

Sealed Power Inductors - BWMR Series

BWMR Series



BWMR series, metal alloy wire wound power inductor, its rated current could be increased up to 35% compare to ferrite base power inductor.

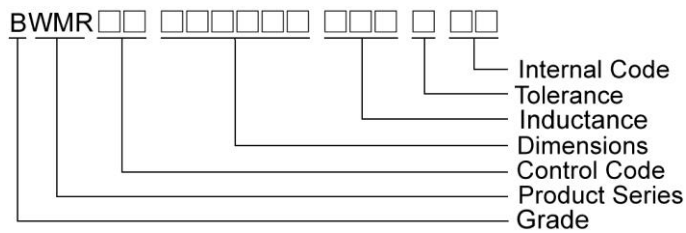
Features

- RoHS, Halogen Free and REACH Compliance
- Constructure Low RDC and high rated current.
- Wide inductance range
- Shielded and miniature package design

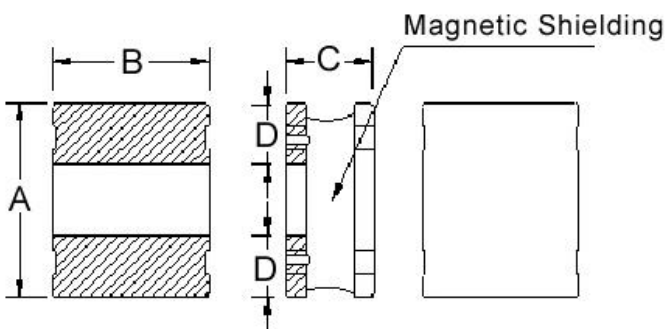
Applications

- Smartphones, tablets and wearable devices
- DSC, camcorders
- DC/DC converters

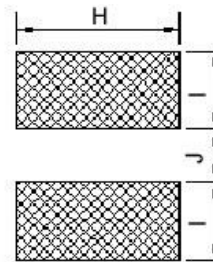
Product Identification



Shape and Dimensions



Recommended Pattern



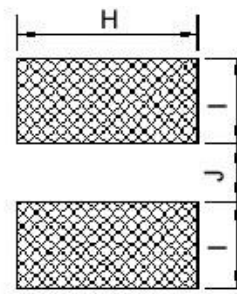
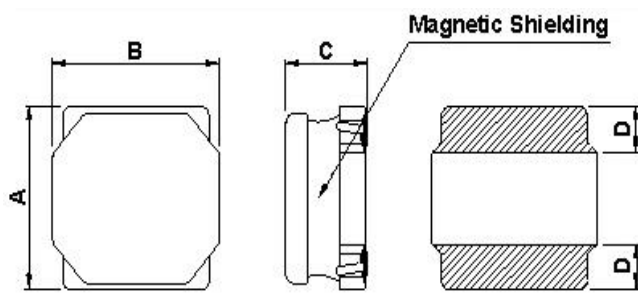
Dimensions in mm

TYPE	A	B	C	D	H	I	J
BWMR00201610	2.0±0.2	1.6±0.2	1.0 Max	0.65	1.7	0.7	0.7
BWMR00201612	2.0±0.2	1.6±0.2	1.2 Max	0.50	1.7	0.6	0.9
BWMR00252010	2.5±0.2	2.0±0.2	1.0 Max	0.85	2.1	0.9	0.8
BWMR00252012	2.5±0.2	2.0±0.2	1.2 Max	0.85	2.1	0.9	0.8
BWMR00302712	3.0±0.2	2.7±0.2	1.2 Max	1.00	2.9	1.1	1.0

Sealed Power Inductors - BWMR Series

Shape and Dimensions

Recommended Pattern



Dimensions in mm

TYPE	A	B	C	D	H	I	J
BWMR00404012	4.0±0.2	4.0±0.2	1.2 Max	1.0	3.7	1.1	2.0
BWMR00404020	4.0±0.2	4.0±0.2	2.0±0.2	1.0	3.7	1.1	1.9

Electrical Characteristics

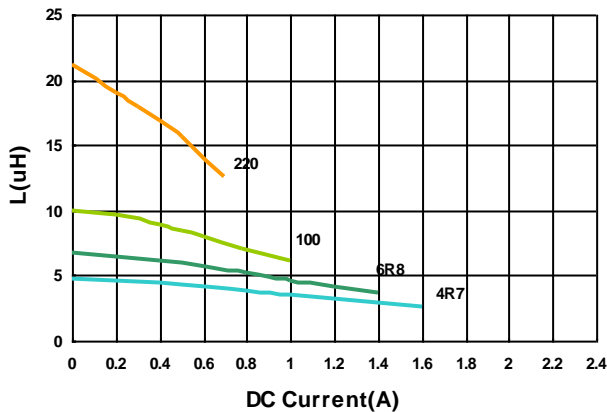
Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
BWMR00201610R33□00	0.33	1	20,30	101	39(46)	4.50(3.70)	3.40(3.10)
BWMR00201610R47□00	0.47	1	20,30	91	48(57)	3.90(3.10)	3.05(2.75)
BWMR00201610R68□00	0.68	1	20,30	71	57(68)	3.50(2.80)	2.80(2.50)
BWMR002016101R0□00	1.0	1	20, 30	64	71.0(85.0)	2.90(2.30)	2.50(2.30)
BWMR002016101R5□00	1.5	1	20, 30	49	103(124)	2.20(1.80)	2.00(1.80)
BWMR002016102R2□00	2.2	1	20, 30	39	145(174)	1.90(1.50)	1.70(1.50)
BWMR002016103R3□00	3.3	1	20,30	32	278(333)	1.60(1.30)	1.10(0.98)
BWMR002016104R7□00	4.7	1	20, 30	25	370(308)	1.00(1.20)	0.86(0.96)
BWMR002016105R6□00	5.6	1	20,30	22	405(486)	1.10(0.90)	0.90(0.80)
BWMR002016106R8□00	6.8	1	20, 30	19	526(438)	0.86(0.96)	0.73(0.82)
BWMR00201610100□00	10	1	20, 30	15	768(640)	0.70(0.78)	0.64(0.72)
BWMR00201610220□00	22	1	20, 30	9	1560(1300)	0.49(0.55)	0.40(0.45)

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

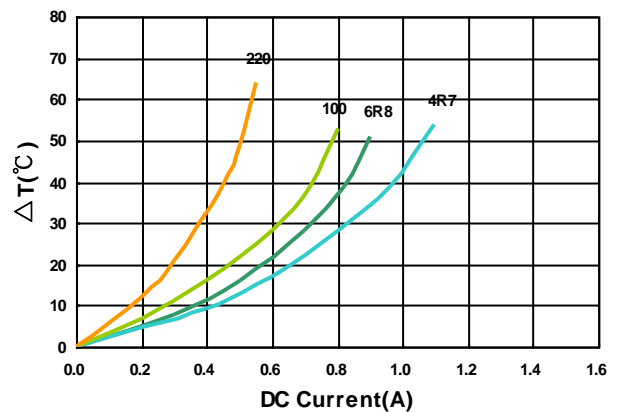
- Operating temperature range –40°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent 4285A+Agilent 42841A, or equivalent,1MHz 200mV
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & I rms : Agilent/HP4285A+Agilent 42841A
SRF : HP4294A+16092A

Test Instruments : HP4285A Material/Impedance Analyzer

Inductance vs. DC Current



Temperature Change vs. DC Current



Electrical Characteristics

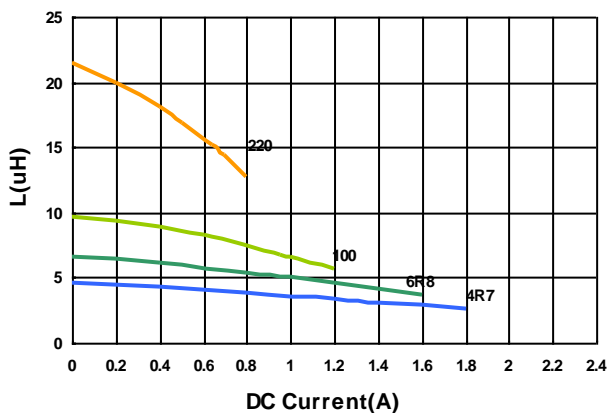
Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
BWMR00201612R24□00	0.24	1	20,30	77	34(40.8)	5.80(4.90)	3.25(2.85)
BWMR00201612R33□00	0.33	1	20,30	73	42(50.4)	5.40(4.50)	3.00(2.70)
BWMR00201612R47□00	0.47	1	20,30	71	47(56.4)	4.30(3.50)	2.80(2.50)
BWMR00201612R68□00	0.68	1	20,30	65	57(68.4)	3.30(2.70)	2.60(2.30)
BWMR002016121R0□00	1.0	1	20, 30	52	86(103)	2.50(2.00)	2.05(1.85)
BWMR002016121R5□00	1.5	1	20, 30	45	113(135)	2.10(1.60)	1.70(1.50)
BWMR002016122R2□00	2.2	1	20, 30	37	131(158)	1.80(1.40)	1.60(1.40)
BWMR002016123R3□00	3.3	1	20, 30	28	192(231)	1.50(1.30)	1.40(1.20)
BWMR00201612-4R7□00	4.7	1	20, 30	26	324(270)	1.20(1.40)	1.00(1.20)
BWMR00201612-6R8□00	6.8	1	20, 30	20	456(380)	1.00(1.20)	0.78(0.92)
BWMR00201612-100□00	10	1	20, 30	16	720(600)	0.85(0.95)	0.65(0.73)
BWMR00201612120□00	12	1	20, 30	14	745(894)	0.77(0.61)	0.71(0.62)
BWMR00201612150□00	15	1	20, 30	13	858(1029)	0.67(0.58)	0.68(0.58)
BWMR00201612-220□00	22	1	20, 30	10	1500(1250)	0.57(0.64)	0.41(0.46)
BWMR00201612101□00	100	1	20, 30	4	6400(7680)	0.26(0.21)	0.23(0.20)

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

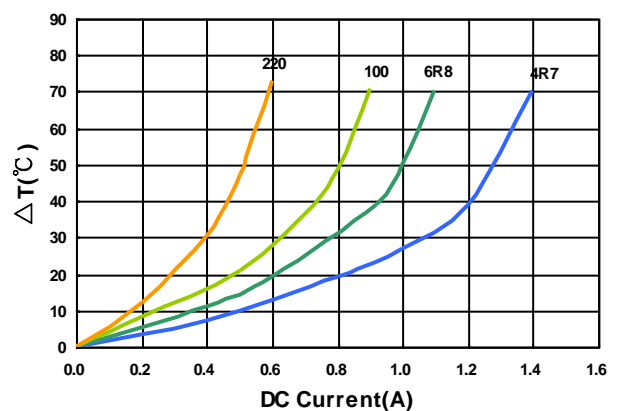
- Operating temperature range -40°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent 4285A+Agilent 42841A, or equivalent, 1MHz 200mV
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & Irms : Agilent/HP4285A+Agilent 42841A
SRF : HP4294A+16092A

Test Instruments : HP4285A Material/Impedance Analyzer

Inductance vs. DC Current



Temperature Change vs. DC Current



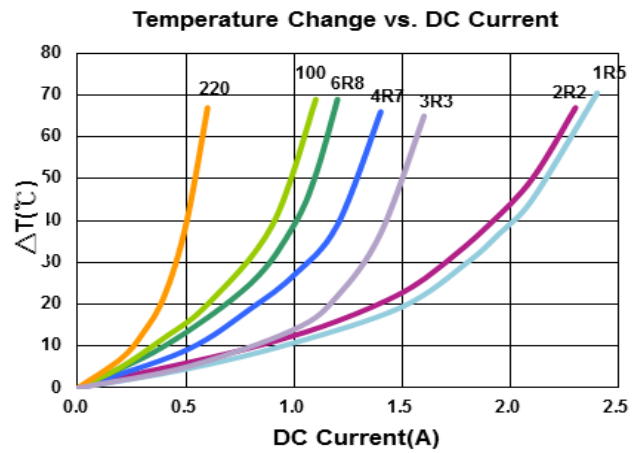
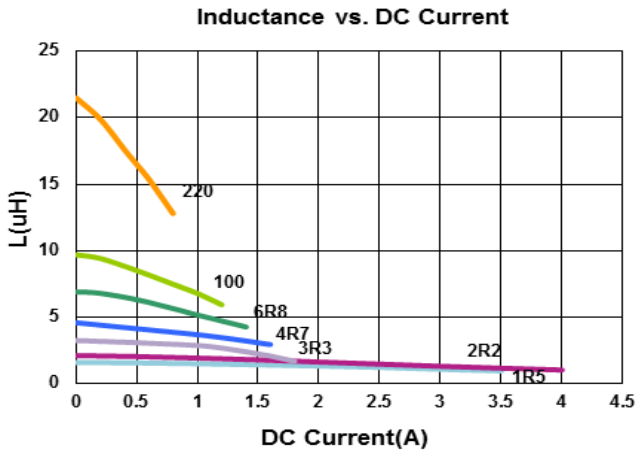
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
BWMR00252010R68□00	0.68	1	20, 30	70	43.5(52.2)	4.20(3.30)	3.00(2.70)
BWMR002520101R0□00	1.0	1	20, 30	51	61.5(73.8)	3.70(3.00)	2.60(2.35)
BWMR002520101R5□00	1.5	1	20, 30	40	111.6(93)	2.20(2.80)	1.80(1.95)
BWMR002520102R2□00	2.2	1	20, 30	31	145(121)	1.90(2.30)	1.70(1.90)
BWMR002520103R3□00	3.3	1	20, 30	24	198(165)	1.40(1.60)	1.20(1.40)
BWMR002520104R7□00	4.7	1	20, 30	19	264(220)	1.30(1.40)	1.10(1.20)
BWMR002520106R8□00	6.8	1	20, 30	15	396(330)	1.00(1.10)	0.90(1.00)
BWMR00252010100□00	10	1	20, 30	12	500(435)	0.90(1.00)	0.80(0.90)
BWMR00252010220□00	22	1	20, 30	8	1260(1050)	0.56(0.63)	0.45(0.50)

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

- Operating temperature range — 40°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent 4285A+Agilent 42841A, or equivalent, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & I rms : Agilent/HP4285A+Agilent 42841A
- SRF : HP4294A+16092A

Test Instruments : HP4285A Material/Impedance Analyzer



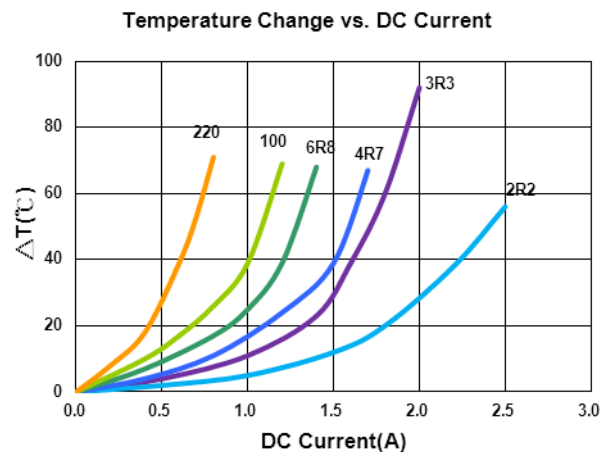
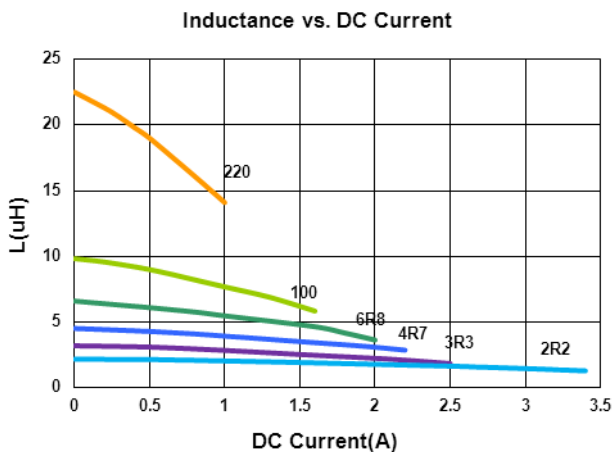
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
BWMR00252012R24□00	0.24	1	20, 30	117	21.5(25.8)	7.70(6.20)	4.50(3.90)
BWMR00252012R33□00	0.33	1	20, 30	104	26.5(31.8)	6.60(5.30)	4.05(3.55)
BWMR00252012R47□00	0.47	1	20, 30	71	27.0(32.4)	5.50(5.00)	4.00(3.50)
BWMR00252012R68□00	0.68	1	20, 30	66	36.0(43.2)	4.20(3.50)	3.50(3.10)
BWMR002520121R0□00	1.0	1	20, 30	51	47.0(56.0)	4.00(3.80)	3.30(3.00)
BWMR002520121R5□00	1.5	1	20, 30	38	71.0(85.2)	3.10(2.60)	2.30(2.05)
BWMR002520122R2□00	2.2	1	20, 30	32	110(92)	2.40(2.70)	1.90(2.20)
BWMR002520123R3□00	3.3	1	20, 30	25	186(155)	1.80(2.10)	1.45(1.65)
BWMR002520124R7□00	4.7	1	20, 30	23	240(200)	1.70(1.90)	1.30(1.50)
BWMR002520126R5□00	6.5	1	20, 30	18	250(300)	1.60(1.30)	1.30(1.15)
BWMR002520126R8□00	6.8	1	20, 30	16	345(285)	1.30(1.60)	1.00(1.20)
BWMR00252012100□00	10	1	20, 30	14	480(400)	1.00(1.30)	0.85(1.00)
BWMR00252012150□00	15	1	20, 30	11	629(755)	0.85(0.75)	0.83(0.73)
BWMR00252012220□00	22	1	20, 30	8	1090(910)	0.74(0.83)	0.54(0.60)

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

- Operating temperature range –40°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 : Agilent 4285A+Agilent 42841A, or equivalent, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent/HP4285A+Agilent 42841A
- SRF : HP4294A+16092A

Test Instruments : HP4285A Material/Impedance Analyzer



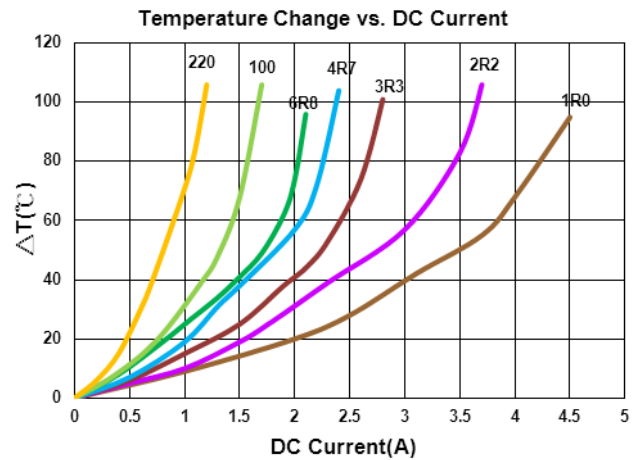
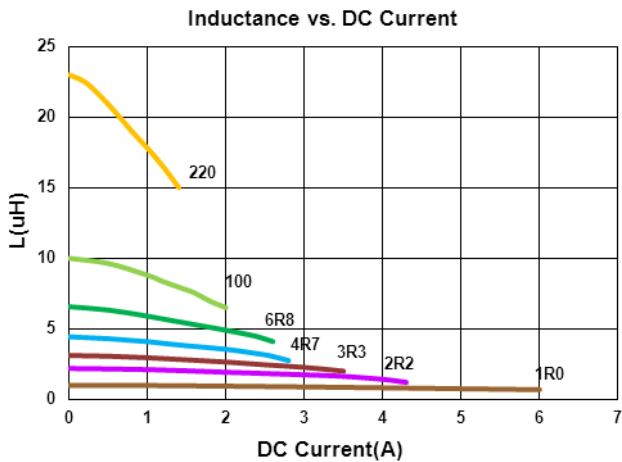
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
BWMR003027121R0□00	1.0	1	20, 30	52	64(54)	4.8(5.4)	2.7(3.0)
BWMR003027122R2□00	2.2	1	20, 30	28	114(95)	3.3(3.7)	2.0(2.3)
BWMR003027123R3□00	3.3	1	20, 30	25	165(138)	2.7(3.0)	1.7(1.9)
BWMR003027124R7□00	4.7	1	20, 30	20	234(195)	2.2(2.5)	1.3(1.5)
BWMR003027126R8□00	6.8	1	20, 30	16	318(265)	1.8(2.1)	1.1(1.3)
BWMR00302712100□00	10	1	20, 30	12	444(370)	1.5(1.7)	1.0(1.15)
BWMR00302712220□00	22	1	20, 30	7	954(795)	1.0(1.2)	0.63(0.7)

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

- Operating temperature range—40°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent 4285A+Agilent 42841A, or equivalent, 1MHz 200mV
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & I rms : Agilent/HP4285A+Agilent 42841A
SRF : HP4294A+16092A

Test Instruments : HP4285A Material/Impedance Analyzer



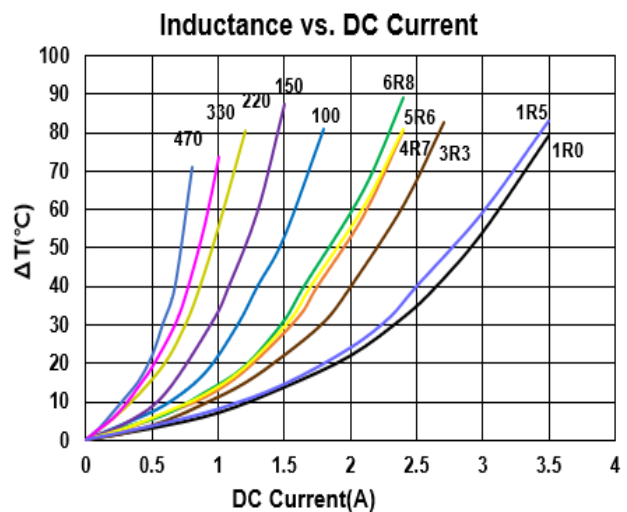
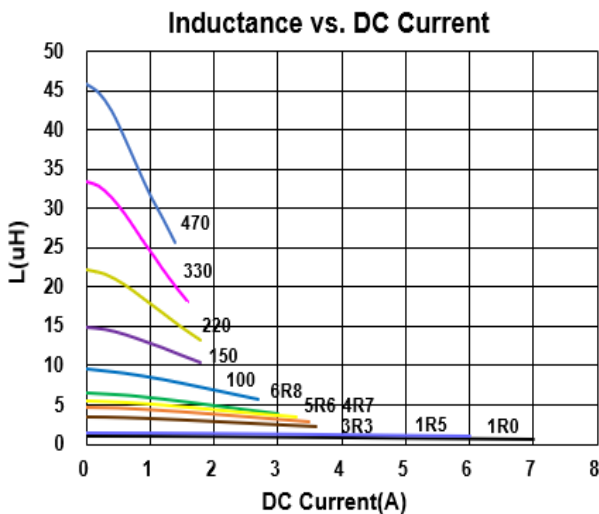
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) (Max) Typ	Isat (A) (Max) Typ	Irms (A) (Max) Typ
BWMR004040121R0□0M	1.0	1	20, 30	60	67(80.4)	5.70(4.70)	2.65(2.40)
BWMR004040121R2□0M	1.2	1	20, 30	51	67(80.4)	4.80(3.70)	2.65(2.40)
BWMR004040121R5□0M	1.5	1	20, 30	42	77(92.4)	4.60(3.60)	2.50(2.30)
BWMR004040122R2□0M	2.2	1	20,30	34	91(109.2)	3.60(2.90)	2.30(2.10)
BWMR004040123R3□0M	3.3	1	20, 30	26	129(154.8)	3.00(2.40)	2.00(1.80)
BWMR004040124R7□0M	4.7	1	20, 30	18	154(184.8)	2.80(2.20)	1.75(1.60)
BWMR004040125R6□0M	5.6	1	20, 30	17	164(196.8)	2.40(1.90)	1.70(1.55)
BWMR004040126R8□0M	6.8	1	20, 30	15	181(217.2)	2.10(1.60)	1.65(1.50)
BWMR00404012100□0M	10	1	20, 30	12	246(295.2)	1.90(1.50)	1.45(1.39)
BWMR00404012150□0M	15	1	20, 30	11	496(595.2)	1.50(1.20)	1.08(0.96)
BWMR00404012220□0M	22	1	20, 30	9	598(717.6)	1.30(1.00)	0.86(0.75)
BWMR00404012330□0M	33	1	20, 30	7	885(1062)	1.00(0.85)	0.77(0.67)
BWMR00404012470□0M	47	1	20, 30	6	1160(1392)	0.94(0.74)	0.67(0.58)

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

- Operating temperature range – 40°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 : Agilent 4285A+Agilent 42841A, or equivalent, 1MHz 200mV
- RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
- Isat & Irms : Agilent/HP4285A+Agilent 42841A
- SRF : HP4294A+16092A, or equivalent

Test Instruments : HP4285A Material/Impedance Analyzer



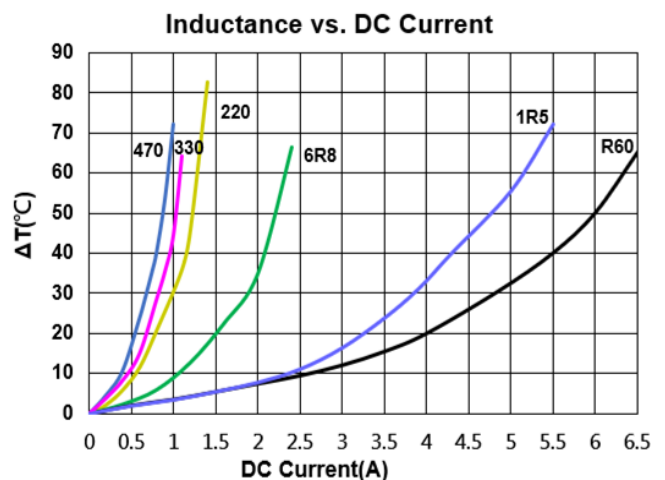
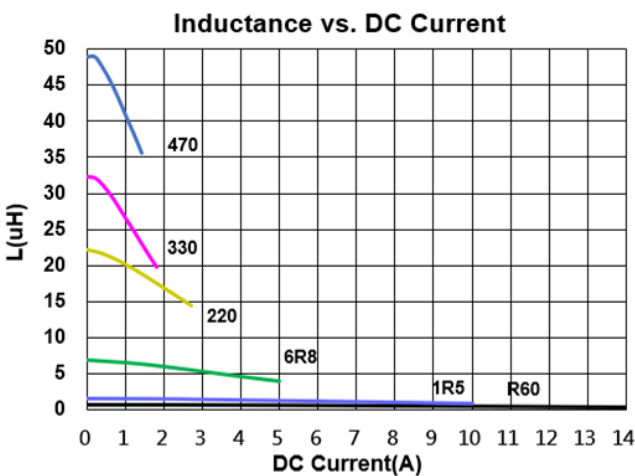
Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	SRF (MHz) Min	RDC(mΩ) Typ.(Max)	Isat(A) Typ.(Max)	Irms(A) Typ.(Max)
BWMR00404020R22□00	0.22	1	20,30	83	10(12)	16.0(13.5)	7.30(6.30)
BWMR00404020R47□00	0.47	1	20,30	77	14.5(17.4)	12.0(10.0)	5.70(5.00)
BWMR00404020R60□00	0.6	1	20, 30	61	18(22)	11.5(9.50)	5.50(4.85)
BWMR004040201R0□00	1.0	1	20, 30	37	26(31)	10.0(8.00)	5.00(4.50)
BWMR004040201R5□00	1.5	1	20, 30	33	31(37.2)	7.30(5.90)	4.30(3.90)
BWMR004040202R2□00	2.2	1	20, 30	25	44.0(53.0)	7.20(5.80)	3.80(3.40)
BWMR004040203R3□00	3.3	1	20, 30	19	64.0(77.0)	6.00(4.80)	3.10(2.70)
BWMR004040204R7□00	4.7	1	20, 30	17	92.0(110)	4.60(3.70)	2.70(2.40)
BWMR004040206R8□00	6.8	1	20, 30	13	135(162)	4.00(3.20)	2.20(2.00)
BWMR00404020100□00	10	1	20, 30	11	175(210)	3.20(2.50)	2.00(1.80)
BWMR00404020150□00	15	1	20, 30	9	270(324)	2.50(2.00)	1.50(1.30)
BWMR00404020220□00	22	1	20, 30	7	425(510)	2.10(1.70)	1.30(1.10)
BWMR00404020330□00	33	1	20, 30	6	580(696)	1.40(1.10)	0.95(0.80)
BWMR00404020470□00	47	1	20, 30	5	838(1006)	1.20(0.95)	0.75(0.65)

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

- Operating temperature range—40°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
- L : Agilent 4285A+Agilent 42841A, or equivalent, 1MHz 200mV
RDC : DIGITAL MILLINHM METER CHROMA 16502, or equivalent
Isat & I rms : Agilent/HP4285A+Agilent 42841A
SRF : HP4294A+16092A, or equivalent

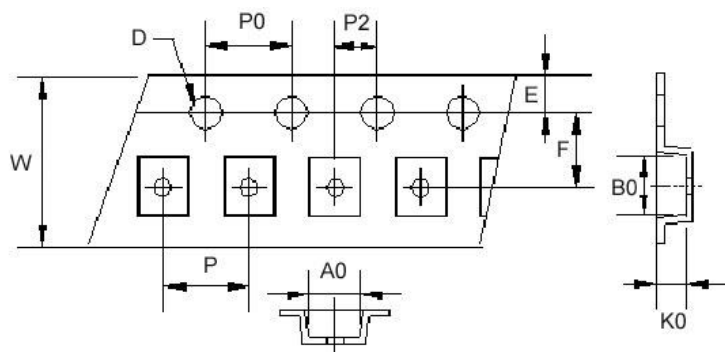
Test Instruments : HP4285A Material/Impedance Analyzer



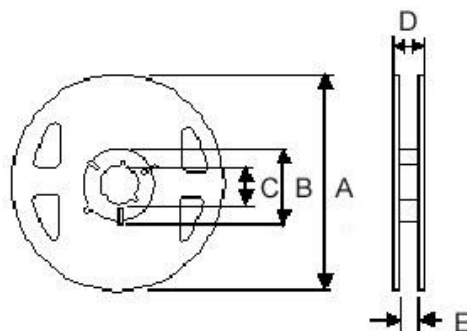
Sealed Power Inductors - BWMR Series

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	E	PCS / Reel
BWMR00201610	1.90	2.20	1.15	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWMR00201612	1.95	2.20	1.35	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWMR00252010	2.35	2.80	1.15	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWMR00252012	2.35	2.80	1.35	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWMR00302712	2.90	3.20	1.35	1.55	1.75	3.5	8	4	4	2	180	60	13	14.4	8.4	2000
BWMR00404012	4.25	4.25	1.40	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	1000
BWMR00404020	4.25	4.25	2.40	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	-	800