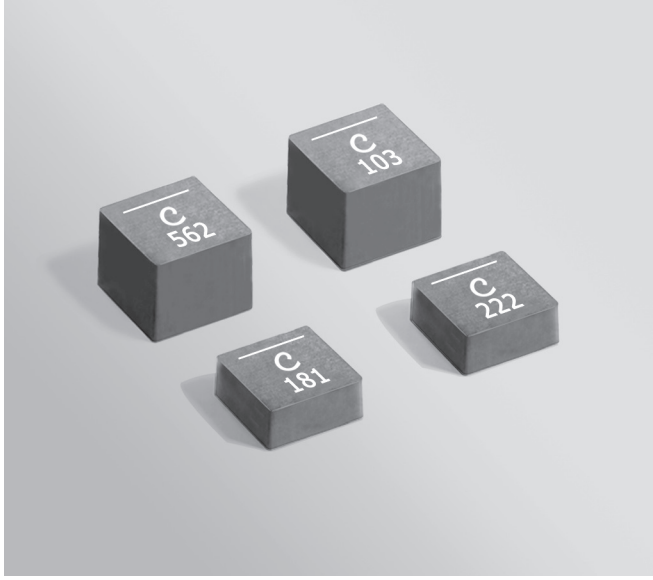
HIGH TEMPERATURE

Shielded Power Inductors – XAL50xx



- High current; very low DCR; soft saturation
- AEC-200 Grade 1 qualified (–40°C to +125°C ambient)

Designer's Kit C445 contains 3 of each value
Core material Composite
Environmental RoHS compliant, halogen free
Terminations RoHS compliant tin-silver (96.5/3.5) over copper
Other terminations available at additional cost.
Ambient temperature –40°C to +125°C with Irms current, +125°C to +165°C with derated current.
Storage temperature Component: –40°C to +165°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
XAL5030 400/7″ reel; 1500/13″ reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 3.18 mm pocket depth
XAL5050 250/7″ reel; 750/13″ reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 5.21 mm pocket depth
PCB washing Only pure water or alcohol recommended

Part number[1]	Inductance[2] ±20% (µH)	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
XAL5030-161ME_	0.16	2.15	2.36	183	31.0	14.2	22.2
XAL5030-331ME_	0.33	3.20	3.52	108	26.0	13.8	19.2
XAL5030-601ME_	0.60	4.11	4.52	75	19.8	13.6	17.7
XAL5030-801ME_	0.80	5.14	5.65	63	18.5	10.0	13.0
XAL5030-122ME_	1.2	8.50	9.40	61	12.5	8.7	11.1
XAL5030-222ME_	2.2	13.20	14.50	38	9.2	7.2	9.7
XAL5030-332ME_	3.3	21.20	23.30	28	8.7	5.9	8.1
XAL5030-472ME_	4.7	32.70	36.00	23	6.7	4.3	5.9
XAL5050-562ME_	5.6	23.45	25.80	25	6.3	5.3	7.2
XAL5050-682ME_	6.8	26.75	29.45	21	6.0	4.7	6.4
XAL5050-822ME_	8.2	31.75	34.95	18	5.6	4.5	6.1
XAL5050-103ME_	10	40.90	45.00	15	4.9	3.6	4.9
XAL5050-153ME_	15	69.70	76.70	13	3.7	2.9	3.9
XAL5050-223ME_	22	90.60	99.65	11	3.6	2.5	3.4

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 **packaging** code:

XAL5030-472MEC

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

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 30% (typ) from its value without current.
6. Current that causes a 40°C 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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HIGH TEMPERATURE

RoHS Halogen Free

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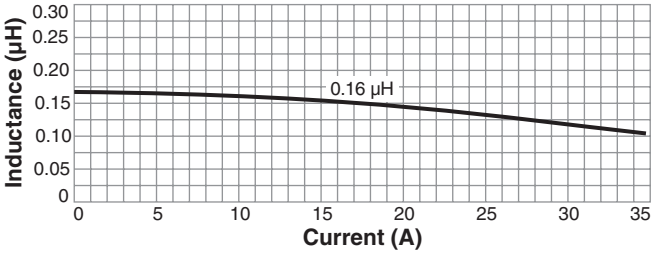
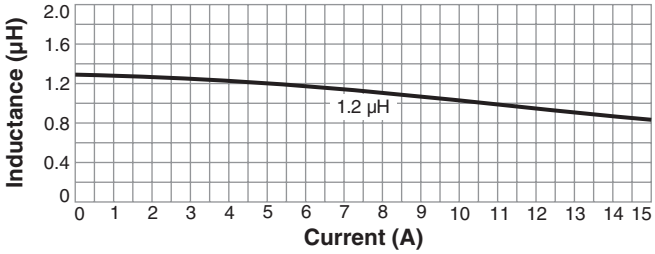
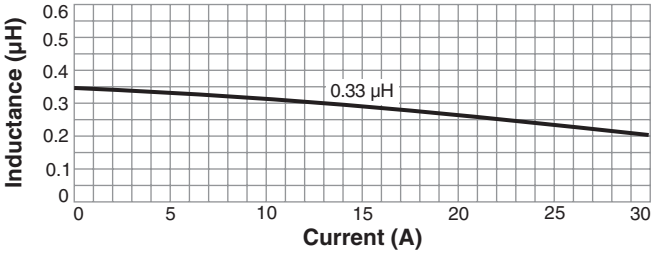
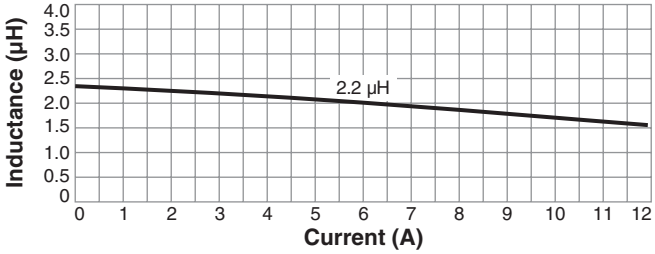
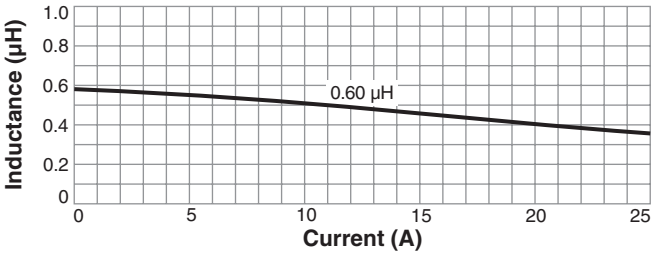
L vs Current

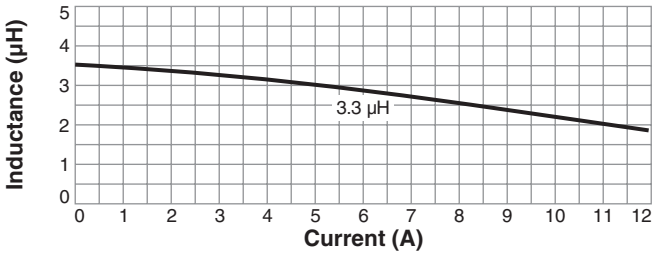


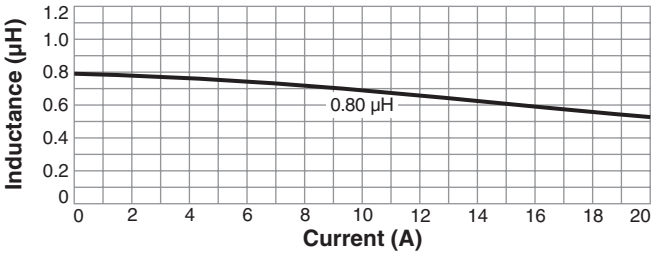


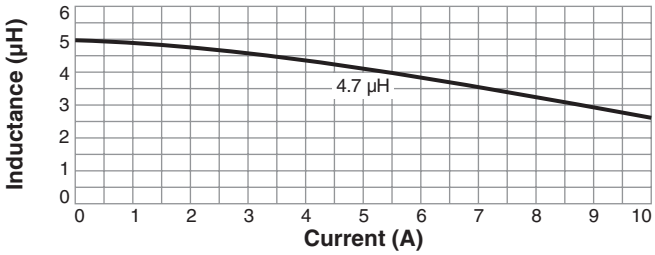












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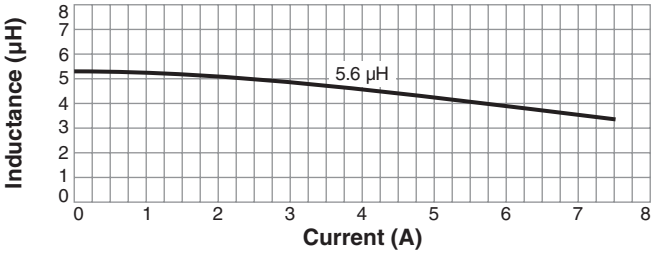
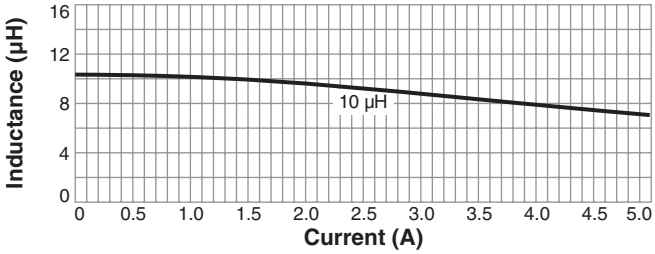
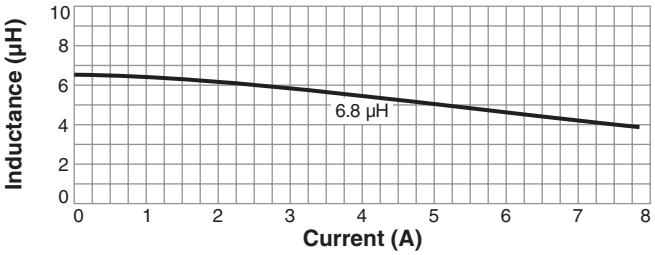
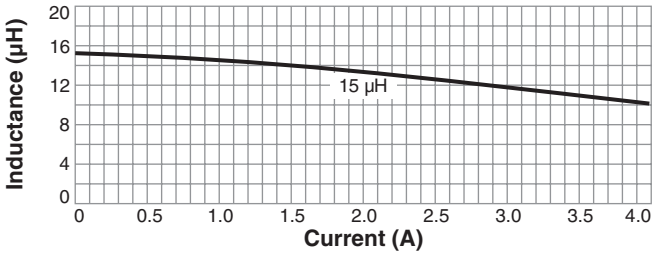
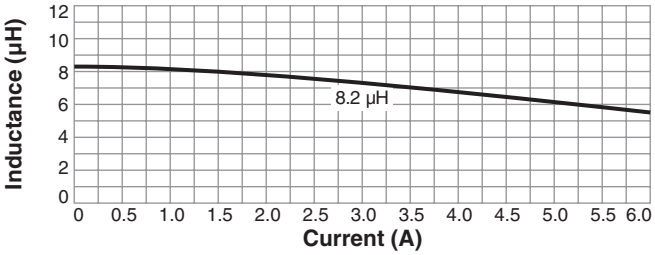
L vs Current

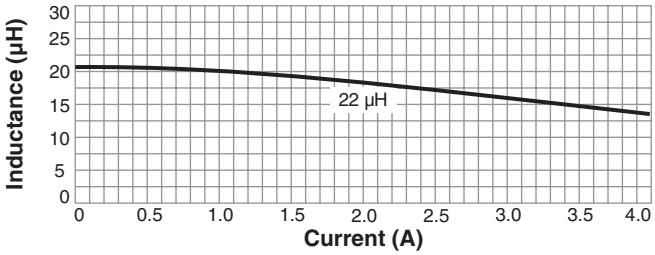












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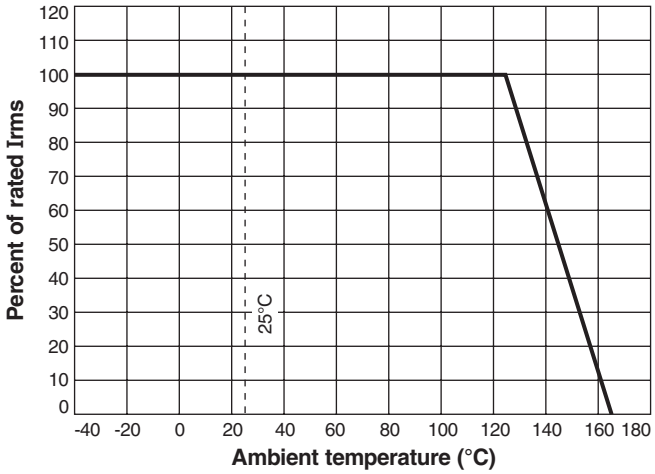
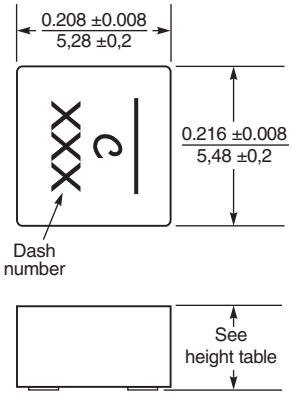
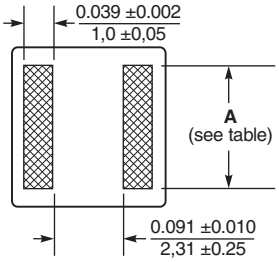
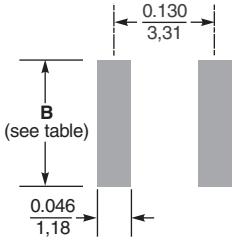
Irms Derating





Dash number	A ±0.008 in ±0,20 mm (in / mm)	B (in / mm)
-161	0.175 / 4.44	0.183 / 4.64
-331	0.175 / 4.44	0.183 / 4.64
-601	0.175 / 4.44	0.183 / 4.64
-801	0.175 / 4.44	0.183 / 4.64
-122	0.168 / 4.28	0.173 / 4.40
-222	0.168 / 4.28	0.173 / 4.40
-332	0.167 / 4.24	0.171 / 4.34
-472	0.165 / 4.18	0.167 / 4.25
-562	0.168 / 4.28	0.173 / 4.40
-682	0.168 / 4.28	0.173 / 4.40
-822	0.168 / 4.28	0.173 / 4.40
-103	0.167 / 4.24	0.171 / 4.34
-153	0.165 / 4.18	0.167 / 4.25
-223	0.165 / 4.18	0.167 / 4.25



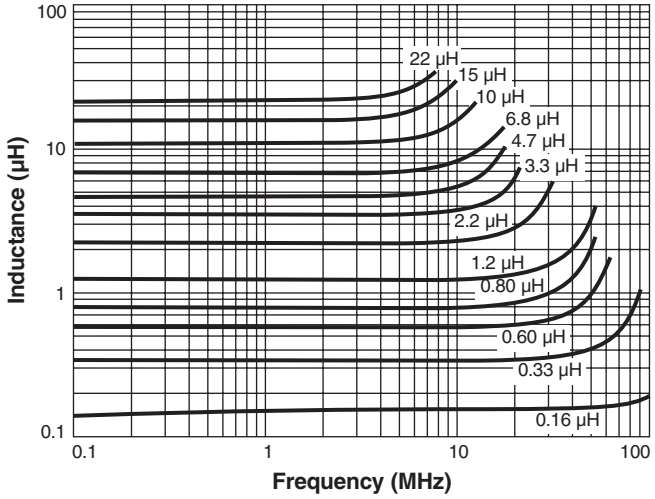


Recommended Land Pattern

	Maximum height	Weight
XAL5030	0.122 / 3,1	0.44 – 0.51 g
XAL5050	0.201 / 5,1	0.74 – 0.80 g

Dimensions are in inches / mm

Typical L vs Frequency



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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

Как с нами связаться

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