



Shielded Power Inductor – XFL3012



- High current, magnetically shielded power inductors
- 3 mm × 3 mm footprint; 1.2 mm maximum height

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 Irms current, +85°C to +125°C with derated current

Storage temperature Component: –40°C to +125°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 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, 1.25 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

| Part number ¹ | Inductance ² ±20% (µH) | DCR (Ohms) ³ | | SRF typ ⁴ (MHz) | Isat (A) ⁵ | | | Irms (A) ⁶ | |
|--------------------------|--------------------------------------|-------------------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
| | | nom | max | | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| XFL3012-221ME_ | 0.22 | 0.014 | 0.019 | 340 | 2.5 | 3.5 | 4.1 | 2.6 | 3.5 |
| XFL3012-361ME_ | 0.36 | 0.019 | 0.023 | 210 | 2.3 | 3.1 | 3.5 | 2.2 | 3.0 |
| XFL3012-601ME_ | 0.60 | 0.023 | 0.029 | 167 | 1.9 | 2.6 | 3.0 | 2.1 | 2.8 |
| XFL3012-102ME_ | 1.0 | 0.035 | 0.042 | 115 | 1.6 | 2.2 | 2.5 | 1.9 | 2.6 |
| XFL3012-152ME_ | 1.5 | 0.060 | 0.072 | 94.4 | 1.3 | 1.8 | 2.2 | 1.6 | 2.2 |
| XFL3012-222ME_ | 2.2 | 0.081 | 0.097 | 73.2 | 1.0 | 1.3 | 1.6 | 1.4 | 1.9 |
| XFL3012-332ME_ | 3.3 | 0.106 | 0.127 | 61.6 | 0.87 | 1.2 | 1.4 | 1.2 | 1.6 |
| XFL3012-472ME_ | 4.7 | 0.143 | 0.171 | 52.6 | 0.72 | 1.0 | 1.2 | 1.0 | 1.4 |
| XFL3012-682ME_ | 6.8 | 0.166 | 0.200 | 39.9 | 0.61 | 0.84 | 0.97 | 0.94 | 1.3 |
| XFL3012-103ME_ | 10 | 0.255 | 0.306 | 34.6 | 0.50 | 0.65 | 0.74 | 0.90 | 1.2 |
| XFL3012-153ME_ | 15 | 0.394 | 0.483 | 25.8 | 0.43 | 0.58 | 0.65 | 0.74 | 1.0 |
| XFL3012-223ME_ | 22 | 0.608 | 0.630 | 22.2 | 0.32 | 0.45 | 0.52 | 0.58 | 0.80 |
| XFL3012-333ME_ | 33 | 0.855 | 0.896 | 16.6 | 0.23 | 0.32 | 0.38 | 0.42 | 0.57 |
| XFL3012-393ME_ | 39 | 0.919 | 0.985 | 15.9 | 0.23 | 0.32 | 0.37 | 0.39 | 0.54 |
| XFL3012-473ME_ | 47 | 1.220 | 1.32 | 13.7 | 0.21 | 0.28 | 0.32 | 0.33 | 0.46 |
| XFL3012-563ME_ | 56 | 1.430 | 1.52 | 12.1 | 0.19 | 0.26 | 0.30 | 0.32 | 0.44 |
| XFL3012-683ME_ | 68 | 2.16 | 2.37 | 10.9 | 0.16 | 0.21 | 0.25 | 0.31 | 0.42 |
| XFL3012-823ME_ | 82 | 2.30 | 2.44 | 10.8 | 0.15 | 0.21 | 0.24 | 0.26 | 0.34 |
| XFL3012-104ME_ | 100 | 2.63 | 3.00 | 9.4 | 0.17 | 0.24 | 0.28 | 0.29 | 0.39 |
| XFL3012-224ME_ | 220 | 6.83 | 8.00 | 6.1 | 0.09 | 0.14 | 0.16 | 0.17 | 0.23 |

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

XFL3012-472MEC

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 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.

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

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 which the inductance drops the specified amount from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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



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Shielded Power Inductor – XFL3012

Typical L vs Frequency



Parts manufactured prior to January 2011 may not have part marking.

Recommended Land Pattern



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



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L vs Current



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Shielded Power Inductor – XFL3012

L vs Current



Typical Irms Derating



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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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