



# Shielded Power Inductors—MSS1260



- 12.3 × 12.3 mm footprint; 6 mm high shielded inductors
- Low DCR and excellent current handling

**Designer's Kit C360** 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. Other terminations available at additional cost.

**Weight:** 2.8– 3.3 g

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +125°C with derated current

**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** 500/13" reel; Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 6.3 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>(µH) | DCR <sup>3</sup><br>(mOhms) |      | SRF<br>typ <sup>4</sup><br>(MHz) | Isat (A) <sup>5</sup> |             |             | Irms (A) <sup>6</sup> |              |
|--------------------------|---------------------------------|-----------------------------|------|----------------------------------|-----------------------|-------------|-------------|-----------------------|--------------|
|                          |                                 | typ                         | max  |                                  | 10%<br>drop           | 20%<br>drop | 30%<br>drop | 20°C<br>rise          | 40°C<br>rise |
| MSS1260-102NL_           | 1.0±30%                         | 5.8                         | 6.5  | 100                              | 19.1                  | 21.4        | 22.7        | 6.00                  | 8.00         |
| MSS1260-152NL_           | 1.5±30%                         | 8.8                         | 9.8  | 80.0                             | 15.0                  | 16.6        | 17.6        | 6.00                  | 7.50         |
| MSS1260-222NL_           | 2.2±30%                         | 11.5                        | 12.8 | 55.0                             | 11.7                  | 13.0        | 13.9        | 5.50                  | 7.00         |
| MSS1260-332NL_           | 3.3±30%                         | 12.6                        | 14.0 | 42.0                             | 10.4                  | 11.7        | 12.5        | 5.00                  | 7.00         |
| MSS1260-472ML_           | 4.7±20%                         | 13.9                        | 15.5 | 33.0                             | 9.22                  | 10.1        | 10.8        | 4.50                  | 7.00         |
| MSS1260-562ML_           | 5.6±20%                         | 14.9                        | 16.6 | 30.0                             | 7.86                  | 9.02        | 9.74        | 4.00                  | 6.40         |
| MSS1260-682ML_           | 6.8±20%                         | 16.6                        | 18.5 | 27.0                             | 7.40                  | 8.26        | 8.80        | 3.80                  | 5.90         |
| MSS1260-822ML_           | 8.2±20%                         | 17.0                        | 20.0 | 26.0                             | 7.10                  | 7.96        | 8.50        | 3.40                  | 4.80         |
| MSS1260-103ML_           | 10±20%                          | 21.5                        | 23.9 | 22.0                             | 6.18                  | 6.92        | 7.40        | 3.00                  | 4.00         |
| MSS1260-123ML_           | 12±20%                          | 24.5                        | 27.3 | 20.0                             | 5.18                  | 5.94        | 6.42        | 2.80                  | 3.70         |
| MSS1260-153ML_           | 15±20%                          | 27.0                        | 32.0 | 18.0                             | 4.80                  | 5.40        | 5.78        | 2.60                  | 3.50         |
| MSS1260-183ML_           | 18±20%                          | 30.0                        | 33.0 | 16.0                             | 4.58                  | 5.22        | 5.62        | 2.50                  | 3.30         |
| MSS1260-223ML_           | 22±20%                          | 36.6                        | 40.7 | 15.0                             | 4.06                  | 4.64        | 4.96        | 2.30                  | 3.10         |
| MSS1260-273ML_           | 27±20%                          | 48.0                        | 52.0 | 13.0                             | 3.52                  | 3.96        | 4.28        | 2.10                  | 2.90         |
| MSS1260-333ML_           | 33±20%                          | 54.0                        | 57.0 | 12.4                             | 3.22                  | 3.74        | 4.02        | 2.00                  | 2.70         |
| MSS1260-393ML_           | 39±20%                          | 58.0                        | 64.5 | 12.0                             | 3.08                  | 3.56        | 3.80        | 1.90                  | 2.60         |
| MSS1260-473ML_           | 47±20%                          | 75.0                        | 82.0 | 11.6                             | 2.66                  | 3.04        | 3.30        | 1.85                  | 2.50         |
| MSS1260-563ML_           | 56±20%                          | 85.0                        | 89.0 | 10.5                             | 2.54                  | 2.96        | 3.14        | 1.75                  | 2.40         |
| MSS1260-683ML_           | 68±20%                          | 94.5                        | 105  | 10.0                             | 2.40                  | 2.70        | 2.94        | 1.70                  | 2.30         |
| MSS1260-823ML_           | 82±20%                          | 120                         | 129  | 8.6                              | 2.16                  | 2.46        | 2.64        | 1.60                  | 2.20         |
| MSS1260-104ML_           | 100±20%                         | 139                         | 146  | 7.8                              | 1.88                  | 2.16        | 2.32        | 1.50                  | 2.10         |
| MSS1260-124KL_           | 120±10%                         | 193                         | 195  | 6.8                              | 1.70                  | 1.92        | 2.10        | 1.38                  | 1.85         |
| MSS1260-154KL_           | 150±10%                         | 209                         | 216  | 6.4                              | 1.58                  | 1.80        | 1.98        | 1.20                  | 1.66         |
| MSS1260-184KL_           | 180±10%                         | 234                         | 246  | 6.1                              | 1.40                  | 1.60        | 1.72        | 1.14                  | 1.58         |
| MSS1260-224KL_           | 220±10%                         | 306                         | 335  | 5.5                              | 1.28                  | 1.44        | 1.56        | 1.00                  | 1.42         |
| MSS1260-274KL_           | 270±10%                         | 349                         | 355  | 4.3                              | 1.10                  | 1.26        | 1.38        | 0.90                  | 1.45         |
| MSS1260-334KL_           | 330±10%                         | 482                         | 494  | 4.0                              | 1.00                  | 1.14        | 1.24        | 0.84                  | 1.16         |
| MSS1260-394KL_           | 390±10%                         | 515                         | 533  | 3.6                              | 0.93                  | 1.06        | 1.15        | 0.78                  | 1.08         |
| MSS1260-474KL_           | 470±10%                         | 705                         | 733  | 3.0                              | 0.87                  | 0.99        | 1.06        | 0.70                  | 0.96         |
| MSS1260-564KL_           | 560±10%                         | 776                         | 800  | 2.8                              | 0.81                  | 0.92        | 1.00        | 0.64                  | 0.88         |
| MSS1260-684KL_           | 680±10%                         | 887                         | 910  | 2.6                              | 0.74                  | 0.85        | 0.92        | 0.58                  | 0.80         |
| MSS1260-824KL_           | 820±10%                         | 1130                        | 1152 | 2.5                              | 0.66                  | 0.76        | 0.81        | 0.53                  | 0.73         |
| MSS1260-105KL_           | 1000±10%                        | 1295                        | 1335 | 2.4                              | 0.60                  | 0.69        | 0.74        | 0.48                  | 0.68         |

1. Please specify **termination** and **packaging** codes:

**MSS1260-184KLD**

**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:** D=13" machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel).

B=Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
  3. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.
  4. SRF measured using Agilent/HP 4191A or equivalent.
  5. DC current at which the inductance drops the specified amount from its value without current.
  6. Current that causes the specified temperature rise from 25°C ambient.
  7. Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**SPICE models** ON OUR WEB SITE



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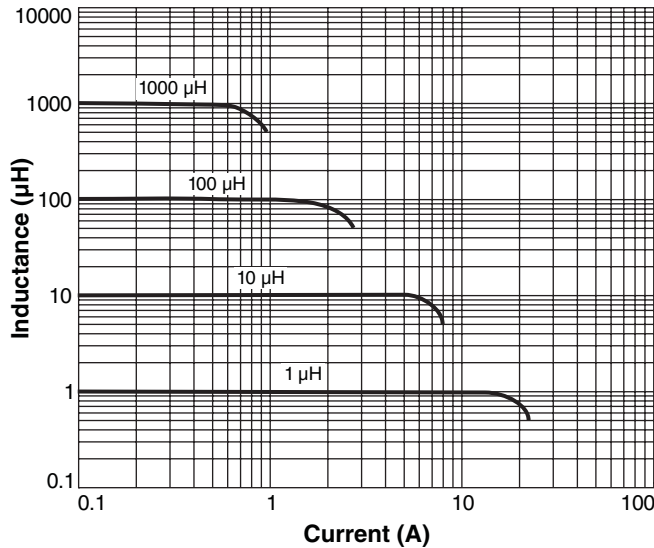
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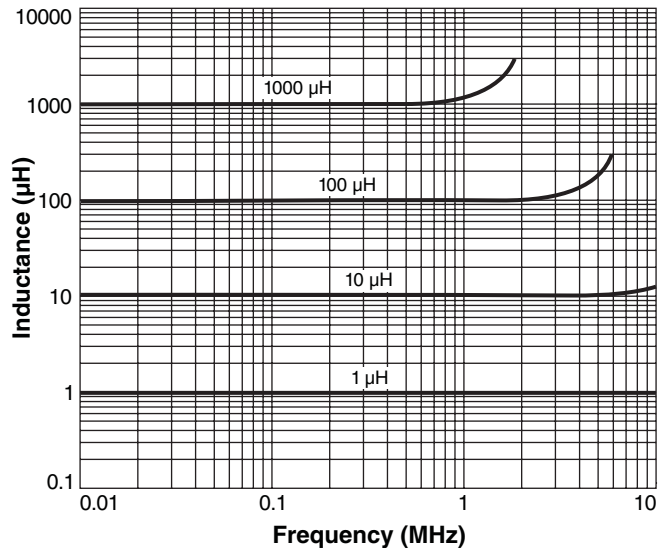


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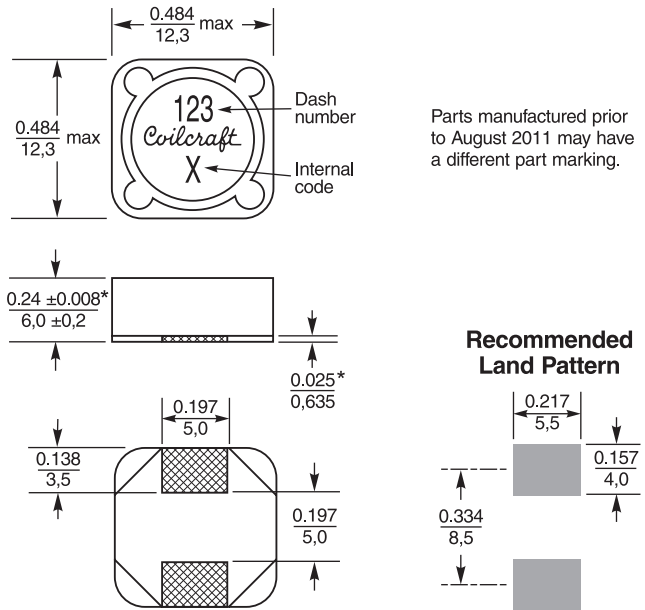
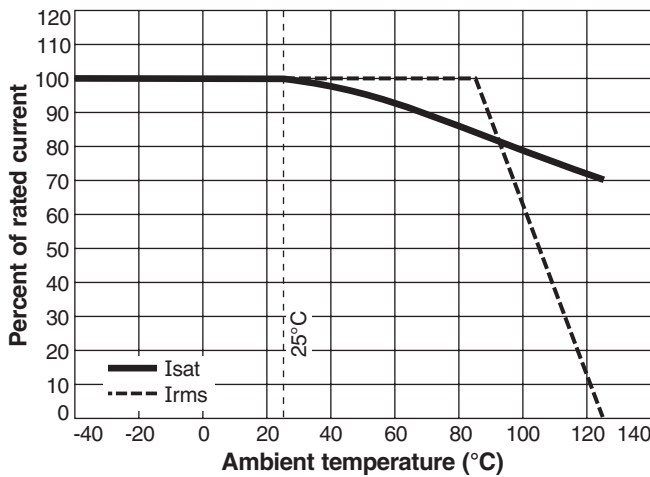
## Typical L vs Current



## Typical L vs Frequency



## Typical Current Derating



\* 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  $\frac{\text{inches}}{\text{mm}}$



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