SMT Power Inductors - SER2800 Series

- Perfect for high current, low voltage power supply applications
- Extremely low DCR; Current handling to >100 Amps
- Higher inductance values than other SER series – up to 33 µH

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.

Weight SER2814L – 27.5 g; SER2814H – 28.7 g; SER2817H – 34.7 g

Ambient temperature –40°C to +85°C with Irms current, +85°C to +125°C with derated current

Storage temperature Component: –40°C to +125°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)

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

Packaging 25 pieces per tray

PCB washing Only pure water or alcohol recommended

Part number	Inductance[1] ±10% (µH)	DCR[2] (mOhms) nom	DCR[2] (mOhms) max	SRF typ[3] (MHz)	Isat (A)[4] 10% drop	Isat (A)[4] 20% drop	Isat (A)[4] 30% drop	Irms (A)[5] 20°C rise	Irms (A)[5] 40°C rise
SER2814L-152KL	1.5	1.47	1.62	60	100	>100	>100	20	30
SER2814H-222KL	2.2	1.83	2.01	40	100	>100	>100	20	30
SER2814L-222KL	2.2	1.47	1.62	50	82.0	84.0	84.8	20	30
SER2817H-332KL	3.3	2.56	2.82	40	91.0	92.5	93.6	20	28
SER2814H-332KL	3.3	1.83	2.01	30	62.0	66.9	68.4	20	30
SER2814L-332KL	3.3	1.47	1.62	40	48.0	54.0	57.0	20	30
SER2817H-472KL	4.7	2.56	2.82	30	59.0	61.2	62.4	20	28
SER2814H-472KL	4.7	1.83	2.01	25	42.0	48.0	50.1	20	30
SER2814L-472KL	4.7	1.47	1.62	30	33.0	36.9	39.0	20	30
SER2817H-682KL	6.8	2.56	2.82	25	42.0	45.0	45.9	20	28
SER2814H-682KL	6.8	1.83	2.01	20	30.0	34.5	36.2	20	30
SER2814L-682KL	6.8	1.47	1.62	25	22.0	26.0	27.8	20	30
SER2817H-103KL	10	2.56	2.82	20	28.0	31.2	32.1	20	28
SER2814H-103KL	10	1.83	2.01	15	18.0	21.5	23.4	20	30
SER2814L-103KL	10	1.47	1.62	20	13.0	16.2	17.6	20	30
SER2817H-153KL	15	2.56	2.82	16	18.0	21.2	21.9	20	28
SER2814H-153KL	15	1.83	2.01	12	11.5	14.0	15.2	20	30
SER2814L-153KL	15	1.47	1.62	15	7.5	9.8	11.0	20	30
SER2817H-223KL	22	2.56	2.82	15	12.0	14.0	15.0	20	28
SER2814H-223KL	22	1.83	2.01	10	7.0	8.6	9.6	20	30
SER2814L-223KL	22	1.47	1.62	10	4.5	6.0	6.8	20	30
SER2817H-333KL	33	2.56	2.82	10	7.0	8.7	9.6	20	28
SER2814H-333KL	33	1.83	2.01	8	4.0	5.1	5.9	20	30
SER2814L-333KL	33	1.47	1.62	7	2.0	2.6	3.3	20	30

1. Inductance measured at 500 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent.
2. DCR measured on a Keithley 580 micro-ohmmeter or equivalent.
3. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
4. DC current at which the inductance drops the specified amount from its value without current.
5. Current that causes a the specified temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.

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

Caution:
This series is not intended for use in high vibration or mechanical shock environments. We advise using additional means of securing the part to the circuit board to ensure its adhesion. Consider our SER2900 series, which offers nearly identical electrical characteristics and incorporates a third mount pad for better stability and board adhesion.

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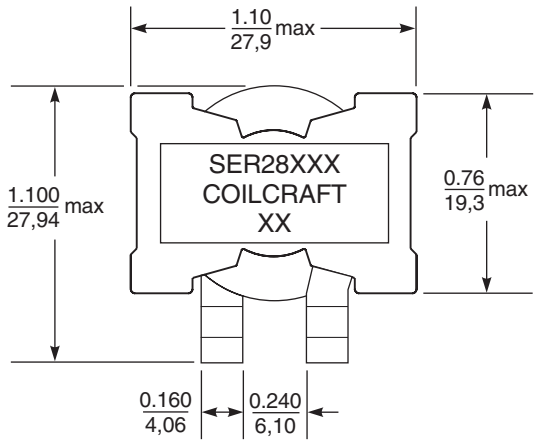
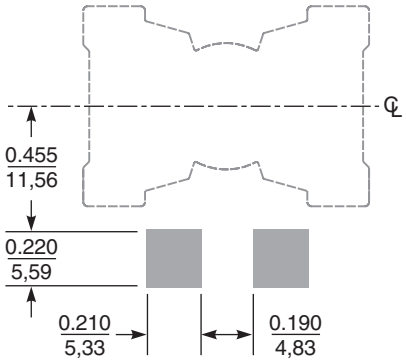
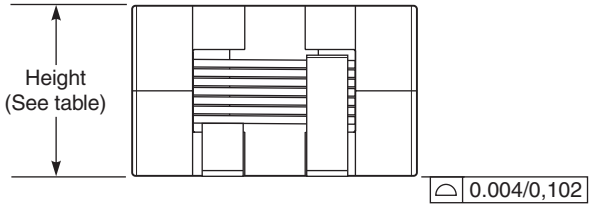
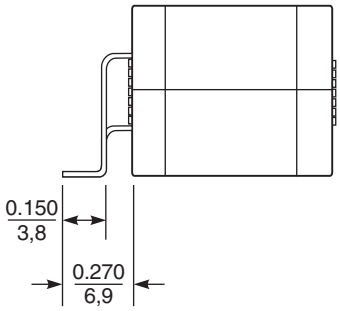


Recommended Land Pattern

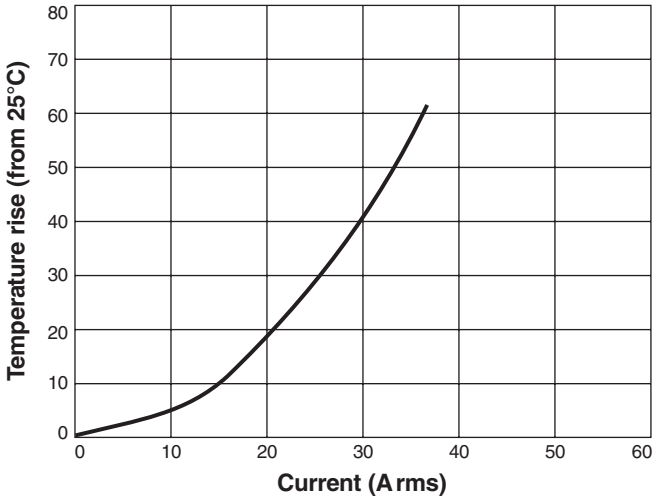




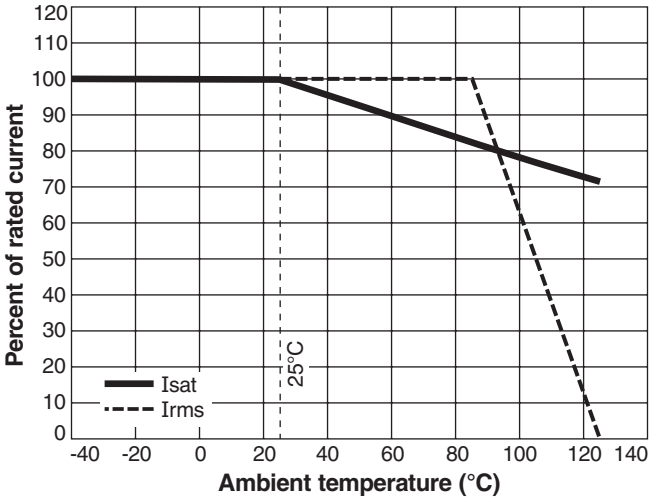


	Maximum height
SER2814L	0.560 / 14,22
SER2814H	0.560 / 14,22
SER2817H	0.655 / 16,64

Temperature Rise vs Current



Current Derating



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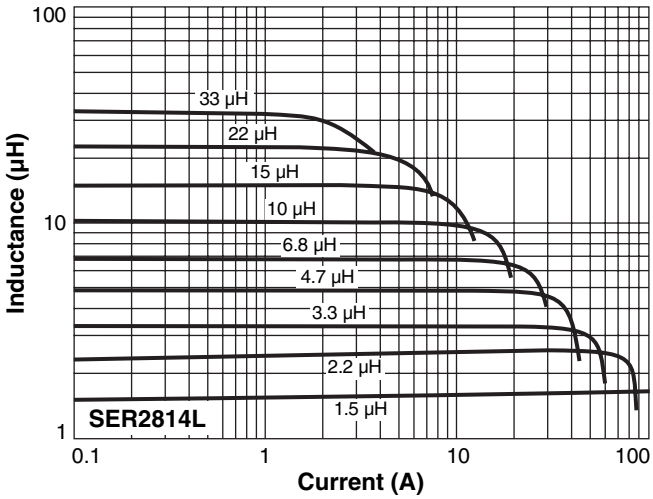
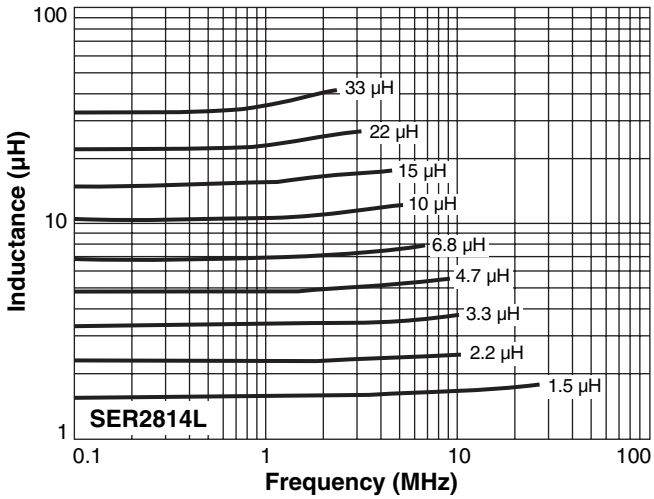
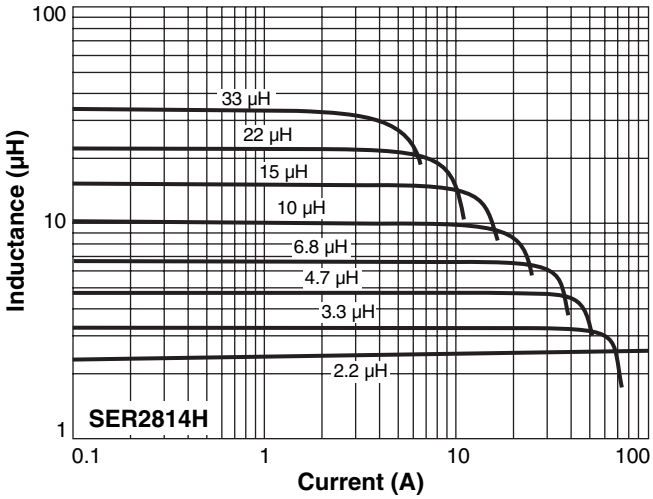
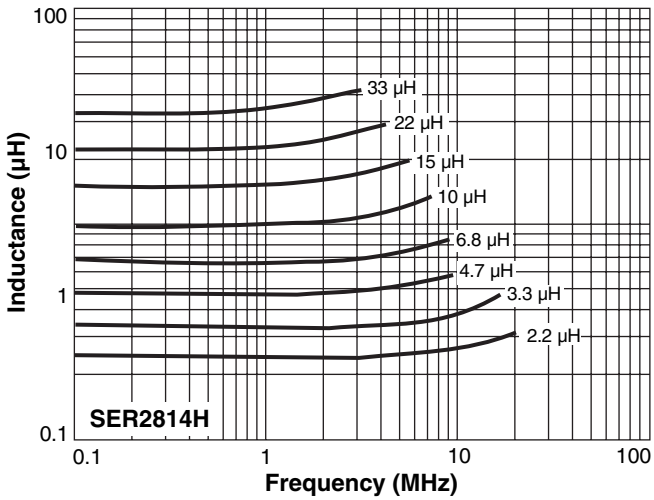
L vs Current

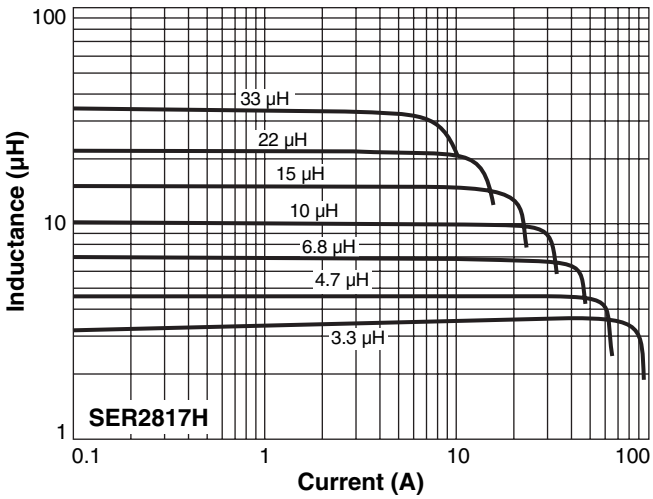


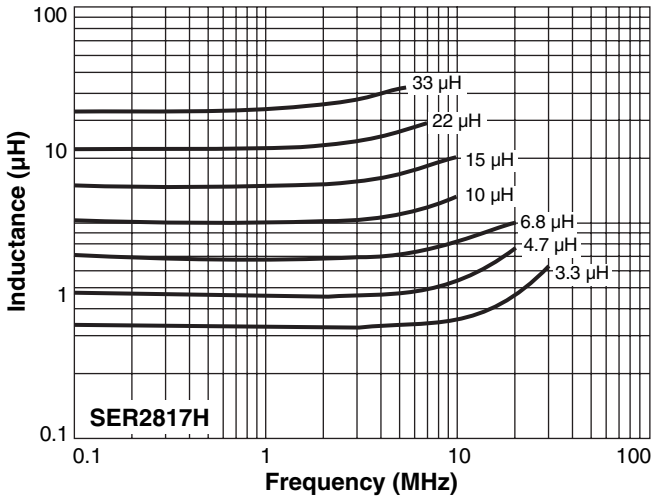
L vs Frequency











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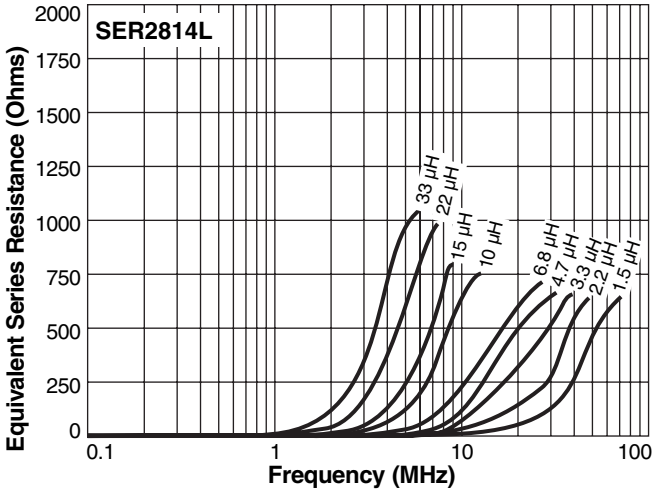
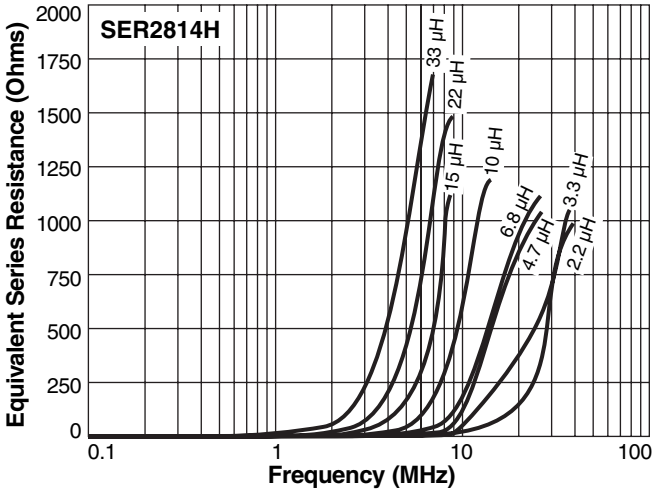
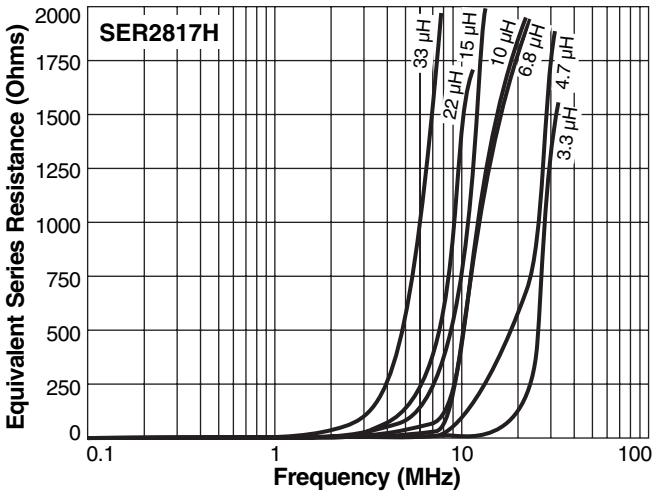
ESR vs Frequency







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