SMT Power Inductors - DO3316H Series

- Soldered self-leaded construction for excellent solderability.
- Very low DCR values and excellent current handling

Designer’s Kit C326 contains 3 of each part
Core material: Ferrite
Core and winding loss: See www.coilcraft.com/coreloss
Terminations: RoHS compliant tin-silver-copper over copper. Other terminations available at additional cost.
Weight: 0.95 – 1.25 g
Ambient temperature: –40°C to +85°C with 1rms current
Maximum part temperature: +125°C (ambient + temp rise). Derating.
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)
Failures in Time (FIT) / Mean Time Between Failures (MTBF):
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging:
- 750 per 13” reel Plastic tape: 24 mm wide, 0.35 mm thick, 12 mm pocket spacing, 6.4 mm pocket depth

1. When ordering, specify tolerance, termination and packaging codes:

<table>
<thead>
<tr>
<th>Part number</th>
<th>L² (µH)</th>
<th>% tol³</th>
<th>DCR max (Ohms)</th>
<th>SRF typ (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO3316H-121ML</td>
<td>0.12</td>
<td>20</td>
<td>0.0015</td>
<td>200</td>
<td>28</td>
<td>17</td>
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<tr>
<td>DO3316H-331ML</td>
<td>0.33</td>
<td>20</td>
<td>0.002</td>
<td>200</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>DO3316H-681ML</td>
<td>0.68</td>
<td>20</td>
<td>0.005</td>
<td>200</td>
<td>13</td>
<td>12</td>
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<tr>
<td>DO3316H-102ML</td>
<td>1.0</td>
<td>20</td>
<td>0.006</td>
<td>100</td>
<td>11</td>
<td>10</td>
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<tr>
<td>DO3316H-152ML</td>
<td>1.5</td>
<td>20</td>
<td>0.008</td>
<td>90</td>
<td>9.0</td>
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<tr>
<td>DO3316H-222_L</td>
<td>2.2</td>
<td>20,10</td>
<td>0.011</td>
<td>80</td>
<td>7.8</td>
<td>7.4</td>
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<tr>
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<td>20,10</td>
<td>0.012</td>
<td>65</td>
<td>7.0</td>
<td>6.6</td>
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<td>DO3316H-332_L</td>
<td>3.3</td>
<td>20,10</td>
<td>0.014</td>
<td>60</td>
<td>6.4</td>
<td>5.9</td>
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<td>0.015</td>
<td>50</td>
<td>5.9</td>
<td>5.3</td>
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<tr>
<td>DO3316H-472_L</td>
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<td>0.018</td>
<td>45</td>
<td>5.4</td>
<td>4.8</td>
</tr>
</tbody>
</table>

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. Tolerances in bold are stocked for immediate shipment.
4. SRF measured using Agilent/HP 8753D network analyzer.
5. DC current at 25°C that causes an inductance drop of 10% (typ) from its value without current. Click for temperature derating information.
6. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
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Typical L vs Frequency

Typical L vs Current

Recommended Land Pattern

Dimensions are in inches / mm