



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 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 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 Only pure water or alcohol recommended

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 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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China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore +65-6484 8412 sales@coilcraft.com.sg

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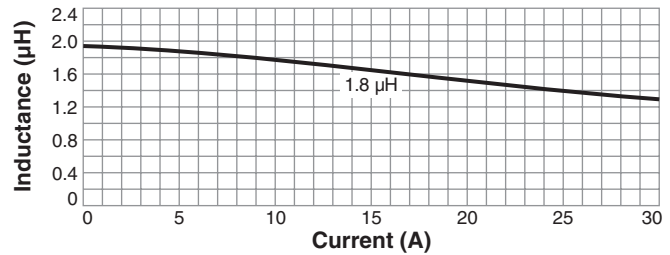
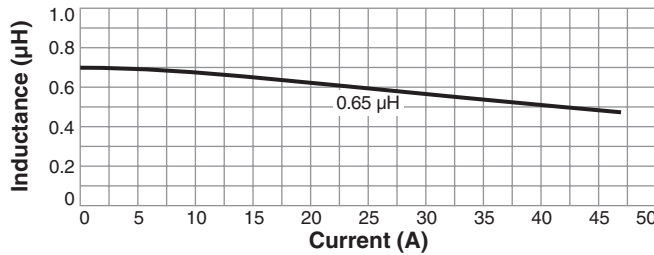
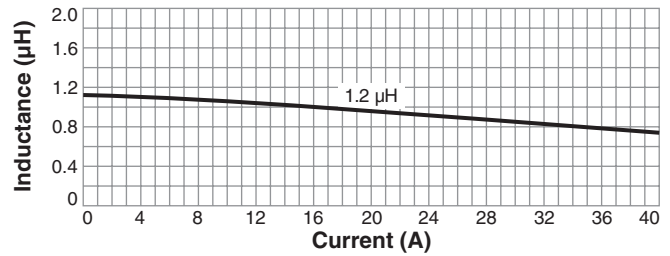
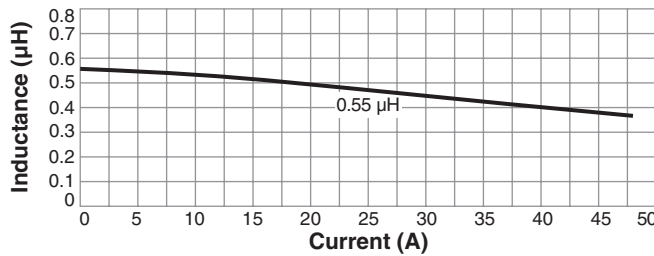
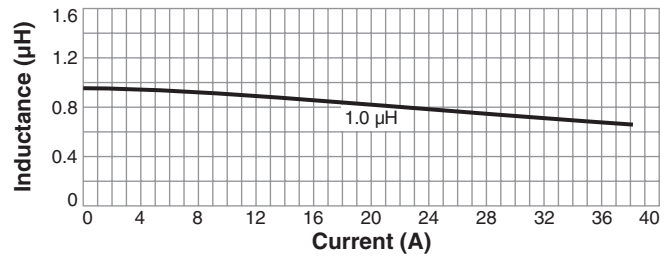
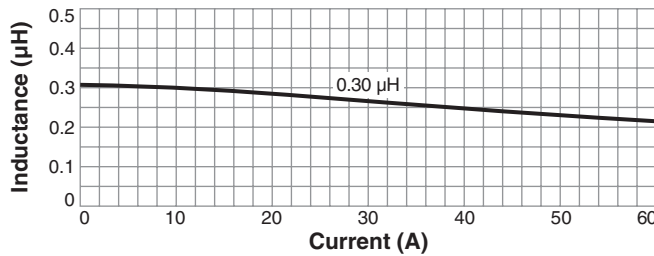
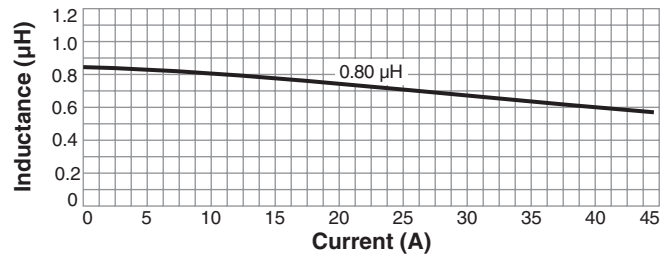
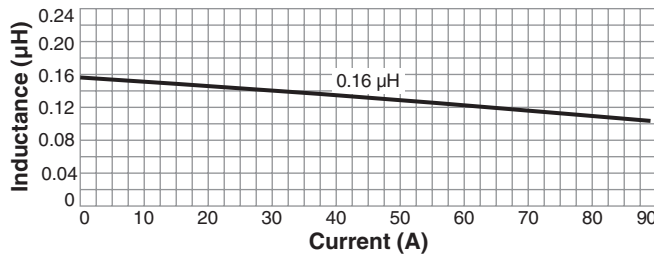
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L vs Current



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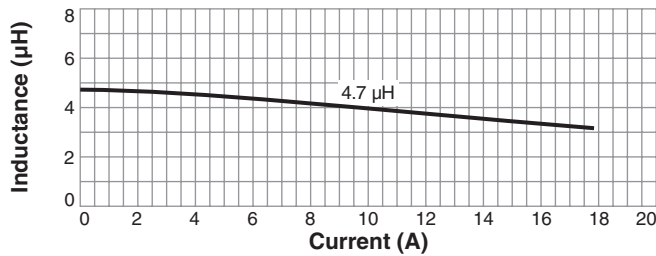
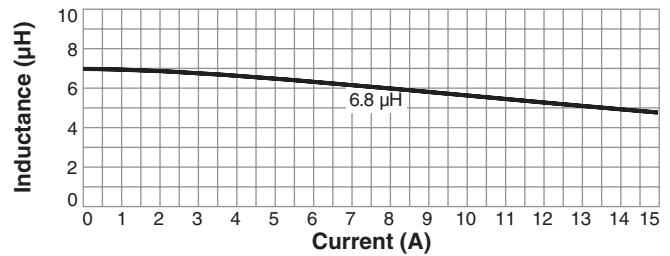
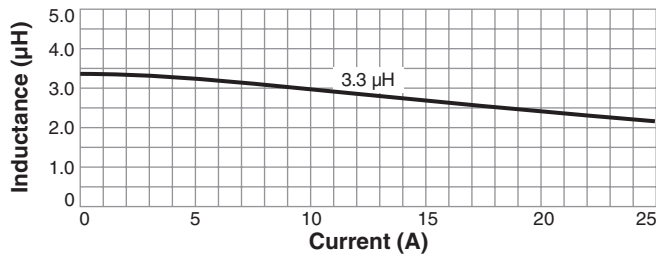
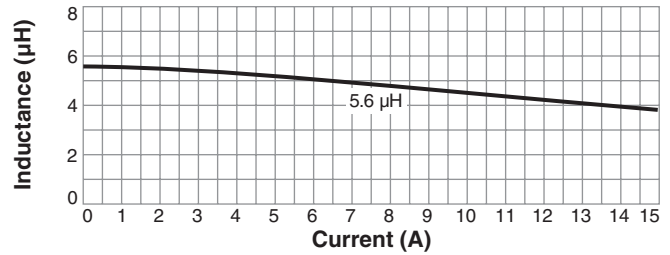
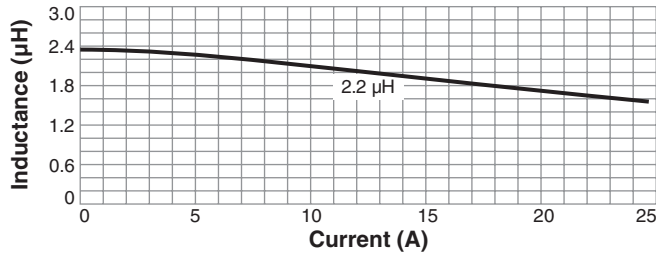
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L vs Current



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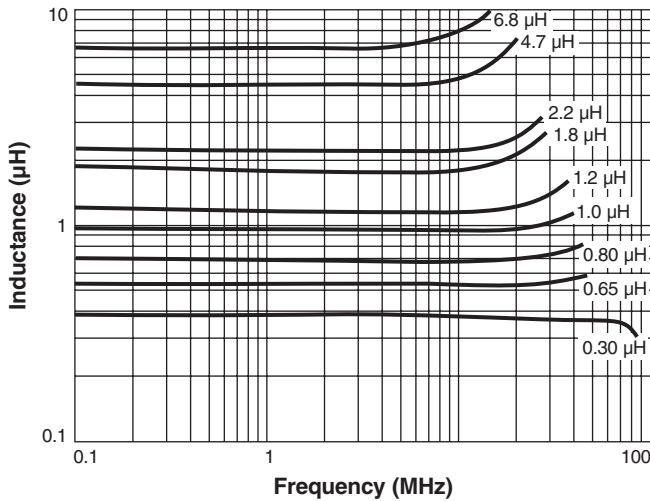
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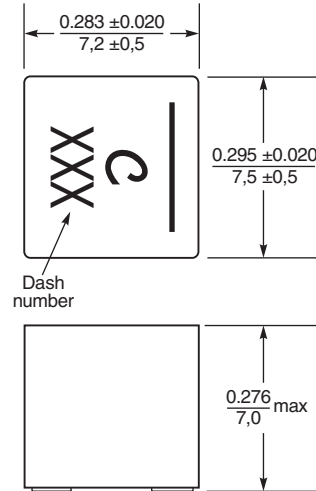
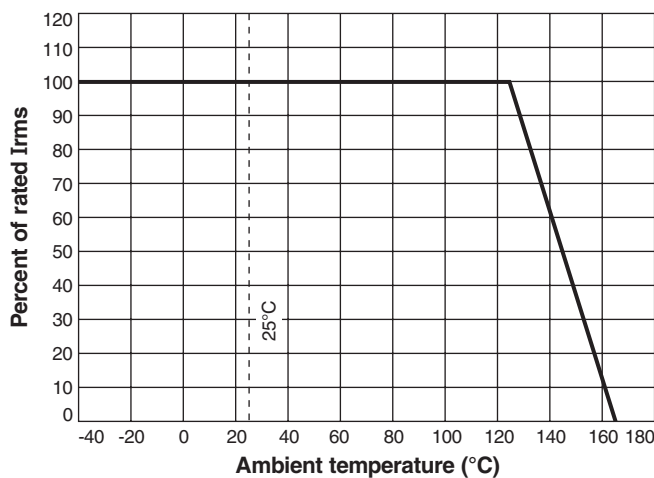
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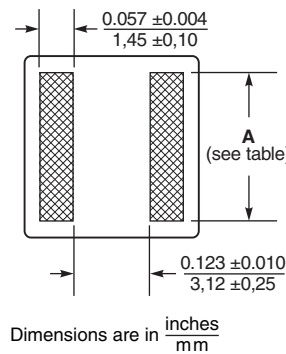
Typical L vs Frequency



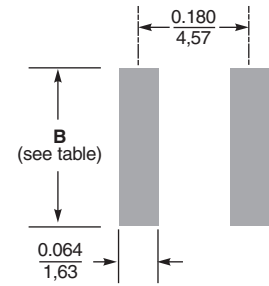
Irms Derating



Dash number	A ±0.008 in ±0.20 mm (in / mm)	B (in / mm)
-161	0.257 / 6.53	0.281 / 7.13
-301	0.257 / 6.53	0.281 / 7.13
-551	0.257 / 6.53	0.281 / 7.13
-651	0.257 / 6.53	0.281 / 7.13
-801	0.257 / 6.53	0.281 / 7.13
-102	0.249 / 6.33	0.269 / 6.83
-122	0.249 / 6.33	0.269 / 6.83
-182	0.241 / 6.13	0.257 / 6.63
-222	0.234 / 5.93	0.245 / 6.23
-332	0.234 / 5.93	0.245 / 6.23
-472	0.226 / 5.73	0.234 / 5.93
-562	0.226 / 5.73	0.234 / 5.93
-682	0.226 / 5.73	0.234 / 5.93



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



**Recommended
Land Pattern**

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.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9