

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples



Check Inventory



5.5 x 5.3 x 2.9 mm

RoHS/RoHS II Compliant

MSL Level = 1

Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 qualified
- Excellent current capacity – up to 32.5A
- Exceptionally low DCR – only 2.3mΩ
- Soft saturation
- Low profile for compact designs
- Shielded constructions for low EMI

Applications

- Automotive grade 0 and electric vehicles
- ADAS and body electronics
- Infotainment systems
- Lighting
- Motor control
- Solar inverters and solar power
- DC/DC converters in distributed power systems
- Battery powered device

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 | M | DCR | Isat | Irms |
| ASPIAIG-F5030-R15 | 0.15 | 20% | 2.31 | 32.5 | 22.2 |
| ASPIAIG-F5030-R16 | 0.16 | 20% | 2.33 | 32.0 | 22.2 |
| ASPIAIG-F5030-R28 | 0.28 | 20% | 3.30 | 28.0 | 19.0 |
| ASPIAIG-F5030-R33 | 0.33 | 20% | 3.52 | 26.0 | 19.2 |
| ASPIAIG-F5030-R47 | 0.47 | 20% | 4.13 | 24.0 | 18.4 |
| ASPIAIG-F5030-R56 | 0.56 | 20% | 4.52 | 20.2 | 17.7 |
| ASPIAIG-F5030-R60 | 0.60 | 20% | 4.52 | 20.0 | 17.7 |
| ASPIAIG-F5030-R80 | 0.80 | 20% | 5.65 | 18.0 | 13.1 |
| ASPIAIG-F5030-R82 | 0.82 | 20% | 5.78 | 17.6 | 12.9 |
| ASPIAIG-F5030-1R0 | 1.00 | 20% | 7.60 | 14.3 | 12.2 |
| ASPIAIG-F5030-1R2 | 1.20 | 20% | 9.70 | 13.5 | 11.0 |
| ASPIAIG-F5030-1R5 | 1.50 | 20% | 11.2 | 12.5 | 10.5 |
| ASPIAIG-F5030-1R8 | 1.80 | 20% | 12.7 | 11.3 | 10.1 |
| ASPIAIG-F5030-2R2 | 2.20 | 20% | 14.5 | 9.0 | 9.70 |
| ASPIAIG-F5030-3R3 | 3.30 | 20% | 23.1 | 8.7 | 8.10 |
| ASPIAIG-F5030-4R7 | 4.70 | 20% | 36.3 | 7.0 | 5.90 |

Test Conditions

Isat: Current at which the inductance drops 30% from its initial value

Irms: Current at which the temperature rises (ΔT , 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 (on PCB)

ASPIAIG-F5030 Series is **RoHS Compliant and Pb free**

ASPIAIG-F5030 Series is **AEC-Q200 Grade 0 qualified (-55°C ~ +155°C ambient)**

Operating Voltage: 40V

MSL level: 1



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION A : 11/10/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples

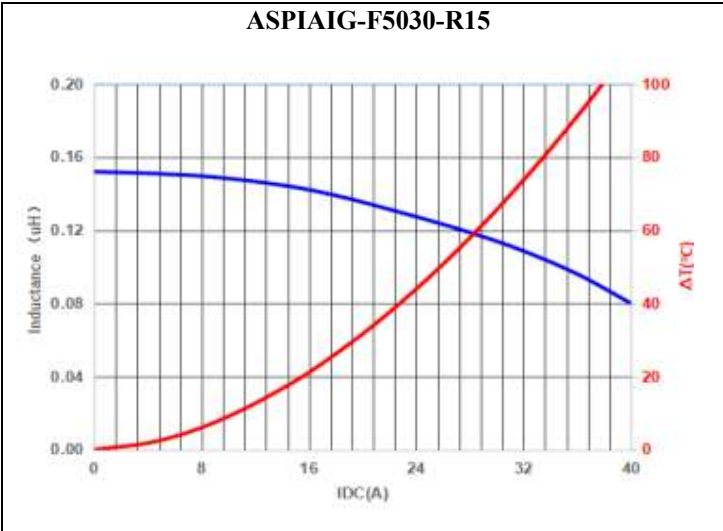


Check Inventory

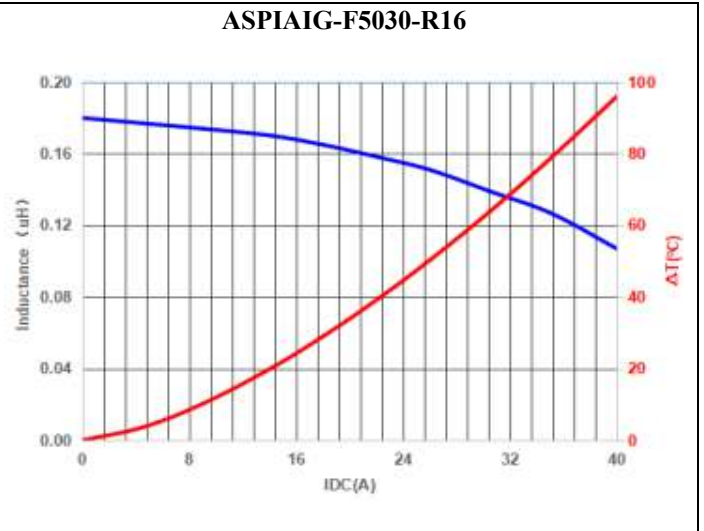


5.5 x 5.3 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

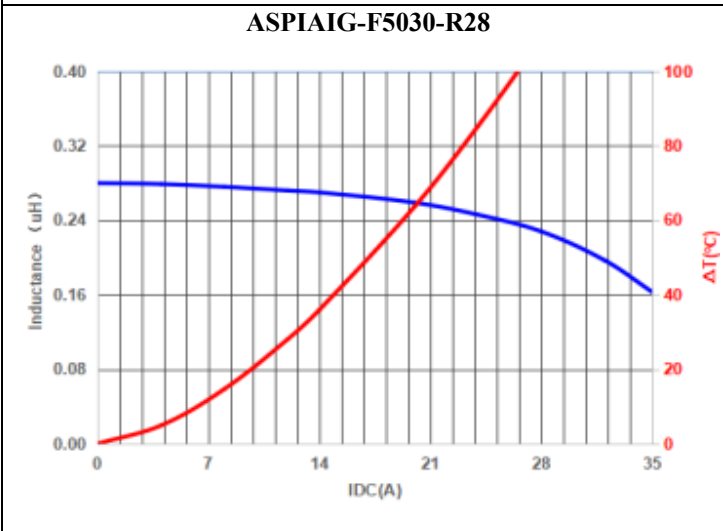
ASPIAIG-F5030-R15



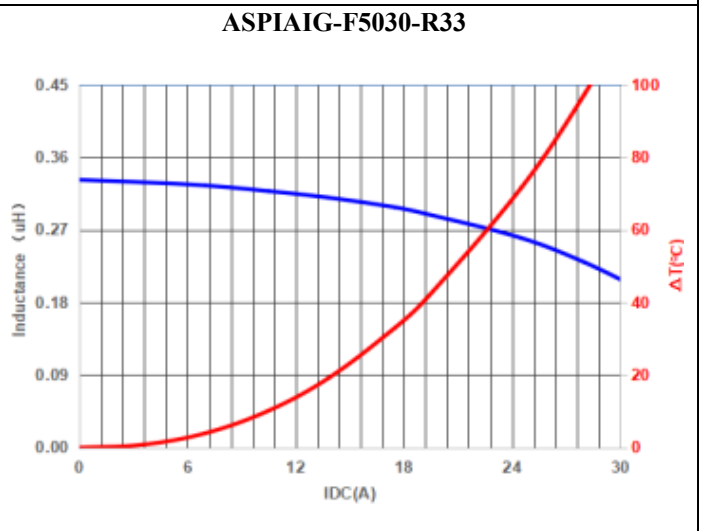
ASPIAIG-F5030-R16



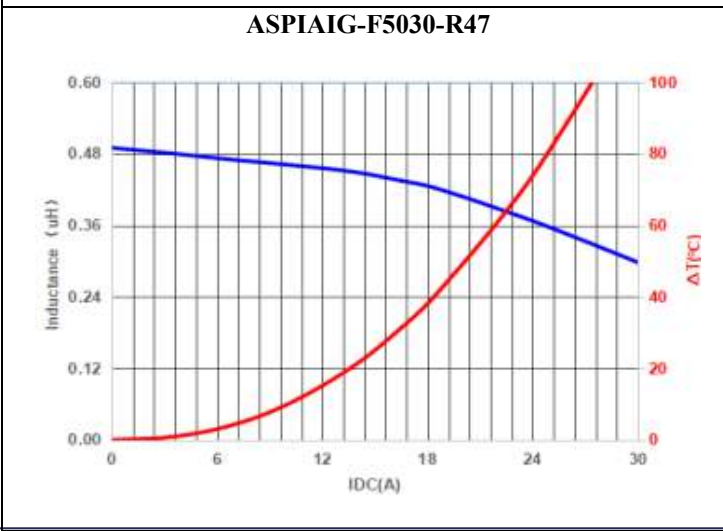
ASPIAIG-F5030-R28



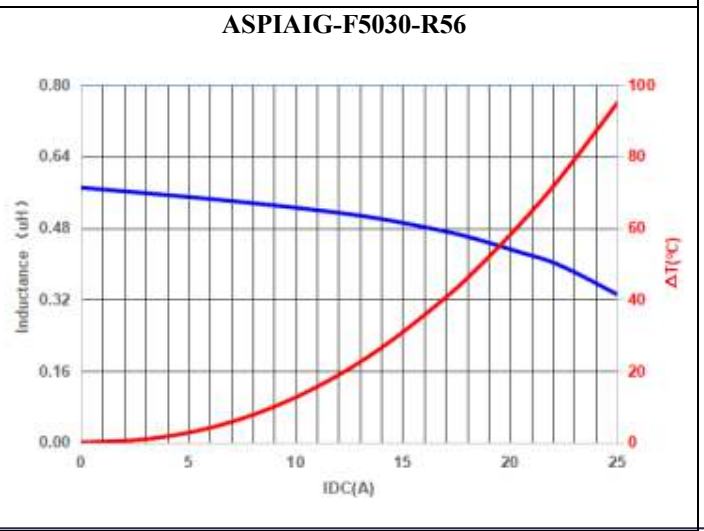
ASPIAIG-F5030-R33



ASPIAIG-F5030-R47



ASPIAIG-F5030-R56



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION A : 11/10/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples

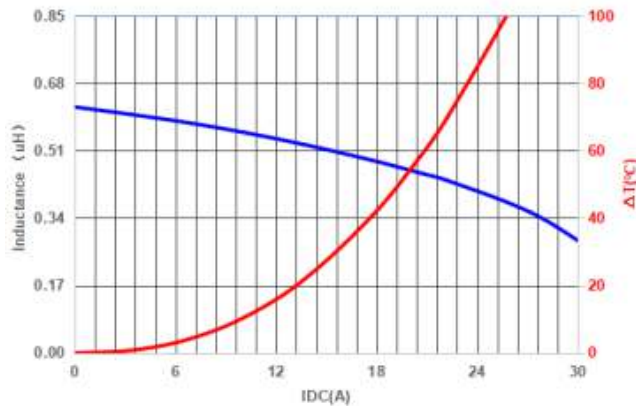


Check Inventory

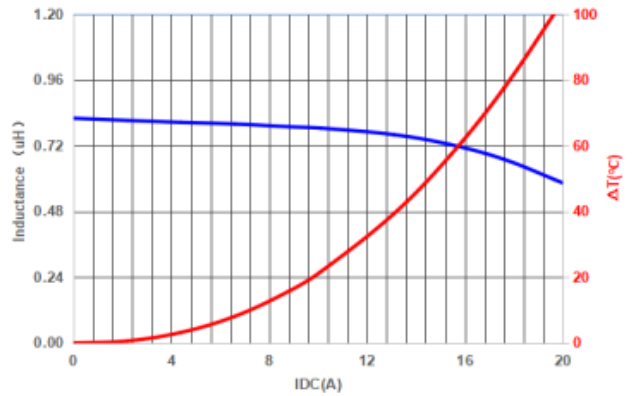


5.5 x 5.3 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

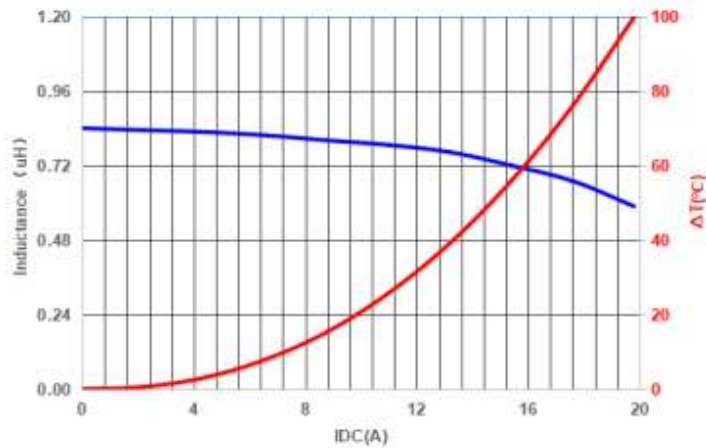
ASPIAIG-F5030-R60



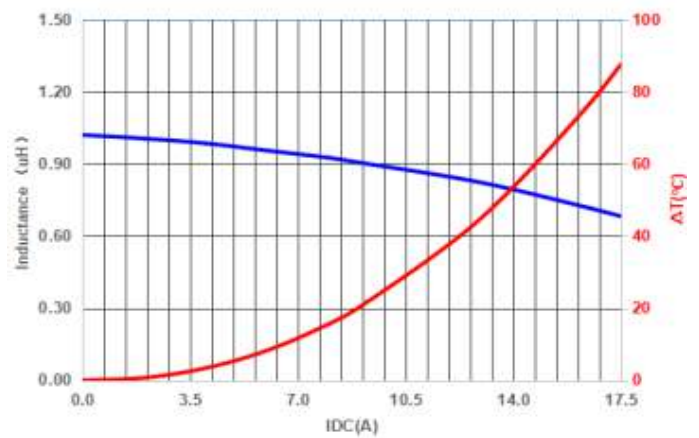
ASPIAIG-F5030-R80



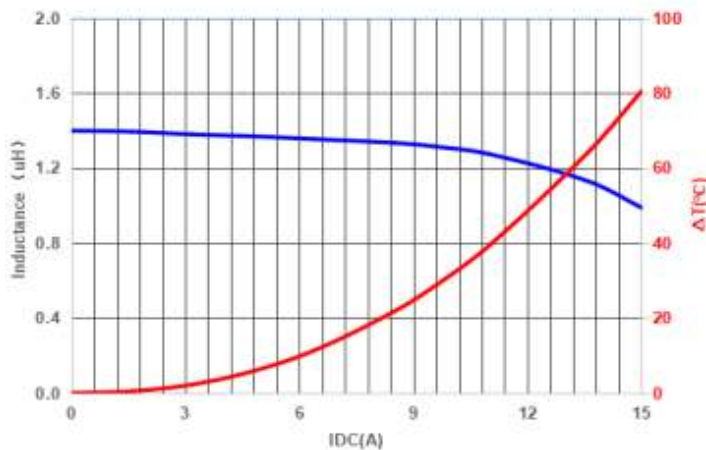
ASPIAIG-F5030-R82



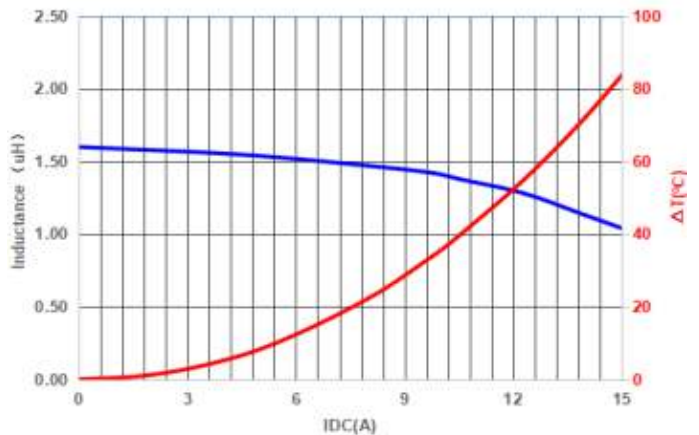
ASPIAIG-F5030-1R0



ASPIAIG-F5030-1R2



ASPIAIG-F5030-1R5



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION A : 11/10/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples

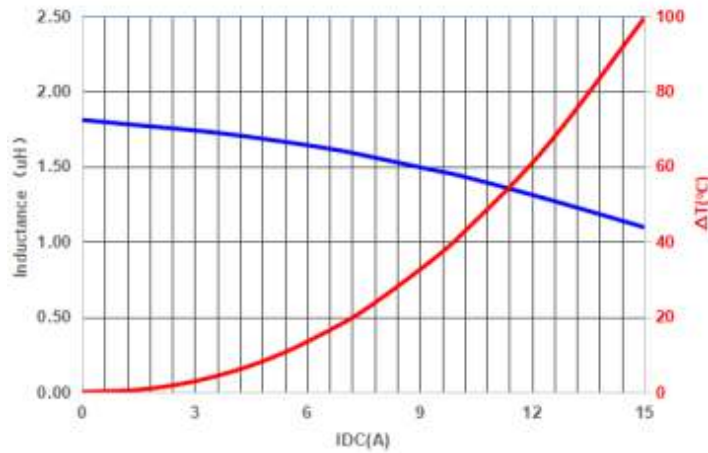


Check Inventory

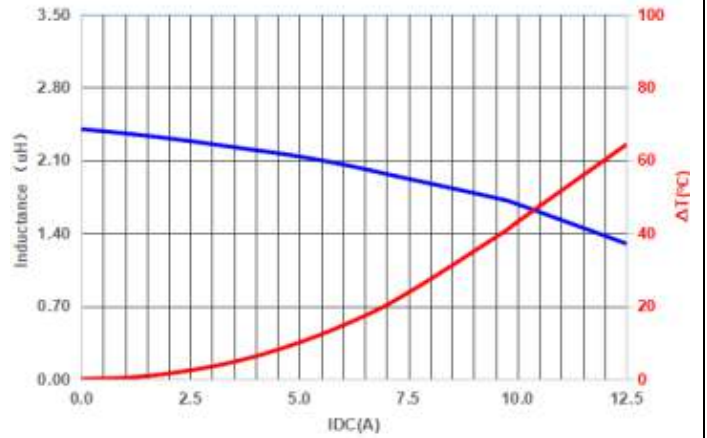


5.5 x 5.3 x 2.9 mm
 RoHS/RoHS II Compliant
 MSL Level = 1

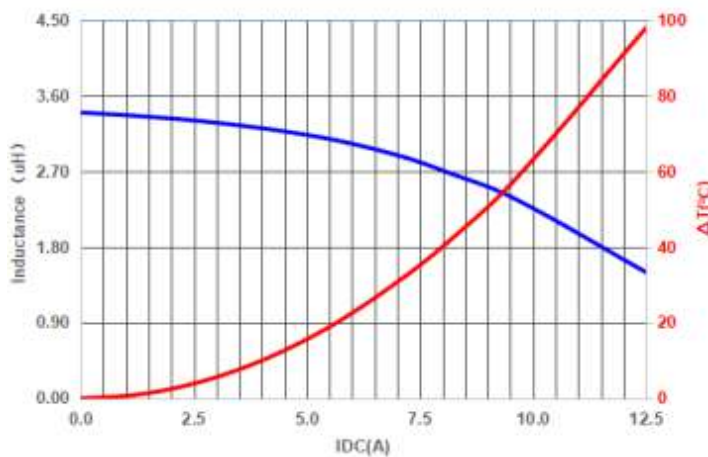
ASPIAIG-F5030-1R8



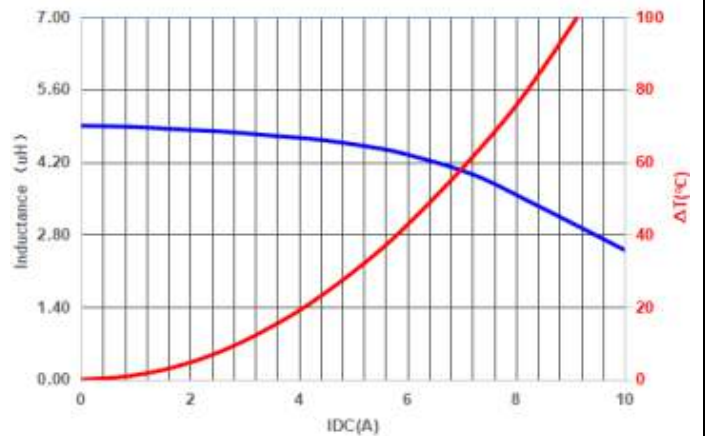
ASPIAIG-F5030-2R2



ASPIAIG-F5030-3R3



ASPIAIG-F5030-4R7



5101 Hidden Creek Ln Spicewood TX 78669
 Phone: 512-371-6159 | Fax: 512-351-8858
 For terms and conditions of sales, please visit:
www.abracon.com

REVISION A : 11/10/2021

ABRACON IS
 ISO9001-2015
 CERTIFIED

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples

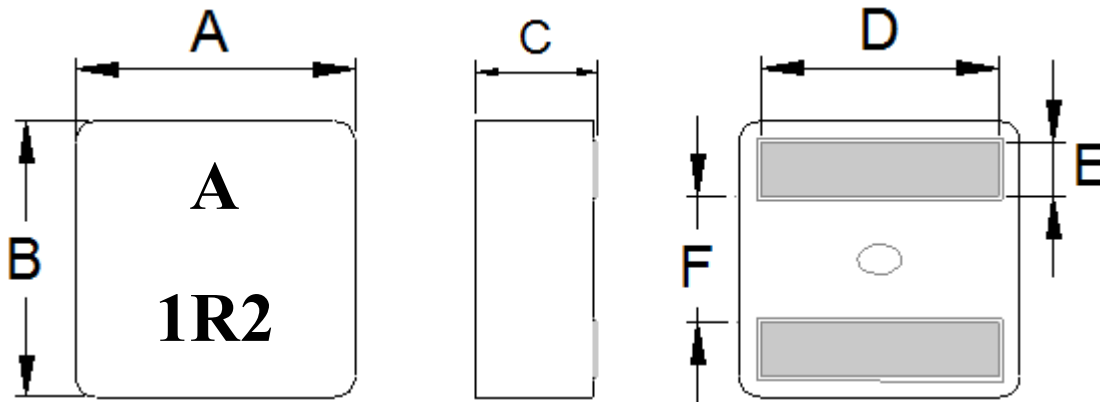


Check Inventory



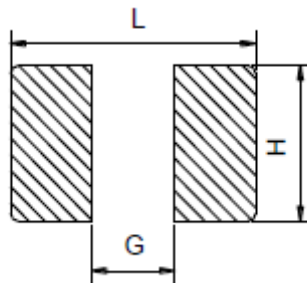
5.5 x 5.3 x 2.9 mm
 RoHS/RoHS II Compliant
 MSL Level = 1

Mechanical Specifications



| Series | A | B | C | D | E | F |
|---------------|-----------|-----------|-----------|-----------|-----------|------------|
| ASPIAIG-F5030 | 6.0 ± 0.2 | 5.7 ± 0.2 | 2.9 ± 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 |

Dimension: mm

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples

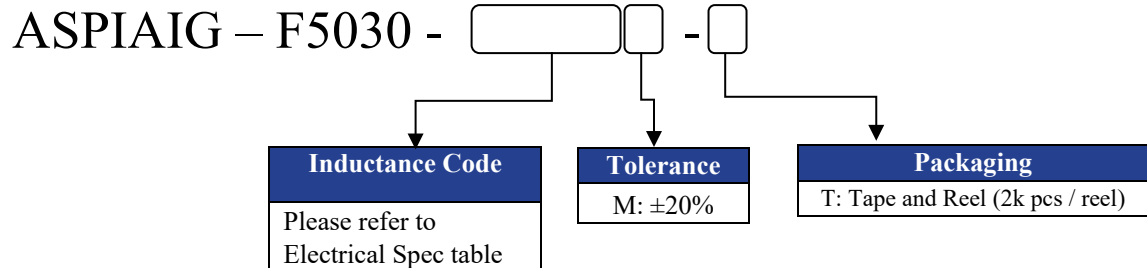


Check Inventory



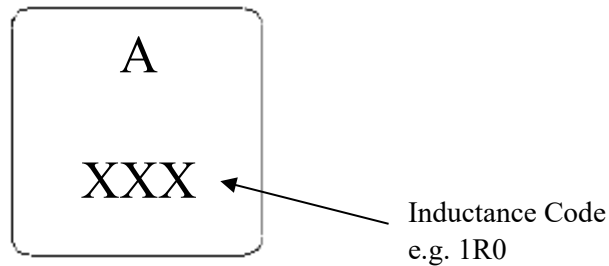
5.5 x 5.3 x 2.9 mm
 RoHS/RoHS II Compliant
 MSL Level = 1

Part Identification

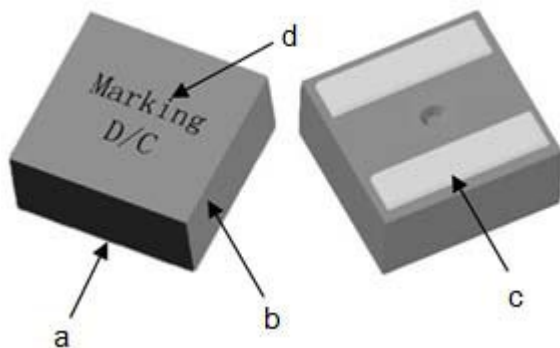


Marking

Marking Method: Ink



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 |

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples

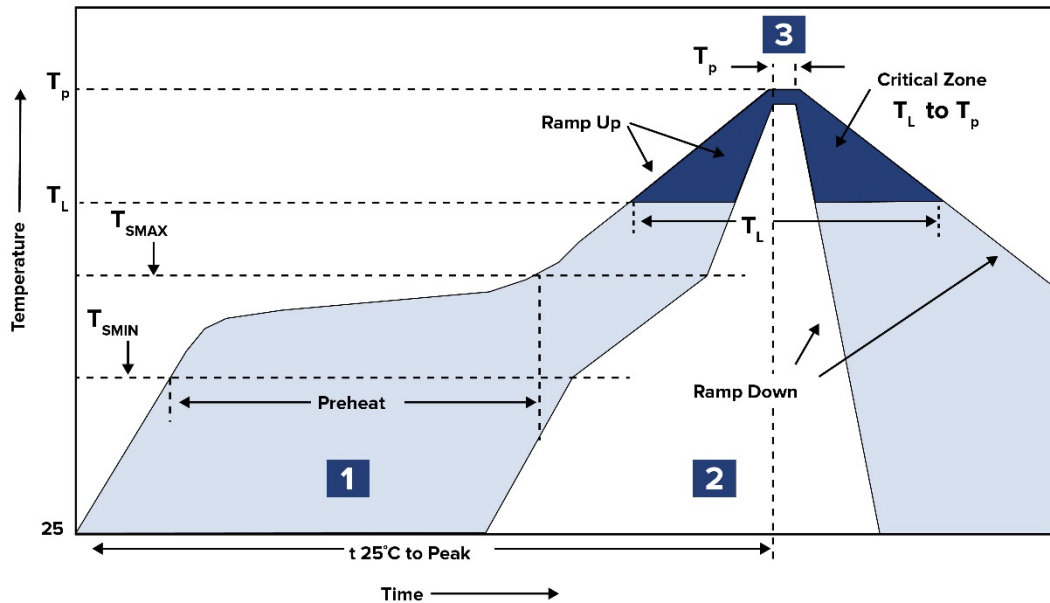


Check Inventory



5.5 x 5.3 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

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 |

Molded SMD Power Inductor



ASPIAIG-F5030 Series

Request Samples



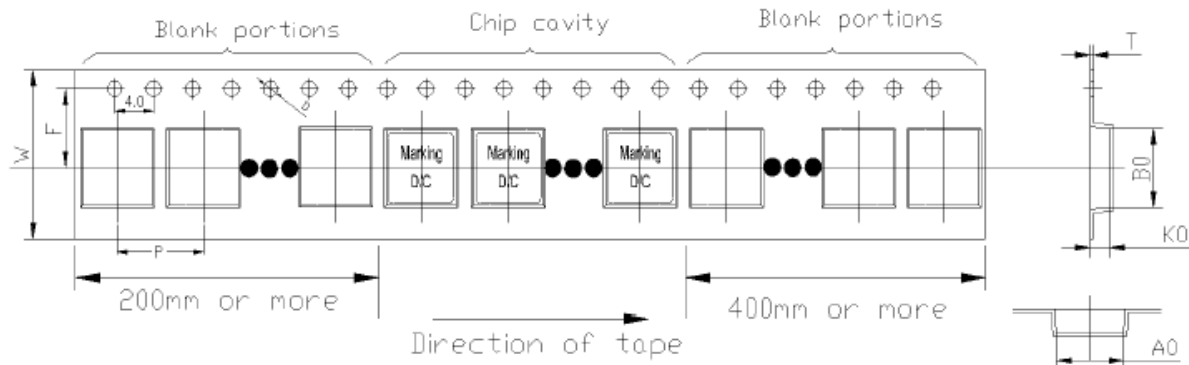
Check Inventory



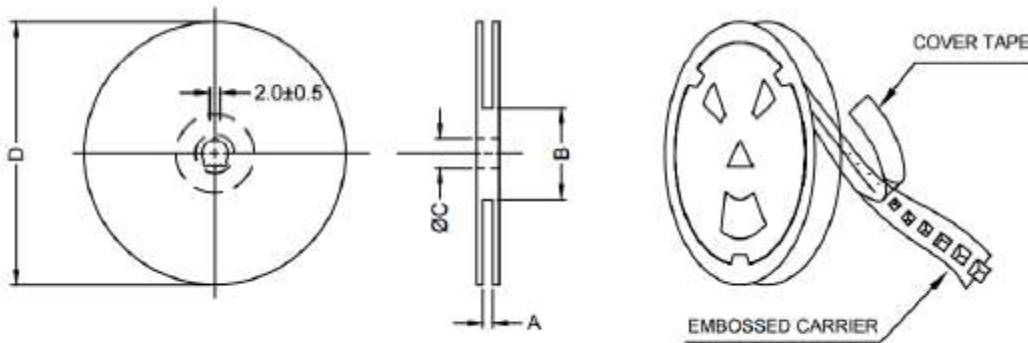
5.5 x 5.3 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging (Tape & Reel)

ASPIAIG-F5030: 2000pcs / reel



| Series | W | F | P | D | A ₀ | B ₀ | T | K ₀ |
|---------------|----------|---------|---------|---------|----------------|----------------|-----------|----------------|
| ASPIAIG-F5030 | 16.0±0.3 | 7.5±0.1 | 8.0±0.1 | 1.5±0.1 | 5.8±0.1 | 5.6 ±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

ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



5101 Hidden Creek Ln Spicewood TX 78669
 Phone: 512-371-6159 | Fax: 512-351-8858
 For terms and conditions of sales, please visit:
www.abracon.com

REVISION A : 11/10/2021

ABRACON IS
 ISO9001-2015
 CERTIFIED