



**THE DATASHEET OF
AISC-0402-15NJ-T**



Ceramic Wire Wound Inductors

AISC-0402



RoHS / RoHS II Compliant



1.19 x 0.64 x 0.66mm

FEATURES:

- Exceptional high Q and SRF for high frequency applications
- Excellent DCR and current carrying characteristics
- Small size suitable for surface mounting
- Epoxy coating protects wound wire

APPLICATIONS:

- Widely applied in mobile phones such as GSM, CDMA, PDC, etc.
- Bluetooth, W-LAN, Broadband Network
- High Frequency Communication Circuits
- Video cameras, liquid crystal television, and other electronic devices

ELECTRICAL SPECIFICATIONS:

| Part Number | L (nH) | Tolerance | Q Min | L/Q Test Freq (MHz) | SRF Min (MHz) | RDC Max (Ω) | IDC Max (mA) |
|-------------|--------|------------|-------|---------------------|---------------|-------------|--------------|
| 1N0 | 1.0 | S | 13 | 250 | 12700 | 0.045 | 1360 |
| 1N2 | 1.2 | K, S | 13 | 250 | 12000 | 0.060 | 1300 |
| 1N8 | 1.8 | J, K, S | 13 | 250 | 11500 | 0.070 | 1040 |
| 1N9 | 1.9 | J, K, S | 16 | 250 | 11300 | 0.070 | 1040 |
| 2N0 | 2.0 | J, K, S | 16 | 250 | 11100 | 0.070 | 1040 |
| 2N2 | 2.2 | J, K, S | 18 | 250 | 10800 | 0.070 | 960 |
| 2N4 | 2.4 | J, K, S | 18 | 250 | 10500 | 0.070 | 960 |
| 2N7 | 2.7 | K, S | 13 | 250 | 10400 | 0.120 | 640 |
| 3N0 | 3.0 | J, K, S | 20 | 250 | 7000 | 0.066 | 840 |
| 3N3 | 3.3 | G, J, K, S | 20 | 250 | 7000 | 0.066 | 840 |
| 3N6 | 3.6 | G, J, K, S | 20 | 250 | 6800 | 0.066 | 840 |
| 3N9 | 3.9 | G, J, K, S | 20 | 250 | 6000 | 0.066 | 840 |
| 4N3 | 4.3 | G, J, K, S | 20 | 250 | 6000 | 0.091 | 700 |
| 4N7 | 4.7 | G, J, K, S | 20 | 250 | 4775 | 0.083 | 800 |
| 5N1 | 5.1 | G, J, K, S | 23 | 250 | 5800 | 0.083 | 800 |
| 5N6 | 5.6 | G, J, K, S | 23 | 250 | 5800 | 0.083 | 760 |
| 6N2 | 6.2 | G, J, K, S | 23 | 250 | 5800 | 0.083 | 760 |
| 6N8 | 6.8 | G, J, K | 20 | 250 | 5800 | 0.083 | 680 |
| 7N3 | 7.3 | G, J, K | 25 | 250 | 6000 | 0.130 | 570 |
| 7N5 | 7.5 | G, J, K | 25 | 250 | 5800 | 0.100 | 680 |
| 8N2 | 8.2 | G, J, K | 25 | 250 | 4400 | 0.100 | 680 |
| 8N7 | 8.7 | G, J, K | 25 | 250 | 4200 | 0.100 | 680 |
| 9N0 | 9.0 | G, J, K | 25 | 250 | 4160 | 0.100 | 680 |
| 9N5 | 9.5 | G, J, K | 21 | 250 | 4000 | 0.162 | 600 |
| 10N | 10 | G, J, K | 21 | 250 | 3900 | 0.200 | 480 |
| 11N | 11 | G, J, K | 26 | 250 | 3680 | 0.120 | 640 |
| 12N | 12 | G, J, K | 26 | 250 | 3600 | 0.120 | 640 |
| 13N | 13 | G, J, K | 26 | 250 | 3450 | 0.185 | 440 |
| 15N | 15 | G, J, K | 26 | 250 | 3280 | 0.170 | 560 |
| 16N | 16 | G, J, K | 26 | 250 | 3100 | 0.220 | 560 |
| 18N | 18 | G, J, K | 26 | 250 | 3100 | 0.230 | 480 |
| 19N | 19 | G, J, K | 26 | 250 | 3040 | 0.200 | 480 |
| 20N | 20 | G, J, K | 26 | 250 | 3000 | 0.250 | 420 |
| 22N | 22 | G, J, K | 26 | 250 | 2800 | 0.250 | 400 |

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Key Electrical Specifications (Cont.)

| Part Number | L (nH) | Tolerance | Q Min | L/Q Test Freq (MHz) | SRF Min (MHz) | RDC Max (Ω) | IDC Max (mA) |
|-------------|--------|-----------|-------|---------------------|---------------|----------------------|--------------|
| 23N | 23 | G, J, K | 26 | 250 | 2720 | 0.250 | 400 |
| 24N | 24 | G, J, K | 26 | 250 | 2700 | 0.300 | 400 |
| 27N | 27 | G, J, K | 26 | 250 | 2480 | 0.300 | 400 |
| 30N | 30 | G, J, K | 25 | 250 | 2350 | 0.300 | 400 |
| 33N | 33 | G, J, K | 25 | 250 | 2350 | 0.350 | 400 |
| 36N | 36 | G, J, K | 26 | 250 | 2320 | 0.400 | 320 |
| 39N | 39 | G, J, K | 25 | 250 | 2100 | 0.500 | 200 |
| 40N | 40 | G, J, K | 26 | 250 | 2240 | 0.550 | 200 |
| 43N | 43 | G, J, K | 25 | 250 | 2030 | 0.700 | 150 |
| 47N | 47 | G, J, K | 20 | 250 | 2100 | 0.750 | 150 |
| 51N | 51 | G, J, K | 25 | 250 | 1750 | 0.820 | 100 |
| 56N | 56 | G, J, K | 25 | 250 | 1760 | 0.970 | 100 |
| 62N | 62 | G, J, K | 25 | 250 | 1620 | 0.970 | 100 |
| 68N | 68 | G, J, K | 25 | 250 | 1620 | 1.120 | 100 |
| 72N | 72 | G, J, K | 25 | 250 | 1620 | 1.550 | 100 |
| 82N | 82 | J, K | 25 | 250 | 1620 | 1.550 | 100 |
| R10 | 100 | J, K | 25 | 250 | 1620 | 2.600 | 100 |
| R12 | 120 | J, K | 25 | 250 | 1520 | 2.700 | 90 |
| R15 | 150 | J, K | 25 | 250 | 1200 | 2.900 | 80 |

Test Conditions:

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

Direct Current Resistance (DCR): HIOKI 3540 or equivalent

Temperature rise current (Ir): Electric Power, Electric current meter, Thermometer

IDC: Based on temperature rise (ΔT : 20°C TYP.)

OPTIONS & PART IDENTIFICATION:



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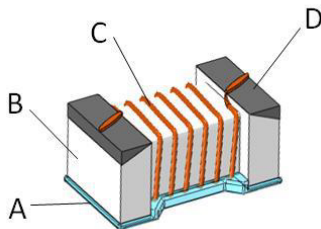
MECHANICAL DIMENSIONS:



Recommended Land Pattern

| A | B | C | D | E | H REF. | I REF. | J REF. |
|----------|----------|----------|----------|----------|--------|--------|--------|
| 1.10±0.1 | 0.60±0.1 | 0.55±0.1 | 0.50±0.1 | 0.20±0.1 | 0.65 | 0.35 | 0.50 |

Materials



| No. | Components | Material |
|-----|------------|--|
| A | Coating | Ultraviolet epoxy resin |
| B | Core | Ceramic |
| C | Wire | Polyurethane system enameled copper wire |
| D | Electrodes | Mo-Mn with Ni and Gold plating |



1.19 x 0.64 x 0.66mm

REFLOW PROFILE:



- Δ 1~2 C/sec. Ramp
- Δ Pre-heating: 150~190°C/120±30 sec.
- Δ Time above 240°C: 20~60sec
- Δ Peak temperature: 260°C Max./10sec.
- Δ Solder paste: Sn/3.0Ag/0.5Cu
- Δ Max.2 times for re-flowing

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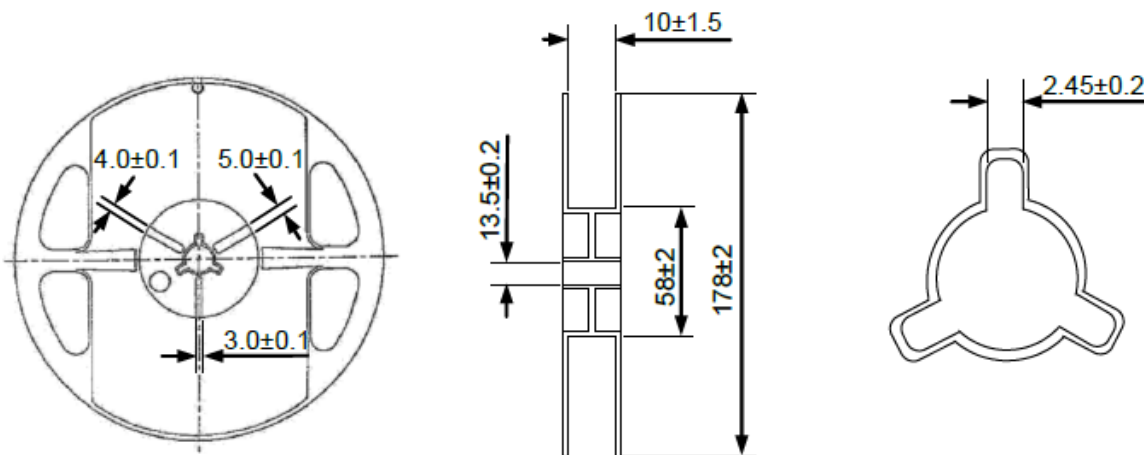
1.19 x 0.64 x 0.66mm

TAPE & REEL:

T= tape and reel (10,000pcs/reel)



| A | B | P | K | T |
|-----------------|-----------------|---------------|-----------------|---------------|
| 0.66 ± 0.05 | 1.20 ± 0.05 | 2.0 ± 0.1 | 0.75 ± 0.05 | 0.8 ± 0.1 |



Dimension: mm

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