

# Low Profile TLVR Inductor



ATL-1Z120705S

Request Samples



Check Inventory



12.0 x 7.0 x 5.0 mm  
RoHS/RoHS II Compliant  
MSL Level = 2

## Features

- Increased Performance with high Saturation
- High Current
- Low Loss, small DCR
- Wide Switching Frequency
- Small, Compact Size
- Low Profile

## Applications

- Voltage Regulation Modules (VRM)
- Multi-phased Power distribution Architectures
- High Power Graphics Cards
- Server/Blade Applications
- High Speed Switches
- Datacenter Storage Applications

## Electrical Specifications

Part Number	Inductance (L ±20%)	Saturation Current, Max Isat (A) Pins 1-4			Temperature Rise Current, Irms (A)		DCR ±10% (mΩ)		Coupling Coefficient
	nH	@25°C	@100°C	@125°C	Pins 1-4	Pins 2-3	Pins 1-4	Pins 2-3	Typ
ATL-1Z120705SR10M	100	75	60	50	50	35	0.25	0.50	0.92
ATL-1Z120705SR12M	120	55	45	40	50	35	0.25	0.50	0.93
ATL-1Z120705SR15M	150	45	35	30	50	35	0.25	0.50	0.94
ATL-1Z120705SR18M	180	38	28	20	50	35	0.25	0.50	0.95
ATL-1Z120705SR22M	220	30	20	15	50	35	0.25	0.50	0.96

### Test Conditions

**Isat:** DC current at which the inductance drops 20% from original value.

**Irms:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40 °C) from 25°C ambient.

**Self-Resonant Frequency (SRF):** 120+ MHz

**Leakage Inductance:** 14nH (Test 100KHz/0.1V across pins 1-4 while pins 2-3 are short)

**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 <70% RH

**Working Voltage:** 50VDC

**ATL-1Z120705S is RoHS Compliant and Pb free**



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**Release 9/23/2024**

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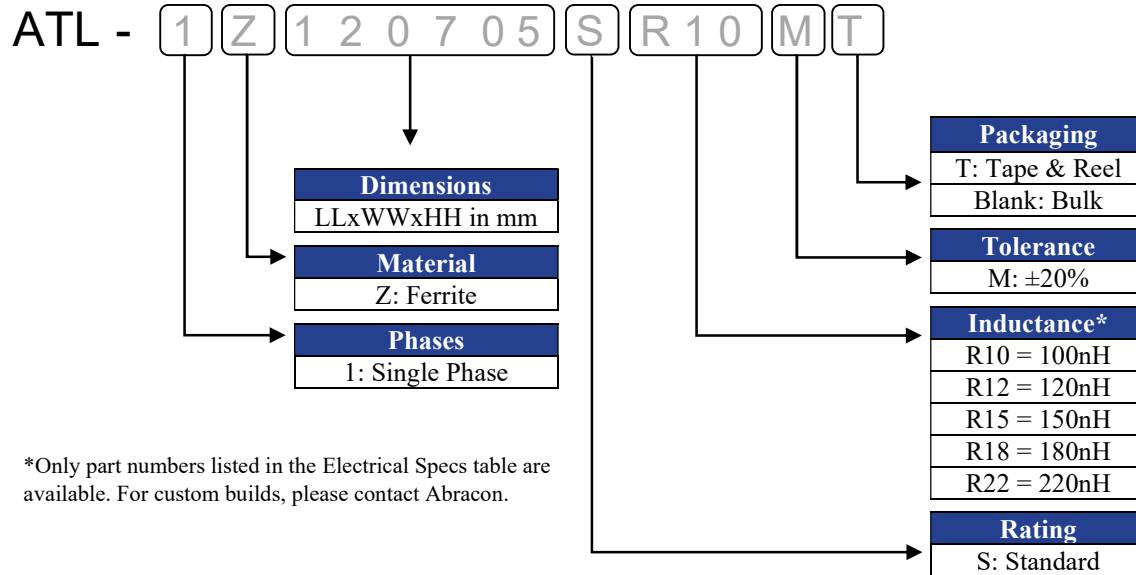


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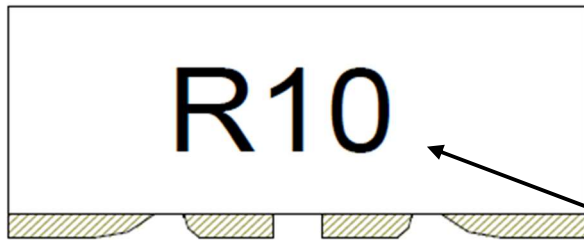
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## Part Number Identification



## Marking

Location: Side



Inductance Code

e.g. 100nH

Marking Method = Ink Marking



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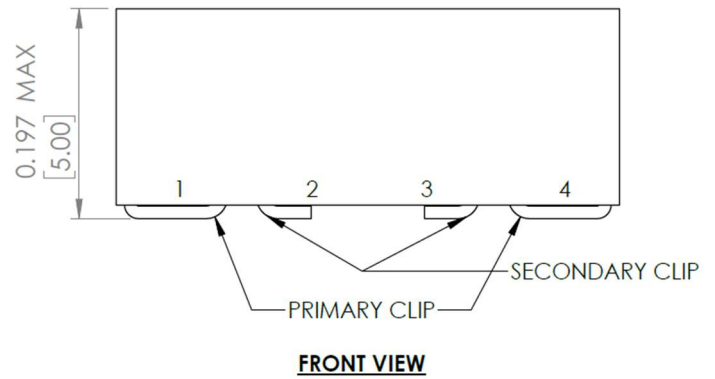
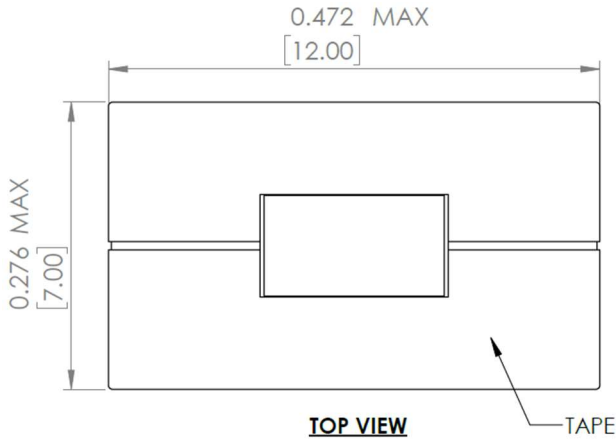


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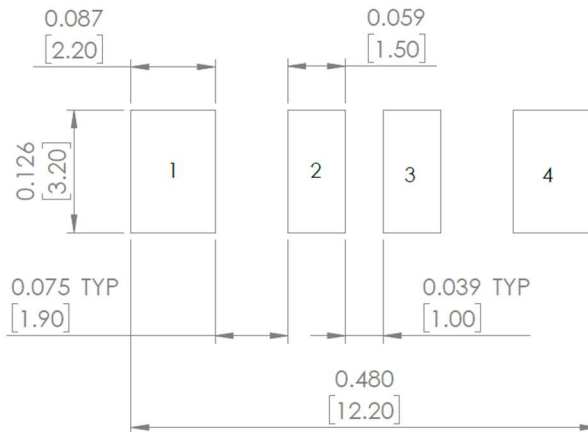


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## Mechanical Specifications

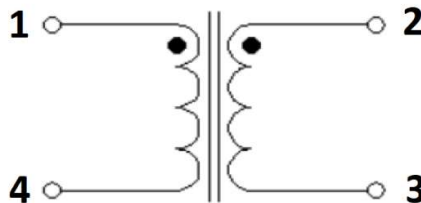


## Recommended Land Pattern



Dimensions: inches[mm]

## Schematic



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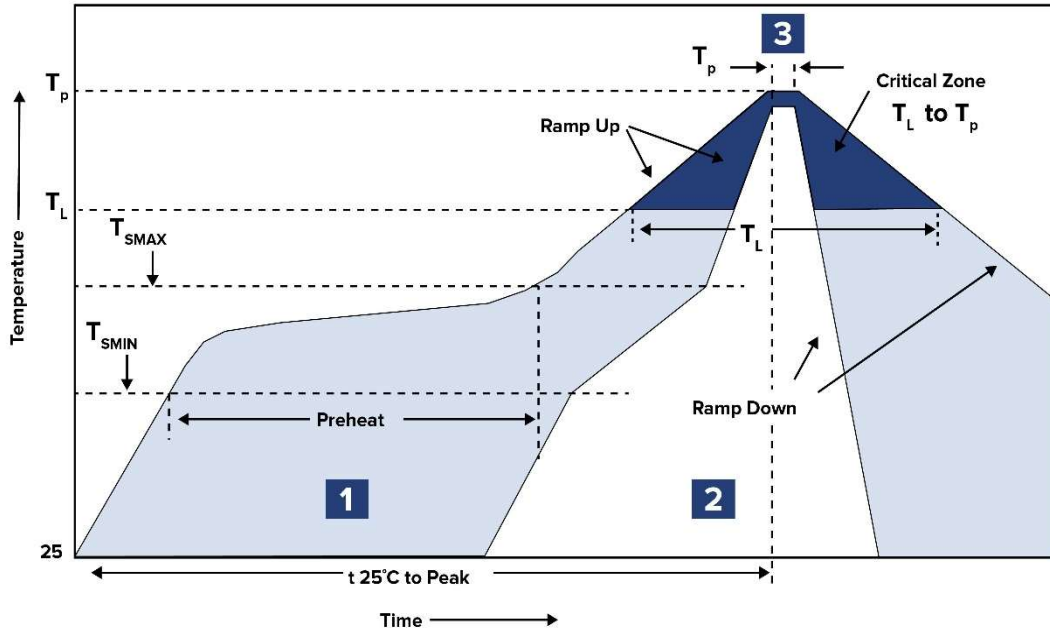


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	80 ~ 120 sec.
2	Reflow	$T_L$ 217°C	60 ~ 150 sec.
3	Peak heat	$T_P$ 245°C	10 sec. MAX

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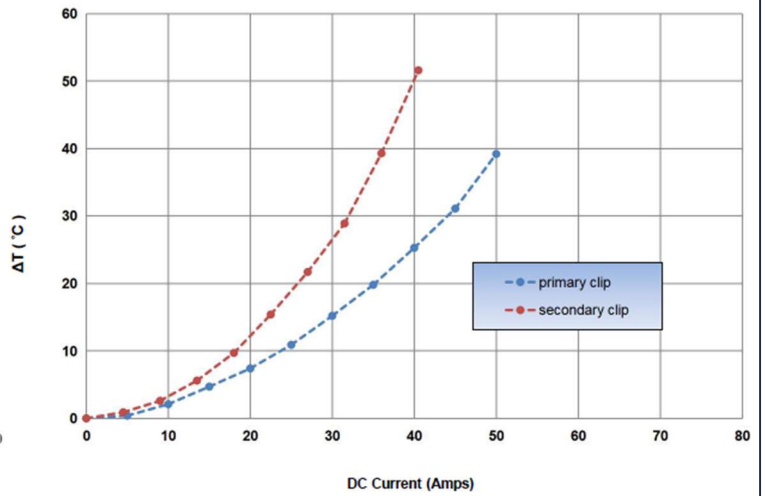
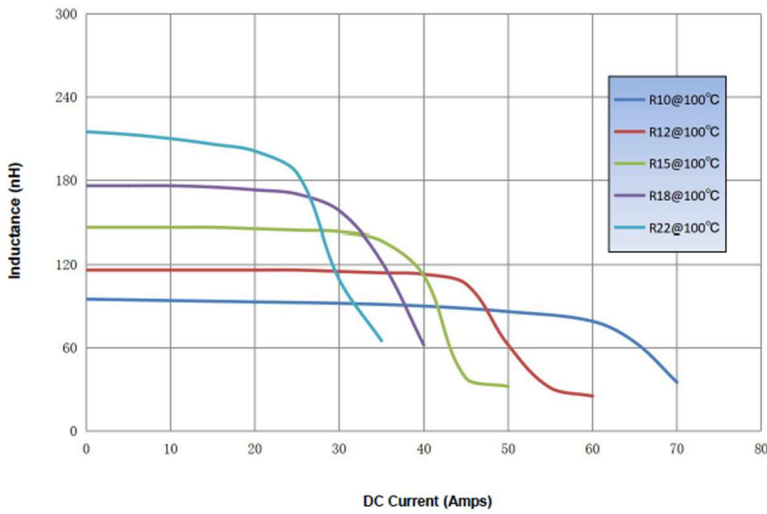
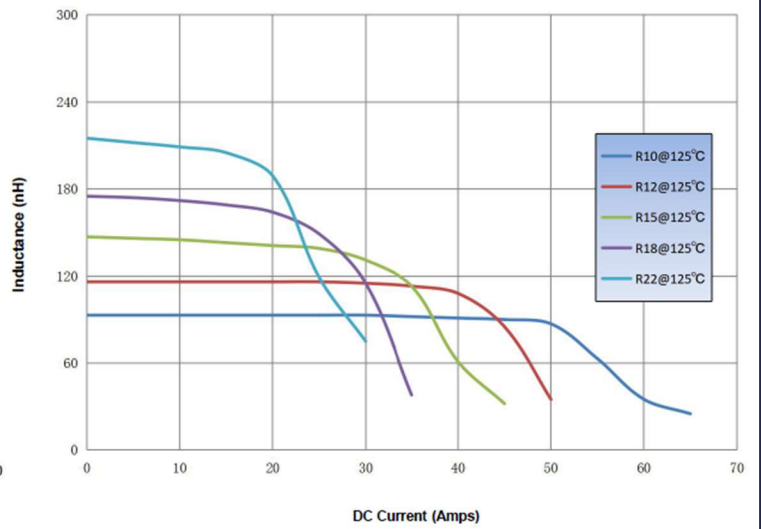
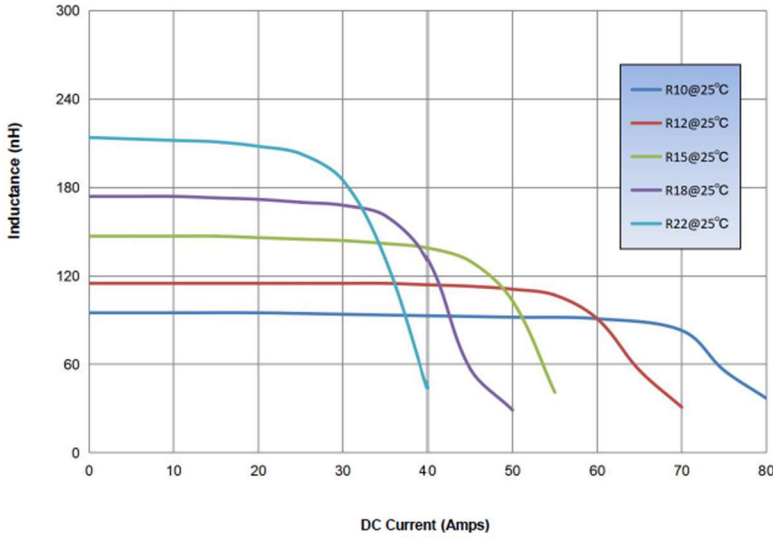


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## Performance Graphs



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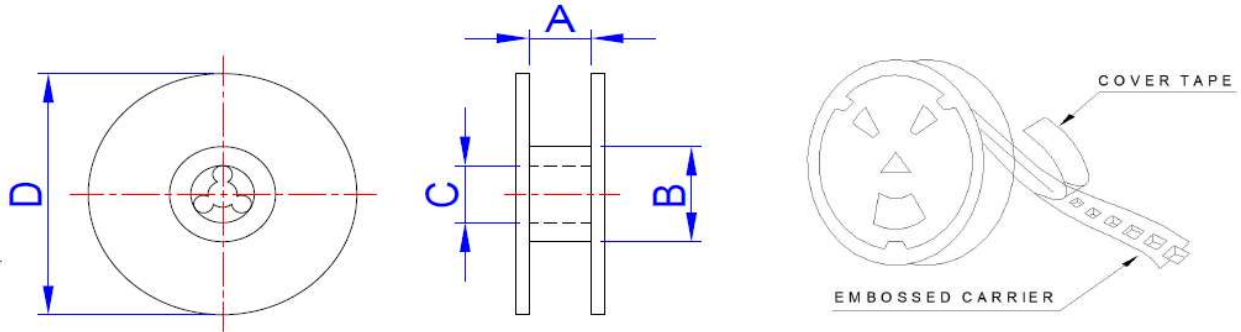
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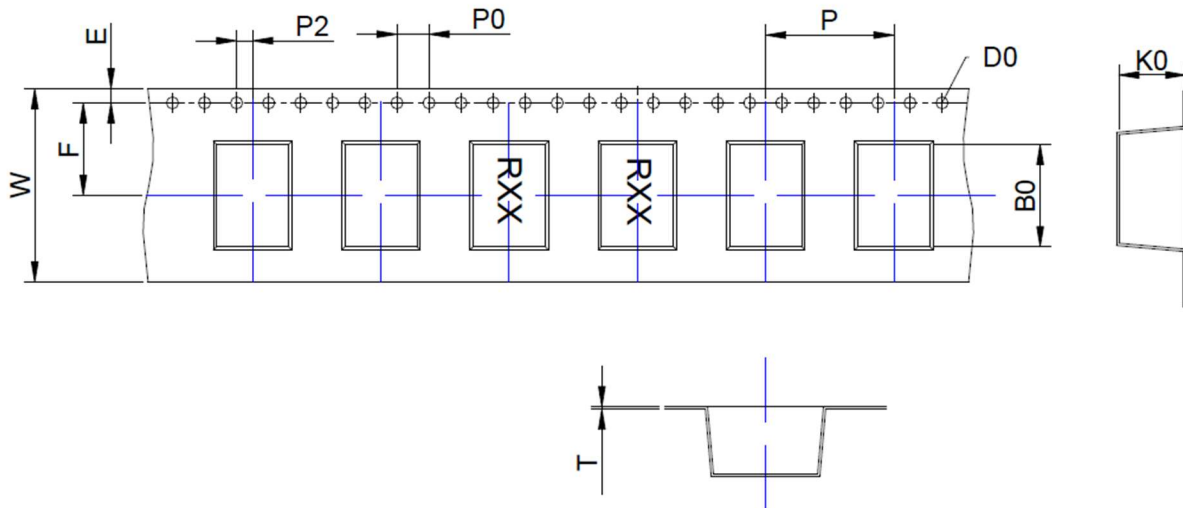
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## Packaging

Tape & Reel: 700 pcs/reel



Reel	A	B	C	D
13" x 24mm	$24.5 \pm 0.5$	$100 \pm 2$	$13.0 \pm 0.5$	330 (REF)



W	P	P0	P2	E	F	D0	T	A0	B0	K0
$24.0 \pm 0.3$	$16.0 \pm 0.1$	4.0	2.0	1.75	11.5	1.5	$0.5 \pm 0.05$	$7.2 \pm 0.1$	$12.2 \pm 0.1$	$5.2 \pm 0.1$

Dimensions: mm

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