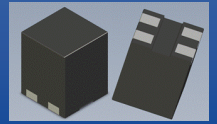


# Multi-Phase Molded Power Inductor



AVR-2M050506S

Request Samples



Check Inventory



4.8 x 4.8 x 5.8 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Features

- Metal Alloy
- Low DCR, High Efficiency
- High temperature-rise current rating
- High saturation current rating

## Applications

- Multiphase DC-DC converters
- Voltage regulator modules (VRMs)
- Renewable energy, Power inverters, DC links
- Telecom infrastructure, datacenters, servers and switches
- Industrial and robotics equipment
- Medium and high-power switch mode power supplies (SMPS)

## Electrical Specifications @ 25°C

| Part Number*      | Inductance  | Inductance Tolerance | DC Resistance | Saturation Current |      | Temperature Rise Current |      |
|-------------------|-------------|----------------------|---------------|--------------------|------|--------------------------|------|
|                   | 100KHz/1.0V |                      | Typ.          | Max.               | Typ. | Max.                     | Typ. |
| Units             | nH          | %                    | mΩ            | A                  |      | A                        |      |
| Symbol            | L           | L                    | DCR           | Isat               |      | I <sub>rms</sub>         |      |
| AVR-2M050506S68NL | 68.0        | ±15%                 | 0.25 ±10%     | 73.0               | 86.0 | 43.0                     | 47.0 |
| AVR-2M050506S85NL | 85.0        | ±15%                 | 0.27 ±10%     | 65.0               | 78.0 | 40.0                     | 44.0 |

\*For full orderable part number, please refer to the [Part Identification](#) section.

### Test Conditions:

**Test Frequency:** 1.0V/100KHz

**Isat:** DC current at which the inductance drops 30% from its nominal value at 25°C.

**I<sub>rms</sub>:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40 °C) from 20°C ambient.

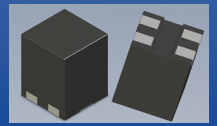
**Operating Voltage:** 25V

**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.

AVR-2M050506S Series is **RoHS Compliant and Pb free.**

# Multi-Phase Molded Power Inductor



**AVR-2M050506S**

Request Samples

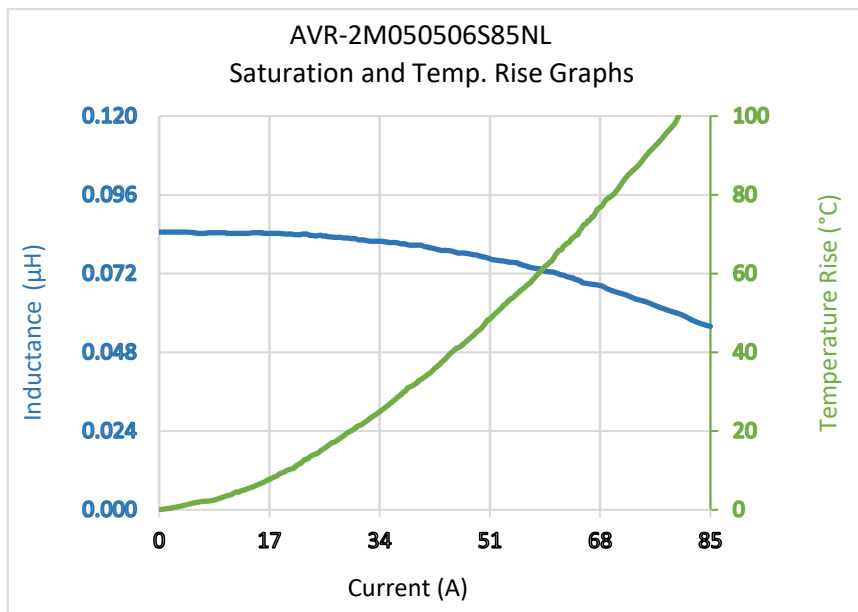
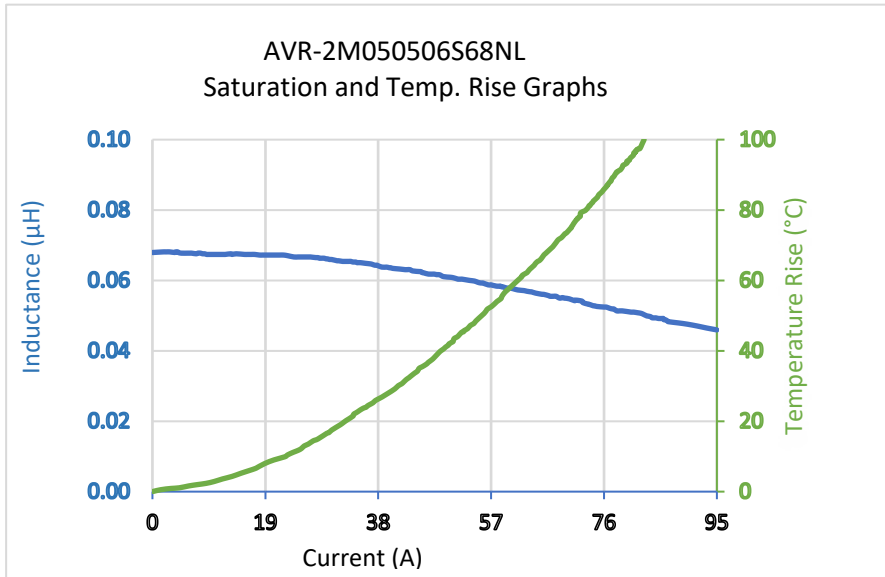


Check Inventory

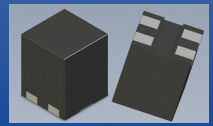


4.8 x 4.8 x 5.8 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Performance Graphs:



# Multi-Phase Molded Power Inductor



AVR-2M050506S

Request Samples

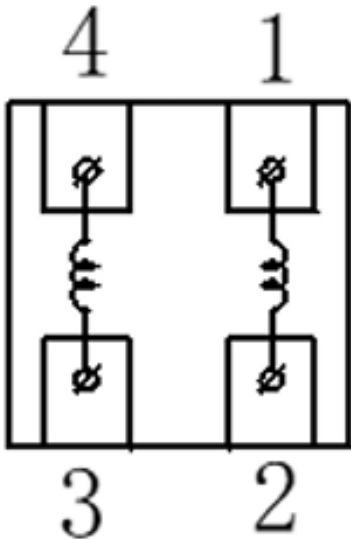


Check Inventory



4.8 x 4.8 x 5.8 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Schematic:



## Part Identification

AVR-2M050506S



### Inductance Code

See Electrical Specification table  
e.g. 68N for 68nH

### Tolerance

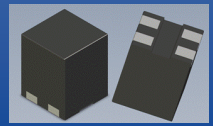
L = ± 15%

### Packaging options

T: Tape and Reel (See Packaging)  
B: Bulk

\*Tolerance only available as  
indicated in electrical spec. table

# Multi-Phase Molded Power Inductor



AVR-2M050506S

Request Samples

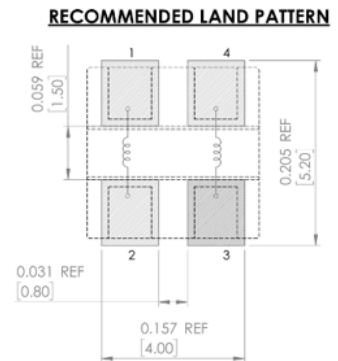
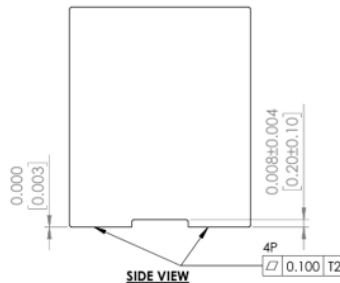
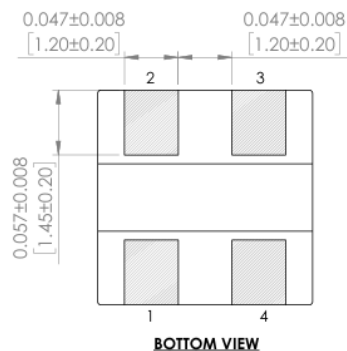
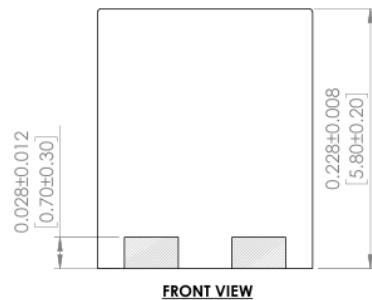
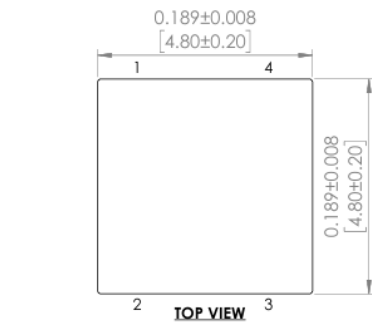


Check Inventory



4.8 x 4.8 x 5.8 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Mechanical Specifications

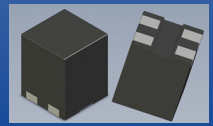


### NOTES:

1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.15 mm and above.
3. Electrode position does not represent polarity.

Dimensions: Inches [mm]

# Multi-Phase Molded Power Inductor



**AVR-2M050506S**

Request Samples



Check Inventory



**4.8 x 4.8 x 5.8 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Reflow Profile

Reflow standard: [JEDEC J-STD-020E]

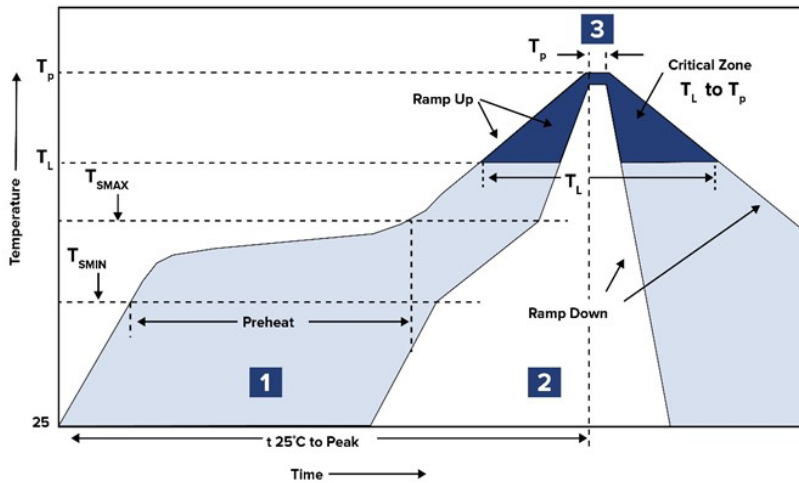


Table (1.2)

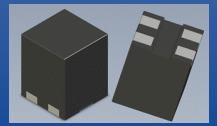
| Pb-Free Process Classification Temperatures (T <sub>c</sub> ) |                             |                                 |                              |
|---|-----------------------------|---------------------------------|------------------------------|
| Package Thickness   | Volume mm <sup>3</sup> <350 | Volume mm <sup>3</sup> 350-2000 | Volume mm <sup>3</sup> >2000 |
| <1.6 mm   | 260 °C                      | 260 °C                          | 260 °C                       |
| 1.6 mm - 2.5 mm   | 260 °C                      | 250 °C                          | 245 °C                       |
| >2.5 mm   | 250 °C                      | 245 °C                          | 245 °C                       |

| Profile Feature   | Pb-Free Assembly       |
|---|------------------------|
| Preheat / soak  |                        |
| Temperature minimum (T <sub>sm</sub> in)  | 150°C                  |
| Temperature maximum (T <sub>sm</sub> ax)  | 200°C                  |
| Time (T <sub>sm</sub> in to T <sub>sm</sub> ax) (t <sub>s</sub> )                                 | 60 - 120 sec.          |
| Average ramp-up rate (T <sub>sm</sub> ax to T <sub>p</sub> )                                      | 3°C/sec. max           |
| Liquidous temperature (T <sub>L</sub> )   | 217°C                  |
| Time at liquidous (t <sub>L</sub> )   | 60 - 150 sec.          |
| Peak package body temperature (T <sub>p</sub> )*  | <b>See Table (1.2)</b> |
| Time (t <sub>p</sub> )** within 5°C of the specified classification temperature (T <sub>c</sub> ) | 30 sec.                |
| Ramp-down rate (T <sub>p</sub> to T <sub>sm</sub> ax)   | 6°C/sec. max           |
| Time 25°C to peak temperature   | 8 min. max             |
| Reflow cycles   | 2 max                  |

\*Tolerance for peak profile temperature (T<sub>p</sub>) is defined as a supplier minimum and a user maximum.

\*\*Tolerance for time at peak profile temperature (t<sub>p</sub>) is defined as supplier minimum and a user maximum.

# Multi-Phase Molded Power Inductor



**AVR-2M050506S**

Request Samples



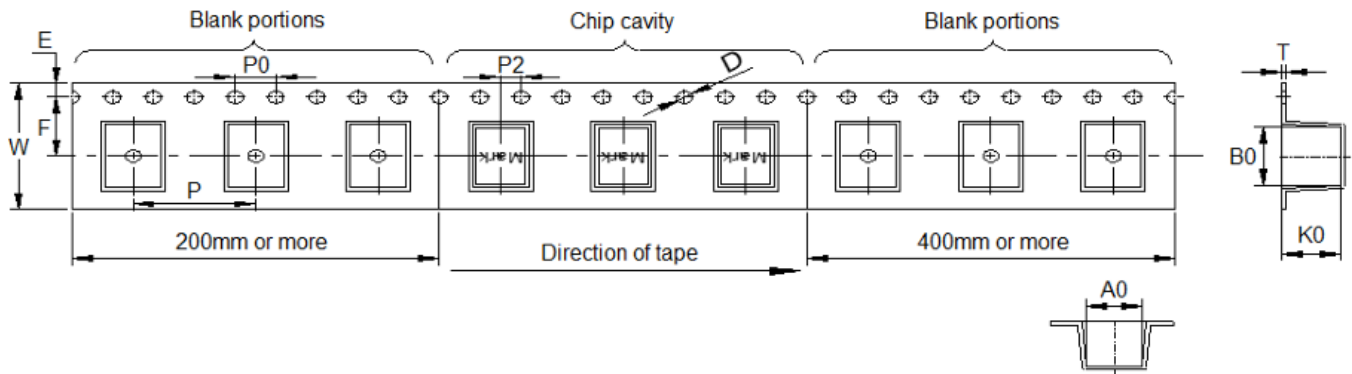
Check Inventory



**4.8 x 4.8 x 5.8 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

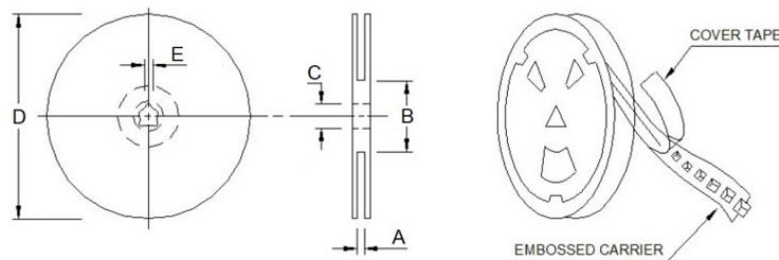
## Packaging

**Tape & Reel: 1000 pcs/reel**



**Tape Specifications (mm)**

| A0      | B0      | D         | E        | F       | K0      | P       |
|---------|---------|-----------|----------|---------|---------|---------|
| 5.3 Ref | 5.3 Ref | 1.5±0.1   | 1.75±0.1 | 5.5±0.1 | 6.3 Ref | 8.0±0.1 |
| P0      | P2      | T         | W        |         |         |         |
| 4.0±0.1 | 2.0±0.1 | 0.35±0.05 | 12±0.1   |         |         |         |



**Reel Specifications (mm)**

| Type     | A        | B       | C        | D   | E       |
|----------|----------|---------|----------|-----|---------|
| 13"x12mm | 12.4 Ref | 100 Ref | 13.0 Ref | 330 | 2.0 Ref |

**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.



12117 Bee Caves Rd, Bldg-3 Ste 200, Bee Cave, TX 78738  
 Phone: 512-371-6159 Fax: 512-351-8858  
 For terms and conditions of sales, please visit:  
[www.abracon.com](http://www.abracon.com)

**REVISION A : 4/10/2026**

ABRACON IS  
 ISO9001-2015  
 CERTIFIED