

DATA SHEET

INDUCTOR

Chip Inductors

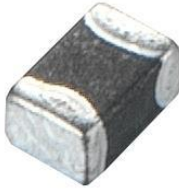
BSCL Series

RoHS compliant & Halogen Free



SMD Multilayer Ferrite Chip Inductors - BSCL Series

BSCL Series



The SMD multi-layered ferrite chip inductors provide a cost-effective solution for densely packed PC board designs. BSCL series comes in 4 sizes and is suitable for low frequency applications.

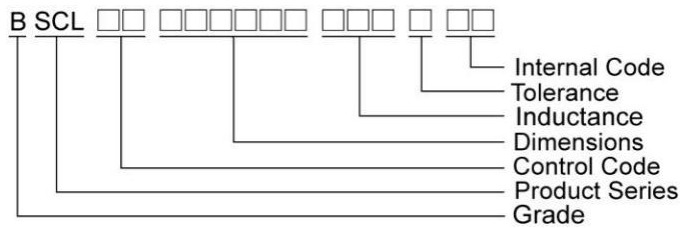
Features

- RoHS compliant
- High mounting density of compact circuit due to crosstalk elimination that results from a closed magnetic flux in a ferrite material
- Suitable for flow and re-flow soldering
- Available in 4 sizes

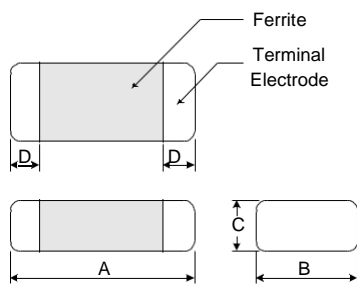
Applications

- Personal computers, HDDs, other various electronic devices
- Any portable device where compact size and high mounting densities are required

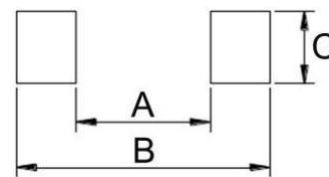
Product Identification



Shape and Dimensions



Recommended Pattern



Dimensions in mm

TYPE	A	B	C	D
BSCL00160808	1.6±0.20	0.80±0.20	0.80±0.20	2.00.3±0.20
BSCL00201209	2.0±0.20	1.25±0.20	0.90±0.20	0.5±0.30
BSCL00201212	2.0±0.20	1.25±0.20	1.25±0.20	0.5±0.30
BSCL00321611	3.2±0.20	1.60±0.20	1.10±0.20	0.5±0.30

Dimensions in mm

TYPE	A	B	C
BSCL00160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
BSCL00201209	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.4
BSCL00201212	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
BSCL00321611	2.0 ~ 2.4	4.2 ~ 5.2	1.3 ~ 1.9

SMD Multilayer Ferrite Chip Inductors – BSCL Series

Electrical Characteristics

Part Number	Inductance (μ H)	Tolerance ($\pm\%$)	Q Min	Test	SRF (MHz) Min	RDC (Ω) Max	IDC (mA) Max
				Frequency (MHz)			
BSCL0016080810N [□] 00	0.010	20	15	50	300	0.2	50
BSCL0016080833N [□] 00	0.033	20	15	50	270	0.2	50
BSCL0016080847N [□] 00	0.047	20	15	50	260	0.3	50
BSCL0016080856N [□] 00	0.056	20	15	50	255	0.3	50
BSCL0016080868N [□] 00	0.068	20	15	50	250	0.3	50
BSCL0016080882N [□] 00	0.082	20	15	50	245	0.3	50
BSCL00160808R10 [□] 00	0.10	20/15/10	25	25	240	0.5	50
BSCL00160808R12 [□] 00	0.12	20/15/10	25	25	205	0.5	50
BSCL00160808R15 [□] 00	0.15	20/15/10	25	25	180	0.6	50
BSCL00160808R18 [□] 00	0.18	20/15/10	25	25	165	0.6	50
BSCL00160808R22 [□] 00	0.22	20/15/10	25	25	150	0.8	50
BSCL00160808R27 [□] 00	0.27	20/15/10	25	25	136	0.8	50
BSCL00160808R33 [□] 00	0.33	20/15/10	25	25	125	0.85	35
BSCL00160808R39 [□] 00	0.39	20/15/10	25	25	110	1.00	35
BSCL00160808R47 [□] 00	0.47	20/15/10	25	25	105	1.35	35
BSCL00160808R56 [□] 00	0.56	20/15/10	25	25	95	1.50	35
BSCL00160808R68 [□] 00	0.68	20/15/10	25	25	85	1.70	35
BSCL00160808R82 [□] 00	0.82	20/15/10	25	25	75	2.10	35
BSCL001608081R0 [□] 00	1.0	20/15/10	35	10	65	0.60	25
BSCL001608081R2 [□] 00	1.2	20/15/10	35	10	60	0.80	25
BSCL001608081R5 [□] 00	1.5	20/15/10	35	10	55	0.80	25
BSCL001608081R8 [□] 00	1.8	20/15/10	35	10	50	0.95	25
BSCL001608082R2 [□] 00	2.2	20/15/10	35	10	45	1.00	15
BSCL001608082R7 [□] 00	2.7	20/15/10	35	10	40	1.15	15
BSCL001608083R3 [□] 00	3.3	20/15/10	35	10	38	1.30	15
BSCL001608083R9 [□] 00	3.9	20/15/10	35	10	36	1.50	15
BSCL001608084R7 [□] 00	4.7	20/15/10	35	10	33	1.60	15
BSCL001608085R6 [□] 00	5.6	20/15/10	35	4	22	1.10	5
BSCL001608086R8 [□] 00	6.8	20/15/10	35	4	20	1.30	5
BSCL001608088R2 [□] 00	8.2	20/15/10	30	4	18	1.50	5
BSCL00160808100 [□] 00	10	20/15/10	30	2	17	1.70	5
BSCL00160808120 [□] 00	12	20/15/10	30	2	15	1.80	3
BSCL00160808150 [□] 00	15	20/15/10	20	1	14	1.50	1
BSCL00160808220 [□] 00	22	20/15/10	20	1	11	1.70	1

Note: When ordering, please specify tolerance code. Tolerance : K= \pm 10% , L= \pm 15% , M= \pm 20%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Measure Equipment :



CHIP INDUCTORS

BSPQ

SRF : Agilent HP8753D/Agilent E4991A

RDC : HP4338B or CHEN HWA 502

SMD Multilayer Ferrite Chip Inductors – BSCL Series

Electrical Characteristics

Part Number	Inductance (μ H)	Tolerance (\pm %)	Q Min	Test Frequency (MHz)	SRF MHz) Min	RDC (Ω) Max	IDC (mA) Max
BSCL0020120922N [□] 00	0.022	20	20	50	320	0.20	300
BSCL0020120933N [□] 00	0.033	20/15	20	50	320	0.20	300
BSCL0020120947N [□] 00	0.047	20/15	20	50	320	0.20	300
BSCL0020120956N [□] 00	0.056	20/15	20	50	320	0.20	300
BSCL0020120968N [□] 00	0.068	20/15	20	50	280	0.20	300
BSCL0020120982N [□] 00	0.082	20/15	20	50	255	0.20	300
BSCL00201209R10 [□] 00	0.10	20/15/0	25	25	235	0.30	250
BSCL00201209R12 [□] 00	0.12	20/15/10	25	25	220	0.30	250
BSCL00201209R15 [□] 00	0.15	20/15/10	25	25	200	0.40	250
BSCL00201209R18 [□] 00	0.18	20/15/10	25	25	185	0.40	250
BSCL00201209R22 [□] 00	0.22	20/15/10	25	25	170	0.50	250
BSCL00201209R27 [□] 00	0.27	20/15/10	25	25	150	0.50	250
BSCL00201209R33 [□] 00	0.33	20/15/10	25	25	145	0.55	250
BSCL00201209R39 [□] 00	0.39	20/15/10	25	25	135	0.65	250
BSCL00201209R47 [□] 00	0.47	20/15/10	25	25	125	0.65	250
BSCL00201209R56 [□] 00	0.56	20/15/10	25	25	115	0.75	150
BSCL00201209R68 [□] 00	0.68	20/15/10	25	25	105	0.80	150
BSCL00201209R82 [□] 00	0.82	20/15/10	25	25	100	1.00	150
BSCL002012091R0 [□] 00	1.0	20/15/10	45	10	75	0.40	50
BSCL002012091R2 [□] 00	1.2	20/15/10	45	10	65	0.50	50
BSCL002012091R5 [□] 00	1.5	20/15/10	45	10	60	0.50	50
BSCL002012091R8 [□] 00	1.8	20/15/10	45	10	55	0.60	50
BSCL002012092R2 [□] 00	2.2	20/15/10	45	10	50	0.65	30

Note: When ordering, please specify tolerance code. Tolerance : K= \pm 10% , L= \pm 15% , M= \pm 20%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value

- Measure Equipment :

L & Q : HP4291A

SRF : Agilent HP8753D/Agilent E4991A

RDC : HP4338B or CHEN HWA 502

SMD Multilayer Ferrite Chip Inductors – BSCL Series

Electrical Characteristics

Part Number	Inductance (μ H)	Tolerance (\pm %)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max	IDC (mA) Max
BSCL002012122R7 [□] 00	2.7	20/15/10	45	10	45	0.75	30
BSCL002012123R3 [□] 00	3.3	20/15/10	45	10	41	0.80	30
BSCL002012123R9 [□] 00	3.9	20/15/10	45	10	38	0.90	30
BSCL002012124R7 [□] 00	4.7	20/15/10	45	10	35	1.00	30
BSCL002012125R6 [□] 00	5.6	20/15/10	45	4	32	0.90	15
BSCL002012126R8 [□] 00	6.8	20/15/10	45	4	29	1.00	15
BSCL002012128R2 [□] 00	8.2	20/15/10	45	4	26	1.10	15
BSCL00201212100 [□] 00	10	20/15/10	45	2	24	1.10	15
BSCL00201212120 [□] 00	12	20/15/10	45	2	22	1.20	15
BSCL00201212150 [□] 00	15	20/15/10	30	1	19	0.80	5
BSCL00201212180 [□] 00	18	20/15/10	30	1	18	0.90	5
BSCL00201212220 [□] 00	22	20/15/10	30	1	16	1.1	5

Note: When ordering, please specify tolerance code. Tolerance : K= \pm 10% , L= \pm 15% , M= \pm 20%

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- IDC : Applied the current to coils, the inductance shall be less than 10% initial value

- Measure Equipment :

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SMD Multilayer Ferrite Chip Inductors – BSCL Series

Electrical Characteristics

Part Number	Inductance (μH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max	IDC (mA) Max
BSCL0032161147N□ ₀₀	0.047	20	20	50	320	0.15	300
BSCL0032161156N□ ₀₀	0.056	20	20	50	280	0.25	300
BSCL0032161168N□ ₀₀	0.068	20	20	50	280	0.25	300
BSCL0032161182N□ ₀₀	0.082	20	20	50	250	0.25	300
BSCL00321611R10□ ₀₀	0.10	20/15/10	25	25	235	0.25	250
BSCL00321611R12□ ₀₀	0.12	20/15/10	25	25	220	0.30	250
BSCL00321611R15□ ₀₀	0.15	20/15/10	25	25	200	0.30	250
BSCL00321611R18□ ₀₀	0.18	20/15/10	25	25	185	0.40	250
BSCL00321611R22□ ₀₀	0.22	20/15/10	25	25	170	0.40	250
BSCL00321611R27□ ₀₀	0.27	20/15/10	25	25	150	0.50	250
BSCL00321611R33□ ₀₀	0.33	20/15/10	25	25	145	0.60	250
BSCL00321611R39□ ₀₀	0.39	20/15/10	25	25	135	0.50	200
BSCL00321611R47□ ₀₀	0.47	20/15/10	25	25	125	0.60	200
BSCL00321611R56□ ₀₀	0.56	20/15/10	25	25	115	0.70	150
BSCL00321611R68□ ₀₀	0.68	20/15/10	25	25	105	0.80	150
BSCL00321611R82□ ₀₀	0.82	20/15/10	25	25	100	0.90	150
BSCL00321611R100□ ₀₀	1.0	20/15/10	45	10	75	0.40	100
BSCL00321611R120□ ₀₀	1.2	20/15/10	45	10	65	0.50	100
BSCL00321611R150□ ₀₀	1.5	20/15/10	45	10	60	0.50	80
BSCL00321611R180□ ₀₀	1.8	20/15/10	45	10	55	0.50	70
BSCL00321611R220□ ₀₀	2.2	20/15/10	45	10	50	0.60	60
BSCL00321611R270□ ₀₀	2.7	20/15/10	45	10	45	0.60	60
BSCL00321611R330□ ₀₀	3.3	20/15/10	45	10	41	0.70	60
BSCL00321611R390□ ₀₀	3.9	20/15/10	45	10	38	0.80	50
BSCL00321611R470□ ₀₀	4.7	20/15/10	45	10	35	0.90	50
BSCL00321611R560□ ₀₀	5.6	20/15/10	45	4	32	0.70	25
BSCL00321611R680□ ₀₀	6.8	20/15/10	45	4	29	0.80	25
BSCL00321611R820□ ₀₀	8.2	20/15/10	45	4	26	0.90	25
BSCL00321611100□ ₀₀	10	20/15/10	45	2	24	1.00	25
BSCL00321611120□ ₀₀	12	20/15/10	45	2	22	1.00	15
BSCL00321611150□ ₀₀	15	20/15/10	35	1	19	0.70	5
BSCL00321611180□ ₀₀	18	20/15/10	35	1	18	0.75	5
BSCL00321611220□ ₀₀	22	20/15/10	35	1	16	0.90	5
BSCL00321611270□ ₀₀	27	20/15/10	35	1	14	0.90	5

Note: When ordering, please specify tolerance code. Tolerance : K=±10% , L=±15% , M=±20%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Measure Equipment :
L & Q : HP4291A



CHIP INDUCTORS

BSPQ

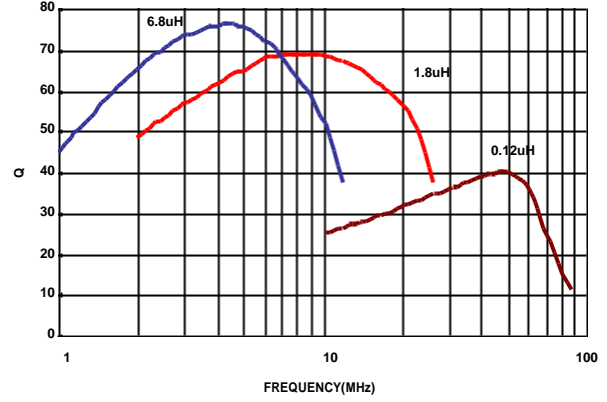
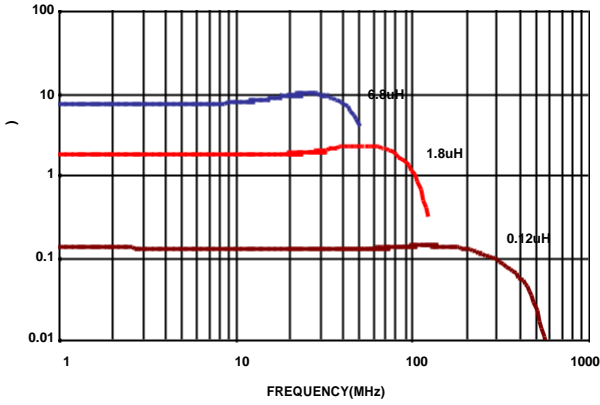
RDC : HP4338B or CHEN HWA 502

SMD Multilayer Ferrite Chip Inductors – BSCL Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer

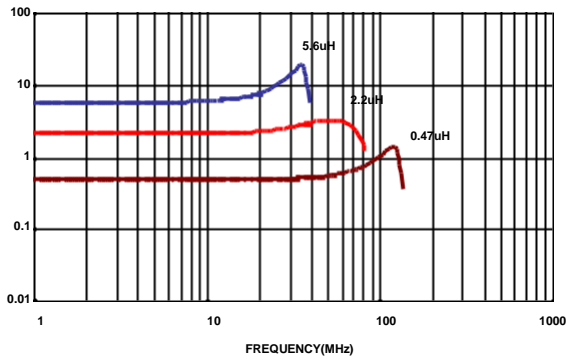
BSCL00160808

INDUCTANCE v.s. FREQUENCY CHARACTERISTICS Q v.s. FREQUENCY CHARACTERISTICS

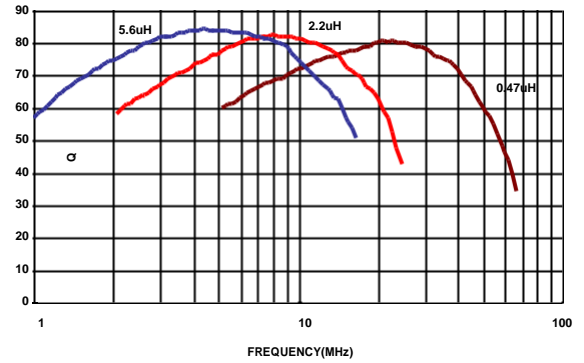


BSCL00201209

INDUCTANCE v.s. FREQUENCY CHARACTERISTICS

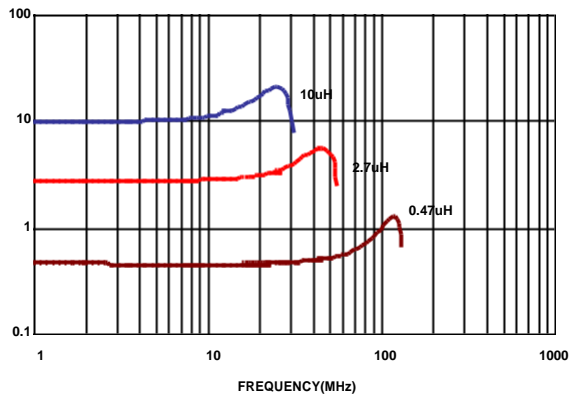


Q v.s. FREQUENCY CHARACTERISTICS

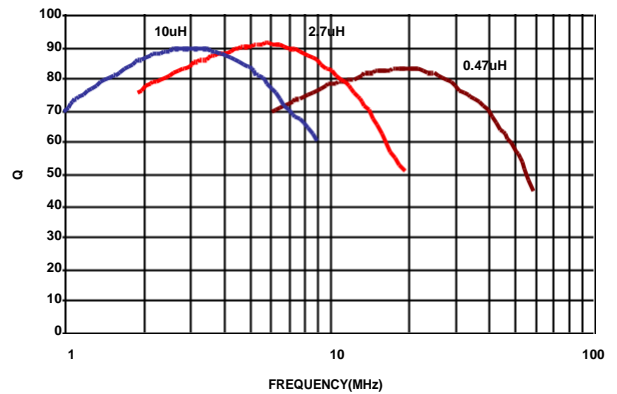


BSCL00321611

INDUCTANCE v.s. FREQUENCY CHARACTERISTICS



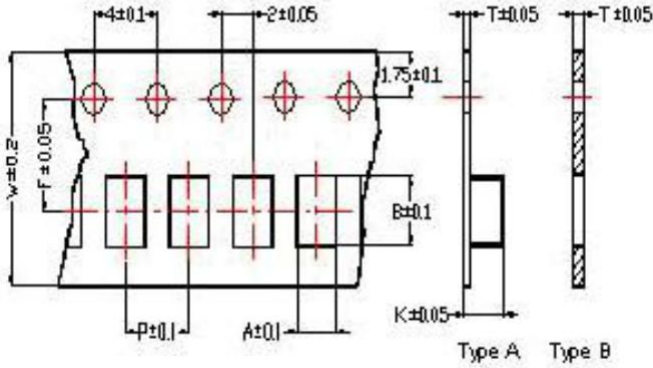
Q v.s. FREQUENCY CHARACTERISTICS



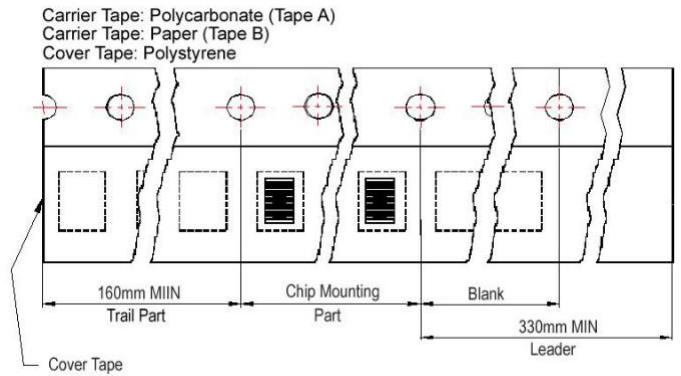
SMD Multilayer Ferrite Chip Inductors - BSCL Series

Packaging Specifications

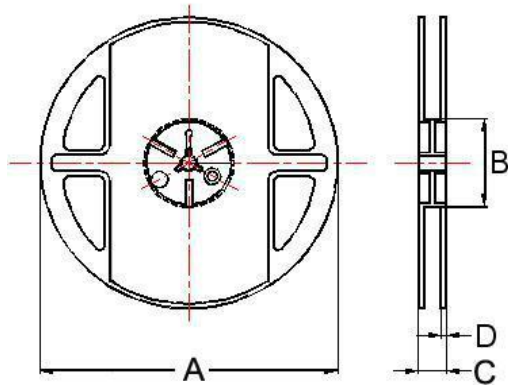
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / Reel
	A	B	T	W	P	F	K	Tape	A	B	C	D	
BSCL00160808	1.05	1.85	0.95	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
BSCL00201209	1.50	2.30	0.97	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
BSCL00201212	1.35	2.25	0.22	8.0	4.0	3.5	1.35	A	178	60	12	1.5	3000
BSCL00321611	1.88	3.50	0.22	8.0	4.0	3.5	1.27	A	178	60	12	1.5	3000