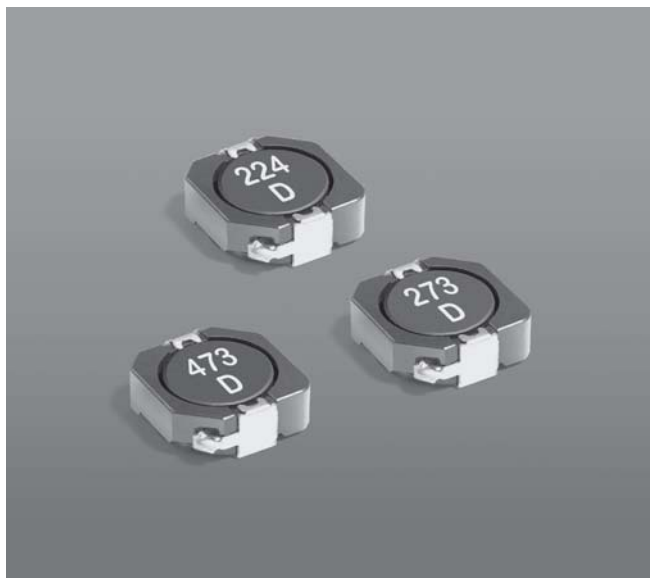




SMT Power Inductors – MSS1038



- 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

Ambient temperature –40°C to +85°C with I_{rms} current, +85°C to +125°C with derated current

Storage temperature Component: –40°C to +125°C.

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 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 Only pure water or alcohol recommended

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

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

MSS1038-105KL C

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).

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 (1000 parts per full reel).

2. Inductance measured at 100 kHz, 1.0 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. SRF measured using an Agilent/HP 8753D 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.

Coilcraft®

Specifications subject to change without notice.
Please check our website for latest information.

Document 378-1 Revised 10/06/08

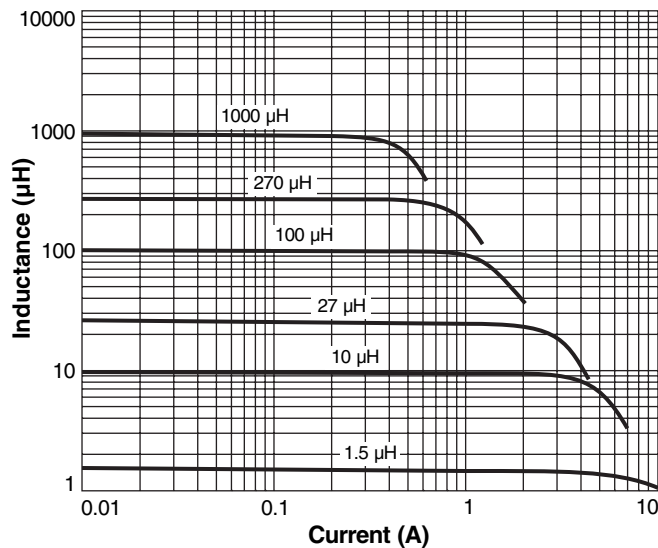
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail info@coilcraft.com Web <http://www.coilcraft.com>

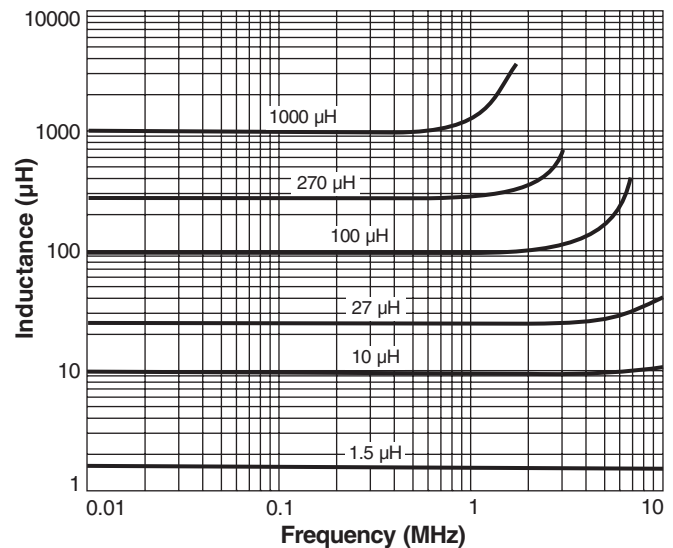


SMT Power Inductors – MSS1038

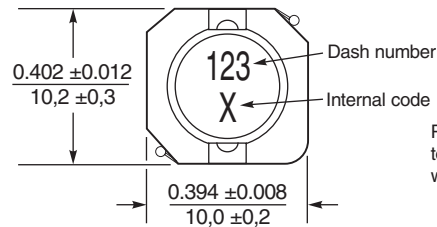
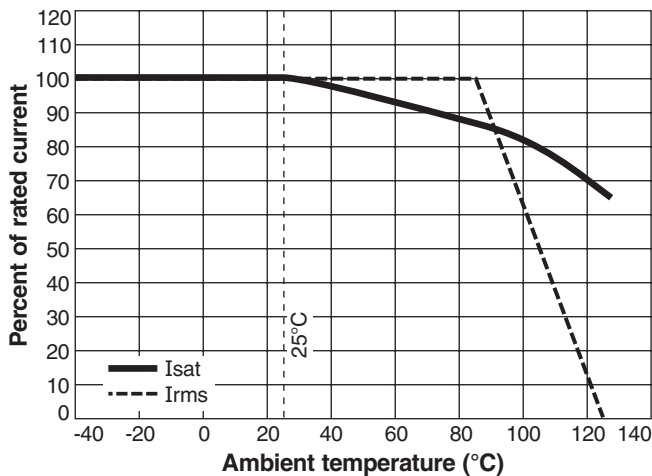
Typical L vs Current



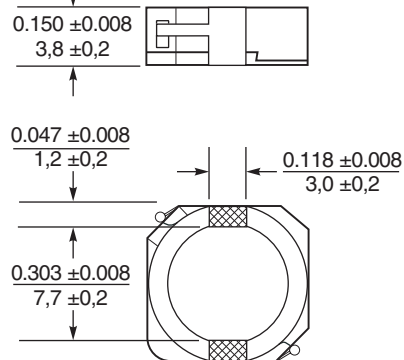
Typical L vs Frequency



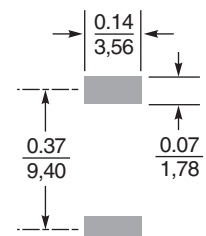
Typical Current Derating



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



Recommended Land Pattern



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

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Specifications subject to change without notice.
Please check our website for latest information.

Document 378-2 Revised 10/06/08

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