Flyback Transformer

For Analog Devices ADP1031
Isolated Micropower Management Unit

- Developed to use with isolated flyback DC-DC regulator in the Analog Devices ADP1031.
- 2250 Vrms, one minute isolation from primary to secondary
- AEC-Q200 Grade 1 qualified (−40°C to +125°C ambient)

Core material: Ferrite
Terminations: RoHS tin-silver-copper (95.5/3.8/0.7) over tin over nickel over phosph bronze.
Weight: 0.99 g
Ambient temperature: −40°C to +125°C
Maximum part temperature: +165°C
Storage temperature: Component: −40°C to +165°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)
Packaging: 600 per reel, 13" reel Plastic tape: 24 mm wide, 0.37 mm thick, 16 mm pocket spacing, 6.11 mm pocket depth

<table>
<thead>
<tr>
<th>Part number</th>
<th>Input voltage (V)</th>
<th>Inductance (µH)</th>
<th>Leakage inductance (µH)</th>
<th>DCR max (Ohms)</th>
<th>Turns ratio</th>
<th>Isolation (Vrms)</th>
<th>Isat (A)</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>YA9293-ALD</td>
<td>4.5 – 60</td>
<td>300</td>
<td>1.62</td>
<td>1.2</td>
<td>0.785</td>
<td>2250</td>
<td>0.25</td>
<td>24 V, 20 mA</td>
</tr>
</tbody>
</table>

2. Inductance is for the primary, measured on an Agilent/HP 4284 at 250 kHz, 0.1 Vrms, 0 A dc.
3. Leakage inductance is for the primary with secondary winding shorted together.
4. Isolation (hipot) measured between windings for one minute.
5. DC current that causes an inductance drop of 20% (typ) from its value without current
6. Electrical specifications at 25°C.
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Schematic

- Primary
- Secondary

Dimensions are in inches.