

AMPLH5030S

Request Samples



Check Inventory (>)



5.7 x 5.3 x 2.8 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. | Тур. | Тур. |
| Units | μН | % | m | | A | \mathbf{A} |
| Symbol | L | M | DC | CR | Isat | Irms |
| AMPLH5030S-R24M | 0.24 | ±20 | 3.0 | 2.5 | 38.0 | 25.0 |
| AMPLH5030S-R33M | 0.33 | ±20 | 3.4 | 2.8 | 25.0 | 21.0 |
| AMPLH5030S-R36M | 0.36 | ±20 | 3.5 | 2.9 | 24.0 | 20.0 |
| AMPLH5030S-R47M | 0.47 | ±20 | 3.9 | 3.2 | 20.0 | 19.0 |
| AMPLH5030S-R68M | 0.68 | ±20 | 5.2 | 4.3 | 18.0 | 17.0 |
| AMPLH5030S-1R0M | 1.00 | ±20 | 6.7 | 5.6 | 16.0 | 15.0 |
| AMPLH5030S-1R2M | 1.20 | ±20 | 8.4 | 7.0 | 15.3 | 14.5 |
| AMPLH5030S-1R5M | 1.50 | ±20 | 10.0 | 8.3 | 15.0 | 14.0 |
| AMPLH5030S-2R2M | 2.20 | ±20 | 14.4 | 12.0 | 12.5 | 12.0 |
| AMPLH5030S-3R3M | 3.30 | ±20 | 21.0 | 17.5 | 10.5 | 10.0 |
| AMPLH5030S-4R7M | 4.70 | ±20 | 32.4 | 27.0 | 10.0 | 8.5 |
| AMPLH5030S-5R6M | 5.60 | ±20 | 44.4 | 37.0 | 8.0 | 7.2 |
| AMPLH5030S-6R8M | 6.80 | ±20 | 50.0 | 41.5 | 7.5 | 6.6 |
| AMPLH5030S-8R2M | 8.20 | ±20 | 62.4 | 52.0 | 7.3 | 5.8 |
| AMPLH5030S-100M | 10.00 | ±20 | 78.0 | 65.0 | 6.8 | 5.0 |
| AMPLH5030S-150M | 15.00 | ±20 | 118.0 | 98.0 | 3.7 | 3.5 |
| AMPLH5030S-220M | 22.00 | ±20 | 160.0 | 133.0 | 3.5 | 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)

AMPLH5030S Series is RoHS Compliant and Pb free.

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





AMPLH5030S

Request Samples (>)

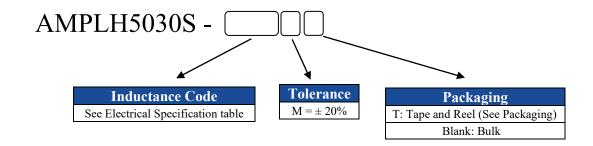


Check Inventory (>)

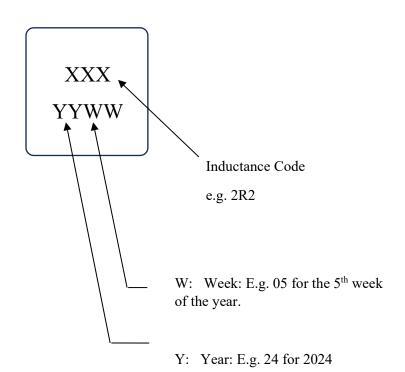


5.7 x 5.3 x 2.8 mm **RoHS/RoHS II Compliant** MSL Level = 1

Part Identification



Marking



Marking Method = Ink Marking



5101 Hidden Creek Ln, Spicewood TX 78669 Phone: 512-371-6159 Fax: 512-351-8858 For terms and conditions of sales, please visit: www.abracon.com

REVISION Initial Release: 2/27/2024

ABRACON IS ISO9001-2015 CERTIFIED



AMPLH5030S

Request Samples (>)

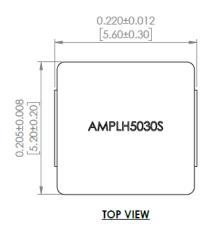


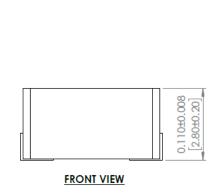
Check Inventory (>)

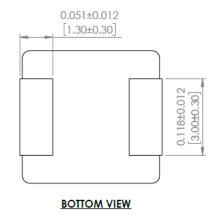


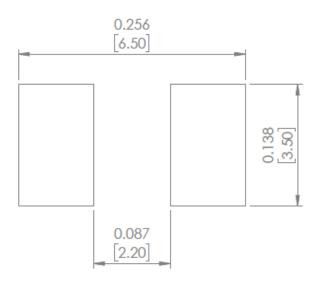
5.7 x 5.3 x 2.8 mm **RoHS/RoHS II Compliant** MSL Level = 1

Mechanical Specifications









RECOMMENDED LAND PATTERN

Dimensions: Inches [mm]



5101 Hidden Creek Ln, Spicewood TX 78669 Phone: 512-371-6159 Fax: 512-351-8858 For terms and conditions of sales, please visit: www.abracon.com

REVISION Initial Release: 2/27/2024

ABRACON IS ISO9001-2015 CERTIFIED



AMPLH5030S

Request Samples (>)

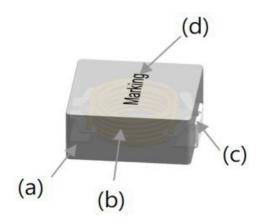


Check Inventory (>)



5.7 x 5.3 x 2.8 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 |





AMPLH5030S

Request Samples (>)

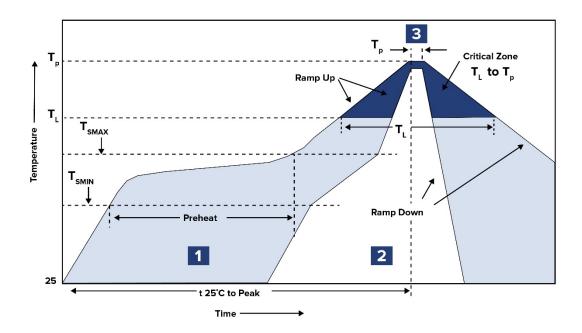


Check Inventory (>)



5.7 x 5.3 x 2.8 mm **RoHS/RoHS II Compliant** MSL Level = 1

Reflow Profile



| Zone | Description | Temperature | Times |
|------|-------------|--|----------------------------|
| 1 | Preheat | $T_{SMIN} \sim T_{SMAX} \\ 150^{\circ}C \sim 200^{\circ}C$ | $60 \sim 120 \text{ sec.}$ |
| 2 | Reflow | T _L ≥217°C | $60 \sim 150 \text{ sec.}$ |
| 3 | Peak heat | Т _Р 260°С | 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.





AMPLH5030S

Request Samples



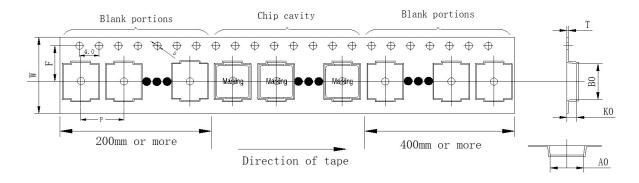
Check Inventory (>)



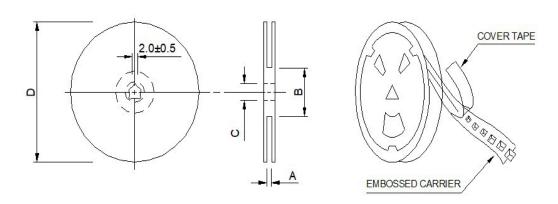
5.7 x 5.3 x 2.8 mm **RoHS/RoHS II Compliant** MSL Level = 1

Packaging

Tape & Reel: 2000 pcs/reel



| A0 | В0 | W | F | P | D | K0 | T |
|-----------|-----------|-----------|---------|---------------|---------|---------------|-----------------|
| 5.70±0.10 | 6.50±0.10 | 12.00±0.3 | 5.5±0.1 | 8.00 ± 0.10 | 1.5±0.1 | 3.30 ± 0.10 | 0.35 ± 0.05 |



| Type | A | В | 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

ATTENTION: Abracon LLC's products are COTS - Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ABRACON:

 AMPLH5030S-8R2M-T
 AMPLH5030S-6R8M-T
 AMPLH5030S-4R7M-T
 AMPLH5030S-R24M-T
 AMPLH5030S-R24M-T
 AMPLH5030S-100M-T

 T
 AMPLH5030S-150M-T
 AMPLH5030S-R33M-T
 AMPLH5030S-R36M-T
 AMPLH5030S-R68M-T
 AMPLH5030S-R68M-T
 AMPLH5030S-5R6M-T

 2R2M-T
 AMPLH5030S-220M-T
 AMPLH5030S-1R2M-T
 AMPLH5030S-1R5M-T
 AMPLH5030S-5R6M-T

 AMPLH5030S-R47M-T
 AMPLH5030S-3R3M-T
 AMPLH5030S-1R0M-T
 AMPLH5030S-1R5M-T
 AMPLH5030S-1R5M-T
 AMPLH5030S-1R0M-T
 AMPLH5030S-100M-T
 AMPLH5030S-100M-T
 AMPLH5030S-2R2MT

 AMPLH5030S-R47M-T
 AMPLH5030S-R33M-T
 AMPLH5030S-220M-T
 AMPLH5030S-1R2M-T
 AMPLH5030S-8R2MT

 AMPLH5030S-6R8M-T
 AMPLH5030S-3R3M-T
 AMPLH5030S-4R7M-T
 AMPLH5030S-150M-T
 AMPLH5030S-R24M-T