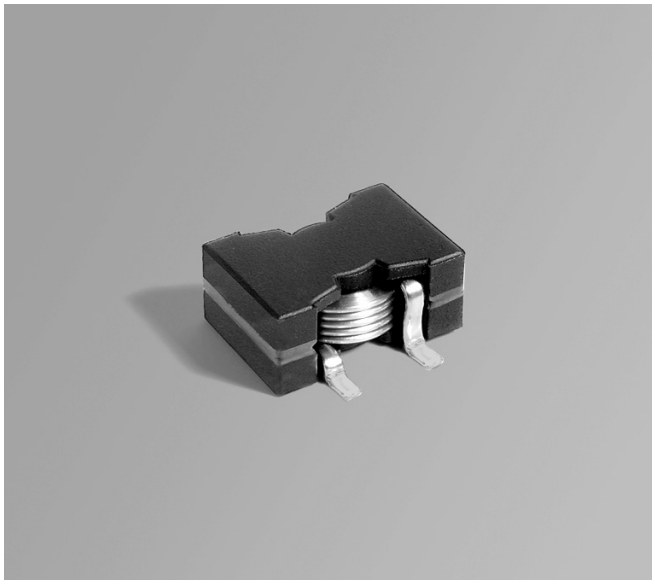
RoHS/ REACH COMPLIANT

Shielded Power Inductor

For National Semiconductor LM5115 DC Controller IC



Part number	Inductance[1] ±10% (µH)	DCR max (mOhms)	SRF typ[2] (MHz)	Isat[3] (A)	Irms[4] (A)
D1787-AL	33.0	2.8	9.0	8.0	23.0

1. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using Coilcraft SMD-D fixture in Agilent/HP 4284A impedance analyzer.
2. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
3. DC current at which the inductance drops 20% (typ) from its value without current. Click for temperature derating information.
4. Current that causes a 40°C rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.
5. Electrical specifications at 25°C.

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

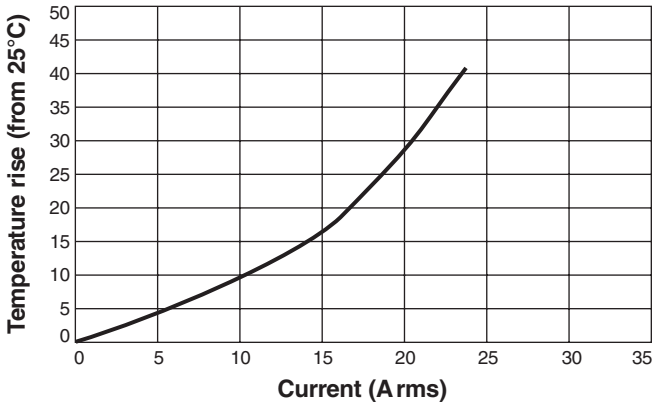
The D1787-AL was developed for use with the National Semiconductor LM5115 Secondary Side Post Regulator Controller and LM5025 Primary Side Controller. This flat wire power inductor offers extremely low dc resistance and very high current ratings (up to 23 A*rms*). The flat core allows for exceptional heat dissipation and provides an excellent surface for pick and place operation.

This inductor is ideal for power supply applications where high current handling is essential and is perfect for low-voltage dc-dc converters. Custom inductance values are also possible.

Request free evaluation samples by contacting Coilcraft or visiting **www.coilcraft.com.**

Core material Ferrite
Core and winding loss See www.coilcraft.com/coreloss
Terminations RoHS tin-silver (96.5/3.5) over copper
Weight 34.9 g
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)
Packaging 25 pieces per tray
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Temperature Rise vs Current



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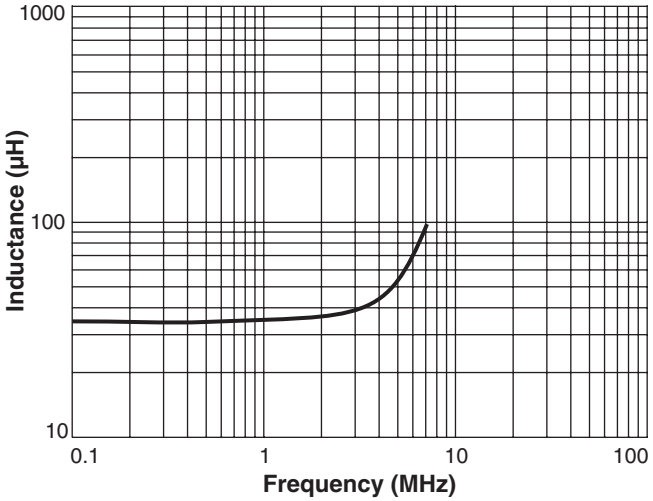
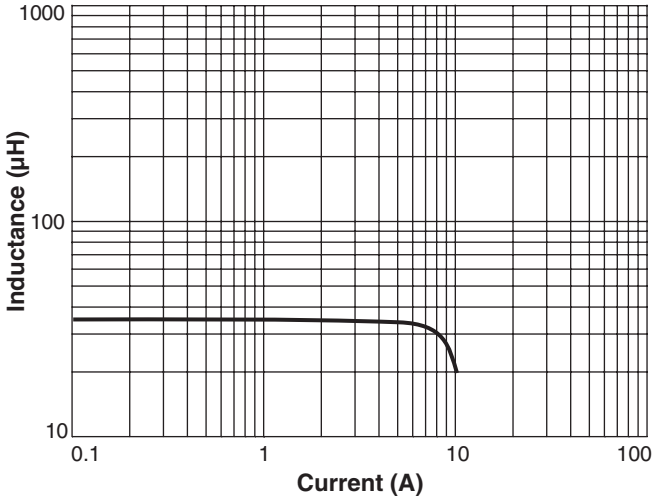
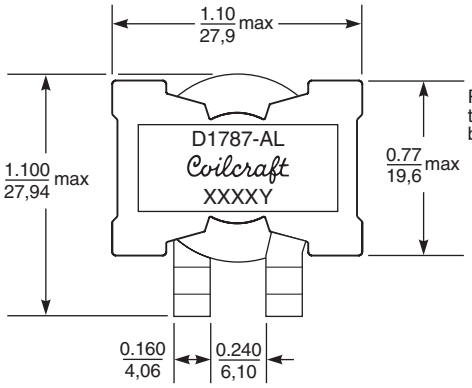
SMT Power Inductor - D1787-AL

Typical L vs Frequency



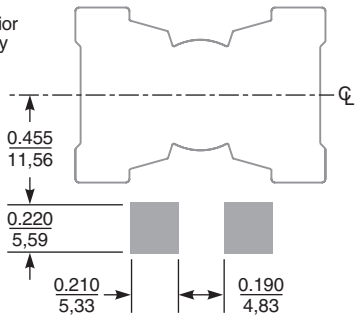
Typical L vs Current

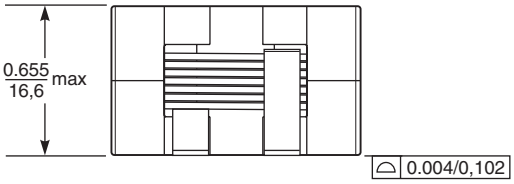


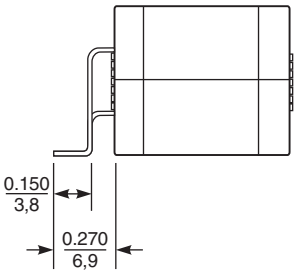


Parts manufactured prior to December 2011 may be marked differently.

Recommended Land Pattern







Dimensions are in inches / mm

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