PSA 佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

MAP1005ST Series
Specification

Product Name	Power Inductor
Series	MAP 1005ST Series
Size	EIAJ 1005

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!

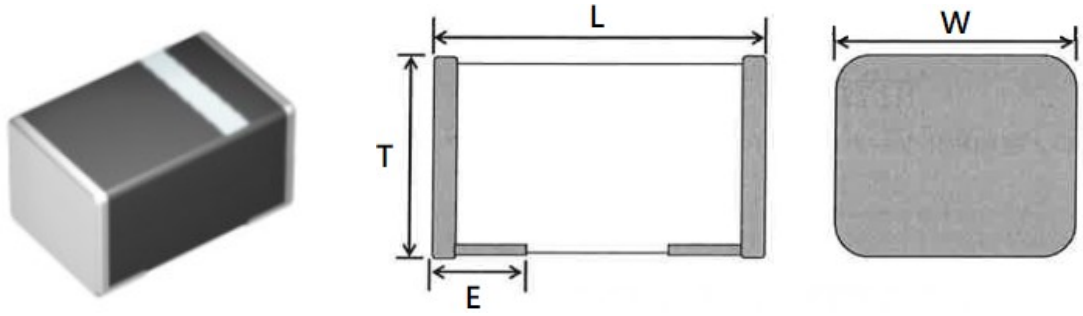
■ Features

- 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)	1005 (EIA 0402)
L	1.00±0.20
W	0.50±0.20
T	0.55 Max.
E	0.25±0.15

■ Part Number and Characteristics Table

Part Number.	Inductance ±20% (μH)	DCR (Ω)		Rated Current Irms (mA)		Rated Current Isat (mA)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
MAP1005STR10MMP	0.10	0.041	0.050	2200	2000	2300	2000
MAP1005STR22MMP	0.22	0.065	0.080	1800	1600	1800	1600
MAP1005STR47MMP	0.47	0.114	0.140	1300	1200	1400	1200
MAP1005ST1R0MMP	1.00	0.244	0.300	900	800	1200	1000
Item	**Test Method**						
Inductance	•Agilent E4991A/B RF Impedance Material Analyzer or equivalent •Agilent 16192A fixture or equivalent •Test Frequency：1MHz •Test Level：100 mV						
DC Resistance	•HP4338A/B Milliohm meter						

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

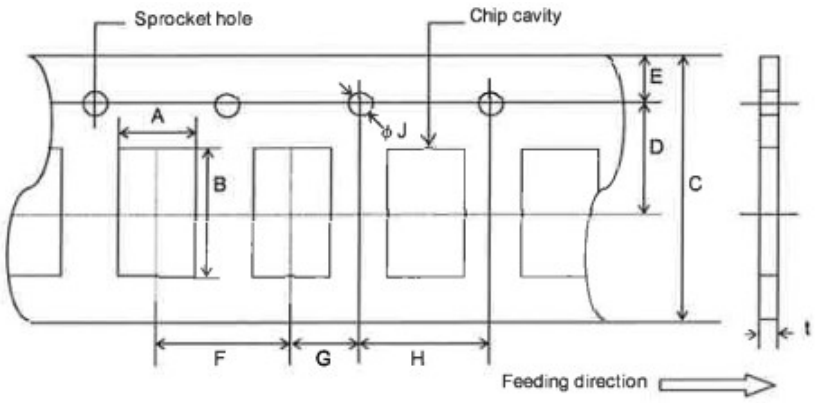
■ Part Number Code

MAP	1005	S	T	R47	M	M	P
1	2	3	4	5	6	7	8

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.

■ Tape and Reel Specifications

Paper Carrier (P)

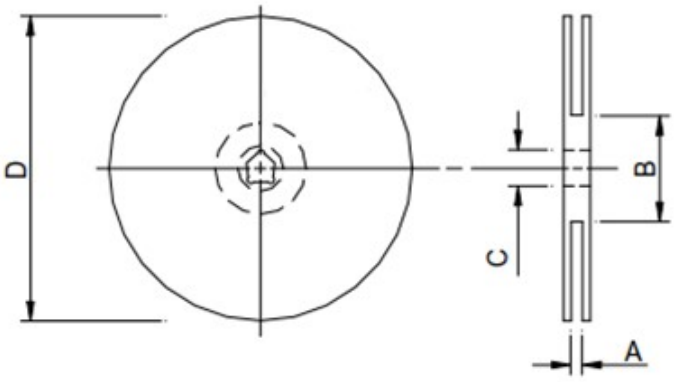


Unit：mm

Taping Dimensions

Size(mm)	**1005**
Symbol	PAPER
A	0.80±0.05
B	1.30±0.05
C	8.00±0.20
D	3.50±0.05
E	1.75±0.10
F	2.00±0.05
G	2.00±0.05
H	4.00±0.10
J	1.50+0.1/-0
t	0.64 max.

■ Reel Dimensions

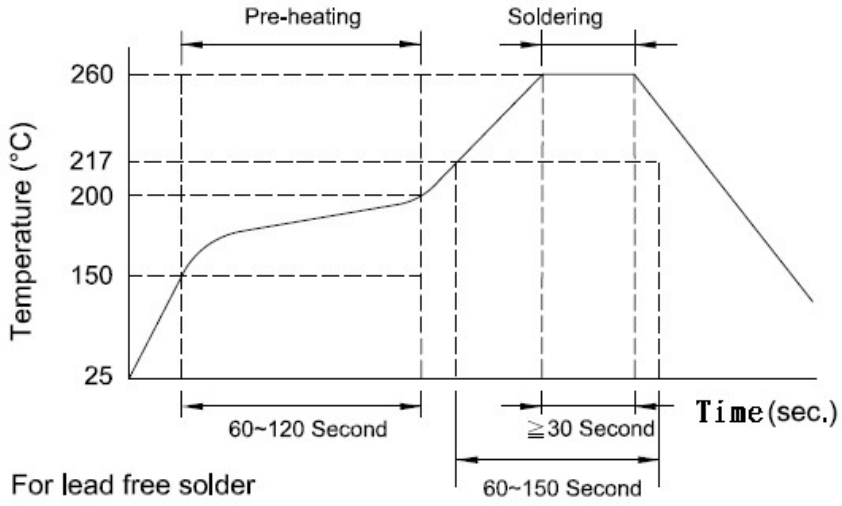


Type	A(mm)	B(mm)	C(mm)	D(mm)
7”	10±1.5	50 or more	13.2±1.0	178±2.0

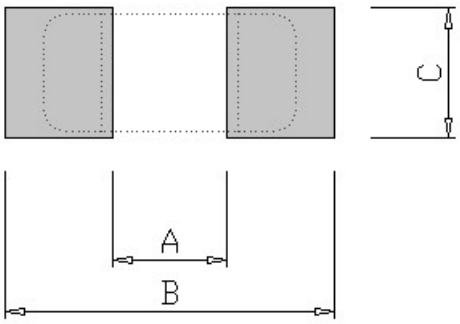
■ Packaging Dimension And Quantity

Packaging style：Taping
Reel packaging quantity：**10,000** pcs/reel
Per the box：5 Reels

■ Recommended Soldering Conditions



■ Land Patterns for Reflow Soldering



Size(mm)	A	B	C
1005	0.50 (0.020)	1.30 (0.051)	0.70 (0.028)

■ Reliability and Test Conditions

Test item	Test condition	Criteria
Resistance to Solder Heat	1. Solder temperature : 260 ± 5℃ 2. Flux : Rosin 3. DIP time : 10 ± 1 sec	1. No mechanical damage 2. Inductance value should be within ± 10 % of the initial value
Solderability	1. Solder temperature : 235 ± 5℃ 2. Flux : Rosin 3. DIP time : 5 ± 1 sec	1. More than 90 % of terminal electrode should be covered with new solder
Adhesive Test	1. Reflow temperature : 245℃ It shall be soldered on the substrate applying direction parallel to the substrate 2. Apply force(F) : 5 N 3. Test time : 5 sec	1. No mechanical damage 2. Soldering the products on PCB after the pulling test force > 5 N
Thermal Shock	1. Temperature:-40 ~ 85℃ for 30 minutes each 2. Cycle: 100 cycles 3. Measurement: at ambient temperature 24 hours after test completion	1. No mechanical damage 2. Inductance should be within ±10% of the initial value
High Temperature Resistance	1. Temperature: 85 ± 5℃ 2. Testing time: 500 hrs 3. Measurement: at ambient temperature 24 hours after test completion	1. No mechanical damage 2. Inductance should be within ±10% of the initial value
Humidity	1. Temperature: 40℃ ± 2℃ 2. Humidity: 90-95 % RH 3. Testing time: 500 hrs 4. Measurement: at ambient temperature 24 hours after test completion	1. No mechanical damage 2. Inductance should be within ±10% of the initial value

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

■ GENERAL TECHNICAL DATA

Operating temperature range : - 40℃ ~ +85℃

Storage Condition : Less than 40℃ and 70% RH

Storage Time: 6 months Max.

Soldering method : Reflow