Shielded Power Inductor – XFL3012

- High current, magnetically shielded power inductors
- 3 mm × 3 mm footprint; 1.3 mm maximum height
- AEC-Q200 Grade 3 (−40°C to +85°C)

Designer’s Kit C440 contains 5 of each XFL3012 and XFL3010 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: 53 mg

Ambient temperature: −40°C to +85°C with (40°C rise) Ims current.

Maximum part temperature: +125°C (ambient + temp rise). Derating.
Storage temperature: Component: −55°C to +125°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF): 0.48 per billion hours / 2.08E+09 hours, calculated per Telcordia SR-332

Packaging: 2000/7” reel; 7500/13” reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.55 mm pocket depth


Part number | Inductance | DCR (Ohms) | SRF typ | Isat (A) | I rms (A)
---|---|---|---|---|---
XFL3012-331ME | 0.33 | 0.023 | 0.027 | 293 | 3.0 | 2.6
XFL3012-561ME | 0.56 | 0.028 | 0.032 | 203 | 2.7 | 2.1
XFL3012-681ME | 0.68 | 0.034 | 0.040 | 164 | 2.2 | 2.1
XFL3012-102ME | 1.0 | 0.039 | 0.046 | 115 | 1.9 | 1.9
XFL3012-152ME | 1.5 | 0.060 | 0.072 | 94.4 | 1.8 | 1.6
XFL3012-222ME | 2.2 | 0.081 | 0.097 | 73.2 | 1.6 | 1.4
XFL3012-332ME | 3.3 | 0.106 | 0.127 | 61.6 | 1.2 | 1.2
XFL3012-472ME | 4.7 | 0.143 | 0.171 | 52.6 | 1.2 | 1.2
XFL3012-682ME | 6.8 | 0.166 | 0.200 | 39.9 | 0.97 | 0.94
XFL3012-103ME | 10 | 0.255 | 0.306 | 34.6 | 0.74 | 0.70
XFL3012-153ME | 15 | 0.394 | 0.483 | 25.8 | 0.65 | 0.74
XFL3012-223ME | 22 | 0.608 | 0.630 | 22.2 | 0.52 | 0.58
XFL3012-333ME | 33 | 0.855 | 0.896 | 16.6 | 0.38 | 0.42
XFL3012-393ME | 39 | 0.919 | 0.985 | 15.9 | 0.37 | 0.39
XFL3012-473ME | 47 | 1.220 | 1.32 | 13.7 | 0.32 | 0.33
XFL3012-563ME | 56 | 1.430 | 1.52 | 12.1 | 0.32 | 0.44
XFL3012-683ME | 68 | 2.16 | 2.37 | 10.9 | 0.25 | 0.31
XFL3012-823ME | 82 | 2.30 | 2.44 | 10.8 | 0.24 | 0.26
XFL3012-104ME | 100 | 2.63 | 3.00 | 9.4 | 0.28 | 0.29
XFL3012-224ME | 220 | 6.93 | 8.00 | 6.1 | 0.17 | 0.16

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

**XFL3012-224MEC**

**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 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.

Click for temperature derating information
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Typical L vs Frequency

Dimensions are in inches / 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 Inductor – XFL3012
L vs Current

![Graph 1](image1)
![Graph 2](image2)
![Graph 3](image3)
![Graph 4](image4)

- **AEC Q200 85°C+**
- **Halogen Free**

![Company Logo]
Shielded Power Inductor – XFL3012

L vs Current

- 33 µH
- 39 µH
- 47 µH
- 56 µH
- 68 µH

Inductance (µH)

Current (A)

Note: This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check website for latest information.