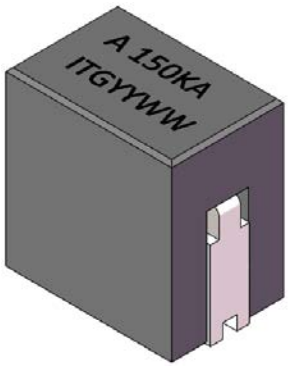
AH3740 Series

1. Features of AH3740 Series:



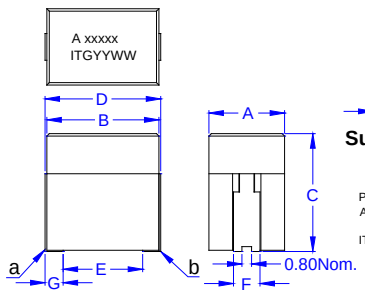
- Ferrite based SMD inductor with lower core loss.
- Inductance range: 45.0 nH to 330.0 nH , custom values are welcomed.
- High current output chokes, up to 155.0 Amp with approx. 20% roll off.
- Low profile 10.00 mm Max. height (60nH,70nH,80nH and 90nH is 10.40mm Max. , 100nH is 10.20mm Max. ,120nH is 10.10mm Max.,45L,50L is 10.70mm Max.).
- 9.60 x 6.40 mm Foot Print.
- Perfect for high density designs with limited board space.
- Operating frequency of up to 5.0MHz.
- Operating temperature range of -55° C to + 130° C. RoHS & HF compliant.
- T & R Qty's: 500pcs, 13" Reel.

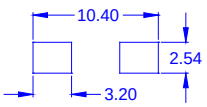
2. Electrical Characteristics of AH3740 Series:

ITG Part Number	OCL [1] (nH) ± 10% or 15%	L @ Isat[2] (nH) Min.	DCR [3] (mΩ) ± 5%	Isat1 [4] (A) @25℃	Isat2 [4] (A) @75℃	Isat3 [4] (A) @100℃	Irms [5] (A) @25℃	C (mm) Max.
AH3740A-45L	45.00 , 15%	32.40	0.145	240.00	205.00	200.00	78.00	10.70
AH3740A-50L	50.00 , 15%	36.00	0.145	210.00	200.00	180.00	78.00	10.70
AH3740A-60L	60.00 , 15%	43.20	0.145	155.00	150.00	140.00	78.00	10.40
AH3740A-70K	70.00 , 10%	50.40	0.145	124.00	120.00	115.00	78.00	10.40
AH3740A-80K	80.00 , 10%	57.60	0.145	118.00	110.00	102.00	78.00	10.40
AH3740A-90K	90.00 , 10%	64.80	0.145	106.00	98.00	92.00	78.00	10.40
AH3740A-100K	100.00 , 10%	72.00	0.145	95.00	88.00	82.00	78.00	10.20
AH3740A-120K	120.00 , 10%	86.40	0.145	78.00	71.00	67.00	78.00	10.10
AH3740A-150K	150.00 , 10%	108.00	0.145	60.00	54.00	52.00	78.00	10.00
AH3740A-180K	180.00 , 10%	129.60	0.145	49.00	45.00	43.00	78.00	10.00
AH3740A-220K	220.00 , 10%	158.40	0.145	38.00	36.00	34.00	78.00	10.00
AH3740A-270K	270.00 , 10%	194.40	0.145	30.00	29.00	27.00	78.00	10.00
AH3740A-300K	300.00 , 10%	216.00	0.145	27.00	24.00	23.00	78.00	10.00
AH3740A-330L	330.00 , 15%	237.60	0.145	20.00	19.00	17.00	78.00	10.00

3. Mechanical Dimension of AH3740 Series:

A Max.	B Max.	C Max.	D Max.	E (Ref.)	F ± 0.20	G ± 0.30
6.40	9.50	See table above	9.60	6.60	2.20	1.50

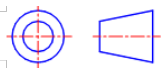




Suggested Pad Layout

Part Marking:
A xxx x x: A is part code, xxx is inductance value in nH, x = tolerance, x is special code.
ITGYYWW: ITG logo and YYWW is date code.

Third Angle Projection:



Notes:

1. Open Circuit Inductance (OCL) test condition: 500KHz , 0.25Vrms , 0A DC at 25℃.
2. L @ Isat and L @ Irms Test condition: 500KHz , 0.25Vrm (Ta=25℃).
3. The nominal DCR is measured from point "a" to point "b" as shown above in the mechanical drawing (Ta=25℃).
4. Isat1, Isat2 & Isat3: DC current that will cause inductance to drop approximately by 20%.
5. Irms: DC current for an approximate temperature rise of 40℃ without core loss.
6. Derating is necessary for AC currents. Verify and check PCB pad layout, trace thickness, width, air-flow and proximity of other heat generating components as it will have an effect on the temperature rise.
7. It is recommended that the part temperature should not exceed 130° C under worst operating conditions.

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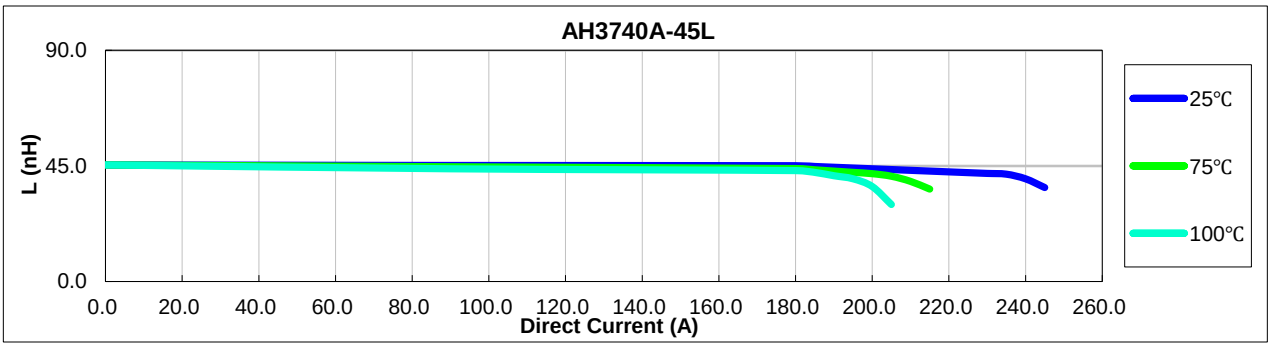
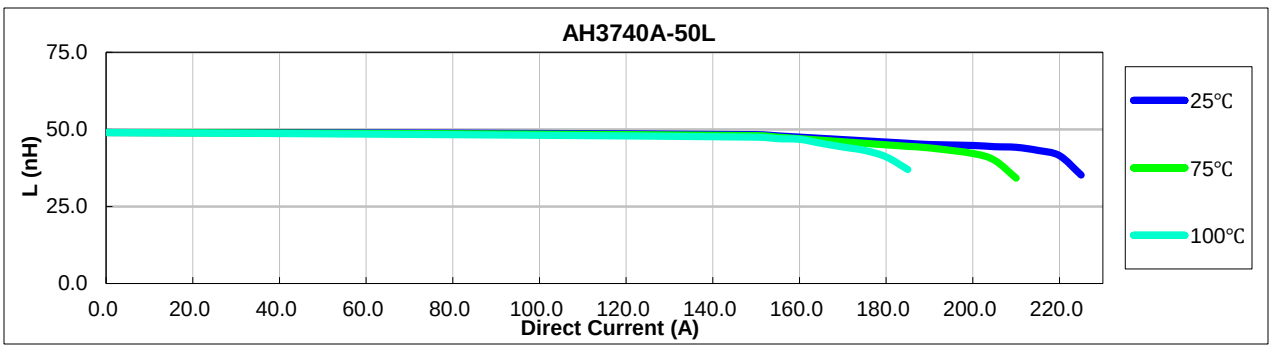
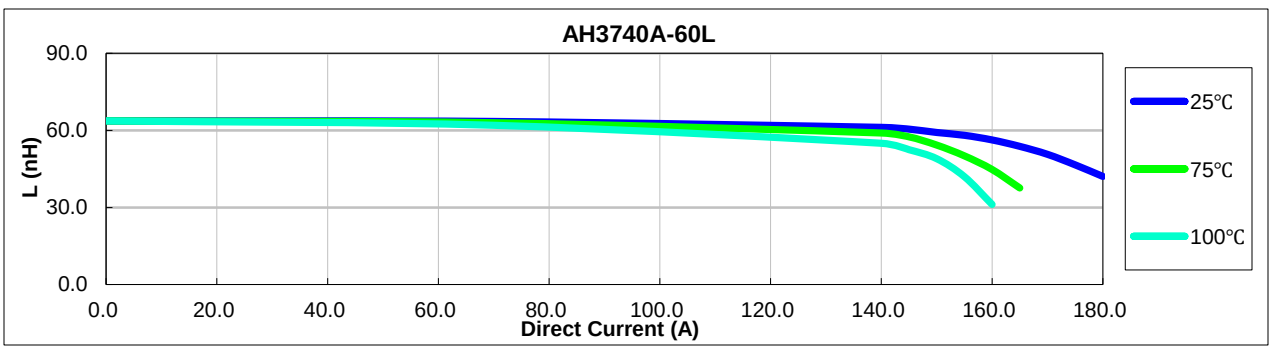
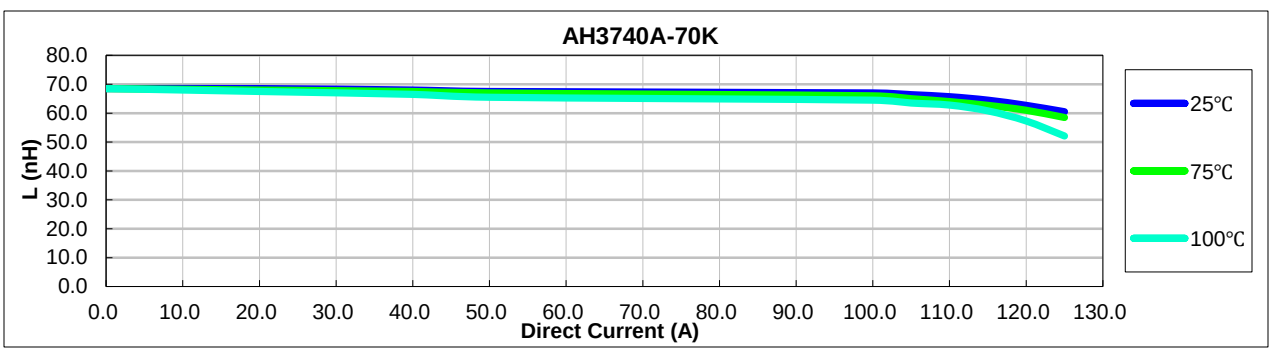
AH3740 Series

4. Inductance Characteristics of AH3740 Series (Inductance vs Current):









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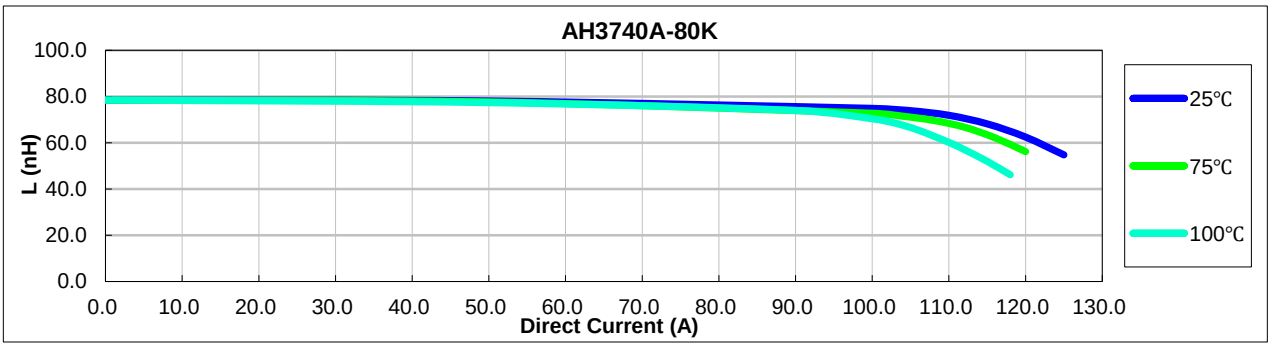

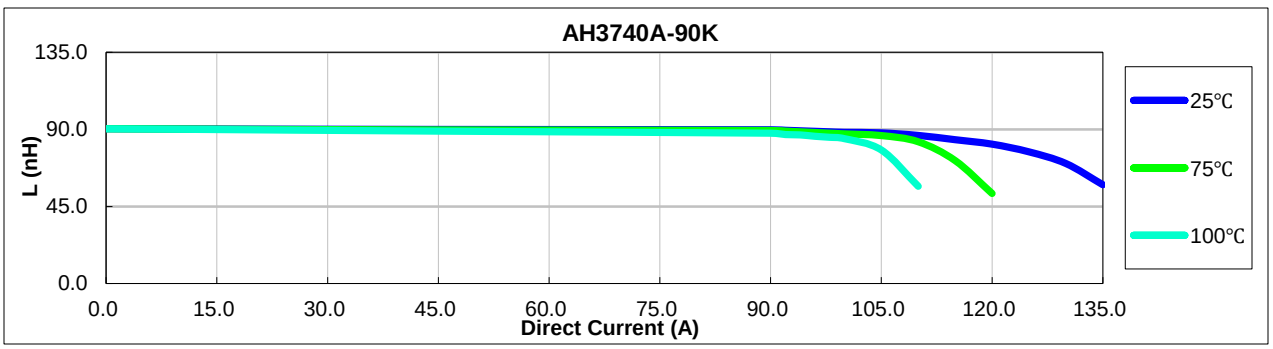

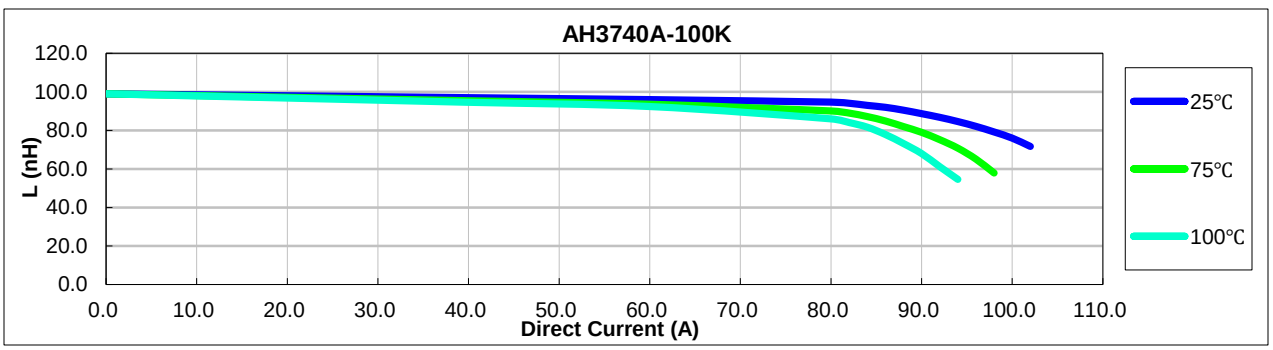

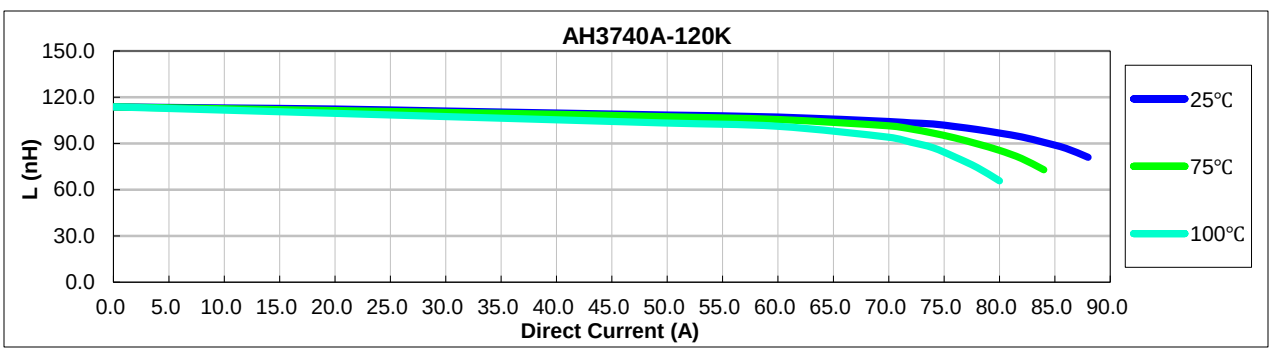

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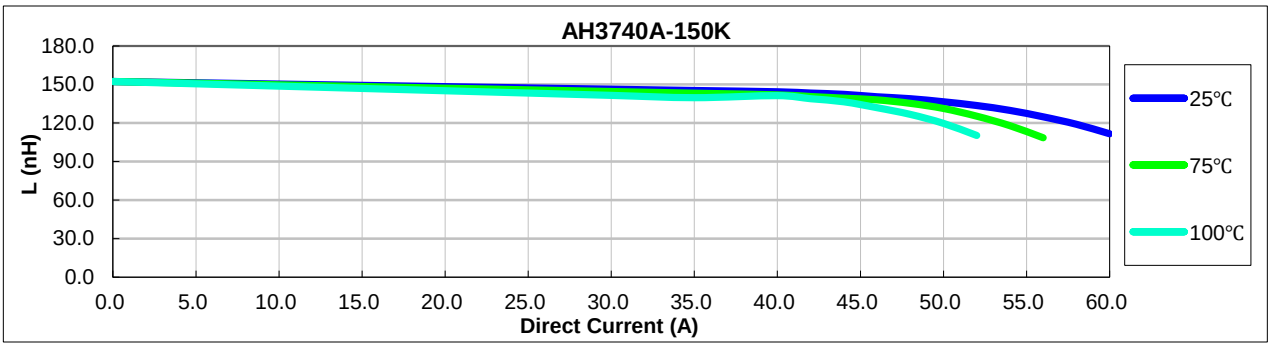

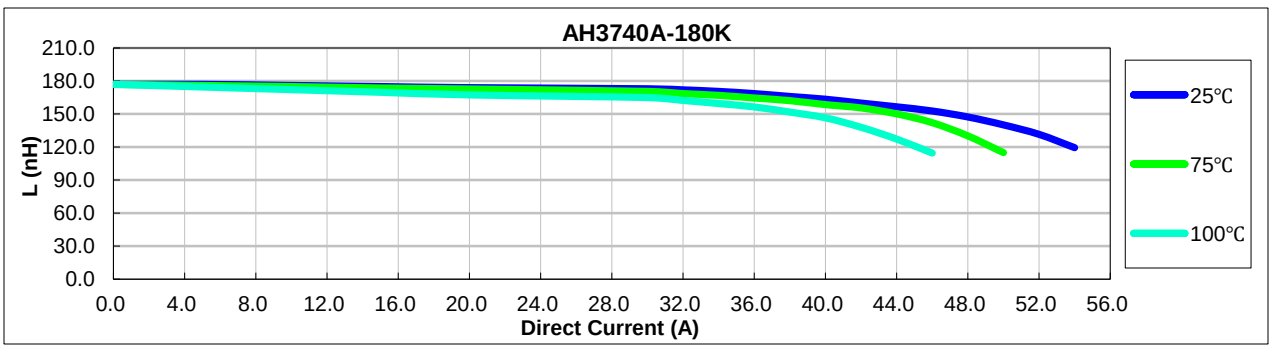

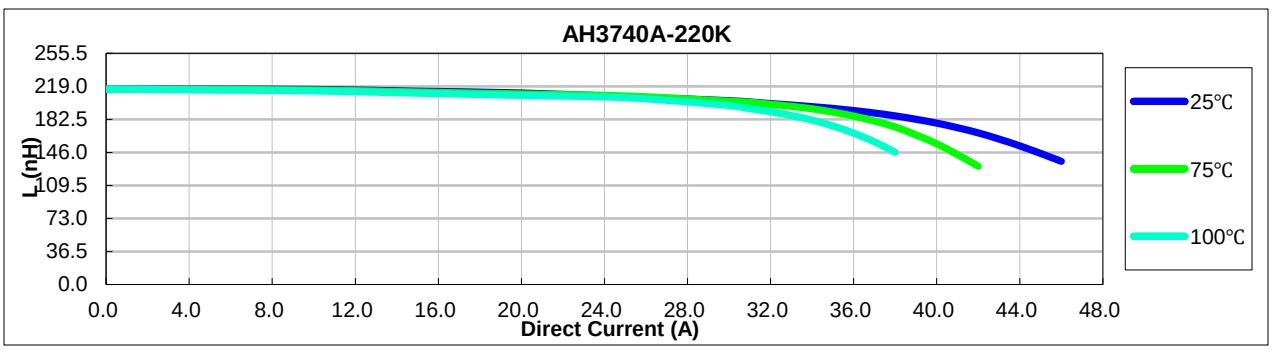

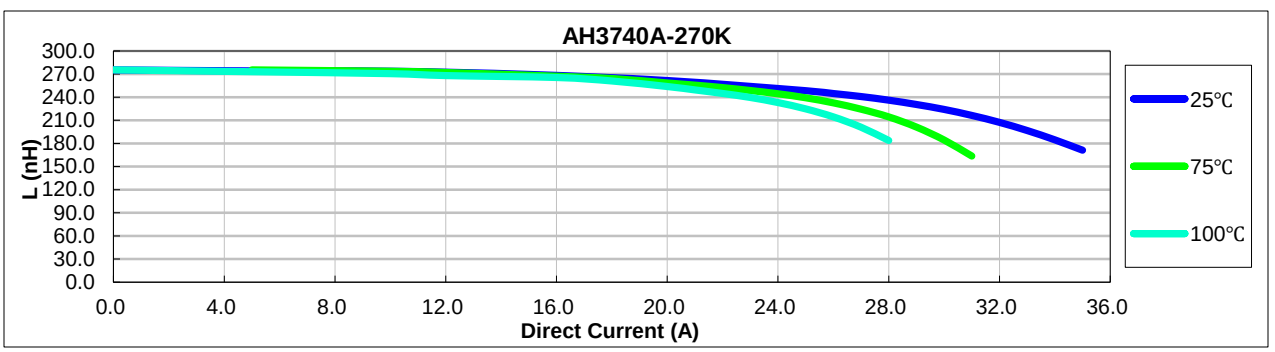

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