



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			Irms (A) ⁵	
				10% drop	20% drop	30% drop	20°C rise	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.



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com

UK +44-1236-730595 sales@coilcraft-europe.com

Taiwan +886-2-2264 3646 sales@coilcraft.com.tw

China +86-21-6218 8074 sales@coilcraft.com.cn

Singapore +65-6484 8412 sales@coilcraft.com.sg

Document 844-1 Revised 11/04/11

© Coilcraft Inc. 2011

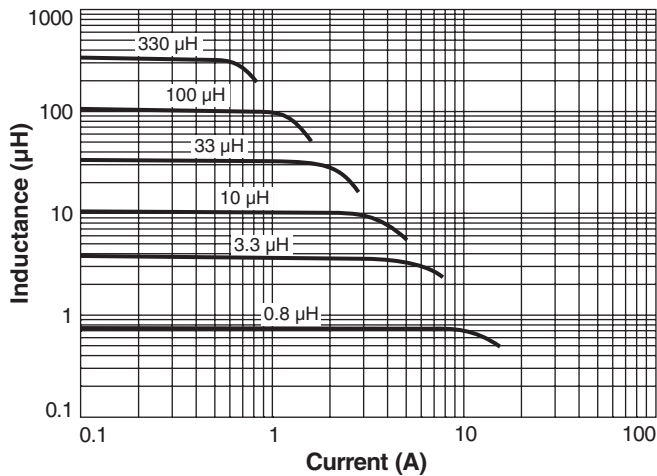
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.



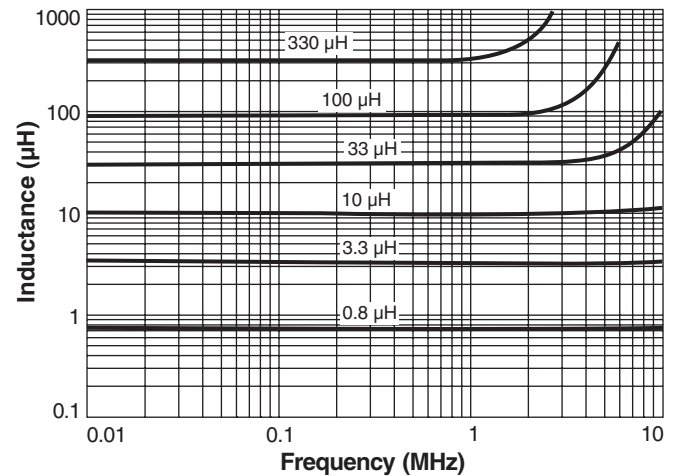
HIGH TEMPERATURE

SMT Power Inductors – MSS1048T

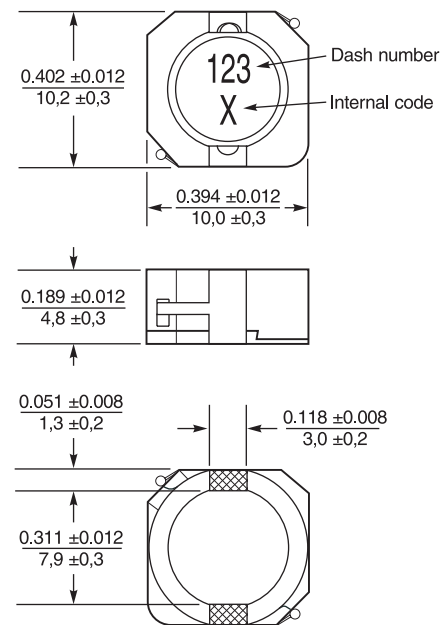
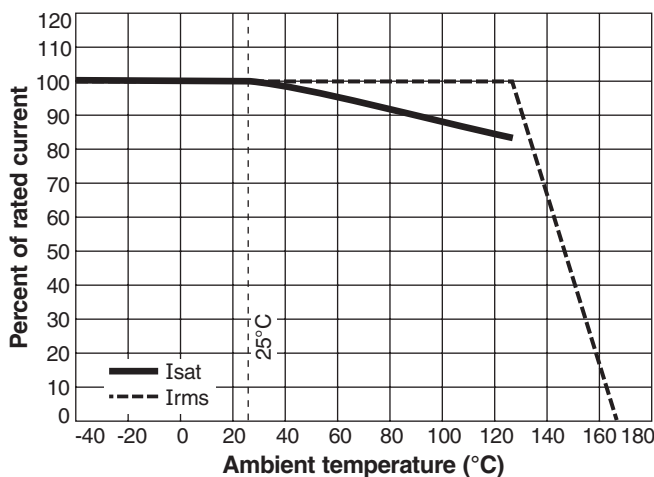
Typical L vs Current



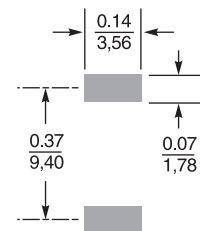
Typical L vs Frequency



Typical Current Derating



Recommended Land Pattern



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



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore +65-6484 8412 sales@coilcraft.com.sg

Document 844-2 Revised 11/0411

© Coilcraft Inc. 2011

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.