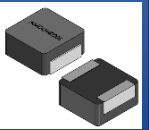


Molded Inductor (Carbonyl)



AMPLH4020S

Request Samples



Check Inventory



4.3 x 4.2 x 1.9 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	μH	%	$\text{m}\Omega$		A	A
Symbol	L	M	DCR		Isat	Irms
AMPLH4020S-R10M	0.10	± 20	2.3	1.9	35.0	19.0
AMPLH4020S-R15M	0.15	± 20	3.8	3.1	29.0	16.5
AMPLH4020S-R33M	0.33	± 20	5.8	5.0	15.0	15.0
AMPLH4020S-R47M	0.47	± 20	7.2	6.0	13.0	13.0
AMPLH4020S-R68M	0.68	± 20	9.9	8.2	11.0	11.0
AMPLH4020S-1R0M	1.00	± 20	13.8	11.5	10.0	10.0
AMPLH4020S-1R5M	1.50	± 20	18.5	15.4	9.0	9.0
AMPLH4020S-2R2M	2.20	± 20	30.0	25.0	7.2	7.2
AMPLH4020S-3R3M	3.30	± 20	49.2	41.0	6.9	5.5
AMPLH4020S-4R7M	4.70	± 20	69.0	60.0	5.8	4.7
AMPLH4020S-5R6M	5.60	± 20	78.2	68.0	4.3	4.1
AMPLH4020S-6R8M	6.80	± 20	92.5	80.5	3.9	3.8
AMPLH4020S-8R2M	8.20	± 20	121.0	105.0	3.5	3.3
AMPLH4020S-100M	10.00	± 20	145.0	126.0	3.3	3.1

Test Conditions

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

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

Operating Temperature: $-40^\circ\text{C} \sim +125^\circ\text{C}$ (including self-temperature rise)

Storage Condition: $-40^\circ\text{C} \sim +125^\circ\text{C}$ (on board), $-10^\circ\text{C} \sim +40^\circ\text{C}$ (with packaging) and R.H. 85% max.

Operating Voltage: 50V (across inductor)

AMPLH4020S Series is **RoHS Compliant and Pb free**.

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

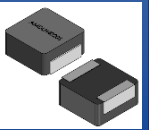


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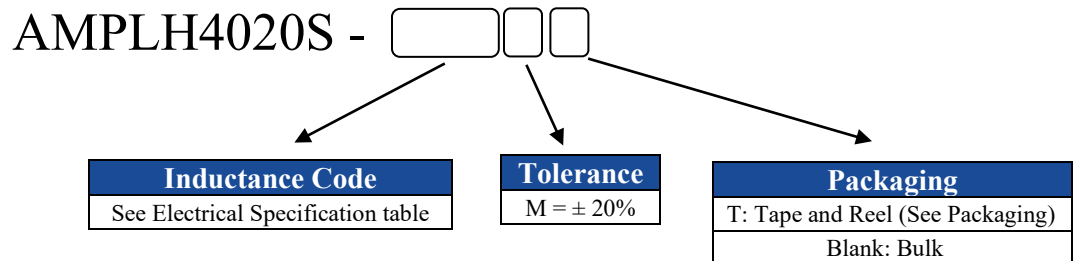


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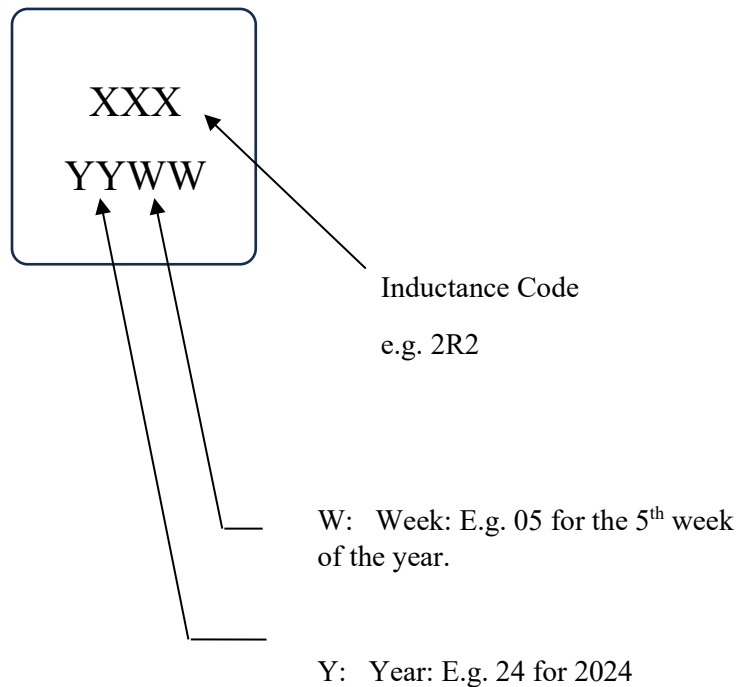


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Part Identification

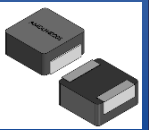


Marking



Marking Method = Ink Marking

Molded Inductor (Carbonyl)



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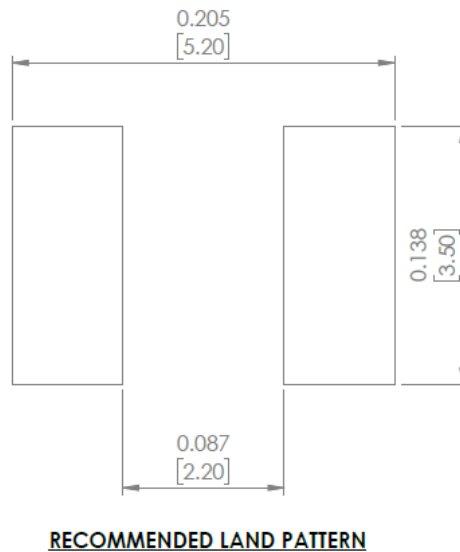
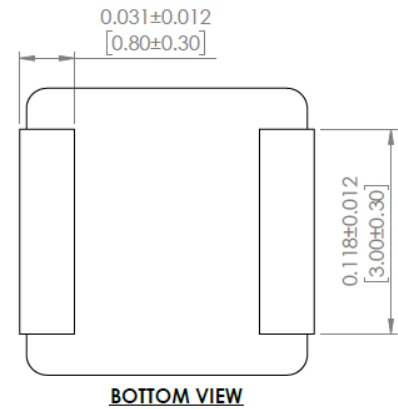
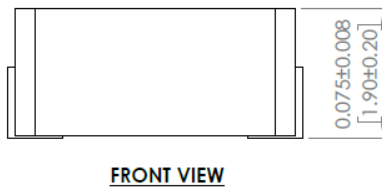
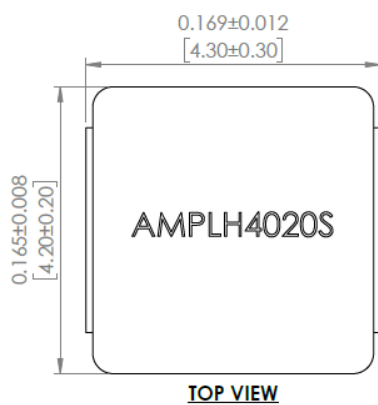


Check Inventory



4.3 x 4.2 x 1.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications



Dimensions: Inches [mm]

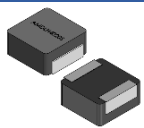


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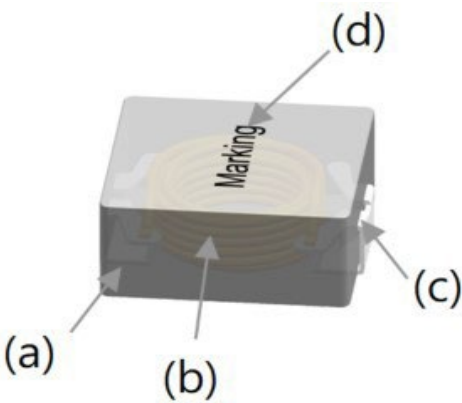


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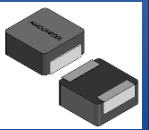
4.3 x 4.2 x 1.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Materials



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

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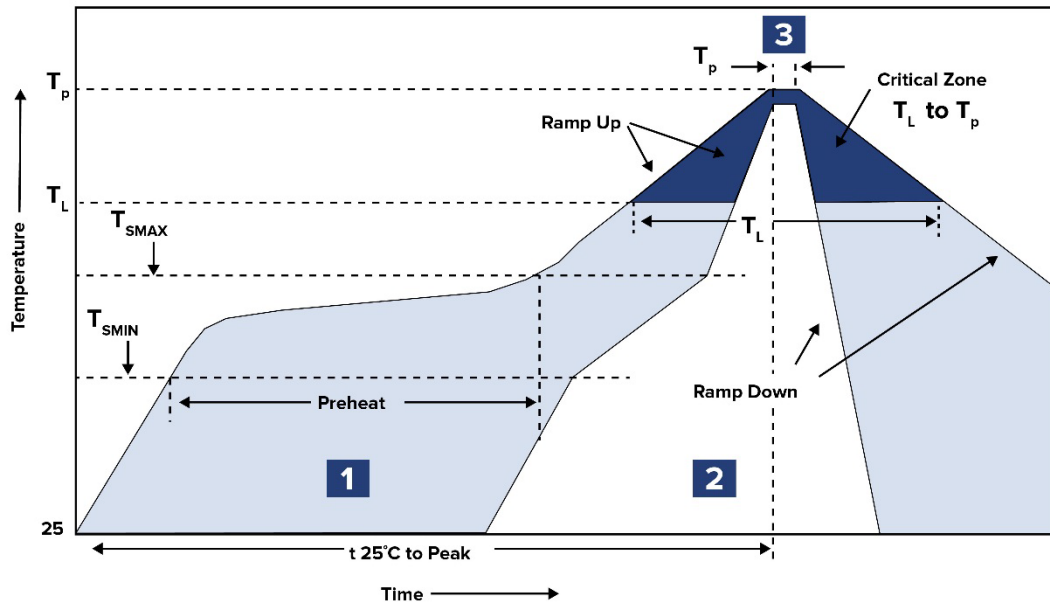


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RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



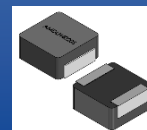
Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L $\geq 217^\circ\text{C}$	60 ~ 150 sec.
3	Peak heat	T_P 260°C	30 sec. MAX

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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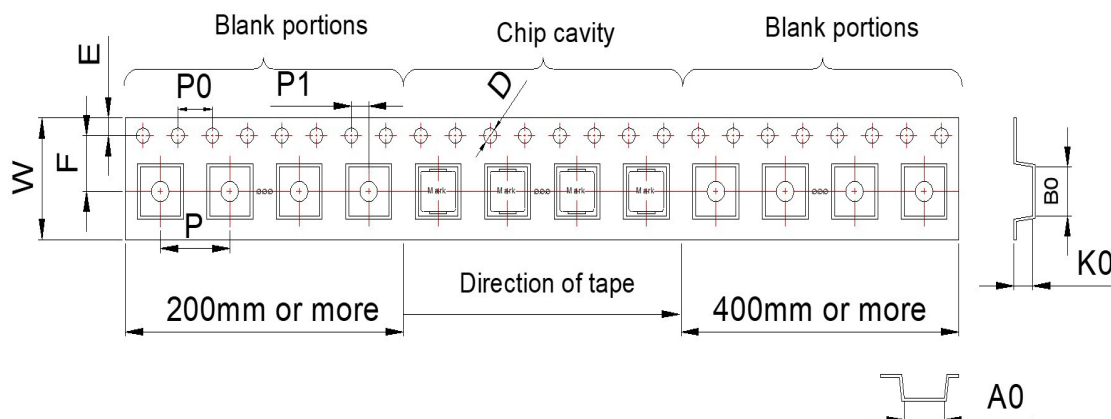
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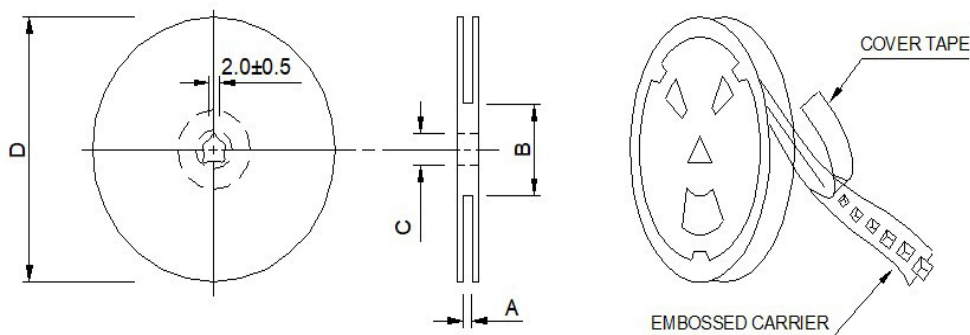
4.3 x 4.2 x 1.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel: 3000 pcs/reel



A0	B0	W	E	F	P	P0	P1	D	F	K0	E
4.6±0.1	4.9±0.1	12±0.3	1.75±0.1	5.5±0.1	8±0.1	4.0±0.1	2±0.1	1.5±0.1	5.5±0.1	2.3±0.1	1.75±0.1



Type	A	B	C	D
13" x 12mm	12.4+2.0/-0.0	100.0±2.0	13.0+0.5/-0.2	330.0±0.3

Dimensions: mm

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