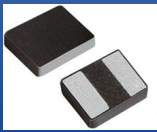


# MINI MOLDED POWER INDUCTOR



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
- Combat 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 converters, inverters, and voltage regulators
- Industrial applications, robotics, signal conditioning, instrumentation, and control systems
- IoT devices, smart home, automation systems, 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 value without current.

**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

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



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# MINI MOLDED POWER INDUCTOR



**AOTA-B252010S**

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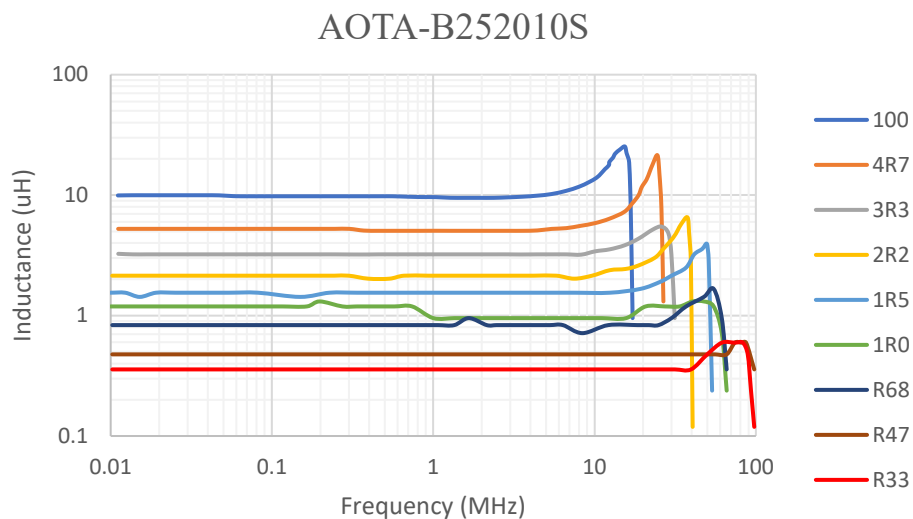


Check Inventory

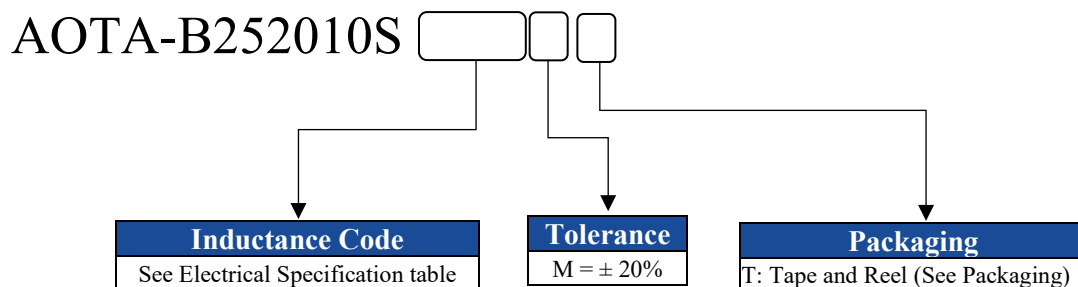


2.5 x 2.0 x 1.0 mm  
**RoHS/RoHS II Compliant**  
MSL Level = 1

## Performance Graphs



## Part Identification



# MINI MOLDED POWER INDUCTOR



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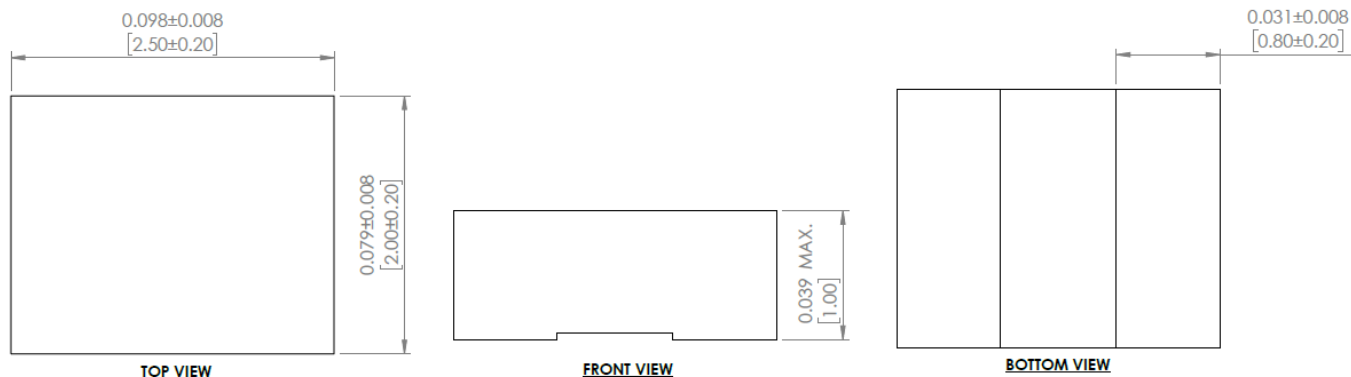


Check Inventory

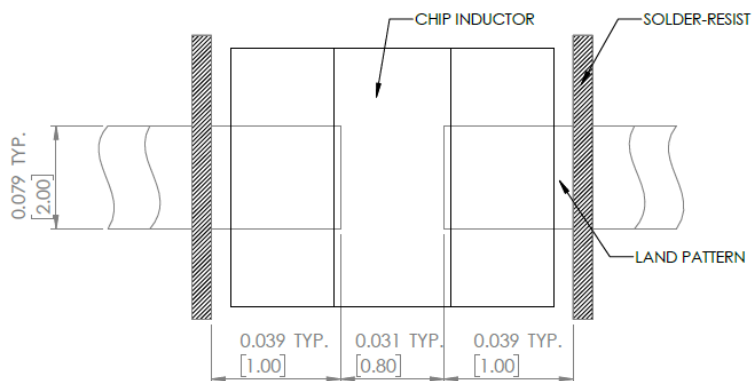


**2.5 x 2.0 x 1.0 mm**  
**RoHS/RoHS II Compliant**  
MSL Level = 1

## Mechanical Specifications



## Recommended Land Pattern



Dimensions: Inch[mm]

## Marking

No Marking



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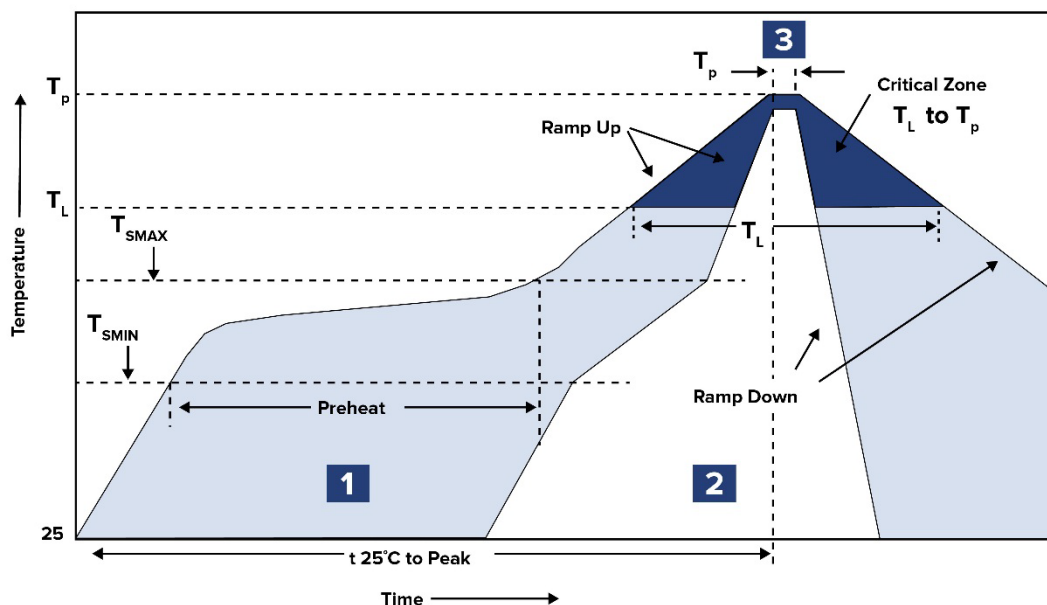


Check Inventory



2.5 x 2.0 x 1.0 mm  
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



**AOTA-B252010S**

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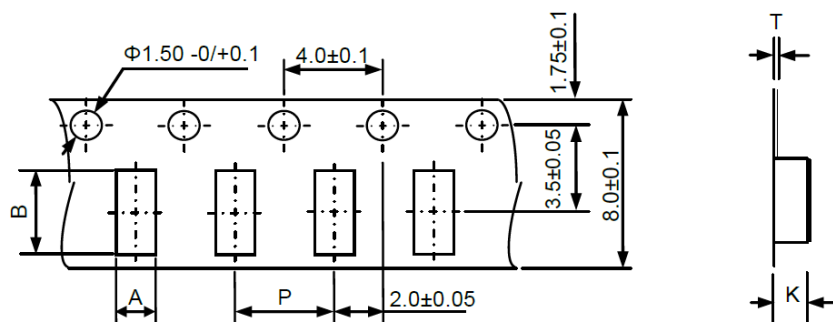
Check Inventory



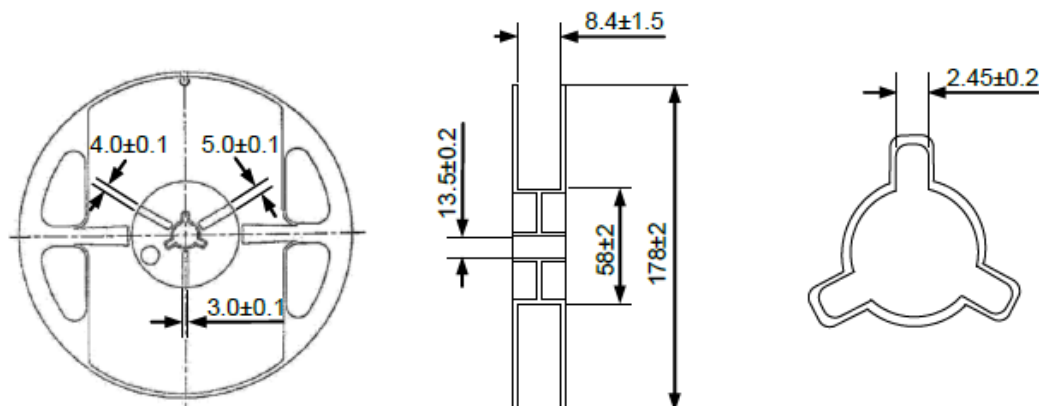
2.5 x 2.0 x 1.0 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Packaging

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



| A              | B              | P             | K        | T       |
|----------------|----------------|---------------|----------|---------|
| $2.30 \pm 0.1$ | $2.80 \pm 0.1$ | $4.0 \pm 0.1$ | 1.30 Max | 0.3 Max |



Dimensions: mm

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