

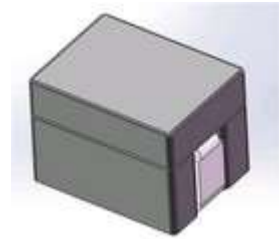
# SMD Power Inductor

## CDB78D78C



### Description

- Ferrite core construction
- Magnetically shielded
- LxWxH: 10.8x8.0x8.0mm Max.
- Product weight: 3.0g(Ref.)
- Moisture Sensitivity Level: 1



### Environmental Data

- Operating temperature range: -40°C~+125°C (including coil's self temperature rise)
- Storage temperature range: -40°C~+125°C

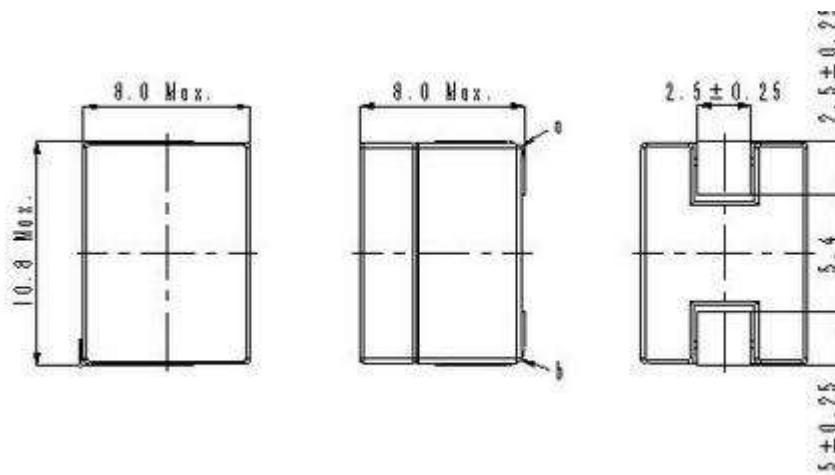
### Packaging

- Carrier tape and reel packaging
- 500pcs per reel

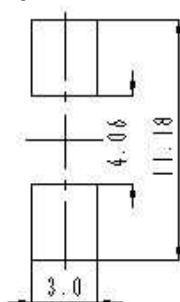
### Applications

- 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.

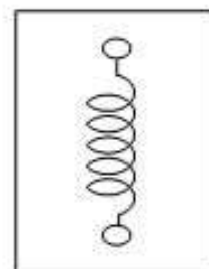
### Dimension - [mm]



### Recommended Land pattern - [mm]



### Wire Connection



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### Electrical Characteristics

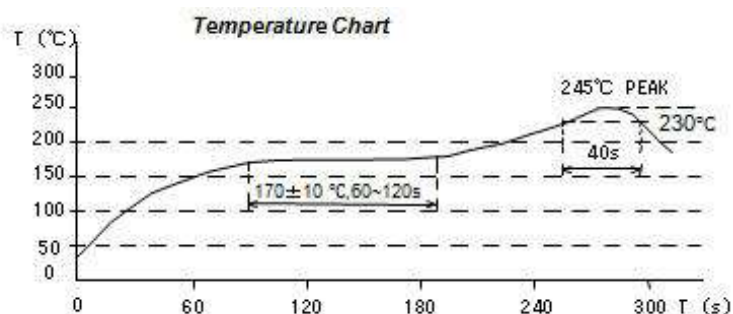
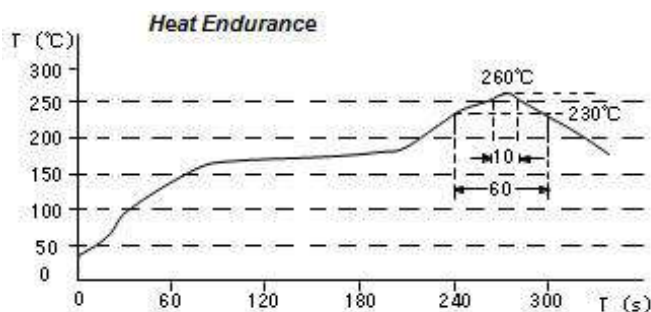
Part Number	Inductance [Within] ( $\mu$ H) ※1	D.C.R. at 20°C Max.(Typ.) (m $\Omega$ )	Saturation Current (A) Max.(Typ.) ※2		Temperature Rise Current (A) Max.(Typ.) ※3
			20°C	125°C	
CDB78D78CNP-R10MC	0.10 $\pm$ 20%	(0.18)	105 (125)	83.00 (98.00)	(73.00)
CDB78D78CNP-R12MC	0.12 $\pm$ 20%	(0.18)	89.00 (105)	70.00 (83.00)	(73.00)
CDB78D78CNP-R15MC	0.15 $\pm$ 20%	(0.18)	74.00 (88.00)	62.00 (74.00)	(73.00)
CDB78D78CNP-R17MC	0.17 $\pm$ 20%	(0.18)	61.00 (72.00)	53.00 (63.00)	(73.00)
CDB78D78CNP-R22MC	0.22 $\pm$ 20%	(0.18)	46.00 (55.00)	38.00 (45.00)	(73.00)
CDB78D78CNP-R33MC	0.33 $\pm$ 20%	(0.18)	30.00 (35.00)	24.00 (29.00)	(73.00)

※1 Measuring frequency inductance at 1MHz.

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

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

### Solder Reflow Condition



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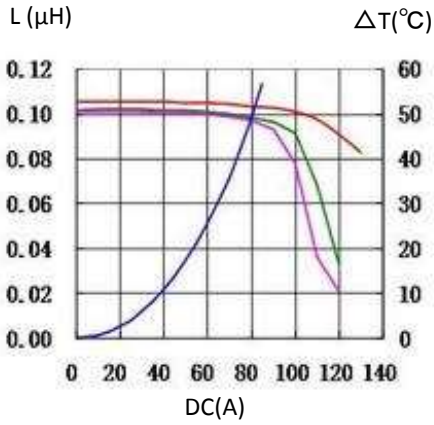
## CDB78D78C



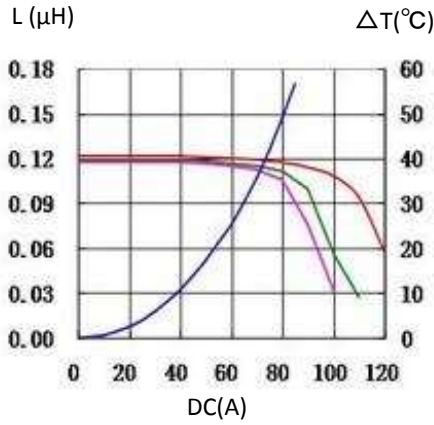
### Saturation Current & Temperature Rise Graph

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

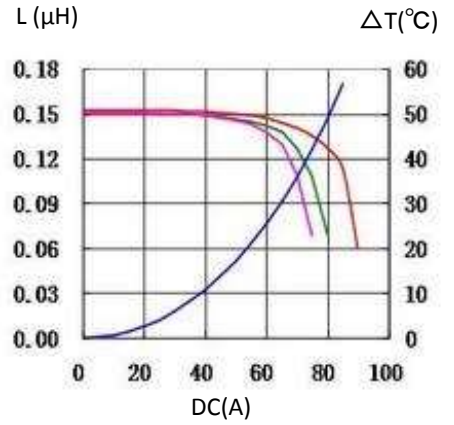
1. CDB78D78CNP-R10MC



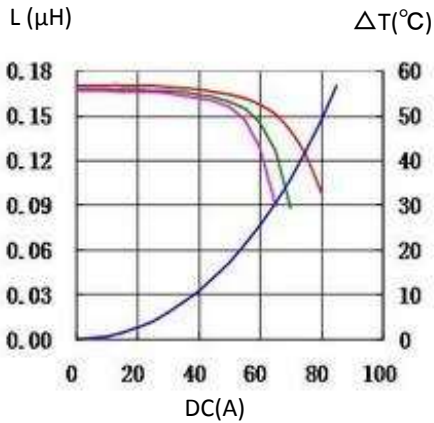
2. CDB78D78CNP-R12MC



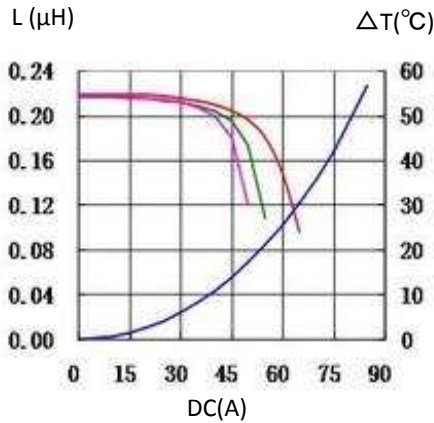
3. CDB78D78CNP-R15MC



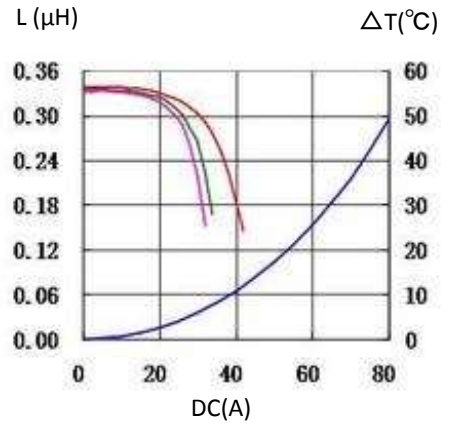
4. CDB78D78CNP-R17MC



5. CDB78D78CNP-R22MC



6. CDB78D78CNP-R33MC



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