

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
	0.1MHz/1.0V		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)

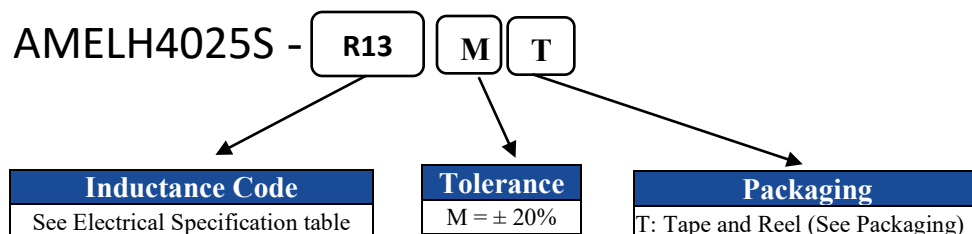
Rated DC Current: The lower value of Irms and Isat

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



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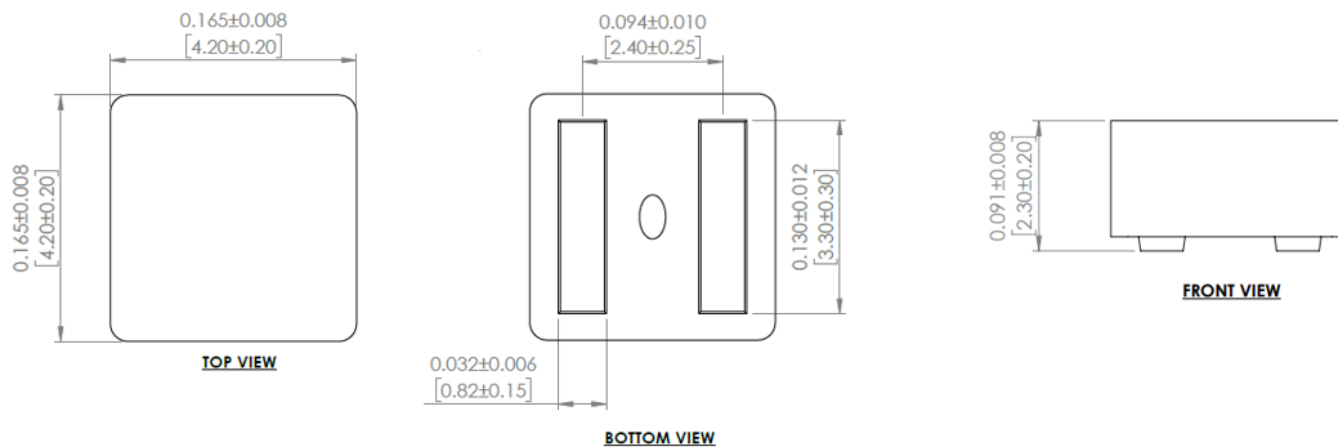


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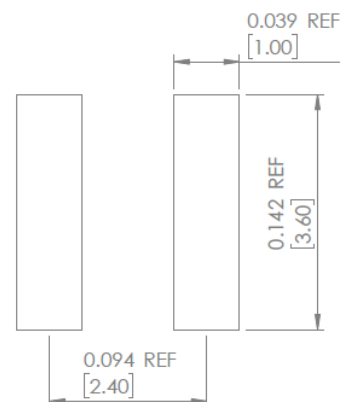


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Mechanical Specifications



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.



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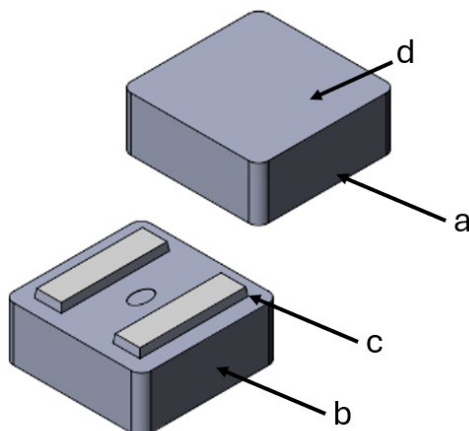


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Materials



a	Core
b	Wire
c	Solder
d	Coating

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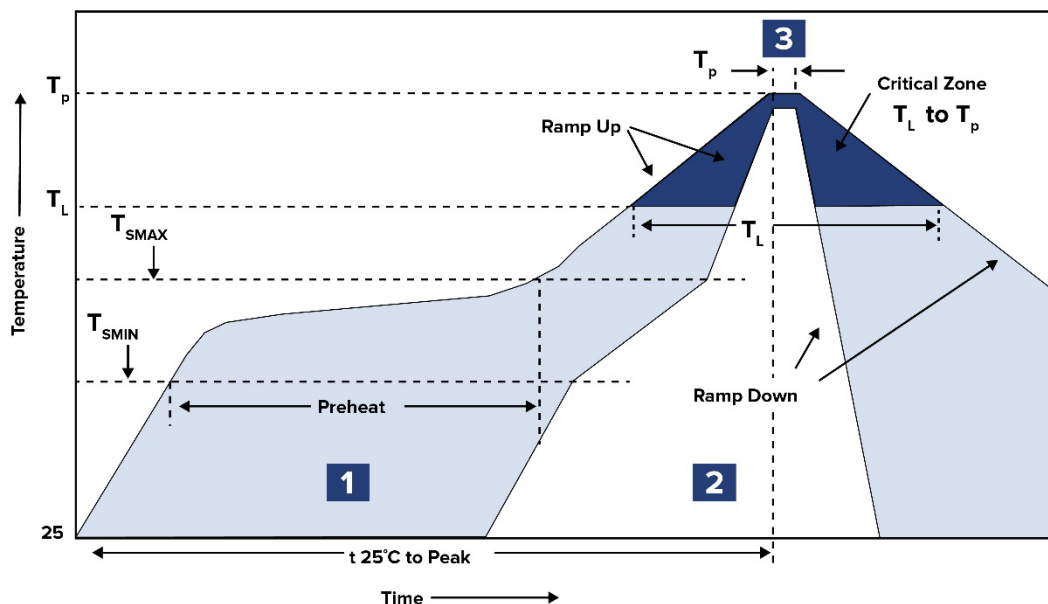


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Reflow Profile



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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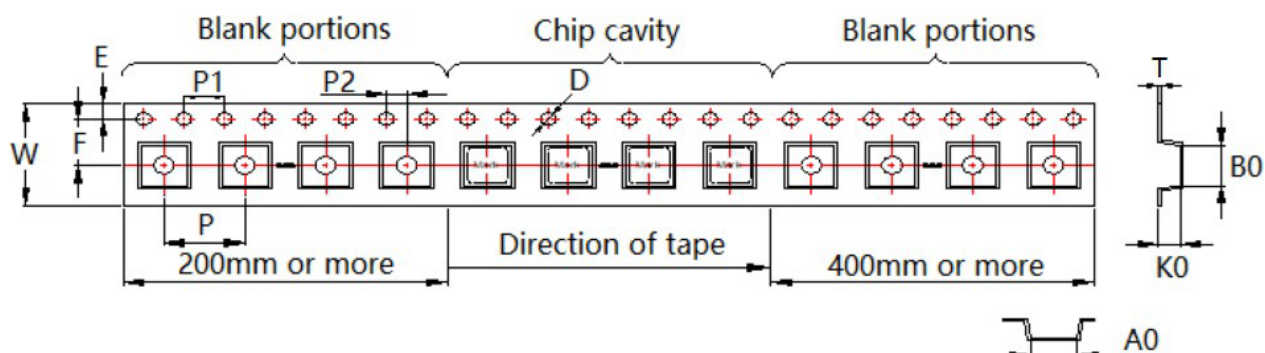
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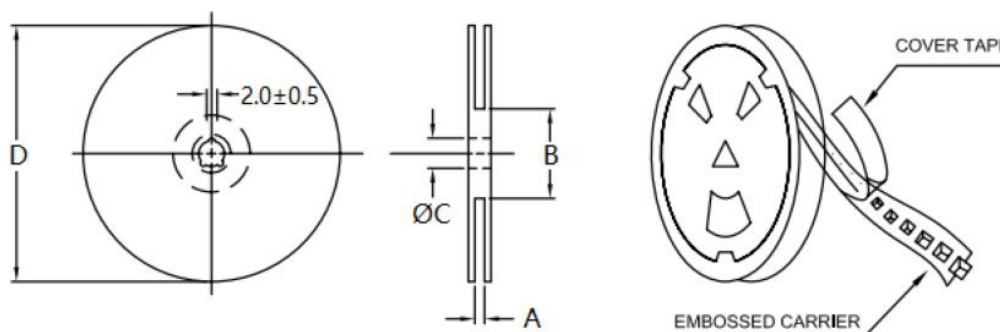
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Packaging

Tape & Reel: 2500 pcs/reel



A0	B0	W	E	F	P	P1	P2	D	T	K0
4.7±0.1	4.7±0.1	12±0.3	1.75±0.1	5.5±0.1	8±0.1	4±0.1	2±0.1	1.5±0.1	0.35±0.1	2.7±0.1



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

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