

# Molded SMD Power Inductor



ASPIAIG-Q1510

Request Samples



Check Inventory



17.5 x 16.5 x 9.7 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 |
|-------------------|-------------|-----------|---------------|--------------------|--------------------------|
|                   | 0.1MHz/0.1V |           | Max           | Max                | Max                      |
| Units             | μH          | %         | mΩ            | A                  | A                        |
| Symbol            | L           |           | DCR           | Isat               | Irms                     |
| ASPIAIG-Q1510-4R7 | 4.7         | M         | 3.80          | 39.0               | 30.0                     |
| ASPIAIG-Q1510-5R6 | 5.6         | M         | 4.20          | 34.0               | 28.0                     |
| ASPIAIG-Q1510-6R8 | 6.8         | M         | 4.60          | 31.0               | 26.0                     |
| ASPIAIG-Q1510-8R2 | 8.2         | M         | 7.20          | 28.0               | 25.0                     |
| ASPIAIG-Q1510-100 | 10.0        | M         | 8.60          | 26.0               | 24.0                     |
| ASPIAIG-Q1510-150 | 15.0        | M         | 11.50         | 20.0               | 18.0                     |
| ASPIAIG-Q1510-220 | 22.0        | M         | 15.80         | 18.0               | 16.0                     |
| ASPIAIG-Q1510-330 | 33.0        | M         | 20.00         | 16.7               | 13.0                     |

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

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

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

ASPIAIG-Q1510 Series is **RoHS Compliant and Pb free**

ASPIAIG-Q1510 is AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)

MSL level: 1



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## Part Number Identification

ASPIAIG – Q1510 - [ ] [ ] - [ ]

### Inductance Code

See Electrical Specification table

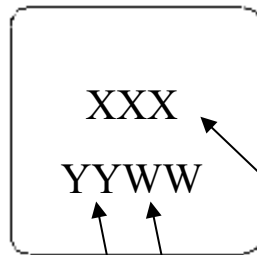
### Tolerance

M = ± 20%

### Packaging

T: Tape and Reel (150 pcs / reel)

## Marking



Inductance Code

e.g. 6R8

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 Marking



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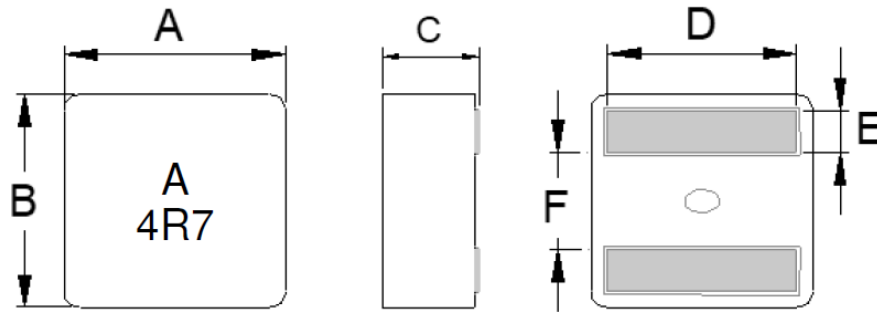


Check Inventory

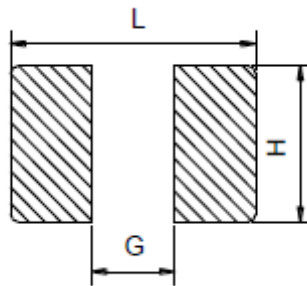


17.5 x 16.5 x 9.7 mm  
**RoHS/RoHS II Compliant**  
 MSL Level = 1

## Mechanical Dimensions



| Series        | A          | B          | C         | D          | E         | F         |
|---------------|------------|------------|-----------|------------|-----------|-----------|
| ASPIAIG-Q1510 | 17.5 ± 0.3 | 16.5 ± 0.3 | 9.7 ± 0.3 | 13.2 ± 0.5 | 3.2 ± 0.2 | 7.0 ± 0.2 |



| L         | G        | H         |
|-----------|----------|-----------|
| 15.0 Ref. | 6.0 Ref. | 15.0 Ref. |

Dimensions: mm

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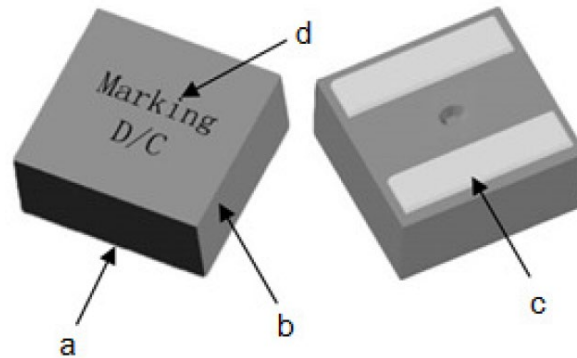


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17.5 x 16.5 x 9.7 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## 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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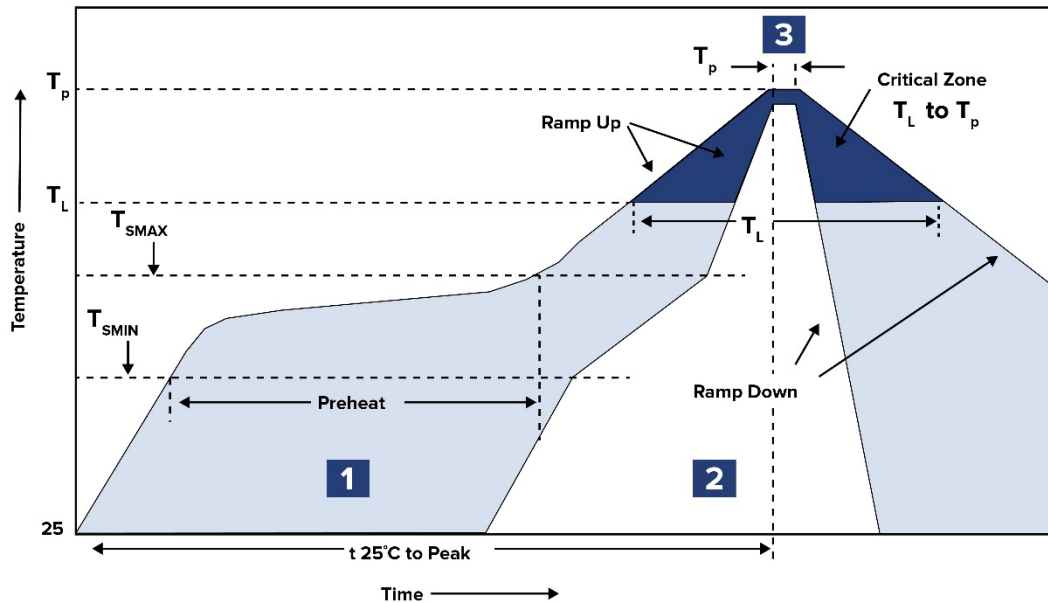


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## Reflow Profile



| Zone | Description | Temperature                               | Times         |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 200°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>217°C                            | 60 ~ 150 sec. |
| 3    | Peak heat   | $T_P$<br>260°C                            | < 30 sec.     |

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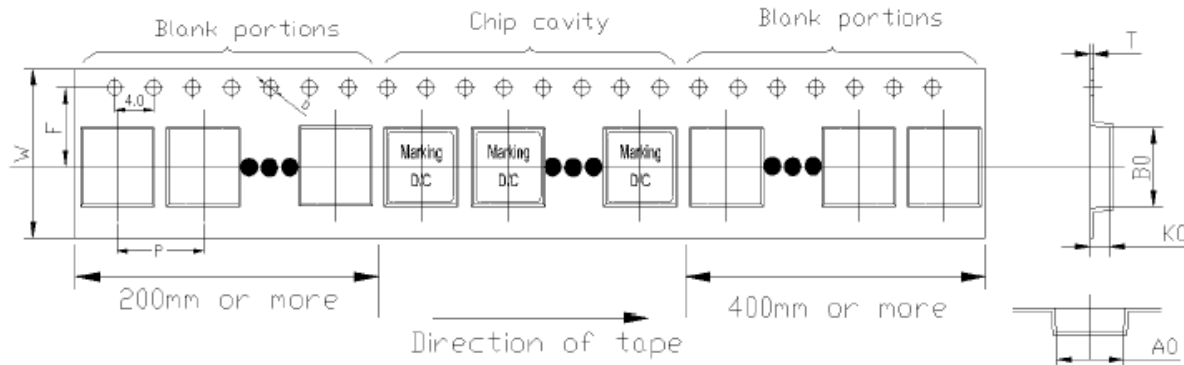
Check Inventory



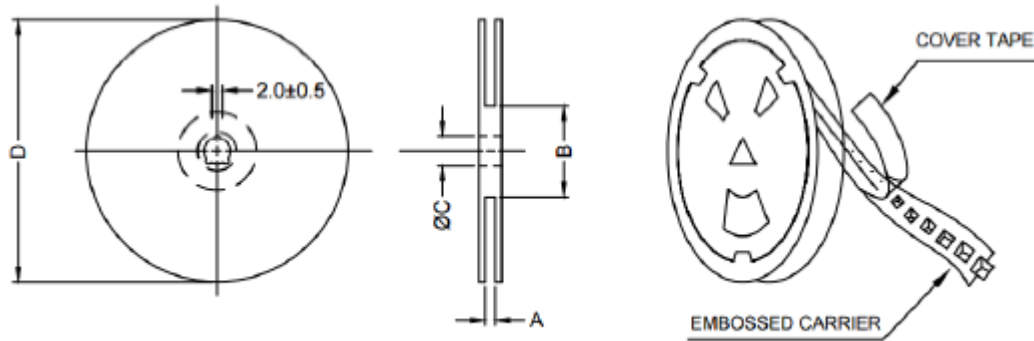
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**RoHS/RoHS II Compliant**  
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## Packaging

**Tape & Reel: 150 pcs/reel**



| W        | F        | P        | D       | A <sub>0</sub> | B <sub>0</sub> | T        | K <sub>0</sub> |
|----------|----------|----------|---------|----------------|----------------|----------|----------------|
| 32.0±0.3 | 14.2±0.1 | 24.0±0.1 | 1.5±0.1 | 18.0±0.1       | 17.0±0.1       | 0.5±0.05 | 10.5±0.1       |



| A         | B       | C             | D   |
|-----------|---------|---------------|-----|
| 34.4+2/-0 | 100 ± 2 | 13.0+0.5/-0.2 | 330 |

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