

# SMD Power Inductor CDB87D10



## Description

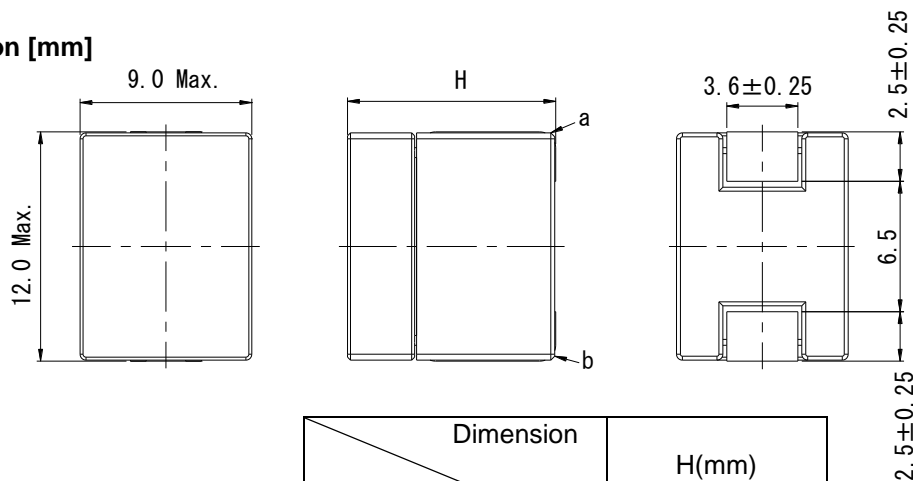
- Ferrite core construction
- Magnetically shielded
- Size((L×W×H): 12.0×9.0×11.0mm Max.
- Operating Temperature: -40°C to +125°C (including self-heating)



## Applications

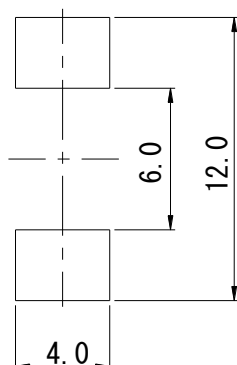
- Multi-phase and V core regulators.
- Voltage Regulation Modules (VRMs). Such as Server and desk-top, Central process unit (CPU), Graphics processing unit (GPU), Application specific integrated circuit(ASIC), High power density.
- Data networking density.
- Graphics cards and battery power systems.

## Dimension [mm]

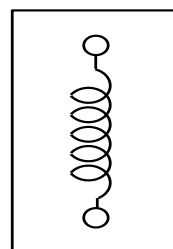


Dimension	H(mm)
Inductance	
0.10 $\mu$ H ~ 0.12 $\mu$ H	11.2 Max.
0.15 $\mu$ H ~ 0.30 $\mu$ H	11.0 Max.

## Reference Land pattern [mm]



## Connection (Bottom view)



Note : This specification is subject to change without notice. Please contact your nearest sales office for updated information when placing an order.

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## Electrical Characteristics

Part name	Stamp	Inductance ( $\mu$ H) [Within] ※1	D.C.R. (m $\Omega$ ) [within] (at 20°C)	Saturation current (A) ※2 Max.(Typ.)			Temperature rise current (A) ※3 Typ.
				(at 25°C)	(at 100°C)	(at 125°C)	
CDB87D10NP-R10MC	R10	0.10 $\pm$ 20%	0.190 $\pm$ 5%	120 <sup>+</sup> (120 <sup>+</sup> )	120 <sup>+</sup> (120 <sup>+</sup> )	106(120 <sup>+</sup> )	72
CDB87D10NP-R12MC	R12	0.12 $\pm$ 20%	0.190 $\pm$ 5%	115(120 <sup>+</sup> )	103(120 <sup>+</sup> )	97(115)	72
CDB87D10NP-R15MC	R15	0.15 $\pm$ 20%	0.190 $\pm$ 5%	99(117)	89(105)	79(93)	72
CDB87D10NP-R23MC	R23	0.23 $\pm$ 20%	0.190 $\pm$ 5%	63(74)	54(64)	51(60)	72
CDB87D10NP-R30MC	R30	0.30 $\pm$ 20%	0.190 $\pm$ 5%	45(53)	39(46)	35(42)	72

※1 Measuring frequency inductance at 1MHz.

※2 Saturation current: This indicates the value of D.C. current when the inductance becomes 20% lower than its initial value.

※3 Temperature rise current: The value of D.C. current when temperature of coil increased  $\Delta T=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ).

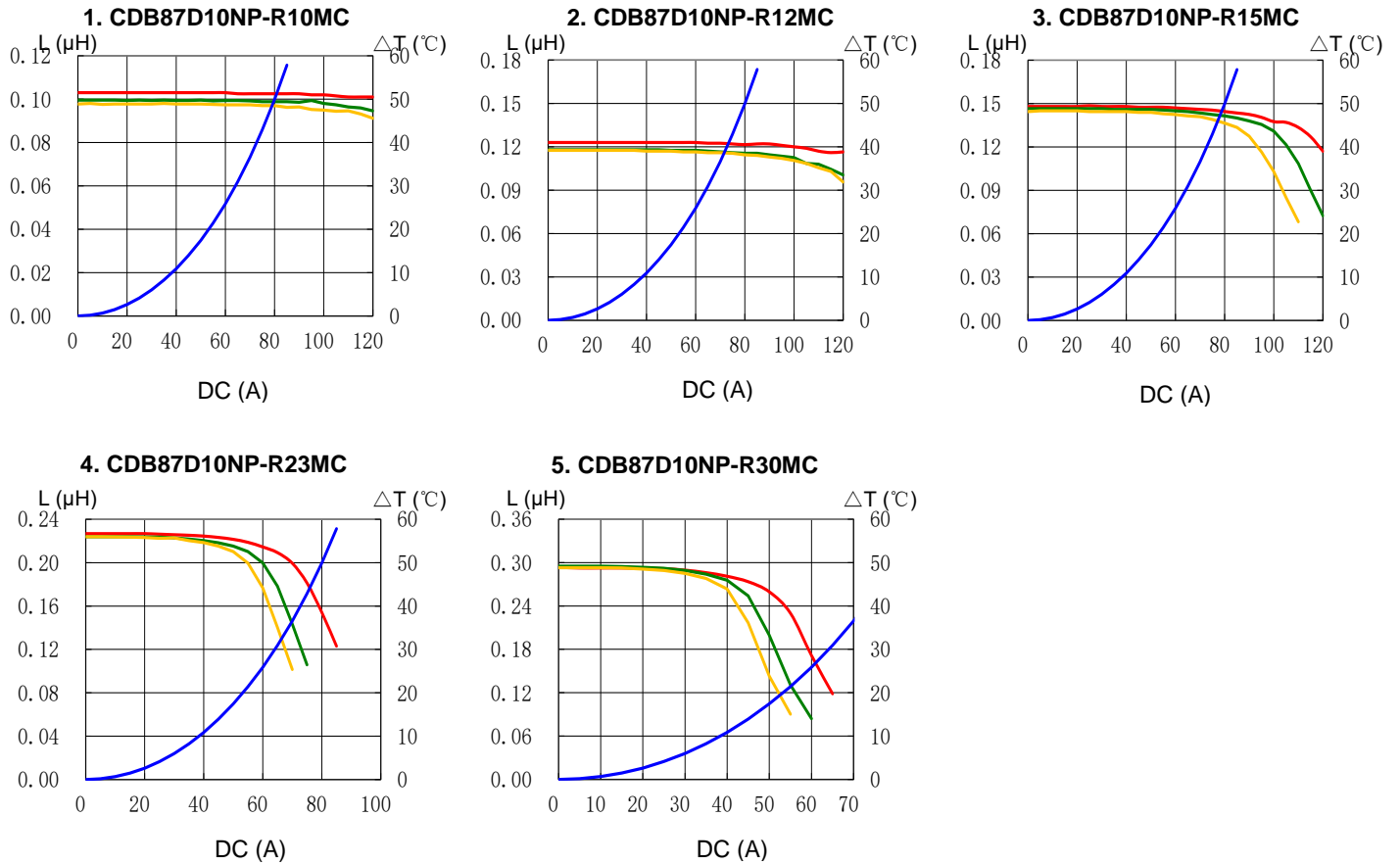
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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — L (125°C) —  $\Delta T$



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