## FEATURES 特征

- Metal material for large current and low loss, low DCR.
  铁合金材料，高饱和电流，低损耗，低DCR
- Low buzz noise, good magnetic shield perfomance.
  低噪声，磁屏蔽效果好
- Small parasitic capacitance.
  寄生电容小
- Operating Temp：-55℃~+125℃(Including self heating)
  工作温度范围:-55℃~+125℃(包括自身温度上升)

RoHS | Reach SVHC-Free | Halogen Free | Consumer


## APPLICATIONS 用途

- 5G Communications
  5G 通讯
- Internet of Things
  物联网
- Security device
  安防设备

## PART NUMBERING 产品型号

| APH | 0660 | C | - | 100 | M | - | TC | D5 |
|---|---|---|---|---|---|---|---|---|
| ① | ② | ③ | | ④ | ⑤ | | ⑥ | ⑦ |

| ① Series Name | |
|---|---|
| APH | T-Core Flat Coil High Current Inductor |

| ② External Dimensions | |
|---|---|
| 0420 | 4.1×4.1×1.9 |
| 0430 | 4.1×4.1×2.8 |
| 0520 | 5.5×5.3×1.9 |
| 0530 | 5.5×5.3×2.9 |
| 0550 | 5.5×5.3×4.8 |
| 0630 | 6.6×6.4×2.8/2.9 |
| 0650 | 6.6×6.4×4.8 |
| 0660 | 6.6×6.4×5.8 |
| 0720 | 7.8×7.6×1.85 |
| 0730 | 7.8×7.6×2.9 |
| 0770 | 7.8×7.6×6.7 |
| 0880 | 8.9×8.5×7.7 |
| 1031 | 11.9×11.0×2.9 |
| 1060 | 11.9×11.0×5.7 |
| 1010 | 11.9×11.0×9.7 |
| 1570 | 16.5×15.5×6.7 |
| 1580 | 16.5×15.5×7.7 |
| 1510 | 16.5×15.5×9.7 |
| 1513 | 16.5×15.5×12.7 |

| ③ Feature Type |
|---|
| C |

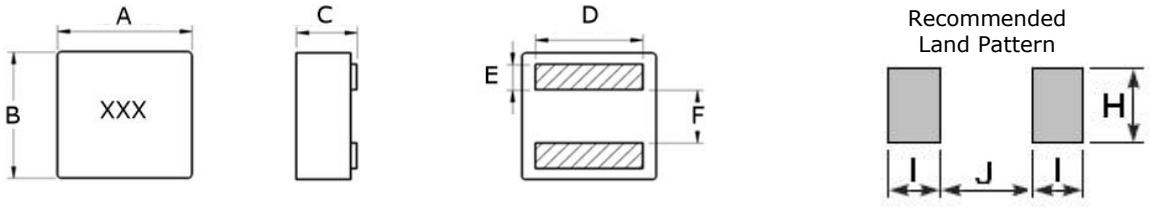
| ④ Inductance | |
|---|---|
| Code (example) | Nominal inductance［μH］ |
| R10 | 0.1 |
| 1R0 | 1 |
| 100 | 10 |

| ⑤ Inductance Tolerance | |
|---|---|
| M | 20% |

| ⑥ Product Type | |
|---|---|
| TC | T-Code Type |

| ⑦ Special material code |
|---|
| D5 |

## DIMENSIONS & RECOMMENDED LAND PATTERN 尺寸及推荐焊盘




Unit: mm

| Dimensions | | | | | | | Recommended Land Pattern | | |
|---|---|---|---|---|---|---|---|---|---|
| Series | A | B | C | D | E | F | I Typ. | J Typ. | H Typ. |
| APH0420C | 4.1±0.2 | 4.1±0.2 | 1.9±0.2 | 3.4±0.3 | 0.88±0.3 | 1.7±0.3 | 1 | 1.4 | 3.8 |
| APH0430C | 4.1±0.25 | 4.1±0.25 | 2.8±0.2 | 3.4±0.3 | 0.88±0.3 | 1.7±0.3 | 1 | 1.4 | 3.8 |
| APH0520C | 5.5±0.2 | 5.3±0.2 | 1.9±0.2 | 4.5±0.3 | 1.1±0.3 | 2.3±0.3 | 1.25 | 2 | 4.7 |
| APH0530C | 5.5±0.2 | 5.3±0.2 | 2.9±0.2 | 4.5±0.3 | 1.1±0.3 | 2.3±0.3 | 1.25 | 2 | 4.7 |
| APH0550C | 5.5±0.2 | 5.3±0.2 | 4.8±0.2 | 4.5±0.3 | 1.1±0.3 | 2.3±0.3 | 1.25 | 2 | 4.7 |
| APH0630C | 6.6±0.2 | 6.4±0.2 | 2.8±0.2 (L≦1.2μH)<br>2.9±0.2 (L≧1.5μH) | 5.4±0.3 | 1.5±0.3 | 2.6±0.3 | 1.55 | 2.5 | 5.6 |
| APH0650C | 6.6±0.2 | 6.4±0.2 | 4.8±0.2 | 5.4±0.3 | 1.5±0.3 | 2.6±0.3 | 1.55 | 2.5 | 5.6 |
| APH0660C | 6.6±0.2 | 6.4±0.2 | 5.8±0.2 | 5.4±0.3 | 1.5±0.3 | 2.6±0.3 | 1.55 | 2.5 | 5.6 |
| APH0720C | 7.8±0.25 | 7.6±0.2 | 1.85±0.2 | 6.3±0.3 | 1.75±0.3 | 3.15±0.3 | 2.3 | 2.8 | 7.2 |
| APH0730C | 7.8±0.25 | 7.6±0.2 | 2.9±0.2 | 6.3±0.3 | 1.75±0.3 | 3.15±0.3 | 2.3 | 2.8 | 7.2 |
| APH0770C | 7.8±0.25 | 7.6±0.2 | 6.7±0.3 | 6.3±0.3 | 1.75±0.3 | 3.15±0.3 | 2.3 | 2.8 | 7.2 |
| APH0880C | 8.9±0.3 | 8.5±0.3 | 7.7±0.3 | 7.2±0.3 (L≦ 2.2μH)<br>6.8±0.3 (L≧ 3.3μH) | 1.7±0.3 | 3.5±0.5 | 2.65 | 2.7 | 7.8 |
| APH1031C | 11.9±0.3 | 11.0±0.3 | 5.7±0.3 | 9.5±0.5 | 2.3±0.3 | 4.5±0.5 | 3.4 | 3.7 | 11 |
| APH1060C | 11.9±0.3 | 11.0±0.3 | 9.7±0.3 | 9.5±0.5 | 2.3±0.3 | 4.4±0.5 | 3.4 | 3.7 | 11 |
| APH1010C | 11.9±0.3 | 11.0±0.3 | 2.9±0.2 | 9.5±0.5 | 2.3±0.3 | 4.4±0.5 | 3.4 | 3.7 | 11 |
| APH1570C | 16.5±0.3 | 15.5±0.3 | 6.7±0.3 | 13.5±0.5 | 3.0±0.3 | 7.0±0.5 | 4.5 | 6 | 15 |
| APH1580C | 16.5±0.3 | 15.5±0.3 | 7.7±0.3 | 13.5±0.5 | 3.0±0.3 | 7.0±0.5 | 4.5 | 6 | 15 |
| APH1510C | 16.5±0.3 | 15.5±0.3 | 9.7±0.3 | 13.5±0.5 | 3.0±0.3 | 7.0±0.5 | 4.5 | 6 | 15 |
| APH1513C | 16.5±0.3 | 15.5±0.3 | 12.7±0.3 | 13.5±0.5 | 3.0±0.3 | 7.0±0.5 | 4.5 | 6 | 15 |

## ELECTRICAL CHARACTERISTICS 特性规格表

● APH0420C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0420C-R10M-TCD5 | 0.10±20% | 2.5 | 2.14 | 33.8 | 38.6 | 13.5 | 18.5 | 40 |
| APH0420C-R22M-TCD5 | 0.22±20% | 4.6 | 4 | 19.4 | 19.9 | 13 | 17.3 | 40 |
| APH0420C-R36M-TCD5 | 0.36±20% | 6.5 | 5.5 | 14.9 | 16.9 | 11 | 14.9 | 40 |
| APH0420C-R40M-TCD5 | 0.40±20% | 7.73 | 6.8 | 13.9 | 15.9 | 10 | 14.4 | 40 |
| APH0420C-R47M-TCD5 | 0.47±20% | 8.58 | 7.8 | 13.1 | 14.5 | 9 | 12.8 | 40 |
| APH0420C-R56M-TCD5 | 0.56±20% | 9.3 | 8.2 | 13 | 14.3 | 8.5 | 12.3 | 40 |
| APH0420C-R60M-TCD5 | 0.60±20% | 9.52 | 8.4 | 12.7 | 14 | 8 | 12 | 40 |
| APH0420C-R72M-TCD5 | 0.72±20% | 11.9 | 10.2 | 11 | 12.3 | 7.6 | 10.8 | 40 |
| APH0420C-1R0M-TCD5 | 1.0±20% | 14.6 | 13 | 9.1 | 9.9 | 6.8 | 9.9 | 40 |
| APH0420C-1R2M-TCD5 | 1.2±20% | 17.9 | 15.8 | 8 | 9.3 | 6.6 | 9.3 | 40 |
| APH0420C-1R5M-TCD5 | 1.5±20% | 23.8 | 20.8 | 7.6 | 8 | 5.8 | 7.9 | 40 |
| APH0420C-1R8M-TCD5 | 1.8±20% | 28 | 24.7 | 7.2 | 7.7 | 5.2 | 7.2 | 40 |
| APH0420C-2R2M-TCD5 | 2.2±20% | 38.7 | 34.2 | 6.2 | 6.7 | 4.6 | 5.8 | 40 |

● APH0430C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0430C-R47M-TCD5 | 0.47±20% | 7.26 | 6.4 | 15.6 | 17.4 | 10 | 14.4 | 40 |
| APH0430C-R90M-TCD5 | 0.90±20% | 10.1 | 8.9 | 9.3 | 10.3 | 8.2 | 11.5 | 40 |
| APH0430C-1R0M-TCD5 | 1.0±20% | 10.1 | 8.9 | 9.5 | 10.1 | 8 | 11.3 | 40 |
| APH0430C-1R2M-TCD5 | 1.2±20% | 11.5 | 10.1 | 9 | 9.5 | 7.8 | 10.1 | 40 |
| APH0430C-1R5M-TCD5 | 1.5±20% | 13.2 | 11.6 | 7.2 | 8.2 | 7 | 9.3 | 40 |
| APH0430C-2R2M-TCD5 | 2.2±20% | 22.6 | 20 | 6.3 | 7.2 | 6 | 8.1 | 40 |
| APH0430C-3R3M-TCD5 | 3.3±20% | 28.6 | 25.3 | 5.5 | 6.4 | 5 | 6.8 | 40 |
| APH0430C-4R7M-TCD5 | 4.7±20% | 44.1 | 38.8 | 4.2 | 4.7 | 3.9 | 5.3 | 40 |
| APH0430C-6R8M-TCD5 | 6.8±20% | 74.1 | 65.2 | 3.2 | 3.8 | 3 | 4.1 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

● APH0520C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0520C-R15M-TCD5 | 0.15±20% | 4.6 | 4 | 27.6 | 30.8 | 13.9 | 19.3 | 40 |
| APH0520C-R16M-TCD5 | 0.16±20% | 4.6 | 4 | 27.6 | 30.8 | 13.9 | 19.3 | 40 |
| APH0520C-R33M-TCD5 | 0.33±20% | 7.3 | 6.2 | 23.6 | 25.1 | 10.5 | 14.8 | 40 |
| APH0520C-R47M-TCD5 | 0.47±20% | 8.05 | 7.1 | 20.6 | 22.6 | 10.1 | 14.5 | 40 |
| APH0520C-R56M-TCD5 | 0.56±20% | 9.54 | 8.4 | 16.6 | 19.4 | 9.9 | 14.3 | 40 |
| APH0520C-R68M-TCD5 | 0.68±20% | 10.2 | 9 | 14.4 | 16.4 | 9.6 | 13.8 | 40 |
| APH0520C-R80M-TCD5 | 0.80±20% | 11.8 | 10.4 | 13.9 | 15.9 | 9.4 | 13.4 | 40 |
| APH0520C-R82M-TCD5 | 0.82±20% | 12.7 | 11.2 | 13.4 | 15.3 | 8.5 | 12.3 | 40 |
| APH0520C-1R0M-TCD5 | 1.0±20% | 13.8 | 12.2 | 13.2 | 14.8 | 7.5 | 10.8 | 40 |
| APH0520C-1R2M-TCD5 | 1.2±20% | 16.3 | 14.4 | 12.6 | 14.3 | 6.8 | 9.7 | 40 |
| APH0520C-1R5M-TCD5 | 1.5±20% | 18.7 | 16.5 | 10.9 | 11.8 | 6.4 | 9.1 | 40 |

● APH0530C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0530C-R15M-TCD5 | 0.15±20% | 2.31 | 2.04 | 33.3 | 36.8 | 14.3 | 22.8 | 40 |
| APH0530C-R16M-TCD5 | 0.16±20% | 2.33 | 2.06 | 32.8 | 35.8 | 14.2 | 22.8 | 40 |
| APH0530C-R47M-TCD5 | 0.47±20% | 4.13 | 3.65 | 24.6 | 26.6 | 13.7 | 18.9 | 40 |
| APH0530C-R56M-TCD5 | 0.56±20% | 4.52 | 4 | 20.8 | 22.8 | 13.6 | 18.2 | 40 |
| APH0530C-R60M-TCD5 | 0.60±20% | 4.52 | 4 | 20.1 | 21.4 | 13.6 | 18.2 | 40 |
| APH0530C-R80M-TCD5 | 0.80±20% | 5.65 | 5 | 18.6 | 20.4 | 10.1 | 13.5 | 40 |
| APH0530C-R82M-TCD5 | 0.82±20% | 5.78 | 5.11 | 18.2 | 20.1 | 9.9 | 13.2 | 40 |
| APH0530C-1R0M-TCD5 | 1.0±20% | 7.6 | 6.7 | 14.7 | 16.9 | 9 | 12.5 | 40 |
| APH0530C-1R2M-TCD5 | 1.2±20% | 9.7 | 8.5 | 13.9 | 15.3 | 8.5 | 11.3 | 40 |
| APH0530C-1R5M-TCD5 | 1.5±20% | 11.2 | 9.9 | 12.9 | 14.3 | 8 | 10.8 | 40 |
| APH0530C-1R8M-TCD5 | 1.8±20% | 12.7 | 11.2 | 11.7 | 12.6 | 7.6 | 10.4 | 40 |
| APH0530C-2R2M-TCD5 | 2.2±20% | 14.5 | 12.8 | 9.3 | 10.3 | 7.2 | 10 | 40 |
| APH0530C-3R3M-TCD5 | 3.3±20% | 23.1 | 20.4 | 9 | 9.8 | 5.9 | 8.4 | 40 |
| APH0530C-4R7M-TCD5 | 4.7±20% | 36.3 | 32.1 | 7.2 | 8.5 | 4.3 | 6.1 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

● APH0550C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0550C-5R6M-TCD5 | 5.6±20% | 24.2 | 21.4 | 7.4 | 8.9 | 5.3 | 7.4 | 40 |
| APH0550C-6R8M-TCD5 | 6.8±20% | 28.6 | 25.3 | 6.8 | 8 | 4.8 | 6.6 | 40 |
| APH0550C-8R2M-TCD5 | 8.2±20% | 32.5 | 29.55 | 6.3 | 7.4 | 4.6 | 6.3 | 40 |
| APH0550C-100M-TCD5 | 10±20% | 43 | 39.1 | 5.6 | 6.7 | 3.8 | 5.2 | 40 |

● APH0630C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0630C-R18M-TCD5 | 0.18±20% | 1.75 | 1.54 | 36.8 | 41 | 24 | 32.6 | 40 |
| APH0630C-R28M-TCD5 | 0.28±20% | 2.4 | 2.12 | 28.6 | 33.3 | 20.5 | 26.1 | 40 |
| APH0630C-R33M-TCD5 | 0.33±20% | 2.5 | 2.21 | 28.6 | 32.8 | 20 | 25.6 | 40 |
| APH0630C-R47M-TCD5 | 0.47±20% | 2.7 | 2.2 | 19.3 | 27.1 | 18.1 | 25.6 | 40 |
| APH0630C-R56M-TCD5 | 0.56±20% | 3.31 | 2.92 | 25.1 | 28.6 | 17 | 22.6 | 40 |
| APH0630C-R68M-TCD5 | 0.68±20% | 5.17 | 4.57 | 21.6 | 25.6 | 15 | 20.5 | 40 |
| APH0630C-1R0M-TCD5 | 1.0±20% | 6.05 | 5.35 | 18.6 | 23.6 | 13 | 18.5 | 40 |
| APH0630C-1R2M-TCD5 | 1.2±20% | 7.4 | 6.54 | 16.6 | 22.6 | 12 | 16.5 | 40 |
| APH0630C-1R5M-TCD5 | 1.5±20% | 9.13 | 8 | 16.1 | 20.4 | 11 | 15.4 | 40 |
| APH0630C-1R8M-TCD5 | 1.8±20% | 10.2 | 9 | 13.4 | 14.5 | 10 | 14.4 | 40 |
| APH0630C-2R2M-TCD5 | 2.2±20% | 12.2 | 10.7 | 11.4 | 16.3 | 7 | 10.3 | 40 |
| APH0630C-3R3M-TCD5 | 3.3±20% | 20.8 | 18.4 | 9.3 | 12.5 | 6 | 8.3 | 40 |
| APH0630C-4R5M-TCD5 | 4.5±20% | 25.3 | 22.4 | 8.3 | 9.3 | 5 | 7.2 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

### APH0650C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0650C-R82M-TCD5 | 0.82±20% | 4.18 | 3.7 | 20.6 | 24.6 | 16 | 21.6 | 40 |
| APH0650C-1R0M-TCD5 | 1.0±20% | 4.52 | 4 | 18.6 | 23.6 | 15 | 20.5 | 40 |
| APH0650C-1R2M-TCD5 | 1.2±20% | 5.83 | 5.1 | 16.6 | 21.4 | 14 | 18.5 | 40 |
| APH0650C-1R5M-TCD5 | 1.5±20% | 6.3 | 5.5 | 14.9 | 19.9 | 13 | 17.5 | 40 |
| APH0650C-1R8M-TCD5 | 1.8±20% | 7.1 | 6.2 | 13.9 | 18.9 | 12 | 16.5 | 40 |
| APH0650C-2R2M-TCD5 | 2.2±20% | 8.5 | 7.5 | 12.4 | 16.4 | 10 | 13.4 | 40 |
| APH0650C-3R3M-TCD5 | 3.3±20% | 12.5 | 11 | 10.4 | 12.8 | 8.5 | 11.3 | 40 |
| APH0650C-4R3M-TCD5 | 4.3±20% | 16.2 | 14.3 | 8.8 | 11.3 | 7 | 9.3 | 40 |
| APH0650C-4R7M-TCD5 | 4.7±20% | 18.4 | 16.2 | 8.3 | 10.8 | 6.5 | 8.8 | 40 |
| APH0650C-6R8M-TCD5 | 6.8±20% | 25.4 | 22.5 | 6.4 | 7.2 | 5 | 6.8 | 40 |

### APH0660C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0660C-1R0M-TCD5 | 1.0±20% | 4.4 | 3.89 | 19.6 | 24.6 | 16 | 21.6 | 40 |
| APH0660C-1R5M-TCD5 | 1.5±20% | 6.1 | 5.39 | 15.6 | 20.4 | 13.5 | 18 | 40 |
| APH0660C-2R2M-TCD5 | 2.2±20% | 8.1 | 7.16 | 12.9 | 16.9 | 11 | 14.4 | 40 |
| APH0660C-3R3M-TCD5 | 3.3±20% | 12.3 | 10.88 | 11.4 | 13.3 | 9 | 12.3 | 40 |
| APH0660C-4R7M-TCD5 | 4.7±20% | 14.4 | 13.1 | 9.6 | 10.8 | 8.5 | 11.3 | 40 |
| APH0660C-5R6M-TCD5 | 5.6±20% | 15.9 | 14.46 | 9 | 10.2 | 7.6 | 10.3 | 40 |
| APH0660C-6R8M-TCD5 | 6.8±20% | 20.8 | 18.9 | 8.4 | 9.5 | 7 | 9.3 | 40 |
| APH0660C-8R2M-TCD5 | 8.2±20% | 26.4 | 23.3 | 8.3 | 8.7 | 6 | 8.3 | 40 |
| APH0660C-100M-TCD5 | 10±20% | 29.82 | 26.5 | 7 | 7.8 | 5 | 7.2 | 40 |
| APH0660C-150M-TCD5 | 15±20% | 43.75 | 38.7 | 5.2 | 6 | 4.5 | 6.2 | 40 |
| APH0660C-220M-TCD5 | 22±20% | 60.63 | 53.6 | 5 | 5.8 | 3.8 | 5.2 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

### APH0720C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0720C-R27M-TCD5 | 0.27±20% | 3.5 | 3.1 | 32.8 | 35.8 | 16 | 21.6 | 40 |
| APH0720C-R31M-TCD5 | 0.31±20% | 4.8 | 4.2 | 31.8 | 34.8 | 14 | 20.5 | 40 |
| APH0720C-R33M-TCD5 | 0.33±20% | 4.8 | 4.2 | 31.8 | 34.8 | 13 | 19.5 | 40 |
| APH0720C-R47M-TCD5 | 0.47±20% | 6.2 | 5..5 | 25.6 | 28.6 | 12 | 17.5 | 40 |
| APH0720C-R68M-TCD5 | 0.68±20% | 9.2 | 8.1 | 23.6 | 25.6 | 10 | 13.4 | 40 |
| APH0720C-1R0M-TCD5 | 1.0±20% | 10.8 | 9.5 | 20.6 | 23.6 | 8 | 11.3 | 40 |

### APH0730C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0730C-1R0M-TCD5 | 1.0±20% | 5 | 4.5 | 28.6 | 30.8 | 16.1 | 22.4 | 40 |
| APH0730C-1R5M-TCD5 | 1.5±20% | 8.25 | 7.3 | 24.1 | 25.6 | 12 | 15.8 | 40 |
| APH0730C-2R2M-TCD5 | 2.2±20% | 13.7 | 12.1 | 17.6 | 19.4 | 10 | 13.4 | 40 |
| APH0730C-2R7M-TCD5 | 2.7±20% | 15.4 | 13.6 | 13.9 | 16.4 | 9.2 | 11.7 | 40 |
| APH0730C-3R3M-TCD5 | 3.3±20% | 18 | 15.9 | 13.4 | 15.3 | 8 | 10.3 | 40 |
| APH0730C-4R7M-TCD5 | 4.7±20% | 26.7 | 23.6 | 12.4 | 13.3 | 6.9 | 9.3 | 40 |
| APH0730C-5R6M-TCD5 | 5.6±20% | 33.2 | 28.1 | 11.9 | 12.8 | 5.3 | 7.5 | 40 |
| APH0730C-6R8M-TCD5 | 6.8±20% | 42.5 | 37.6 | 11.4 | 12.3 | 4.5 | 7 | 40 |
| APH0730C-8R2M-TCD5 | 8.2±20% | 48.73 | 43 | 9.3 | 10.5 | 3 | 6.1 | 40 |

### APH0770C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0770C-R80M-TCD5 | 0.8±20% | 2.29 | 2.1 | 34.8 | 38.6 | 20.8 | 26.4 | 40 |
| APH0770C-1R0M-TCD5 | 1.0±20% | 2.81 | 2.48 | 32.6 | 35.6 | 20 | 25.6 | 40 |
| APH0770C-1R8M-TCD5 | 1.8±20% | 4.46 | 3.94 | 23.6 | 25.6 | 15.8 | 21.6 | 40 |
| APH0770C-2R2M-TCD5 | 2.2±20% | 6.33 | 5.6 | 18.2 | 20 | 13.2 | 18.3 | 40 |
| APH0770C-3R3M-TCD5 | 3.3±20% | 9.42 | 8.3 | 15.7 | 19.8 | 11.5 | 15.6 | 40 |
| APH0770C-4R7M-TCD5 | 4.7±20% | 13.5 | 11.9 | 13.9 | 15.5 | 10.5 | 14 | 40 |
| APH0770C-5R6M-TCD5 | 5.6±20% | 14 | 12.3 | 11.9 | 12.3 | 10 | 11.8 | 40 |
| APH0770C-6R8M-TCD5 | 6.8±20% | 19.6 | 17.3 | 11.4 | 13.1 | 7 | 9.8 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

### APH0880C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH0880C-1R8M-TCD5 | 1.8±20% | 4 | 3.5 | 24.6 | 28.6 | 18 | 24.6 | 40 |
| APH0880C-2R2M-TCD5 | 2.2±20% | 4.3 | 3.8 | 22.6 | 25.6 | 16 | 22.1 | 40 |
| APH0880C-3R3M-TCD5 | 3.3±20% | 7.3 | 6.5 | 20.6 | 23.6 | 13.5 | 18.5 | 40 |
| APH0880C-4R7M-TCD5 | 4.7±20% | 9.8 | 8.6 | 15.6 | 16.9 | 10.5 | 15 | 40 |
| APH0880C-6R8M-TCD5 | 6.8±20% | 14.3 | 12.6 | 12.9 | 14.8 | 8 | 11.6 | 40 |
| APH0880C-100M-TCD5 | 10±20% | 22.9 | 20.2 | 10.4 | 11.3 | 6.6 | 9 | 40 |

### APH1031C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1031C-R28M-TCD5 | 0.28±20% | 1.6 | 1.4 | 59 | 66 | 25.5 | 35.8 | 40 |
| APH1031C-R56M-TCD5 | 0.56±20% | 2.75 | 2.4 | 39.8 | 45 | 23 | 32.6 | 40 |
| APH1031C-R82M-TCD5 | 0.82±20% | 4.1 | 3.6 | 32.8 | 38.8 | 18 | 25.6 | 40 |
| APH1031C-R90M-TCD5 | 0.90±20% | 4.2 | 3.5 | 31.8 | 36.8 | 17 | 24.6 | 40 |
| APH1031C-1R0M-TCD5 | 1.0±20% | 4.95 | 4.3 | 30.6 | 35.8 | 16 | 23.6 | 40 |
| APH1031C-1R5M-TCD5 | 1.5±20% | 6.6 | 5.8 | 25.6 | 30.8 | 12 | 18.5 | 40 |

### APH1060C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1060C-R68M-TCD5 | 0.68±20% | 1.5 | 1.32 | 51 | 56 | 22.5 | 34.8 | 40 |
| APH1060C-1R0M-TCD5 | 1.0±20% | 2.32 | 2.05 | 45 | 49 | 20 | 29.1 | 40 |
| APH1060C-1R2M-TCD5 | 1.2±20% | 2.64 | 2.33 | 41 | 46 | 18 | 27.1 | 40 |
| APH1060C-1R5M-TCD5 | 1.5±20% | 3.3 | 3 | 36.8 | 41 | 16 | 25.1 | 40 |
| APH1060C-2R2M-TCD5 | 2.2±20% | 4.84 | 4.28 | 30.6 | 35.8 | 14 | 20.5 | 40 |
| APH1060C-3R3M-TCD5 | 3.3±20% | 7.7 | 6.8 | 25.6 | 28.6 | 11.4 | 17.3 | 40 |
| APH1060C-4R7M-TCD5 | 4.7±20% | 10.72 | 9.48 | 22.6 | 25.6 | 8.7 | 14.4 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

### APH1010C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1010C-1R0M-TCD5 | 1.0±20% | 1.2 | 1.1 | 45 | 51 | 35.4 | 40.8 | 40 |
| APH1010C-2R2M-TCD5 | 2.2±20% | 2.8 | 2.3 | 29.6 | 34.8 | 24.5 | 32.6 | 40 |
| APH1010C-3R3M-TCD5 | 3.3±20% | 4.1 | 3.6 | 24 | 28 | 18.2 | 25.6 | 40 |
| APH1010C-4R7M-TCD5 | 4.7±20% | 5.7 | 5 | 22 | 26 | 17.5 | 24.6 | 40 |
| APH1010C-5R6M-TCD5 | 5.6±20% | 7.2 | 6.3 | 20.2 | 24.2 | 15.7 | 21.8 | 40 |
| APH1010C-6R8M-TCD5 | 6.8±20% | 8.9 | 7.8 | 19.1 | 22.4 | 14 | 19 | 40 |
| APH1010C-8R2M-TCD5 | 8.2±20% | 12.4 | 11 | 16.9 | 18.7 | 12.9 | 17.6 | 40 |
| APH1010C-100M-TCD5 | 10±20% | 13.75 | 12.1 | 15.2 | 17.9 | 11.5 | 16 | 40 |
| APH1010C-150M-TCD5 | 15±20% | 19.3 | 17 | 12.9 | 15.3 | 9.9 | 14.2 | 40 |

### APH1570C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1570C-5R3M-TCD5 | 5.3±20% | 5.34 | 4.7 | 30.6 | 34.8 | 19 | 25.6 | 40 |
| APH1570C-8R2M-TCD5 | 8.2±20% | 7.9 | 7 | 20.6 | 24.6 | 13 | 18.5 | 40 |
| APH1570C-100M-TCD5 | 10±20% | 9 | 8 | 18.6 | 22.6 | 10 | 16.5 | 40 |

### APH1580C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1580C-2R0M-TCD5 | 2.0±20% | 2.21 | 1.95 | 53 | 58 | 29.5 | 40.8 | 40 |
| APH1580C-2R2M-TCD5 | 2.2±20% | 2.48 | 2.2 | 50 | 56 | 28 | 37.8 | 40 |
| APH1580C-3R0M-TCD5 | 3.0±20% | 3 | 2.65 | 42 | 47 | 26 | 35.3 | 40 |
| APH1580C-4R2M-TCD5 | 4.2±20% | 4.68 | 4.14 | 33.8 | 38.8 | 20.5 | 27.6 | 40 |
| APH1580C-5R3M-TCD5 | 5.3±20% | 5.34 | 4.72 | 31.8 | 35.8 | 19.5 | 26.6 | 40 |
| APH1580C-6R2M-TCD5 | 6.2±20% | 6.5 | 5.75 | 31.8 | 34.8 | 17 | 23.6 | 40 |
| APH1580C-7R2M-TCD5 | 7.2±20% | 7.2 | 6.37 | 29.6 | 32.8 | 15 | 21.6 | 40 |
| APH1580C-8R2M-TCD5 | 8.2±20% | 7.92 | 7 | 25.6 | 28.6 | 13 | 19.5 | 40 |
| APH1580C-100M-TCD5 | 10±20% | 9.6 | 8.49 | 21.6 | 24.6 | 11 | 16.5 | 40 |
| APH1580C-150M-TCD5 | 15±20% | 15 | 13.27 | 18.6 | 21.4 | 10 | 13.4 | 40 |
| APH1580C-220M-TCD5 | 22±20% | 23.2 | 20.53 | 16.6 | 19.4 | 9 | 12.3 | 40 |

## ELECTRICAL CHARACTERISTICS 特性规格表

- APH1510C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1510C-4R7M-TCD5 | 4.7±20% | 3.8 | 3.5 | 39.8 | 44 | 22 | 30.6 | 40 |
| APH1510C-5R6M-TCD5 | 5.6±20% | 4.2 | 3.7 | 34.8 | 38.8 | 21 | 28.6 | 40 |
| APH1510C-6R8M-TCD5 | 6.8±20% | 4.6 | 4.1 | 31.8 | 36.8 | 20 | 26.6 | 40 |
| APH1510C-8R2M-TCD5 | 8.2±20% | 7.2 | 6 | 28.6 | 32.8 | 19 | 25.6 | 40 |
| APH1510C-100M-TCD5 | 10±20% | 8.6 | 6.8 | 24.1 | 27.1 | 16 | 22.6 | 40 |
| APH1510C-150M-TCD5 | 15±20% | 11.5 | 10.2 | 18.6 | 20.4 | 14 | 18.5 | 40 |
| APH1510C-220M-TCD5 | 22±20% | 15.8 | 13.9 | 16.6 | 18.4 | 10.5 | 14.6 | 40 |
| APH1510C-240M-TCD5 | 24±20% | 15.8 | 13.9 | 16.6 | 18.4 | 10.5 | 14.6 | 40 |
| APH1510C-330M-TCD5 | 33±20% | 20 | 17.7 | 14.4 | 17.1 | 8.6 | 12.6 | 40 |

- APH1513C Series

| Part Number | Inductance | DC resistance | | Saturation Current | | Heat Rating Current | | Withstanding Voltage |
|---|---|---|---|---|---|---|---|---|
| | @100KHz,01v | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| Units | μH | mΩ | | A | | A | | V |
| Symbol | L | DCR | | Isat | | Irms | | @1mA/3S |
| APH1513C-4R7M-TCD5 | 4.7±20% | 3.3 | 2.9 | 41 | 45 | 23 | 31.6 | 40 |
| APH1513C-5R6M-TCD5 | 5.6±20% | 3.9 | 3.4 | 35.8 | 41 | 22 | 29.6 | 40 |
| APH1513C-6R8M-TCD5 | 6.8±20% | 4.2 | 3.7 | 32.8 | 37.8 | 21 | 27.6 | 40 |
| APH1513C-8R2M-TCD5 | 8.2±20% | 5.74 | 5 | 29.6 | 33.8 | 20 | 26.6 | 40 |
| APH1513C-100M-TCD5 | 10±20% | 7 | 6.2 | 27.6 | 30.8 | 19 | 25.6 | 40 |
| APH1513C-150M-TCD5 | 15±20% | 7.5 | 6.6 | 21.6 | 26.1 | 16 | 22.6 | 40 |
| APH1513C-220M-TCD5 | 22±20% | 13.86 | 12.3 | 19.6 | 22.6 | 12 | 17.5 | 40 |
| APH1513C-330M-TCD5 | 33±20% | 22.2 | 19.6 | 16.6 | 19.4 | 9 | 14.4 | 40 |

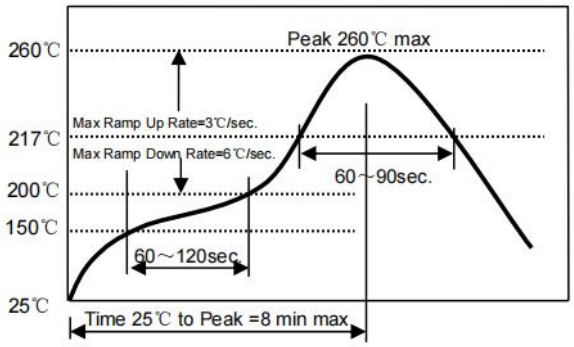
- Rated current: Isat or Irms, whichever is smaller.
- Isat: DC current at which the inductance drops approximate 35% from its value without current.
- Irms: DC current that causes the temperature rise (ΔT=40°C) from 20°C ambient.

## RECOMMENDED SOLDERING TECHNOLOGIES 回流焊建议

### Reflowing Profile

- Preheat condition: 150~200℃/60~120sec.
- Allowed time above 217℃: 60~90sec.
- Max temp: 260℃
- Max time at max temp: 10sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

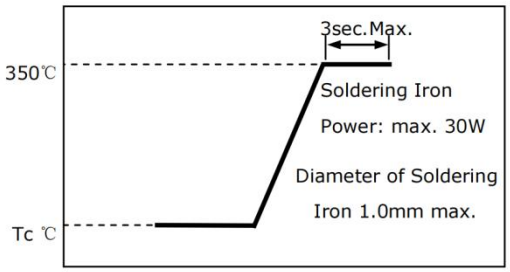
Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.




### Iron Soldering Profile

- Iron soldering power: Max.30W
- Pre-heating: 150 ℃ / 60sec.
- Soldering Tip temperature: 350℃Max.
- Soldering time: 3sec Max.
- Solder paste: Sn/3.0Ag/0.5Cu
- Max.1 times for iron soldering

Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.



## SAFETY REMINDERS 注意事项

### SAFETY REMINDERS

- The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 15 to 35℃, humidity: 75% RH or less).If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- This product is not designed for production processes involving ultrasonic welding, as high-frequency vibration may cause application issues such as product detachment and breakage.
- Carefully layout the coil for the circuit board design of the non-magnetic shield type. A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment, under a normal operation and use condition.

The Company shall not guarantee the suitability, performance, or quality for the following applications that require a high level of safety and reliability, or where equipment failure, malfunction, or abnormal operation may cause damage to human life, physical well-being, or property, and may have significant social impacts (hereinafter referred to as "specific applications").If you intend to use this product in the application scenarios listed below, or if you have special requirements exceeding the scope or conditions specified in each product catalog, please contact us.

(1) Aerospace/aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment
(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.