

# Molded SMD Power Inductor



ASPI-F1030

Request Samples



Check Inventory



11.9 x 11.0 x 2.9 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

- Body electronics and comfort system
- Infotainment and entertainment
- Electric vehicles
- 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/0.1V |           | Max           | Max                | Typ.                     |
| Units           | $\mu$ H     | %         | m $\Omega$    | A                  | A                        |
| Symbol          | L           | M         | DCR           | Isat               | Irms                     |
| ASPI-F1030- R28 | 0.28        | $\pm$ 20  | 1.60          | 58.0               | 35.0                     |
| ASPI-F1030- R56 | 0.56        | $\pm$ 20  | 2.75          | 39.0               | 32.0                     |
| ASPI-F1030- R82 | 0.82        | $\pm$ 20  | 4.10          | 32.0               | 25.0                     |
| ASPI-F1030- R90 | 0.90        | $\pm$ 20  | 4.20          | 31.0               | 24.0                     |
| ASPI-F1030- 1R0 | 1.0         | $\pm$ 20  | 4.95          | 30.0               | 23.0                     |
| ASPI-F1030- 1R5 | 1.5         | $\pm$ 20  | 6.60          | 25.0               | 18.0                     |

## 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 20°C ambient

**Operating Temperature:** -40°C ~ +125°C (including self-temperature rise)

**Storage Condition:** -10°C ~ +40°C (in original packaging) and R.H. 60 max

**Operating Voltage:** 40V (across inductor)

ASPI-F1030 Series is **RoHS Compliant and Pb free**

MSL level: 1



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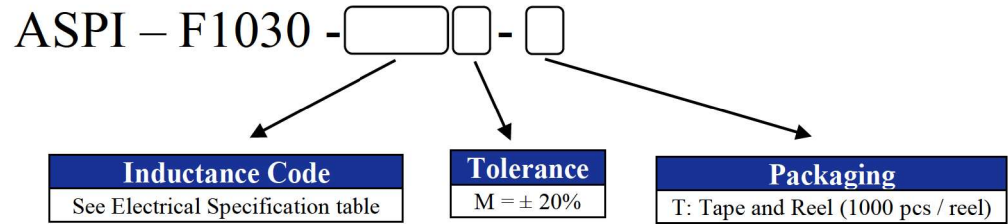


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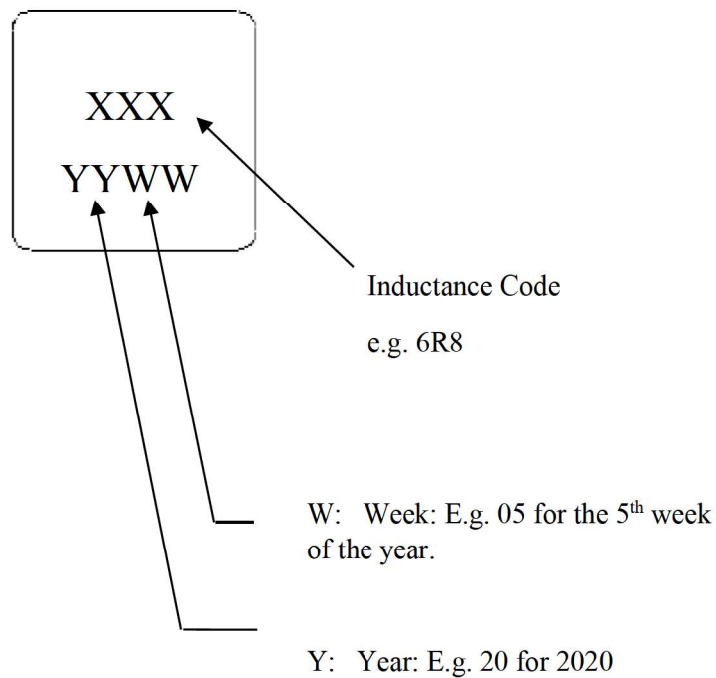


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## Part Number Identification



## Marking



Marking Method = Ink Marking

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**ASPI-F1030**

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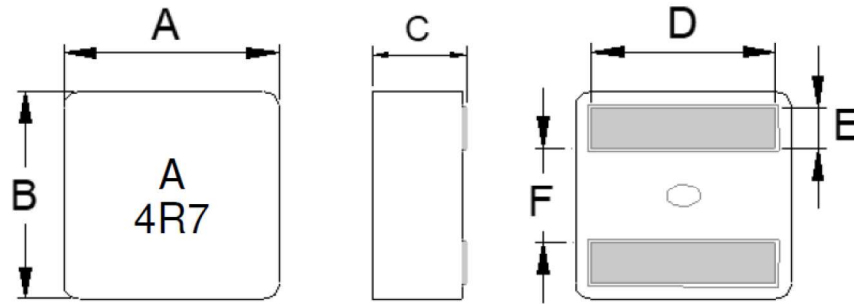


Check Inventory

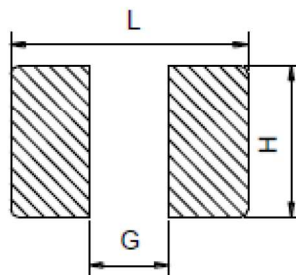


11.9 x 11.0 x 2.9 mm  
**RoHS/RoHS II Compliant**  
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## Mechanical Dimensions



| Series     | A          | B          | C         | D         | E         | F         |
|------------|------------|------------|-----------|-----------|-----------|-----------|
| ASPI-F1030 | 11.9 ± 0.3 | 11.0 ± 0.3 | 2.9 ± 0.2 | 9.0 ± 0.5 | 2.4 ± 0.2 | 4.4 ± 0.3 |



| L         | G        | H         |
|-----------|----------|-----------|
| 10.5 Ref. | 3.7 Ref. | 11.0 Ref. |

**Dimensions: mm**

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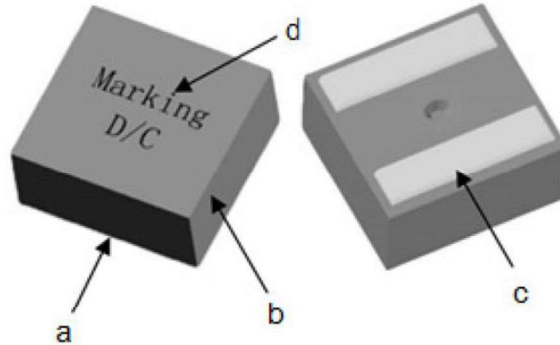


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11.9 x 11.0 x 2.9 mm  
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MSL Level = 1

## Materials



|   | Components | Material             |
|---|------------|----------------------|
| a | Core       | Alloy powder         |
| b | Wire       | 220 deg. C Flat Wire |
| c | Solder     | 100% Pb free solder  |
| d | Ink        | Halogen-free ketone  |

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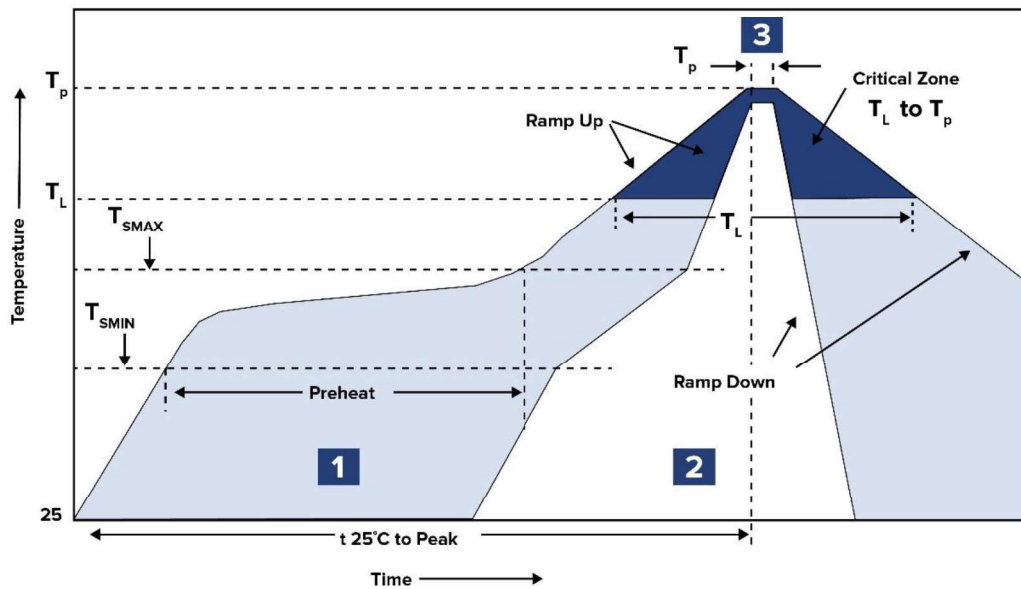


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## Reflow Profile



| Zone | Description | Temperature                               | Times         |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 200°C | 60 ~ 180 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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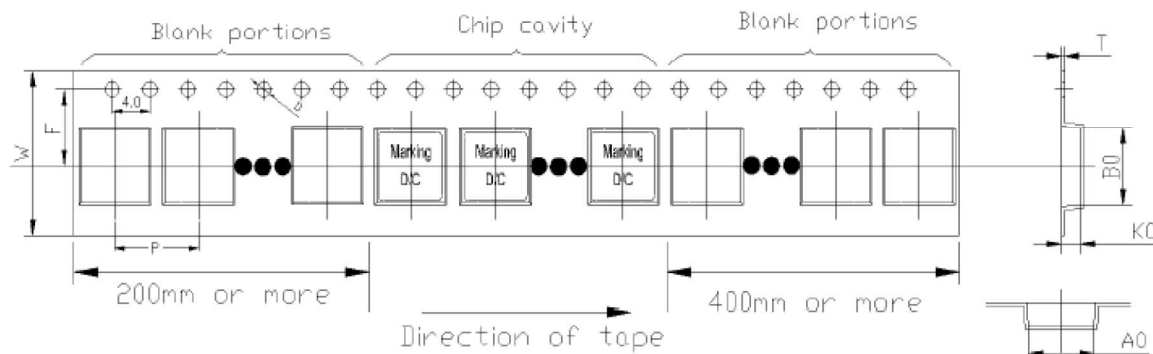
Check Inventory



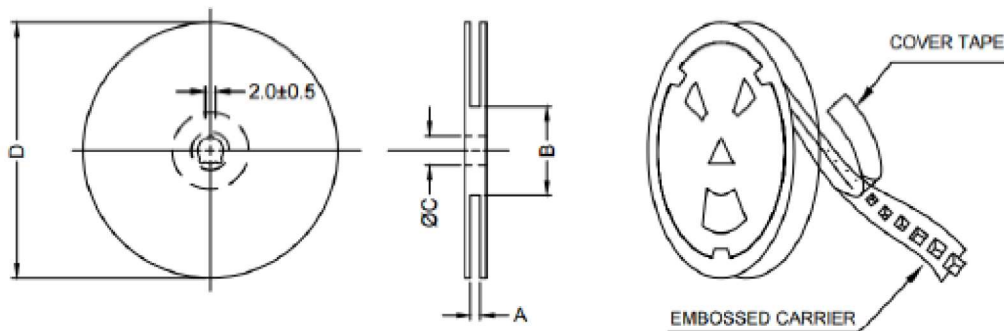
**11.9 x 11.0 x 2.9 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Packaging

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



| W          | F          | P          | D         | A <sub>0</sub> | B <sub>0</sub> | T          | K <sub>0</sub> |
|------------|------------|------------|-----------|----------------|----------------|------------|----------------|
| 24.0 ± 0.3 | 11.5 ± 0.1 | 16.0 ± 0.1 | 1.5 ± 0.1 | 12.4 ± 0.1     | 11.5 ± 0.1     | 0.35 ± 0.1 | 3.3 ± 0.1      |



| A              | B       | C                  | D   |
|----------------|---------|--------------------|-----|
| 24.4 + 2 / - 0 | 100 ± 2 | 13.0 + 0.5 / - 0.2 | 330 |

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