



佳邦科技股份有限公司

INPAQ TECHNOLOGY CO., LTD.

## MAP1608LT Series

# Specification

<b>Product Name</b>	<b>Power Inductor</b>
<b>Series</b>	<b>MAP 1608LT Series</b>
<b>Size</b>	<b>EIAJ 1608</b>



## Multilayer Power Inductor (MAP Series) Engineering Spec.

This product belongs to the 3C and industrial grade standard, not for automotive application. If customer privately uses to automotive parts and results in any consequences, INPAQ is not responsible for after-sales service, thank you!

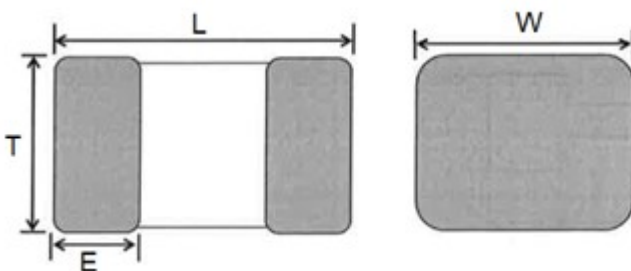
### ■ Features

- The monolithic construction performs high reliability and ensures a closed magnetic flux in a component avoids magnetic leakage and interference .
- Allow for higher mounting density.
- Low DC resistance.

### ■ Applications

Suitable for DVD , DSC , PND , PC , NB , Power Line

### ■ Shapes and Dimensions



Type (mm)	1608 (EIA 0603)
<b>L</b>	1.60±0.20
<b>W</b>	0.80±0.20
<b>T</b>	0.65 Max.
<b>E</b>	0.30±0.20

## ■ Part Number and Characteristics Table

Part Number.	Inductance ±20% (μH)	DCR (Ω)		Rated Current I <sub>rms</sub> (mA)		Rated Current I <sub>sat</sub> (mA)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
MAP1608LTR24MNPG	0.24	0.075	0.100	1700	1500	3100	2600
MAP1608LTR47MNPG	0.47	0.114	0.150	1400	1200	2400	2000
MAP1608LT1R0MNPG	1.00	0.270	0.340	900	800	1700	1400
Item	Test Method						
<b>Inductance</b>	<ul style="list-style-type: none"> <li>•Agilent E4991A/B RF Impedance Material Analyzer or equivalent</li> <li>•Agilent 16192A fixture or equivalent</li> <li>•Test Frequency : 1MHz</li> <li>•Test Level : 100 mV</li> </ul>						
<b>DC Resistance</b>	•HP4338A/B Milliohm meter						

\*\* For special part number which is not shown in the above table, please refer to appendix.

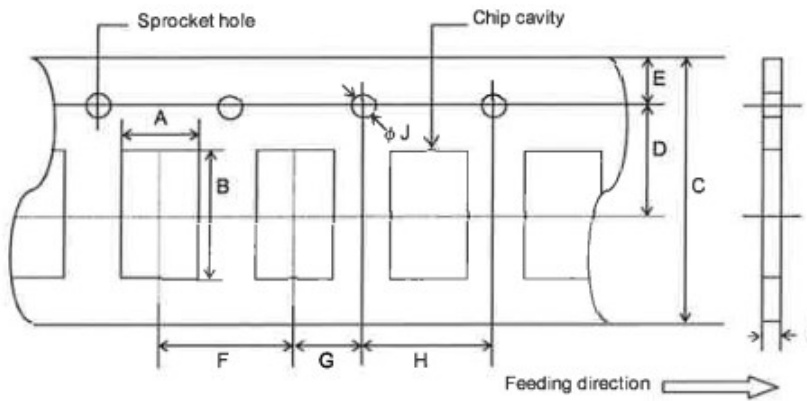
## ■ Part Number Code

MAP   1608   L   T   R47   M   N   P   □   G  
 1        2        3        4        5        6        7        8        9        10

- 1 Series Name
- 2 Size Code : The first two digitals: length(mm) · the last two digitals: width(mm)
- 3 Internal Code
- 4 Type code
- 5 Inductance : R = Decimal point · Unit = μH
- 6 Tolerance : M = ±20%
- 7 Polarity Marking : M = with ; N = without
- 8 Packaging : E = Embossed plastic tape ; P = Paper tape, 7" reel.
- 9 Special code 1
- 10 Special code2 (G : 5 surface terminal)

## ■ Tape and Reel Specifications

### Paper Carrier (P)

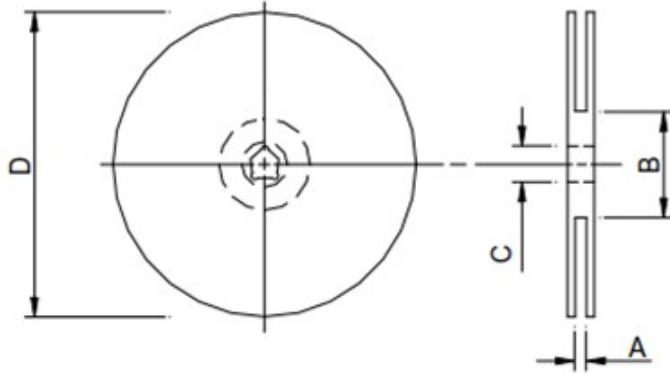


Unit : mm

### Taping Dimensions

Size(mm)	<b>1608</b>
Symbol	PAPER
A	1.10±0.05
B	1.90±0.05
C	8.00±0.20
D	3.50±0.05
E	1.75±0.10
F	4.00±0.10
G	2.00±0.05
H	4.00±0.10
J	1.50+0.1/-0
t	0.72 max.

■ Reel Dimensions



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"	10±1.5	50 or more	13.2±1.0	178±2.0

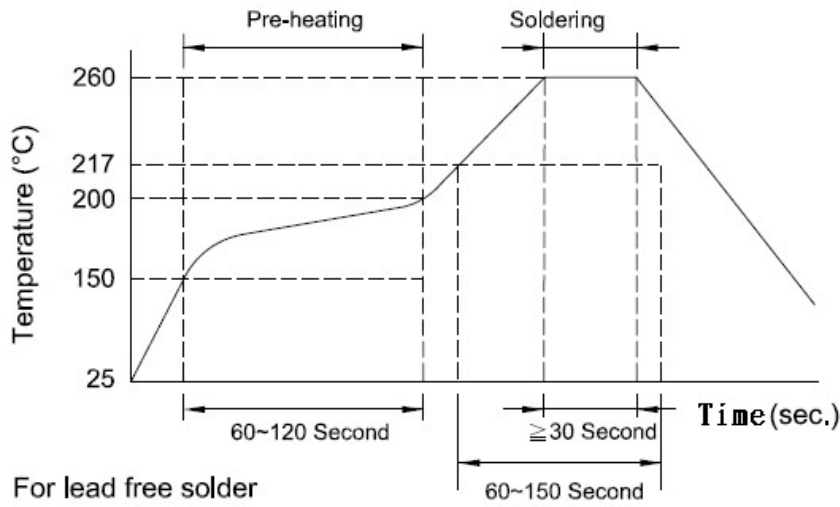
■ Packaging Dimension And Quantity

Packaging style : Taping

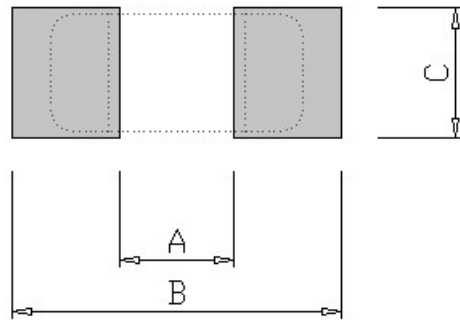
Reel packaging quantity : **4,000** pcs/reel

Per the box : 5 Reels

■ Recommended Soldering Conditions



■ Land Patterns for Reflow Soldering



Size(mm)	A	B	C
1608	1.00 (0.039)	1.90 (0.075)	1.00 (0.039)

■ Reliability and Test Conditions

Test item	Test condition	Criteria
<b>Resistance to Solder Heat</b>	<ol style="list-style-type: none"> <li>Solder temperature : <math>260 \pm 5^{\circ}\text{C}</math></li> <li>Flux : Rosin</li> <li>DIP time : <math>10 \pm 1</math> sec</li> </ol>	<ol style="list-style-type: none"> <li>No mechanical damage</li> <li>Inductance value should be within <math>\pm 10\%</math> of the initial value</li> </ol>
<b>Solderability</b>	<ol style="list-style-type: none"> <li>Solder temperature : <math>235 \pm 5^{\circ}\text{C}</math></li> <li>Flux : Rosin</li> <li>DIP time : <math>5 \pm 1</math> sec</li> </ol>	<ol style="list-style-type: none"> <li>More than 90 % of terminal electrode should be covered with new solder</li> </ol>
<b>Adhesive Test</b>	<ol style="list-style-type: none"> <li>Reflow temperature : <math>245^{\circ}\text{C}</math> It shall be soldered on the substrate applying direction parallel to the substrate</li> <li>Apply force(F) : 10 N</li> <li>Test time : 5 sec</li> </ol>	<ol style="list-style-type: none"> <li>No mechanical damage</li> <li>Soldering the products on PCB after the pulling test force <math>&gt; 10</math> N</li> </ol>
<b>Thermal Shock</b>	<ol style="list-style-type: none"> <li>Temperature: <math>-40 \sim 85^{\circ}\text{C}</math> for 30 minutes each</li> <li>Cycle: 100 cycles</li> <li>Measurement: at ambient temperature 24 hours after test completion</li> </ol>	<ol style="list-style-type: none"> <li>No mechanical damage</li> <li>Inductance should be within <math>\pm 10\%</math> of the initial value</li> </ol>
<b>High Temperature Resistance</b>	<ol style="list-style-type: none"> <li>Temperature: <math>85 \pm 5^{\circ}\text{C}</math></li> <li>Testing time: 500 hrs</li> <li>Measurement: at ambient temperature 24 hours after test completion</li> </ol>	<ol style="list-style-type: none"> <li>No mechanical damage</li> <li>Inductance should be within <math>\pm 10\%</math> of the initial value</li> </ol>
<b>Humidity</b>	<ol style="list-style-type: none"> <li>Temperature: <math>40^{\circ}\text{C} \pm 2^{\circ}\text{C}</math></li> <li>Humidity: 90-95 % RH</li> <li>Testing time: 500 hrs</li> <li>Measurement: at ambient temperature 24 hours after test completion</li> </ol>	<ol style="list-style-type: none"> <li>No mechanical damage</li> <li>Inductance should be within <math>\pm 10\%</math> of the initial value</li> </ol>

Test item	Test condition	Criteria
Rated Current	Apply current : full rated current / 5min	MAP product surface temp : below room temperature plus 40°C

■ **GENERAL TECHNICAL DATA**

Operating temperature range : - 40°C ~ +125°C  
 Storage Condition : Less than 40°C and 70% RH  
 Storage Time: 6 months Max.  
 Soldering method : Reflow