

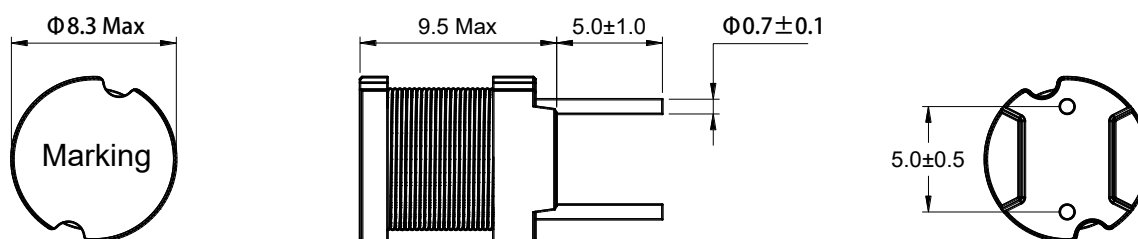
# **THNB Series** Through-hole Inductor Size 0809



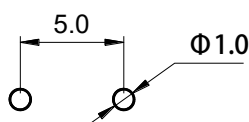
## **FEATURES**

- High reliability, high consistency inductance.
- High saturation current
- Lead free product, RoHS compliant.
- Widely used in power supply, DC-DC converter, computer and peripherals, air-condition, home electric appliance, and etc.
- Operating temperature : -40°C ~ +125°C (Including coil's temperature rise)
- Quantity : 300 pcs

## Dimensions: [mm]



## Land Pattern: [mm]



## Schematic:



## Electrical Properties:

| Part No.      | Inductance ( $\mu$ H)<br>$\pm 10\%$ | D.C.R. (m $\Omega$ ) |      | Saturation current (A) |      | Temperature rise current (A) |
|---------------|-------------------------------------|----------------------|------|------------------------|------|------------------------------|
|               |                                     | Typical              | Max  | Typical                | Max  | Typical                      |
| THNB0809-100K | 10.0                                | 21.4                 | 25.7 | 5.20                   | 4.16 | 4.83                         |
| THNB0809-120K | 12.0                                | 24.6                 | 29.5 | 4.80                   | 3.84 | 4.44                         |
| THNB0809-150K | 15.0                                | 31.2                 | 37.4 | 4.30                   | 3.44 | 4.03                         |
| THNB0809-180K | 18.0                                | 34.9                 | 41.9 | 4.10                   | 3.28 | 3.67                         |
| THNB0809-220K | 22.0                                | 40.5                 | 48.5 | 3.50                   | 2.80 | 3.41                         |
| THNB0809-270K | 27.0                                | 46.1                 | 55.3 | 3.15                   | 2.52 | 3.24                         |
| THNB0809-330K | 33.0                                | 60.8                 | 72.9 | 2.80                   | 2.24 | 2.66                         |
| THNB0809-390K | 39.0                                | 67.3                 | 80.7 | 2.60                   | 2.08 | 2.54                         |
| THNB0809-470K | 47.0                                | 89.3                 | 107  | 2.30                   | 1.84 | 2.19                         |

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|---------------|--------------------------------------------|----------------------|-------|------------------------|------|------------------------------|
|               |                                            | Typical              | Max   | Typical                | Max  | Typical                      |
| THNB0809-560K | 56.0                                       | 110                  | 132   | 2.10                   | 1.68 | 1.98                         |
| THNB0809-680K | 68.0                                       | 126                  | 150   | 1.90                   | 1.52 | 1.85                         |
| THNB0809-820K | 82.0                                       | 145                  | 174   | 1.80                   | 1.44 | 1.72                         |
| THNB0809-101K | 100                                        | 171                  | 205   | 1.58                   | 1.26 | 1.59                         |
| THNB0809-121K | 120                                        | 217                  | 260   | 1.46                   | 1.17 | 1.50                         |
| THNB0809-151K | 150                                        | 250                  | 300   | 1.30                   | 1.04 | 1.46                         |
| THNB0809-181K | 180                                        | 284                  | 340   | 1.22                   | 0.98 | 1.37                         |
| THNB0809-221K | 220                                        | 394                  | 470   | 1.05                   | 0.84 | 1.17                         |
| THNB0809-271K | 270                                        | 487                  | 585   | 0.97                   | 0.78 | 1.05                         |
| THNB0809-331K | 330                                        | 566                  | 680   | 0.90                   | 0.72 | 0.97                         |
| THNB0809-391K | 390                                        | 659                  | 790   | 0.82                   | 0.66 | 0.90                         |
| THNB0809-471K | 470                                        | 826                  | 990   | 0.74                   | 0.59 | 0.81                         |
| THNB0809-561K | 560                                        | 940                  | 1,130 | 0.69                   | 0.55 | 0.76                         |
| THNB0809-681K | 680                                        | 1,130                | 1,350 | 0.62                   | 0.50 | 0.69                         |
| THNB0809-821K | 820                                        | 1,340                | 1,610 | 0.55                   | 0.44 | 0.63                         |
| THNB0809-102K | 1,000                                      | 1,680                | 2,010 | 0.52                   | 0.42 | 0.56                         |

All data is tested based on 25°C ambient temperature.

Inductance measure condition at 1kHz,0.25V.

Saturation current: the value of DC current when the inductance decrease 20% of its initial value.

Temperature rise current: the actual value of DC current when the temperature rise is  $\Delta T 40^{\circ}\text{C}$  ( $T_a=25^{\circ}\text{C}$ ).

## Typical Electrical Characteristics:

### Saturation current VS temperature rise current curve

