

# VERTICALLY ASSEMBLED POWER INDUCTOR



AVR-1Z100506S

Request Samples



Check Inventory



10.0 x 4.8 x 6.0mm  
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	DC Resistance	Saturation Current		Temperature Rise Current
	100KHz/1.0V		mΩ	Typ.		Typ.
Units	nH	%		A		A
Symbol	L	L	DCR	Isat1@ 25°C	Isat2@ 100°C	Irms
AVR-1Z100506S70NLT	70	15%	0.23±10%	100	77	70
AVR-1Z100506SR10LT	100			67	52	
AVR-1Z100506SR12LT	120			55	42	

\* 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 ( $\Delta T$ , approximate 40 °C) from 25°C ambient.

**Operating Voltage:** 50VDC (Typ.)

**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-1Z100506S Series is **RoHS Compliant and Pb free.**



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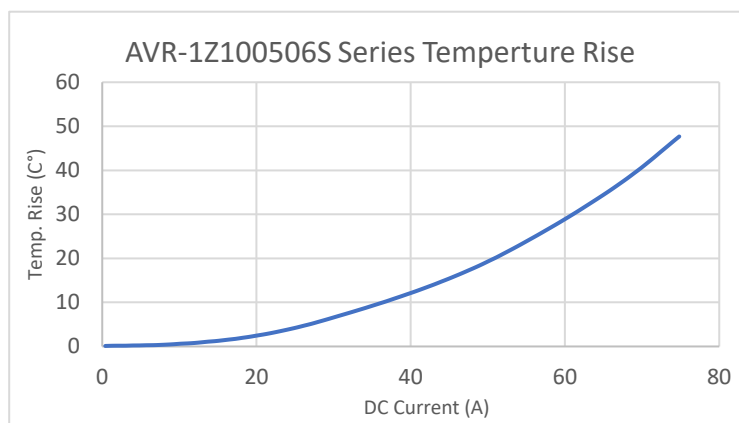
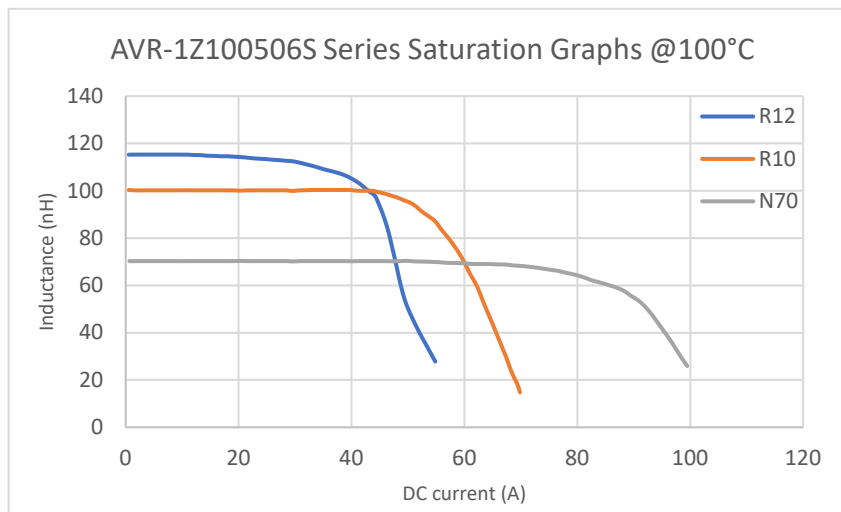
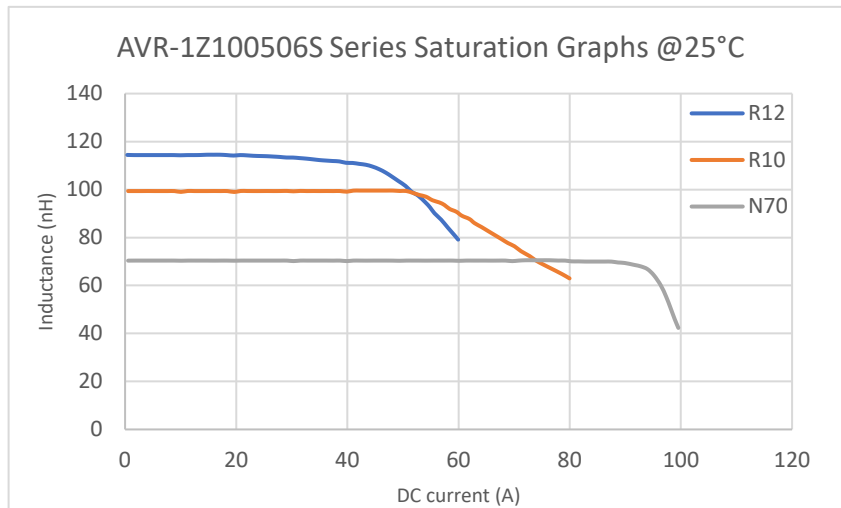


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## Performance Graphs



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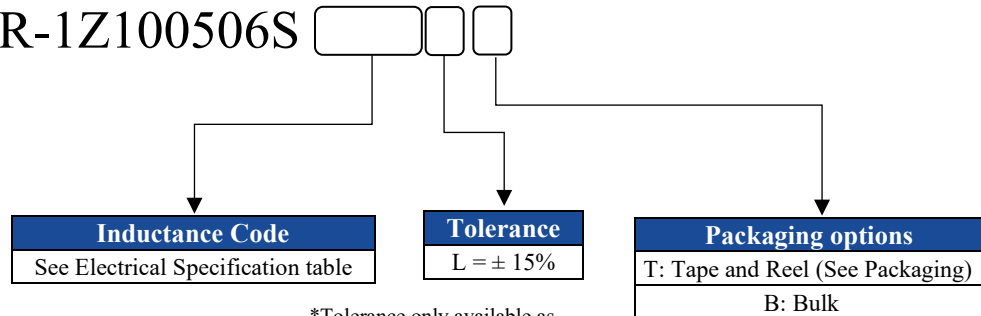
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**RoHS/RoHS II Compliant**  
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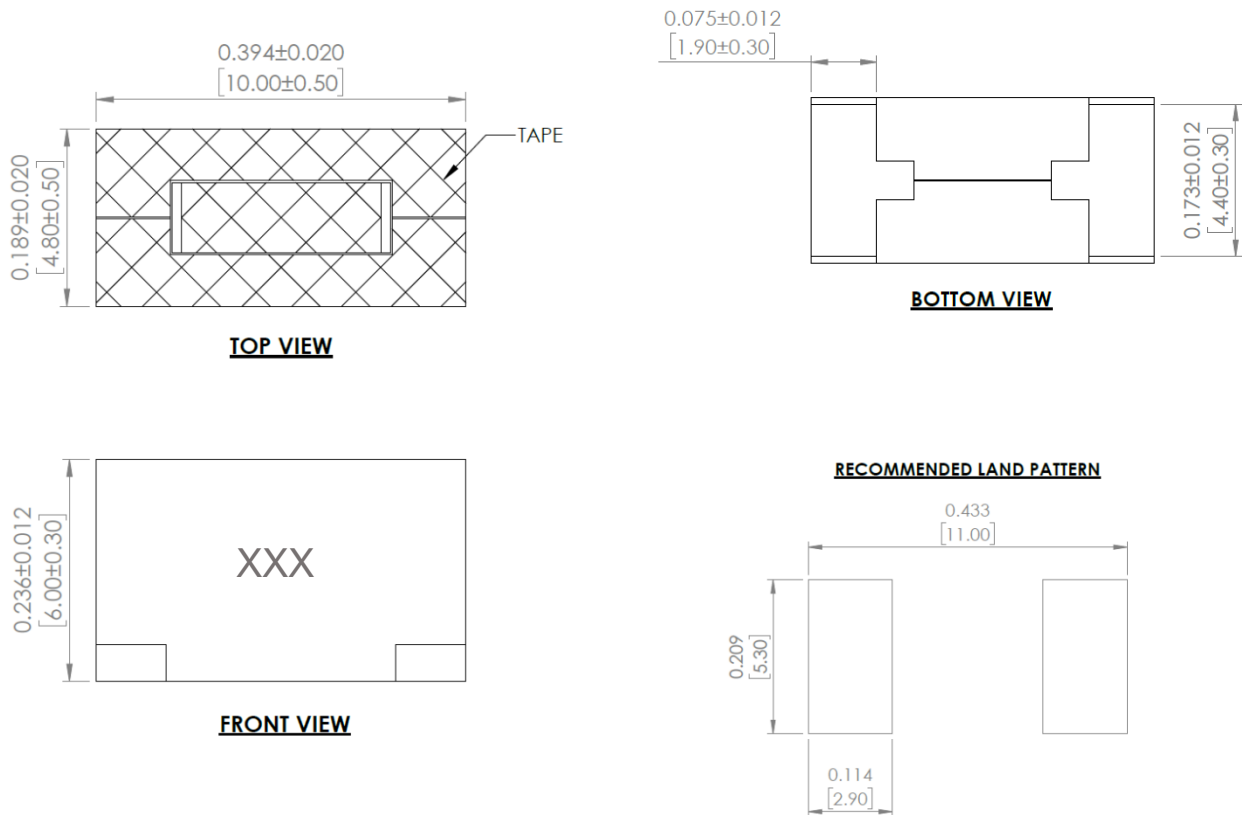
## Part Identification

AVR-1Z100506S



\*Tolerance only available as indicated in electrical spec. table

## Mechanical Specifications



**Markings:** Inductance code.

**Dimensions:** Inches [mm]



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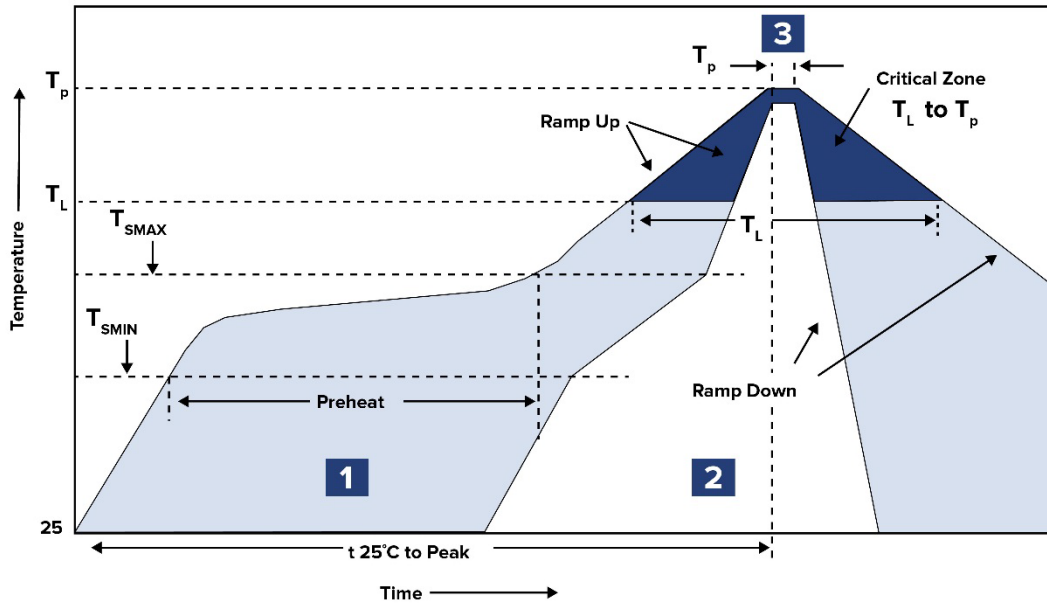


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 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.

Ref. Solder paste: Sn/3.0Ag/0.5Cu

Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.



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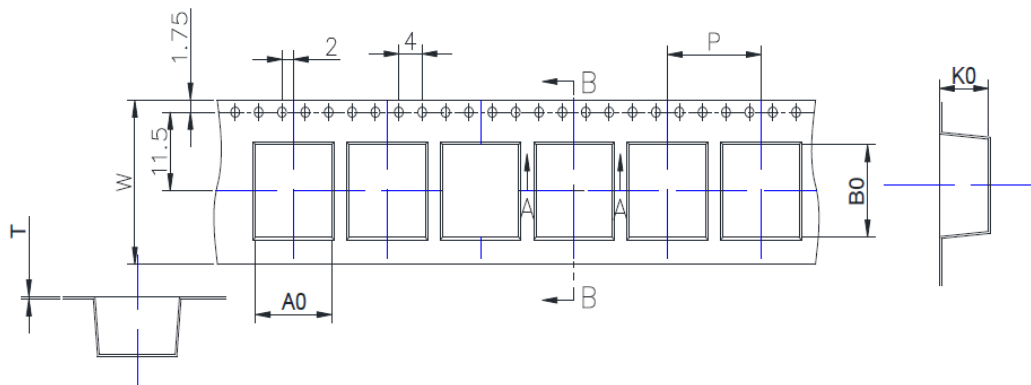
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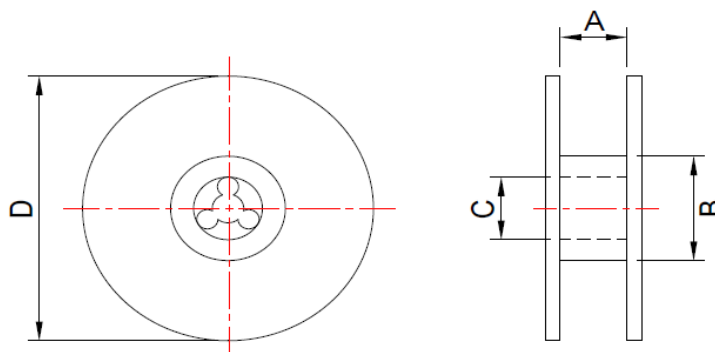
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**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Packaging

**Tape & Reel: 800 pcs/reel**



A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	P	T	W
5.1 ± 0.3	10.7 ± 0.3	6.5 ± 0.3	12.0 ± 0.2	0.35 ± 0.10	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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