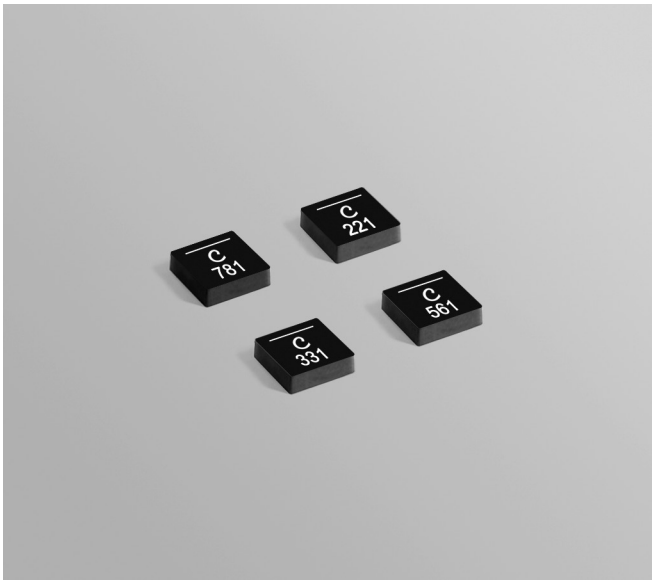
RoHS/ REACH COMPLIANT

Halogen Free

AEC Q200 +125°C

Shielded Power Inductors XEL4012, 4014



- Extremely low DCR and ultra low AC losses for high switching frequencies (2 to 5 MHz)
- Superior current handling with soft saturation characteristics
- Can withstand high current spikes
- AEC-200 Grade 1 qualified (–40°C to +125°C ambient)

Core material Composite
Environment RoHS compliant, halogen free
Terminations RoHS compliant, tin-silver over copper. Other terminations available at additional cost.
Weight 0.11 g
Operating voltage 0 – 80 V
Ambient temperature –40°C to +125°C with (40°C) 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)
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] (nH)	DCR (mOhms)[3] typ	DCR (mOhms)[3] max	SRF typ[4] (MHz)	Isat[5] (A)	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
XEL4012-920NE_	92 ±30%	5.2	5.7	279	24.0	11.5	16.5
XEL4012-221NE_	220 ±30%	9.7	10.6	146	16.0	6.5	9.0
XEL4014-221ME_	220 ±20%	7.5	9.5	150	18.2	9.0	12.0
XEL4014-331ME_	330 ±20%	9.9	12.0	110	14.6	6.5	9.0
XEL4014-561ME_	560 ±20%	16.5	18.4	80	11.6	5.5	7.5
XEL4014-781ME_	780 ±20%	20.3	22.8	70	9.8	5.0	6.5

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.

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

XEL4014-781MEC

Termination: **E** = RoHS compliant tin-silver over copper.
Special order: S = non-RoHS tin-lead (63/37).

Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape. 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.

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 which the inductance drops 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.

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Please check web site for latest information.

VERY LOW AC AND DC LOSSES

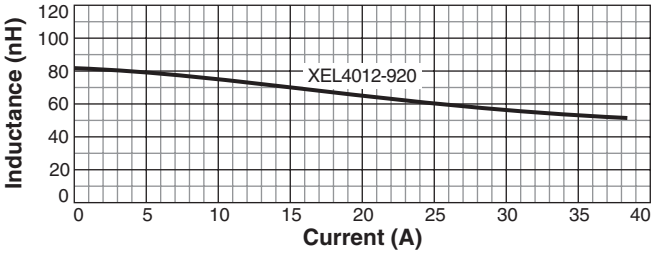
RoHS/ REACH COMPLIANT

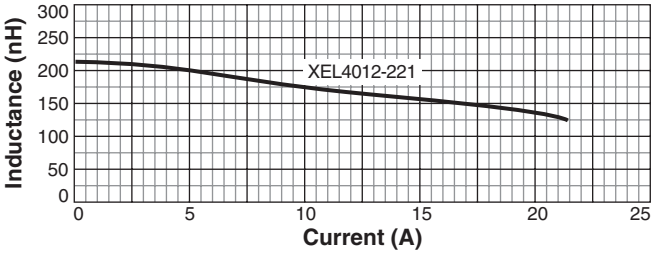
Halogen Free

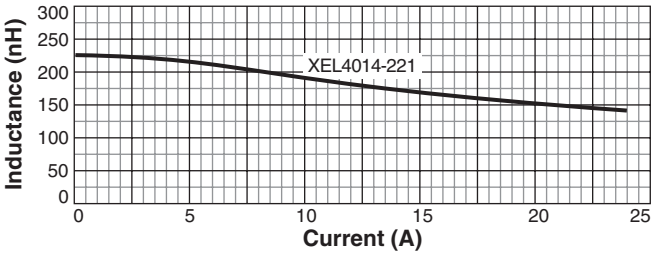
AEC Q200 +125°C

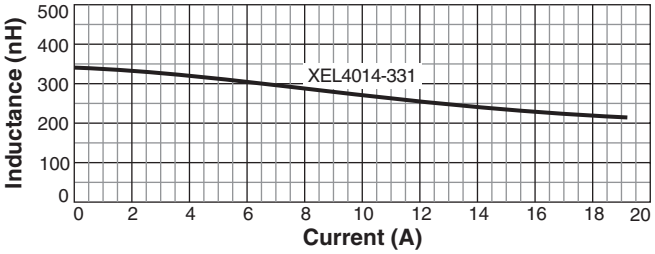
Shielded Power Inductors – XEL4012, XEL4014

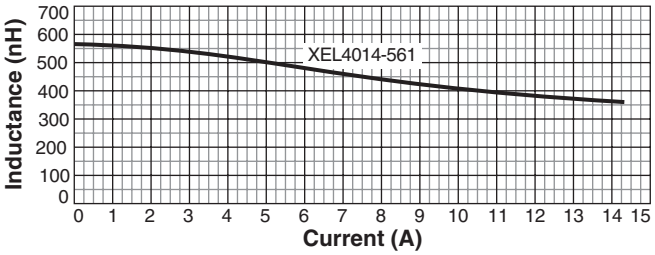
L vs Current

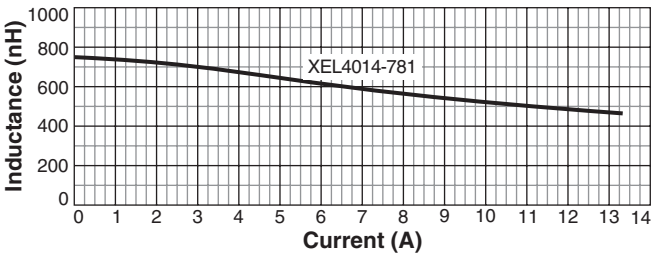




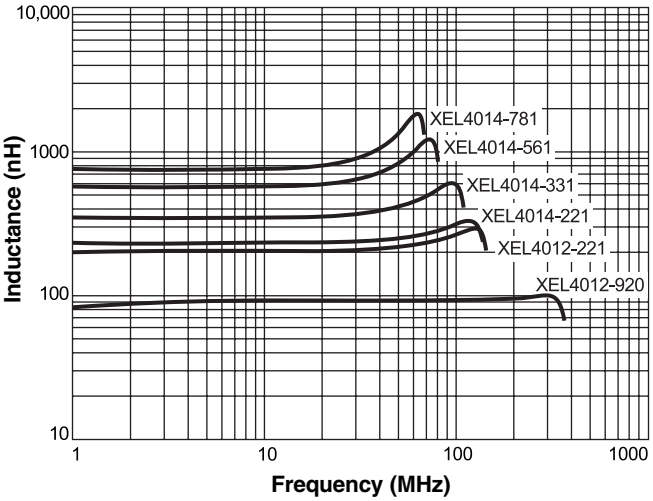


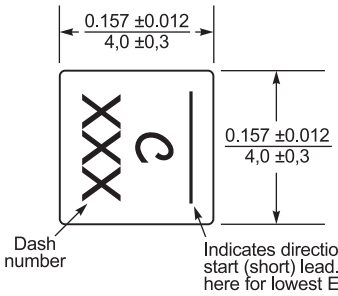


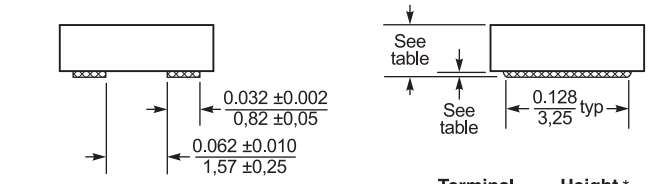


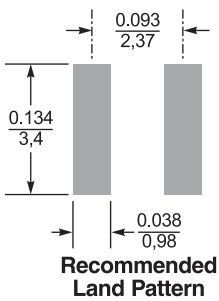


L vs Frequency









Part number	Terminal thickness (typ) (in / mm)	Height * max (in / mm)
XEL4012-920	0.0032 / 0.08	0.047 / 1.20
XEL4012-221	0.0024 / 0.06	0.047 / 1.20
XEL4014-221	0.0032 / 0.08	0.055 / 1.40
XEL4014-331	0.0032 / 0.08	0.055 / 1.40
XEL4014-561	0.0024 / 0.06	0.055 / 1.40
XEL4014-781	0.0024 / 0.06	0.055 / 1.40

* 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.

Dimensions are in inches / mm

Packaging

XEL4012 1500/7″ reel; 5000/13″ reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.40 mm pocket depth

XEL4014 1000/7″ reel; 4000/13″ reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.78 mm pocket depth

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Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

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