



**THE DATASHEET OF  
ASPI-0428S-820M-T**



# SMD SHIELDED POWER INDUCTORS

ASPI-0428S



RoHS  
Compliant



4.7 x 4.7 x 3.0mm

## FEATURES:

- Superior to be high saturation for surface mounting
- Very thin & compact
- With large permissible DC current & low DC resistance
- Magnetic shielding surface mount inductor with high rating

## APPLICATIONS:

- PDA's flash memory
- Step-up, step-down converters
- Communications
- Hard disk, notebook computer

## ELECTRICAL SPECIFICATIONS:

### PARAMETERS

ABRACON P/N: ASPI-0428S-XXX

Operating temperature: -40°C to +125°C (including self-generated heat)

Storage temperature: -40°C to +125°C

Part#	Inductance ( $\mu$ H)	Testing Conditions	Tol. (%)	RDC max. ( $\Omega$ )	IDC max. (A)
ASPI-0428S-1R0	1.0	100KHz/0.25V	N	0.026	2.70
ASPI-0428S-1R2	1.2	100KHz/0.1V	N	0.024	2.56
ASPI-0428S-1R8	1.8	100KHz/0.1V	N	0.028	2.20
ASPI-0428S-2R2	2.2	100KHz/0.25V	N	0.034	1.80
ASPI-0428S-2R7	2.7	100KHz/0.1V	N	0.043	1.60
ASPI-0428S-3R0	3.0	100KHz/0.25V	N	0.048	1.55
ASPI-0428S-3R3	3.3	100KHz/0.1V	N	0.049	1.57
ASPI-0428S-3R9	3.9	100KHz/0.25V	N	0.048	1.50
ASPI-0428S-4R7	4.7	100KHz/0.25V	N	0.052	1.35
ASPI-0428S-5R6	5.6	100KHz/0.25V	N	0.059	1.21
ASPI-0428S-6R8	6.8	100KHz/0.25V	N	0.088	1.15
ASPI-0428S-8R2	8.2	100KHz/0.1V	N	0.118	1.04
ASPI-0428S-100	10	1KHz/0.25V	M	0.120	1.00
ASPI-0428S-120	12	1KHz/0.25V	M	0.140	0.84
ASPI-0428S-150	15	1KHz/0.25V	M	0.156	0.75
ASPI-0428S-180	18	100KHz/0.1V	M, N	0.166	0.72
ASPI-0428S-220	22	1KHz/0.25V	M	0.247	0.70
ASPI-0428S-270	27	1KHz/0.25V	M	0.299	0.58
ASPI-0428S-330	33	1KHz/0.25V	M	0.325	0.57
ASPI-0428S-390	39	1KHz/0.25V	M	0.351	0.52
ASPI-0428S-430	43	1KHz/0.25V	M	0.377	0.51
ASPI-0428S-470	47	1KHz/0.25V	M	0.442	0.50
ASPI-0428S-560	56	1KHz/0.25V	M	0.468	0.41
ASPI-0428S-680	68	1KHz/0.25V	M	0.546	0.35
ASPI-0428S-820	82	1KHz/0.25V	M	0.780	0.32

\*Continued on next page

# SMD SHIELDED POWER INDUCTORS

ASPI-0428S



RoHS  
Compliant



4.7 x 4.7 x 3.0mm

## ELECTRICAL SPECIFICATIONS:

### PARAMETERS

ABRACON P/N: ASPI-0428S-XXX

Operating temperature: -40°C to +125°C (including self-generated heat)

Storage temperature: -40°C to +125°C

Part#	Inductance ( $\mu$ H)	Testing Conditions	Tol. (%)	RDC max. ( $\Omega$ )	IDC max. (A)
ASPI-0428S-101	100	1KHz/0.25V	M	0.858	0.29
ASPI-0428S-121	120	1KHz/0.25V	M	1.30	0.27
ASPI-0428S-151	150	1KHz/0.25V	M	1.50	0.24
ASPI-0428S-181	180	1KHz/0.25V	M	1.60	0.22
ASPI-0428S-221	220	100KHz/0.1V	M, N	2.00	0.21
ASPI-0428S-271	270	1KHz/0.25V	M	2.86	0.185
ASPI-0428S-331	330	1KHz/0.25V	M	3.25	0.170
ASPI-0428S-391	390	1KHz/0.25V	M	4.55	0.155
ASPI-0428S-471	470	1KHz/0.25V	M	5.07	0.140
ASPI-0428S-561	560	1KHz/0.25V	M	5.46	0.130
ASPI-0428S-681	680	1KHz/0.25V	M	6.11	0.120

### Note:

#### Test Conditions

- 100KHz/0.25V, 1KHz/0.25V, 100KHz/0.1V

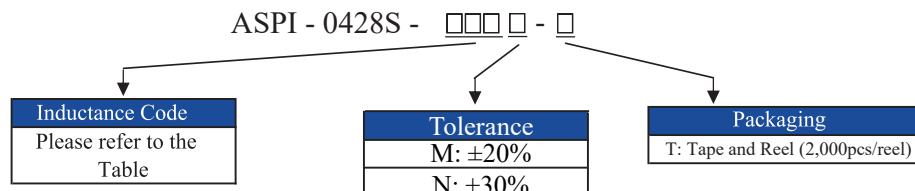
- Tolerance: N=±30%; M=±20%, M tolerance is standard

- Rated DC Current: The current when the inductance becomes 35% lower than its initial value or the current when the temperature of coil increases to  $\Delta 40^\circ\text{C}$ . The smaller one is defined as Rated DC Current.

( $T_a=25^\circ\text{C}$ )

- DCR & IDC listed are all Max. value.

## OPTIONS AND PART IDENTIFICATION



# SMD SHIELDED POWER INDUCTORS



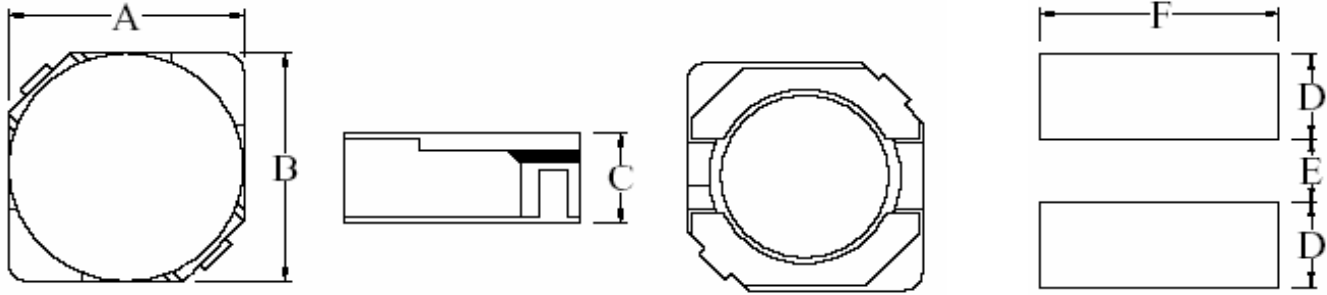
4.7 x 4.7 x 3.0mm

**ASPI-0428S**



**RoHS**  
Compliant

## OUTLINE DRAWING:

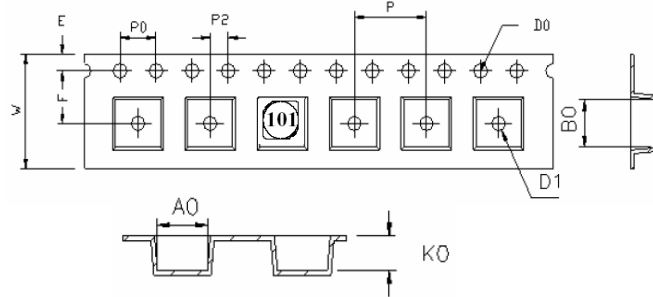


Part#	A	B	C	D	E	F
ASPI-0428S-xxx	0.185±0.012 (4.7± 0.3)	0.185±0.012 (4.7± 0.3)	0.118 Max (3.0) max.	0.075 ref. (1.9) ref.	0.059 ref. (1.5) ref.	0.209 ref. (5.3) ref.

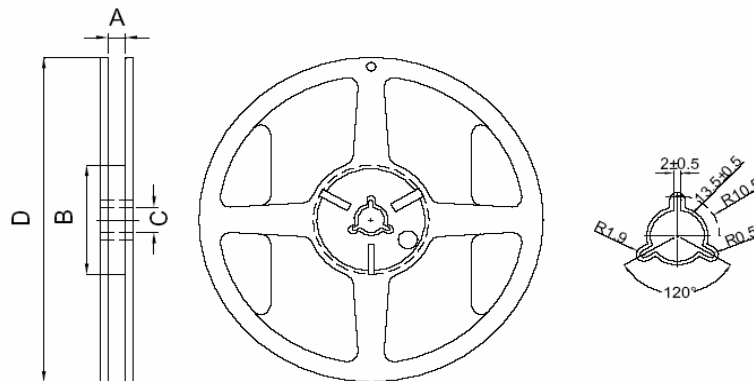
Dimension : Inches (mm)

## PACKAGING

T: 2,000pcs/reel



Part#	A0	B0	K0	P	P0	P2
ASPI-0428S-xxx	5.2± 0.1	5.2± 0.1	3.2± 0.1	8.0± 0.1	4.0± 0.1	2.0± 0.1
	W	F	E	D0	D1	
	12± 0.3.	5.5± 0.05	1.75±0.1	1.5 min.	1.5 min.	



Part#	A	B	C	D
ASPI-0428S-xxx	12.5± 0.5	100± 0.5	13.5± 0.3	330± 1.0

Dimension : mm

# SMD SHIELDED POWER INDUCTORS

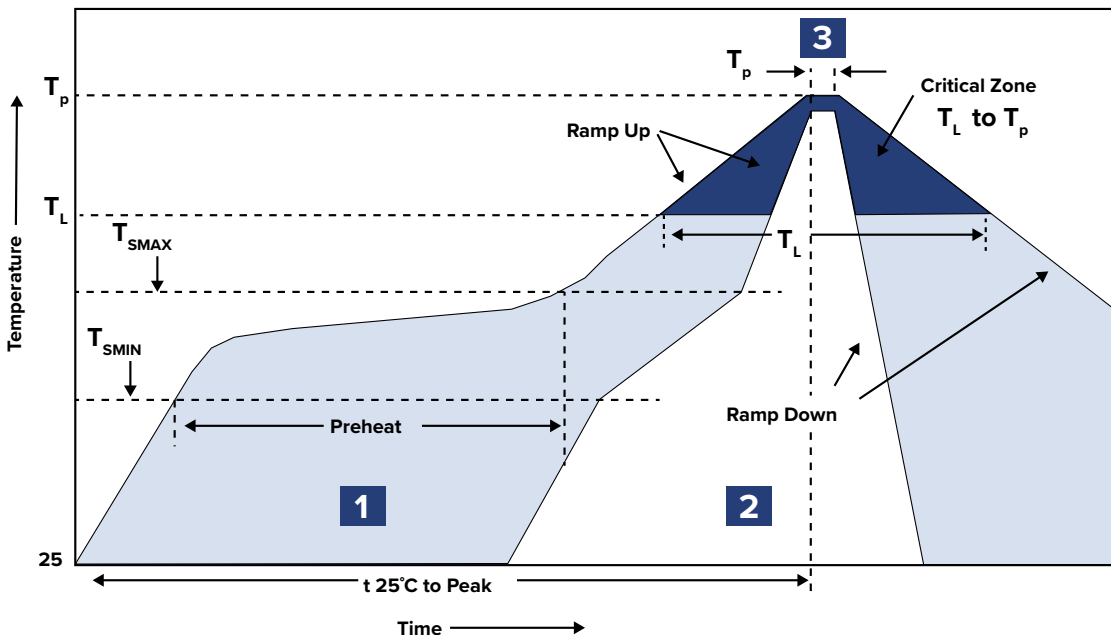


4.7 x 4.7 x 3.0mm

**ASPI-0428S**

**Pb** | **RoHS**  
Compliant

## REFLOW PROFILE:



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMAX}$ 120°C ~ 180°C	50 ~ 150 sec.
2	Reflow	$T_L$ 217°C	70 sec.
3	Peak heat	$T_p$ 250°C ~ 260°C	10 - 30 sec. MAX

Dimension: 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: 09-30-20

ABRACON IS  
ISO9001-2015  
CERTIFIED

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View ASPI-0428S-820M-T on WIN SOURCE](#)
- ⊖ [Abracon LLC Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management