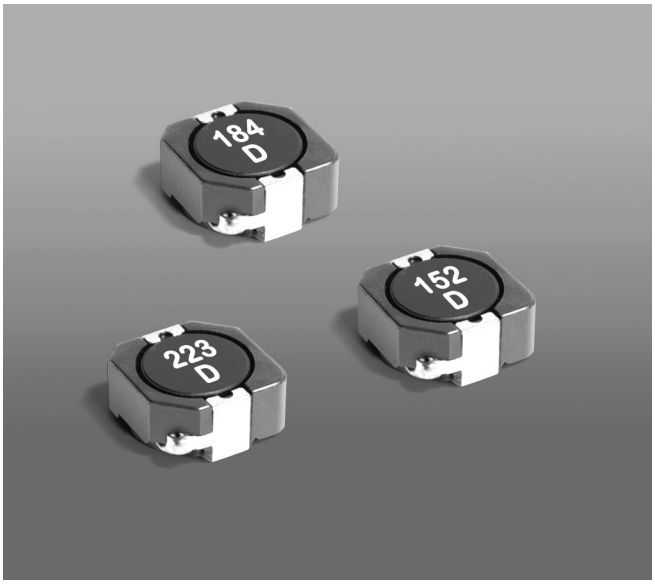
Shielded Power Inductors – MSS1048



- 10 × 10.2 mm footprint; 4.8 mm high shielded inductors
- Very low DCR and excellent current handling

Designer's Kit C409 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: 1.7 – 1.9 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 +85°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 200/7″ reel; 800/13″ reel; Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 5.1 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] (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
MSS1048-801NL_	0.8 ±30%	4.3	180	9.60	12.0	14.1	8.19	12.0
MSS1048-152NL_	1.5 ±30%	5.1	90	5.44	7.80	10.5	7.41	10.8
MSS1048-222NL_	2.2 ±30%	7.2	70	4.92	6.62	8.40	6.63	9.78
MSS1048-332NL_	3.3 ±30%	10.0	50	4.62	6.32	7.38	5.04	7.22
MSS1048-472NL_	4.7 ±30%	11.5	38	4.36	5.62	6.46	4.90	6.90
MSS1048-682NL_	6.8 ±30%	16.3	35	3.60	5.00	5.94	4.52	6.01
MSS1048-822NL_	8.2 ±30%	20.0	28	3.14	4.14	4.84	4.38	5.71
MSS1048-103ML_	10 ±20%	23.0	24	3.08	3.84	4.32	3.99	4.79
MSS1048-153ML_	15 ±20%	36.0	20	2.46	3.06	3.44	3.51	4.26
MSS1048-223ML_	22 ±20%	50.0	12	2.36	2.90	3.28	2.86	3.58
MSS1048-333ML_	33 ±20%	68.0	11	1.66	2.14	2.42	2.12	2.80
MSS1048-473ML_	47 ±20%	120	10	1.44	1.86	2.20	1.83	2.42
MSS1048-563ML_	56 ±20%	126	10	1.36	1.70	1.90	1.71	2.28
MSS1048-683ML_	68 ±20%	176	7.0	1.28	1.60	1.70	1.39	1.88
MSS1048-823ML_	82 ±20%	196	6.0	1.08	1.44	1.64	1.23	1.67
MSS1048-104ML_	100 ±20%	224	6.0	0.99	1.20	1.36	1.09	1.48
MSS1048-154KL_	150 ±10%	330	5.0	0.79	1.02	1.16	0.97	1.33
MSS1048-184KL_	180 ±10%	360	4.5	0.75	0.92	1.02	0.89	1.24
MSS1048-224KL_	220 ±10%	394	4.5	0.67	0.84	0.95	0.85	1.18
MSS1048-334KL_	330 ±10%	748	3.0	0.57	0.69	0.76	0.57	0.82
MSS1048-474KL_	470 ±10%	886	2.7	0.43	0.52	0.62	0.50	0.72

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

MSS1048-334KLC

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 (200 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 (800 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 4192A impedance analyzer 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.

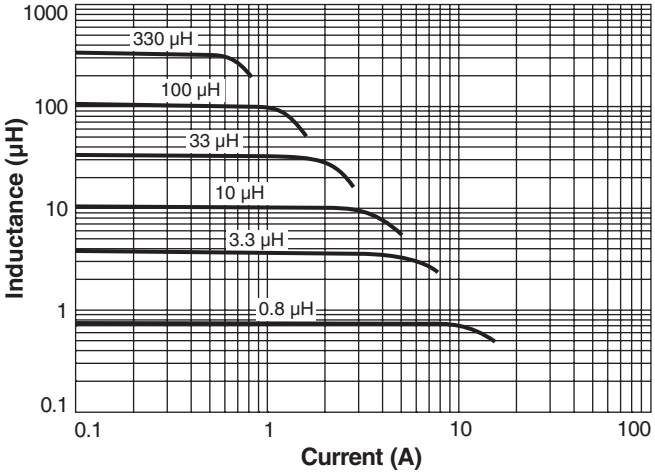
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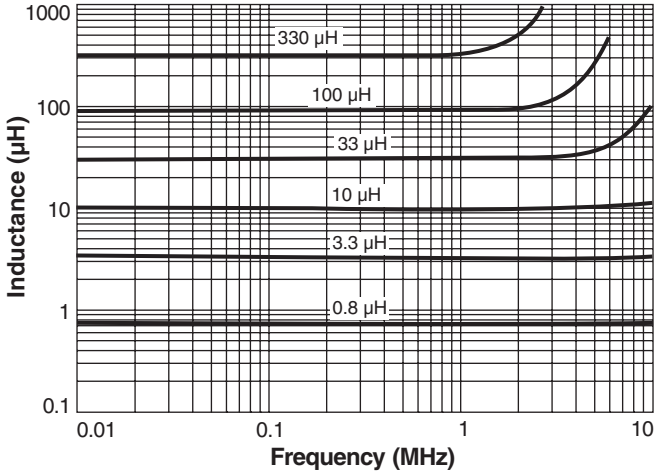
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SMT Power Inductors – MSS1048

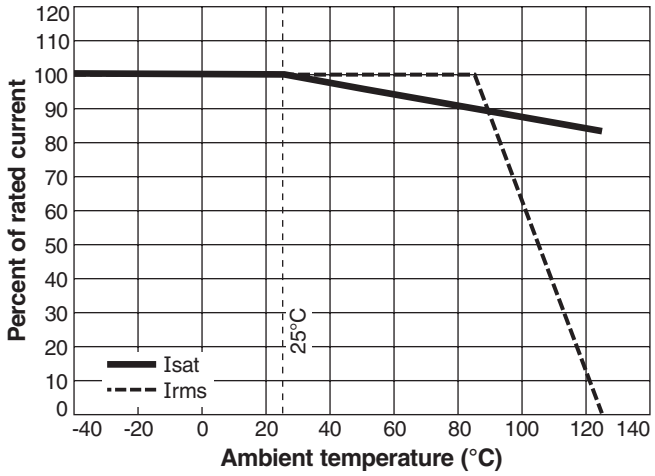
Typical L vs Current

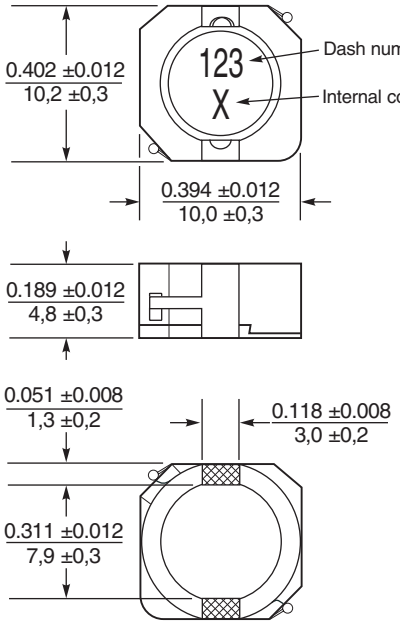


Typical L vs Frequency



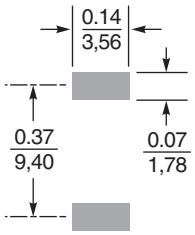
Typical Current Derating





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

Recommended Land Pattern



Dimensions are in inches / mm

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