Molded SMD Power Inductor

ASPIAIG-F5030 Series

Request Samples Check Inventory

6.0 x 5.7x 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	Temperature Rise Current	Saturation Current	
	0.1MHz/0.1V		Max	Typ.	Max	Typ.
Units	µH	%	mΩ	A	A	
Symbol	L	M	DCR	Irms	Isat	
ASPIAIG-F5030-R15	0.15	20%	2.31	22.2	32.5	36.0
ASPIAIG-F5030-R16	0.16	20%	2.33	22.2	32.0	35.0
ASPIAIG-F5030-R28	0.28	20%	3.30	19.0	28.0	32.0
ASPIAIG-F5030-R33	0.33	20%	3.52	19.2	26.0	28.0
ASPIAIG-F5030-R47	0.47	20%	4.13	18.4	24.0	26.0
ASPIAIG-F5030-R56	0.56	20%	4.52	17.7	20.2	22.2
ASPIAIG-F5030-R60	0.60	20%	4.52	17.7	20.0	22.0
ASPIAIG-F5030-R80	0.80	20%	5.65	13.1	18.0	20.0
ASPIAIG-F5030-R82	0.82	20%	5.78	12.9	17.6	19.7
ASPIAIG-F5030-1R0	1.00	20%	7.60	12.2	14.3	16.5
ASPIAIG-F5030-1R2	1.20	20%	9.70	11.0	13.5	15.0
ASPIAIG-F5030-1R5	1.50	20%	11.2	10.5	12.5	14.0
ASPIAIG-F5030-1R8	1.80	20%	12.7	10.1	11.3	12.3
ASPIAIG-F5030-2R2	2.20	20%	14.5	9.70	9.0	10.0
ASPIAIG-F5030-3R3	3.30	20%	23.1	8.10	8.7	9.5
ASPIAIG-F5030-4R7	4.70	20%	36.3	5.90	7.0	8.2

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

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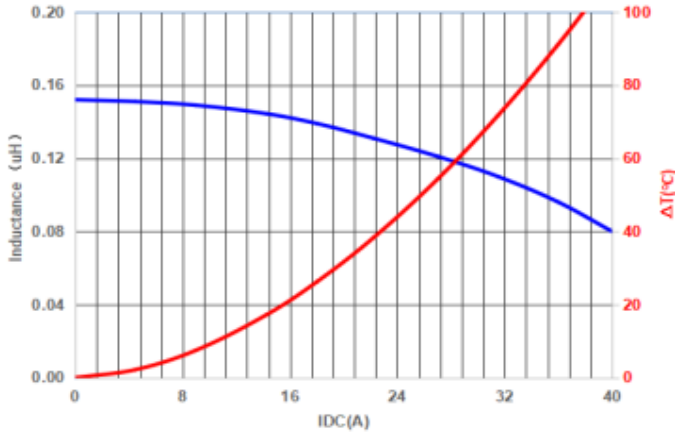
ASPIAIG-F5030-R15



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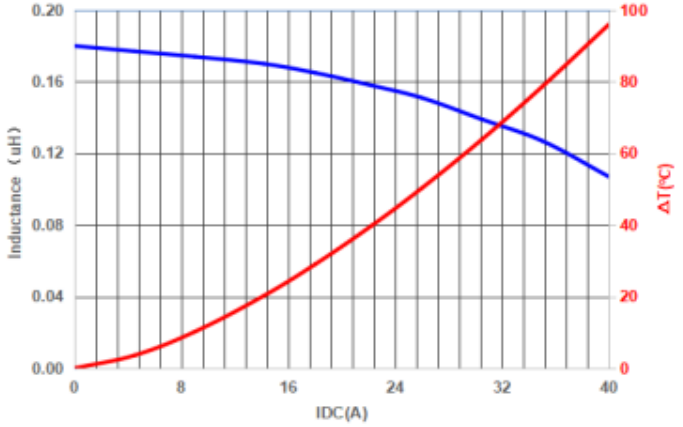

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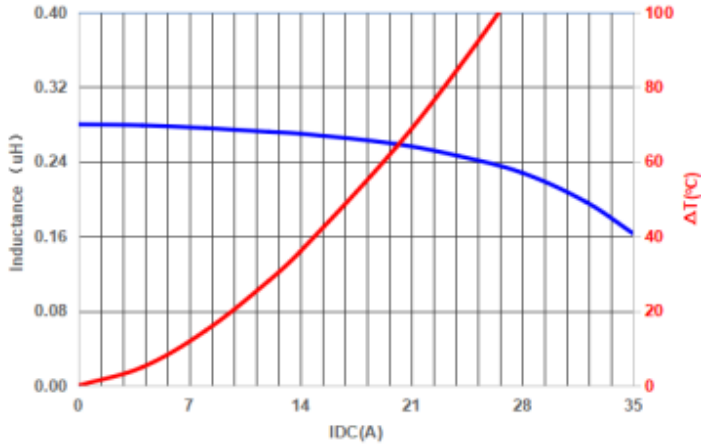

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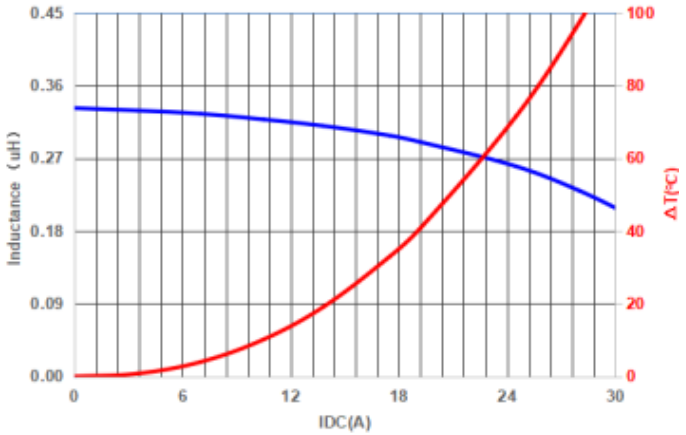

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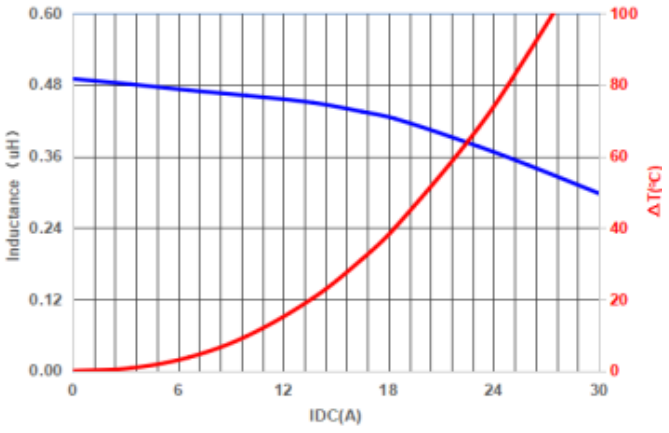

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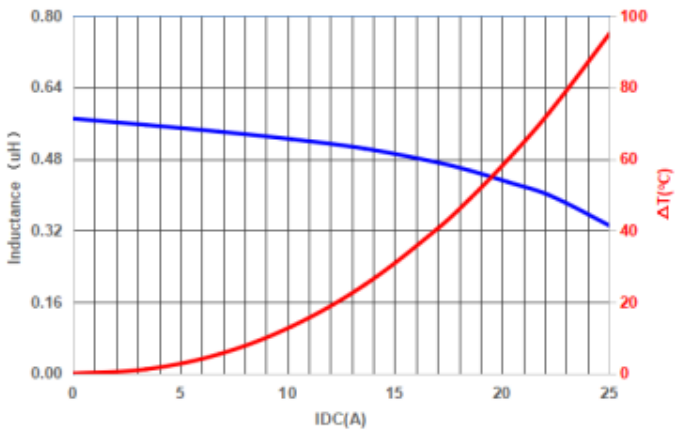

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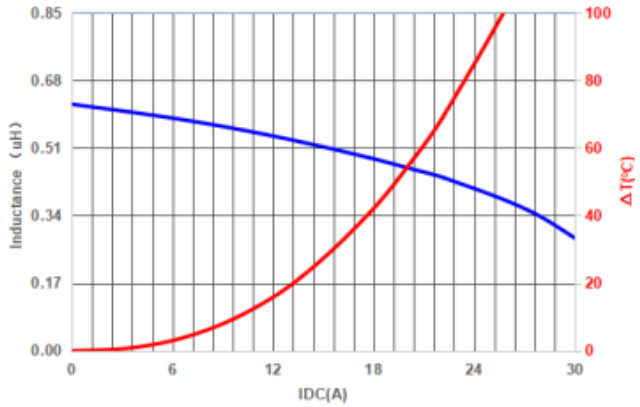
ASPIAIG-F5030-R60



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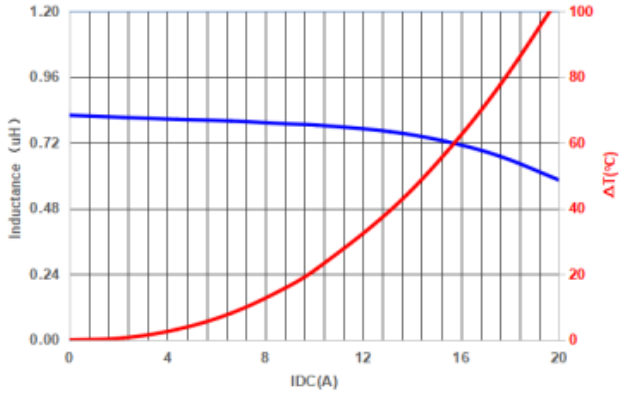

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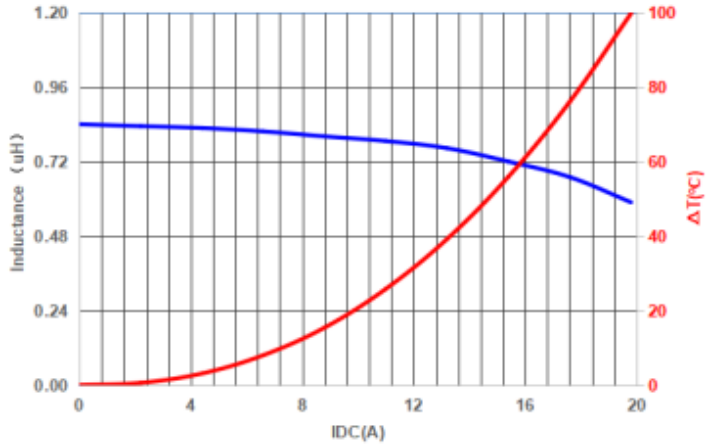

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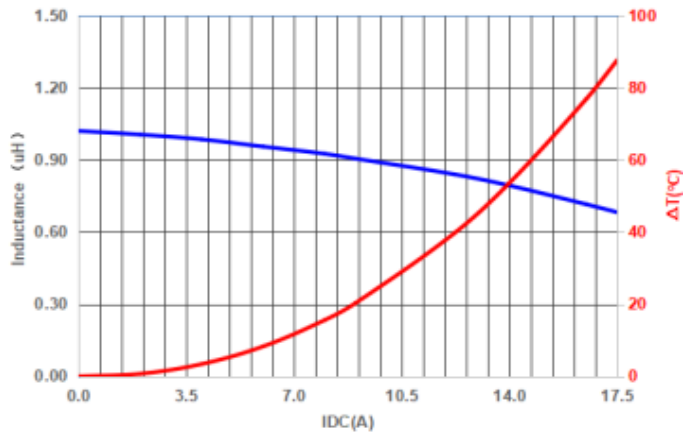

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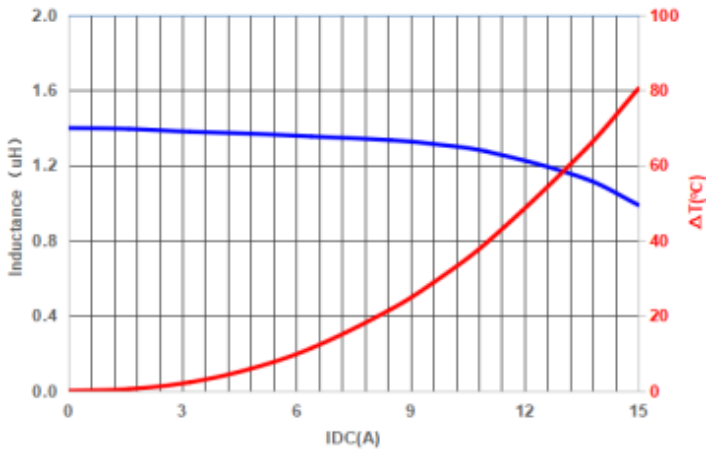

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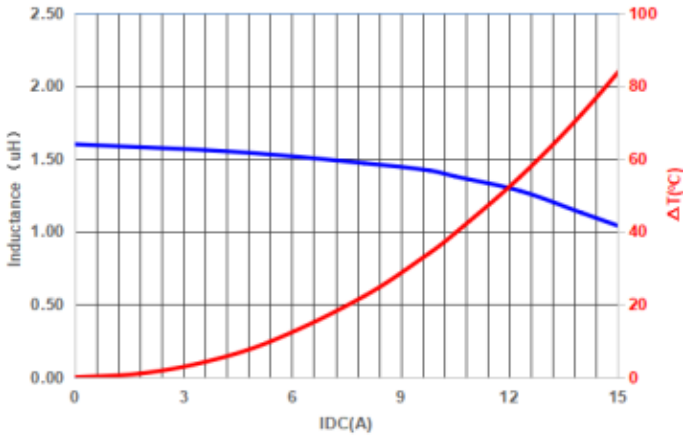

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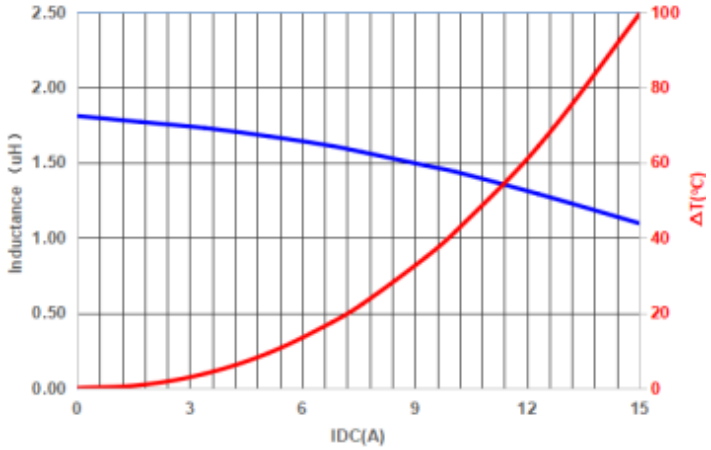
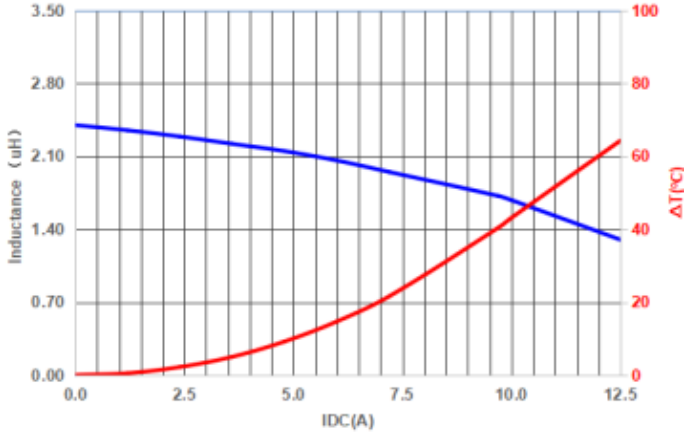
ASPIAIG-F5030-1R8



ASPIAIG-F5030-2R2



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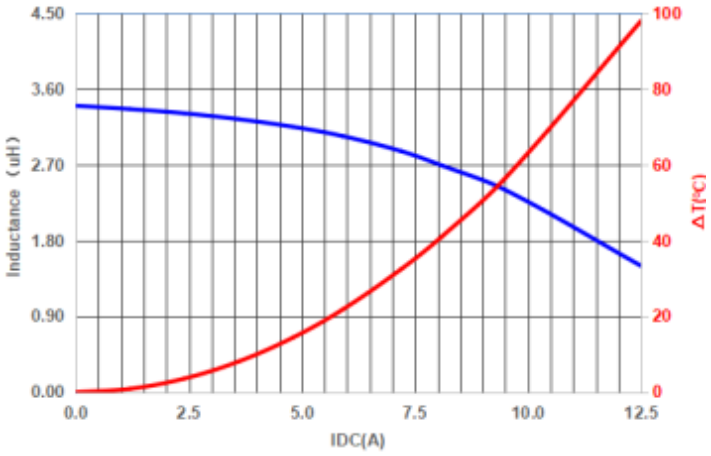
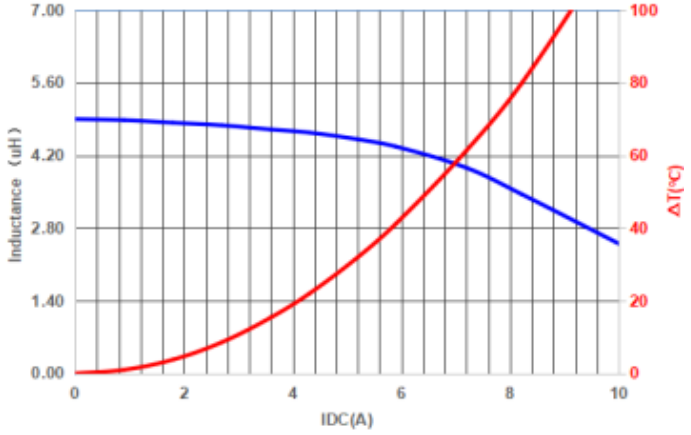


ASPIAIG-F5030-4R7



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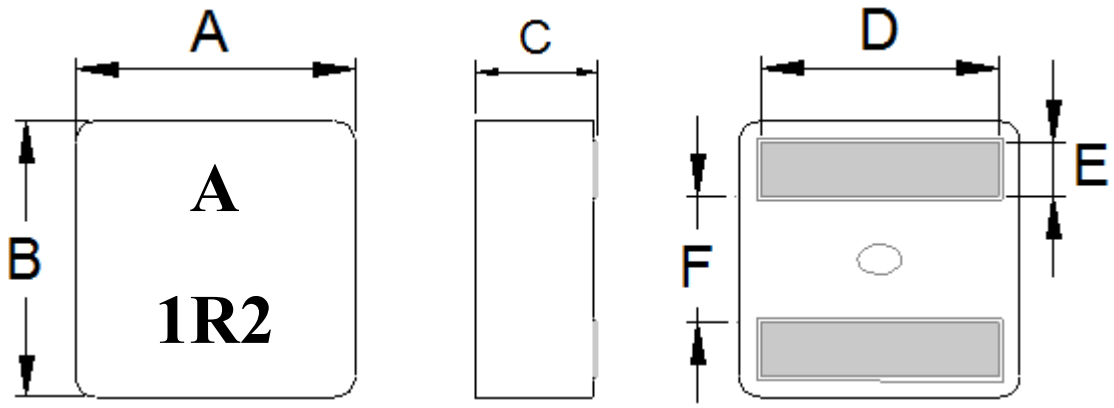
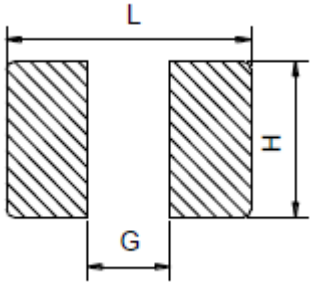
Mechanical Specifications



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

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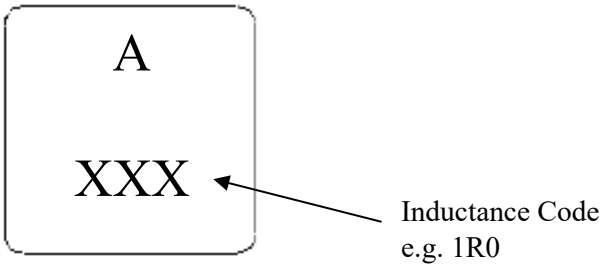
Part Identification

ASPIAIG – F5030 - [ ][ ] - [ ]

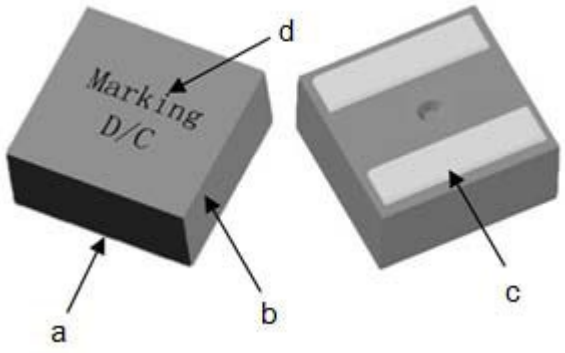
Inductance Code	Tolerance	Packaging
Please refer to Electrical Spec table	M: ±20%	T: Tape and Reel (2k pcs / reel)

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**

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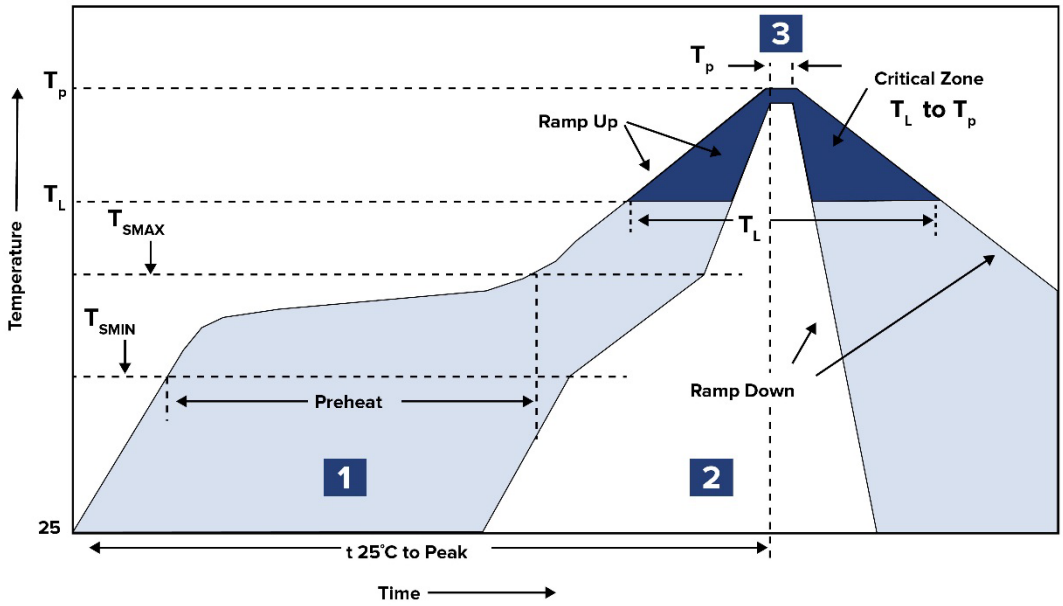
Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ 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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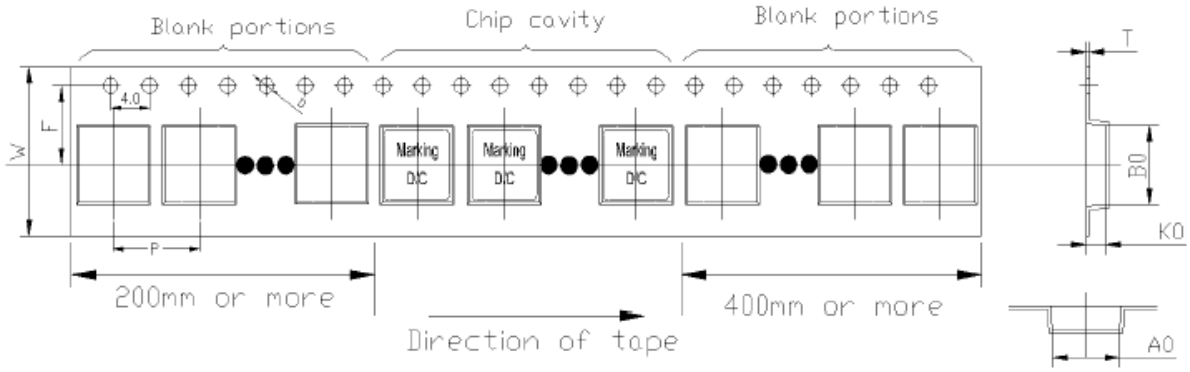
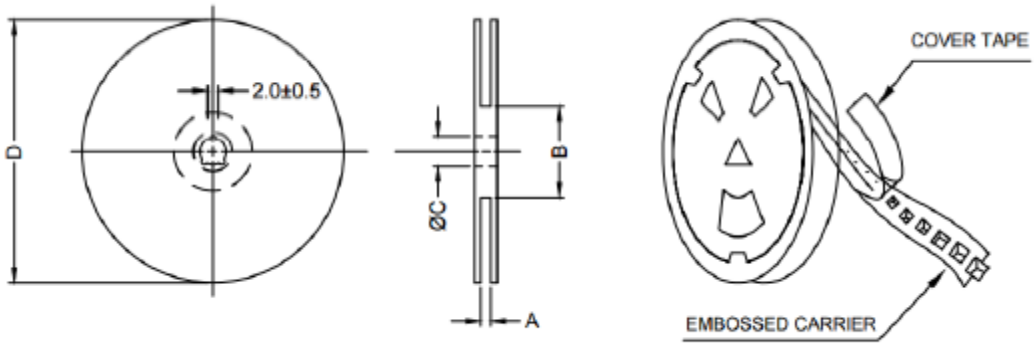
Packaging (Tape & Reel)

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

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