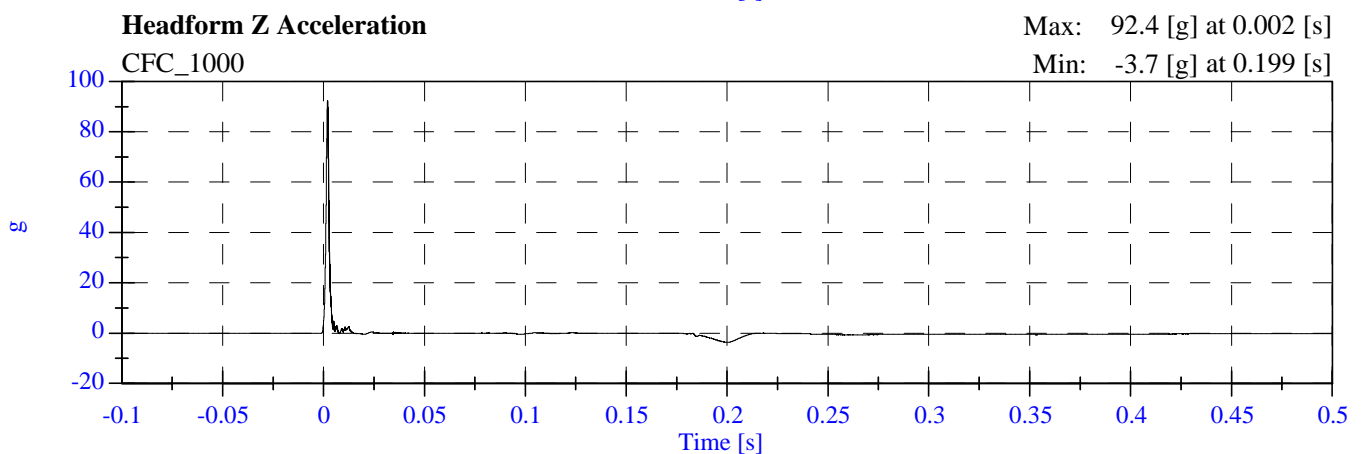
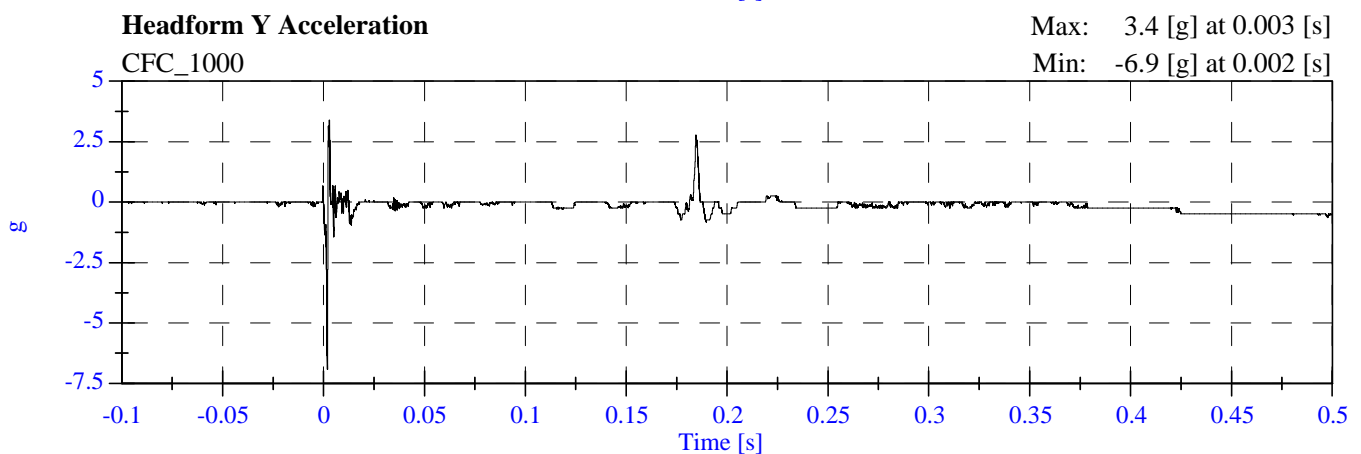
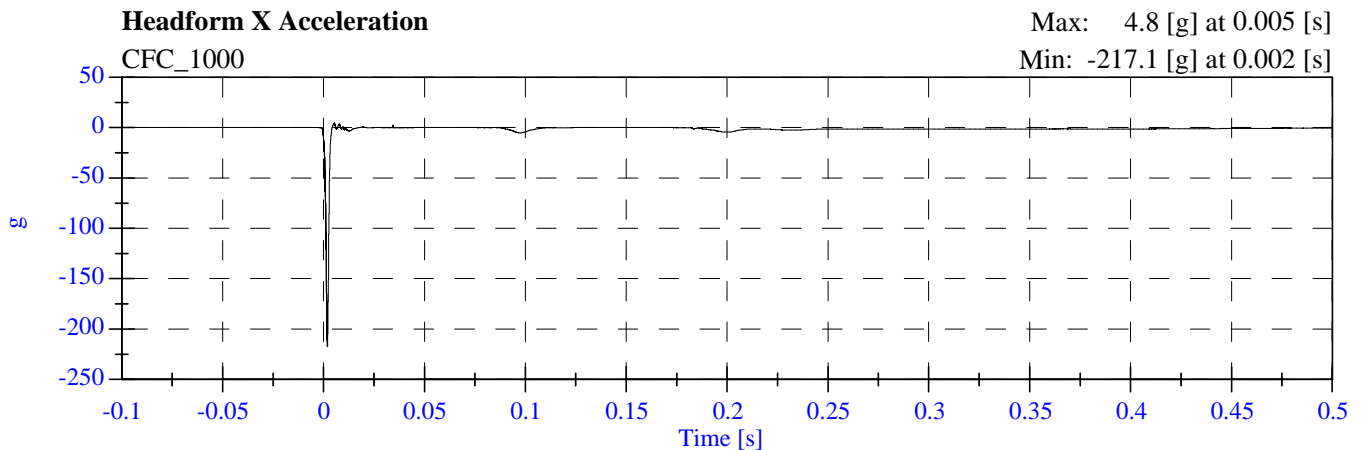
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J24876</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33030</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J31009</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 20, 2009





**PART 572L  
HEAD DROP PRE-TEST**

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0062</b>	
<b>CALIBRATION DATE:</b>		<b>January 20, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>14</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>266.0</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>12.3</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

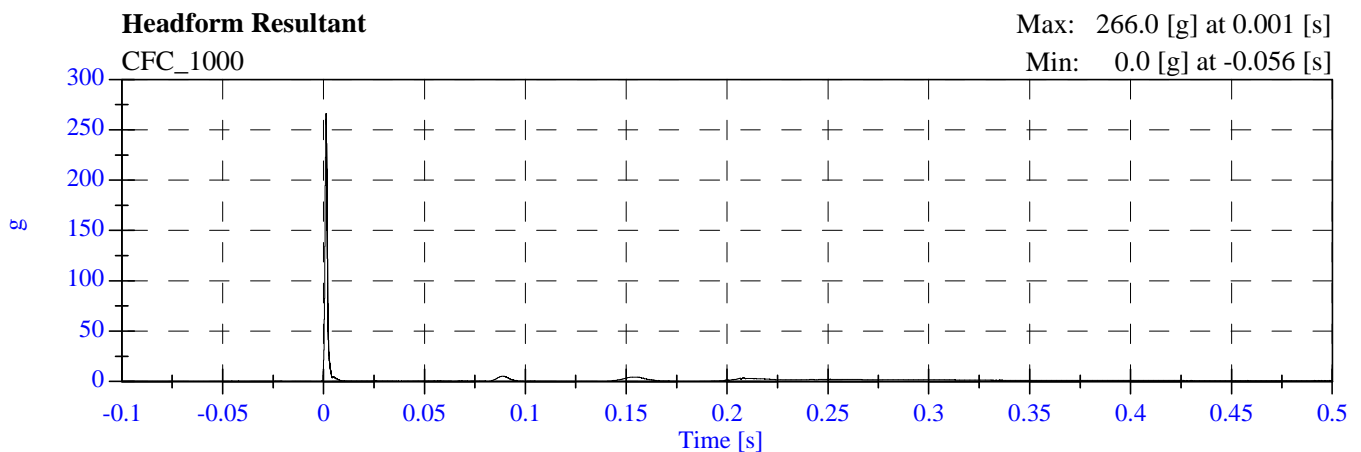
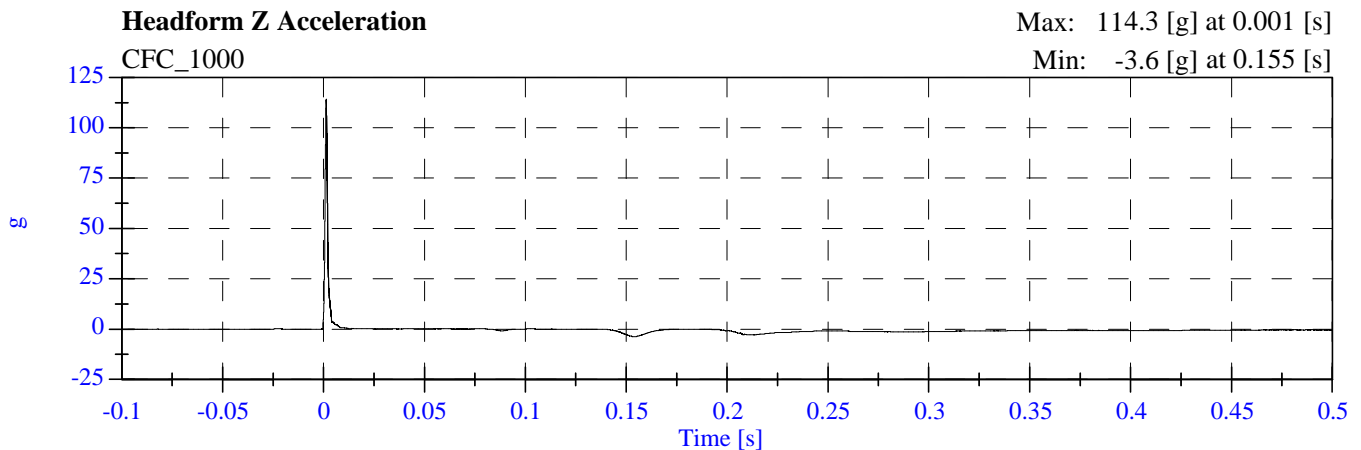
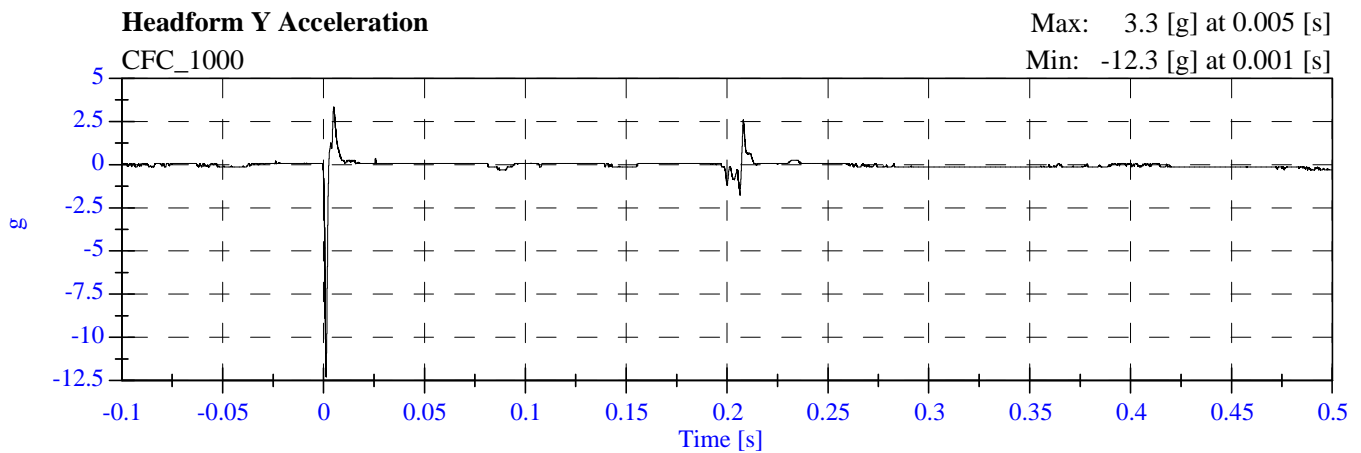
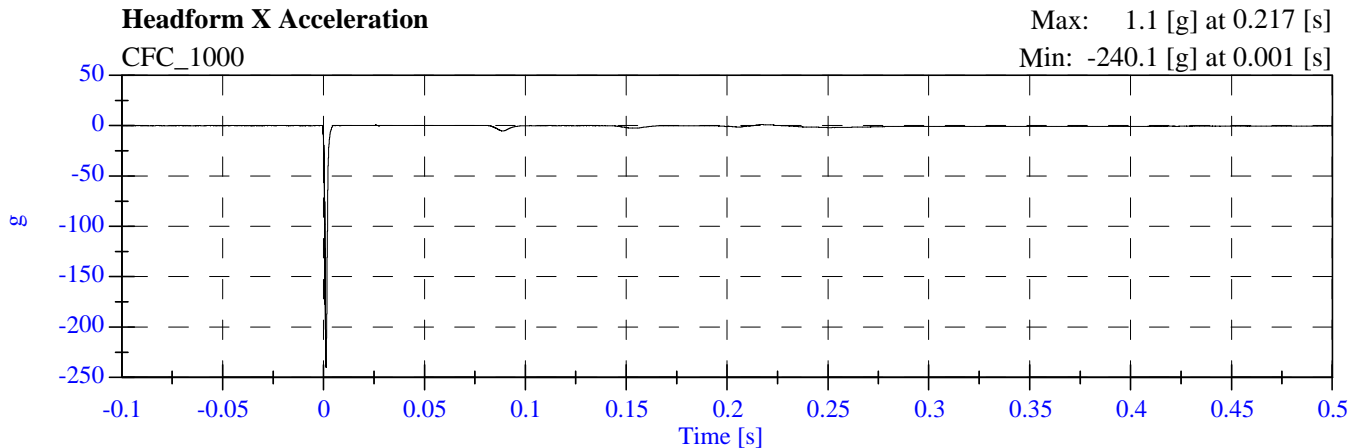
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33127</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33019</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32782</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 20, 2009



**PART 572L  
HEAD DROP PRE-TEST**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>805</b>	
<b>CALIBRATION DATE:</b>		<b>January 20, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>14</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>265.4</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>7.9</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

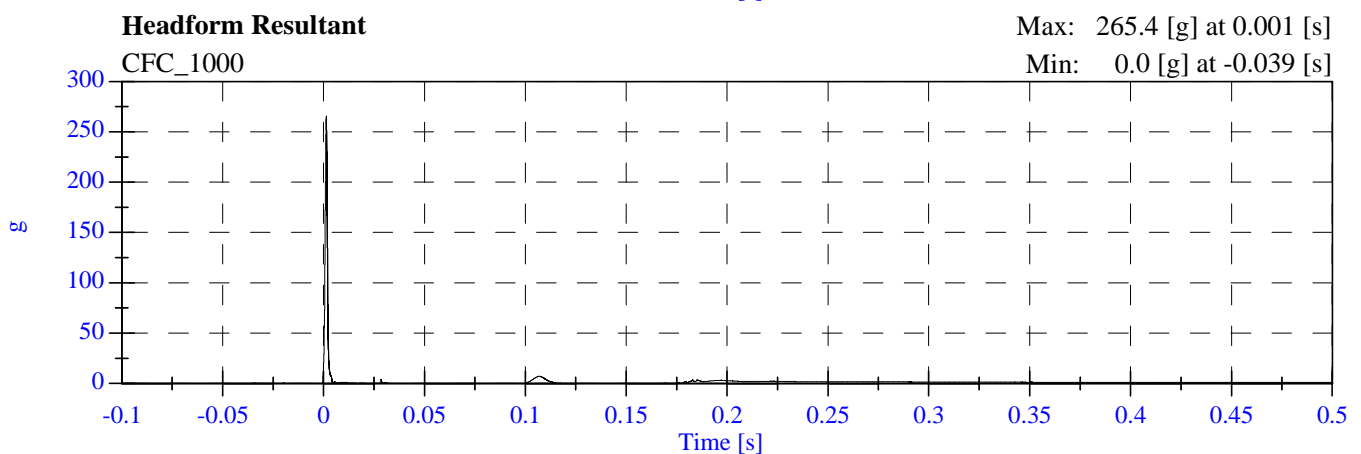
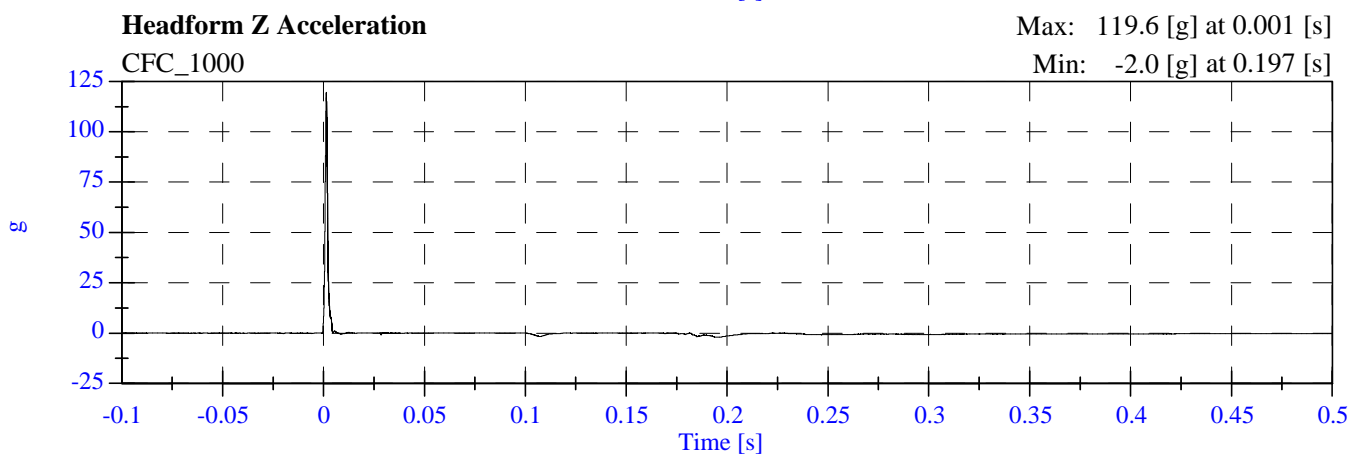
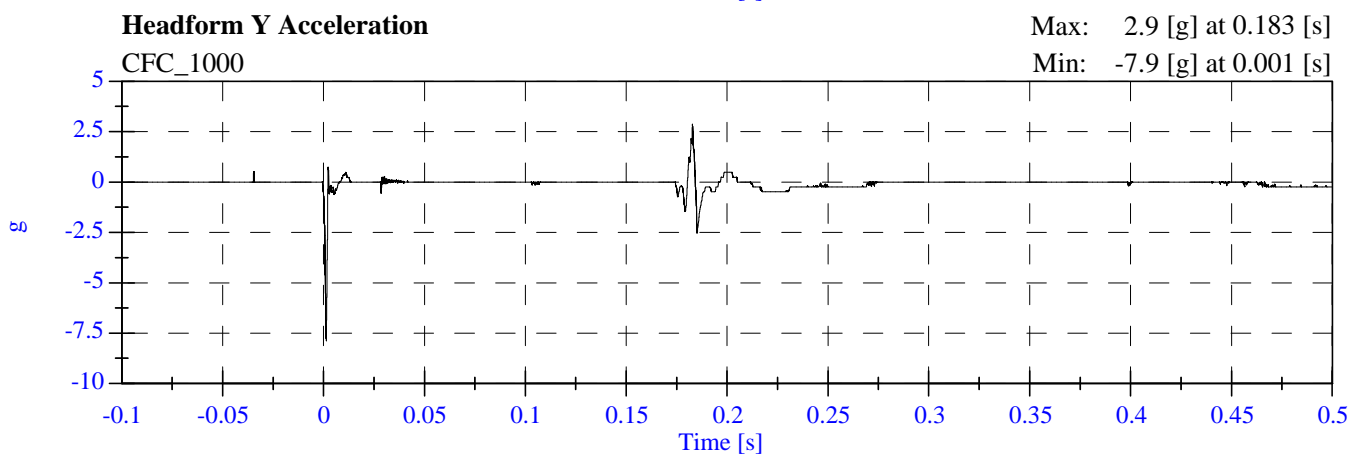
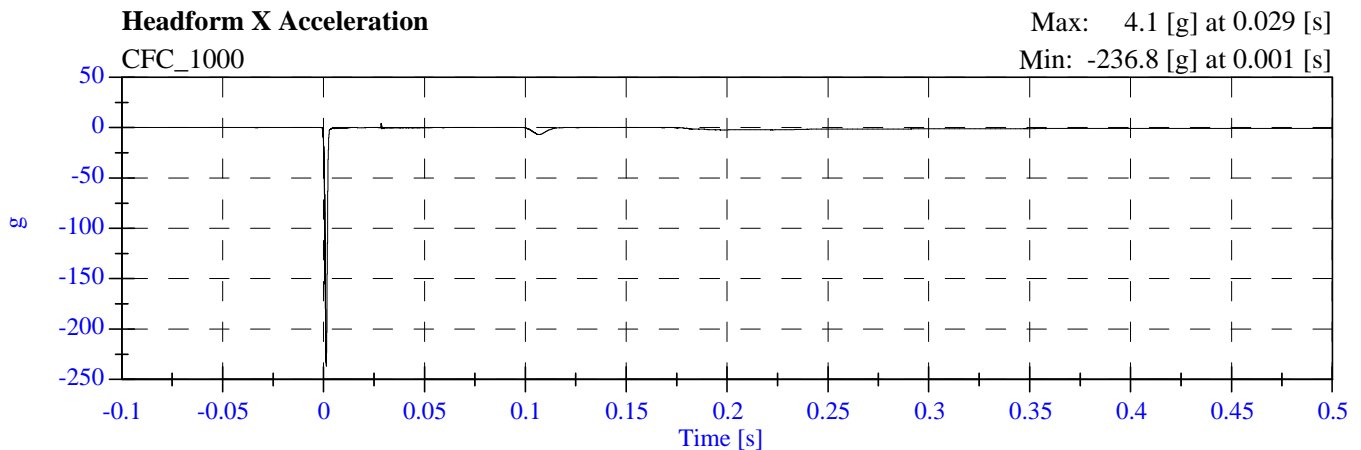
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41004</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J37496</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41016</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 20, 2009



**PART 572L  
HEAD DROP PRE-TEST**

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0355</b>	
<b>CALIBRATION DATE:</b>		<b>January 20, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>14</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>264.1</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>4.3</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

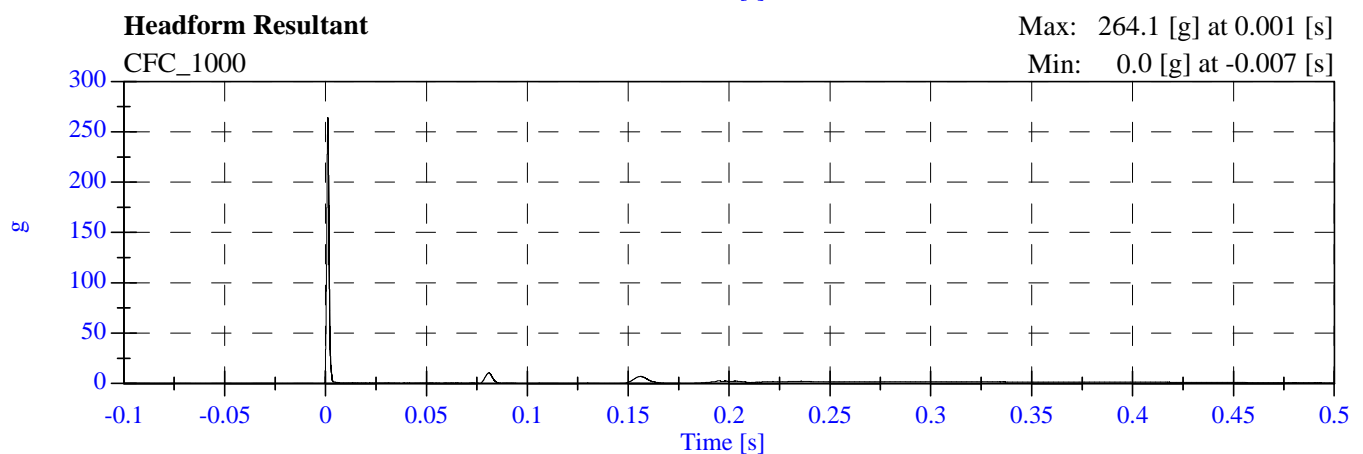
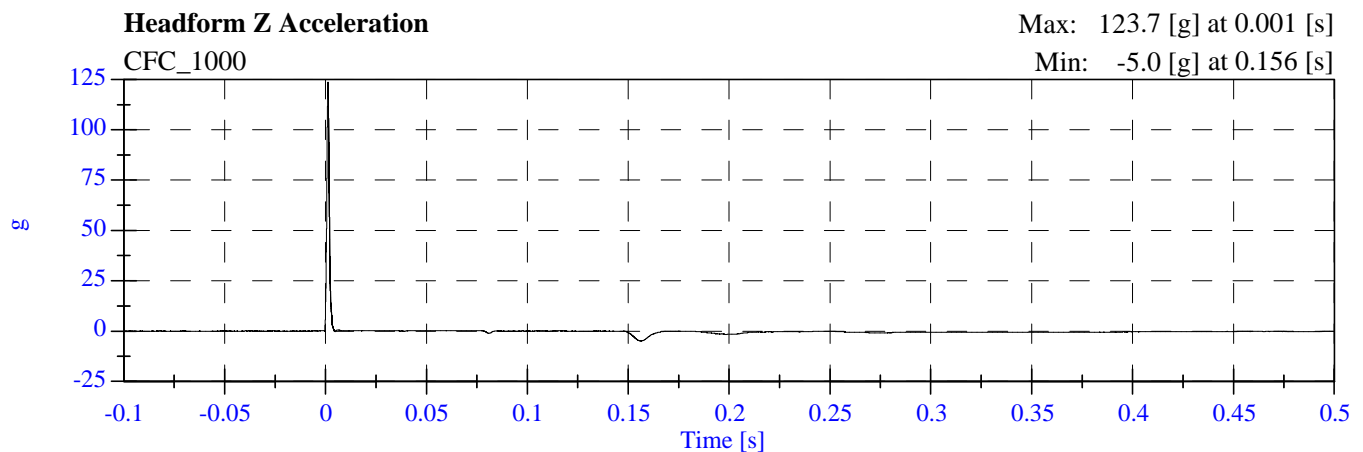
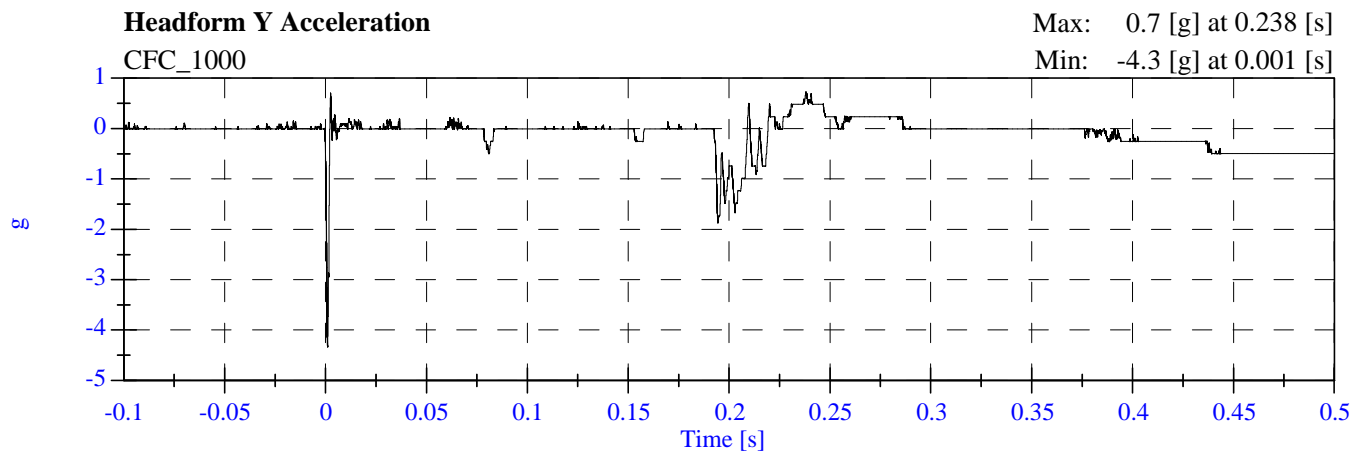
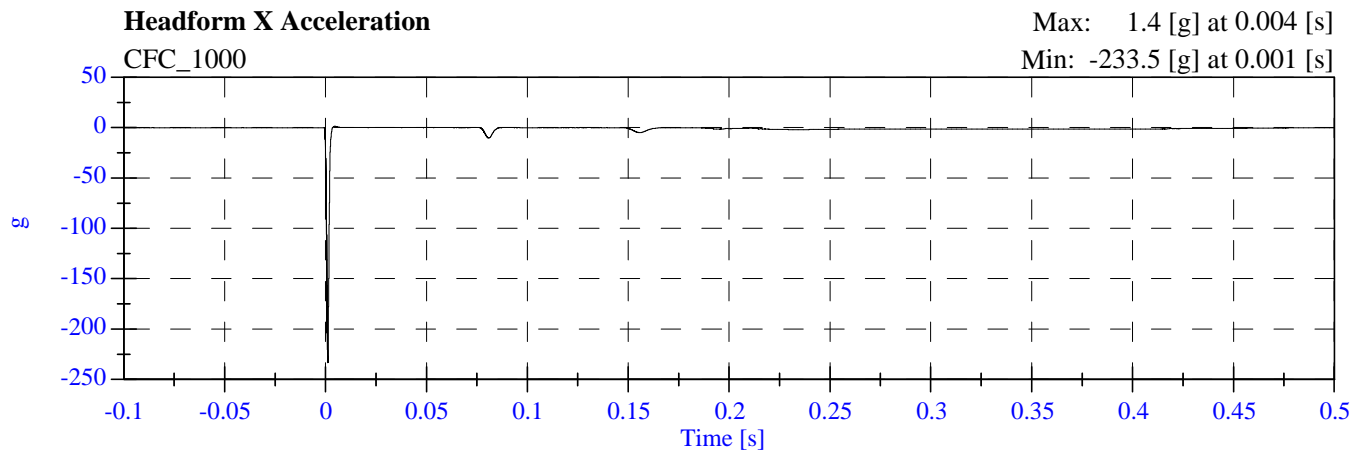
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J28671</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32779</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J25854</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 20, 2009



**PART 572L  
HEAD DROP PRE-TEST**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		1142	
<b>CALIBRATION DATE:</b>		January 20, 2009	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	19°C to 26°C	21	
<b>RELATIVE HUMIDITY</b>	10% to 70%	14	
<b>PEAK RESULTANT ACCELERATION</b>	225 Gs to 275 Gs	233.3	
<b>PEAK LATERAL ACCELERATION</b>	15 Gs Maximum	6.0	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	YES	YES	

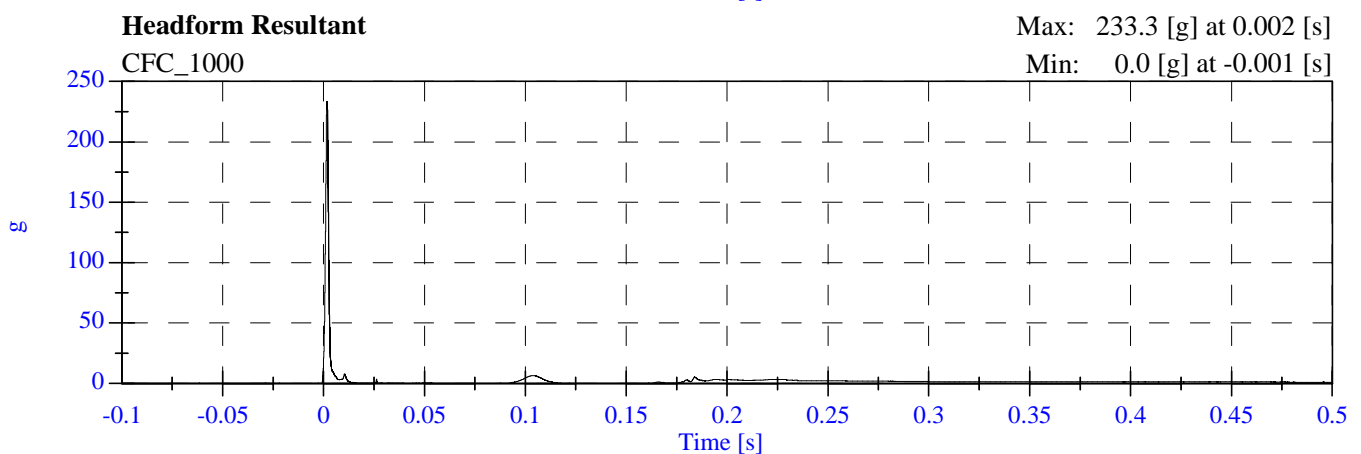
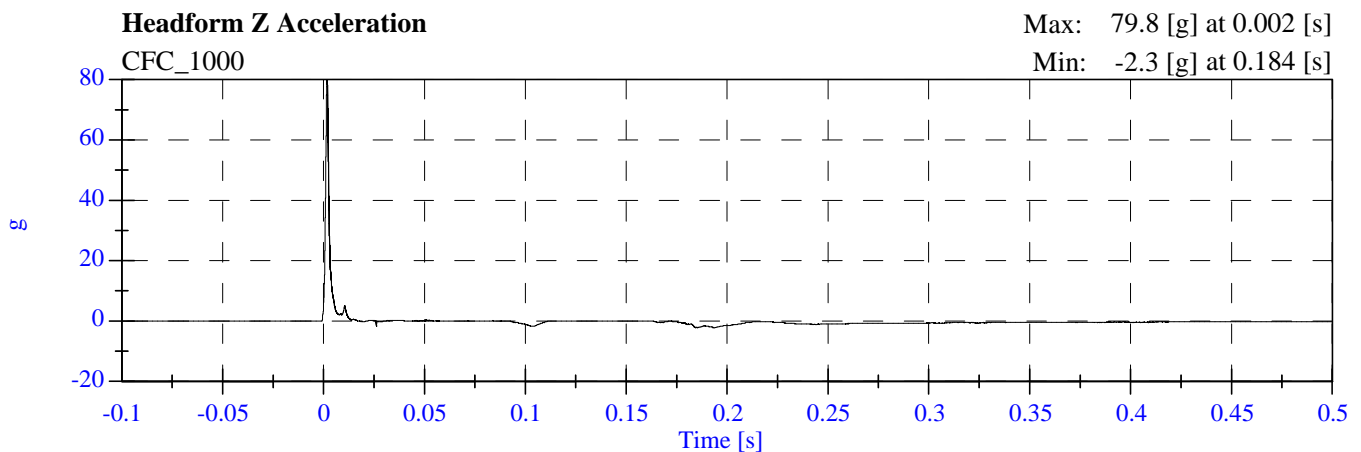
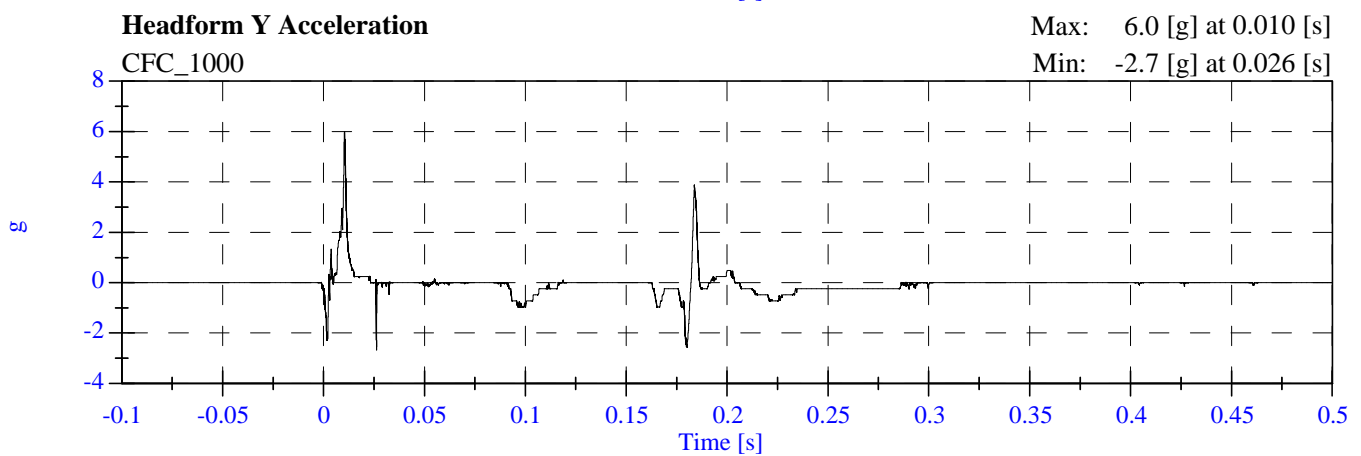
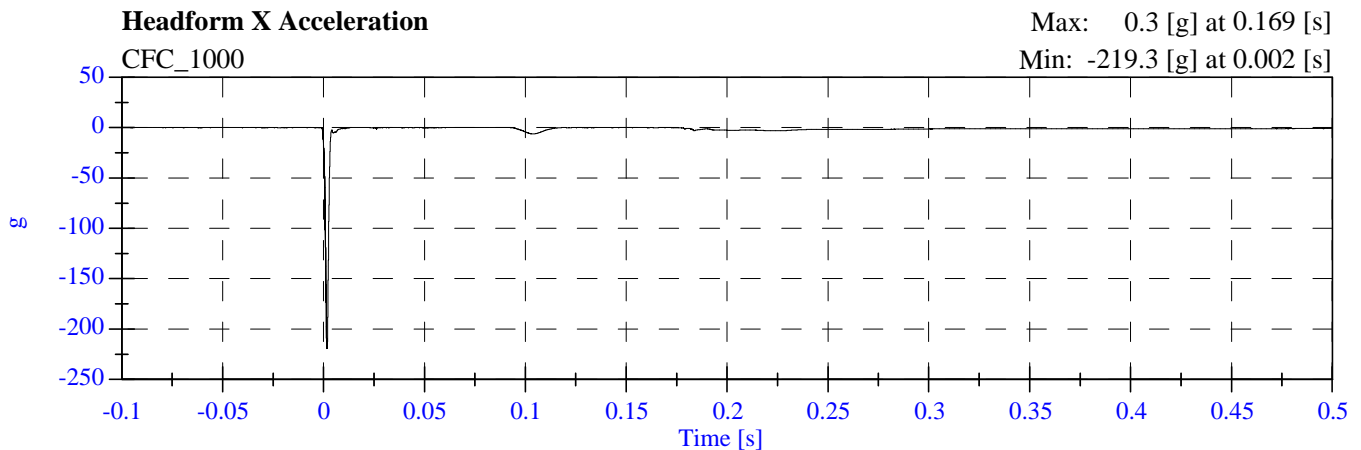
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J41006	9/2/2008	3/2/2009
2 - LATERAL	ENDEVCO	7264-2000T	J40994	9/2/2008	3/2/2009
3 - VERTICAL	ENDEVCO	7264-2000T	J41007	9/2/2008	3/2/2009

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 20, 2009





**PART 572L  
HEAD DROP POST-TEST**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>1140</b>	
<b>CALIBRATION DATE:</b>		<b>January 28, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>20</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>250.2</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>12.1</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

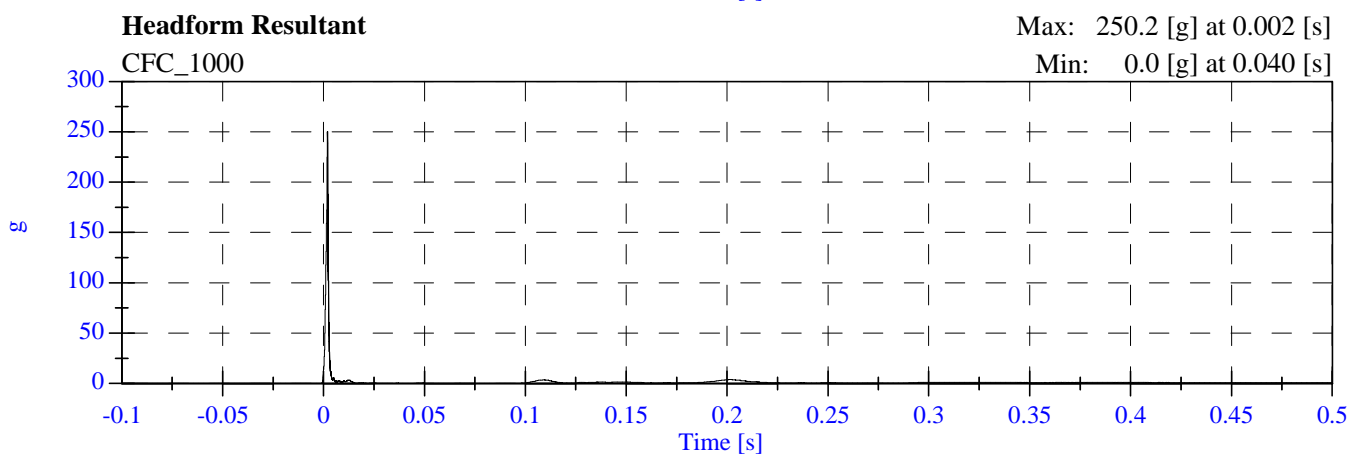
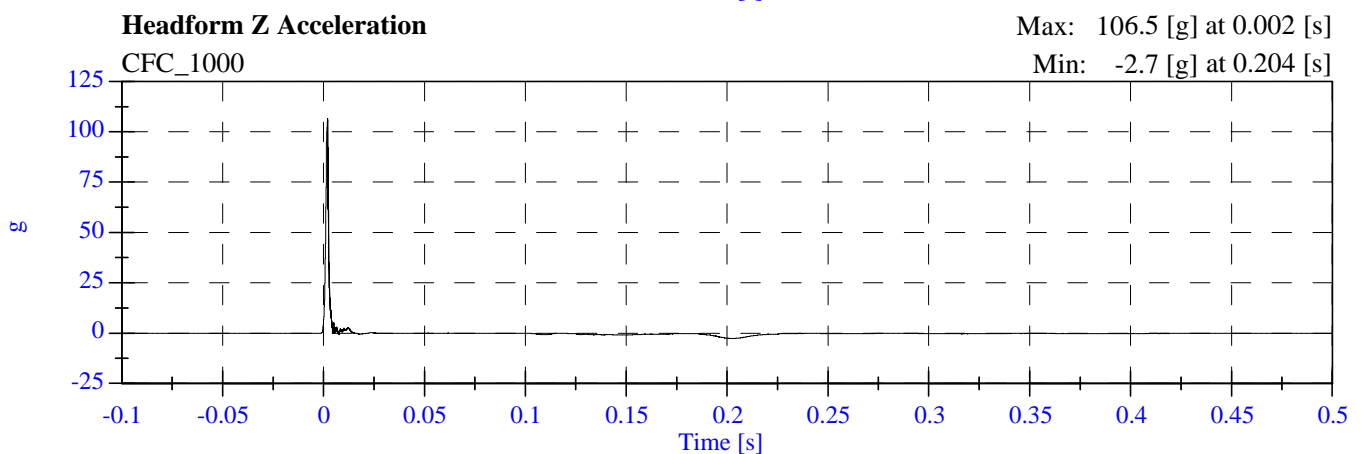
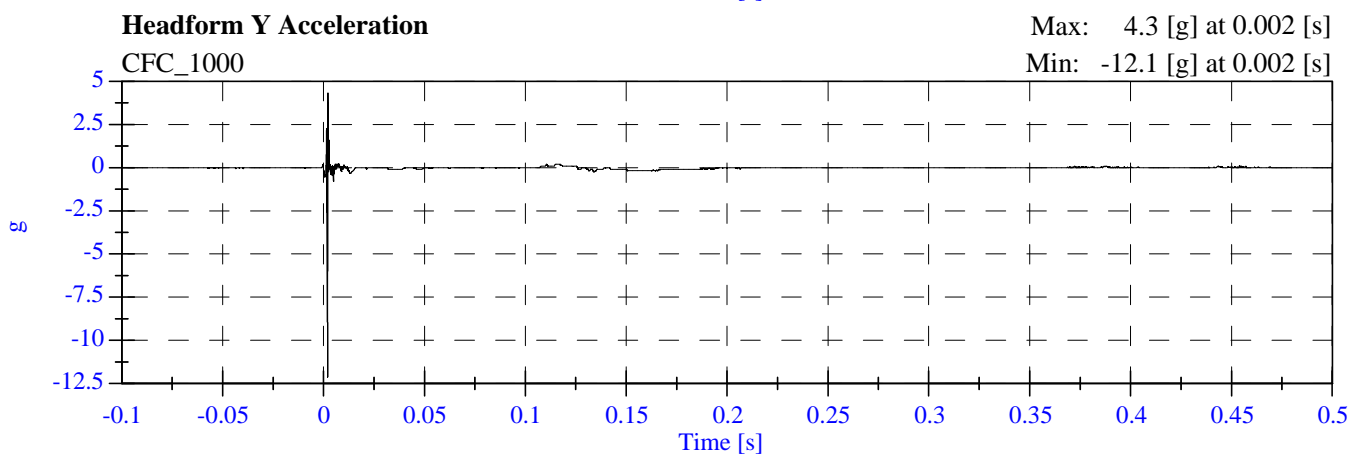
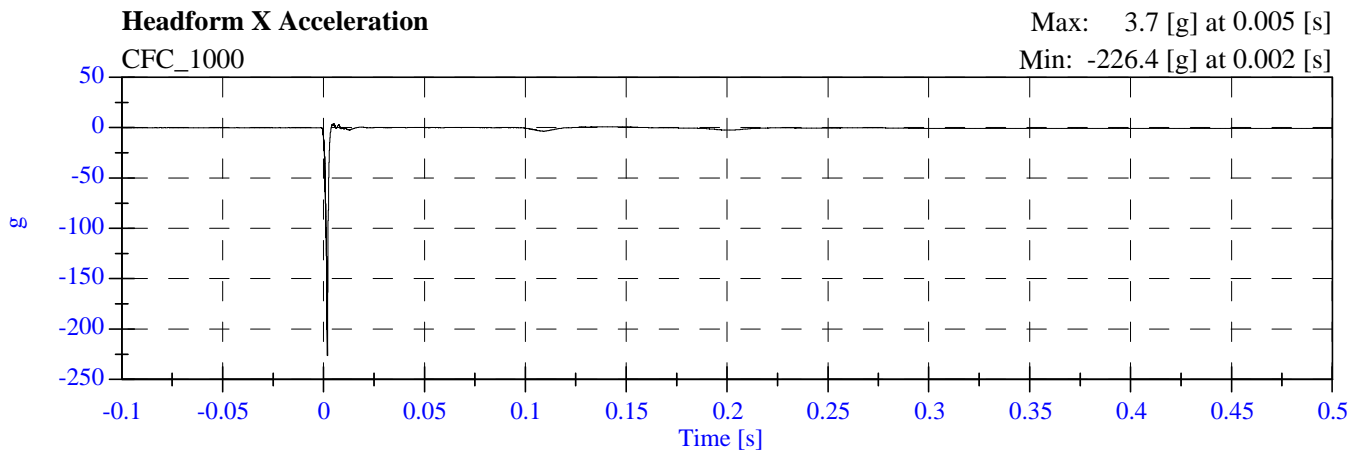
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J24876</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33030</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J31009</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 28, 2009



**PART 572L  
HEAD DROP POST-TEST**

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0062</b>	
<b>CALIBRATION DATE:</b>		<b>January 28, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>20</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>272.0</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>6.4</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

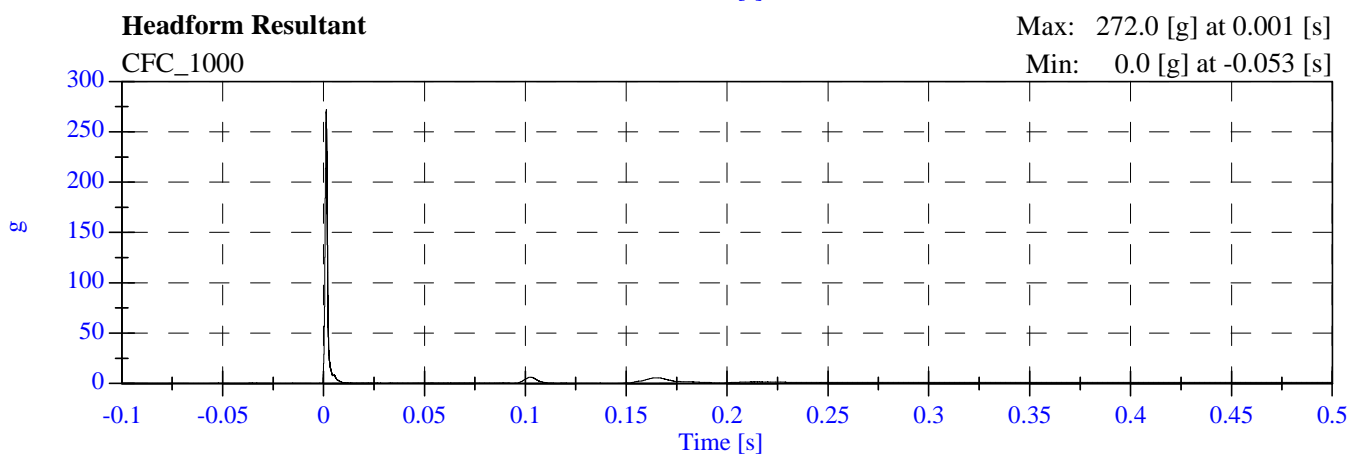
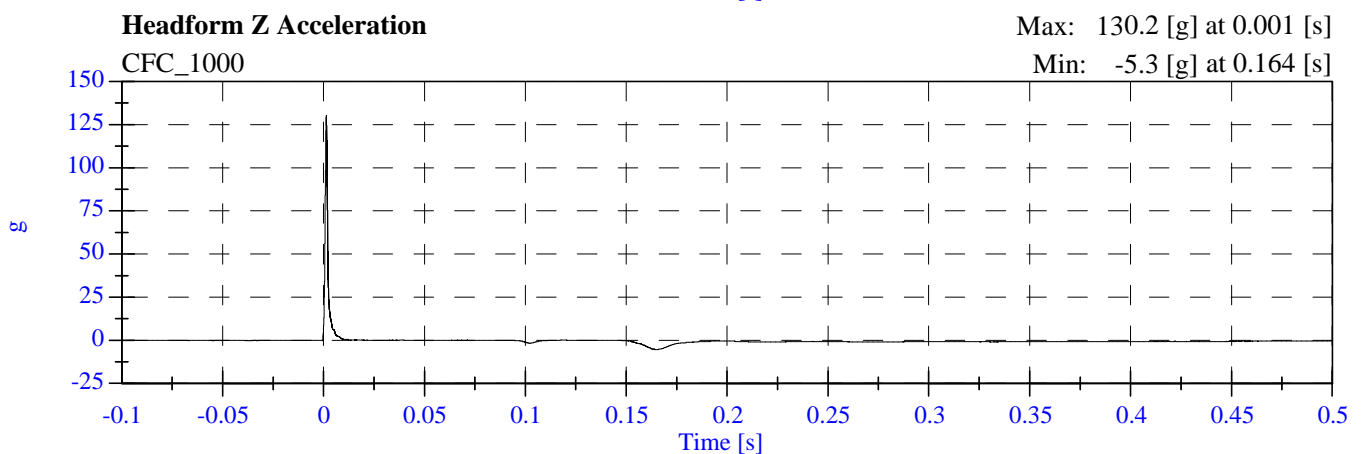
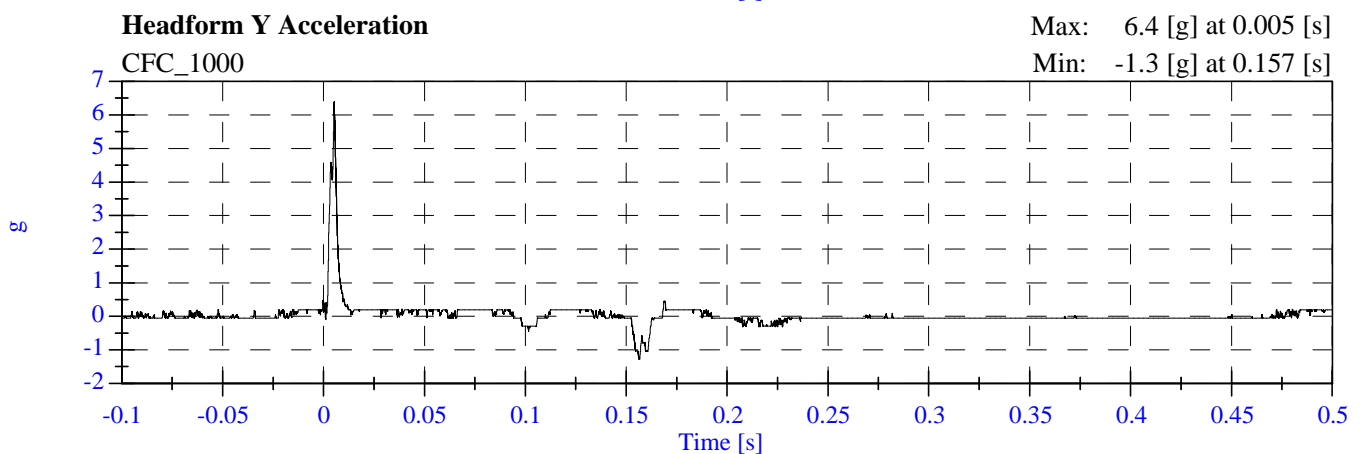
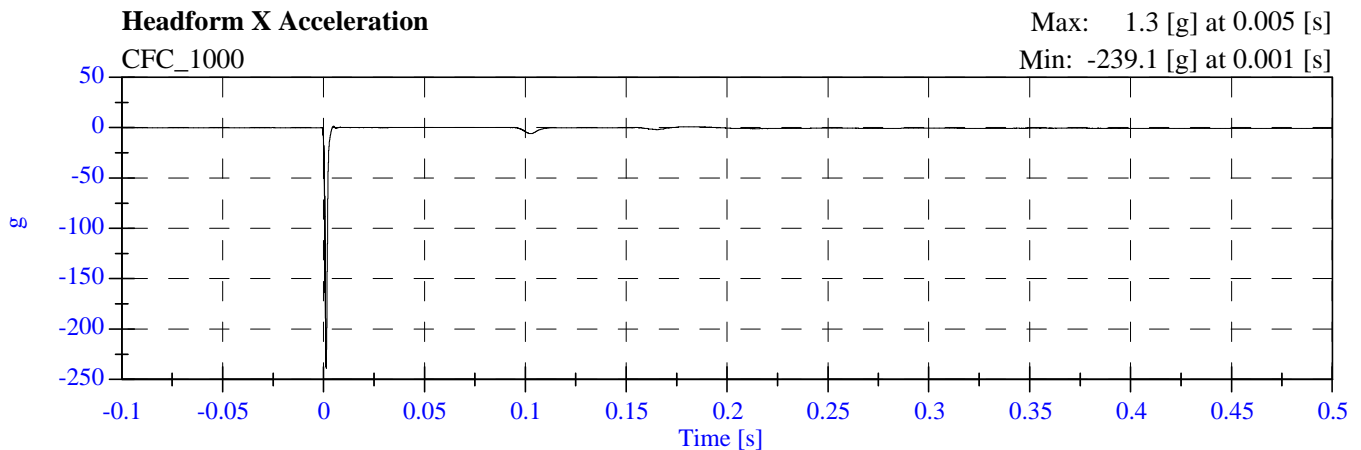
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33127</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J33019</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32782</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 28, 2009



**PART 572L  
HEAD DROP POST-TEST**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		<b>805</b>	
<b>CALIBRATION DATE:</b>		<b>January 28, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>20</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>265.8</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>9.1</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

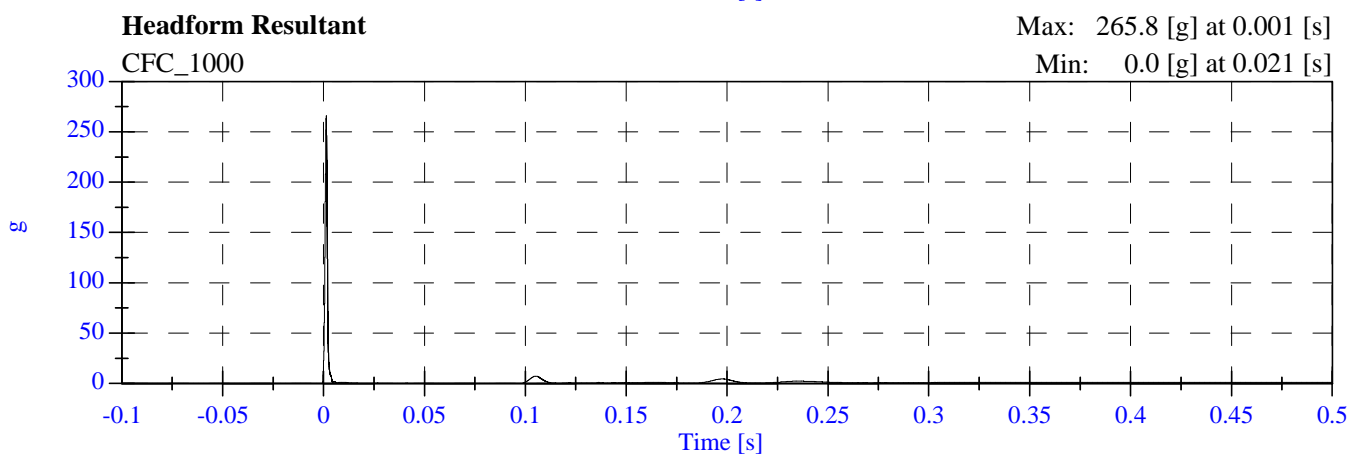
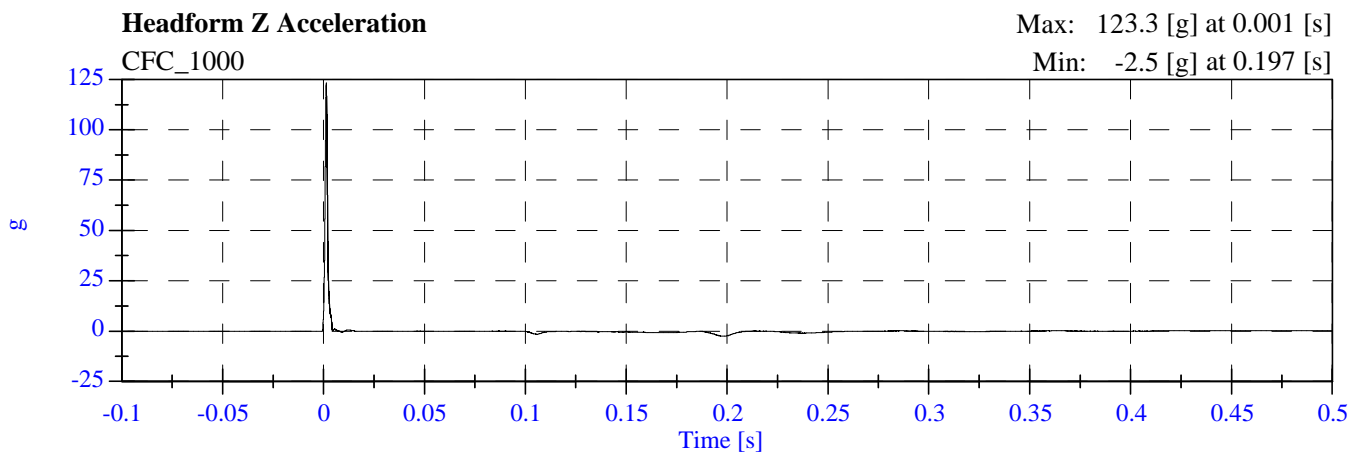
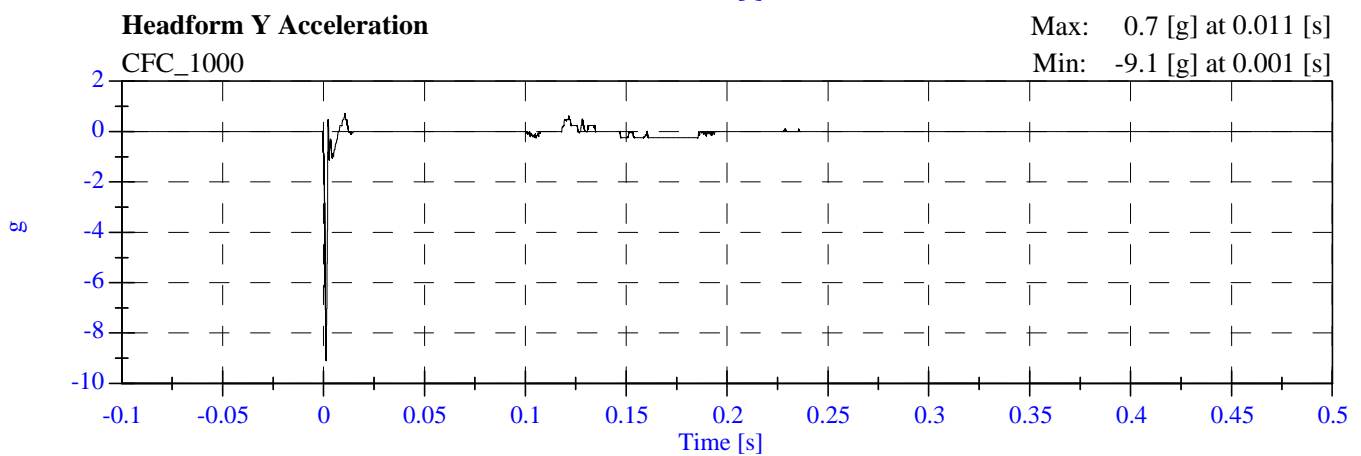
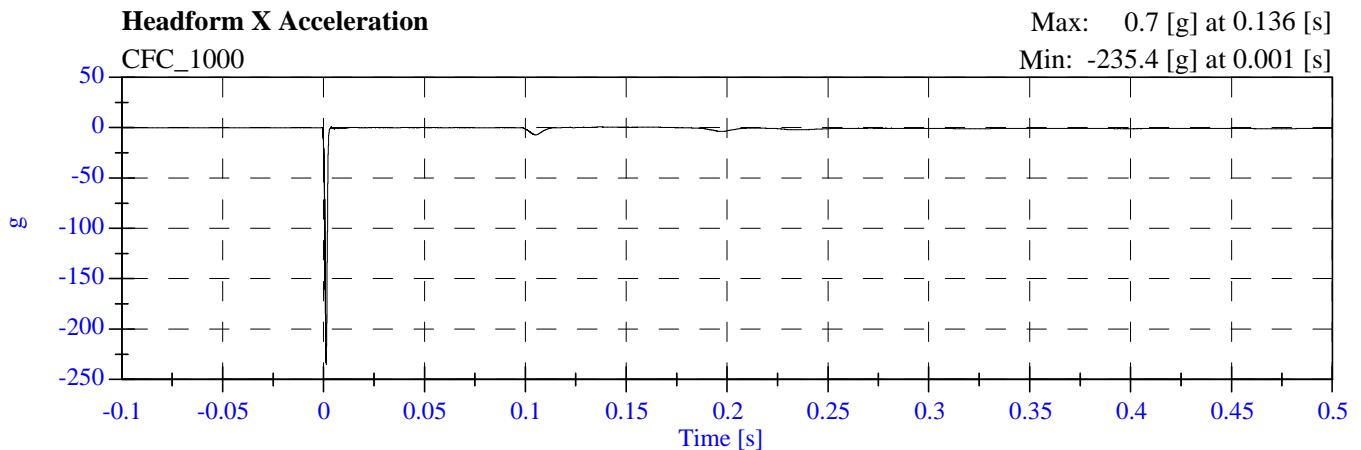
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41004</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J37496</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J41016</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 28, 2009



**PART 572L  
HEAD DROP POST-TEST**

<b>MANUFACTURER:</b>		<b>DENTON ATD INC.</b>	
<b>SERIAL NUMBER:</b>		<b>0355</b>	
<b>CALIBRATION DATE:</b>		<b>January 28, 2009</b>	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	<b>19°C to 26°C</b>	<b>21</b>	
<b>RELATIVE HUMIDITY</b>	<b>10% to 70%</b>	<b>20</b>	
<b>PEAK RESULTANT ACCELERATION</b>	<b>225 Gs to 275 Gs</b>	<b>249.2</b>	
<b>PEAK LATERAL ACCELERATION</b>	<b>15 Gs Maximum</b>	<b>3.8</b>	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	<b>YES</b>	<b>YES</b>	

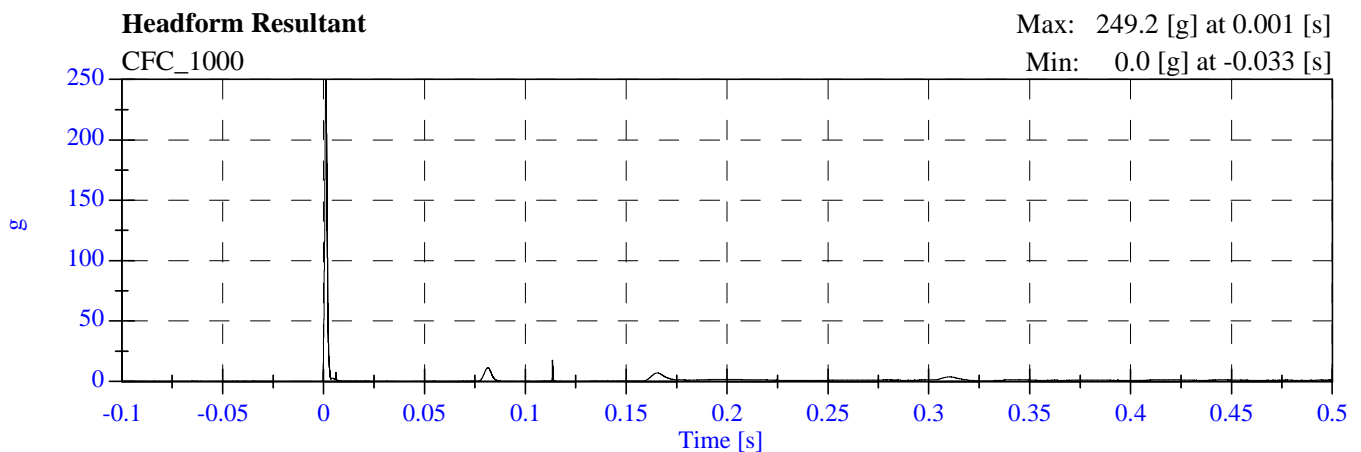
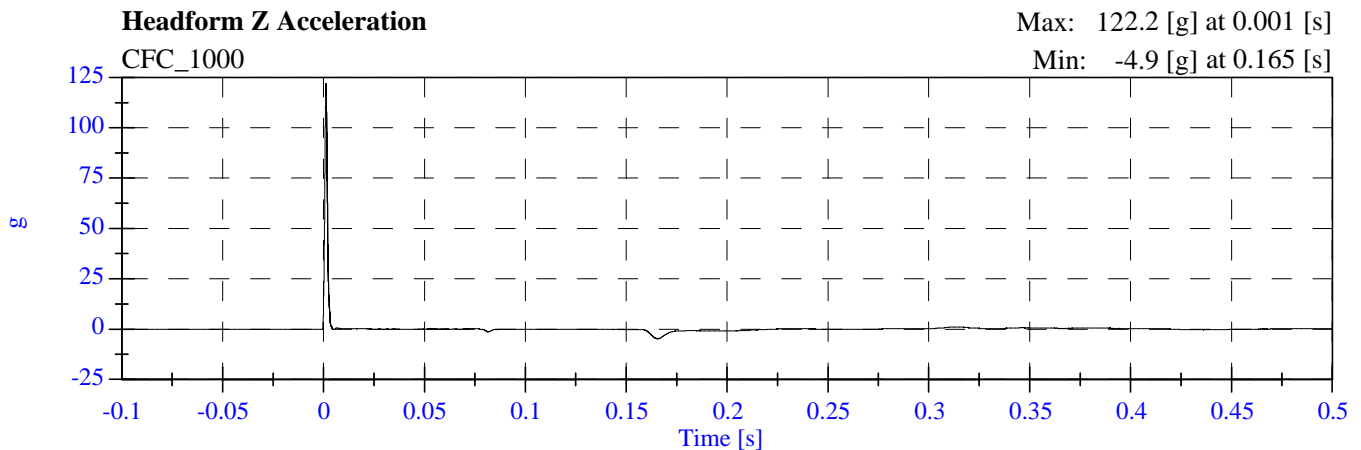
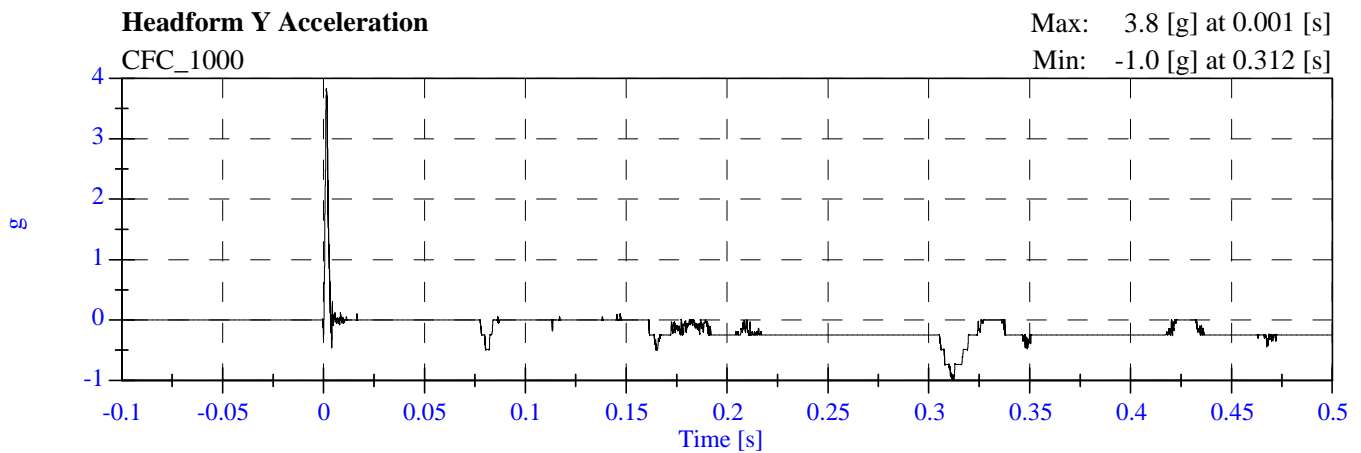
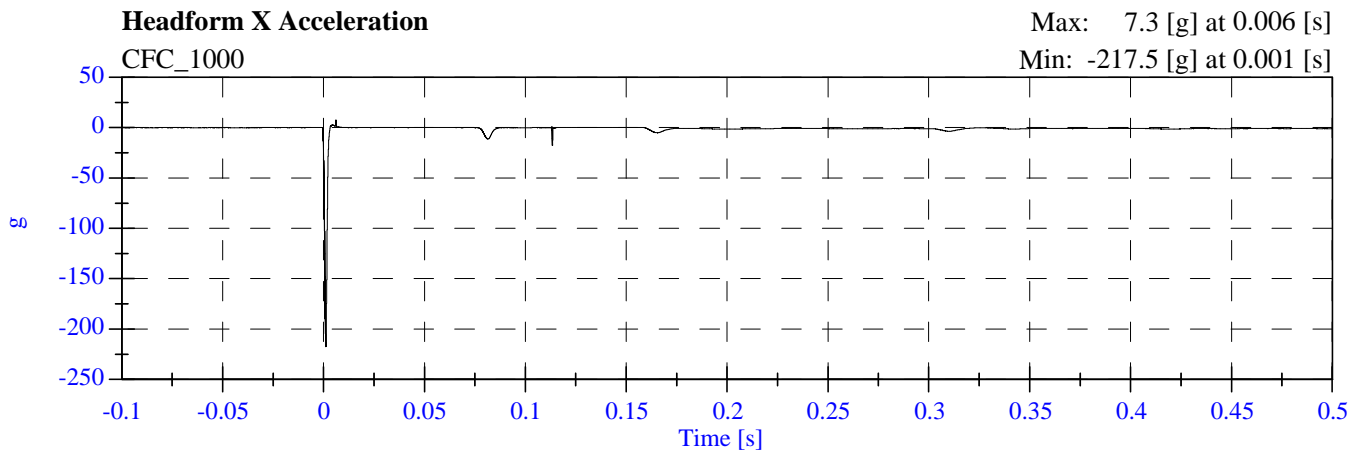
**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
<b>1 - LONGITUDINAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J28671</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>2 - LATERAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J32779</b>	<b>9/2/2008</b>	<b>3/2/2009</b>
<b>3 - VERTICAL</b>	<b>ENDEVCO</b>	<b>7264-2000T</b>	<b>J25854</b>	<b>9/2/2008</b>	<b>3/2/2009</b>

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 28, 2009





**PART 572L  
HEAD DROP POST-TEST**

<b>MANUFACTURER:</b>		<b>FIRST TECHNOLOGY SAFETY SYSTEMS</b>	
<b>SERIAL NUMBER:</b>		1142	
<b>CALIBRATION DATE:</b>		January 28, 2009	
<b>TEST PARAMETER</b>	<b>SPECIFICATION</b>	<b>TEST RESULTS</b>	
<b>TEMPERATURE</b>	19°C to 26°C	21	
<b>RELATIVE HUMIDITY</b>	10% to 70%	20	
<b>PEAK RESULTANT ACCELERATION</b>	225 Gs to 275 Gs	230.4	
<b>PEAK LATERAL ACCELERATION</b>	15 Gs Maximum	6.2	
<b>IS ACCELERATION CURVE UNIMODAL?</b>	YES	YES	

**HEAD ACCELEROMETER CALIBRATION INFORMATION**

<b>I.D. NUMBER</b>	<b>MANUFACTURER</b>	<b>MODEL NUMBER</b>	<b>SERIAL NUMBER</b>	<b>DATE OF LAST CALIBRATION</b>	<b>DATE OF NEXT CALIBRATION</b>
1 - LONGITUDINAL	ENDEVCO	7264-2000T	J41006	9/2/2008	3/2/2009
2 - LATERAL	ENDEVCO	7264-2000T	J40994	9/2/2008	3/2/2009
3 - VERTICAL	ENDEVCO	7264-2000T	J41007	9/2/2008	3/2/2009

**REMARKS:**

# FMVSS 201U - Headform Calibration Drops

## C95204 - January 28, 2009

