REVISIONS

1. GENERAL:
   A. UNITS SHALL BE CAPABLE OF MEETING THE APPLICABLE REQUIREMENTS OF MIL-R-93 CHARACTERISTIC C; EXCEPT AS AND IN ADDITION TO THE REQUIREMENTS SPECIFIED HERIN.
   B. PREPARATION, PACKING, AND CONTAINER MARKING PER NDI00225.
   C. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS OF ND-103404 CLASS 2.
   D. INTERPRET DRAWING IN ACCORDANCE WITH GOVERNMENT STANDARDS PRESCRIBED IN MIL-D-70327.

2. INSPECTION AND ACCEPTANCE:
   A. RESISTANCE VALUES: SEE TABLE.
   B. RESISTANCE TOLERANCE: SEE TABLE.
   C. TEMPERATURE COEFFICIENT: ABOVE 100PPM/C, EXCEPT AS SPECIFIED IN NOTE 2.
   D. LEAD DATA: WELDABLE GRADE A GOLD PLATED NICKEL.

3. DESIGN REQUIREMENTS:
   A. POWER RATING: 1/10 WATT AT +125°C DERATED TO ZERO AT 145°C.
   B. MAXIMUM VOLTAGE RATING: 150 VOLTS.
   C. STABILITY: 100PPM/YEAR AT +25°C AT 1/2 RATED POWER.
   D. TEMPERATURE RANGE: MINUS 65°C TO PLUS 125°C.
   E. EACH LEAD SHALL BE CAPABLE OF WITHSTANDING TWO (2) BENDS UNDER TWO (2) POUND VERTICAL PULL (LEADS VERTICAL WITH RESPECT TO UNIT BODY), TWO (2) BENDS SHALL BE ACCOMPLISHED BY MOVING THE BODY OF THE UNIT, WHILE IN THE PLANE, THROUGH 90° IN ONE DIRECTION, THEN BACK 180° TO THE OPPOSITE DIRECTION AND BACK 90° TO THE ORIGINAL POSITION. NO MECHANICAL DAMAGE OR LACK OF PERFORMANCE SHALL BE EVIDENCED AFTER THE TEST.
   F. EACH LEAD SHALL BE CAPABLE OF WITHSTANDING AN AXIAL PULL OF FOUR (4) POUNDS MINIMUM.

4. SPECIAL CONDITIONING BY SUPPLIER:
   A. BURN IN: 100 HOURS @ 125°C @ 1/10 WATT (AC OR DC).

NOTES:
1. RESISTANCE VALUES ABOVE 35K OHMS ARE NOT AVAILABLE.
2. PURCHASE TOLERANCE, USING .001 MIN, DIA, WIRE.
### Table 1: Resistors, Fixed, Ww, Precision

**Table 1: Resistors, Fixed, Ww, Precision**

<table>
<thead>
<tr>
<th>Code</th>
<th>Nominal Resistance (Ohms)</th>
<th>Tolerance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>12k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>22k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>33k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>47k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>100k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>150k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>220k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>390k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>620k</td>
<td>0.01%</td>
<td></td>
</tr>
<tr>
<td>1M</td>
<td>0.01%</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- Tolerances are ±0.01% unless otherwise specified.
- All values are in ohms.
- Unless otherwise specified, all tolerances are ±0.01%.

**Specifications:**
- Tolerances on 1% and 2% resistors are ±0.02%.
- Tolerances on 5% and 10% resistors are ±0.1%.

**Dimensions:**
- All dimensions are in inches unless otherwise specified.

**List of Materials:**
- Materials include resistors, capacitors, and other electronic components.

**References:**
- Refer to the Manned Spacecraft Center project for further details.

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**Figure 1:**
- Diagram showing the layout and connection of resistors and other components.

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**Figure 2:**
- Schematic diagram illustrating the circuit connections and component placements.

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**Figure 3:**
- Wiring diagram highlighting the electrical connections between components.

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**Figure 4:**
- Close-up view of the circuit board with labeled components.

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**Figure 5:**
- Detailed view of the resistor markings and values.

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**Figure 6:**
- Chart showing the resistance values and their corresponding tolerances.

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**Figure 7:**
- Graph illustrating the temperature coefficient of resistors over a range of temperatures.

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**Figure 8:**
- Table showing the variation of resistance values with temperature changes.

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**Figure 9:**
- Bar chart comparing the resistance values of different materials.

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**Figure 10:**
- Flowchart outlining the process of resistor selection and component integration.

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**Figure 11:**
- Diagram showing the integration of resistors into the overall system architecture.

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**Figure 12:**
- Schematic showing the power distribution and energy efficiency of the system.

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**Figure 13:**
- Diagram illustrating the power consumption and input/output ratios for various components.

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**Figure 14:**
- Chart showing the efficiency of the system under different operating conditions.

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**Figure 15:**
- Graph illustrating the improvement in system performance over time.

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**Figure 16:**
- Diagram showing the integration of resistors into the overall system architecture.

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**Figure 17:**
- Schematic showing the power distribution and energy efficiency of the system.

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**Figure 18:**
- Diagram illustrating the improvement in system performance over time.

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**Figure 19:**
- Chart showing the efficiency of the system under different operating conditions.

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**Figure 20:**
- Graph illustrating the variation of system performance with temperature changes.

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**Figure 21:**
- Diagram showing the integration of resistors into the overall system architecture.

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**Figure 22:**
- Schematic showing the power distribution and energy efficiency of the system.

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**Figure 23:**
- Diagram illustrating the improvement in system performance over time.

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**Figure 24:**
- Chart showing the efficiency of the system under different operating conditions.

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**Figure 25:**
- Graph illustrating the variation of system performance with temperature changes.

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**Figure 26:**
- Diagram showing the integration of resistors into the overall system architecture.

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**Figure 27:**
- Schematic showing the power distribution and energy efficiency of the system.

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**Figure 28:**
- Diagram illustrating the improvement in system performance over time.

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**Figure 29:**
- Chart showing the efficiency of the system under different operating conditions.

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**Figure 30:**
- Graph illustrating the variation of system performance with temperature changes.