No-Opto Flyback Transformers YA903x-AL

- Optimized for LM25180 and LM5180 flyback converters from Texas Instruments
- Five output versions for various single-output designs with 4 – 65 V input
- Eliminates auxiliary winding for simple and reliable converter designs

Core material: Ferrite
Terminations: RoHS tin-silver-copper over tin over nickel over phosphor bronze. Other terminations available at additional cost.

Weight: 2 – 2.3 g
Ambient temperature: –40°C to +85°C
Max Part Temperature: +125°C (ambient + temperature 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 refloows 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): 10.06 per billion hours / 9.940E+07 hours, calculated per Telcordia SR-332


### Part Number 
<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance at 0 A²</th>
<th>Inductance min at 2 A</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance max (µH)</th>
<th>Turns ratio</th>
<th>Isolation (Vrms)</th>
<th>Power (W)</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>YA9033-ALD</td>
<td>32 25.6</td>
<td>0.240 0.032</td>
<td>0.480 1:0.5</td>
<td>1500 6 8 V, 0.75 A</td>
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<tr>
<td>YA9034-ALD</td>
<td>36 28.8</td>
<td>0.244 0.084</td>
<td>0.426 1:0.666</td>
<td>1500 6 12 V, 0.5 A</td>
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<tr>
<td>YA9035-ALD</td>
<td>30 24.0</td>
<td>0.168 0.168</td>
<td>0.290 1:1</td>
<td>1500 6 15 V, 0.4 A</td>
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<tr>
<td>YA9036-ALD</td>
<td>30 24.0</td>
<td>0.168 0.437</td>
<td>0.314 1:2</td>
<td>1500 6 24 V, 0.25 A</td>
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<td></td>
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<tr>
<td>YA9037-ALD</td>
<td>32 25.6</td>
<td>0.232 1.444</td>
<td>0.384 1:3</td>
<td>1500 6 48 V, 0.1 A</td>
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</tbody>
</table>

1. Packaging: D = 13” machine-ready reel. EIA-481 embossed plastic tape (300 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
2. Inductance is for the primary, measured at 300 kHz, 0.1 Vrms, 0 Adc.
3. Minimum inductance is for the primary, measured at 300 KHz, 0.1 Vrms, 2 Adc.
4. Leakage inductance is for the primary winding with the secondary windings shorted.
5. 1500 Vrms, one minute isolation (hipot) between primary and secondary.
6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Schematics**

Connect pin 5 to 6 and pin 7 to 8 on the PC board.
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Dimensions

Dot indicates pin 1

Connect pin 5 to 6 and pin 7 to 8 on the PC board

Dimensions are in inches mm

Packaging 300 per 13” reel Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 10.69 mm pocket depth