

BWHQ 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.

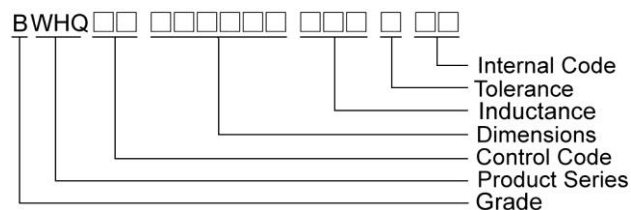
Features

- RoHS compliant.
- Ceramic body and wire wound construction provide highest 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
- The highest Q factors and low RDC to fulfill the needs of mobile applications

Applications

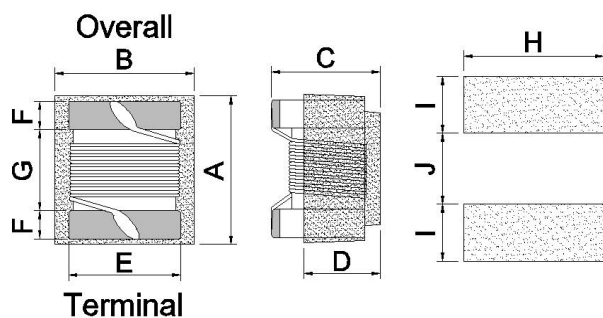
- RF products for cellular phone
- GPS receiver
- Base Station
- Repeater
- Wireless LAN/ mouse/ keyboard/ earphone
- Remote control
- Security system and other RF modules

Product Identification

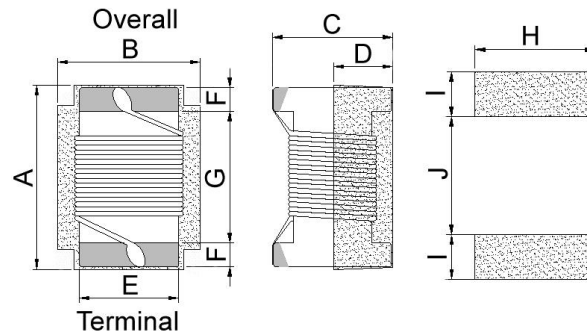


Shape and Dimensions/ Recommended Pattern

BWHQ00231816/ 302821



BWHQ00493834



Dimensions

		A Max	B Max	C Max	D	E	F	G	H	I	J
BWHQ00231816	inch	0.090	0.070	0.061	0.020	0.050	0.017	0.050	0.070	0.040	0.030
	mm	2.29	1.78	1.56	0.50	1.27	0.44	1.27	1.78	1.02	0.76
BWHQ00302821	inch	0.117	0.110	0.083	0.028	0.080	0.020	0.060	0.100	0.040	0.050
	mm	2.96	2.79	2.10	0.70	2.03	0.51	1.52	2.54	1.02	1.27
BWHQ00493834	inch	0.197	0.154	0.135	0.070	0.1	0.025	0.128	0.120	0.045	0.118
	mm	4.95	3.810	3.43	1.78	2.54	0.64	3.25	3.05	1.14	3.00

SMD Wire Wound Ceramic Chip Inductors – BWHQ Series

Electrical Characteristics

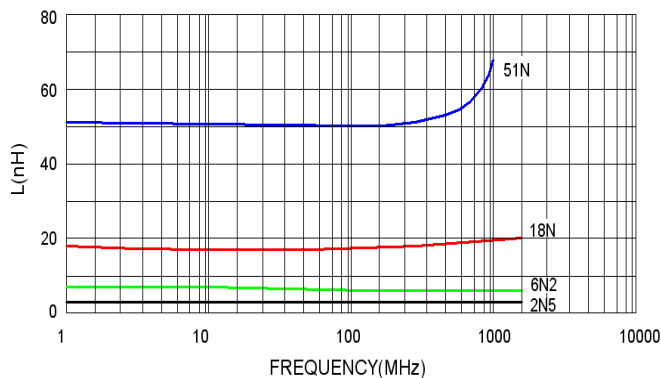
Part Number	Inductance (nH)	Tolerance (±%)	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max	Irms (mA) Max	Color
BWHQ002318162N5□00	2.5	10 / 5	250	80	1500	6000	0.020	1600	Black
BWHQ002318165N6□00	5.6	10 / 5	250	98	1500	6000	0.035	1600	Brown
BWHQ002318166N2□00	6.2	10 / 5	250	88	1000	4750	0.035	1600	Red
BWHQ0023181612N□00	12	10 / 5	250	80	1000	3000	0.045	1600	Orange
BWHQ0023181616N□00	16	10 / 5 / 2	250	72	500	2950	0.060	1500	Yellow
BWHQ0023181618N□00	18	10 / 5 / 2	250	75	500	2550	0.060	1400	Green
BWHQ0023181620N□00	20	10 / 5 / 2	250	70	500	2050	0.055	1400	Blue
BWHQ0023181627N□00	27	10 / 5 / 2	250	75	500	2000	0.070	1300	Violet
BWHQ0023181630N□00	30	10 / 5 / 2	250	65	500	1950	0.095	1200	Gray
BWHQ0023181639N□00	39	10 / 5 / 2	250	65	500	1600	0.095	1100	White
BWHQ0023181648N□00	48	10 / 5 / 2	200	65	500	1400	0.110	1200	Black
BWHQ0023181651N□00	51	10 / 5 / 2	200	65	500	1400	0.120	1000	Brown

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

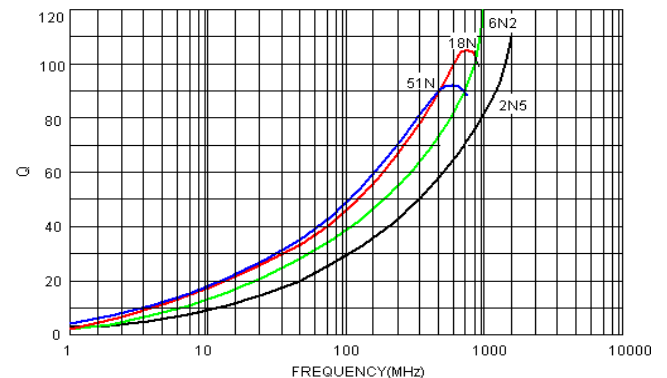
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L & Q : Agilent E4991A+Agilent HP16197A
 SRF : Agilent HP8753D/Agilent E4991A
 RDC : HP 4338B or Chroma 16502
 Irms : HP4284A+HP42841A/HP4285A+HP42841A

Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



SMD Wire Wound Ceramic Chip Inductors – BWHQ Series

Electrical Characteristics

Part Number	Inductance (nH)	Tolerance (±%)	Test Frequency (MHz)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max	I _{rms} (mA) Max	Color Coding		
									1 ST	2 ND	3 RD
BWHQ003028214N1□00	4.1	10 / 5	50	75	1500	6000	0.05	1600	Black	Yellow	Black
BWHQ003028218N2□00	8.2	10 / 5	50	60	500	3600	0.06	1600	Gray	Red	White
BWHQ0030282110N□00	10	10 / 5	50	60	500	3600	0.06	1600	Brown	Black	Black
BWHQ0030282112N□00	12	10 / 5 / 2	50	70	500	2800	0.06	1500	Brown	Red	Black
BWHQ0030282118N□00	18	10 / 5 / 2	50	62	350	2700	0.07	1400	Brown	Gray	Black
BWHQ0030282122N□00	22	10 / 5 / 2	50	62	350	2050	0.07	1400	Red	Red	Black
BWHQ0030282133N□00	33	10 / 5 / 2	50	75	350	1700	0.09	1300	Orange	Orange	Black
BWHQ0030282139N□00	39	10 / 5 / 2	50	75	350	1300	0.09	1300	Orange	White	Black
BWHQ0030282147N□00	47	10 / 5 / 2	50	75	350	1450	0.12	1200	Yellow	Violet	Black
BWHQ0030282156N□00	56	10 / 5 / 2	50	75	350	1230	0.12	1200	Green	Blue	Black
BWHQ0030282168N□00	68	10 / 5 / 2	50	80	350	1150	0.13	1100	Blue	Gray	Black
BWHQ0030282182N□00	82	10 / 5 / 2	50	80	350	1060	0.16	1100	Gray	Red	Black
BWHQ00302821R10□00	100	10 / 5 / 2	50	62	350	1000	0.16	1000	Brown	Black	Brown
BWHQ00302821R12□00	120	10 / 5 / 2	25	50	100	950	0.20	1000	Brown	Red	Brown
BWHQ00302821R15□00	150	10 / 5 / 2	25	48	100	820	0.23	1000	Brown	Green	Brown
BWHQ00302821R22□00	220	10 / 5 / 2	25	48	100	730	0.45	1000	Red	Red	Brown
BWHQ00302821R27□00	270	10 / 5 / 2	25	48	100	650	0.50	900	Red	Violet	Brown
BWHQ00302821R33□00	330	10 / 5 / 2	25	48	100	570	0.65	900	Orange	Orange	Brown
BWHQ00302821R39□00	390	10 / 5 / 2	25	48	100	530	0.70	900	Orange	White	Brown

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

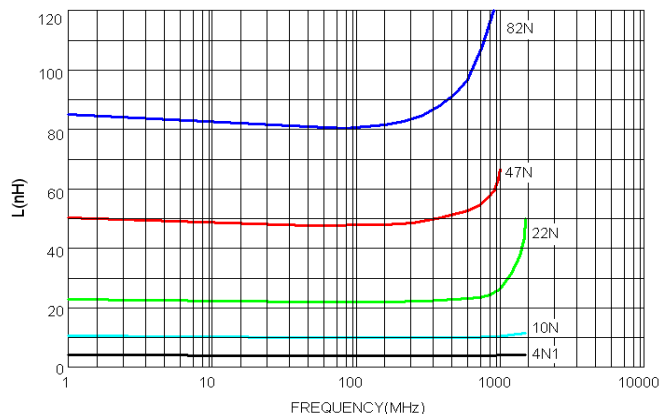
SRF : Agilent HP8753D/Agilent E4991A

RDC : HP 4338B or Chroma 16502

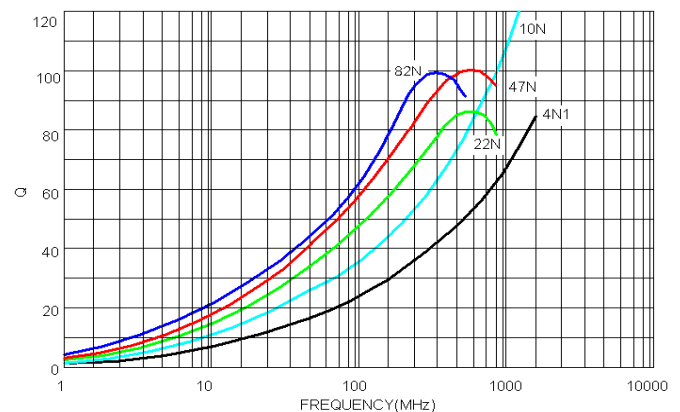
I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

Test Instruments : Agilent E4991A Material/Impedance Analyzer

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 – BWHQ Series

Electrical Characteristics

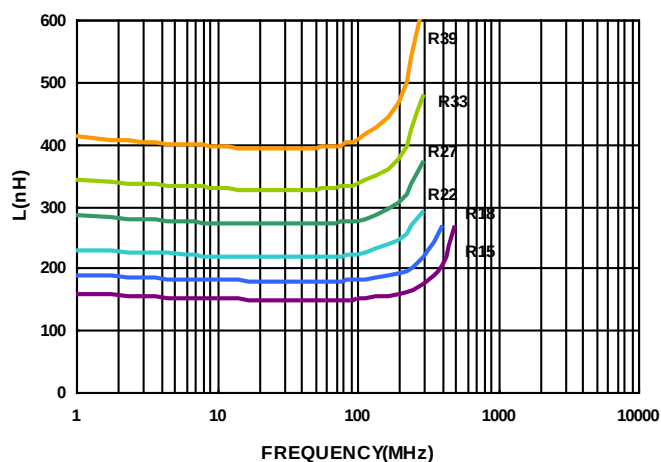
Part Number	Inductance (nH)	Tolerance (±%)	Q Typ.	Test Frequency (MHz)	SRF (MHz) Typ.	RDC (Ω) Max	Irms (mA) Max
BWHQ00493834-R15□00	150	2	75	50	860	0.100	1150
BWHQ00493834-R18□00	180	2	80	50	850	0.105	1150
BWHQ00493834-R22□00	220	2	80	50	700	0.110	940
BWHQ00493834-R27□00	270	2	85	50	730	0.120	940
BWHQ00493834-R33□00	330	2	80	50	600	0.135	850
BWHQ00493834-R39□00	390	2	80	50	600	0.150	850

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

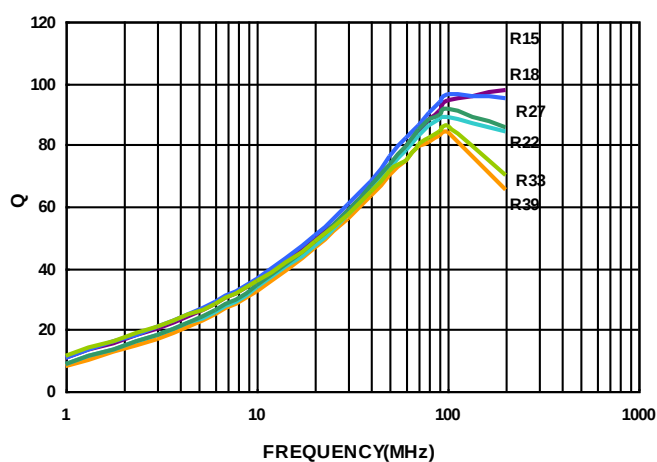
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- I_{rms} for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L & Q : HP4286A/HP4287A/AgilentE4991/Keysight E4982A
 SRF : Agilent HP8753D/AgilentE4991
 RDC : Chroma 16502
 I_{rms} : HP4284A+HP42841A/HP4285A+HP42841A

Test Instruments : Agilent E4991A Material/Impedance Analyzer

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



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



SMD Wire Wound Ceramic Chip Inductors - BWHQ Series

Packaging Specifications

Tape Dimensions

Reel Dimensions

Figure 1

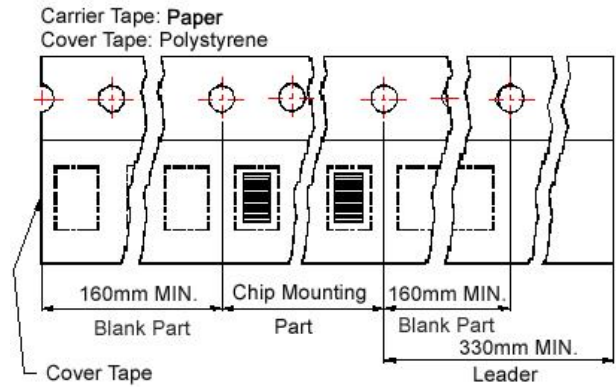
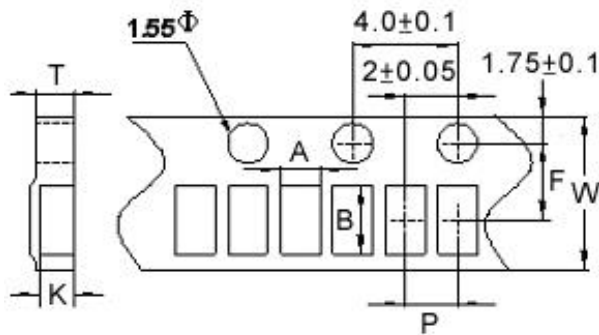
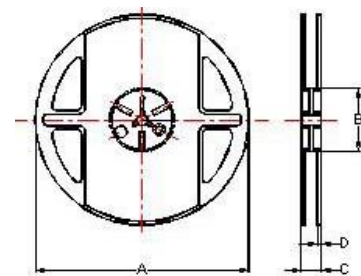
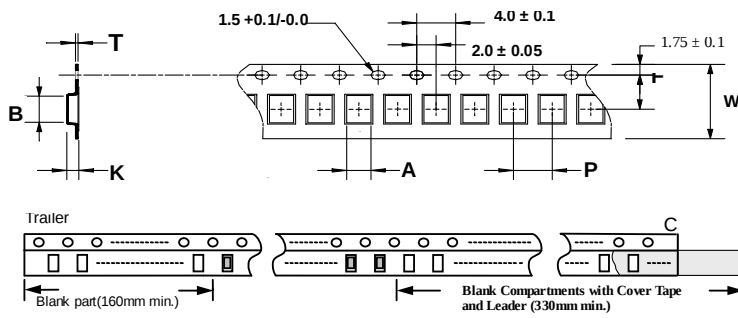


Figure 2



Dimensions in mm

TYPE	Fig.	Tape Dimensions							Reel Dimensions				Quantity PCS / REEL
		A	B	T	W	P	F	K	A	B	C	D	
BWHQ00231816	2	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2000
BWHQ00302821	2	2.80	2.95	0.23	8	4	3.5	2.20	178	60	12	1.5	2000
BWHQ00493834	2	3.90	4.90	0.30	12	8	5.5	3.20	178	60	16	1.4	600

Mouser Electronics

Authorized Distributor

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

Pulse:

BWHQ0023181612NG00	BWHQ0023181612NJ00	BWHQ0023181612NK00	BWHQ0023181616NG00
BWHQ0023181616NJ00	BWHQ0023181616NK00	BWHQ0023181618NG00	BWHQ0023181618NJ00
BWHQ0023181618NK00	BWHQ0023181620NG00	BWHQ0023181620NJ00	BWHQ0023181620NK00
BWHQ0023181627NK00	BWHQ002318162N5G00	BWHQ002318162N5J00	BWHQ002318162N5K00
BWHQ0023181630NG00	BWHQ0023181630NJ00	BWHQ0023181630NK00	BWHQ0023181639NG00
BWHQ0023181639NJ00	BWHQ0023181639NK00	BWHQ0023181648NG00	BWHQ0023181648NJ00
BWHQ0023181648NK00	BWHQ0023181651NG00	BWHQ0023181651NJ00	BWHQ0023181651NK00
BWHQ002318165N6K00	BWHQ002318166N2G00	BWHQ002318166N2J00	BWHQ002318166N2K00
BWHQ0030282110NJ00	BWHQ0030282110NK00	BWHQ0030282112NG00	BWHQ0030282112NJ00
BWHQ0030282112NK00	BWHQ0030282118NG00	BWHQ0030282118NJ00	BWHQ0030282118NK00
BWHQ0030282122NJ00	BWHQ0030282122NK00	BWHQ0030282133NG00	BWHQ0030282133NJ00
BWHQ0030282133NK00	BWHQ0030282139NJ00	BWHQ0030282139NK00	BWHQ0030282147NG00
BWHQ0030282147NJ00	BWHQ0030282147NK00	BWHQ003028214N1G00	BWHQ003028214N1J00
BWHQ003028214N1K00	BWHQ0030282156NG00	BWHQ0030282156NJ00	BWHQ0030282156NK00
BWHQ0030282168NG00	BWHQ0030282168NJ00	BWHQ0030282168NK00	BWHQ0030282182NG00
BWHQ0030282182NJ00	BWHQ0030282182NK00	BWHQ003028218N2G00	BWHQ003028218N2J00
BWHQ003028218N2K00	BWHQ00302821R10G00	BWHQ00302821R10J00	BWHQ00302821R10K00
BWHQ00302821R12G00	BWHQ00302821R12J00	BWHQ00302821R12K00	BWHQ00302821R15G00
BWHQ00302821R15J00	BWHQ00302821R15K00	BWHQ00302821R22G00	BWHQ00302821R22J00
BWHQ00302821R22K00	BWHQ00302821R27G00	BWHQ00302821R27J00	BWHQ00302821R27K00
BWHQ00302821R33G00	BWHQ00302821R33J00	BWHQ00302821R33K00	BWHQ00302821R39G00
BWHQ00302821R39J00	BWHQ00302821R39K00	BWHQ00493834R15G00	BWHQ00493834R18G00
BWHQ00493834R22G00	BWHQ00493834R27G00	BWHQ00493834R33G00	BWHQ00493834R39G00