

Molded SMD Power Inductor



ASPIAIG-Q7050

Request Samples



Check Inventory



8.4 x 8.0 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 Current | Temperature Rise Current |
|---------------------|-------------|-----------|---------------|--------------------|--------------------------|
| | 0.1MHz/0.1V | | Max | Max | Max |
| Units | μH | % | mΩ | A | A |
| Symbol | L | | DCR | Isat | Irms |
| ASPIAIG-Q7050 – 2R2 | 2.2 | 20 | 6.4 | 17.0 | 14.0 |
| ASPIAIG-Q7050 – 3R3 | 3.3 | 20 | 11.4 | 14.0 | 13.0 |
| ASPIAIG-Q7050 – 4R7 | 4.7 | 20 | 15.4 | 13.0 | 11.0 |
| ASPIAIG-Q7050 – 5R6 | 5.6 | 20 | 17.2 | 11.0 | 7.0 |

Test Conditions

Isat: DC current at which the inductance drops 30% from its value without current.

Irms: DC current that causes the temperature rise (ΔT , 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-Q7050 Series is **RoHS Compliant and Pb free**

ASPIAIG-Q7050 is AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)

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Part Number Identification

ASPIAIG – Q7050 - [] [] - []

Inductance Code

See Electrical Specification table

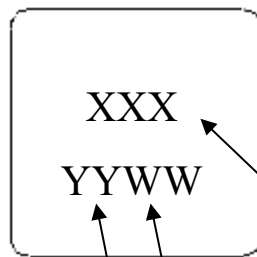
Tolerance

M = ± 20%

Packaging

T: Tape and Reel (800 pcs / reel)

Marking



Inductance Code

e.g. 6R8

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

Y: Year: E.g. 20 for 2020

Marking Method = Ink Marking



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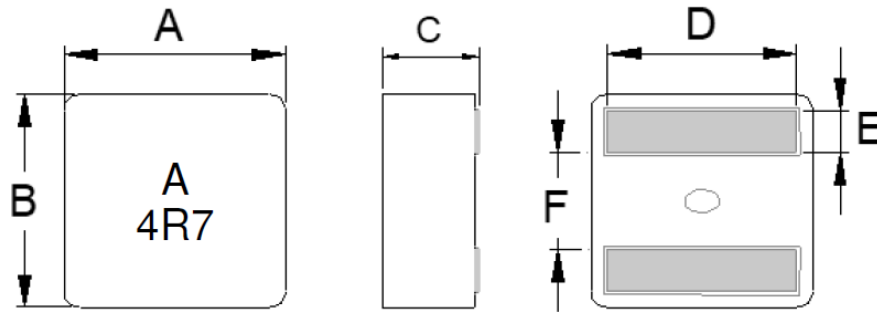


Check Inventory

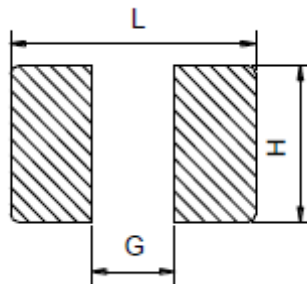


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Mechanical Dimensions



| Series | A | B | C | D | E | F |
|---------------|-----------|-----------|-----------|-----------|------------|-------------|
| ASPIAIG-Q7050 | 8.4 ± 0.3 | 8.0 ± 0.3 | 4.8 ± 0.3 | 6.2 ± 0.3 | 1.75 ± 0.2 | 3.15 ± 0.25 |



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

Dimensions: mm

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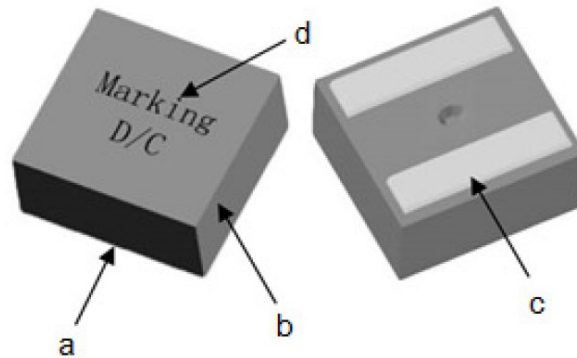


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RoHS/RoHS II Compliant
MSL Level = 1

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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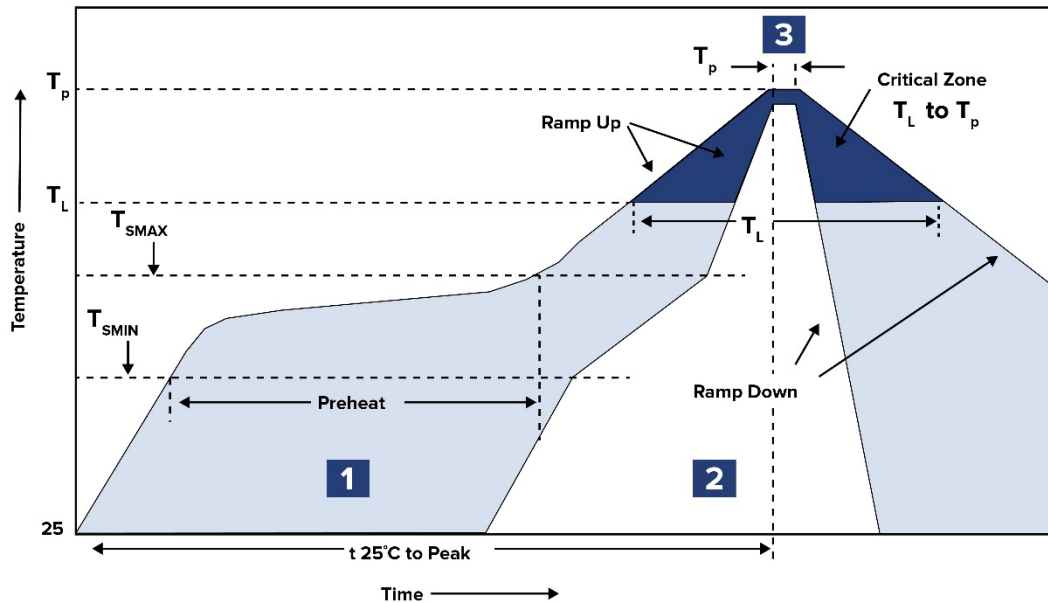


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Reflow Profile



| Zone | Description | Temperature | Times |
|------|-------------|---|---------------|
| 1 | Preheat | $T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C | 60 ~ 180 sec. |
| 2 | Reflow | T_L 217°C | 60 ~ 150 sec. |
| 3 | Peak heat | T_P 260°C | 10 sec. MAX |

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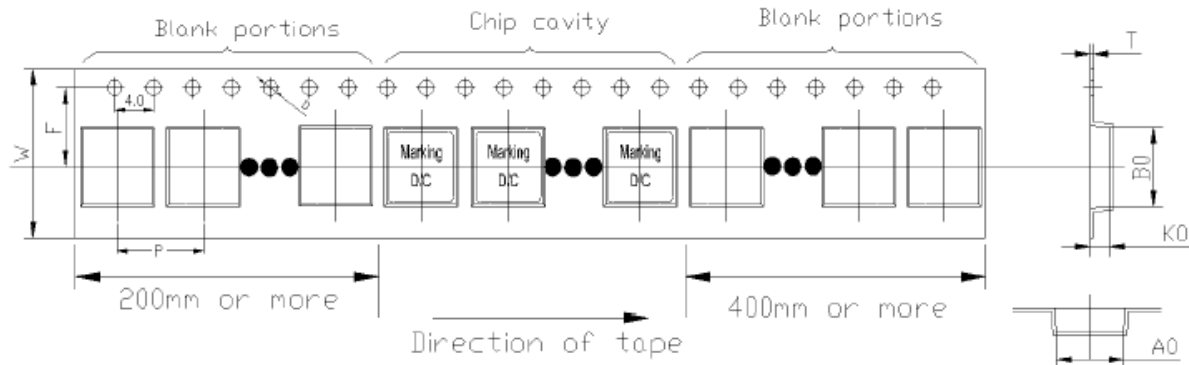
Check Inventory



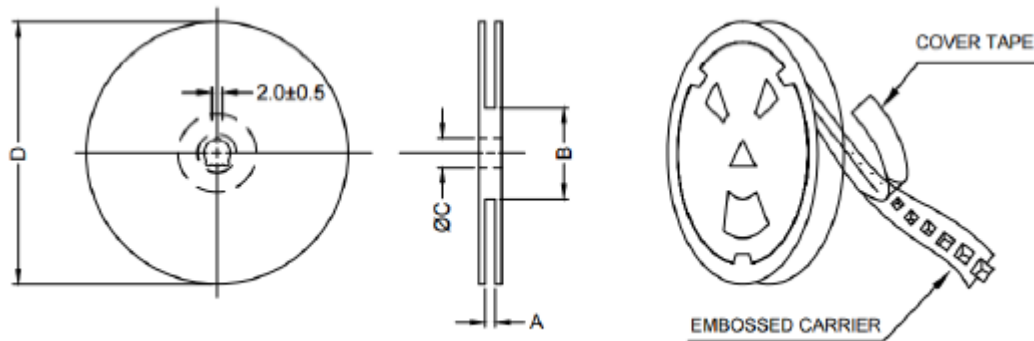
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Packaging

Tape & Reel: 800 pcs/reel



| W | F | P | D | A ₀ | B ₀ | T | K ₀ |
|----------|---------|----------|---------|----------------|----------------|-----------|----------------|
| 16.0±0.3 | 7.5±0.1 | 12.0±0.1 | 1.5±0.1 | 8.8±0.1 | 8.4 ±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 |

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