



Shielded Power Inductors – MSS5131H



- 5.1 × 5.1 mm footprint; 3.1 mm high shielded inductors
- Low DCR and excellent current handling
- AEC-Q200 Grade 3 (–40°C to +85°C)

Core material Ferrite

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

Environmental RoHS compliant, halogen free

Terminations RoHS compliant matte tin over nickel over phos bronze.

Weight 0.20 – 0.24 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

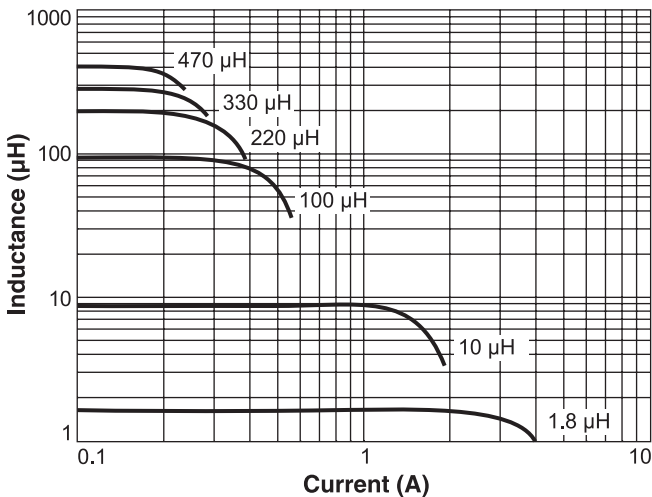
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

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

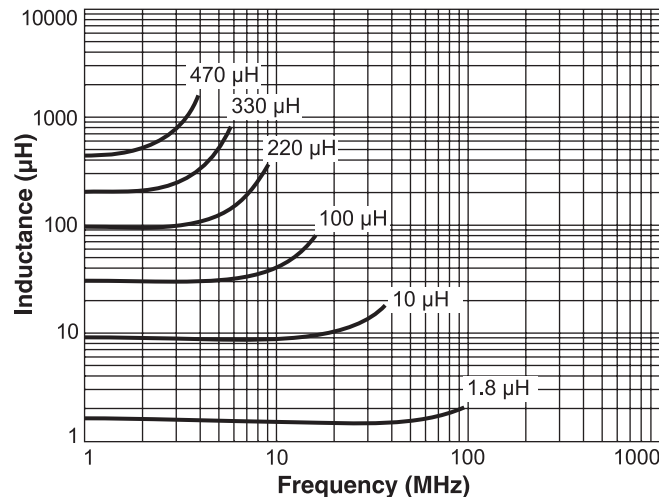
Packaging 600/7" reel, 2500/13" reel; Plastic tape: 12 mm wide, 0.35 mm thick, 8 mm pocket spacing, 3.25 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see [Doc787_PCB_Washing.pdf](#).

Typical L vs Current



Typical L vs Frequency





Shielded Power Inductors – MSS5131H

| Part number ¹ | Inductance ² ±20% (µH) | DCR (Ohms) | | SRF typ ³ (MHz) | Isat (A) ⁴ | | | Irms (A) ⁵ | |
|--------------------------|--------------------------------------|------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
| | | typ | max | | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| MSS5131H-182ME_ | 1.8 | 0.018 | 0.021 | 118 | 3.00 | 3.40 | 3.70 | 1.40 | 2.00 |
| MSS5131H-332ME_ | 3.3 | 0.029 | 0.033 | 80 | 2.20 | 2.55 | 2.80 | 1.30 | 1.80 |
| MSS5131H-472ME_ | 4.7 | 0.040 | 0.046 | 57 | 1.80 | 2.05 | 2.20 | 1.20 | 1.80 |
| MSS5131H-562ME_ | 5.6 | 0.045 | 0.052 | 51 | 1.70 | 1.95 | 2.15 | 1.10 | 1.75 |
| MSS5131H-622ME_ | 6.2 | 0.048 | 0.055 | 47 | 1.60 | 1.85 | 2.00 | 1.10 | 1.70 |
| MSS5131H-822ME_ | 8.2 | 0.070 | 0.081 | 47 | 1.40 | 1.60 | 1.75 | 1.10 | 1.70 |
| MSS5131H-103ME_ | 10 | 0.078 | 0.090 | 41 | 1.20 | 1.40 | 1.55 | 1.10 | 1.60 |
| MSS5131H-123ME_ | 12 | 0.098 | 0.113 | 39 | 1.10 | 1.30 | 1.40 | 1.10 | 1.50 |
| MSS5131H-153ME_ | 15 | 0.115 | 0.132 | 31 | 1.00 | 1.15 | 1.25 | 1.00 | 1.40 |
| MSS5131H-183ME_ | 18 | 0.145 | 0.167 | 27 | 0.95 | 1.05 | 1.15 | 0.9 | 1.20 |
| MSS5131H-223ME_ | 22 | 0.175 | 0.201 | 23 | 0.85 | 1.00 | 1.05 | 0.9 | 1.20 |
| MSS5131H-273ME_ | 27 | 0.185 | 0.213 | 21 | 0.75 | 0.85 | 0.92 | 0.9 | 1.20 |
| MSS5131H-333ME_ | 33 | 0.200 | 0.230 | 18 | 0.67 | 0.76 | 0.82 | 0.85 | 1.10 |
| MSS5131H-393ME_ | 39 | 0.275 | 0.316 | 17 | 0.63 | 0.72 | 0.78 | 0.80 | 1.00 |
| MSS5131H-473ME_ | 47 | 0.305 | 0.351 | 14 | 0.56 | 0.63 | 0.68 | 0.74 | 1.00 |
| MSS5131H-563ME_ | 56 | 0.340 | 0.391 | 14 | 0.54 | 0.61 | 0.66 | 0.68 | 0.94 |
| MSS5131H-683ME_ | 68 | 0.445 | 0.512 | 11 | 0.49 | 0.55 | 0.60 | 0.63 | 0.84 |
| MSS5131H-823ME_ | 82 | 0.485 | 0.558 | 10 | 0.44 | 0.50 | 0.54 | 0.58 | 0.80 |
| MSS5131H-104ME_ | 100 | 0.660 | 0.759 | 9.0 | 0.38 | 0.43 | 0.46 | 0.50 | 0.67 |
| MSS5131H-124ME_ | 120 | 0.720 | 0.828 | 8.6 | 0.34 | 0.39 | 0.42 | 0.47 | 0.64 |
| MSS5131H-154ME_ | 150 | 0.990 | 1.14 | 7.1 | 0.33 | 0.37 | 0.40 | 0.41 | 0.56 |
| MSS5131H-184ME_ | 180 | 1.09 | 1.25 | 6.6 | 0.31 | 0.35 | 0.37 | 0.38 | 0.53 |
| MSS5131H-224ME_ | 220 | 1.25 | 1.44 | 5.9 | 0.27 | 0.31 | 0.34 | 0.36 | 0.50 |
| MSS5131H-274ME_ | 270 | 1.70 | 1.96 | 5.0 | 0.24 | 0.28 | 0.30 | 0.31 | 0.42 |
| MSS5131H-334ME_ | 330 | 1.88 | 2.16 | 4.8 | 0.22 | 0.25 | 0.27 | 0.30 | 0.42 |
| MSS5131H-394ME_ | 390 | 2.10 | 2.42 | 4.4 | 0.20 | 0.23 | 0.25 | 0.28 | 0.37 |
| MSS5131H-474ME_ | 470 | 2.35 | 2.70 | 4.0 | 0.19 | 0.22 | 0.23 | 0.27 | 0.35 |

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

MSS5131H-474MEC

Termination: **E** = RoHS compliant matte tin over nickel over phos bronze.

Special order:

Q = RoHS tin-silver-copper (95.5/4/0.5) over gold over nickel over phos bronze or **P** = non-RoHS tin-lead (63/37) over gold over nickel over phos bronze.

Packaging: **C** = 7" machine-ready reel EIA-481 embossed plastic tape (600 per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel EIA-481 embossed plastic tape. Factory order only, not stocked (2500 per reel per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

3. SRF measured using Agilent/HP 4191A or equivalent.

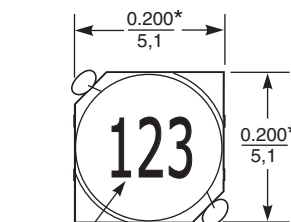
4. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)

5. 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.](#)

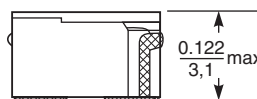
6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

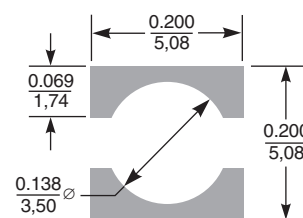
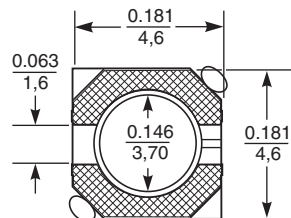
Dimensions



Dash number



*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.035 in / 0.9 mm.



Recommended Land Pattern

Dimensions are in $\frac{\text{inches}}{\text{mm}}$



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com

UK +44-1236-730595 sales@coilcraft-europe.com

Taiwan +886-2-2264 3646 sales@coilcraft.com.tw

China +86-21-6218 8074 sales@coilcraft.com.cn

Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 1569-2 Revised 07/27/21

© Coilcraft Inc. 2021

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.