



HIGH TEMPERATURE

Shielded Power Inductors – MSS1246T



- Designed for high ambient temperatures
- Magnetic shielding allows high density mounting.

Designer's Kit C417 contains 3 each of all values.

Core material Ferrite

Terminations RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

Weight: 2.3 g – 2.5 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, 4.7 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 ³ (mOhms)		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS1246T-102ML_	1.0±20%	5.6	6.3	100	18.14	20.64	22.24	6.00	8.00
MSS1246T-152ML_	1.5±20%	8.7	9.7	85.0	14.06	15.90	17.08	5.80	7.80
MSS1246T-272ML_	2.7±20%	10.3	11.5	70.0	11.66	13.16	14.16	5.00	6.80
MSS1246T-332ML_	3.3±20%	15.1	16.8	65.0	9.74	11.08	11.98	4.50	6.30
MSS1246T-472ML_	4.7±20%	19.1	21.3	42.0	8.62	9.70	10.42	4.40	6.00
MSS1246T-562ML_	5.6±20%	22.1	24.6	37.0	7.62	8.74	9.44	3.95	5.75
MSS1246T-682ML_	6.8±20%	24.9	27.7	33.0	7.38	8.36	9.00	3.70	5.20
MSS1246T-822ML_	8.2±20%	27.4	30.5	31.0	6.84	7.70	8.32	3.35	4.67
MSS1246T-103ML_	10±20%	36.8	40.9	27.0	5.88	6.66	7.18	2.85	3.90
MSS1246T-123ML_	12±20%	38.9	43.3	24.0	5.34	6.04	6.52	2.69	3.65
MSS1246T-153ML_	15±20%	48.6	54.1	22.0	4.68	5.36	5.78	2.50	3.40
MSS1246T-183ML_	18±20%	51.0	56.7	19.0	4.32	4.92	5.32	2.41	3.19
MSS1246T-223ML_	22±20%	60.3	67.0	18.0	3.84	4.34	4.75	2.30	3.14
MSS1246T-273ML_	27±20%	67.5	75.0	16.0	3.54	4.02	4.32	2.06	2.86
MSS1246T-333ML_	33±20%	81.7	90.8	15.0	3.24	3.66	3.96	1.90	2.60
MSS1246T-393ML_	39±20%	95.2	105.8	13.3	3.04	3.46	3.72	1.73	2.39
MSS1246T-473ML_	47±20%	120.6	134.0	12.0	2.70	3.08	3.34	1.50	2.10
MSS1246T-563ML_	56±20%	133.8	148.7	10.6	2.46	2.80	3.02	1.44	2.01
MSS1246T-683ML_	68±20%	167.3	185.9	9.7	2.26	2.54	2.74	1.30	1.80
MSS1246T-823ML_	82±20%	188.5	209.5	8.8	1.98	2.26	2.46	1.24	1.72
MSS1246T-104ML_	100±20%	216.8	240.9	8.0	1.84	2.08	2.24	1.19	1.65
MSS1246T-124KL_	120±10%	287.2	319.2	7.2	1.62	1.86	2.04	1.03	1.42
MSS1246T-154KL_	150±10%	326.7	363.0	6.6	1.48	1.70	1.82	0.95	1.30
MSS1246T-184KL_	180±10%	379.5	421.7	5.9	1.36	1.56	1.68	0.89	1.21
MSS1246T-224KL_	220±10%	488.2	542.5	5.3	1.22	1.38	1.50	0.76	1.00
MSS1246T-274KL_	270±10%	560.1	622.4	4.7	1.12	1.26	1.36	0.72	0.95
MSS1246T-334KL_	330±10%	731.4	812.7	4.1	1.00	1.10	1.20	0.65	0.87
MSS1246T-394KL_	390±10%	813.7	904.2	3.8	0.946	1.00	1.10	0.59	0.79
MSS1246T-474KL_	470±10%	935.1	1039	3.5	0.864	0.978	1.00	0.56	0.76
MSS1246T-564KL_	560±10%	1193	1326	3.0	0.776	0.884	0.956	0.50	0.67
MSS1246T-684KL_	680±10%	1370	1523	2.8	0.720	0.818	0.882	0.46	0.62
MSS1246T-824KL_	820±10%	1590	1767	2.6	0.634	0.728	0.792	0.43	0.58
MSS1246T-105KL_	1000±10%	2090	2323	2.4	0.594	0.676	0.728	0.36	0.50

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

MSS1246T-105KLD

Termination: L = RoHS compliant matte tin over nickel over phos bronze.
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 (800 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter or equivalent.
3. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.
4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
5. DC current at which the inductance drops the specified amount from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Coilcraft

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 540-1 Revised 08/18/11

© Coilcraft Inc. 2013

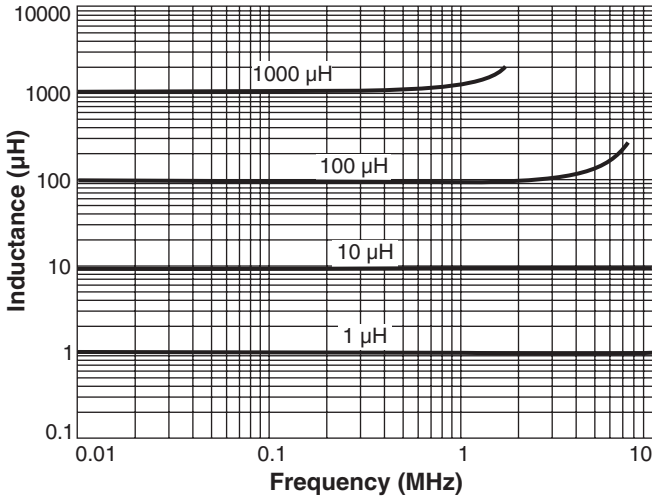
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

HIGH TEMPERATURE

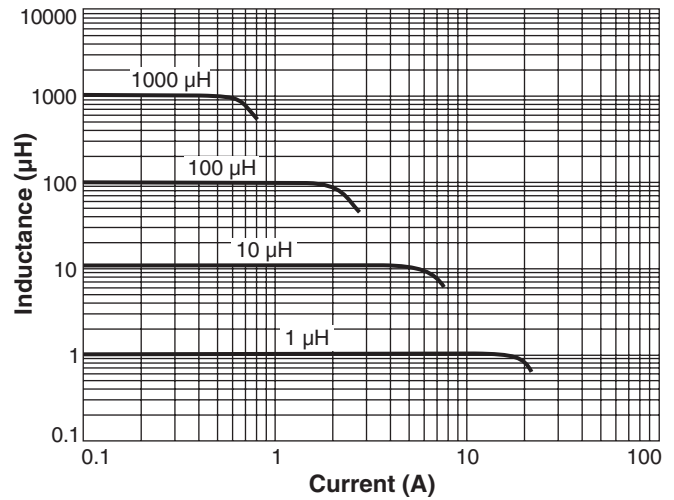


Shielded Power Inductors – MSS1246T

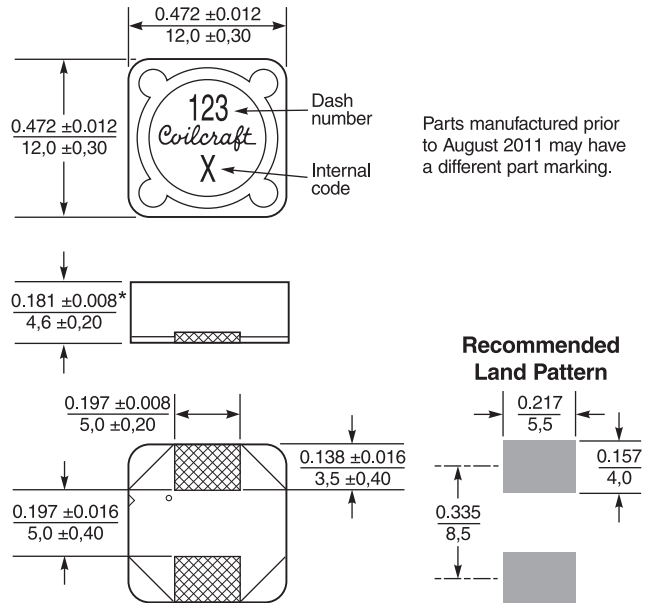
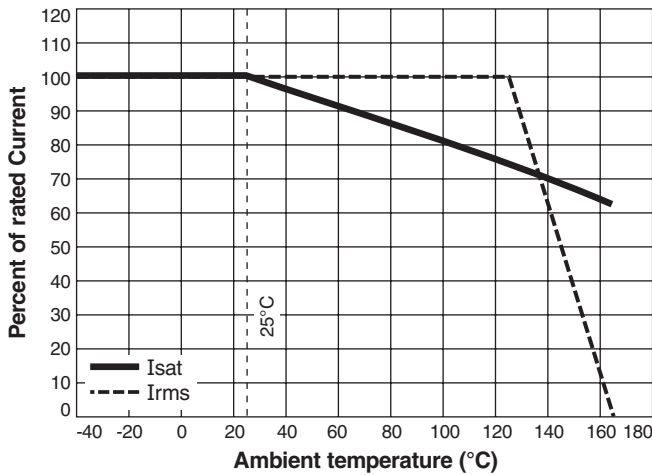
Typical L vs Frequency



Typical L vs Current



Current Derating



* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.012 inch (0.3 mm).

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