

BWVT Series



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

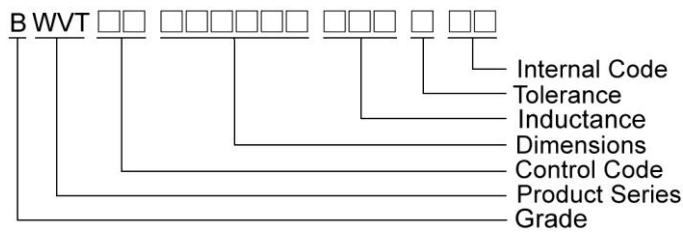
Features

- 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

- Smartphones, tablets and wearable devices
- DSC, camcorders
- AP Routers
- STBs
- LCD TVs, monitors and panels
- Game consoles
- DC/DC converters

Product Identification



Shape and Dimensions

Figure 1

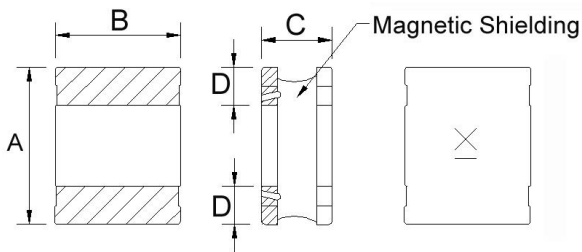
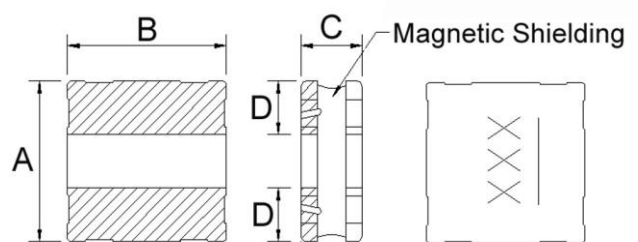


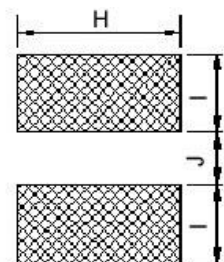
Figure 2



Dimensions in mm

TYPE	FIG	A	B	C	D	H	I	J
BWVT00201610	1	2.0±0.25	1.6±0.25	1.00Max	0.6	1.8	0.80	0.8
BWVT00252010	1	2.5±0.25	2.0±0.25	1.02 Max	0.8	2.2	0.85	0.8
BWVT00252012	1	2.5±0.25	2.0±0.25	1.2±0.05	0.8	2.2	0.85	0.8
BWVT00303010	2	3.0±0.20	3.0±0.20	1.02 Max	1.0	3.2	1.1	1.0
BWVT00303012	2	3.0±0.20	3.0±0.20	1.20 Max	1.0	3.2	1.1	1.0
BWVT00404012	2	4.0±0.20	4.0±0.20	1.2±0.1	1.5	4.2	1.5	1.2

Recommended Pattern



Sealed Power Inductors – BWVT Series

Shape and Dimensions

Figure 3

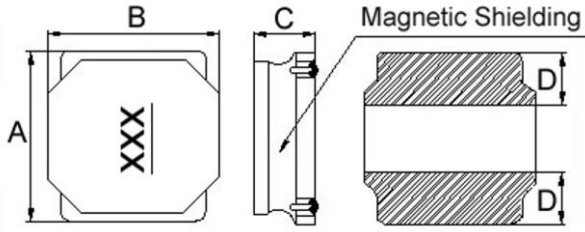
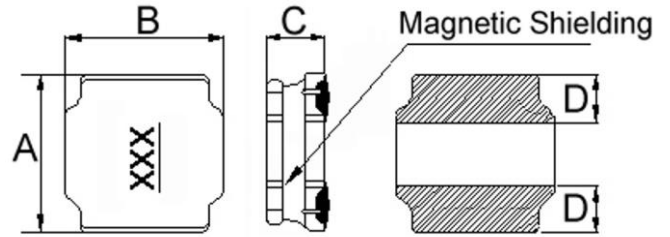


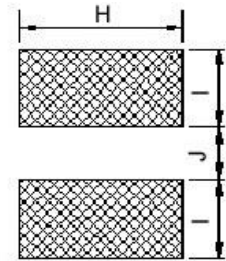
Figure 4



Dimensions in mm

TYPE	FIG	A	B	C	D	H	I	J
BWVT00404015	3	4.0±0.25	4.0±0.25	1.5±0.2	1.3	3.7	1.5	1.2
BWVT00404026	3	4.0±0.20	4.0±0.20	2.6±0.2	1.4	3.7	1.6	1.2
BWVT00505020	4	5.0±0.2	5.0±0.2	2.0±0.2	1.8±0.3	4.2	1.6	2.0
BWVT00606020	4	6.0±0.2	6.0±0.2	2.0±0.2	1.7±0.3	5.7	1.7	2.8
BWVT00808040	4	8.0±0.2	8.0±0.2	4.0 ^{+0.2} _{-0.30}	2.3±0.3	7.5	2.5	3.4

Recommended Pattern



Sealed Power Inductors – BWVT Series

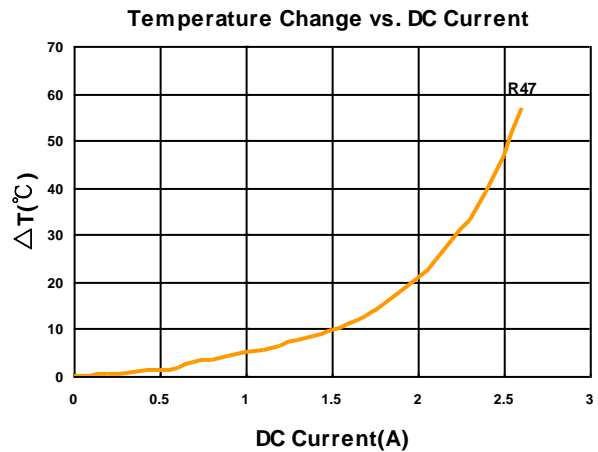
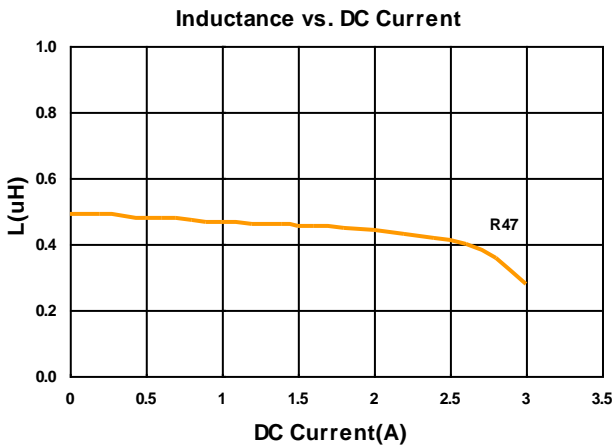
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (mΩ) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00201610R47□00	0.47	20, 30	1	72	2.4(2.16)	2.4(2.16)	A

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

- Operating temperature range –55°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : HP4285A+HP42841A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



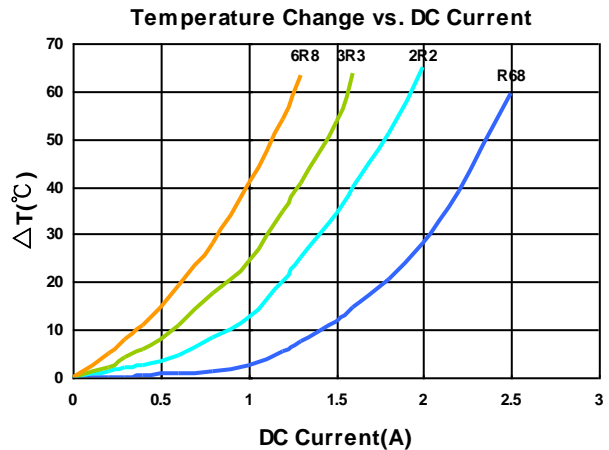
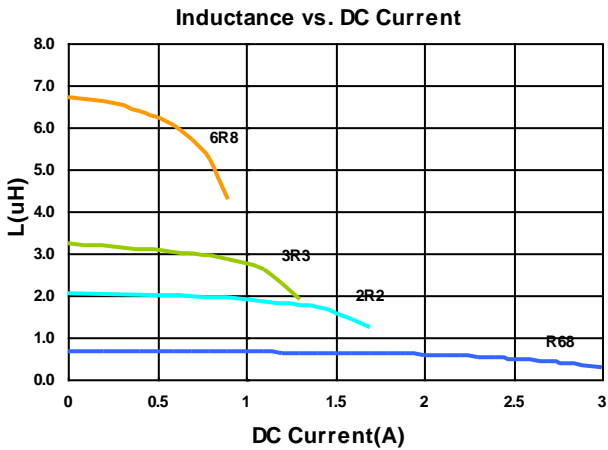
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00252010R68□00	0.68	20, 30	1	0.050	2.40(2.160)	2.20(1.980)	K
BWVT002520102R2□00	2.2	20, 30	1	0.135	1.42(1.270)	1.55(1.390)	D
BWVT002520103R3□00	3.3	20, 30	1	0.220	1.12(1.000)	1.20(1.080)	E
BWVT002520106R8□00	6.8	20, 30	1	0.435	0.78(0.700)	0.84(0.750)	G

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

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Sealed Power Inductors – BWVT Series

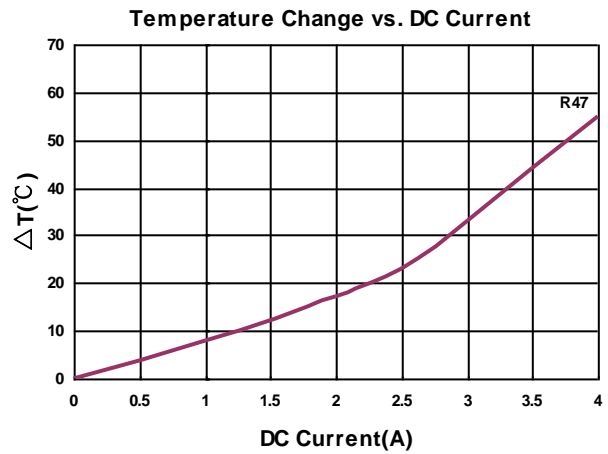
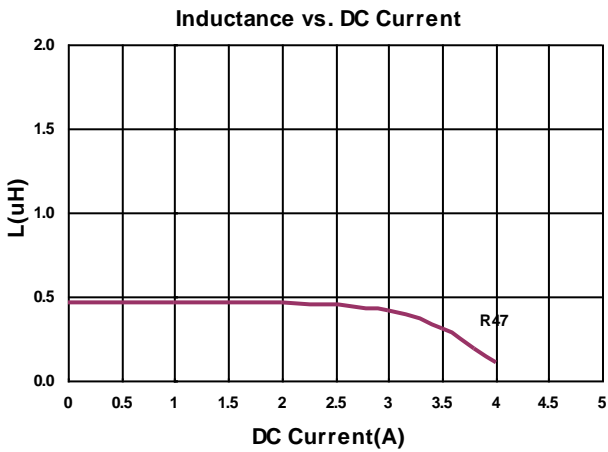
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00252012R47□00	0.47	20, 30	1	0.027	3.70(3.330)	3.10(2.790)	A

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

- Operating temperature range –55°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : HP4285A+HP42841A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



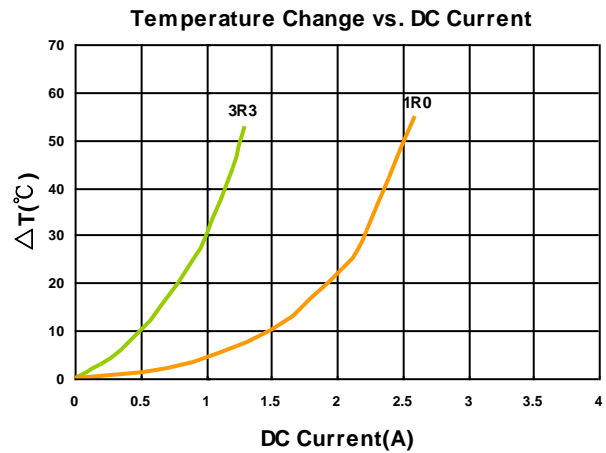
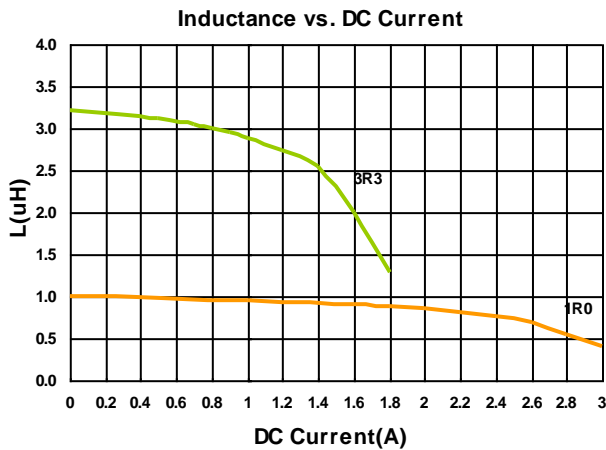
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT003030101R0□00	1.0	20, 30	1	0.063	2.4(2.16)	2.3(2.07)	1R0
BWVT003030103R3□00	3.3	20, 30	1	0.165	1.2(1.08)	1.1(0.99)	3R3

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

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- Irms for a 40°C temperature rise from 25°C 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



Sealed Power Inductors – BWVT Series

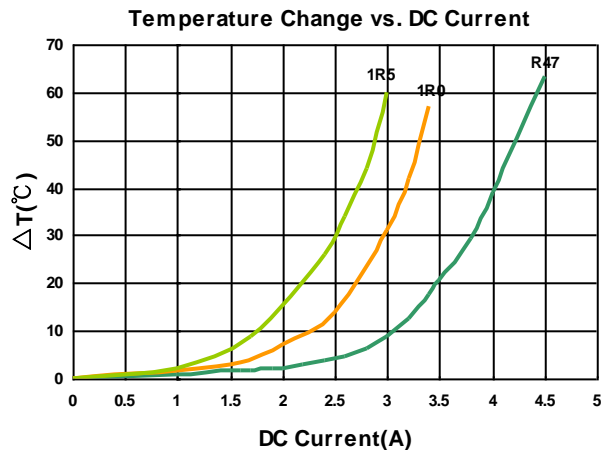
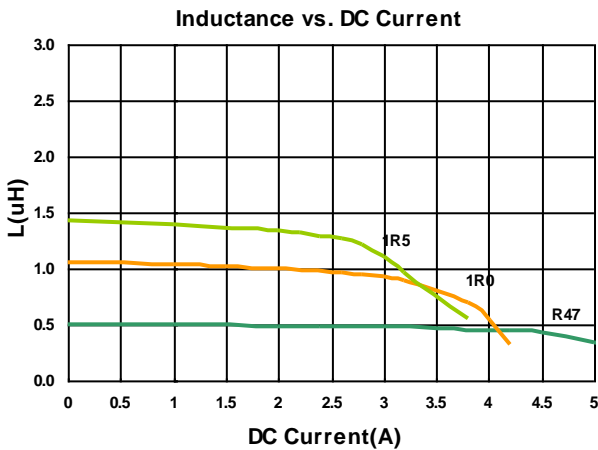
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00303012R47□00	0.47	20, 30	1	0.032	4.3(3.87)	4.0(3.60)	R47
BWVT003030121R0□00	1.0	20, 30	1	0.060	3.1(2.79)	3.0(2.70)	1R0
BWVT003030121R5□00	1.5	20, 30	1	0.072	2.7(2.43)	2.6(2.34)	1R5

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

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- Irms for a 40°C temperature rise from 25°C 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



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.

Sealed Power Inductors – BWVT Series

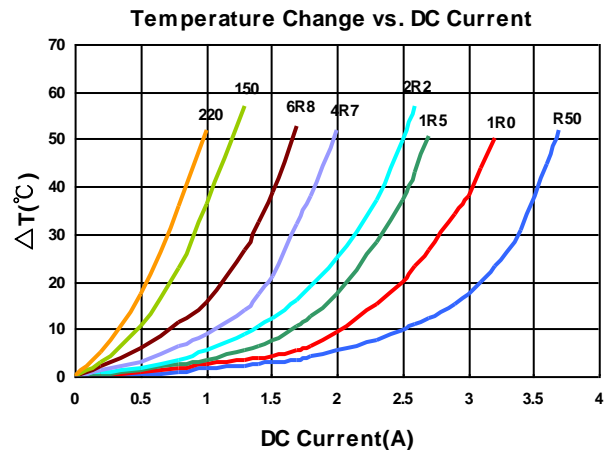
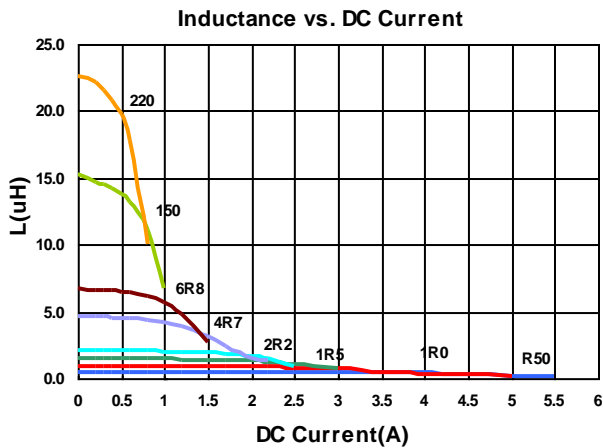
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00404012R50□00	0.5	20, 30	1	0.030	3.90(3.51)	3.50(3.15)	R50
BWVT004040121R0□00	1.0	20, 30	1	0.040	2.90(2.60)	3.00(2.70)	1R0
BWVT004040121R5□00	1.5	20, 30	1	0.051	2.30(2.07)	2.50(2.25)	1R5
BWVT004040122R2□00	2.2	20, 30	1	0.060	1.90(1.71)	2.30(2.07)	2R2
BWVT004040124R7□00	4.7	20, 30	1	0.094	1.32(1.18)	1.80(1.62)	4R7
BWVT004040126R8□00	6.8	20, 30	1	0.135	1.08(0.97)	1.50(1.35)	6R8
BWVT00404012150□00	15	20, 30	1	0.260	0.78(0.70)	1.00(0.90)	150
BWVT00404012220□00	22	20, 30	1	0.390	0.62(0.55)	0.80(0.72)	220

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

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- Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



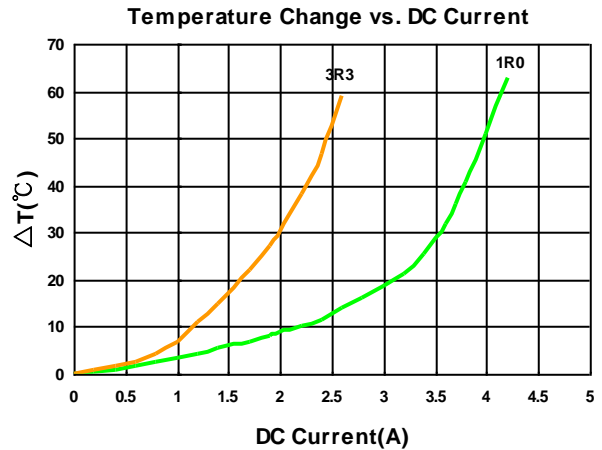
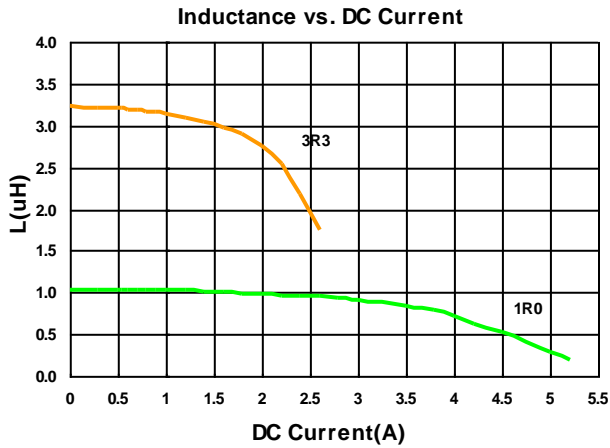
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT004040151R0□00	1.0	20, 30	1	0.034	3.60(3.24)	3.70(3.33)	1R0
BWVT004040153R3□00	3.3	20, 30	1	0.080	2.00(1.80)	2.20(1.98)	3R3

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

- Operating temperature range –55°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : HP4285A+HP42841A, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



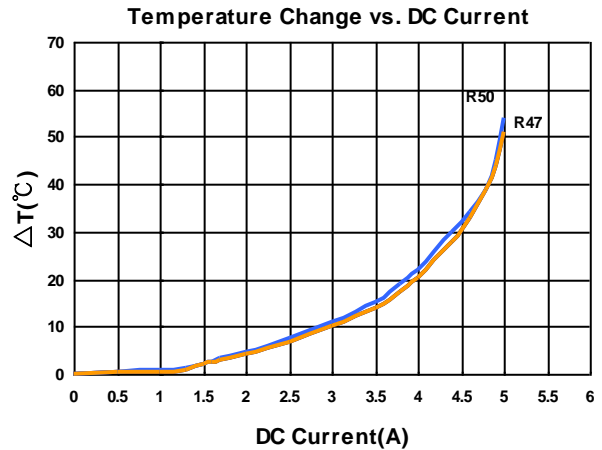
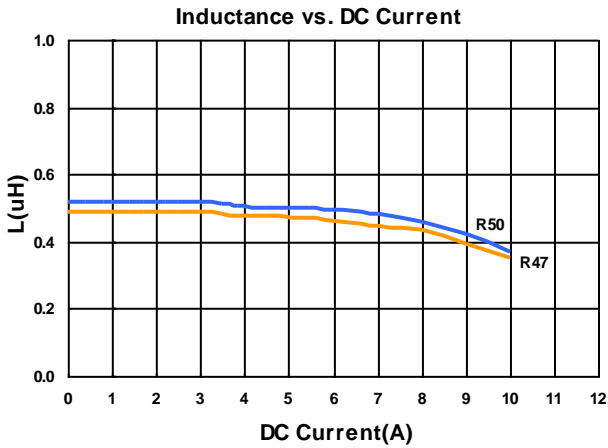
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (kHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00404026R47□00	0.47	20, 30	100	0.024	7.20(6.48)	4.80(4.32)	R47
BWVT00404026R50□00	0.50	20, 30	100	0.024	7.20(6.48)	4.80(4.32)	R50

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

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- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : HP4285A+ HP42841A, 100kHz 1V
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & Irms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer



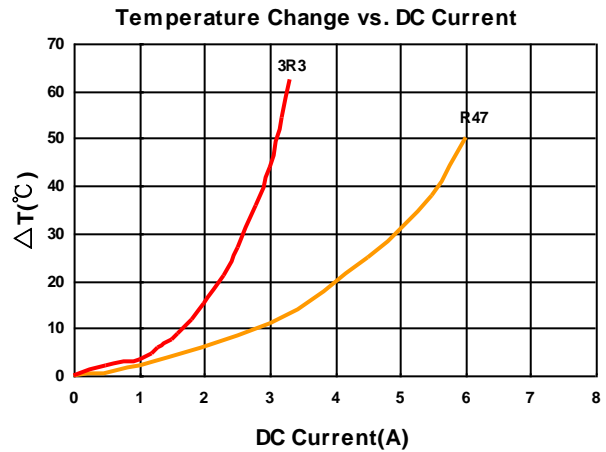
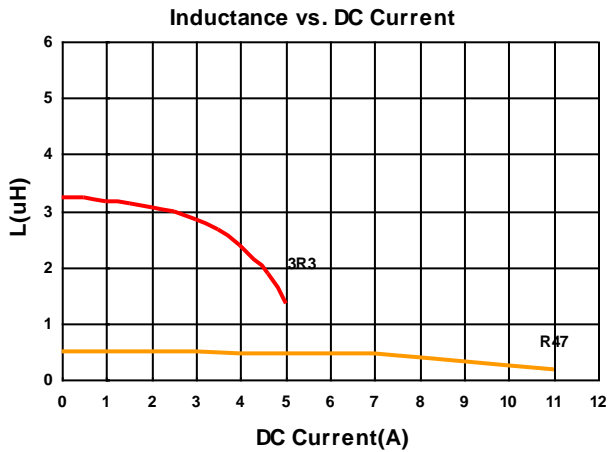
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (kHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT00505020R47□00	0.47	20, 30	100	0.0135	8.0(7.2)	5.5(5.0)	R47
BWVT005050203R3□00	3.3	20, 30	100	0.050	3.4(3.06)	2.7(2.43)	3R3

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

- Operating temperature range -55°C ~ 125°C (Including self - temperature rise)
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Test Instruments : HP4284A Material/Impedance Analyzer



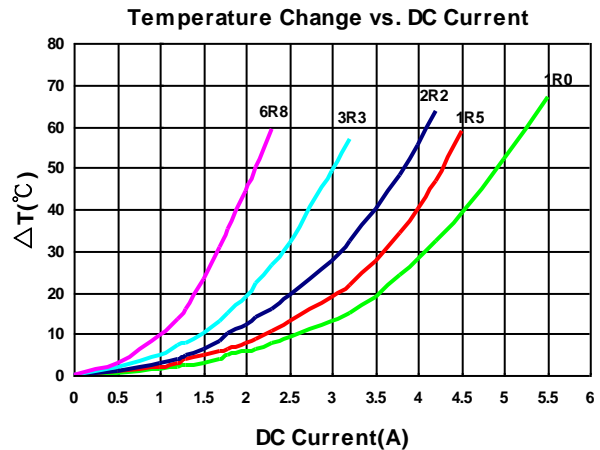
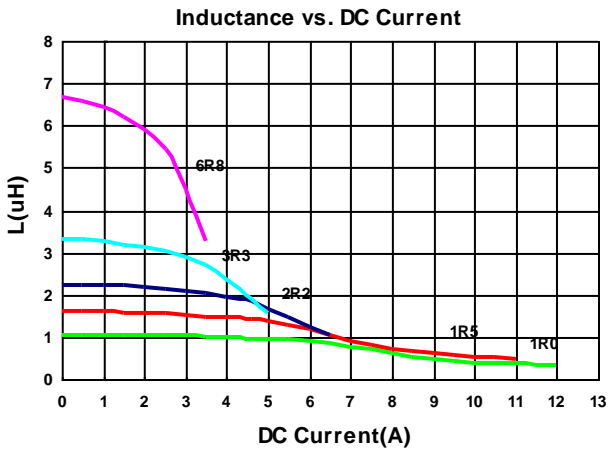
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (kHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT006060201R0□00	1.0	20, 30	100	0.019	6.4(5.76)	4.2(3.78)	1R0
BWVT006060201R5□00	1.5	20, 30	100	0.026	5.4(4.86)	3.7(3.33)	1R5
BWVT006060202R2□00	2.2	20, 30	100	0.034	4.5(4.05)	3.3(2.97)	2R2
BWVT006060203R3□00	3.3	20, 30	100	0.045	3.6(3.24)	2.8(2.52)	3R3
BWVT006060206R8□00	6.8	20, 30	100	0.085	2.6(2.34)	1.9(1.71)	6R8

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

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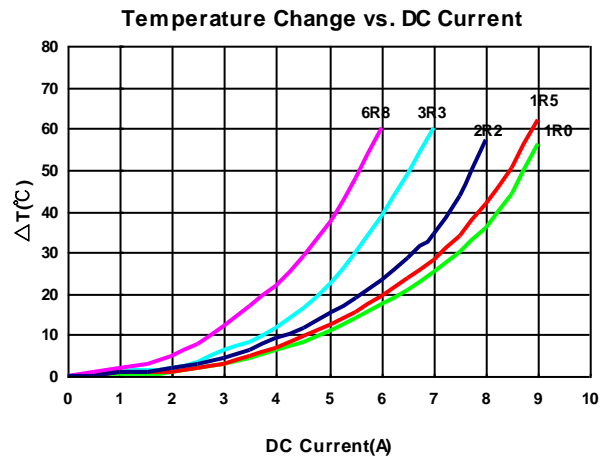
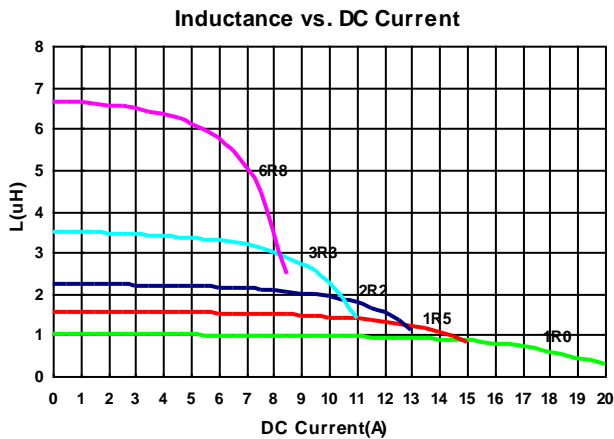
Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (kHz)	RDC (Ω) ±30%	Isat (A) Typ. (Max)	Irms (A) Typ. (Max)	Marking
BWVT008080401R0□00	1.0	20, 30	100	0.0075	13.5(12.15)	8.1(7.29)	1R0
BWVT008080401R5□00	1.5	20, 30	100	0.0097	10.5(9.45)	7.7(6.93)	1R5
BWVT008080402R2□00	2.2	20, 30	100	0.012	9.7(8.73)	7.2(6.48)	2R2
BWVT008080403R3□00	3.3	20, 30	100	0.047	8.0(7.20)	5.9(5.31)	3R3
BWVT008080406R8□00	6.8	20, 30	100	0.029	5.8(5.22)	4.9(4.41)	6R8

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

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Isat & I rms : Agilent HP4284A

Test Instruments : HP4284A Material/Impedance Analyzer

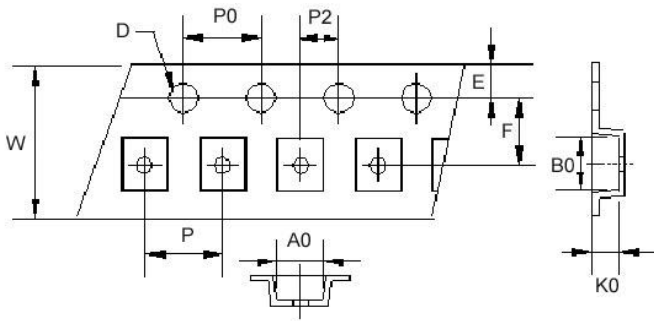


Sealed Power Inductors – BWVT Series

Packaging Specifications

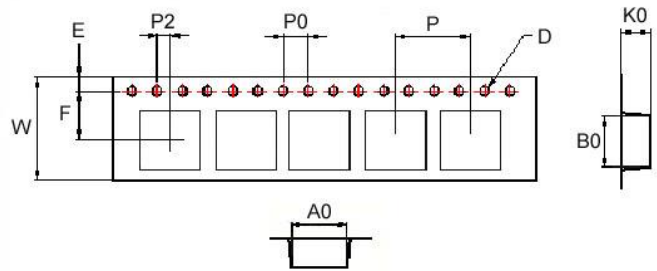
Tape Dimensions

Figure 1



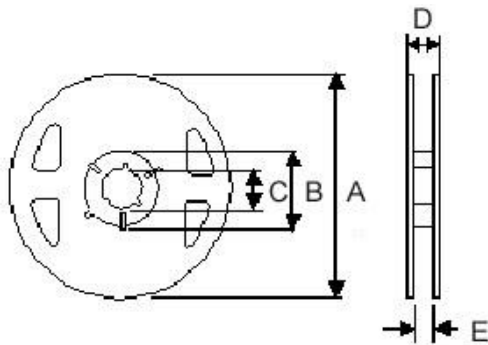
Tape Dimensions

Figure 2



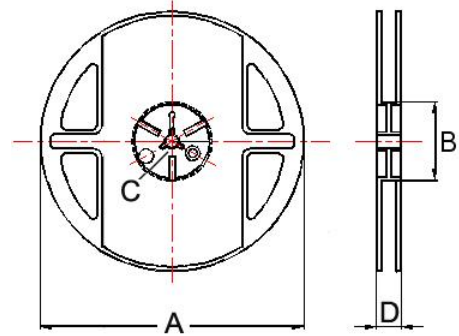
Reel Dimensions

Figure 1



Reel Dimensions

Figure 2



Dimensions in mm

TYPE	Fig	Tape Dimensions										Reel Dimensions					Quantity PCS / Reel
		A0	B0	K0	D	E	F	W	P	P0	P2	A	B	C	D	E	
BWVT00201610	1	1.90	2.20	1.15	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWVT00252010	1	2.40	2.70	1.15	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWVT00252012	1	2.40	2.70	1.35	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWVT00303010	1	3.20	3.20	1.40	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWVT00303012	1	3.20	3.20	1.40	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWVT00404012	2	4.25	4.25	1.30	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	1000
BWVT00404015	2	4.25	4.25	1.70	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	1000
BWVT00404026	2	4.25	4.25	3.00	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	500
BWVT00505020	2	5.25	5.25	2.20	1.55	1.75	5.5	12	8	4	2	330	100	13	13.4	-	2000
BWVT00606020	2	6.25	6.25	2.20	1.55	1.75	5.5	12	8	4	2	330	100	13	13.4	-	2000
BWVT00808040	2	8.25	8.25	4.15	1.55	1.75	7.5	16	12	4	2	330	100	13	16.0	-	1000