COMPACT SHIELDED SMD POWER INDUCTOR FOR AUTOMOTIVE

ASPIAIG-SXXXX SERIES



ASPIAIG-S6055: 6.0 x 6.0 x 5.5 mm
ASPIAIG-S8050: 8.0 x 8.0 x 5.0 mm

RoHS/RoHS II Compliant

MSL = 1

FEATURES

- High reliability wire-wound construction
- Shielded construction reduces EMI
- Automotive grade power inductor
- TS-16949 qualified production
- PPAP level 3 support
- AEC-Q200 qualified with -40˚C to 125˚C operation
- High inductance up to 470µH

APPLICATIONS

- Height restricted applications
- Automotive body electronics and comfort system
- Automotive infotainment and entertainment
- Automotive navigation
- Transportation
- Lighting, LED ballasts
- Industrial Internet of Things (IIoT)
- Industrial applications
- Solar power
- DC/DC converters and switch mode power supplies

STANDARD SPECIFICATIONS

Operating Temperature	-40˚C ~ +125˚C
Storage Condition	-10˚C ~ +40˚C and R.H. 70% max

Part Number	Inductance	Tolerance	Self-resonant	DC Resistance	Saturation Current	Temperature Rise Current
	100kHz/1V		Min	Max Max (25˚C)	Typ	Typ
Units	µH	%	MHz	Ω	A	A
Symbol	L	M	SRF	DCR	Isat	Irms
ASPIAIG-S6055-3R3	3.3	20	32	0.026	6.00	4.60
ASPIAIG-S6055-4R7	4.7	20	24	0.031	5.00	4.25
ASPIAIG-S6055-6R8	6.8	20	20	0.034	4.30	4.10
ASPIAIG-S6055-8R2	8.2	20	21	0.049	4.30	3.40
ASPIAIG-S6055-100	10	20	15	0.054	3.70	3.20
ASPIAIG-S6055-150	15	20	12	0.074	3.30	2.75
ASPIAIG-S6055-220	22	20	10	0.100	2.60	2.35
ASPIAIG-S6055-330	33	20	7.8	0.170	2.00	1.80
ASPIAIG-S6055-470	47	20	6.4	0.252	1.70	1.50
ASPIAIG-S6055-680	68	20	6.4	0.353	1.40	1.25
ASPIAIG-S6055-101	100	20	4.2	0.434	1.10	1.10
ASPIAIG-S6055-151	150	20	4.2	0.686	0.90	0.90
ASPIAIG-S6055-221	220	20	3.5	1.036	0.70	0.70
ASPIAIG-S6055-331	330	20	2.8	1.603	0.65	0.60
ASPIAIG-S8050-1R0	1.0	20	99	0.010	16.00	7.20
ASPIAIG-S8050-1R5	1.5	20	79	0.012	13.00	6.50
ASPIAIG-S8050-2R2	2.2	20	59	0.014	11.00	5.80
ASPIAIG-S8050-3R3	3.3	20	24	0.020	9.00	4.90
ASPIAIG-S8050-4R7	4.7	20	23	0.023	7.50	4.60
ASPIAIG-S8050-6R8	6.8	20	19	0.029	6.10	4.20
ASPIAIG-S8050-8R2	8.2	20	18	0.035	5.60	3.80
ASPIAIG-S8050-100	10	20	14	0.038	5.20	3.60
ASPIAIG-S8050-150	15	20	13	0.061	4.50	2.70
ASPIAIG-S8050-220	22	20	9.0	0.088	3.50	2.20
ASPIAIG-S8050-330	33	20	7.6	0.122	3.00	2.00
ASPIAIG-S8050-470	47	20	6.6	0.173	2.40	1.70
ASPIAIG-S8050-680	68	20	5.4	0.252	2.00	1.45
ASPIAIG-S8050-101	100	20	4.4	0.326	1.60	1.25
ASPIAIG-S8050-151	150	20	3.2	0.480	1.40	1.00
ASPIAIG-S8050-221	220	20	2.9	0.708	1.10	0.75
ASPIAIG-S8050-331	330	20	2.3	1.044	0.90	0.65
ASPIAIG-S8050-471	470	M	1.9	1.540	0.80	0.55

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ASPIAIG-S8050: 8.0 x 8.0 x 5.0 mm

RoHS/RoHS II Compliant

MSL = 1

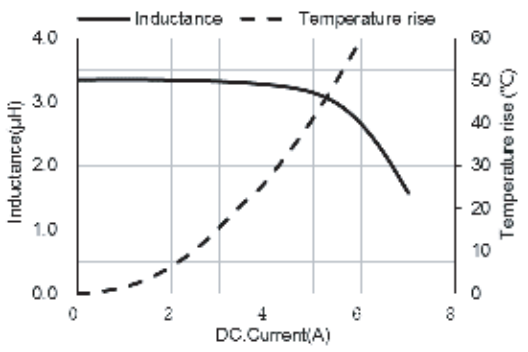
PART NUMBER IDENTIFICATION

ASPIAIG - S [ ] - [ ] [ ] - [ ]

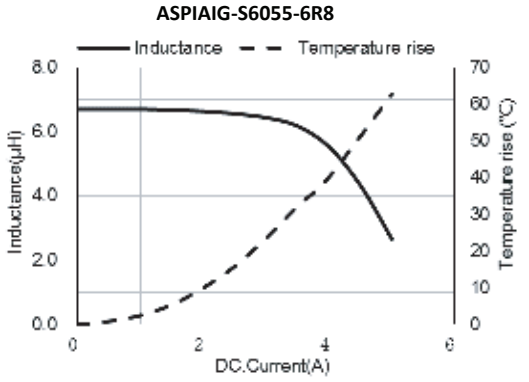
SERIES #	IMPEDENCE CODE	TOLERANCE	PACKAGING
6055 8050	Please refer to Electrical Spec table	M: ±20%	T: Tape and Reel (Series #6055 800pcs / reel) (Series #8050 900pcs / reel)

ELECTRICAL CHARACTERISTICS

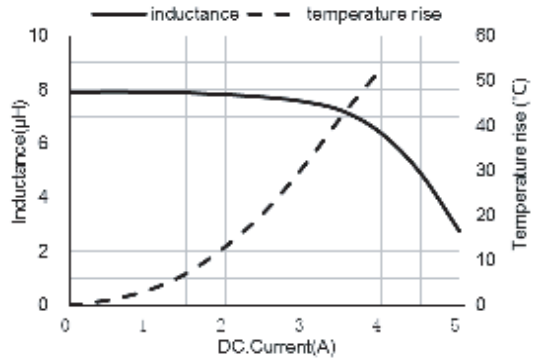
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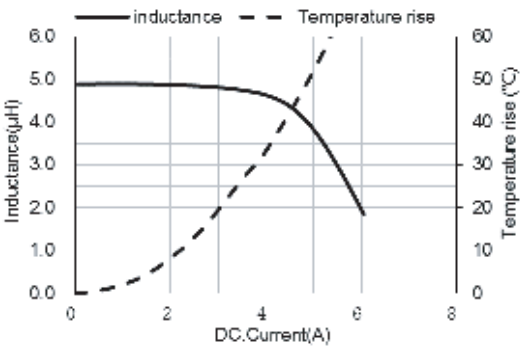
ASPIAIG-S6055-6R8



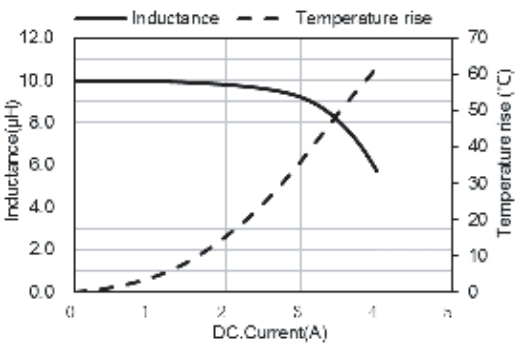
ASPIAIG-S6055-8R2



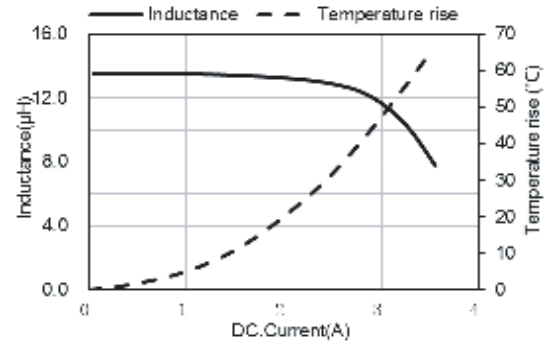
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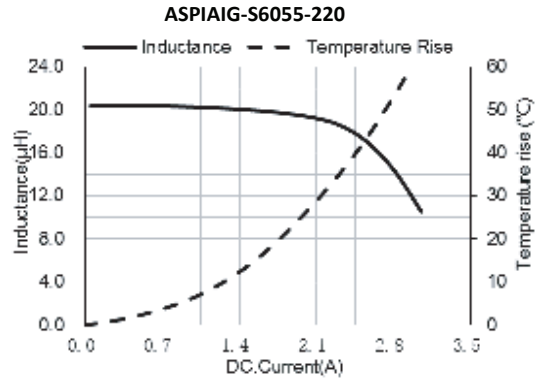
ASPIAIG-S6055-100



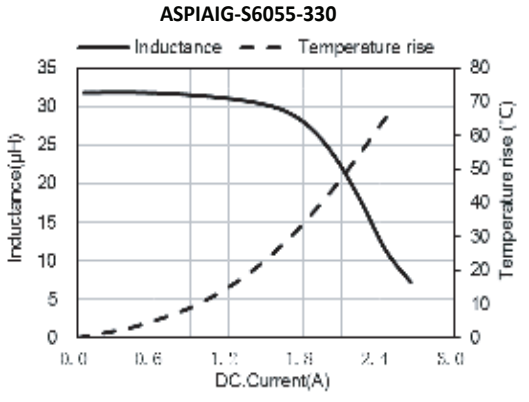
ASPIAIG-S6055-150



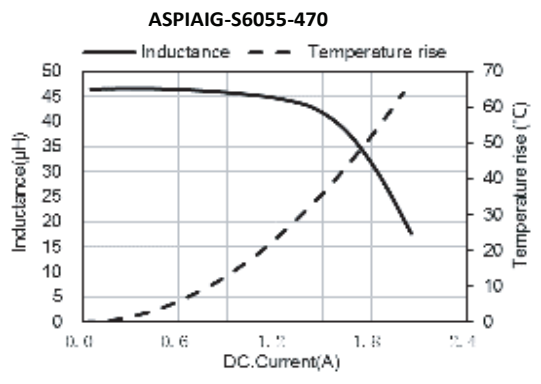
ASPIAIG-S6055-220



ASPIAIG-S6055-330



ASPIAIG-S6055-470



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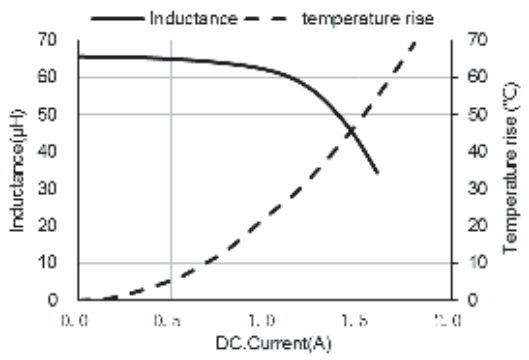
ASPIAIG-S6055: 6.0 x 6.0 x 5.5 mm
ASPIAIG-S8050: 8.0 x 8.0 x 5.0 mm

RoHS/RoHS II Compliant

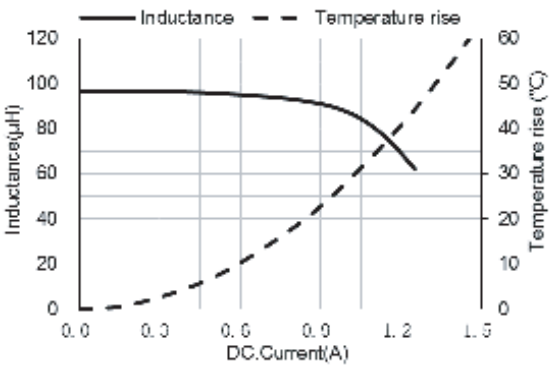
MSL = 1

ELECTRICAL CHARACTERISTICS

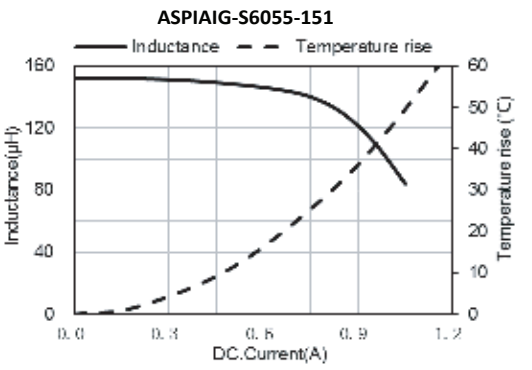
ASPIAIG-S6055-680



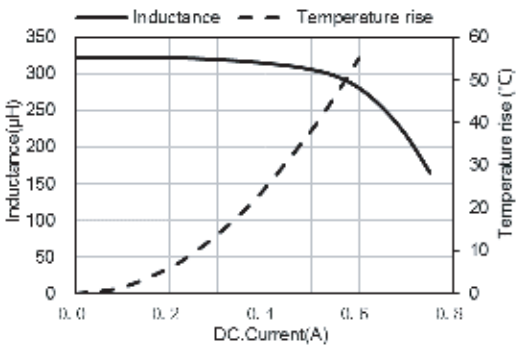
ASPIAIG-S6055-101



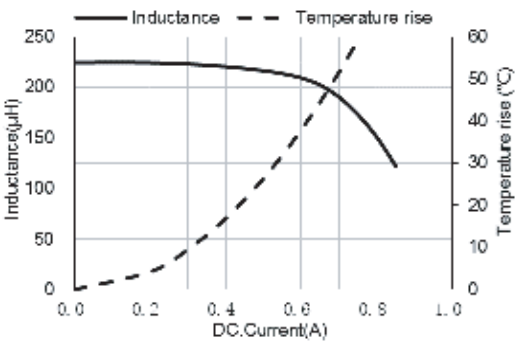
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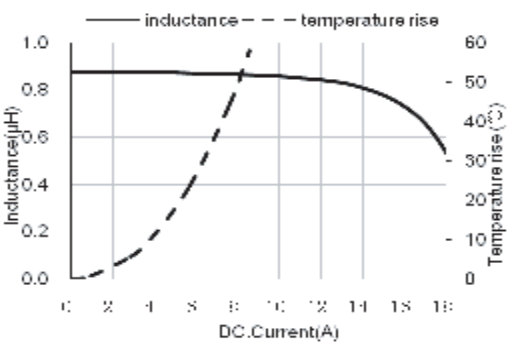
ASPIAIG-S6055-331



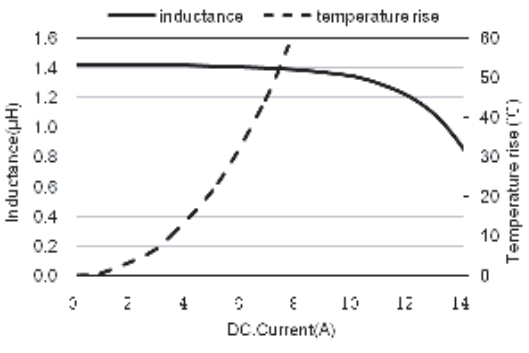
ASPIAIG-S6055-221



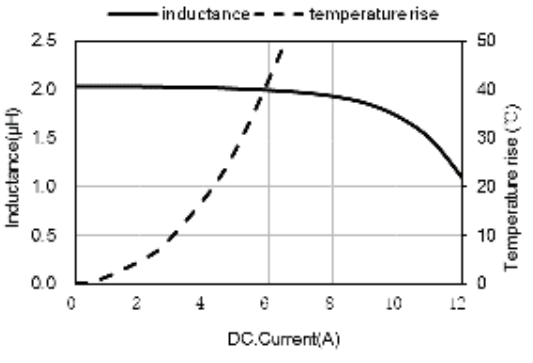
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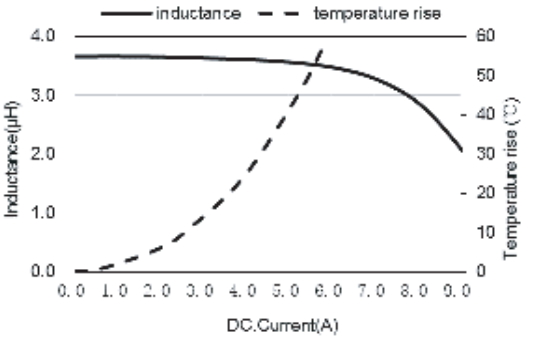
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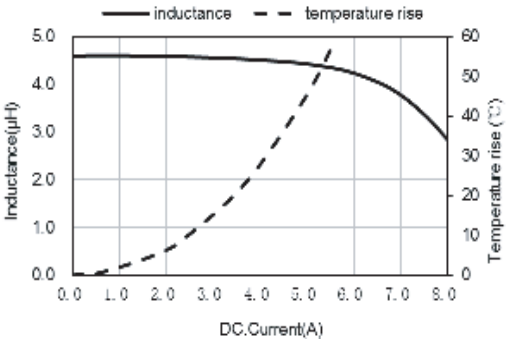
ASPIAIG-S8050-2R2



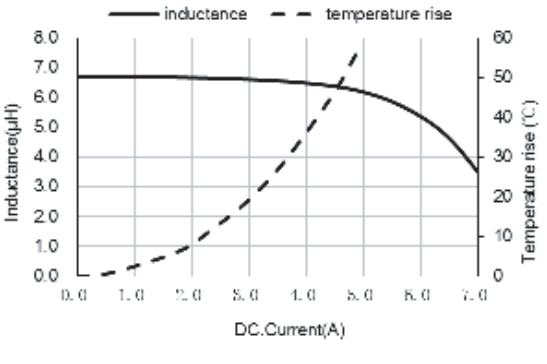
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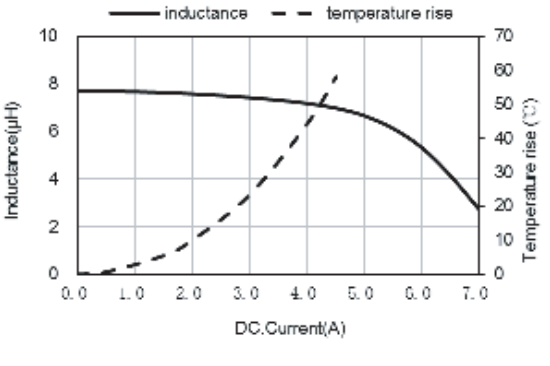
ASPIAIG-S8050-4R7



ASPIAIG-S8050-6R8



ASPIAIG-S8050-8R2



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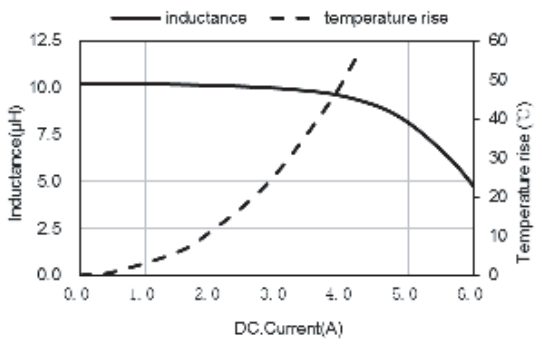
ASPIAIG-S6055: 6.0 x 6.0 x 5.5 mm
ASPIAIG-S8050: 8.0 x 8.0 x 5.0 mm

RoHS/RoHS II Compliant

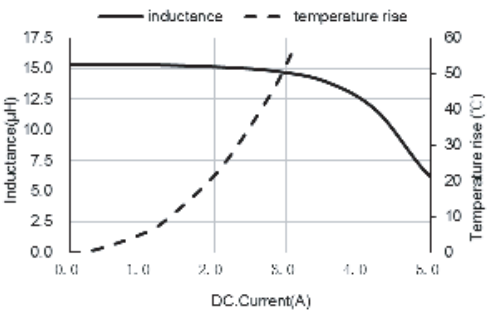
MSL = 1

ELECTRICAL CHARACTERISTICS

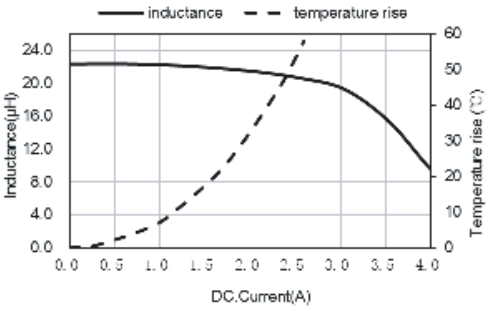
ASPIAIG-S8050-100



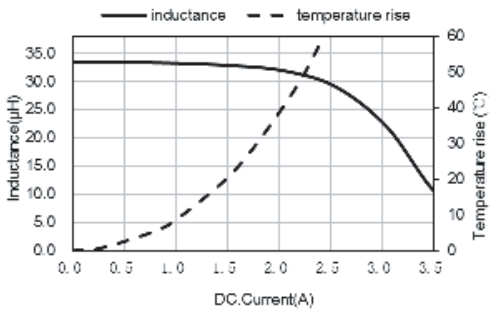
ASPIAIG-S8050-151



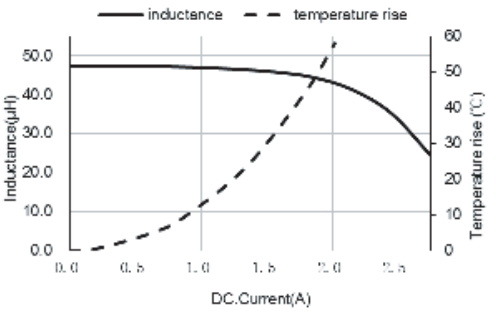
ASPIAIG-S8050-220



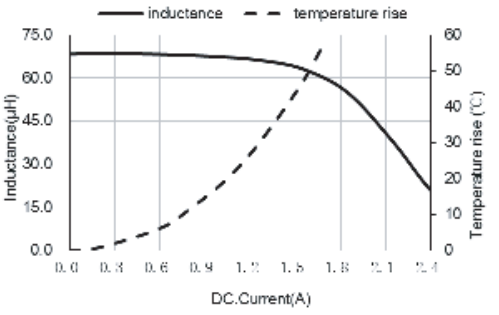
ASPIAIG-S8050-330



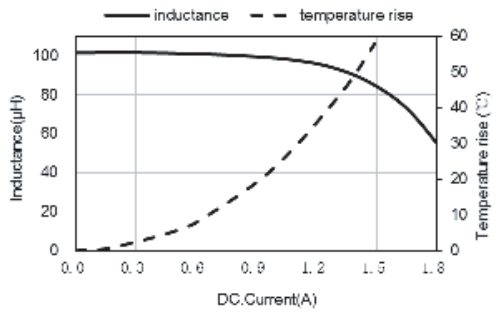
ASPIAIG-S8050-470



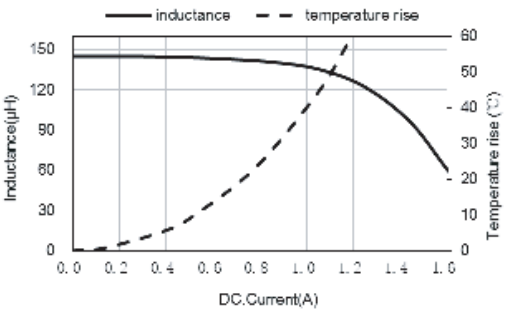
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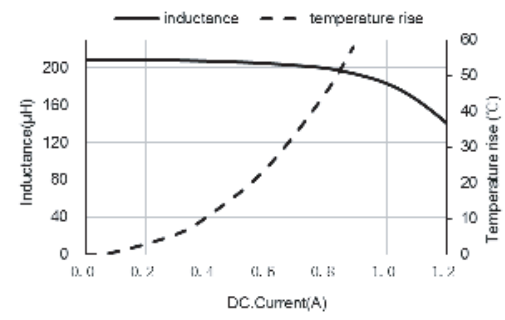
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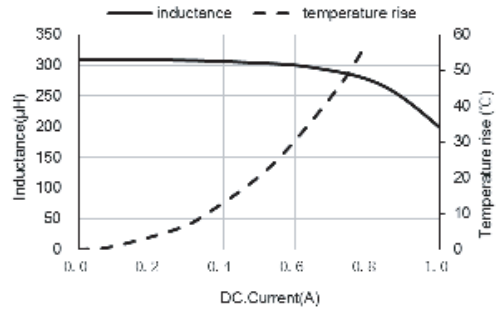
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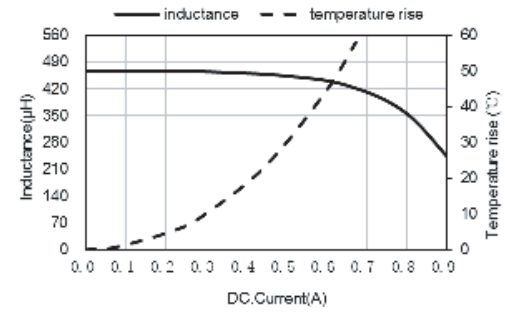
ASPIAIG-S8050-221



ASPIAIG-S8050-331



ASPIAIG-S8050-471



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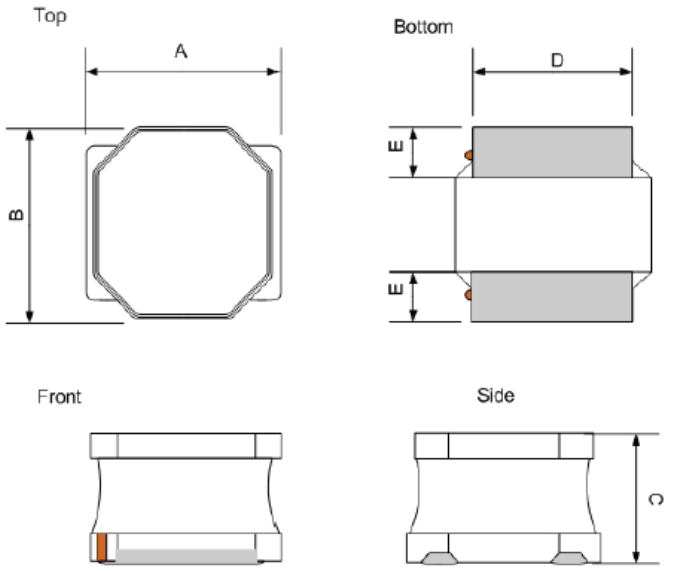


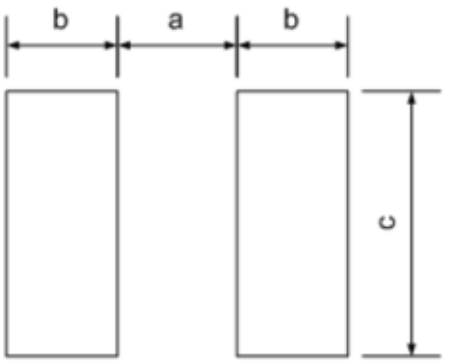
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ASPIAIG-S8050: 8.0 x 8.0 x 5.0 mm

RoHS/RoHS II Compliant

MSL = 1

MECHANICAL DIMENSIONS

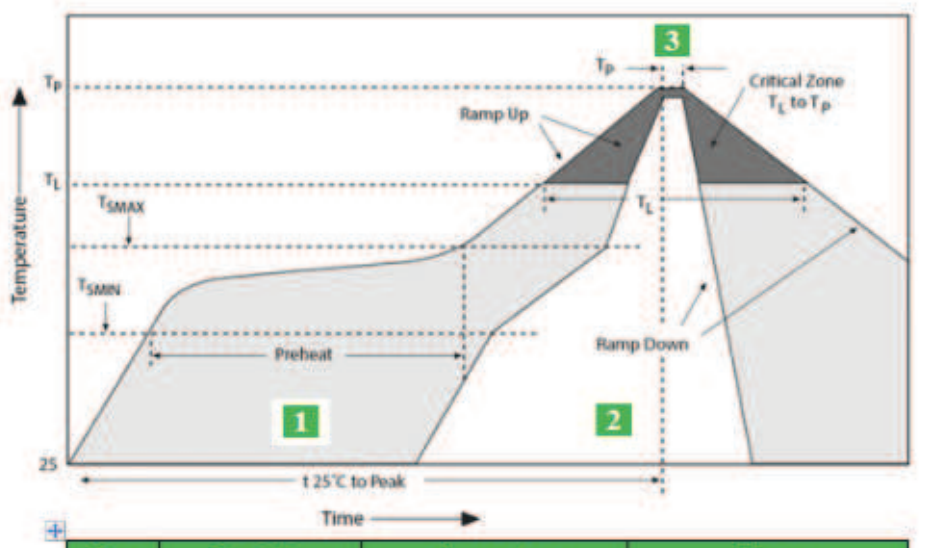




Series	a Typ	b Typ	c Typ
ASPIAIG-S6055	2.8	1.7	5.7
ASPIAIG-S8050	3.8	2.2	7.5

Series	A	B	C	D	E
ASPIAIG-S6055	6.0 ± 0.2	6.0 ± 0.2	5.5 ± 0.2	4.9 ± 0.2	1.55 ± 0.3
ASPIAIG-S8050	8.0 ± 0.3	8.0 ± 0.3	5.0 ± 0.2	6.3 ± 0.3	2.0 ± 0.2

REFLOW PROFILE



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ T_{SMAX} 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 90 sec.
3	Peak heat	T_P 260°C	5 sec. MAX

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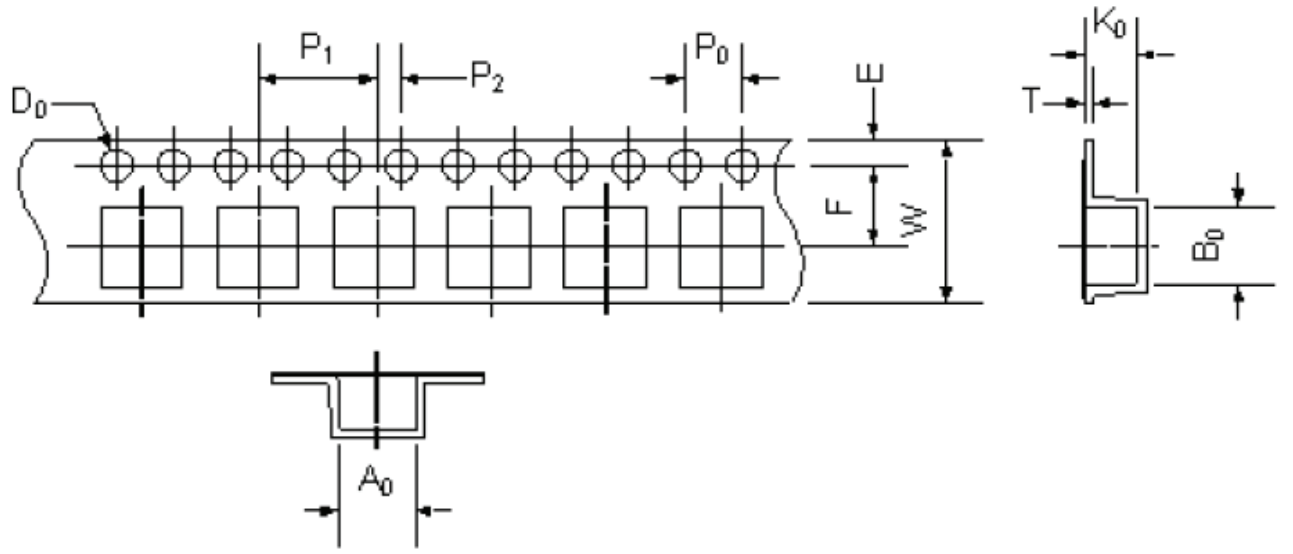
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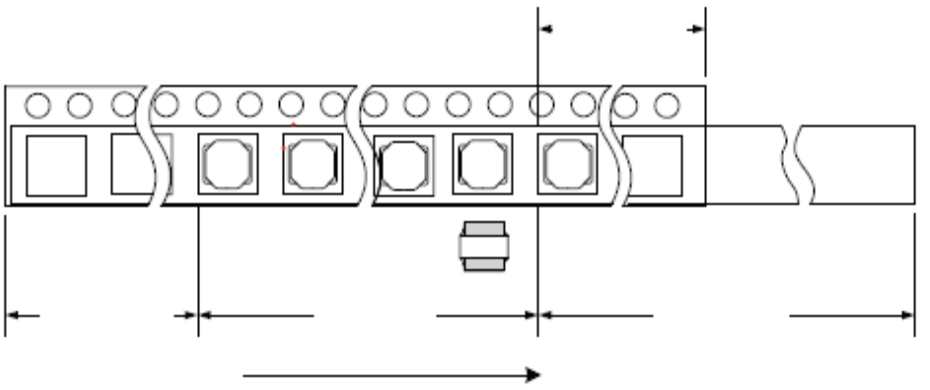
PACKAGING

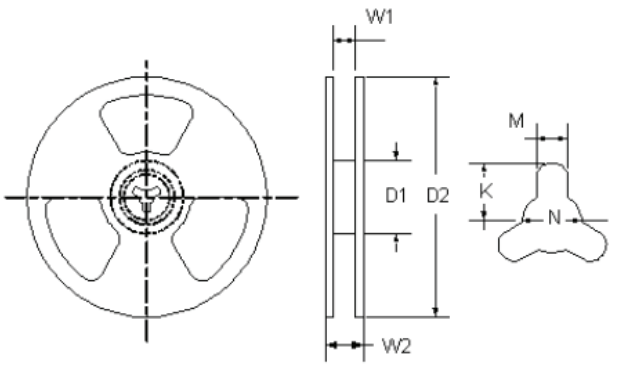
TAPE AND REEL: 800 PCS/REEL (S6055)
TAPE AND REEL: 900 PCS/REEL (S8050)



SERIES#	W	E	F	P0	P1	P2	D0	A0	B0	T	K0
ASPIAIG-S6055	16.0±0.3	1.75±0.1	7.5±0.1	4.0±0.1	8.0±0.1	2.0±0.1	1.5+0.1/-0.0	6.3±0.1	6.3±0.1	0.50±0.05	5.7±0.1
ASPIAIG-S8050	16.0±0.3	1.75±0.1	7.5±0.1	4.0±0.1	12.0±0.1	2.0±0.1	1.5+0.1/-0.0	8.3±0.1	8.3±0.1	0.50±0.05	5.2±0.1

PACKAGING: DIRECTION OF ROLLING





D1	100 ± 0.5
D2	330 ± 0.1
W1	16.4 +0.2 / -0.0
W2	22.4 MAX
K	10.75 ± 0.2
M	2.3 ± 0.2
N	13.0 +0.2 / -0.0

ABRACON LLC

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

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ABRACON IS
ISO9001-2015
CERTIFIED

COMPACT SHIELDED SMD POWER INDUCTOR FOR AUTOMOTIVE

ASPIAIG-SXXXX SERIES



ASPIAIG-S6055: 6.0 x 6.0 x 5.5 mm
ASPIAIG-S8050: 8.0 x 8.0 x 5.0 mm

RoHS/RoHS II Compliant

MSL = 1

NOTES

1. The parts are manufactured in accordance with this specification. If other conditions and specifications which are required for this specification, please contact ABRACON for more information.
2. ABRACON will supply the parts in accordance with this specification unless we receive a written request to modify prior to an order placement.
3. In no case shall ABRACON be liable for any product failure from in appropriate handling or operation of the item beyond the scope of this specification.
4. When changing your production process, please notify ABRACON immediately.
5. 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-dependant 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 Corporation is required. Please contact ABRACON Corporation for more information.
6. All specifications and Marking will be subject to change without notice.

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