Shielded Power Inductors—MSS1210H

- 12.3 x 12.3 mm footprint; 10 mm high shielded inductors
- 27 inductance values from 10 µH to 1 mH
- Low DCR and excellent current handling
- AEC-Q200 Grade 1 (–40°C to +125°C)
- Designer’s Kit C498 contains 3 of each part

Core material: Ferrite
Core and winding loss: See www.coilcraft.com/coreloss
Environment: RoHS compliant, halogen free
Terminations: RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.
Weight: 5.1 – 6.2 g
Operating voltage: 400 V max
Ambient temperature: –40°C to +125°C with (40°C rise) Irms current.
Maximum part temperature: +165°C (ambient + temp rise). Derating.
Storage temperature: Component: –55°C to +165°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)
PCB washing: Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf

<table>
<thead>
<tr>
<th>Part number</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>MSS1210H-106KED</td>
<td>10±20%</td>
<td>0.010</td>
<td>0.013</td>
<td>18.00</td>
<td>7.50</td>
</tr>
<tr>
<td>MSS1210H-153KED</td>
<td>15±20%</td>
<td>0.016</td>
<td>0.018</td>
<td>13.00</td>
<td>6.00</td>
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<tr>
<td>MSS1210H-223KED</td>
<td>22±20%</td>
<td>0.021</td>
<td>0.027</td>
<td>11.00</td>
<td>5.10</td>
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<tr>
<td>MSS1210H-333KED</td>
<td>33±20%</td>
<td>0.031</td>
<td>0.036</td>
<td>8.00</td>
<td>4.10</td>
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<tr>
<td>MSS1210H-473KED</td>
<td>47±20%</td>
<td>0.037</td>
<td>0.045</td>
<td>6.50</td>
<td>3.50</td>
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<tr>
<td>MSS1210H-683KED</td>
<td>68±20%</td>
<td>0.056</td>
<td>0.065</td>
<td>5.30</td>
<td>2.90</td>
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<tr>
<td>MSS1210H-104KED</td>
<td>100±10%</td>
<td>0.078</td>
<td>0.096</td>
<td>4.30</td>
<td>2.40</td>
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<tr>
<td>MSS1210H-124KED</td>
<td>120±10%</td>
<td>0.088</td>
<td>0.110</td>
<td>4.00</td>
<td>2.20</td>
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<tr>
<td>MSS1210H-154KED</td>
<td>150±10%</td>
<td>0.100</td>
<td>0.123</td>
<td>3.80</td>
<td>1.90</td>
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<tr>
<td>MSS1210H-184KED</td>
<td>180±10%</td>
<td>0.130</td>
<td>0.163</td>
<td>2.90</td>
<td>1.80</td>
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<tr>
<td>MSS1210H-224KED</td>
<td>220±10%</td>
<td>0.160</td>
<td>0.185</td>
<td>2.80</td>
<td>1.60</td>
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<td>MSS1210H-334KED</td>
<td>330±10%</td>
<td>0.230</td>
<td>0.280</td>
<td>2.30</td>
<td>1.30</td>
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<td>MSS1210H-474KED</td>
<td>470±10%</td>
<td>0.340</td>
<td>0.400</td>
<td>1.90</td>
<td>1.10</td>
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<tr>
<td>MSS1210H-684KED</td>
<td>680±10%</td>
<td>0.490</td>
<td>0.596</td>
<td>1.40</td>
<td>0.91</td>
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<tr>
<td>MSS1210H-105KED</td>
<td>1000±10%</td>
<td>0.630</td>
<td>0.768</td>
<td>1.30</td>
<td>0.75</td>
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</tbody>
</table>

1. Specify termination code:

- MSS1210H-106KED

Termination: E = RoHS compliant matte tin over nickel over phos bronze.
Special order: Q = RoHS tin-silver-copper (95.5/4/0.5) or P = non-RoHS tin-lead (63/37).
Packaging: D = 13” machine-ready reel. EIA-481 embossed plastic tape (300 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).

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 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. This information is for reference only and does not represent absolute maximum ratings.
7. Electrical specifications at 25°C. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
Shielded Power Inductors – MSS1210H

Typical L vs Current

![Graph showing typical inductance vs current for MSS1210H inductors.]

Typical L vs Frequency

![Graph showing typical inductance vs frequency for MSS1210H inductors.]

Dimensions are in **inches**

**XXX**

**Coilcraft**

**XXX Y**

Recommended Land Pattern

![Diagram of recommended land pattern.]

- **0.094 ±0.008**: 2.4 ±0.2
- **0.285 ±0.010**: 7.25 ±0.25
- **0.084 ±0.008**: 2.4 ±0.2
- **0.217**: 5.5
- **0.025**: 0.635
- **0.197 ±0.008**: 9.0 ±0.2

* 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).

Packaging 300/13” reel; Plastic tape: 24 mm wide, 0.5 mm thick, 20 mm pocket spacing, 10.3 mm pocket depth.

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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 website for latest information.