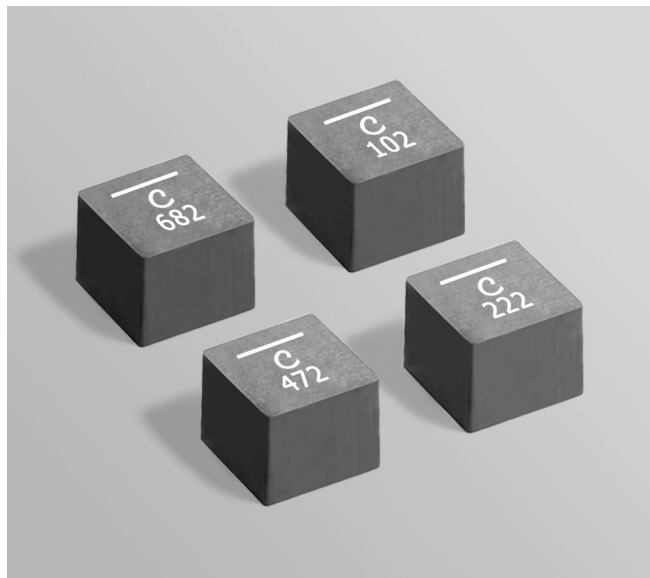


HIGH TEMPERATURE

Shielded Power Inductors – XAL7070



- High current and very low DCR
- AEC-200 Grade 1 qualified (–40°C to +125°C ambient)
- Soft saturation makes them ideal for VRM/VRD applications.

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.**Weight** 1.9 – 2.1g**Ambient temperature** –40°C to +125°C with (40°C rise) Irms current.**Maximum part temperature** +165°C (ambient + temp rise). [Derating](#).**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 150/7" reel, 750/13" reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 7.21 mm pocket depth**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		SRF typ ⁴ (MHz)	Isat ⁵ (A)	Irms (A) ⁶	
		typ	max			20°C rise	40°C rise
XAL7070-161ME_	0.16	0.75	0.83	207	78.0	30.5	36.1
XAL7070-301ME_	0.30	1.06	1.17	135	55.6	26.1	33.4
XAL7070-551ME_	0.55	1.42	1.56	89	43.0	23.5	29.0
XAL7070-651ME_	0.65	1.75	1.93	74	40.0	21.0	26.5
XAL7070-801ME_	0.80	2.08	2.29	67	37.8	20.8	25.8
XAL7070-102ME_	1.0	2.55	2.81	64	34.8	20.0	25.0
XAL7070-122ME_	1.2	3.10	3.41	43	31.2	16.2	21.6
XAL7070-182ME_	1.8	4.05	4.46	43	25.0	15.8	21.0
XAL7070-222ME_	2.2	5.73	6.33	35	19.6	13.2	17.8
XAL7070-332ME_	3.3	8.56	9.42	32	19.4	11.5	15.1
XAL7070-472ME_	4.7	12.96	14.26	26	15.2	10.5	13.6
XAL7070-562ME_	5.6	13.67	15.03	21	13.0	8.5	11.4
XAL7070-682ME_	6.8	17.84	19.62	20	12.8	6.8	9.2

Irms Testing

Irms testing was performed on 0.75 inch wide x 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:

XAL7070-682MEC

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (150 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.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (750 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 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.



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Document 856-1 Revised 07/08/15

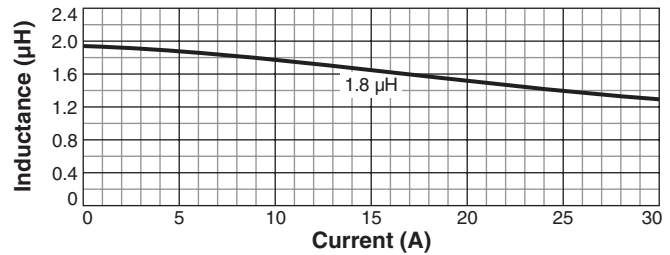
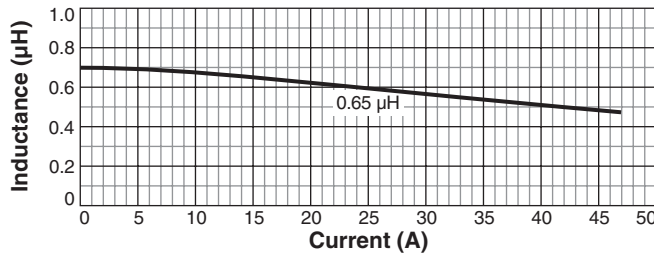
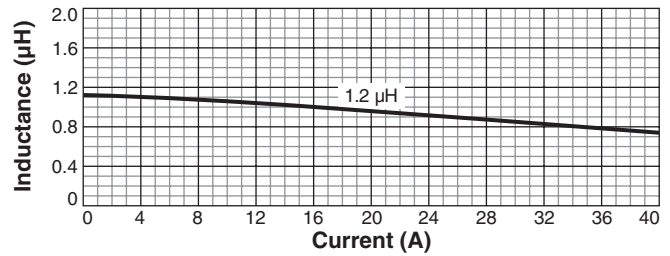
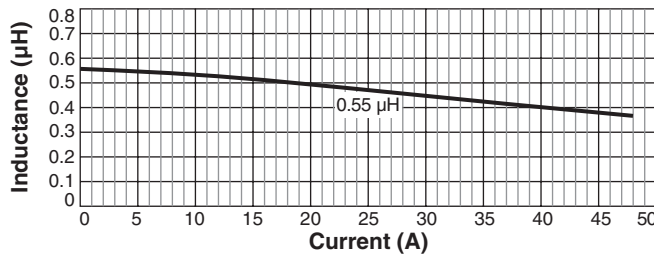
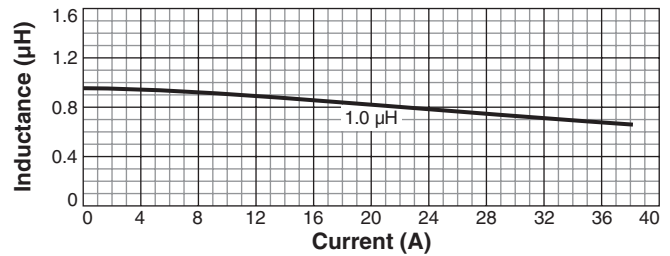
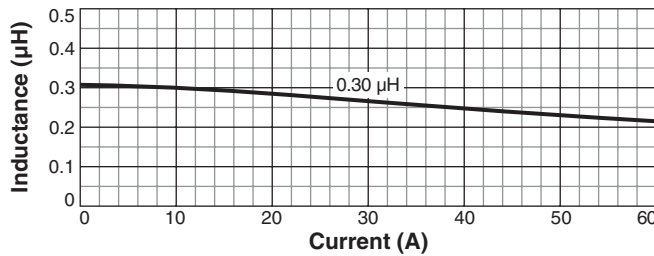
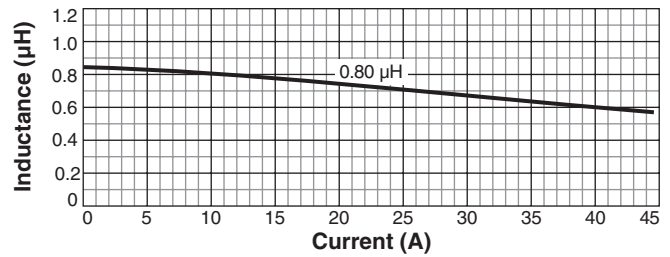
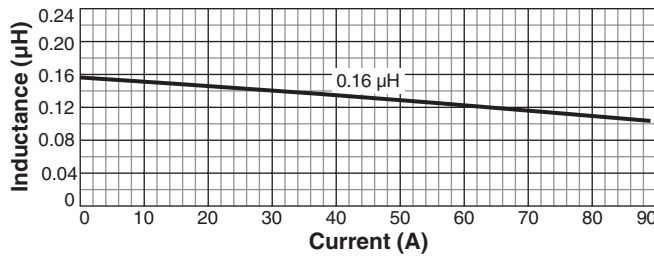
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

HIGH TEMPERATURE

Shielded Power Inductors – XAL7070

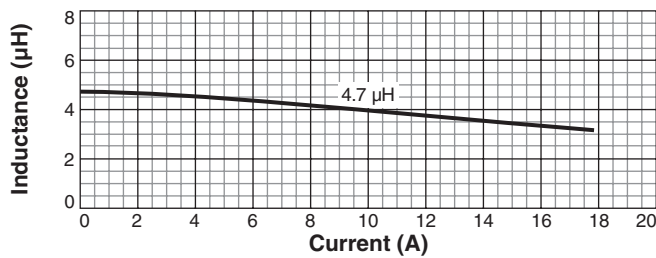
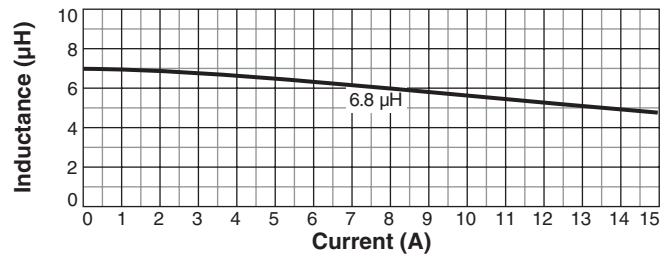
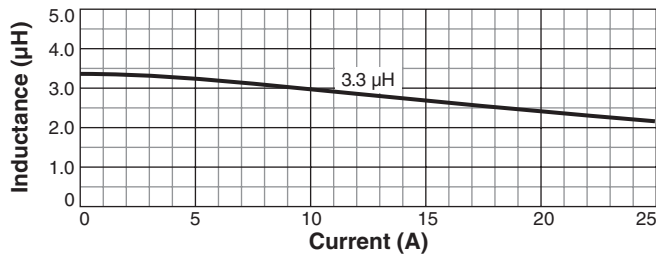
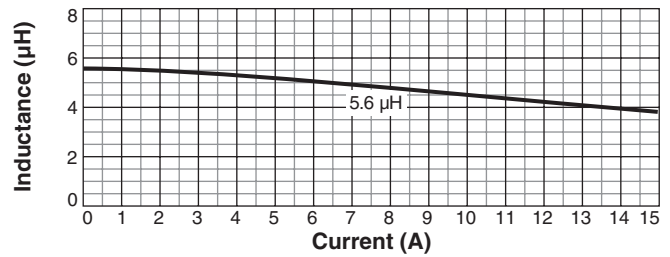
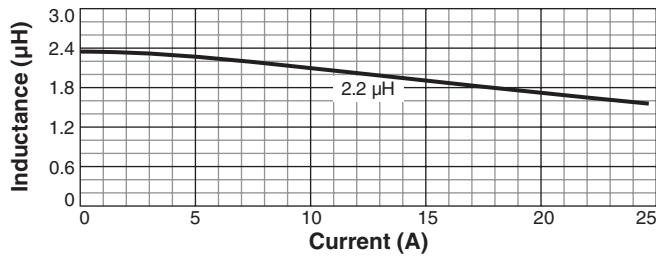
L vs Current



HIGH TEMPERATURE

Shielded Power Inductors – XAL7070

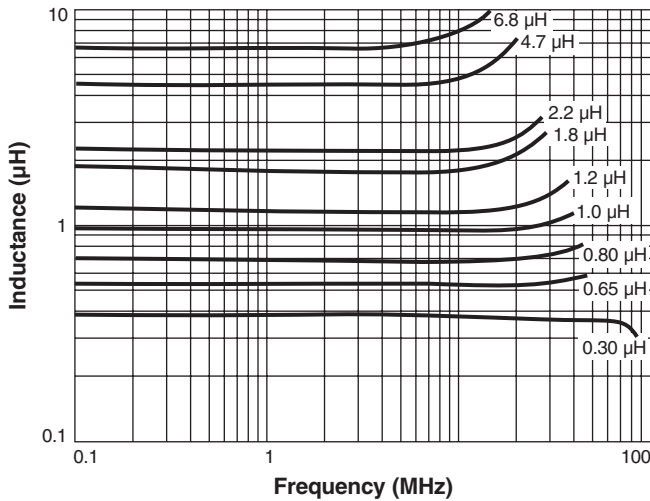
L vs Current



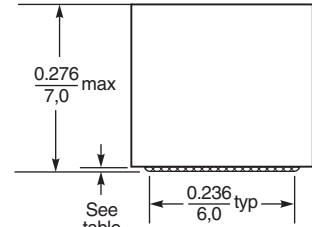
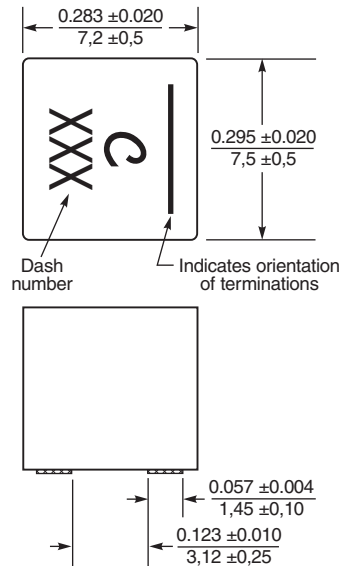
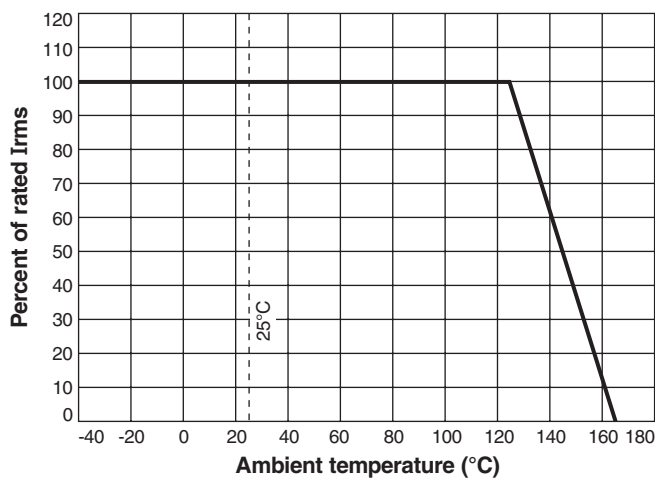
HIGH TEMPERATURE

Shielded Power Inductors – XAL7070

Typical L vs Frequency

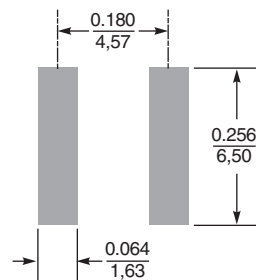


Irms Derating



Dash number	Terminal thickness (typ) (in / mm)
-161	0.0236 / 0,60
-301	0.0236 / 0,60
-551	0.0236 / 0,60
-651	0.0236 / 0,60
-801	0.0236 / 0,60
-102	0.0197 / 0,50
-122	0.0197 / 0,50
-182	0.0157 / 0,40
-222	0.0118 / 0,30
-332	0.0118 / 0,30
-472	0.0079 / 0,20
-562	0.0079 / 0,20
-682	0.0079 / 0,20

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



Recommended Land Pattern



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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