



# HPL, TFL series, high-precision, thin-film chip inductors.



These 0805, 0402 and 0201 size chip inductors are adjustment free due to their tight tolerance. Additionally, this part also offers a high self-resonance frequency of 1 GHz and high Q value and a very excellent rated current.

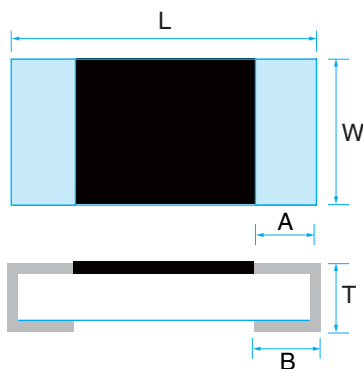
RoHS compliant

Completely lead free



## SPECIFICATIONS

### Mechanical



| Dimension<br>(Inch Size) | HPL0603<br>(0201) | HPL1005<br>(0402) | TFL0816<br>(0603) |
|--------------------------|-------------------|-------------------|-------------------|
| L                        | 0.60±0.05         | 1.00±0.10         | 1.60±0.10         |
| W                        | 0.30±0.05         | 0.50±0.10         | 0.80±0.10         |
| A                        | 0.07±0.05         | 0.15±0.10         | 0.30±0.20         |
| B                        | 0.12±0.05         | 0.25±0.10         | 0.30±0.20         |
| T                        | 0.28±0.05         | 0.40±0.10         | 0.45±0.10         |

(unit : mm)

### Electrical

| Type                          | HPL0603        |          | HPL1005        |          | TFL0816       |         |         |          |          |
|-------------------------------|----------------|----------|----------------|----------|---------------|---------|---------|----------|----------|
| inductance value              | E-24           |          | E-24           |          | E-12          |         |         |          |          |
| inductance range (nH)         | 1.0~5.6        | 6.2~27   | 1.0~9.1        | 10~39    | 1.0~4.7       | 5.6~8.2 | 10~27   | 33~68    | 82~100   |
| inductance tolerance          | ±0.1nH, ±0.2nH | ±2%      | ±0.1nH, ±0.2nH | ±2%      | ±0.2nH        |         | ±2%     | ±2%      |          |
| Q value (at 300MHz)           | 10             | 8~10     | 20~15          | 15~13    | 20            | 15      | 15      | *15      | *10      |
| Q value (at 800MHz) typ.      | 14~17          | 14~16    | 35~25          | 25~20    | 34~30         |         | 30~25   | 25       | 15       |
| Q value (at 1.5GHz) typ.      | 18~25          | 18~20    | 50~30          | 30~25    | 38~35         |         | 35~30   | **       |          |
| Self resonance Frequency(GHz) | 10~6.0         | 3.5      | 7.0~4.0        | 3.5      | 6.0~5.0       | 5.0~4.0 | 4.0~2.0 | 1.5~1.0  | 1.0      |
| DC resistance(Ω)              | 0.1~0.8        | 0.8~1.5  | 0.01~0.4       | 0.5~0.8  | 0.10~0.25     | 0.50    | 1.0~2.0 | 2.0~4.5  | 6.0~8.5  |
| Rated Current(A)              | 0.5~0.2        | 0.2~0.15 | 1.8~0.34       | 0.3~0.24 | 1.0~0.6       | 0.40    | 0.3~0.2 | 0.2~0.14 | 0.12~0.1 |
| Package                       | 10,000pcs/reel |          |                |          | 5,000pcs/reel |         |         |          |          |

Measured at 500MHz in case of HPL0603, at 300MHz in case of HPL1005

\* Measured at 200MHz in case of 33-100nH(TFL0816)

\*\* No measuring in case of 33-100nH(TFL0816)



## PART NUMBER

# HPL 0603 - 1NO (-E02)

Superior tolerance (Given to HPL series)

Inductance value

Dimensions

Part Code