

NEW!

Coupled Inductors NSC3113



- Optimized for 48 V dual-phase interleaved converters.
- Reduced ripple current improving overall efficiency
- High saturation current with flat inductance across the full current range
- AEC-Q200 qualified

Core material Ferrite

Environmental RoHS compliant, halogen free

Terminations RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

Weight 17.5 – 19.5 g

Ambient temperature –40°C to +125°C with (40°C rise) Irms current.

Maximum part temperature +165°C (ambient + temp rise).

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)

Recommended pick and place nozzle OD: 5 mm; ID: ≤ 2.5 mm

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

Part number ¹	Inductance (μH)			DCR max ⁵ (mOhms)	Leakage ⁶ L typ (μH)	Isolation ⁷ (VDC / Vrms)	Isat ⁸ (A)	Irms ⁹ (A)	Capacitance ¹⁰ (pF)
	L3 ² ±10%	L1 ³ ±15%	L2 ⁴ ±15%						
NSC3113-142L	1.4	2.6	2.6	0.76	1.2	200 / 141	95	30	6.2
NSC3113-182L	1.8	3.5	3.5	0.76	1.6	200 / 141	56	30	6.4
NSC3113-222L	2.2	4.1	4.1	1.56	1.9	200 / 141	80	20	7.3
NSC3113-282L	2.8	5.4	5.4	1.56	2.5	200 / 141	53	20	6.0

1. Please specify **termination code**:

NSC3113-282L

Termination: L = RoHS compliant tin-silver (96.5/3.5) over copper.

Special order:

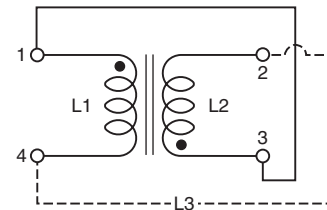
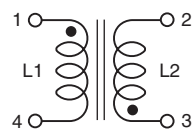
T = RoHS tin-silver-copper over copper(95.5/4/0.5) or

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

- Measured at 100 kHz, 0.1 Vrms, 0 ADC on an Agilent 4263B (or equivalent) across pins 2 – 4 with 1, 3 shorted.
- Measured at 100 kHz, 0.1 Vrms, 0 ADC on an Agilent 4263B (or equivalent) across pins 1 – 4.
- Measured at 100 kHz, 0.1 Vrms, 0 ADC on an Agilent 4263B (or equivalent) across pins 2 – 3.
- DCR is for L1 (Pins 1-4) and L2 (Pins 2 – 3).
- Leakage inductance is measured across 1 – 4, with pins 2 – 3 shorted at 100 kHz, 0.1 Vrms.
- 200 VDC / 141 Vrms, one minute isolation (hipot) between pins 2,3 shorted to pins 1, 4 shorted.
- DC current to cause a 20% drop in L3.
- DC current through pins 2 – 4 with 1, 3 shorted to cause a 40°C rise from 25°C ambient.
- Interwinding capacitance is measured from L1 to L2 at 250 KHz, 0.1 Vrms.
- Electrical specifications at 25°C

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Schematic



Measurement setup for L3



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com

UK +44-1236-730595 sales@coilcraft-europe.com

Taiwan +886-2-2264 3646 sales@coilcraft.com.tw

China +86-21-6218 8074 sales@coilcraft.com.cn

Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 1875-1 Revised 08/27/26

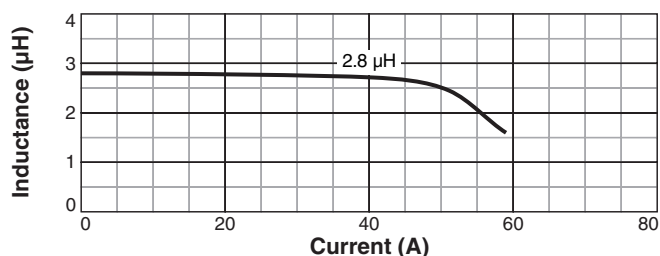
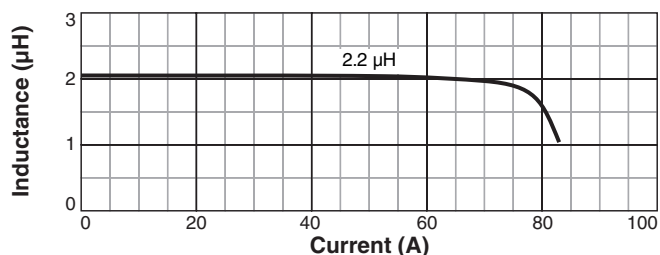
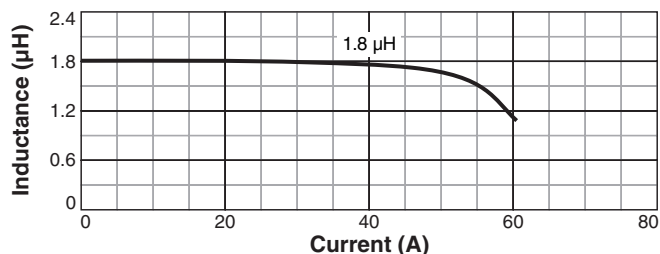
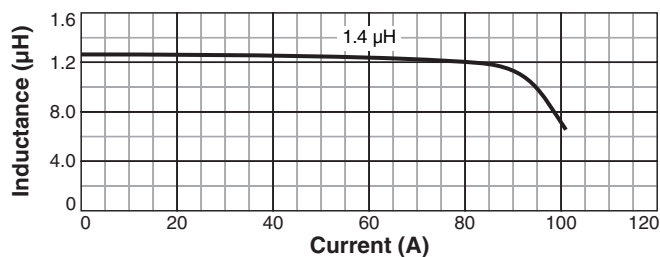
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

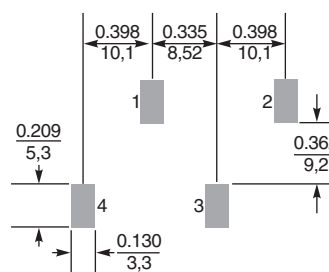
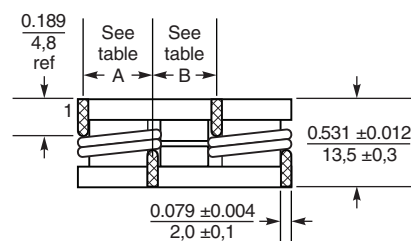
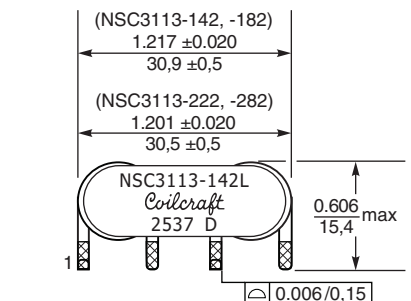


NSC3113 Coupled Inductors

L vs Current



Dimensions



Dash	A ref (in / mm)	B ref (in / mm)
-142	0.398 / 10,1	0.335 / 8,5
-182	0.398 / 10,1	0.335 / 8,5
-222	0.390 / 9,9	0.343 / 8,7
-282	0.390 / 9,9	0.343 / 8,7

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

Recommended Land Pattern

Packaging 30 parts per tray