

SER2012-801MLD Datasheet

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| | |
|------------------------------|---|
| DiGi Electronics Part Number | SER2012-801MLD-DG |
| Manufacturer | Coilcraft |
| Manufacturer Product Number | SER2012-801MLD |
| Description | FIXED IND 800NH 35A 1.6MOHM SM |
| Detailed Description | 800 nH Shielded Wirewound Inductor 35 A 1.6mOhm Max Nonstandard |



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DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

SER2012-801MLD

Series:

SER2000

Type:

Wirewound

Inductance:

800 nH

Current Rating (Amps):

35 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

AEC-Q200

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

2012

Height - Seated (Max):

0.470" (11.95mm)

Manufacturer:

Coilcraft

Product Status:

Active

Material - Core:

Ferrite

Tolerance:

±20%

Current - Saturation (Isat):

75A

DC Resistance (DCR):

1.6mOhm Max

Frequency - Self Resonant:

91MHz

Operating Temperature:

-40°C ~ 85°C

Features:

-

Package / Case:

Nonstandard

Size / Dimension:

0.755" L x 0.365" W (19.18mm x 9.27mm)

Environmental & Export classification

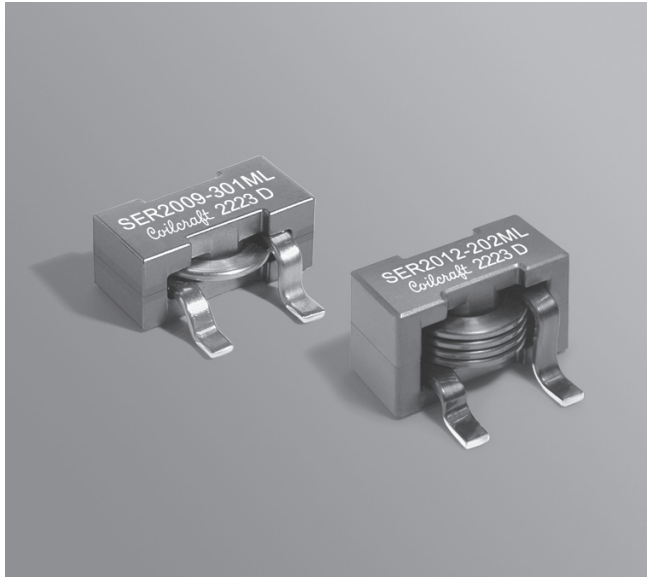
ECCN:

EAR99

HTSUS:

8504.50.8000

Shielded Power Inductor – SER2000



- 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 See www.coilcraft.com/coreloss

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). [Derating](#).

Storage temperature Component: -40°C to +125°C.

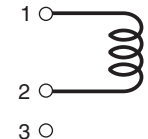
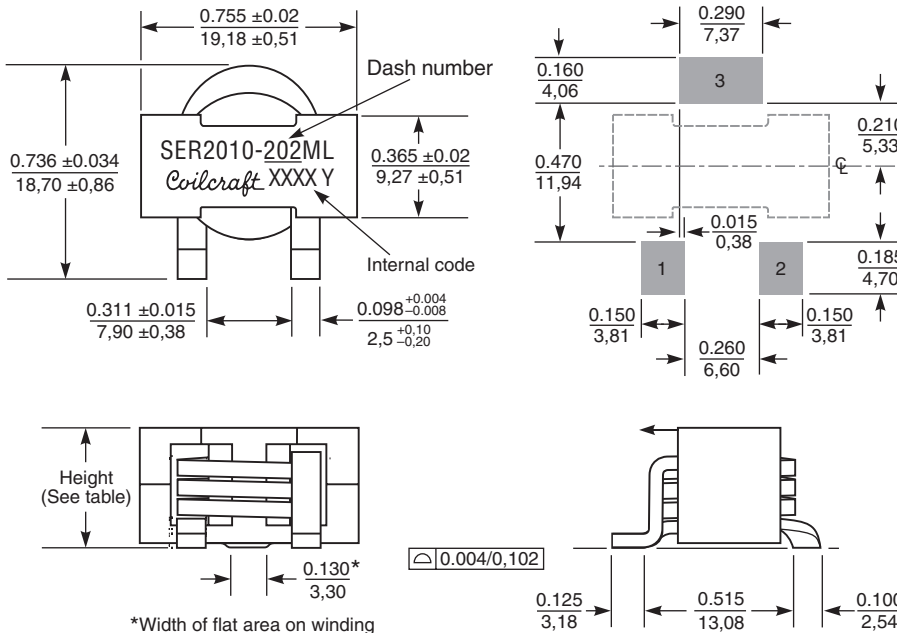
Tape and reel packaging: -40°C to +80°C

Resistance to soldering heat Max three 40 second 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)

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

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 |
|---------|----------------|---------------|
| 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 $\frac{\text{inches}}{\text{mm}}$

Packaging

- SER2009 200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 9.25 pocket depth
- SER2010 200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 10.5 pocket depth
- SER2011 170 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.6 pocket depth
- SER2012 150 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 13.0 pocket depth
- SER2013 150 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 14.0 pocket depth
- SER2014 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 – SER2000 Series

SPICE models
ON OUR WEB SITE

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

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

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

SER2013-472MLD

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

Special order:

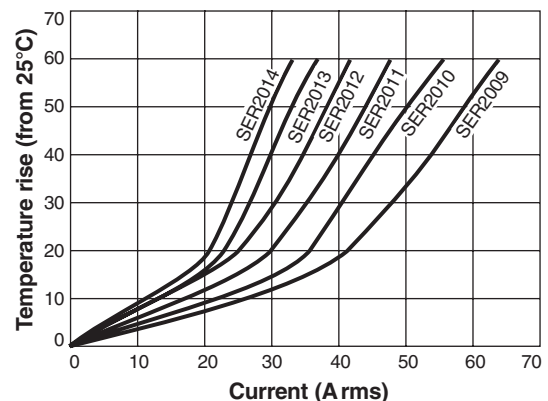
S = non-RoHS tin-lead (63/37).

Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape. Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

- 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 4395A network analyzer and an Agilent/HP 16092A test fixture.
- DC current at 25°C that causes a 10% (typ) inductance drop from its value without current.
[Click for temperature derating information.](#)
- Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
[Click for temperature derating information.](#) 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 below.
- Electrical specifications at 25°C.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

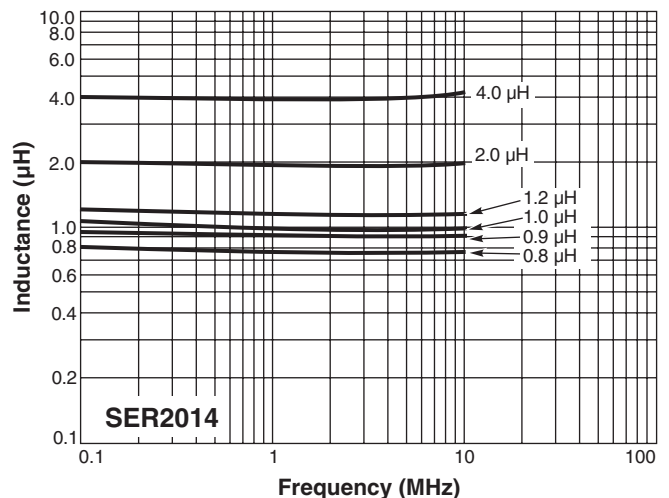
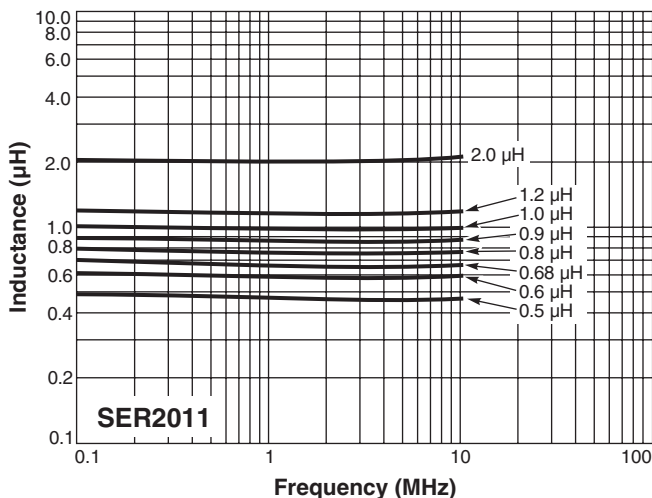
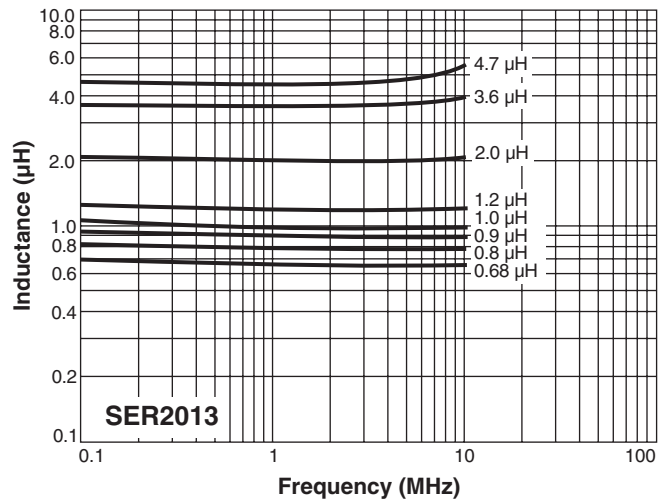
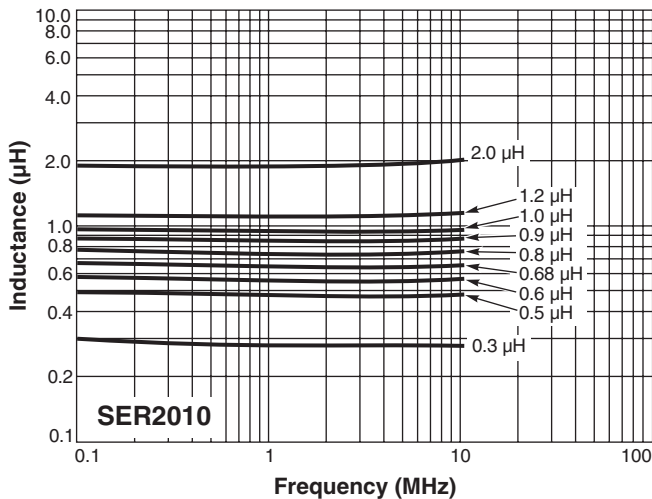
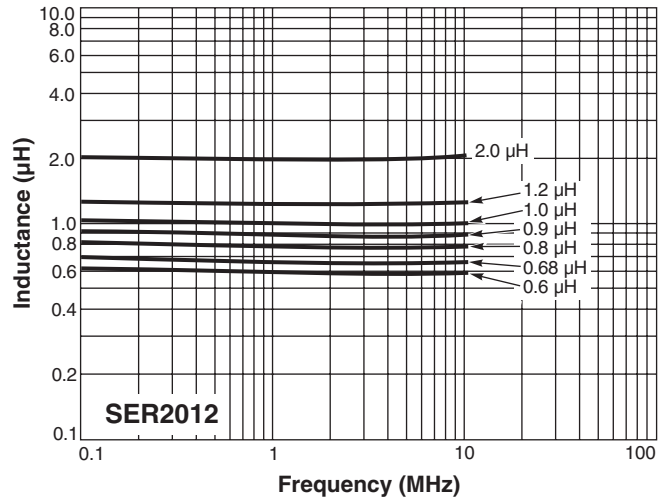
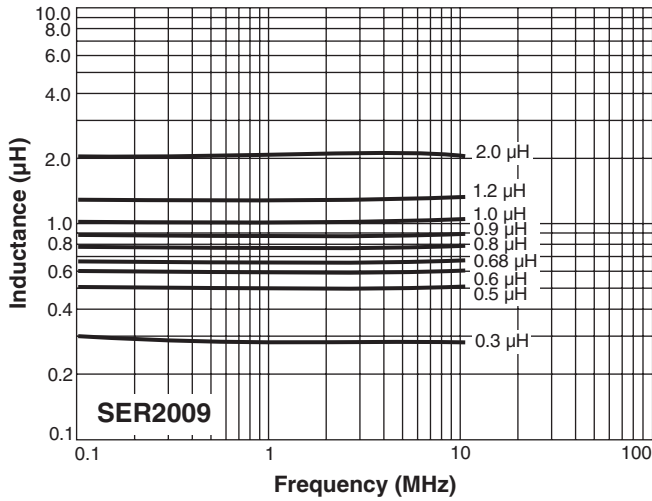
Temperature Rise vs Current





Shielded Power Inductors – SER2000 Series

L vs Frequency



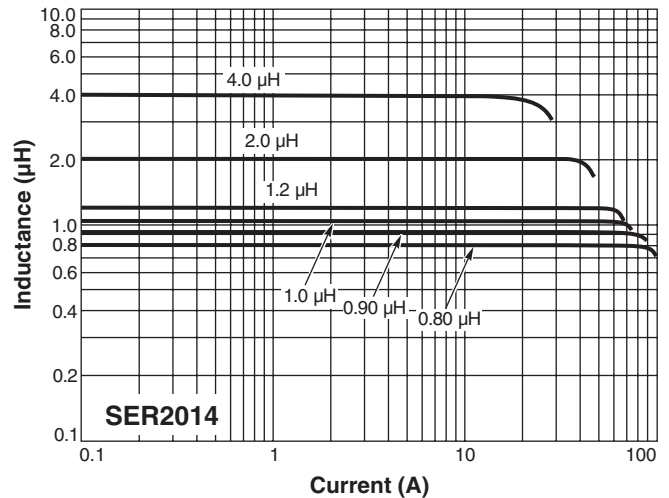
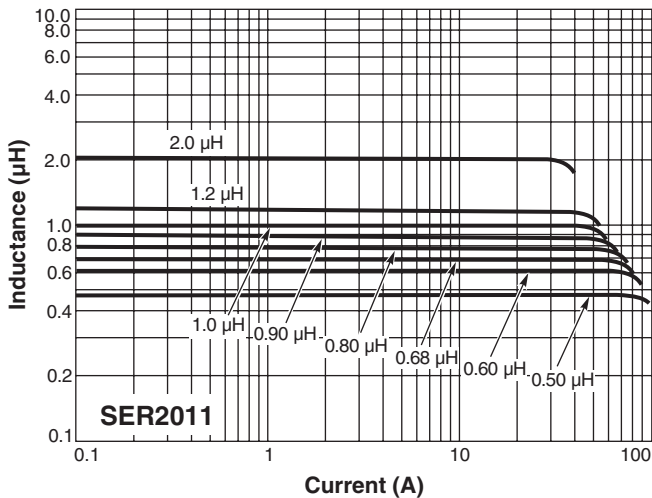
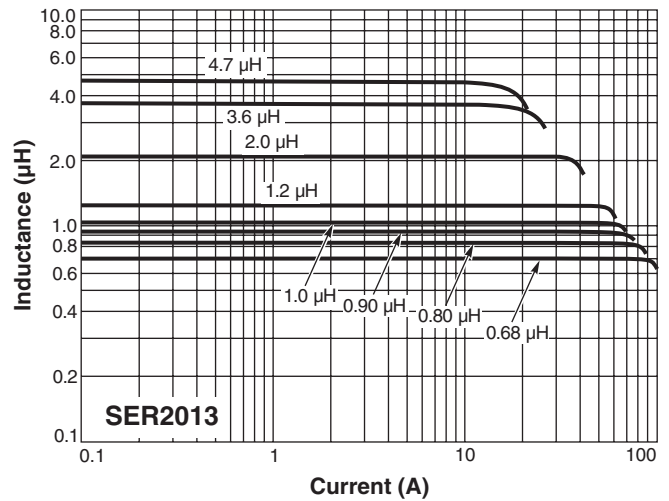
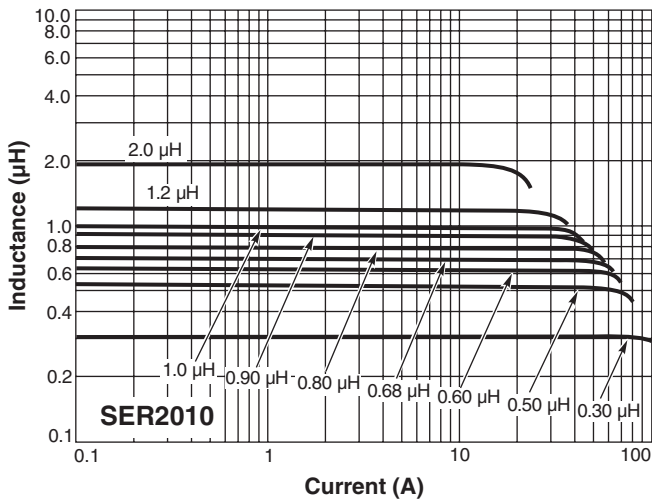
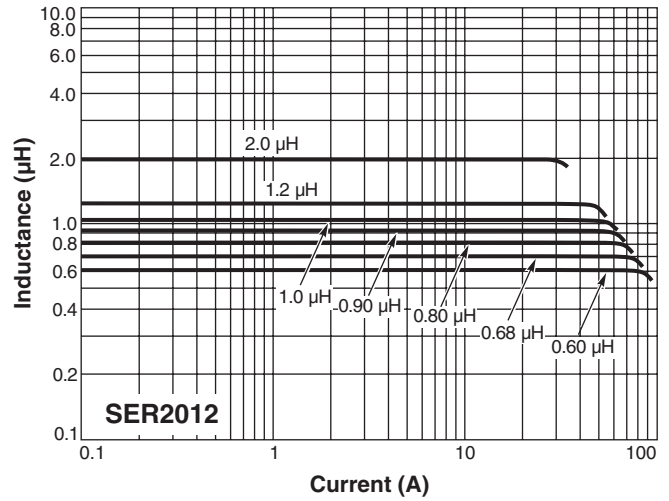
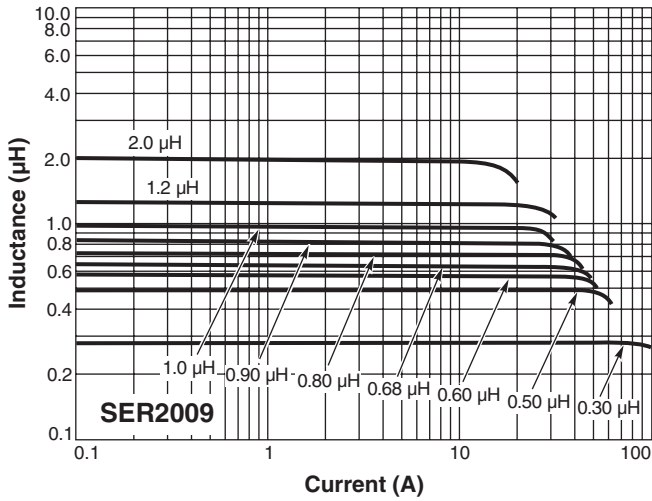
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L vs Current



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