Power Inductor - GA3252-AL

For National Semiconductor
LM3433 LED Driver

- High current surface mount toroidal power inductor
- Specified by National Semiconductor for 2 A to 14 A output applications

Core material
Ferrite
Terminations
RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

Weight
11.6 g

Ambient temperature
-40°C to +85°C with Irms current, +85°C to +125°C with derated current

Storage temperature
Component: -40°C to +85°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)

Mean Time Between Failures (MTBF)
26,315,789 hours

Packaging
200 per 13" reel Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 10.4 mm pocket depth

PCB washing
Only pure water or alcohol recommended

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<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±20% (µH)</th>
<th>DCR max (Ohms)</th>
<th>SRF typ (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA3252-AL</td>
<td></td>
<td></td>
<td></td>
<td>10% drop</td>
<td>20% drop</td>
</tr>
<tr>
<td></td>
<td>12.0</td>
<td>0.017</td>
<td>20</td>
<td>6.5</td>
<td>8.0</td>
</tr>
</tbody>
</table>

1. When ordering, specify termination and packaging codes:
   - L = RoHS compliant tin-silver over copper.
   - T = RoHS tin-silver-copper (95.5/4/0.5) or non-RoHS tin-lead (63/37).
   - D = 13" machine-ready reel EIA-481 embossed plastic tape (200 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 tested at 100 kHz, 0.1 Vrms on Agilent/HP 4192A.
3. DCR measured on a Keithley 580 micro-ohmmeter or equivalent.
4. SRF measured on an Agilent/HP 8753ES network analyzer.
5. DC current at which the inductance drops the specified amount from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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Termination: L = RoHS compliant tin-silver over copper.
Special order:
T = RoHS tin-silver-copper (95.5/4/0.5) or non-RoHS tin-lead (63/37).

Packaging: D = 13" machine-ready reel EIA-481 embossed plastic tape (200 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.

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Dimensions are in inches

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Recommended Land Pattern
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L vs Current

L vs Frequency

Irms Derating

Percent of rated Irms vs Ambient temperature (°C)