

SMD Unshielded Power Inductors - BPSL Series

BPSL Series

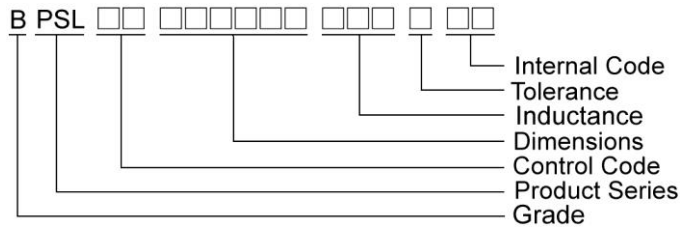
Features

- RoHS, Halogen Free and REACH Compliance
- Unshielded power inductor
- Various package size and wide inductance range. SSL-HC family is designed for low resistance and high current purpose

Applications

- DC/DC converters

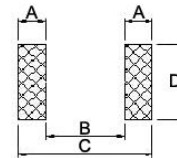
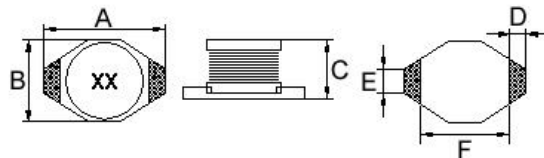
Product Identification



Shape and Dimensions

Recommended Pattern

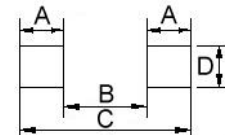
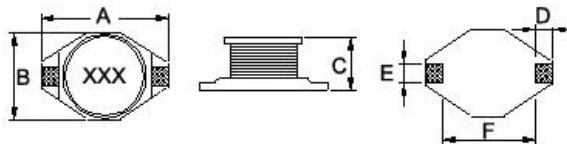
BPSL00070429



Dimensions in mm

TYPE	Shape and Dimensions						Recommended Pattern			
	A	B	C	D	E	F	A	B	C	D
BPSL00070429	6.60 ⁺⁰	4.45 ⁺⁰	2.92 ⁺⁰	1.02	1.27	4.32	1.40	4.06	6.86	3.56

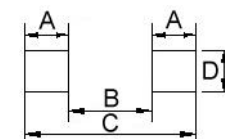
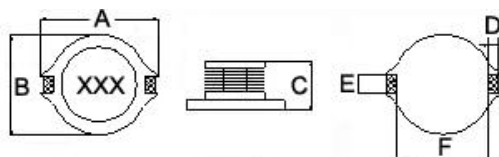
BPSL00130952/130911



Dimensions in mm

TYPE	Shape and Dimensions						Recommended Pattern			
	A	B	C	D	E	F	A	B	C	D
BPSL00130952	12.95 ⁺⁰	9.40 ⁺⁰	5.21 ⁺⁰	2.54	2.54	7.62	2.92	7.37	13.21	2.79
BPSL00130911	12.95 ⁺⁰	9.40 ⁺⁰	11.43 ⁺⁰	2.54	2.54	7.62	2.92	7.37	13.21	2.79

BPSL00191571



Dimensions in mm

TYPE	Shape and Dimensions						Recommended Pattern			
	A	B	C	D	E	F	A	B	C	D
BPSL00191571	18.54 ⁺⁰	15.24 ⁺⁰	7.11 ⁺⁰	2.54	2.54	12.7	2.92	12.45	18.29	2.79

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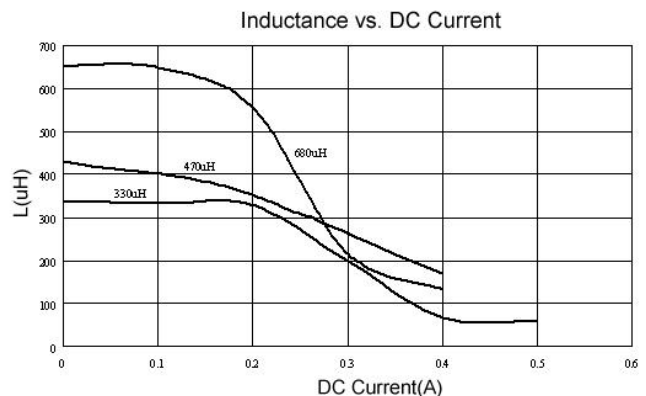
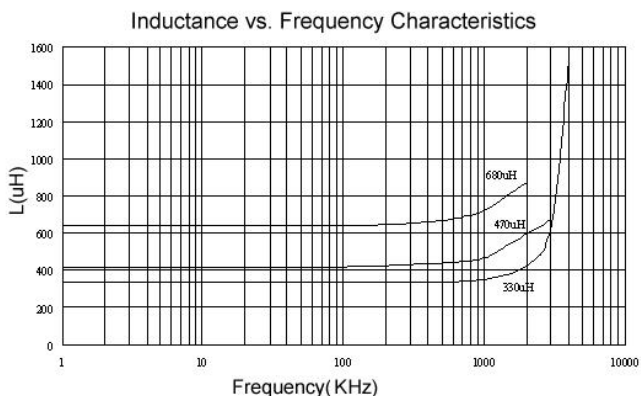
Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (kHz)	SRF (MHz) Typ.	RDC (Ω) Max	Isat (A)	Irms (A)
BPSL000704291R0M00	1.0	20	100	130	0.05	2.90	2.9
BPSL000704291R5M00	1.5	20	100	115	0.05	2.60	2.8
BPSL000704292R2M00	2.2	20	100	90	0.07	2.30	2.4
BPSL000704293R3M00	3.3	20	100	70	0.08	2.00	2.0
BPSL000704294R7M00	4.7	20	100	50	0.09	1.50	1.5
BPSL000704295R6M00	5.6	20	100	47	0.11	1.30	1.4
BPSL000704296R8M00	6.8	20	100	45	0.13	1.20	1.4
BPSL00070429100M00	10	20	100	35	0.16	1.10	1.1
BPSL00070429150M00	15	20	100	30	0.23	0.90	1.2
BPSL00070429220M00	22	20	100	20	0.37	0.70	0.8
BPSL00070429330M00	33	20	100	15	0.51	0.58	0.6
BPSL00070429470M00	47	20	100	14	0.64	0.50	0.5
BPSL00070429680M00	68	20	100	11	0.86	0.40	0.4
BPSL00070429101M00	100	20	100	9	1.27	0.31	0.3
BPSL00070429151M00	150	20	100	6	2.00	0.27	0.25
BPSL00070429221M00	220	20	100	5.5	3.11	0.22	0.20
BPSL00070429331M00	330	20	100	5	3.80	0.18	0.16
BPSL00070429471M00	470	20	100	4	5.06	0.16	0.15
BPSL00070429681M00	680	20	100	3	9.20	0.14	0.12
BPSL00070429102M00	1000	20	100	2	13.8	0.10	0.07

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

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 20% from its value without current
- I rms for a 30°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L : E4980 or HP4284A , 100kHz 0.1V
 SRF : HP4291A or HP4192A
 RDC : Chroma 16502
 Isat : HP4284A+HP42841A or WK3260B+WK3265B

Test Instruments :



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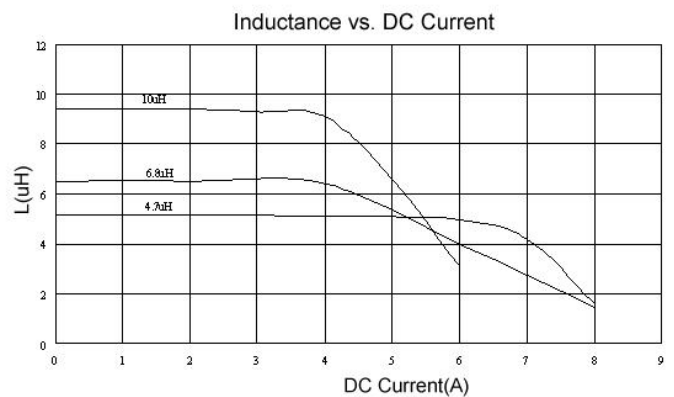
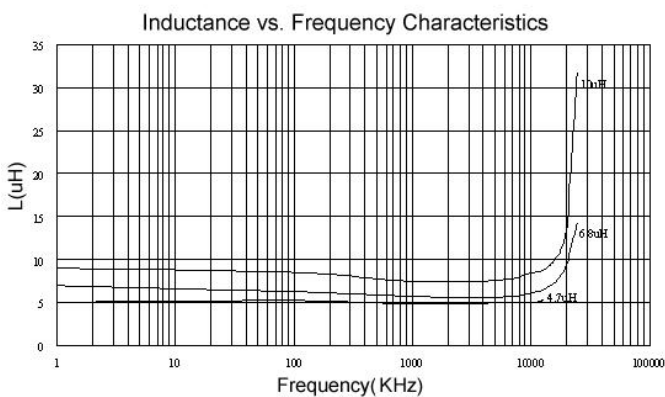
Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (kHz)	SRF (MHz) Typ.	RDC (Ω) Max	Isat (A)	Irms (A)
BPSL001309521R0M00	1.0	20	100	100	0.009	9.0	6.8
BPSL001309521R5M00	1.5	20	100	90	0.010	8.0	6.4
BPSL001309522R2M00	2.2	20	100	80	0.012	7.0	6.1
BPSL001309523R3M00	3.3	20	100	65	0.015	6.4	5.4
BPSL001309524R7M00	4.7	20	100	45	0.018	5.4	4.8
BPSL001309526R8M00	6.8	20	100	38	0.027	4.6	4.4
BPSL00130952100M00	10	20	100	30	0.038	3.8	3.9
BPSL00130952120M00	12	20	100	27	0.0432	3.5	3.6
BPSL00130952150M00	15	20	100	27	0.046	3.0	3.1
BPSL00130952220M00	22	20	100	19	0.085	2.6	2.7
BPSL00130952330M00	33	20	100	15	0.100	2.0	2.1
BPSL00130952470M00	47	20	100	12	0.140	1.6	1.8
BPSL00130952680M00	68	20	100	10	0.200	1.4	1.5
BPSL00130952101M00	100	20	100	9	0.260	1.2	1.3
BPSL00130952151M00	150	20	100	6	0.400	1.0	1.0
BPSL00130952221M00	220	20	100	5	0.610	0.8	0.8
BPSL00130952331M00	330	20	100	4.5	1.020	0.6	0.6
BPSL00130952471M00	470	20	100	3.5	1.270	0.5	0.5
BPSL00130952681M00	680	20	100	2.5	2.020	0.4	0.4
BPSL00130952102M00	1000	20	100	2.0	3.000	0.3	0.3
BPSL00130952152M00	1500	20	100	1.4	4.500	0.25	0.2

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

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 20% from its value without current
- Irms for a 15°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L : E4980 or HP4284A , 100kHz 0.1V
 SRF:HP4291A or HP4192A
 RDC : Chroma 16502
 Isat : HP4284A+HP42841A or WK3260B+WK3265B

Test Instruments :



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Electrical Characteristics

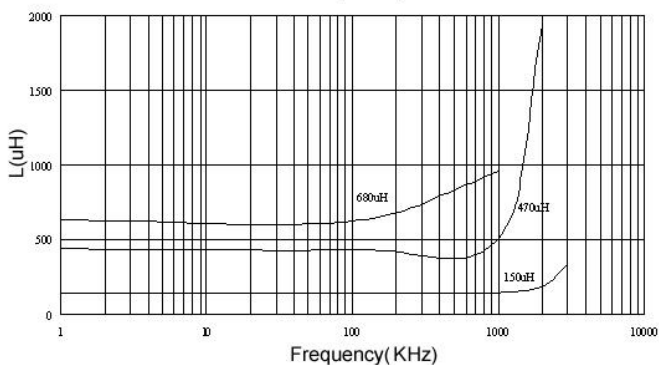
Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (kHz)	SRF (MHz) Typ.	RDC (Ω) Max	Isat (A)	Irms (A)
BPSL001309113R3M00	3.3	20	100	30	0.025	10	4.0
BPSL001309114R7M00	4.7	20	100	25	0.033	8.0	3.5
BPSL00130911100M00	10	20	100	22	0.033	8.0	3.5
BPSL00130911150M00	15	20	100	18	0.042	7.0	3.0
BPSL00130911220M00	22	20	100	11	0.054	5.5	2.5
BPSL00130911330M00	33	20	100	9	0.08	4.0	2.0
BPSL00130911470M00	47	20	100	8	0.10	3.8	1.6
BPSL00130911680M00	68	20	100	7	0.17	3.0	1.2
BPSL00130911101M00	100	20	100	5	0.22	2.5	1.2
BPSL00130911151M00	150	20	100	4	0.34	2.0	0.9
BPSL00130911221M00	220	20	100	3.5	0.44	1.6	0.7
BPSL00130911271M00	270	20	100	2.5	0.60	1.4	0.6
BPSL00130911331M00	330	20	100	2.5	0.70	1.2	0.6
BPSL00130911471M00	470	20	100	2	0.95	1.0	0.3
BPSL00130911681M00	680	20	100	2	1.2	1.0	0.2
BPSL00130911102M00	1000	20	100	1.5	2.0	0.8	0.1

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

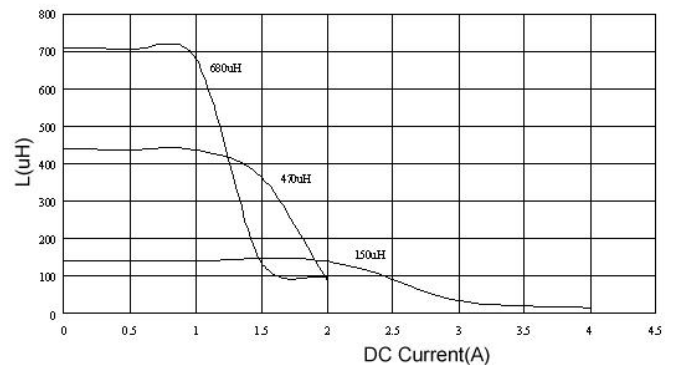
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 20% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L : E4980 or HP4284A , 100kHz 0.1V
 SRF:HP4291A or HP4192A
 RDC : Chroma 16502
 Isat : HP4284A+HP42841A or WK3260B+WK3265B

Test Instruments :

Inductance vs. Frequency Characteristics



Inductance vs. DC Current



SMD Unshielded Power Inductors – BPSL Series

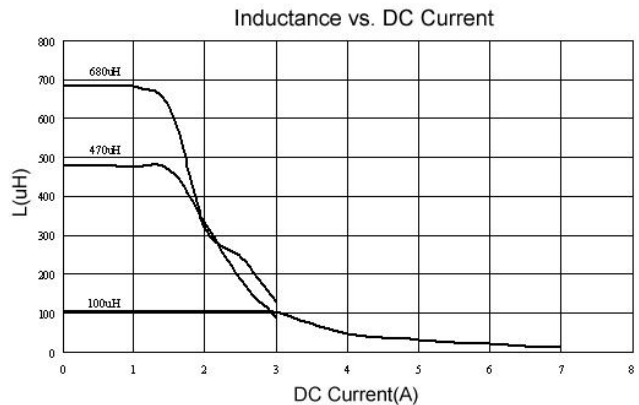
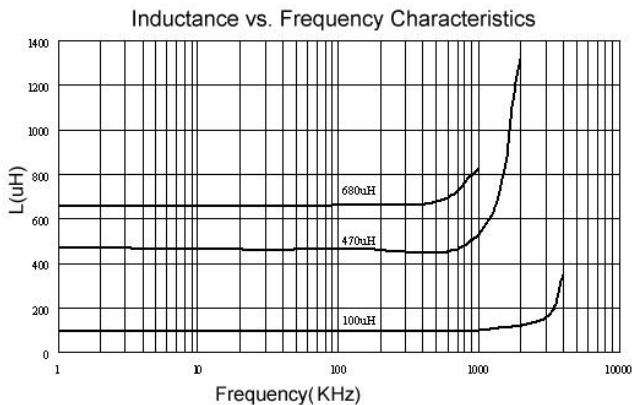
Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (kHz)	SRF (MHz) Typ.	RDC (Ω+15%)	Isat (A)	Irms (A)
BPSL001915711R0M00	1.0	20	100	80	0.011	20	8.6
BPSL001915712R2M00	2.2	20	100	80	0.014	16	7.1
BPSL001915713R3M00	3.3	20	100	60	0.016	14	6.2
BPSL001915714R7M00	4.7	20	100	45	0.022	13	5.5
BPSL001915715R6M00	5.6	20	100	40	0.022	12	5.3
BPSL001915716R8M00	6.8	20	100	30	0.022	10	5.0
BPSL00191571100M00	10	20	100	30	0.032	10	4.3
BPSL00191571150M00	15	20	100	22	0.036	8.0	4.0
BPSL00191571180M00	18	20	100	20	0.039	7.5	3.7
BPSL00191571220M00	22	20	100	20	0.047	7.0	3.5
BPSL00191571330M00	33	20	100	15	0.066	5.5	3.0
BPSL00191571470M00	47	20	100	9	0.087	4.5	2.6
BPSL00191571680M00	68	20	100	8	0.13	3.5	2.3
BPSL00191571101M00	100	20	100	7	0.19	3.0	1.8
BPSL00191571151M00	150	20	100	6	0.25	2.6	1.5
BPSL00191571221M00	220	20	100	5	0.38	2.4	1.2
BPSL00191571331M00	330	20	100	4	0.56	1.9	1.0
BPSL00191571471M00	470	20	100	3	0.85	1.4	0.82
BPSL00191571681M00	680	20	100	2.5	1.2	1.2	0.72
BPSL00191571102M00	1000	20	100	2	1.8	1.0	0.56

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

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 20% from its value without current
- I rms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L : E4980 or HP4284A , 100kHz 0.1V
 SRF:HP4291A or HP4192A
 RDC : Chroma 16502
 Isat : HP4284A+HP42841A or WK3260B+WK3265B

Test Instruments :

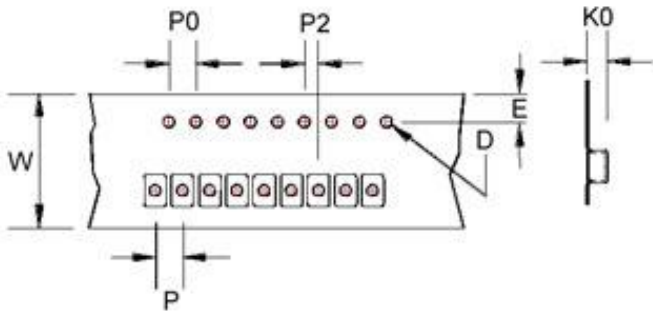


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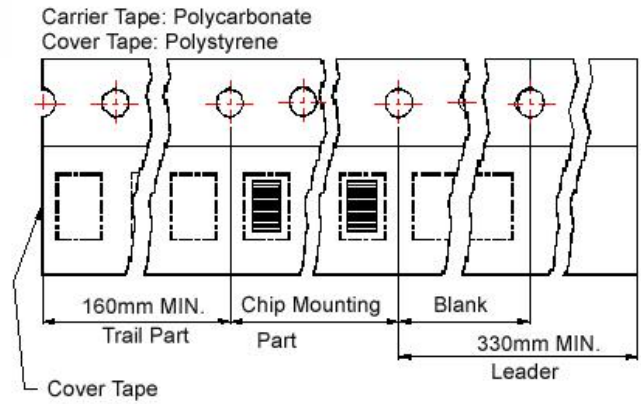
SMD Unshielded Power Inductors - BPSL Series

Packaging Specifications

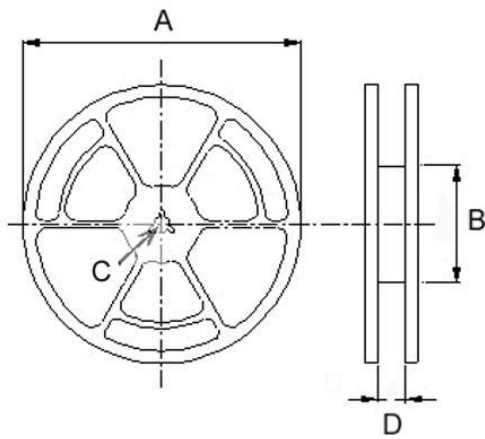
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity (PCS / REEL)	
	K0	D	E	W	P	P0	P2	A	B	C	D	178mm	330mm
BPSL00070429	3.2	1.55	1.75	12	8	4	2	330	100	13	13.4	-	2500
								178	60		13.2	750	-
BPSL00130952	5.4	1.55	1.75	24	16	4	2	330	100	13	24.4	-	750
BPSL00130911	11.2	1.55	1.75	24	20	4	2	330	100	13	24.4	-	225
BPSL00191571	7.5	1.55	1.75	32	20	4	2	330	100	13	33.4	-	350

BPSL-BN Series



This series is specially designed for high current, low voltage DC-DC converter applications. Its simple, rugged design provides current ratings normally available in larger packages. With tinned self-leaded construction, BPSL-BN series can achieve very low DCR values and excellent solderability. In addition, they have very low resistance. Standard parts shown in catalogue and custom values are also available.

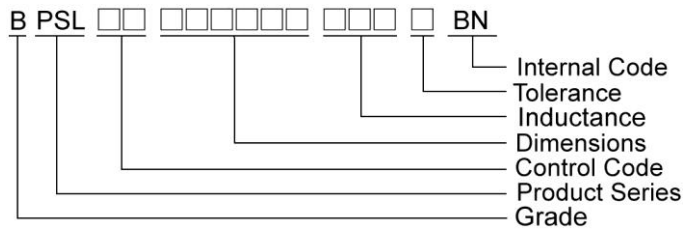
Features

- RoHS, Halogen Free and REACH Compliance
- Unshielded power inductor
- Various package size and wide inductance range. SSL-HC family is designed for low resistance and high current purpose

Applications

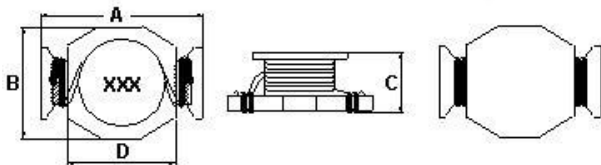
- DC/DC converters

Product Identification



Shape and Dimension

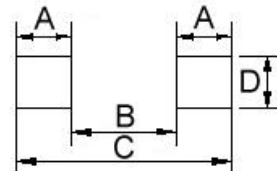
BPSL00090650



Dimension in mm

A	B	C	D
8.89 ⁺⁰	6.10 ⁺⁰	5.00 ⁺⁰	5.84

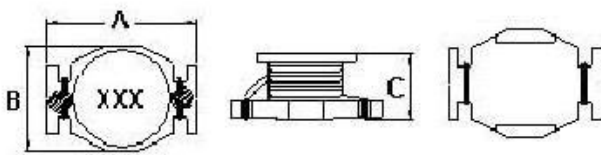
Recommended Pattern



Dimension in mm

A	B	C	D
1.91	4.06	8.89	5.08

BPSL00131064



Dimension in mm

A	B	C
13.21 ⁺⁰	9.91 ⁺⁰	6.35 ⁺⁰

Dimension in mm

A	B	C	D
1.52	8.64	11.68	4.06

SMD Unshielded Power Inductors – BPSL-BN Series

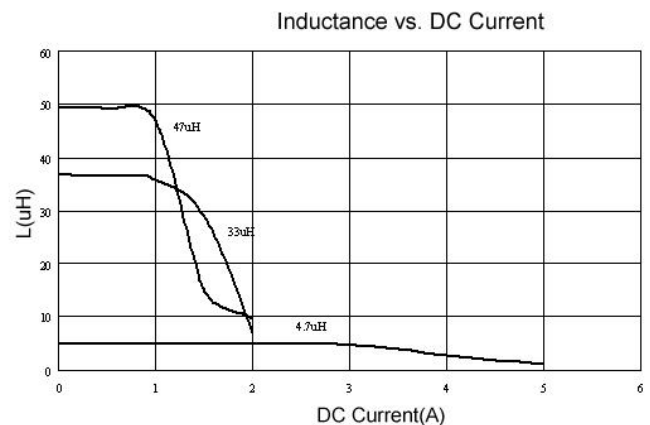
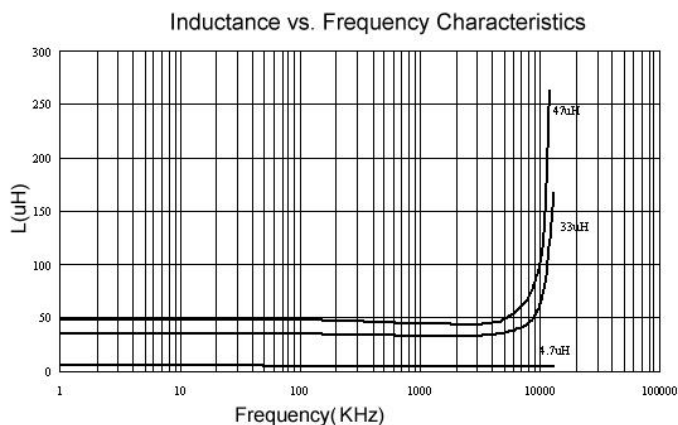
Electrical Characteristics

Part Number	Inductance (μH)	Tolerance ($\pm\%$)	Test Frequency (kHz)	SRF (MHz) Typ.	RDC (Ω) Max	Isat (A)	Irms (A)
BPSL00090650R33TBN	0.33	30	100	330	0.007	8.2	7.0
BPSL00090650R56MBN	0.56	20	100	200	0.010	7.7	6.0
BPSL000906501R0MBN	1.0	20	100	140	0.017	5.3	4.4
BPSL000906501R2MBN	1.2	20	100	140	0.017	5.3	4.4
BPSL000906501R6MBN	1.6	20	100	100	0.022	4.5	4.0
BPSL000906502R2MBN	2.2	20	100	100	0.035	3.5	3.1
BPSL000906504R7MBN	4.7	20	100	50	0.054	2.6	2.2
BPSL000906506R8MBN	6.8	20	100	45	0.070	2.0	1.8
BPSL00090650100MBN	10	20	100	40	0.111	1.9	1.5
BPSL00090650150MBN	15	20	100	30	0.17	1.5	1.2
BPSL00090650220MBN	22	20	100	25	0.25	1.2	1.0
BPSL00090650270MBN	27	20	100	20	0.32	1.0	0.85
BPSL00090650330MBN	33	20	100	20	0.37	0.99	0.82
BPSL00090650470MBN	47	20	100	15	0.47	0.87	0.72

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

- 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 : E4980 or HP4284A , 100kHz 0.25V
 SRF : HP4291A or HP4192A
 RDC : Chroma 16502
 Isat : HP4284A+HP42841A or WK3260B+WK3265B

Test Instruments :



SMD Unshielded Power Inductors – BPSL-BN Series

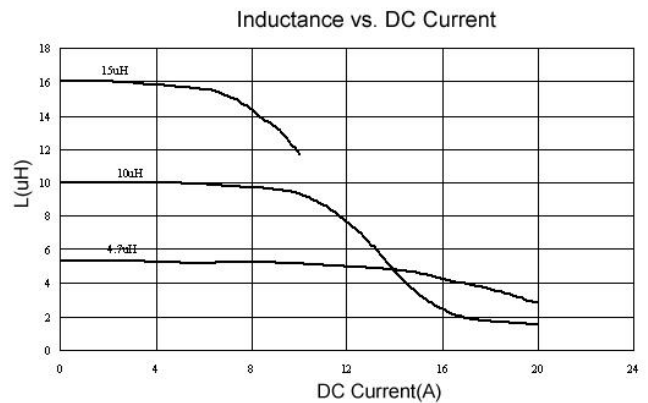
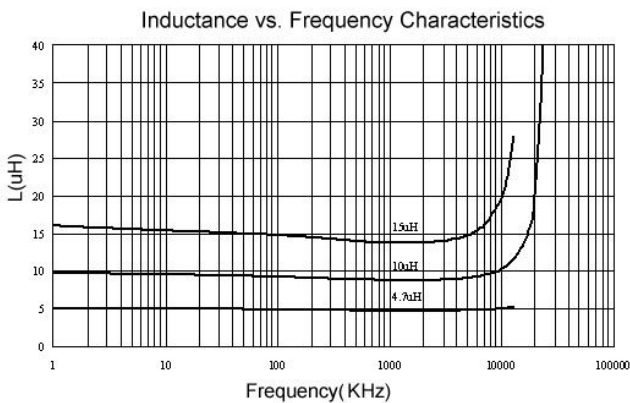
Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (kHz)	SRF (MHz) Typ.	RDC (Ω) Max	Isat (A)	Irms (A)
BPSL00131064R33MBN	0.33	20	100	300	0.002	20.0	16.0
BPSL00131064R68MBN	0.68	20	100	200	0.005	13.0	12.0
BPSL001310641R0MBN	1.0	20	100	100	0.006	11.0	10.0
BPSL001310641R5MBN	1.5	20	100	90	0.008	9.0	9.0
BPSL001310642R2MBN	2.2	20	100	90	0.011	7.8	7.4
BPSL001310642R7MBN	2.7	20	100	65	0.012	7.0	6.6
BPSL001310643R3MBN	3.3	20	100	65	0.014	6.4	5.9
BPSL001310644R7MBN	4.7	20	100	45	0.018	5.4	4.8
BPSL001310646R8MBN	6.8	20	100	35	0.035	3.6	5.0
BPSL00131064100MBN	10	20	100	26	0.04	3.3	4.3
BPSL00131064150MBN	15	20	100	21	0.06	2.4	3.5
BPSL00131064220MBN	22	20	100	17	0.08	2.0	2.8
BPSL00131064330MBN	33	20	100	14	0.15	1.7	2.1
BPSL00131064470MBN	47	20	100	12	0.28	1.4	1.7
BPSL00131064680MBN	68	20	100	9	0.3	1.2	1.5
BPSL00131064101MBN	100	20	100	7	0.4	0.95	1.2

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

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Isat for Inductance drop 10% from its value without current
- Irms for a 40°C temperature rise from 25°C ambient with current
- Measure Equipment :
 L : E4980 or HP4284A , 100kHz 0.1V
 SRF : HP4291A or HP4192A
 RDC : Chroma 16502
 Isat : HP4284A+HP42841A or WK3260B+WK3265B.

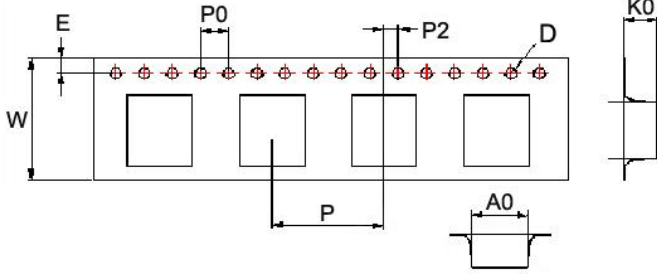
Test Instruments :



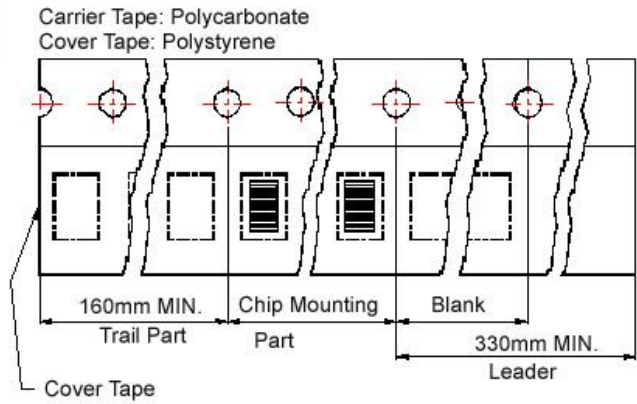
SMD Unshielded Power Inductors – BPSL-BN Series

Packaging Specifications

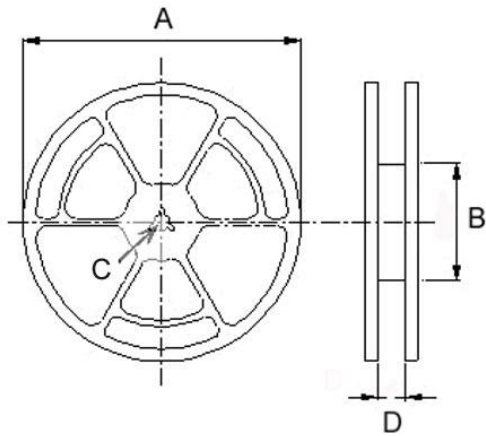
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TPYE	Tape Dimensions							Reel Dimensions				Quantity
	K0	D	E	W	P	P0	P2	A	B	C	D	PCS / Reel
BPSL00090650	5.3	1.55	1.75	16	12	4	2	330	100	13	16.0	1000
BPSL00131064	6.1	1.55	1.75	24	16	4	2	330	100	13	24.2	700