


**NEW!**

# Shielded Power Inductors – XAL1580



- High current – up to 111 A
- Very low DCR – 0.50 mOhms
- Soft saturation makes them ideal for VRM/VRD applications.

**Core material** Composite

**Terminations** RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

**Weight** 10.6 g

**Ambient temperature** –40°C to +90°C with Irms current, +90°C to +130°C with derated current.

**Storage temperature** Component: –40°C to +130°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** 300/13" reel Plastic tape: 32 mm wide, 0.3 mm thick, 24 mm pocket spacing, 8.26 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>±20% (µH) | DCR <sup>3</sup><br>(mOhms) |      | SRF<br>typ <sup>4</sup><br>(MHz) | Isat <sup>5</sup><br>(A) | Irms (A) <sup>6</sup> |           | Height <sup>7</sup> |
|--------------------------|--------------------------------------|-----------------------------|------|----------------------------------|--------------------------|-----------------------|-----------|---------------------|
|                          |                                      | typ                         | max  |                                  |                          | 20°C rise             | 40°C rise |                     |
| XAL1580-401ME_           | 0.40                                 | 0.50                        | 0.70 | 53.0                             | 111                      | 47.0                  | 60.0      | 0.315/8.0           |
| XAL1580-741ME_           | 0.74                                 | 0.72                        | 0.86 | 35.1                             | 86.0                     | 43.2                  | 59.7      | 0.315/8.0           |
| XAL1580-102ME_           | 1.0                                  | 0.93                        | 1.12 | 30.0                             | 73.5                     | 40.6                  | 57.5      | 0.315/8.0           |
| XAL1580-132ME_           | 1.3                                  | 1.15                        | 1.38 | 26.2                             | 65.0                     | 34.6                  | 46.7      | 0.307/7.8           |
| XAL1580-182ME_           | 1.8                                  | 1.61                        | 1.93 | 21.3                             | 57.0                     | 33.2                  | 43.8      | 0.303/7.7           |
| XAL1580-202ME_           | 2.0                                  | 1.91                        | 2.29 | 20.1                             | 51.0                     | 29.5                  | 39.9      | 0.303/7.7           |
| XAL1580-302ME_           | 3.0                                  | 2.62                        | 3.10 | 16.0                             | 43.0                     | 25.6                  | 34.4      | 0.295/7.5           |
| XAL1580-452ME_           | 4.5                                  | 3.82                        | 4.58 | 12.5                             | 34.2                     | 20.4                  | 27.0      | 0.295/7.5           |
| XAL1580-532ME_           | 5.3                                  | 4.35                        | 5.22 | 11.8                             | 33.0                     | 19.5                  | 26.5      | 0.295/7.5           |
| XAL1580-612ME_           | 6.1                                  | 5.66                        | 6.79 | 11.7                             | 31.0                     | 16.9                  | 22.6      | 0.291/7.4           |

## 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 **termination** and **packaging** codes:

**XAL1580-612MED**

**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 C 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. Maximum height in inches/mm.

8. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



www.coilcraft.com

**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** +65-6484 8412 sales@coilcraft.com.sg

Document 891-1 Revised 07/25/12

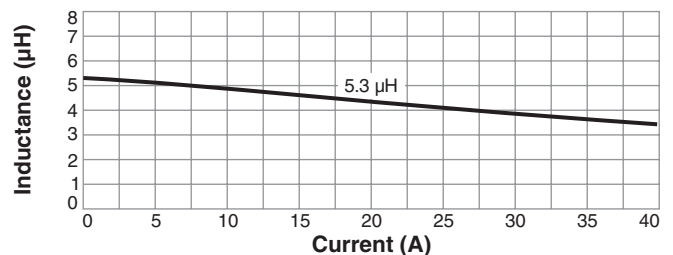
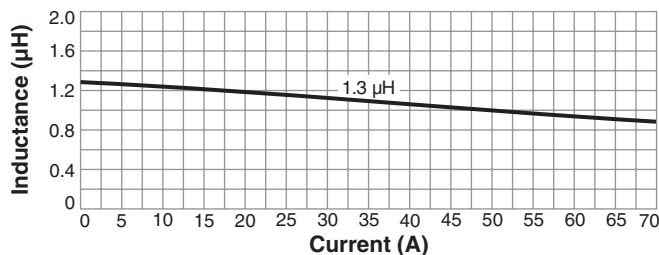
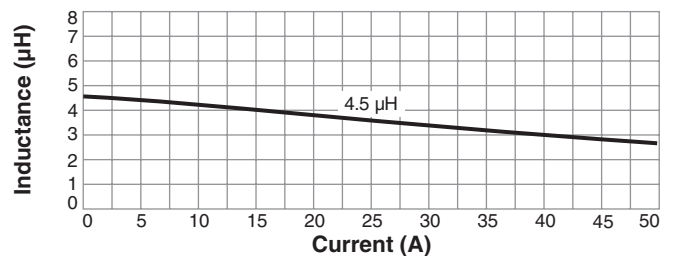
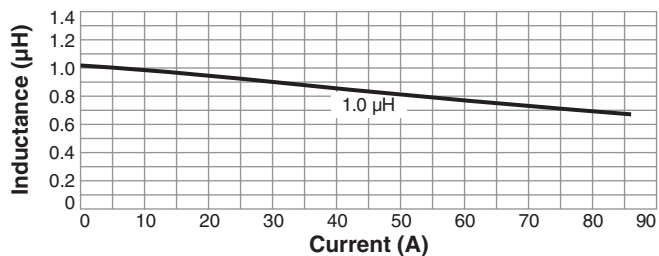
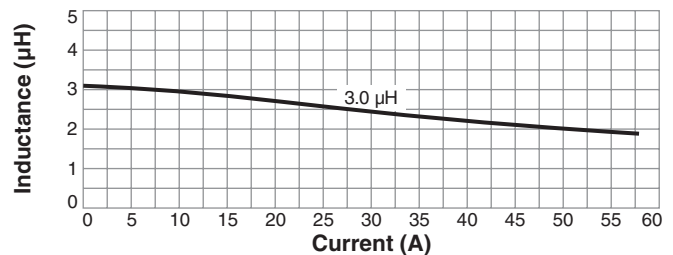
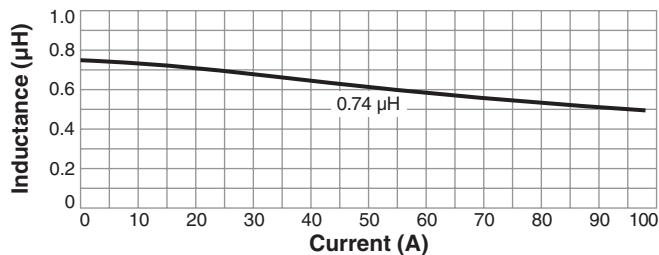
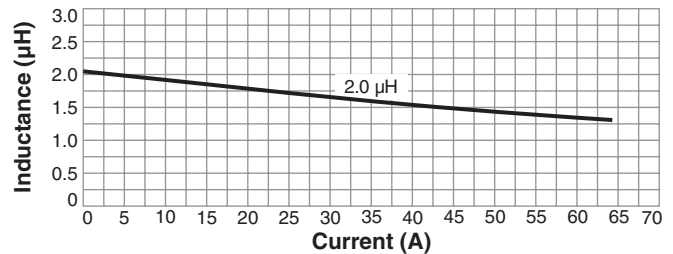
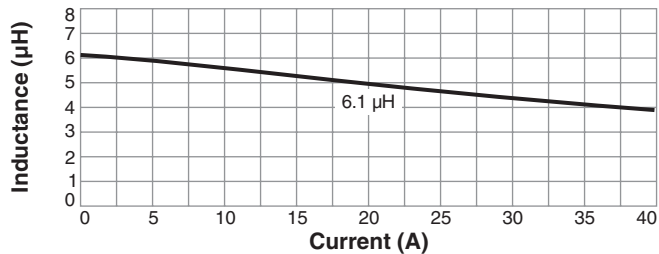
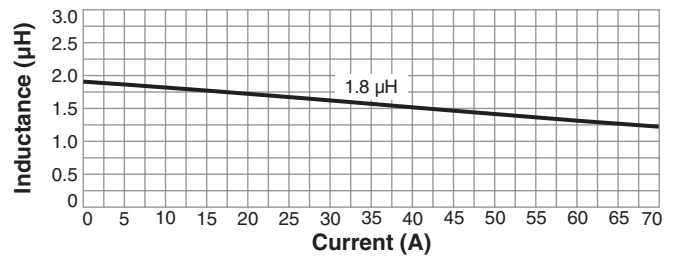
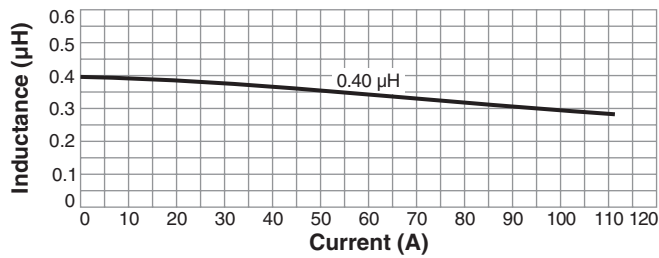
© Coilcraft Inc. 2012

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


**NEW!**

# Shielded Power Inductors – XAL1580

## Typical L vs Current


[www.coilcraft.com](http://www.coilcraft.com)

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)  
**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)  
**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)  
**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)  
**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

Document 891-2 Revised 07/25/12

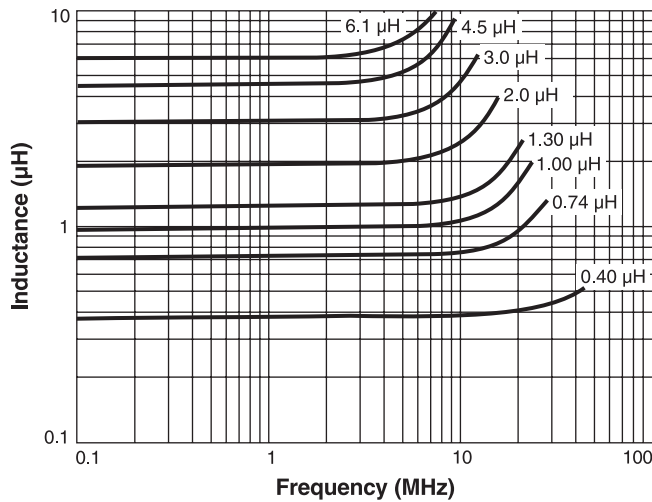
© Coilcraft Inc. 2012

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

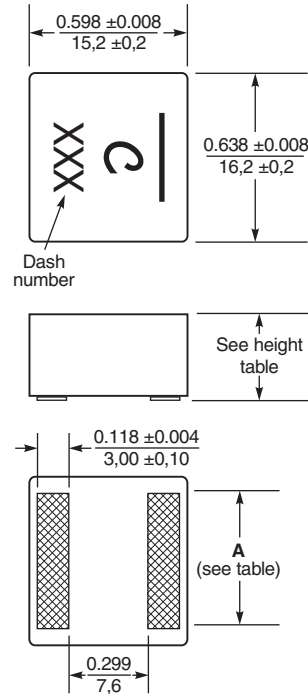
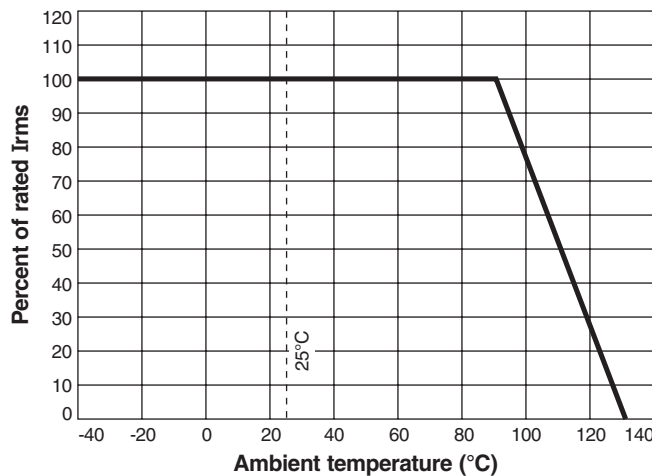

**NEW!**

# Shielded Power Inductors – XAL1580

## Typical L vs Frequency



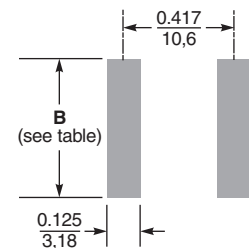
## Irms Derating



| Part number | Height max (inches / mm) |
|-------------|--------------------------|
| XAL1580-401 | 0.315 / 8.0              |
| XAL1580-741 | 0.315 / 8.0              |
| XAL1580-102 | 0.315 / 8.0              |
| XAL1580-132 | 0.307 / 7.8              |
| XAL1580-182 | 0.303 / 7.7              |
| XAL1580-202 | 0.303 / 7.7              |
| XAL1580-302 | 0.295 / 7.5              |
| XAL1580-452 | 0.295 / 7.5              |
| XAL1580-532 | 0.295 / 7.5              |
| XAL1580-612 | 0.291 / 7.4              |

| Dash number | A<br>±0.008 in<br>±0.20 mm<br>(in / mm) | B<br>(in / mm) |
|-------------|-----------------------------------------|----------------|
| -401        | 0.518 / 13.16                           | 0.557 / 14.16  |
| -741        | 0.518 / 13.16                           | 0.557 / 14.16  |
| -102        | 0.518 / 13.16                           | 0.557 / 14.16  |
| -132        | 0.502 / 12.76                           | 0.534 / 13.56  |
| -182        | 0.494 / 12.56                           | 0.522 / 13.26  |
| -202        | 0.494 / 12.56                           | 0.522 / 13.26  |
| -302        | 0.479 / 12.16                           | 0.498 / 12.66  |
| -452        | 0.471 / 11.96                           | 0.487 / 12.36  |
| -532        | 0.471 / 11.96                           | 0.487 / 12.36  |
| -612        | 0.467 / 11.86                           | 0.481 / 12.21  |

## Recommended Land Pattern



Dimensions are in inches / mm



www.coilcraft.com

**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 891-3 Revised 07/25/12

© Coilcraft Inc. 2012

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



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](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.