



Semi-Shielded Inductor 8.2µH



APPLICATIONS

- · Battery-powered devices
- High-efficiency SMPS
- Embedded computing
- Input filters

FEATURES

- Size 6mmx6mmx4mm
- Semi-Shielded Construction
- Low DCR
- Low Stray Field
- Max Operating Temp +125°C
- RoHS/REACH-Compliant, Halogen-Free

ELECTRICAL CHARACTERISTICS				
Parameter			Value	Unit
Inductance (1)	L	±20%	8.2	μH
Resistance	R _{DC}	typ	39	mΩ
Resistance MAX	RDC MAX	max	47	$\boldsymbol{m}\boldsymbol{\Omega}$
Rated Current (2)	I _R	typ	4	Α
Saturation Current _{25°C} (3)	ISAT 25°C	typ	3.6	Α
Saturation Current 100°C (4)	ISAT 100°C	typ	3.2	Α
Resonance Frequency	fr	typ	23	MHz

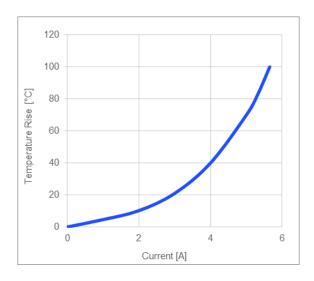
GENERAL SPECIFICATIONS		
(1) Inductance	Measured at 100kHz, 100mA	
(2) Rated Current	Rated current will cause the coil temperature rise ΔT of 40K I_R measured with the inductor soldered in a single-layer PCB. Copper layer thickness 35 μ m Cu / PCB size 30x50mm. Temperature behavior dependent on circuit design, PCB layout, proximity to other components, and trace dimensions and thickness.	
(3) Saturation Current 25°C	Saturation current will cause L to drop from 30% at 25°C ambient temperature	
(4) Saturation Current 100°C	Saturation current will cause L to drop from 30% at 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	

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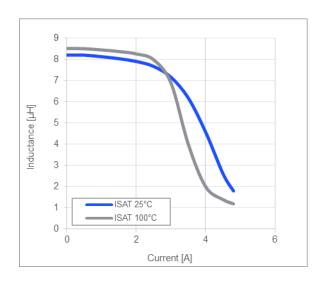


TYPICAL PERFORMANCE CURVES

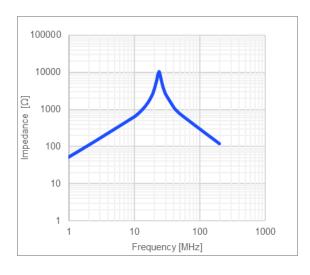
Temperature Rise vs. Current



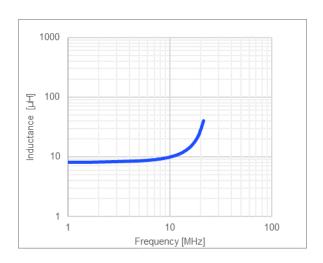
Inductance vs. Current



Impedance vs. Frequency

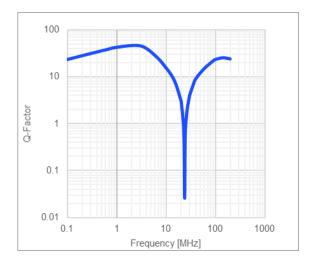


Inductance vs. Frequency

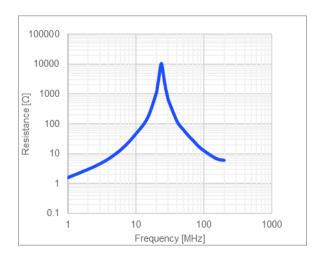




Quality Factor vs. Frequency



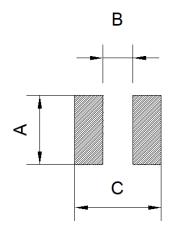
AC Resistance vs. Frequency



3



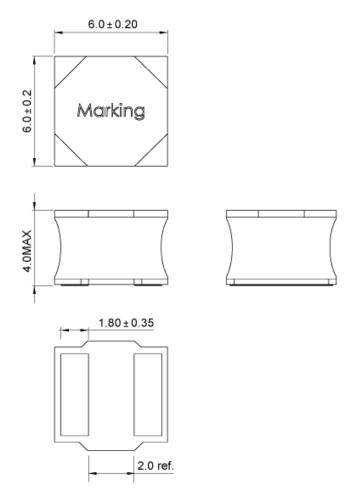
LAND PATTERN		
Dimensions		
Α	4.50 ref.	
В	2.20 ref.	
С	6.50 ref.	
	(unit in mm)	



PRODUCT PACKAGE AND DIMENSIONS

Dimensions

(unit in mm)



TOP MARKING

Marking		
	000	

Inductance Code 8R2



ORDERING INFORMATION					
Part Number	L (1)	RDC	I _R ⁽²⁾	I _{SAT 25°C} (3)	I _{SAT 100°C} (4)
r art Number	typ (µH)	typ (mΩ)	typ (A)	typ (A)	typ (A)
MPL-SE6040-1R5	1.5	11.5	6.8	8.9	7.8
MPL-SE6040-2R2	2.2	14.5	6.3	7.2	6.7
MPL-SE6040-3R3	3.3	19.5	5.6	5.6	4.9
MPL-SE6040-4R7	4.7	23	5.2	5	4.5
MPL-SE6040-6R8	6.8	33	4.4	4.1	3.7
MPL-SE6040-8R2	8.2	39	4.0	3.6	3.2
MPL-SE6040-100	10	41	3.8	3.4	2.8
MPL-SE6040-150	15	70	2.8	2.7	2.4
MPL-SE6040-220	22	97	2.35	2.25	2

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Storage Condition	Tape and Reel packaging: -10°C to +40°C Humidity: <50% RH	

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