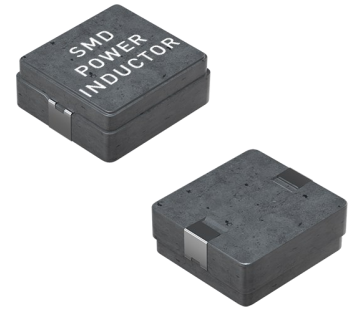


# SMD LARGE CURRENT POWER INDUCTOR SERIES „SPIB/F 1040“



## FEATURES

- + A coil embedded inductor with magnetic metal alloy powder. Shielded construction
- + Superior DC Current characteristics, suitable for large current application
- + Low loss realized with low DC resistance
- + Ultra low buzz noise

## APPLICATIONS

- + Ideal for DC/DC converters in personal computer, Notebook PC, VTR and set top box etc.
- + High current POL converters
- + DC/DC Converters in other portable game devices, communication equipment's and office automation electronic equipment's,

PB FREE / ROHS-2 2011/65/EU COMPLIANT

## ELECTRICAL CHARACTERISTICS

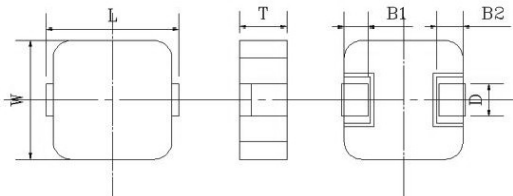
PART NUMBER	INDUCTANCE ( $\mu$ H) @0A	TOLERANCE	RESISTANCE (m $\Omega$ ) $\pm$ 7%	SATURATION CURRENT TYP.(A)	HEAT RATING CURRENT TYP.(A)
SPIB1040-R36	0.36	$\pm$ 20%	1.10	35	28
SPIB1040-R47	0.47	$\pm$ 20%	1.20	28	24
SPIB1040-R56	0.56	$\pm$ 20%	1.70	27	23
SPIB1040-R68	0.68	$\pm$ 20%	2.10	25	22
SPIB1040-1R0	1.00	$\pm$ 20%	3.00	23	20
SPIF1040-1R5	1.50	$\pm$ 20%	4.7	18	15
SPIF1040-2R2	2.20	$\pm$ 20%	6.5	13.5	12.0
SPIF1040-3R3	3.30	$\pm$ 20%	11.0	12.0	10.0
SPIF1040-4R7	4.70	$\pm$ 20%	14.0	10.5	9.0
SPIF1040-6R8	6.80	$\pm$ 20%	20.7	8.5	7.2
SPIF1040-8R2	6.20	$\pm$ 20%	25.0	6.5	6.0
SPIF1040-100	10.0	$\pm$ 20%	30.0	6.0	5.3
SPIF1040-150	15.0	$\pm$ 20%	45.0	5.4	4.5
SPIF1040-220	22.0	$\pm$ 20%	62.0	4.5	4.0
SPIF1040-330	33.0	$\pm$ 20%	95.0	4.0	3.5
SPIF1040-470	47.0	$\pm$ 20%	150.0	3.0	2.5
SPIF1040-680	66.0	$\pm$ 20%	190.0	2.3	2.0
SPIF1040-101	100.0	$\pm$ 20%	300.0	1.5	1.2

### Notes:

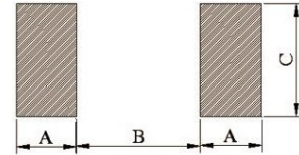
1. Inductance is measured with a Q meter, LCR meter or an impedance analyzer. Test frequency: 100 kHz;
2. DC resistance is measured with a digital DCR analyzer;
3. Saturation current (I sat) that will cause LO to approximately drop 20%.
4. Heat rating current (I rms) that will cause a temperature rise  $\Delta$ T of 40°C approximately.
5. Operating temperature range -55 °C to + 125 °C.
6. Withstanding voltage: 30V DC max.

## DIMENSIONS AND PATTERNS

### PACKAGE SIZE - DIMENSIONS (UNIT: MM)



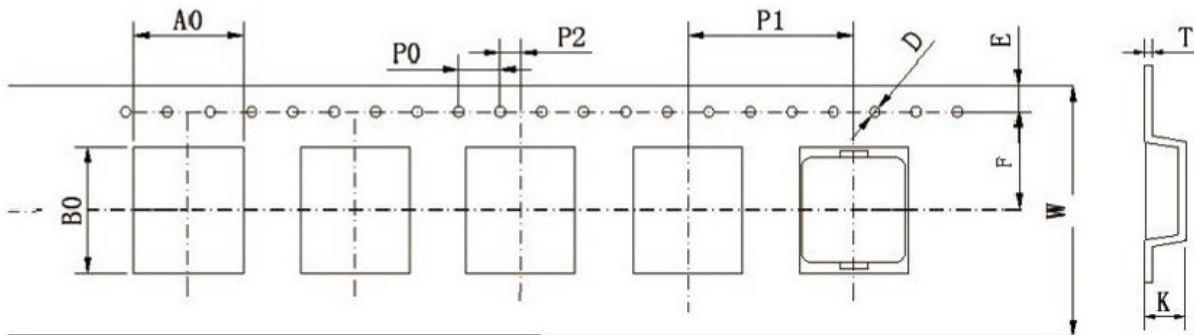
### RECOMMENDED LAND PATTERN (UNIT: MM)



DIMENSIONS (MM)						RECOMMENDED LAND PATTERN (MM)		
L	W	T	B1	B2	D	A	B	C
10.8±0.5	10.0±0.3	3.8±0.2	2.2±0.3	2.5±0.3	3.0±0.2	4.1	5.4	4.1

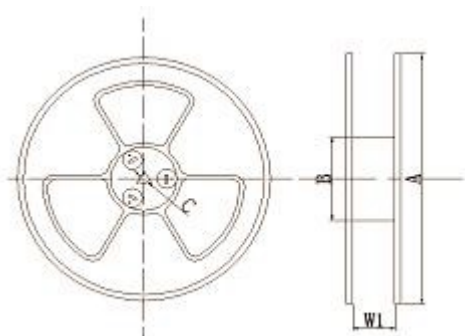
## Package

### TAPE DIMENSIONS (MM)



	A0	B0	W	F	E	P1	P2	P0	D	T	K
10 SERIES	±0.1	±0.1	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.05	±0.1
	10.3	11.6	24	11.5	1.75	16	2.0	4.0	1.5	0.4	4.2

### REEL DIMENSIONS (MM)



	A	B	C	W1	QUANTITY (PCS/REEL)
10 SERIES	330	100	13.0	24.0	500

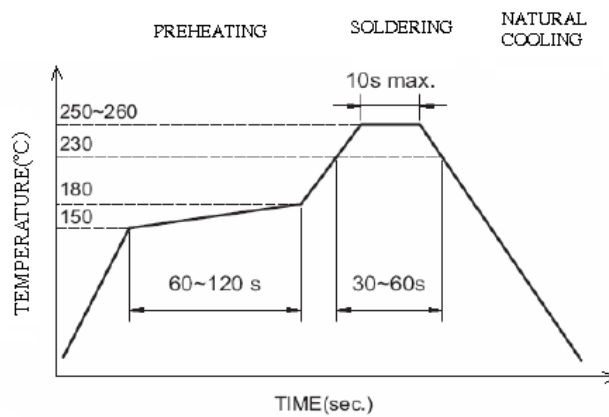
## SOLDERING AND MOUNTING

### SOLDERING

Mildly activated rosin fluxes are preferred. The minimum amount of solder can lead to damage from the stresses caused by the difference in coefficients of expansion between solder, chip and substrate. The terminations are suitable for all wave and reflow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

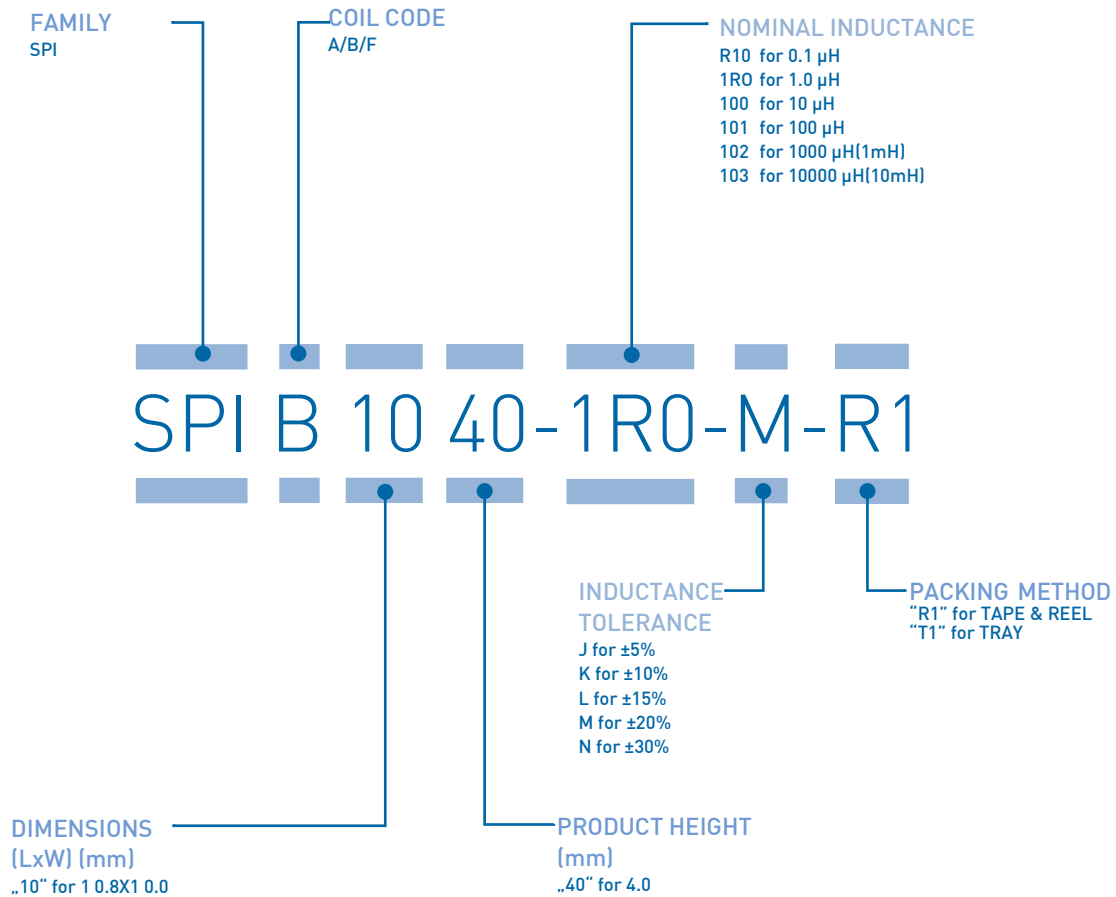
### REFLOW SOLDERING PROFILE

Recommended temperature profiles for re-flow soldering in Figure .



Recommended temperature profiles for re-flow soldering in Figure .

## ORDERING INFORMATION



EXAMPLE: SPIB1040-1R0-M-R1

PLEASE INDICATE YOUR REQUIRED PARAMETERS

**Note:**

7. The component has not been developed and is not intended for safety-relevant applications. A use in safety-relevant applications requires a separate written approval by PETERMANN-TECHNIK GmbH
8. Do not use the product beyond the nominal rated current as this may create excessive heat and will void the warranty
9. The usage and operation of the product within ambient conditions, which probably alloy or harm the wire isolation, has to be avoided.
10. Don't bend; don't press.
11. Do not clean or wash the component for it is not hermetically sealed.
12. Don't use more than in welding 0.2% (weight ratio) chloric acid solvent.
13. Don't get close to fire.
14. This specification mentions the quality of the component as a single unit. Please insure the component is thoroughly evaluated in your application circuit.
15. It may be influential to the component solderability if the component is used beyond 12 months.
16. If used in automotive electronics, please contact us before use.



## PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2015 IN OCTOBER 2016 BY THE DMSZ CERTIFIKATION GMBH AND CERTIFIED ACCORDING TO 14001:2015 IN MARCH 2018 BY SEQ-CERT.

THIS IS FOR YOU TO ENSURE THAT THE PRINCIPLES OF QUALITY MANAGEMENT ARE FULLY IMPLEMENTED IN OUR QUALITY MANAGEMENT SYSTEM AND QUALITY CONTROL METHODS ALSO DOMINATE OUR QUALITY STANDARDS.