MPL-SR7345-470

Shielded Inductor, 47µH

APPLICATIONS

- Battery-Powered Devices
- High-Efficiency SMPS
- DC/DC Converters

FEATURES

- Size: 7.3mmx7.3mmx4.5mm
- Shielded Construction
- MnZn Core for Higher Saturation Current
- Max Operating Temp: +125°C
- RoHS/REACH-Compliant, Halogen-Free

ELECTRICAL CHARACTERISTICS

Parameter			Value	Unit
Inductance (1)	L	±20%	47	µH
Resistance	R_{DC}	Typ	190	mΩ
Resistance MAX	$R_{DC\ MAX}$	Max	210	mΩ
Rated Current (2)	I_R	Typ	1.4	A
Saturation Current 25°C (3)	$I_{SAT\ 25°C}$	Typ	2.0	A
Saturation Current 100°C (4)	$I_{SAT\ 100°C}$	Typ	1.4	A
Resonance Frequency	f_r	Typ	11	MHz
Operating Voltage	V_{DC}	Max	100	V

GENERAL SPECIFICATIONS

(1) Inductance	Measured at 100kHz, 100mA
(2) Rated Current	The rated current causes a coil temperature rise ΔT of 40K. I_R is measured with the inductor soldered in a single-layer PCB, with a copper layer thickness of 35µm Cu, and a PCB size of 30mmx50mm. The temperature behavior is dependent on circuit design, PCB layout, proximity to other components, as well as trace dimensions and thickness.
(3) Saturation Current 25°C	Saturation current will cause L to drop from 30% at a 25°C ambient temperature.
(4) Saturation Current 100°C	Saturation current will cause L to drop from 30% at a 100°C ambient temperature.
Temperature Test Condition	Electrical specifications measured at 25°C, 35% RH if not given differently.
Operating Condition	Operating temperature: -40°C to +125°C (including temp rise) Should not exceed +125°C under worst-case operation conditions.
Storage Condition	Tape and Reel packaging: -10°C to +40°C Humidity: <50% RH

All MPS parts are lead-free, halogen-free, and adhere to the RoHS directive. For MPS green status, please visit the MPS website under Quality Assurance. “MPS”, the MPS logo, and “Simple, Easy Solutions” are registered trademarks of Monolithic Power Systems, Inc. or its subsidiaries.

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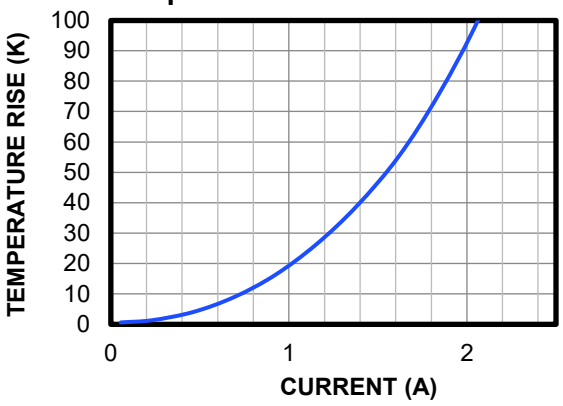
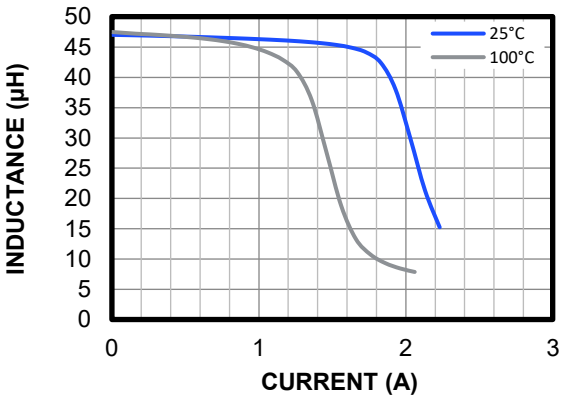
TYPICAL PERFORMANCE CURVES

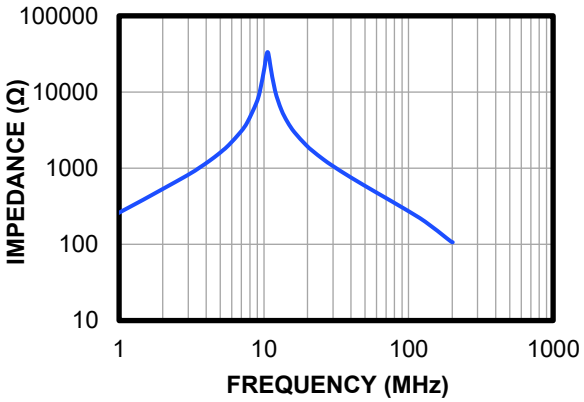
Temperature Rise vs. Current



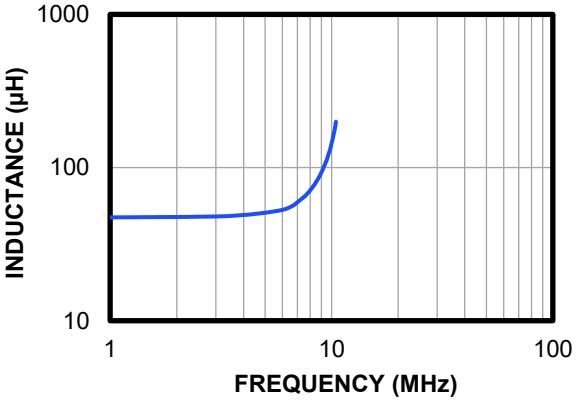
Inductance vs. Current



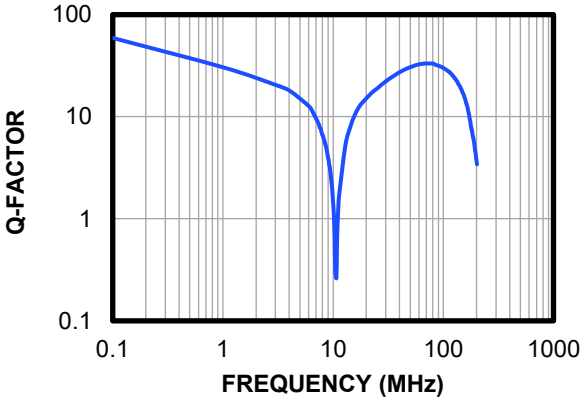
Impedance vs. Frequency



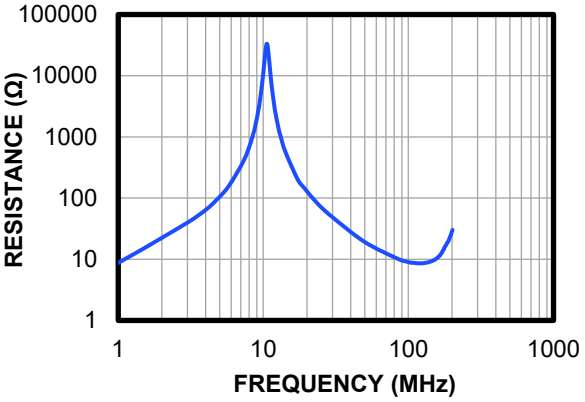
Inductance vs. Frequency



Quality Factor vs. Frequency



AC Resistance vs. Frequency



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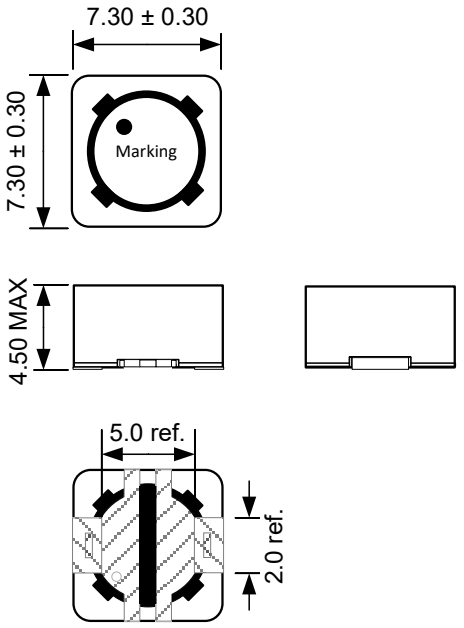
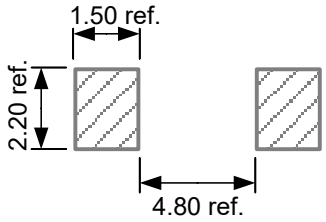
DIMENSIONS

PRODUCT PACKAGE



(units in mm)

RECOMMENDED LAND PATTERN



(units in mm)

TOP MARKING

Marking	
Start of Winding	. (dot)
Inductance Code	470

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ORDERING INFORMATION

Part Number	L (1) (µH)	R_{DC} Typ (mΩ)	I_R (2) Typ (A)	$I_{SAT\ 25°C}$ (3) Typ (A)	$I_{SAT\ 100°C}$ (4) Typ (A)
MPL-SR7345-1R0	1.0	11	7.5	11.2	8.8
MPL-SR7345-1R5	1.5	12	7.1	10	7.9
MPL-SR7345-2R2	2.2	14	6.5	8.8	6.6
MPL-SR7345-3R3	3.3	22	5.1	7.5	5.6
MPL-SR7345-4R7	4.7	24	4.8	6.4	4.7
MPL-SR7345-6R8	6.8	36	4.0	5.3	4.0
MPL-SR7345-100	10	47	3.3	4.6	3.3
MPL-SR7345-150	15	66	2.7	3.6	2.6
MPL-SR7345-220	22	90	2.3	2.7	2.0
MPL-SR7345-330	33	135	1.7	2.4	1.8
MPL-SR7345-470	47	190	1.4	2.0	1.4
MPL-SR7345-101	100	390	1.0	1.2	0.9

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REVISION HISTORY

Revision #	Revision Date	Description	Pages Updated
1.0	6/11/2026	Initial Release	-

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