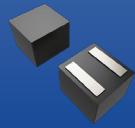


Flat Wire / Hot Pressed Molded Power Inductor

**AMELH4025S**[Request Samples](#)[Check Inventory](#)

4.2 x 4.2 x 2.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Low-DCR
- Ultra-low AC losses
- High saturation current
- Soft saturation characteristics
- Minimal audible buzzing

Applications

- Consumer Electronics
- Industrial Electronics
- Telecom equipment's

Electrical Specifications

Part Number	Inductance	Tolerance	DC Resistance		Saturation Current		Temperature Rise Current		SRF
			Max	Typ.	Typ.	Max.	Typ.	Max.	
Units	µH	%	mΩ		A		A		MHz
Symbol	L	M	DCR		Isat		Irms		F
AMELH4025S-R13MT	0.13	20	1.7	1.40	35.0	32.0	32.0	29.0	235
AMELH4025S-R24MT	0.24	20	2.5	2.10	30.0	27.0	25.0	22.0	145
AMELH4025S-R33MT	0.33	20	3.2	2.70	23.0	20.0	22.0	20.0	106
AMELH4025S-R47MT	0.47	20	4.5	3.70	19.0	17.0	20.0	18.0	90
AMELH4025S-R56MT	0.56	20	4.9	4.4	17.0	15.0	18.0	16.0	85
AMELH4025S-R68MT	0.68	20	5.9	5.1	13.8	13.0	16.5	15.0	60
AMELH4025S-R72MT	0.72	20	6.0	5.2	13.0	12.0	16.0	14.7	60
AMELH4025S-R82MT	0.82	20	6.9	6.0	12.5	11.5	14.5	13.0	58
AMELH4025S-1R0MT	1.00	20	8.2	7.1	11.0	10.0	13.0	11.5	50
AMELH4025S-1R5MT	1.50	20	12.0	10.5	10.0	9.0	11.0	9.5	45
AMELH4025S-2R2MT	2.20	20	17.0	15.5	7.3	6.3	9.0	8.0	30
AMELH4025S-3R3MT	3.30	20	27.0	24.5	5.7	5.2	7.0	6.0	22
AMELH4025S-4R7MT	4.70	20	36.3	33.0	5.0	4.5	6.0	5.0	22

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Test Conditions

Test frequency: 1.0V/100KHz

Test Temp: 25°C Ambient

Isat: DC current at which the inductance drops 30% from its value without current.

Irms: DC current that causes the temperature rise (ΔT , approximate 40 °C) from 25°C ambient.

Operating Voltage: 40V

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

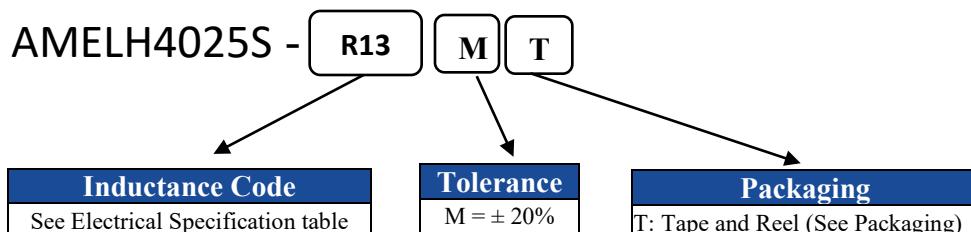
Rated DC Current: The lower value of Irms and Isat

Part Temperature (Ambient + Temp. Rise): Should not exceed 125°C under worst case operating conditions

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

AMELH4025S Series is **RoHS Compliant and Pb free**.

Part Identification



Flat Wire / Hot Pressed Molded Power Inductor

AMELH4025S

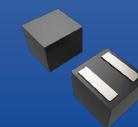
Request Samples



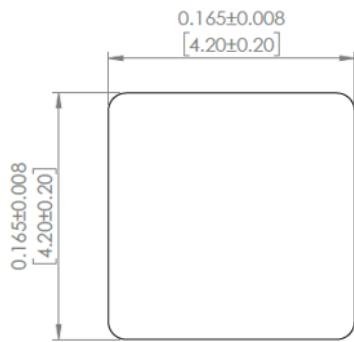
Check Inventory



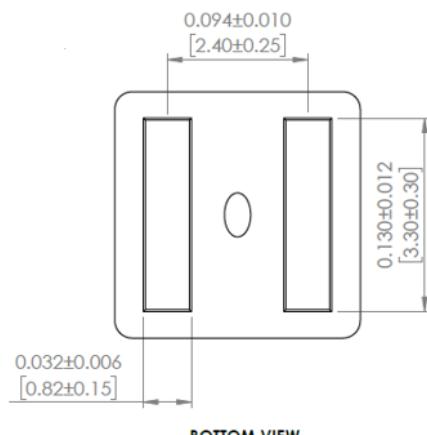
4.2 x 4.2 x 2.3 mm
RoHS/RoHS II Compliant
MSL Level = 1



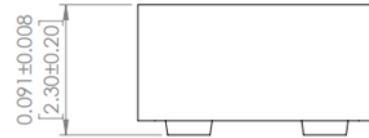
Mechanical Specifications



TOP VIEW

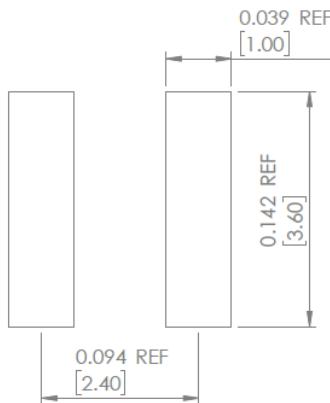


BOTTOM VIEW



FRONT VIEW

RECOMMENDED LAND PATTERN

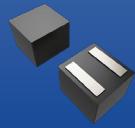


DIMENSIONS: INCHES[mm]

NOTES:

1. THE ABOVE PCB LAYOUT REFERENCE ONLY.
2. RECOMMEND SOLDER PASTE THICKNESS AT .004[0.12] AND ABOVE.

Flat Wire / Hot Pressed Molded Power Inductor



AMELH4025S

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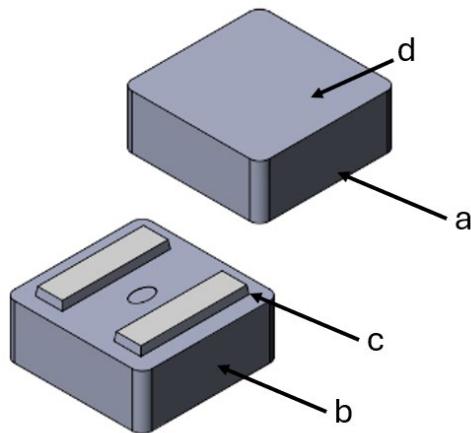


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4.2 x 4.2 x 2.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

Materials



a	Core
b	Wire
c	Solder
d	Coating

Flat Wire / Hot Pressed Molded Power Inductor

AMELH4025S

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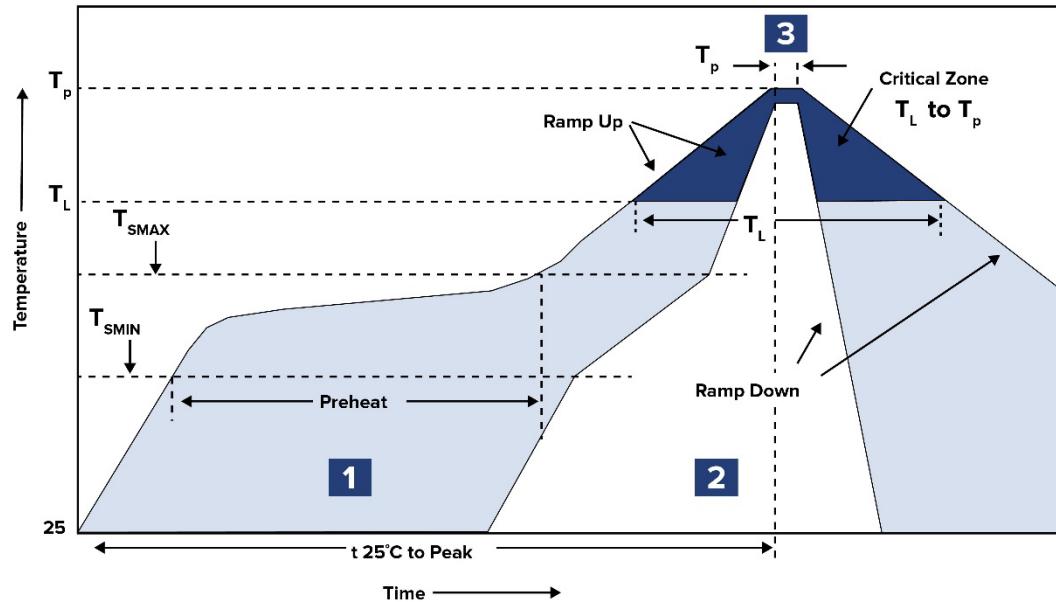


Check Inventory



4.2 x 4.2 x 2.3 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_l 217°C	60 ~ 150 sec.
3	Peak heat	T_p 260°C-5°C	30 sec. MAX

Ref. Solder paste: Sn/3.0Ag/0.5Cu

Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.

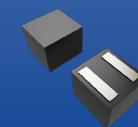
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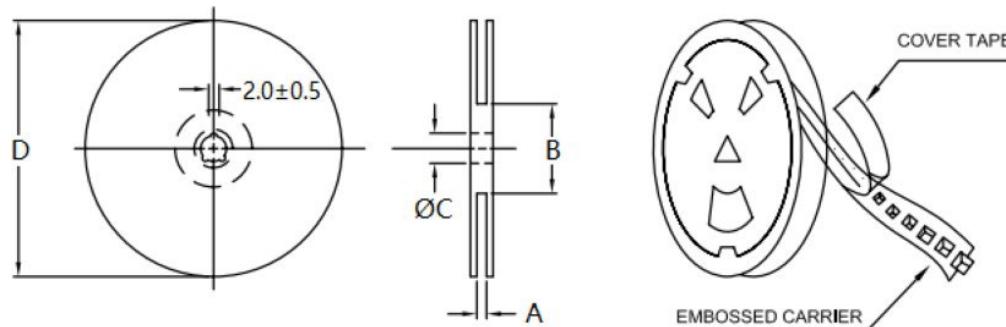
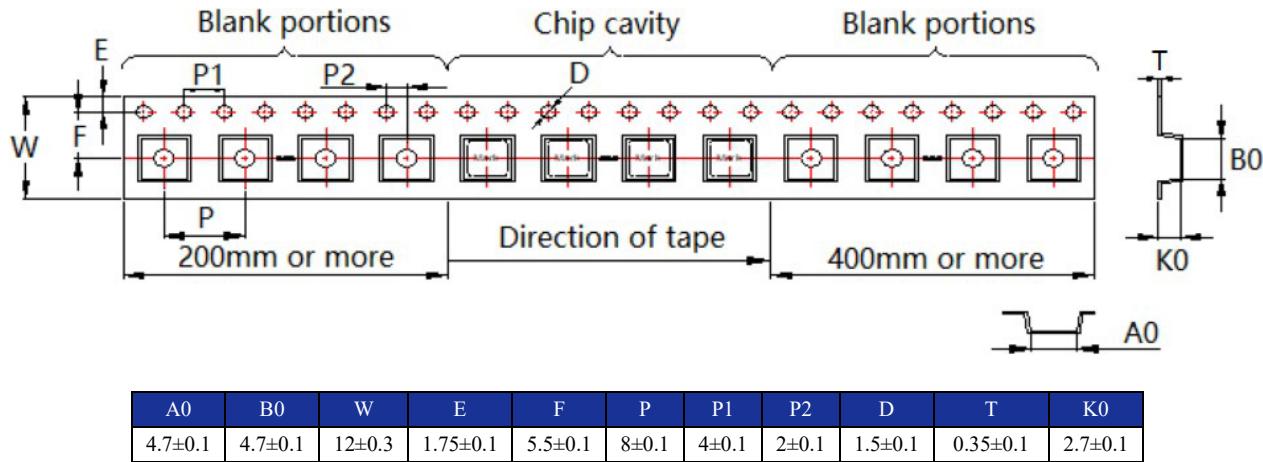
[Check Inventory](#)

4.2 x 4.2 x 2.3 mm
RoHS/RoHS II Compliant
MSL Level = 1



Packaging

Tape & Reel: 2500 pcs/reel



Type	A	B	C	D
13"x12mm	12.4+2.0/-0.0	100.0±2.0	13.0+0.5/-0.2	330.0

Dimensions: mm

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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For terms and conditions of sales, please visit:
www.abracon.com

REVISION A : 6/16/2025

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