Molded SMD Power Inductor



ASPIAIG-F6050 Series

Request Samples Check Inventory

7.2 x 6.9 x 4.8 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 20A
- Exceptionally low DCR – only 4.52mΩ
- 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	Electrode Width
	0.1MHz/0.1V		Max	Max	Max	±0.3
Units	µH	%	mΩ	A	A	mm
Symbol	L	M	DCR	Isat	Irms	D
ASPIAIG-F6050-1R0	1.00	20%	4.52	18.0	20.0	5.3
ASPIAIG-F6050-1R2	1.20	20%	5.83	16.0	18.0	5.3
ASPIAIG-F6050-1R5	1.50	20%	6.3	14.5	17.0	5.3
ASPIAIG-F6050-1R8	1.80	20%	7.1	13.5	16.0	5.3
ASPIAIG-F6050-2R2	2.20	20%	8.5	12.0	13.0	5.2
ASPIAIG-F6050-3R3	3.30	20%	12.5	10.0	11.0	5.2
ASPIAIG-F6050-4R3	4.30	20%	16.2	8.5	9.0	5.2
ASPIAIG-F6050-4R7	4.70	20%	18.4	8.0	8.5	5.2
ASPIAIG-F6050-5R6	5.60	20%	22.0	8.3	7.0	5.2
ASPIAIG-F6050-6R8	6.80	20%	23.1	7.0	6.6	5.2
ASPIAIG-F6050-8R2	8.20	20%	28.6	6.8	6.2	5.2

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-F6050 Series is RoHS Compliant and Pb free
ASPIAIG-F6050 Series is AEC-Q200 Grade 0 qualified (-55˚C ~ +155˚C ambient)
Operating Voltage: 40V
MSL level: 1

ABRACON

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 : 11/12/2021

ABRACON IS ISO9001-2015 CERTIFIED

Molded SMD Power Inductor



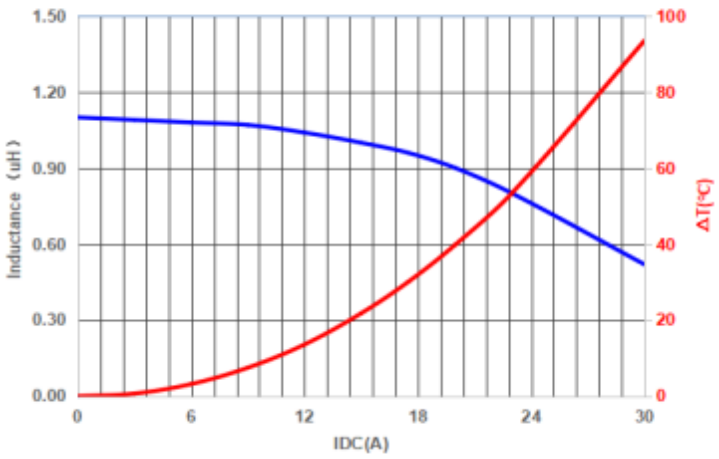
ASPIAIG-F6050 Series

Request Samples

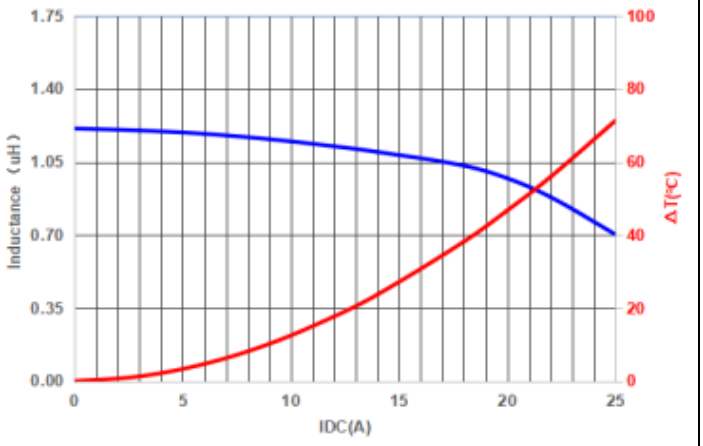
Check Inventory

7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

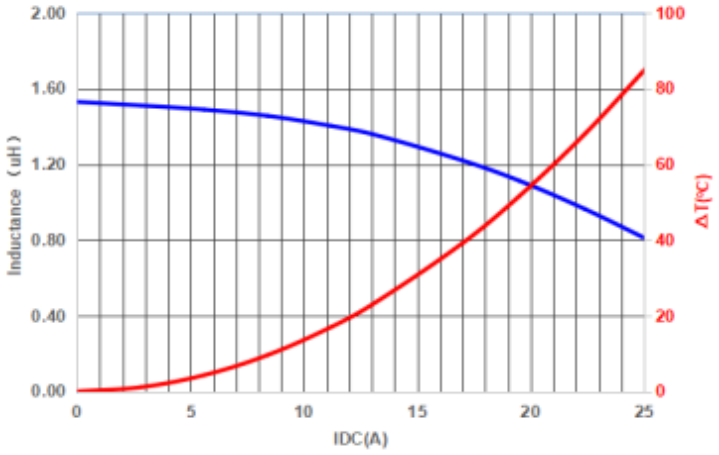
ASPIAIG-F6050-1R0



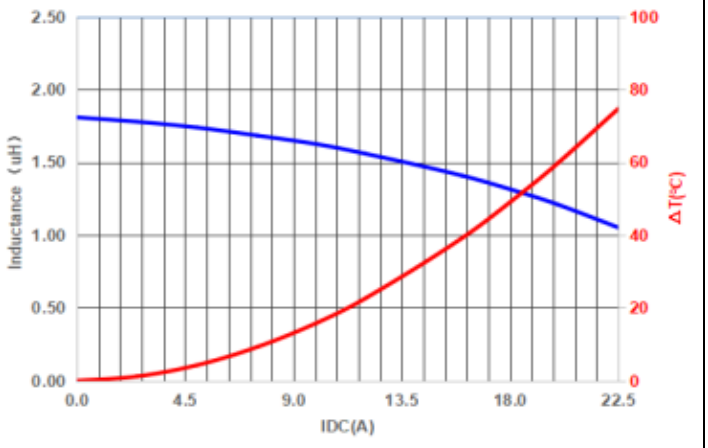
ASPIAIG-F6050-1R2



ASPIAIG-F6050-1R5



ASPIAIG-F6050-1R8



ABRACON

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 : 11/12/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



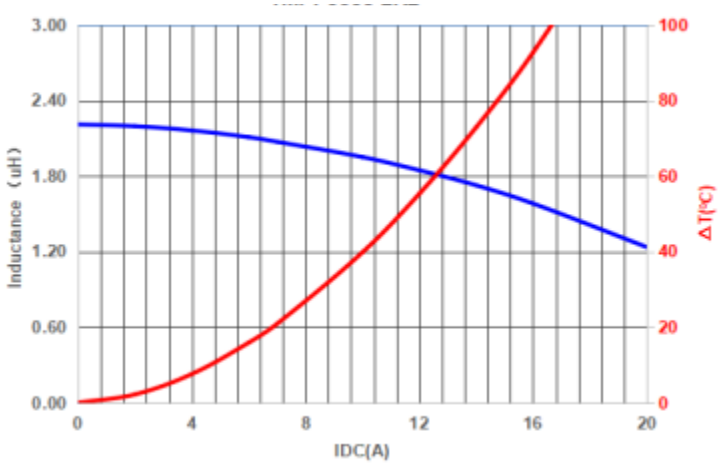
ASPIAIG-F6050 Series

Request Samples

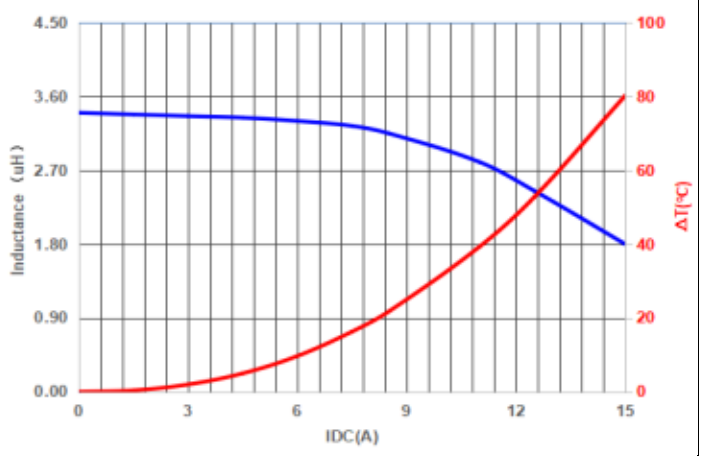
Check Inventory

7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

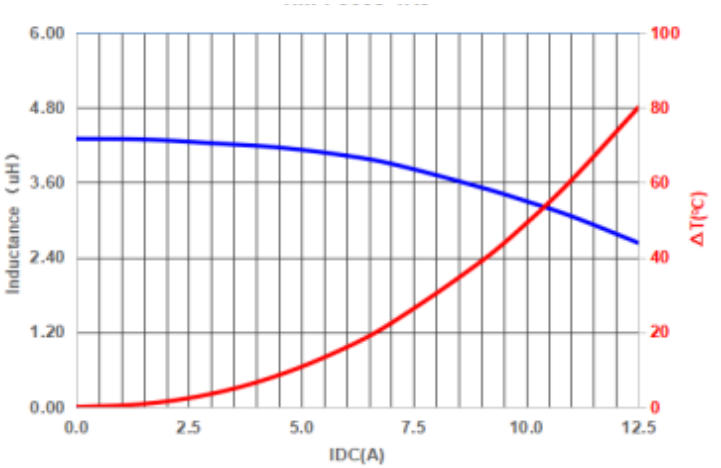
ASPIAIG-F6050-2R2



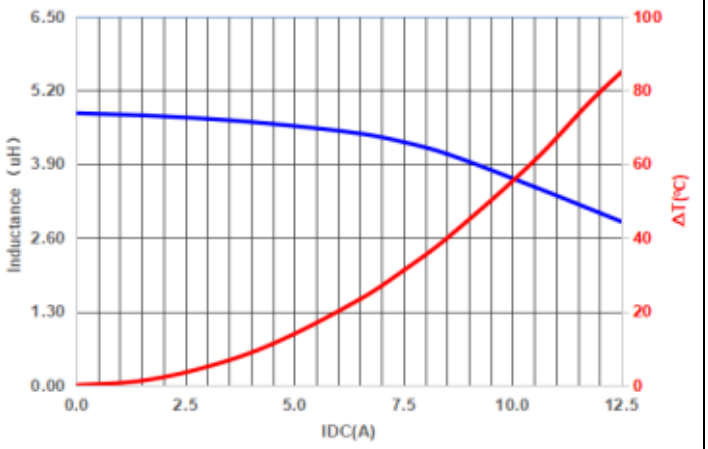
ASPIAIG-F6050-3R3



ASPIAIG-F6050-4R3



ASPIAIG-F6050-4R7



ABRACON

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 : 11/12/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



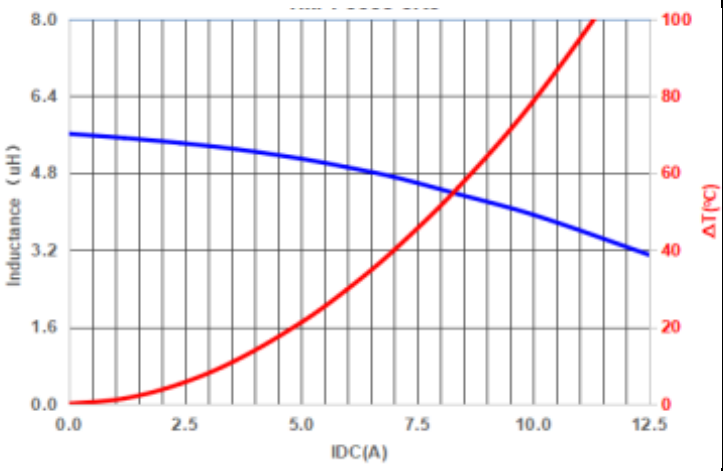
ASPIAIG-F6050 Series

Request Samples

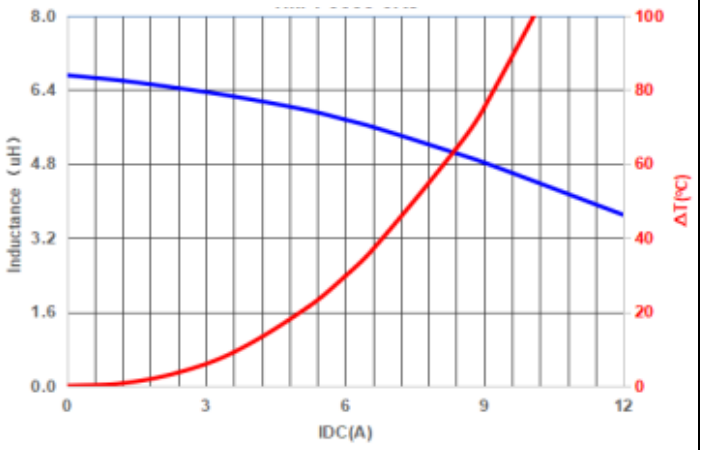
Check Inventory

7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

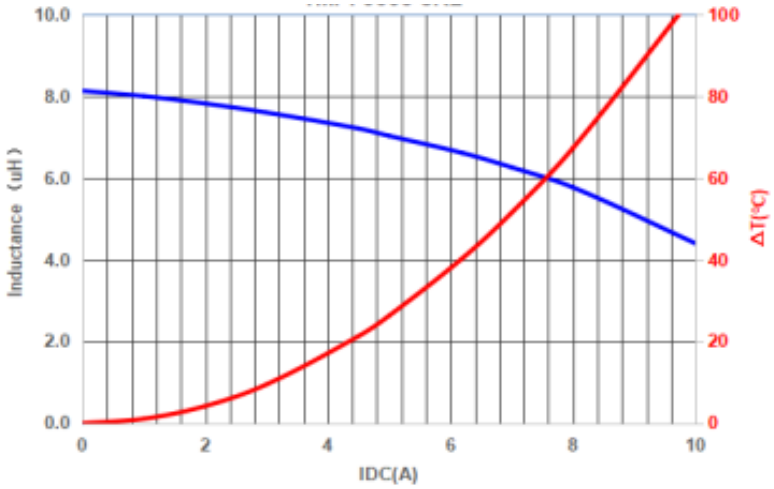
ASPIAIG-F6050-5R6



ASPIAIG-F6050-6R8



ASPIAIG-F6050-8R2



ABRACON

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 : 11/12/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor

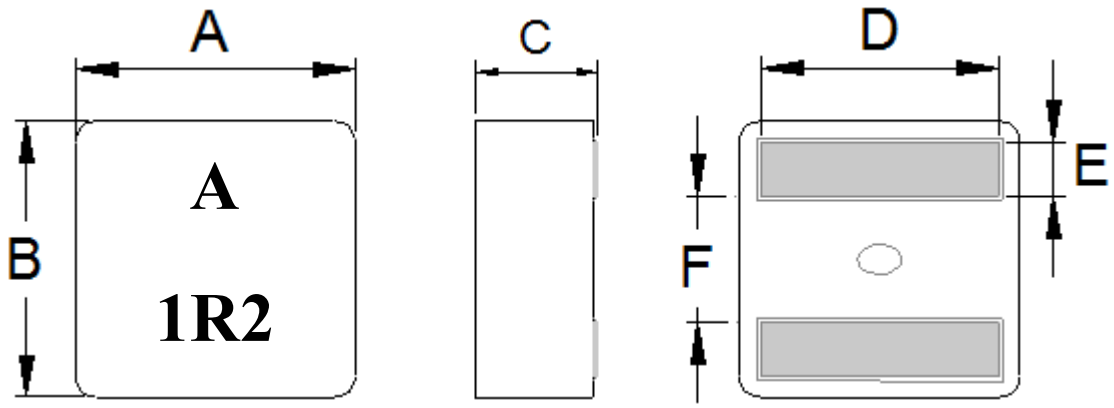


ASPIAIG-F6050 Series

Request Samples Check Inventory

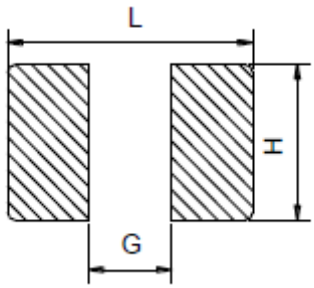
7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications



Series	A	B	C	D	E	F
ASPIAIG-F6050	7.2 ± 0.2	6.9 ± 0.2	4.8 ± 0.2	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

Molded SMD Power Inductor



ASPIAIG-F6050 Series

Request Samples Check Inventory

7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

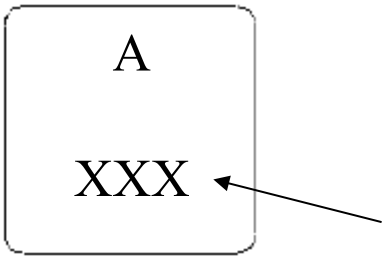
Part Identification

ASPIAIG – F6050 - [ ] [ ] - [ ]

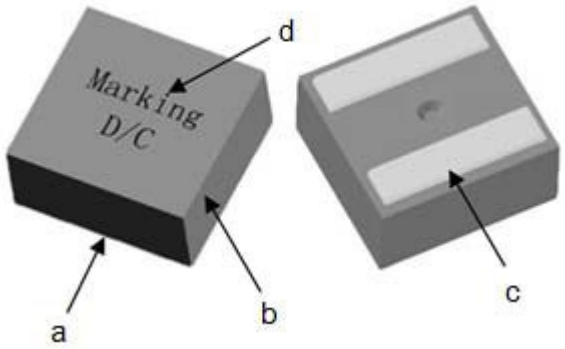
Inductance Code	Tolerance	Packaging
Please refer to Electrical Spec table	M: ±20%	T: Tape and Reel (800 pcs / reel)

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**

ABRACON

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 : 11/12/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



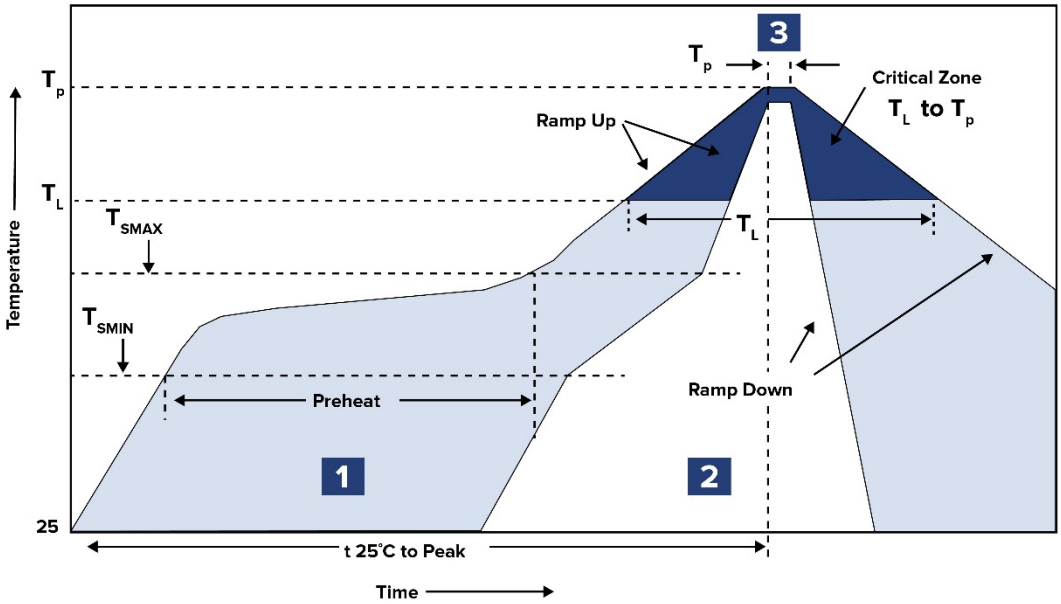
ASPIAIG-F6050 Series

Request Samples

Check Inventory

7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

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

ABRACON

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 : 11/12/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Molded SMD Power Inductor



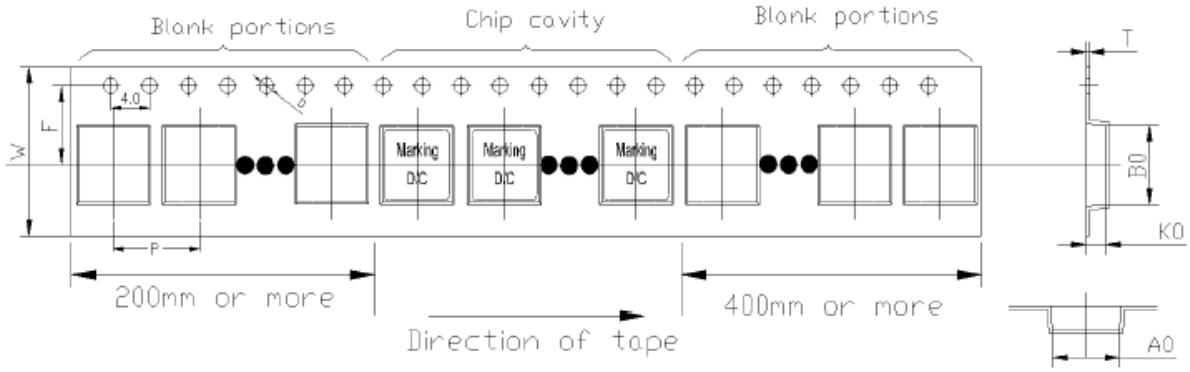
ASPIAIG-F6050 Series

Request Samples Check Inventory

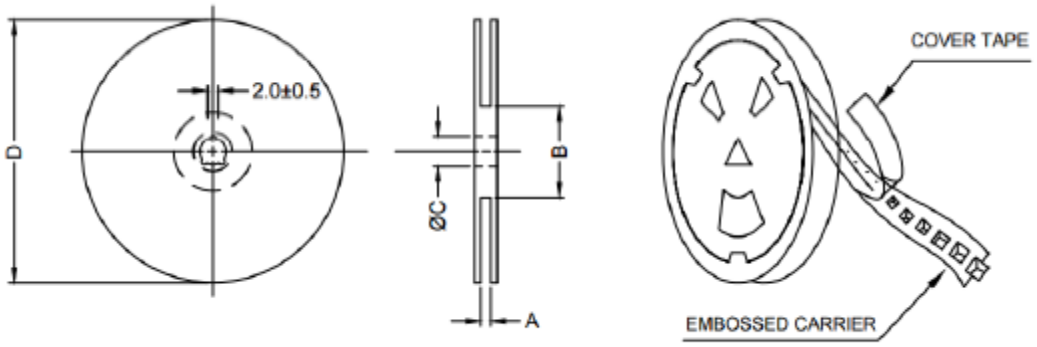
7.2 x 6.9 x 4.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging (Tape & Reel)

ASPIAIG-F6050: 800pcs / reel



Series	W	F	P	D	A_0	B_0	T	K_0
ASPIAIG-F6050	16.0±0.3	7.5±0.1	12.0±0.1	1.5±0.1	7.6±0.1	7.3 ±0.1	0.35±0.1	5.3±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.

ABRACON

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 : 11/12/2021

ABRACON IS
ISO9001-2015
CERTIFIED

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

ABRACON:

ABLS-16.000MHZ-D4-T ASV-125.000MHZ-EC-T ATX-11-F-27.000MHZ-F05-T AMDLA4010S-2R2MT AMPLA5030Q-4R7MT ASCO-50.000MHz-E-K-T3 ASDMB-8.000MHZ-LC-T ABM8-24.000MHZ-D4Y-T ABM8AIG-24.000MHZ-12-2Z-T3 AMPMAFB-27.0000T ASPI-M3015-2R2M-T FC5BAEEMM8.0-T1 ACML-0402HC-301-T ASPIAIG-Q1060-1R0M-T FT5HNBPK25.0-T1 ABM8G-16.000MHz-4-Y-T3 AISC-1008F-100G-T AMPMGFB-25.0000T ATCA-07-101M-H ABMM2-10.000MHZ-E2-T ACHL-25.000MHZ-EK ASEMB-100.000MHZ-LY-T ABM11W-16.0000MHZ-8-K1Z-T3 ABM8-27.000MHZ-B2-T ABM8G-24.000MHz-4-Y-T3 ASPIAIG-F1040-R36M-T ABLSG-24.000MHz-D-2-Y-T ASE3-25.000MHz-E-K-T ASPI-F1010-4R7M-T ASPIAIG-Q5030-1R0M-T