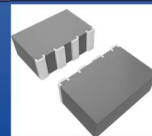


# Low Profile TLVR Inductor



ATL-1M114275S

Request Samples



Check Inventory



10.8 x 4 x 7.3 mm

RoHS/RoHS II Compliant

MSL Level = 1

## 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

| Position | Inductance<br>(L $\pm 20\%$ ) | Saturation<br>Current,<br>Isat (A) |      | Temperature Rise<br>Current, Irms (A) |      | DCR (m $\Omega$ ) |      |
|----------|-------------------------------|------------------------------------|------|---------------------------------------|------|-------------------|------|
|          | nH                            | Typ                                | Max  | Typ                                   | Max  | Typ               | Max  |
| Pin 1-4  | 85                            | 95.0                               | 85.0 | 35.0                                  | 30.0 | 0.11              | 0.14 |
| Pin 2-3  | 85                            | 85.0                               | 75.0 | 32.0                                  | 27.0 | 0.53              | 0.58 |

## Test Conditions

**Test Frequency:** 1.0V/100kHz

**Isat:** DC current at which the inductance drops 30% from its value without current.

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

**Coupling Factor:** 0.7

**Leakage Inductance:** 10nH

**Interwinding Capacitance:** 10pF

**Self-Resonant Frequency (SRF):** 350+ MHz

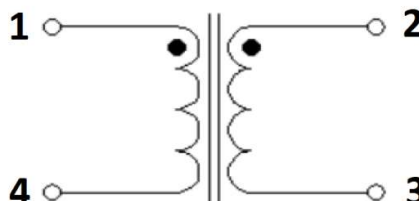
**Operating Temperature:** -40°C ~ +125°C (including self-temperature rise)

**Storage Condition:** -40°C ~ +125°C (on board), -10°C ~ +40°C (with packaging) and R.H. 60 max

**Operating Voltage:** 100V

ATL-1M114275S Series is RoHS Compliant and Pb free

## Schematic

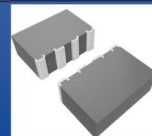


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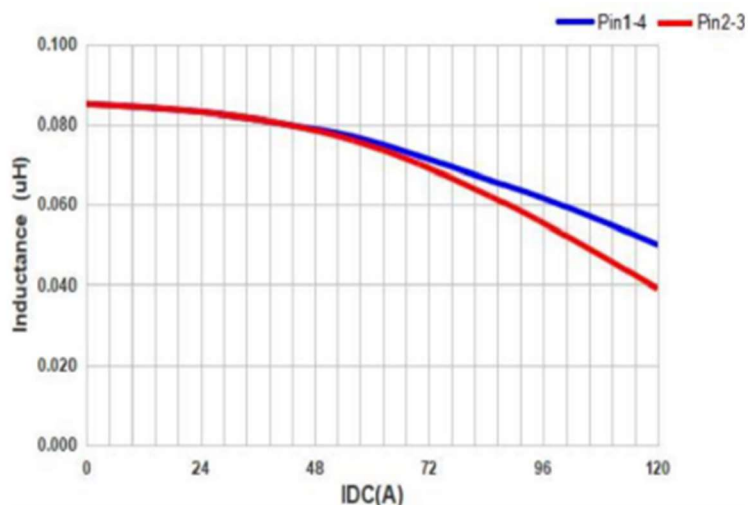
10.8 x 4 x 7.3 mm

RoHS/RoHS II Compliant

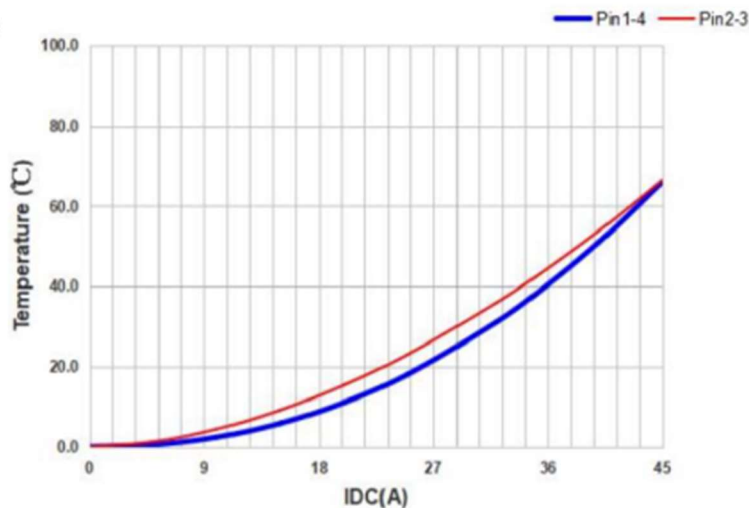
MSL Level = 1

## Performance Graphs

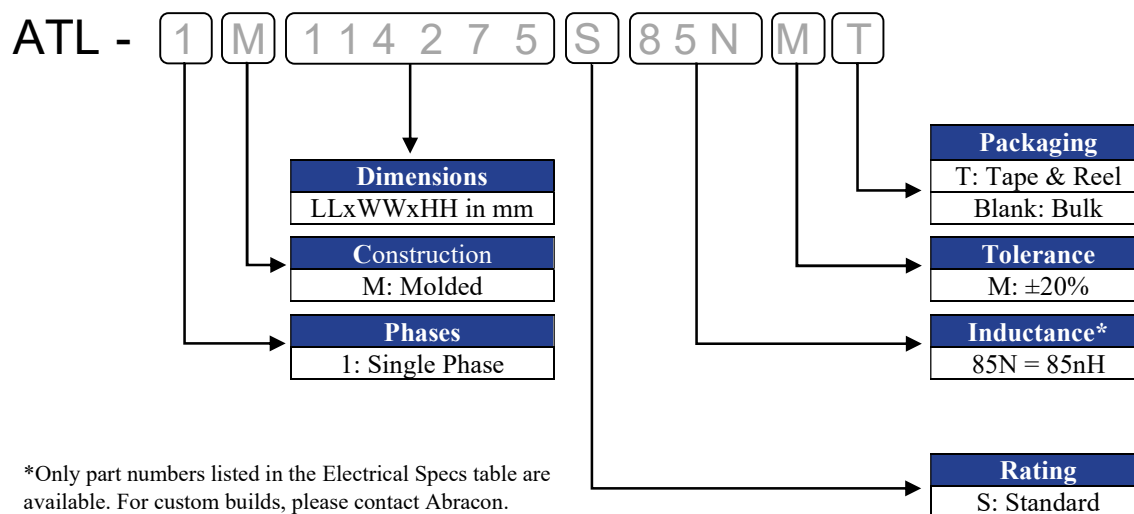
Inductance VS IDC



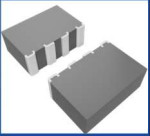
Temperature VS IDC



## Part Identification



# Low Profile TLVR Inductor



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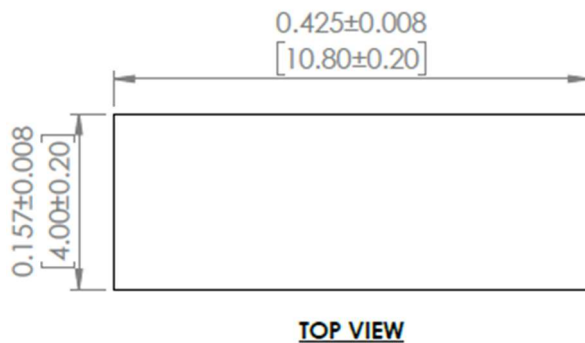
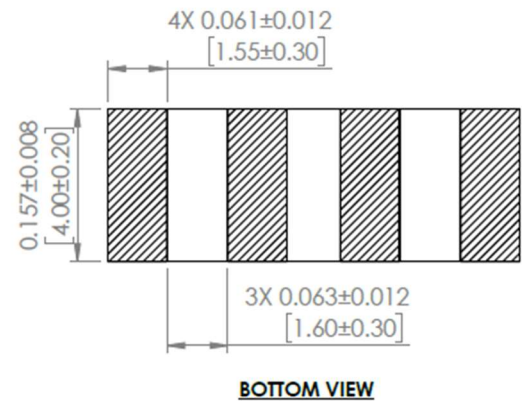
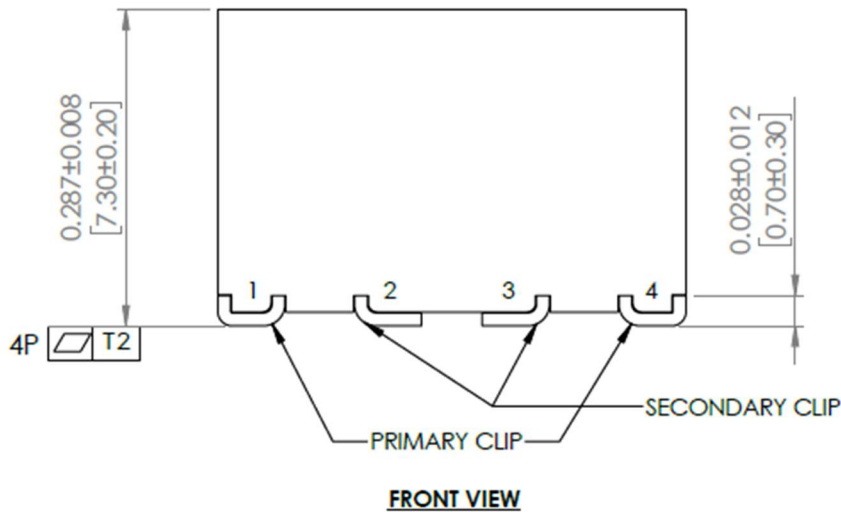


Check Inventory

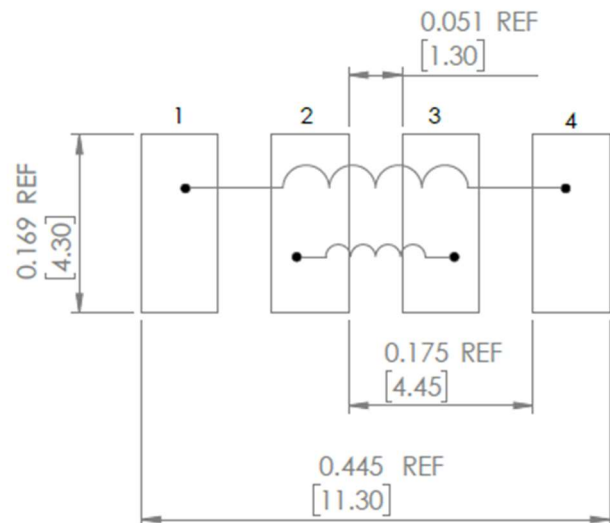


10.8 x 4 x 7.3 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Mechanical Specifications



## Recommended Land Pattern



Dimensions: inches[mm]

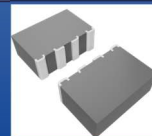


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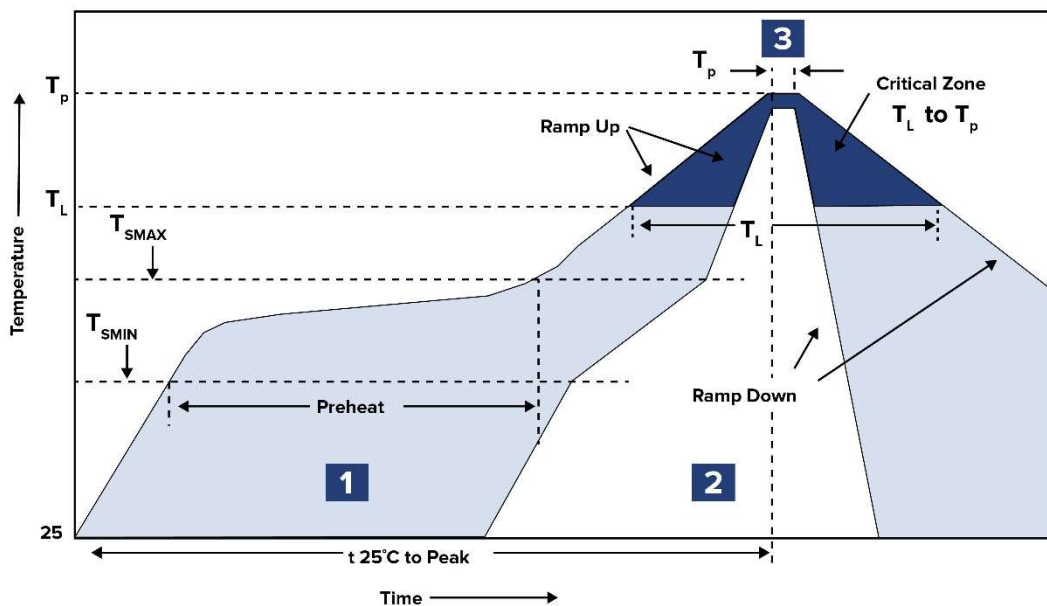


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RoHS/RoHS II Compliant

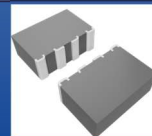
MSL Level = 1

## Reflow Profile



| Zone | Description | Temperature                               | Times         |
|------|-------------|-------------------------------------------|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 200°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>217°C                            | 60 ~ 150 sec. |
| 3    | Peak heat   | $T_P$<br>250°C±5°C                        | 30 sec. MAX   |

# Low Profile TLVR Inductor



**ATL-1M114275S**

Request Samples



Check Inventory



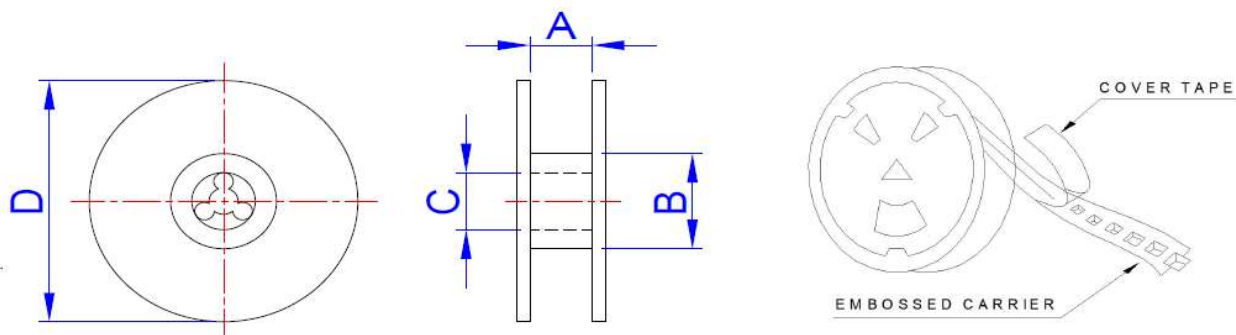
**10.8 x 4 x 7.3 mm**

**RoHS/RoHS II Compliant**

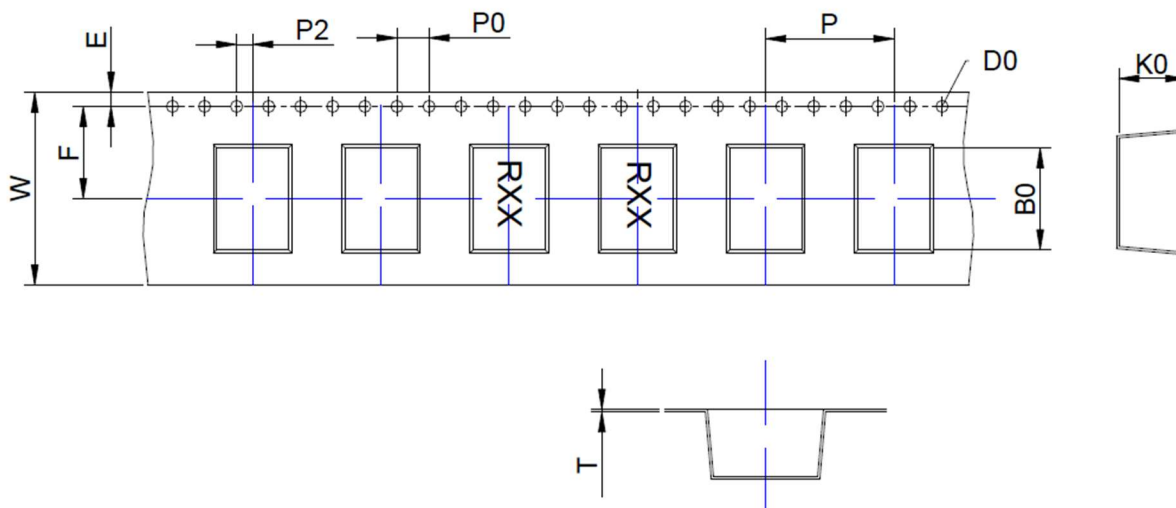
**MSL Level = 1**

## Packaging

**Tape & Reel: 600 pcs/reel**



| Reel       | A          | B       | C               | D   |
|------------|------------|---------|-----------------|-----|
| 13" x 24mm | 24.4 ± 0.2 | 100 ± 2 | 13.0 ± 0.5/-0.2 | 330 |



| W              | P              | P0            | P2            | E             | F              | D0            | T             | A0          | B0           | K0          |
|----------------|----------------|---------------|---------------|---------------|----------------|---------------|---------------|-------------|--------------|-------------|
| 24.00<br>±0.10 | 12.00<br>±0.10 | 4.00<br>±0.10 | 2.00<br>±0.10 | 1.75<br>±0.10 | 11.50<br>±0.10 | 1.50<br>±0.10 | 0.35<br>±0.05 | 4.50<br>Ref | 11.80<br>Ref | 7.80<br>Ref |

Dimensions: mm

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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