

BWCS0012070733NG00 Datasheet

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| | |
|------------------------------|--|
| DiGi Electronics Part Number | BWCS0012070733NG00-DG |
| Manufacturer | Pulse Electronics |
| Manufacturer Product Number | BWCS0012070733NG00 |
| Description | FIXED IND 33NH 400MA 400MOHM SMD |
| Detailed Description | 33 nH Unshielded Wirewound Inductor 400 mA 400 mOhm Max 0402 (1005 Metric) |



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DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

BWCS0012070733NG00

Series:

BWCS

Type:

Wirewound

Inductance:

33 nH

Current Rating (Amps):

400 mA

Shielding:

Unshielded

Q @ Freq:

24 @ 250MHz

Ratings:

-

Inductance Frequency - Test:

250 MHz

Mounting Type:

Surface Mount

Supplier Device Package:

0402

Height - Seated (Max):

0.026" (0.66mm)

Manufacturer:

Pulse Electronics

Product Status:

Active

Material - Core:

Ceramic

Tolerance:

±2%

Current - Saturation (Isat):

-

DC Resistance (DCR):

400mOhm Max

Frequency - Self Resonant:

2.35GHz

Operating Temperature:

-40°C ~ 125°C

Features:

-

Package / Case:

0402 (1005 Metric)

Size / Dimension:

0.047" L x 0.028" W (1.19mm x 0.70mm)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

SMD Wire Wound Ceramic Chip Inductors - BWCS Series

BWCS Series



Due to accurate wire winding technology, these chip inductors are designed for filtering, impedance matching, resonance and choke circuits for RF designer. Both standard series custom designs are available.

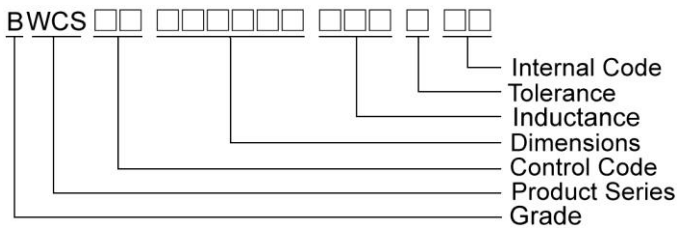
Features

- RoHS Compliant
- Ceramic body and wire wound construction provide high SRFs
- Exceptional Q values even at high frequencies
- Highest possible SRFs as well as excellent Q values
- The non-magnetic coil form assures utmost thermal stability, predictability and batch consistency
- CS series is standard for RF designers

Applications

- RF products for cellular phone
- GPS receiver
- Base Station
- Repeater
- Wireless LAN/ mouse/ keyboard/ earphone
- Remote control
- Security system and other RF modules

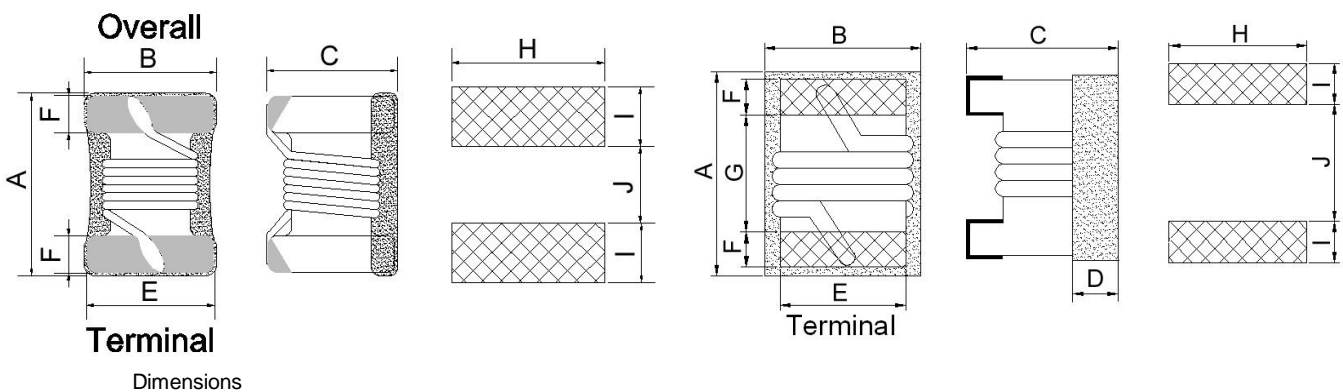
Product Identification



Shape and Dimensions / Recommended Pattern

BWCS00060404

BWCS00120707

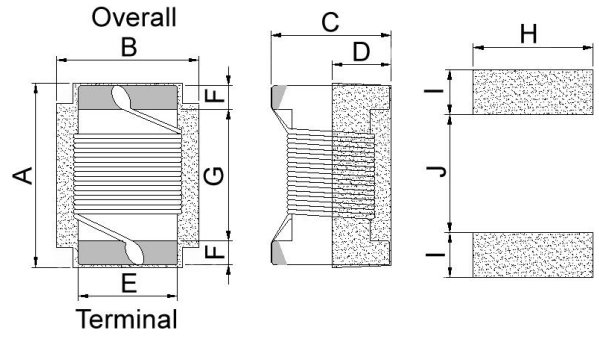
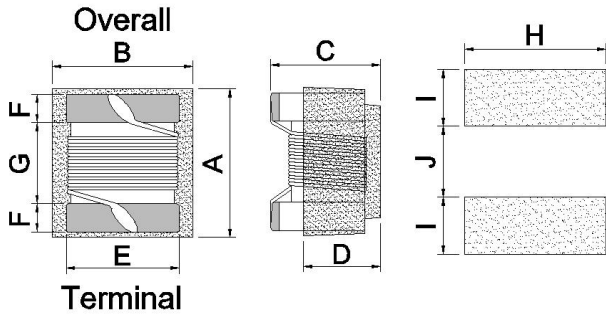


| | | A Max | B Max | C Max | D | E | F | G | H | I | J |
|---------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BWCS00060404 | inch | 0.023 | 0.018 | 0.018 | - | 0.015 | 0.004 | - | 0.018 | 0.007 | 0.009 |
| | mm | 0.58 | 0.46 | 0.45 | - | 0.38 | 0.1 | - | 0.46 | 0.18 | 0.23 |
| BWCS00120707 | inch | 0.047 | 0.025 | 0.026 | 0.010 | 0.020 | 0.009 | 0.022 | 0.026 | 0.014 | 0.018 |
| | mm | 1.19 | 0.64 | 0.66 | 0.25 | 0.51 | 0.23 | 0.56 | 0.66 | 0.36 | 0.46 |

SMD Wire Wound Ceramic Chip Inductors - BWCS Series

BWCS00161008/ 231715/ 292821

BWCS00493834



Dimensions

| | | A | B | C | D | E | F | G | H | I | J |
|---------------------|------|-------------------------------------|----------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| BWCS00161008 | mm | 1.6 ^{+0.2} _{-0.1} | 1.02±0.1 | 0.82 ^{+0.2} _{-0.1} | 0.51 | 0.76 | 0.33 | 0.86 | 1.02 | 0.64 | 0.64 |
| | | A Max | B Max | C Max | D | E | F | G | H | I | J |
| BWCS00231715 | inch | 0.093 | 0.068 | 0.06 | 0.028 | 0.050 | 0.020 | 0.040 | 0.070 | 0.040 | 0.030 |
| | mm | 2.35 | 1.73 | 1.52 | 0.71 | 1.27 | 0.51 | 1.02 | 1.78 | 1.02 | 0.76 |
| BWCS00292821 | inch | 0.115 | 0.110 | 0.083 | 0.046 | 0.080 | 0.020 | 0.060 | 0.100 | 0.040 | 0.050 |
| | mm | 2.92 | 2.79 | 2.1 | 1.16 | 2.03 | 0.51 | 1.52 | 2.54 | 1.02 | 1.27 |
| BWCS00493834 | inch | 0.197 | 0.154 | 0.135 | 0.07 | 0.1 | 0.025 | 0.128 | 0.12 | 0.045 | 0.118 |
| | mm | 4.95 | 3.81 | 3.43 | 1.78 | 2.54 | 0.64 | 3.25 | 3.05 | 1.14 | 3.00 |

SMD Wire Wound Ceramic Chip Inductors - BWCS Series**Electrical Characteristics**

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | SRF (GHz) Typ | RDC (Ω) Max | Irms (mA) Typ |
|--------------------|--------------------|-------------------|----------------------------|----------|------------------|----------------|------------------|
| BWCS000604040N5□00 | 0.5 | 10 | 250 | 4 | 23.5 | 0.02 | 1250 |
| BWCS000604040N6□00 | 0.6 | 10 | 250 | 6 | 24.5 | 0.03 | 1000 |
| BWCS000604041N2□00 | 1.2 | 5 | 250 | 13 | 17.9 | 0.042 | 870 |
| BWCS000604041N3□00 | 1.3 | 5 | 250 | 11 | 17.6 | 0.048 | 820 |
| BWCS000604041N4□00 | 1.4 | 5 | 250 | 14 | 17 | 0.08 | 630 |
| BWCS000604041N5□00 | 1.5 | 5 | 250 | 11 | 17 | 0.09 | 600 |
| BWCS000604042N2□00 | 2.2 | 5 | 250 | 15 | 16.7 | 0.07 | 700 |
| BWCS000604042N3□00 | 2.3 | 5 | 250 | 18 | 16.5 | 0.07 | 670 |
| BWCS000604042N4□00 | 2.4 | 5 | 250 | 13 | 13 | 0.082 | 620 |
| BWCS000604042N5□00 | 2.5 | 5 | 250 | 16 | 12.5 | 0.165 | 440 |
| BWCS000604043N3□00 | 3.3 | 5 | 250 | 14 | 12.8 | 0.08 | 630 |
| BWCS000604043N4□00 | 3.4 | 5 | 250 | 11 | 12.7 | 0.08 | 630 |
| BWCS000604043N5□00 | 3.5 | 5 | 250 | 16 | 12.4 | 0.08 | 630 |
| BWCS000604043N6□00 | 3.6 | 5 | 250 | 18 | 12.5 | 0.105 | 550 |
| BWCS000604043N7□00 | 3.7 | 5 | 250 | 15 | 10.6 | 0.105 | 550 |
| BWCS000604043N8□00 | 3.8 | 5 | 250 | 16 | 10.2 | 0.18 | 420 |
| BWCS000604043N9□00 | 3.9 | 5 | 250 | 12 | 11.2 | 0.24 | 360 |
| BWCS000604044N8□00 | 4.8 | 5 | 250 | 17 | 11 | 0.096 | 570 |
| BWCS000604044N9□00 | 4.9 | 5 | 250 | 18 | 11.7 | 0.13 | 510 |
| BWCS000604045N0□00 | 5.0 | 5 | 250 | 18 | 11.5 | 0.13 | 510 |
| BWCS000604045N1□00 | 5.1 | 5 | 250 | 18 | 11.1 | 0.13 | 510 |
| BWCS000604045N2□00 | 5.2 | 5 | 250 | 18 | 10 | 0.17 | 430 |
| BWCS000604045N3□00 | 5.3 | 5 | 250 | 18 | 10.6 | 0.13 | 510 |
| BWCS000604045N4□00 | 5.4 | 5 | 250 | 18 | 10.2 | 0.13 | 510 |
| BWCS000604045N5□00 | 5.5 | 5 | 250 | 16 | 9.5 | 0.285 | 330 |
| BWCS000604046N7□00 | 6.7 | 5 | 250 | 18 | 6.8 | 0.15 | 460 |
| BWCS000604046N8□00 | 6.8 | 5 | 250 | 18 | 9.5 | 0.15 | 460 |
| BWCS000604046N9□00 | 6.9 | 5 | 250 | 18 | 9.3 | 0.15 | 460 |
| BWCS000604047N0□00 | 7.0 | 5 | 250 | 18 | 6.7 | 0.21 | 390 |
| BWCS000604047N1□00 | 7.1 | 5 | 250 | 18 | 9.5 | 0.25 | 390 |
| BWCS000604047N2□00 | 7.2 | 5 | 250 | 18 | 9.4 | 0.25 | 390 |
| BWCS000604047N3□00 | 7.3 | 5 | 250 | 18 | 9.3 | 0.25 | 390 |

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

- Operating temperature range—40°C ~ 125°C (Including self - temperature rise)
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
L & Q : HP4286A/HP4287A/AgilentE4991/Keysight E4982A
SRF : Agilent HP8753D/Agilent HP8722ES
RDC : HP4287A
Irms : HP4284A+HP42841A/HP4285A+HP42841A

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SMD Wire Wound Ceramic Chip Inductors - BWCS Series

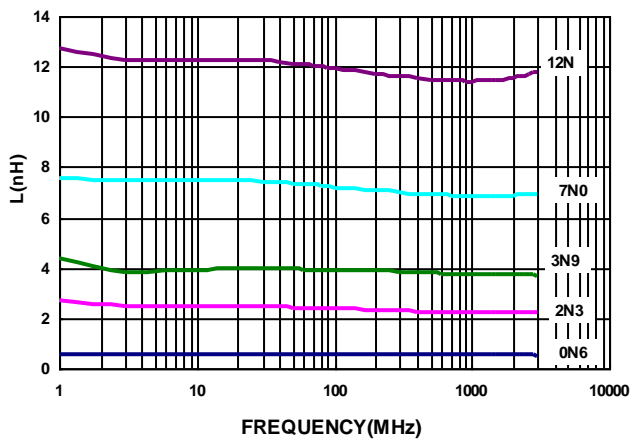
Electrical Characteristics

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | SRF (GHz) Typ | RDC (Ω) Max | Irms (mA) Typ |
|--------------------|-----------------|----------------|----------------------|-------|---------------|-------------|---------------|
| BWCS000604047N4□00 | 7.4 | 5 | 250 | 18 | 9.1 | 0.25 | 390 |
| BWCS000604047N5□00 | 7.5 | 5 | 250 | 15 | 6.8 | 0.34 | 300 |
| BWCS000604047N6□00 | 7.6 | 5 | 250 | 17 | 9.3 | 0.3 | 340 |
| BWCS000604047N7□00 | 7.7 | 5 | 250 | 17 | 9.2 | 0.3 | 340 |
| BWCS000604047N8□00 | 7.8 | 5 | 250 | 17 | 9.2 | 0.3 | 340 |
| BWCS000604047N9□00 | 7.9 | 5 | 250 | 17 | 9.1 | 0.3 | 340 |
| BWCS000604048N0□00 | 8.0 | 5 | 250 | 17 | 9.2 | 0.3 | 340 |
| BWCS000604048N1□00 | 8.1 | 5 | 250 | 17 | 9.1 | 0.3 | 340 |
| BWCS000604048N2□00 | 8.2 | 5 | 250 | 17 | 6.4 | 0.27 | 340 |
| BWCS000604048N4□00 | 8.4 | 5 | 250 | 15 | 8.9 | 0.38 | 300 |
| BWCS000604048N5□00 | 8.5 | 5 | 250 | 15 | 8.9 | 0.38 | 300 |
| BWCS000604048N7□00 | 8.7 | 5 | 250 | 15 | 6.3 | 0.38 | 300 |
| BWCS000604049N0□00 | 9.0 | 5 | 250 | 15 | 6.4 | 0.38 | 300 |
| BWCS000604049N4□00 | 9.4 | 5 | 250 | 16 | 6.4 | 0.4 | 280 |
| BWCS000604049N6□00 | 9.6 | 5 | 250 | 16 | 6.2 | 0.4 | 280 |
| BWCS0006040411N□00 | 11 | 5 | 250 | 16 | 5.7 | 0.44 | 280 |
| BWCS0006040412N□00 | 12 | 5 | 250 | 17 | 5.6 | 0.36 | 300 |
| BWCS0006040413N□00 | 13 | 5 | 250 | 16 | 6.7 | 0.5 | 270 |
| BWCS0006040414N□00 | 14 | 5 | 250 | 16 | 5.1 | 0.5 | 270 |

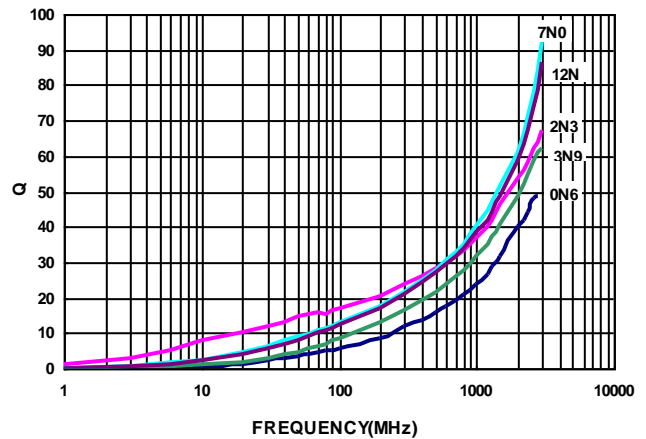
Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L & Q : HP4286A/HP4287A/AgilentE4991/Keysight E4982A
 SRF : Agilent HP8753D/Agilent HP8722ES
 RDC : HP4287A
 I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

Typical L vs. Frequency



Typical Q vs. Frequency



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SMD Wire Wound Ceramic Chip Inductors - BWCS Series**Electrical Characteristics**

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | SRF (GHz) Min | RDC (Ω) Max | Irms (mA) Max |
|--------------------|-----------------|-----------------|----------------------|-------|---------------|-------------|---------------|
| BWCS001207071N0□00 | 1.0 | 10 / 5 / ±0.1nH | 250 | 16 | 12.7 | 0.045 | 1360 |
| BWCS001207071N2□00 | 1.2 | 10 / 5 / ±0.1nH | 250 | 10 | 10.4 | 0.140 | 640 |
| BWCS001207071N3□00 | 1.3 | 10 / ±0.1nH | 250 | 10 | 10.4 | 0.140 | 640 |
| BWCS001207071N9□00 | 1.9 | 10 / 5 / ±0.1nH | 250 | 16 | 11.3 | 0.070 | 1040 |
| BWCS001207072N0□00 | 2.0 | 10 / 5 / ±0.1nH | 250 | 16 | 11.1 | 0.070 | 1040 |
| BWCS001207072N2□00 | 2.2 | 10 / 5 / ±0.1nH | 250 | 19 | 10.8 | 0.070 | 960 |
| BWCS001207072N4□00 | 2.4 | 10 / 5 / ±0.1nH | 250 | 15 | 10.5 | 0.068 | 790 |
| BWCS001207072N5□00 | 2.5 | 10 / 5 / ±0.1nH | 250 | 13 | 10.4 | 0.150 | 640 |
| BWCS001207072N7□00 | 2.7 | 10 / 5 / ±0.1nH | 250 | 16 | 10.4 | 0.120 | 640 |
| BWCS001207073N3□00 | 3.3 | 10 / 5 / 3 | 250 | 19 | 7.00 | 0.066 | 840 |
| BWCS001207073N6□00 | 3.6 | 10 / 5 / 3 | 250 | 19 | 6.80 | 0.066 | 840 |
| BWCS001207073N9□00 | 3.9 | 10 / 5 / 3 | 250 | 19 | 6.00 | 0.066 | 840 |
| BWCS001207074N3□00 | 4.3 | 10 / 5 / 3 | 250 | 18 | 6.00 | 0.091 | 700 |
| BWCS001207074N7□00 | 4.7 | 10 / 5 / 3 | 250 | 15 | 4.77 | 0.130 | 640 |
| BWCS001207075N1□00 | 5.1 | 10 / 5 / 3 | 250 | 20 | 4.80 | 0.083 | 800 |
| BWCS001207075N6□00 | 5.6 | 10 / 5 / 3 | 250 | 20 | 4.80 | 0.083 | 760 |
| BWCS001207075N8□00 | 5.8 | 10 / 5 / 3 | 250 | 20 | 4.80 | 0.083 | 760 |
| BWCS001207076N2□00 | 6.2 | 10 / 5 / 3 | 250 | 20 | 4.80 | 0.083 | 760 |
| BWCS001207076N8□00 | 6.8 | 10 / 5 / 3 | 250 | 20 | 4.80 | 0.083 | 680 |
| BWCS001207077N3□00 | 7.3 | 10 / 5 / 3 | 250 | 20 | 4.80 | 0.12 | 680 |
| BWCS001207077N5□00 | 7.5 | 10 / 5 / 3 | 250 | 22 | 4.80 | 0.10 | 680 |
| BWCS001207078N2□00 | 8.2 | 10 / 5 / 3 | 250 | 22 | 4.40 | 0.10 | 680 |
| BWCS001207078N7□00 | 8.7 | 10 / 5 / 3 | 250 | 18 | 4.10 | 0.20 | 480 |
| BWCS001207079N0□00 | 9.0 | 10 / 5 / 3 | 250 | 22 | 4.16 | 0.10 | 680 |
| BWCS001207079N1□00 | 9.1 | 10 / 5 / 3 | 250 | 22 | 4.16 | 0.10 | 680 |
| BWCS001207079N5□00 | 9.5 | 10 / 5 / 3 | 250 | 18 | 4.00 | 0.20 | 480 |
| BWCS0012070710N□00 | 10 | 10 / 5 / 3 / 2 | 250 | 21 | 3.90 | 0.20 | 480 |
| BWCS0012070711N□00 | 11 | 10 / 5 / 3 / 2 | 250 | 24 | 3.68 | 0.12 | 640 |
| BWCS0012070712N□00 | 12 | 10 / 5 / 3 / 2 | 250 | 24 | 3.60 | 0.12 | 640 |
| BWCS0012070713N□00 | 13 | 10 / 5 / 3 / 2 | 250 | 24 | 3.45 | 0.21 | 440 |
| BWCS0012070715N□00 | 15 | 10 / 5 / 3 / 2 | 250 | 24 | 3.28 | 0.17 | 560 |
| BWCS0012070716N□00 | 16 | 10 / 5 / 3 / 2 | 250 | 24 | 3.10 | 0.22 | 560 |

Note: When ordering, please specify tolerance code. Tolerance : B=±0.1nH , G=±2% , H=±3% , J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
L & Q : Agilent E4991A+Agilent HP16197A
SRF : Agilent HP8753D/Agilent HP8722ES
RDC : HP4287A
Irms : HP4284A+HP42841A/HP4285A+HP42841A

SMD Wire Wound Ceramic Chip Inductors – BWCS Series

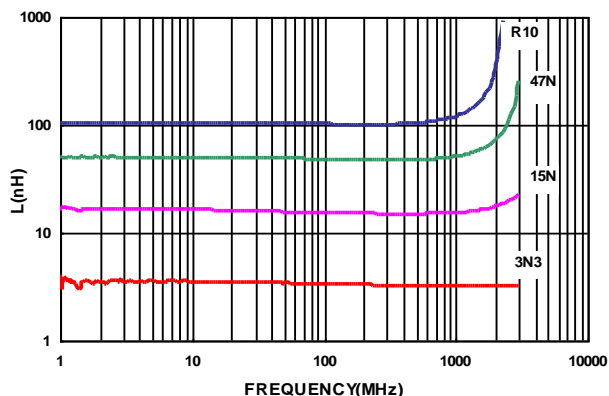
Electrical Characteristics

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | SRF (GHz) Min | RDC (Ω) Max | Irms (mA) Max |
|--------------------|-----------------|----------------|----------------------|-------|---------------|-------------|---------------|
| BWCS0012070718N□00 | 18 | 10 / 5 / 3 / 2 | 250 | 25 | 3.10 | 0.23 | 420 |
| BWCS0012070719N□00 | 19 | 10 / 5 / 3 / 2 | 250 | 24 | 3.04 | 0.20 | 480 |
| BWCS0012070720N□00 | 20 | 10 / 5 / 3 / 2 | 250 | 25 | 3.00 | 0.25 | 420 |
| BWCS0012070722N□00 | 22 | 10 / 5 / 3 / 2 | 250 | 25 | 2.80 | 0.30 | 400 |
| BWCS0012070723N□00 | 23 | 10 / 5 / 3 / 2 | 250 | 22 | 2.72 | 0.30 | 400 |
| BWCS0012070724N□00 | 24 | 10 / 5 / 3 / 2 | 250 | 25 | 2.70 | 0.30 | 400 |
| BWCS0012070727N□00 | 27 | 10 / 5 / 3 / 2 | 250 | 24 | 2.48 | 0.30 | 400 |
| BWCS0012070730N□00 | 30 | 10 / 5 / 3 / 2 | 250 | 25 | 2.35 | 0.35 | 400 |
| BWCS0012070733N□00 | 33 | 10 / 5 / 3 / 2 | 250 | 24 | 2.35 | 0.40 | 400 |
| BWCS0012070736N□00 | 36 | 10 / 5 / 3 / 2 | 250 | 24 | 2.32 | 0.44 | 320 |
| BWCS0012070739N□00 | 39 | 10 / 5 / 3 / 2 | 250 | 25 | 2.10 | 0.55 | 200 |
| BWCS0012070740N□00 | 40 | 10 / 5 / 3 / 2 | 250 | 24 | 2.24 | 0.65 | 320 |
| BWCS0012070743N□00 | 43 | 10 / 5 / 3 / 2 | 250 | 25 | 2.03 | 0.81 | 100 |
| BWCS0012070747N□00 | 47 | 10 / 5 / 3 / 2 | 250 | 20 | 2.10 | 0.83 | 150 |
| BWCS0012070751N□00 | 51 | 10 / 5 / 3 / 2 | 250 | 25 | 1.75 | 0.82 | 100 |
| BWCS0012070756N□00 | 56 | 10 / 5 / 3 / 2 | 250 | 22 | 1.76 | 0.97 | 100 |
| BWCS0012070768N□00 | 68 | 10 / 5 / 3 / 2 | 250 | 22 | 1.62 | 1.12 | 100 |
| BWCS0012070782N□00 | 82 | 10 / 5 / 3 / 2 | 250 | 20 | 1.26 | 1.55 | 50 |
| BWCS00120707R10□00 | 100 | 10 / 5 / 3 / 2 | 250 | 20 | 1.16 | 2.00 | 30 |
| BWCS00120707R18□00 | 180 | 10 / 5 / 3 / 2 | 100 | 8 | 0.70 | 2.70 | 50 |
| BWCS00120707R22□00 | 220 | 10 / 5 / 3 / 2 | 100 | 8 | 0.70 | 4.00 | 50 |

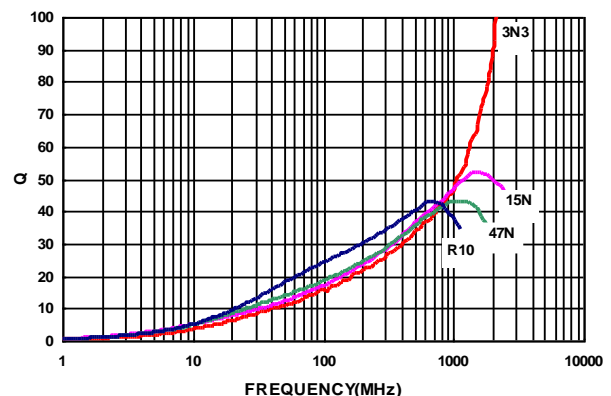
Note: When ordering, please specify tolerance code. Tolerance : B=±0.1nH , G=±2% , H=±3% , J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
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 SRF : Agilent HP8753D/Agilent HP8722ES
 RDC : HP4287A
 I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

Typical **L** vs. **F** Frequency



Typical **Q** vs. **F** Frequency



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SMD Wire Wound Ceramic Chip Inductors – BWCS Series**Electrical Characteristics**

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | SRF (MHz) Min | RDC (Ω) Max | I _{rms} (mA) Max | Color |
|--------------------|-----------------|-----------------|----------------------|-------|---------------|-------------|---------------------------|--------|
| BWCS001610081N6□00 | 1.6 | 10 / 5 / ±0.1nH | 250 | 24 | 12500 | 0.030 | 700 | Red |
| BWCS001610081N8□00 | 1.8 | 10 / 5 / ±0.1nH | 250 | 16 | 12500 | 0.045 | 700 | Black |
| BWCS001610082N2□00 | 2.2 | 10 / 5 / ±0.1nH | 250 | 13 | 12500 | 0.250 | 700 | Yellow |
| BWCS001610083N3□00 | 3.3 | 10 / 5 / 3 / 2 | 250 | 35 | 5900 | 0.045 | 700 | Blue |
| BWCS001610083N6□00 | 3.6 | 10 / 5 / 3 / 2 | 250 | 22 | 5900 | 0.063 | 700 | Red |
| BWCS001610083N9□00 | 3.9 | 10 / 5 / 3 / 2 | 250 | 22 | 6900 | 0.080 | 700 | Brown |
| BWCS001610084N3□00 | 4.3 | 10 / 5 / 3 / 2 | 250 | 22 | 5900 | 0.063 | 700 | Orange |
| BWCS001610084N7□00 | 4.7 | 10 / 5 / 3 / 2 | 250 | 20 | 5800 | 0.116 | 700 | Violet |
| BWCS001610085N1□00 | 5.1 | 10 / 5 / 3 / 2 | 250 | 20 | 5700 | 0.140 | 700 | Green |
| BWCS001610085N6□00 | 5.6 | 10 / 5 / 3 / 2 | 250 | 20 | 5800 | 0.170 | 700 | Yellow |
| BWCS001610086N3□00 | 6.3 | 10 / 5 / 3 / 2 | 250 | 20 | 5700 | 0.140 | 700 | White |
| BWCS001610086N8□00 | 6.8 | 10 / 5 / 3 / 2 | 250 | 27 | 5800 | 0.110 | 700 | Red |
| BWCS001610087N5□00 | 7.5 | 10 / 5 / 3 / 2 | 250 | 28 | 4800 | 0.106 | 700 | Brown |
| BWCS001610088N2□00 | 8.2 | 10 / 5 / 3 / 2 | 250 | 28 | 4700 | 0.109 | 700 | White |
| BWCS001610088N7□00 | 8.7 | 10 / 5 / 3 / 2 | 250 | 28 | 4600 | 0.109 | 700 | Yellow |
| BWCS001610089N1□00 | 9.1 | 10 / 5 / 3 / 2 | 250 | 28 | 4800 | 0.120 | 700 | Violet |
| BWCS001610089N5□00 | 9.5 | 10 / 5 / 3 / 2 | 250 | 28 | 5400 | 0.135 | 700 | Blue |
| BWCS0016100810N□00 | 10 | 10 / 5 / 3 / 2 | 250 | 31 | 4800 | 0.130 | 700 | Orange |
| BWCS0016100811N□00 | 11 | 10 / 5 / 3 / 2 | 250 | 33 | 4000 | 0.086 | 700 | Gray |
| BWCS0016100812N□00 | 12 | 10 / 5 / 3 / 2 | 250 | 35 | 4000 | 0.130 | 700 | Yellow |
| BWCS0016100813N□00 | 13 | 10 / 5 / 3 / 2 | 250 | 30 | 4000 | 0.160 | 700 | Black |
| BWCS0016100815N□00 | 15 | 10 / 5 / 3 / 2 | 250 | 35 | 4000 | 0.170 | 700 | Green |
| BWCS0016100816N□00 | 16 | 10 / 5 / 3 / 2 | 250 | 34 | 3300 | 0.104 | 700 | White |
| BWCS0016100818N□00 | 18 | 10 / 5 / 3 / 2 | 250 | 35 | 3100 | 0.170 | 700 | Blue |
| BWCS0016100820N□00 | 20 | 10 / 5 / 3 / 2 | 250 | 38 | 3000 | 0.190 | 700 | Red |
| BWCS0016100822N□00 | 22 | 10 / 5 / 3 / 2 | 250 | 38 | 3000 | 0.190 | 700 | Violet |
| BWCS0016100823N□00 | 23 | 10 / 5 / 3 / 2 | 250 | 38 | 2850 | 0.190 | 700 | Orange |
| BWCS0016100824N□00 | 24 | 10 / 5 / 3 / 2 | 250 | 37 | 2650 | 0.135 | 700 | Black |
| BWCS0016100827N□00 | 27 | 10 / 5 / 3 / 2 | 250 | 40 | 2800 | 0.220 | 600 | Gray |
| BWCS0016100830N□00 | 30 | 10 / 5 / 3 / 2 | 250 | 37 | 2250 | 0.144 | 600 | Brown |
| BWCS0016100833N□00 | 33 | 10 / 5 / 3 / 2 | 250 | 40 | 2300 | 0.220 | 600 | White |
| BWCS0016100836N□00 | 36 | 10 / 5 / 3 / 2 | 250 | 38 | 2080 | 0.250 | 600 | Red |
| BWCS0016100839N□00 | 39 | 10 / 5 / 3 / 2 | 250 | 40 | 2200 | 0.250 | 600 | Black |
| BWCS0016100843N□00 | 43 | 10 / 5 / 3 / 2 | 250 | 39 | 2000 | 0.280 | 600 | Orange |

Note: When ordering, please specify tolerance code. Tolerance : B=±0.1nH , G=±2% , H=±3% , J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
L & Q : Agilent E4991A+Agilent HP16197A
SRF : Agilent HP8753D/Agilent E4991A
RDC : Chroma 16502
I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

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 Ceramic Chip Inductors – BWCS Series

Electrical Characteristics

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | SRF (MHz) Min | RDC (Ω) Max | Irms (mA) Max | Color |
|--------------------|-----------------|----------------|----------------------|-------|---------------|-------------|---------------|--------|
| BWCS0016100847N□00 | 47 | 10 / 5 / 3 / 2 | 200 | 38 | 2000 | 0.280 | 600 | Brown |
| BWCS0016100851N□00 | 51 | 10 / 5 / 3 / 2 | 200 | 38 | 1900 | 0.310 | 600 | Brown |
| BWCS0016100856N□00 | 56 | 10 / 5 / 3 / 2 | 200 | 38 | 1900 | 0.310 | 600 | Red |
| BWCS0016100868N□00 | 68 | 10 / 5 / 3 / 2 | 200 | 37 | 1700 | 0.340 | 600 | Orange |
| BWCS0016100872N□00 | 72 | 10 / 5 / 3 / 2 | 150 | 34 | 1700 | 0.490 | 400 | Yellow |
| BWCS0016100882N□00 | 82 | 10 / 5 / 3 / 2 | 150 | 34 | 1700 | 0.540 | 400 | Green |
| BWCS0016100891N□00 | 91 | 10 / 5 / 3 / 2 | 150 | 34 | 1400 | 0.580 | 400 | Black |
| BWCS00161008R10□00 | 100 | 10 / 5 / 3 / 2 | 150 | 34 | 1400 | 0.580 | 400 | Blue |
| BWCS00161008R11□00 | 110 | 10 / 5 / 3 / 2 | 150 | 32 | 1350 | 0.610 | 300 | Violet |
| BWCS00161008R12□00 | 120 | 10 / 5 / 3 / 2 | 150 | 32 | 1300 | 0.750 | 300 | Gray |
| BWCS00161008R15□00 | 150 | 10 / 5 / 3 / 2 | 150 | 28 | 990 | 0.920 | 280 | White |
| BWCS00161008R16□00 | 160 | 10 / 5 / 3 / 2 | 100 | 25 | 990 | 1.250 | 240 | Yellow |
| BWCS00161008R18□00 | 180 | 10 / 5 / 3 / 2 | 100 | 25 | 990 | 1.250 | 240 | Black |
| BWCS00161008R20□00 | 200 | 10 / 5 / 3 / 2 | 100 | 25 | 900 | 2.100 | 200 | Red |
| BWCS00161008R21□00 | 210 | 10 / 5 / 3 / 2 | 100 | 27 | 895 | 2.060 | 200 | Gray |
| BWCS00161008R22□00 | 220 | 10 / 5 / 3 / 2 | 100 | 25 | 900 | 2.100 | 200 | Brown |
| BWCS00161008R24□00 | 240 | 10 / 5 / 3 / 2 | 100 | 25 | 900 | 2.200 | 200 | Green |
| BWCS00161008R25□00 | 250 | 10 / 5 / 3 / 2 | 100 | 25 | 822 | 3.550 | 120 | Violet |
| BWCS00161008R27□00 | 270 | 10 / 5 / 3 / 2 | 100 | 24 | 900 | 2.800 | 170 | Red |
| BWCS00161008R33□00 | 330 | 10 / 5 / 3 / 2 | 100 | 25 | 900 | 3.890 | 100 | Orange |
| BWCS00161008R39□00 | 390 | 10 / 5 / 3 / 2 | 100 | 25 | 900 | 4.350 | 100 | Yellow |
| BWCS00161008R47□00 | 470 | 10 / 5 / 3 / 2 | 100 | 25 | 500 | 4.500 | 100 | Brown |
| BWCS00161008R56□00 | 560 | 10 / 5 / 3 / 2 | 100 | 23 | 460 | 4.700 | 90 | Blue |

Note: When ordering, please specify tolerance code. Tolerance : B=±0.1nH , G=±2% , H=±3% , J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :

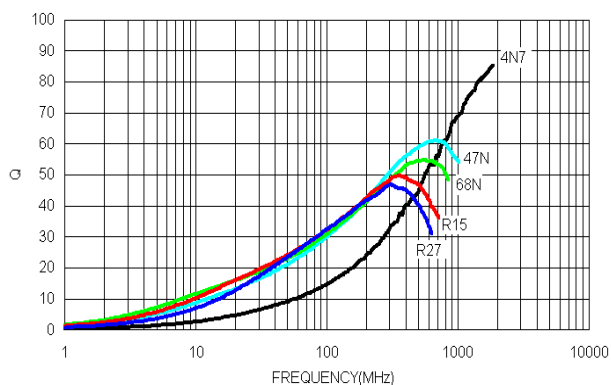
L & Q : Agilent E4991A+Agilent HP16197A

SRF : Agilent HP8753D/Agilent E4991A

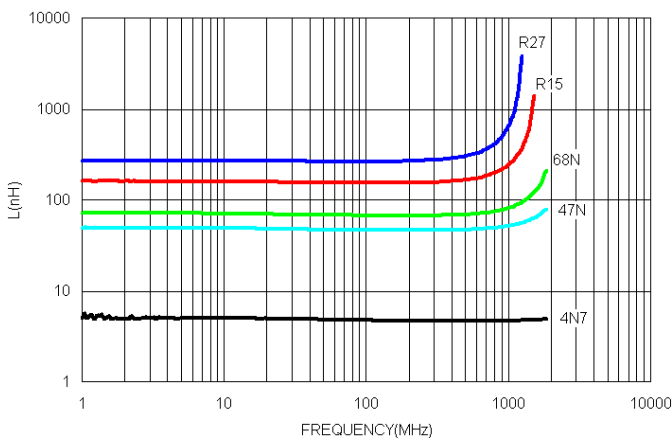
RDC : Chroma 16502

Irms : HP4284A+HP42841A/HP4285A+HP42841A

Typical L vs. Frequency



Typical Q vs. Frequency



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SMD Wire Wound Ceramic Chip Inductors – BWCS Series**Electrical Characteristics**

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | Irms (mA) Max | Color |
|--------------------|-----------------|----------------|----------------------|-------|----------------------|---------------|-------------|---------------|--------|
| BWCS002317152N7□00 | 2.7 | 10 / 5 / 2 | 250 | 50 | 1500 | 7900 | 0.06 | 800 | Yellow |
| BWCS002317152N8□00 | 2.8 | 10 / 5 / 2 | 250 | 80 | 1500 | 7900 | 0.06 | 800 | Gray |
| BWCS002317153N0□00 | 3.0 | 10 / 5 / 2 | 250 | 65 | 1500 | 7900 | 0.06 | 800 | White |
| BWCS002317153N3□00 | 3.3 | 10 / 5 / 2 | 250 | 50 | 1500 | 7900 | 0.08 | 600 | Black |
| BWCS002317155N6□00 | 5.6 | 10 / 5 / 2 | 250 | 65 | 1000 | 5500 | 0.08 | 600 | Orange |
| BWCS002317156N8□00 | 6.8 | 10 / 5 / 2 | 250 | 50 | 1000 | 5500 | 0.11 | 600 | Brown |
| BWCS002317157N5□00 | 7.5 | 10 / 5 / 2 | 250 | 50 | 1000 | 4500 | 0.14 | 600 | Green |
| BWCS002317158N2□00 | 8.2 | 10 / 5 / 2 | 250 | 50 | 1000 | 4700 | 0.12 | 600 | Red |
| BWCS0023171510N□00 | 10 | 10 / 5 / 2 | 250 | 60 | 500 | 4200 | 0.10 | 600 | Blue |
| BWCS0023171512N□00 | 12 | 10 / 5 / 2 | 250 | 50 | 500 | 4000 | 0.15 | 600 | Orange |
| BWCS0023171515N□00 | 15 | 10 / 5 / 2 | 250 | 50 | 500 | 3400 | 0.17 | 600 | Yellow |
| BWCS0023171518N□00 | 18 | 10 / 5 / 2 | 250 | 50 | 500 | 3300 | 0.20 | 600 | Green |
| BWCS0023171522N□00 | 22 | 10 / 5 / 2 | 250 | 55 | 500 | 2600 | 0.22 | 500 | Blue |
| BWCS0023171524N□00 | 24 | 10 / 5 / 2 | 250 | 50 | 500 | 2000 | 0.22 | 500 | Gray |
| BWCS0023171527N□00 | 27 | 10 / 5 / 2 | 250 | 55 | 500 | 2500 | 0.25 | 500 | Violet |
| BWCS0023171533N□00 | 33 | 10 / 5 / 2 | 250 | 60 | 500 | 2050 | 0.27 | 500 | Gray |
| BWCS0023171536N□00 | 36 | 10 / 5 / 2 | 250 | 55 | 500 | 1700 | 0.27 | 500 | Orange |
| BWCS0023171539N□00 | 39 | 10 / 5 / 2 | 250 | 60 | 500 | 2000 | 0.29 | 500 | White |
| BWCS0023171543N□00 | 43 | 10 / 5 / 2 | 200 | 60 | 500 | 1650 | 0.34 | 500 | Yellow |
| BWCS0023171547N□00 | 47 | 10 / 5 / 2 | 200 | 60 | 500 | 1650 | 0.31 | 500 | Black |
| BWCS0023171556N□00 | 56 | 10 / 5 / 2 | 200 | 60 | 500 | 1550 | 0.34 | 500 | Brown |
| BWCS0023171568N□00 | 68 | 10 / 5 / 2 | 200 | 60 | 500 | 1450 | 0.38 | 500 | Red |
| BWCS0023171582N□00 | 82 | 10 / 5 / 2 | 150 | 65 | 500 | 1300 | 0.42 | 400 | Orange |
| BWCS0023171591N□00 | 91 | 10 / 5 / 2 | 150 | 65 | 500 | 1200 | 0.48 | 400 | Black |
| BWCS00231715R10□00 | 100 | 10 / 5 / 2 | 150 | 65 | 500 | 1200 | 0.46 | 400 | Yellow |
| BWCS00231715R11□00 | 110 | 10 / 5 / 2 | 150 | 50 | 250 | 1000 | 0.48 | 400 | Brown |
| BWCS00231715R12□00 | 120 | 10 / 5 / 2 | 150 | 50 | 250 | 1100 | 0.51 | 400 | Green |
| BWCS00231715R15□00 | 150 | 10 / 5 / 2 | 100 | 50 | 250 | 920 | 0.56 | 400 | Blue |
| BWCS00231715R18□00 | 180 | 10 / 5 / 2 | 100 | 50 | 250 | 870 | 0.64 | 400 | Violet |
| BWCS00231715R20□00 | 200 | 10 / 5 / 2 | 100 | 50 | 250 | 860 | 0.68 | 400 | Red |
| BWCS00231715R22□00 | 220 | 10 / 5 / 2 | 100 | 50 | 250 | 850 | 0.70 | 400 | Gray |
| BWCS00231715R24□00 | 240 | 10 / 5 / 2 | 100 | 44 | 250 | 690 | 1.00 | 350 | Red |

Note: When ordering, please specify tolerance code. Tolerance : G=±2% , J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
L & Q : Agilent E4991A+Agilent HP16197A
SRF : Agilent HP8753D/Agilent E4991A
RDC : Chroma 16502
Irms : HP4284A+HP42841A/HP4285A+HP42841A

SMD Wire Wound Ceramic Chip Inductors – BWCS Series

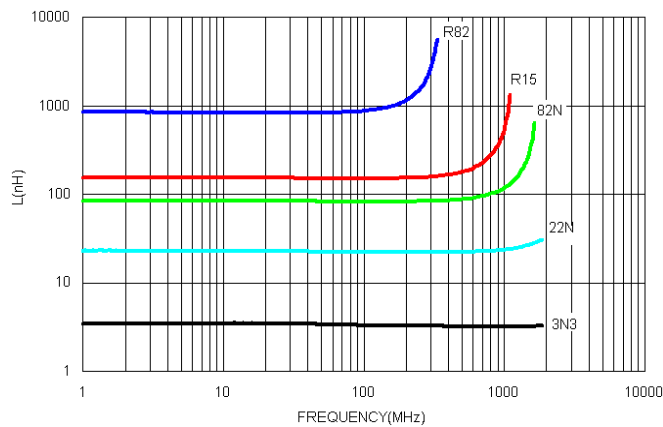
Electrical Characteristics

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | Irms (mA) Max | Color |
|--------------------|-----------------|----------------|----------------------|-------|----------------------|---------------|-------------|---------------|--------|
| BWCS00231715R25□00 | 250 | 10 / 5 / 2 | 100 | 45 | 250 | 660 | 1.20 | 350 | Yellow |
| BWCS00231715R27□00 | 270 | 10 / 5 / 2 | 100 | 48 | 250 | 650 | 1.00 | 350 | White |
| BWCS00231715R30□00 | 300 | 10 / 5 / 2 | 100 | 25 | 250 | 450 | 1.40 | 310 | Orange |
| BWCS00231715R33□00 | 330 | 10 / 5 / 2 | 100 | 48 | 250 | 600 | 1.40 | 310 | Black |
| BWCS00231715R39□00 | 390 | 10 / 5 / 2 | 100 | 48 | 250 | 560 | 1.50 | 290 | Brown |
| BWCS00231715R47□00 | 470 | 10 / 5 / 2 | 50 | 33 | 100 | 450 | 1.76 | 250 | Violet |
| BWCS00231715R51□00 | 510 | 10 / 5 / 2 | 25 | 23 | 50 | 340 | 1.90 | 230 | Gray |
| BWCS00231715R56□00 | 560 | 10 / 5 / 2 | 25 | 23 | 50 | 340 | 1.90 | 230 | Orange |
| BWCS00231715R62□00 | 620 | 10 / 5 / 2 | 25 | 23 | 50 | 220 | 2.20 | 210 | Yellow |
| BWCS00231715R68□00 | 680 | 10 / 5 / 2 | 25 | 23 | 50 | 188 | 2.20 | 190 | Green |
| BWCS00231715R82□00 | 820 | 10 / 5 / 2 | 25 | 23 | 50 | 215 | 2.35 | 180 | Blue |
| BWCS002317151R0□00 | 1000 | 10 / 5 / 2 | 25 | 20 | 50 | 100 | 2.50 | 170 | Gray |
| BWCS002317151R2□00 | 1200 | 10 / 5 | 7.9 | 18 | 25 | 100 | 2.50 | 170 | White |
| BWCS002317151R8□00 | 1800 | 10 / 5 / 2 | 7.9 | 16 | 7.9 | 80 | 2.50 | 170 | Orange |
| BWCS002317152R2□00 | 2200 | 10 / 5 / 2 | 7.9 | 16 | 7.9 | 65 | 3.90 | 140 | Gray |
| BWCS002317153R3□00 | 3300 | 10 / 5 / 2 | 7.9 | 15 | 7.9 | 40 | 4.40 | 90 | Red |
| BWCS002317154R7□00 | 4700 | 10 / 5 / 2 | 7.9 | 15 | 7.9 | 40 | 6.40 | 90 | Yellow |

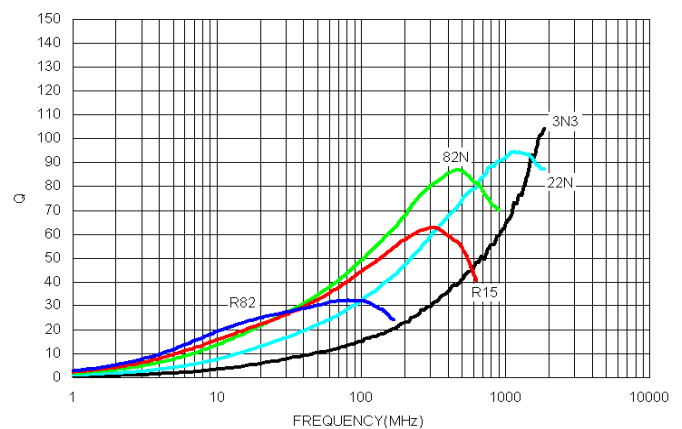
Note: When ordering, please specify tolerance code. Tolerance : G=±2% , J=±5% , K=±10%

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L & Q : Agilent E4991A+Agilent HP16197A
 SRF : Agilent HP8753D/Agilent E4991A
 RDC : Chroma 16502
 I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

Typical L vs. Frequency



Typical Q vs. Frequency



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SMD Wire Wound Ceramic Chip Inductors – BWCS Series

Electrical Characteristics

| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | Test Frequency (MHz) | SRF (MHz) | RDC (Ω) | I _{rms} (mA) | Color Coding | | | offset value (nH) |
|--------------------|-----------------|----------------|----------------------|-------|----------------------|-----------|---------|-----------------------|-----------------|-----------------|-----------------|-------------------|
| | | | | | | | | | 1 ST | 2 ND | 3 RD | |
| BWCS0029282110N□00 | 10 | 10 / 5 / 2 | 50 | 50 | 500 | 4100 | 0.08 | 1000 | Brown | Black | Black | -0.4 |
| BWCS0029282112N□00 | 12 | 10 / 5 / 2 | 50 | 50 | 500 | 3300 | 0.09 | 1000 | Brown | Red | Black | -0.6 |
| BWCS0029282115N□00 | 15 | 10 / 5 / 2 | 50 | 50 | 500 | 2500 | 0.10 | 1000 | Brown | Green | Black | -0.9 |
| BWCS0029282118N□00 | 18 | 10 / 5 / 2 | 50 | 50 | 350 | 2500 | 0.11 | 1000 | Brown | Gray | Black | -0.4 |
| BWCS0029282122N□00 | 22 | 10 / 5 / 2 | 50 | 55 | 350 | 2400 | 0.12 | 1000 | Red | Red | Black | -0.9 |
| BWCS0029282127N□00 | 27 | 10 / 5 / 2 | 50 | 55 | 350 | 1600 | 0.13 | 1000 | Red | Violet | Black | -1 |
| BWCS0029282133N□00 | 33 | 10 / 5 / 2 | 50 | 60 | 350 | 1600 | 0.14 | 1000 | Orange | Orange | Black | -1.3 |
| BWCS0029282139N□00 | 39 | 10 / 5 / 2 | 50 | 60 | 350 | 1500 | 0.15 | 1000 | Orange | White | Black | -1.4 |
| BWCS0029282147N□00 | 47 | 10 / 5 / 2 | 50 | 65 | 350 | 1500 | 0.16 | 1000 | Yellow | Violet | Black | -1 |
| BWCS0029282156N□00 | 56 | 10 / 5 / 2 | 50 | 65 | 350 | 1300 | 0.18 | 1000 | Green | Blue | Black | -3.5 |
| BWCS0029282168N□00 | 68 | 10 / 5 / 2 | 50 | 65 | 350 | 1300 | 0.20 | 1000 | Blue | Gray | Black | -3.5 |
| BWCS0029282182N□00 | 82 | 10 / 5 / 2 | 50 | 60 | 350 | 1000 | 0.22 | 1000 | Gray | Red | Black | -3.6 |
| BWCS00292821R10□00 | 100 | 10 / 5 / 2 | 25 | 60 | 350 | 1000 | 0.56 | 650 | Brown | Black | Brown | -6 |
| BWCS00292821R12□00 | 120 | 10 / 5 / 2 | 25 | 60 | 350 | 950 | 0.63 | 650 | Brown | Red | Brown | -5 |
| BWCS00292821R15□00 | 150 | 10 / 5 / 2 | 25 | 45 | 100 | 850 | 0.70 | 580 | Brown | Green | Brown | -5 |
| BWCS00292821R18□00 | 180 | 10 / 5 / 2 | 25 | 45 | 100 | 750 | 0.77 | 620 | Brown | Gray | Brown | -2 |
| BWCS00292821R20□00 | 200 | 10 / 5 / 2 | 25 | 45 | 100 | 700 | 0.84 | 500 | Red | Black | Brown | 0 |
| BWCS00292821R22□00 | 220 | 10 / 5 / 2 | 25 | 45 | 100 | 700 | 0.84 | 500 | Red | Red | Brown | -15 |
| BWCS00292821R27□00 | 270 | 10 / 5 / 2 | 25 | 45 | 100 | 600 | 0.91 | 500 | Red | Violet | Brown | -15 |
| BWCS00292821R33□00 | 330 | 10 / 5 / 2 | 25 | 45 | 100 | 570 | 1.05 | 450 | Orange | Orange | Brown | -20 |
| BWCS00292821R39□00 | 390 | 10 / 5 / 2 | 25 | 45 | 100 | 500 | 1.12 | 470 | Orange | White | Brown | -25 |
| BWCS00292821R47□00 | 470 | 10 / 5 / 2 | 25 | 45 | 100 | 450 | 1.19 | 470 | Yellow | Violet | Brown | -35 |
| BWCS00292821R56□00 | 560 | 10 / 5 / 2 | 25 | 45 | 100 | 415 | 1.33 | 400 | Green | Blue | Brown | -32 |
| BWCS00292821R62□00 | 620 | 10 / 5 / 2 | 25 | 45 | 100 | 375 | 1.40 | 300 | Blue | Red | Brown | -40 |
| BWCS00292821R68□00 | 680 | 10 / 5 / 2 | 25 | 45 | 100 | 375 | 1.47 | 400 | Blue | Gray | Brown | -50 |
| BWCS00292821R75□00 | 750 | 10 / 5 / 2 | 25 | 45 | 100 | 360 | 1.54 | 360 | Violet | Green | Brown | -50 |
| BWCS00292821R82□00 | 820 | 10 / 5 / 2 | 25 | 45 | 100 | 350 | 1.61 | 400 | Gray | Red | Brown | -55 |
| BWCS00292821R91□00 | 910 | 10 / 5 / 2 | 25 | 35 | 50 | 320 | 1.68 | 380 | White | Brown | Brown | -80 |
| BWCS002928211R0□00 | 1000 | 10 / 5 / 2 | 25 | 35 | 50 | 290 | 1.75 | 370 | Brown | Black | Red | -80 |
| BWCS002928211R2□00 | 1200 | 10 / 5 / 2 | 7.9 | 35 | 50 | 250 | 2.0 | 310 | Brown | Red | Red | -17.8 |
| BWCS002928211R5□00 | 1500 | 10 / 5 / 2 | 7.9 | 28 | 50 | 200 | 2.3 | 330 | Brown | Green | Red | -29.3 |
| BWCS002928211R8□00 | 1800 | 10 / 5 / 2 | 7.9 | 28 | 50 | 160 | 2.6 | 300 | Brown | Gray | Red | -42.2 |

Note: When ordering, please specify tolerance code. Tolerance : G=±2% , J=±5% , K=±10%

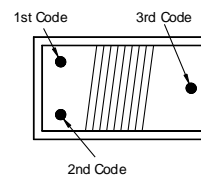
- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :

L & Q : Agilent E4991A+Agilent HP16197A

SRF : Agilent HP8753D/Agilent E4991A

RDC : Chroma 16502

I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A



COLOR CODING

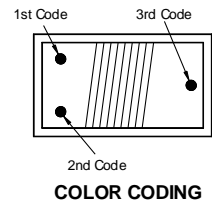
SMD Wire Wound Ceramic Chip Inductors – BWCS Series

Electrical Characteristics

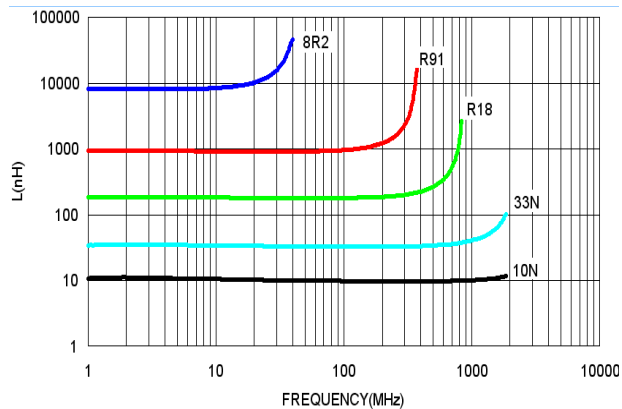
| Part Number | Inductance (nH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | Test Frequency (MHz) | SRF (MHz) | RDC (Ω) | I _{rms} (mA) | Color Coding | | | offset value (nH) |
|--------------------|-----------------|----------------|----------------------|-------|----------------------|-----------|---------|-----------------------|-----------------|-----------------|-----------------|-------------------|
| | | | | | | | | | 1 ST | 2 ND | 3 RD | |
| BWCS002928212R2□00 | 2200 | 10 / 5 / 2 | 7.9 | 28 | 50 | 160 | 2.8 | 280 | Red | Red | Red | -89.6 |
| BWCS002928212R7□00 | 2700 | 10 / 5 / 2 | 7.9 | 22 | 25 | 140 | 3.2 | 290 | Red | Violet | Red | -75 |
| BWCS002928213R3□00 | 3300 | 10 / 5 / 2 | 7.9 | 22 | 25 | 110 | 3.4 | 290 | Orange | Orange | Red | -145.6 |
| BWCS002928213R9□00 | 3900 | 10 / 5 / 2 | 7.9 | 20 | 25 | 100 | 3.6 | 260 | Orange | White | Red | -155.5 |
| BWCS002928214R7□00 | 4700 | 10 / 5 / 2 | 7.9 | 20 | 25 | 90 | 4.0 | 260 | Yellow | Violet | Red | -227.7 |
| BWCS002928215R6□00 | 5600 | 10 / 5 / 2 | 7.9 | 18 | 7.9 | 45 | 4.0 | 240 | Green | Blue | Red | 0 |
| BWCS002928216R8□00 | 6800 | 10 / 5 / 2 | 7.9 | 18 | 7.9 | 40 | 4.9 | 200 | Blue | Gray | Red | 0 |
| BWCS002928218R2□00 | 8200 | 10 / 5 / 2 | 7.9 | 18 | 7.9 | 25 | 6.0 | 170 | Gray | Red | Red | 0 |
| BWCS00292821100□00 | 10000 | 10 / 5 / 2 | 2.52 | 18 | 7.9 | 25 | 8.0 | 150 | Brown | Black | Orange | 0 |
| BWCS00292821150□00 | 15000 | 10 / 5 / 2 | 2.52 | 15 | 7.9 | 20 | 11 | 100 | Brown | Green | Orange | 0 |

Note: When ordering, please specify tolerance code. Tolerance : G=±2% , J=±5% , K=±10%

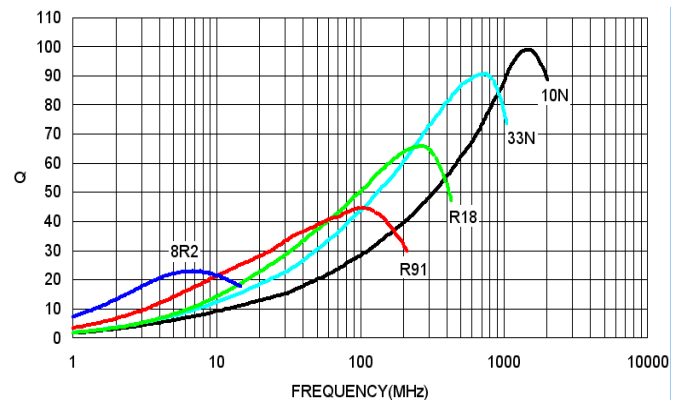
- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L & Q : Agilent E4991A+Agilent HP16197A
 SRF : Agilent HP8753D/Agilent E4991A
 RDC : Chroma 16502
 I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A



Typical **L** vs. **F** Frequency



Typical **Q** vs. **F** Frequency



SMD Wire Wound Ceramic Chip Inductors – BWCS Series

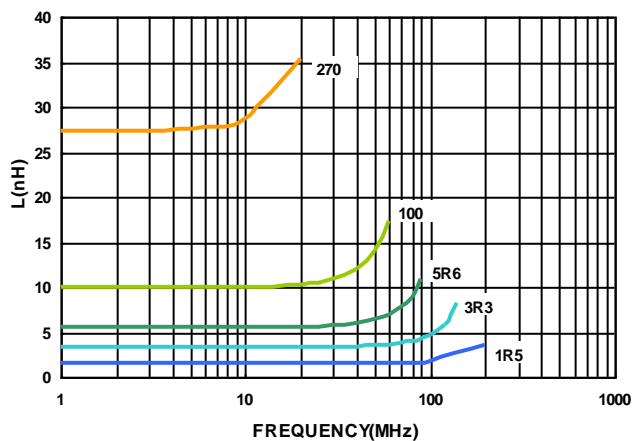
Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (MHz) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | Irms (mA) Typ |
|--------------------|-----------------|----------------|----------------------|-------|----------------------|---------------|-------------|---------------|
| BWCS004938341R0□00 | 1.0 | 5 | 7.9 | 60 | 50 | 310 | 1.2 | 480 |
| BWCS004938341R2□00 | 1.2 | 5 | 7.9 | 62 | 50 | 230 | 1.2 | 480 |
| BWCS004938341R5□00 | 1.5 | 5 / 2 | 7.9 | 65 | 50 | 210 | 1.6 | 430 |
| BWCS004938341R8□00 | 1.8 | 5 | 7.9 | 68 | 50 | 190 | 2.0 | 380 |
| BWCS004938342R2□00 | 2.2 | 5 / 2 | 7.9 | 63 | 50 | 170 | 2.2 | 340 |
| BWCS004938342R7□00 | 2.7 | 5 / 2 | 7.9 | 60 | 50 | 160 | 3.2 | 300 |
| BWCS004938343R3□00 | 3.3 | 5 / 2 | 7.9 | 60 | 50 | 145 | 3.8 | 270 |
| BWCS004938343R9□00 | 3.9 | 5 / 2 | 7.9 | 61 | 50 | 130 | 5.0 | 240 |
| BWCS004938344R7□00 | 4.7 | 5 | 7.9 | 60 | 50 | 115 | 5.4 | 230 |
| BWCS004938345R6□00 | 5.6 | 5 | 7.9 | 42 | 50 | 100 | 5.7 | 220 |
| BWCS004938346R8□00 | 6.8 | 5 | 7.9 | 32 | 50 | 90 | 6.6 | 210 |
| BWCS004938348R2□00 | 8.2 | 5 / 2 | 7.9 | 35 | 50 | 80 | 7.0 | 200 |
| BWCS00493834100□00 | 10 | 5 | 7.9 | 27 | 50 | 70 | 7.7 | 190 |
| BWCS00493834120□00 | 12 | 5 | 2.5 | 34 | 10 | 58 | 8.7 | 180 |
| BWCS00493834150□00 | 15 | 5 / 2 | 2.5 | 32 | 10 | 48 | 9.6 | 170 |
| BWCS00493834180□00 | 18 | 5 | 2.5 | 28 | 10 | 36 | 10.5 | 160 |
| BWCS00493834220□00 | 22 | 5 / 2 | 2.5 | 28 | 10 | 34 | 11.5 | 155 |
| BWCS00493834270□00 | 27 | 5 | 2.5 | 28 | 10 | 30 | 12.5 | 150 |
| BWCS00493834330□00 | 33 | 5 / 2 | 2.5 | 20 | 10 | 20 | 13.5 | 145 |

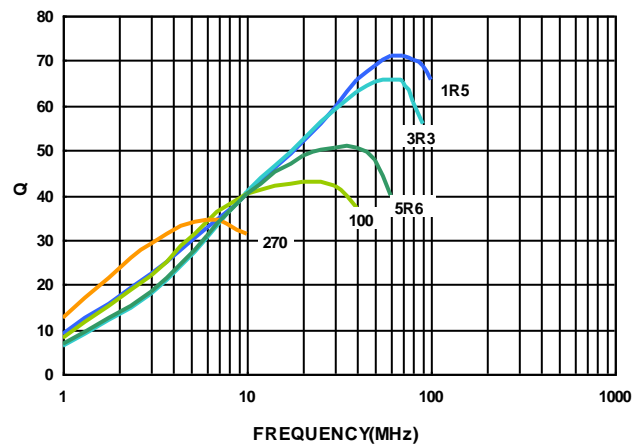
Note: When ordering, please specify tolerance code. Tolerance : G=±2% , J=±5%

- Operating temperature range—40°C ~ 125°C (Including self - temperature rise)
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L & Q : HP4286A/HP4287A/AgilentE4991/Keysight E4982A
 SRF : Agilent HP8753D/Agilent E4991A
 RDC : Chroma 16502
 Irms : HP4284A+HP42841A/HP4285A+HP42841A

Typical **L** vs. **F** Frequency



Typical **Q** vs. **F** Frequency



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 Ceramic Chip Inductors - BWCS Series

Packaging Specifications

Tape Dimensions

Figure 1

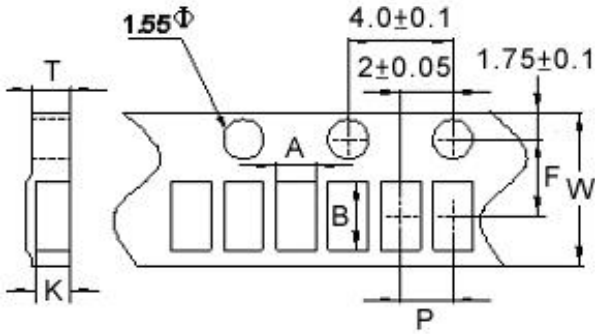


Figure 2

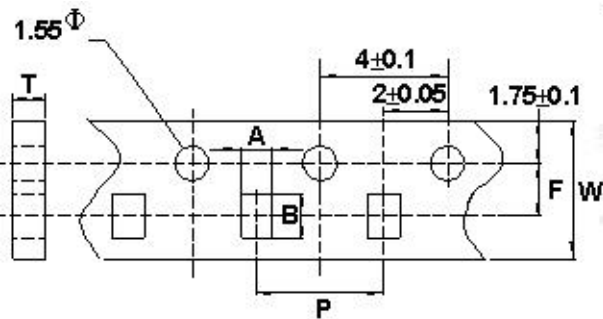
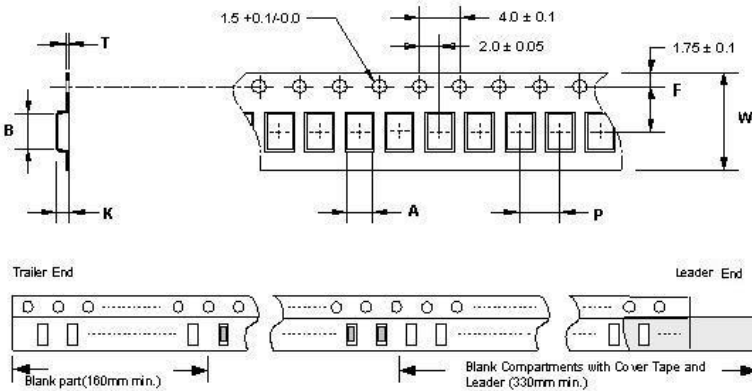
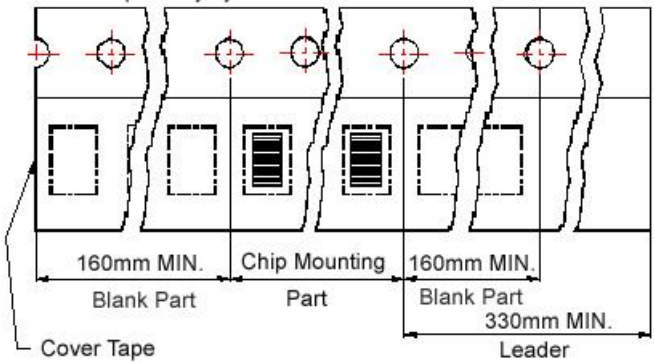


Figure 3

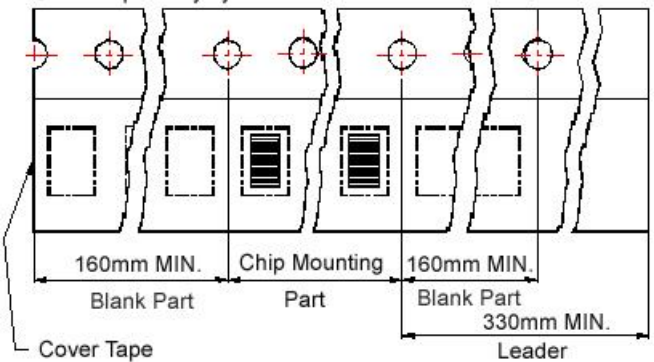


Tape Material

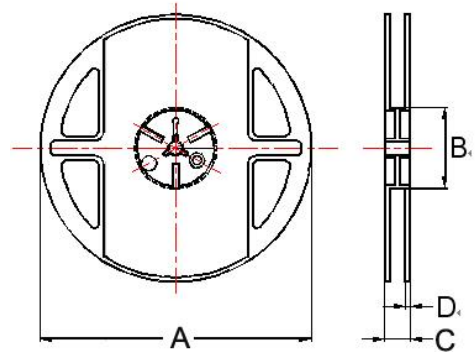
Carrier Tape: Paper
Cover Tape: Polystyrene



Carrier Tape: Paper
Cover Tape: Polystyrene



Reel Dimensions



Dimensions in mm

| TYPE | Fig. | Tape Dimensions | | | | | | | Reel Dimensions | | | | Quantity PCS / Reel |
|--------------|------|-----------------|------|------|----|---|-----|------|-----------------|----|----|-----|------------------------|
| | | A | B | T | W | P | F | K | A | B | C | D | |
| BWCS00060404 | 1 | 0.47 | 0.60 | 0.65 | 8 | 2 | 3.5 | 0.45 | 178 | 60 | 12 | 1.5 | 4000 |
| BWCS00120707 | 1 | 0.67 | 1.20 | 0.75 | 8 | 2 | 3.5 | 0.59 | 178 | 60 | 12 | 1.5 | 4000 |
| BWCS00161008 | 2 | 1.25 | 1.90 | 1.05 | 8 | 4 | 3.5 | - | 178 | 60 | 12 | 1.5 | 4000 |
| BWCS00231715 | 3 | 1.85 | 2.45 | 0.23 | 8 | 4 | 3.5 | 1.70 | 178 | 60 | 12 | 1.5 | 2000 |
| BWCS00292821 | 3 | 2.80 | 2.95 | 0.23 | 8 | 4 | 3.5 | 2.20 | 178 | 60 | 12 | 1.5 | 2000 |
| BWCS00493834 | 3 | 3.90 | 4.90 | 0.30 | 12 | 8 | 5.5 | 3.20 | 178 | 60 | 16 | 1.4 | 600 |

OUR CERTIFICATE

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