Innovative Service Around the Globe YAGEO

# DATA SHEET

## INDUCTOR

### Power Inductors

BWVS Series

**RoHS compliant & Halogen Free**

YAGEO

Product specification – March 26, 2021 V.0

# BWVS Series

BWVS series, an automatic assembly constructed power inductor, is shielded with magnetic resin and suitable for the portable DC-DC converter applications.

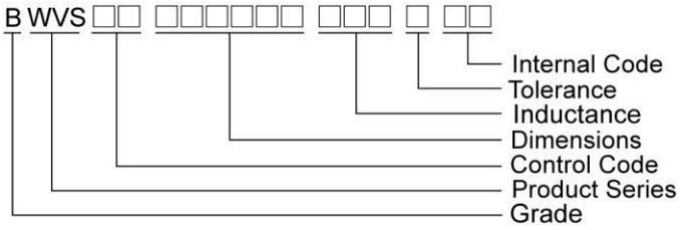
## Features

- RoHS, Halogen Free and REACH Compliance
- Shielded with magnetic resin
- Various package size and wide inductance range
- Optimize electrical characteristics by using different ferrite core figures

## Applications

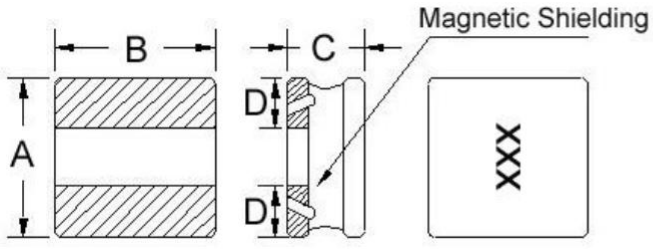
- AP Routers
- STBs
- LCD TVs, monitors and panels
- Game consoles
- DC/DC converters

## Product Identification

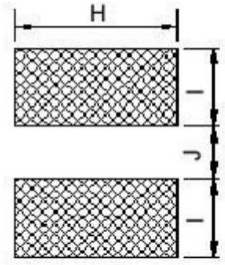



## Shape and Dimensions

Figure 1




## Recommended Pattern

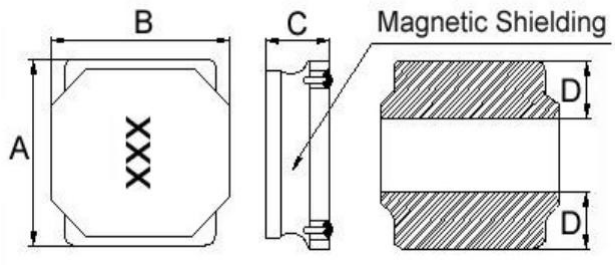



Dimensions in mm

| TYPE | FIG | A | B | C | D | H | I | J |
|---|---|---|---|---|---|---|---|---|
| BWVS00404012 | 1 | 4.0±0.2 | 4.0±0.2 | 1.20±0.1 | 1.5 | 4.2 | 1.5 | 1.2 |

### Shape and Dimensions

Figure 2

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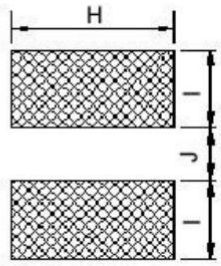
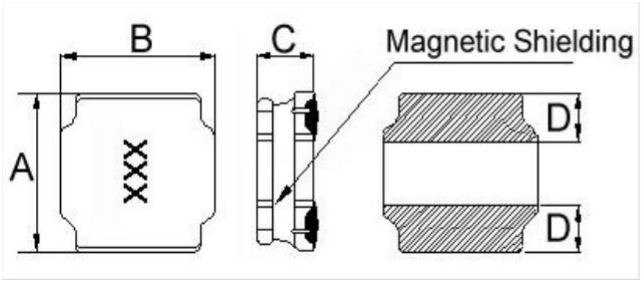



Dimensions in mm

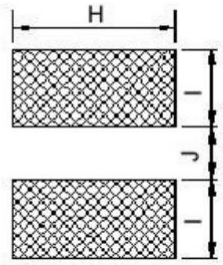
| TYPE | FIG | A | B | C | D | H | I | J |
|---|---|---|---|---|---|---|---|---|
| BWVS00404018 | 2 | 4.0±0.2 | 4.0±0.2 | $1.8^{+0.2}_{-0.30}$ | 1.3±0.3 | 3.7 | 1.2 | 1.6 |
| BWVS00404026 | 2 | 4.0±0.2 | 4.0±0.2 | 2.6±0.2 | 1.4 | 3.7 | 1.2 | 1.6 |

### Shape and Dimensions

Figure 3




### Recommended Pattern




Dimensions in mm

| TYPE | FIG | A | B | C | D | H | I | J |
|---|---|---|---|---|---|---|---|---|
| BWVS00505020 | 3 | 5.0±0.2 | 5.0±0.2 | $2.0^{+0.2}_{-0.30}$ | 1.8±0.3 | 4.0 | 1.5 | 2.1 |
| BWVS00505040 | 3 | 5.0±0.2 | 5.0±0.2 | $4.0^{+0.2}_{-0.30}$ | 1.6±0.3 | 4.0 | 1.5 | 2.1 |
| BWVS00606020 | 3 | 6.0±0.2 | 6.0±0.2 | $2.0^{+0.2}_{-0.30}$ | 1.7±0.3 | 5.7 | 1.6 | 2.9 |
| BWVS00606028 | 3 | 6.0±0.2 | 6.0±0.2 | $2.8^{+0.2}_{-0.30}$ | 1.9±0.3 | 5.7 | 1.6 | 2.9 |
| BWVS00606045 | 3 | 6.0±0.2 | 6.0±0.2 | $4.5^{+0.2}_{-0.30}$ | 1.8±0.3 | 5.7 | 2.0 | 2.4 |
| BWVS00808040 | 3 | 8.0±0.2 | 8.0±0.2 | $4.0^{+0.2}_{-0.30}$ | 2.3±0.3 | 7.5 | 2.5 | 3.4 |

## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS004040121R0□00 | 1.0 | 20, 30 | 100 | 48 | 2.50(2.25) | 1.70(1.53) | 1R0 |
| BWVS004040121R5□00 | 1.5 | 20, 30 | 100 | 58 | 2.10(1.89) | 1.60(1.44) | 1R5 |
| BWVS004040122R2□00 | 2.2 | 20, 30 | 100 | 65 | 1.70(1.53) | 1.50(1.35) | 2R2 |
| BWVS004040123R3□00 | 3.3 | 20, 30 | 100 | 90 | 1.30(1.17) | 1.40(1.26) | 3R3 |
| BWVS004040124R7□00 | 4.7 | 20, 30 | 100 | 110 | 1.10(0.99) | 1.20(1.08) | 4R7 |
| BWVS004040126R8□00 | 6.8 | 20, 30 | 100 | 135 | 0.90(0.81) | 1.05(0.94) | 6R8 |
| BWVS00404012100□00 | 10 | 20, 30 | 100 | 190 | 0.78(0.70) | 0.90(0.81) | 100 |
| BWVS00404012150□00 | 15 | 20, 30 | 100 | 250 | 0.65(0.58) | 0.85(0.76) | 150 |
| BWVS00404012220□00 | 22 | 20, 30 | 100 | 400 | 0.52(0.46) | 0.75(0.67) | 220 |
| BWVS00404012330□00 | 33 | 20, 30 | 100 | 600 | 0.44(0.39) | 0.70(0.63) | 330 |
| BWVS00404012470□00 | 47 | 20, 30 | 100 | 930 | 0.35(0.31) | 0.50(0.45) | 470 |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%**

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Measure Equipment：

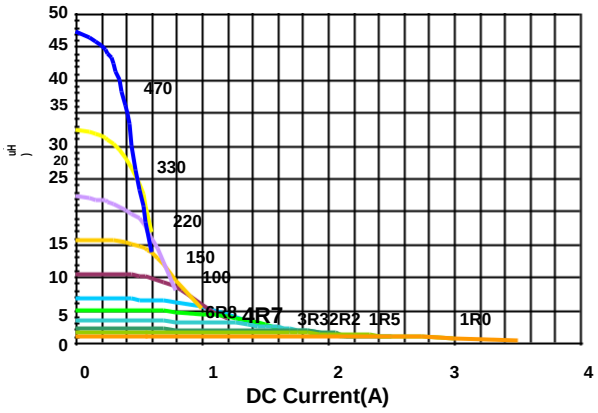
  L：Agilent HP4284A+Agilent HP42841A, 100kHz 1V

  RDC：DIGITAL MILLINHM METER CHROMA 16502, or equivalent

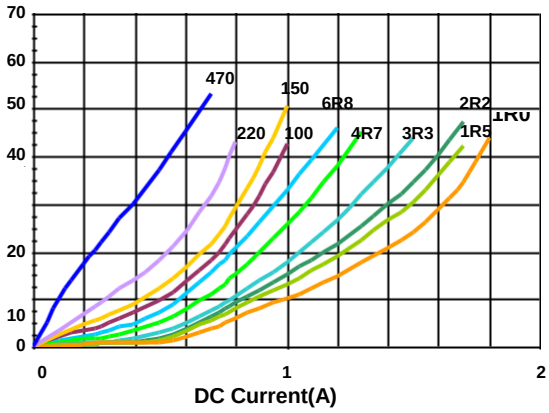
  Isat & Irms：Agilent HP4284A

**Test Instruments**：HP4284A Material/Impedance Analyzer

**Inductance vs. DC Current**




**Temperature Change vs. DC Current**



## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±20% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS004040181R0□00 | 1.0 | 20, 30 | 100 | 32 | 4.10(3.69) | 2.80(2.52) | 1R0 |
| BWVS004040181R5□00 | 1.5 | 20, 30 | 100 | 40 | 3.30(2.97) | 2.60(2.34) | 1R5 |
| BWVS004040181R8□00 | 1.8 | 20, 30 | 100 | 55 | 2.80(2.50) | 2.50(2.20) | 1R8 |
| BWVS004040182R2□00 | 2.2 | 20, 30 | 100 | 60 | 2.80(2.52) | 2.50(2.25) | 2R2 |
| BWVS004040183R3□00 | 3.3 | 20, 30 | 100 | 70 | 2.20(1.98) | 2.10(1.89) | 3R3 |
| BWVS004040183R6□00 | 3.6 | 20, 30 | 100 | 75 | 2.10(1.89) | 1.90(1.71) | 3R6 |
| BWVS004040183R9□00 | 3.9 | 20, 30 | 100 | 75 | 2.10(1.89) | 1.90(1.71) | 3R9 |
| BWVS004040184R7□00 | 4.7 | 20, 30 | 100 | 90 | 2.00(1.80) | 1.70(1.53) | 4R7 |
| BWVS004040186R8□00 | 6.8 | 20, 30 | 100 | 110 | 1.60(1.44) | 1.50(1.35) | 6R8 |
| BWVS004040188R2□00 | 8.2 | 20, 30 | 100 | 155 | 1.50(1.30) | 1.30(1.10) | 8R2 |
| BWVS00404018100□00 | 10 | 20, 30 | 100 | 170 | 1.40(1.26) | 1.20(1.08) | 100 |
| BWVS00404018150□00 | 15 | 20, 30 | 100 | 250 | 1.00(0.90) | 1.00(0.90) | 150 |
| BWVS00404018220□00 | 22 | 20, 30 | 100 | 350 | 0.90(0.81) | 0.85(0.76) | 220 |
| BWVS00404018330□00 | 33 | 20, 30 | 100 | 530 | 0.80(0.72) | 0.70(0.63) | 330 |
| BWVS00404018470□00 | 47 | 20, 30 | 100 | 720 | 0.70(0.63) | 0.56(0.50) | 470 |
| BWVS00404018680□00 | 68 | 20, 30 | 100 | 1000 | 0.56(0.50) | 0.45(0.40) | 680 |
| BWVS00404018101□00 | 100 | 20, 30 | 100 | 1500 | 0.46(0.41) | 0.38(0.34) | 101 |
| BWVS00404018121□00 | 120 | 20, 30 | 100 | 1600 | 0.38(0.34) | 0.36(0.32) | 121 |
| BWVS00404018151□00 | 150 | 20, 30 | 100 | 2500 | 0.35(0.31) | 0.30(0.27) | 151 |
| BWVS00404018221□00 | 220 | 20, 30 | 100 | 4000 | 0.28(0.25) | 0.23(0.20) | 221 |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%**

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
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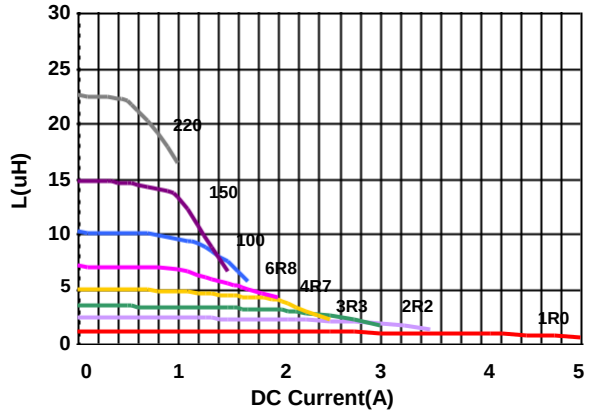
**Inductance vs. DC Current**

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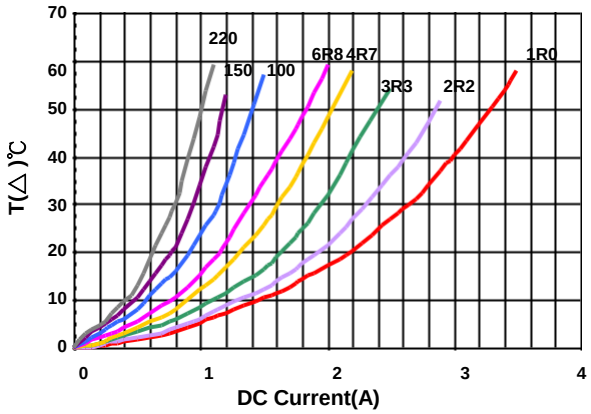

## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS004040261R2□00 | 1.2 | 20, 30 | 100 | 30 | 3.50(3.15) | 3.30(2.97) | 1R2 |
| BWVS004040263R3□00 | 3.3 | 20, 30 | 100 | 45 | 2.50(2.25) | 2.50(2.25) | 3R3 |
| BWVS004040264R7□00 | 4.7 | 20, 30 | 100 | 60 | 1.80(1.62) | 1.80(1.62) | 4R7 |
| BWVS00404026220□00 | 22 | 20, 30 | 100 | 230 | 0.86(0.77) | 1.00(0.90) | 220 |

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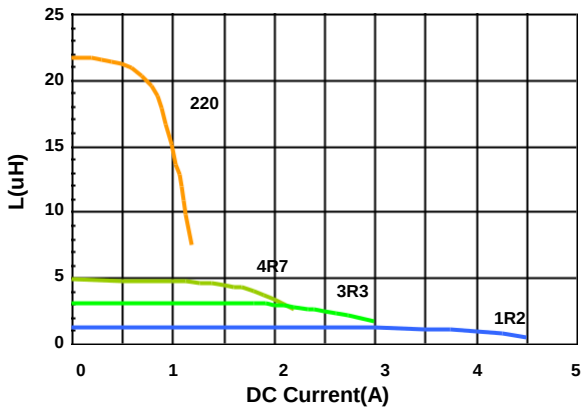


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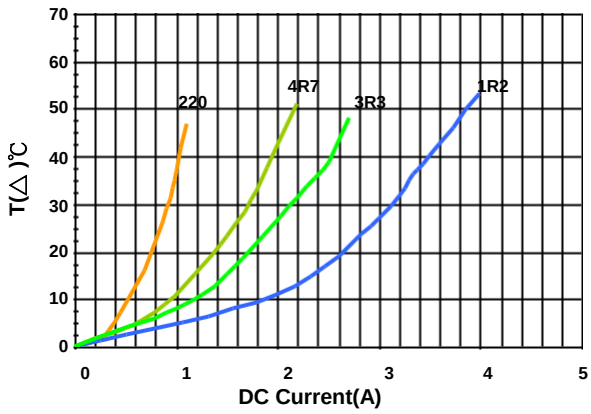

## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±20% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS005050201R0□00 | 1.0 | 20, 30 | 100 | 21 | 5.1(4.59) | 4.0(3.60) | 1R0 |
| BWVS005050201R2□00 | 1.2 | 30 | 100 | 21 | 4.8(4.32) | 3.8(3.42) | 1R2 |
| BWVS005050201R5□00 | 1.5 | 20, 30 | 100 | 26 | 4.2(3.78) | 3.5(3.15) | 1R5 |
| BWVS005050202R2□00 | 2.2 | 20, 30 | 100 | 35 | 3.4(3.06) | 3.2(2.88) | 2R2 |
| BWVS005050202R7□00 | 2.7 | 20, 30 | 100 | 38 | 3.05(2.7) | 2.9(2.60) | 2R7 |
| BWVS005050203R3□00 | 3.3 | 20, 30 | 100 | 48 | 3.0(2.70) | 2.8(2.52) | 3R3 |
| BWVS005050204R7□00 | 4.7 | 20, 30 | 100 | 60 | 2.2(1.98) | 2.2(1.98) | 4R7 |
| BWVS005050205R6□00 | 5.6 | 20, 30 | 100 | 82 | 2.05(1.84) | 2.0(1.80) | 5R6 |
| BWVS005050206R8□00 | 6.8 | 20, 30 | 100 | 90 | 2.0(1.80) | 1.8(1.62) | 6R8 |
| BWVS00505020100□00 | 10 | 20, 30 | 100 | 120 | 1.6(1.44) | 1.6(1.44) | 100 |
| BWVS00505020150□00 | 15 | 20, 30 | 100 | 190 | 1.3(1.17) | 1.2(1.08) | 150 |
| BWVS00505020220□00 | 22 | 20, 30 | 100 | 260 | 1.0(0.90) | 1.0(0.90) | 220 |
| BWVS00505020330□00 | 33 | 20, 30 | 100 | 460 | 0.8(0.72) | 0.75(0.67) | 330 |
| BWVS00505020470□00 | 47 | 20, 30 | 100 | 580 | 0.65(0.58) | 0.65(0.58) | 470 |

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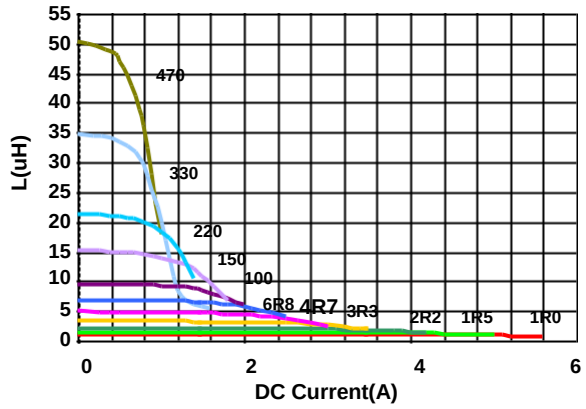


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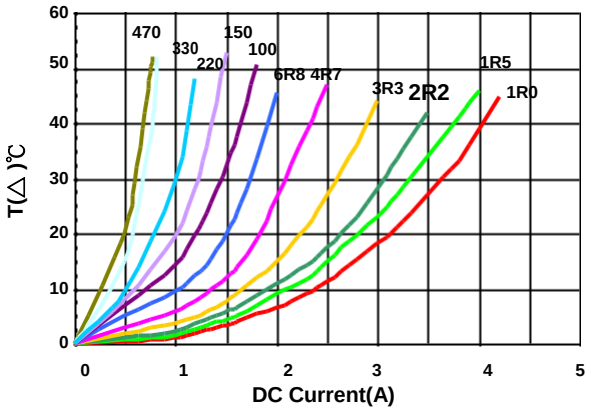

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|---|---|---|---|---|---|---|---|
| BWVS005050401R0□00 | 1.0 | 20, 30 | 100 | 14 | 7.5(6.75) | 4.6(4.14) | 1R0 |
| BWVS005050401R2□00 | 1.2 | 20, 30 | 100 | 15 | 7.4(6.66) | 4.5(4.05) | 1R2 |
| BWVS005050401R5□00 | 1.5 | 20, 30 | 100 | 16 | 7.1(6.39) | 4.4(3.96) | 1R5 |
| BWVS005050402R2□00 | 2.2 | 20, 30 | 100 | 21 | 5.7(5.13) | 3.7(3.33) | 2R2 |
| BWVS005050403R0□00 | 2.2 | 20, 30 | 100 | 26 | 4.8(4.32) | 3.5(3.15) | 3R0 |
| BWVS005050403R3□00 | 3.3 | 20, 30 | 100 | 26 | 4.8(4.32) | 3.5(3.15) | 3R3 |
| BWVS005050403R6□00 | 3.6 | 20, 30 | 100 | 31 | 4.2(3.70) | 3.3(2.90) | 3R6 |
| BWVS005050404R7□00 | 4.7 | 20, 30 | 100 | 32 | 4.2(3.78) | 3.2(2.88) | 4R7 |
| BWVS005050406R8□00 | 6.8 | 20, 30 | 100 | 50 | 3.3(2.97) | 2.4(2.16) | 6R8 |
| BWVS00505040100□00 | 10 | 20, 30 | 100 | 60 | 2.8(2.52) | 2.2(1.98) | 100 |
| BWVS00505040150□00 | 15 | 20, 30 | 100 | 90 | 2.3(2.07) | 1.8(1.62) | 150 |
| BWVS00505040220□00 | 22 | 20, 30 | 100 | 135 | 1.8(1.62) | 1.4(1.26) | 220 |
| BWVS00505040270□00 | 27 | 20, 30 | 100 | 180 | 1.6(1.44) | 1.2(1.08) | 270 |
| BWVS00505040330□00 | 33 | 20, 30 | 100 | 190 | 1.5(1.35) | 1.1(0.99) | 330 |
| BWVS00505040470□00 | 47 | 20, 30 | 100 | 310 | 1.2(1.08) | 0.9(0.81) | 470 |
| BWVS00505040680□00 | 68 | 20, 30 | 100 | 540 | 1.0(0.90) | 0.78(0.7) | 680 |
| BWVS00505040101□00 | 100 | 20, 30 | 100 | 800 | 0.7(0.60) | 0.6(0.50) | 101 |

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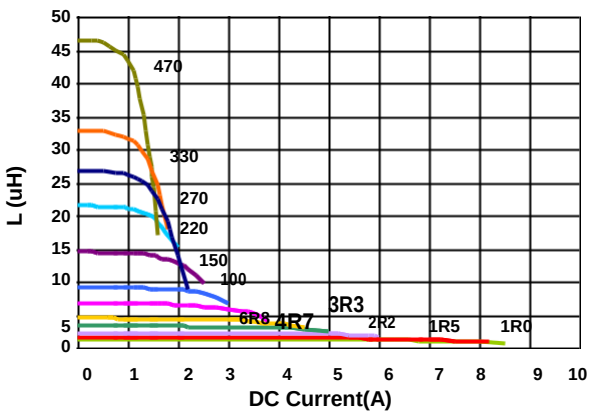


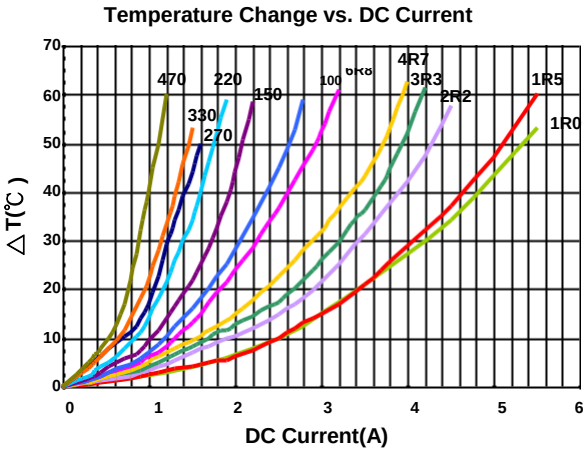

## Electrical Characteristics

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|---|---|---|---|---|---|---|---|
| BWVS00606020R50□00 | 0.5 | 30 | 100 | 13 | 8.0(7.20) | 5.3(4.77) | R50 |
| BWVS00606020R90□00 | 0.9 | 30 | 100 | 18 | 6.3(5.67) | 4.2(3.78) | R90 |
| BWVS006060201R0□00 | 1.0 | 30 | 100 | 19 | 6.2(5.58) | 4.1(3.69) | 1R0 |
| BWVS006060201R5□00 | 1.5 | 20, 30 | 100 | 26 | 5.0(4.50) | 3.6(3.24) | 1R5 |
| BWVS006060202R2□00 | 2.2 | 20, 30 | 100 | 34 | 4.2(3.78) | 3.2(2.88) | 2R2 |
| BWVS006060203R3□00 | 3.3 | 20, 30 | 100 | 40 | 3.2(2.88) | 2.7(2.43) | 3R3 |
| BWVS006060204R7□00 | 4.7 | 20, 30 | 100 | 58 | 2.5(2.25) | 2.2(1.98) | 4R7 |
| BWVS006060206R8□00 | 6.8 | 20, 30 | 100 | 85 | 2.2(1.98) | 1.8(1.62) | 6R8 |
| BWVS00606020100□00 | 10 | 20, 30 | 100 | 125 | 2.0(1.80) | 1.6(1.44) | 100 |
| BWVS00606020150□00 | 15 | 20, 30 | 100 | 190 | 1.3(1.17) | 1.3(1.17) | 150 |
| BWVS00606020220□00 | 22 | 20, 30 | 100 | 260 | 1.1(0.99) | 1.1(0.99) | 220 |

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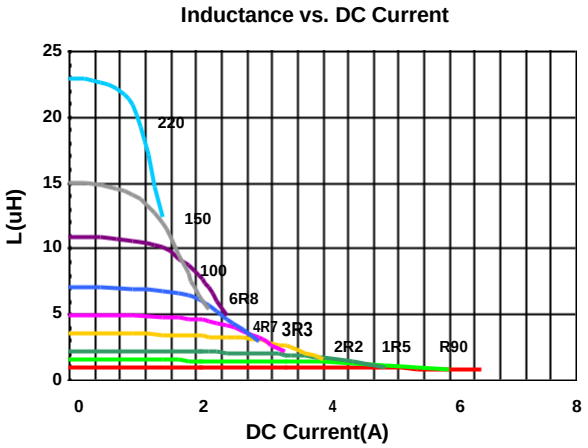
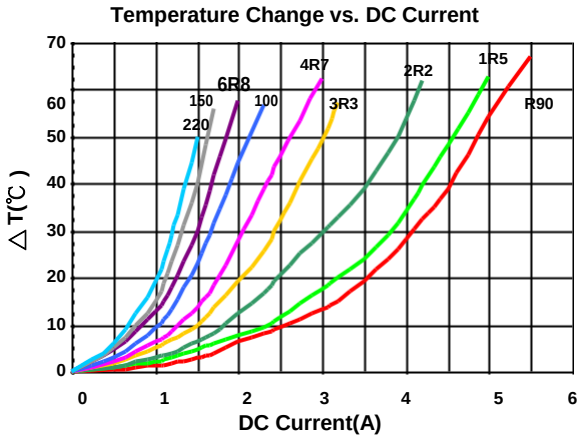
  RDC：DIGITAL MILLINHM METER CHROMA 16502, or equivalent

  Isat & Irms：Agilent HP4284A

**Test Instruments**：HP4284A Material/Impedance Analyzer



## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS006060281R0□00 | 1.0 | 20, 30 | 100 | 13 | 7.6(6.84) | 5.2(4.68) | 1R0 |
| BWVS006060281R5□00 | 1.5 | 20, 30 | 100 | 16 | 6.3(5.67) | 4.8(4.32) | 1R5 |
| BWVS006060282R2□00 | 2.2 | 20, 30 | 100 | 20 | 5.4(4.86) | 4.0(3.60) | 2R2 |
| BWVS006060282R7□00 | 2.7 | 20, 30 | 100 | 26 | 4.9(4.41) | 3.7(3.33) | 2R7 |
| BWVS006060283R3□00 | 3.3 | 20, 30 | 100 | 28 | 4.3(3.87) | 3.5(3.15) | 3R3 |
| BWVS006060284R7□00 | 4.7 | 20, 30 | 100 | 38 | 3.7(3.33) | 3.2(2.88) | 4R7 |
| BWVS006060286R0□00 | 6.0 | 20, 30 | 100 | 45 | 3.3(2.97) | 2.8(2.52) | 6R0 |
| BWVS006060286R8□00 | 6.8 | 20, 30 | 100 | 50 | 3.1(2.79) | 2.7(2.43) | 6R8 |
| BWVS00606028100□00 | 10 | 20, 30 | 100 | 65 | 2.5(2.25) | 2.3(2.07) | 100 |
| BWVS00606028150□00 | 15 | 20, 30 | 100 | 95 | 2.0(1.80) | 1.8(1.62) | 150 |
| BWVS00606028220□00 | 22 | 20, 30 | 100 | 135 | 1.6(1.44) | 1.5(1.35) | 220 |
| BWVS00606028330□00 | 33 | 20, 30 | 100 | 220 | 1.3(1.17) | 1.4(1.26) | 330 |
| BWVS00606028470□00 | 47 | 20, 30 | 100 | 320 | 1.1(0.99) | 1.0(0.90) | 470 |
| BWVS00606028680□00 | 68 | 20, 30 | 100 | 420 | 0.98(0.88) | 0.9(0.81) | 680 |
| BWVS00606028101□00 | 100 | 20, 30 | 100 | 600 | 0.82(0.73) | 0.8(0.72) | 101 |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%**

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Measure Equipment：

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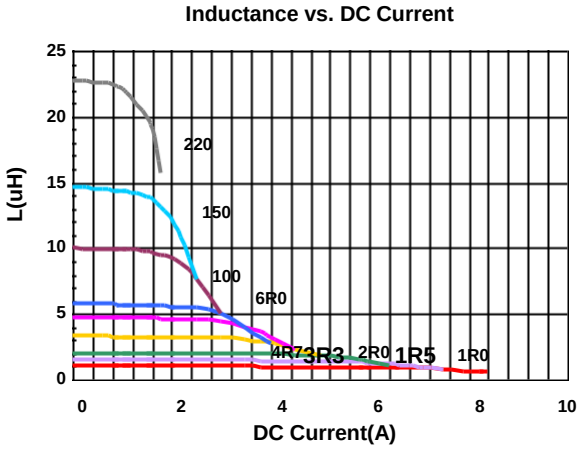
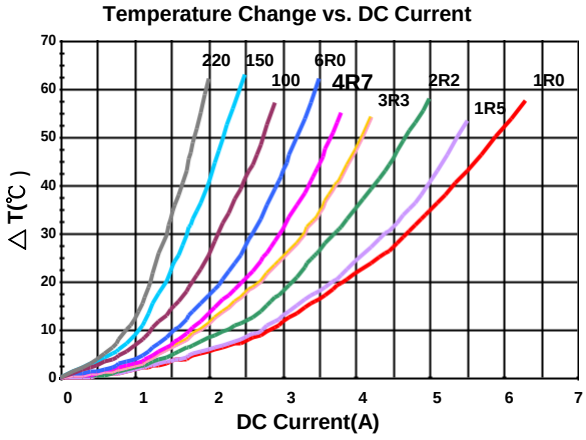
  RDC：DIGITAL MILLINHM METER CHROMA 16502, or equivalent

  Isat & Irms：Agilent HP4284A

**Test Instruments**：HP4284A Material/Impedance Analyzer



## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS006060451R0□00 | 1.0 | 20, 30 | 100 | 12 | 12.2(10.98) | 6.5(5.85) | 1R0 |
| BWVS006060451R2□00 | 1.2 | 20, 30 | 100 | 13 | 10.6(9.50) | 5.9(5.30) | 1R2 |
| BWVS006060451R5□00 | 1.5 | 20, 30 | 100 | 15 | 10.4(9.36) | 5.9(5.31) | 1R5 |
| BWVS006060451R8□00 | 1.8 | 20, 30 | 100 | 17 | 9.6(8.64) | 5.6(5.04) | 1R8 |
| BWVS006060452R2□00 | 2.2 | 20, 30 | 100 | 18.4 | 8.8(7.92) | 5.1(4.59) | 2R2 |
| BWVS006060452R3□00 | 2.3 | 20, 30 | 100 | 19 | 8.8(7.92) | 5.0(4.50) | 2R3 |
| BWVS006060453R0□00 | 3.0 | 20, 30 | 100 | 22 | 7.8(7.02) | 4.4(3.96) | 3R0 |
| BWVS006060453R3□00 | 3.3 | 20, 30 | 100 | 24 | 7.5(6.75) | 4.3(3.87) | 3R3 |
| BWVS006060453R6□00 | 3.6 | 20, 30 | 100 | 24 | 7.5(6.75) | 4.3(3.87) | 3R6 |
| BWVS006060453R9□00 | 3.9 | 20, 30 | 100 | 26 | 7.0(6.30) | 4.0(3.60) | 3R9 |
| BWVS006060454R5□00 | 4.5 | 20, 30 | 100 | 31 | 6.7(6.03) | 3.9(3.51) | 4R5 |
| BWVS006060454R7□00 | 4.7 | 20, 30 | 100 | 31 | 6.7(6.03) | 3.9(3.51) | 4R7 |
| BWVS006060455R1□00 | 5.1 | 20, 30 | 100 | 33 | 6.0(5.40) | 3.5(3.15) | 5R1 |
| BWVS006060455R6□00 | 5.6 | 20, 30 | 100 | 40 | 5.5(4.95) | 3.3(2.97) | 5R6 |
| BWVS006060456R3□00 | 6.3 | 20, 30 | 100 | 40 | 5.5(4.95) | 3.3(2.97) | 6R3 |
| BWVS006060456R8□00 | 6.8 | 20, 30 | 100 | 43 | 5.3(4.77) | 3.2(2.88) | 6R8 |
| BWVS006060458R2□00 | 8.2 | 20, 30 | 100 | 53 | 4.6(4.10) | 2.9(2.60) | 8R2 |
| BWVS00606045100□00 | 10 | 20, 30 | 100 | 57 | 4.5(4.05) | 2.7(2.43) | 100 |
| BWVS00606045150□00 | 15 | 20, 30 | 100 | 80 | 3.4(3.06) | 2.2(1.98) | 150 |
| BWVS00606045180□00 | 18 | 20, 30 | 100 | 100 | 3.1(2.79) | 1.8(1.62) | 180 |
| BWVS00606045220□00 | 22 | 20, 30 | 100 | 125 | 3.0(2.70) | 1.9(1.71) | 220 |
| BWVS00606045270□00 | 27 | 20, 30 | 100 | 160 | 2.5(2.25) | 1.3(1.17) | 270 |
| BWVS00606045330□00 | 33 | 20, 30 | 100 | 165 | 2.3(2.07) | 1.4(1.26) | 330 |
| BWVS00606045470□00 | 47 | 20, 30 | 100 | 245 | 1.9(1.71) | 1.2(1.08) | 470 |
| BWVS00606045560□00 | 56 | 20, 30 | 100 | 310 | 1.7(1.50) | 1.1(0.99) | 560 |
| BWVS00606045680□00 | 68 | 20, 30 | 100 | 330 | 1.6(1.44) | 1.0(0.90) | 680 |
| BWVS00606045101□00 | 100 | 20, 30 | 100 | 500 | 1.3(1.17) | 0.8(0.72) | 101 |
| BWVS00606045221□00 | 220 | 20, 30 | 100 | 1300 | 0.82(0.73) | 0.38(0.34) | 221 |
| BWVS00606045331□00 | 330 | 20, 30 | 100 | 1800 | 0.7(0.63) | 0.35(0.31) | 331 |
| BWVS00606045102□00 | 1000 | 20, 30 | 100 | 6000 | 0.4(0.36) | 0.22(0.19) | 102 |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%**

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
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- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Measure Equipment：

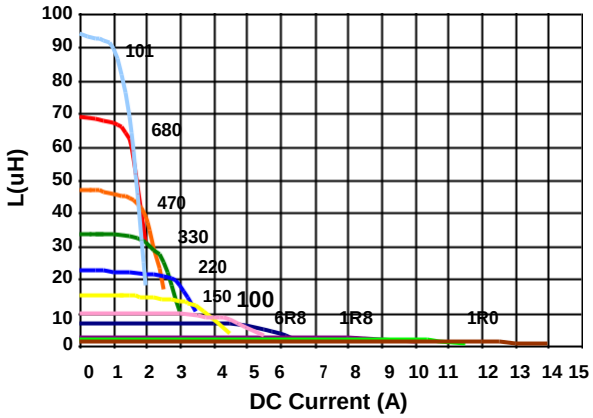
  L：Agilent HP4284A+Agilent HP42841A, 100kHz 1V

  RDC：DIGITAL MILLINHM METER CHROMA 16502, or equivalent

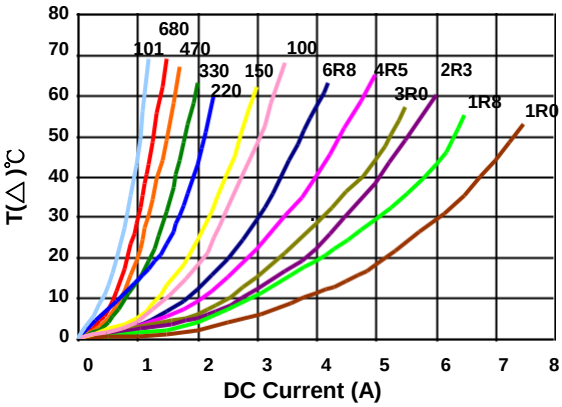
  Isat & Irms：Agilent HP4284A

**Test Instruments：**HP4284A Material/Impedance Analyzer

**Inductance vs. DC Current**




**Temperature Change vs. DC Curent**



## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) Max | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS00606045R50□L1 | 0.5 | 30 | 100 | 9 | 11(9.90) | 8.0(7.20) | R50 |
| BWVS006060452R2□L1 | 2.2 | 20, 30 | 100 | 17 | 6.8(6.12) | 5.5(4.95) | 2R2 |
| BWVS006060453R3□L1 | 3.3 | 20, 30 | 100 | 24 | 5.5(4.95) | 4.7(4.23) | 3R3 |
| BWVS006060454R7□L1 | 4.7 | 20, 30 | 100 | 30 | 4.6(4.14) | 4.0(3.60) | 4R7 |
| BWVS006060456R8□L1 | 6.8 | 20, 30 | 100 | 40 | 4.0(3.60) | 3.5(3.15) | 6R8 |
| BWVS00606045100□L1 | 10 | 20, 30 | 100 | 50 | 3.2(2.88) | 3.2(2.88) | 100 |
| BWVS00606045150□L1 | 15 | 20, 30 | 100 | 80 | 2.6(2.34) | 2.5(2.25) | 150 |
| BWVS00606045220□L1 | 22 | 20, 30 | 100 | 120 | 2.1(1.89) | 2.0(1.80) | 220 |
| BWVS00606045330□L1 | 33 | 20, 30 | 100 | 170 | 1.7(1.53) | 1.6(1.44) | 330 |
| BWVS00606045101□L1 | 100 | 20, 30 | 100 | 595 | 0.95(0.85) | 0.92(0.82) | 101 |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%**

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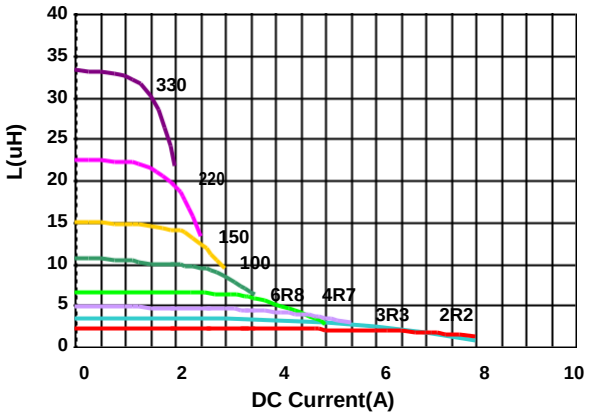
  RDC：DIGITAL MILLINHM METER CHROMA 16502, or equivalent

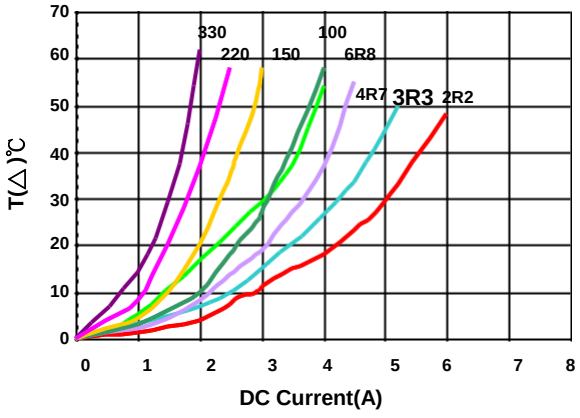
  Isat & Irms：Agilent HP4284A

**Test Instruments**：HP4284A Material/Impedance Analyzer

**Inductance vs. DC Current**




**Temperature Change vs. DC Current**



## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) ±30% | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS00808040R90□00 | 0.9 | 30 | 100 | 7 | 13.8(12.42) | 8.05(7.24) | R90 |
| BWVS008080401R0□00 | 1.0 | 30 | 100 | 7.5 | 13.0(11.70) | 7.95(7.15) | 1R0 |
| BWVS008080401R4□00 | 1.4 | 30 | 100 | 9 | 10.8(9.72) | 7.8(7.02) | 1R4 |
| BWVS008080401R5□00 | 1.5 | 30 | 100 | 9.5 | 10.0(9.00) | 7.7(6.93) | 1R5 |
| BWVS008080402R0□00 | 2.0 | 20, 30 | 100 | 11 | 9.6(8.64) | 7.4(6.66) | 2R0 |
| BWVS008080402R2□00 | 2.2 | 20, 30 | 100 | 11.5 | 9.2(8.28) | 7.2(6.48) | 2R2 |
| BWVS008080402R5□00 | 2.5 | 20, 30 | 100 | 13 | 8.2(7.38) | 6.3(5.67) | 2R5 |
| BWVS008080403R3□00 | 3.3 | 20, 30 | 100 | 15 | 7.5(6.75) | 6.0(5.40) | 3R3 |
| BWVS008080403R9□00 | 3.9 | 20, 30 | 100 | 18 | 6.1(5.40) | 5.5(4.90) | 3R9 |
| BWVS008080404R7□00 | 4.7 | 20, 30 | 100 | 18 | 6.0(5.40) | 5.5(4.95) | 4R7 |
| BWVS008080405R6□00 | 5.6 | 20, 30 | 100 | 23 | 5.7(5.13) | 5.2(4.68) | 5R6 |
| BWVS008080406R8□00 | 6.8 | 20, 30 | 100 | 25 | 5.4(4.86) | 5.1(4.59) | 6R8 |
| BWVS00808040100□00 | 10 | 20, 30 | 100 | 38 | 4.3(3.87) | 3.8(3.42) | 100 |
| BWVS00808040120□00 | 12 | 20, 30 | 100 | 45 | 3.8(3.42) | 3.5(3.15) | 120 |
| BWVS00808040150□00 | 15 | 20, 30 | 100 | 50 | 3.6(3.24) | 3.2(2.88) | 150 |
| BWVS00808040180□00 | 18 | 20, 30 | 100 | 68 | 3.1(2.79) | 2.7(2.43) | 180 |
| BWVS00808040220□00 | 22 | 20, 30 | 100 | 80 | 2.8(2.52) | 2.6(2.34) | 220 |
| BWVS00808040330□00 | 33 | 20, 30 | 100 | 110 | 2.3(2.07) | 2.0(1.80) | 330 |
| BWVS00808040470□00 | 47 | 20, 30 | 100 | 160 | 1.9(1.71) | 1.75(1.57) | 470 |
| BWVS00808040680□00 | 68 | 20, 30 | 100 | 240 | 1.7(1.53) | 1.45(1.30) | 680 |
| BWVS00808040101□00 | 100 | 20, 30 | 100 | 340 | 1.4(1.26) | 1.10(0.99) | 101 |
| BWVS00808040121□00 | 120 | 20, 30 | 100 | 425 | 1.1(0.99) | 1.0(0.90) | 121 |
| BWVS00808040151□00 | 150 | 20, 30 | 100 | 480 | 1.0(0.90) | 0.9(0.81) | 151 |
| BWVS00808040181□00 | 180 | 20, 30 | 100 | 650 | 0.98(0.88) | 0.7(0.63) | 181 |
| BWVS00808040221□00 | 220 | 20, 30 | 100 | 670 | 0.94(0.84) | 0.60(0.54) | 221 |
| BWVS00808040271□00 | 270 | 20, 30 | 100 | 900 | 0.83(0.74) | 0.55(0.49) | 271 |
| BWVS00808040821□00 | 820 | 20, 30 | 100 | 2800 | 0.40(0.36) | 0.38(0.34) | 821 |

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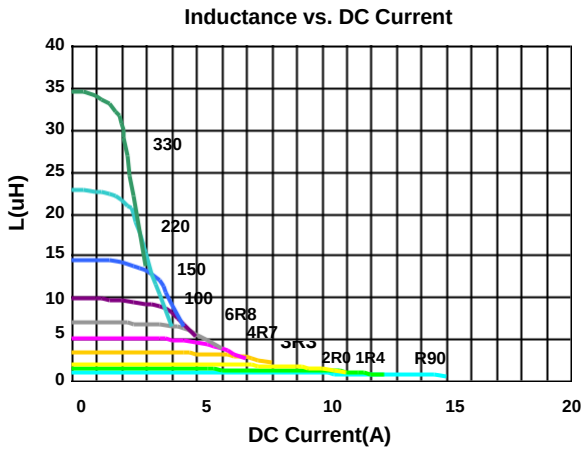


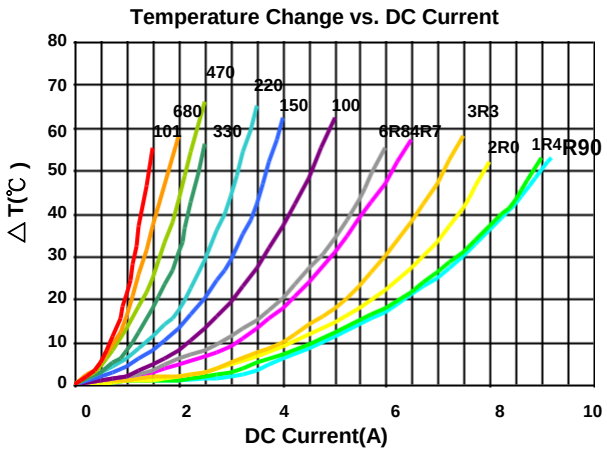

## Electrical Characteristics

| Part Number | Inductance (uH) | Tolerance (±%) | Test Frequency (kHz) | RDC (mΩ) Max | Isat (A) Typ. (Max) | Irms (A) Typ. (Max) | Marking |
|---|---|---|---|---|---|---|---|
| BWVS008080401R0□L1 | 1.0 | 30 | 100 | 10 | 9.5(8.55) | 8.5(7.65) | 1R0 |
| BWVS008080402R2□L1 | 2.2 | 20,30 | 100 | 12 | 7.2(6.48) | 7.3(6.57) | 2R2 |
| BWVS008080403R3□L1 | 3.3 | 20,30 | 100 | 19 | 5.6(5.04) | 6.0(5.40) | 3R3 |
| BWVS008080404R7□L1 | 4.7 | 20,30 | 100 | 22 | 4.4(3.96) | 5.0(4.50) | 4R7 |
| BWVS008080408R2□L1 | 8.2 | 20,30 | 100 | 37 | 3.6(3.24) | 3.8(3.42) | 8R2 |
| BWVS00808040100□L1 | 10 | 20,30 | 100 | 42 | 3.1(2.79) | 3.5(3.15) | 100 |
| BWVS00808040150□L1 | 15 | 20,30 | 100 | 58 | 2.5(2.25) | 3.0(2.70) | 150 |
| BWVS00808040220□L1 | 22 | 20,30 | 100 | 85 | 2.0(1.80) | 2.5(2.25) | 220 |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , T =±30%**

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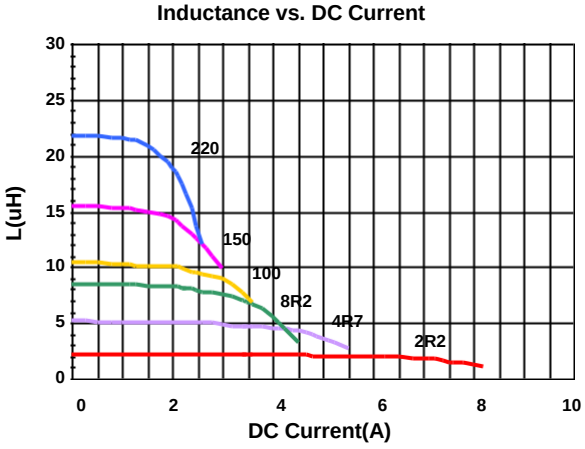
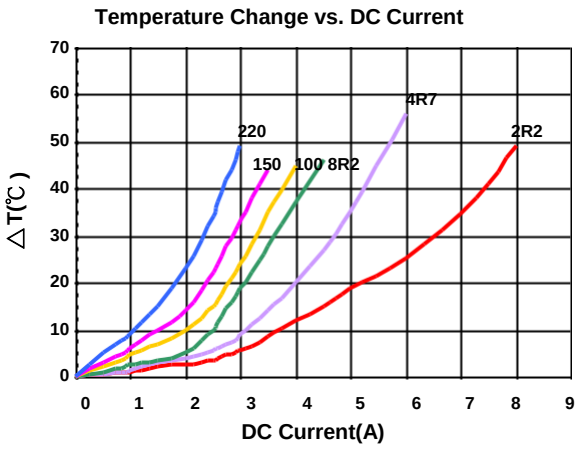
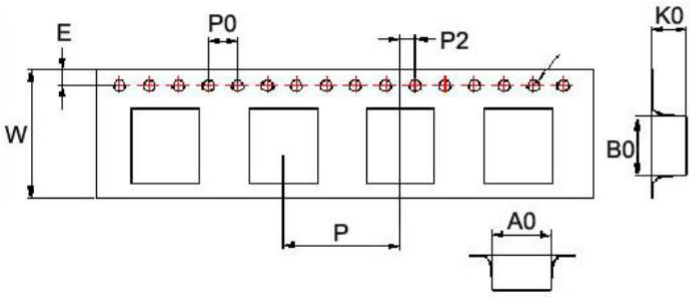


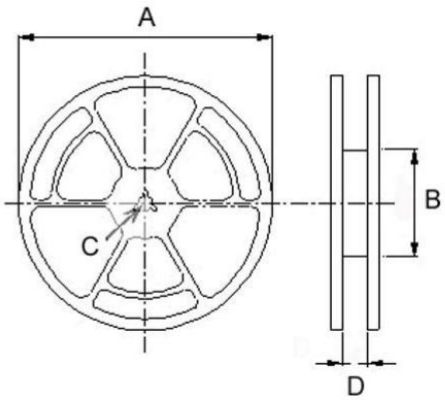



## Packaging Specifications

**Tape Dimensions**




**Reel Dimensions**




**Dimensions in mm**

| TYPE | Tape Dimensions | | | | | | | | | | Reel Dimensions | | | | Quantity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A0 | B0 | K0 | D | E | F | W | P | P0 | P2 | A | B | C | D | PCS / Reel |
| BWVS00404012 | 4.25 | 4.25 | 1.30 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 180 | 60 | 13 | 13.2 | 1000 |
| BWVS00404018 | 4.25 | 4.25 | 2.10 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 180 | 60 | 13 | 13.2 | 800 |
| BWVS00404026 | 4.25 | 4.25 | 3.00 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 180 | 60 | 13 | 13.2 | 500 |
| BWVS00505020 | 5.25 | 5.25 | 2.20 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 2000 |
| BWVS00505040 | 5.20 | 5.20 | 4.20 | 1.55 | 1.75 | 5.5 | 12 | 8 | 4 | 2 | 330 | 100 | 13 | 13.4 | 1500 |
| BWVS00606020 | 6.25 | 6.25 | 2.20 | 1.55 | 1.75 | 7.5 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 2000 |
| BWVS00606028 | 6.25 | 6.25 | 3.00 | 1.55 | 1.75 | 7.5 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1500 |
| BWVS00606045 | 6.25 | 6.25 | 4.65 | 1.55 | 1.75 | 7.5 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1000 |
| BWVS00808040 | 8.25 | 8.25 | 4.15 | 1.55 | 1.75 | 7.5 | 16 | 12 | 4 | 2 | 330 | 100 | 13 | 16.0 | 1000 |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Pulse:

BWVS00404018100M00 BWVS00404018101M00 BWVS00404018150M00 BWVS004040181R0M00
BWVS004040181R5M00 BWVS00404018220M00 BWVS00808040150M00 BWVS00808040220M00
BWVS008080402R2M00 BWVS008080403R3M00 BWVS00808040470M00 BWVS008080404R7M00
BWVS00606045470M00 BWVS006060454R7M00 BWVS006060454R7ML1 BWVS006060456R8M00
BWVS00808040100M00 BWVS00808040101M00 BWVS00606045100ML1 BWVS00606045101M00
BWVS00606045150M00 BWVS00606045220M00 BWVS006060452R2M00 BWVS006060453R3M00
BWVS005050406R8M00 BWVS00606028100M00 BWVS006060282R2M00 BWVS00606028330M00
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BWVS004040121R5T00 BWVS00404012220M00 BWVS00404012220T00 BWVS004040122R2M00
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