BWQC Series



The BWQC Series is a type of miniature wire-wound chip inductor designed on a special ferrite core. They are excellent for use in DC power supply circuits.

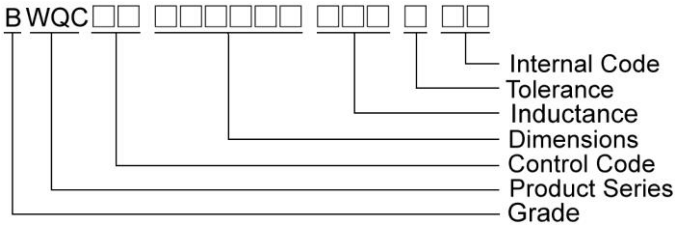
Features

- RoHS compliant
- Low DC resistance, high current capacity, and high impedance characteristics
- Excellent solder heat resistance
- Both flow and reflow soldering methods can be employed
- Available in 4 sizes

Applications

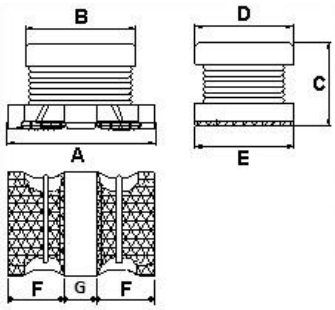
- Personal computers
- Disk drives and computer peripherals
- Pagers, cordless phone
- DC power supply circuit

Product Identification

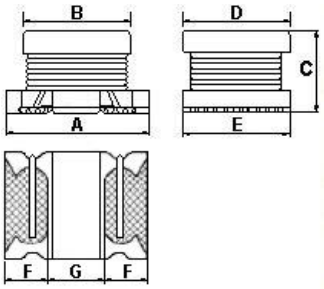


Shape and Dimensions

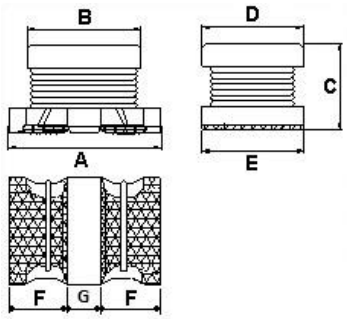
BWQC00322520/322520_L1



BWQC00322516/322516_H1



BWQC00453226

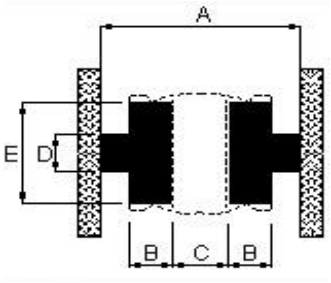


Dimensions in mm

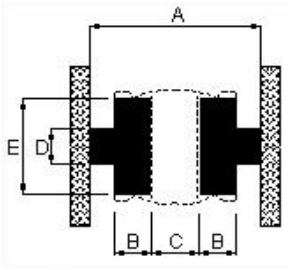
TYPE	A	B	C	D	E	F	G
BWQC00322516	3.2 ± 0.3	2.5 ± 0.2	1.55± 0.15	2.5 ± 0.2	2.5 ± 0.2	0.95 ± 0.3	1.3 ± 0.2
BWQC00322516_H1	3.2 ± 0.3	2.5 ± 0.2	1.55± 0.15	2.5 ± 0.2	2.5 ± 0.2	0.95 ± 0.3	1.3 ± 0.2
BWQC00322520	3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	2.5 ± 0.2	2.5 ± 0.2	0.95 ± 0.3	1.3 ± 0.2
BWQC00322520_L1	3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	2.5 ± 0.2	2.5 ± 0.2	0.95 ± 0.3	1.3 ± 0.2
BWQC00453226	4.5 ± 0.3	3.6 ± 0.2	2.6 ± 0.2	3.2 ± 0.2	3.2 ± 0.2	1.45 ± 0.3	1.6 ± 0.2

Recommended Pattern

BWQC00322516/322516_H1



BWQC00322520/322520_L1/453226



Dimensions in mm

TYPE	A	B	C	D	E
BWQC00322516	5.5	1.0	1.3	1.0	2.0
BWQC00322516_H1	5.5	1.0	1.3	1.0	2.0
BWQC00322520	5.5	1.0	1.3	1.0	2.0
BWQC00322520_L1	5.5	1.0	1.3	1.0	2.0
BWQC00453226	7.5	1.5	1.5	1.5	3.0

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω±20%)	Rated current (mA)	Irms (mA)
BWQC00322516R47□H1	0.47	30	1	100	0.030	3400	2550
BWQC003225161R0□H1	1.0	30 / 20	1	100	0.045	2300	2050
BWQC003225161R5□H1	1.5	30	1	70	0.057	1750	1750
BWQC003225162R2□H1	2.2	30 / 20	1	70	0.076	1550	1600
BWQC003225163R3□H1	3.3	30 / 20	1	50	0.120	1250	1200
BWQC003225164R7□H1	4.7	30 / 20	1	40	0.180	1000	1000
BWQC003225166R8□H1	6.8	30 / 20	1	40	0.240	850	850
BWQC00322516100□H1	10	30 / 20	1	30	0.380	750	700
BWQC00322516150□H1	15	30 / 20	1	25	0.700	550	500
BWQC00322516220□H1	22	30 / 20	1	20	0.810	500	450
BWQC00322516330□H1	33	30 / 20	1	14	1.050	360	320
BWQC00322516470□H1	47	30 / 20	1	11	1.480	280	240

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

- Operating temperature range－40℃～125℃(Including self - temperature rise)
- Rated Current：Self temperature rise shall be limited to 35℃ Max Inductance drop 10% typ.
- Measure Equipment：
  L：Agilent HP4192A
  SRF：Agilent HP4291A
  RDC：Chroma 16502
  Rate Current：HP4284A+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.

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Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω±30%)	Rated current (mA)
BWQC003225162R2□00	2.2	20	1	64	0.097	790
BWQC003225163R3□00	3.3	20	1	50	0.12	710
BWQC003225166R8□00	6.8	20	1	32	0.25	540
BWQC00322516100□00	10	20 / 10	1	26	0.30	350
BWQC00322516220□00	22	20 / 10	1	19	0.71	250
BWQC00322516101□00	100	20 / 10	1	10	3.50	100

Note: When ordering, please specify tolerance code. Tolerance : K=±10% , M=±20%

- Operating temperature range－40℃～125℃(Including self - temperature rise)
- Rated Current for Inductance drop 10% from its value with current
- Measure Equipment：
  L：Agilent HP4192A
  SRF：Agilent HP4287A
  RDC：Chroma 16502

Electrical Characteristics (LOW DCR Type)

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω±30%)	Rated current (mA)
BWQC00322520R15□L1	0.15	20	1	400	0.028	1450
BWQC00322520R27□L1	0.27	20	1	250	0.034	1250
BWQC00322520R47□L1	0.47	20	1	150	0.042	1100
BWQC003225201R0□L1	1.0	20	1	100	0.060	1000
BWQC003225201R5□L1	1.5	20	1	85	0.085	900
BWQC003225202R2□L1	2.2	20	1	64	0.097	790
BWQC003225203R3□L1	3.3	20	1	55	0.13	700
BWQC003225204R7□L1	4.7	20 / 10	1	43	0.15	650
BWQC003225206R8□L1	6.8	20	1	30	0.21	600
BWQC00322520100□L1	10	20 / 10	1	26	0.30	450

Note: When ordering, please specify tolerance code. Tolerance : K=±10% , M=±20%

- Operating temperature range－40℃～125℃(Including self - temperature rise)
- Rated Current：Self temperature rise shall be limited to 35℃ Max Inductance drop 10% typ.
- Measure Equipment：
  L：Agilent HP4192A
  SRF：Agilent HP4291A
  RDC：Chroma 16502
  Rate Current：HP4284A+HP42841A

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CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω±30%)	Rated current (mA)
BWQC00322520R47□00	0.47	20	1	150	0.042	1100
BWQC003225201R0□00	1.0	20	1	96	0.09	1000
BWQC003225202R2□00	2.2	20	1	64	0.13	600
BWQC003225203R3□00	3.3	20 / 10	1	60	0.15	600
BWQC003225203R9□00	3.9	20	1	50	0.16	500
BWQC003225204R7□00	4.7	20	1	43	0.20	450
BWQC003225206R8□00	6.8	20	1	30	0.26	400
BWQC00322520100□00	10	20 / 10	1	26	0.44	300
BWQC00322520150□00	15	20 / 10	1	22	0.55	350
BWQC00322520220□00	22	20 / 10	1	19	0.71	250
BWQC00322520270□00	27	20 / 10	1	15	0.90	230
BWQC00322520330□00	33	20 / 10	1	15	1.10	200
BWQC00322520470□00	47	20 / 10	1	15	1.30	170
BWQC00322520560□00	56	20 / 10	1	12	2.30	150
BWQC00322520101□00	100	20 / 10	1	10	3.50	100
BWQC00322520151□00	150	20 / 10 / 5	1	7	6.00	80
BWQC00322520221□00	220	20 / 10 / 5	1	6.8	8.40	70
BWQC00322520271□00	270	20 / 10	1	6	10.0	65
BWQC00322520331□00	330	20 / 10 / 5	1	5.6	10.0	60
BWQC00322520391□00	390	20 / 10	1	5	17.0	60
BWQC00322520471□00	470	20 / 10	0.001	5	19.0	60
BWQC00322520561□00	560	20 / 10	0.001	5	22.0	60

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10% , M=±20%

- Operating temperature range－40℃～125℃(Including self - temperature rise)
- Rated Current：Self temperature rise shall be limited to 35℃ Max Inductance drop 10% typ.
- Measure Equipment：
  L：Agilent HP4192A
  SRF：Agilent HP4291A
  RDC：Chroma 16502
  Rate Current：HP4284A+HP42841A

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CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max.	Rated current (mA)
BWQC004532261R0□00	1.0	20	1	100	0.08	1080
BWQC004532261R5□00	1.5	20	1	85	0.09	1000
BWQC004532261R8□00	1.8	20	1	65	0.10	900
BWQC004532262R2□00	2.2	20 / 10	1	60	0.11	900
BWQC004532263R3□00	3.3	20	1	47	0.13	800
BWQC004532264R7□00	4.7	20 / 10	1	35	0.15	750
BWQC004532266R8□00	6.8	20 / 10	1	30	0.20	720
BWQC00453226100□00	10	20 / 10 / 5	1	23	0.24	650
BWQC00453226150□00	15	20 / 10 / 5	1	20	0.32	570
BWQC00453226220□00	22	20 / 10 / 5	1	15	0.60	420
BWQC00453226330□00	33	20 / 10 / 5	1	12	1.0	310
BWQC00453226470□00	47	20 / 10 / 5	1	10	1.1	280
BWQC00453226680□00	68	20 / 10 / 5	1	8.4	1.7	220
BWQC00453226101□00	100	20 / 10 / 5	1	6.8	2.2	190
BWQC00453226151□00	150	20 / 10 / 5	1	5.5	3.5	130
BWQC00453226221□00	220	20 / 10 / 5	1	4.5	4.0	110
BWQC00453226331□00	330	20 / 10 / 5	1	3.6	6.8	100
BWQC00453226471□00	470	20 / 10 / 5	1	3.0	8.5	90
BWQC00453226561□00	560	20 / 10 / 5	0.001	2.5	10.4	80
BWQC00453226681□00	680	20 / 10 / 5	0.001	2.2	14.7	70
BWQC00453226821□00	820	20 / 10 / 5	0.001	2.0	20.0	60
BWQC00453226102□00	1000	20 / 10 / 5	0.001	2.0	27.9	50
BWQC00453226152□00	1500	20 / 10 / 5	0.001	1.8	35.0	40

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10% , M=±20%

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- Measure Equipment：
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  SRF：Agilent HP4291A
  RDC：Chroma 16502
  Rate Current：HP4284A+HP42841A

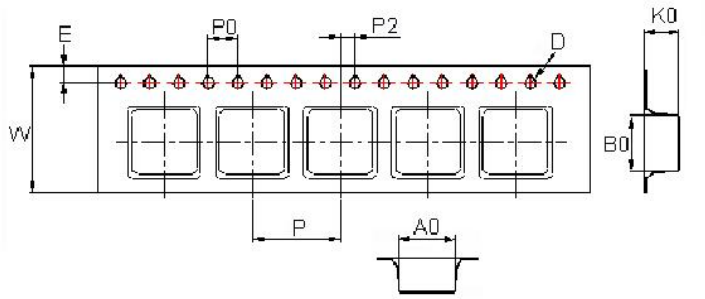
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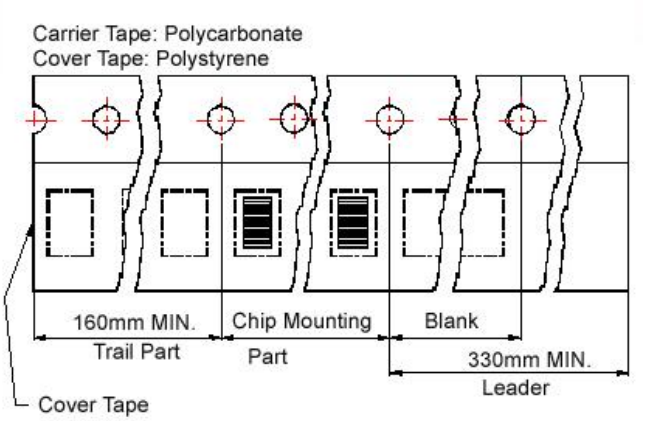
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Packaging Specifications

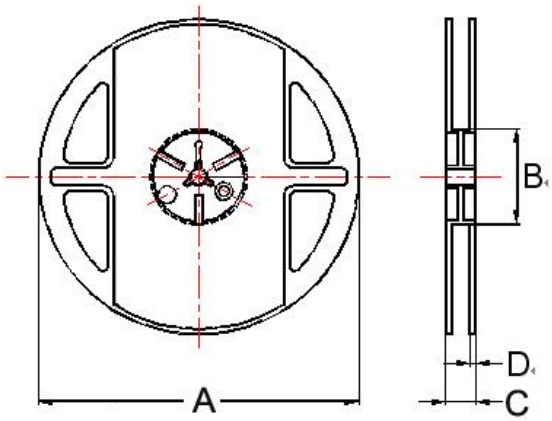
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions									Reel Dimensions				Quantity
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	PCS / REEL
BWQC00322516	2.85	3.56	1.80	1.55	1.75	8	4	4	2	178	60	9	1.5	2000
BWQC00322516_H1	2.85	3.56	1.80	1.55	1.75	8	4	4	2	178	60	9	1.5	2000
BWQC00322520	2.85	3.60	2.25	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
BWQC00322520_L1	2.85	3.60	2.25	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
BWQC00453226	3.60	4.90	3.00	1.5	1.75	12	8	4	2	178	60	13.2	1.5	500