

**Power Choke Coil CMLE051E type**

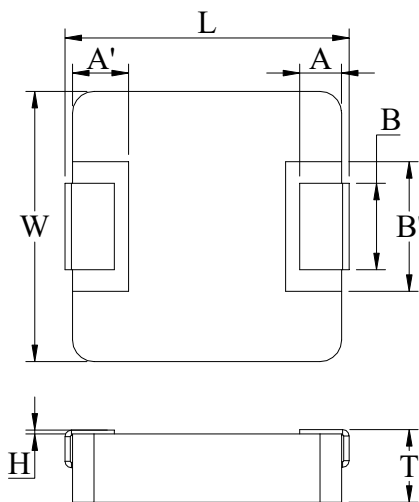
**■ Features**

High performance (Isat) realized by metal dust core.  
 Low profile : Thickness max. 1.5mm  
 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

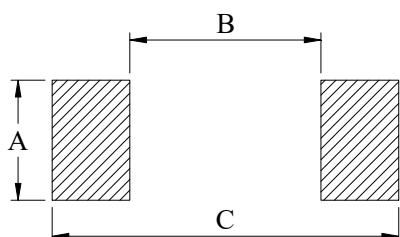
**■ Outline Dimensions**



Code	Dimensions (mm)
L	5.40 ± 0.35
W	5.2 ± 0.2
T	1.3 ± 0.2
A	1.0 ± 0.3
A'	1.5 ± 0.1
B	2.0 ± 0.3
B'	2.5 ± 0.2
H	0 ~ +0.15

**■ Recommend Land Pattern Dimensions**

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



A	2.5
B	2.2
C	5.99

Unit : mm

■ Specifications

Part Number	L0 Inductance ( $\mu$ H ) @ (0A)	R <sub>dc</sub> ( m $\Omega$ )		Heat Rating Current DC Amps. I <sub>dc</sub> ( A )		Saturation Current DC Amps. I <sub>sat</sub> ( A )	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
CMLE051E-R12MS	0.12	3.20	3.70	18.0	16.0	29.0	25.0
CMLE051E-R22MS	0.22	3.79	4.40	16.0	14.5	20.0	16.8
CMLE051E-R47MS	0.47	10.80	12.70	10.0	9.0	15.0	12.7
CMLE051E-R68MS	0.68	13.50	15.50	9.0	8.1	13.0	11.0
CMLE051E-1R0MS	1.0	19.00	23.00	6.5	5.8	10.0	8.5
CMLE051E-1R2MS	1.2	26.00	31.00	6.0	5.4	8.7	7.5
CMLE051E-2R2MS	2.2	45.00	52.00	5.0	4.0	7.0	6.0
CMLE051E-3R3MS	3.3	60.00	72.00	3.5	3.1	5.1	4.3
CMLE051E-4R7MS	4.7	88.00	100.00	3.1	2.7	4.2	3.7
CMLE051E-100MS	10.0	152.00	170.00	2.1	1.9	3.1	2.7

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

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

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

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

Note 3. : I<sub>dc</sub> : DC current (A) that will cause an approximate  $\Delta$  T of 40 $^{\circ}$ C

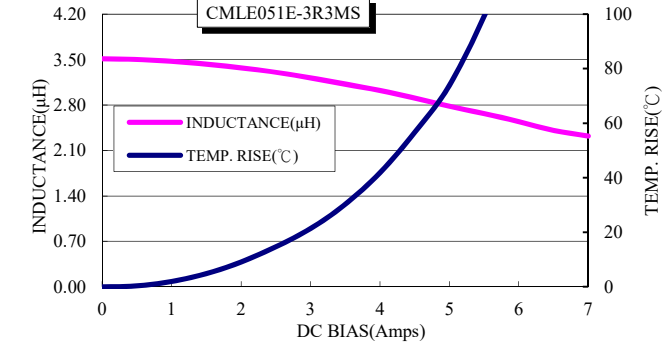
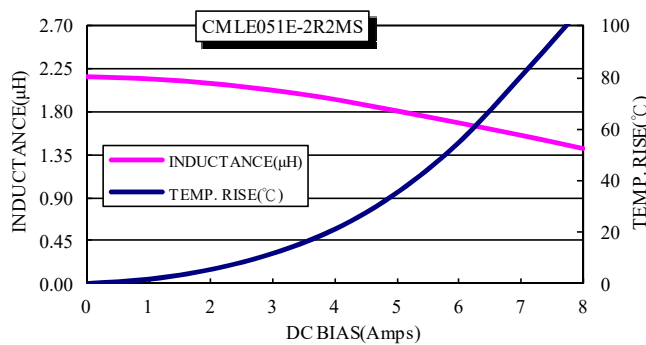
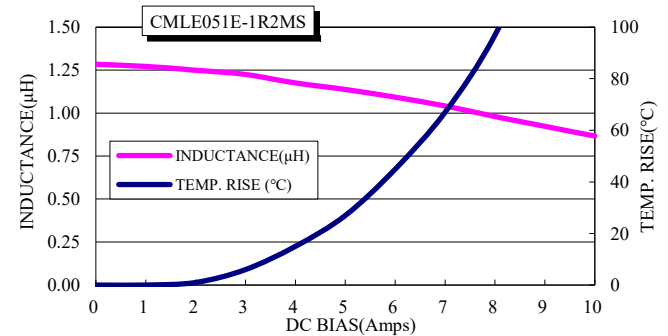
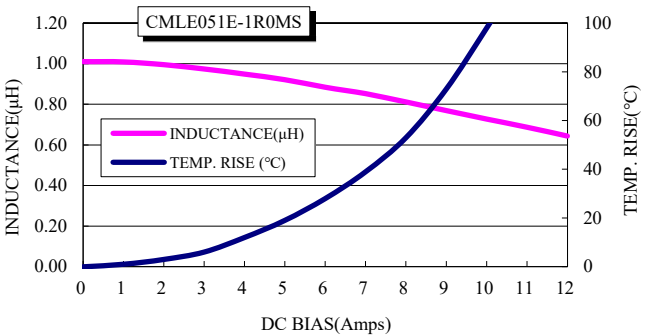
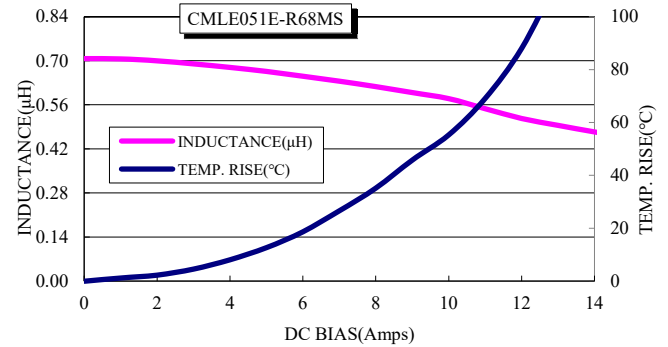
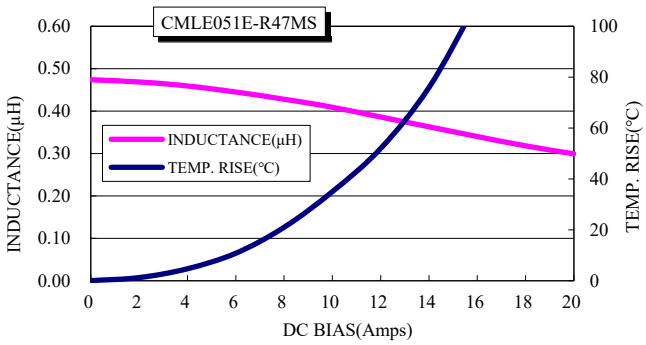
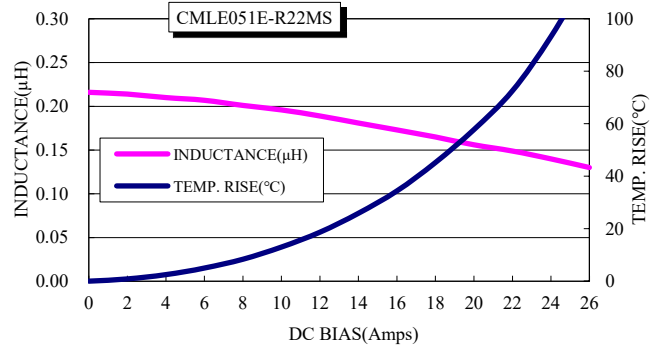
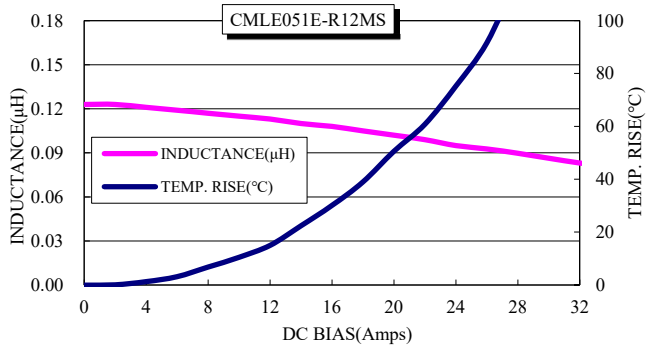
Note 4. : I<sub>sat</sub> : DC current (A) that will cause L0 to drop approximately 30%

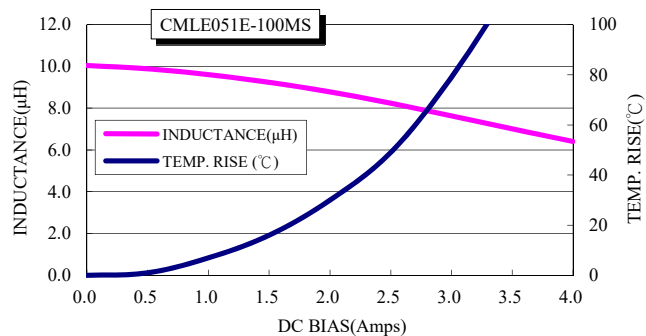
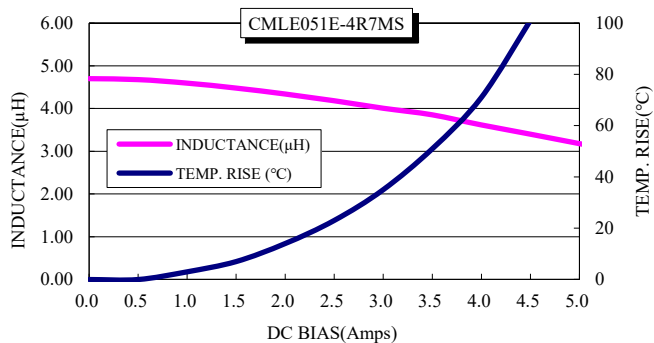
Note 5. : Operating Temperature Range -55 $^{\circ}$ C to +125 $^{\circ}$ C

Note 6. : The part temperature (ambient + temp rise) should not exceed 125 $^{\circ}$ C under the worst case operating conditions. Circuit design, component placement, PCB 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





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