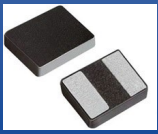




**THE DATASHEET OF  
ASPIAIG-F5030-2R2M-T**



# MINI MOLDED POWER INDUCTOR



AOTA-B252010S

Request Samples



Check Inventory



2.5 x 2.0 x 1.0 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Features

- Shielded construction for minimized EMI emissions
- Low DCR for better efficiency
- High current handling capability
- Compact size that is suitable for high-density designs
- Fit for high-frequency switching applications due to high SRF

## Applications

- Consumer electronics and portable devices
- Power electronics such as DC-DC converters, inverters and voltage regulators
- Industrial applications, robotics, signal conditioning, instrumentation and control systems
- IoT devices, smart home, automation systems and wireless sensing

## Electrical Specifications

| Part Number        | Inductance    | Tolerance | Self-Resonant Frequency | DC Resistance    |     | Saturation Current |     | Temperature Rise Current |     |
|--------------------|---------------|-----------|-------------------------|------------------|-----|--------------------|-----|--------------------------|-----|
|                    | 1MHz/1.0V     |           | Min.                    | Typ              | Max | Typ                | Max | Typ                      | Max |
| Units              | $\mu\text{H}$ | %         | MHz                     | $\text{m}\Omega$ |     | A                  |     | A                        |     |
| Symbol             | L             | M         | SRF                     | DCR              |     | Isat               |     | Irms                     |     |
| AOTA-B252010SR33MT | 0.33          | 20        | 95                      | 13               | 16  | 8.5                | 7.5 | 5.5                      | 5.0 |
| AOTA-B252010SR47MT | 0.47          | 20        | 81                      | 16               | 20  | 7.0                | 6.5 | 6.1                      | 5.7 |
| AOTA-B252010SR68MT | 0.68          | 20        | 63                      | 24               | 29  | 6.6                | 5.8 | 5.2                      | 4.5 |
| AOTA-B252010S1R0MT | 1.0           | 20        | 53                      | 27               | 30  | 5.4                | 5.0 | 4.7                      | 4.5 |
| AOTA-B252010S1R5MT | 1.5           | 20        | 35                      | 37               | 42  | 4.0                | 3.7 | 4.1                      | 3.6 |
| AOTA-B252010S2R2MT | 2.2           | 20        | 27                      | 57               | 65  | 3.5                | 3.2 | 2.6                      | 2.3 |
| AOTA-B252010S3R3MT | 3.3           | 20        | 22                      | 95               | 110 | 2.9                | 2.6 | 2.2                      | 1.9 |
| AOTA-B252010S4R7MT | 4.7           | 20        | 19                      | 124              | 136 | 2.2                | 1.9 | 1.7                      | 1.6 |
| AOTA-B252010S100MT | 10.0          | 20        | 14                      | 360              | 420 | 1.7                | 1.5 | 1.4                      | 1.2 |

## Test Conditions

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

**Irms:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40 °C) from 25°C ambient.

**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. 60 max.

**Working Voltage:** 20V

AOTA-B252010S Series is **RoHS Compliant and Pb free.**

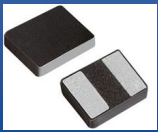


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# MINI MOLDED POWER INDUCTOR



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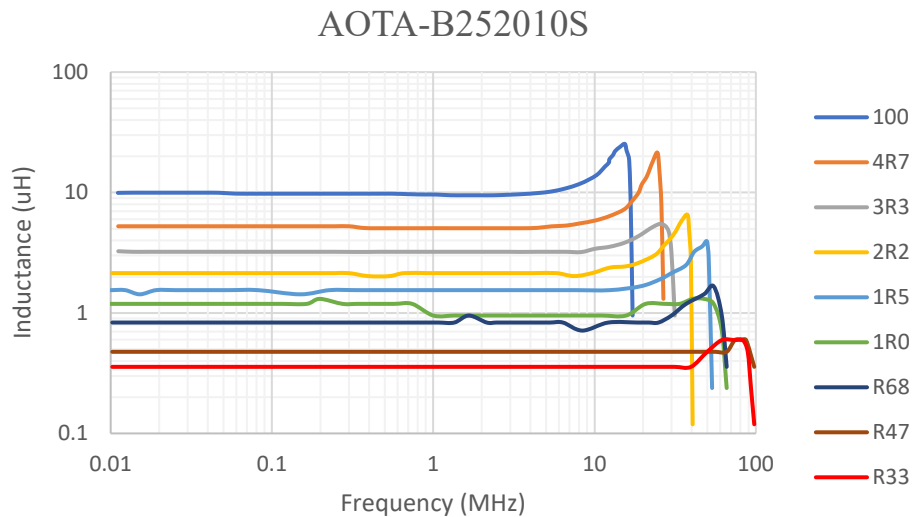


Check Inventory

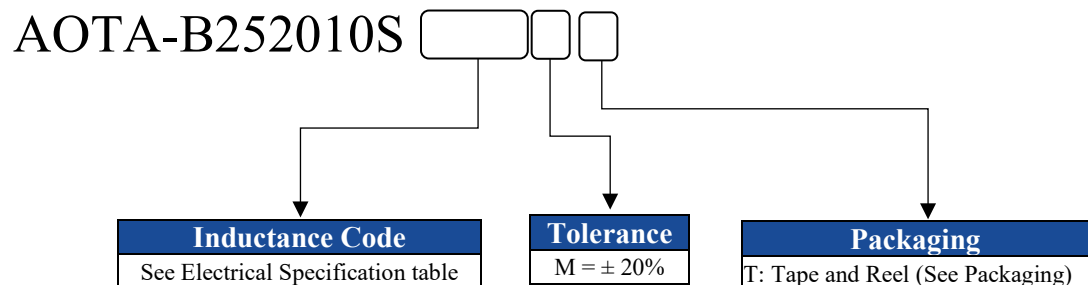


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RoHS/RoHS II Compliant  
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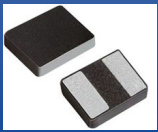
## Performance Graphs



## Part Identification



# MINI MOLDED POWER INDUCTOR



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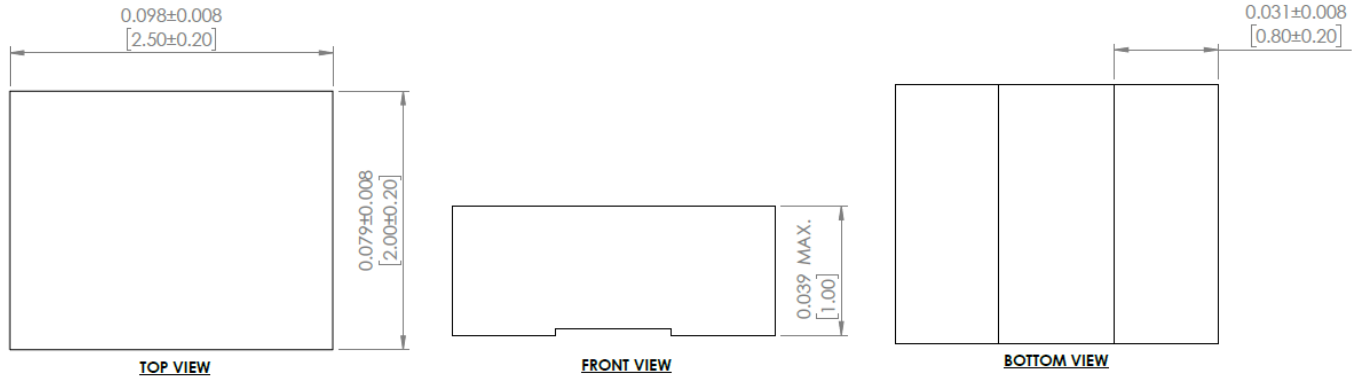


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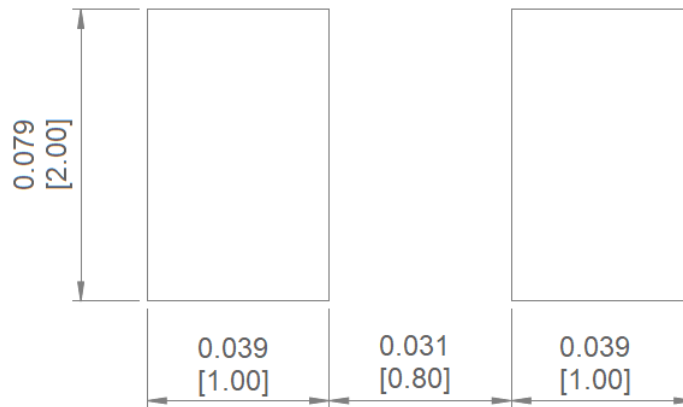


**2.5 x 2.0 x 1.0 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Mechanical Specifications



## Recommended Land Pattern (Typ.)



Dimensions: Inch[mm]

## Marking

No Marking

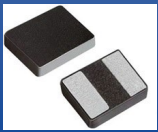


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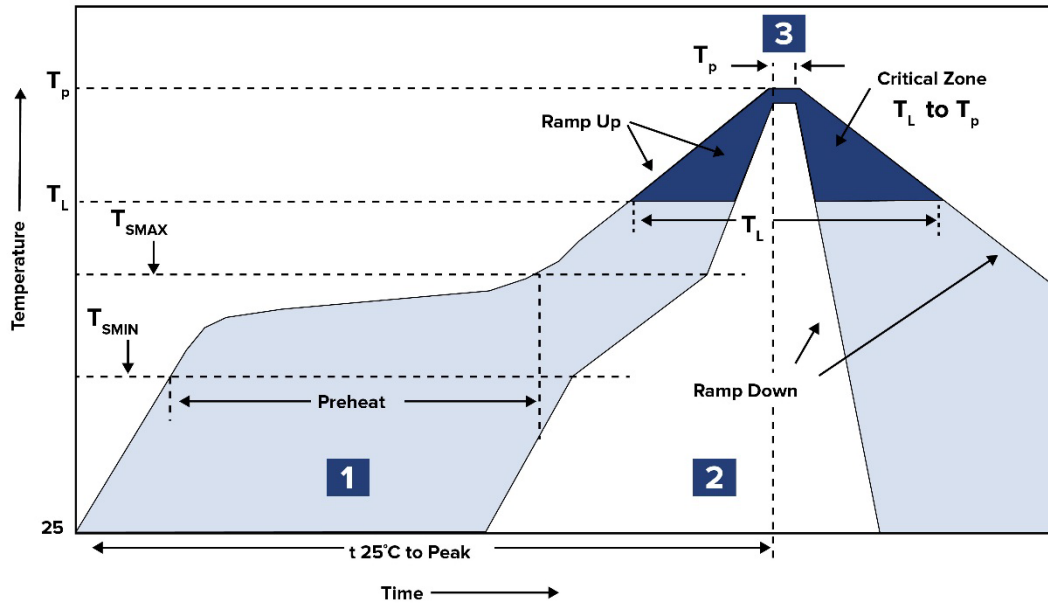


Check Inventory



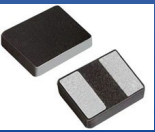
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RoHS/RoHS II Compliant  
MSL Level = 1

## Reflow Profile



| Zone | Description | Temperature                               | Times         |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 200°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>217°C                            | 60 ~ 90 sec.  |
| 3    | Peak heat   | $T_P$<br>260°C Max                        | 10 sec. MAX   |

# MINI MOLDED POWER INDUCTOR



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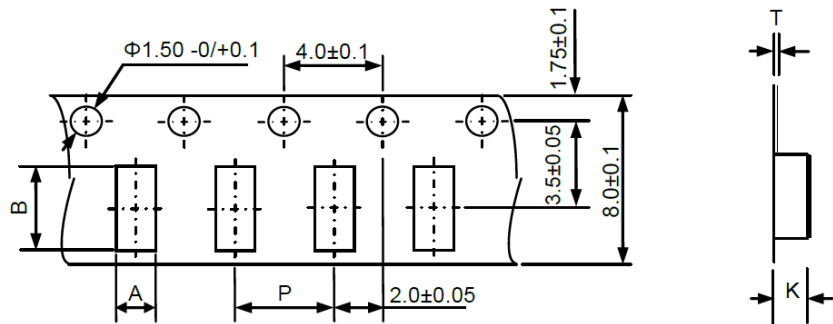
Check Inventory



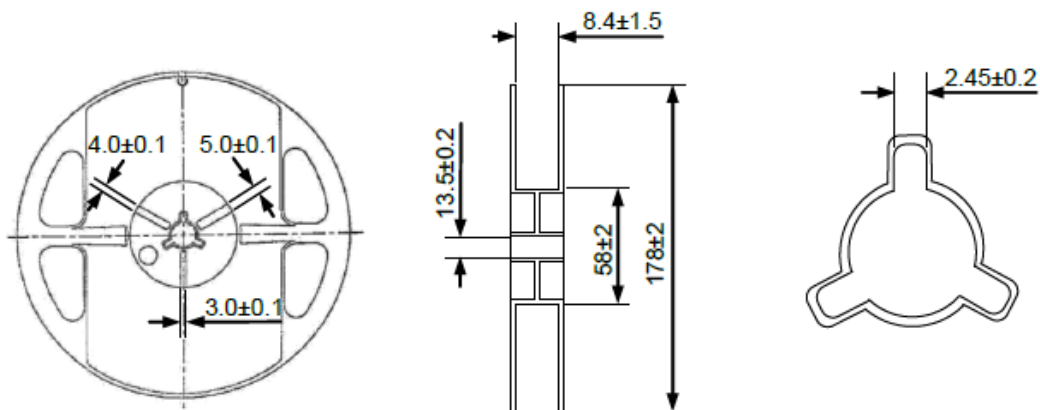
2.5 x 2.0 x 1.0 mm  
**RoHS/RoHS II Compliant**  
 MSL Level = 1

## Packaging

**Tape & Reel: 3000 pcs/reel**



| A        | B        | P       | K        | T       |
|----------|----------|---------|----------|---------|
| 2.30±0.1 | 2.80±0.1 | 4.0±0.1 | 1.30 Max | 0.3 Max |



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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- ✓ Alternative Solution
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