### Forward Mode Transformer
For Maxim MAX17599 PWM Controller

- Forward mode transformer for the Maxim MAX17599 Active Clamp Current-Mode PWM Controller
- 18 – 36 V input; 12 V, 3.3 A output
- 1500 Vrms, one minute isolation from primary to secondary and gate windings
- Specified on reference design MAXREFDES48#

**Core material**: Ferrite

**Terminations**: RoHS tin-silver (96.5/3.5) over tin over nickel over phosphor bronze.

**Weight**: 10.5 g

**Ambient temperature**: –40°C to +85°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

**Electrical specifications at 25°C**. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

#### Inductance

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance at 0 A (\text{min (µH)})</th>
<th>DCR max (mOhms)</th>
<th>Leakage inductance max (µH)</th>
<th>Turns ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA6999-AL</td>
<td>70</td>
<td>20.5</td>
<td>0.35</td>
<td>1:1.125</td>
</tr>
</tbody>
</table>

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

   **RA6999-ALD**
   
   **Packaging**:  
   - **D** = 13” machine ready reel. EIA-481 embossed plastic tape (175 parts 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 measured at 250 kHz, 0.1 Vrms.

3. Output is for the secondary winding. Output of the gate winding is 4 V, 0.25 A

4. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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**Dimensions are in **

<table>
<thead>
<tr>
<th>Dimensions are in <strong>inches (mm)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.039 (1.0)</td>
</tr>
<tr>
<td>0.148 (3.76)</td>
</tr>
<tr>
<td>0.420 (10.66)</td>
</tr>
<tr>
<td>0.791 (20.1)</td>
</tr>
<tr>
<td>0.906 (23.10)</td>
</tr>
<tr>
<td>0.039 (1.0)</td>
</tr>
<tr>
<td>0.090 (2.29)</td>
</tr>
<tr>
<td>0.148 (3.76)</td>
</tr>
<tr>
<td>0.910 max (23.11)</td>
</tr>
<tr>
<td>1.020 max (25.90)</td>
</tr>
</tbody>
</table>

Dot indicates pin 1

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**Recommended Land Pattern**

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**Gate**

**Pri**

**Sec**

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