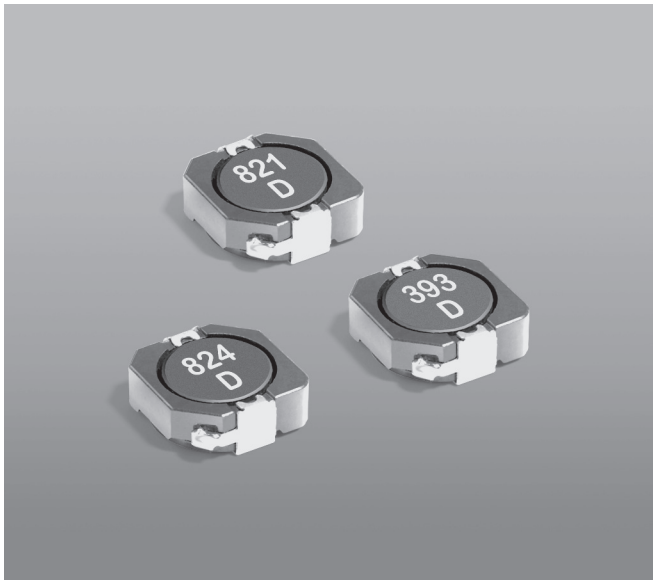
HIGH TEMPERATURE

SMT Power Inductors – MSS1048T



- 10.0 × 10.2 mm footprint; 4.8 mm high shielded inductors
- Designed for high temperature applications; ambient temperature up to 165°C.
- AEC-Q200 qualified
- Very low DCR and excellent current handling

Core material Ferrite
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 +125°C with Irms current, +125°C to +165°C with derated current
Storage temperature Component: –40°C to +165°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 Only pure water or alcohol recommended

Part number[1]	Inductance[2] (µH)	DCR max (mΩ)	SRF typ[3] (MHz)	Isat (A)[4] 10% drop	Isat (A)[4] 20% drop	Isat (A)[4] 30% drop	Irms (A)[5] 20°C rise	Irms (A)[5] 40°C rise
MSS1048T-801NL_	0.8 ±30%	4.1	180	9.60	12.0	14.1	8.19	12.0
MSS1048T-152NL_	1.5 ±30%	5.1	90	5.44	7.80	10.5	7.41	10.8
MSS1048T-222NL_	2.2 ±30%	7.2	70	4.92	6.62	8.40	6.63	9.78
MSS1048T-332NL_	3.3 ±30%	10.1	50	4.62	6.32	7.38	5.04	7.22
MSS1048T-472NL_	4.7 ±30%	11.4	38	4.36	5.62	6.46	4.90	6.90
MSS1048T-682NL_	6.8 ±30%	15.4	35	3.60	5.00	5.94	4.52	6.01
MSS1048T-822NL_	8.2 ±30%	17.7	28	3.14	4.14	4.84	4.38	5.71
MSS1048T-103ML_	10 ±20%	22.7	24	3.08	3.84	4.32	3.99	4.79
MSS1048T-153ML_	15 ±20%	36.4	20	2.46	3.06	3.44	3.51	4.26
MSS1048T-223ML_	22 ±20%	52.2	12	2.36	2.90	3.28	2.86	3.58
MSS1048T-333ML_	33 ±20%	66.0	11	1.66	2.14	2.42	2.12	2.80
MSS1048T-473ML_	47 ±20%	109.9	10	1.44	1.86	2.20	1.83	2.42
MSS1048T-563ML_	56 ±20%	117.2	10	1.36	1.70	1.90	1.71	2.28
MSS1048T-683ML_	68 ±20%	173.1	7.0	1.28	1.60	1.70	1.39	1.88
MSS1048T-823ML_	82 ±20%	192.8	6.0	1.08	1.44	1.64	1.23	1.67
MSS1048T-104ML_	100 ±20%	216.8	6.0	0.99	1.20	1.36	1.09	1.48
MSS1048T-154KL_	150 ±10%	324.4	5.0	0.79	1.02	1.16	0.97	1.33
MSS1048T-184KL_	180 ±10%	356.5	4.5	0.75	0.92	1.02	0.89	1.24
MSS1048T-224KL_	220 ±10%	405.9	4.5	0.67	0.84	0.95	0.85	1.18
MSS1048T-334KL_	330 ±10%	749.5	3.0	0.57	0.69	0.76	0.57	0.82
MSS1048T-474KL_	470 ±10%	901.4	2.7	0.43	0.52	0.62	0.50	0.72

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

MSS1048T-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 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.

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HIGH TEMPERATURE

RoHS COMPLIANT

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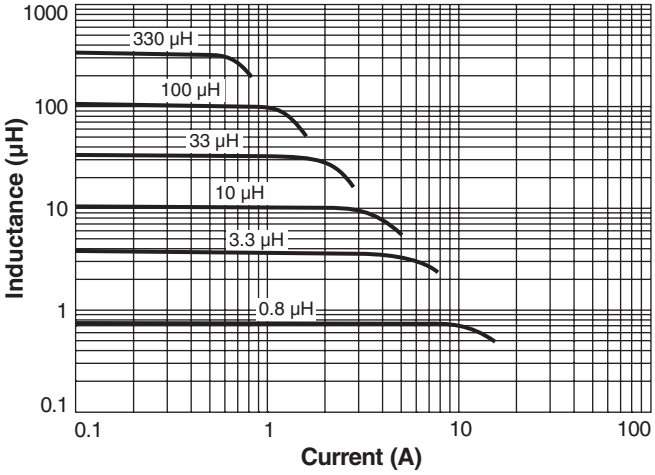
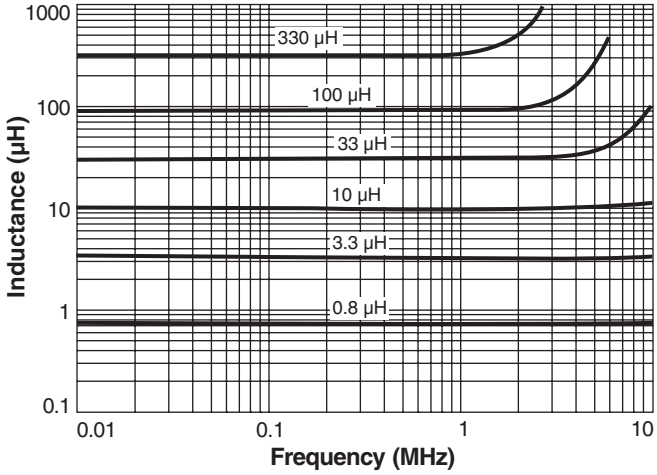
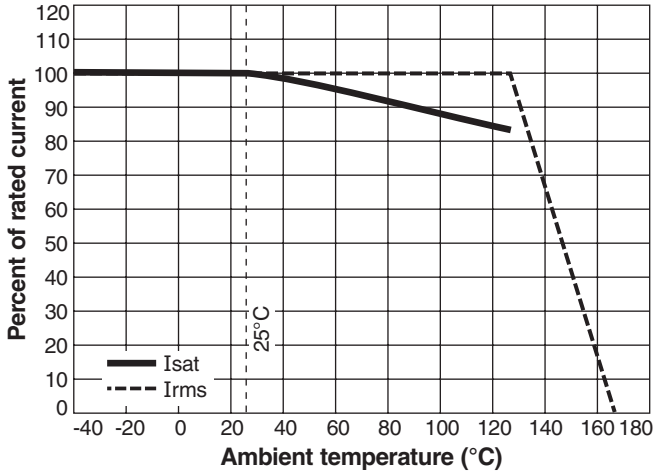
Typical L vs Current

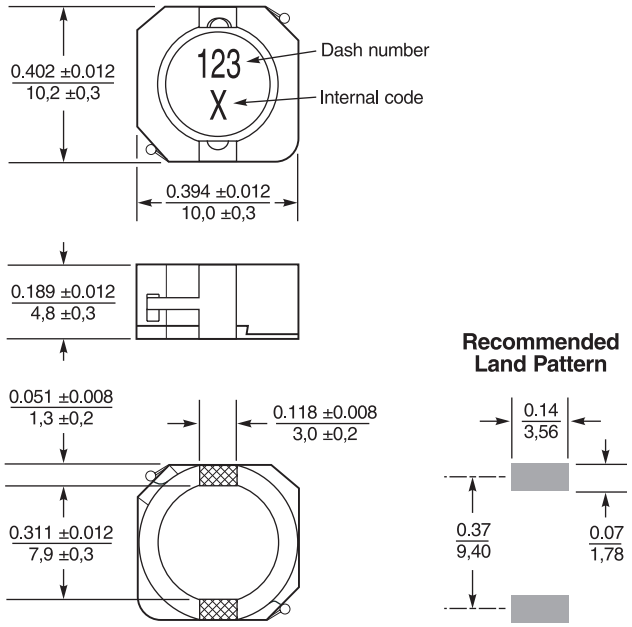


Typical L vs Frequency



Typical Current Derating





Dimensions are in inches / mm

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Document 844-2 Revised 11/0411

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