Shielded Power Inductors – MSS7341

- 6.6 x 6.6 mm footprint; 4.1 mm high shielded inductors
- Low DCR and excellent current handling

**Designer’s Kit C385** contains 3 each of all values.

**Core material**: Ferrite

**Core and winding loss**: See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Terminations**: RoHS compliant matte tin over nickel over phos bronze (current production) or gold over nickel over phos bronze (prior production). Other terminations available at additional cost.

**Weight**: 0.61 – 0.67 g

**Ambient temperature**: -40°C to +85°C with (40°C rise) Irms 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 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)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**:
- 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
- Packaging: 300/7 reel; 1200/13” reel; Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 4.5 mm pocket depth

**PCB washing**: Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](http://Doc787_PCB_Washing.pdf)

### Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (µH)</th>
<th>Percent tolerance</th>
<th>DCR (Ohms)</th>
<th>SRF typ</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSS7341-322L</td>
<td>3.3</td>
<td>30.20</td>
<td>0.014 0.018</td>
<td>85</td>
<td>2.74 3.28 3.72</td>
<td>3.95 5.00</td>
</tr>
<tr>
<td>MSS7341-502L</td>
<td>5.0</td>
<td>30.20</td>
<td>0.018 0.023</td>
<td>49</td>
<td>2.30 2.82 3.16</td>
<td>3.40 4.70</td>
</tr>
<tr>
<td>MSS7341-622L</td>
<td>6.2</td>
<td>30.20</td>
<td>0.024 0.027</td>
<td>42</td>
<td>2.18 2.66 2.98</td>
<td>3.05 4.30</td>
</tr>
<tr>
<td>MSS7341-742L</td>
<td>7.4</td>
<td>30.20</td>
<td>0.027 0.031</td>
<td>35</td>
<td>1.92 2.32 2.56</td>
<td>2.80 4.10</td>
</tr>
<tr>
<td>MSS7341-872L</td>
<td>8.7</td>
<td>30.20</td>
<td>0.029 0.034</td>
<td>33</td>
<td>1.78 2.12 2.36</td>
<td>2.80 3.90</td>
</tr>
</tbody>
</table>

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

- **Tolerance**: M = 20%, N = 30% (Table shows stock tolerances in bold.)
- **Termination**: L = RoHS compliant matte tin over nickel over phos bronze (95.5/4/0.5) over gold over nickel over phos bronze or S = non-RoHS tin-lead (63/37) over gold over nickel over phos bronze.
- **Packaging**: D = 13” machine-ready reel. EIA-481 embossed plastic tape (1200 parts per full reel).
- **C** = 7” machine-ready reel. EIA-481 embossed plastic tape. Special order (300 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4283B LCR meter.

3. Tolerances in bold are stocked for immediate shipment.

4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

5. DC current at 25°C that causes the specified inductance drop from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

8. Core and winding loss information.

9. Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

10. Failures in Time (FIT) / Mean Time Between Failures (MTBF)

11. Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](http://Doc787_PCB_Washing.pdf)

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### Documents

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Typical L vs Current

Typical L vs Frequency

Typical Temperature Rise vs Current

Parts manufactured prior to Sept. 2007 were marked with only the dash number.

*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.02 in / 0.51 mm.

Dimensions are in inches / mm

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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice.

Please check web site for latest information.