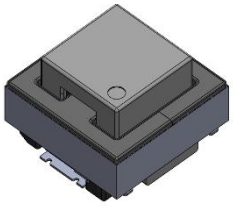
High Withstand Voltage Inductor

CDEEH13D90/T150

Provisional



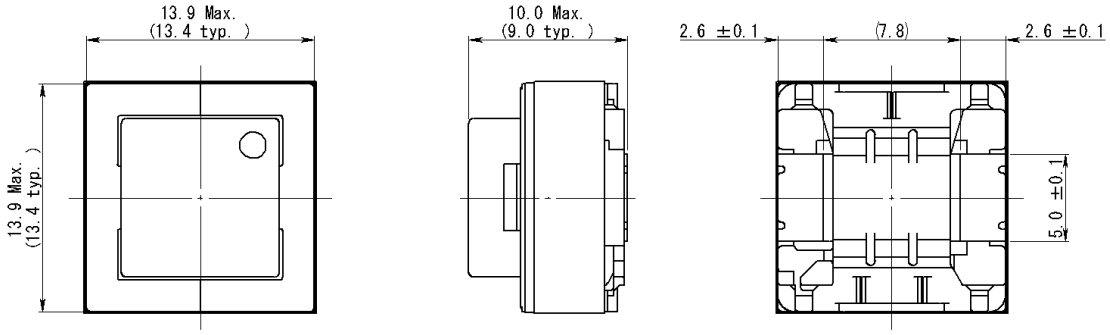
Description

- High withstand voltage inductor for high voltage input chopper buck converter circuit (e.g. 800Vin/15Vout)
- Circuit simplification and minimization are possible comparing conventional transformer circuit design
- Coil-Core, Coil-Coil withstand voltage: 840V
- Operational temperature range: -40℃～+150℃ (including self-heating)
- Qualified AEC-Q200

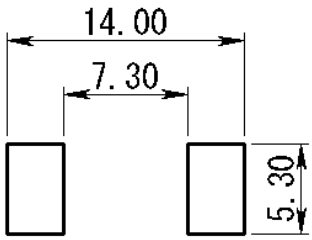
Applications

- Backup power supply chopper circuit for switching IC (e.g. inverter and DC/DC converter) when 12V battery power lost
- High voltage input chopper circuit for switching IC (e.g. e-compressor)
- Other high voltage input buck/boost chopper circuits

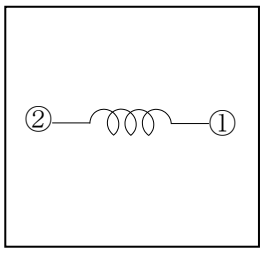
Dimension - [mm]



Reference Land pattern – [mm]



Connection



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Electrical Characteristics

Part No.	Stamp	Inductance [within] (μH) ※1	D.C.R (mΩ) at 20℃ Max. (Typ.)	Saturation Current (A) Max. (Typ.) ※2		Temperature Rise Current (A) Max. (Typ.) ※3
				(at 20℃)	(at 150℃)	
CDEEH13D90T150NP-101LC	101	100±15%	250±15%	1.36 (1.70)	1.04 (1.30)	1.25
CDEEH13D90T150NP-151LC	151	150±15%	304±15%	1.12 (1.40)	0.84 (1.05)	1.10
CDEEH13D90T150NP-221LC	221	220±15%	373±15%	0.90 (1.12)	0.74 (0.92)	1.04
CDEEH13D90T150NP-271LC	271	270±15%	423±15%	0.82 (1.02)	0.62 (0.77)	1.00
CDEEH13D90T150NP-331LC	331	330±15%	585±15%	0.74 (0.93)	0.60 (0.75)	0.82
CDEEH13D90T150NP-361LC	361	360±15%	610±15%	0.71 (0.89)	0.56 (0.70)	0.78
CDEEH13D90T150NP-471LC	471	470±15%	709±15%	0.62 (0.77)	0.48 (0.60)	0.73
CDEEH13D90T150NP-681LC	681	680±15%	1120±15%	0.52 (0.65)	0.39 (0.49)	0.58
CDEEH13D90T150NP-751LC	751	750±15%	1170±15%	0.50 (0.62)	0.37 (0.46)	0.56
CDEEH13D90T150NP-102LC	102	1000±15%	1530±15%	0.42 (0.53)	0.34 (0.42)	0.50
CDEEH13D90T150NP-152LC	152	1500±15%	2150±15%	0.34 (0.43)	0.26 (0.33)	0.43
CDEEH13D90T150NP-222LC	222	2200±15%	3300±15%	0.29 (0.36)	0.22 (0.27)	0.34

※1 Measuring frequency : Inductance 100kHz、1.0V

※2 Saturation current: This indicates the actual value of DC current when the inductance becomes 30% lower than its initial value.

※3 Temperature rise current: The actual value of DC current when the temperature of coil becomes ΔT=40°C (Ta=20°C).

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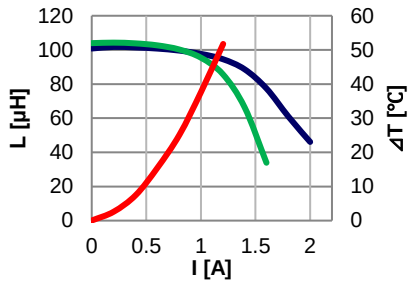
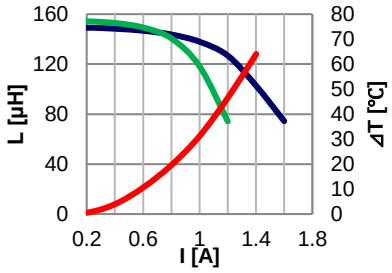
Provisional

Saturation Current & Temperature Rise Graph — L (20℃) — L (150℃) — ⊿T

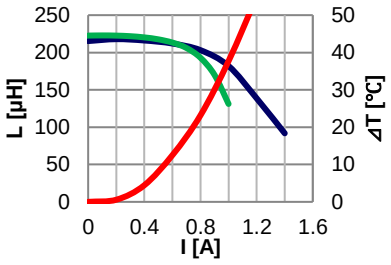
CDEEH13D90T150NP-101LC



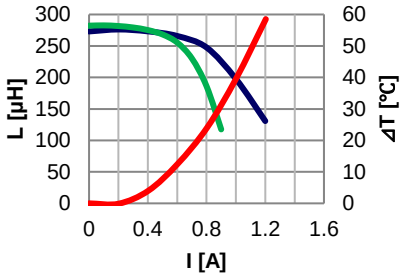
CDEEH13D90T150NP-151LC



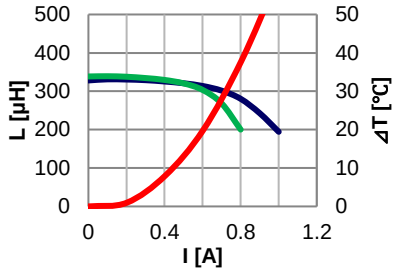
CDEEH13D90T150NP-221LC



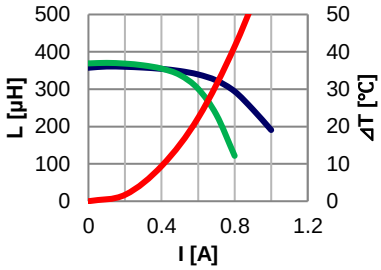
CDEEH13D90T150NP-271LC



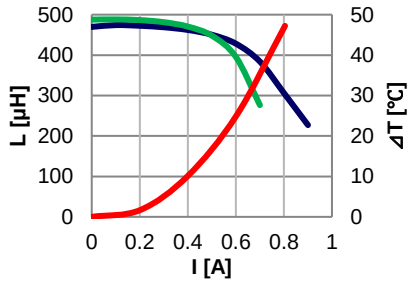
CDEEH13D90T150NP-331LC



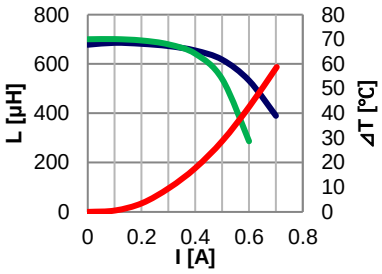
CDEEH13D90T150NP-361LC



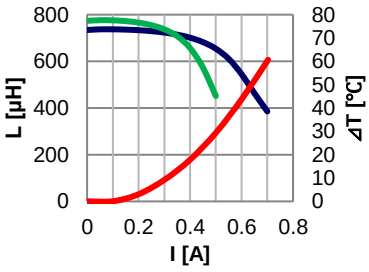
CDEEH13D90T150NP-471LC



CDEEH13D90T150NP-681LC



CDEEH13D90T150NP-751LC



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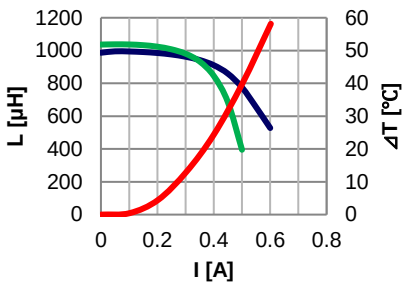
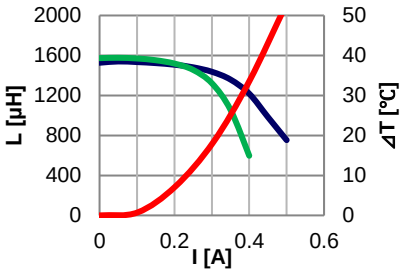
Provisional

Saturation Current & Temperature Rise Graph — L (20℃) — L (150℃) — ⊿T

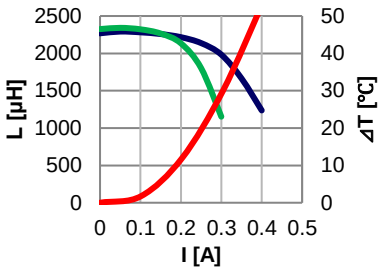
CDEEH13D90T150NP-102LC



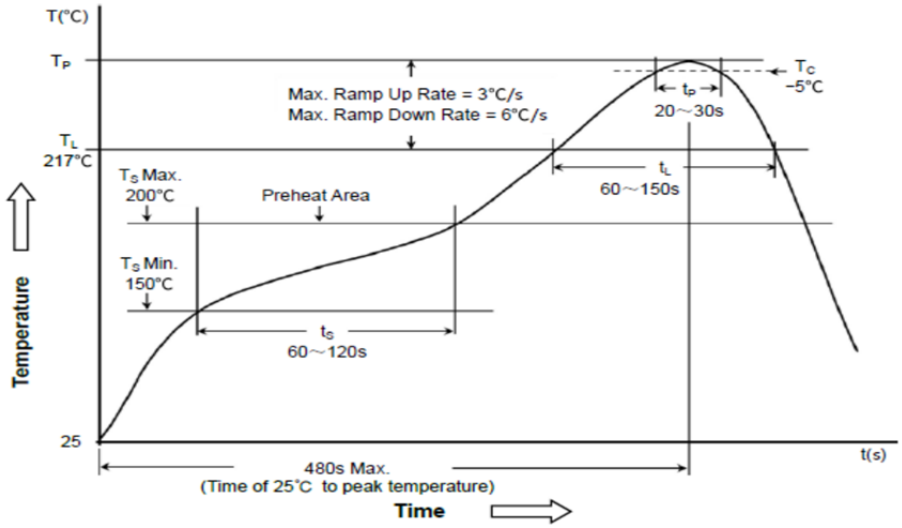
CDEEH13D90T150NP-152LC



CDEEH13D90T150NP-222LC



Solder Reflow Condition



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