### Shielded Power Inductors – MSS1246

- 12 x 12 mm footprint; 4.6 mm high shielded inductors
- Very low DCR and excellent current handling

**Designers’ Kit C410** contains 3 each of all values.

**Core material** Ferrite

**Core and winding loss** See www.coilcraft.com/coreloss

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 2.3 g – 2.5 g

**Ambient temperature** -40°C to +85°C with (40°C rise) I rms 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**
- 200/7” reel: 800/13” reel: Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 4.7 mm pocket depth

**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 number</th>
<th>Inductance (µH) typ</th>
<th>DCR typ (mOhms)</th>
<th>SRF typ (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
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<td>MSS1246-102ML</td>
<td>1.0 ±20%</td>
<td>5.84</td>
<td>6.60</td>
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<tr>
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<td>6.52</td>
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<tr>
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<tr>
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<td>2323</td>
<td>2.4</td>
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</table>

1. Please specify termination and packaging codes:

**MSS1246-105KLC**

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

- **Packaging:**
  - C=7” machine-ready reel. EIA-481 embossed plastic tape (200 parts per full reel).
  - D=Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
  - E=13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (800 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 4263B LCR meter or equivalent.

3. DCR measured on a micro-ohmmeter and a Coilcraft CFR858 test fixture.

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. Click for temperature derating information.

6. Current that causes the specified 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.
Shielded Power Inductors – MSS1246

Typical L vs Current

![Current vs Inductance Graph]

- Inductance (µH) vs Current (A)
- Parts manufactured prior to August 2011 may have a different part marking.

**Recommended Land Pattern**

- Dimensions are in inches

**For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.012 inch (0.3 mm).**

**Dimensions are in**

**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.

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1 10 100 1000 10000
1 10 100 1000 10000

- Inductance (µH)
- Frequency (MHz)

- Inductance (µH)
- Frequency (MHz)

10 100 1000 10000
0.1 1 10 100
0.01 0.1 1 10

- Inductance (µH)
- Frequency (MHz)

- Inductance (µH)
- Frequency (MHz)