VERTICALLY ASSEMBLED POWER INDUCTOR



AVR-1Z090509S

Request Samples | Check Inventory

9.0 x 5.2 x 9.4mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Ferrite Core
- Low DCR, High Efficiency
- High temperature current rating
- High saturation current rating

Applications

- Single and Multiphase DC-DC converters
- Voltage regulator modules (VRMs)
- Renewable energy, Power inverters, DC links
- Electric Vehicles (EVs)
- 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	Dim. B	DC Resistance	Saturation Current		Temperature Rise Current
	100KHz/1.0V		Max.	mΩ	Typ.		Typ.
Units	nH	%	mm		A		A
Symbol	L	L	B	DCR	Isat1@ 25°C	Isat2@ 100°C	Irms
AVR-1Z090509S90NLT	90	15%	5.2	0.125±10%	90	77	63
AVR-1Z090509SR10LT	100		5.2		80	70	
AVR-1Z090509SR12LT	120		5.0		72	64	
AVR-1Z090509SR15LT	150		5.0		58	51	
AVR-1Z090509SR18LT	180		5.0		49	42	
AVR-1Z090509SR21LT	210		5.0		38	33	
AVR-1Z090509SR24LT	240		5.0		33	30	
AVR-1Z090509SR27LT	270		5.0		30	26	
AVR-1Z090509SR33LT	330		5.0		23	19	

* The “T” at the end of the part number refers to “Tape & Reel” packaging. For other options, please refer to the Part Identification section.

Test Conditions:

Isat1: DC current at which the inductance drops 20% from its nominal value at 25°C.
Isat2: DC current at which the inductance drops 20% from its nominal value at 100°C.
Irms: DC current that causes the temperature rise (ΔT, approximate 40 ˚C) from 25°C ambient.
Dim. B: Refer to the Mechanical Specs section

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. 70 max.
AVR-1Z090509S Series is RoHS Compliant and Pb free.

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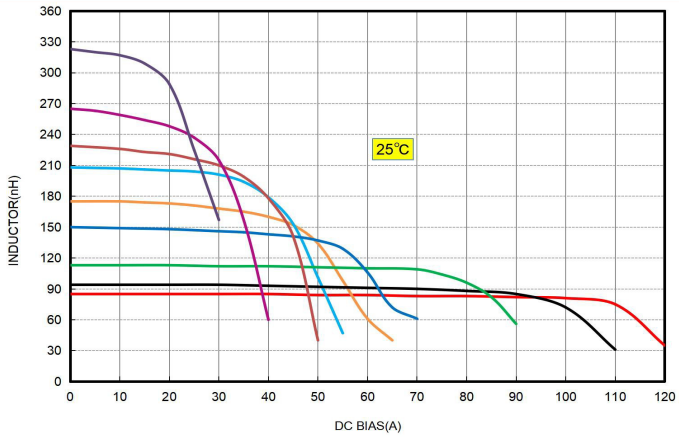
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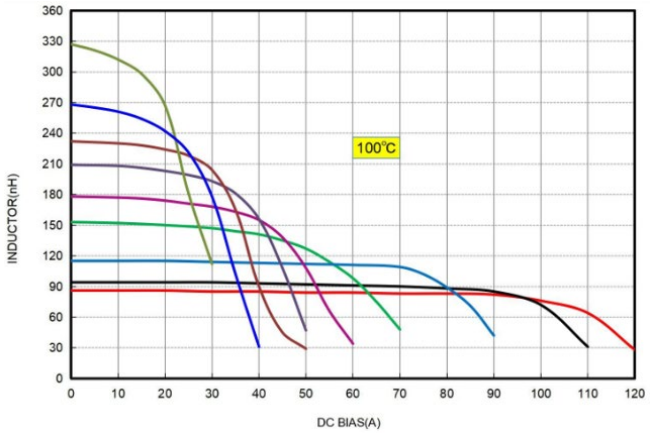
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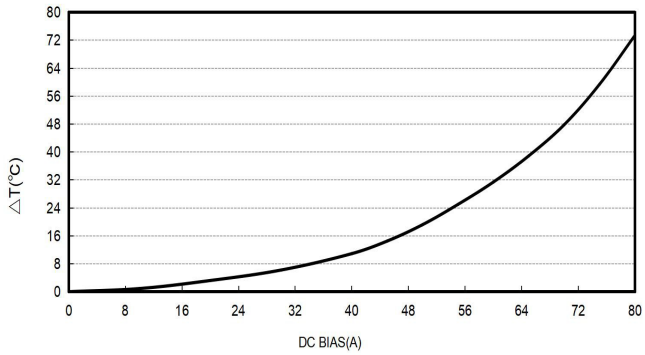
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MSL Level = 1

Performance Graphs







Part Identification

AVR-1Z090509S ☐☐☐

Inductance Code	Tolerance	Packaging options
See Electrical Specification table e.g. R10	L = ± 15%	T: Tape and Reel (See Packaging) B: Bulk

*Tolerance only available as indicated in electrical spec. table

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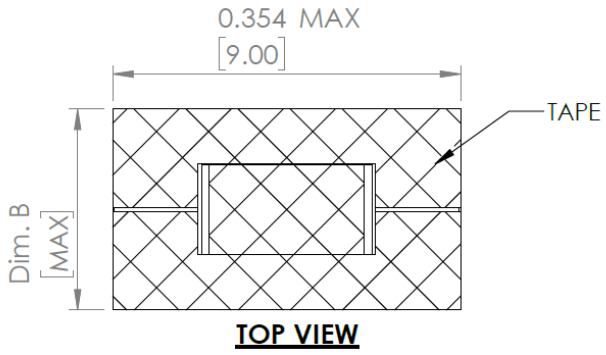


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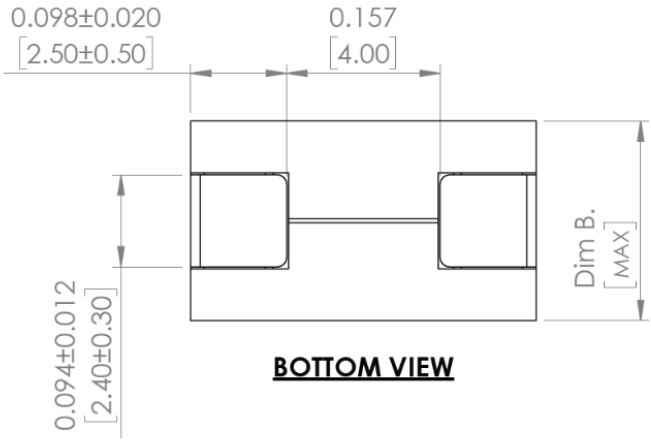
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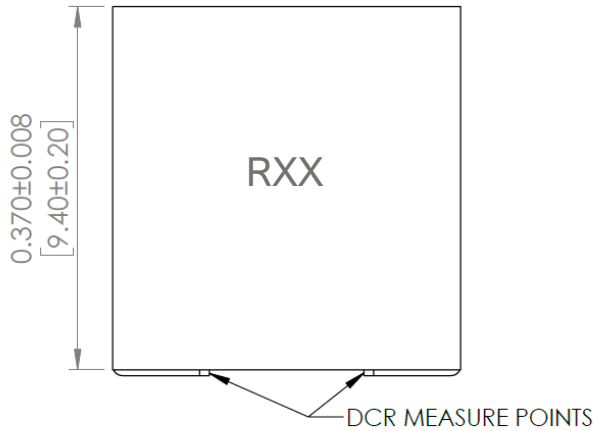
Mechanical Specifications



TOP VIEW

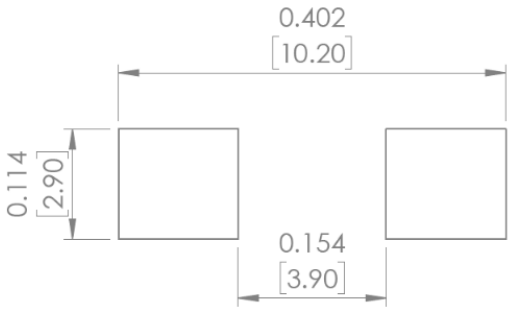


BOTTOM VIEW



FRONT VIEW

RECOMMENDED LAND PATTERN



Refer to the Specification table for Dim B.
Markings: Inductance code.
Dimensions: Inches [mm]

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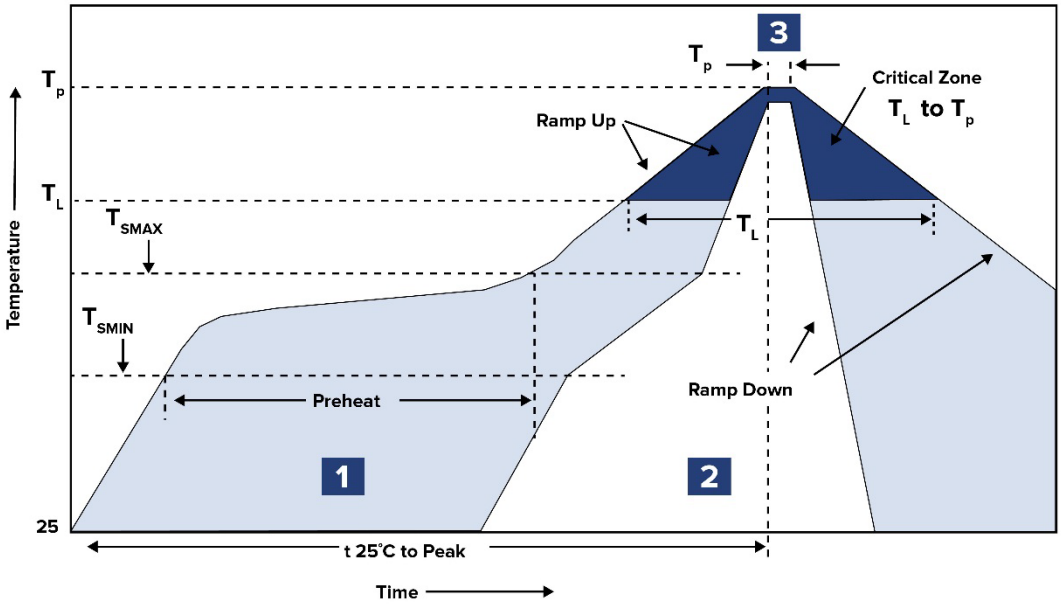


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ T_{SMAX} 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 250°C ± 5°C	5 ± 0.5 sec.

Ramp up rate: 3°C/s Max.
Ramp down rate: 6°C/s Max.

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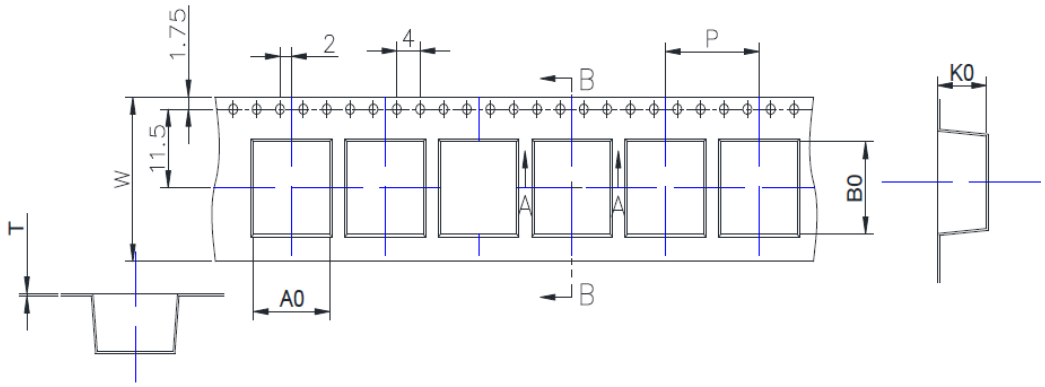
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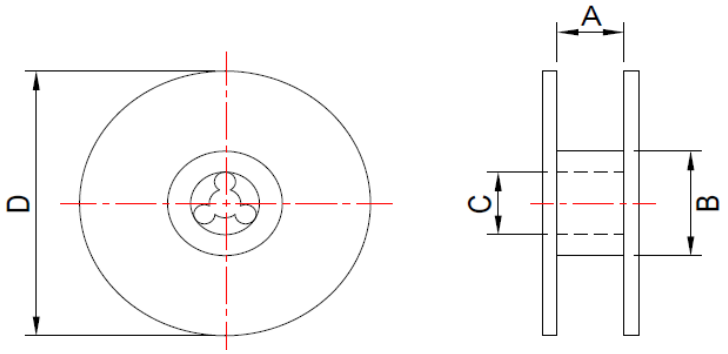
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RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel: 400 pcs/reel



Ao	Bo	Ko	P	T	W
5.5 ± 0.1	9.8 ± 0.1	10.0 ± 0.1	16.0 ± 0.1	0.4 ± 0.05	24.0 ± 0.3



A	B	C	D
24.0 ± 0.5	100 ± 2.0	13.5 ± 0.5	330 Ref.

Dimensions: mm

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