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**QUALIFICATION TEST REPORT ABSTRACT FOR
GLENAIR
EL OCHITO DWV RATING
REPORT NO. GT-21-366 ABSTRACT**



El Ochito White



El Ochito Blue

PREPARED BY: *Bryan Samowitz* DATE: 02/07/2022
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QUALIFICATION TEST REPORT
Glenair El Ochito Vibration at
Temperature

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1.0 Product Description/Application

High speed, harsh environment El Ochito octaxial contacts and pre-wired assemblies save size and weight. Suitable for aircraft avionics, weapons systems, satellites, radars, communications equipment, and other aerospace/defense gear. El Ochito® contacts and cables are optimized for 10G Ethernet, SuperSpeed USB and other multi-gigabit datalink protocols including HDMI, DisplayPort, and SATA.

1.1 Purpose

Testing was performed on 858-003, 858-004, 858-028, and 858-029 El Ochitos to determine their Dielectric Withstanding Voltage ratings.

El Ochito Red uses the same materials as El Ochito Blue, so this rates the DWV capabilities of that product as well.

1.2 Scope

This report summarizes mechanical and electrical qualification testing and results thereof in accordance with QTP-759. The information in this report was obtained from tests conducted by Vertical Laboratories LLC and Glenair Inc. The documents listed below are on file at Glenair and available upon request.

Applicable Test Reports		
Test Report Number	Provider	Date Tested
19114D1BMV2	Vertical Labs	05/16/2019
20211R1BMV1	Vertical Labs	06/25/2021
GT-21-366	Glenair Inc.	07/07/2021

1.3 Test Specimen

Test Sample Description	
Description	Part Number
El Ochito Contact, Pin, 100 Ohms, MIL-DTL-38999, Series III	858-003-01
El Ochito Contact, Socket, 100 Ohms, MIL-DTL-38999, Series III	858-004-01
El Ochito, “Blue” Contact, Pin, 90 Ohms, MIL-DTL-38999, Series III	858-028-01
El Ochito, “Blue” Contact, Socket, 90 Ohms, MIL-DTL-38999, Series III	858-029-01

1.3.1 Test Specimen Preparation

For testing, each El Ochito was fully assembled with all eight inner contacts having a length of M22759/11-26 wire crimped on. A ninth length of M22759/11-26 wire was also crimped to the outer body.

Each altitude and mating condition shall have its own set of samples.



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1.4 Inspection Procedure

All tests were performed with the test specimens at standard laboratory conditions and within procedural parameters as defined below.

1. Ambient room temperature: 25°C ± 10°C (77°F ± 18°F)
2. Relative humidity: Room ambient up to 90% relative
3. Barometric pressure: Prevailing room conditions

2.0 Qualification Test Summary

Qualification Test Summary						
Test Description	Abstract Reference	Results	Highest Passing Voltage			
			El Ochito White		El Ochito Blue	
			Mated	Unmated	Mated	Unmated
Examination of product	3.1	Pass	N/A			
Insulation Resistance 5,000 MOhms, 500 VDC	3.2	Pass				
Dielectric Withstanding Voltage Sea Level	3.3		1000	1000	1100	1100
Dielectric Withstanding Voltage 50,000 ft	3.4		500	500	500	500
Dielectric Withstanding Voltage 70,000 ft	3.4		300	350	300	300
Dielectric Withstanding Voltage 100,000 ft	3.4		300	200	200	200

3.0 Qualification Testing Details

3.1 **Visual and mechanical examination**

Specimen submitted for testing was representative of standard production lots. Specimen was assembled at Glenair and accepted by Glenair Quality Assurance prior to submittal for testing.

3.2 **Insulation Resistance at Ambient Temperature**

3.2.1 Test Method

EIA-364-21

Unmated condition

3.2.2 Requirement

Resistance between any pair of inner contacts and between any contact and the outer body shall be 5,000 Megaohms minimum at 500 VDC

3.2.3 Results

PASS. All samples met the required resistance level.

3.2.4 Test Anomalies/Deviations

N/A



3.3 Dielectric Withstanding Voltage at Sea Level

3.3.1 Test Method

EIA-364-20, Method C

Starting at 100 VAC, voltage shall be increased by 100 volts until the leakage current exceeds 2 milliamperes

Maintain each voltage for at least 2 seconds

3.3.2 Requirement

Leakage current shall be less than 2 milliamperes

3.3.3 Results

Refer to section 2.0

3.3.4 Test Anomalies/Deviations

N/A

3.4 Dielectric Withstanding Voltage at Altitude

3.4.1 Test Method

EIA-364-20, Method C

For each altitude, start at 100 VAC. Voltage shall be increased by 100 volts until the leakage current exceeds 2 milliamperes

Maintain each voltage for at least 2 seconds

Altitudes and pressures shall be:

- 50,000 ft – 87 torr
- 70,000 ft – 33 torr
- 100,000 ft – 8 torr

3.4.2 Requirement

Leakage current shall be less than 2 milliamperes

3.4.3 Results

Refer to section 2.0

3.4.4 Test Anomalies/Deviations

N/A