

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!

Designer's Kit C427 contains 3 each of all values

Core material Ferrite

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

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 (40°C rise) Irms current.

Maximum part temperature +165°C (ambient + temp rise). [Derating](#).

Storage temperature Component: -40°C to +165°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)

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. See [Doc787_PCB_Washing.pdf](#).

High Isat for high peak current applications

Part number ¹	Inductance ² ±20% (µH)	DCR typ ³ (mOhms)	DCR max ³ (mOhms)	SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶		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 ¹	Inductance ² ±20% (µH)	DCR typ ³ (mOhms)	DCR max ³ (mOhms)	SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶		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 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. 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.

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. Typical dc current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information](#).

6. Typical 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](#).

7. Electrical specifications at 25°C.

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



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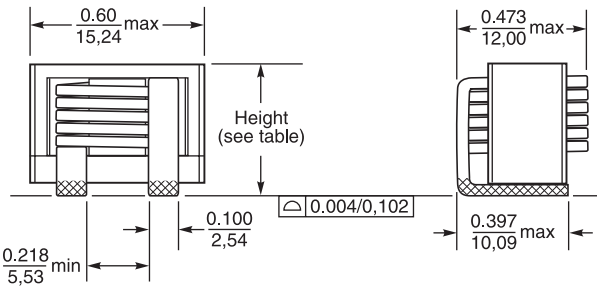
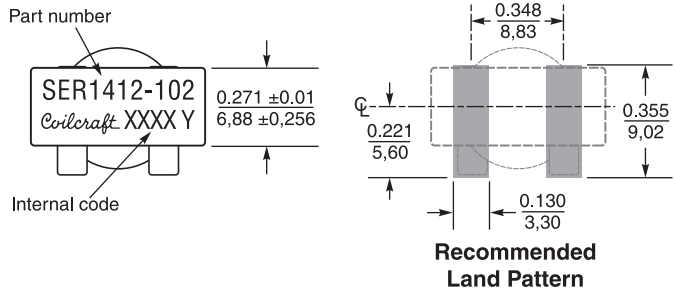
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Shielded Power Inductors – SER1400 Series



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

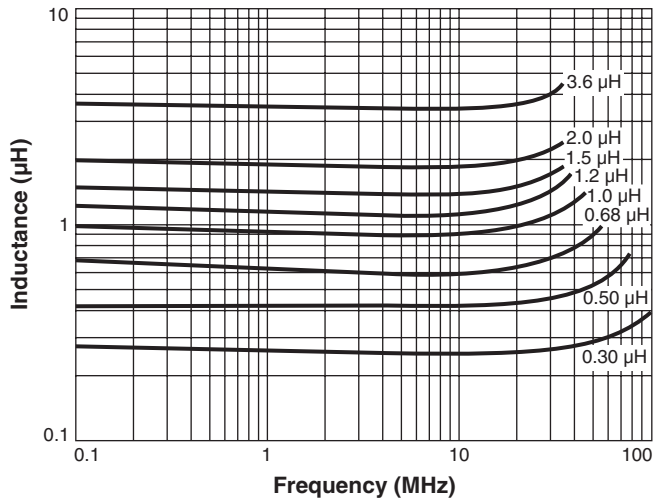


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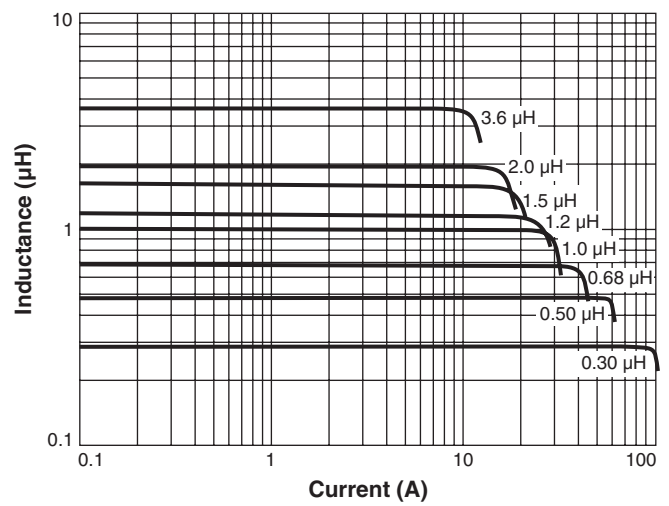


Shielded Power Inductors – SER1400 Series

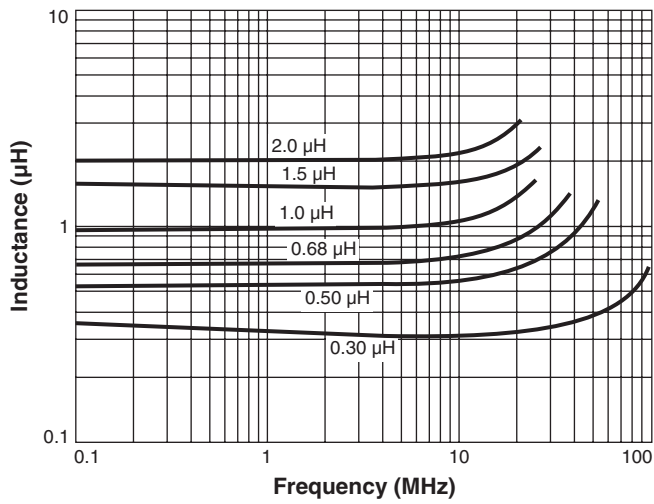
L vs Frequency (High Isat Versions)



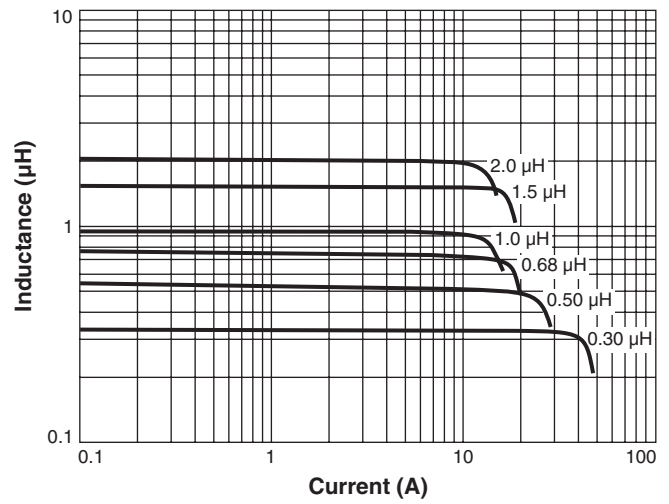
L vs Current (High Isat Versions)



L vs Frequency (Low DCR Versions)



L vs Current (Low DCR Versions)



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