



High Temp Power Inductors MSS1048T



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

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 +125°C with (40°C rise) Irms current.

Maximum part temperature +165°C (ambient + temp rise). [Derating](#).

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 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			Irms (A) ⁵	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS1048T-801NL_	0.8±30%	4.3	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%	10.0	50	4.62	6.32	7.38	5.04	7.22
MSS1048T-472NL_	4.7±30%	11.5	38	4.36	5.62	6.46	4.90	6.90
MSS1048T-682NL_	6.8±30%	16.3	35	3.60	5.00	5.94	4.52	6.01
MSS1048T-822NL_	8.2±30%	20.0	28	3.14	4.14	4.84	4.38	5.71
MSS1048T-103ML_	10±20%	23.0	24	3.08	3.84	4.32	3.99	4.79
MSS1048T-153ML_	15±20%	36.0	20	2.46	3.06	3.44	3.51	4.26
MSS1048T-223ML_	22±20%	50.0	12	2.36	2.90	3.28	2.86	3.58
MSS1048T-333ML_	33±20%	68.0	11	1.66	2.14	2.42	2.12	2.80
MSS1048T-473ML_	47±20%	120	10	1.44	1.86	2.20	1.83	2.42
MSS1048T-563ML_	56±20%	126	10	1.36	1.70	1.90	1.71	2.28
MSS1048T-683ML_	68±20%	176	7.0	1.28	1.60	1.70	1.39	1.88
MSS1048T-823ML_	82±20%	196	6.0	1.08	1.44	1.64	1.23	1.67
MSS1048T-104ML_	100±20%	224	6.0	0.99	1.20	1.36	1.09	1.48
MSS1048T-154KL_	150±10%	330	5.0	0.79	1.02	1.16	0.97	1.33
MSS1048T-184KL_	180±10%	360	4.5	0.75	0.92	1.02	0.89	1.24
MSS1048T-224KL_	220±10%	394	4.5	0.67	0.84	0.95	0.85	1.18
MSS1048T-334KL_	330±10%	748	3.0	0.57	0.69	0.76	0.57	0.82
MSS1048T-474KL_	470±10%	886	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).

- Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
 - SRF measured using an Agilent/HP 8753D or equivalent.
 - DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)
 - 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.](#)
 - 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 03/31/16

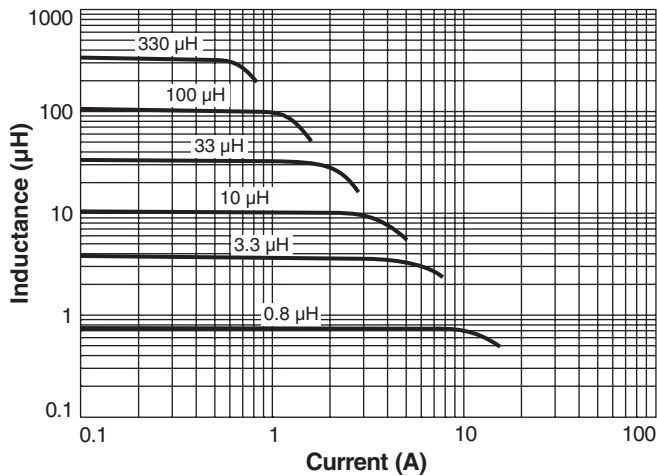
© Coilcraft Inc. 2017

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

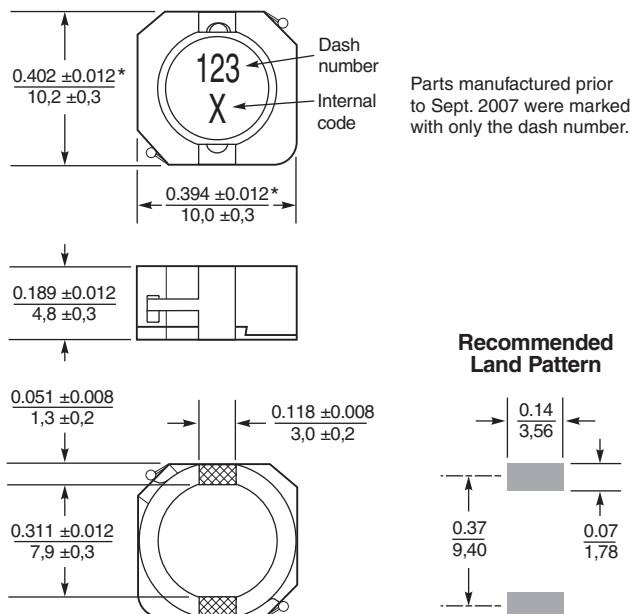
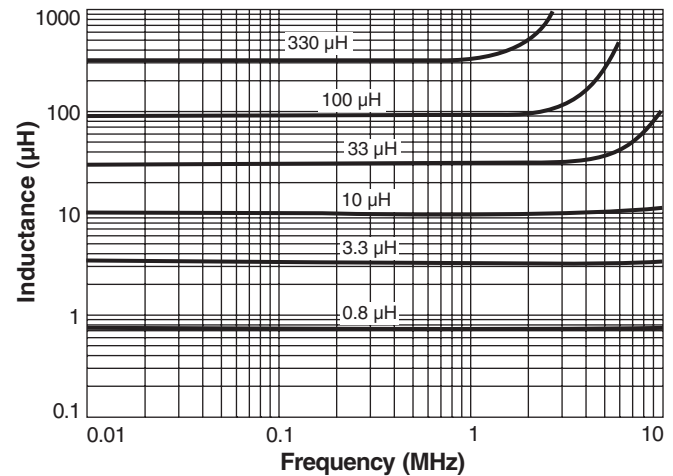
HIGH TEMPERATURE

Shielded Power Inductors – MSS1048T

Typical L vs Current



Typical L vs Frequency



*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 $\frac{\text{inches}}{\text{mm}}$

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Coilcraft:

[MSS1048T-103MLC](#) [MSS1048T-104MLC](#) [MSS1048T-333MLC](#) [MSS1048T-823MLC](#) [MSS1048T-682NLB](#)
[MSS1048T-334KLC](#) [MSS1048T-474KLC](#) [MSS1048T-472NLC](#) [MSS1048T-563MLB](#) [MSS1048T-103NLB](#) [MSS1048T-472NLB](#) [MSS1048T-154KLC](#) [MSS1048T-104MLB](#) [MSS1048T-152NLB](#) [MSS1048T-333MLB](#) [MSS1048T-683MLC](#)
[MSS1048T-153MLC](#) [MSS1048T-223MLB](#) [MSS1048T-332NLC](#) [MSS1048T-801NLC](#) [MSS1048T-224KLC](#) [MSS1048T-823MLB](#) [MSS1048T-222NLC](#) [MSS1048T-334KLB](#) [MSS1048T-474KLB](#) [MSS1048T-223MLC](#) [MSS1048T-103NLC](#)
[MSS1048T-154KLB](#) [MSS1048T-683MLB](#) [MSS1048T-224KLB](#) [MSS1048T-801NLB](#) [MSS1048T-222NLB](#) [MSS1048T-184KLB](#) [MSS1048T-473MLB](#) [MSS1048T-682NLC](#) [MSS1048T-822NLC](#) [MSS1048T-152NLC](#) [MSS1048T-473MLC](#)
[MSS1048T-184KLC](#) [MSS1048T-563MLC](#) [MSS1048T-332NLB](#) [MSS1048T-822NLB](#) [MSS1048T-153MLB](#)