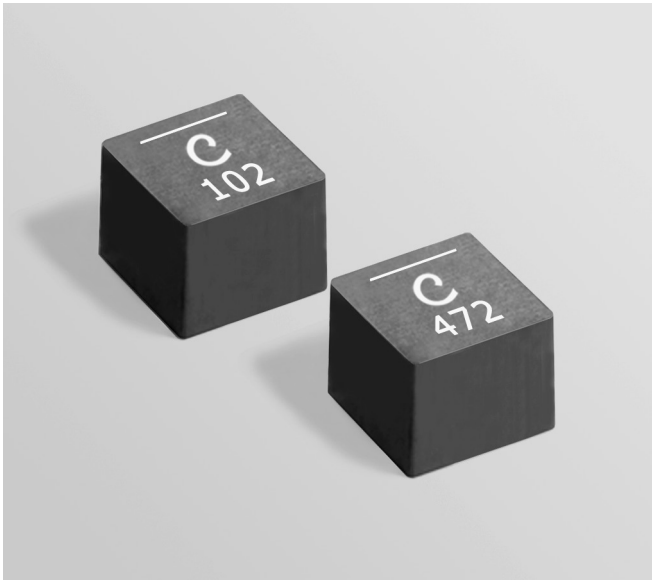
HIGH TEMPERATURE

Shielded Power Inductors – XAL1010



- High current – up to 98.8 A
- Very low DCR – 0.33 mOhms
- Soft saturation makes them ideal for VRM/VRD applications.

Core material Composite
Core and winding loss See www.coilcraft.com/coreloss
Environmental RoHS compliant, halogen free
Terminations RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.
Weight 5.7 – 6.3 g
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 & 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 300/13″ reel Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 10.21 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
XAL1010-221ME_	0.22	0.45	0.50	115	98.8	41.0	55.5
XAL1010-451ME_	0.45	0.65	0.72	66	70.5	40.0	53.0
XAL1010-681ME_	0.68	0.87	0.96	53	62.0	36.0	48.0
XAL1010-102ME_	1.0	1.00	1.10	42	55.0	32.0	43.5
XAL1010-152ME_	1.5	1.60	1.76	33	36.6	31.0	40.5
XAL1010-222ME_	2.2	2.55	2.80	22	34.0	24.5	32.0
XAL1010-332ME_	3.3	3.70	4.10	21	27.4	18.2	25.0
XAL1010-472ME_	4.7	5.20	5.70	19	25.4	17.5	24.0
XAL1010-562ME_	5.6	6.30	6.93	16	23.6	15.7	21.2
XAL1010-682ME_	6.8	8.10	8.90	14	21.8	14.0	18.5
XAL1010-822ME_	8.2	11.70	12.90	12	18.3	12.9	17.1
XAL1010-103ME_	10	13.40	14.75	11	17.5	11.5	15.5
XAL1010-153ME_	15	16.90	18.60	9	15.5	9.9	13.8

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** coded:

XAL1010-153MED

Termination: E = RoHS compliant tin-silver over copper.
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).
Packaging: D = 13″ machine-ready reel. EIA-481 embossed plastic tape (300 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 D instead.

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 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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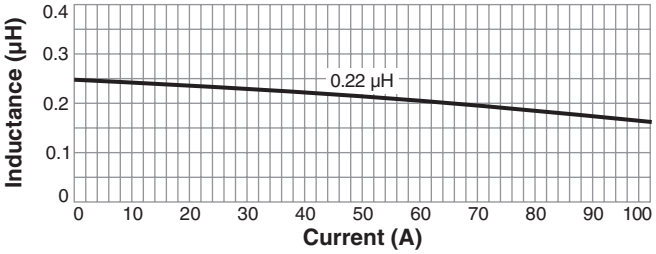
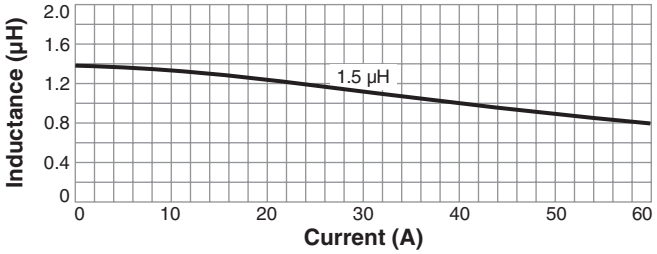
HIGH TEMPERATURE

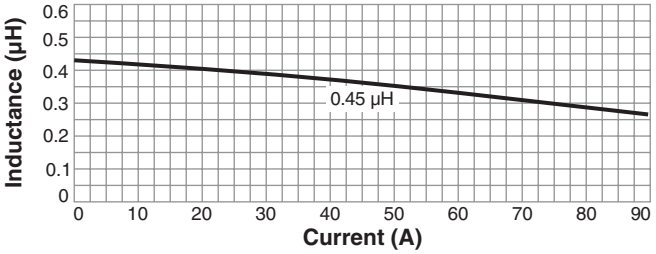
RoHS Halogen Free

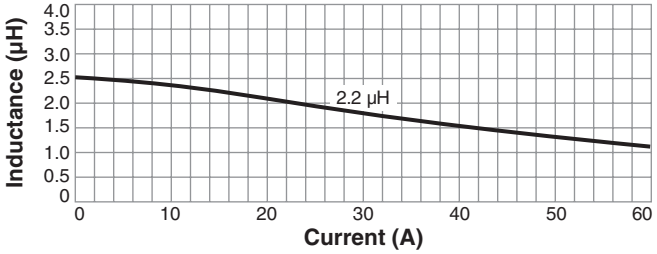
Shielded Power Inductors – XAL1010

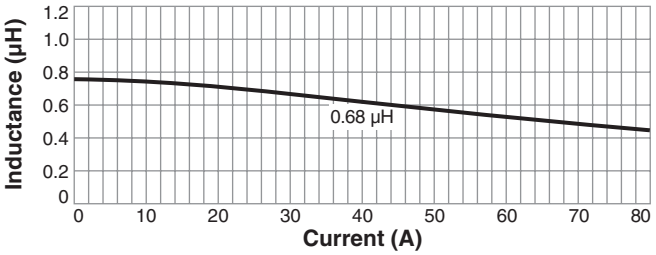
Typical L vs Current

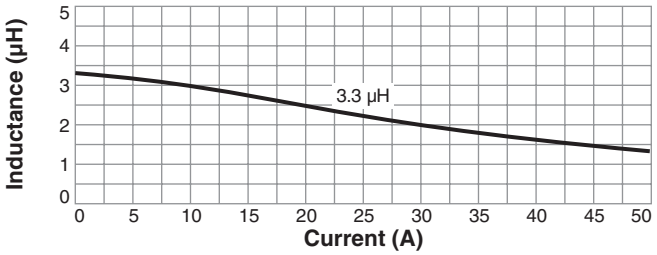


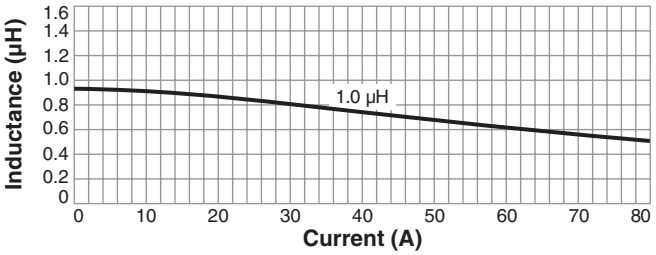


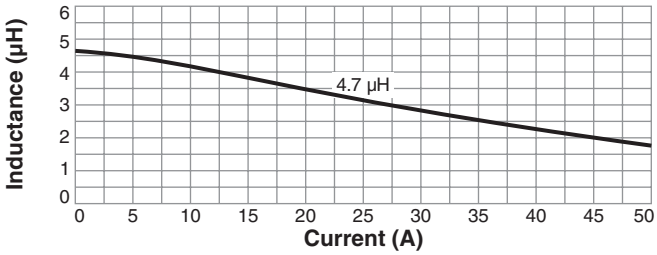












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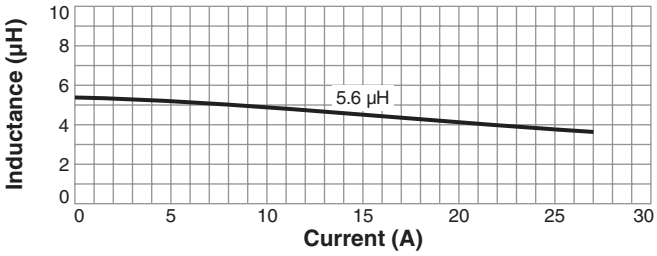
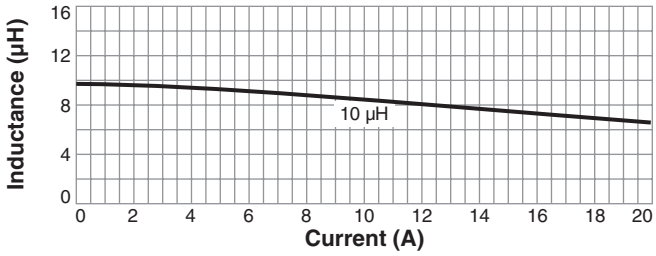
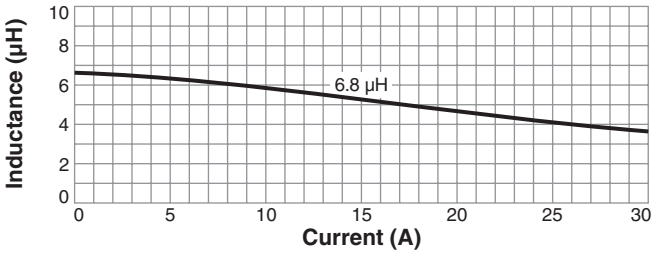
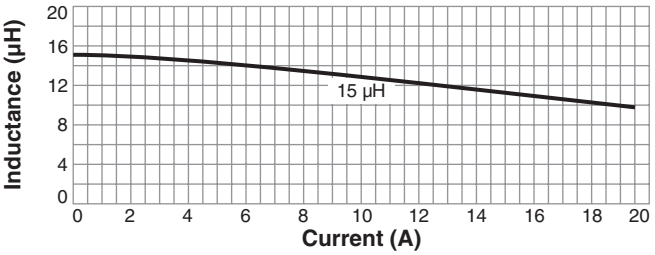
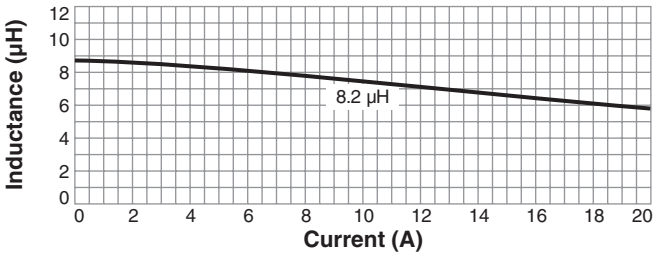
Typical L vs Current











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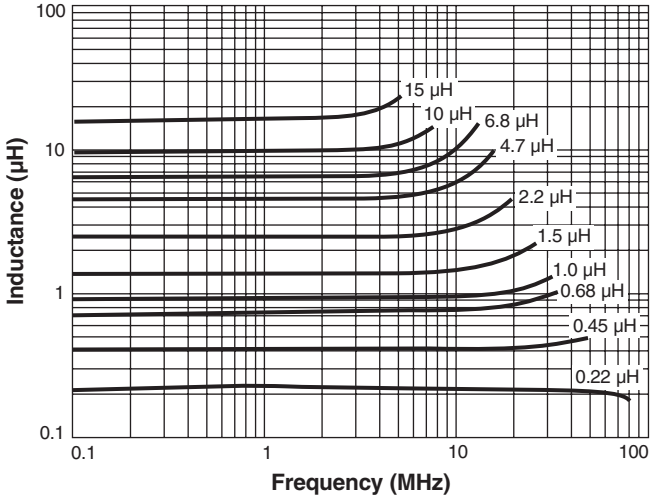
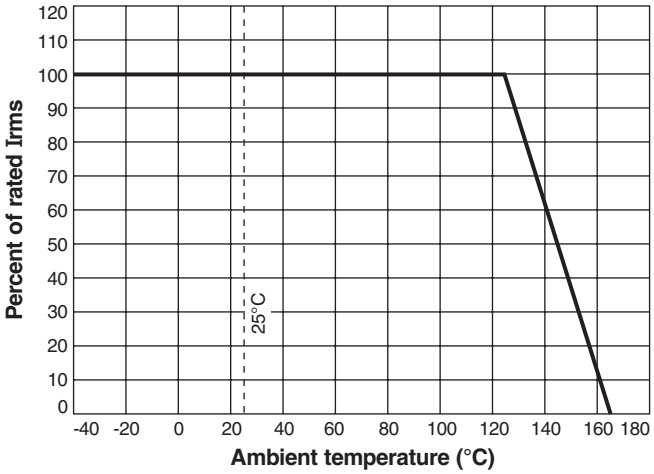
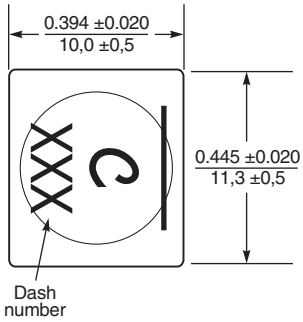
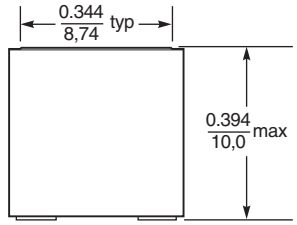
Typical L vs Frequency

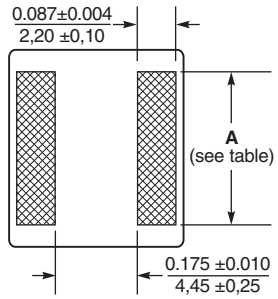


Irms Derating





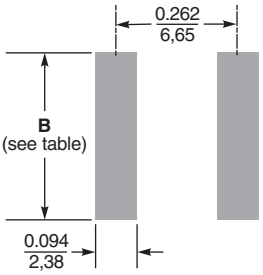




Dimensions are in inches / mm

Dash number	A ±0.016 in ±0,40 mm (in / mm)	B (in / mm)
-221	0.394 / 10	0.445 / 11.31
-451	0.394 / 10	0.445 / 11.31
-681	0.394 / 10	0.445 / 11.31
-102	0.394 / 10	0.445 / 11.31
-152	0.386 / 9.8	0.421 / 10.71
-222	0.370 / 9.4	0.398 / 10.11
-332	0.354 / 9.0	0.374 / 9.51
-472	0.354 / 9.0	0.374 / 9.51
-562	0.354 / 9.0	0.374 / 9.51
-682	0.346 / 8.8	0.362 / 9.21
-822	0.335 / 8.5	0.351 / 8.91
-103	0.335 / 8.5	0.351 / 8.91
-153	0.335 / 8.5	0.351 / 8.91

Recommended Land Pattern



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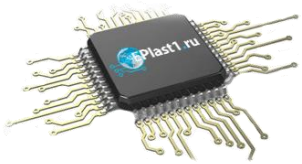
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.