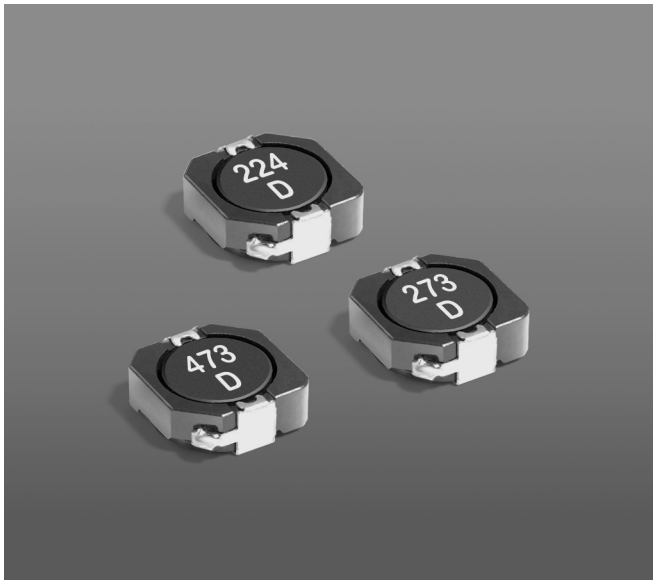
Shielded Power Inductors – MSS1038



- 10.0 × 10.2 mm footprint; 3.8 mm high shielded inductors
- Very low DCR and excellent current handling

Designer's Kit C391 contains 3 each of all values.
Core material Ferrite
Core and winding loss See www.coilcraft.com/coreloss
Terminations RoHS compliant matte tin over nickel over copper. Other terminations available at additional cost.
Weight 1.5 g
Operating voltage 400 V max
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 250/7″ reel; 1000/13″ reel; Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 4.3 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Part number[1]	Inductance[2] (µH)	DCR max (mΩ)	SRF typ[3] (MHz)	Isat (A)[4] 10% drop	20% drop	30% drop	Irms (A)[5] 20°C rise	40°C rise
MSS1038-102NL_	1.0 ±30%	6.0	138	9.00	11.16	12.10	7.30	10.00
MSS1038-152NL_	1.5 ±30%	8.1	81	7.40	9.48	11.06	5.60	7.85
MSS1038-252NL_	2.5 ±30%	10	61	5.70	7.62	9.26	4.65	6.65
MSS1038-382NL_	3.8 ±30%	13	45	4.94	6.50	7.64	4.25	6.05
MSS1038-522NL_	5.2 ±30%	22	37	3.96	5.28	6.14	3.60	5.10
MSS1038-702NL_	7.0 ±30%	27	33	3.62	4.74	5.60	3.10	4.35
MSS1038-103NL_	10 ±30%	35	29	3.04	3.90	4.52	2.90	4.05
MSS1038-123ML_	12 ±20%	41	25	2.72	3.48	4.04	2.85	4.00
MSS1038-153ML_	15 ±20%	50	21	2.84	3.44	3.86	2.70	3.80
MSS1038-183ML_	18 ±20%	65	18	2.44	3.10	3.52	2.25	3.35
MSS1038-223ML_	22 ±20%	73	15	2.34	2.94	3.30	1.90	2.85
MSS1038-273ML_	27 ±20%	89	15	1.98	2.48	2.84	1.65	2.35
MSS1038-333ML_	33 ±20%	93	13	1.84	2.34	2.62	1.60	2.30
MSS1038-393ML_	39 ±20%	112	12	1.60	2.04	2.34	1.55	2.25
MSS1038-473ML_	47 ±20%	128	11	1.60	1.98	2.22	1.45	2.20
MSS1038-563ML_	56 ±20%	180	11	1.48	1.84	2.04	1.40	1.85
MSS1038-683ML_	68 ±20%	213	10	1.32	1.62	1.82	1.15	1.75
MSS1038-823ML_	82 ±20%	261	8	1.12	1.42	1.60	1.09	1.50
MSS1038-104ML_	100 ±20%	304	6	1.02	1.30	1.46	1.05	1.45
MSS1038-124KL_	120 ±10%	380	6	0.95	1.18	1.34	0.85	1.25
MSS1038-154KL_	150 ±10%	506	6	0.89	1.10	1.22	0.80	1.20
MSS1038-184KL_	180 ±10%	582	5	0.89	1.02	1.16	0.71	0.98
MSS1038-224KL_	220 ±10%	756	5	0.72	0.88	0.99	0.70	0.97
MSS1038-274KL_	270 ±10%	926	4	0.66	0.81	0.91	0.65	0.86
MSS1038-334KL_	330 ±10%	1090	4	0.59	0.73	0.82	0.50	0.69
MSS1038-394KL_	390 ±10%	1141	4	0.51	0.65	0.74	0.49	0.65
MSS1038-474KL_	470 ±10%	1243	3	0.50	0.62	0.70	0.45	0.63
MSS1038-564KL_	560 ±10%	1696	3	0.43	0.53	0.56	0.43	0.59
MSS1038-684KL_	680 ±10%	1926	3	0.38	0.48	0.52	0.36	0.50
MSS1038-824KL_	820 ±10%	2596	3	0.37	0.46	0.49	0.34	0.47
MSS1038-105KL_	1000 ±10%	2853	3	0.35	0.43	0.46	0.33	0.45

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

MSS1038-105KLC

Termination: L = RoHS compliant matte tin over nickel over copper.
Special order:
T = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

Packaging: C = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
B = 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 C.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1000 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. SRF measured using an Agilent/HP 8753D or equivalent.
5. 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.

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Specification subject to change without notice
Please check web site for latest information

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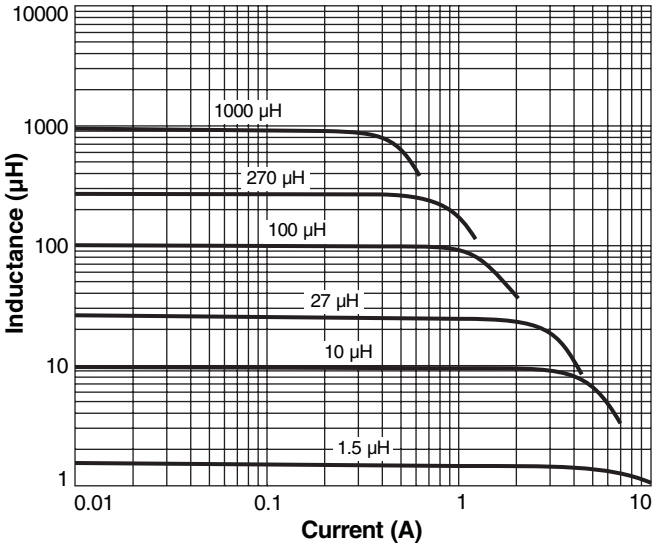
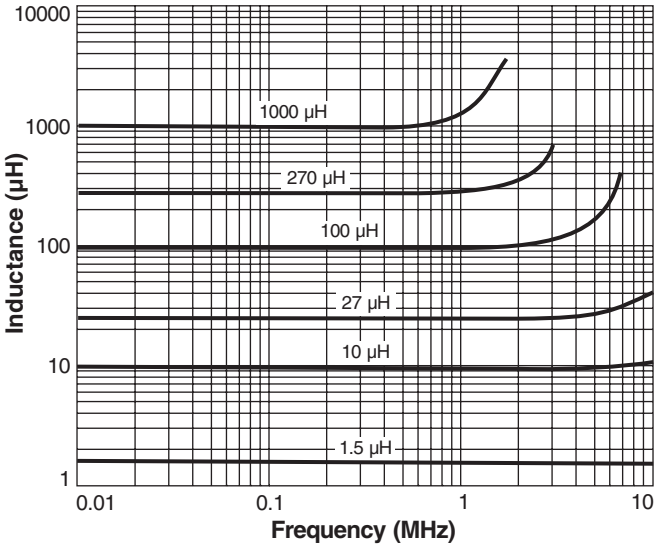
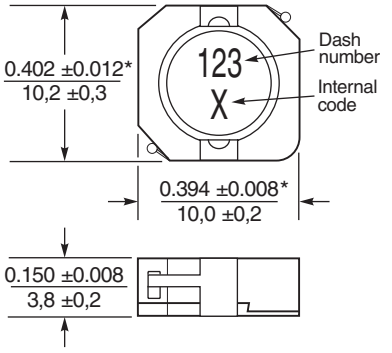
Typical L vs Current



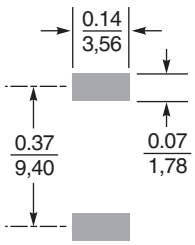
Typical L vs Frequency





Parts manufactured prior to Sept. 2007 were marked with only the dash number.

Recommended Land Pattern



*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0,13 mm.

Dimensions are in inches / mm

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Specification subject to change without notice
Please check web site for latest information