



Halogen Free

# AF13A Series



## 1. Features of AF13A Series:

- Ferrite based SMD inductor with lower core loss.
- Inductance range: 65.0 nH to 300.0 nH, custom values are welcomed.
- High current output chokes , up to 165.0 Amp with approx. 20% roll off.
- Low Profile 9.00 mm Max. height .
- 9.60 x 6.40 mm Foot Print.
- Ideal for Buck Converter, VRM & High Density Board Design.
- 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.

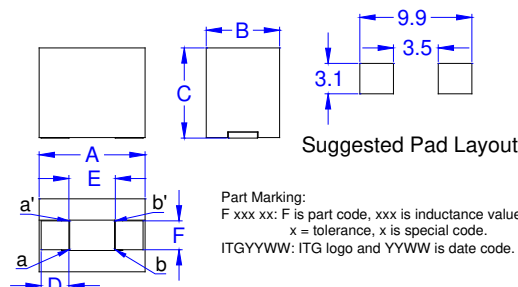
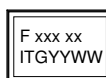


## 2. Electrical Characteristics of AF13A Series:

ITG Part Number	OCL <sup>1</sup> (nH) ± 10% or 15%	L @ Isat1 <sup>2</sup> (nH) Min.	DCR <sup>3</sup> (mΩ) ± 5%	Isat1 <sup>4</sup> (A) @25°C	Isat2 <sup>4</sup> (A) @75°C	Isat3 <sup>4</sup> (A) @100°C	Isat4 <sup>4</sup> (A) @125°C	Irms <sup>5</sup> (A) @25°C
AF13A-65L	65.00	46.80	0.17	165.00	155.00	145.00	135.00	66.00
AF13A-75K	75.00	54.00	0.17	140.00	130.00	120.00	110.00	66.00
AF13A-90K	90.00	64.80	0.17	134.00	120.00	114.00	107.00	66.00
AF13A-100K	100.00	72.00	0.17	124.00	112.00	102.00	94.00	66.00
AF13A-120K	120.00	86.40	0.17	94.00	84.00	80.00	75.00	66.00
AF13A-150K	150.00	108.00	0.17	75.00	70.00	65.00	61.00	66.00
AF13A-170K	170.00	122.40	0.17	65.00	60.00	56.00	53.00	66.00
AF13A-180K	180.00	129.60	0.17	60.00	54.00	52.00	48.00	66.00
AF13A-210K	210.00	151.20	0.17	48.00	45.00	43.00	39.00	66.00
AF13A-220K	220.00	158.40	0.17	44.00	42.00	39.00	37.00	66.00
AF13A-280K	280.00	201.60	0.17	35.00	31.00	30.00	28.00	66.00
AF13A-300K	300.00	216.00	0.17	33.00	30.00	29.00	27.00	66.00

## 3. Mechanical Dimension of AF13A Series:

A	B	C	D	E	F
Max.	Max.	Max.	± 0.35	Nom.	± 0.20
9.60	6.40	9.00	2.60	4.00	2.60



Part Marking:  
F xxx xx: F 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<sub>dc</sub> at 25°C.
2. L @ Isat and L @ Irms Test condition: 500KHz,0.25Vrms (Ta=25°C).
3. The nominal DCR is measured from point "a" and "a'" to point "b" and "b'", as shown above on the mechanical drawing(Ta=25°C).
4. Isat1 , Isat2 , Isat3 & Isat4 : DC current that will cause inductance to drop approximately by 20%.
5. Irms: DC current for an approximate temperature rise of 40°C without core loss. Derating is necessary for AC currents. PCB pad layout , trace thickness and width , air-flow and proximity of other heat generating components will affect the temperature rise.
6. It is recommended the part temperature not exceed 130° C under worst case operating conditions as verified in the end application.

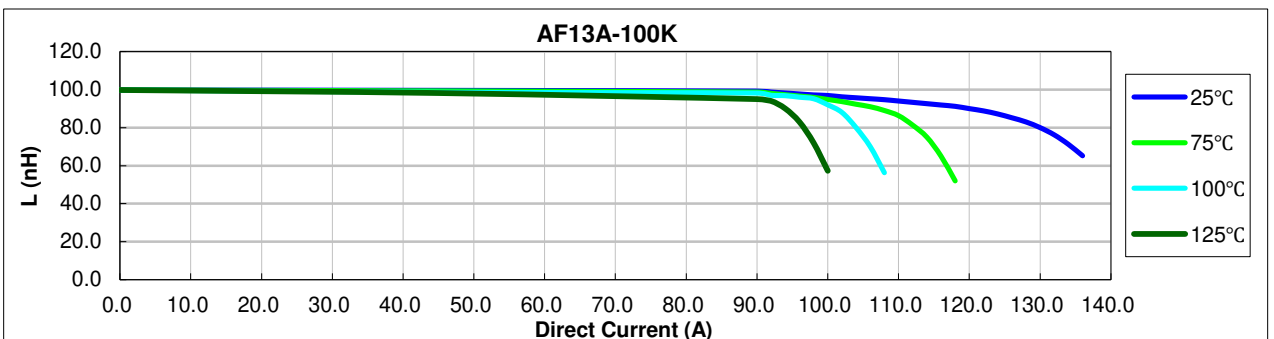
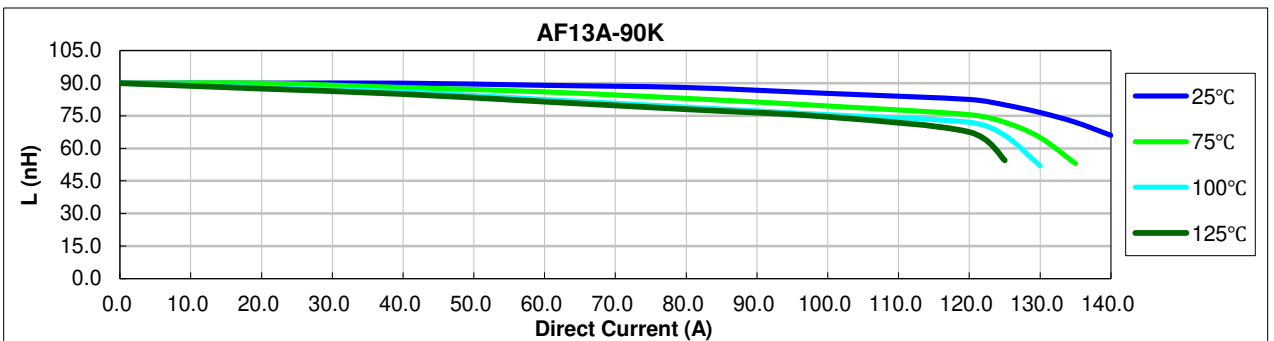
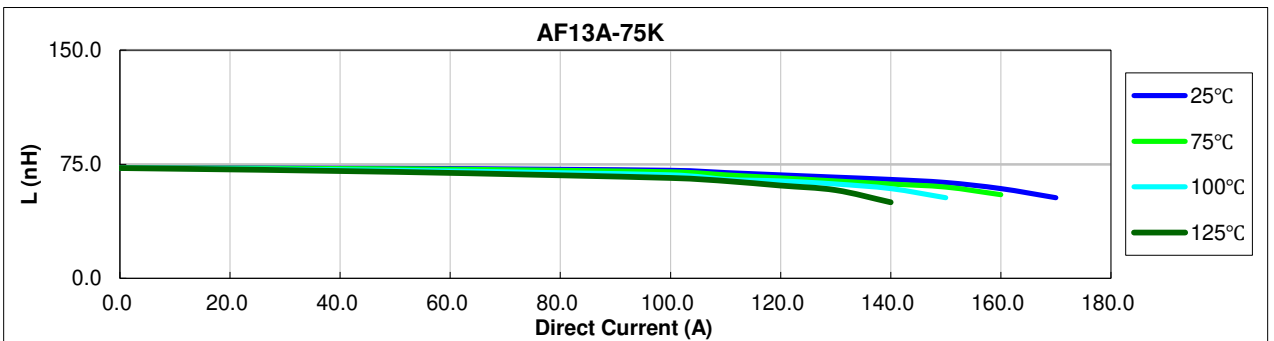
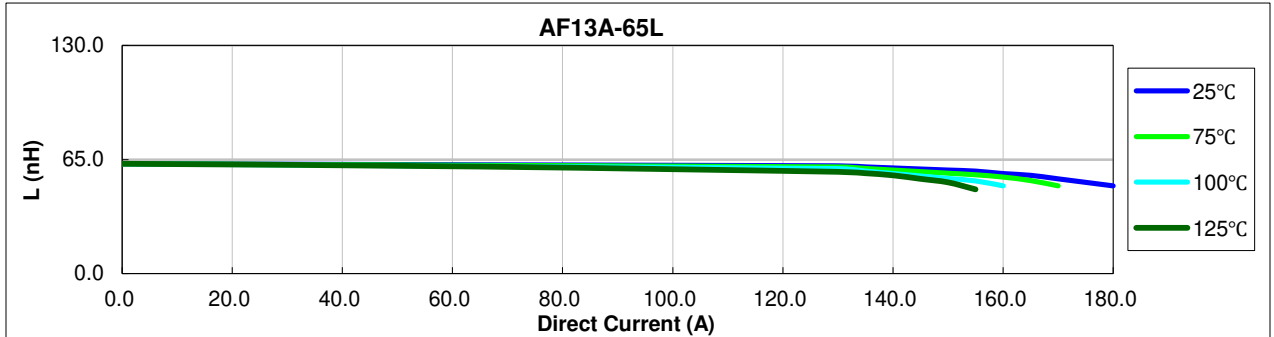
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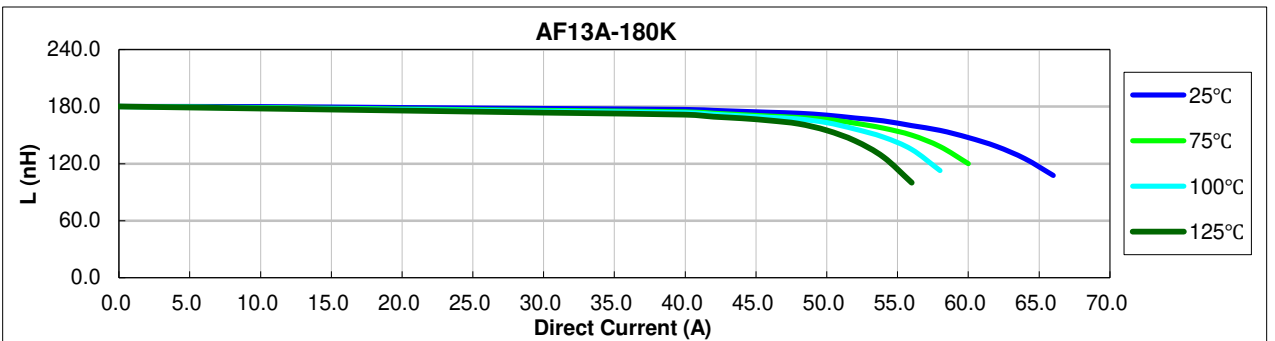
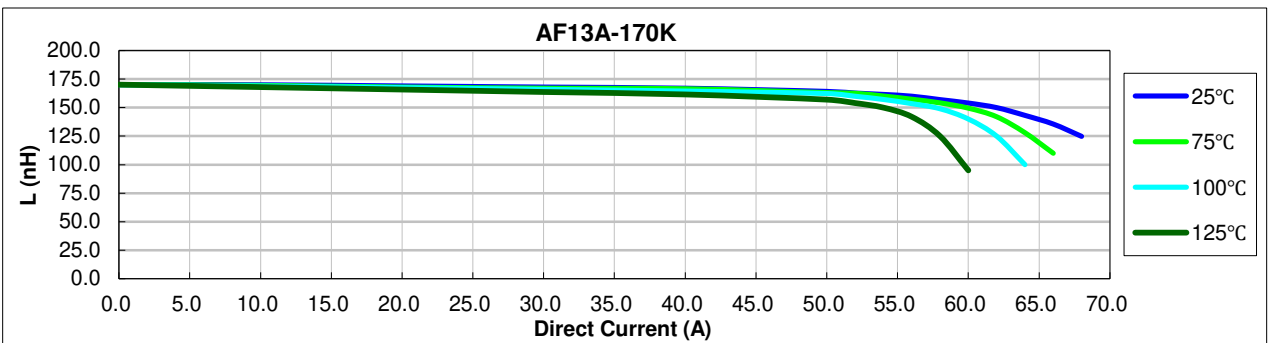
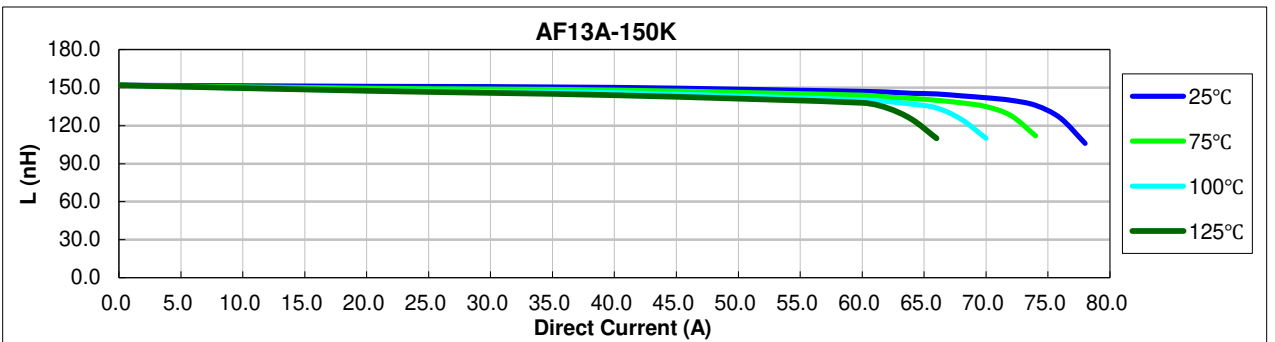
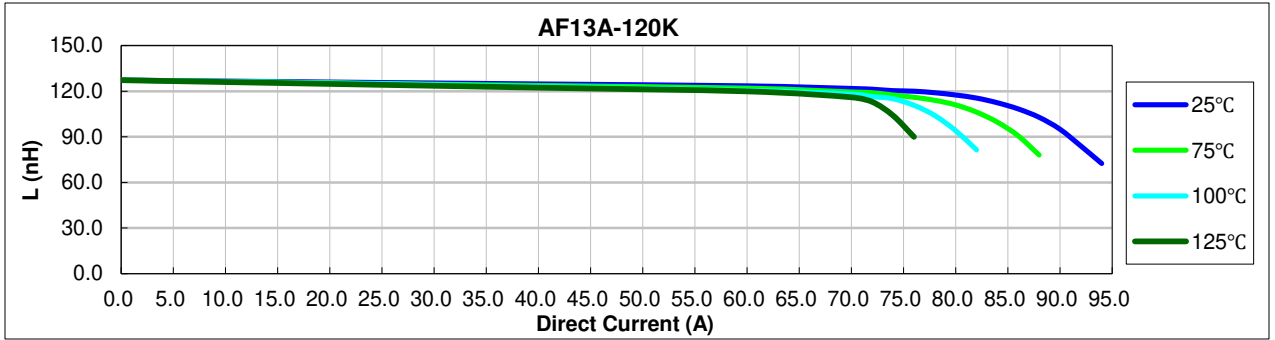
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\*Due to continuous product improvement, all specifications are subject to change without prior notice. Kindly contact an ITG field application engineer or a sales representative prior to purchase.

## 4. Inductance Characteristics of AF13A Series (Inductance vs Current):

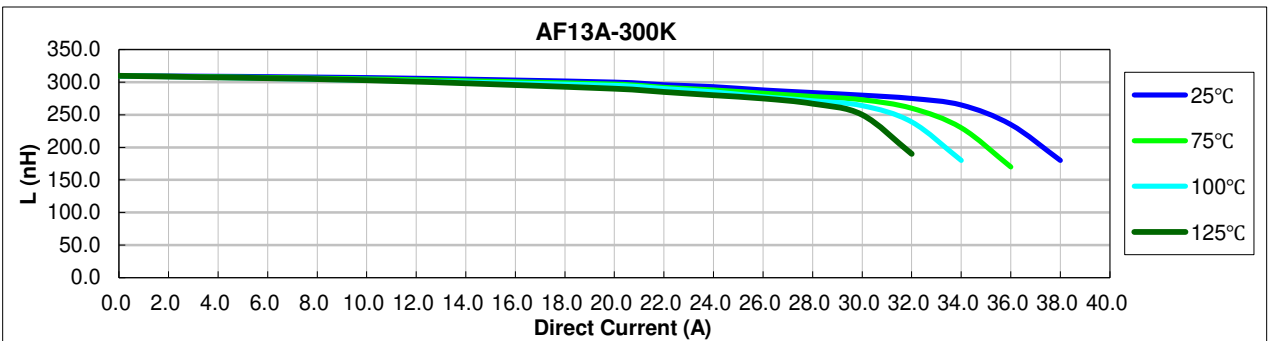
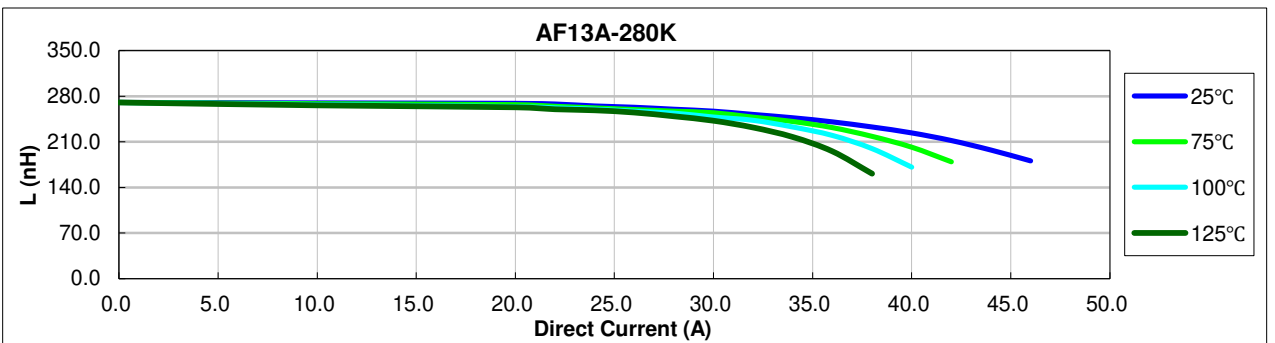
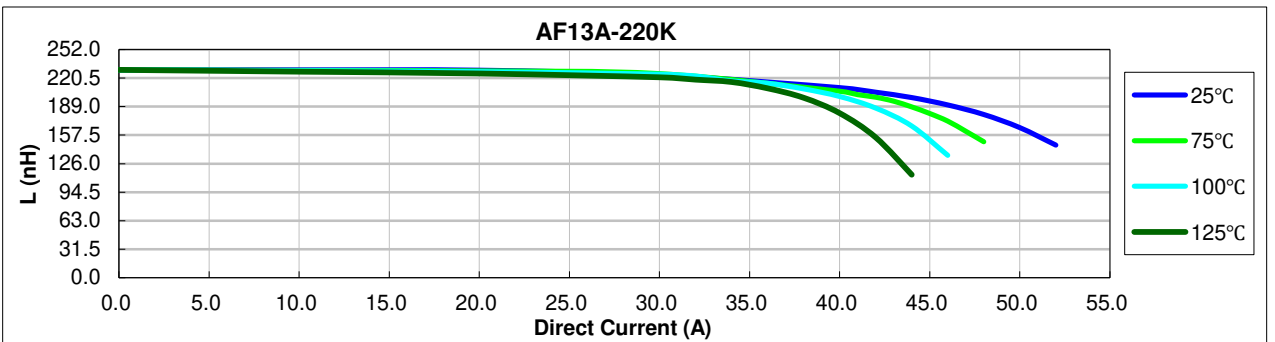
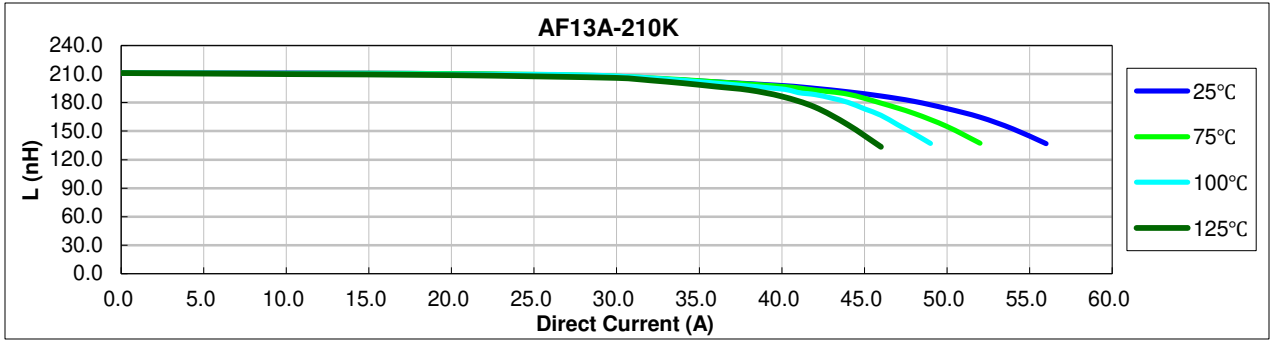


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