

# Molded SMD Power Inductor



ASPIAIG-Q7030

Request Samples



Check Inventory



7.8 x 7.6 x 2.9 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)
- Shielded construction
- Soft saturation
- Low DCR, High Efficiency

## 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 | D    |
|-------------------|-------------|-----------|---------------|--------------------|--------------------------|------|
|                   | 0.1MHz/0.1V |           | Typ/Max       | Max                | Max                      |      |
| Units             | μH          | %         | mΩ            | A                  | A                        | mm   |
| Symbol            | L           | M         | DCR           | Isat               | Irms                     | ±0.3 |
| ASPIAIG-Q7030-R60 | 0.60        | M         | 2.90 / 3.20   | 32.0               | 23.0                     | 6.6  |
| ASPIAIG-Q7030-1R0 | 1.00        | M         | 4.55 / 5.00   | 28.0               | 21.8                     | 6.6  |
| ASPIAIG-Q7030-1R5 | 1.50        | M         | 7.50 / 8.25   | 23.5               | 15.3                     | 6.6  |
| ASPIAIG-Q7030-2R2 | 2.20        | M         | 12.4 / 13.7   | 17.0               | 13.0                     | 6.2  |
| ASPIAIG-Q7030-2R7 | 2.70        | M         | 14.0 / 15.4   | 13.5               | 11.4                     | 6.2  |
| ASPIAIG-Q7030-3R3 | 3.30        | M         | 16.3 / 18.0   | 13.0               | 10.0                     | 6.2  |
| ASPIAIG-Q7030-4R7 | 4.70        | M         | 24.2 / 26.7   | 12.2               | 9.00                     | 6.2  |
| ASPIAIG-Q7030-5R6 | 5.60        | M         | 30.1 / 33.2   | 11.5               | 7.30                     | 6.2  |
| ASPIAIG-Q7030-6R8 | 6.80        | M         | 38.6 / 42.5   | 11.0               | 6.80                     | 6.2  |
| ASPIAIG-Q7030-8R2 | 8.20        | M         | 44.3 / 48.7   | 9.0                | 5.90                     | 6.2  |

## Test Conditions

**Isat:** DC current at which the inductance drops 20% from its value.

**Irms:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40 °C) from 20°C ambient

**Operating Temperature:** -55°C ~ +155°C (including self-temperature rise)

**Storage Condition:** -55°C ~ +155°C and R.H. 60 max

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

ASPIAIG-Q7030 Series is **RoHS Compliant and Pb free**

ASPIAIG-Q7030 is AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)

MSL level: 1



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**ASPIAIG-Q7030**

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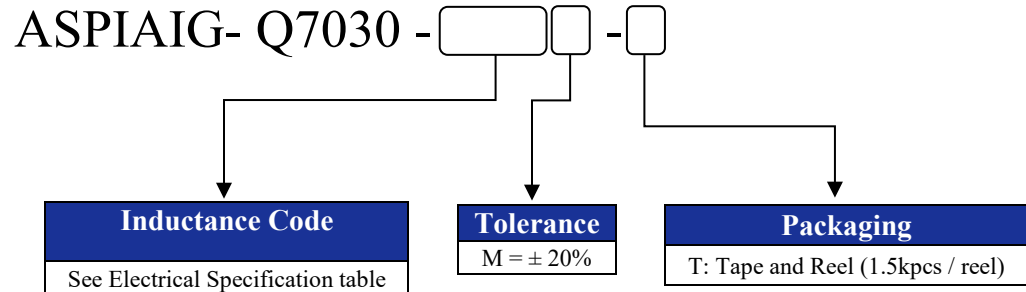


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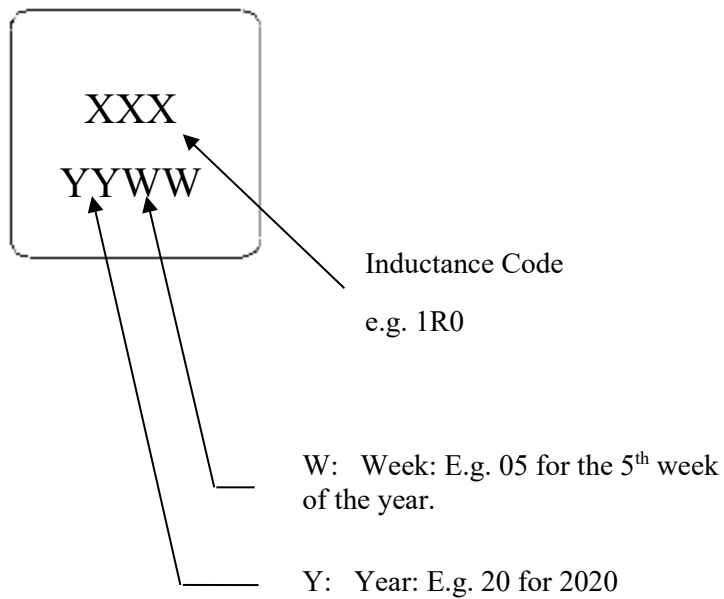


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## Part Identification



## Marking



**Marking Method: Ink**

# Molded SMD Power Inductor



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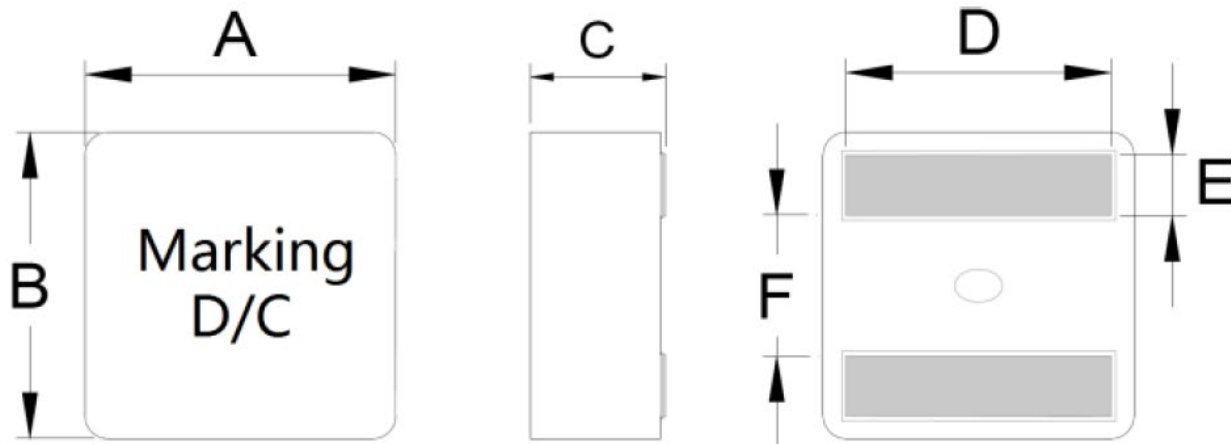


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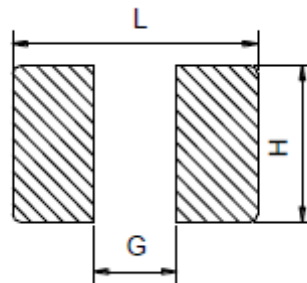
7.8 x 7.6 x 2.9 mm  
**RoHS/RoHS II Compliant**  
 MSL Level = 1

## Mechanical Dimensions



| Series        | A         | B         | C         | D                          | E          | F           |
|---------------|-----------|-----------|-----------|----------------------------|------------|-------------|
| ASPIAIG-Q7030 | 7.8 ± 0.2 | 7.6 ± 0.2 | 2.9 ± 0.2 | See column D in Spec Table | 1.75 ± 0.2 | 3.15 ± 0.25 |

## Recommended Land Pattern



| L        | G        | H        |
|----------|----------|----------|
| 7.4 Ref. | 2.8 Ref. | 7.2 Ref. |

Dimension: mm

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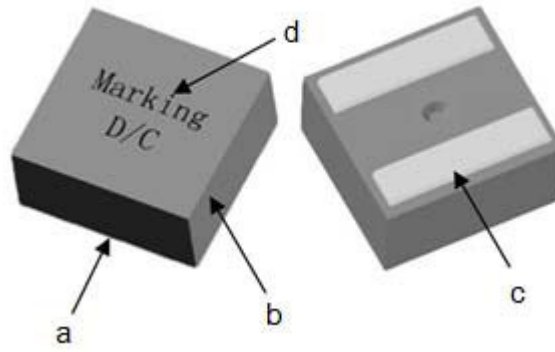


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7.8 x 7.6 x 2.9 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## 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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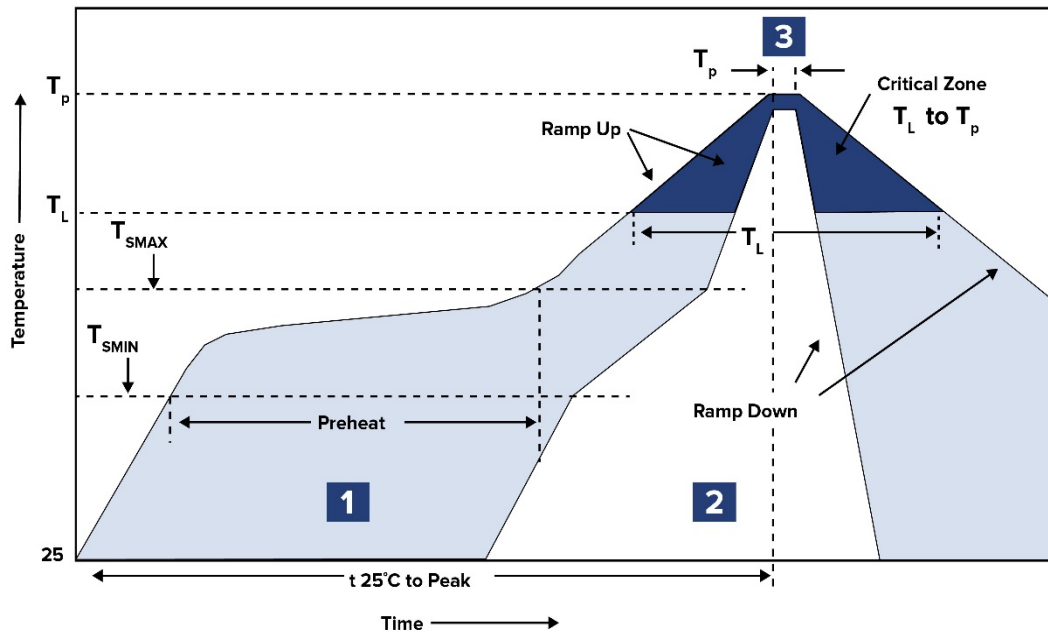


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## Reflow Profile



| 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±5°C                        | 10 sec. MAX   |

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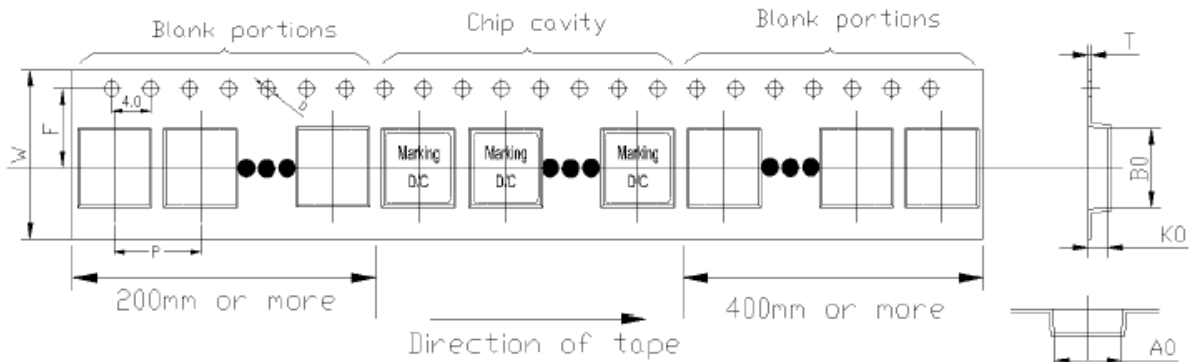
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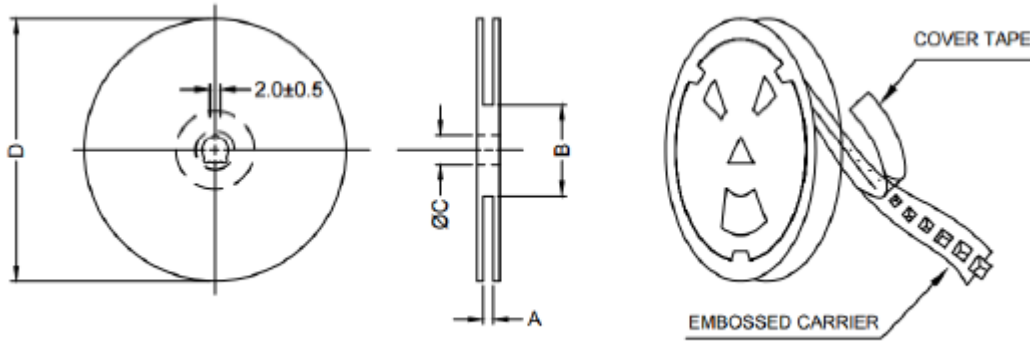
**7.8 x 7.6 x 2.9 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Packaging

**Tape & Reel: 1500 pcs/reel)**



| W        | F       | P        | D       | A <sub>0</sub> | B <sub>0</sub> | T         | K <sub>0</sub> |
|----------|---------|----------|---------|----------------|----------------|-----------|----------------|
| 16.0±0.3 | 7.5±0.1 | 12.0±0.1 | 1.5±0.1 | 8.2±0.1        | 8.0 ±0.1       | 0.35±0.05 | 3.3±0.1        |



| A         | B       | C             | D   |
|-----------|---------|---------------|-----|
| 16.4+2/-0 | 100 ± 2 | 13.0+0.5/-0.2 | 330 |

**Dimension: mm**

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