



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



4.0 x 4.0 x 1.2mm

ASPI-0412FS



RoHS/RoHS II Compliant

## FEATURES:

- Small size and low profile: 1.2mm max
- Small DCR and high rated current
- High reliability to mechanical strength
- Shielded by magnetic powder molding
- Suitable for RoHS compliant reflow

## APPLICATIONS:

- Mobile phones
- MP3, MP4 and other portable / communication products
- Digital cameras

## ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ASPI-0412FS Series
Operating Temperature & Humidity	-25°C to +125°C
Storage Temperature & Humidity:	-5°C to +40°C and RH 70% Max. (In tape and reel)

Part Number ASPI-0412FS- Inductance Code	Inductance	L Tolerance	DC Resistance Typ	DC Resistance Max	Saturation Current	Temperature Rise Current	Inductance Code
Units	μH	—	Ω	Ω	A	A	
Symbol	L	N, M	DCR	DCR	Isat	I <sub>rms</sub>	
ASPI-0412FS-R82	0.82	N	0.050	0.0650	3.02	1.65	R82
ASPI-0412FS-1R0	1.0	N	0.050	0.0650	2.61	1.65	1R0
ASPI-0412FS-1R5	1.5	N	0.065	0.8450	2.10	1.46	1R5
ASPI-0412FS-1R8	1.8	N	0.080	0.1040	2.12	1.32	1R8
ASPI-0412FS-2R2	2.2	M	0.080	0.1040	1.76	1.32	2R2
ASPI-0412FS-2R7	2.7	M	0.090	0.1170	1.90	1.25	2R7
ASPI-0412FS-3R3	3.3	M	0.110	0.1430	1.72	1.12	3R3
ASPI-0412FS-3R6	3.6	M	0.110	0.1430	1.20	1.12	3R6
ASPI-0412FS-4R3	4.3	M	0.140	0.1820	1.58	1.00	4R3
ASPI-0412FS-4R7	4.7	M	0.175	0.2280	1.15	1.05	4R7
ASPI-0412FS-5R1	5.1	M	0.155	0.2015	1.55	0.95	5R1
ASPI-0412FS-5R6	5.6	M	0.140	0.1820	1.00	1.00	5R6
ASPI-0412FS-6R8	6.8	M	0.198	0.2574	0.85	0.84	6R8
ASPI-0412FS-100	10	M	0.353	0.4590	0.80	0.77	100
ASPI-0412FS-120	12	M	0.290	0.3770	0.66	0.70	120
ASPI-0412FS-150	15	M	0.340	0.4420	0.56	0.64	150
ASPI-0412FS-180	18	M	0.470	0.6110	0.55	0.55	180
ASPI-0412FS-220	22	M	0.720	0.9360	0.46	0.49	220
ASPI-0412FS-270	27	M	0.720	0.9360	0.50	0.45	270
ASPI-0412FS-330	33	M	0.810	1.0530	0.42	0.42	330
ASPI-0412FS-360	36	M	0.900	1.1700	0.40	0.40	360
ASPI-0412FS-390	39	M	1.100	1.4300	0.55	0.37	390
ASPI-0412FS-470	47	M	1.100	1.4300	0.35	0.37	470
ASPI-0412FS-560	56	M	1.250	1.6250	0.33	0.33	560
ASPI-0412FS-680	68	M	1.950	2.5350	0.38	0.27	680
ASPI-0412FS-820	82	M	2.140	2.7820	0.28	0.26	820
ASPI-0412FS-101	100	M	2.210	2.8730	0.25	0.25	101

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CERTIFIED



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CORPORATION

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Revised: 01.23.14

# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



4.0 x 4.0 x 1.2mm

ASPI-0412FS



RoHS/RoHS II Compliant

## Test Conditions:

1. Inductance: ZM2355 LCR meter or equivalent
2. RDC: HIOKI 3540 or equivalent
3. Isat : Based on inductance change ( $\Delta L/L_0 : \leq -30\%$ )
4. Irms : Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$ )
5. Test Freq: 100KHz, 1Vrms

## OPTIONS AND PART IDENTIFICATION

ASPI-0412FS---

**Inductance Code**  
Please refer to the Electrical Spec Table

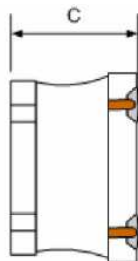
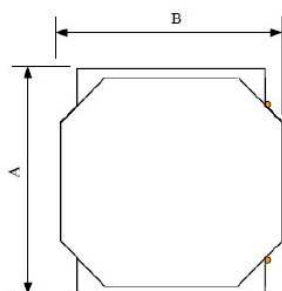
**Tolerance**  
N:  $\pm 30\%^*$   
M:  $\pm 20\%^*$

**Packaging**  
T4: Tape and Reel  
(4kpcs / reel)

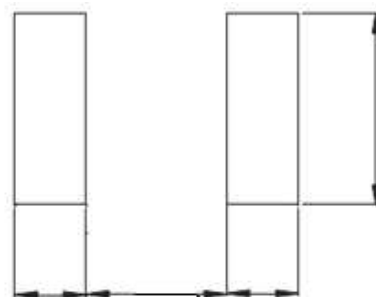
\*N for L = 0.82 ~ 1.8 $\mu\text{H}$

\*M for L = 2.2 ~ 100 $\mu\text{H}$

## OUTLINE DRAWING:



### Recommended Land Pattern



3.7

A	B	C Max.
4.0 $\pm$ 0.2	4.0 $\pm$ 0.2	1.2

1.2 1.6 1.2

Dimension: mm

## Materials

No	Components	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane System enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating Electrodes	Plating: Ag/Ni/Sn
5	Outer Electrodes	Top surface solder coating: Sn/Ag/Cu





# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



4.0 x 4.0 x 1.2mm

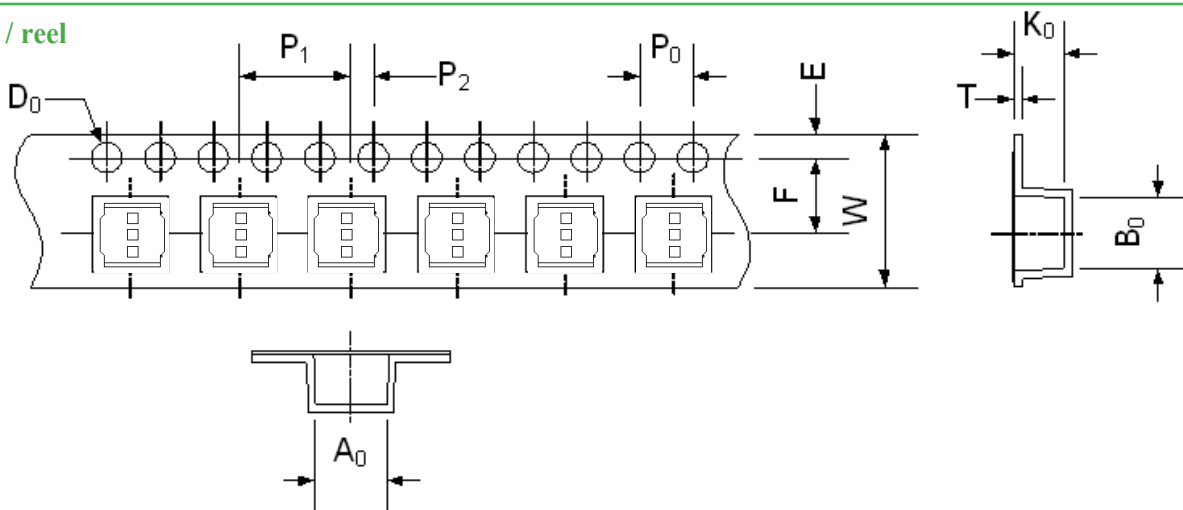
ASPI-0412FS



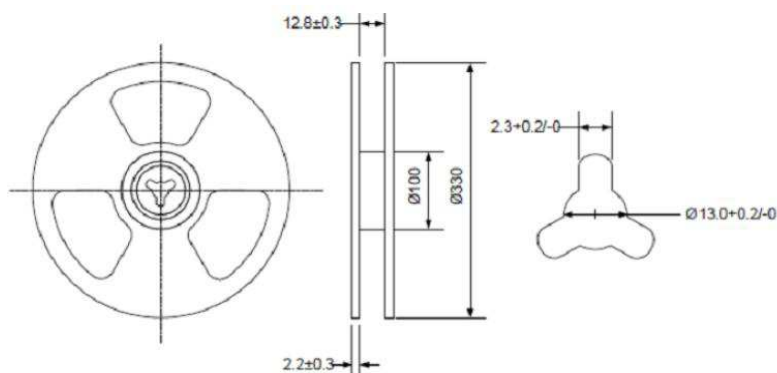
RoHS/RoHS II Compliant

## TAPE & REEL:

T4: 4,000pcs / reel

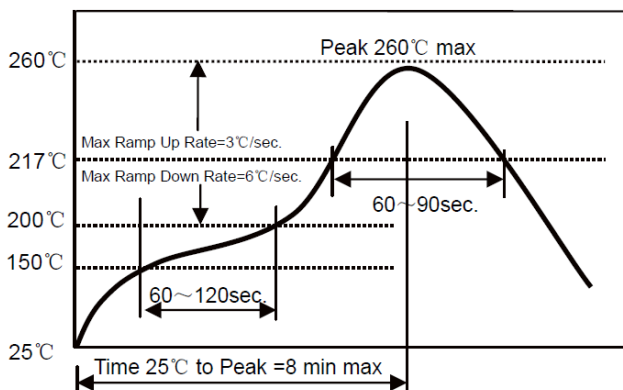


A <sub>0</sub>	B <sub>0</sub>	W	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	D <sub>0</sub>	T	K <sub>0</sub>
4.3±0.1	4.3±0.1	12.0±0.3	1.75±0.1	5.5±0.1	4.0±0.1	8.0±0.1	2.0±0.05	1.5+0.1/-0.0	0.35±0.03	1.6±0.1



Dimension: mm

## REFLOW PROFILE:



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