



# Shielded Power Inductors - XGL1712



- Industry's lowest DCR and low power losses
- Wide inductance range up to 82 uH
- High current handling with soft saturation characteristics
- AEC-Q200 qualified with 165°C max part temperature

## Core material Composite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://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** 20 – 25 g

**Operating voltage** 60 V<sup>7</sup>

**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](http://Doc787_PCB_Washing.pdf).

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (μH)	DCR (mOhms) <sup>3</sup>		SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
XGL1712-102MED	1.0	0.9	1.1	27	40.0	68.0	95.0	40.0	55.0
XGL1712-162MED	1.6	1.1	1.3	21	32.0	54.5	77.0	36.0	50.0
XGL1712-232MED	2.3	1.3	1.5	17	28.5	48.0	69.5	31.6	43.5
XGL1712-332MED	3.3	1.6	1.9	15	23.0	40.0	59.0	30.3	41.7
XGL1712-472MED	4.7	2.0	2.3	13	19.9	35.0	51.5	27.2	37.7
XGL1712-562MED	5.6	2.5	2.8	12	18.2	32.0	47.0	24.6	33.9
XGL1712-752MED	7.5	3.1	3.6	9.7	16.5	28.5	42.0	22.4	31.5
XGL1712-103MED	10	3.8	4.4	8.4	14.3	24.5	35.0	20.3	27.9
XGL1712-153MED	15	6.3	7.2	6.6	11.3	19.7	29.0	16.8	22.7
XGL1712-183MED	18	6.9	7.9	6.3	10.9	18.5	27.0	15.4	21.2
XGL1712-223MED	22	8.8	9.8	5.7	9.8	16.6	24.0	14.4	19.5
XGL1712-333MED	33	13.7	15.2	5.1	8.9	14.6	20.5	11.3	15.4
XGL1712-473MED	47	18.7	20.7	4.1	7.1	11.8	16.5	9.7	13.3
XGL1712-683MED	68	28.2	31.3	3.4	5.6	9.2	12.8	8.1	11.0
XGL1712-823MED	82	34.6	38.4	2.8	5.3	8.8	12.5	7.1	9.7

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

**XGL1712-823MED**

**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 (150 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 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 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. Voltage capability varies by part number and in many cases may be higher than the listed voltage.

8. 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 x 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.

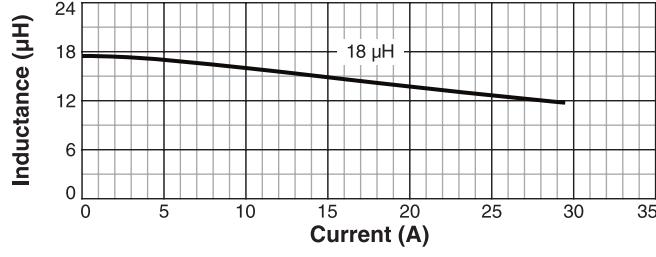
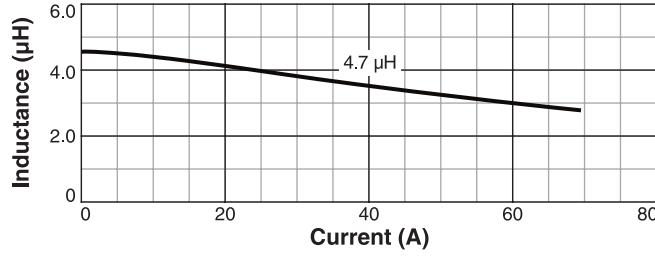
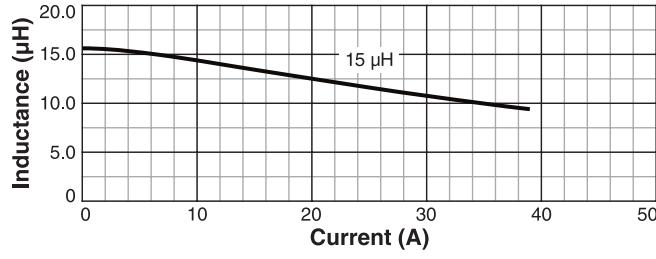
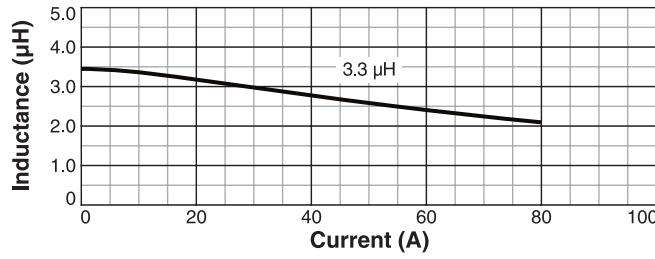
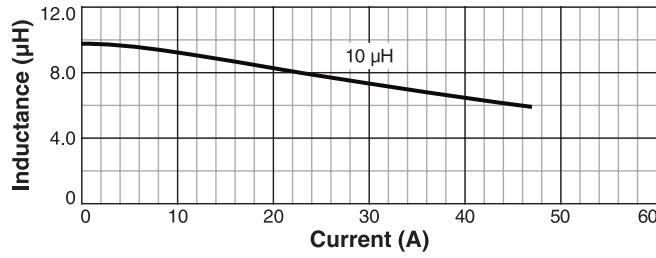
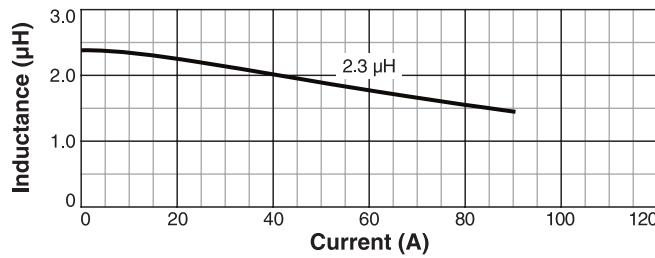
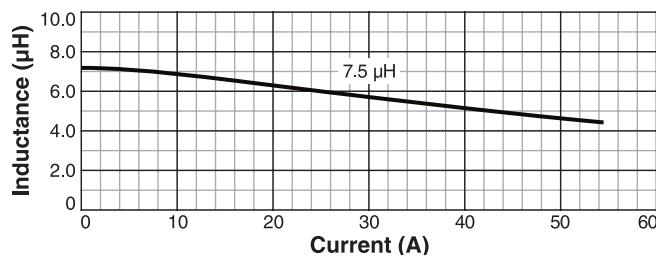
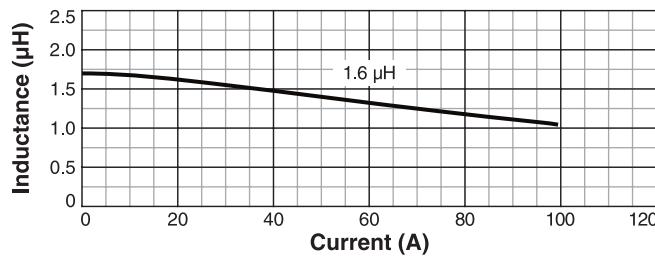
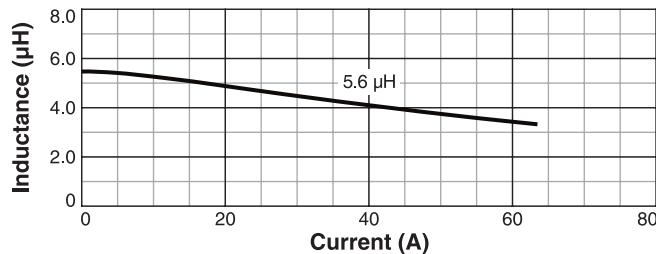
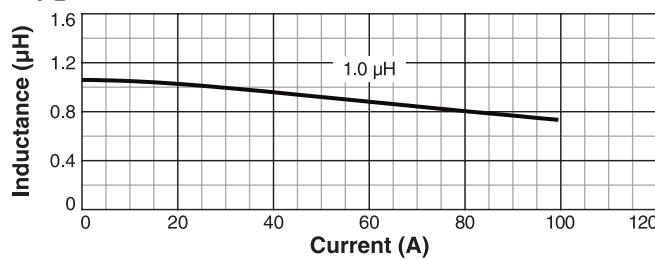


AEC

Q200 +125°C

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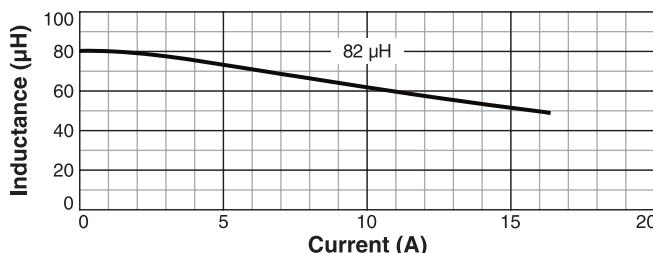
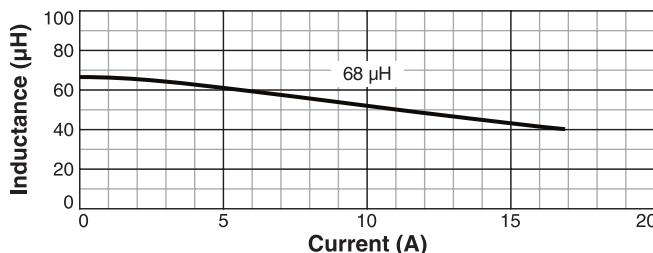
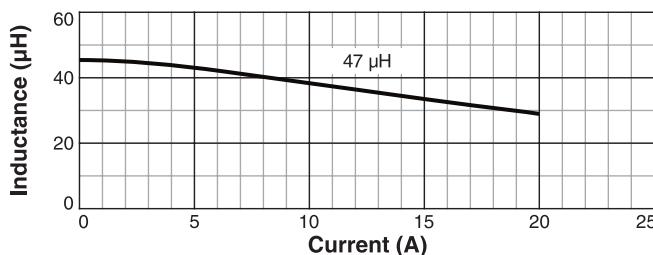
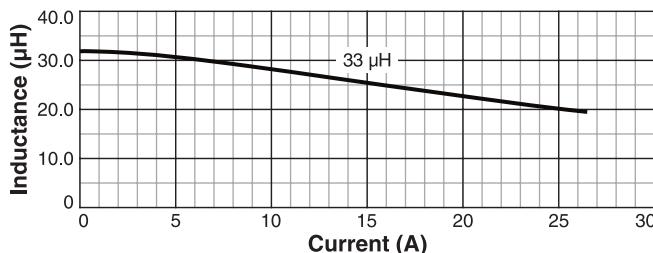
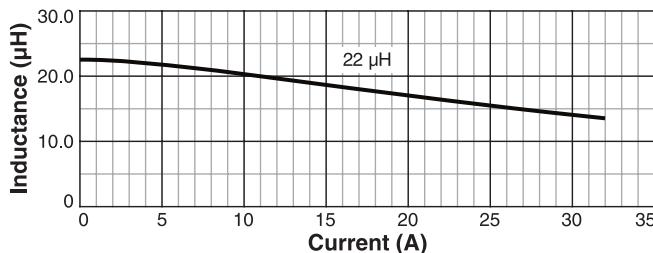
## Typical L vs Current



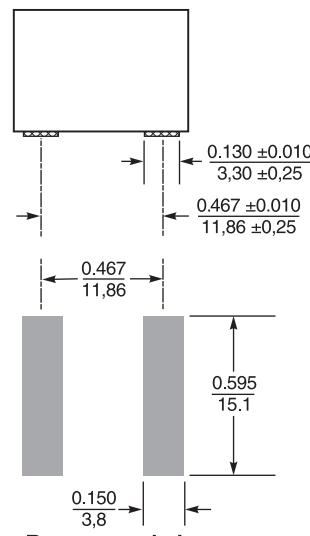
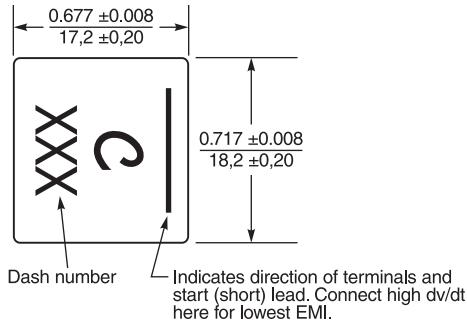
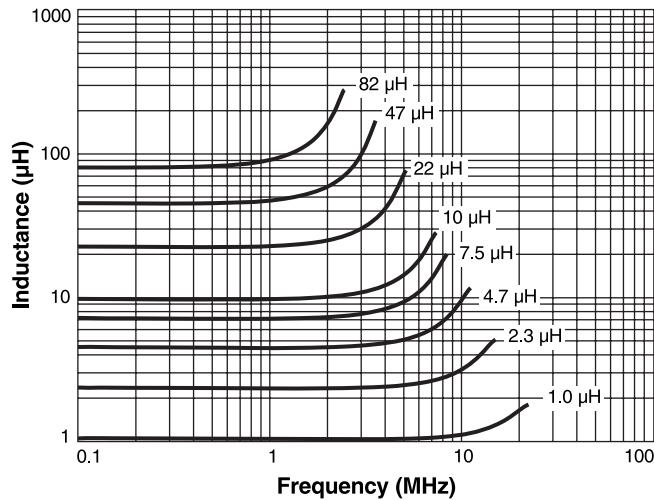


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## Typical L vs Current



## Typical L vs Frequency



Recommended Land Pattern

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

\* 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

**Packaging** 150/13" reel Plastic tape: 32 mm wide, 0.45 mm thick, 24 mm pocket spacing, 12.2 mm pocket depth

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