Flyback Transformer
For Texas Instruments
Reference Design TIDA-01505

- Designed for Texas Instruments Automotive 40 V to 1 kV
  Input Flyback Reference Design Supporting Regenerative
  Braking Safety Test
- Operates at 150 kHz with 40–1000 Volts input
- 5700 Vrms, one minute isolation (hipot) pri and aux to sec;
  2000 Vrms pri to aux
- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)

Core material Ferrite
Terminations RoHS tin-silver-copper over tin over nickel over phos bronze.
Weight 35.5 g
Ambient temperature –40°C to +125°C
Maximum part temperature +165°C (ambient + temp rise).
Storage temperature Component: –40°C to +165°C.
Tray 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)
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance at 0 A1</th>
<th>Inductance at Ipk2</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance3</th>
<th>Turns ratio3</th>
<th>Ipk2 (A)</th>
<th>Output5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>at 10% (mH)</td>
<td>max (mH)</td>
<td>pri</td>
<td>sec</td>
<td>aux1</td>
<td>aux2</td>
<td>max (µH)</td>
</tr>
<tr>
<td>WA8759-AL</td>
<td>1.50</td>
<td>1.35</td>
<td>3.1</td>
<td>0.07</td>
<td>1.30</td>
<td>0.34</td>
<td>34.0</td>
</tr>
</tbody>
</table>

1. Inductance is for the primary, measured at 150 kHz, 0.1 Vrms, 0 A dc.
2. Peak primary current drawn at minimum input voltage.
3. Leakage inductance is for the primary winding with the secondary windings shorted.
4. Turn Ratios specified are with no core gap.
5. Output is for the secondary. Output of Aux1 is 20 V, 35 mA;
   Output of Aux2 is 5 V, 35 mA.
6. Electrical specifications at 25°C.

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

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Dimensions are in inches / mm

Packaging 16 per tray