Flyback Transformer

For Microchip Technology’s Isolated AC LED driver

- Developed specifically for Microchip Technology’s Isolated AC LED driver to operate with PIC16HV785 CMOS Microcontroller and MCP1402 Gate Driver
- Universal ac input; 20 V, 0.7 A output; Operates at 125 kHz
- 3000 Vrms, one minute isolation from the primary and bias to the secondary winding
- Bias winding supplies 12 V to power the microprocessor

Core material  Ferrite
Terminations  RoHS tin-silver over tin over copper clad steel. Other terminations available at additional cost.
Weight  11.7 g
Ambient temperature  −40°C to +85°C
Storage temperature  Component: −40°C to +85°C. Packaging: −40°C to +80°C
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  117 parts per tray
PCB washing  Only pure water or alcohol recommended

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### Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Power (W)</th>
<th>Inductance at 0 A³</th>
<th>Inductance at Ipk²</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance min (µH)</th>
<th>Turns ratio</th>
<th>Ipk² (A)</th>
<th>Output²</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA3172-AL</td>
<td>14</td>
<td>500</td>
<td>450</td>
<td>0.675</td>
<td>0.245</td>
<td>0.325</td>
<td>8.25</td>
<td>1:0.214</td>
</tr>
</tbody>
</table>

1. Inductance measured at 125 kHz, 0.1 Vrms, 0 Adc.
2. Peak primary current drawn at minimum input voltage.
3. Leakage inductance is for the primary and is measured with the secondary shorted.
4. Output is for the secondary. Bias winding output is 12 V.
5. Electrical specifications at 25°C.
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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### PCB Board Layout

Dimensions are in inches

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For Microchip Technology’s Isolated AC LED driver

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