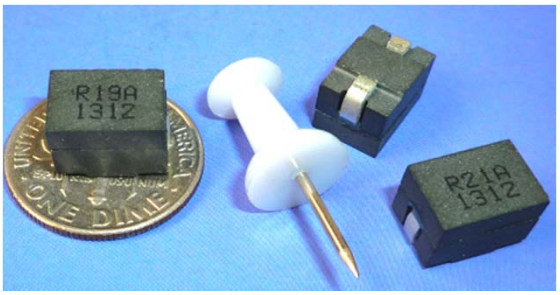
# SL40307 Series

## 1. Features:



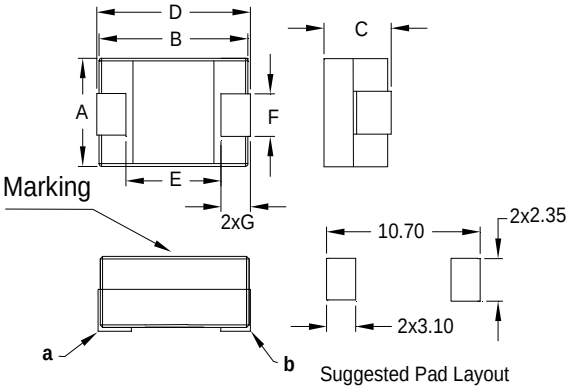

- Ferrite based SMD Inductor with lower core loss.
- Inductance Range:190nH to 230nH , Custom values are welcomed.
- High current output chokes, upto 54.0 Amp with approx. 20% roll off.
- Low Profile 7.5mm Max. height .
- 10.0 x 7.0mm foot print.
- Ideal for Buck Converter, VRM & High Density Board Design.
- Operating frequency up to 1 MHz application.
- Operating Temperature Range -55°C to + 130°C , RoHs & HF compliance .
- T & R Qtys: 500 pcs , 13" Reel ;

## 2. Electrical Characteristic of SL40307 Series:

| Part Number | Inductance (uH) ±10% | DCR (mΩ) ± 5.0% | Isat[1] (A) @25℃ | Isat[2] (A) @75℃ | Isat[3] (A) @100℃ | Irms (A) @25℃ |
|---|---|---|---|---|---|---|
| SL40307A-R19KHF | 0.190 | 0.200 | 54.00 | 50.00 | 46.00 | 60.00 |
| SL40307A-R21KHF | 0.210 | 0.200 | 48.00 | 44.00 | 38.00 | 60.00 |
| SL40307A-R23KHF | 0.230 | 0.200 | 43.00 | 39.00 | 36.00 | 60.00 |

## 3. Mechanical Dimension(unit: mm):

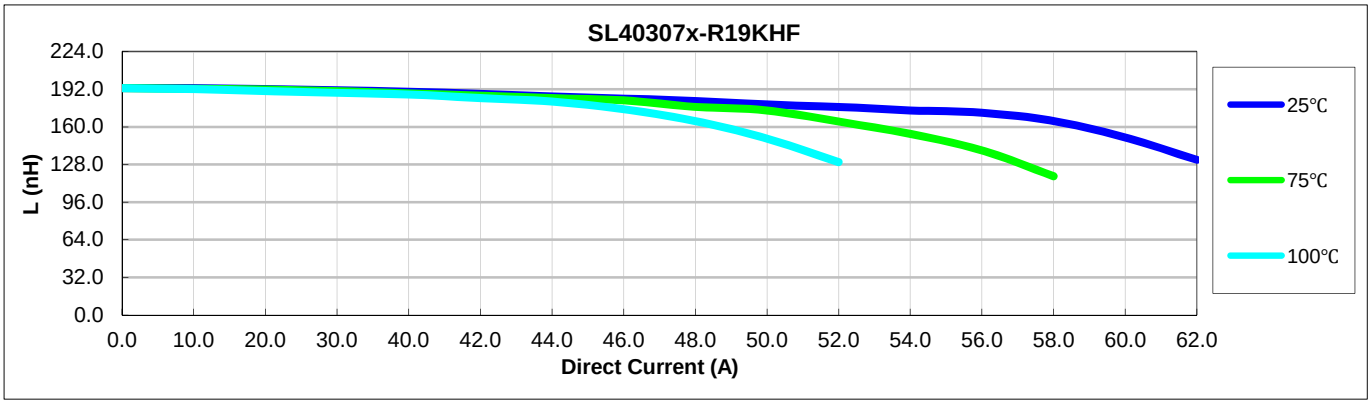
| A ±0.2 | B Max. | C ±0.2 | D Max. | E Nom. | F Nom. | G Nom. |
|---|---|---|---|---|---|---|
| 6.80 | 9.90 | 7.30 | 10.00 | 5.10 | 1.80 | 2.40 |




**Note:**

1>.Open Circuit Inductance (OCL) test condition:100KHz,0.1Vrms,0Adc ,at 25 ℃.
2>.Full Load Inductance (FLL) Test condition:100KHz,0.1Vrms ,Isat ;(Ta=25 ℃).
3>.Isat[1],Isat[2]&Isat[3]: DC current that will cause inductance to drops approximately by 20% ;
4>. Irms: DC current for an approximate temperature rise of 40℃ 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. It is recommended the part temperature not exceed 130°C under worst case operating conditions verified in the end application.
5>.The nominal DCR is measured from point "a" to point"b",as shown above on the mechanical drawing.

## 4. Inductance Characteristics (Inductance vs. Current):

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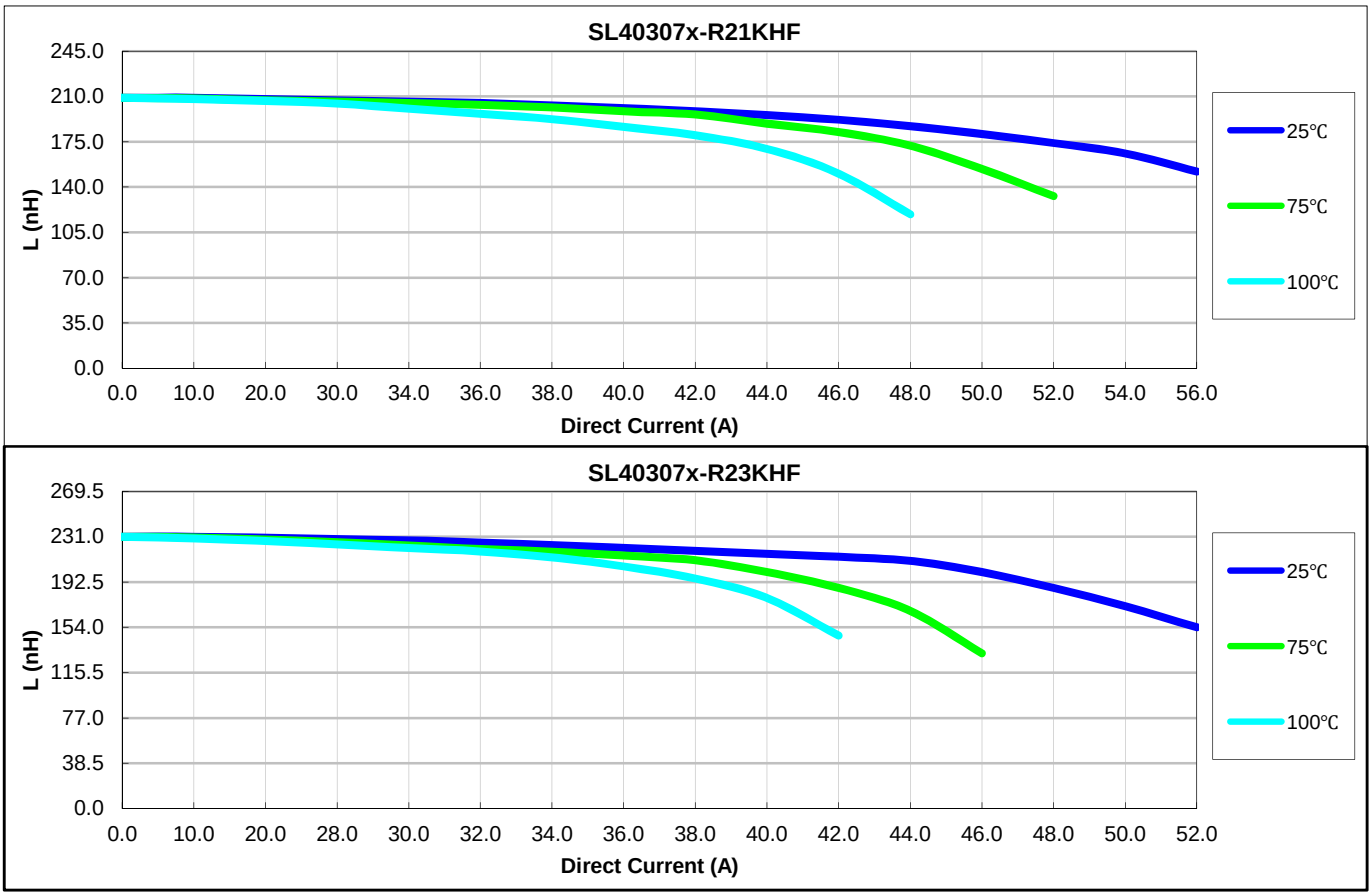
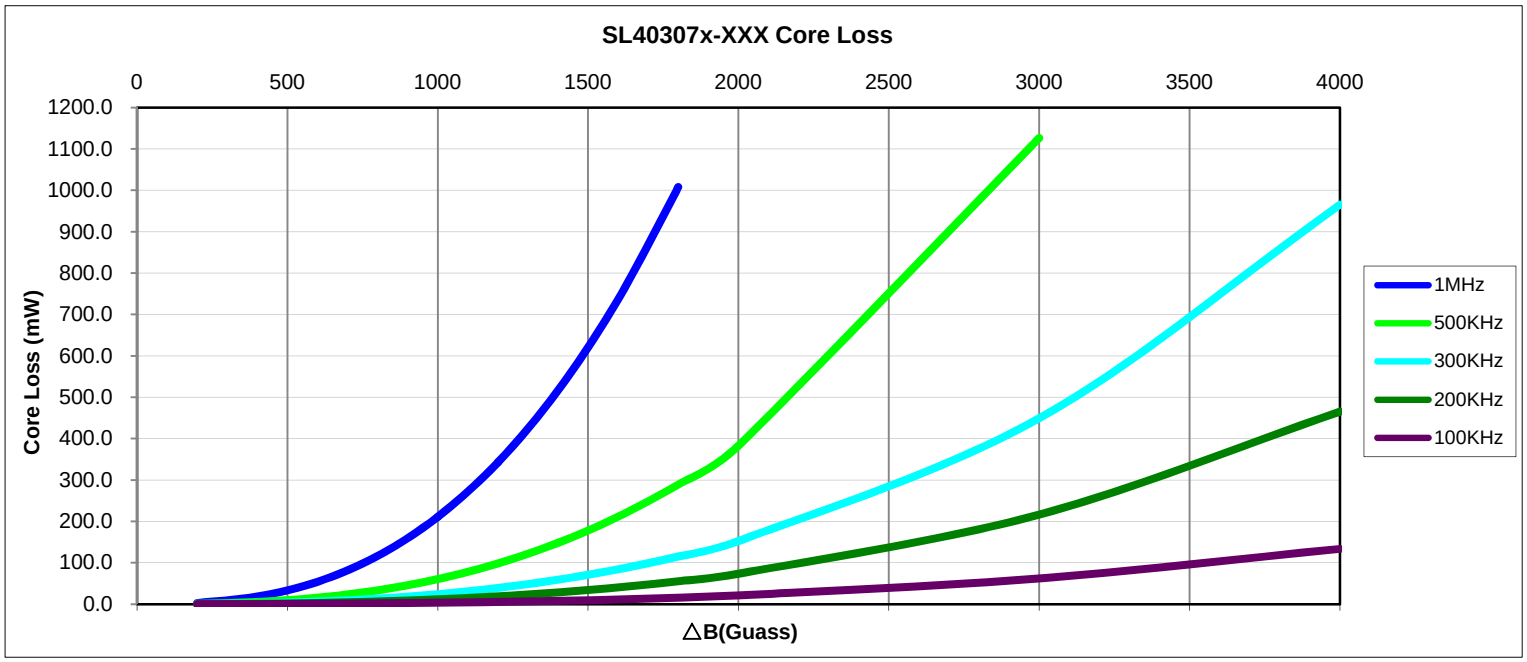
## Inductance vs. Current




## 5. Core Loss:




**Where △B=0.391*L(nH)*△I**

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