

SHIELDED LOW PROFILE WIREWOUND POWER INDUCTOR



ASPI-3D, 4D, 5D, 6D



RoHS
Compliant

FEATURES:

- Magnetic shielded for low radiation
- Low profile, compact size
- Large Terminal surface for good PCB bonding
- Low DCR, High Energy storage, suitable for large currents
- Ideal for a variety of DC-DC converter inductor applications

APPLICATIONS:

- Desktop, notebook, servers
- Network hubs, bridges, routers
- Portable communication equipment
- OA equipment
- LCD, DVD, modem, set-top box
- DC/DC converters

STANDARD SPECIFICATIONS:

PARAMETERS

ABRACON P/N:	ASPI-3DXX , -4DXX, -5DXX, -6DXX
Operating temperature:	-40°C to +85°C
Storage temperature:	-40°C to +85°C

Electrical Characteristics:

Test Frequency: 100KHz, 0.1V (ASPI-3DXX, 4DXX, 5DXX); 10KHz, 0.1V (ASPI-6DXX)

IDC1: Based on inductance change ($\Delta L/L_0 \leq 35\%$)

$$\Delta L = L_{(IDC)} - L_{0A}$$

Measuring conditions: Unless specified, test condition should be Temp. = 15 ~ 35°C, Humidity = 25 ~ 75%
But if needed, then test condition should be Temp. = 18 ~ 22°C, Humidity = 60 ~ 70%

Part Number ASPI-3D16 Series	Inductance (μ H)	Tolerance (%)	DCR (Ω) max.	Rated DC Current (A)
				IDC1 max.
ASPI-3D16-R26N	0.26	$\pm 35\%$	0.0275	3.60
ASPI-3D16-R47N	0.47	$\pm 35\%$	0.0350	2.75
ASPI-3D16-R70N	0.70	$\pm 35\%$	0.0430	2.25
ASPI-3D16-1R1N	1.10	$\pm 35\%$	0.0500	1.90
ASPI-3D16-1R5N	1.50	$\pm 30\%$	0.0520	1.55
ASPI-3D16-2R2N	2.20	$\pm 30\%$	0.0720	1.20
ASPI-3D16-3R3N	3.30	$\pm 30\%$	0.0850	1.10
ASPI-3D16-4R7N	4.70	$\pm 30\%$	0.1050	0.90
ASPI-3D16-5R0N	5.00	$\pm 30\%$	0.1100	0.88
ASPI-3D16-5R6N	5.60	$\pm 30\%$	0.1460	0.80
ASPI-3D16-6R8N	6.80	$\pm 30\%$	0.1700	0.73
ASPI-3D16-100N	10.00	$\pm 30\%$	0.2100	0.55
ASPI-3D16-150N	15.00	$\pm 30\%$	0.2950	0.45
ASPI-3D16-220N	22.00	$\pm 30\%$	0.4300	0.40
ASPI-3D16-330N	33.00	$\pm 30\%$	0.6750	0.32
ASPI-3D16-390N	39.00	$\pm 30\%$	1.0620	0.28
ASPI-3D16-470N	47.00	$\pm 30\%$	1.2500	0.26



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Part Number ASPI-4D18 Series	Inductance (μ H)	Tolerance (%)	DCR (Ω) max.	Rated DC Current (A)
				IDC1 max.
ASPI-4D18-1R0N	1.00	$\pm 30\%$	0.045	1.72
ASPI-4D18-2R2N	2.20	$\pm 30\%$	0.075	1.32
ASPI-4D18-2R7N	2.70	$\pm 30\%$	0.105	1.28
ASPI-4D18-3R3N	3.30	$\pm 30\%$	0.110	1.04
ASPI-4D18-3R9N	3.90	$\pm 30\%$	0.155	0.88
ASPI-4D18-4R7N	4.70	$\pm 30\%$	0.162	0.84
ASPI-4D18-5R6N	5.60	$\pm 30\%$	0.170	0.80
ASPI-4D18-6R8N	6.80	$\pm 30\%$	0.180	0.76
ASPI-4D18-8R2N	8.20	$\pm 30\%$	0.190	0.68
ASPI-4D18-100N	10.00	$\pm 30\%$	0.200	0.61
ASPI-4D18-120N	12.00	$\pm 30\%$	0.210	0.56
ASPI-4D18-150N	15.00	$\pm 30\%$	0.240	0.50
ASPI-4D18-180N	18.00	$\pm 30\%$	0.338	0.48
ASPI-4D18-220N	22.00	$\pm 30\%$	0.397	0.41
ASPI-4D18-270N	27.00	$\pm 30\%$	0.441	0.35
ASPI-4D18-330N	33.00	$\pm 30\%$	0.694	0.32
ASPI-4D18-390N	39.00	$\pm 30\%$	0.709	0.30
ASPI-4D18-470N	47.00	$\pm 30\%$	0.922	0.28
ASPI-4D18-560N	56.00	$\pm 30\%$	1.080	0.26
ASPI-4D18-680N	68.00	$\pm 30\%$	1.300	0.24
ASPI-4D28-1R2N	1.20	$\pm 30\%$	0.0236	2.56
ASPI-4D28-1R8N	1.80	$\pm 30\%$	0.0275	2.20
ASPI-4D28-2R2N	2.20	$\pm 30\%$	0.0313	2.04
ASPI-4D28-2R7N	2.70	$\pm 30\%$	0.0433	0.60
ASPI-4D28-3R3N	3.30	$\pm 30\%$	0.0492	1.57
ASPI-4D28-3R9N	3.90	$\pm 30\%$	0.0648	1.44
ASPI-4D28-4R7N	4.70	$\pm 30\%$	0.0720	1.32
ASPI-4D28-5R6N	5.60	$\pm 30\%$	0.1009	1.17
ASPI-4D28-6R8N	6.80	$\pm 30\%$	0.1089	1.12
ASPI-4D28-8R2N	8.20	$\pm 30\%$	0.1175	1.04
ASPI-4D28-100M	10.00	$\pm 20\%$	0.1283	1.00
ASPI-4D28-120M	12.00	$\pm 20\%$	0.1316	0.84
ASPI-4D28-150M	15.00	$\pm 20\%$	0.1490	0.76
ASPI-4D28-180M	18.00	$\pm 20\%$	0.1660	0.72
ASPI-4D28-220M	22.00	$\pm 20\%$	0.2350	0.70
ASPI-4D28-270M	27.00	$\pm 20\%$	0.2610	0.58
ASPI-4D28-330M	33.00	$\pm 20\%$	0.3780	0.56
ASPI-4D28-390M	39.00	$\pm 20\%$	0.3837	0.50
ASPI-4D28-470M	47.00	$\pm 20\%$	0.5870	0.48
ASPI-4D28-560M	56.00	$\pm 20\%$	0.6245	0.41



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Part Number ASPI-5D18 Series	Inductance (μ H)	Tolerance (%)	DCR (Ω) max.	Rated DC Current (A)
				IDC1 max.
ASPI-5D18-1R0N	1.00	$\pm 30\%$	0.033	3.50
ASPI-5D18-2R2N	2.20	$\pm 30\%$	0.046	2.50
ASPI-5D18-4R1N	4.10	$\pm 30\%$	0.057	1.95
ASPI-5D18-4R7N	4.70	$\pm 30\%$	0.065	1.82
ASPI-5D18-5R4N	5.40	$\pm 30\%$	0.076	1.60
ASPI-5D18-6R2N	6.20	$\pm 30\%$	0.096	1.40
ASPI-5D18-8R9N	8.90	$\pm 30\%$	0.116	1.25
ASPI-5D18-100N	10.00	$\pm 30\%$	0.124	1.20
ASPI-5D18-120N	12.00	$\pm 30\%$	0.153	1.10
ASPI-5D18-150N	15.00	$\pm 30\%$	0.196	0.97
ASPI-5D18-180N	18.00	$\pm 30\%$	0.210	0.85
ASPI-5D18-220N	22.00	$\pm 30\%$	0.290	0.80
ASPI-5D18-270N	27.00	$\pm 30\%$	0.330	0.75
ASPI-5D18-330N	33.00	$\pm 30\%$	0.386	0.65
ASPI-5D18-390N	39.00	$\pm 30\%$	0.520	0.57
ASPI-5D18-470N	47.00	$\pm 30\%$	0.595	0.54
ASPI-5D18-560N	56.00	$\pm 30\%$	0.665	0.50
ASPI-5D18-680N	68.00	$\pm 30\%$	0.840	0.43
ASPI-5D18-820N	82.00	$\pm 30\%$	0.978	0.41
ASPI-5D18-101M	100.00	$\pm 20\%$	1.200	0.36
ASPI-5D28-2R6N	2.60	$\pm 30\%$	0.018	2.60
ASPI-5D28-3R3N	3.30	$\pm 30\%$	0.024	2.40
ASPI-5D28-4R2N	4.20	$\pm 30\%$	0.031	2.20
ASPI-5D28-5R3N	5.30	$\pm 30\%$	0.038	1.90
ASPI-5D28-6R2N	6.20	$\pm 30\%$	0.045	1.80
ASPI-5D28-6R8N	6.80	$\pm 30\%$	0.052	1.70
ASPI-5D28-8R2N	8.20	$\pm 30\%$	0.053	1.60
ASPI-5D28-100M	10.00	$\pm 20\%$	0.065	1.30
ASPI-5D28-120M	12.00	$\pm 20\%$	0.076	1.20
ASPI-5D28-150M	15.00	$\pm 20\%$	0.103	1.10
ASPI-5D28-180M	18.00	$\pm 20\%$	0.110	1.00
ASPI-5D28-220M	22.00	$\pm 20\%$	0.122	0.90
ASPI-5D28-270M	27.00	$\pm 20\%$	0.175	0.85
ASPI-5D28-330M	33.00	$\pm 20\%$	0.189	0.75
ASPI-5D28-390M	39.00	$\pm 20\%$	0.212	0.70
ASPI-5D28-470M	47.00	$\pm 20\%$	0.260	0.62
ASPI-5D28-560M	56.00	$\pm 20\%$	0.305	0.58
ASPI-5D28-680M	68.00	$\pm 20\%$	0.355	0.52
ASPI-5D28-820M	82.00	$\pm 20\%$	0.463	0.46
ASPI-5D28-101M	100.00	$\pm 20\%$	0.520	0.42

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Part Number ASPI-6D28 Series	Inductance (μ H)	Tolerance (%)	DCR (Ω) max.	Rated DC Current (A)
				IDC1 max.
ASPI-6D28-3R0N	3.00	$\pm 30\%$	0.024	3.00
ASPI-6D28-3R3N	3.30	$\pm 30\%$	0.027	2.90
ASPI-6D28-3R9N	3.90	$\pm 30\%$	0.027	2.60
ASPI-6D28-4R7N	4.70	$\pm 30\%$	0.031	2.50
ASPI-6D28-5R0N	5.00	$\pm 30\%$	0.031	2.40
ASPI-6D28-6R0N	6.00	$\pm 30\%$	0.035	2.25
ASPI-6D28-6R8N	6.80	$\pm 30\%$	0.053	2.20
ASPI-6D28-7R3N	7.30	$\pm 30\%$	0.054	2.10
ASPI-6D28-8R6N	8.60	$\pm 30\%$	0.058	1.85
ASPI-6D28-100M	10.00	$\pm 20\%$	0.065	1.70
ASPI-6D28-120M	12.00	$\pm 20\%$	0.070	1.55
ASPI-6D28-150M	15.00	$\pm 20\%$	0.084	1.40
ASPI-6D28-180M	18.00	$\pm 20\%$	0.095	1.32
ASPI-6D28-220M	22.00	$\pm 20\%$	0.128	1.20
ASPI-6D28-270M	27.00	$\pm 20\%$	0.142	1.05
ASPI-6D28-330M	33.00	$\pm 20\%$	0.165	0.97
ASPI-6D28-390M	39.00	$\pm 20\%$	0.210	0.86
ASPI-6D28-470M	47.00	$\pm 20\%$	0.238	0.80
ASPI-6D28-560M	56.00	$\pm 20\%$	0.277	0.73
ASPI-6D28-680M	68.00	$\pm 20\%$	0.304	0.65

Part Number ASPI-6D38 Series	Inductance (μ H)	Tolerance (%)	DCR (Ω) max.	Rated DC Current (A)
				IDC1 max.
ASPI-6D38-2R7N	2.70	$\pm 30\%$	0.015	3.50
ASPI-6D38-3R3N	3.30	$\pm 30\%$	0.020	3.50
ASPI-6D38-4R7N	4.70	$\pm 30\%$	0.024	2.90
ASPI-6D38-5R0N	5.00	$\pm 30\%$	0.024	2.90
ASPI-6D38-6R2N	6.20	$\pm 30\%$	0.027	2.50
ASPI-6D38-7R4N	7.40	$\pm 30\%$	0.031	2.30
ASPI-6D38-8R2N	8.20	$\pm 30\%$	0.033	2.25
ASPI-6D38-8R7N	8.70	$\pm 30\%$	0.034	2.20
ASPI-6D38-100M	10.00	$\pm 20\%$	0.038	2.00
ASPI-6D38-120M	12.00	$\pm 20\%$	0.053	1.70
ASPI-6D38-150M	15.00	$\pm 20\%$	0.057	1.60
ASPI-6D38-180M	18.00	$\pm 20\%$	0.092	1.50
ASPI-6D38-220M	22.00	$\pm 20\%$	0.096	1.30
ASPI-6D38-270M	27.00	$\pm 20\%$	0.109	1.20
ASPI-6D38-330M	33.00	$\pm 20\%$	0.124	1.10
ASPI-6D38-390M	39.00	$\pm 20\%$	0.138	1.00
ASPI-6D38-470M	47.00	$\pm 20\%$	0.155	0.95
ASPI-6D38-560M	56.00	$\pm 20\%$	0.202	0.85
ASPI-6D38-680M	68.00	$\pm 20\%$	0.234	0.75
ASPI-6D38-820M	82.00	$\pm 20\%$	0.324	0.70
ASPI-6D38-101M	100.00	$\pm 20\%$	0.358	0.65

ABRACON IS
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OPTIONS AND PART IDENTIFICATION:

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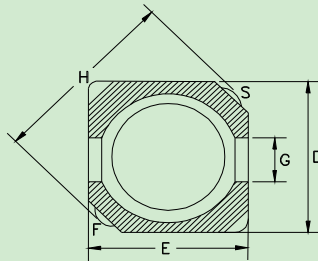
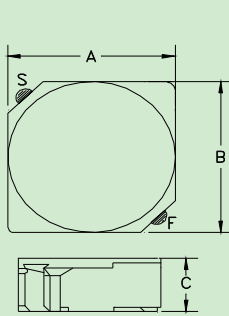
P/N	Package Size (mm)
3D16	4.0 x 4.0 x 1.8
4D18	4.7 x 4.7 x 2.0
4D28	4.7 x 4.7 x 3.0
5D18	5.7 x 5.7 x 2.0
5D28	5.7 x 5.7 x 3.0
6D28	6.7 x 6.7 x 3.0
6D38	6.7 x 6.7 x 4.0

Inductance Code
Please refer to the
Tables in Electrical
Spec.

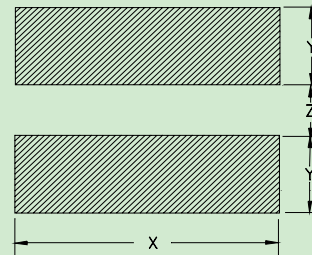
Tolerance	
N	Please refer to the Tables in Electrical Spec.
M	

Packaging	
T	Tape and Reel

OUTLINE DRAWING:



Recommended Land Pattern



Abracon P/N	X	Y	Z
ASPI-3D16	4.2	1.6	1.0
ASPI-4D18	5.3	1.9	1.5
ASPI-4D28	5.3	1.9	1.5
ASPI-5D18	6.3	2.15	2.0
ASPI-5D28	6.3	2.15	2.0
ASPI-6D28	7.3	2.65	2.0
ASPI-6D28	7.3	2.65	2.0

Abracon P/N	A	B	C (max.)	D (ref.)	E (ref.)	H (max.)	G (ref.)
ASPI-3D16	4.00±0.3	4.00±0.3	1.80	3.80	3.80	5.20	1.00
ASPI-4D18	4.70±0.3	4.70±0.3	2.00	4.50	4.50	6.90	1.50
ASPI-4D28	4.70±0.3	4.70±0.3	3.00	4.50	4.50	6.90	1.50
ASPI-5D18	5.70±0.3	5.70±0.3	2.00	5.50	5.50	8.20	2.00
ASPI-5D28	5.70±0.3	5.70±0.3	3.00	5.50	5.50	8.20	2.00
ASPI-6D28	6.70±0.3	6.70±0.3	3.00	6.50	6.50	9.50	2.00
ASPI-6D38	6.70±0.3	6.70±0.3	4.00	6.50	6.50	9.50	2.00

Dimensions: mm

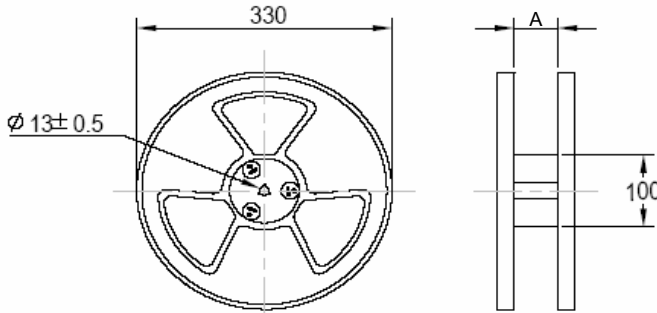
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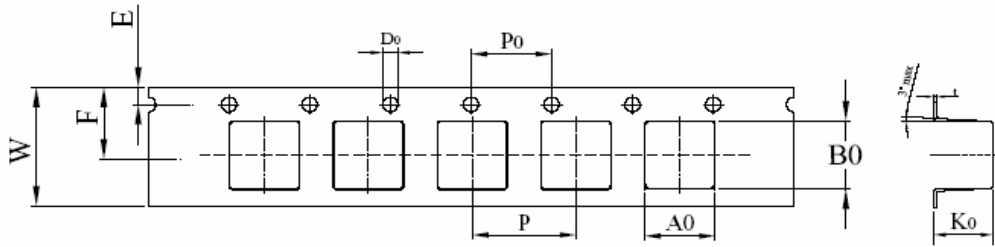
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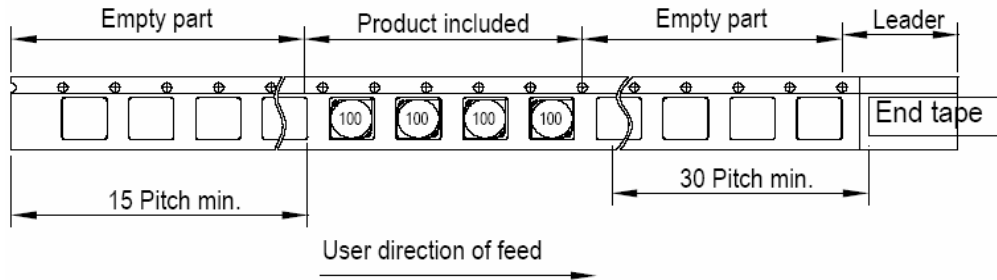
TAPE & REEL:



ABRACON P/N	A	Qty(pcs)
ASPI-3D16	12.5	3000
ASPI-4D18	12.5	2000
ASPI-4D28	12.5	2000
ASPI-5D18	12.5	2000
ASPI-5D28	12.5	2000
ASPI-6D28	16.5	1000
ASPI-6D38	16.5	1000

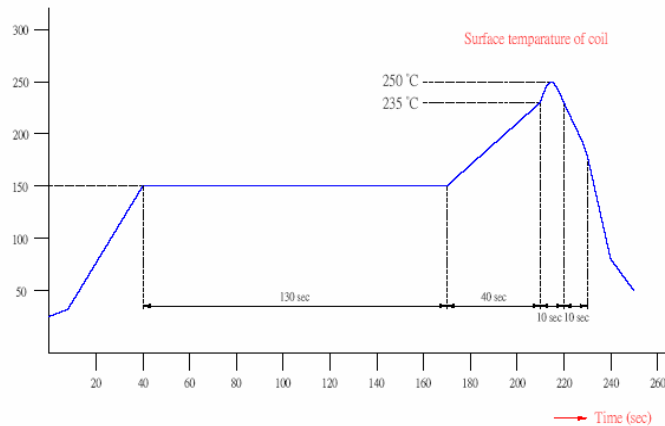


ABRACON P/N	W	E	F	P	A0	B0	D0	P0	K0	t
ASPI-3D16	12.0±0.2	1.75±0.1	7.25±0.1	8.0±0.1	4.10±0.1	4.10±0.1	1.5±0.1	4.0±0.1	2.0±0.1	0.3±0.05
ASPI-4D18	12.0±0.2	1.75±0.1	7.25±0.1	8.0±0.1	5.30±0.1	5.30±0.1	1.5±0.1	4.0±0.1	2.2±0.1	0.3±0.05
ASPI-4D28	12.0±0.2	1.75±0.1	7.25±0.1	8.0±0.1	5.30±0.1	5.30±0.1	1.5±0.1	4.0±0.1	3.3±0.1	0.3±0.05
ASPI-5D18	12.0±0.2	1.75±0.1	7.25±0.1	8.0±0.1	6.10±0.1	6.10±0.1	1.5±0.1	4.0±0.1	2.2±0.1	0.3±0.05
ASPI-5D28	12.0±0.2	1.75±0.1	7.25±0.1	8.0±0.1	6.10±0.1	6.10±0.1	1.5±0.1	4.0±0.1	3.1±0.1	0.3±0.05
ASPI-6D28	16.0±0.3	1.75±0.1	9.25±0.1	12.0±0.1	7.50±0.1	7.50±0.1	1.5±0.1	4.0±0.1	3.2±0.1	0.4±0.05
ASPI-6D38	16.0±0.3	1.75±0.1	9.25±0.1	12.0±0.1	7.50±0.1	7.50±0.1	1.5±0.1	4.0±0.1	4.5±0.1	0.4±0.05



Dimension : mm

REFLOW PROFILE:



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