

# Molded SMD Power Inductor (AEC-Q200 Grade 0)



**ASPIAIG-F4030**

Request Samples



Check Inventory



4.1 x 4.1 x 2.8 mm  
**RoHS/RoHS II Compliant**  
MSL Level = 1

## Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 qualified (-55°C ~ +150°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/1.0V		Max	Typ.	Max	Typ.
Units	$\mu$ H	%	m $\Omega$		A	A
Symbol	L	M	DCR		Isat	Irms
ASPIAIG-F4030-R47M-T	0.47	20	7.3	5.8	15.0	14.0
ASPIAIG-F4030-R90M-T	0.90	20	10.1	8.1	9.0	11.2
ASPIAIG-F4030-1R0M-T	1.0	20	10.1	8.1	9.2	11.0
ASPIAIG-F4030-1R2M-T	1.2	20	11.5	9.2	8.7	9.8
ASPIAIG-F4030-1R5M-T	1.5	20	13.2	10.6	7.0	9.0
ASPIAIG-F4030-2R2M-T	2.2	20	22.6	18.1	6.1	7.8
ASPIAIG-F4030-3R3M-T	3.3	20	28.6	22.9	5.3	6.6
ASPIAIG-F4030-4R7M-T	4.7	20	44.1	35.2	3.6	5.1

## 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 25°C ambient.

**Operating Temperature:** -55°C ~ +150°C (including self-temperature rise)

**Storage Condition:** -55°C ~ +150°C (on board), -10°C ~ +40°C (with packaging) and R.H. 60 max

ASPIAIG-F4030 Series is **RoHS Compliant and Pb free**

ASPIAIG-F4030 is **AEC-Q200 Grade 0** qualified (-55°C ~ +150°C)

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## Part Identification

ASPIAIG-F4030 -   -

### Inductance Code

See Electrical Specification table

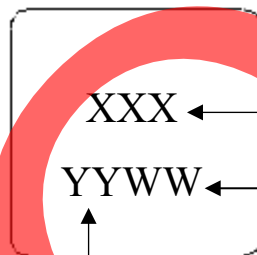
### Tolerance

M =  $\pm 20\%$

### Packaging

T: Tape and Reel (See Packaging)

## Marking



Inductance Code

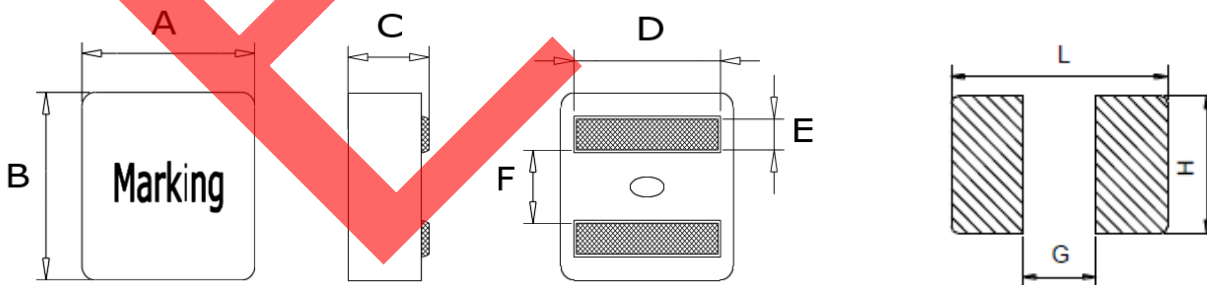
e.g. 4R7

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

Y: Year: E.g. 23 for 2023

Marking Method = Ink Marking

## Mechanical Specifications



Series	A	B	C	D	E	F	L	G	H
ASPIAIG-F4030	4.1 $\pm$ 0.25	4.1 $\pm$ 0.25	2.8 $\pm$ 0.2	3.4 $\pm$ 0.3	0.88 $\pm$ 0.3	1.7 $\pm$ 0.3	3.4 ref	1.4 ref	3.8 ref.

Dimensions: mm



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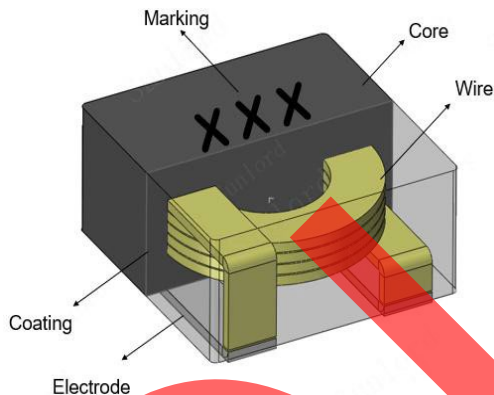


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## Materials



Components	Material
Core	Alloy Powder
Wire	Polyester Wire
Electrode	Cu/Ni/Sn
Coating	Epoxy
Marking	Ink

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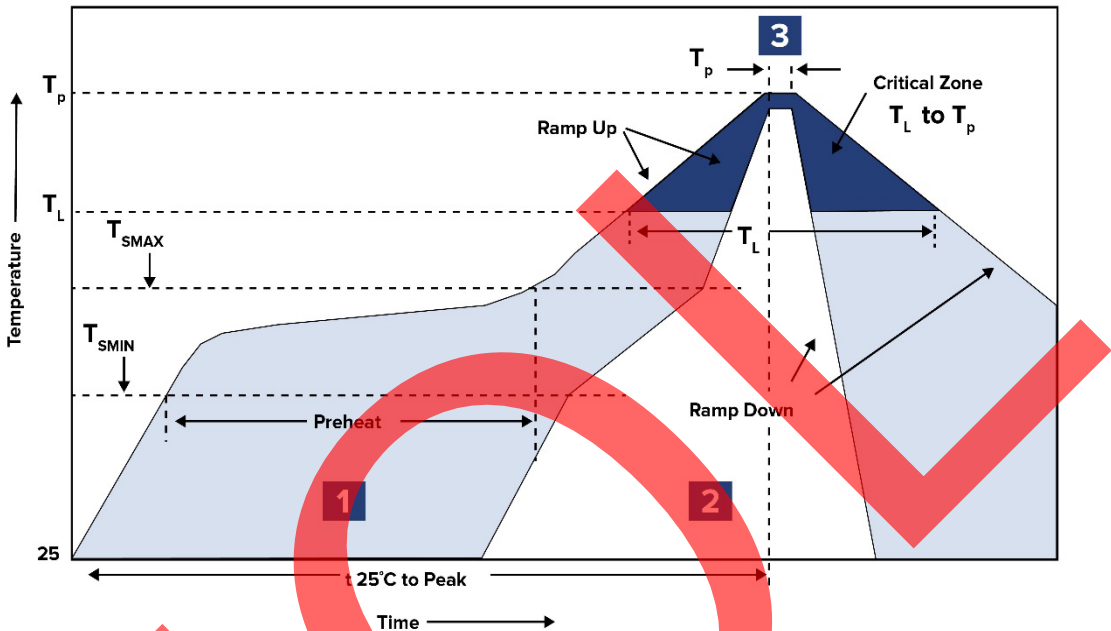


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ $150^{\circ}\text{C} \sim 200^{\circ}\text{C}$	60 ~ 180 sec.
2	Reflow	$T_L$ $217^{\circ}\text{C}$	60 ~ 150 sec.
3	Peak heat	$T_p$ $255^{\circ}\text{C}$	30 sec. MAX



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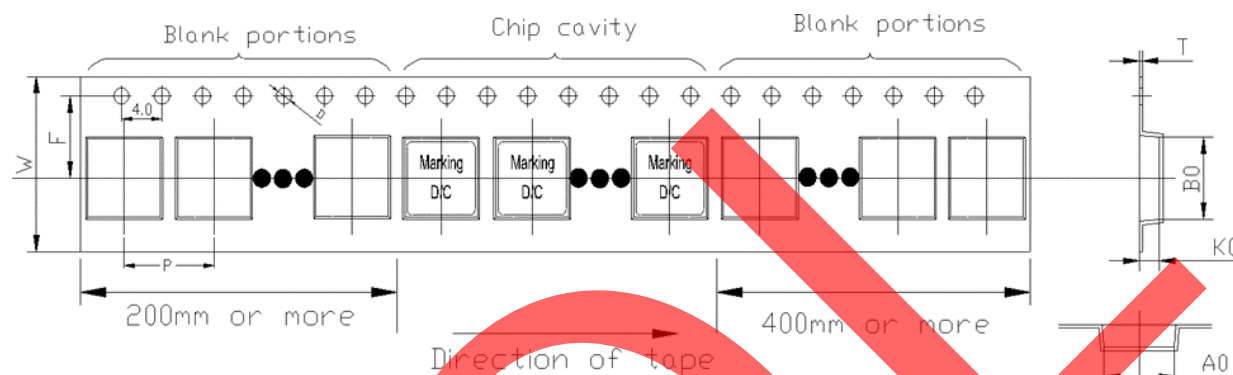
Check Inventory



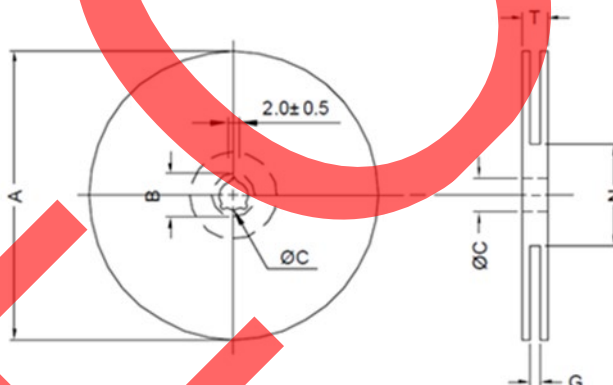
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## Packaging

Tape & Reel: 2000 pcs/reel



A0	B0	K0	P	W	F	T	D
4.4±0.1	4.4±0.1	3.3±0.1	8±0.1	12±0.3	5.5±0.1	0.35±0.05	1.50±0.1



A	C	G	N
33.0 ± 2.0	13.0±0.5	12.8±0.2	100.0 ± 2.0

Dimensions: mm

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