Initial Electrical Characteristics

- Standard Resistance Value: 250K and 500K ohms
- Total Resistance Tolerance: ±10 %
- Independent Linearity: ±5 %
- Absolute Minimum Resistance: 2 ohms maximum
- Effective Electrical Angle: ±2 % maximum
- Total Resistance Shift: ±2 % maximum
- Voltage Ratio Shift: ±5 % maximum
- Shock: 30 G
- Vibration: 15 G
- Dielectric Withstanding Voltage (MIL-STD-202, Method 301):
  - Sea Level: 1,500 VAC minimum
  - 70,000 Feet: 500 VAC minimum
  - Insulation Resistance (500 VDC): 1,000 megohms minimum
- Power Rating (Voltage Limited By Power Dissipation or 350 VAC, Whichever Is Less):
  - +70 °C: ±0.25 watt
  - +125 °C: ±0 watt
- Theoretical Resolution: Essentially infinite

Environmental Characteristics

- Operating Temperature Range: -40 °C to +125 °C
- Storage Temperature Range: -55 °C to +125 °C
- Temperature Coefficient Over Storage Temperature Range: ±1,000 ppm/°C
- Vibration: 15 G
- Total Resistance Shift: ±2 % maximum
- Voltage Ratio Shift: ±5 % maximum
- Shock: 30 G
- Total Resistance Shift: ±2 % maximum
- Voltage Ratio Shift: ±5 % maximum
- Load Life: 1,000 hours
- Total Resistance Shift: ±10 % maximum
- Rotational Life (No Load): 100,000 cycles
- Contact Resistance Variation @ 50,000 cycles: ±3 %
  - Total Resistance Shift: ±20 % TRS maximum
  - Insulation Resistance (500 VDC): 100 megohms minimum
- IP Rating: IP 40

Mechanical Characteristics

- Mechanical Angle: 300 ° ±5 °
- Rotational Torque: 0.7 oz-in (50 g-cm) typical
- Weight: 21 grams
- Terminals: J-hooks
- Soldering Condition: Manufacturer’s trademark, date code, resistance, manufacturer’s part number
- Hardware: One lockwasher, one flat washer, two mounting nuts and one solder lug washer are shipped with each potentiometer

1 AT ROOM AMBIENT: +25 °C NOMINAL AND 50 % RELATIVE HUMIDITY NOMINAL, EXCEPT AS NOTED.

Features
- Plain or knurled shaft option
- 10 % TR tolerance
- Conductive polymer element
- Very low noise
- Single-turn
- 250K and 500K resistances

Environmental Characteristics

- Single-turn
- Very low noise
- Conductive polymer element

Selection Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Taper/Shaft</th>
<th>Resistance Value (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>82A1D-A24-BA0/186L</td>
<td>Audio/Plain</td>
<td>250K</td>
</tr>
<tr>
<td>82A1D-A24-BA0/187L</td>
<td>Audio/Plain</td>
<td>500K</td>
</tr>
<tr>
<td>82A1D-Z28-BA0/254L</td>
<td>Audio/Knurled</td>
<td>500K</td>
</tr>
<tr>
<td>82A1D-Z28-BA0/255L</td>
<td>Audio/Knurled</td>
<td>250K</td>
</tr>
<tr>
<td>82Z1D-Z33-BA0/753L</td>
<td>Audio/Knurled (Long Bushing)</td>
<td>250K</td>
</tr>
<tr>
<td>82Z1D-Z33-BA0/754L</td>
<td>Audio/Knurled (Long Bushing)</td>
<td>500K</td>
</tr>
</tbody>
</table>

Audio Taper Plot

WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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Users should verify actual device performance in their specific applications.
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