



# Shielded Power Inductors – MSS5131



- 5.1 × 5.1 mm footprint; 3.1mm high shielded inductors
- Low DCR and excellent current handling

**Designer's Kit C362** contains 3 of each value

**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** 0.20 – 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 to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS5131-222ML_	2.2	0.020	65.0	1.76	2.08	2.30	2.00	3.30
MSS5131-332ML_	3.3	0.028	60.0	1.33	1.58	1.73	1.60	2.90
MSS5131-472ML_	4.7	0.038	48.0	1.08	1.32	1.42	1.40	2.50
MSS5131-562ML_	5.6	0.042	44.0	1.00	1.20	1.30	1.30	2.30
MSS5131-682ML_	6.8	0.050	42.0	0.98	1.14	1.24	1.20	2.16
MSS5131-822ML_	8.2	0.058	40.0	0.90	1.04	1.18	1.10	2.00
MSS5131-103ML_	10	0.070	38.0	0.85	0.98	1.13	1.00	1.90
MSS5131-123ML_	12	0.080	35.0	0.72	0.85	0.94	0.97	1.60
MSS5131-153ML_	15	0.100	32.0	0.67	0.78	0.86	0.94	1.50
MSS5131-183ML_	18	0.120	26.0	0.61	0.72	0.79	0.89	1.40
MSS5131-223ML_	22	0.145	22.0	0.54	0.64	0.70	0.87	1.30
MSS5131-273ML_	27	0.161	19.0	0.48	0.56	0.62	0.85	1.20
MSS5131-333ML_	33	0.200	18.0	0.44	0.52	0.58	0.80	1.10
MSS5131-393ML_	39	0.215	17.0	0.42	0.50	0.55	0.74	1.00
MSS5131-473ML_	47	0.270	16.0	0.38	0.46	0.51	0.71	0.95
MSS5131-563ML_	56	0.280	15.0	0.34	0.42	0.47	0.70	0.90
MSS5131-683ML_	68	0.368	12.5	0.31	0.38	0.42	0.66	0.85
MSS5131-823ML_	82	0.420	12.0	0.27	0.32	0.35	0.62	0.80
MSS5131-104ML_	100	0.580	11.5	0.26	0.30	0.33	0.55	0.69
MSS5131-124ML_	120	0.610	11.0	0.23	0.27	0.30	0.51	0.62
MSS5131-154ML_	150	0.820	10.0	0.21	0.26	0.28	0.47	0.58
MSS5131-184ML_	180	1.00	9.0	0.19	0.23	0.25	0.43	0.54
MSS5131-224ML_	220	1.10	8.0	0.18	0.21	0.23	0.39	0.50
MSS5131-274ML_	270	1.43	7.5	0.15	0.18	0.20	0.35	0.45
MSS5131-334ML_	330	1.58	6.8	0.13	0.17	0.19	0.32	0.42
MSS5131-394ML_	390	1.80	5.4	0.12	0.15	0.16	0.30	0.38

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

MSS5131-394MLC

**Termination:** L = RoHS compliant matte tin over nickel over phos bronze (current production) or gold over nickel over phos bronze (prior production).

**Special order:**

**T** = RoHS tin-silver-copper (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:** 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).

**B** = Less than full reel Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

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.

**SPICE models**  
ON OUR WEB SITE



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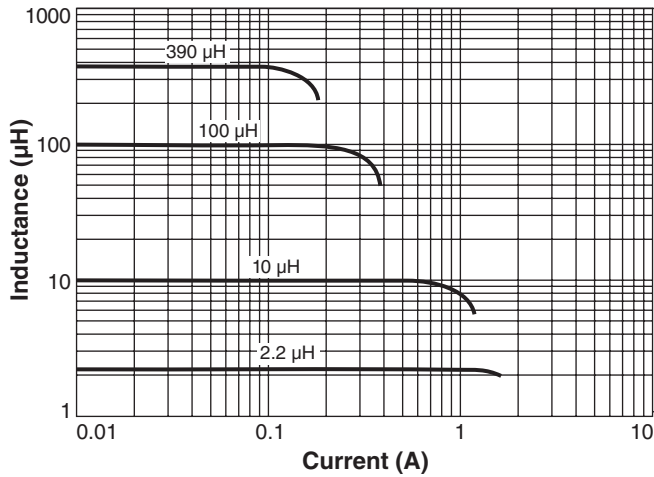
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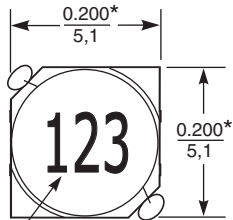
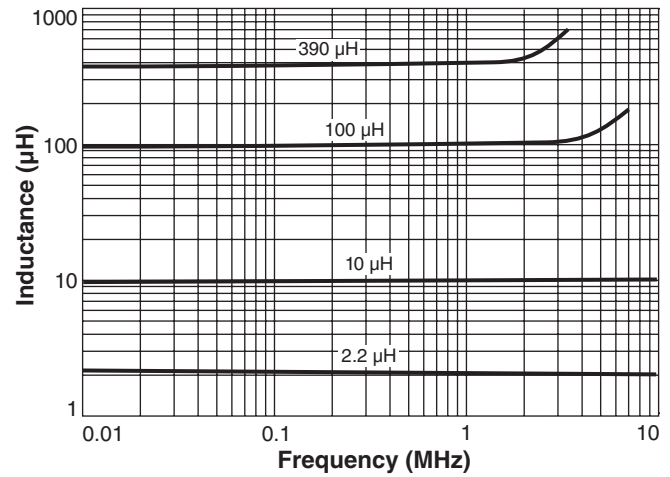


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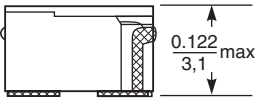
## Typical L vs Current



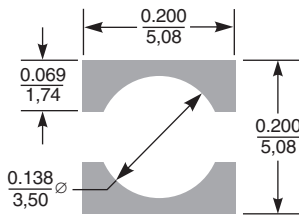
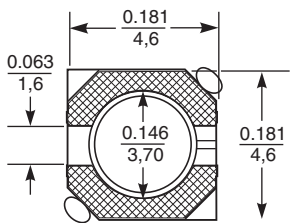
## Typical L vs Frequency



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 inches / mm



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