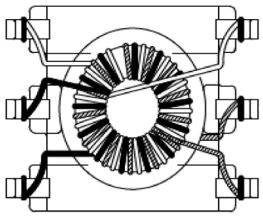
# VTX-513-8904-301 SMD Power Inductor



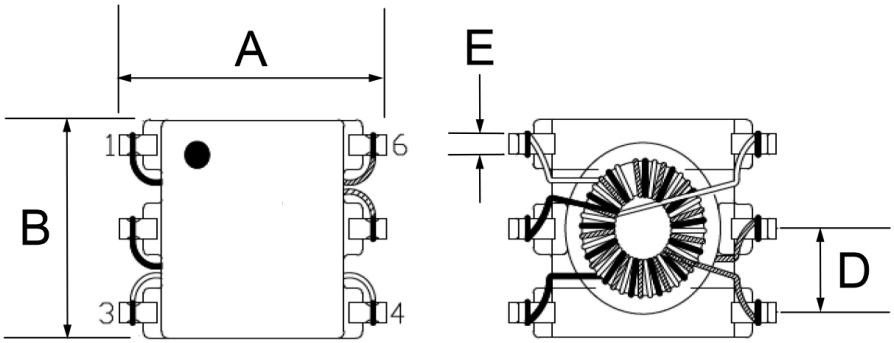
**Features:**

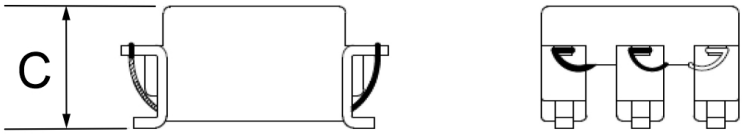
- Surface Mount Device
- Low Profile Design
- Dielectric Strength: 1.5kVrms. (2Sec)
- Designed to match OWTC-A0285
- Lead free
- RoHS Compliant
- UL Approved Materials

## Description

The VTX-513-8904-301 is a SMD Power Inductor with 3 individual windings which can be configured seperately. This device features a small footprint area of 8.8x 6.5mm and seated height of 4.0mm Max.
The SMD Power Inductor is a direct replacement for the OWTC-A0285 SMD Power Inductor

## Technical Drawing




| ID | Dim (mm) |
|---|---|
| A | 8.8 ±0.5 |
| B | 6.5 ±0.5 |
| C | 4.0 Max |
| D | 2.5 ±0.5 |
| E | 0.60Ref |

Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements.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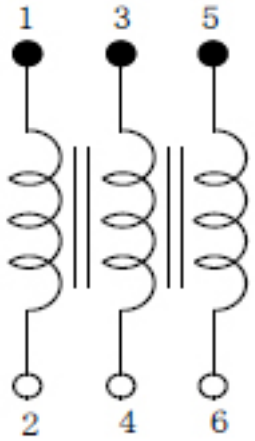
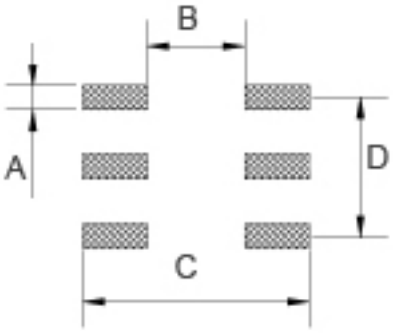
## General Specifications

### Schematic




### PCB Pad Layout




| ID | Dim (mm) |
|---|---|
| A | 1.5 |
| B | 5.2 |
| C | 8.2 |
| D | 5.0 |

| Specification | Condition | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|
| Inductance | 100KHz/1V | 300 | 430 | - | uH |
| Winding Ratio | 1 : 1 : 1 | - | 1-1-1 | - | Ratio |
| Winding DCR | Wind 1 (1-2)<br>Wind 2 (3-4)<br>Wind 3 (5-6) | - | 230 | 420 | mΩ |
| Voltage Isolation | Wind to Wind (2Sec) | 1.5 | - | - | KVrms |
| Temperature rise (above Ambient) | at rated Current | - | - | +45 | °C |
| Operating Range | | -25 | - | +85 | °C |
| Storage Temperature Range | | -25 | - | +95 | °C |
| Humidity Range | | - | - | 95 Max | %RH |
| Leakage Inductance | 1-2 (Short 3,4,5,6) | - | - | 0.5 Max | uH |

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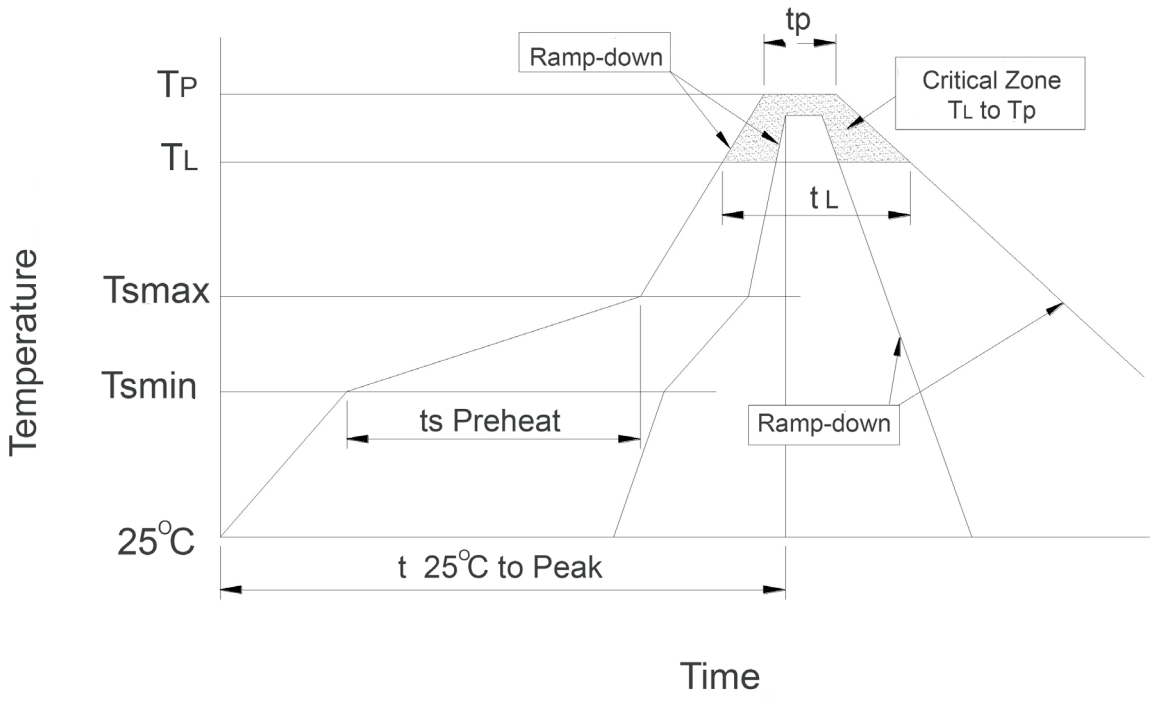
## Reflow Solder Profile - lead free




| Relfow Parameters | |
|---|---|
| Average ramp-up rate<br>(TL to Tp) | 3°C / Second Max |
| Preheat<br>-Temperature Min (TSmin)<br>-Temperature Min (TSmax)<br>-Temperature Min to Max (TS) | <br>150 °C<br>200 °C<br>60 - 180 Seconds |
| Tsmax to TL<br>-Ramp-up Rate | <br>3°C / Second Max |
| Time maintained above:<br>-Temperature (TL)<br>-Time ($t_L$) | <br>217°C<br>60 - 150 Seconds |
| Peak Temperature (Tp) | 255 ±5°C |
| Time within 5°C of actual Peak Temperature (tp) | 20 - 40 Seconds |
| Ramp-down Rate | 6°C / Second Max |
| Time 25°C o peak Temperature | 8 Minutes Max |
| Note: All Temperatures refer to topside of the package. Measured on the package bofy surface. | |

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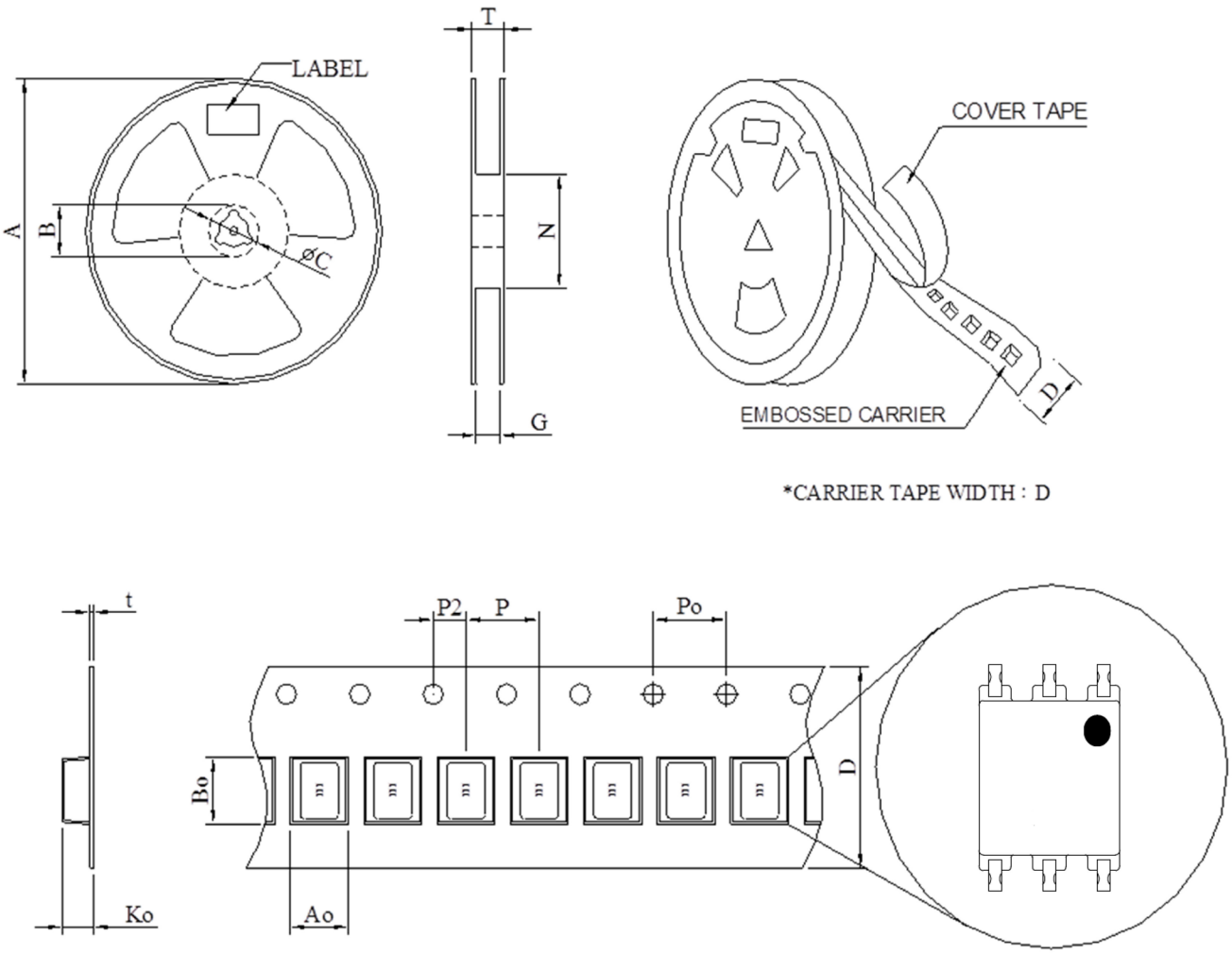
## Packaging: Tape and Reel




| STAYLE | DIMENSIONS (m/m) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q'TY (PCS) | A | B | C | D | G | N | T | Ao | Bo | Ko | t | P | Po | P2 |
| 24 | 1000 | 330 | — | — | 16 ±0.3 | 24.5 | 100 | — | 6.7 ±0.1 | 8.9 ±0.1 | 3.9 ±0.1 | 0.35 ±0.05 | 12.0 ±0.1 | 4.0 ±0.1 | 2.0 ±0.1 |
| Reel Qty = 1,000pcs | | | | | | | | | | | | | | | |
| Carton Qty = (1,000pcs/reel * 3 )/box * 5 box = 15,000pcs | | | | | | | | | | | | | | | |

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