



# HIGH CURRENT POWER INDUCTORS

## HCB1005 SERIES

### FEATURES:

- High current carrying capacity
- Low core loss
- Inductance range from 80nH to 220nH
- Current range from 33A to 90A
- Ferrite core material

### OPTIONS:

- Tape & Reel is Standard
- Bulk packaging Available for Smaller Quantities

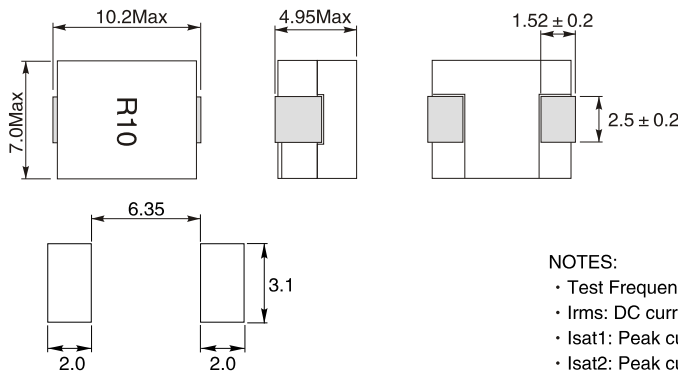
### APPLICATIONS:

- Portable electronics
- Servers and workstations
- Data networking and storage systems
- Notebook and desktop computers
- Graphics cards and battery power systems
- Multi-phase regulators
- Voltage regulator module(VRM)

### ELECTRICAL CHARACTERISTICS:

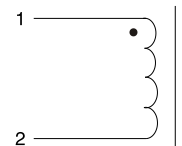
Part Number	Inductance (nH) ± 10% @0A <sub>dc</sub>	Inductance (nH)Min @I <sub>sat1</sub>	Heat rating current DC Amps I <sub>rms</sub> (A)	Saturation current DC Amps I <sub>sat1</sub> (A)	Saturation current DC Amps I <sub>sat2</sub> (A)	DCR@25 °C (mΩ)
HCB1005R1-80NK	80	60	53	90	64	0.39 ± 7.5%
HCB1005R1-R10K	100	72	53	73	57	0.39 ± 7.5%
HCB1005R1-R12K	120	86	53	60	48	0.39 ± 7.5%
HCB1005R1-R15K	150	108	53	47	37	0.39 ± 7.5%
HCB1005R1-R22K	220	158	53	33	26	0.39 ± 7.5%
HCB1005R2-80NK	80	60	50	90	64	0.47 ± 6.5%
HCB1005R2-R10K	100	72	50	73	57	0.47 ± 6.5%
HCB1005R2-R12K	120	86	50	60	48	0.47 ± 6.5%
HCB1005R2-R15K	150	108	50	47	37	0.47 ± 6.5%
HCB1005R2-R22K	220	158	50	33	26	0.47 ± 6.5%
HCB1005R3-80NK	80	60	50	90	64	0.55 ± 5.4%
HCB1005R3-R10K	100	72	50	73	57	0.55 ± 5.4%
HCB1005R3-R12K	120	86	50	60	48	0.55 ± 5.4%
HCB1005R3-R15K	150	108	50	47	37	0.55 ± 5.4%
HCB1005R3-R22K	220	158	50	33	26	0.55 ± 5.4%
HCB1005R4-80NK	80	60	53	90	64	0.31 ± 7.0%
HCB1005R4-R10K	100	72	53	73	57	0.31 ± 7.0%
HCB1005R4-R12K	120	86	53	60	48	0.31 ± 7.0%
HCB1005R4-R15K	150	108	53	47	37	0.31 ± 7.0%
HCB1005R4-R22K	220	158	53	33	26	0.31 ± 7.0%

### DIMENSIONS(mm) :



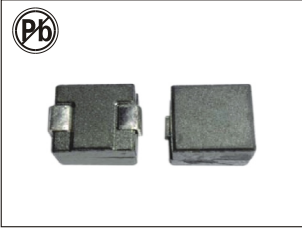
Recommended pad layout

### SCHEMATIC :



### NOTES:

- Test Frequency : 100KHz / 0.1V@25°C
- I<sub>rms</sub>: DC current for an approximate temperature rise of 40°C without core loss
- I<sub>sat1</sub>: Peak current for approximately 20% rolloff at +25°C
- I<sub>sat2</sub>: Peak current for approximately 20% rolloff at +125°C
- Operating temperature: -40°C to +125°C(ambient plus self-temperature rise)
- Storage temperature: -40°C to +125°C

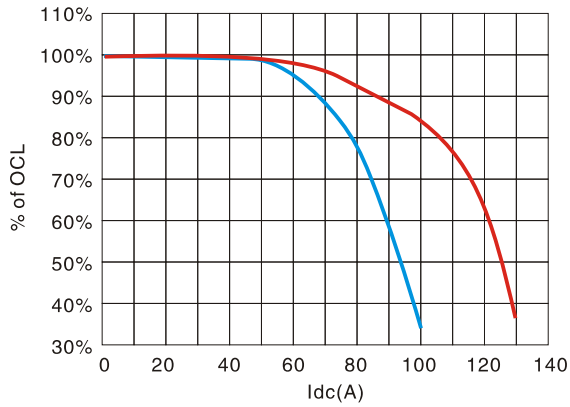


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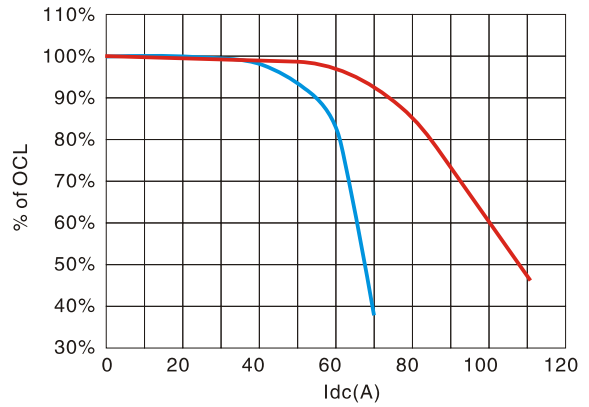
## HCB1005 SERIES

### INDUCTANCE CHARACTERISTICS:

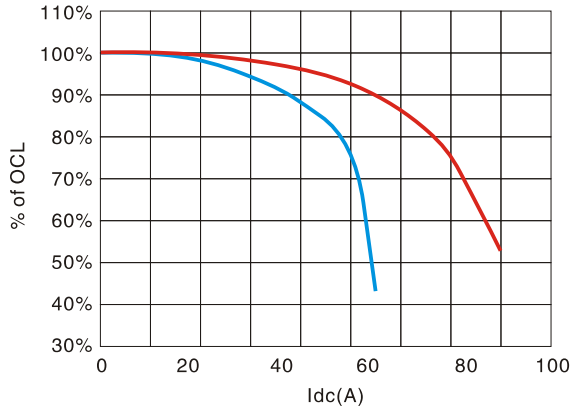
HCB1005RX-80NK



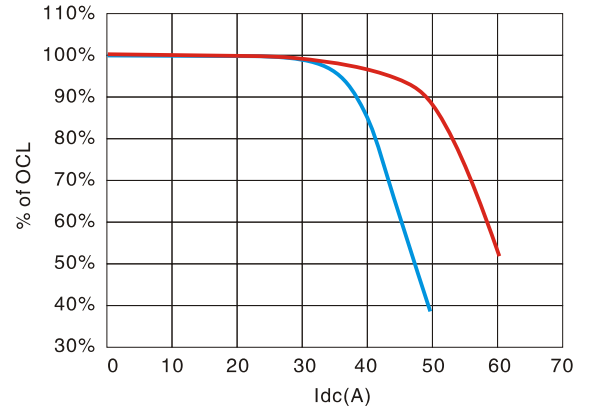
HCB1005RX-R10K



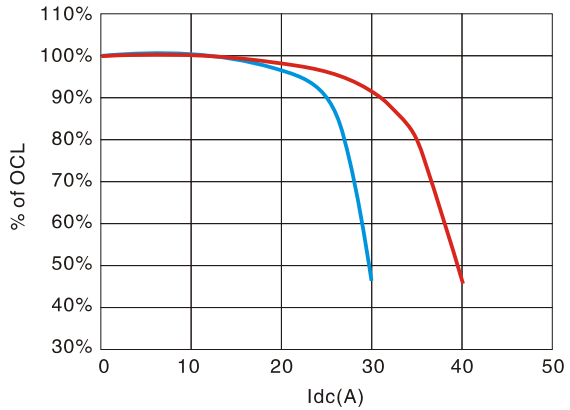
HCB1005RX-R12K



HCB1005RX-R15K



HCB1005RX-R22K



— +25°C  
— +125°C