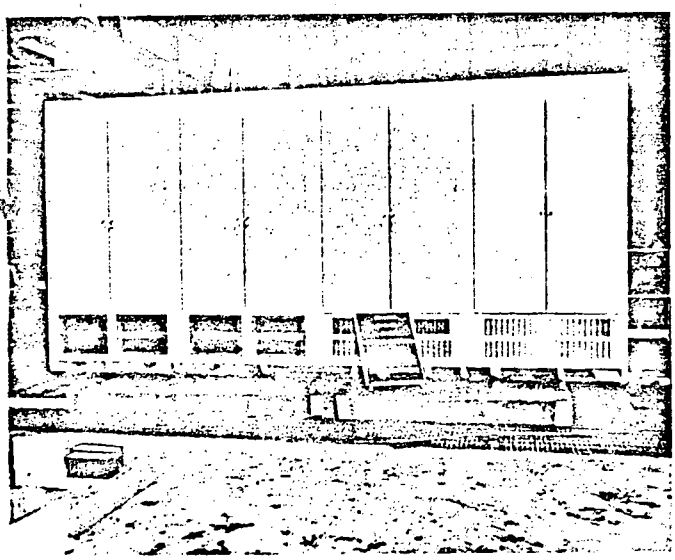
SEISMIC SIMULATION TEST PROGRAM

ON AN

AUXILIARY PROTECTIVE CABINET

FOR

RELIANCE ELECTRIC COMPANY
4900 LEWIS ROAD
STONE MOUNTAIN, GEORGIA 30083



SEISMIC SIMULATIO
Test Report

REPORT NO. 43482-1

WYLE JOB NO. 43482

CUSTOMER P. O. NO. 4854-99X0636

PAGE 1 OF 386 PAGE REPORT

DATE April 18, 1977

SPECIFICATION (S) See References in Section 7.0

1.0 CUSTOMER Reliance Electric Company

ADDRESS 4900 Lewis Road, Stone Mountain, Georgia 30083

2.0 TEST SPECIMEN Auxiliary Protective Cabinet

3.0 MANUFACTURER Reliance Electric Company

4.0 SUMMARY

The Auxiliary Protective Cabinet, hereinafter called the specimen, was subjected to a Seismic Simulation Test Program as required by Reliance Electric Company Purchase Order Number 4854-99X0636, and Wyle Laboratories' Seismic Test Plan 541/5435/ES, dated September 26, 1976, Revision B.

It was demonstrated that the specimen possessed sufficient integrity to withstand, without major compromise of structure, the prescribed simulated seismic environment; however, during Test 32, the screws backed out of one of the micro-switches and allowed it to fall off as described in Paragraph 6.4.1 of this report.

Problems were experienced with one of the fan motors during the Seismic Test Program as described in Notice of Anomaly Number 1 and Paragraph 6.8.1 of this report.

STATE OF ALABAMA
COUNTY OF MADISON } ss.

Ala. Professional Eng. License No. 7112

William W. Holbrook, being duly sworn, deposes and says: The information contained in this report is the result of complete and carefully conducted tests and is to the best of his knowledge true and correct in all respects.

SEAL

SUBSCRIBED and sworn to before me this 29 day of April, 1977

Notary Public in and for the County of Madison, State of Alabama.

My Commission expires June 13, 1979

PREPARED BY Arnie E. Kuykendall
A. Kuykendall

APPROVED BY Larry G. Crow

WYLE Q. A. L. M. Davies
L. M. Davies

WYLE LABORATORIES
SCIENTIFIC SERVICES AND SYSTEMS GROUP
HUNTSVILLE, ALABAMA

4.0 SUMMARY (Continued)

Notice of Anomaly Number 1 documents the fan motor that stopped running after Test 11 and prior to Test 12.

Table I contains the test run descriptions and the zero period accelerations.

Tables II and III show the test response data at 1/3 octave intervals for the control and composite specimen response accelerometers.

Figures 1 and 2 show the Required Response Spectra for Louisiana Power and Light Company.

Figures 3 and 4 show the Required Response Spectra for Southern California Edison Companies' San Onofre Nuclear Generating Station.

Figures 5 through 8 show Test Response Spectra of the control accelerometers during random multifrequency tests (Runs 19 and 32).

Figures 9 through 12 show composite Test Response Spectra of the specimen accelerometers during random multifrequency tests (Runs 19 and 32).

Figures 13 through 16 show predicted composite response spectra for the specimen accelerometers if the Test Response Spectra of the control accelerometers had equaled the Required Response Spectra. These figures were developed from the data presented in Tables II and III.

Figures 17 through 20 show transmissibility plots of the composite specimen response accelerometers divided by the control accelerometers during random multifrequency tests. These figures were developed from the data presented in Tables II and III.

Figure 21 shows the accelerometer locations.

Photographs 1 and 2 show the Auxiliary Protective Cabinet installed on the Multiaxis Seismic Simulator.

Photographs 3 through 27 show the accelerometer locations. The horizontal accelerometers were oriented in the side-to-side direction during the side-to-side/vertical testing and were re-oriented in the front-to-back direction during the front-to-back/vertical testing.

Photographs 28 through 33 show the strain gage locations.

Photograph 34 shows a view of the micro-switch which came off during Test 32.

Appendix I contains the transmissibility plots of the in-line response accelerometers from the resonant search tests.

4.0 SUMMARY (Continued)

Appendix II contains the Test Response Spectra plots of the control and specimen response accelerometers from the Louisiana Power and Light Company Design Basis Earthquake (reference Figures 1 and 2) test in each orientation.

Appendix III contains the Test Response Spectra plots of the control and specimen response accelerometers from the Southern California Edison Companies' San Onofre Nuclear Generating Station Design Basis Earthquake (reference Figures 3 and 4) test in each orientation.

Appendix IV contains the Instrumentation Log Sheets and Instrumentation Equipment Sheets.

Appendix V contains the Wyle Seismic Test Plan 541/5435/ES, dated September 21, 1976, Revision B.

5.0 TEST REQUIREMENTS

5.1 Specimen Mounting and Orientation

The Auxiliary Protective Cabinet, loaded with dummy weights, shall be bolted to a customer-furnished mounting fixture. The fixture shall be welded to the Multiaxis Seismic Simulator Table such that the specimen is oriented in the side-to-side/vertical axes for the initial sequence of tests. For the second axis of test, the specimen shall be rotated 90 degrees in the horizontal plane to the front-to-back/vertical axes. The mounting shall simulate as closely as practical the actual in-service mounting.

5.2 Resonant Search

A low-level (approximately 0.2 g horizontally and vertically) single-axis sine sweep shall be performed from 1 Hz to 40 Hz to establish major resonances in each of the three major axes of the specimen. The sweep rate shall be 0.5 octave per minute.

5.3 Random Multifrequency Tests

The specimen shall be subjected to 30-second duration simultaneous horizontal and vertical inputs of random waveform motion consisting of frequency bandwidths spaced one-third octave apart over the range of 1 Hz to 50 Hz, as necessary to envelope the Required Response Spectra (RRS). The amplitude of each one-third octave frequency shall be independently adjusted in each axis until the Test Response Spectra (TRS) envelope the RRS. The resulting TRS shall be analyzed by a spectrum analyzer at a damping of one percent (1%), and plotted at one-third octave frequency intervals over the frequency range of interest. (The horizontal RRS shall be a composite spectra of Figures 1 and 2. The vertical RRS shall be Figure 3. These figures are contained in the Seismic Test Plan, Appendix V.) The specimen shall be subjected to five (5) Operating Basis Earthquake (OBE) tests (one-half DBE) and one (1) Design Basis Earthquake (DBE) test in each test orientation.

5.4 Random Multifrequency with Sine Burst Tests

The specimen shall be subjected to 45 second duration simultaneous horizontal and vertical inputs of random motion consisting of frequency bandwidths spaced one-third octave apart over the frequency range of 1 Hz to 40 Hz as necessary to envelope the Required Response Spectra (RRS). (The horizontal and vertical RRS shall be as shown in Figures 4 and 5 of the Seismic Test Plan, Appendix V.) The amplitude of each one-third octave bandwidths shall be independently adjusted in each axis until the Test Response Spectra (TRS) envelope the RRS within the limitations of the test machine. Since the Required Response Spectra cannot be enveloped with a random multifrequency test alone, a sine burst shall be superimposed on the random signal. The sine burst shall be imposed sequentially at frequencies of 1, 1.26, 1.6 and 2 Hz. Each sine burst contains approximately 15

5.0 TEST REQUIREMENTS (Continued)

5.4 Random Multifrequency with Sine Burst Tests (Continued)

oscillations at each frequency. The magnitude of the first oscillation of each sine burst will be less than the remaining 14 oscillations, which shall be at a constant level. The resulting table motion shall be analyzed by a spectrum analyzer at one percent (1%) damping. The specimen shall be subjected to five OBE tests (one-half DBE) and one DBE test in each test orientation.

5.5 Specimen Response

A total of 49 specimen-mounted uniaxial piezo-electric accelerometers shall be located on the specimen. The placement of the accelerometers shall be at the discretion of the Reliance Electric Technical Representative. FM tape and oscillograph recorders shall provide a record of each accelerometer response.

5.6 Strain

A total of six (6) strain gages shall be installed on the Cabinet structure in areas of highest anticipated stress as determined by the Reliance Electric Technical Representative. The outputs from the strain gages shall be recorded on an oscillograph recorder during the Simulated Seismic Test Program. The maximum specimen strain from a full-level multifrequency test in each orientation shall be included in the test report.

5.7 Electrical Powering

Electrical power of 120 VAC, single-phase, 60 Hz shall be provided to power two of the fans in the specimen.

5.8 Electrical Monitoring

Two channels of electrical monitoring shall be recorded on an oscillograph recorder during the Seismic Simulation Test Program. These channels shall be utilized to ascertain electrical continuity, spurious operation, contact chatter, etc., of a temperature switch, and two fan failure switches wired in series, before, during and after the seismic excitation.

6.0 TEST PROCEDURES AND RESULTS

6.1 Specimen Mounting and Orientation Procedures

The Auxiliary Protective Cabinet, loaded with dummy weights, was bolted to a customer-furnished fixture. The fixture was welded to the Multiaxis Seismic Simulator Table such that the specimen was oriented in the side-to-side/vertical axes (Photograph 1) for the initial sequence of tests. For the second axes of test, the specimen was rotated 90 degrees in the horizontal plane to the front-to-back/vertical axes (Photograph 2). The mounting simulated as closely as practical the actual in-service mounting.

6.2 Resonant Search Procedure

A low-level (approximately 0.2 g horizontally and vertically) single-axis sine sweep was performed from 1 Hz to 40 Hz to establish major resonances in each of the three major axes of the specimen. The sweep rate was 0.5 octave per minute.

6.2.1 Resonant Search Results

Table I contains the test run descriptions and input Zero Period Accelerations (ZPA).

The transmissibility plots of the specimen response accelerometers from the resonant search tests are presented in Appendix I.

6.3 Random Multifrequency Test Procedures

The specimen was subjected to 30-second duration simultaneous horizontal and vertical inputs of random waveform motion consisting of frequency bandwidths spaced one-third octave apart over the range of 1 Hz to 50 Hz, as necessary to envelope the Required Response Spectra (RRS) as shown in Figures 1 and 2 (Louisiana Power and Light). The resulting TRS was analyzed by a spectrum analyzer at a damping of one percent (1%) and plotted at one-third octave frequency intervals over the frequency range of interest. The specimen was subjected to five Operating Basis Earthquake (OBE) tests (one-half DBE) and one Design Basis Earthquake (DBE) test in each test orientation.

6.3.1 Random Multifrequency Test Results

It was demonstrated that the specimen possessed sufficient integrity to withstand, without compromise of structure, the prescribed simulated seismic environment.

Table I contains the test run descriptions and input Zero Period Accelerations (ZPA).

The TRS plots of the control accelerometers from the DBE test in each test orientation are presented in Appendix II.

6.0 TEST PROCEDURES AND RESULTS (Continued)

6.4 Random Multifrequency with Sine Burst Test Procedures

The specimen was subjected to 45 second duration simultaneous horizontal and vertical inputs of random motion consisting of frequency bandwidths spaced one-third octave apart over the frequency range of 1 Hz to 40 Hz as necessary to envelope the Required Response Spectra (RRS) as shown in Figures 3 and 4 (Southern California Edison). The amplitude of each one-third octave bandwidth were independently adjusted in each axis until the Test Response Spectra (TRS) enveloped the RRS. Since the RRS could not be enveloped with a random multifrequency test alone, a sine burst was superimposed on the random signal. The sine bursts were imposed sequentially at frequencies of 1, 1.26, 1.6 and 2 Hz. Each sine burst contained approximately 15 oscillations at each frequency. The magnitude of the first oscillation of the sine burst was less than the remaining 14 oscillations, which were at a constant level. The resulting table motion was analyzed by a spectrum analyzer at one percent (1%) damping. The specimen was subjected to five OBE tests (one-half DBE) and one DBE test in each test orientation.

6.4.1 Random Multifrequency with Sine Bursts Test Results

It was demonstrated that the specimen possessed sufficient integrity to withstand, without major compromise of structure, the prescribed simulated seismic environment. However, during Test 32 (DBE, front-to-back/vertical axes), the mounting screws backed out of one of the micro-switches and allowed the switch to fall off (see Photograph 34). No problem was experienced with the seven other micro-switches located on the specimen.

Table I contains the test run descriptions and input Zero Period Accelerations (ZPA).

Test Response Spectra plots of the control and composite specimen response accelerometers from full level multifrequency tests 19 and 32 are shown in Figures 5 through 12. The horizontal and vertical control accelerometers show that the table motion exceeded the Requied Response Spectra at certain frequencies by a significant margin. Naturally, the specimen response accelerometers show a higher response than they would have had the table motion equaled the Required Response Spectra.

Figures 8 through 16 show Predicted Composite Response Spectra for the specimen accelerometers, if the Test Response Spectra of the control accelerometers had equaled the Required Response Spectra. The data used to develop these figures are valid based on linearity of response (Figures 17 through 20 show transmissibility plots for random multifrequency) and were calculated with the following formula:

$$PCTRS = RRS \times \frac{CTRS}{TRS}$$

6.0 TEST PROCEDURES AND RESULTS (Continued)

6.4 Random Multifrequency with Sine Burst Test Procedures (Continued)

6.4.1 Random Multifrequency with Sine Bursts Test Results (Continued)

where: PCTRS = Predicted Composite Test Response Spectra of Specimen Response Accelerometers

RRS = Required Response Spectra of the Table Motion

CTRS = Composite Test Response Spectra of Specimen Response Accelerometers

TRS = Test Response Spectra of the Table Motion

The calculated data are presented in Tables II and III.

6.5 Specimen Response Procedures

A total of 49 specimen-mounted uniaxial piezo-electric accelerometers were located on the specimen as shown in Figure 21 and Photographs 3 through 27. The placement of the accelerometers was at the discretion of the Reliance Electric Technical Representative. FM tape and oscillograph recorders provided a record of each accelerometer response.

6.5.1 Specimen Response Results

The transmissibility plots of the in-line response accelerometers from the resonant search tests are presented in Appendix I.

The TRS plots of the specimen response accelerometers from the multifrequency random DBE test in each test orientation (Louisiana Power and Light) are presented in Appendix II.

The TRS plots of the specimen response accelerometers from the multifrequency random with sine burst DBE test in each test orientation (Southern California Edison) are presented in Appendix III.

6.6 Strain Procedures

A total of six (6) strain gages were installed on the Cabinet structure in areas of highest stress as determined by the Reliance Electric Technical Representative. The strain gage locations are shown in Figure 21 and Photographs 28 through 33. The outputs from the strain gages were recorded on an oscillograph recorder during the Seismic Test Program.

6.0 TEST PROCEDURES AND RESULTS (Continued)

6.6 Strain Procedures (Continued)

6.6.1 Strain Results

The uniaxial stress, from the full level DBE tests in each test orientation, was determined from Hooke's Law of Proportionality, e.g.,

$$\sigma = E_{\epsilon}$$

where: σ = Stress in Pounds per Square Inch (PSI)

E = Modulus of Elasticity (PSI)

ϵ = Strain in Micro Inch/Inch

Run No.	σ Strain Gage Number 1	2	3	4	5	6
9	254 psi	218 psi	435 psi	798 psi	218 psi	798 psi
19	1088 psi	653 psi	725 psi	1631 psi	725 psi	3625 psi
26	653 psi	544 psi	326 psi	326 psi	145 psi	290 psi
32	2247 psi	2175 psi	2175 psi	2030 psi	544 psi	725 psi

6.7 Electrical Powering Procedures

Electrical power of 120 VAC, single-phase, 60 Hz was provided to power two of the fans on the specimen.

6.8 Electrical Monitoring Procedures

Two channels of electrical monitoring were recorded on an oscillograph recorder during the Seismic Simulation Test Program. These channels were utilized to ascertain electrical continuity, spurious operation, contact chatter, etc., of a temperature switch and two fan failure switches, wired in series, before, during and after the seismic excitation.

6.8.1 Electrical Monitoring Results

The fan failure switch electrical monitoring channel indicated a change of state between Test 11 and Test 12 (see Notice of Anomaly Number 1). Inspection revealed that one of the fan motors had stopped operation. The defective motor was disconnected and another motor in the adjacent compartment was powered. The fan failure switch in the defective unit was bypassed and testing continued without further problems.

7.0 REFERENCES

7.1 The Reliance Electric Company Purchase Order Number 4854-99X0636.

7.2 Wyle Laboratories' Seismic Test Plan 541/5435/ES, dated September 21, 1976, Revision B.

7.3 IEEE Standard 344-1975 Specification entitled "Recommended Practices for Seismic Qualification of Class I Electrical Equipment for Nuclear Power Generating Stations."

NOTICE OF ANOMALY

NOTICE NO. 1 P. O. NUMBER: 4854-99X0636 WYLE JOB NO. 43482 PAGE NO. _____

CONTRACT NUMBER: N/A REPORT NO. 43482-1

CATEGORY: ☒ SPECIMEN ☐ PROCEDURE ☐ TEST EQUIPMENT DATE: 9 Feb. 77

TO: Reliance Electric Company ATTN: John Cullifer

PART NAME: McLean Blower PART NO. N/A

TEST: Seismic Simulation I. D. NO. N/A

SPECIFICATION: 541/5435/ES PARA. NO. 3.3

NOTIFICATION MADE TO: John Cullifer DATE: 9 Feb. 77

NOTIFICATION MADE BY: Arnie Kuykendall VIA: Verbal

REQUIREMENTS:

Standard electrical of 120 VAC, 60 Hz, single-phase, will be provided for operation of two of the fans prior to, during and after the test program.

DESCRIPTION OF ANOMALY:

One of the fan motors stopped operating between Test 11 and Test 12. This particular motor had a high noise level prior to the start of the test program.

DISPOSITION – COMMENTS – RECOMMENDATIONS:

The defective motor was disconnected and another motor in the adjacent cabinet was powered and testing was continued.

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TEST WITNESS _____ ENGINEER Arnie E. Kuykendall

_____ QUALITY CONTROL L. M. Davis

REPRESENTING _____ PROJECT MANAGER Larry G. Jaeger

TABLE I

TEST RUN DESCRIPTIONS AND ZERO PERIOD ACCELERATIONS

Test No.	Axes	Type Test	HZPA	VZPA	Comments
1	V	SW	-	-	0.2 g, 1-40 Hz
2	SS	SW	-	-	0.2 g, 1-40 Hz
3	SS/V	RMF	1.50	0.70	OBE, Figures 1 and 2
4	SS/V	RMF	0.42	0.15	<OBE, Figures 1 and 2
5	SS/V	RMF	0.42	0.82	OBE, Figures 1 and 2
6	SS/V	RMF	0.44	0.85	OBE, Figures 1 and 2
7	SS/V	RMF	0.50	0.80	OBE, Figures 1 and 2
8	SS/V	RMF	0.38	0.19	OBE, Figures 1 and 2
9	SS/V	RMF	0.80	0.55	DBE, Figures 1 and 2
10	SS/V	RMF/SB	1.03	0.60	<OBE, Figures 3 and 4
11	SS/V	RMF/SB	1.00	0.82	<OBE, Figures 3 and 4
12	SS/V	RMF/SB	-	-	Shutdown 15 seconds into run. Door came open.
13	SS/V	RMF/SB	1.30	0.88	OBE, Figures 3 and 4
14	SS/V	RMF/SB	1.25	0.95	OBE, Figures 3 and 4
15	SS/V	RMF/SB	1.28	0.92	OBE, Figures 3 and 4
16	SS/V	RMF/SB	1.30	0.94	OBE, Figures 3 and 4
17	SS/V	RMF/SB	1.75	1.15	OBE, Figures 3 and 4
18	SS/V	RMF/SB	3.50	1.54	<DBE, Figures 3 and 4
19	SS/V	RMF/SB	3.55	1.70	DBE, Figures 3 and 4
20	FB	SW	-	-	0.2 g, 1-40 Hz
21	FB/V	RMF	0.52	0.21	OBE, Figures 1 and 2
22	FB/V	RMF	0.50	0.23	OBE, Figures 1 and 2
23	FB/V	RMF	0.60	0.23	OBE, Figures 1 and 2
24	FB/V	RMF	0.39	0.22	OBE, Figures 1 and 2
25	FB/V	RMF	0.60	0.26	OBE, Figures 1 and 2
26	FB/V	RMF	0.84	0.56	DBE, Figures 1 and 2
27	FB/V	RMF/SB	1.90	0.95	OBE, Figures 3 and 4
28	FB/V	RMF/SB	1.58	0.93	OBE, Figures 3 and 4
29	FB/V	RMF/SB	1.75	0.95	OBE, Figures 3 and 4
30	FB/V	RMF/SB	1.50	0.85	OBE, Figures 3 and 4
31	FB/V	RMF/SB	1.58	0.90	OBE, Figures 3 and 4
32	FB/V	RMF/SB	3.05	1.45	DBE, Figures 3 and 4

Legend:

HZPA - Horizontal Zero Period Acceleration
VZPA - Vertical Zero Period Acceleration
V - Vertical
SS - Side-to-Side
FB - Front-to-Back
SW - Sine Sweep
RMF - Multifrequency Random
RMF/SB - Multifrequency Random with Sine Burst
OBE - Operating Basis Earthquake
DBE - Design Basis Earthquake

TABLE II

TEST RESPONSE DATA AT 1/3 OCTAVE INTERVALS
FOR THE
CONTROL AND COMPOSITE SPECIMEN RESPONSE ACCELEROMETERS
AXIS: SIDE-TO-SIDE AND VERTICAL ORIENTATION

	Test No. 19					Test No. 19				
	Specimen Accelerometers Oriented in the Side-to-Side Direction					Specimen Accelerometers Oriented in the Vertical Direction				
Accel. Spectra Figure	HCA TRS 5	SA SSCTRS 9	- Q 17	HCA RRS 3	SA SSPCTRS 13	VCA TRS 6	SA VCTRS 10	- Q 18	VCA RRS 4	SA VPCTRS 14
Freq.	G's	G's	SSCTRS ÷ TRS	x RRS G's	= PCTRS G's	G's	G's	VCTRS ÷ TRS	x RRS G's	= VPCTRS G's
1.00	5.5	6.0	1.1	5.0	5.5	3.6	4.0	1.1	3.2	3.5
1.26	10.6	12.4	1.2	8.5	9.9	5.5	7.0	1.3	5.0	6.5
1.58	12.5	14.0	1.1	10.4	11.6	8.3	10.0	1.2	8.0	9.6
2.00	11.8	13.5	1.1	10.4	11.9	9.3	11.0	1.2	8.0	9.6
2.50	11.0	12.8	1.2	8.5	9.9	9.1	10.0	1.1	8.0	8.8
3.16	6.1	8.3	1.4	4.7	6.4	6.3	7.0	1.1	5.5	6.0
4.00	5.2	10.4	2.0	2.6	5.2	7.0	7.7	1.1	3.8	4.2
5.00	7.8	12.2	1.6	1.5	2.3	5.5	7.3	1.3	2.7	3.5
6.30	7.6	21.0	2.8	1.4	3.9	4.4	7.5	1.7	1.9	3.2
8.00	6.5	16.5	2.5	1.4	3.6	4.1	10.2	2.5	1.4	3.5
10.00	6.5	16.0	2.5	1.4	3.3	6.8	11.4	1.7	1.0	1.7
12.60	5.3	11.2	2.1	1.3	2.7	6.7	11.0	1.6	1.0	1.6
15.80	9.5	13.8	1.5	1.3	1.8	5.4	16.5	3.0	1.0	3.0
20.00	11.8	14.5	1.2	1.2	1.5	3.5	9.3	2.7	0.9	2.4
25.00	7.5	11.5	1.5	1.2	1.8	2.3	7.7	3.3	0.9	3.0
31.60	7.3	14.0	1.9	1.2	2.2	2.2	7.8	3.5	0.9	3.2
40.00	4.2	16.0	3.8	1.1	4.3	2.5	8.0	3.2	0.9	2.9
50.00	4.1	11.0	2.7	1.1	2.9	2.5	7.7	3.1	0.8	2.5
63.00	3.9	12.5	3.2	1.1	3.4	2.1	5.3	2.5	0.8	2.0
80.00	3.9	6.8	1.7	1.0	1.8	1.8	4.3	2.4	0.8	1.9
100.00	3.6	5.1	1.4	1.0	1.4	1.7	4.1	2.4	0.8	1.9
ZPA	3.6	5.1	1.4	1.0	1.4	1.7	4.1	2.4	0.8	1.9

Legend:
HCA = Horizontal Control Accelerometer
SA = Specimen Accelerometer
VCA = Vertical Control Accelerometer
TRS = Test Response Spectra
SSCTRS = Side-to-Side Composite Specimen Test Response Spectra
Q = Transmissibility
RRS = Required Response Spectra
SSPCTRS = Side-to-Side Predicted Composite Specimen Test Response Spectra
VCTRS = Vertical Composite Specimen Test Response Spectra
VPCTRS = Vertical Predicted Composite Specimen Test Response Spectra
ZPA = Zero Period Amplitude

TABLE III

TEST RESPONSE DATA AT 1/3 OCTAVE INTERVALS
FOR THE
CONTROL AND COMPOSITE SPECIMEN RESPONSE ACCELEROMETERS
AXIS: FRONT-TO-BACK AND VERTICAL ORIENTATION

	Test No. 32					Test No. 32				
	Specimen Accelerometers Oriented in the Front-to-Back Direction					Specimen Accelerometers Oriented in the Vertical Direction				
Accel. Spectra Figure	HCA TRS 7	SA FBCTRS 11	- Q 19	HCA RRS 3	SA FBPCTRS 15	VCA TRS 8	SA VCTRS 12	- Q 20	VCA RRS 4	SA VPCTRS 16
Freq.	G's	G's	FBCTRS ÷ TRS	x RRS G's	= PCTRS G's	G's	G's	VCTRS ÷ TRS	x RRS G's	= PCTRS G's
1.00	6.0	6.3	1.0	5.0	5.0	3.5	4.3	1.2	3.2	3.9
1.26	10.8	12.7	1.2	8.5	10.2	5.1	7.2	1.4	5.0	7.0
1.58	11.8	13.2	1.1	10.4	11.4	8.1	9.2	1.1	8.0	8.8
2.00	11.2	13.0	1.2	10.4	12.5	9.2	11.0	1.2	8.0	9.6
2.50	10.2	11.0	1.1	8.5	9.4	7.8	8.5	1.1	8.0	8.8
3.16	6.5	8.0	1.2	4.7	5.6	5.6	7.5	1.3	5.5	7.4
4.00	5.9	9.5	1.6	2.6	4.2	6.0	6.8	1.1	3.8	4.3
5.00	7.4	11.2	1.5	1.5	2.3	5.0	6.1	1.2	2.7	3.3
6.30	9.2	15.3	1.7	1.4	2.4	3.6	5.8	1.6	1.9	3.1
8.00	6.5	12.3	1.9	1.4	2.7	4.0	8.8	2.2	1.4	3.1
10.00	5.7	18.8	3.3	1.4	4.6	4.5	10.8	2.4	1.0	2.4
12.60	5.8	10.0	1.7	1.3	2.2	4.3	9.8	2.3	1.0	2.3
15.80	8.8	8.8	1.0	1.3	1.3	3.1	7.7	2.5	1.0	2.5
20.00	8.7	18.0	2.1	1.2	2.5	3.2	8.7	2.7	0.9	2.4
25.00	7.4	25.0	3.4	1.2	4.1	2.7	11.5	4.3	0.9	3.8
31.60	8.2	22.5	2.7	1.2	3.2	4.7	13.2	2.8	0.9	2.5
40.00	4.2	16.0	3.8	1.1	4.2	3.4	9.5	2.8	0.9	2.5
50.00	4.2	8.2	1.9	1.1	2.1	1.9	5.6	2.9	0.8	2.4
63.00	3.4	6.0	1.8	1.1	2.0	1.8	4.8	2.7	0.8	2.1
80.00	3.5	5.7	1.6	1.0	1.6	1.7	4.7	2.7	0.8	2.1
100.00	3.4	4.8	1.4	1.0	1.4	1.4	4.3	3.1	0.8	2.4
ZPA	3.3	4.6	1.4	1.0	1.4	1.4	4.2	3.0	0.8	2.4

Legend: FBCTRS = Front-to-Back Composite Test Response Spectra

FBPCTRS = Front-to-Back Predicted Composite Test Response Spectra

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

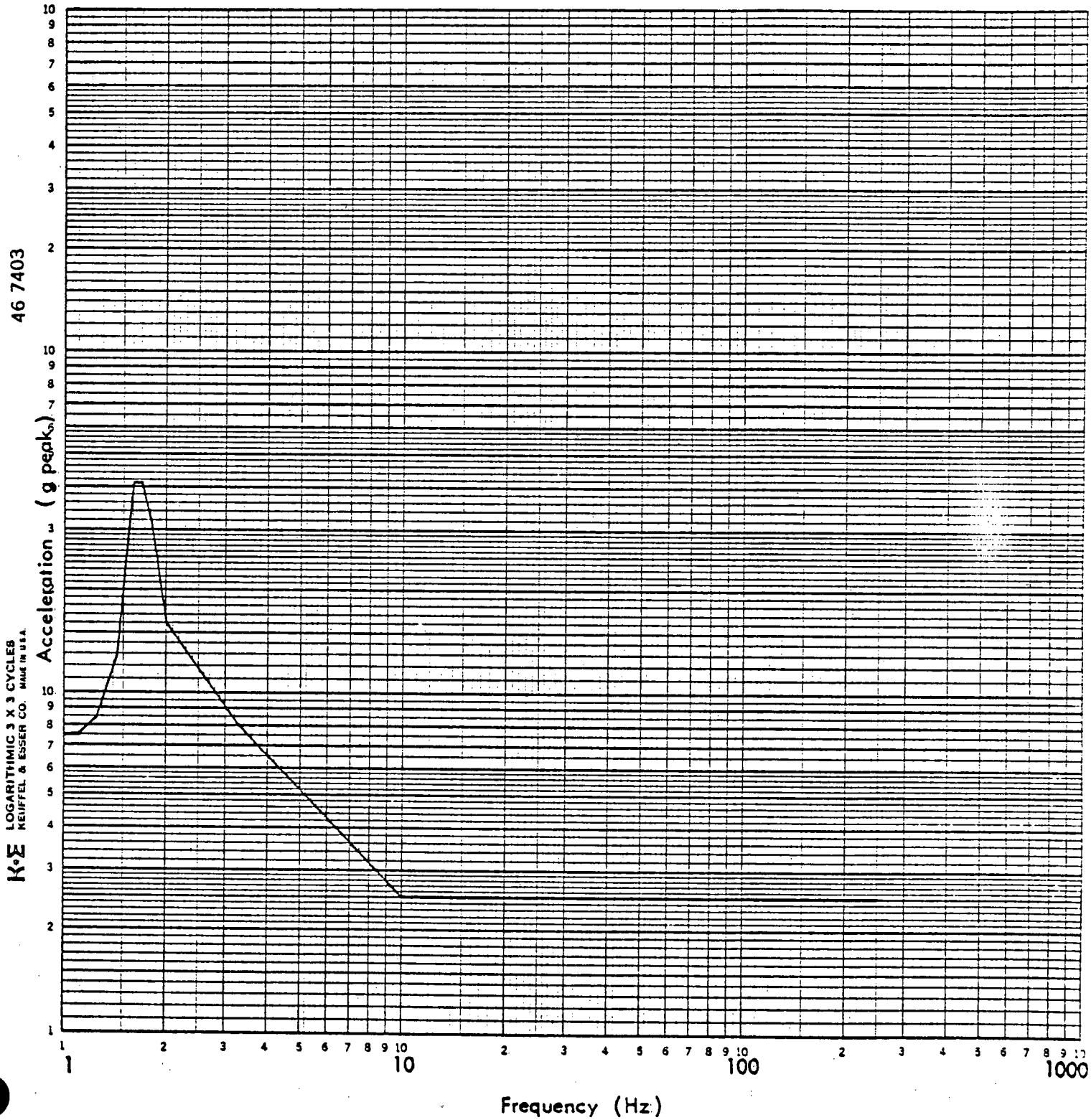


FIGURE 1 LOUISIANA POWER AND LIGHT COMPANY HORIZONTAL DESIGN BASIS EARTHQUAKE REQUIRED RESPONSE SPECTRUM

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

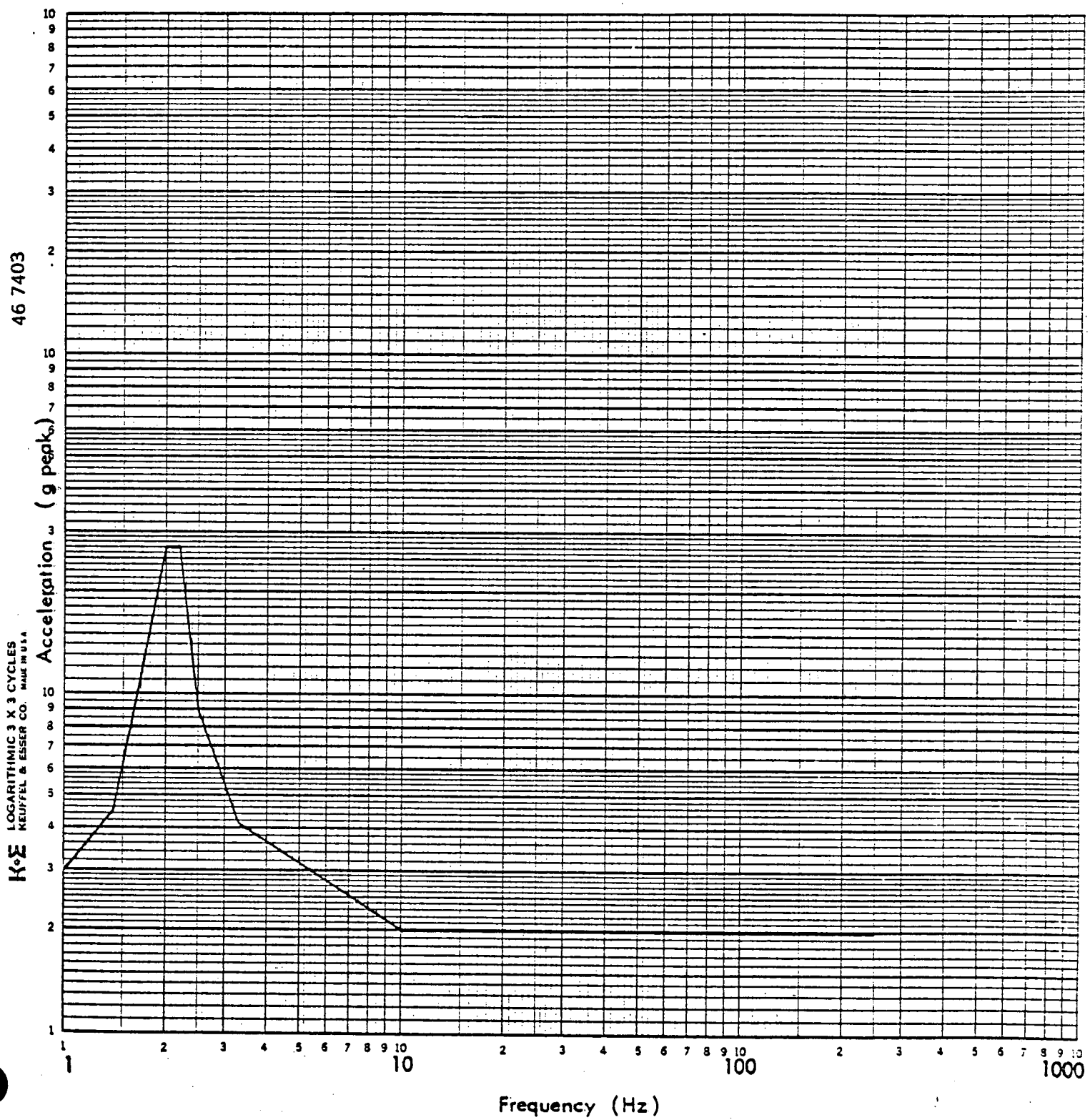


FIGURE 2 LOUISIANA POWER AND LIGHT COMPANY
VERTICAL DESIGN BASIS EARTHQUAKE
REQUIRED RESPONSE SPECTRUM

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

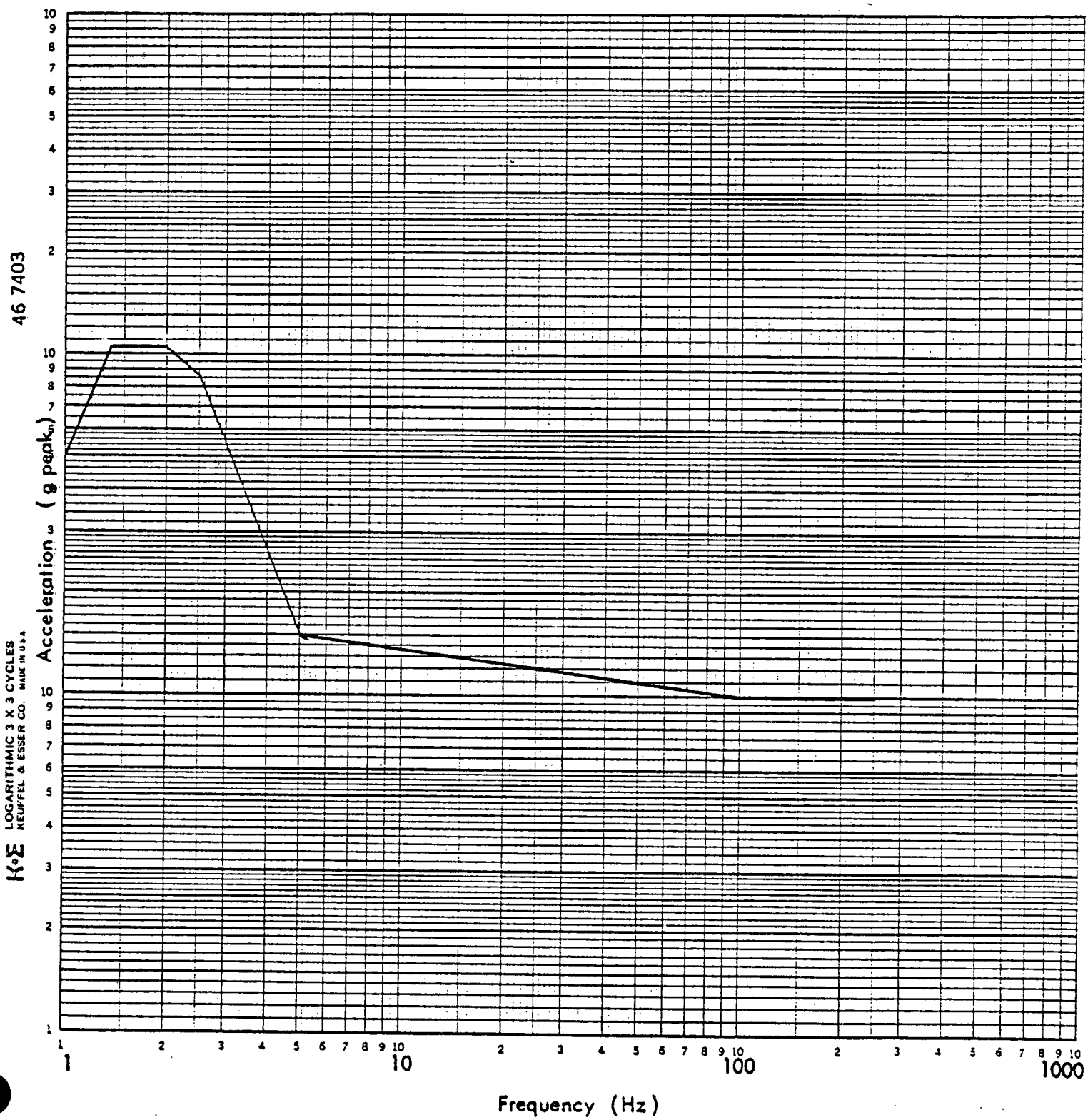


FIGURE 3 SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATION STATION'S
HORIZONTAL DESIGN BASIS EARTHQUAKE
REQUIRED RESPONSE SPECTRUM

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

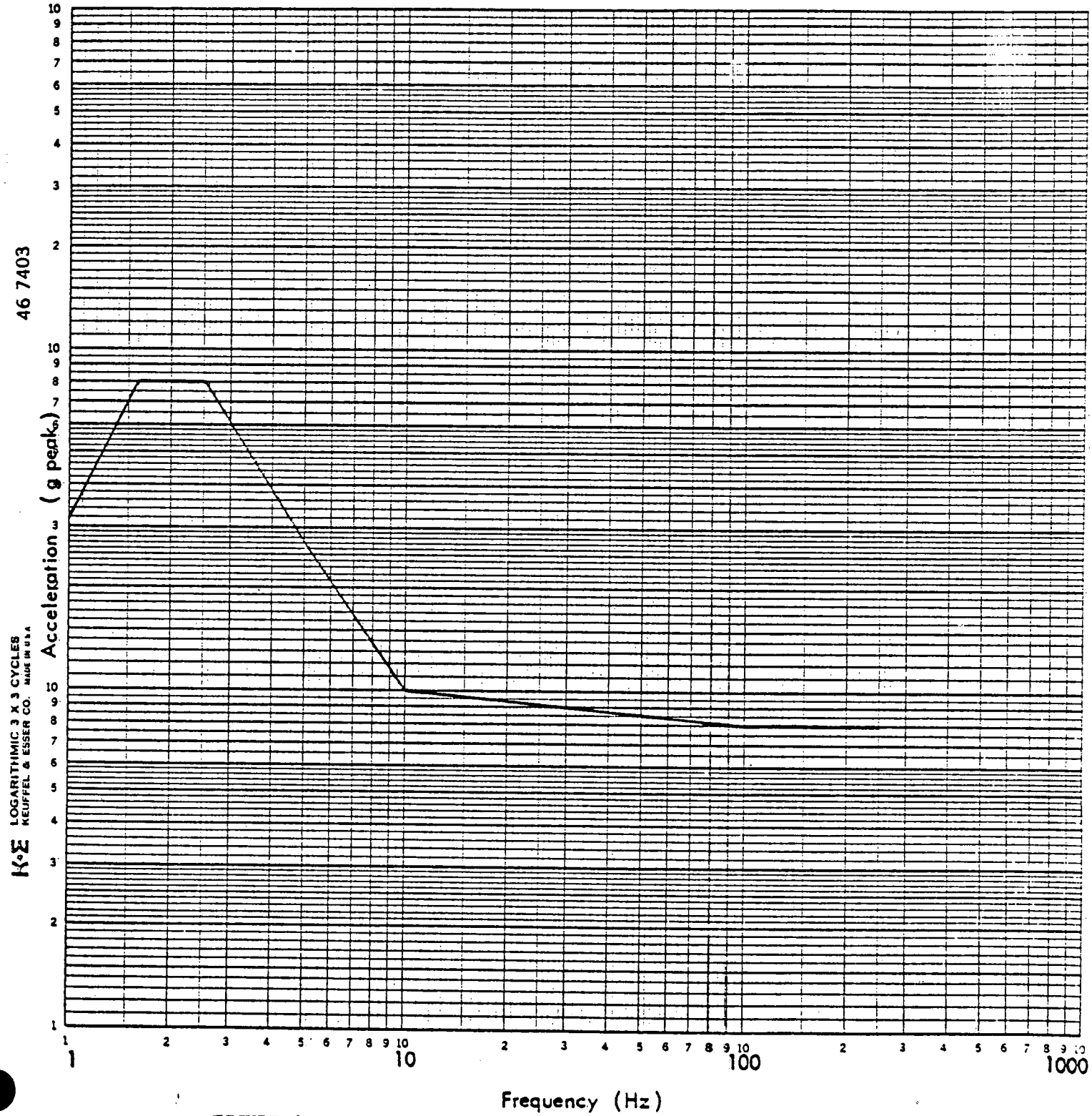


FIGURE 4 SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATION STATION'S
VERTICAL DESIGN BASIS EARTHQUAKE
REQUIRED RESPONSE SPECTRUM

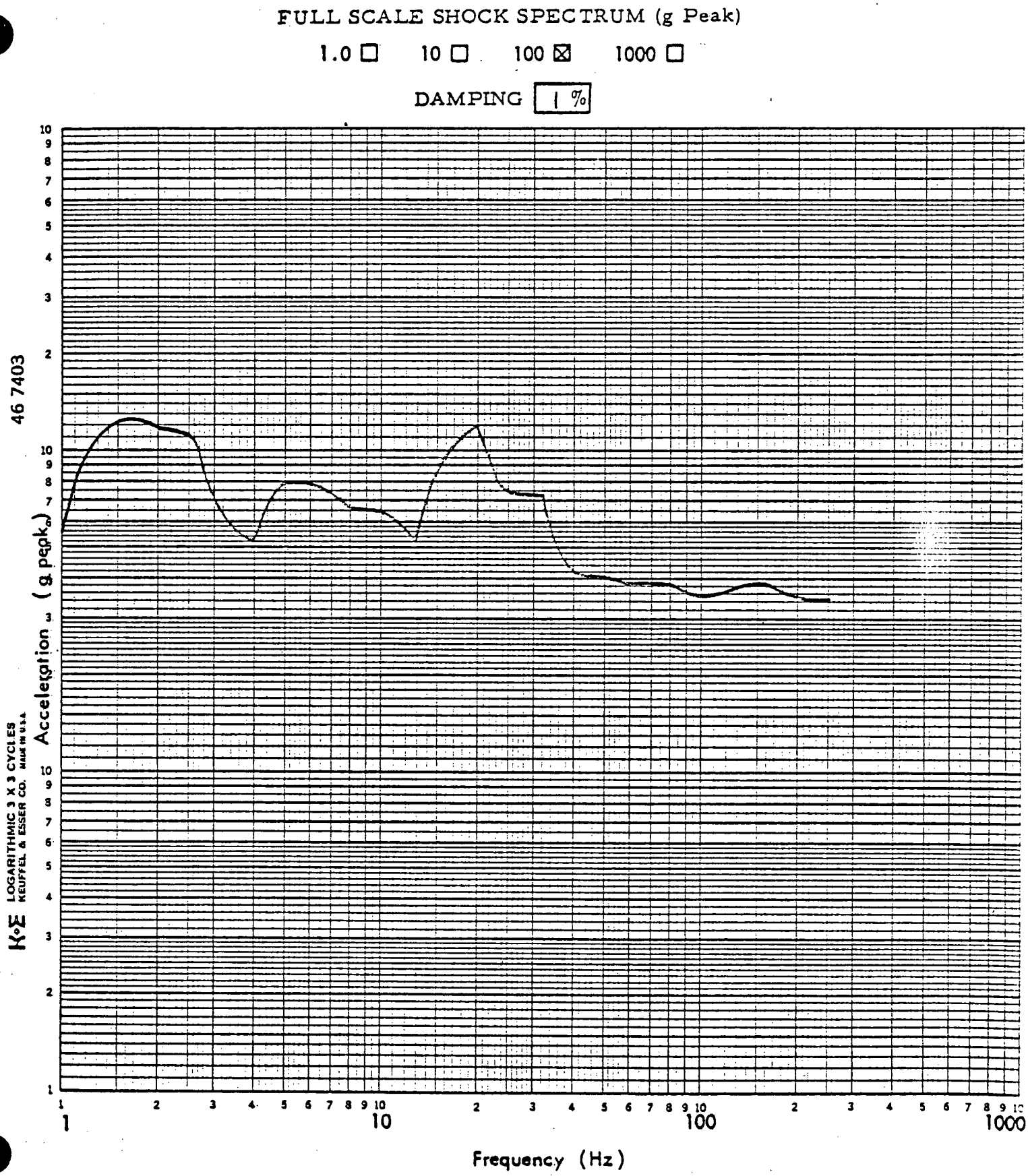


FIGURE 5 TEST RESPONSE SPECTRA OF HORIZONTAL CONTROL ACCELEROMETER DURING SS/V RANDOM MULTI-FREQUENCY TEST (RUN # 19)

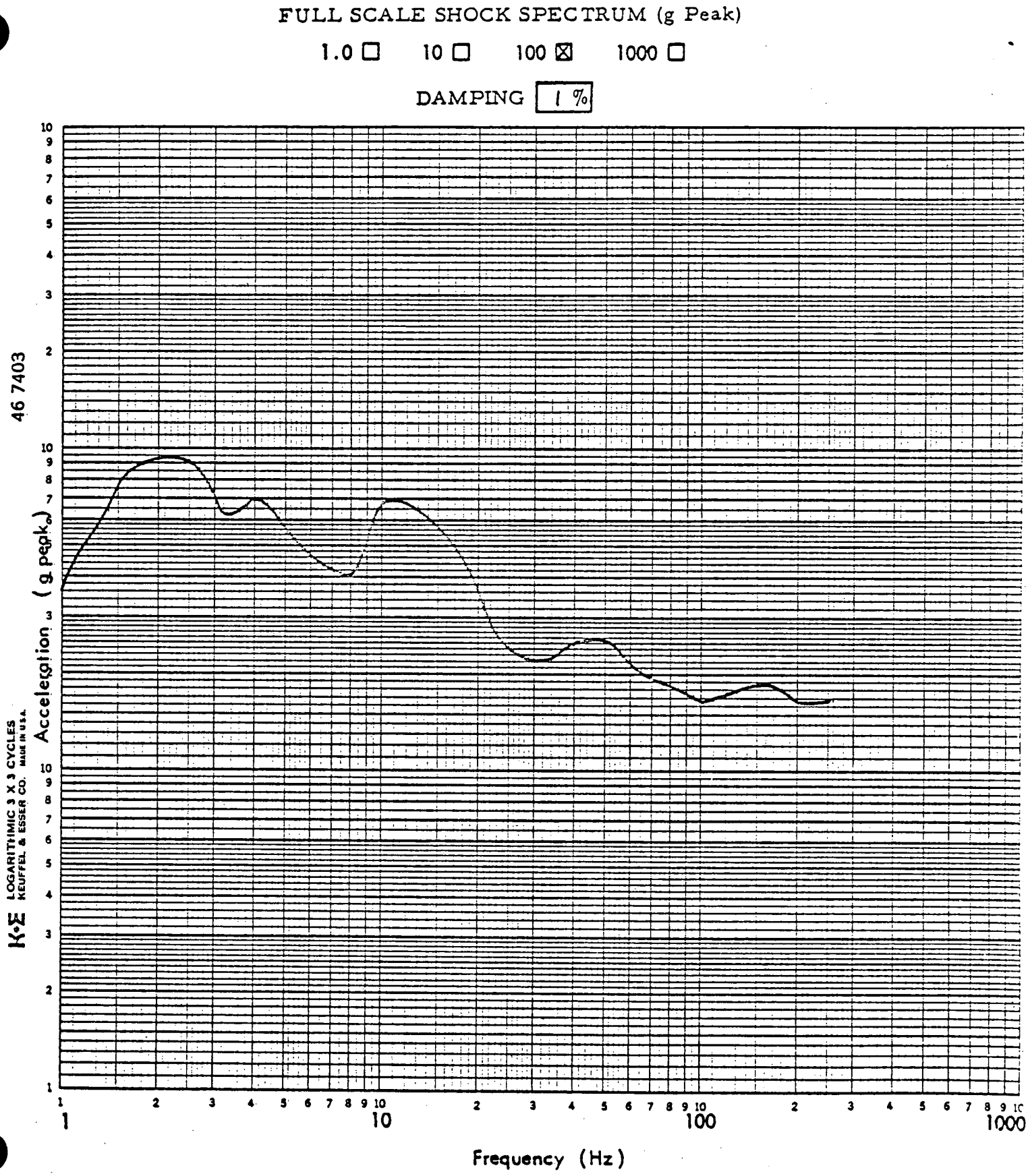


FIGURE 6 TEST RESPONSE SPECTRUM OF VERTICAL CONTROL ACCELEROMETER DURING SS/V RANDOM MULTI-FREQUENCY TEST (RUN #19)

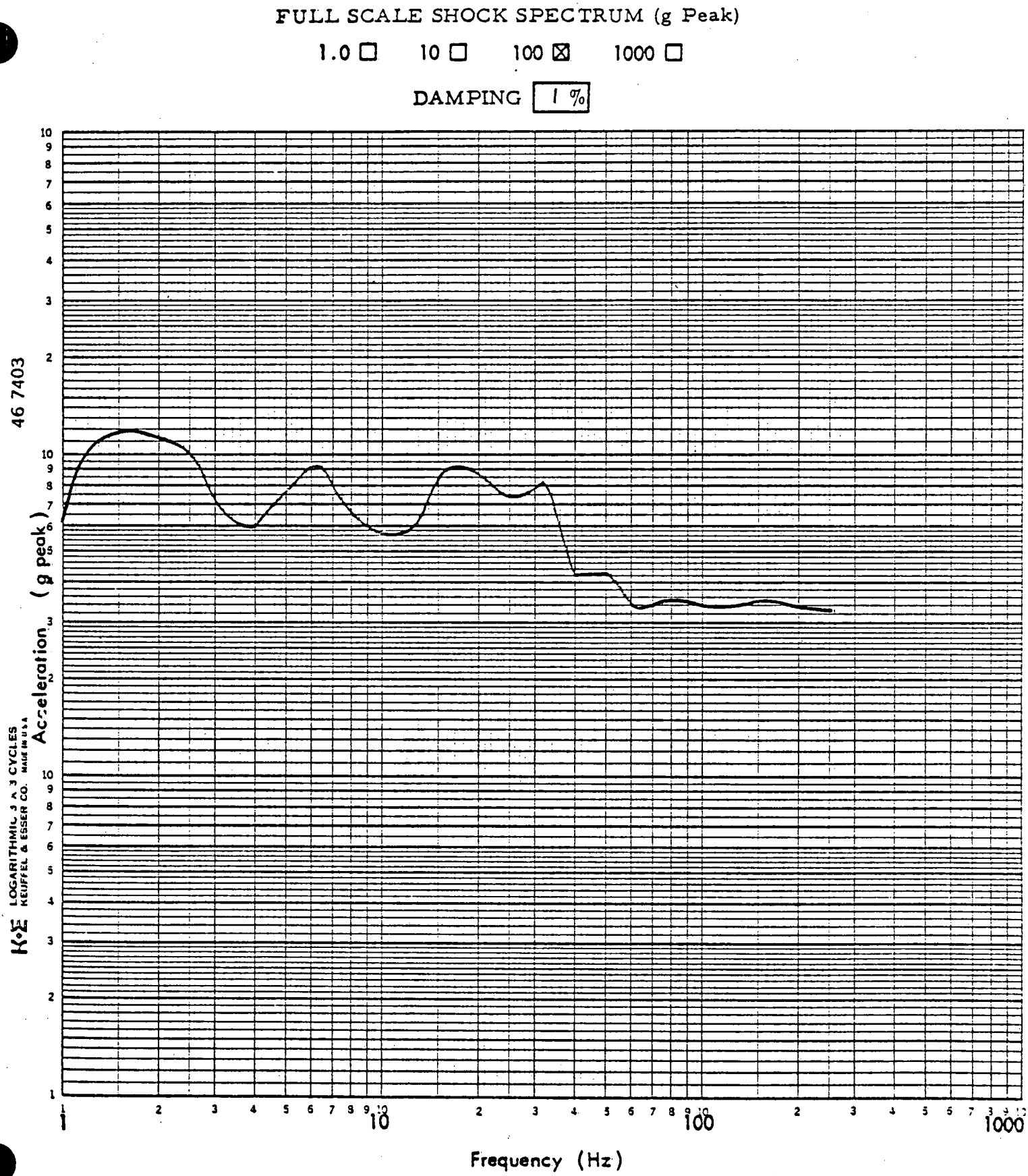


FIGURE 7 TEST RESPONSE SPECTRUM OF HORIZONTAL CONTROL ACCELEROMETER DURING FB/V RANDOM MULTI-FREQUENCY TEST (RUN # 32)

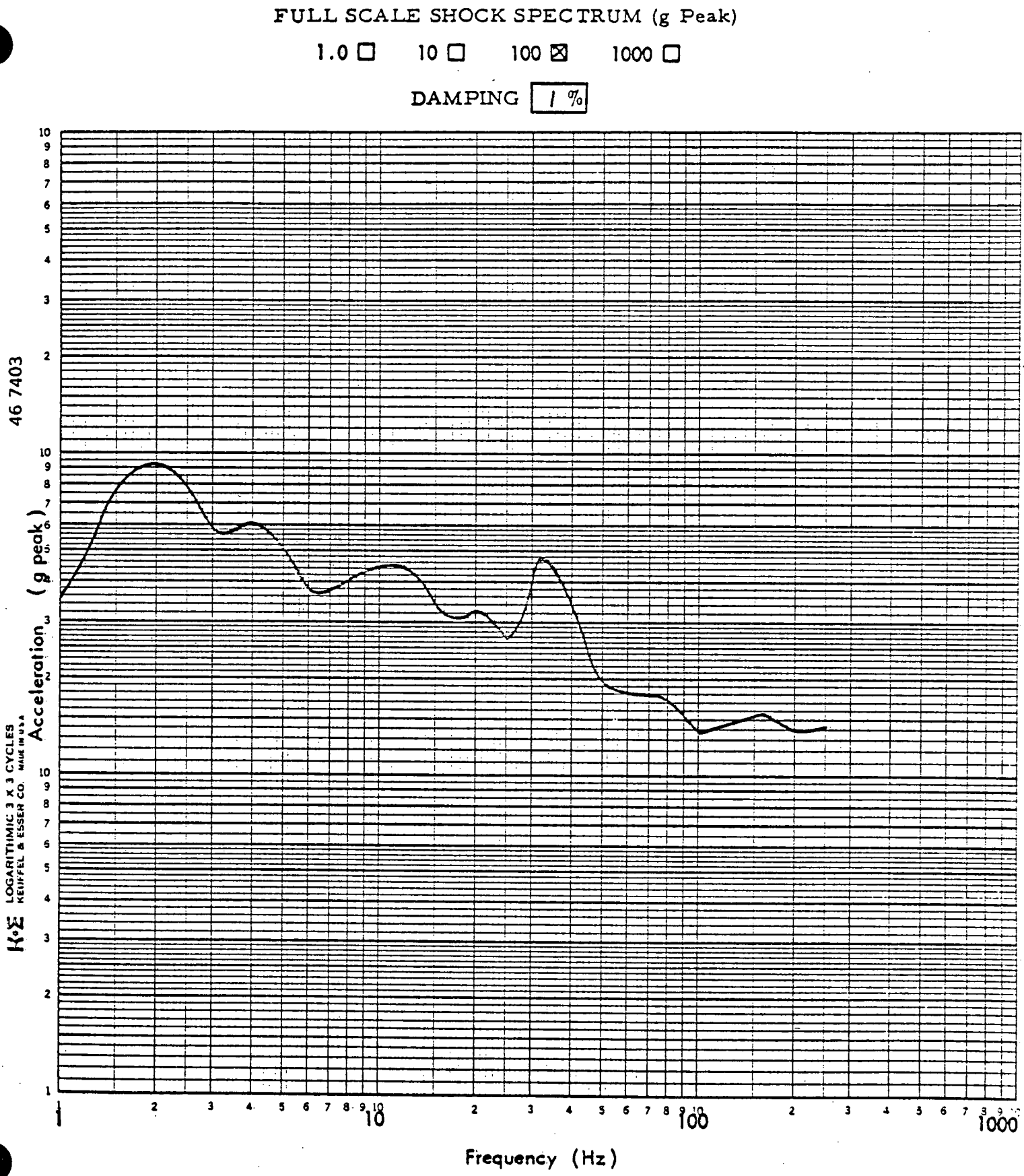


FIGURE 8 TEST RESPONSE SPECTRUM OF THE VERTICAL CONTROL ACCELEROMETERS DURING FB/V RANDOM MULTI-FREQUENCY TEST (RUN # 32)

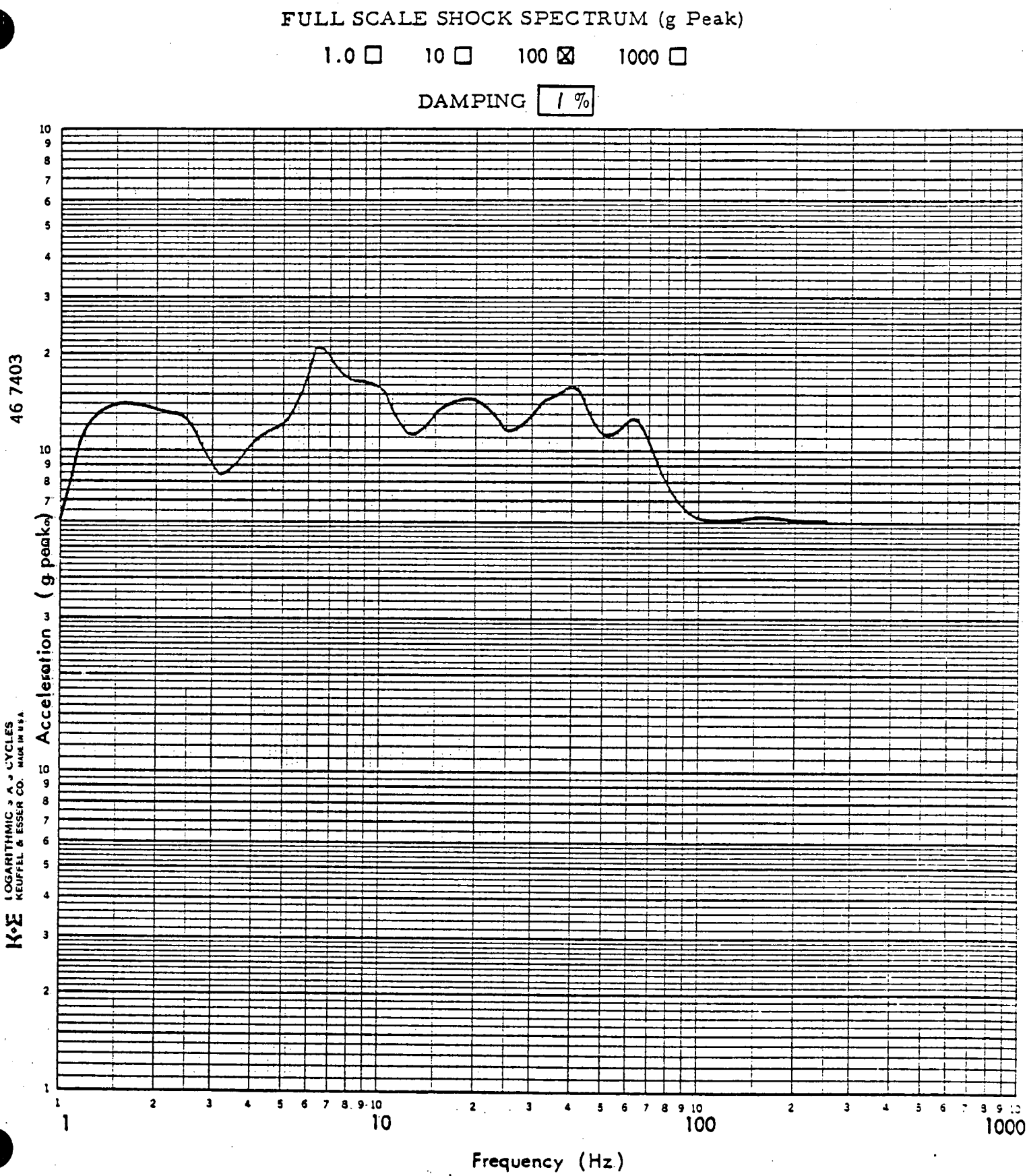


FIGURE 9 COMPOSITE TEST RESPONSE SPECTRUM OF HORIZONTALLY ORIENTED SPECIMEN ACCELEROMETERS DURING SS/F RANDOM MULTI-FREQUENCY TEST (RUN # 19)

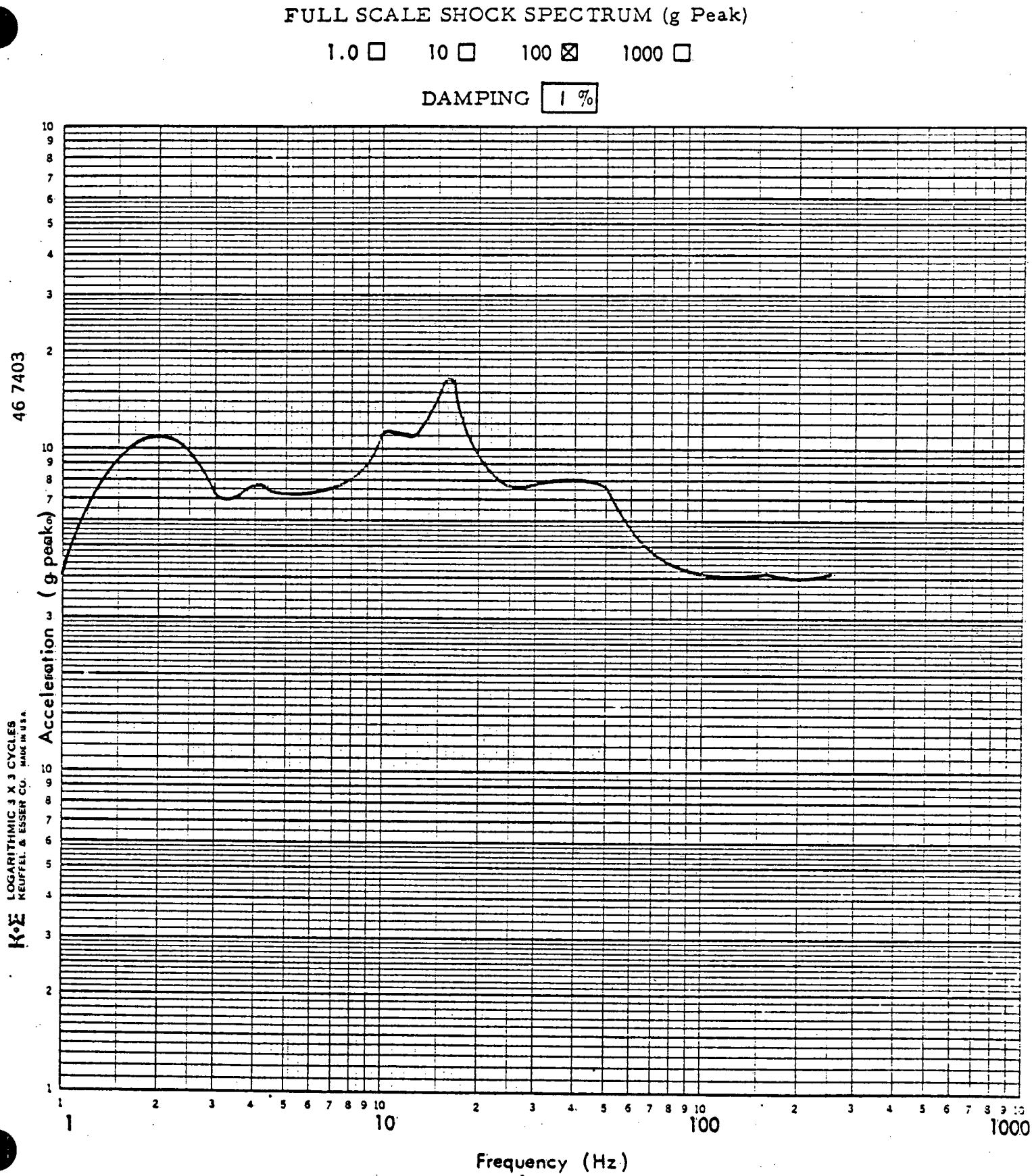


FIGURE 10 COMPOSITE TEST RESPONSE SPECTRUM OF VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS DURING SS/V RANDOM MULTIFREQUENCY TEST (RUN #19)

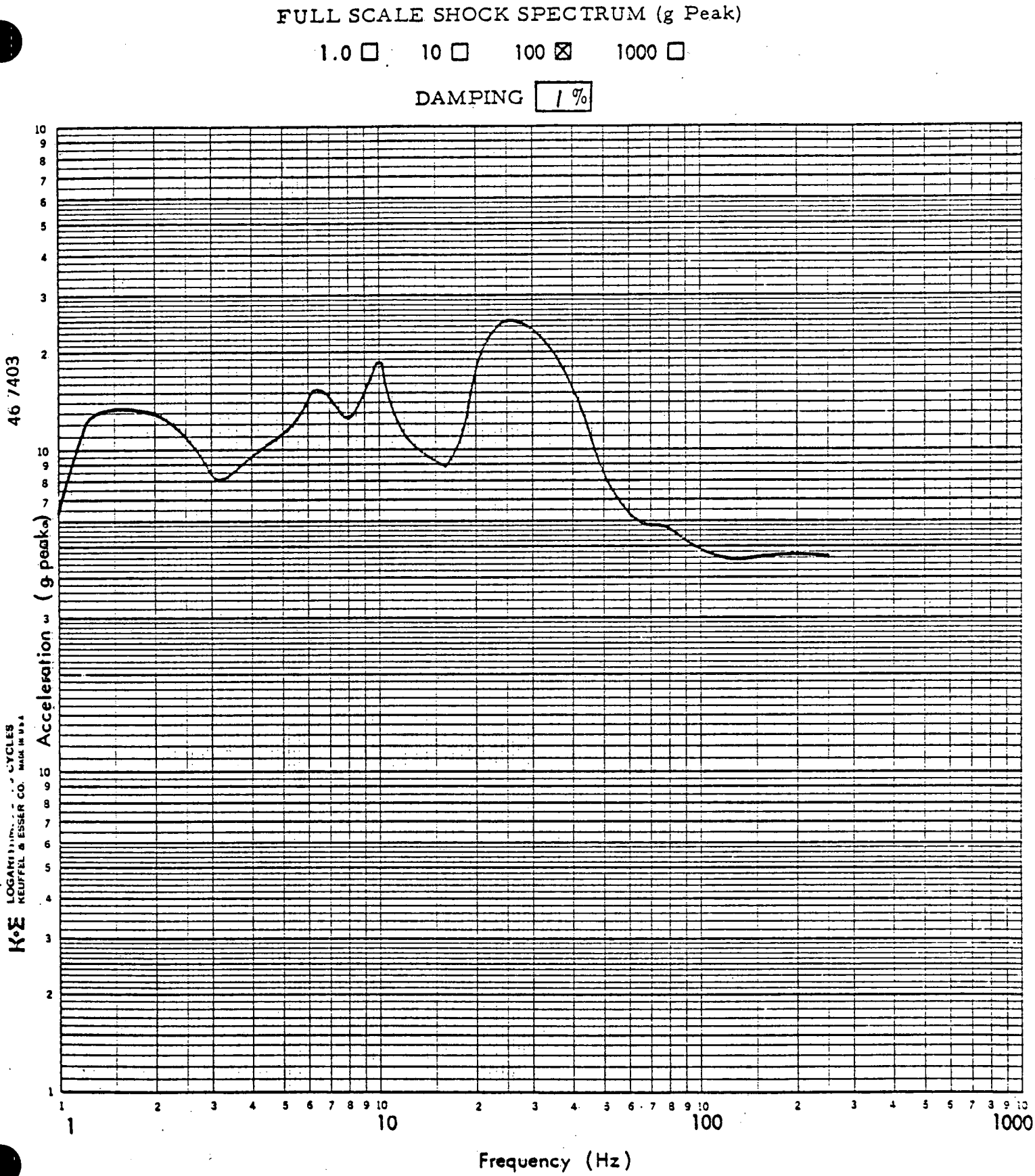


FIGURE 11 COMPOSITE TEST RESPONSE SPECTRUM OF HORIZONTALLY ORIENTED SPECIMEN ACCELEROMETERS DURING FB/V RANDOM MULTI-FREQUENCY TEST (RUN #32)

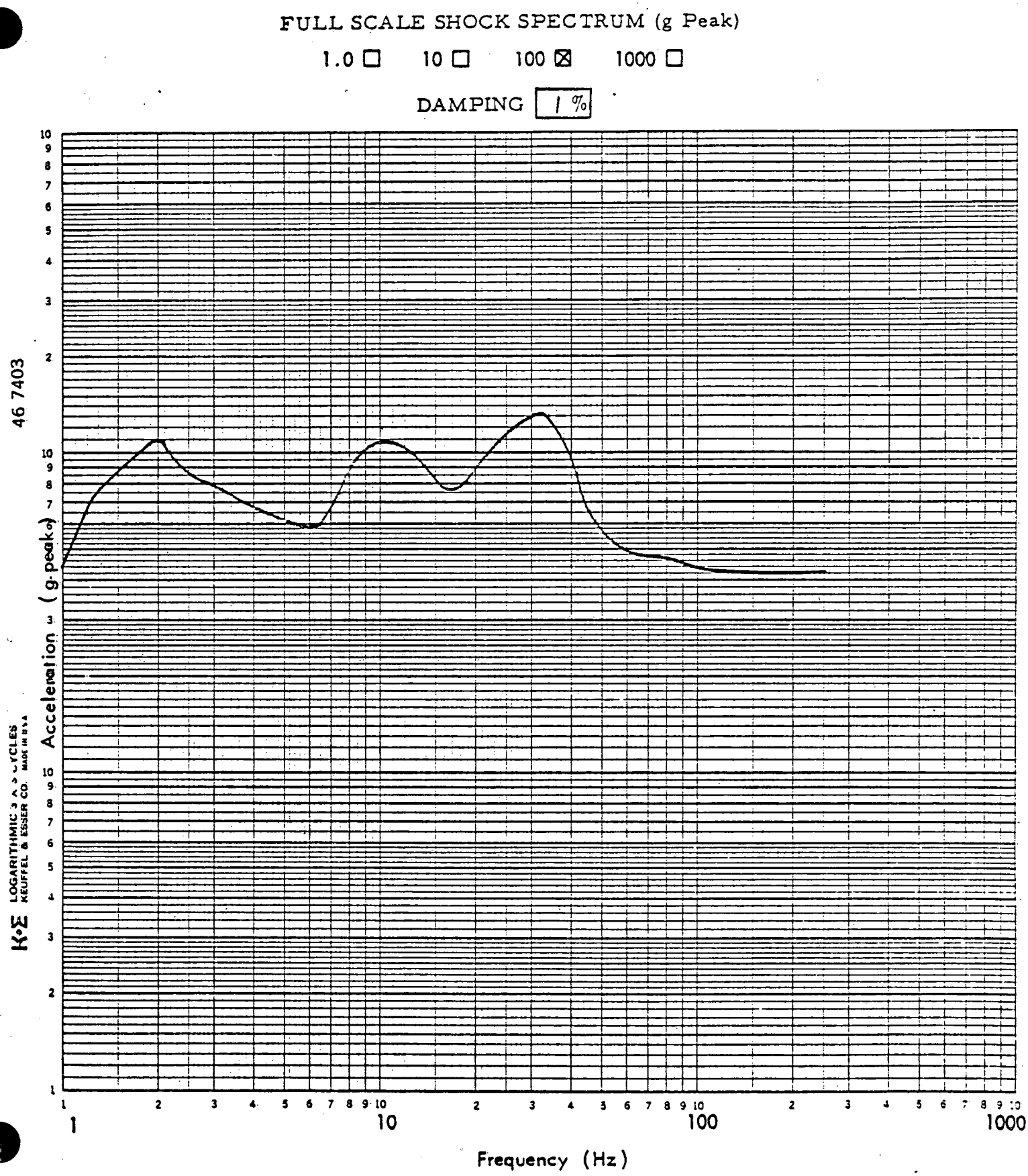


FIGURE 12 COMPOSITE TEST RESPONSE SPECTRUM OF VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS DURING FB/V RANDOM MULTI-FREQUENCY TEST (RUN # 32)

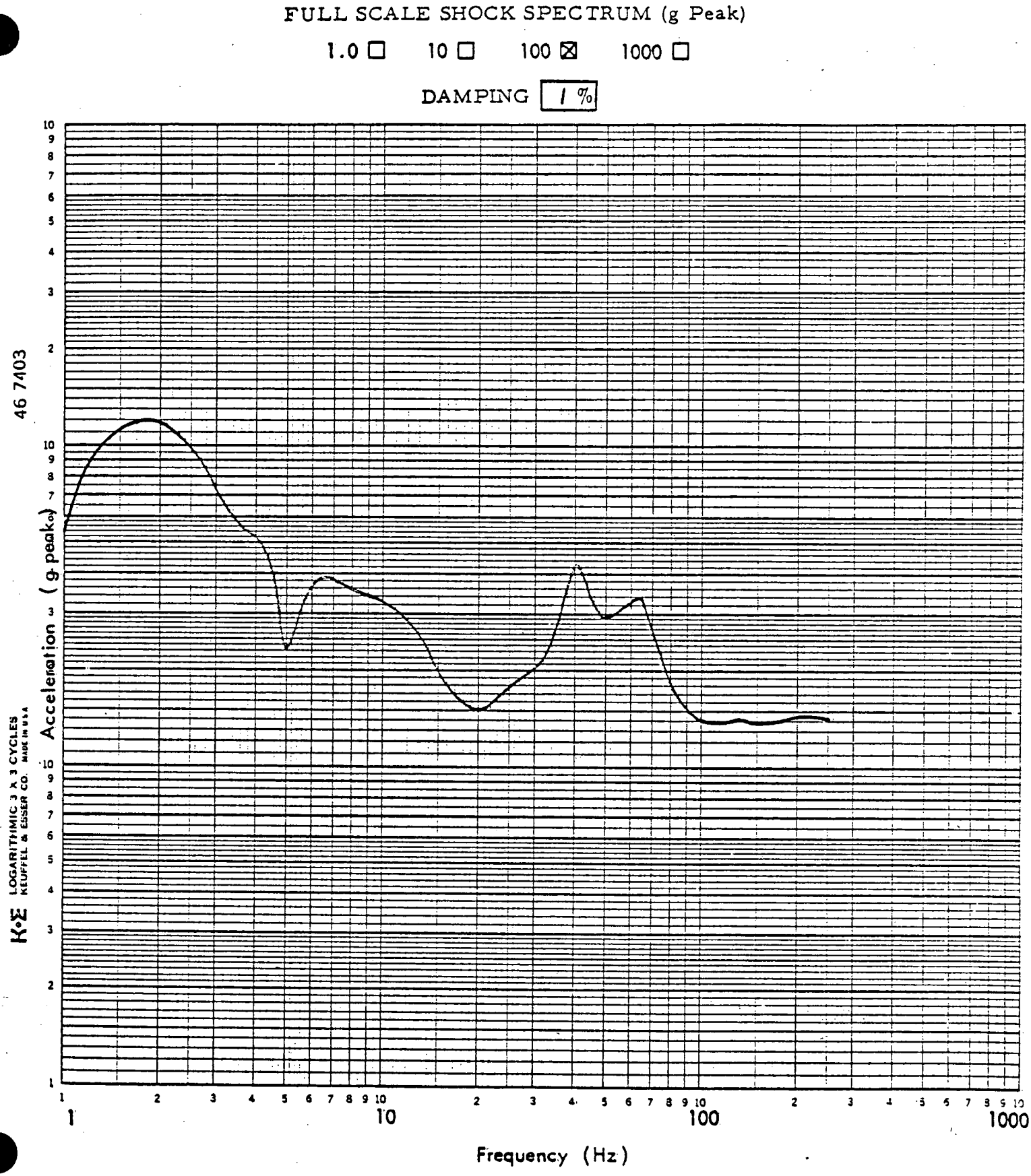


FIGURE 13 PREDICTED COMPOSITE RESPONSE SPECTRUM FOR HORIZONTALLY ORIENTED SPECIMEN ACCELEROMETERS IF THE TEST RESPONSE SPECTRA OF THE HORIZONTAL CONTROL ACCELEROMETER HAD EQUALED THE HORIZONTAL REQUIRED RESPONSE SPECTRA DURING SS/V RANDOM MULTI-FREQUENCY TEST (RUN # 19)

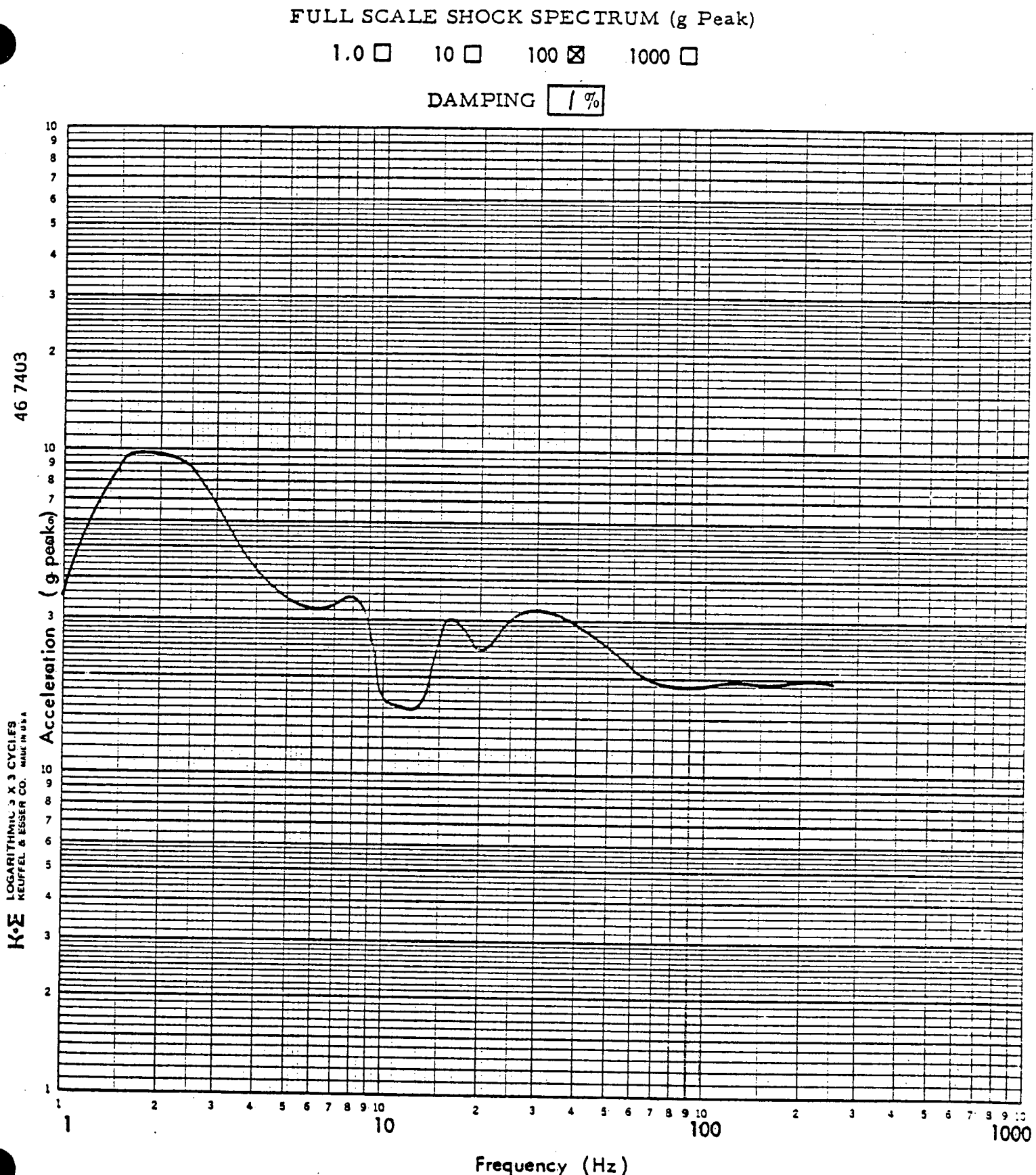


FIGURE 14 PREDICTED COMPOSITE RESPONSE SPECTRUM FOR VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS IF THE TEST RESPONSE SPECTRA OF THE VERTICAL CONTROL ACCELEROMETER HAD EQUALED THE VERTICAL REQUIRED RESPONSE SPECTRA DURING SS/V RANDOM MULTI-FREQUENCY TEST (RUN # 19)

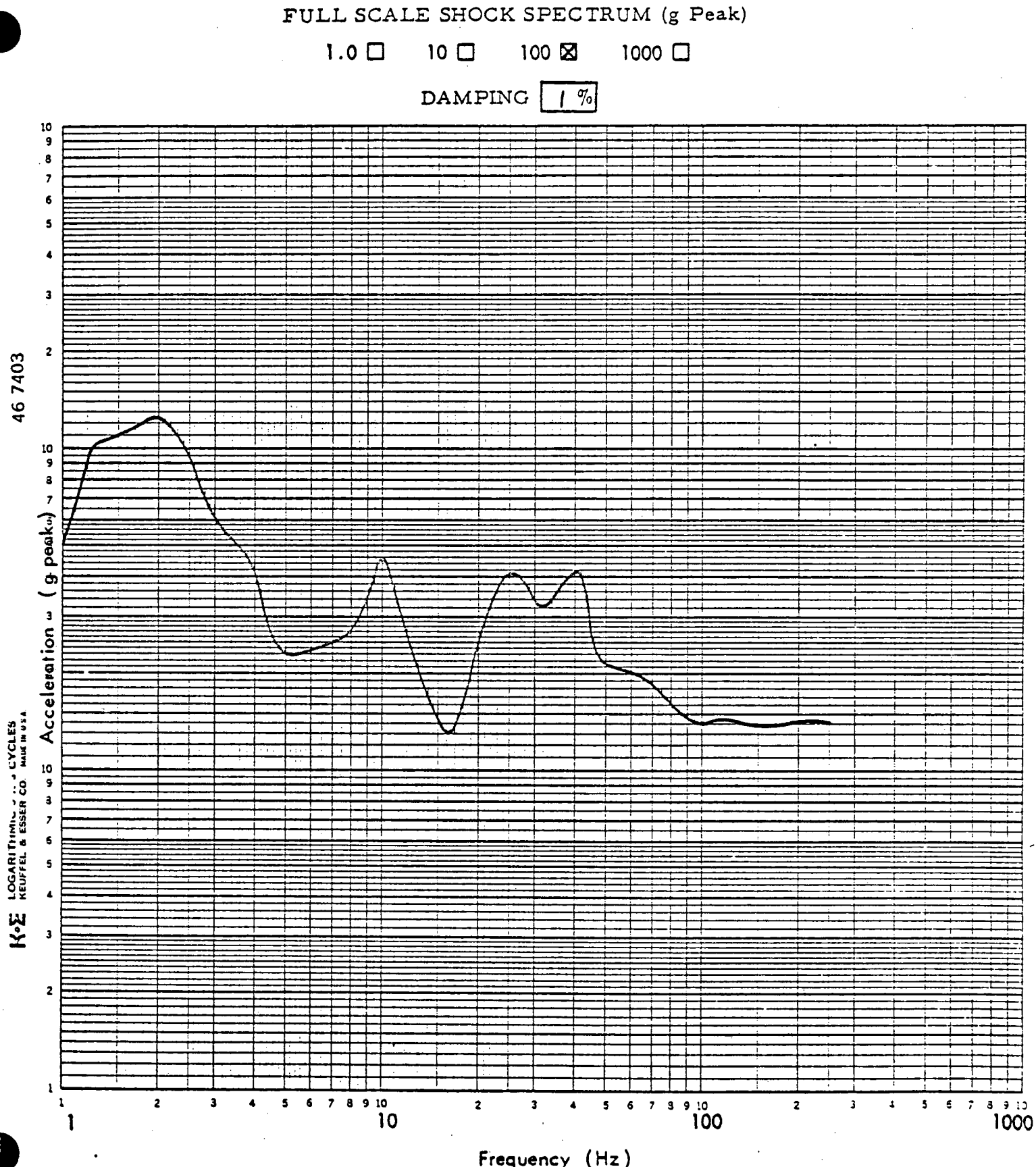


FIGURE 15 PREDICTED COMPOSITE RESPONSE SPECTRUM FOR HORIZONTALLY ORIENTED SPECIMEN ACCELEROMETERS IF THE TEST RESPONSE SPECTRA OF THE HORIZONTAL CONTROL ACCELEROMETER HAD EQUALED THE HORIZONTAL REQUIRED RESPONSE SPECTRA DURING FB/V RANDOM MULTI-FREQUENCY TEST (RUN # 32)

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]

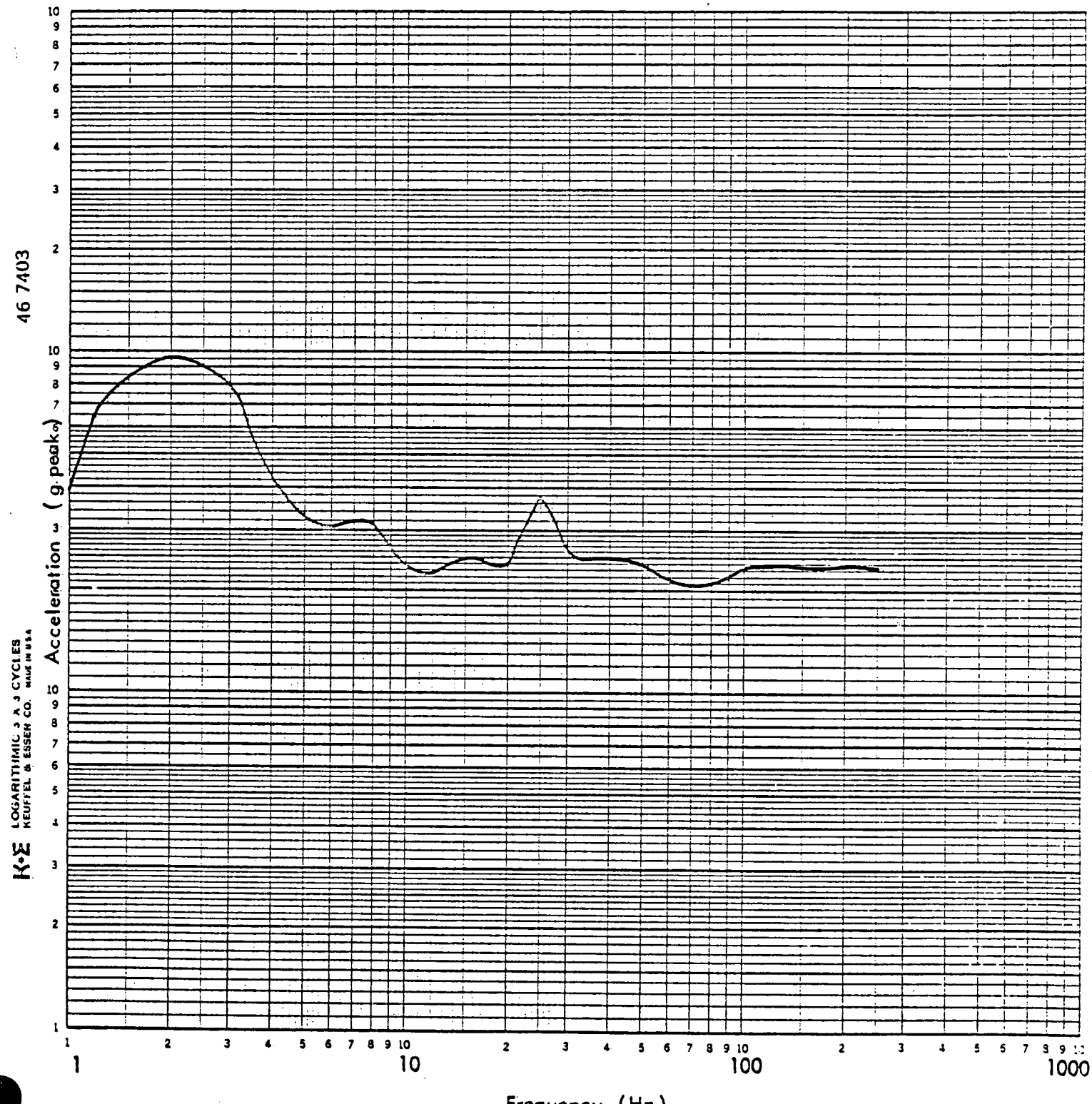


FIGURE 16 PREDICTED COMPOSITE RESPONSE SPECTRA FOR VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS IF THE TEST RESPONSE SPECTRA OF THE VERTICAL CONTROL ACCELEROMETER HAD EQUALED THE VERTICAL REQUIRED RESPONSE SPECTRA DURING FB/V RANDOM MULTI-FREQUENCY TEST (RUN # 32)

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

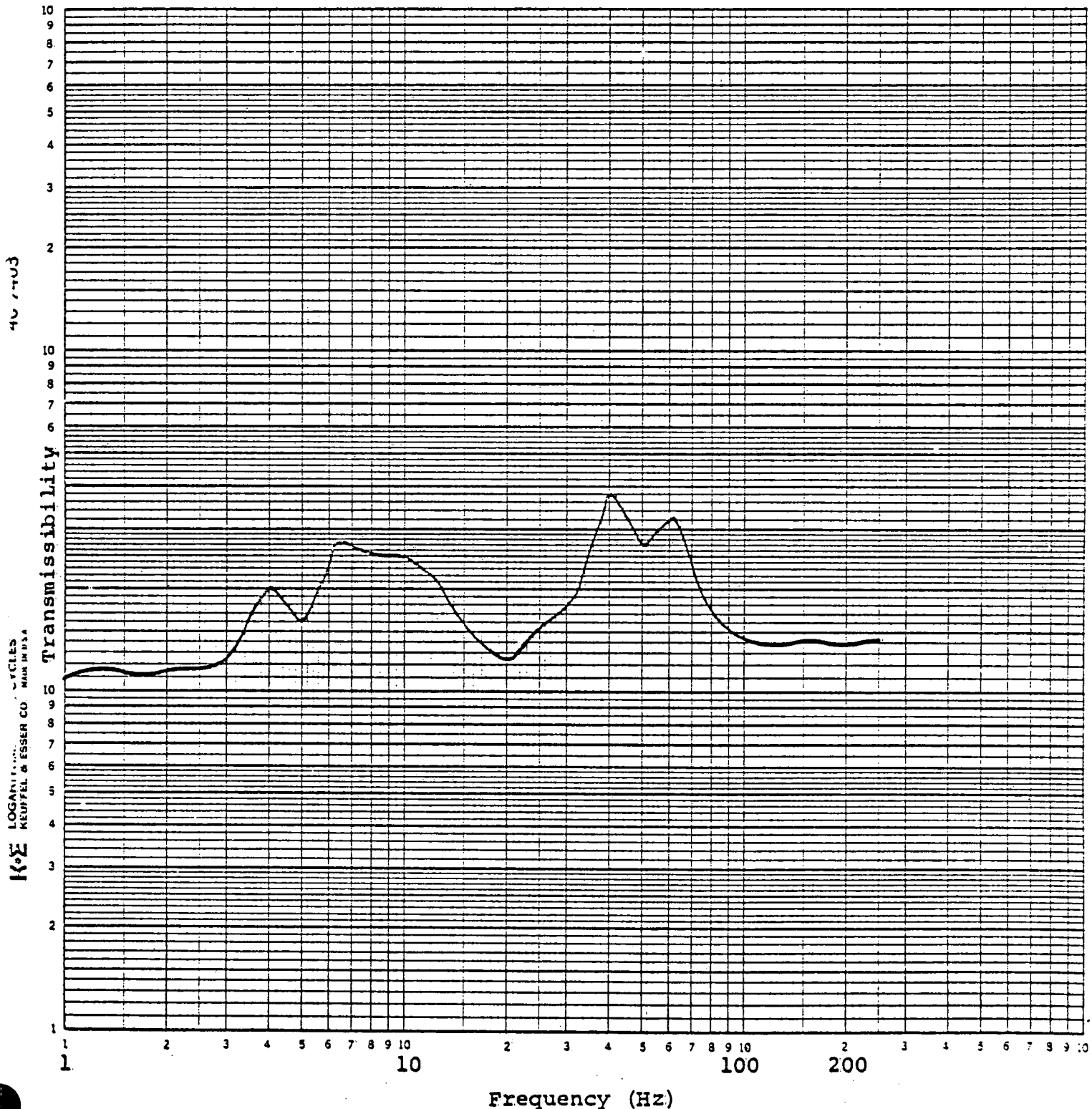


FIGURE 17 RANDOM MULTI-FREQUENCY TRANSMISSIBILITY PLOT OF THE HORIZONTAL COMPOSITE TEST RESPONSE SPECTRA SPECIMEN RESPONSE ACCELEROMETERS DIVIDED BY THE HORIZONTAL CONTROL ACCELEROMETER DURING SS/V AXES (RUN 19)

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

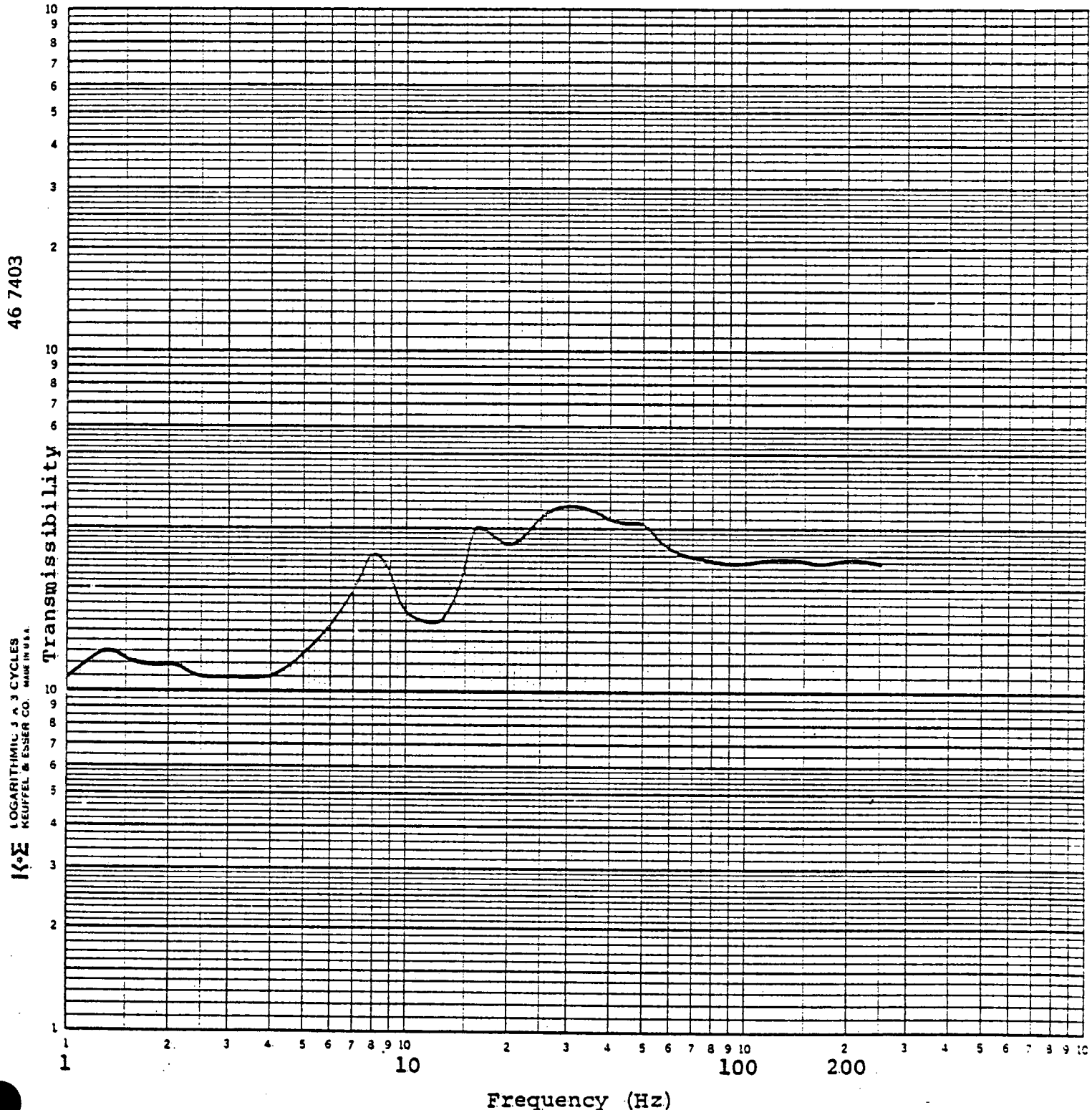


FIGURE 18 RANDOM MULTI-FREQUENCY TRANSMISSIBILITY PLOT OF THE VERTICAL COMPOSITE TEST RESPONSE SPECTRA SPECIMEN RESPONSE ACCELEROMETERS DIVIDED BY THE VERTICAL COMPOSITE CONTROL ACCELEROMETERS DURING SS/V AXES (RUN 19)

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

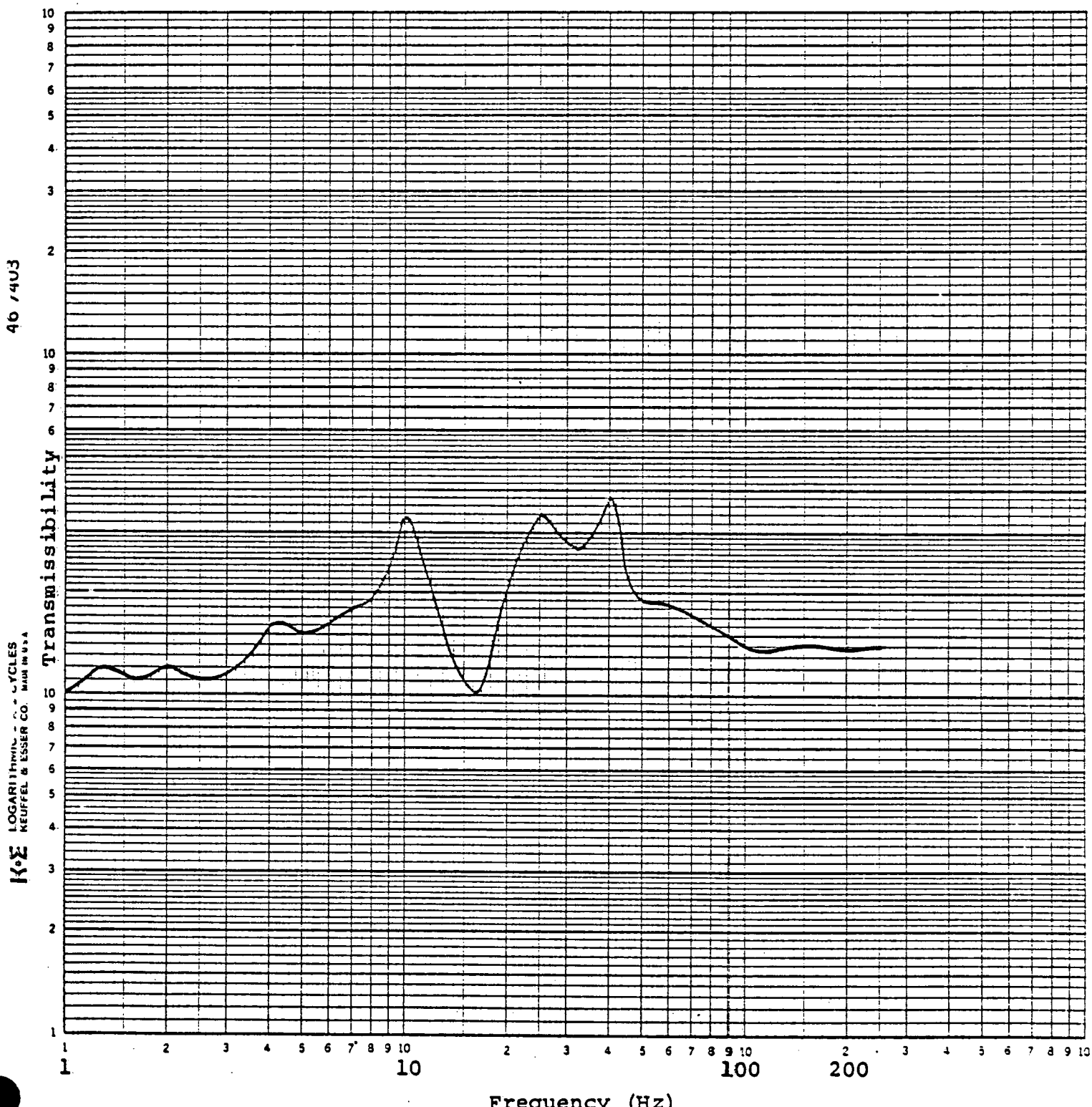


FIGURE 19 RANDOM MULTI-FREQUENCY TRANSMISSIBILITY PLOT OF THE HORIZONTAL COMPOSITE TEST RESPONSE SPECTRA SPECIMEN RESPONSE ACCELEROMETERS DIVIDED BY THE HORIZONTAL CONTROL ACCELEROMETER DURING FB/V AXES (RUN 32)

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

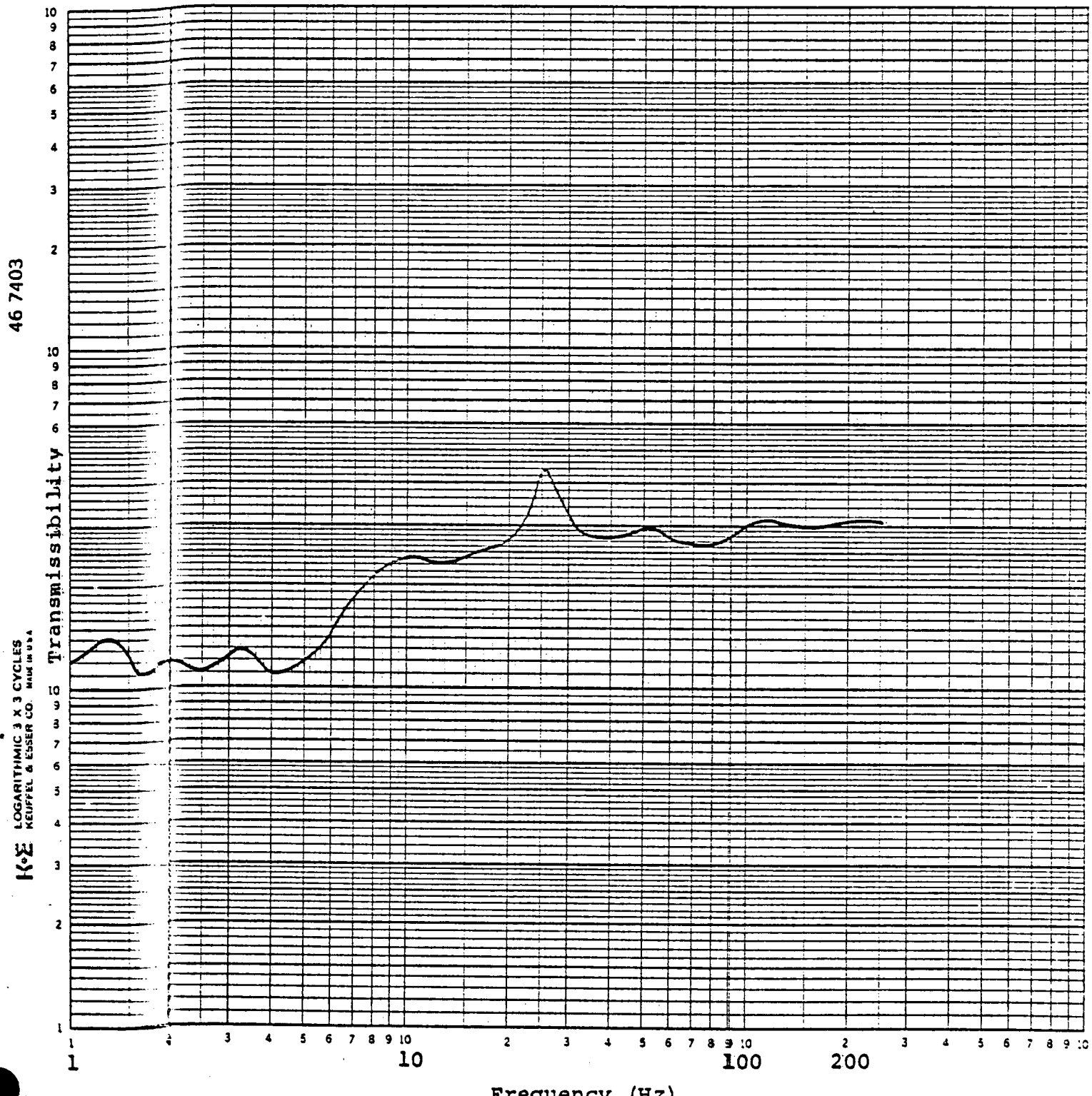
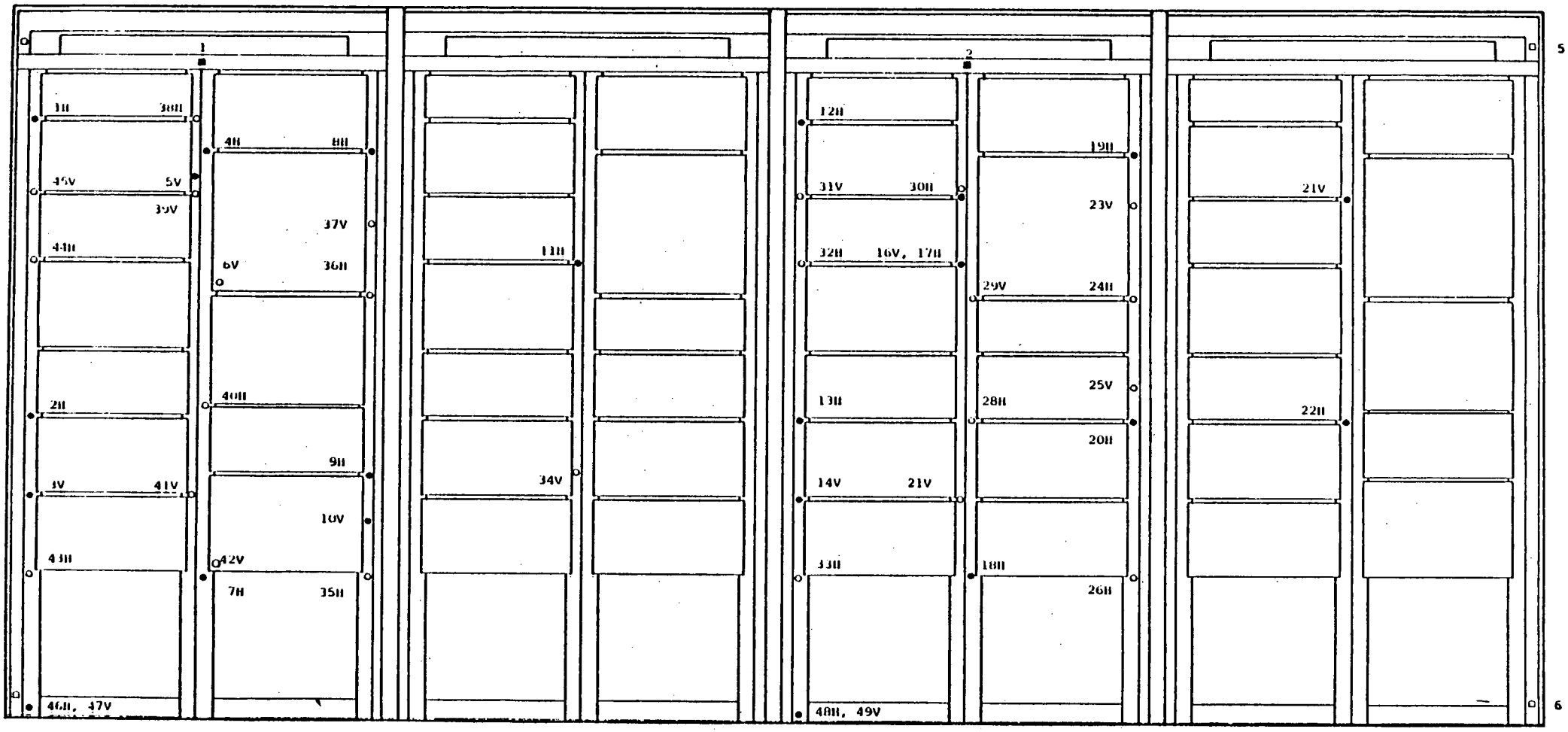


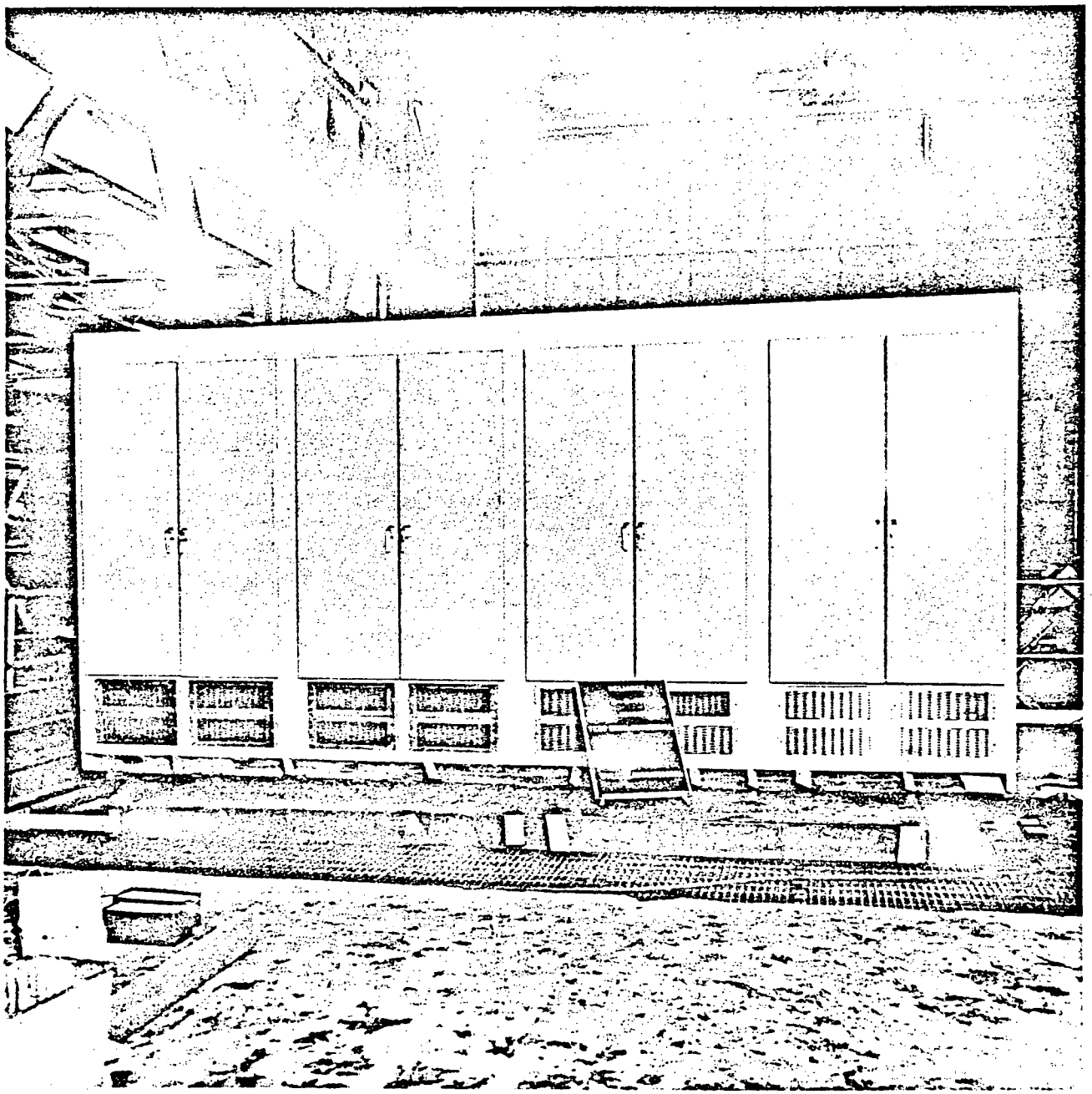
FIGURE 20 RANDOM MULTI-FREQUENCY TRANSMISSIBILITY PLOT OF THE VERTICAL COMPOSITE ACCELEROMETER TEST RESPONSE SPECTRA SPECIMEN RESPONSE ACCELEROMETERS DIVIDED BY THE VERTICAL COMPOSITE CONTROL ACCELEROMETER DURING FB/V AXES (RUN 32)



- Accelerometer locations (Front)
- Accelerometer locations (Rear)
- Strain Gage locations (Front)
- Strain Gage locations (Rear)

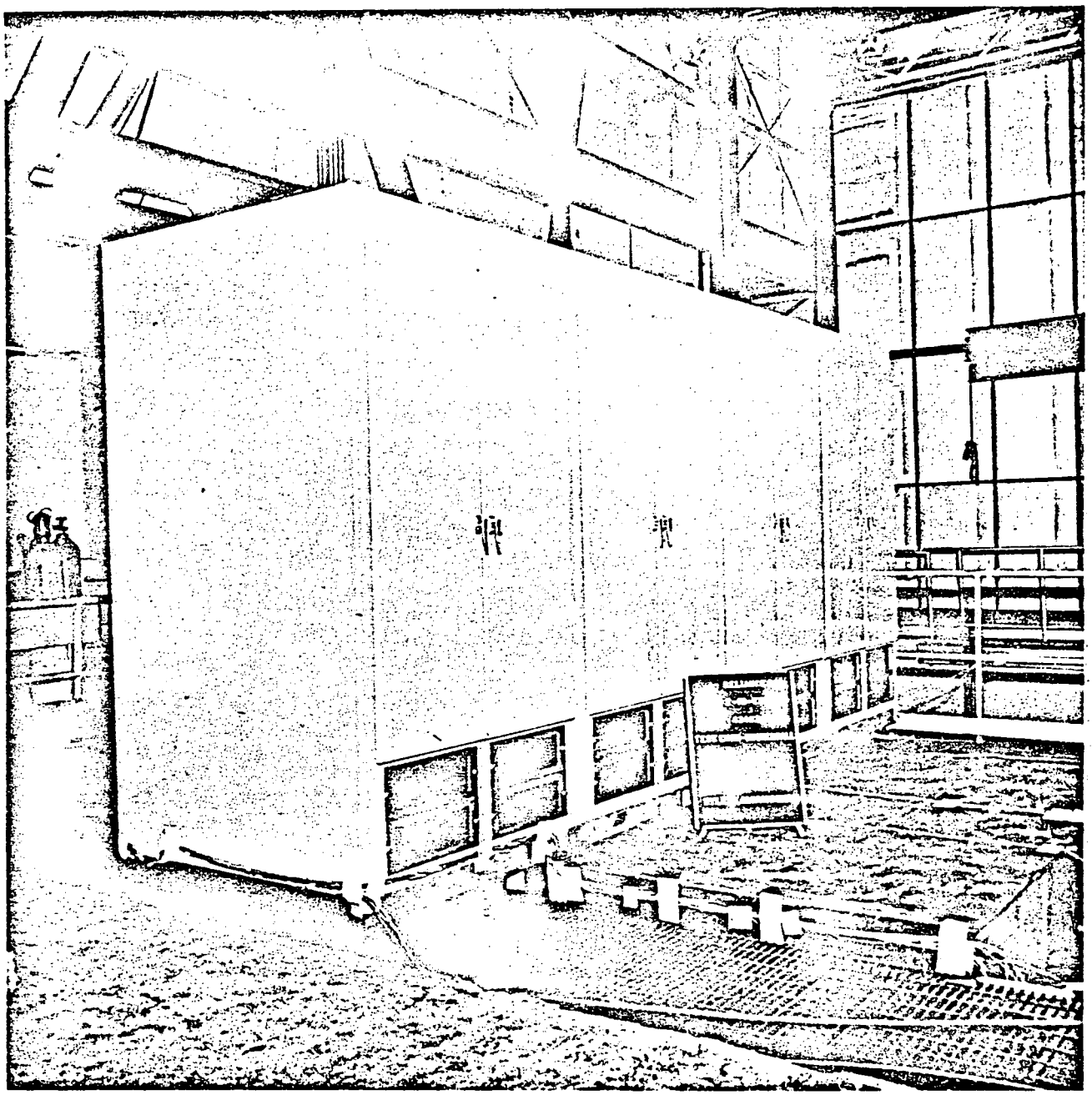
FIGURE 21

ACCELEROMETER AND STRAIN GAGE LOCATIONS



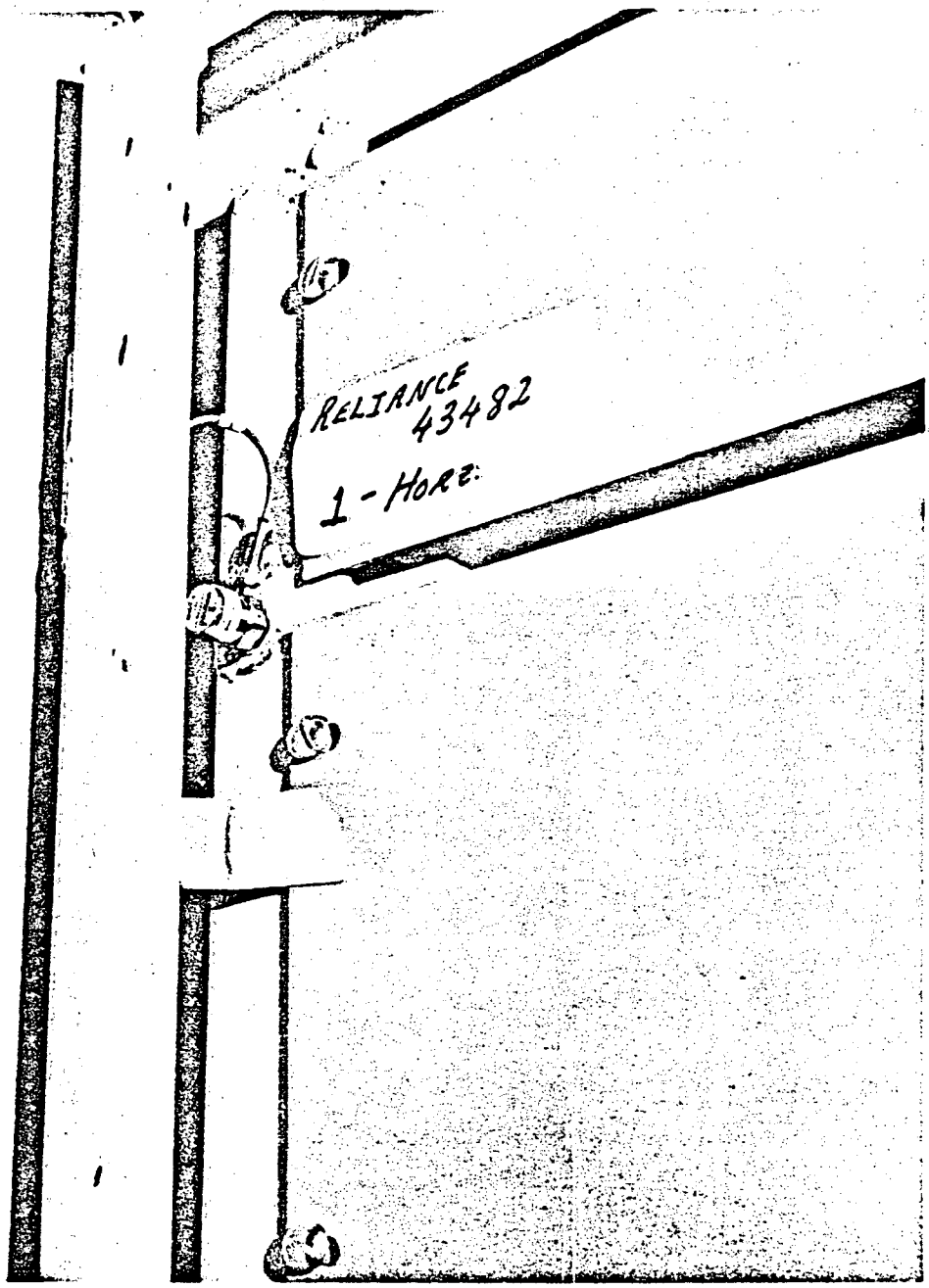
PHOTOGRAPH 1

GENERAL ARRANGEMENT OF THE AUXILIARY PROTECTIVE CABINET
FOR THE SIDE-TO-SIDE AND VERTICAL AXIS
TESTING ON THE SEISMIC SIMULATOR



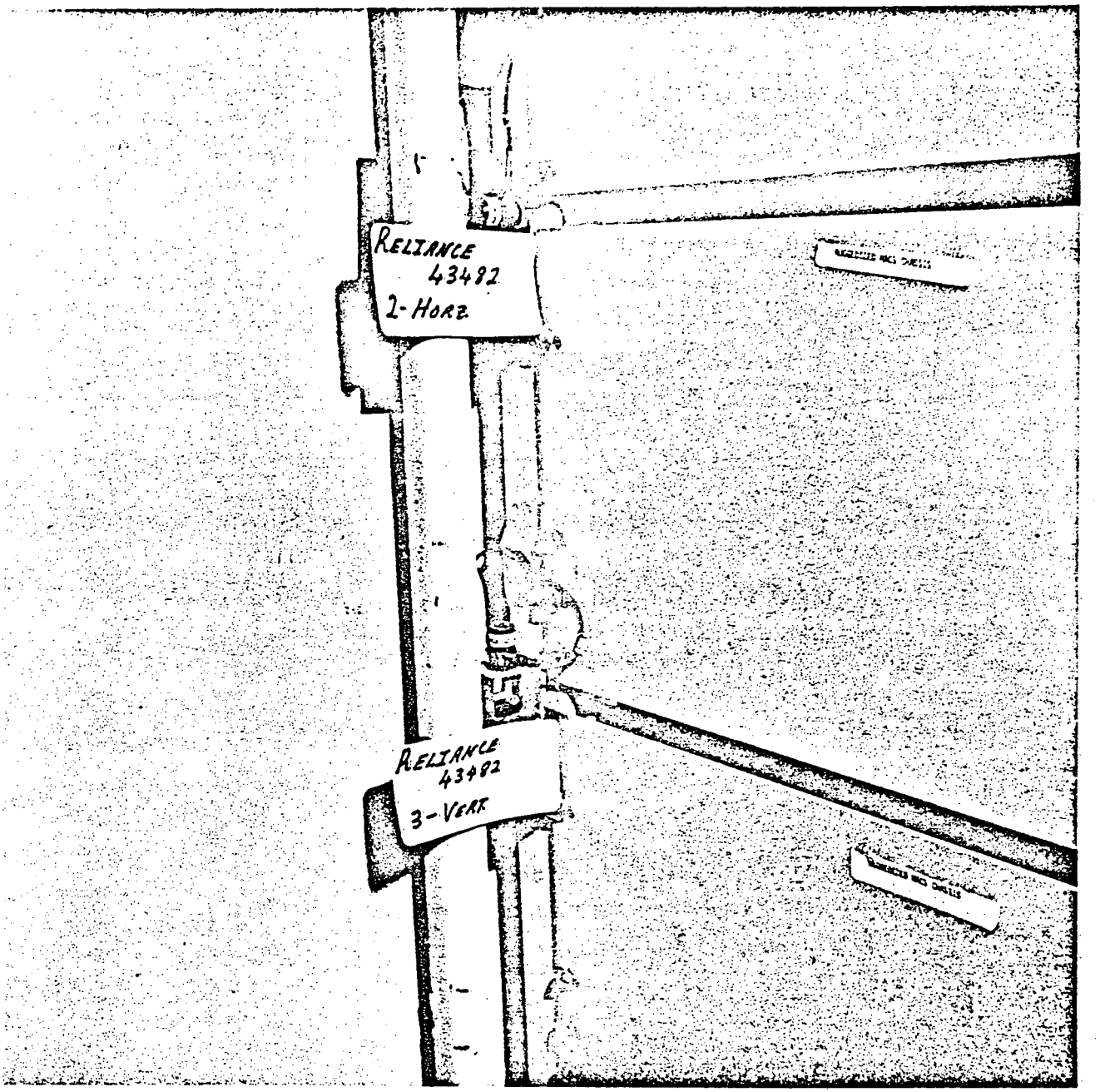
PHOTOGRAPH 2

GENERAL ARRANGEMENT OF THE AUXILIARY PROTECTIVE CABINET
FOR THE FRONT-TO-BACK AND VERTICAL AXIS
TESTING ON THE SEISMIC SIMULATOR



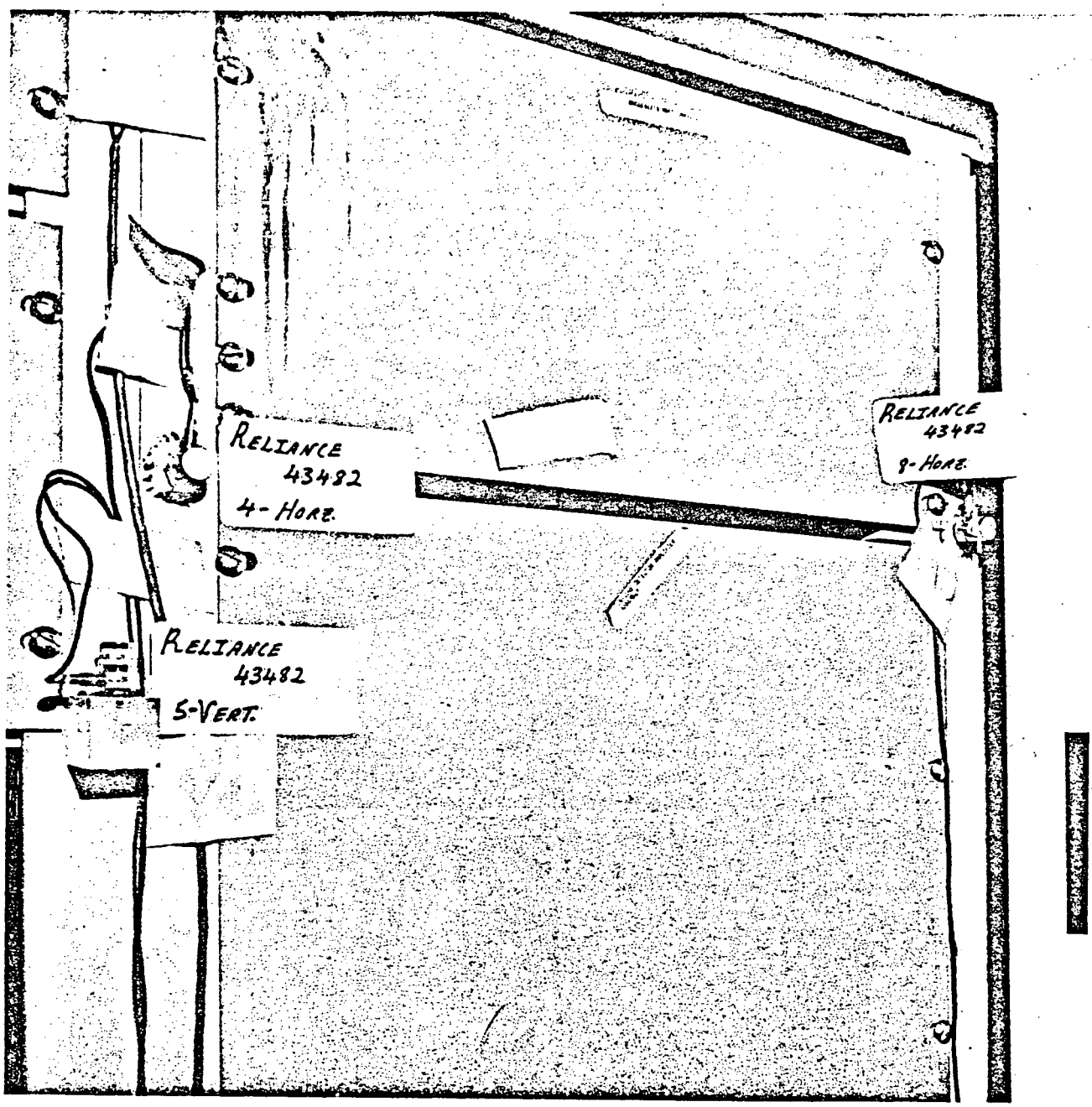
PHOTOGRAPH 3

LOCATION OF ACCELEROMETER 1H



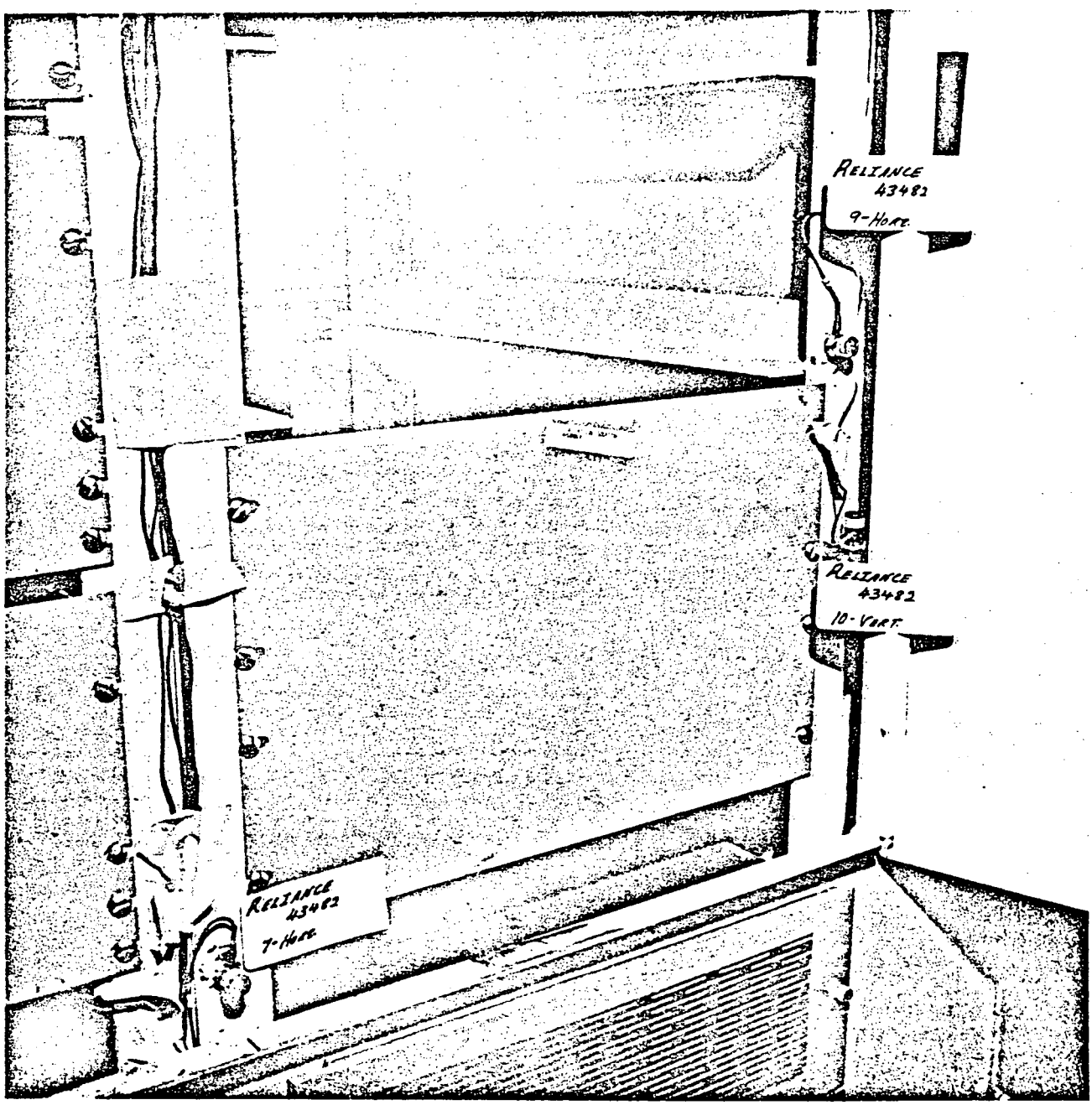
PHOTOGRAPH 4

LOCATION OF ACCELEROMETERS 2H AND 3V



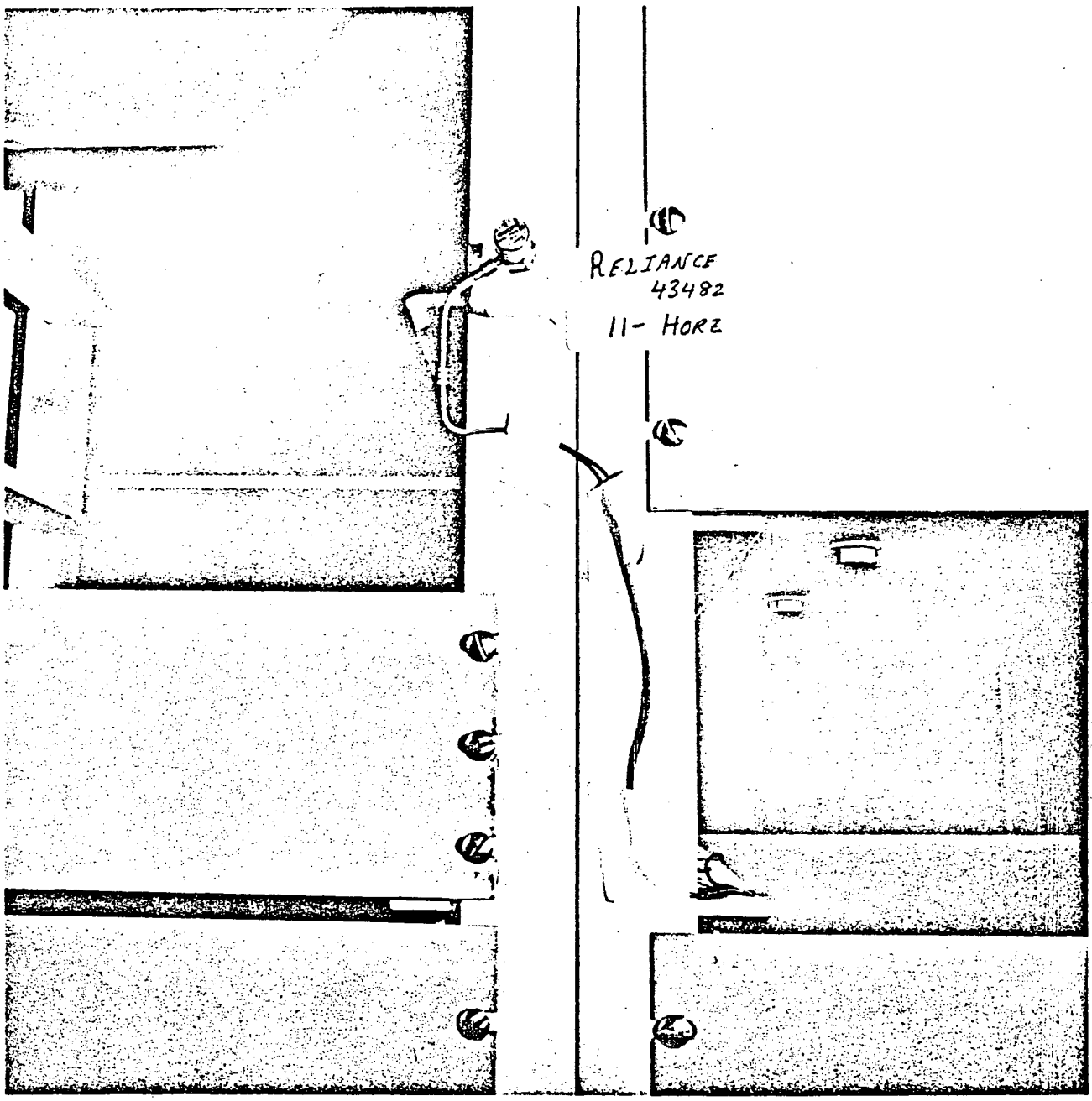
PHOTOGRAPH 5

LOCATION OF ACCELEROMETERS 4H, 5V AND 8H



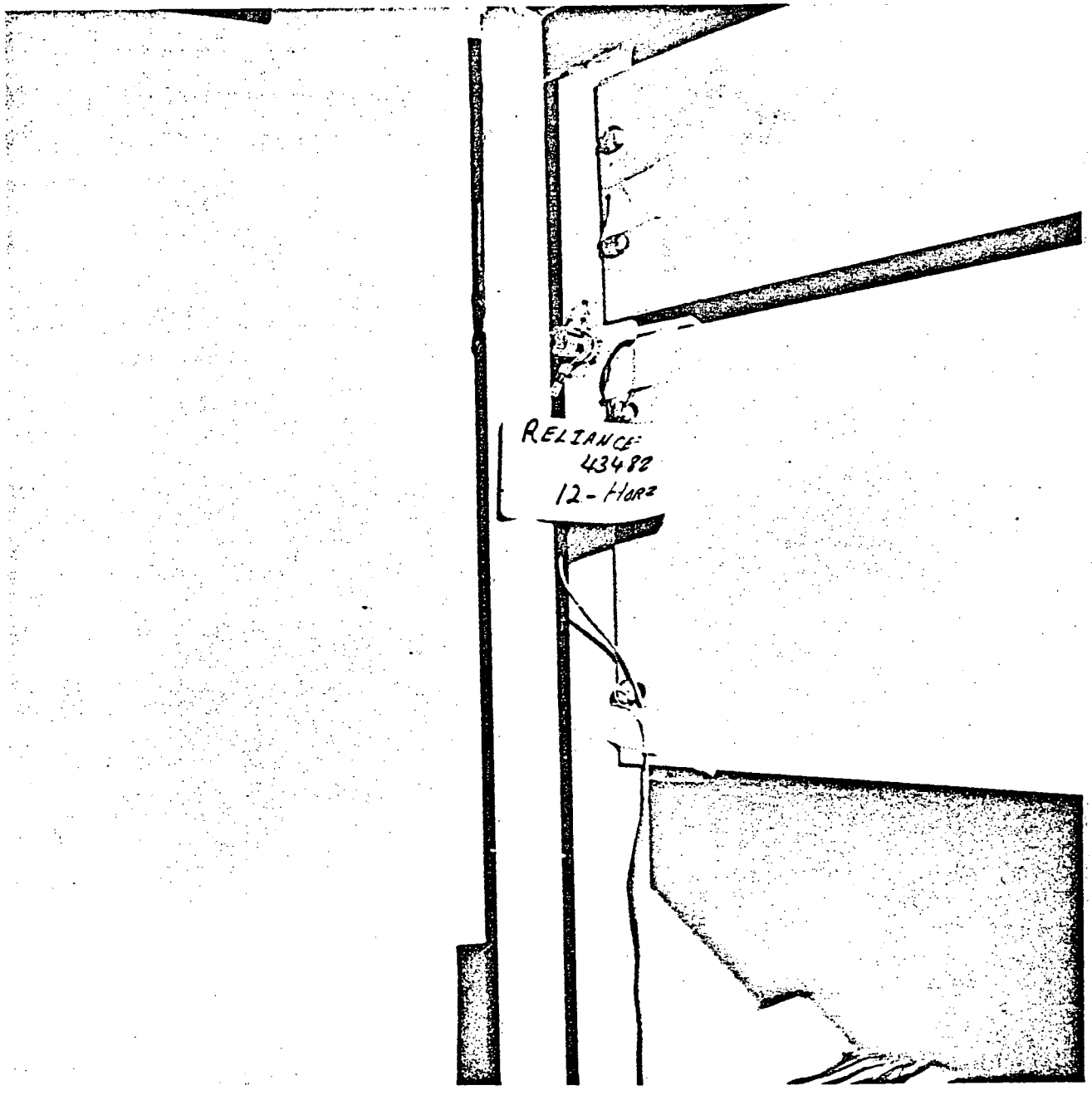
PHOTOGRAPH 6

LOCATION OF ACCELEROMETERS 7H, 9H AND 10V



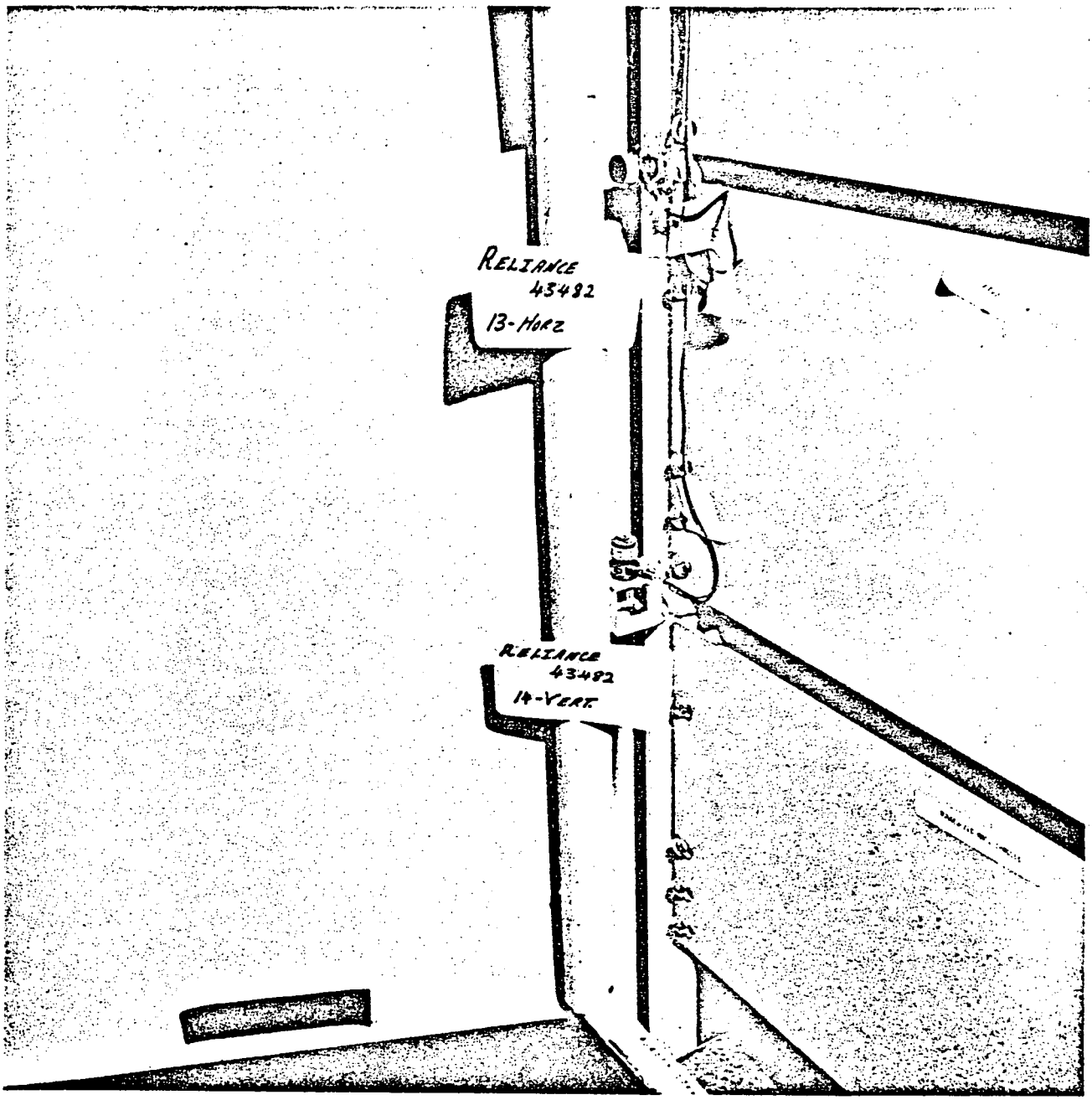
PHOTOGRAPH 7

LOCATION OF ACCELEROMETER 11H



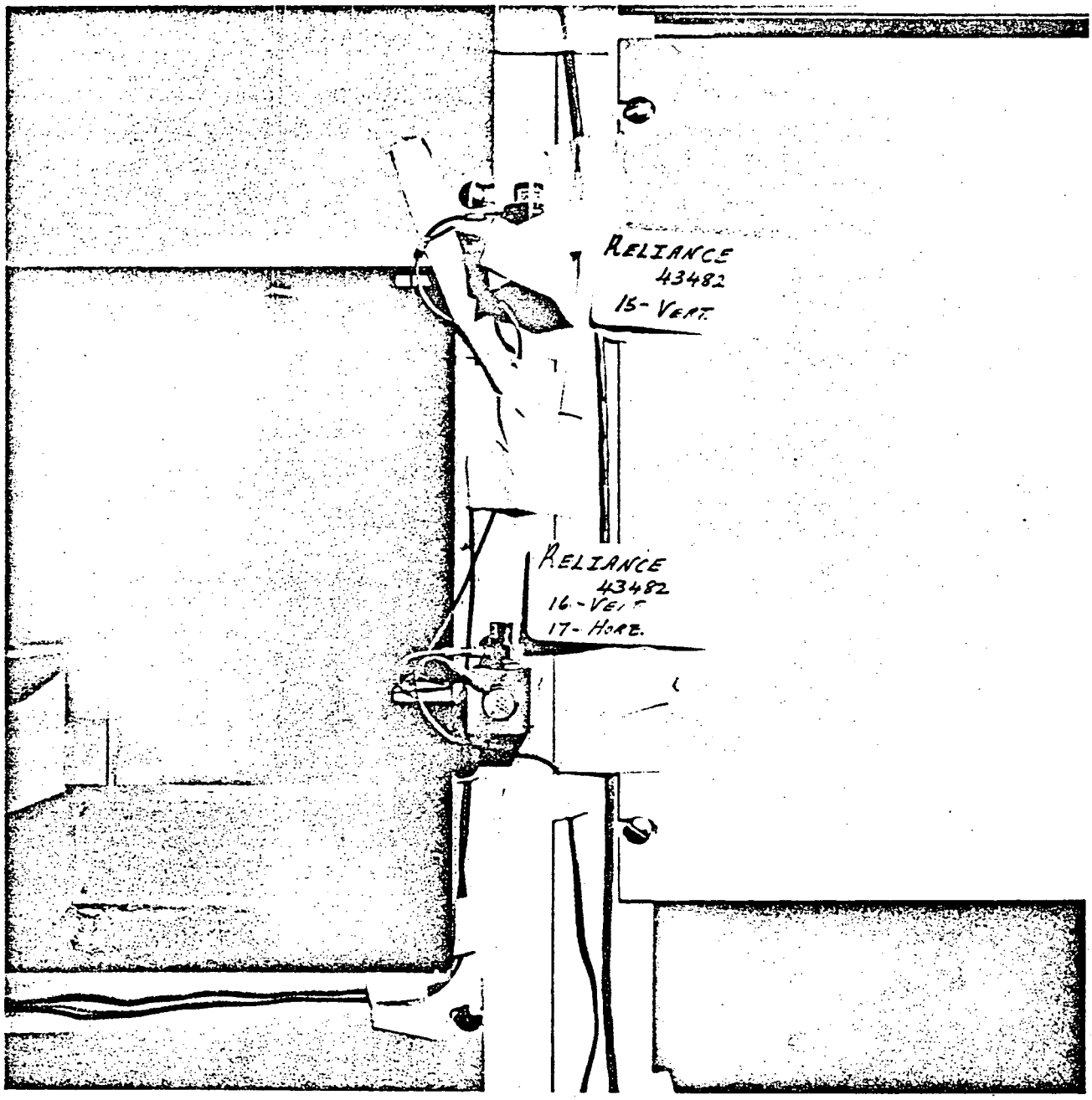
PHOTOGRAPH 8

LOCATION OF ACCELEROMETER 12H



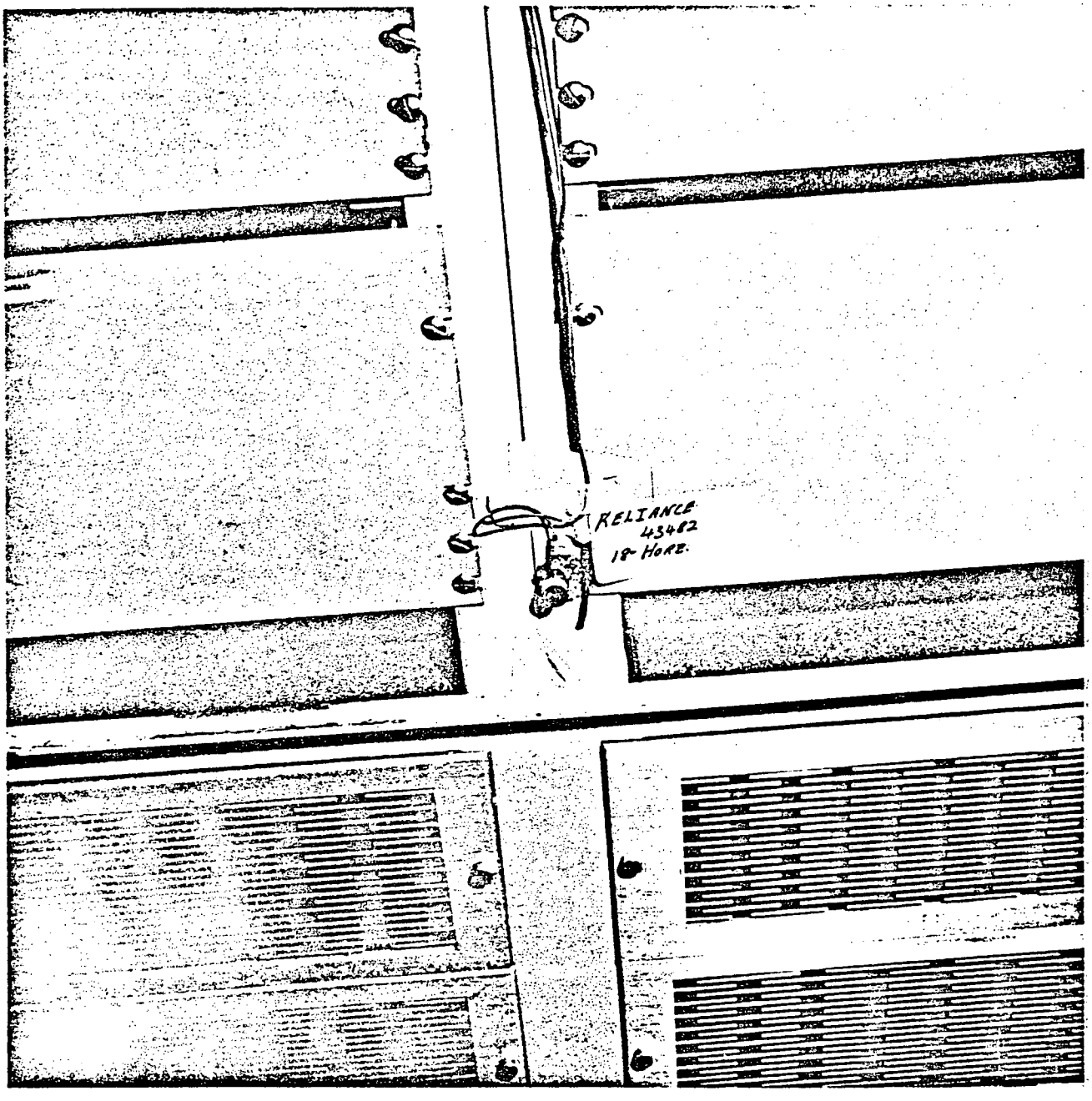
PHOTOGRAPH 9

LOCATION OF ACCELEROMETER 13H AND 14V



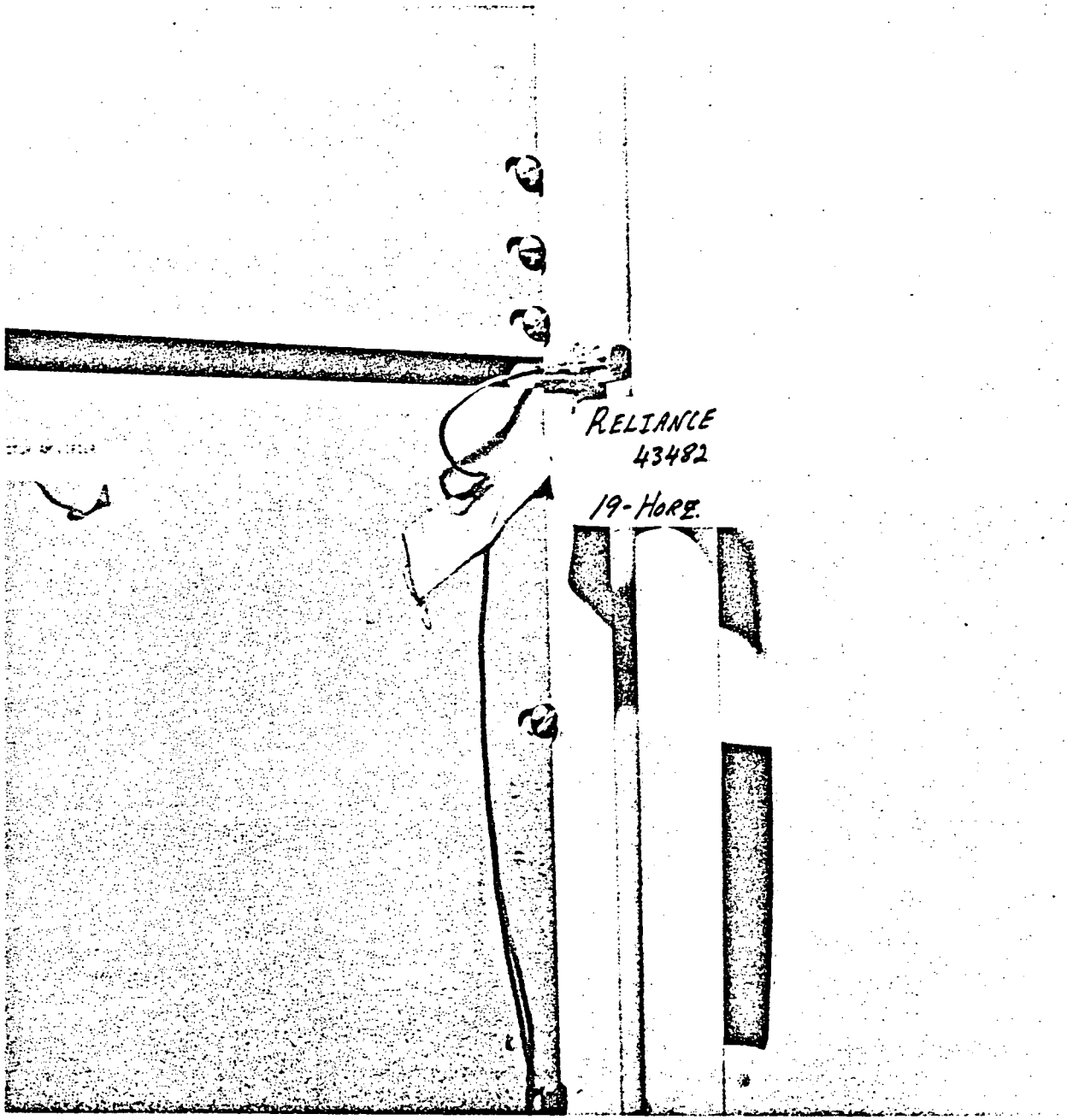
PHOTOGRAPH 10

LOCATION OF ACCELEROMETERS 15V, 16V AND 17H



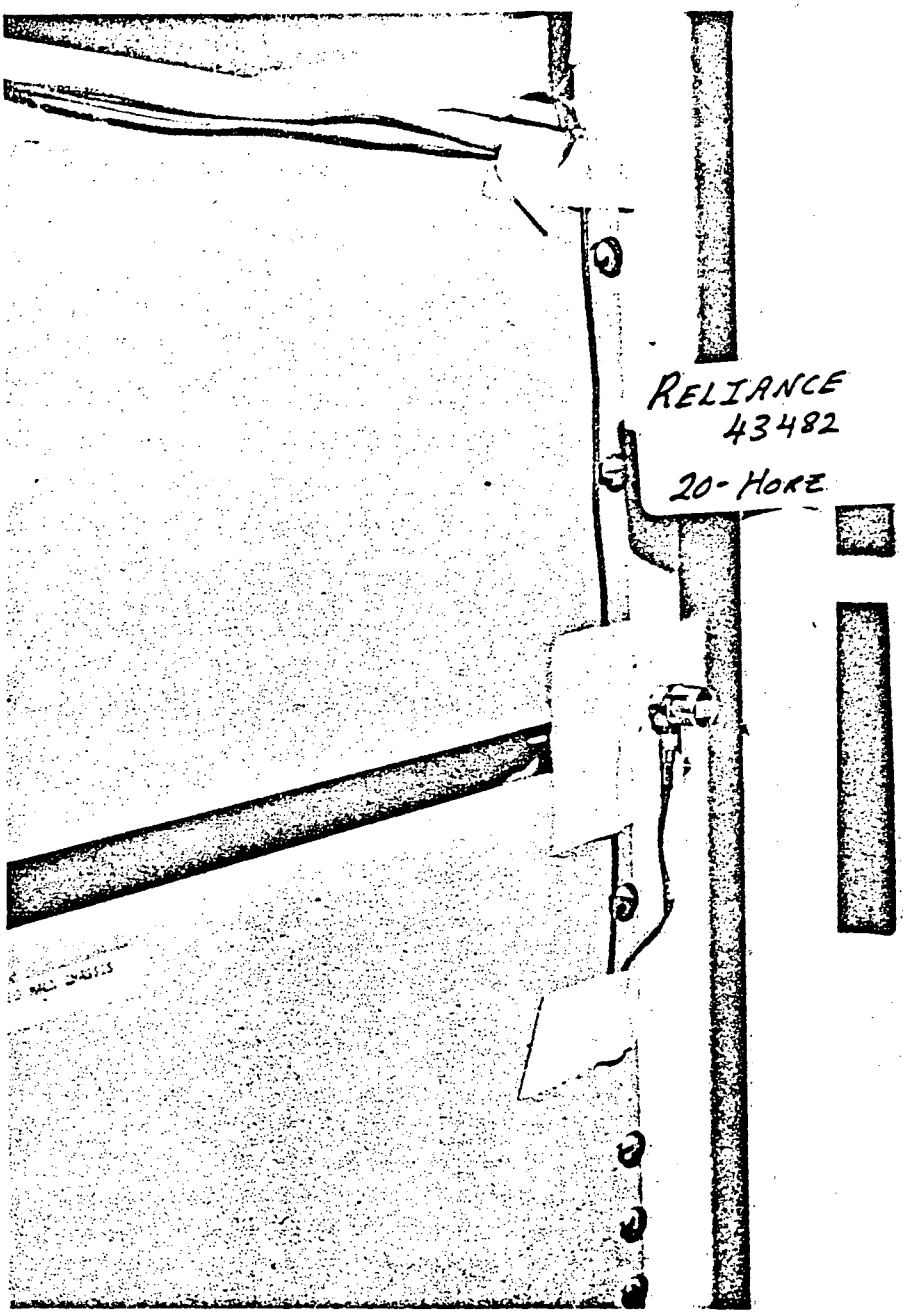
PHOTOGRAPH 11

LOCATION OF ACCELEROMETER 18H



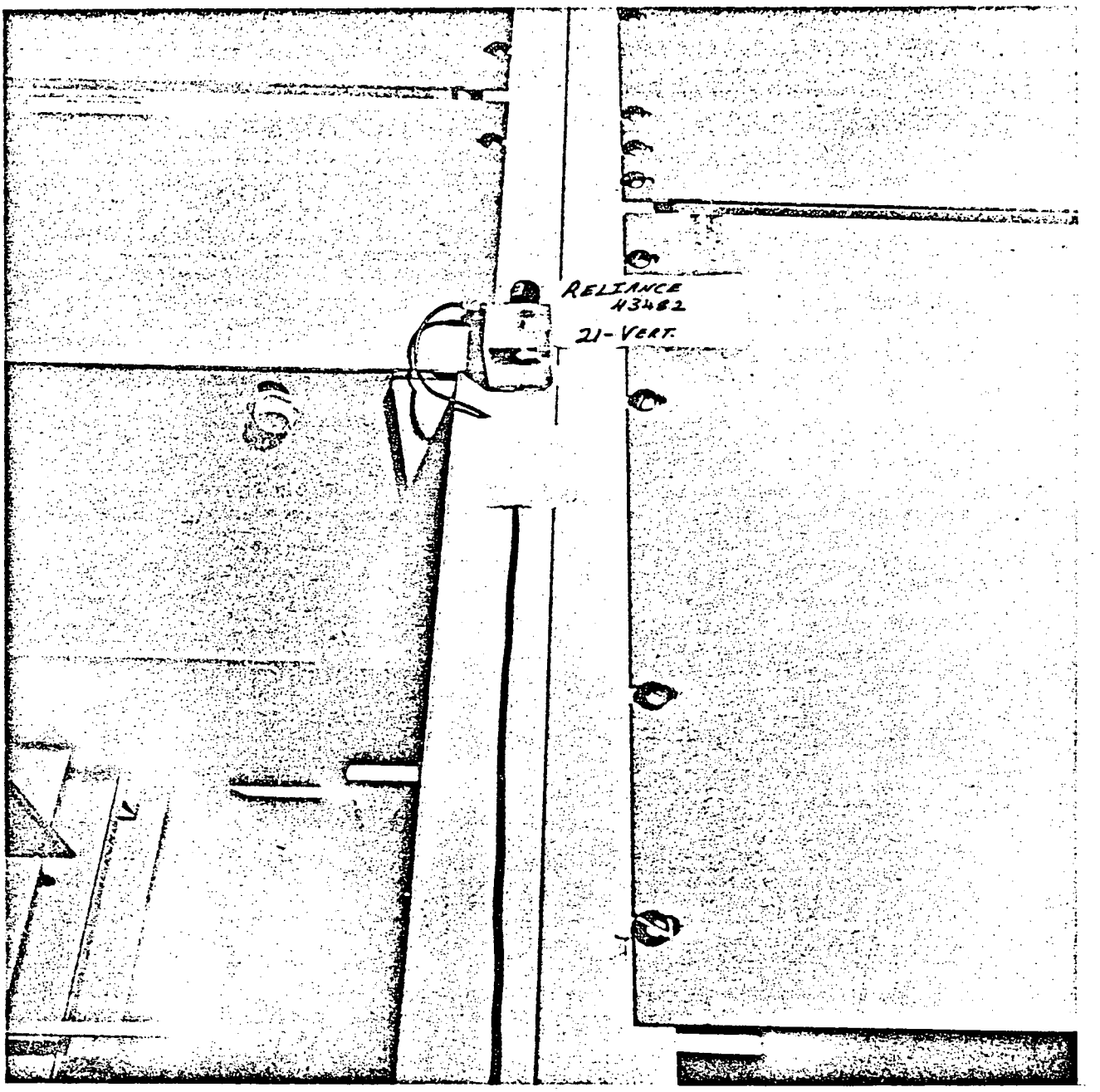
PHOTOGRAPH 12

LOCATION OF ACCELEROMETER 19H



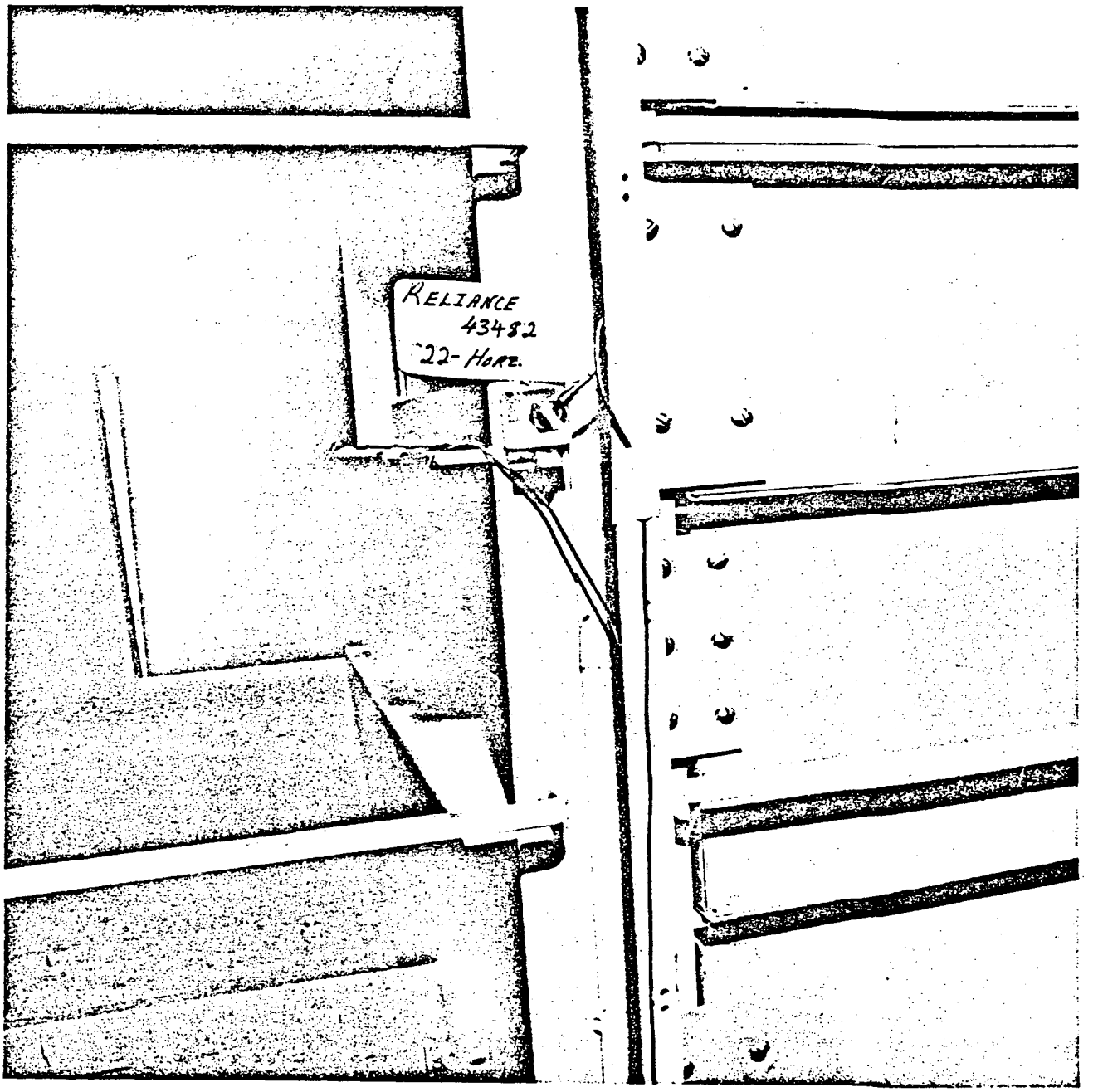
PHOTOGRAPH 13

LOCATION OF ACCELEROMETER 20H



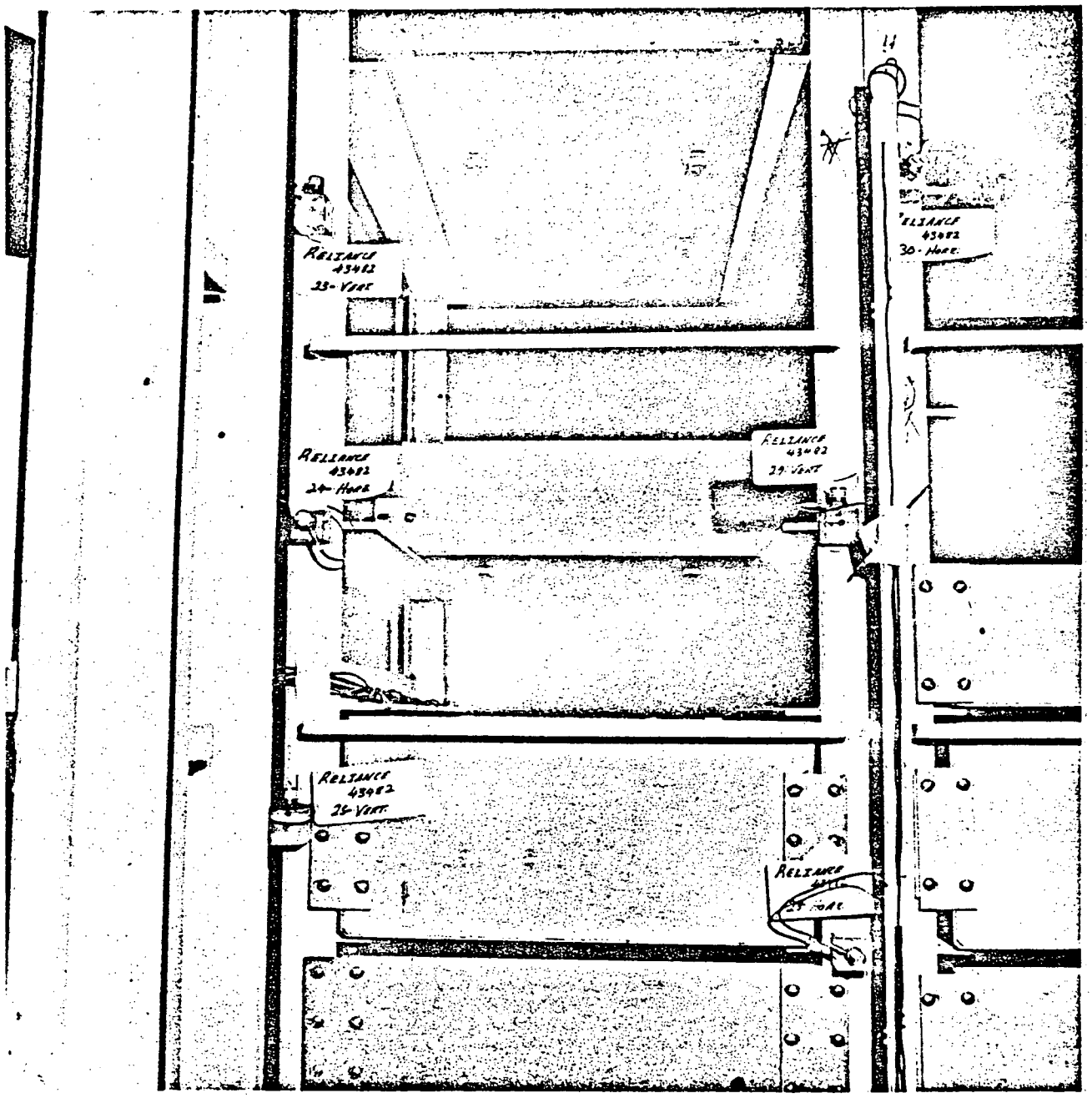
PHOTOGRAPH 14

LOCATION OF ACCELEROMETER 21V



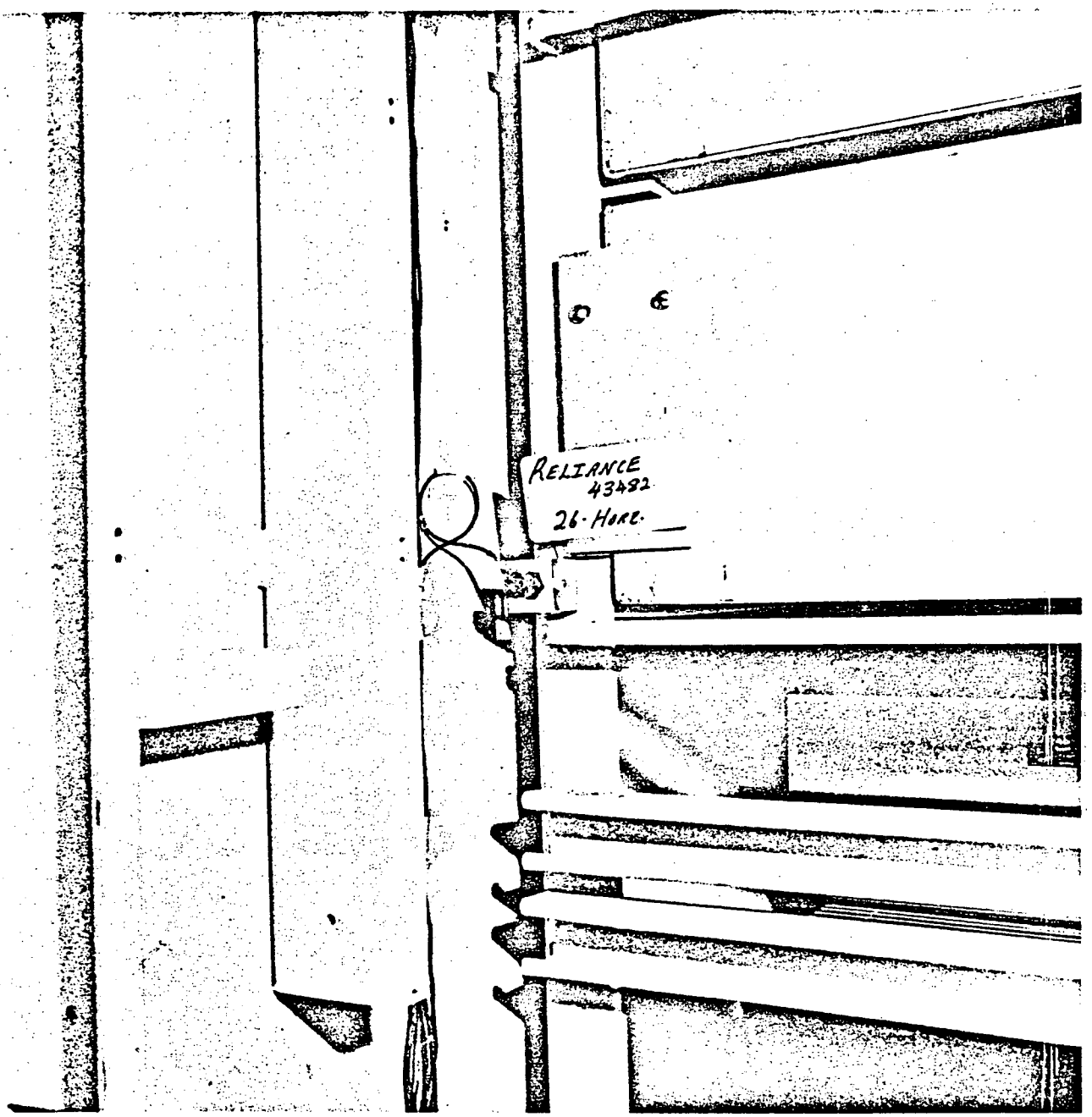
PHOTOGRAPH 15

LOCATION OF ACCELEROMETER 22H



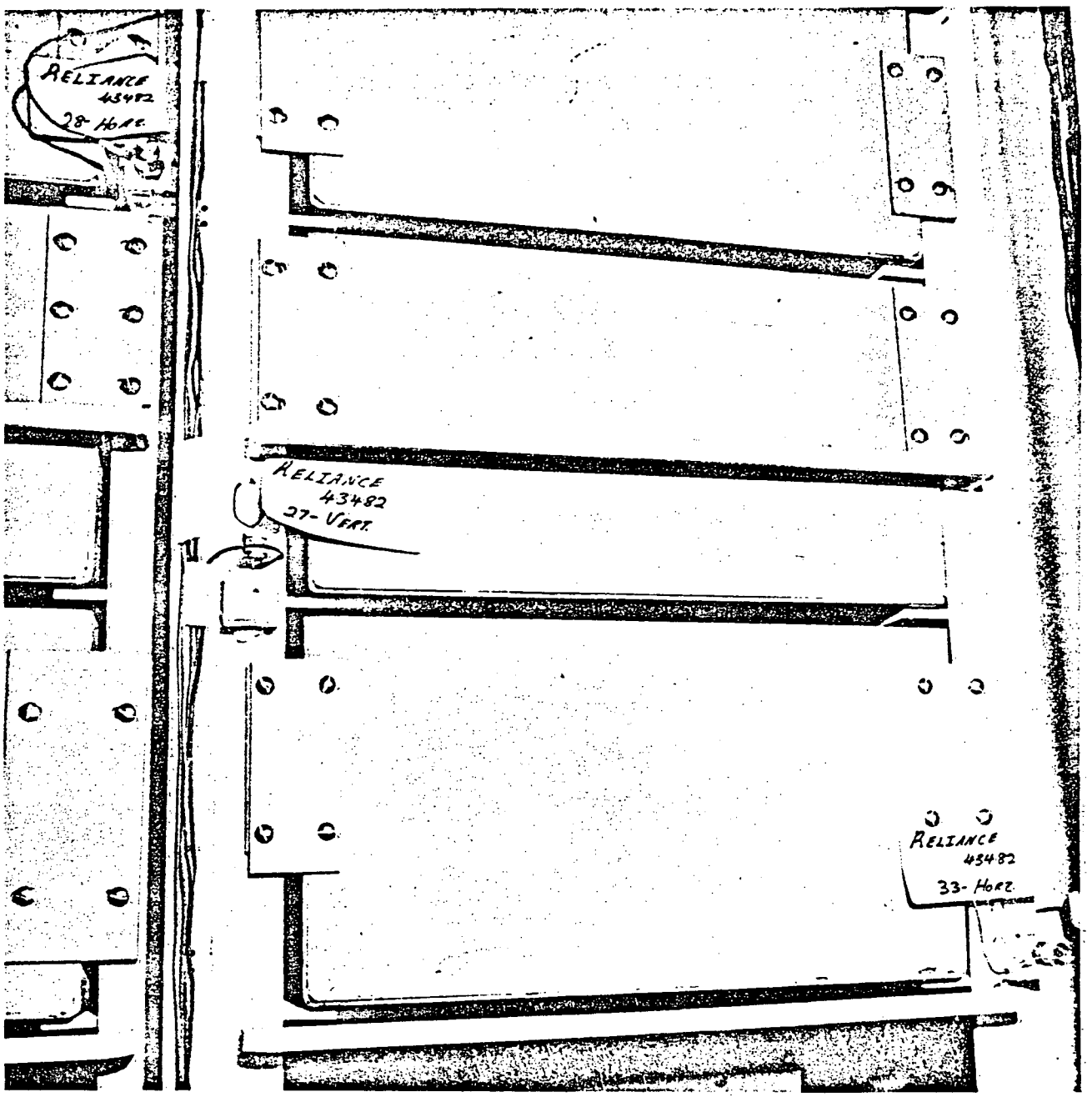
PHOTOGRAPH 16

LOCATION OF ACCELEROMETERS 23V,
24H, 25V, 28H, 29V AND 30H



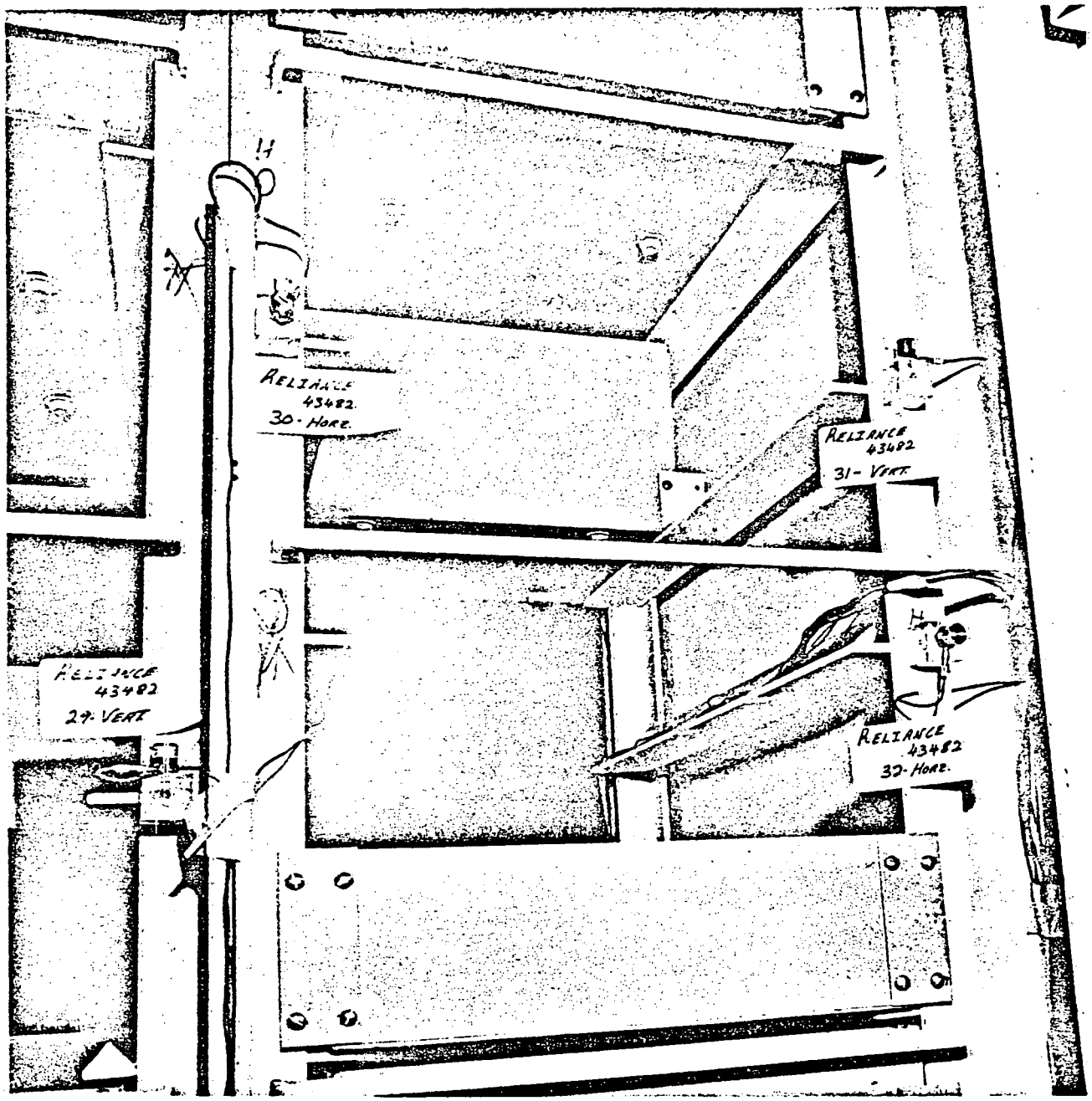
PHOTOGRAPH 17

LOCATION OF ACCELEROMETER 26H



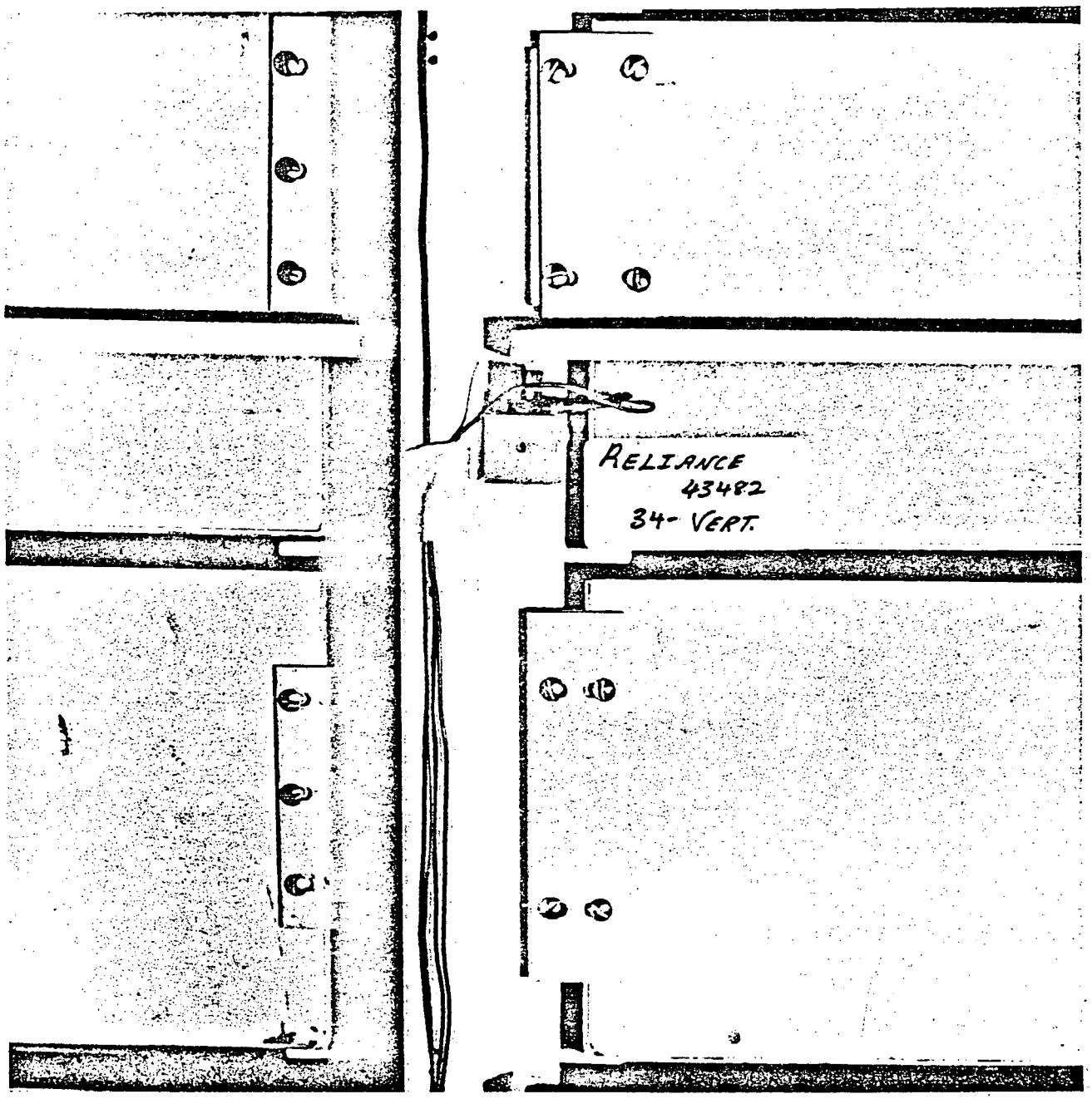
PHOTOGRAPH 18

LOCATION OF ACCELEROMETERS 27V, 28H AND 33H



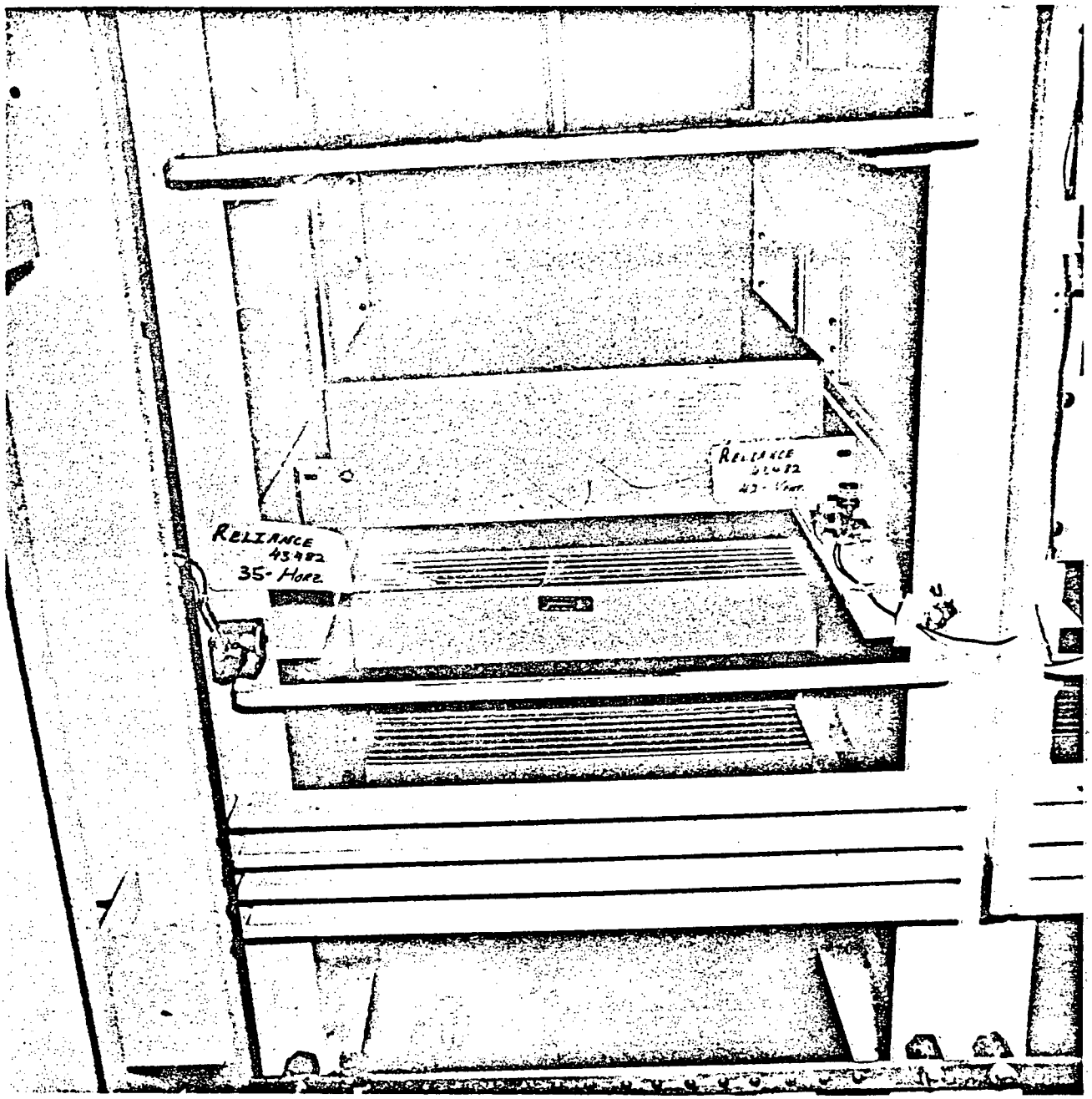
PHOTOGRAPH 19

LOCATION OF ACCELEROMETERS 29V, 30H, 31V AND 32H



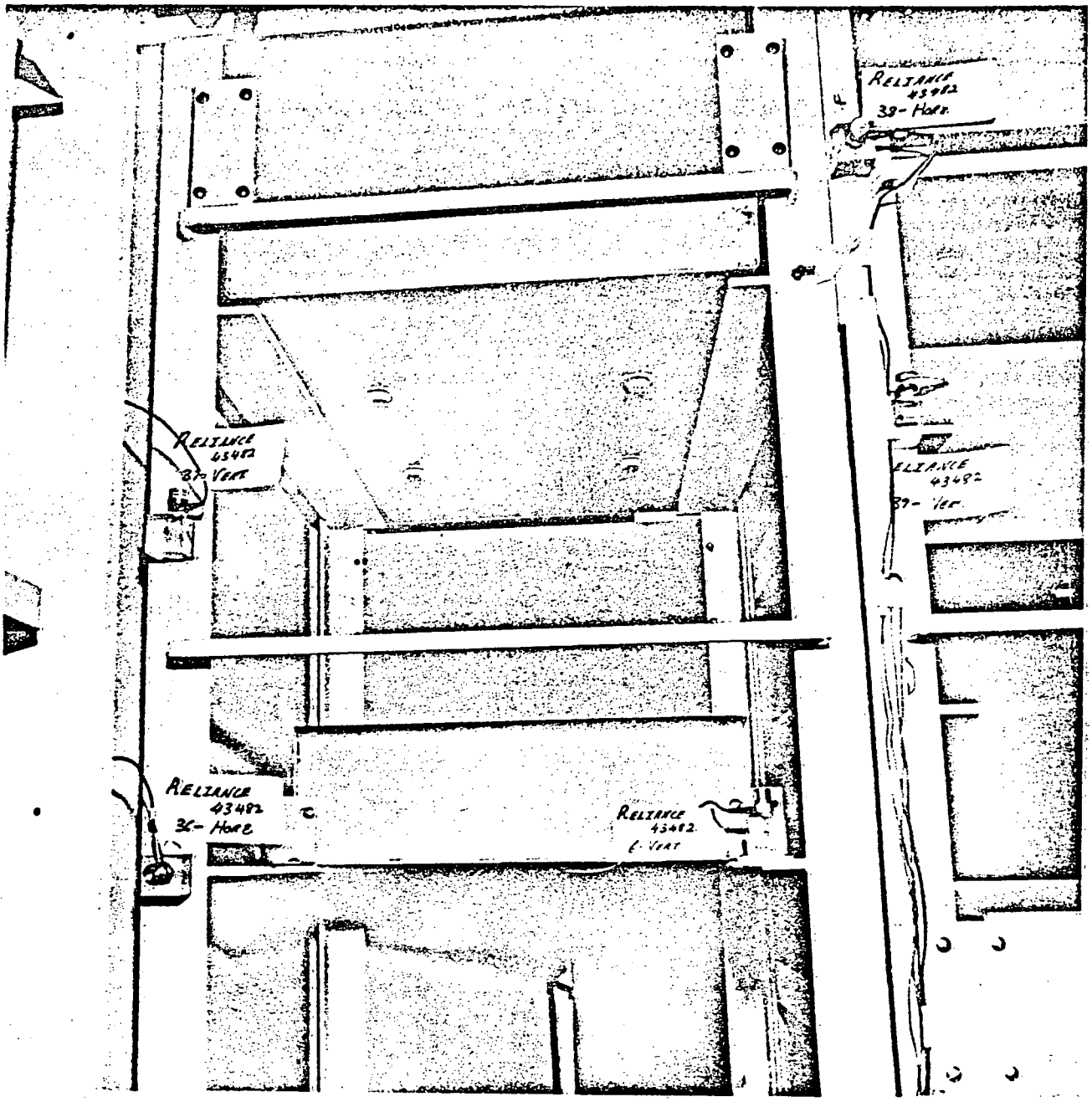
PHOTOGRAPH 20

LOCATION OF ACCELEROMETER 34V



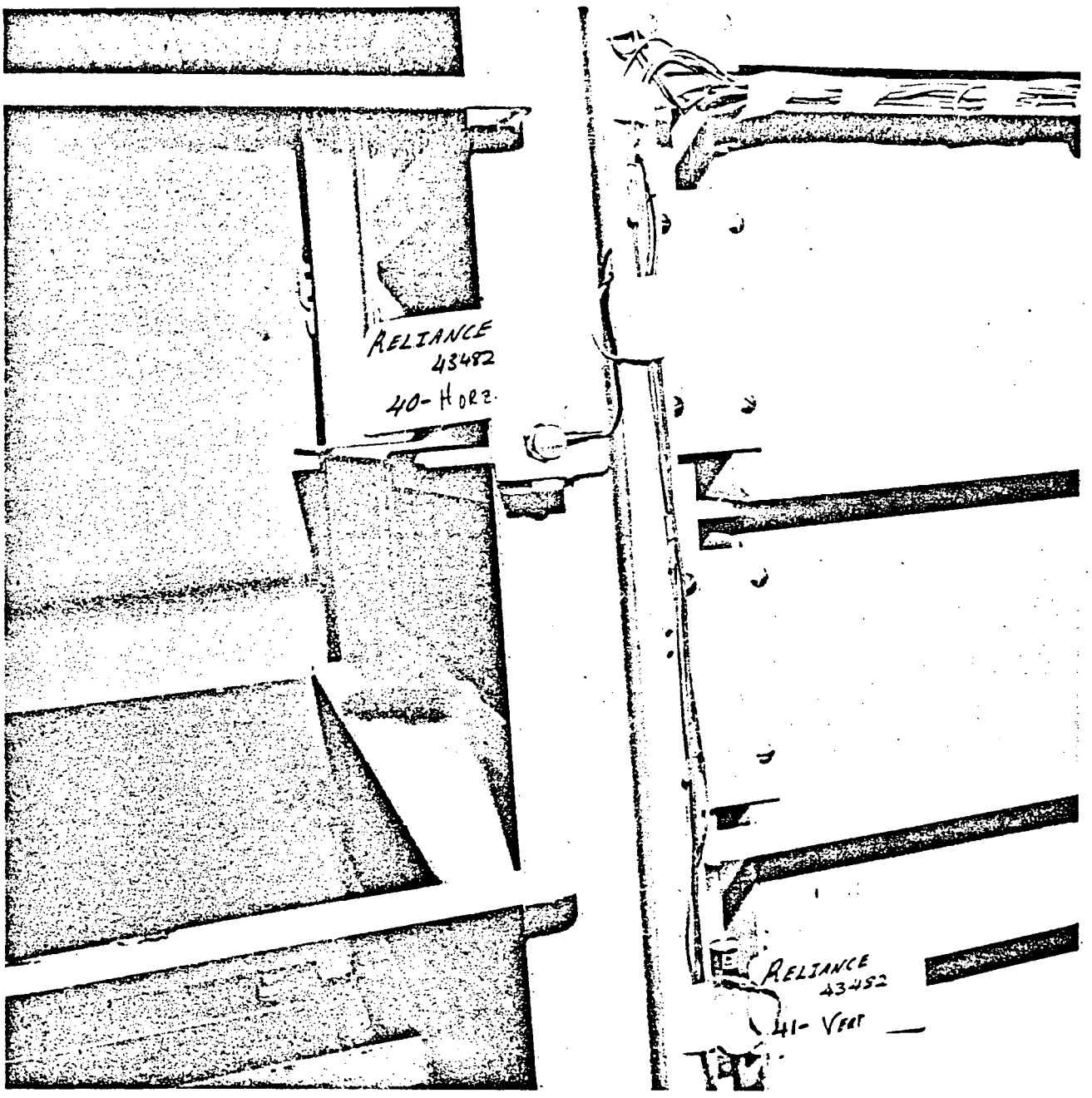
PHOTOGRAPH 21

LOCATION OF ACCELEROMETERS 35H AND 42V



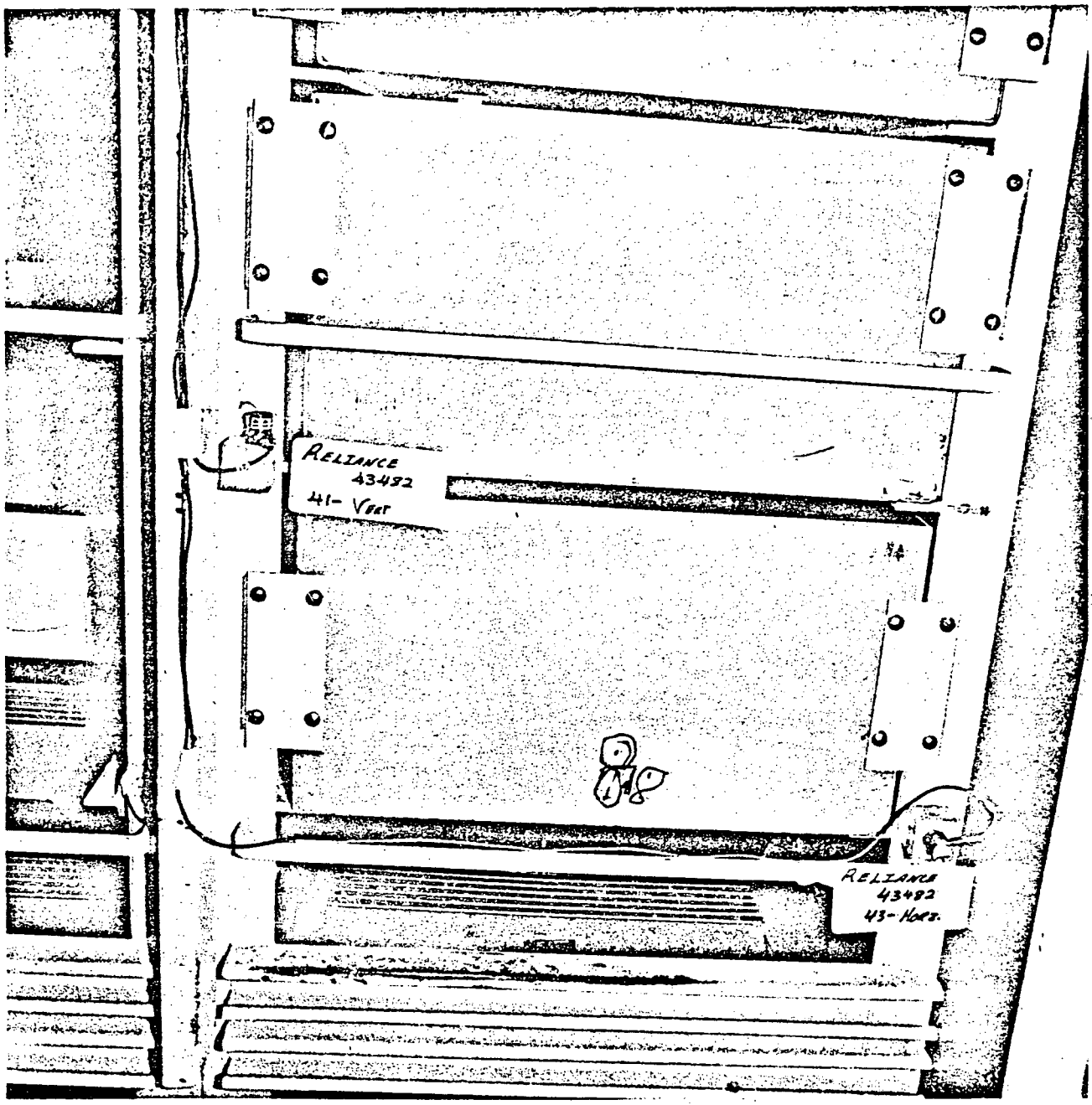
PHOTOGRAPH 22

LOCATION OF ACCELEROMETERS 6V, 36H, 37V, 38H AND 39V



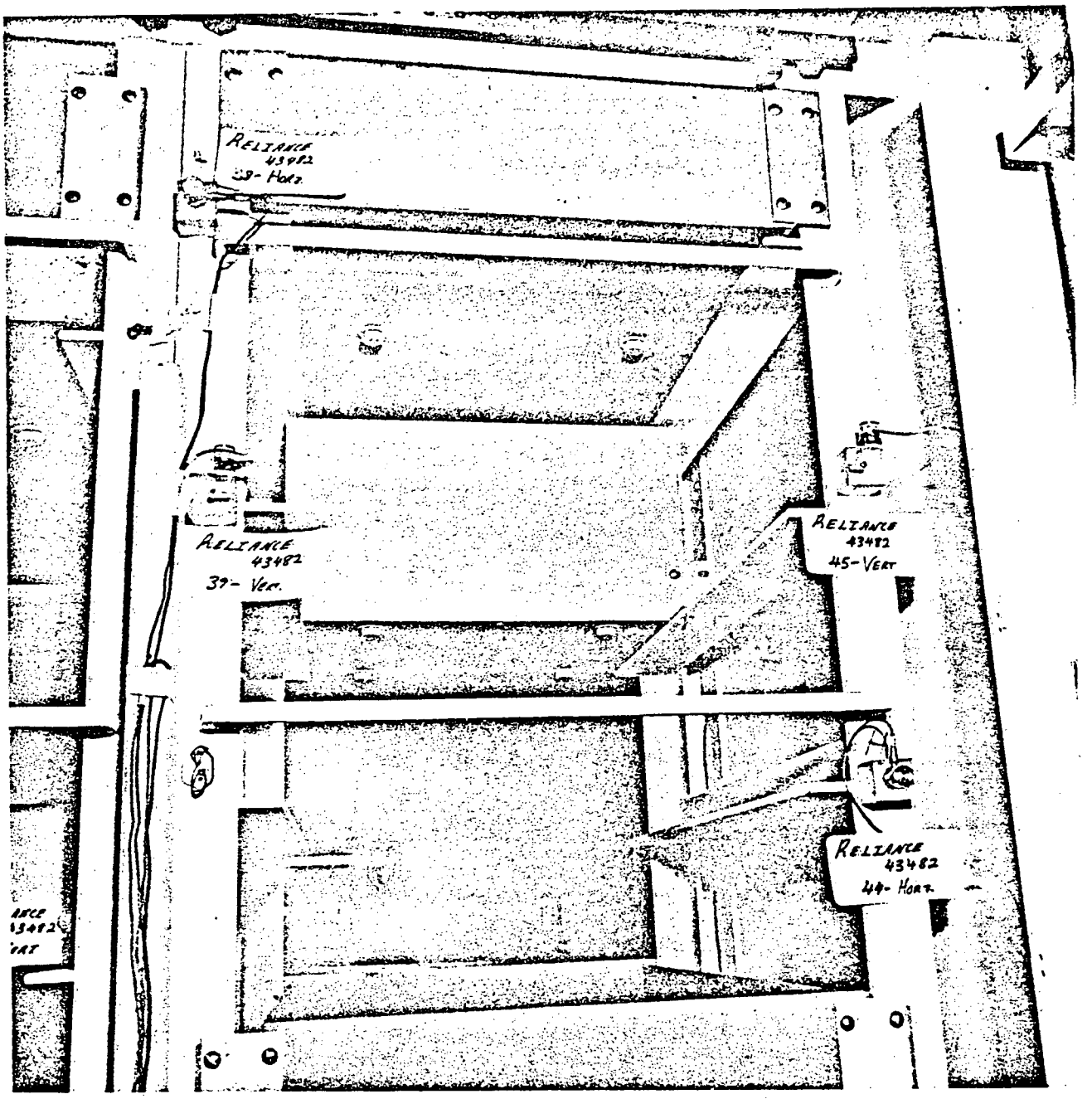
PHOTOGRAPH 23

LOCATION OF ACCELEROMETER 40H AND 41V



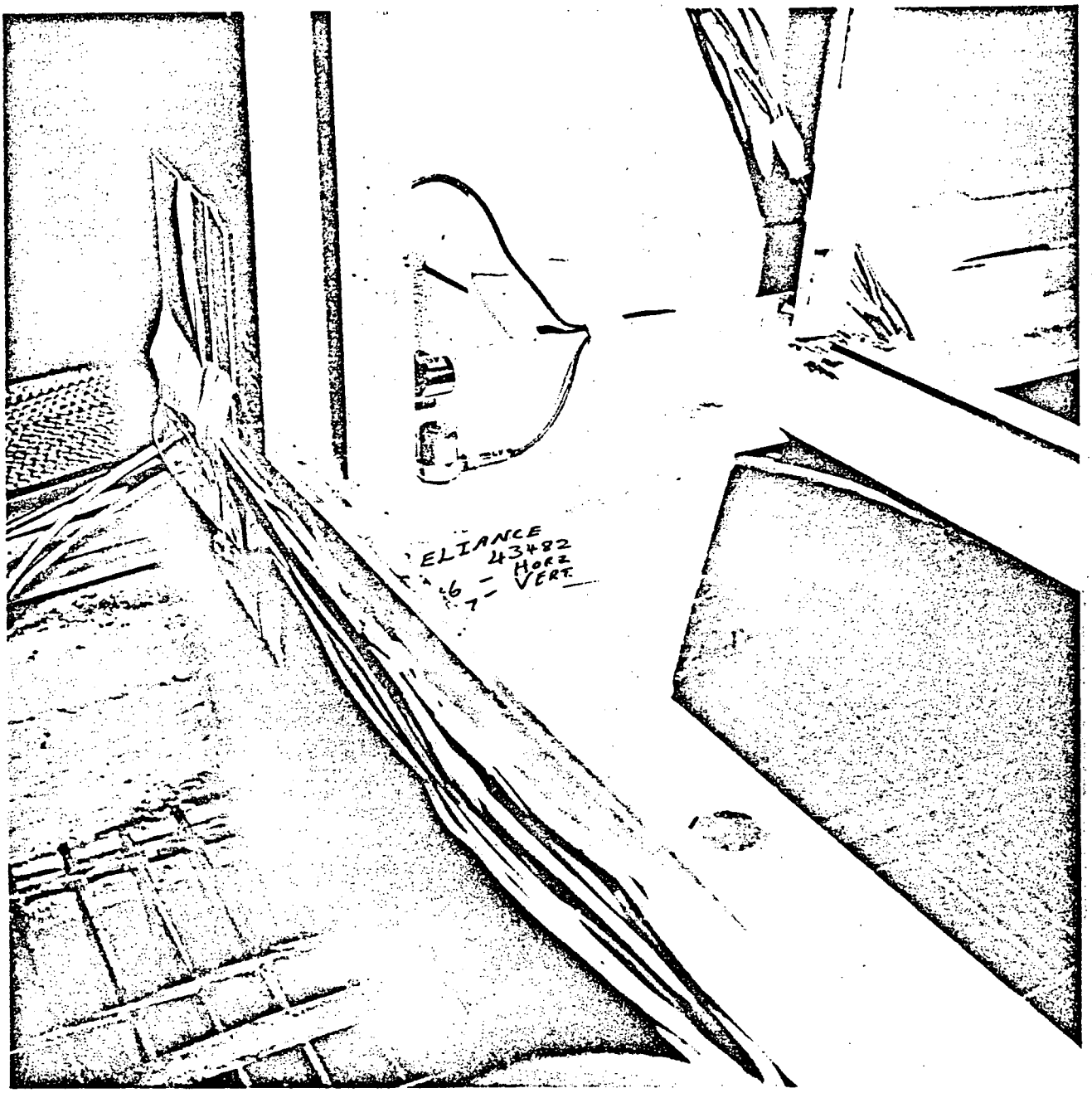
PHOTOGRAPH 24

LOCATION OF ACCELEROMETERS 41V AND 43H



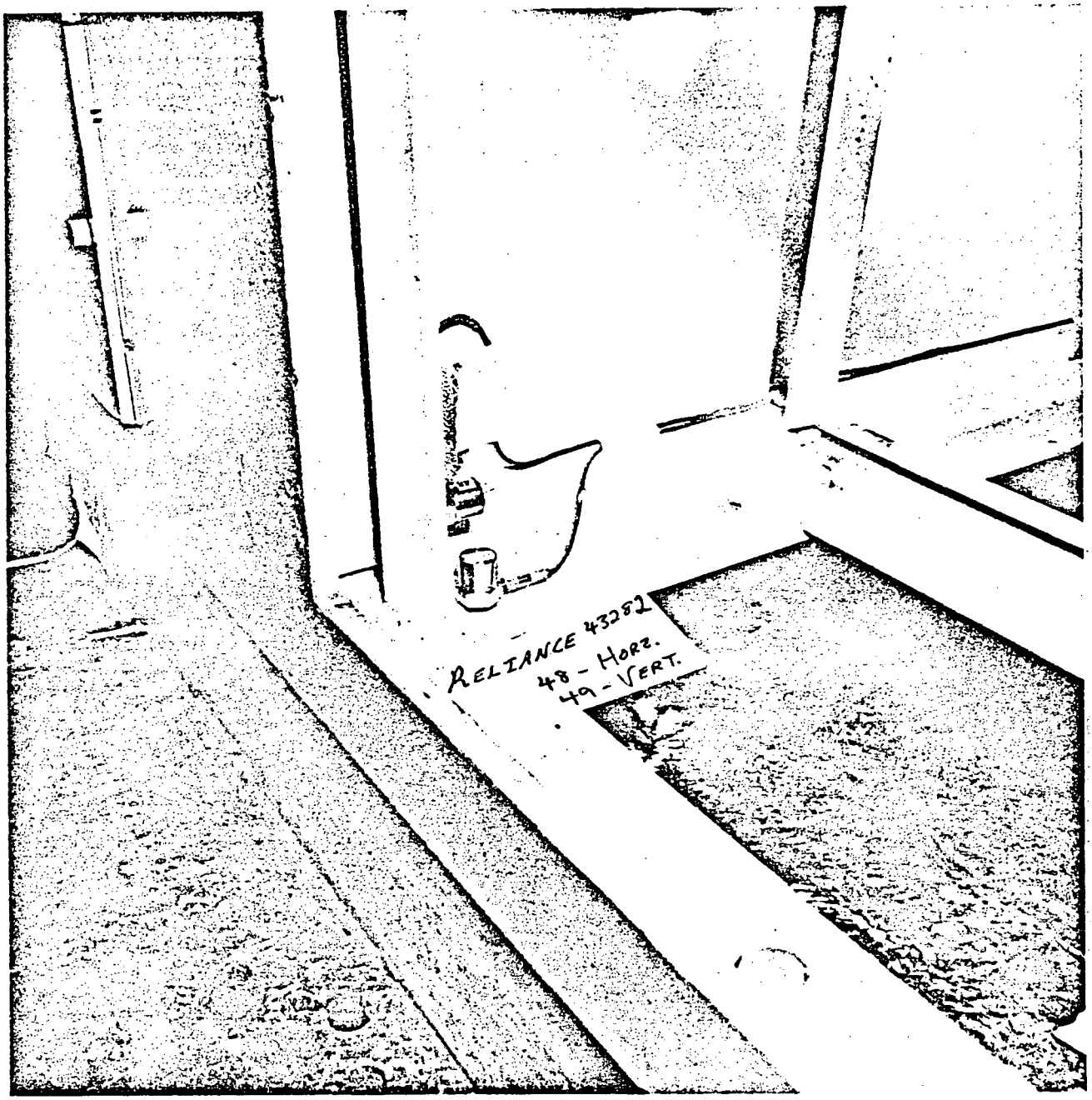
PHOTOGRAPH 25

LOCATION OF ACCELEROMETERS 38H, 39V, 44H AND 45V



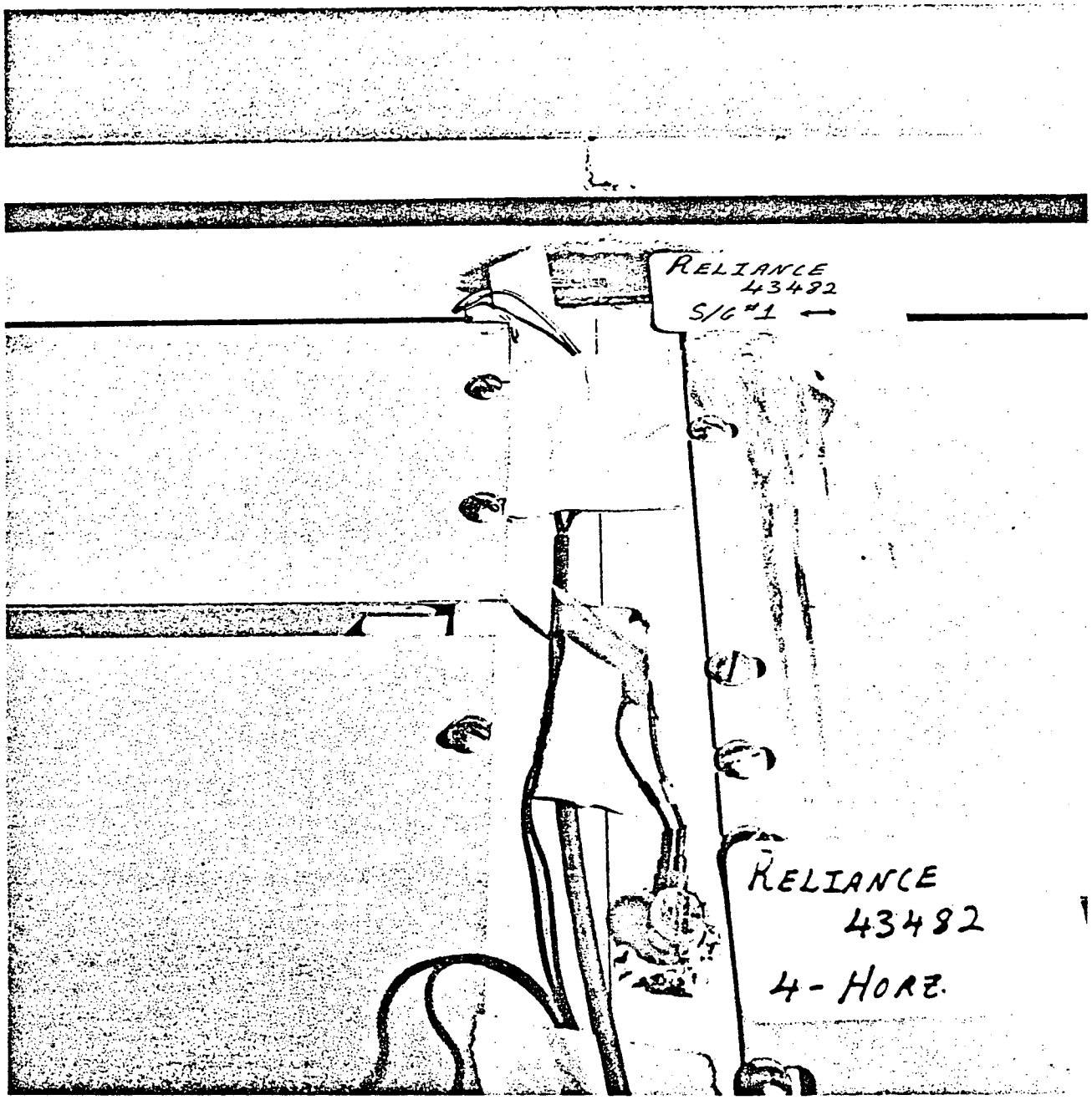
PHOTOGRAPH 26

LOCATION OF ACCELEROMETERS 46H AND 47V



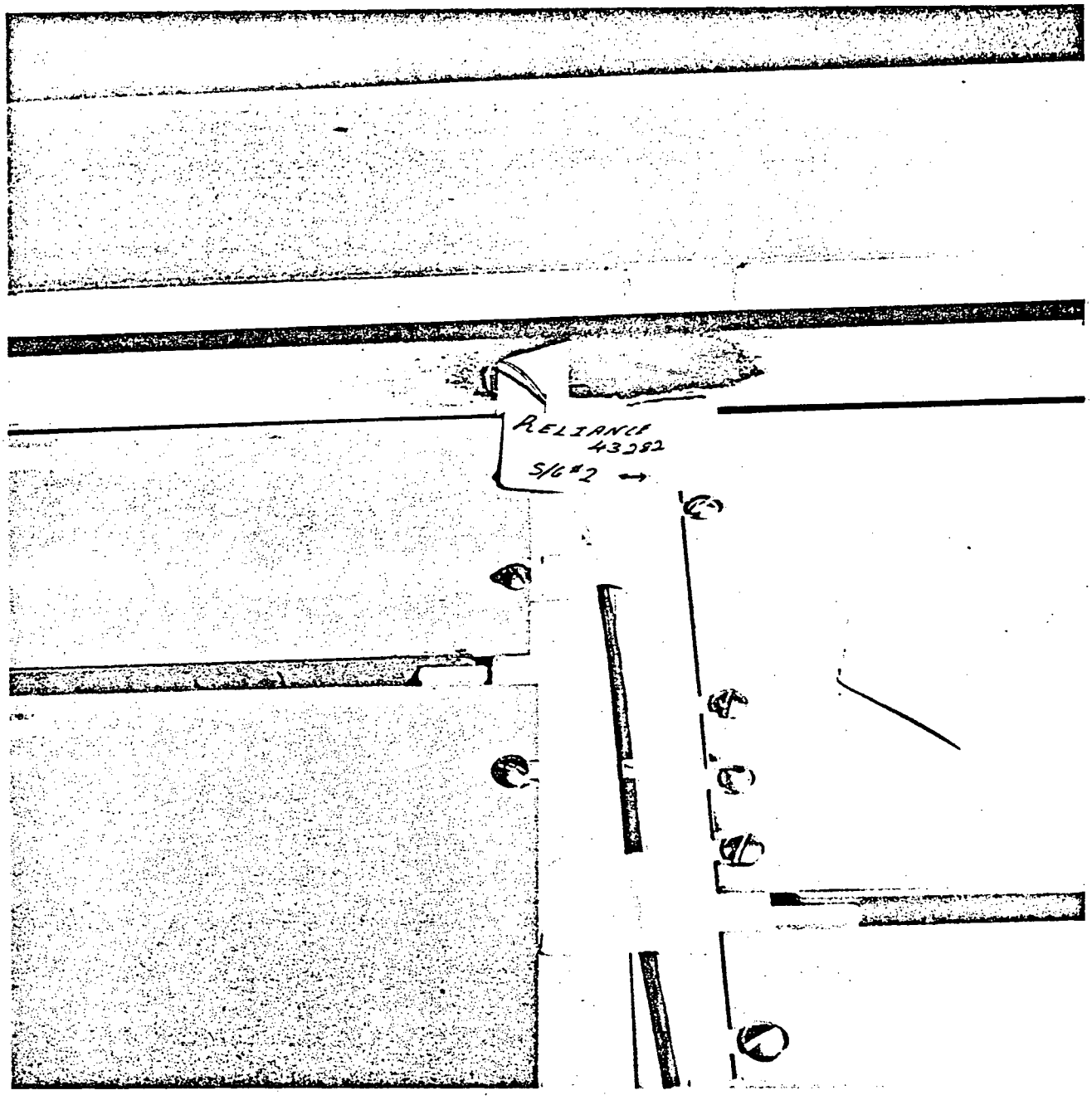
PHOTOGRAPH 27

LOCATION OF ACCELEROMETERS 48H AND 49V



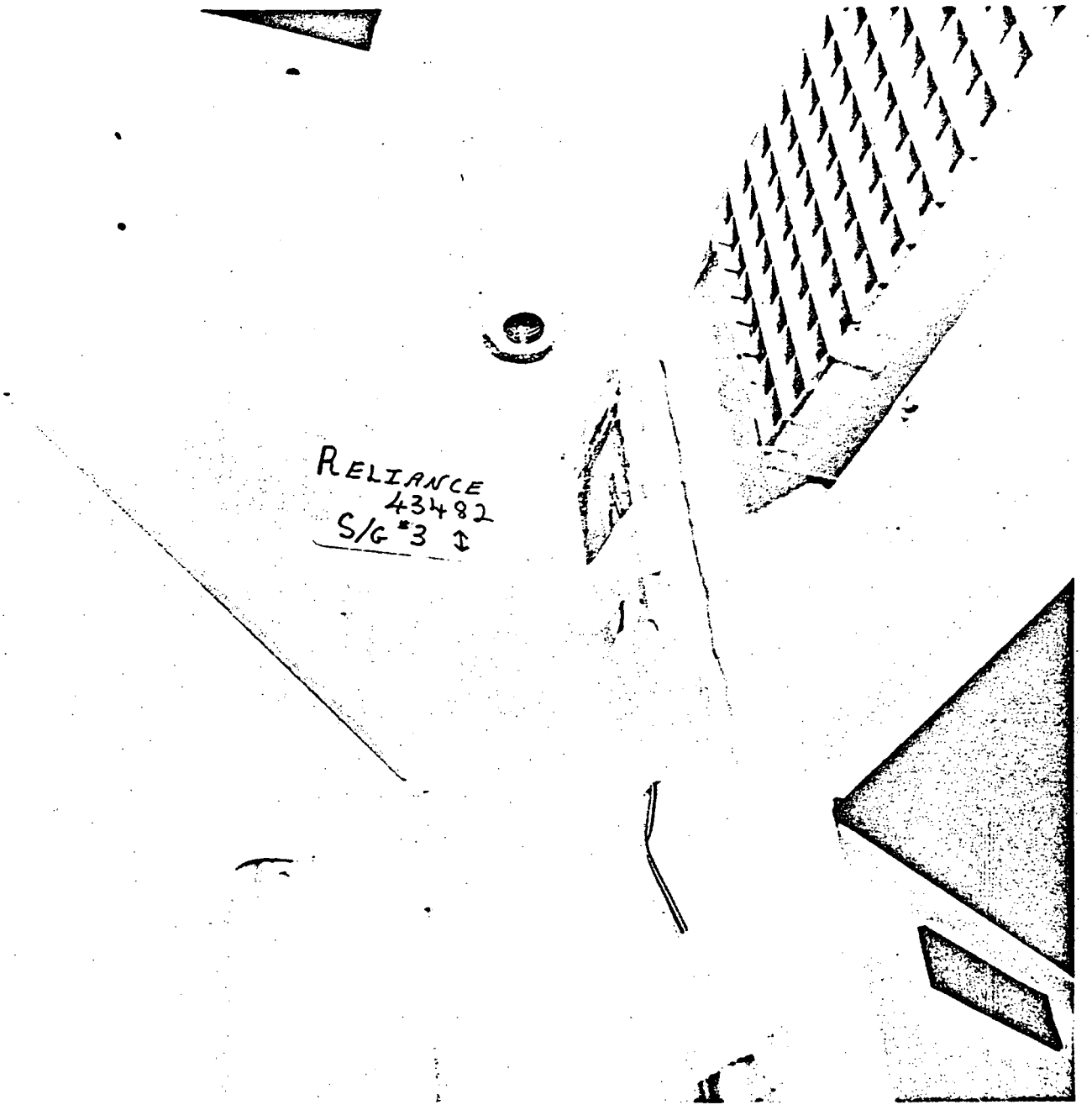
PHOTOGRAPH 28

LOCATION OF STRAIN GAGE NUMBER 1



PHOTOGRAPH 29

LOCATION OF STRAIN GAGE NUMBER 2

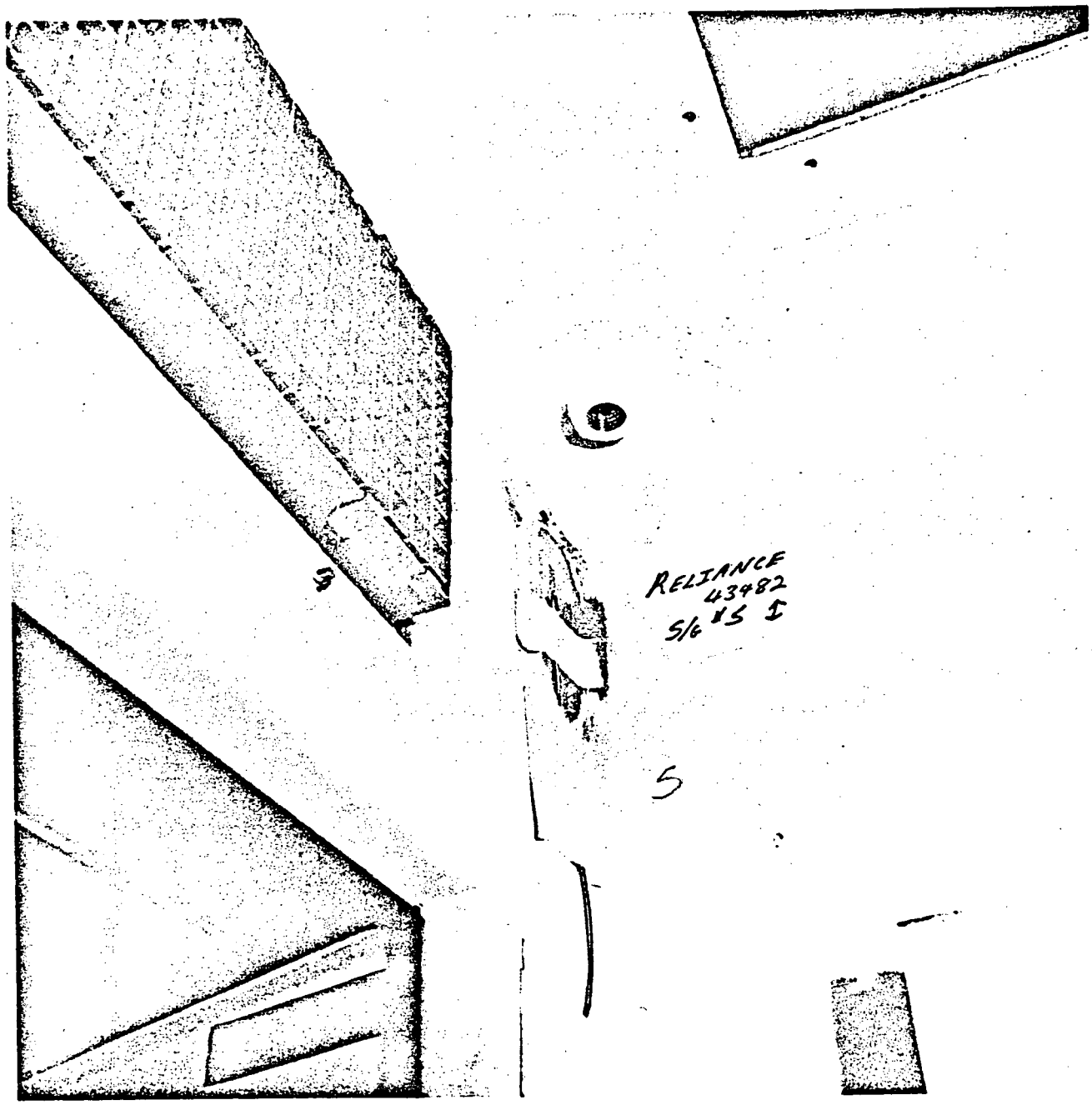


PHOTOGRAPH 30

LOCATION OF STRAIN GAGE NUMBER 3

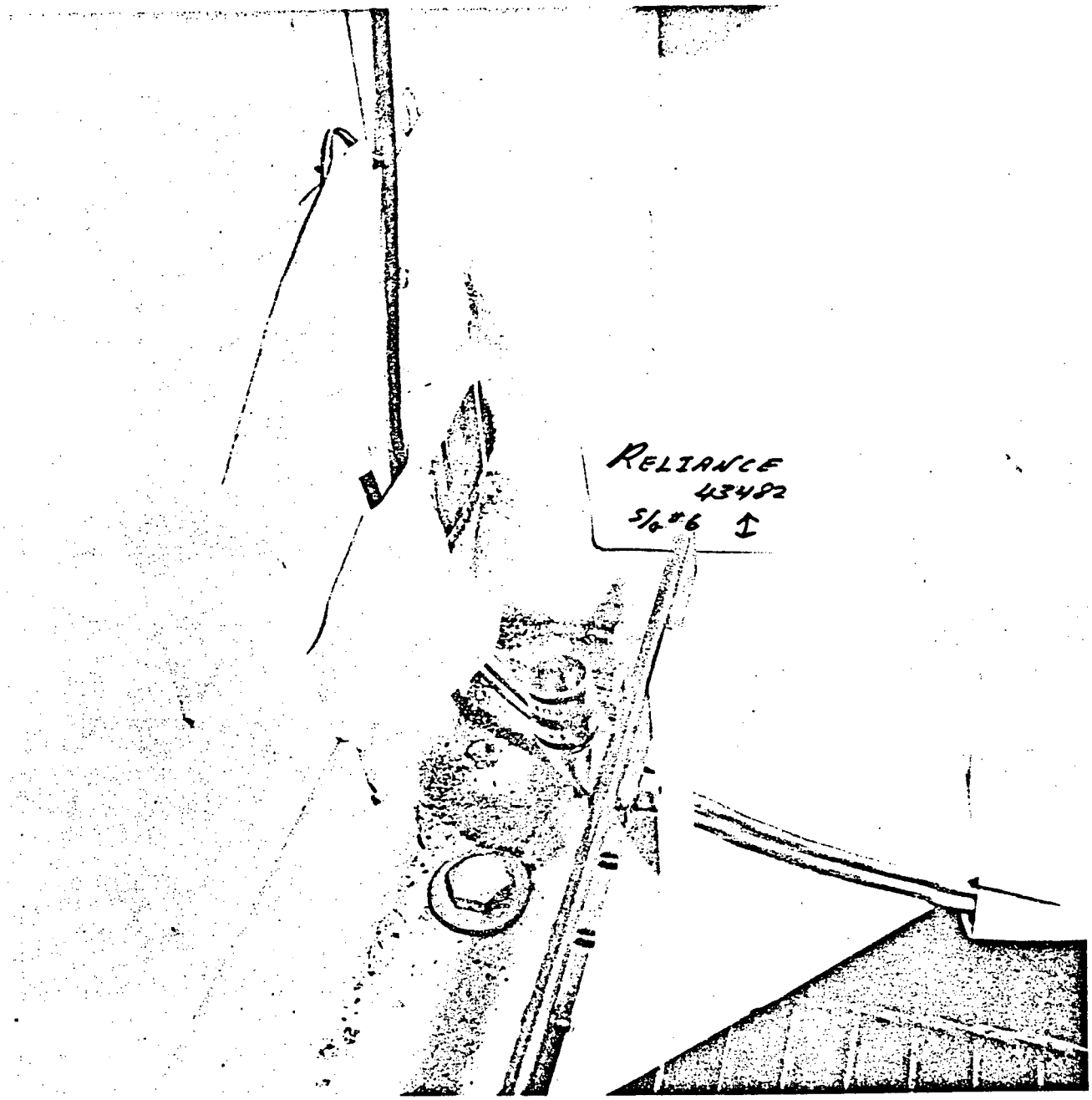
PHOTOGRAPH 31

LOCATION OF STRAIN GAGE NUMBER 4



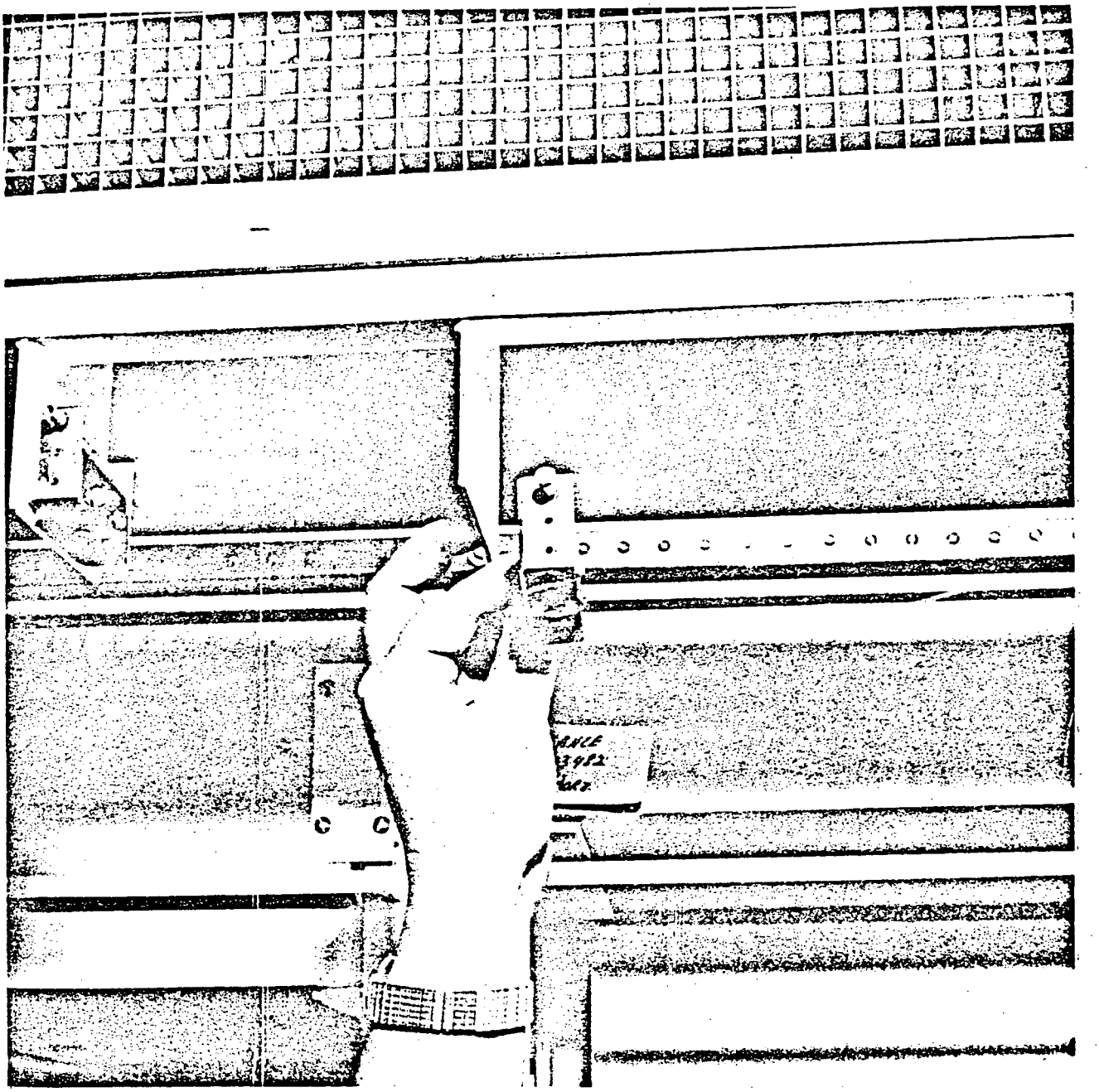
PHOTOGRAPH 32

LOCATION OF STRAIN GAGE NUMBER 5



PHOTOGRAPH 33

LOCATION OF STRAIN GAGE NUMBER 6



PHOTOGRAPH 34

A VIEW OF THE MICRO SWITCH WHICH CAME
OFF DURING TEST 32

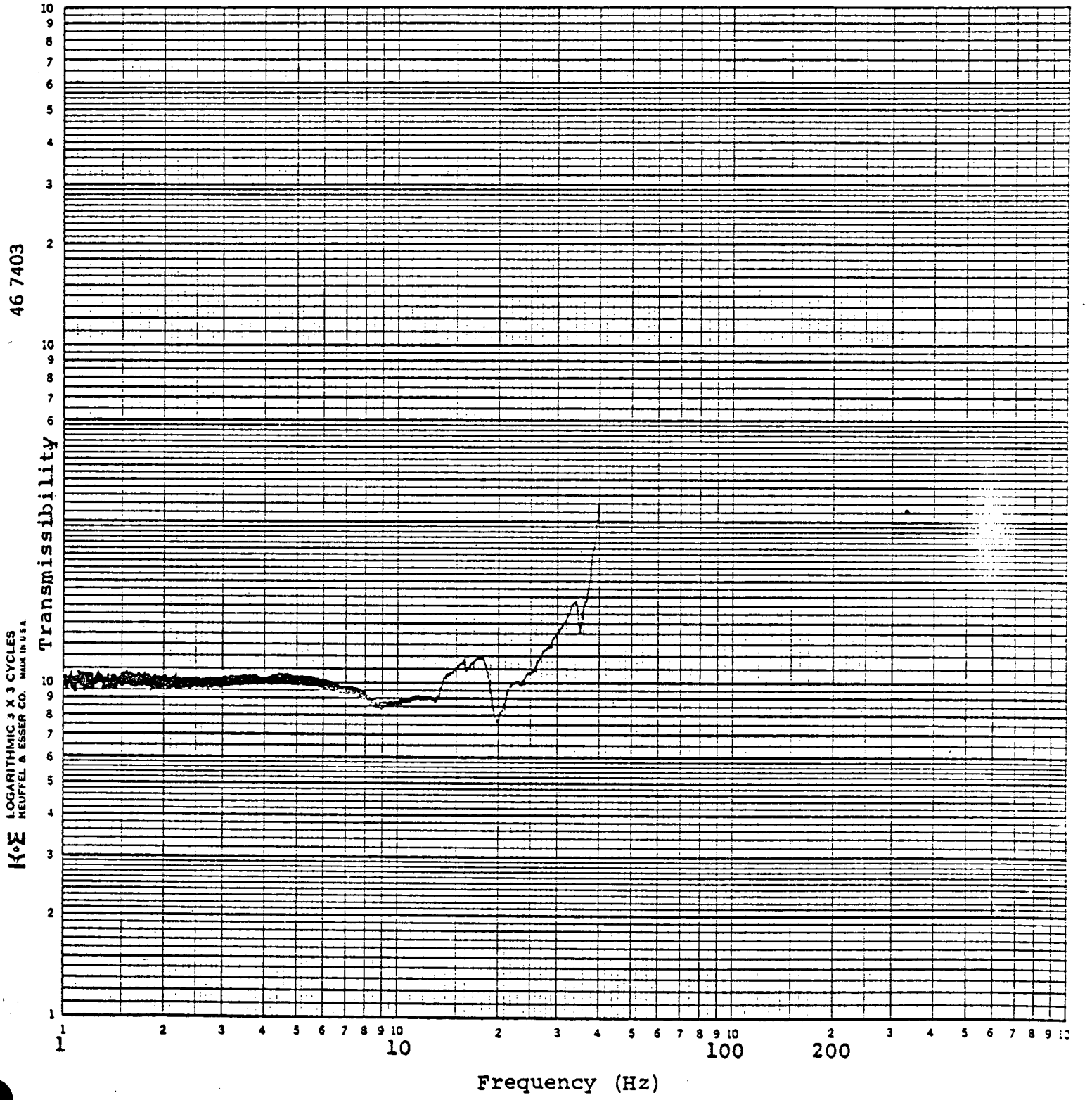
APPENDIX I

TRANSMISSIBILITY PLOTS

TEST NO.	AXES
1	Vertical
2	Side-to-Side
20	Front-to-Back

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



VCA = VERTICAL CONTROL ACCELEROMETER

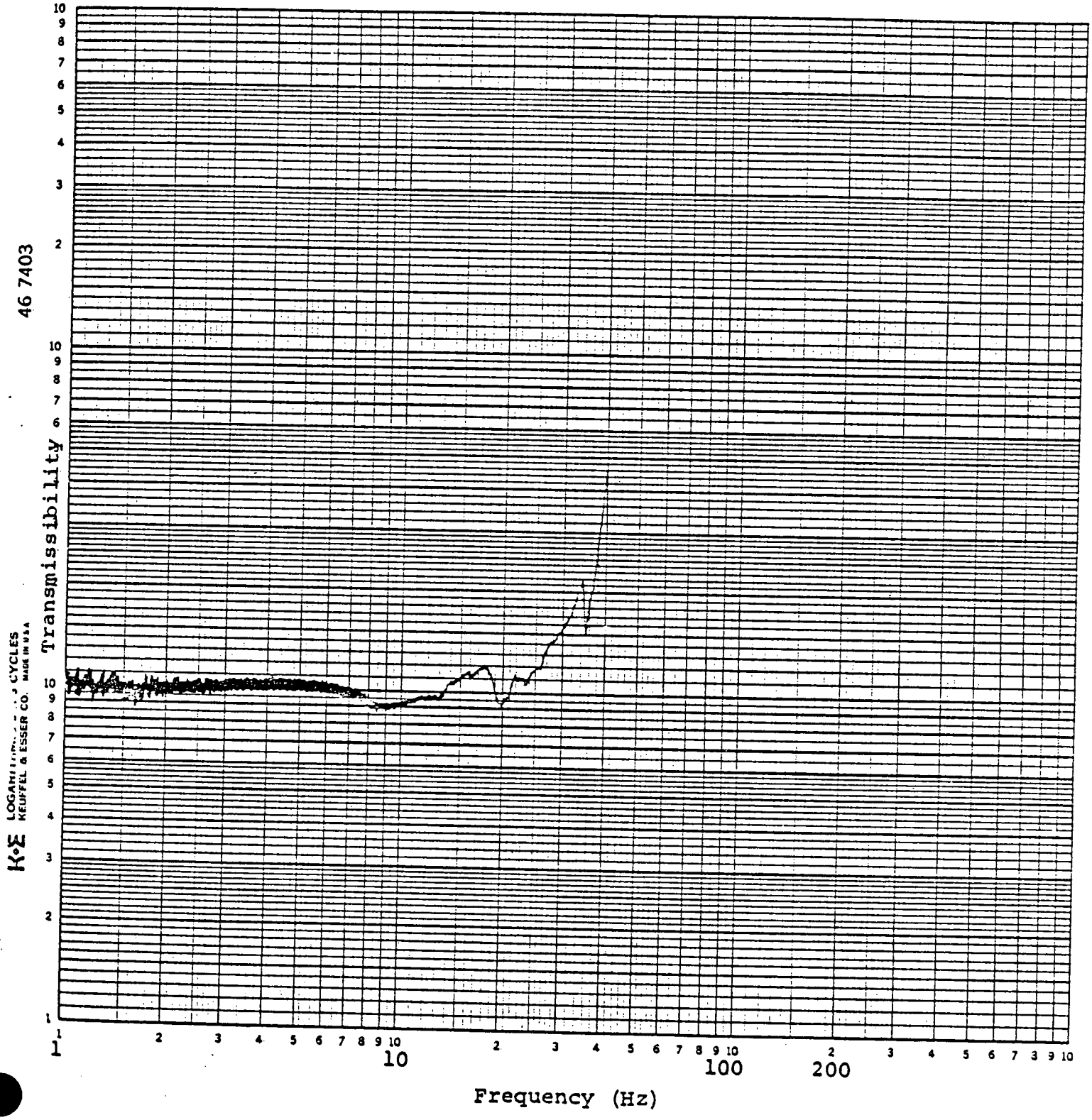
AXIS VERT

ACCEL. NO 3V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



VCA: VERTICAL CONTROL ACCELEROMETER

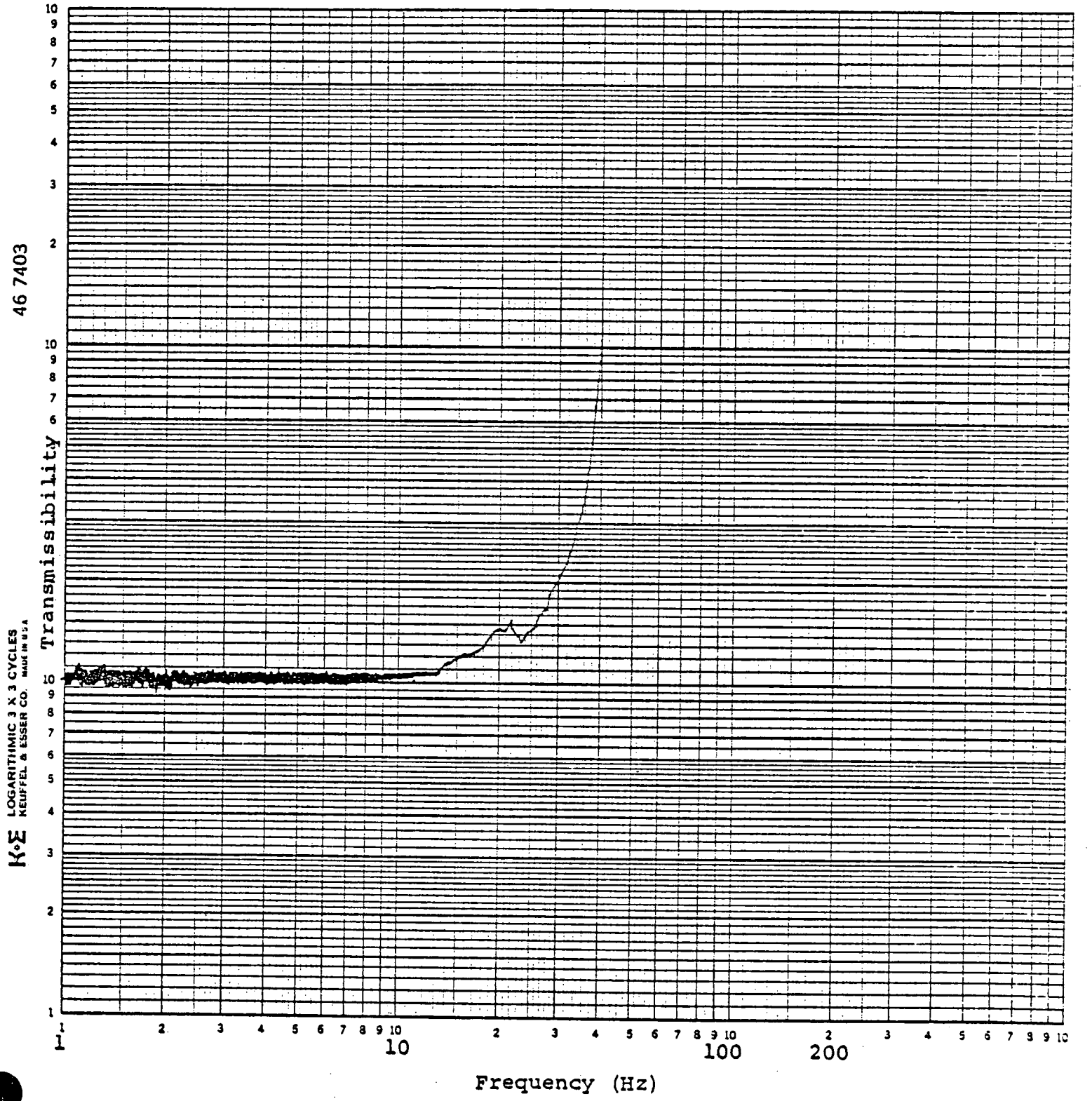
AXIS VERT

ACCEL. NO. 5V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



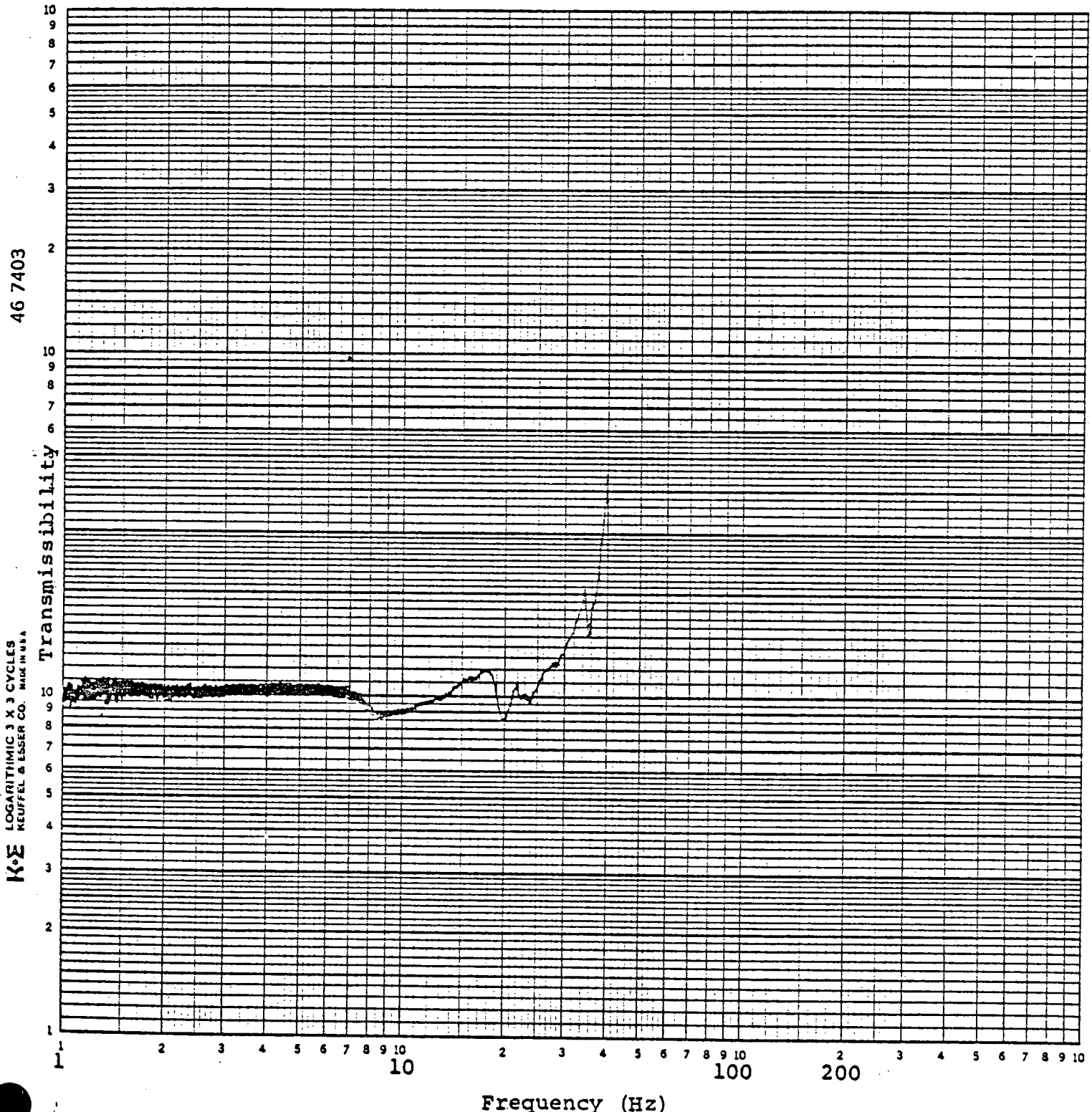
AXIS VERT

ACCEL. NO. 6V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



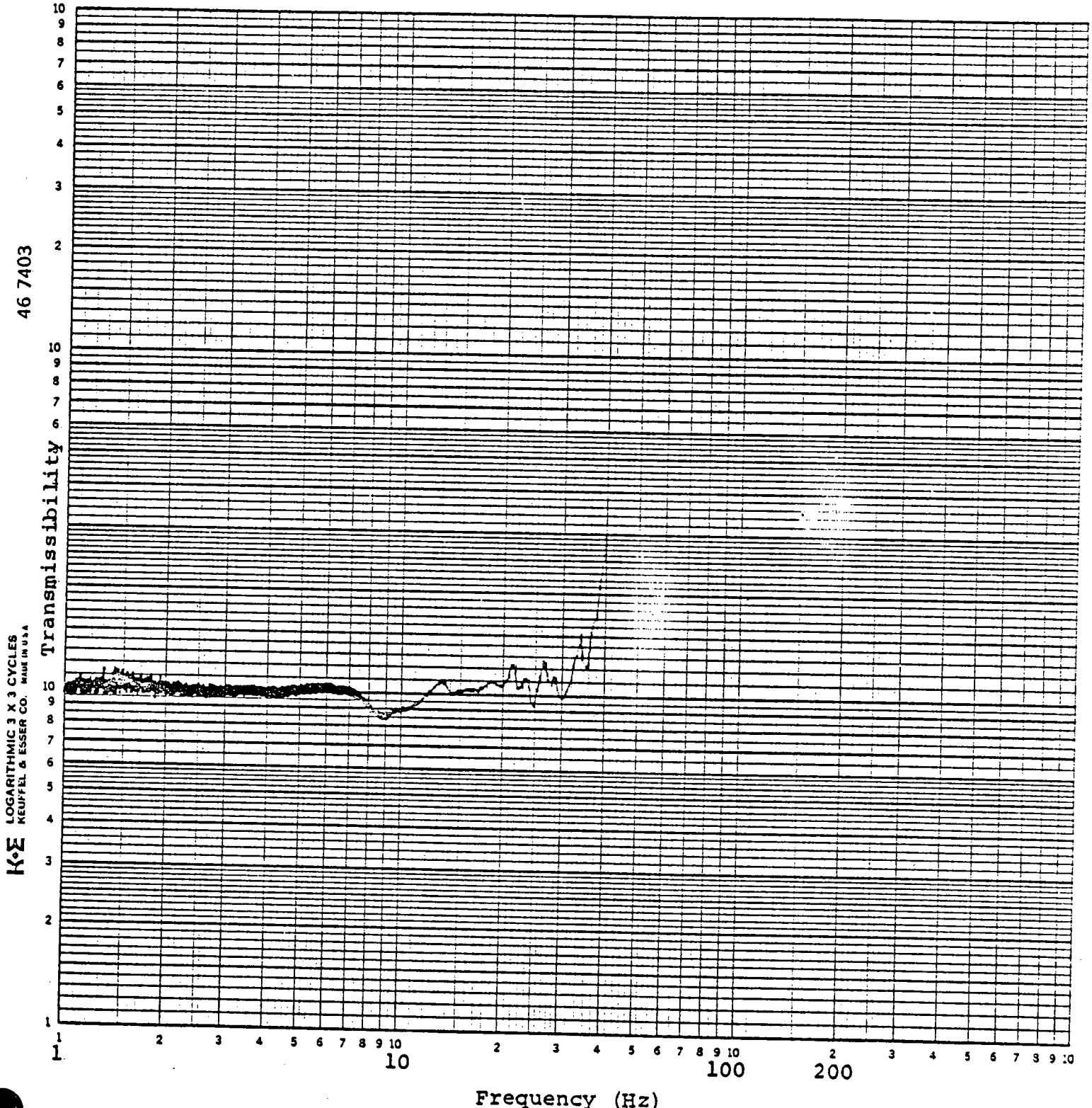
AXIS VERT

ACCEL. NO. 10V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



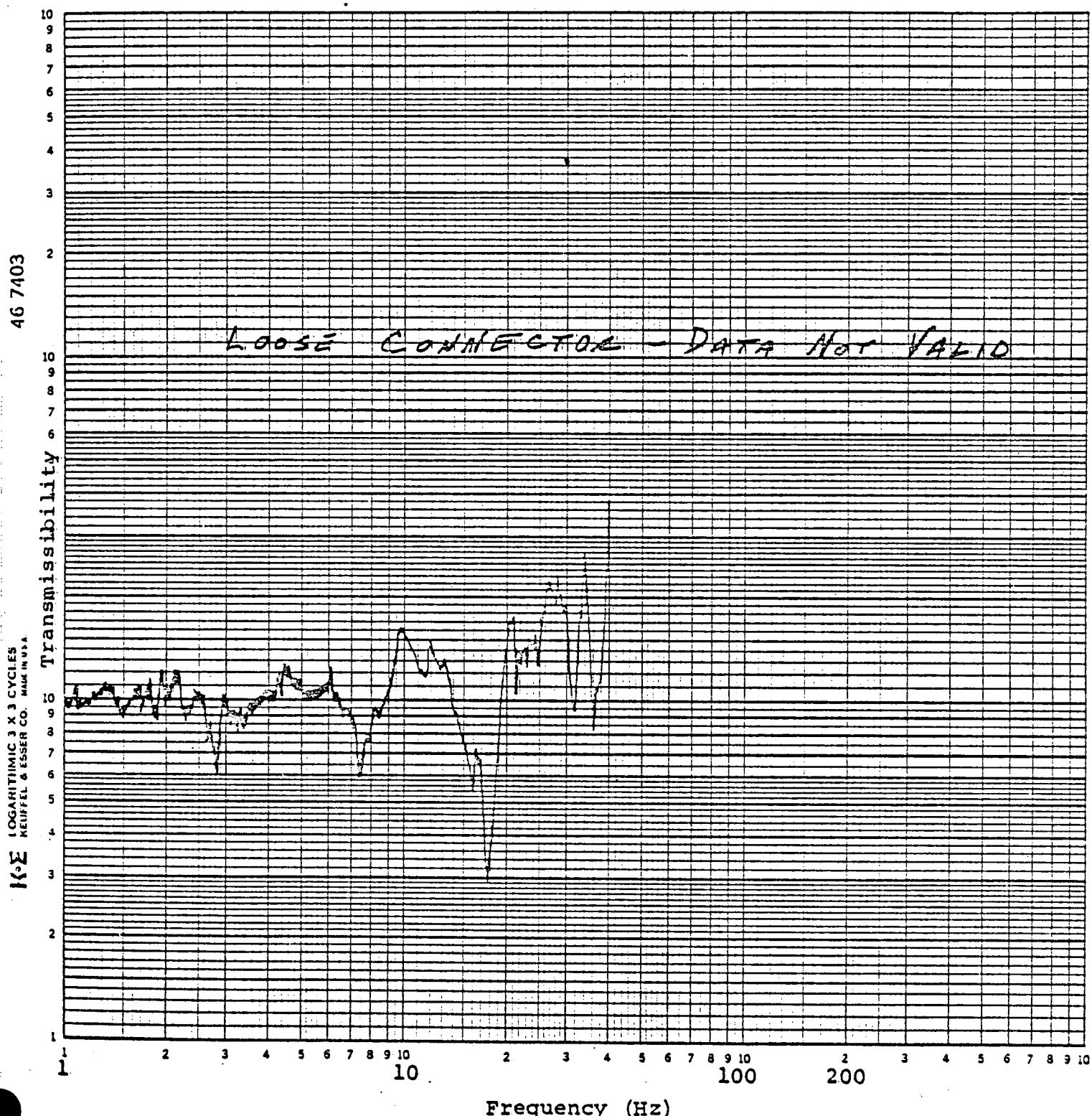
AXIS VERT

ACCEL. NO. 14V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



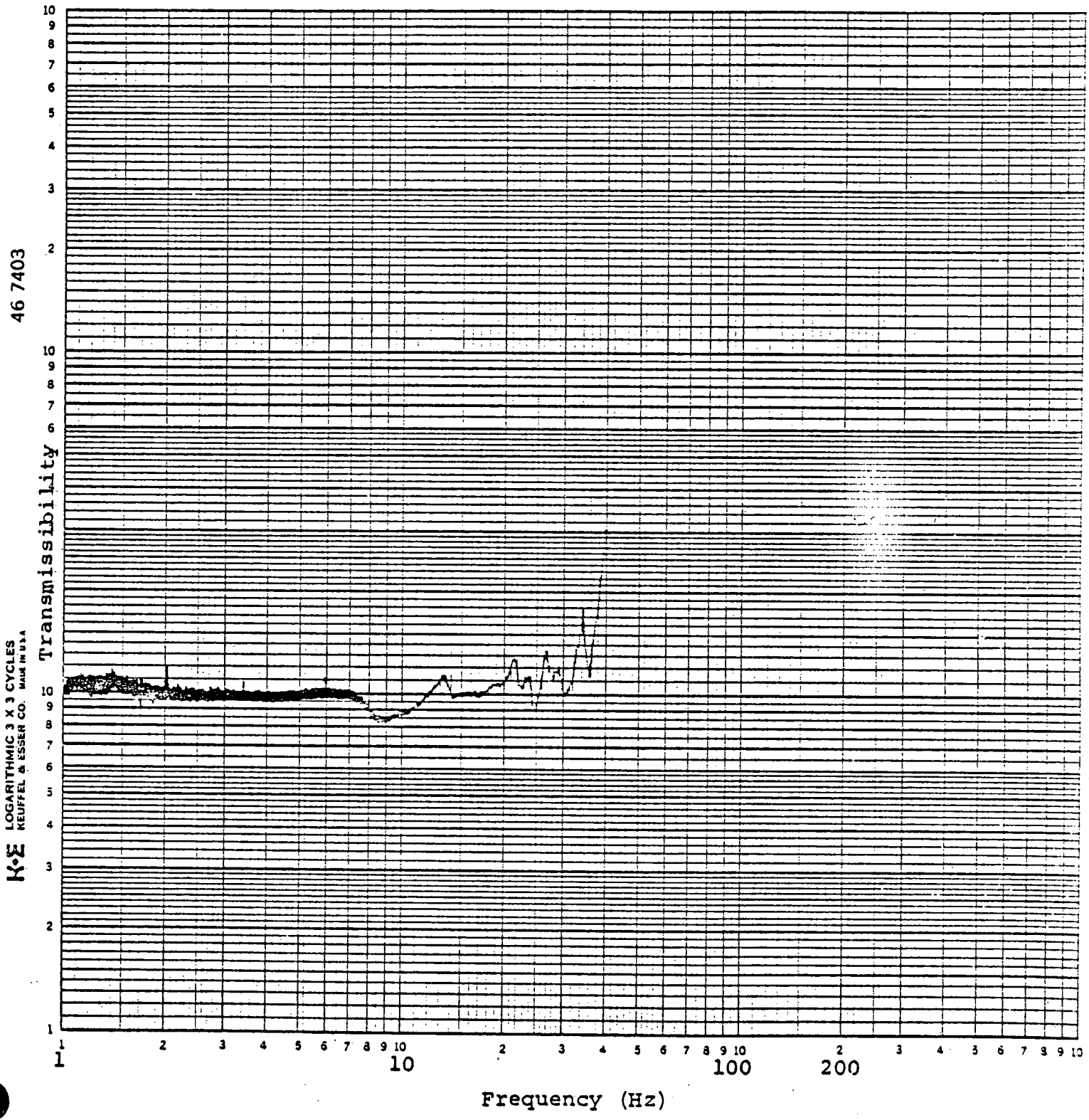
AXIS VERT

ACCEL. NO. 15V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



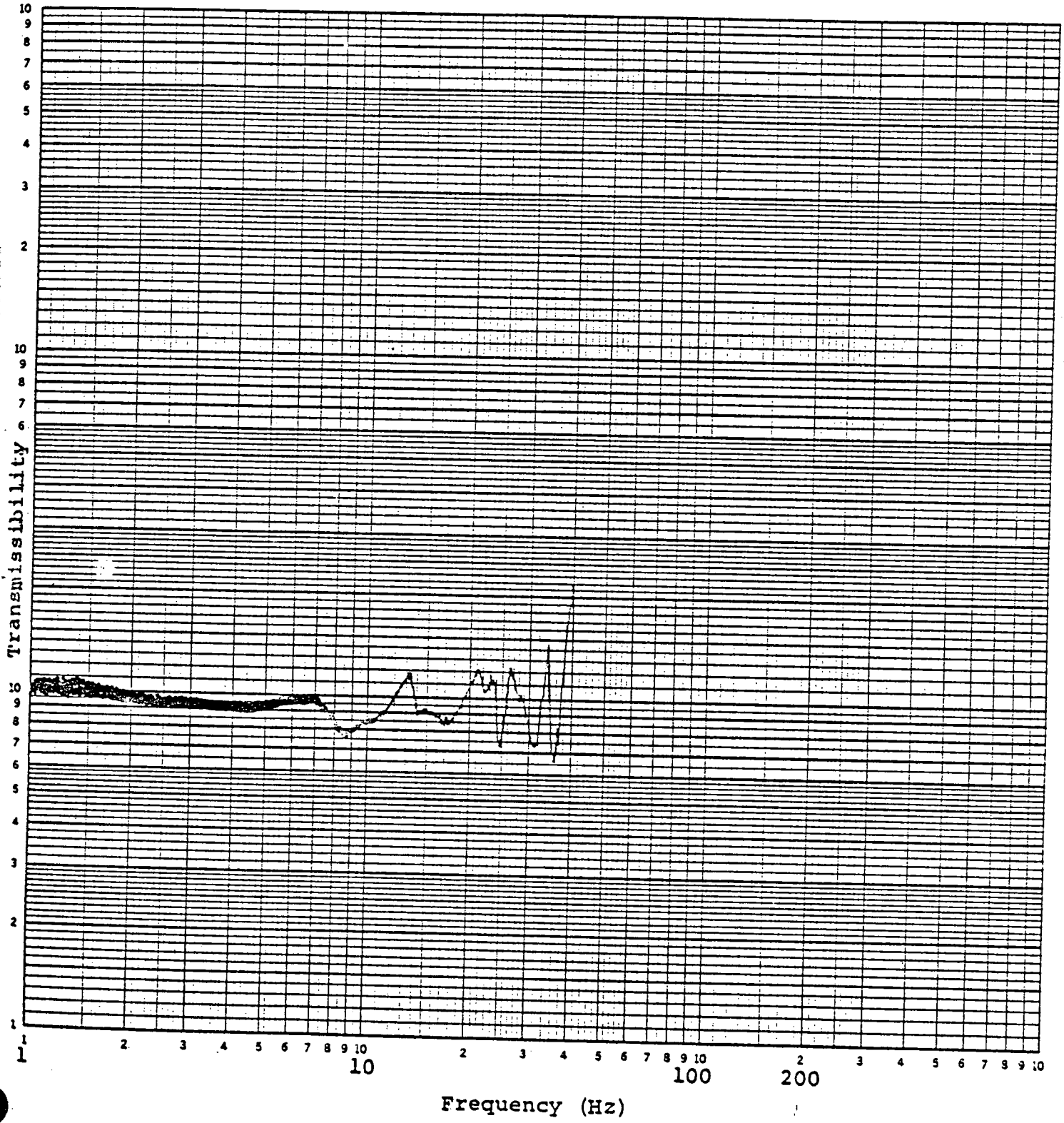
AXIS VERT

ACCEL. NO. V6V ÷ NO. V6A

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



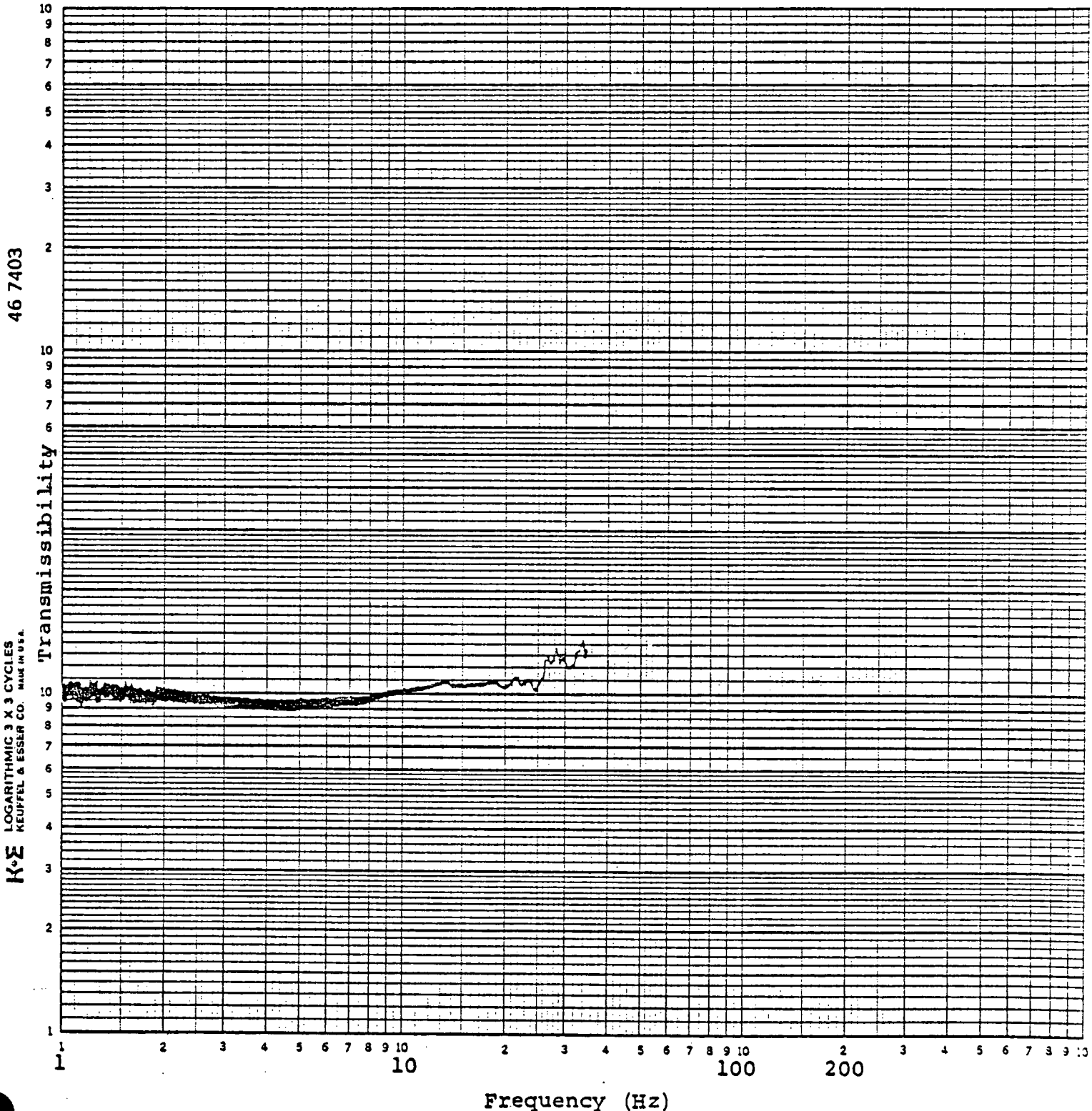
AXIS VERT

ACCEL. NO 21V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



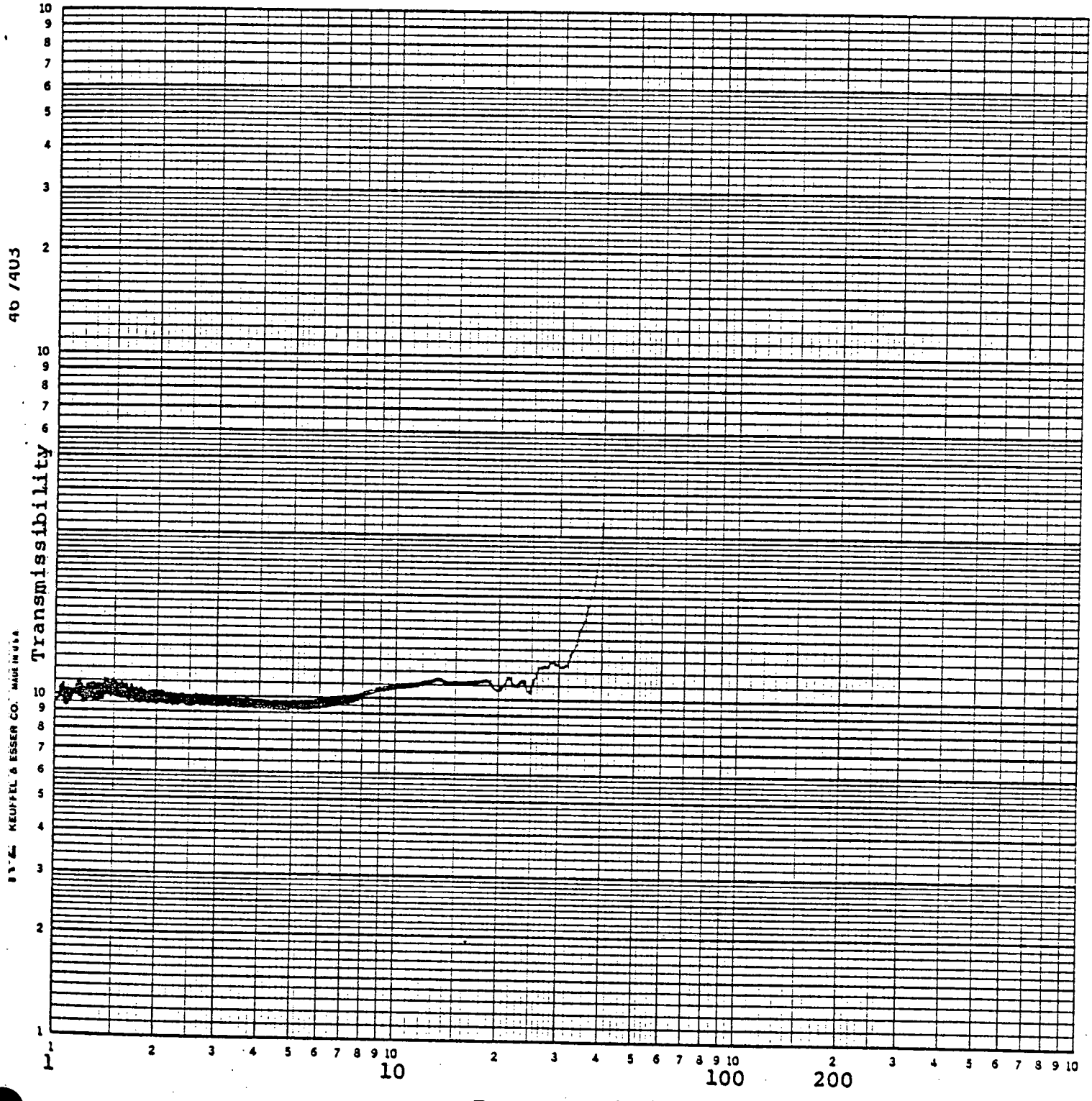
AXIS VERT

ACCEL. NO. 23V ÷ NO. VC8

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



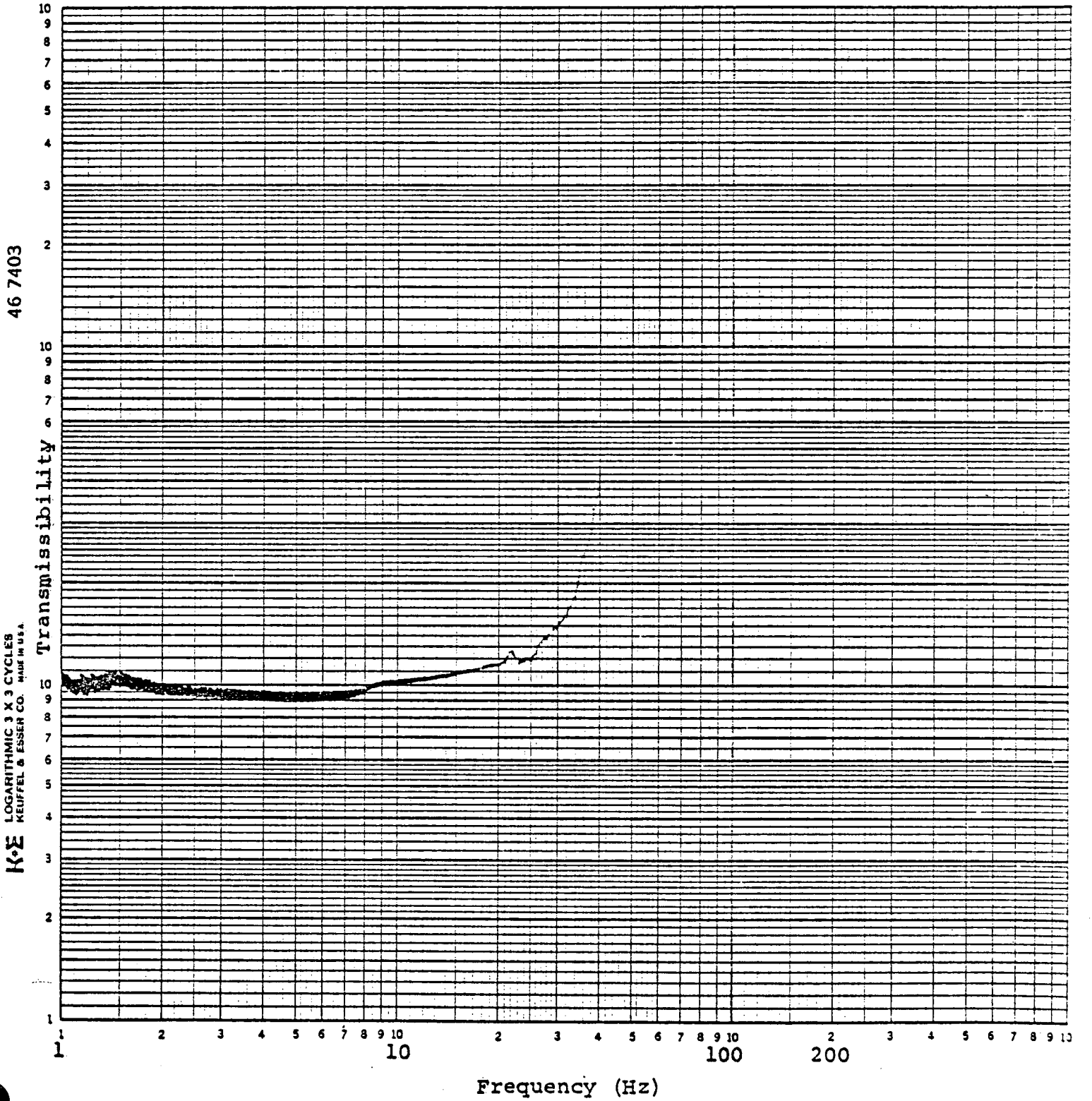
AXIS _____

ACCEL. NO. 25V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



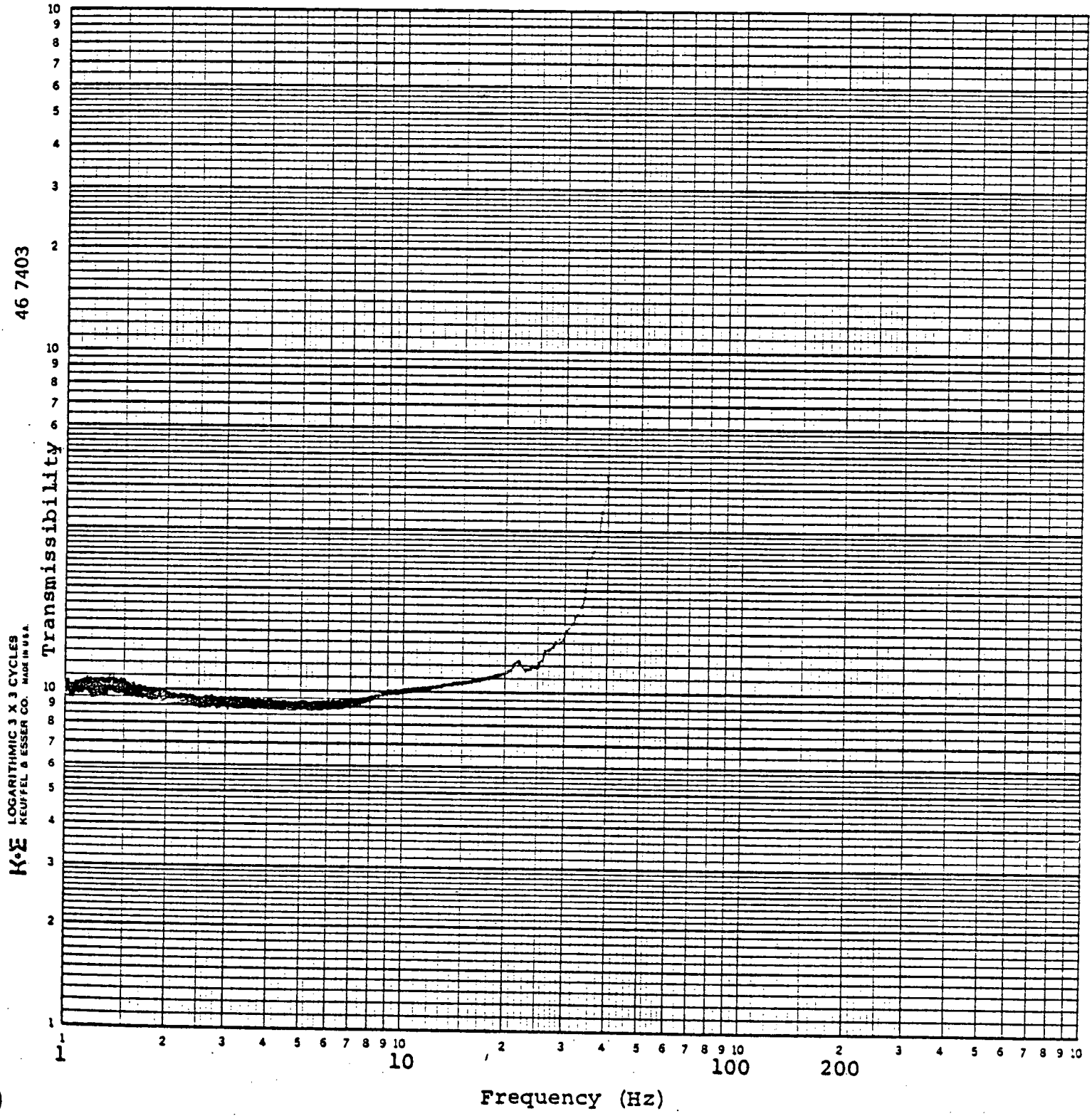
AXIS VERT

ACCEL. NO 27V ÷ NO. VC A

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



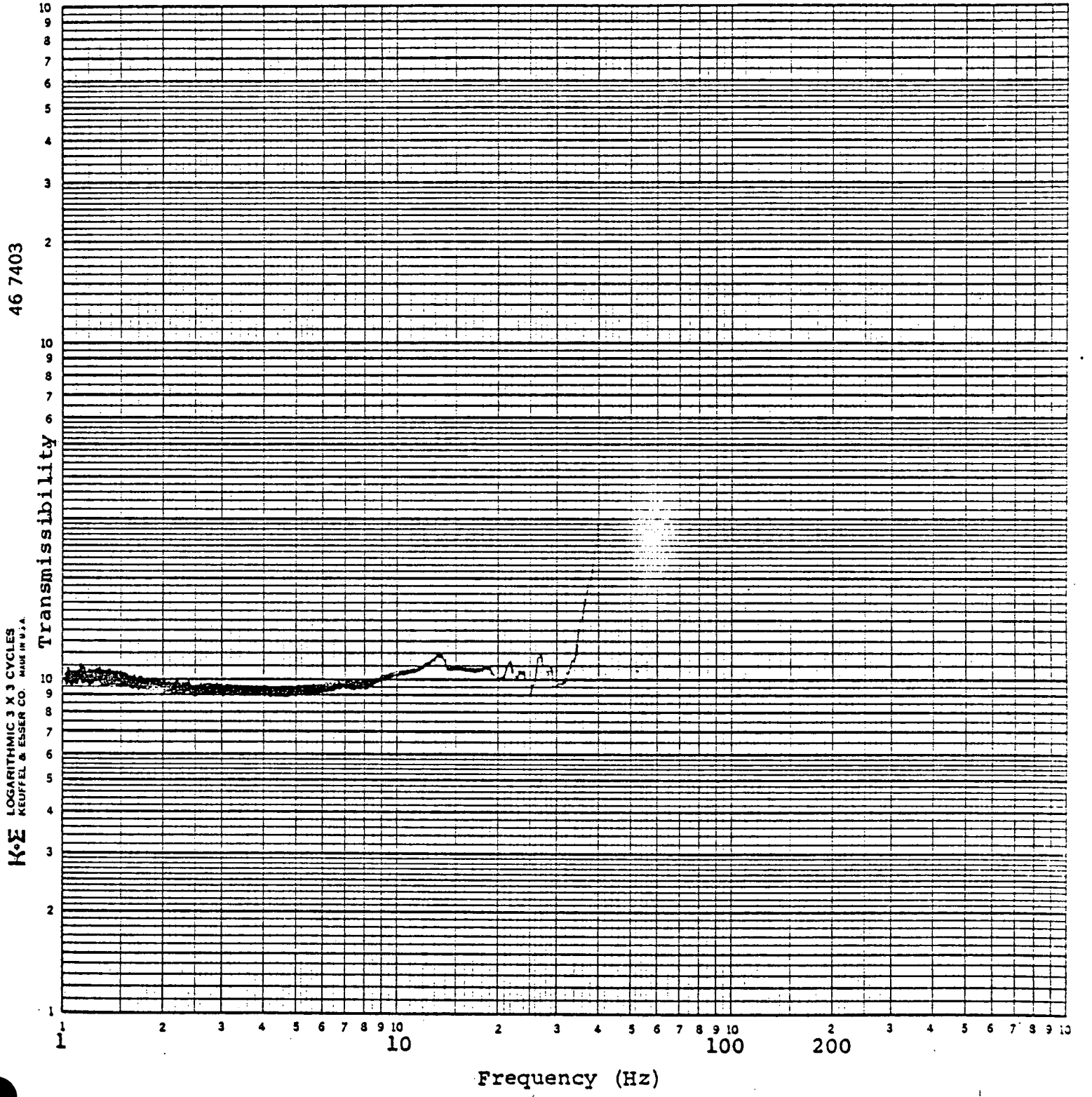
AXIS VERT

ACCEL. NO. 29V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



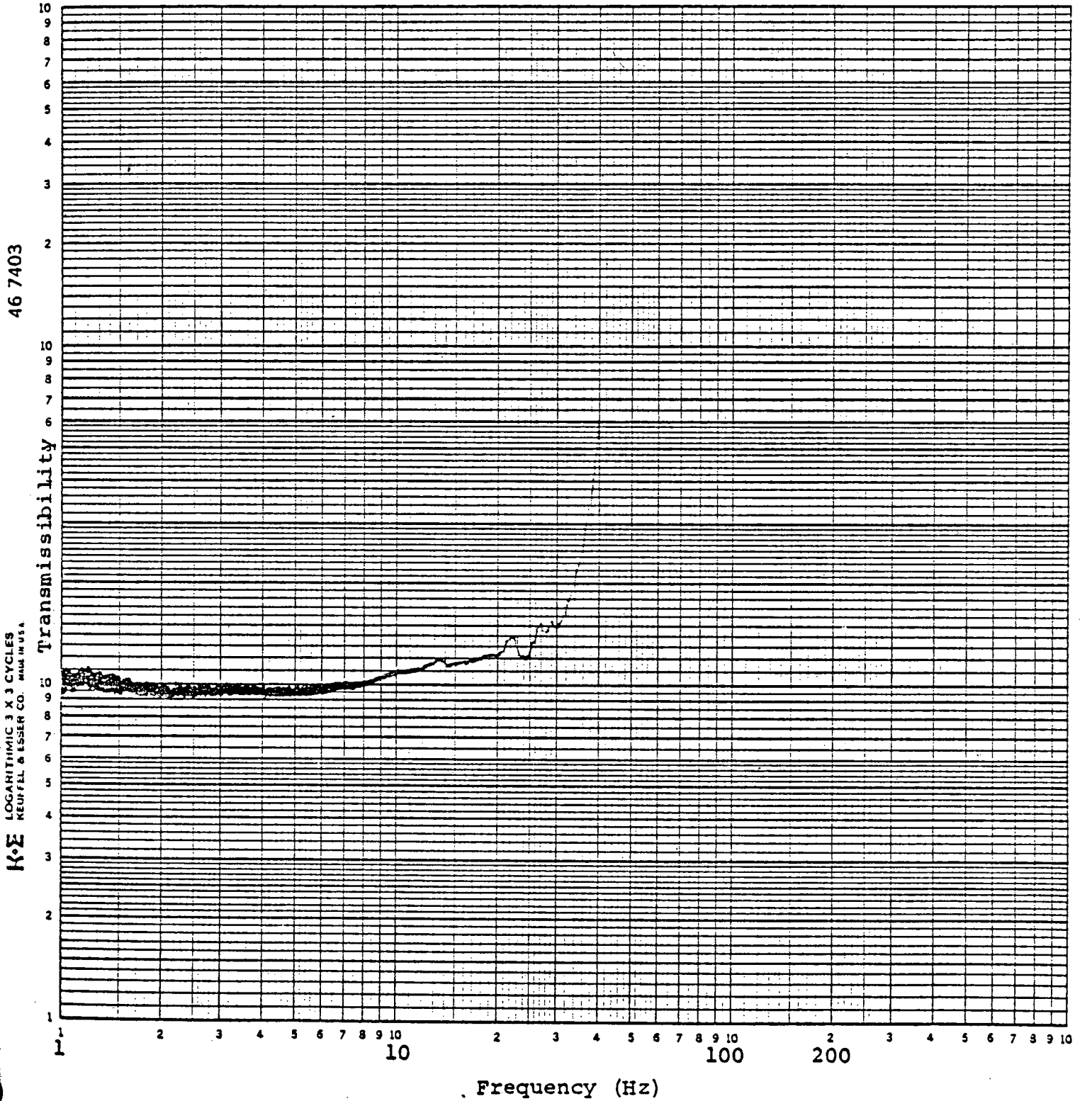
AXIS VERT

ACCEL. NO. 3 V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



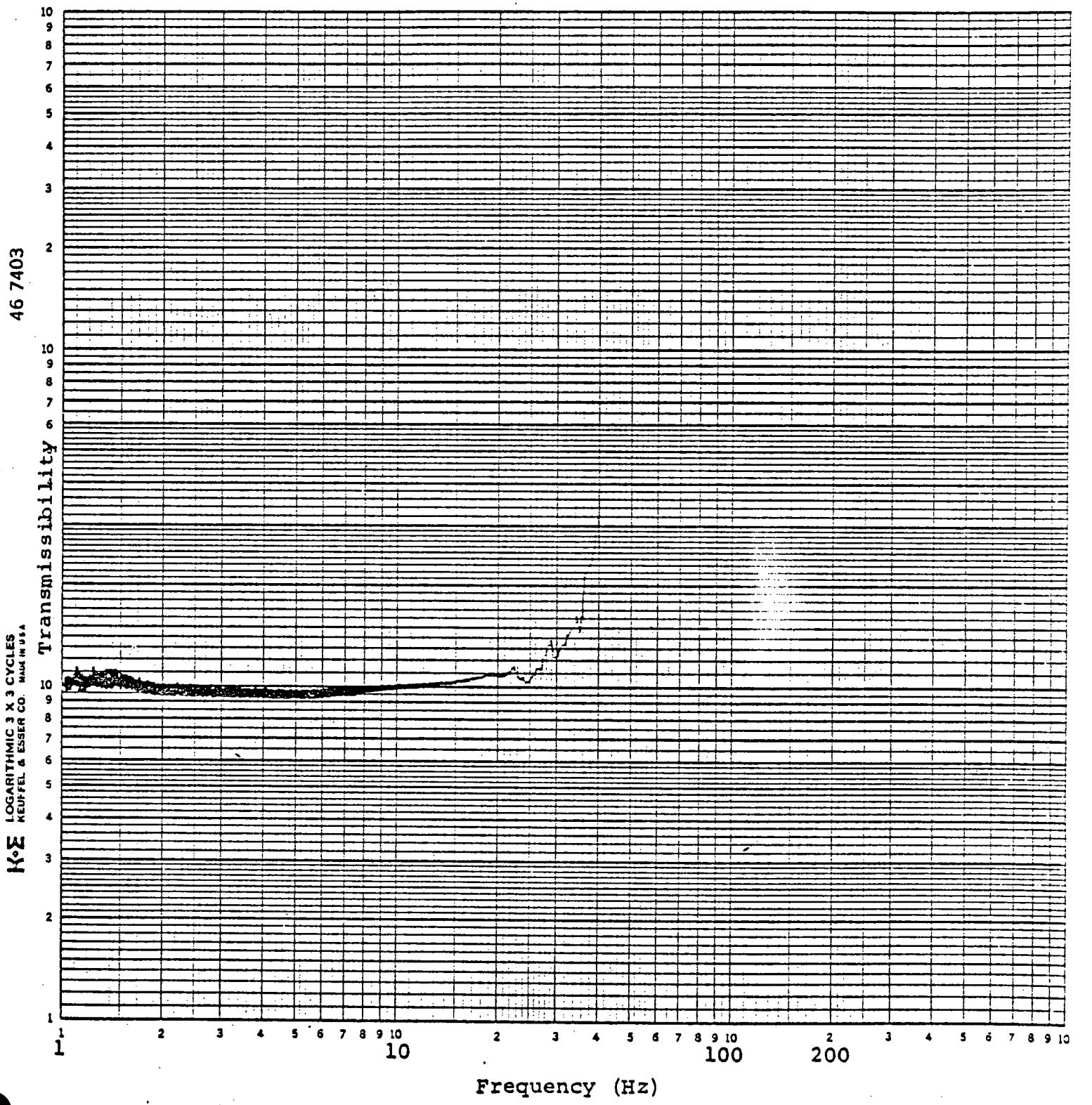
AXIS VERT

ACCEL. NO. 34Y ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



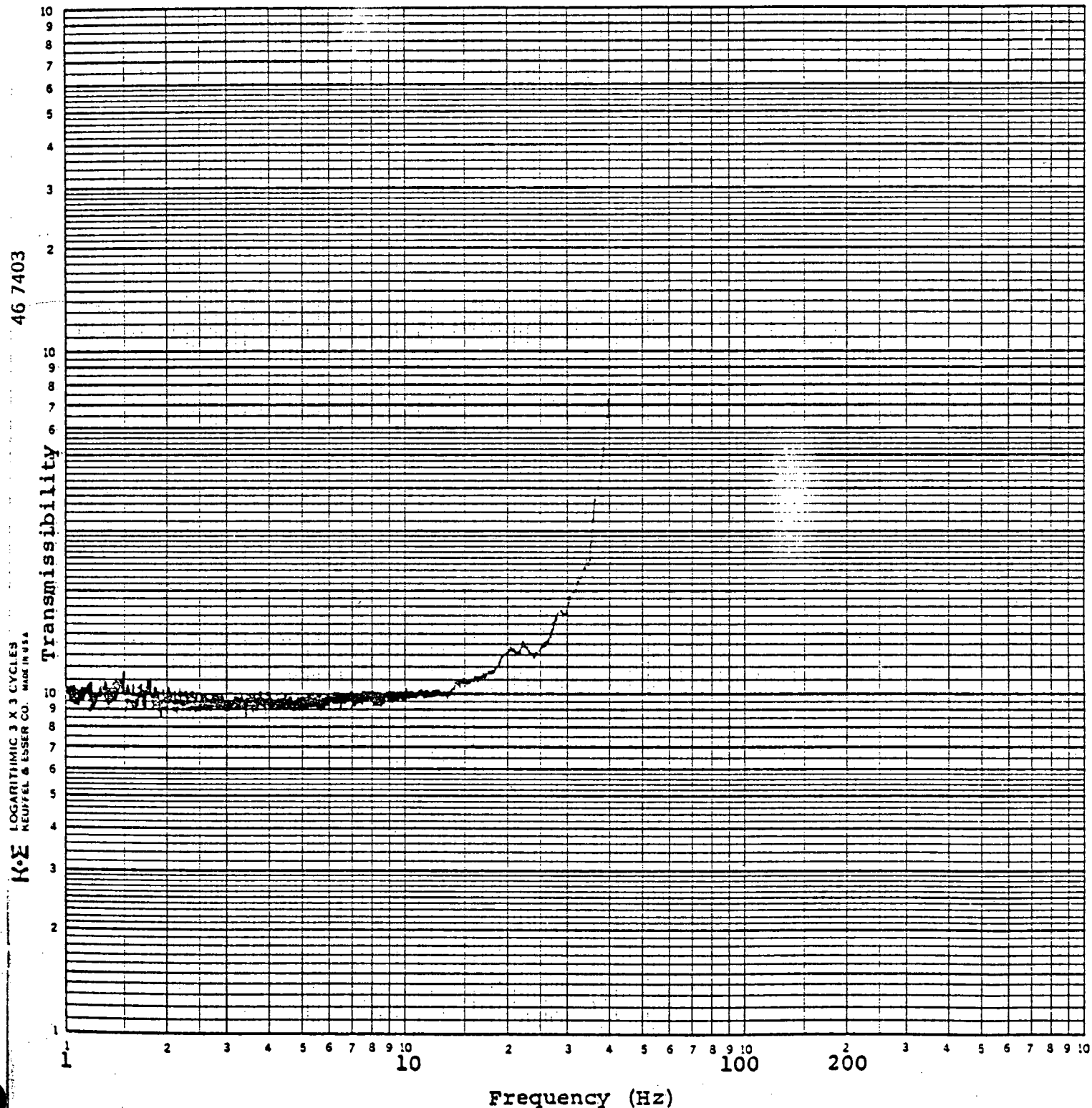
AXIS VERT

ACCEL. NO. 37V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



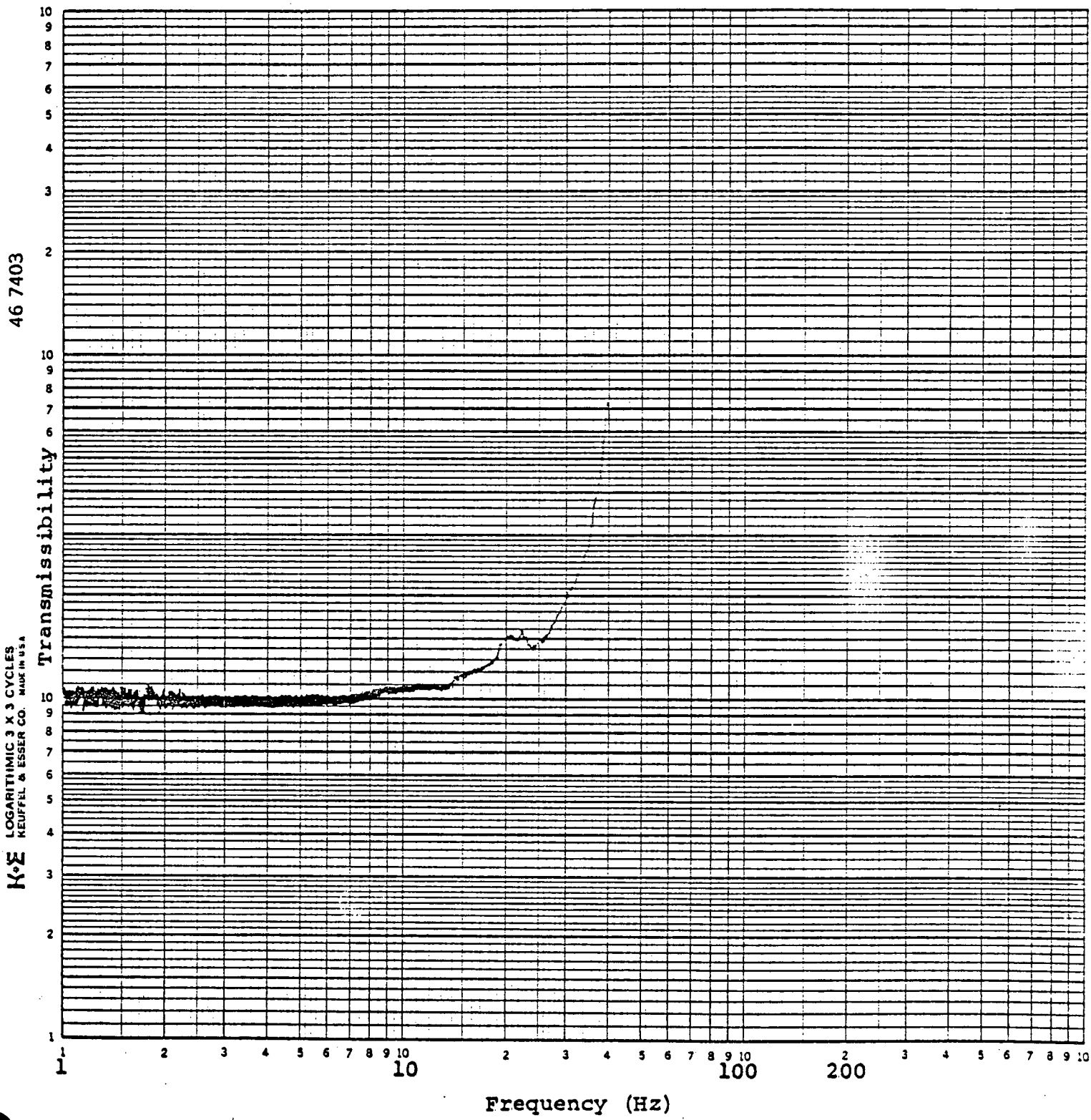
AXIS VERT

ACCEL. NO. 39V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



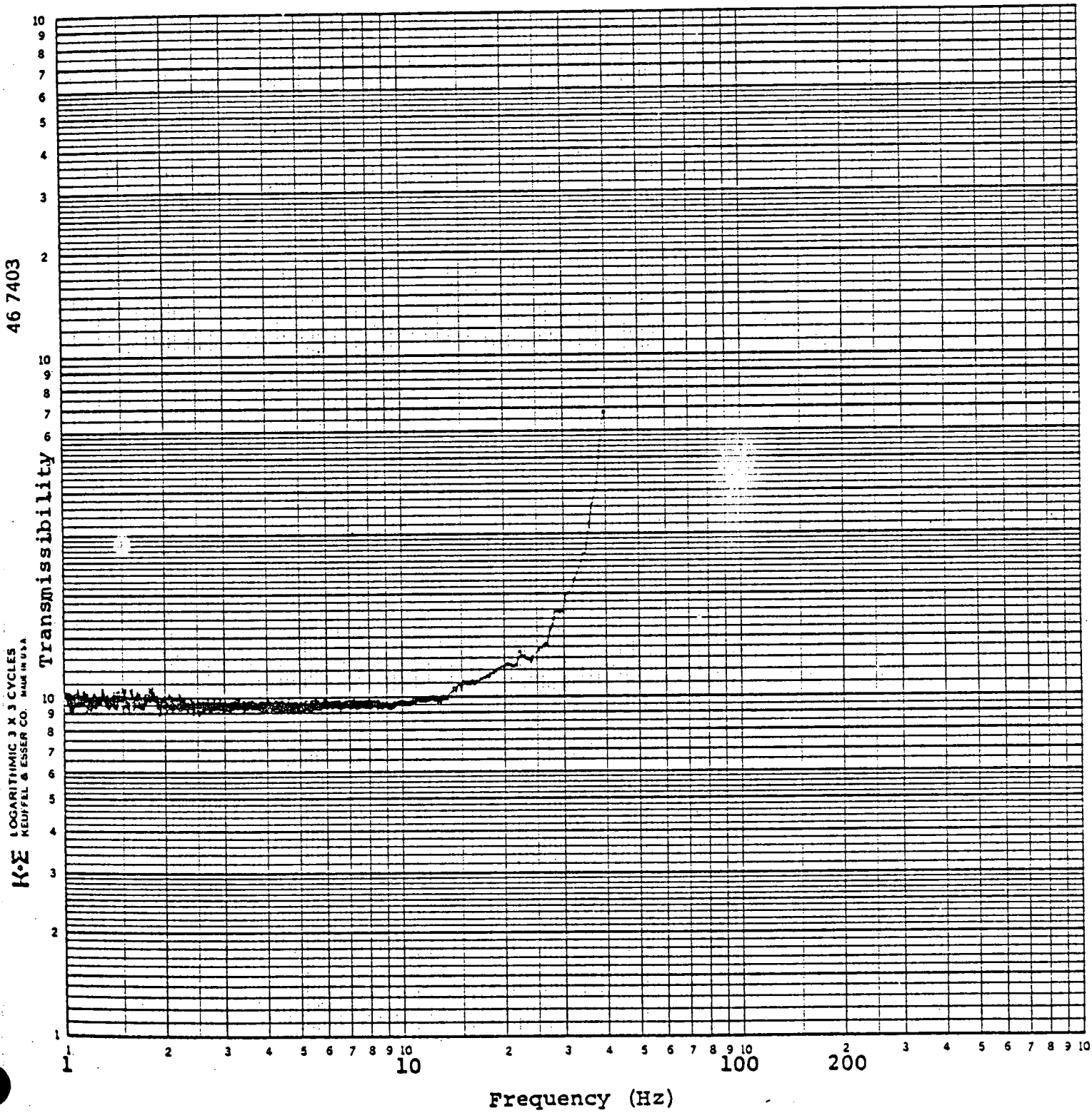
AXIS VERT

ACCEL. NO. H\V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



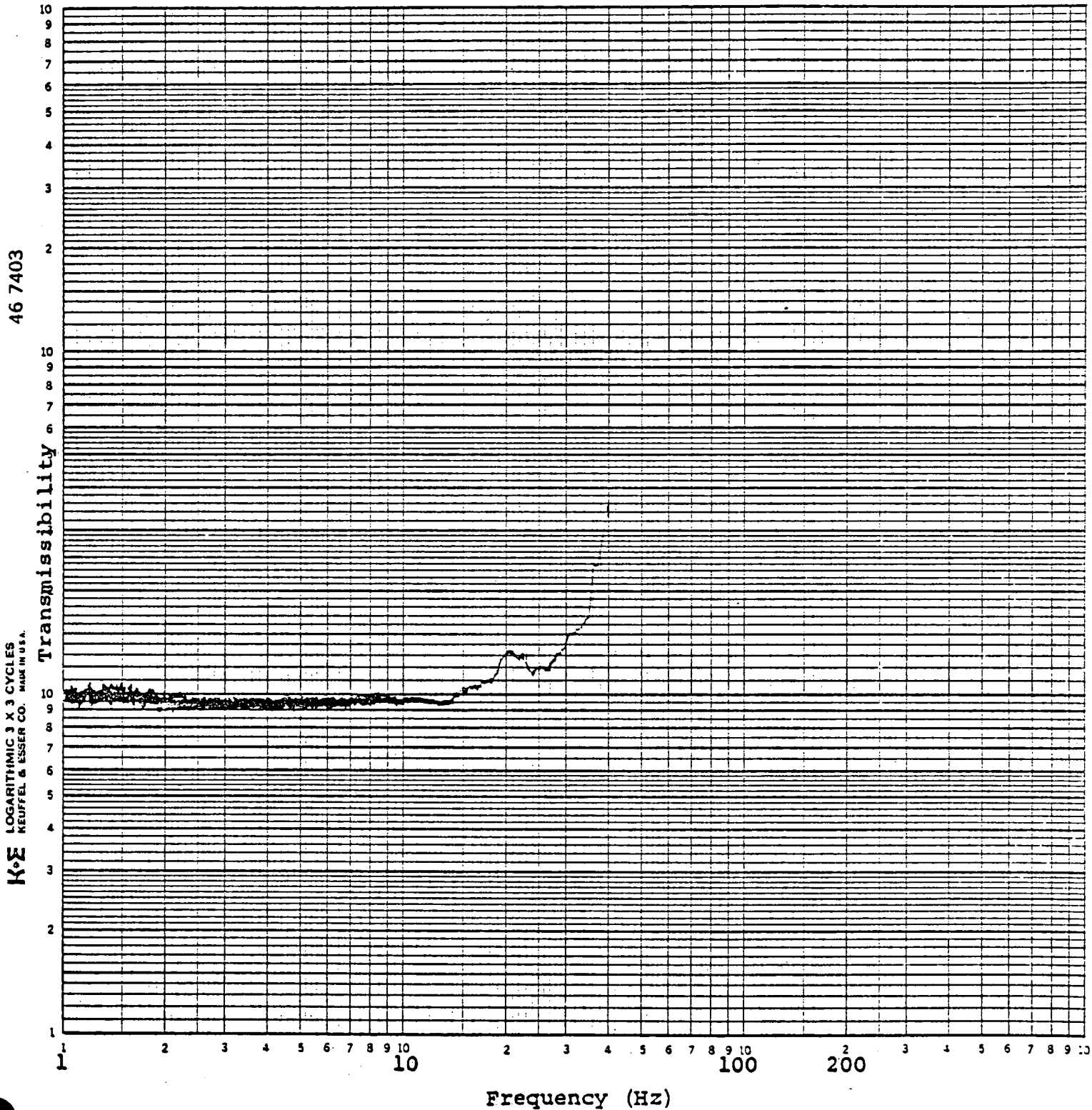
AXIS VERT

ACCEL. NO. 42V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



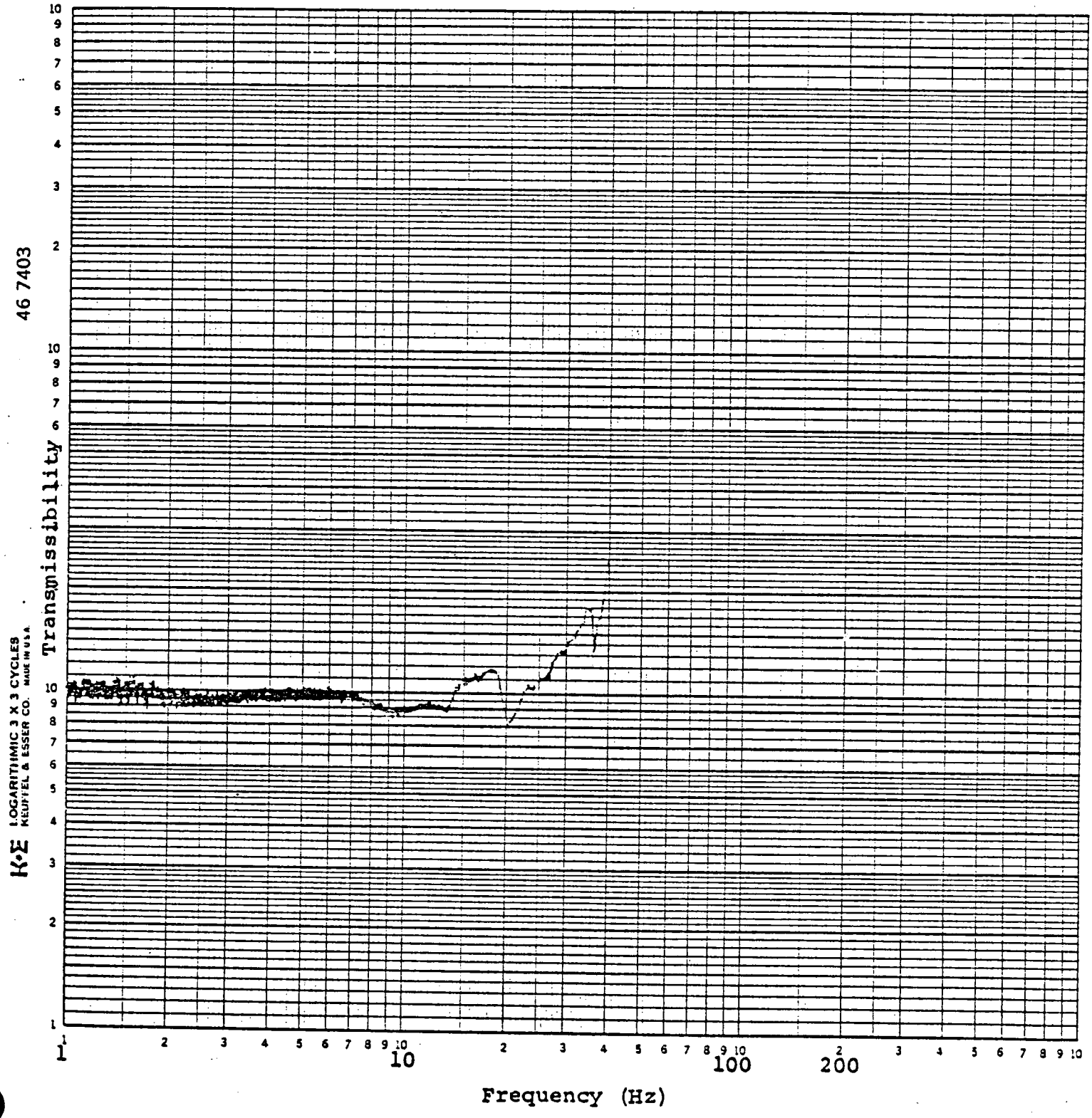
AXIS VERT

ACCEL. NO. 45V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



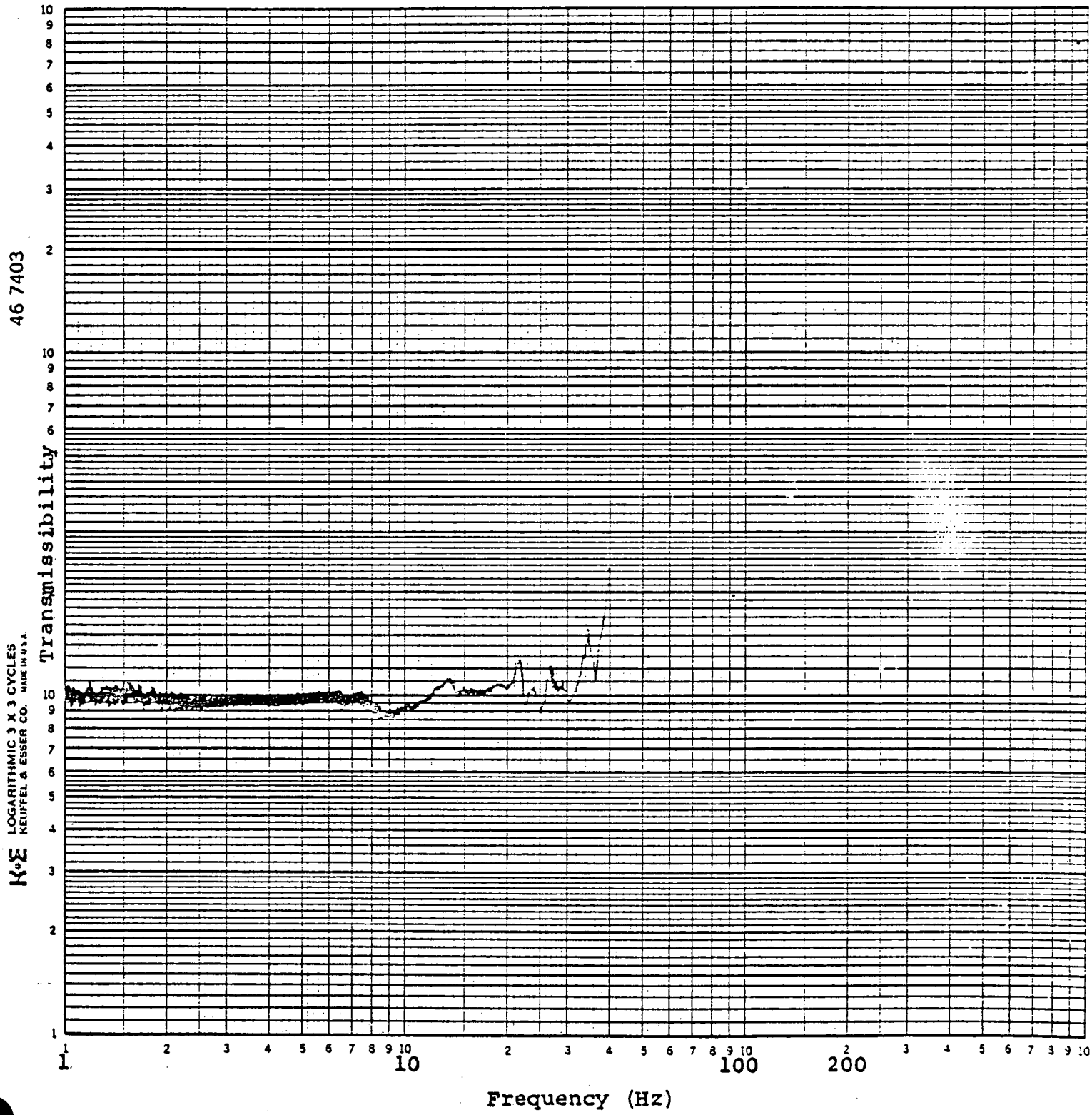
AXIS VERT

ACCEL. NO. 47V ÷ NO. YCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



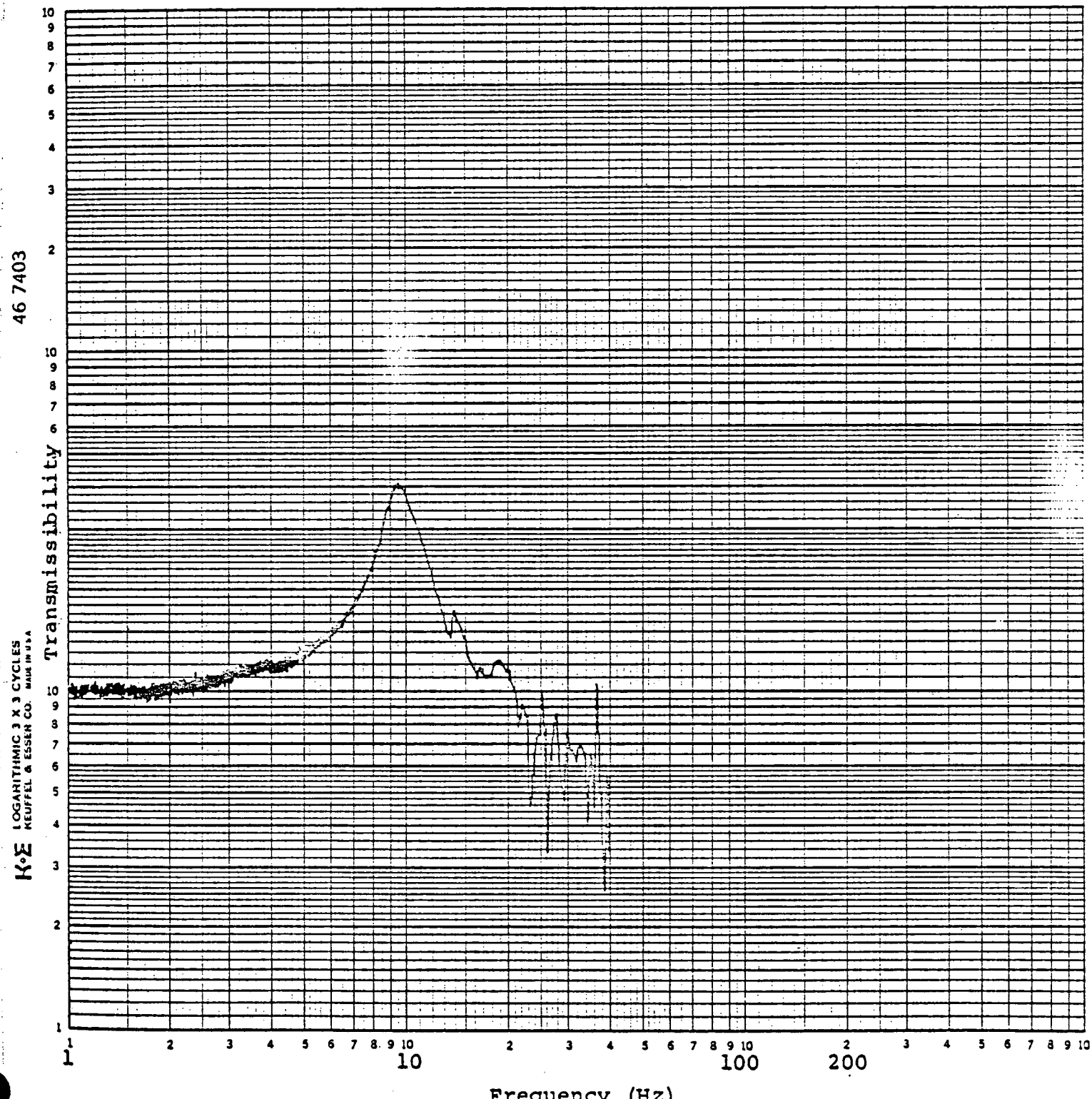
AXIS VERT

ACCEL. NO. 49V ÷ NO. VCA

TEST RUN NO. 1

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



S-S : SIDE-TO-SIDE
HCR: HORIZONTAL CONTROL ACCELEROMETER

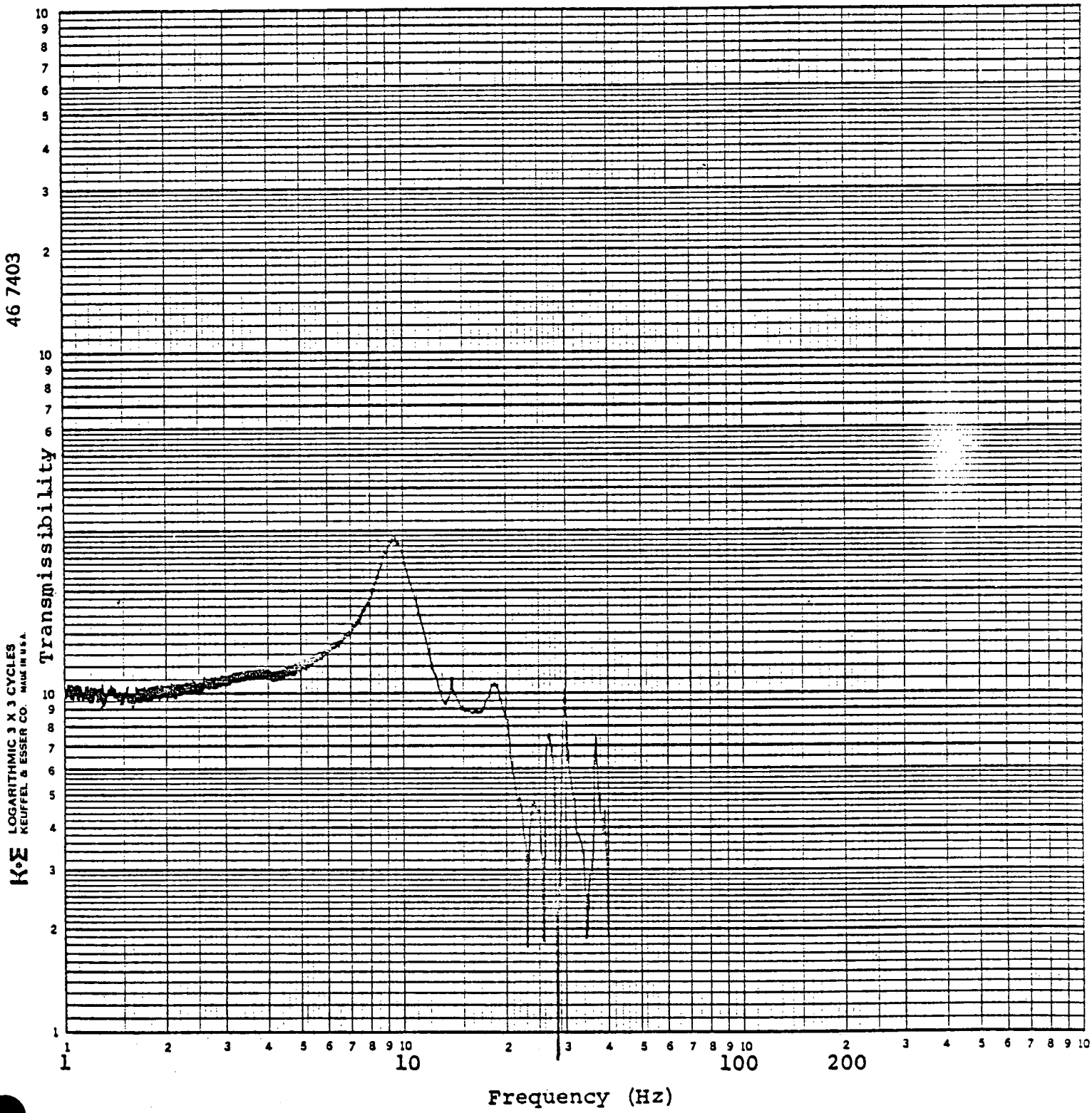
AXIS S-S

ACCEL. NO. 155 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



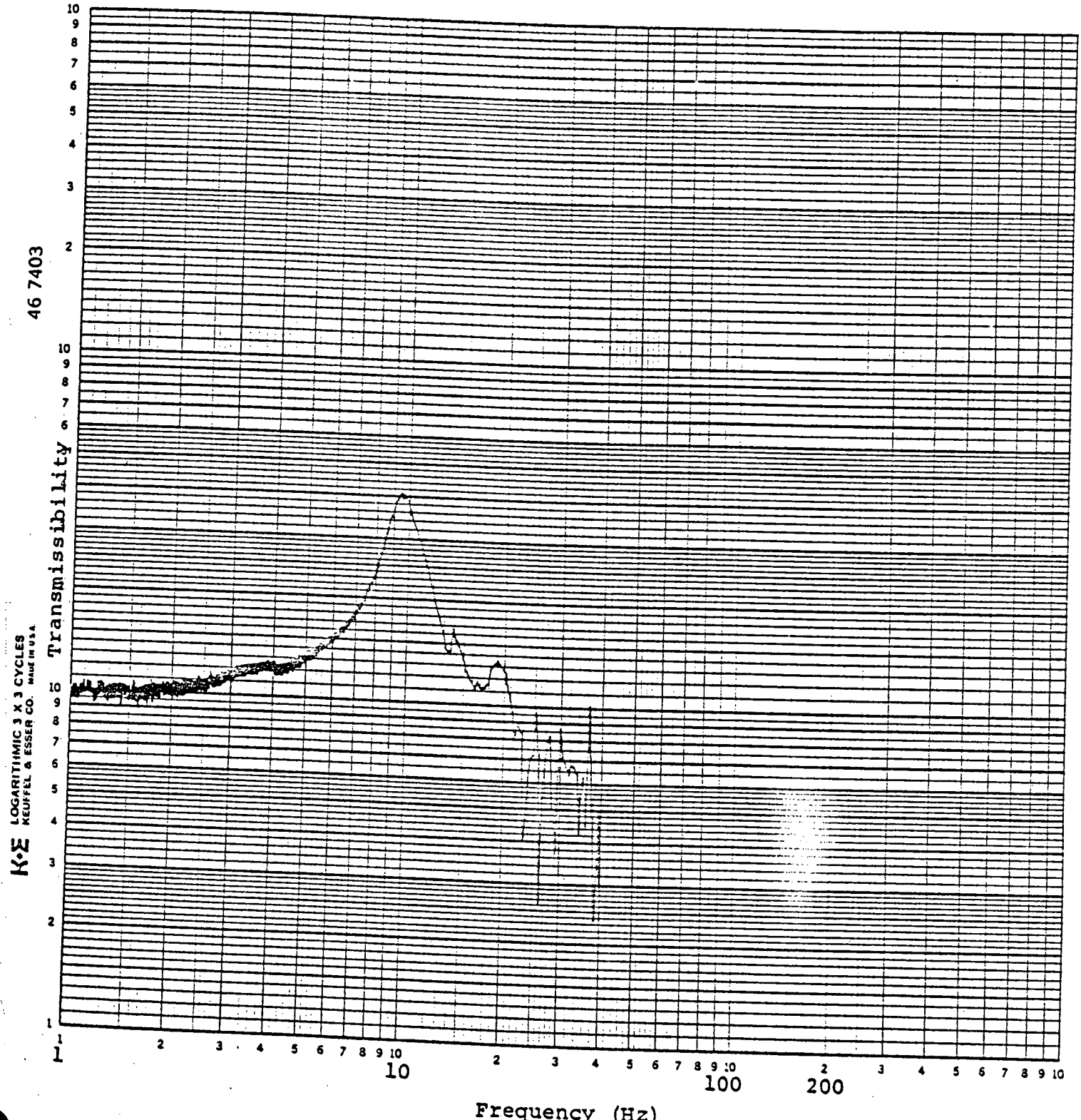
AXIS 5-5

ACCEL. NO. 255 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



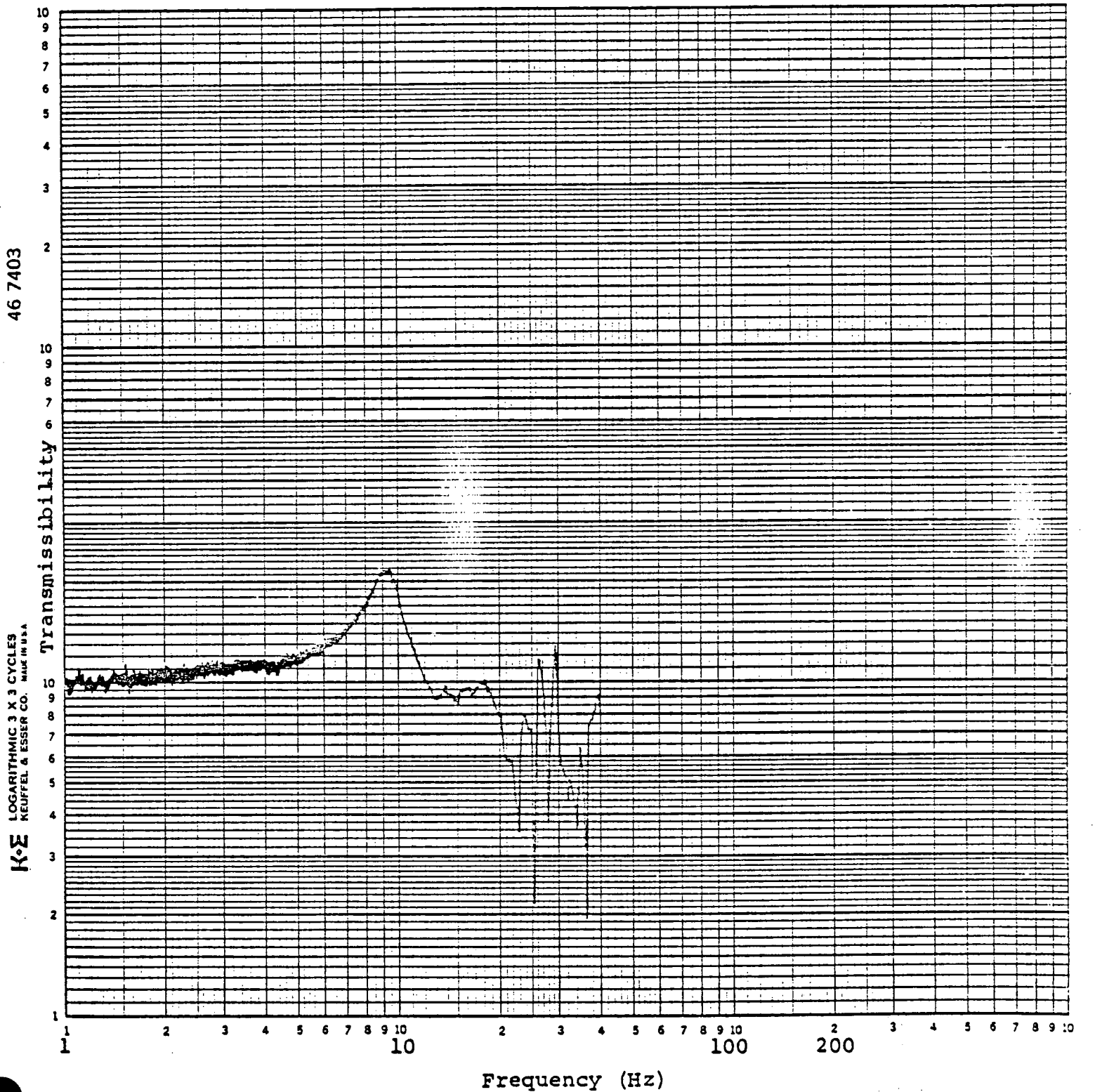
AXIS 5-5

ACCEL. NO. 455 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



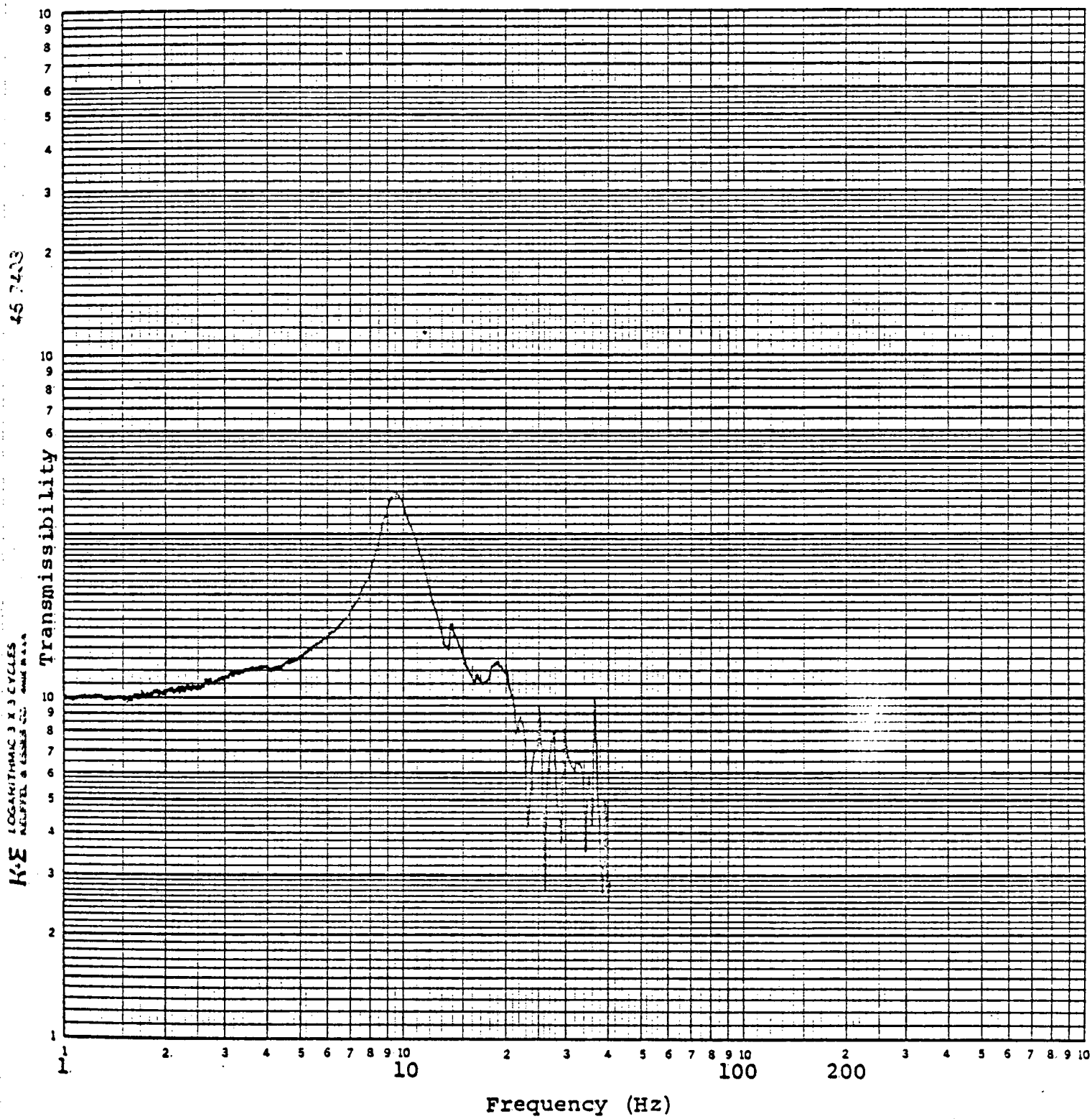
AXIS 5-5

ACCEL. NO. 755÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



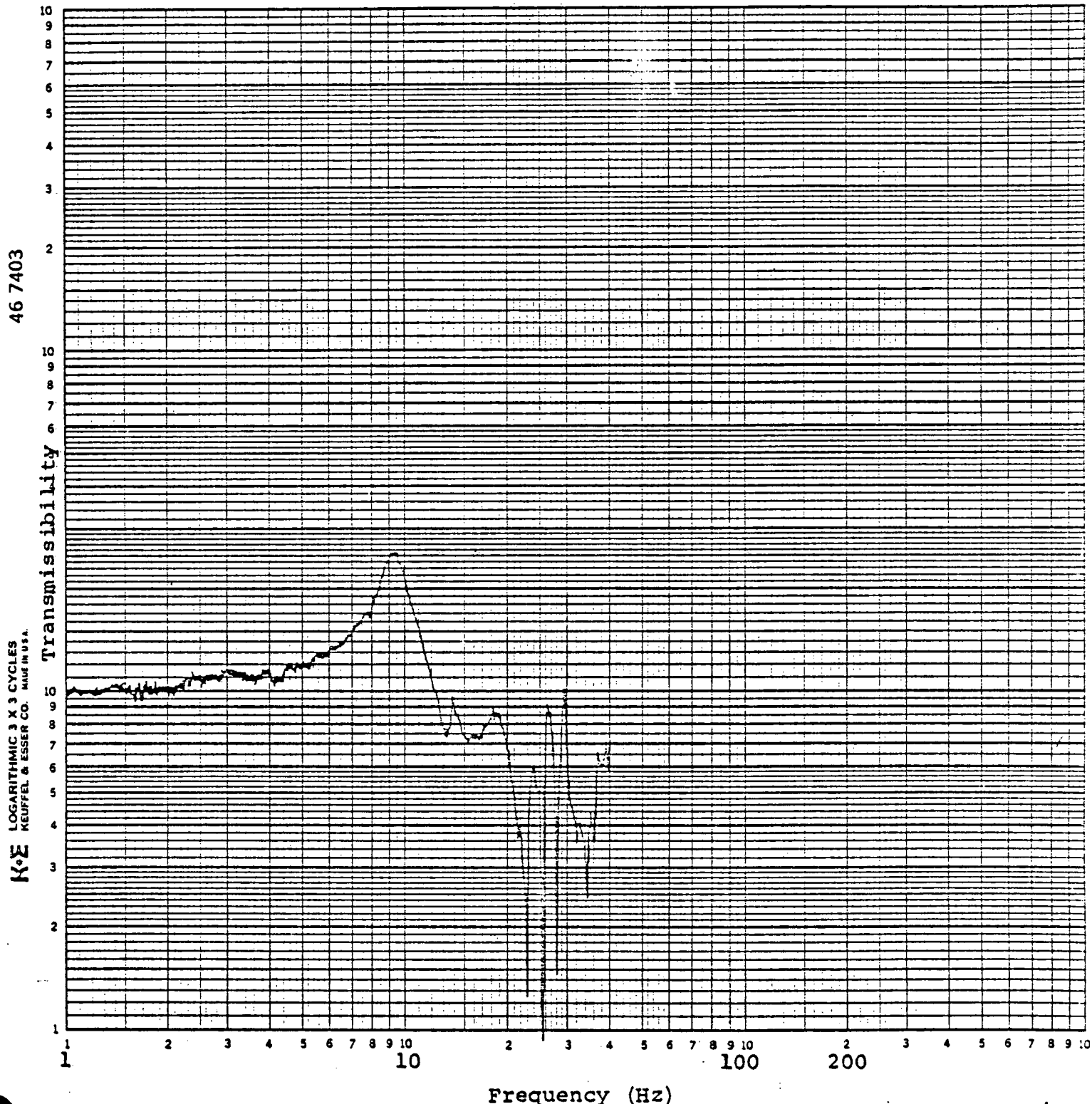
AXIS S-S

ACCEL. NO. 855 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



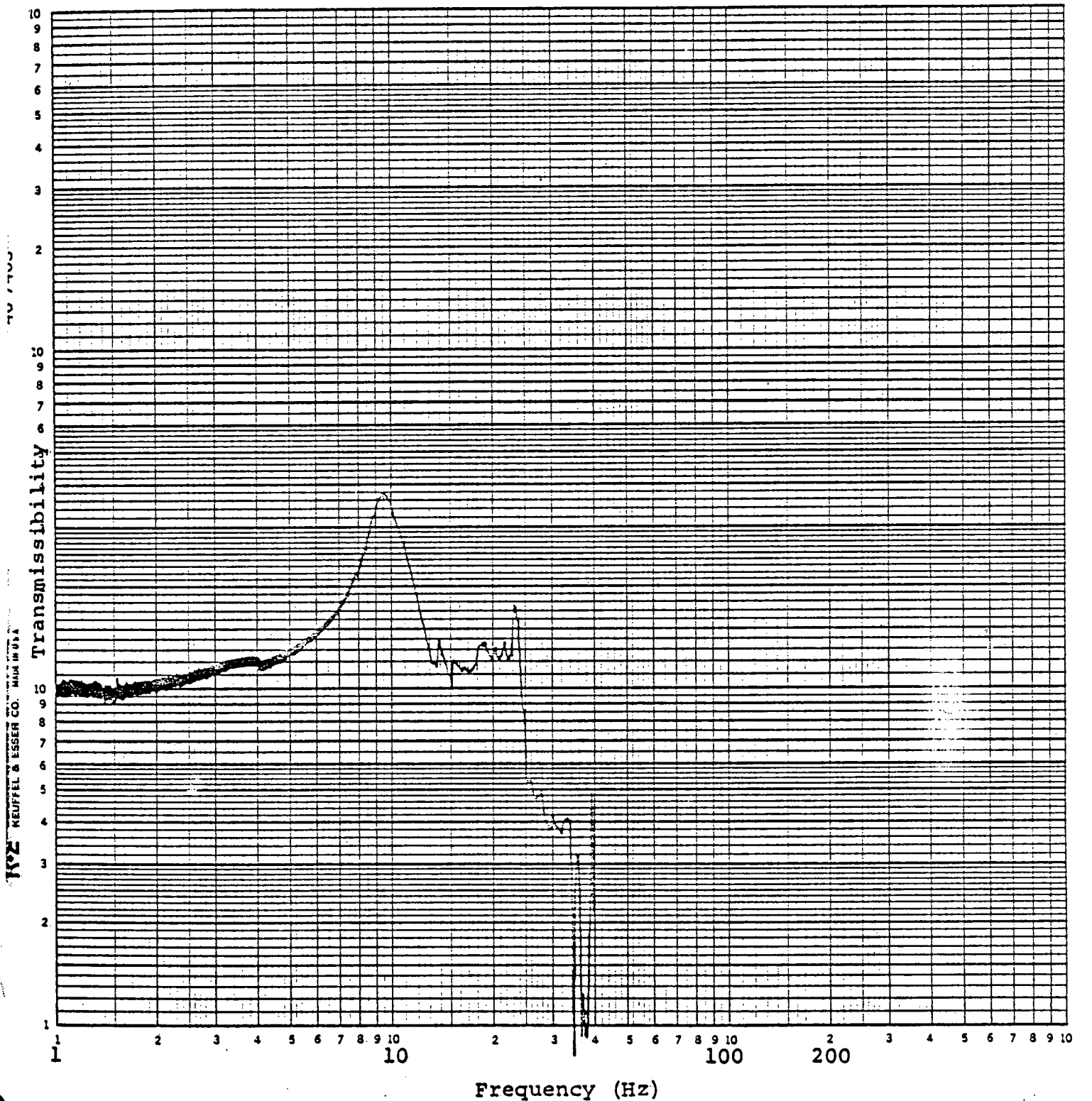
AXIS 5-5

ACCEL. NO. 955 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



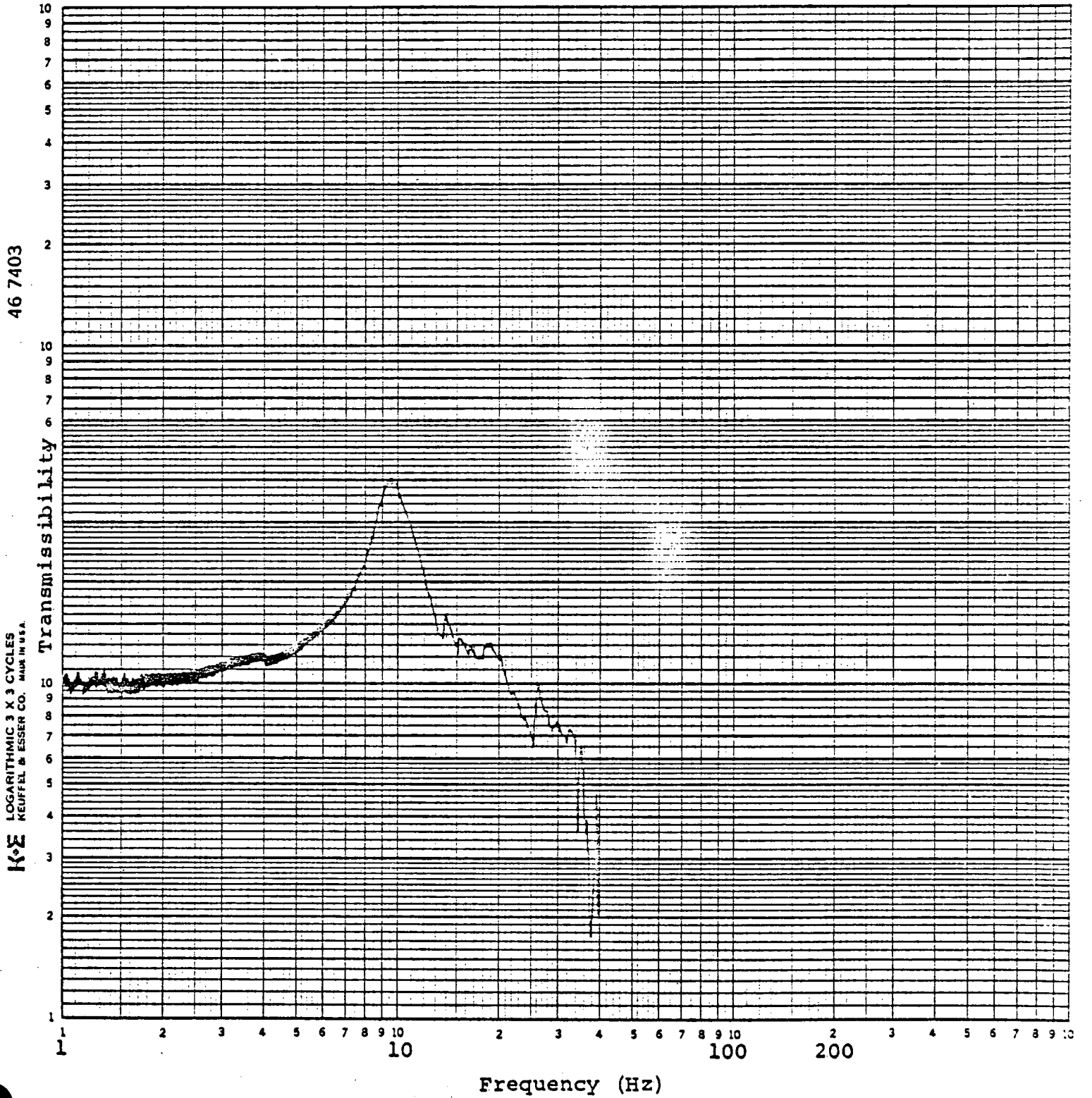
AXIS S-S

ACCEL. NO 1155 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



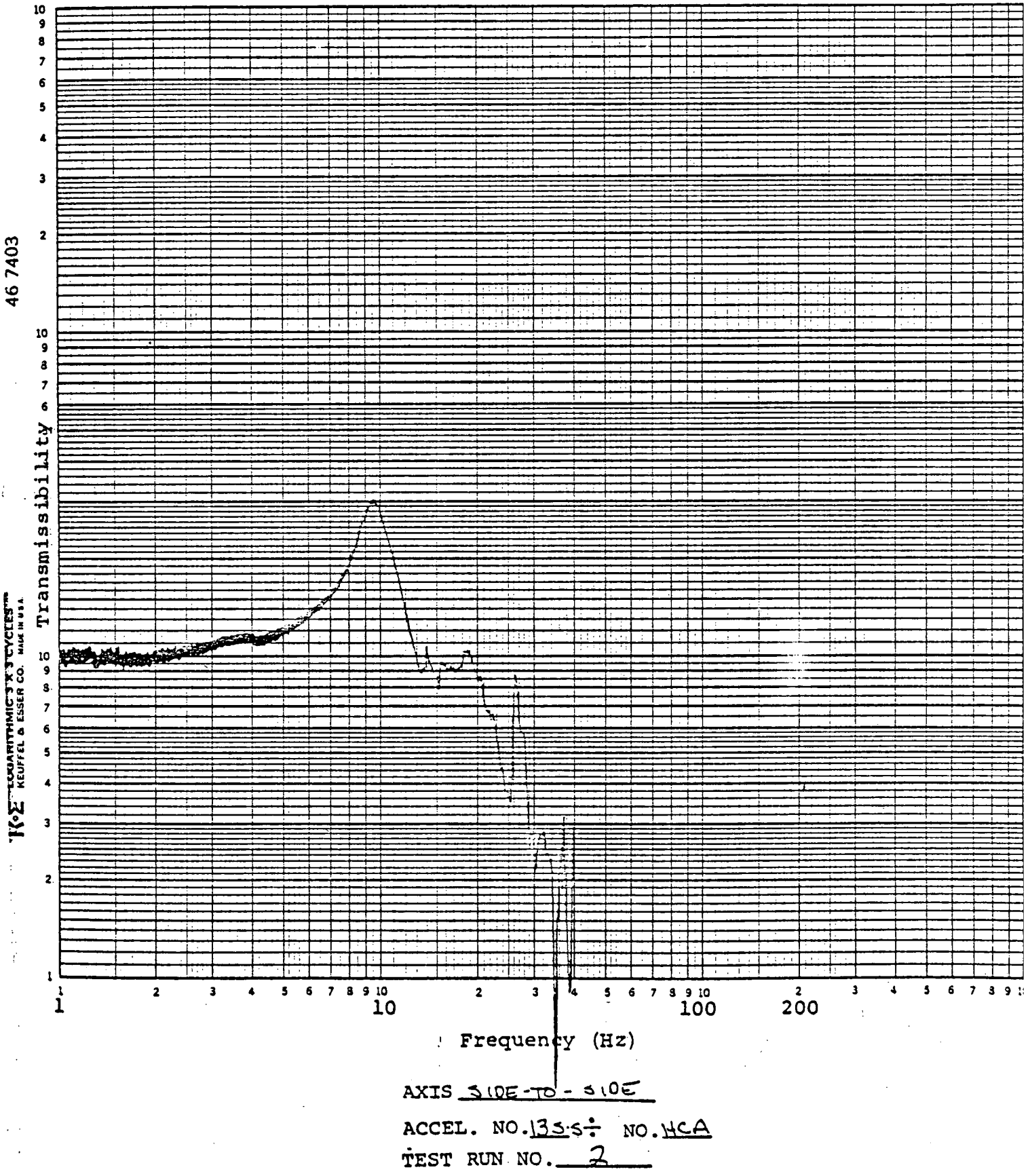
AXIS S-S

ACCEL. NO 1255 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



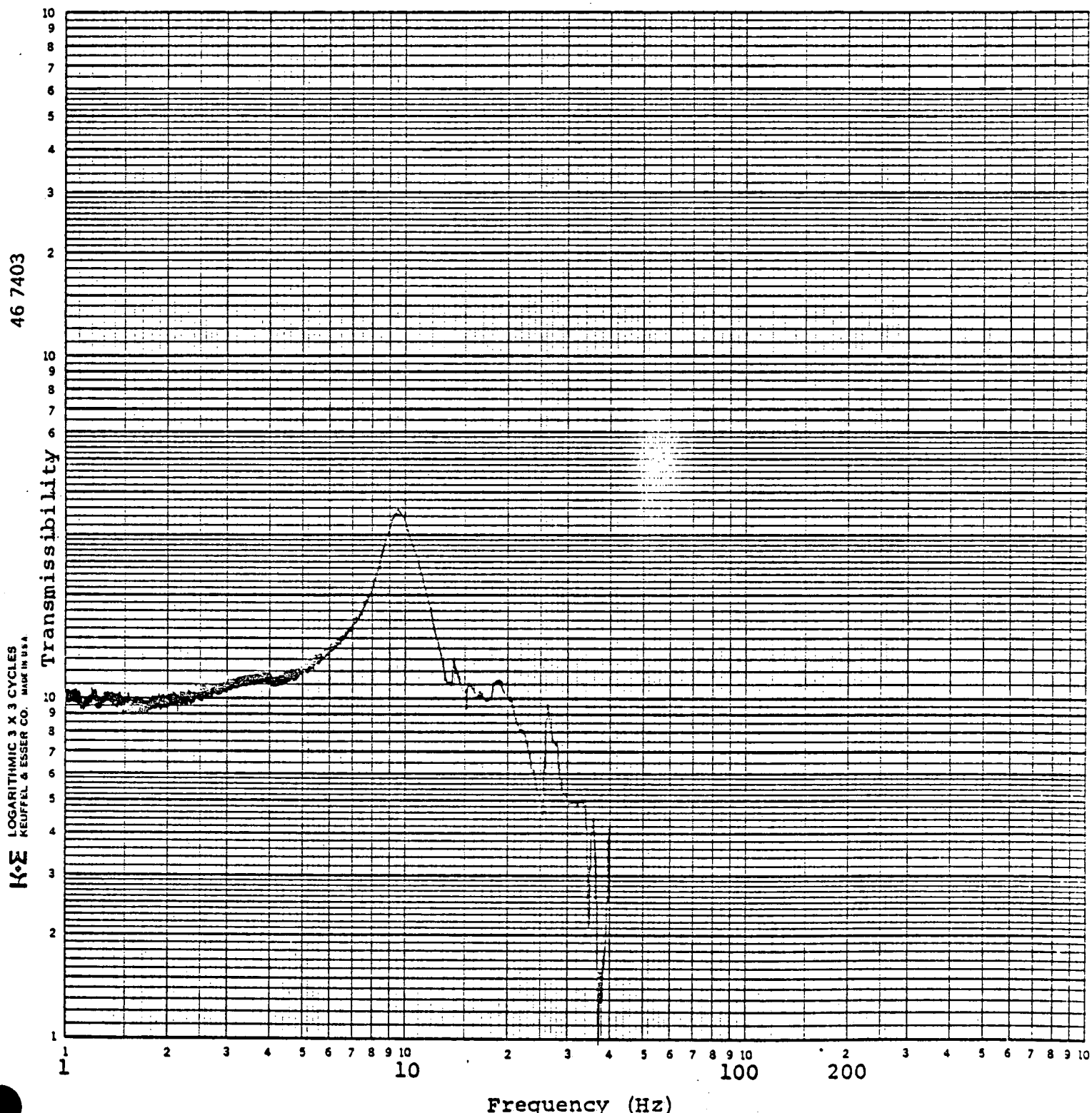
AXIS SIDE-TO-SIDE

ACCEL. NO. 1335 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



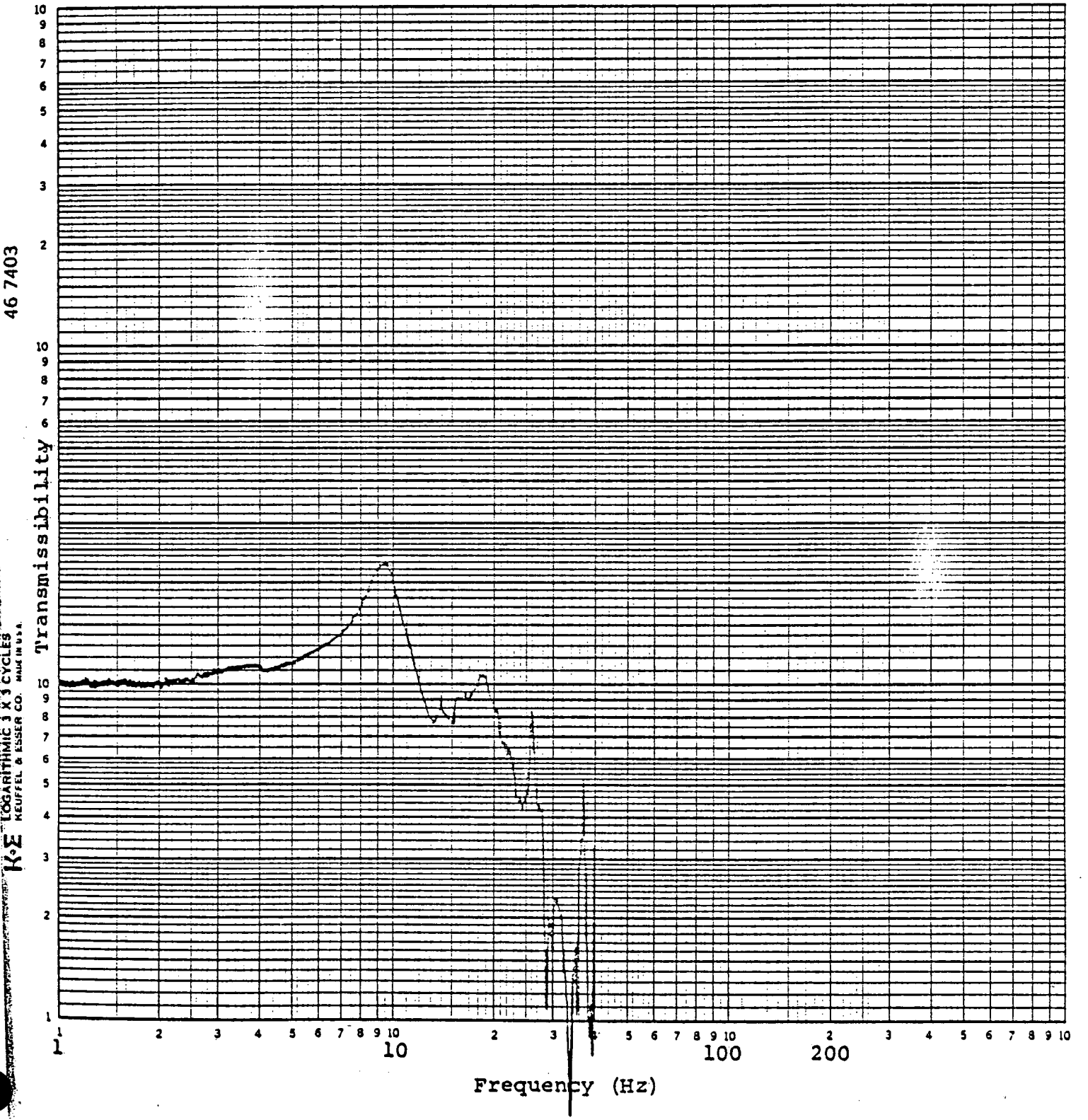
AXIS SIDE-TO-SIDE

ACCEL. NO. 1755 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



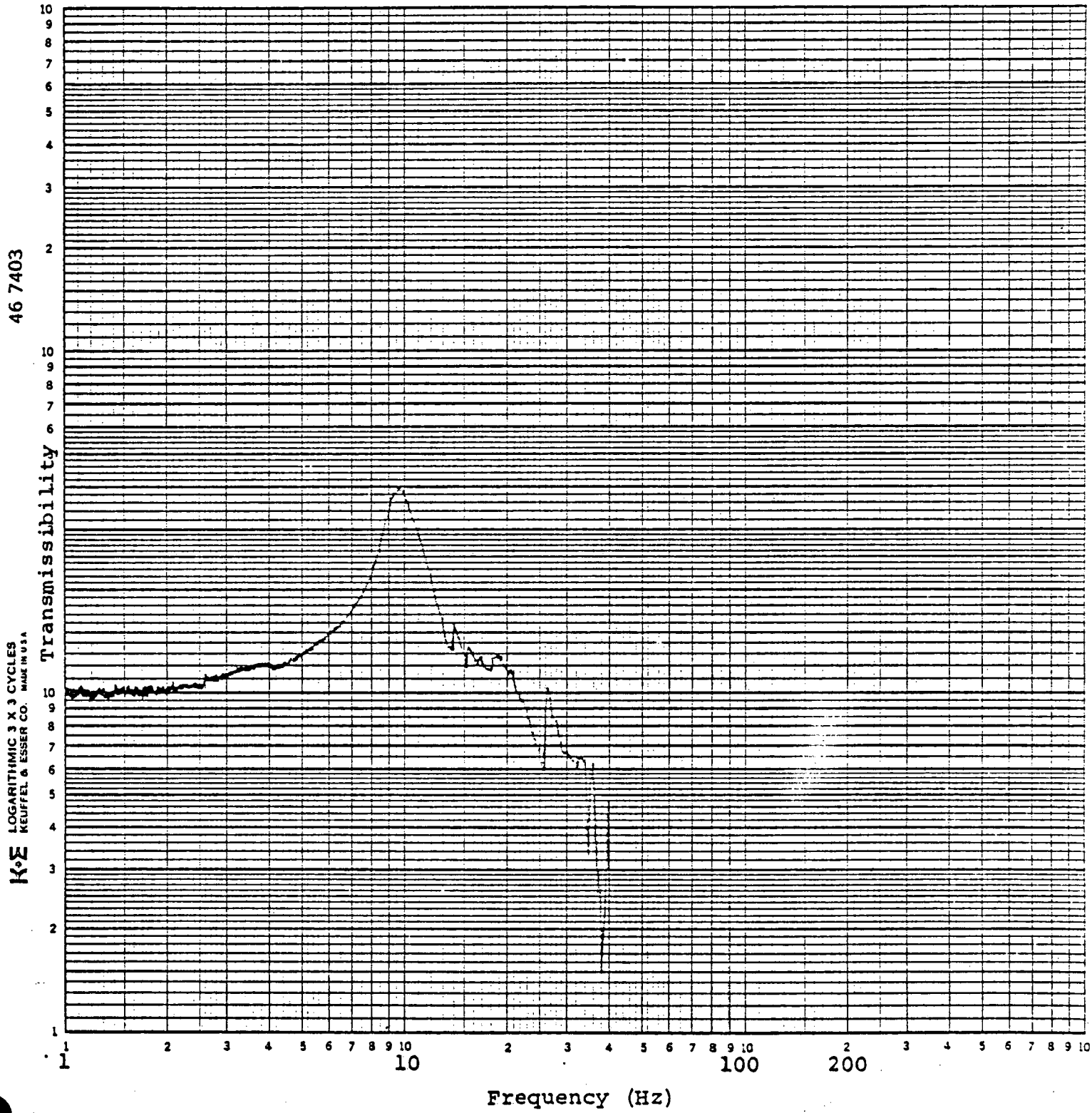
AXIS SIDE-TO-SIDE

ACCEL. NO. 1855 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



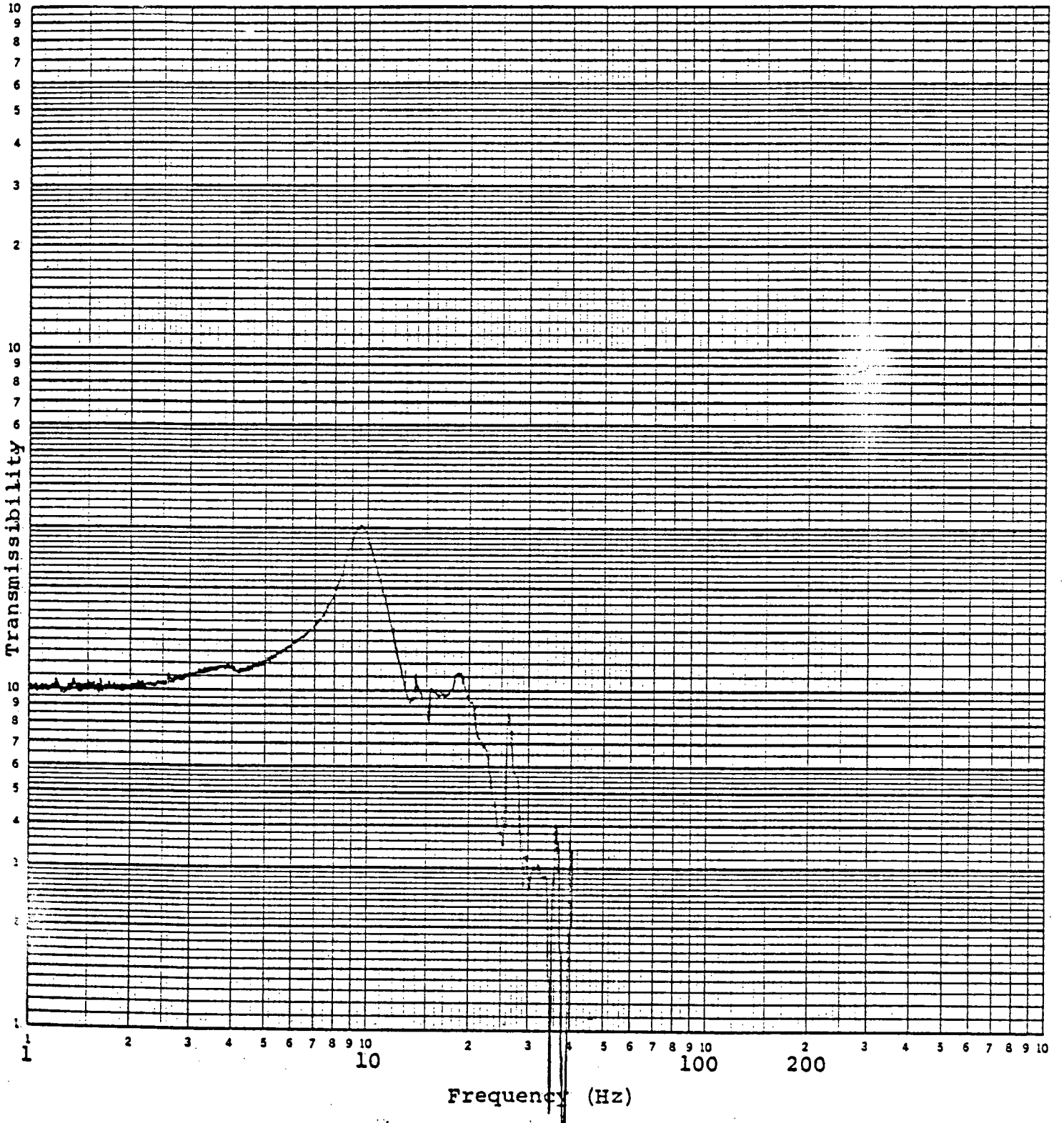
AXIS SIDE-TO-SIDE

ACCEL. NO. 195 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



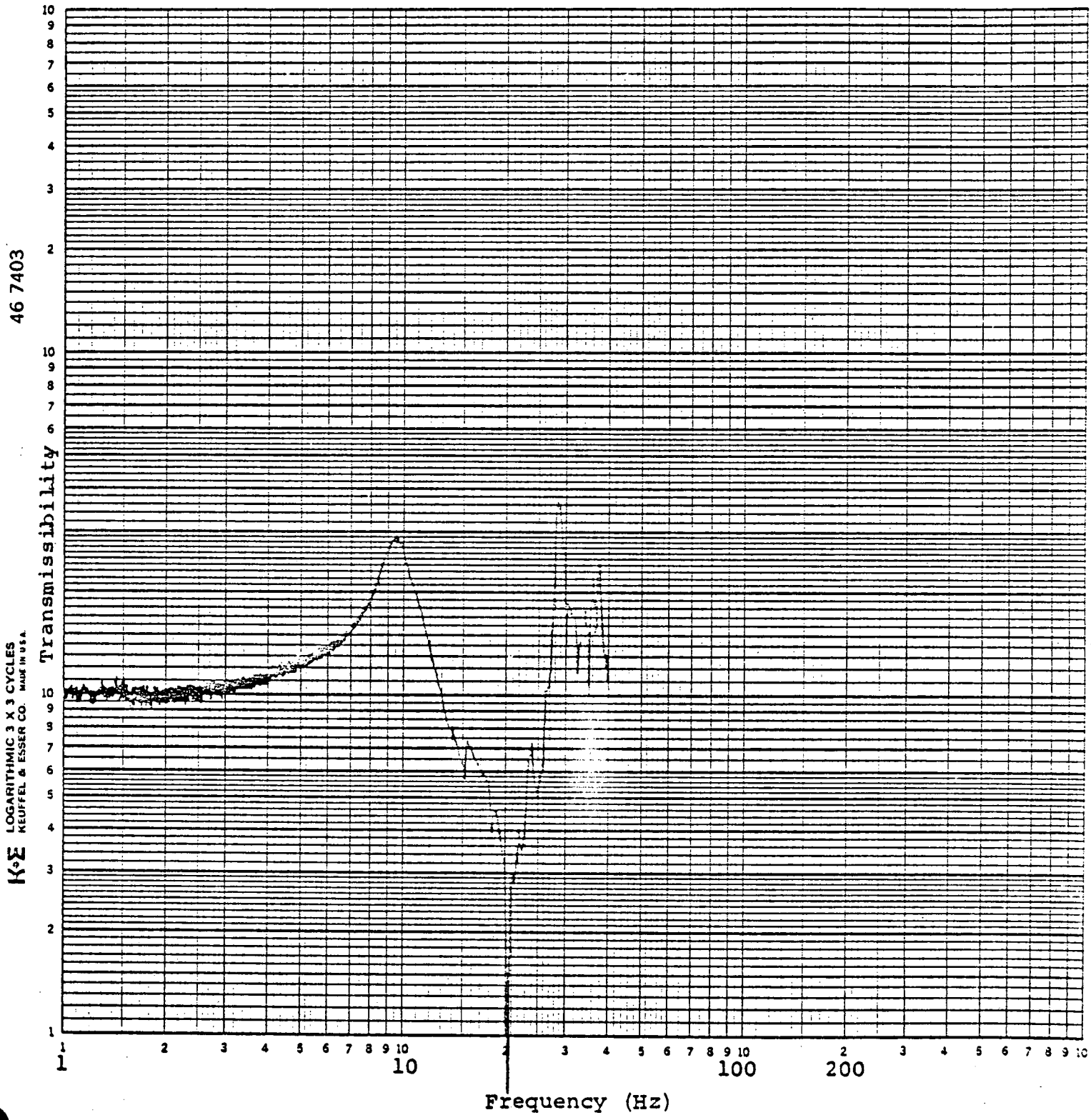
AXIS SIDE-TO-SIDE

ACCEL. NO. 2055 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



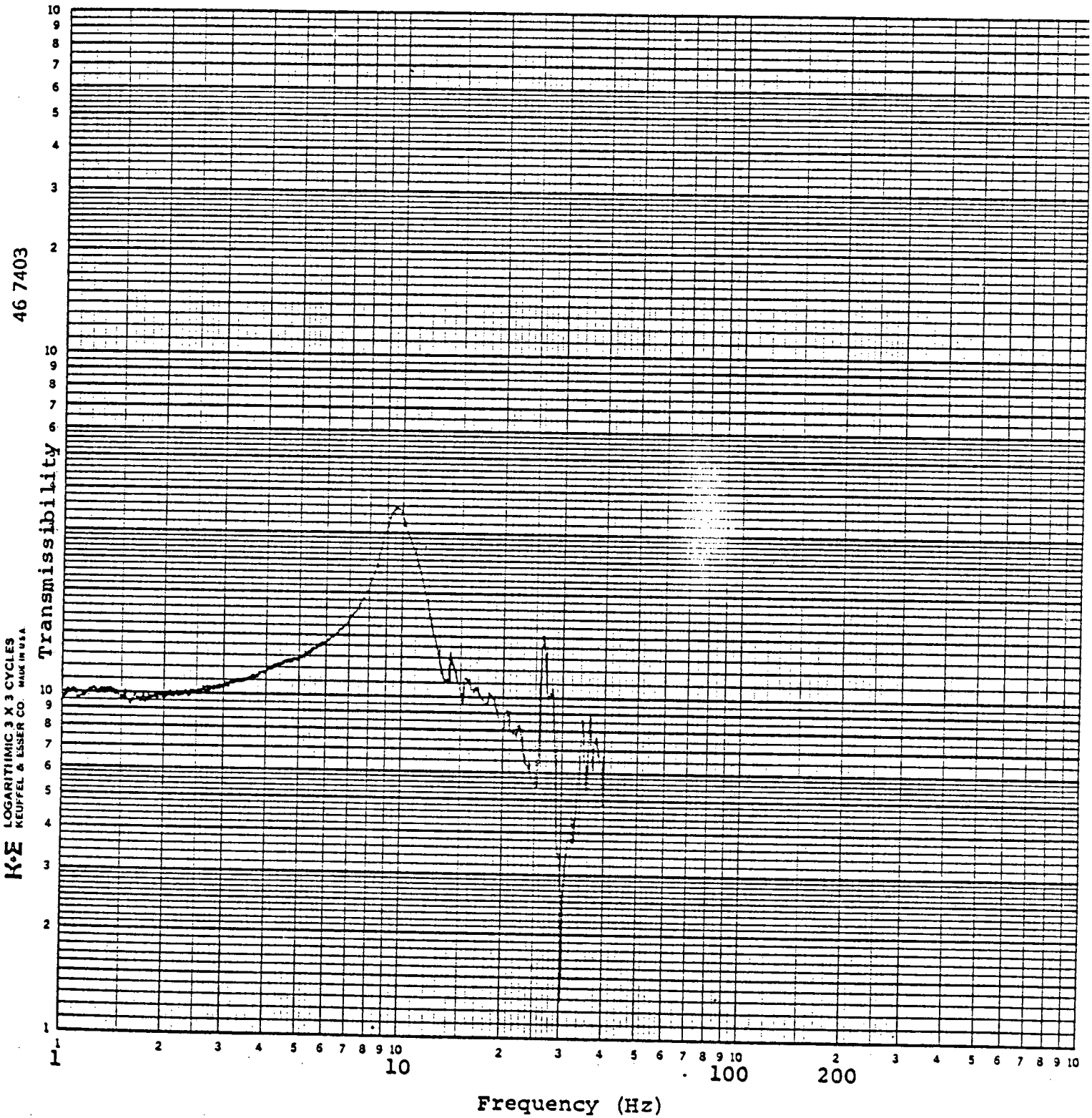
AXIS SIDE-TO-SIDE

ACCEL. NO 2255 ÷ NO. 4CA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



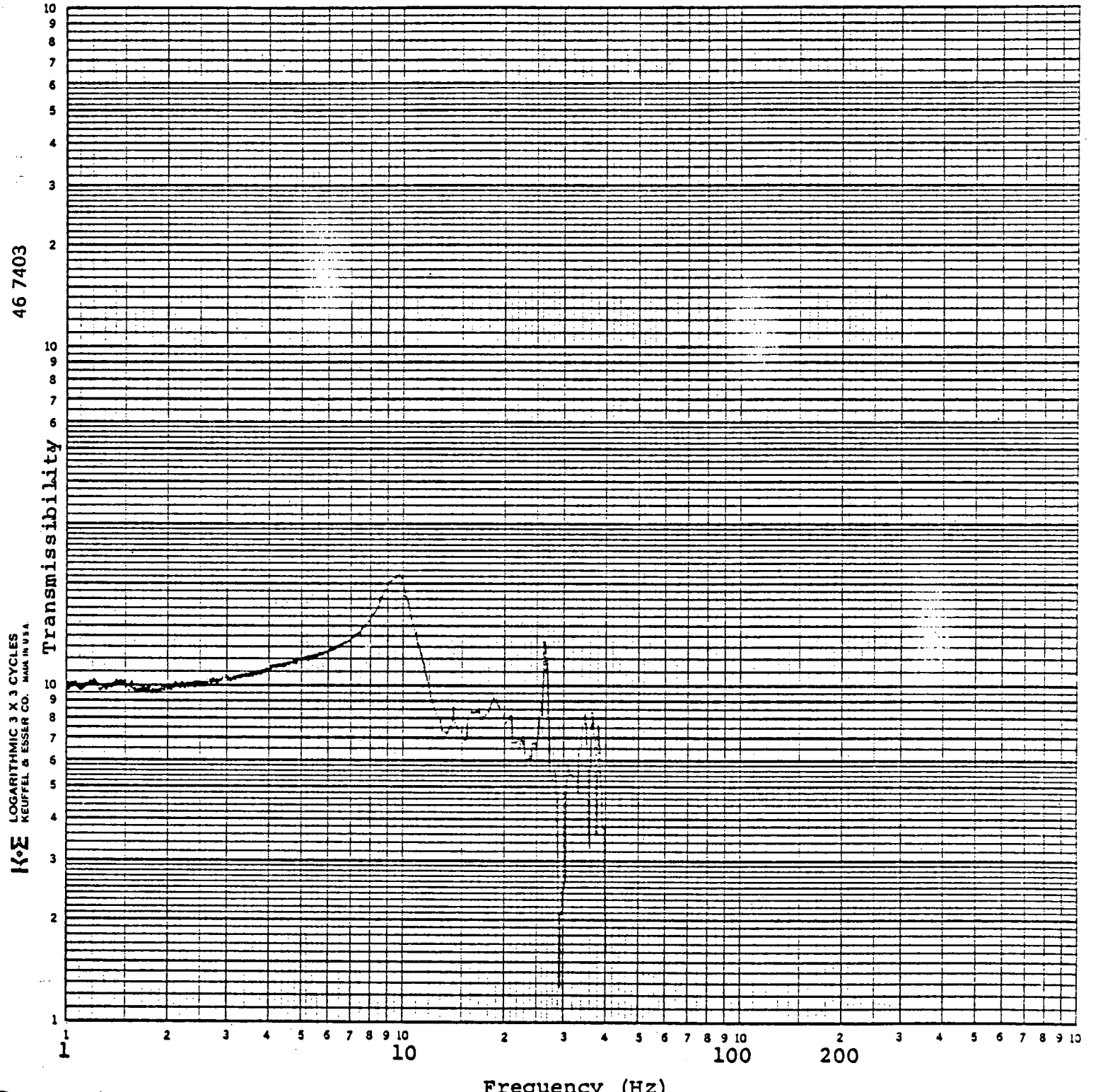
AXIS SIDE-TO-SIDE

ACCEL. NO. 2455 NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



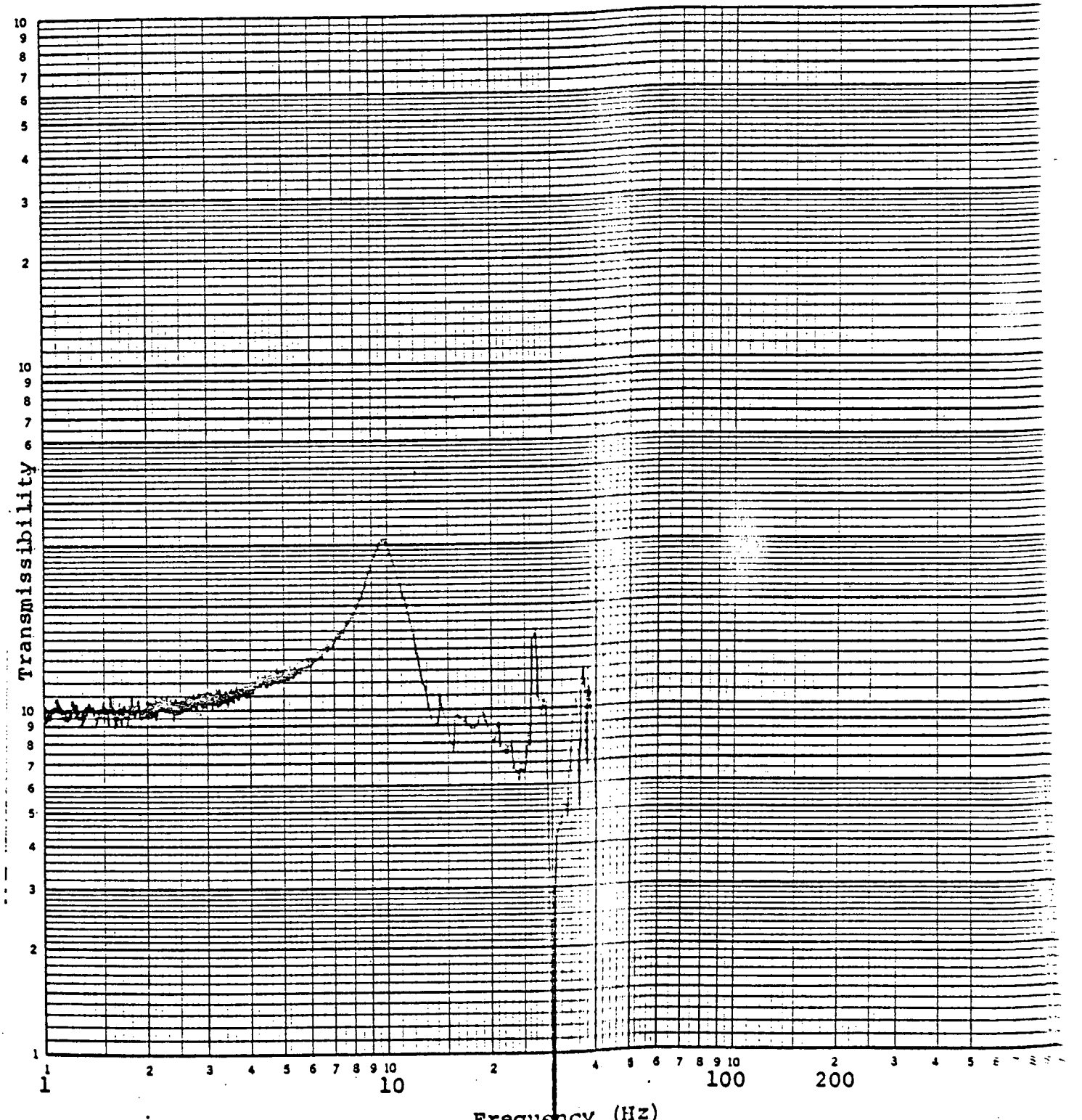
AXIS SIDE-TO-SIDE

ACCEL. NO. 265 S÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



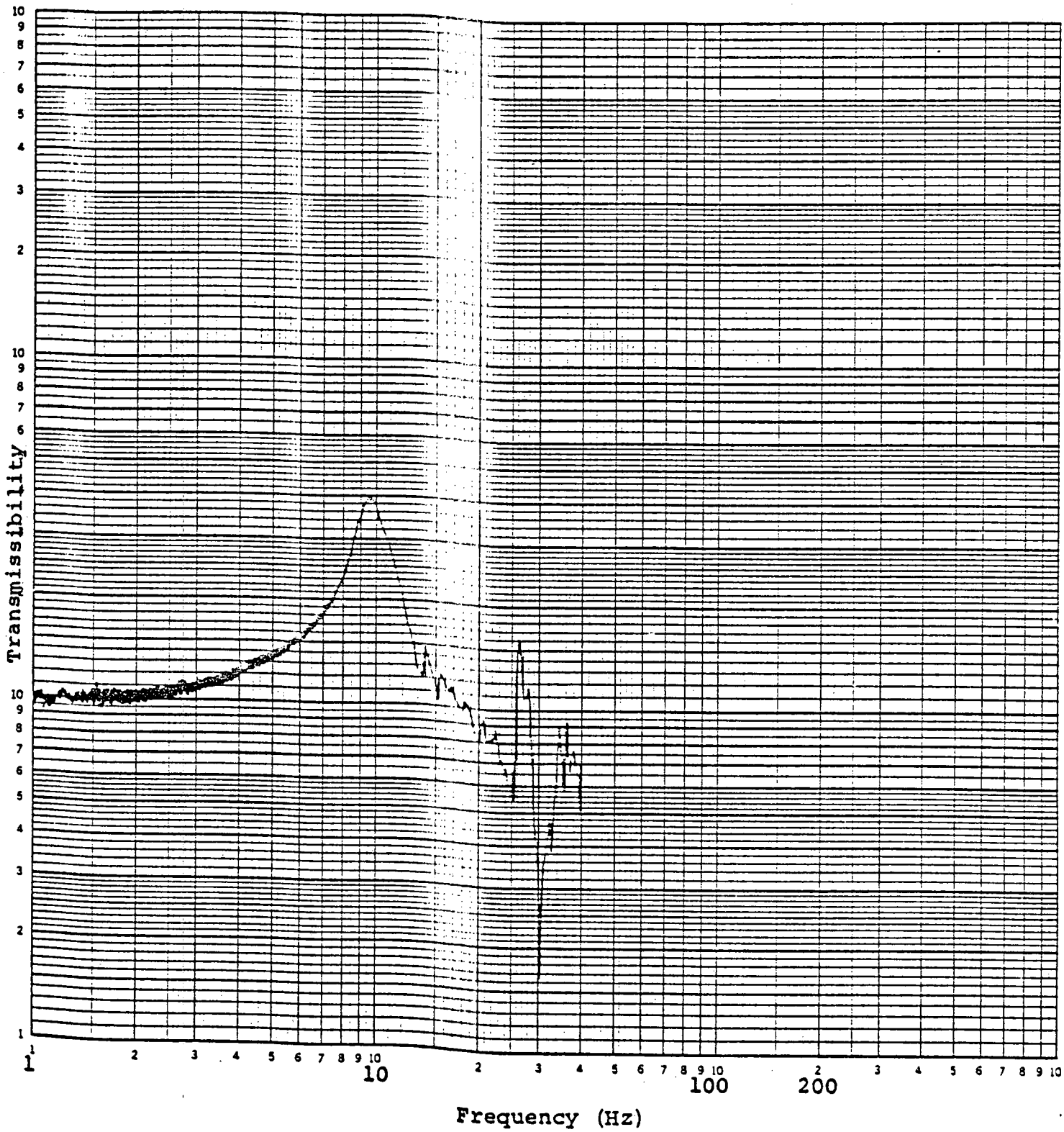
AXIS SIDE-TO-SIDE

ACCEL. NO. 285 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



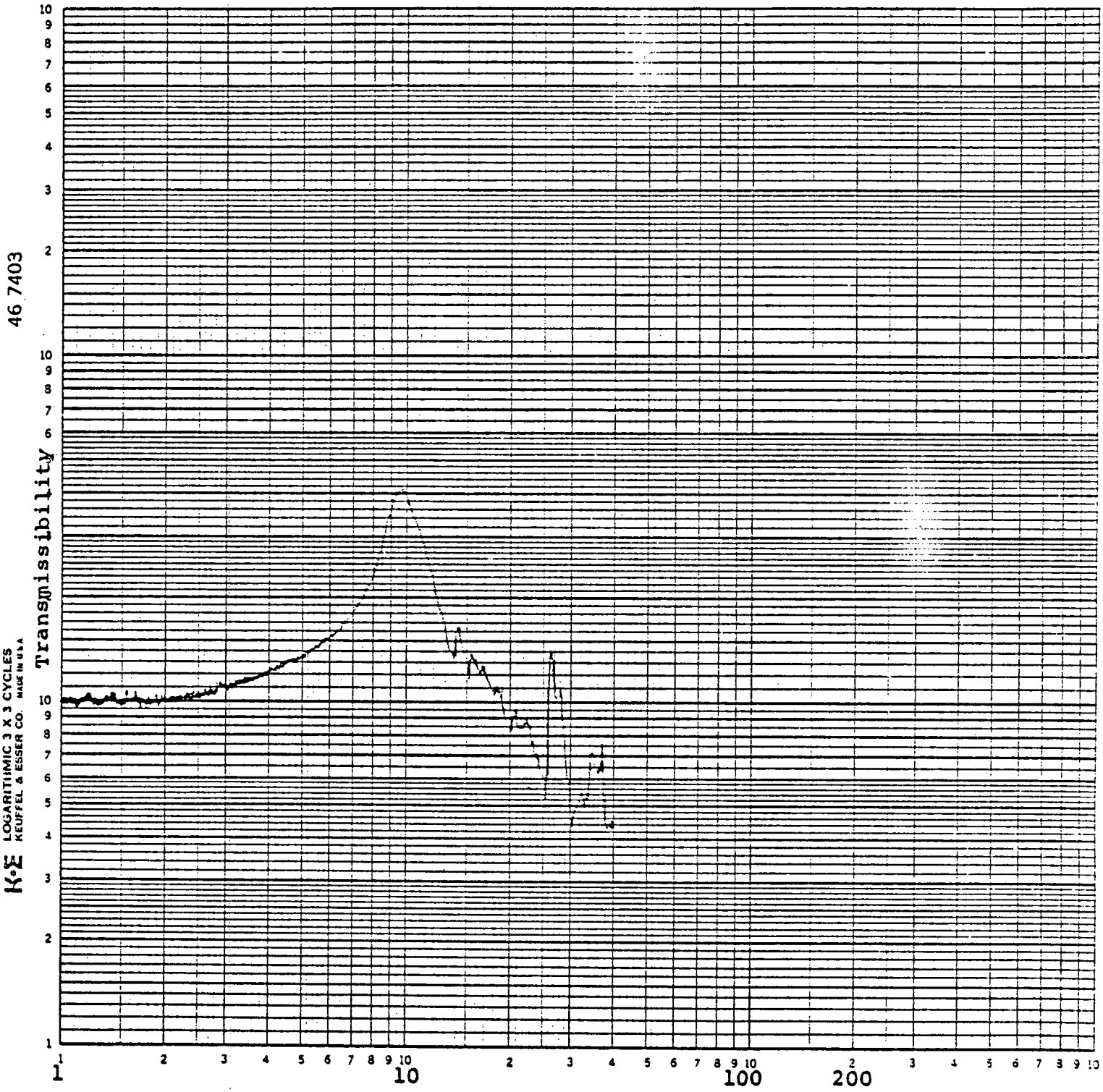
AXIS SIDE-TO-SIDE

ACCEL. NO. 323.5 NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



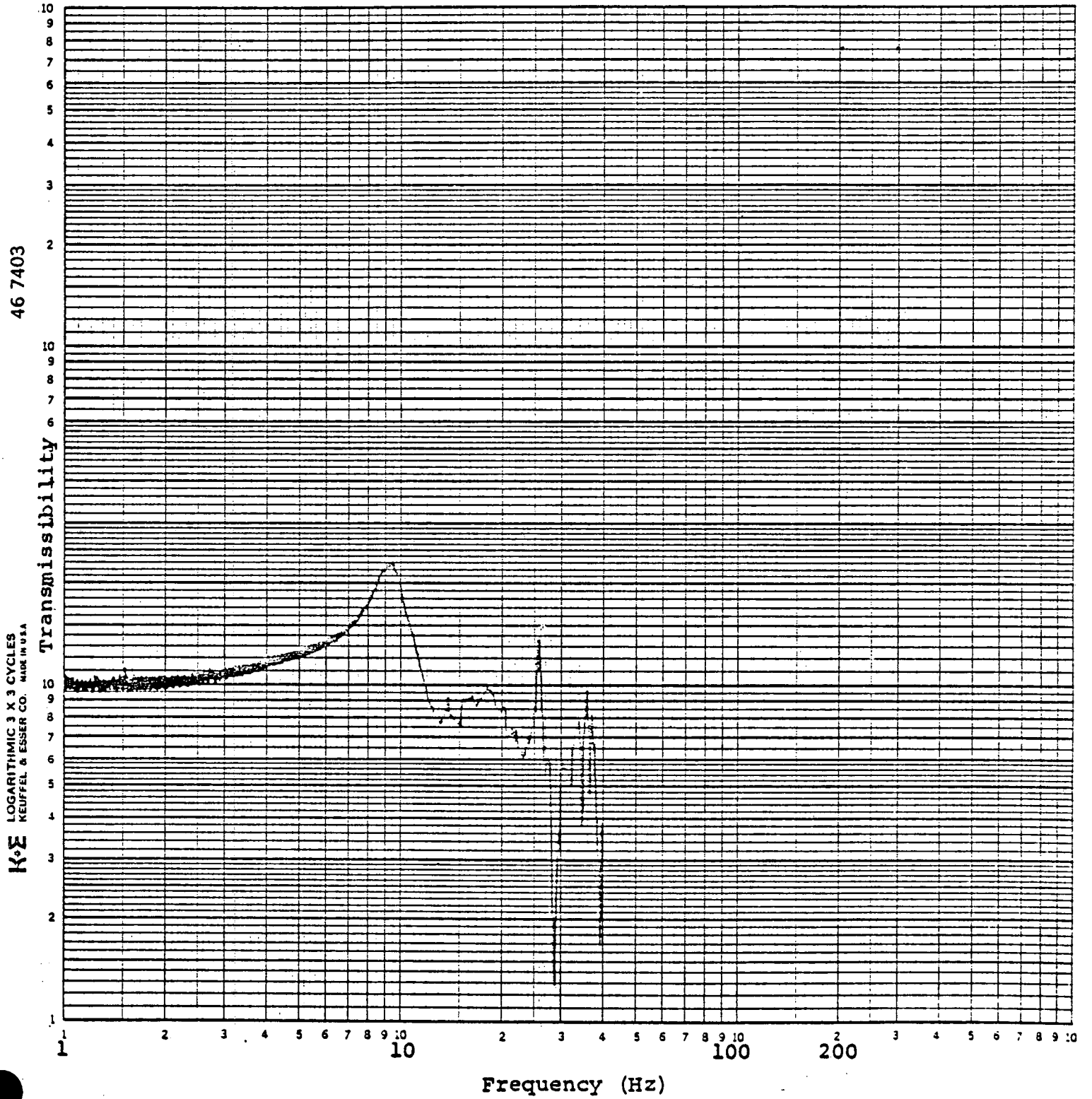
AXIS SIDE-TO-SIDE

ACCEL. NO. 305-S÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



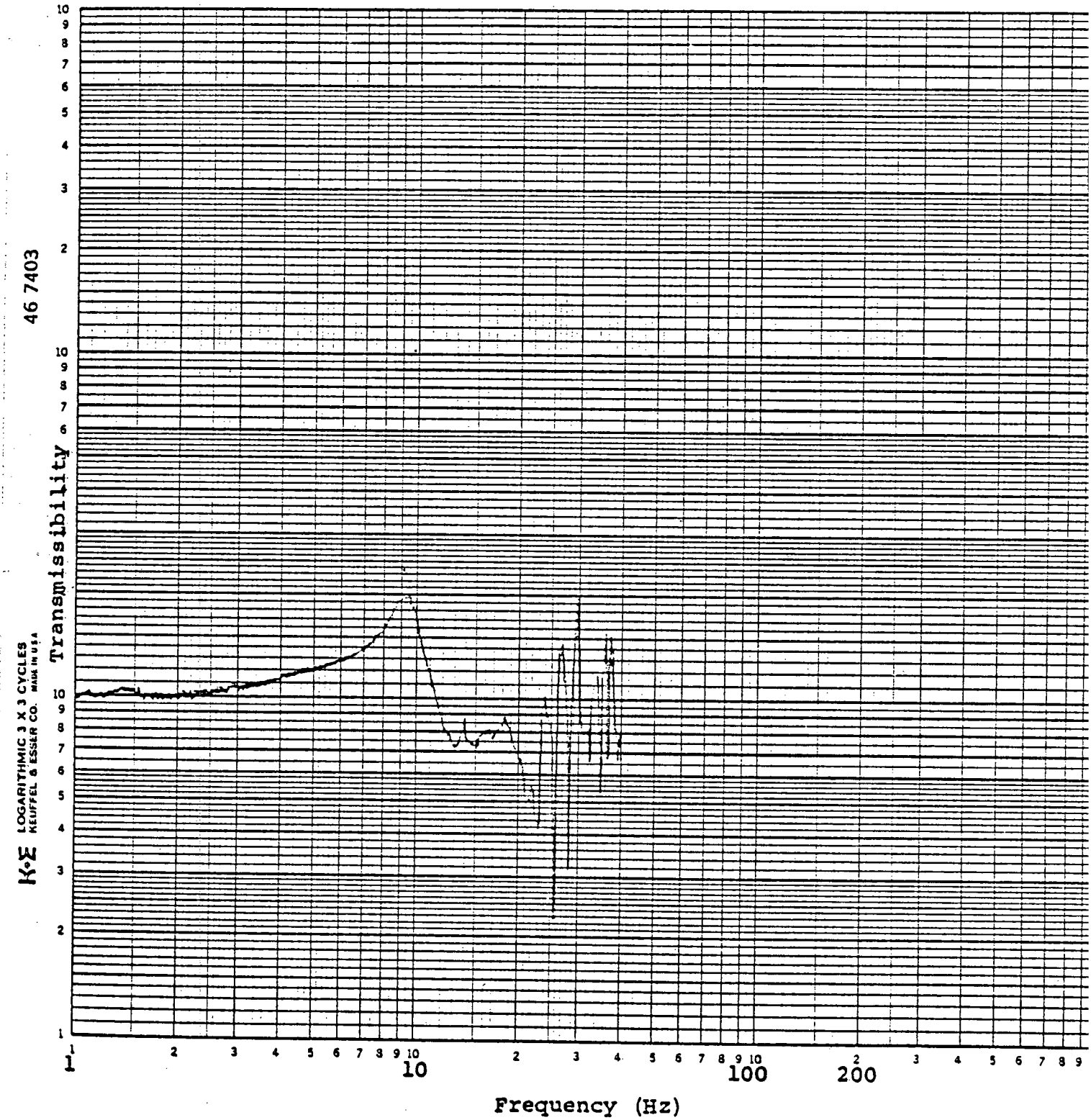
AXIS SINE-TO-SIDE

ACCEL. NO. 335 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



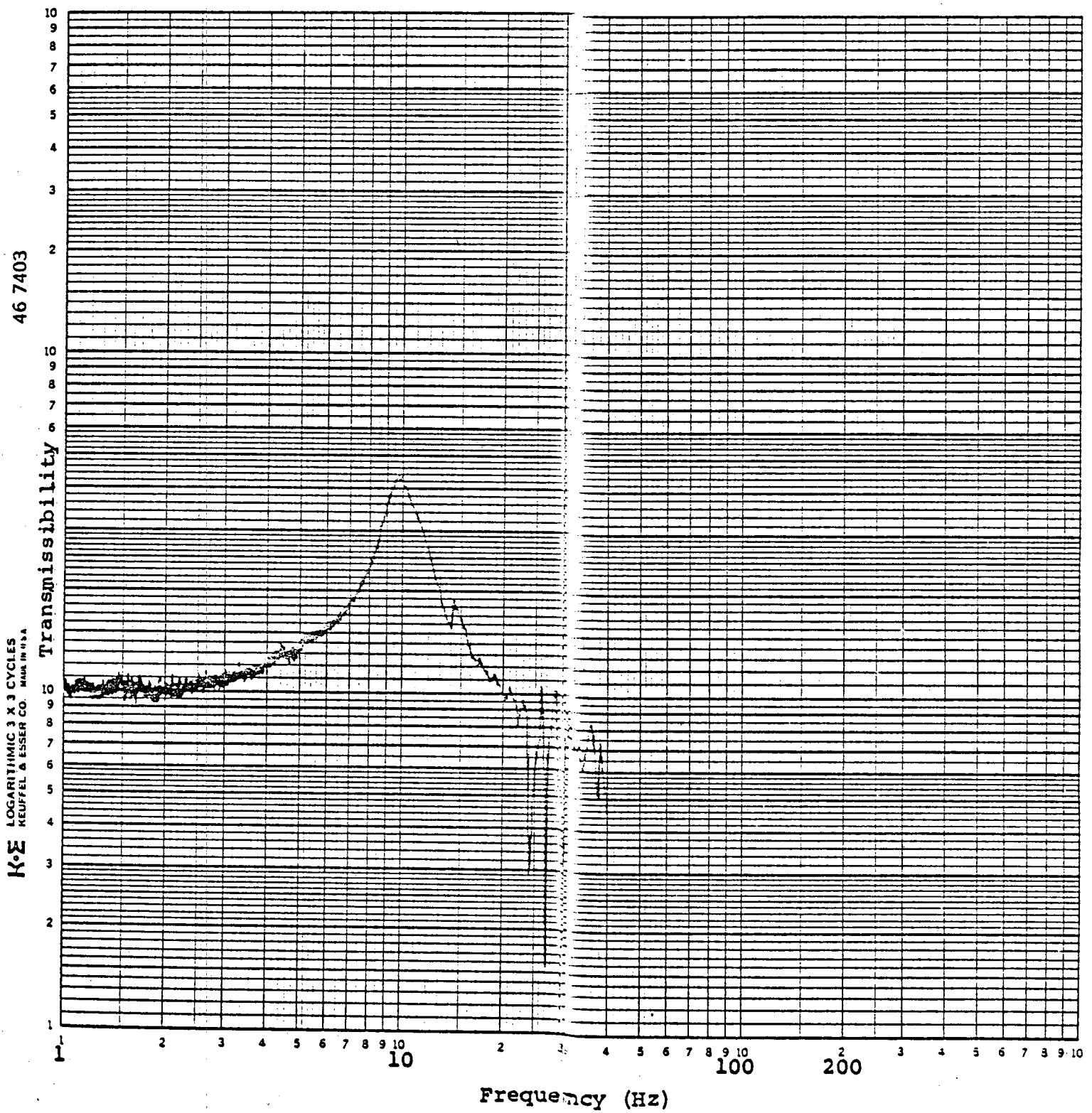
AXIS SIDE-TO-SIDE

ACCEL. NO 355-5 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



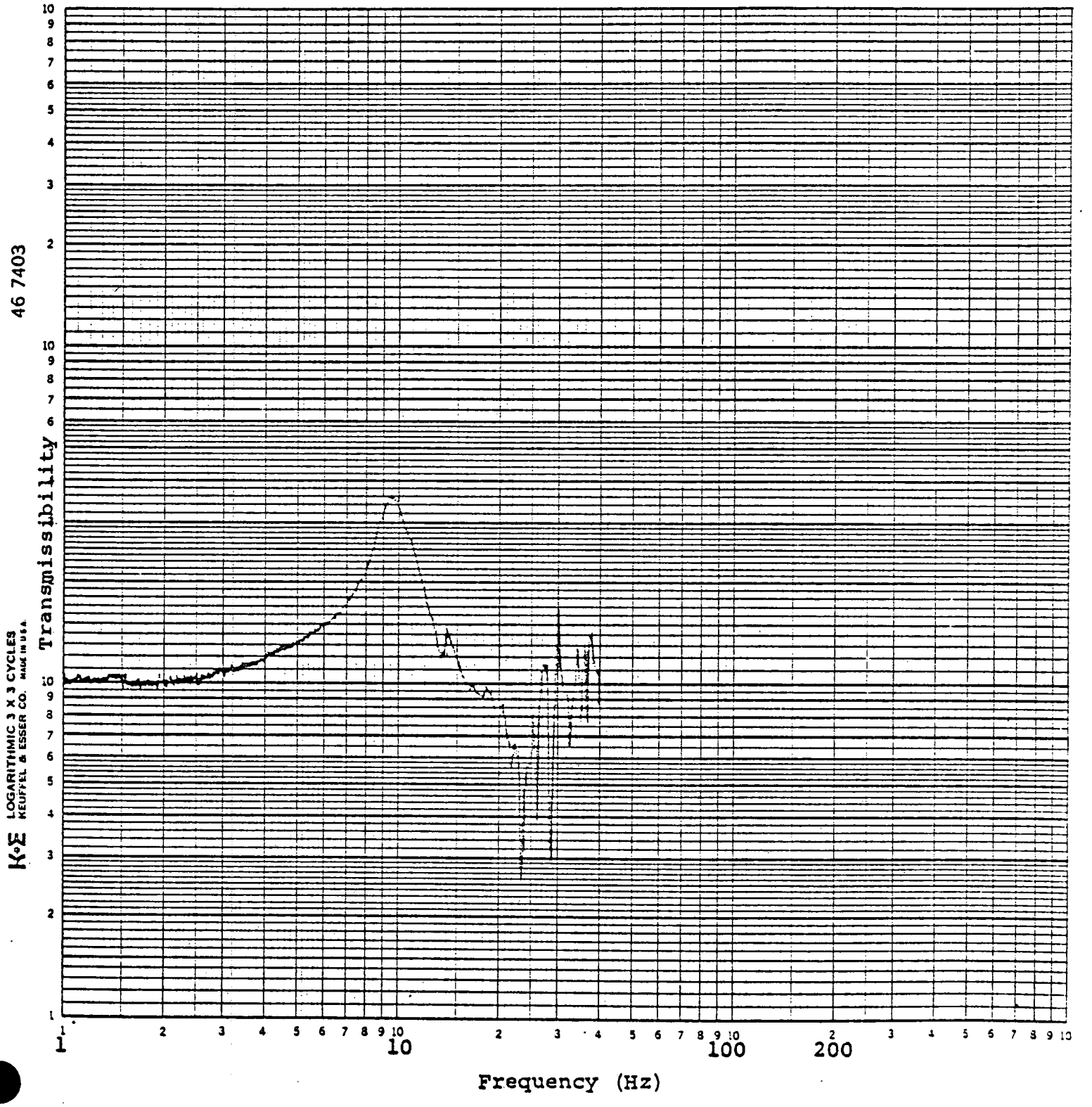
AXIS SIDE-TO-SIDE

ACCEL. NO. 3955 NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



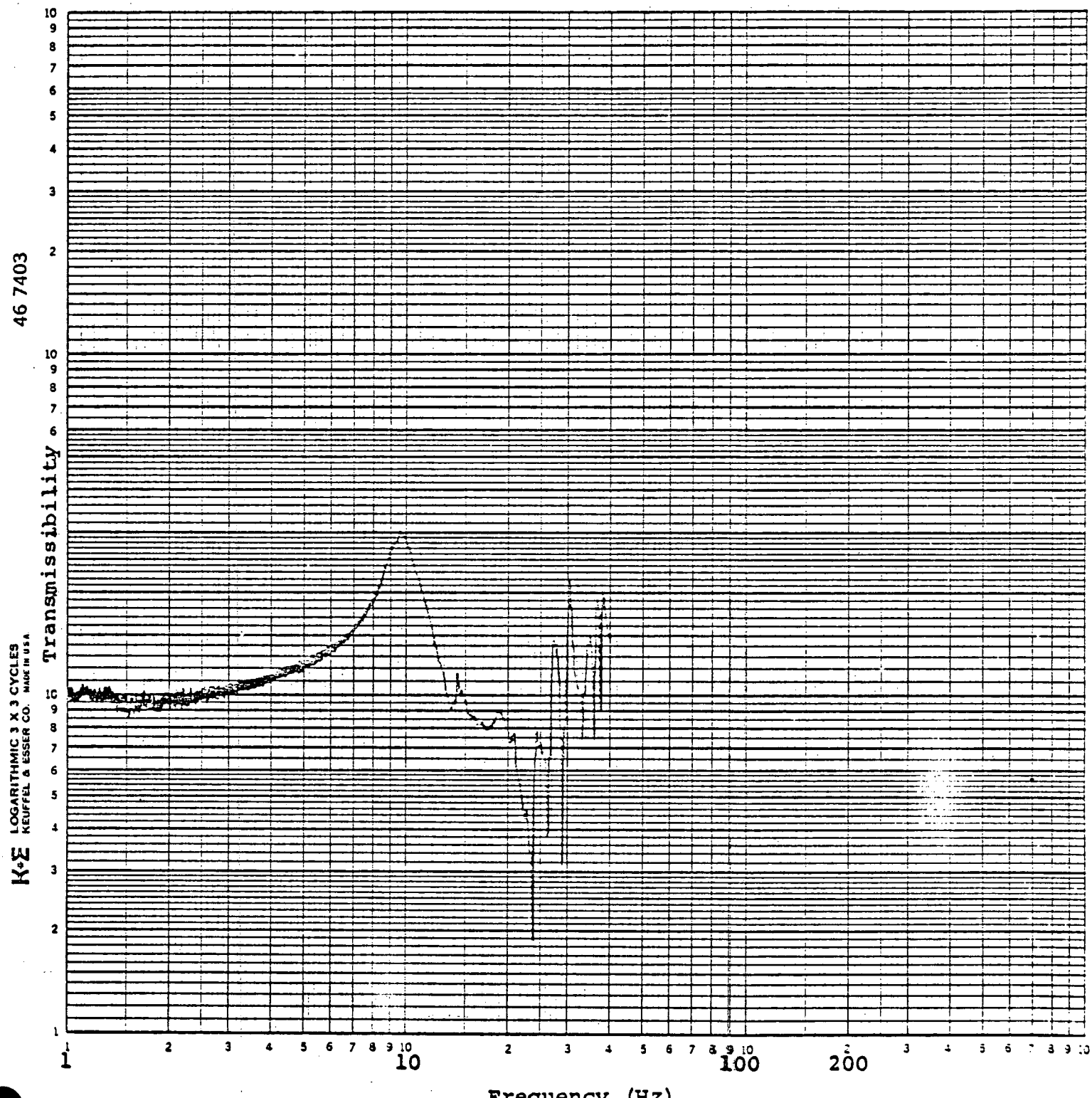
AXIS S10E-TO-S10E

ACCEL. NO. 365-5 NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



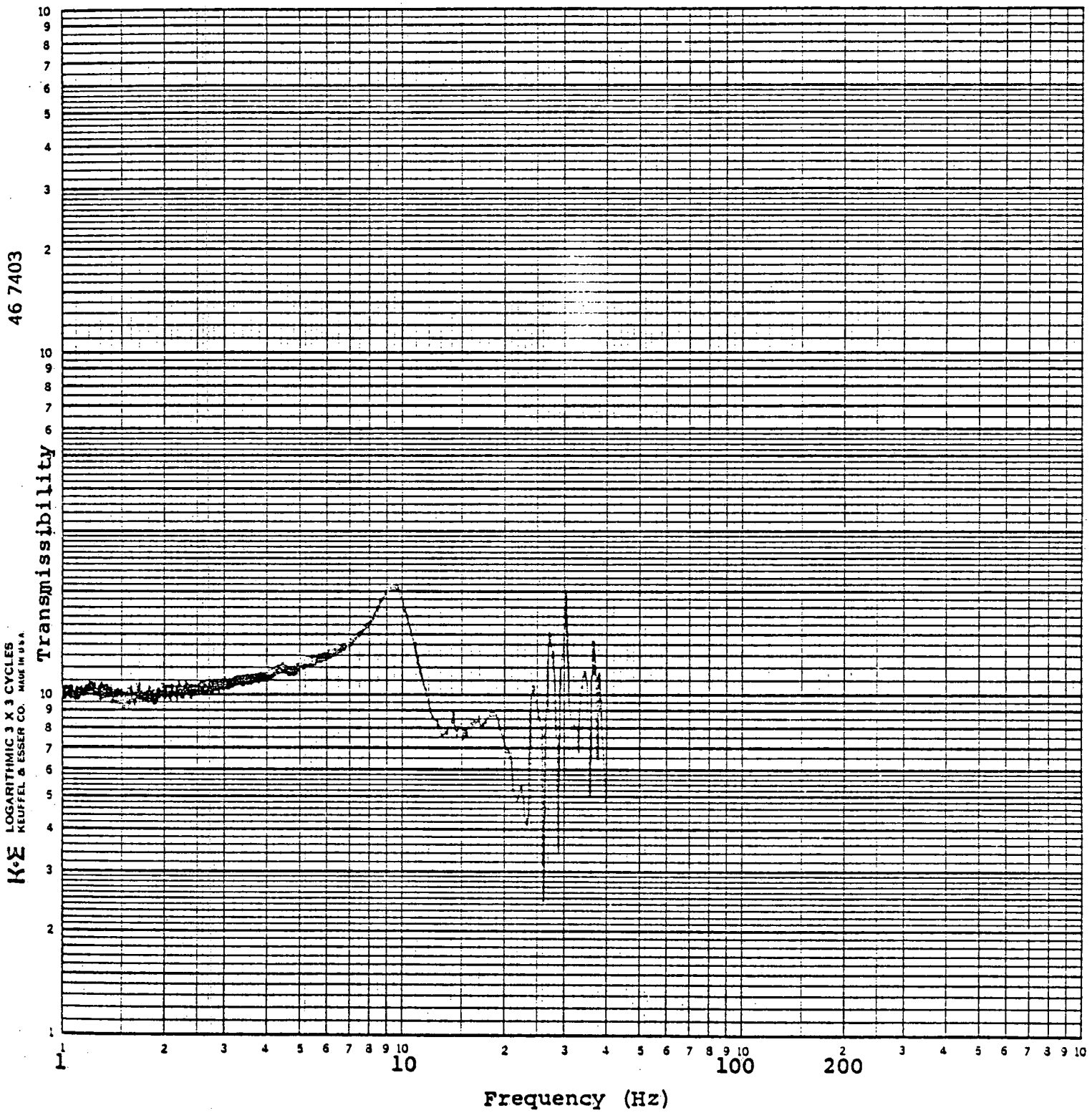
AXIS SIDE-TO-SIDE

ACCEL. NO. 405 S÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



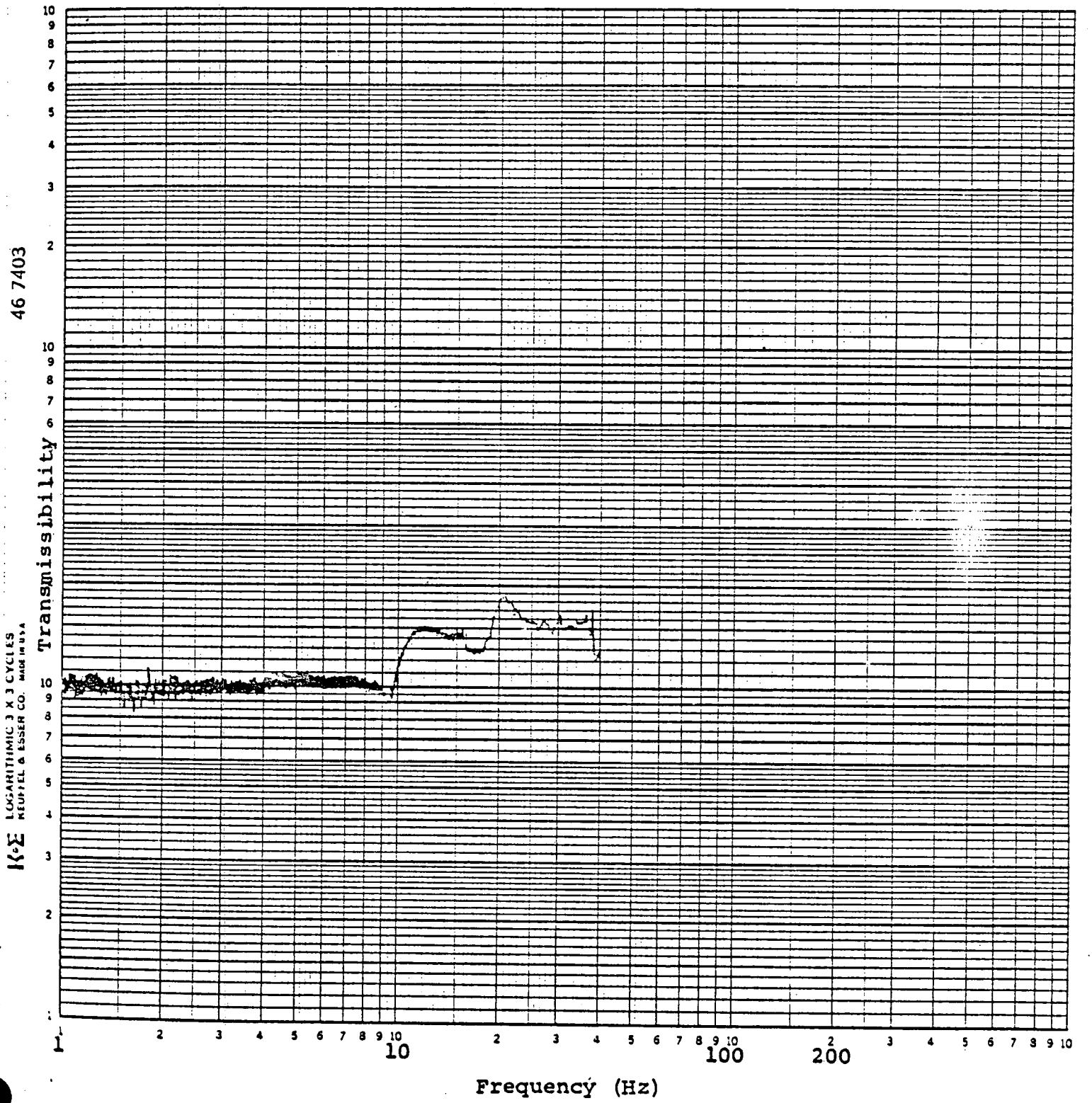
AXIS SIDE-TO-SIDE

ACCEL. NO. 435.5 ± NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



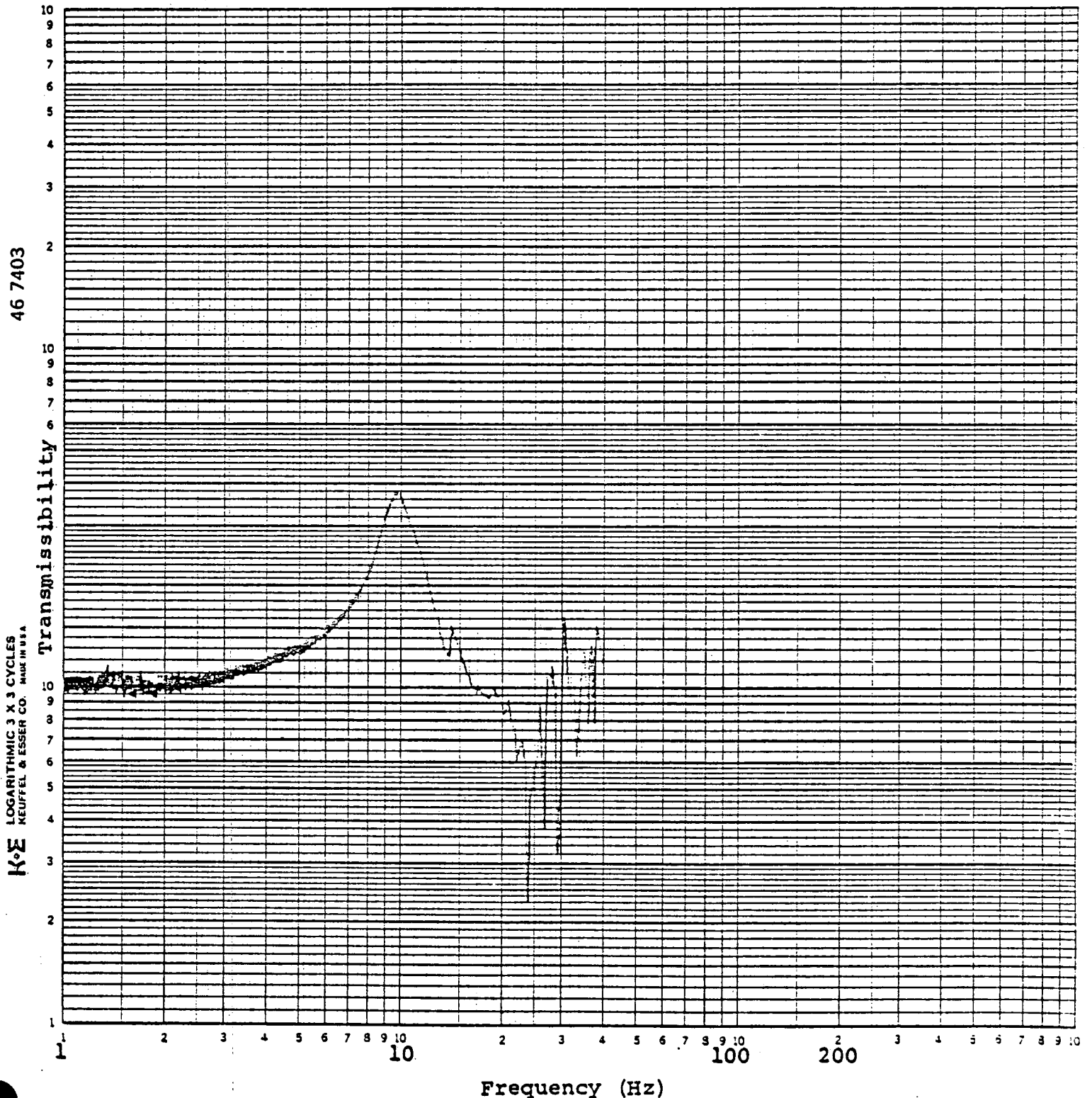
AXIS SIDE-TO-SIDE

ACCEL. NO. 4655 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



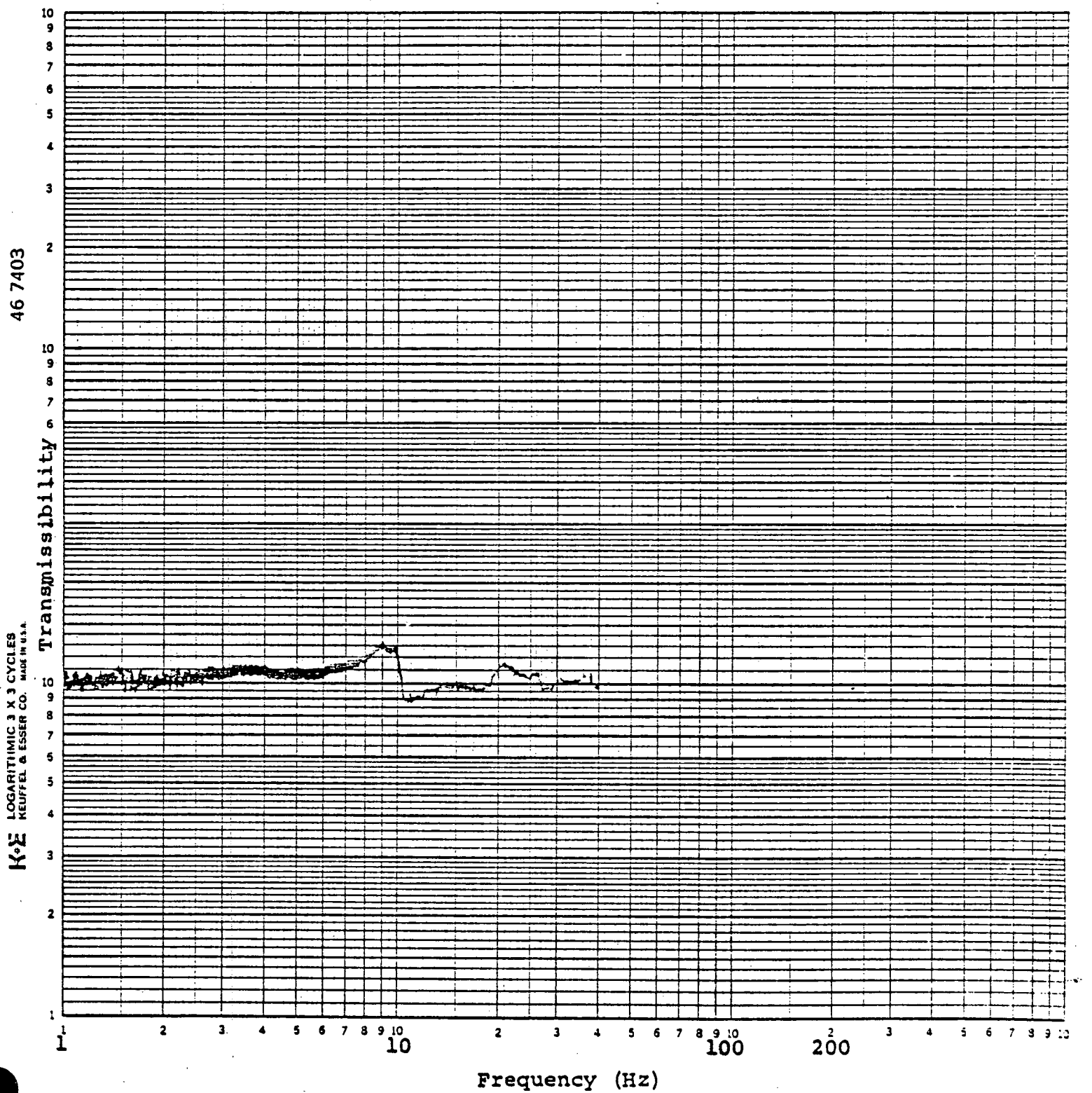
AXIS SIDE-TO-SIDE

ACCEL. NO. 4455 ÷ NO. 4CA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



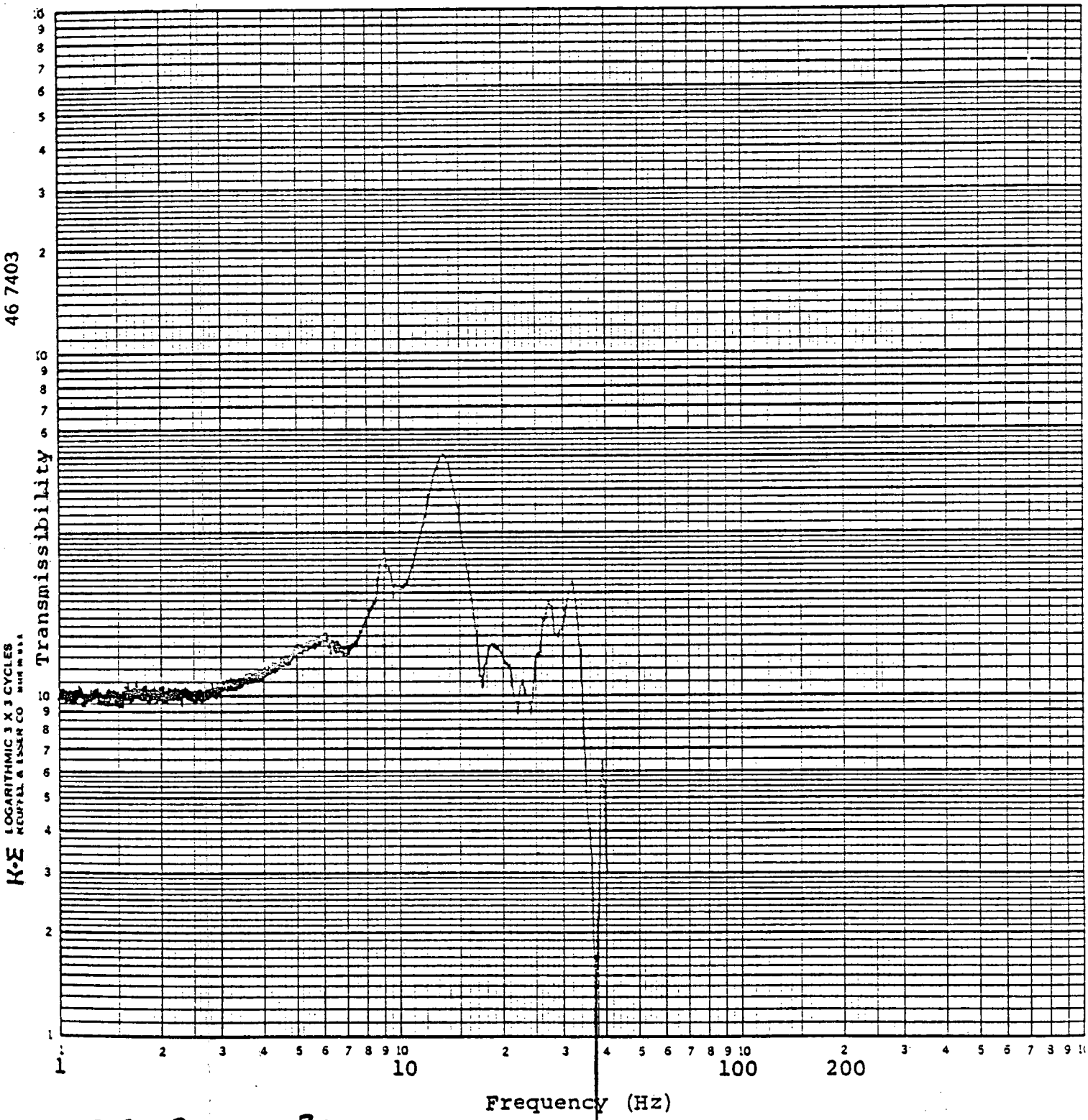
AXIS 510E-TO-510E

ACCEL. NO. 485.5 ÷ NO. HCA

TEST RUN NO. 2

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



F-B = FRONT-TO-BACK
HCA = HORIZONTAL CONTROL ACCELEROMETER

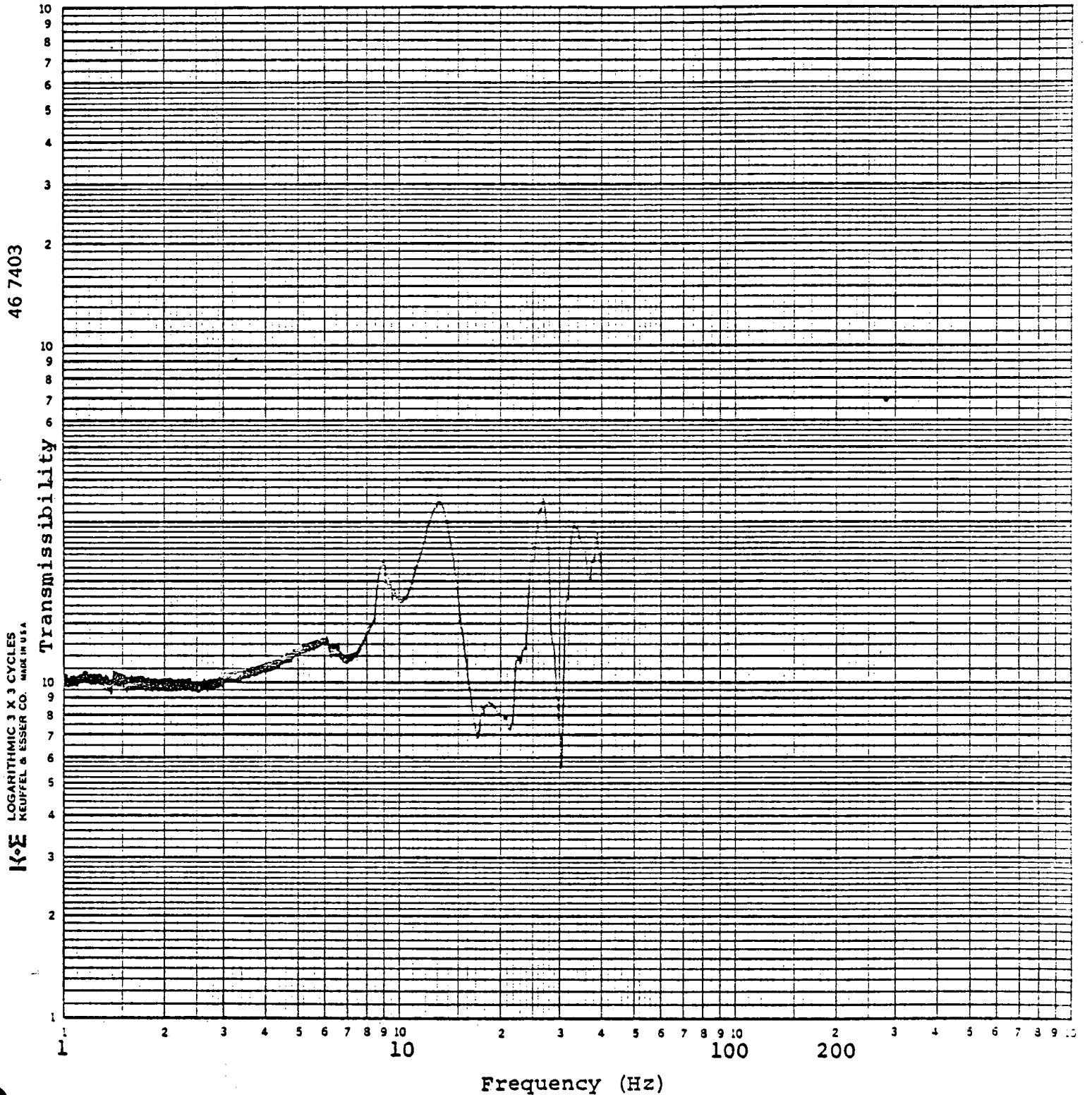
AXIS F-B

ACCEL. NO. 1FB ÷ NO HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



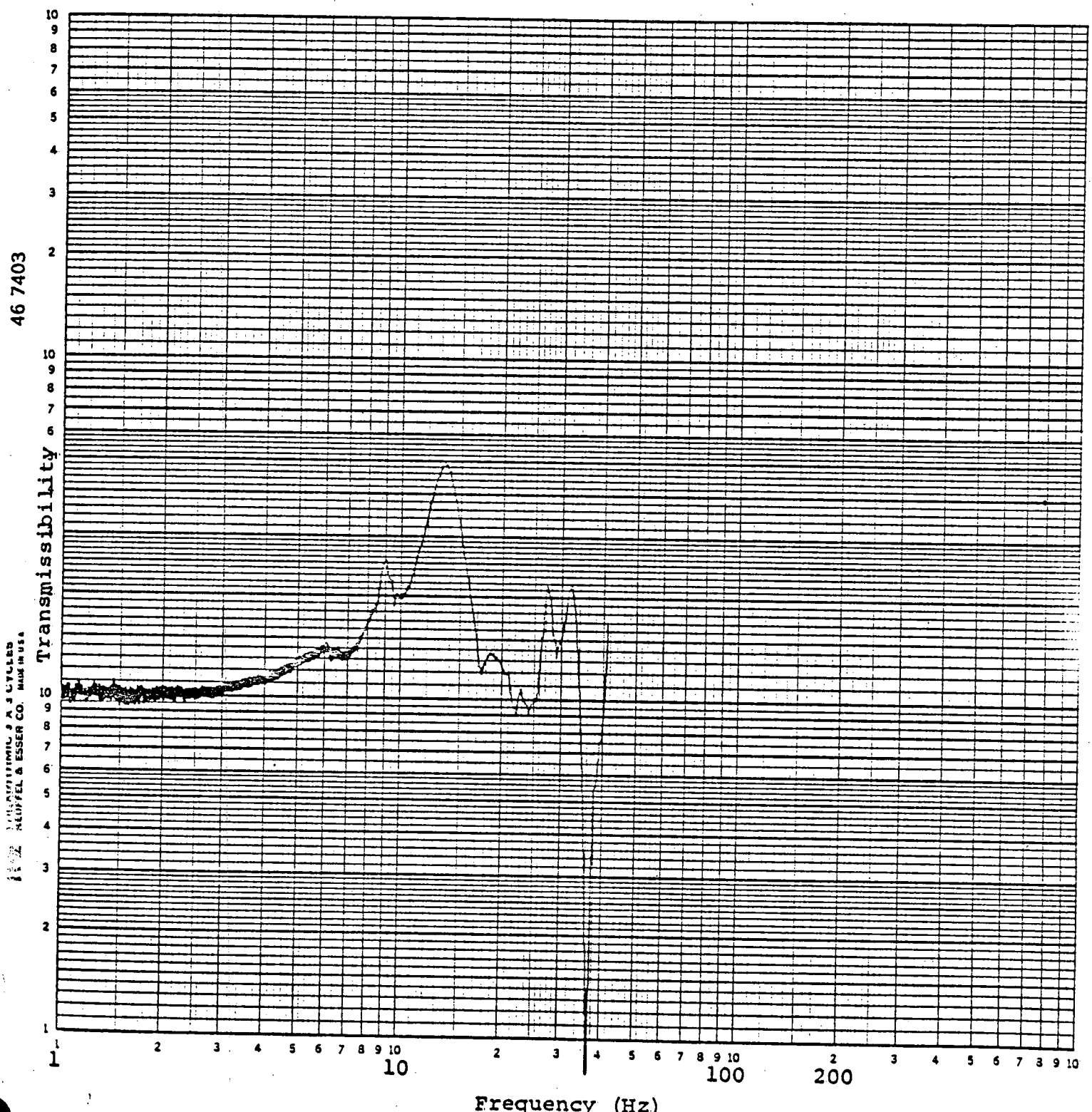
AXIS F-B

ACCEL. NO. 2FB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



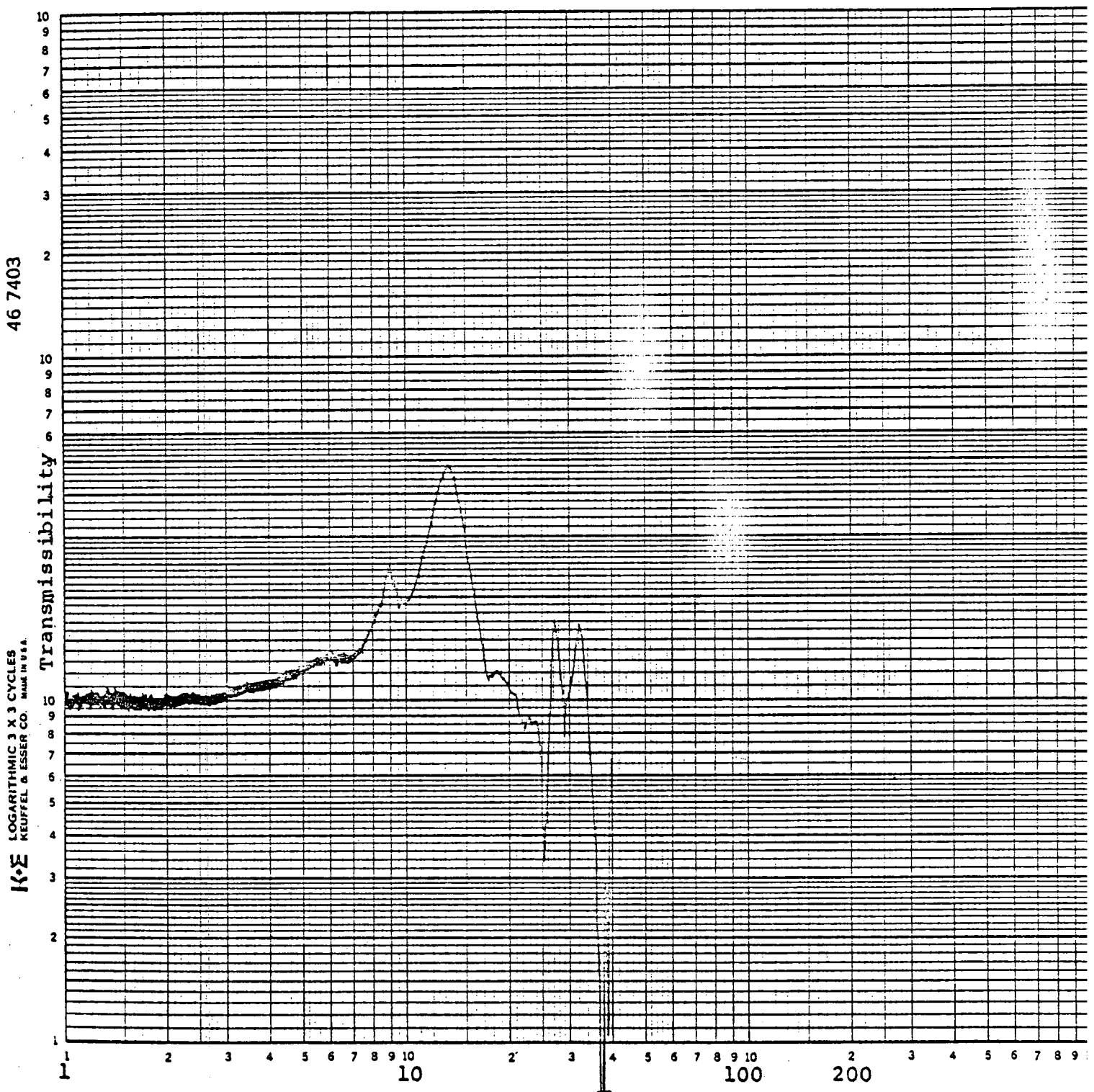
AXIS F-B

ACCEL. NO. 4FB ÷ NO. 4CA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



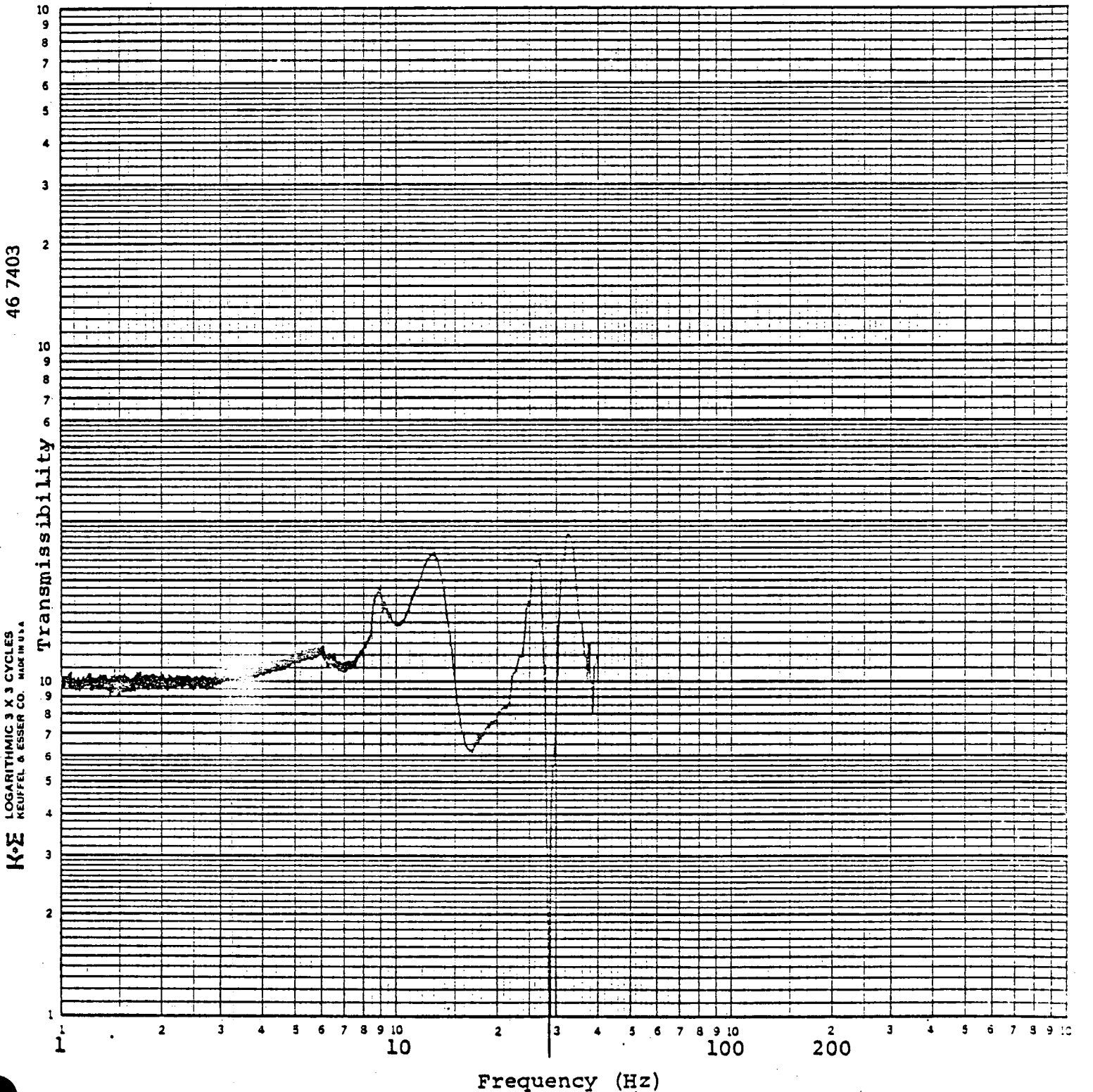
AXIS F-B

ACCEL. NO 8FB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



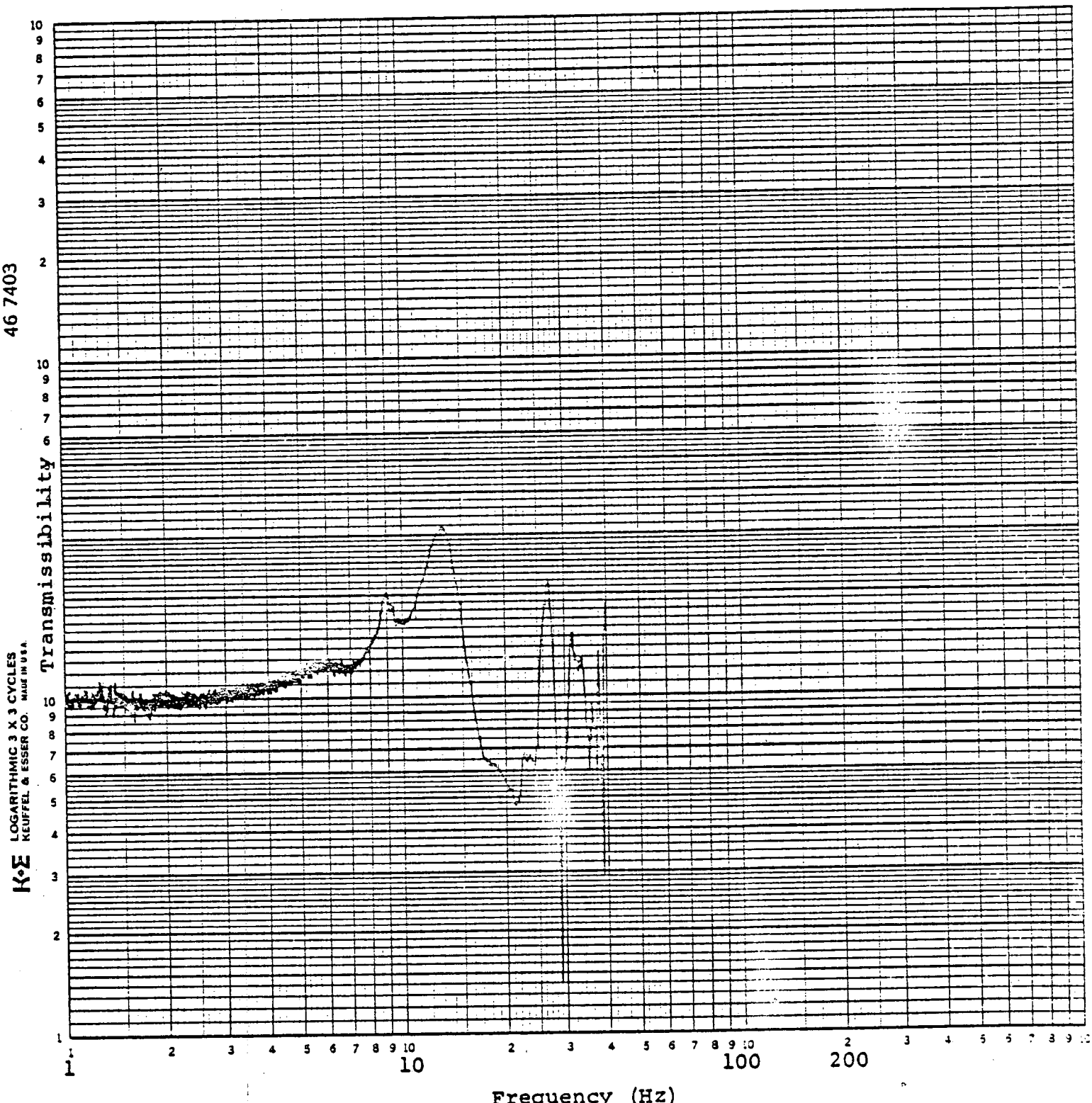
AXIS F-B

ACCEL. NO. 7FB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



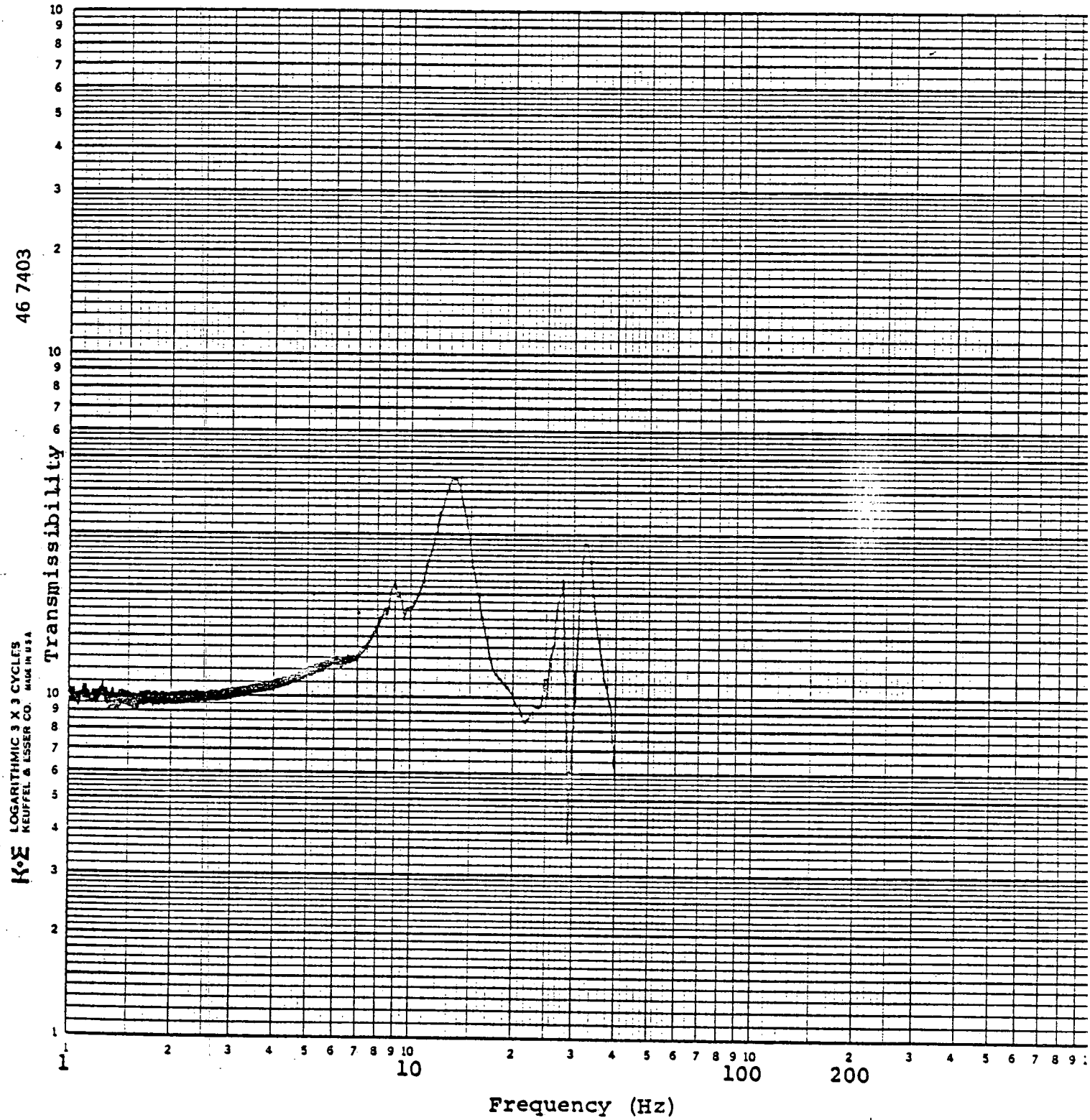
AXIS F.B

ACCEL. NO. 9FB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



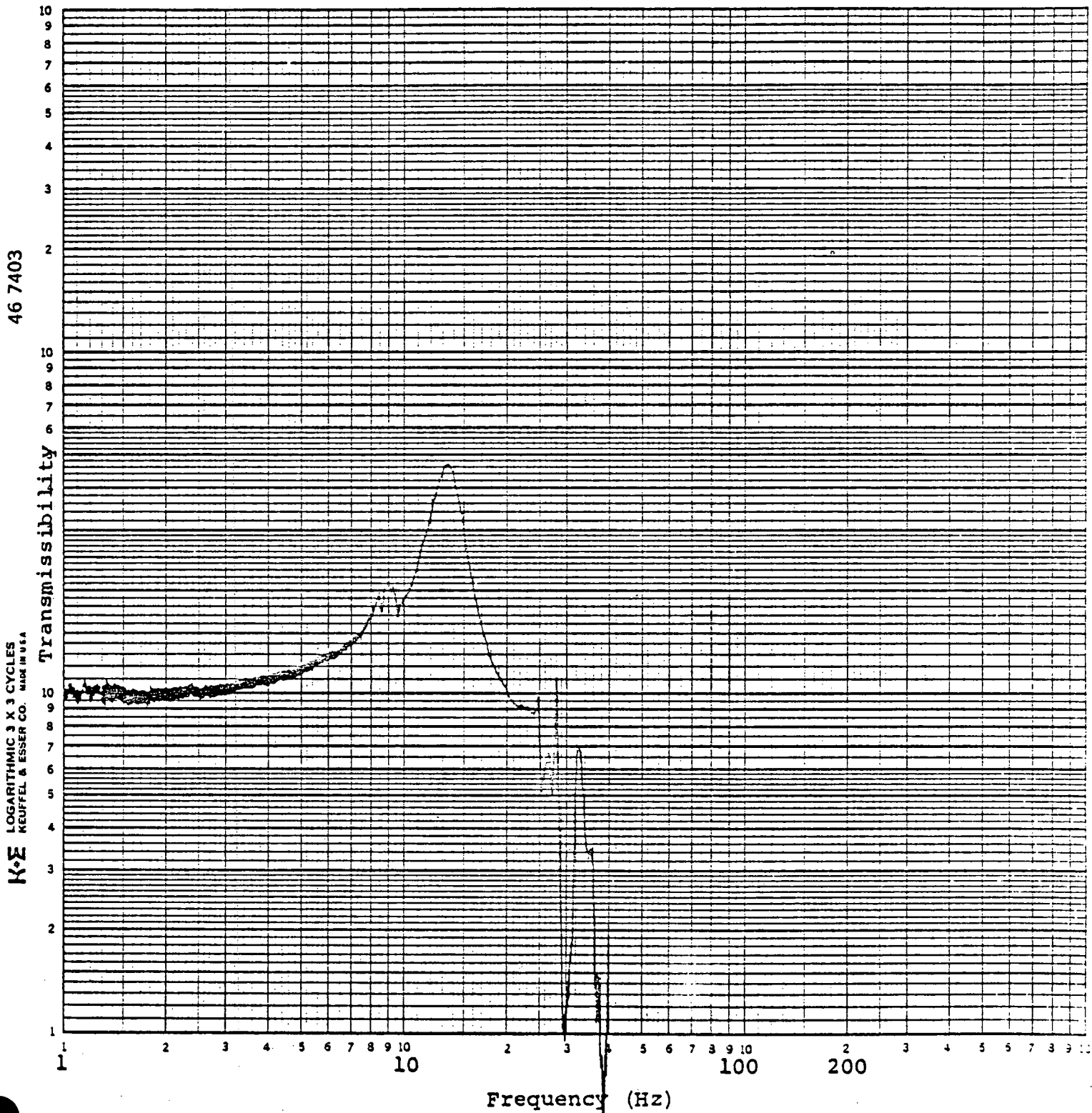
AXIS F-B

ACCEL. NO. UFB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☐ 1000 ☐



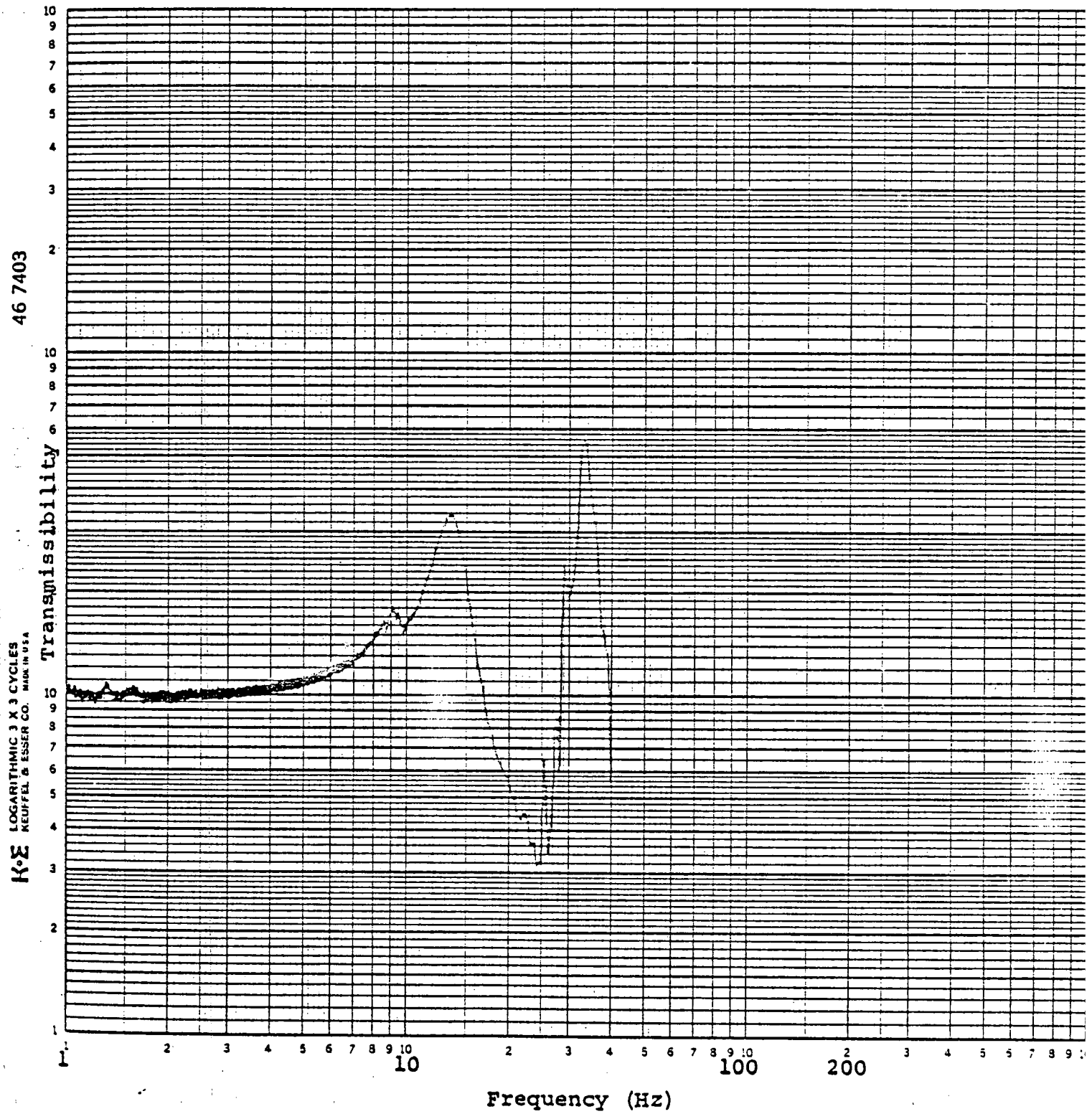
AXIS F.B

ACCEL. NO 12FB÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



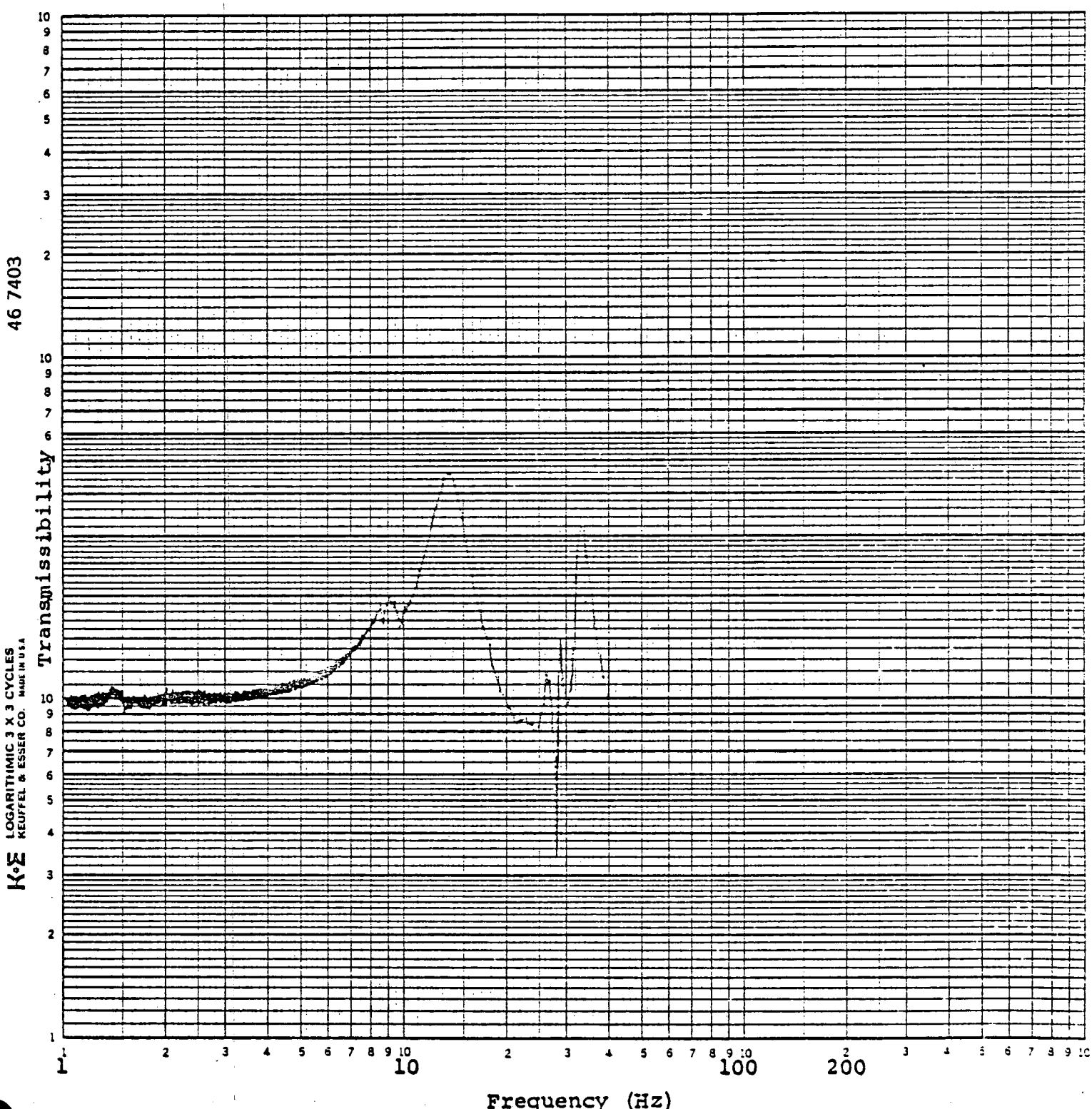
AXIS FRONT-TO-BACK

ACCEL. NO. 13EB÷ NO. 4CA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



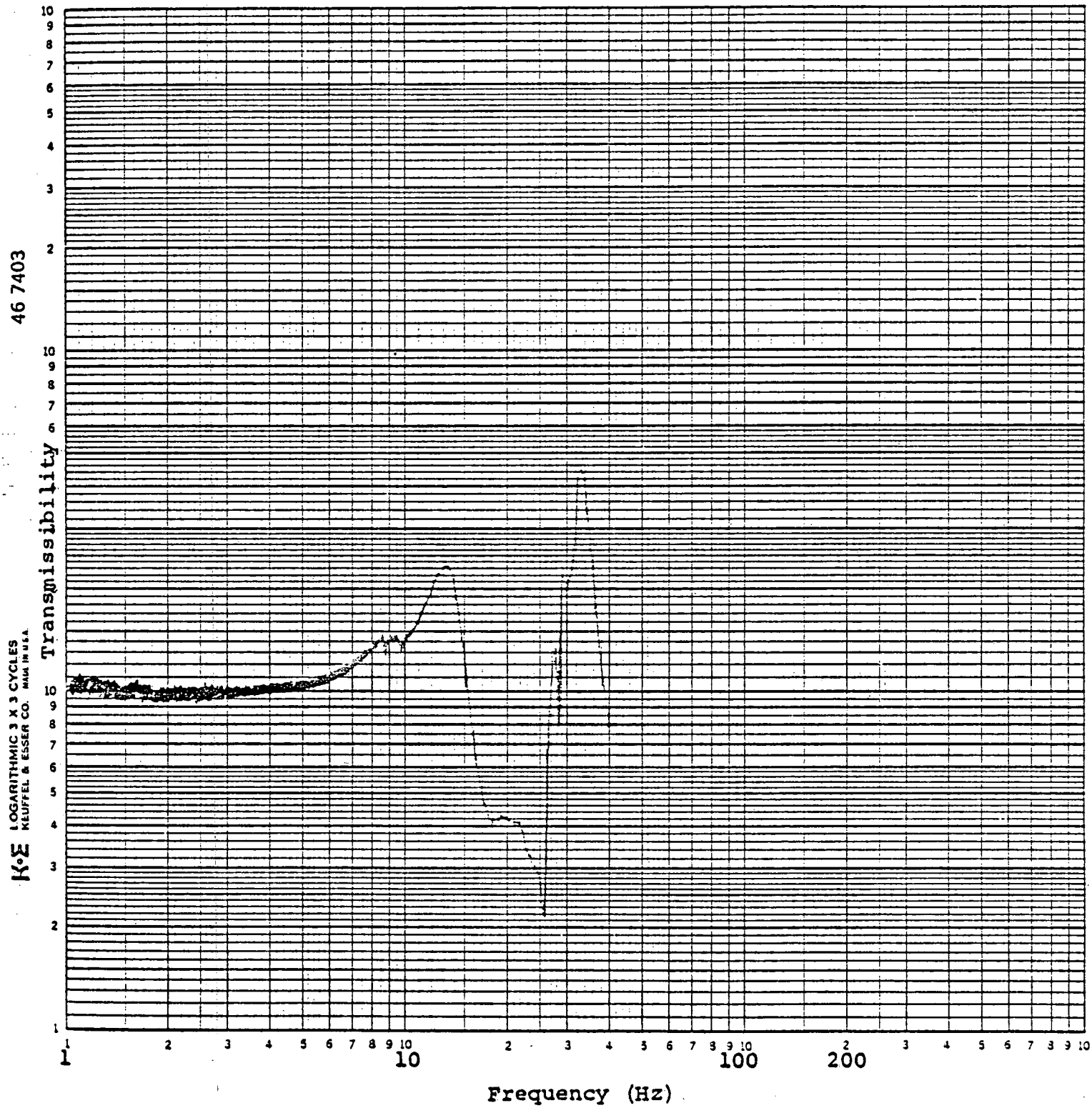
AXIS FRONT-TO-BACK

ACCEL. NO. 17F-8 ÷ NO. HC-8

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



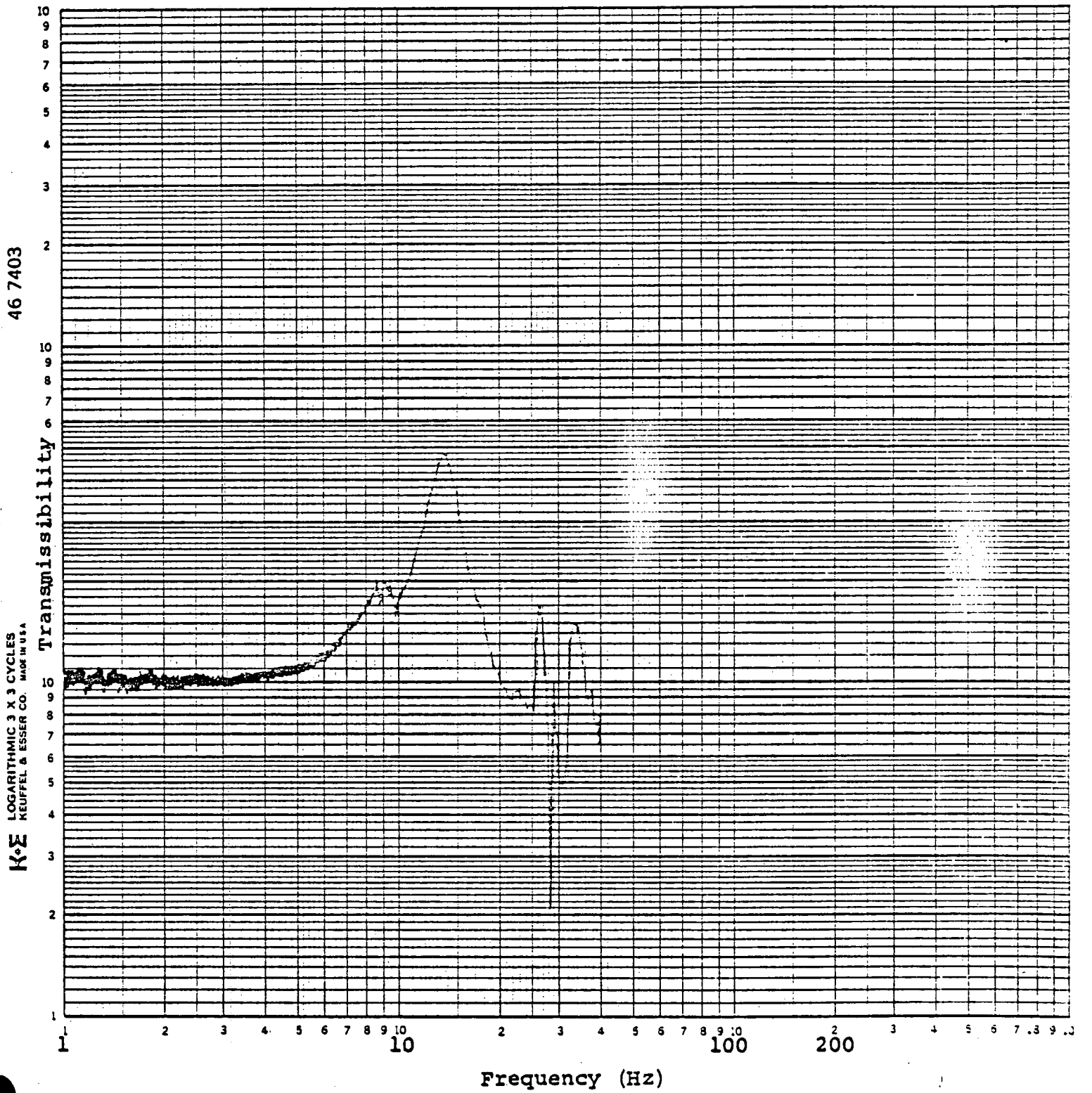
AXIS FRONT-TO-BACK

ACCEL. NO. 18EB÷ NO. 4CA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



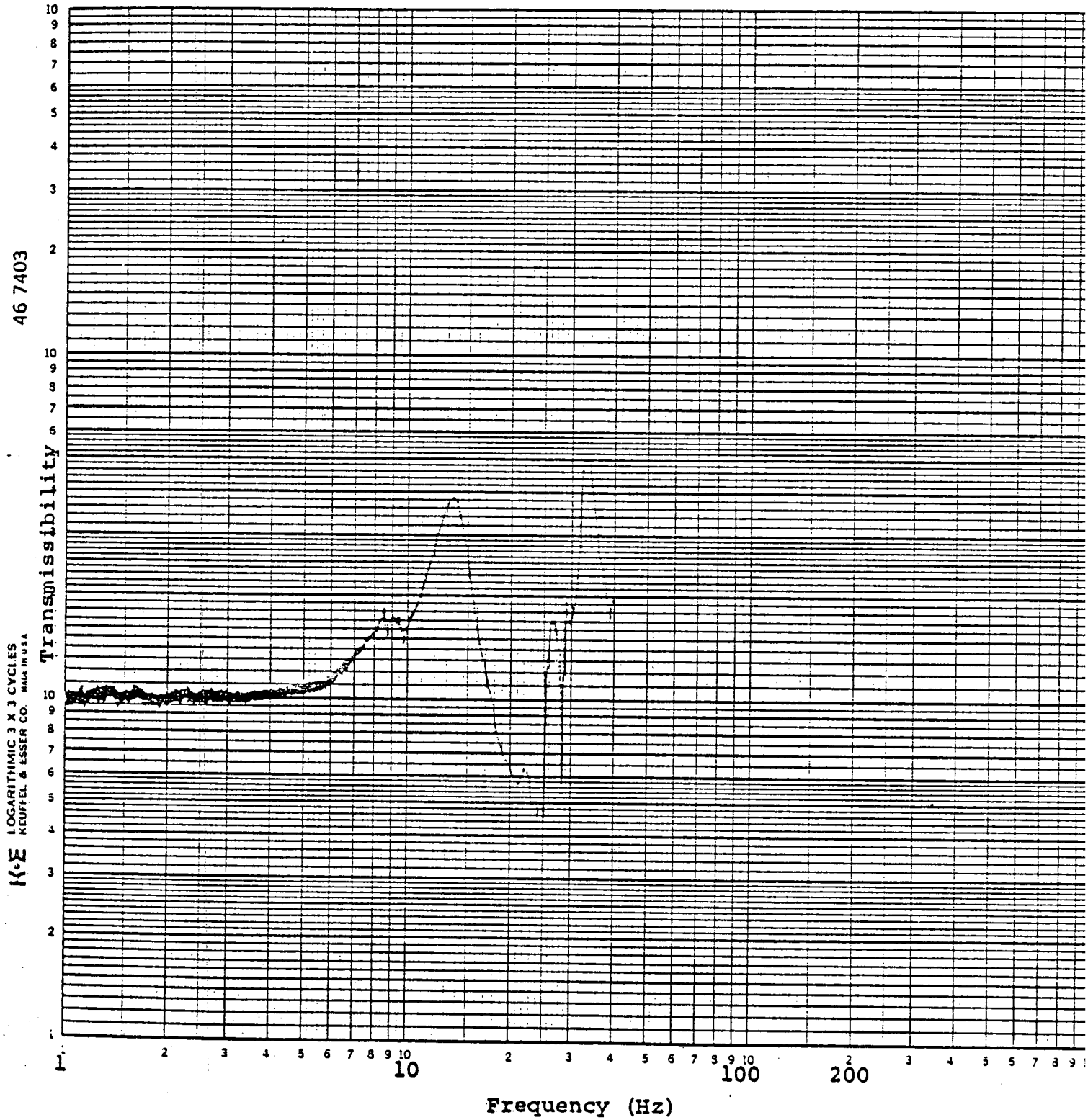
AXIS FRONT-TO-BACK

ACCEL. NO. 19FB ÷ NO. 4CA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



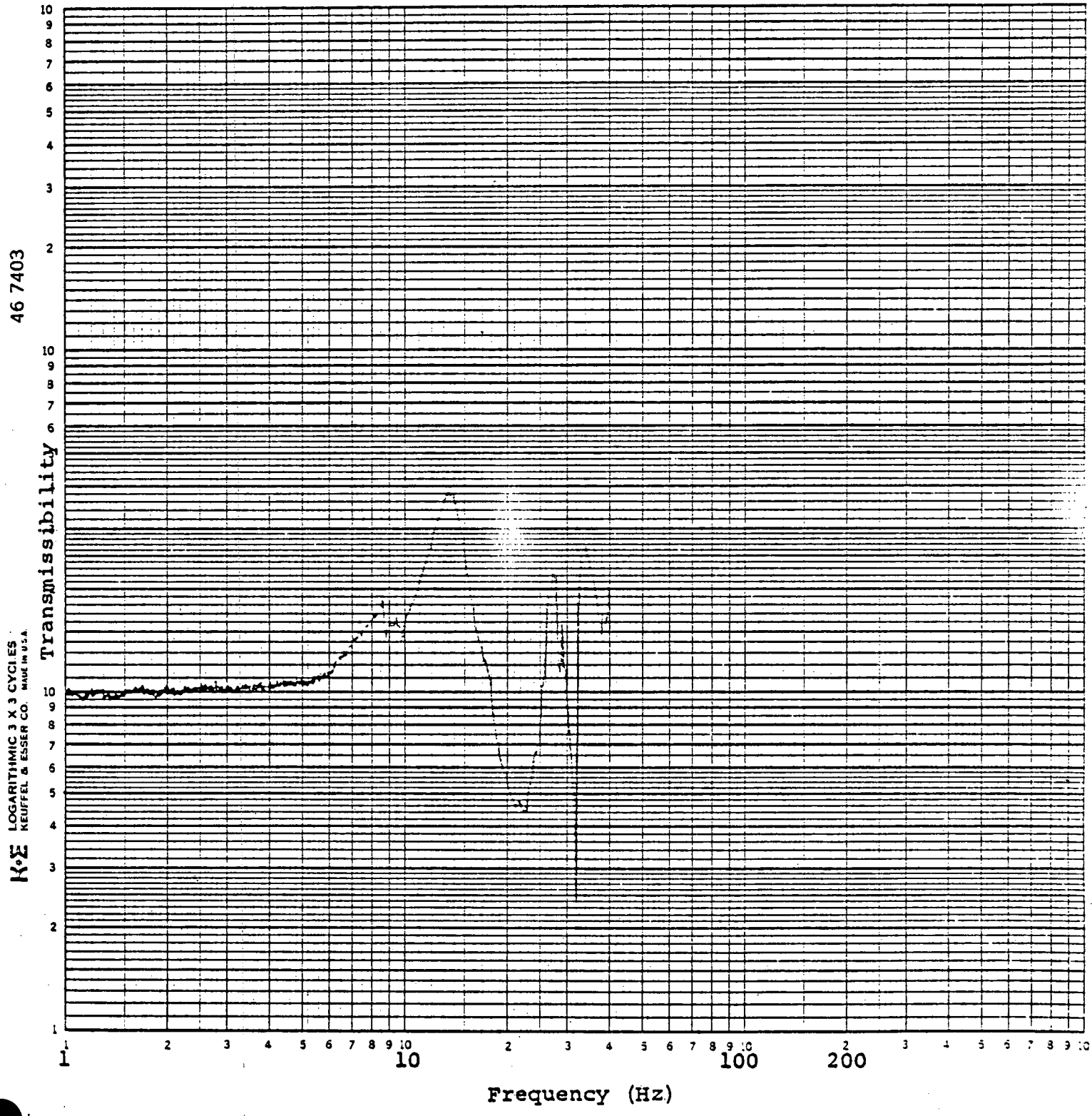
AXIS FRONT-TO-BACK

ACCEL. NO. 20EB÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



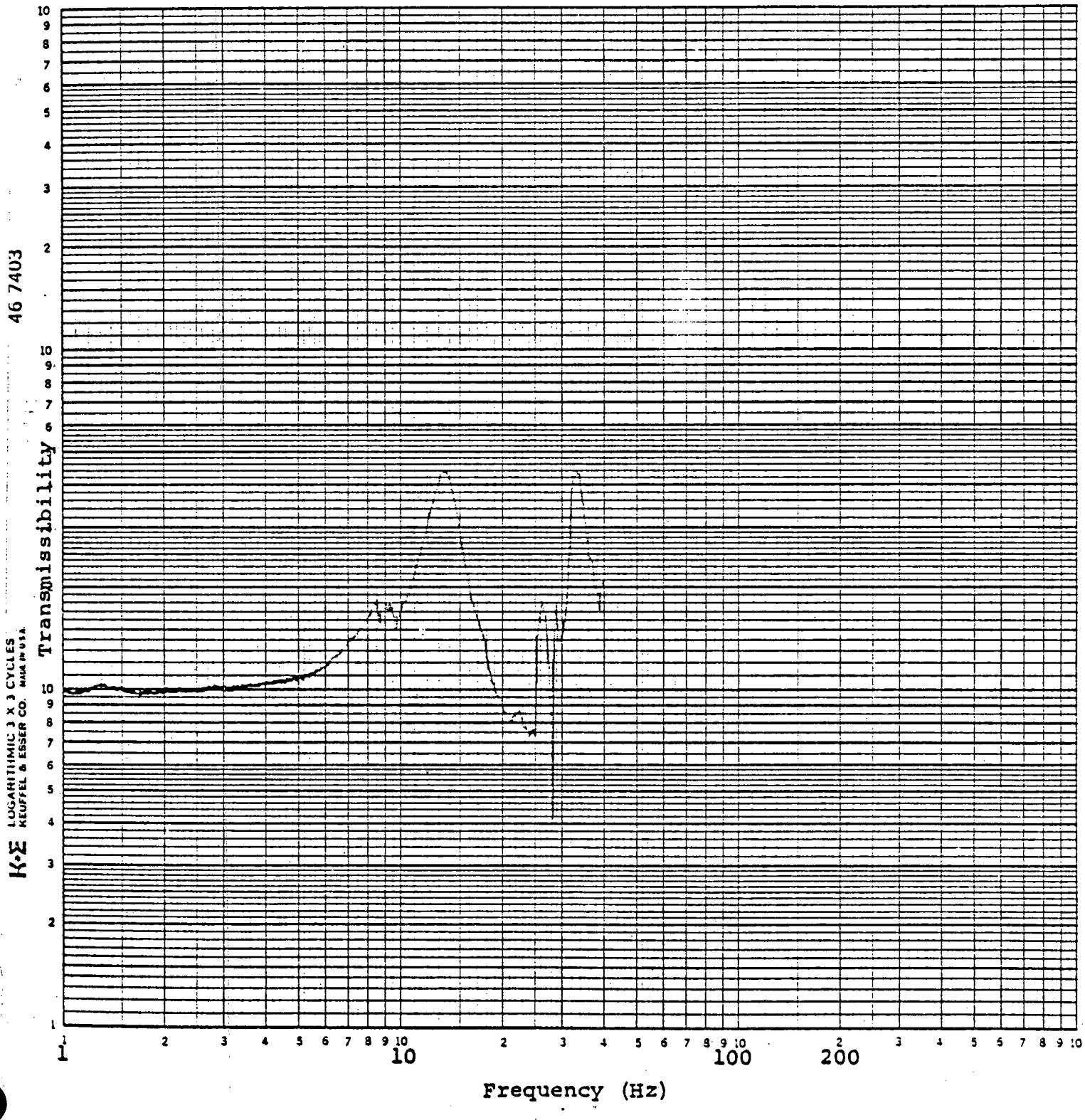
AXIS FRONT-TO-BACK

ACCEL. NO 22FB ÷ NO. 4CA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



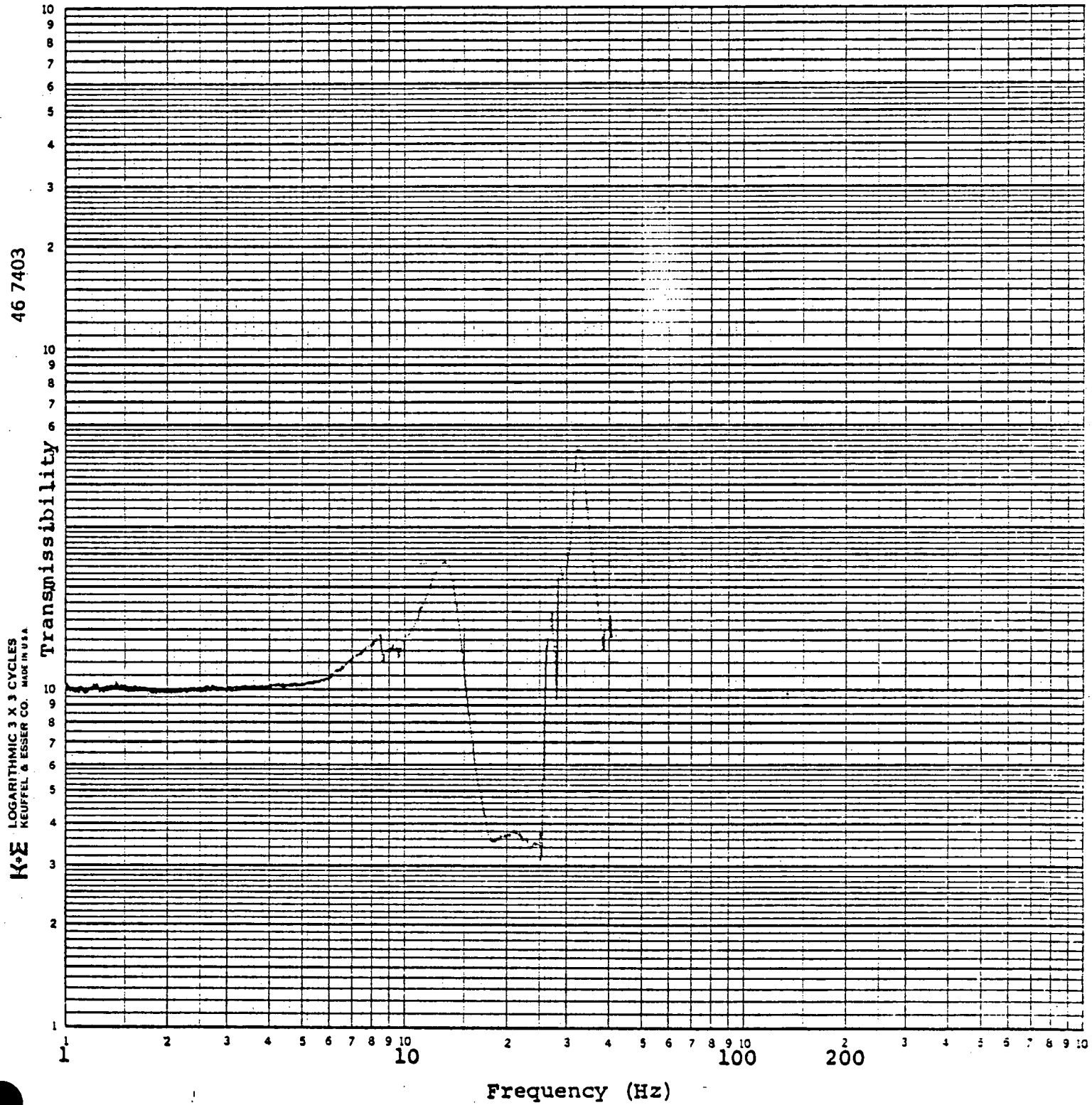
AXIS FRONT-TO-BACK

ACCEL. NO 24FB÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



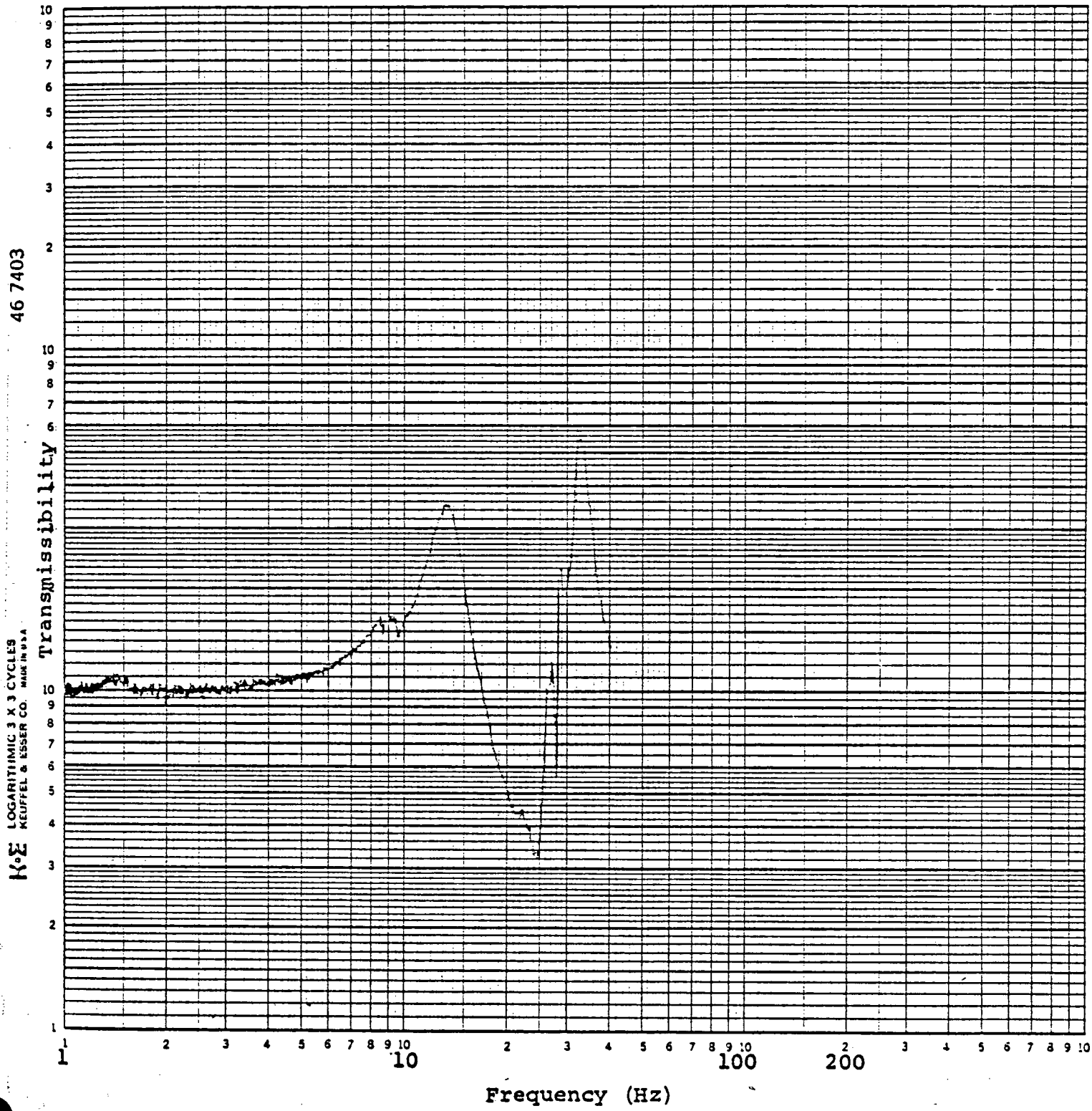
AXIS FRONT-TO-BACK

ACCEL. NO 26EB÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



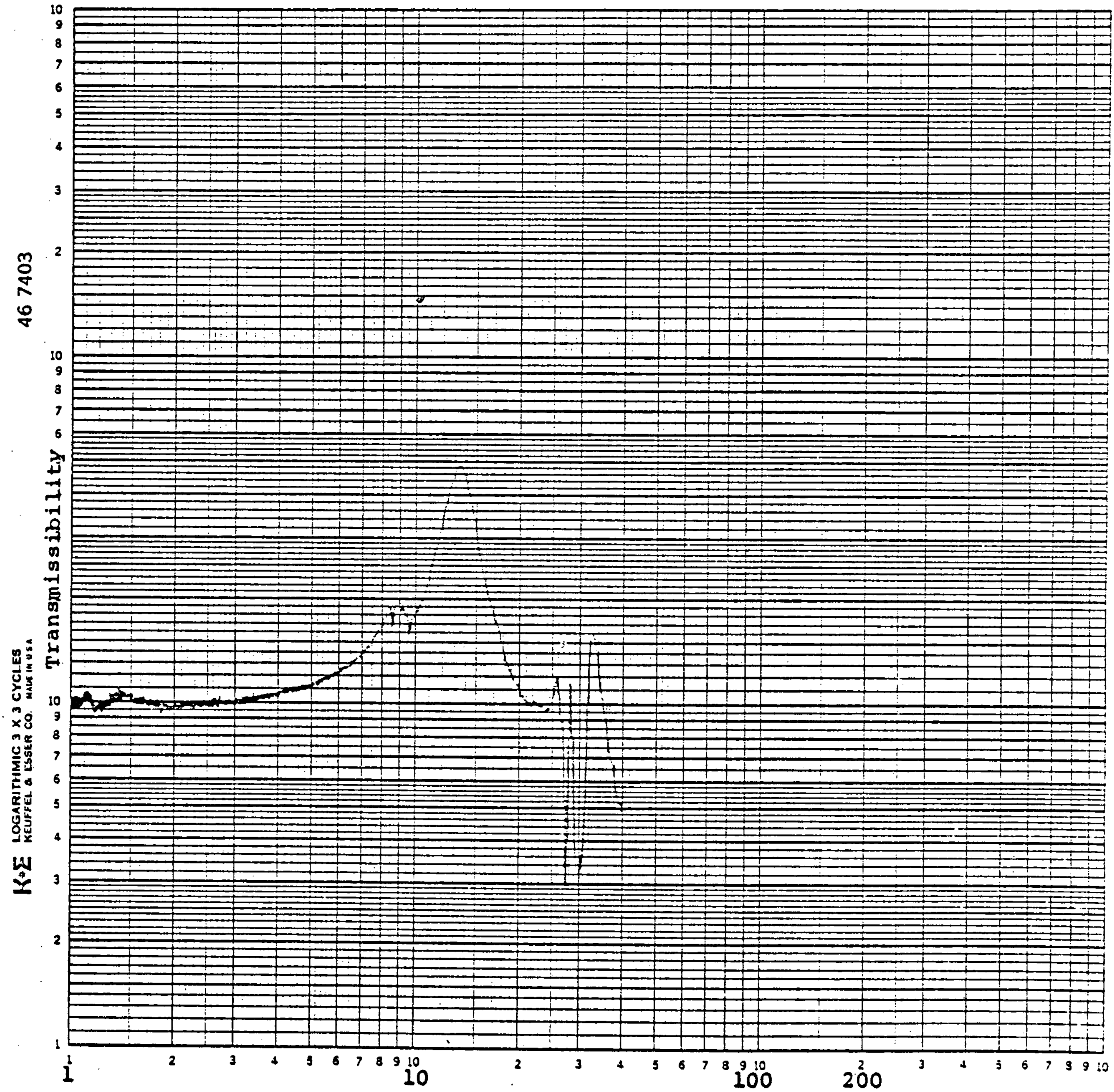
AXIS FRONT-TO-BACK

ACCEL. NO 28F.B÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



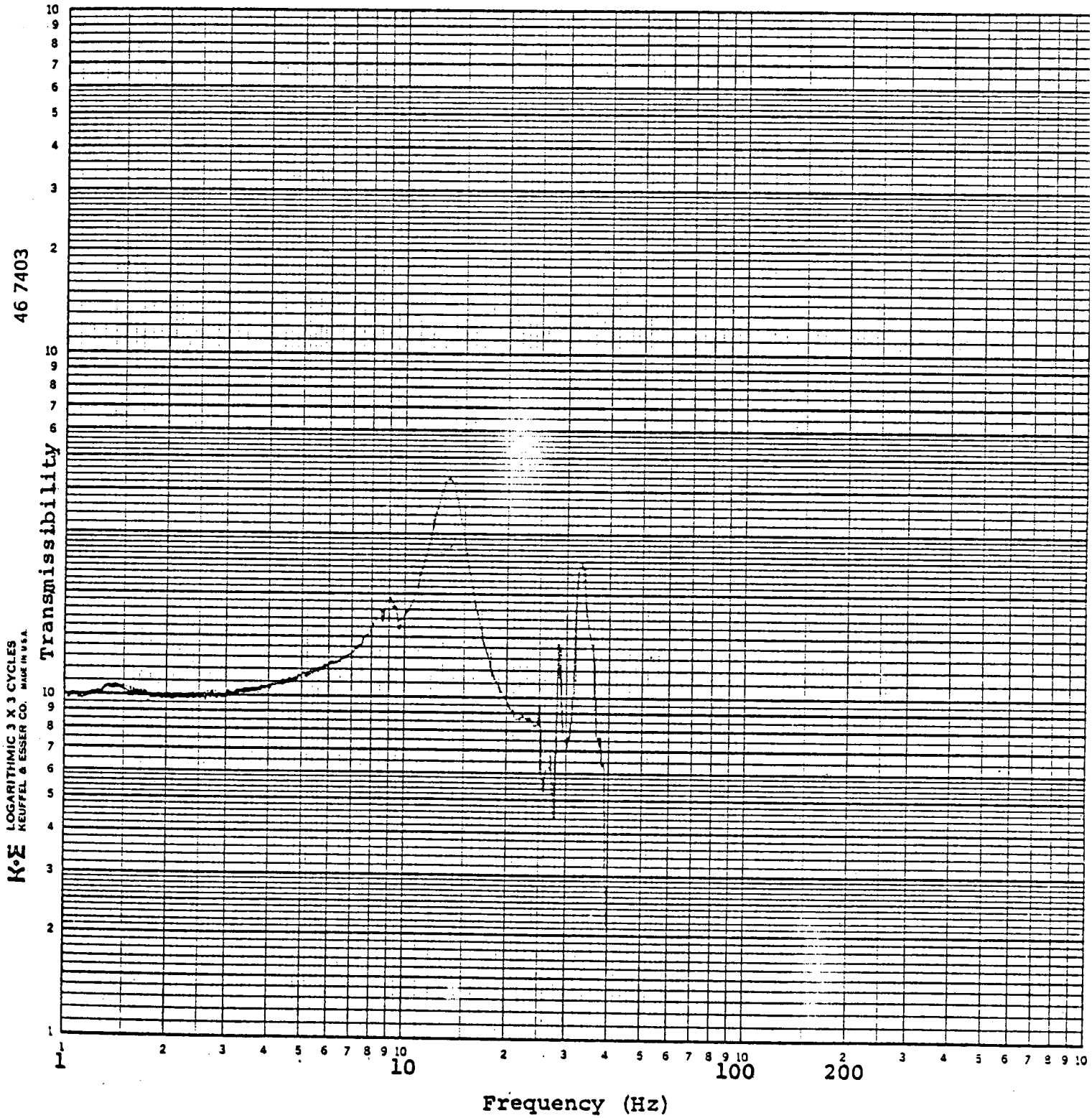
AXIS FRONT-TO-BACK

ACCEL. NO 30FB÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



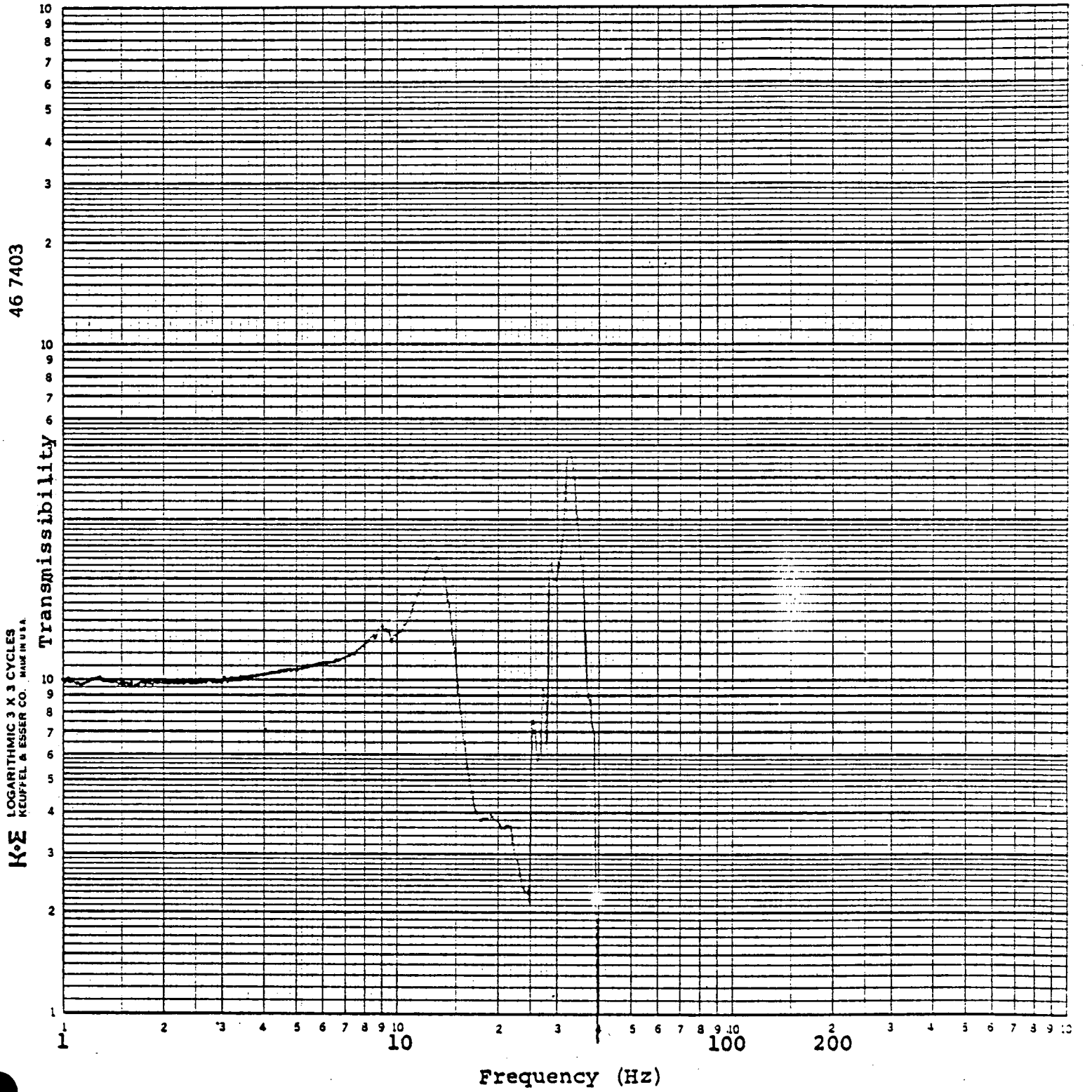
AXIS FRONT-TO-BACK

ACCEL. NO. 3257 ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



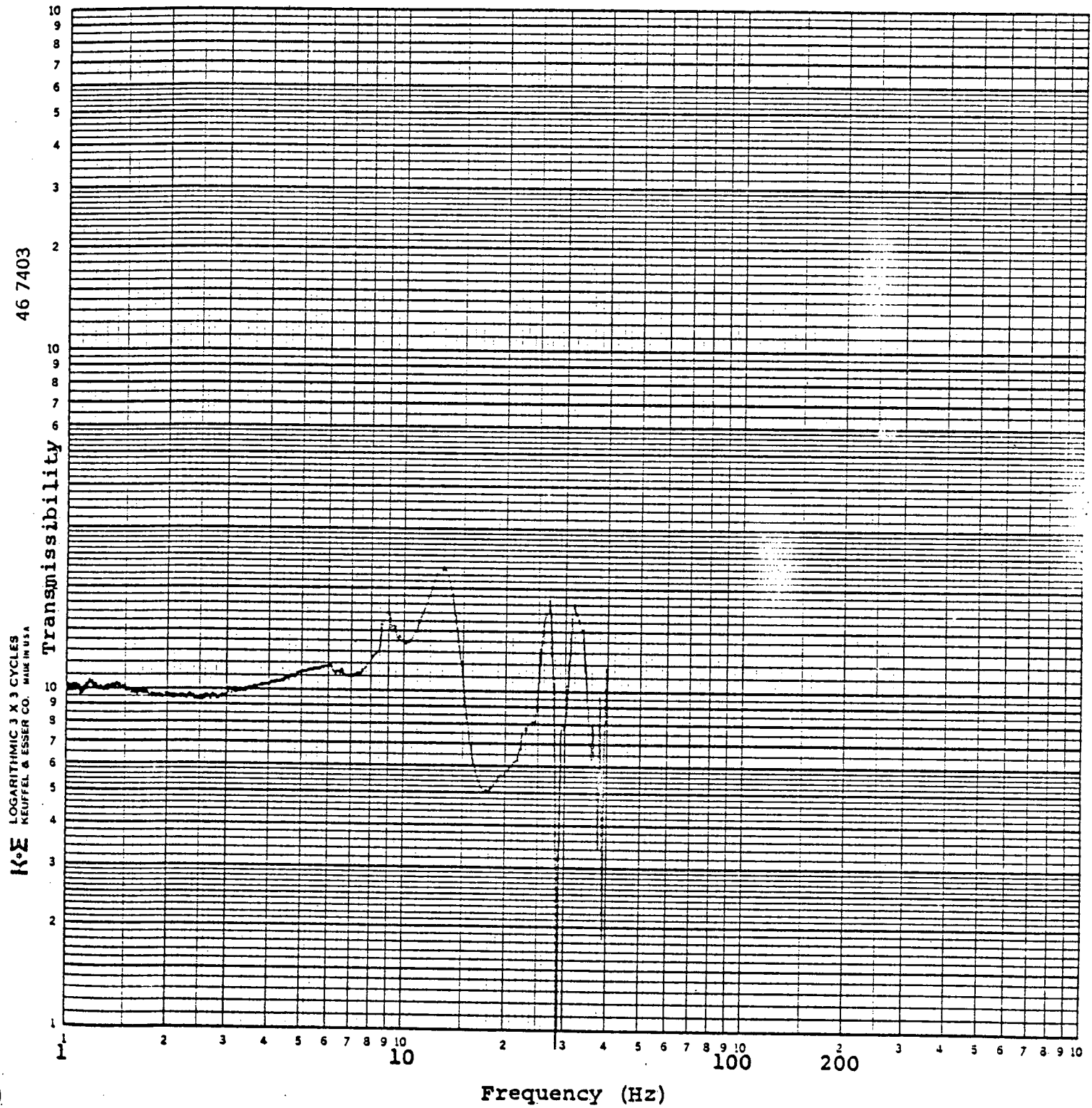
AXIS FROUT-TO-BACK

ACCEL. NO 33FB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



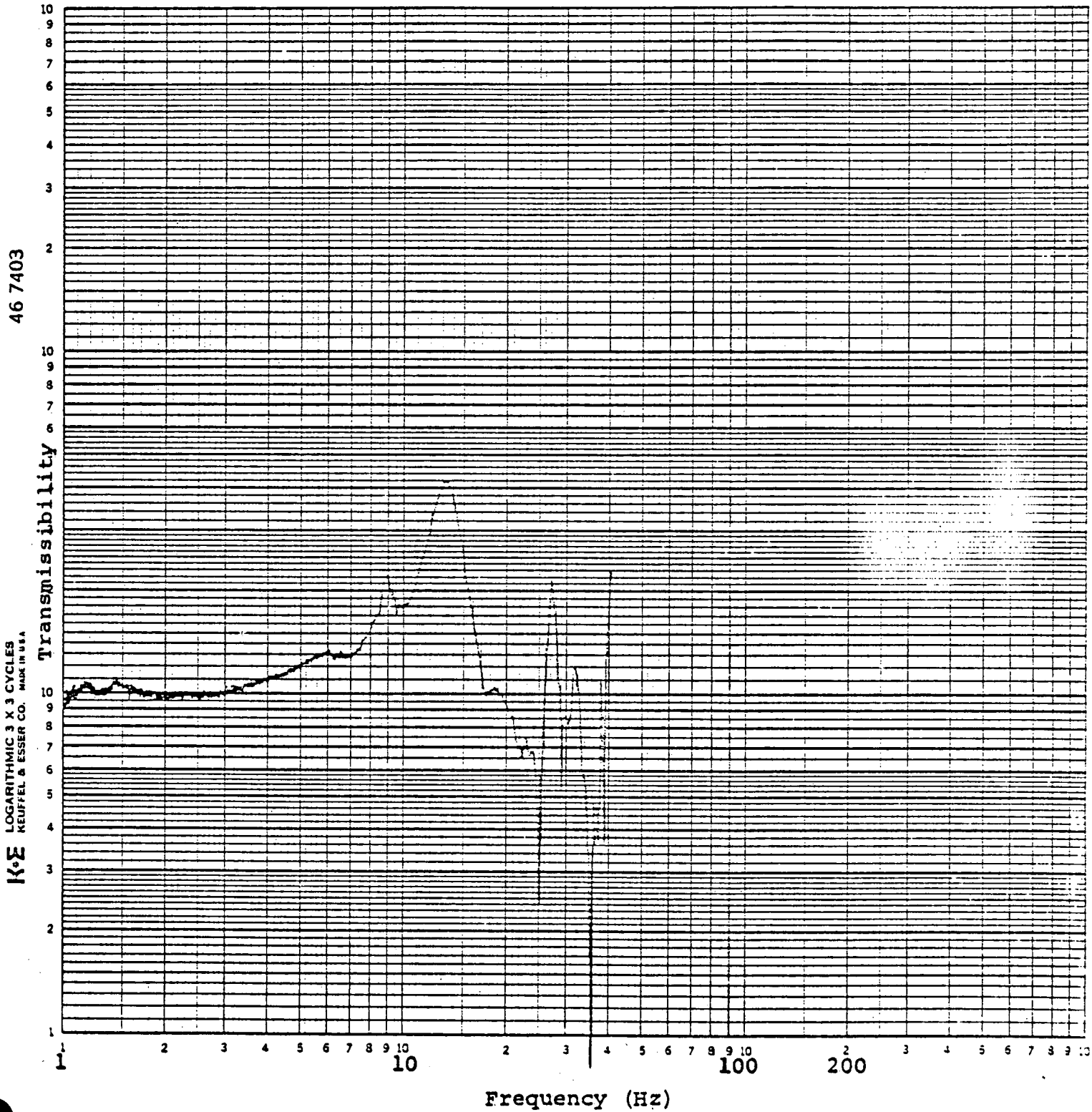
AXIS FRONT-TO-BACK

ACCEL. NO. 35FB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



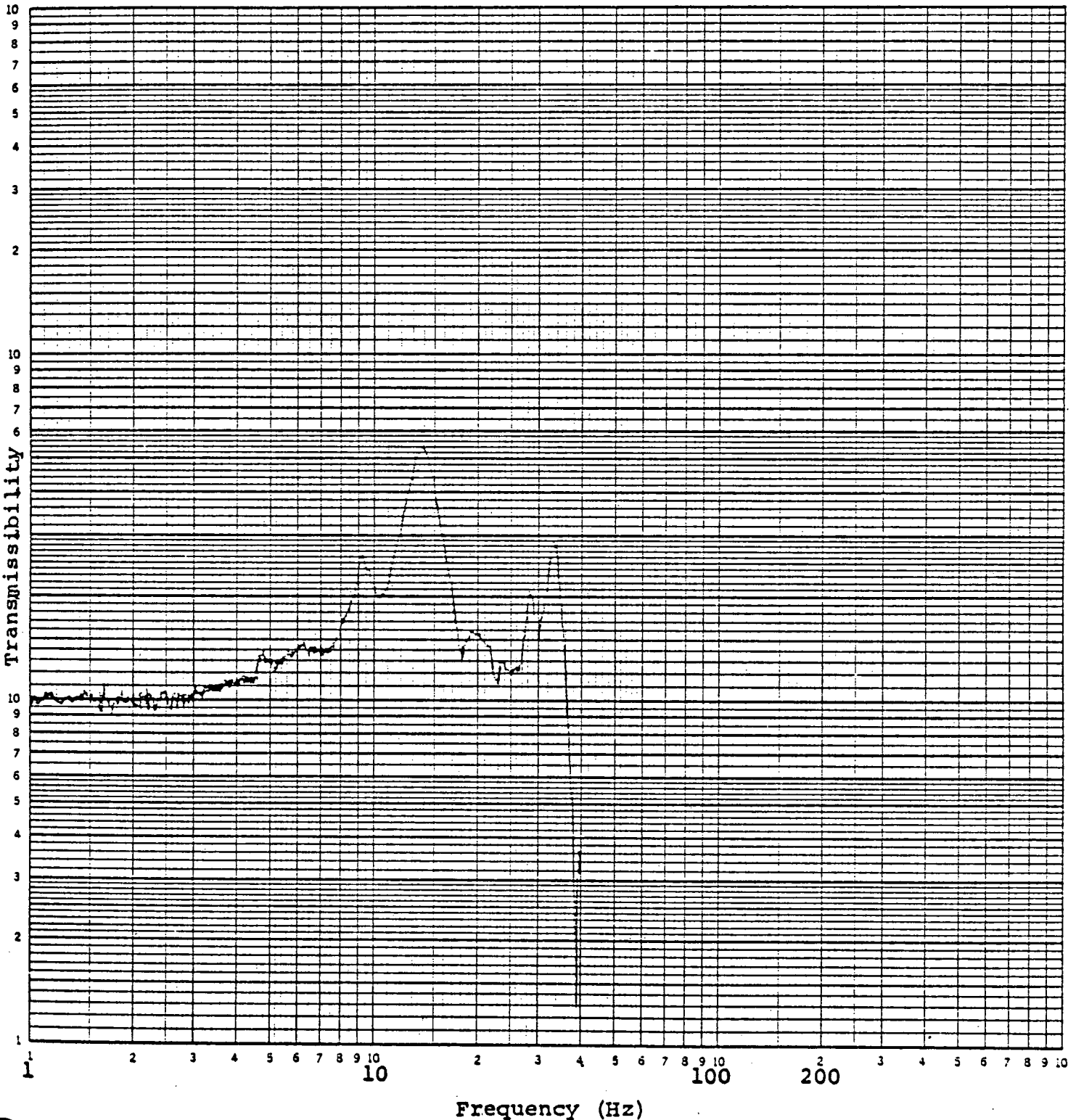
AXIS FRONT-TO-BACK

ACCEL. NO. 36EC NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



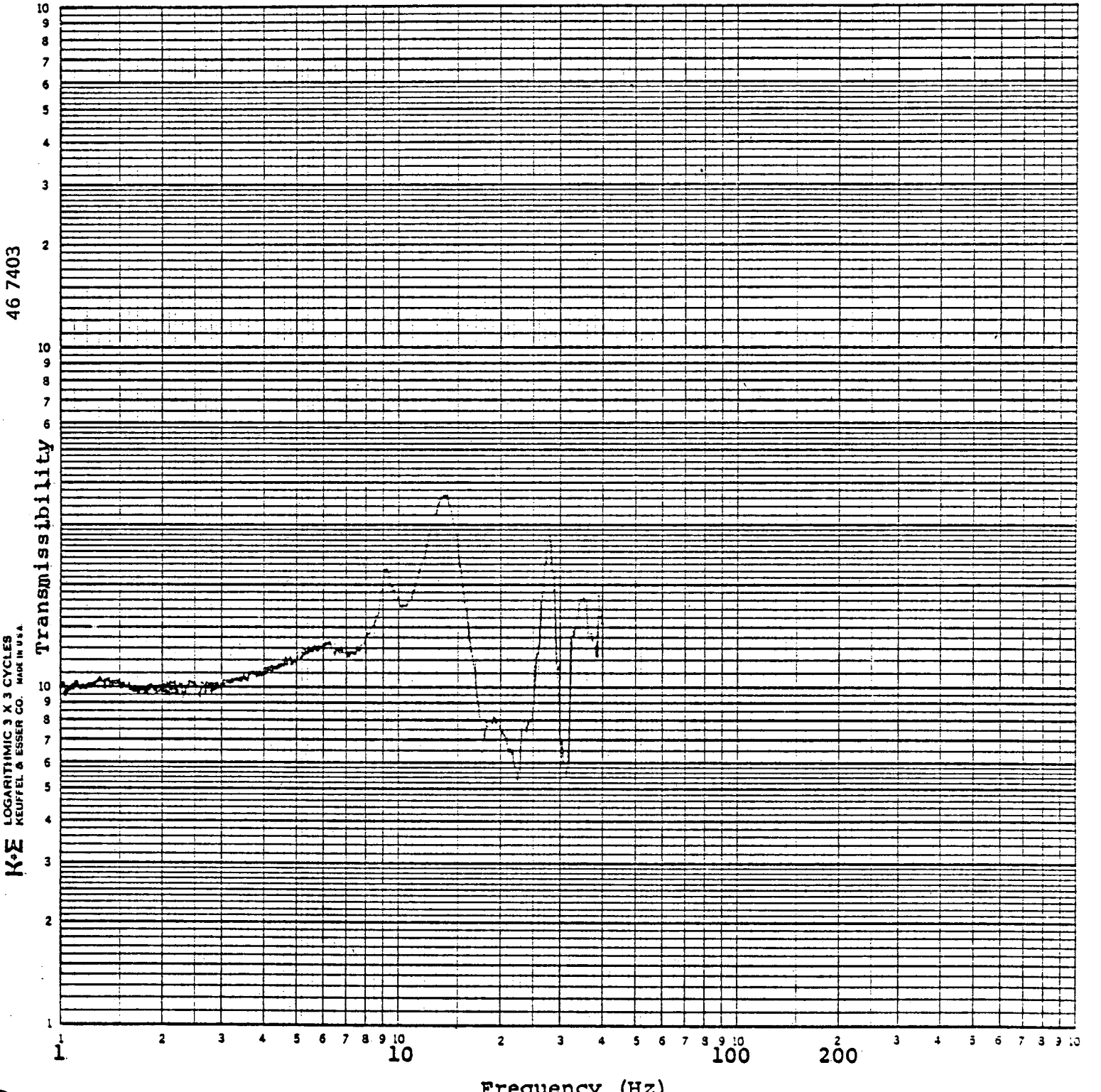
AXIS FRONT-TO-BACK

ACCEL. NO. 38FB÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



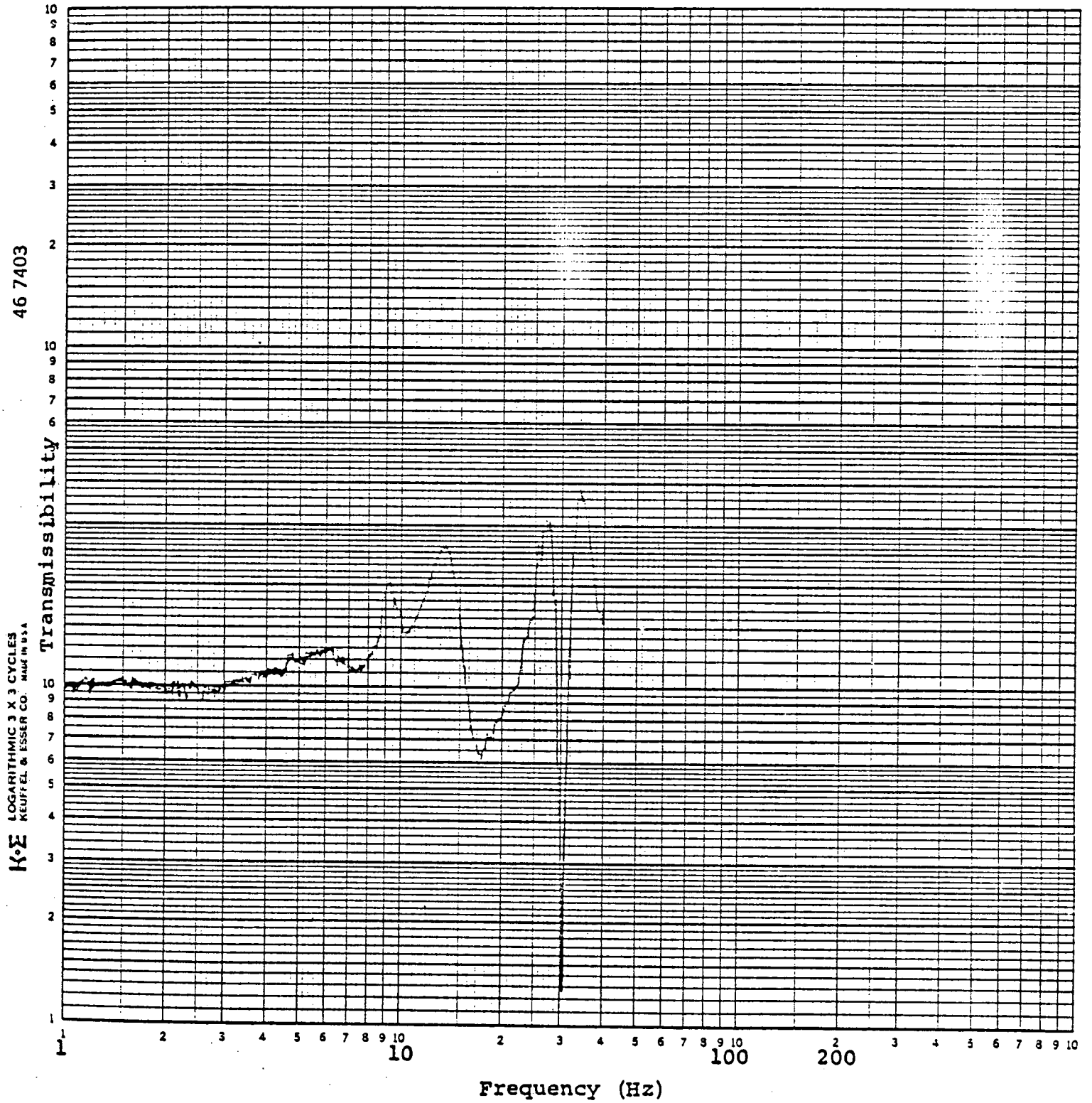
AXIS FRONT-TO-BACK

ACCEL. NO. 40 F.B ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



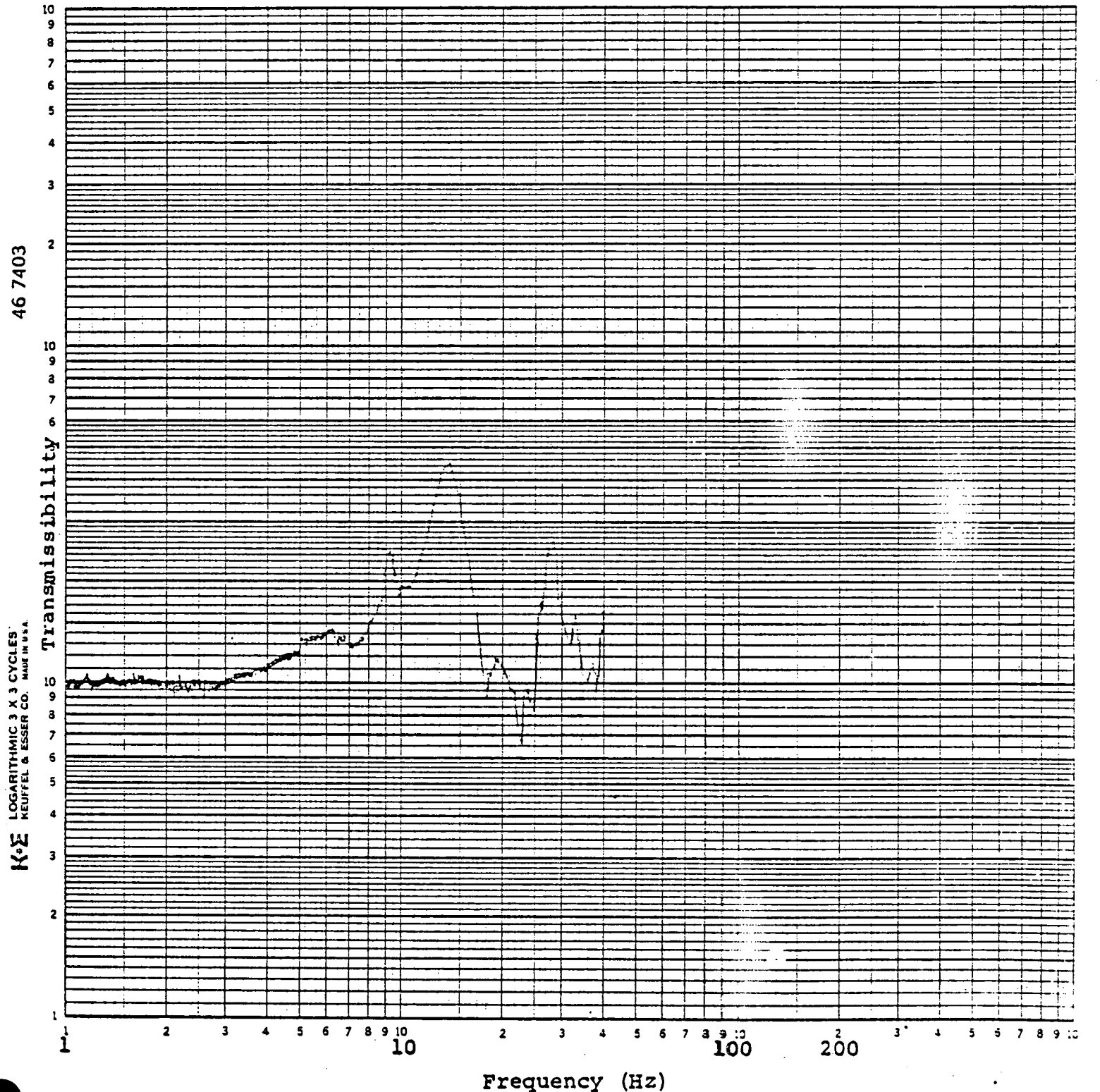
AXIS FRONT-TO-BACK

ACCEL. NO. 43EB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



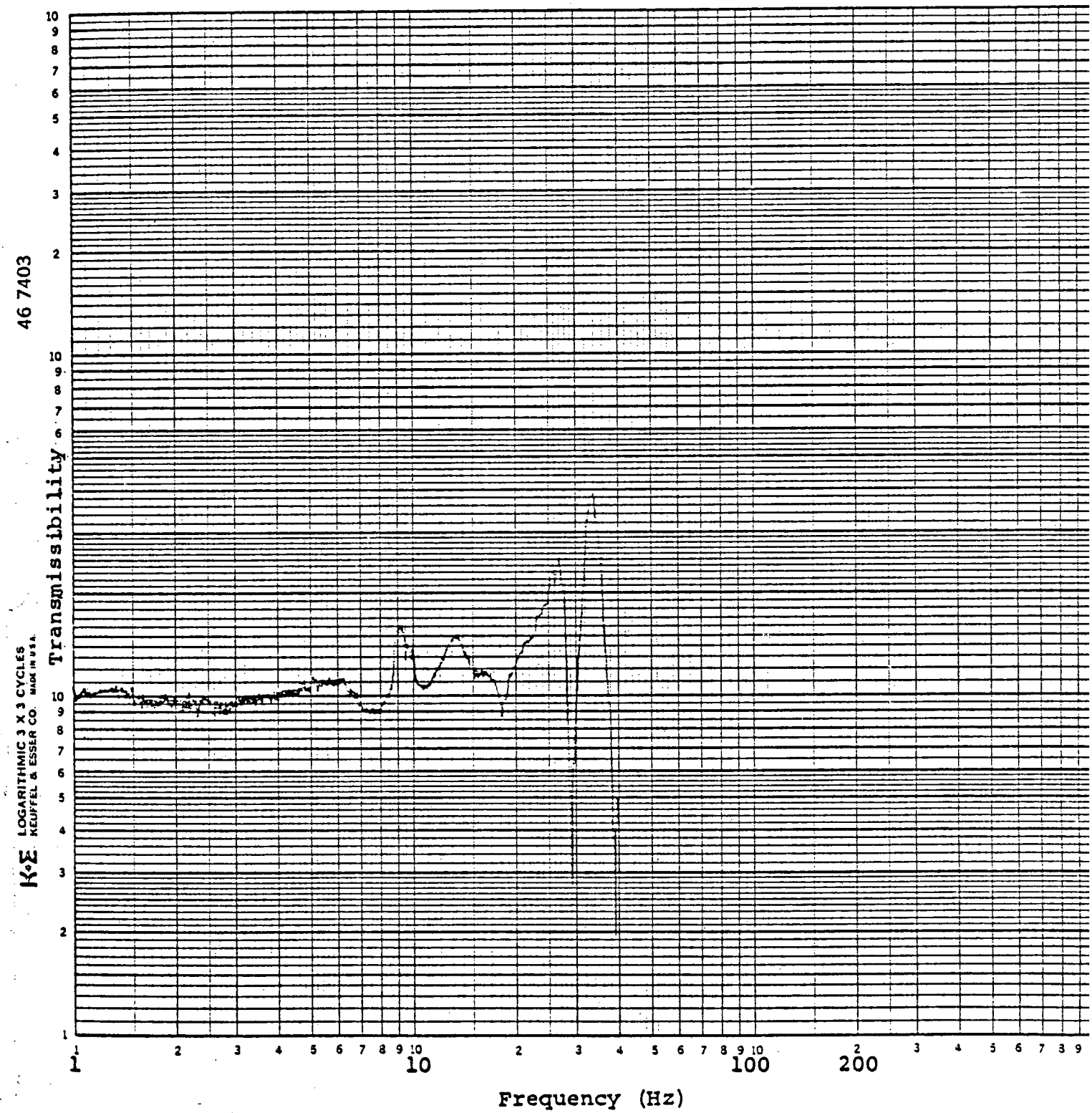
AXIS FRONT-TO-BACK

ACCEL. NO. 4458 ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



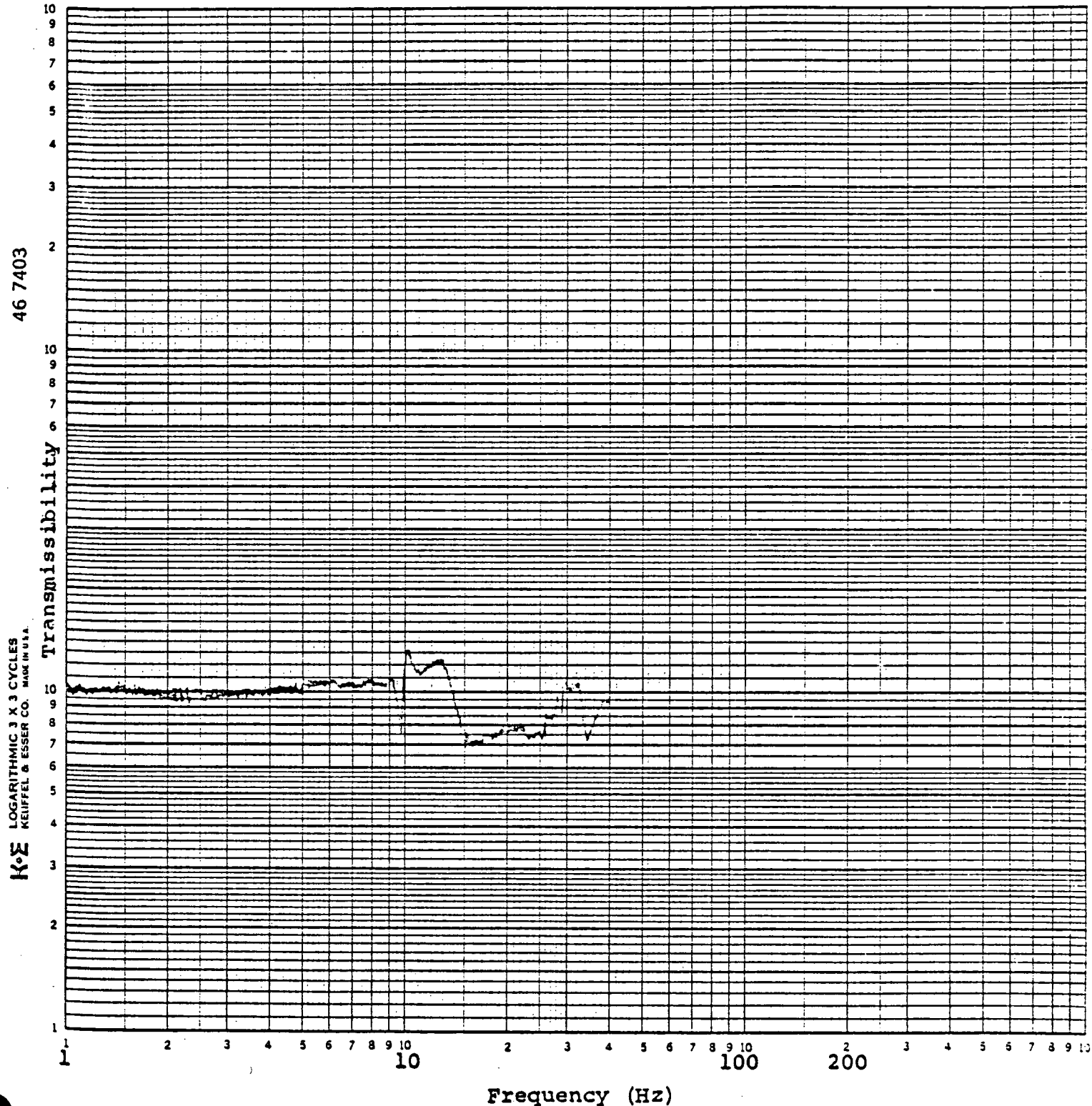
AXIS FRONT-TO-BACK

ACCEL. NO. 46EB ÷ NO. HCA

TEST RUN NO. 20

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐



AXIS FRONT-TO-BACK

ACCEL. NO. 48FB ÷ NO. 4CA

TEST RUN NO. 20

APPENDIX II

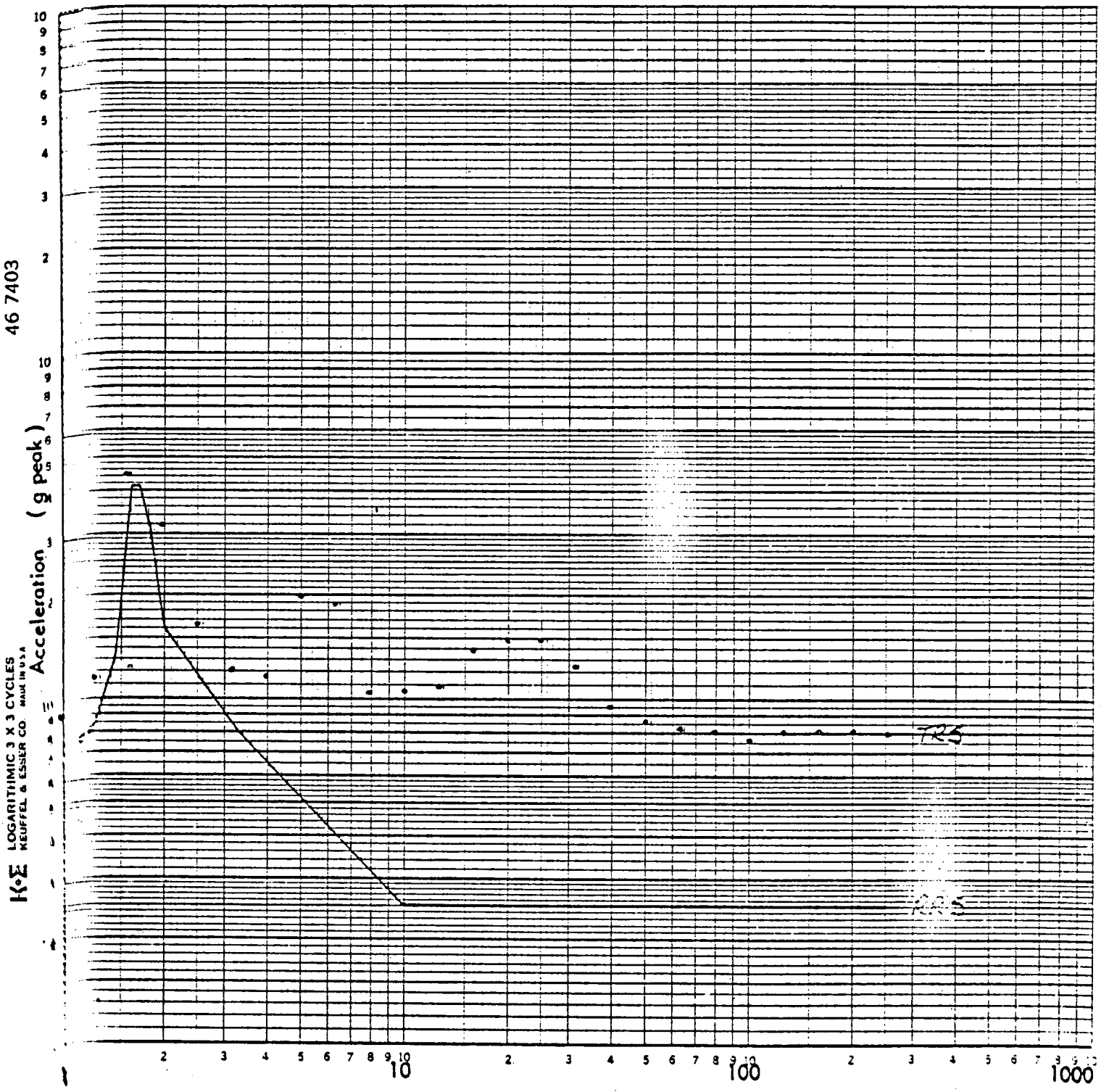
TEST RESPONSE SPECTRA PLOTS OF THE CONTROL AND SPECIMEN RESPONSE ACCELEROMETERS FOR THE LOUISIANA POWER AND LIGHT COMPANY DESIGN BASIS EARTHQUAKE TESTS (REFERENCE FIGURES 1 AND 2)

TEST NO.	AXES
9	Side-to-Side/Vertical
26	Front-to-Back/Vertical

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERTICAL

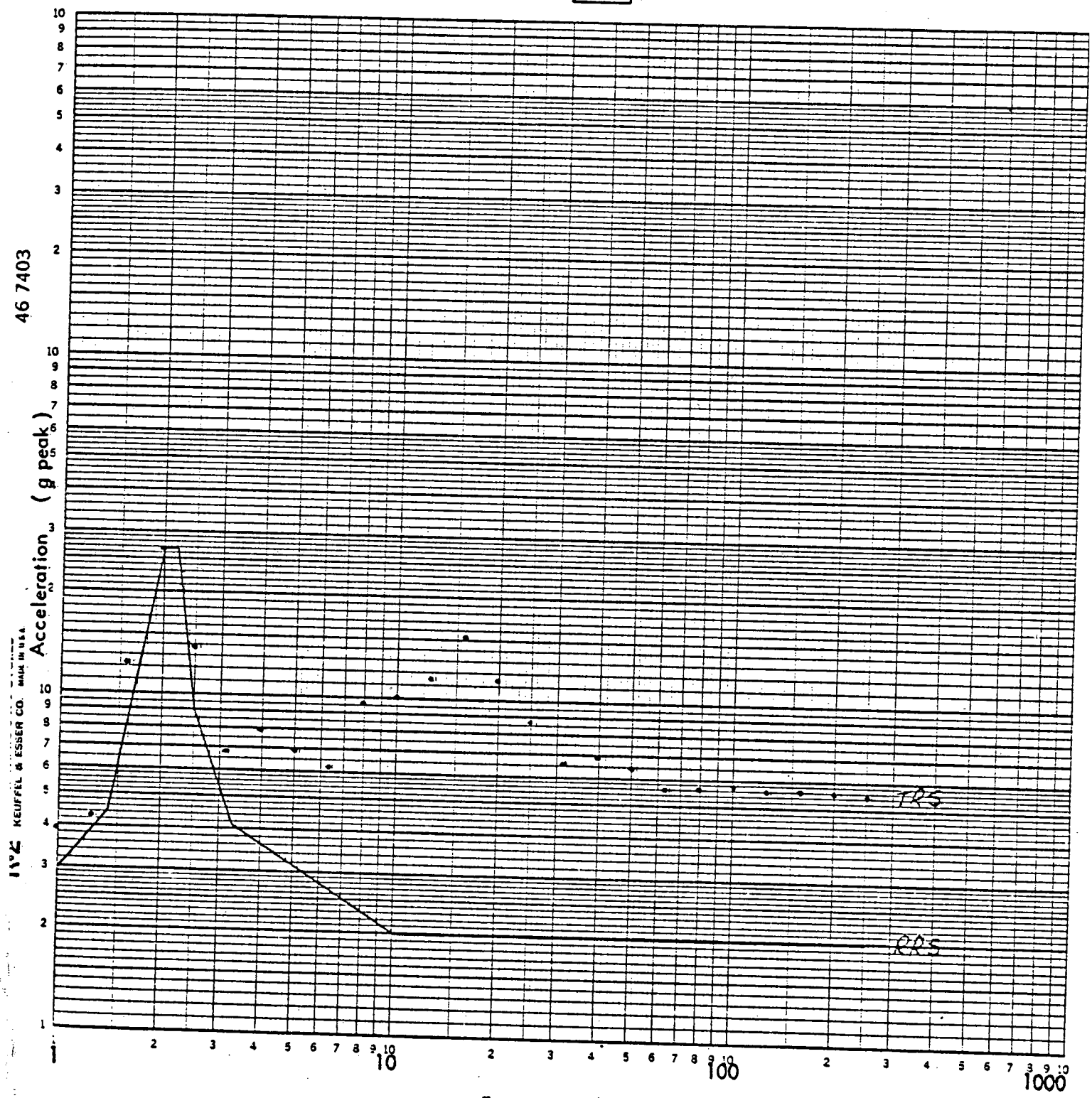
LOCATION NO. HCA

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS 5-5/VERTICAL

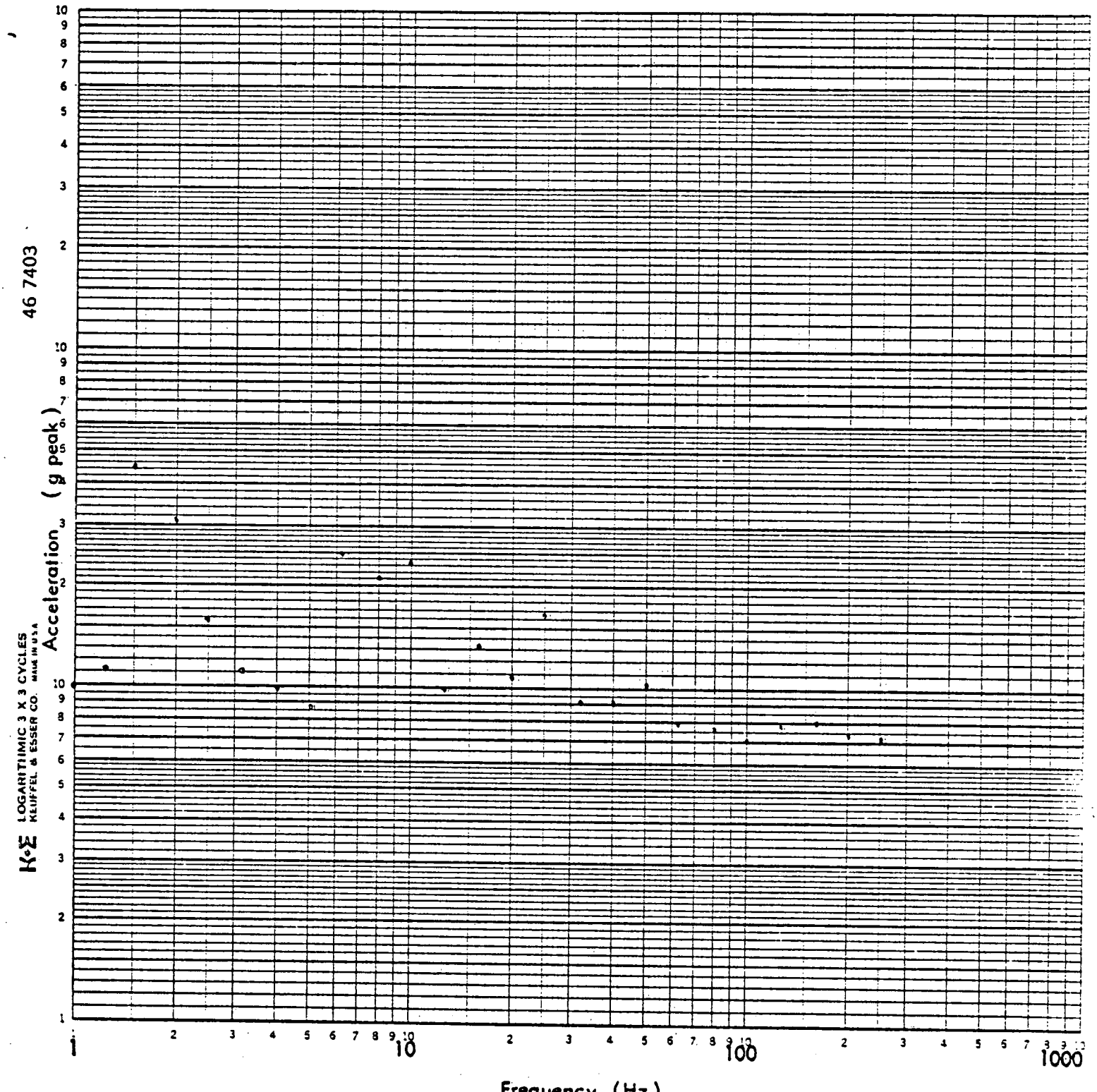
LOCATION NO. WCR

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

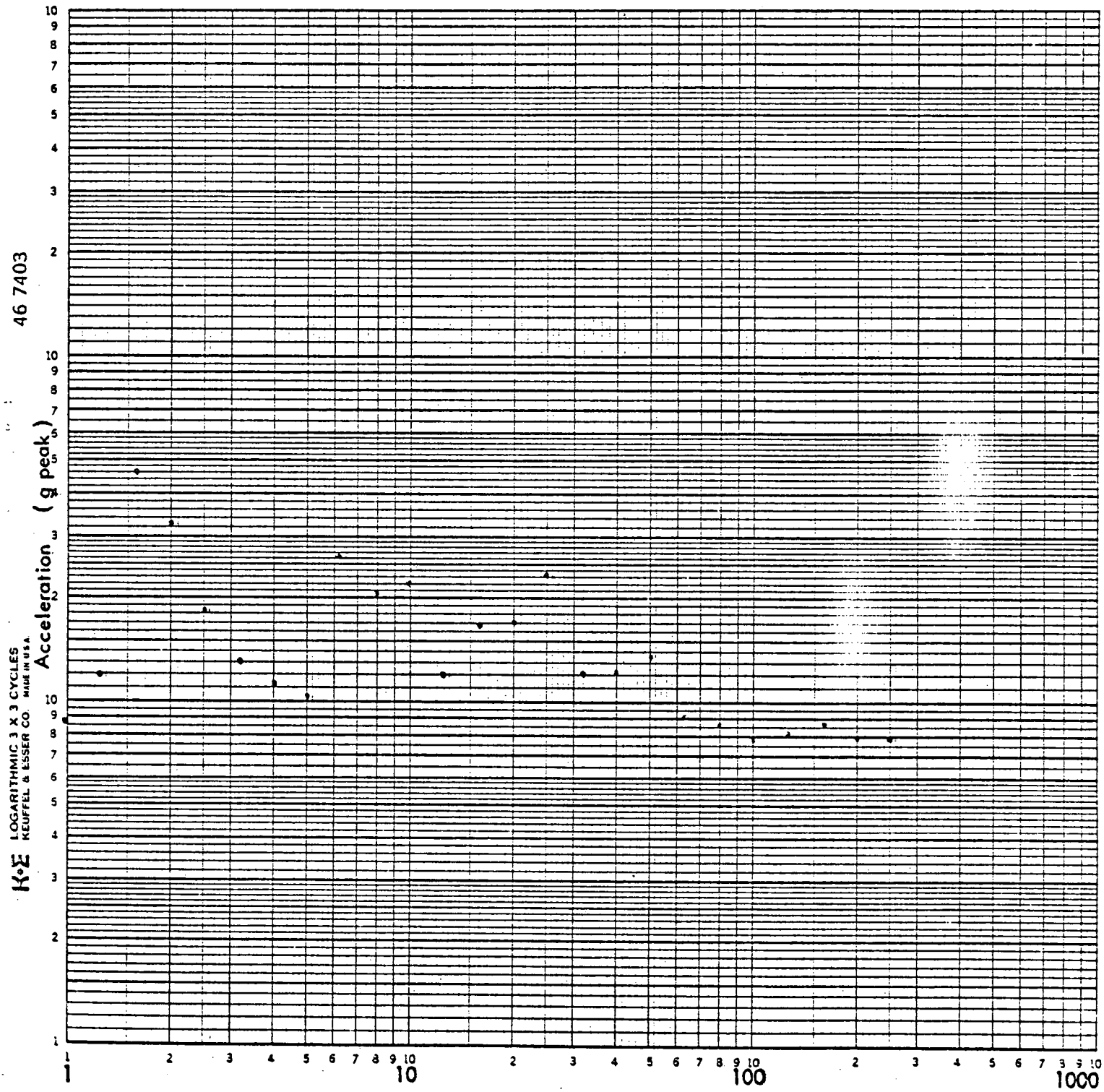
LOCATION NO. 1 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

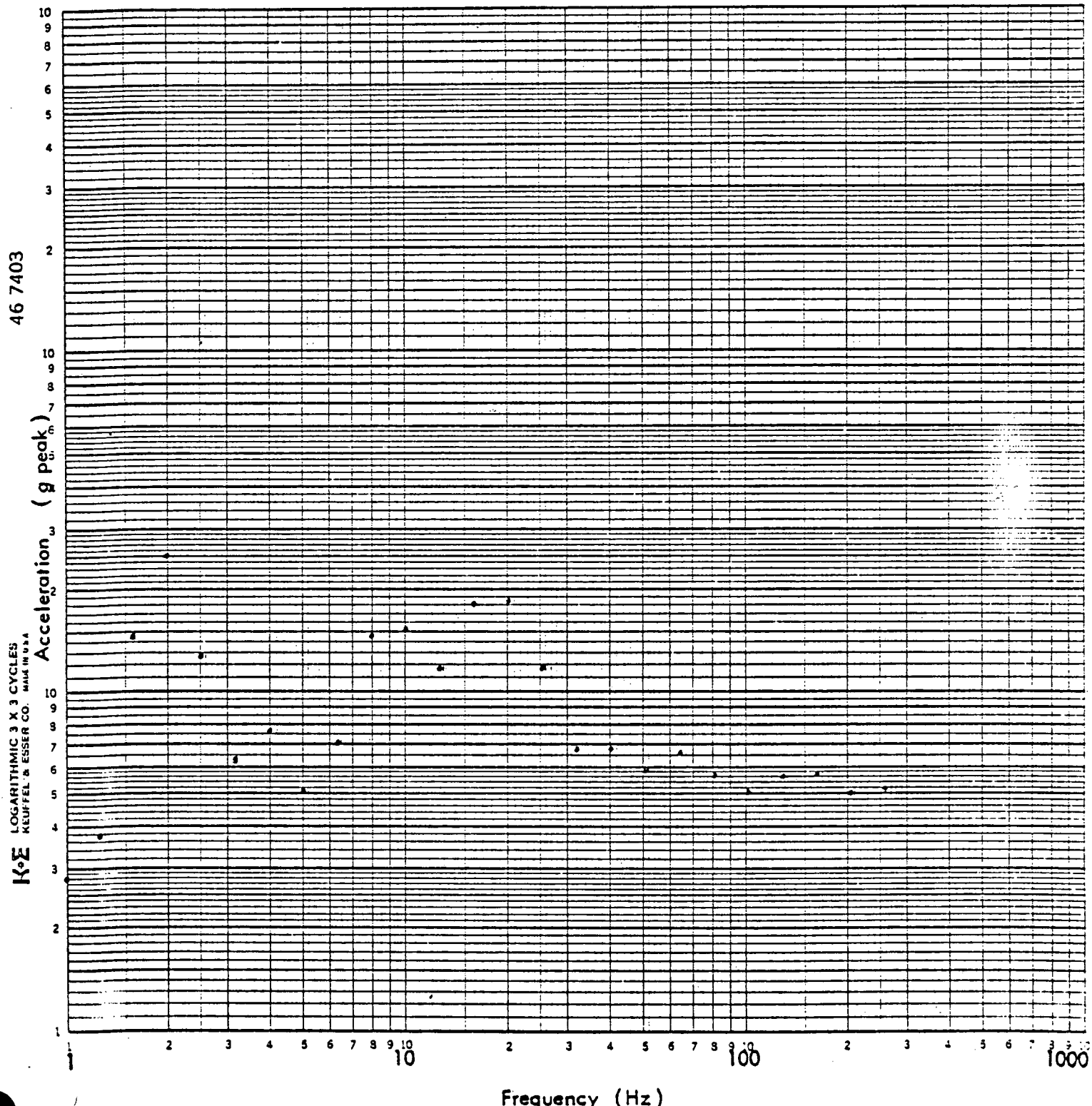
LOCATION NO. 2 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

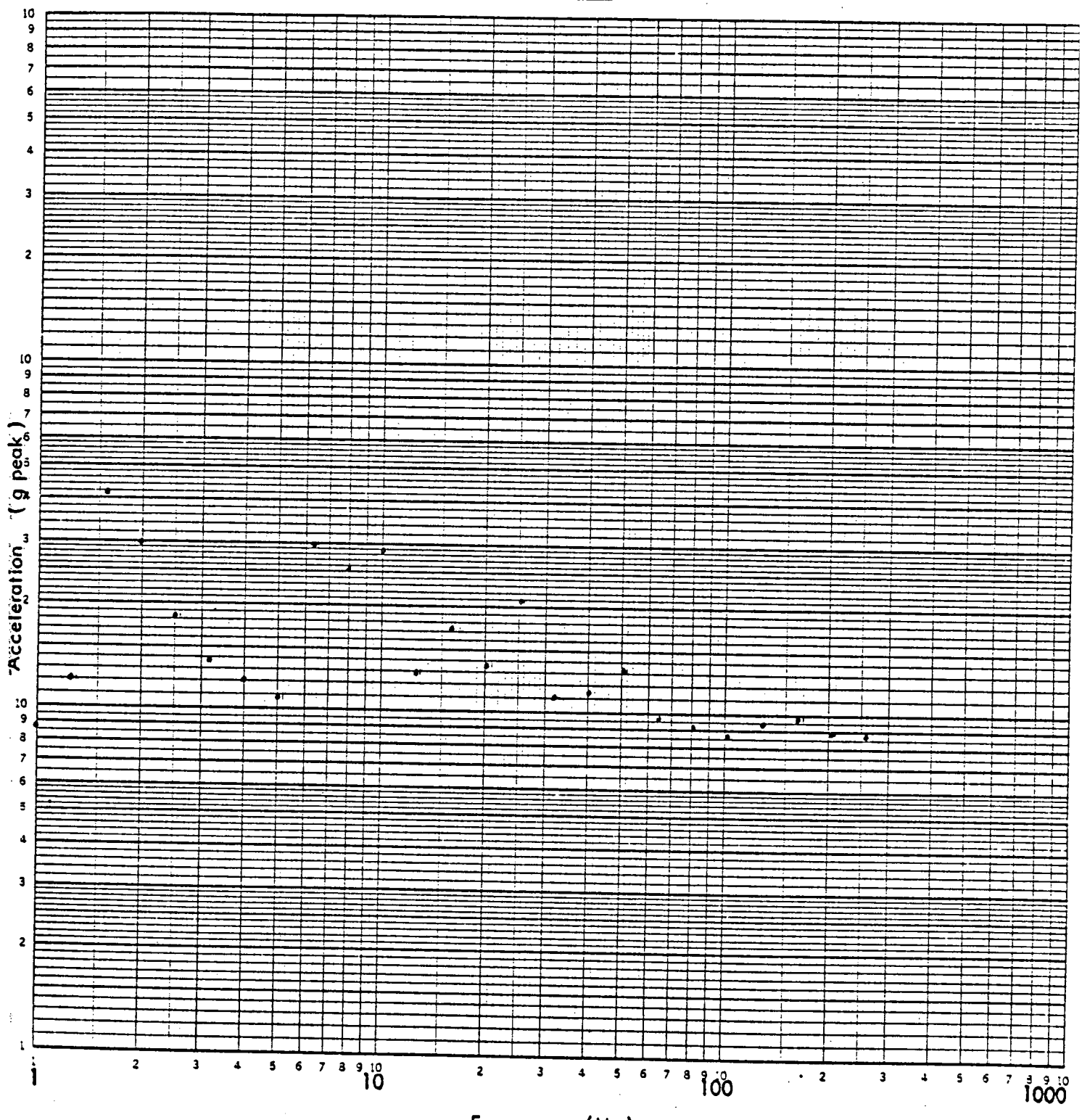
LOCATION NO. 3Y

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

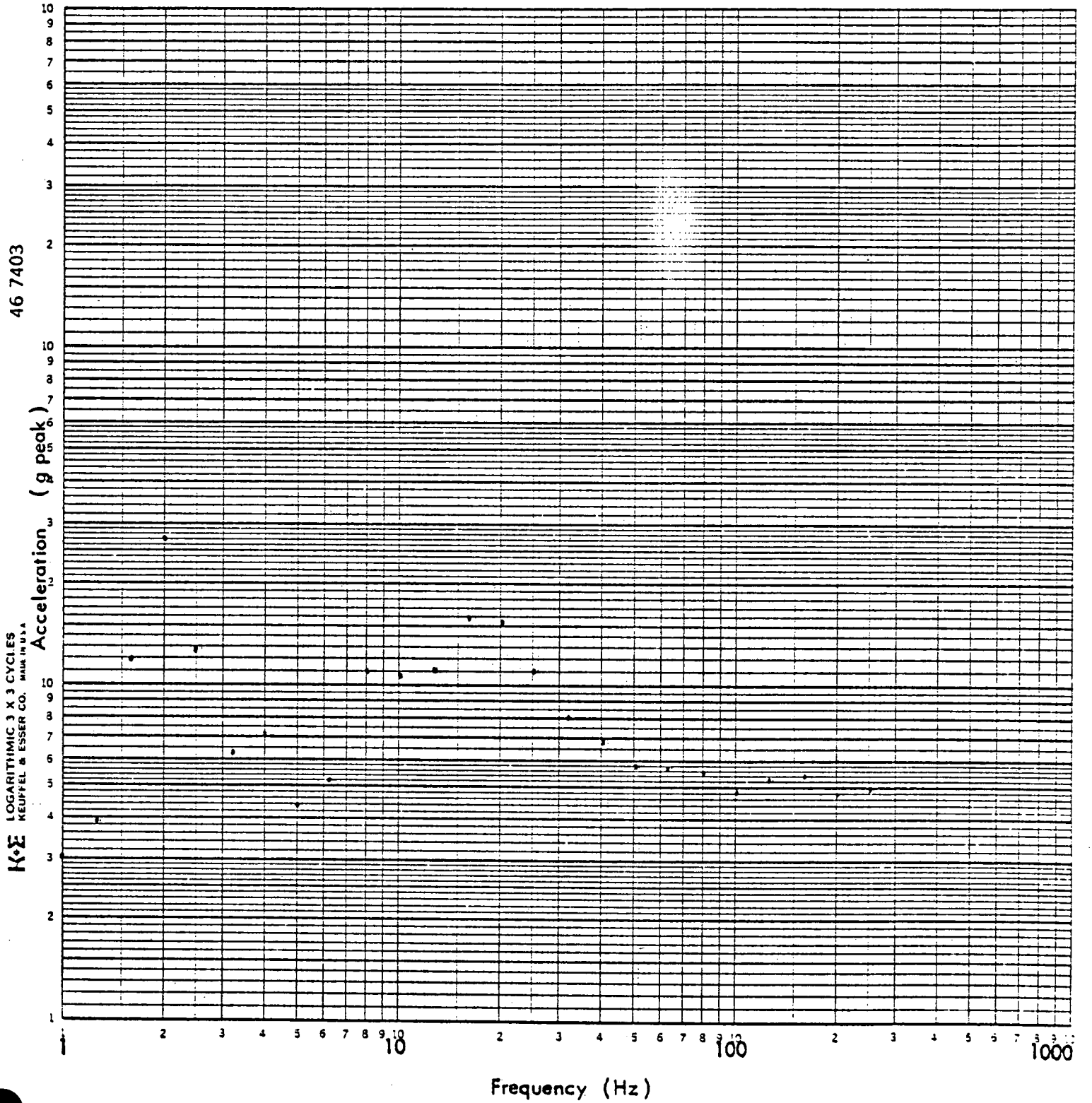
LOCATION NO. 4 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [/ %]



AXIS S-S Vert

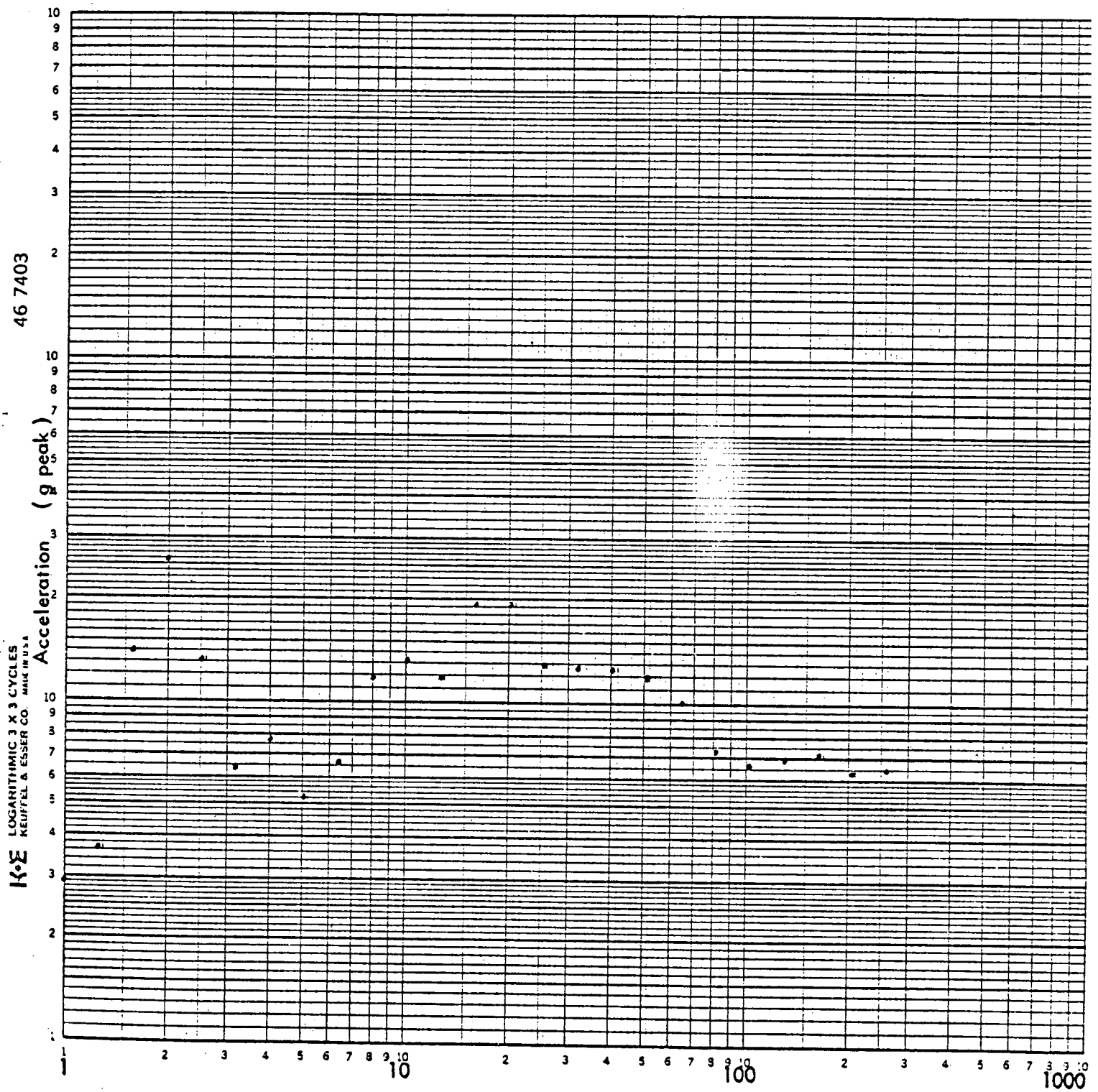
LOCATION NO. 5 Y

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

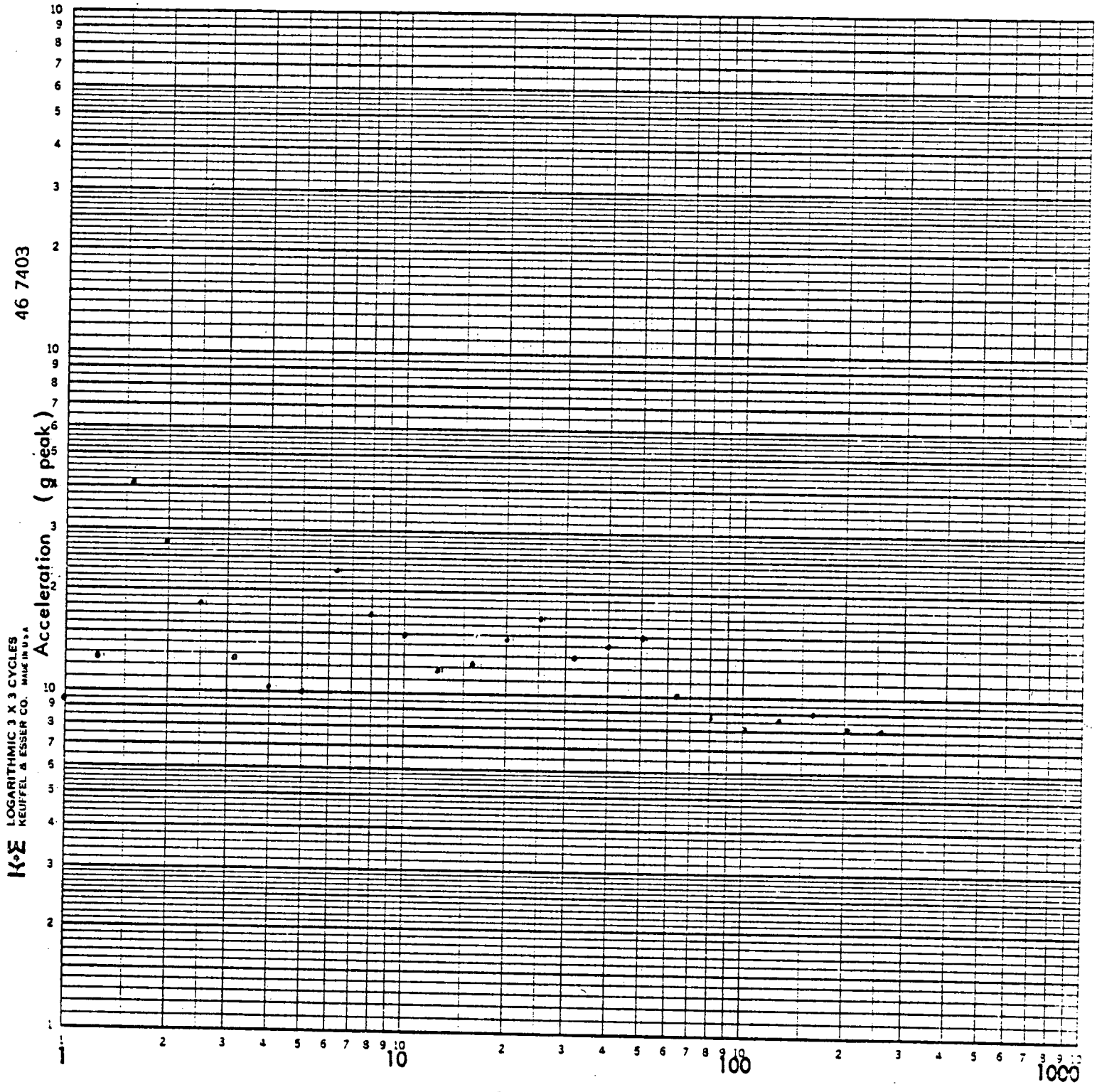
LOCATION NO. 6Y

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

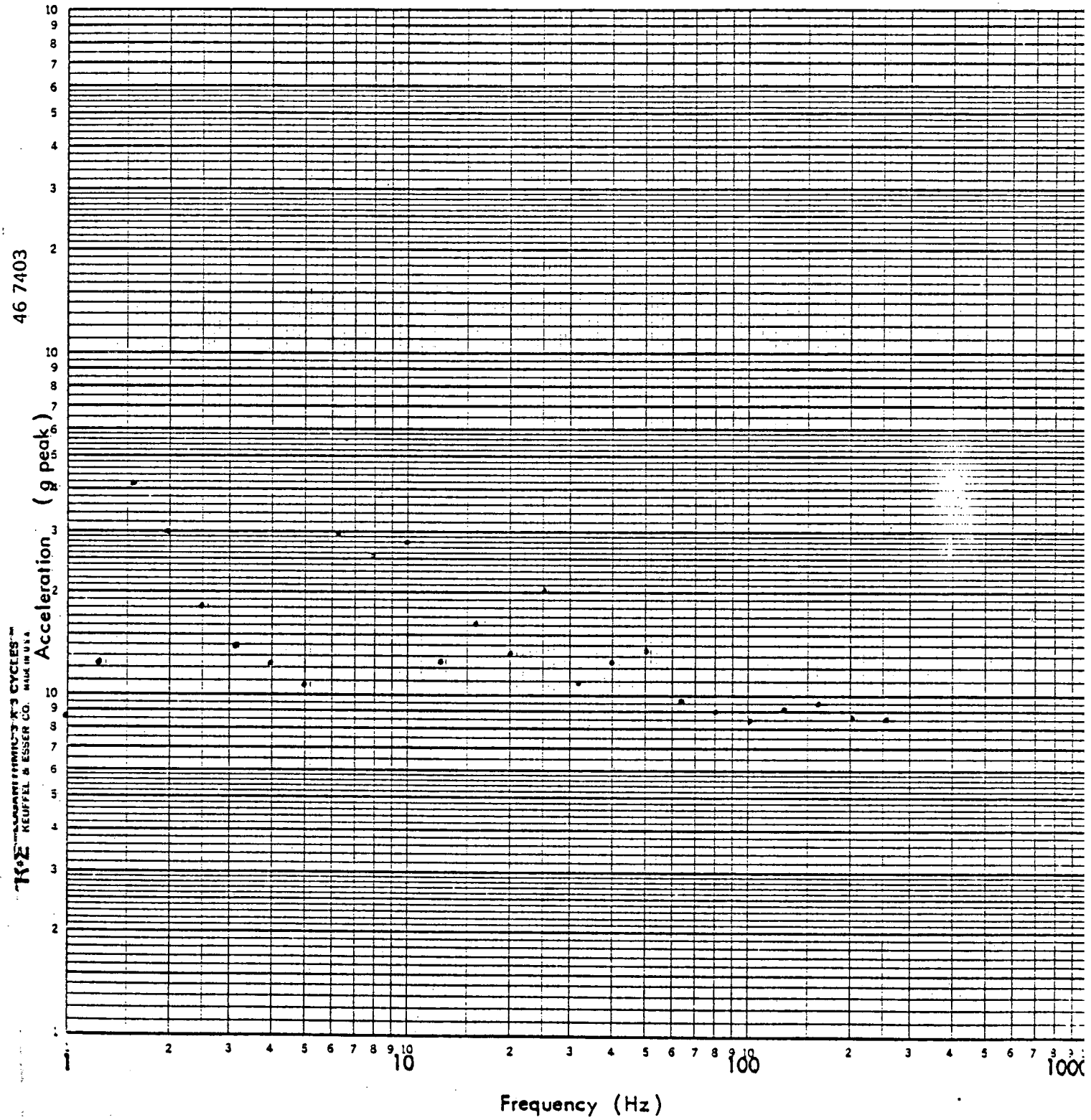
LOCATION NO. 7 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

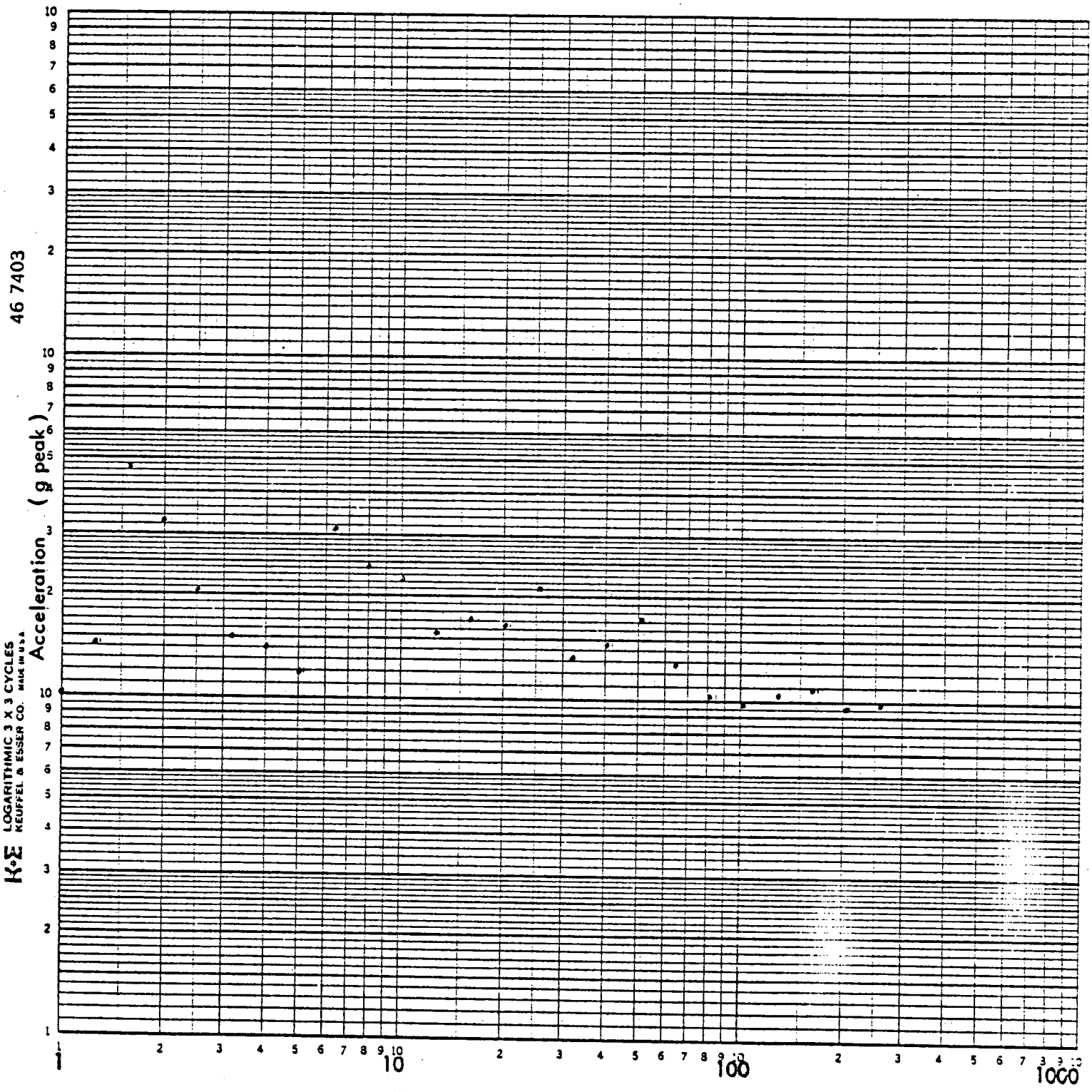
LOCATION NO. 8 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

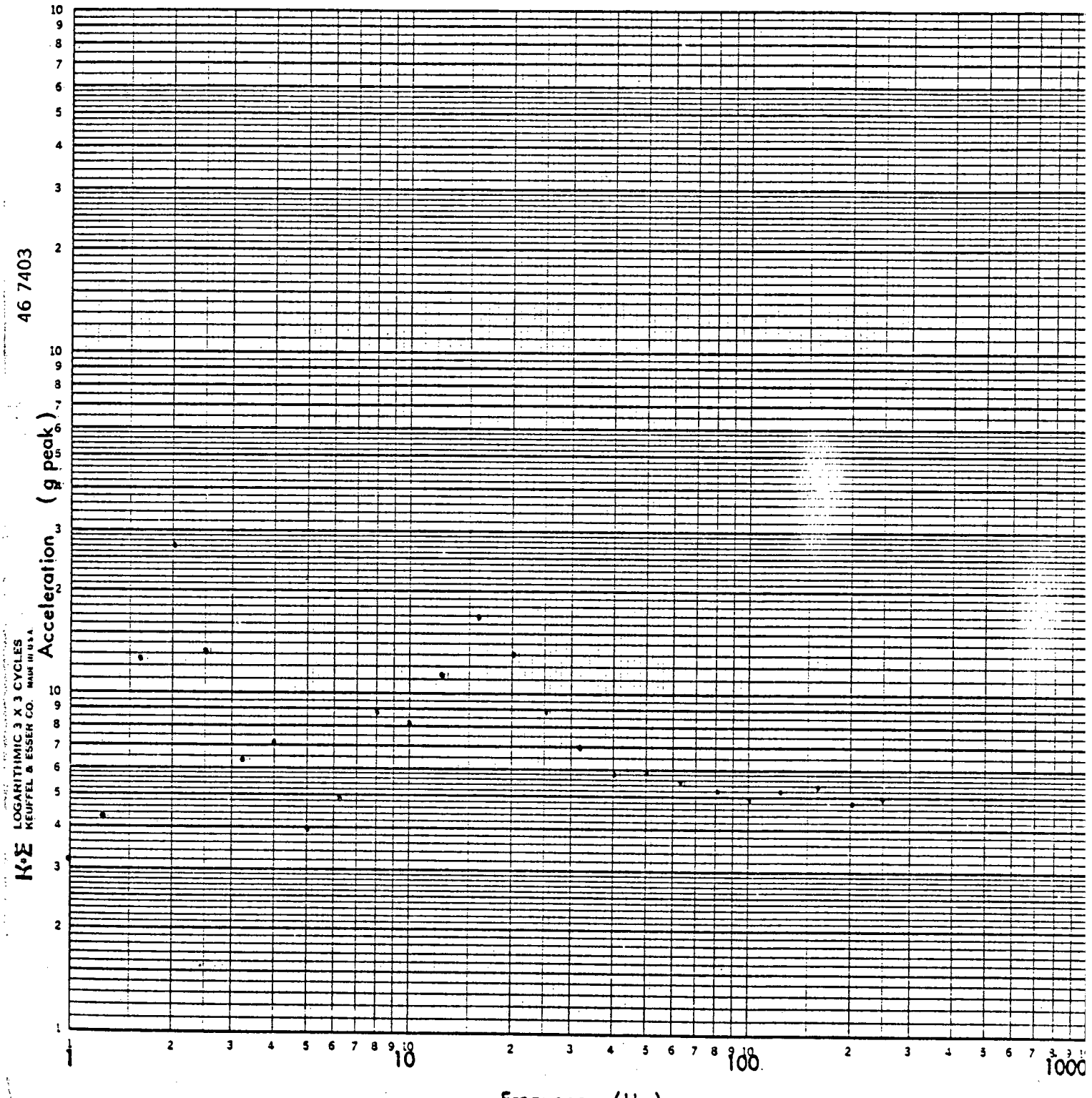
LOCATION NO. 9 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

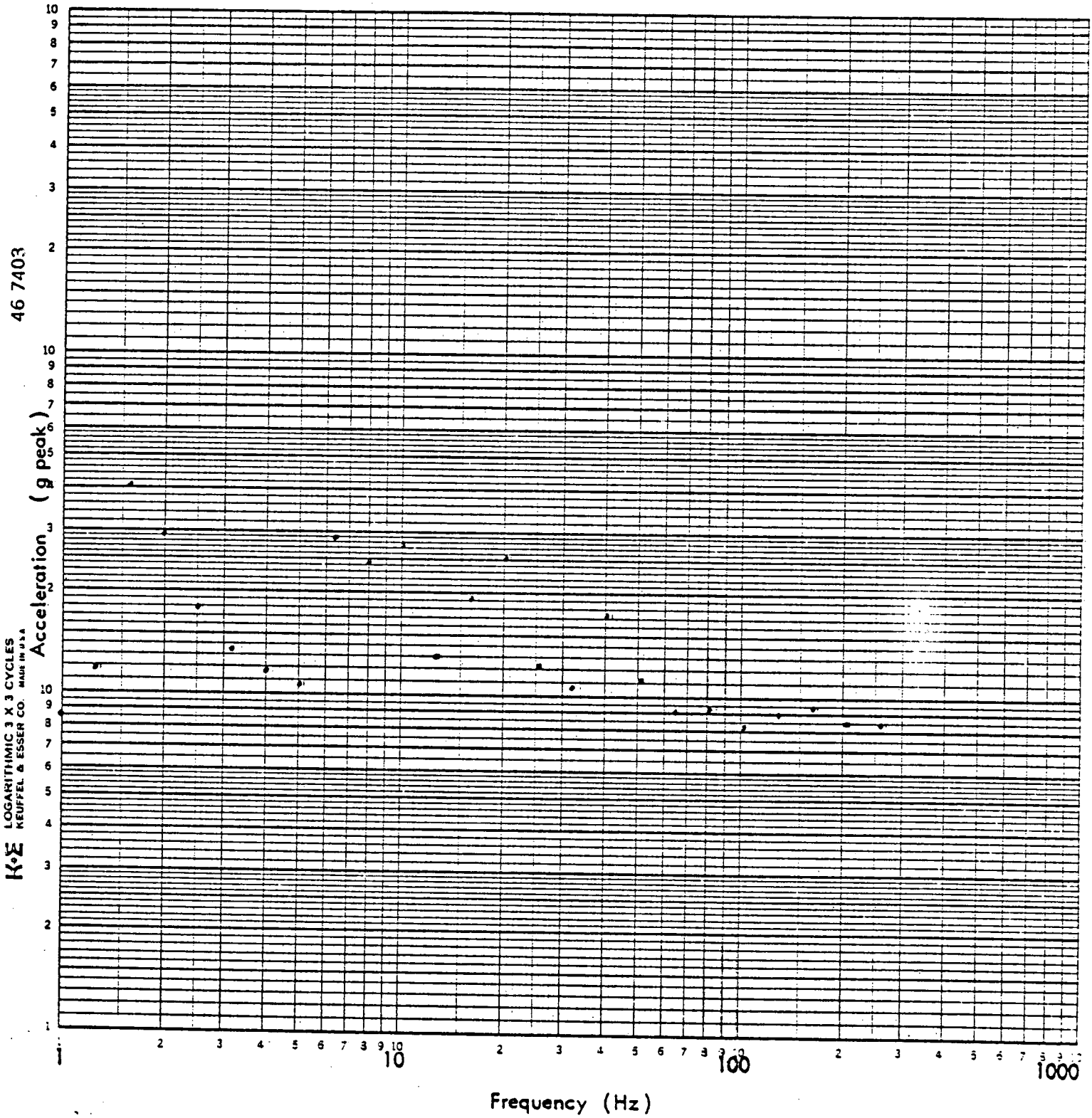
LOCATION NO. 10 V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

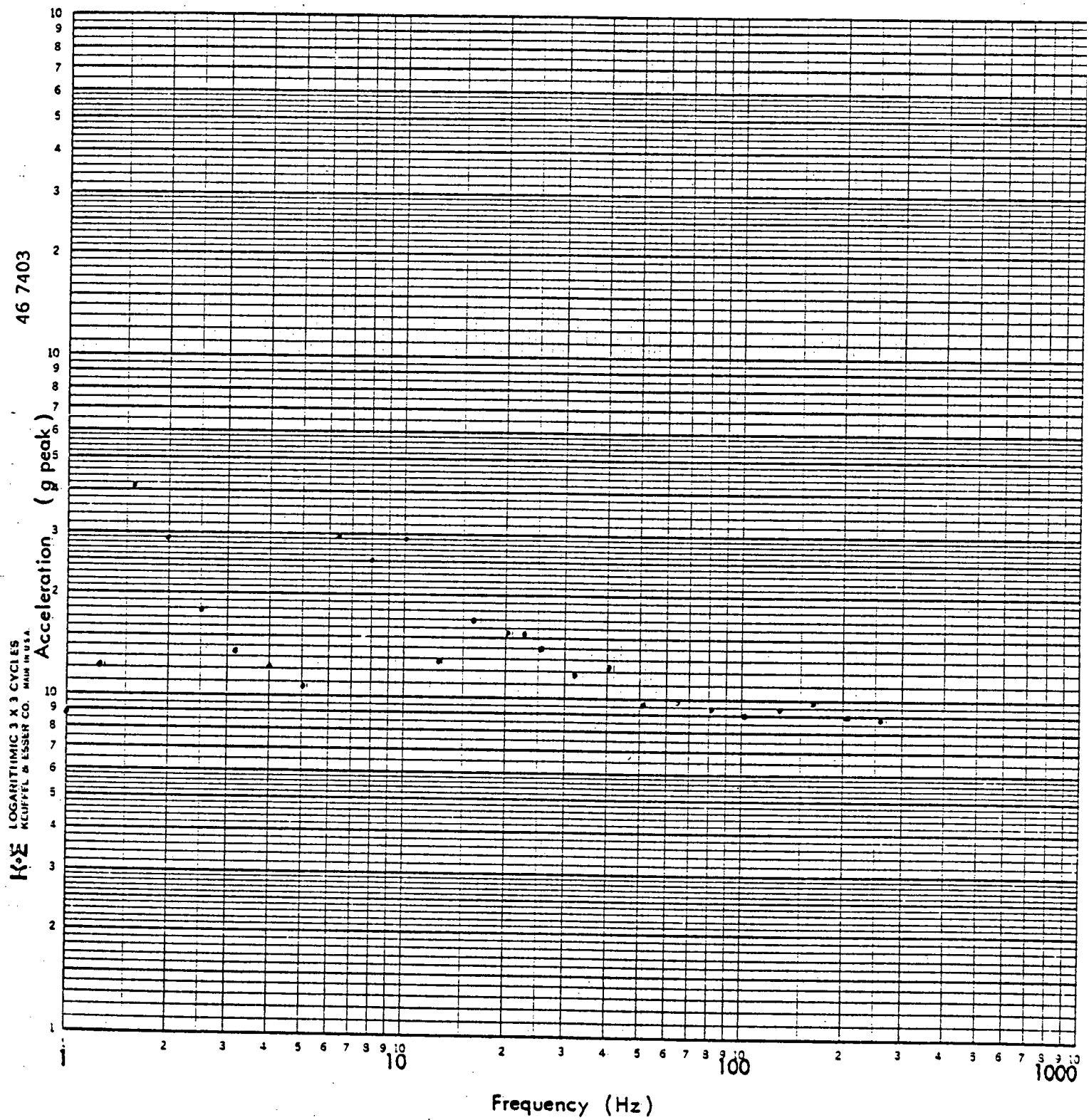
LOCATION NO. 11 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

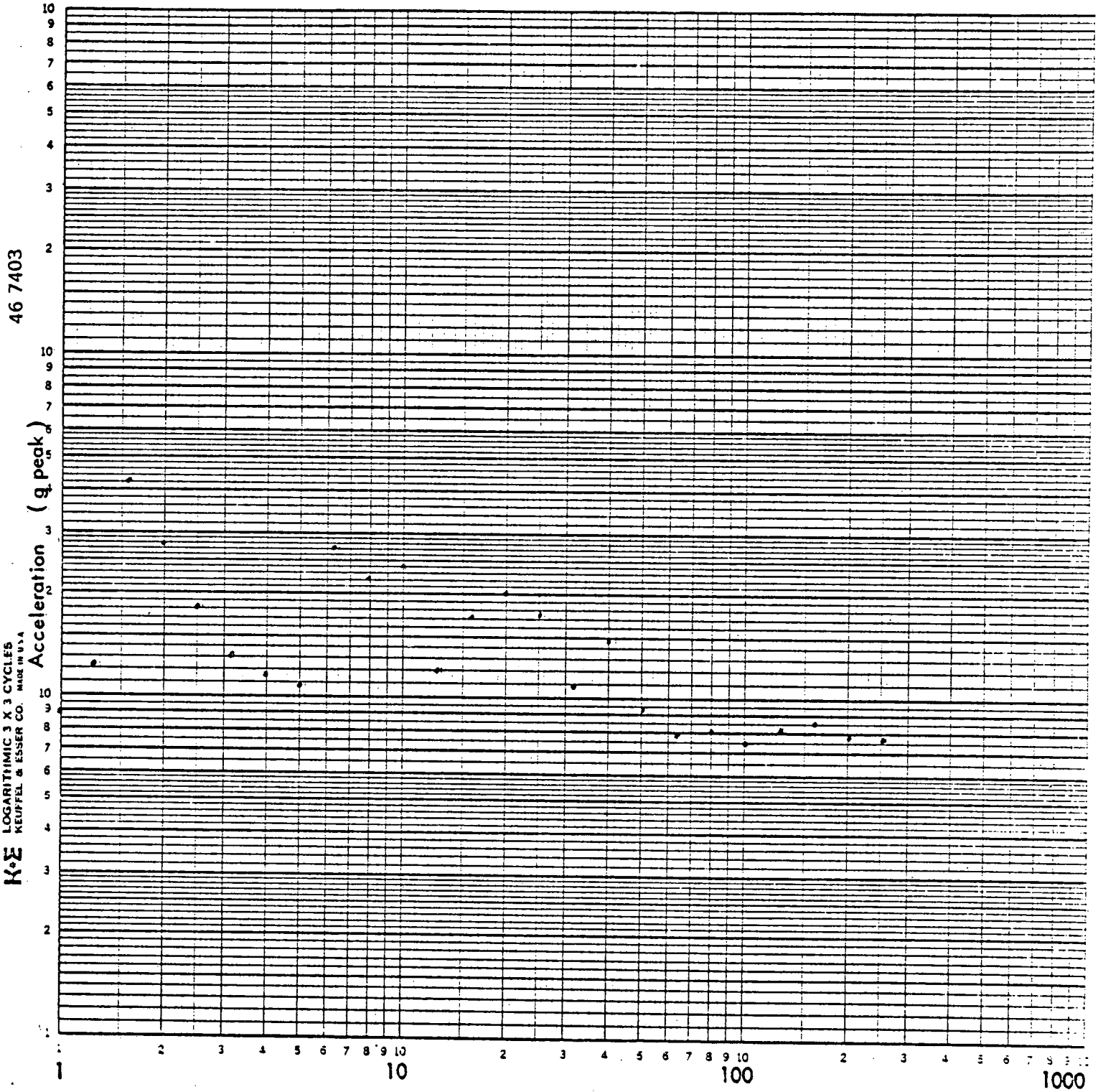
LOCATION NO. 12 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

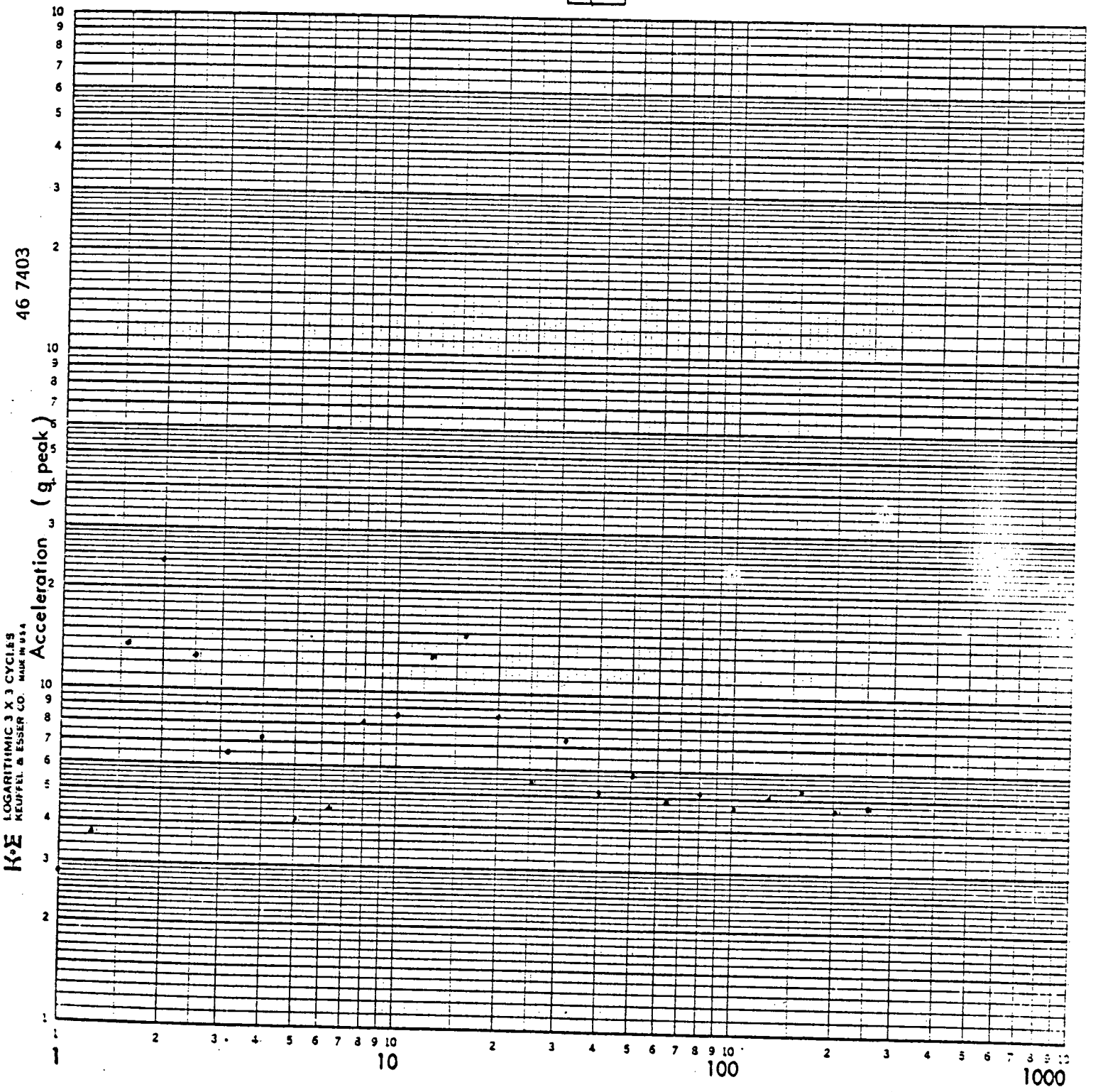
LOCATION NO. 13 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS 3-3/VERT

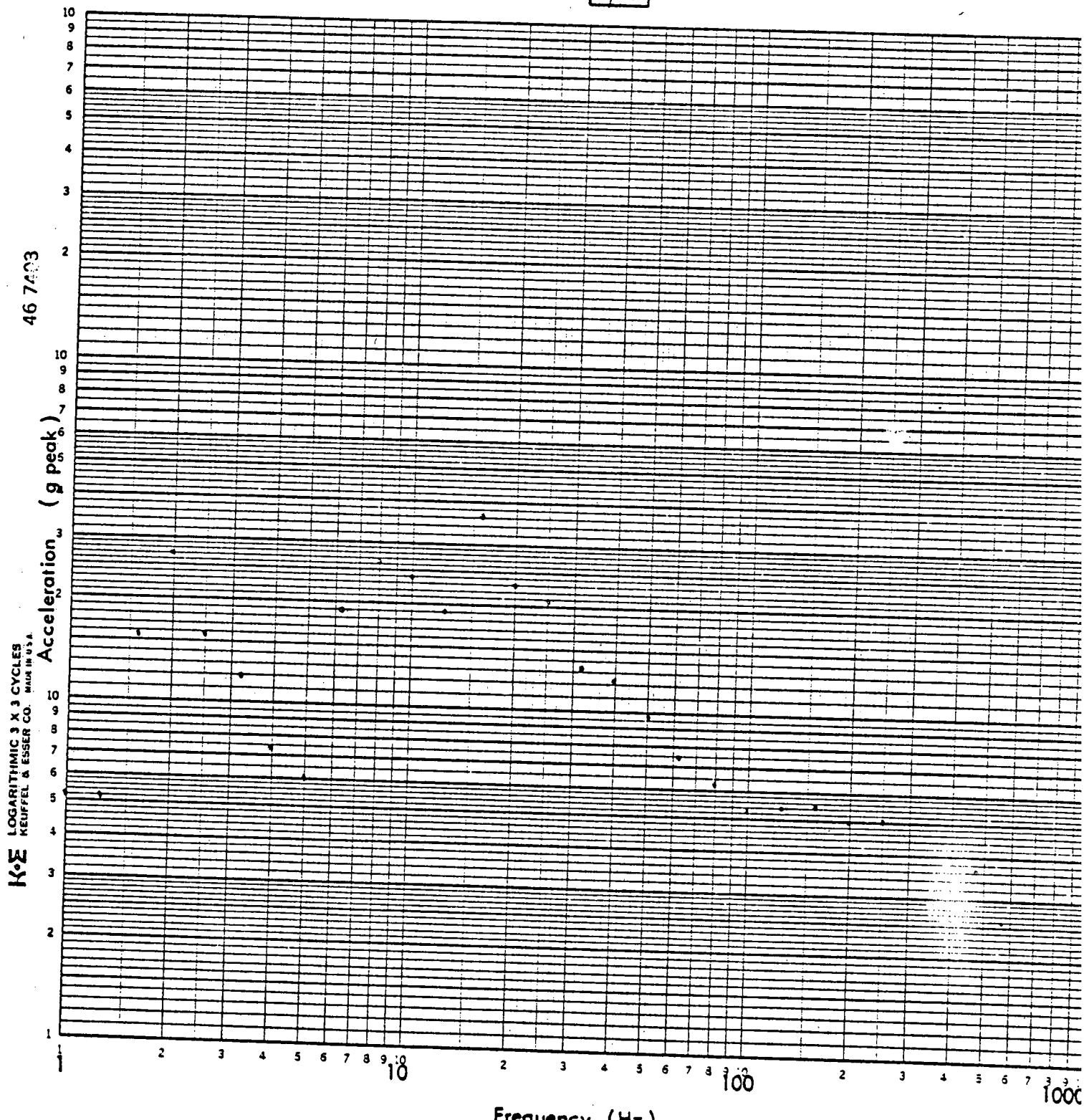
LOCATION NO. 14V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

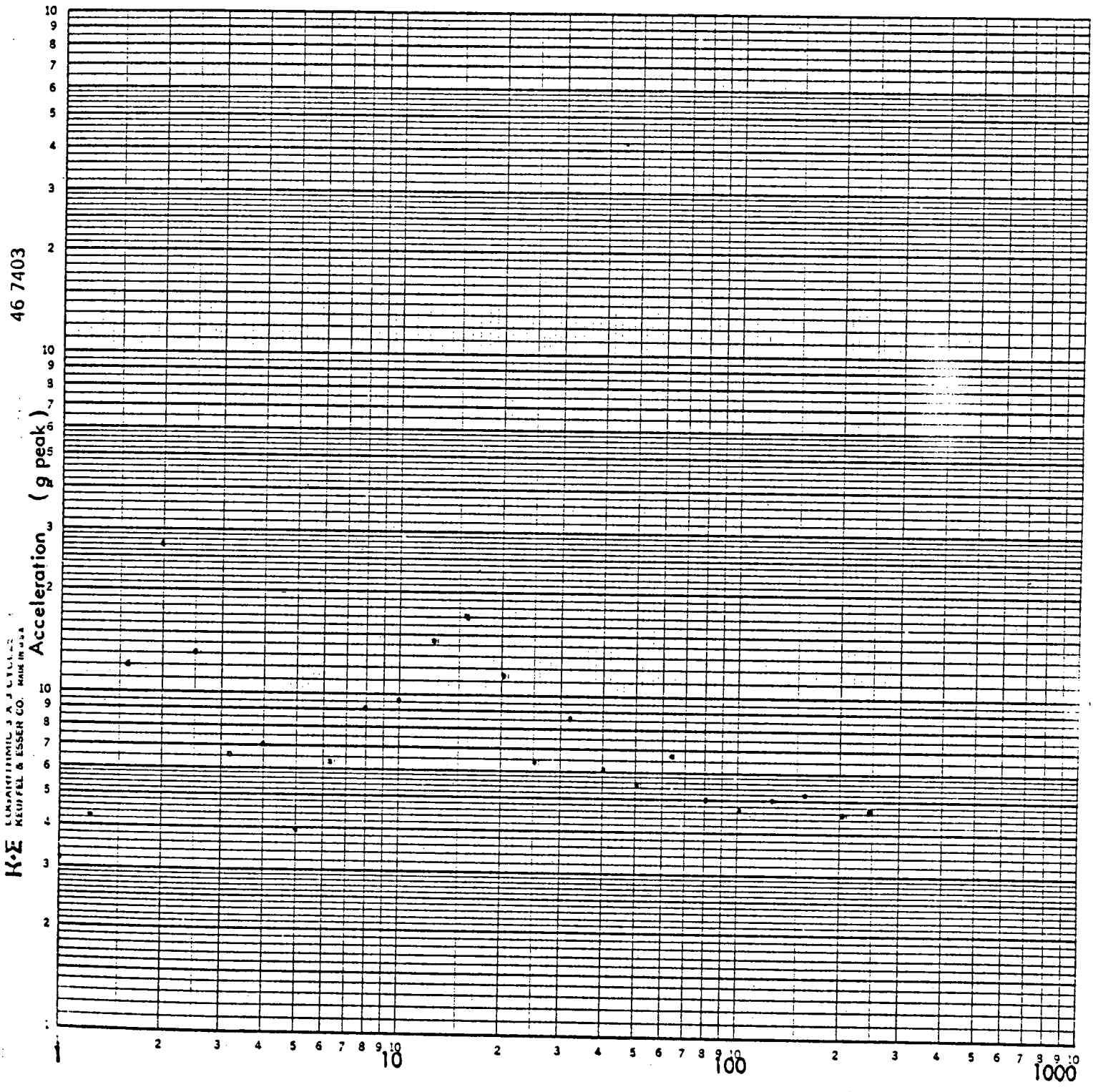
LOCATION NO. 15V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

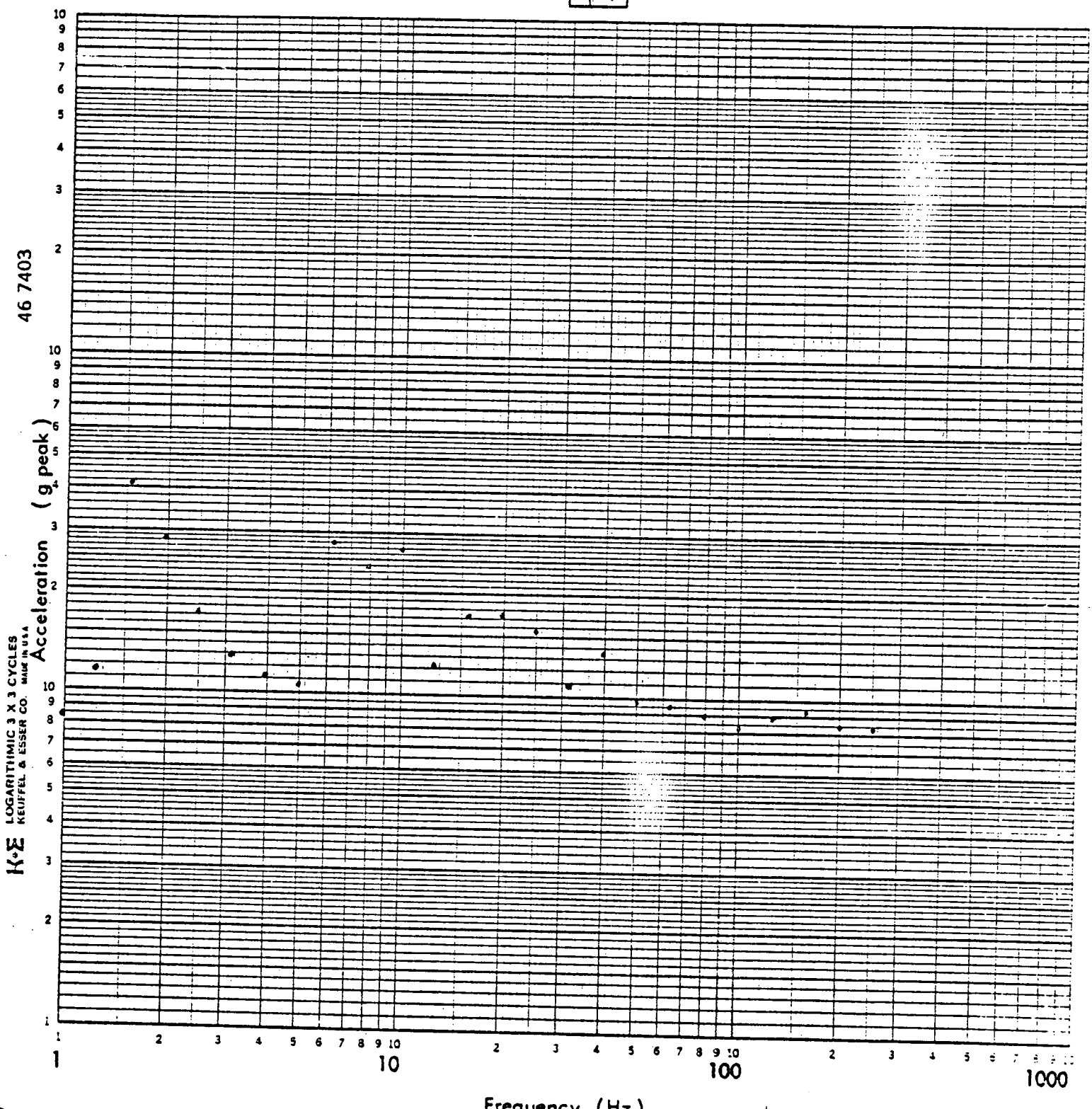
LOCATION NO. 16V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

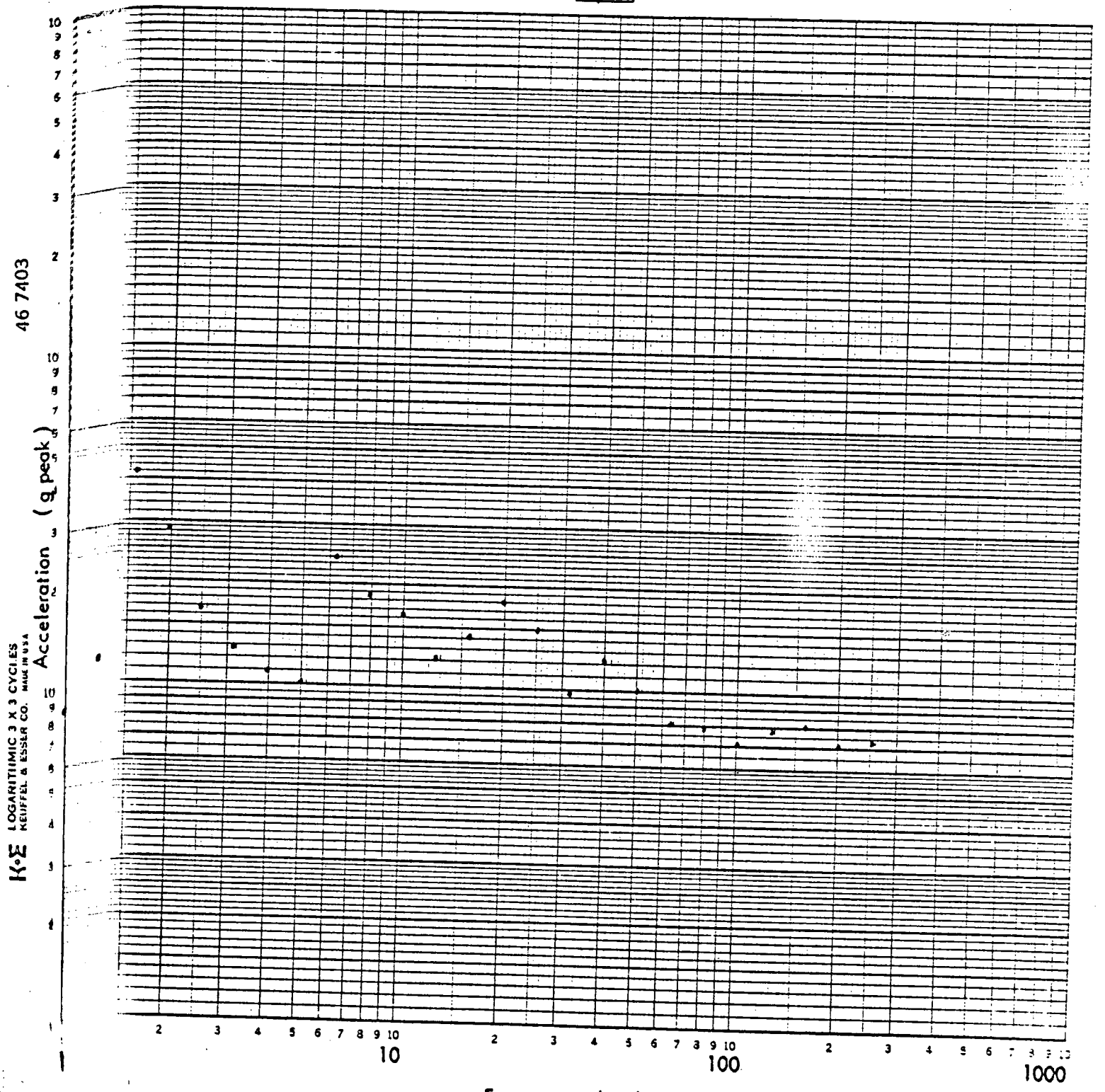
LOCATION NO. 17 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

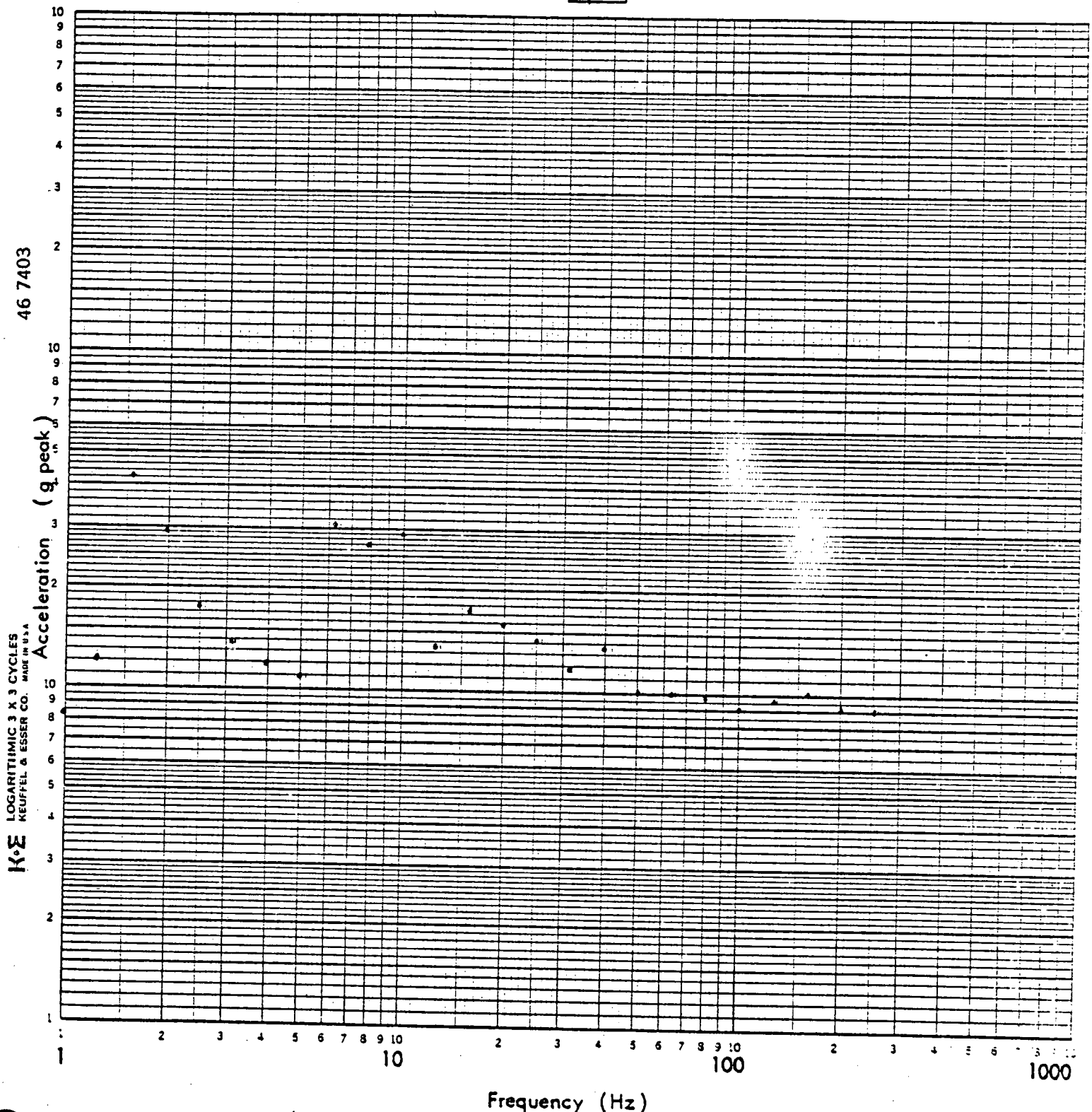
LOCATION NO. 18 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S / VERT

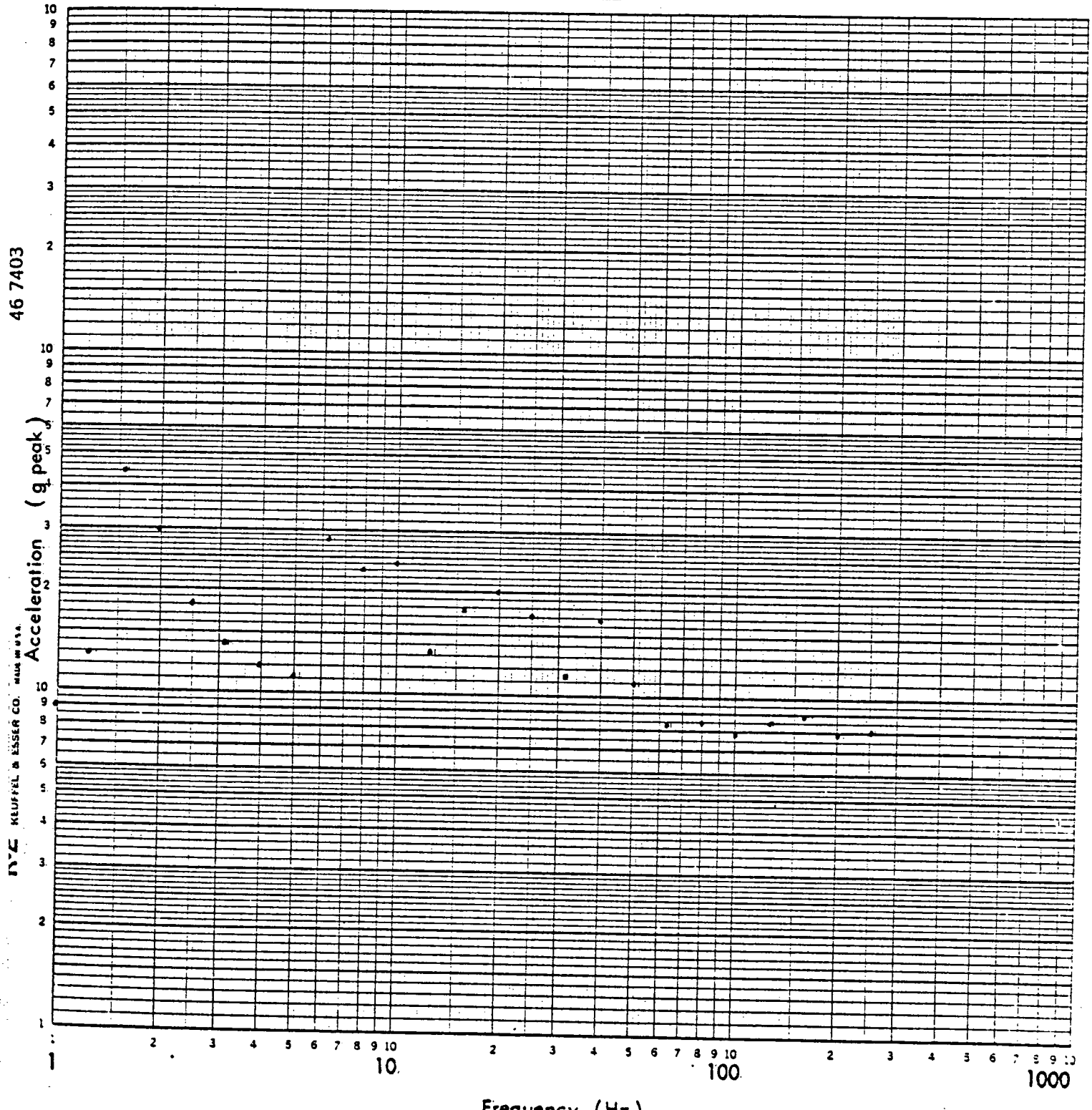
LOCATION NO. 195-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

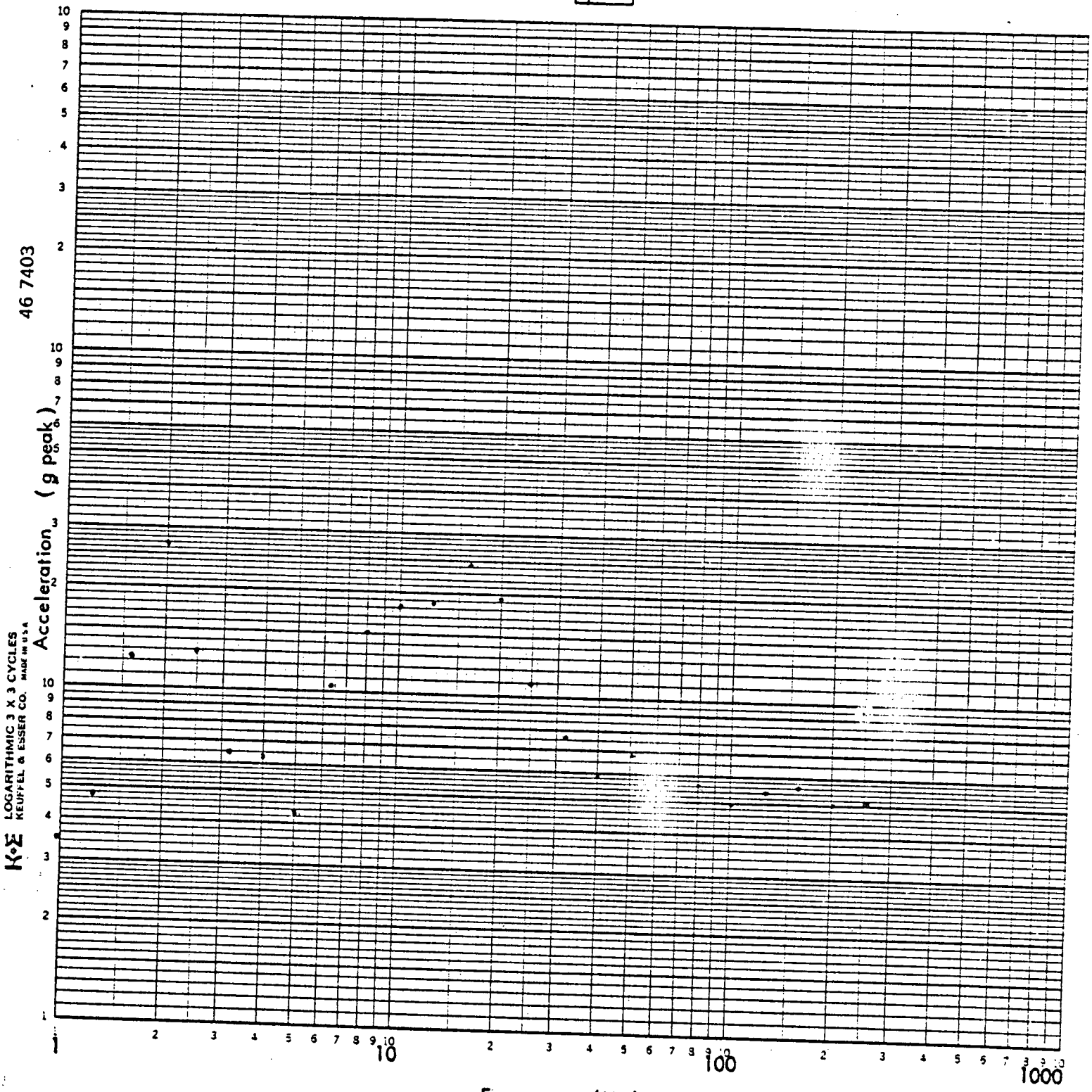
LOCATION NO. 205-5

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-3 / VERT

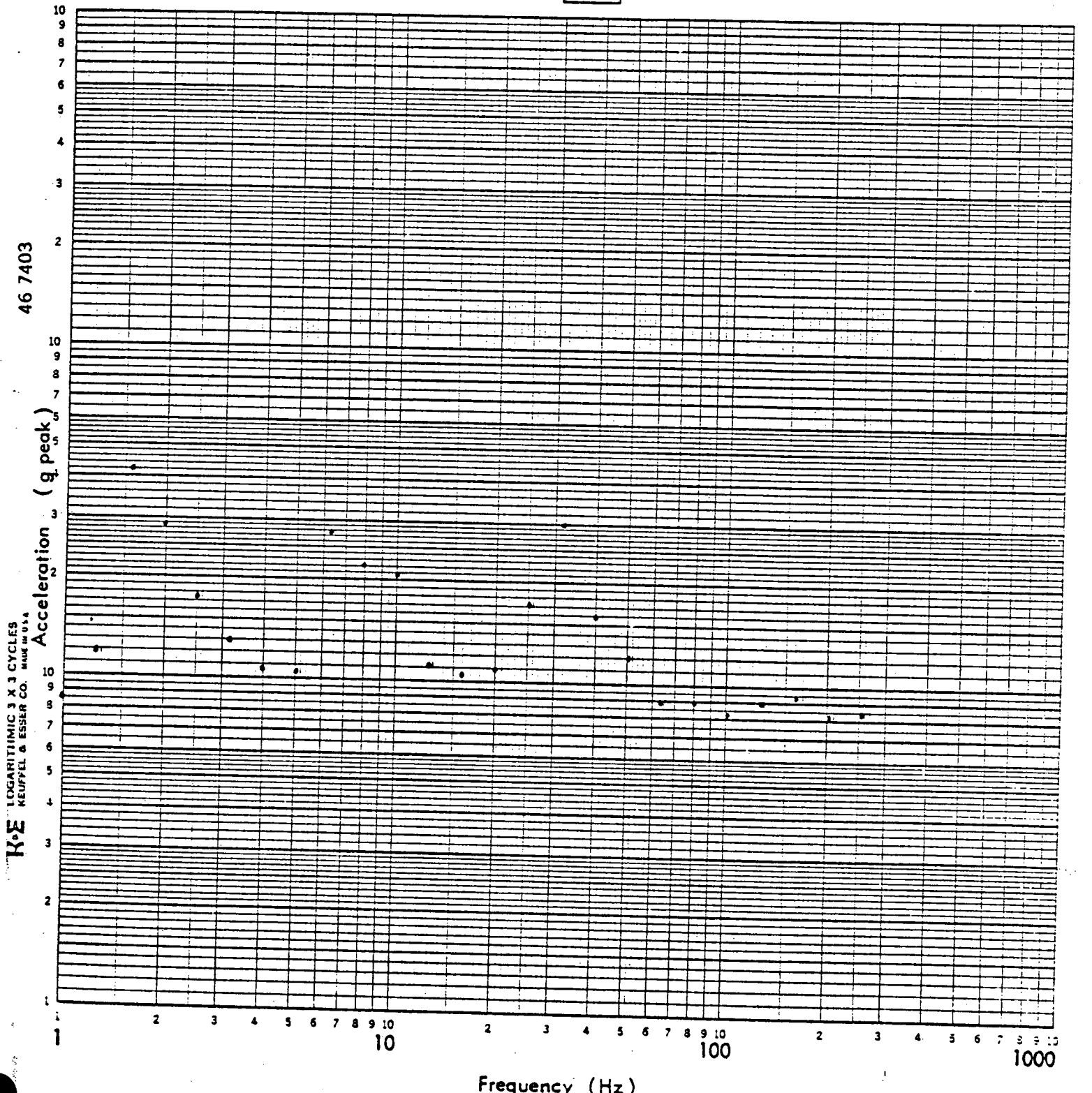
LOCATION NO. 21 V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S / VERT

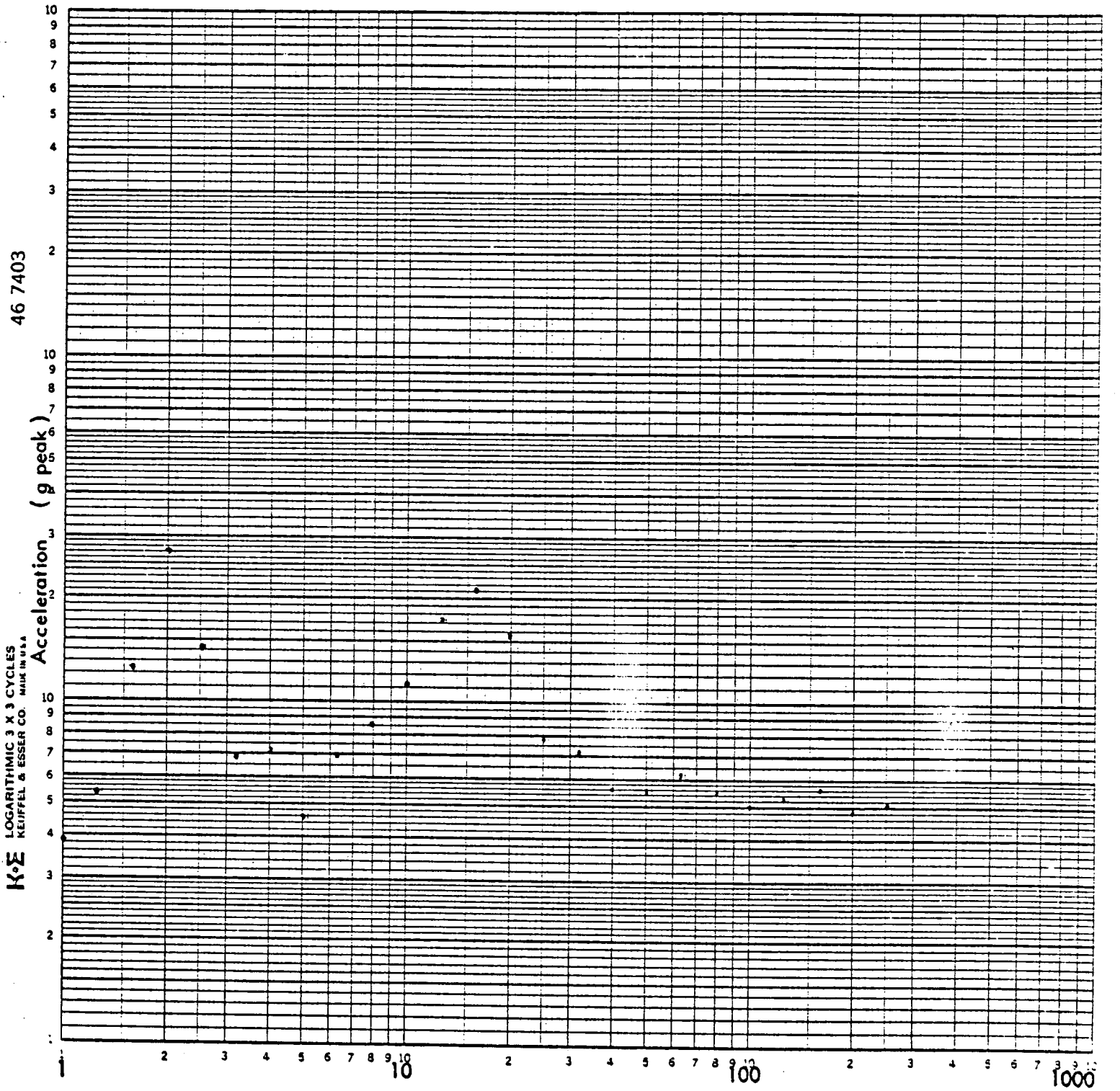
LOCATION NO. 22 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-3/VERT

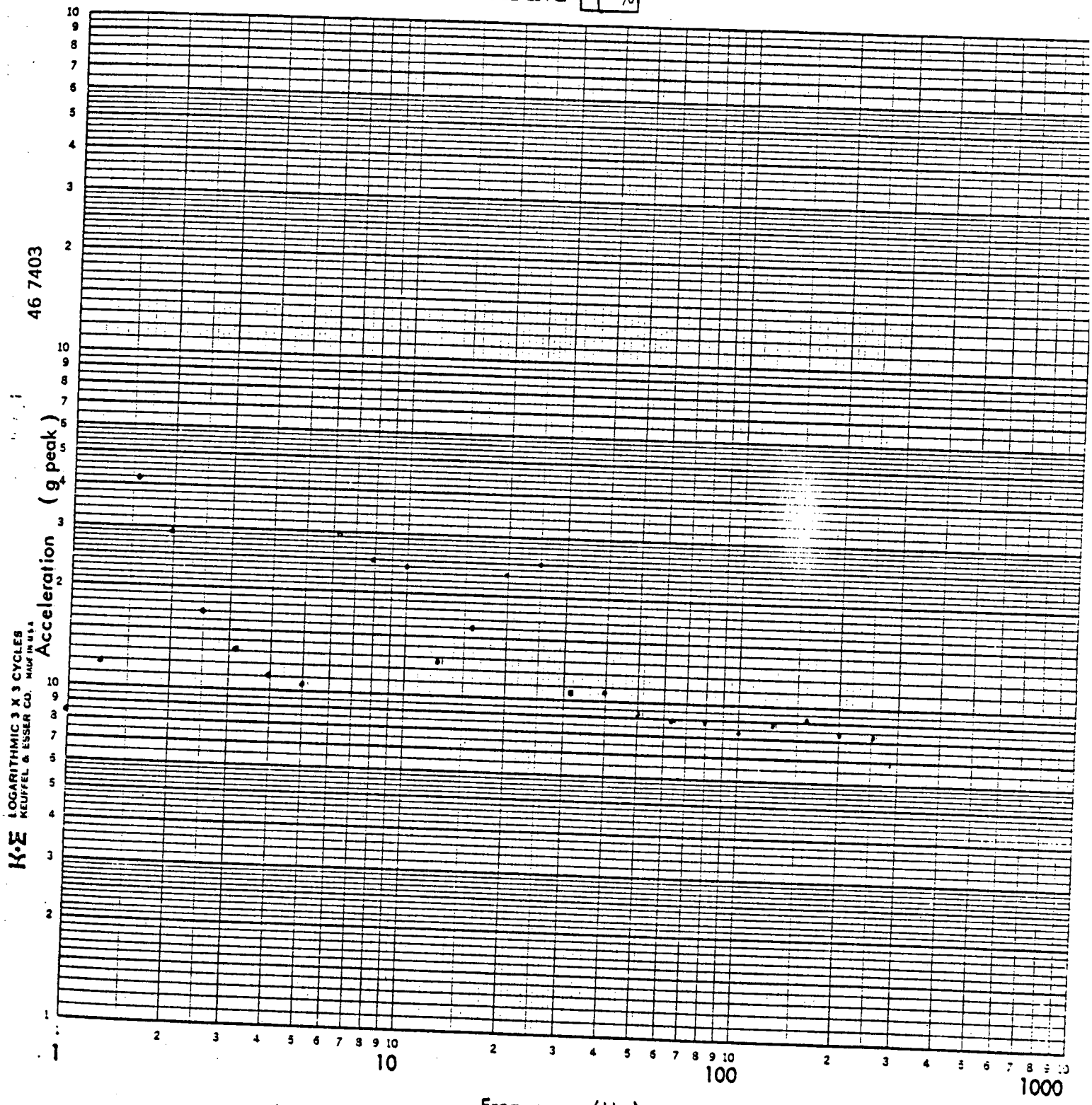
LOCATION NO. 23V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

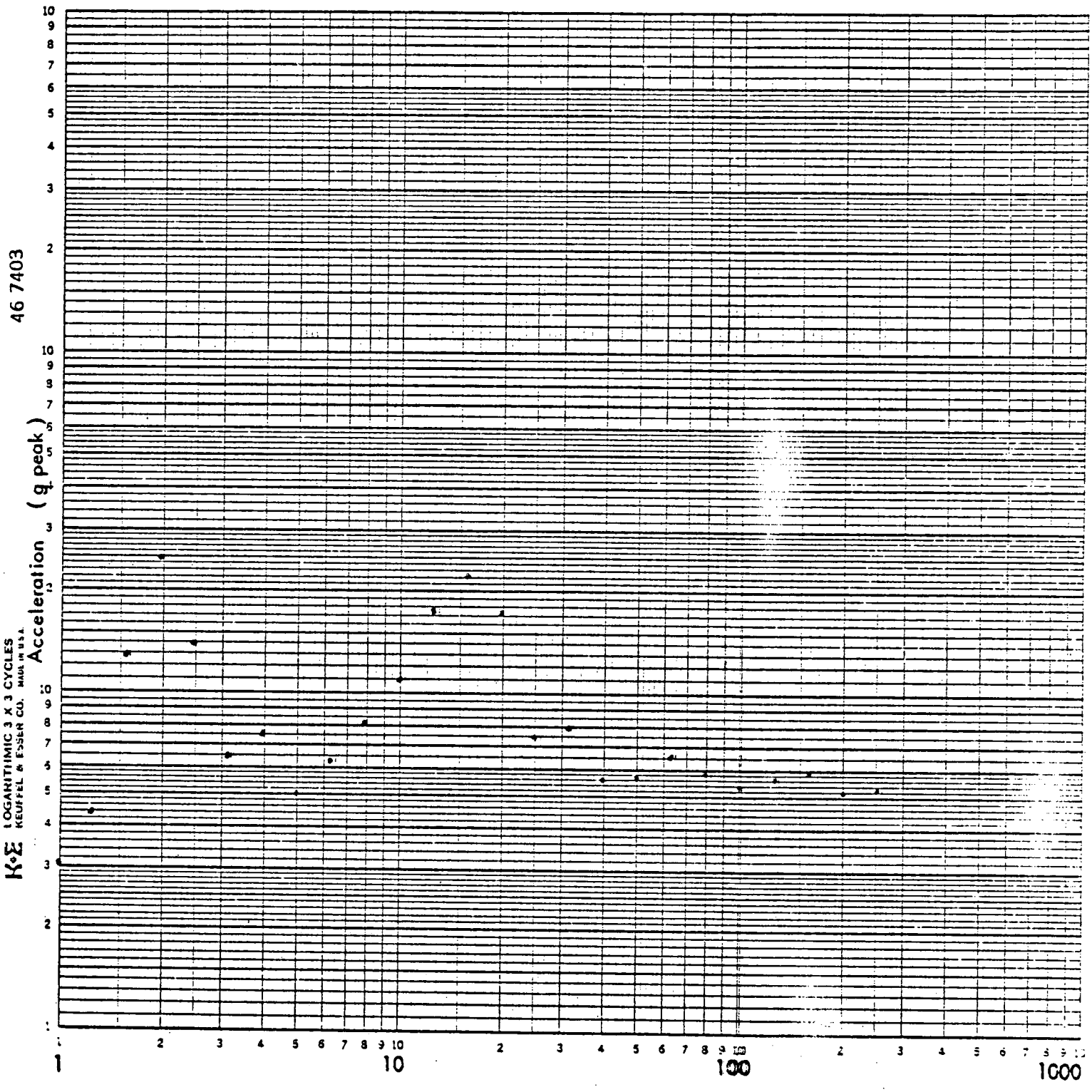
LOCATION NO. 24 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

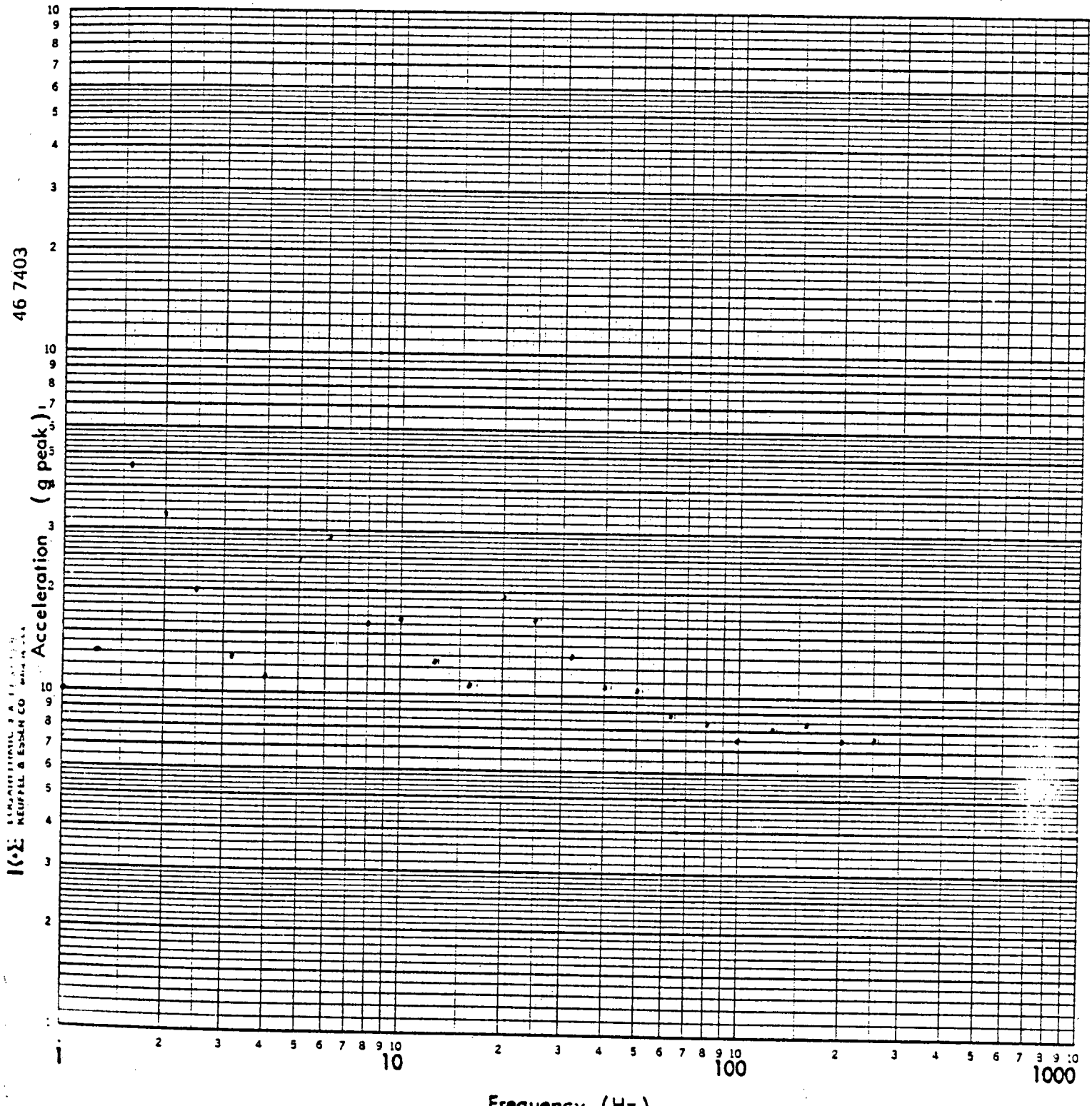
LOCATION NO. 25Y

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

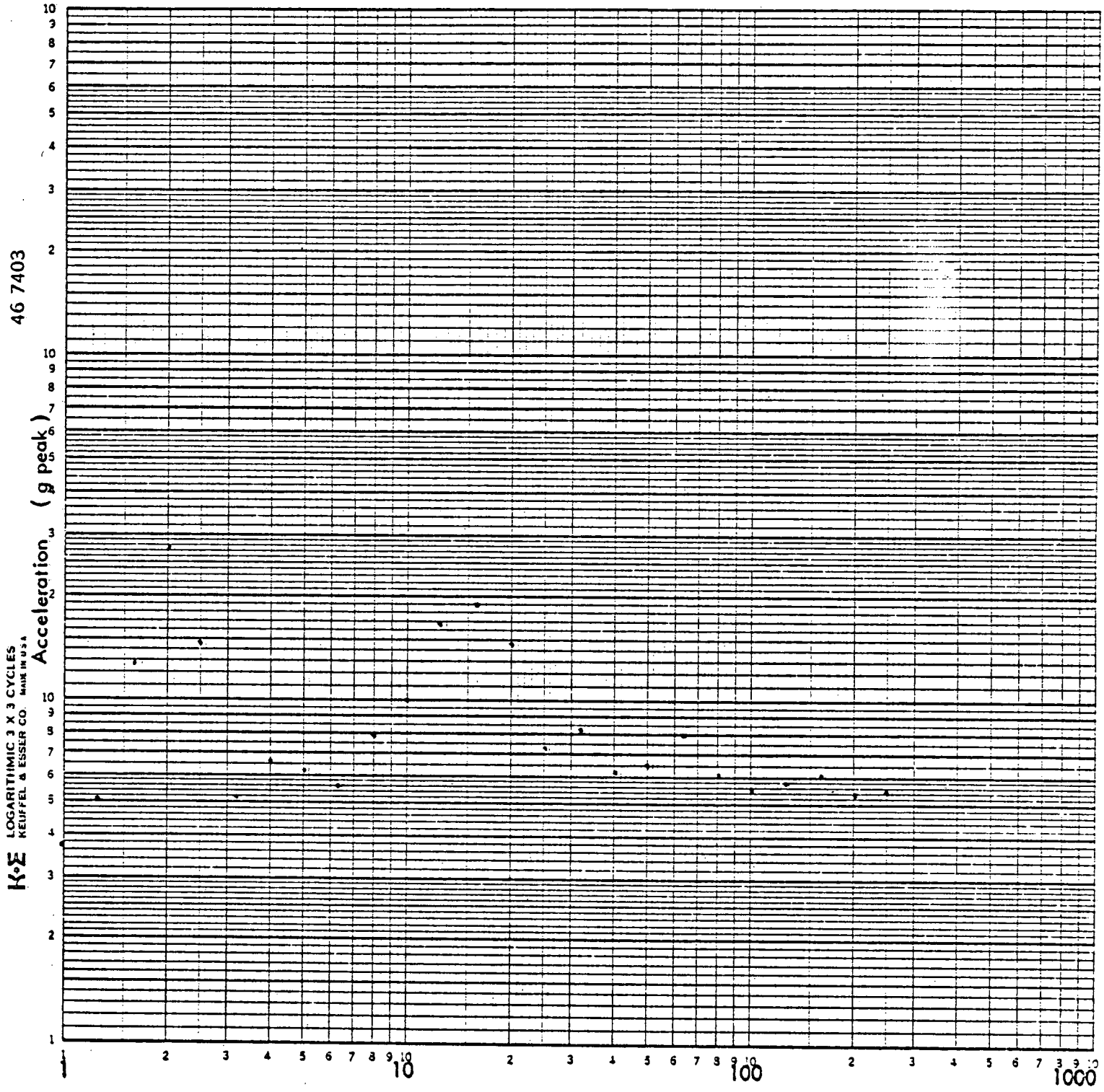
LOCATION NO. 26 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

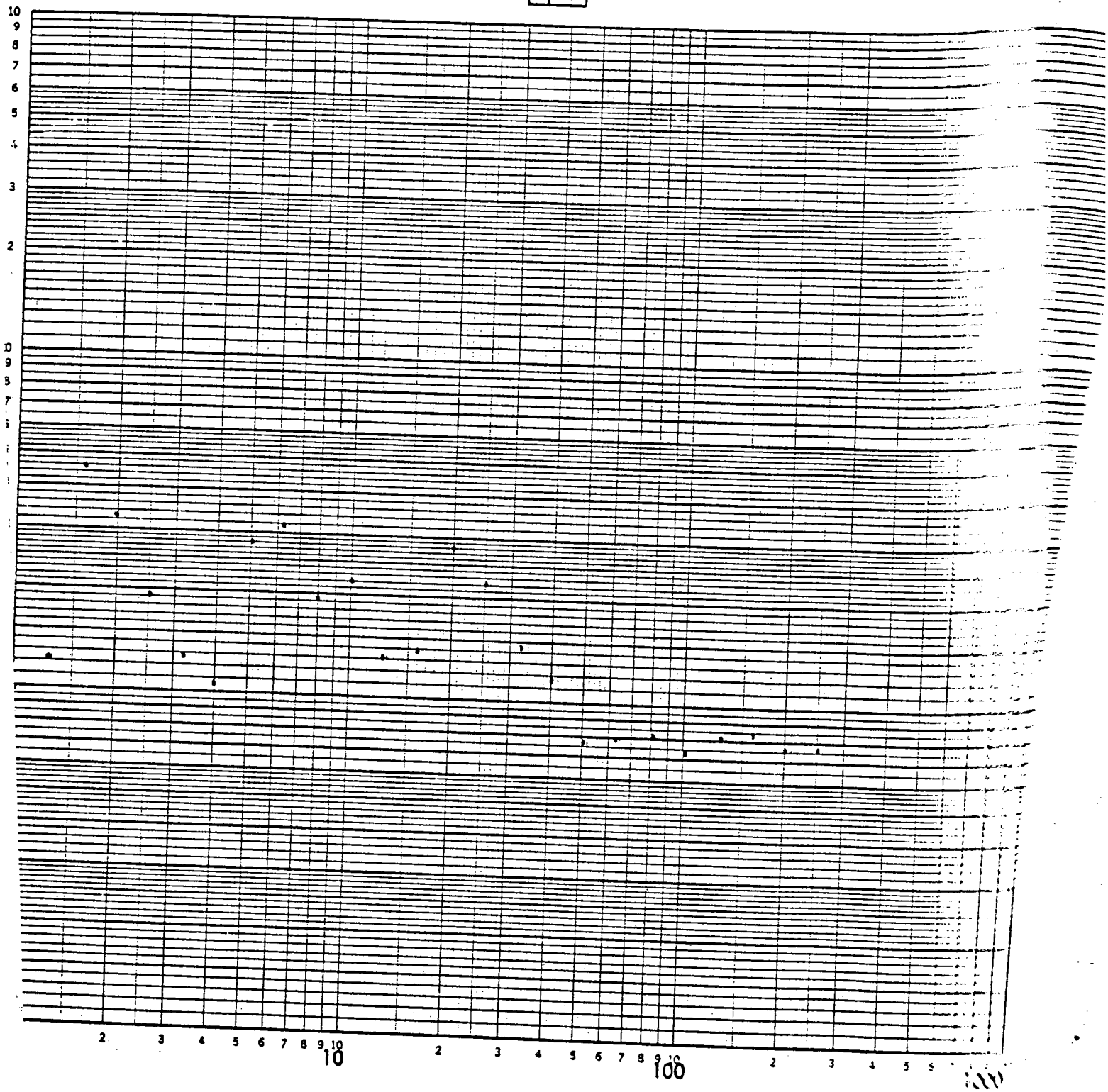
LOCATION NO. 27V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS S-S/VERT

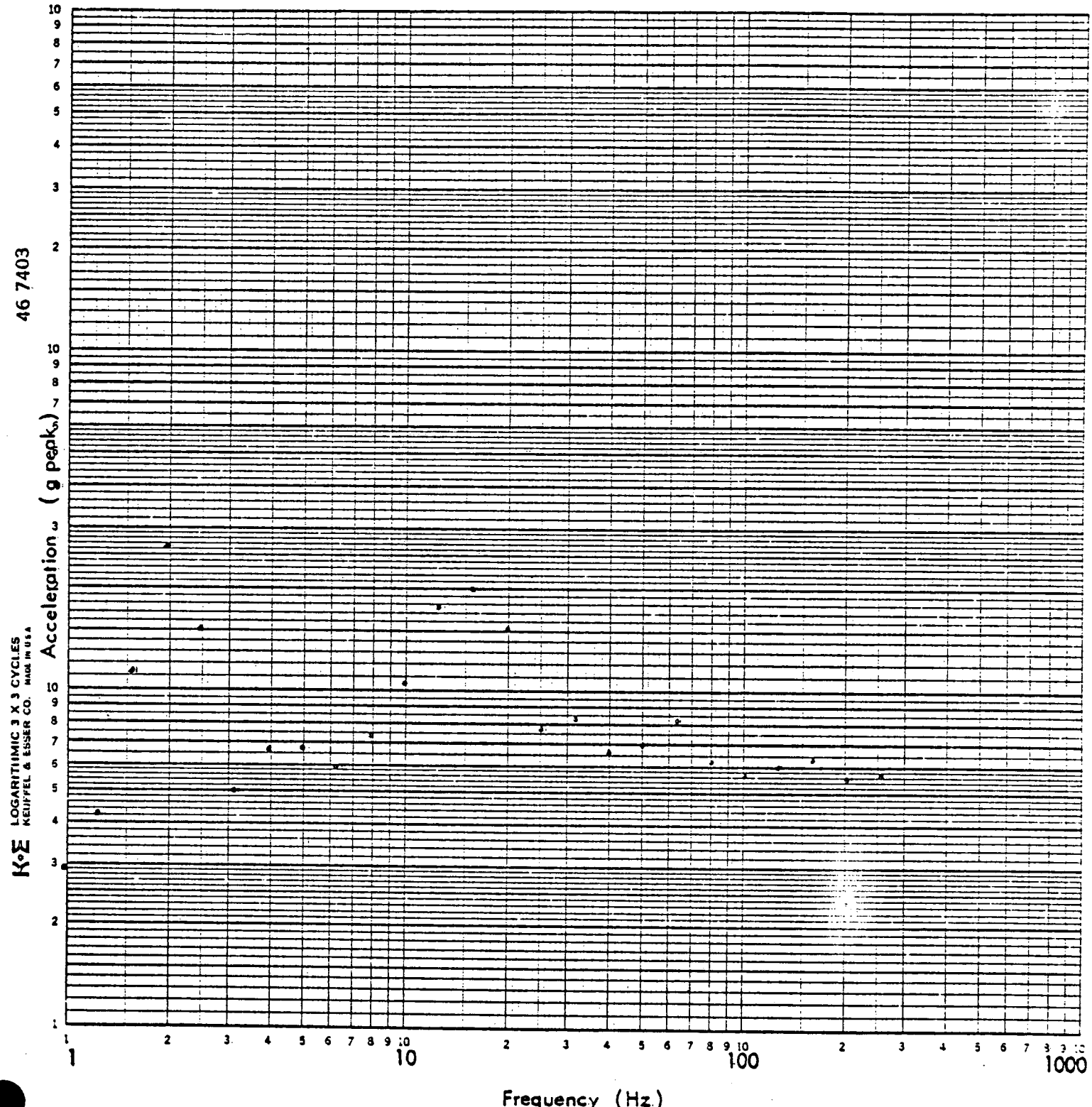
LOCATION NO. 28 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

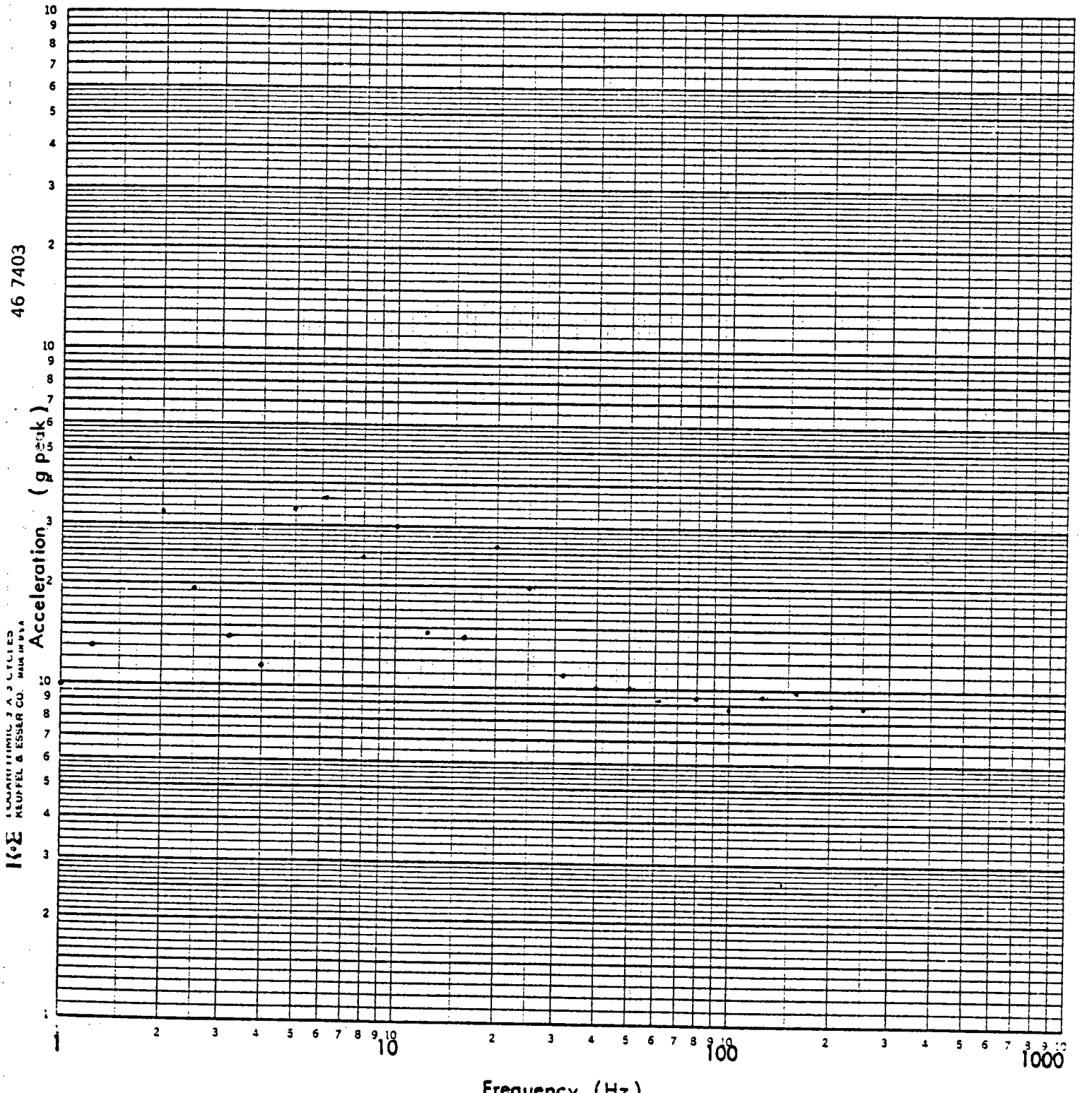
LOCATION NO. 29V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

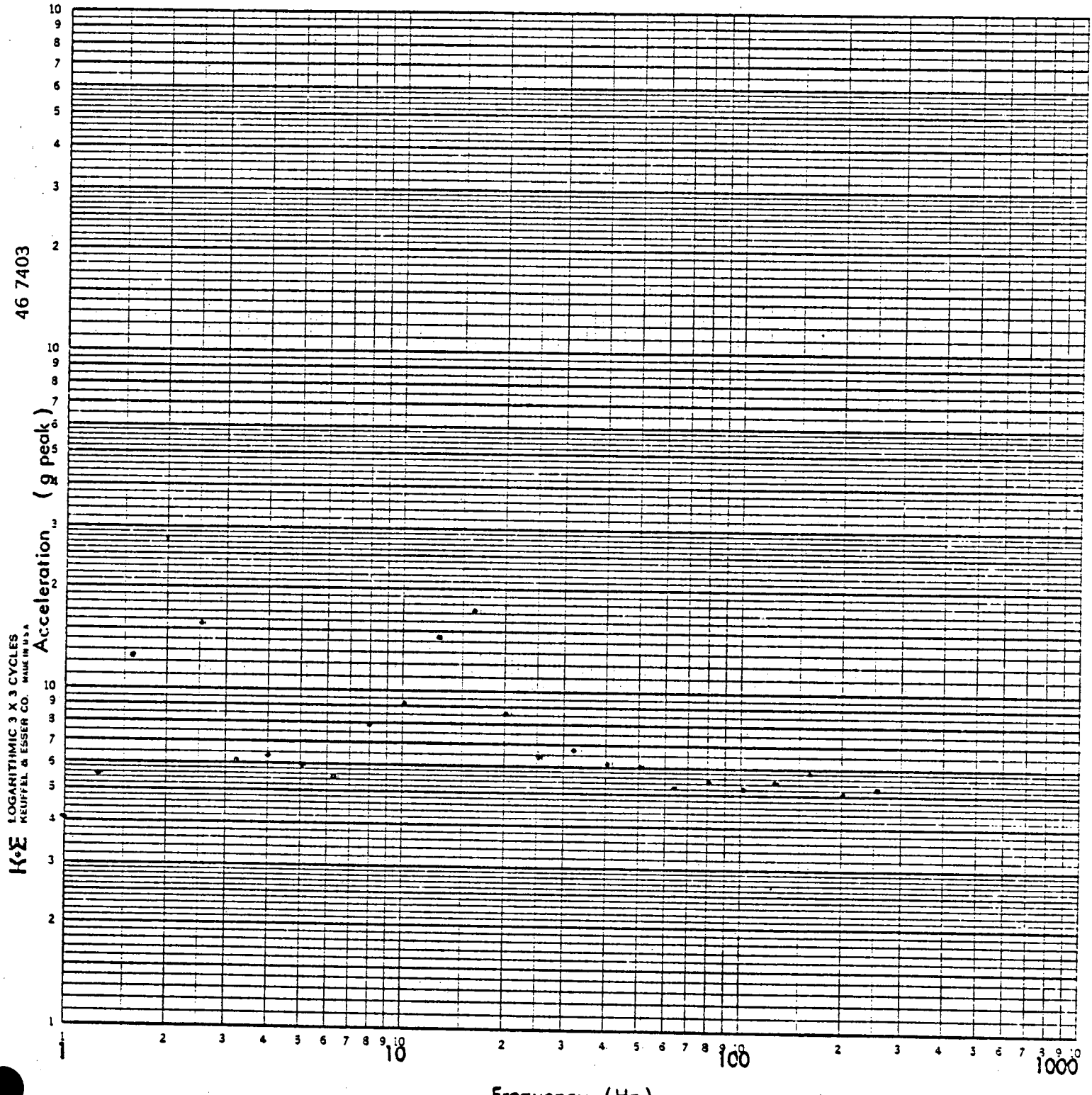
LOCATION NO. 30 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1%



AXIS S-S VERT

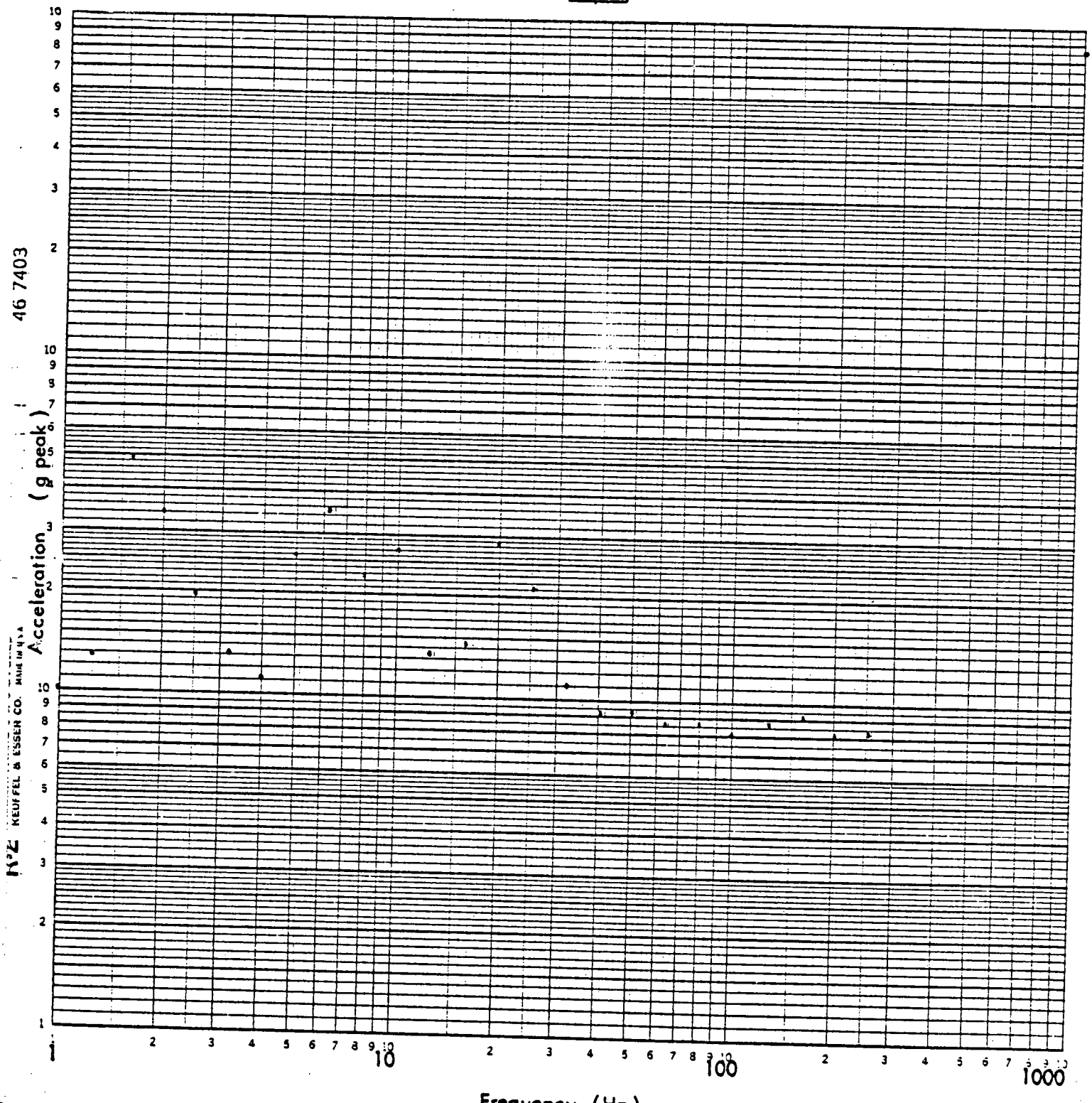
LOCATION NO. 31V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-3/VERT

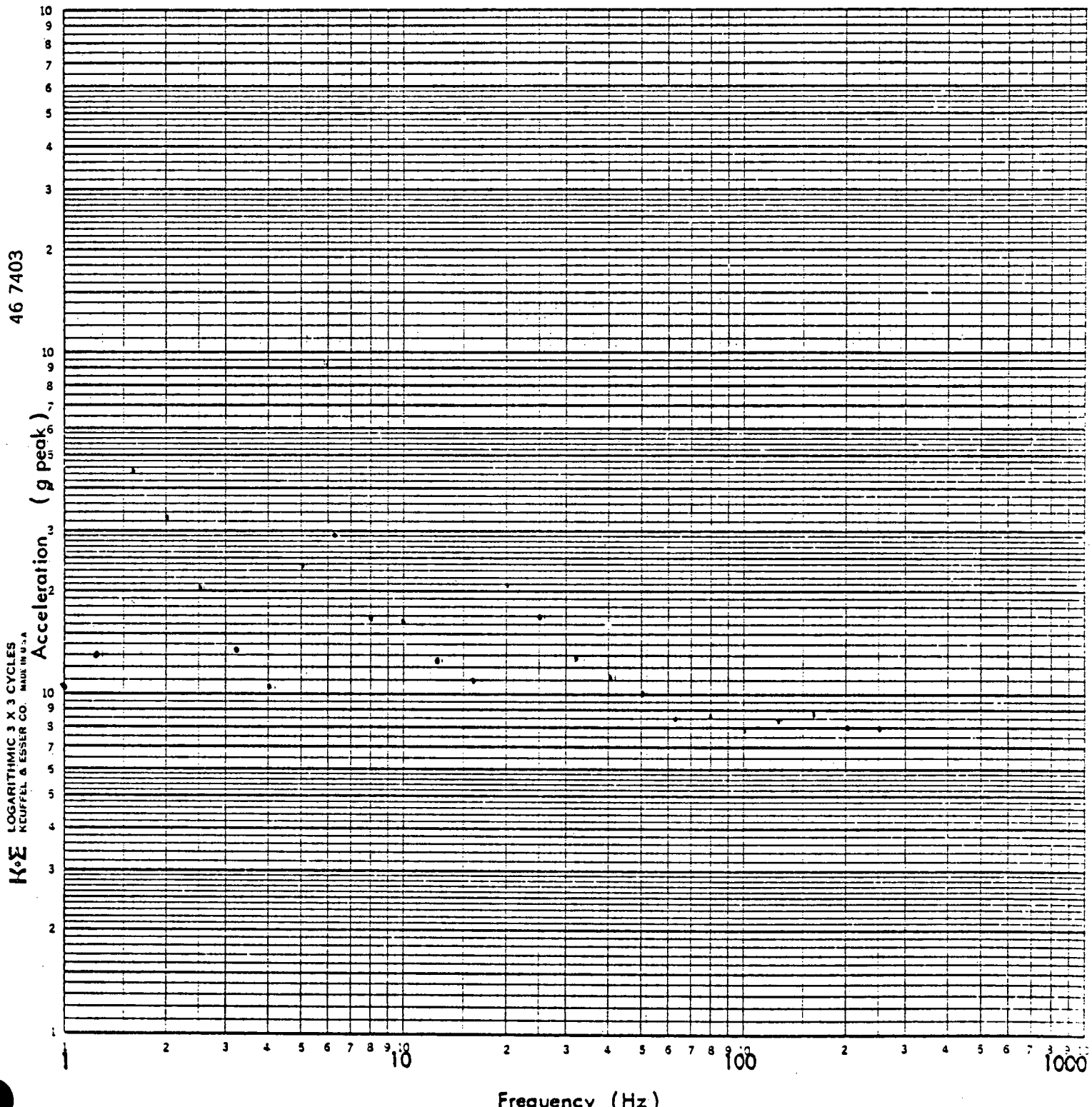
LOCATION NO. 32 S-5

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

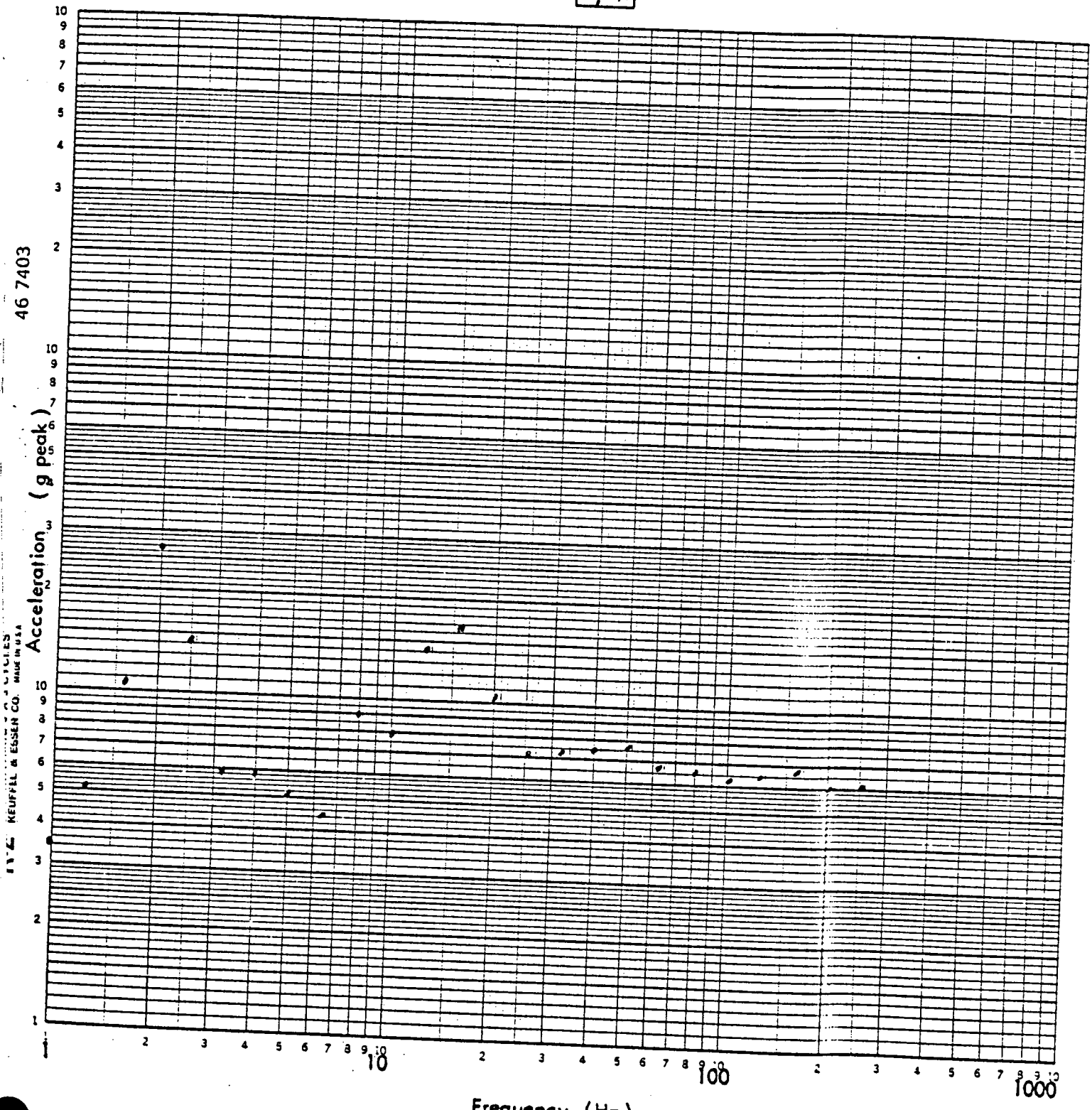
LOCATION NO. 33 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

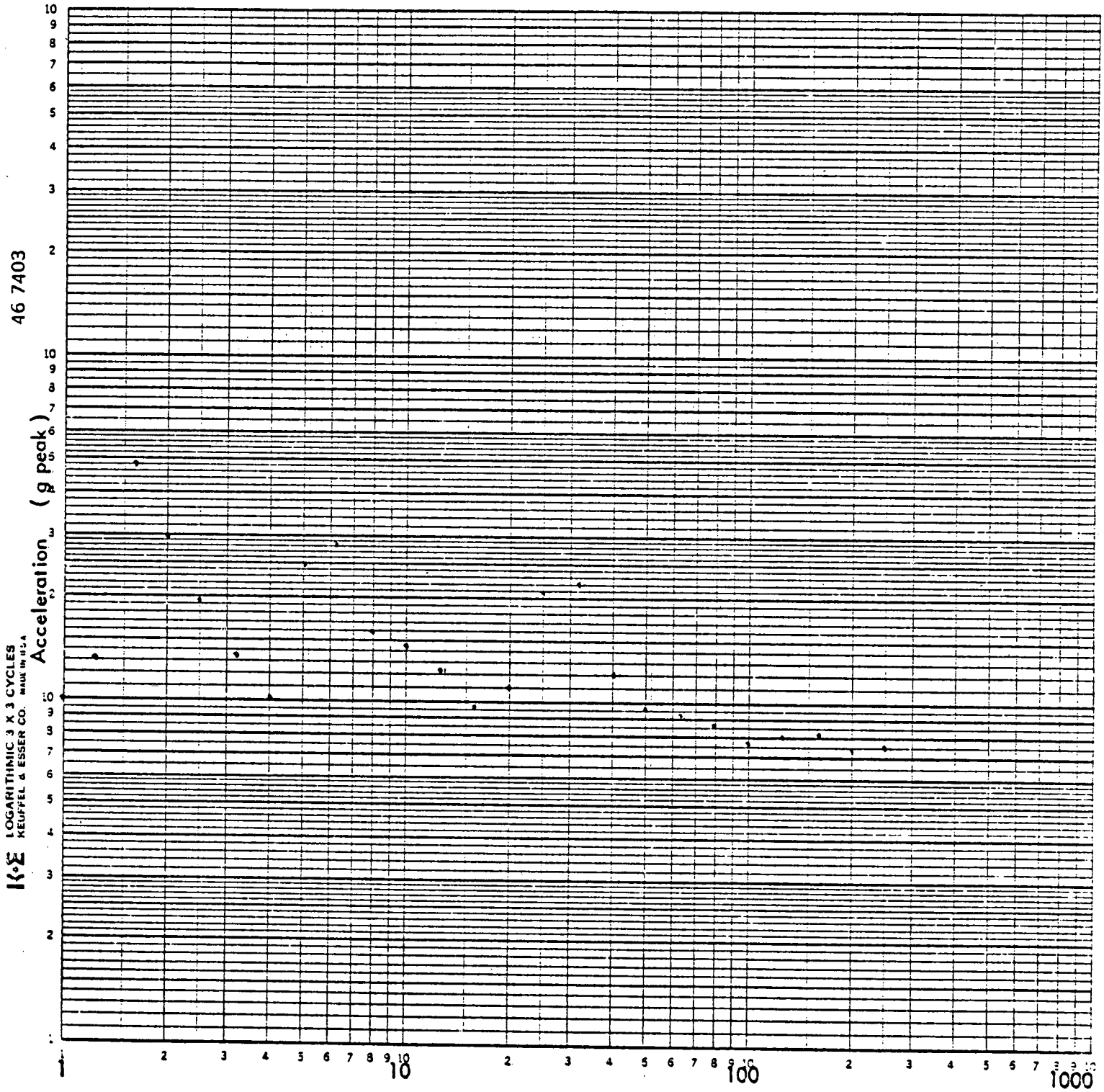
LOCATION NO. 34V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-3/VERT

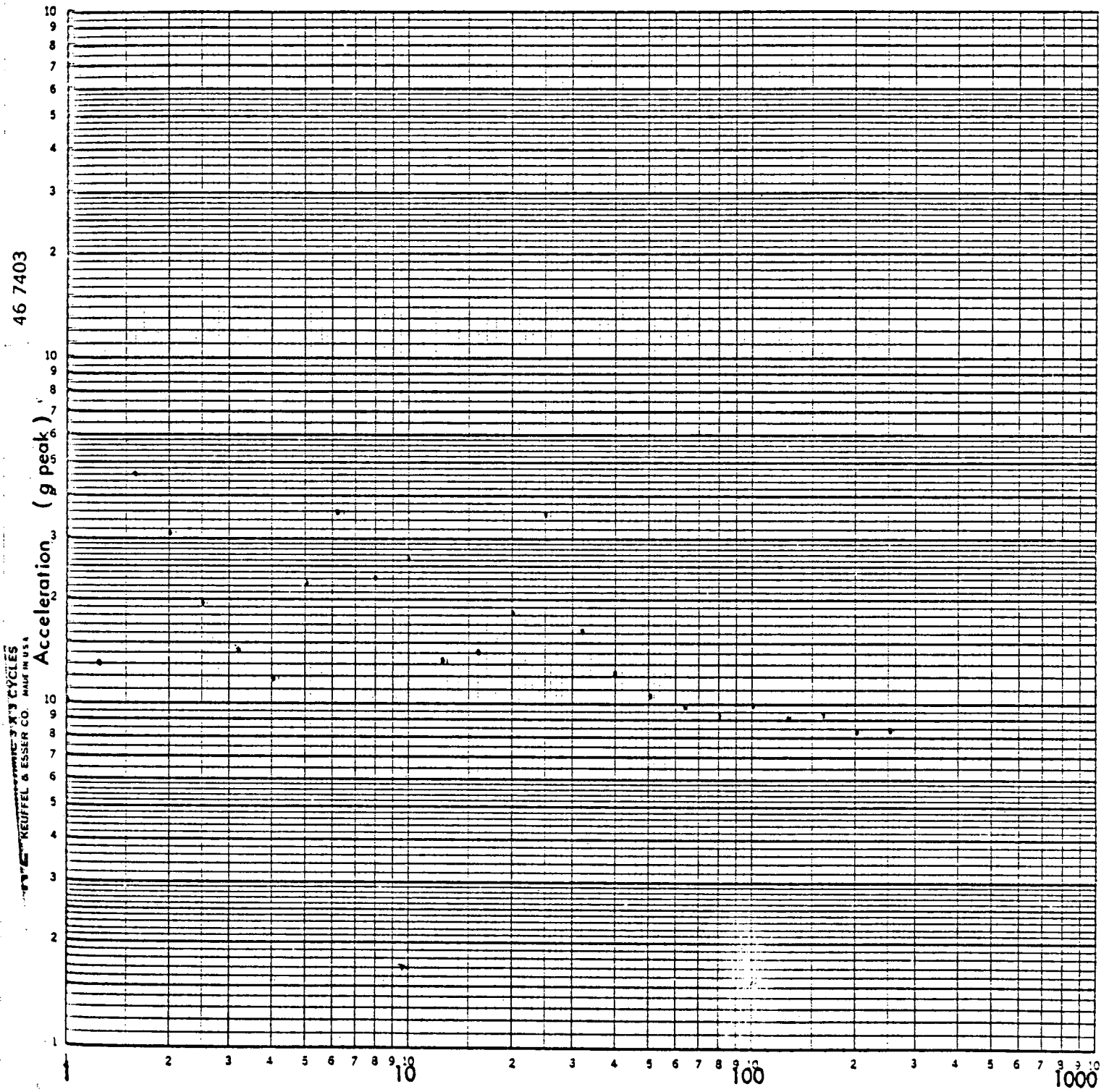
LOCATION NO. 35 S-3

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

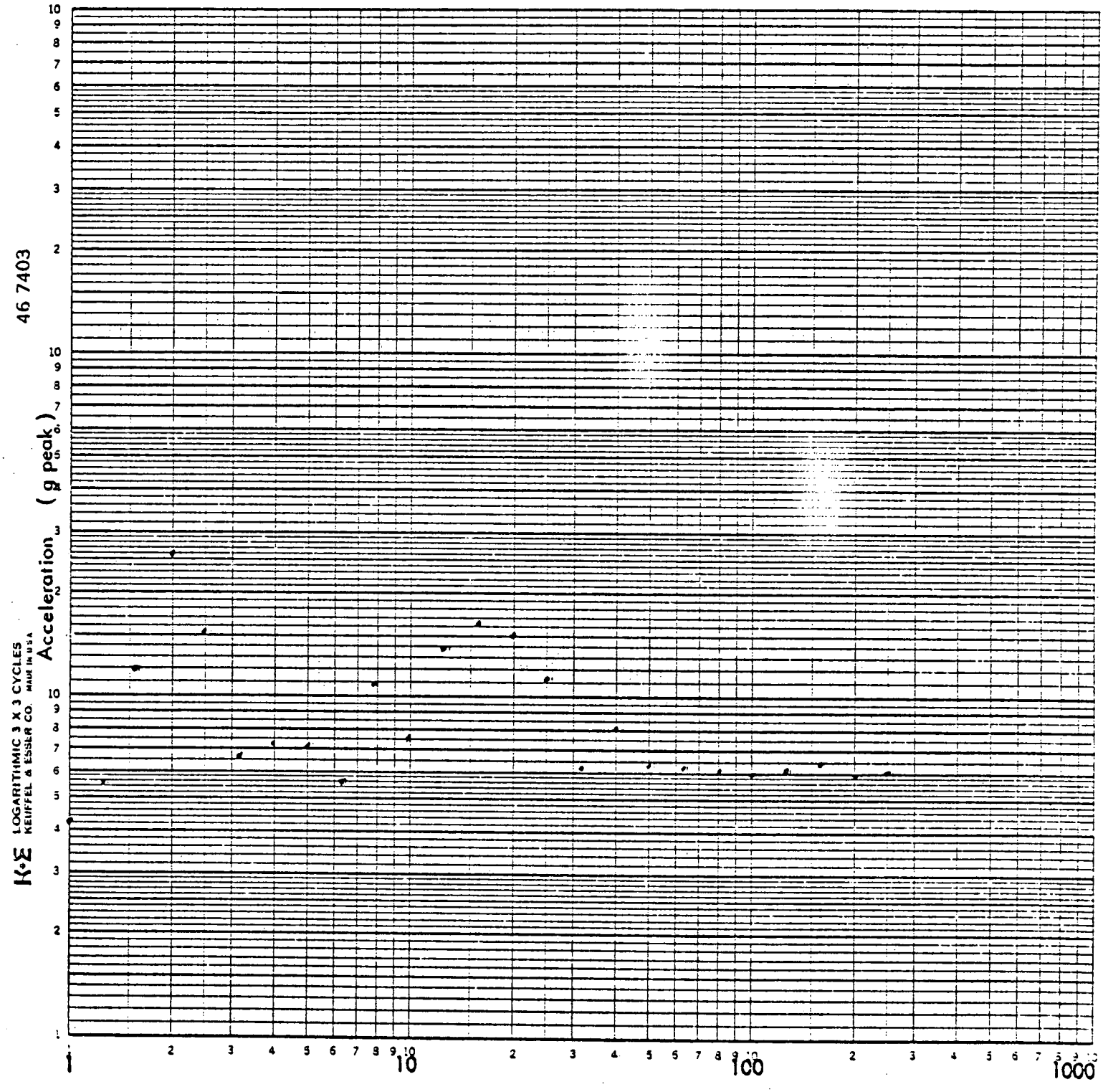
LOCATION NO. 36 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S VERT

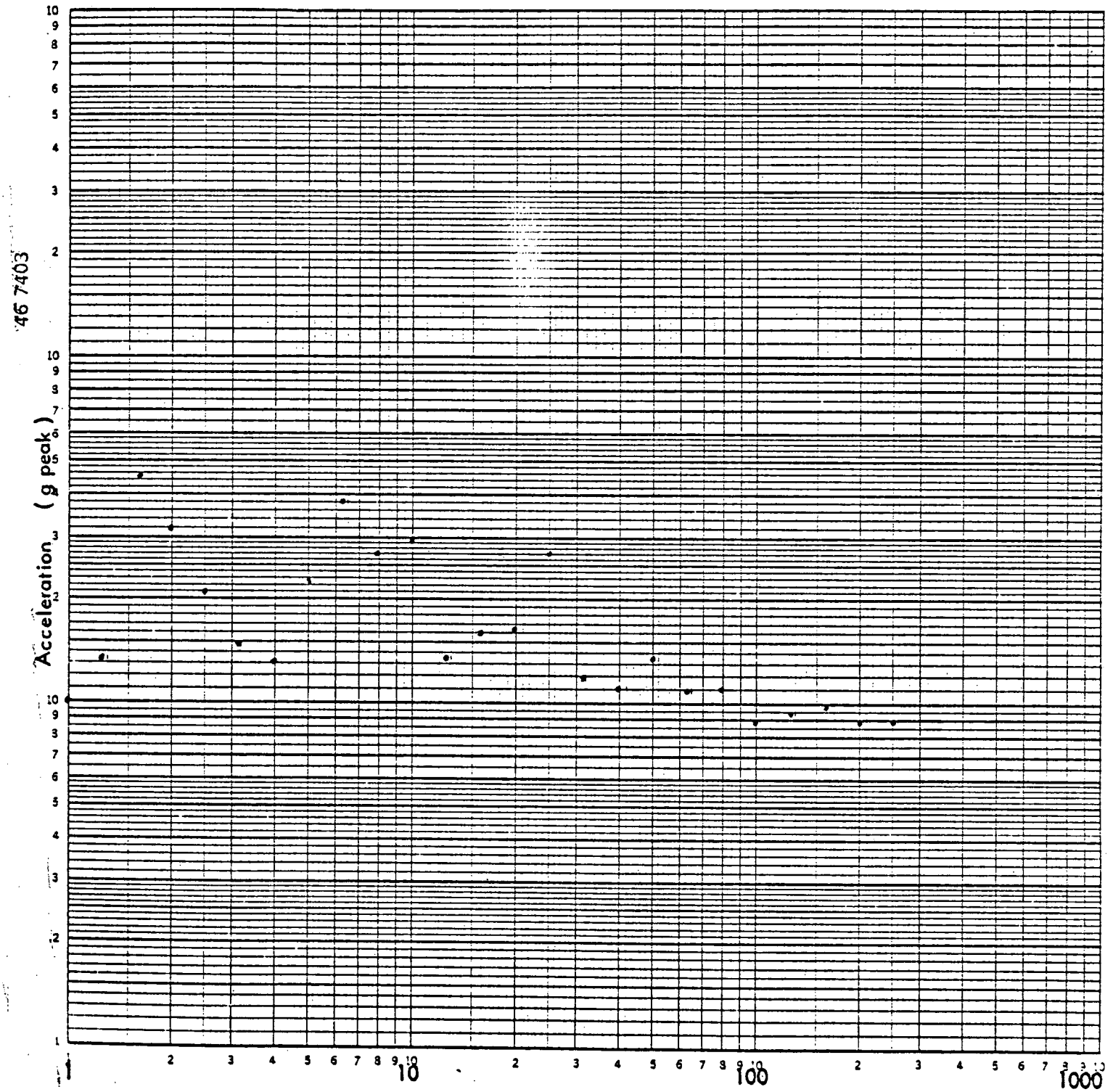
LOCATION NO. 37V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S VERT

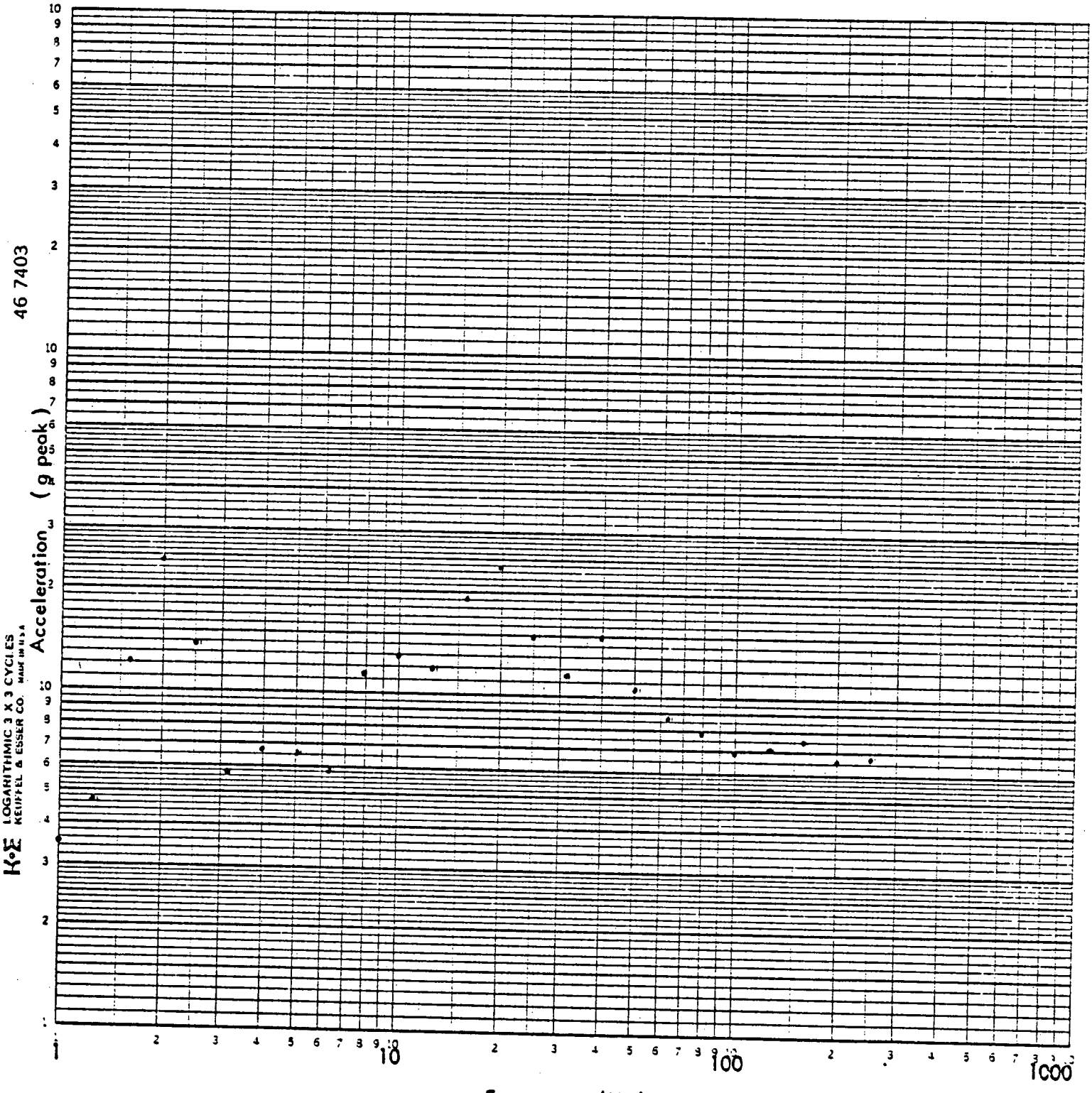
LOCATION NO. 38 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-3/VERT

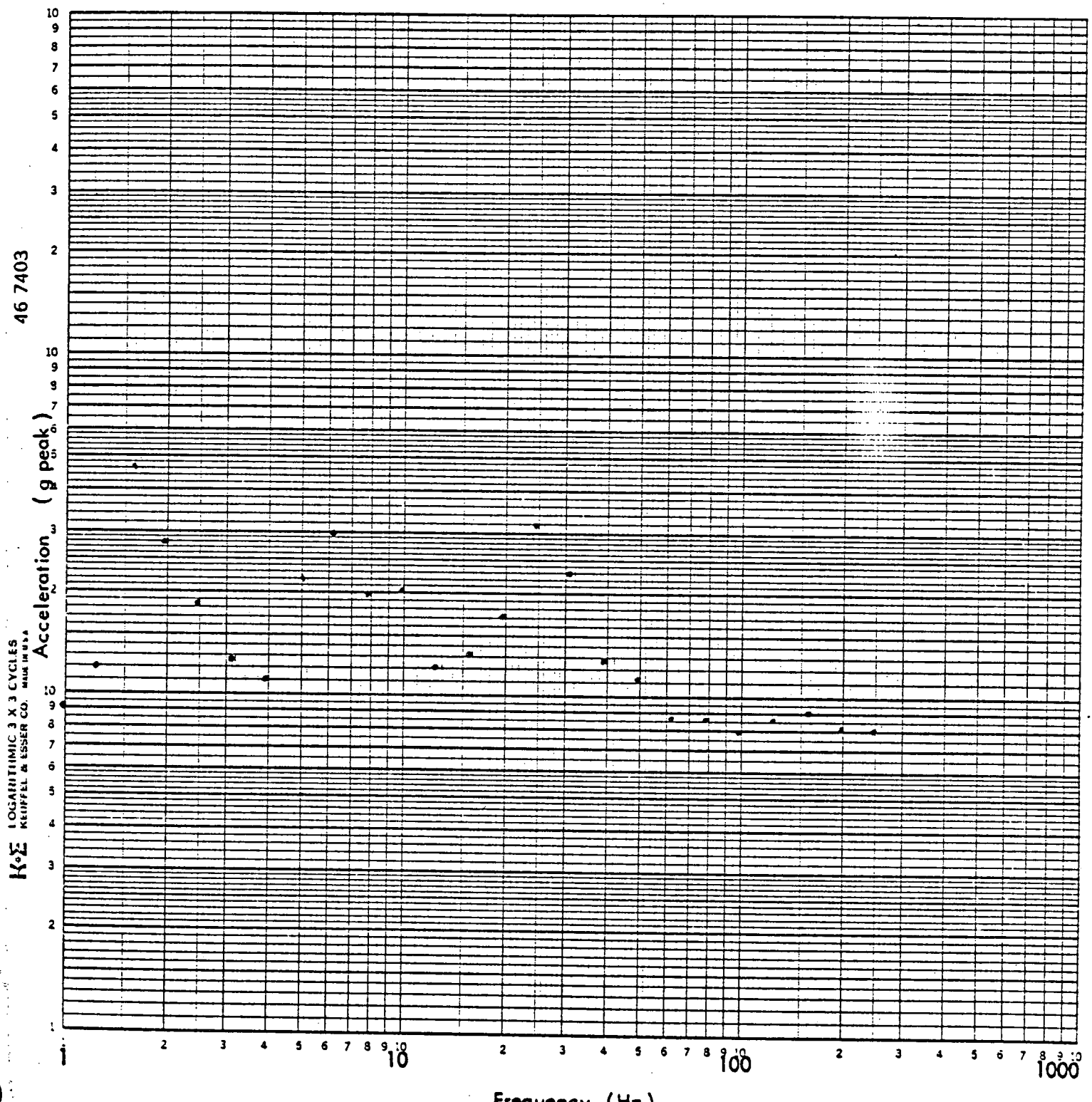
LOCATION NO. 39 Y

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S / VERT

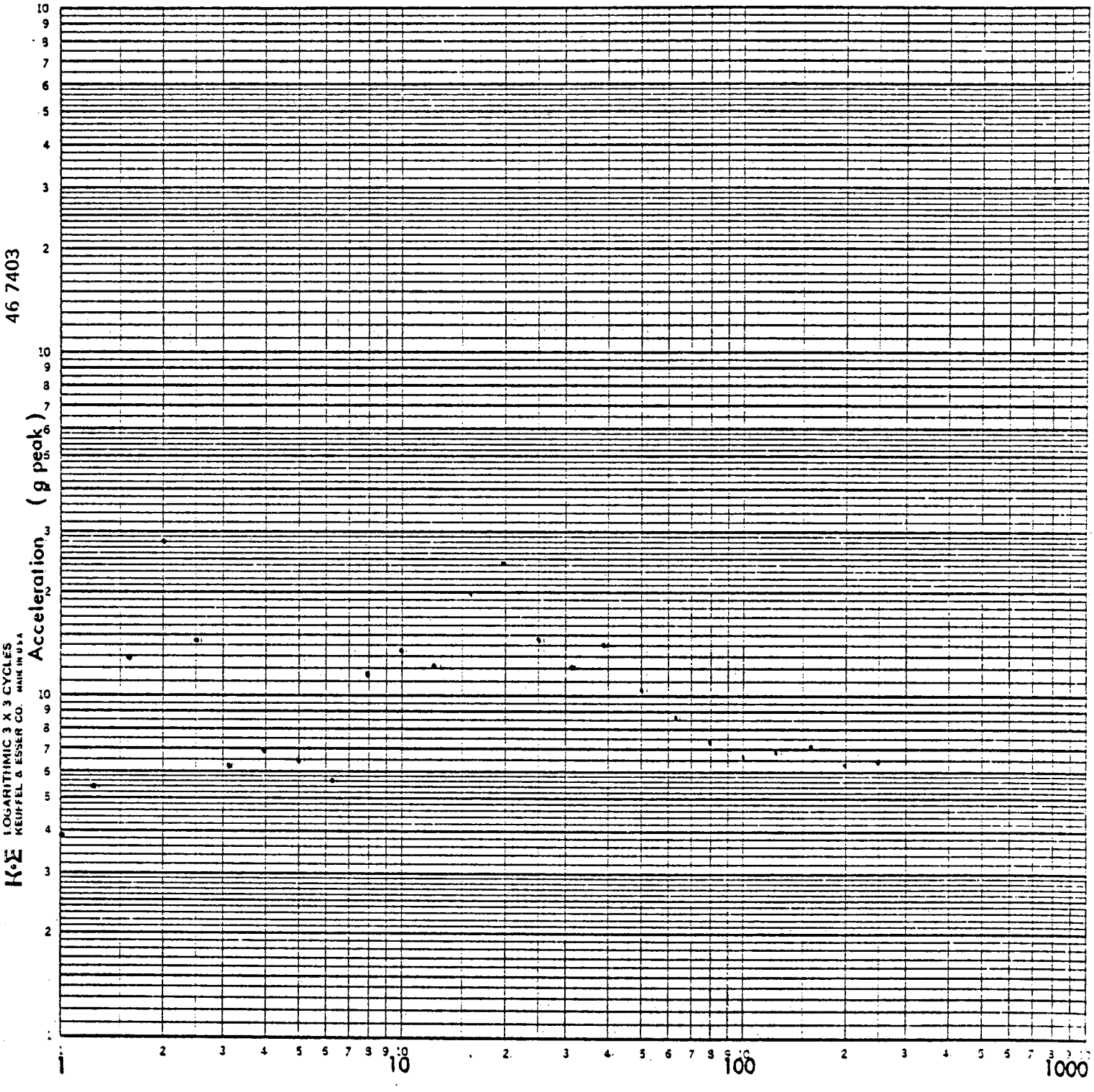
LOCATION NO. 40 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

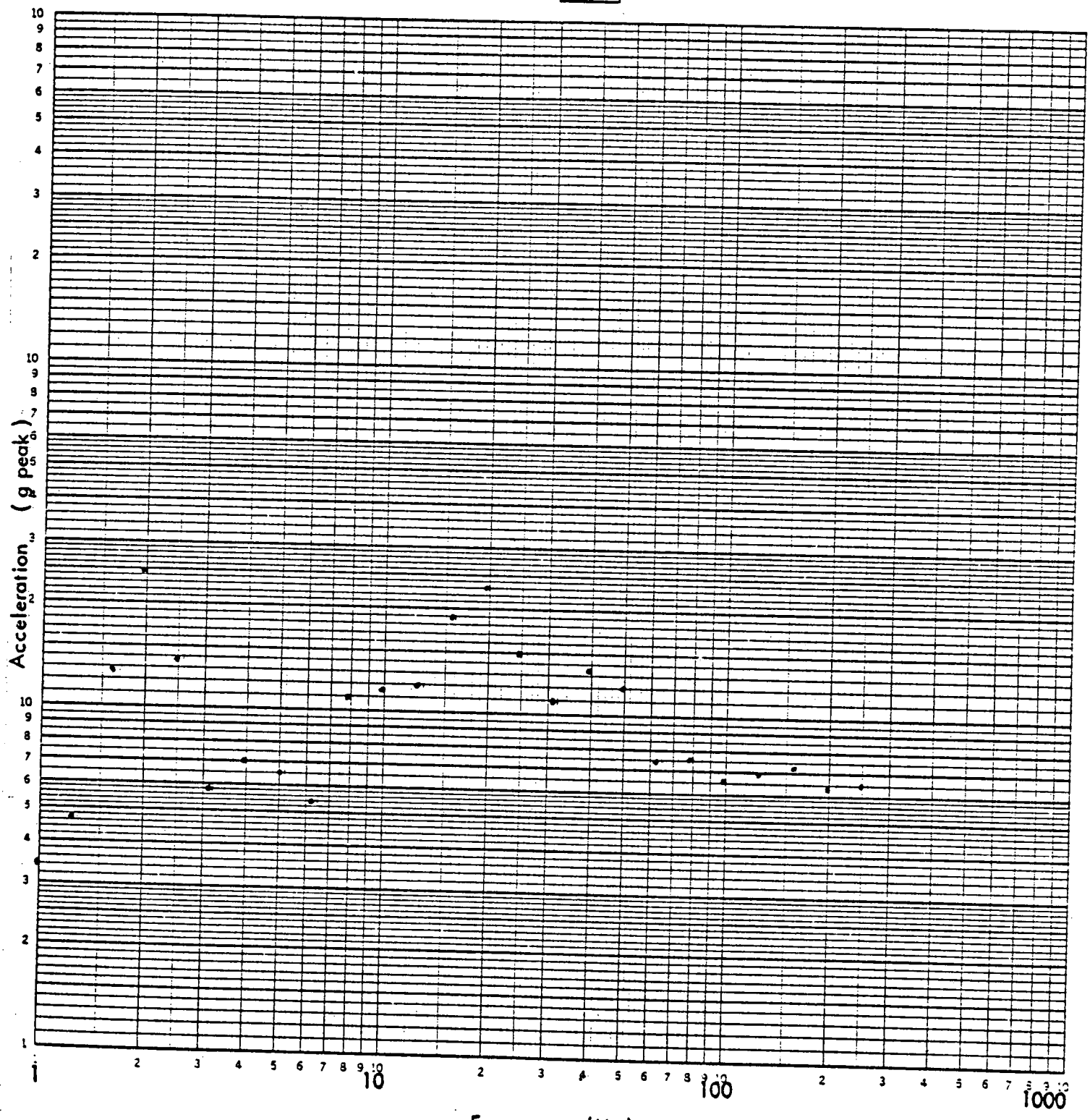
LOCATION NO. 41V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

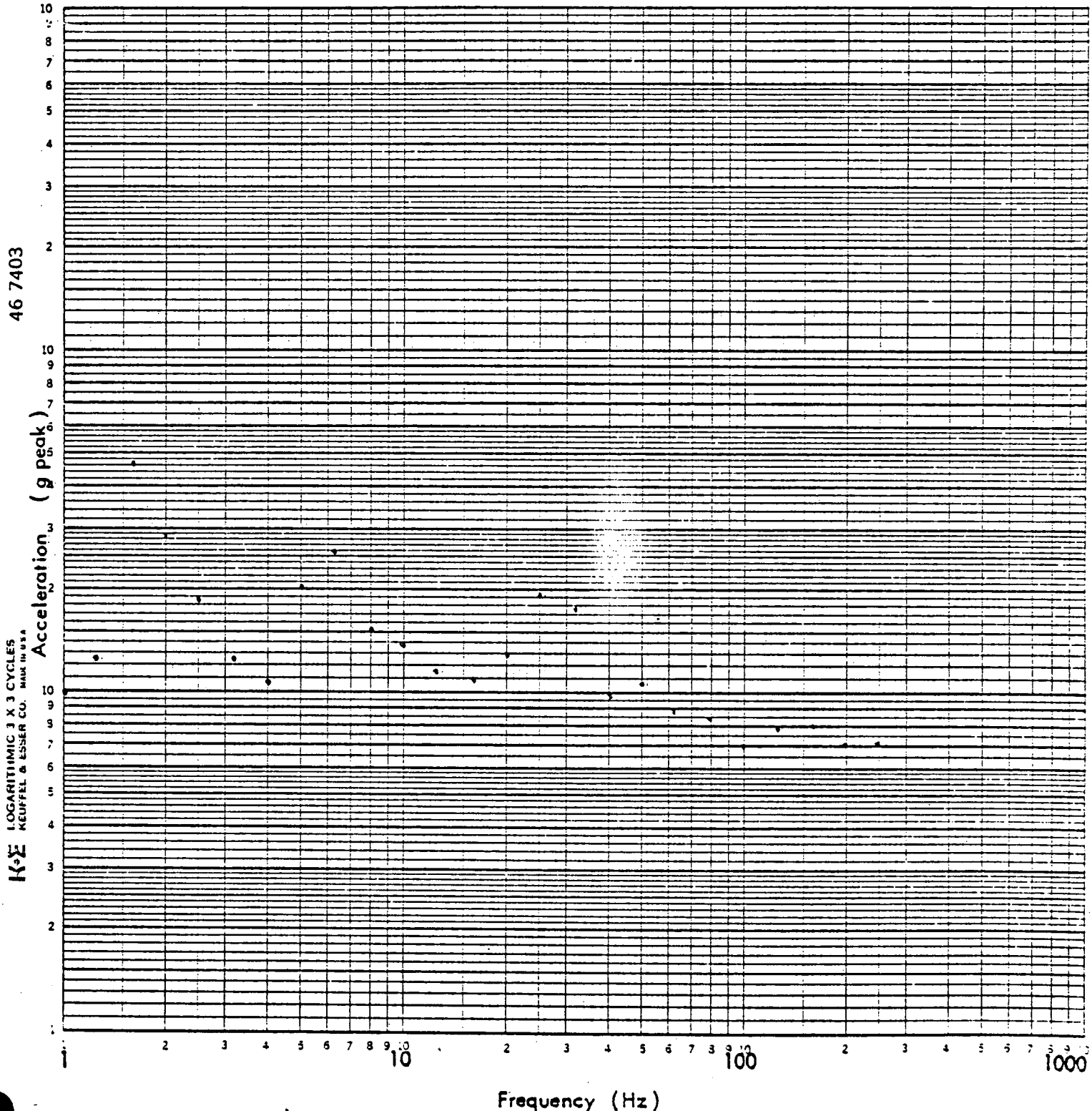
LOCATION NO. 42V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

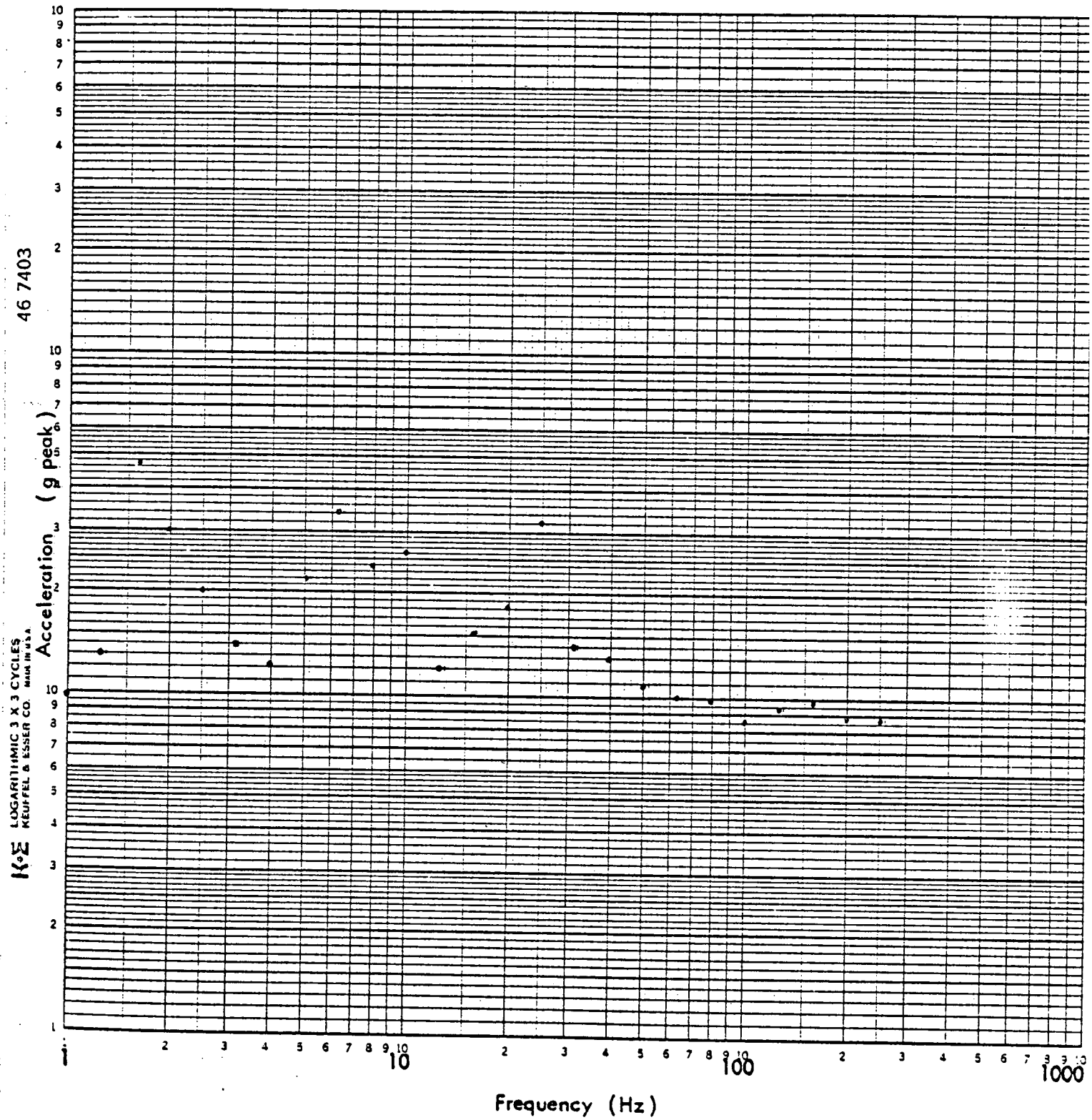
LOCATION NO. 43 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS 3-S/VERT

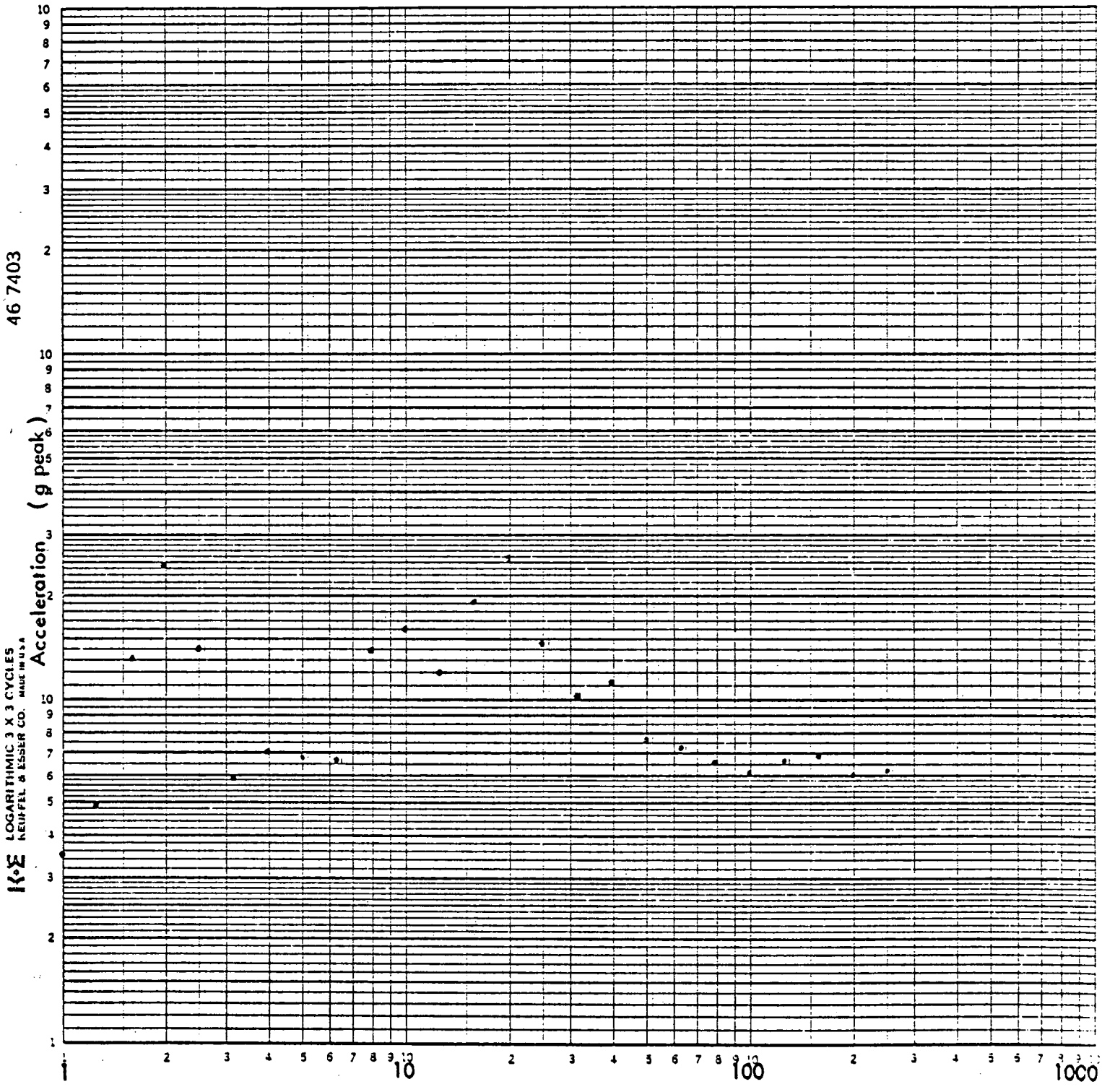
LOCATION NO. 44 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-3/VERT

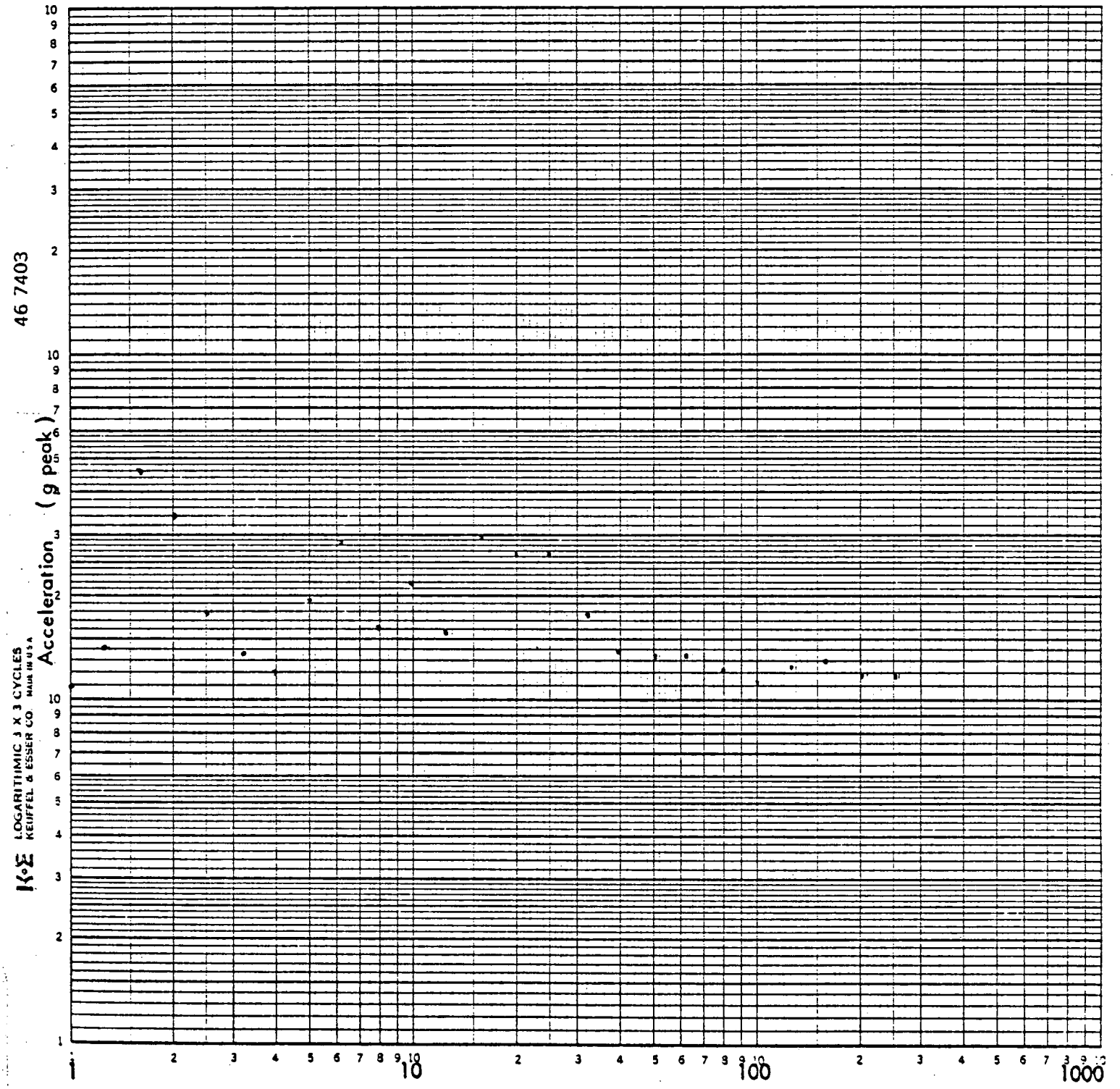
LOCATION NO. 45V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

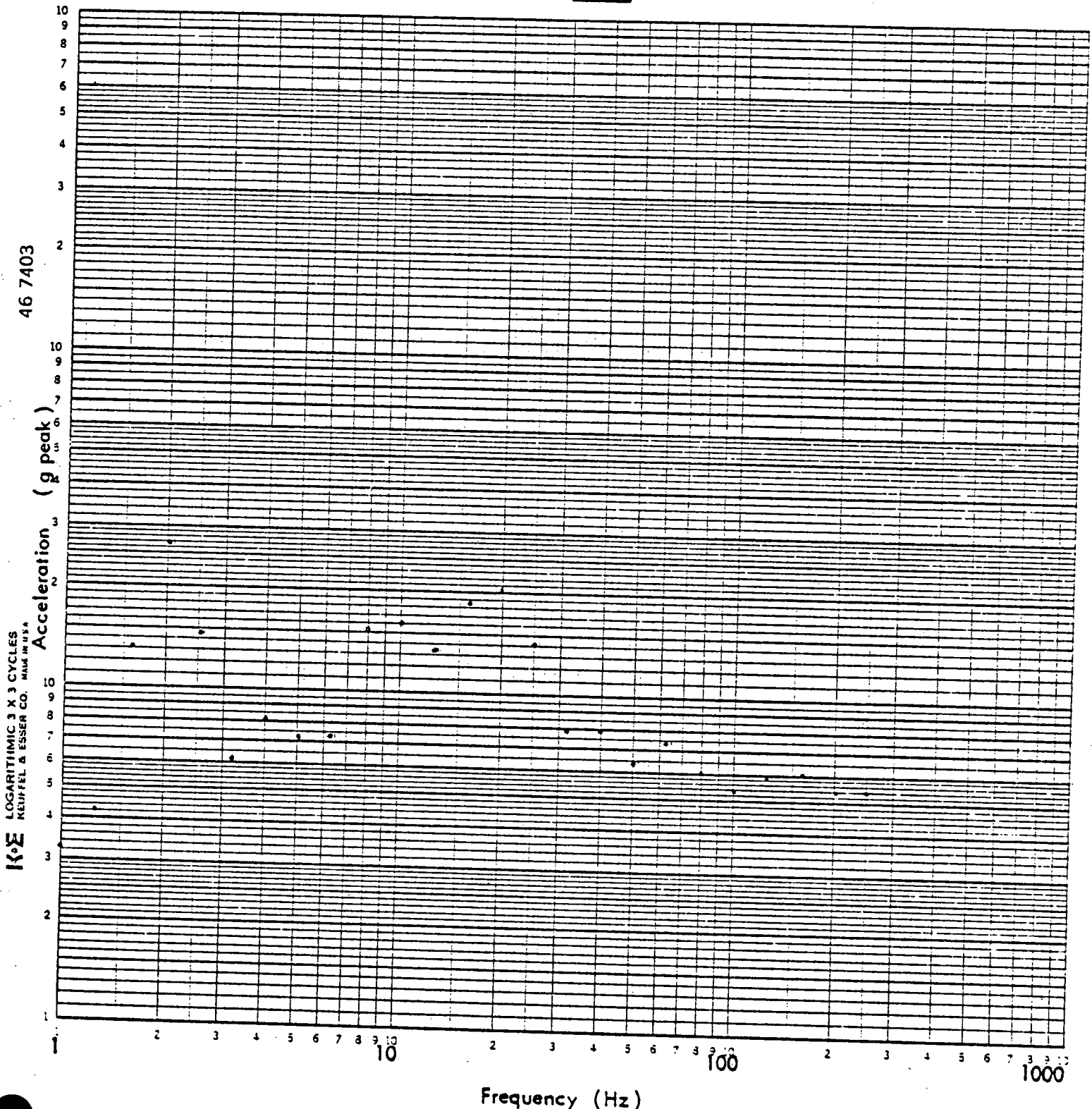
LOCATION NO. 46 S-S

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1%



AXIS S-S/VERT

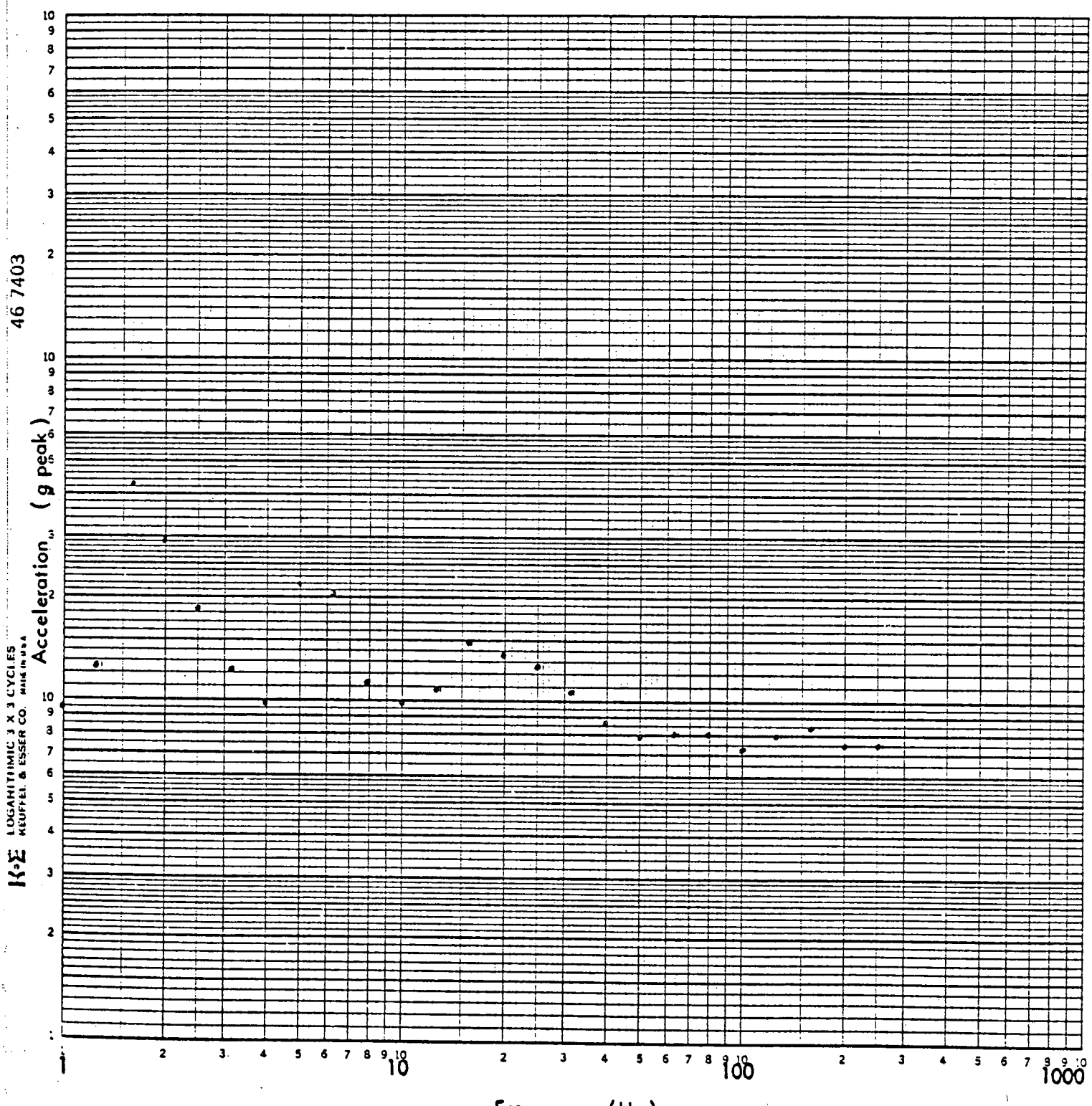
LOCATION NO. 47V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS 3-3/VERT

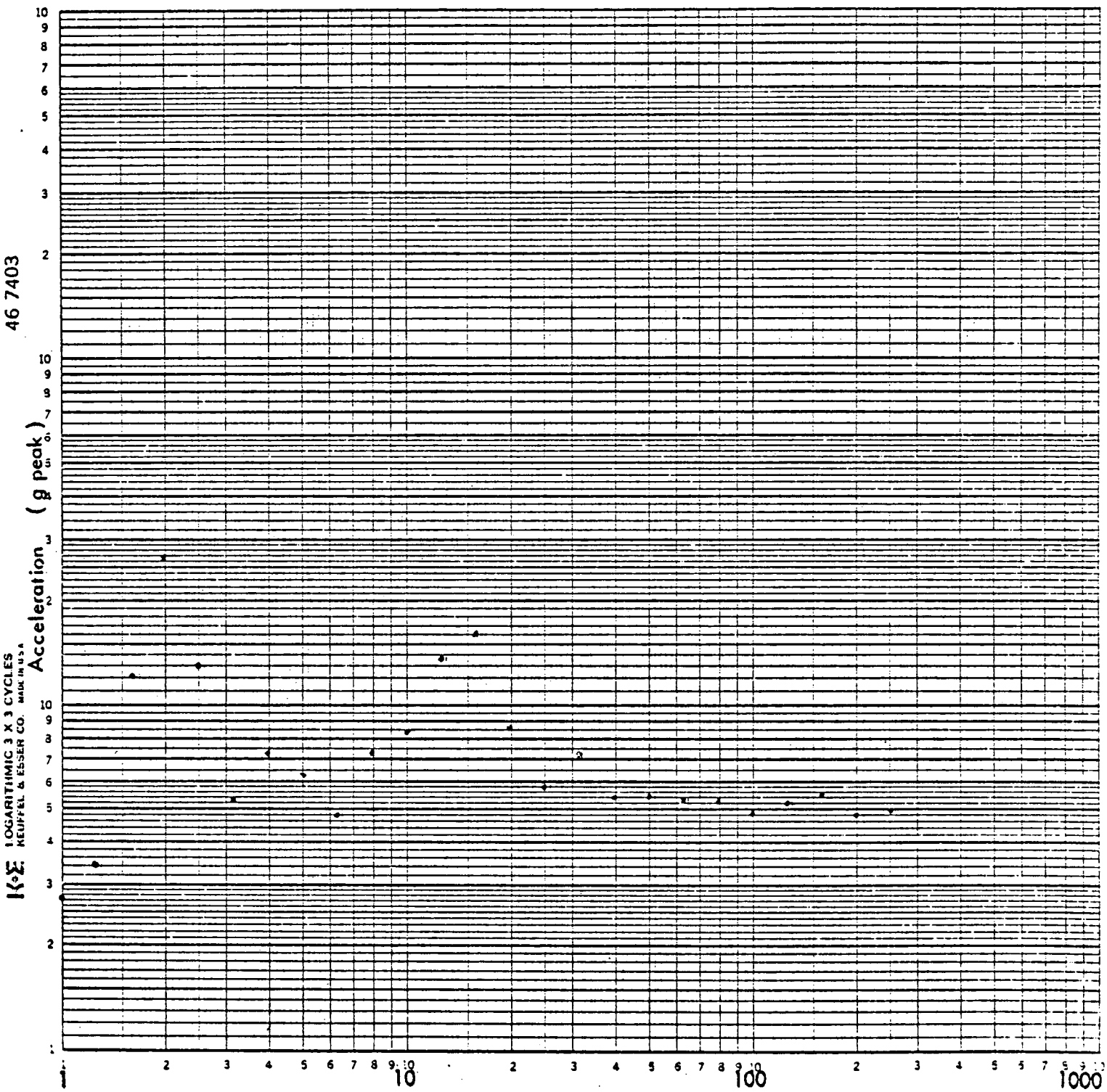
LOCATION NO. 485-5

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

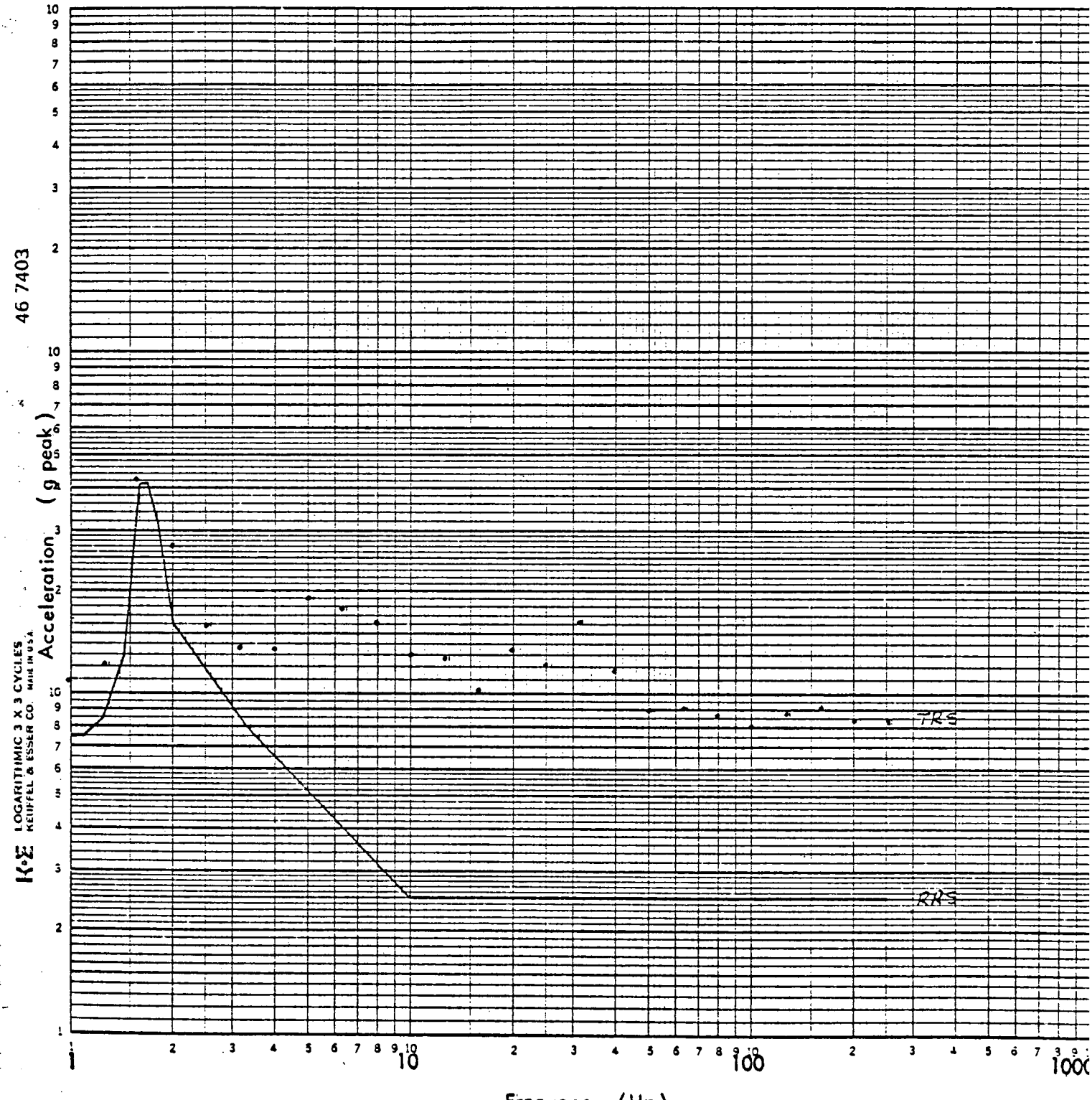
LOCATION NO. 49V

TEST RUN NO. 9

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

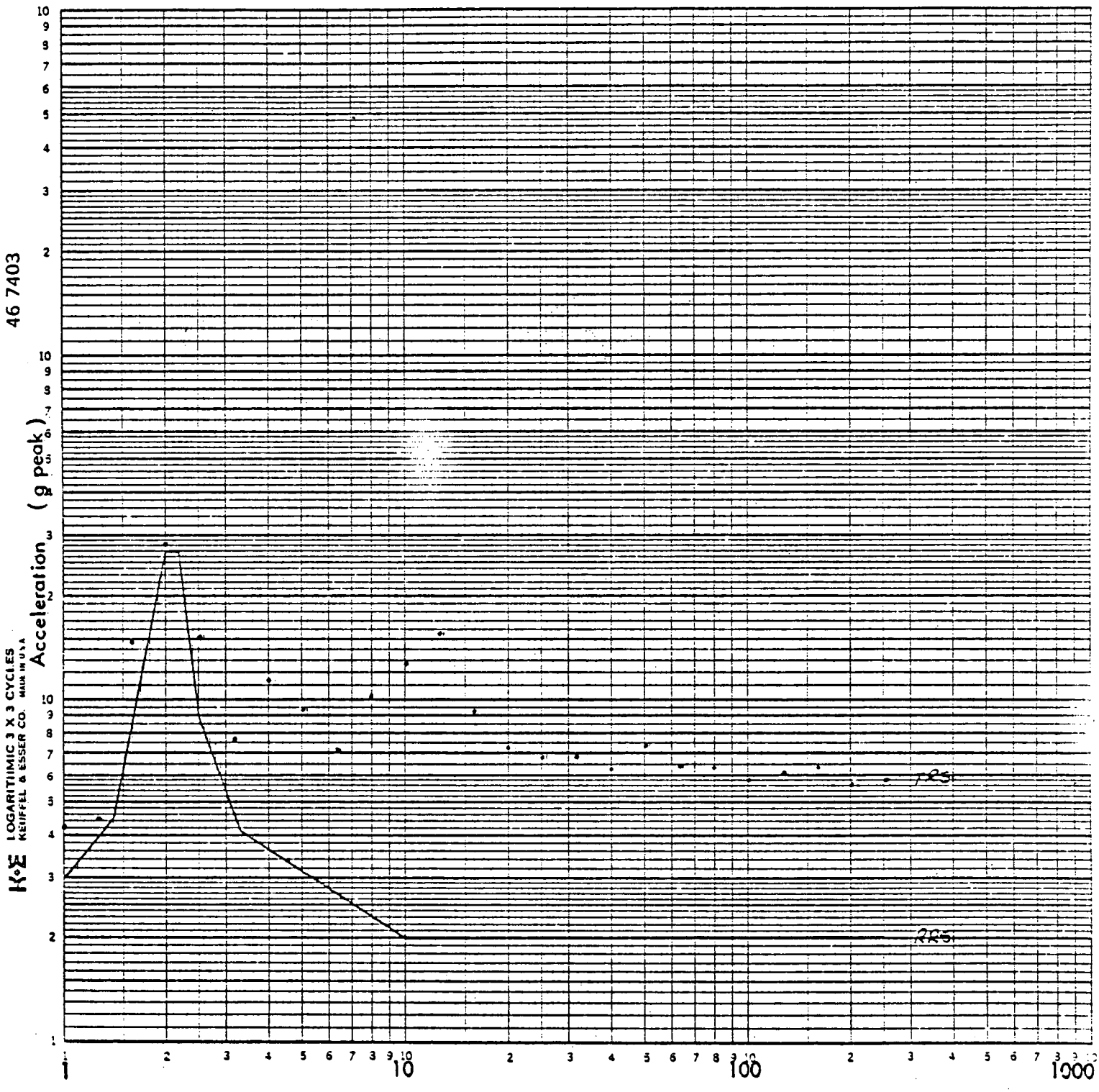
LOCATION NO. 4CA

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1%



AXIS F-8 / VERT

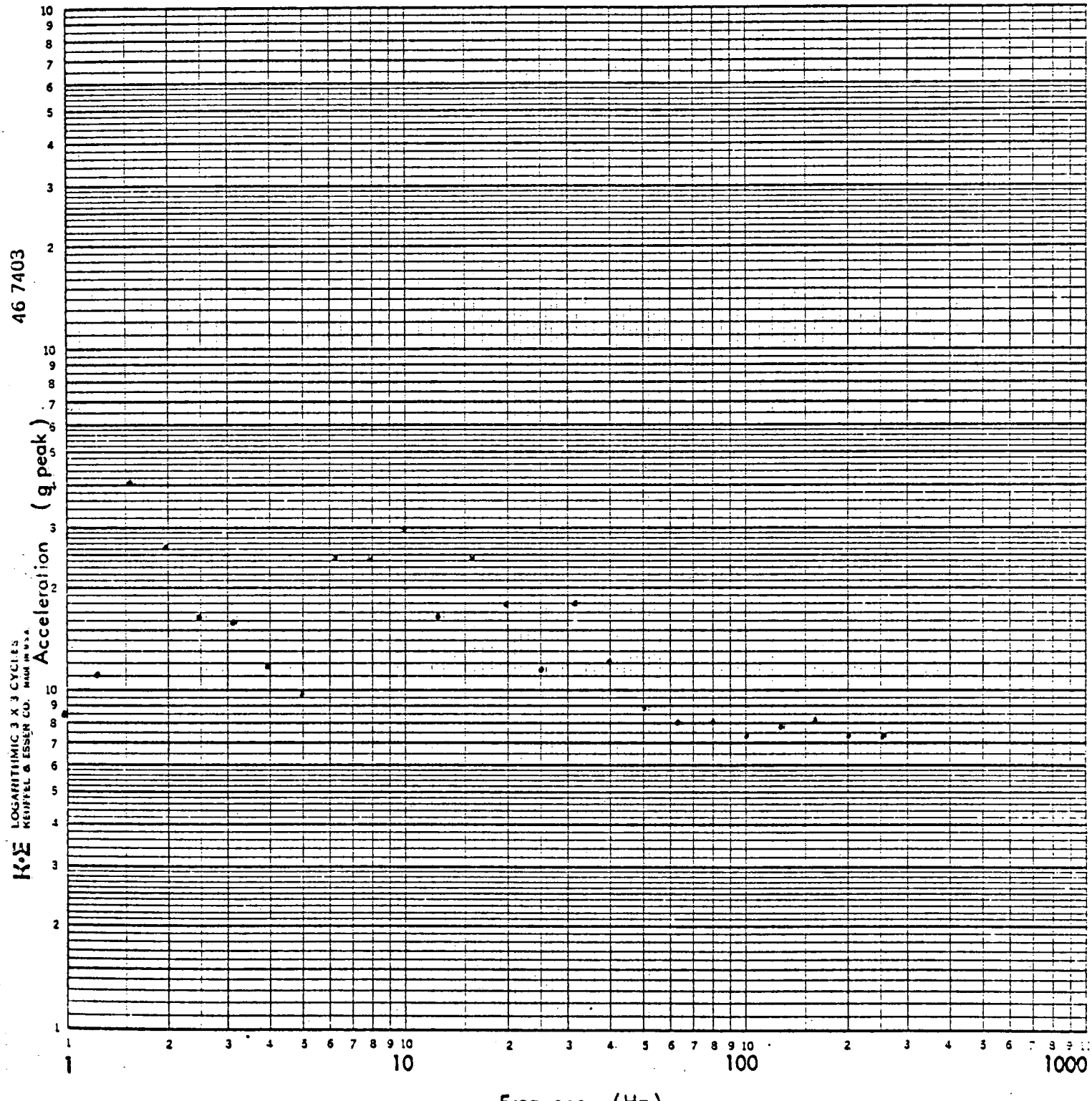
LOCATION NO. V-A

TEST RUN NO. 36

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

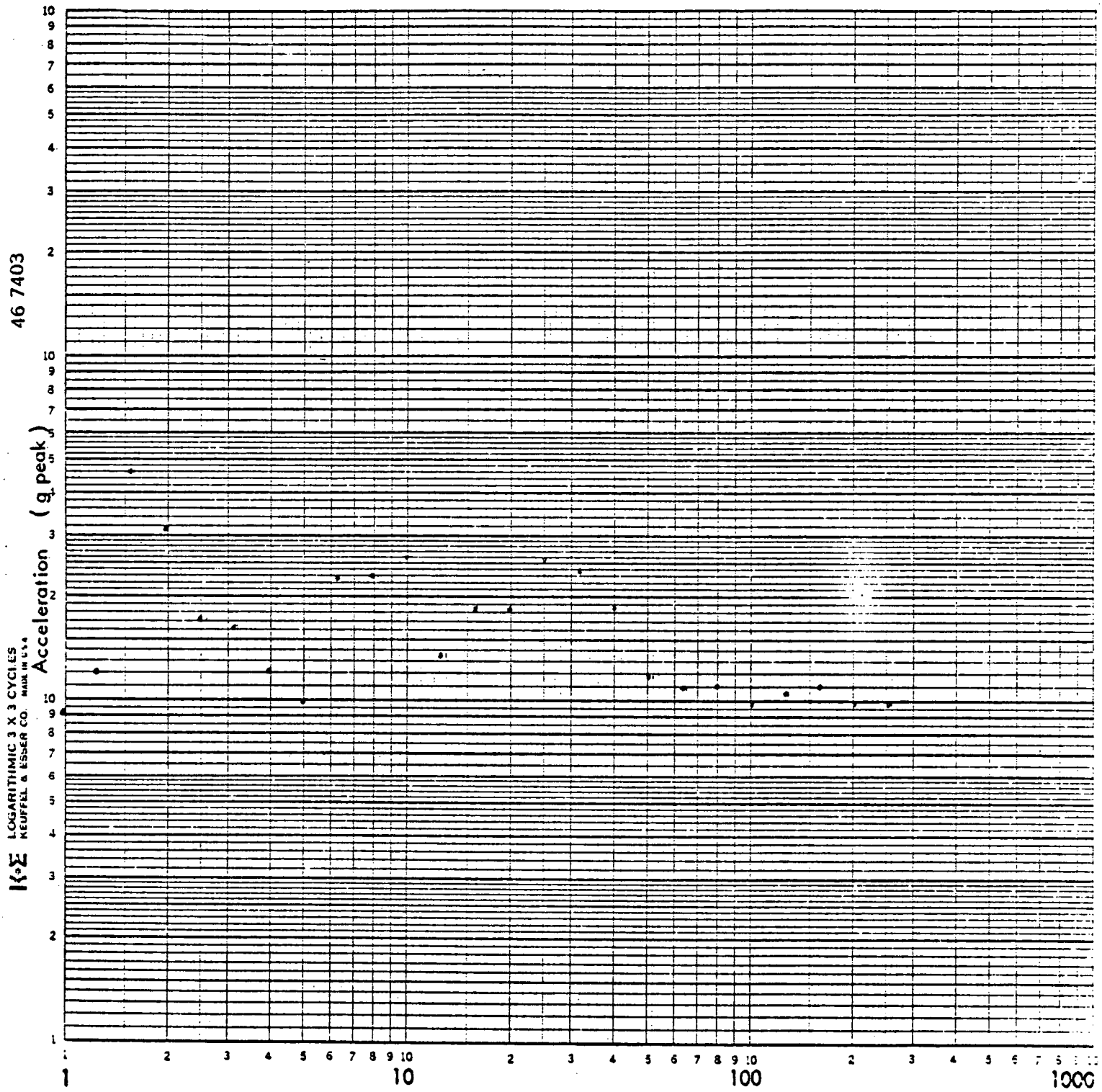
LOCATION NO. 1 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

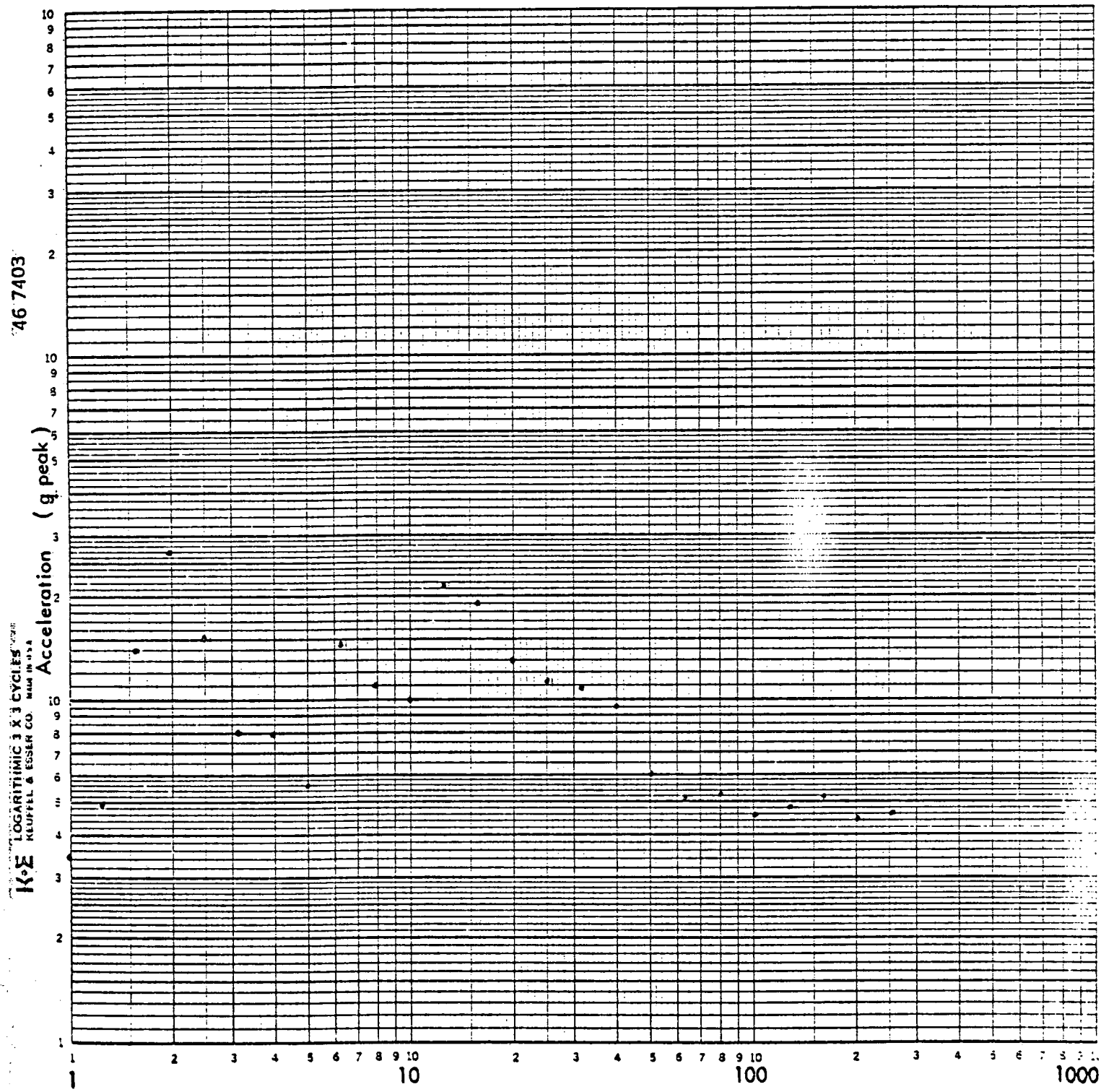
LOCATION NO. 2 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-6/VERT

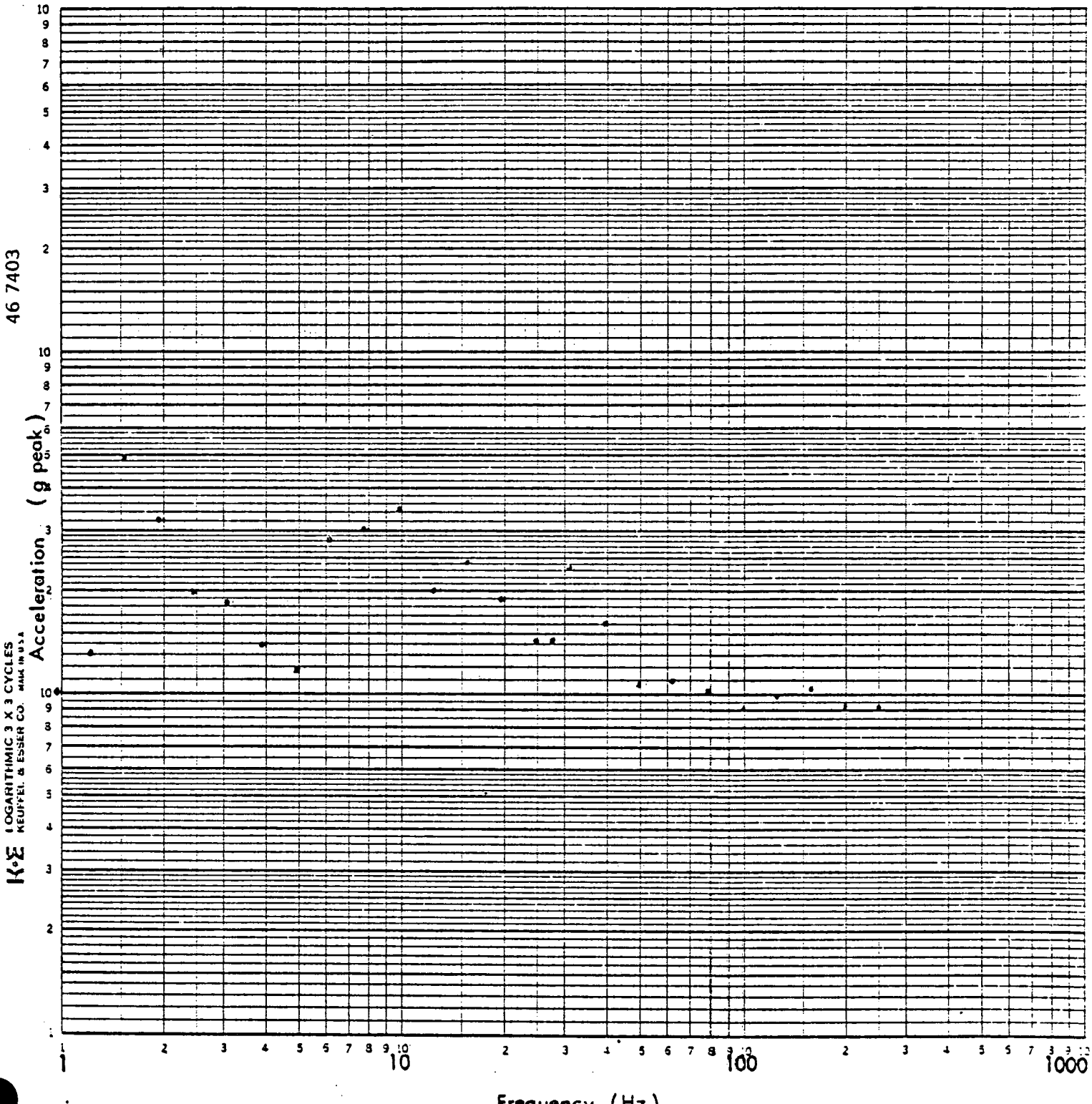
LOCATION NO. 3V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [ ] %



AXIS F-B/Vert

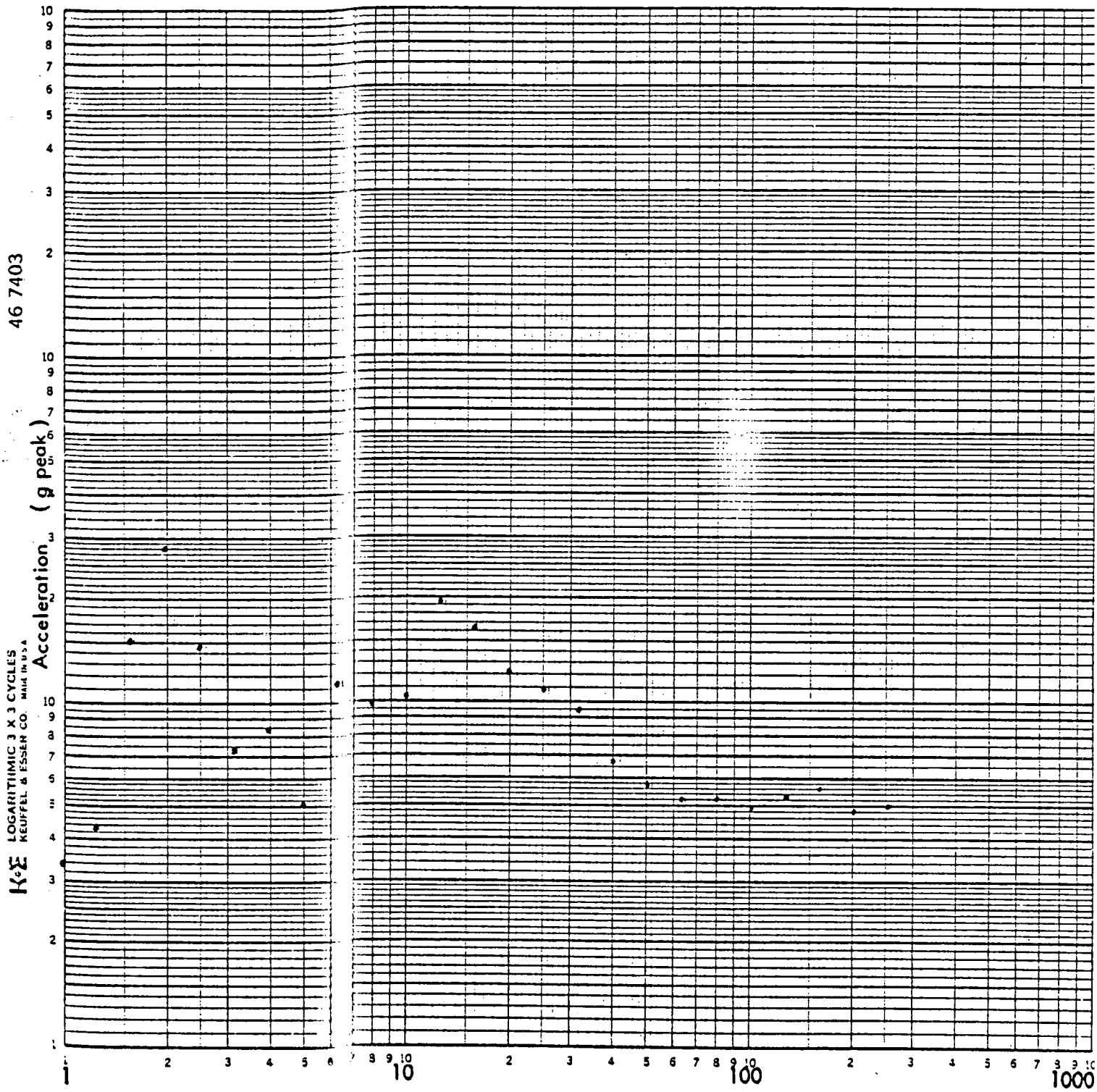
LOCATION NO. 4 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS E-W/VERT

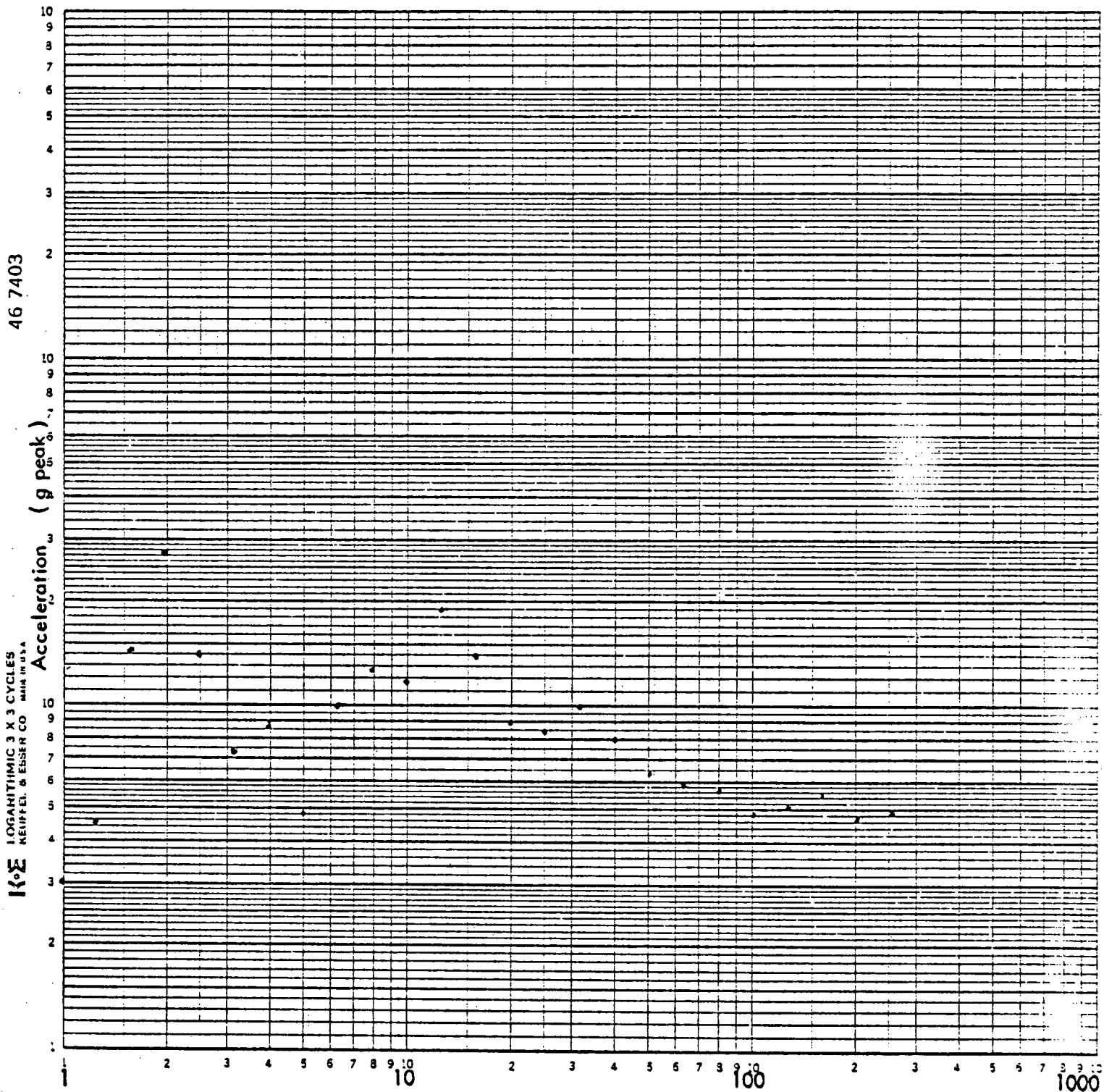
LOCATION NO. 5V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-B/VERT

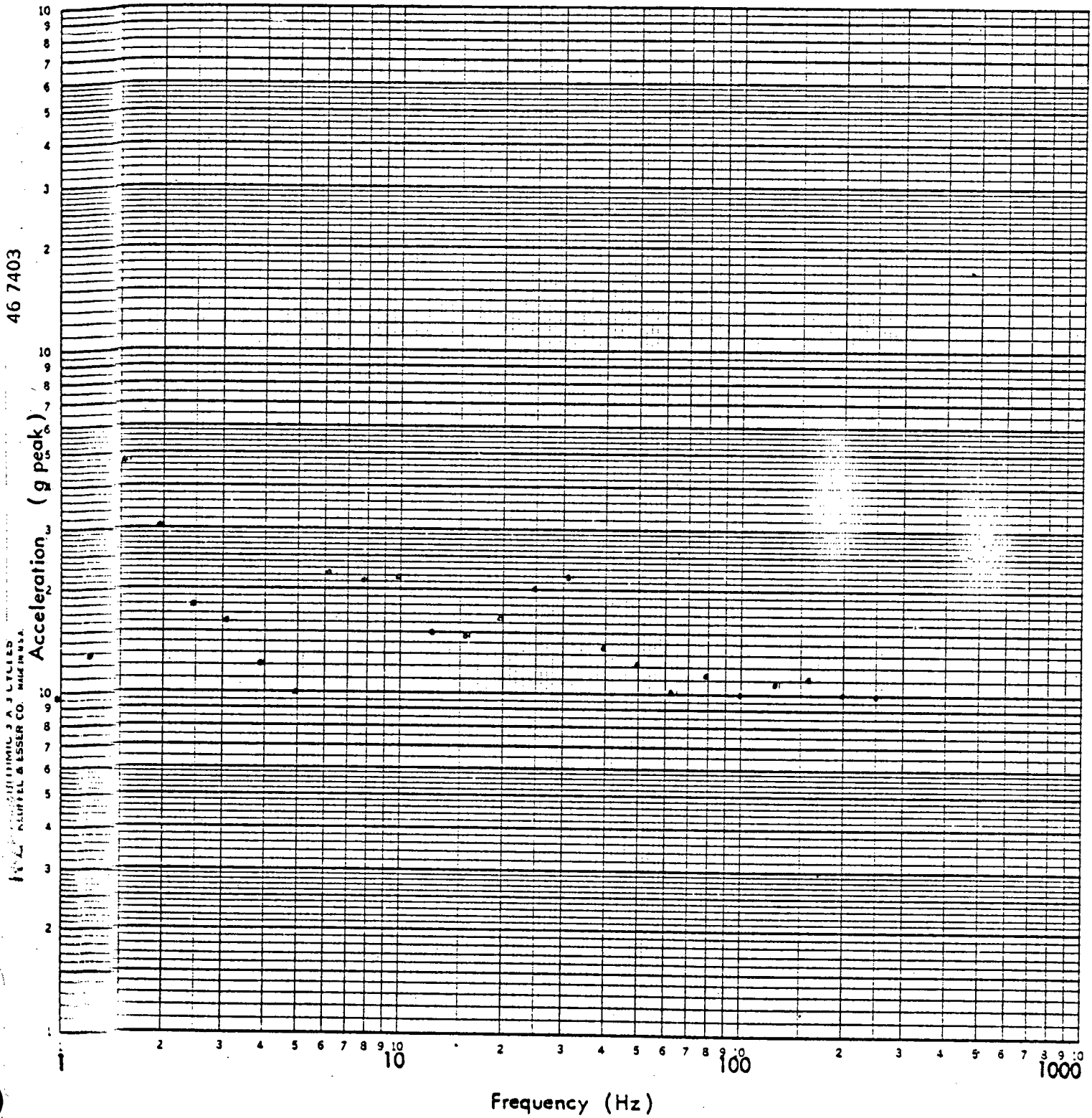
LOCATION NO. 6V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

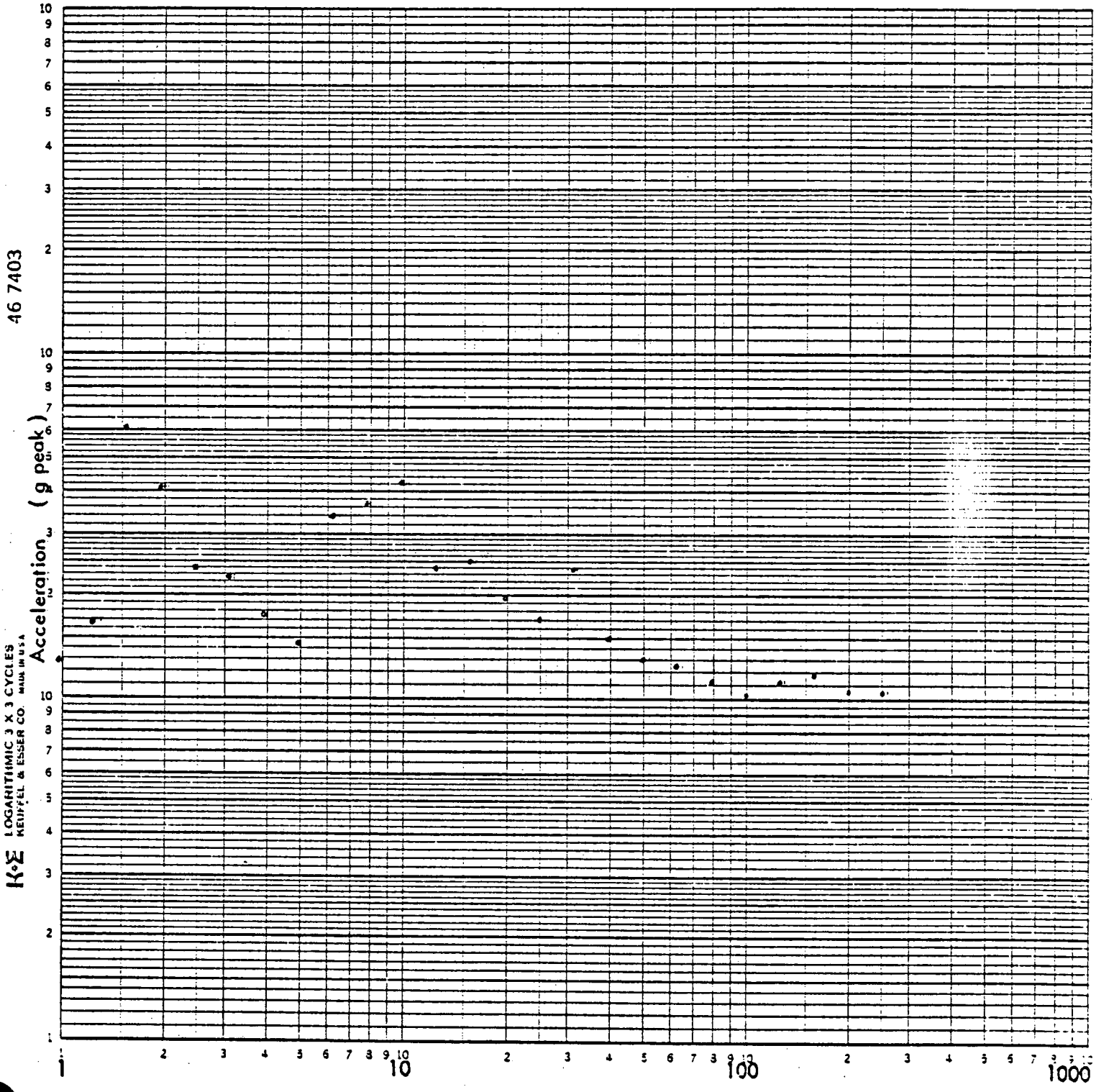
LOCATION NO. 7 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

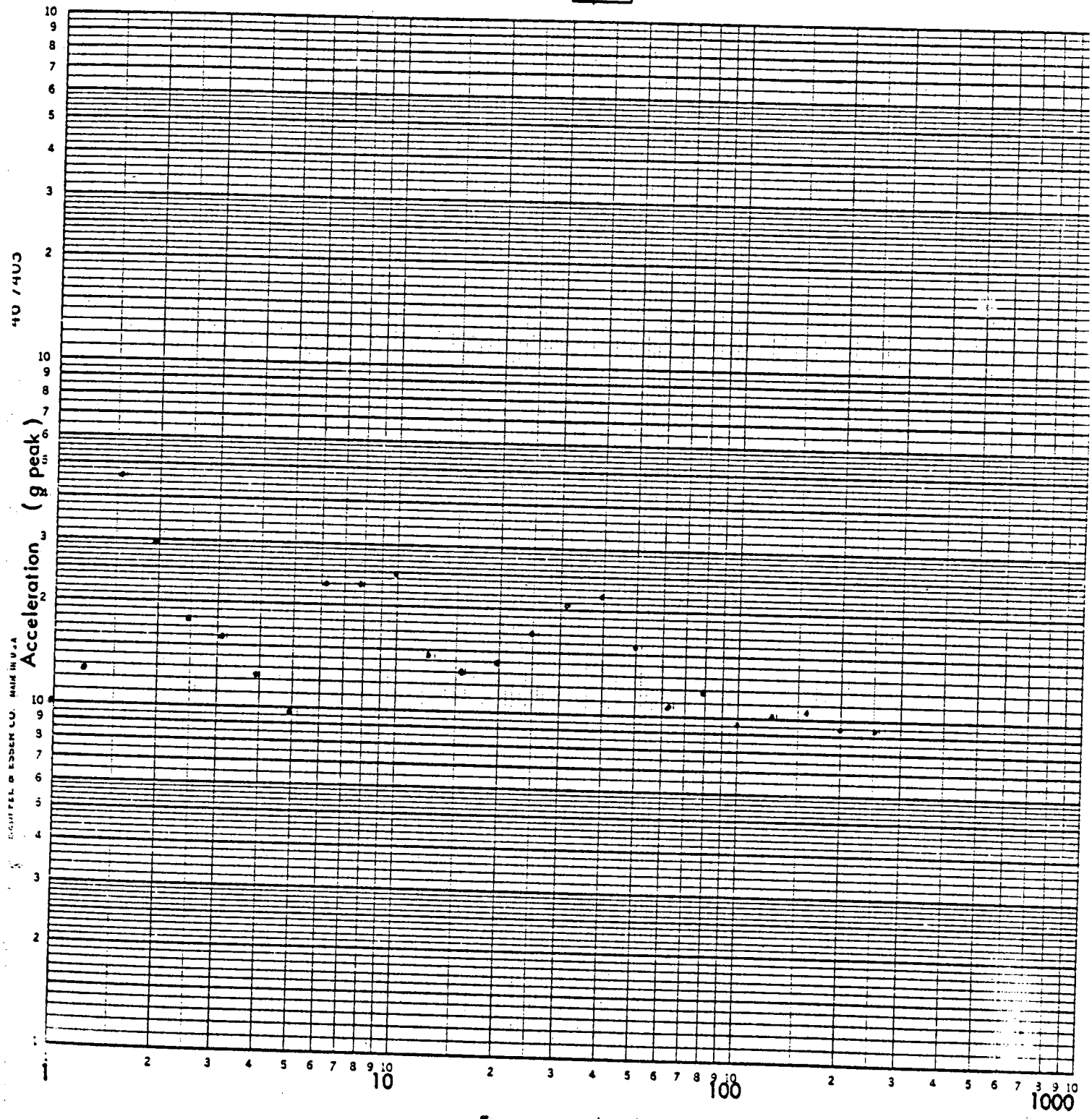
LOCATION NO. 8 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

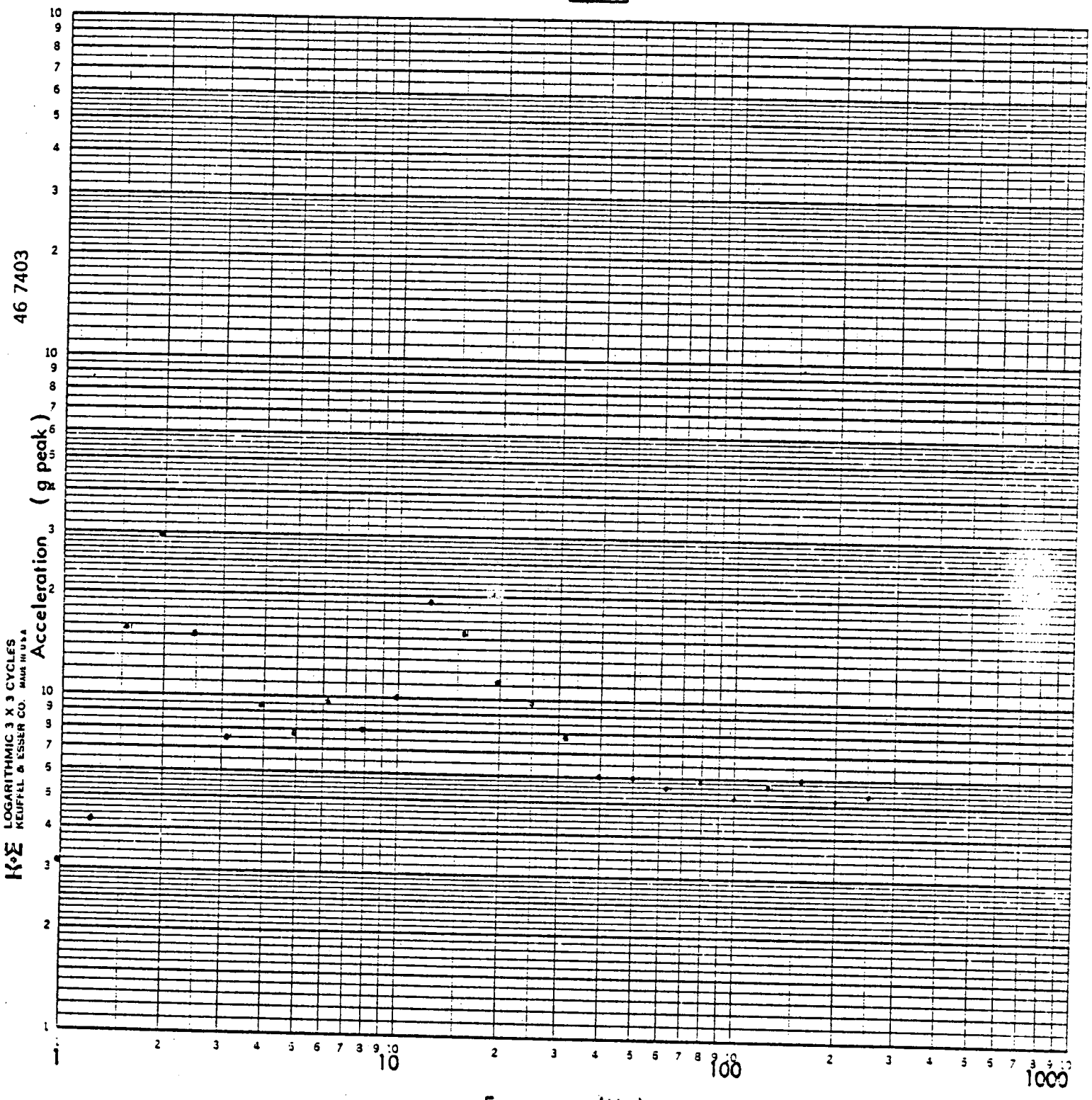
LOCATION NO. 9 F-B

TEST RUN NO. 24

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-G/VERT

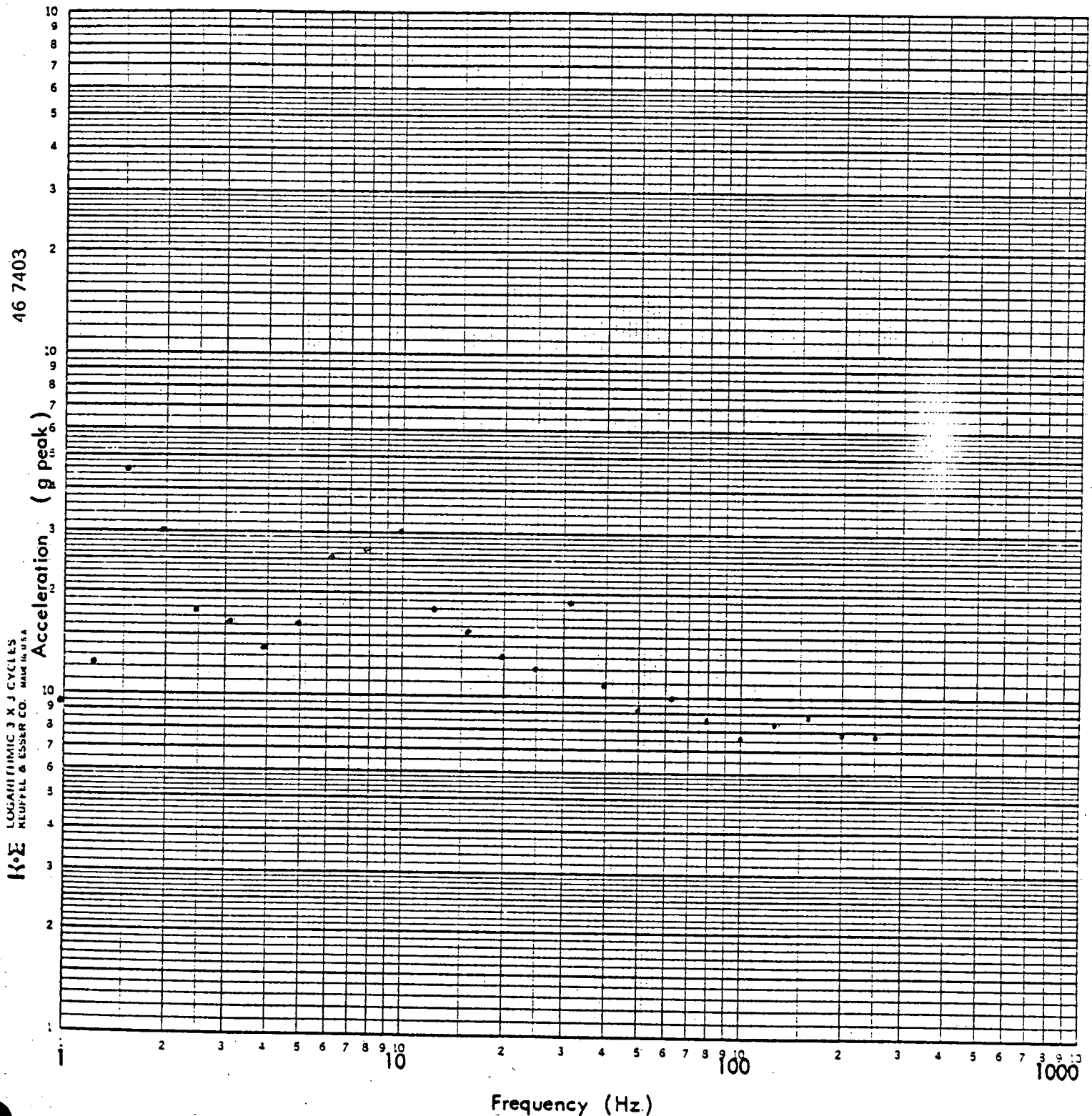
LOCATION NO. 10Y

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

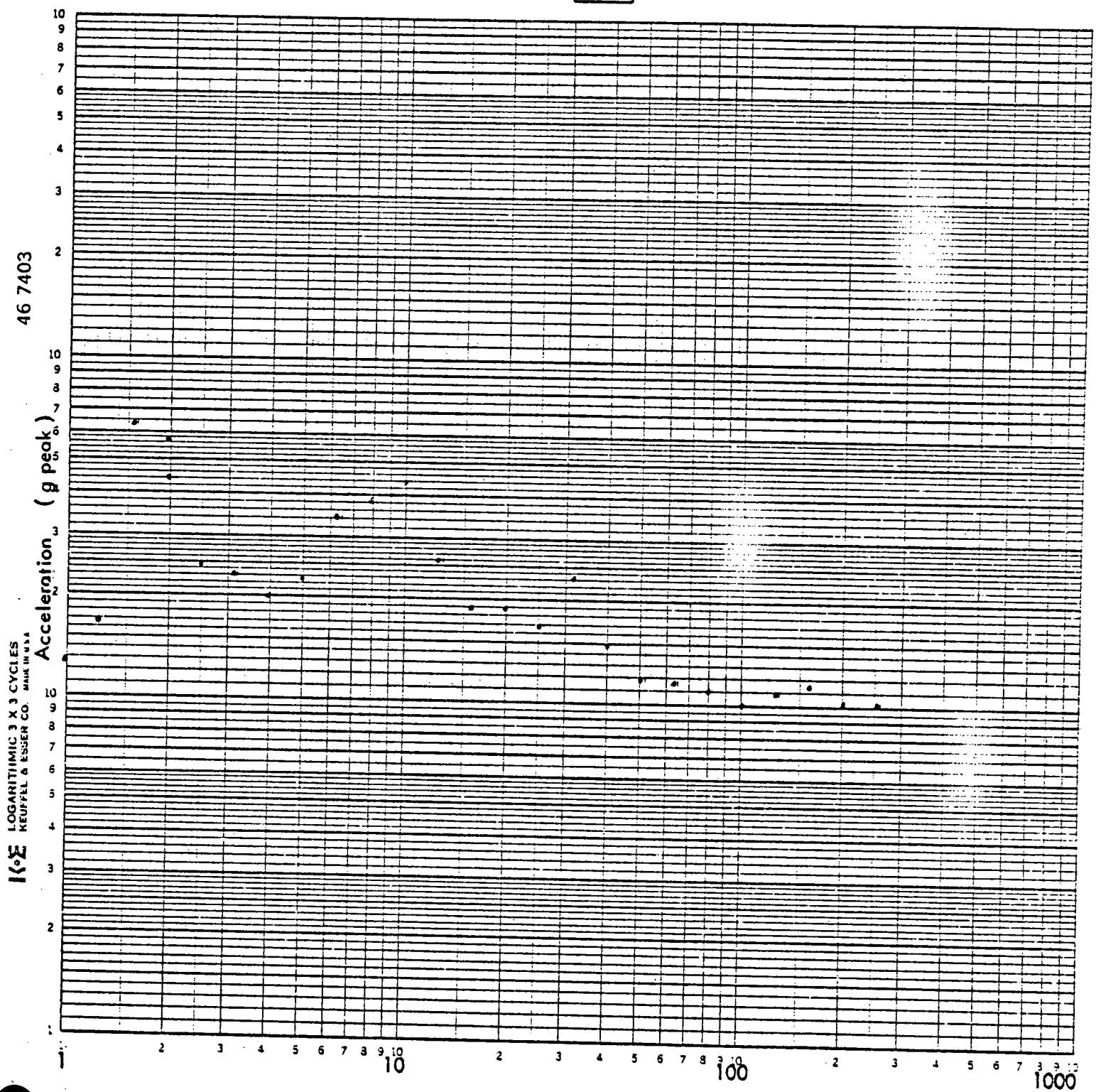
LOCATION NO. 11 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

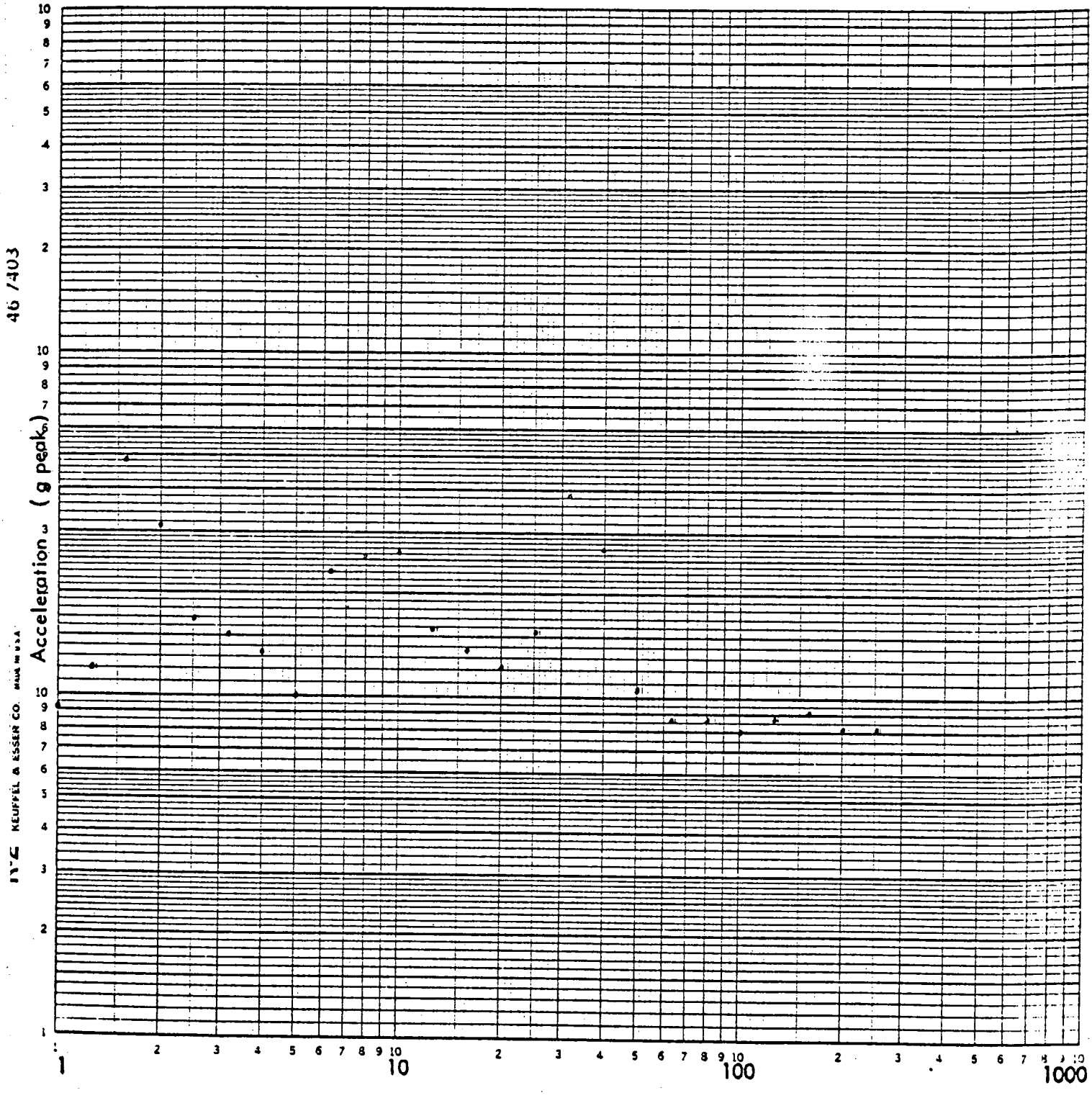
LOCATION NO. 12 E-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-B/VERT

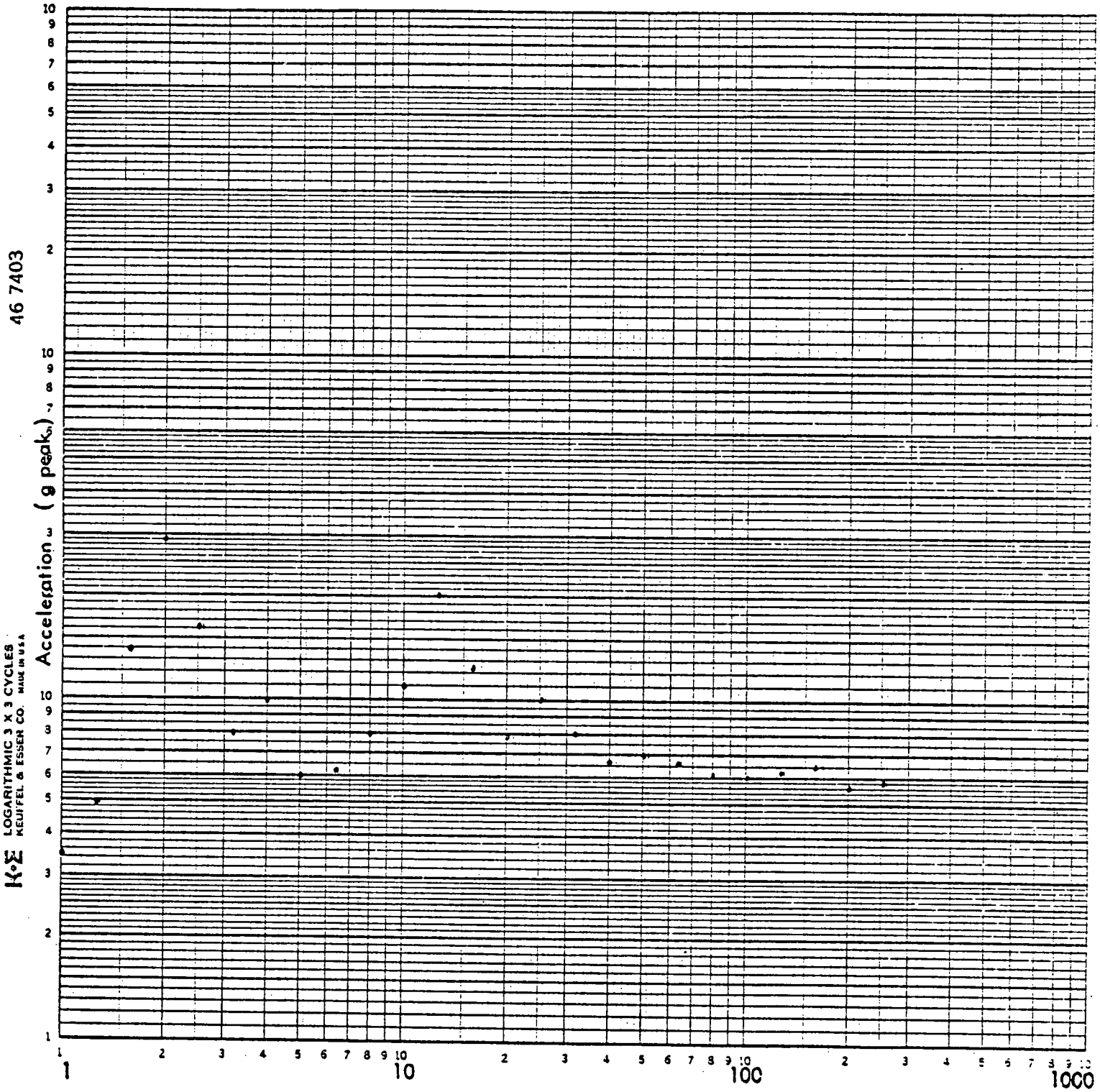
LOCATION NO. 13 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/V ZLT

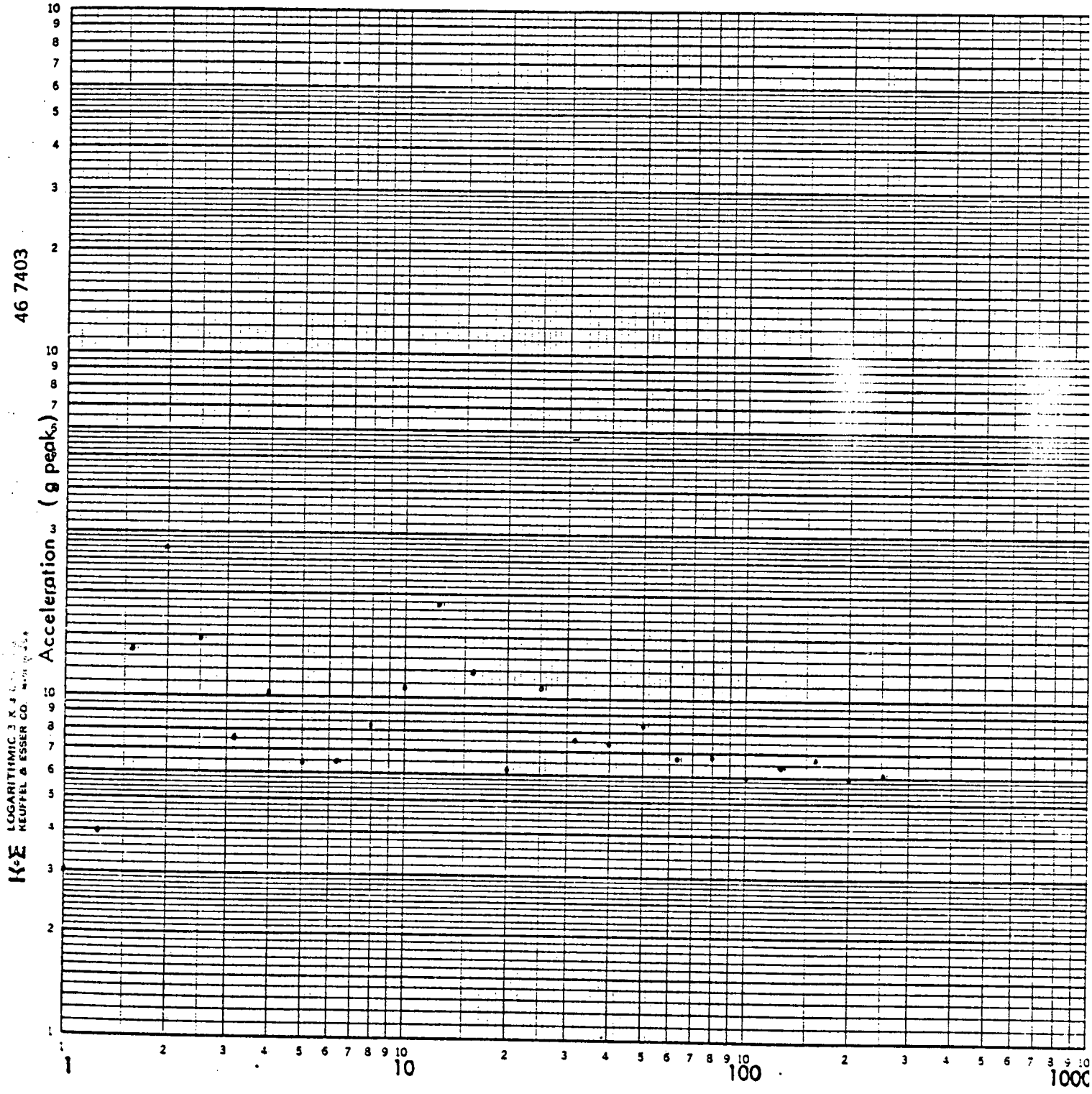
LOCATION NO. 14 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [5 %]



AXIS E-B/VERT

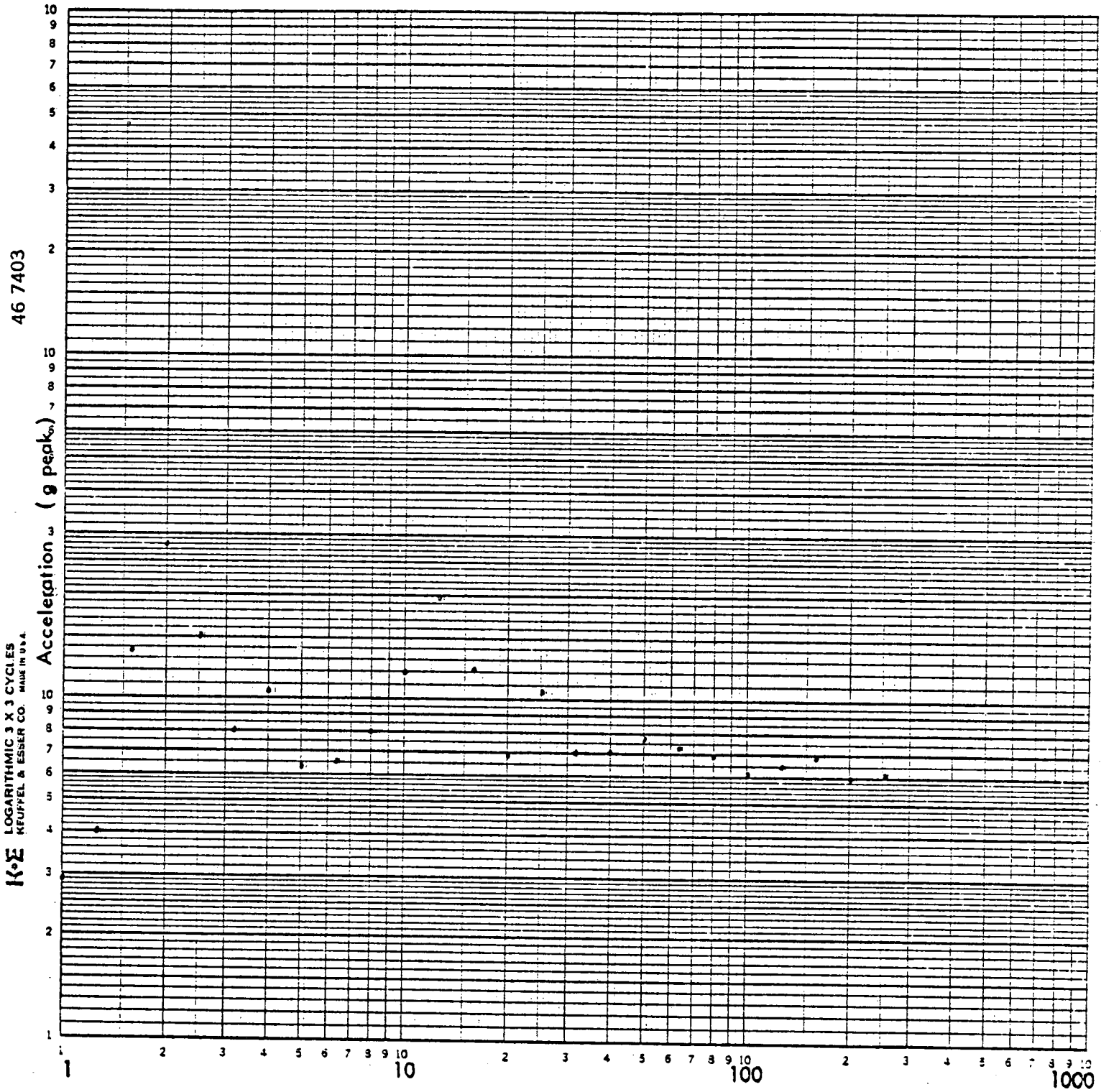
LOCATION NO. 15Y

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-W/VERT

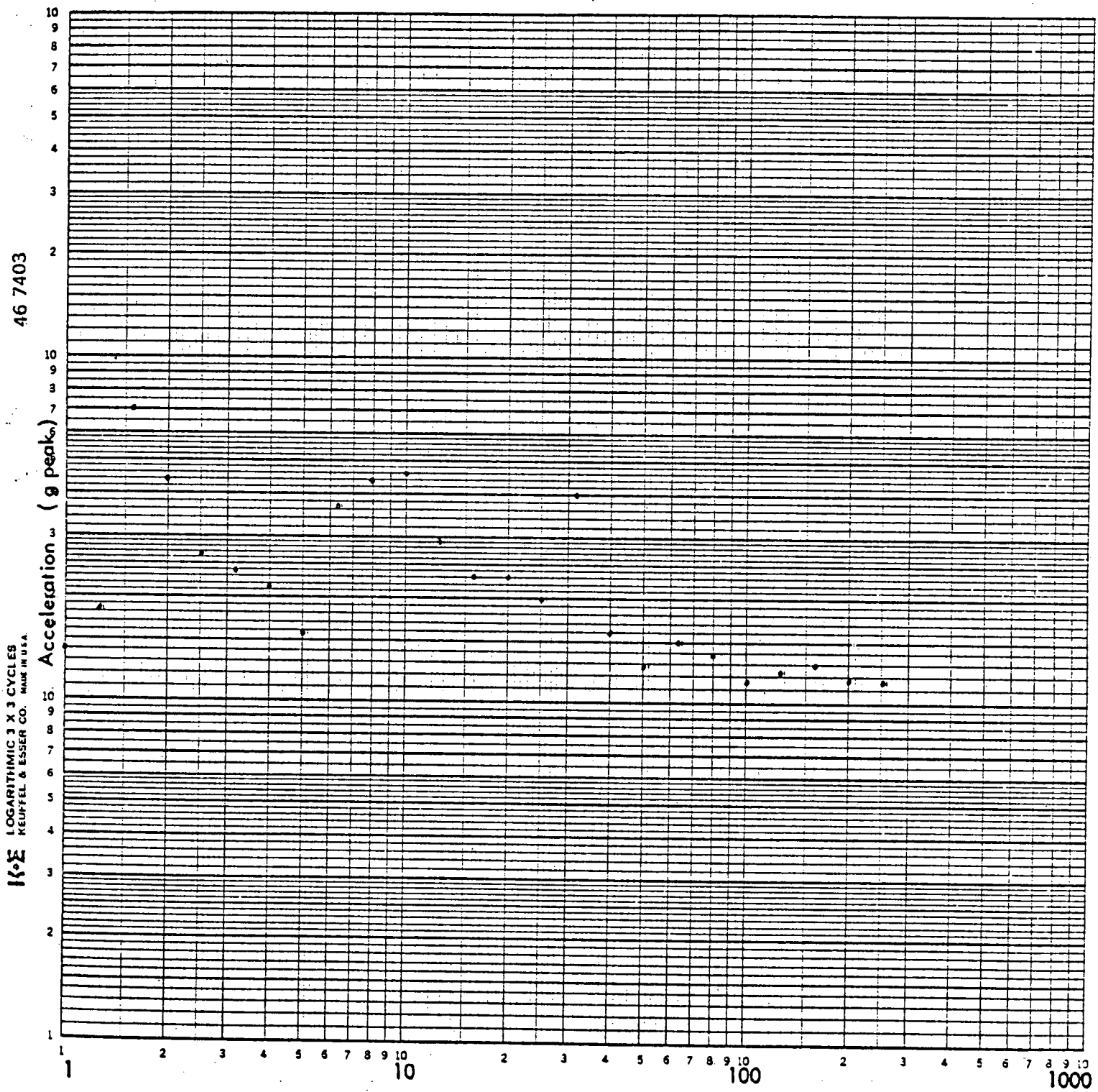
LOCATION NO. 16Y

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

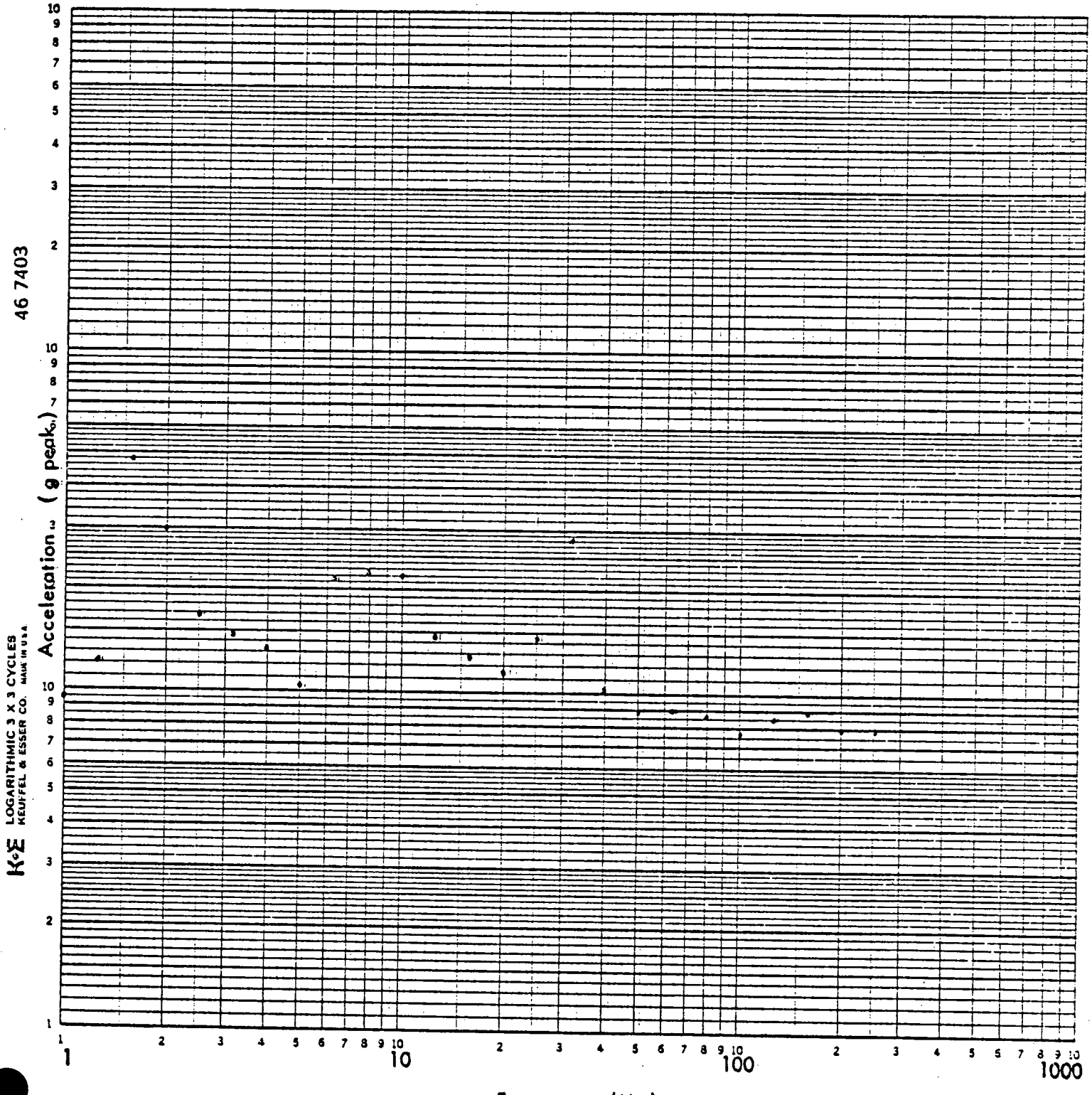
LOCATION NO. 17 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING | %



AXIS F-B/VERT

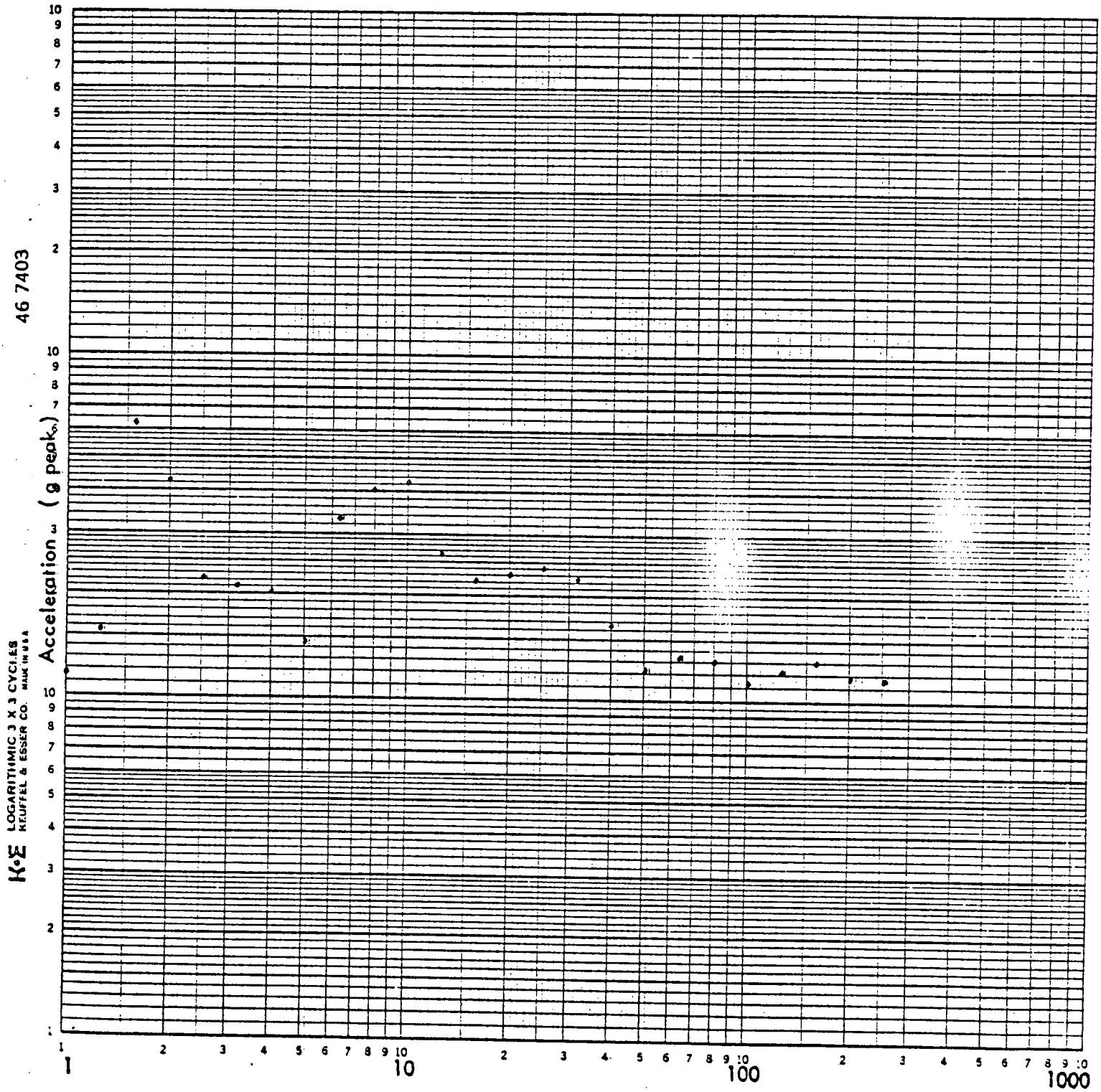
LOCATION NO. 18 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS F-B/VERT

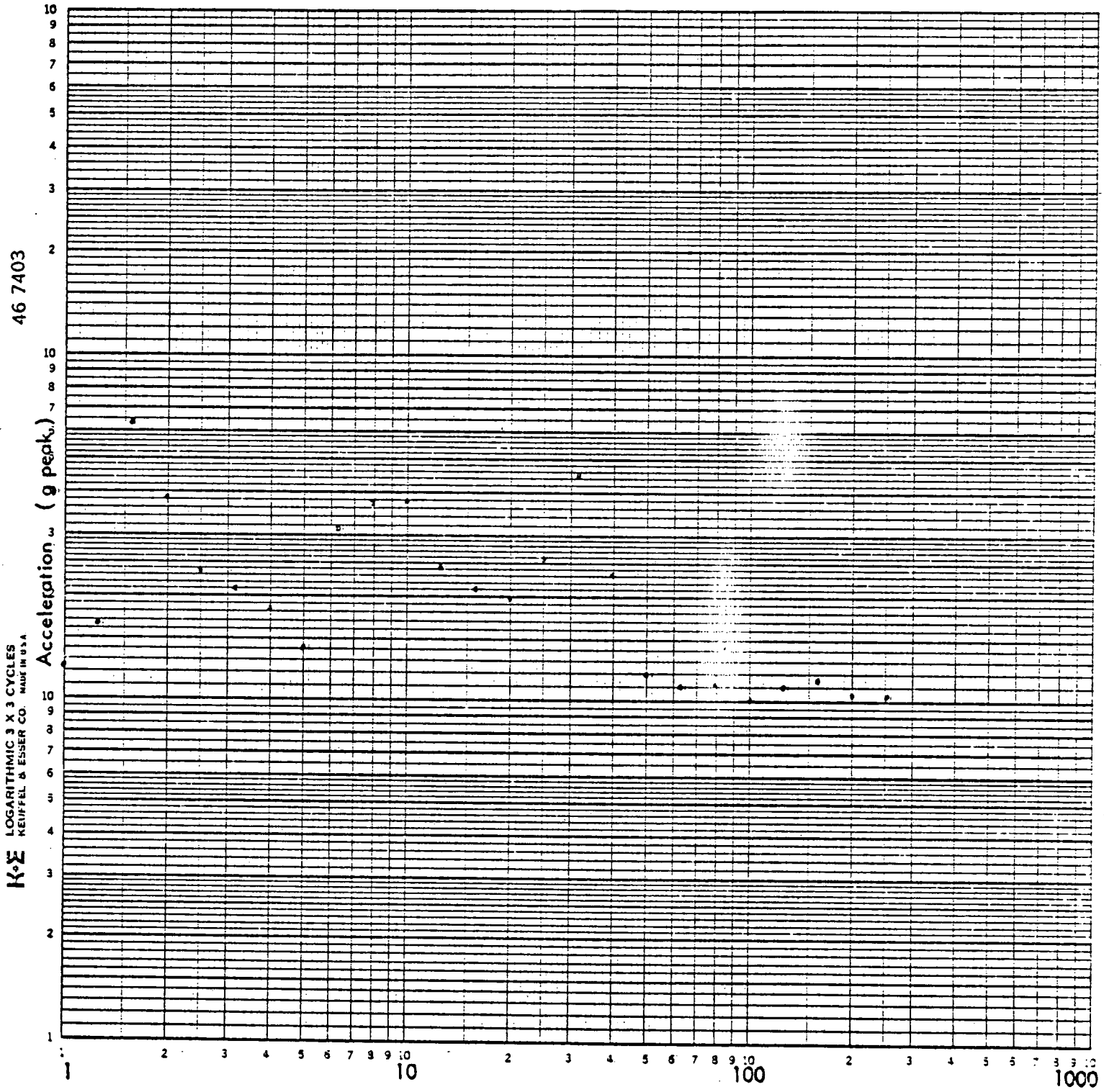
LOCATION NO. 19 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

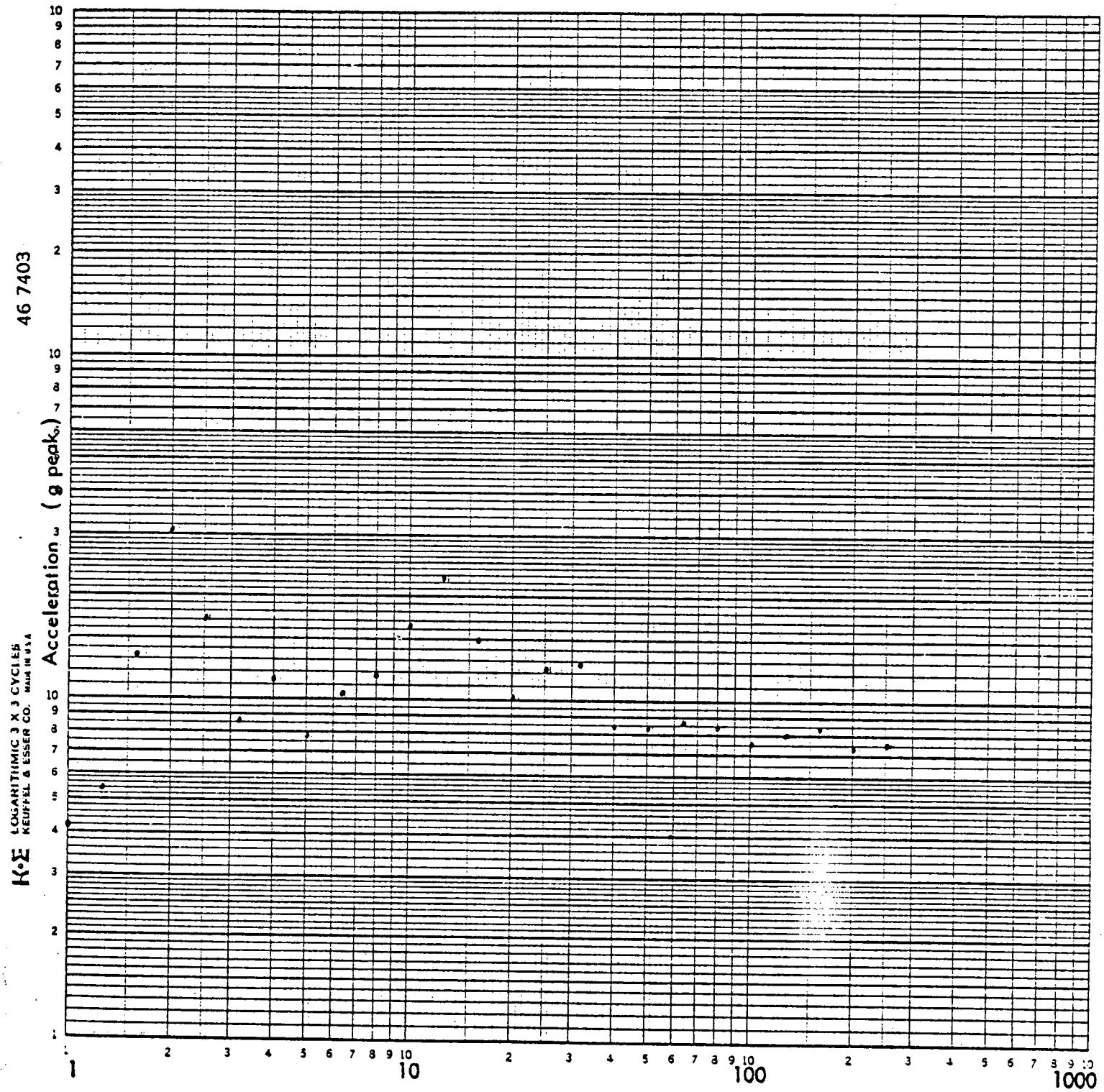
LOCATION NO. 20 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

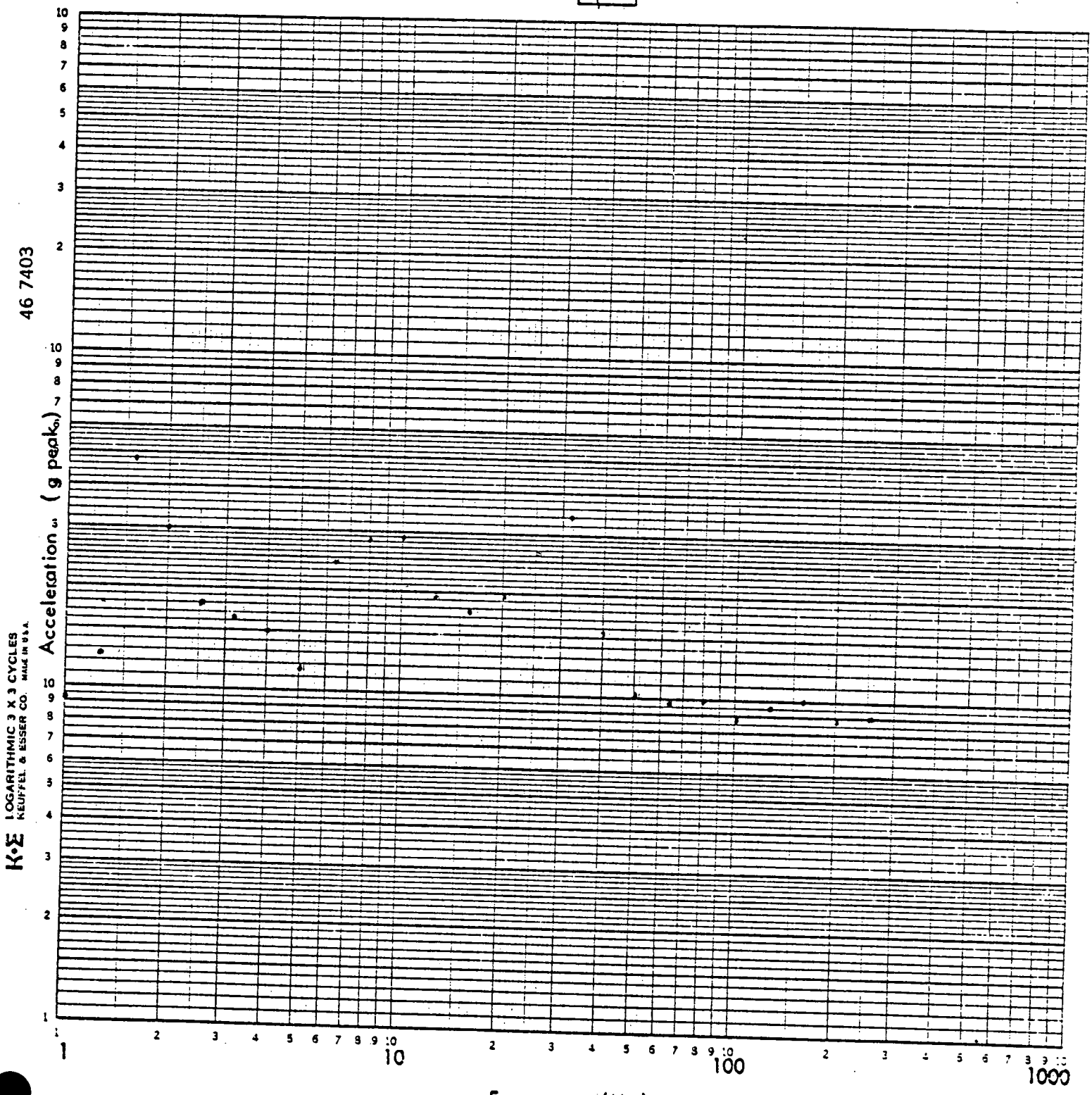
LOCATION NO. 21 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/V 2&7

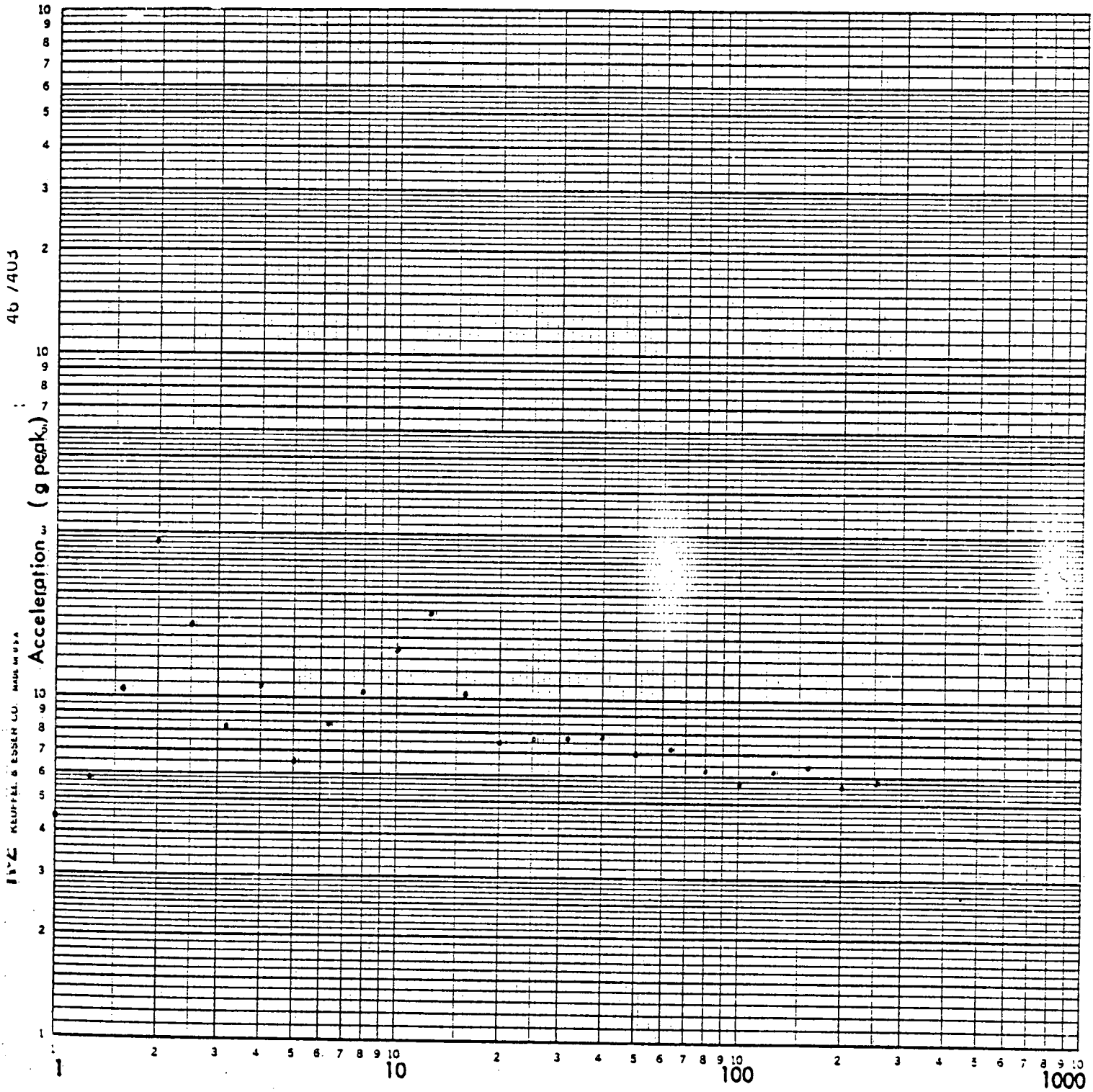
LOCATION NO. 22 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS F-B/VERT

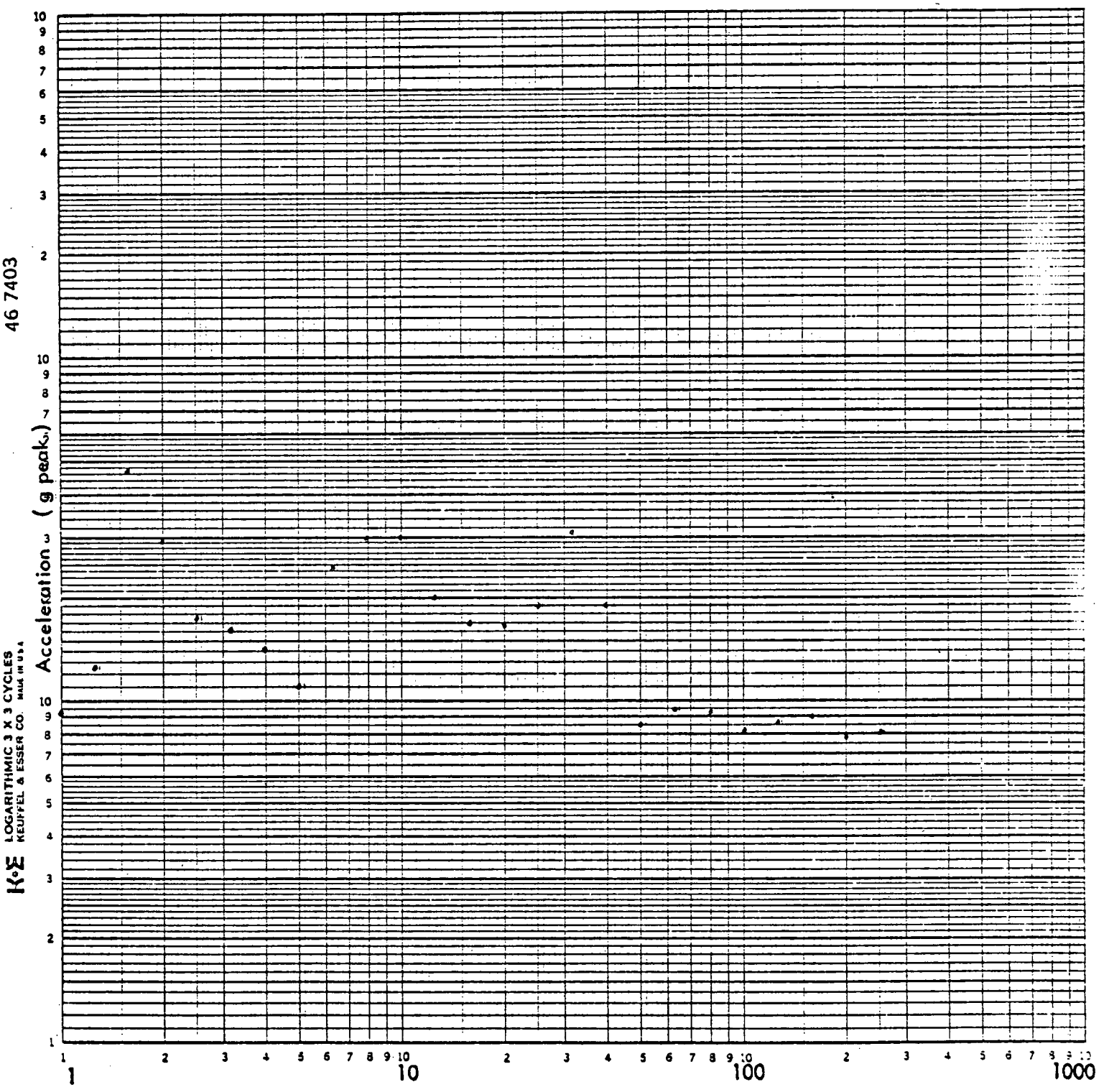
LOCATION NO. 23V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [ ] %



AXIS F-B / VERT

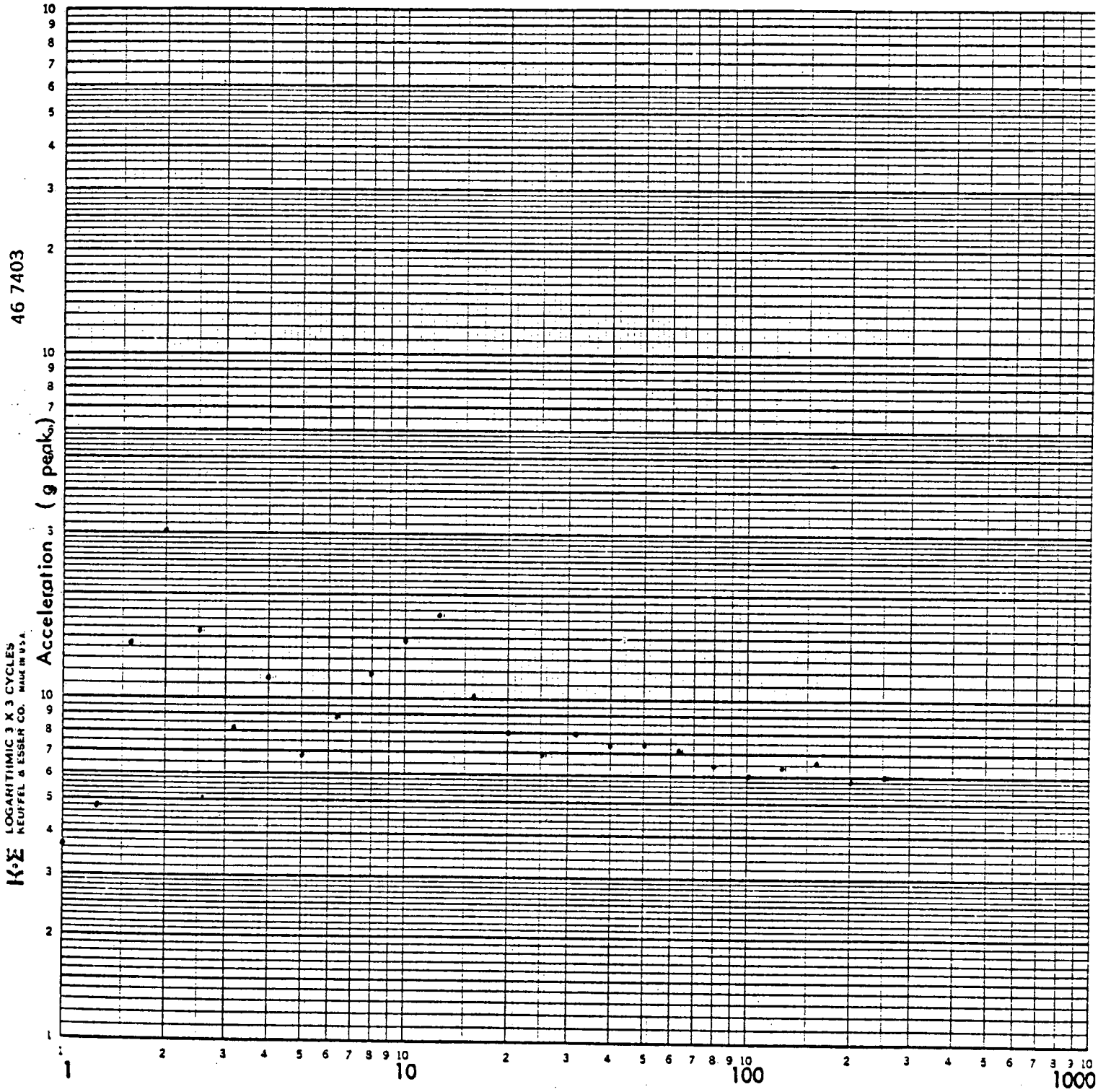
LOCATION NO. 24 F-B

TEST RUN NO. 24

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

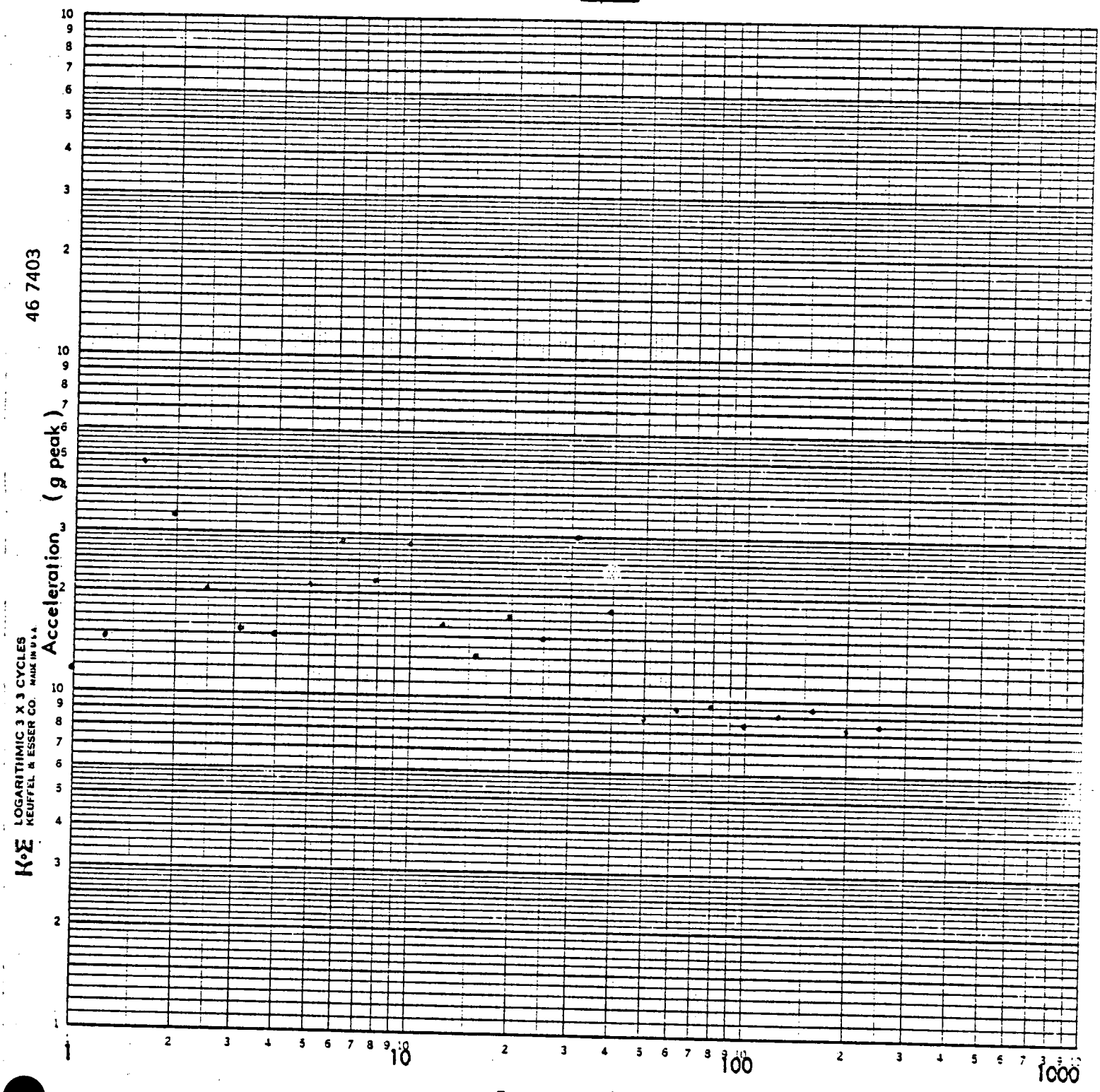
LOCATION NO. 25 Y

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F.B/VERT

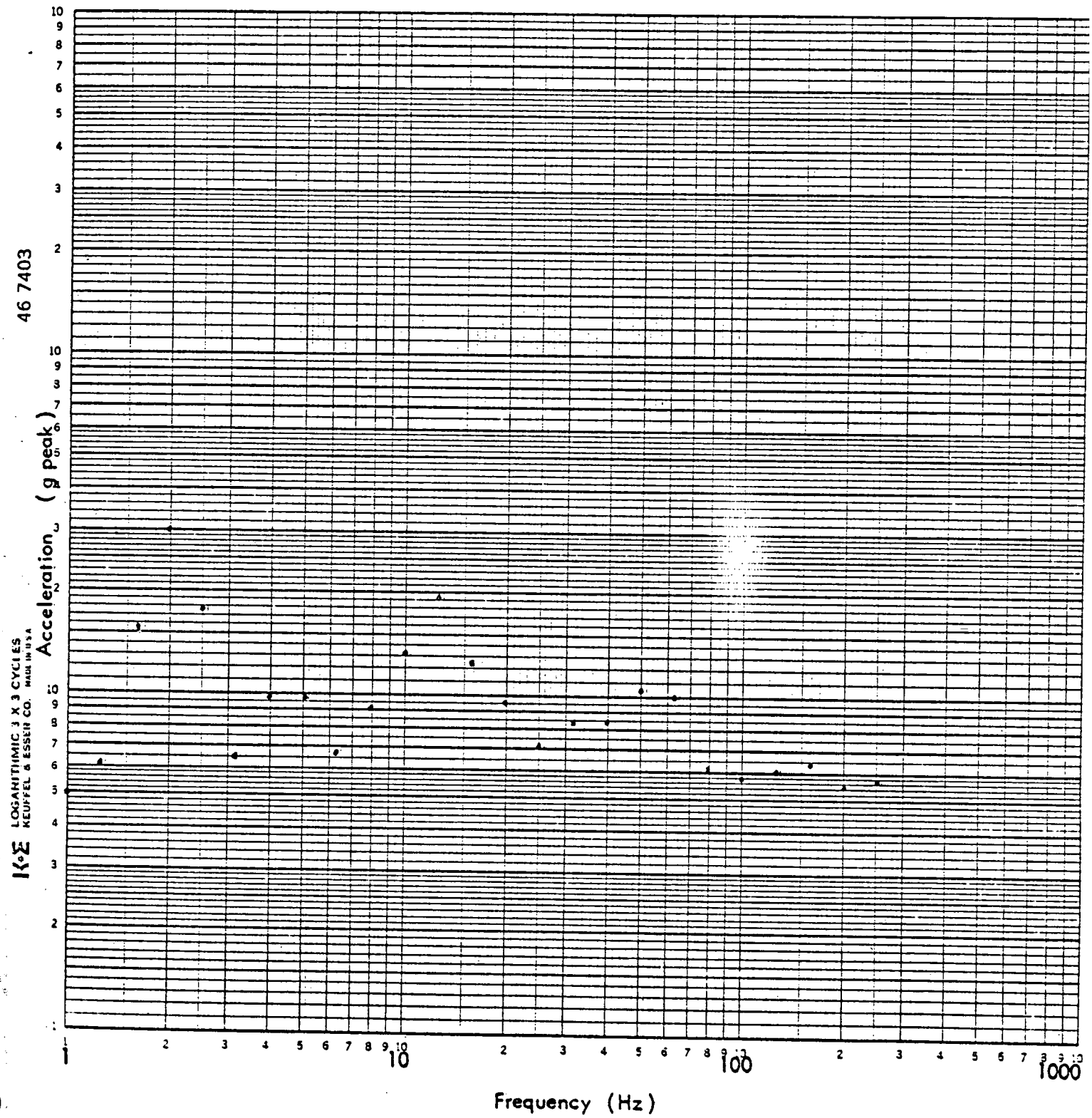
LOCATION NO. 26 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-8/VERT

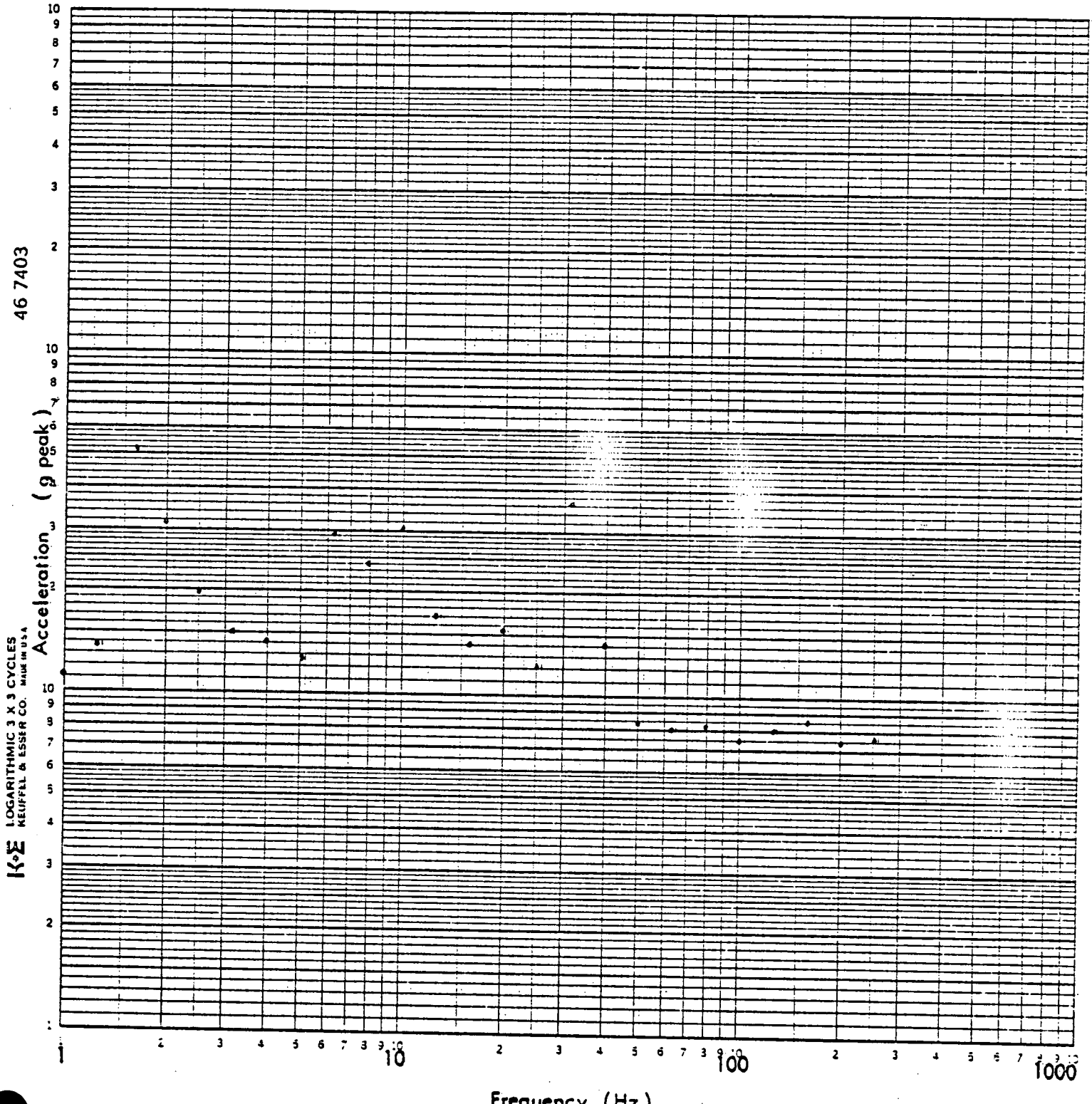
LOCATION NO. 27 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

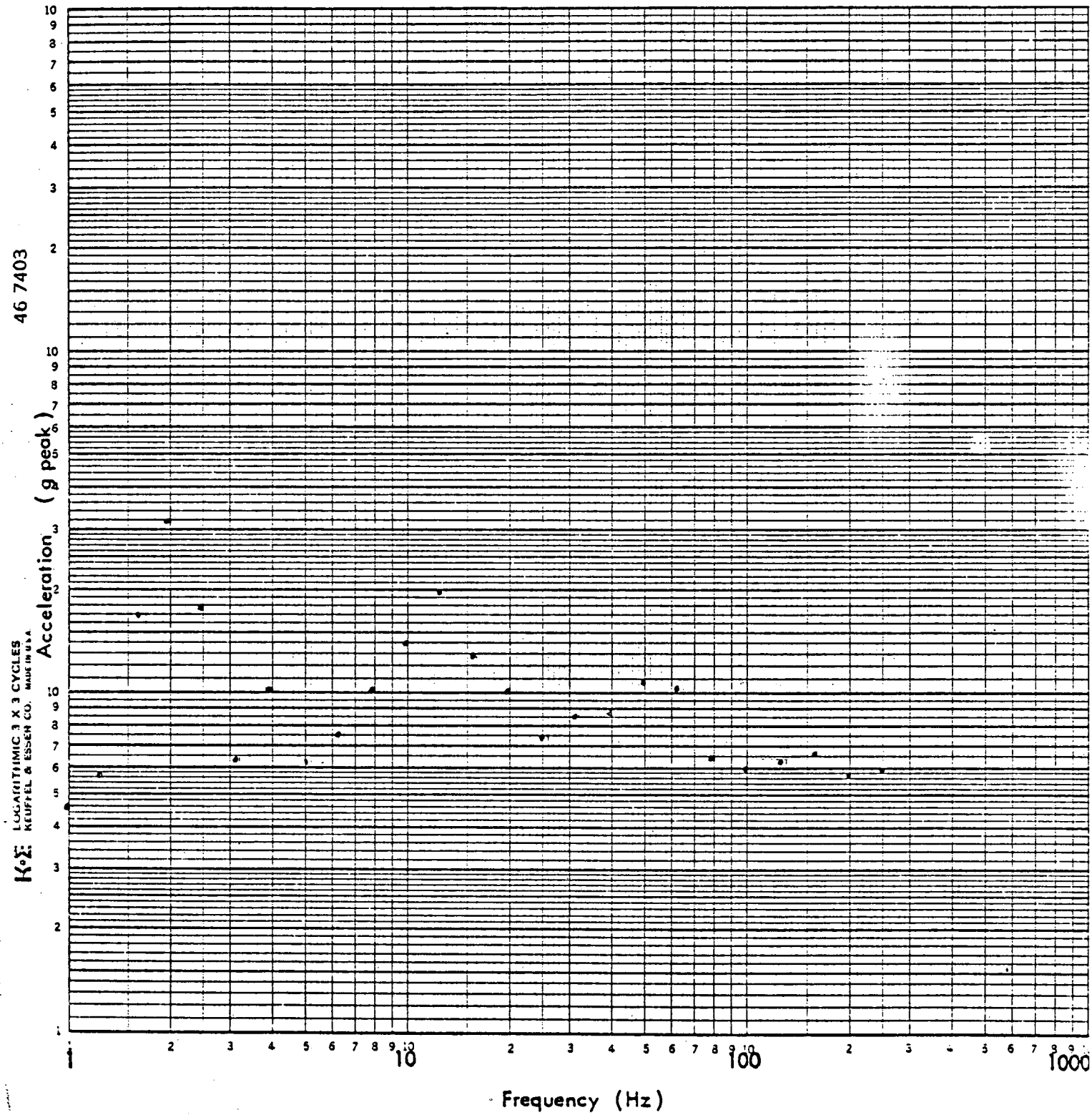
LOCATION NO. 28 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-8/VERT

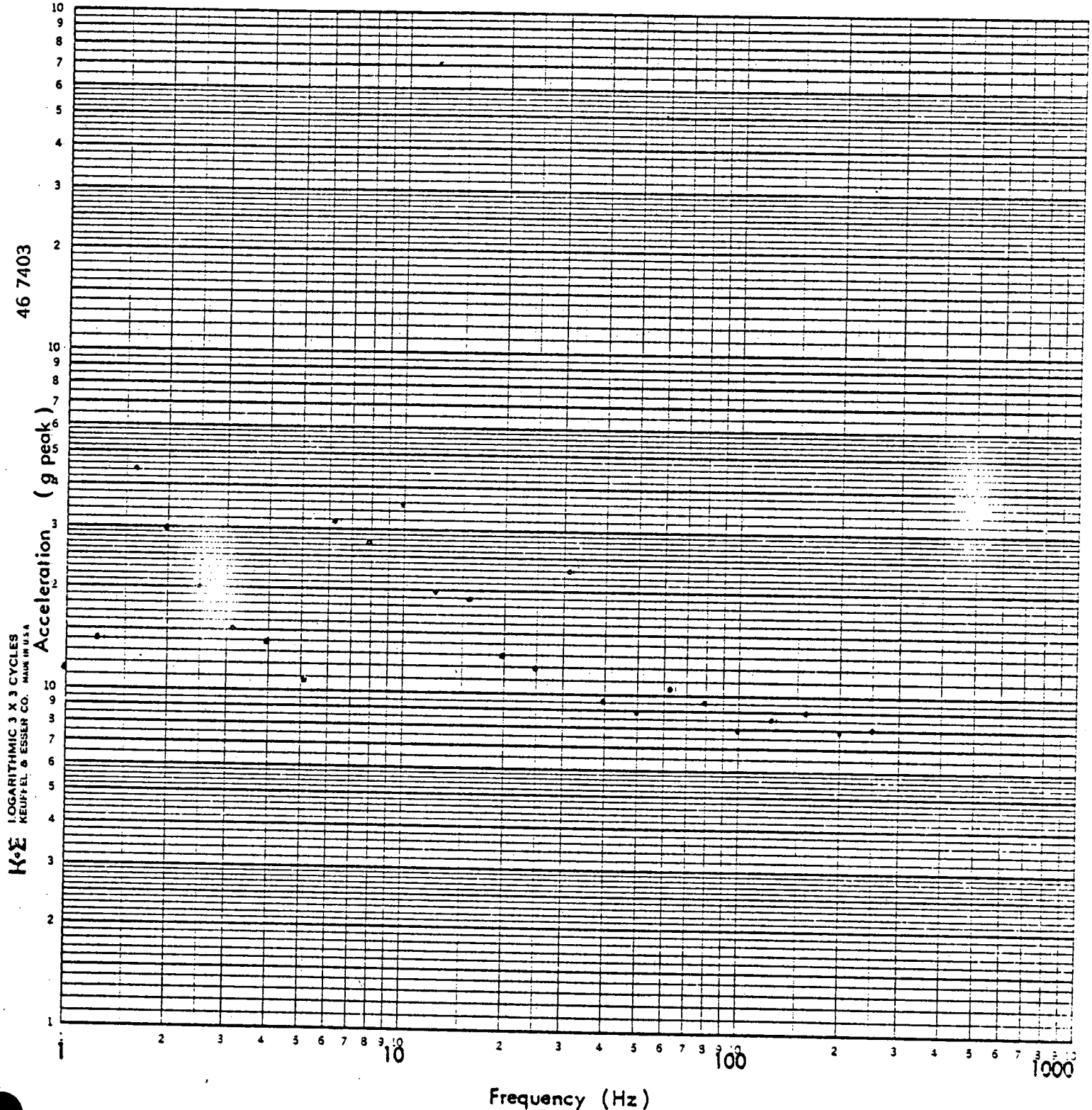
LOCATION NO. 29 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

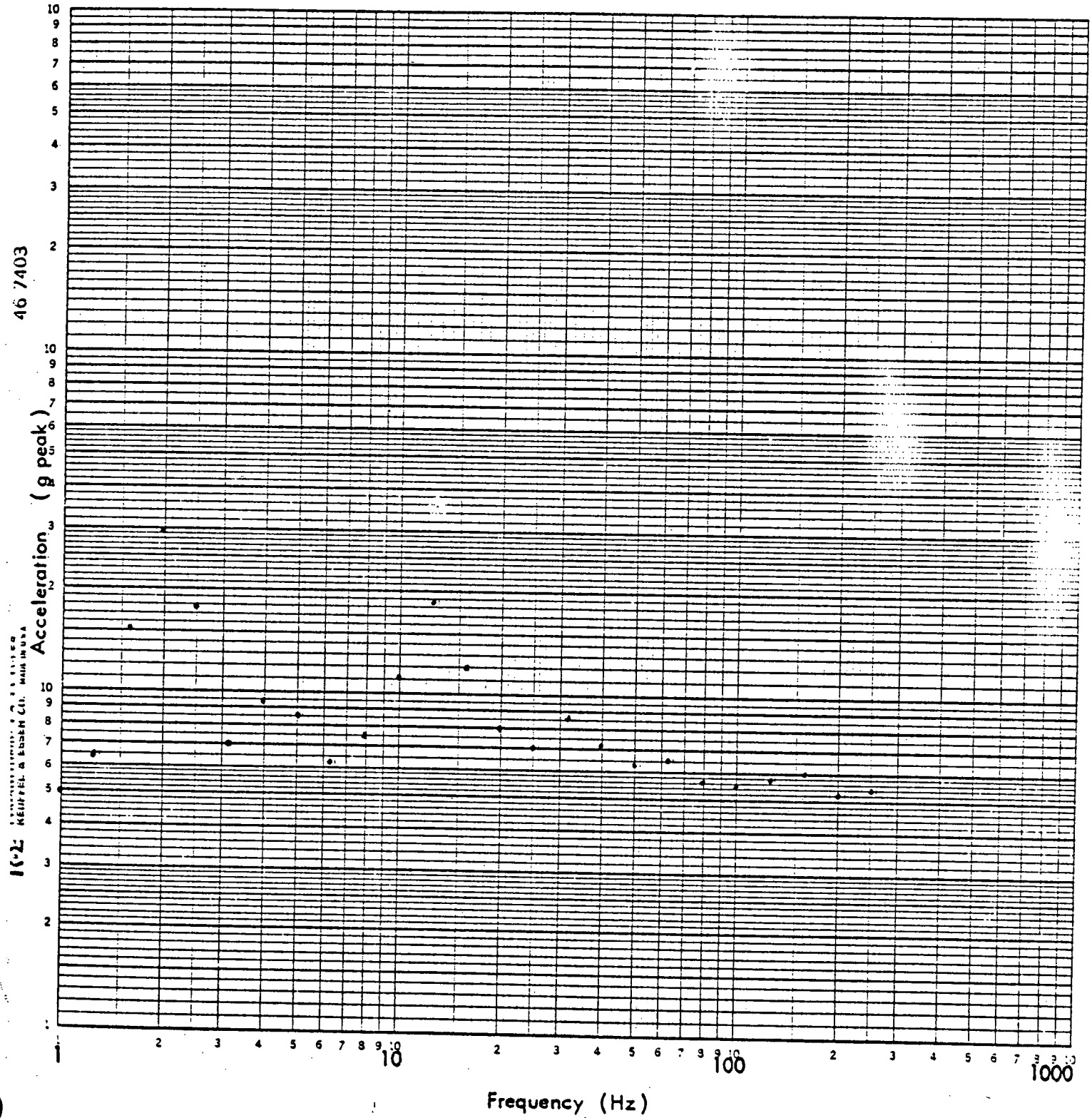
LOCATION NO. 30 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B / VERT

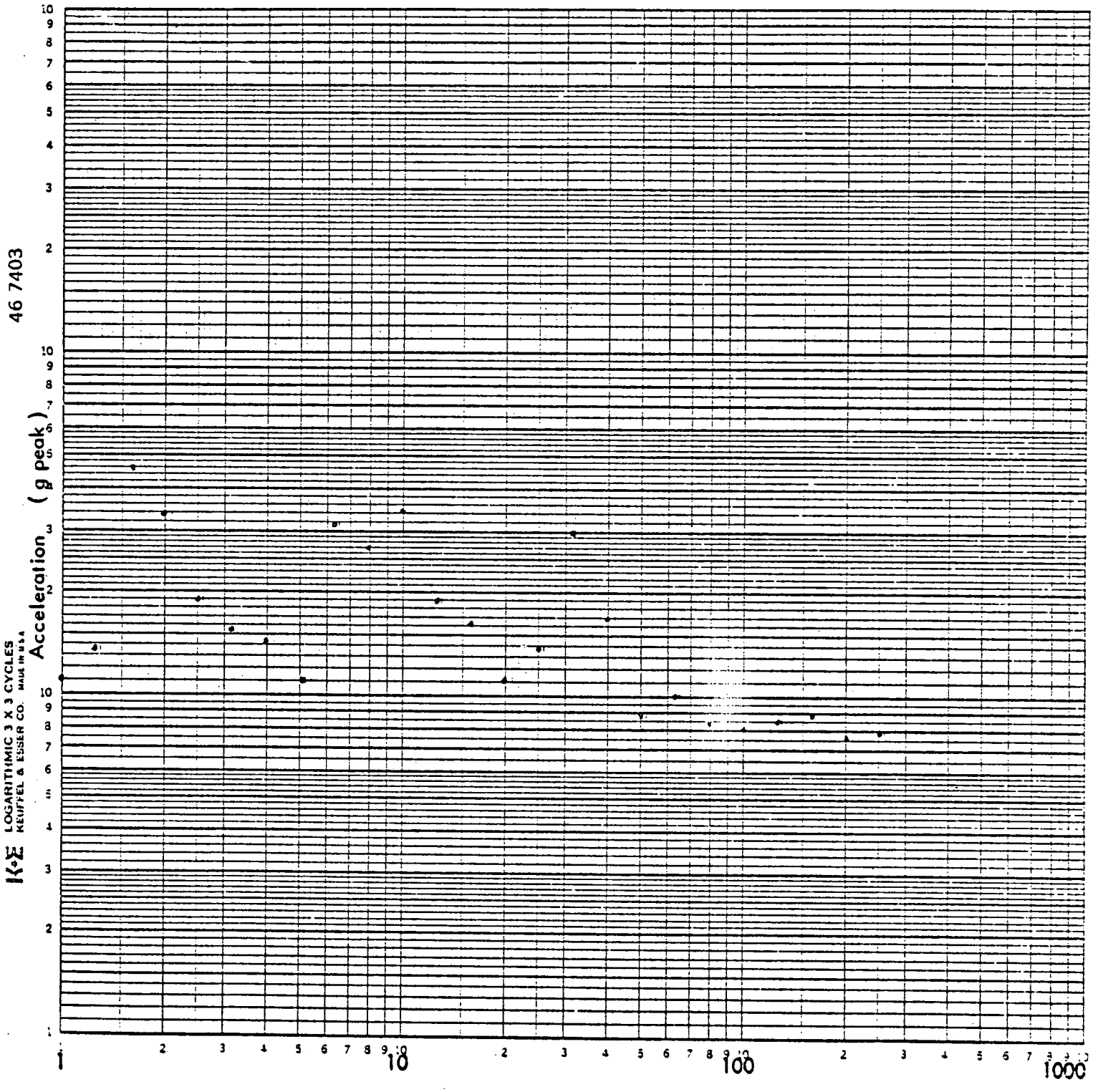
LOCATION NO. 31 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

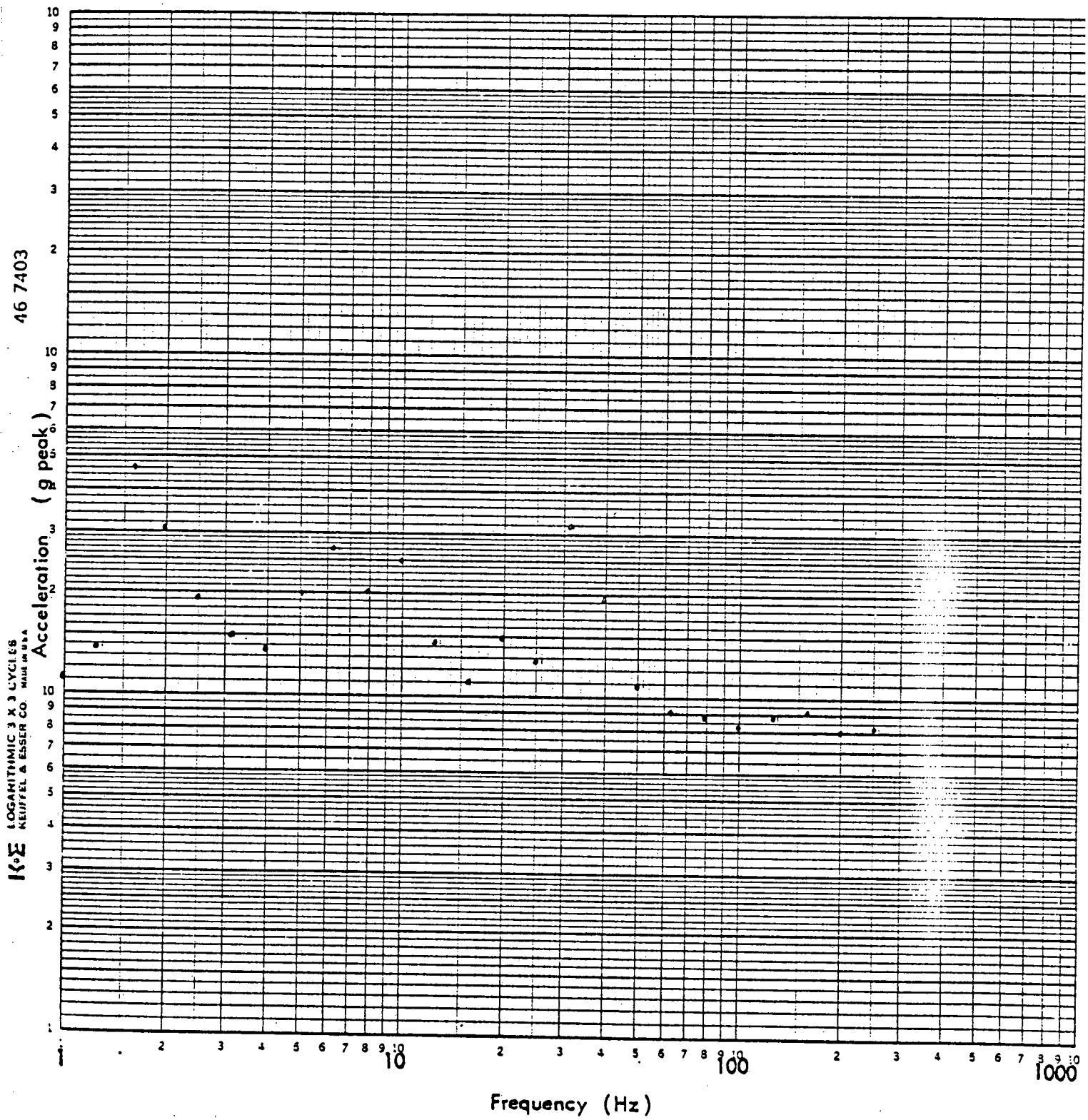
LOCATION NO. 32F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B / VERT

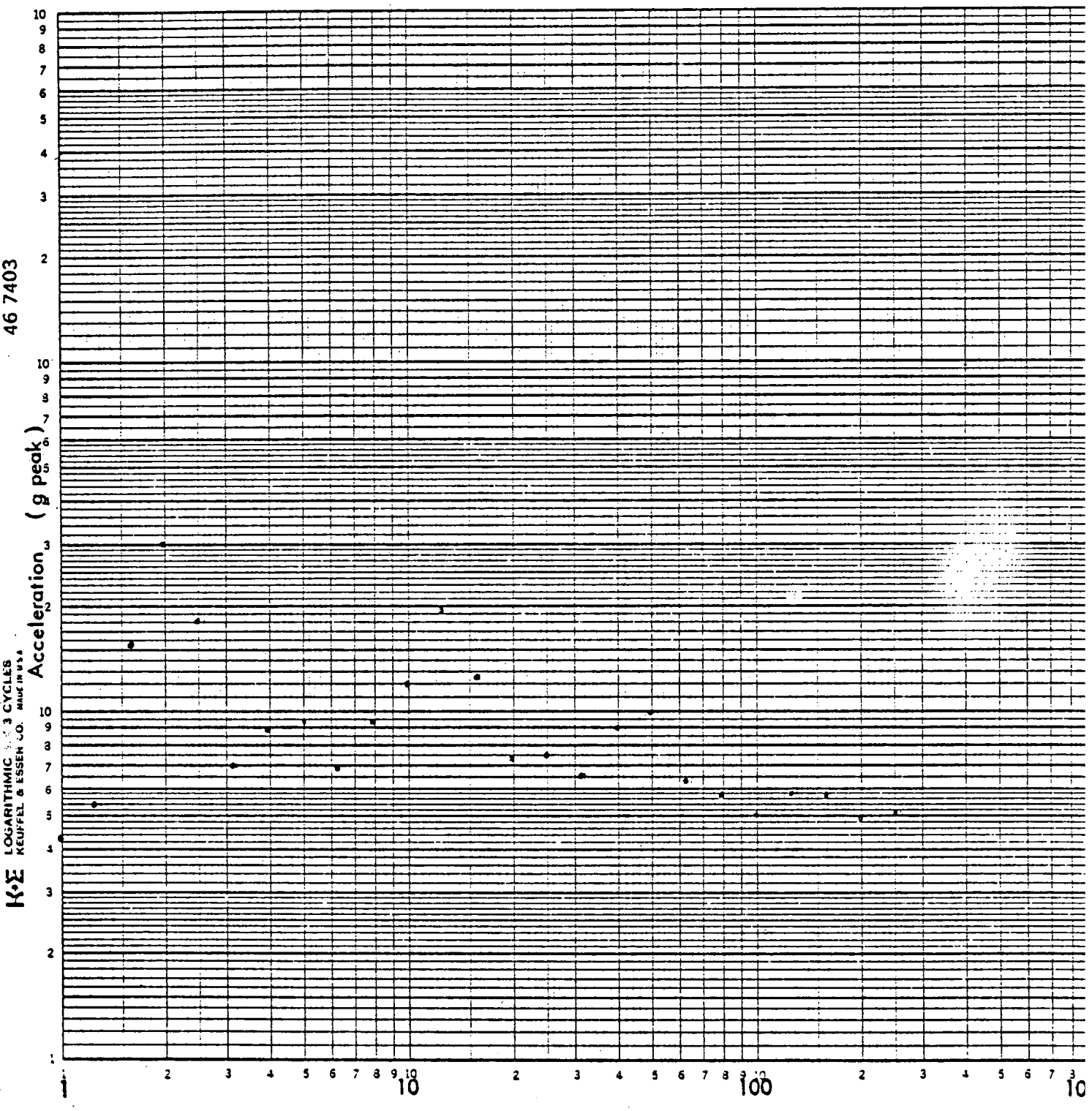
LOCATION NO. 33 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B / VERT

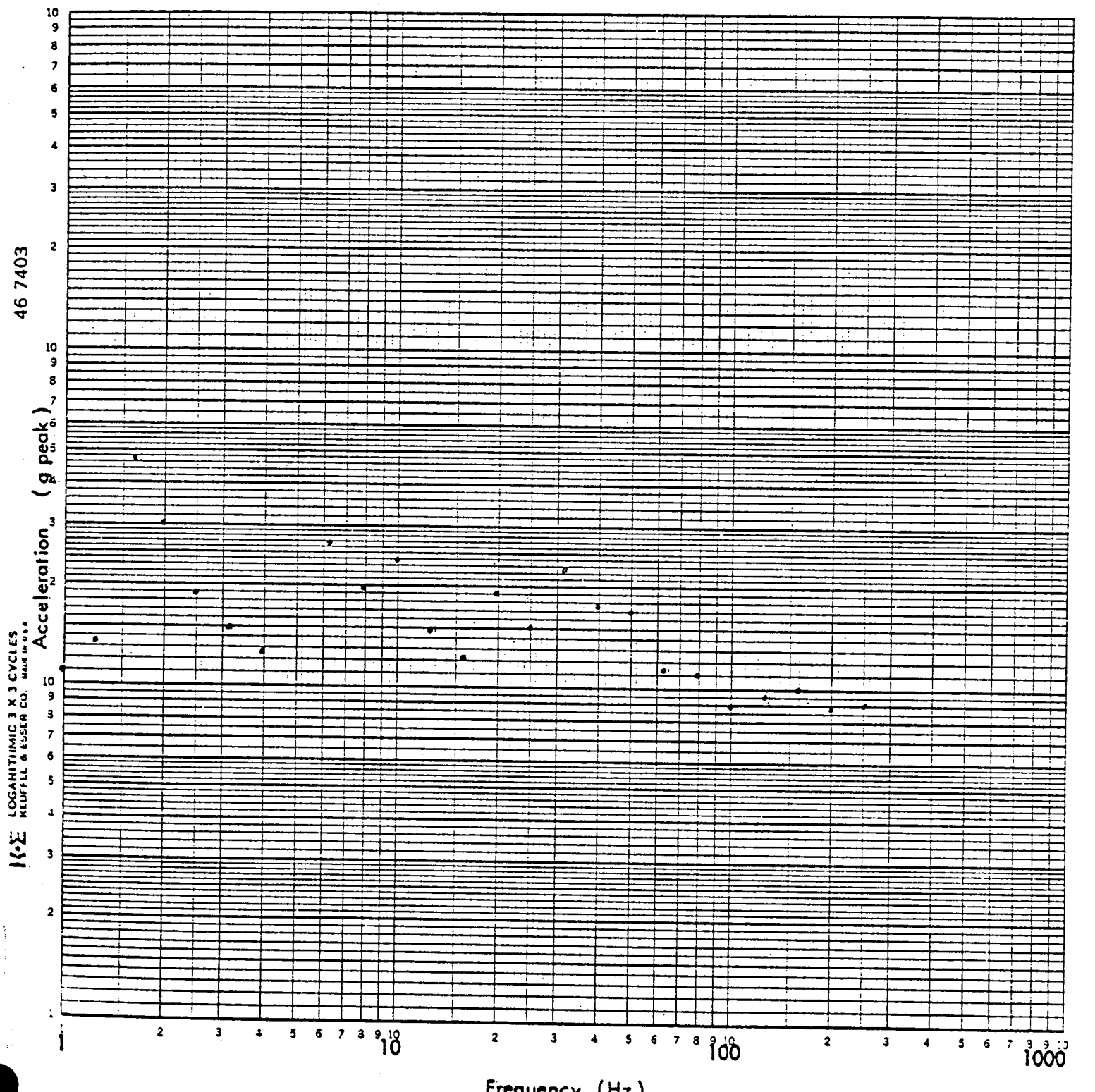
LOCATION NO. 34 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



Frequency (Hz)

AXIS F-B/VERT

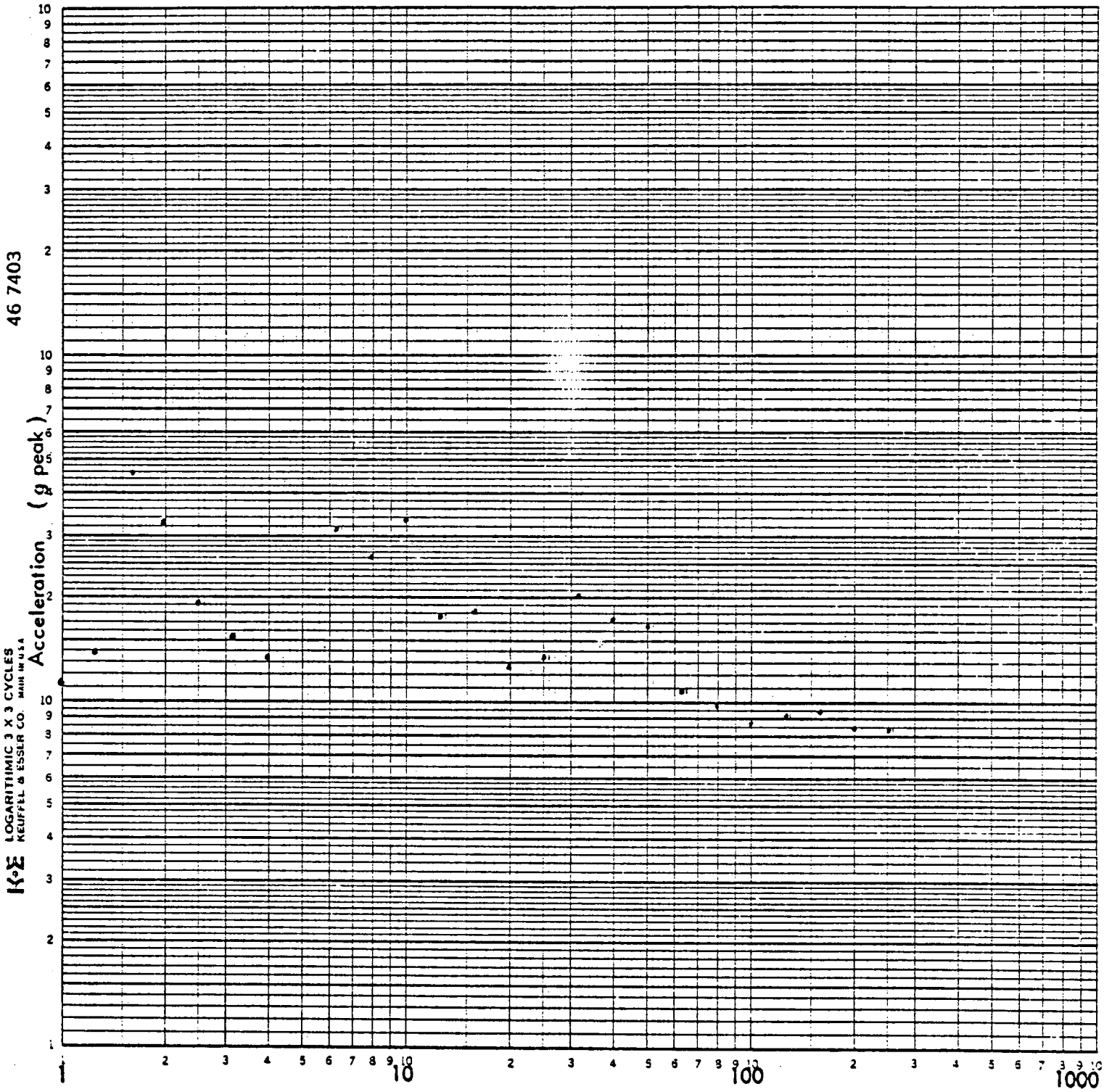
LOCATION NO. 35 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

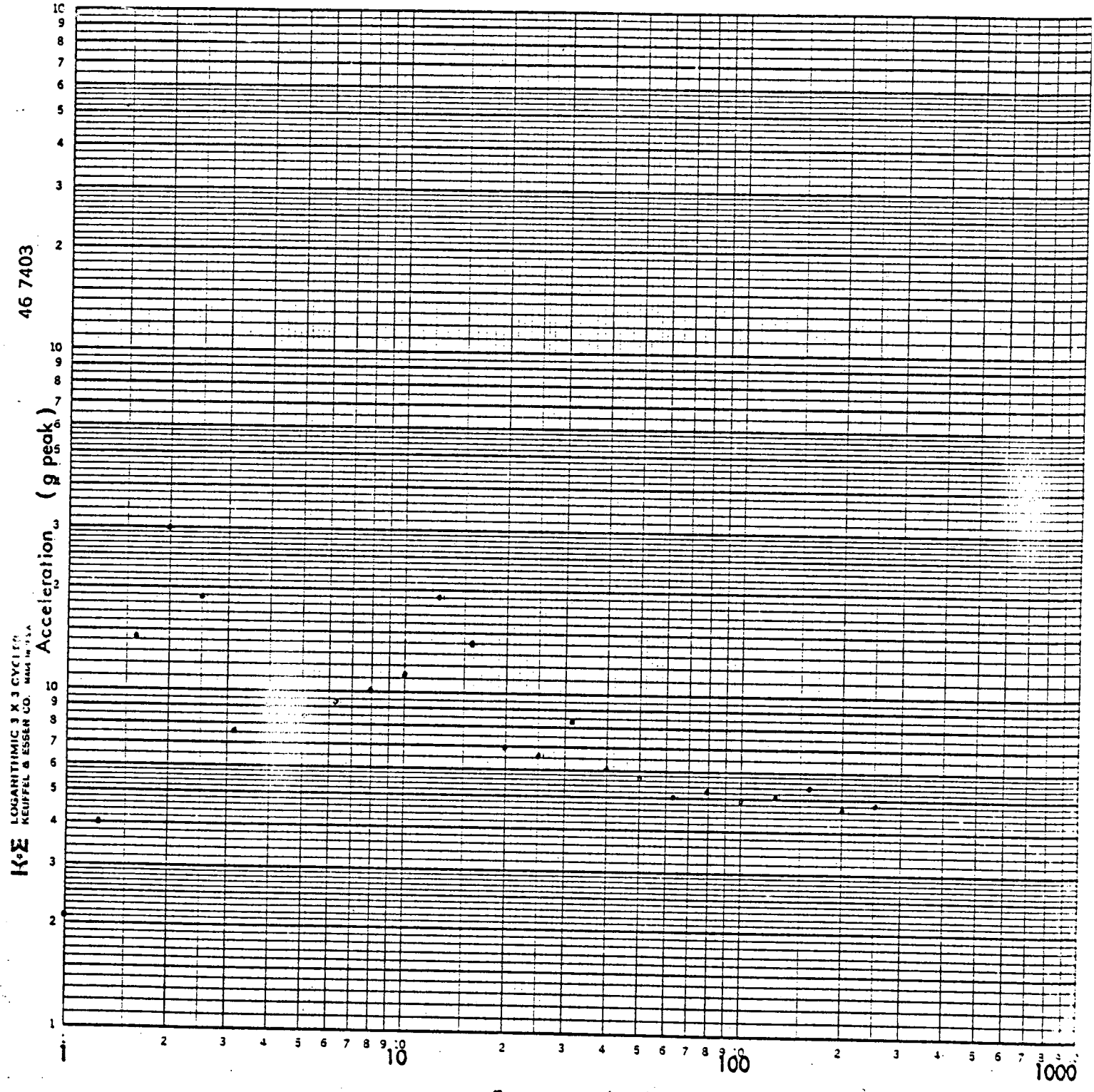
LOCATION NO. 36 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

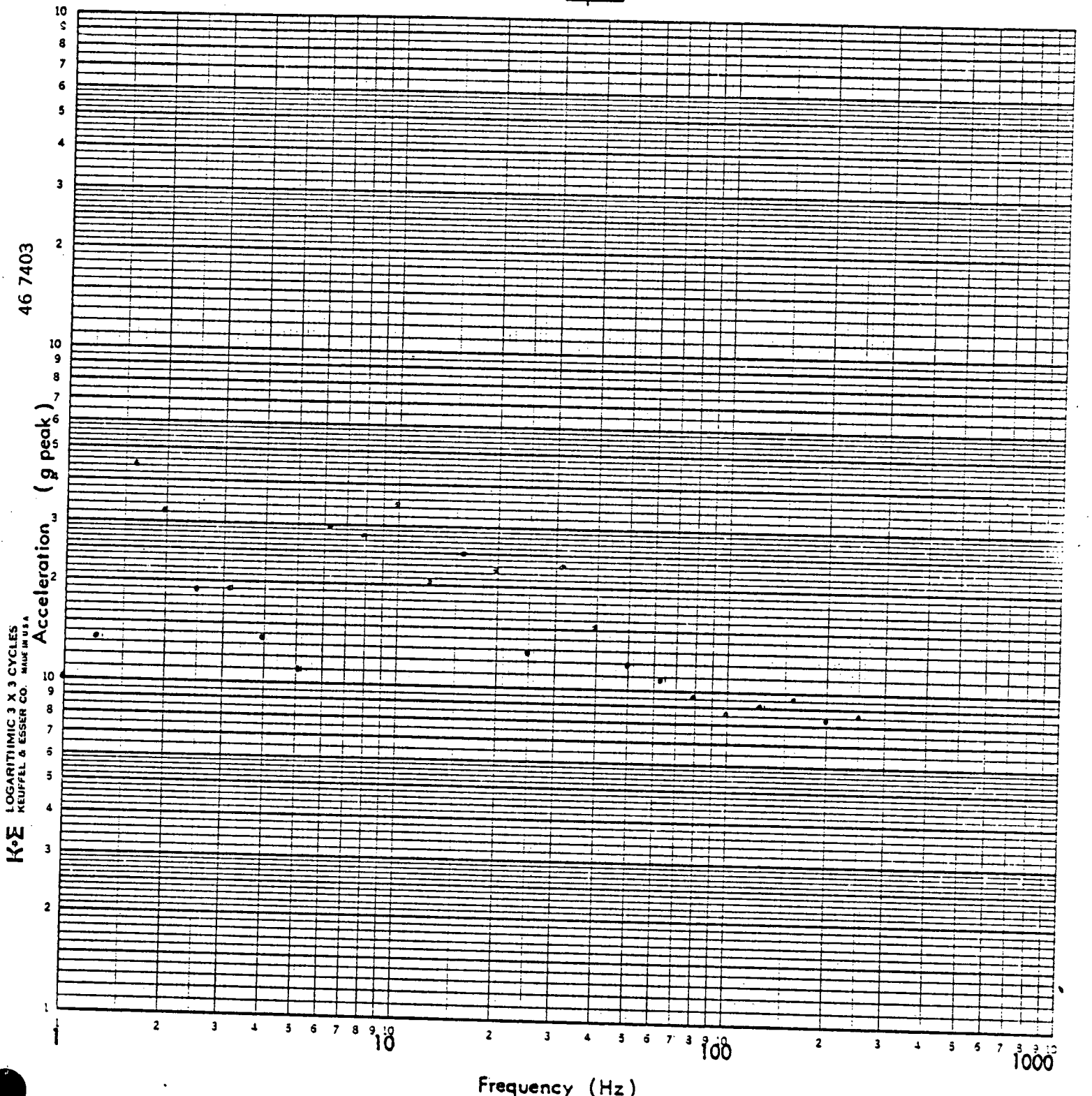
LOCATION NO. 37V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

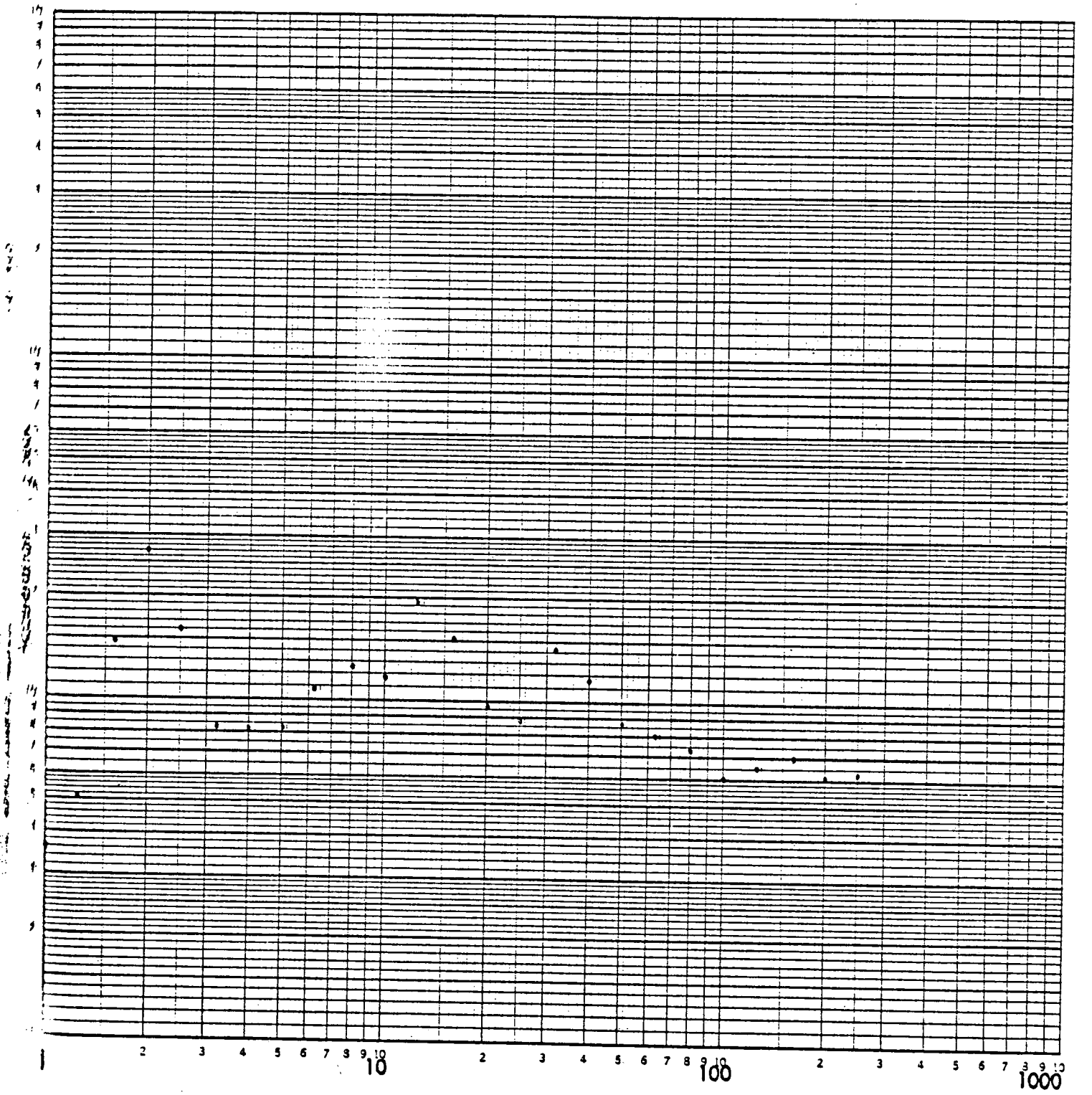
LOCATION NO. 38 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS F-B / VERT

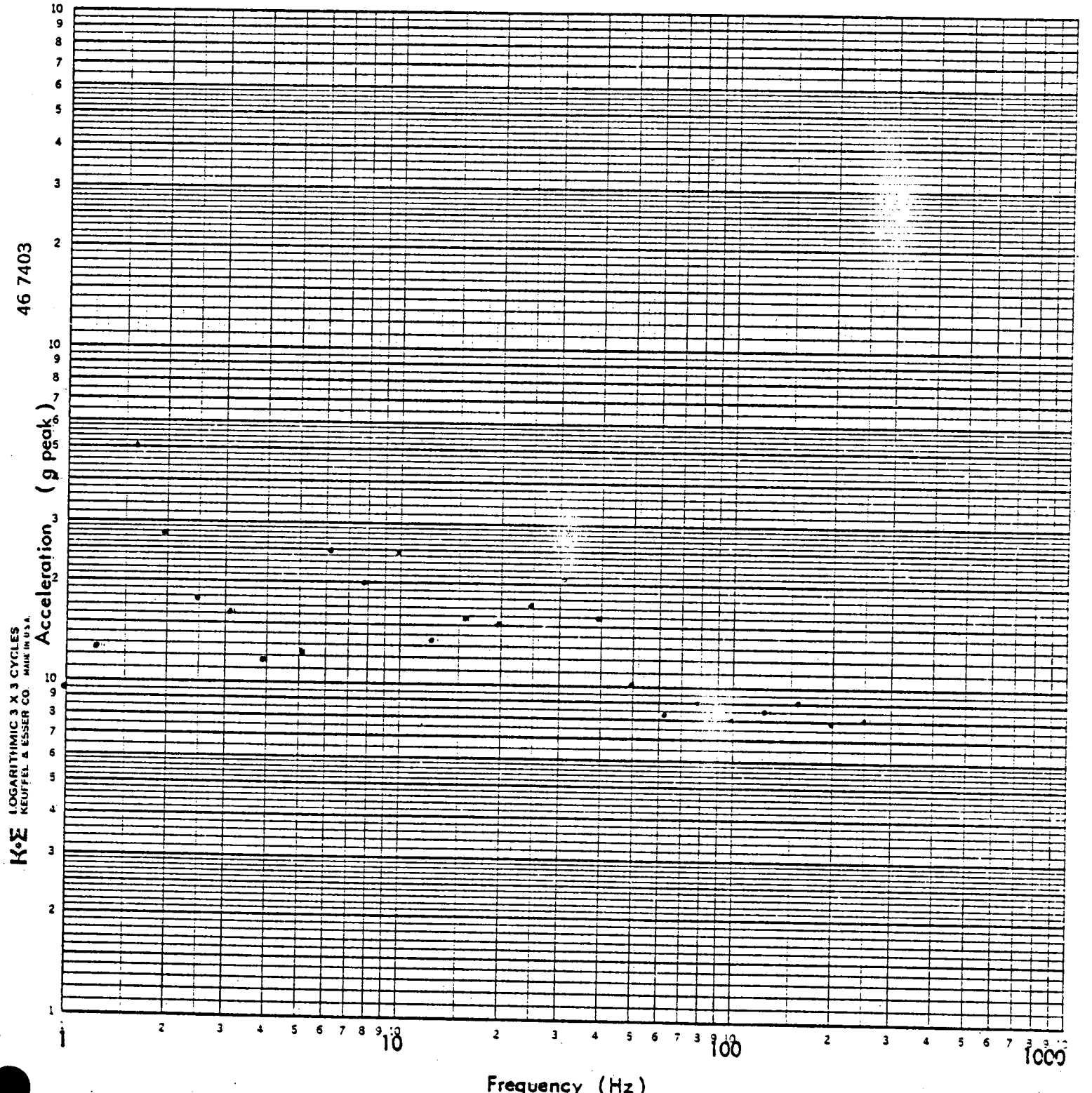
LOCATION NO. 34V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

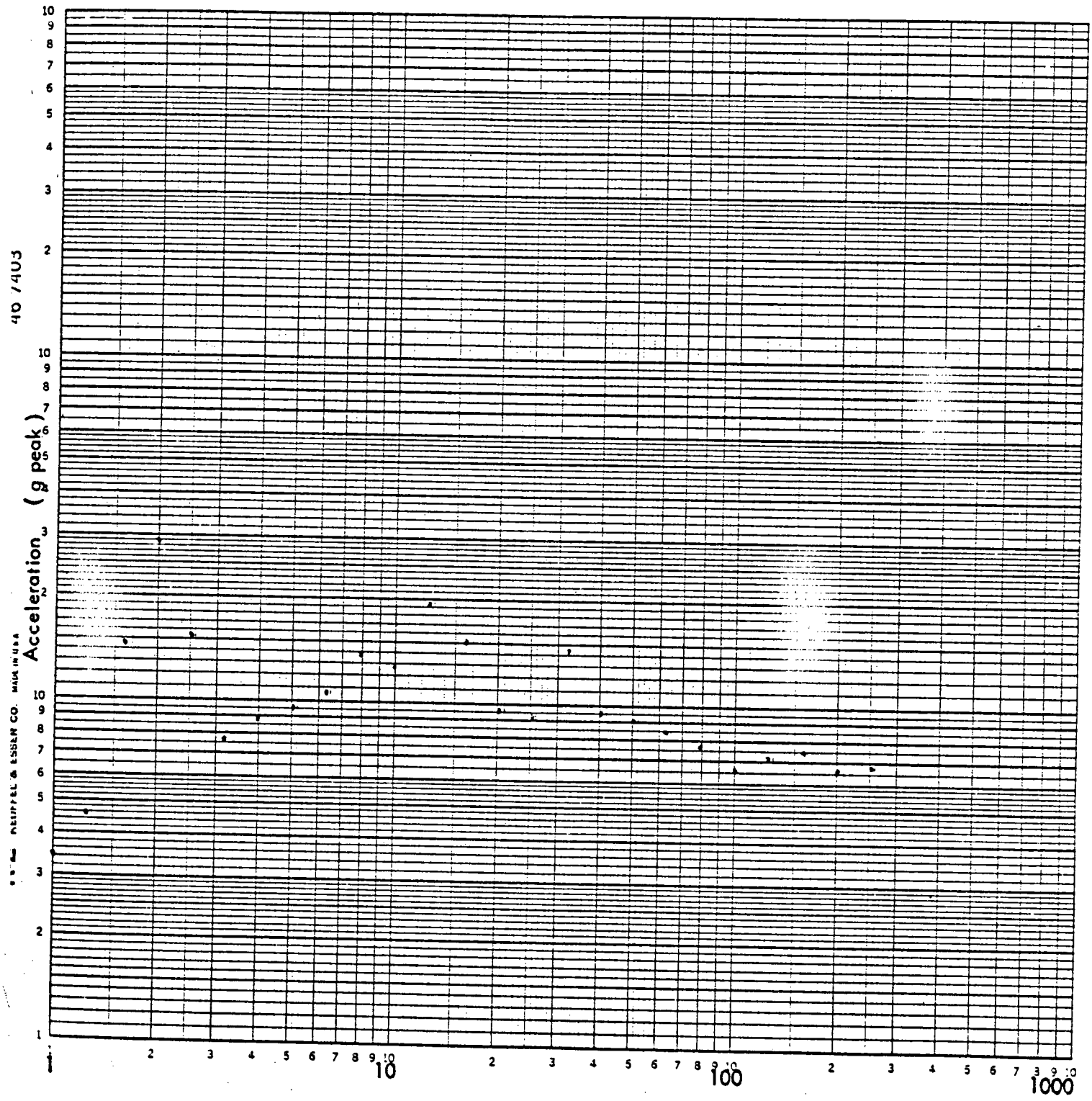
LOCATION NO. 40 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

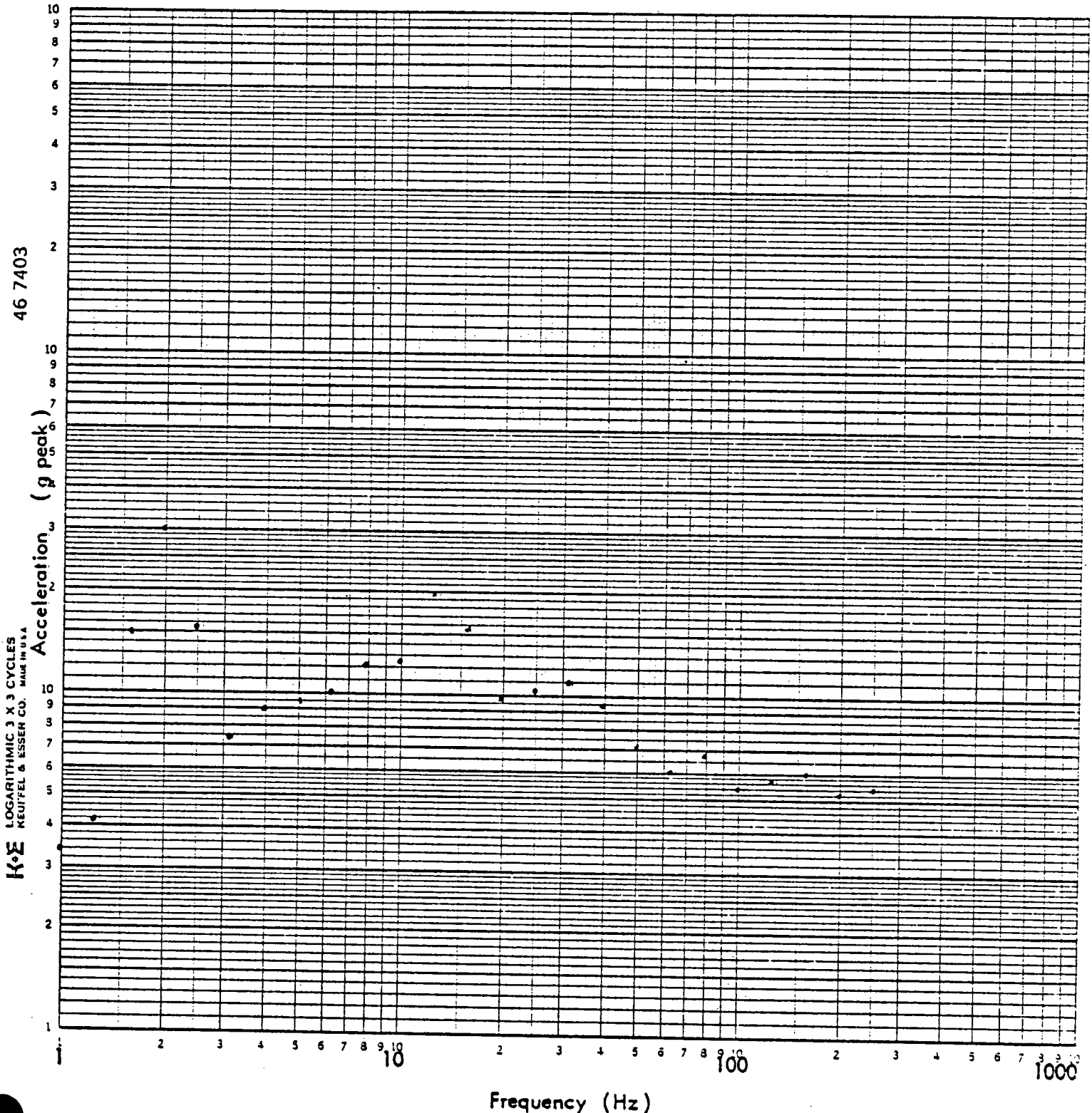
LOCATION NO. 41 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B / VERT

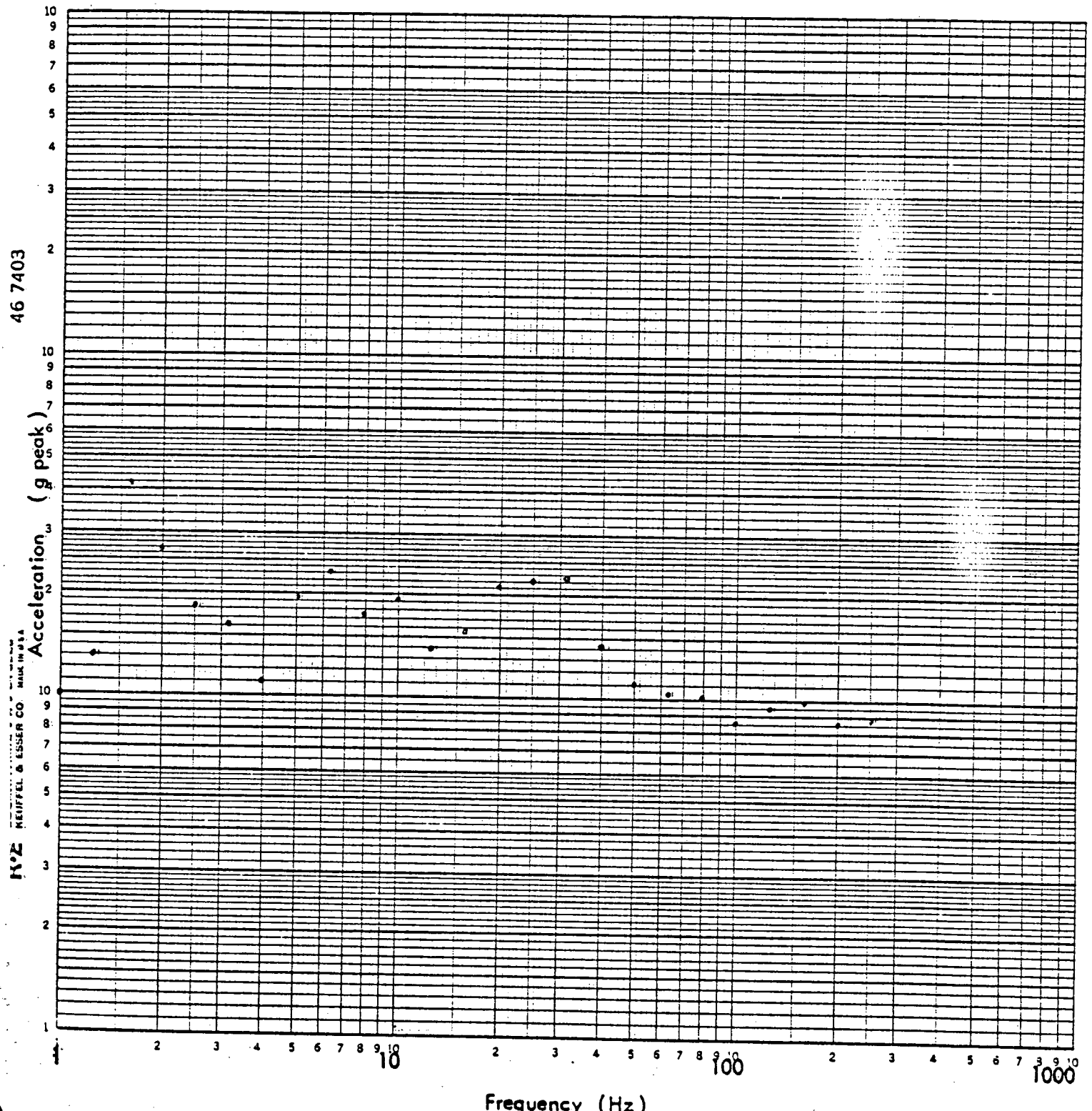
LOCATION NO. 42 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

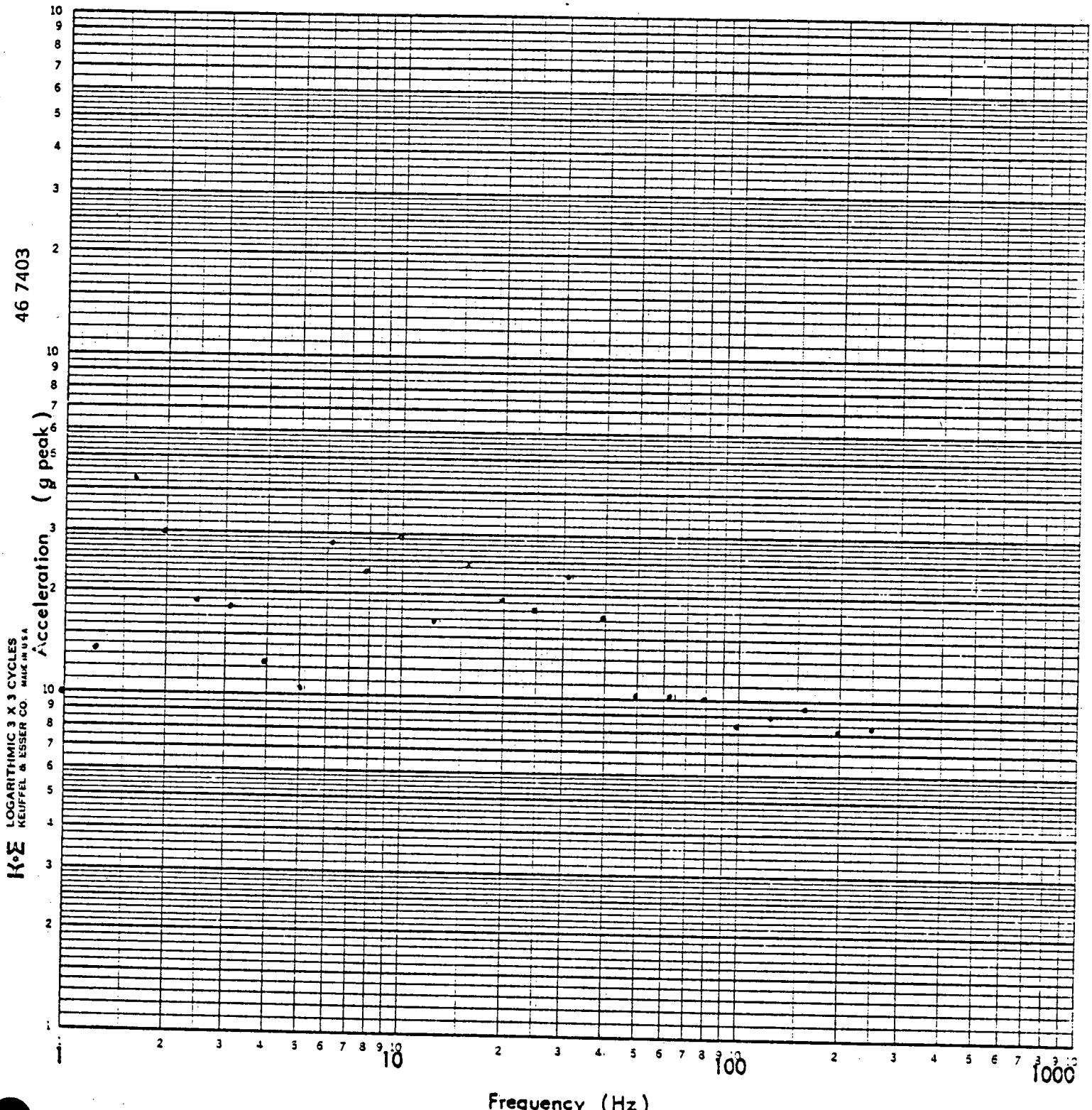
LOCATION NO. 43 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

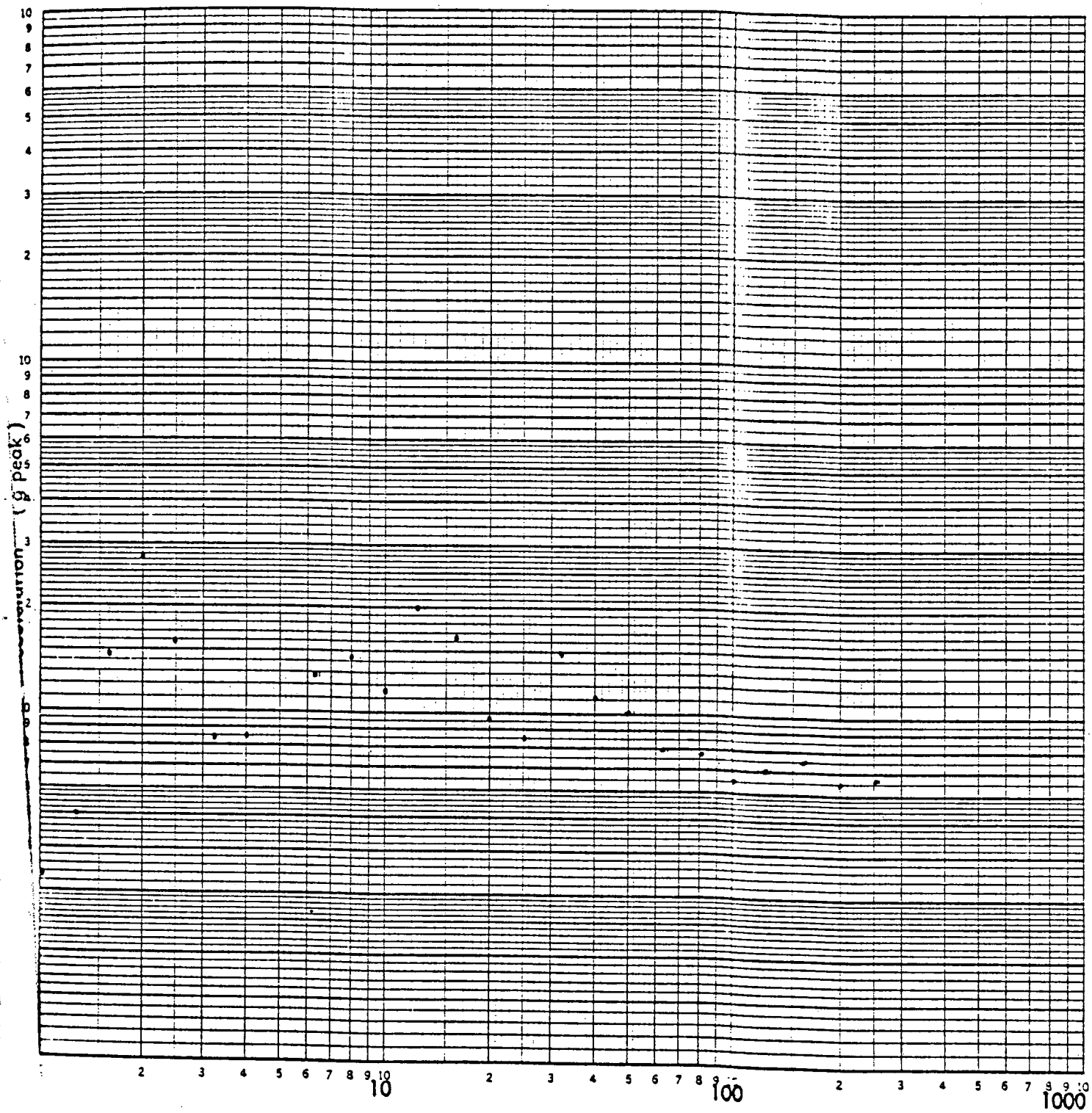
LOCATION NO. 44 F.B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1%



AXIS F-B/VERT

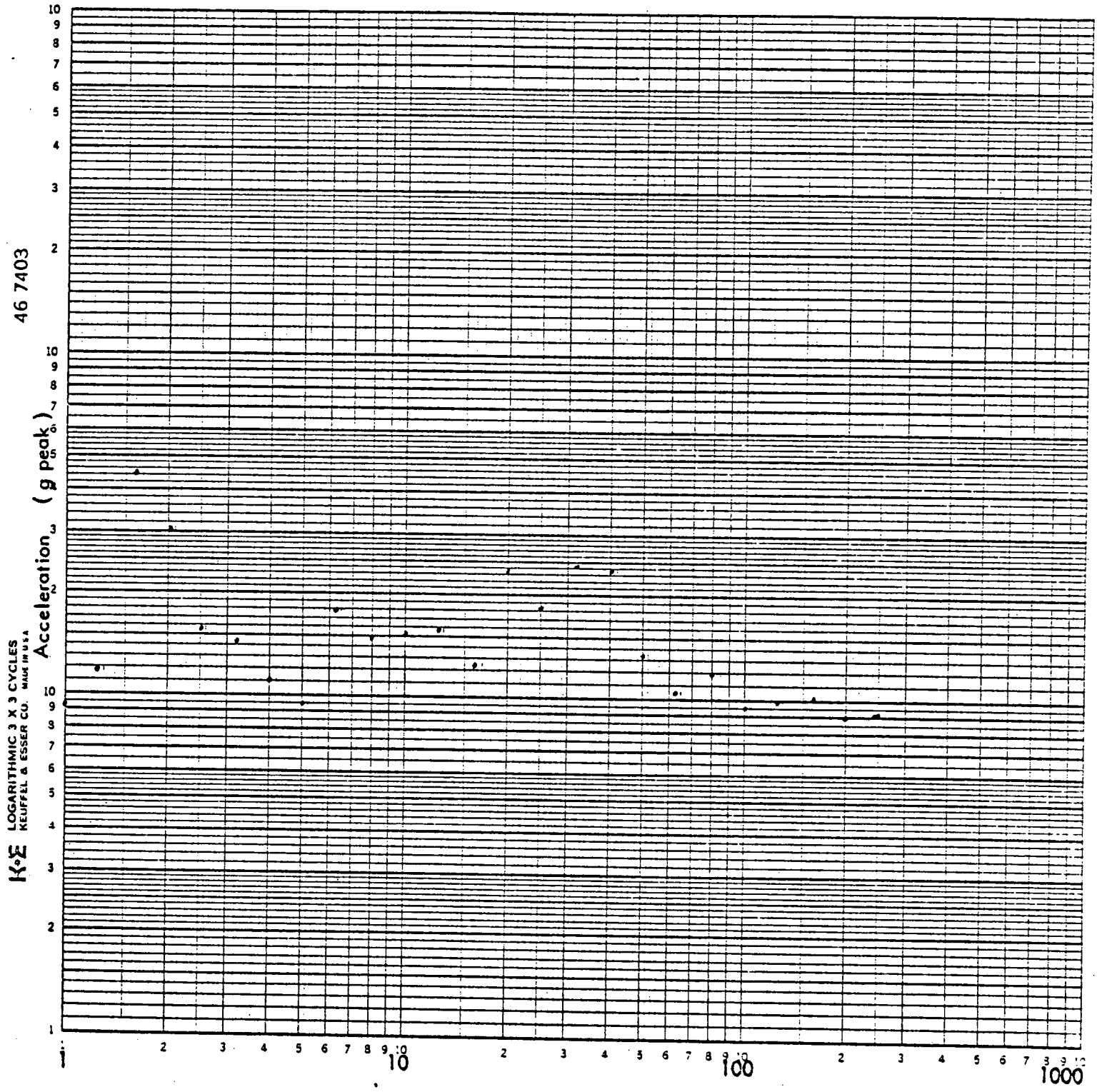
LOCATION NO. 45 V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

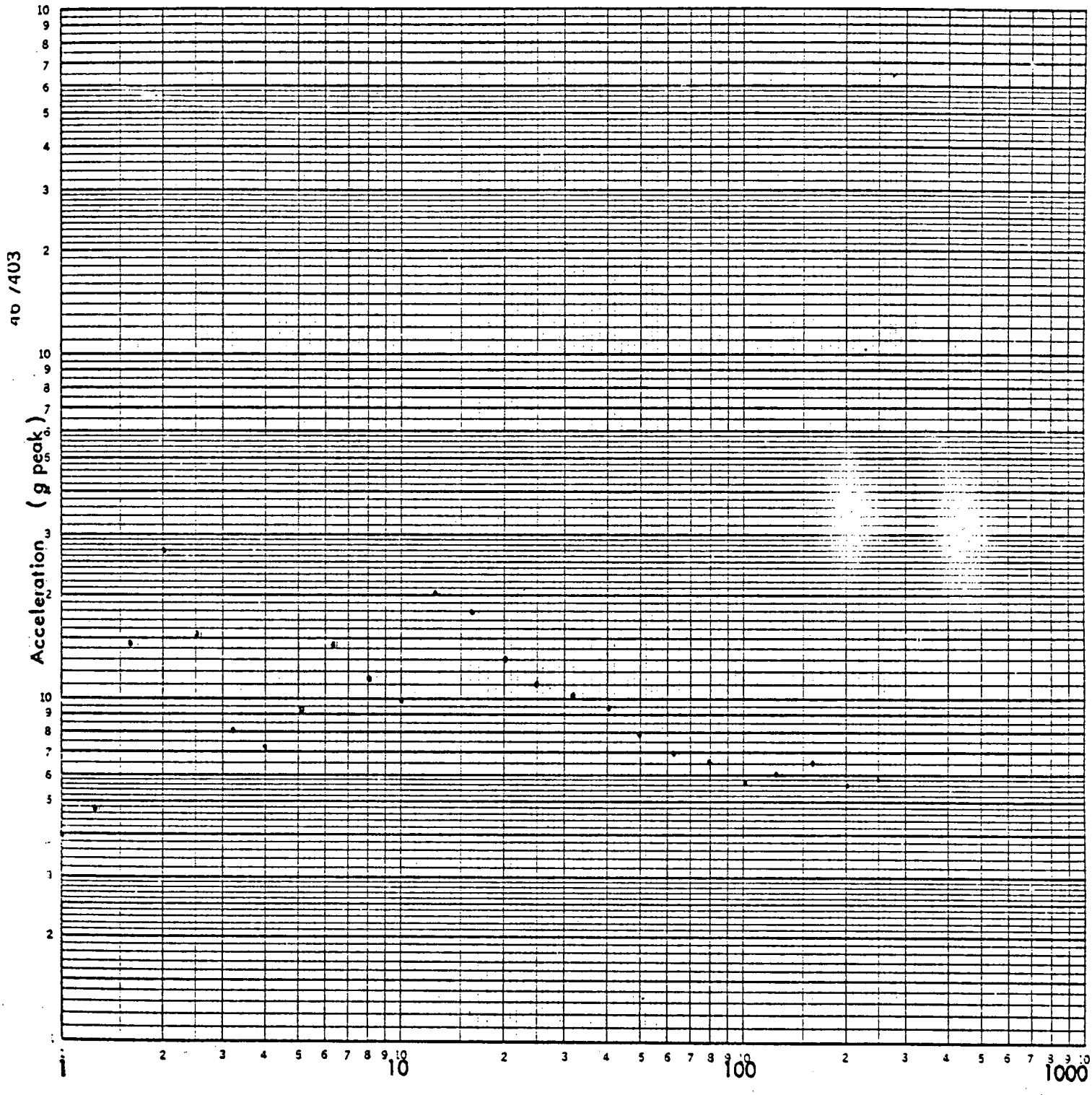
LOCATION NO. 46 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [\ %]



AXIS F-B/VERT

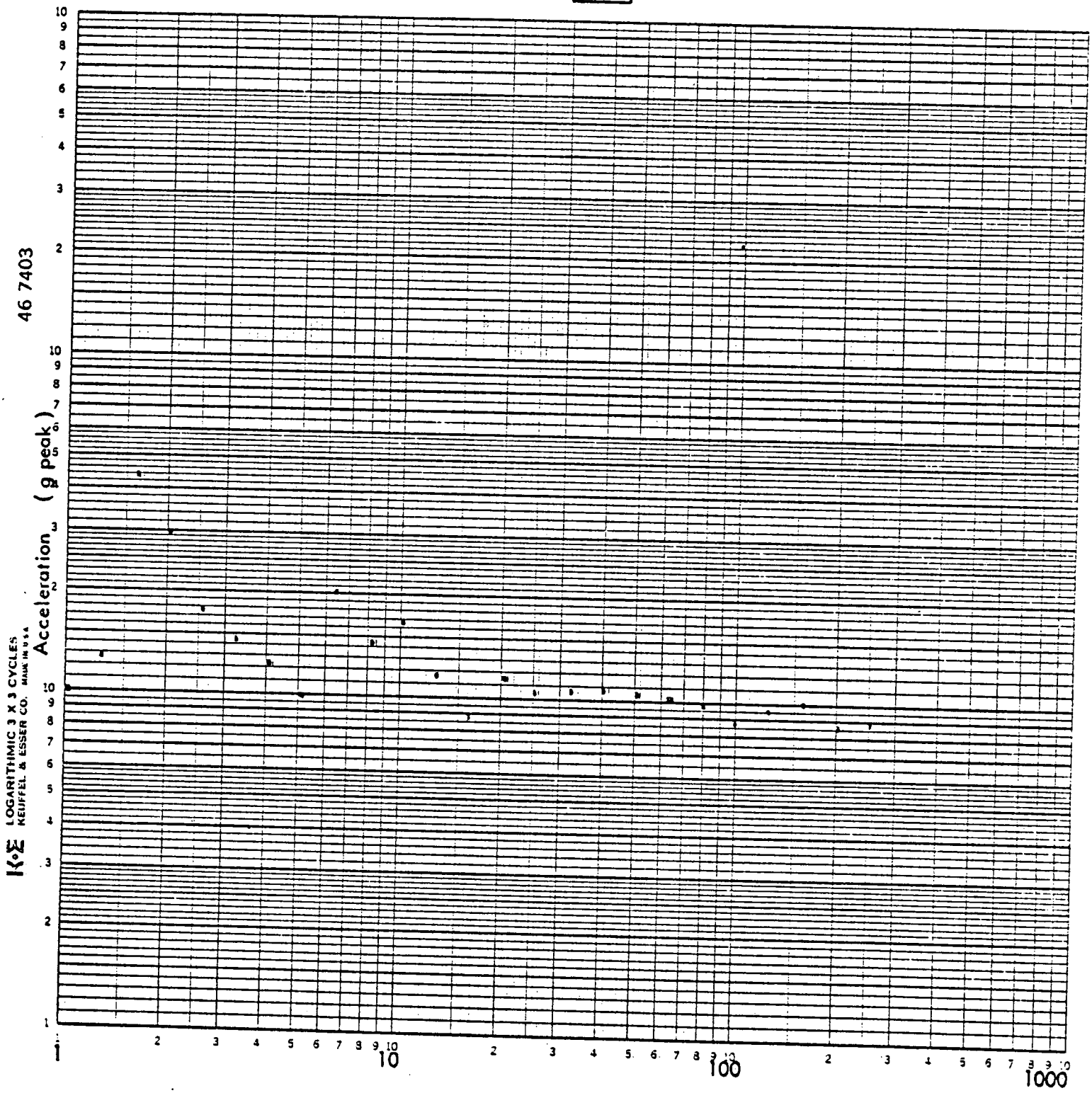
LOCATION NO. 47V

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

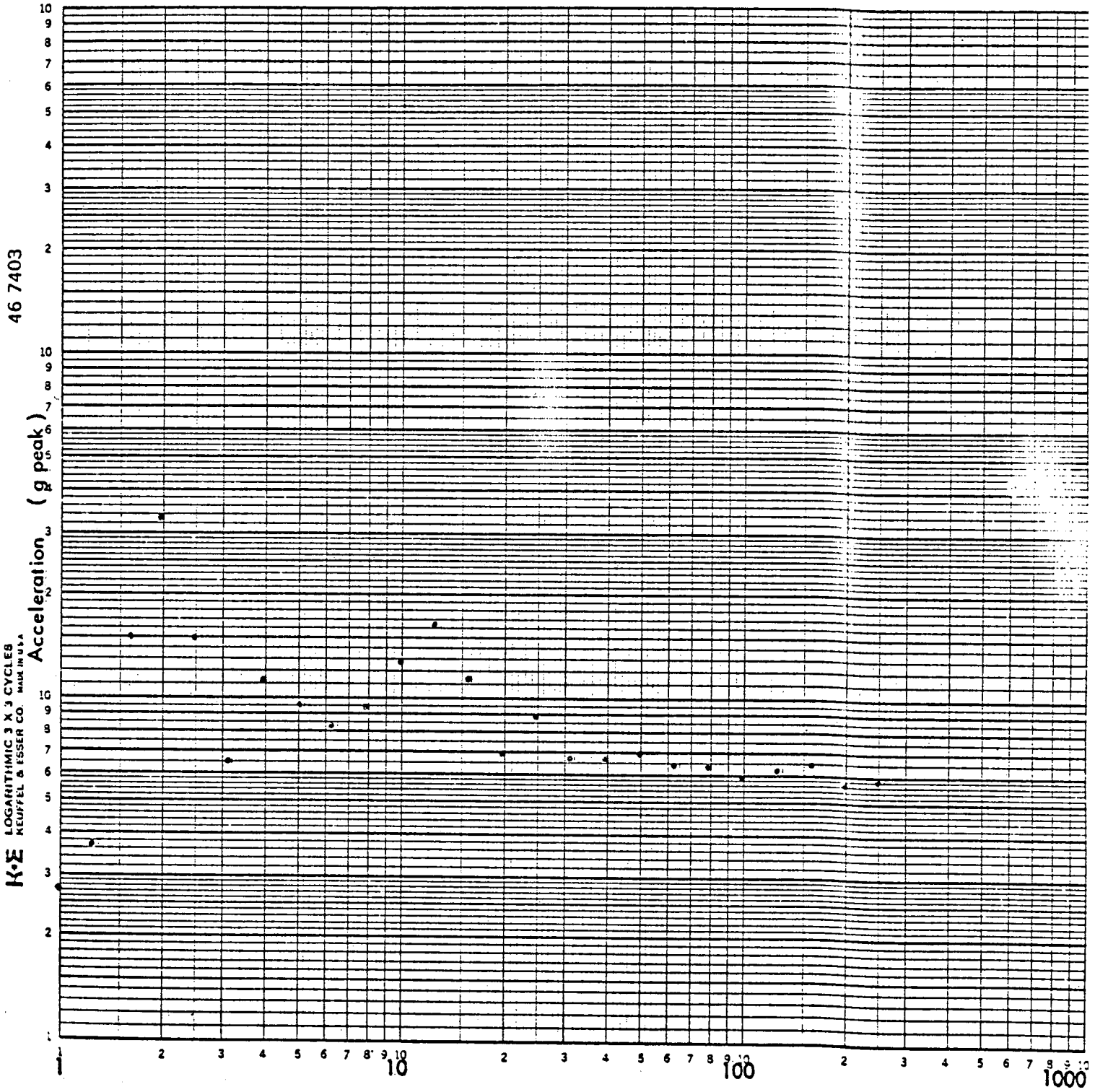
LOCATION NO. 49 F-B

TEST RUN NO. 26

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

LOCATION NO. 49 V

TEST RUN NO. 26

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APPENDIX III

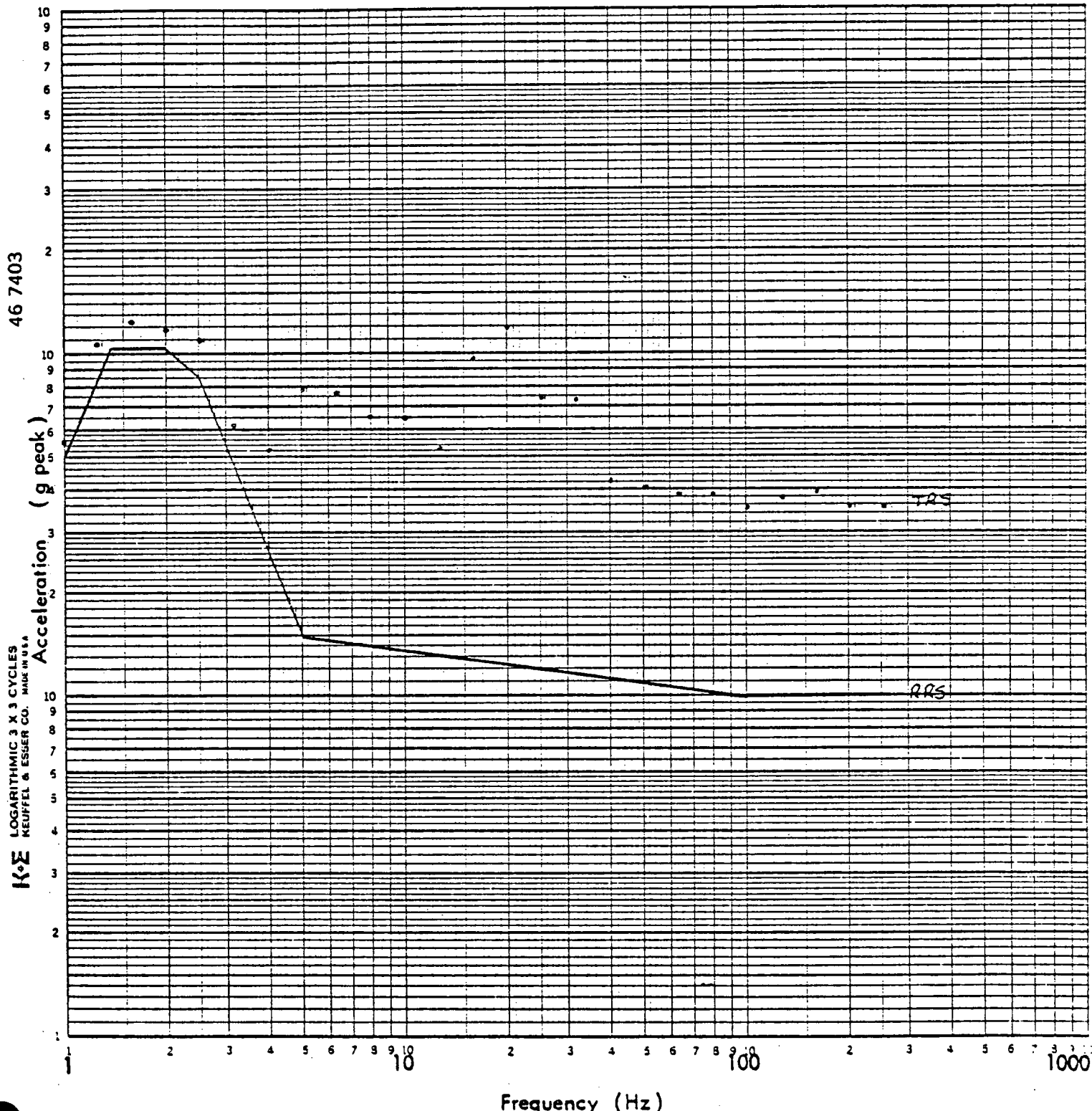
TEST RESPONSE SPECTRA PLOTS
OF THE
CONTROL AND SPECIMEN RESPONSE ACCELEROMETERS
FOR THE
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
DESIGN BASIS EARTHQUAKE TESTS
(REFERENCE FIGURES 3 AND 4)

TEST NO.	AXIS
19	Side-to-Side/Vertical
32	Front-to-Back/Vertical

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S VERT

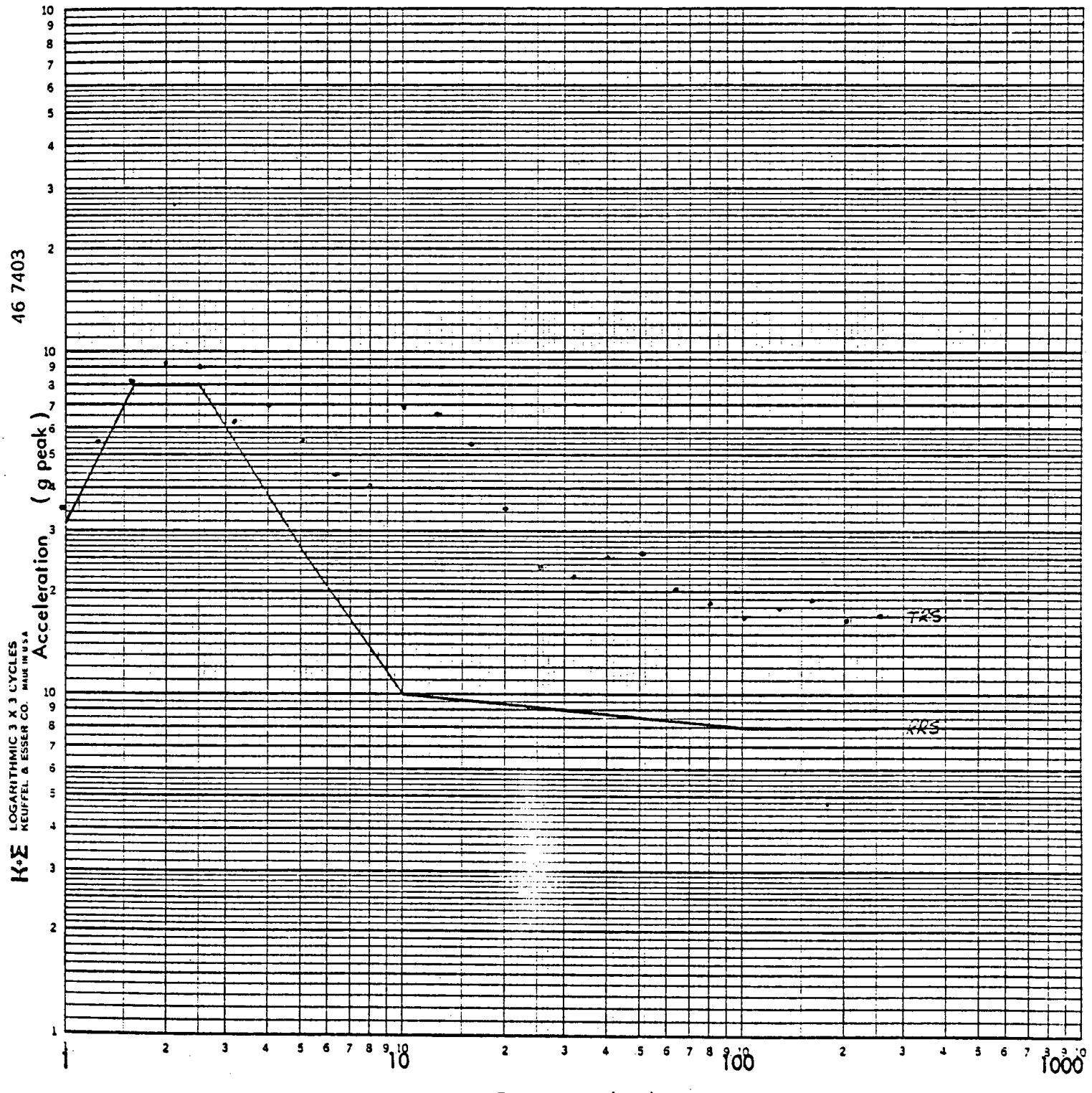
LOCATION NO. HCA

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

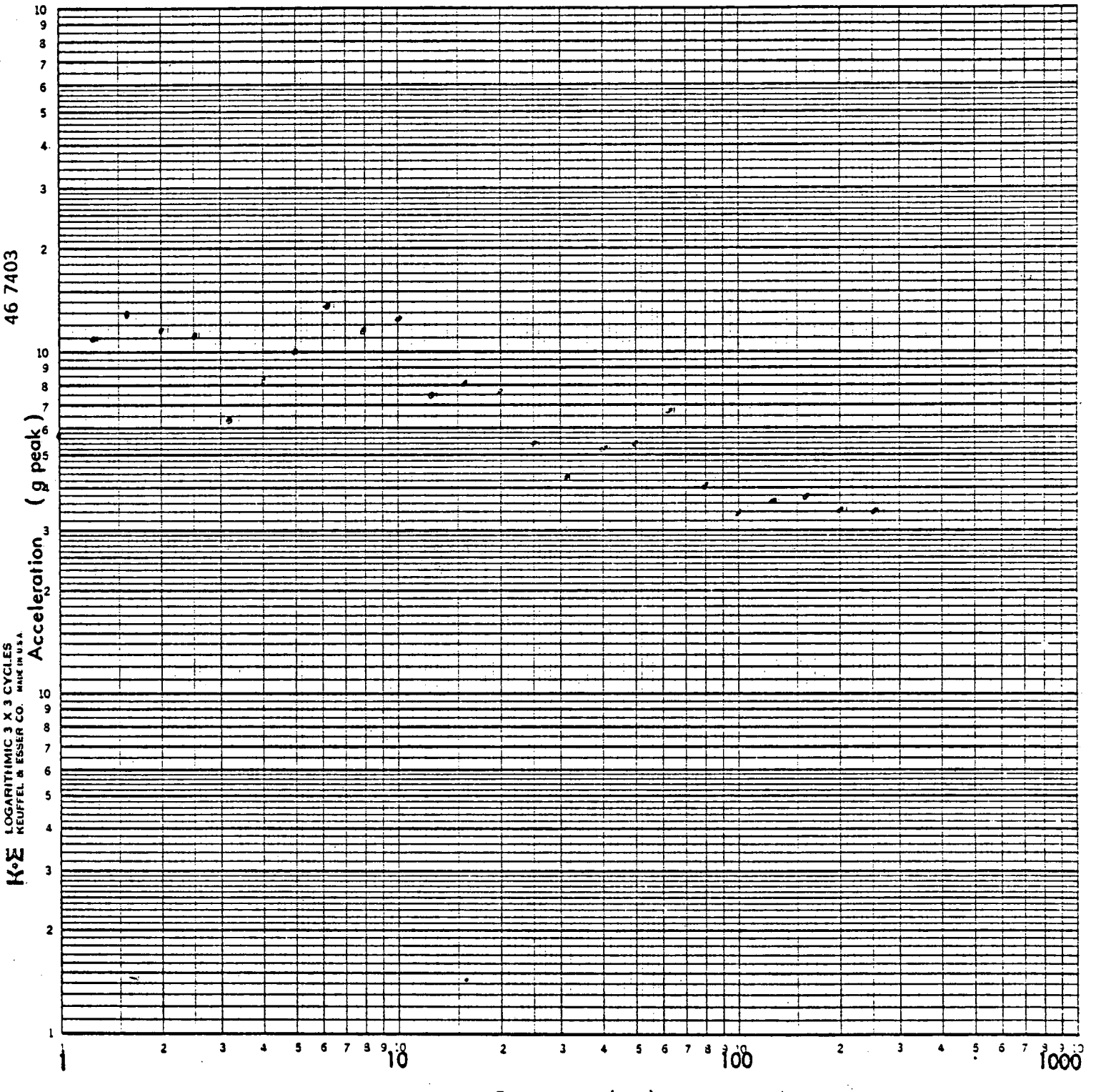
LOCATION NO. VCA

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

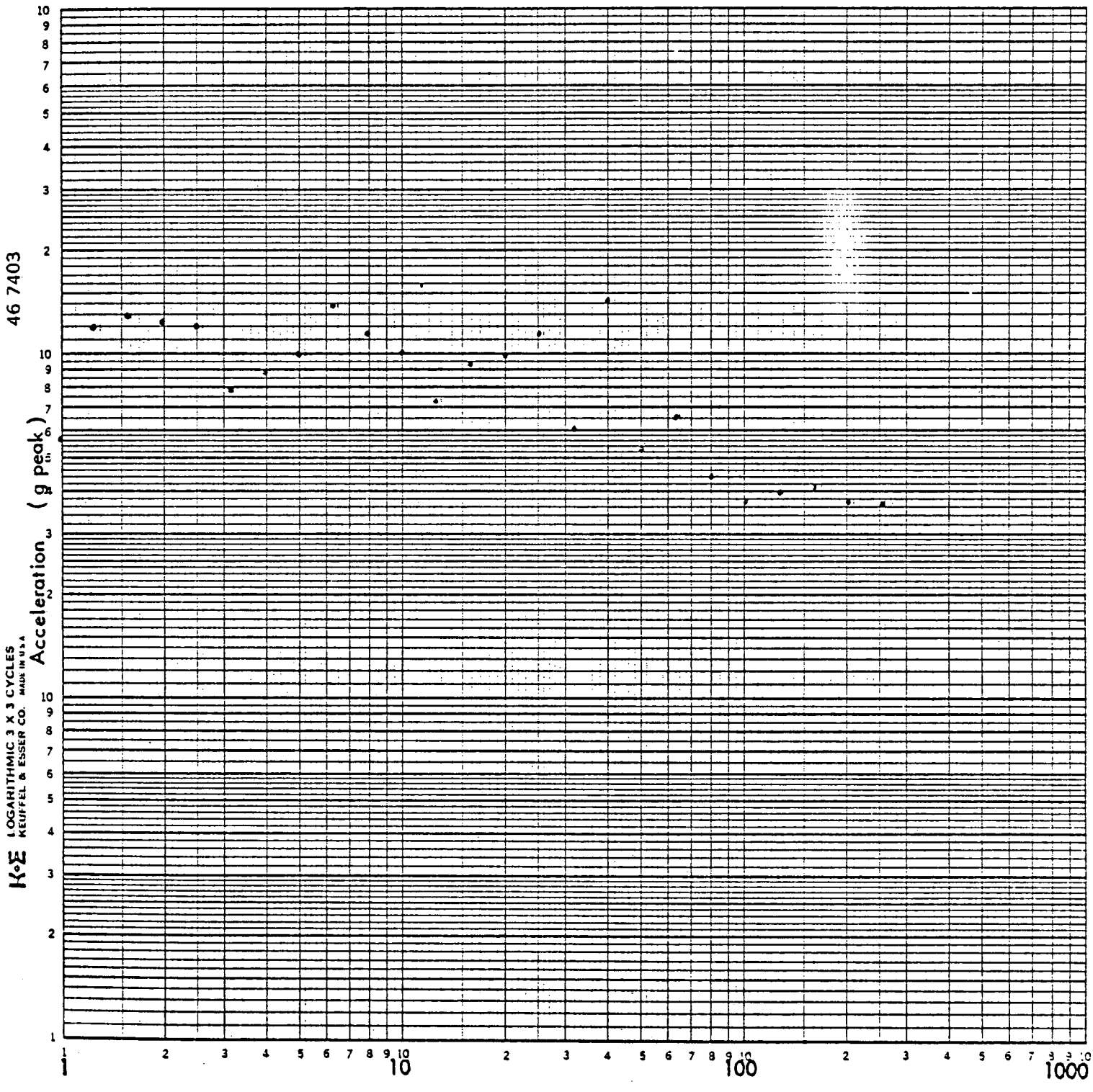
LOCATION NO. 15-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [5 %]



AXIS S-S/VERT

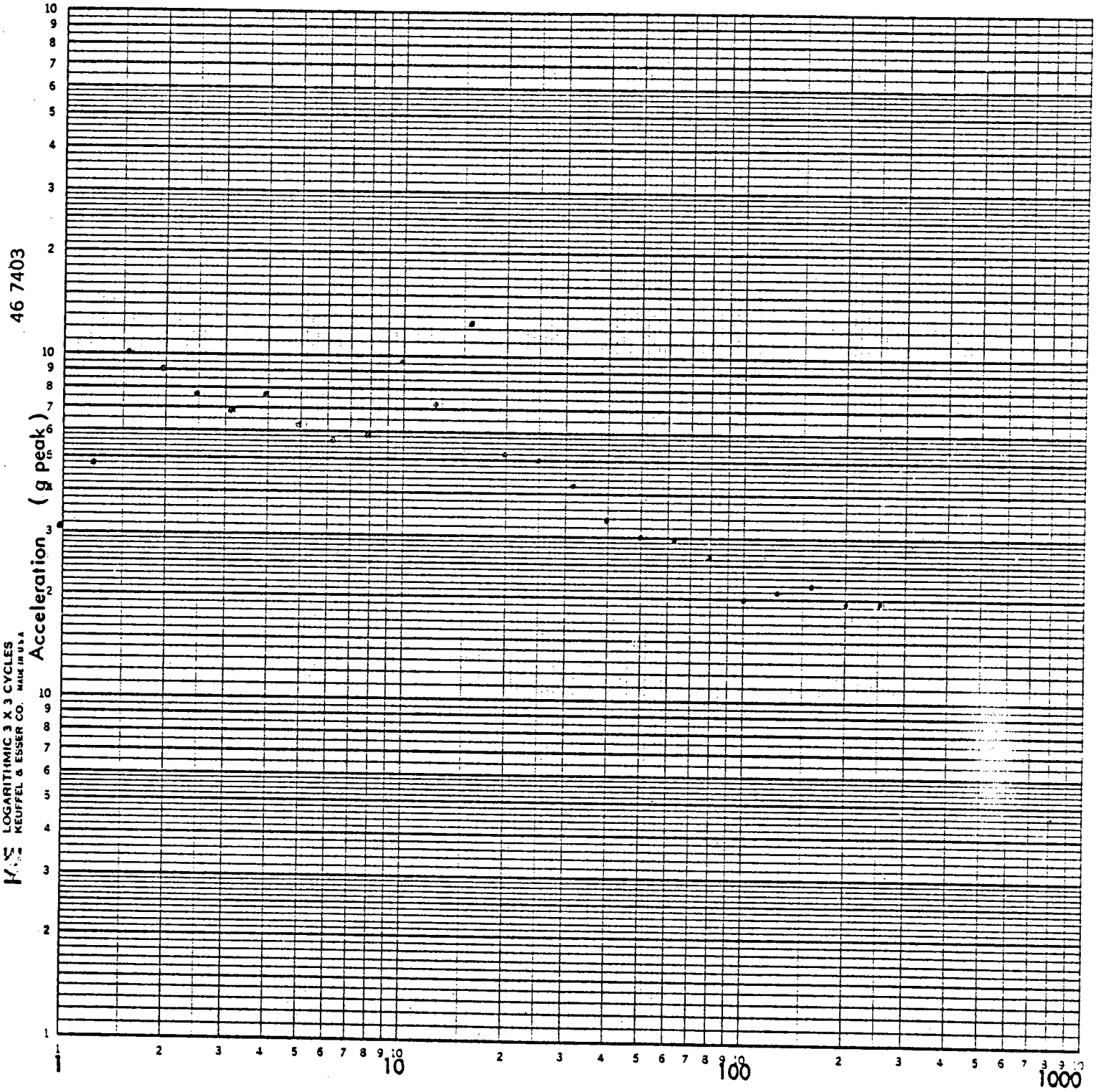
LOCATION NO. 2 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-5/VERT

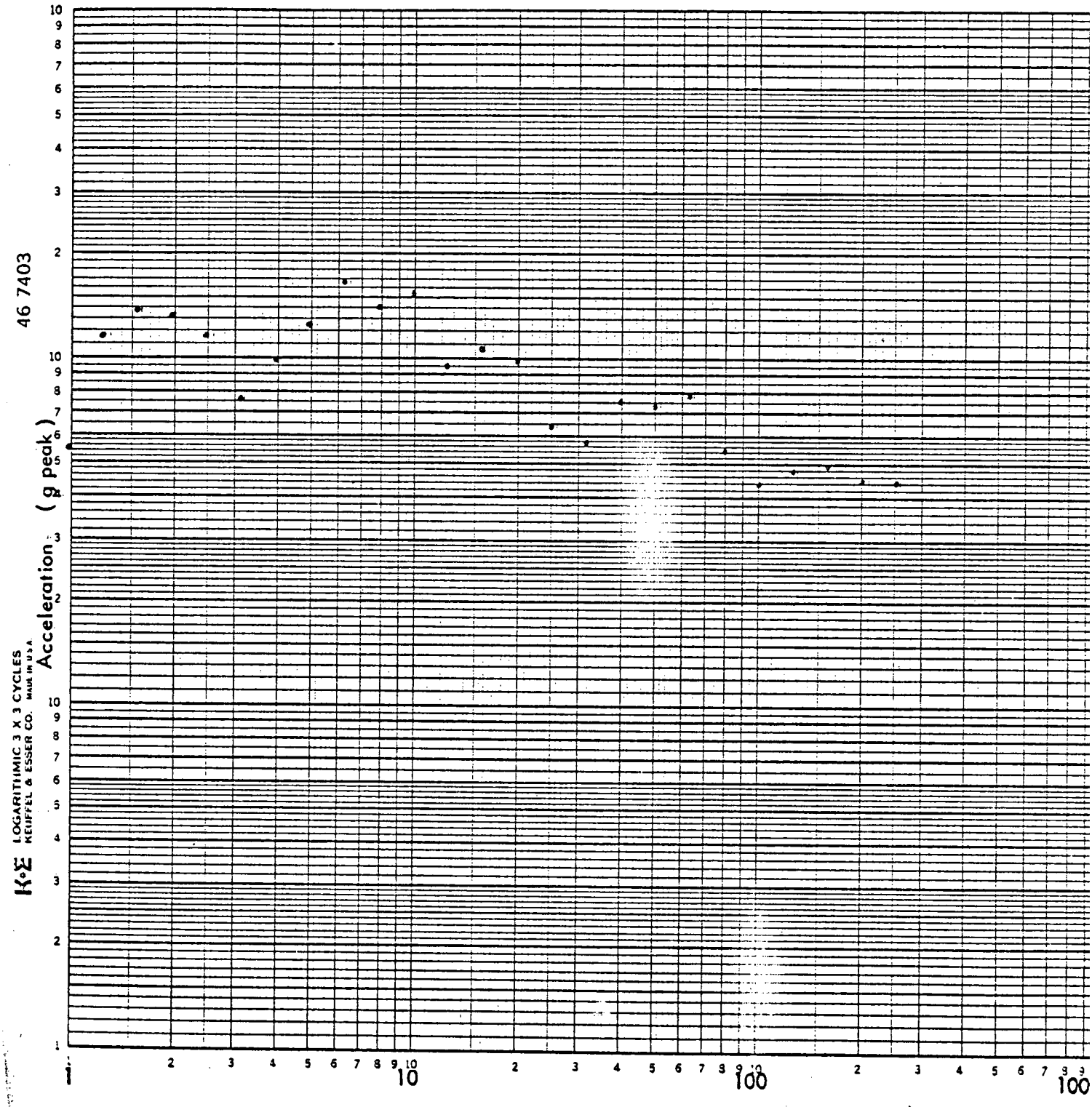
LOCATION NO. 3V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

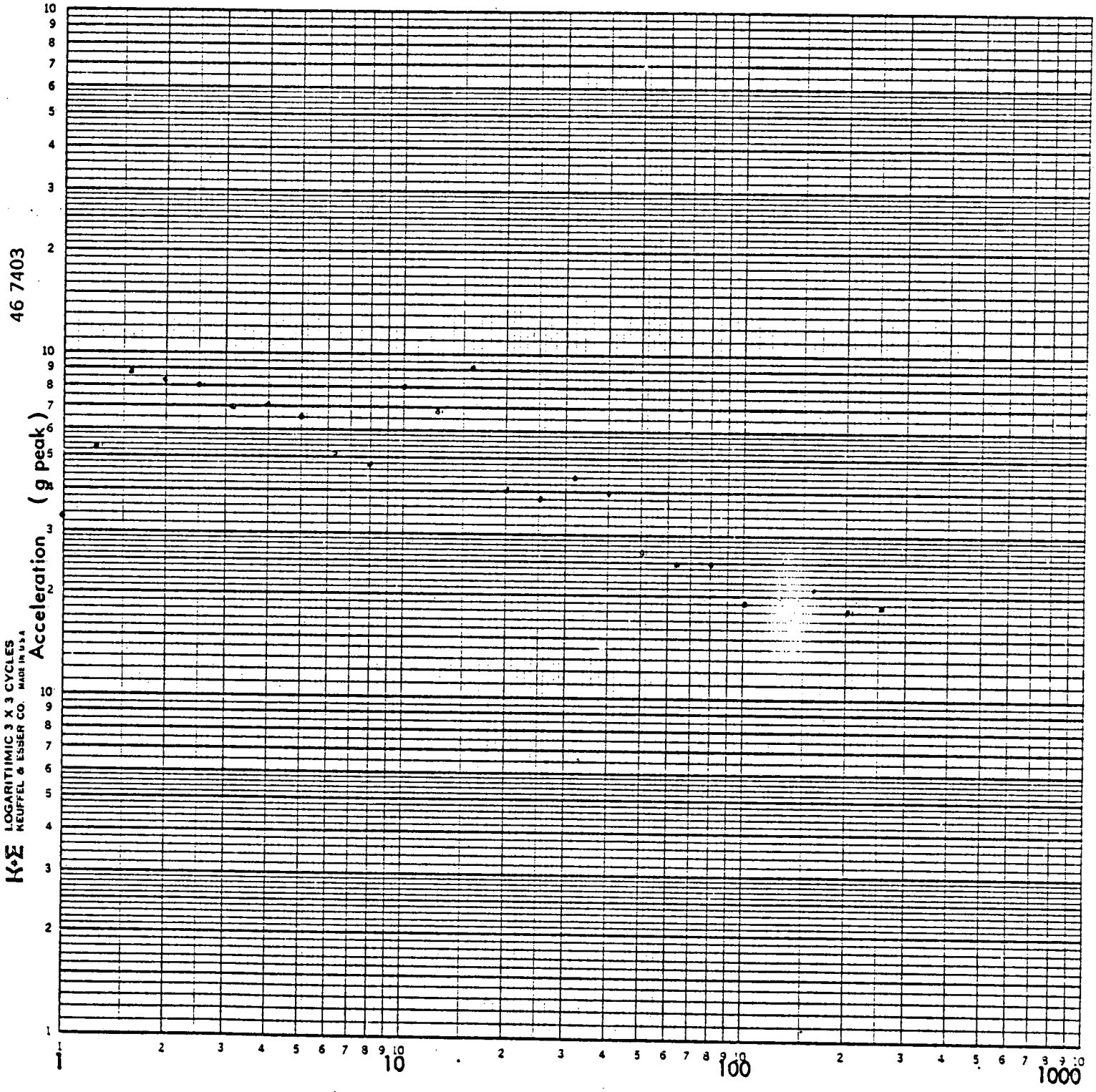
LOCATION NO. 4 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

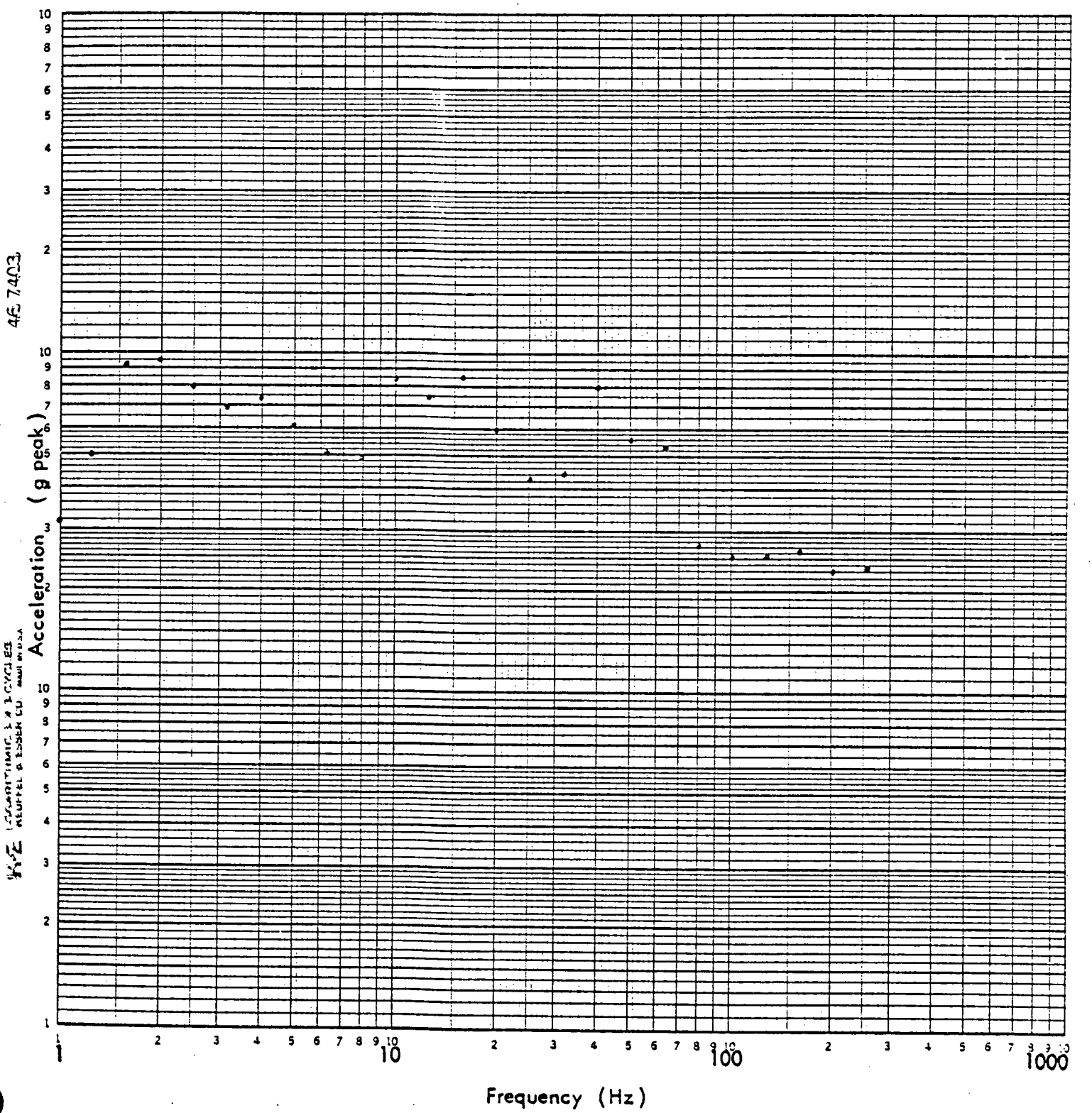
LOCATION NO. 5V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [\ %]



AXIS S-S/VERT

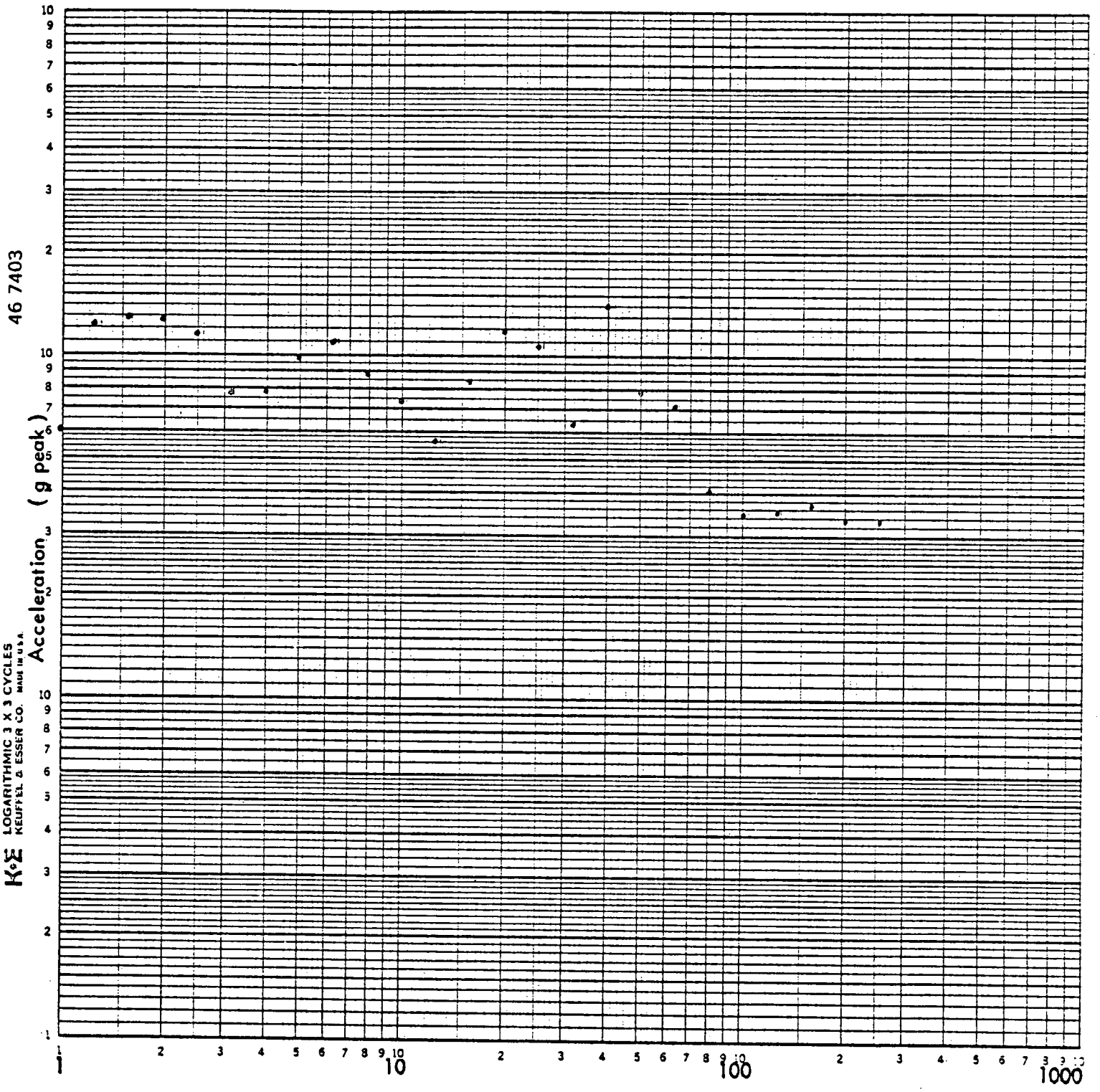
LOCATION NO. 6V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



Frequency (Hz)

AXIS S-S/VERT

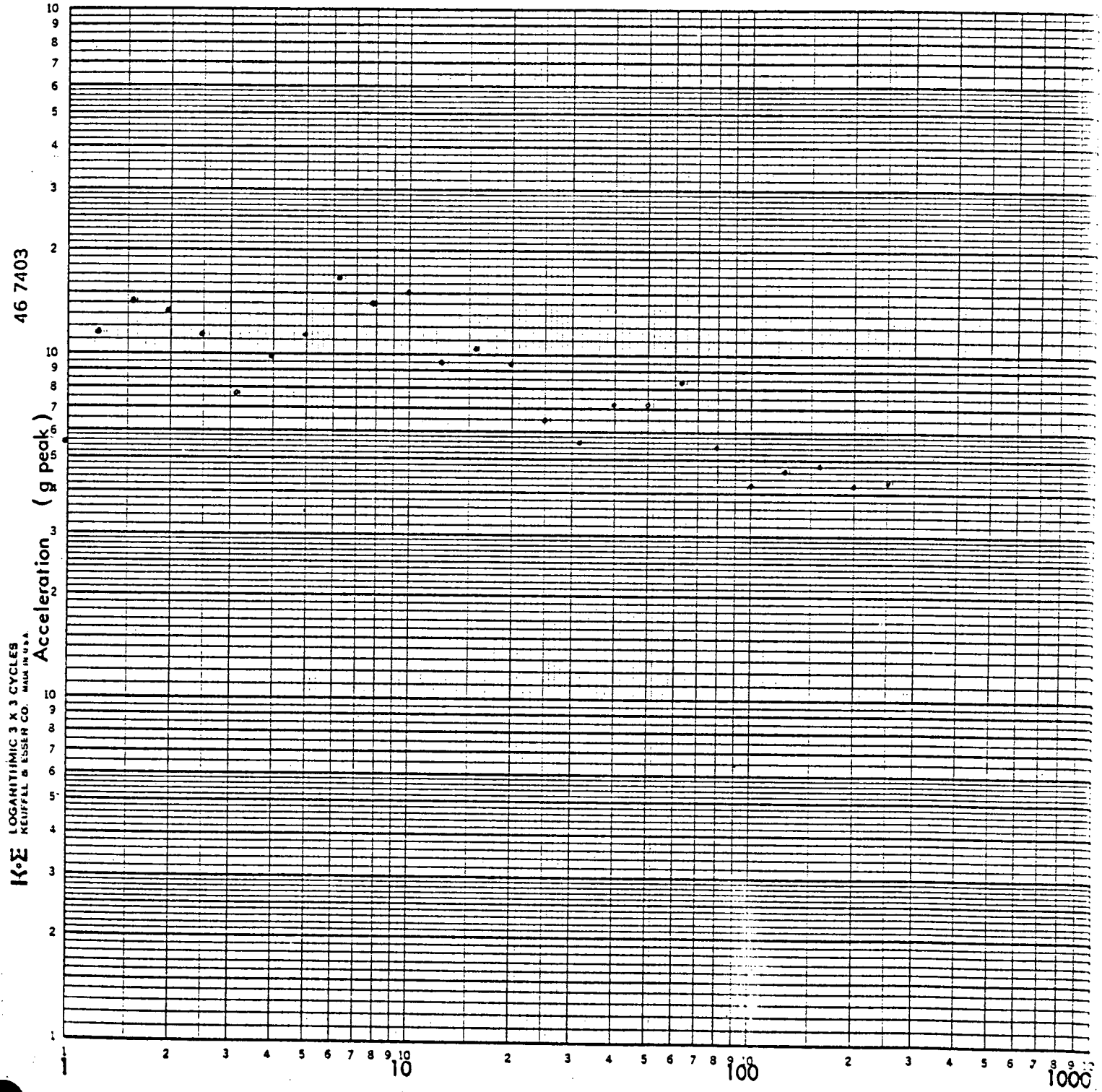
LOCATION NO. 7 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [| %]



Frequency (Hz)

AXIS S-S/VERT

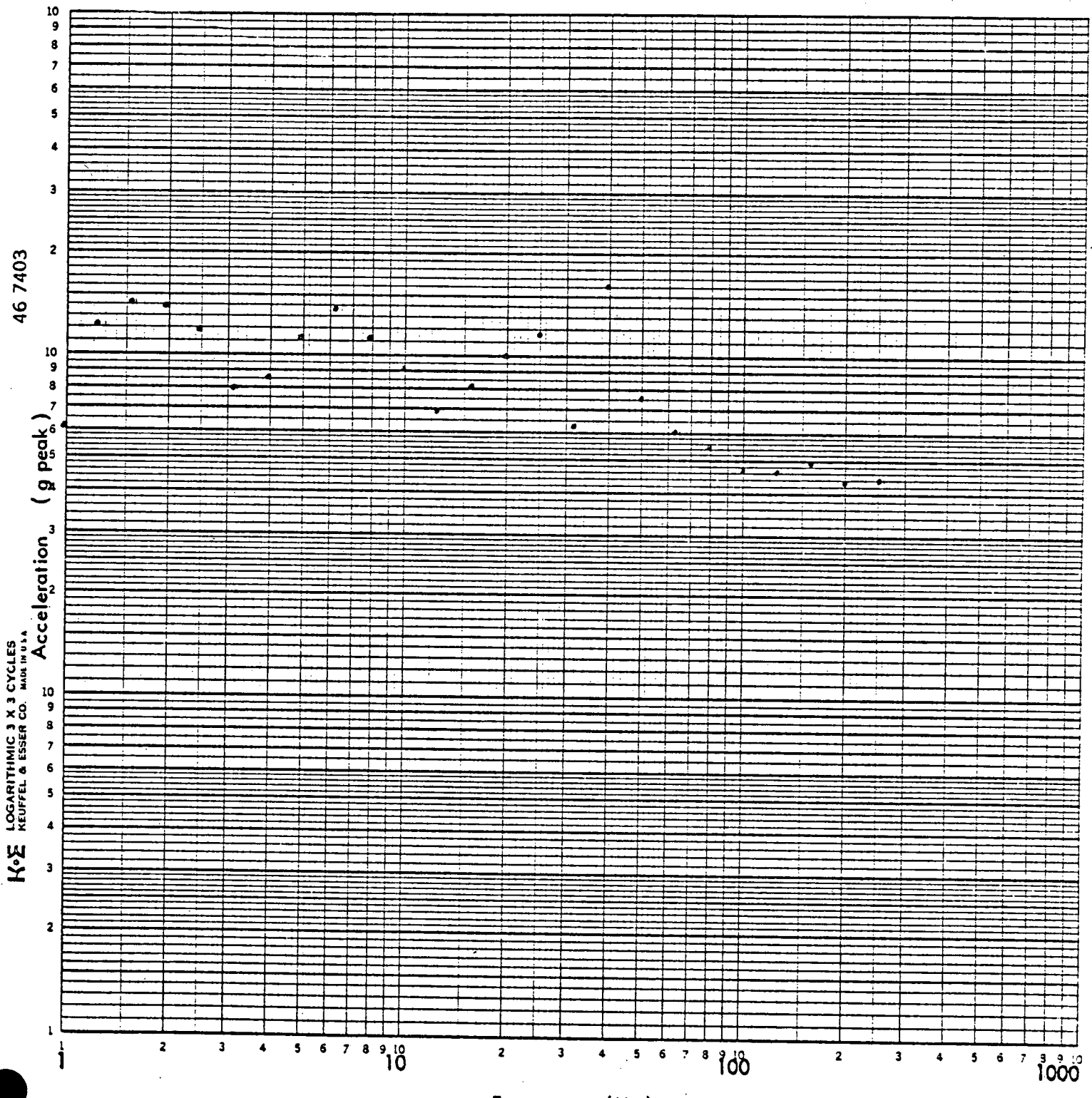
LOCATION NO. 8 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

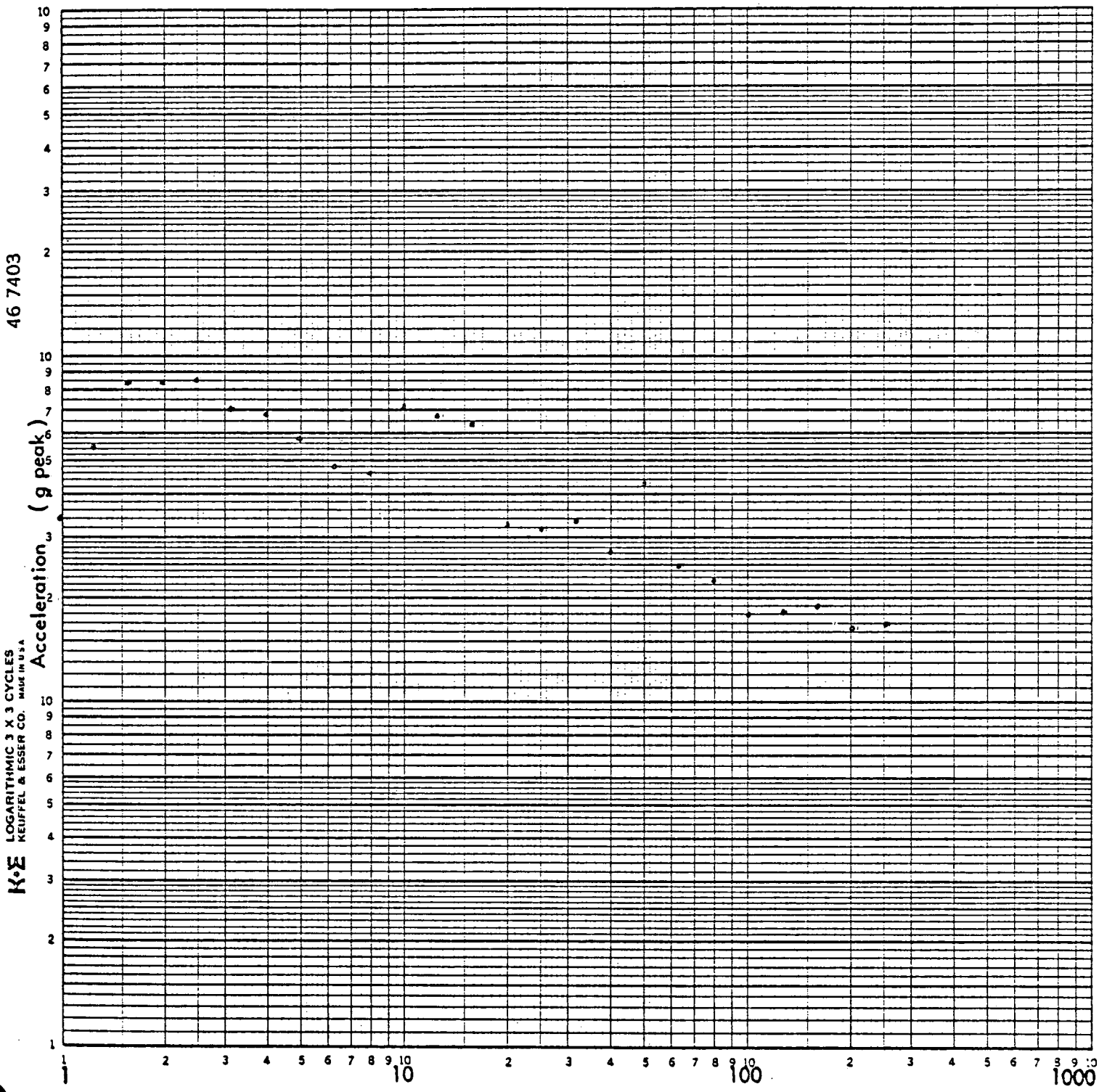
LOCATION NO. 9 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

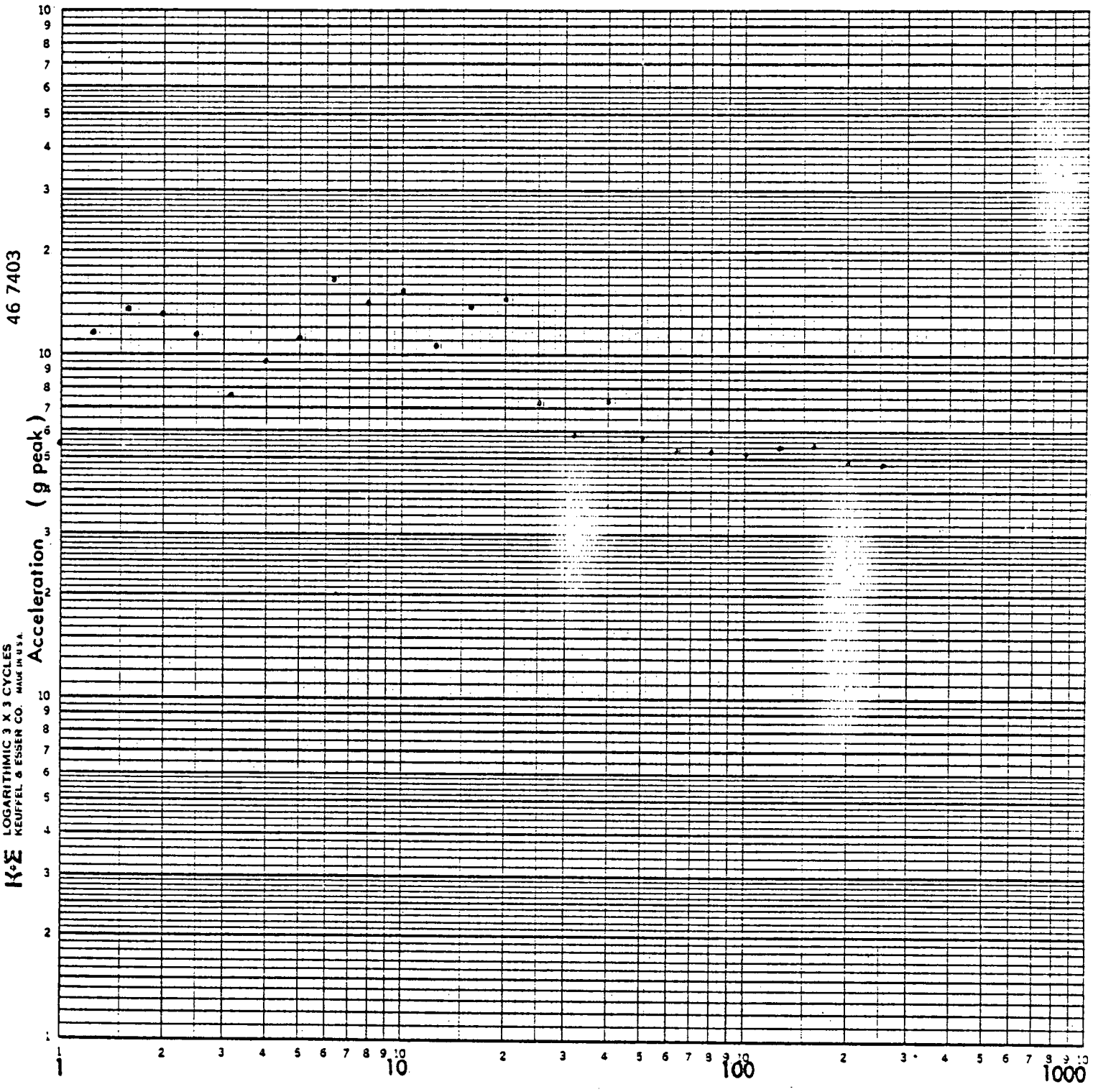
LOCATION NO. 10 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

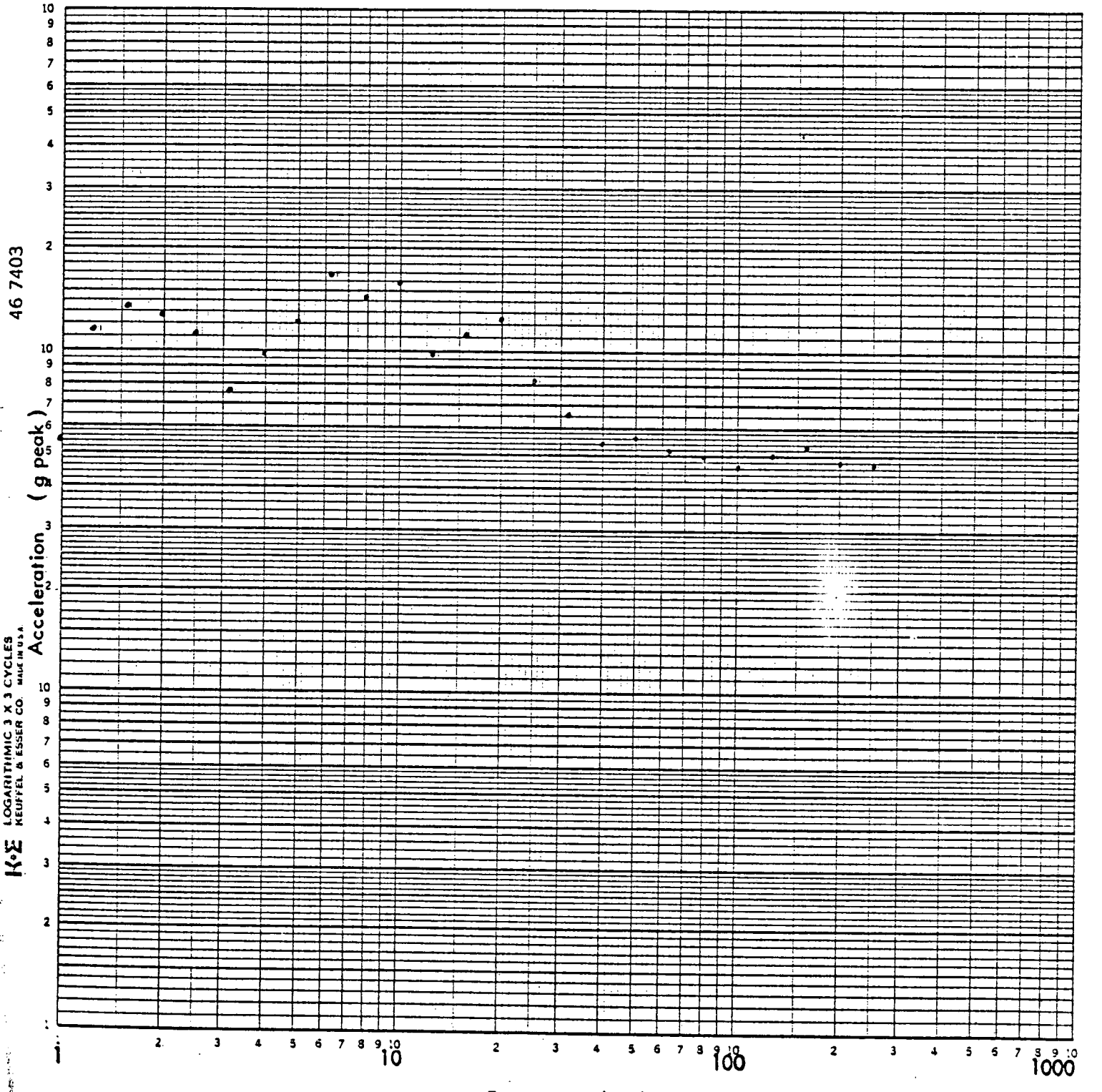
LOCATION NO. 11 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

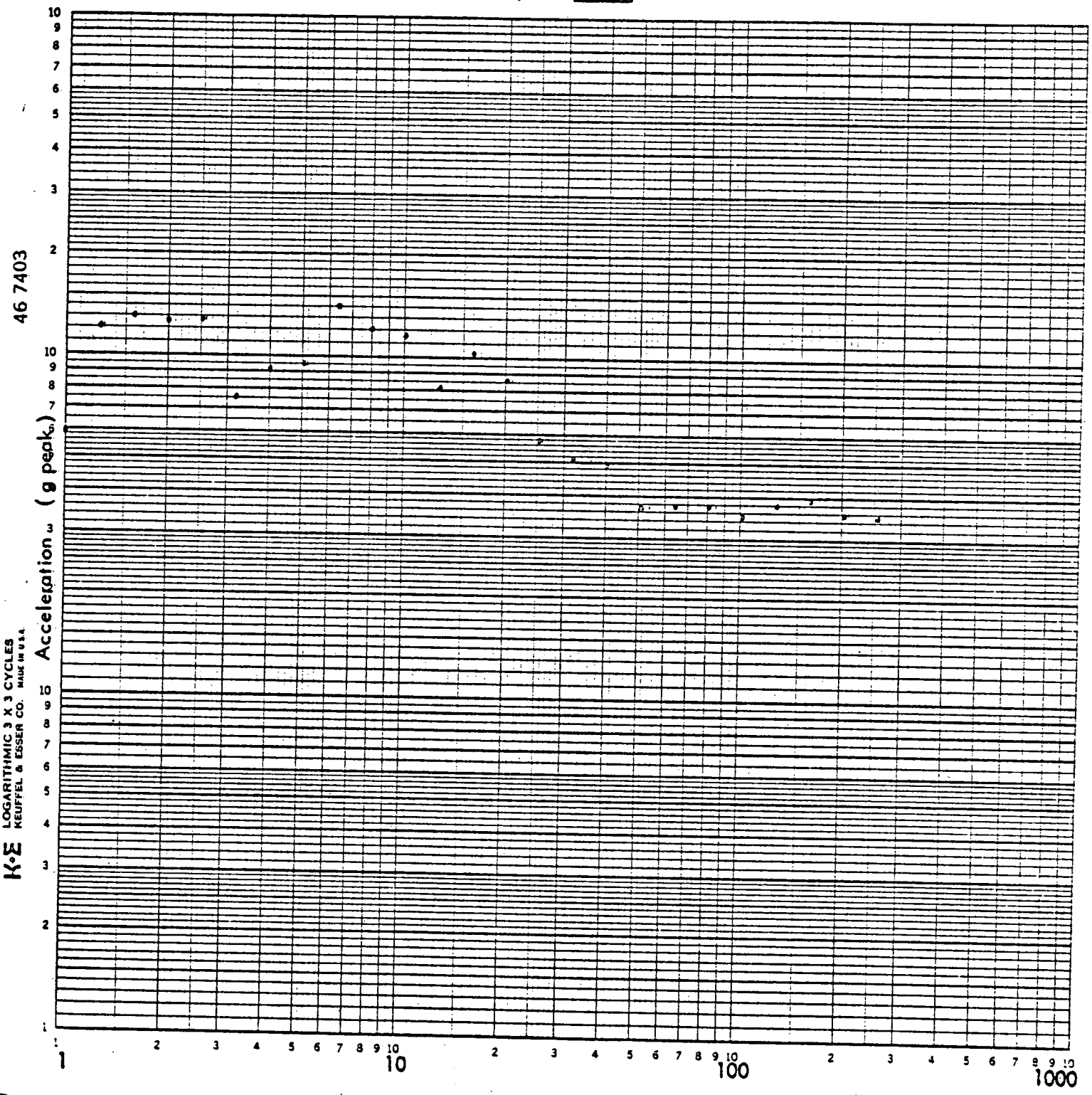
LOCATION NO. 12 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS 5-5 / VERT

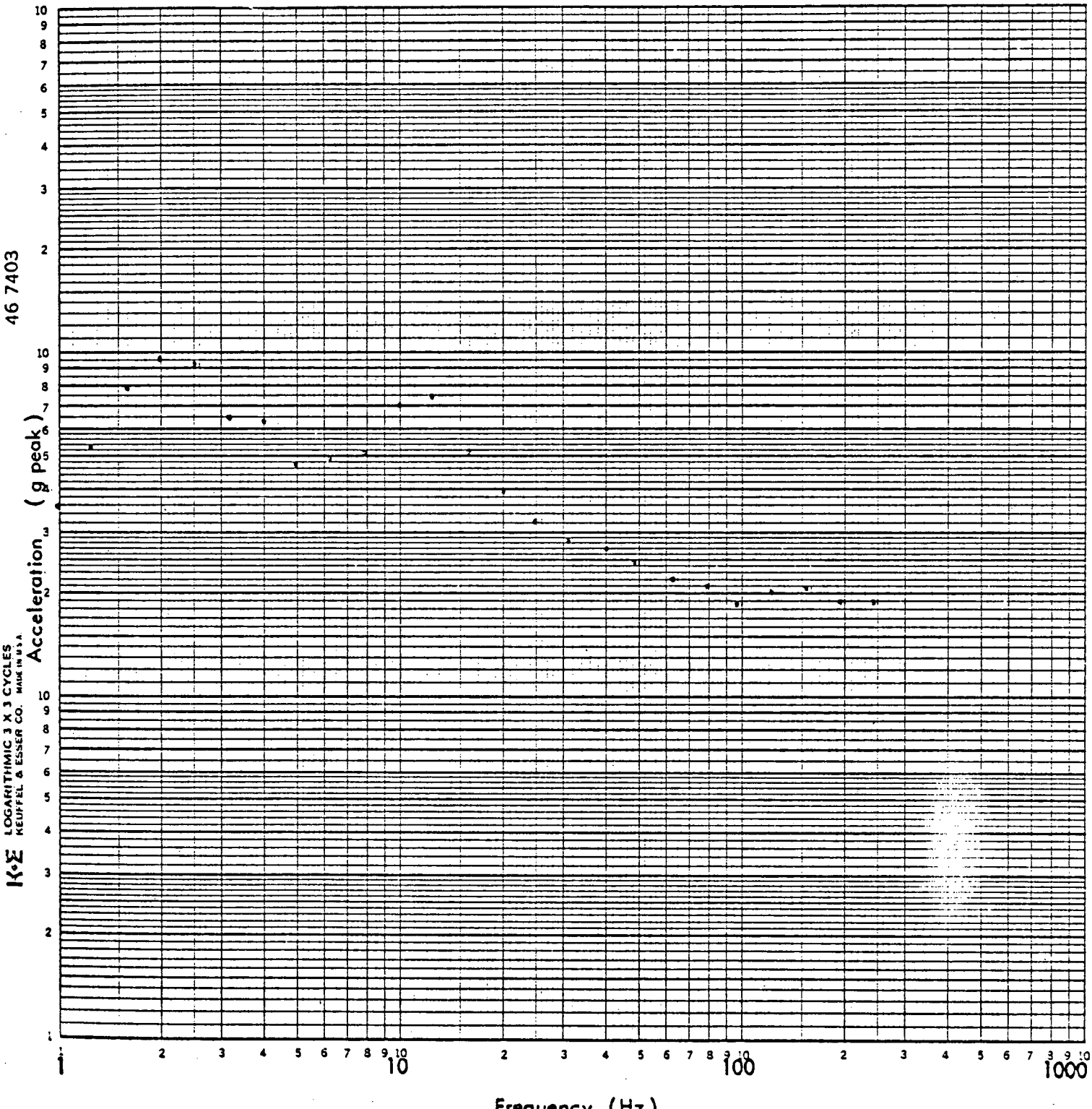
LOCATION NO. 13 5-5

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1%



AXIS S-S/VERT

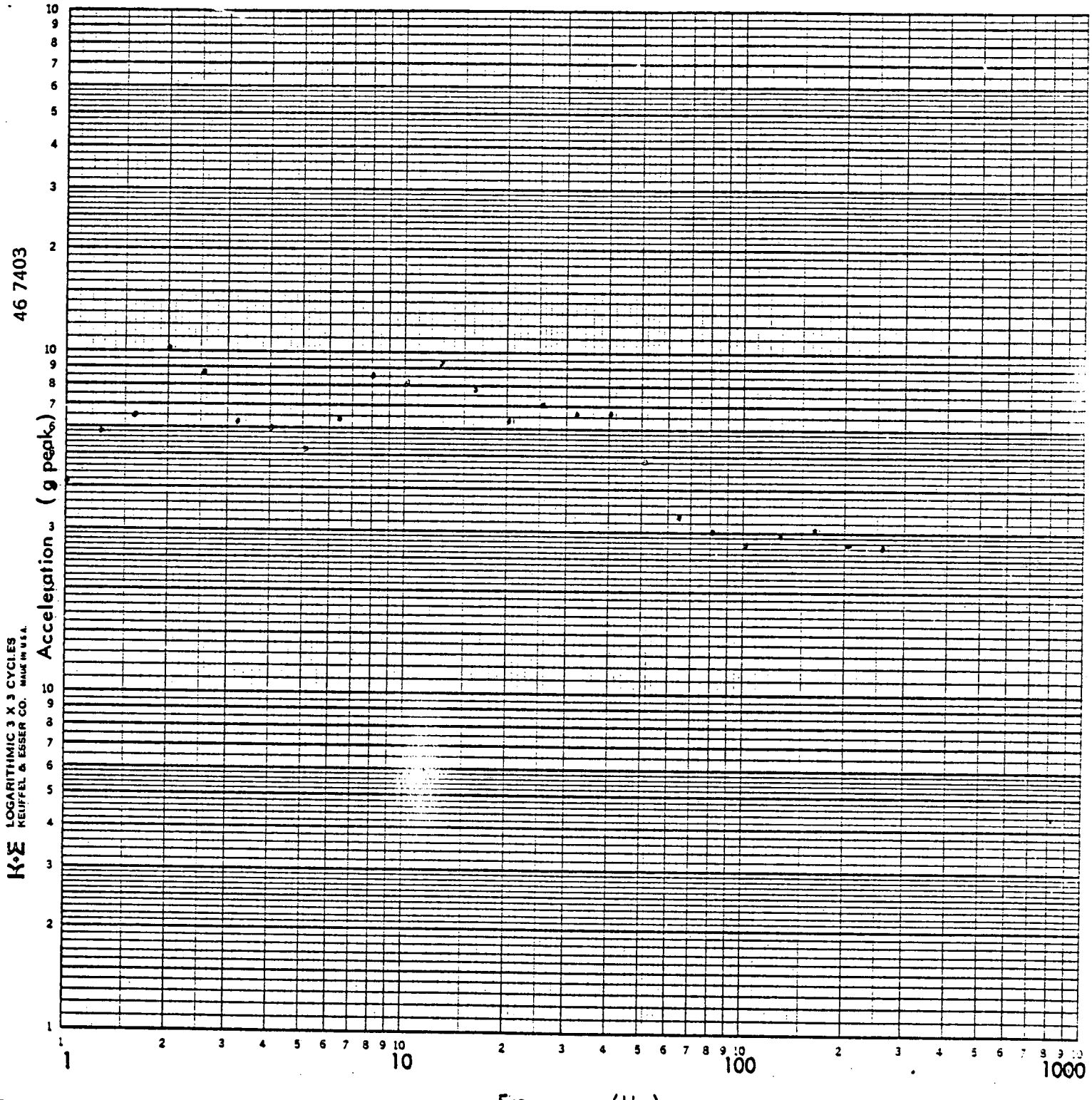
LOCATION NO. 14V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

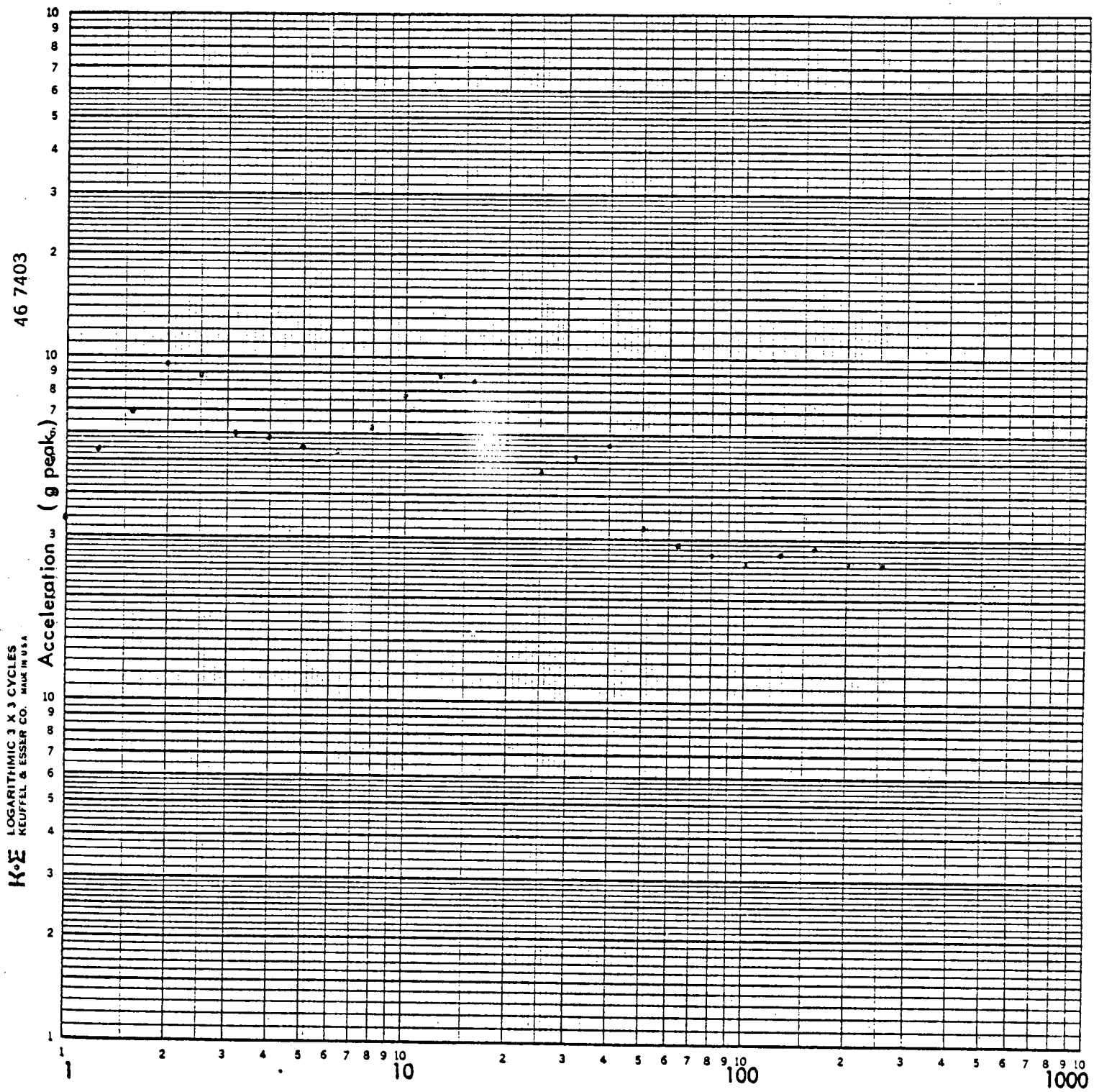
LOCATION NO. 15Y

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

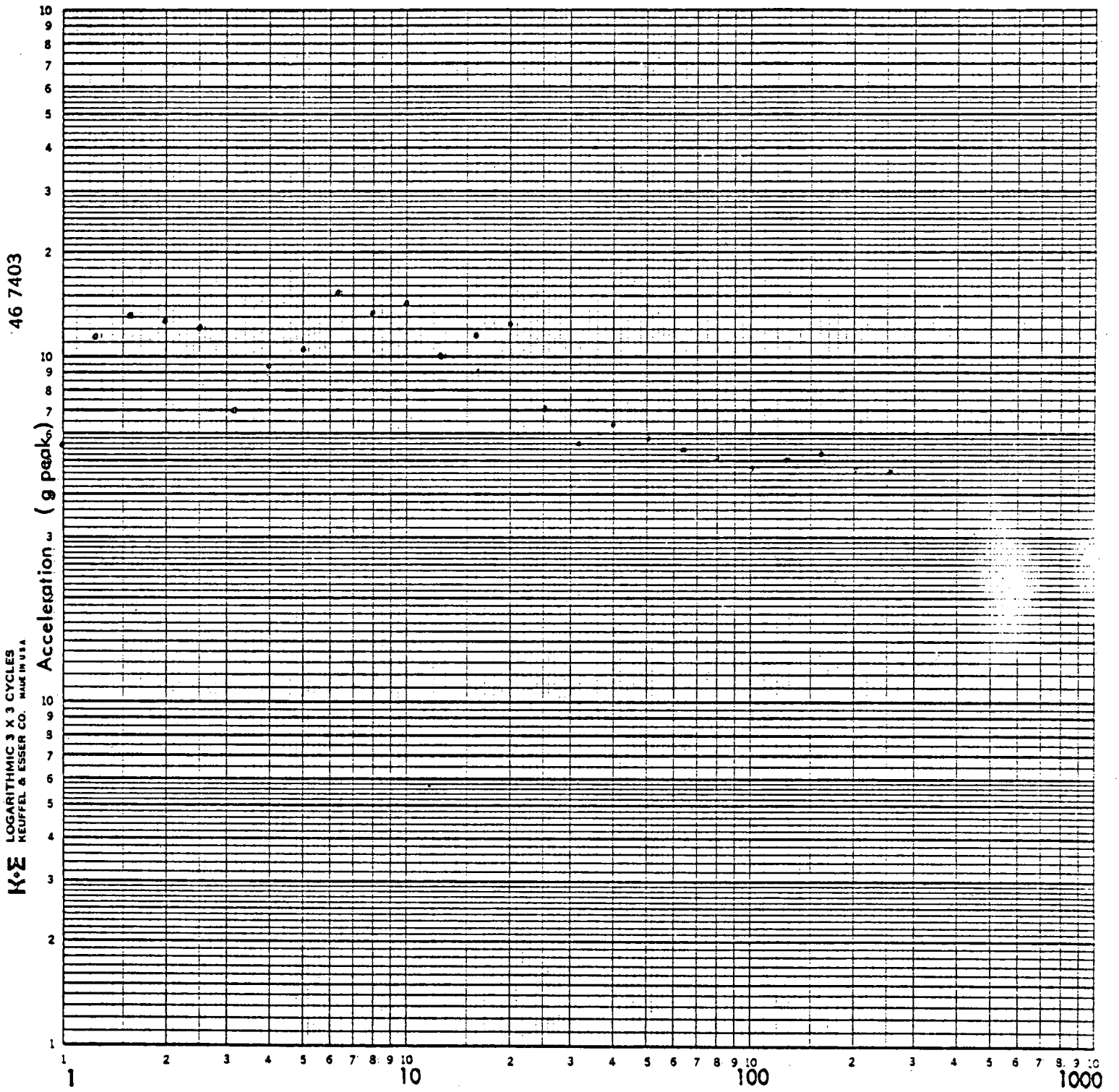
LOCATION NO. 116 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

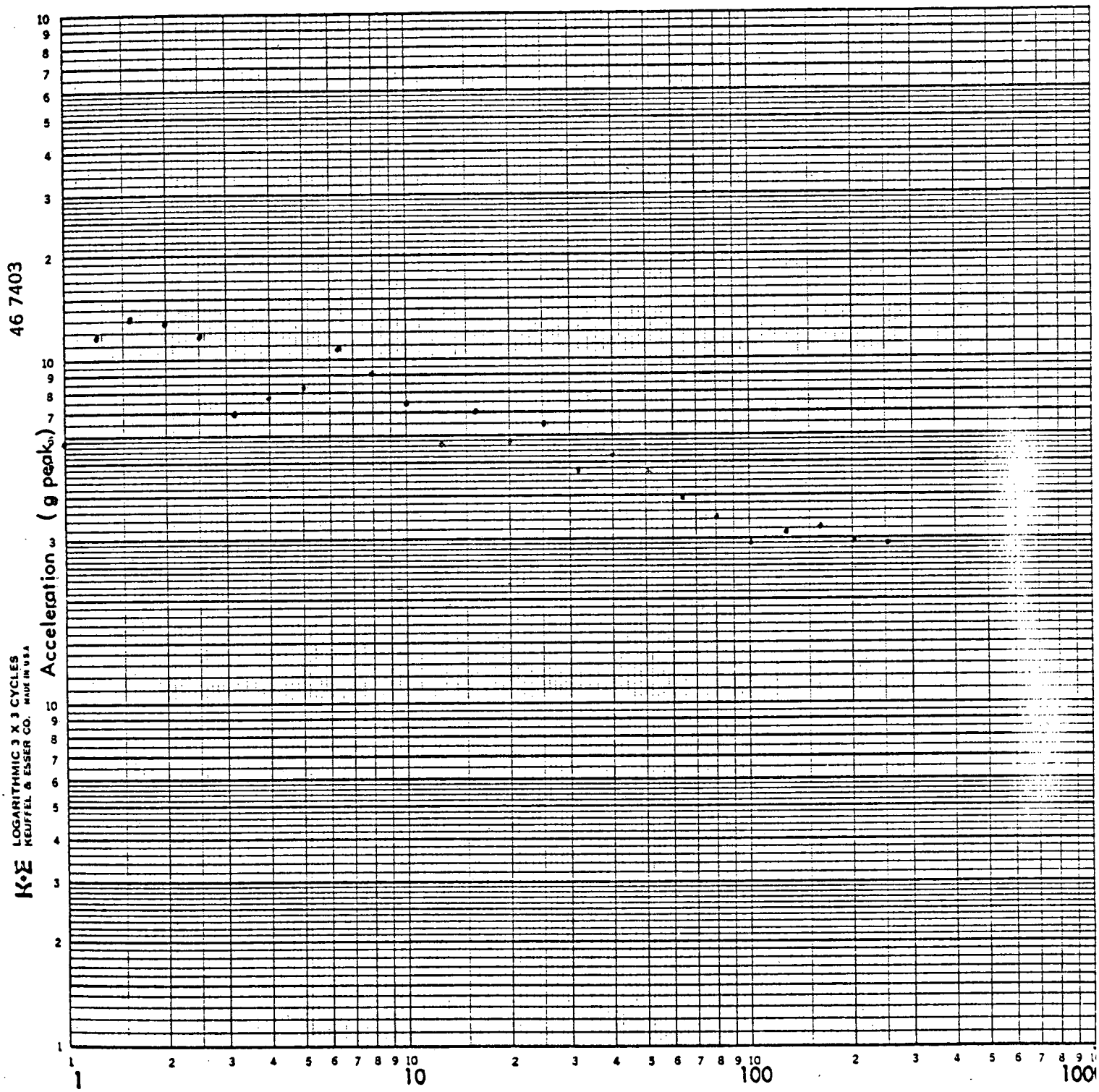
LOCATION NO. 17 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

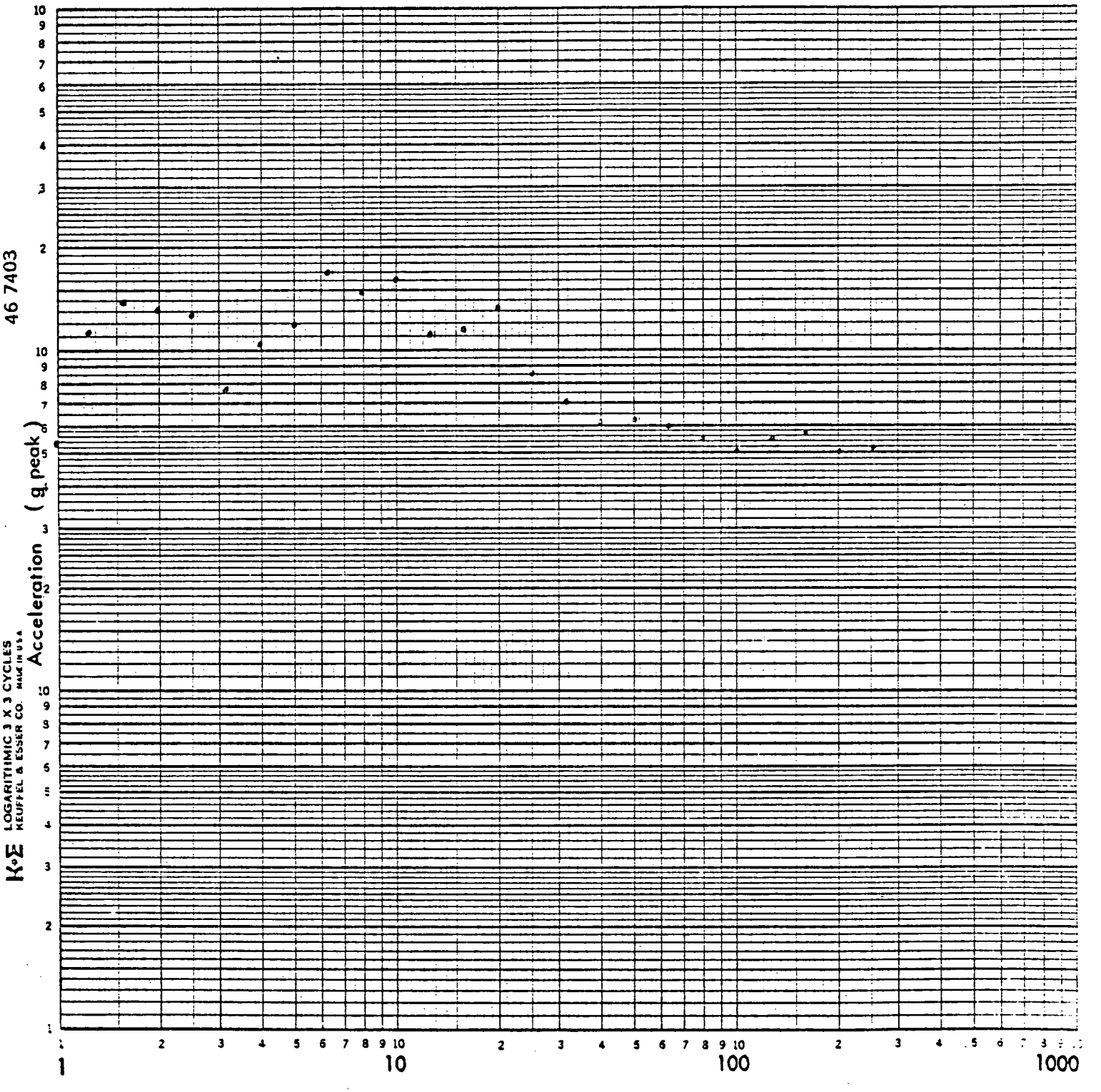
LOCATION NO. 18 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

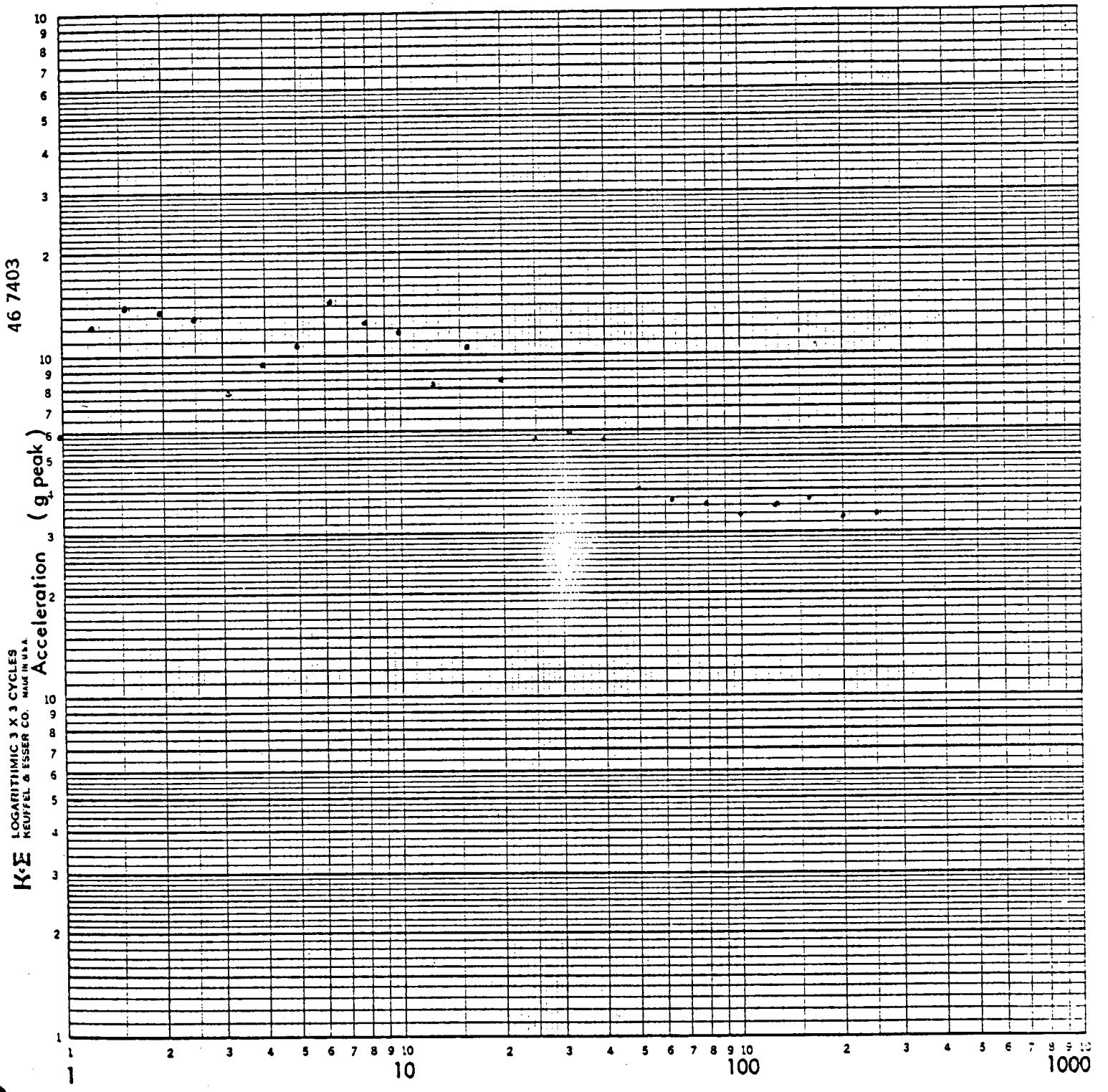
LOCATION NO. 19 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

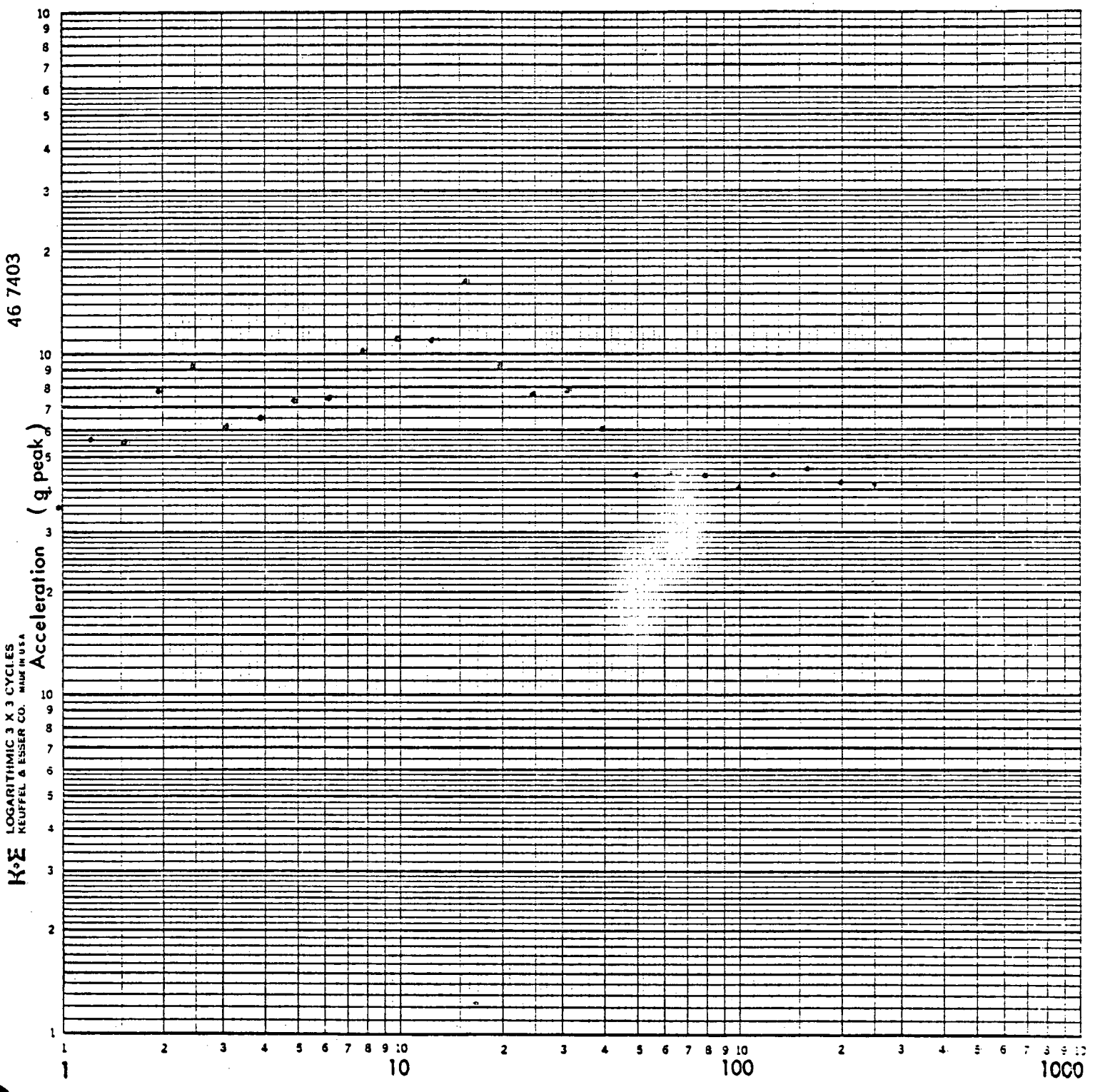
LOCATION NO. 205-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

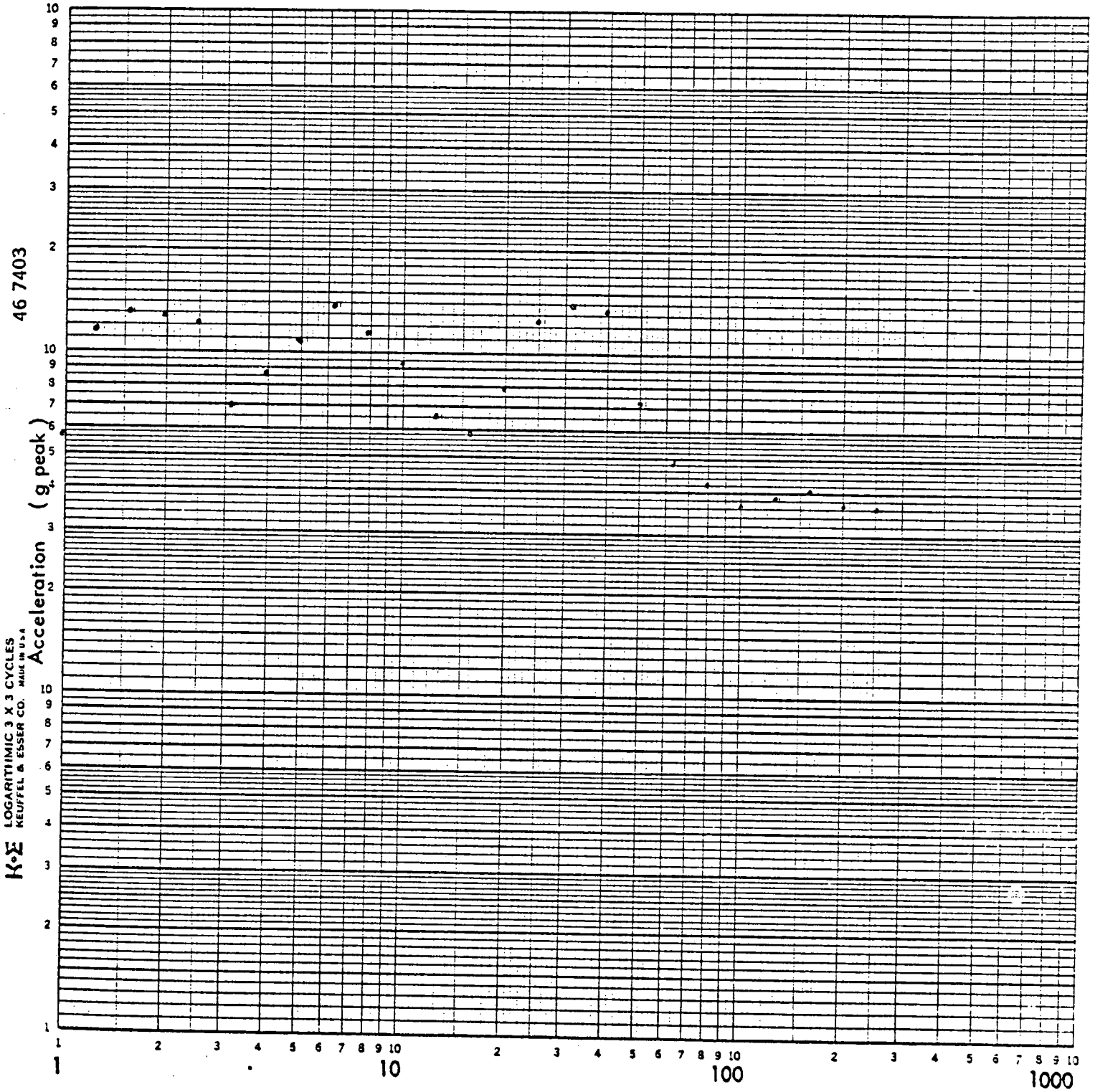
LOCATION NO. 21 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING | %



AXIS S-S / VERT

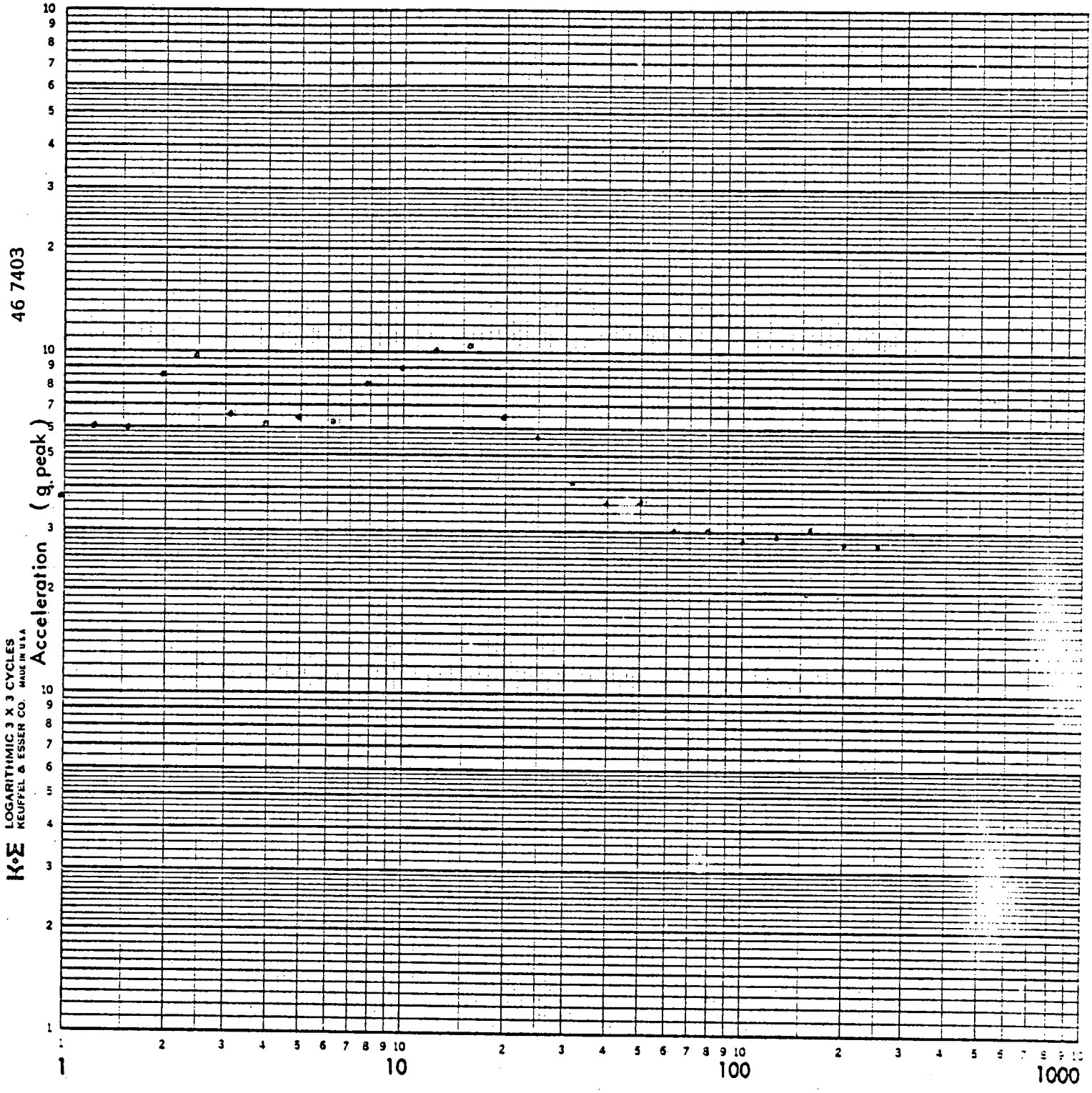
LOCATION NO. 225.5

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

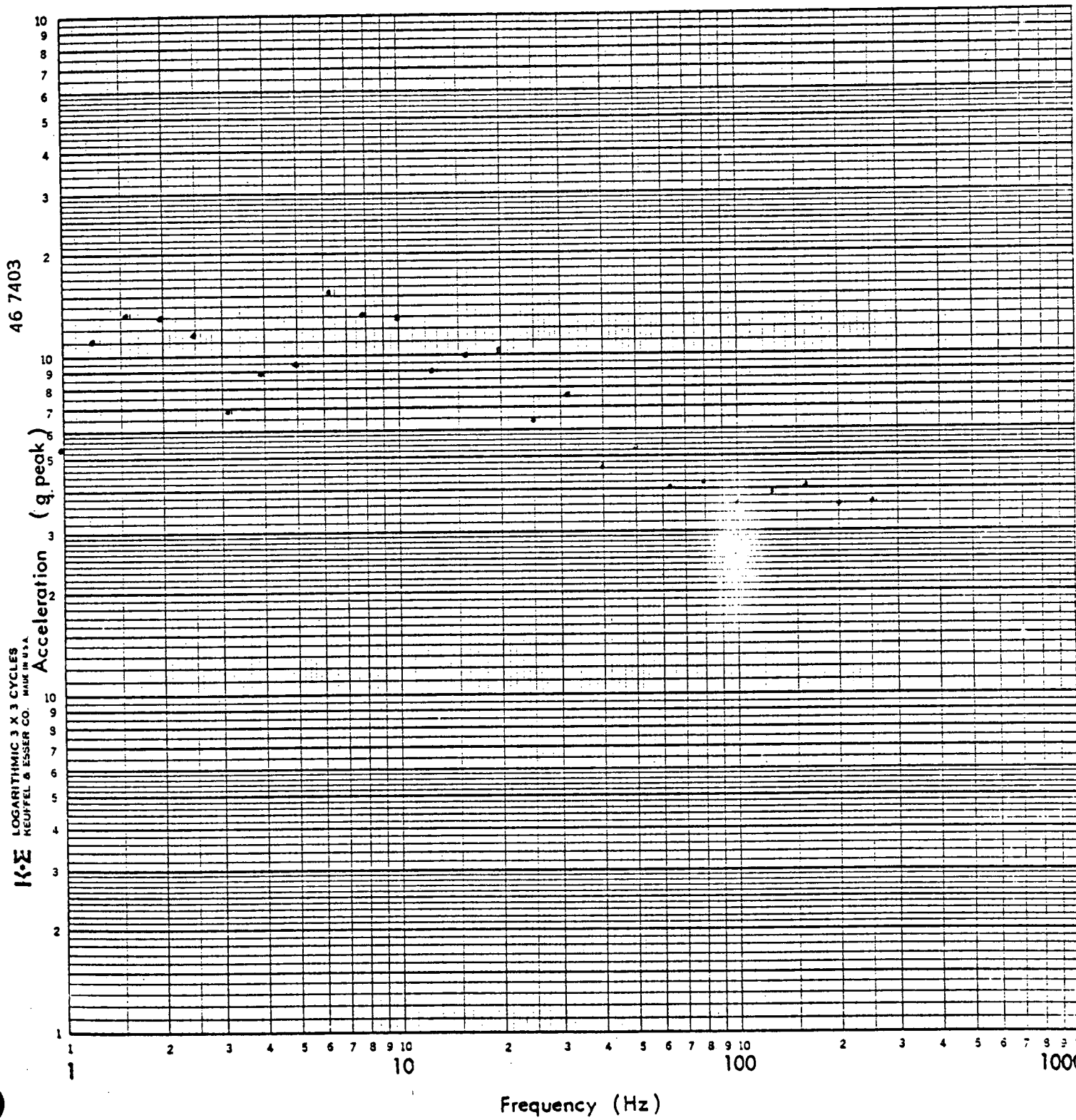
LOCATION NO. 234

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-2/VERT

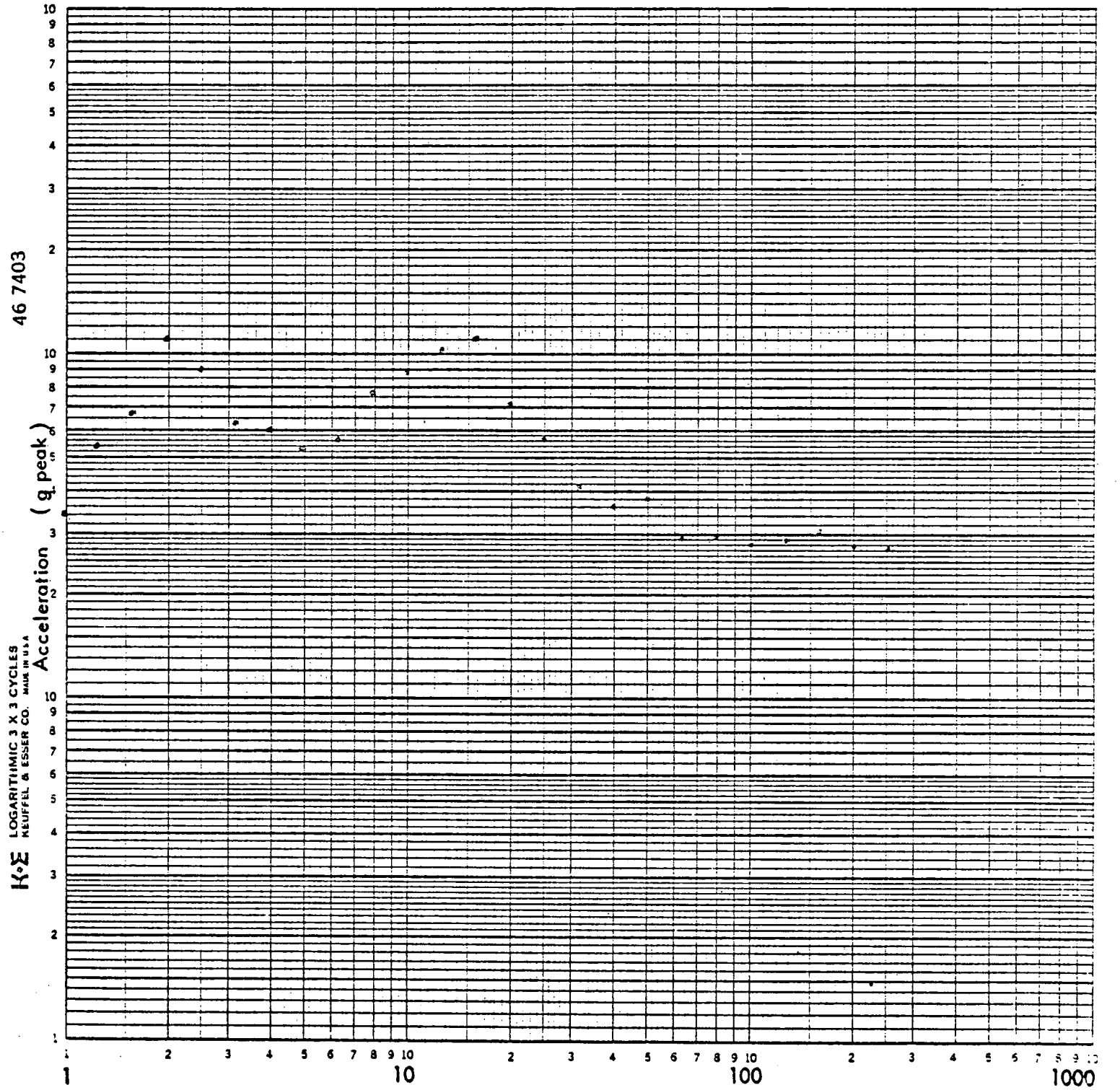
LOCATION NO. 24 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-1/VERT

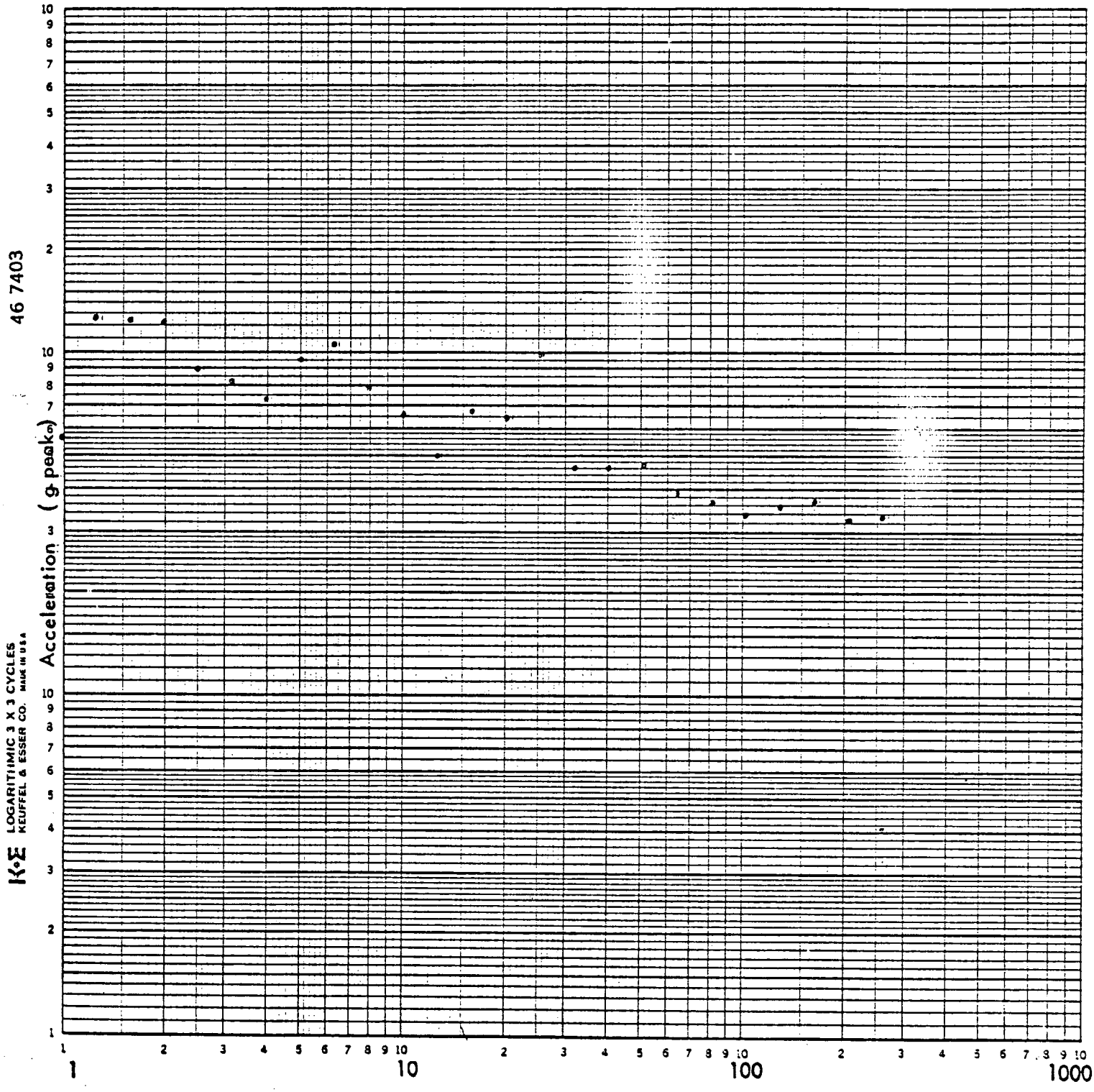
LOCATION NO. 25V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

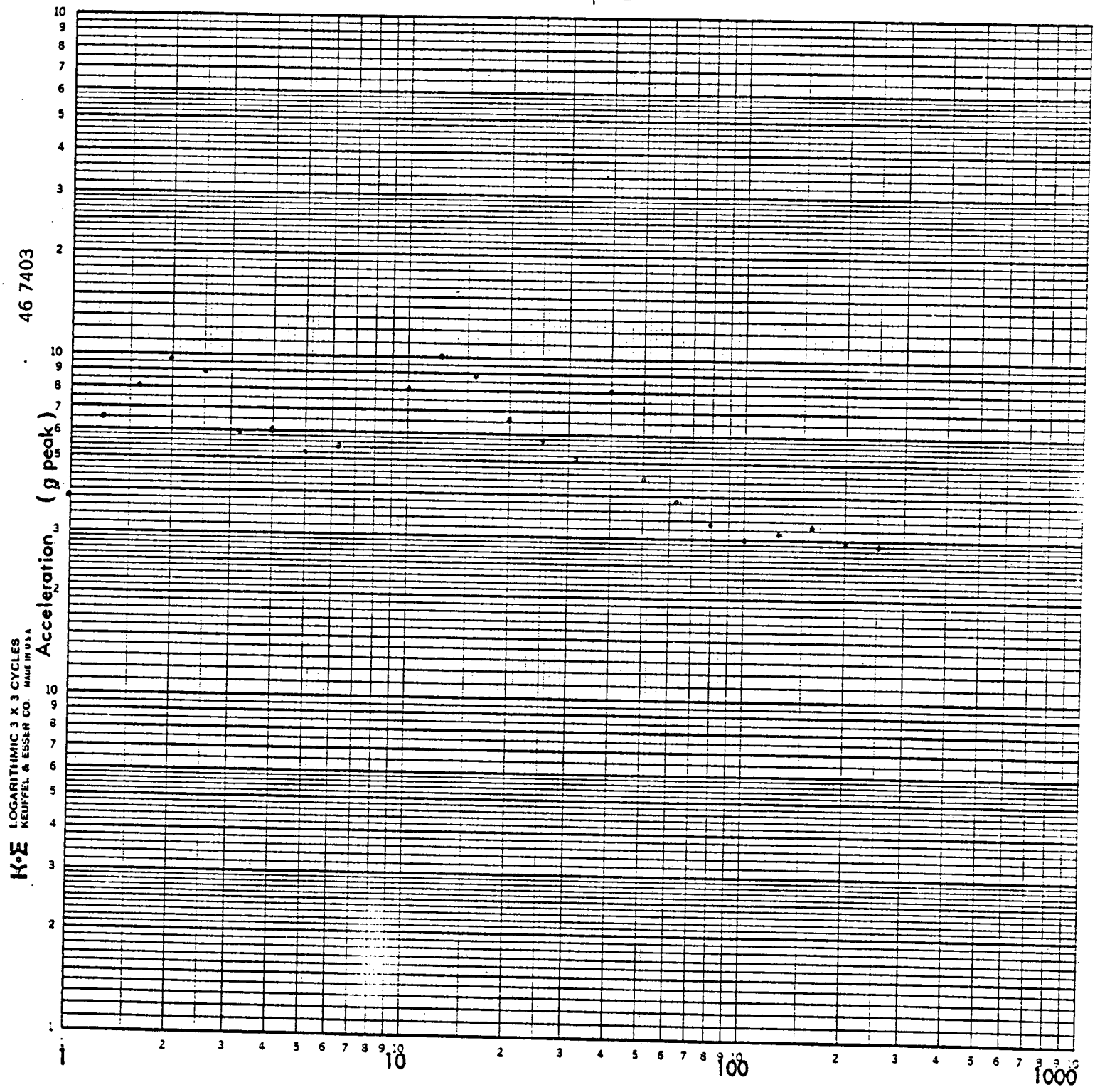
LOCATION NO. 26 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

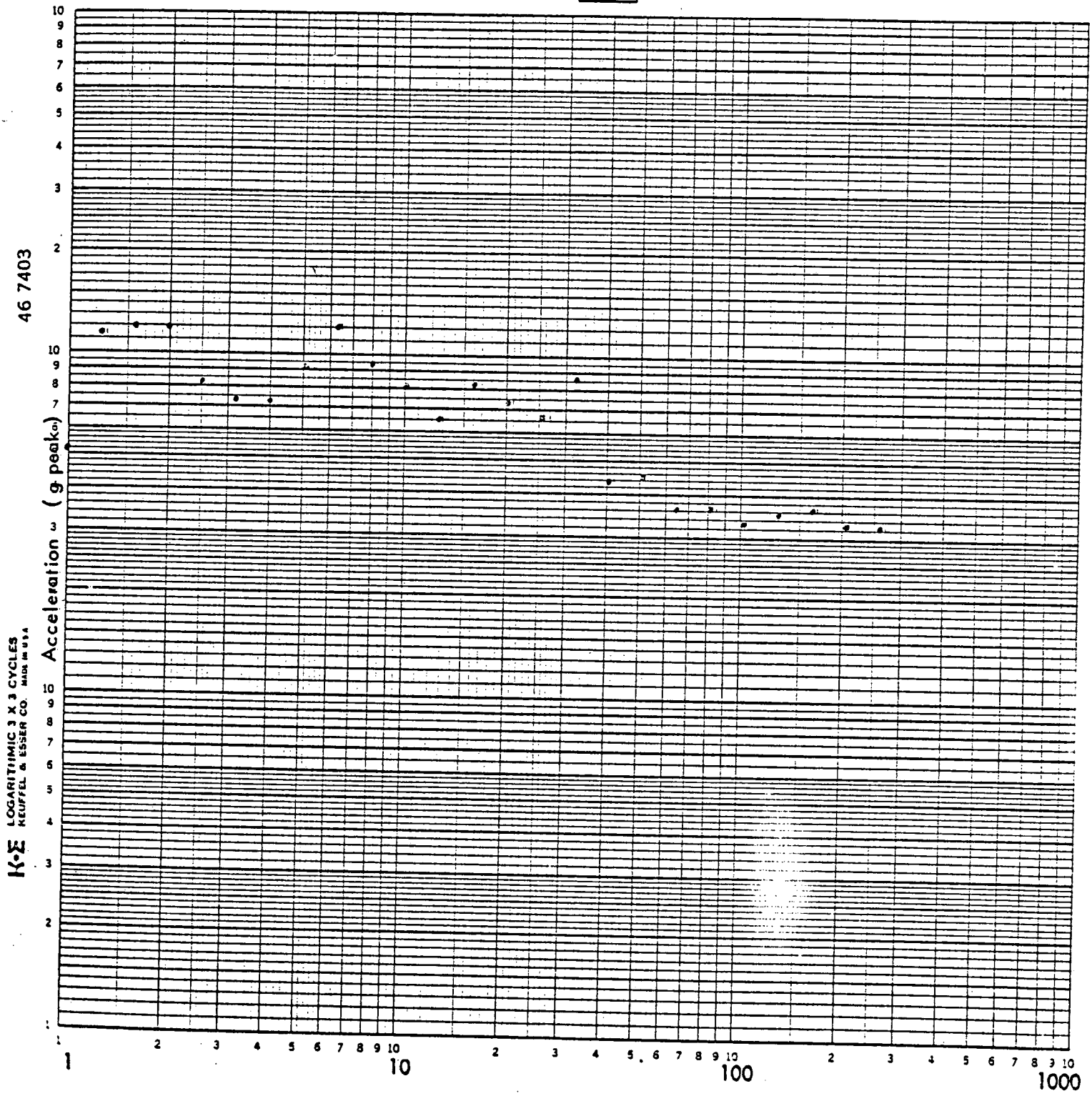
LOCATION NO. 27V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

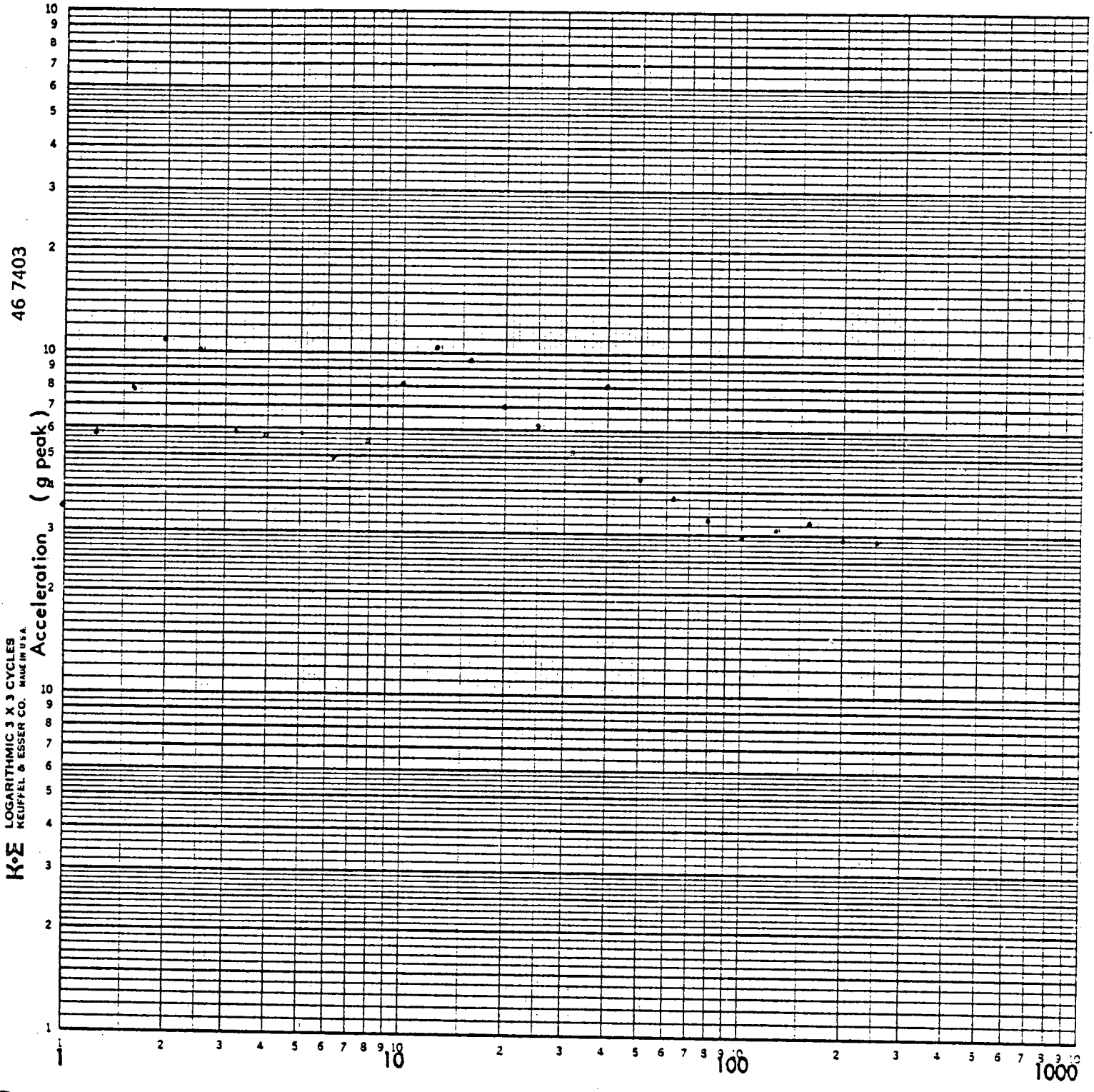
LOCATION NO. 28 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

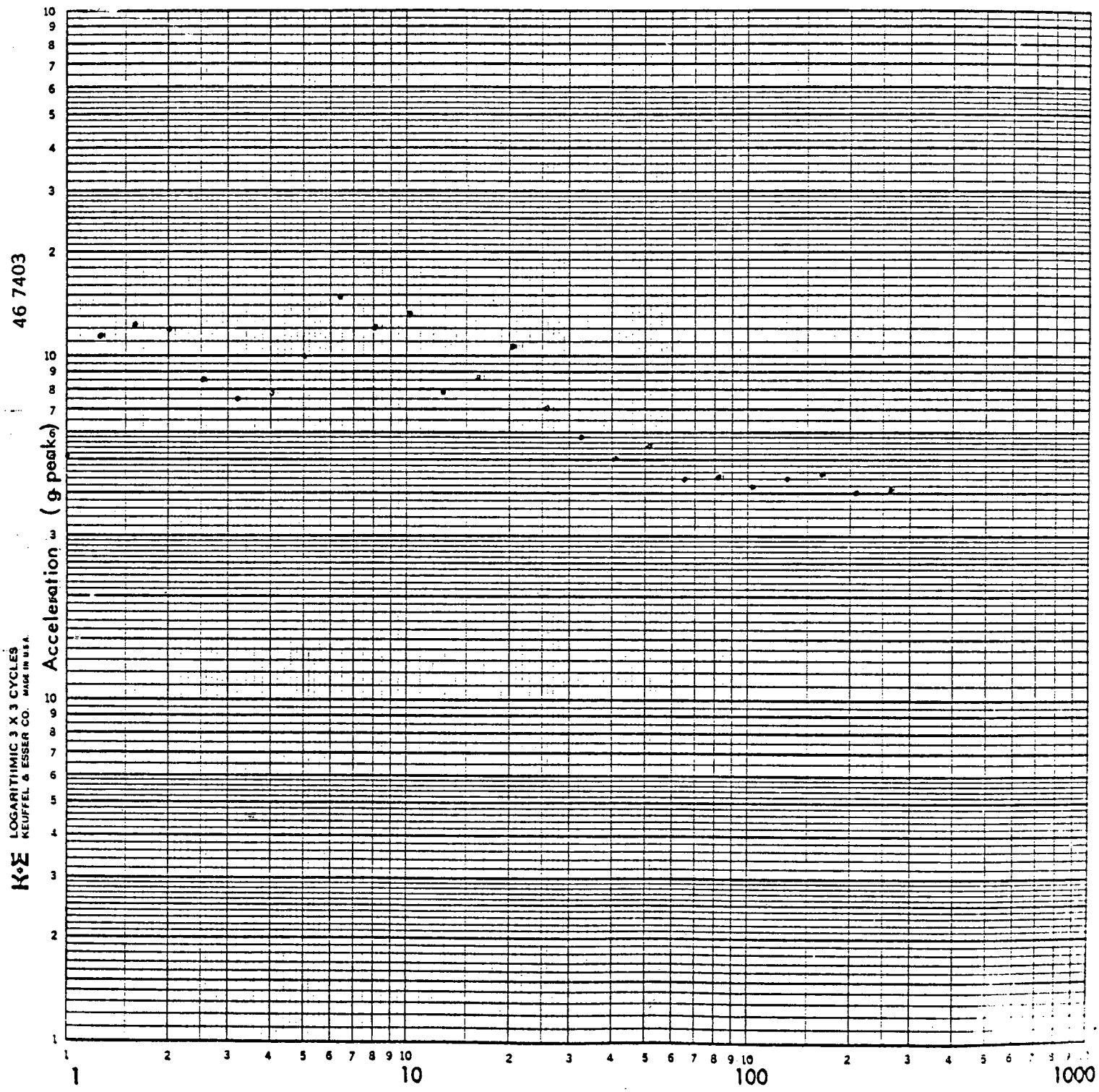
LOCATION NO. 29 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

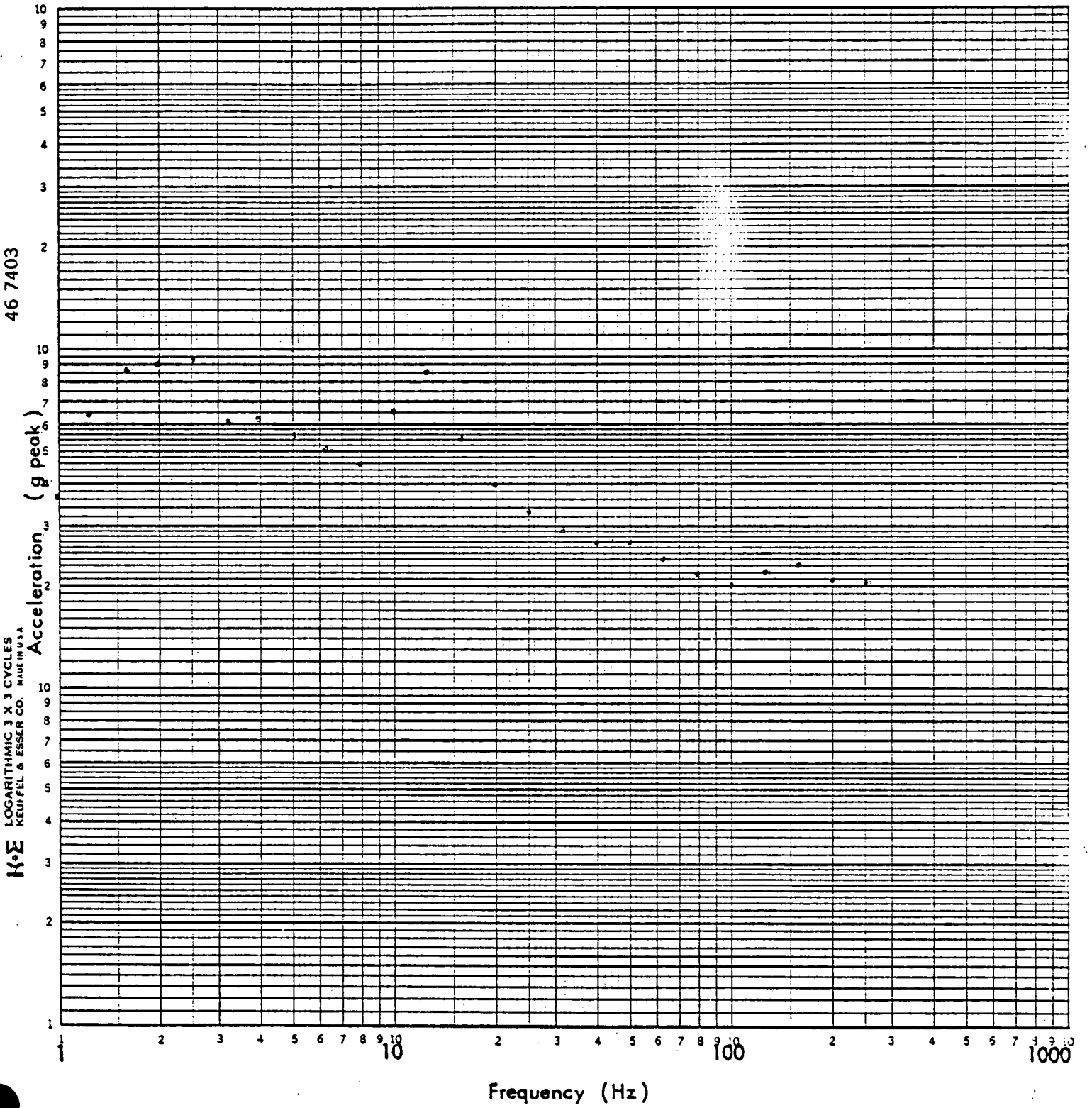
LOCATION NO. 30 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [ ] %



AXIS S-S/VERT

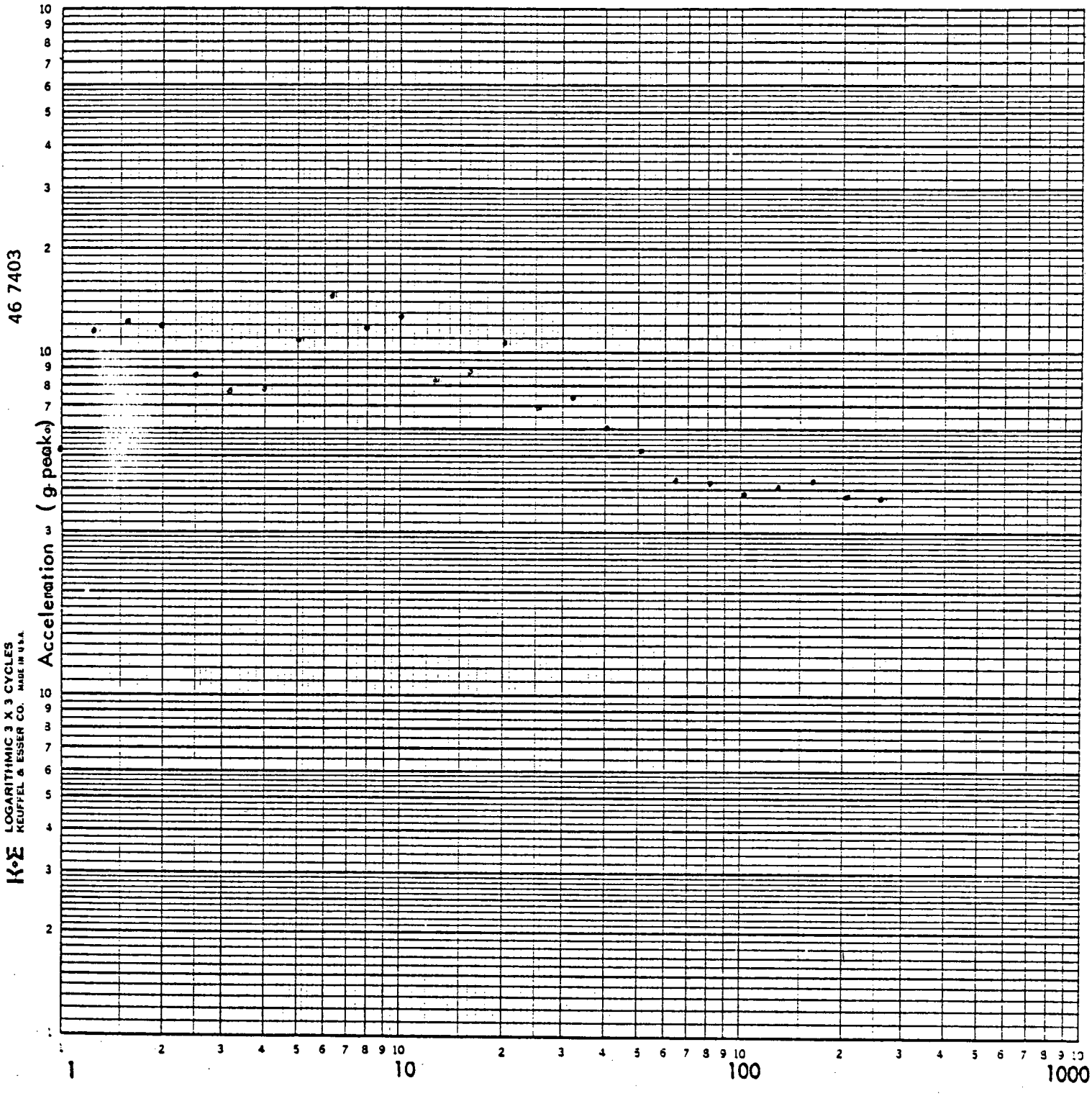
LOCATION NO. 31 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

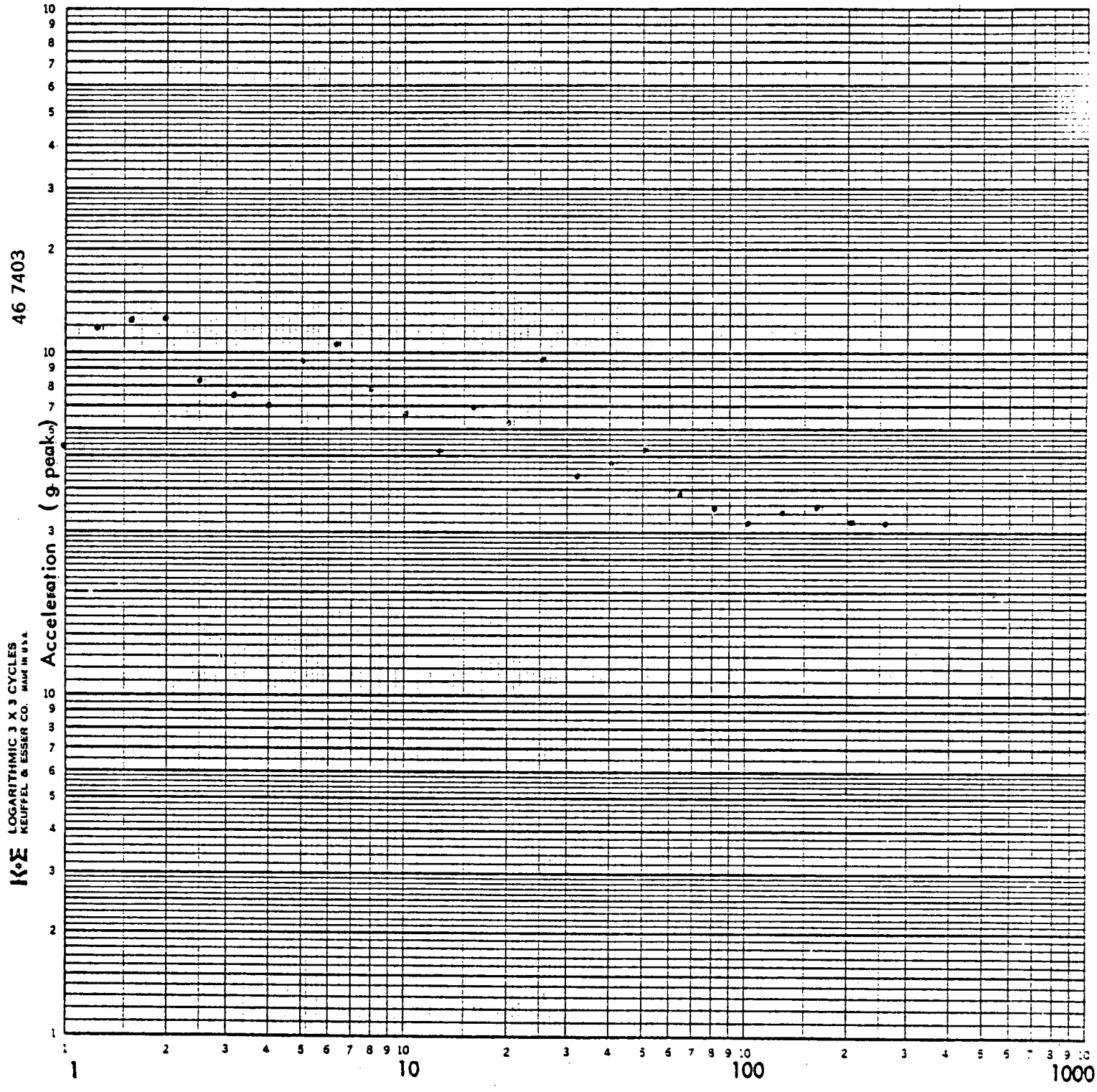
LOCATION NO. 32 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-3/VERT

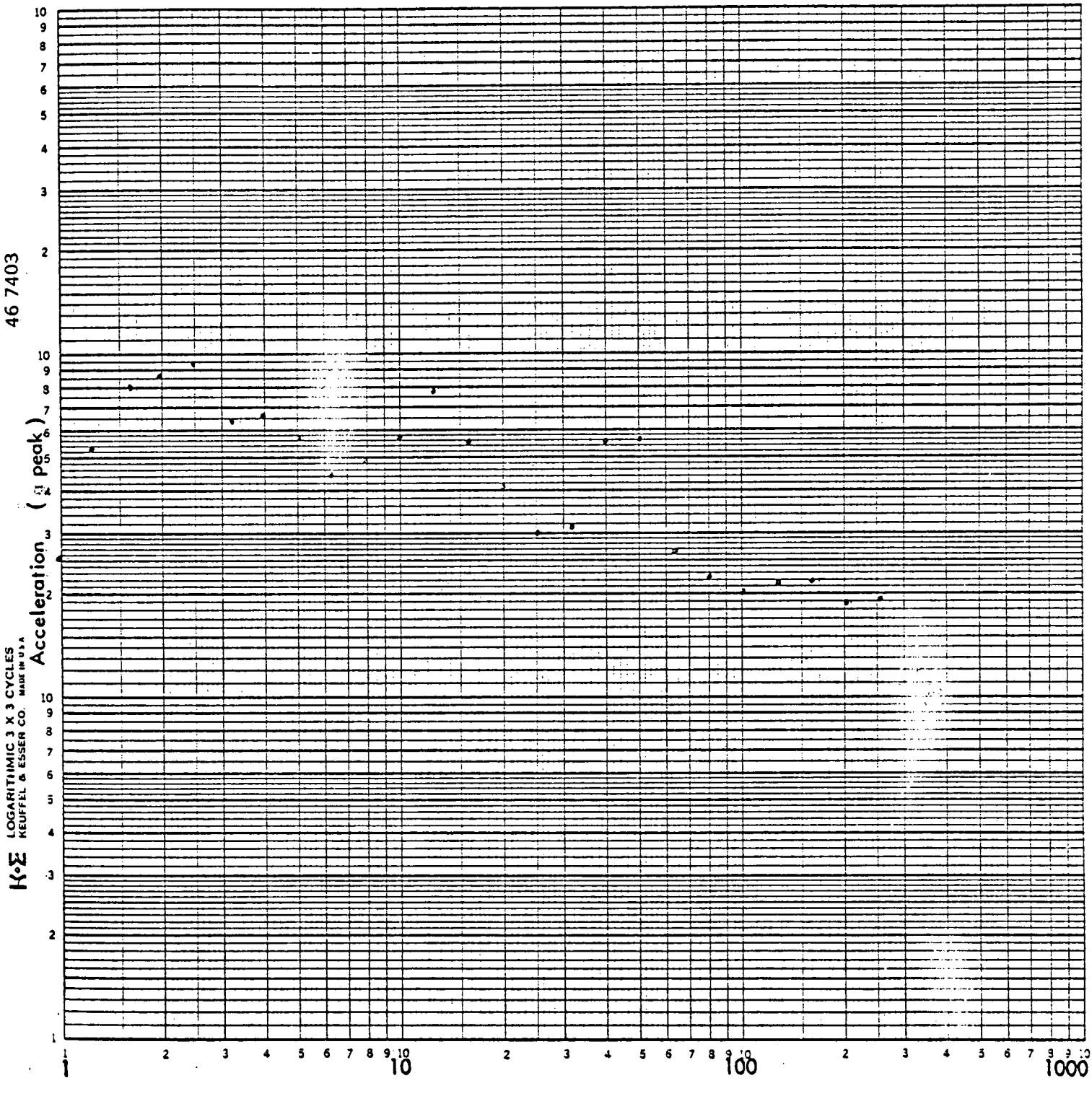
LOCATION NO. 33 S-3

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

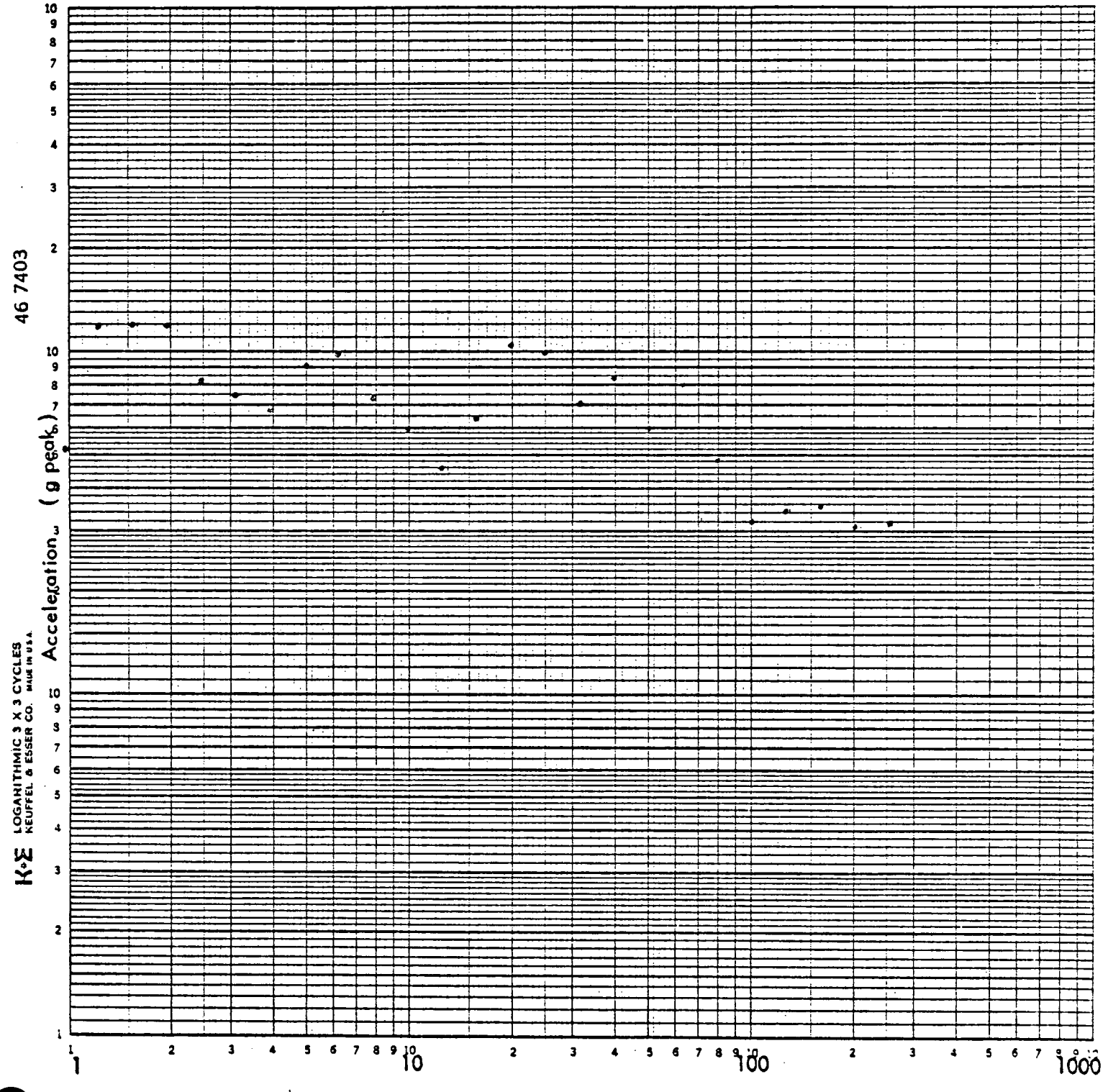
LOCATION NO. 34V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

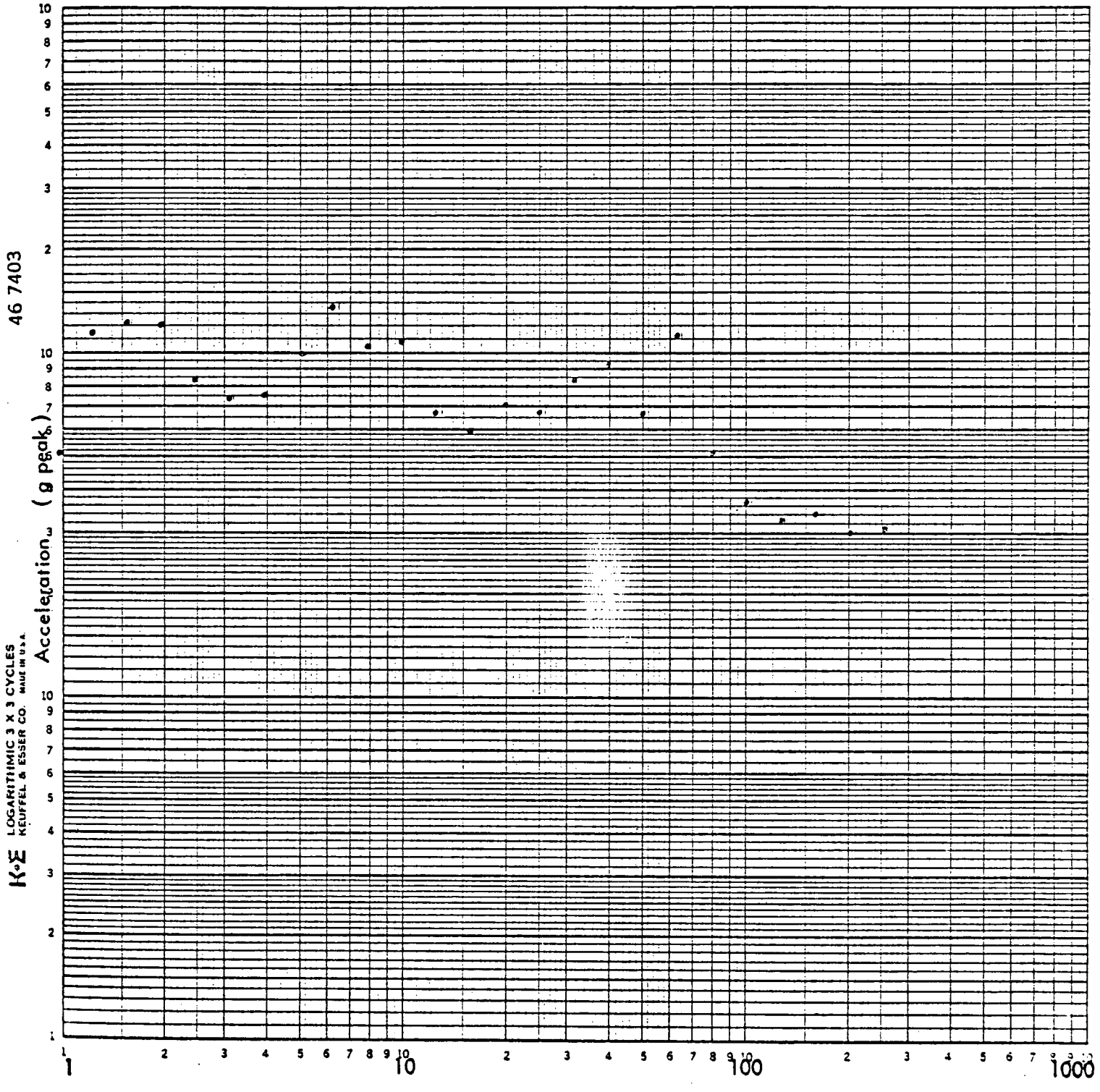
LOCATION NO. 35 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

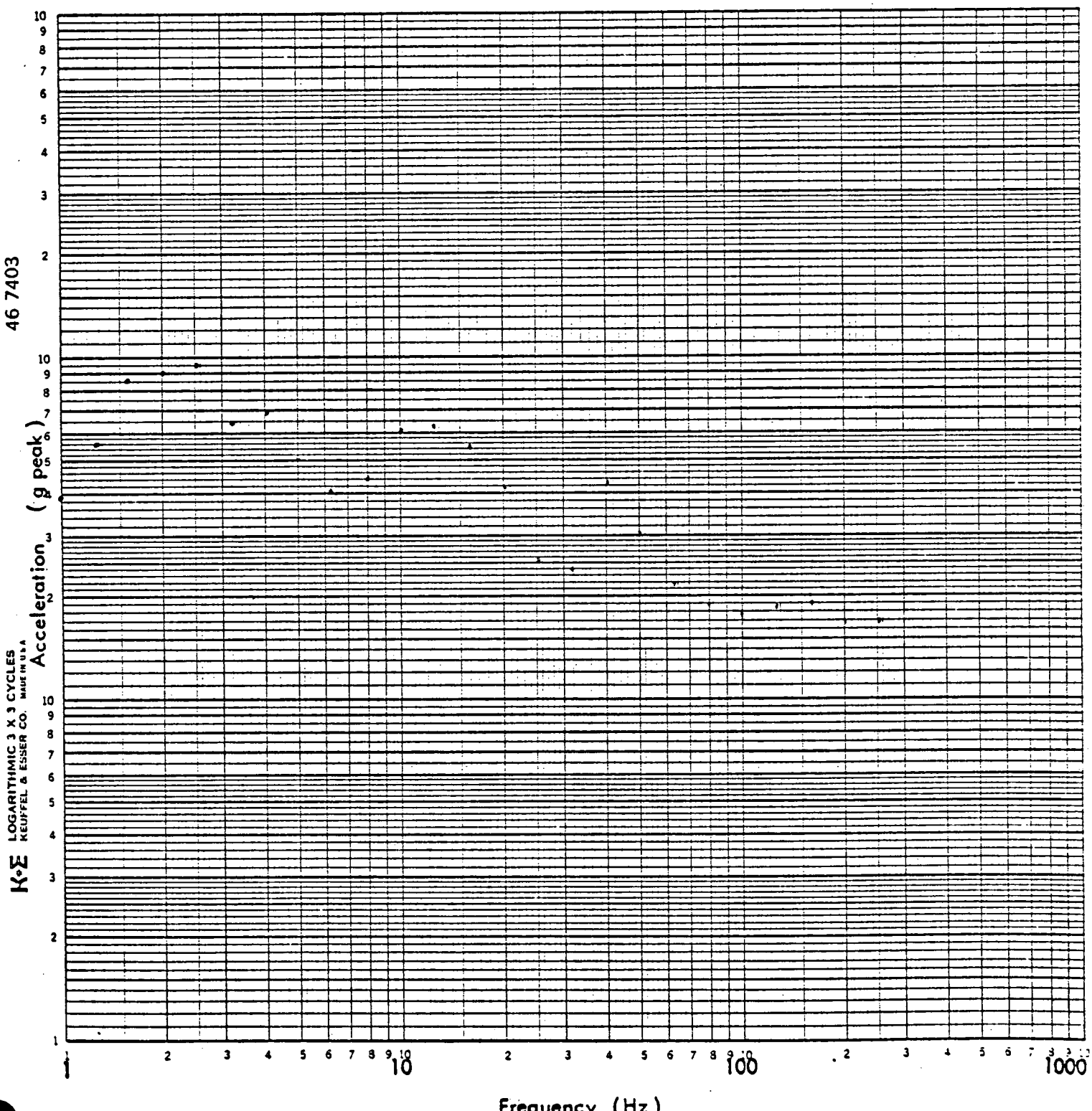
LOCATION NO. 36 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1%



AXIS S-S/VERT

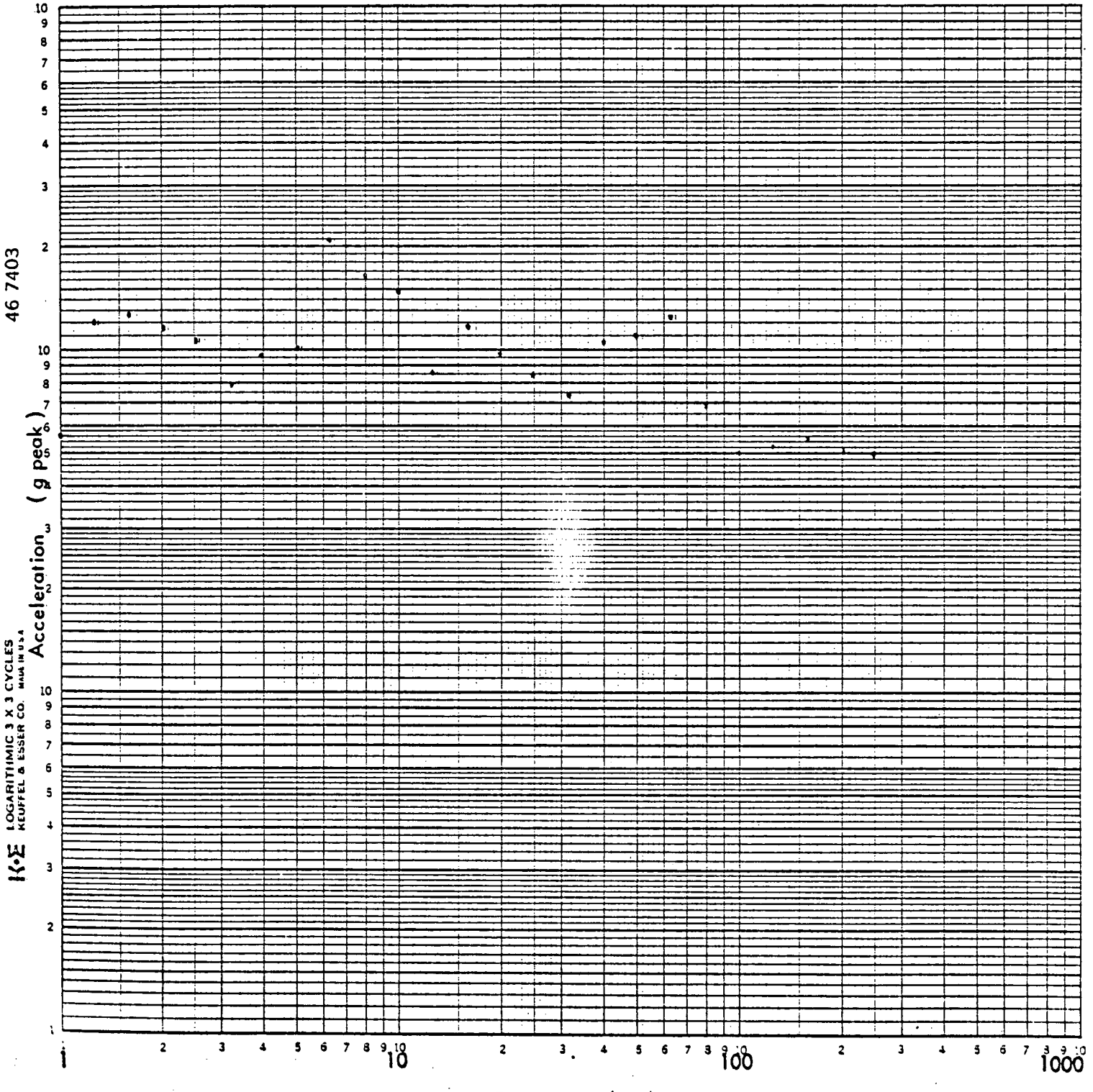
LOCATION NO. 37V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

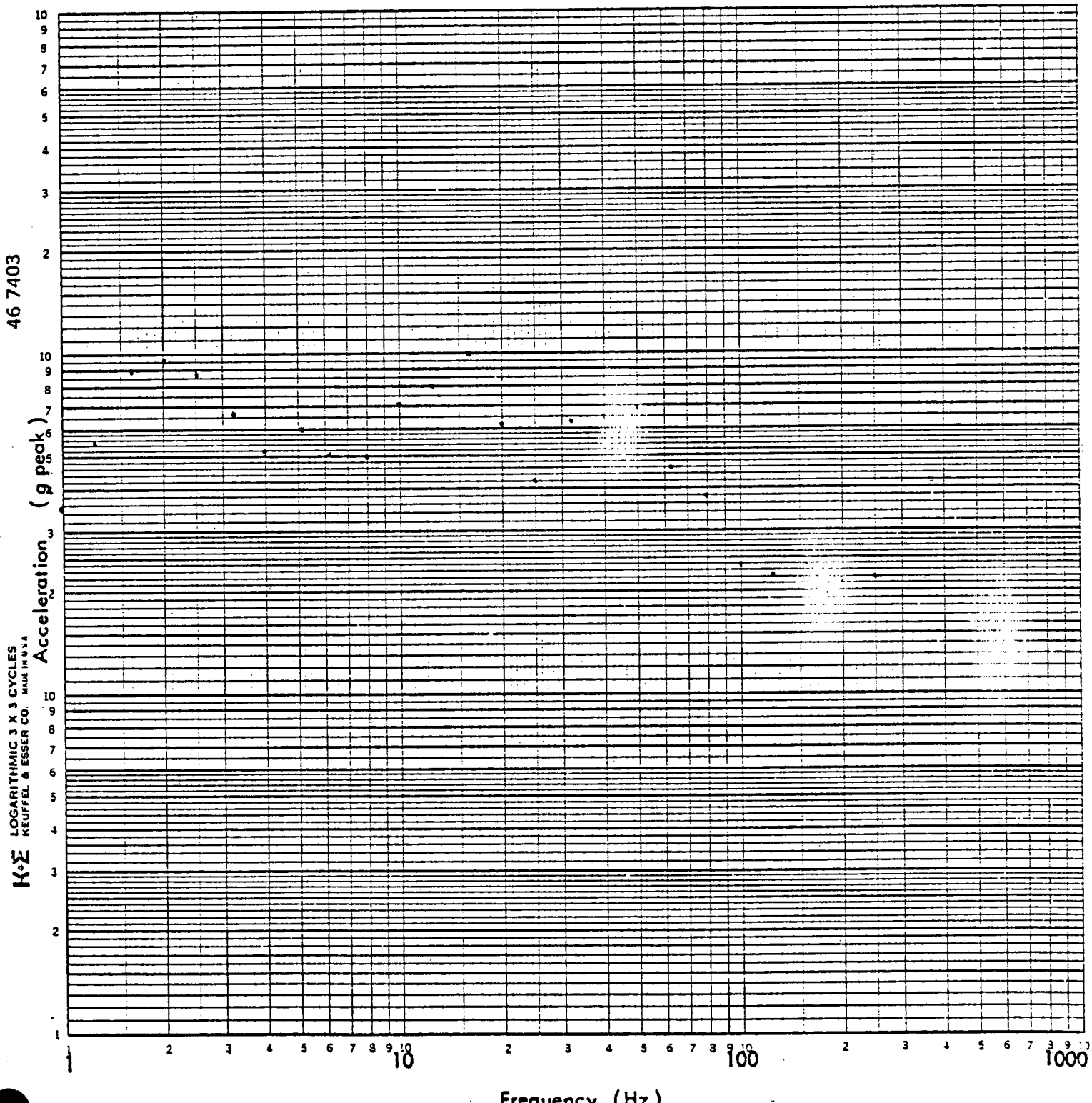
LOCATION NO. 38 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS 5-S/VERT

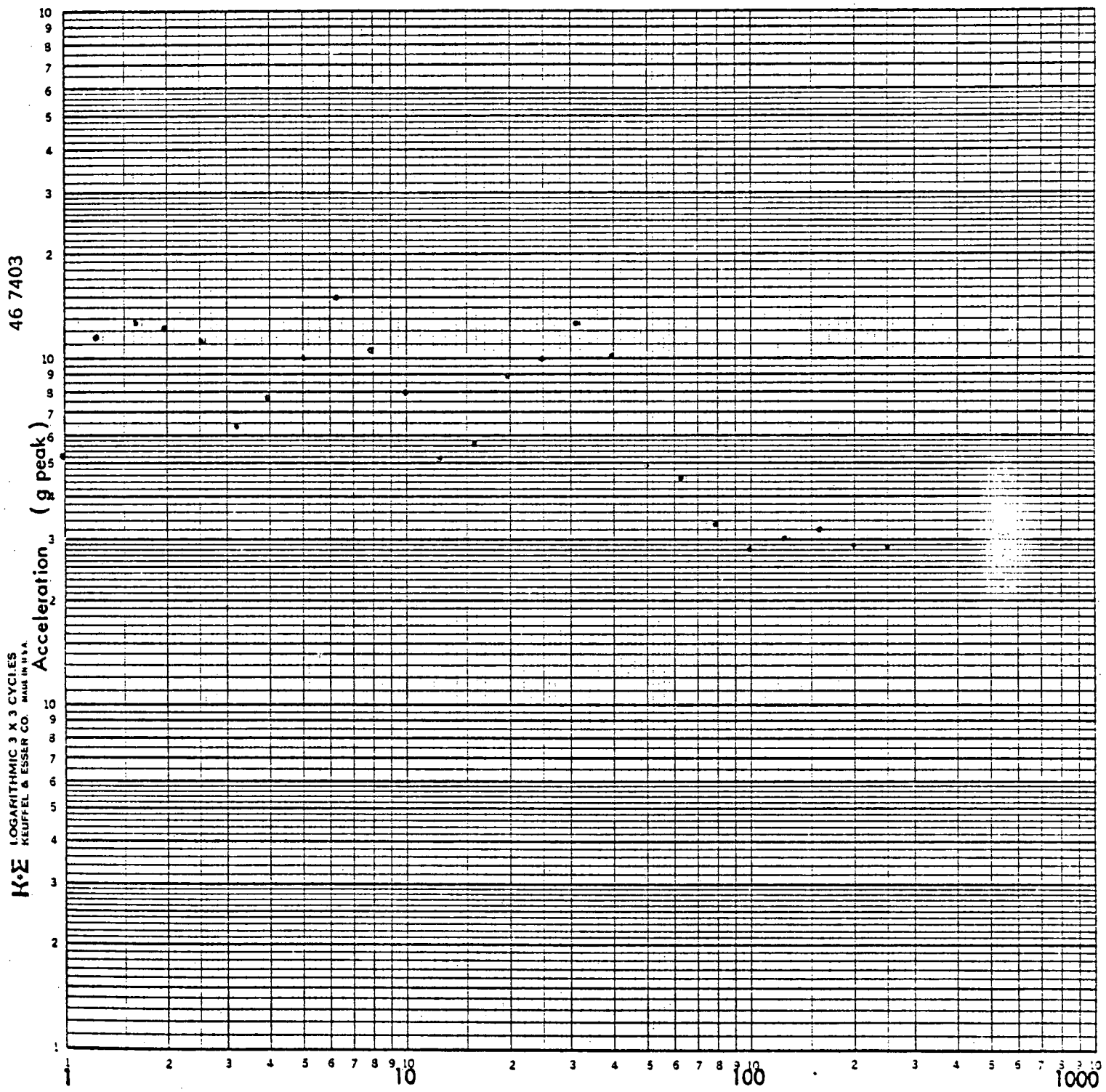
LOCATION NO. 39 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

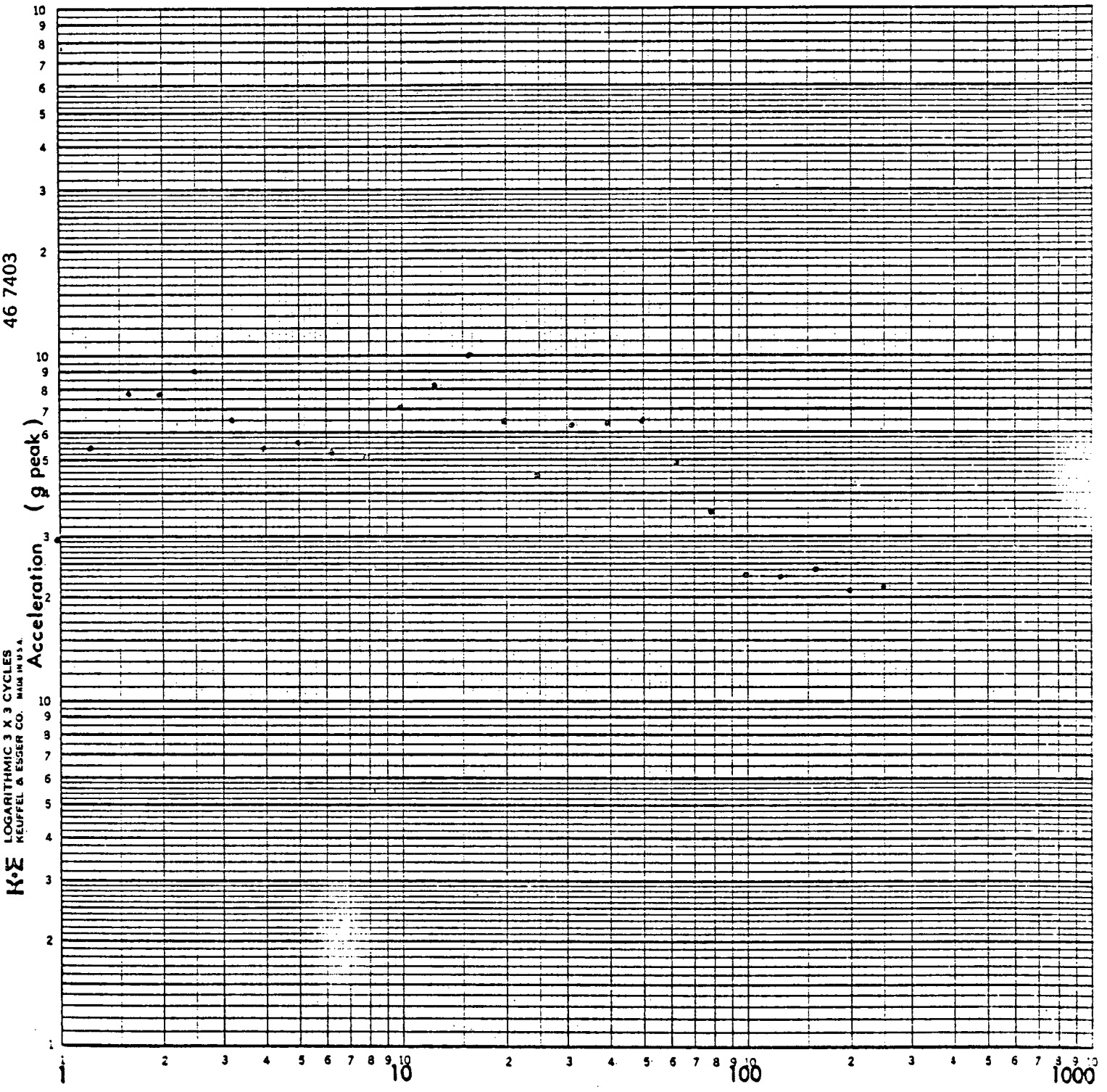
LOCATION NO. 40 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

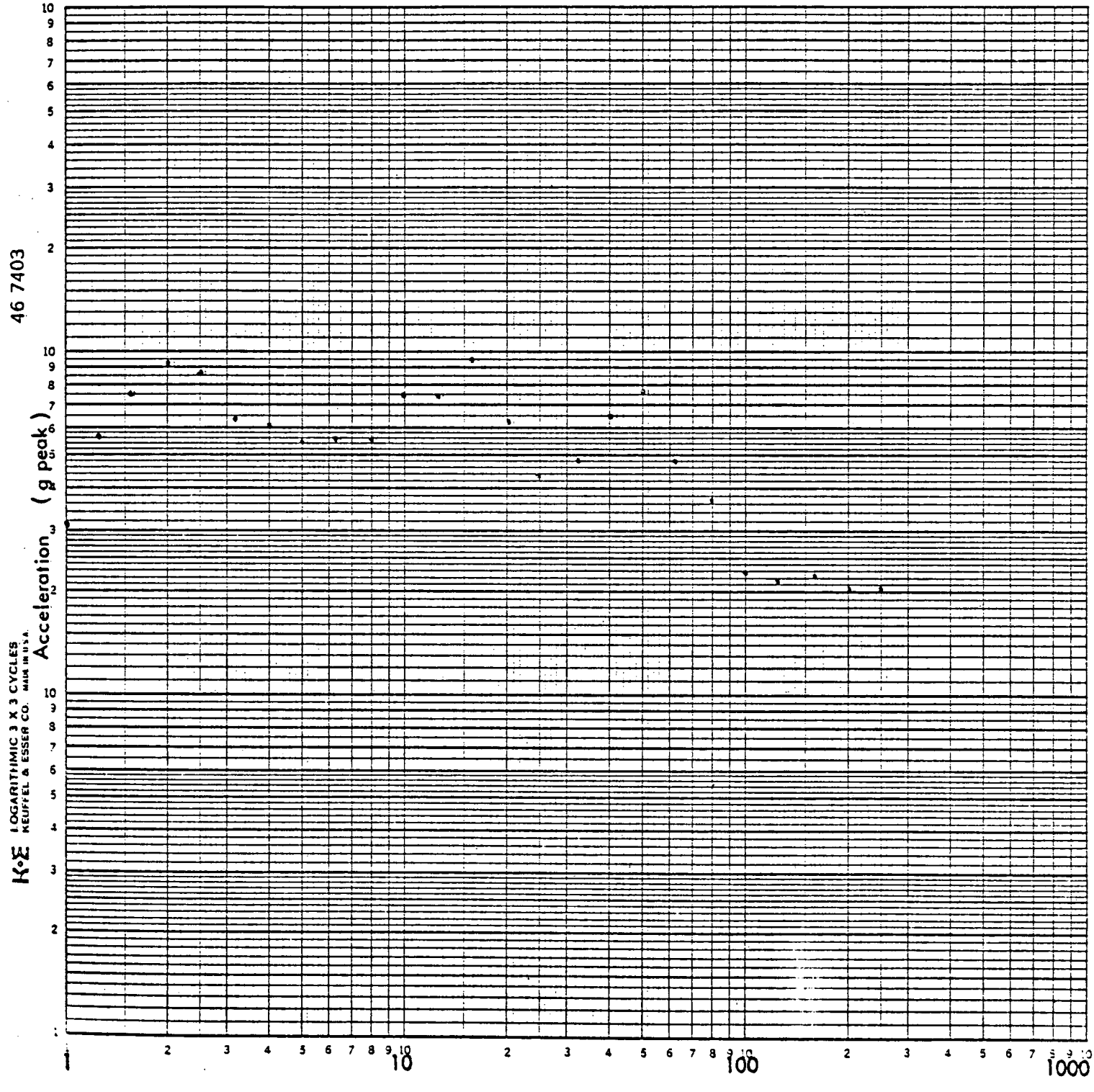
LOCATION NO. 41 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING | % |



AXIS S-S/VERT

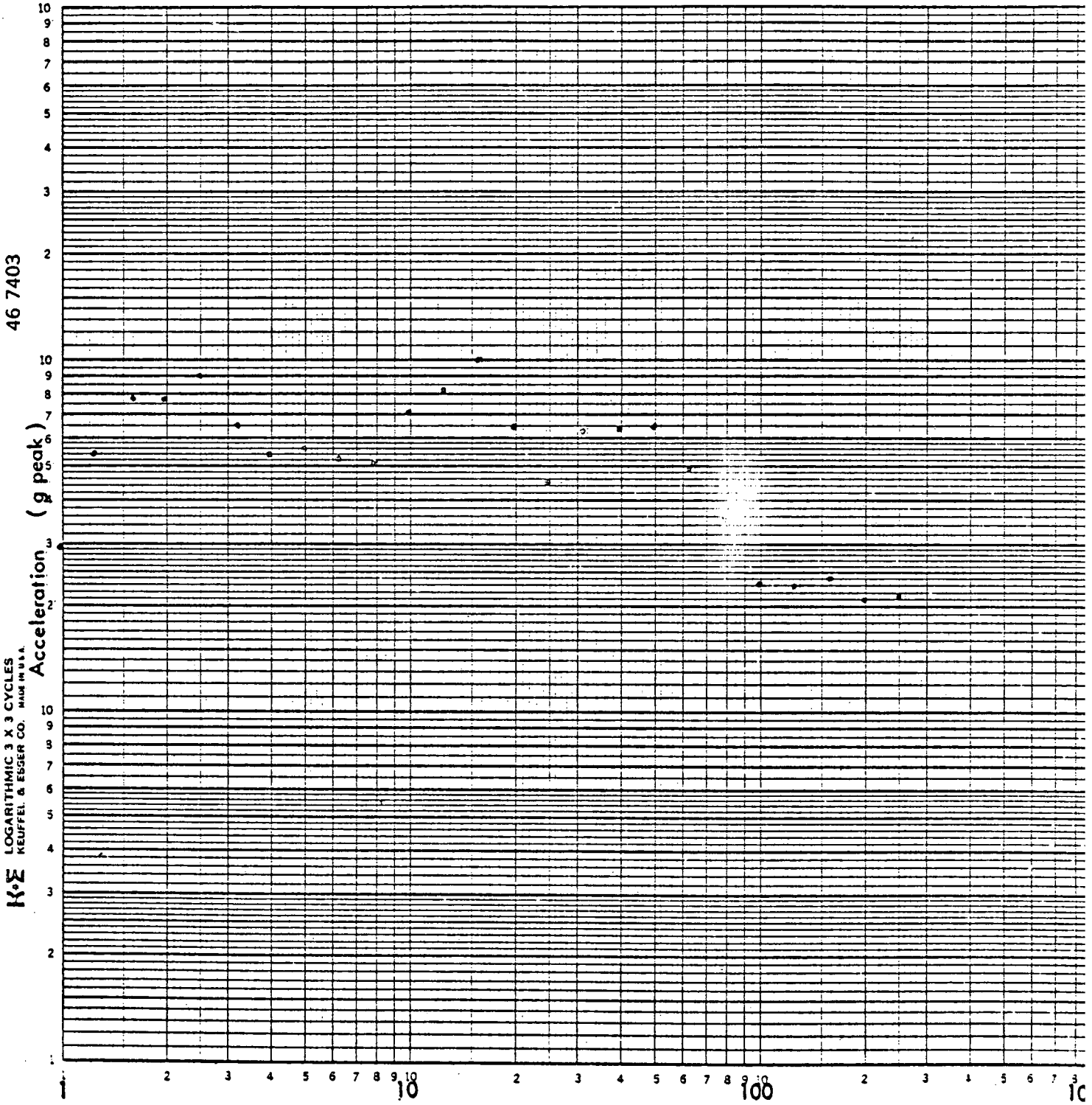
LOCATION NO. 42 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

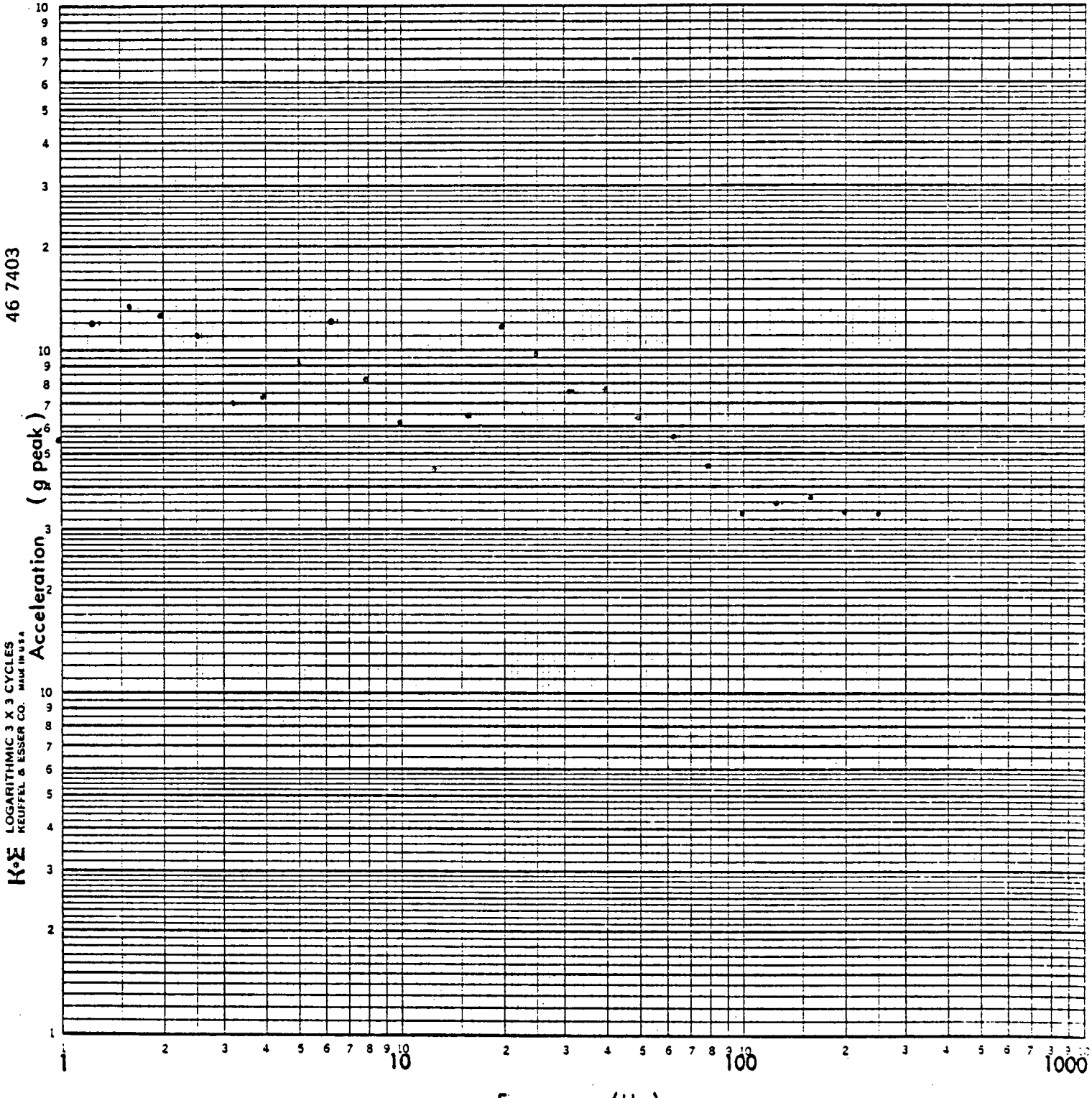
LOCATION NO. 41 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

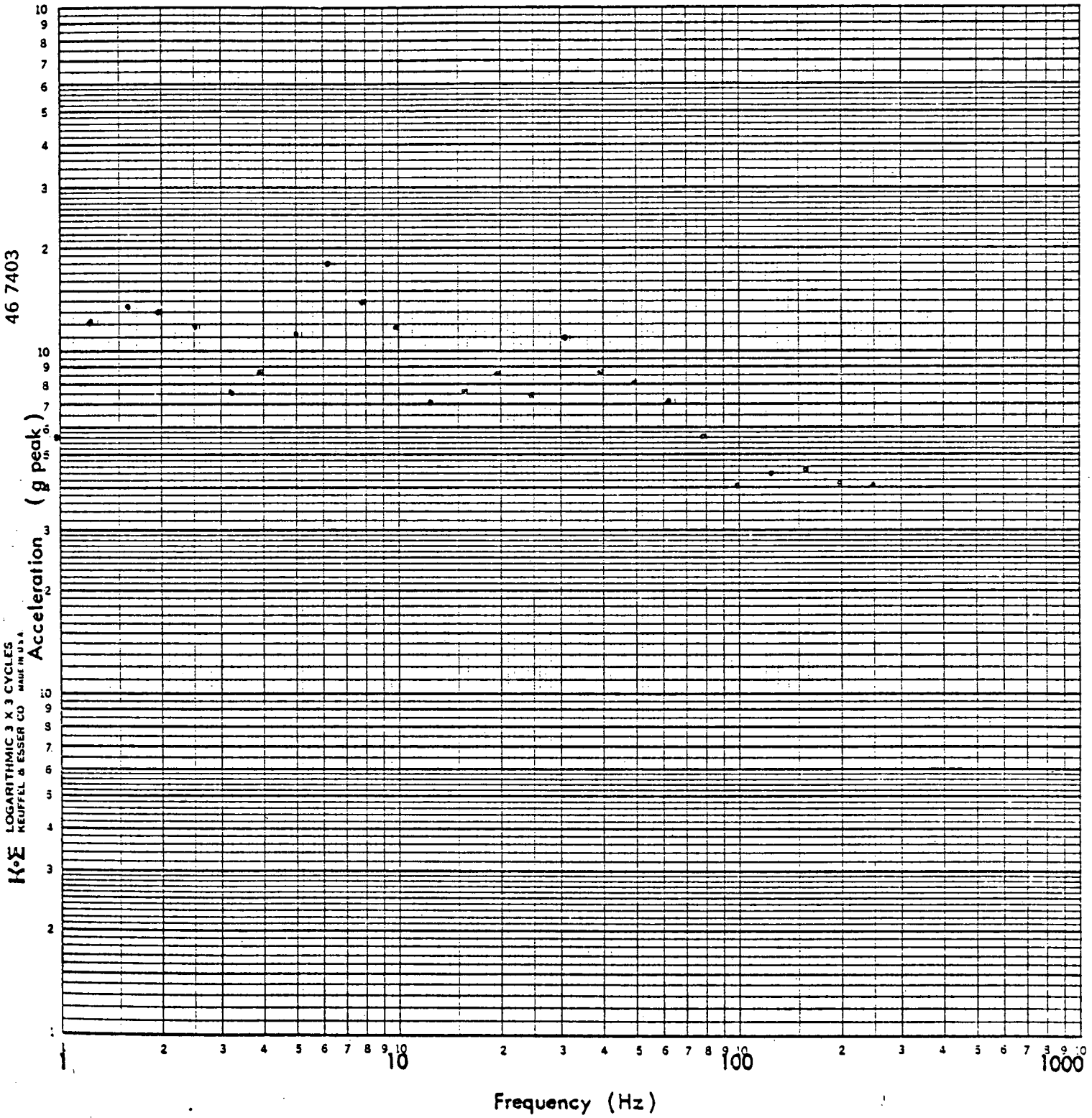
LOCATION NO. 43 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [/ %]



AXIS S-S/VERT

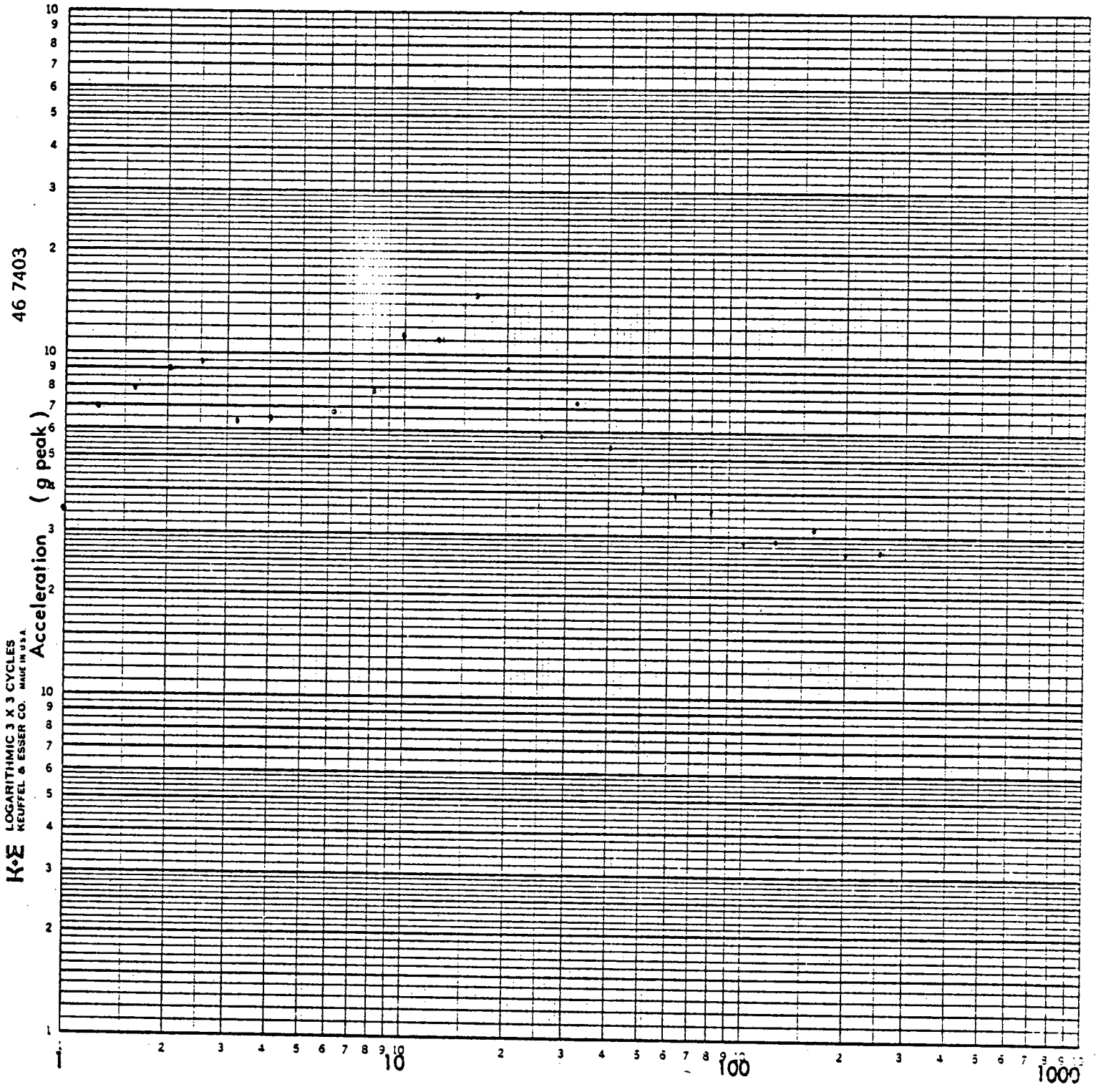
LOCATION NO. 44 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS S-S/VERT

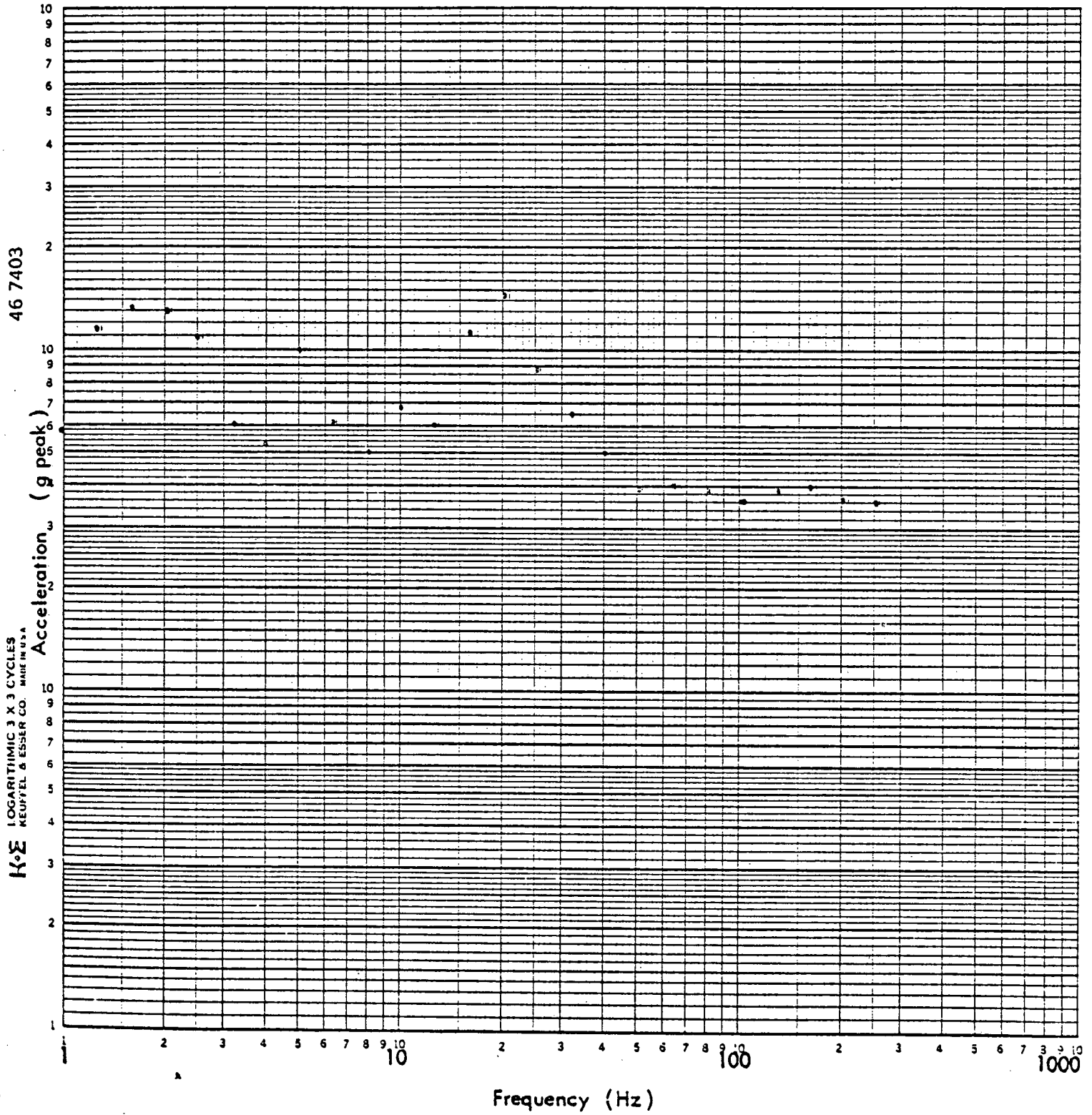
LOCATION NO. 45 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S / VERT

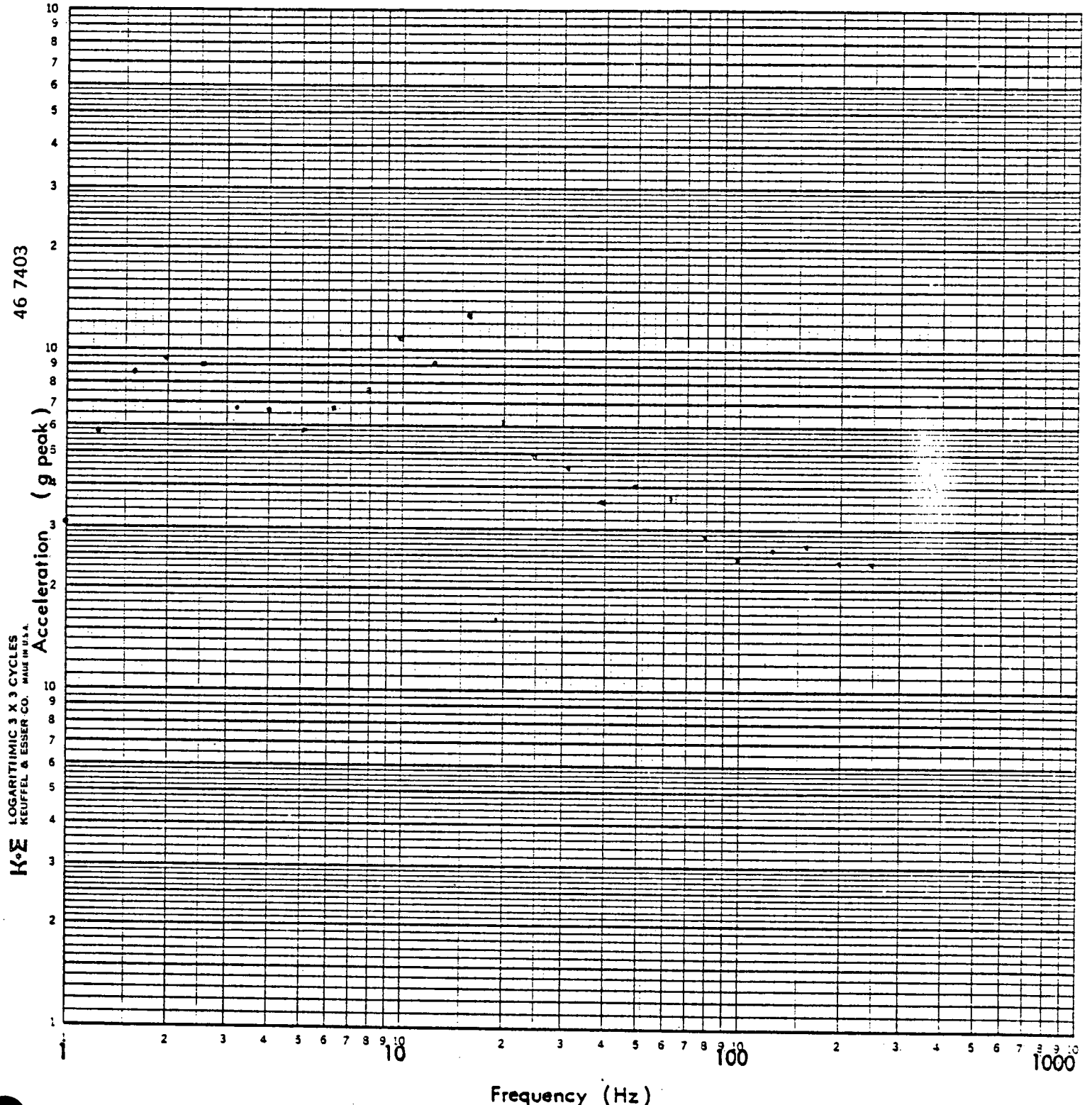
LOCATION NO. 46 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

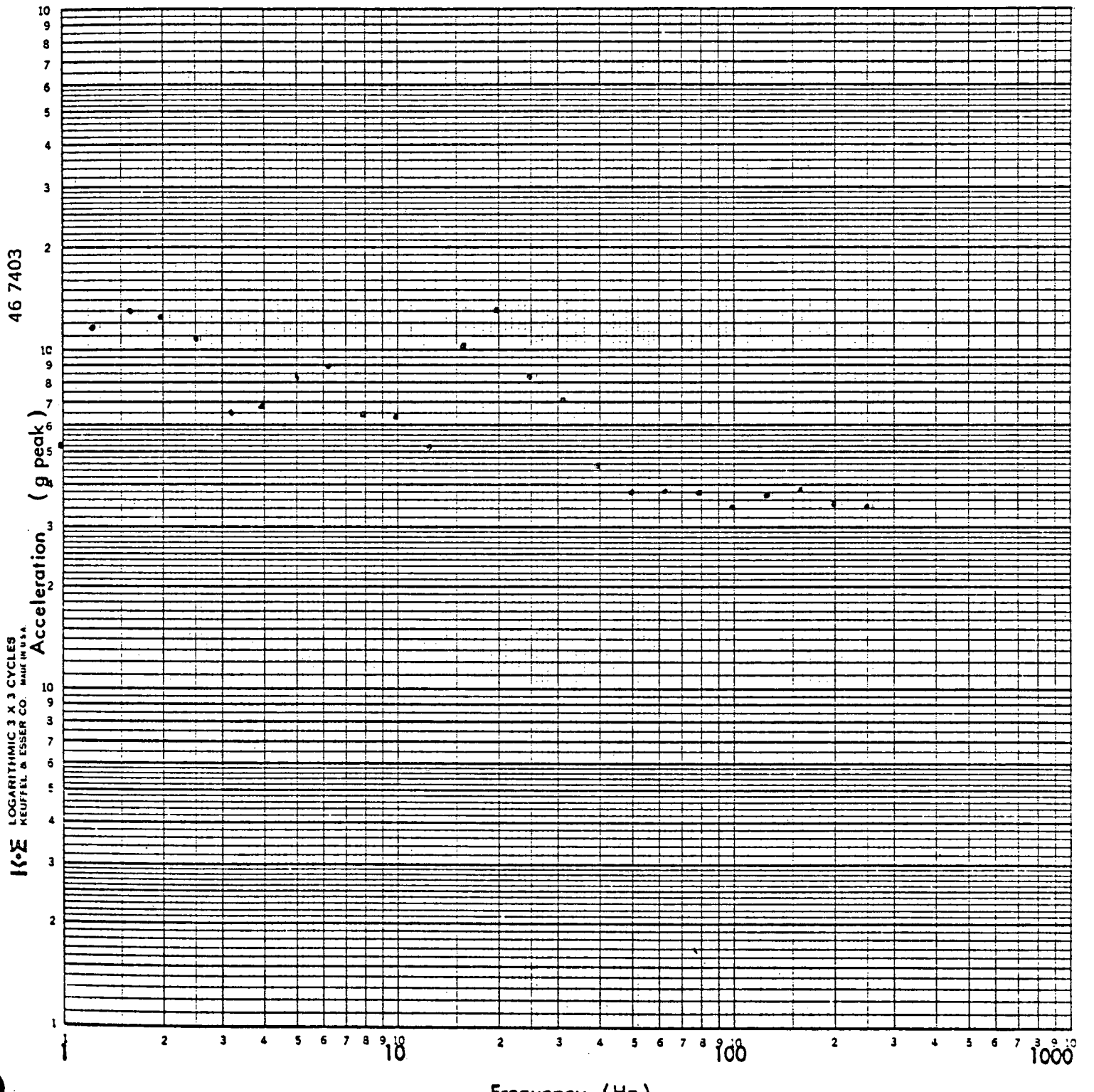
LOCATION NO. 47V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS S-S/VERT

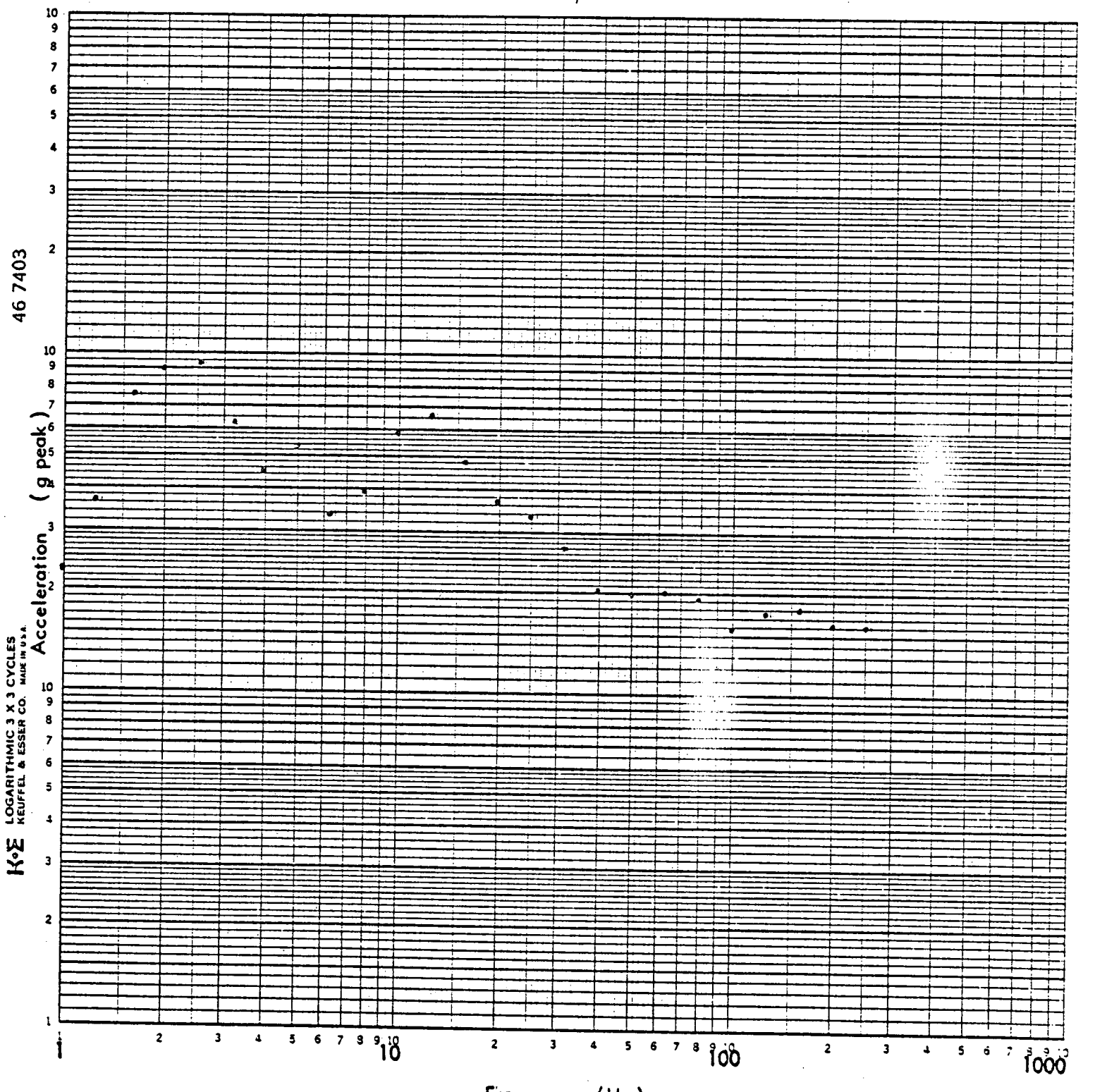
LOCATION NO. 48 S-S

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☑ 1000 ☐

DAMPING 1 %



AXIS S-S / VERT

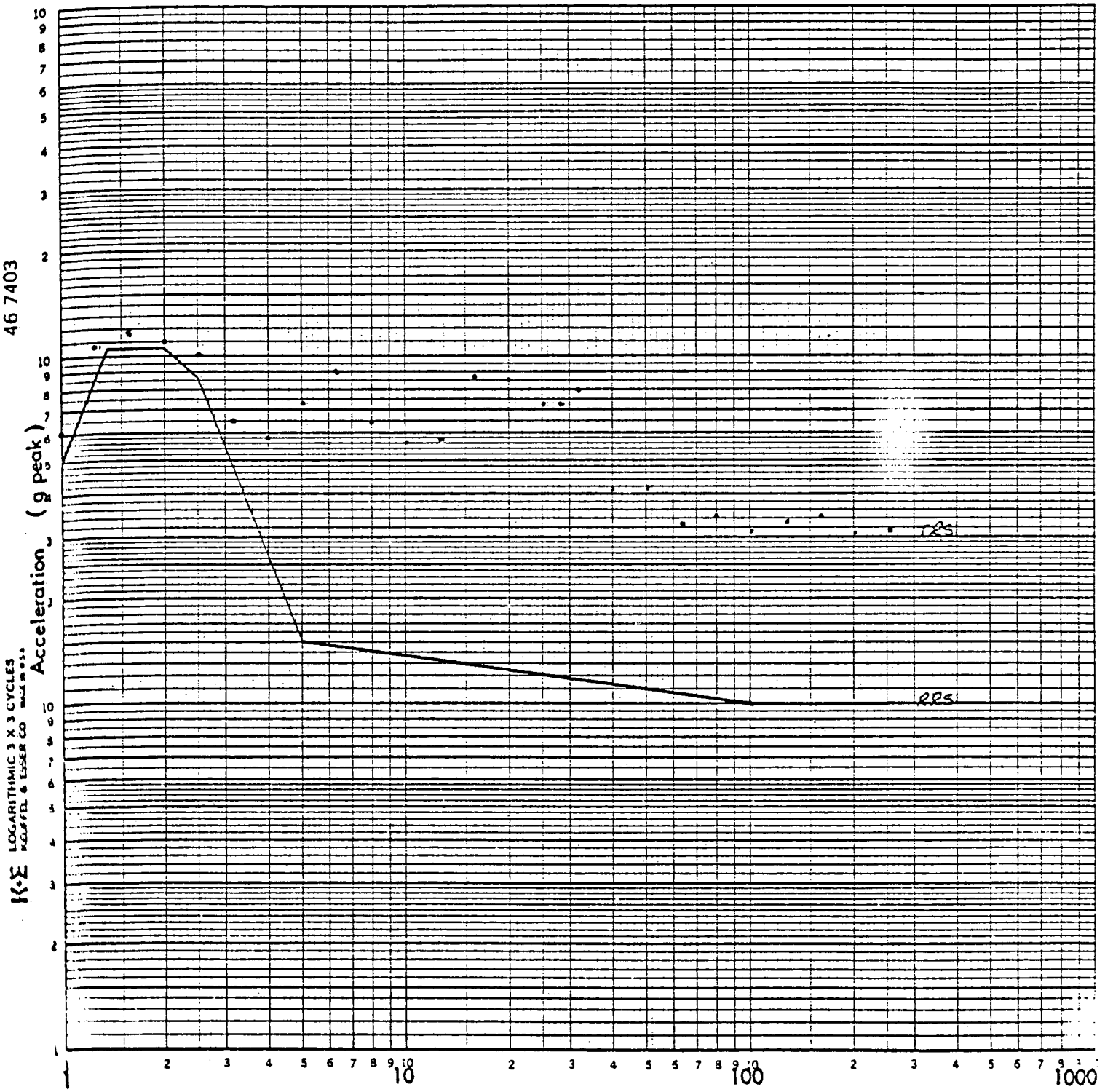
LOCATION NO. 49 V

TEST RUN NO. 19

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B / VERT

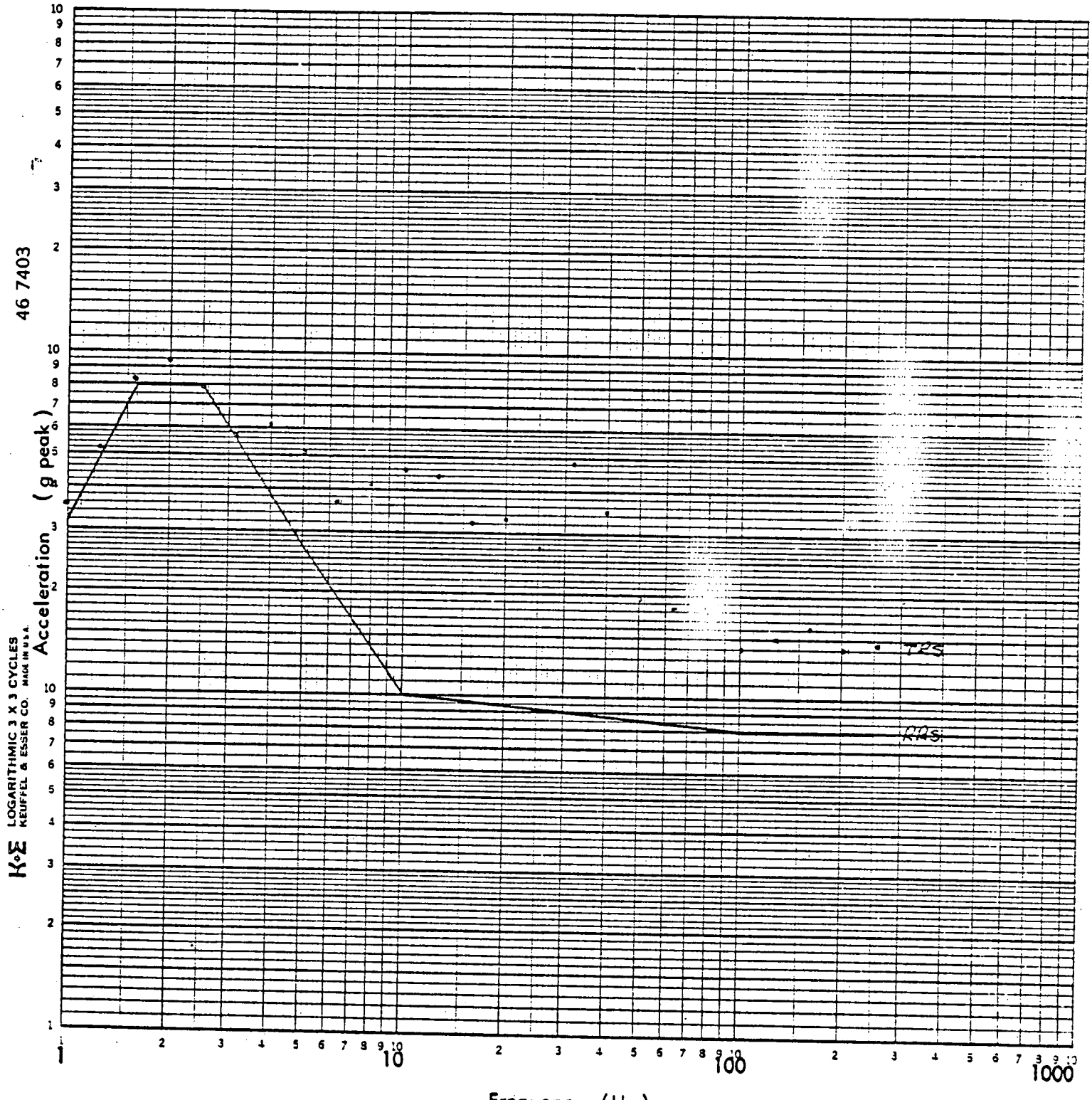
LOCATION NO. HCA

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS F-8/VERT

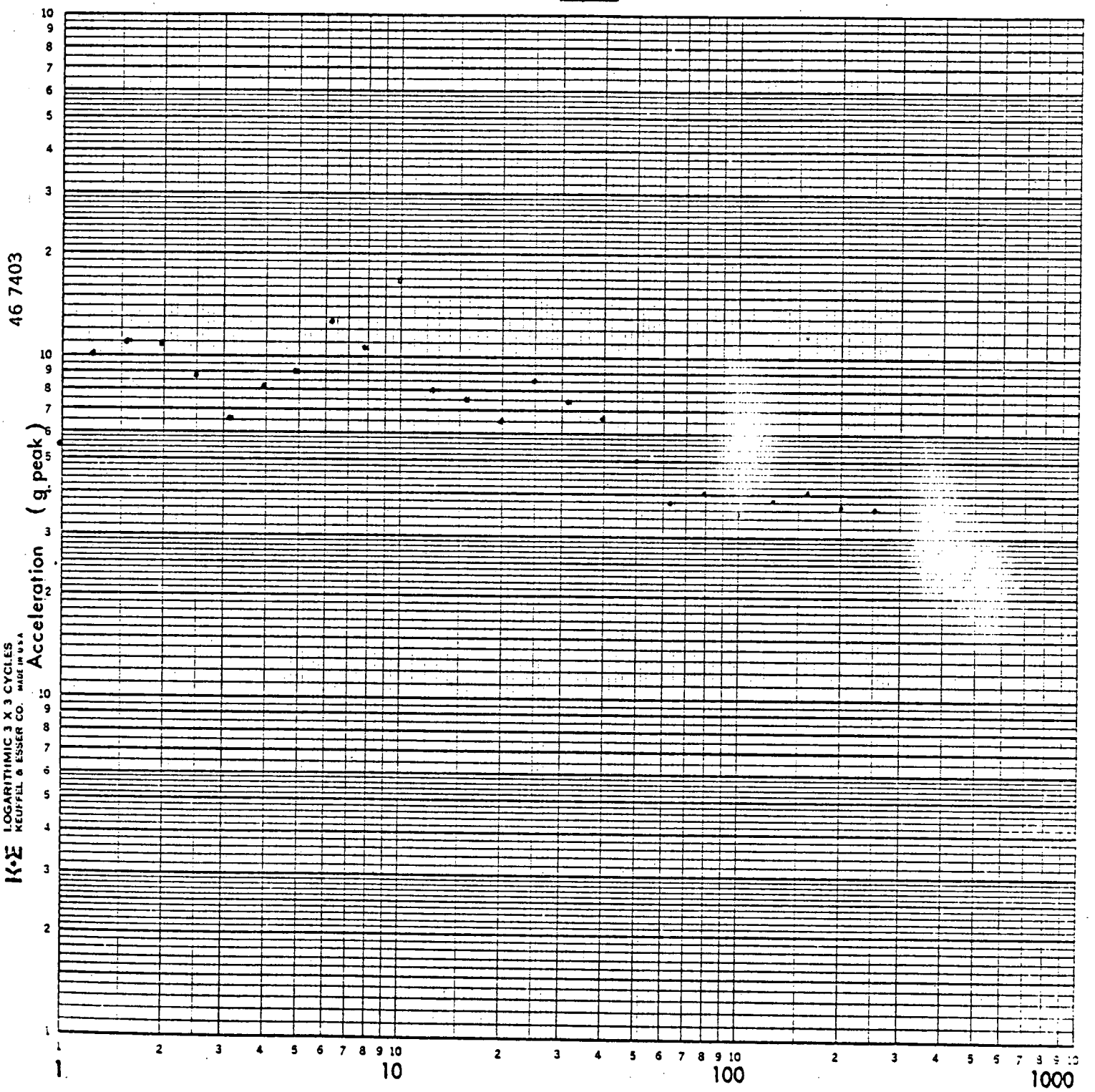
LOCATION NO. VCA

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS F-B/VERT

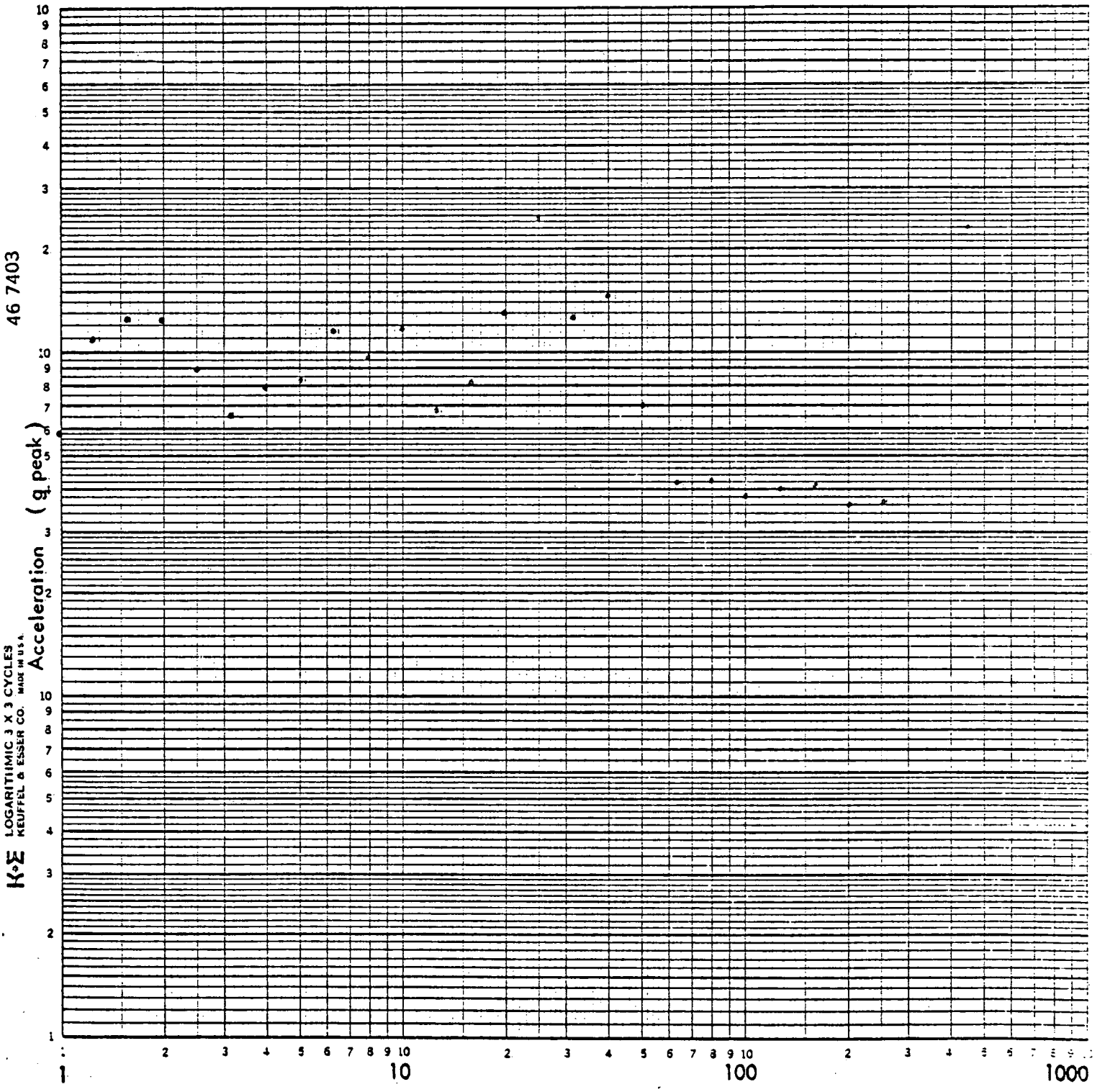
LOCATION NO. 1 F-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

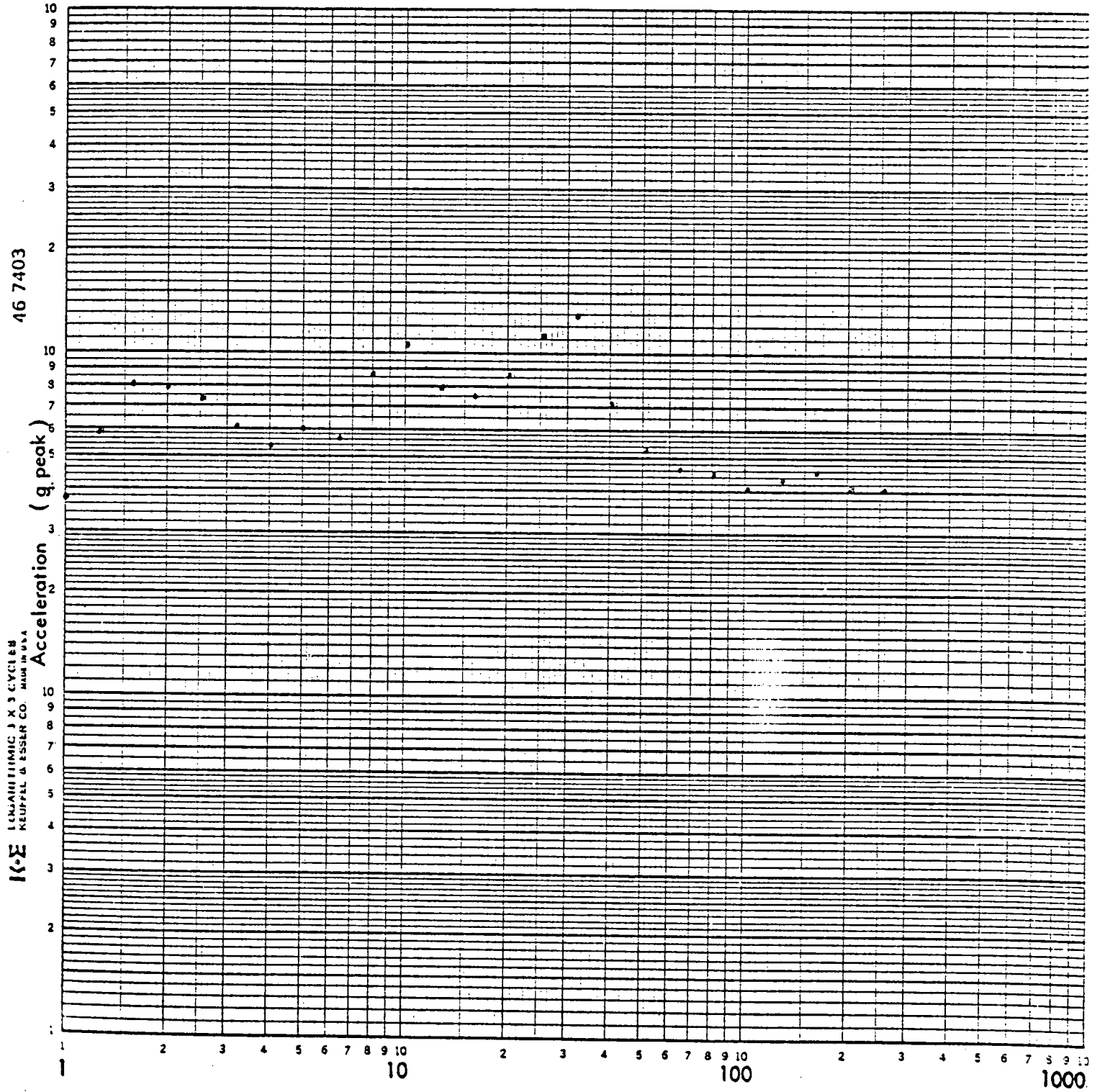
LOCATION NO. 2 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

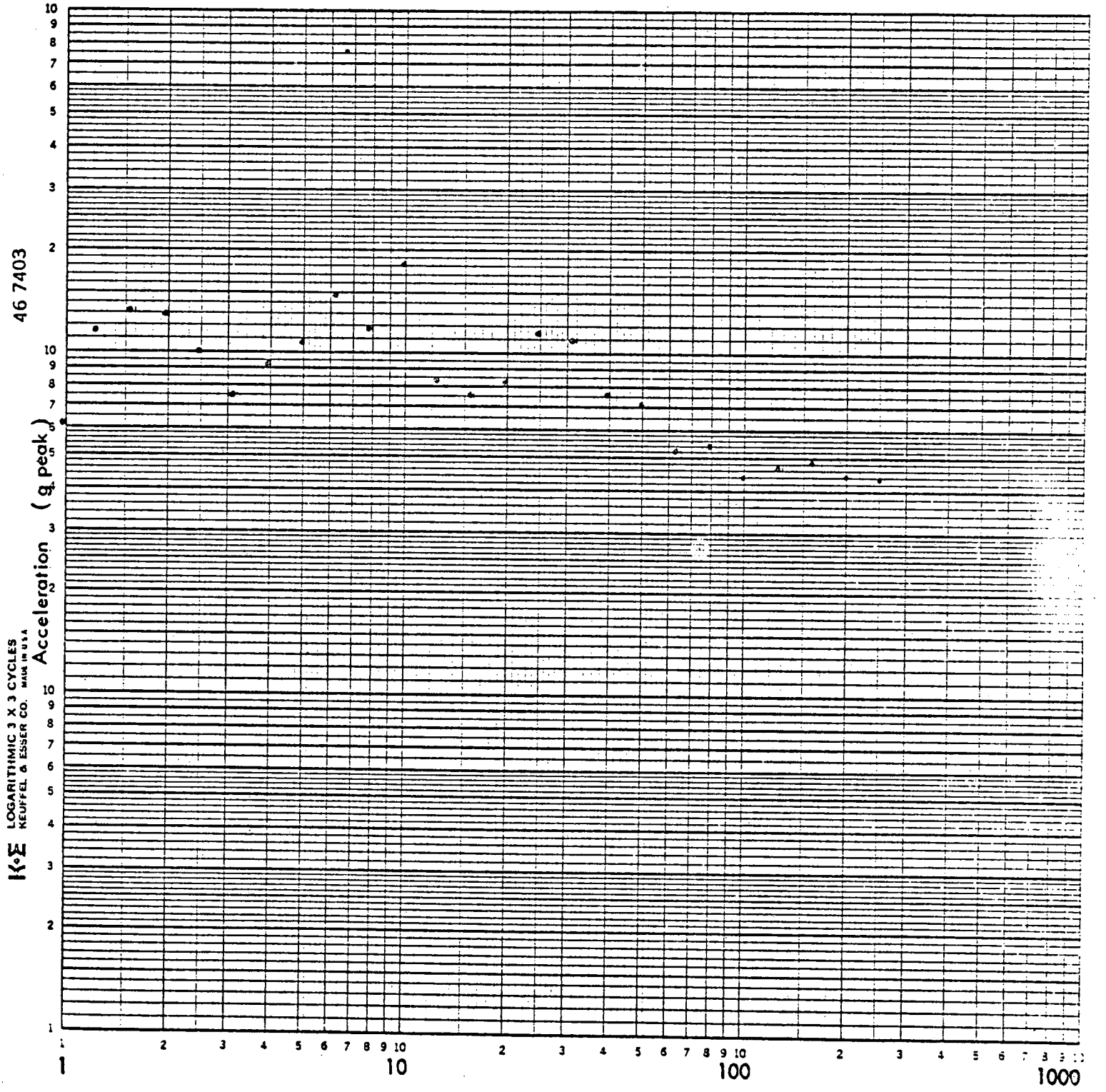
LOCATION NO. 3V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1] %



AXIS F-B/VERT

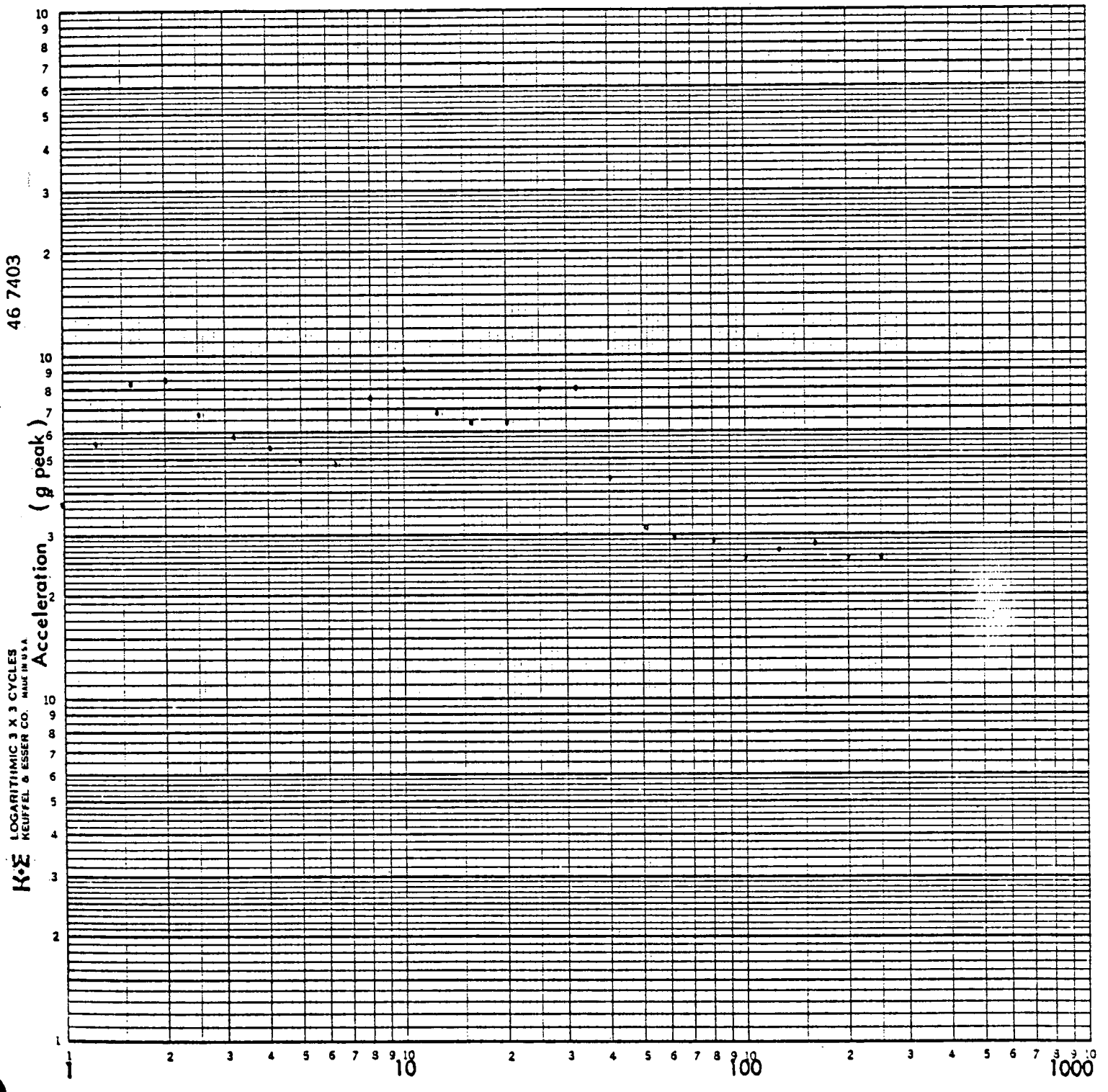
LOCATION NO. 4 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

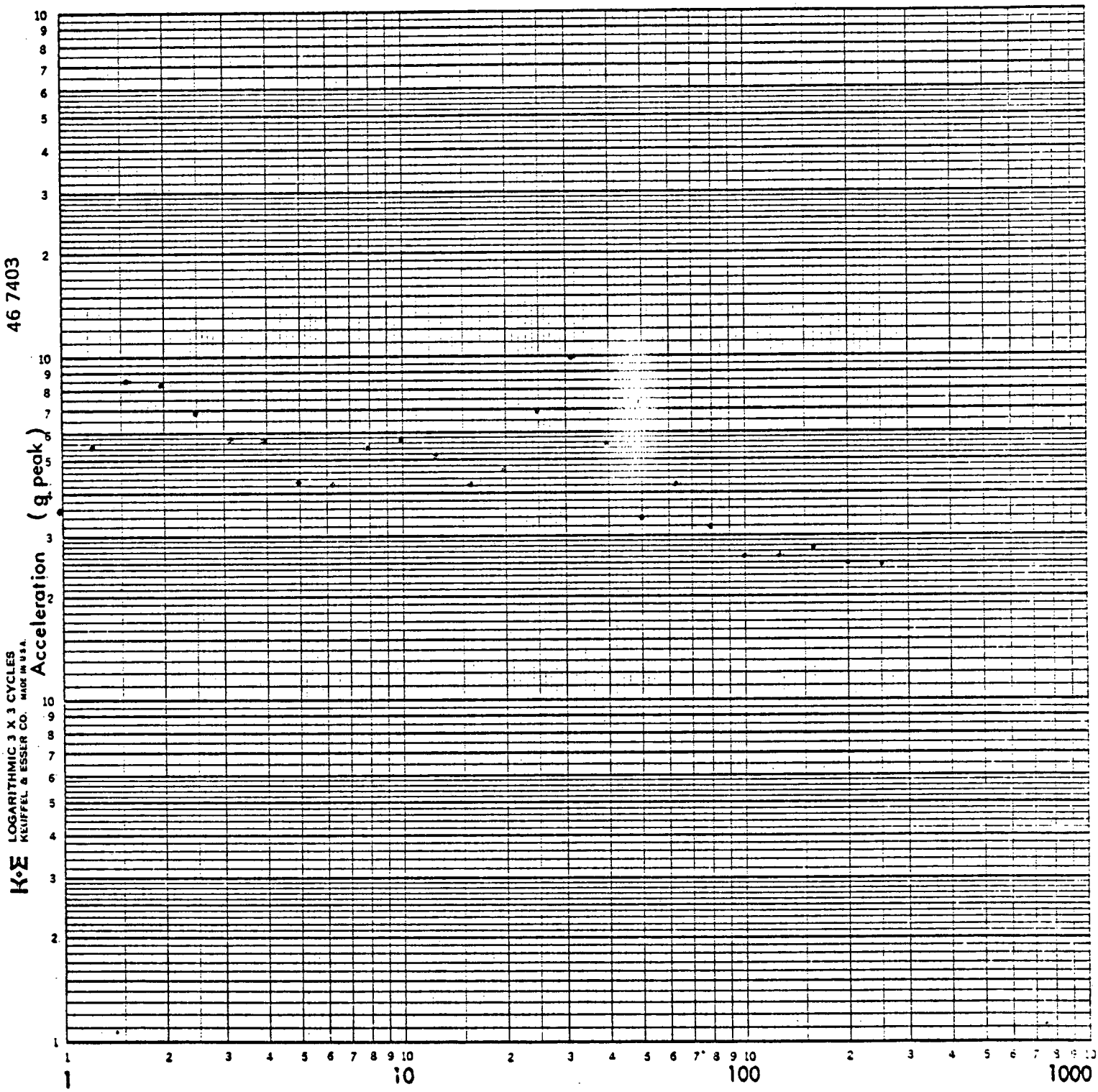
LOCATION NO. 5V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS FB/Vert

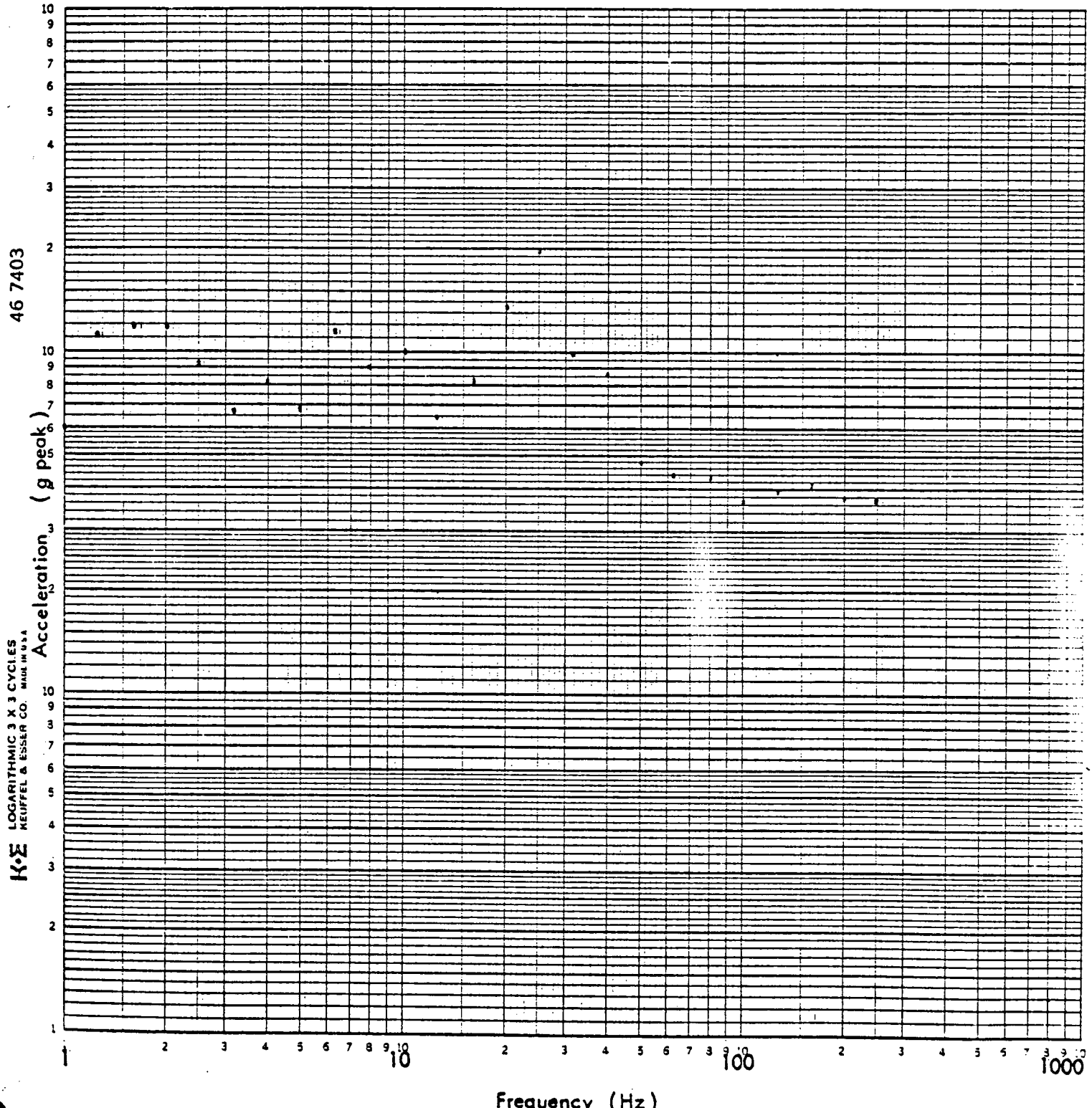
LOCATION NO. 6Y

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

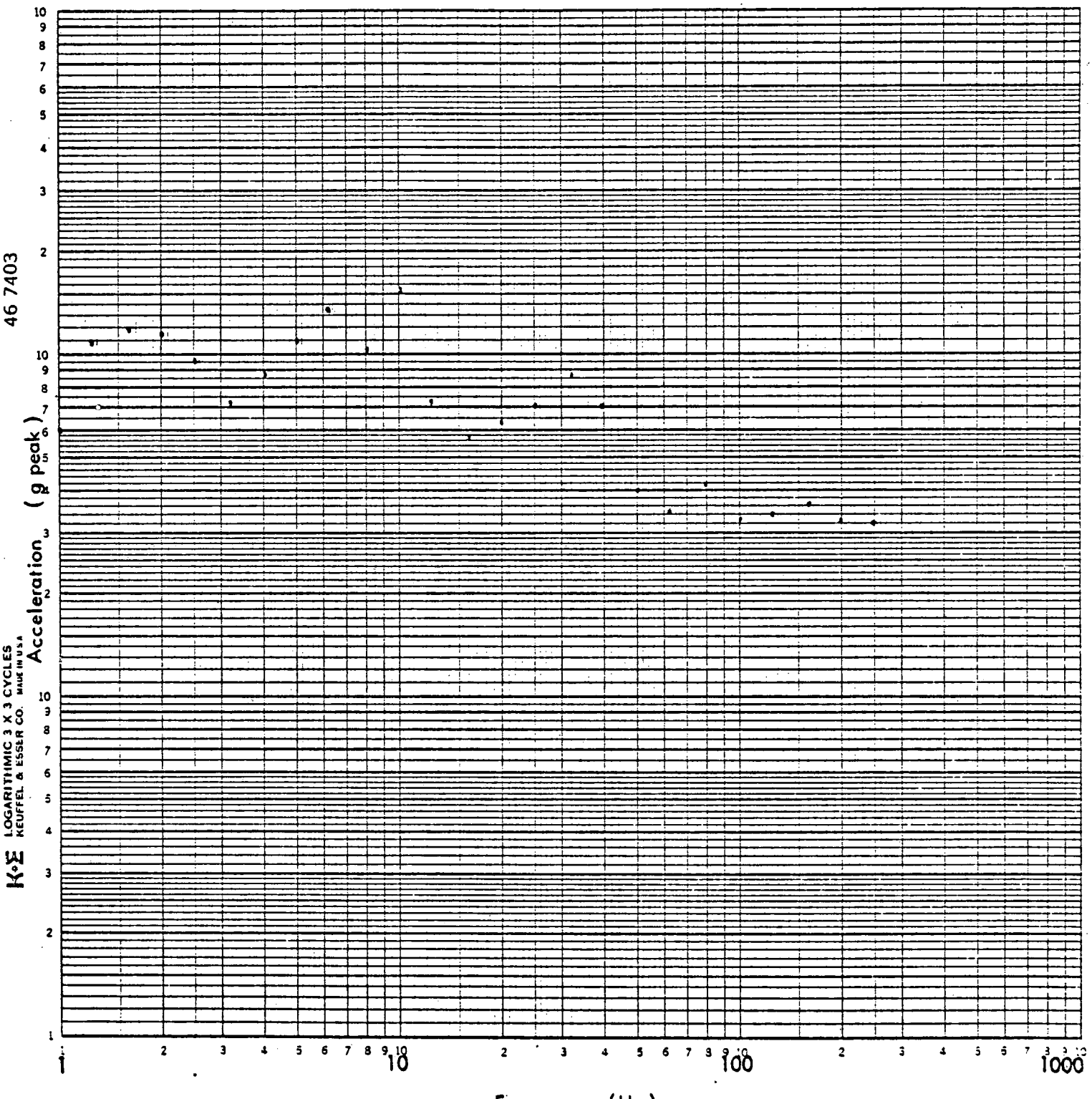
LOCATION NO. 7 F B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1%]



AXIS F-B/VERT

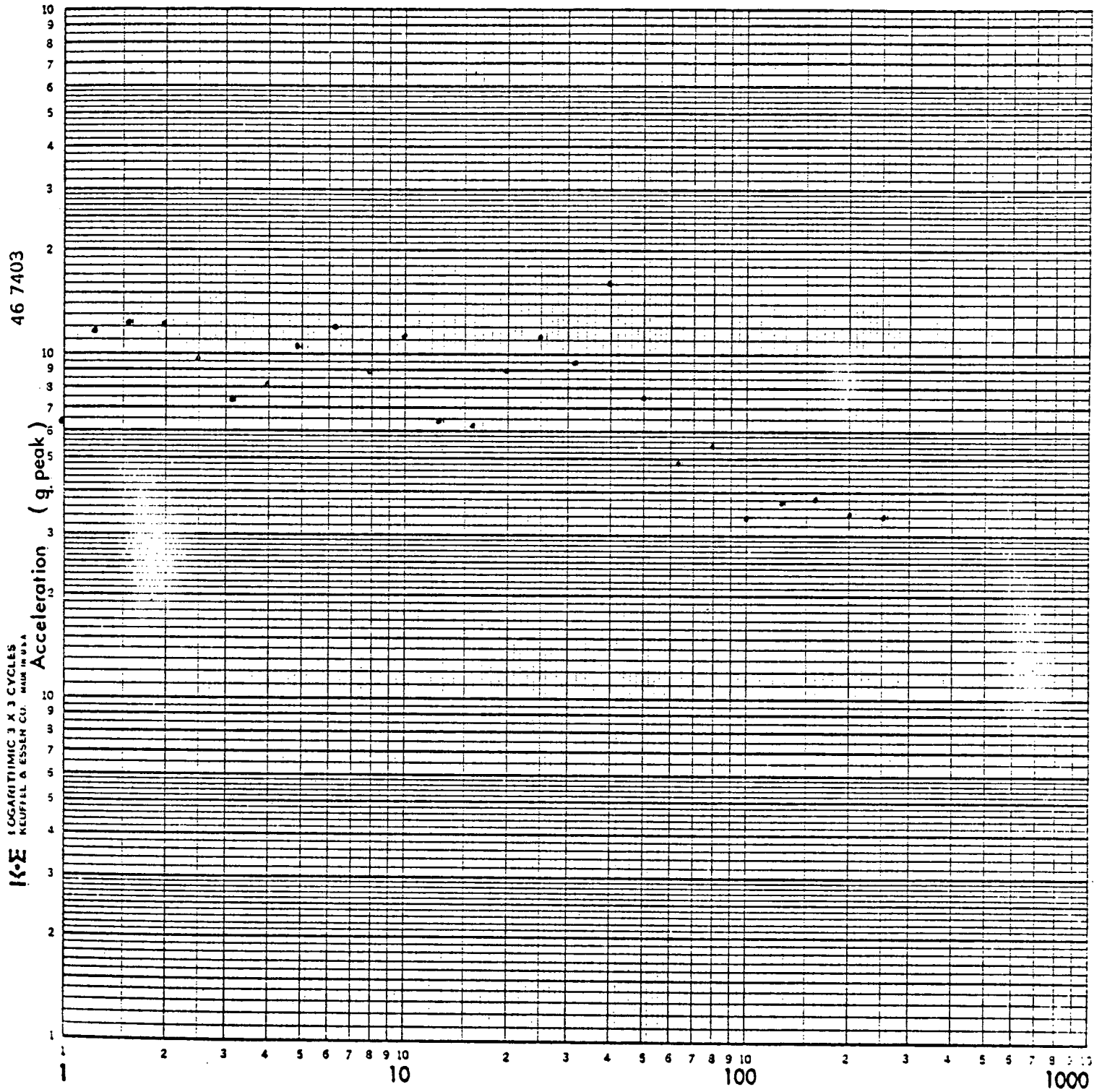
LOCATION NO. 8 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [5 %]



AXIS F-B/VERT

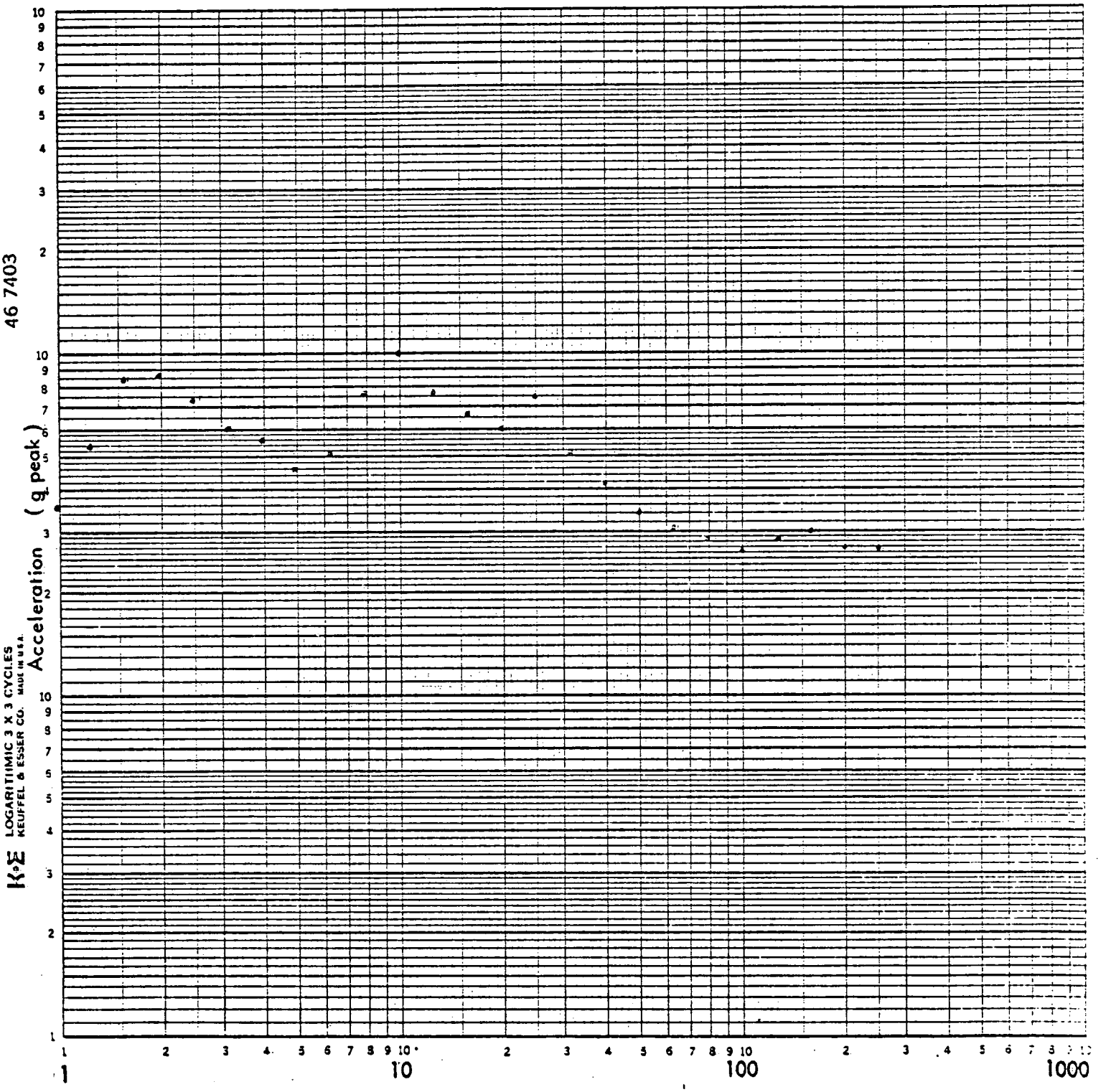
LOCATION NO. 9 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS FB/VERT

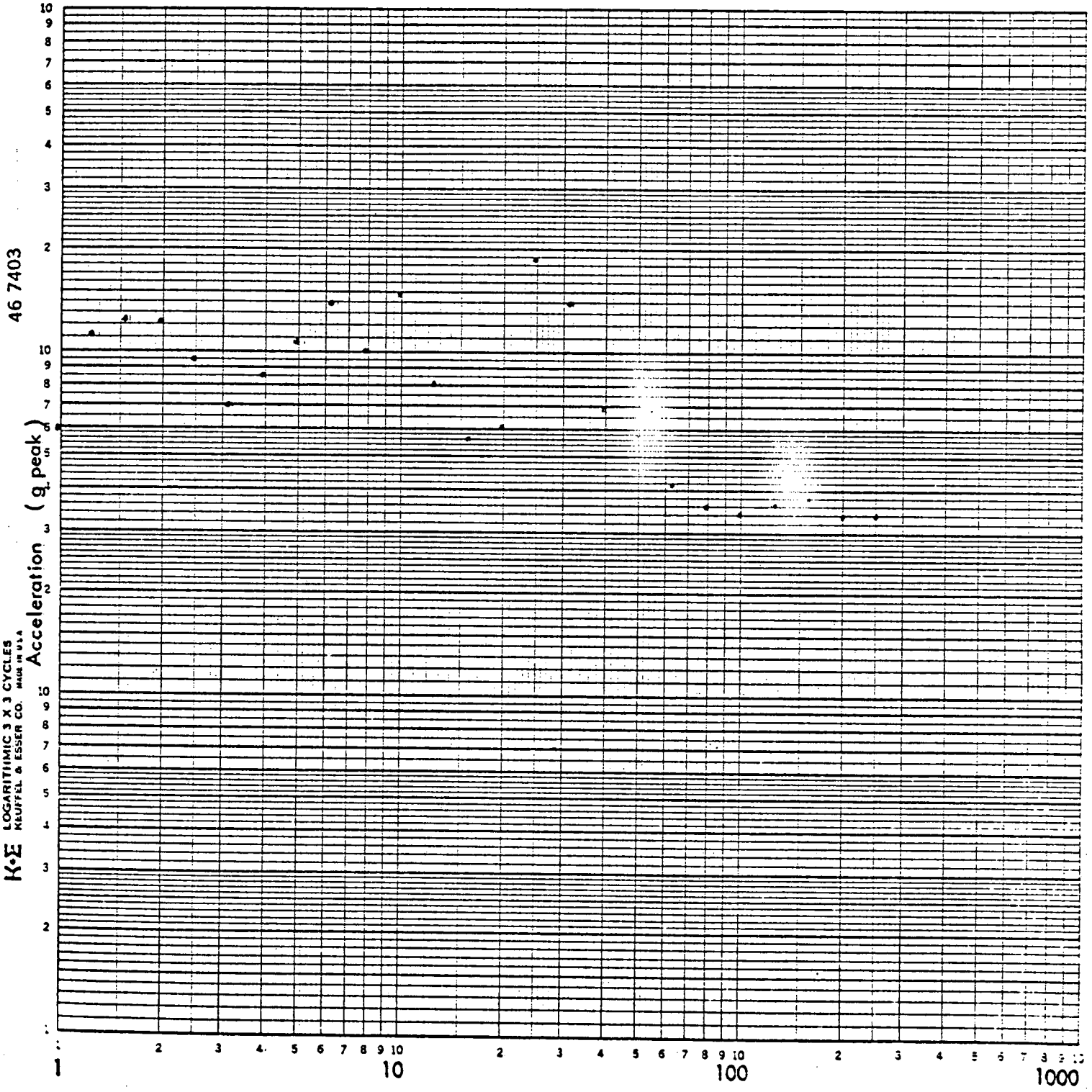
LOCATION NO. 10 V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

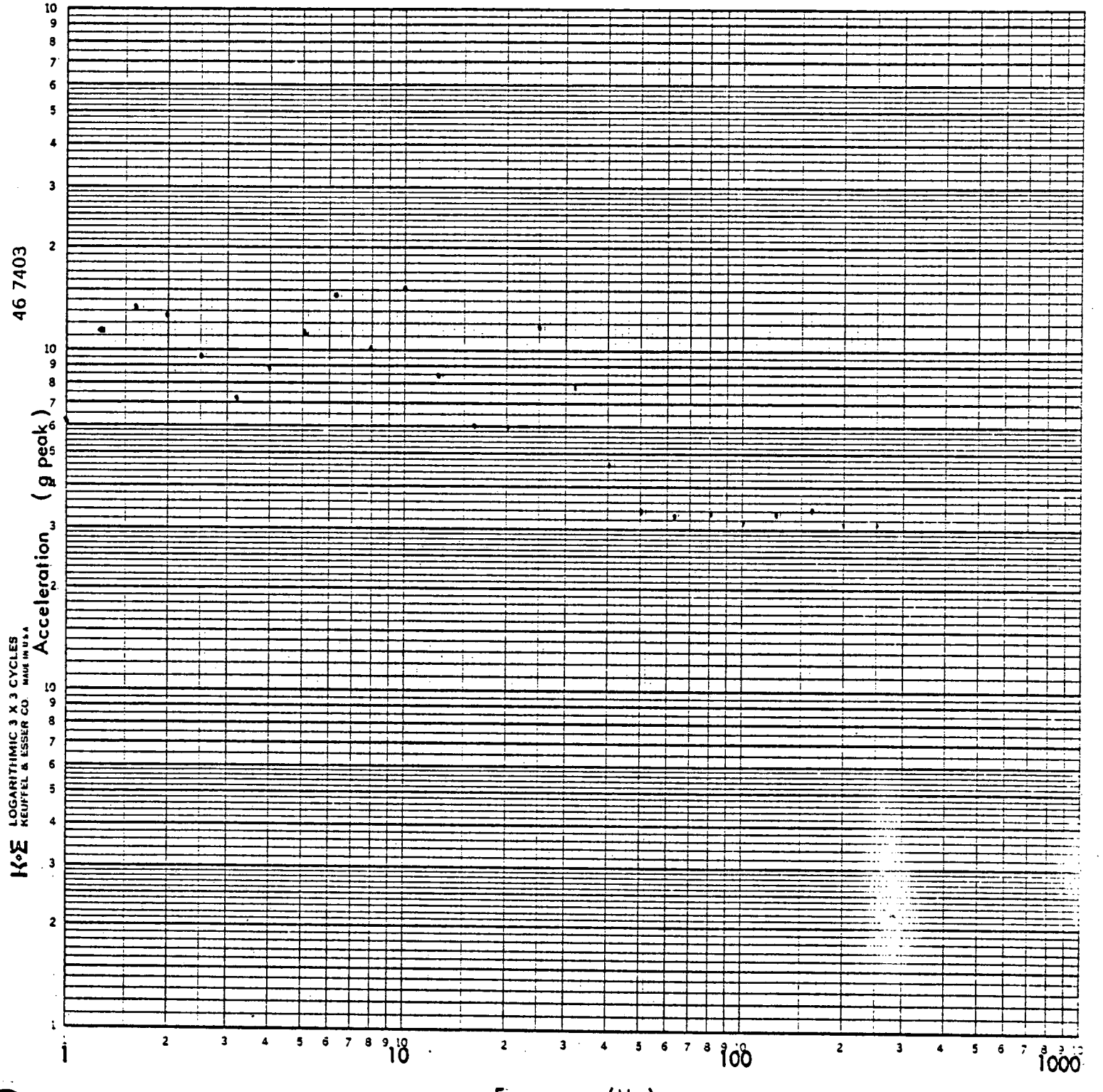
LOCATION NO. 11 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

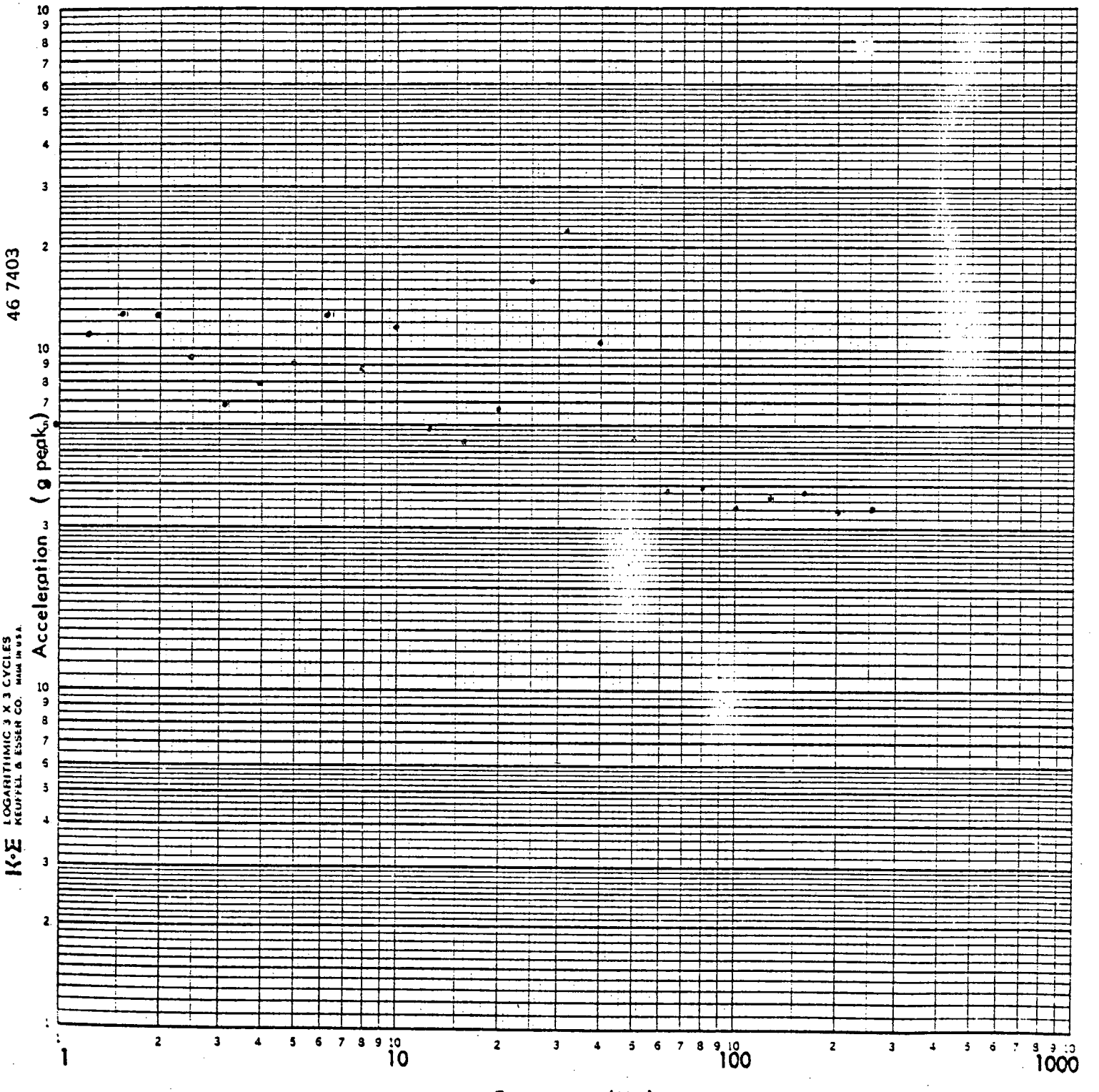
LOCATION NO. 12 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

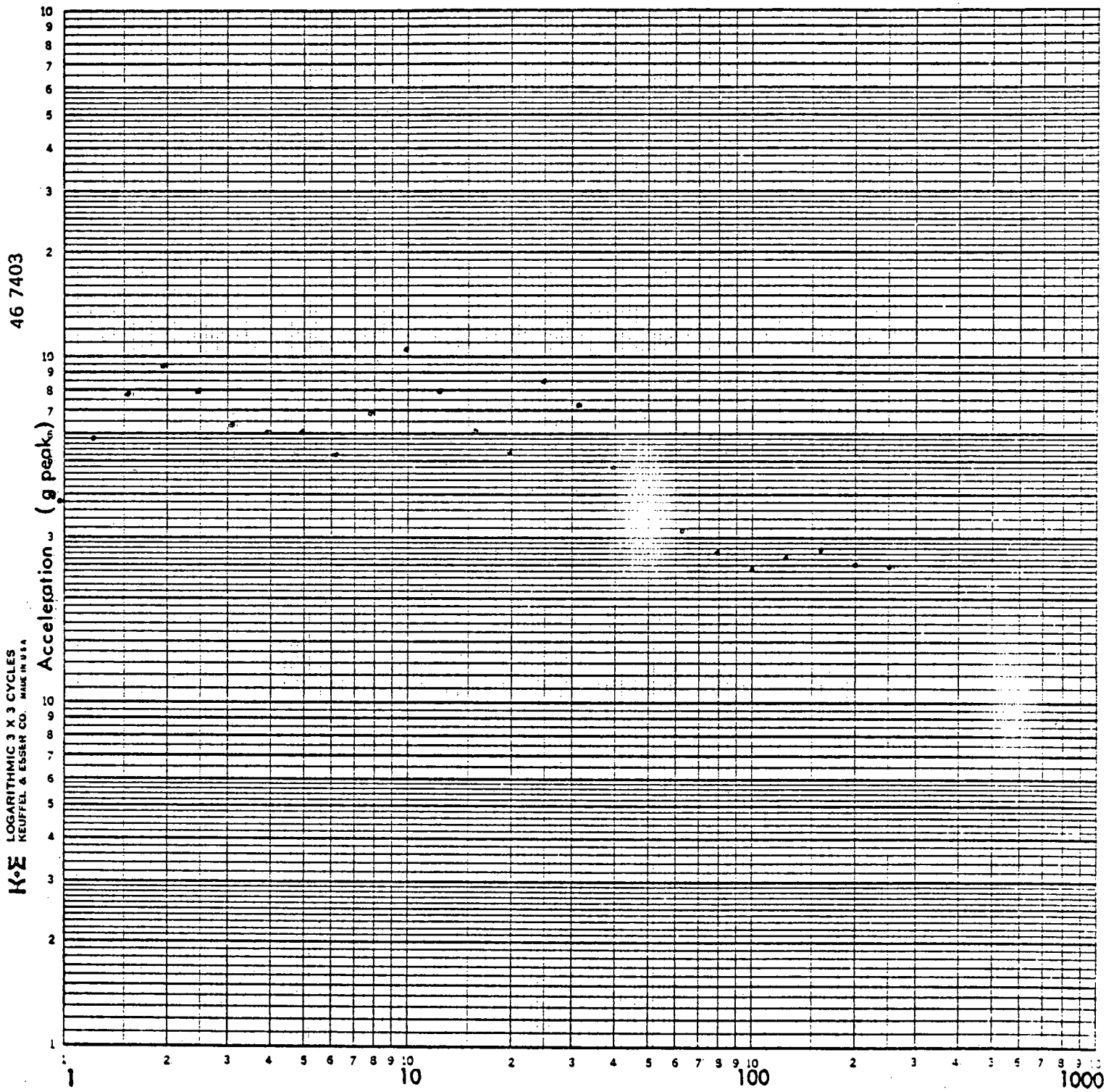
LOCATION NO. 13 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

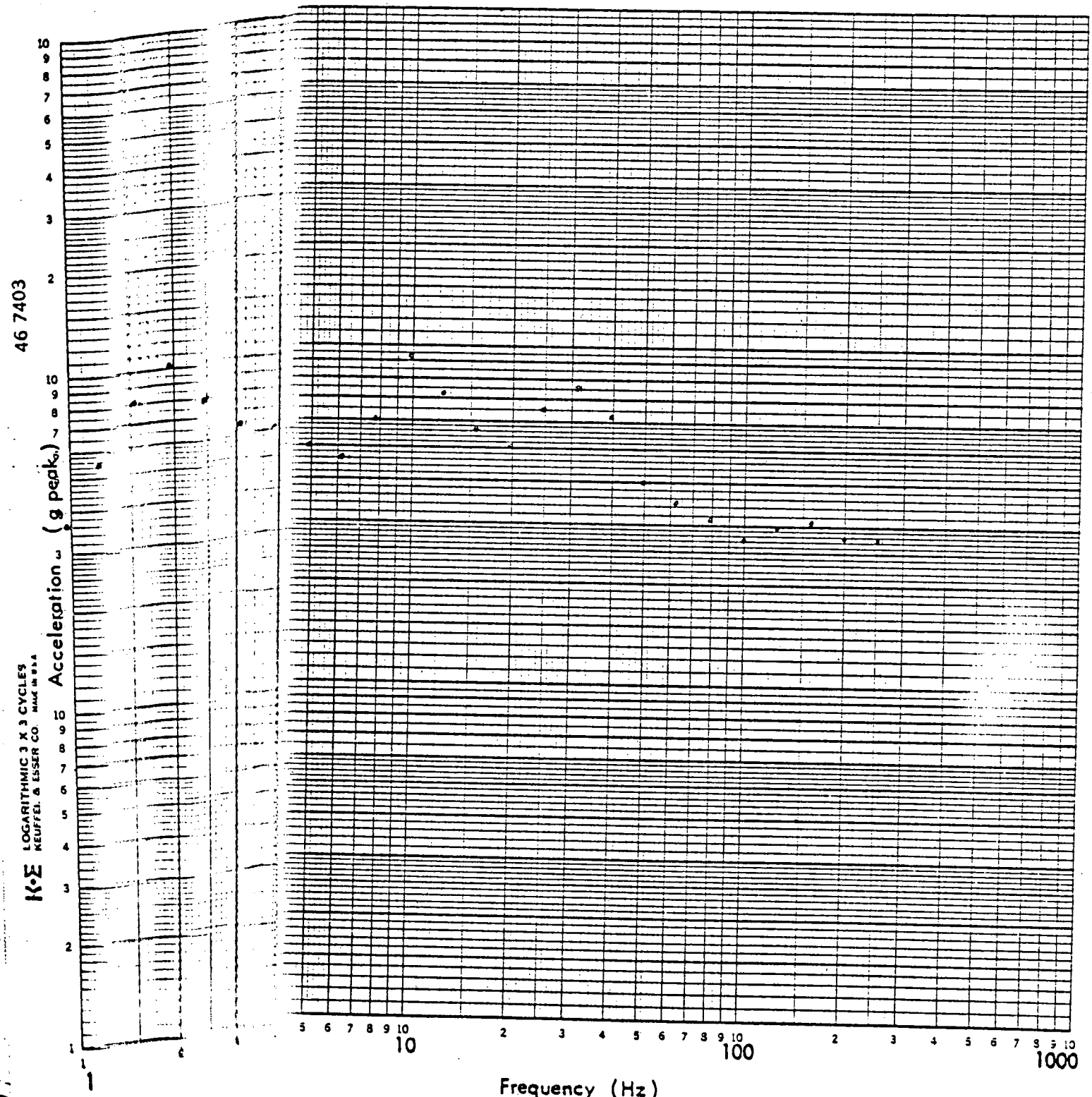
LOCATION NO. 14V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-R/VERT

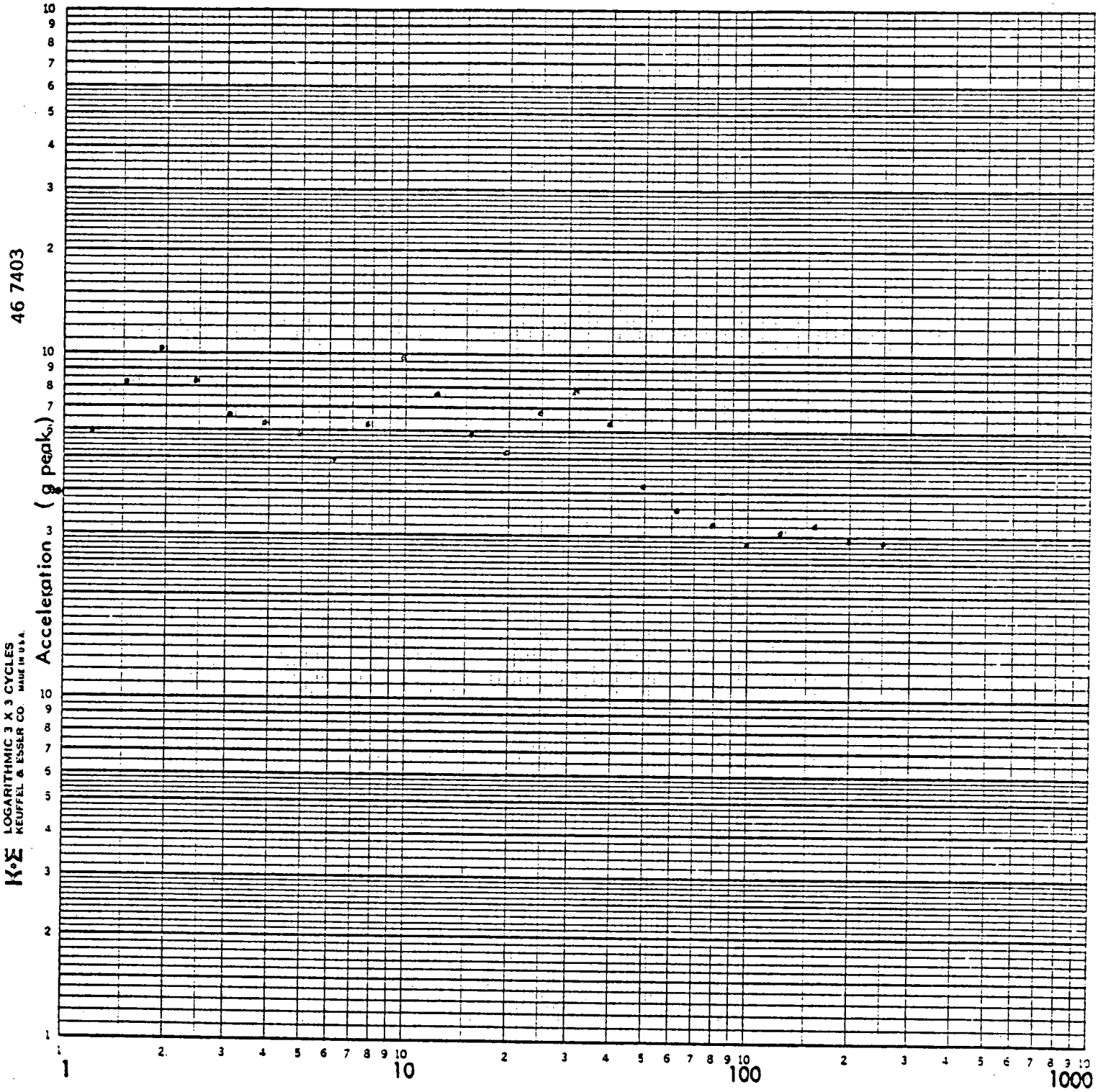
LOCATION NO. 15Y

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-B/VERT

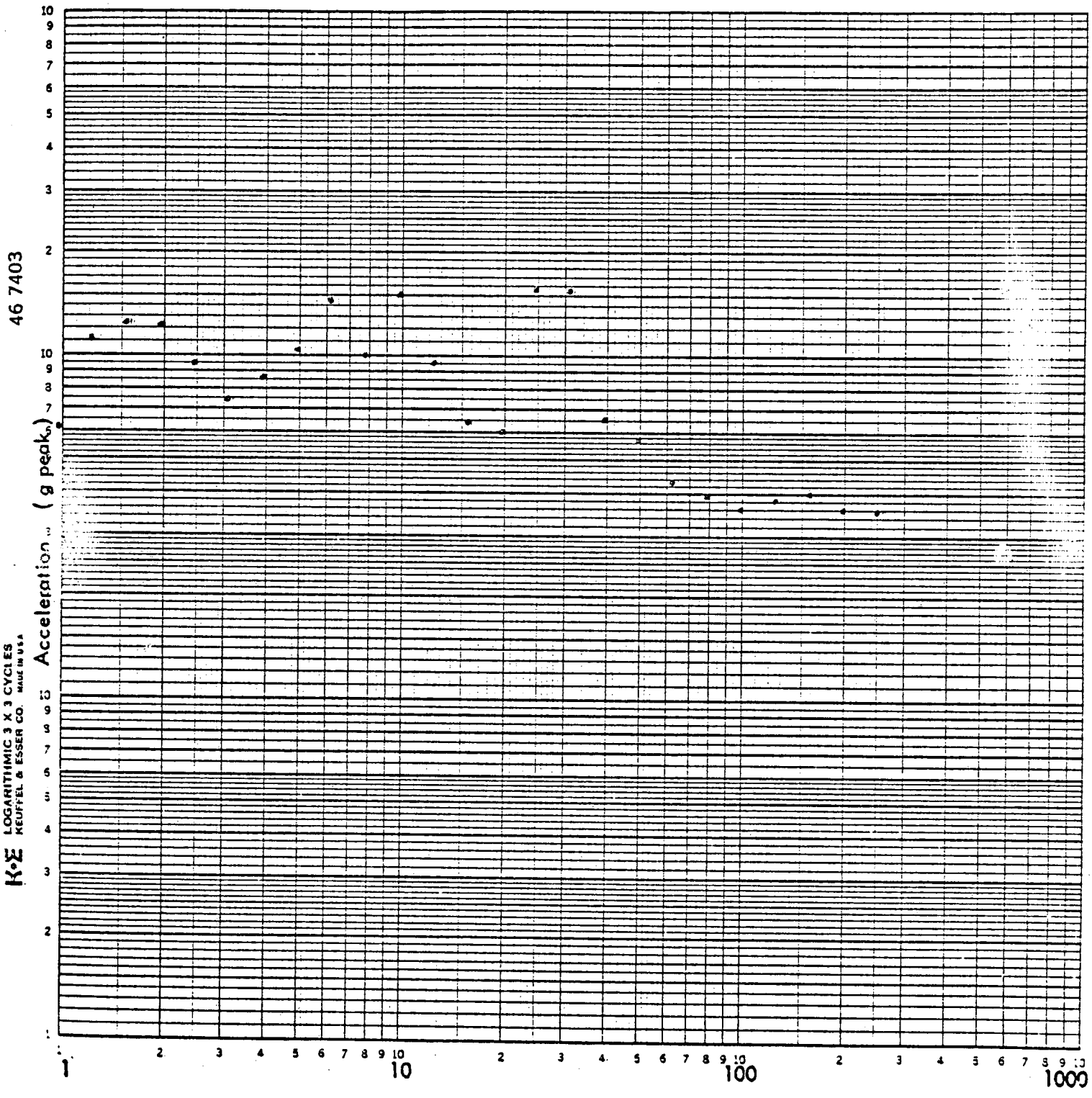
LOCATION NO. 16V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

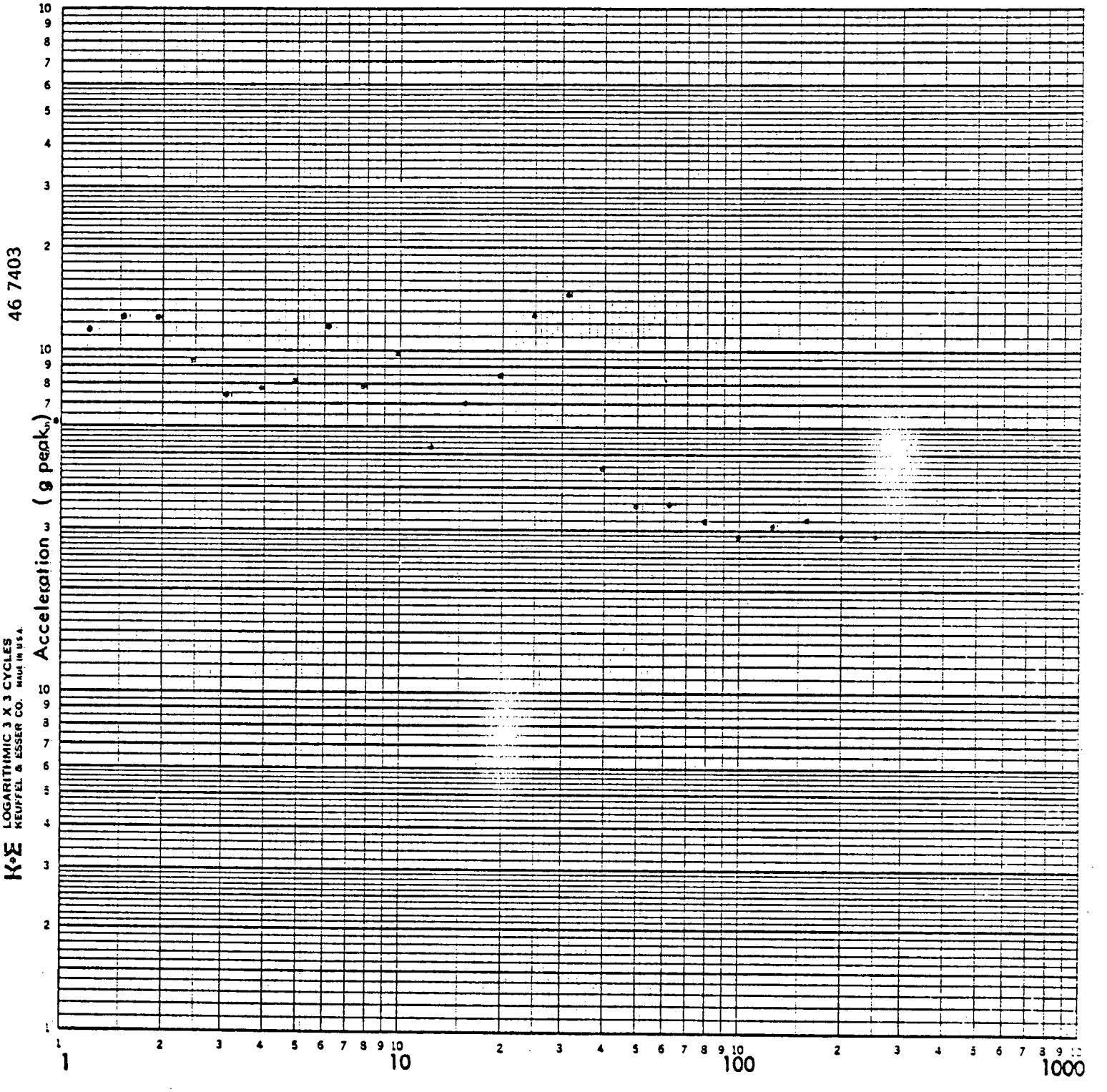
LOCATION NO. 17 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

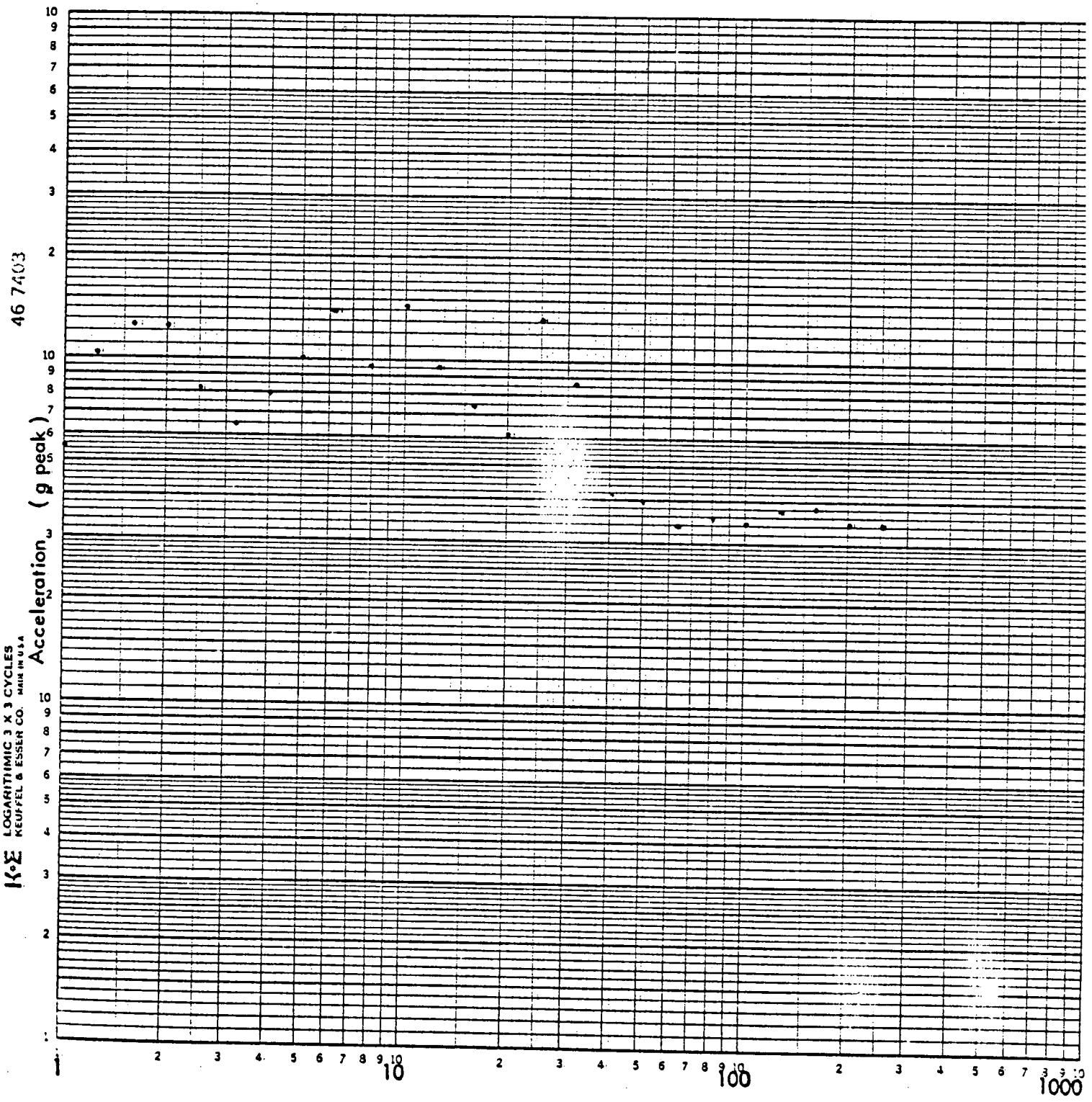
LOCATION NO. 18 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☐ 1000 ☐

DAMPING [ ] %



Frequency (Hz)

AXIS E-W Vert

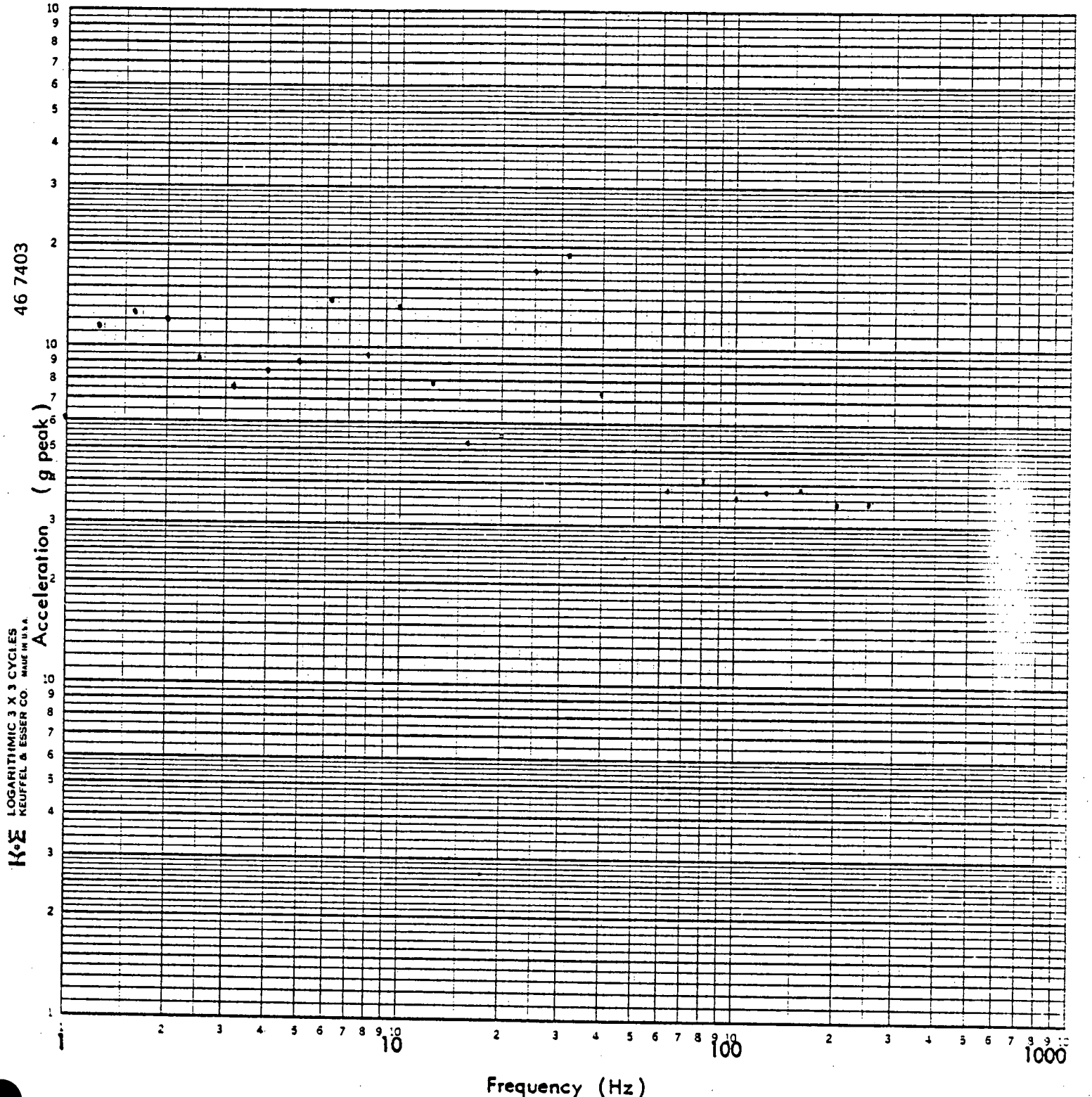
LOCATION NO. 19 F-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-B/VERT

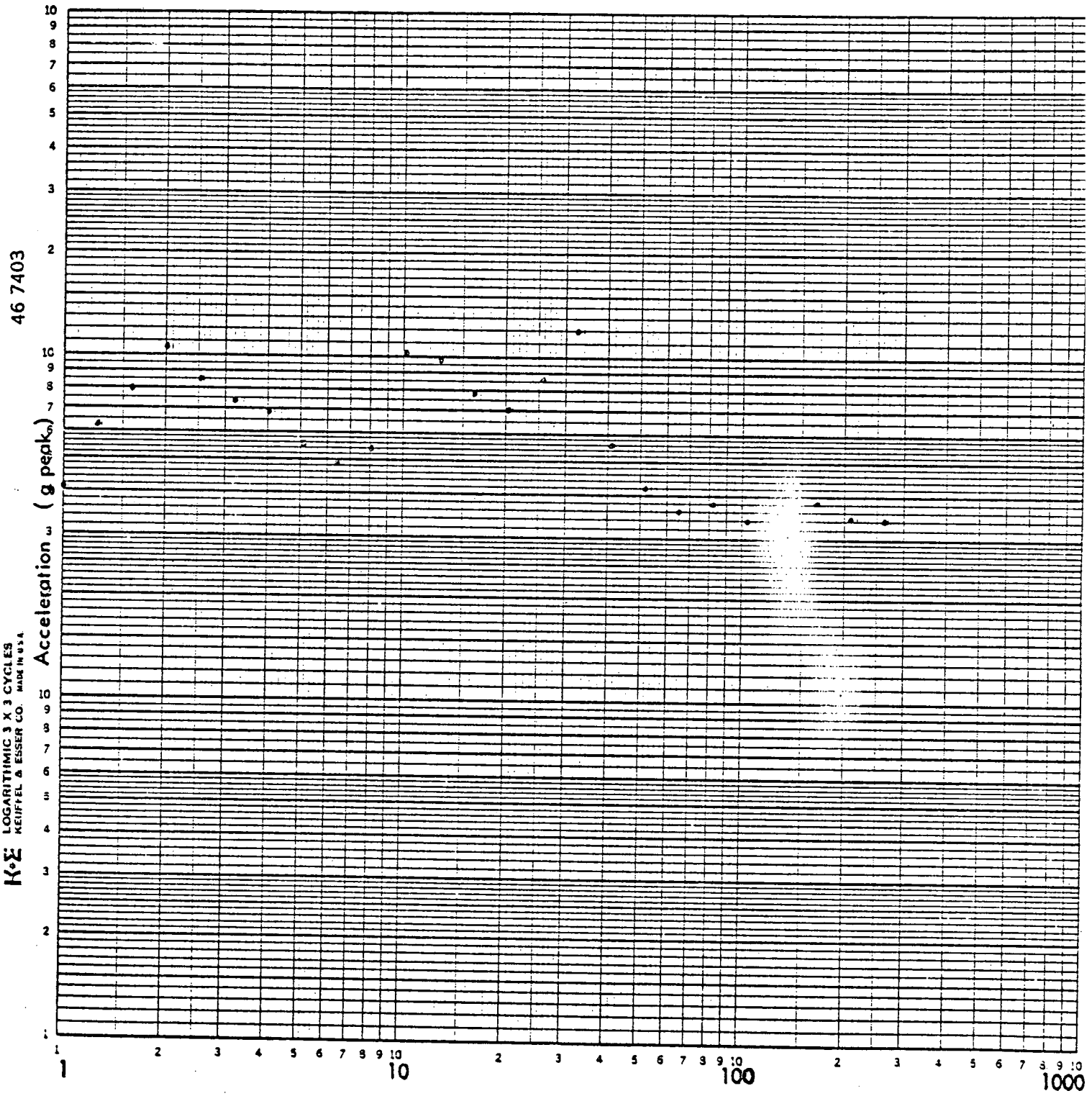
LOCATION NO. 20 E.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

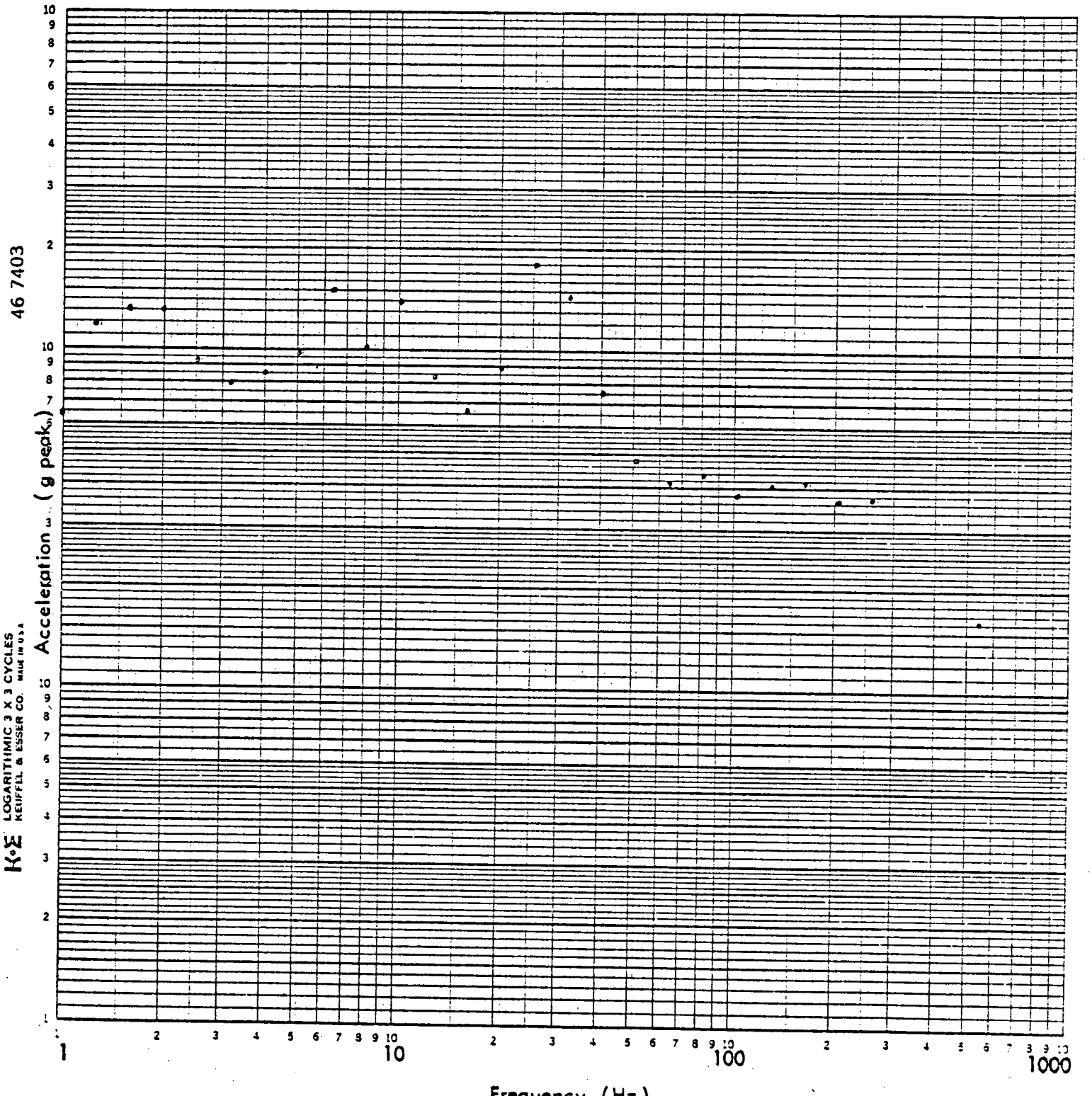
LOCATION NO. 21 V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-B/VERT

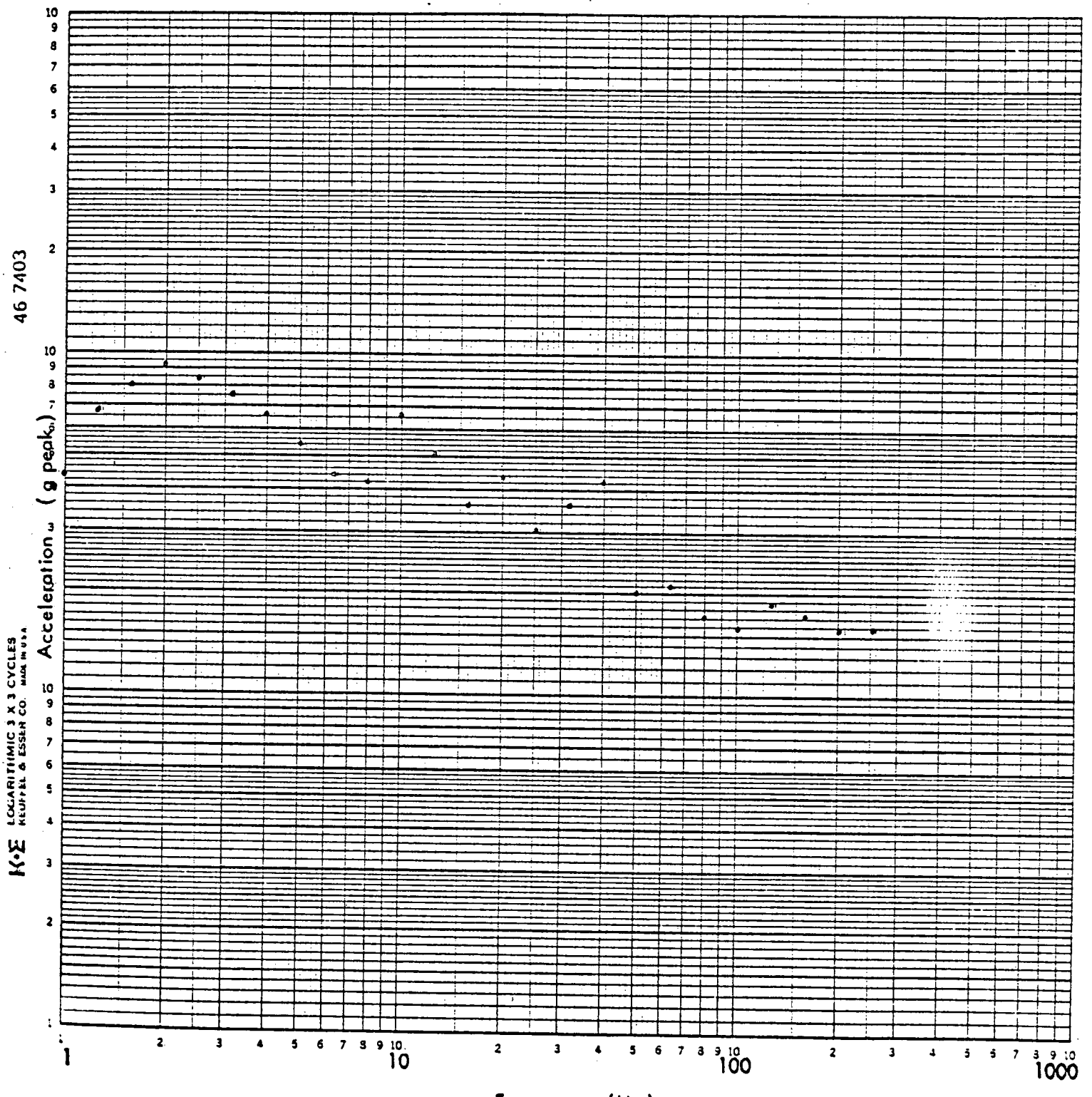
LOCATION NO. 22 E-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS E-B/VERT

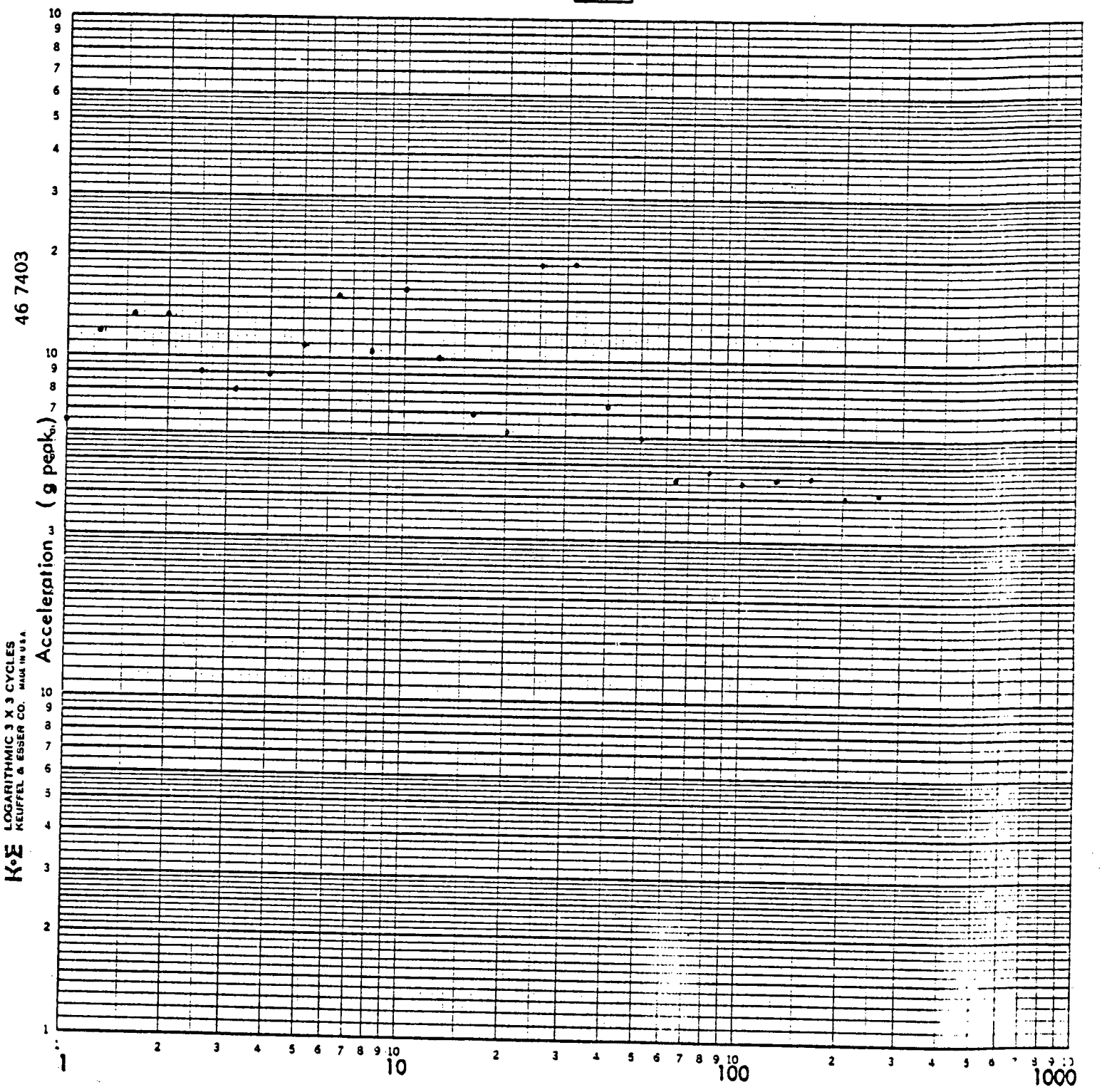
LOCATION NO. 23V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

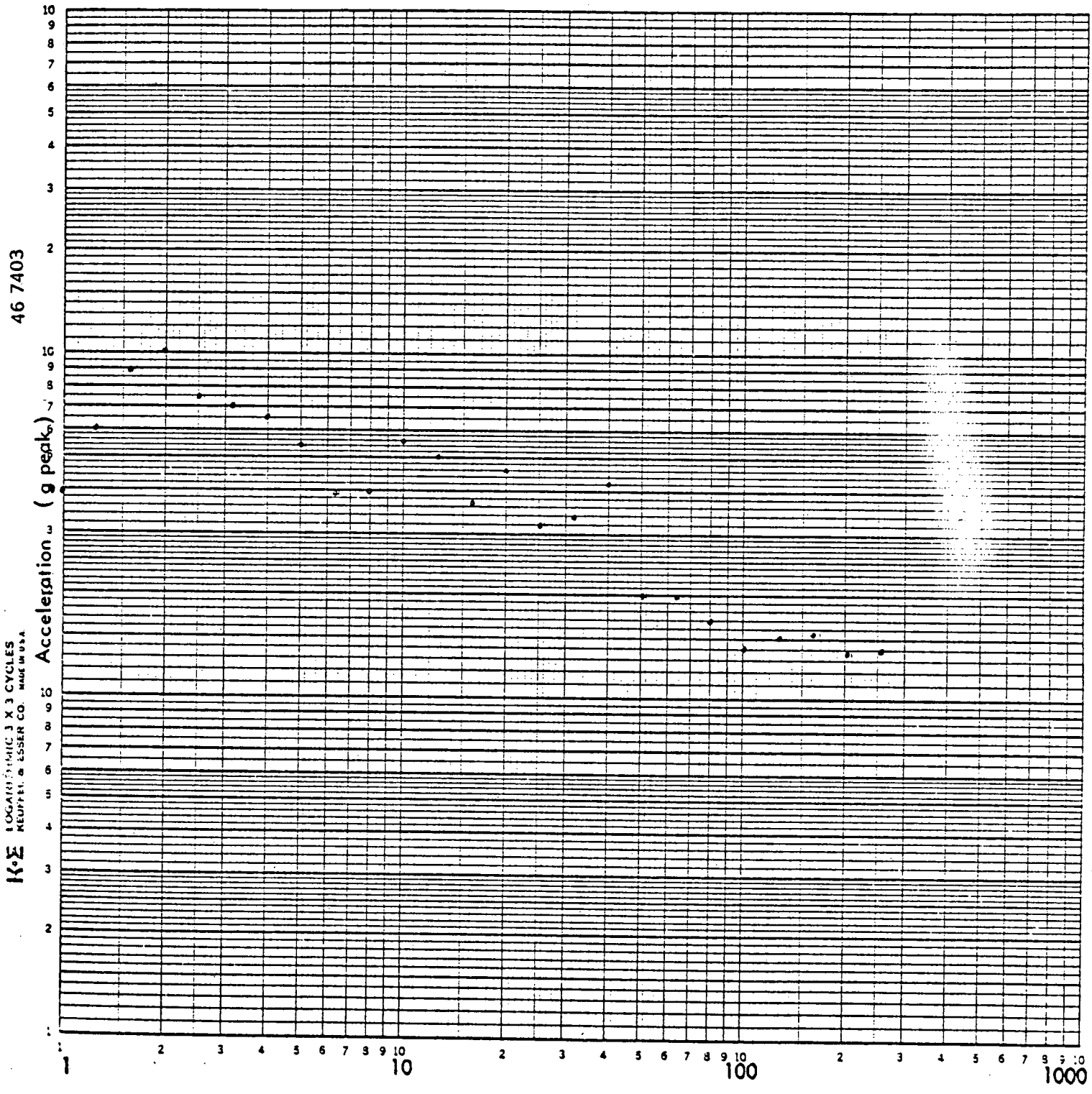
LOCATION NO. 24 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VELT

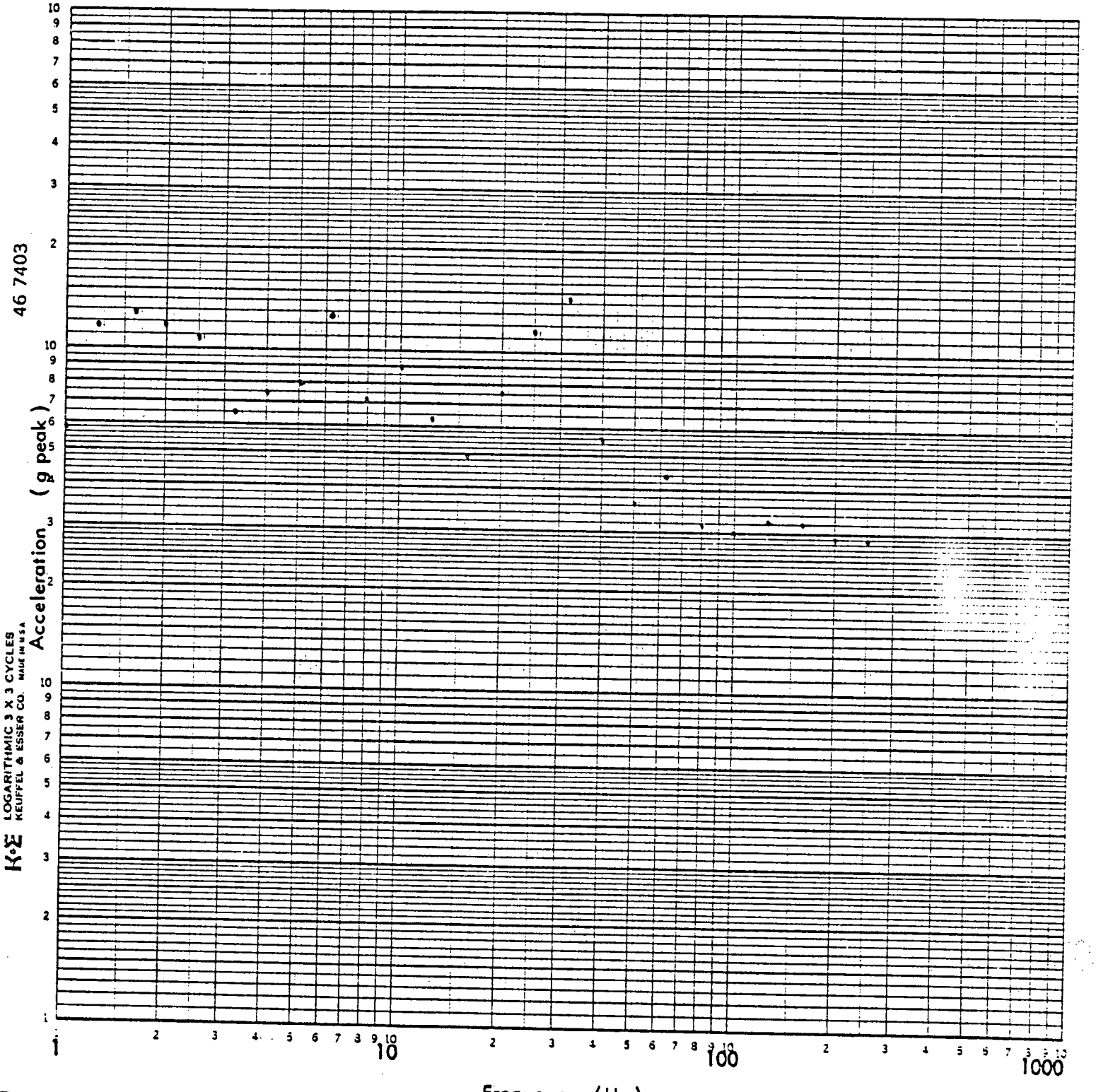
LOCATION NO. 25V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B / VERT

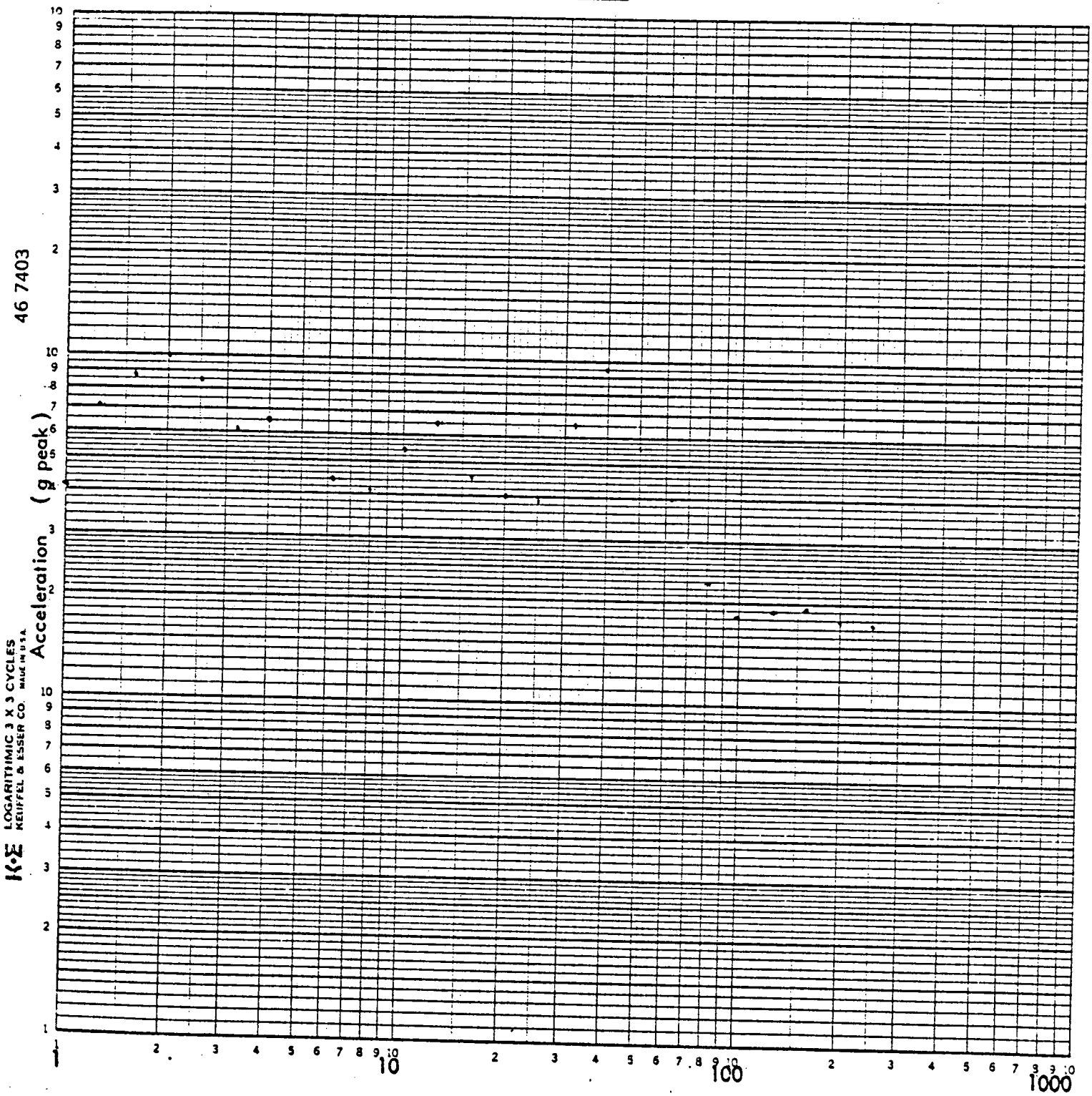
LOCATION NO. 26 F-13

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B / VERT

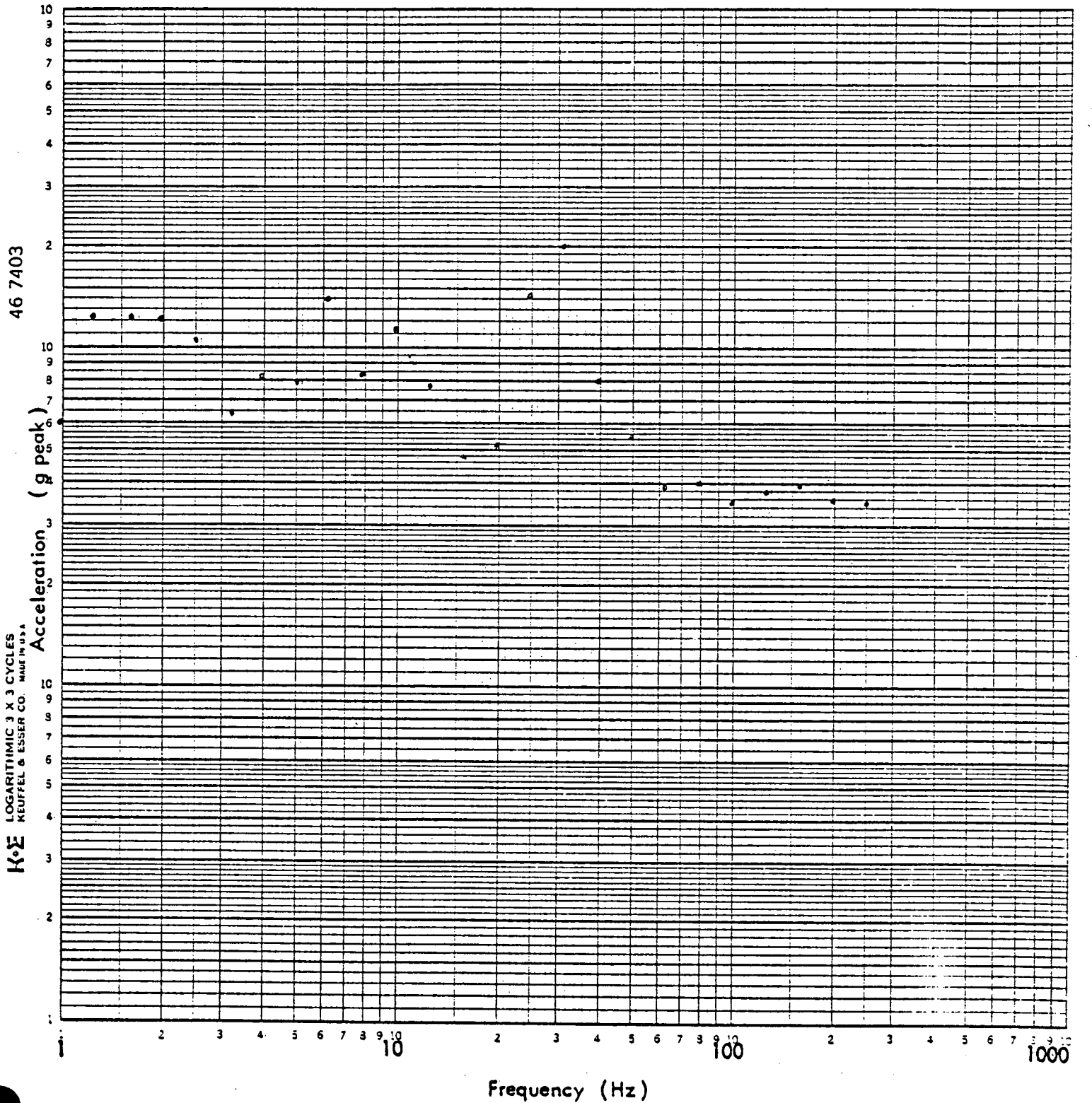
LOCATION NO. 27V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

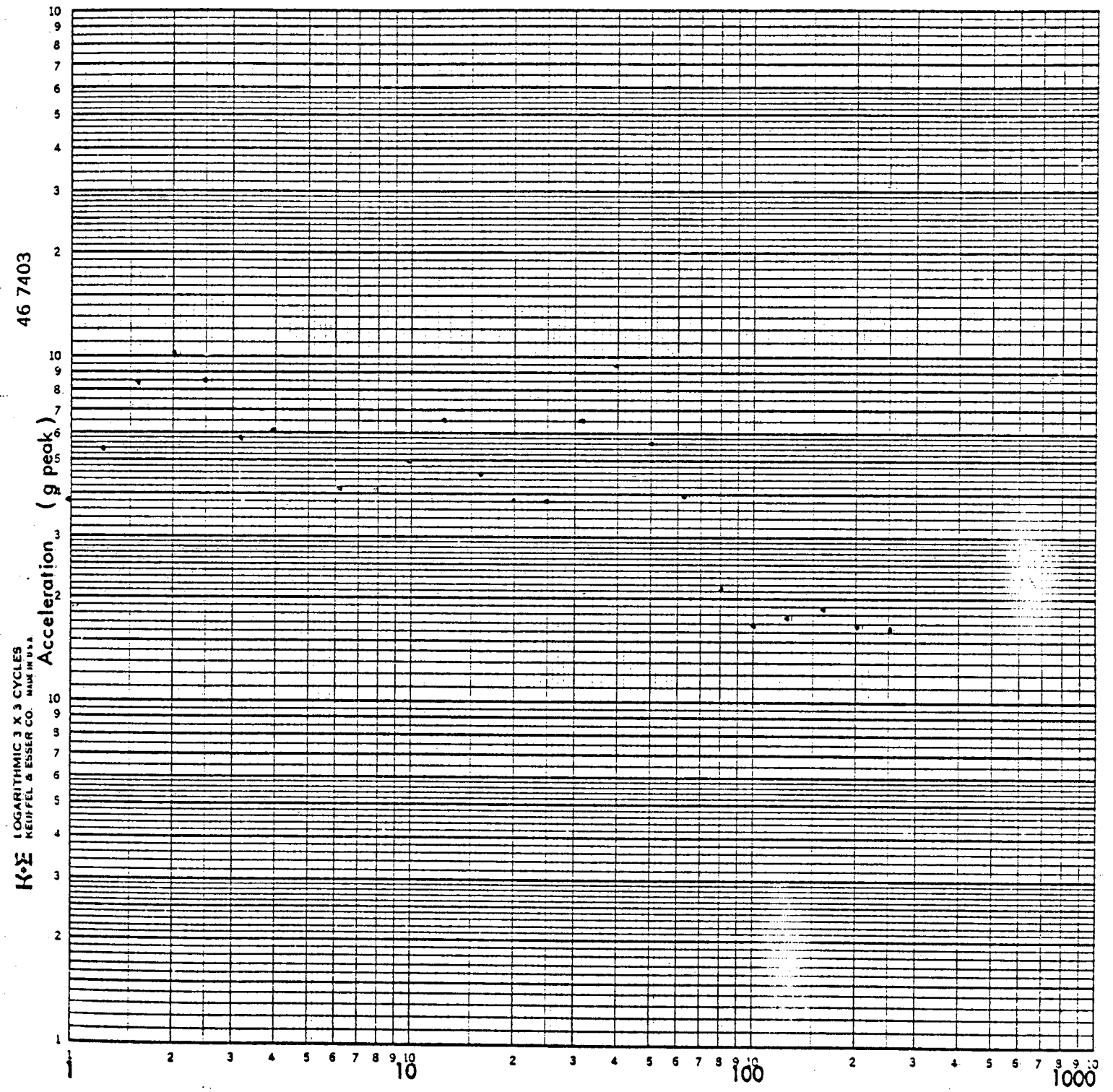
LOCATION NO. 28 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

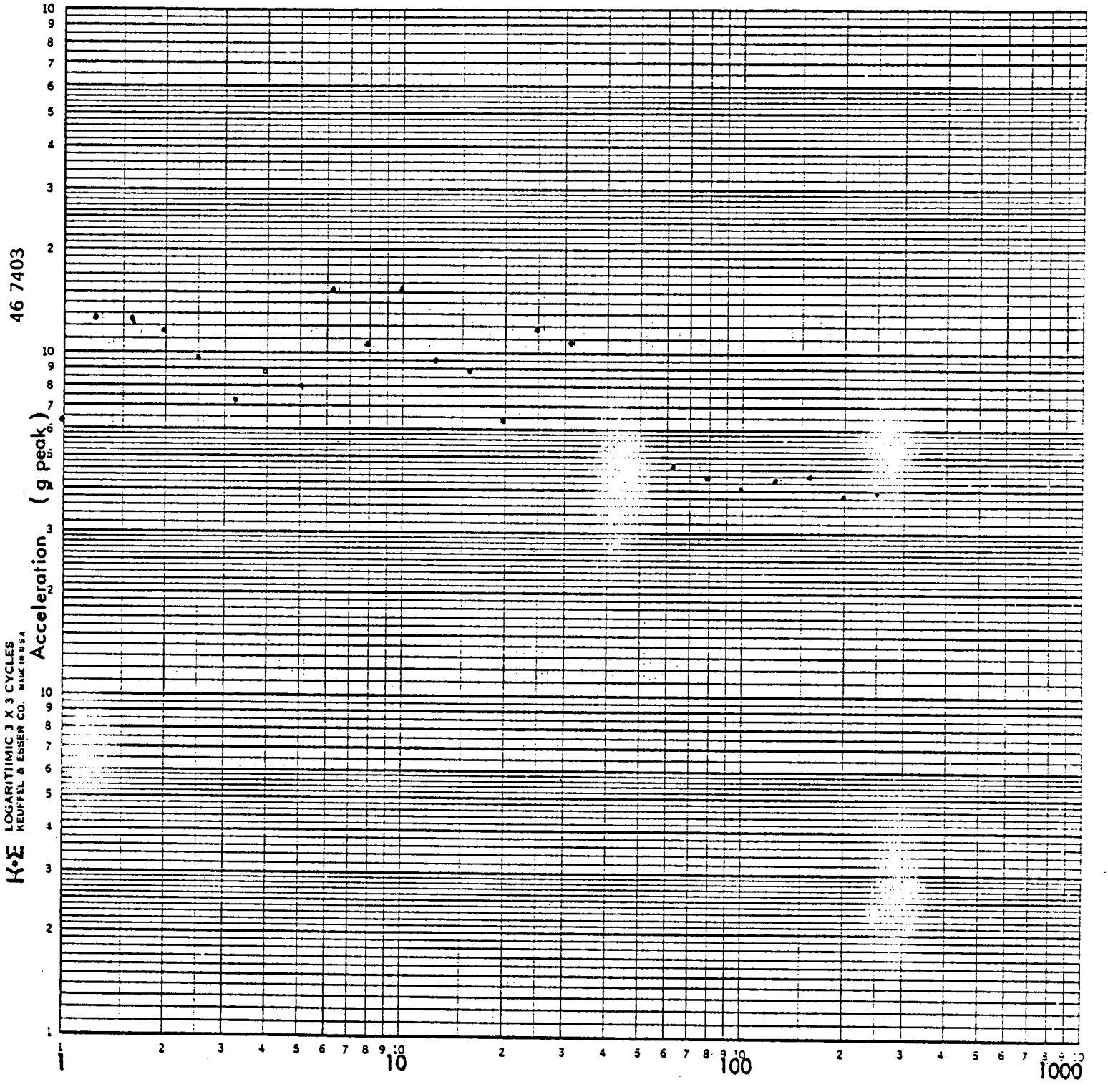
LOCATION NO. 29V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [\ %]



AXIS F-B/VERT

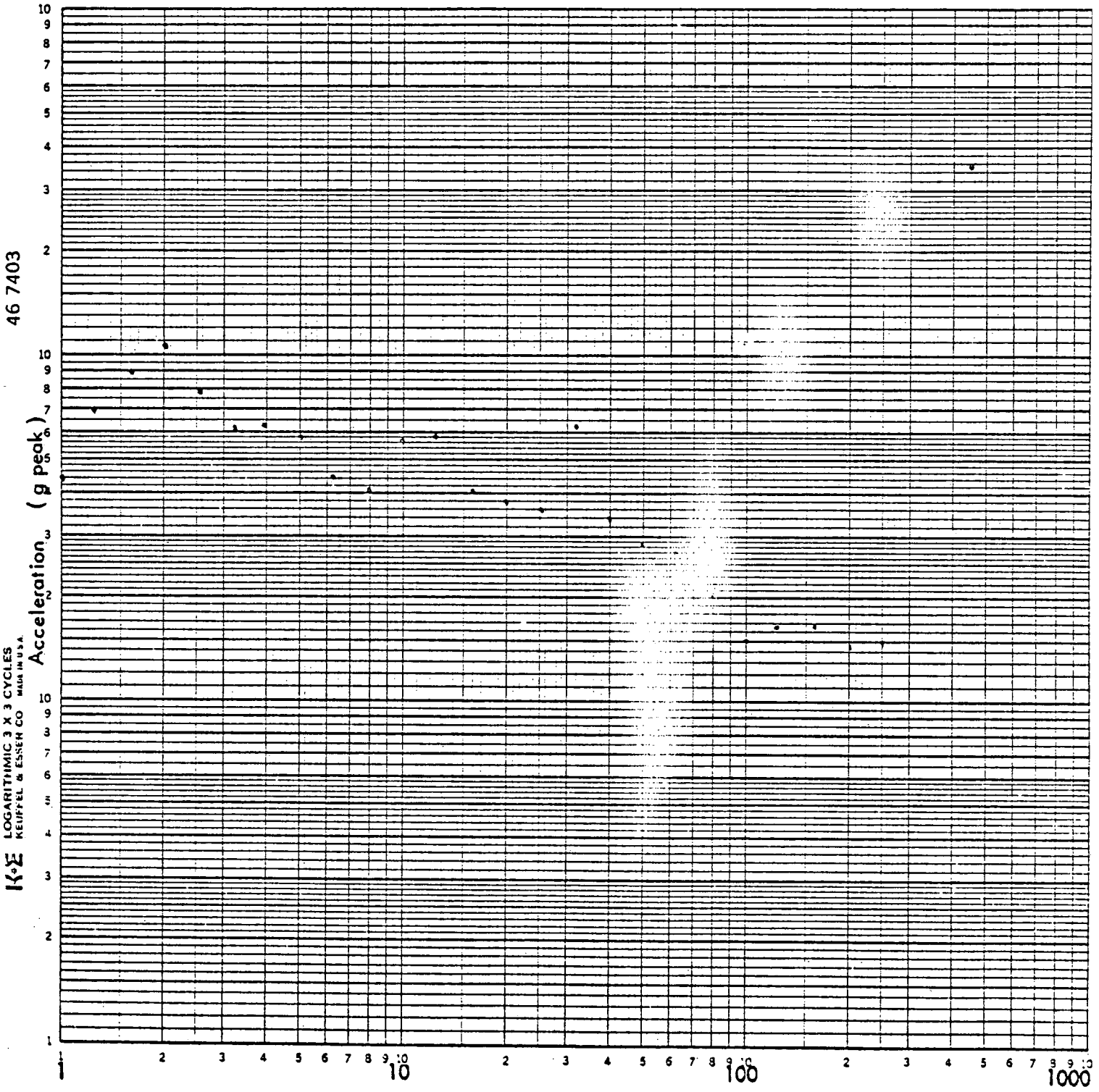
LOCATION NO. 30 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

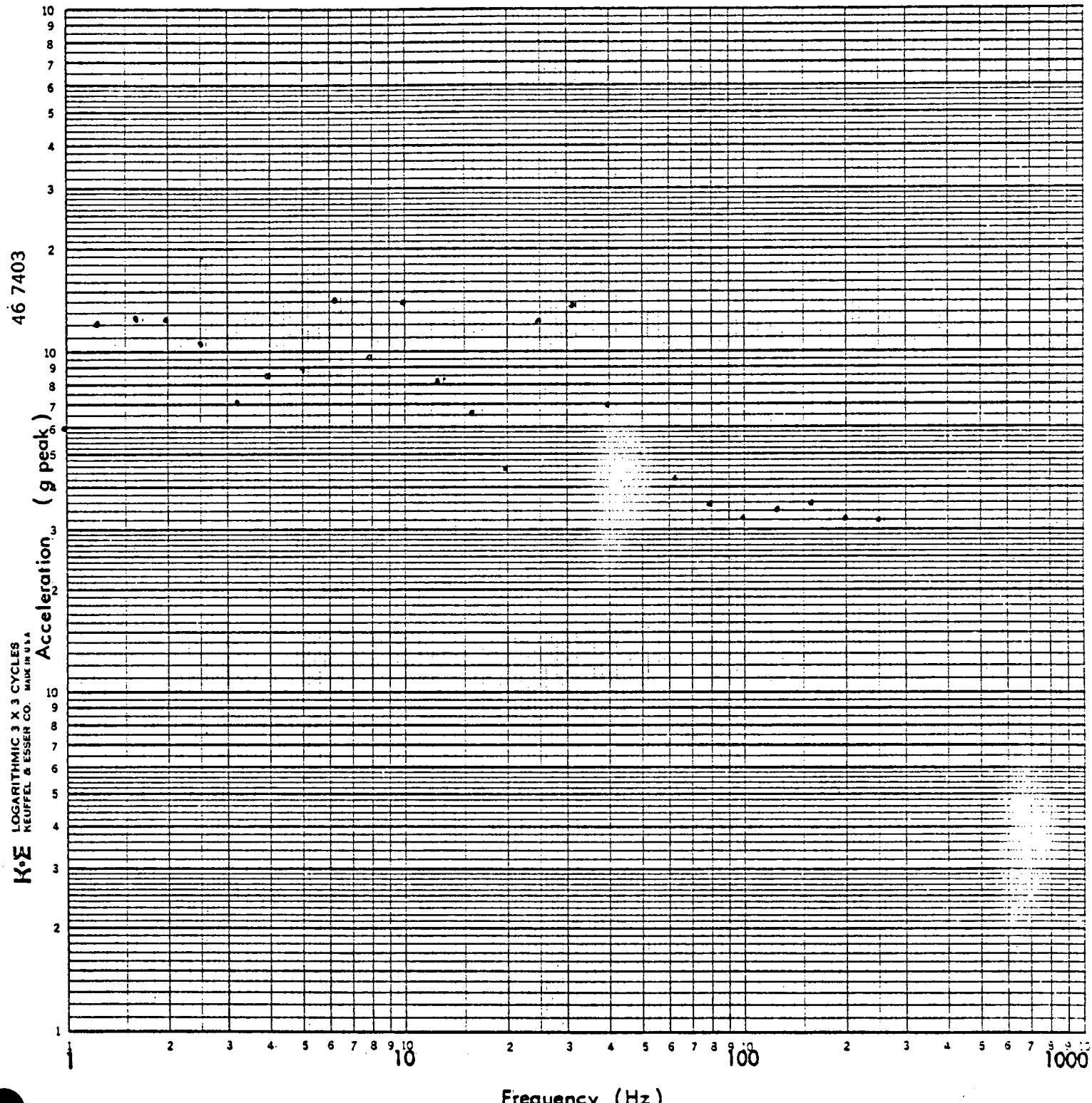
LOCATION NO. 31 V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

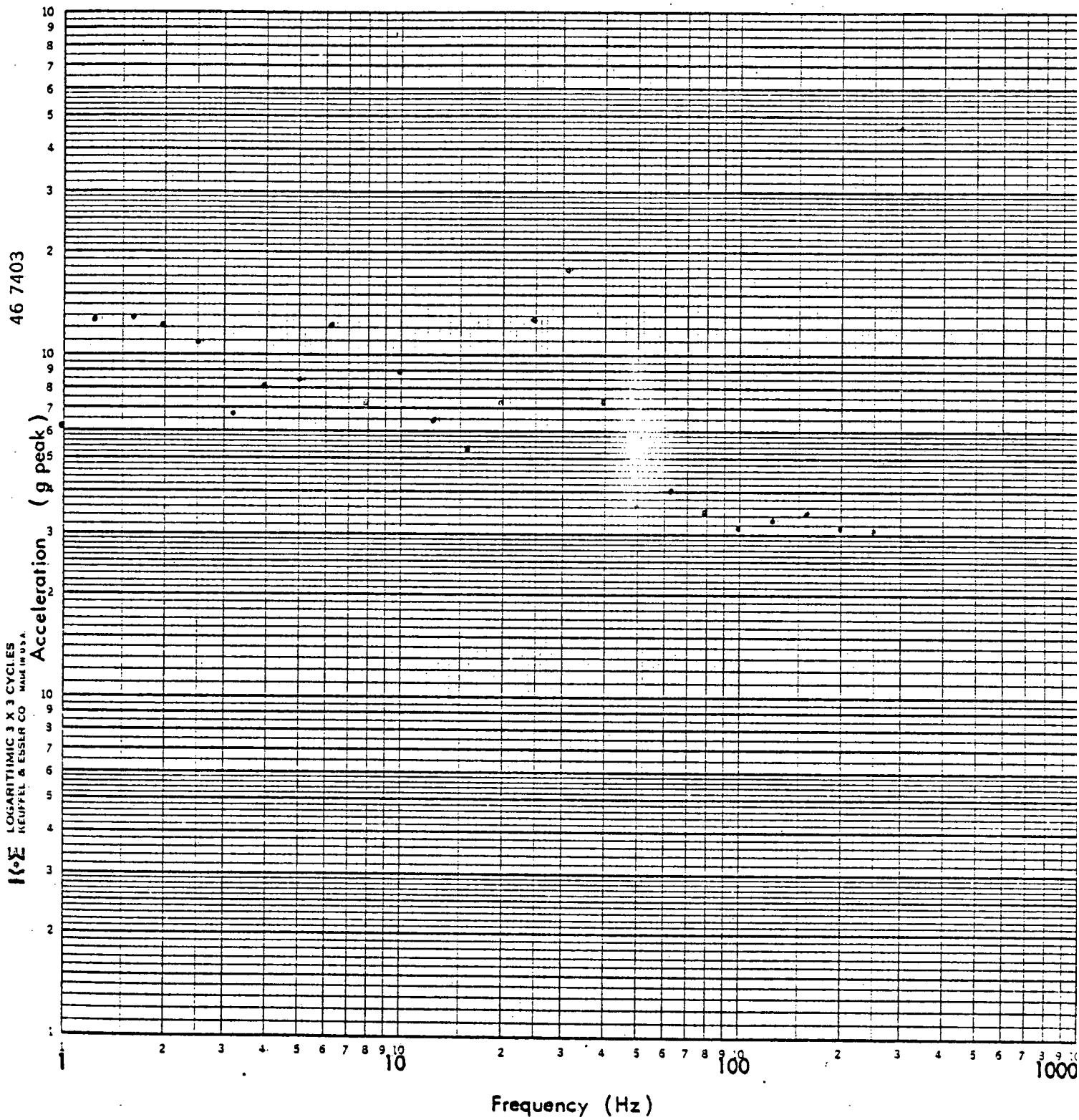
LOCATION NO. 32 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☑ 1000 ☐

DAMPING [1 %]



AXIS F-6/VERT

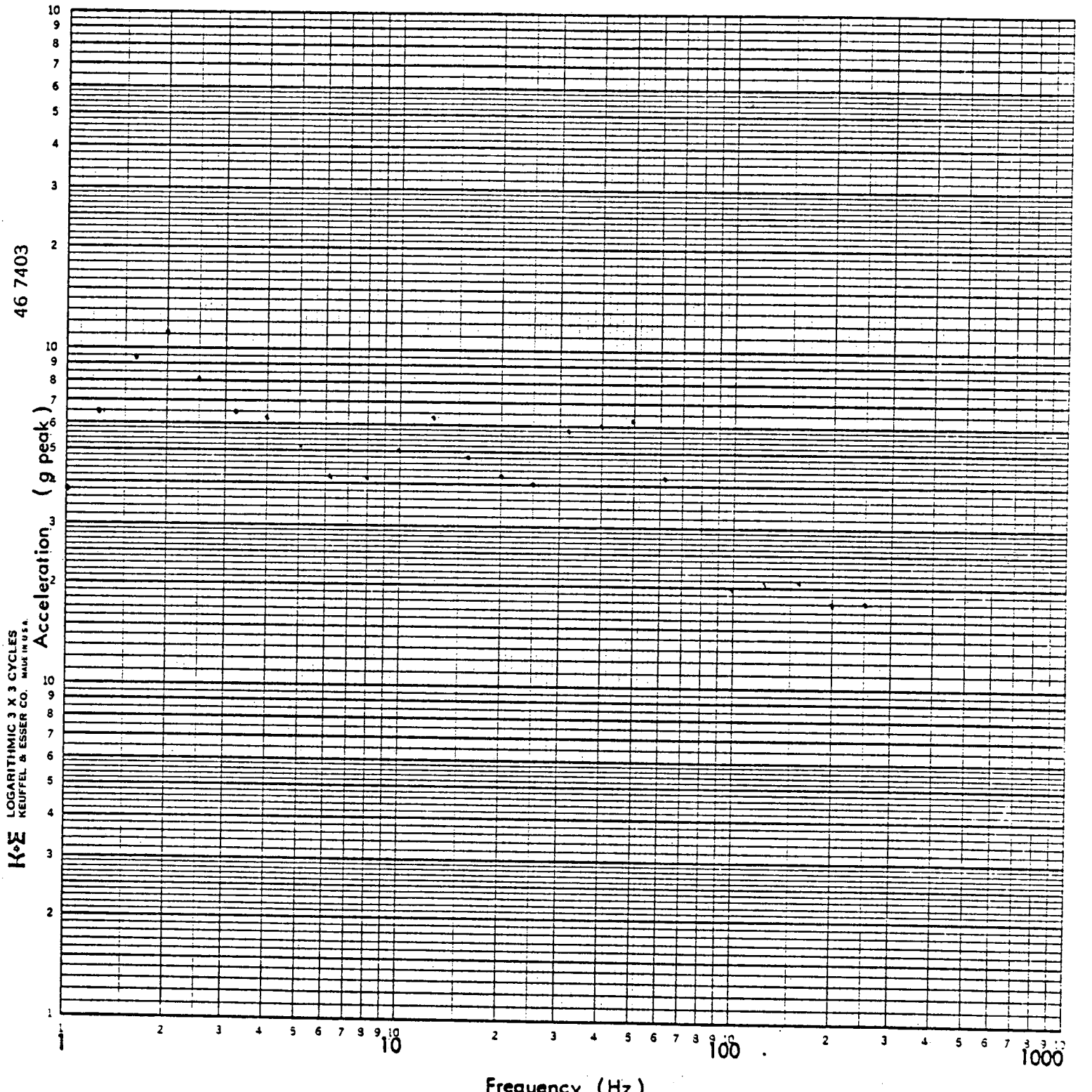
LOCATION NO. 33 F-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

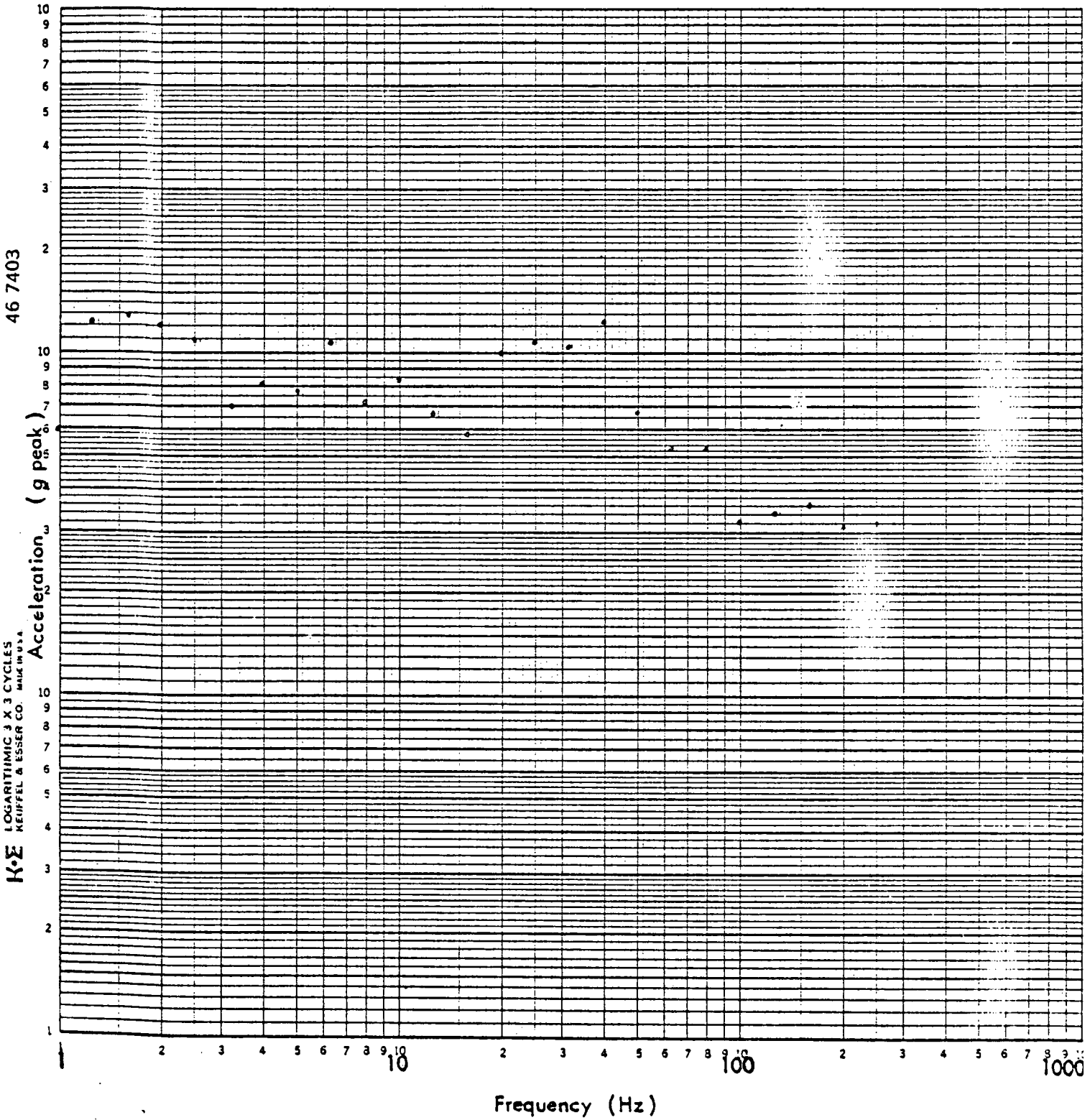
LOCATION NO. 34V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

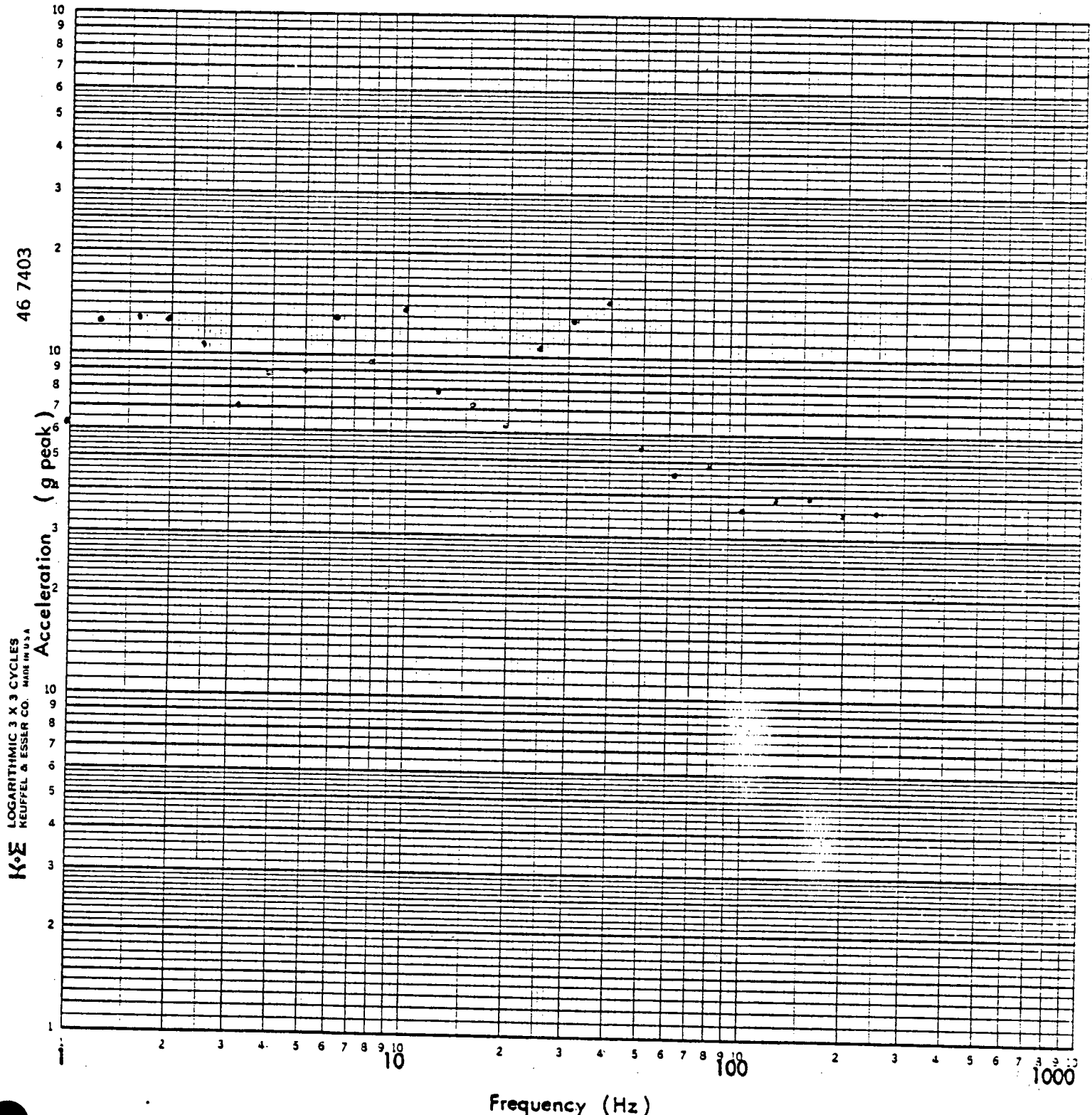
LOCATION NO. 35 F-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



Frequency (Hz)

AXIS F-B/VERT

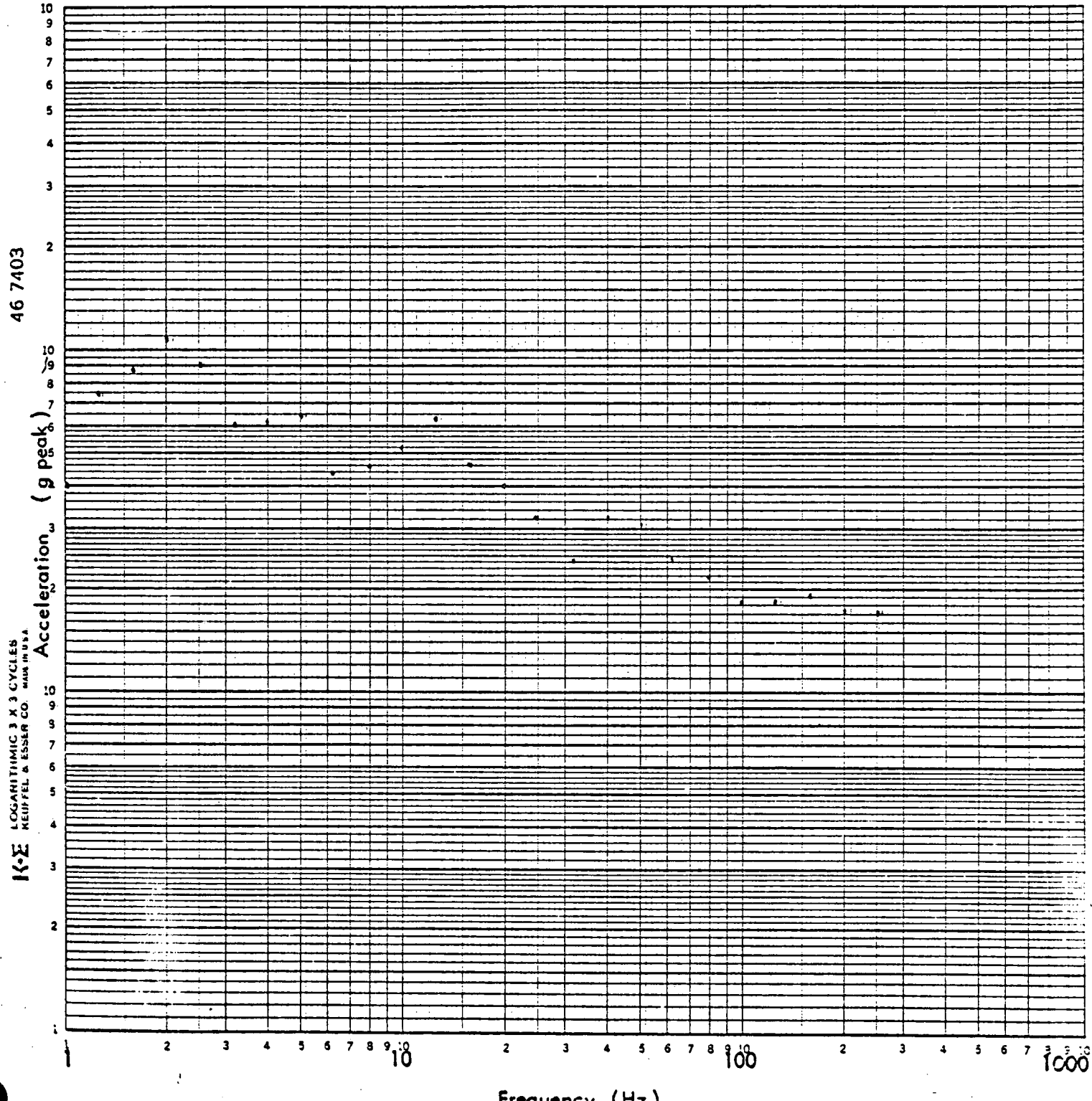
LOCATION NO. 36 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS E-B/Vert

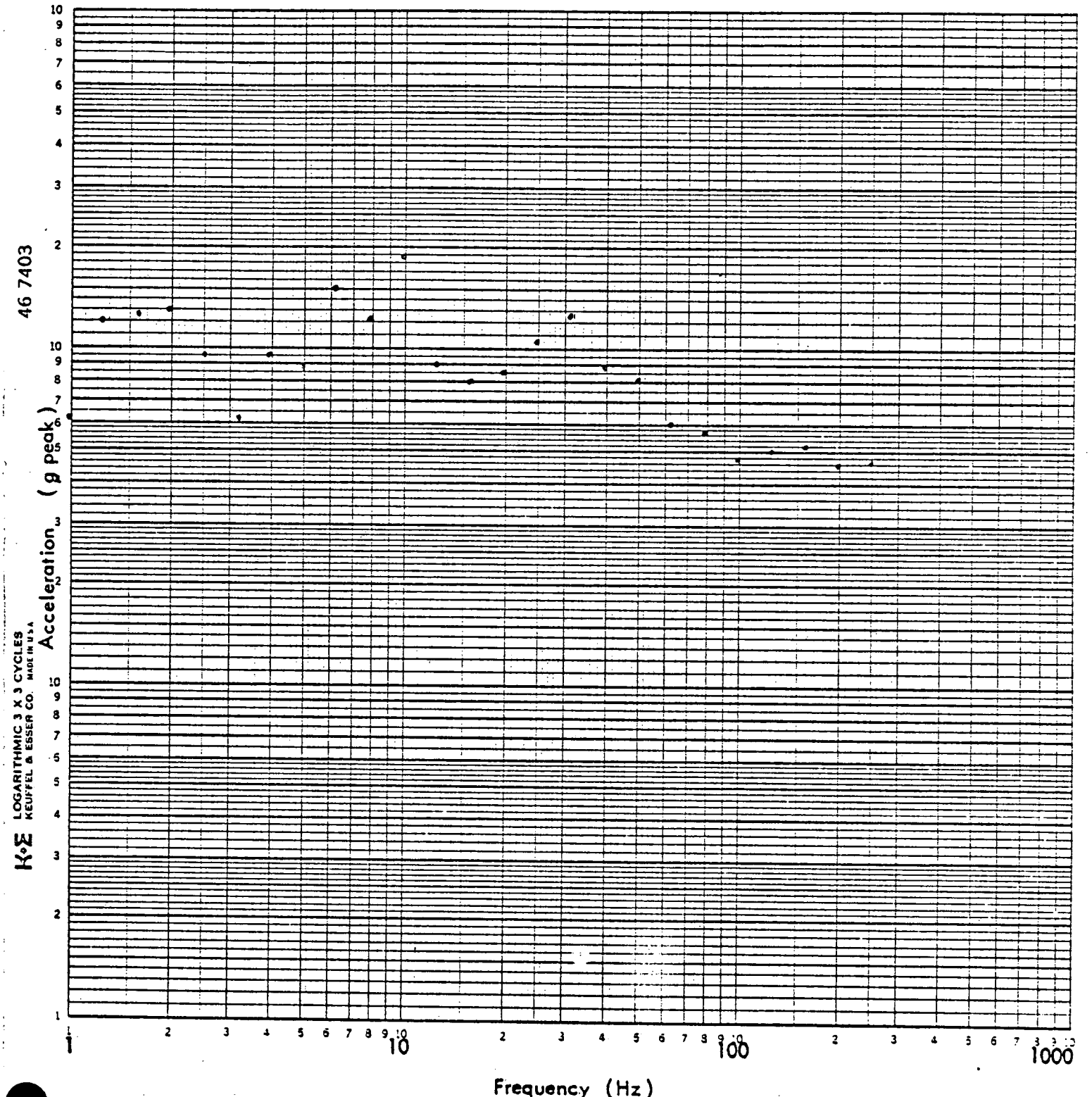
LOCATION NO. 37 V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

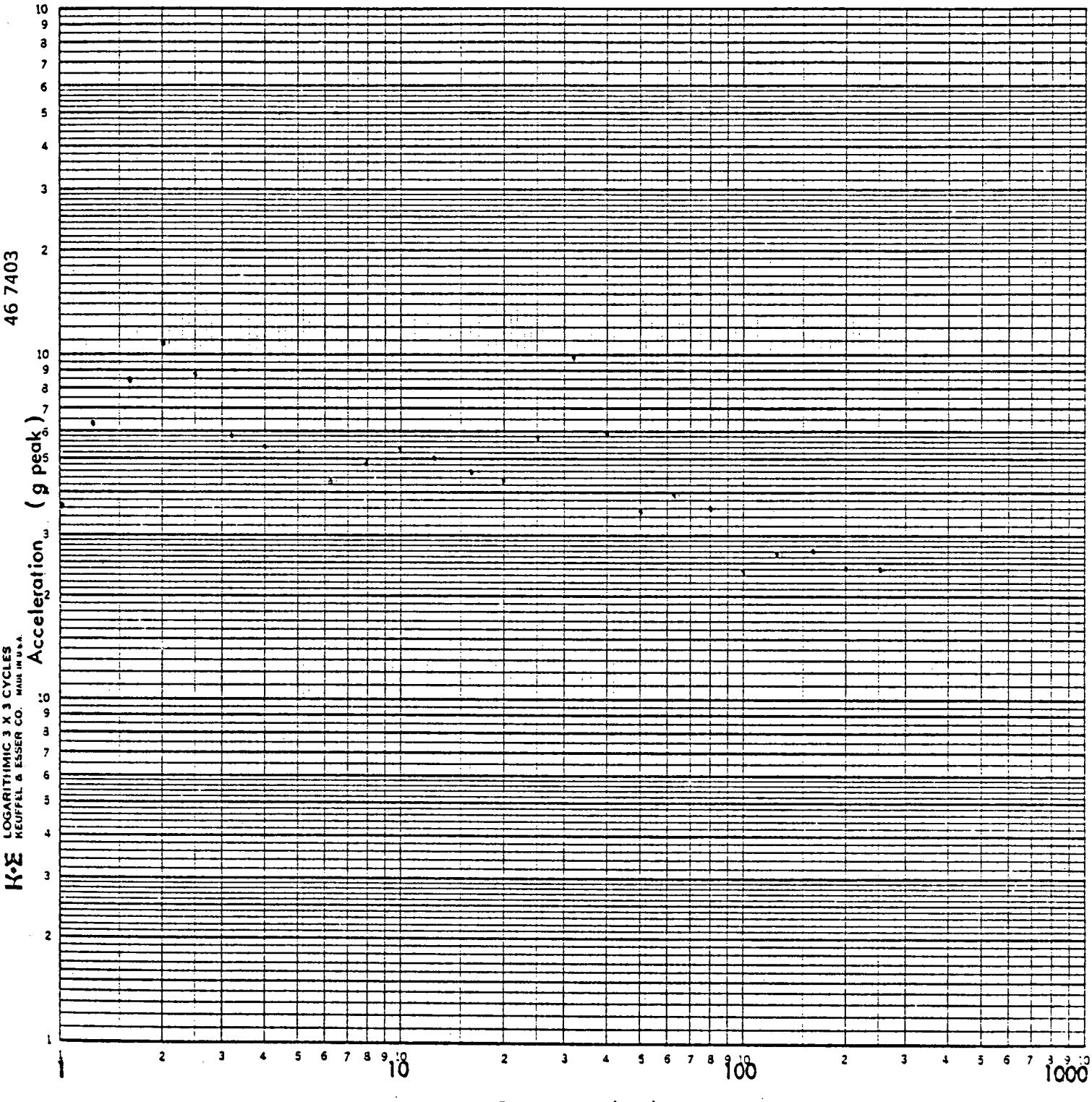
LOCATION NO. 38 F-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

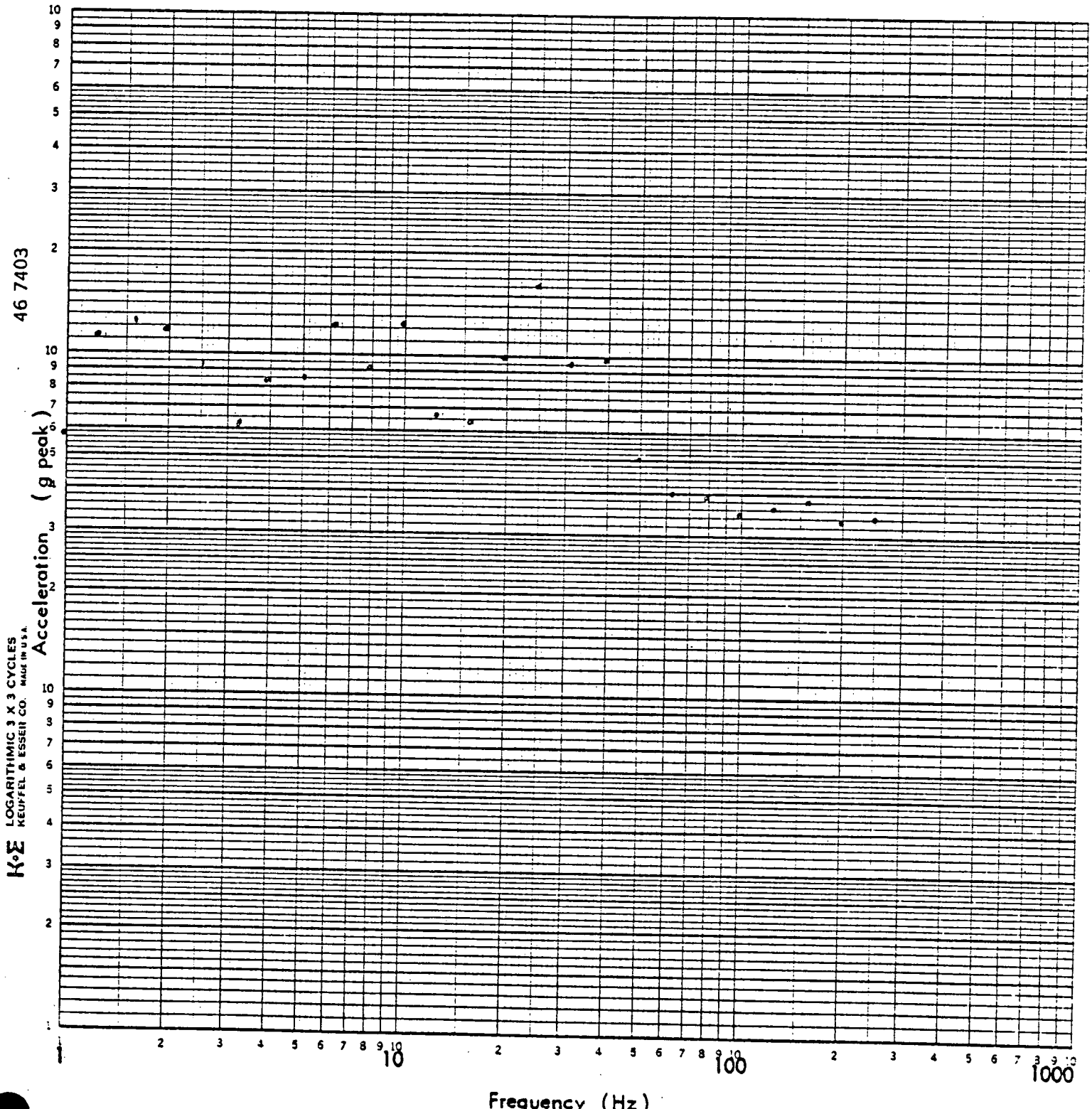
LOCATION NO. 39V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

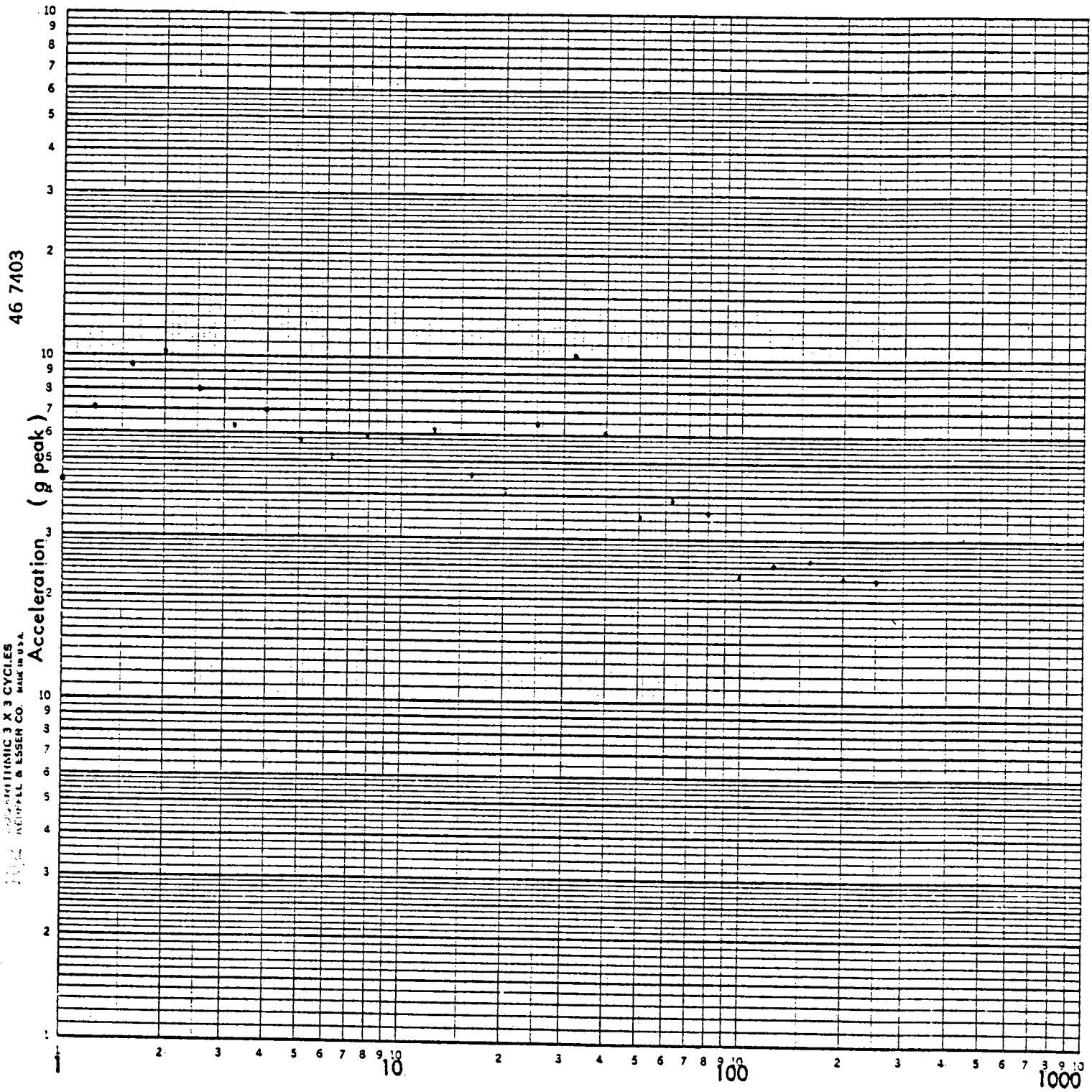
LOCATION NO. 40 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %



AXIS F-B/VERT

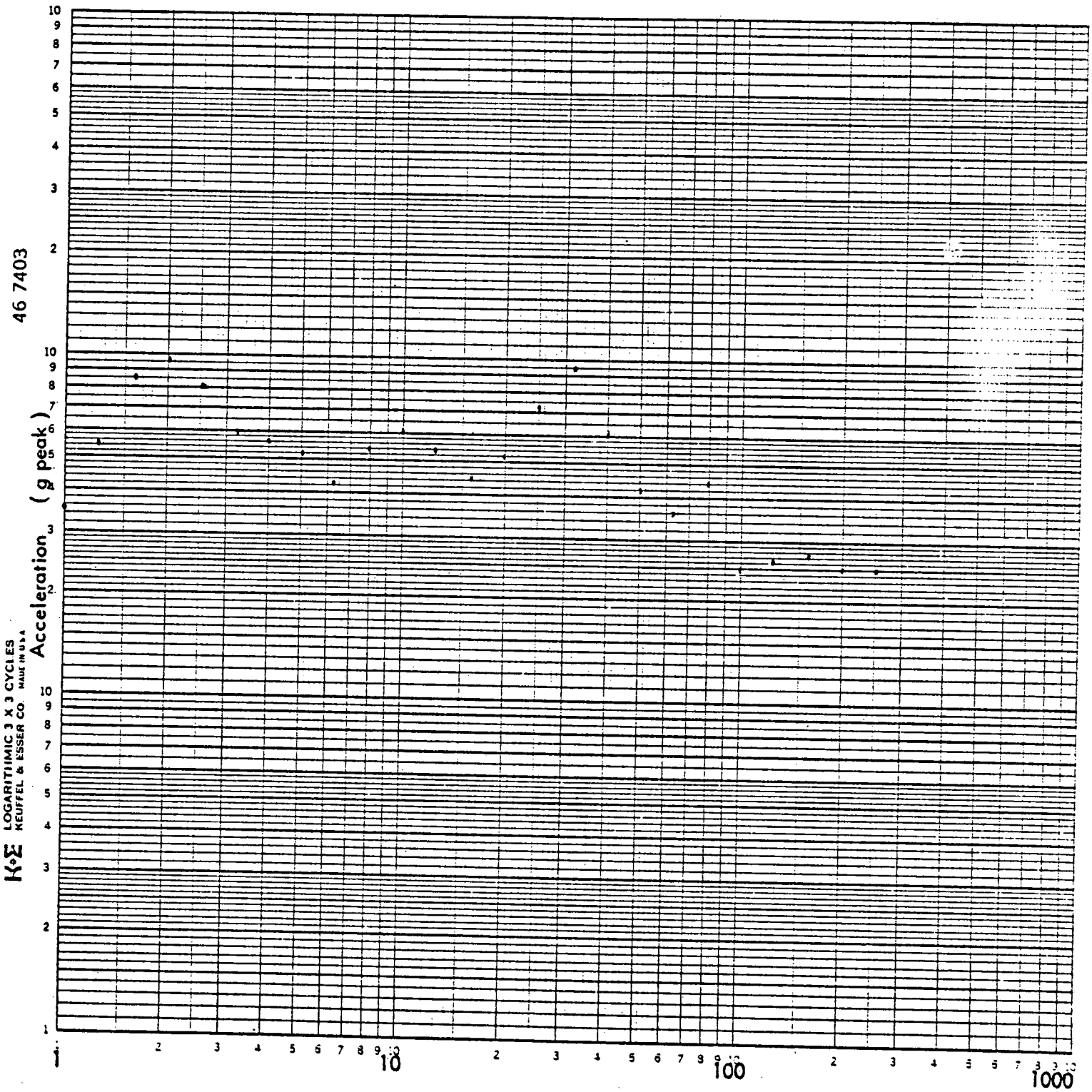
LOCATION NO. 41V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

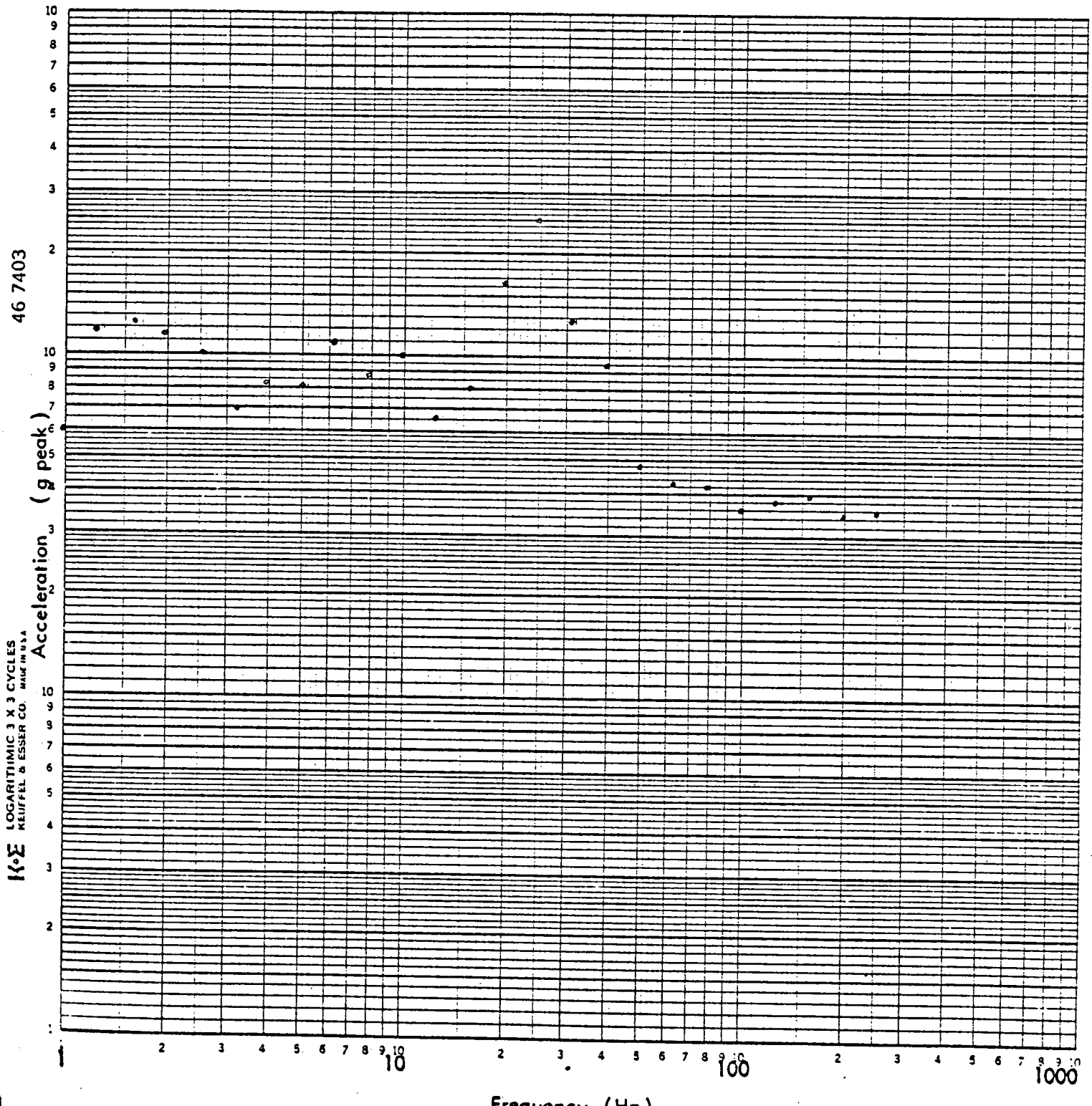
LOCATION NO. 42V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

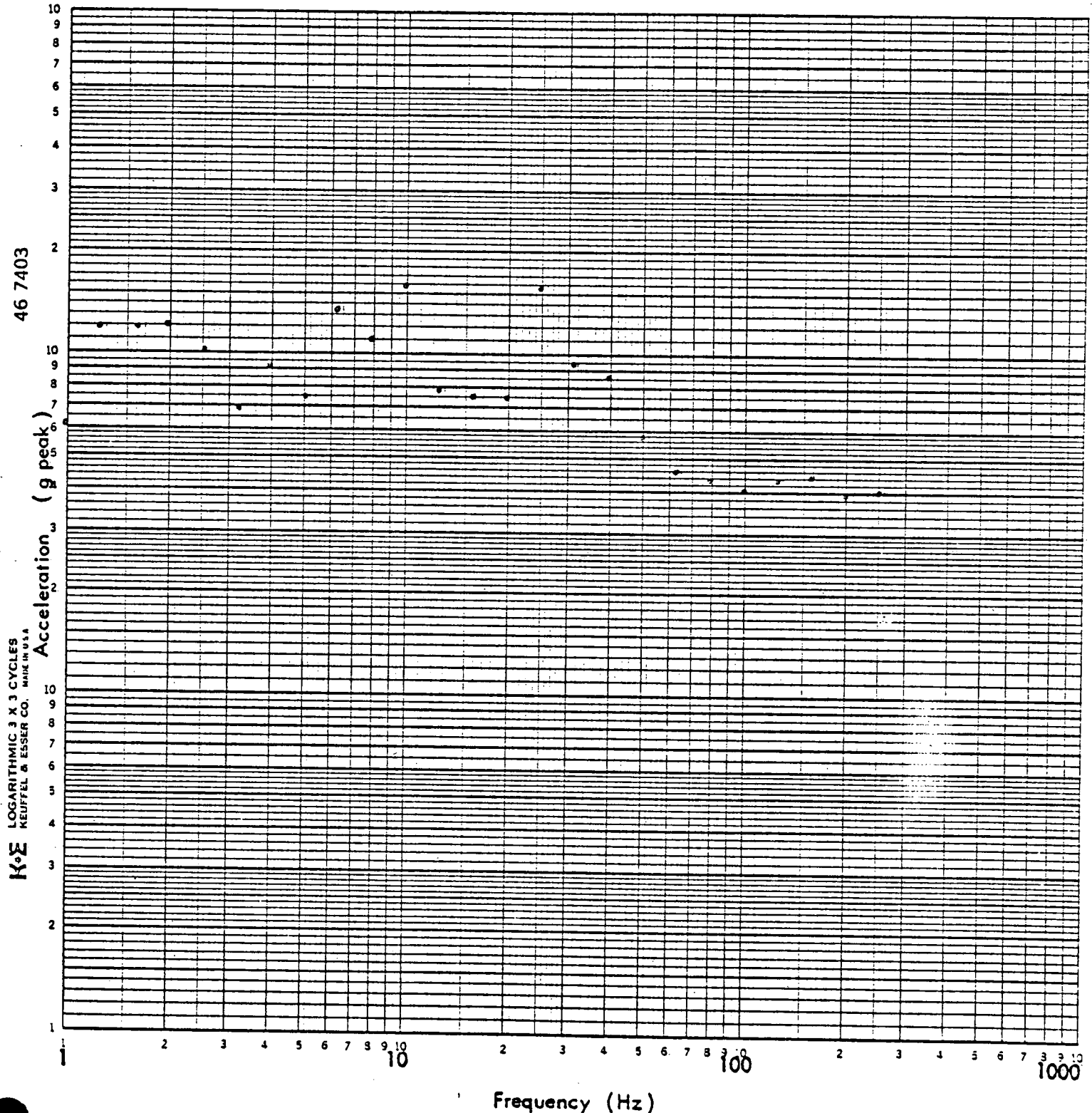
LOCATION NO. 43 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

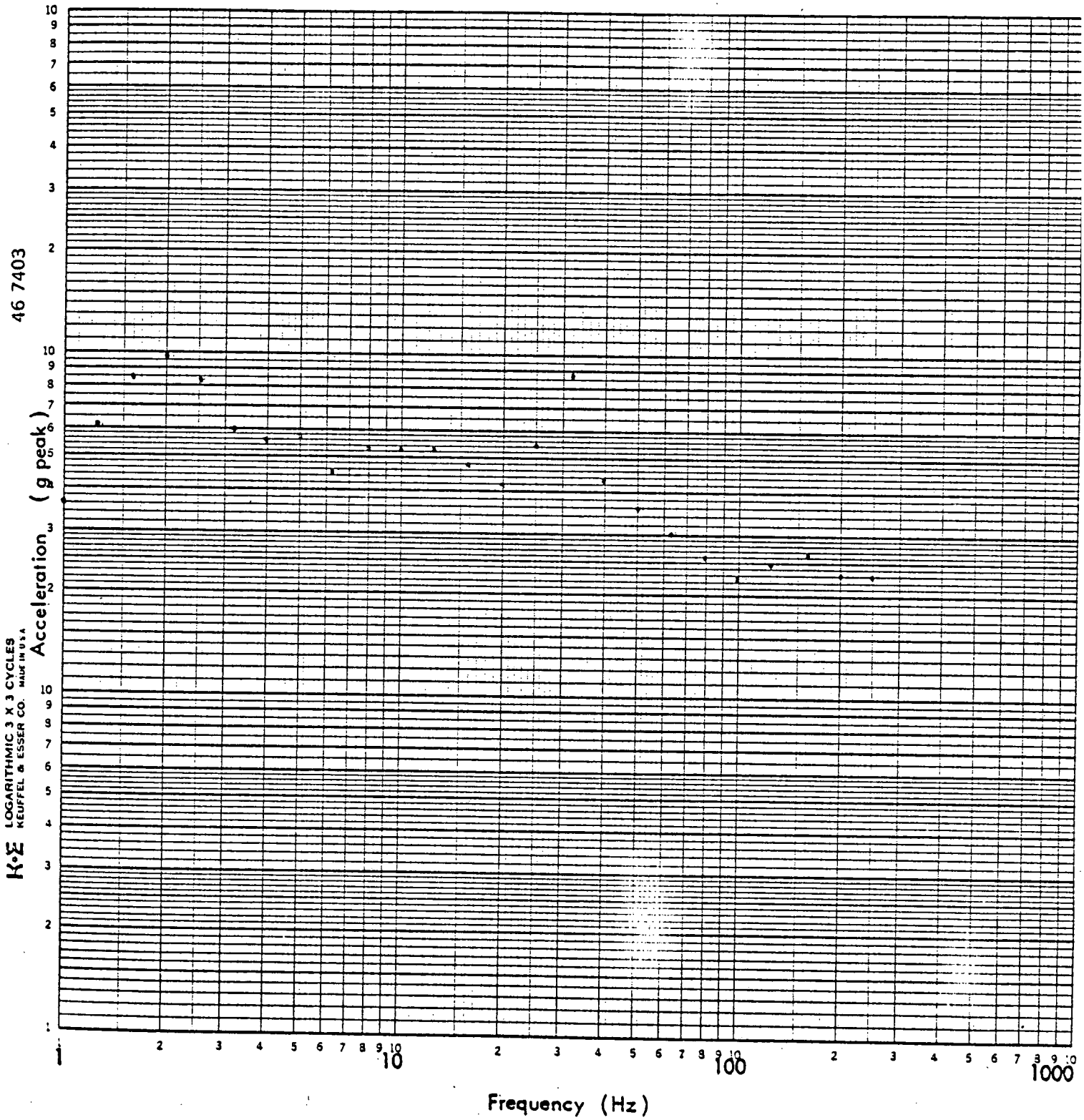
LOCATION NO. 44 F.B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

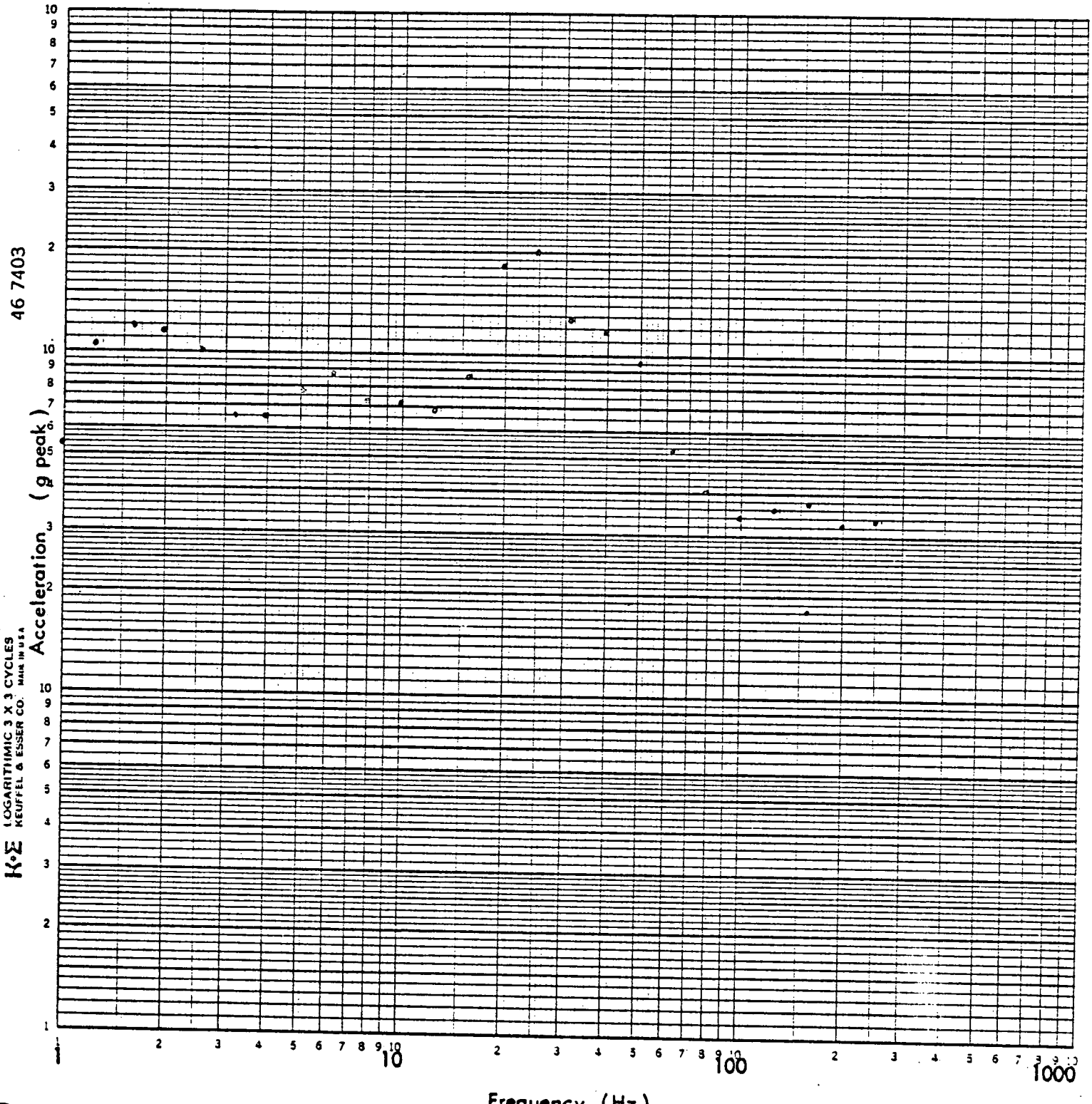
LOCATION NO. 45 V

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

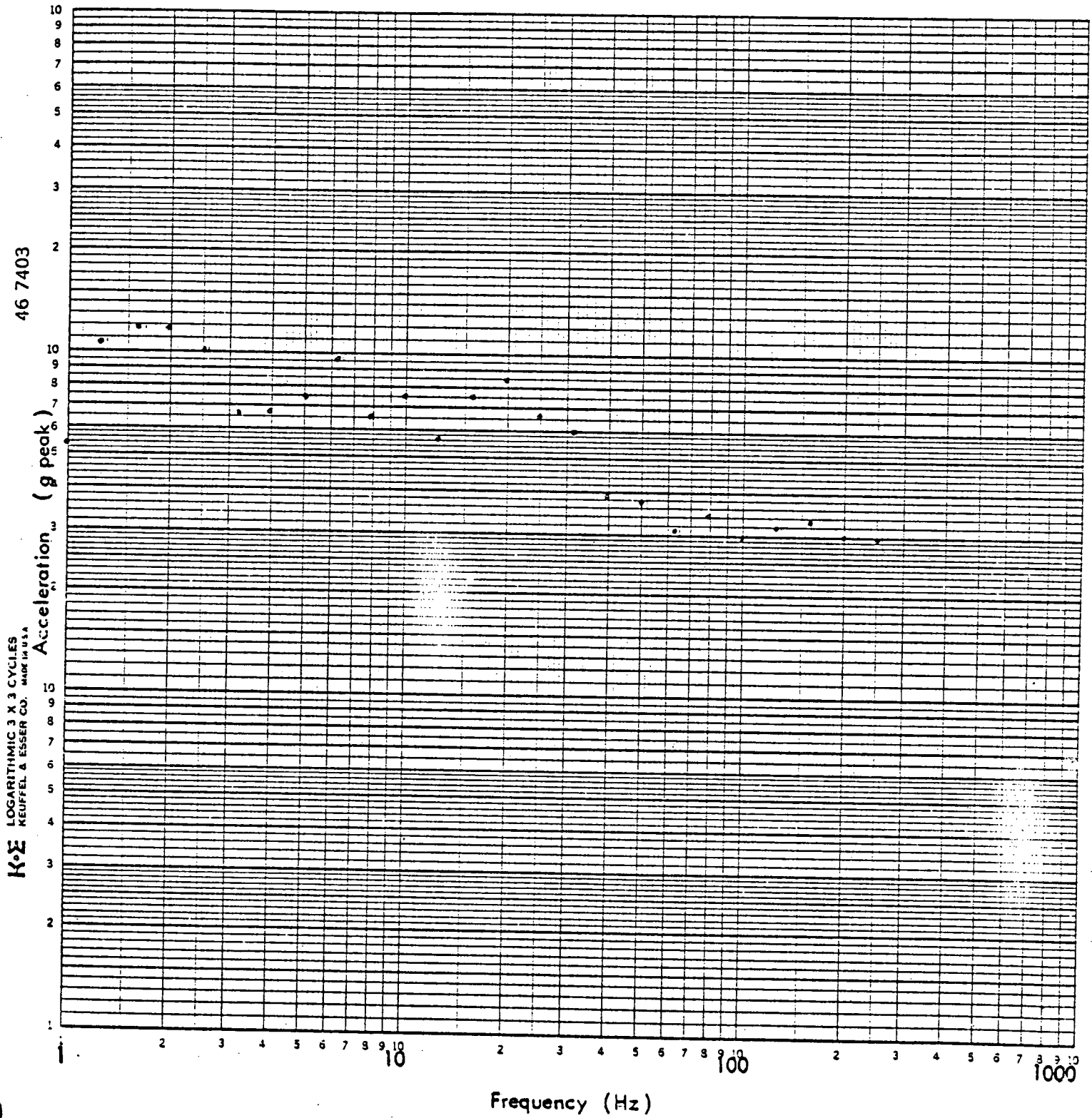
LOCATION NO. 46 F-B

TEST RUN NO. 32

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]



AXIS F-B/VERT

LOCATION NO. 48 F.B

TEST RUN NO. 32

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APPENDIX IV

INSTRUMENTATION LOG SHEETS
AND
INSTRUMENTATION EQUIPMENT SHEETS

W 322

WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

CUSTOMER RELIANCE

LOG PAGE NO. 1 OF 11

TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
9 FEB 77		SET-UP TO RECORD 2 CONTROL AND 4 RESPONSE ACCELEROMETERS ON TAPE AND OSCILLOGRAPH
		SET-UP TO RECORD 2 ELECTRICAL MONITORS, 6 STRAIN GAGES ON OSCILLOGRAPH
		RECORDED CALIBRATION SIGNAL 1VPK 1KHZ ON TAPE
		TAPE START #1 0000' END 0100'
		#2 0000' 0100'
		#3 MARKED WITH TAGS
		#4 0000' 0100'
		MOUNTED SPECIMEN IN THE S-S/VERT AXIS
	1005	RUN #1, SINE SWEEP 1-40HZ 0.2G VERT. VERT AXIS ONLY
		TAPE START #1 0100' END 0546'
		#2 0100' 0536'
		#4 0100' 0531'

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

CUSTOMER RELIANCE

LOG PAGE NO. 2 OF 11

TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
9 FEB 77	1030	RUN #2, SINE SWEEP 1-40 HZ 0.2 G HARIS — S-S AXIS ONLY
		TAPE START #1 0545' END 0996'
		#2 0535' 0970'
		#4 0531' 0965'
	1105	RUN #3, MULTI FREQUENCY RANDOM OBE — S-S/VERT. AXIS
		TAPE START #1 0995' END 1045'
		#2 0970' 1015'
		#4 0965' 1014'
	1115	RUN #4, MULTI-FREQUENCY RANDOM < OBE — S-S/VERT. AXIS
		TAPE START #1 1045' END 1086'
		#2 1015' 1055'
		#4 1014' 1050'
	1125	RUN #5, MULTI-FREQUENCY RANDOM OBE — S-S/VERT. AXIS
		TAPE START #1 1085' END 1125'
		#2 & 4 1055 1095'

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482 LOG PAGE NO. 3 OF 11

CUSTOMER RELIANCE TEST ENGINEER [signature]

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)	
9 FEB 77	1130	RUN#6, MULTI-FREQUENCY RANDOM OBE	S-S/VERT AXIS
		TAPE START #1 1125' END 1165'	
		#2&4 1096' 1135'	
	1135	RUN#7, MULTI-FREQUENCY RANDOM OBE	S-S/VERT. AXIS
		TAPE START #1 1165' END 1205'	
		#2&4 1135' 1170'	
	1140	RUN#8, MULTI-FREQUENCY RANDOM OBE	S-S/VERT. AXIS
		TAPE START #1 1205' END 1245'	
		#2&4 1170' 1210'	
	1150	RUN#9, MULTI-FREQUENCY RANDOM OBE	S-S/VERT. AXIS
		TAPE START #1 1245' END 1285'	
		#2&4 1210' 1240'	

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

CUSTOMER RELIANCE

LOG PAGE NO. 4 OF 11

TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
9 FEB 77	1200	RUN#10, SINE ON RANDOM 5dBE — 2-S/VERT. AXIS
		TAPE START #1 1285' END 1340'
		#2 1240' 1310'
		#4 1240' 1286'
	1208	RUN#11, SINE ON RANDOM 5dBE — S-S/VERT. AXIS
		TAPE START #1 1340' END 1400'
		#2 1310' 1370'
		#4 1286' 1336'
	1230	RUN#12, SINE ON RANDOM — S-S/VERT. AXIS
		TAPE START #1 1400' END 1430'
		#2 1370' 1400'
		#4 1335' 1368'
		SHUT DOWN 15 SEC INTO RUN DOOR CAME OPEN
		DISCOVERED THAT FAN NOT OPERATING BETWEEN RUN 11 AND RUN 12.

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482 LOG PAGE NO. 5 OF 11

CUSTOMER RELIANCE TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
9 FEB 77	1405	RUN#13, SINE ON RANDOM OBE S-S/VERT. AXIS
		TAPE START #1 1430' END 1480'
		#2 1400' 1460'
		#4 1368' 1413'
	1410	RUN#14, SINE ON RANDOM OBE S-S/VERT. AXIS
		TAPE START #1 1480' END 1530'
		#2 1460' 1500'
		#4 1413' 1463'
	1415	RUN#15, SINE ON RANDOM OBE S-S/VERT. AXIS
		TAPE START #1 1530' END 1580'
		#2 1500' 1560'
		#4 1463' 1510'

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

CUSTOMER RELIANCE

LOG PAGE NO. 6 OF 11

TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
9 FEB 77	1420	RUN #16, SINE ON RANDOM OBE S-S/VERT. AXIS
		TAPE START #1 1580' END 1630'
		#2 1550' 1600'
		#4 1510' 1556'
	1425	RUN #17, SINE ON RANDOM OBE S-S/VERT. AXIS
		TAPE START #1 1630' END 1680'
		#2 1600' 1650'
		#4 1556' 1607'
	1435	RUN #18, SINE ON RANDOM ≤ OBE S-S/VERT AXIS
		TAPE START #1 1680' END 1735'
		#2 1650' 1705'
		#4 1607' 1658'

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482 LOG PAGE NO. 7 OF 11

CUSTOMER RELIANCE TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
9FEB 77	1448	RUN#19, SINE ON RANDOM DBE S-S/VERT. AXIS
		TAPE START #1 1736' END 1790'
		#2 1705' 1760'
		#4 1658' 1713'
		ROTATED SPECIMEN 90° TO THE E-E/VERT. AXIS
		RECORDED CALIBRATION SIGNAL 1VPK 10HZ TAPE #2
		TAPE START #2 0000' END 0100'
10FEB 77	0910	RUN#20, SINE SWEEP 1-40HZ 0.2G HORIZ E-E/VERT. AXIS
		TAPE START #1 1790' END 2235'
		#2 0170' END 0585'
		#4 1713 2138'
		REAR DOOR CAME OPEN DURING TEST
		TIGHTEN ALL DOORS

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482 LOG PAGE NO. 8 OF 11

CUSTOMER RELIANCE TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
10 FEB 77	0935	RUN#21, MULTI-FREQUENCY RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 2235' END 2270'
		#2 0535' 0576'
		#4 2138' 2179'
	0945	RUN#22, MULTI-FREQUENCY RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 2270' END 2305'
		#2 0576' 0615'
		#4 2179 2213'
		RUN#23, MULTI-FREQUENCY RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 2305' END 2340'
		#2 0615' 0655'
		#4 2213' 2249'
		RECORDED CALIBRATION SIGNAL 1VPK@1HZ ON TAPE 1, 3&4
		TAPE START #1&4 0000' END 0100'
		#3 MARKED WITH TAGS

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

LOG PAGE NO. 9 OF 11

CUSTOMER RELIANCE

TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
10 FEB 77	1040	RUN#24, MULTI-FREQUENCY RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0100' END 0145'
		#2 0665' 0700'
		#4 0100' 0143'
	1044	RUN#25, MULTI-FREQUENCY RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0145' END 0185'
		#2 0700' 0740'
		#4 0143' 0179'
	1050	RUN#26, MULTI-FREQUENCY RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0185' END 0225'
		#2 0740' 0780'
		#4 0179' 0218'

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

LOG PAGE NO. 10 OF 11

CUSTOMER RELIANCE

TEST ENGINEER [signature]

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
10 FEB 77	1100	RUN #27, SINE ON RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0225' END 0280'
		#2 0780' 0835'
		#4 0218' 0262'
	1115	RUN #28, SINE ON RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0280' END 0335'
		#2 0835' 0890'
		#4 0267' 0316'
	1120	RUN #29, SINE ON RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0335' END 0390'
		#2 0980' 0946'
		#4 0316' 0366'

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WYLE LABORATORIES
INSTRUMENTATION LOG SHEET

JOB NO. 43482

CUSTOMER RELIANCE

LOG PAGE NO. 11 OF 11

TEST ENGINEER

DATE	TIME	REMARKS (Include Run Number, Part Changes, Shift Changes and all other pertinent data)
10 FEB 77	1125	RUN #30, SINE ON RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0390' END 0440'
		#2 0945' 0995'
		#4 0866' 0916'
	1130	RUN #31, SINE ON RANDOM OBE F-B/VERT. AXIS
		TAPE START #1 0440' END 0495'
		#2 0996' 1050'
		#4 0916' 0970'
	1140	RUN #32, SINE ON RANDOM DBE F-B/VERT AXIS
		TAPE START #1 0495' END 0550'
		#2 1050' 1105'
		#4 0970' 0528'
		MICRO SWITCH CAME OFF REAR CABINET DURING TEST

INSTRUMENTATION EQUIPMENT SHEET

Date 9 FEB 77 Job No. 43482 Test Area PIT #1

Technician FROST Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
1	ACCELEROMETER	ENDEVCO	2272	EQ21	96148	1000 G	±5%	12-14-76	3-14-77
2	ACCELEROMETER	ENDEVCO	2272	EP49	96146	1000 G	±5%	12-14-76	3-14-77
3	ACCELEROMETER	ENDEVCO	2272	EQ36	96150	1000 G	±5%	12-14-76	3-14-77
4	ACCELEROMETER	ENDEVCO	2272	EQ73	96157	1000 G	±5%	12-14-76	3-14-77
5	ACCELEROMETER	ENDEVCO	2272	EQ38	96151	1000G	±5%	12-14-76	3-14-77
6	ACCELEROMETER	ENDEVCO	2272	EQ45	96153	1000G	±5%	12-14-76	3-14-77
7	ACCELEROMETER	ENDEVCO	2272	EQ58	96155	1000G	±5%	12-14-76	3-14-77
8	ACCELEROMETER	ENDEVCO	2272	EQ44	96152	1000 G	±5%	12-14-76	3-14-77
9	ACCELEROMETER	ENDEVCO	2272	EP53	96147	1000 G	±5%	12-14-76	3-14-77
10	ACCELEROMETER	ENDEVCO	2272	EQ68	96156	1000G	±5%	12-14-76	3-14-77
11	ACCELEROMETER	ENDEVCO	2272	EQ34	96149	1000G	±5%	12-14-76	3-14-77
12	ACCELEROMETER	ENDEVCO	2272	EQ56	96154	1000G	±5%	12-14-76	3-14-77
13	ACCELEROMETER	ENDEVCO	2271A	CQ56	96194	1000G	±5%	12-14-76	3-14-77
14	ACCELEROMETER	ENDEVCO	2272	ES23	96268	1000 G	±5%	12-14-76	3-14-77
15	ACCELEROMETER	ENDEVCO	2272	EH02	96185	1000 G	±5%	12-14-76	3-14-77
16	ACCELEROMETER	ENDEVCO	2271A	CQ93	95486	1000 G	±5%	12-14-76	3-14-77
17	ACCELEROMETER	ENDEVCO	2272	NF36	96191	1000 G	±5%	12-14-76	3-14-77
18	ACCELEROMETER	ENDEVCO	2271A	CS49	96112	1000G	±5%	12-14-76	3-14-77

Instrument Test Engineer D. DeLucchi Checked & Received By Arnie E. Kuykendall

WII-1029

INSTRUMENTATION EQUIPMENT SHEET

Date 9 FEB 77 Job No. 43482 Test Area PIT #1

Technician FROST Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
19	ACCELEROMETER	ENDEVCO	2272	NE89	96192	1000g	±5%	12-14-76	3-14-77
20	Accelerometer	ENDEVCO	2235	LA54	95310	1000g	±5%	12-14-76	3-14-77
21	Accelerometer	ENDEVCO	2272	NA13	F1419	1000g	±5%	11-19-76	2-19-77
22	Accelerometer	ENDEVCO	2272	NA28	F1410	1000g	±5%	11-19-76	2-19-77
23	Accelerometer	ENDEVCO	2272	NA50	F1408	1000g	±5%	11-19-76	2-19-77
24	Accelerometer	ENDEVCO	2272	NA68	F1406	1000g	±5%	11-19-76	2-19-77
25	Accelerometer	ENDEVCO	2272	NA22	F1431	1000g	±5%	11-19-76	2-19-77
26	Accelerometer	ENDEVCO	2272	RB58	F1401	1000g	±5%	12-14-76	3-14-77
27	Accelerometer	ENDEVCO	2272	NA25	F1430	1000g	±5%	11-18-76	2-18-77
28	Accelerometer	ENDEVCO	2272	NA41	F1439	1000g	±5%	11-19-76	2-19-77
29	Accelerometer	ENDEVCO	2272	NA45	F1413	1000g	±5%	11-22-76	2-22-77
30	Accelerometer	ENDEVCO	2272	NA46	F1412	1000g	±5%	11-19-76	2-19-77
31	Accelerometer	ENDEVCO	2272	NA94	F1414	1000g	±5%	11-22-76	2-22-77
32	Accelerometer	ENDEVCO	2272	NA43	F1435	1000g	±5%	12-15-76	3-15-77
33	Accelerometer	ENDEVCO	2272	NA67	F1432	1000g	±5%	12-14-76	3-14-77
34	Accelerometer	ENDEVCO	2272	NA66	F1417	1000g	±5%	12-15-76	3-15-77
35	Accelerometer	ENDEVCO	2272	NA95	F1404	1000g	±5%	12-15-76	3-15-77
36	Accelerometer	ENDEVCO	2272	NA49	F1441	1000g	±5%	1-25-77	4-25-77

Instrument Test Engineer D. DeLuccia Checked & Received By Annie E. Kuykendall

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INSTRUMENTATION EQUIPMENT SHEET

Date 9 FEB 77 Job No. 43482 Test Area PIT #1

Technician FROST Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
37	ACCELEROMETER	ENDEVCO	2272	RA05	95045	1000g	±5%	11-19-76	2-19-77
38	Accelerometer	ENDEVCO	2272	AQ93	F1405	1000g	±5%	12-15-76	3-15-77
39	Accelerometer	ENDEVCO	2272	NA97	F1409	1000g	±5%	12-15-76	3-15-77
40	Accelerometer	ENDEVCO	2272	CU55	F1445	1000g	±5%	12-15-76	3-15-77
41	Accelerometer	ENDEVCO	2272	NA98	F1424	1000g	±5%	11-19-76	2-19-77
42	Accelerometer	ENDEVCO	2272	NA19	F1441	1000g	±5%	11-18-76	2-18-77
43	Accelerometer	ENDEVCO	2272	AY81	95229	1000g	±5%	11-19-76	2-19-77
44	Accelerometer	ENDEVCO	2272	NA61	F1411	1000g	±5%	1-25-77	4-25-77
45	Accelerometer	ENDEVCO	2272	NA14	F1407	1000g	±5%	11-19-76	2-19-77
46	Accelerometer	ENDEVCO	2272	NK29	98048	1000g	±5%	11-19-76	2-19-77
47	Accelerometer	ENDEVCO	2272	NA91	F1434	1000g	±5%	11-19-76	2-19-77
48	Accelerometer	ENDEVCO	2272	NA15	F1425	1000g	±5%	11-18-76	2-18-77
49	Accelerometer	ENDEVCO	2272	NA08	F1436	1000g	±5%	11-18-76	2-18-77
50	Accelerometer	ENDEVCO	2272	NA92	F1445	1000g	±5%	11-19-76	2-19-77
51	Accelerometer	ENDEVCO	2219	AB84	96190	1000g	±5%	12-14-76	3-14-77
52	Accelerometer	ENDEVCO	2219	AC91	LOAN	1000g	±5%	11-22-76	2-22-77
53	Charge Amp	DYNAMICS	7302	-	1547	500g	±2%	1-4-77	7-4-77
54	Charge Amp	DYNAMICS	7302	-	1536	500g	±2%	11-18-76	5-18-77

Instrument Test Engineer S. DeLucchi Checked & Received By Arnie E. [illegible]

WII-1029

INSTRUMENTATION EQUIPMENT SHEET

Date 9 FEB 77 Job No. 43482 Test Area PIT #1

Technician K. Pointer Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
73	Charge Amp	DYNAMICS	7302	-	1628	500g	± 2%	1-4-77	7-4-77
74	Charge Amp	DYNAMICS	7302	-	1566	500g	±2%	1-4-77	7-4-77
75	Charge Amp	DYNAMICS	7302	-	1648	500g	±2%	1-4-77	7-4-77
76	Charge Amp	DYNAMICS	7302	-	1529	500g	±2%	1-4-77	7-4-77
77	Charge Amp	DYNAMICS	7302	-	1540	500g	±2%	1-4-77	7-4-77
78	Charge Amp	DYNAMICS	7302	-	1673	500g	±2%	1-4-77	7-4-77
79	Charge Amp	DYNAMICS	7302	-	1692	500g	±2%	1-4-77	7-4-77
80	Charge Amp	DYNAMICS	7302	-	1522	500g	±2%	1-4-77	7-4-77
81	Charge Amp	DYNAMICS	7302	-	1583	500g	±2%	1-4-77	7-4-77
82	Charge Amp	DYNAMICS	7302	-	1650	500g	±2%	1-4-77	7-4-77
83	Charge Amp	DYNAMICS	7302	-	1513	500g	±2%	1-4-77	7-4-77
84	Charge Amp	DYNAMICS	7302	-	1615	500g	±2%	1-4-77	7-4-77
85	Charge Amp	DYNAMICS	7302	-	1623	500g	±2%	1-4-77	7-4-77
86	Charge Amp	DYNAMICS	7302	-	1602	500g	±2%	1-4-77	7-4-77
87	Charge Amp	DYNAMICS	7302	-	1617	500g	±2%	1-4-77	7-4-77
88	Charge Amp	DYNAMICS	7302	-	1682	500g	±2%	1-4-77	7-4-77
89	Charge Amp	DYNAMICS	7302	-	1542	500g	±2%	1-4-77	7-4-77
90	Charge Amp	DYNAMICS	7302	-	1562	500g	±2%	1-4-77	7-4-77

Instrument Test Engineer L. DeLeach Checked & Received By Annie E. Humphandall

INSTRUMENTATION EQUIPMENT SHEET

Date 9 FEB 77 Job No. 43482 Test Area PIT #1

Technician K. Pointer Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
55	Charge Amp	DYNAMICS	7302	-	1657	500g	±2%	1-4-77	7-4-77
56	Charge Amp	DYNAMICS	7302	-	1538	500g	±2%	1-4-77	7-4-77
57	Charge Amp	DYNAMICS	7302	-	1605	500g	±2%	1-4-77	7-4-77
58	Charge Amp	DYNAMICS	7302	-	1658	500g	±2%	1-4-77	7-4-77
59	Charge Amp	DYNAMICS	7302	-	1504	500g	±2%	1-4-77	7-4-77
60	Charge Amp	DYNAMICS	7302	-	1582	500g	±2%	1-4-77	7-4-77
61	Charge Amp	DYNAMICS	7302	-	1565	500g	±2%	1-4-77	7-4-77
62	Charge Amp	DYNAMICS	7302	-	1526	500g	±2%	1-4-77	7-4-77
63	Charge Amp	DYNAMICS	7302	-	1634	500g	±2%	1-4-77	7-4-77
64	Charge Amp	DYNAMICS	7302	-	1549	500g	±2%	11-18-76	5-18-77
65	Charge Amp	DYNAMICS	7302	-	1686	500g	±2%	1-4-77	7-4-77
66	Charge Amp	DYNAMICS	7302	-	1553	500g	±2%	1-4-77	7-4-77
67	Charge Amp	DYNAMICS	7302	-	1619	500g	±2%	1-4-77	7-4-77
68	Charge Amp	DYNAMICS	7302	-	1660	500g	±2%	1-4-77	7-4-77
69	Charge Amp	DYNAMICS	7302	-	1641	500g	±2%	1-4-77	7-4-77
70	Charge Amp	DYNAMICS	7302	-	1640	500g	±2%	1-4-77	7-4-77
71	Charge Amp	DYNAMICS	7302	-	1616	500g	±2%	1-4-77	7-4-77
72	Charge Amp	DYNAMICS	7302	-	1677	500g	±2%	1-4-77	7-4-77

Instrument Test Engineer [signature] Checked & Received By Arnie E. Kuykendall

WH-1029

INSTRUMENTATION EQUIPMENT SHEET

Date 9 FEB 77 Job No. 43482 Test Area PIT #1

Technician K. Pointer Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
91	Charge Amp	DYNAMICS	7302	-	1607	500g	±2%	1-4-77	7-4-77
92	Charge Amp	DYNAMICS	7302	-	1539	500g	±2%	11-18-76	5-18-76
93	Charge Amp	DYNAMICS	7302	-	1573	500g	±2%	11-18-76	5-18-76
94	Charge Amp	DYNAMICS	7302	-	1527	500g	±2%	11-18-76	5-18-76
95	Charge Amp	DYNAMICS	7302	-	1616	500g	±2%	11-18-76	5-18-76
96	Charge Amp	DYNAMICS	7302	-	1681	500g	±2%	11-18-76	5-18-76
97	Charge Amp	DYNAMICS	7302	-	1515	500g	±2%	11-18-76	5-18-76
98	Charge Amp	DYNAMICS	7302	-	1518	500g	±2%	11-18-76	5-18-76
99	Charge Amp	DYNAMICS	7302	-	1656	500g	±2%	11-18-76	5-18-76
100	Charge Amp	DYNAMICS	7302	-	1670	500g	±2%	11-18-76	5-18-76
101	Charge Amp	DYNAMICS	7302	-	1535	500g	±2%	11-18-76	5-18-76
102	Charge Amp	DYNAMICS	7302	-	1501	500g	±2%	11-18-76	5-18-76
103	Charge Amp	DYNAMICS	7302	-	1550	500g	±2%	11-18-76	5-18-76
104	Tape Recorder	SANGAMO	4700	-	97374	2.5K Hz	±0.5dB	11-22-76	2-22-77
105	Visicorder	HONEYWELL	1508	-	95423	DC-2.5KHz	±4%	11-8-76	5-8-77
106	Galvo Amp	HONEYWELL	T66A-500	-	95397	1:1	±2%	1-5-77	7-5-77
107	Galvo Amp	HONEYWELL	T66A-500	-	96160	1:1	±2%	12-3-76	6-3-77
108	Voltmeter	B+K	2416	-	80188	10mV-1000V	±2%	1-14-77	4-14-77

Instrument Test Engineer [signature] Checked & Received By [signature]

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Page No. 373
Report No. 43482-1

INSTRUMENTATION EQUIPMENT SHEET

Date 9, FEB. 77 Job No. 43482 Test Area PIT 41

Technician K. Pointer Customer RELIANCE Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
109	Oscilloscope	H. P.	132A	-	605F186	DC – 500KHz	±3%	12-27-76	3-27-77
110	Oscillator	H. P.	201C	-	81095	20-20KHz	±2%	11-30-76	2-30-77
111	Tape Recorder	B&H	CPR-4010	-	96291	2.5KHz	±5%	9-22-76	3-22-77
112	Tape Recorder	SANGAMO	3500	-	95378	2.5KHz	±5%	11-23-76	2-23-77
113	Tape Recorder	CEC	2800	-	80571	DC-2.5KHz	±5%	12-28-76	6-28-77
114	Visicorder	HONEYWELL	1912	-	96273	2.5KHz	±5%	9-10-76	3-10-77
115	Visicorder	HONEYWELL	1508	-	96338	2.5KHz	±5%	2-3-77	8-3-77
116	Visicorder	HONEYWELL	1508	-	81218	2.5KHz	±4%	10-6-76	4-6-77
117	Visicorder	HONEYWELL	1508	-	81026	2.5KHz	±4%	10-6-76	4-6-77
118	Galvo Amp	HONEYWELL	T66A-500	-	96161	1:1	±2%	12-3-76	6-3-77
119	Galvo Amp	HONEYWELL	T66A-500	-	96261	1:1	±2%	2-7-77	8-7-77
120	Galvo Amp	HONEYWELL	T66A-500	-	96256	1:1	±2%	9-7-76	3-7-77
121	Galvo Amp	HONEYWELL	T66A-500	-	96279	1:1	±2%	1-5-77	7-5-77
122	Galvo Amp	HONEYWELL	T66A-500	-	96258	1:1	±2%	1-27-77	7-27-77
123	Galvo Amp	HONEYWELL	T66A-500	-	96257	1:1	±2%	1-31-77	7-31-77
124	Galvo Amp	HONEYWELL	T66A-500	-	96277	1:1	±2%	2-7-77	8-7-77
125	Galvo Amp	HONEYWELL	T66A-500	-	96255	1:1	±2%	2-7-77	8-7-77
126	DiGimark	CHADWICK	423	-	97694	9999	±1 CNT.	2-8-77	4-8-77

Instrument Test Engineer [signature] Checked & Received By [signature]

WH-1029

INSTRUMENTATION EQUIPMENT SHEET

Date 9, FEB, 77　　Job No. 43482　　Test Area PIT #1

Technician K. Pointer　　Customer RELIANCE　　Type Test SEISMIC

No.	Instrument	Manufacturer	Model No.	Serial No.	Wyle or Gov't No.	Range	Accuracy	Calibration On	Calibration Due
127	Oscilloscope	TEXTRONICS	561A	-	605F54	.02-10v/cm	±3%	12-13-76	3-13-77
128	Voltmeter	B&K	2426	-	95452	300V	±2%	12-30-76	3-30-77
129	Strain Gage Cond.	VISHAY	2110	-	96228	12vdc	±2%	12-21-76	3-21-77
130	Log Converter	DYNAMICS	SD112-1	-	96145	± 80db	±2%	1-24-77	4-24-77
131	Carrier Generator	DYNAMICS	SD1010	-	80557	± 40db	±1%	1-25-77	4-25-77
132	Tracking Filter	DYNAMICS	SD1012	-	81607	± 40db	±0.5db	1-25-77	4-25-77
133	X-Y Recorder	H.P.	7004B	-	95202	0.5mv-10v/in	±.2%	1-19-77	4-19-77
134	SERVO MONITOR	SPEC. DYNAMICS	SD104	-	95358	1000g	±4%	1-24-77	4-24-77
135	SERVO MONITOR	SPEC. DYNAMICS	SD104	-	95359	1000g	±4%	1-24-77	4-24-77
136	SWEEP OSCILLATOR	SPEC. DYNAMICS	SD105	-	95360	.5-50KHz	±2%	1-24-77	4-24-77
137	X-Y RECORDER	H.P.	7044A	-	95377	.5mv-10v/in	±.2%	11-23-76	2-23-77
138	SPECTRUM SYNTHESIZER	M RAD	1975	-	95363	.5-100Hz	±4%	11-24-76	2-24-77
139	SPECTRUM ANALYZER	M RAD	2825	-	95478	.5-10KHz	±4%	11-22-76	2-25-77
140	BAND PASS FILTER	KROHN-HITE	330M	-	80203	.2-20KHz	±1db	1-14-77	4-13-77
141	POWER SUPPLY	DRESSEN	27144	-	95774	0-15vdc	±10mv	2-1-77	8-1-77
142	POWER SUPPLY	KEPCO	SM160-2	-	97872	0-160vdc	±10mv	2-1-77	8-1-77

Instrument Test Engineer [illegible]　　Checked & Received By [illegible]

WH-1029

APPENDIX V

SEISMIC TEST PLAN

TEST PROCEDURE

WYLE LABORATORIES
SCIENTIFIC SERVICES AND SYSTEMS GROUP
P. O. BOX 1008 • HUNTSVILLE, ALABAMA 35807
TWX (810) 726-2225 • TELEPHONE (205) 837-4411

TEST PROCEDURE NO. 541/5435/ES

DATE: September 21, 1976

Revision B

SEISMIC TEST PLAN

FOR AN

AUXILIARY PROTECTIVE CABINET

FOR

RELIANCE ELECTRIC COMPANY
(CE #99AX400636)

APPROVED BY: _____
FOR: _____

APPROVED BY PROJECT MANAGER: Larry E Thayer

APPROVED BY: _____
FOR: _____

APPROVED BY QUALITY ENGINEER: _____

APPROVED BY: _____
FOR: _____

PREPARED BY PROJECT ENGINEER: H. J. [illegible]

REVISIONS

FORM 1054-1 Rev. 4/74

REV. NO.	DATE	PAGES AFFECTED	BY	APP'L.	DESCRIPTION OF CHANGES
A	12-16-76	2	HJ	LEF	Para. 1.1 - Change specimen size
"	"	3	HJ	LEF	Delete reference to Figures 4 through
					7 and change Figures 8 and 9 to
					Figures 4 and 5
"	"	3	HJ	LEF	Para. 3.2.1 - Add ten accelerometers
"	"	Figures	HJ	LEF	Delete Figures 4 through 7 and change
					Figures 8 and 9 to Figures 4 and 5
B	2-9-77	3	AK	LEF	Add "five (5) OBE tests and one (1)
					DBE test . . ." to Para. 2.3 and 2.4
"	"	3	AK	LEF	Delete Para. 2.5
"	"	3	AK	LEF	Add 9 accelerometers

TEST PROCEDURE NO. 541/5435/E

DATE: 2-9-77

WYLE LABORATORIES
EASTERN OPERATIONS, HUNTSVILLE, ALABAMA

REVISIONS

REV. NO.	DATE	PAGES AFFECTED	BY	APP'L.	DESCRIPTION OF CHANGES
B	2-9-77	4	AK	[signature]	Add electrical power of 120 V, single-
					phase, 60 Hz
"	"	4	AK	[signature]	Add 2 electrical monitoring channels

1.0 MOUNTING

1.1 Specimen Orientation

An Auxiliary Protective Cabinet, hereinafter called the specimen, 192" long x 50" deep x 90" high (excluding mounting fixture), with a total weight not exceeding 12,000 pounds including mounting fixture, dummy weights and specimen, will be mounted on the Wyle Biaxial Seismic Simulator Table such that one of the principal horizontal axes of the specimen will be colinear with the longitudinal axis of the table. For the second axis of test, the specimen will be rotated 90 degrees in the horizontal plane. A

1.2 Specimen Tie-Down

The mounting hole pattern in the base of the specimen will be transferred to the Customer-fabricated mounting fixture. These holes will be drilled in the fixture and the specimen will be bolted to the mounting fixture prior to shipment to Wyle Laboratories. The mounting of the specimen will simulate as closely as practical the actual in-service configuration. The mounting fixture will be welded to the test table during the seismic simulation.

The specimen will be loaded with dummy weights, by the Customer, to simulate the weight of various components.

The specimen will be shipped with lifting hooks such that Wyle might lift the unit from above if they so desire.

2.0 EXCITATION

2.1 Simultaneous Biaxial Excitation

Each horizontal axis will be excited separately but each one will be excited simultaneously with the vertical axis. (Longitudinal simultaneous with vertical, then lateral simultaneous with vertical.) The horizontal and vertical input acceleration levels will be phase incoherent during the multifrequency tests.

2.2 Resonant Search

A low-level (approximately 0.2 g horizontally and vertically) single-axis sine sweep will be performed from 1 Hz to 40 Hz to establish major resonances in each of the three major axes of the specimen. The sweep rate will be 0.5 octave per minute.

WYLE LABORATORIES
SCIENTIFIC SERVICES AND SYSTEMS GROUP

2.3 Random Multifrequency Tests

The specimen will be subjected to 30-second [illegible] simultaneous h[illegible]tal and vertical inputs of random waveform motion consisting of frequen[illegible]d-widths spaced one-third octave apart over the range of 1 Hz to 50 H[illegible] necessary to envelope the Required Response Spectra (RRS). The amp[illegible]e of each one-third octave frequency will be incrementally adjusted in e[illegible]kis until the Test Response Spectra (TRS) envelope the RRS. The resulti[illegible]RS will be analyzed by a spectrum analyzer at a bandwidth of one percent [illegible], and plotted at one-third octave frequency increments over the frequen[illegible]ange of interest. The Zero Period Acceleration [illegible] as well as other ar[illegible], of the RRS could be exceeded in order to meet the peak responses of the [illegible]ves. The horizontal RRS will be a composite spectra of Figures 1 and 2. [illegible] A vertical RRS will be as shown in Figure 3. The specimen will be subj[illegible]ted B to five (5) Operating Basis Earthquake (OBE) tests and one (1) Design Basis Earthquake (DBE) test in each test orientation. The specimen will be tested on a best-effort basis due to the total weight of the specimen, mounting fixture and dummy weights, and the length of the specimen.

2.4 Random Multifrequency Tests with Sine Burst

Since the RRS shown in Figures 4 and 5 cannot be enveloped with a random multifrequency test, due to the limitations of the test machine, a sine burst on random test will be performed. The horizontal and vertical RRS will be as shown in Figures 4 and 5, respectively. The sine bursts will be input sequentially at frequencies of 1 Hz, 1.25 Hz, 1.6 Hz and 2 Hz. The duration of the sine burst on random test will be approximately 45 seconds. The specimen shall be subjected to five (5) OBE tests and one (1) B DBE test in each test orientation. The sine burst tests will be performed on a best-effort basis within the limits of the test machine.

3.0 INSTRUMENTATION

3.1 Excitation Control

Control accelerometers will be mounted on the table at locations near the base of the mounting fixture.

3.2 Specimen Response

3.2.1 Accelerometers

A total of forty-nine (49) specimen-mounted uniaxial piezo-electric accel- B erometers will be located on the specimen under test. The placement of the accelerometers will be at the discretion of the Reliance Technical Representative. Oscillograph and FM tape recorders will provide a record of each accelerometer response during the test program. Response Spectra plots of the specimen response accelerometers from the full-level RRS test (see Paragraphs 2.3 and 2.4) in each test orientation at a damping of one percent (1%) will be

presented in the test report. Transmissibility plots of the accelerometers oriented in the line of excitation will be presented for the resonant search tests.

3.2.2 Strain

A total of six (6) strain gages will be installed on the Cabinet structure in areas of highest stress as determined by the Reliance Technical Representative. The outputs from the strain gages will be recorded on an oscillograph recorder during the simulated seismic test program. The maximum specimen strain from a full-level multifrequency test in each orientation will be included in the test report.

3.3 Electrical Powering B

Two (2) of the fan motors will be powered with 120 VAC, single-phase, 60 Hz, power during the seismic test program.

3.4 Electrical Monitoring

Two (2) channels of electrical monitoring will be recorded on oscillograph recorders during the Seismic Simulation Test Program. These channels may be used to ascertain electrical continuity, current/voltage levels, spurious operation, contact chatter, etc. before, during and after the seismic excitation. B

4.0 IN-PROCESS INSPECTION

The records will be checked for equality of performance after each test.

The specimen will be examined for possible damage following all violent tests such as at a severe structural resonance.

All important vibration effects will be logged.

Photographs will be taken of any noticeable physical damage that may occur.

5.0 REPORT

Ten (10) copies of a certification-type report will be issued subsequent to completion of testing. This report will be signed by a Registered Professional Engineer and will include maximum g levels, transmissibility plots, Response Spectrum plots, natural frequencies, photographs of test setups, accelerometer locations, etc. The report will also contain a list of test equipment used and its calibration.

FIGURE 1
LOUISIANA
FLOOR SPECTRA, N-S, DBE
AUXILIARY BUILDING ELEVATION 46.0'

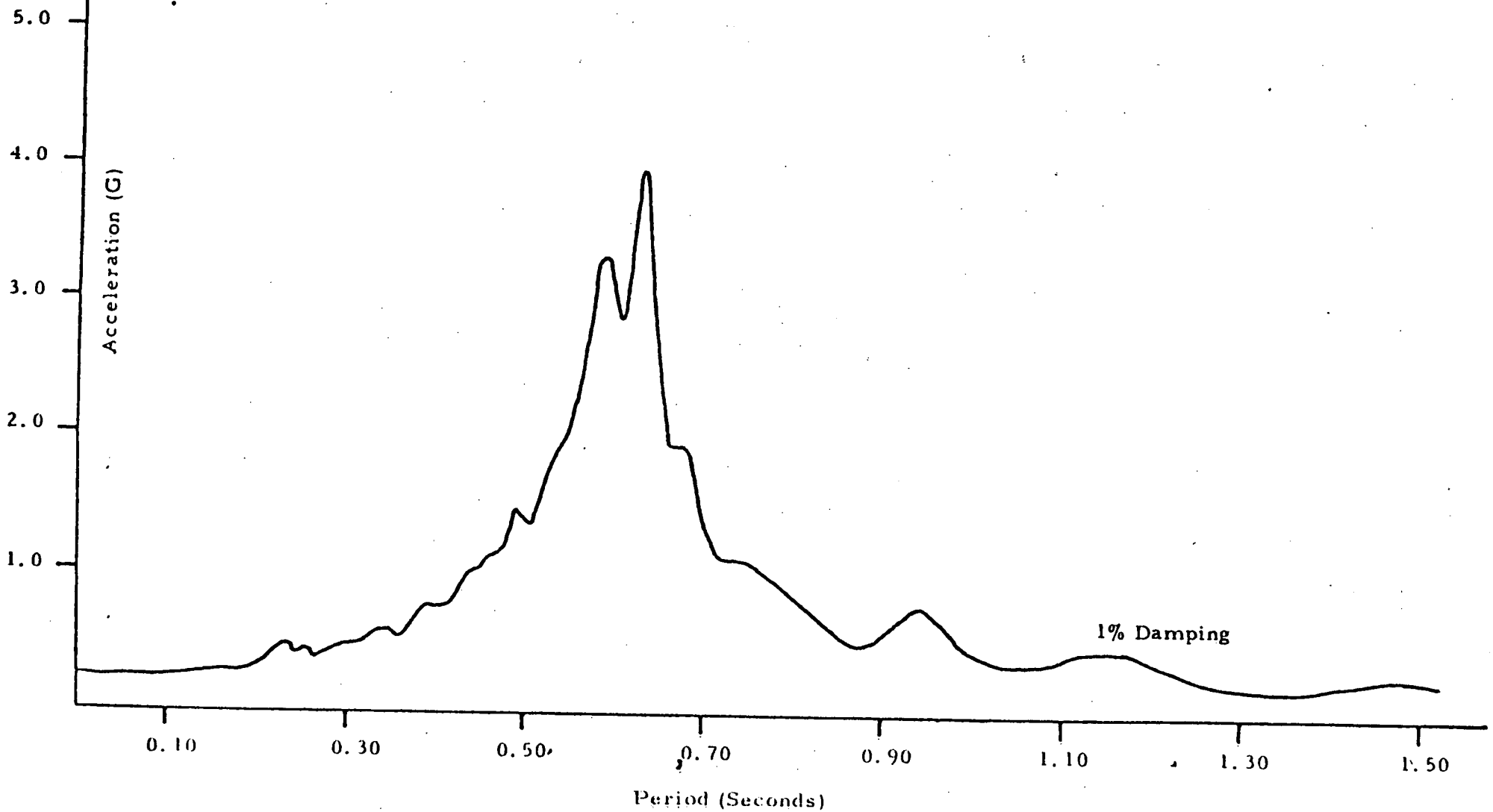


FIGURE 2
LOUISIANA
FLOOR SPECTRA, E-W, DBE
AUXILIARY BUILDING ELEVATION 46.0'

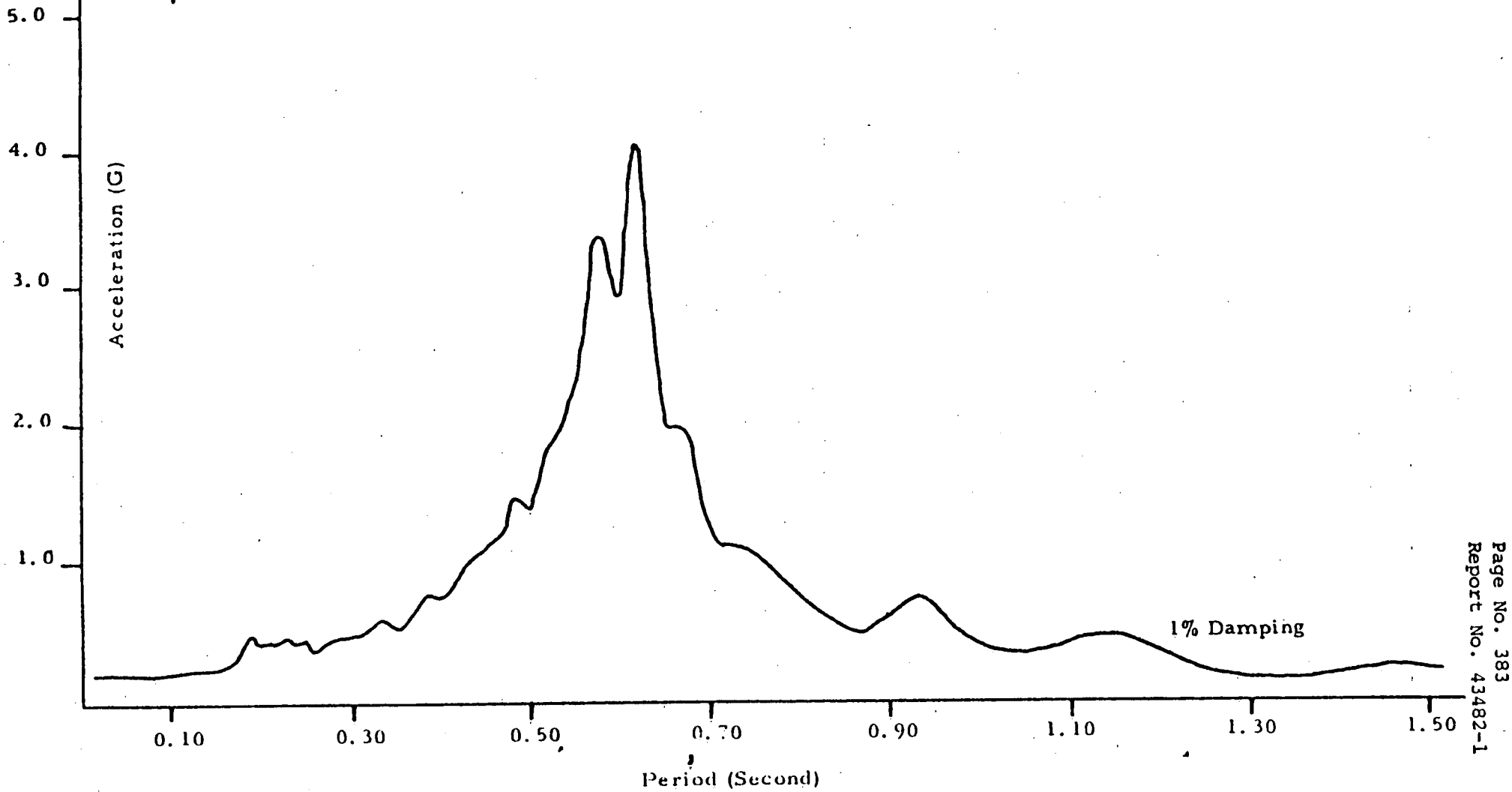


FIGURE 3
LOUISIANA
FLOOR SPECTRA, VERTICAL, DBE
AUXILIARY BUILDING ELEVATION 46.0'

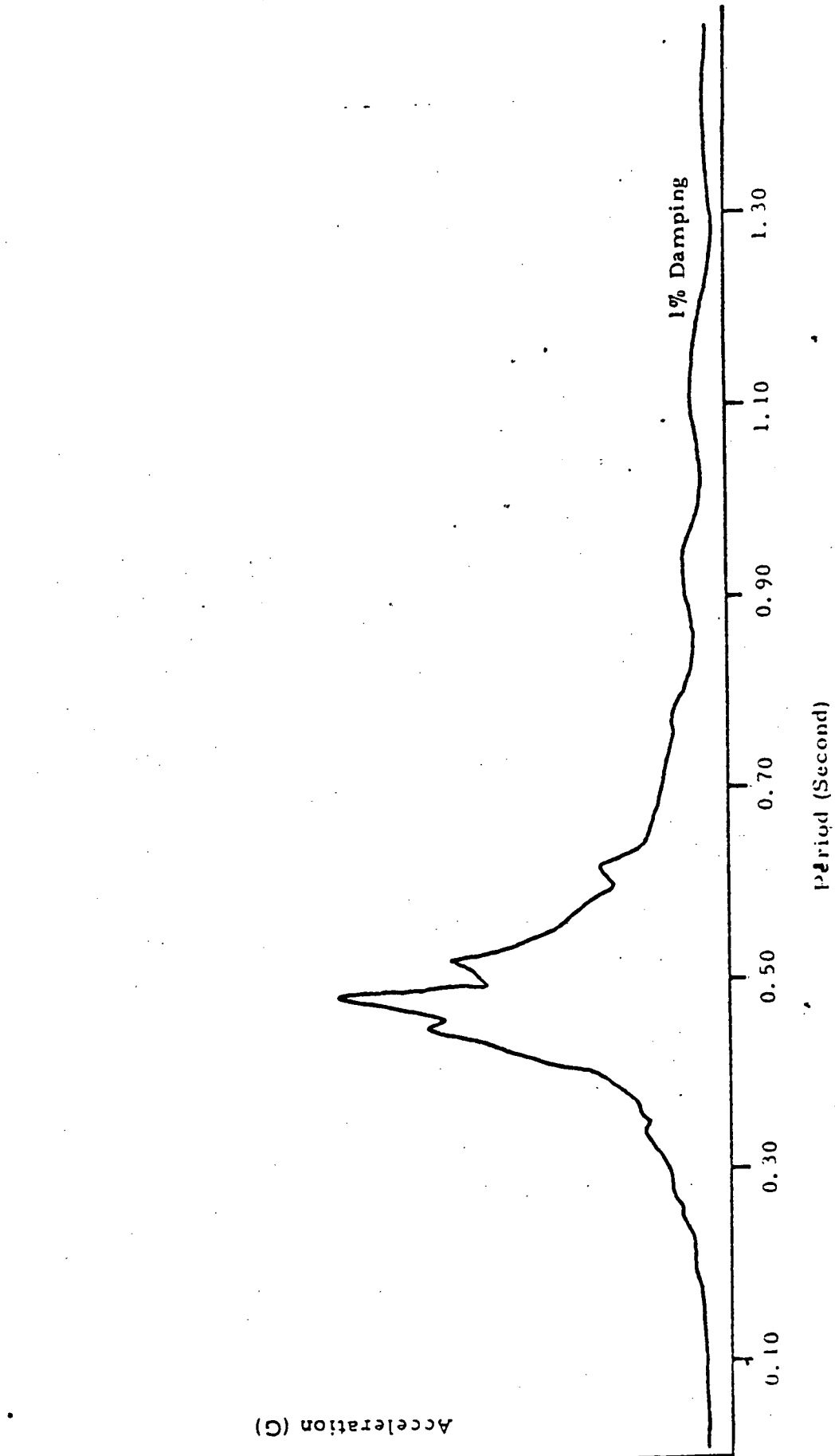


FIGURE 4.
SOUTHERN CALIFORNIA EDISON CO.
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
HORIZONTAL DBE
SPECTRA AT NODE 5
AUXILIARY BUILDING ELEVATION 30'

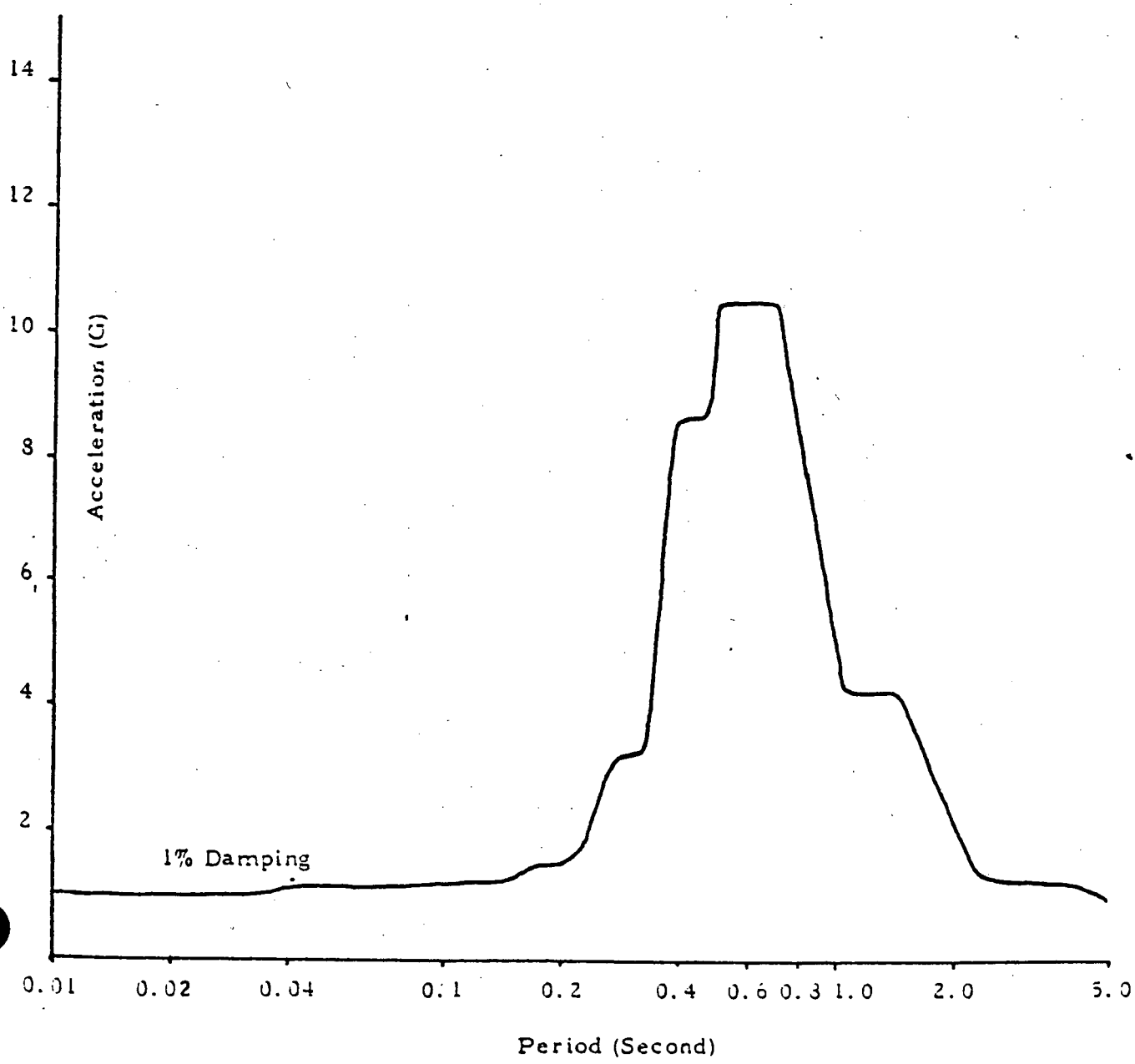
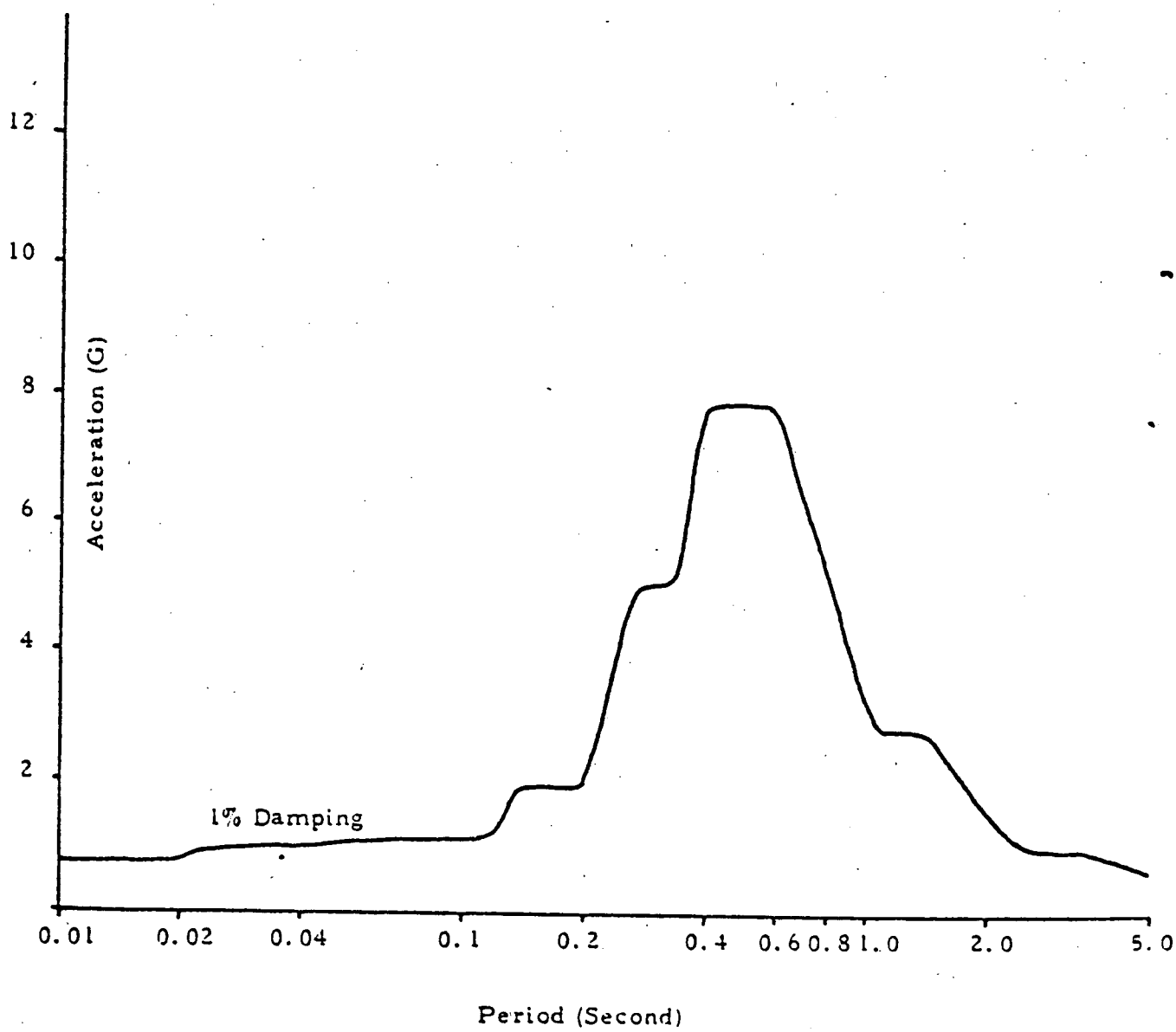


FIGURE 5.
SOUTHERN CALIFORNIA EDISON CO.
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
VERTICAL DBE
SPECTRA AT NODE 5, ELEVATION 30' OF CENTRAL CONTROL AREA AUXILIARY BUILDING



REVISIONS

REVISION. A

REPORT NO. 43482-1

DATE: May 27, 1977

WYLE LABORATORIES
SCIENTIFIC SERVICES AND SYSTEMS GROUP

REV. NO.	DATE	PAGES AFFECTED	BY	APP'L.	DESCRIPTION OF CHANGES
A	5/26/77	7, 13, 14, 20, 22, 24,	HJ	[illegible]	Use Accelerometers 47V, 49V and
		26, 28, 30, 32 & 34			vertical control accelerometer for
					composite vertical input motion.

6.0 TEST PROCEDURES AND RESULTS (Continued)

6.4 Random Multifrequency with Sine Burst Test Procedures

The specimen was subjected to 45 second duration simultaneous horizontal and vertical inputs of random motion consisting of frequency bandwidths spaced one-third octave apart over the frequency range of 1 Hz to 40 Hz as necessary to envelope the Required Response Spectra (RRS) as shown in Figures 3 and 4 (Southern California Edison). The amplitude of each one-third octave bandwidth were independently adjusted in each axis until the Test Response Spectra (TRS) enveloped the RRS. Since the RRS could not be enveloped with a random multifrequency test alone, a sine burst was superimposed on the random signal. The sine bursts were imposed sequentially at frequencies of 1, 1.26, 1.6 and 2 Hz. Each sine burst contained approximately 15 oscillations at each frequency. The magnitude of the first oscillation of the sine burst was less than the remaining 14 oscillations, which were at a constant level. The resulting table motion was analyzed by a spectrum analyzer at one percent (1%) damping. The specimen was subjected to five OBE tests (one-half DBE) and one DBE test in each test orientation.

6.4.1 Random Multifrequency with Sine Bursts Test Results

It was demonstrated that the specimen possessed sufficient integrity to withstand, without major compromise of structure, the prescribed simulated seismic environment. However, during Test 32 (DBE, front-to-back/vertical axes), the mounting screws backed out of one of the micro-switches and allowed the switch to fall off (see Photograph 34). No problem was experienced with the seven other micro-switches located on the specimen.

Table I contains the test run descriptions and input Zero Period Accelerations (ZPA).

Test Response Spectra plots of the control and composite specimen response accelerometers from full level multifrequency tests 19 and 32 are shown in Figures 5 through 12. The composite vertical control accelerometer curves (Figures 6 and 8) were developed from the vertical control accelerometer, Accelerometer 47 vertical, and Accelerometer 49 vertical. Accelerometer 47 was located at one end of the cabinet on the mounting base and Accelerometer 49 was located near the center of the cabinet on the mounting base. Therefore, the composite vertical control accelerometer curves show the overall vertical input motion. The horizontal and vertical control accelerometers

6.0 TEST PROCEDURES AND RESULTS (Continued)

6.4 Random Multifrequency with Sine Burst Test Procedures (Continued)

6.4.1 Random Multifrequency with Sine Bursts Test Results (Continued)

show that the table motion exceeded the Required Response Spectra at certain frequencies by a significant margin. Naturally, the specimen response accelerometers show a higher response than they would have had the table motion equaled the Required Response Spectra.

Figures 13 through 16 show Predicted Composite Response Spectra for the specimen accelerometers, if the Test Response Spectra of the control accelerometers had equaled the Required Response Spectra. The data used to develop these figures are valid based on linearity of response (Figures 17 through 20 show transmissibility plots for random multifrequency) and were calculated with the following formula:

$$PCTRS = RRS \times \frac{CTRS}{TRS}$$

TABLE II

TEST RESPONSE DATA AT 1/3 OCTAVE INTERVALS
FOR THE
CONTROL AND COMPOSITE SPECIMEN RESPONSE ACCELEROMETERS
AXIS: SIDE-TO-SIDE AND VERTICAL ORIENTATION

	Test No. 19					Test No. 19				
	Specimen Accelerometers Oriented in the Side-to-Side Direction					Specimen Accelerometers Oriented in the Vertical Direction				
Accel. Spectra Figure	HCA TRS 5	SA SSCTRS 9	- Q 17	HCA RRS 3	SA SSPCTRS 13	VCA TRS 6	SA VCTRS 10	- Q 18	VCA RRS 4	SA VPCTRS 14
Freq.	G's	G's	SSCTRS ÷ TRS	x RRS G's	= PCTRS G's	G's	G's	VCTRS ÷ TRS	x RRS G's	= VPCTRS G's
1.00	5.5	6.0	1.1	5.0	5.5	3.6	4.0	1.1	3.2	3.5
1.26	10.6	12.4	1.2	8.5	9.9	5.5	7.0	1.2	5.0	6.0
1.58	12.5	14.0	1.1	10.4	11.6	8.3	10.0	1.2	8.0	9.6
2.00	11.8	13.5	1.1	10.4	11.9	9.3	11.0	1.2	8.0	9.6
2.50	11.0	12.8	1.2	8.5	9.9	9.3	10.0	1.1	8.0	8.8
3.16	6.1	8.3	1.4	4.7	6.4	6.7	7.0	1.0	5.5	5.5
4.00	5.2	10.4	2.0	2.6	5.2	7.0	7.7	1.1	3.8	4.2
5.00	7.8	12.2	1.6	1.5	2.3	5.8	7.3	1.2	2.7	3.2
6.30	7.6	21.0	2.8	1.4	3.9	6.7	7.5	1.1	1.9	2.1
8.00	6.5	16.5	2.5	1.4	3.6	7.5	10.2	1.4	1.4	2.0
10.00	6.5	16.0	2.5	1.4	3.3	10.8	11.4	1.0	1.0	1.0
12.60	5.3	11.2	2.1	1.3	2.7	9.2	11.0	1.2	1.0	1.2
15.80	9.5	13.8	1.5	1.3	1.8	12.8	16.5	1.3	1.0	1.3
20.00	11.8	14.5	1.2	1.2	1.5	6.2	9.3	1.5	0.9	1.3
25.00	7.5	11.5	1.5	1.2	1.8	4.9	7.7	1.6	0.9	1.4
31.60	7.3	14.0	1.9	1.2	2.2	4.5	7.8	1.7	0.9	1.5
40.00	4.2	16.0	3.8	1.1	4.3	3.6	8.0	2.2	0.9	2.0
50.00	4.1	11.0	2.7	1.1	2.9	4.0	7.7	1.9	0.8	1.5
63.00	3.9	12.5	3.2	1.1	3.4	3.7	5.3	1.4	0.8	1.1
80.00	3.9	6.8	1.7	1.0	1.8	2.8	4.3	1.5	0.8	1.2
100.00	3.6	5.1	1.4	1.0	1.4	2.5	4.1	.6	0.8	1.3
ZPA	3.6	5.1	1.4	1.0	1.4	2.4	4.1	1.6	0.8	1.3

Legend:
HCA = Horizontal Control Accelerometer
SA = Specimen Accelerometer
VC = Vertical Control (Vertical Control Accelerometer, Accel. 47V & 49V)
TRS = Test Response Spectra
SSCTRS = Side-to-Side Composite Specimen Test Response Spectra
Q = Transmissibility
RRS = Required Response Spectra
SSPCTRS = Side-to-Side Predicted Composite Specimen Test Response Spectra
VCTRS = Vertical Composite Specimen Test Response Spectra
VPCTRS = Vertical Predicted Composite Specimen Test Response Spectra
ZPA = Zero Period Amplitude

TABLE III

TEST RESPONSE DATA AT 1/3 OCTAVE INTERVALS
FOR THE
CONTROL AND COMPOSITE SPECIMEN RESPONSE ACCELEROMETERS
AXIS: FRONT-TO-BACK AND VERTICAL ORIENTATION

	Test No. 32					Test No. 32				
	Specimen Accelerometers Oriented in the Front-to-Back Direction					Specimen Accelerometers Oriented in the Vertical Direction				
Accel. Spectra Figure	HCA TRS 7	SA FBCTRS 11	- Q 19	HCA RRS 3	SA FBPCTRS 15	VCA TRS 8	SA VCTRS 12	- Q 20	VCA RRS 4	SA VPCTRS 16
Freq.	G's	G's	FBCTRS ÷ TRS	x RRS G's	= PCTRS G's	G's	G's	VCTRS ÷ TRS	x RRS G's	= PCTRS G's
1.00	6.0	6.3	1.0	5.0	5.0	3.6	4.2	1.1	3.2	3.5
1.26	10.8	12.7	1.2	8.5	10.2	5.8	7.2	1.2	5.0	6.0
1.58	11.8	13.2	1.1	10.4	11.4	8.8	9.2	1.0	8.0	8.0
2.00	11.2	13.0	1.2	10.4	12.5	11.0	11.0	1.0	8.0	8.0
2.50	10.2	11.0	1.1	8.5	9.4	8.5	8.5	1.0	8.0	8.0
3.16	6.5	8.0	1.2	4.7	5.6	6.3	7.5	1.2	5.5	6.6
4.00	5.9	9.5	1.6	2.6	4.2	6.0	6.8	1.1	3.8	4.2
5.00	7.4	11.2	1.5	1.5	2.3	5.9	6.1	1.0	2.7	2.7
6.30	9.2	15.3	1.7	1.4	2.4	5.4	5.8	1.1	1.9	2.1
8.00	6.5	12.3	1.9	1.4	2.7	8.0	8.8	1.1	1.4	1.5
10.00	5.7	18.8	3.3	1.4	4.6	9.7	10.8	1.1	1.0	1.1
12.60	5.8	10.0	1.7	1.3	2.2	7.5	9.8	1.3	1.0	1.3
15.80	8.8	8.8	1.0	1.3	1.3	7.0	7.7	1.1	1.0	1.1
20.00	8.7	18.0	2.1	1.2	2.5	8.5	8.7	1.0	0.9	0.9
25.00	7.4	25.0	3.4	1.2	4.1	11.0	11.5	1.0	0.9	0.9
31.60	8.2	22.5	2.7	1.2	3.2	11.8	13.2	1.1	0.9	1.0
40.00	4.2	16.0	3.8	1.1	4.2	6.7	9.5	1.4	0.9	1.3
50.00	4.2	8.2	1.9	1.1	2.1	4.9	5.6	1.1	0.8	0.9
63.00	3.4	6.0	1.8	1.1	2.0	4.3	4.8	1.1	0.8	0.9
80.00	3.5	5.7	1.6	1.0	1.6	4.1	4.7	1.1	0.8	0.9
100.00	3.4	4.8	1.4	1.0	1.4	3.8	4.3	1.1	0.8	0.9
ZPA	3.3	4.6	1.4	1.0	1.4	3.7	4.2	1.1	0.8	0.9

Legend: FBCTRS = Front-to-Back Composite Test Response Spectra
FBPCTRS = Front-to-Back Predicted Composite Test Response Spectra

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]

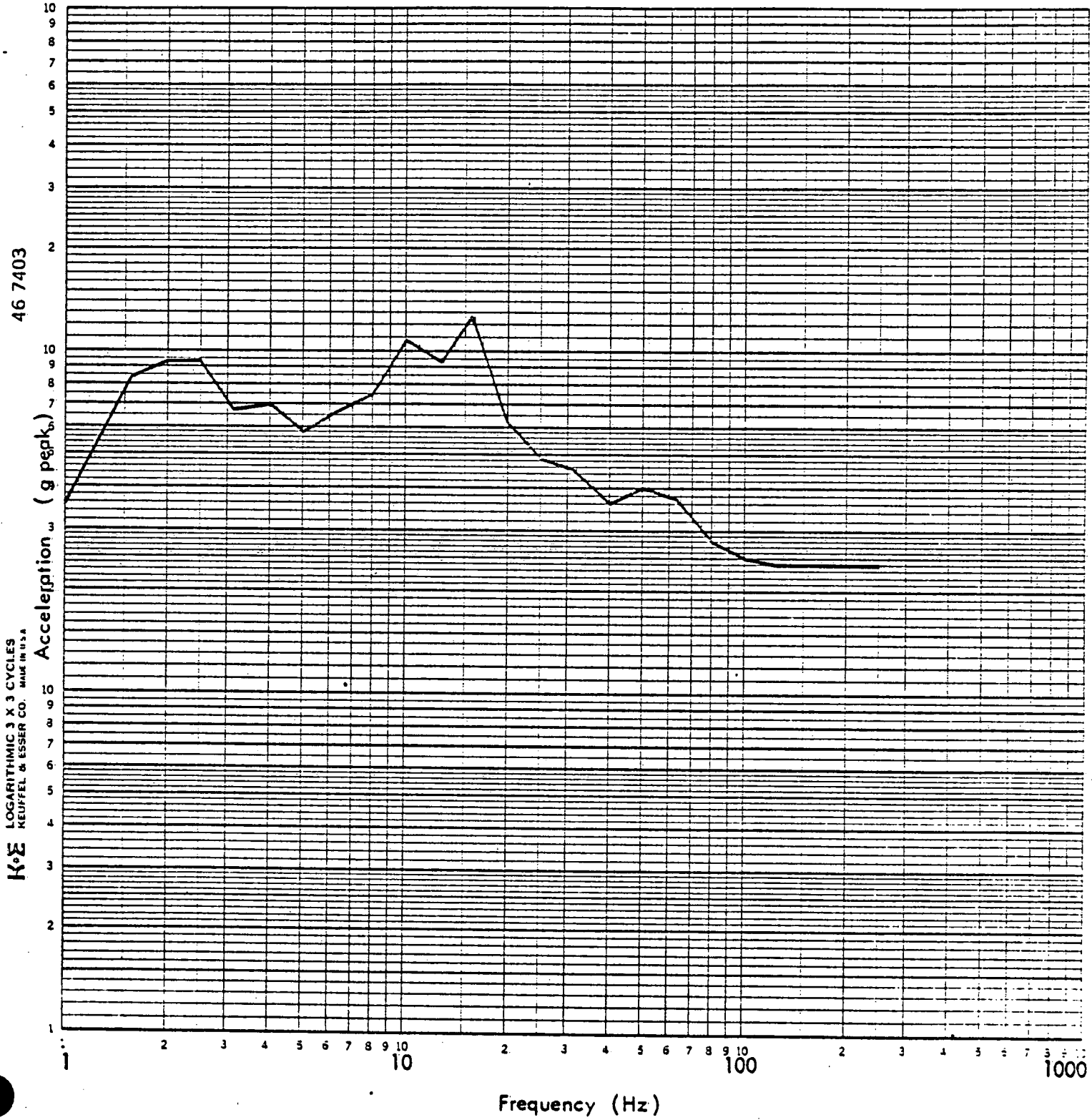


FIGURE 6 COMPOSITE TEST RESPONSE SPECTRUM OF THE VERTICAL CONTROL ACCELEROMETERS (VCA, 47V, AND 49V) DURING SS/V RANDOM MULTIFREQUENCY TEST (RUN #13)

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]

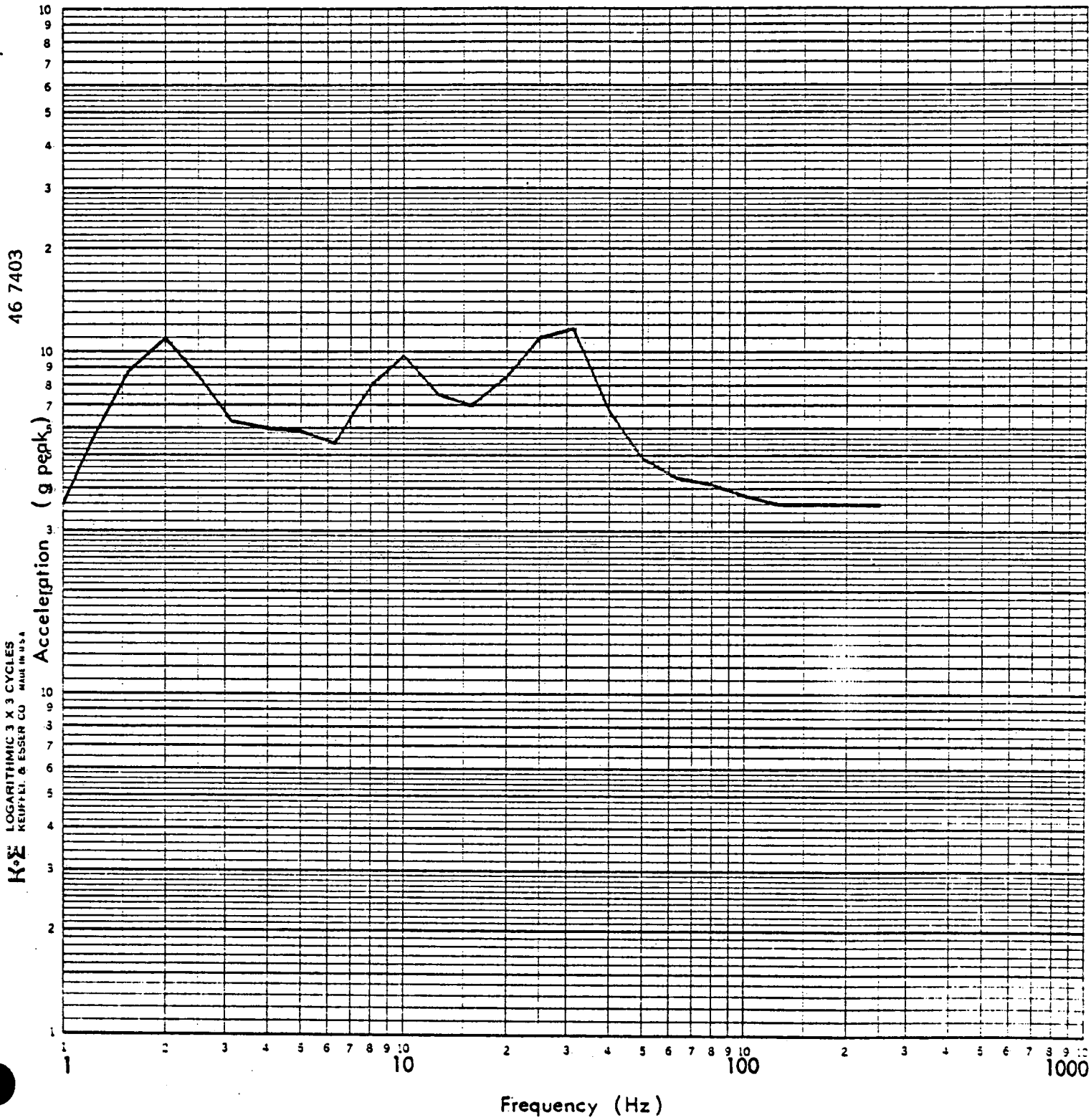


FIGURE 8 COMPOSITE TEST RESPONSE SPECTRUM OF THE VERTICAL CONTROL ACCELEROMETERS (VCA, 47V, AND 49V) DURING FB/V RANDOM MULTIFREQUENCY TEST (RUN #32)

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

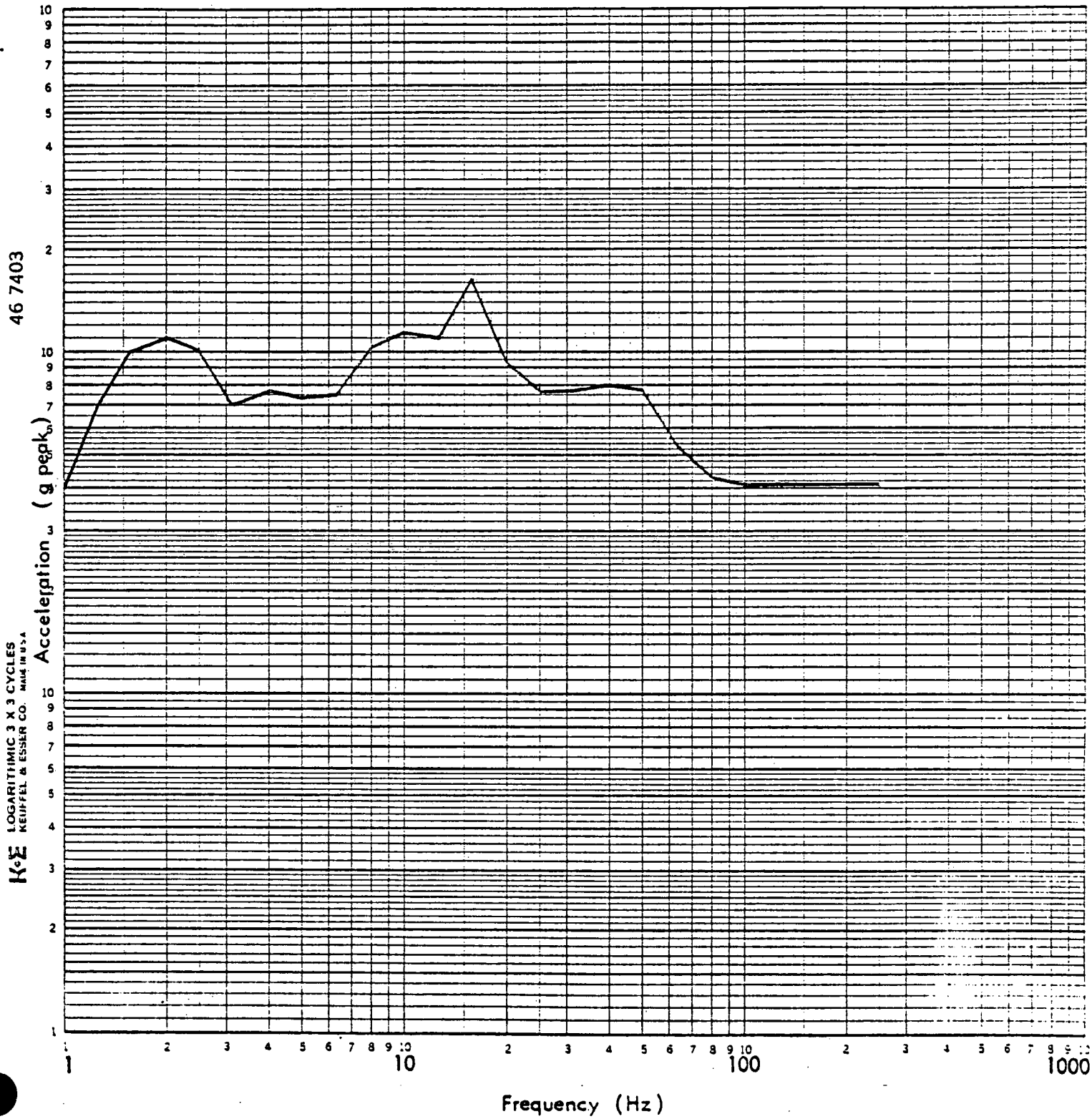


FIGURE 10 COMPOSITE TEST RESPONSE SPECTRUM OF VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS DURING SS/V RANDOM MULTIFREQUENCY TEST (RUN #19)

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

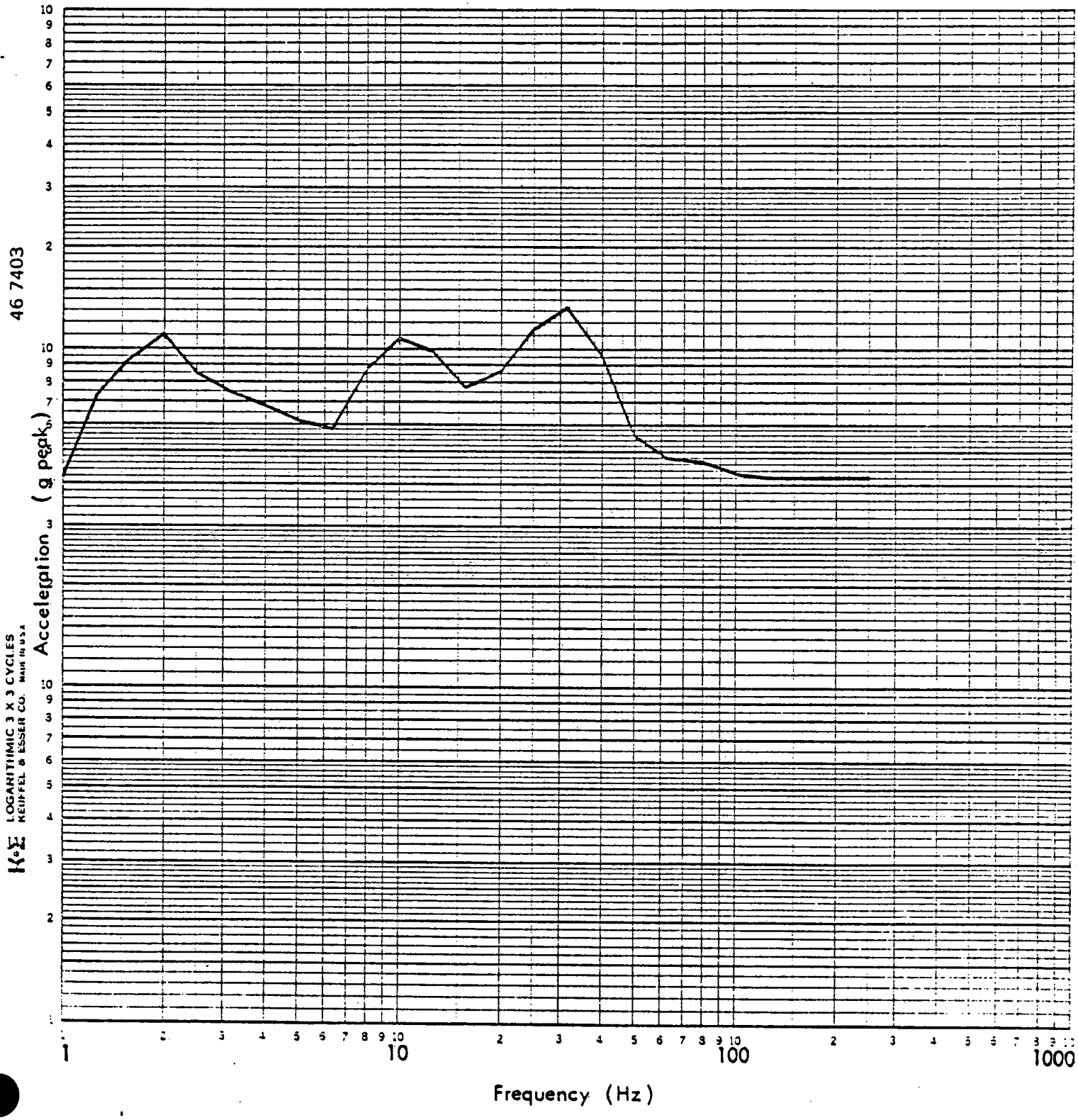


FIGURE 12 COMPOSITE TEST RESPONSE SPECTRUM OF VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS DURING FB/V RANDOM MULTIFREQUENCY TEST (RUN #32)

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING 1 %

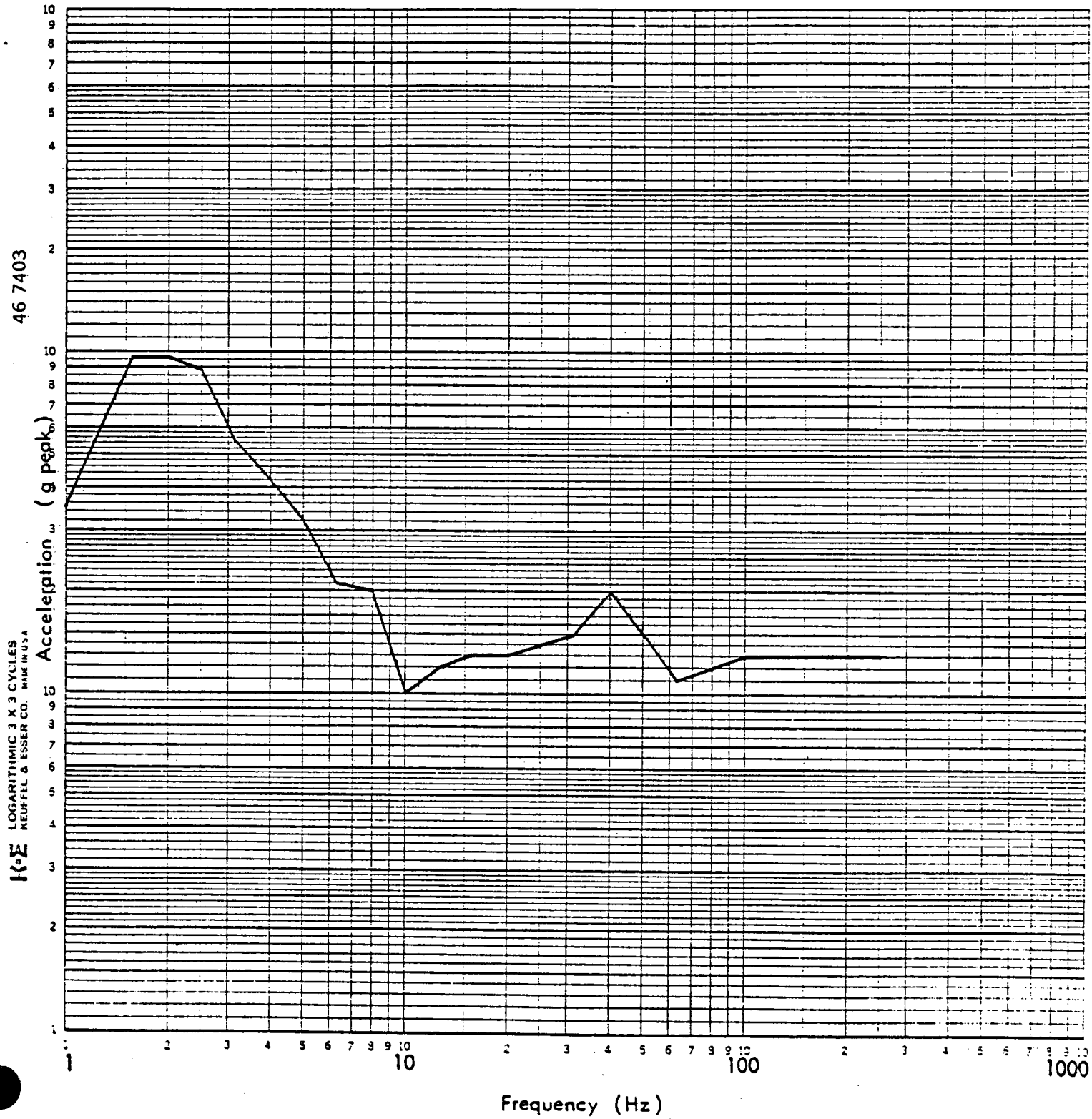


FIGURE 14 PREDICTED COMPOSITE RESPONSE SPECTRUM FOR VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS IF THE TEST RESPONSE SPECTRA OF THE VERTICAL CONTROL ACCELEROMETERS HAD EQUALED THE VERTICAL REQUIRED RESPONSE SPECTRA DURING SS/V RANDOM MULTIFREQUENCY TEST (RUN #19)

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

DAMPING [1 %]

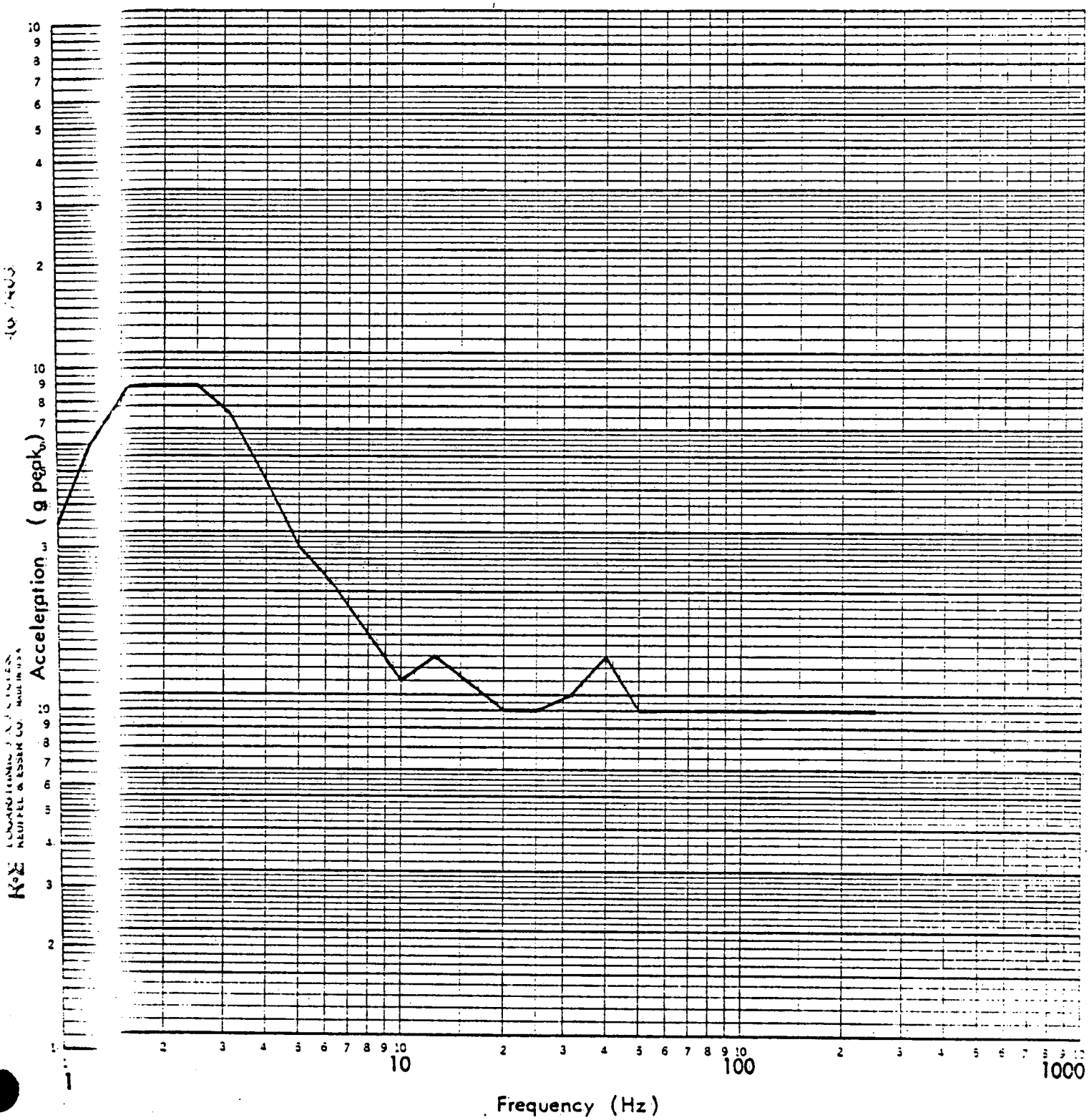


FIGURE 16 PREDICTED COMPOSITE RESPONSE SPECTRA FOR VERTICALLY ORIENTED SPECIMEN ACCELEROMETERS IF THE TEST RESPONSE SPECTRA OF THE VERTICAL CONTROL ACCELEROMETERS HAD EQUALED THE VERTICAL REQUIRED RESPONSE SPECTRA DURING FB/V RANDOM MULTIFREQUENCY TEST (RUN #32)

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

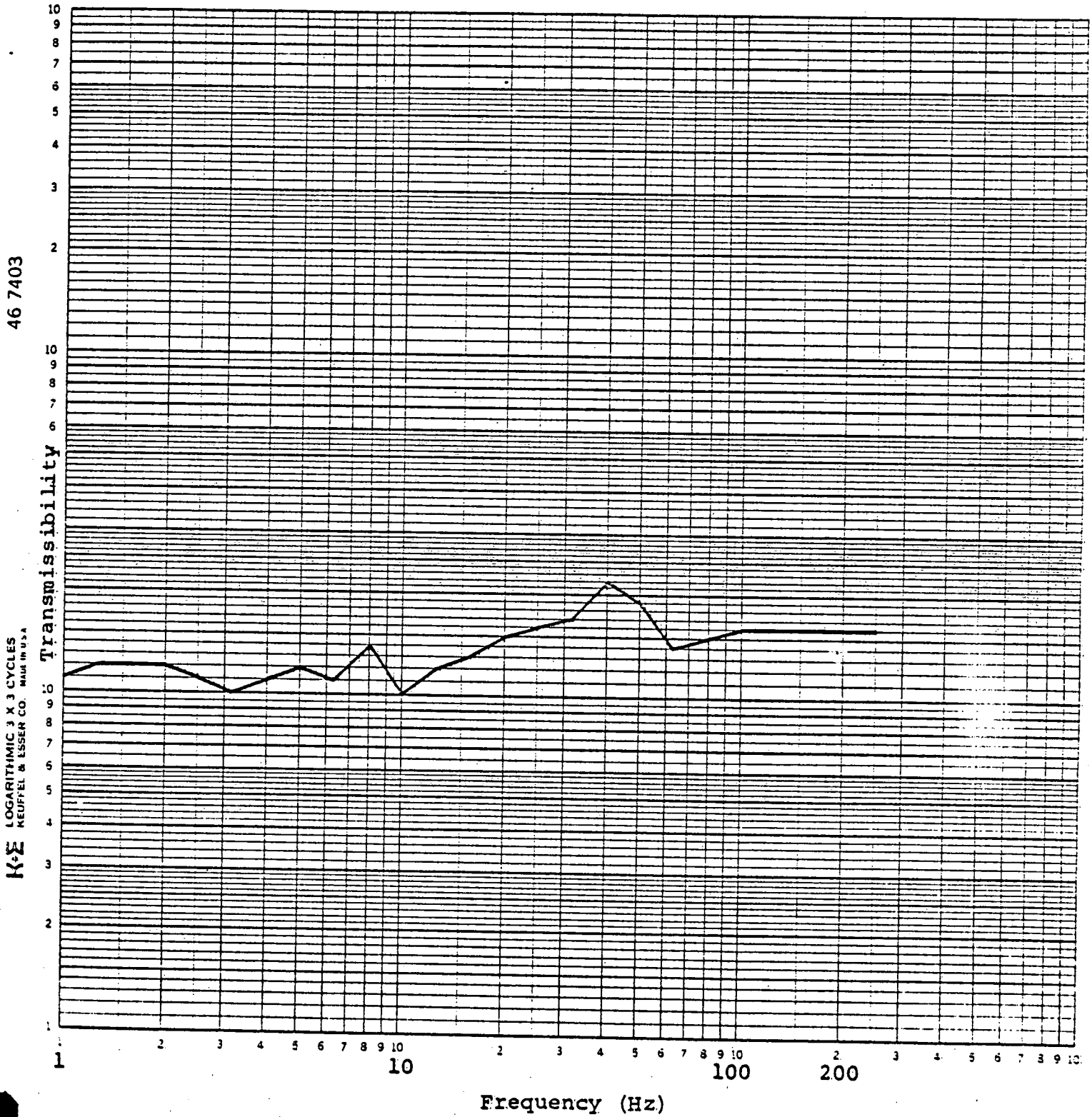


FIGURE 18 RANDOM MULTIFREQUENCY TRANSMISSIBILITY PLOT OF THE VERTICAL COMPOSITE TEST RESPONSE SPECTRA SPECIMEN RESPONSE ACCELEROMETERS DIVIDED BY THE VERTICAL COMPOSITE CONTROL ACCELEROMETERS DURING SS/V AXES (RUN #19)

FULL SCALE TRANSMISSIBILITY

0.1 ☐ 1.0 ☐ 10 ☐ 100 ☒ 1000 ☐

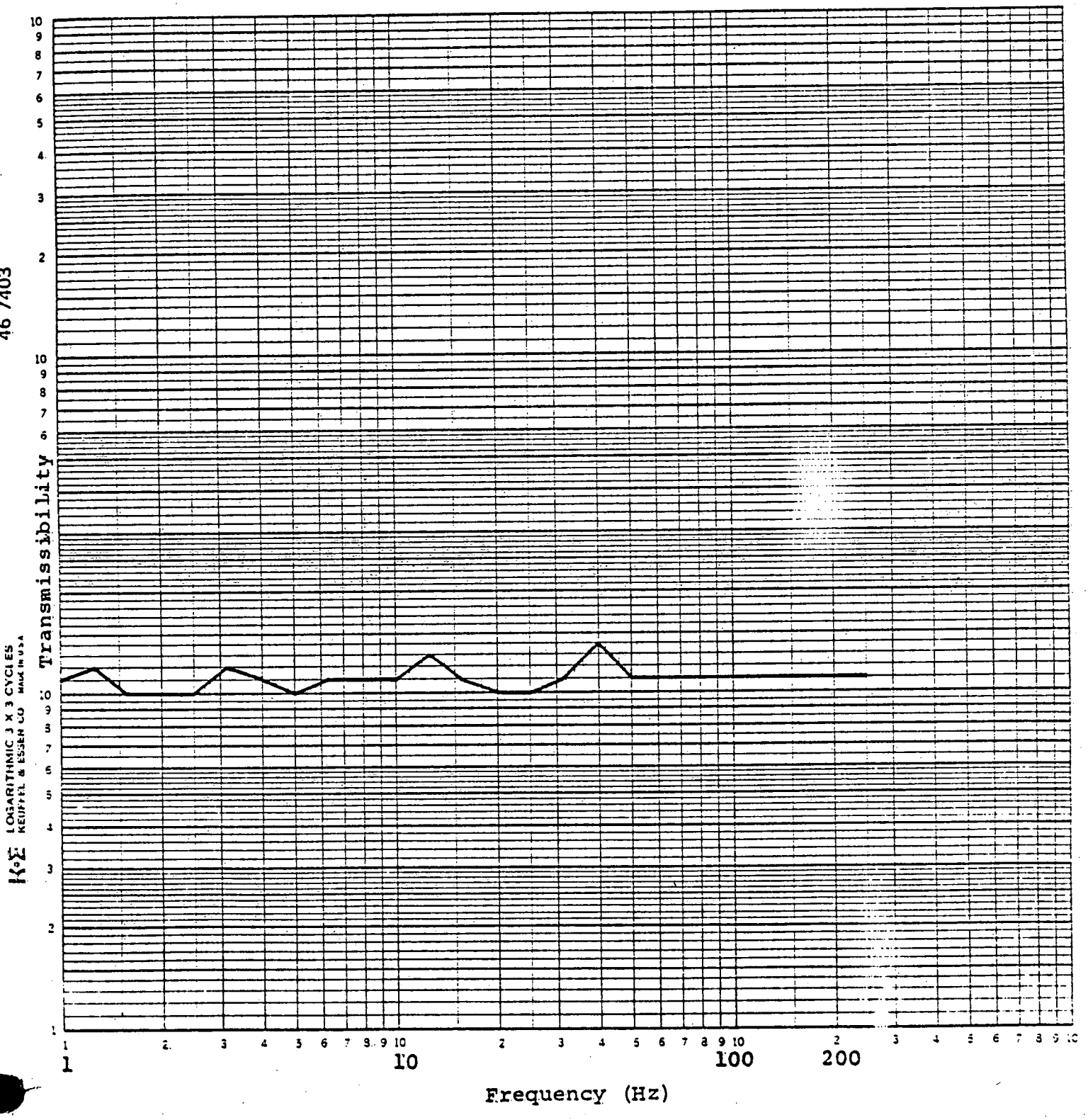


FIGURE 20 RANDOM MULTIFREQUENCY TRANSMISSIBILITY PLOT OF THE VERTICAL COMPOSITE ACCELEROMETER TEST RESPONSE SPECTRA SPECIMEN RESPONSE ACCELEROMETERS DIVIDED BY THE VERTICAL COMPOSITE CONTROL ACCELEROMETERS DURING FB/V AXES (RUN #32)

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