



**THE DATASHEET OF  
AISC-0805-R0022J-T**



# WIRE WOUND INDUCTOR - CERAMIC or FERRITE

## AISC-0805(F)



2.29 x 1.73 x 1.55mm

### FEATURES:

- Ceramic or Ferrite Construction assures the utmost in the thermal stability and high SRF
- Exceptionally high Q compared to non-wirewound inductor, especially at high frequencies
- Inductance values available from 2.2 nH to 68uH; tight tolerance

### APPLICATIONS:

- Widely applied in the VCO, SAW circuit for GSM, CDMA communications
- Used in hard disk, notebook computer and other electronic equipment

### STANDARD SPECIFICATIONS:

| Part Number     | L (nH)<br>@Test Freq. | Tolerance<br>(±%) | Q <sub>min</sub><br>@Test Freq. | SRF Min<br>(MHz) | R <sub>DC</sub> Max<br>(Ω) | I <sub>DC</sub> Max<br>(mA) |
|-----------------|-----------------------|-------------------|---------------------------------|------------------|----------------------------|-----------------------------|
| AISC-0805-R0022 | 2.2 @ 250 MHz         | 10,20             | 40 @ 1500 MHz                   | >6000            | 0.10                       | 600                         |
| AISC-0805-R0033 | 3.3 @ 250 MHz         | 5,10,20           | 30 @ 1500 MHz                   | >6000            | 0.08                       | 600                         |
| AISC-0805-R0068 | 6.8 @ 250 MHz         | 5,10,20           | 40 @ 1000 MHz                   | 5000             | 0.11                       | 600                         |
| AISC-0805-R0082 | 8.2 @ 250 MHz         | 5,10,20           | 40 @ 1000 MHz                   | 4600             | 0.19                       | 600                         |
| AISC-0805-R012  | 12 @ 250 MHz          | 2,5,10,20         | 40 @ 500 MHz                    | 4000             | 0.15                       | 600                         |
| AISC-0805-R015  | 15 @ 250 MHz          | 5,10,20           | 40 @ 500 MHz                    | 2900             | 0.17                       | 600                         |
| AISC-0805-R018  | 18 @ 250 MHz          | 2,5,10,20         | 50 @ 500 MHz                    | 3300             | 0.20                       | 600                         |
| AISC-0805-R022  | 22 @ 250 MHz          | 2,5,10,20         | 55 @ 500 MHz                    | 2000             | 0.22                       | 500                         |
| AISC-0805-R027  | 27 @ 250 MHz          | 2,5,10,20         | 55 @ 500 MHz                    | 2500             | 0.25                       | 500                         |
| AISC-0805-R033  | 33 @ 250 MHz          | 2,5,10,20         | 60 @ 500MHz                     | 2000             | 0.27                       | 500                         |
| AISC-0805-R039  | 39 @ 250 MHz          | 2,5,10,20         | 60 @ 500MHz                     | 2000             | 0.29                       | 500                         |
| AISC-0805-R047  | 47 @ 200 MHz          | 2,5,10,20         | 50 @ 500MHz                     | 1600             | 0.31                       | 500                         |
| AISC-0805-R056  | 56 @ 200 MHz          | 2,5,10,20         | 55 @ 500MHz                     | 1550             | 0.32                       | 500                         |
| AISC-0805-R068  | 68 @ 200 MHz          | 2,5,10,20         | 55 @ 500MHz                     | 1450             | 0.38                       | 500                         |
| AISC-0805-R082  | 82 @ 150 MHz          | 2,5,10,20         | 50 @ 500MHz                     | 1300             | 0.42                       | 400                         |
| AISC-0805-R10   | 100 @ 150 MHz         | 2,5,10,20         | 50 @ 500MHz                     | 1200             | 0.46                       | 400                         |
| AISC-0805-R12   | 120 @ 150 MHz         | 2,5,10,20         | 50 @ 250 MHz                    | 1100             | 0.51                       | 400                         |
| AISC-0805-R15   | 150 @ 100 MHz         | 2,5,10,20         | 50 @ 250 MHz                    | 920              | 0.56                       | 400                         |
| AISC-0805-R18   | 180 @ 100 MHz         | 2,5,10,20         | 50 @ 250 MHz                    | 870              | 0.64                       | 400                         |
| AISC-0805-R22   | 220 @ 100 MHz         | 2,5,10,20         | 45 @ 250 MHz                    | 850              | 1.10                       | 400                         |
| AISC-0805-R27   | 270 @ 100 MHz         | 2,5,10,20         | 38 @ 250 MHz                    | 650              | 1.00                       | 350                         |
| AISC-0805-R33   | 330 @ 100 MHz         | 2,5,10,20         | 40 @ 250 MHz                    | 600              | 1.4                        | 310                         |
| AISC-0805-R39   | 390 @ 100 MHz         | 2,5,10,20         | 35 @ 250 MHz                    | 560              | 1.5                        | 290                         |
| AISC-0805-R47   | 470 @ 50 MHz          | 5,10,20           | 33 @ 100 MHz                    | 375              | 1.72                       | 250                         |
| AISC-0805-R56   | 560 @ 25 MHz          | 5,10,20           | 23 @ 50 MHz                     | 320              | 1.9                        | 230                         |
| AISC-0805-R62   | 620 @ 25 MHz          | 5,10,20           | 23 @ 50 MHz                     | 280              | 1.95                       | 200                         |
| AISC-0805-R68   | 680 @ 25 MHz          | 5,10,20           | 23 @ 50 MHz                     | 270              | 2.05                       | 190                         |
| AISC-0805-R75   | 750 @ 25 MHz          | 5,10,20           | 23 @ 50 MHz                     | 240              | 2.1                        | 180                         |
| AISC-0805-R82   | 820 @ 25 MHz          | 5,10,20           | 23 @ 50 MHz                     | 250              | 2.3                        | 180                         |
| AISC-0805-R91   | 910 @ 25 MHz          | 5,10,20           | 22 @ 50 MHz                     | 230              | 2.4                        | 160                         |
| AISC-0805-IR0   | 1000 @ 25 MHz         | 5,10,20           | 20 @ 50 MHz                     | 200              | 2.5                        | 150                         |
| AISC-0805F-R27  | 270 @ 25MHz           | 5,10,20           | 15 @ 25MHz                      | 550              | 0.91                       | 350                         |
| AISC-0805F-R47  | 470 @ 100MHz          | 5,10,20           | 8 @ 100MHz                      | 500              | 0.72                       | 300                         |
| AISC-0805F-R56  | 560 @ 25MHz           | 5,10,20           | 15 @ 25MHz                      | 360              | 0.6                        | 145                         |
| AISC-0805F-IR0  | 1000 @ 7.9MHz         | 2,5,10,20         | 15 @ 7.9MHz                     | 63               | 1.20                       | 245                         |
| AISC-0805F-IR5  | 1500 @ 7.9MHz         | 2,5,10,20         | 15 @ 7.9MHz                     | 60               | 1.45                       | 225                         |
| AISC-0805F-IR8  | 1800 @ 7.9MHz         | 5,10,20           | 15 @ 7.9MHz                     | 60               | 1.45                       | 200                         |
| AISC-0805F-2R2  | 2200 @ 7.9MHz         | 2,5,10,20         | 10 @ 50MHz                      | 200              | 2.50                       | 100                         |
| AISC-0805F-3R3  | 3300 @ 7.9MHz         | 2,5,10,20         | 15 @ 7.9MHz                     | 50               | 2.30                       | 175                         |
| AISC-0805F-3R9  | 3900 @ 7.9MHz         | 5,10,20           | 10 @ 7.9MHz                     | 50               | 2.50                       | 80                          |
| AISC-0805F-4R7  | 4700 @ 7.9MHz         | 2,5,10,20         | 15 @ 7.9MHz                     | 43               | 2.80                       | 140                         |
| AISC-0805F-6R8  | 6800 @ 7.9MHz         | 2,5,10,20         | 15 @ 7.9MHz                     | 36               | 3.40                       | 115                         |
| AISC-0805F-8R2  | 8200 @ 7.9MHz         | 5,10,20           | 10 @ 2.5MHz                     | 35               | 4.50                       | 100                         |

| PARAMETERS            |
|-----------------------|
| ABRACON P/N:          |
| AISC-0805(F)-xxx      |
| Operating temperature |
| -40°C to +125°C       |
| Storage temperature:  |
| -10°C to +40°C        |
| 70% RH max.           |



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REVISED: 08-31-20

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# WIRE WOUND INDUCTOR - CERAMIC or FERRITE

## AISC-0805(F)

 RoHS/RoHS II compliant

2.29 x 1.73 x 1.55mm

| Part Number    | L (nH)<br>@ Test Freq. | Tolerance<br>(±%) | Q <sub>i</sub> Min<br>@ Test Freq. | SRF Min<br>(MHz) | R <sub>DC</sub> Max<br>(Ω) | I <sub>DC</sub> Max<br>(mA) |
|----------------|------------------------|-------------------|------------------------------------|------------------|----------------------------|-----------------------------|
| AISC-0805F-100 | 10000@2.5MHz           | 2.5,10,20         | 10@2.5MHz                          | 30               | 4.70                       | 98                          |
| AISC-0805F-150 | 15000@2.5MHz           | 2.5,10,20         | 10@2.5MHz                          | 23               | 6.50                       | 80                          |
| AISC-0805F-220 | 22000@2.5MHz           | 2.5,10,20         | 10@2.5MHz                          | 20               | 8.00                       | 68                          |
| AISC-0805F-330 | 33000@2.5MHz           | 2.5,10,20         | 10@2.5MHz                          | 17               | 10.7                       | 60                          |
| AISC-0805F-470 | 47000@2.5MHz           | 2.5,10,20         | 10@2.5MHz                          | 14               | 13.8                       | 55                          |
| AISC-0805F-680 | 68000@2.5MHz           | 2.5,10,20         | 8@2.5MHz                           | 11               | 17.5                       | 40                          |

### Test Conditions

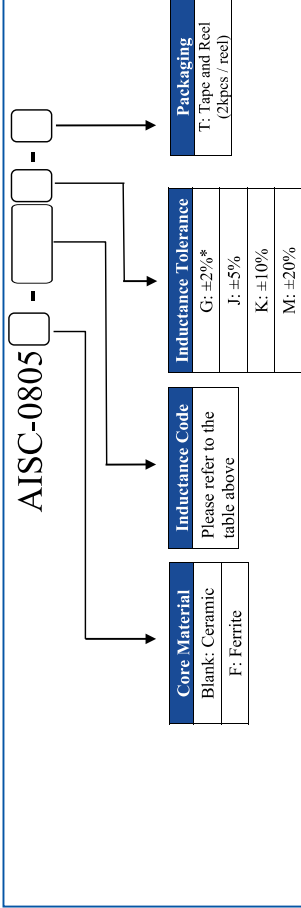
Inductance (L): Agilent4287A+Agilent16197A or equivalent, 50mV

Direct Current Resistance (DCR): HIOKI 3540 or equivalent

Temperature rise current (I<sub>r</sub>): Electric Power, Electric current meter, Thermometer

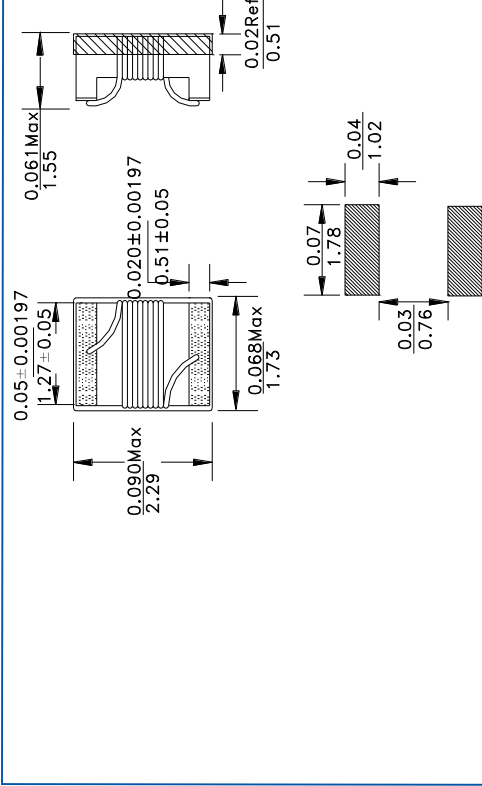
I<sub>DC</sub>: Based on temperature rise (ΔT: 20°C)

### ➤ PART IDENTIFICATION:



\*Please review electrical specification table

### ➤ OUTLINE DRAWING:



Recommended  
Land Pattern

Dimension: inches / mm



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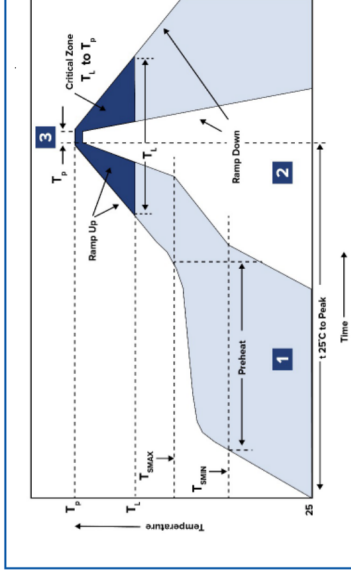
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**AISC-0805(F)**

**Pb** RoHS/RoHS II compliant

2.29 x 1.73 x 1.55mm

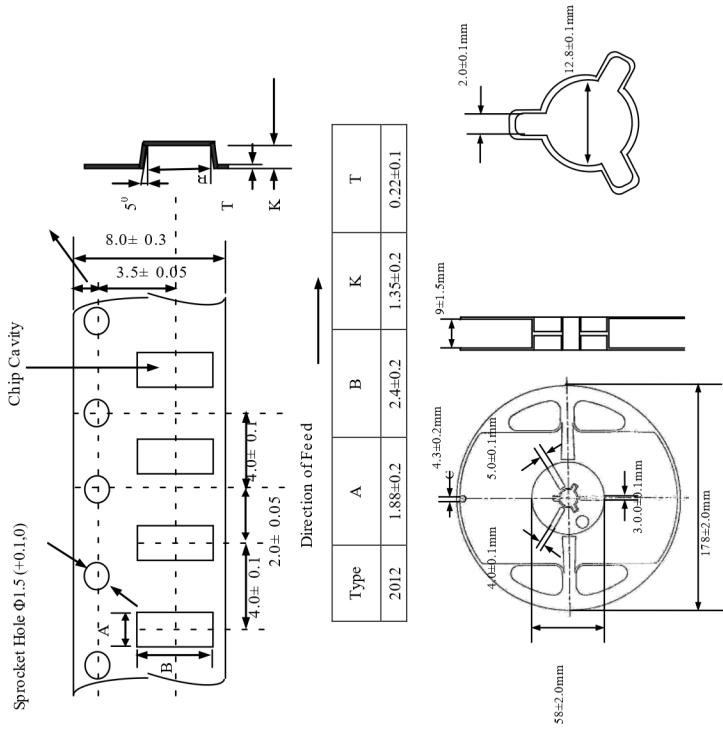
## REFLOW PROFILE:



| Zone | Description | Temperature                                | Times          |
|------|-------------|--|----------------|
| 1    | Preheat     | $T_{1max}$ to $T_{1max}$<br>150°C to 190°C | 60 to 120 sec. |
| 2    | Reflow      | $T_2$<br>240°C                             | 20 to 40 sec.  |
| 3    | Peak heat   | $T_3$<br>255°C $\pm$ 5°C                   | 10 sec. MAX    |

## TAPE & REEL:

**T= tape and reel (2,000pcs/reel)**



**Dimension: mm**

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