

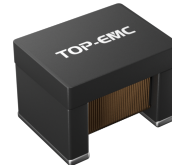
# Winding Type Chip Inductor

TLPAI2012D2R2MT

**TOP-EMC**

## Features

- Ferrite core wire wound construction
- High Reliability due to wire wound type construction
- Small footprint as well as low profile
- 100% Lead(Pb) & Halogen-Free and RoHS compliant
- High reliability -Reliability tests comply with AEC-Q200



## Product Identification

TLPAI  
①

2012  
②

D  
③

2R2  
④

M  
⑤

T  
⑥

- ① Type : TLPAI
- ② External Dimensions (L×W) [mm]= 2.0\*1.2
- ③ Feature Type : Differential
- ④ Nominal Inductance : 2R2=2.2μH
- ⑤ Inductance Tolerance :  
K=±10%  
M=±20%  
N=±30%
- ⑥ Packing T=Tape Carrier Package

## Specifications

| Part Number     | Inductance<br>@1MHz,1V | DC Resistance<br>Max. | Saturation<br>Current(Max.) | Heat Rating<br>Current(Max.) | Self-Resonant<br>Frequency(Min.) |
|-----------------|------------------------|-----------------------|-----------------------------|------------------------------|----------------------------------|
| Symbol          | L                      | DCR                   | Isat                        | Irms                         | SRF                              |
| Units           | μH                     | Ω                     | mA                          | mA                           | MHz                              |
| TLPAI2012D2R2MT | 2.2± 20%               | 0.5                   | 900                         | 400                          | 360                              |

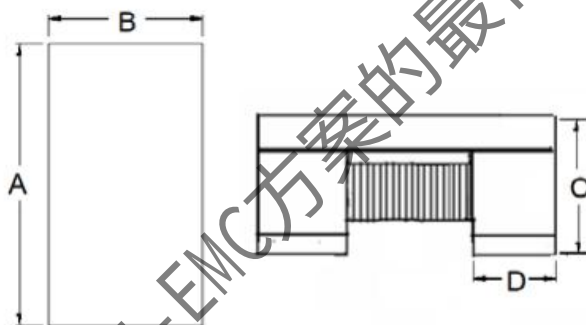
Note:

(1)Isat: Applied the current to coils, the inductance change shall be less than 30% of initial value.

(2)Irms: Temperature rise caused by selfgenerated heat shall be limited to 20°C max.

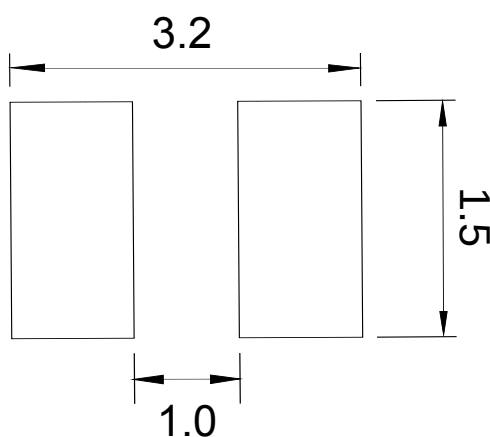
(3)Operating temperature : -40 to +125°C(Including self-temperature rise).

## Shape And Dimensions : (Dimensions in mm)

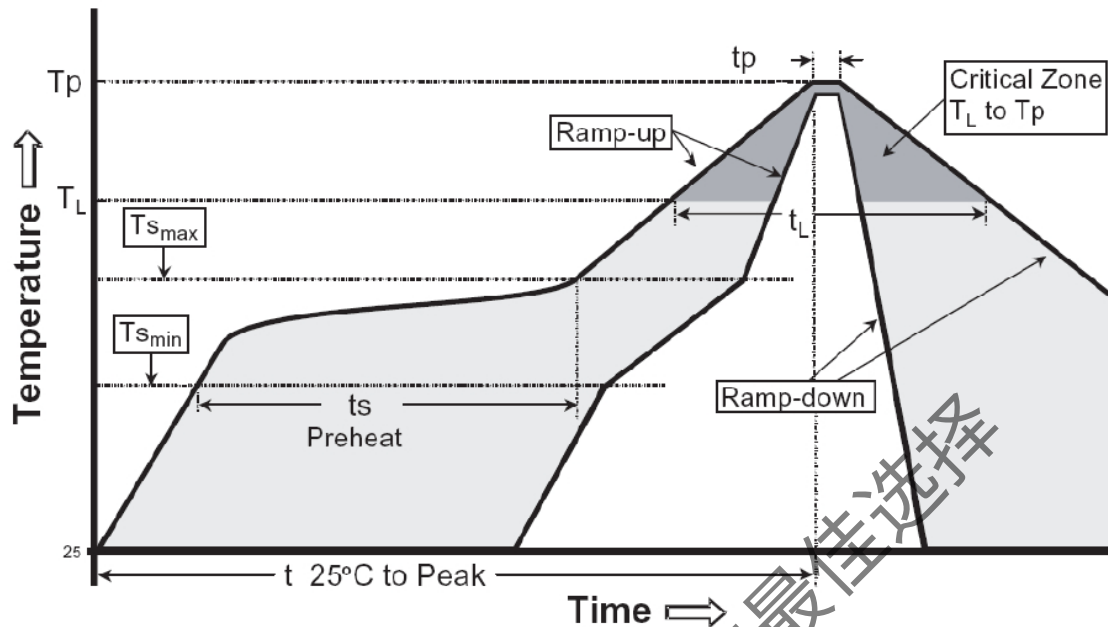


| A         | B         | C         | D       |
|-----------|-----------|-----------|---------|
| 2.00±0.20 | 1.27±0.20 | 1.60±0.20 | 0.4 Typ |

## Suggested Land Pattern : (Dimensions in mm)



## Recommended Soldering Technologies



| Profile Feature                                                                                                                                                                                                                    | Pb free Assembly                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Average Ramp Rate<br>( $T_{s_{max}}$ to $T_p$ )                                                                                                                                                                                    | 3 °C/second max                  |
| Preheat <ul style="list-style-type: none"> <li>- Temperature Min (<math>T_{s_{min}}</math>)</li> <li>- Temperature Min (<math>T_{s_{max}}</math>)</li> <li>- Time(<math>t_{s_{min}}</math> to <math>t_{s_{max}}</math>)</li> </ul> | 150°C<br>200°C<br>60-180 seconds |
| Time maintained above: <ul style="list-style-type: none"> <li>- Temperature (<math>T_L</math>)</li> <li>- Time (<math>t_L</math>)</li> </ul>                                                                                       | 217°C<br>60-150 seconds          |
| Peak/Classification Temperature ( $T_p$ )                                                                                                                                                                                          | 260 °C                           |
| Peak/Classification Time ( $T_p$ )                                                                                                                                                                                                 | 3-4 seconds                      |
| Time within 5 °C of actual Peak Temperature ( $T_p$ )                                                                                                                                                                              | 20-40 seconds                    |
| Ramp-Down Rate                                                                                                                                                                                                                     | 6 °C/second max.                 |
| Time 25°C to Peak Temperature                                                                                                                                                                                                      | 8 minutes max                    |

## CONTACT INFORMATION

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