Flyback Transformers
For Microchip Grid-Connected Solar Microinverter using dsPIC

- Listed on Bill of Material for Reference Design AN1338
- Input voltage: 22 Vdc – 55 Vdc
- 3000 Vrms, one minute isolation from primary to secondary windings

Core material: Ferrite
Terminations: RoHS tin-silver (96.5/3.5) over tin cover copper-plated steel wire
Weight: 94.3 g
Ambient temperature: -40°C to +85°C
Storage temperature: Component: -40°C to +85°C. Tray 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: 20 per tray

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance at 0 A</th>
<th>DCR max (Ohms)</th>
<th>SRF typ (kHz)</th>
<th>Leakage inductance (µH)</th>
<th>Turns ratio</th>
<th>Isat (A)</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±10% (µH)</td>
<td>pri</td>
<td>sec</td>
<td></td>
<td>pri</td>
<td>sec</td>
<td></td>
</tr>
<tr>
<td>JA4635-AL</td>
<td>28</td>
<td>0.008</td>
<td>0.106</td>
<td>640</td>
<td>0.138</td>
<td>1:6</td>
<td>10.5</td>
</tr>
<tr>
<td>KA4823-CL</td>
<td>28</td>
<td>0.008</td>
<td>0.472</td>
<td>360</td>
<td>0.115</td>
<td>1:12</td>
<td>10.5</td>
</tr>
</tbody>
</table>

1. Inductance is measured at 150 kHz, 0.1 Vrms.
2. DCR is with the secondary windings connected in parallel.
3. Leakage inductance is for the three windings of the primary with the secondary windings shorted.
4. Turns ratios are with the primary and secondary windings connected in parallel.
5. DC current at which the inductance drops 10% (typical) from its value without current.
6. Electrical specifications at 25°C.
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Pin 1, 2 and 3 to be connected together on the PC board.
Pin 10, 11 and 12 to be connected together on the PC board.
Secondary windings to be connected in parallel on the PC board.

Dimensions are in inches / mm

Parts manufactured prior to September 2011 may be marked differently.

Recommended PC board layout
(0.10 inch / 2.54 mm grid)