HIGH TEMPERATURE

RoHS COMPLIANT

SMT 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. 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 Only pure water or alcohol recommended

Part number[1]	Inductance[2] (µH)	DCR[3] (mOhms) typ	DCR[3] (mOhms) max	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 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.

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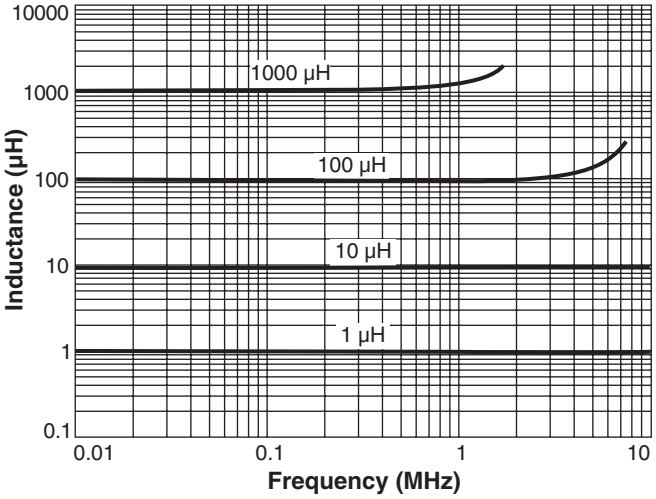
HIGH TEMPERATURE

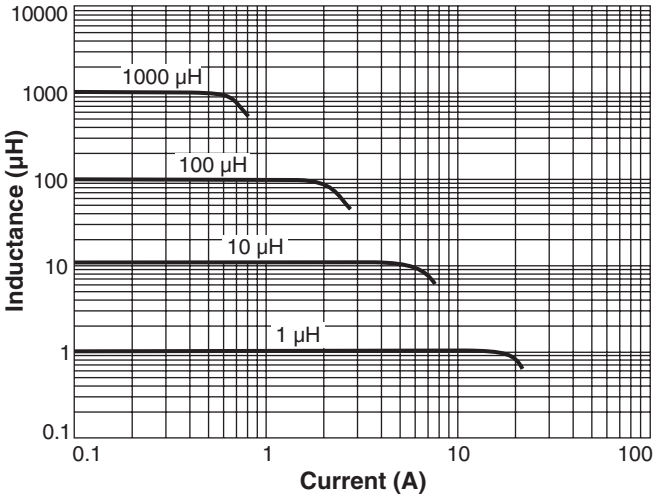
RoHS COMPLIANT

SMT Power Inductors – MSS1246T

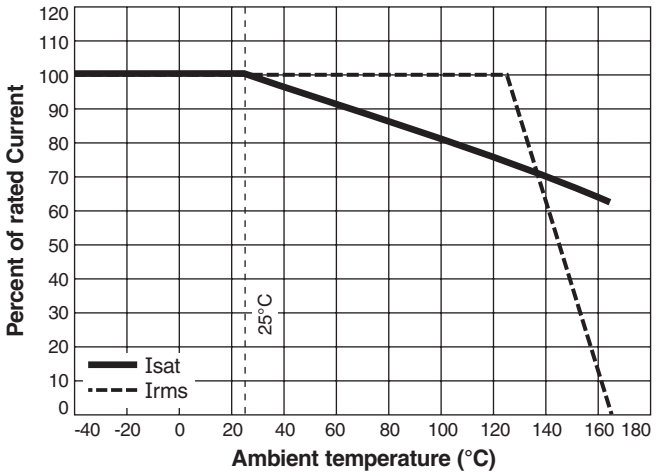
Typical L vs Frequency

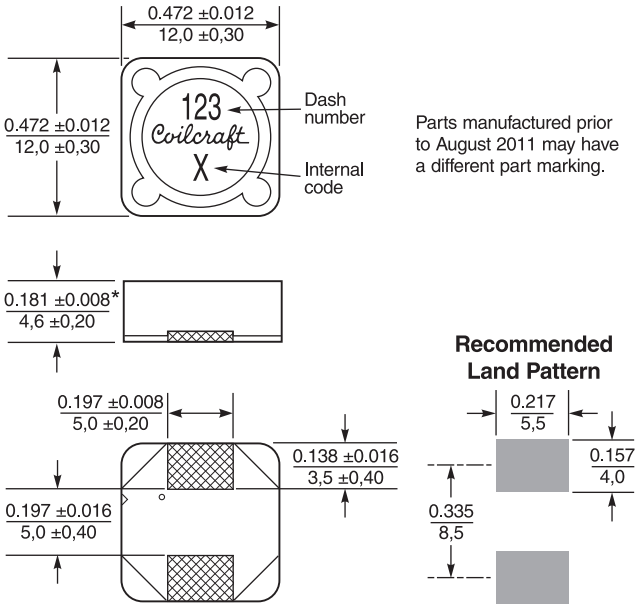


Typical L vs Current



Current Derating





Parts manufactured prior to August 2011 may have a different part marking.

* 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 inches / mm

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