



# THE DATASHEET OF CMLE063T-R68MS



### Power Choke Coil CMLE063T 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 (1MHz)

100% lead (Pb) free meet RoHS standard

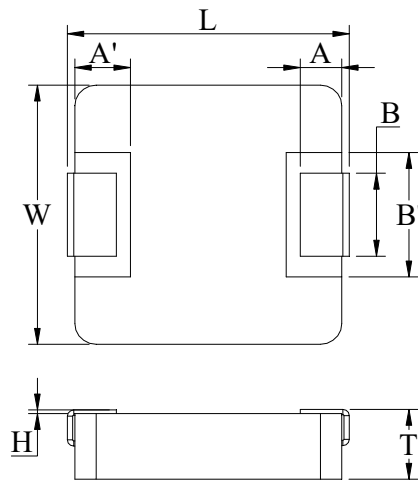
#### ■ Application

DC/DC converter for CPU in Notebook PC

Thin type on-board power supply module for exchanger

VRM for server

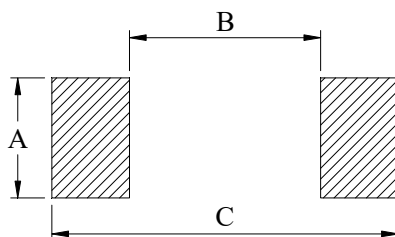
#### ■ Outline Dimensions



Code	Dimensions (mm)	
	L < 0.36μH	L ≥ 0.36μH
L	7.25 ± 0.35	6.95 ± 0.35
W	6.6 ± 0.2	
T	2.8 ± 0.2	
A	1.6 ± 0.3	
A'	2.0 ± 0.1	
B	3.0 ± 0.3	
B'	3.6 ± 0.2	
H	0 ~ +0.15	

#### ■ Recommend Land Pattern Dimensions

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



A	3.5
B	3.7
C	8.4

Unit : mm

### Specifications

Part Number	L0 Inductance ( $\mu\text{H}$ ) @ (0A)	$R_{dc}$ ( $m\Omega$ )		Heat Rating Current DC Amps. $I_{dc}$ ( A )		Saturation Current DC Amps. $I_{sat}$ ( A )	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
CMLE063T-R10MSQ	0.10	0.62	0.72	42.0	38.0	60.0	55.0
CMLE063T-R12MSQ	0.12	0.62	0.72	41.5	37.5	48.0	42.5
CMLE063T-R15MSQ	0.15	0.85	0.96	38.0	35.0	45.0	41.0
CMLE063T-R22MS	0.22	1.15	1.30	37.0	32.0	38.0	32.0
CMLE063T-R36MS	0.36	2.30	2.55	25.0	23.0	31.0	28.0
CMLE063T-R47MS	0.47	2.90	3.30	23.0	20.0	25.0	23.0
CMLE063T-R68MS	0.68	4.60	5.20	16.5	15.5	18.5	17.0
CMLE063T-R82MS	0.82	4.70	5.40	16.2	15.0	18.0	15.6
CMLE063T-1R0MS	1.0	5.60	6.50	16.0	14.4	17.0	15.0
CMLE063T-1R5MS	1.5	7.50	8.90	12.0	11.0	15.0	14.0
CMLE063T-2R2MS	2.2	11.00	12.80	10.0	9.0	14.0	12.0
CMLE063T-3R3MS	3.3	18.50	21.00	8.0	7.0	11.0	10.0
CMLE063T-4R7MS	4.7	23.60	26.00	6.7	6.0	8.0	7.0
CMLE063T-6R8MS	6.8	41.00	48.00	5.5	5.0	7.0	6.1
CMLE063T-8R2MS	8.2	52.00	60.00	5.1	4.6	6.6	5.7
CMLE063T-100MS	10.0	59.00	66.00	4.2	3.8	6.2	5.5
CMLE063T-220MS	22.0	148.00	170.00	2.8	2.3	3.2	2.7

Part Number	L0 Inductance ( $\mu\text{H}$ ) @ (0A)	$R_{dc}$ ( $m\Omega$ )	Heat Rating Current DC Amps. $I_{dc}$ ( A )		Saturation Current DC Amps. $I_{sat}$ ( A )	
			Typical	Maximum	Typical	Maximum
CMLE063T-R12MS0R657	0.12	$0.65 \pm 7\%$	41.5	37.5	48.0	42.5
CMLE063T-R15MS0R905	0.15	$0.90 \pm 5\%$	38.0	35.0	45.0	41.0
CMLE063T-R15MS0R907	0.15	$0.90 \pm 7\%$	38.0	35.0	45.0	41.0
CMLE063T-R15MS0R987	0.15	$0.98 \pm 7\%$	35.0	30.0	42.0	35.0
CMLE063T-R22MSQ1R167	0.22	$1.60 \pm 7\%$	37.0	32.0	38.0	32.0
CMLE063T-R24MS1R197	0.24	$1.19 \pm 7\%$	35.0	31.0	38.0	32.0

\*: 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  $40^{\circ}\text{C}$

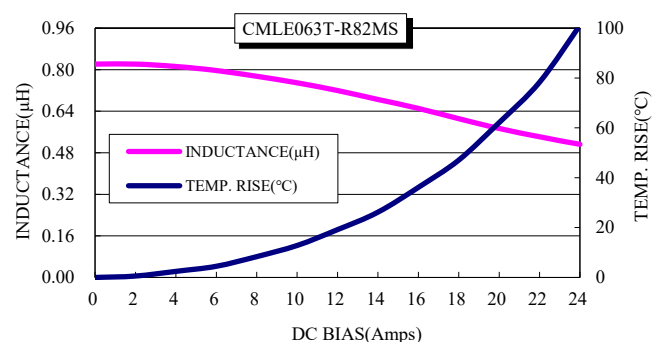
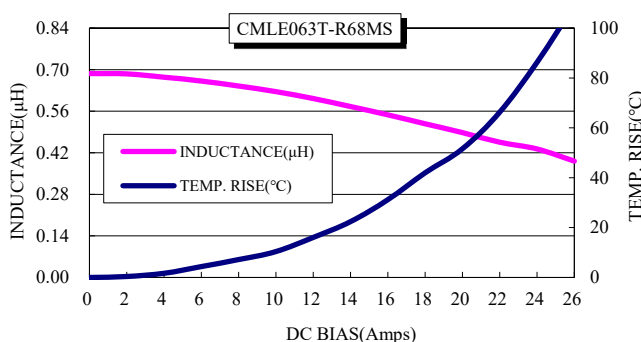
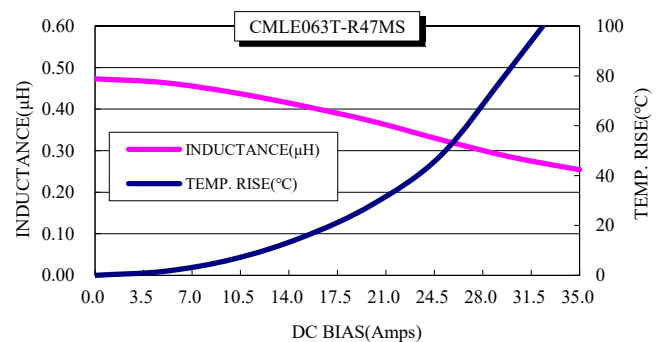
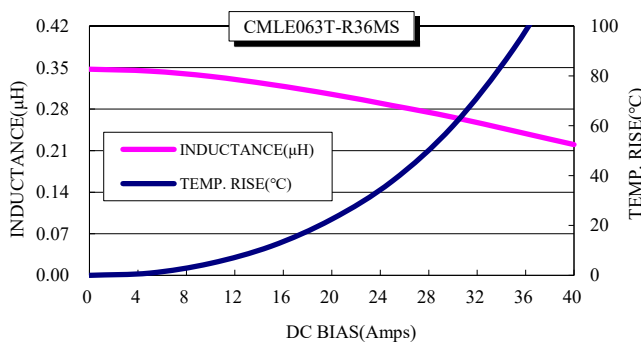
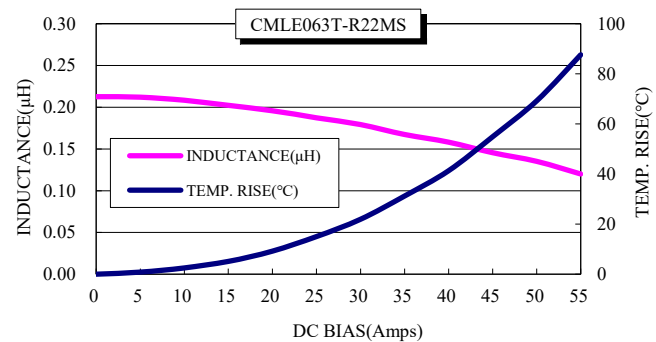
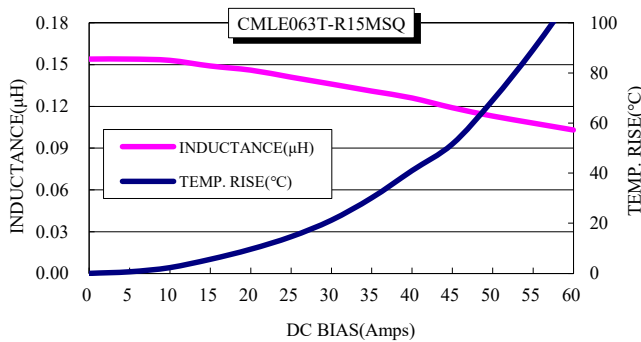
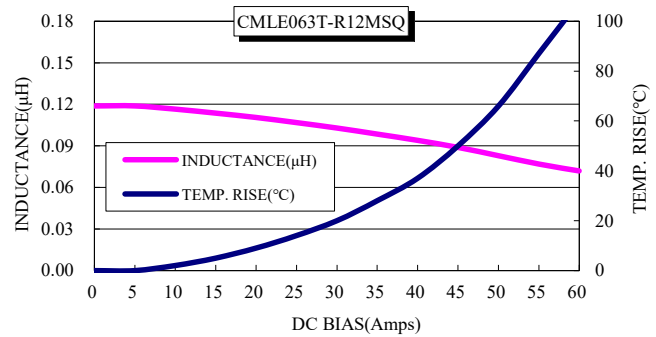
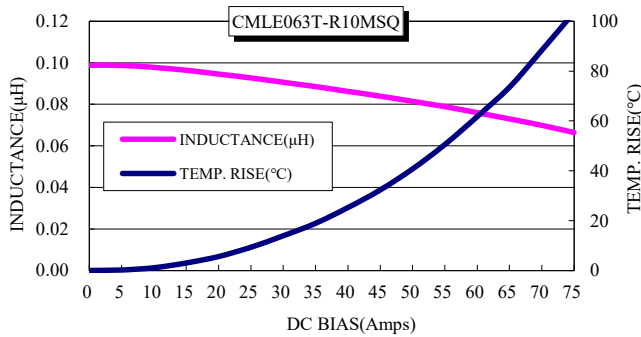
Note 4. :  $I_{sat}$  : DC current (A) that will cause L0 to drop approximately 30%

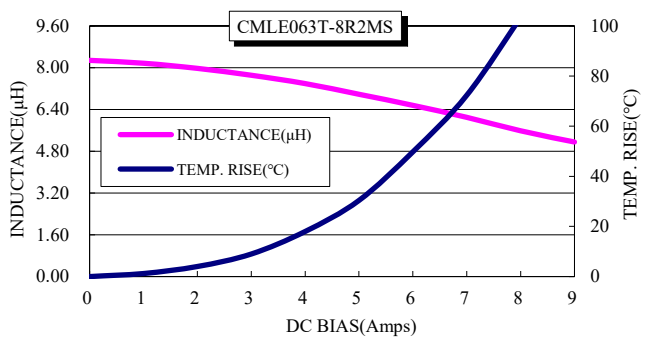
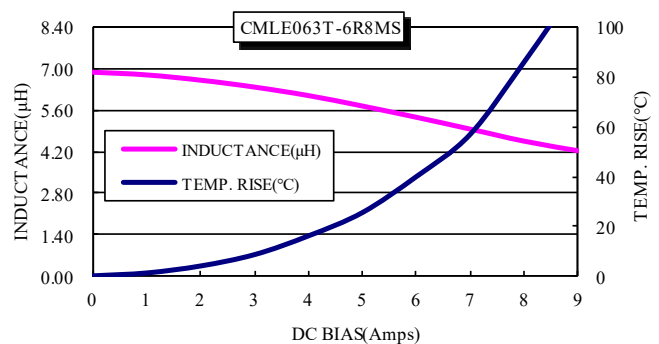
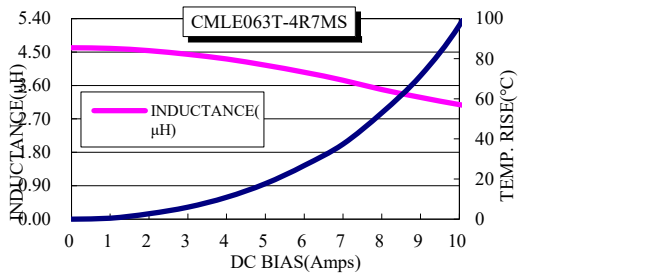
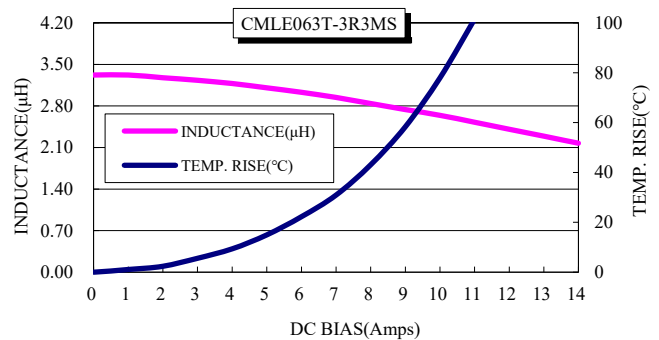
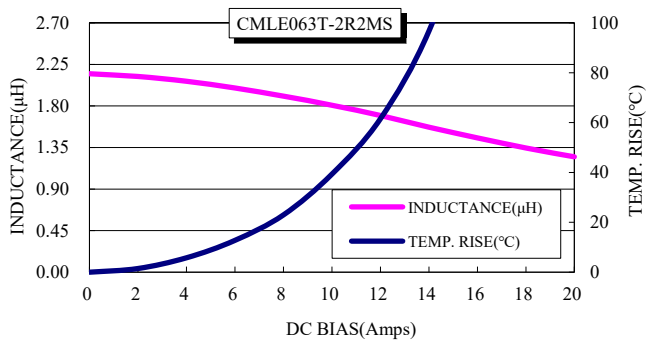
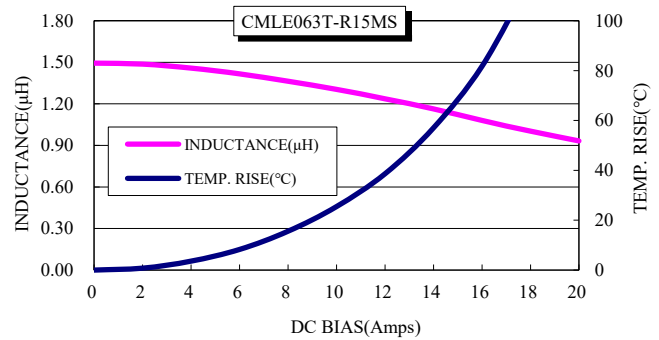
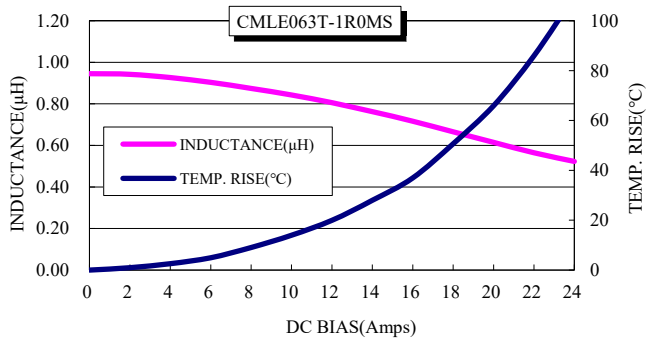
Note 5. : Operating Temperature Range  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

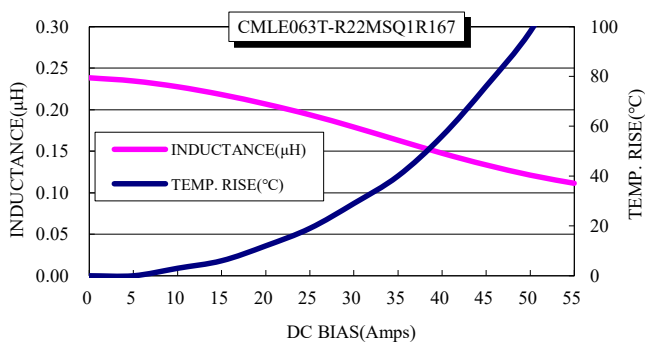
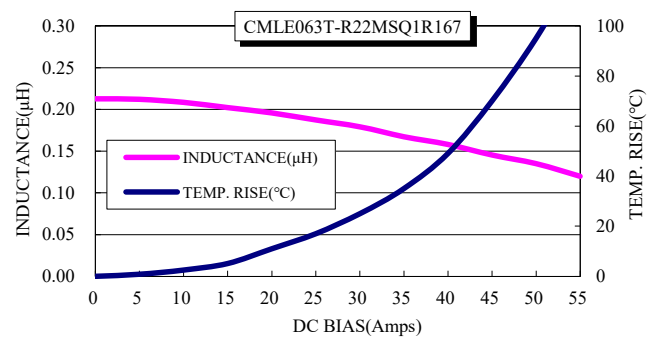
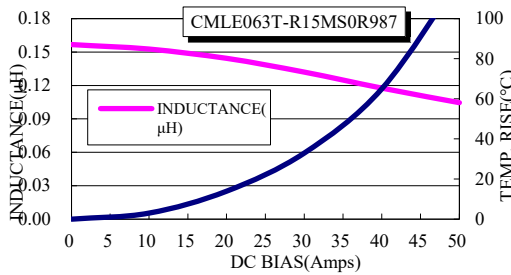
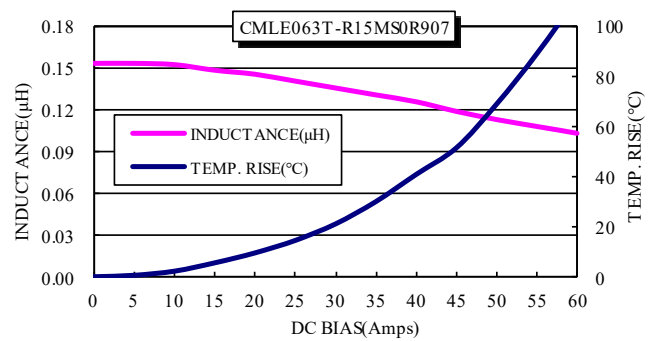
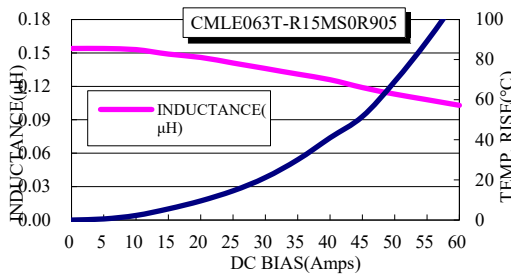
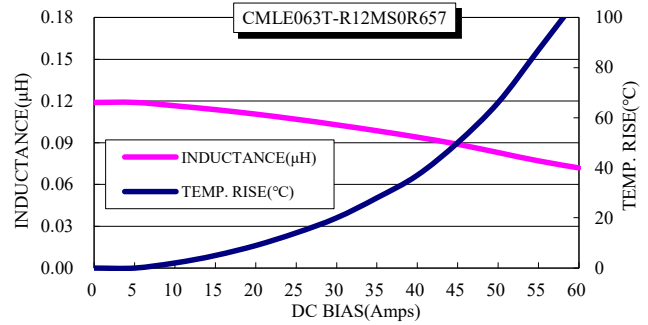
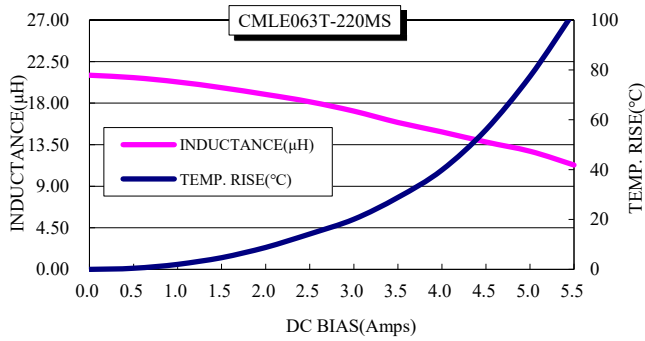
Note 6. : The part temperature (ambient + temp rise) should not exceed  $125^{\circ}\text{C}$  under the worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be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