



## Power Choke Coil MHIC1040 type

### ■ Features

High performance (Isat) realized by metal dust core.

Low profile : Thickness max. 4.0mm

Low loss realized with low DCR

Capable of corresponding high frequency (3MHz)

100% lead (Pb) free meet RoHS standard

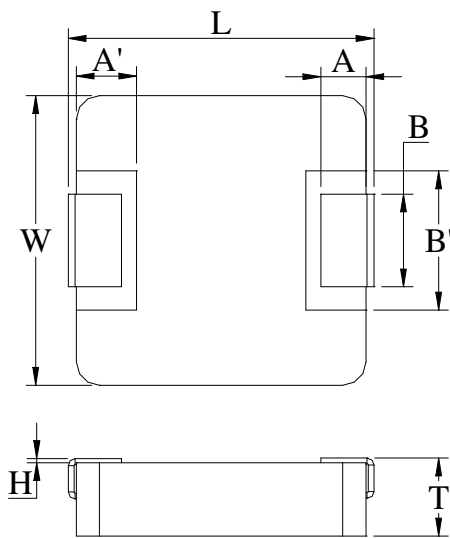
### ■ Application

DC/DC converter for CPU in Notebook PC

Thin type on-board power supply module for exchanger

VRM for server

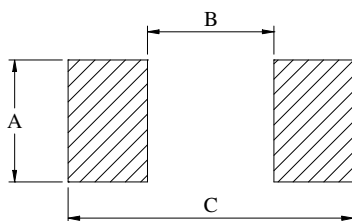
### ■ Outline Dimensions



Code	Dimensions (mm)	
	R15 / R22 / R39 R41 / R45 / R68 R88	1R5 / 2R2 / 4R7
L	11.15 ± 0.35	10.85 ± 0.35
W	10 ± 0.3	
T	3.8 ± 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. Idc ( A )	Saturation Current DC Amps. Isat ( A )
		Typical	Maximum	Typical	Typical
MHIC1040-R15M	0.15	0.50	0.65	40.0	75.0
MHIC1040-R22M	0.22	0.90	1.0	35.0	60.0
MHIC1040-R39M	0.39	1.10	1.3	30.0	60.0
MHIC1040-R41M	0.41	1.10	1.3	30.0	60.0
MHIC1040-R45M	0.45	1.10	1.3	29.0	45.0
MHIC1040-R68M	0.68	2.40	2.7	22.0	39.0
MHIC1040-R88M	0.88	2.70	3.0	20.0	38.0
MHIC1040-1R5M	1.5	3.80	4.2	16.0	33.0
MHIC1040-2R2M	2.2	6.70	7.0	12.0	27.0
MHIC1040-4R7M	4.7	15.0	16.5	9.5	17.0

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

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

Note 1. : All test data is referenced to 25°C ambient.

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

Note 3. : Idc : DC current (A) that will cause an approximate  $\Delta T$  of 40°C

Note 4. : Isat : DC current (A) that will cause L0 to drop approximately 20%

Note 5. : Operating Temperature Range -55°C to + 125°C

Note 6. : The part temperature (ambient + temp rise) should not exceed 125°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

