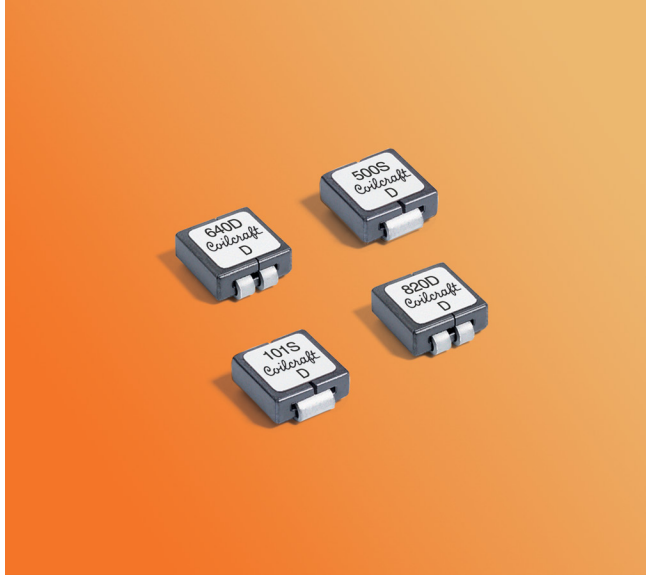


Power Inductor for Critical Applications

ST515PMM
ST515PMD



- Designed for high-speed switch mode applications
- Can be used as a 1:1 transformer or in SEPIC applications

Core material Ferrite

Terminations Matte tin over nickel over copper. Other terminations available at additional cost.

Weight 0.44 – 0.47 g

Ambient temperature –40°C to +85°C with (40°C rise) Irms current.

Maximum part temperature +125°C (ambient + temp rise). [Derating](#).

Storage temperature Component: –55°C to +125°C.
Tape and reel packaging: –55°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 500/7" reel; Plastic tape: 16 mm wide, 0.33 mm thick, 12 mm pocket spacing, 3.12 mm pocket depth

Single Conductor

Part number ¹	L±20% ² (µH)	DCR ±5% ³ (mOhms)	SRF typ ⁴ (GHz)	Isat ⁵ (A)	Irms ⁶ (A)
ST515PMM500MLZ	0.050	0.123	3.80	50	40
ST515PMM640MLZ	0.064	0.123	3.65	32	40
ST515PMM820MLZ	0.082	0.123	3.75	22	40
ST515PMM101MLZ	0.100	0.123	3.75	20	40

Dual Conductor

Leads connected in parallel

Leads connected in series

Part number ¹	L±20% ² (µH)	DCR ±5% ³ (mOhms)	SRF typ ⁴ (GHz)	Isat ⁵ (A)	Irms ⁶ (A)	L±20% ² (µH)	DCR max ³ (mOhms)	SRF typ ⁴ (GHz)	Isat ⁵ (A)	Irms ⁶ (A)
ST515PMD500MLZ	0.050	0.209	3.75	50	38	0.188	1.00	1.50	21	17
ST515PMD640MLZ	0.064	0.209	3.65	32	38	0.272	1.00	1.30	14	17
ST515PMD820MLZ	0.082	0.209	3.75	22	38	0.350	1.00	1.20	11	17
ST515PMD101MLZ	0.100	0.209	3.75	20	38	0.400	1.00	0.950	8	17

1. When ordering, specify **conductors**, **termination** and **testing** codes:

ST515PMM101KLZ

Conductors: M= Single conductor; D = dual conductor

Termination: L = Matte tin over nickel over copper
Special order: T = Tin-silver-copper (95.5/4/0.5) or
S = Tin-lead (63/37).

Testing: Z = Unscreened
H = Group A screening per Coilcraft CP-SA-10001
T = Screening per MIL-STD-981
U = Screening per EEE-INST-002
F = Screening per ESCC 3201
All screening performed to the document's latest revision
Custom screening also available

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

3. DCR is measured on a micro-ohmmeter at points indicated in the diagram.



▲ Points used for measuring DCR

- SRF measured using an Agilent/HP 8753ES network analyzer and a Coilcraft SMD-D fixture.
 - DC current at 25°C that causes a 20% (typ) inductance drop from its value without current.
 - Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

SPICE models
ON OUR WEB SITE

Document ST366I-1 Revised 05/29/17

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

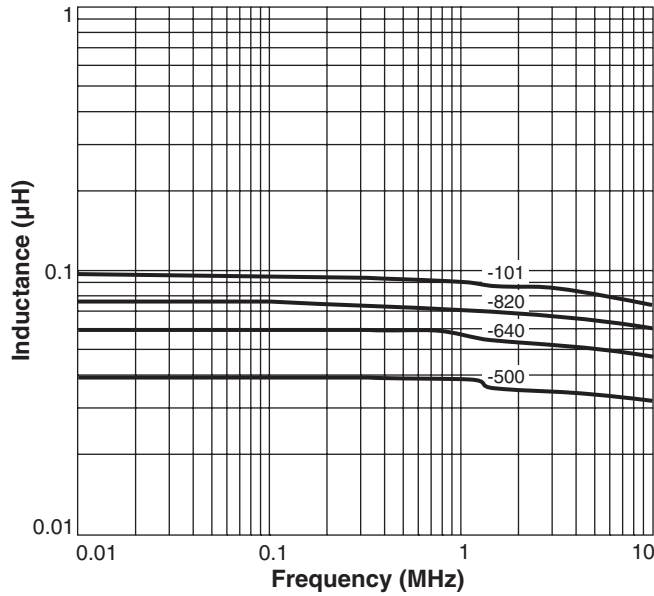
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

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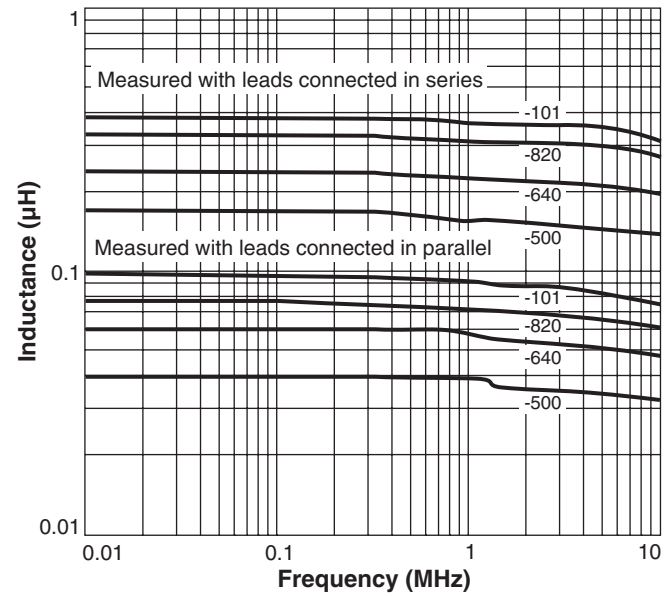
Power Inductor for Critical Applications – ST515PMM & PMD

Typical L vs Current

Single Conductor

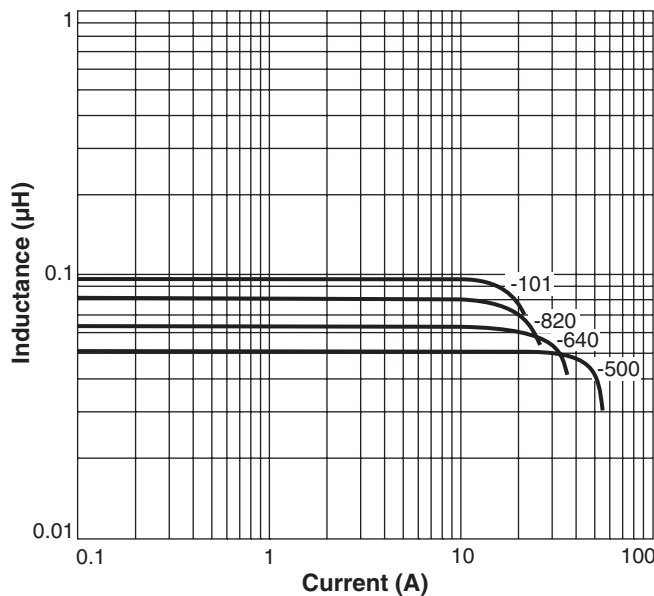


Dual Conductor

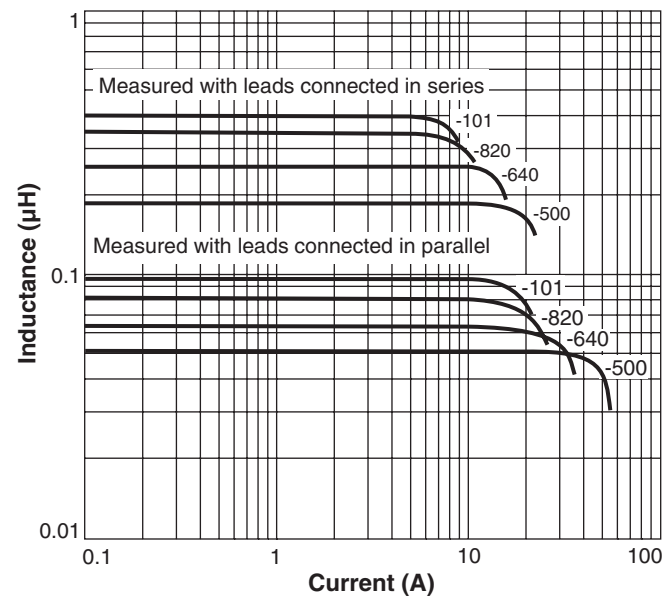


Typical L vs Frequency

Single Conductor



Dual Conductor



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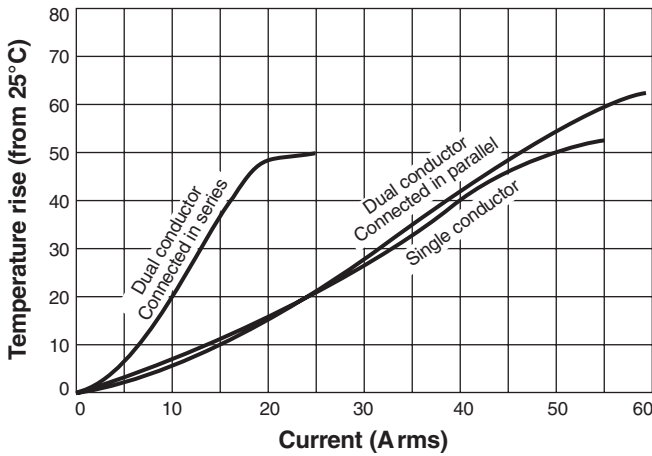
Fax 847-639-1508
Email cps@coilcraft.com
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Document ST3661-2 Revised 05/29/17

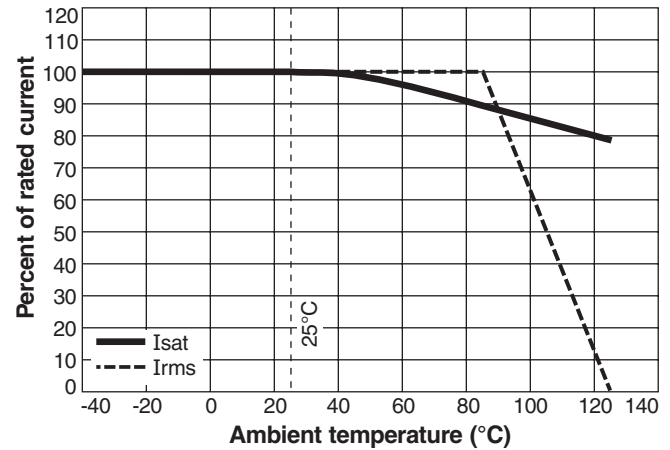
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Power Inductor for Critical Applications – ST515PMM & PMD

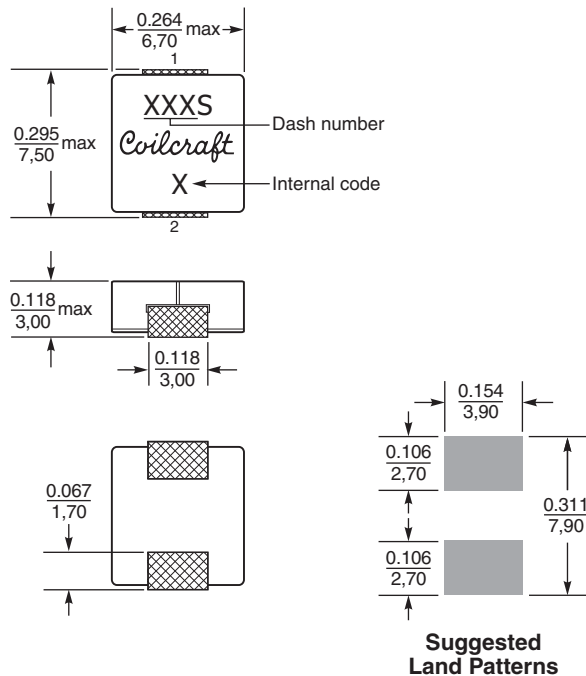
Typical Temperature Rise vs Current



Current Derating

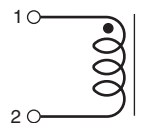


Dimensions – Single Conductor

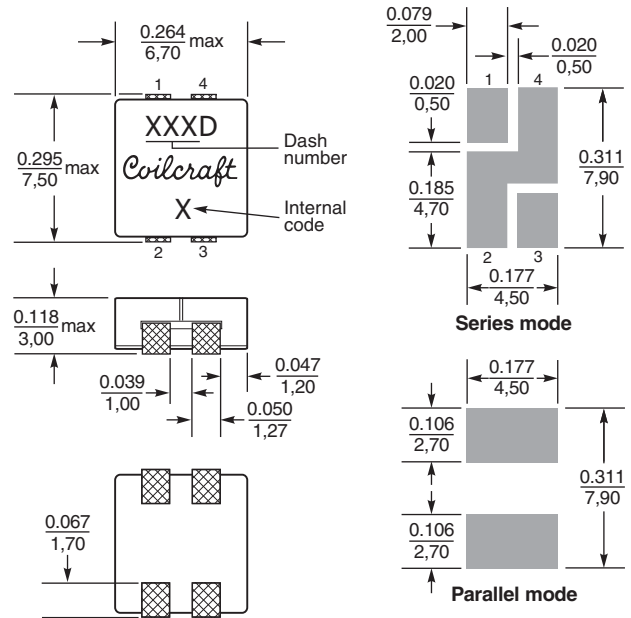


Note: Dimensions are before optional solder application. For maximum overall dimensions including solder, add 0.0025 in / 0,064 mm to the length, and 0.006 in / 0,15 mm to the height.

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

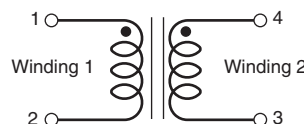


Dimensions – Dual Conductor

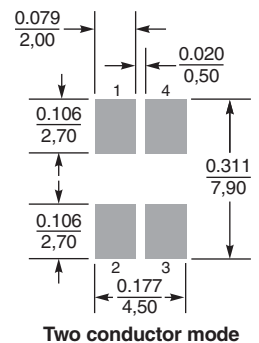


Note: Dimensions are before optional solder application. For maximum overall dimensions including solder, add 0.0025 in / 0,064 mm to the length, and 0.006 in / 0,15 mm to the height.

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



Winding-to-winding isolation:
25 V maximum



Suggested Land Patterns

