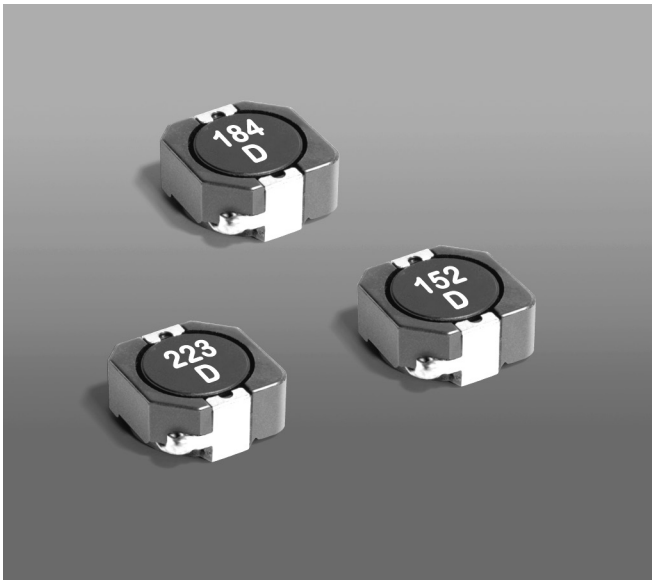
# Shielded Power Inductors – MSS1048




- 10 × 10.2 mm footprint; 4.8 mm high shielded inductors
- Very low DCR and excellent current handling

**Designer's Kit C409** contains 3 each of all values.

**Core material** Ferrite

**Core and winding loss** See www.coilcraft.com/coreloss

**Terminations** RoHS compliant matte tin over nickel over copper. Other terminations available at additional cost.

**Weight:** 1.7 – 1.9 g

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +85°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** 200/7″ reel; 800/13″ reel; Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 5.1 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

| Part number[1] | Inductance[2] (µH) | DCR max (mΩ) | SRF typ[3] (MHz) | Isat (A)[4] 10% drop | 20% drop | 30% drop | Irms (A)[5] 20°C rise | 40°C rise |
|---|---|---|---|---|---|---|---|---|
| MSS1048-801NL_ | 0.8 ±30% | 4.3 | 180 | 9.60 | 12.0 | 14.1 | 8.19 | 12.0 |
| MSS1048-152NL_ | 1.5 ±30% | 5.1 | 90 | 5.44 | 7.80 | 10.5 | 7.41 | 10.8 |
| MSS1048-222NL_ | 2.2 ±30% | 7.2 | 70 | 4.92 | 6.62 | 8.40 | 6.63 | 9.78 |
| MSS1048-332NL_ | 3.3 ±30% | 10.0 | 50 | 4.62 | 6.32 | 7.38 | 5.04 | 7.22 |
| MSS1048-472NL_ | 4.7 ±30% | 11.5 | 38 | 4.36 | 5.62 | 6.46 | 4.90 | 6.90 |
| MSS1048-682NL_ | 6.8 ±30% | 16.3 | 35 | 3.60 | 5.00 | 5.94 | 4.52 | 6.01 |
| MSS1048-822NL_ | 8.2 ±30% | 20.0 | 28 | 3.14 | 4.14 | 4.84 | 4.38 | 5.71 |
| MSS1048-103ML_ | 10 ±20% | 23.0 | 24 | 3.08 | 3.84 | 4.32 | 3.99 | 4.79 |
| MSS1048-153ML_ | 15 ±20% | 36.0 | 20 | 2.46 | 3.06 | 3.44 | 3.51 | 4.26 |
| MSS1048-223ML_ | 22 ±20% | 50.0 | 12 | 2.36 | 2.90 | 3.28 | 2.86 | 3.58 |
| MSS1048-333ML_ | 33 ±20% | 68.0 | 11 | 1.66 | 2.14 | 2.42 | 2.12 | 2.80 |
| MSS1048-473ML_ | 47 ±20% | 120 | 10 | 1.44 | 1.86 | 2.20 | 1.83 | 2.42 |
| MSS1048-563ML_ | 56 ±20% | 126 | 10 | 1.36 | 1.70 | 1.90 | 1.71 | 2.28 |
| MSS1048-683ML_ | 68 ±20% | 176 | 7.0 | 1.28 | 1.60 | 1.70 | 1.39 | 1.88 |
| MSS1048-823ML_ | 82 ±20% | 196 | 6.0 | 1.08 | 1.44 | 1.64 | 1.23 | 1.67 |
| MSS1048-104ML_ | 100 ±20% | 224 | 6.0 | 0.99 | 1.20 | 1.36 | 1.09 | 1.48 |
| MSS1048-154KL_ | 150 ±10% | 330 | 5.0 | 0.79 | 1.02 | 1.16 | 0.97 | 1.33 |
| MSS1048-184KL_ | 180 ±10% | 360 | 4.5 | 0.75 | 0.92 | 1.02 | 0.89 | 1.24 |
| MSS1048-224KL_ | 220 ±10% | 394 | 4.5 | 0.67 | 0.84 | 0.95 | 0.85 | 1.18 |
| MSS1048-334KL_ | 330 ±10% | 748 | 3.0 | 0.57 | 0.69 | 0.76 | 0.57 | 0.82 |
| MSS1048-474KL_ | 470 ±10% | 886 | 2.7 | 0.43 | 0.52 | 0.62 | 0.50 | 0.72 |

1. Please specify **termination** and **packaging** codes:

**MSS1048-334KLC**

**Termination: L** = RoHS compliant matte tin over nickel over copper.
**Special order:**
**T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

**Packaging: C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (200 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.
**D** = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (800 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. SRF measured using an Agilent/HP 4192A impedance analyzer or equivalent.
4. DC current at which the inductance drops the specified amount from its value without current.
5. Current that causes the specified temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.

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



Coilcraft
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

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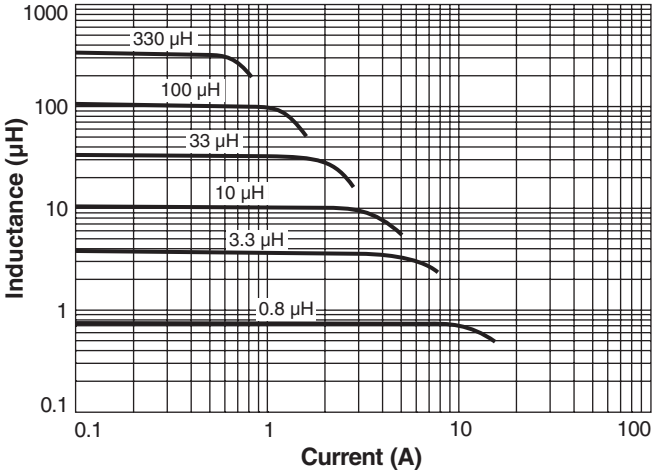
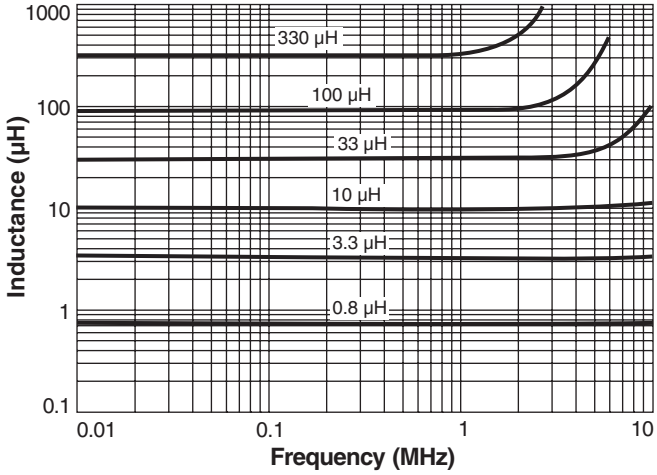
# SMT Power Inductors – MSS1048

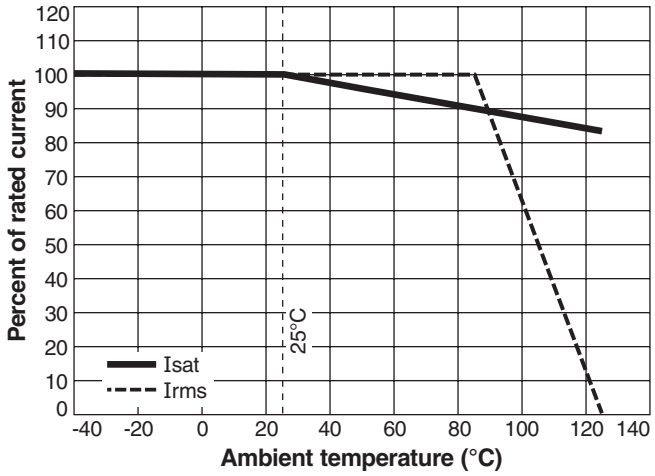
## Typical L vs Current

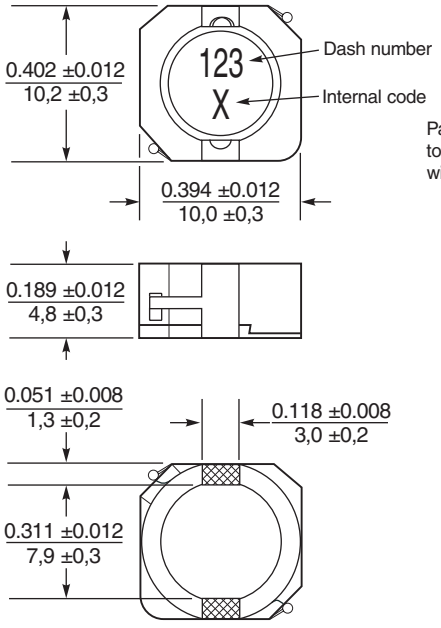



## Typical L vs Frequency



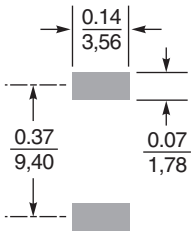

## Typical Current Derating




Parts manufactured prior to Sept. 2007 were marked with only the dash number.

**Recommended Land Pattern**




Dimensions are in inches / mm

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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
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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:

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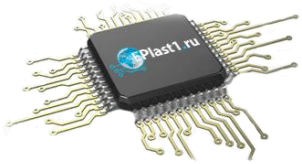
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**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.