

### Power Choke Coil PIMB103T type

#### ■ Features

High performance (Isat) realized by metal dust core.

Low profile : Thickness max. 3.0mm

Low loss realized with low DCR

Capable of corresponding high frequency ( $R \leq 10\mu\text{H} : 3\text{MHz}$  /  $R > 10\mu\text{H} : 1\text{MHz}$ )

100% lead (Pb) free meet RoHS standard

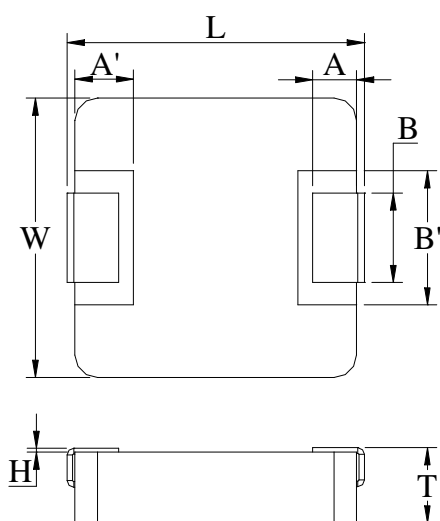
#### ■ Application

DC/DC converter for CPU in Notebook PC

Thin type on-board power supply module for exchanger

VRM for server

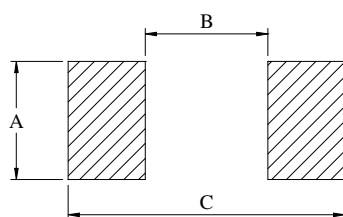
#### ■ Outline Dimensions



Code	Dimensions (mm)	
	R22 / R24 / R33 / R36 R47 R56 / R68	R82 / 1R0 / 1R5 / 2R2 3R3 / 4R7 / 8R2 / 100 150 / 220
L	11.15 ± 0.35	10.85 ± 0.35
W	10 ± 0.3	
T	2.8 ± 0.2	
A	2.0 ± 0.5	
A'	2.5 ± 0.1	
B	3.0 ± 0.5	
B'	5.0 ± 0.2	
H	0 ~ +0.15	

#### ■ Recommend Land Pattern Dimensions

The customer shall determine the land dimensions shown below after confirming and safety.



A	4.1
B	5.4
C	13.6

Unit : mm

### ■ Specifications

Part Number	L0 Inductance ( $\mu\text{H}$ ) @ (0A)	$R_{dc}$ ( $\text{m}\Omega$ )		Heat Rating Current DC Amps. $I_{dc}$ (A)	Saturation Current DC Amps. $I_{sat}$ (A)
		Typical	Maximum	Typical	Typical
PIMB103T-R22MS	0.22	1.07	1.2	30.0	50.0
PIMB103T-R24MS	0.24	1.1	1.27	30.0	50.0
PIMB103T-R33MS	0.33	1.3	1.6	23.0	32.0
PIMB103T-R36MS	0.36	1.3	1.6	23.0	28.0
PIMB103T-R47MS	0.47	2.1	2.5	23.0	26.0
PIMB103T-R56MS	0.56	2.4	3.0	22.0	24.0
PIMB103T-R68MS	0.68	2.9	3.4	21.0	23.0
PIMB103T-R82MS	0.82	4.0	4.6	18.0	22.5
PIMB103T-1R0MS	1.00	5.3	6.0	15.0	21.0
<b>PIMB103T-1R5MS</b>	<b>1.50</b>	<b>6.5</b>	<b>7.5</b>	<b>13.5</b>	<b>20.0</b>
PIMB103T-2R2MS	2.20	8.0	9.0	13.0	16.0
PIMB103T-3R3MS	3.30	14.5	16.0	9.0	14.0
PIMB103T-4R7MS	4.70	20.5	22.5	7.0	13.0
PIMB103T-8R2MS	8.20	35.0	45.0	5.0	8.5
PIMB103T-100MS	10.0	50.0	55.0	5.0	7.5
PIMB103T-150MS	15.0	59.0	65.0	4.0	6.0
PIMB103T-220MS	22.0	90.0	99.0	3.0	5.0

\* : If you require another part number please contact with us.

\*\* : Inductance Tolerance  $\pm 20\%$

Note 1. : All test data is referenced to  $25^{\circ}\text{C}$  ambient.

Note 2. : Test Condition: 100KHz, 1.0Vrms

Note 3. :  $I_{dc}$  : DC current (A) that will cause an approximate  $\Delta T$  of  $40^{\circ}\text{C}$

Note 4. :  $I_{sat}$  : DC current (A) that will cause L0 to drop approximately 30%

Note 5. : Operating Temperature Range  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

Note 6. : The part temperature (ambient + temp rise) should not exceed  $125^{\circ}\text{C}$  under the worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

Note 7. : The rated current as listed is either the saturation current or the heating current depending on which value is lower.

### Current Characteristic

