

# Molding Type Power Inductor

ASPI-0630LR



RoHS  
Compliant



7.2 x 6.65 x 3.0 mm

## FEATURES:

- High saturation current.
- Low loss due to low DC resistance.
- Frequency application up to 3MHz.
- Low profile with max thickness 3.0mm.
- 100% lead free and metted RoHS standard.
- Suitable for reflow soldering.
- High reliable SMD package

## APPLICATIONS:

- DC/DC converters in Notebook, Netbook, desktop and server
- Low profile, high current power supplies.

## STANDARD SPECIFICATIONS

|                                   |                                                 |
|-----------------------------------|-------------------------------------------------|
| Abracon P/N:                      | ASPI-0630LR Series                              |
| Operating Temperature & Humidity: | -55°C to +125°C (Including self generated heat) |
| Storage Temperature & Humidity:   | +25°C to +35°C, 45% to 85% RH                   |

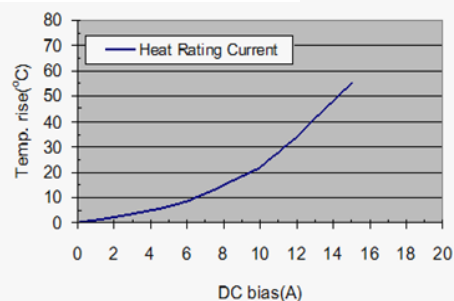
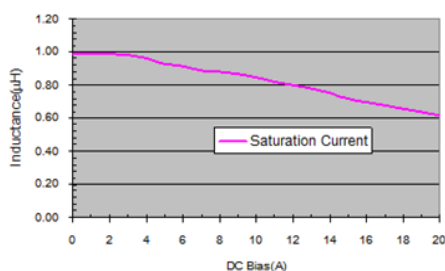
| Part Number     | Inductance | Tolerance | DCR Typ | DCR Max | Saturation Current | Temperature Rise Current |
|-----------------|------------|-----------|---------|---------|--------------------|--------------------------|
| Units           | μH         | %         | mΩ      | mΩ      | A                  | A                        |
| Symbol          | L          | M         |         |         | Isat               | Irms                     |
| ASPI-0630LR-R47 | 0.47       | M         | 3.5     | 4.1     | 20.0               | 18.0                     |
| ASPI-0630LR-R56 | 0.56       | M         | 4.7     | 5.0     | 18.0               | 17.0                     |
| ASPI-0630LR-R68 | 0.68       | M         | 6.0     | 6.5     | 17.0               | 16.0                     |
| ASPI-0630LR-R82 | 0.82       | M         | 7.0     | 7.5     | 16.0               | 14.0                     |
| ASPI-0630LR-1R0 | 1.0        | M         | 8.5     | 9.0     | 15.0               | 12.0                     |
| ASPI-0630LR-1R5 | 1.5        | M         | 10.5    | 12.0    | 14.0               | 10.0                     |
| ASPI-0630LR-2R2 | 2.2        | M         | 16.0    | 18.5    | 10.0               | 8.0                      |
| ASPI-0630LR-3R3 | 3.3        | M         | 25.0    | 28.0    | 10.0               | 6.5                      |
| ASPI-0630LR-4R7 | 4.7        | M         | 32.5    | 35.0    | 6.5                | 5.5                      |
| ASPI-0630LR-5R6 | 5.6        | M         | 32.5    | 35.5    | 5.0                | 6.0                      |
| ASPI-0630LR-6R8 | 6.8        | M         | 54.0    | 60.0    | 6.0                | 4.5                      |
| ASPI-0630LR-100 | 10.0       | M         | 62.0    | 68.0    | 5.5                | 4.0                      |
| ASPI-0630LR-150 | 15.0       | M         | 110.0   | 120.0   | 5.0                | 3.0                      |
| ASPI-0630LR-220 | 22.0       | M         | 152.0   | 167.0   | 2.5                | 2.5                      |

## Test Conditions

1. Inductance is measured in HP-4284A Precision LCR Meter.
2. RDC is measured in HP-4338B milli ohm meter.(or equivalent).
3. Isat: Based on inductance change ( $\Delta L/L_o : \leq -30\%$ )
4. Irms: Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$  )

## ELECTRICAL CHARACTERISTIC CURVES

ASPI-0630LR-1R0



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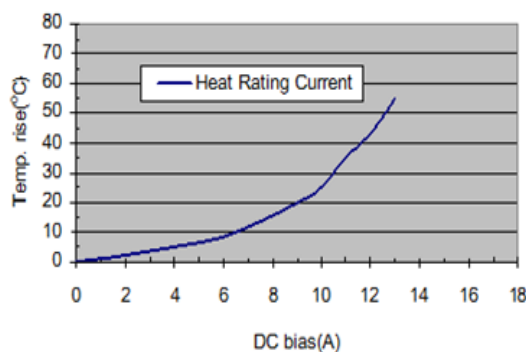
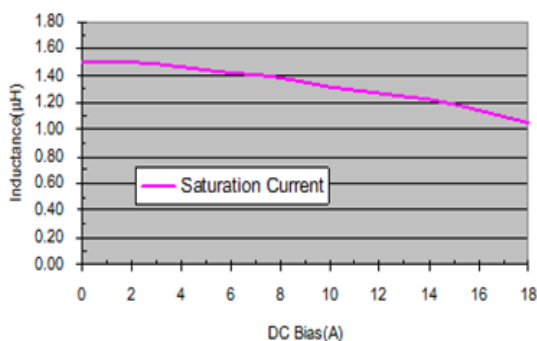
RoHS  
Compliant



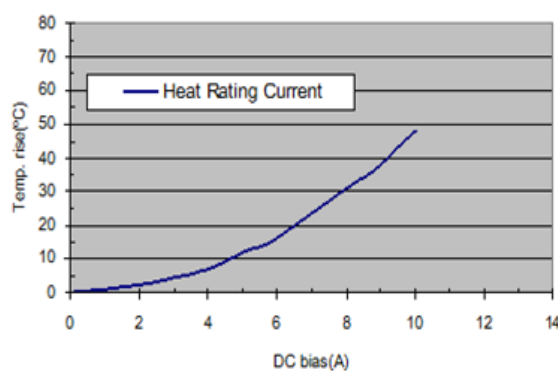
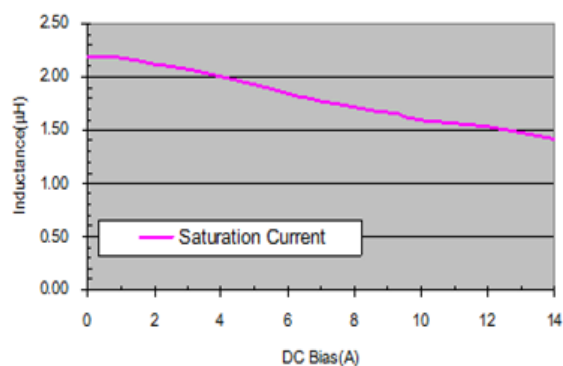
7.2 x 6.65 x 3.0 mm

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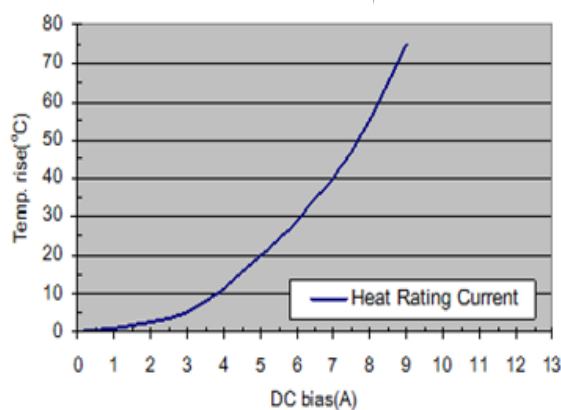
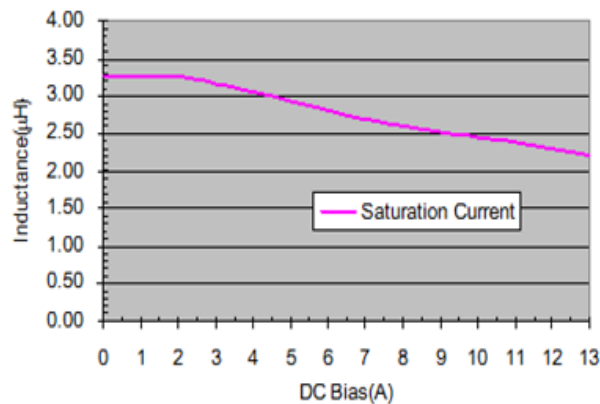
ASPI-0630LR-1R5



ASPI-0630LR-2R2



ASPI-0630LR-3R3



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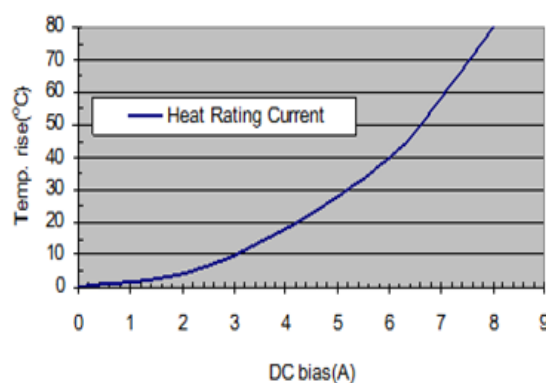
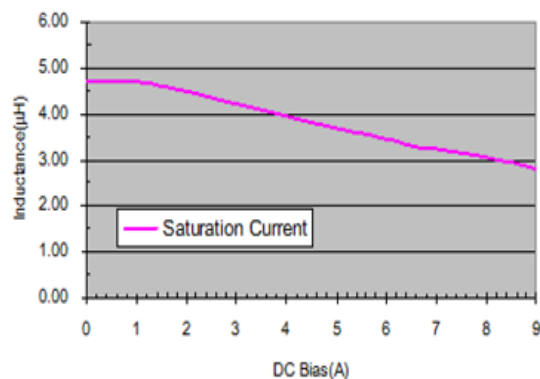
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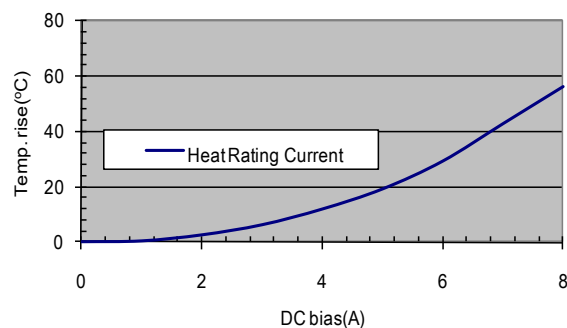
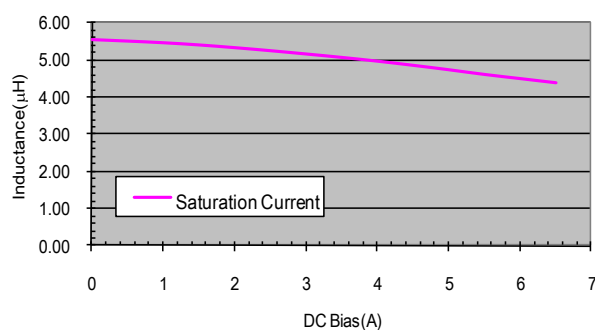
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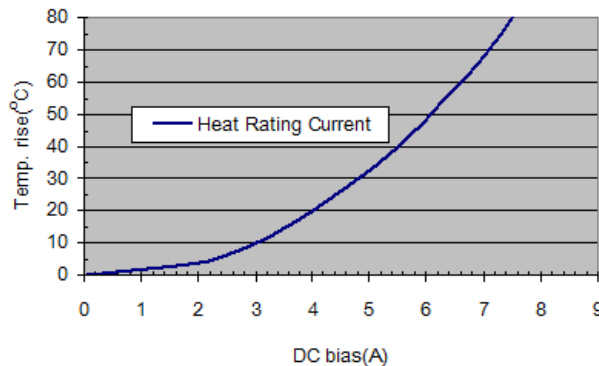
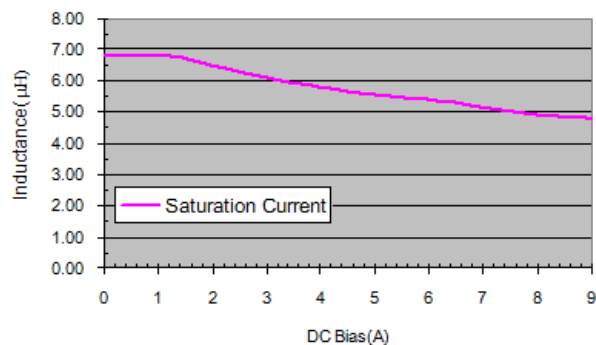
ASPI-0630LR-4R7



ASPI-0630LR-5R6



ASPI-0630LR-6R8



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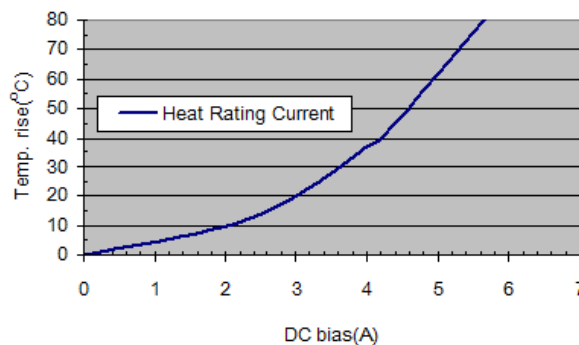
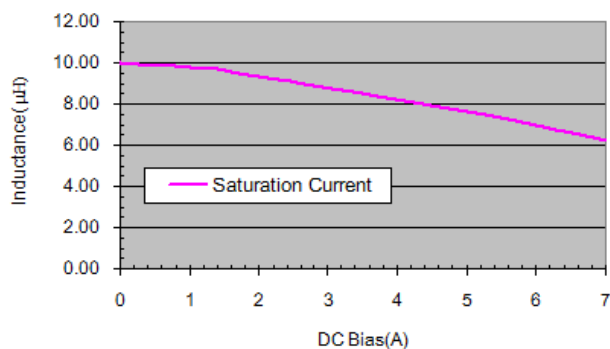
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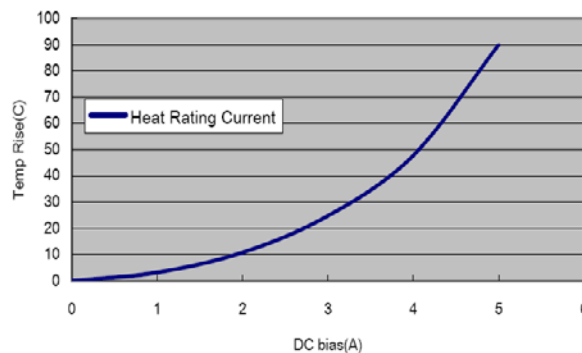
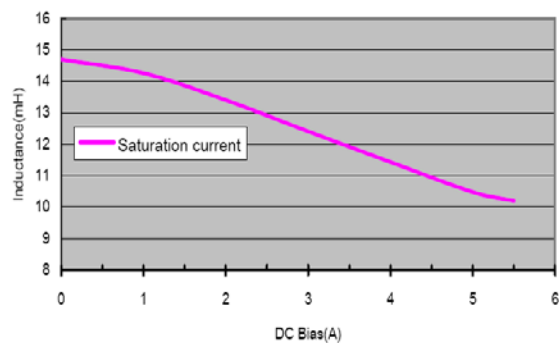
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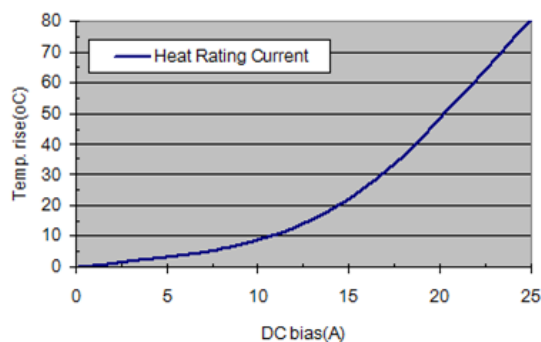
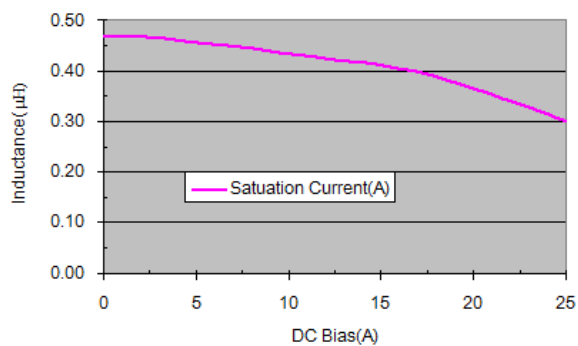
ASPI-0630LR-100



ASPI-0630LR-150



ASPI-0630LR-R47



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ASPI-0630LR



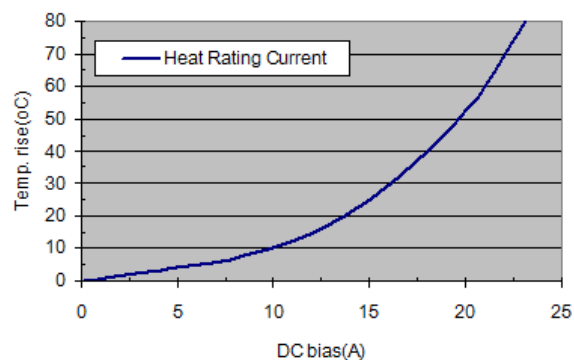
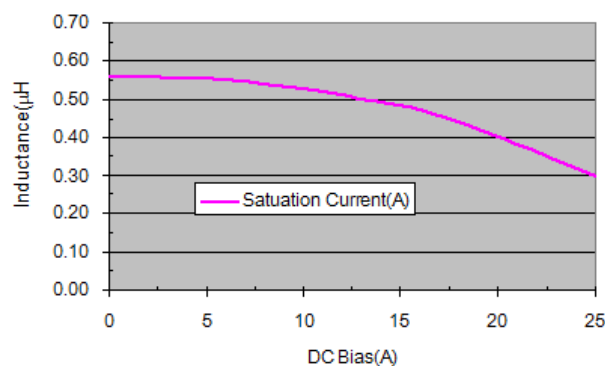
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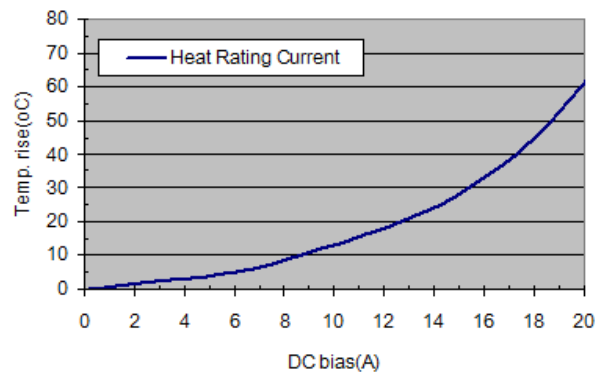
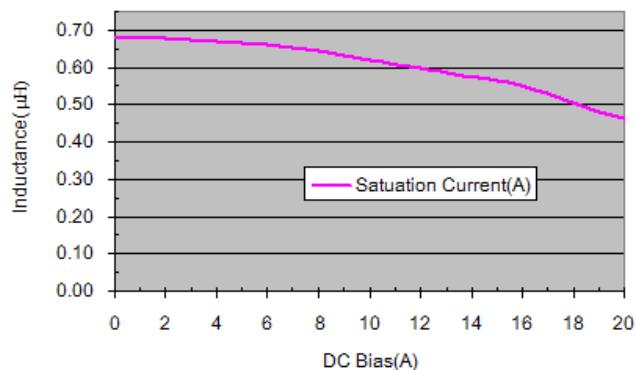
7.2 x 6.65 x 3.0 mm

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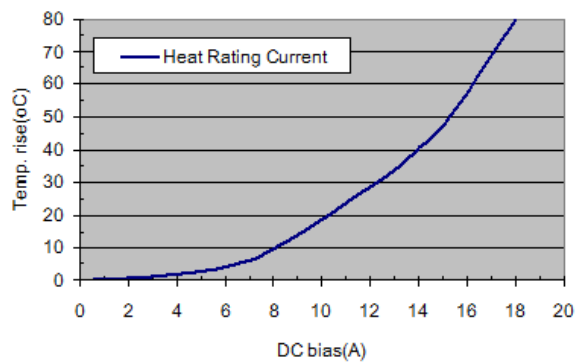
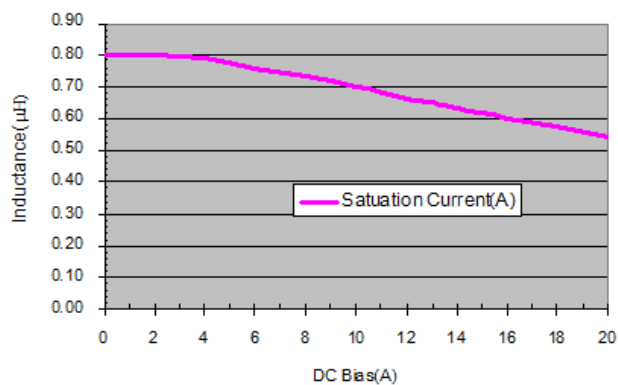
ASPI-0630LR-R56



ASPI-0630LR-R68



ASPI-0630LR-R82



# Molding Type Power Inductor

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## PART NUMBER IDENTIFICATION

ASPI-0630LR-  - 

### Inductance Code

Please refer to the  
Electrical Spec Table

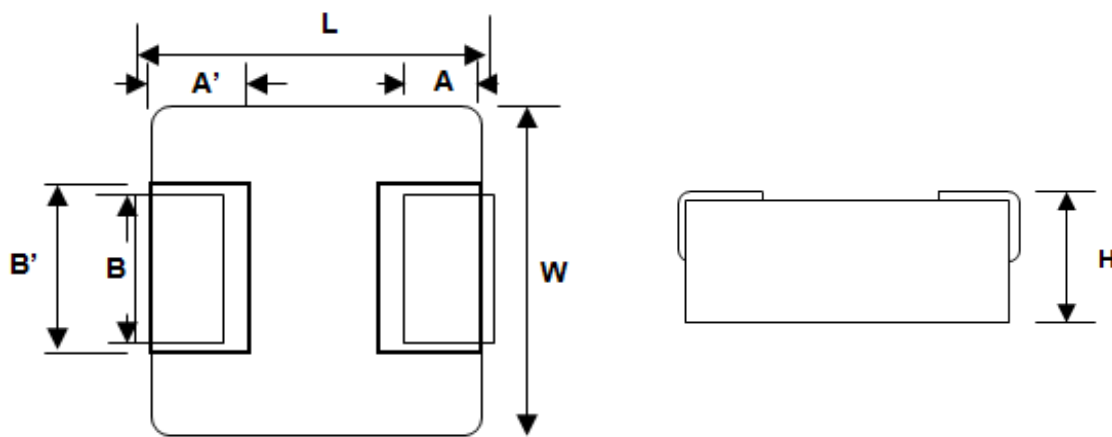
### Tolerance

M:  $\pm 20\%$

### Packaging

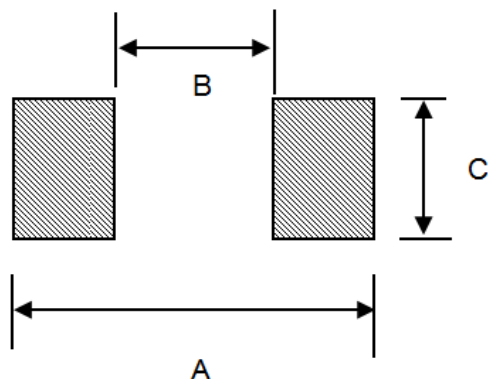
T15: Tape and Reel (1.5kpcs /  
reel)

## OUTLINE DRAWING:



| A             | A'            | B             | B'            | L             | W              | H max |
|---------------|---------------|---------------|---------------|---------------|----------------|-------|
| 1.6 $\pm$ 0.4 | 2.0 $\pm$ 0.1 | 3.0 $\pm$ 0.3 | 3.4 $\pm$ 0.2 | 7.2 $\pm$ 0.3 | 6.65 $\pm$ 0.2 | 3.0   |

### Recommended Land Pattern



| A   | B   | C   |
|-----|-----|-----|
| 8.4 | 3.7 | 3.4 |

Dimension: mm

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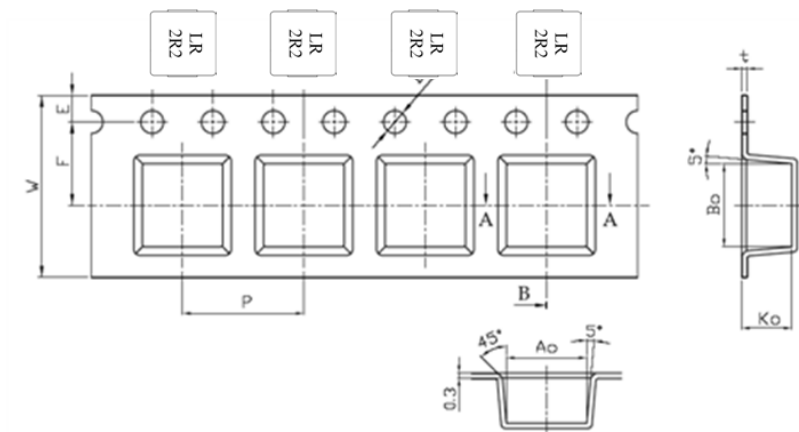
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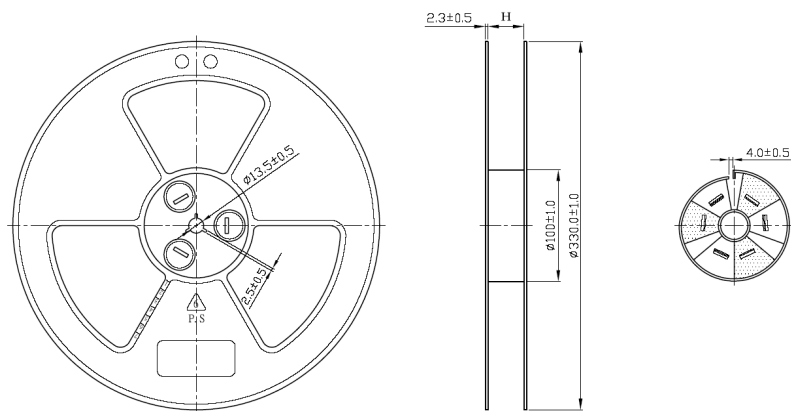
7.2 x 6.65 x 3.0 mm

## TAPE & REEL:

T1: 1,500pcs / reel



|    |      |
|----|------|
| A0 | 7.2  |
| B0 | 7.5  |
| K0 | 3.6  |
| P  | 12.0 |
| t  | 0.3  |
| W  | 16   |
| E  | 1.75 |
| F  | 7.5  |
| D  | 1.5  |



Dimension: mm

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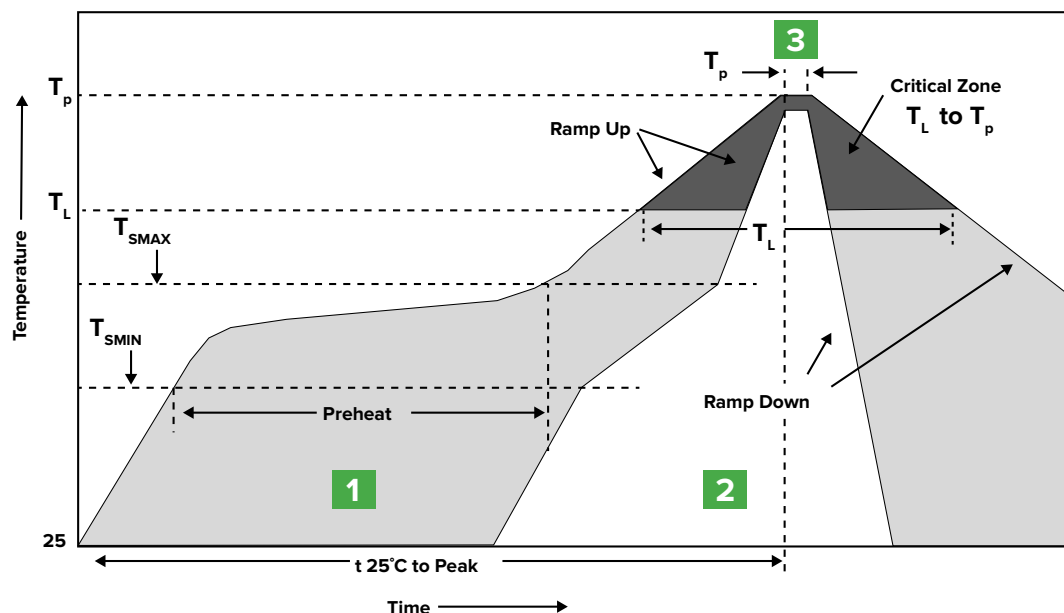


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## REFLOW PROFILE:



| Zone | Description | Temperature                                | Times          |
|------|-------------|--------------------------------------------|----------------|
| 1    | Preheat     | $T_{SMIN}$ to $T_{SMAX}$<br>150°C to 200°C | 60 to 120 sec. |
| 2    | Reflow      | $T_L$<br>217°C                             | 60 to 150 sec. |
| 3    | Peak heat   | $T_P$<br>260°C                             | 30 sec. MAX    |

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