

VERTICALLY ASSEMBLED POWER INDUCTOR



AVR-1Z090610S

Request Samples



Check Inventory



9.4 x 6.2 x 10.1mm
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
	800KHz/0.1V		Typ.		Typ.		Typ.
Units	nH	%	mm	mΩ	A		A
Symbol	L	K	B	DCR	Isat1@ 25°C	Isat2@ 100°C	Irms
AVR-1Z090610S70NKT	70	10	6.2±0.4	0.12 Max. (0.10 Typ.)	145	126	84
AVR-1Z090610SR10KT	100				110	90	
AVR-1Z090610SR12KT	120				90	75	
AVR-1Z090610SR15KT	150				67	58	
AVR-1Z090610SR18KT	180				56	49	
AVR-1Z090610SR22KT	220				46	40	
AVR-1Z090610SR28KT	280				36	31	

* 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

DC Resistance: Nominal DCR measured from point ‘a’ to 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-1Z090610S Series is **RoHS Compliant and Pb free.**



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6/10/2024

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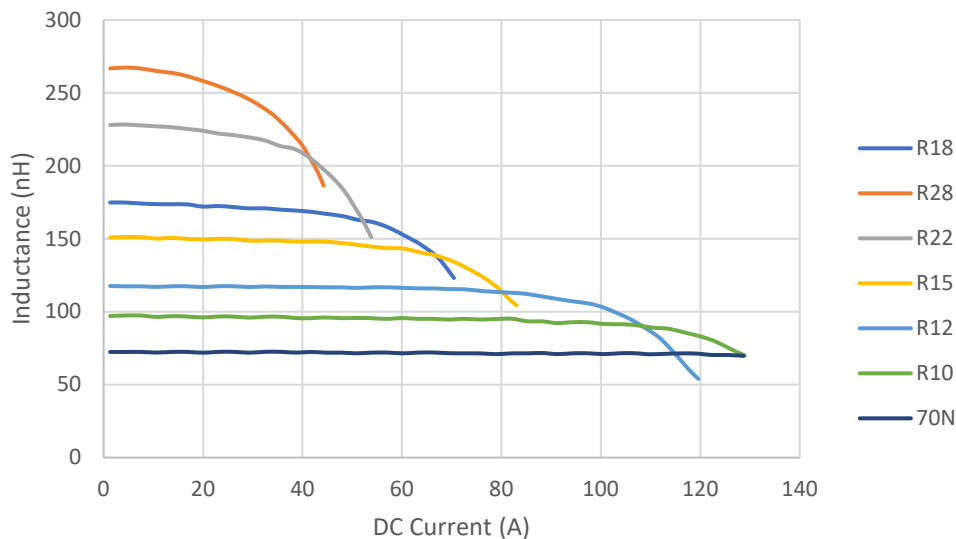
Check Inventory



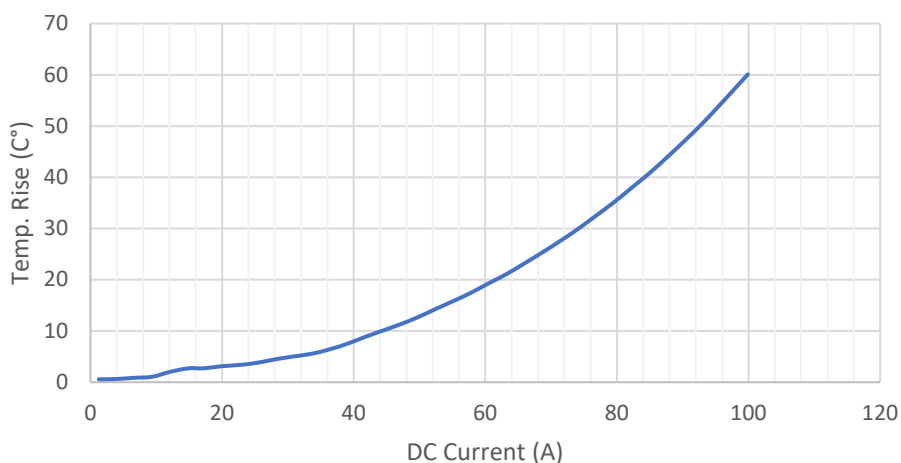
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Performance Graphs

AVR-1Z090610S Saturation Graphs



AVR-1Z090610S Series Temperture Rise



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Part Identification

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Inductance Code

See Electrical Specification table

Tolerance

K = $\pm 10\%$

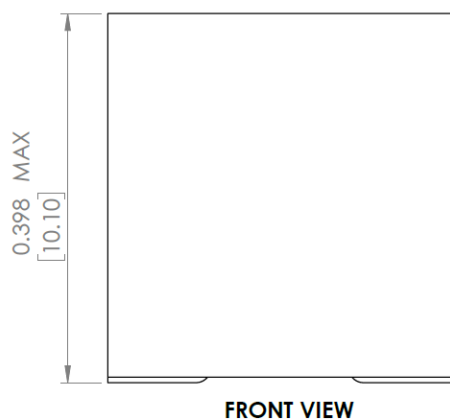
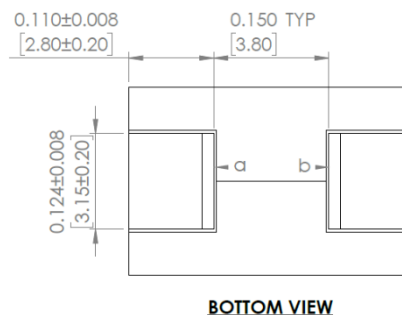
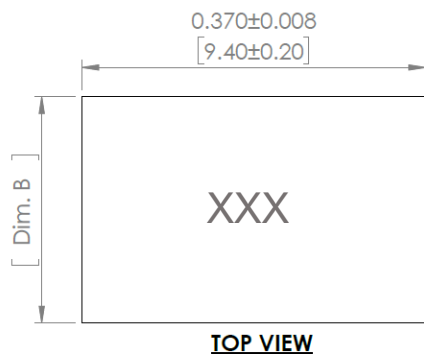
Packaging options

T: Tape and Reel (See Packaging)

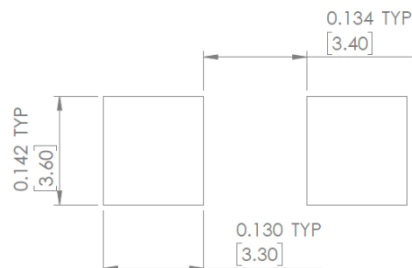
B: Bulk

*Tolerance only available as indicated in electrical spec. table

Mechanical Specifications



RECOMMENDED LAND PATTERN



Refer to the Specification table for Dim B.

'a' and 'b': DCR measuring points.

Markings: Inductance code.

Dimensions: Inches [mm]



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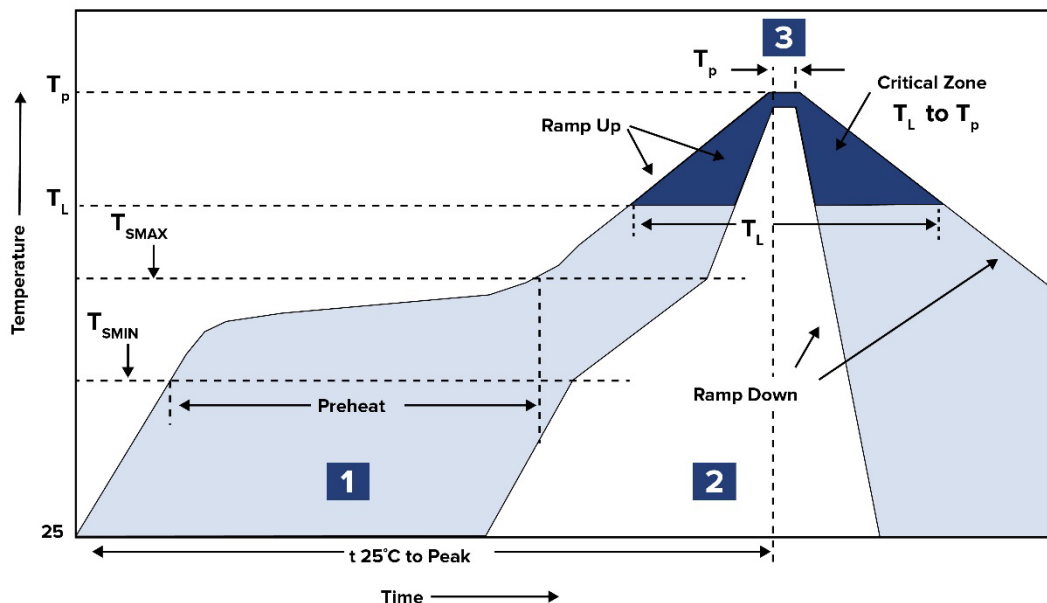


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_p 260°C Max	5 Sec. Max

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

Time from 25°C to peak: 8 Mins

Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.

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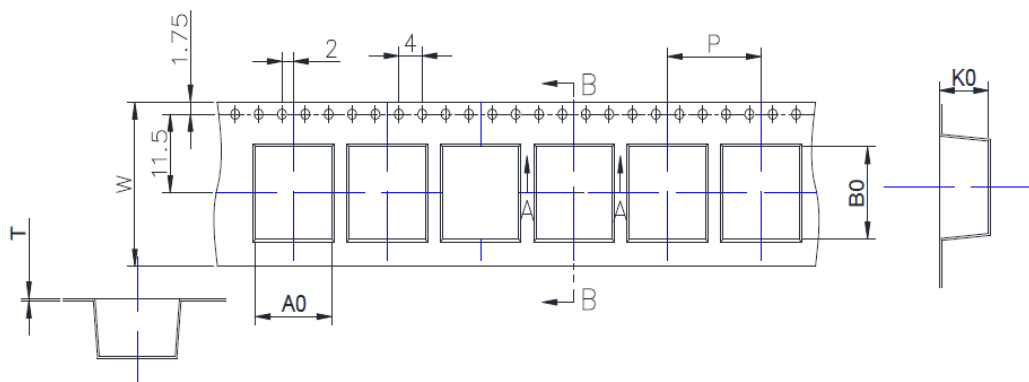
Check Inventory



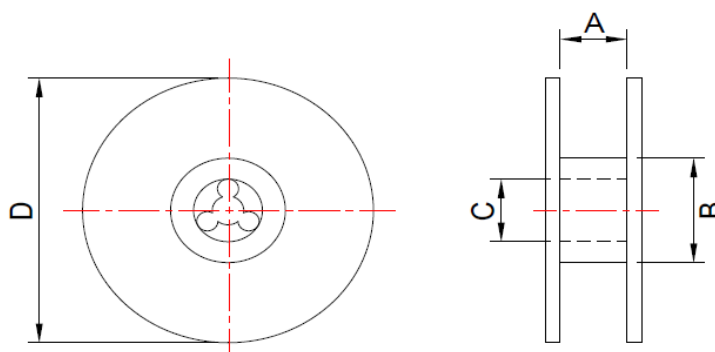
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Packaging

Tape & Reel: 400 pcs/reel



Ao	Bo	Ko	P	T	W
6.6 ± 0.10	10.0 ± 0.10	10.3 ± 0.10	12.0 ± 0.10	0.5 ± 0.05	24.0 ± 0.30



A	B	C	D
24.5 ± 0.2	100 ± 2.0	13.0 ± 0.2	330 Ref.

Dimensions: mm

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