

Molded SMD Power Inductor



ASPIAIG-F6030 Series

Request Samples



Check Inventory



7.2 x 6.9 x 2.8 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 36A
- Exceptionally low DCR – only 1.75mΩ
- 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	Self-resonant Frequency	DC Resistance	Saturation Current	Temperature Rise Current	Electrode Width	Case Height
	0.1MHz/0.1V		Ref	Max	Max	Max	±0.3	±0.2
Units	μH	%	MHz	mΩ	A	A	mm	mm
Symbol	L	M	SRF	DCR	Isat	Irms	D	C
ASPIAIG-F6030-R18	0.18	20%	143	1.75	36.0	32.0	5.30	2.8
ASPIAIG-F6030-R33	0.33	20%	78	2.50	28.0	25.0	5.55	2.8
ASPIAIG-F6030-R56	0.56	20%	70	3.31	25.0	22.0	5.30	2.8
ASPIAIG-F6030-R68	0.68	20%	65	5.17	21.0	20.0	5.30	2.8
ASPIAIG-F6030-1R0	1.00	20%	52	6.05	18.0	18.0	5.20	2.8
ASPIAIG-F6030-1R2	1.20	20%	47	7.40	16.0	16.0	5.15	2.8
ASPIAIG-F6030-1R5	1.50	20%	40	9.13	15.5	15.0	5.15	2.9
ASPIAIG-F6030-1R8	1.80	20%	33	10.2	13.0	14.0	5.10	2.9
ASPIAIG-F6030-2R2	2.20	20%	29	12.2	11.0	10.0	5.05	2.9
ASPIAIG-F6030-3R3	3.30	20%	25	20.8	9.00	8.00	5.00	2.9
ASPIAIG-F6030-4R5	4.50	20%	20	25.3	8.00	7.00	5.00	2.9

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-F6030 Series is RoHS Compliant and Pb free

ASPIAIG-F6030 Series is AEC-Q200 Grade 0 qualified (-55°C ~ +155°C ambient)

Operating Voltage: 40V

MSL level: 1



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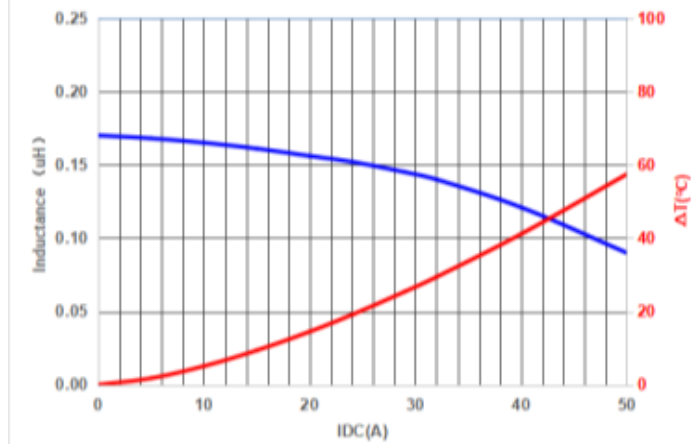


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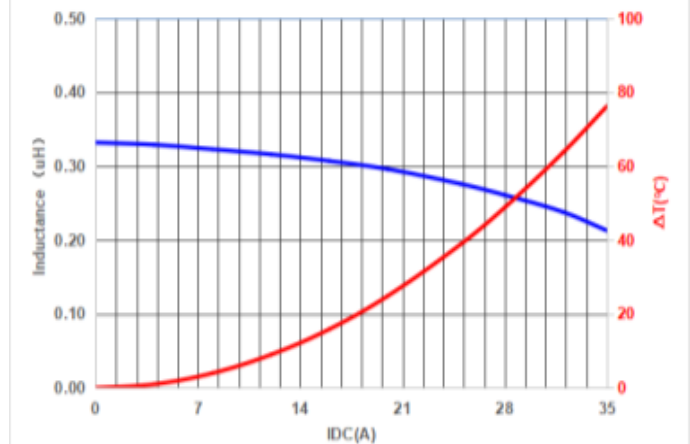


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RoHS/RoHS II Compliant
MSL Level = 1

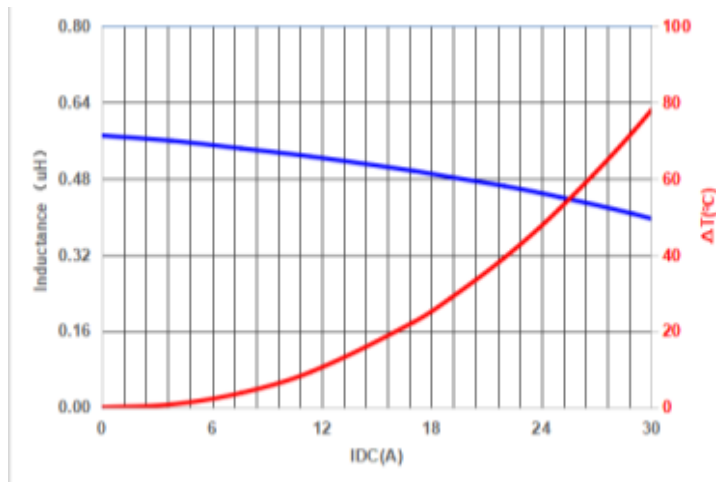
ASPIAIG-F6030-R18



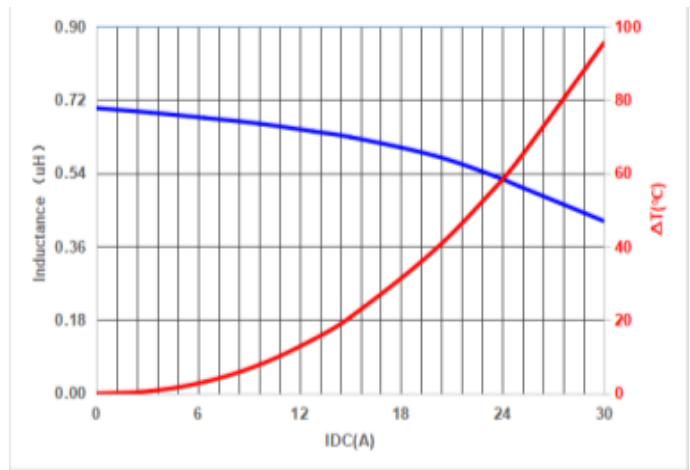
ASPIAIG-F6030-R33



ASPIAIG-F6030-R56



ASPIAIG-F6030-R68



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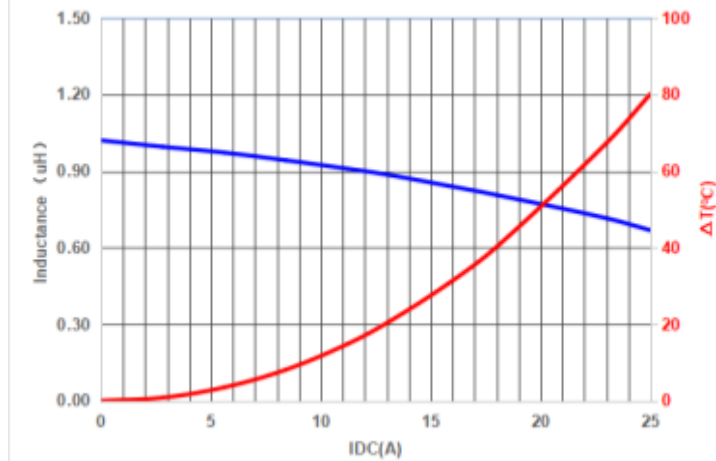


7.2 x 6.9 x 2.8 mm

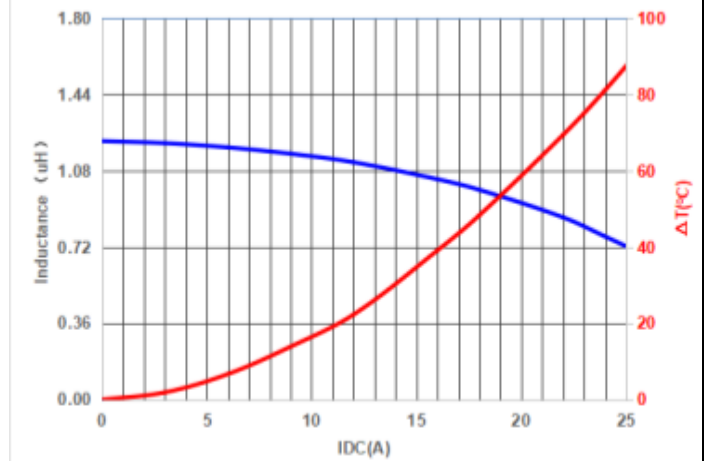
RoHS/RoHS II Compliant

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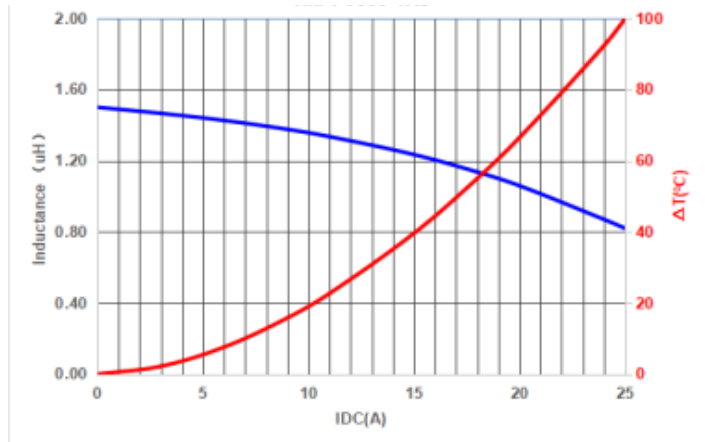
ASPIAIG-F6030-1R0



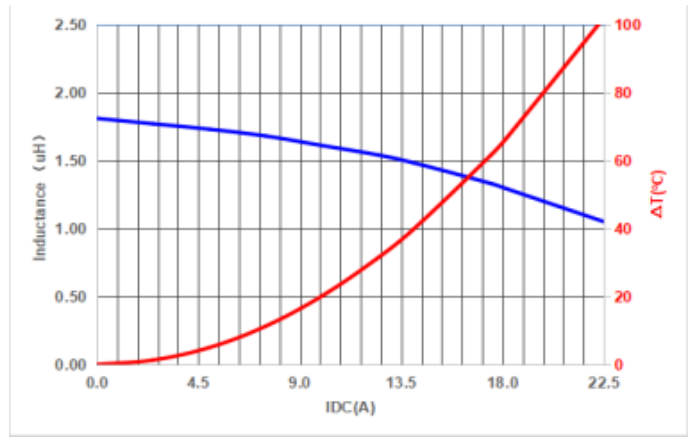
ASPIAIG-F6030-1R2



ASPIAIG-F6030-1R5



ASPIAIG-F6030-1R8



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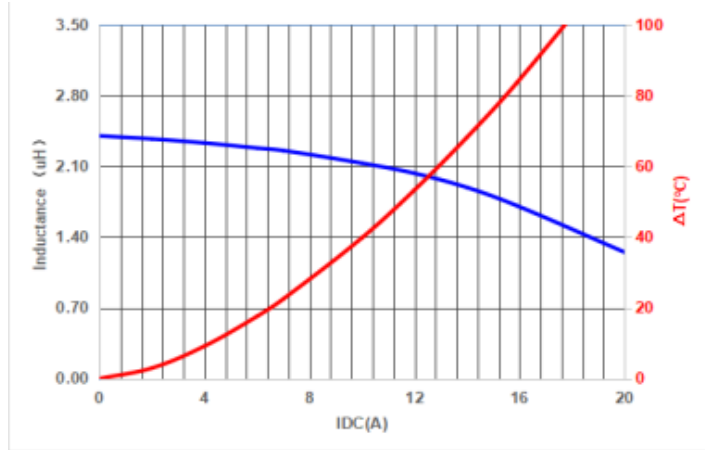


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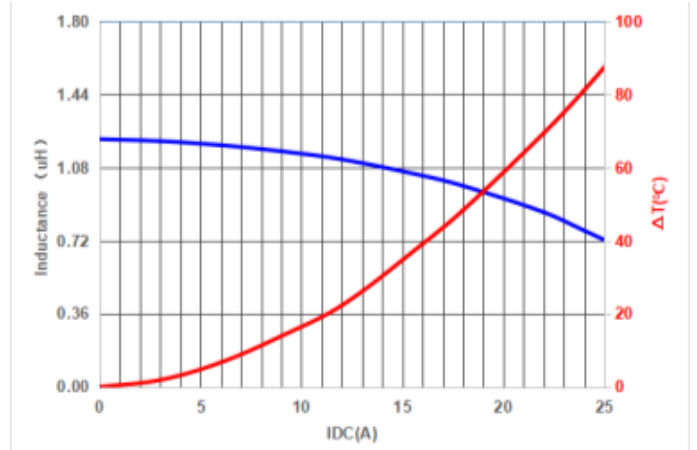


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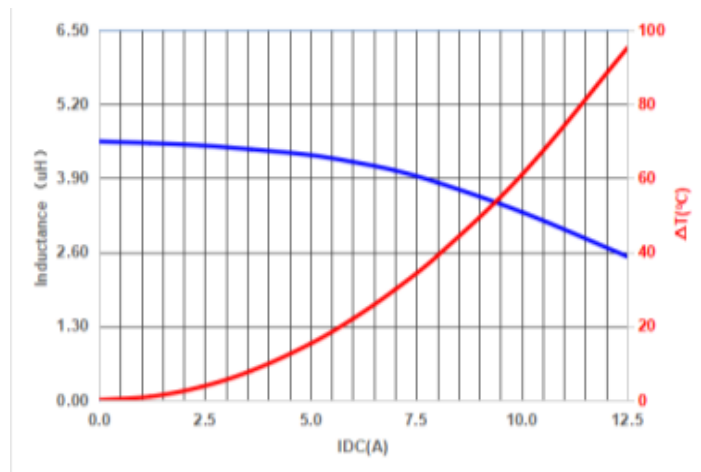
ASPIAIG-F6030-2R2



ASPIAIG-F6030-3R3



ASPIAIG-F6030-4R5



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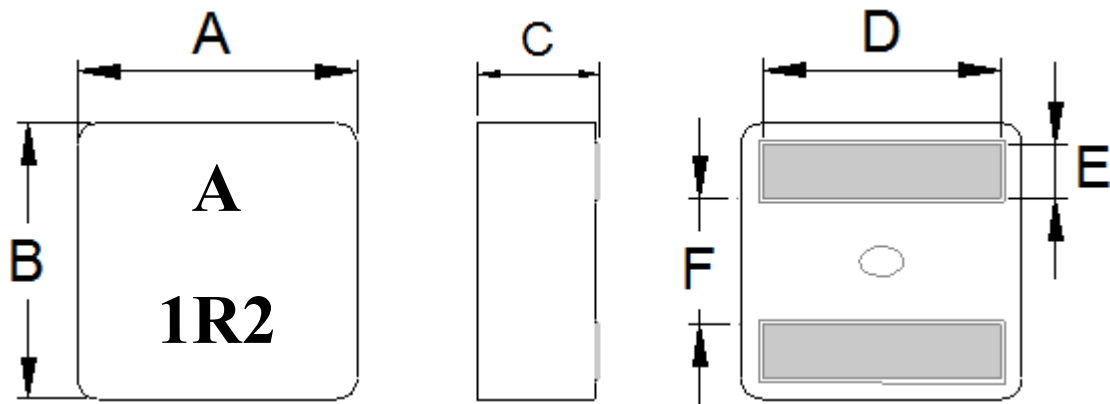


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RoHS/RoHS II Compliant

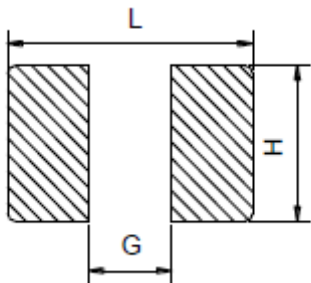
MSL Level = 1

Mechanical Specifications



Series	A	B	C	D	E	F
ASPIAIG-F6030	7.2 ± 0.2	6.9 ± 0.2	See electrical spec. table	See electrical spec. table	1.4 ± 0.2	2.6 ± 0.25

Recommended Land Pattern



L Typ.	G Typ.	H Typ.
5.6	2.5	5.6

Dimension: mm

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Part Identification

ASPIAIG – F6030 -

Inductance Code

Please refer to
Electrical Spec table

Tolerance

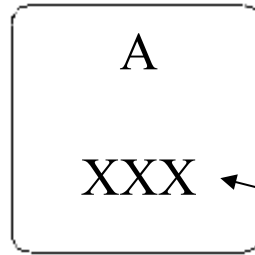
M: $\pm 20\%$

Packaging

T: Tape and Reel (1k pcs / reel)

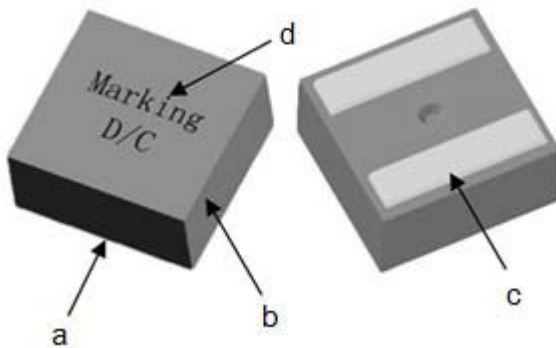
Marking

Marking Method: Ink



Inductance Code
e.g. 1R0

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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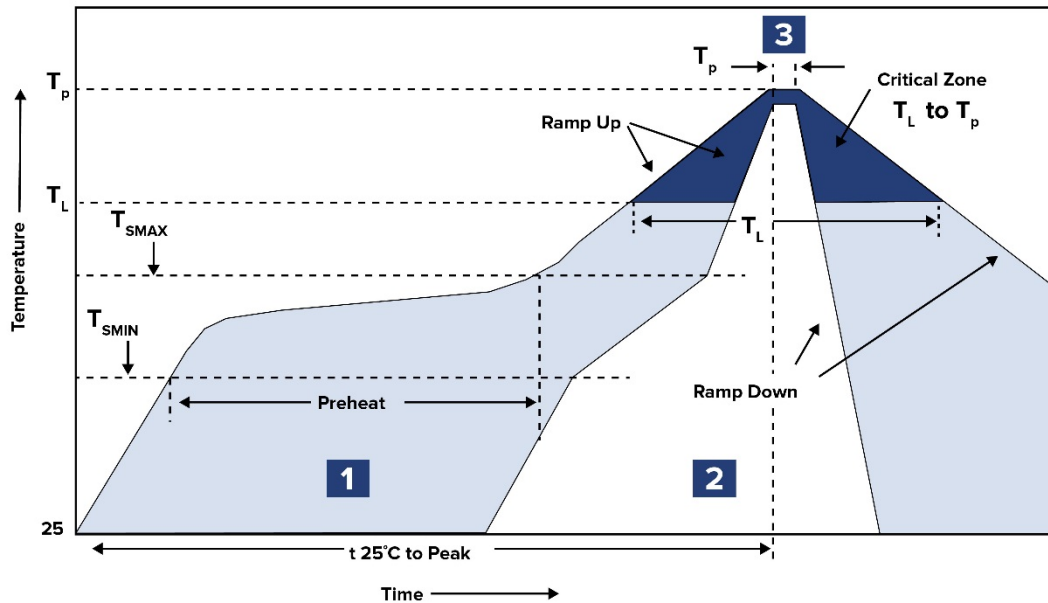


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Reflow Profile



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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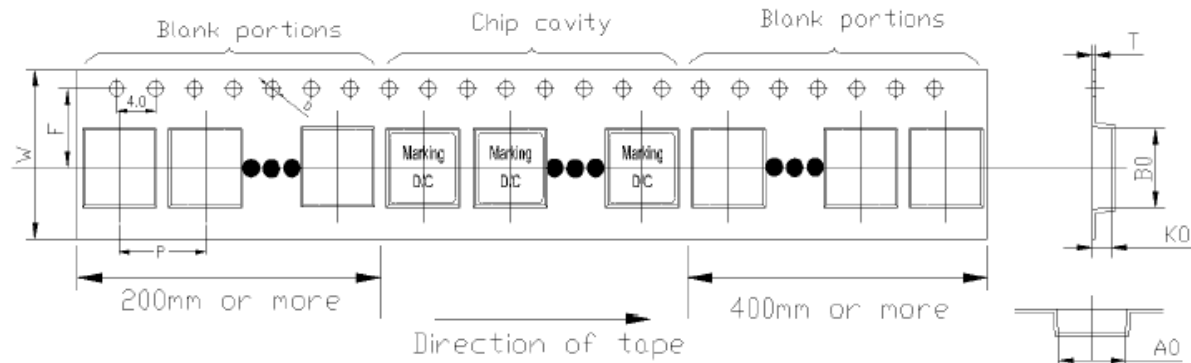
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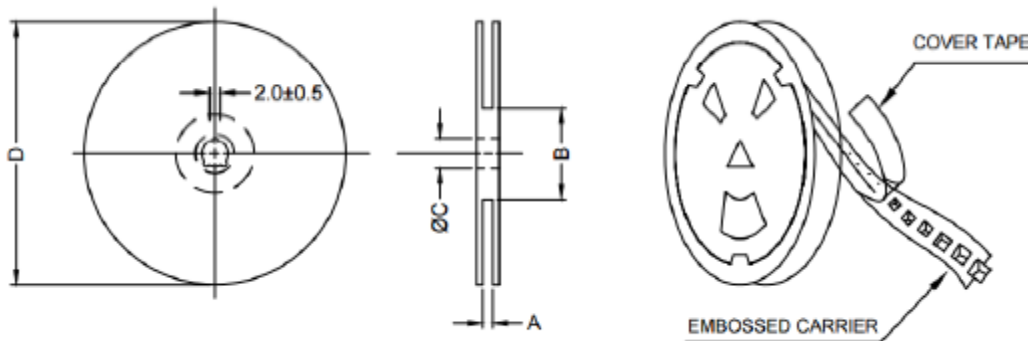
MSL Level = 1

Packaging (Tape & Reel)

ASPIAIG-F6030: 1000pcs / reel



Series	W	F	P	D	A ₀	B ₀	T	K ₀
ASPIAIG-F6030	16.0±0.3	7.5±0.1	12.0±0.1	1.5±0.1	6.8±0.1	7.0 ±0.1	0.35±0.1	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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