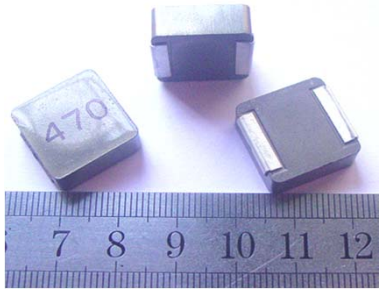
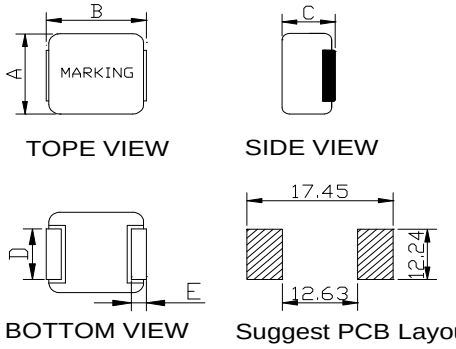
# SMHC6827 Series

## 1. Features:




· Molding Inductor with low core loss for high frequency application.
· Inductance Range:3.3uH to 100uH. Custom values are welcomed.
· High current output chokes, up to 27.0 Amp.with approx. 30% roll off.
· Ideal for desktop computers,servers,workstations,VGA card ,High-End switches and routers,Voltage-regulator modules & High Density Board Design.
· Very low DC resistance and compact size,high performance,low cost.
· Operating Temperature Range -55°C to + 130°C; RoHs compliance .
· Quantity per reel: 300 pcs per 13" reel.

## 2. Mechanical Dimension(Unit:mm):




| Type | SMHC6827 |
|---|---|
| A | 17.15 (Max.) |
| B | 17.15 ± 0.3 |
| C | 7.0 (Max.) |
| D | 11.94 ± 0.3 |
| E | 2.11 ± 0.3 |

## 3. Electrical Characteristic of SMHC6827 Series:

| Part Number | OCL (uH) ±20% | DCR (mΩ) Typ. | DCR (mΩ) Max. | Isat (A) @25℃ | L@Isat (uH) Typ. | Irms (A) @25℃ | L@Irms (uH) Typ. |
|---|---|---|---|---|---|---|---|
| SMHC6827-3R3MHF | 3.3 | 2.79 | 2.93 | 27.0 | 2.37 | 35.0 | 2.10 |
| SMHC6827-4R7MHF | 4.7 | 3.98 | 4.18 | 21.0 | 3.50 | 30.0 | 2.95 |
| SMHC6827-6R8MHF | 6.8 | 5.86 | 6.15 | 18.5 | 5.10 | 22.5 | 4.68 |
| SMHC6827-8R2MHF | 8.2 | 7.71 | 8.10 | 18.0 | 6.07 | 21.0 | 5.67 |
| SMHC6827-100MHF | 10.0 | 8.89 | 9.33 | 17.0 | 7.65 | 19.0 | 7.32 |
| SMHC6827-150MHF | 15.0 | 13.70 | 14.40 | 12.0 | 11.45 | 14.0 | 10.75 |
| SMHC6827-220MHF | 22.0 | 20.00 | 21.00 | 9.5 | 17.52 | 12.0 | 16.00 |
| SMHC6827-330MHF | 33.0 | 35.10 | 37.00 | 9.0 | 26.85 | 10.7 | 25.30 |
| SMHC6827-470MHF | 47.0 | 40.70 | 42.70 | 8.6 | 34.75 | 8.7 | 34.60 |
| SMHC6827-560MHF | 56.0 | 55.00 | 57.80 | 4.2 | 50.45 | 7.2 | 45.20 |
| SMHC6827-680MHF | 68.0 | 72.10 | 75.70 | 4.5 | 59.80 | 6.1 | 55.10 |
| SMHC6827-820MHF | 82.0 | 87.30 | 91.70 | 4.5 | 65.13 | 5.5 | 60.10 |
| SMHC6827-101MHF | 100.0 | 105.00 | 110.00 | 4.0 | 80.40 | 5.0 | 74.50 |

**Note:**

1>.Open Circuit Inductance(OCL) and L@Irms and L@Isat are measured at: 100KHz, 1.0V ;(Ta=25℃).

2>.Isat: DC current that causes inductance to drop approximately by 30% from OCL ;(Ta=25℃).

3>. 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 125°C under worst case operating conditions verified in the end application.

4>.Inductance Vs. DC current curve, please see the next page to get more detail information.

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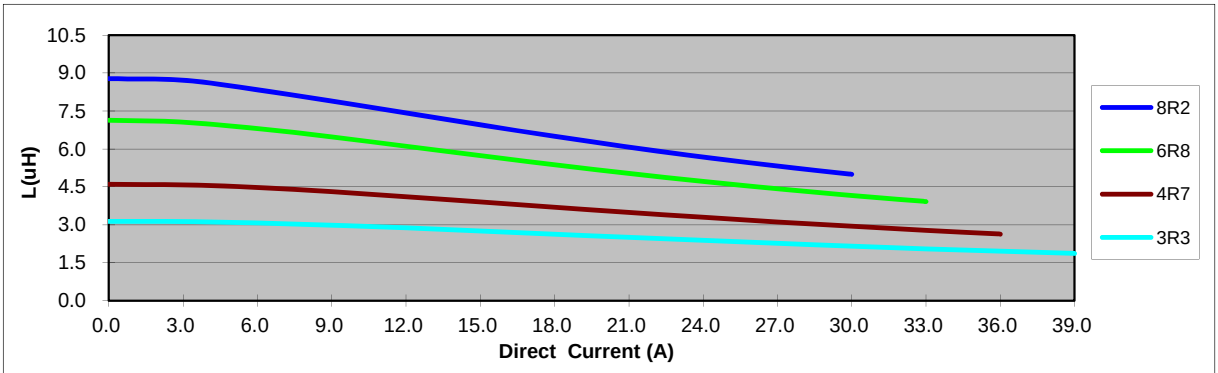
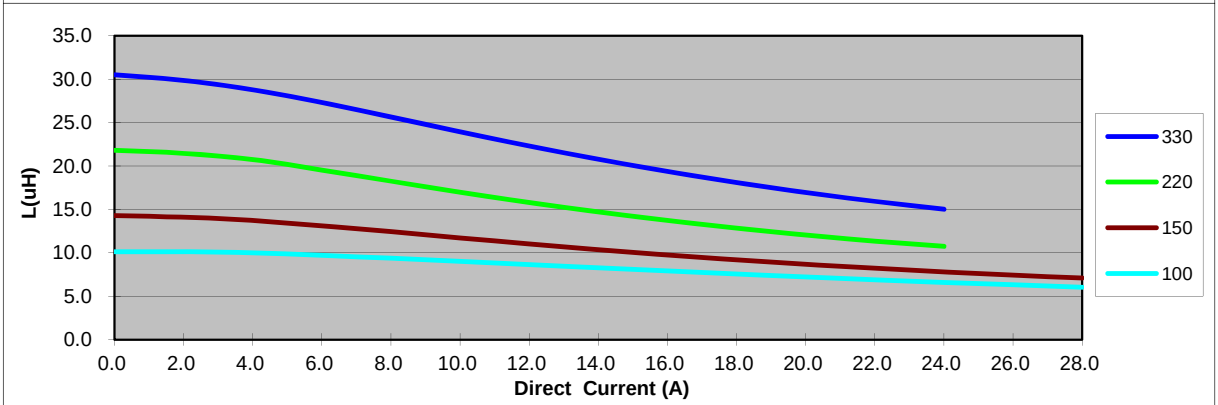
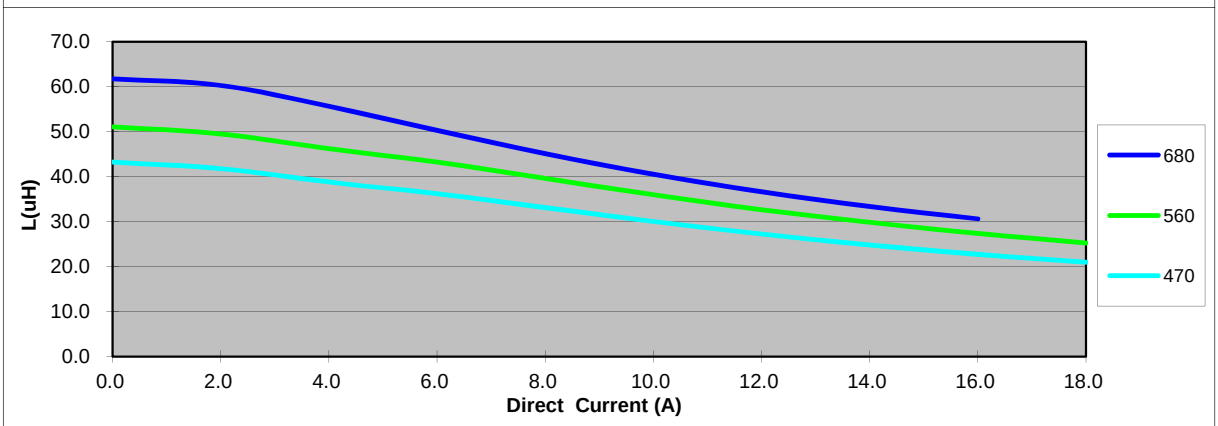
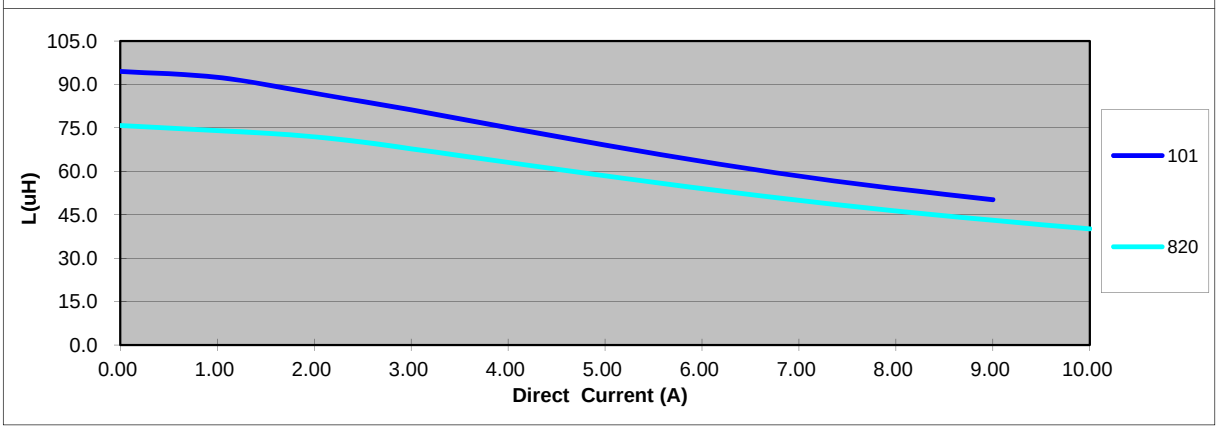
## Inductance vs. Current





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