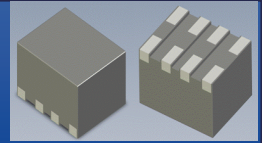


Multi-Phase Molded Power Inductor



AVR-4M100806S

Request Samples



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9.8 x 7.8 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Metal Alloy
- Low DCR, High Efficiency
- High temperature-rise current rating
- High saturation current rating

Applications

- Multiphase DC-DC converters
- Voltage regulator modules (VRMs)
- Renewable energy, Power inverters, DC links
- Telecom infrastructure, datacenters, servers and switches
- Industrial and robotics equipment
- Medium and high-power switch mode power supplies (SMPS)

Electrical Specifications @ 25°C

Part Number*	Inductance	Inductance Tolerance	DC Resistance		Saturation Current		Temperature Rise Current	
	100KHz/1.0V		Typ.	Max.	Max.	Typ.	Max.	Typ.
Units	nH	%	mΩ		A		A	
Symbol	L	M	DCR		Isat		Irms	
AVR-4M100806S50NM	50	± 20%	0.28	0.33	115.0	130.0	50.0	54.0
AVR-4M100806S85NM	85	± 20%	0.28	0.33	90.0	104.0	50.0	54.0

*For full orderable part number, please refer to the [Part Identification](#) section.

Test Conditions:

Test Frequency: 1.0V/100KHz

Isat: DC current at which the inductance drops 30% from its nominal value at 25°C.

Irms: DC current that causes the temperature rise (ΔT , approximate 40 °C) from 20°C ambient.

Operating Temperature: -40°C ~ +125°C. (including self-temperature rise)

Storage Condition: -40°C ~ +125°C (on board), -10°C ~ +40°C (with packaging) and R.H. 85% max.

AVR-4M100806S Series is RoHS Compliant and Pb free.

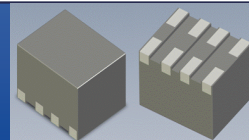


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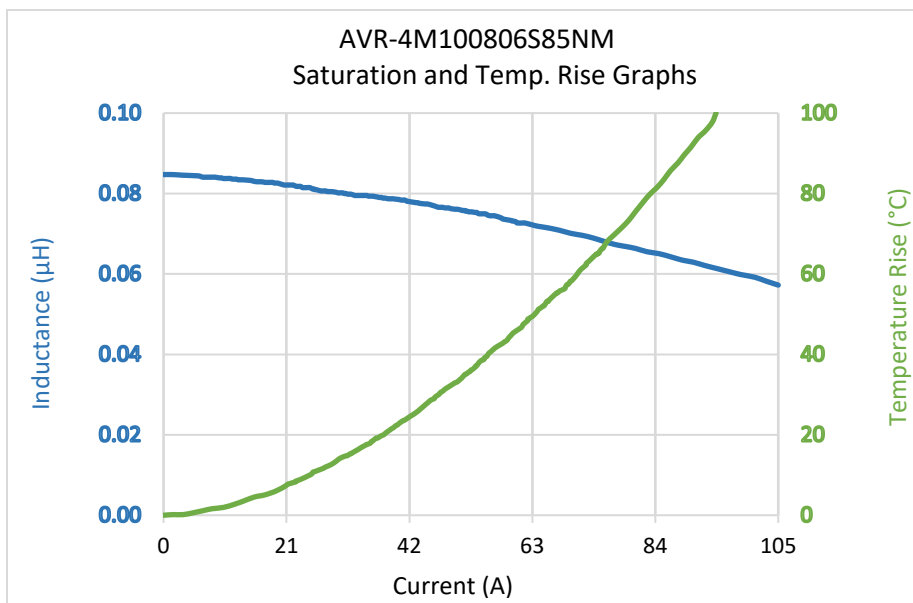
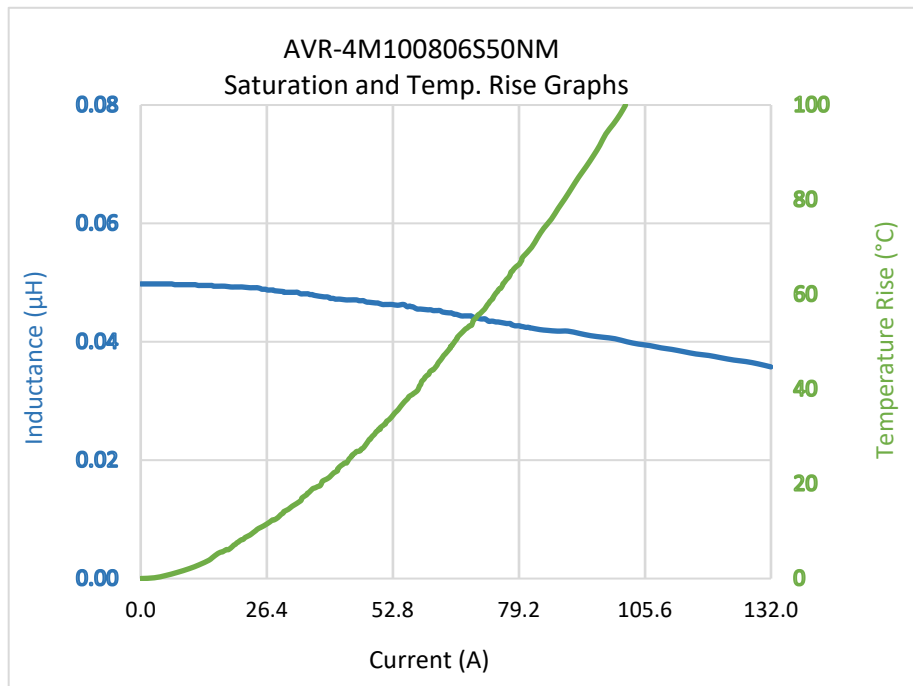


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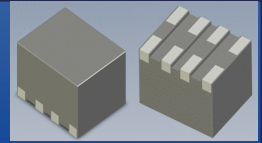


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Performance Graphs



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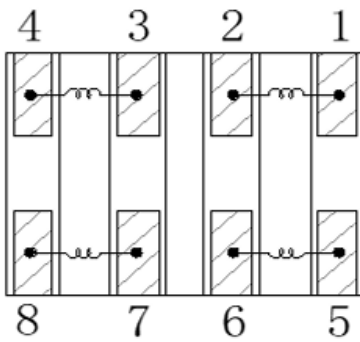


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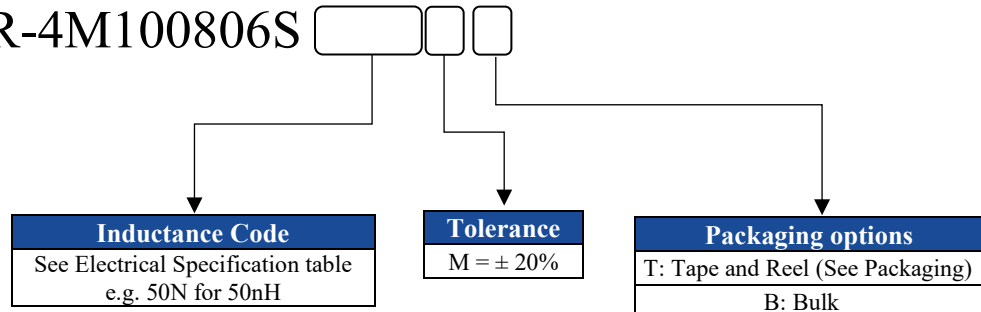
9.8 x 7.8 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Schematic:



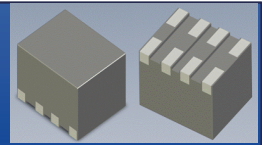
Part Identification

AVR-4M100806S



*Tolerance only available as
indicated in electrical spec. table

Multi-Phase Molded Power Inductor



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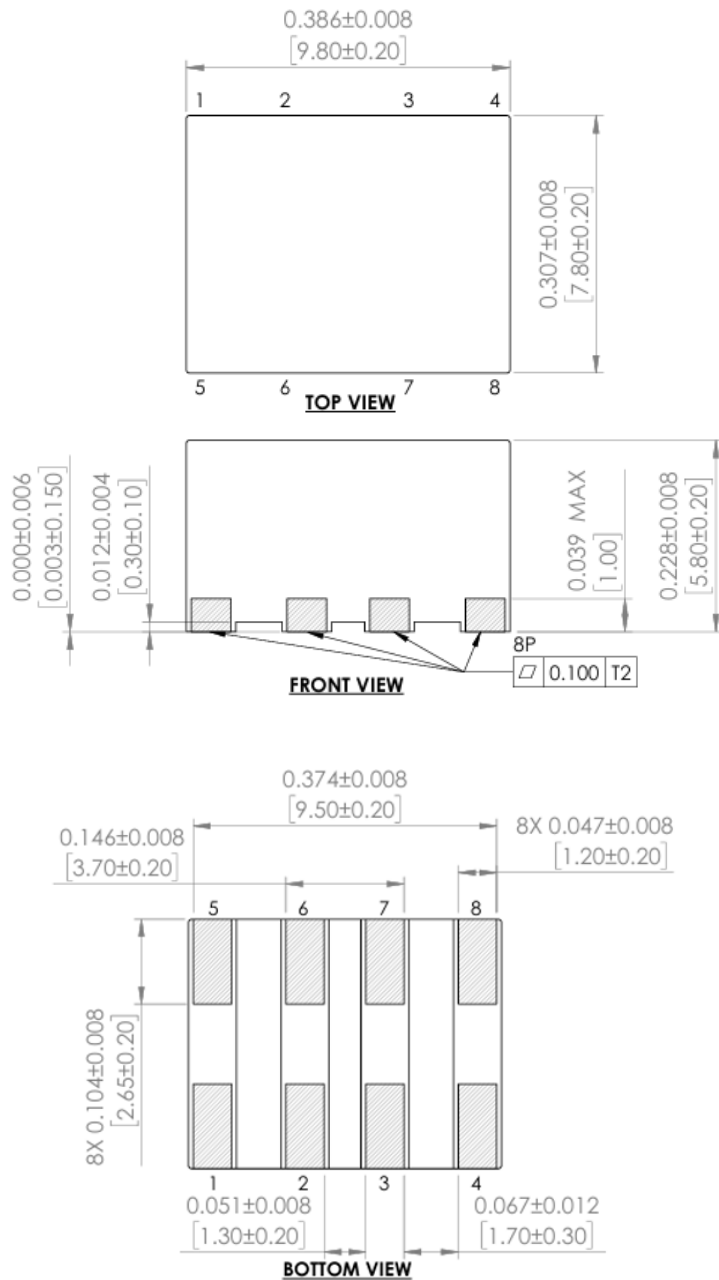


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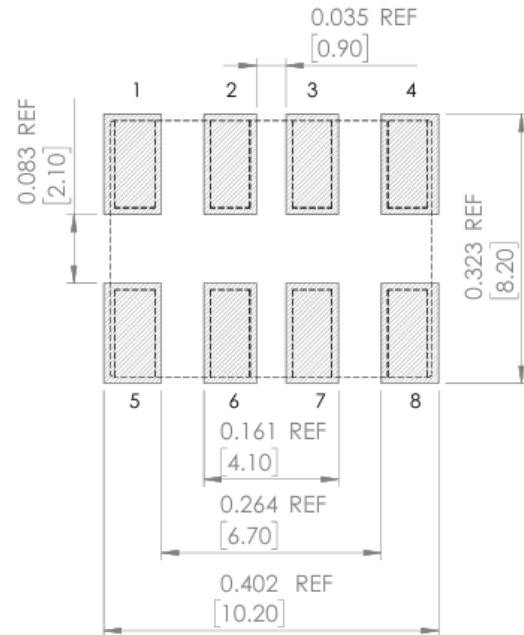


9.8 x 7.8 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications



RECOMMENDED LAND PATTERN



NOTES:

1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.12 mm and above.

Dimensions: Inches [mm]

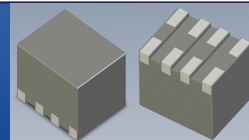


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Reflow Profile

Reflow standard: [JEDEC J-STD-020E]

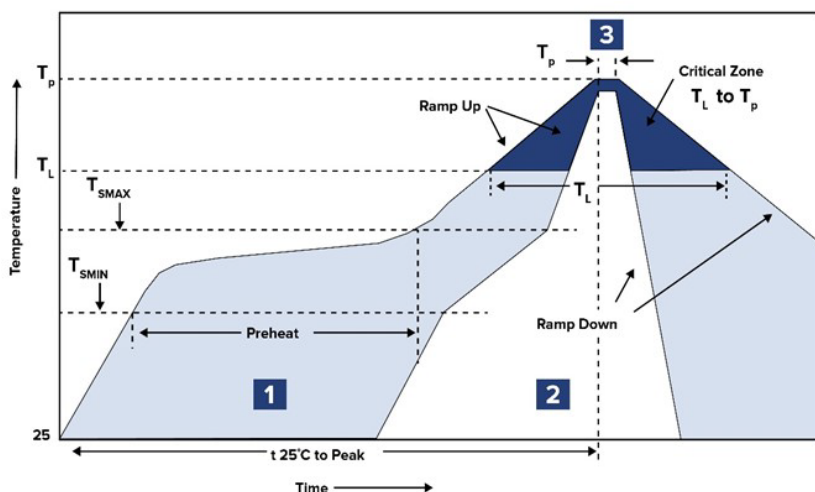


Table (1.2)

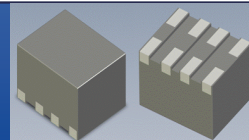
Pb-Free Process Classification Temperatures (T_c)			
Package Thickness	Volume mm^3 <350	Volume mm^3 350-2000	Volume mm^3 >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Pb-Free Assembly
Preheat / soak	
Temperature minimum (T_{smin})	150°C
Temperature maximum (T_{smax})	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_p)	3°C/sec. max
Liquidous temperature (T_L)	217°C
Time at liquidous (t_L)	60 - 150 sec.
Peak package body temperature (T_p)*	See Table (1.2)
Time (t_p)** within 5°C of the specified classification temperature (T_c)	30 sec.
Ramp-down rate (T_p to T_{smax})	6°C/sec. max
Time 25°C to peak temperature	8 min. max
Reflow cycles	2 max

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

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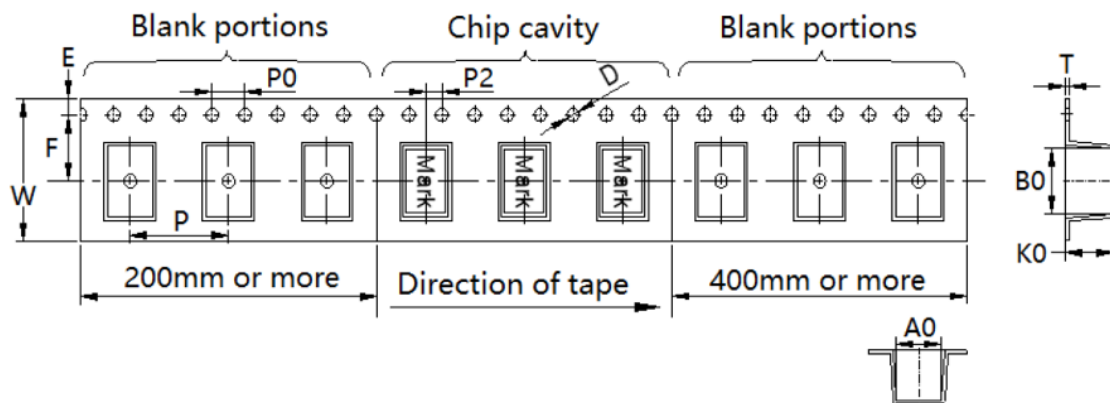
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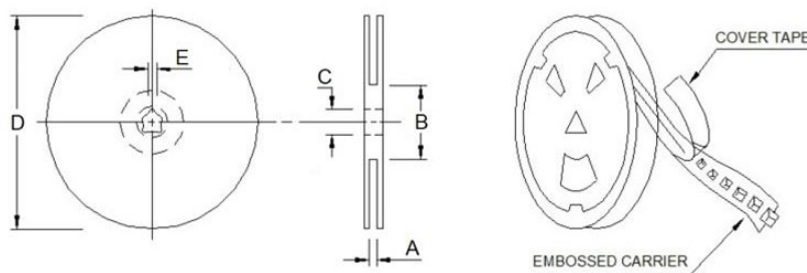
Packaging

Tape & Reel: 500 pcs/reel



Tape Specifications (mm)

A0	B0	D	E	F	K0	P
8.6 Ref	10.6 Ref	1.5±0.1	1.75±0.1	11.5±0.1	6.5 Ref	16.0±0.1
P0	P2	T	W			
4.0±0.1	2.0±0.1	0.5±0.05	24±0.1			



Reel Specifications (mm)

Type	A	B	C	D	E
13"x24mm	24.4 Ref	100 Ref	13.0 Ref	330	2.0 Ref

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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