SMT Gate Drive Transformers

- Designed for high switching speed, transformer coupled MOSFET and IGBT gate drive circuits.
- Operating frequency: 50 kHz – 2 MHz
- Primary to secondary isolation: 1500 Vdc. For DA2317-AL and DA2320-AL, isolation between secondaries is 500 Vdc.

**Core material** Ferrite  
**Terminations** RoHS compliant tin-silver over tin over nickel over phos bronze. Other terminations available at additional cost.  
**Weight** 535 – 615 mg  
**Ambient temperature** –40°C to +125°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  
**Packaging** 250/7″ reel; 1000/13″ reel Plastic tape: 16 mm wide, 0.5 mm thick, 20 mm pocket spacing, 5.54 mm pocket depth  
**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

<table>
<thead>
<tr>
<th>Part number&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Turns ratio</th>
<th>Primary inductance&lt;sup&gt;2&lt;/sup&gt; (µH)</th>
<th>Leakage inductance&lt;sup&gt;3&lt;/sup&gt; max (µH)</th>
<th>Primary DCR max (Ohms)</th>
<th>Secondary DCR max (Ohms)</th>
<th>Volt-time product (V-µsec)</th>
<th>SRF min&lt;sup&gt;4&lt;/sup&gt; (MHz)</th>
<th>Capacitance pri to sec max (pF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA2319-AL_</td>
<td>1 : 1</td>
<td>296.0</td>
<td>1.5</td>
<td>0.795</td>
<td>0.655</td>
<td>25.8</td>
<td>1.75</td>
<td>14.0</td>
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<tr>
<td>DA2318-AL_</td>
<td>1.5 : 1</td>
<td>680.0</td>
<td>4.0</td>
<td>1.65</td>
<td>0.860</td>
<td>40.8</td>
<td>1.25</td>
<td>14.0</td>
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<tr>
<td>DA2320-AL_</td>
<td>1 : 1 : 1</td>
<td>264.0</td>
<td>0.30</td>
<td>1.50</td>
<td>1.50</td>
<td>24.5</td>
<td>2.50</td>
<td>95.0</td>
</tr>
<tr>
<td>DA2317-AL_</td>
<td>2 : 1 : 1</td>
<td>330.0</td>
<td>0.60</td>
<td>1.40</td>
<td>0.650 (2-5)</td>
<td>24.5</td>
<td>2.00</td>
<td>18.0</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:  
   - **Termination:** L = RoHS compliant tin-silver over tin over nickel over phos bronze  
   - **Special order**, added cost:  
     - S = non-RoHS tin-lead (63/37)  
   - **Packaging:**  
     - C = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 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 C instead.  
     - D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only. Not stocked (1000 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc  
3. Leakage inductance measured at 100 kHz, 0.1 Vrms with secondary pins shorted.  
4. SRF measured with coils connected in series using an Agilent/HP 4192 or equivalent.  
5. Operating temperature range –40°C to +125°C.  
6. Electrical specifications at 25°C.  

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

**Dimensions in inches**

- **DA2318-AL, DA2319-AL**  
  - Pri: 3  
  - Sec: 6  
  - Recommended Land Pattern

- **DA2317-AL, DA2320-AL**  
  - Pri: 3  
  - Sec: 6  
  - Intern code

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