



**THE DATASHEET OF
AISC-0603F-R47J-T**

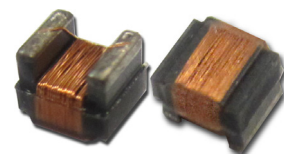


FERRITE WIRE WOUND INDUCTORS

AISC-0603F



RoHS/RoHS II Compliant



1.6 x 1.0 x 1.0mm

FEATURES:

- Higher inductance values than other 0603 inductors
- Ferrite construction for high current rating
- Inductance values: 47 nH – 22 μH; 5% tolerance available

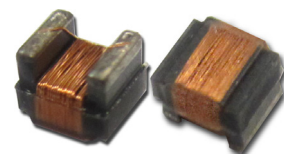
APPLICATIONS:

- Camcorders, LED TVs and other electronic devices

STANDARD SPECIFICATIONS:

| Part Number AISC-0603F- Inductance Code | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|---|------------|-----------|-----------------|-----------------------|-----------------------|---------------------------------|
| Units | nH | - | MHz | Ω | mA | MHz |
| Symbol | L | - | Freq. | DCR | I _r | S.R.F |
| AISC-0603F-47N | 47 | J, K, M | 7.9 | 0.06 | 1200 | 2350 |
| AISC-0603F-51N | 51 | J, K, M | 7.9 | 0.07 | 1050 | 2300 |
| AISC-0603F-R10 | 100 | K, M | 7.9 | 0.11 | 850 | 1370 |
| AISC-0603F-R12 | 120 | J, K, M | 7.9 | 0.18 | 670 | 1340 |
| AISC-0603F-R15 | 150 | J, K, M | 7.9 | 0.12 | 820 | 1260 |
| AISC-0603F-R18 | 180 | J, K, M | 7.9 | 0.19 | 670 | 1060 |
| AISC-0603F-R20 | 200 | J, K, M | 7.9 | 0.14 | 740 | 1030 |
| AISC-0603F-R22 | 220 | J, K, M | 7.9 | 0.20 | 650 | 850 |
| AISC-0603F-R24 | 240 | J, K, M | 7.9 | 0.17 | 690 | 800 |
| AISC-0603F-R25 | 250 | J, K, M | 7.9 | 0.17 | 690 | 910 |
| AISC-0603F-R27 | 270 | J, K, M | 7.9 | 0.24 | 630 | 780 |
| AISC-0603F-R33 | 330 | J, K, M | 7.9 | 0.29 | 510 | 730 |
| AISC-0603F-R39 | 390 | J, K, M | 7.9 | 0.33 | 490 | 750 |
| AISC-0603F-R47 | 470 | J, K, M | 7.9 | 0.37 | 470 | 670 |
| AISC-0603F-R50 | 500 | J, K, M | 7.9 | 0.45 | 410 | 610 |
| AISC-0603F-R56 | 560 | J, K, M | 7.9 | 0.51 | 380 | 590 |
| AISC-0603F-R62 | 620 | J, K, M | 7.9 | 0.48 | 390 | 570 |
| AISC-0603F-R65 | 650 | J, K, M | 7.9 | 0.61 | 350 | 550 |
| AISC-0603F-R68 | 680 | J, K, M | 7.9 | 0.77 | 310 | 520 |
| AISC-0603F-R78 | 780 | J, K, M | 7.9 | 0.83 | 300 | 480 |
| AISC-0603F-R82 | 820 | J, K, M | 7.9 | 0.88 | 290 | 500 |
| AISC-0603F-1R0 | 1000 | J, K, M | 7.9 | 0.94 | 280 | 410 |
| AISC-0603F-1R2 | 1200 | J, K, M | 7.9 | 1.10 | 260 | 370 |
| AISC-0603F-1R5 | 1500 | J, K, M | 7.9 | 1.30 | 240 | 340 |
| AISC-0603F-1R8 | 1800 | J, K, M | 7.9 | 1.40 | 230 | 190 |
| AISC-0603F-2R2 | 2200 | J, K, M | 7.9 | 1.50 | 220 | 120 |
| AISC-0603F-2R7 | 2700 | J, K, M | 7.9 | 1.60 | 210 | 70 |
| AISC-0603F-3R3 | 3300 | J, K, M | 7.9 | 1.80 | 200 | 60 |
| AISC-0603F-3R9 | 3900 | J, K, M | 7.9 | 1.90 | 190 | 50 |
| AISC-0603F-4R7 | 4700 | J, K, M | 7.9 | 2.70 | 160 | 50 |
| AISC-0603F-5R6 | 5600 | J, K, M | 7.9 | 3.00 | 150 | 40 |
| AISC-0603F-6R8 | 6800 | J, K, M | 7.9 | 4.00 | 130 | 40 |
| AISC-0603F-7R8 | 7800 | J, K, M | 7.9 | 4.40 | 120 | 40 |
| AISC-0603F-8R2 | 8200 | J, K, M | 7.9 | 4.50 | 110 | 40 |
| AISC-0603F-100 | 10000 | J, K, M | 2.5 | 5.00 | 100 | 30 |
| AISC-0603F-150 | 15000 | J, K, M | 2.5 | 9.50 | 90 | 20 |
| AISC-0603F-180 | 18000 | J, K, M | 2.5 | 10.40 | 80 | 20 |
| AISC-0603F-220 | 22000 | J, K, M | 2.5 | 11.40 | 70 | 20 |

FERRITE WIRE WOUND INDUCTORS



1.6 x 1.0 x 1.0mm

AISC-0603F



RoHS/RoHS II Compliant

Test Equipment

Inductance (L): Agilent 4287A+Agilent 16197A or equivalent, -13dBm or 10mA

DC Resistance (DCR): HIOKI 3540 or equivalent

Q Factor (Q): Agilent4287A+Agilent16197A or equivalent, -13dBm or 10mA

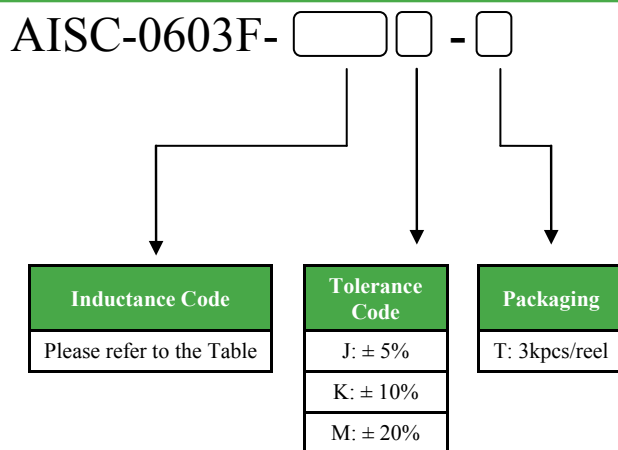
Self-Resonant Frequency (SRF): Agilent4991B+Agilent16197A and HP 8753E or equivalent, -20dBm or 50mV

Rated Current (Ir): Ir is direct electric current as chip surface temperature rose just 40°C against chip initial surface temperature (Ta)

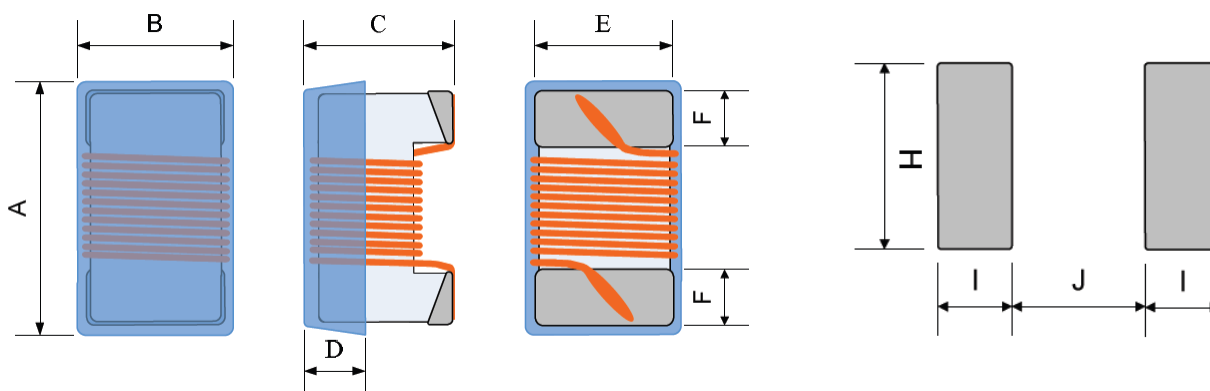
Operating Temperature: -40°C to +85°C

Storage Temperature: -10°C to +40°C, 70% RH max. in tape and reel

PART NUMBER IDENTIFICATION



OUTLINE DIMENSIONS:



| A | B | C | D REF. | E REF. | F REF. | H REF. | I REF. | J REF. |
|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 1.6±0.2 | 1.0±0.2 | 1.0±0.2 | 0.38 | 0.76 | 0.30 | 1.02 | 0.64 | 0.64 |

Dimension: mm

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ISO 9001 :2008
CERTIFIED

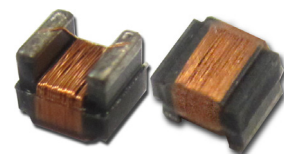


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Revised: 10.11.13

FERRITE WIRE WOUND INDUCTORS



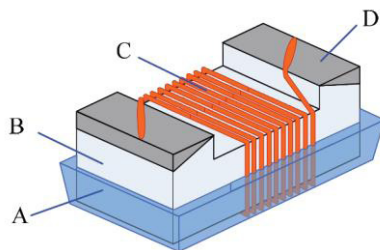
1.6 x 1.0 x 1.0mm

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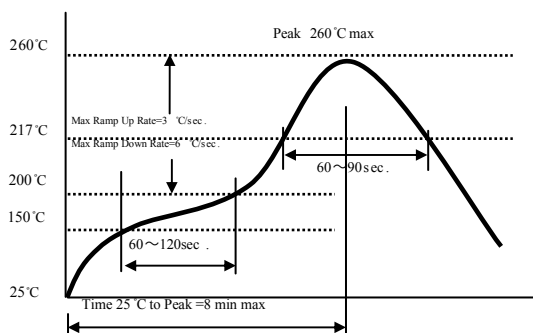
RoHS/RoHS II Compliant

Materials



| No. | Components | Material |
|-----|------------|--|
| A | Coating | Ultraviolet epoxy resin |
| B | Core | Ferrite |
| C | Wire | Polyurethane system enameled copper wire |
| D | Electrodes | Ag-Pd with Ni and Sn plating |

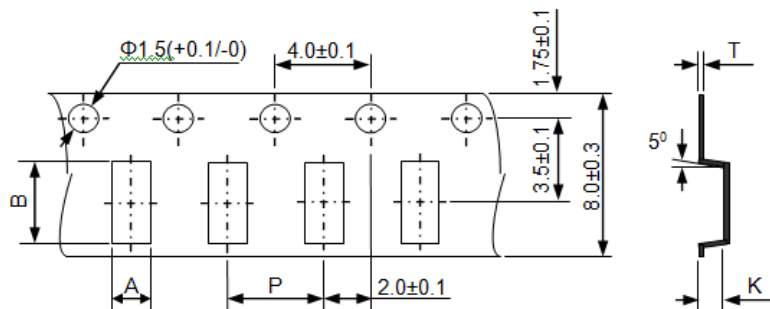
REFLOW PROFILE:



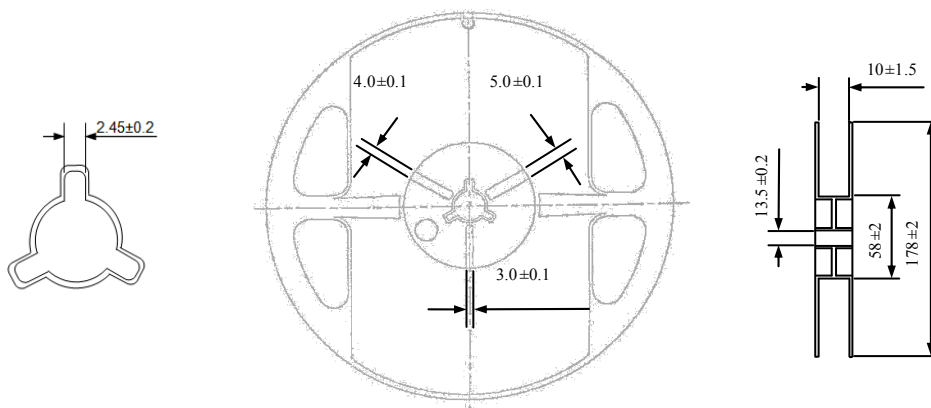
- Preheat condition: 150 ~200°C/60~120sec.
- Allowed time above 217 °C: 60~90sec.
- Max temp: 260 °C
- Max time at max temp: 10sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

TAPE & REEL:

T= tape and reel (3,000pcs/reel)



| A | B | P | K | T |
|-----------|-----------|---------|-----------|-----------|
| 1.20±0.05 | 1.85±0.05 | 4.0±0.1 | 1.02±0.05 | 0.23±0.05 |



Dimension: mm

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