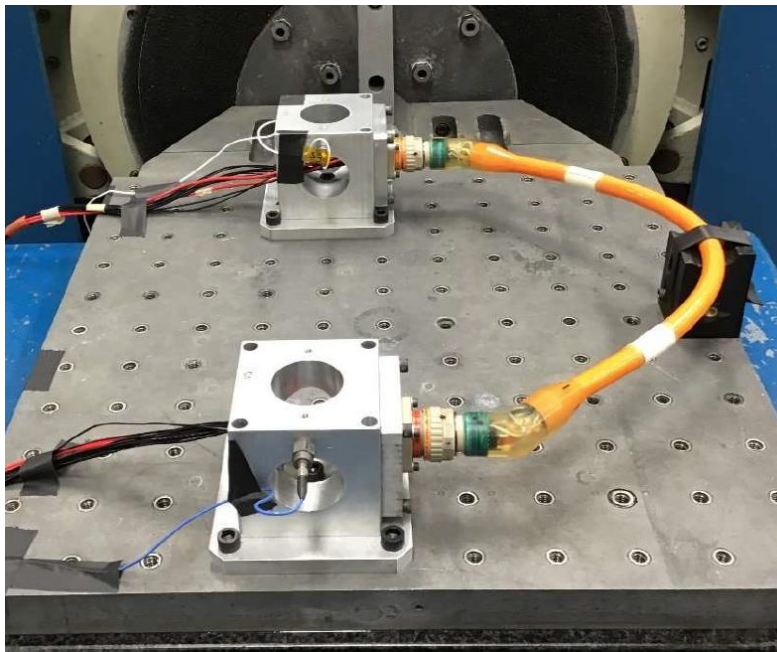




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**QUALIFICATION TEST REPORT ABSTRACT
FOR
SEAKING™ 700 PEEK
GLASS FILLED COMPOSITE SUBSEA CONNECTORS
REPORT NO. GT-23-122 ABSTRACT**



PREPARED BY:  DATE: 6/27/2023
Meghan Taylor

UPDATED BY: _____ DATE: _____

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QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
Date: June 26, 2023
Sheet 2 of 54

1.0 Product Description/Application

SeaKing™ 700 PEEK connectors are non-metallic with 30% glass filled composite thermoplastic shells designed for galvanic compatibility in mixed material applications and immunity from cathodic delamination.

1.1 Purpose

Testing was performed on PEEK cable and connector assemblies to determine its conformance to the performance requirements of EIA 364 and QTP 769-2, Revision E.

1.2 Scope

This report summarizes the environmental, mechanical, and electrical qualification testing of SeaKing™ 700 PEEK connectors and cable assemblies.

1.3 Conclusion

SeaKing™ 700 PEEK connectors and cable assemblies has been shown to be capable of meeting performance requirements of QTP 769-2, Revision E.

1.4 Test Specimen

Test Sample Description		
Glenair Series	Description	Quantity
SeaKing™ 700 PEEK	7071-0118: LX14 Double Ended Molded Cable Assembly, PEEK and Polyurethane Construction	9
	707-0155-6: PEEK Flange Connector Receptacle (FCR)	9
	707-0155-1: PEEK Cable Connector Plug (CCP)	9



2.0 Qualification Test Summary

Qualification Test Summary		
Test Description	Section Reference	Results
Contact Resistance	2.2	Passed
Proof Voltage	2.3	Passed
Pressure Cycling @ 6,000m	2.4	Passed
High Voltage Breakdown	2.5	Passed
Mechanical Shock	2.6	Passed
Vibration	2.7	Passed
Thermal Shock	2.8	Passed
Temperature Rise	2.9	Passed*
Electrical Verification	2.10	Passed
Thermal Cycling	2.11	Passed
Dry Mating Over Temperature Range	2.12	Passed
Drop	2.13	Passed
Reverse Pressure @ 6,000m	2.14	Passed
Over-Torque of CCP Locking Collar	2.15	Passed
Over-Torque of FCR Shell	2.16	Passed
Mating Durability	2.17	Passed
Ethernet	2.18	Passed

*For Test Deviation description, please see section 2.9.4

2.1 Qualification Testing Details

2.2 **Contact Resistance**

2.2.1 Test Method

AP 17F, Section B.7.3.1.1, four-wire method

Connectors shall be tested for Low Level Contact Resistance – measuring contact resistance across each contact point with 50mA

2.2.2 Acceptance Criteria

Contact resistance shall not exceed 0.3Ω (0.03Ω per contact, including resistance of wire and fixture)

2.2.3 Results

PASS,

2.2.4 Test Anomalies/Deviations

N/A

2.3 **Proof Voltage**

2.3.1 Test Method

EIA-364-20F, Method A, Test Condition I

1200kV AC for 60 seconds on 5 contacts or 10% of total contacts



- 2.3.2 Acceptance Criteria
Current leakage shall not exceed 5mA
- 2.3.3 Results
PASS
- 2.3.4 Test Anomalies/Deviations
N/A

2.4 Pressure Cycling

- 2.4.1 Test Method
EIA-364-39 / API 17F Section 9.2.2.1
Samples shall be subjected to 520 pressure cycles, from 0m to 6000m deep (0 - 8,702 psi, - 0/+500 psi)
Pressurization rate: 50 psi/sec
Depressurization rate: 100 psi/sec
In process cycling hold: 1 minutes
Electrical Verification Tests shall be performed on samples after every 52 cycles.
- 2.4.2 Acceptance Criteria
Samples shall pass Electrical Verification Tests and exhibit no damage detrimental to functionality. The measured resistance shall be less than 0.3Ω (0.03Ω per contact + 0.24Ω for wire between contacts, and wire/connections of testing fixture.)
- 2.4.3 Results
PASS
- 2.4.4 Test Anomalies/Deviations
N/A

2.5 High Voltage Breakdown

- 2.5.1 Test Method
API 17F, Section B.7.3.1.7
The cable assemblies shall be mated to the respective fixtures (wired such that cable contacts are in series.) Seawater shall provide earth to the electrical test equipment. Increase the AC voltage at a maximum rate of 500 VAC/minute until breakdown occurs.
- 2.5.2 Acceptance Criteria
The breakdown at greater than or equal to 8kV ac. Voltage shall be recorded, and the point of failure identified by means of photographs.
- 2.5.3 Results
PASS
- 2.5.4 Test Anomalies/Deviations
N/A

2.6 Mechanical Shock

2.6.1 Test Method

API 17F, Section 9.2.3.2.1

Half sine shock pulse of 10G, 11ms, 4 shocks in each positive and negative direction of all 3 axes (Total number of shocks will be 24.). Each unit shall be wired in series and monitored for electrical discontinuities greater than 1µs.

2.6.2 Acceptance Criteria

The samples shall exhibit no discontinuity greater than 1µs and exhibit no damage detrimental to functionality

2.6.3 Results

PASS

2.6.4 Test Anomalies/Deviations

N/A

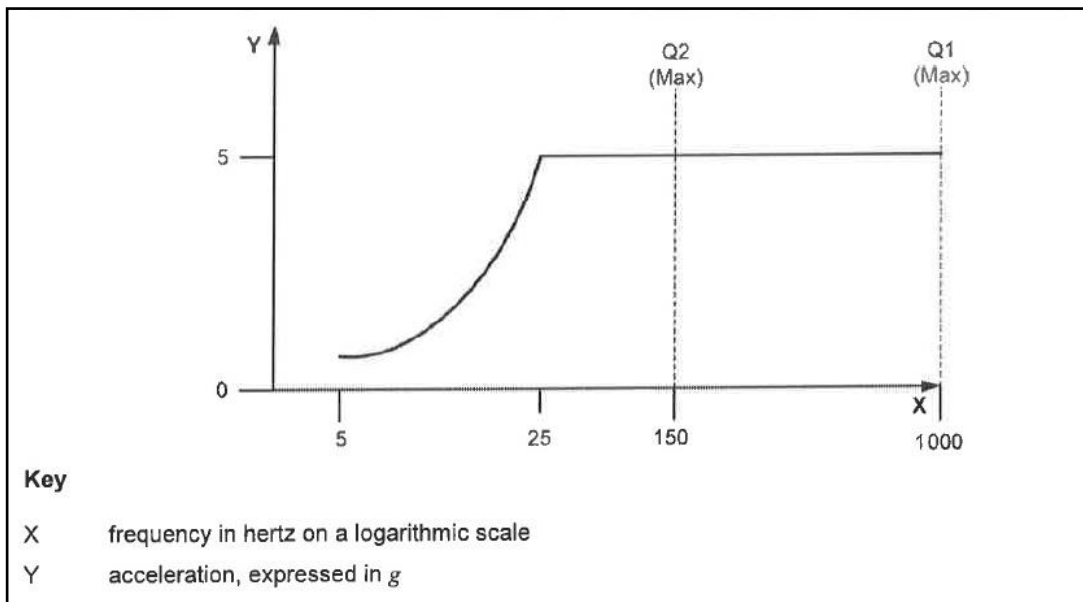
2.7 Vibration

2.7.1 Test Method

API 17 F, Section 9.2.3.2.3 and 9.3.7.3

Sine vibration shall be performed in all three axes—a single sweep from 5 to 150 and back at 5 Hz. Random vibration shall then be conducted, for two (2) hours, on the axis that had the highest resonance during sine vibration.

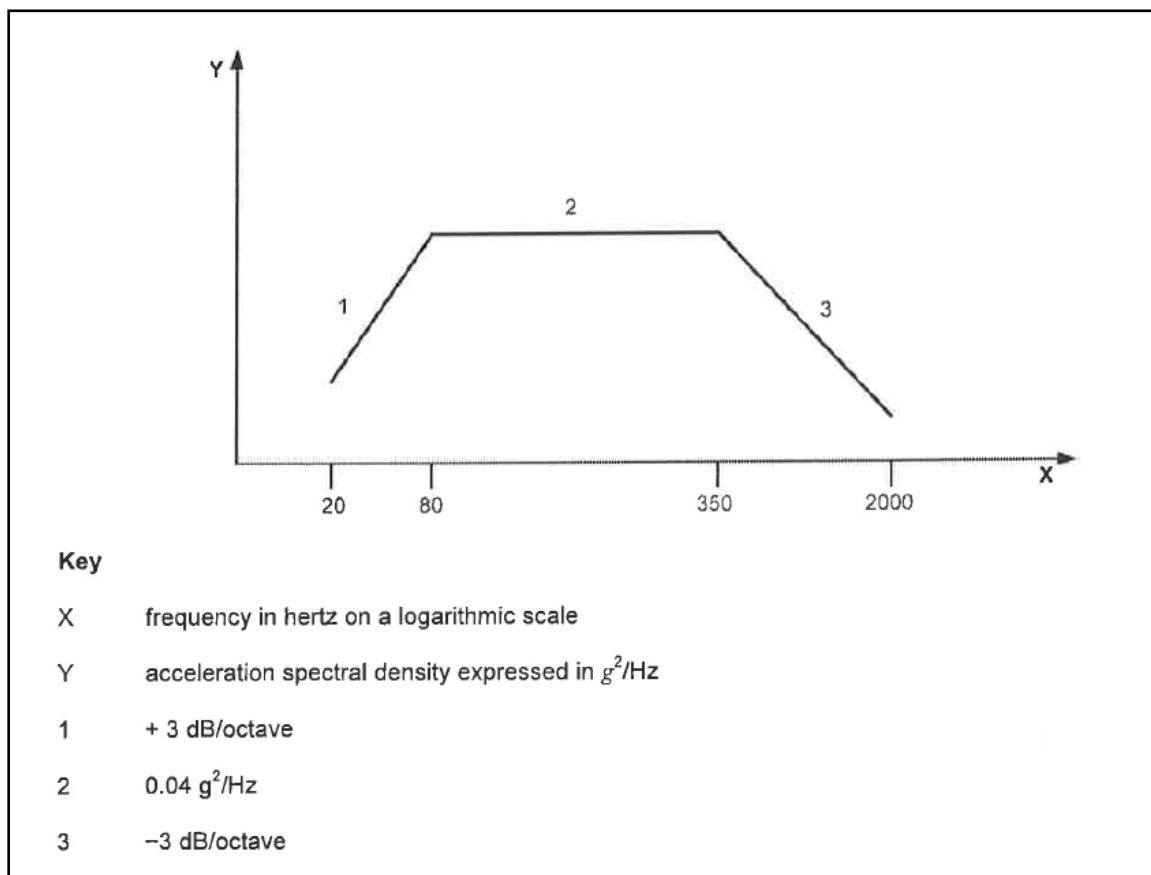
Profile for initial Sine Vibration tests—all 3 axes:



(Acceleration, g, over Mechanical Vibration Frequency)

- (Q1 &) Q2: 5 Hz to 25 Hz with ±2mm displacement
- Q2: 25 Hz to 150 Hz with 5g acceleration
- Sweep rate: One octave per minute max

Random Profile (Acceleration Spectral Density over Frequency Range):



- 20 Hz to 80 Hz at 3dB per octave rise
- 80 Hz to 350 Hz at 0.04 g^2/Hz
- 350 Hz to 2000 Hz at 3dB per octave roll-off

(Performed on one axis—that had the highest resonance during Sine Vibration.)

2.7.2 Acceptance Criteria

The samples shall exhibit no discontinuity greater than 1 μ s or damage during vibration testing and pass electrical verification testing.

2.7.3 Results

PASS

2.7.4 Test Anomalies/Deviations

N/A

2.8 Thermal Shock

2.8.1 Test Method

EIA-364-32

The intent of this testing is to evaluate the performance of the cables when exposed to extremes of high and low temperatures and to the shock of alternate exposures to these extremes. Samples shall be mounted on a shuttle in the thermal shock chamber and cycled from -20°C to 60°C for 60 minutes at each temperature extreme, for a total of 5 cycles

2.8.2 Acceptance Criteria

The samples must pass electrical verification testing and exhibit no damage detrimental to functionality.



2.8.3 Results
PASS

2.8.4 Test Anomalies/Deviations
N/A

2.9 Temperature Rise

2.9.1 Test Method

EIA-364-70, Method 1

Run 23 Amps thru two (2) discrete 12ga contacts, having thermocouples on input and output pins. Record and plot temperature increase over time for each thermocouple.

2.9.2 Acceptance Criteria

Cable assembly shall experience less than 30°C rise in temperature.

2.9.3 Results

PASS

2.9.4 Test Anomalies/Deviations

The first unit tested in Temperature rise failed due to the amount of current exceeding the wire gauge size. The QTP was then revised to only test the two large gauge size wires in the cable.

2.10 Electrical Verification

2.10.1 Test Method

QTP-769-2 Rev E

Contact Resistance - Connectors shall be tested for Low Level Contact Resistance - Using the four wire method

Requirements: 50mA

Insulation Resistance - Connectors shall be tested for Insulation Resistance

Requirements: 500V, >10GΩ

Continuity - A multimeter device, such as a Fluke meter, shall be set to its continuity test setting, and hooked to leads across each contact individually

Requirements: Point-to-point continuity shall be verified across all contacts.

2.10.2 Acceptance Criteria

Samples shall pass electrical verification tests and exhibit no damage detrimental to functionality.

2.10.3 Results

PASS

2.10.4 Test Anomalies/Deviations

N/A



2.11 Thermal Cycling

2.11.1 Test Method

EIA-364-110 (2006) / QTP-769-2 Rev E

Temperature plateaus shall be -20°C and $+105^{\circ}\text{C}$ ($\pm 3^{\circ}\text{C}$) and transition between plateaus cannot be less than or equal to two minutes. Samples shall be subjected to 520 cycles and electrical verification testing shall be performed every 52 cycles.

2.11.2 Acceptance Criteria

Samples shall pass electrical verification tests and exhibit no damage detrimental to functionality.

2.11.3 Results

PASS

2.11.4 Test Anomalies/Deviations

N/A

2.12 Dry Mating Over Temperature Range

2.12.1 Test Method

EIA-364-09D and API 17F, Section B.7.3.3.5

Inside appropriate chamber, mate and de-mate FCR connectors on one side of each cable assembly 20 times at -20°C . Perform electrical verification tests on cable assembly. Repeat at $+60^{\circ}\text{C}$.

2.12.2 Acceptance Criteria

Samples shall exhibit satisfactory positive location and pass Electrical verification tests (after each set of mating cycles.) No damage shall be observed to either half of the connector pair due to incorrect orientation/alignment.

2.12.3 Results

PASS

2.12.4 Test Anomalies/Deviations

N/A

2.13 Drop

2.13.1 Test Method

API 17F, Section B.7.5.2.3

Mate an FCR connector onto one end of cable assembly sample. Drop from a height of 2m onto a 5mm thick rubber mat on top of a concrete floor. Perform Electrical Verification Tests. Repeat with FCR connector mated to opposite end of cable assembly.

2.13.2 Acceptance Criteria

Samples shall pass electrical verification tests and exhibit no damage detrimental to functionality.

2.13.3 Results

PASS

2.13.4 Test Anomalies/Deviations

N/A



2.14 Reverse Pressure

2.14.1 Test Method

EIA-364-39 and API 17F, Section 9.2.2.1

Mated (back-potted) test samples shall be placed in a bag, into the pressure vessel, Samples shall be subjected to 8,700psi for a total of 520 cycles. After every 52 cycles, an electrical verification shall be performed.

2.14.2 Acceptance Criteria

Samples shall pass electrical verification tests and exhibit no damage detrimental to functionality.

2.14.3 Results

PASS

2.14.4 Test Anomalies/Deviations

N/A

2.15 Over-Torque of CCP Locking Collar

2.15.1 Test Method

With plug and receptacle mated, securely grip collar with a torque-measurement device. Torque collar to 18 in-lbs. and hold for 20s.

2.15.2 Acceptance Criteria

Samples shall exhibit no damage detrimental to functionality.

2.15.3 Results

PASS

2.15.4 Test Anomalies/Deviations

N/A

2.16 Over-Torque of FCR Shell

2.16.1 Test Method

With plug and receptacle mated, securely grip FCR with a torque-measurement device. Torque FCR shell to 10 in-lbs. and hold for 20s.

2.16.2 Acceptance Criteria

Samples shall exhibit no damage detrimental to functionality.

2.16.3 Results

PASS

2.16.4 Test Anomalies/Deviations

N/A

2.17 Mating Durability

2.17.1 Test Method

EIA-364-09

The intent of this testing is to determine the effects caused by subjecting electrical connectors to the conditioning action of mating and unmating, simulating the expected life of the connectors. Connectors shall be manually cycled at a rate of no more than 300 cycles per



hour until all 520 cycles are completed. One cycle consists of fully mating and unmating the connector. After every 52 cycles, an electrical verification shall be performed.

2.17.2 Acceptance Criteria

Samples shall pass electrical verification tests and exhibit no damage detrimental to functionality.

2.17.3 Results

PASS

2.17.4 Test Anomalies/Deviations

N/A

2.18 **Ethernet**

2.18.1 Test Method

API 17F, B.9.6 and Table B.29

The SIIS twisted-pair link segment transmission and coupling parameters (TP1 to TP6) shall meet or exceed the 100BASETX twisted-pair link segment specifications. The 100BASE-TX link transmission and coupling parameters of insertion loss, differential characteristic impedance, return loss and near-end crosstalk (NEXT).

Test Summary		
Test	API 17F Requirement	Corresponding ANSI/ARINC Spec.
Wire Map	(Continuity Check)	
Insertion Loss	Equation B.2	ANSI TIA-568-C.2, 6.2.7
Near End Crosstalk (NEXT)	Equation B.4	ANSI TIA-568-C.2, 6.2.8
Return Loss	Equation B.3	ANSI TIA-568-C.2, 6.2.6
Propagation Delay	(For Info only)	ARINC 800P4, 3.4.5
Delay Skew	(For Info only)	ARINC 800P4, 3.4.6
Attenuation-to-Crosstalk Ratio – Far End (ACR-F)	(For Info only)	ANSI TIA-568-C.2, 6.2.11
Power Sum Near-End Crosstalk (PS NEXT)	(For Info only)	ANSI TIA-568-C.2, 6.2.9
Power Sum Attenuation-to-Crosstalk Ratio – Far End (PS ACR-F)	(For Info only)	ANSI TIA-568-C.2, 6.2.13

2.18.2 Acceptance Criteria

Samples shall exhibit no discontinuity in transmission and pass 100BASE-TX requirements.

2.18.3 Results

PASS

2.18.4 Test Anomalies/Deviations

N/A



3.0 Test Results

3.1 Contact Resistance

Contact Resistance Test Results [mV]									
Pin	Serial No.								
	LX-01	LX-02	LX-03	LX-04	LX-05	LX-06	LX-07	LX-08	LX-09
1	0.438	0.440	0.437	0.437	0.443	0.447	0.432	0.440	0.439
2	0.434	0.438	0.435	0.443	0.445	0.443	0.432	0.441	0.437
3	5.915	5.830	5.853	5.866	5.893	5.910	5.911	5.843	5.847
4	5.917	5.841	5.827	5.857	5.891	5.946	5.914	5.833	5.865
5	5.922	5.823	5.822	5.871	5.896	5.891	5.882	5.862	5.839
6	5.935	5.784	5.783	5.833	5.877	5.863	5.854	5.826	5.849
7	5.943	5.821	5.804	5.866	5.899	5.922	5.923	5.865	5.86
8	5.925	5.812	5.802	5.827	5.869	5.889	5.875	5.831	5.842
9	5.919	5.842	5.814	5.867	5.888	5.895	5.853	5.841	5.864
10	5.926	5.808	5.772	5.843	5.886	5.868	5.854	5.825	5.836
11	6.505	3.447	3.463	3.486	3.498	3.511	3.472	3.501	3.458
12	2.361	2.309	2.320	2.349	2.346	2.371	2.323	2.360	2.335
13	3.577	3.505	3.502	3.509	3.535	3.532	3.504	3.537	3.488
14	3.540	3.476	3.470	3.476	3.507	3.527	3.496	3.505	3.479

3.2 Proof Voltage

Typical Proof Voltage Test Results

Proof Voltage Test					
Test Type	Test Level	Active Pin	Ground Pin	Test Value	Pass/ Fail
ACW	1.2kV	Pin 1	All	0.372mA	Pass
ACW	1.2kV	Pin 3	All	0.266mA	Pass
ACW	1.2kV	Pin 5	All	0.249mA	Pass
ACW	1.2kV	Pin 7	All	0.264mA	Pass
ACW	1.2kV	Pin 9	All	0.252mA	Pass



3.3 High Voltage Breakdown

High Voltage Breakdown Test Results

Serial No.	Ramp Rate	Breakdown Voltage	Dwell Time	Pass / Fail
1-9	500 VAC/min	Units did not breakdown. End voltage, 8.3kV.	30s	Pass

3.4 Contact Resistance, Initial

Contact Resistance Test Results [mV]

Initial									
Pin	Serial No.								
	LX-01	LX-02	LX-03	LX-04	LX-05	LX-06	LX-07	LX-08	LX-09
1	0.438	0.440	0.437	0.437	0.443	0.447	0.432	0.440	0.439
2	0.434	0.438	0.435	0.443	0.445	0.443	0.432	0.441	0.437
3	5.915	5.830	5.853	5.866	5.893	5.910	5.911	5.843	5.847
4	5.917	5.841	5.827	5.857	5.891	5.946	5.914	5.833	5.865
5	5.922	5.823	5.822	5.871	5.896	5.891	5.882	5.862	5.839
6	5.935	5.784	5.783	5.833	5.877	5.863	5.854	5.826	5.849
7	5.943	5.821	5.804	5.866	5.899	5.922	5.923	5.865	5.86
8	5.925	5.812	5.802	5.827	5.869	5.889	5.875	5.831	5.842
9	5.919	5.842	5.814	5.867	5.888	5.895	5.853	5.841	5.864
10	5.926	5.808	5.772	5.843	5.886	5.868	5.854	5.825	5.836
11	6.505	3.447	3.463	3.486	3.498	3.511	3.472	3.501	3.458
12	2.361	2.309	2.320	2.349	2.346	2.371	2.323	2.360	2.335
13	3.577	3.505	3.502	3.509	3.535	3.532	3.504	3.537	3.488
14	3.540	3.476	3.470	3.476	3.507	3.527	3.496	3.505	3.479



3.5 Contact Resistance, Post-Mechanical Shock

Contact Resistance Test Results [mV]

Post Mechanical Shock Test									
Pin	Serial No.								
	LX-01	LX-02	LX-03	LX-04	LX-05	LX-06	LX-07	LX-08	LX-09
1	0.451	0.448	0.449	0.440	0.453	0.448	0.452	0.448	0.449
2	0.447	0.447	0.441	0.453	0.448	0.443	0.448	0.452	0.445
3	5.916	5.818	5.862	5.845	5.910	5.903	5.918	5.862	5.857
4	5.908	5.842	5.821	5.877	5.909	5.941	5.895	5.835	5.875
5	5.914	5.841	5.807	5.868	5.858	5.875	5.883	5.896	5.874
6	5.911	5.784	5.795	5.803	5.866	5.843	5.849	5.827	5.857
7	5.891	5.790	5.824	5.859	5.870	5.892	5.926	5.853	5.854
8	5.894	5.793	5.793	5.833	5.857	5.882	5.892	5.845	5.810
9	5.891	5.830	5.818	5.859	5.892	5.884	5.857	5.842	5.906
10	5.913	5.818	5.749	5.847	5.887	5.864	5.845	5.836	5.857
11	3.514	3.443	3.453	3.466	3.495	3.508	3.467	3.512	3.484
12	2.345	2.321	2.329	2.353	2.342	2.371	2.335	2.355	2.336
13	3.550	3.493	3.496	3.502	3.548	3.546	3.504	3.547	3.506
14	3.567	3.483	3.462	3.463	3.503	3.532	3.504	3.529	3.486



3.6 Contact Resistance, Post-Vibration

Contact Resistance Test Results [mV]

Post Vibration Test									
Pin	Serial No.								
	LX-01	LX-02	LX-03	LX-04	LX-05	LX-06	LX-07	LX-08	LX-09
1	0.443	0.446	0.458	0.438	0.454	0.452	0.439	0.456	0.448
2	0.445	0.435	0.460	0.442	0.448	0.448	0.445	0.447	0.448
3	5.884	5.813	5.833	5.825	5.886	5.884	5.852	5.814	5.874
4	5.876	5.815	5.829	5.819	5.883	5.870	5.847	5.807	5.882
5	5.881	5.832	5.821	5.835	5.860	5.836	5.815	5.839	5.857
6	5.868	5.809	5.780	5.784	5.883	5.816	5.777	5.805	5.860
7	5.865	5.827	5.824	5.810	5.892	5.842	5.863	5.812	5.875
8	5.887	5.791	5.818	5.797	5.860	5.822	5.832	5.808	5.840
9	5.863	5.849	5.804	5.805	5.878	5.875	5.829	5.827	5.893
10	5.865	5.835	5.756	5.802	5.848	5.847	5.833	5.805	5.855
11	3.487	3.453	3.459	3.441	3.487	3.493	3.435	3.496	3.466
12	2.339	2.310	2.325	2.330	2.337	2.361	2.308	2.335	2.340
13	3.551	3.493	3.499	3.492	3.521	3.530	3.508	3.533	3.508
14	3.529	3.479	3.468	3.449	3.508	3.524	3.477	3.509	3.483



3.7 Contact Resistance, Post-Thermal Shock

Contact Resistance Test Results [mV]

Post Thermal Shock Test									
Pin	Serial No.								
	LX-01	LX-02	LX-03	LX-04	LX-05	LX-06	LX-07	LX-08	LX-09
1	0.447	0.434	0.451	0.437	0.441	0.444	0.449	0.448	0.45
2	0.445	0.443	0.436	0.44	0.44	0.442	0.446	0.452	0.439
3	6.078	5.976	5.983	6.023	6.076	6.07	6.086	6.049	6.027
4	6.067	5.965	3.975	6.029	6.061	6.067	6.06	6.038	6.054
5	6.078	5.995	5.984	6.024	6.027	6.032	6.038	6.029	6.056
6	6.089	5.975	5.94	5.978	6.037	5.992	6.002	6.021	6.035
7	6.091	5.986	5.983	6.023	6.07	6.07	6.091	6.045	6.07
8	6.072	5.968	5.994	5.995	6.029	6.036	6.076	6.048	6.022
9	6.044	5.995	5.995	6.061	6.052	6.051	6.022	6.054	6.063
10	6.085	5.977	5.951	6.016	6.046	6.009	6.039	6.017	6.045
11	3.598	3.548	3.552	3.54	3.581	3.614	3.575	3.601	3.57
12	2.427	2.366	2.387	2.41	2.381	2.432	2.4	2.413	2.401
13	3.666	3.617	3.586	3.615	3.623	3.614	3.602	3.645	3.607
14	3.638	3.578	3.579	3.597	3.597	3.646	3.612	3.632	3.561



3.8 Contact Resistance, Post-Temperature Rise

Contact Resistance Test Results [mV]

Post Temperature Rise Test									
Pin	Serial No.								
	LX-01	LX-02	LX-03	LX-04	LX-05	LX-06	LX-07	LX-08	LX-09
1	removed	0.446	0.450	0.446	0.504	0.453	0.455	0.441	0.443
2	-	0.451	0.450	0.443	0.453	0.445	0.448	0.438	0.436
3	-	6.033	6.094	6.028	6.124	6.075	6.116	6.015	6.047
4	-	6.025	6.045	6.044	6.108	6.108	6.083	6.046	6.043
5	-	6.051	6.035	6.062	6.094	6.073	6.045	6.075	6.050
6	-	6.014	6.014	6.022	6.069	6.036	6.033	6.048	6.039
7	-	6.038	6.020	6.049	6.097	6.088	6.125	6.073	6.029
8	-	6.019	6.034	6.047	6.039	6.065	6.082	6.053	6.011
9	-	6.063	6.021	6.050	6.097	6.085	6.035	6.028	6.048
10	-	6.033	5.971	6.035	6.054	6.059	6.054	6.035	6.057
11	-	3.579	3.577	3.583	3.597	3.614	3.586	3.599	3.556
12	-	2.392	2.399	2.427	2.428	2.442	2.404	2.417	2.403
13	-	3.635	3.616	3.628	3.654	3.639	3.637	3.633	3.612
14	-	3.610	3.594	3.606	3.628	3.645	3.607	3.628	3.572



3.9 Contact Resistance, Thermal Cycling

Contact Resistance Test Results [mV]

Initial					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.599	0.6	0.652	4.061	3.978
2	0.593	0.6	0.629	9.785	9.531
3	9.479	9.401	10.209	9.726	9.494
4	9.373	9.306	10.179	9.794	5.65
5	9.476	9.684	10.15	9.754	9.524
6	9.398	9.303	10.15	7.096	4.024
7	9.466	9.379	1.182	9.761	9.451
8	9.393	9.343	10.133	9.675	9.464
9	9.487	9.362	10.257	9.754	9.549
10	9.383	9.301	10.2	9.739	9.434
11	4.909	4.89	5.062	5.304	5.167
12	2.551	2.51	2.531	3.159	3.201
13	4.931	4.902	5.208	5.91	5.817
14	4.924	4.876	5.176	5.158	5.012

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

15/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.606	0.609	0.645	4.135	4.069
2	6.01	0.625	0.64	9.934	9.71
3	9.581	9.548	10.354	9.871	9.637
4	9.496	9.445	10.316	9.93	9.729
5	9.632	9.568	10.336	9.884	9.363
6	9.556	9.464	10.2	4.174	4.101
7	9.622	9.553	10.357	9.908	9.674
8	9.532	9.455	10.266	9.792	9.535
9	9.6	9.512	10.422	9.912	9.639
10	9.522	9.436	10.356	9.876	9.629
11	4.977	4.976	5.231	5.365	5.315
12	2.569	2.553	2.531	3.286	3.249
13	5.012	5.002	5.276	6.036	5.939
14	4.996	4.938	5.252	5.203	5.077

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

100/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.6	0.607	0.659	4.138	4.051
2	0.602	0.611	0.641	9.875	9.651
3	9.53	9.467	10.336	9.808	9.551
4	9.43	9.374	10.303	9.908	9.623
5	9.562	9.473	10.329	9.808	9.563
6	9.483	9.363	10.273	4.139	4.074
7	9.564	9.475	10.305	9.856	9.615
8	9.516	9.369	10.278	9.754	9.511
9	9.537	9.429	10.35	9.912	9.593
10	9.449	9.368	10.294	9.827	9.505
11	4.961	4.912	5.237	5.369	5.239
12	2.569	2.53	2.567	3.219	3.218
13	5.033	4.957	5.271	5.979	5.934
14	4.995	4.957	5.246	5.354	5.139

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

200/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.6	0.602	4.121	4.121	4.036
2	0.601	0.619	9.861	9.861	9.637
3	9.519	9.436	9.84	9.84	9.587
4	9.433	9.328	9.874	9.874	9.636
5	9.548	9.462	9.802	9.802	9.58
6	9.476	9.369	4.125	4.125	4.061
7	9.551	9.447	9.826	9.826	9.562
8	9.433	9.363	9.725	9.725	9.527
9	9.504	9.435	9.879	9.879	9.612
10	9.44	9.365	9.807	9.807	9.503
11	4.94	4.916	5.328	5.328	5.207
12	2.55	2.535	3.241	3.241	9.618
13	4.977	4.959	5.986	5.986	5.905
14	4.955	4.926	5.26	5.26	5.149

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

300/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.608	0.609	0.65	4.139	4.05
2	0.61	0.627	0.638	9.947	9.716
3	9.617	9.549	40.381	9.875	9.652
4	9.544	9.47	10.322	9.932	9.706
5	9.656	9.579	10.372	9.88	9.651
6	9.531	9.46	10.334	4.161	4.098
7	9.617	9.55	10.355	9.812	9.636
8	9.539	9.451	10.318	9.776	4.103
9	9.62	9.502	10.423	9.935	9.681
10	9.567	9.457	10.415	9.897	9.591
11	5.004	4.96	5.252	5.453	9.705
12	2.58	2.551	2.577	3.523	9.609
13	5.036	5.001	5.286	6.059	5.292
14	4.988	4.975	5.276	5.284	5.125

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

400/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.621	0.618	0.654	4.119	4.075
2	0.627	0.626	0.648	9.917	9.709
3	9.621	9.584	10.366	9.865	9.593
4	9.515	9.496	10.387	9.902	9.677
5	9.674	9.575	10.408	9.863	9.652
6	9.548	9.504	10.365	4.152	4.098
7	9.651	9.582	10.365	9.861	9.647
8	9.568	9.464	10.363	9.763	9.546
9	9.624	9.546	10.453	9.896	9.674
10	9.511	9.463	10.407	9.859	9.636
11	5.011	4.98	5.276	5.402	5.294
12	2.592	2.561	2.591	3.305	3.24
13	5.035	5.024	5.289	6.035	5.946
14	5.011	4.977	5.286	5.255	5.128

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

500/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.612	0.612	0.651	4.102	4.018
2	0.622	0.618	0.646	9.836	9.64
3	9.543	9.478	10.269	9.781	9.535
4	0.9453	9.384	10.254	9.86	9.594
5	9.561	9.462	10.299	9.773	9.561
6	9.454	9.339	10.267	4.125	4.062
7	9.569	9.488	10.28	9.761	9.574
8	9.478	9.383	10.247	9.742	9.468
9	9.538	9.461	10.369	9.841	9.593
10	9.428	9.38	10.27	9.794	9.493
11	4.948	4.929	5.217	5.336	5.245
12	2.576	2.546	2.567	3.263	5.273
13	4.997	4.978	5.732	5.949	5.894
14	4.975	4.94	5.23	5.203	5.174

Insulation Resistance Results

LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



Contact Resistance Test Results [mV]

Final 520/520					
Pin	Serial No.				
	LX-01	LX-02	LX-03	K14-01	K14-02
1	0.615	0.608	0.641	4.091	4.003
2	0.612	0.617	0.64	9.823	9.604
3	9.539	9.489	10.244	9.767	9.508
4	9.452	9.396	10.25	9.835	9.563
5	9.593	9.463	10.298	9.782	9.538
6	9.468	9.361	10.244	4.108	4.057
7	9.559	9.47	10.228	9.787	9.51
8	9.463	9.376	10.236	9.698	9.467
9	9.511	9.393	10.316	9.857	9.569
10	9.452	9.354	10.26	9.752	9.482
11	4.967	4.924	5.208	5.3547	5.237
12	2.578	2.532	2.563	3.298	3.305
13	4.986	4.945	5.236	5.937	5.874
14	4.973	4.946	5.216	5.192	5.057

Insulation Resistance Results

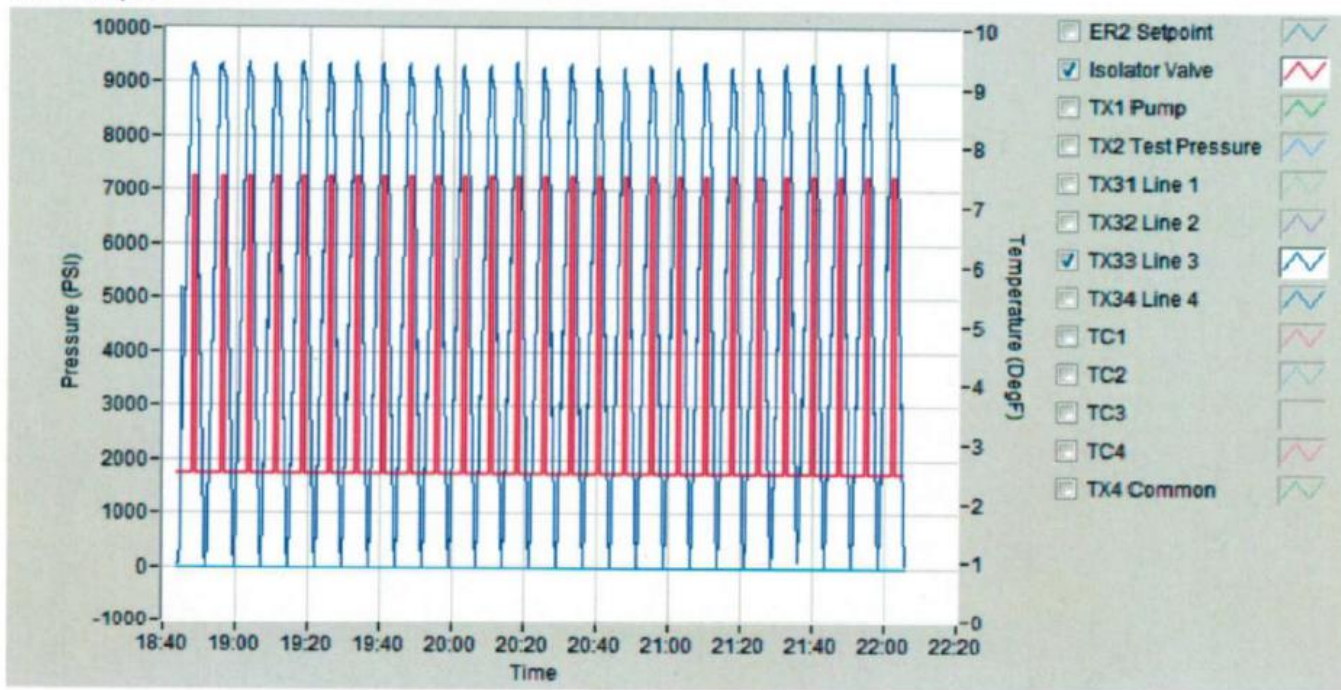
LX-01	LX-02	LX-03	K14-01	K14-02
Pass	Pass	Pass	Pass	Pass



4.0 Test Plots

4.1 Pressure Cycling

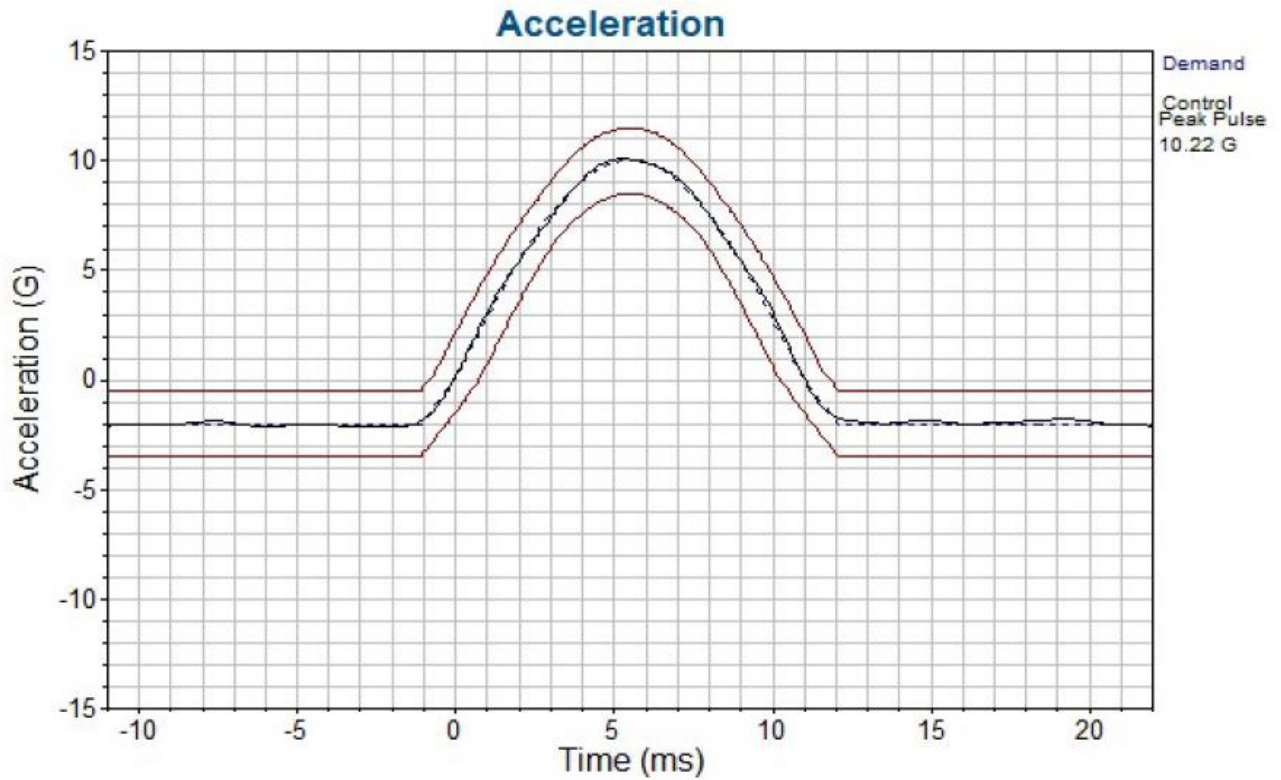
Test Graph:



Description	Typical Pressure Test Plot in Glenair Pressure Test Report
Test Name	Pressure Cycling @ 6,000 m
Part Name	Cable Assembly
Test Group	1



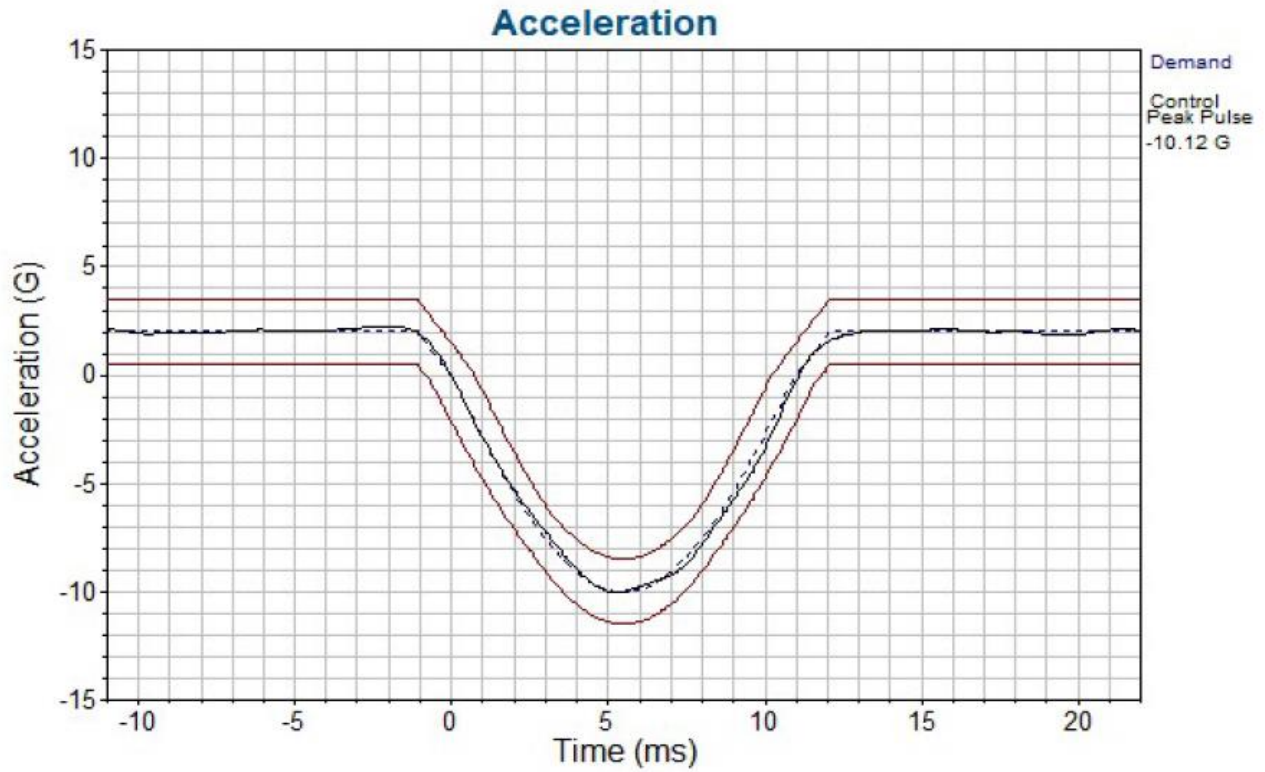
4.2 Mechanical Shock, Positive



Description	Typical Positive Shock Pulse Plot
Test Name	Shock Test
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9



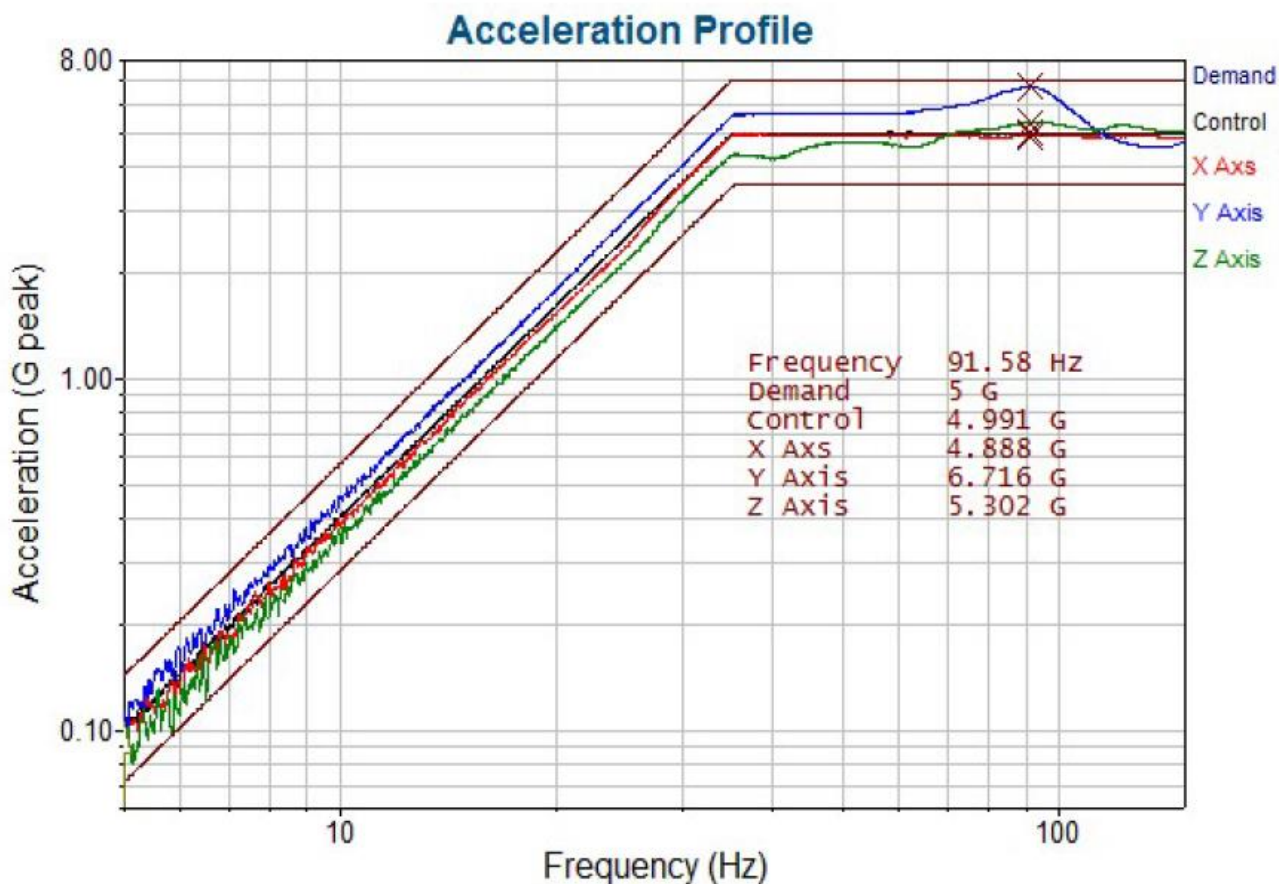
4.3 Mechanical Shock, Negative



Description	Typical Negative Shock Pulse Plot
Test Name	Shock Test
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9



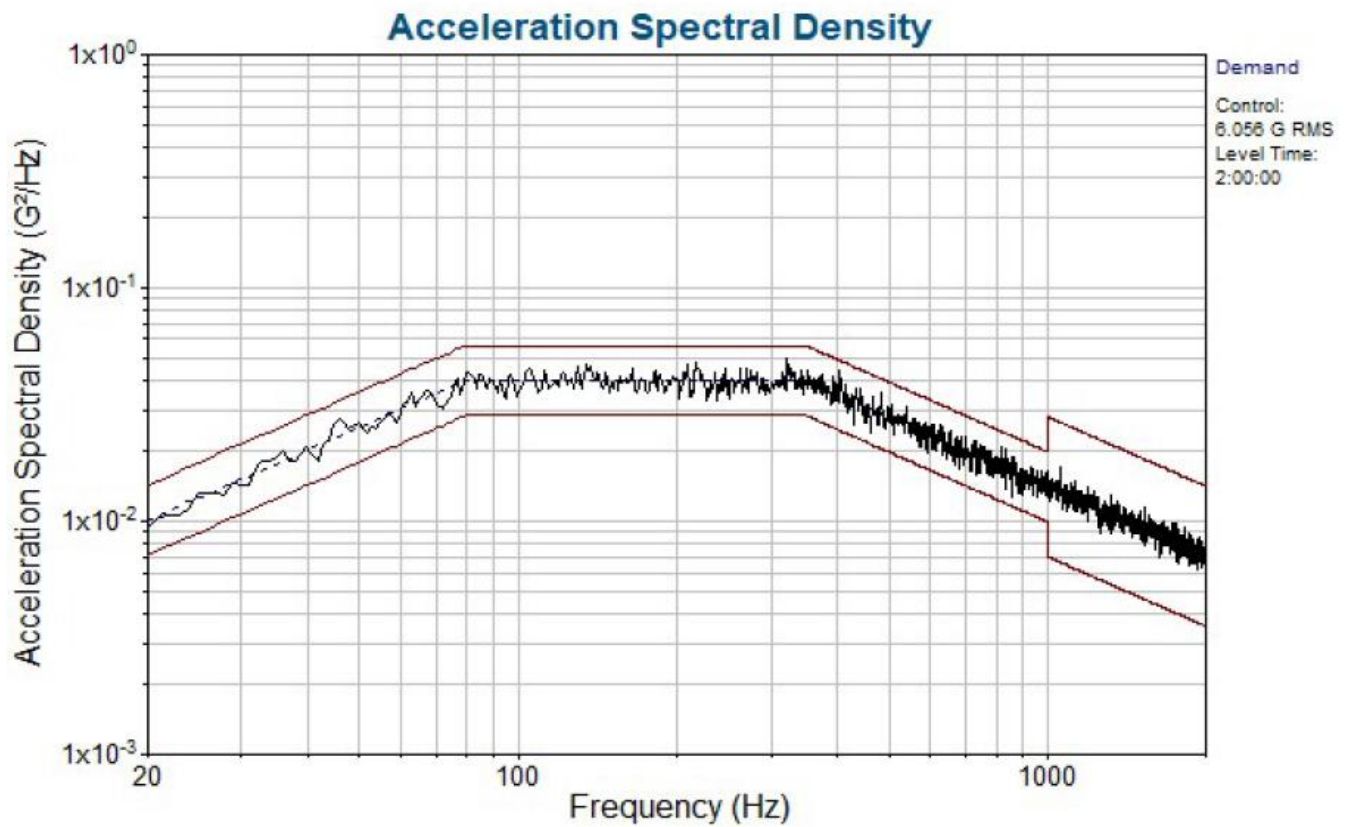
4.4 Sine Vibration



Description	Typical Sine Plot, X , Y and Z axis plotted
Test Name	Vibration
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9



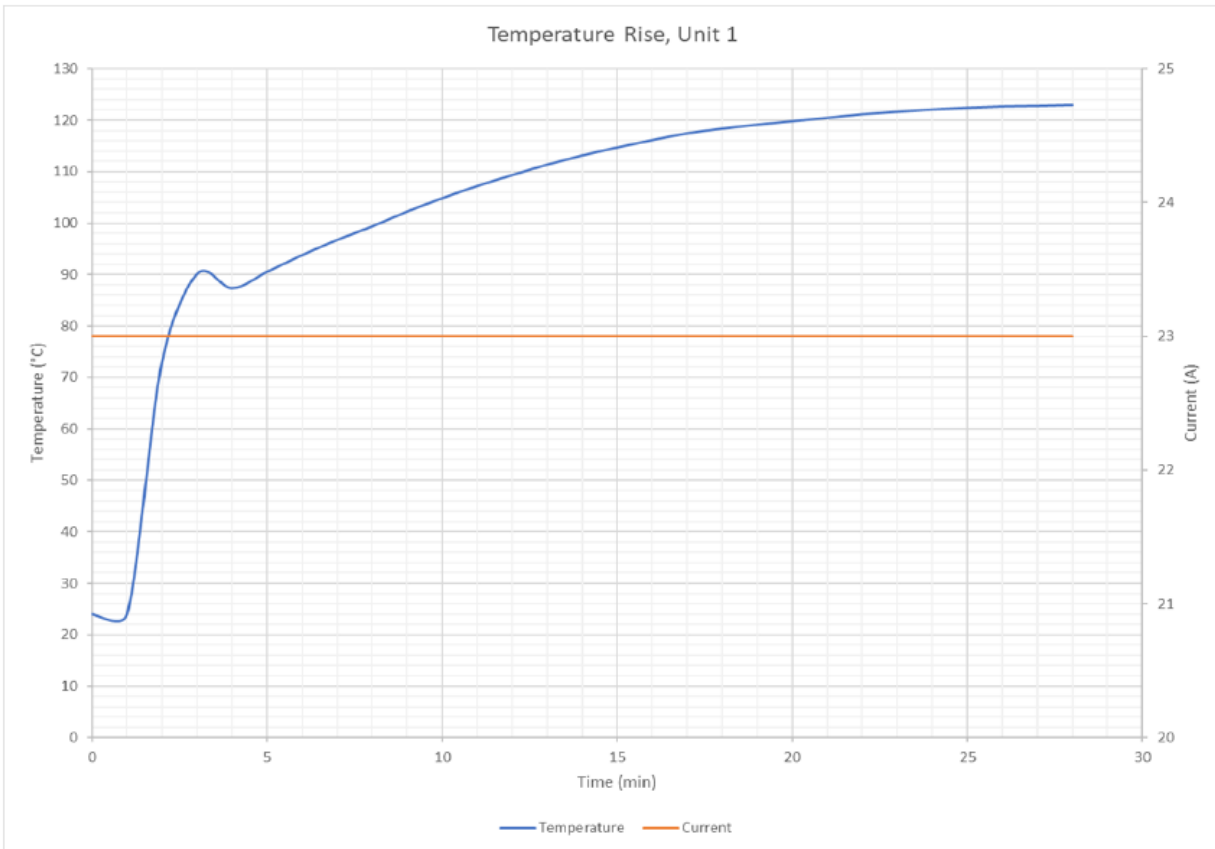
4.5 Random Vibration



Description	Random Vibration Plot
Test Name	Vibration
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9



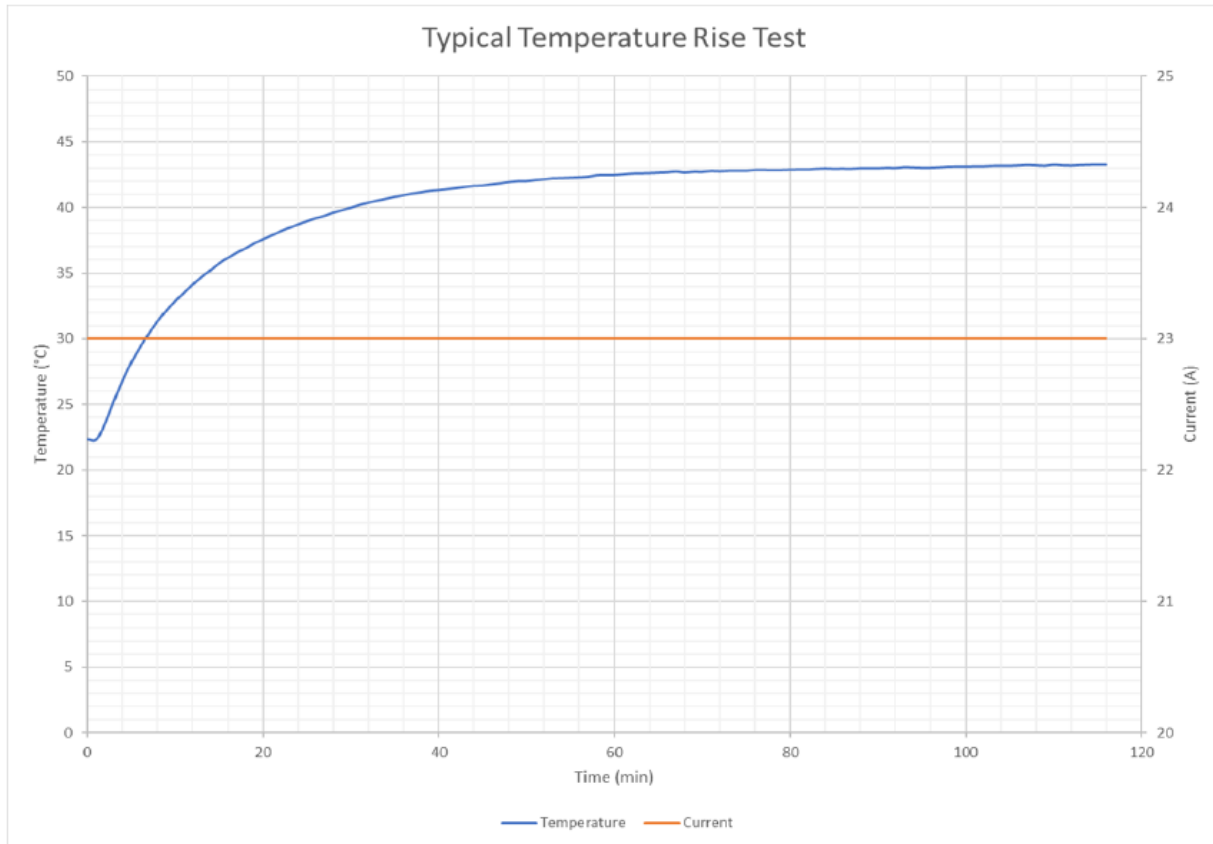
4.6 Temperature Rise



Description	Unit 1 Temperature Rise Plot
Test Name	Temperature Rise
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1



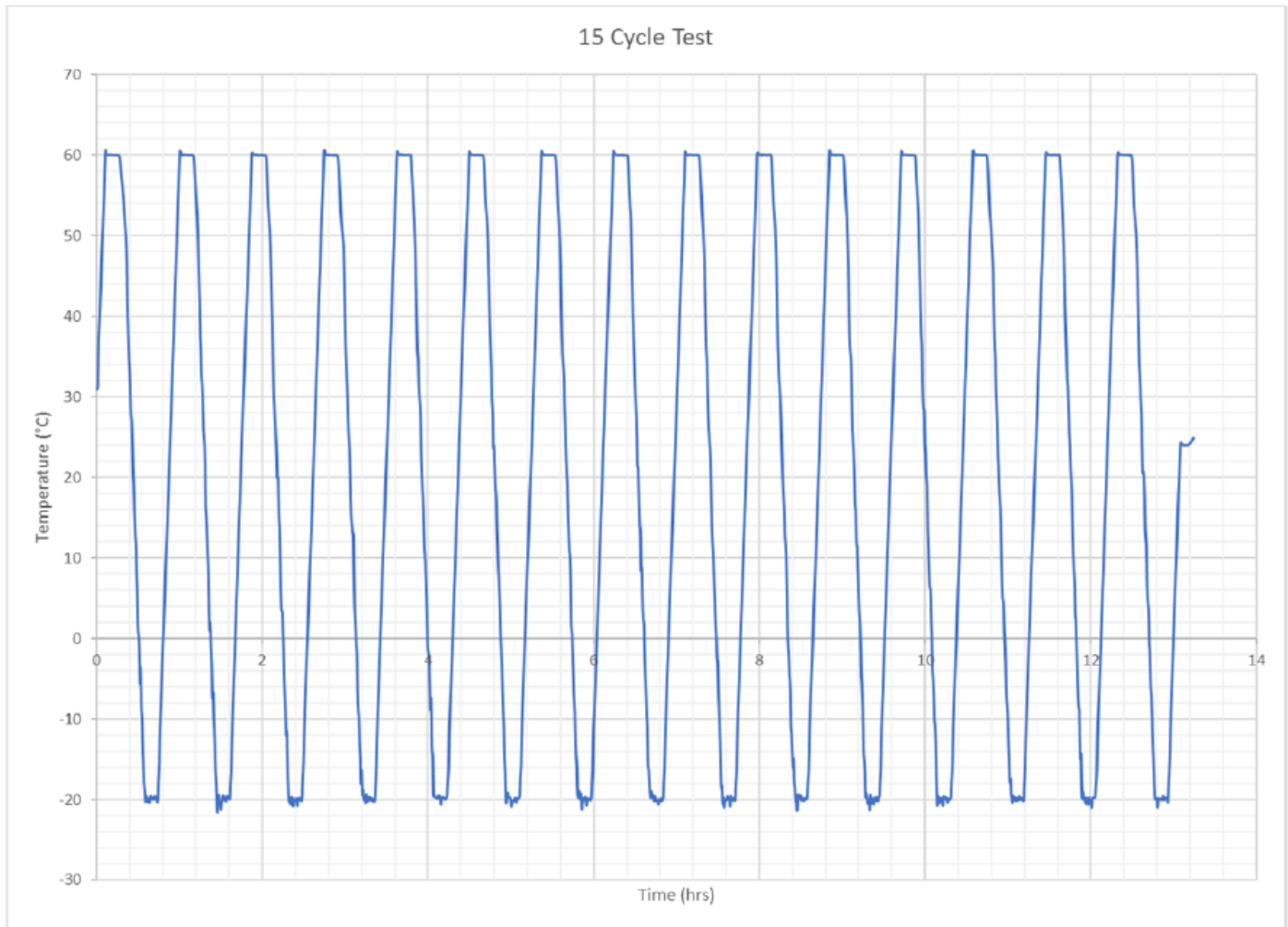
4.7 Temperature Rise



Description	Typical Temperature Rise Plot
Test Name	Temperature Rise
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	2-9



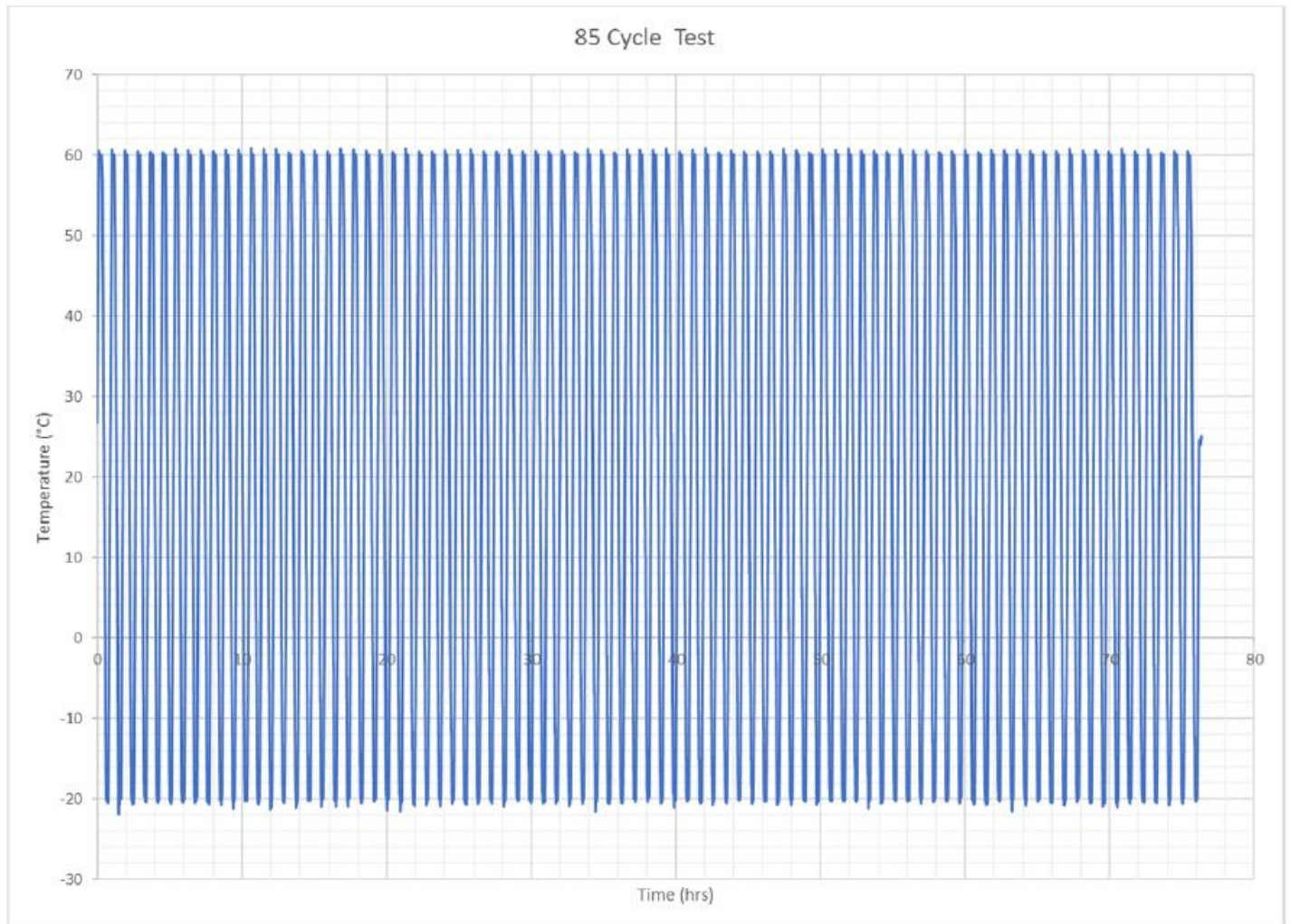
4.8 Temperature Cycling, 15 Cycles



Description	Temperature Cycle Run Plot (15 Cycles Plotted)
Test Name	Temperature Cycling



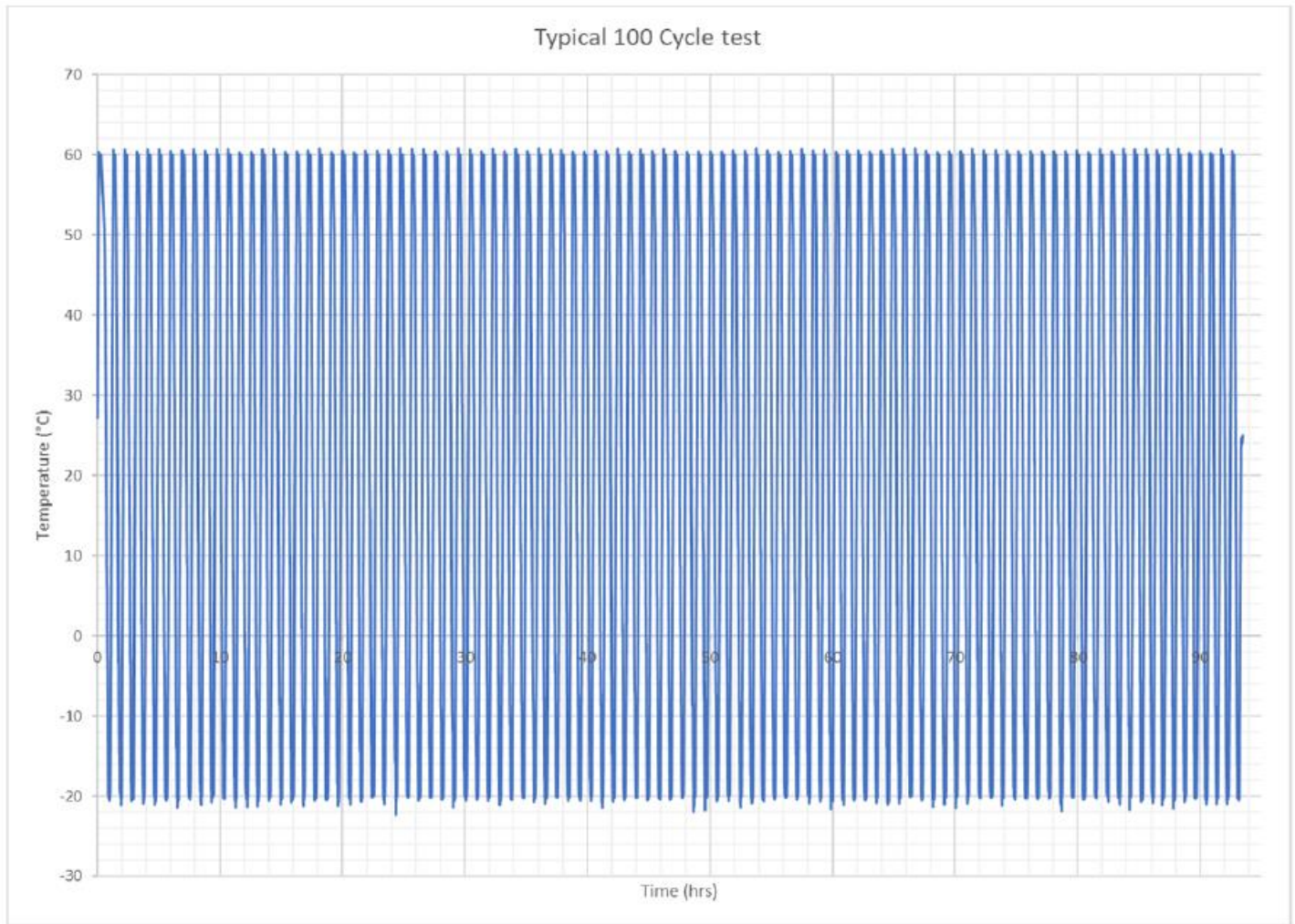
4.9 Temperature Cycling, 85 Cycles



Description	Temperature Cycle Run Plot (85 Cycles Plotted)
Test Name	Temperature Cycling



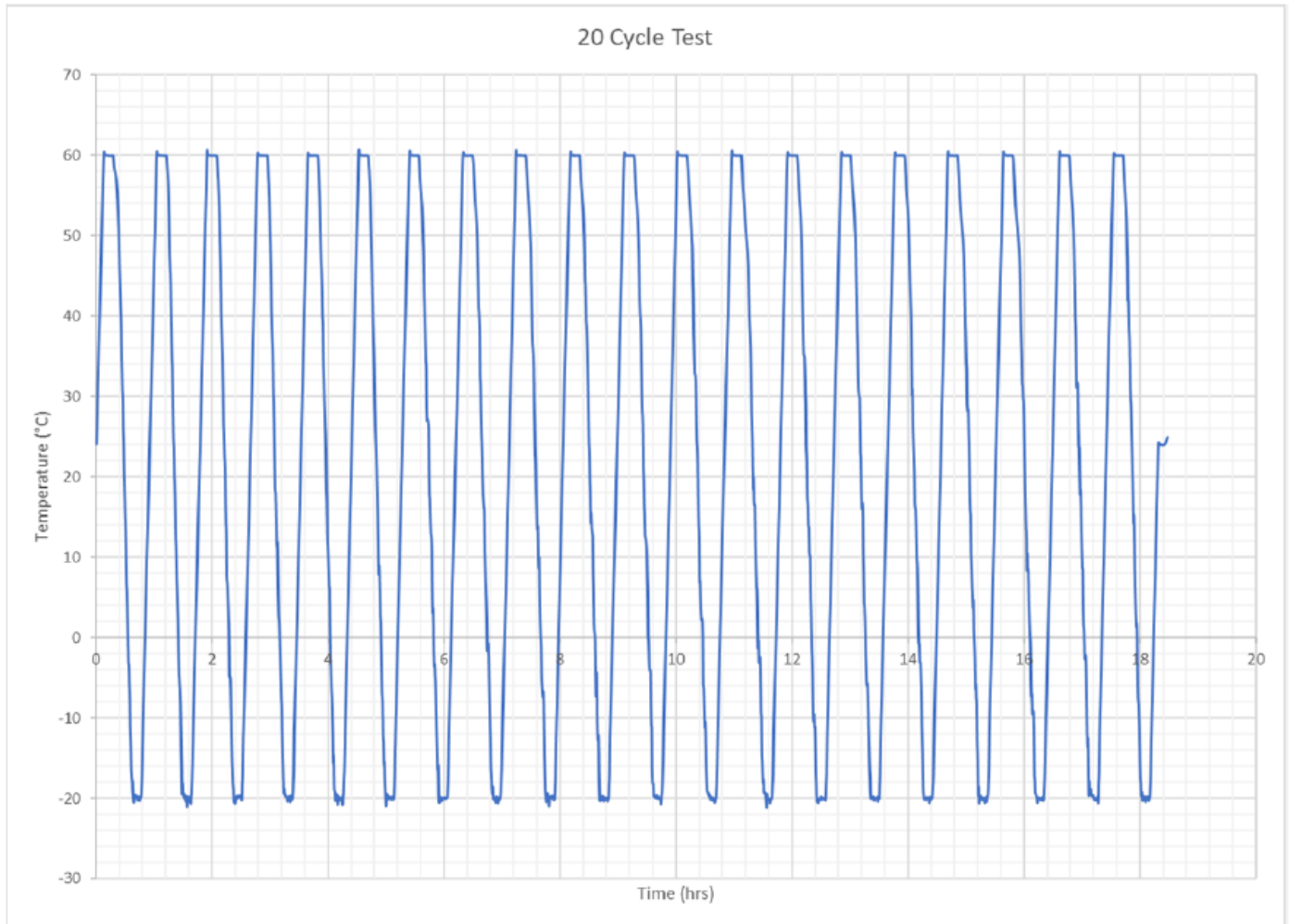
4.10 Temperature Cycling, 100 Cycles



Description	Temperature Cycle Run Plot (100 Cycles Plotted)
Test Name	Temperature Cycling



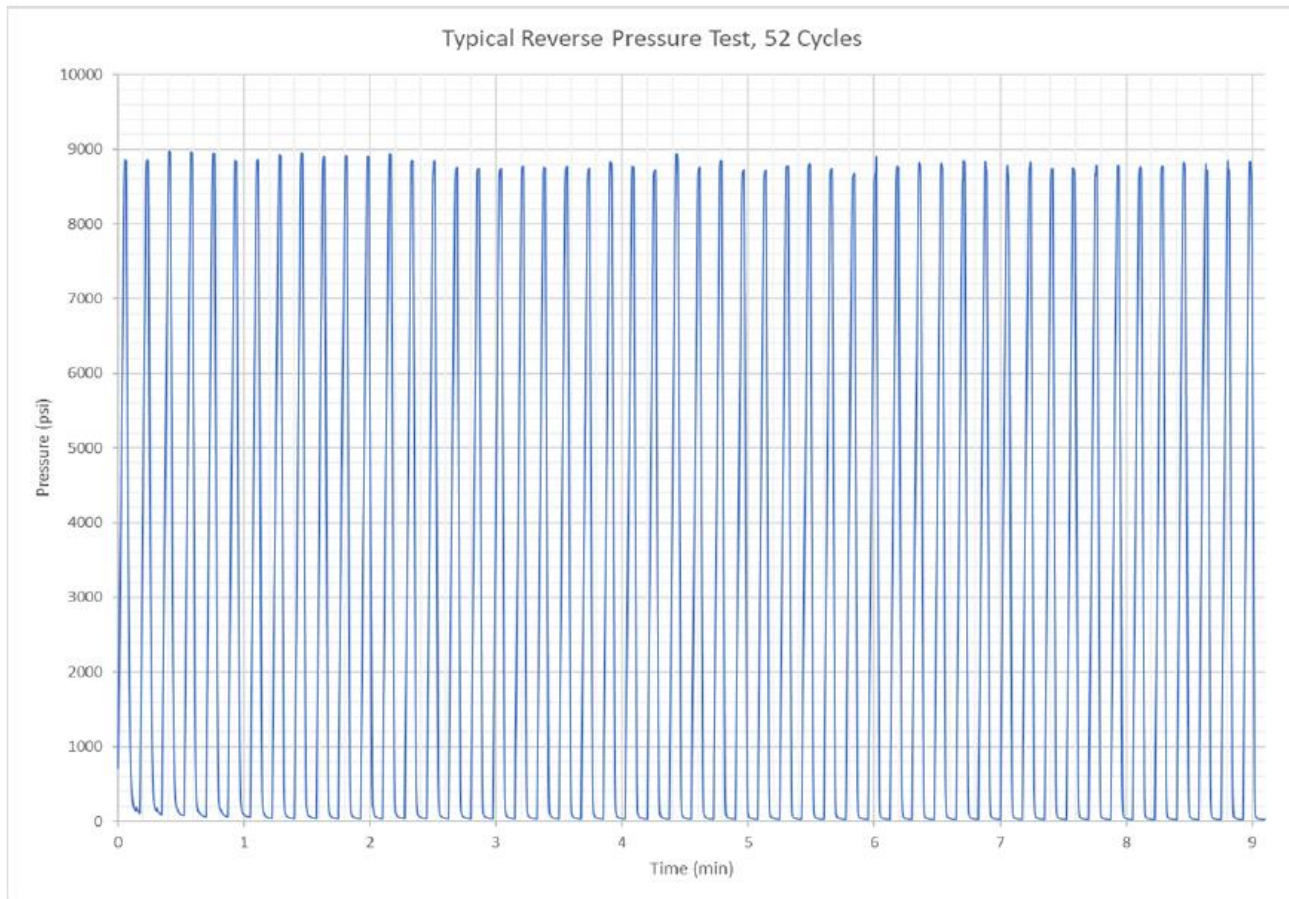
4.11 Temperature Cycling, 20 Cycles



Description	Temperature Cycle Run Plot (20 Cycles Plotted)
Test Name	Temperature Cycling



4.12 Reverse Pressure



Description	Typical 52 Cycle Pressure Test Plot
Test Name	Reverse Pressure Test
Part Name	Cable Assembly
Test Group	4



QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
 Date: June 26, 2023
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4.13 Ethernet



Cable ID: 1

Test Limit: 100BASE-TX
 Limits Version: V7.4
 Date / Time: 03/08/2021 10:17:09 AM
 Operator: Vertical Labs
Headroom 16.1 dB (NEXT 3,6-7,8)
 Cable Type: Cat 5e U/UTP
 NVP: 69.0%

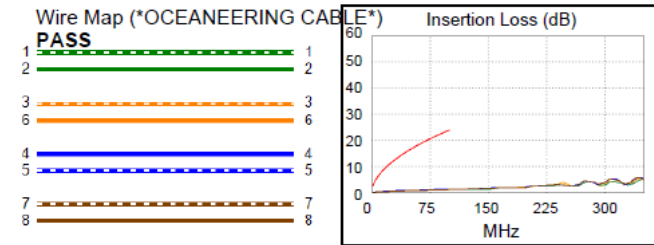
Main: Versiv
 S/N: 2766289
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 4862525

Test Summary: PASS

Remote: Versiv
 S/N: 2766352
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 2791443

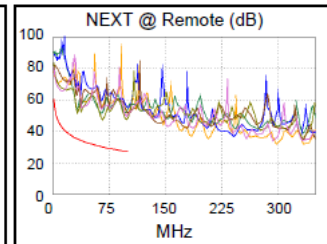
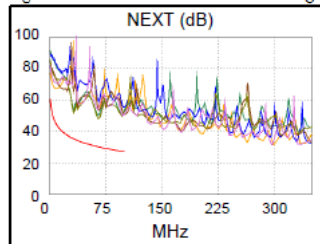
Length (ft), Limit 328	[Pair 3,6]	11
Prop. Delay (ns)	[Pair 3,6]	17
Delay Skew (ns)	[Pair 1,2]	1
Resistance (ohms), Limit 25.00	[Pair 1,2]	0.70
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 3,6]	22.7
Frequency (MHz)	[Pair 3,6]	100.0
Limit (dB)	[Pair 3,6]	24.0

Patch Cable BAD or Patch Cable too short

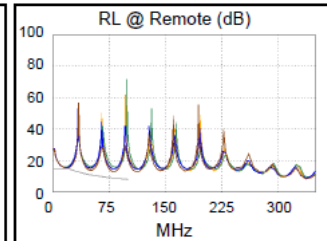
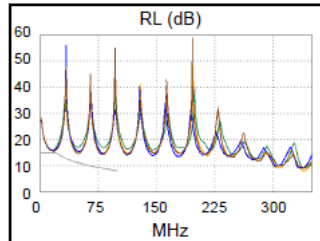


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	3,6-7,8
NEXT (dB)	16.2	16.1	18.0	17.3
Freq. (MHz)	32.3	32.5	66.0	65.8
Limit (dB)	35.4	35.3	30.1	30.2



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	0.4	0.2	5.1	4.0
Freq. (MHz)	17.5	19.5	80.5	81.3
Limit (dB)	15.0	15.0	9.0	8.9



Compliant Network Standards:
 10BASE-T 100BASE-TX



QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
Date: June 26, 2023
Sheet 38 of 54



Cable ID: 2

Test Limit: 100BASE-TX

Limits Version: V7.4

Date / Time: 03/08/2021 10:18:15 AM

Operator: Vertical Labs

Headroom 14.6 dB (NEXT 3,6-7,8)

Cable Type: Cat 5e U/UTP

NVP: 69.0%

Main: Versiv

S/N: 2766289

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

Adapter: DSX-5000 (DSX-CHA004)

S/N: 4862525

Remote: Versiv

S/N: 2766352

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

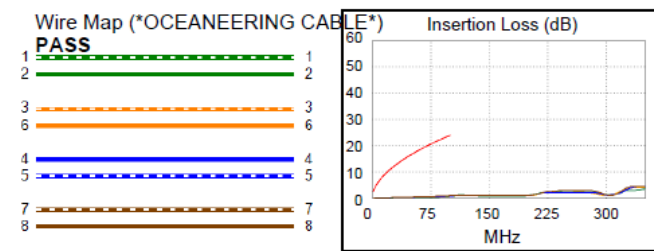
Adapter: DSX-5000R (DSX-CHA004)

S/N: 2791443

Test Summary: PASS

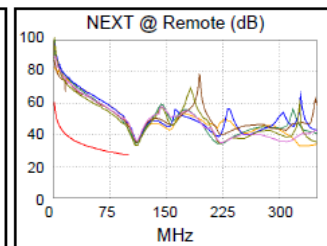
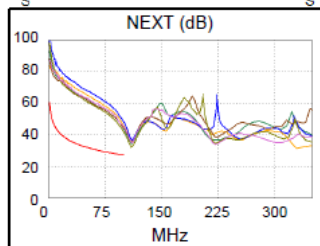
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 3,6]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	0.26
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.2
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

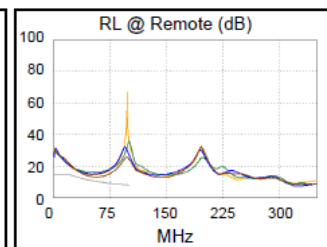
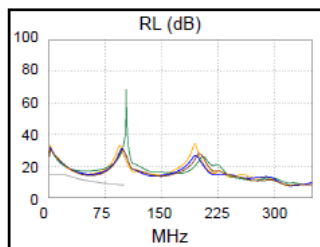


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	3,6-7,8
NEXT (dB)	14.6	15.2	14.6	15.2
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	3.0	2.3	3.7	2.7
Freq. (MHz)	48.5	53.0	58.8	58.5
Limit (dB)	11.2	10.8	10.3	10.3



Compliant Network Standards:
 10BASE-T 100BASE-TX



QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
 Date: June 26, 2023
 Sheet: 39 of 54



Cable ID: 3

Test Limit: 100BASE-TX

Limits Version: V7.4

Date / Time: 03/08/2021 10:19:25 AM

Operator: Vertical Labs

Headroom 17.6 dB (NEXT 3,6-4,5)

Cable Type: Cat 5e U/UTP

NVP: 69.0%

Main: Versiv

S/N: 2766289

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

Adapter: DSX-5000 (DSX-CHA004)

S/N: 4862525

Remote: Versiv

S/N: 2766352

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

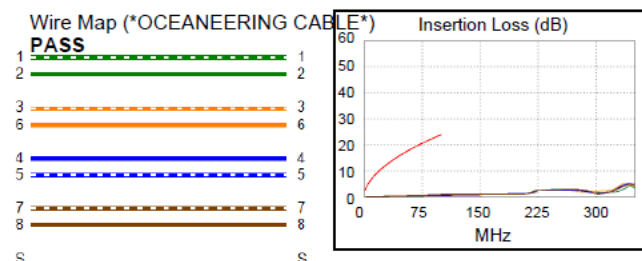
Adapter: DSX-5000R (DSX-CHA004)

S/N: 2791443

Test Summary: PASS

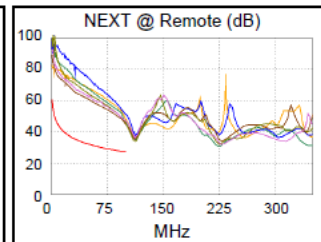
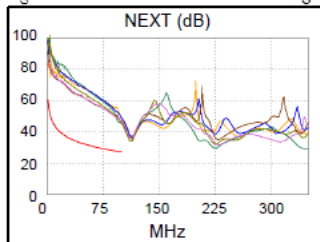
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 7,8]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	0.23
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.2
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

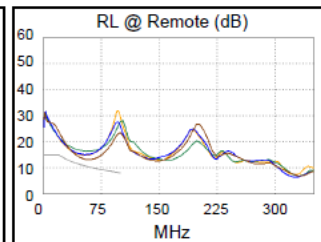
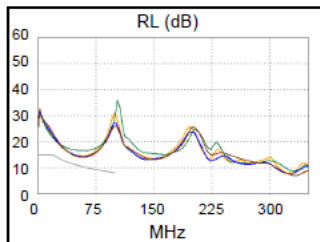


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	3,6-4,5	1,2-4,5	3,6-4,5
NEXT (dB)	18.3	17.6	18.3	17.6
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	3.3	2.5	3.9	2.9
Freq. (MHz)	54.3	52.0	62.3	60.5
Limit (dB)	10.7	10.9	10.1	10.2



Compliant Network Standards:
 10BASE-T 100BASE-TX



QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
 Date: June 26, 2023
 Sheet: 40 of 54



Cable ID: 4

Test Limit: 100BASE-TX
 Limits Version: V7.4
 Date / Time: 03/08/2021 10:20:08 AM
 Operator: Vertical Labs
Headroom 17.5 dB (NEXT 3,6-4,5)
 Cable Type: Cat 5e U/UTP
 NVP: 69.0%

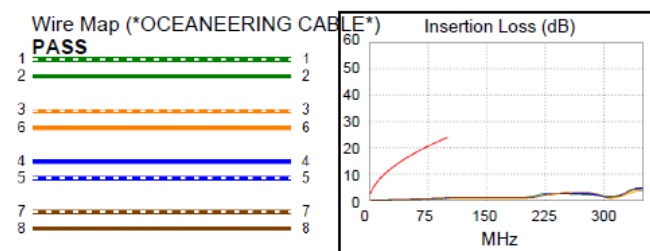
Main: Versiv
 S/N: 2766289
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 4862525

Test Summary: PASS

Remote: Versiv
 S/N: 2766352
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 2791443

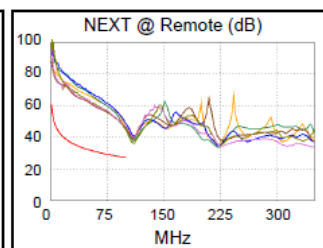
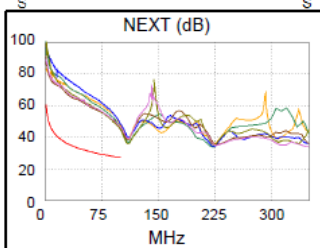
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 4,5]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 1,2]	0.23
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.1
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

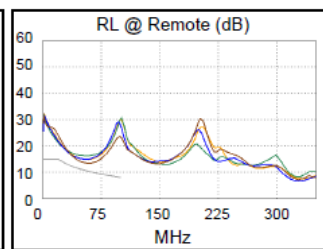
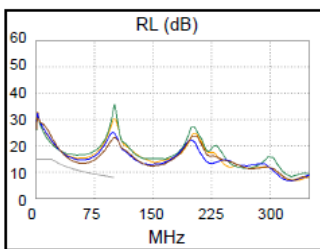


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	17.5	17.5	17.5	17.5
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	2.8	2.8	3.2	3.3
Freq. (MHz)	54.3	54.3	62.0	61.8
Limit (dB)	10.7	10.7	10.1	10.1



Compliant Network Standards:
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QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
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No.: GT-23-122
 Date: June 26, 2023
 Sheet: 41 of 54



Cable ID: 5

Test Limit: 100BASE-TX

Limits Version: V7.4

Date / Time: 03/08/2021 10:20:58 AM

Operator: Vertical Labs

Headroom 17.8 dB (NEXT 3,6-7,8)

Cable Type: Cat 5e U/UTP

NVP: 69.0%

Main: Versiv

S/N: 2766289

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

Adapter: DSX-5000 (DSX-CHA004)

S/N: 4862525

Remote: Versiv

S/N: 2766352

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

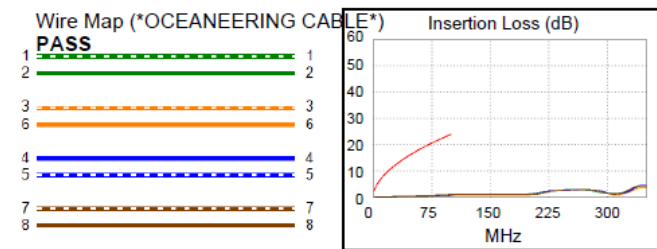
Adapter: DSX-5000R (DSX-CHA004)

S/N: 2791443

Test Summary: PASS

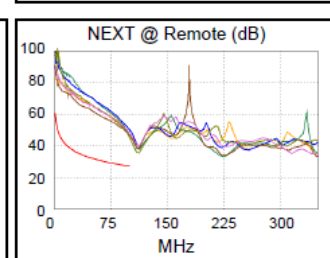
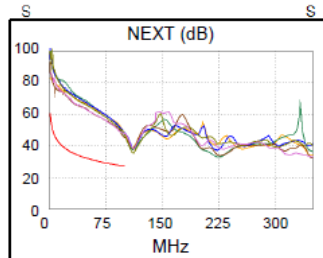
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 3,6]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	0.26
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.1
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

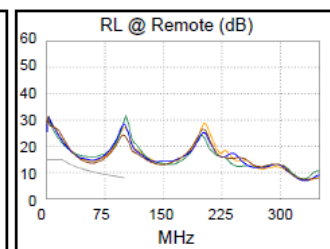
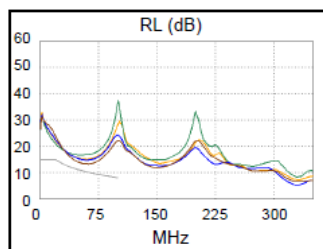


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-7,8	3,6-4,5	3,6-7,8
NEXT (dB)	18.1	17.8	18.1	17.8
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	2.7	3.0	3.1	3.4
Freq. (MHz)	54.3	54.3	62.5	61.0
Limit (dB)	10.7	10.7	10.1	10.2



Compliant Network Standards:
 10BASE-T 100BASE-TX



QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
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No.: GT-23-122
 Date: June 26, 2023
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Cable ID: 6

Test Limit: 100BASE-TX

Limits Version: V7.4

Date / Time: 03/08/2021 10:22:16 AM

Operator: Vertical Labs

Headroom 17.3 dB (NEXT 3,6-7,8)

Cable Type: Cat 5e U/UTP

NVP: 69.0%

Main: Versiv

S/N: 2766289

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

Adapter: DSX-5000 (DSX-CHA004)

S/N: 4862525

Remote: Versiv

S/N: 2766352

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

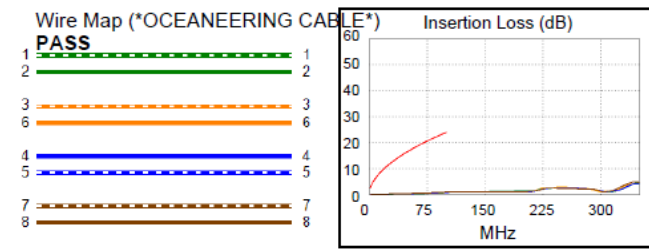
Adapter: DSX-5000R (DSX-CHA004)

S/N: 2791443

Test Summary: PASS

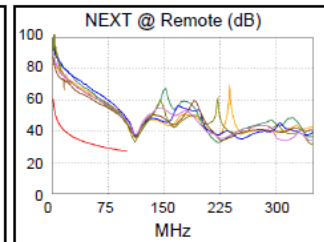
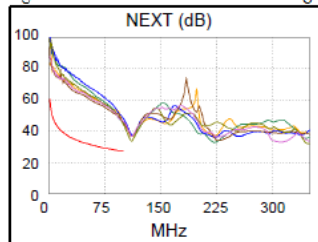
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 7,8]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	0.30
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.2
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

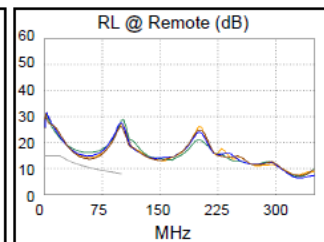
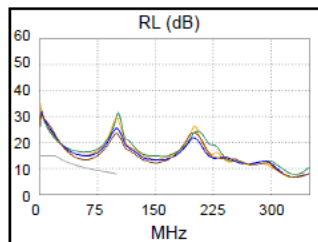


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-4,5	3,6-7,8	3,6-4,5
NEXT (dB)	17.3	17.3	17.3	17.3
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	2.8	3.0	3.3	3.6
Freq. (MHz)	54.3	54.3	62.3	62.0
Limit (dB)	10.7	10.7	10.1	10.1



Compliant Network Standards:
 10BASE-T 100BASE-TX



QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
 Date: June 26, 2023
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Cable ID: 7

Test Limit: 100BASE-TX

Limits Version: V7.4

Date / Time: 03/08/2021 10:23:58 AM

Operator: Vertical Labs

Headroom 18.1 dB (NEXT 3,6-4,5)

Cable Type: Cat 5e U/UTP

NVP: 69.0%

Main: Versiv

S/N: 2766289

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

Adapter: DSX-5000 (DSX-CHA004)

S/N: 4862525

Remote: Versiv

S/N: 2766352

Software Version: V6.4 Build 4

Calibration Date: 10/09/2020

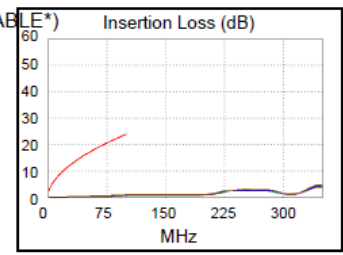
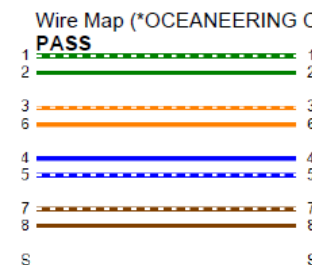
Adapter: DSX-5000R (DSX-CHA004)

S/N: 2791443

Test Summary: PASS

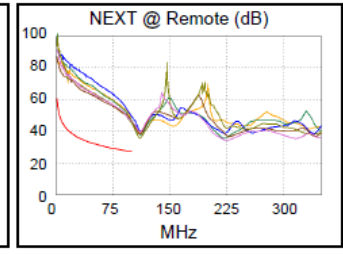
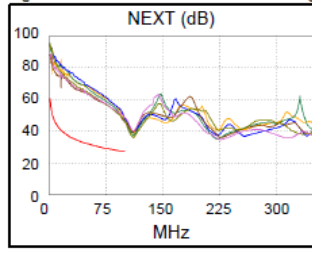
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 3,6]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	0.30
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.2
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

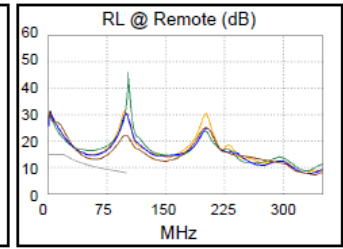
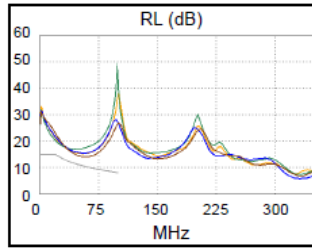


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	18.6	18.1	18.6	18.1
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	3.3	2.5	3.9	3.1
Freq. (MHz)	53.0	54.3	62.3	62.8
Limit (dB)	10.8	10.7	10.1	10.0



Compliant Network Standards:
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QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
Assemblies

No.: GT-23-122
 Date: June 26, 2023
 Sheet: 44 of 54



Cable ID: 8

Test Limit: 100BASE-TX
 Limits Version: V7.4
 Date / Time: 03/08/2021 10:25:48 AM
 Operator: Vertical Labs
Headroom 18.0 dB (NEXT 3,6-4,5)
 Cable Type: Cat 5e U/UTP
 NVP: 69.0%

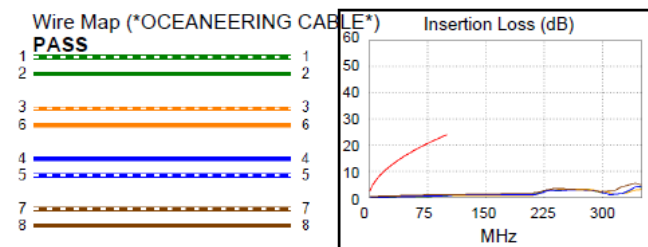
Main: Versiv
 S/N: 2766289
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 4862525

Test Summary: PASS

Remote: Versiv
 S/N: 2766352
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 2791443

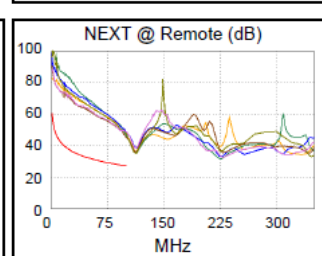
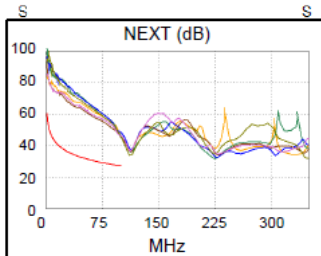
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 7,8]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	6.65
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	22.9
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

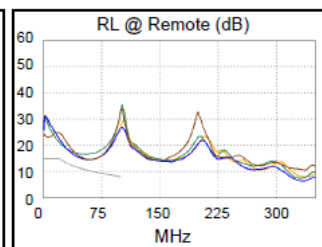
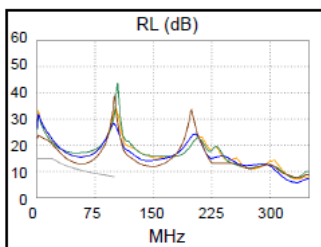


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	18.0	18.2	18.0	18.2
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	1,2	7,8	1,2
RL (dB)	2.2	3.8	2.6	4.2
Freq. (MHz)	53.0	50.8	58.8	59.0
Limit (dB)	10.8	11.0	10.3	10.3



Compliant Network Standards:
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QUALIFICATION TEST REPORT ABSTRACT
SEAKING™ 700 PEEK Connectors and Cable
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 Sheet: 45 of 54



Cable ID: 9

Test Summary: PASS

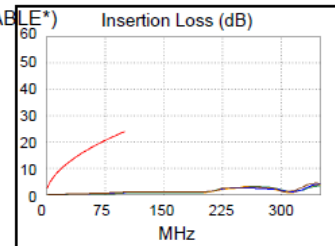
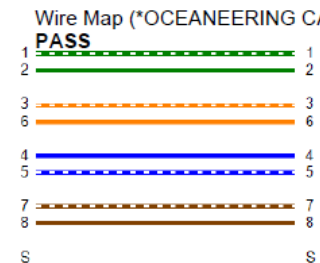
Test Limit: 100BASE-TX
 Limits Version: V7.4
 Date / Time: 03/08/2021 10:26:30 AM
 Operator: Vertical Labs
Headroom 17.4 dB (NEXT 3,6-4,5)
 Cable Type: Cat 5e U/UTP
 NVP: 69.0%

Main: Versiv
 S/N: 2766289
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 4862525

Remote: Versiv
 S/N: 2766352
 Software Version: V6.4 Build 4
 Calibration Date: 10/09/2020
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 2791443

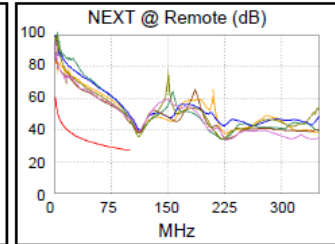
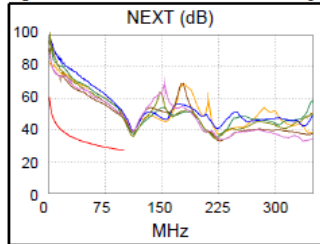
Length (ft), Limit 328	[Pair 1,2]	5
Prop. Delay (ns)	[Pair 3,6]	7
Delay Skew (ns)	[Pair 1,2]	0
Resistance (ohms), Limit 25.00	[Pair 7,8]	0.23
Impedance (ohms), Limit 85-115	[Pair 1,2]	Too Short
Insertion Loss Margin (dB)	[Pair 7,8]	23.1
Frequency (MHz)	[Pair 7,8]	100.0
Limit (dB)	[Pair 7,8]	24.0

Patch Cable BAD or Patch Cable too short

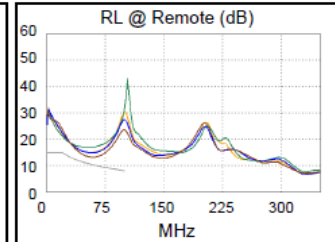
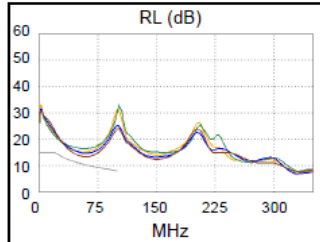


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	19.5	17.4	19.5	17.4
Freq. (MHz)	100.0	100.0	100.0	100.0
Limit (dB)	27.1	27.1	27.1	27.1



N/A	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	2.8	2.6	3.2	3.1
Freq. (MHz)	55.5	54.3	61.3	62.0
Limit (dB)	10.6	10.7	10.1	10.1



Compliant Network Standards:
 10BASE-T 100BASE-TX

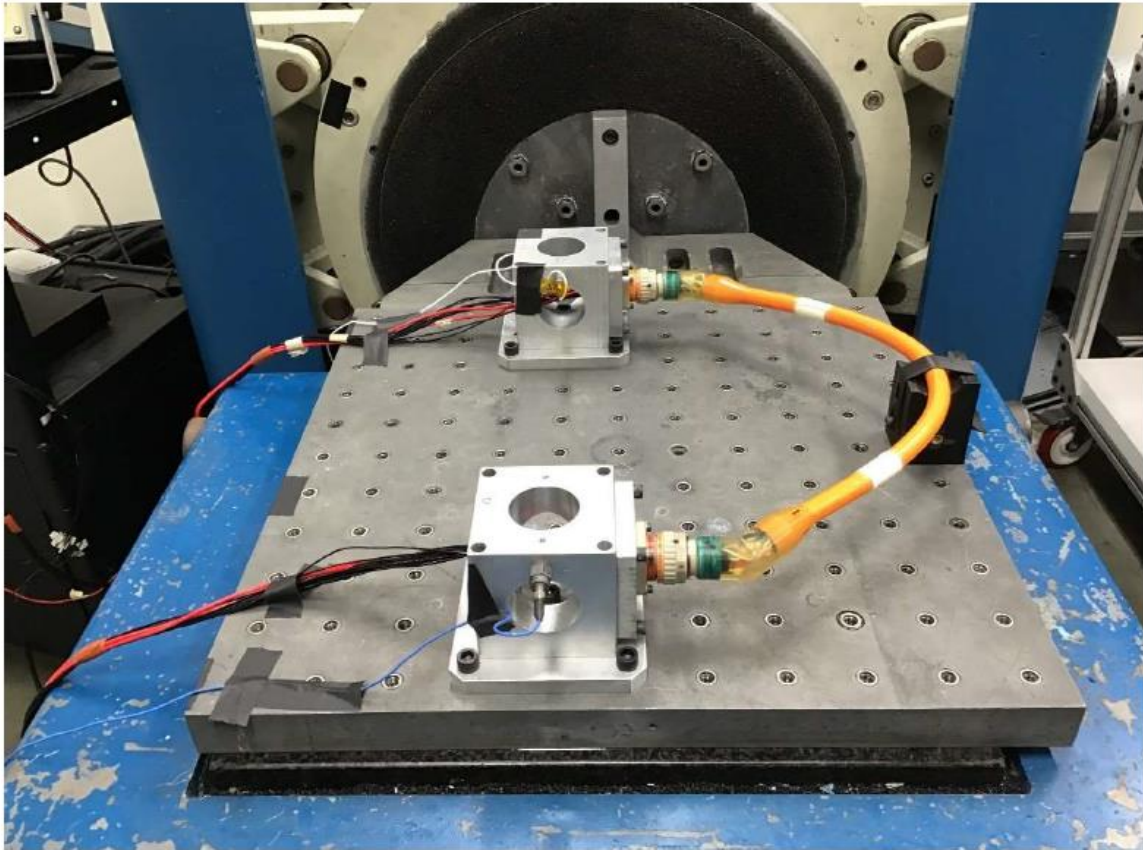
5.0 Test Photos

5.1 **High Voltage Breakdown**



Description	High Voltage Breakdown Test Setup
Test Name	High Voltage Breakdown
Part Name	Cable Assembly
Test Group	1

5.2 Shock and Vibration, X and Y Axis



Description	Typical Vibration Test Setup, X & YAxis
Test Name	Shock and Vibration
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9

5.3 Shock and Vibration, Z Axis



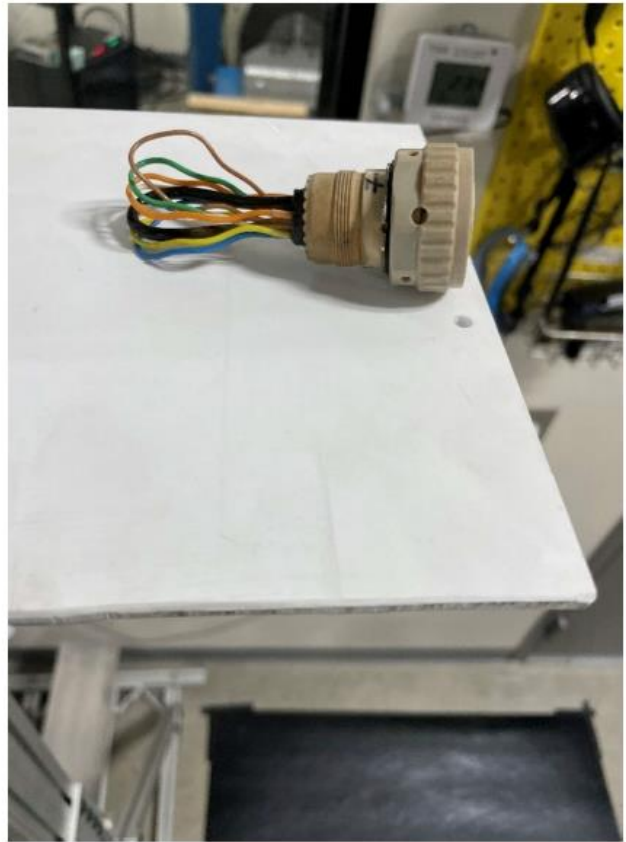
Description	Typical Vibration Test Setup, Z Axis
Test Name	Shock and Vibration
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9

5.4 Thermal Shock



Description	Units in Thermal Shock Chamber
Test Name	Thermal Shock Test
Part Name	Cable Assembly
Test Group	2
Part No.	7071-0118
Serial No.	1-9

5.5 Drop Test



Description	Mated and unmated unit, Drop Test
Test Name	Drop Test
Part Name	Cable Assembly
Test Group	3

5.6 Reverse Pressure



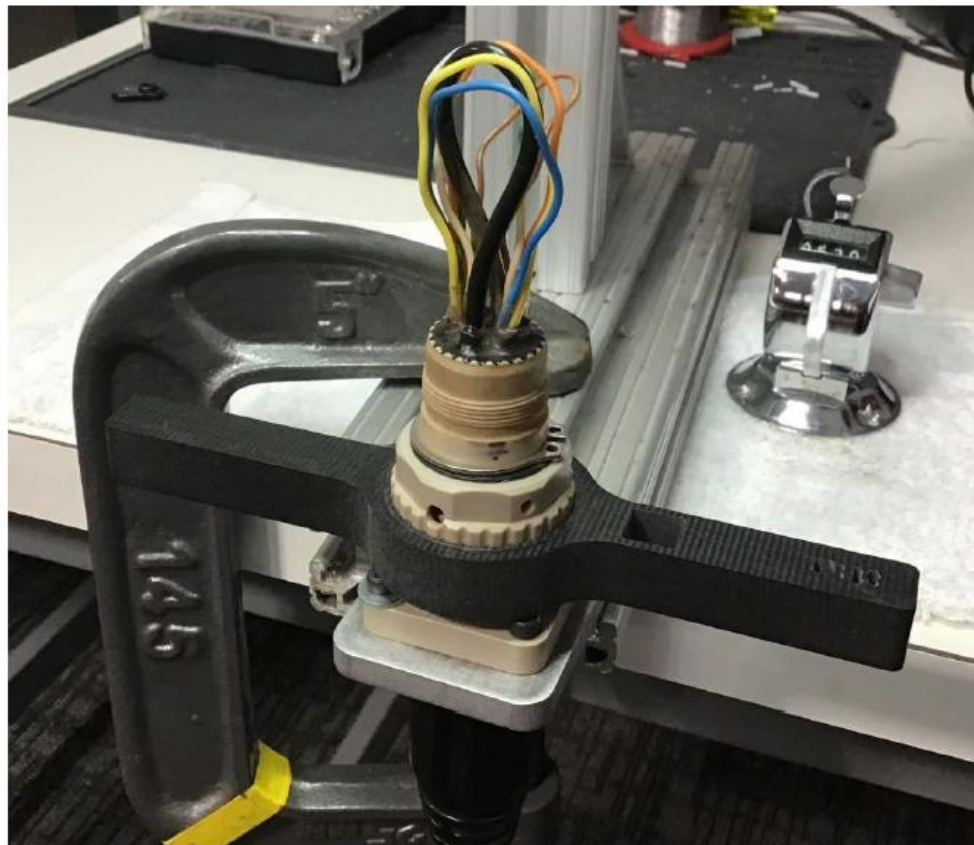
Description	Unit in Pressure Chamber
Test Name	Reverse Pressure Test
Part Name	Cable Assembly
Test Group	4

5.7 Over-Torque, CCP Locking Collar and FCR Shell



Description	Over Torque of CCP Collar and FCR Shell
Test Name	Over Torque Test
Part Name	Cable Assembly
Test Group	4

5.8 Mating Durability



Description	Mating Durability Setup
Test Name	Mating Durability
Part Name	Cable Assembly
Test Group	4

5.9 Ethernet



Description	Ethernet Test Setup
Test Name	Ethernet Test
Part Name	Cable Assembly
Test Group	5