



Shielded Power Inductor

For NSC LM315x
SIMPLE SWITCHER®



Part number ¹	Inductance ² ±20% (µH)	DCR ±8% (mOhm)	SRF typ ³ (MHz)	Isat ⁴ (A)	Irms ⁵ (A)
HA3778-AL_	1.65	2.53	55	17	20

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

HA3778-ALC

Termination: L = 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: C = 7" machine-ready reel. EIA-481 embossed plastic tape (100 parts per full reel).

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (500 parts per full reel).

- Inductance measured at 500 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4284A LCR meter or equivalent.
 - SRF measured on an Agilent/HP 8753ES.
 - DC current at which the inductance drops 30% (typ) from its value without current.
 - Current that causes a 40°C temperature rise from 25°C ambient.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

- Designed specifically for National Semiconductor LM315x SIMPLE SWITCHER® Controllers for applications with output current up to 12 A.
- L1 on NSC Demonstration Board LM3152-3.3
- Soft saturation makes it ideal for use in multi-phase VRM/VRD regulators and high current/high frequency DC/DC converters.
- Flat wire construction for low DCR
- The materials used eliminate all thermal aging issues

Core material Powdered iron

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

Weight 3.44 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

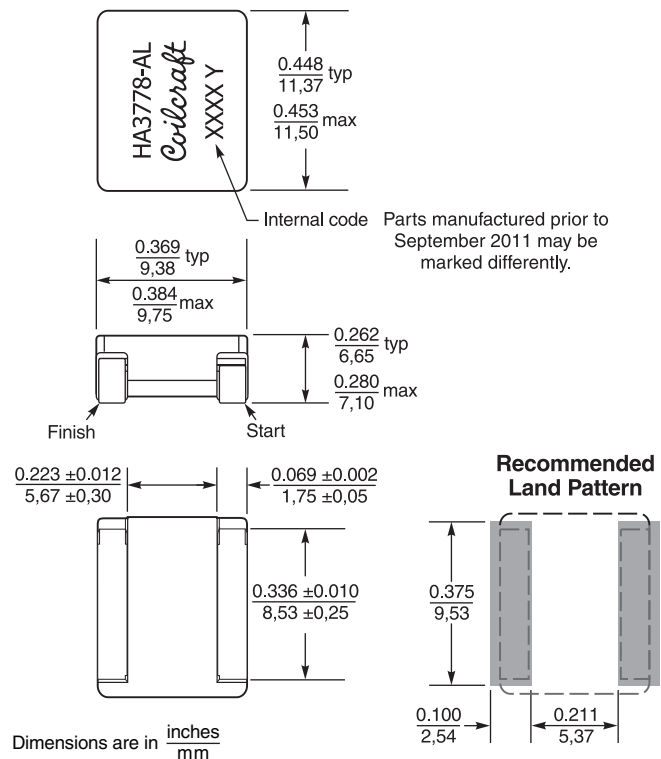
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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

Packaging 100/7" reel; 500/13" reel Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 7.5 mm pocket depth

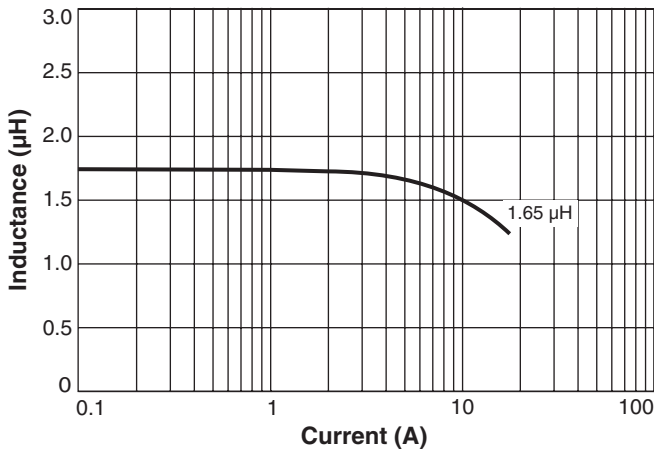
PCB washing Only pure water or alcohol recommended



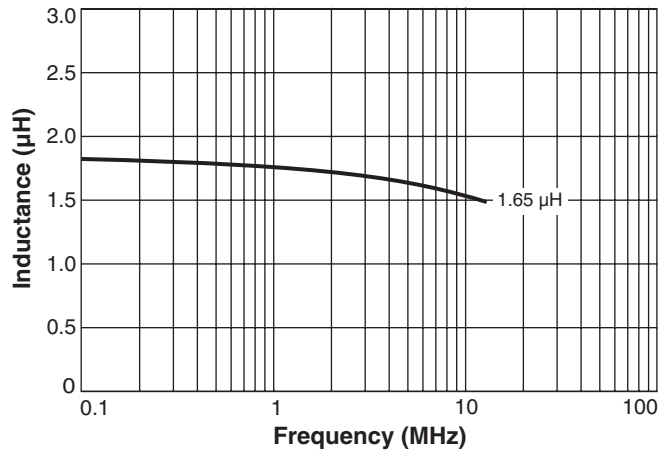


Shielded Power Inductor – HA3778-AL

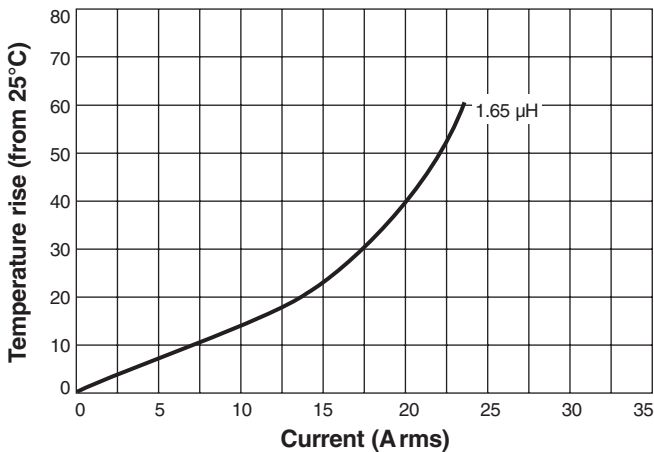
Inductance vs Current



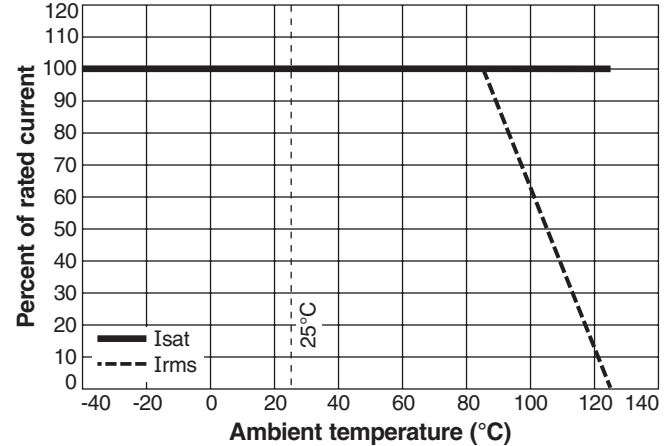
Inductance vs Frequency



Temperature Rise vs Current



Current Derating



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 684-2 Revised 09/16/11
 © Coilcraft Inc. 2012
 This product may not be used in medical of high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check out web site for latest information.