# Shielded Power Inductors – RFS1317

- Low cost, high current power inductors
- 27 µH to 10 mH inductance range

## Core material
Ferrite

## Terminations
Tin-silver over tin over copper over steel. Other terminations available at additional cost.

## Weight
9.1 – 9.4 g

## Ambient temperature
-40°C to +85°C with Irms current

## Maximum part temperature
+125°C (ambient + temp rise)

## Storage temperature
- Component: –40°C to +125°C.
- Tray packaging: –40°C to +80°C

## 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
144 parts per tray

## PCB washing
Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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<table>
<thead>
<tr>
<th>Part</th>
<th>Inductance (µH)</th>
<th>DCR (Ohms)</th>
<th>SRF (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±10%</td>
<td>max</td>
<td>typ</td>
<td>10% drop</td>
<td>20% drop</td>
</tr>
<tr>
<td>RFS1317-273KL</td>
<td>27 µH</td>
<td>0.033</td>
<td>20.95</td>
<td>5.2</td>
<td>6.4</td>
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<tr>
<td>RFS1317-333KL</td>
<td>33 µH</td>
<td>0.050</td>
<td>18.18</td>
<td>4.5</td>
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<td>RFS1317-473KL</td>
<td>47 µH</td>
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<td>12.93</td>
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<td>RFS1317-683KL</td>
<td>68 µH</td>
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<td>3.1</td>
<td>3.8</td>
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<td>RFS1317-823KL</td>
<td>82 µH</td>
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<td>RFS1317-104KL</td>
<td>100 µH</td>
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<td>RFS1317-154KL</td>
<td>150 µH</td>
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<td>RFS1317-184KL</td>
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<td>RFS1317-224KL</td>
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<td>330 µH</td>
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<td>1.55</td>
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<td>RFS1317-394KL</td>
<td>390 µH</td>
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<td>RFS1317-474KL</td>
<td>470 µH</td>
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<td>RFS1317-564KL</td>
<td>560 µH</td>
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<td>RFS1317-684KL</td>
<td>680 µH</td>
<td>0.617</td>
<td>0.955</td>
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<td>RFS1317-824KL</td>
<td>820 µH</td>
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<td>0.827</td>
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<td>RFS1317-105KL</td>
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<td>RFS1317-125KL</td>
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<td>RFS1317-155KL</td>
<td>1.5 mH</td>
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<td>RFS1317-185KL</td>
<td>1.8 mH</td>
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<td>0.566</td>
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<td>RFS1317-225KL</td>
<td>2.2 mH</td>
<td>2.01</td>
<td>0.496</td>
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<td>RFS1317-275KL</td>
<td>2.7 mH</td>
<td>2.22</td>
<td>0.439</td>
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<tr>
<td>RFS1317-335KL</td>
<td>3.3 mH</td>
<td>2.38</td>
<td>0.435</td>
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<tr>
<td>RFS1317-395KL</td>
<td>3.9 mH</td>
<td>3.38</td>
<td>0.373</td>
<td>0.41</td>
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<tr>
<td>RFS1317-475KL</td>
<td>4.7 mH</td>
<td>3.68</td>
<td>0.352</td>
<td>0.38</td>
<td>0.48</td>
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<td>RFS1317-565KL</td>
<td>5.6 mH</td>
<td>4.03</td>
<td>0.320</td>
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<td>RFS1317-685KL</td>
<td>6.8 mH</td>
<td>5.43</td>
<td>0.288</td>
<td>0.32</td>
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<tr>
<td>RFS1317-825KL</td>
<td>8.2 mH</td>
<td>5.88</td>
<td>0.274</td>
<td>0.31</td>
<td>0.39</td>
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<tr>
<td>RFS1317-106KL</td>
<td>10 mH</td>
<td>6.55</td>
<td>0.254</td>
<td>0.28</td>
<td>0.33</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination code: RFS1317-106L
2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
3. SRF measured using Agilent/HP 4191A or equivalent.
4. DC current that causes the specified inductance drop from its value without current.
5. Current that causes the specified temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.
Shielded Power Inductors – RFS1317 Series

Typical L vs Current

Typical L vs Frequency

Dimensions are in inches mm

Recommended PC Board Layout

Dot indicates pin 1

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