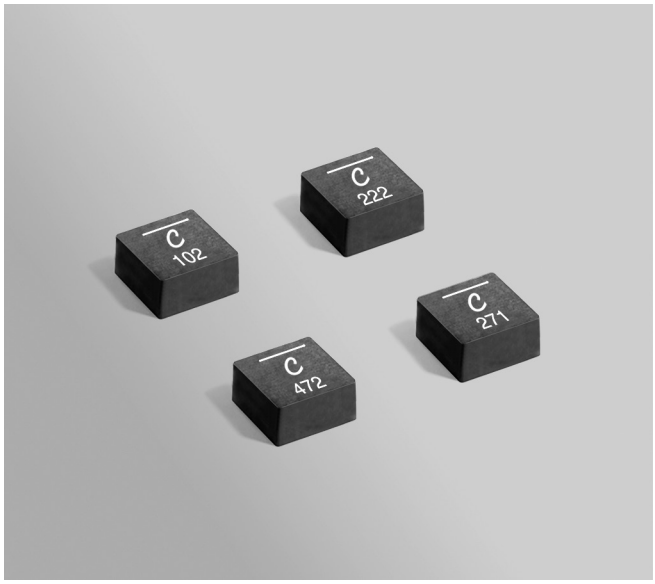
RoHS/ REACH COMPLIANT

Halogen Free

AEC Q200 +125°C

Shielded Power Inductors – XFL5030



- Exceptionally low DCR – only 2.15 mOhms
- Excellent current handling – up to 11.5 A
- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)
- 3.1 mm maximum height with a 5.48 mm × 5.28 mm footprint

Core material Composite

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

Weight 0.42 – 0.50 g

Ambient temperature –40°C to +125°C with (40°C rise) Irms current.

Operating voltage 0 – 20 V

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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

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 (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
XFL5030-271ME_	0.27	2.15	2.55	132	10.0	11.0	11.5	18.0	25.5
XFL5030-561ME_	0.56	3.20	3.80	77.0	7.5	8.5	9.0	14.6	21.0
XFL5030-102ME_	1.0	4.20	5.00	60.0	5.4	6.2	6.5	13.0	28.0
XFL5030-222ME_	2.2	10.5	12.0	37.4	3.5	4.0	4.3	8.2	11.5
XFL5030-332ME_	3.3	13.5	16.0	28.7	3.1	4.0	4.2	7.2	10.0
XFL5030-472ME_	4.7	18.5	22.0	24.5	2.5	3.1	3.3	6.2	8.7

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

   XFL5030-472MEC

   Packaging: C = 7″ machine-ready reel. EIA-481 embossed plastic tape (400 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 (1500 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 an inductance drop of 30% (typ) 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.

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.

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Document 791-1 Revised 12/20/19

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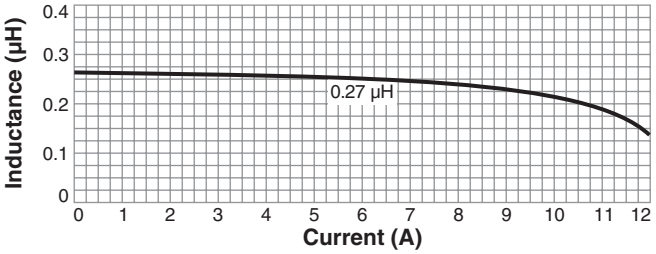
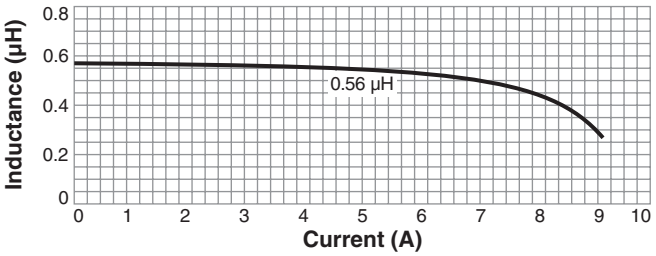
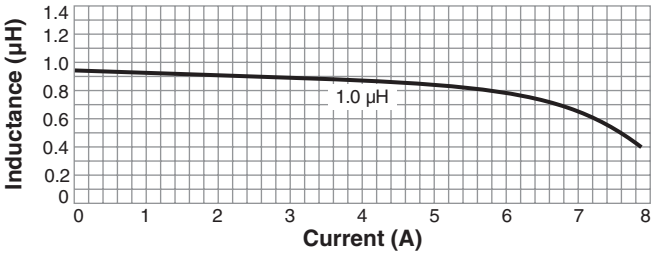
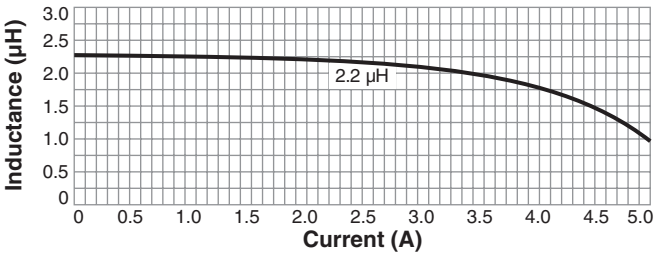
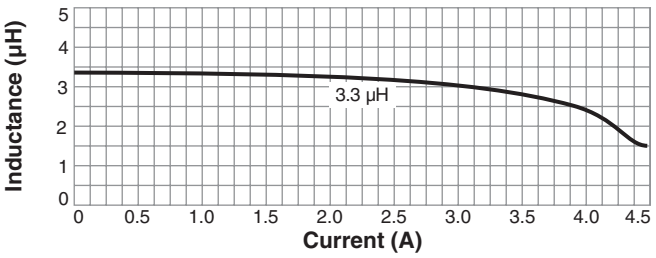
L vs Current

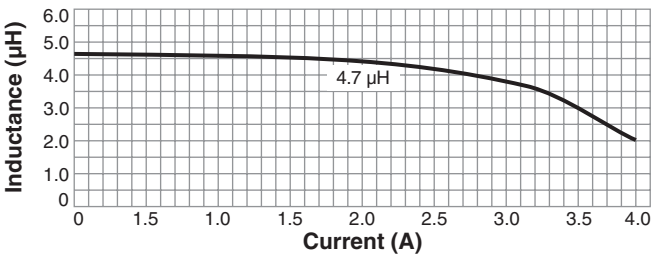




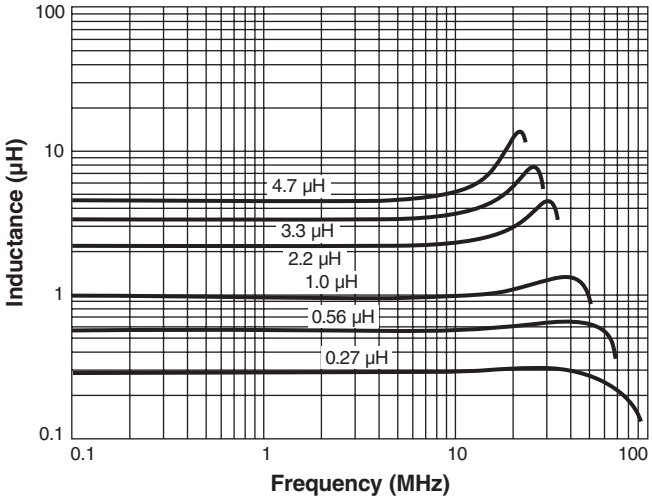


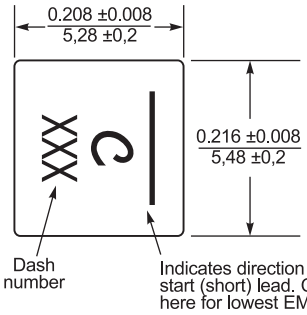


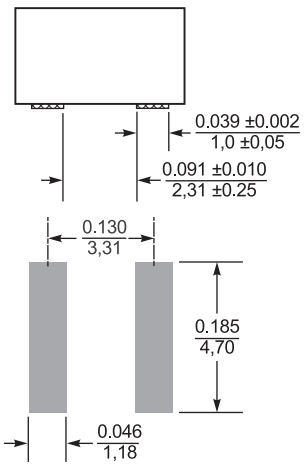


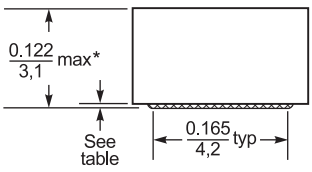


L vs Frequency









Dash number	Terminal thickness (typ) (in / mm)
-271	0.0079 / 0.20
-561	0.0079 / 0.20
-102	0.0079 / 0.20
-222	0.0047 / 0.12
-332	0.0047 / 0.12
-472	0.0039 / 0.10

* 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 400/7″ reel; 1500/13″ reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 3.18 mm pocket depth

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