# Isolation Transformers

For Analog Devices ADuM347x Quad-Channel Digital Isolators

- Developed to work with Analog Devices ADuM347x quad-channel, digital isolators with integrated PWM controller and transformer driver
- Power rating: 2 Watts
- Designed to meet UL/CSA/IEC 60950 Basic Insulation with 1.5 mm creepage and clearance.

## Specification

**Core Material**
- Ferrite

**Terminations**
- Tin-silver over tin over nickel over phosphor bronze

**Isolation**
- 2500 Vrms primary to secondary; 500 Vrms winding to core

**Weight**
- 0.95 – 0.98 g

**Ambient Temperature**
- -40°C to +125°C

**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

## Part Number

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Inductance (µH)</th>
<th>Turns Ratio</th>
<th>Primary / Output Voltages</th>
<th>DCR max (Ohms)</th>
<th>Leakage Inductance (µH)</th>
<th>Volt-time Product (V-µs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA4631-BL_</td>
<td>63.75</td>
<td>1:2</td>
<td>5 V +3.3 to +5 V, 0 V</td>
<td>0.095</td>
<td>0.190</td>
<td>0.460</td>
</tr>
<tr>
<td>JA4650-BL_</td>
<td>63.75</td>
<td>1:3</td>
<td>5 V +12 to +15 V, +6 to +7.5 V, 0 V</td>
<td>0.122</td>
<td>0.260</td>
<td>0.660</td>
</tr>
<tr>
<td>KA4976-AL_</td>
<td>63.75</td>
<td>1:5</td>
<td>5 V +12 to +15 V, 0 V</td>
<td>0.095</td>
<td>1.17</td>
<td>0.515</td>
</tr>
</tbody>
</table>

1. When ordering, please specify a packaging code:
   
   **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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