

HIGH CURRENT INDUCTORS / AHCI Series

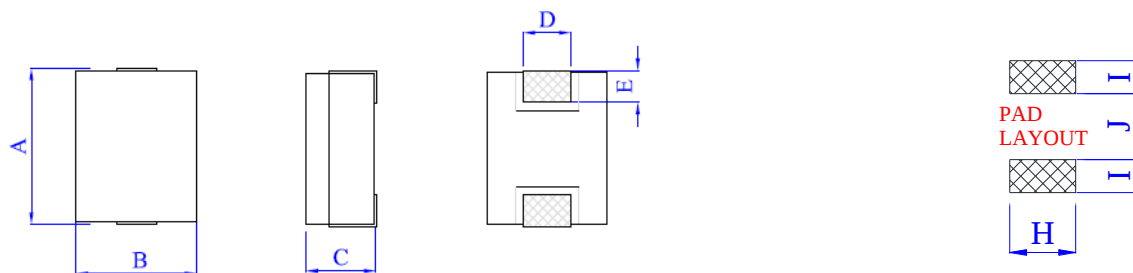
• Features

Ferrite core material, High current carrying capacity
Low core losses
Controlled DCR tolerance for sensing circuits
Inductance range from 72nH to 220nH
Current range from 20 to 65 Amps, frequency range up to 2MHz
RoHS compliant

• Applications

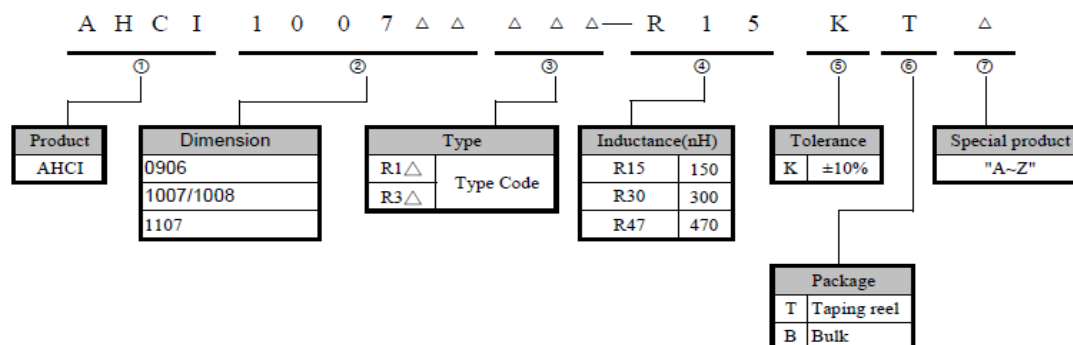
Portable electronics
Servers and workstations
Data networking and storage systems
Notebook and desktop computers
Graphics cards and battery power systems
Multi-phase regulators
Voltage Regulator Module (VRM)
DCR sensing

• Shape & Dimensions



TYPE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H (Ref.)	I (Ref.)	J (Ref.)
AHCI0906RX	9.4 ± 0.3	6.2 ± 0.3	7.8 ± 0.3	2.0 ± 0.2	1.8 ± 0.2	2.54	3.20	4.00
AHCI1007RX	10.7 MAX.	8.0 MAX.	7.2 MAX.	2.2 ± 0.2	2.54 ± 0.3	2.60	3.00	5.00
AHCI1008RX	10.2 MAX.	8.0 MAX.	8.0 MAX.	2.2 ± 0.25	2.5 ± 0.25	3.00	3.56	4.06
AHCI1107RX	11.2 MAX.	7.0 ± 0.3	R1=7.6 MAX. R2=7.4 MAX.	1.6 ± 0.3	2.7 ± 0.3	2.60	3.10	5.00

■ PRODUCT IDENTIFICATION



◆ AHCI0906RX Series Specification :

Part Number	L1 (nH) ±10%	L2 @Isat1 (nH) Min.	Test Freq. (KHz)	DCR (mΩ)	Isat 1 (A) Typ.	Isat 2 (A) Typ.	Irms (A) Typ.
AHCI0906R1-R10□T	100	72	100	0.29±5%	94	81	51
AHCI0906R1-R12□T	120	86	100	0.29±5%	79	68	51
AHCI0906R1-R15□T	150	108	100	0.29±5%	65	54.5	51
AHCI0906R1-R22□T	220	155	100	0.29±5%	44	37.5	51
AHCI0906R1-R28□T	280	200	100	0.29±5%	34	29	51
AHCI0906R1-R30□T	300	216	100	0.29±5%	32.5	27.5	51

NOTE :

* The operating temperature range is -40°C to +125°C (Including self-temperature rise).

* □ Tolerance K : ±10%

*Isat1:Peak current for approximately 20% rolloff at 25°C.

*Isat2:Peak current for approximately 20% rolloff at 125°C.

*Irms:D.C current for an approximate temperature rise of 40°C without core loss.

◆ AHCI1007RX Series Specification :

Part Number	L1 (nH) ±10%	L2 @Isat1 (nH) Min.	Test Freq. (KHz)	DCR (mΩ)	Isat 1 (A) Typ.	Isat 2 (A) Typ.	Irms (A) Typ.
AHCI1007R1-R12□T	115	83	100	0.29±5%	94	86	61
AHCI1007R1-R15□T	150	108	100	0.29±5%	75	60	61
AHCI1007R1-R18□T	180	129	100	0.29±5%	60	50	61
AHCI1007R1-R22□T	220	158	100	0.29±5%	50	40	61
AHCI1007R1-R27□T	270	194	100	0.29±5%	41	33	61
AHCI1007R1-R30□T	300	216	100	0.29±5%	35	30	61
AHCI1007R1-R33□T	330	237	100	0.29±5%	33	26.5	61
AHCI1007R1-R39□T	390	280	100	0.29±5%	28	22.5	61
AHCI1007R1-R47□T	470	338	100	0.29±5%	23.5	19	61

NOTE :

* The operating temperature range is -40°C to +125°C (Including self-temperature rise).

* □ Tolerance K : ±10% , L : ±15%

*Isat1:Peak current for approximately 20% rolloff at 25°C.

*Isat2:Peak current for approximately 20% rolloff at 125°C.

*Irms:D.C current for an approximate temperature rise of 40°C without core loss.

◆ AHCI1008RX Series Specification :

Part Number	L1 (nH) $\pm 10\%$	L2 @Isat1 (nH) Min.	Test Freq. (KHz)	DCR (m Ω)	Isat 1 (A) Typ.	Isat 2 (A) Typ.	Irms (A) Typ.
AHCI1008R1-R12□T	120	86.4	100	0.18 $\pm 5\%$	95	84	68
AHCI1008R1-R15□T	150	108	100	0.18 $\pm 5\%$	79	70	68
AHCI1008R1-R18□T	180	129.6	100	0.18 $\pm 5\%$	62	56	68
AHCI1008R1-R22□T	220	158.4	100	0.18 $\pm 5\%$	58	51	68

NOTE :

* The operating temperature range is -40°C to +125°C (Including self-temperature rise).

* □ Tolerance K : $\pm 10\%$

* Isat1: Peak current for approximately 20% rolloff at 25°C.

* Isat2: Peak current for approximately 20% rolloff at 125°C.

* Irms: D.C current for an approximate temperature rise of 40°C without core loss.

◆ AHCI1107RX Series Specification :

Part Number	L1 (nH) $\pm 10\%$	L2 @Isat1 (nH) Min.	Test Freq. (KHz)	DCR (m Ω)	Isat 1 (A) Typ.	Isat 2 (A) Typ.	Irms (A) Typ.
AHCI1107R1-R12□T	120	86	100	0.29 $\pm 5\%$	90	72	55
AHCI1107R1-R15□T	150	108	100	0.29 $\pm 5\%$	70	56	55
AHCI1107R1-R23□T	230	166	100	0.29 $\pm 5\%$	45	36	55
AHCI1107R1-R30□T	300	217	100	0.29 $\pm 5\%$	35	28	55
AHCI1107R1-R40□T	400	288	100	0.29 $\pm 5\%$	25	20	55
AHCI1107R1-R51□T	510	364	100	0.29 $\pm 5\%$	18	14.5	55
AHCI1107R2-R12□T	120	86	100	0.47 $\pm 6\%$	90	72	42
AHCI1107R2-R15□T	150	108	100	0.47 $\pm 6\%$	70	56	42
AHCI1107R2-R23□T	230	166	100	0.47 $\pm 6\%$	45	36	42
AHCI1107R2-R30□T	300	217	100	0.47 $\pm 6\%$	35	28	42
AHCI1107R2-R40□T	400	288	100	0.47 $\pm 6\%$	25	20	42
AHCI1107R2-R51□T	510	364	100	0.47 $\pm 6\%$	18	14.5	42

NOTE :

* The operating temperature range is -40°C to +125°C (Including self-temperature rise).

* □ Tolerance K : $\pm 10\%$, L : $\pm 15\%$

* Isat1: Peak current for approximately 20% rolloff at 25°C.

* Isat2: Peak current for approximately 20% rolloff at 125°C.

* Irms: D.C current for an approximate temperature rise of 40°C without core loss.