Isolation Transformers

For Analog Devices ADuM347x Quad-Channel Digital Isolators

- AEC-Q200 Grade 1 qualified
- Developed to work with Analog Devices ADuM347x quad-channel, digital isolators in automotive applications
- Power rating: 2 Watts
- Designed to meet UL/CSA/IEC 60950 Basic Insulation with 1.5 mm creepage and clearance.

### Core Material
- Ferrite

### Terminations
- Tin-silver over tin over nickel over phosph bronze

### Isolation
- 2500 Vrms primary to secondary; 1250 Vrms windings to core

### Weight
- 0.95 – 0.98 g

### Ambient Temperature
- –40°C to +125°C

### Maximum Part Temperature
- +165°C (ambient + temp rise)

### Storage Temperature
- Component: –40°C to +125°C.
- Tape and reel packaging: –40°C to +80°C

### Resistance to Soldering Heat
- Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

### Moisture Sensitivity Level (MSL)
- 1 (unlimited floor life at <30°C / 85% relative humidity)

### Failures in Time (FIT) / Mean Time Between Failures (MTBF)
- 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

### Packaging
- 600/13” reel; Plastic tape: 24 mm wide, 0.37 mm thick, 16 mm pocket spacing, 6.1 mm pocket depth

### PCB Washing
- Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

#### Pri / output voltages

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance min (µH)</th>
<th>Turns ratio</th>
<th>Pri / output voltages</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance max (µH)</th>
<th>Volt-time product (V·µsec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA6547-AL_</td>
<td>63.75</td>
<td>1 : 2</td>
<td>5 V +3.3 to +5 V</td>
<td>0 V No output</td>
<td>0.095</td>
<td>0.190 0.460 17.6</td>
</tr>
<tr>
<td>PA6548-AL_</td>
<td>63.75</td>
<td>1 : 3</td>
<td>5 V +12 to +15 V</td>
<td>+6 to +7.5 V</td>
<td>0 V</td>
<td>0.122 0.260 0.660 17.6</td>
</tr>
<tr>
<td>PA6549-AL_</td>
<td>63.75</td>
<td>1 : 5</td>
<td>5 V +12 to +15 V</td>
<td>0 V –12 to –15 V</td>
<td>0.095</td>
<td>1.17 0.515 17.6</td>
</tr>
</tbody>
</table>

1. When ordering, please specify a packaging code:
- **PA6549-ALD**
  - **Packaging:** D = 13” machine ready reel. EIA-481 embossed plastic tape (600 per full reel).
  - B = Less than full reel. In tape, but not machine ready.
  - To have a leader and trailer added ($25 charge), use code letter D instead.

2. Inductance is for the primary, measured from pins 4 – 3 at 1 kHz, 0.1 Vrms.
3. DCR is for each winding of the primary and secondary.
4. Leakage inductance is for the primary windings, measured from pins 1 – 4 with all secondary windings shorted.
5. Based on Bsat of the core at 25°C and the number of turns on winding 4 – 3.
6. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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