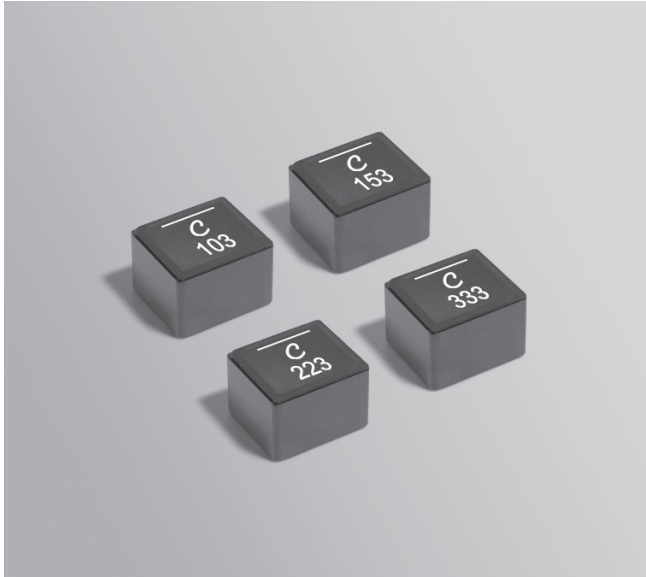




Shielded Power Inductors – XAL1080



- Industry's lowest DCR and low power losses
- High current handling with soft saturation characteristics
- AEC-Q200 qualified with a 165°C max part temperature

Core material Composite

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

Environmental RoHS compliant, halogen free

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

Weight 5.4 g

Operating voltage: 0 – 60 V

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: –55°C to +165°C.

Tape and reel packaging: –55°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)

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

Part number ¹	Inductance ² ±20% (μH)	DCR (mOhms) ³		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
XAL1080-103MED	10	10.7	12.3	11.5	5.8	9.5	13.4	10.7	14.8
XAL1080-123MED	12	12.0	13.8	10.6	5.5	9.0	12.6	10.0	13.9
XAL1080-153MED	15	15.6	17.9	9.2	5.2	8.2	11.5	8.5	11.7
XAL1080-183MED	18	18.5	21.3	8.5	4.6	7.4	10.3	7.9	10.8
XAL1080-223MED	22	21.3	24.5	7.4	4.1	6.6	9.0	7.3	10.0
XAL1080-333MED	33	33.4	38.4	6.5	3.5	5.7	7.9	5.5	7.5

1. When ordering, please specify **termination** code:

XAL1080-333MED

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 (500 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

2. Inductance tested at 1 MHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A or equivalent.

5. DC current at 25°C that causes an inductance drop from its value without current.

6. 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.

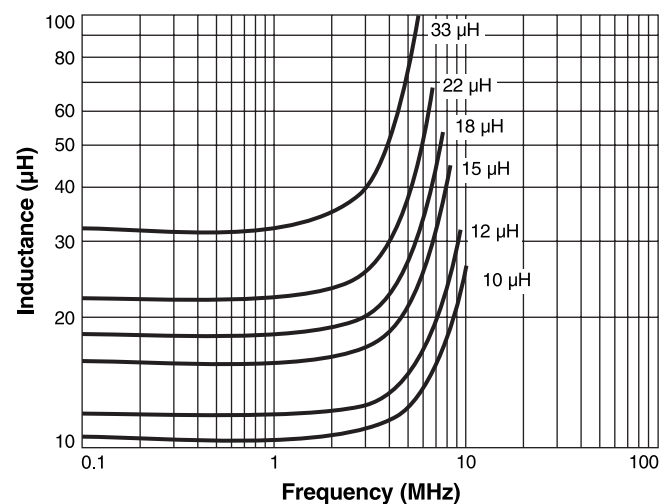
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Irms Testing

Irms testing was performed on 0.75 inch wide × 0.25 inch thick copper traces in still air.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.

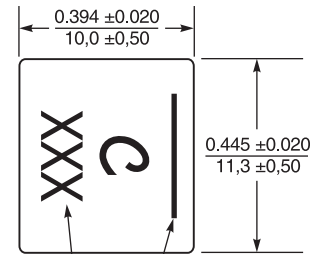
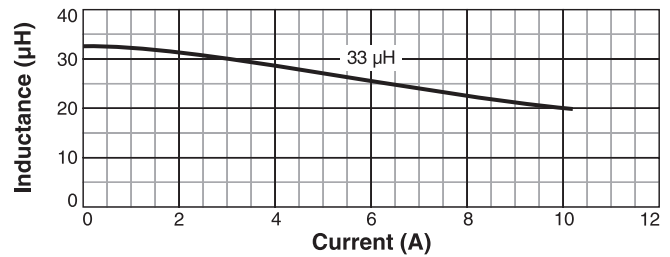
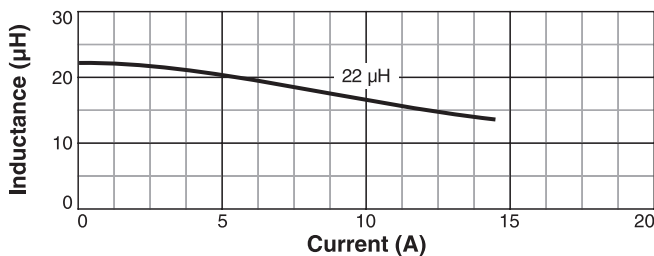
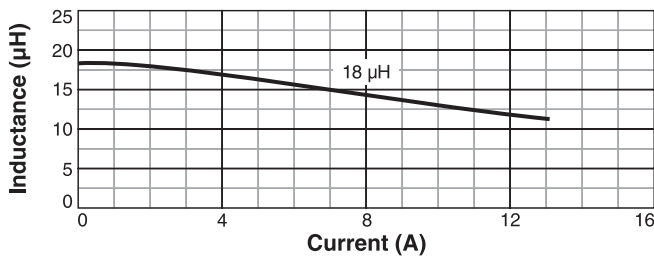
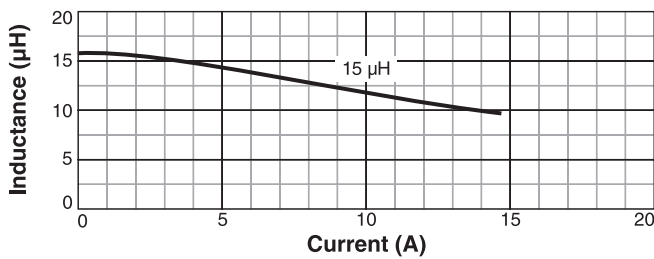
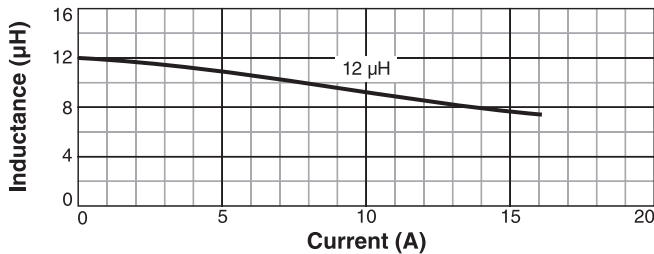
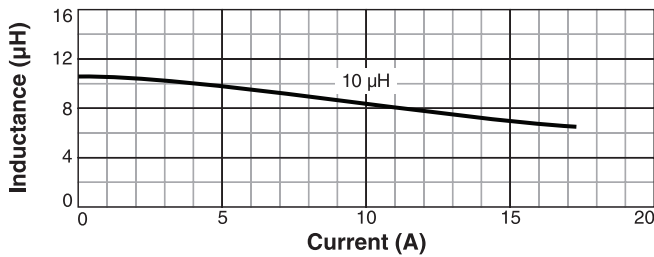
Typical L vs Frequency



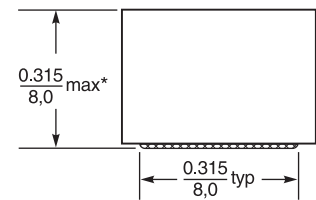
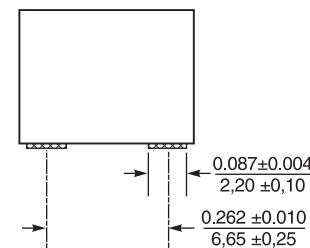


Shielded Power Inductors – XAL1080

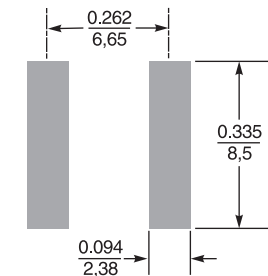
Typical L vs Current



Dash number — Indicates direction of terminals and start (short) lead. Connect high dv/dt here for lowest EMI.



* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0,13 mm



Recommended Land Pattern

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

Packaging 500/13" reel Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 8.23 mm pocket depth