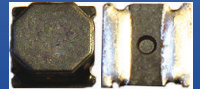


# Low Profile Shielded SMD Chip Power Inductor



ASPI-0418FS



4.0 x 4.0 x 1.80mm  
RoHS Compliant

## Features

- Small size and low profile: 1.88mm max
- Small DCR and high rated current
- High reliability to mechanical strength
- Magnetically shielded by magnetic powder molding
- Suitable for RoHS reflow profile

## Applications

- Mobile phones
- MP3 & other portable communication equipment
- Digital cameras

## Electrical Specifications

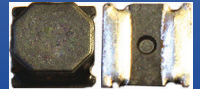
<b>Operating Temperature:</b>	-40°C to +125°C (Including self-generated heat)
<b>Storage Temperature:</b>	-40°C to +125°C

Part Number	Inductance	Inductance Tolerance	DCR		DCR Tolerance	Self-Resonant Frequency	Saturation Current Max	Temp Rise Current Max
			mΩ	mΩ				
Units	μH	%	mΩ	mΩ	%	MHz	A	A
Symbol	L	M, N	Max	Typ		SRF	Isat	Irms
ASPI-0418FS-R33	0.33	N	16	12	±30%	230	6.50	4.20
ASPI-0418FS-R47	0.47	N	20	17		220	6.50	3.50
ASPI-0418FS-1R0	1.0	N	32	27		90	4.00	3.20
ASPI-0418FS-1R5	1.5	N	37	31		70	3.60	2.95
ASPI-0418FS-2R2	2.2	M	50	42	±20%	60	3.00	2.20
ASPI-0418FS-3R3	3.3	M	66	55		45	2.30	2.00
ASPI-0418FS-4R7	4.7	M	84	70		35	2.00	1.70
ASPI-0418FS-6R8	6.8	M	118	98		30	1.60	1.45
ASPI-0418FS-100	10	M	180	150		25	1.30	1.20
ASPI-0418FS-150	15	M	252	210		18	1.10	0.85
ASPI-0418FS-220	22	M	348	290		15	0.90	0.70
ASPI-0418FS-330	33	M	552	460		12	0.70	0.55
ASPI-0418FS-470	47	M	744	620		11	0.57	0.50
ASPI-0418FS-680	68	M	972	810		7.1	0.53	0.40
ASPI-0418FS-101	100	M	1560	1300		5.2	0.49	0.40
ASPI-0418FS-151	150	M	3120	2600		5.1	0.41	0.28
ASPI-0418FS-221	220	M	3840	3200		4.2	0.33	0.25
ASPI-0418FS-331	330	M	5880	4900		3.2	0.26	0.20

## Test Conditions

1. Inductance is measured in HP-4285A Precision LCR Meter
2. RDC is measured in DU-5011 milli ohm meter (or equivalent)
3. Isat: Based on inductance change ( $\Delta L/L_0$ :  $\leq -30\%$ )
4. Irms: Based on temperature rise ( $\Delta T$ : 40°C TYP. )
5. Test Freq: 100KHz, 1Vrms

# Low Profile Shielded SMD Chip Power Inductor



ASPI-0418FS



4.0 x 4.0 x 1.80mm  
RoHS Compliant

## Part Number Identification

ASPI-0418FS--

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

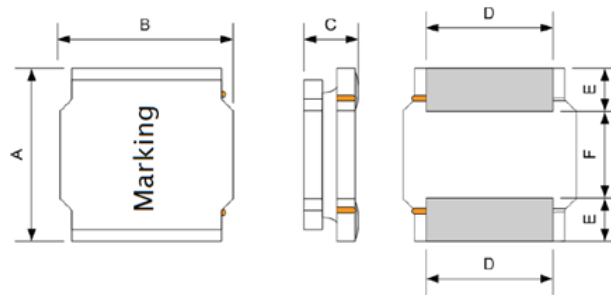
**Tolerance**  
N:  $\pm 30\%^*$   
M:  $\pm 20\%^*$

**Packaging**  
T3: Tape and Reel (3kpcs / reel)

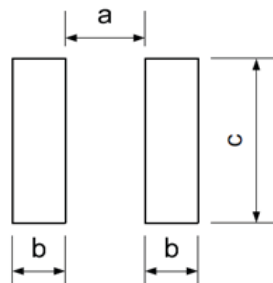
\*N for L = 0.33 ~ 1.5 $\mu$ H

\*M for L = 2.2 ~ 330 $\mu$ H

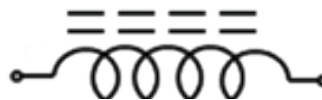
## Mechanical Information



Recommended Land Pattern



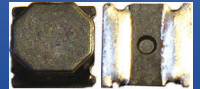
A	B	C Max	D	E	F	a typ.	b typ.	c typ.
4.0 $\pm$ 0.2	4.0 $\pm$ 0.2	1.8	3.3 $\pm$ 0.2	0.95 $\pm$ 0.2	2.1 $\pm$ 0.2	1.9	1.1	3.7



No Polarity

Dimensions: mm

# Low Profile Shielded SMD Chip Power Inductor

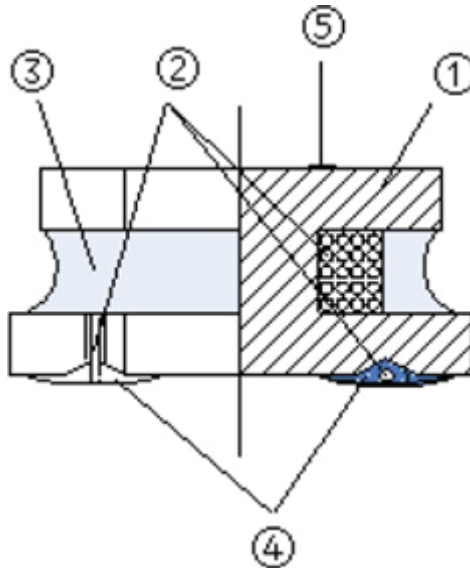


ASPI-0418FS



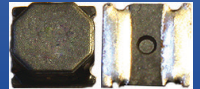
4.0 x 4.0 x 1.80mm  
RoHS Compliant

## Materials



#	Part Name	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Electrodes	Ag/Ni/Sn or FeNiCu + Sn Alloy
5	Marking	Nitrocellulose

# Low Profile Shielded SMD Chip Power Inductor

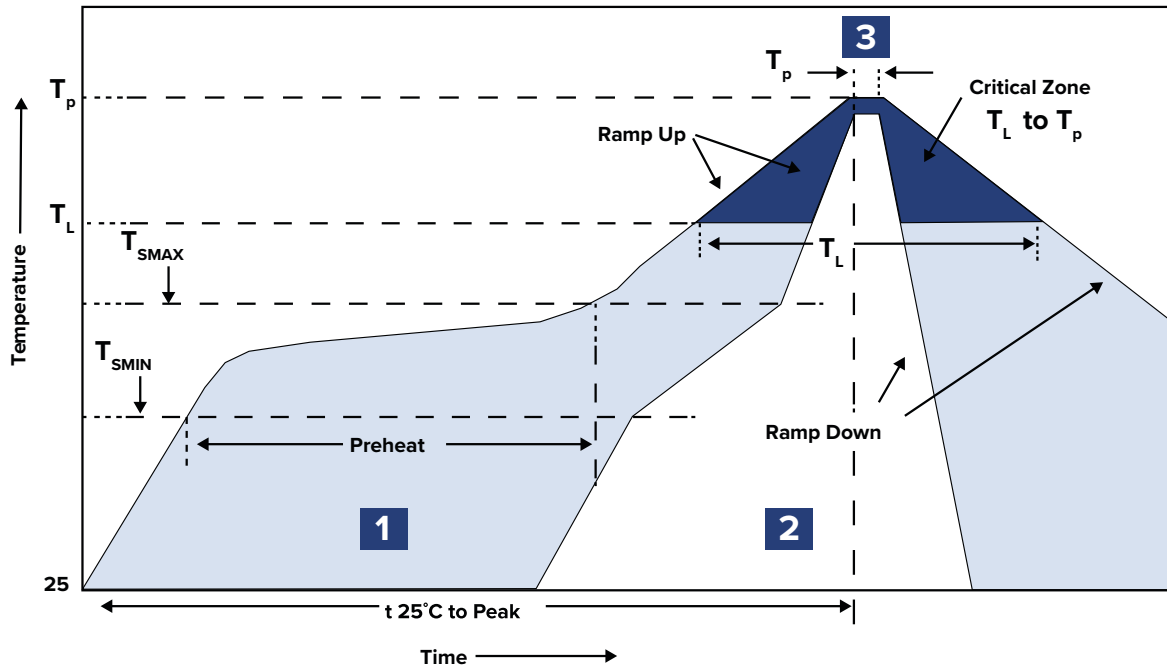


ASPI-0418FS



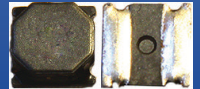
4.0 x 4.0 x 1.80mm  
RoHS Compliant

## Reflow Profile



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	$T_L$ 217°C	60 ~ 90 sec.
3	Peak heat	$T_P$ 260°C	10 sec. MAX

# Low Profile Shielded SMD Chip Power Inductor



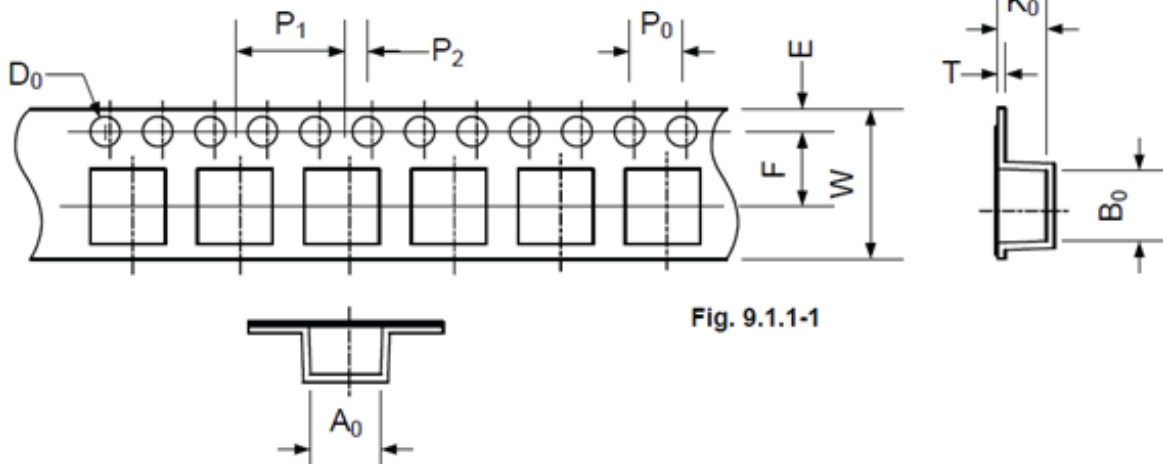
ASPI-0418FS



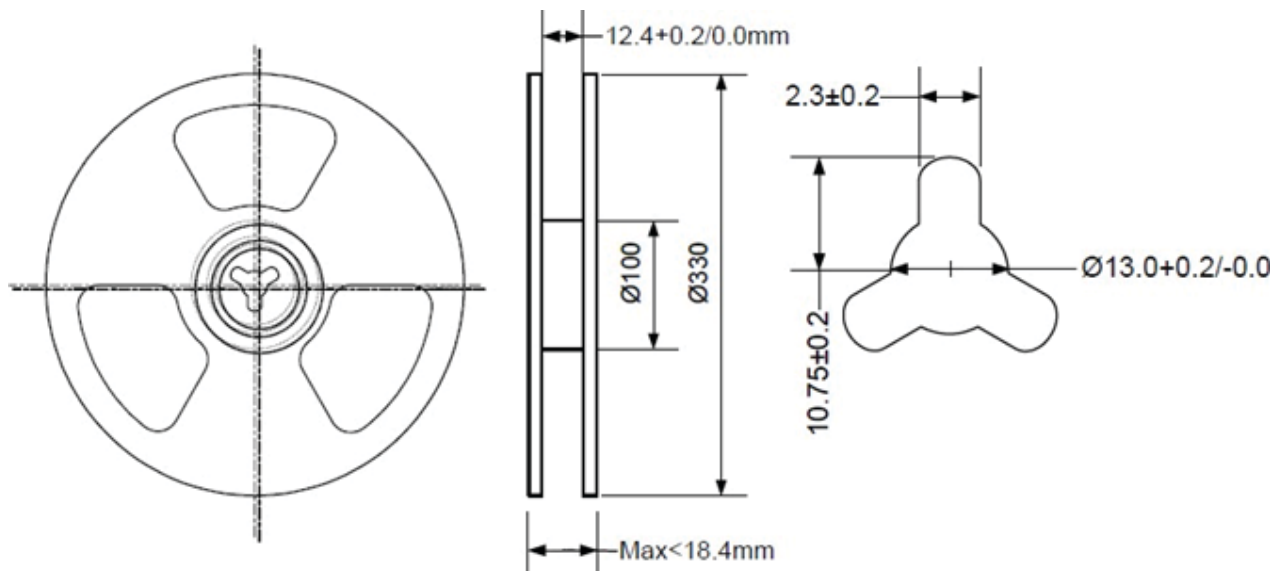
4.0 x 4.0 x 1.80mm  
RoHS Compliant

## Packaging

T3= Tape and Reel (3,000pcs/reel)



$A_0$	$B_0$	$W$	$E$	$F$	$P_0$	$P_1$	$P_2$	$D_0$	$T$
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



Dimensions: mm

**ATTENTION:** 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-dependent 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 LLC is required. Please contact Abracon LLC for more information.



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](http://www.abracon.com)

REVISED: 05-21-20

ABRACON IS  
ISO9001-2015  
CERTIFIED

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Fixed Inductors](#) category:*

*Click to view products by [ABRACON](#) manufacturer:*

Other Similar products are found below :

[CR43NP-680KC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#) [CTX32CT-100](#) [70F224AI](#) [MGDQ4-00004-P](#) [MHL1ECTTP18NJ](#) [MHL1JCTTD12NJ](#)  
[PE-51506NL](#) [PE-53601NL](#) [PE-53602NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-62892NL](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#)  
[9310-16](#) [PM06-2N7](#) [PM06-39NJ](#) [A01TK](#) [1206CS-471XJ](#) [HC2-2R2TR](#) [HC2LP-R47-R](#) [HC3-2R2-R](#) [HCF1305-3R3-R](#) [1206CS-151XG](#)  
[RCH664NP-140L](#) [RCH664NP-4R7M](#) [RCH8011NP-221L](#) [RCP1317NP-332L](#) [RCP1317NP-391L](#) [RCR1010NP-470M](#) [RCR110DNP-331L](#)  
[DH2280-4R7M](#) [DS1608C-106](#) [ASPI-4020HI-R10M-T](#) [B10TJ](#) [B82477P4333M](#) [B82498B3101J000](#) [B82498B3680J000](#) [ELJ-RE27NJF2](#)  
[1812CS-153XJ](#) [1812CS-183XJ](#) [1812CS-223XJ](#) [1812LS-104XJ](#) [1812LS-105XJ](#) [1812LS-124XJ](#) [1812LS-154XJ](#) [1812LS-223XJ](#)