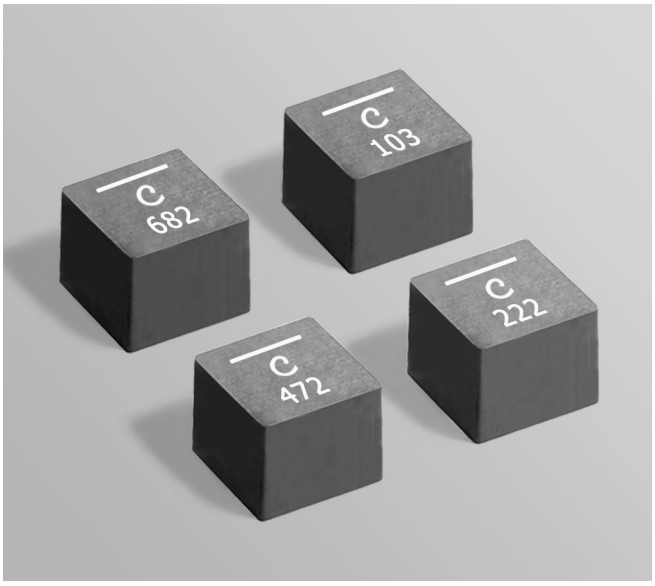
Shielded Power Inductors – XAL8080



- High current – up to 38 A
- Very low DCR – as low as 4.08 mOhms
- Soft saturation

Core material Composite

Environmental RoHS compliant, halogen free

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

Weight 3 g

Ambient temperature –40°C to +125°C with 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)

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

Packaging 450/13″ reel Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 8.36 mm pocket depth

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] typ	DCR (mOhms)[3] max	SRF typ[4] (MHz)	Isat[5] (A)	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
XAL8080-681ME_	0.68	1.38	1.65	70.00	38.0	27.0	37.0
XAL8080-102ME_	1.0	2.11	2.33	49.22	31.3	24.9	34.1
XAL8080-222ME_	2.2	4.08	4.49	36.73	24.0	16.0	21.5
XAL8080-472ME_	4.7	8.89	9.77	24.14	17.4	10.5	14.6
XAL8080-682ME_	6.8	13.2	14.5	20.64	14.0	8.0	11.3
XAL8080-103ME_	10	21.0	23.1	15.63	10.9	6.6	8.7

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.

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

   XAL8080-103MED

   Packaging: D = 13″ machine-ready reel. EIA-481 embossed plastic tape. (450 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.
2. Inductance tested at 100 kHz, 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 a 30% (typ) inductance drop from its value without current. Click for temperature derating information.
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.

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NEW!

RoHS COMPLIANT

Halogen Free

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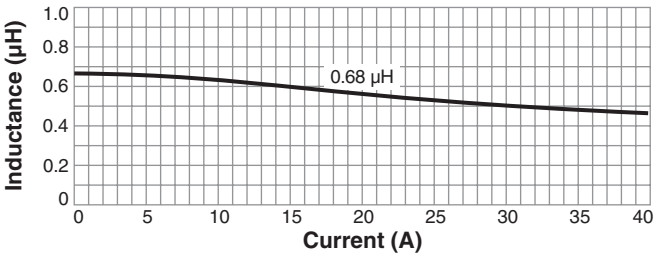
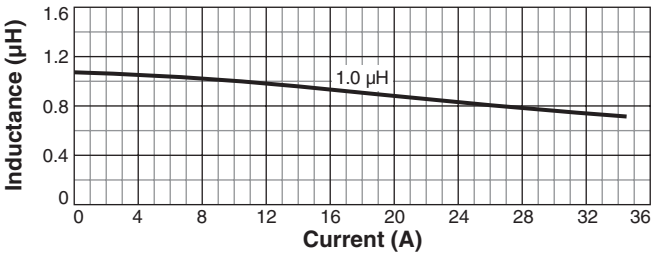
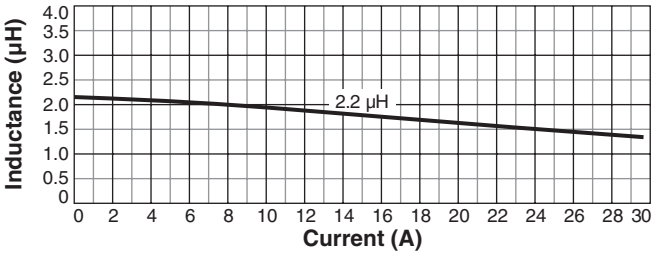
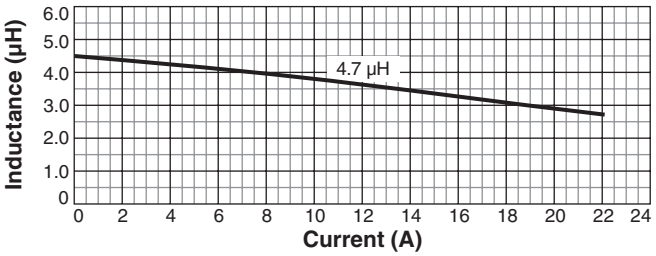
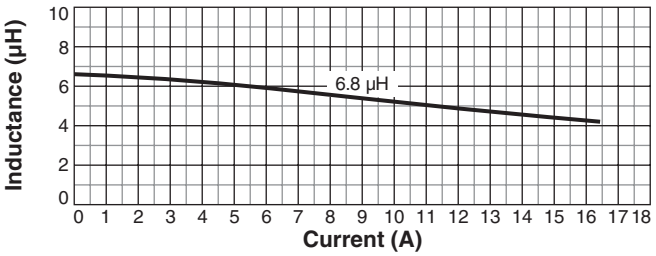
L vs Current

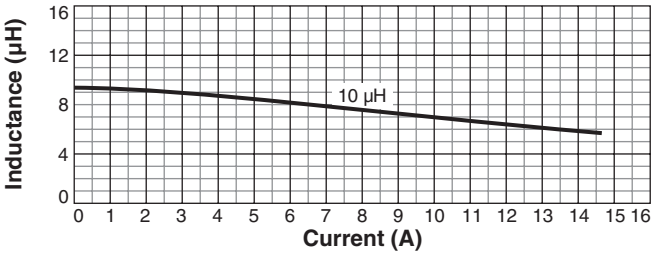




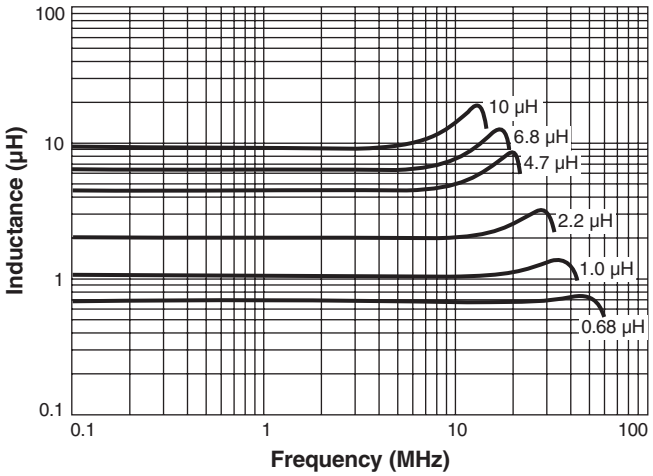


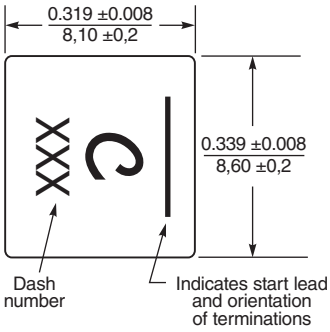




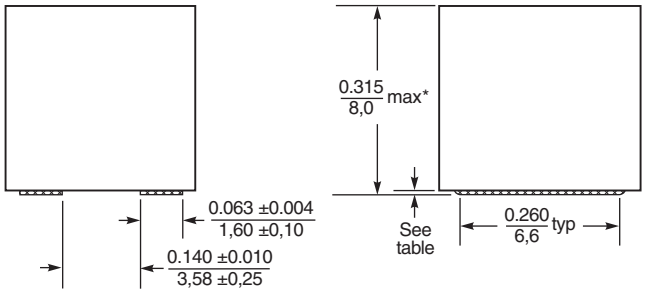


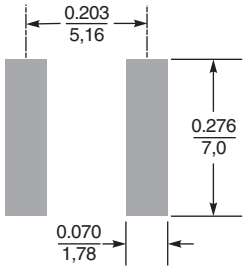
L vs Frequency





* 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

Dash number	Terminal thickness (typ) (in / mm)
-681	0.0236 / 0.60
-102	0.0236 / 0.60
-222	0.0197 / 0.50
-472	0.0118 / 0.30
-682	0.0098 / 0.25
-103	0.0079 / 0.20

Dimensions are in inches / mm

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