



SMT Power Inductor - SER2000 Series



- Designed for high current power supply applications
- Flat wire windings provide exceptionally low DCR
- Isat ratings as high as 100 A

Designer's Kit C374 contains 2 each of nine part

Core material Ferrite

Core and winding loss See www.coilcraft.com/coreloss

Terminations RoHS compliant tin-silver over copper. Other terminations available at additional cost.

Ambient temperature -40°C to $+85^{\circ}\text{C}$ with I_{rms} current, $+85^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ with derated current

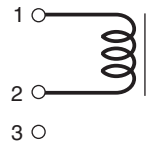
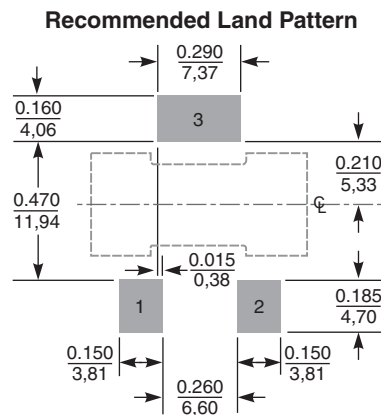
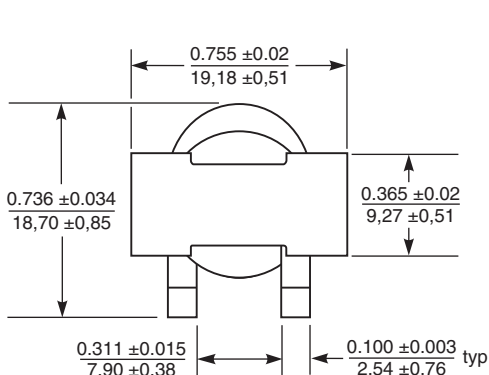
Storage temperature Component: -40°C to $+125^{\circ}\text{C}$.
Packaging: -55°C to $+80^{\circ}\text{C}$

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

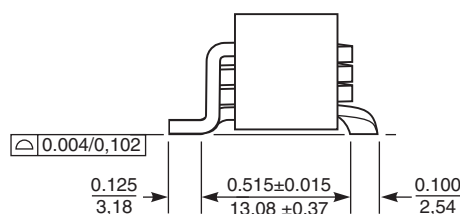
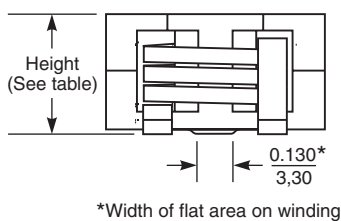
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Mean Time Between Failures (MTBF) 26,315,789 hours

PCB washing Only pure water or alcohol recommended



Caution:
Terminal 3 is provided for mounting stability only. This terminal is connected to the winding of the inductor and must not be connected to ground or any circuitry.



	Maximum height	Weight
SER2009	0.34 / 8,64	6.65 – 6.89 g
SER2010	0.37 / 9,40	7.46 – 7.90 g
SER2011	0.42 / 10,67	8.63 – 9.08 g
SER2012	0.47 / 11,94	9.92 – 10.3 g
SER2013	0.51 / 12,95	10.8 – 11.4 g
SER2014	0.55 / 13,97	11.7 – 12.4 g

Dimensions are in inches
mm

Packaging

SER2009	200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 9.25 pocket depth
SER2010	200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 10.5 pocket depth
SER2011	170 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 11.6 pocket depth
SER2012	150 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 4 mm pocket spacing, 13.0 pocket depth
SER2013	150 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 4 mm pocket spacing, 14.0 pocket depth
SER2014	125 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 4 mm pocket spacing, 15.0 pocket depth

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SPICE models
ON OUR WEB SITE OR CD

Part number ¹	Inductance ±20% ² (µH)	DCR max ³ (mΩ)	DCR typ ³ (mΩ)	SRF typ ⁴ (MHz)	Isat ⁵ (A)	Irms (A) ⁶		Height (mm)
						20°C rise	40°C rise	
SER2009-301ML_	0.30	0.740	0.630	550	100	41	54	8,64
SER2010-301ML_	0.30	1.00	0.900	182	100	36	45	9,40
SER2009-501ML_	0.50	0.740	0.630	544	60	41	54	8,64
SER2010-501ML_	0.50	1.00	0.900	148	81	36	45	9,40
SER2011-501ML_	0.50	1.34	1.20	161	100	30	40	10,67
SER2009-601ML_	0.60	0.740	0.630	648	49	41	54	8,64
SER2010-601ML_	0.60	1.00	0.900	115	70	36	45	9,40
SER2011-601ML_	0.60	1.34	1.20	124	90	30	40	10,67
SER2012-601ML_	0.60	1.60	1.44	115	97	25	35	11,94
SER2009-681ML_	0.68	0.740	0.630	454	45	41	54	8,64
SER2010-681ML_	0.68	1.00	0.900	136	62	36	45	9,40
SER2011-681ML_	0.68	1.34	1.20	135	78	30	40	10,67
SER2012-681ML_	0.68	1.60	1.44	103	85	25	35	11,94
SER2013-681ML_	0.68	1.82	1.70	104	98	23	30	12,95
SER2009-801ML_	0.80	0.740	0.630	567	38	41	54	8,64
SER2010-801ML_	0.80	1.00	0.900	92	53	36	45	9,40
SER2011-801ML_	0.80	1.34	1.20	113	70	30	40	10,67
SER2012-801ML_	0.80	1.60	1.44	91	73	25	35	11,94
SER2013-801ML_	0.80	1.82	1.70	93	85	23	30	12,95
SER2014-801ML_	0.80	2.15	1.94	104	98	21	27	13,97
SER2009-901ML_	0.90	0.740	0.630	557	33	41	54	8,64
SER2010-901ML_	0.90	1.00	0.900	96	48	36	45	9,40
SER2011-901ML_	0.90	1.34	1.20	104	62	30	40	10,67
SER2012-901ML_	0.90	1.60	1.44	85	69	25	35	11,94
SER2013-901ML_	0.90	1.82	1.70	98	73	23	30	12,95
SER2014-901ML_	0.90	2.15	1.94	102	87	21	27	13,97
SER2009-102ML_	1.0	0.740	0.630	488	29	41	54	8,64
SER2010-102ML_	1.0	1.00	0.900	81	42	36	45	9,40
SER2011-102ML_	1.0	1.34	1.20	97	56	30	40	10,67
SER2012-102ML_	1.0	1.60	1.44	75	64	25	35	11,94
SER2013-102ML_	1.0	1.82	1.70	98	68	23	30	12,95
SER2014-102ML_	1.0	2.15	1.94	88	70	21	27	13,97
SER2009-122ML_	1.2	0.740	0.630	81	28	41	54	8,64
SER2010-122ML_	1.2	1.00	0.900	69	37	36	45	9,40
SER2011-122ML_	1.2	1.34	1.20	81	49	30	40	10,67
SER2012-122ML_	1.2	1.60	1.44	73	54	25	35	11,94
SER2013-122ML_	1.2	1.82	1.70	82	58	23	30	12,95
SER2014-122ML_	1.2	2.15	1.94	78	63	21	27	13,97
SER2009-202ML_	2.0	0.740	0.630	40	16	41	54	8,64
SER2010-202ML_	2.0	1.00	0.900	48	27	36	45	9,40
SER2011-202ML_	2.0	1.34	1.20	56	37	30	40	10,67
SER2012-202ML_	2.0	1.60	1.44	51	35	25	35	11,94
SER2013-202ML_	2.0	1.82	1.70	61	40	23	30	12,95
SER2014-202ML_	2.0	2.15	1.94	62	45	21	27	13,97
SER2013-362ML_	3.6	1.82	1.70	38	25	23	30	12,95
SER2013-402ML_	4.0	1.82	1.70	35	20	23	30	12,95
SER2014-402ML_	4.0	2.15	1.94	36	25	21	27	13,97
SER2013-472ML_	4.7	1.82	1.70	30	18	23	30	12,95

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

SER2014-202ML D

Termination: L = RoHS compliant tin-silver over copper.
Special order:

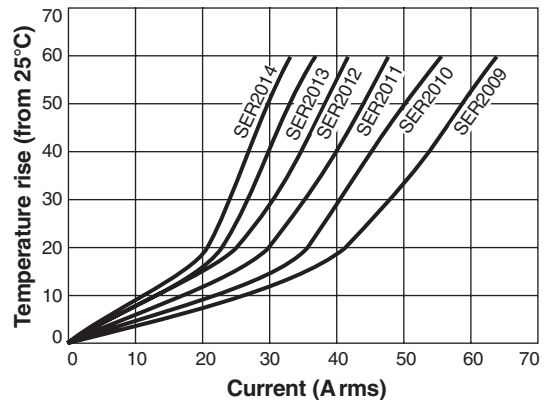
T = RoHS tin-silver-copper (95.5/4/0.5)
or S = non-RoHS tin-lead (63/37).

Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape.

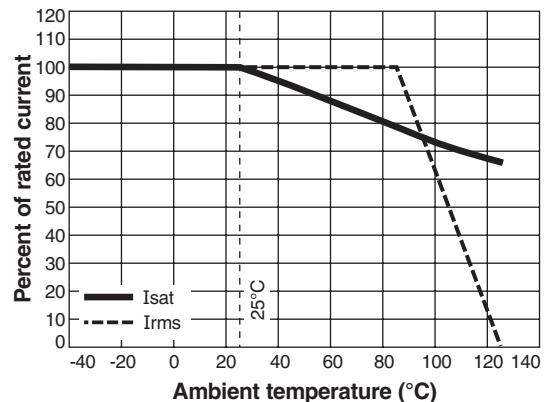
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

- Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.
- DCR measured on a Keithley 580 micro-ohmmeter.
- SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.
See Qualification Standards section for environmental and test data.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Temperature Rise vs Current



Current Derating



Parts shown in bold are included in Coilcraft Designer's Kit C374.



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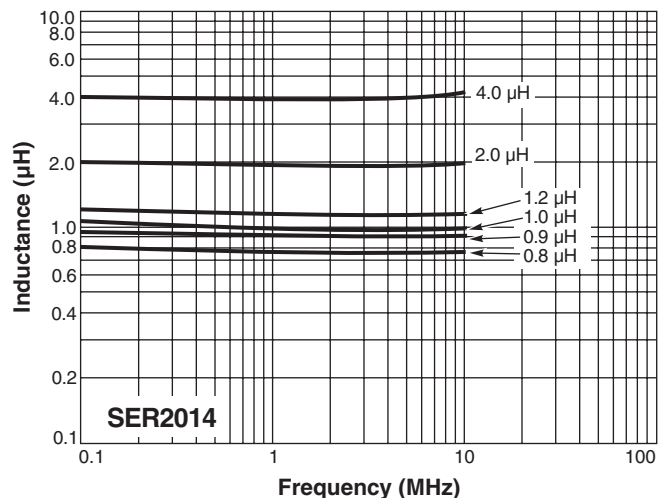
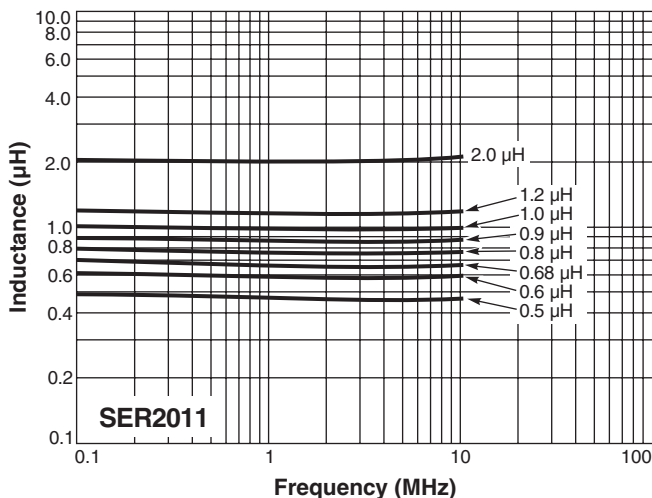
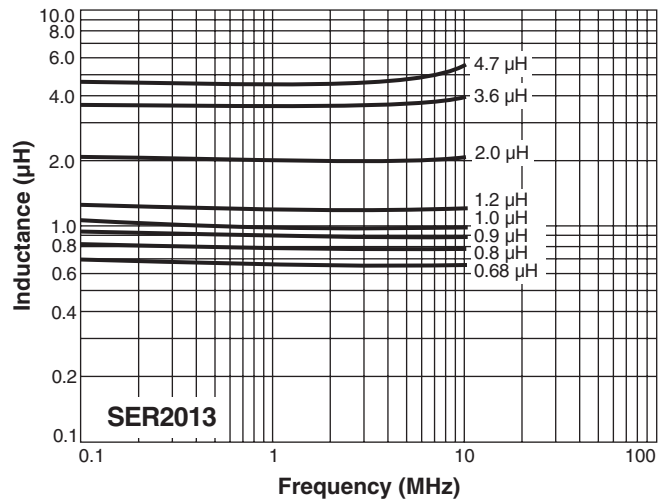
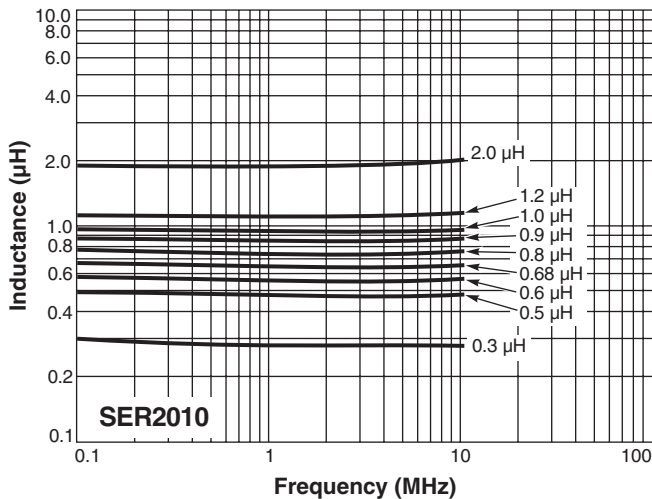
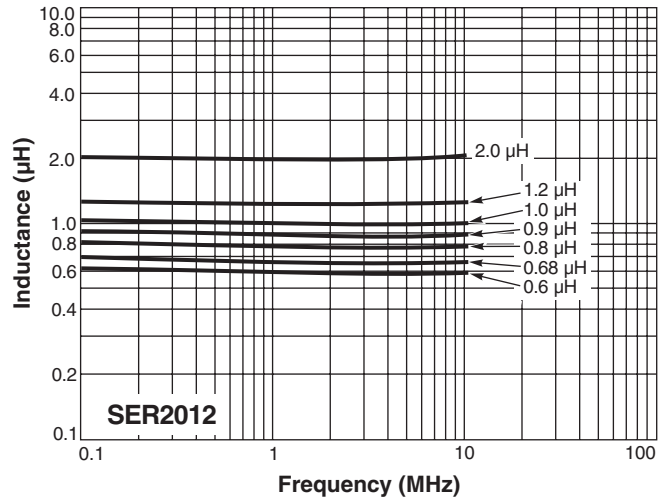
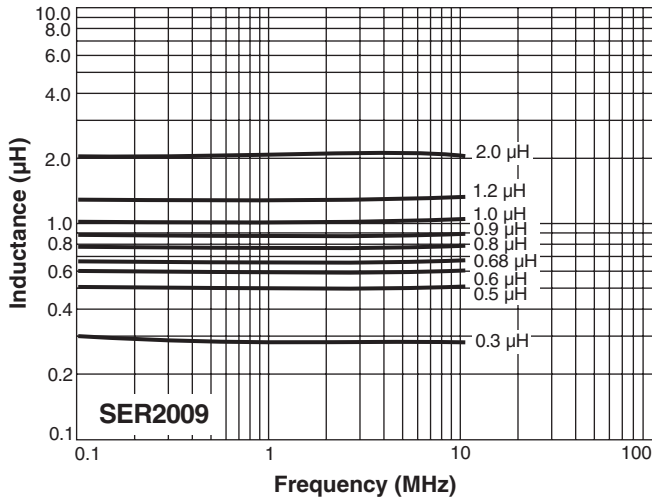
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L vs Frequency



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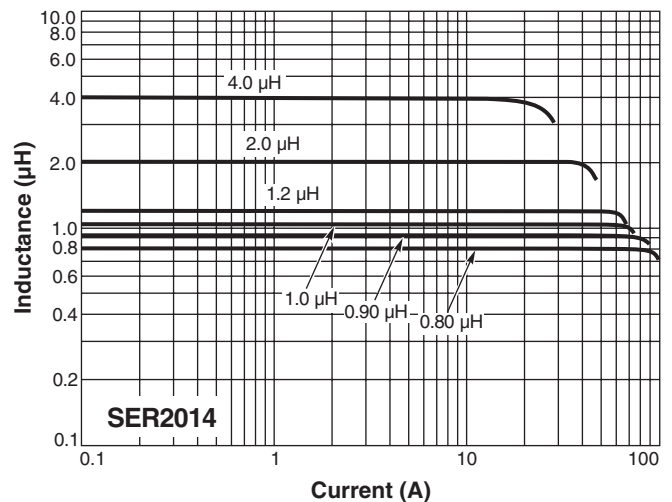
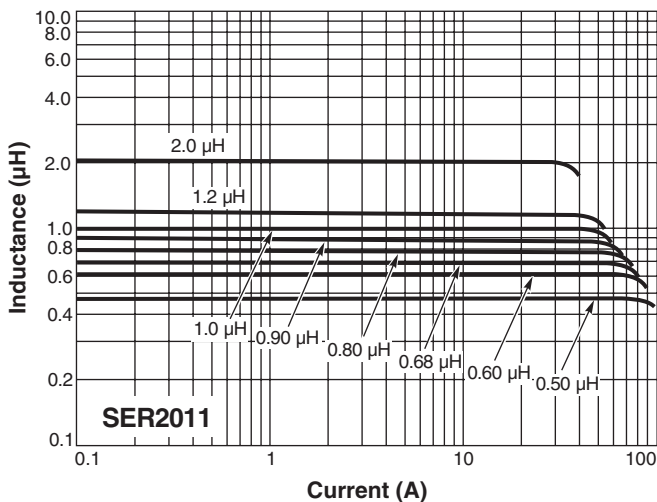
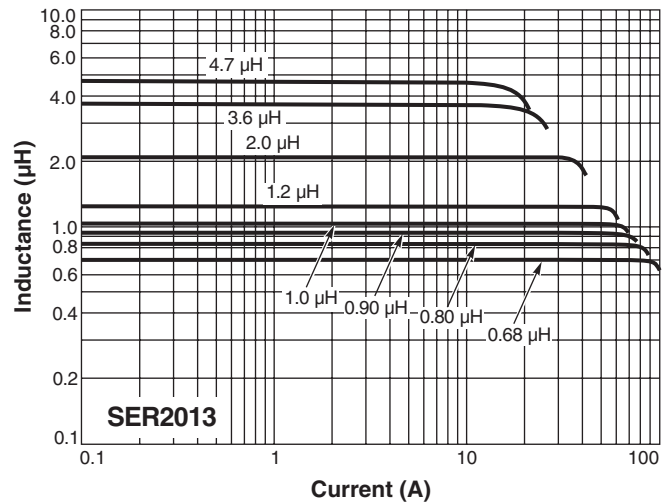
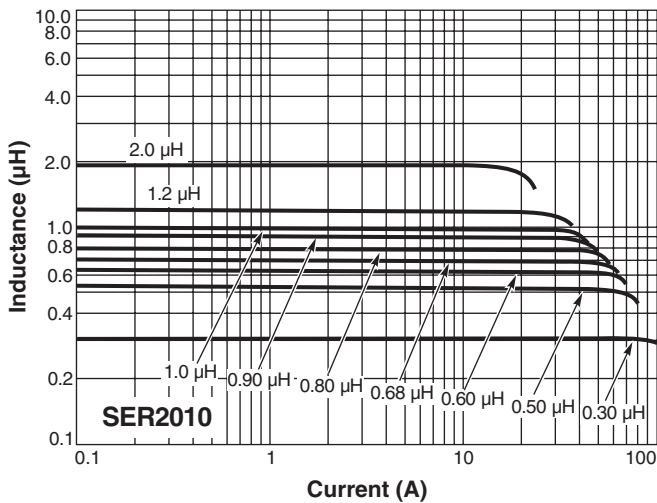
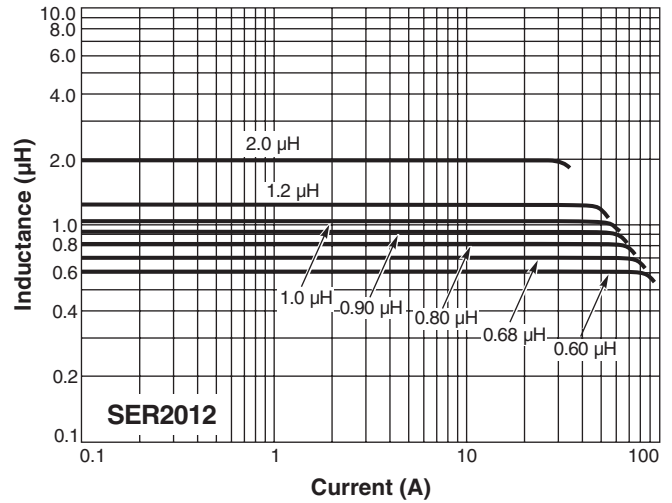
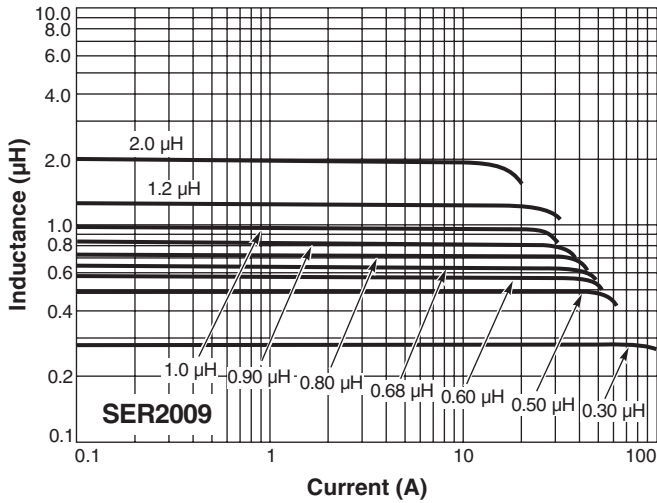
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L vs Current



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