PROTECTIVE NATURE OF NYE NYOGEL 760 G LUBRICANT
ON MINIFIT SR. TIN PLATED TERMINALS

1.0 SCOPE
This test summary covers the MiniFit Sr. Tin plated terminals used in the presence of Vibration with and without lubricant.

2.0 PRODUCT DESCRIPTION
2.1 PRODUCT NAME AND PART NUMBER(S)

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Crimp Terminal</td>
<td>42815-0011</td>
</tr>
<tr>
<td>Male Crimp Terminal</td>
<td>42817-0011</td>
</tr>
<tr>
<td>Receptacle Housing (6 pos)</td>
<td>42816-0612</td>
</tr>
<tr>
<td>Plug Housing (6 pos)</td>
<td>42818-0612</td>
</tr>
</tbody>
</table>

DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS
Female Terminal Material: Copper Alloy 151
Male Terminal Material: Copper Alloy 151
Receptacle Housing Material: Polyester , PBT, UL94V-0, Color: Black
Plug Housing Material: Polyester , PBT, UL94V-0, Color: Black
Plating: Overall Tin over Nickel.

See the appropriate Sales Drawings for the information on Dimensions.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS
SD-42815-*  SD-42817-*  PS-42815-001

4.0 QUALIFICATION
All testing is performed in accordance with EIA-364-1000.
### 5.0 PERFORMANCE

#### 5.1 Test Results:

<table>
<thead>
<tr>
<th></th>
<th>Tin Plating (No Lubricant) Thermal Shock (ΔmΩ)</th>
<th>Tin Plating (W / Lubricant) Thermal Shock (ΔmΩ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>0.76</td>
<td>0.08</td>
</tr>
<tr>
<td>Maximum</td>
<td>377.54</td>
<td>0.80</td>
</tr>
<tr>
<td>Average</td>
<td>29.02</td>
<td>0.37</td>
</tr>
<tr>
<td>Criteria</td>
<td>2mΩ Max.</td>
<td>2mΩ Max.</td>
</tr>
<tr>
<td>Result</td>
<td>Fail</td>
<td>Pass</td>
</tr>
</tbody>
</table>

#### 6.0 Conclusion:

Fretting Corrosion on the non-lubricated sample was the main cause for the failure during the Thermal Shock Testing. It appears that the use of the NYE Nyogel 760G Lubricant aided in the delay of any resistance degradation, and effectively minimized the impact of any oxidation / corrosion in the contact area.
7.0 TEST PROCEDURES / SEQUENCE

7.1 Procedure: **Thermal Shock:**

Samples were placed in chamber and subjected to 500 cycles. High temperature was 85°C and low temperature was 15°C. Exposure time at each temperature was 30 minutes. The samples were allowed to return to room ambient conditions prior to further measurements / tests.

7.2 Test Sequence:

- **Lubricant 760G**
  - Applied to half of the samples

  **Sample Preparation**

- **Initial Contact Resistance**

- **Durability** 20 Cycles

- **Contact Resistance**

- **Temperature Life** 105°C, 72 hours

  **Thermal Shock**
  - 15°C TO 85°C
  - 30 min. dwells, 500 Cycles

  **Contact Resistance**

  **Reseating** 3 Cycles

  **Contact Resistance**

  **End Testing**