

### **ASPI-0315FS Series**

Request Samples



Check Inventory (>)



3.0 x 3.0 x 1.5mm **RoHS/RoHS II Compliant** MSL Level = 1

#### **Features**

- Small size and low profile: 1.5mm
- Small DCR and high rated current
- High reliability to mechanical stress
- Magnetically shielded by magnetic powder molding
- Suitable for RoHS reflow profile

## **Applications**

- Mobile phones
- MP3 & 4 and other portable communication equipment
- Digital cameras

## **Electrical Specifications**

Part Number		Inductance	DC Resistance		Saturation	Temperature	Self-	
ASPI-0315FS- Inductance Code	Inductance	Tolerance	Max	Тур	Current	Rise Current	Resonant Frequency	
Units	μН	%	mΩ	${ m m}\Omega$	A	A	MHz	
Symbol	L	M, N	Do	CR	Isat	Irms	SRF	
ASPI-0315FS-R50	0.5	N	39	30	3.90	2.60	162	
ASPI-0315FS-1R0	1.0	N	39	30	2.32	2.35	150	
ASPI-0315FS-1R2	1.2	N	52	40	2.21	1.95	110	
ASPI-0315FS-1R5	1.5	N	65	50	2.3	1.70	100	
ASPI-0315FS-1R8	1.8	N	65	50	1.75	1.70	92	
ASPI-0315FS-2R2	2.2	N	78	60	1.60	1.60	86	
ASPI-0315FS-2R7	2.7	N	98	75	1.52	1.43	64	
ASPI-0315FS-3R3	3.3	M	104	80	1.32	1.36	68	
ASPI-0315FS-3R6	3.6	M	137	105	1.28	1.20	59	
ASPI-0315FS-3R9	3.9	M	137	105	1.20	1.20	47	
ASPI-0315FS-4R3	4.3	M	150	115	1.20	1.14	53	
ASPI-0315FS-4R7	4.7	M	163	125	1.10	1.09	46	
ASPI-0315FS-5R1	5.1	M	173	133	1.00	1.05	49	
ASPI-0315FS-6R2	6.2	M	254	195	1.00	0.86	46	
ASPI-0315FS-6R8	6.8	M	260	200	0.85	0.85	39	
ASPI-0315FS-100	10	M	325	250	0.72	0.77	41	
ASPI-0315FS-120	12	M	416	320	0.70	0.68	32	
ASPI-0315FS-150	15	M	455	350	0.66	0.65	30	
ASPI-0315FS-180	18	M	559	430	0.56	0.59	23	
ASPI-0315FS-220	22	M	598	460	0.52	0.57	23	
ASPI-0315FS-270	27	M	949	730	0.48	0.45	22	
ASPI-0315FS-330	33	M	1066	820	0.44	0.43	20	
ASPI-0315FS-390	39	M	1294	995	0.41	0.39	14	
ASPI-0315FS-430	43	M	1378	1060	0.37	0.37	16	
ASPI-0315FS-470	47	M	1625	1250	0.35	0.35	14	
ASPI-0315FS-560	56	M	1664	1280	0.33	0.34	13	
ASPI-0315FS-620	62	M	2093	1610	0.30	0.30	13	
ASPI-0315FS-680	68	M	3510	2700	0.28	0.23	11	
ASPI-0315FS-101	100	M	4043	3110	0.23	0.21	7.2	
ASPI-0315FS-151	150	M	4940	3800	0.18	0.19	4.5	





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#### **Test Conditions**

- 1. Inductance is measured using a WK3260B LCR meter or equivalent.
- 2. DCR is measured using HIOKI 3540 or equivalent.
- 3. Isat: Based on inductance change ( $\triangle L/Lo$ :  $\le$  -30%)
- 4. Irms: Based on temperature rise ( $\triangle T$ : 40°C TYP.)
- 5. SRF: Agilent E4991A+16197 or equivalent.
- 6. Test Freq: 100KHz, 1Vrms

## **Operating Temperature**

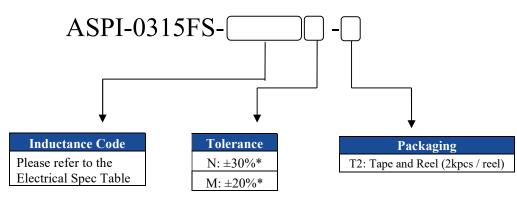
-40°C to +125°C (Including self-generated heat)

## Storage Temperature of Component Removed from Packaging

-10°C to +40°C, RH 70% Max

ASPI-0315FS is RoHS/RoHS II Compliant and Pb free

#### Part Identification



\*N for L =  $0.5 \sim 2.7 \mu H$ \*M for L =  $3.3 \sim 150 \mu H$ 





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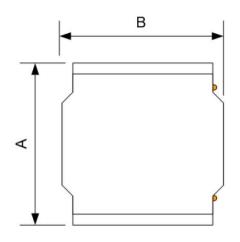


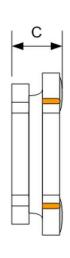
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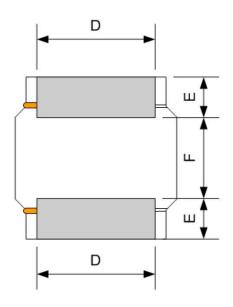


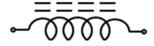
3.0 x 3.0 x 1.5mm **RoHS/RoHS II Compliant** MSL Level = 1

## **Mechanical Specifications**







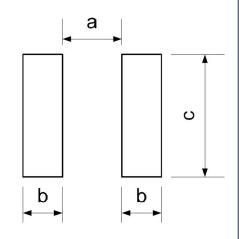


No Polarity

A	В	C	D	E	F	a Typ.	b Typ.	c Typ.
3.0	3.0	1.5	2.50	0.75	1.5	1.5	0.8	2.7
$\pm 0.2$	$\pm 0.2$	Max	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$	1.3	0.8	

**Dimension: mm** 

## Recommended Land Pattern







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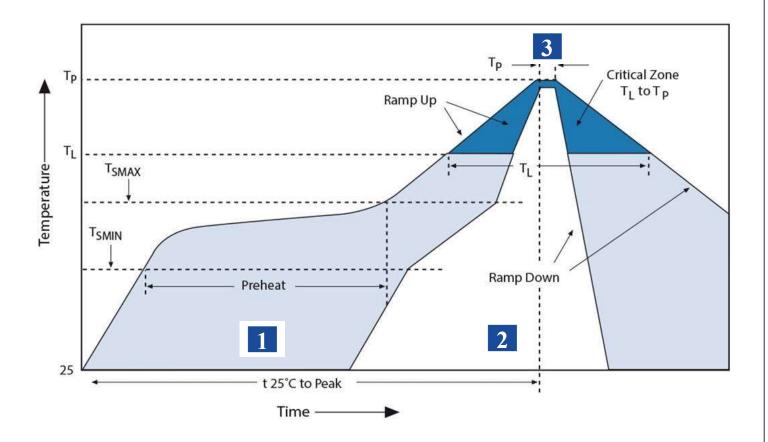


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3.0 x 3.0 x 1.5mm RoHS/RoHS II Compliant MSL Level = 1

#### **Reflow Profile**



Zone	Description	Temperature	Times
1	Preheat	T <sub>SMIN</sub> ~T <sub>SMAX</sub> 150°C~200°C	60 ∼ 120 sec.
2	Reflow	T <sub>L</sub> 217°C	60 ~ 90 sec.
3	Peak heat	Т <sub>Р</sub> 260°С	10 sec. MAX





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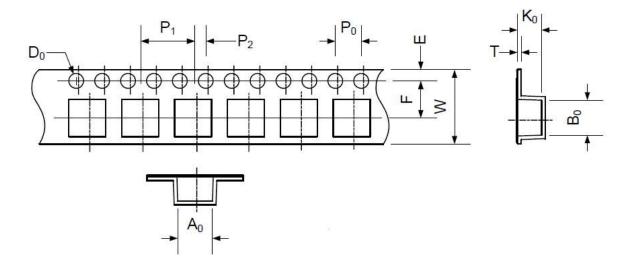
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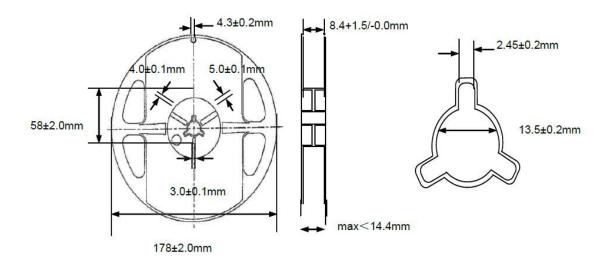
## **Packaging**

## T2: 2,000pcs / reel



$\mathbf{A_0}$	$\mathbf{B}_{0}$	$\mathbf{W}$	E	F	Po	P <sub>1</sub>	P <sub>2</sub>	$\mathbf{D_0}$	T	K <sub>0</sub>
3.3	3.3	8.0	1.75	3.5	4.0	4.0	2.0	1.5	0.25	1.6
$\pm 0.1$	±0.1	$\pm 0.3$	±0.1	$\pm 0.05$	$\pm 0.1$	$\pm 0.1$	$\pm 0.1$	+0.1/-0.0	±0.03	$\pm 0.1$

### **Dimension: mm**



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#### **1.0** Note

- i) The parts are manufactured in accordance with this specification. If other conditions and specifications which are required for this specification, please contact ABRACON for more information.
- ii) ABRACON will supply the parts in accordance with this specification unless we receive a written request to modify prior to an order placement.
- iii) In no case shall ABRACON be liable for any product failure from in appropriate handling or operation of the item beyond the scope of this specification.
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**REVISED: 08-09-19** 

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**REVISED: 08-09-19**