

DATA SHEET

INDUCTOR

Chip Inductors

BWNC Series

RoHS compliant & Halogen Free



BWNC Series



The characteristics of this series perform low RDC and carry large current. These unique open type inductors offer many superior features in opposition to the molding type one of Japanese peers.

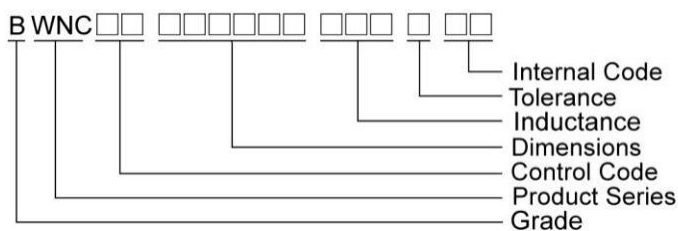
Features

- RoHS compliant
- Very strong solderability by reflow soldering and soldering iron
- Highly accurate dimensions can be mounted automatically
- Terminals are highly resistant to pull forces
- Highly resistant to mechanical shocks and pressure
- Highly reliable in environments of sudden temperature change and humidity
- Superior IDC for DC/DC converter

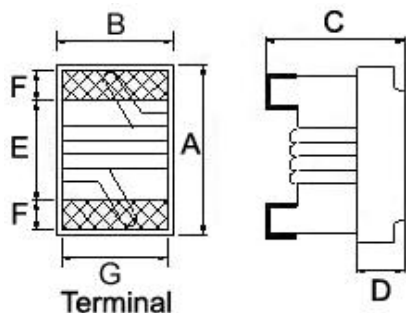
Applications

- DC/DC converter such as DSC
- LCD TV
- Game console
- Portable VCRs
- Conveyable telephone and others

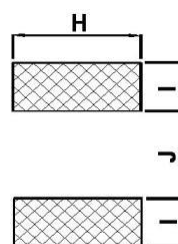
Product Identification



Shape and Dimensions



Recommended Pattern



Dimensions in mm

| TYPE | A Max | B Max | C Max | D | E | F | G | H | I | J |
|--------------|-------|-------|-------|-----|-----|-----|-----|------|------|------|
| BWNC00292522 | 2.92 | 2.50 | 2.20 | 0.7 | 1.5 | 0.5 | 2.0 | 2.54 | 1.02 | 1.27 |
| BWNC00372926 | 3.70 | 2.90 | 2.60 | 0.7 | 2.0 | 0.6 | 2.4 | 2.70 | 1.00 | 2.00 |

Electrical Characteristics

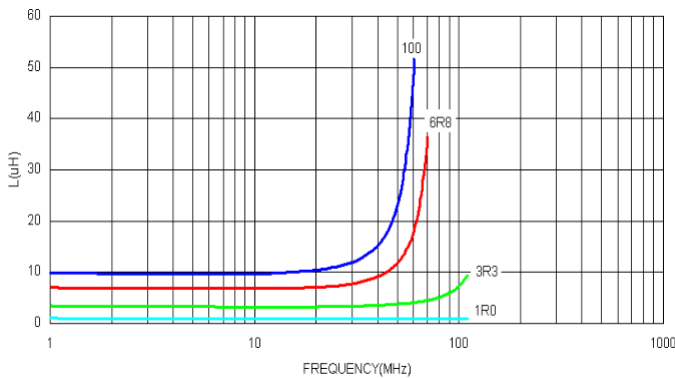
| Part Number | Inductance (uH) | Tolerance (±%) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) | Color Coding | | |
|--------------------|-----------------|----------------|-------|----------------------|---------------|-------------|----------|-----------------|-----------------|-----------------|
| | | | | | | | | 1 ST | 2 ND | 3 RD |
| BWNC002925221R0 00 | 1.0 | 10/5 | 25 | 7.96 | 300 | 0.34 | 1500 | Brown | Black | Red |
| BWNC002925221R2 00 | 1.2 | 10/5 | 25 | 7.96 | 280 | 0.40 | 1400 | Brown | Red | Red |
| BWNC002925221R5 00 | 1.5 | 10/5 | 25 | 7.96 | 270 | 0.42 | 1400 | Brown | Green | Red |
| BWNC002925221R8 00 | 1.8 | 10/5 | 25 | 7.96 | 150 | 0.45 | 1200 | Brown | Gray | Red |
| BWNC002925222R2 00 | 2.2 | 10/5 | 25 | 7.96 | 140 | 0.50 | 1200 | Red | Red | Red |
| BWNC002925223R3 00 | 3.3 | 10/5 | 25 | 7.96 | 95 | 0.65 | 1000 | Orange | Orange | Red |
| BWNC002925224R7 00 | 4.7 | 10/5 | 25 | 7.96 | 90 | 0.80 | 800 | Yellow | Violet | Red |
| BWNC002925226R8 00 | 6.8 | 10/5 | 25 | 7.96 | 68 | 1.00 | 730 | Blue | Gray | Red |
| BWNC00292522100 00 | 10 | 10/5 | 20 | 2.52 | 45 | 1.50 | 700 | Brown | Black | Orange |
| BWNC00292522150 00 | 15 | 10/5 | 20 | 2.52 | 40 | 2.20 | 500 | Brown | Green | Orange |
| BWNC00292522220 00 | 22 | 10/5 | 20 | 2.52 | 25 | 2.70 | 470 | Red | Red | Orange |
| BWNC00292522330 00 | 33 | 10/5 | 20 | 2.52 | 25 | 4.00 | 400 | Orange | Orange | Orange |
| BWNC00292522390 00 | 39 | 10/5 | 16 | 2.52 | 20 | 7.00 | 320 | Orange | White | Orange |
| BWNC00292522470 00 | 47 | 10/5 | 16 | 2.52 | 20 | 8.00 | 300 | Yellow | Violet | Orange |

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

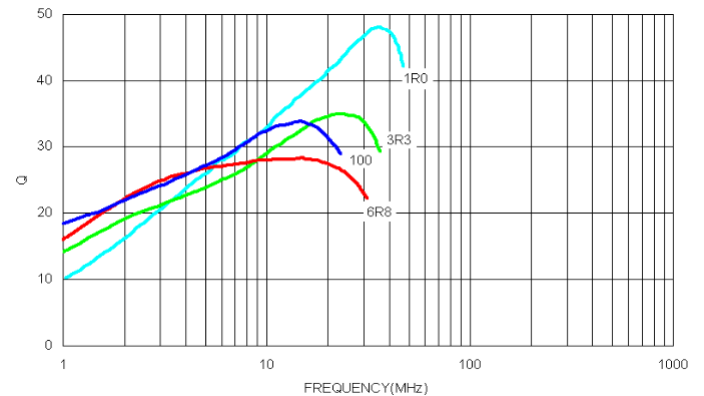
- Operating temperature range - 25°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value with current
- Measure Equipment :
L & Q : Agilent HP4291A/Agilent HP4285A+Agilent HP16197A
SRF : Agilent HP4291A
RDC : HP4338B or Chroma 16502

Test Instruments : Agilent HP4291A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Q Min | Test | SRF (MHz) Typ. | RDC (Ω)±30% | IDC (mA) | Color Coding | | |
|--------------------|-----------------|----------------|-------|-----------------|----------------|-------------|----------|-----------------|-----------------|-----------------|
| | | | | Frequency (MHz) | | | | 1 ST | 2 ND | 3 RD |
| BWNC00372926R47 00 | 0.47 | 5/10 | 40 | 25.2 | 450 | 0.07 | 1800 | Yellow | Violet | Brown |
| BWNC003729261R0 00 | 1.0 | 5/10 | 20 | 7.96 | 100 | 0.08 | 1500 | Brown | Black | Red |
| BWNC003729261R2 00 | 1.2 | 5/10 | 20 | 7.96 | 90 | 0.12 | 1400 | Brown | Red | Red |
| BWNC003729261R5 00 | 1.5 | 5/10 | 20 | 7.96 | 80 | 0.13 | 1125 | Brown | Green | Red |
| BWNC003729261R8 00 | 1.8 | 5/10 | 20 | 7.96 | 70 | 0.13 | 970 | Brown | Gray | Red |
| BWNC003729262R2 00 | 2.2 | 5/10 | 20 | 7.96 | 68 | 0.13 | 970 | Red | Red | Red |
| BWNC003729262R7 00 | 2.7 | 5/10 | 20 | 7.96 | 62 | 0.15 | 900 | Red | Violet | Red |
| BWNC003729263R3 00 | 3.3 | 5/10 | 20 | 7.96 | 54 | 0.16 | 837 | Orange | Orange | Red |
| BWNC003729264R7 00 | 4.7 | 5/10 | 20 | 7.96 | 43 | 0.23 | 675 | Yellow | Violet | Red |
| BWNC003729265R6 00 | 5.6 | 5/10 | 20 | 7.96 | 36 | 0.26 | 620 | Green | Blue | Red |
| BWNC003729266R8 00 | 6.8 | 5/10 | 20 | 7.96 | 33 | 0.27 | 600 | Blue | Gray | Red |
| BWNC003729268R2 00 | 8.2 | 5/10 | 20 | 7.96 | 30 | 0.32 | 580 | Gray | Red | Red |
| BWNC00372926100 00 | 10 | 5/10 | 15 | 2.52 | 28 | 0.36 | 520 | Brown | Black | Orange |
| BWNC00372926120 00 | 12 | 5/10 | 15 | 2.52 | 25 | 0.50 | 500 | Brown | Red | Orange |
| BWNC00372926150 00 | 15 | 5/10 | 15 | 2.52 | 19 | 0.56 | 480 | Brown | Green | Orange |
| BWNC00372926180 00 | 18 | 5/10 | 15 | 2.52 | 17 | 0.67 | 330 | Brown | Gray | Orange |
| BWNC00372926220 00 | 22 | 5/10 | 15 | 2.52 | 16 | 0.77 | 310 | Red | Red | Orange |
| BWNC00372926270 00 | 27 | 5/10 | 15 | 2.52 | 13 | 1.00 | 280 | Red | Violet | Orange |
| BWNC00372926330 00 | 33 | 5/10 | 15 | 2.52 | 12 | 1.10 | 270 | Orange | Orange | Orange |
| BWNC00372926390 00 | 39 | 5/10 | 15 | 2.52 | 11 | 1.40 | 220 | Orange | White | Orange |
| BWNC00372926470 00 | 47 | 5/10 | 15 | 2.52 | 10 | 1.64 | 210 | Yellow | Violet | Orange |
| BWNC00372926560 00 | 56 | 5/10 | 15 | 2.52 | 9 | 2.49 | 189 | Green | Blue | Orange |
| BWNC00372926680 00 | 68 | 5/10 | 15 | 2.52 | 9 | 2.80 | 189 | Blue | Gray | Orange |
| BWNC00372926820 00 | 82 | 5/10 | 15 | 2.52 | 6 | 3.00 | 145 | Gray | Red | Orange |
| BWNC00372926101 00 | 100 | 5/10 | 15 | 0.796 | 6 | 3.70 | 145 | Brown | Black | Yellow |
| BWNC00372926151 00 | 150 | 5/10 | 15 | 0.796 | 5 | 6.10 | 120 | Brown | Green | Yellow |
| BWNC00372926181 00 | 180 | 5/10 | 15 | 0.796 | 4 | 8.00 | 105 | Brown | Gray | Yellow |
| BWNC00372926221 00 | 220 | 5/10 | 15 | 0.796 | 4 | 8.40 | 100 | Red | Red | Yellow |
| BWNC00372926331 00 | 330 | 5/10 | 15 | 0.796 | 3.5 | 12.3 | 80 | Orange | Orange | Yellow |
| BWNC00372926391 00 | 390 | 5/10 | 15 | 0.796 | 2.8 | 17.6 | 75 | Orange | White | Yellow |
| BWNC00372926471 00 | 470 | 5/10 | 15 | 0.796 | 2.8 | 22.0 | 75 | Yellow | Violet | Yellow |
| BWNC00372926561 00 | 560 | 5/10 | 15 | 0.796 | 2.5 | 23.0 | 65 | Green | Blue | Yellow |
| BWNC00372926681 00 | 680 | 5/10 | 15 | 0.796 | 2 | 28.0 | 65 | Blue | Gray | Yellow |

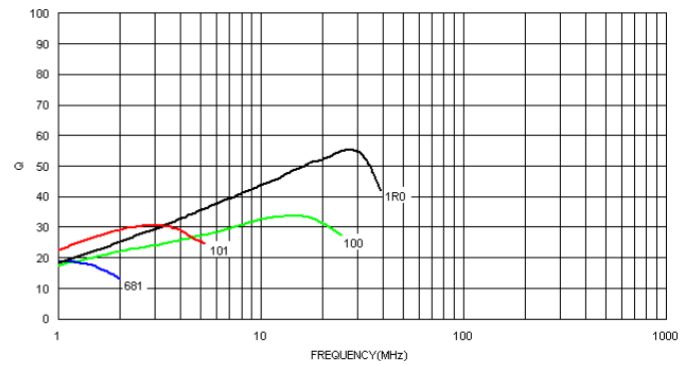
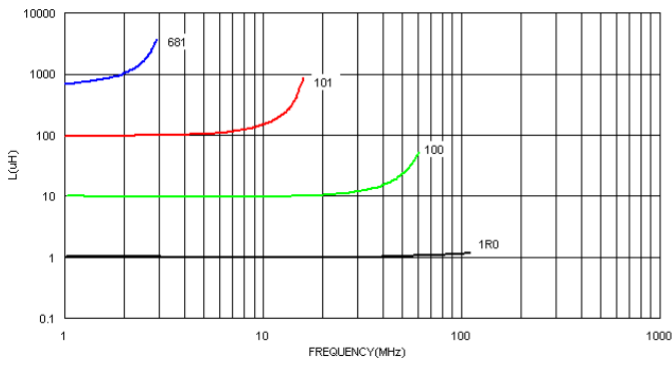
Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

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- IDC for Inductance drop 10% from its value with current
- Measure Equipment :
L & Q : Agilent HP4291A(over 1MHz)/Agilent HP4285A+Agilent HP16197A (under 1MHz)
SRF : Agilent HP4291A
RDC : HP4338B or Chroma 16502

Test Instruments : Agilent HP4291A Material/Impedance Analyzer

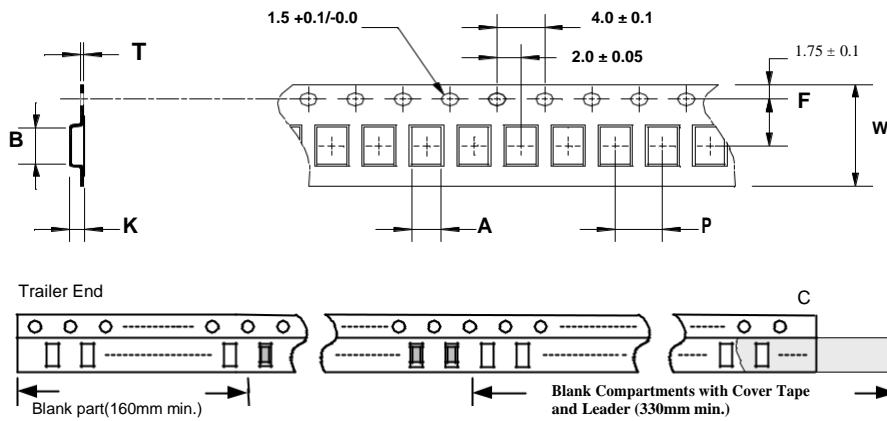
Typical L vs. Frequency

Typical Q vs. Frequency

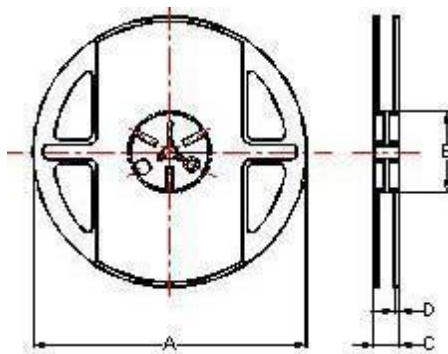


Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE | Tape Dimensions | | | | | | | Reel Dimensions | | | | Quantity PCS / Reel |
|--------------|-----------------|------|------|----|---|-----|------|-----------------|----|----|-----|------------------------|
| | A | B | T | W | P | F | K | A | B | C | D | |
| BWNC00292522 | 2.40 | 2.93 | 0.26 | 8 | 4 | 3.5 | 2.25 | 178 | 60 | 12 | 1.5 | 2000 |
| BWNC00372926 | 2.85 | 3.58 | 0.27 | 12 | 4 | 5.5 | 2.60 | 178 | 60 | 16 | 1.4 | 2000 |

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