

On-Board Type (DC) EMI Suppression Filters (EMIFIL®)



Chip Ferrite Beads Part Numbering

Chip Ferrite Beads

(Part Number)

BL	M	18	AG	102	S	N	1	D
①	②	③	④	⑤	⑥	⑦	⑧	⑨

① Product ID

Product ID	
BL	Chip Ferrite Beads

② Type

Code	Type
A	Array Type
M	Monolithic Type

③ Dimensions (L×W)

Code	Dimensions (L×W)	EIA
03	0.6×0.3mm	0201
15	1.0×0.5mm	0402
18	1.6×0.8mm	0603
2A	2.0×1.0mm	0804
21	2.0×1.25mm	0805
31	3.2×1.6mm	1206
41	4.5×1.6mm	1806

④ Characteristics/Applications

Code *1	Characteristics/Applications	Series
AG	for General Use	BLM03/BLM15/BLM18/BLM21/BLA2A/BLA31
TG		BLM18
BA	for High-speed Signal Lines	BLM18
BB		BLM03/BLM15/BLM18/BLM21/BLA2A
BD		BLM15/BLM18/BLM21/BLA2A/BLA31
PG	for Power Supplies	BLM15/BLM18/BLM21/BLM31/BLM41
RK	for Digital Interface	BLM18/BLM21
HG	for GHz Band General Use	BLM15/BLM18
EG	for GHz Band General Use (Low DC Resistance Type)	
HB	for GHz Band High-speed Signal Line	BLM15/BLM18
HD		BLM15/BLM18
HK	for GHz Band Digital Interface	BLM18
GG	for High-GHz Band General Use	BLM18

*1 Frequency characteristics vary with each code.

⑨ Packaging

Code	Packaging	Series
K	Plastic Taping (ø330mm Reel)	BLM31/BLM41/BLM21 *1
L	Plastic Taping (ø180mm Reel)	
B	Bulk	All Series
J	Paper Taping (ø330mm Reel)	BLM15/BLM18/BLM21 *2/BLA31
D	Paper Taping (ø180mm Reel)	BLM03/BLM15/BLM18/BLM21 *2/BLA2A/BLA31
C	Bulk Case	BLM15/BLM18

*1 BLM21BD222SN1/BLM21BD272SN1 only.

*2 Except BLM21BD222SN1/BLM21BD272SN1

⑤ Impedance

Expressed by three figures. The unit is in ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

⑥ Performance

Expressed by a letter.

Ex.)	Code	Performance
	S/T	Sn Plating
	A	Au Plating

⑦ Category

Code	Category
N	Standard Type

⑧ Number of Circuits

Code	Number of Circuits
1	1 Circuit
4	4 Circuits

On-Board Type (DC) EMI Suppression Filters (EMIFIL®)



Chip Ferrite Bead BLM Series

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Essential for Noise Suppression in High Speed Signal Lines and DC Power Lines

The chip ferrite bead BLM series comprises ferrite beads in the shape of a chip. This ferrite bead generates a high impedance which at high frequencies mainly consists of a resistance element. The BLM series is effective in circuits without stable ground lines because the BLM series does not need a connection to ground.

Chip sizes of 0.6x0.3, 1.0x0.5, 1.6x0.8, 2.0x1.25, 3.2x1.6 and 4.5x1.6mm are cataloged. (The BLA series of array type chip ferrite beads is also cataloged.)

The nickel barrier structure of the external electrodes provides excellent solder heat resistance.

■Features

The BLM series comprises the R series (for digital interface), the A series (for standard), the B series (for high speed signal), the P series (for large current), and the H/E/G series (for GHz range noise suppression).

1. BLM□□R series – For Digital Interface

The BLM-R series can be used in Digital Interface.

Resistance of BLM-R series especially grows in the lower frequency range. Therefore BLM-R series is less effective for digital signal waveform at low frequency range and can suppress the ringing.

2. BLM□□A/T series – For General Use

The BLM-A series generates an impedance from the relatively low frequencies. Therefore the BLM-A series is effective in noise suppression in the wide frequency range (30MHz – several hundred MHz).

3. BLM□□B series – For High Speed Signal

The BLM-B series can minimize attenuation of the signal waveform due to its sharp impedance characteristics. Various impedances are available to match signal frequency.

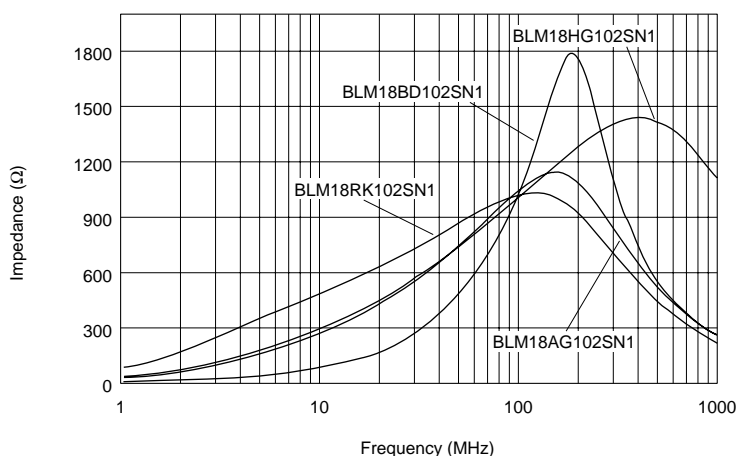
4. BLM□□P series – For Large Current

The BLM-P series can be used in high current circuits due to its low DC resistance. It can match power lines to a maximum of 6A DC (BLM41P).

5. BLM□□H/E/G series – For GHz Range Noise Suppression

The BLM□□H/E/G series has a modified internal electrode structure that minimizes stray capacitance and increases the effective frequency range.

[Impedance Characteristics]



Continued from the preceding page.

Size (inches)	Type	Part Number	Impedance (Ω)		Rated Current (mA)
			at 100MHz	at 1GHz	
0805	For Standard	BLM21AG121SN1	120±25%	-	200
		BLM21AG151SN1	150±25%	-	
		BLM21AG221SN1	220±25%	-	
		BLM21AG331SN1	330±25%	-	
		BLM21AG471SN1	470±25%	-	
		BLM21AG601SN1	600±25%	-	
		BLM21AG102SN1	1000±25%	-	
	For High Speed Signal (Sharp impedance characteristics)	BLM21BB050SN1	5±25%	-	500
		BLM21BB600SN1	60±25%	-	
		BLM21BB750SN1	75±25%	-	
		BLM21BB121SN1	120±25%	-	200
		BLM21BD121SN1		-	
		BLM21BB151SN1	150±25%	-	
		BLM21BD151SN1		-	
		BLM21BB201SN1	200±25%	-	
		BLM21BB221SN1	220±25%	-	
		BLM21BD221SN1		-	
		BLM21BB331SN1	330±25%	-	
		BLM21BD331SN1		-	
		BLM21BD421SN1	420±25%	-	
		BLM21BB471SN1	470±25%	-	
		BLM21BD471SN1		-	
		BLM21BD601SN1	600±25%	-	
		BLM21BD751SN1	750±25%	-	
		BLM21BD102SN1	1000±25%	-	
		BLM21BD152SN1	1500±25%	-	
		BLM21BD182SN1	1800±25%	-	
		BLM21BD222SN1	2250 (Typ.)	-	
		BLM21BD222TN1	2200±25%	-	
		BLM21BD272SN1	2700±25%	-	
	For Digital Interface	BLM21RK121SN1	120±25%	-	200
		BLM21RK221SN1	220±25%	-	
		BLM21RK471SN1	470±25%	-	
		BLM21RK601SN1	600±25%	-	
		BLM21RK102SN1	1000±25%	-	
	For Large Current	BLM21PG220SN1	22±25%	-	6000*
		BLM21PG300SN1	30 (Typ.)	-	3000*
		BLM21PG600SN1	60±25%	-	2000*
		BLM21PG221SN1	220±25%	-	1500*
		BLM21PG331SN1	330±25%	-	
1206	For Large Current	BLM31PG330SN1	33±25%	-	6000*
		BLM31PG500SN1	50 (Typ.)	-	3000*
		BLM31PG121SN1	120±25%	-	2000*
		BLM31PG391SN1	390±25%	-	1500*
		BLM31PG601SN1	600±25%	-	
1806	For Large Current	BLM41PG600SN1	60 (Typ.)	-	6000*
		BLM41PG750SN1	75 (Typ.)	-	3000*
		BLM41PG181SN1	180±25%	-	2000*
		BLM41PG471SN1	470±25%	-	1500*
		BLM41PG102SN1	1000±25%	-	

* Please see p.55 "Derating of Rated Current".