

BWNL Series



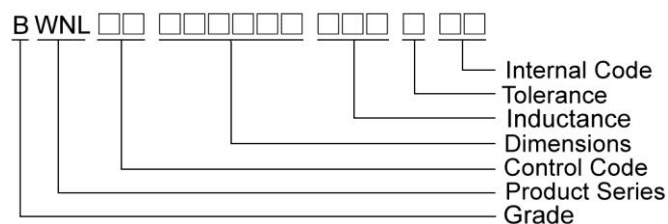
Features

- RoHS compliant
- Strong solderability by reflow soldering and soldering iron
- Highly accurate dimensions
- Can be mounted automatically
- Terminals are highly resistant to external forces
- Highly resistant to mechanical shocks and pressure
- Highly reliable in environments of sudden temperature change and humidity
- Superior Q characteristics and the broadest L selections among peers

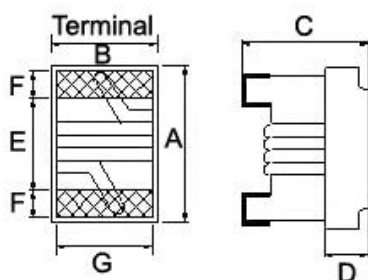
Applications

- Microtelevisions
- Liquid crystal televisions
- Video cameras
- Portable VCRs
- Car radios
- Car stereos
- Thin tape radios
- Television tuners
- Mobile telephones
- Radio and other electronic devices

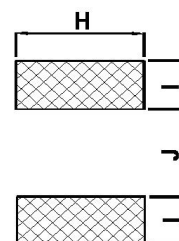
Product Identification



Shape and Dimensions



Recommended Pattern



Dimensions in mm

| TYPE | A Max | B Max | C Max | D | E | F | G | H | I | J |
|--------------|-------|-------|-------|------|------|------|------|------|------|------|
| BWNL00241715 | 2.40 | 1.72 | 1.52 | 0.70 | 1.02 | 0.50 | 1.27 | 1.78 | 1.02 | 0.76 |
| BWNL00292822 | 2.92 | 2.79 | 2.20 | 0.70 | 1.50 | 0.50 | 2.00 | 2.54 | 1.02 | 1.27 |
| BWNL00292522 | 2.92 | 2.50 | 2.20 | 0.70 | 1.50 | 0.50 | 2.00 | 2.54 | 1.02 | 1.27 |

BWNL00292822: at 5N0~R10,

BWNL00292522: at R12~101

SMD Wire Wound Ferrite Chip Inductors – BWNL Series

Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) | Color |
|----------------------|-----------------|----------------|-------|----------------------|---------------|-------------|----------|--------|
| BWNL00241715R12□00 | 0.12 | 10 / 5 | 25 | 25.2 | 500 | 0.20 | 600 | White |
| BWNL00241715R15□00 | 0.15 | 10 / 5 | 25 | 25.2 | 450 | 0.25 | 600 | Black |
| BWNL00241715R18□00 | 0.18 | 10 / 5 | 25 | 25.2 | 410 | 0.30 | 570 | Brown |
| BWNL00241715R22□00 | 0.22 | 10 / 5 | 25 | 25.2 | 350 | 0.35 | 550 | Red |
| BWNL00241715R27□00 | 0.27 | 10 / 5 | 25 | 25.2 | 280 | 0.40 | 530 | Orange |
| BWNL00241715R33□00 | 0.33 | 10 / 5 | 25 | 25.2 | 235 | 0.45 | 510 | Yellow |
| BWNL00241715R39□00 | 0.39 | 10 / 5 | 25 | 25.2 | 210 | 0.50 | 490 | Green |
| BWNL00241715R47□00 | 0.47 | 10 / 5 | 25 | 25.2 | 170 | 0.55 | 470 | Blue |
| BWNL00241715R56□00 | 0.56 | 10 / 5 | 25 | 25.2 | 150 | 0.60 | 450 | Violet |
| BWNL00241715R68□00 | 0.68 | 10 / 5 | 25 | 25.2 | 140 | 0.70 | 420 | Gray |
| BWNL00241715R82□00 | 0.82 | 10 / 5 | 25 | 25.2 | 130 | 0.75 | 400 | White |
| BWNL00241715R100□00 | 1.00 | 10 / 5 | 15 | 7.96 | 115 | 0.80 | 350 | Black |
| BWNL00241715R120□00 | 1.20 | 10 / 5 | 15 | 7.96 | 95 | 0.90 | 325 | Brown |
| BWNL00241715R150□00 | 1.50 | 10 / 5 | 15 | 7.96 | 85 | 1.05 | 300 | Red |
| BWNL00241715R180□00 | 1.80 | 10 / 5 | 15 | 7.96 | 80 | 1.20 | 270 | Orange |
| BWNL00241715R220□00 | 2.20 | 10 / 5 | 15 | 7.96 | 75 | 1.40 | 250 | Yellow |
| BWNL00241715R270□00 | 2.70 | 10 / 5 | 15 | 7.96 | 70 | 1.60 | 230 | Green |
| BWNL00241715R330□00 | 3.30 | 10 / 5 | 15 | 7.96 | 60 | 1.80 | 210 | Blue |
| BWNL00241715R390□00 | 3.90 | 10 / 5 | 15 | 7.96 | 55 | 2.00 | 190 | Violet |
| BWNL00241715R470□00 | 4.70 | 10 / 5 | 15 | 7.96 | 45 | 2.40 | 170 | Gray |
| BWNL00241715R560□00 | 5.60 | 10 / 5 | 15 | 7.96 | 40 | 2.70 | 150 | White |
| BWNL00241715R680□00 | 6.80 | 10 / 5 | 15 | 7.96 | 36 | 3.20 | 140 | Black |
| BWNL00241715R820□00 | 8.20 | 10 / 5 | 15 | 7.96 | 33 | 3.60 | 120 | Brown |
| BWNL00241715R1000□00 | 10.0 | 10 / 5 | 15 | 2.52 | 30 | 4.50 | 110 | Red |
| BWNL00241715R1200□00 | 12.0 | 10 / 5 | 15 | 2.52 | 25 | 5.70 | 105 | Orange |
| BWNL00241715R1500□00 | 15.0 | 10 / 5 | 15 | 2.52 | 23 | 6.50 | 90 | Yellow |
| BWNL00241715R1800□00 | 18.0 | 10 / 5 | 15 | 2.52 | 21 | 7.00 | 85 | Green |
| BWNL00241715R2200□00 | 22.0 | 10 / 5 | 15 | 2.52 | 20 | 8.00 | 78 | Blue |
| BWNL00241715R2700□00 | 27.0 | 10 / 5 | 15 | 2.52 | 18 | 9.00 | 75 | Violet |
| BWNL00241715R3300□00 | 33.0 | 10 / 5 | 15 | 2.52 | 17 | 10.0 | 70 | Gray |

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 E4991A+Agilent HP16197A
SRF : Agilent E4991A
RDC : HP4338B or Chroma 16502

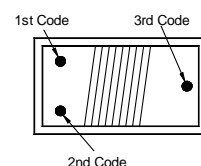
SMD Wire Wound Ferrite Chip Inductors – BWNL Series

Electrical Characteristics

| Part Number | Inductance (μ H) | Tolerance (\pm %) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) | Color Coding | | |
|--------------------|--------------------------|-------------------------|----------|----------------------------|------------------|-------------------------|-------------|-----------------|-----------------|-----------------|
| | | | | | | | | 1 ST | 2 ND | 3 RD |
| BWNL002928225N0□00 | 0.005 | 10 | 10 | 100 | 3000 | 0.25 | 2000 | Black | Green | Black |
| BWNL0029282210N□00 | 0.010 | 10 | 10 | 100 | 2500 | 0.25 | 1800 | Brown | Black | Black |
| BWNL0029282212N□00 | 0.012 | 10 | 15 | 100 | 2400 | 0.26 | 1700 | Brown | Red | Black |
| BWNL0029282215N□00 | 0.015 | 10 | 15 | 100 | 2300 | 0.28 | 1600 | Brown | Green | Black |
| BWNL0029282218N□00 | 0.018 | 10 | 15 | 100 | 2200 | 0.30 | 1550 | Brown | Gray | Black |
| BWNL0029282222N□00 | 0.022 | 10 / 5 | 20 | 100 | 2100 | 0.35 | 1500 | Red | Red | Black |
| BWNL0029282227N□00 | 0.027 | 10 / 5 | 20 | 100 | 2000 | 0.40 | 1450 | Red | Violet | Black |
| BWNL0029282233N□00 | 0.033 | 10 / 5 | 30 | 100 | 1600 | 0.42 | 1400 | Orange | Orange | Black |
| BWNL0029282239N□00 | 0.039 | 10 / 5 | 35 | 100 | 1500 | 0.45 | 1350 | Orange | White | Black |
| BWNL0029282247N□00 | 0.047 | 10 / 5 | 35 | 100 | 1400 | 0.50 | 1300 | Yellow | Violet | Black |
| BWNL0029282256N□00 | 0.056 | 10 / 5 | 35 | 100 | 1300 | 0.60 | 1250 | Green | Blue | Black |
| BWNL0029282268N□00 | 0.068 | 10 / 5 | 35 | 100 | 1200 | 0.65 | 1240 | Blue | Gray | Black |
| BWNL0029282282N□00 | 0.082 | 10 / 5 | 35 | 100 | 1100 | 0.75 | 1230 | Gray | Red | Black |
| BWNL00292822R10□00 | 0.10 | 10 / 5 | 35 | 100 | 800 | 0.80 | 1220 | Brown | Black | Brown |
| BWNL00292522R12□00 | 0.12 | 10 / 5 | 30 | 25.2 | 700 | 0.30 | 900 | Brown | Red | Brown |
| BWNL00292522R15□00 | 0.15 | 10 / 5 | 30 | 25.2 | 550 | 0.35 | 900 | Brown | Green | Brown |
| BWNL00292522R18□00 | 0.18 | 10 / 5 | 30 | 25.2 | 500 | 0.40 | 850 | Brown | Gray | Brown |
| BWNL00292522R22□00 | 0.22 | 10 / 5 | 30 | 25.2 | 450 | 0.50 | 840 | Red | Red | Brown |
| BWNL00292522R27□00 | 0.27 | 10 / 5 | 30 | 25.2 | 425 | 0.55 | 830 | Red | Violet | Brown |
| BWNL00292522R33□00 | 0.33 | 10 / 5 | 30 | 25.2 | 400 | 0.60 | 820 | Orange | Orange | Brown |
| BWNL00292522R39□00 | 0.39 | 10 / 5 | 30 | 25.2 | 375 | 0.65 | 810 | Orange | White | Brown |
| BWNL00292522R47□00 | 0.47 | 10 / 5 | 30 | 25.2 | 350 | 0.68 | 800 | Yellow | Violet | Brown |
| BWNL00292522R56□00 | 0.56 | 10 / 5 | 30 | 25.2 | 325 | 0.75 | 800 | Green | Blue | Brown |
| BWNL00292522R68□00 | 0.68 | 10 / 5 | 30 | 25.2 | 300 | 0.85 | 800 | Blue | Gray | Brown |
| BWNL00292522R82□00 | 0.82 | 10 / 5 | 30 | 25.2 | 260 | 1.0 | 800 | Gray | Red | Brown |
| BWNL002925221R0□00 | 1.0 | 10 / 5 | 25 | 7.96 | 245 | 1.1 | 800 | Brown | Black | Red |
| BWNL002925221R2□00 | 1.2 | 10 / 5 | 25 | 7.96 | 230 | 1.2 | 790 | Brown | Red | Red |
| BWNL002925221R5□00 | 1.5 | 10 / 5 | 25 | 7.96 | 182 | 1.3 | 750 | Brown | Green | Red |
| BWNL002925221R8□00 | 1.8 | 10 / 5 | 25 | 7.96 | 135 | 1.45 | 750 | Brown | Gray | Red |
| BWNL002925222R2□00 | 2.2 | 10 / 5 | 25 | 7.96 | 105 | 1.55 | 750 | Red | Red | Red |
| BWNL002925222R7□00 | 2.7 | 10 / 5 | 25 | 7.96 | 70 | 1.7 | 740 | Red | Violet | Red |
| BWNL002925223R3□00 | 3.3 | 10 / 5 | 25 | 7.96 | 55 | 1.9 | 730 | Orange | Orange | Red |
| BWNL002925223R9□00 | 3.9 | 10 / 5 | 25 | 7.96 | 48 | 2.1 | 700 | Orange | White | Red |
| BWNL002925224R7□00 | 4.7 | 10 / 5 | 25 | 7.96 | 43 | 2.3 | 650 | Yellow | Violet | Red |

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 : HP4291A/HP4285A
SRF : HP4291A/HP8753D



COLOR CODING

Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

SMD Wire Wound Ferrite Chip Inductors – BWNL Series

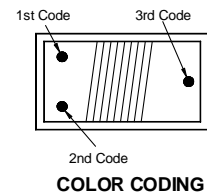
RDC : HP4338B or Chroma 16502

Electrical Characteristics

| Part Number | Inductance (μ H) | Tolerance (\pm %) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) | Color Coding | | |
|--------------------|--------------------------|-------------------------|----------|----------------------------|------------------|-------------------------|-------------|-----------------|-----------------|-----------------|
| | | | | | | | | 1 ST | 2 ND | 3 RD |
| BWNL002925225R6□00 | 5.6 | 10 / 5 | 20 | 7.96 | 42 | 2.5 | 640 | Green | Blue | Red |
| BWNL002925226R8□00 | 6.8 | 10 / 5 | 20 | 7.96 | 39 | 2.7 | 630 | Blue | Gray | Red |
| BWNL002925228R2□00 | 8.2 | 10 / 5 | 20 | 7.96 | 36 | 3.05 | 600 | Gray | Red | Red |
| BWNL00292522100□00 | 10 | 10 / 5 | 15 | 2.52 | 33 | 3.5 | 600 | Brown | Black | Orange |
| BWNL00292522120□00 | 12 | 10 / 5 | 15 | 2.52 | 30 | 3.8 | 550 | Brown | Red | Orange |
| BWNL00292522150□00 | 15 | 10 / 5 | 15 | 2.52 | 26 | 4.4 | 430 | Brown | Green | Orange |
| BWNL00292522180□00 | 18 | 10 / 5 | 15 | 2.52 | 24 | 4.8 | 400 | Brown | Gray | Orange |
| BWNL00292522220□00 | 22 | 10 / 5 | 15 | 2.52 | 22 | 5.5 | 400 | Red | Red | Orange |
| BWNL00292522270□00 | 27 | 10 / 5 | 15 | 2.52 | 21 | 6.3 | 360 | Red | Violet | Orange |
| BWNL00292522330□00 | 33 | 10 / 5 | 15 | 2.52 | 20 | 7.1 | 350 | Orange | Orange | Orange |
| BWNL00292522390□00 | 39 | 10 / 5 | 10 | 2.52 | 18 | 9.5 | 330 | Orange | White | Orange |
| BWNL00292522470□00 | 47 | 10 / 5 | 10 | 2.52 | 17 | 11.1 | 300 | Yellow | Violet | Orange |
| BWNL00292522560□00 | 56 | 10 / 5 | 10 | 2.52 | 16 | 12.1 | 270 | Green | Blue | Orange |
| BWNL00292522680□00 | 68 | 10 / 5 | 10 | 2.52 | 15 | 16.6 | 250 | Blue | Gray | Orange |
| BWNL00292522820□00 | 82 | 10 / 5 | 10 | 2.52 | 13 | 19 | 200 | Gray | Red | Orange |
| BWNL00292522101□00 | 100 | 10 / 5 | 8 | 0.796 | 12 | 21 | 120 | Brown | Black | Yellow |

ote: When ordering, please specify tolerance code. Tolerance : J= \pm 5% , K= \pm 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 : HP4291A/HP4285A
SRF : HP4291A/HP8753D
RDC : HP4338B or Chroma 16502



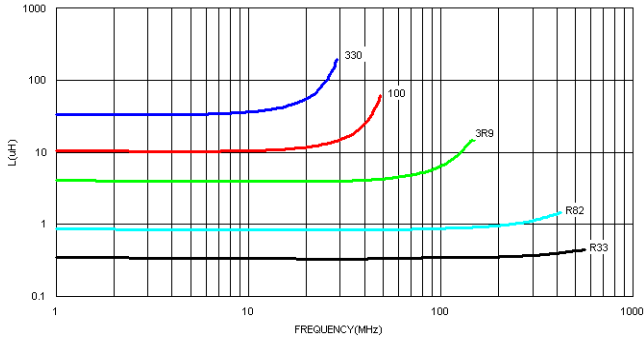
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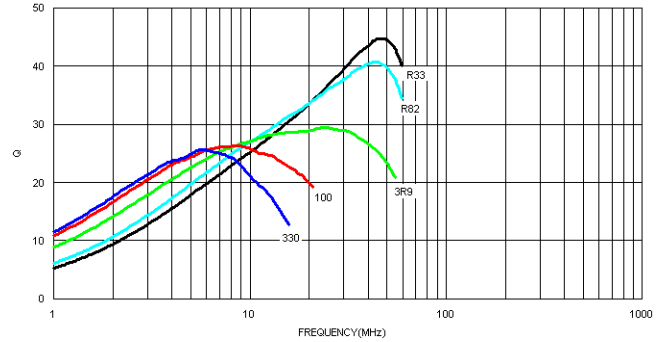
Test Instruments : Agilent E4991A Material/Impedance Analyzer

BWNL00241715

Typical L vs. Frequency

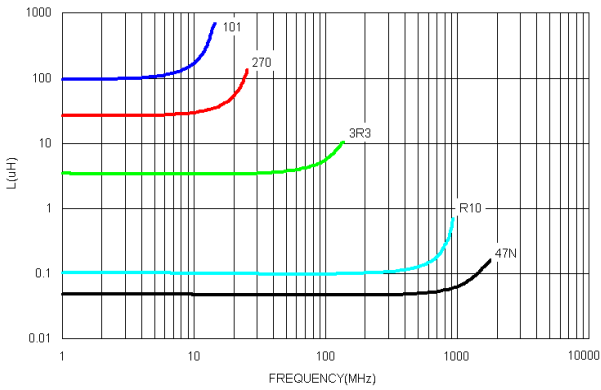


Typical Q vs. Frequency

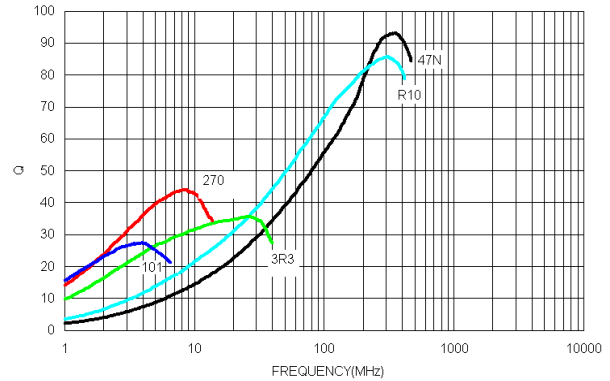


BWNL00292522

Typical L vs. Frequency

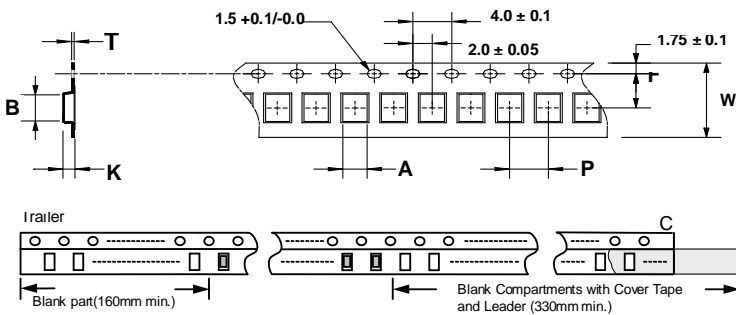


Typical Q vs. Frequency

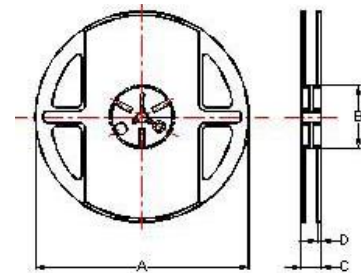


Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE | Tape Dimensions | | | | | | | | Reel Dimensions | | | | Quantity |
|-----------------------|-----------------|------|------|---|---|-----|------|-----|-----------------|----|-----|------------|----------|
| | A | B | T | W | P | F | K | A | B | C | D | PCS / Reel | |
| BWNL00241715 | 1.85 | 2.45 | 0.23 | 8 | 4 | 3.5 | 1.45 | 178 | 60 | 12 | 1.5 | 2000 | |
| BWNL00292822(5N0~R10) | 2.80 | 2.95 | 0.23 | 8 | 4 | 3.5 | 2.20 | 178 | 60 | 12 | 1.5 | 2000 | |
| BWNL00292522(R12~101) | 2.40 | 2.93 | 0.26 | 8 | 4 | 3.5 | 2.25 | 178 | 60 | 12 | 1.5 | 2000 | |

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