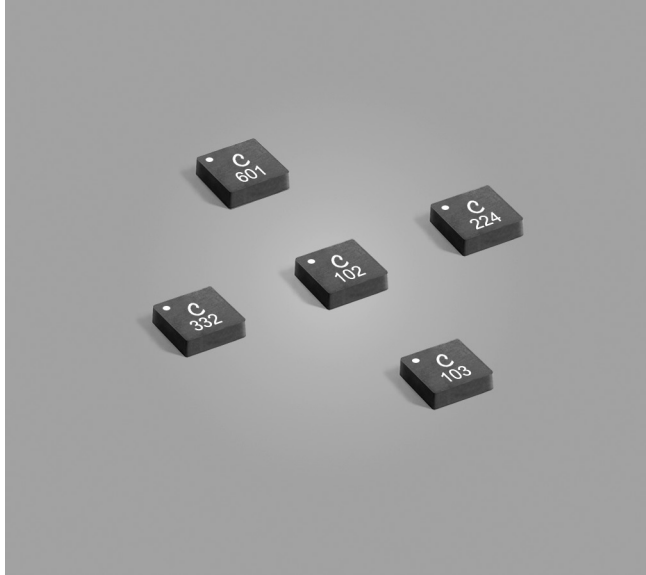


# Shielded Power Inductors – XFL3010



- AEC-Q200 Grade 1 (–40°C to +125°C)
- High current, magnetically shielded power inductors
- Only 1 mm high with a 3 mm × 3 mm footprint

**Designer's Kit C440** contains 5 of each XFL3010 and XFL3012 value

**Core material** Composite

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Other terminations available at additional cost.

**Weight** 44 mg

**Operating voltage** 0 – 40 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

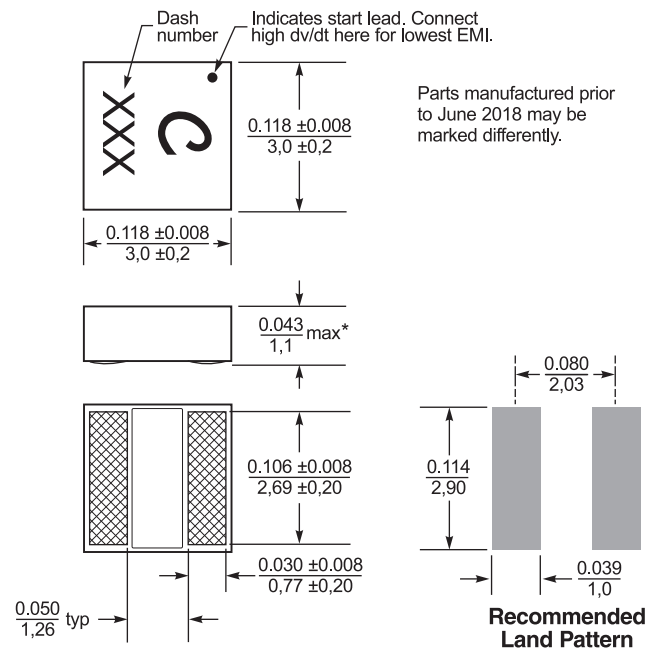
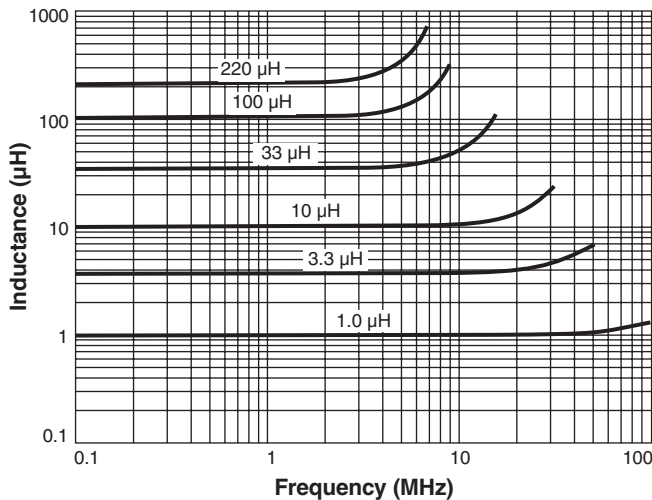
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

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

**Packaging** 2000/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.14 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

## Typical L vs Frequency



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.



# Shielded Power Inductors – XFL3010

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±20% (µH) | DCR (Ohms) <sup>3</sup> |       | SRF typ <sup>4</sup><br>(MHz) | Isat (A) <sup>5</sup> |          |          | Irms (A) <sup>6</sup> |           |
|--------------------------|--------------------------------------|-------------------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
|                          |                                      | nom                     | max   |                               | 10% drop              | 20% drop | 30% drop | 20°C rise             | 40°C rise |
| XFL3010-601ME_           | 0.60                                 | 0.030                   | 0.033 | 180                           | 1.8                   | 2.4      | 2.7      | 1.8                   | 2.5       |
| XFL3010-102ME_           | 1.0                                  | 0.043                   | 0.049 | 128                           | 1.5                   | 2.1      | 2.4      | 1.6                   | 2.3       |
| XFL3010-152ME_           | 1.5                                  | 0.071                   | 0.080 | 97.0                          | 1.2                   | 1.6      | 1.9      | 1.4                   | 1.9       |
| XFL3010-222ME_           | 2.2                                  | 0.111                   | 0.122 | 78.0                          | 0.94                  | 1.2      | 1.5      | 1.0                   | 1.3       |
| XFL3010-332ME_           | 3.3                                  | 0.154                   | 0.166 | 64.0                          | 0.86                  | 1.1      | 1.3      | 0.88                  | 1.2       |
| XFL3010-472ME_           | 4.7                                  | 0.217                   | 0.230 | 57.0                          | 0.71                  | 0.97     | 1.1      | 0.84                  | 1.1       |
| XFL3010-682ME_           | 6.8                                  | 0.315                   | 0.346 | 42.0                          | 0.56                  | 0.78     | 0.92     | 0.72                  | 0.95      |
| XFL3010-103ME_           | 10                                   | 0.472                   | 0.519 | 35.0                          | 0.44                  | 0.61     | 0.71     | 0.62                  | 0.82      |
| XFL3010-153ME_           | 15                                   | 0.521                   | 0.560 | 28.4                          | 0.33                  | 0.45     | 0.53     | 0.56                  | 0.76      |
| XFL3010-223ME_           | 22                                   | 0.770                   | 0.818 | 21.7                          | 0.26                  | 0.35     | 0.40     | 0.48                  | 0.66      |
| XFL3010-333ME_           | 33                                   | 1.12                    | 1.20  | 17.5                          | 0.22                  | 0.30     | 0.35     | 0.41                  | 0.56      |
| XFL3010-393ME_           | 39                                   | 1.23                    | 1.40  | 16.9                          | 0.21                  | 0.29     | 0.33     | 0.37                  | 0.51      |
| XFL3010-473ME_           | 47                                   | 1.71                    | 1.93  | 14.4                          | 0.16                  | 0.23     | 0.27     | 0.33                  | 0.44      |
| XFL3010-563ME_           | 56                                   | 1.95                    | 2.16  | 13.6                          | 0.16                  | 0.22     | 0.25     | 0.3                   | 0.41      |
| XFL3010-683ME_           | 68                                   | 2.32                    | 2.60  | 12.7                          | 0.15                  | 0.21     | 0.24     | 0.27                  | 0.36      |
| XFL3010-823ME_           | 82                                   | 2.77                    | 3.10  | 11.6                          | 0.14                  | 0.20     | 0.23     | 0.26                  | 0.34      |
| XFL3010-104ME_           | 100                                  | 4.64                    | 5.50  | 10.1                          | 0.13                  | 0.19     | 0.22     | 0.20                  | 0.29      |
| XFL3010-224ME_           | 220                                  | 9.91                    | 12.0  | 6.9                           | 0.08                  | 0.12     | 0.14     | 0.14                  | 0.19      |

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

**XFL3010-224MEC**

**Termination: E** = RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum.

Special order:

**S** = non-RoHS tin-lead (63/37).

**Packaging: C** = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

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 the specified 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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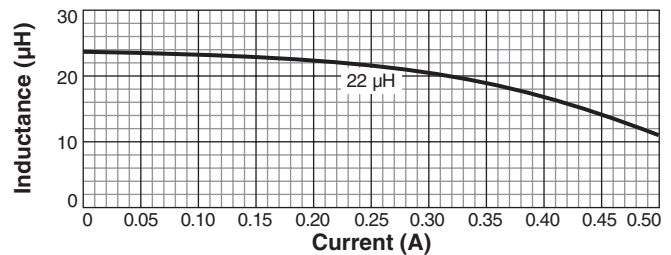
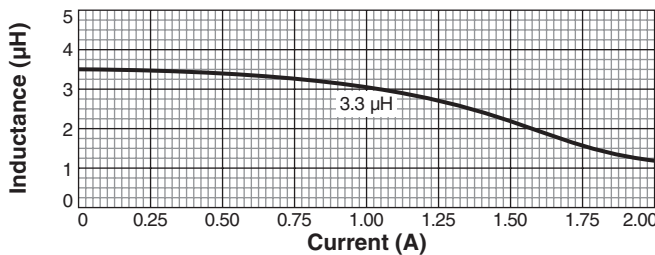
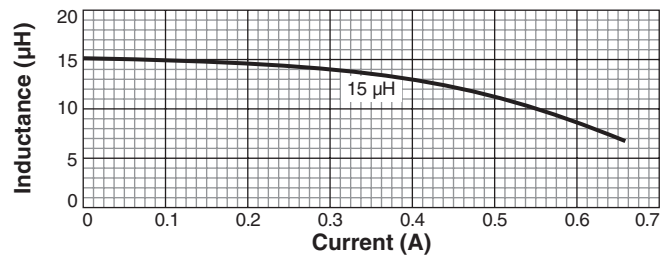
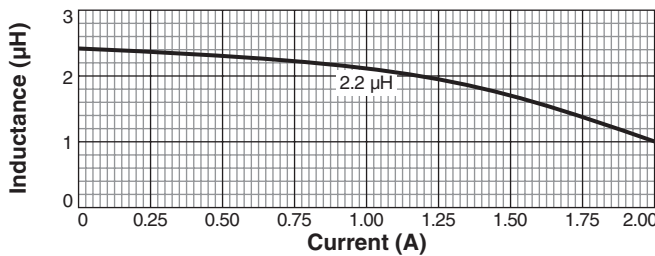
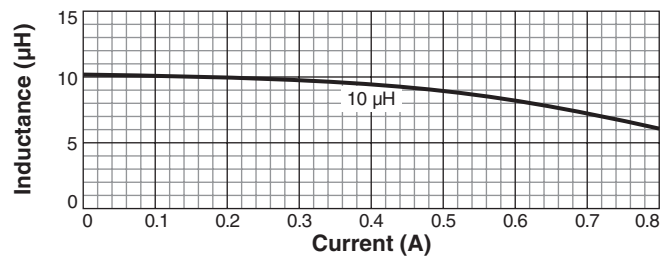
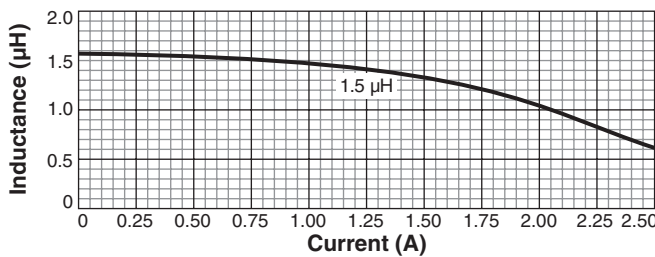
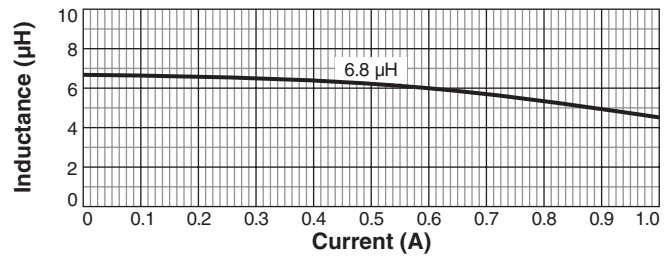
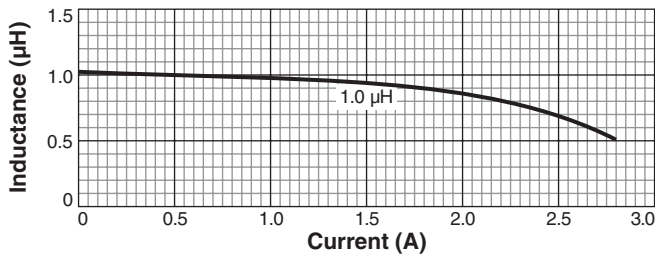
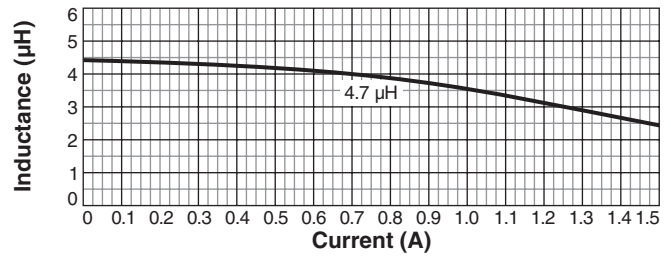
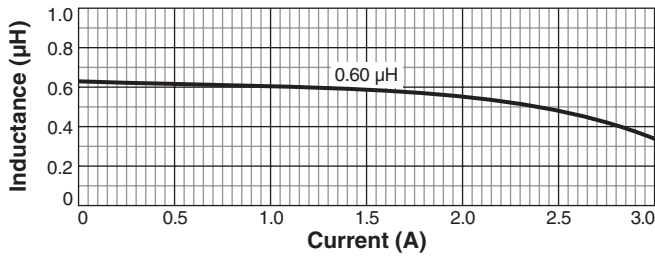
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# Shielded Power Inductors – XFL3010

## Typical L vs Current



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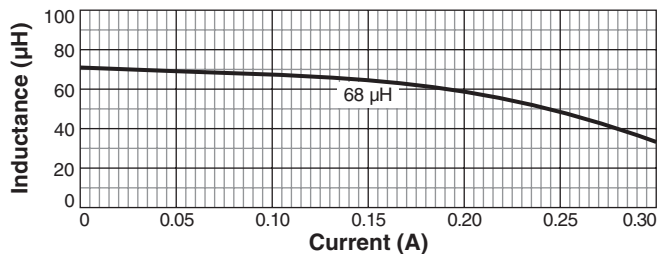
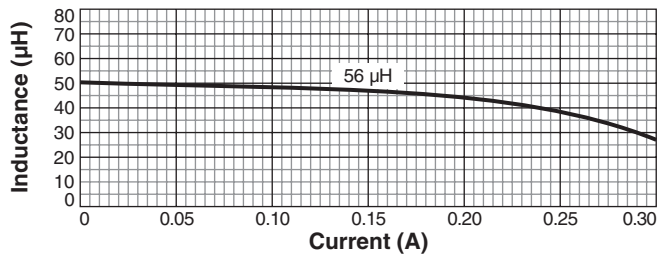
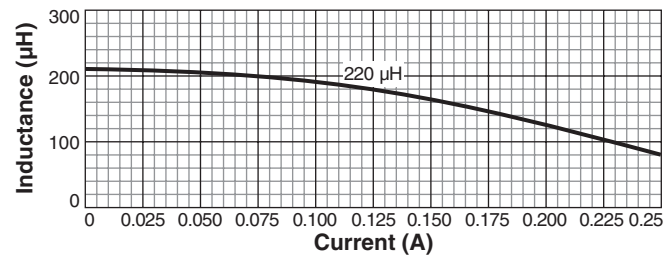
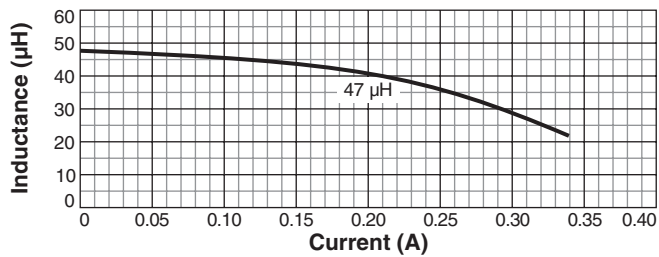
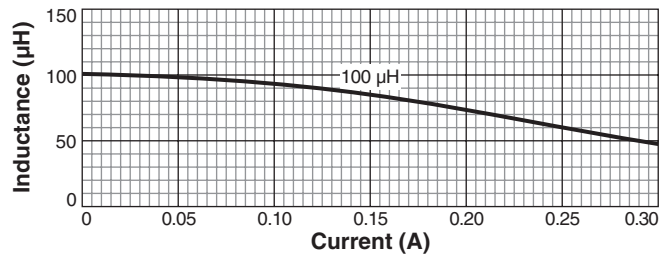
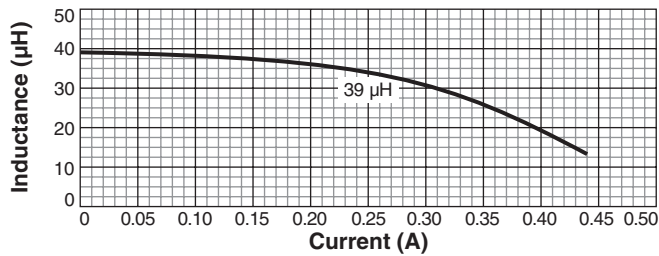
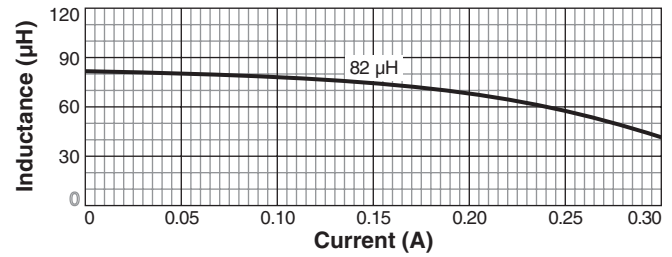
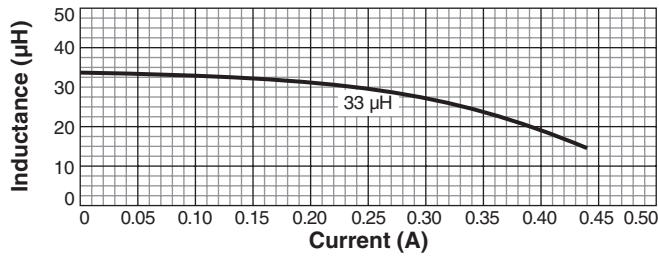
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## Typical L vs Current



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