

# Molded SMD Power Inductor



**ASPIAIG-QLR5050**

Request Samples



Check Inventory



**6.0 x 5.7 x 4.8 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 | Temperature  |
|---------------------|-------------|-----------|---------------|------------|--------------|
|                     | 0.1MHz/0.1V |           | Typ/Max       | Current    | Rise Current |
| Units               | μH          | %         | mΩ            | A          | A            |
| Symbol              | L           | M         | DCR           | Isat       | Irms         |
| ASPIAIG-QLR5050-5R6 | 5.6         | M         | 22.0 / 24.2   | 7.2        | 7.2          |
| ASPIAIG-QLR5050-6R8 | 6.8         | M         | 26.0 / 28.6   | 6.6        | 6.4          |
| ASPIAIG-QLR5050-8R2 | 8.2         | M         | 29.5 / 32.5   | 6.1        | 6.1          |
| ASPIAIG-QLR5050-100 | 10          | M         | 39.0 / 43.0   | 5.4        | 5.0          |

## 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:** 15V (across inductor)

**ASPIAIG-QLR5050 Series is RoHS Compliant and Pb free**

**ASPIAIG-QLR5050 is AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)**

**MSL level: 1**

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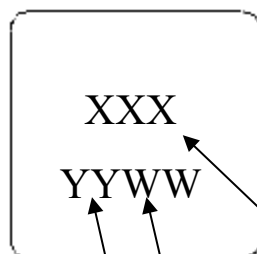


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## Marking



Inductance Code

e.g. 1R0

W: Week: E.g. 05 for the 5<sup>th</sup> week of the year.

Y: Year: E.g. 20 for 2020

**Marking Method: Ink**

## Part Identification

ASPIAIG-QLR5030 -   -

**Inductance Code**

See Electrical Specification table

**Tolerance**

M =  $\pm 20\%$

**Packaging**

T: Tape and Reel (1.5kpcs / reel)

# Molded SMD Power Inductor



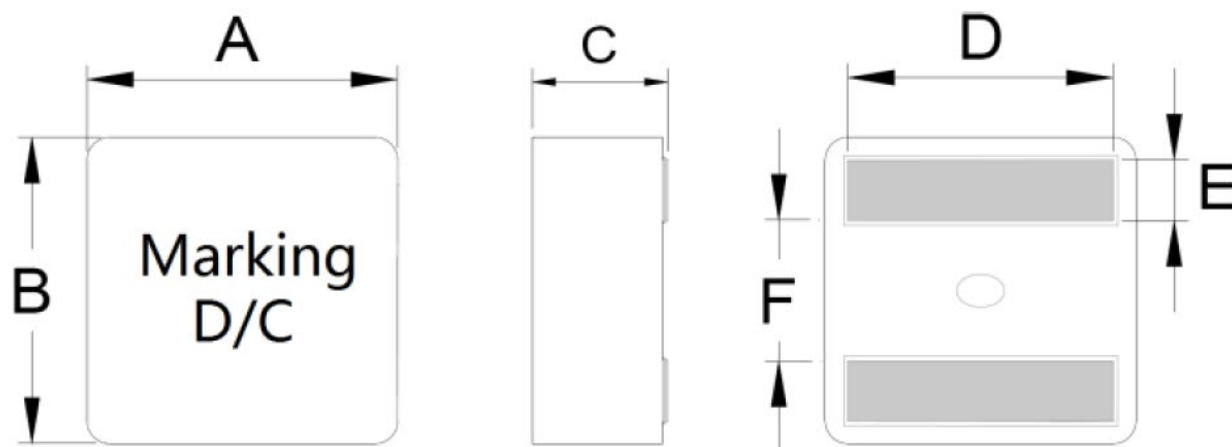
**ASPIAIG-QLR5050**

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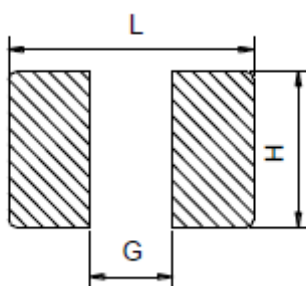
**6.0 x 5.7 x 4.8 mm**  
**RoHS/RoHS II Compliant**  
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## Mechanical Dimensions



| Series        | A         | B         | C         | D         | E         | F          |
|---------------|-----------|-----------|-----------|-----------|-----------|------------|
| ASPIAIG-Q5030 | 6.0 ± 0.2 | 5.7 ± 0.2 | 4.8 ± 0.2 | 4.3 ± 0.3 | 1.1 ± 0.2 | 2.3 ± 0.25 |

## Recommended Land Pattern



| L Typ. | G Typ. | H Typ. |
|--------|--------|--------|
| 4.5    | 2.0    | 4.7    |

**Dimensions: mm**

# Molded SMD Power Inductor



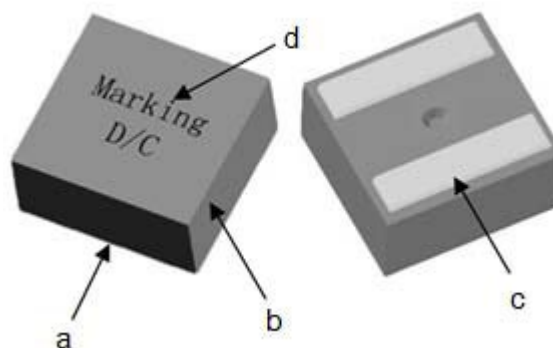
**ASPIAIG-QLR5050**

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**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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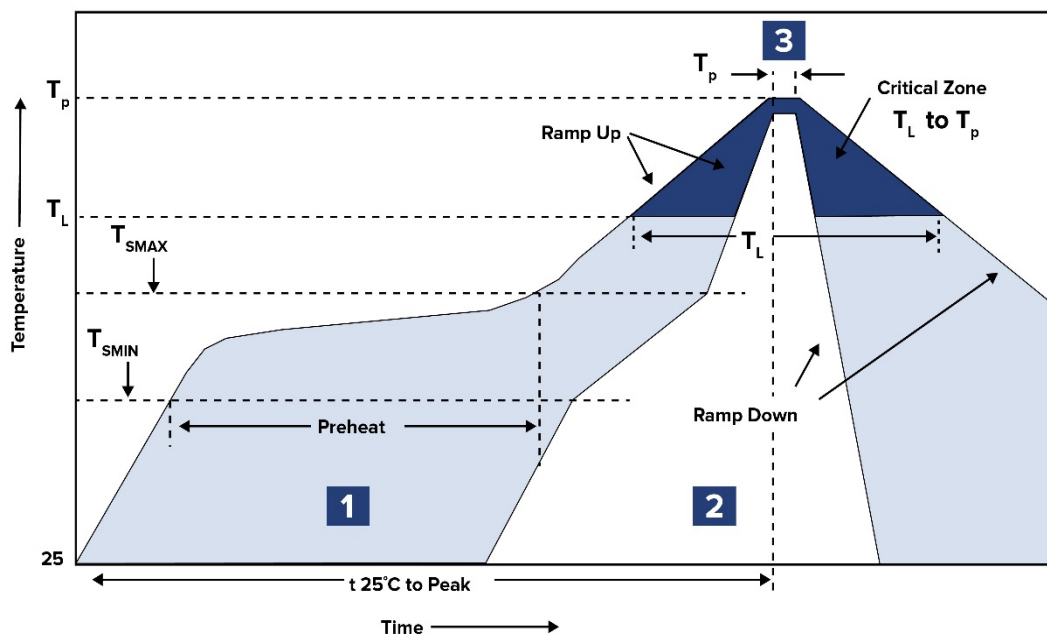


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## Reflow Profile



| 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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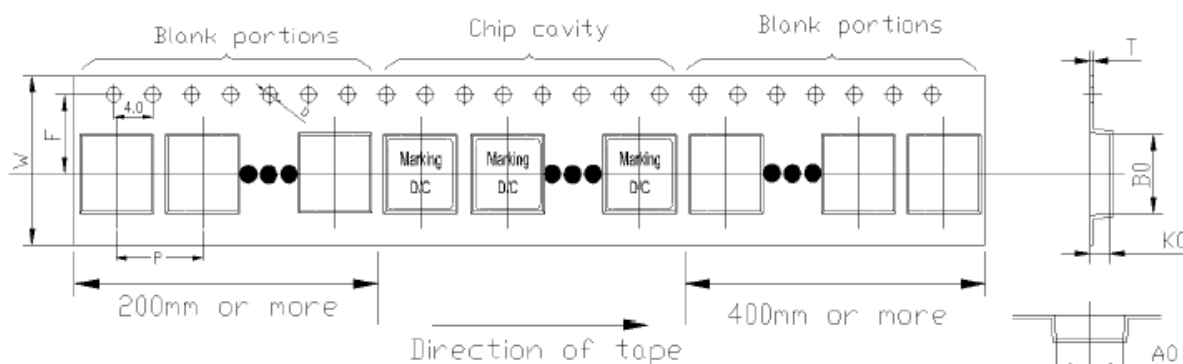
Check Inventory



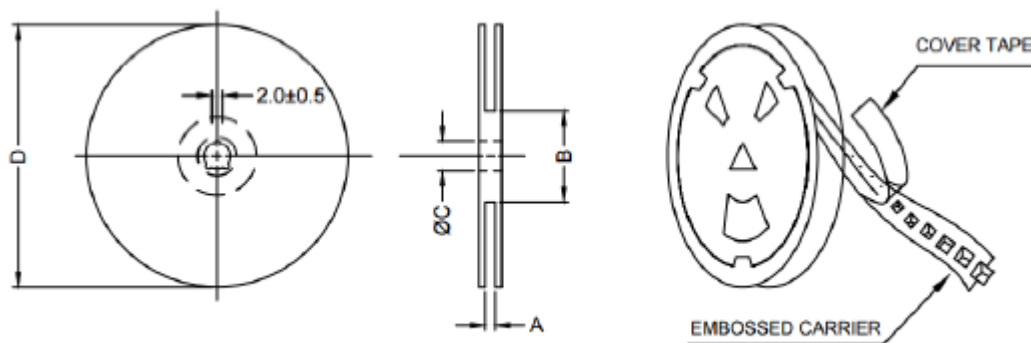
**6.0 x 5.7 x 4.8 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## 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 | 8.0±0.1 | 1.5±0.1 | 6.4±0.1        | 6.1 ±0.1       | 0.35±0.05 | 5.3±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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