# Shielded Power Inductors – RFS1113

- Low cost, high current power inductors
- 6.8 µH to 2.7 mH inductance range

**Core material** Ferrite  
**Terminations** Tin-silver (96.5/3.5) over tin over copper over steel. Other terminations available at additional cost.  
**Weight** 4.1 – 4.7 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** 169 parts per tray  
**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

### Inductance

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (µH)</th>
<th>DCR (Ohms) typ</th>
<th>max</th>
<th>SRF typ (MHz)</th>
<th>Isat (A) typ</th>
<th>10% drop</th>
<th>20% drop</th>
<th>30% drop</th>
<th>20°C rise</th>
<th>40°C rise</th>
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</thead>
<tbody>
<tr>
<td>RFS1113-682ME</td>
<td>6.8</td>
<td>0.014</td>
<td>0.016</td>
<td>45.0</td>
<td>6.6</td>
<td>8.0</td>
<td>9.1</td>
<td>5.65</td>
<td>7.80</td>
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<td>RFS1113-103ME</td>
<td>10</td>
<td>0.017</td>
<td>0.020</td>
<td>30.2</td>
<td>5.4</td>
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<td>0.020</td>
<td>0.023</td>
<td>19.8</td>
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<td>4.80</td>
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<td>RFS1113-223ME</td>
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<td>0.023</td>
<td>0.026</td>
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<td>3.5</td>
<td>4.2</td>
<td>4.8</td>
<td>4.40</td>
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<td>0.089</td>
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<td>0.40</td>
<td>0.45</td>
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<td>0.40</td>
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</table>

1. When ordering, please specify termination code:  
   **RFS1113-105ME**
   **Termination:** E = Tin-silver over tin over copper over steel.  
   **Special order:** T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).  
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 – RFS1113 Series

Typical L vs Current

Typical L vs Frequency

Dimensions are in inches

Recommended PC Board Layout

Dot indicates pin 1

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Specification subject to change without notice
Please check web site for latest information

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