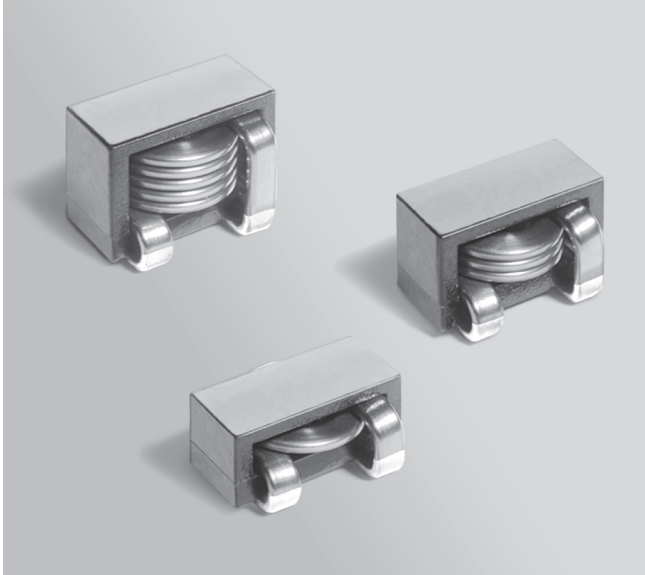




# Shielded Power Inductors – SER1400



- Designed for high current power supply applications
- Flat wire windings provide exceptionally low DCR
- Specially formed terminations provide small footprint
- Isat ratings as high as 105.9 A!
- Other inductance, DCR, height combinations are possible

**Designer's Kit C427** contains 3 each of all values

**Core material** Ferrite

**Environment** RoHS compliant, halogen free

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

**Ambient temperature** –40°C to +125°C with Irms current, +125°C to +165°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)

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

**PCB washing** Only pure water or alcohol recommended

## High Isat for high peak current applications

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR typ <sup>3</sup> (mOhms)	DCR max <sup>3</sup> (mOhms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>		Height max (inches / mm)
					10% drop	20% drop	30% drop	20°C rise	40°C rise	
SER1412-301ME_	0.30	1.30	1.43	154	87.0	92.8	105.9	30	37	0.498 / 12,66
SER1412-501ME_	0.50	1.30	1.43	122	56.1	59.3	62.5	30	37	0.498 / 12,66
SER1412-681ME_	0.68	1.30	1.43	100	41.2	43.5	45.8	30	37	0.498 / 12,66
SER1412-102ME_	1.0	1.30	1.43	78	28.9	31.0	32.2	30	37	0.498 / 12,66
SER1412-152ME_	1.5	1.30	1.43	62	21.8	23.6	24.6	30	37	0.498 / 12,66
SER1412-202ME_	2.0	1.30	1.43	50	16.9	18.5	19.4	30	37	0.498 / 12,66
SER1412-362ME_	3.6	1.30	1.43	35	9.6	11.2	12.1	30	37	0.498 / 12,66

## Low DCR for high average current applications

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR typ <sup>3</sup> (mOhms)	DCR max <sup>3</sup> (mOhms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>		Height max (inches / mm)
					10% drop	20% drop	30% drop	20°C rise	40°C rise	
SER1408-301ME_	0.30	0.48	0.55	140	43.2	49.6	53.0	38	42	0.325 / 8,26
SER1408-501ME_	0.50	0.48	0.55	83	25.8	29.6	31.4	38	42	0.325 / 8,26
SER1408-681ME_	0.68	0.48	0.55	63	18.8	21.6	23.2	38	42	0.325 / 8,26
SER1408-102ME_	1.0	0.48	0.55	48	12.1	14.2	16.1	38	42	0.325 / 8,26
SER1410-152ME_	1.5	0.90	0.99	53	16.8	18.9	20.3	33	39	0.416 / 10,56
SER1410-202ME_	2.0	0.90	0.99	45	12.1	13.9	15.0	33	39	0.416 / 10,56

1. When ordering, please specify **termination** and **packaging** codes:

SER1410-202MED

**Termination:** E = 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.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B 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 16193A 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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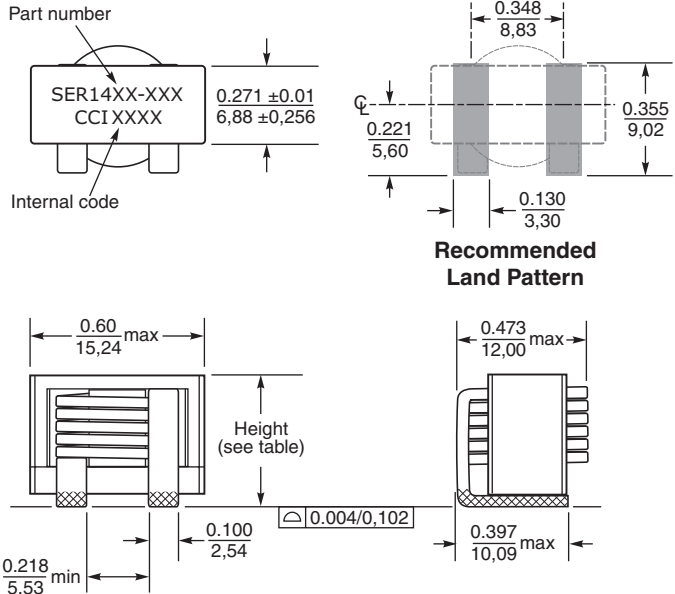
Document 609-1 Revised 04/14/11

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# Shielded Power Inductors – SER1400 Series



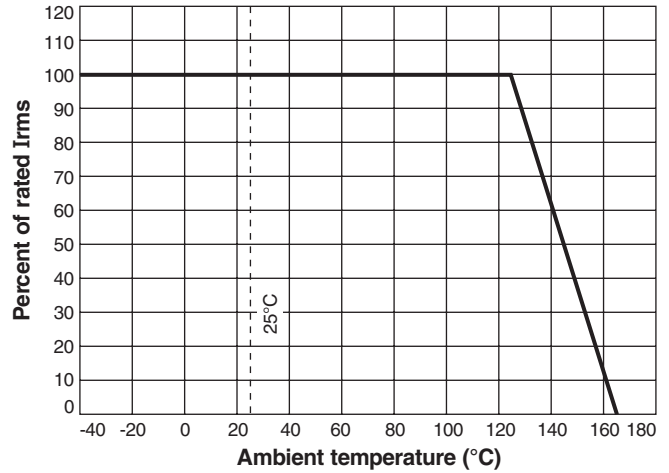
Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

Series	Height max (inches/ mm)	Weight
SER1408	0.325 / 8,26	3.5 – 3.8 g
SER1410	0.416 / 10,56	4.8 – 5.2 g
SER1412	0.498 / 12,66	6.1 – 6.7 g

### Packaging

- SER1408** 300/13" reel Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 8.6 mm pocket depth
- SER1410** 250/13" reel Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 10.8 mm pocket depth
- SER1412** 250/13" reel Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 12.8 mm pocket depth

### Irms Derating



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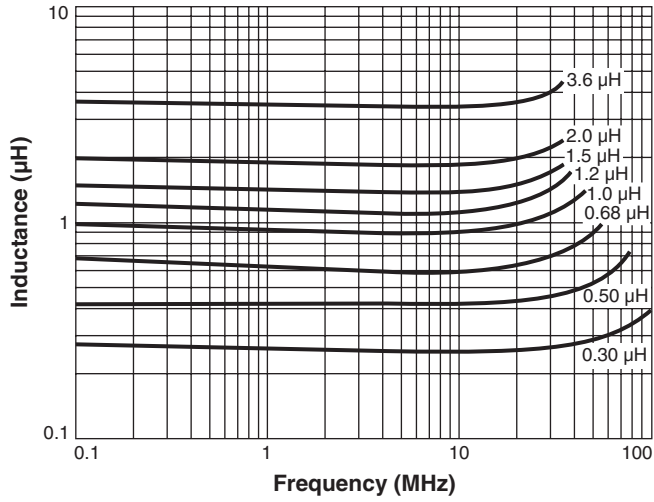
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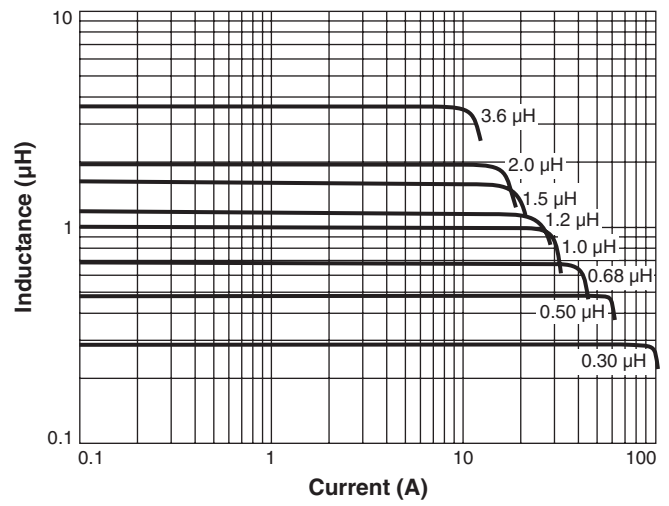


# Shielded Power Inductors – SER1400 Series

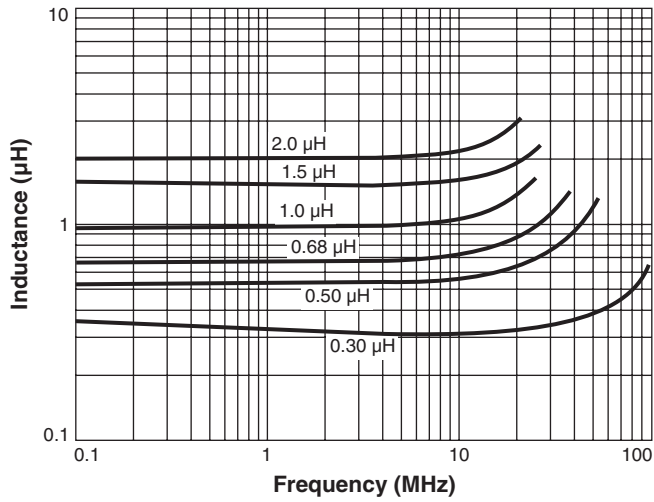
## L vs Frequency (High Isat Versions)



## L vs Current (High Isat Versions)



## L vs Frequency (Low DCR Versions)



## L vs Current (Low DCR Versions)

