

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.

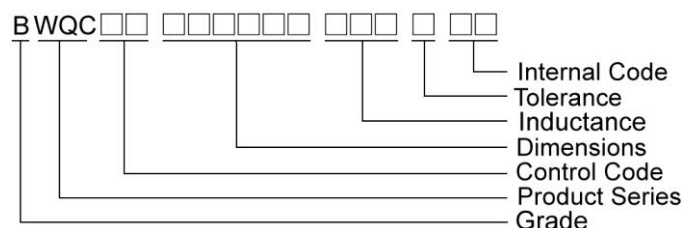
Features

- 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

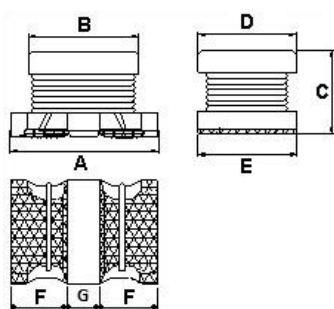
- Personal computers
- Disk drives and computer peripherals
- Pagers, cordless phone
- DC power supply circuit

Product Identification

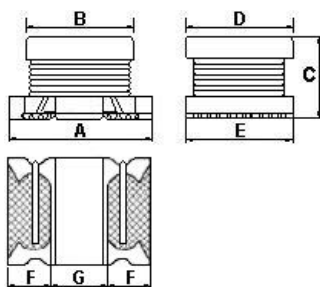


Shape and Dimensions

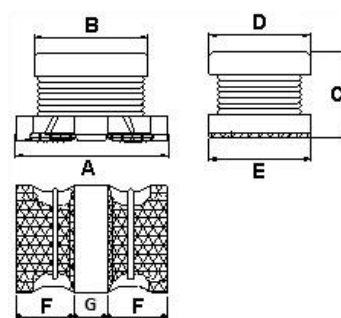
BWQC00322520/322520_L1



BWQC00322516/322516_H1



BWQC00453226



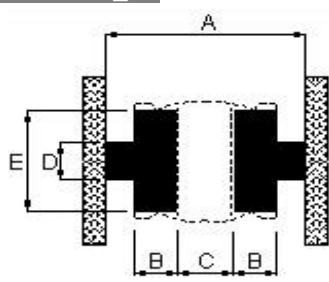
Dimensions in mm

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

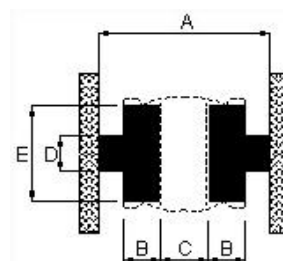
SMD Wire Wound Ferrite Chip Inductors - BWQC Series

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

SMD Wire Wound Ferrite Chip Inductors - BWQC Series

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

SMD Wire Wound Ferrite Chip Inductors - BWQC Series

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

SMD Wire Wound Ferrite Chip Inductors - BWQC Series

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

SMD Wire Wound Ferrite Chip Inductors - BWQC Series

Electrical Characteristics

Part Number	Inductance (μ H)	Tolerance ($\pm$ %)	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

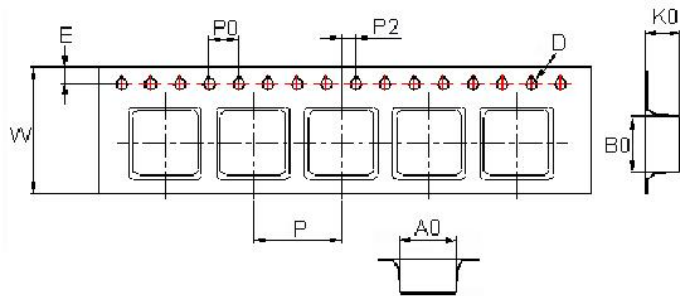
Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10% , M=±20%

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- Rated Current : Self temperature rise shall be limited to 35℃ Max Inductance drop 10% typ.
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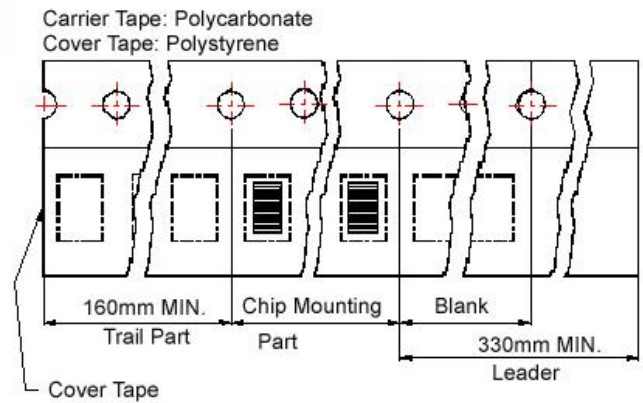
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Packaging Specifications

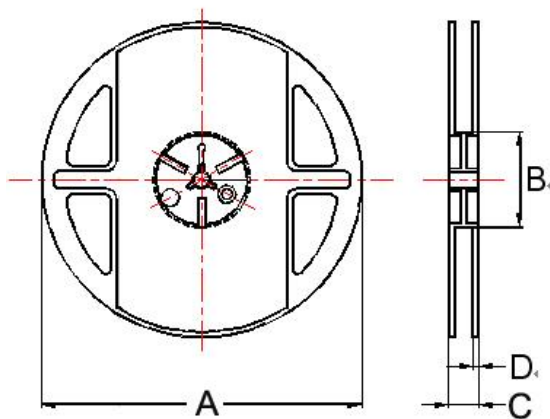
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions									Reel Dimensions				Quantity PCS / REEL
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	
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

Mouser Electronics

Authorized Distributor

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

Pulse:

BWQC00322516100K00	BWQC00322516100M00	BWQC00322516100MH1	BWQC00322516100TH1
BWQC00322516101K00	BWQC00322516101M00	BWQC00322516150MH1	BWQC00322516150TH1
BWQC003225161R0MH1	BWQC003225161R0TH1	BWQC003225161R5TH1	BWQC00322516220K00
BWQC00322516220M00	BWQC00322516220MH1	BWQC00322516220TH1	BWQC003225162R2M00
BWQC003225162R2MH1	BWQC003225162R2TH1	BWQC00322516330MH1	BWQC00322516330TH1
BWQC003225163R3M00	BWQC003225163R3MH1	BWQC003225163R3TH1	BWQC00322516470MH1
BWQC00322516470TH1	BWQC003225164R7MH1	BWQC003225164R7TH1	BWQC003225166R8M00
BWQC003225166R8MH1	BWQC003225166R8TH1	BWQC00322516R47TH1	BWQC00322520100K00
BWQC00322520100KL1	BWQC00322520100M00	BWQC00322520100ML1	BWQC00322520101K00
BWQC00322520101M00	BWQC00322520150K00	BWQC00322520150M00	BWQC00322520151J00
BWQC00322520151K00	BWQC00322520151M00	BWQC003225201R0M00	BWQC003225201R0ML1
BWQC003225201R5ML1	BWQC00322520220K00	BWQC00322520220M00	BWQC00322520221J00
BWQC00322520221K00	BWQC00322520221M00	BWQC00322520270K00	BWQC00322520270M00
BWQC00322520271K00	BWQC00322520271M00	BWQC003225202R2M00	BWQC003225202R2ML1
BWQC00322520330K00	BWQC00322520330M00	BWQC00322520331J00	BWQC00322520331K00
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BWQC00453226102M00	BWQC00453226150J00	BWQC00453226150K00	BWQC00453226150M00
BWQC00453226151J00	BWQC00453226151K00	BWQC00453226151M00	BWQC00453226152J00