Low Profile, High Current Power Inductors

3D Models Available

Remark: View this 3D model by opening this Doc. With Adobe Acrobat or Reader in computer（Recommended)

Features

- SMD inductors
- High current and lower DCR
- Ferrite core material
- Operating temperature range: –40 to +125°C (including self-temperature rise)
- Shielded construction

Applications

- Servers
- Multi-phase and Vcore regulators
- Voltage Regulator Modules (VRMs)
  - Server and desktop
  - Central processing unit (CPU)
  - Graphics processing unit (GPU)
  - Specific integrated circuit (ASIC)
  - High power density
- Notebook regulators
- Battery power systems
- Graphics cards

Environmental Data

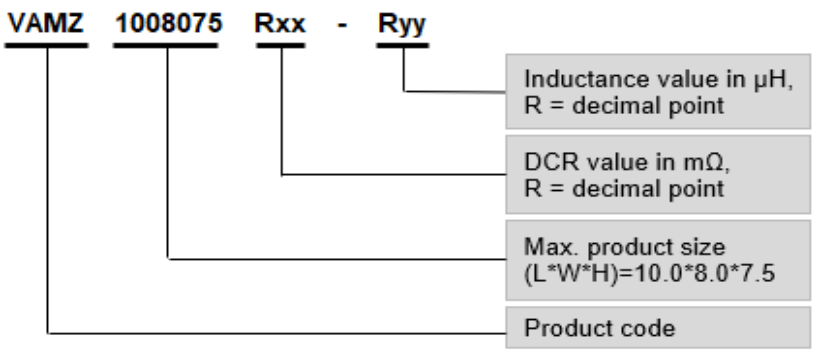
- Storage Conditions (In Original Packaging): <40°C ; <75%RH
- Operating temperature range: -40°C to +125°C (Ambient plus self temperature rise)
- Solder reflow temperature: J-STD-020D compliant
- Moisture Sensitivity Level (MSL): 1

Product Specifications

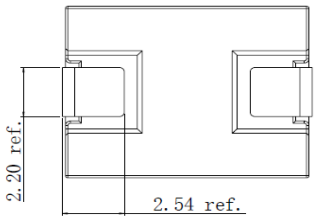
Part Number[5]	OCL[1] (nH) ±15%	Irms[2] (Amps)	Isat[3] (Amps)	Height (max.)	DCR(mΩ) typical @ +20 °C
VAMZ1008075R29-R15	150	56	73	7.5	0.29
VAMZ1008075R29-R19	190	56	60	7.5	0.29
VAMZ1008075R29-R26	260	56	44	7.5	0.29
VAMZ1008075R29-R34	340	56	34	7.5	0.29

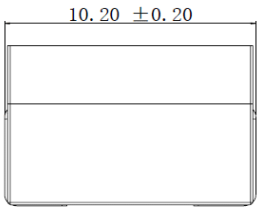
Notes:

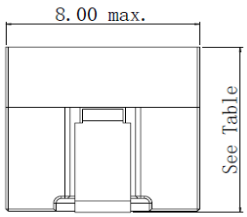
1. Open Circuit Inductance (OCL) Test Parameters: 100 kHz, 0.1 Vrms,0.0 Adc, +25 °C
2. Irms: DC current for an approximate temperature rise of 40 °C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed +125 °C under worst case operating conditions verified in the end application.
3. Isat : Peak current for approximately 20% (R15 10%) rolloff @+25 °C (R15 10%)
4. Measurement Equipment: WK3260B+WK3265B
5. Part Number Definition:



Dimensions:[mm]







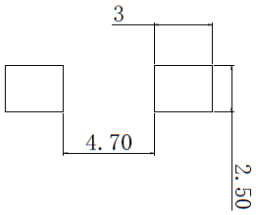
Product Marking:

Part Code	Ryy
Date Code	YYWW

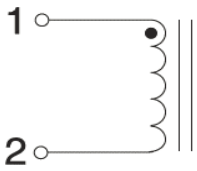
Table

Part Number	Max. Height
VAMZ1008075R29 Type	7.5

Recommended Pad Layout:[mm]

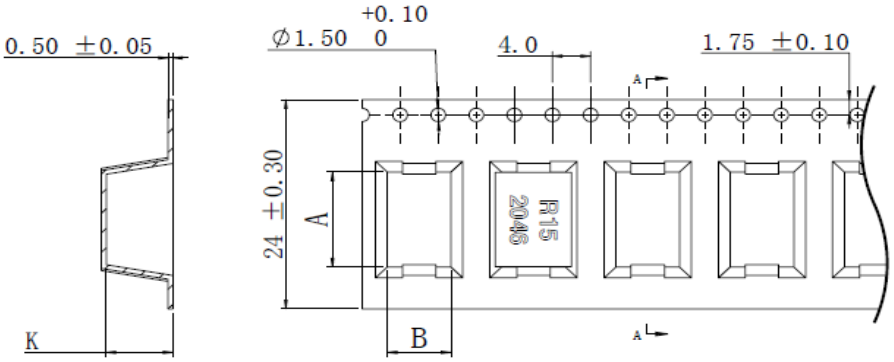


Schematic:

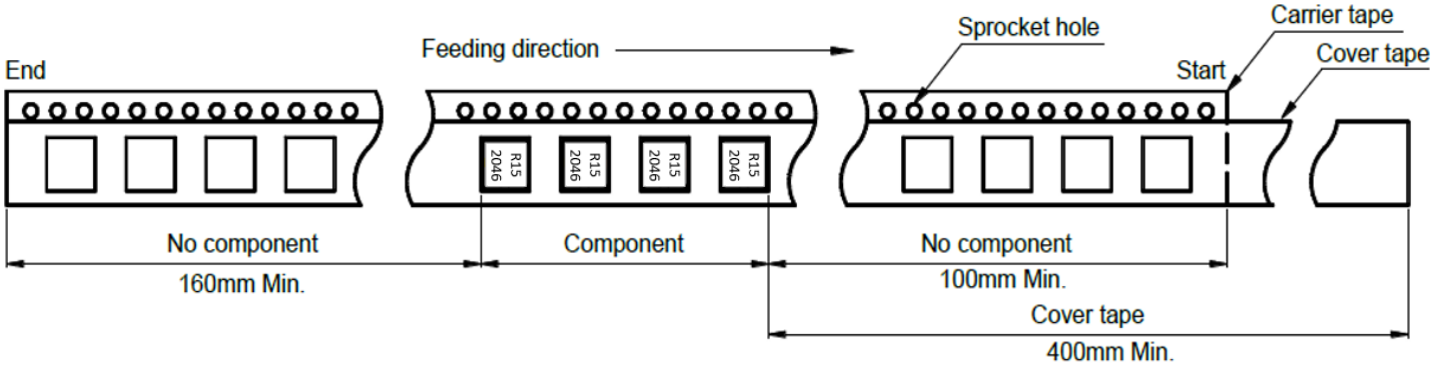


Packaging Information:[mm]

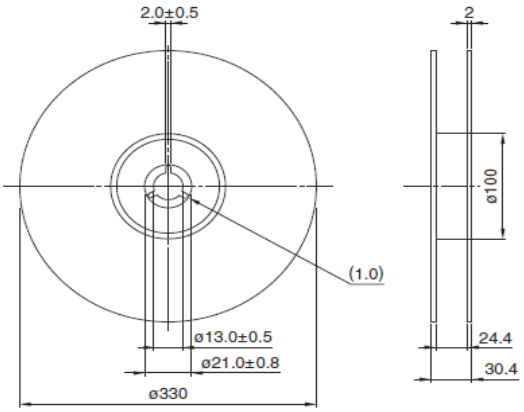
Tape Dimensions



Part Number	A	B	K
VAMZ1008075R29 Type	10.8±0.1	8.0±0.1	7.7±0.1

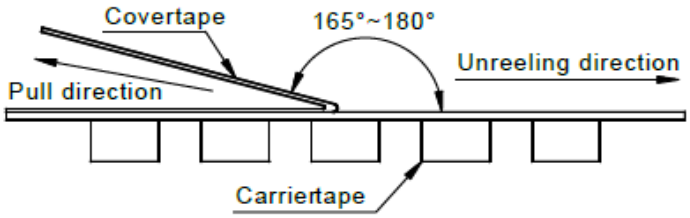


Reel Dimensions



Cover tape peel off condition

Tape Width	Peel-off Force	Peel Speed
16/24mm	0.1~1.3N	300±10mm/M



Packing Quantity

Part Number	Quantity (pcs/reel)
VAMZ1008075R29 Type	700

Recommended Reflow Profile:

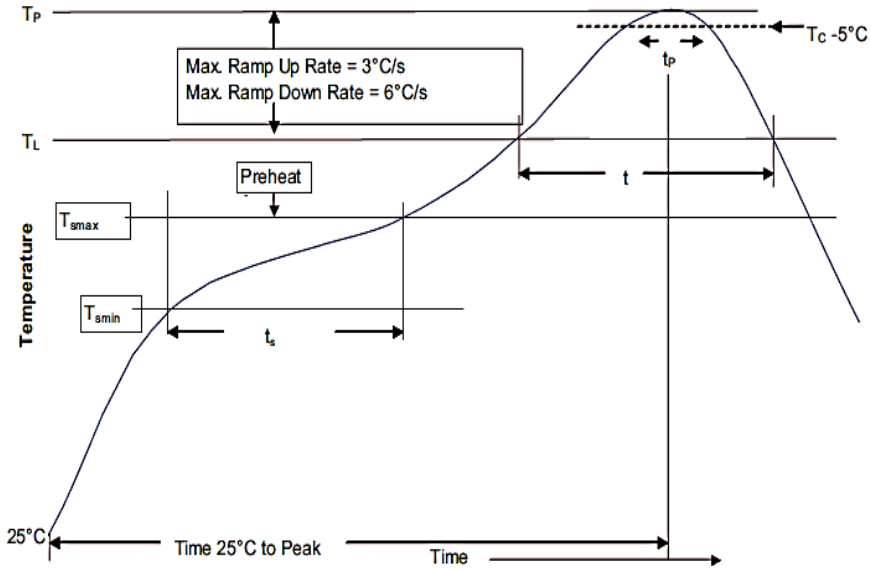


Table 1 - Standard SnPb Solder (T_C)

Package Thickness	Volume mm3 <350	Volume mm3 ≥350
<2.5mm)	235°C	220°C
≥2.5mm	220°C	220°C

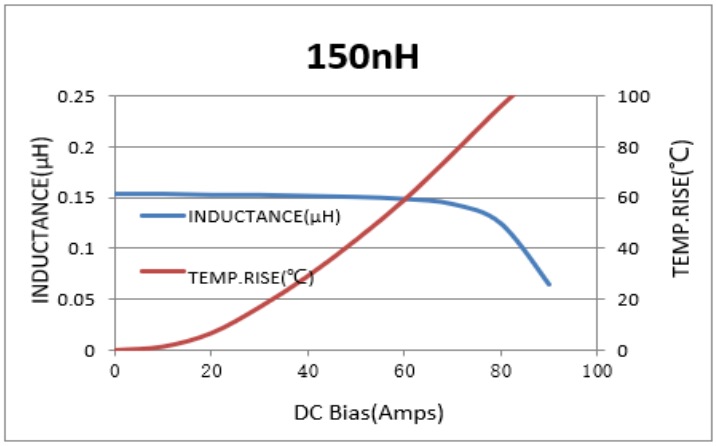
Table 2 - Lead (Pb) Free Solder (T_C)

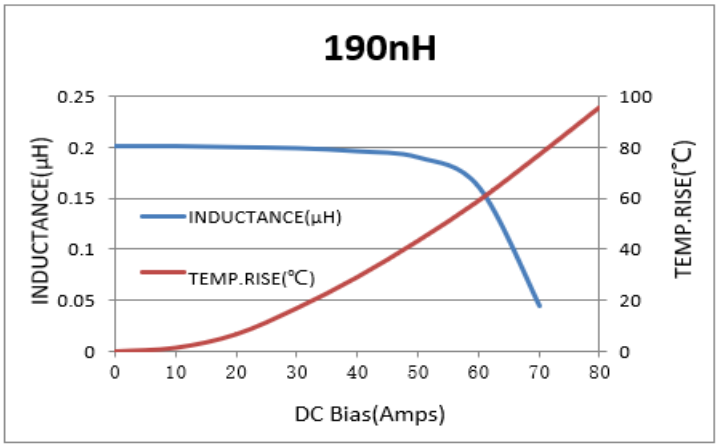
Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

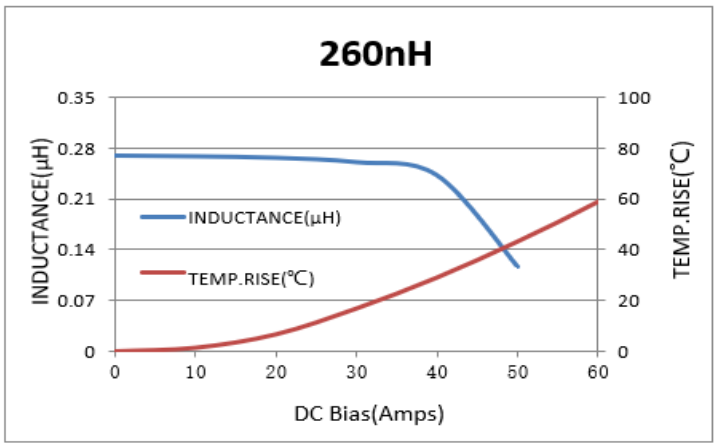
Profile Feature		Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak	• Temperature min. (T_{smin})	100°C	150°C
	• Temperature max. (T_{smax})	150°C	200°C
	• Time (T_{smin} to T_{smax}) (t_s)	60-120 Seconds	60-120 Seconds
Average ramp up rate T_{smax} to T_p		3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T_L) Time at liquidous (t_L)		183°C 60-150 Seconds	217°C 60-150 Seconds
Peak package body temperature (T_P)*		Table 1	Table 2
Time (t_p)** within 5 °C of the specified classification temperature (T_C)		20 Seconds**	30 Seconds**
Average ramp-down rate (T_p to T_{smax})		6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Peak Temperature		6 Minutes Max.	8 Minutes Max.

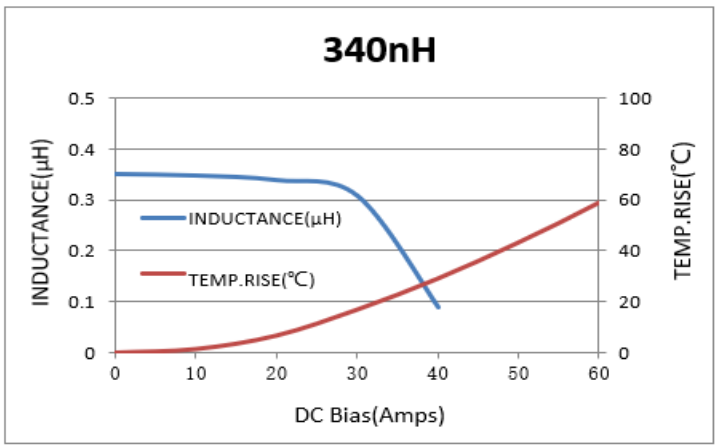
* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.
** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

Inductance Characteristics:









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