SMT Gate Drive Transformer

- Designed for transformer coupled MOSFET and IGBT gate drive circuits; operating frequency: 50 kHz to 2 MHz.
- 2250 Vdc, one minute primary to secondary isolation
- Requires only 56 mm² of board space.
- Specified by National Semiconductor on AN-1521 for their POE+PHYTEREV-I/-E evaluation boards.
- Specified on the Microsemi PD70211EVB51F-12 evaluation board

Core material  Ferrite
Terminations  RoHS compliant tin-silver over tin over nickel over phos bronze
Weight  700 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 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)
Packaging  175/7” reel; 750/13” reel Plastic tape: 24 mm wide, 0.4 mm thick, 12 mm pocket spacing, 7.0 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 number¹</th>
<th>Turns ratio</th>
<th>Primary inductance² min (µH)</th>
<th>Leakage inductance³ max (µH)</th>
<th>Primary DCR max (Ohms)</th>
<th>Secondary DCR max (Ohms)</th>
<th>Volt-time product⁴ (V-µsec)</th>
<th>SRF min⁵ (MHz)</th>
<th>Capacitance pri to sec max (pF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA2659-AL_</td>
<td>1 : 1</td>
<td>296.0</td>
<td>1.5</td>
<td>0.795</td>
<td>0.655</td>
<td>34.2</td>
<td>1.39</td>
<td>21.9</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - FA2659-ALC
     Packaging:  C = 7” machine-ready reel. EIA-481 embossed plastic tape (175 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
     D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (750 parts per full reel).
     B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

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. Based on Bsat of the core at 25°C and number of turns of the primary.
5. SRF measured with coils connected in series using an Agilent/HP 4192 or equivalent.
6. Electrical specifications at 25°C.

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