B. BURN-IN: RESISTORS SHALL BE BURNED IN NON-OPERATING AT 50°C FOR 100 HOURS. RESISTANCE, ONE HOUR AFTER TESTING SHALL NOT VARY MORE THAN ±1% FROM THE INITIAL MEASUREMENT. THERE SHALL BE NO MECHANICAL DAMAGE.


2. ACCEPTANCE AND INSPECTION REQUIREMENTS (100%):

A. MECHANICAL REQUIREMENTS:
1. LEAD MATERIAL: NICKEL (GRADE A) PER ND 1015400.
2. PROTECTIVE VARNISH: MOISTURE AND FUNGUS PROOF VARNISH PER MIL-V-173. SUPPLIED WITH EACH SHIPMENT UNLESS OTHERWISE SPECIFIED.
3. MATERIAL AND FINISH CERTIFICATION: LEAD MATERIAL AND RESISTOR MOISTURE PROOF VARNISH COMPLIANCE SHALL BE CERTIFIED WITH EACH SHIPMENT.

B. ELECTRICAL CHARACTERISTICS (AT 25°C ± 0.1°C):
1. ZERO-POWER RESISTANCE VALUE: TABLE I VALUE ± 1%.

3. DESIGN REQUIREMENTS:
A. DISSIPATION CONSTANT: SEE TABLE I FOR THE AMOUNT OF POWER WHICH WILL RAISE THE THERMISTOR ONE DEGREE CENTIGRADE ABOVE AMBIENT.
B. TIME CONSTANT: SEE TABLE I FOR THE TIME REQUIRED FOR THE THERMISTOR TO REACH 63% OF THE TEMPERATURE CHANGE FOR A CERTAIN CHANGE IN AMBIENT TEMPERATURE. THE THERMISTOR WILL REACH 98% OF TEMPERATURE CHANGE IN APPROX 5 TIMES THE CONSTANT LISTED.

C. STORAGE LIFE: 1 YEAR MINIMUM AT ROOM TEMPERATURE AND HUMIDITY WHEN STORED IN UNOPENED CONTAINERS.
D. CONSTRUCTION: RESISTIVE WAFER MATERIAL WITH LEADS SOLDERED IN PLACE.
E. ENVIRONMENTAL: CAPABLE OF OPERATION OVER THE AMBIENT TEMPERATURE RANGE OF -55°C TO +105°C.

4. SPECIAL CONDITIONING:
A. TEMPERATURE CYCLING: RESISTORS SHALL BE TESTED PER MIL-STD-202, METHOD 102, CONDITION C EXCEPT TEMPERATURE EXTREMES OF -55°C AND +105°C. RESISTANCE, ONE HOUR AFTER TESTING, SHALL NOT VARY MORE THAN ±1% FROM THE INITIAL MEASUREMENT. THERE SHALL BE NO MECHANICAL DAMAGE.

B. BURN-IN: RESISTORS SHALL BE BURNED IN NON-OPERATING AT 50°C FOR 100 HOURS. RESISTANCE, ONE HOUR AFTER TESTING SHALL NOT VARY MORE THAN ±1% FROM THE INITIAL MEASUREMENT. THERE SHALL BE NO MECHANICAL DAMAGE.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.
### Table I

<table>
<thead>
<tr>
<th>ORDER NO.</th>
<th>ZERO-POWER RESISTANCE IN OHMS</th>
<th>DISSIPATION CONSTANT</th>
<th>TIME CONSTANT SECONDS</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500.1±1%</td>
<td>1,635±1%</td>
<td>179.7±1%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1,000±1%</td>
<td>3,274±1%</td>
<td>599.5±1%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5,000±1%</td>
<td>17,703±1%</td>
<td>1,630±1%</td>
<td></td>
</tr>
</tbody>
</table>

### Requirement Paragraphs

**Group I (All Samples)**

- **Visual & Mechanical**
- **Zero-Power Resistance**
- **Dissipation Constant**
- **Thermal Time Constant**
- **Maximum Power Rating**

**Group II (1/3 of Samples)**

- **Characteristics**
  - **Temperature Cycling**
  - **Thermal Stability**
  - **Low Temperature Storage**
- **Terminal Strength**

**Group III (1/3 of Samples)**

- **Vibration**
- **Shock**
- **Moisture Resistance**
- **Load Life**
- **Lead Composition**

**Group IV (1/3 of Samples)**

- **Load Life**
- **Resistance, Temperature Sensitive, Wafer**

---

**General Qualification Requirements**

Para. 3.2 through 3.9.2 of ND - 1002057

Para. 4.2.1 OF ND - 1002057

Para. 4.5.2 of MIL-T-23648 except measure at 29°C, +50°C & 0°C

Para. 4.5.4 of MIL-T-23648

Para. 4.5.5 of MIL-T-23648

Para. 3.3.7 of MIL-T-23648 except measure power that produces temperature rise of +80°C

Para. 4.5.10 of MIL-T-23648

Para. 4.2.11 of ND 1002057 (see note 1)

Para. 4.2.12 of ND 1002057 (see note 1)

Para. 4.5.13 of MIL-T-23648 (see note 2)

Para. 4.5.15 of MIL-T-23648 except initial resistance may be measured prior to start of life. Max operating temperature +105°C

Para. 4.2.16 of ND 1002057

---

**Note 1**

The amount of power to be applied will be that necessary to raise the Thermistor temperature to approx. +65°C under normal free air conditions. Zero-power resistance will be measured before and after test per PARA. 4.5.2. of MIL-T-23648.

**Note 2**

Indicated steps (a), (d), and (f) replaced by (1), (4), and (7) respectively.