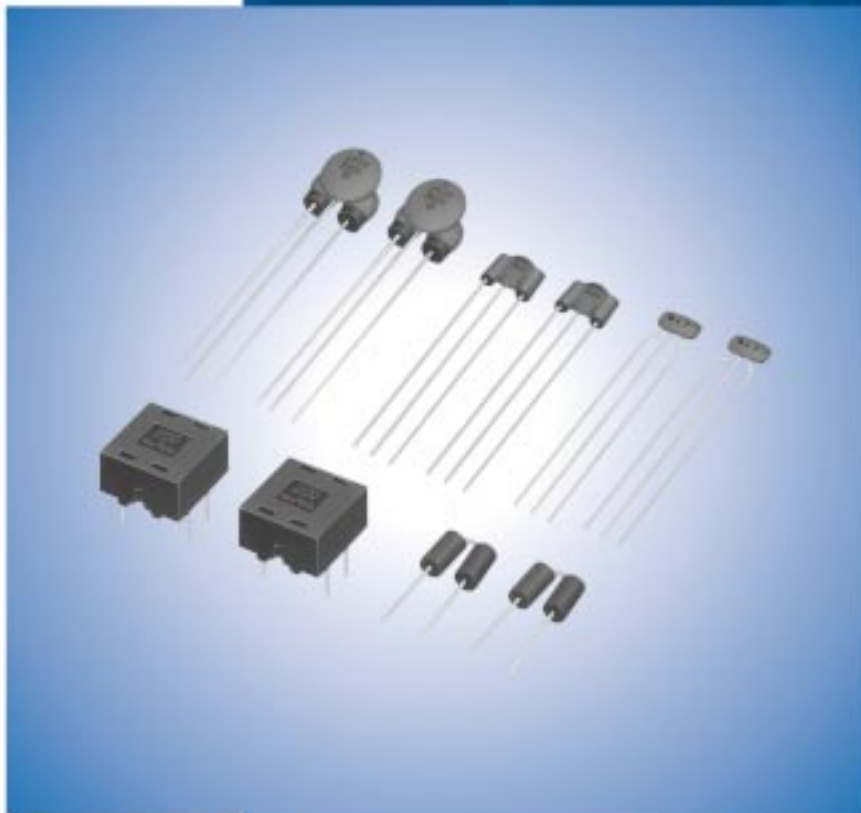
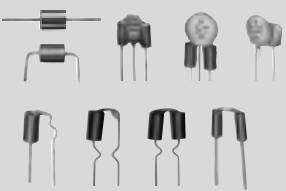


EMI Suppression Filters (Lead Type EMIFIL[®])

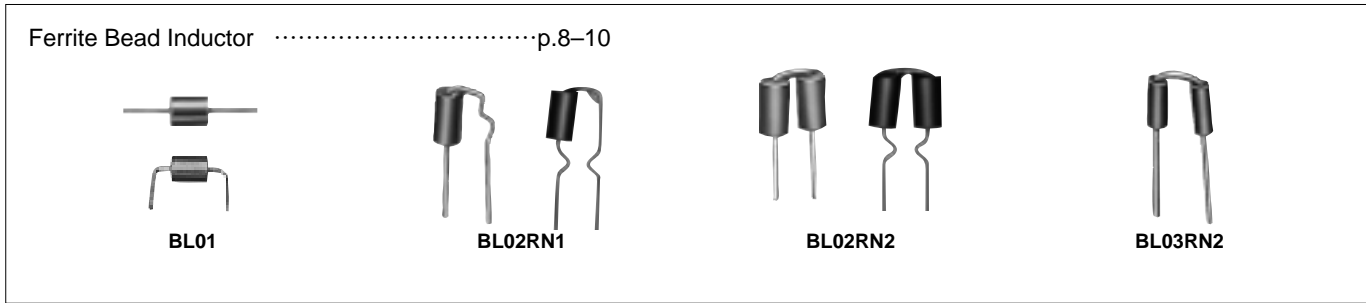


Product Guide/Effective Frequency Range

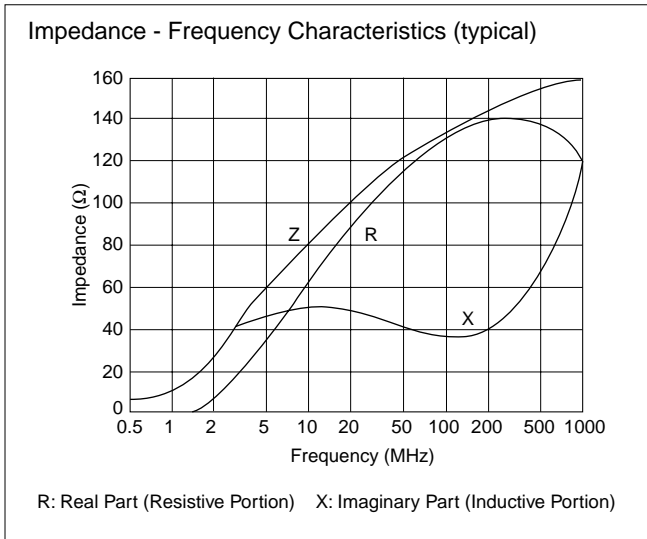
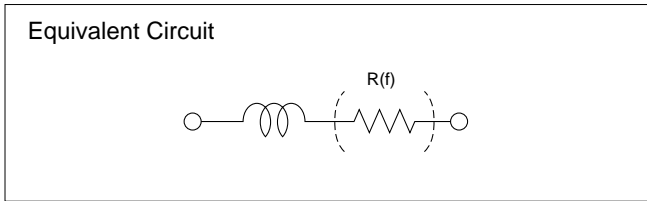
Type	Series	Dimensions		Effective Frequency Range										
		(mm)	EIA Code	10kHz	100kHz	1MHz	10MHz	100MHz	1GHz	10GHz				
Disc Type EMIFIL® Ferrite Bead Inductor 	BL01/02/03 DSN6/9(H) DSS6/9(H) DST9(H)													

Outline of EMI Suppression Filters (EMIFIL®) for DC Line

● Ferrite Bead Inductor



- Chip Ferrite Beads are effective for frequencies ranging from a few MHz to a few GHz. Chip Ferrite Beads are widely used as a low noise countermeasure, as well as a universal noise suppression component.
- Chip Ferrite Beads produce a micro inductance in a low frequency range. At high frequencies, however, the resistive component of the inductor produces the primary impedance. When inserted in series in the noise producing circuit, the resistive impedance of the inductor prevents noise propagation.



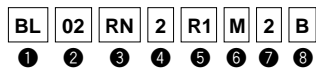
EMI Suppression Filters (Lead Type EMIFIL®)



Ferrite Beads Inductors Part Numbering

Ferrite Beads Inductors

(Part Number)



① Product ID

Product ID	
BL	Ferrite Beads Inductors

② Series

Code	Series
01	Beads ø3.6
02	Beads ø3.4
03	Beads ø2.3 max.

③ Beads Core Material

Code	Beads Core Material
RN	Standard Type

④ Numbers of Beads Core

Code	Numbers of Beads Core
1	1
2	2

⑤ Lead Type

Code	Lead Type	Series
A1	Axial Straight Type	BL01
A2	Axial Crimp Type	BL01
R1	Radial Straight Type	BL02/BL03
R2	Radial Straight and Wave Formed Leads Type	BL02
R3	Radial Incrimp Type	BL02

⑥ Lead Length, Space

Code	Lead Length, Space	Series
A	Bulk, Axial Type, 3.7mm	BL01
D	Bulk, Axial Type, 45.0mm	
E	Taping, Axial Type, 26.0mm	
F	Taping, Axial Type, 52.0mm	
J	Bulk, Radial Type, 5.0mm	BL02/BL03
M	Bulk, Radial Type, 10.0mm	
N	Taping, Radial Type, 16.5mm	
P	Taping, Radial Type, 18.5mm	
Q	Taping, Radial Type, 20.0mm	

⑦ Lead Diameter

Code	Lead Diameter
1	ø0.60mm
2	ø0.65mm

⑧ Packaging

Code	Packaging	Series
A	Ammo Pack	BL01/BL02/BL03
B	Bulk	All Series
J	Paper Reel (ø320mm)	BL01

Ferrite Beads Inductors
 Disc Type EMIFIL®
 EMIGUARD® (EMIFIL® with Varistor Function)
 Common Mode Choke Coils
 △Caution / Notice
 Soldering and Mounting
 Packaging

EMI Suppression Filters (Lead Type EMIFIL®)

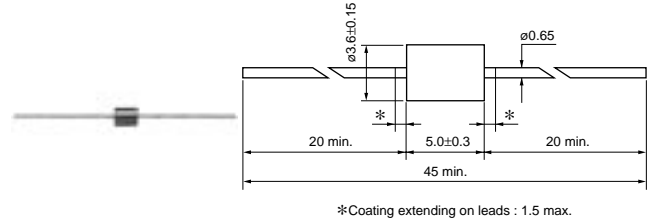


Ferrite Beads Inductors BL01/02/03 Series

BL01/BL02/BL03 Series

■ Features

BL01/02/03 series are ferrite beads with lead wires to produce a high frequency loss for suppression of noise. They are simply constructed and easy to use, effective for low impedance circuits such as power supplies and grounds. Effective also for preventing overshoot and undershoot of digital signal in clocks or the like, and suppressing the higher harmonic wave. Suitable for prevention of abnormal oscillation at high frequency amplifying circuits.



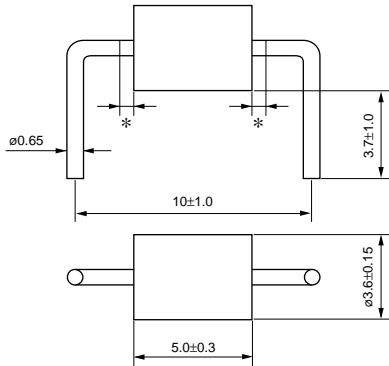
*Coating extending on leads : 1.5 max.

BL01RN1A1D2B

(in mm)



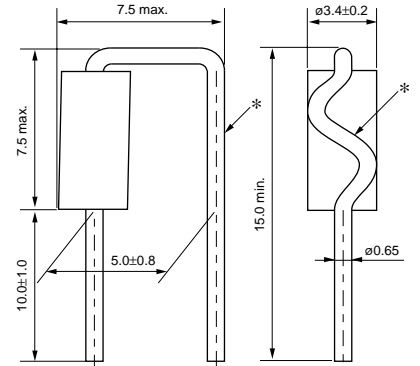
BL01RN1A2A2B



*Coating extending on leads : 1.5 max. (in mm)



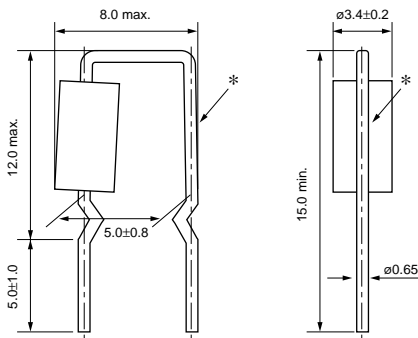
BL02RN1R2M2B



*There is excess bond stick on the wire. (in mm)



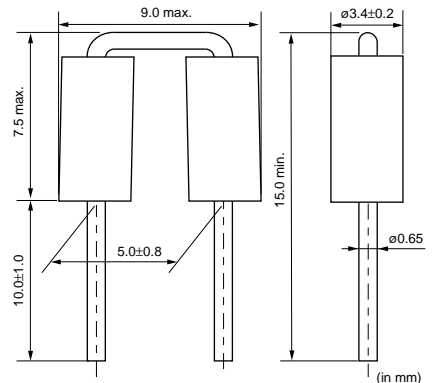
BL02RN1R3J2B



*There is excess bond stick on the wire. (in mm)



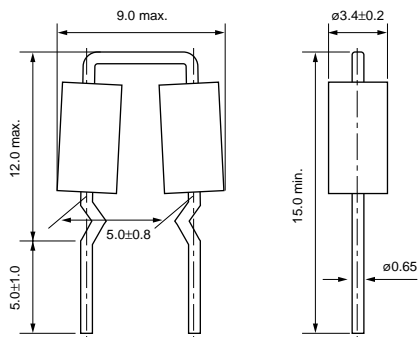
BL02RN2R1M2B



(in mm)



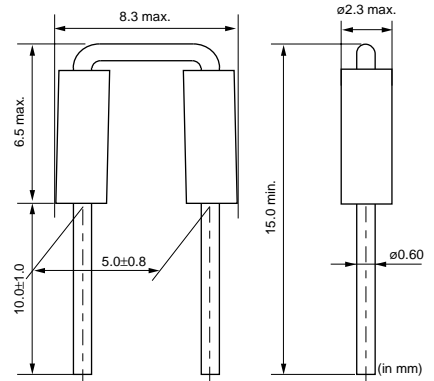
BL02RN2R3J2B



(in mm)



BL03RN2R1M1B

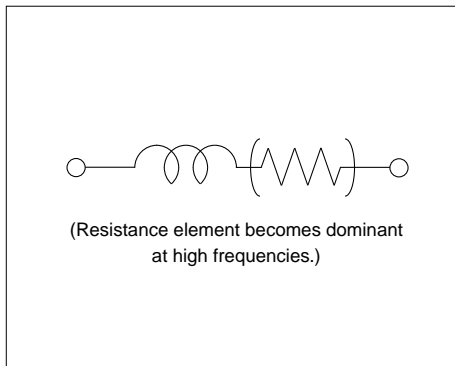


(in mm)

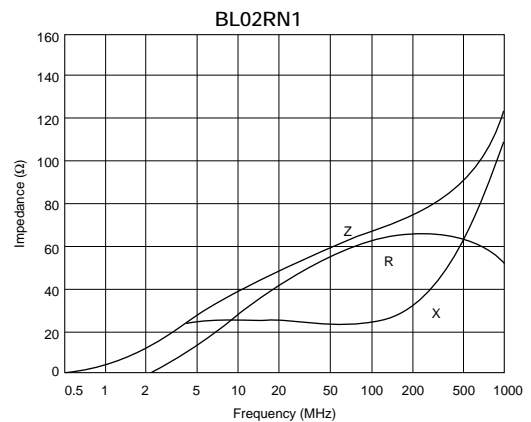
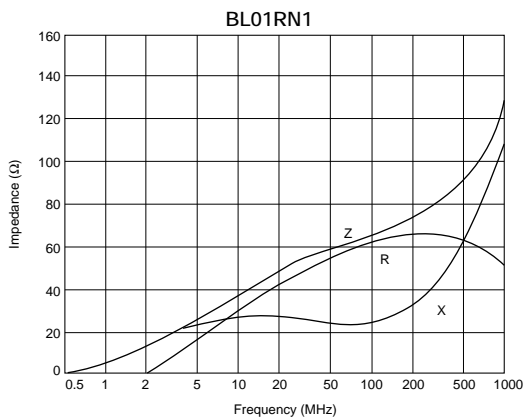
Part Number	Rated Current (A)	Operating Temperature Range
BL01RN1A1D2B	7	-40 to +85°C
BL01RN1A1E1A	6	-40 to +85°C
BL01RN1A1F1J	6	-40 to +85°C
BL01RN1A2A2B	7	-40 to +85°C
BL02RN1R2M2B	7	-40 to +85°C
BL02RN1R2N1A	6	-40 to +85°C
BL02RN1R2P1A	6	-40 to +85°C
BL02RN1R2Q1A	6	-40 to +85°C
BL02RN1R3J2B	7	-40 to +85°C
BL02RN1R3N1A	6	-40 to +85°C
BL02RN2R1M2B	7	-40 to +85°C
BL02RN2R1N1A	6	-40 to +85°C
BL02RN2R1P1A	6	-40 to +85°C
BL02RN2R1Q1A	6	-40 to +85°C
BL02RN2R3J2B	7	-40 to +85°C
BL02RN2R3N1A	6	-40 to +85°C
BL03RN2R1M1B	6	-40 to +85°C
BL03RN2R1N1A	6	-40 to +85°C
BL03RN2R1P1A	6	-40 to +85°C
BL03RN2R1Q1A	6	-40 to +85°C

Please refer to p.34, "Packaging" for Dimensions of Part Numbers except 'B' for the last code.

■ Equivalent Circuit



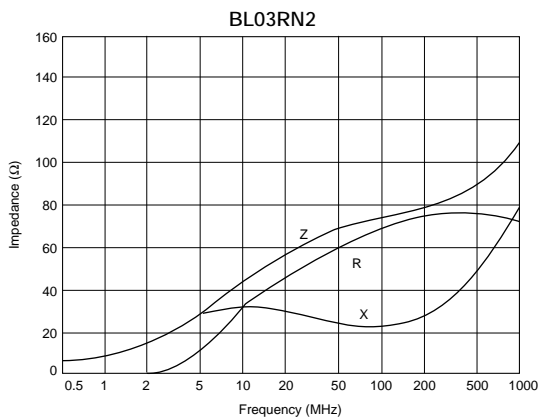
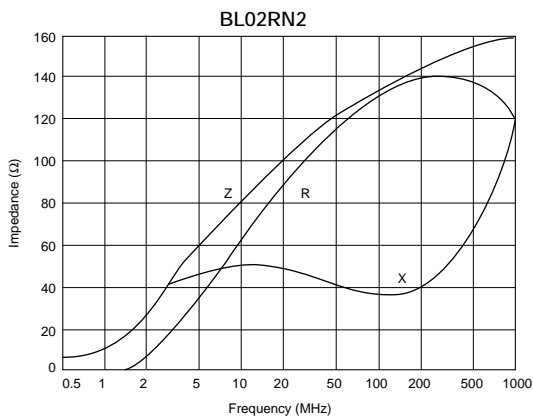
■ Impedance - Frequency Characteristics



Continued on the following page. ↗

Continued from the preceding page.

■ Impedance - Frequency Characteristics



Ferrite Beads Inductors

Disc Type EMIFIL®

EMIGUARD®
 (EMIFIL® with Varistor Function)

Common Mode Choke Coils

⚠Caution / Notice

Soldering and Mounting

Packaging

Packaging

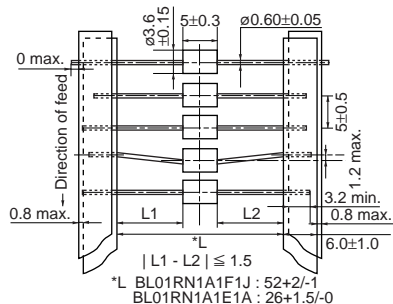
Minimum Quantity (Pcs.)

Series	Bulk	Ammo Pack	ø320mm Paper Reel
BL01RN	500	1000	2000
BL02RN	500	1500	—
BL03RN	1000	2000	—

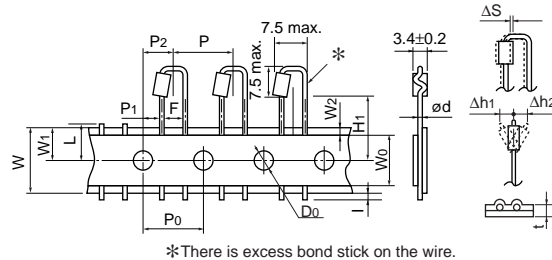
Taping Dimensions

BL01RN_J

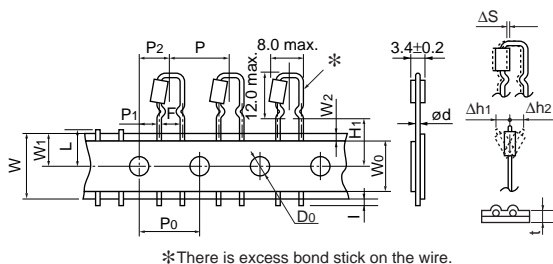
BL01RN_A



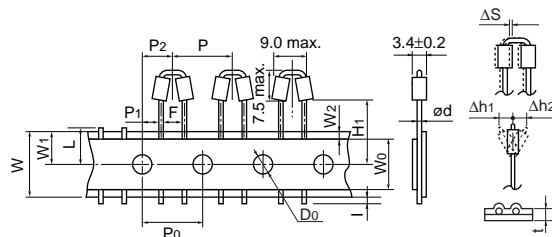
BL02RN1R2□1A



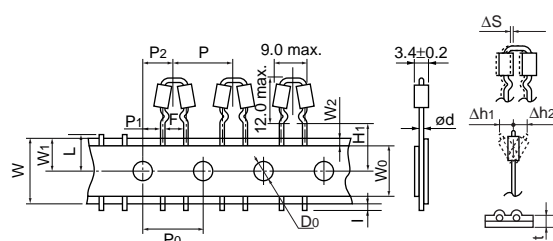
BL02RN1R3N1A



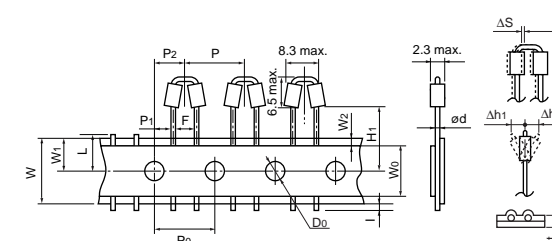
BL02RN2R1□1A



BL02RN2R3N1A



BL03RN2R1□1A



Description	Symbol	Dimension (mm)	Remarks	
Pitch of component	P	12.7	Product inclination ΔS determines tolerance	
Pitch of sprocket hole	P0	12.7±0.2		
Lead spacing	F	5.0 ^{+0.8} _{-0.2}		
Hole center to lead	P1	3.85±0.7		
Hole center to component center	P2	6.35±1.3	Tape deviation in feeding direction	
Offset of bead	ΔS	±1.0	Including the offset caused by lead bend	
Carrier tape width	W	18.0±0.5		
Position of sprocket hole	W1	9.0 ⁺⁰ _{-0.5}	Tape with deviation	
Lead length between sprocket hole and forming position	H1	Lead Length Number : N	16.5±0.5	BL02, BL03
		Lead Length Number : Q	20.0±0.5	BL02RN1R2/2R1, BL03
		Lead Length Number : P	18.5±0.5	BL02, BL03
Protruding length	I	+0.5 to -1.0		
Diameter of sprocket hole	D0	ø4.0±0.1		
Lead Diameter	ød	ø0.60		
Total tape thickness	t	0.7±0.2	Including bonding tape thickness	
Deviation across tape, Deviation across tape rear	Δh1, Δh2	1.0 max.		
Cutting position of failure	L	11.0 ⁺⁰ _{-1.0}		
Hold down tape width	W0	12.0±0.5		
Hold down tape position	W2	1.5±1.5		

(in mm)