

AIAP-02-120K Datasheet



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DiGi Electronics Part Number	AIAP-02-120K-DG
Manufacturer	Abracon LLC
Manufacturer Product Number	AIAP-02-120K
Description	FIXED IND 12UH 3.6A 37 MOHM TH
Detailed Description	12 μ H Unshielded Wirewound Inductor 3.6 A 37mOhm Max Axial



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Purchase and inquiry

Manufacturer Product Number:

AIAP-02-120K

Series:

AIAP-02

Type:

Wirewound

Inductance:

12 μ H

Current Rating (Amps):

3.6 A

Shielding:

Unshielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

1 kHz

Package / Case:

Axial

Size / Dimension:

0.252" Dia x 0.551" L (6.40mm x 14.00mm)

Manufacturer:

Abracon LLC

Product Status:

Active

Material - Core:

-

Tolerance:

\pm 10%

Current - Saturation (Isat):

-

DC Resistance (DCR):

37mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-40°C ~ 85°C

Mounting Type:

Through Hole

Supplier Device Package:

-

Height - Seated (Max):

-

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

THRU-HOLE AXIAL CONFORMAL/EPOXY COATED INDUCTORS



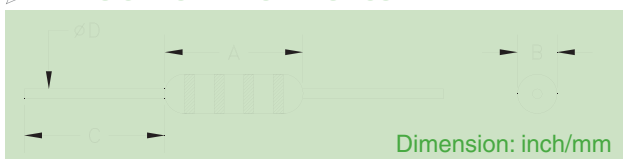
AICC-04, AIAP-01 SERIES

STANDARD SPECIFICATIONS:

Part Number AICC-04	L (μH)	Q Min	L.Q Test Freq (MHz)	SRF Min (MHz)	R _{DC} Max (Ω)	I _{DC} Max (mA)
R10K	0.10	38	25.2	680	0.08	1380
R12K	0.12	38	25.2	640	0.09	1300
R15K	0.15	38	25.2	600	0.11	1230
R18K	0.18	35	25.2	550	0.12	1120
R22K	0.22	33	25.2	510	0.14	1040
R27K	0.27	32	25.2	480	0.18	975
R33K	0.33	30	25.2	410	0.22	830
R39K	0.39	30	25.2	385	0.30	710
R47K	0.47	30	25.2	330	0.35	680
R56K	0.56	30	25.2	310	0.50	550
R68K	0.68	28	25.2	280	0.60	500
R82K	0.82	28	25.2	260	0.85	420
1R0K	1.0	26	25.2	240	0.10	390
1R2K	1.2	60	7.96	150	0.15	620
1R5K	1.5	60	7.96	140	0.18	560
1R8K	1.8	60	7.96	125	0.20	480
2R2K	2.2	60	7.96	115	0.29	415
2R7K	2.7	50	7.96	100	0.40	355
3R3K	3.3	50	7.96	90	0.42	285
3R9K	3.9	50	7.96	80	0.60	263
4R7K	4.7	40	7.96	60	0.65	230
5R6K	5.6	40	7.96	45	0.70	195
6R8K	6.8	40	7.96	40	0.90	185
8R2K	8.2	40	7.96	28	1.00	160
100K	10	35	7.96	24	1.10	144
120K	12	60	2.52	20	1.62	160
150K	15	60	2.52	17	1.75	157
180K	18	60	2.52	16	1.85	149
220K	22	60	2.52	14	2.00	144
270K	27	60	2.52	12	2.10	140
330K	33	60	2.52	10	2.20	130
390K	39	50	2.52	9.5	2.30	125
470K	47	50	2.52	9.0	2.40	110
560K	56	50	2.52	7.8	3.00	100
680K	68	50	2.52	7.0	3.40	92
820K	82	50	2.52	8.7	3.80	88
101K	100	50	2.52	6.1	4.10	84
121K	120	50	0.796	4.8	6.50	68
151K	150	50	0.796	4.1	8.30	61
181K	180	60	0.796	4.0	8.90	57
221K	220	60	0.796	3.5	10.1	52
271K	270	60	0.796	3.3	11.0	47
331K	330	60	0.796	3.1	12.4	45
391K	390	60	0.796	2.9	13.6	40
471K	470	60	0.796	2.4	18.4	36
561K	560	60	0.796	2.2	20.3	35
681K	680	60	0.796	2.0	22.3	30
821K	820	60	0.796	1.9	25.0	29
102K	1000	60	0.796	1.8	27.4	28

Part Number AIAP-01	L (μH)	L Test Freq (KHz)	SRF Min (MHz)	R _{DC} Max (Ω)	I _{DC} Max (mA)
1R0K	1.0	100	190	0.018	3300
1R2K	1.2	100	170	0.019	3200
1R5K	1.5	100	160	0.020	3100
1R8K	1.8	100	150	0.023	2900
2R2K	2.2	100	130	0.031	2600
2R7K	2.7	100	120	0.033	2500
3R3K	3.3	100	110	0.054	1900
3R9K	3.9	100	100	0.060	1800
4R7K	4.7	100	86	0.068	1700
5R6K	5.6	100	64	0.074	1600
6R8K	6.8	100	44	0.080	1600
8R2K	8.2	100	32	0.087	1500
100K	10	100	25	0.095	1500
120K	12	100	17	0.11	1400
150K	15	100	13	0.15	1200
180K	18	100	10	0.16	1100
220K	22	100	8.4	0.19	1000
270K	27	100	8.0	0.22	950
330K	33	100	7.6	0.24	910
390K	39	100	7.1	0.26	880
470K	47	100	6.0	0.35	760
560K	56	100	5.8	0.47	650
680K	68	100	4.3	0.53	610
820K	82	100	4.1	0.60	580
101K	100	100	3.9	0.67	550
121K	120	100	3.6	0.90	470
151K	150	100	3.2	1.2	410
181K	180	100	2.8	1.4	380
221K	220	100	2.3	1.9	320
271K	270	100	2.1	2.1	310
331K	330	100	1.9	2.4	290
391K	390	100	1.7	3.0	260
471K	470	100	1.4	3.4	240
561K	560	100	1.3	4.7	210
681K	680	100	1.2	6.4	180
821K	820	100	1.1	7.1	170
102K	1000	100	1.0	7.9	160
122K	1200	100	0.94	9	150
152K	1500	100	0.76	12	130
182K	1800	100	0.72	14	120
222K	2200	100	0.64	19	100
272K	2700	100	0.56	25	90
332K	3300	100	0.53	29	83
392K	3900	100	0.48	34	77
472K	4700	100	0.45	37	74
562K	5600	100	0.40	50	63
682K	6800	100	0.36	58	59
822K	8200	100	0.29	68	54
103K	10000	100	0.27	75	52

PHYSICAL CHARACTERISTICS:



Dimension: inch/mm

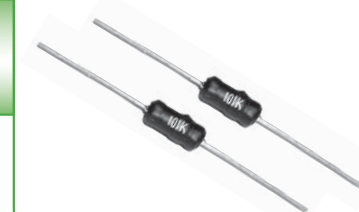
- Operating Temperature: -40°C to +85°C
 - Marking EIA 4 band color code
 - Tolerance: J=±5%, K=±10%
 - Letter suffix indicates standard tolerance
 - Check SCD for detail E&M specification
- Note: All specifications subject to change without notice

	AICC-04	AIAP-01
A Max	0.300 (7,62)	0.360 (9,14)
B	0.118MAX (3,00)	0.13±0.010 (3,30±0,25)
C Typ	1.15 (29,2)	1.15 (29,2)
D	0.020 (0,51)	0.020 (0,51)

AICC-04 = Conformal coated ferrite
AIAP-01 = Clear epoxy coated ferrite

THRU-HOLE AXIAL POWER INDUCTORS

AIAP-02-120K Abracon LLC FIXED IND 120UH 3.6A 37 MOHM TH



AIAP-02, AIAP-03 SERIES

FEATURES:

- Ferrite core with heat shrink tube
- Wire wound construction

OPTIONS:

- Bulk Pack is standard
- Ammo Pack available

APPLICATIONS:

- Electronic Appliance
- Automotive system

STANDARD SPECIFICATIONS:

Part Number AIAP-02	L (μH) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
3R9	3.9	0.019	7.3
4R7	4.7	0.022	6.3
5R6	5.6	0.024	5.6
6R8	6.8	0.026	5.3
8R2	8.2	0.028	4.5
100	10	0.033	4.1
120	12	0.037	3.6
150	15	0.040	3.3
180	18	0.044	3.0
220	22	0.050	2.7
270	27	0.056	2.5
330	33	0.076	2.2
390	39	0.094	2.0
470	47	0.109	1.8
560	56	0.131	1.7

Part Number AIAP-02	L (μH) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
680	68	0.142	1.5
820	82	0.152	1.4
101	100	0.208	1.2
121	120	0.283	1.1
151	150	0.340	1.0
181	180	0.362	0.95
221	220	0.430	0.86
271	270	0.557	0.77
331	330	0.655	0.70
391	390	0.772	0.64
471	470	1.15	0.59
561	560	1.27	0.54
681	680	1.61	0.49
821	820	1.96	0.44
102	1000	2.30	0.40

Part Number AIAP-02	L (μH) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
122	1200	2.65	0.35
152	1500	3.45	0.33
182	1800	4.03	0.29
222	2200	4.48	0.27
272	2700	5.40	0.24
332	3300	6.56	0.22
392	3900	8.63	0.20
472	4700	9.66	0.18
562	5600	13.9	0.17
682	6800	16.3	0.15
822	8200	20.8	0.14
103	10000	26.4	0.14
123	12000	29.9	0.11
153	15000	42.5	0.10
183	18000	48.3	0.09

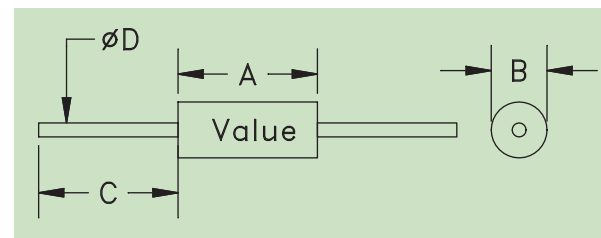
Part Number AIAP-03	L (μH) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
3R9	3.9	0.007	15.5
4R7	4.7	0.008	13.9
5R6	5.6	0.011	12.6
6R8	6.8	0.013	11.6
8R2	8.2	0.017	9.89
100	10	0.019	8.70
120	12	0.000	8.21
150	15	0.022	7.34
180	18	0.023	6.64
220	22	0.026	6.07
270	27	0.027	5.36
330	33	0.032	4.83
390	39	0.033	4.36
470	47	0.035	3.98
560	56	0.037	3.66
680	68	0.047	3.31
820	82	0.060	3.10
101	100	0.090	2.79

Part Number AIAP-03	L (μH) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
121	120	0.113	2.54
151	150	0.129	2.22
181	180	0.150	1.98
221	220	0.162	1.89
271	270	0.208	1.63
331	330	0.212	1.51
391	390	0.281	1.39
471	470	0.380	1.24
561	560	0.420	1.17
681	680	0.548	1.05
821	820	0.655	0.97
102	1000	0.844	0.87
122	1200	1.04	0.79
152	1500	1.18	0.70
182	1800	1.56	0.64
222	2200	2.00	0.58
272	2700	2.06	0.53
332	3300	2.63	0.47

Part Number AIAP-03	L (μH) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
392	3900	2.75	0.430
472	4700	3.19	0.390
562	5600	3.92	0.359
682	6800	5.69	0.322
822	8200	6.32	0.293
103	10000	7.30	0.266
123	12000	10.0	0.257
153	15000	11.2	0.230
183	18000	15.2	0.210
223	22000	16.8	0.190
273	27000	18.6	0.171
333	33000	26.7	0.155
393	39000	29.0	0.143
473	47000	31.8	0.131
563	56000	42.6	0.119
683	68000	46.9	0.108
823	82000	64.9	0.099
104	100000	71.7	0.098
124	120000	37.0	0.070

PHYSICAL CHARACTERISTICS:

- Operating Temperature: -45°C to +85°C
 - Wrap with UL heat shrink tube
 - Add -K for Lp tolerance ±10%
 - Lp measures at 100KHz, 0.1VRMS
 - Check SCD for detail E&M specification
- Note: All specifications subject to change without notice.



	AIAP-02	AIAP-03
A Max	0.55 (14,0)	0.375 (9,53)
B Max	0.26 (6,6)	0.13±0.010 (3,30±0,25)
C Typ	1.15 (29,2)	1.15 (29,2)
D	0.032 (0,81)	0.032 (0,81)

DIMENSION: inch/(mm)

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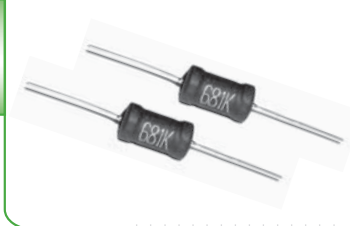


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THRU-HOLE AXIAL POWER INDUCTORS

AIAP-02-120K Abracon LLC FIXED IND 120UH 3.6A 37 MOHM TH

AIAP-04, AIAP-05 SERIES



FEATURES:

- Ferrite core with UL tube
- Wire wound construction

OPTIONS:

- Bulk Pack is standard
- Ammo Pack available

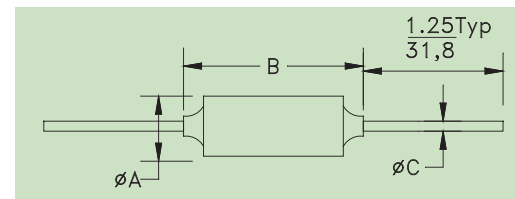
APPLICATIONS:

- Electronic Appliance
- Automotive system

STANDARD SPECIFICATIONS:

Part No. AIAP-04	L (μ H)	I _{DC} (A Max)	R _{DC} (Ω Max)	A Max	B Max	C Typical
500-2.5	50	2.5	0.120	0.475/12,07	0.800/20,32	0.032/0,81
101-2.1	100	2.1	0.160	0.475/12,07	0.800/20,32	0.032/0,81
251-1.8	250	1.8	0.280	0.475/12,07	1.050/26,67	0.032/0,81
501-1.6	500	1.6	0.420	0.550/13,97	1.050/26,67	0.032/0,81
102-1.4	1000	1.4	0.600	0.550/13,97	1.175/29,85	0.032/0,81
270-3.7	27	3.7	0.060	0.500/12,70	0.800/20,32	0.032/0,81
500-3.1	50	3.1	0.085	0.500/12,70	0.800/20,32	0.032/0,81
101-2.7	100	2.7	0.120	0.500/12,70	0.920/23,37	0.032/0,81
251-2.4	250	2.4	0.200	0.600/15,24	0.920/23,37	0.032/0,81
501-2.3	500	2.3	0.320	0.750/19,05	1.050/26,67	0.032/0,81
50-6.8	5	6.8	0.015	0.475/12,07	0.800/20,32	0.032/0,81
100-6.1	10	6.1	0.021	0.475/12,07	0.920/23,37	0.032/0,81
270-4.8	27	4.8	0.040	0.550/13,97	0.800/20,32	0.032/0,81
500-4.3	50	4.3	0.050	0.550/13,97	0.920/23,37	0.032/0,81
880-2.5	88	2.5	0.035	0.550/13,97	0.920/23,37	0.032/0,81
101-4.2	100	4.2	0.070	0.550/13,97	1.175/29,85	0.032/0,81
50-9.3	5	9.3	0.010	0.475/12,07	1.050/26,67	0.040/1,02
100-8.3	10	8.3	0.015	0.475/12,07	1.050/26,67	0.040/1,02
270-6.5	27	6.5	0.030	0.700/17,78	1.050/26,67	0.040/1,02
500-6.1	50	6.1	0.040	0.700/17,78	1.050/26,67	0.040/1,02
101-5.9	100	5.9	0.060	0.700/17,78	1.300/33,02	0.040/1,02

PHYSICAL CHARACTERISTICS:



- UL Polyolefin Tubing, 2,500 VRMS isolation
 - Operating Temp: -55°C to 125°C
 - Lp measure at 10 KHz 0.1VRMS.
 - Tolerance: J=±5%, K=±10%, L=±15%, M=20%
 - Add tolerance after the part no.
 - Check SCD for detail E&M specification
 - Marking: Inductance value and tolerance
- Note: All specifications subject to change without notice

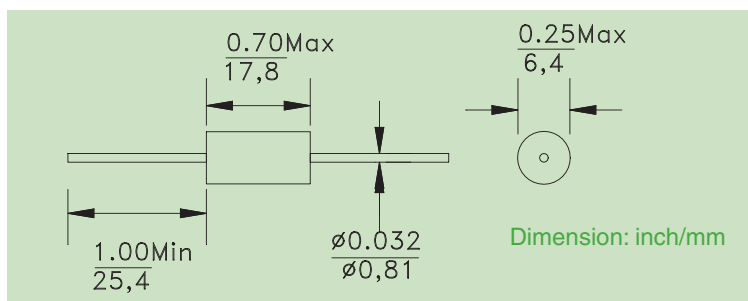
Dimension: inch/mm

Part Number AIAP-05-	L (μ H) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
3R9	3.9	0.019	3.60
4R7	4.7	0.027	3.30
5R6	5.6	0.024	3.00
6R8	6.8	0.026	2.70
8R2	8.2	0.028	2.50
100	10	0.033	2.30
120	12	0.037	2.10
150	15	0.040	1.90
180	18	0.044	1.70
220	22	0.050	1.50
270	27	0.058	1.40
330	33	0.075	1.30
390	39	0.094	1.20
470	47	0.109	1.10
560	56	0.140	0.97

Part Number AIAP-05-	L (μ H) ±10%	R _{DC} Max (Ω)	I _{DC} Max (A)
680	68	0.145	0.88
820	82	0.152	0.80
101	100	0.208	0.73
121	120	0.283	0.66
151	150	0.340	0.60
181	180	0.362	0.54
221	220	0.430	0.49
271	270	0.557	0.45
331	330	0.665	0.40
391	390	0.772	0.37
471	470	1.150	0.34
561	560	1.270	0.31
681	680	1.61	0.280
821	820	1.96	0.260
102	1000	2.30	0.230

Part Number AIAP-05-	L (μ H) ±10%	R _{DC} Max (Ω)
122	1200	2.65
152	1500	3.45
182	1800	4.03
222	2200	4.48
272	2700	5.90
332	3300	6.56
392	3900	8.63
472	4700	10.5
562	5600	13.9
682	6800	16.3
822	8200	20.8
103	10000	26.4
123	12000	29.9
153	15000	42.5
183	18000	48.3

PHYSICAL CHARACTERISTICS:



- Lp measured @ 1KHz, 0.1VRMS
- Add K for 10% tolerance
- Coils finished with 135°C polyolefin sleeving
- Marking: Inductance value and tolerance
- Operating Temperature: -55°C to +130°C
- 5% inductance drop typical from initial value @ IDC
- Add -AMMO for AMMO-PACK

ABRACON IS
ISO 9001 / QS 9000
CERTIFIED



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