

# Molded Inductor (Carbonyl)



AMPLH7025S

Request Samples



Check Inventory



7.3 x 6.6 x 2.2 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Features

- Shielded construction
- Soft saturation
- Low DCR, High Efficiency
- Designed for switching frequencies between 100KHz-2MHz

## Applications

- DC/DC Switching converters
- Power supplies for Notebooks, workstations, and Servers
- Low Profile applications
- High current, transient load applications

## Electrical Specifications

Part Number	Inductance	Tolerance	DC Resistance		Saturation Current	Temperature Rise Current
	0.1MHz/1.0V		Max.	Typ.	Typ.	Typ.
Units	$\mu\text{H}$	%	$\text{m}\Omega$		A	A
Symbol	L	M	DCR		Isat	Irms
AMPLH7025S-R20M	0.20	$\pm 20$	1.9	1.6	41.0	25.0
AMPLH7025S-R33M	0.33	$\pm 20$	2.4	2.0	33.0	21.0
AMPLH7025S-R47M	0.47	$\pm 20$	4.2	3.6	27.0	19.0
AMPLH7025S-R68M	0.68	$\pm 20$	4.6	4.0	23.0	17.0
AMPLH7025S-1R0M	1.00	$\pm 20$	6.8	5.9	17.0	15.0
AMPLH7025S-1R5M	1.50	$\pm 20$	10.1	8.7	15.0	13.0
AMPLH7025S-2R2M	2.20	$\pm 20$	14.7	12.8	12.0	10.0
AMPLH7025S-3R3M	3.30	$\pm 20$	27.6	24.0	9.0	8.0
AMPLH7025S-4R7M	4.70	$\pm 20$	36.8	32.0	8.0	7.0
AMPLH7025S-5R6M	5.60	$\pm 20$	40.2	35.0	7.5	6.5
AMPLH7025S-6R8M	6.80	$\pm 20$	50.6	44.0	7.0	6.0
AMPLH7025S-8R2M	8.20	$\pm 20$	53.0	46.0	6.0	5.5
AMPLH7025S-100M	10.00	$\pm 20$	73.6	64.0	5.5	5.0

## Test Conditions

**Isat:** DC current at which the inductance drops 30% from its initial value.

**Irms:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40°C) from 25°C ambient.

**Operating Temperature:** -40°C ~ +125°C (including self-temperature rise)

**Storage Condition:** -40°C ~ +125°C (on board), -10°C ~ +40°C (with packaging) and R.H. 85% max.

**Operating Voltage:** 50V (across inductor)

AMPLH7025S Series is **RoHS Compliant and Pb free.**

For saturation and temperature rise graphs, please visit [Abracon | Power Inductor Performance Analyzer \(PIPA\)](#)

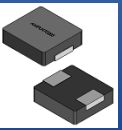


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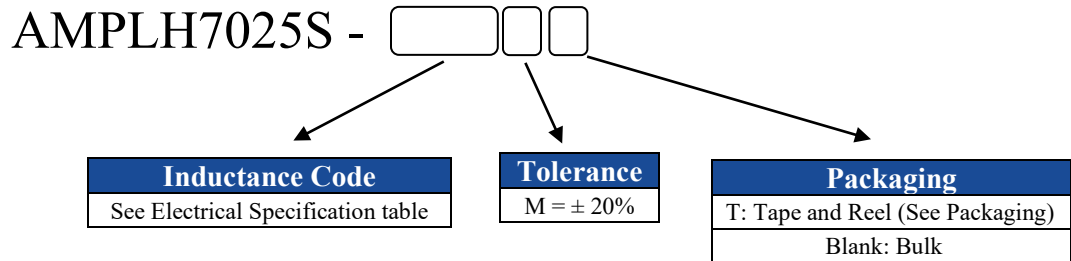


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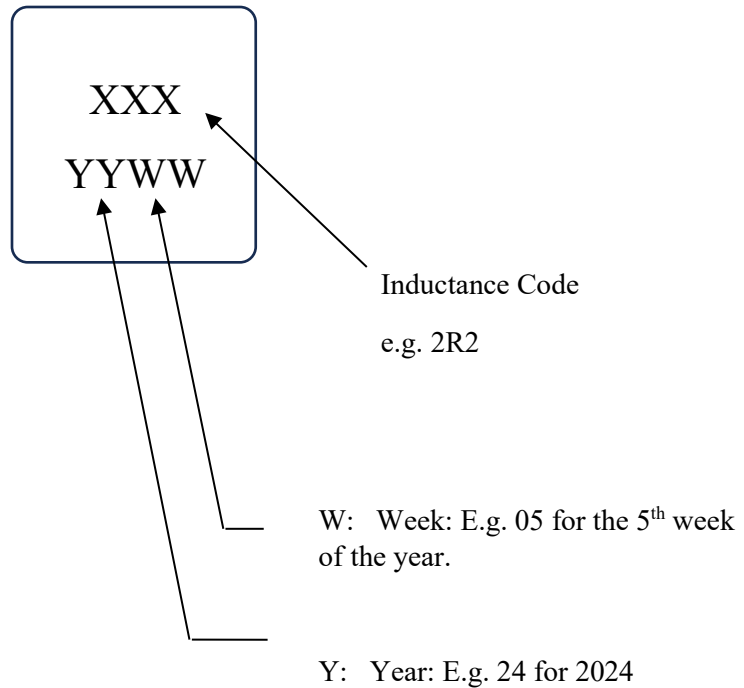


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## Part Identification



## Marking



Marking Method = Ink Marking

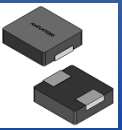


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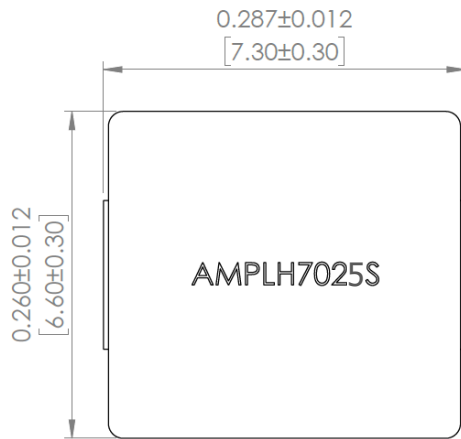


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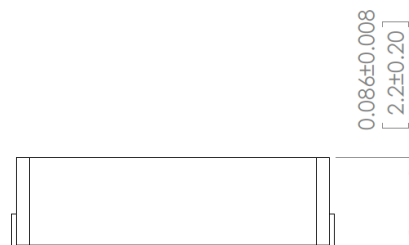


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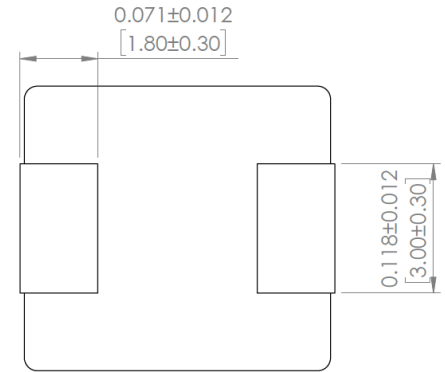
## Mechanical Specifications



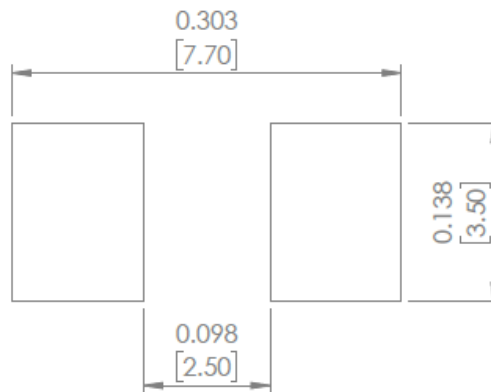
**TOP VIEW**



**FRONT VIEW**



**BOTTOM VIEW**



**RECOMMENDED LAND PATTERN**

Dimensions: Inches [mm]

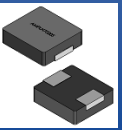


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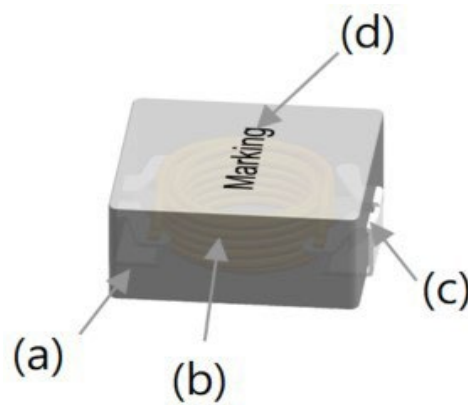


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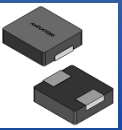
7.3 x 6.6 x 2.2 mm  
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## Materials



	Components	Material
a	Core	Alloy Powder
b	Wire	Polyester Wire
c	Electrode	Cu/Ni/Sn
d	Marking	Ink

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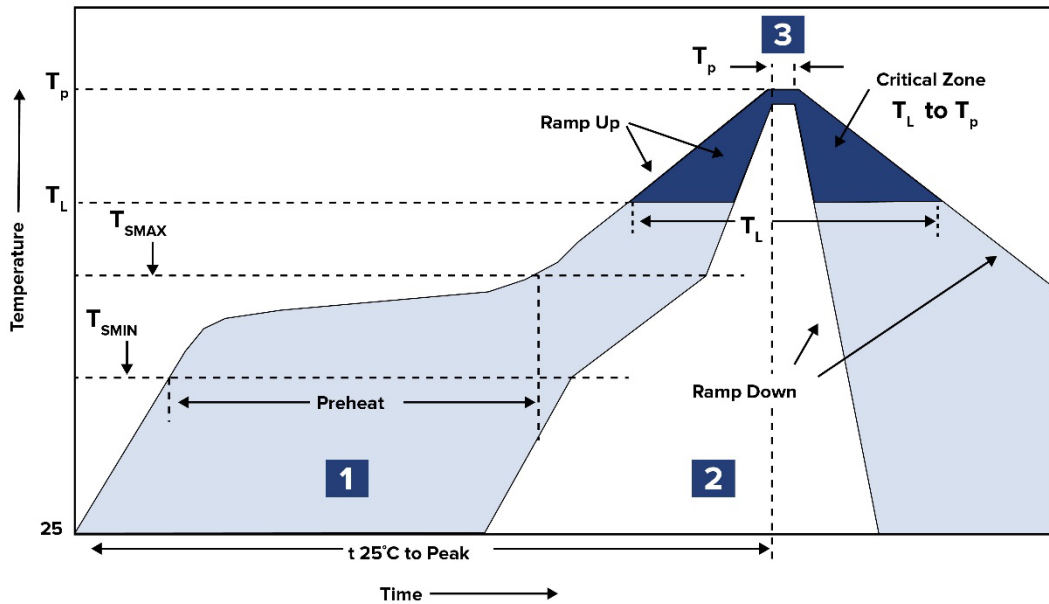


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T <sub>SMIN</sub> ~ T <sub>SMAX</sub> 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T <sub>L</sub> ≥217°C	60 ~ 150 sec.
3	Peak heat	T <sub>p</sub> 260°C	30 sec. MAX

Time of 25°C to peak temperature: 8 mins Max  
 Ramp up rate: 3°C/Second max.  
 Ramp down rate: 6°C/Second max.

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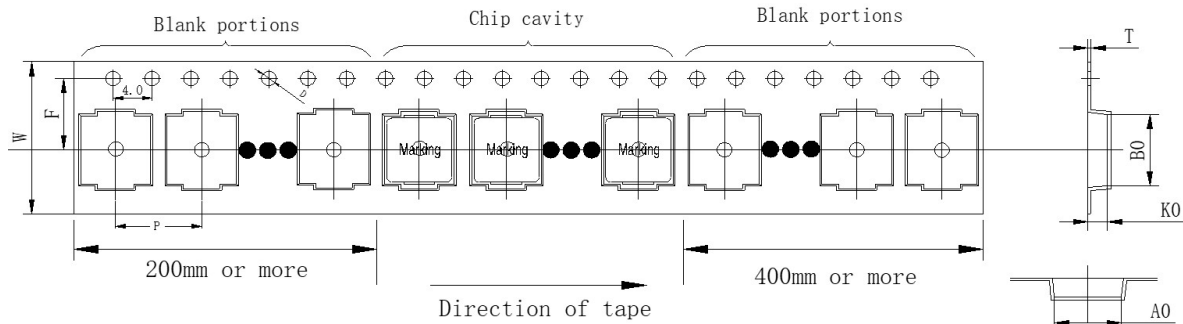
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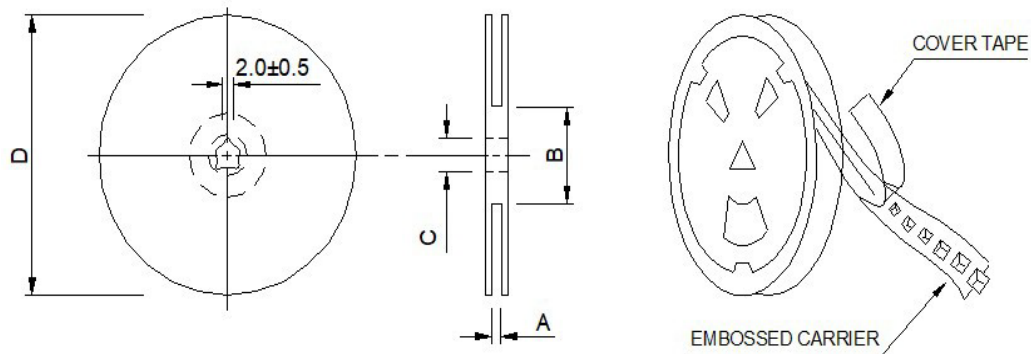
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## Packaging

**Tape & Reel: 1500 pcs/reel**



A0	B0	W	F	P	D	K0	T
7.10 Ref	8.10 Ref	16.00±0.30	7.50±0.10	12.00±0.10	1.50±0.10	2.70 Ref	0.35±0.05



Type	A	B	C	D
13" x 16mm	16.4+2.0/-0.0	100.0±2.0	13.0+0.5/-0.2	330.0±0.3

**Dimensions: mm**

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