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
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 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 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.

Part number[1]	Inductance[2] ±20% (µH)	DCR max (Ohms)	SRF typ[3] (MHz)	Isat (A)[4] 10% drop	20% drop	30% drop	Irms (A)[5] 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).
B = **Less than full reel** In tape, but not machine-ready. To have a leader and trailer added ($25 charge), use code letter C instead.
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 which the inductance drops the specified amount from its value without current.
5. Current that causes the specified temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.

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

SPICE models
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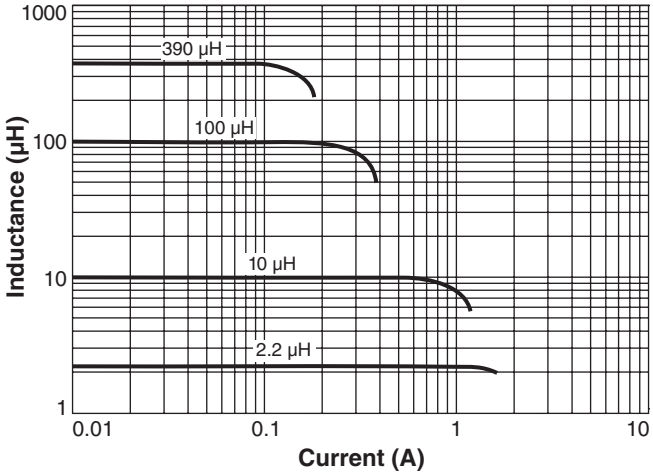
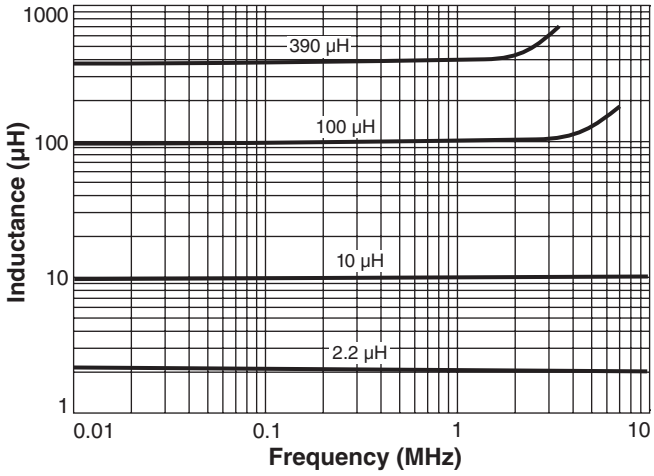
Shielded Power Inductors – MSS5131

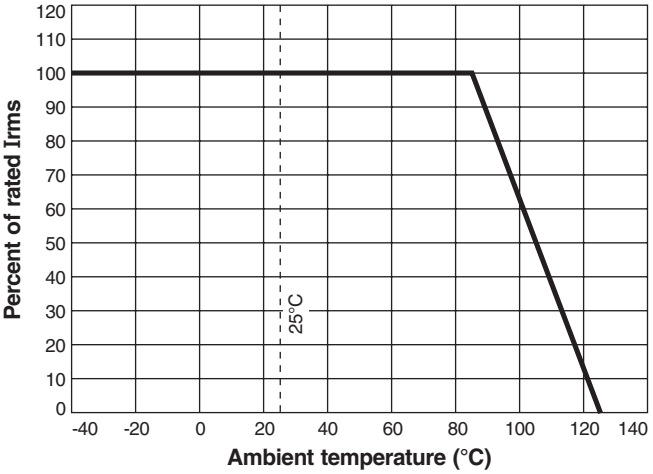
Typical L vs Current

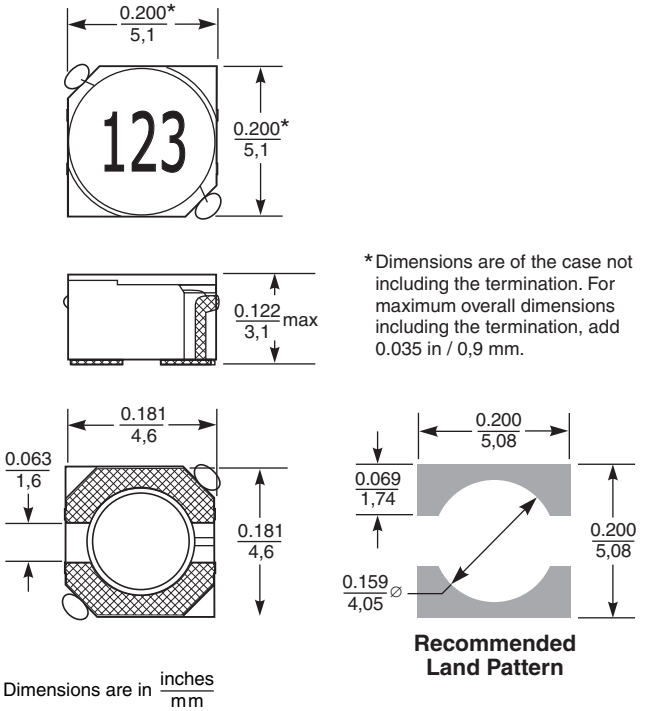


Typical L vs Frequency



Irms Derating





*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.035 in / 0,9 mm.

Dimensions are in inches / mm

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