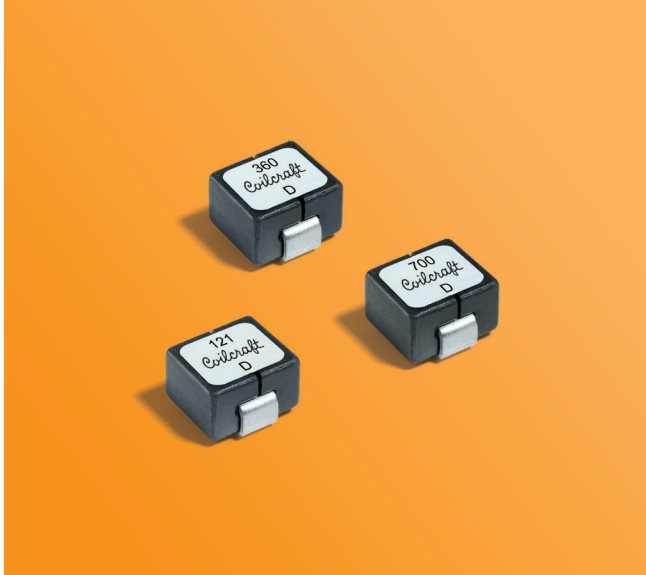


# High-Reliability Power Inductors MS528PMM



- Designed for use in multi-phase VRM/VRD regulators and high current/high frequency DC/DC converters.
- Requires only 60 mm<sup>2</sup> of board space; can handle up to 100 A.
- Tin-lead (Sn-Pb) terminations for the best possible board adhesion

**Core material** Ferrite

**Terminations** Tin-lead (63/37) over tin over nickel over copper.

**Weight** 0.9 g

**Ambient temperature** -55°C to +125°C with Irms current

**Maximum part temperature** +155°C (ambient + temp rise)

**Storage temperature** Component: -55°C to +155°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)

**Packaging** 250/7" reel Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 5 mm pocket depth

| Part number <sup>1,7</sup> | L<br>±10% <sup>2</sup><br>(nH) | DCR<br>±5% <sup>3</sup><br>(mOhms) | SRF<br>ref <sup>4</sup><br>(MHz) | Isat <sup>5</sup><br>(A) | Irms <sup>6</sup><br>(A) |
|----------------------------|--------------------------------|------------------------------------|----------------------------------|--------------------------|--------------------------|
| MS528PMM360KS_             | 36                             | 0.17                               | 1150                             | 100                      | 39                       |
| MS528PMM500KS_             | 50                             | 0.17                               | 900                              | 84                       | 39                       |
| MS528PMM700KS_             | 70                             | 0.17                               | 750                              | 65                       | 39                       |
| MS528PMM101KS_             | 100                            | 0.17                               | 110                              | 42                       | 39                       |
| MS528PMM121KS_             | 120                            | 0.17                               | 78                               | 33                       | 39                       |
| MS528PMM151KS_             | 150                            | 0.17                               | 67                               | 27                       | 39                       |

1. When ordering, please specify **screening** code:

**MS528PMM151KSZ**

**Screening:** Z = Unscreened

Y = Unscreened (SLDC Option A)

W = Unscreened (SLDC Option B)

H = Group A screening per Coilcraft CP-SA-10001

G = Coilcraft CP-SA-10001 Group A (SLDC Option A)

D = Coilcraft CP-SA-10001 Group A (SLDC Option B)

1 = EEE-INST-002 (Family 1) Level 1

2 = EEE-INST-002 (Family 1) Level 2

3 = EEE-INST-002 (Family 1) Level 3

4 = MIL-STD-981 (Family 04) Class B

5 = MIL-STD-981 (Family 04) Class S

F = ESCC3201 (F4 operational life performed at 105°C)

- Screening performed to the document's latest revision.

- Lot qualification (Group B) available.

- Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.

- Country of origin restrictions available; prefix options G or F.

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4263B LCR meter or equivalent.

3. DCR is measured between the two points indicated on the dimensional drawing.

4. This information is for design purposes only and shall not be tested during screening.

5. DC current at 25°C that causes an inductance drop of 20% (typ) from its value without current.

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.

7. Due to the design of this component, DWV and IR shall not be specified or tested.

8. Electrical specifications at 25°C.

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

**Coilcraft CPS**

CRITICAL PRODUCTS & SERVICES

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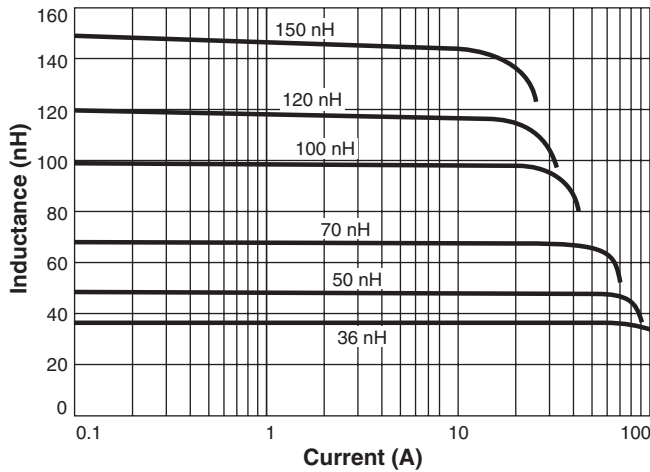
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Document MS481-1 Revised 08/11/23

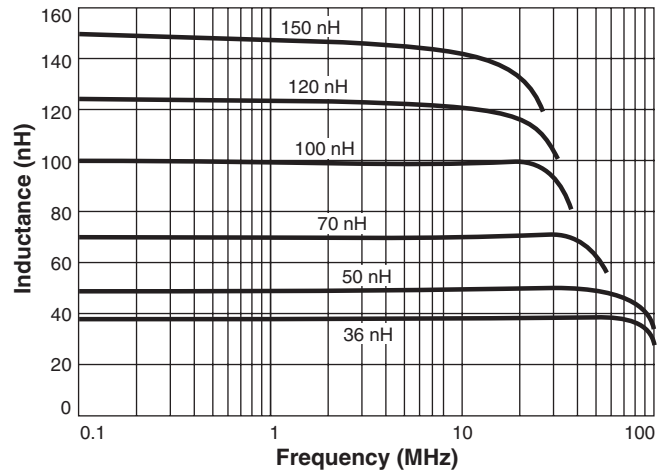
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# Shielded Power Inductors – MS528PMM Series

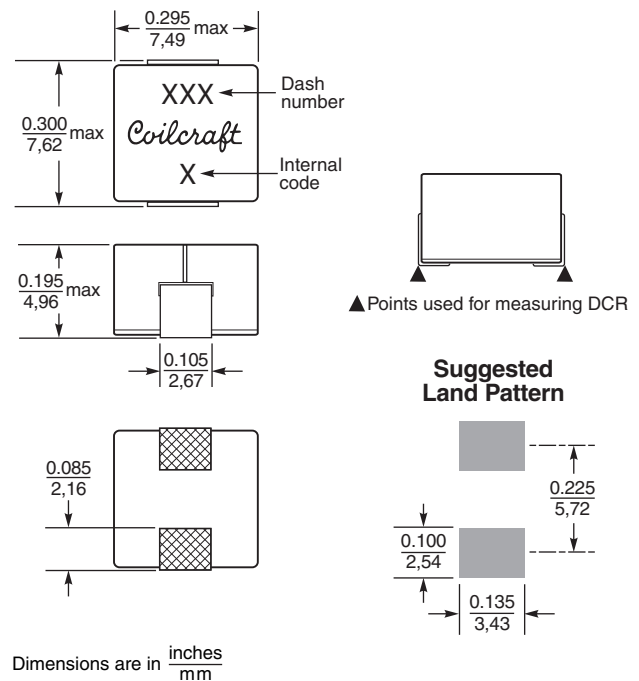
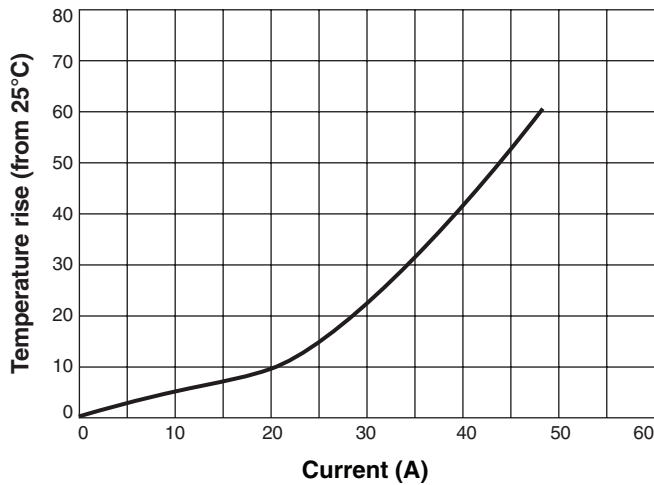
## L vs Current



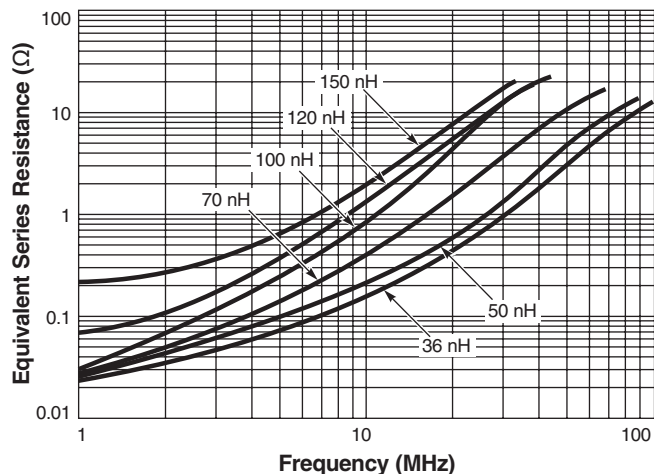
## L vs Frequency



## Temperature Rise vs Current



## ESR vs Frequency



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