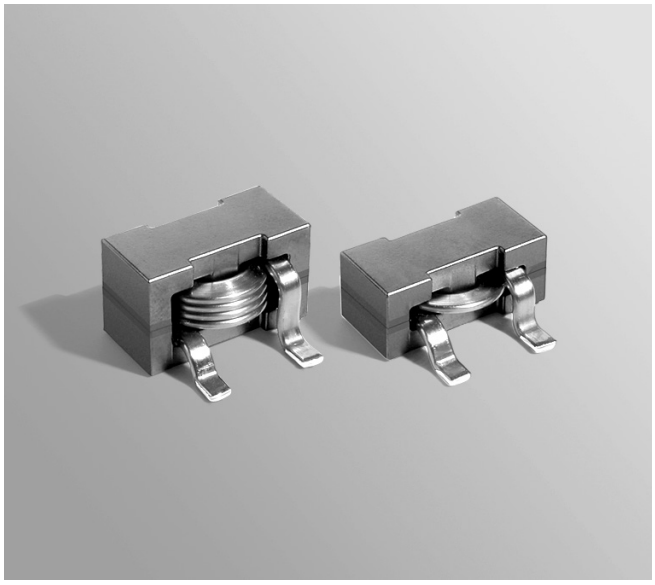
Shielded Power Inductor – ER2000



- 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 parts.

Core material Ferrite

Core and winding loss

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

Ambient temperature –40°C to +85°C with (40°C rise) Irms current.

Maximum part temperature +125°C (ambient + temp rise).

Storage temperature Component: –40°C to +125°C.
Tape and reel packaging: –40°C to +80°C

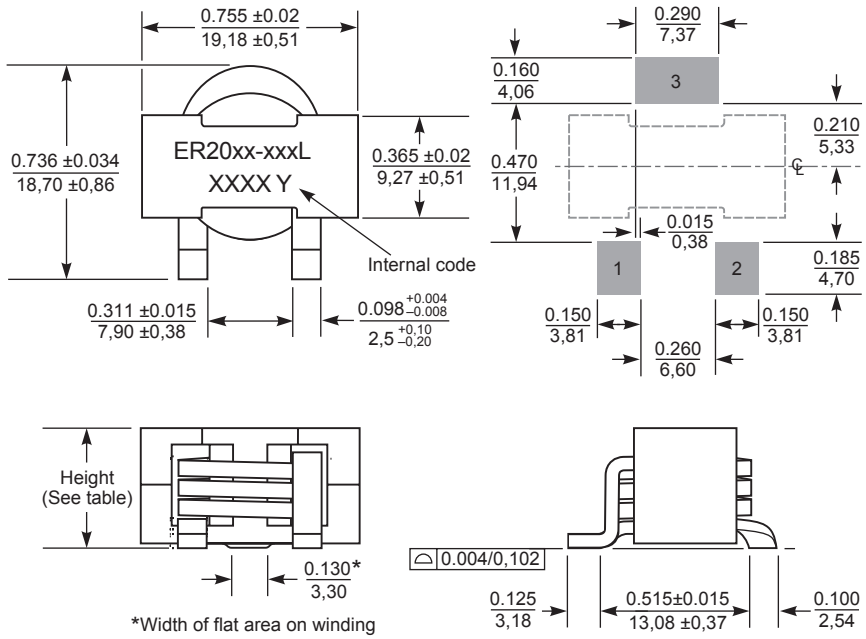
Resistance to soldering heat Max three 40 second refl ws at +260°C, parts cooled to room temperature between cycles

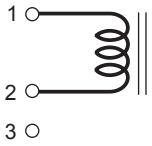
Moisture Sensitivity Level (MSL) 1 (unlimited floor li e at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash.

Recommended Land Pattern





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
ER2009	0.34 / 8,64	6.65 – 6.89 g
ER2010	0.37 / 9,40	7.46 – 7.90 g
ER2011	0.42 / 10,67	8.63 – 9.08 g
ER2012	0.47 / 11,94	9.92 – 10.3 g
ER2013	0.51 / 12,95	10.8 – 11.4 g
ER2014	0.55 / 13,97	11.7 – 12.4 g

Dimensions are in inches / mm

Packaging

ER2009 200 per 13″ reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 9.25 pocket depth
ER2010 200 per 13″ reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 10.5 pocket depth
ER2011 170 per 13″ reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.6 pocket depth
ER2012 150 per 13″ reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 13.0 pocket depth
ER2013 150 per 13″ reel; Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 14.0 pocket depth
ER2014 125 per 13″ reel; Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 15.0 pocket depth

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Shielded Power Inductors – ER2000 Series

Part number[1]	Inductance ±20%[2] (µH)	DCR typ[3] (mΩ)	DCR max[3] (mΩ)	SRF typ[4] (MHz)	Isat[5] (A)	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise	Height (mm)
ER2009-301ML_	0.30	0.630	0.740	550	100	41	54	8,64
ER2010-301ML_	0.30	0.900	1.00	182	100	36	45	9,40
ER2009-501ML_	0.50	0.630	0.740	544	60	41	54	8,64
ER2010-501ML_	0.50	0.900	1.00	148	81	36	45	9,40
ER2011-501ML_	0.50	1.20	1.34	161	100	30	40	10,67
ER2009-601ML_	0.60	0.630	0.740	648	49	41	54	8,64
ER2010-601ML_	0.60	0.900	1.00	115	70	36	45	9,40
ER2011-601ML_	0.60	1.20	1.34	124	90	30	40	10,67
ER2012-601ML_	0.60	1.44	1.60	115	97	25	35	11,94
ER2009-681ML_	0.68	0.630	0.740	454	45	41	54	8,64
ER2010-681ML_	0.68	0.900	1.00	136	62	36	45	9,40
ER2011-681ML_	0.68	1.20	1.34	135	78	30	40	10,67
ER2012-681ML_	0.68	1.44	1.60	103	85	25	35	11,94
ER2013-681ML_	0.68	1.70	1.82	104	98	23	30	12,95
ER2009-801ML_	0.80	0.630	0.740	567	38	41	54	8,64
ER2010-801ML_	0.80	0.900	1.00	92	53	36	45	9,40
ER2011-801ML_	0.80	1.20	1.34	113	70	30	40	10,67
ER2012-801ML_	0.80	1.44	1.60	91	75	25	35	11,94
ER2013-801ML_	0.80	1.70	1.82	93	85	23	30	12,95
ER2014-801ML_	0.80	1.94	2.15	104	98	21	27	13,97
ER2009-901ML_	0.90	0.630	0.740	557	33	41	54	8,64
ER2010-901ML_	0.90	0.900	1.00	96	48	36	45	9,40
ER2011-901ML_	0.90	1.20	1.34	104	62	30	40	10,67
ER2012-901ML_	0.90	1.44	1.60	85	69	25	35	11,94
ER2013-901ML_	0.90	1.70	1.82	98	73	23	30	12,95
ER2014-901ML_	0.90	1.94	2.15	102	87	21	27	13,97
ER2009-102ML_	1.0	0.630	0.740	488	29	41	54	8,64
ER2010-102ML_	1.0	0.900	1.00	81	42	36	45	9,40
ER2011-102ML_	1.0	1.20	1.34	97	56	30	40	10,67
ER2012-102ML_	1.0	1.44	1.60	75	64	25	35	11,94
ER2013-102ML_	1.0	1.70	1.82	98	68	23	30	12,95
ER2014-102ML_	1.0	1.94	2.15	88	70	21	27	13,97
ER2009-122ML_	1.2	0.630	0.740	81	28	41	54	8,64
ER2010-122ML_	1.2	0.900	1.00	69	37	36	45	9,40
ER2011-122ML_	1.2	1.20	1.34	81	49	30	40	10,67
ER2012-122ML_	1.2	1.44	1.60	73	54	25	35	11,94
ER2013-122ML_	1.2	1.70	1.82	82	58	23	30	12,95
ER2014-122ML_	1.2	1.94	2.15	78	63	21	27	13,97
ER2009-202ML_	2.0	0.630	0.740	40	16	41	54	8,64
ER2010-202ML_	2.0	0.900	1.00	48	27	36	45	9,40
ER2011-202ML_	2.0	1.20	1.34	56	37	30	40	10,67
ER2012-202ML_	2.0	1.44	1.60	51	35	25	35	11,94
ER2013-202ML_	2.0	1.70	1.82	61	40	23	30	12,95
ER2014-202ML_	2.0	1.94	2.15	62	45	21	27	13,97
ER2013-362ML_	3.6	1.70	1.82	38	25	23	30	12,95
ER2013-402ML_	4.0	1.70	1.82	35	20	23	30	12,95
ER2014-402ML_	4.0	1.94	2.15	36	25	21	27	13,97
ER2013-472ML_	4.7	1.70	1.82	30	18	23	30	12,95

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

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

SER2014-202MLD

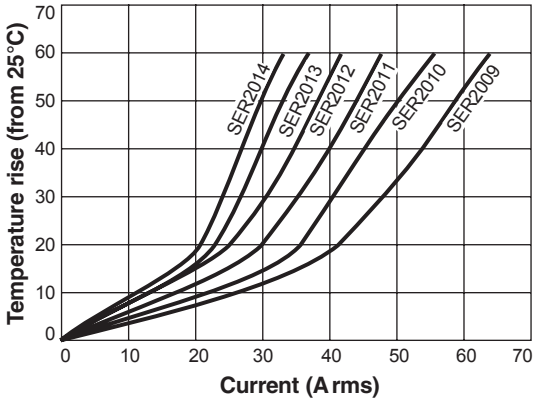
Termination: L = RoHS compliant tin-silver copper over copper.
Special order:
T = RoHS tin-silver-copper over copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

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.

2. Inductance measured at 500 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent.
3. DCR measured on a Keithley 580 micro-ohmmeter or equivalent.
4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 16092A test fixture.
5. DC current at 25°C that causes the specified inductance drop from its value without current. When Isat rating is less than Irms, Isat is the more critical specification.
6. Current that causes the specified tempera-ture rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. When Irms is greater than Isat, Isat is the more critical specification, and Irms is shown in gray type. See Temperature Rise vs Current curve on next page.

7. Electrical specifications at 25° .
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Temperature Rise vs Current



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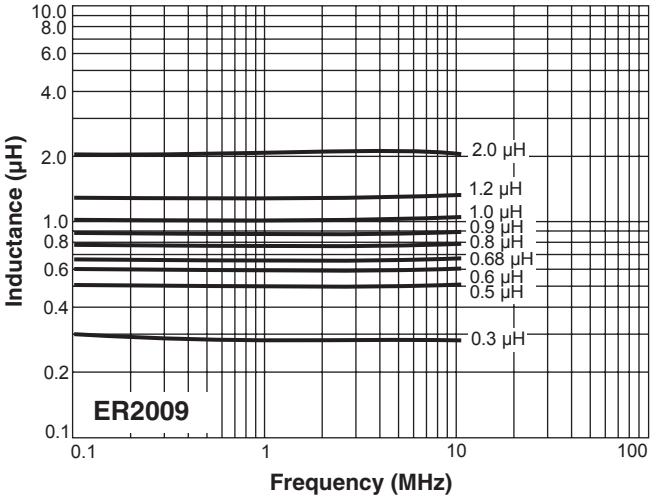
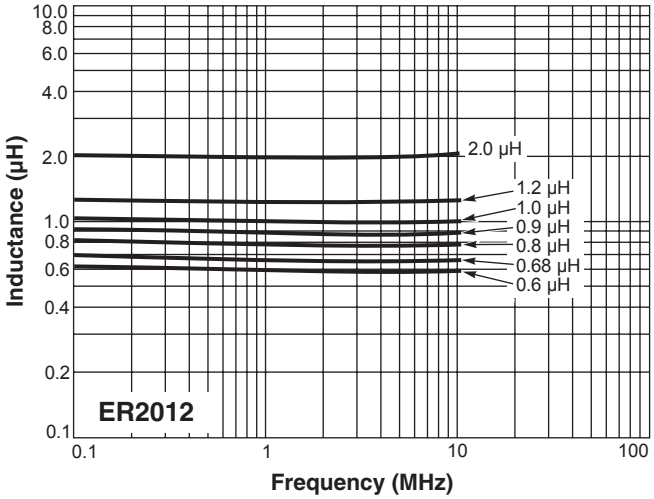
RoHS/ REACH COMPLIANT

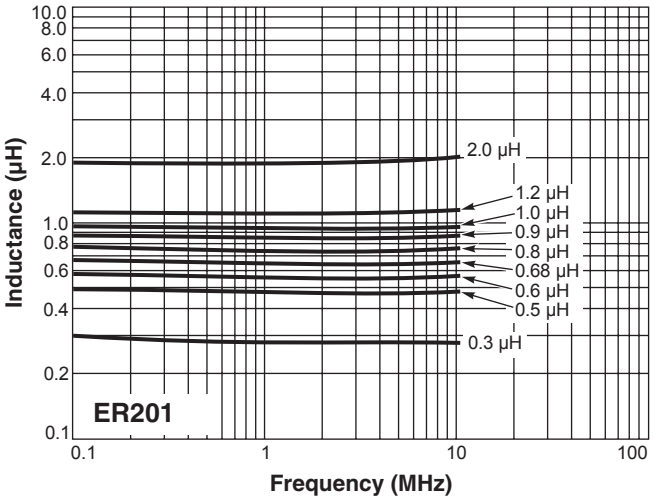
AEC Q200 +85°C

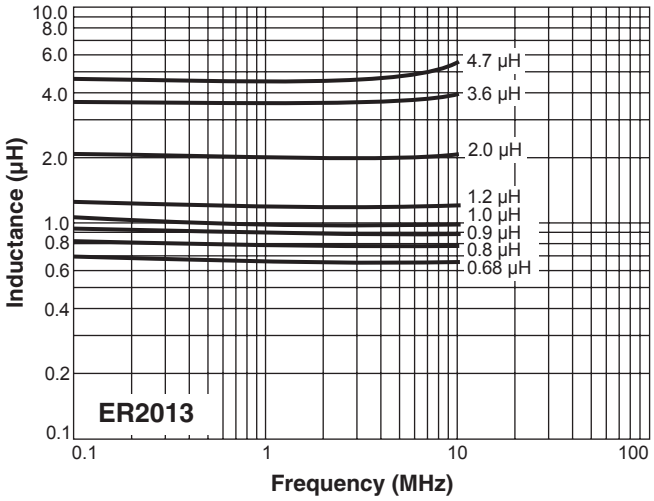
Shielded Power Inductors – ER2000 Series

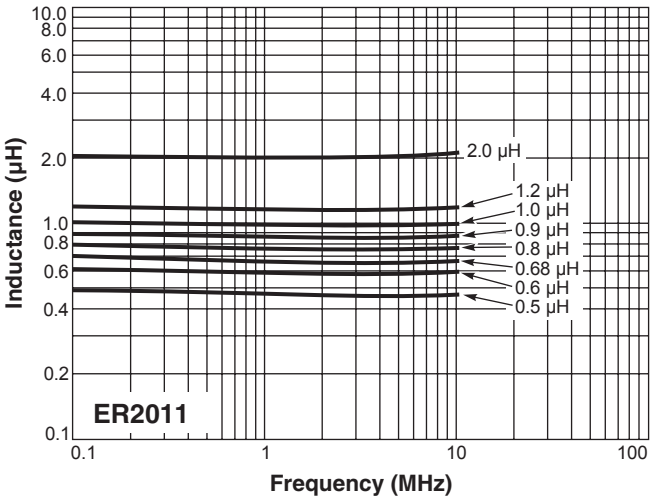
L vs Frequency

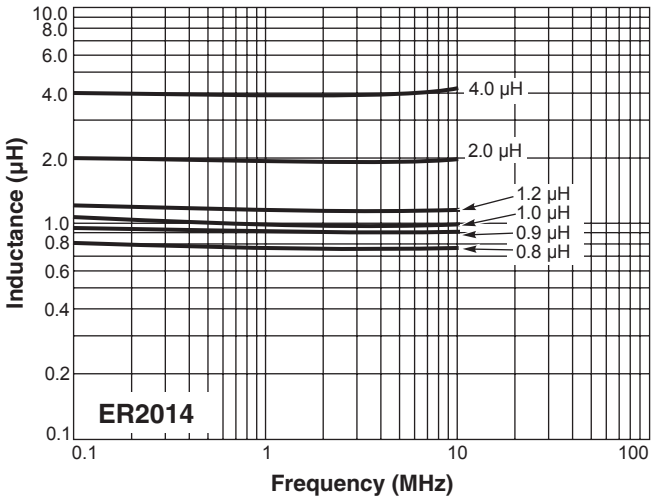












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L vs Current

