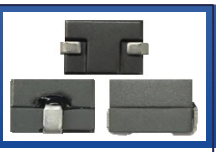
# Molded SMD Power Inductor



## AMSLA-7050

Request Samples | Check Inventory

**7.0 x 7.0 x 5.0 mm**
**RoHS/RoHS II Compliant**
**MSL Level = 2**

## Features

- Shielded construction
- Soft saturation
- High Power Density
- Low DCR, High Efficiency
- Designed for switching frequencies between 100KHz-2MHz

## Applications

- Desktop/ Server applications
- High current point-of-load (POL) converters
- Lighting
- Solar inverters and power
- Industrial and robotics
- Medium and high-power switch mode power supplies.

## Electrical Specifications

| Part Number | Inductance | Tolerance | DC Resistance | Saturation Current | Temperature Rise Current |
|---|---|---|---|---|---|
| | 0.1MHz/1V | | Max | Max | Max |
| Units | nH | % | mΩ | A | A |
| Symbol | L | M | DCR | Isat | Irms |
| AMSLA-7050-72N | 72 | 20 | 0.35 | 58 | 45 |
| AMSLA-7050-105N | 105 | 20 | 0.35 | 46 | 45 |
| AMSLA-7050-150N | 150 | 20 | 0.35 | 30 | 45 |

**Test Conditions**

**Isat**: DC current at which the inductance drops 20% from its value without current.
**Irms:** DC current that causes the temperature rise (ΔT, approximate 40 ˚C) from 20°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
**Operating Voltage:** 40V (across inductor)
**AMSLA-7050 Series is RoHS Compliant and Pb free**
**AMSLA-7050 is commercial grade.**

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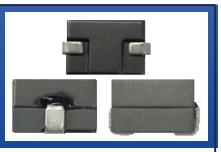

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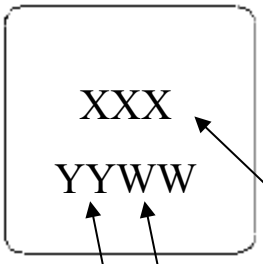
## Part Number Identification

AMSLA – 7050 - □□□

| Inductance Code | Tolerance | Packaging |
|---|---|---|
| See Electrical Specification table | M = ± 20% | T: Tape and Reel (1000 pcs / reel) |

## Marking




Inductance Code

e.g. N150

W: Week: E.g. 05 for the 5th week of the year.

Y: Year: E.g. 21 for 2021

**Marking Method = Ink Marking**

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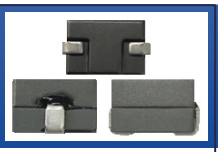

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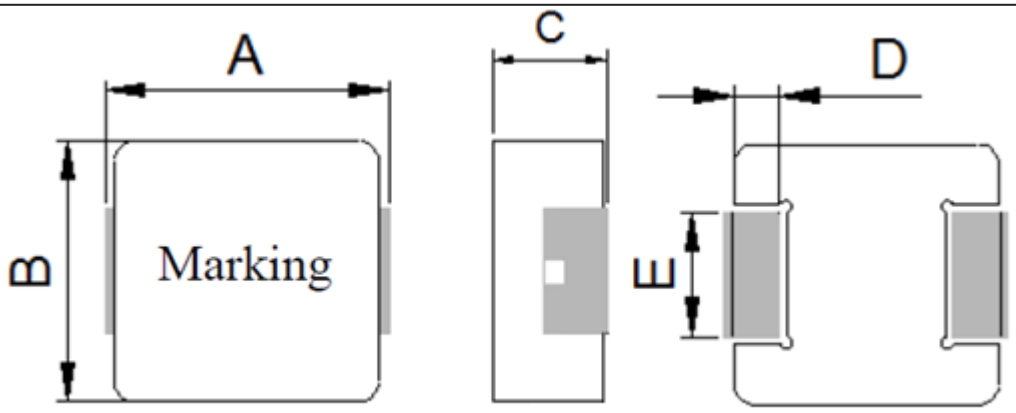
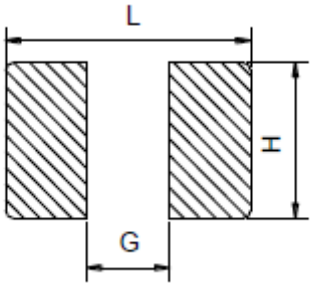
## Mechanical Dimensions




| Series | A | B | C | D | E |
|---|---|---|---|---|---|
| **AMSLA-7050** | 7.0 MAX | 7.0 MAX | 5.0 MAX | 1.3 ± 0.2 | 2.5 ± 0.3 |




| L | G | H |
|---|---|---|
| 7.3 Ref. | 3.3 Ref. | 3.0 Ref. |

**Dimensions: mm**

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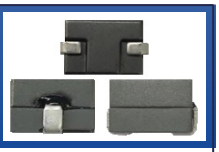

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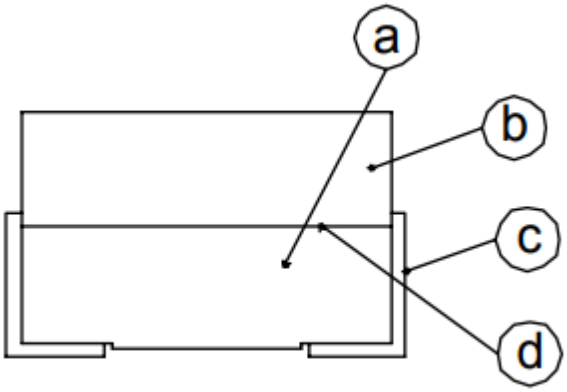
## Materials




| | Components | Material |
|---|---|---|
| a | Core | Manganese-Zinc Ferrite |
| b | Core | Manganese-Zinc Ferrite |
| c | Electrode | Nickel-Tin |
| d | Adhesive (Top) | KAA11700xx (Black) |
| e | Adhesive (Bottom) | 6030H (Black) |

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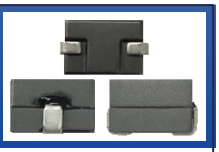

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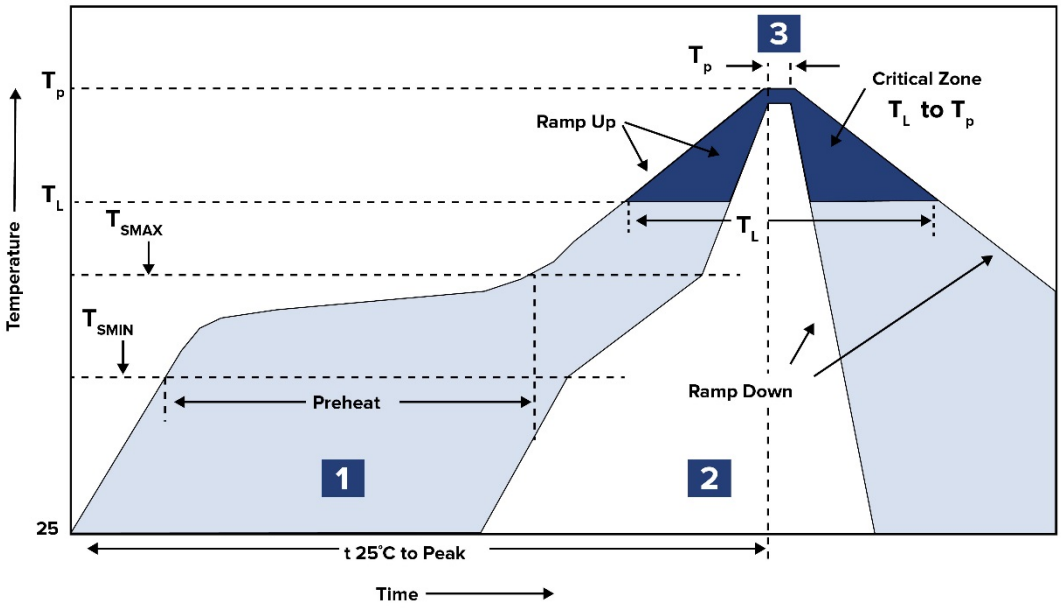
## Reflow Profile




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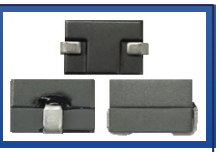

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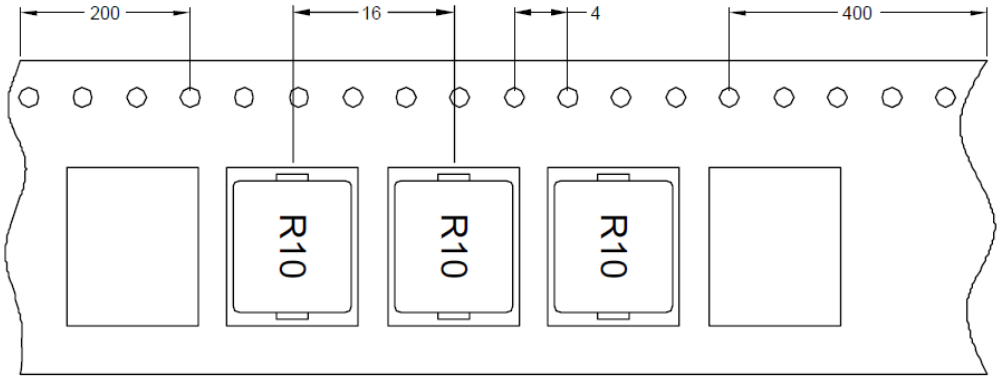
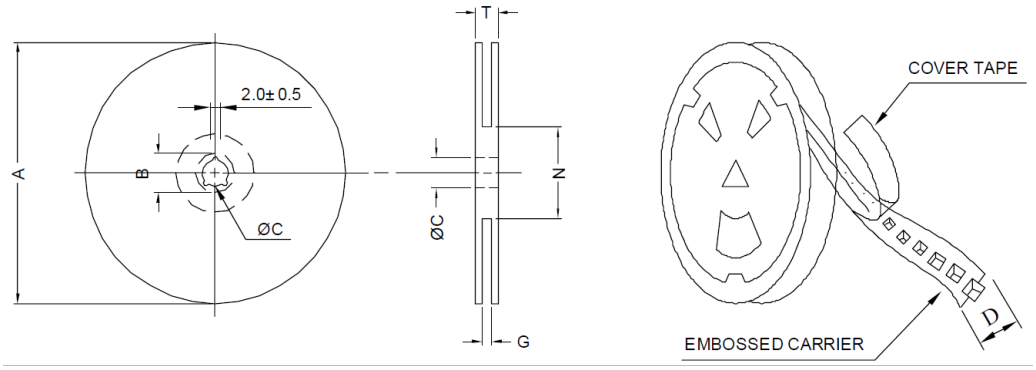
## Packaging

### Tape & Reel: 1000 pcs/reel




| A | B | C | D | G | N | T |
|---|---|---|---|---|---|---|
| 330 | 21 ±0.8 | 13.0±0.5 | 16.0 | 18.0 Max | 50.0 Min | 22.4 |

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