AUTOMOTIVE GRADE MOLDED POWER INDUCTOR

ASPIAIG-F1x

11.0 x 10.0 x 3.8 mm
13.5 x 12.5 x 6.2 mm
MSL = 1

FEATURES

- PPAP ready and supported
- TS16949 production certified lines
- AEC-Q200 qualified
- Molded wire-wound construction with shielding
- High current up to 55A rms
- High saturation current up to 118A
- Hig inductance up to 82µH
- Low DCR down to 0.6mΩ
- Wide operating temperature range -40˚C ~ +125˚C

APPLICATIONS

RoHS/RoHS II Compliant

- Automotive and extended temperature industrial
- Body electronics and comfort system
- High current and high power applications
- Infotainment and entertainment
- Electric vehicles
- Lighting
- Solar inverters and power
- Industrial and robotics
- Medium and high power switch mode power supplies
- Point of load (POL) applications
- Motor control and motor drivvers
- Heavy machinery and transportation

OPTIONS AND PART IDENTIFICATION

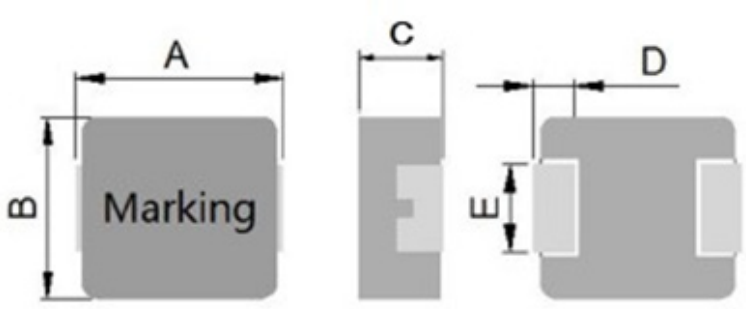
ASPIAIG - F□ - □□ - □

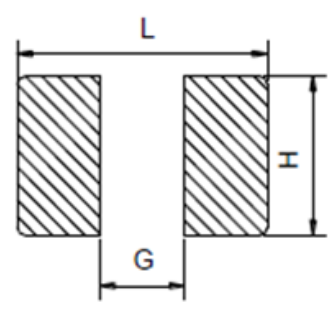
Series No.	Inductance Code	Tolerance	Packaging
1040 1265	Please refer to Electrical Spec table	M: ±20% N: ±30%	T: Tape and Reel (500 pcs / reel)

TEST CONDITIONS

Isat: DC current at which the inductance drops 30% from its value without current
Irms: DC current that causes the temperature rise (ΔT, approximate 40 ˚C) from 20°C ambient

MECHANICAL DIMENSIONS





SERIES	A	B	C	D	E
ASPIAIG-F1040	11.0 ± 0.5	10.0 ± 0.3	3.8 ± 0.2	2.3 ± 0.3	3.0 ± 0.3
ASPIAIG-F1265	13.5 ± 0.5	12.5 ± 0.3	6.2 ± 0.3	2.3 ± 0.3	4.7 ± 0.3

SERIES	L TYP.	G TYP.	H TYP.
ASPIAIG-F1040	13.6	5.4	3.5
ASPIAIG-F1265	14.2	8.0	5.0

Dimension: mm

REVISED: 08/03/2021

ABRACON

5101 Hidden Creek Lane Spicewood TX 78751
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RoHS/RoHS II Compliant

ELECTRICAL SPECIFICATIONS

Part Number	Inductance	Tolerance	DC Resistance	Saturation Current	Temperature Rise Current	Type
	0.1MHz/1.0V		Max	Typ	Typ	
Units	µH	%	mΩ	A	A	
Symbol	L	M, N	DCR	Isat	Irms	
ASPIAIG-F1040-R15	0.15	30%	0.6	75	43	Non-Lead Frame
ASPIAIG-F1040-R19	0.19	30%	0.9	70	36	Non-Lead Frame
ASPIAIG-F1040-R20	0.20	30%	0.95	70	35	Non-Lead Frame
ASPIAIG-F1040-R22	0.22	20%	1	60	35	Non-Lead Frame
ASPIAIG-F1040-R24	0.24	20%	1	60	34	Non-Lead Frame
ASPIAIG-F1040-R27	0.27	20%	1	60	33	Non-Lead Frame
ASPIAIG-F1040-R30	0.30	20%	1.1	60	32	Non-Lead Frame
ASPIAIG-F1040-R36	0.36	20%	1.2	60	31	Non-Lead Frame
ASPIAIG-F1040-R39	0.39	20%	1.3	60	30	Non-Lead Frame
ASPIAIG-F1040-R45	0.45	20%	1.5	45	29	Non-Lead Frame
ASPIAIG-F1040-R47	0.47	20%	1.5	43	28	Non-Lead Frame
ASPIAIG-F1040-R56	0.56	20%	1.8	40	25	Non-Lead Frame
ASPIAIG-F1040-R68	0.68	20%	2.7	39	22	Non-Lead Frame
ASPIAIG-F1040-R75	0.75	20%	2.7	39	22	Non-Lead Frame
ASPIAIG-F1040-R88	0.88	20%	2.9	38	20	Non-Lead Frame
ASPIAIG-F1040-1R0	1.00	20%	3.3	36	18	Non-Lead Frame
ASPIAIG-F1040-1R2	1.20	20%	3.8	33	17	Non-Lead Frame
ASPIAIG-F1040-1R5	1.50	20%	4.6	33	16	Non-Lead Frame
ASPIAIG-F1040-1R8	1.80	20%	6.4	30	14	Lead Frame
ASPIAIG-F1040-2R2	2.20	20%	7	27	12	Lead Frame
ASPIAIG-F1040-2R5	2.50	20%	8.7	23	11.5	Lead Frame
ASPIAIG-F1040-3R0	3.00	20%	11.5	21	11.5	Lead Frame
ASPIAIG-F1040-3R3	3.30	20%	11.8	20	11	Lead Frame
ASPIAIG-F1040-3R9	3.90	20%	14.5	19	10.5	Lead Frame
ASPIAIG-F1040-4R0	4.00	20%	15	18	10.2	Lead Frame
ASPIAIG-F1040-4R7	4.70	20%	15.5	17	10	Lead Frame
ASPIAIG-F1040-5R6	5.60	20%	19.3	14	9	Lead Frame
ASPIAIG-F1040-6R2	6.20	20%	21.3	13.7	8.7	Lead Frame
ASPIAIG-F1040-6R5	6.50	20%	22.3	13.6	8.6	Lead Frame
ASPIAIG-F1040-6R8	6.80	20%	23.3	13.5	8.5	Lead Frame
ASPIAIG-F1040-7R3	7.30	20%	21.8	13	8.3	Lead Frame
ASPIAIG-F1040-8R2	8.20	20%	22.5	12.5	8	Lead Frame
ASPIAIG-F1040-100	10.0	20%	30	12	7.5	Lead Frame
ASPIAIG-F1040-150	15.0	20%	45	10	6.25	Lead Frame
ASPIAIG-F1040-180	18.0	20%	62	9	5.5	Lead Frame
ASPIAIG-F1040-220	22.0	20%	74	7	5	Lead Frame
ASPIAIG-F1040-270	27.0	20%	100	6	4	Lead Frame
ASPIAIG-F1040-330	33.0	20%	112	5	3.5	Lead Frame
ASPIAIG-F1040-470	47.0	20%	167	4.5	3	Lead Frame
ASPIAIG-F1040-680	68.0	20%	240	3	2	Lead Frame
ASPIAIG-F1040-820	82.0	20%	320	2.5	1.5	Lead Frame

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ELECTRICAL SPECIFICATIONS

Part Number	Inductance	Tolerance	DC Resistance	Saturation Current	Temperature Rise Current	Type
	0.1MHz/1.0V		Max	Typ	Typ	
Units	µH	%	mΩ	A	A	
Symbol	L	M, N	DCR	Isat	Irms	
ASPIAIG-F1265-R15	0.15	20%	0.6	118	55	Non-Lead Frame
ASPIAIG-F1265-R22	0.22	20%	0.6	112	53	Non-Lead Frame
ASPIAIG-F1265-R30	0.30	20%	0.72	72	48	Non-Lead Frame
ASPIAIG-F1265-R33	0.33	20%	0.8	68	46	Non-Lead Frame
ASPIAIG-F1265-R36	0.36	20%	0.9	66	45	Non-Lead Frame
ASPIAIG-F1265-R40	0.40	20%	1	64	44	Non-Lead Frame
ASPIAIG-F1265-R47	0.47	20%	1.2	63	41	Non-Lead Frame
ASPIAIG-F1265-R50	0.50	20%	1.25	60	40	Non-Lead Frame
ASPIAIG-F1265-R56	0.56	20%	1.2	58	37	Non-Lead Frame
ASPIAIG-F1265-R68	0.68	20%	1.5	55	35	Non-Lead Frame
ASPIAIG-F1265-R82	0.82	20%	1.9	50	33	Non-Lead Frame
ASPIAIG-F1265-1R0	1.00	20%	2.3	48	30	Non-Lead Frame
ASPIAIG-F1265-1R2	1.20	20%	2.4	47	28	Non-Lead Frame
ASPIAIG-F1265-1R5	1.50	20%	3	45	27	Non-Lead Frame
ASPIAIG-F1265-1R8	1.80	20%	4	40	24	Lead Frame
ASPIAIG-F1265-2R2	2.20	20%	4.2	37	22	Lead Frame
ASPIAIG-F1265-2R7	2.70	20%	5.5	32	20	Lead Frame
ASPIAIG-F1265-3R3	3.30	20%	6.8	30	18	Lead Frame
ASPIAIG-F1265-4R7	4.70	20%	8.4	28	13.5	Lead Frame
ASPIAIG-F1265-5R6	5.60	20%	10	23	12.5	Lead Frame
ASPIAIG-F1265-6R8	6.80	20%	11.5	18	11.5	Lead Frame
ASPIAIG-F1265-8R2	8.20	20%	15.5	16	10.5	Lead Frame
ASPIAIG-F1265-100	10.0	20%	16.5	15.5	10	Lead Frame
ASPIAIG-F1265-130	13.0	20%	24	13	9	Lead Frame
ASPIAIG-F1265-150	15.0	20%	28	13	9	Lead Frame
ASPIAIG-F1265-220	22.0	20%	37	12	9	Lead Frame
ASPIAIG-F1265-330	33.0	20%	58	11	8	Lead Frame
ASPIAIG-F1265-470	47.0	20%	90	9.5	6.5	Lead Frame
ASPIAIG-F1265-680	68.0	20%	130	7.8	4.8	Lead Frame
ASPIAIG-F1265-101	100	20%	165	5.5	4.2	Lead Frame

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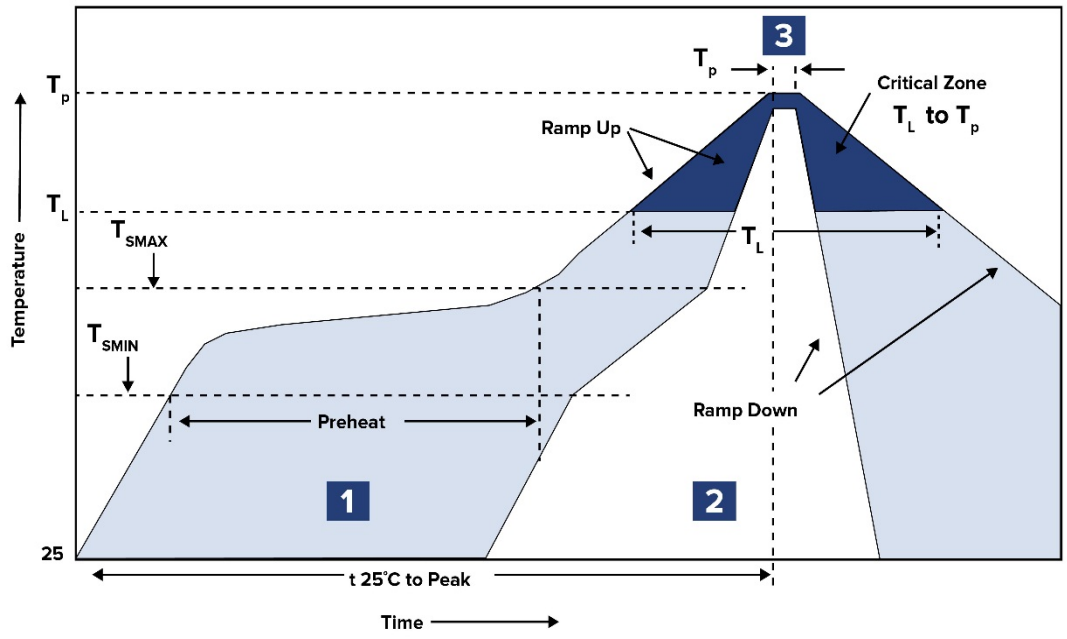
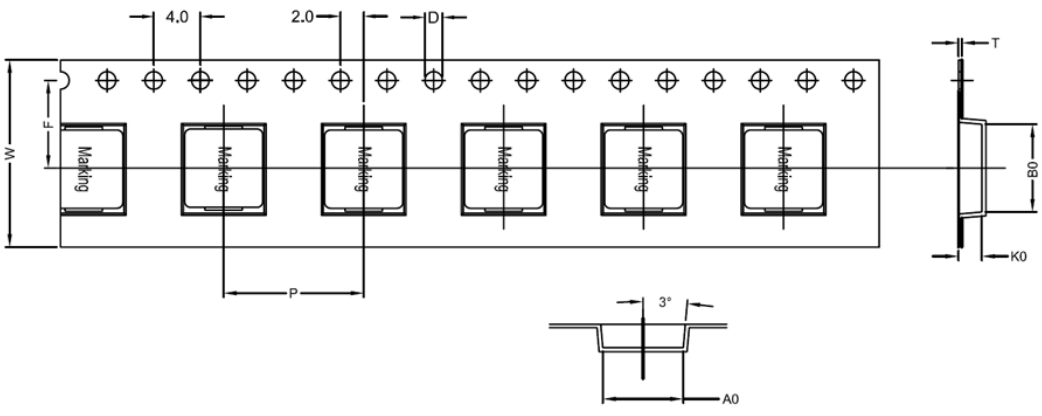
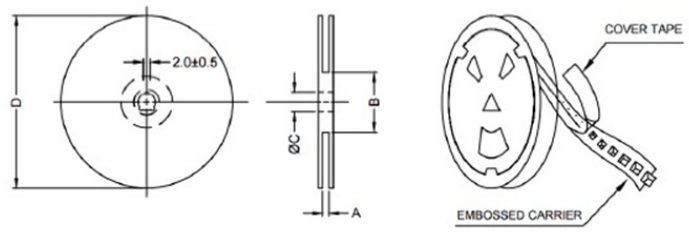
REFLOW



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

PACKING (TAPE & REEL: 500 PCS/REEL)





A	B	C	D
12.4+2/-0	100 ± 2	13.0+0.5/-0.2	330

SERIES	W	F	P	D	A_0	B_0	T	K_0
ASPIAIG-F1040	24.0±0.3	11.5±0.1	16.0±0.1	1.5±0.1	10.4±0.1	11.6±0.1	0.35±0.05	4.5±0.1
ASPIAIG-F1265	24.0±0.3	11.5±0.1	16.0±0.1	1.5±0.1	12.9±0.1	13.0±0.1	0.35±0.05	7.0±0.1

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