

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

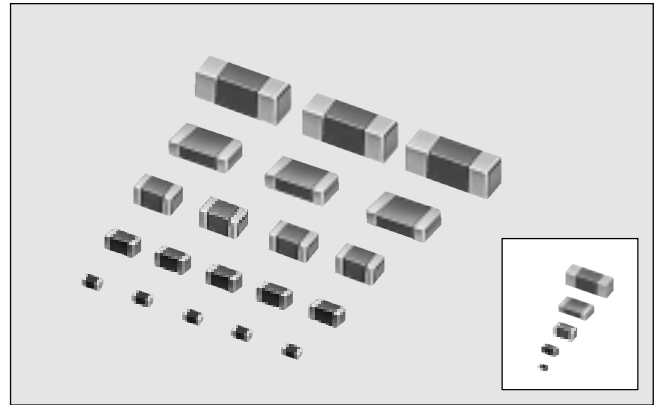
## Chip Ferrite Bead BLM Series

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

The chip ferrite bead BLM series comprises ferrite bead inductors in the shape of a chip. This inductor 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 1.0×0.5, 1.6×0.8, 2.0×1.25, 3.2×1.6 and 4.5×1.6mm are cataloged. (The BLA series of array type chip ferrite bead is also cataloged.)

The nickel barrier structure of the external electrodes provides excellent solder heat resistance. Both flow and reflow soldering methods can be employed.



### ■Features

The BLM series comprises, the R series (for digital interface), the A series (for standard), the B series (for high speed signal), and the P series (for large current).

#### 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 effect for digital signal waveform at low frequency range and can suppress the ringing.

#### 2. BLM□□A series-For Standard

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

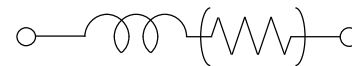
#### 4. BLM□□P series-For Large Current

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).

### ■Difference between A Series, B Series and R Series

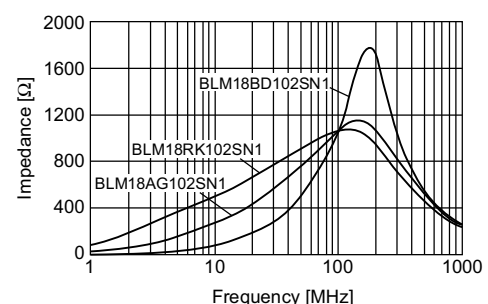
The BLM□□B series has sharp impedance characteristics and it does not affect the signal frequency. The BLM□□R series has resistance especially growing in the lower frequency range. Therefore it can suppress the ringing effectively.

### ■Equivalent Circuit Diagram



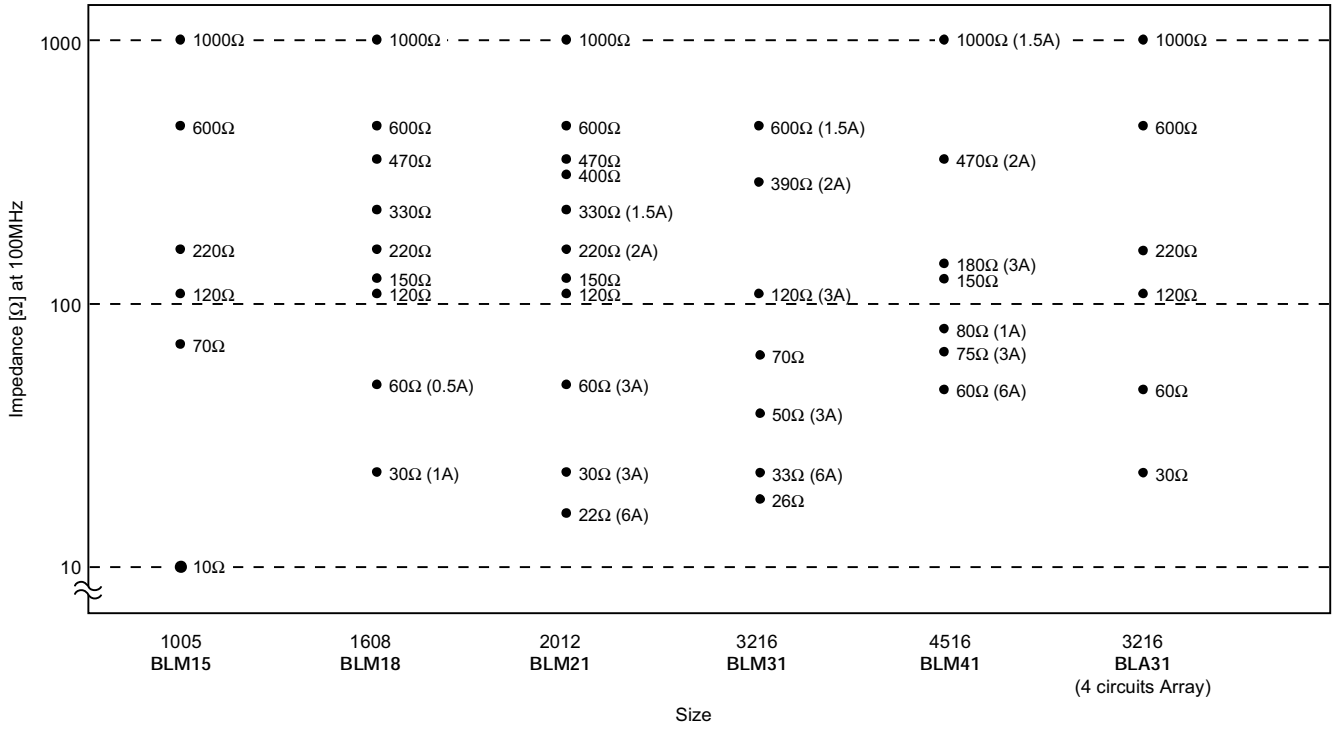
(Resistance element becomes dominant at high frequencies.)

[Impedance Characteristics]

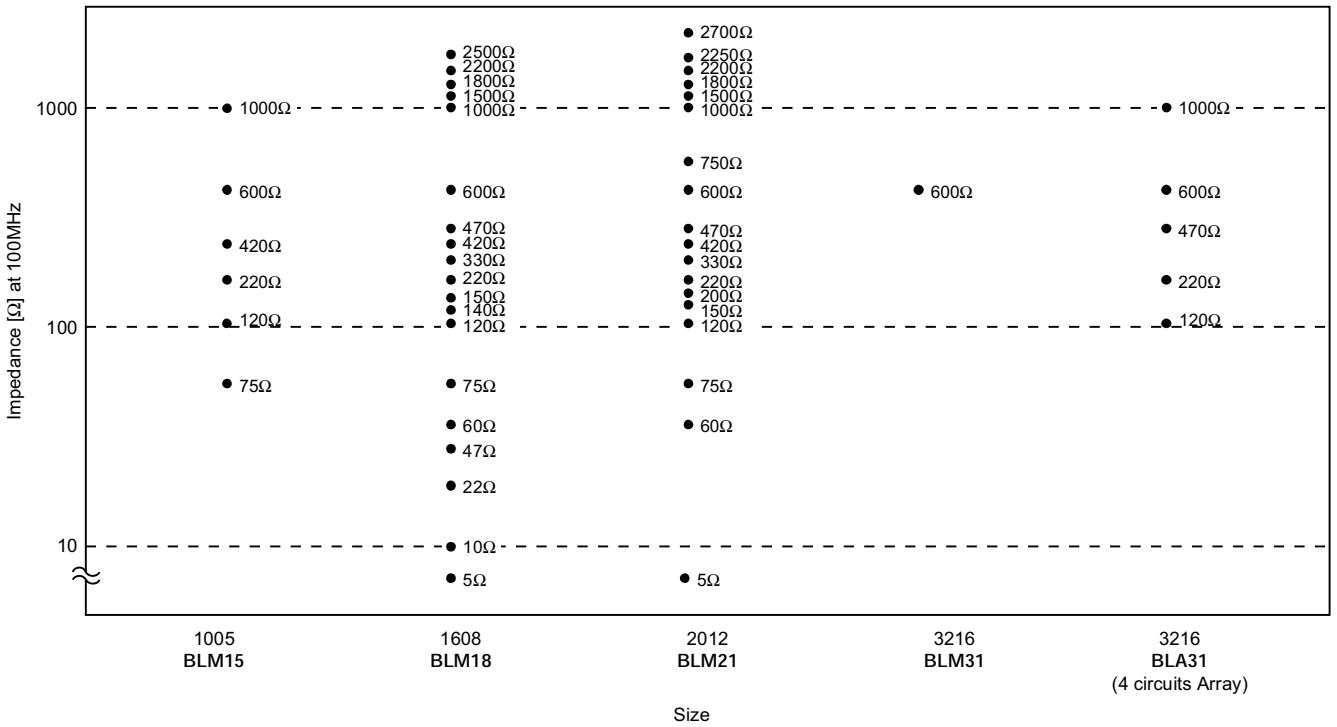


■ Selection Guide

● BLM□□A series-Standard / BLM□□R series-For Digital Interface / BLM□□P series-For Large Current




● BLM□□B series-For High Speed Signal




■BLM Series


Type	Size(mm)	Part Number	Impedance (Ω) at 100MHz	Rated Current (mA)
BLM□□R Series -For Digital Interface	1.6×0.8	BLM18RK121SN1	120±25%	200
		BLM18RK221SN1	220±25%	
		BLM18RK471SN1	470±25%	
		BLM18RK601SN1	600±25%	
		BLM18RK102SN1	1000±25%	
	2.0×1.25	BLM21RK121SN1	120±25%	
		BLM21RK221SN1	220±25%	
		BLM21RK471SN1	470±25%	
		BLM21RK601SN1	600±25%	
		BLM21RK102SN1	1000±25%	
BLM□□A Series -For Standard	1.0×0.5	BLM15AG100PN1	10 (Typ.)	500
		BLM15AG700PN1	70 (Typ.)	200
		BLM15AG121PN1	120 (Typ.)	100
		BLM15AG221PN1	220±25%	
		BLM15AG601PN1	600±25%	50
		BLM15AG102PN1	1000±25%	
	1.6×0.8	BLM18AG121SN1	120±25%	200
		BLM18AG151SN1	150±25%	
		BLM18AG221SN1	220±25%	
		BLM18AG331SN1	330±25%	
		BLM18AG471SN1	470±25%	
		BLM18AG601SN1	600±25%	
	2.0×1.25	BLM18AG102SN1	1000±25%	200
		BLM21AG121SN1	120±25%	
		BLM21AG151SN1	150±25%	
		BLM21AG221SN1	220±25%	
		BLM21AG331SN1	330±25%	
		BLM21AJ401SN1	400±25%	
		BLM21AG471SN1	470±25%	
		BLM21AG601SN1	600±25%	
3.2×1.6	BLM21AJ601SN1	1000±25%	200	
	BLM21AG102SN1			
	BLM21AJ102SN1			
4.5×1.6	BLM31AJ260SN1	26±25%	500	
	BLM31AF700SN1	70±25%	200	
	BLM31AJ601SN1	600±25%	200	
BLM□□B Series -For High Speed Signal (Sharp impedance characteristic)	1.0×0.5	BLM41AF800SN1	80±25%	500
		BLM41AF151SN1	150±25%	200
		BLM15BB750PN1	75±25%	100
		BLM15BB121PN1	120±25%	
		BLM15BB221PN1	220±25%	
		BLM15BD421PN1	420±25%	
	BLM15BD601PN1	600±25%		
	BLM15BD102PN1	1000±25%		
	1.6×0.8	BLM18BA050SN1	5±25%	500
		BLM18BB050SN1		700
		BLM18BA100SN1	10±25%	500
		BLM18BB100SN1		
		BLM18BA220SN1	22±25%	
		BLM18BB220SN1		
		BLM18BA470SN1	47±25%	500
		BLM18BB470SN1		
		BLM18BB600SN1	60±25%	200
		BLM18BB750SN1	75±25%	300
BLM18BA750SN1				
BLM18BA121SN1		120±25%	200	
BLM18BB121SN1				

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Type	Size(mm)	Part Number	Impedance (Ω) at 100MHz	Rated Current (mA)	
BLM□□B Series -For High Speed Signal (Sharp impedance characteristic)	1.6×0.8	BLM18BD121SN1	120±25%	200	
		BLM18BB141SN1	140±25%		
		BLM18BB151SN1	150±25%		
		BLM18BD151SN1			
		BLM18BB221SN1	220±25%		
		BLM18BD221SN1			
		BLM18BB331SN1	330±25%		
		BLM18BD331SN1			
		BLM18BD421SN1	420±25%		
		BLM18BB471SN1	470±25%		50
		BLM18BD471SN1			200
		BLM18BD601SN1	600±25%		100
		BLM18BD102SN1	1000±25%		
		BLM18BD152SN1	1500±25%		50
		BLM18BD182SN1	1800±25%		
		BLM18BD222SN1	2200±25%		
BLM18BD252SN1	2500±25%				
BLM□□B Series -For High Frequency (Sharp impedance characteristic)	2.0×1.25	BLM21BB050SN1	5±25%	500	
		BLM21BB600SN1	60±25%	200	
		BLM21BB750SN1	75±25%		
		BLM21BB121SN1	120±25%		
		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%				
3.2×1.6	BLM31BE601FN1	600±25%	300		

\* Impedance±25% guarantee type is also available. Please contact for further details.

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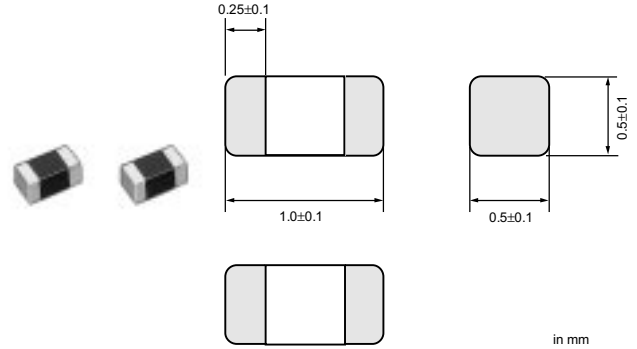
Type	Size(mm)	Part Number	Impedance ( $\Omega$ ) at 100MHz	Rated Current (mA)	
BLM□□P Series* -For Large Current	1.6×0.8	BLM18PG300SN1	30 (Typ.)	1000	
		BLM18PG600SN1	60 (Typ.)	500	
	2.0×1.25	BLM21PG220SN1	22 (Typ.)	6000	
		BLM21PG300SN1	30 (Typ.)	3000	
		BLM21PG600SN1	60 (Typ.)		
		BLM21PG221SN1	220 (Typ.)	2000	
		BLM21PG331SN1	330 (Typ.)	1500	
	3.2×1.6	BLM31PG330SN1	33 (Typ.)	6000	
		BLM31PG500SN1	50 (Typ.)	3000	
		BLM31PG121SN1	120 (Typ.)		
		BLM31PG391SN1	390 (Typ.)	2000	
	4.5×1.6	BLM31PG601SN1	600 (Typ.)	1500	
		BLM41PG600SN1	60 (Typ.)	6000	
		BLM41PG750SN1	75 (Typ.)	3000	
		BLM41PF800SN1	80 (Typ.)	1000	
		BLM41PG181SN1	180 (Typ.)	3000	
		BLM41PG471SN1	470 (Typ.)	2000	
	BLM□□H□ Series For GHz Range Noise Suppression	BLM□□HG Series -For Standard	1.6×0.8	BLM18HG471SN1	470±25%
BLM18HG601SN1				600±25%	
BLM18HG102SN1				1000±25%	
BLM□□HD Series -For High Speed Signal		BLM18HD471SN1		470±25%	100
		BLM18HD601SN1		600±25%	
		BLM18HD102SN1		1000±25%	
BLM□□HK Series -For Digital Interface		BLM18HK331SN1		330±25%	200
		BLM18HK471SN1		470±25%	
		BLM18HK601SN1		600±25%	100
		BLM18HK102SN1		1000±25%	50

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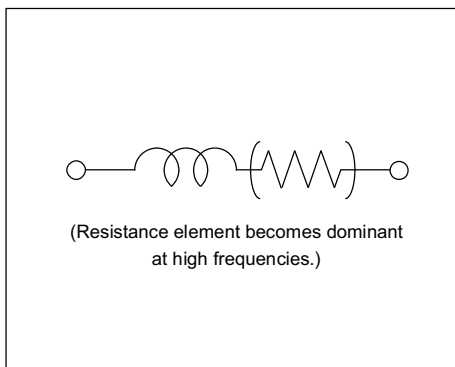
## Chip Ferrite Beads BLM15/BLM18/BLM21/BLM31/BLM41 Series

### BLM15 Series(1005 Size)

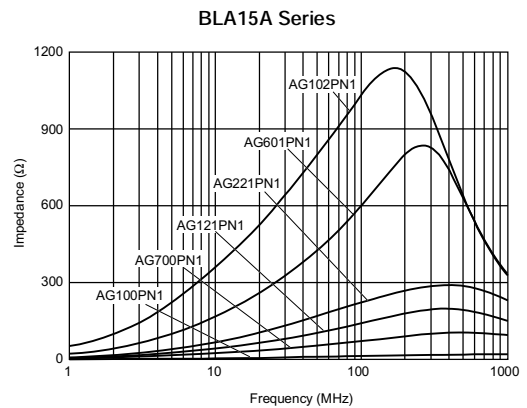


Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
BLM15AG100PN1	10 (Typ.)	500	0.05	-55 to 125
BLM15AG700PN1	70 (Typ.)	200	0.40	-55 to 125
BLM15AG121PN1	120 (Typ.)	200	0.50	-55 to 125
BLM15AG221PN1	220 ±25%	100	0.70	-55 to 125
BLM15AG601PN1	600 ±25%	50	1.10	-55 to 125
BLM15AG102PN1	1000 ±25%	50	1.50	-55 to 125
BLM15BB750PN1	75 ±25%	100	0.80	-55 to 125
BLM15BB121PN1	120 ±25%	50	1.10	-55 to 125
BLM15BB221PN1	220 ±25%	50	1.40	-55 to 125
BLM15BD421PN1	420 ±25%	50	1.30	-55 to 125
BLM15BD601PN1	600 ±25%	50	1.50	-55 to 125
BLM15BD102PN1	1000 ±25%	50	1.30	-55 to 125


### Equivalent Circuit



### Impedance-Frequency (Typical)



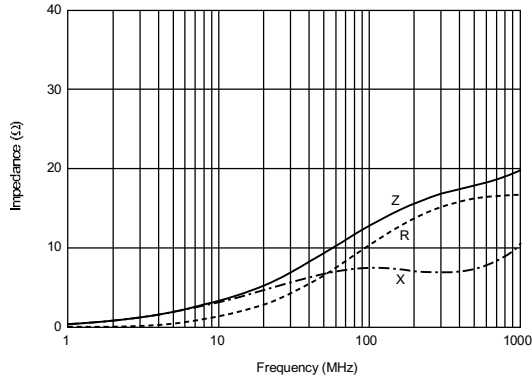
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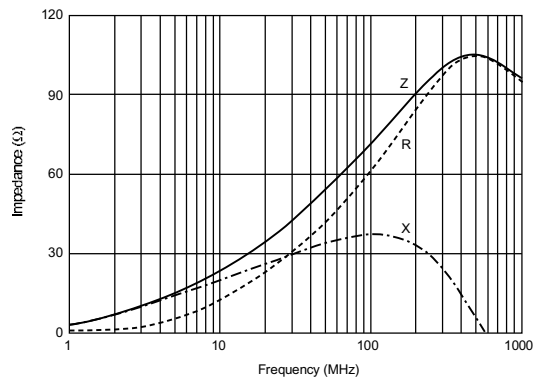
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**Impedance-Frequency Characteristics**

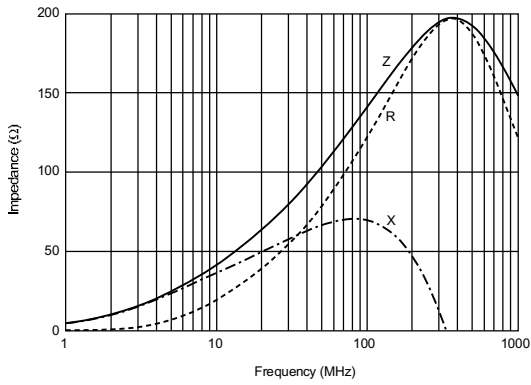
**BLM15AG100PN1**



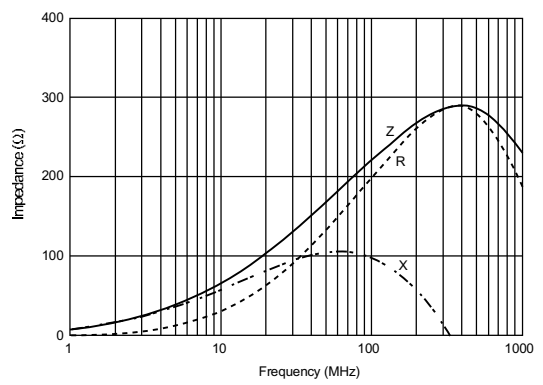
**BLM15AG700PN1**



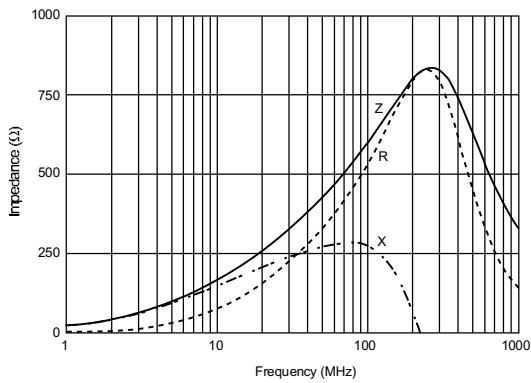
**BLM15AG121PN1**



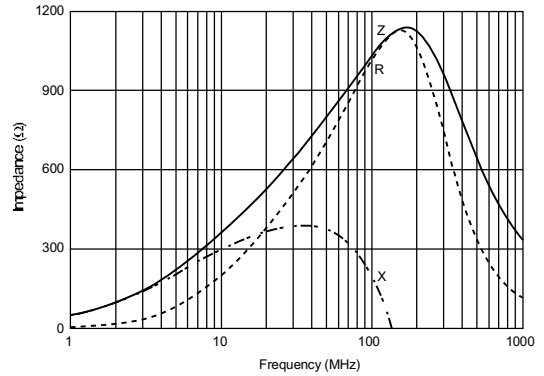
**BLM15AG221PN1**



**BLM15AG601PN1**

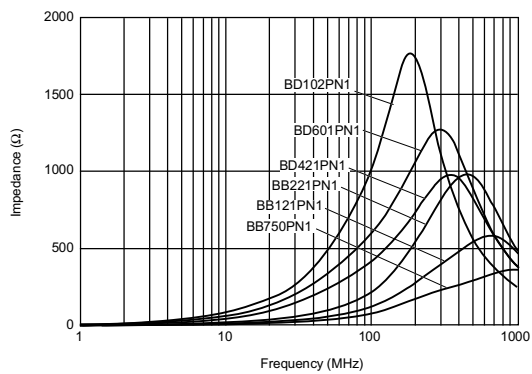


**BLM15AG102PN1**



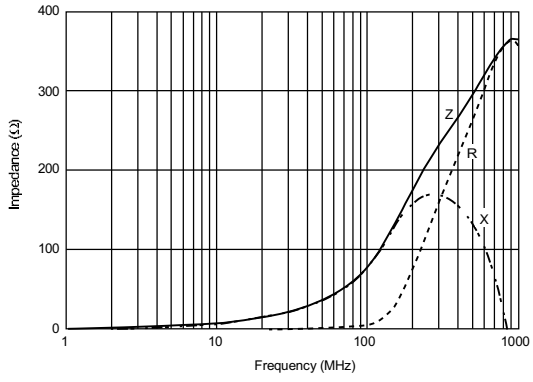
**Impedance-Frequency (Typical)**

**BLA15B Series**

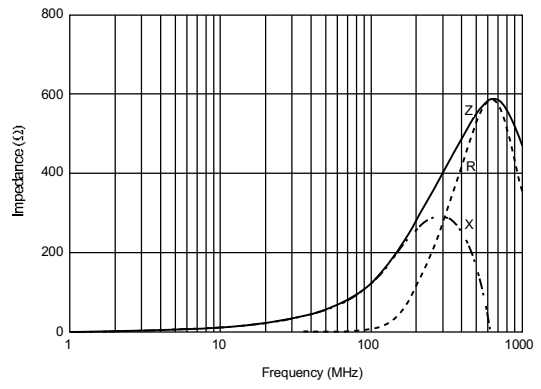


■ Impedance-Frequency Characteristics

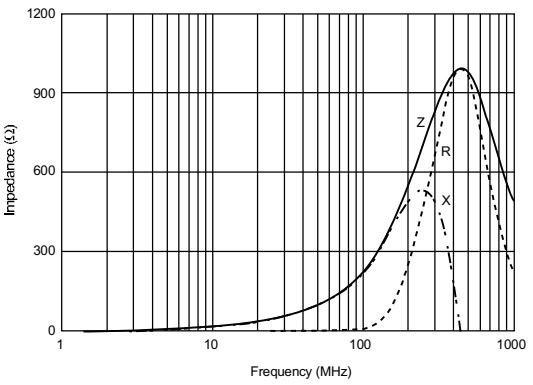
BLM15BB750PN1



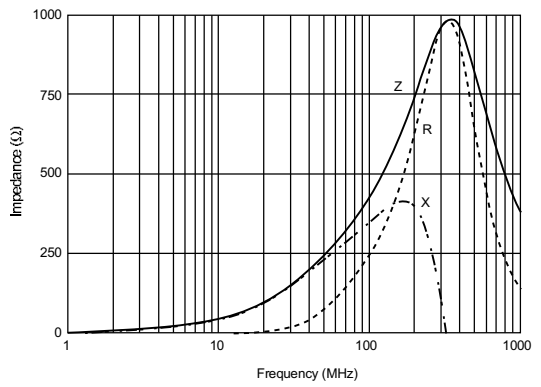
BLM15BB121PN1



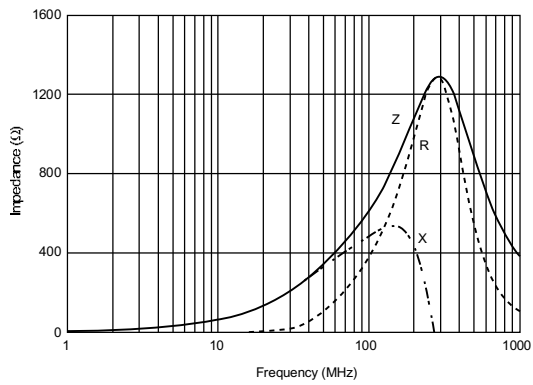
BLM15BB221PN1



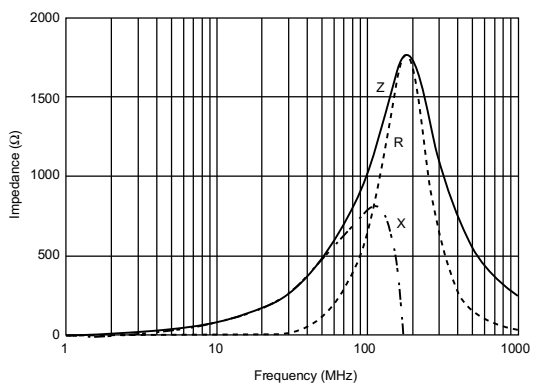
BLM15BD421PN1



BLM15BD601PN1

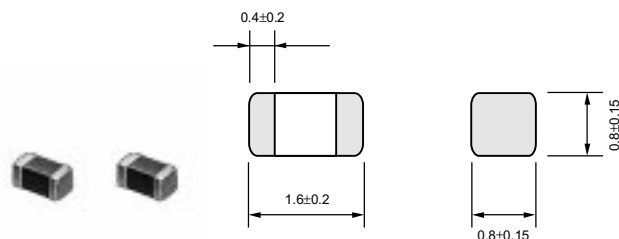


BLM15BD102PN1






## BLM18 Series(1608 Size)



in mm

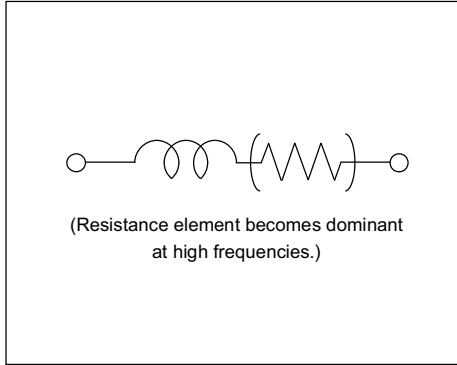
Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
BLM18AG121SN1	120 ±25%	200	0.20	-55 to 125
BLM18AG151SN1	150 ±25%	200	0.25	-55 to 125
BLM18AG221SN1	220 ±25%	200	0.30	-55 to 125
BLM18AG331SN1	330 ±25%	200	0.45	-55 to 125
BLM18AG471SN1	470 ±25%	200	0.50	-55 to 125
BLM18AG601SN1	600 ±25%	200	0.50	-55 to 125
BLM18AG102SN1	1000 ±25%	100	0.70	-55 to 125
BLM18BA050SN1	5 ±25%	500	0.20	-55 to 125
BLM18BA100SN1	10 ±25%	500	0.25	-55 to 125
BLM18BA220SN1	22 ±25%	500	0.35	-55 to 125
BLM18BA470SN1	47 ±25%	300	0.55	-55 to 125
BLM18BA750SN1	75 ±25%	300	0.70	-55 to 125
BLM18BA121SN1	120 ±25%	200	0.90	-55 to 125
BLM18BB050SN1	5 ±25%	700	0.10	-55 to 125
BLM18BB100SN1	10 ±25%	500	0.15	-55 to 125
BLM18BB220SN1	22 ±25%	500	0.25	-55 to 125
BLM18BB470SN1	47 ±25%	500	0.30	-55 to 125
BLM18BB600SN1	60 ±25%	200	0.35	-55 to 125
BLM18BB750SN1	75 ±25%	200	0.35	-55 to 125
BLM18BB121SN1	120 ±25%	200	0.50	-55 to 125
BLM18BB141SN1	140 ±25%	200	0.55	-55 to 125
BLM18BB151SN1	150 ±25%	200	0.55	-55 to 125
BLM18BB221SN1	220 ±25%	200	0.65	-55 to 125
BLM18BB331SN1	330 ±25%	200	0.75	-55 to 125
BLM18BB471SN1	470 ±25%	50	1.00	-55 to 125
BLM18BD121SN1	120 ±25%	200	0.40	-55 to 125
BLM18BD151SN1	150 ±25%	200	0.40	-55 to 125
BLM18BD221SN1	220 ±25%	200	0.45	-55 to 125
BLM18BD331SN1	330 ±25%	200	0.5	-55 to 125
BLM18BD421SN1	420 ±25%	200	0.55	-55 to 125
BLM18BD471SN1	470 ±25%	200	0.55	-55 to 125
BLM18BD601SN1	600 ±25%	200	0.65	-55 to 125
BLM18BD102SN1	1000 ±25%	100	0.85	-55 to 125
BLM18BD152SN1	1500 ±25%	50	1.20	-55 to 125
BLM18BD182SN1	1800 ±25%	50	1.50	-55 to 125
BLM18BD222SN1	2200 ±25%	50	1.50	-55 to 125
BLM18BD252SN1	2500 ±25%	50	1.50	-55 to 125
BLM18PG300SN1	30 (Typ.)	1000	0.05	-55 to 125
BLM18PG600SN1	60 (Typ.)	500	0.10	-55 to 125
BLM18RK121SN1	120 ±25%	200	0.25	-55 to 125
BLM18RK221SN1	220 ±25%	200	0.30	-55 to 125
BLM18RK471SN1	470 ±25%	200	0.50	-55 to 125

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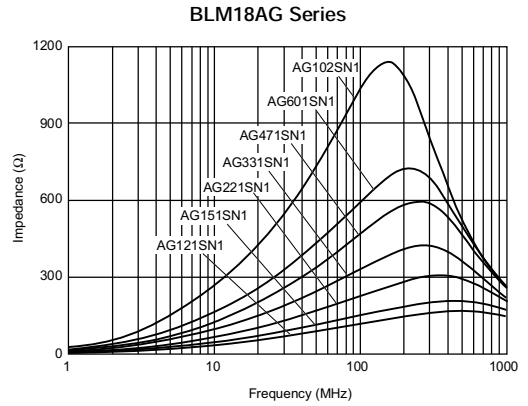
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Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
<b>BLM18RK601SN1</b>	600 ±25%	200	0.60	-55 to 125
<b>BLM18RK102SN1</b>	1000 ±25%	100	0.80	-55 to 125

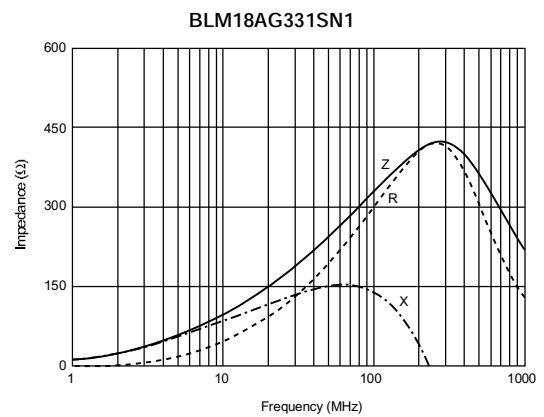
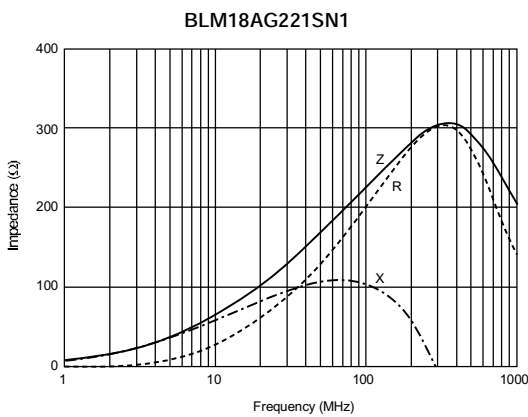
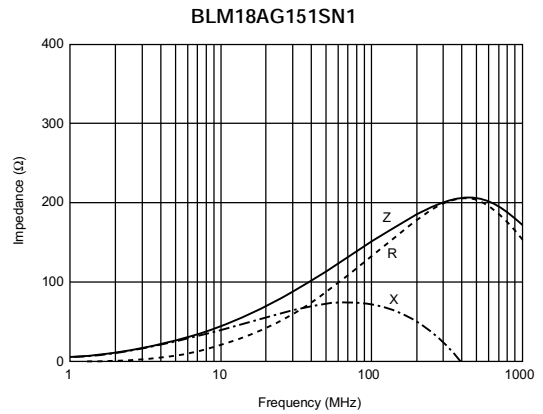
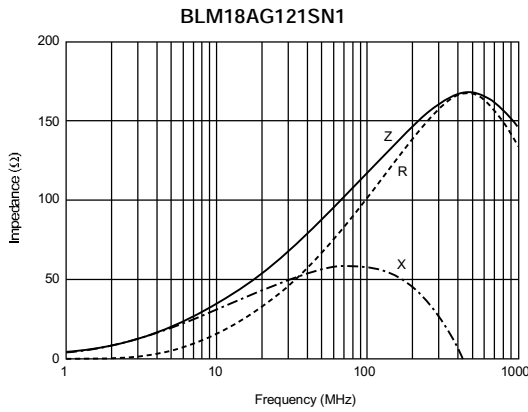
■ Equivalent Circuit




■ Impedance-Frequency (Typical)



■ Impedance-Frequency Characteristics



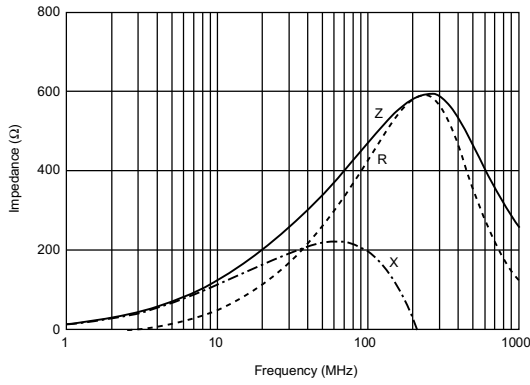
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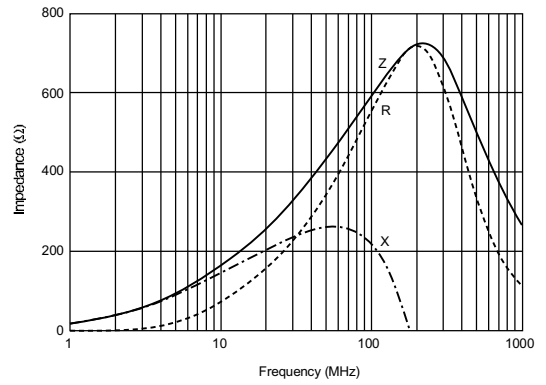
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**Impedance-Frequency Characteristics**

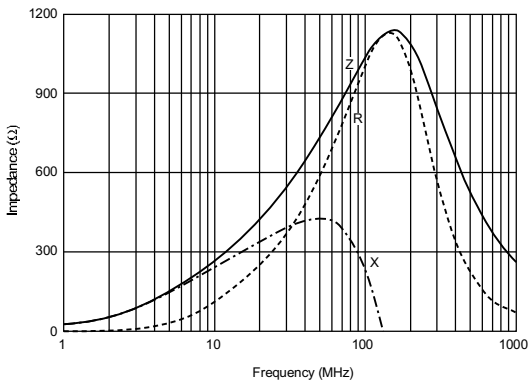
**BLM18AG471SN1**



**BLM18AG601SN1**

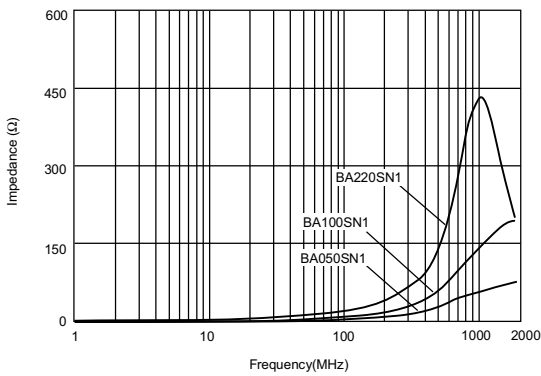


**BLM18AG102SN1**

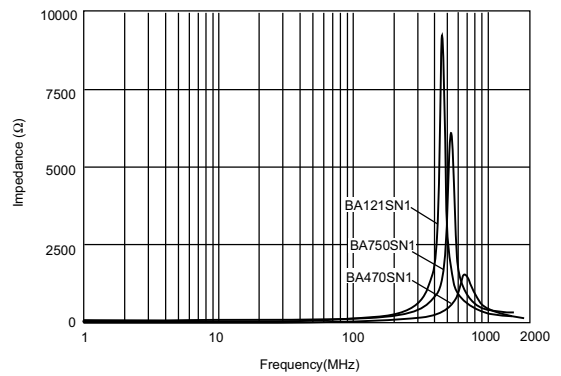


**Impedance-Frequency (Typical)**

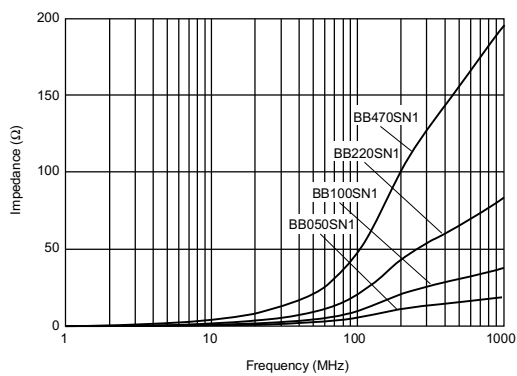
**BLM18BA\_SN1(5-22ohm)**



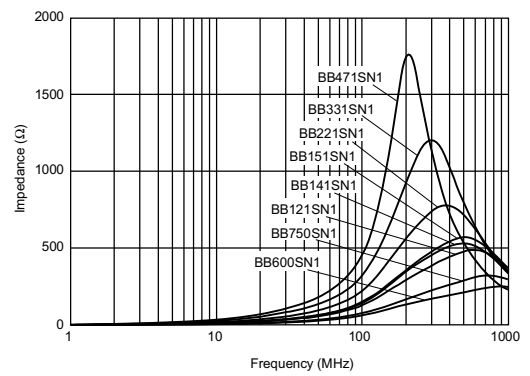
**BLM18BA\_SN1(47-120ohm)**



**BLM18BB\_SN1(5-47ohm)**



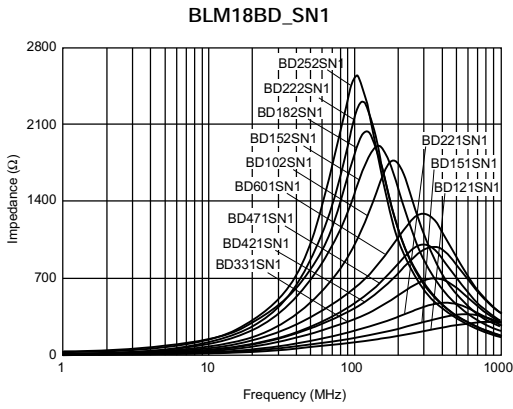
**BLM18BB\_SN1(60-470ohm)**



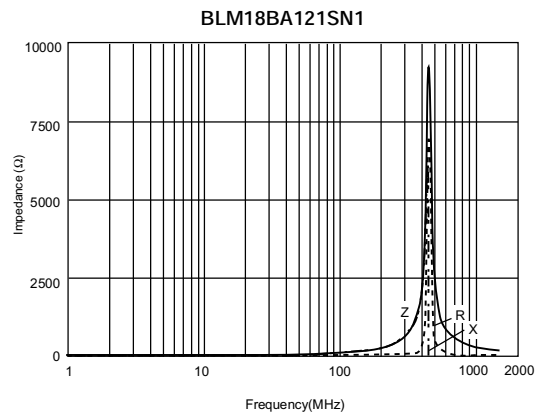
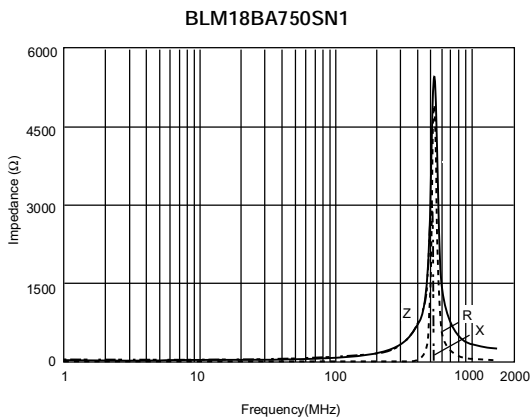
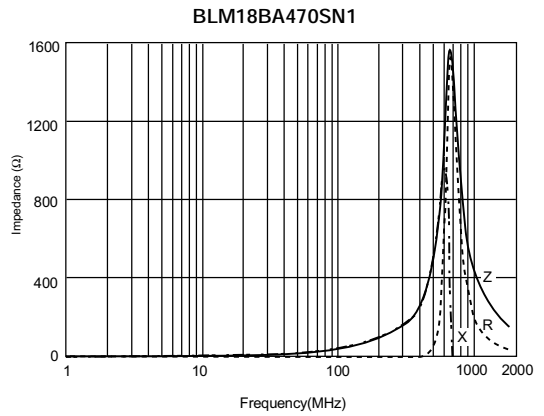
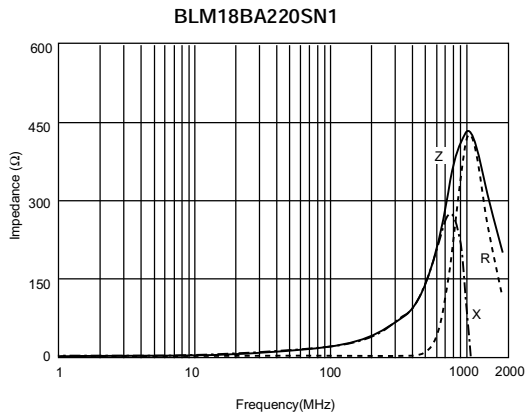
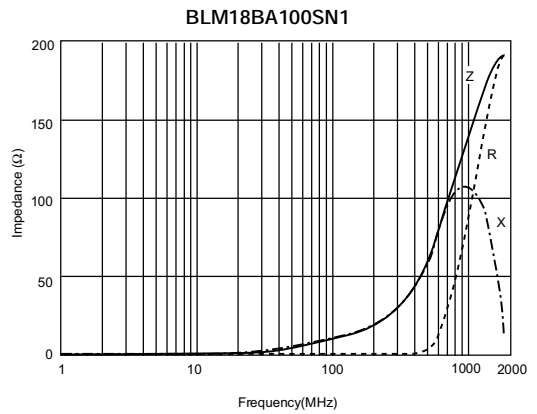
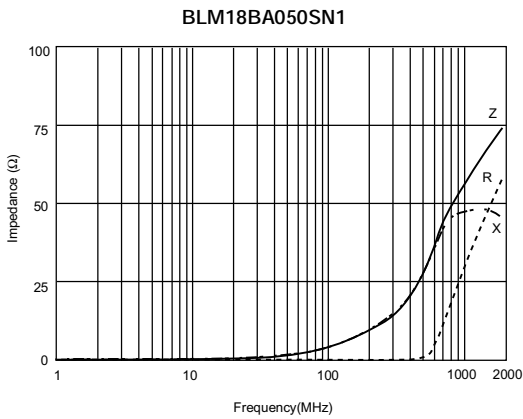
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### Impedance-Frequency (Typical)



### Impedance-Frequency Characteristics

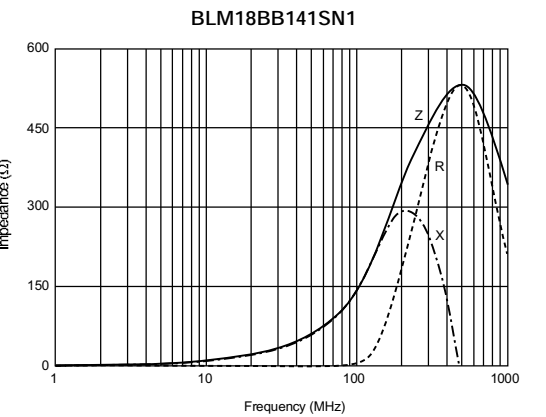
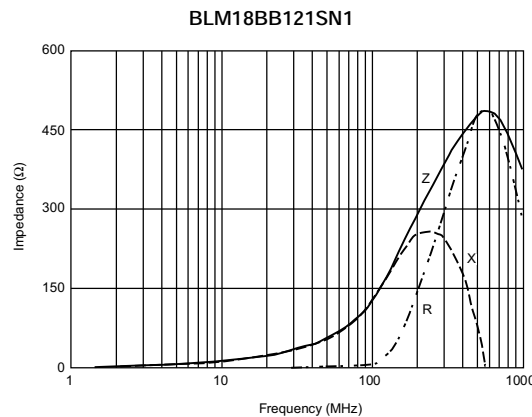
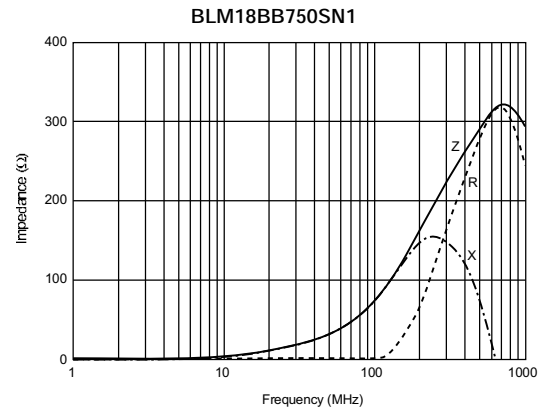
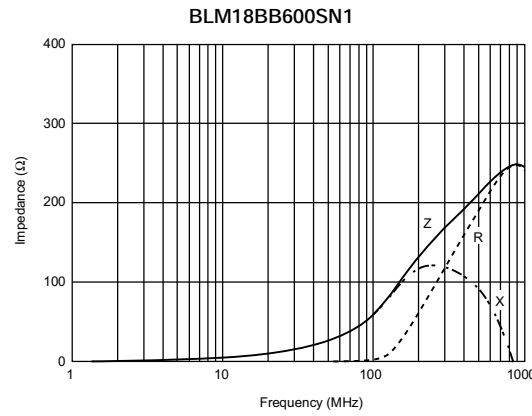
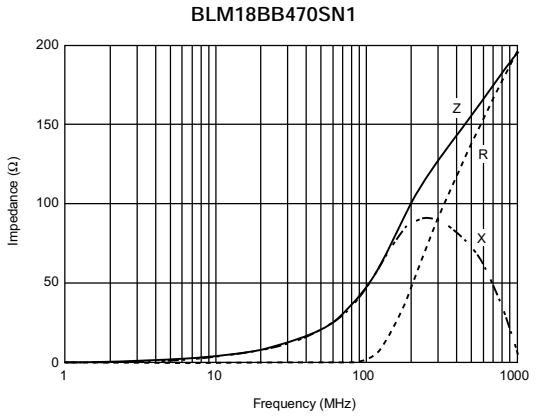
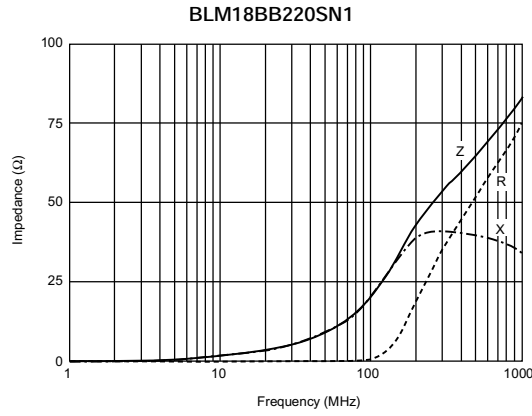
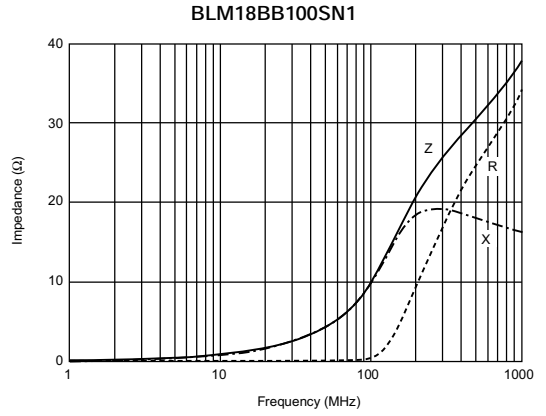
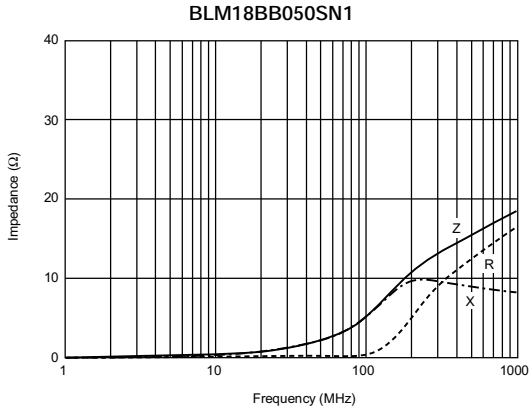


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1

### Impedance-Frequency Characteristics

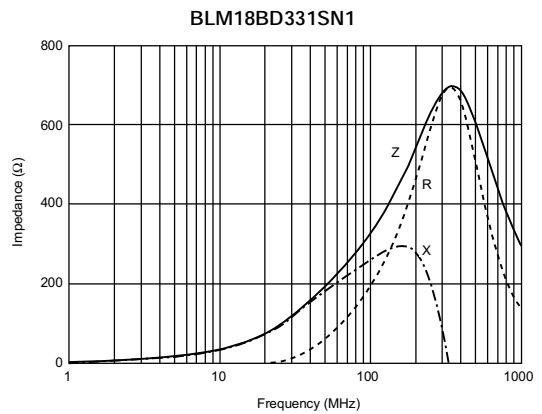
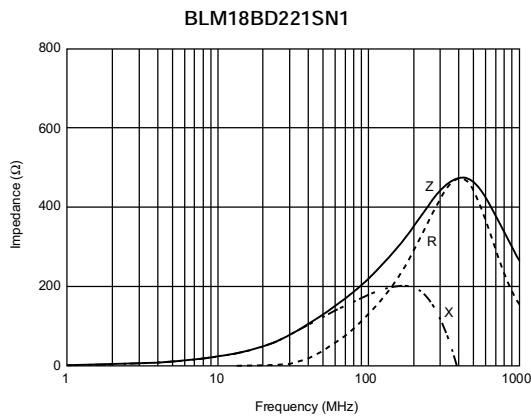
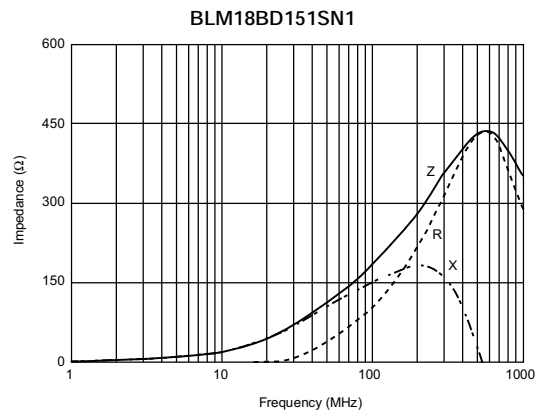
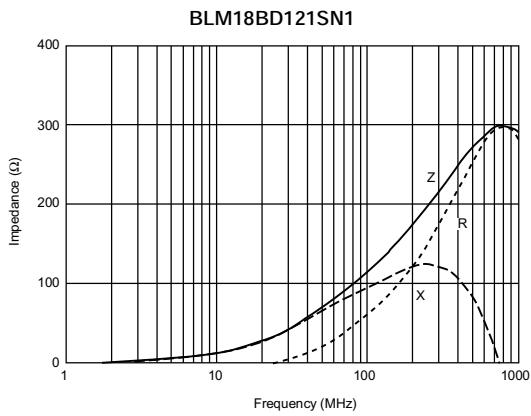
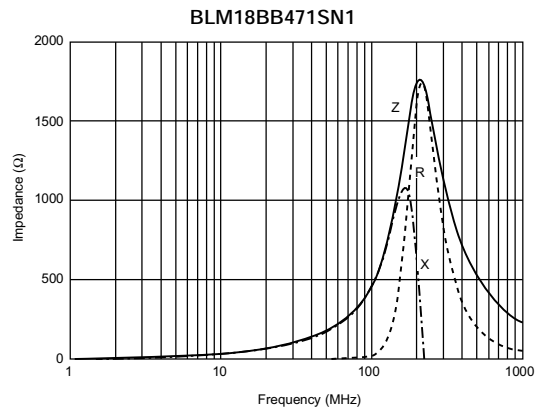
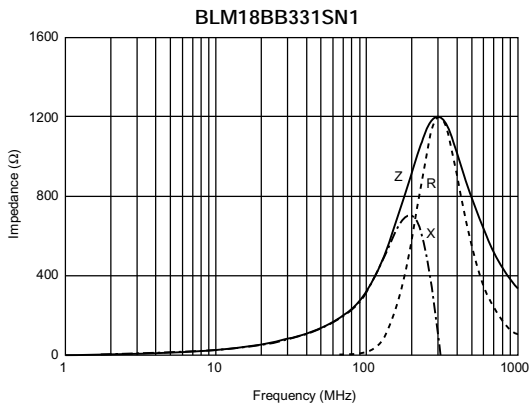
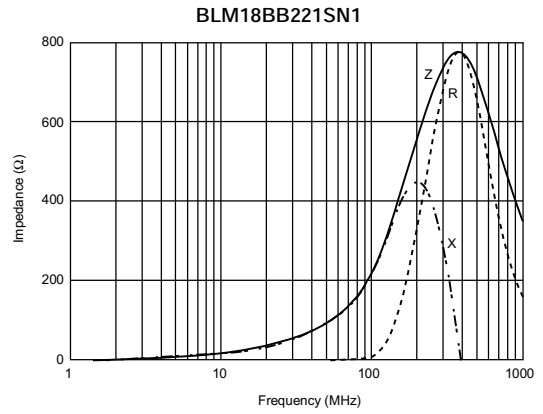
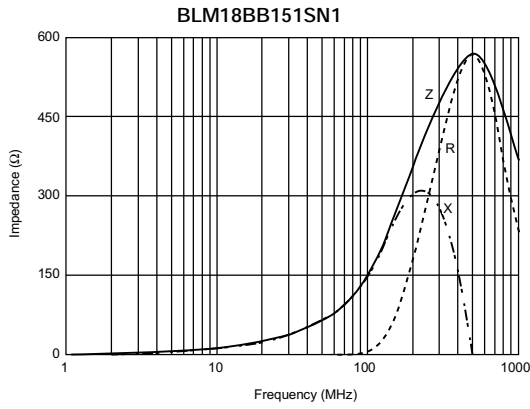


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### Impedance-Frequency Characteristics

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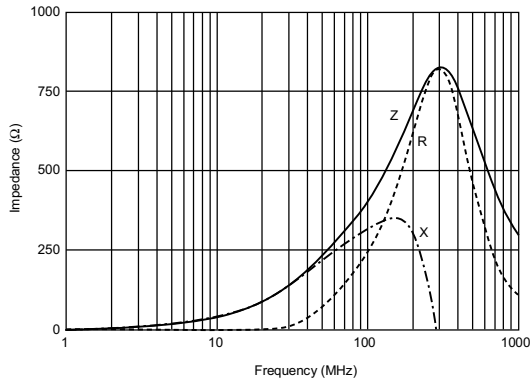
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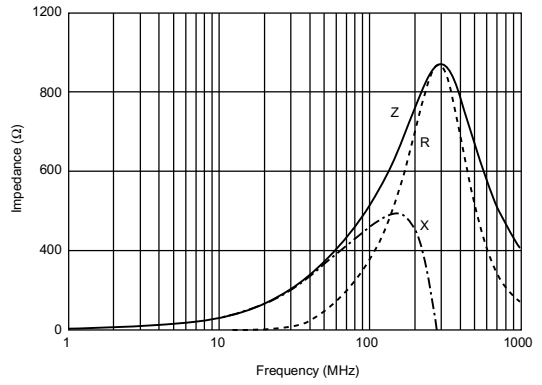
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### Impedance-Frequency Characteristics

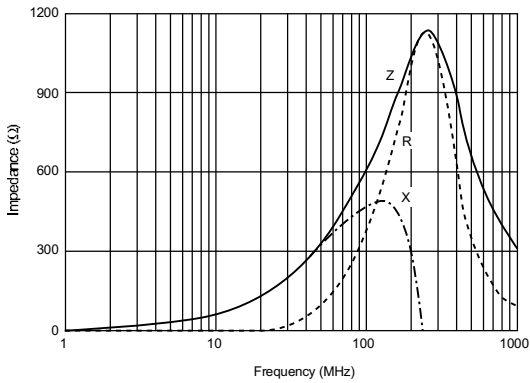
BLM18BD421SN1



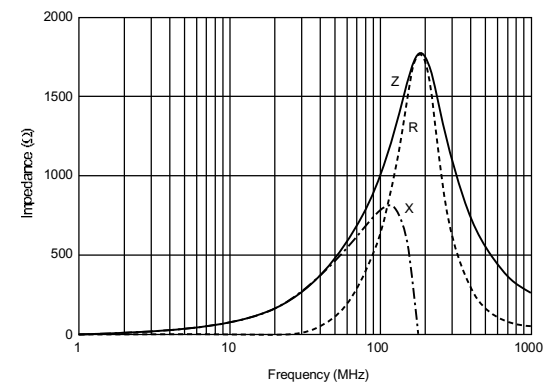
BLM18BD471SN1



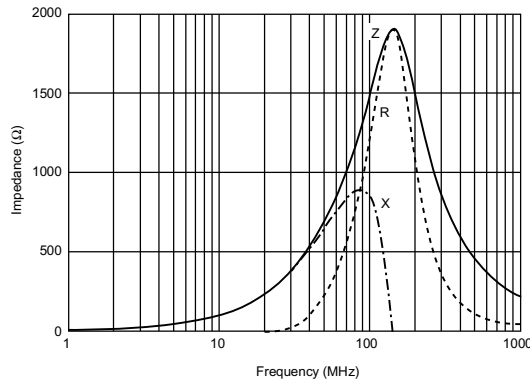
BLM18BD601SN1



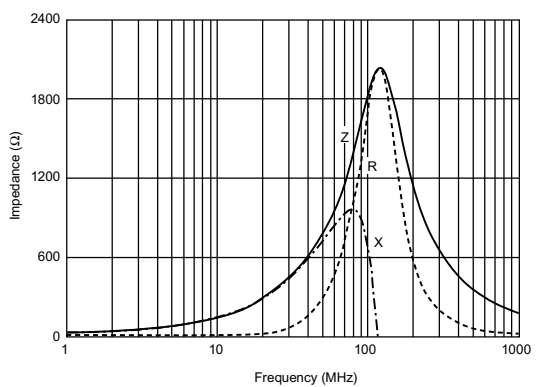
BLM18BD102SN1



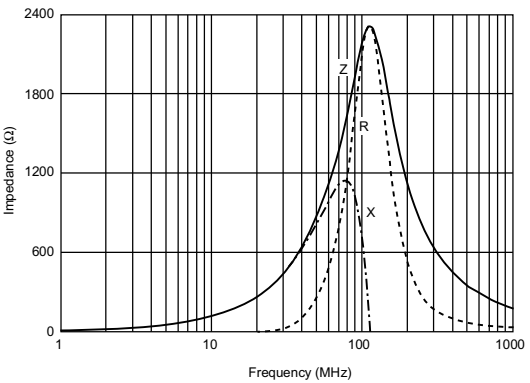
BLM18BD152SN1



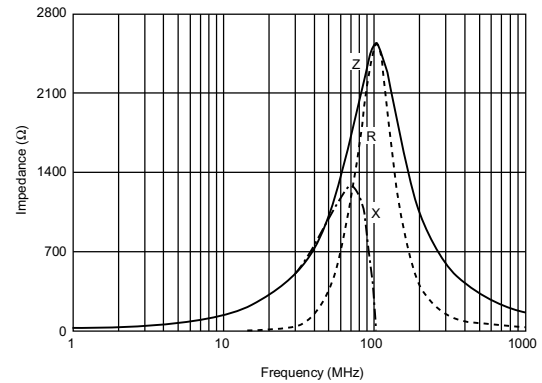
BLM18BD182SN1



BLM18BD222SN1

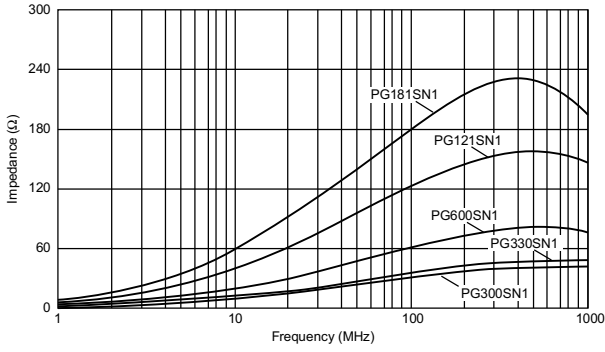


BLM18BD252SN1



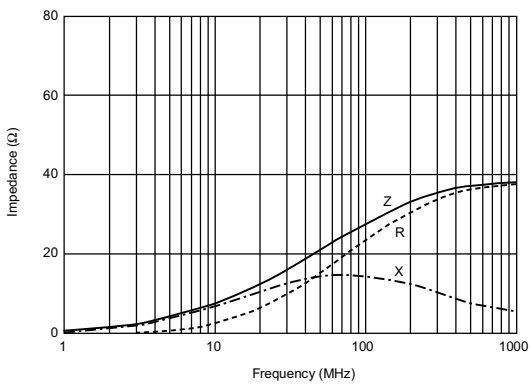
■ Impedance-Frequency (Typical)

BLM18P Series

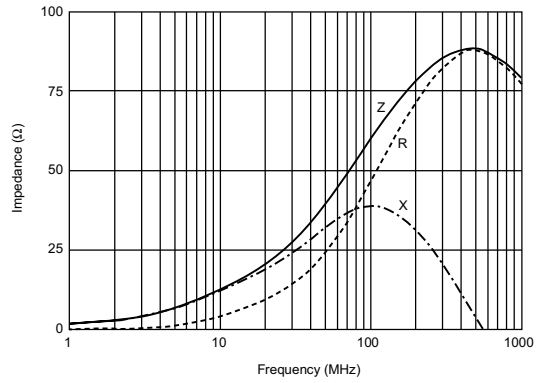


■ Impedance-Frequency Characteristics

BLM18PG300SN1

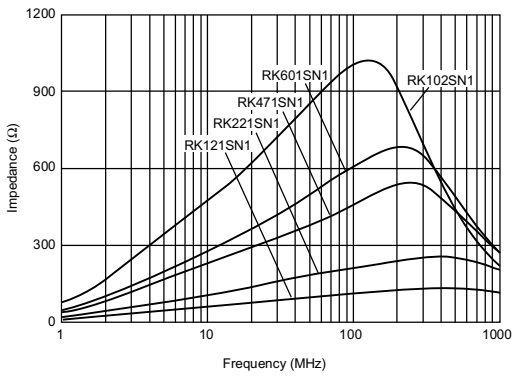


BLM18PG600SN1



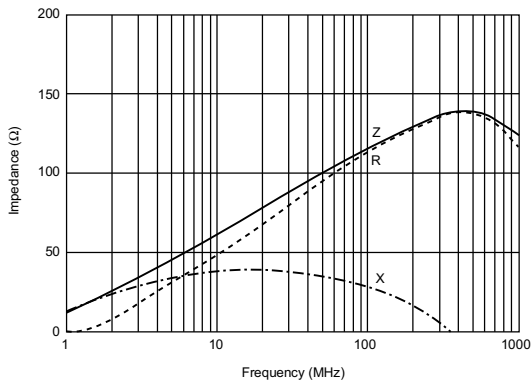
■ Impedance-Frequency (Typical)

BLM18R Series

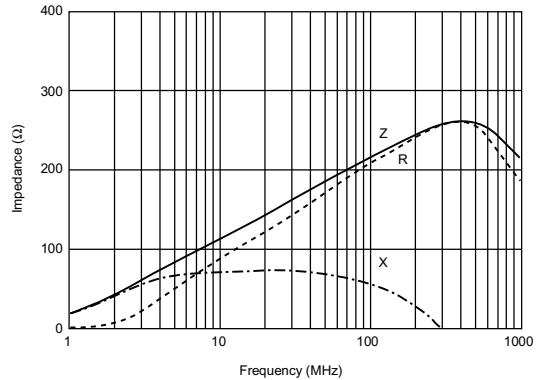


■ Impedance-Frequency Characteristics

BLM18RK121SN1



BLM18RK221SN1



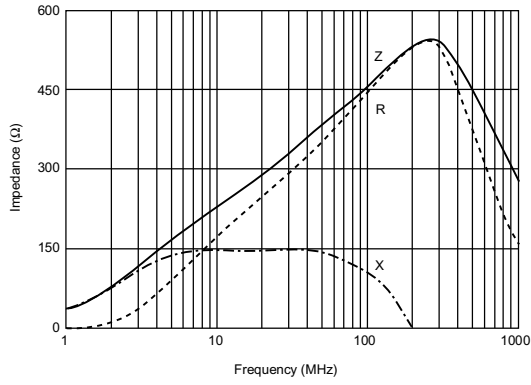


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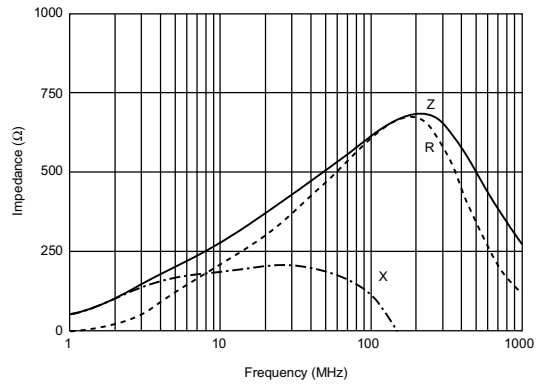
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### Impedance-Frequency Characteristics

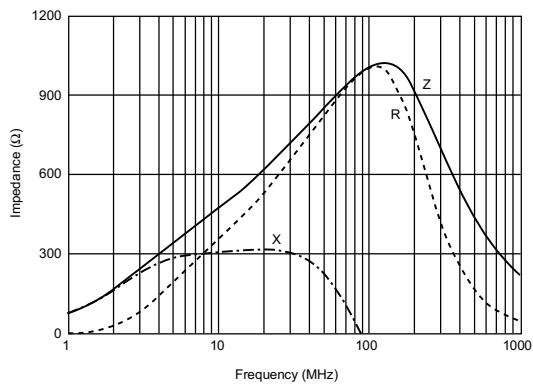
BLM18RK471SN1



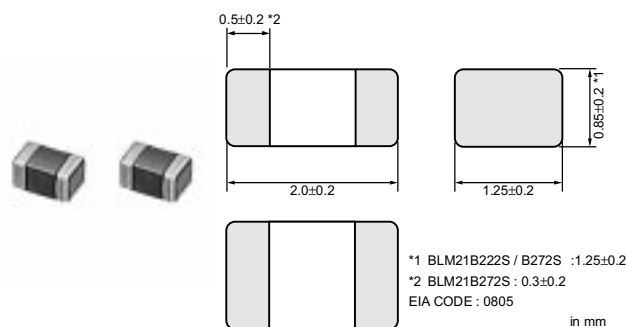
BLM18RK601SN1



BLM18RK102SN1



## BLM21 Series(2012 Size)



Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
BLM21AG121SN1	120 ±25%	200	0.15	-55 to 125
BLM21AG151SN1	150 ±25%	200	0.15	-55 to 125
BLM21AG221SN1	220 ±25%	200	0.20	-55 to 125
BLM21AG331SN1	330 ±25%	200	0.25	-55 to 125
BLM21AG471SN1	470 ±25%	200	0.25	-55 to 125
BLM21AG601SN1	600 ±25%	200	0.30	-55 to 125
BLM21AG102SN1	1000 ±25%	200	0.45	-55 to 125
BLM21AH102SN1	1000 ±25%	200	0.45	-55 to 85
BLM21AJ401SN1	400 ±25%	200	0.85	-55 to 125
BLM21AJ601SN1	600 ±25%	200	1.10	-55 to 125
BLM21BB050SN1	5 ±25%	500	0.07	-55 to 125
BLM21BB600SN1	60 ±25%	200	0.20	-55 to 125
BLM21BB750SN1	75 ±25%	200	0.25	-55 to 125
BLM21BB121SN1	120 ±25%	200	0.25	-55 to 125
BLM21BB151SN1	150 ±25%	200	0.25	-55 to 125
BLM21BB201SN1	200 ±25%	200	0.35	-55 to 125
BLM21BB221SN1	220 ±25%	200	0.35	-55 to 125
BLM21BB331SN1	330 ±25%	200	0.40	-55 to 125
BLM21BB471SN1	470 ±25%	200	0.45	-55 to 125
BLM21BD121SN1	120 ±25%	200	0.25	-55 to 125
BLM21BD151SN1	150 ±25%	200	0.25	-55 to 125
BLM21BD221SN1	220 ±25%	200	0.25	-55 to 125
BLM21BD331SN1	330 ±25%	200	0.30	-55 to 125
BLM21BD421SN1	420 ±25%	200	0.30	-55 to 125
BLM21BD471SN1	470 ±25%	200	0.35	-55 to 125
BLM21BD601SN1	600 ±25%	200	0.35	-55 to 125
BLM21BD751SN1	750 ±25%	200	0.40	-55 to 125
BLM21BD102SN1	1000 ±25%	200	0.40	-55 to 125
BLM21BD152SN1	1500 ±25%	200	0.45	-55 to 125
BLM21BD182SN1	1800 ±25%	200	0.50	-55 to 125
BLM21BD222TN1	2200 ±25%	200	0.60	-55 to 125
BLM21BD222SN1	2250 (Typ.)	200	0.60	-55 to 125
BLM21BD272SN1	2700 ±25%	200	0.80	-55 to 125
BLM21PG220SN1	22 (Typ.)	6000	0.01	-55 to 125
BLM21PG300SN1	30 (Typ.)	3000	0.015	-55 to 125
BLM21PG600SN1	60 (Typ.)	3000	0.025	-55 to 125
BLM21PG221SN1	220 (Typ.)	2000	0.050	-55 to 125
BLM21PG331SN1	330 (Typ.)	1500	0.09	-55 to 125
BLM21RK121SN1	120 ±25%	200	0.15	-55 to 125
BLM21RK221SN1	220 ±25%	200	0.20	-55 to 125
BLM21RK471SN1	470 ±25%	200	0.25	-55 to 125
BLM21RK601SN1	600 ±25%	200	0.30	-55 to 125

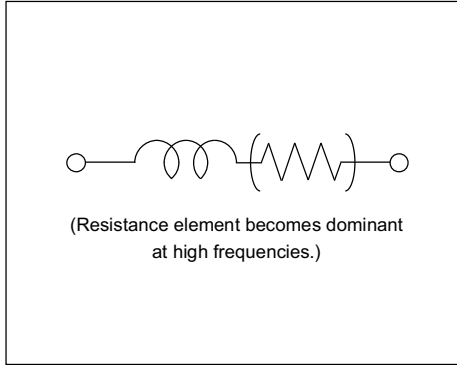
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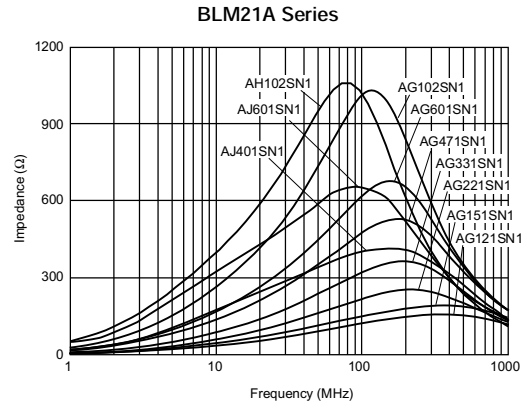
Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
<b>BLM21RK102SN1</b>	1000 ±25%	200	0.50	-55 to 125

BLM21P series require derating above 85°C ambient. Please contact us for details.

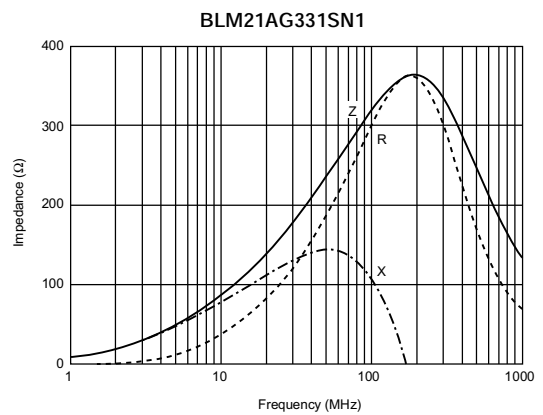
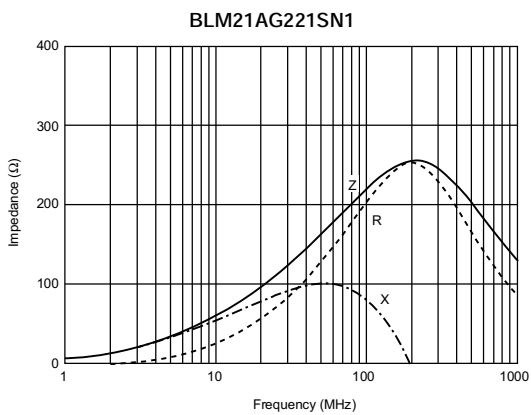
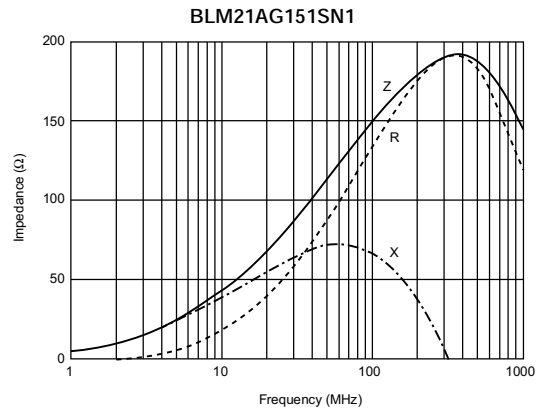
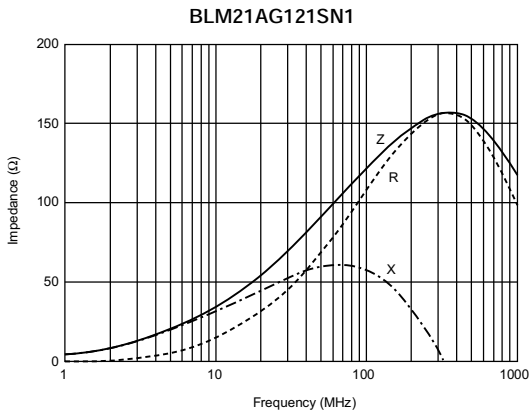
■ Equivalent Circuit




■ Impedance-Frequency (Typical)



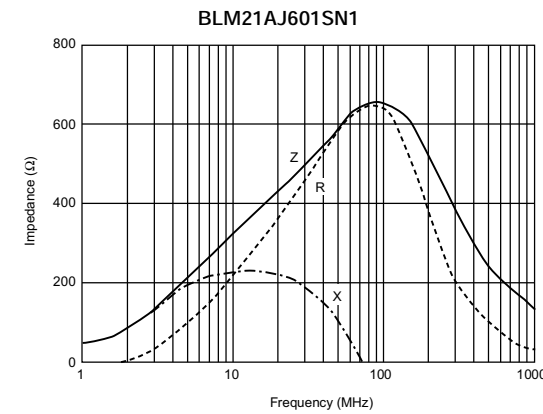
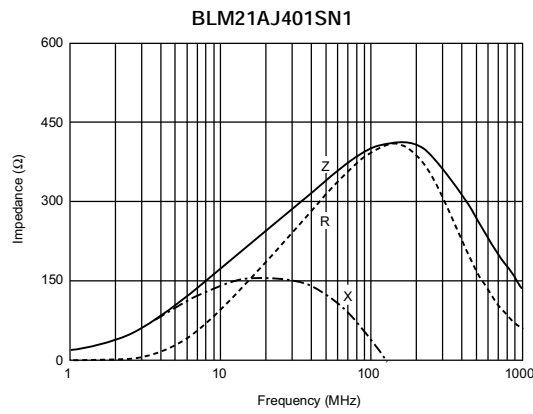
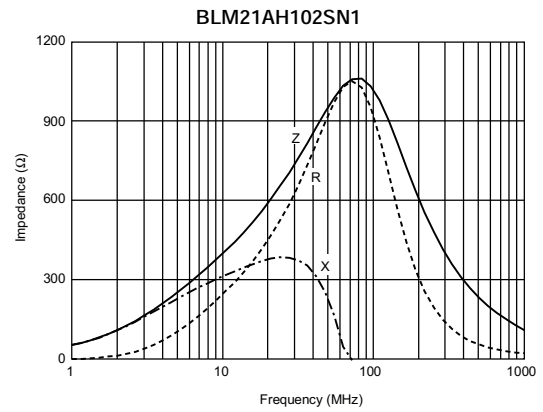
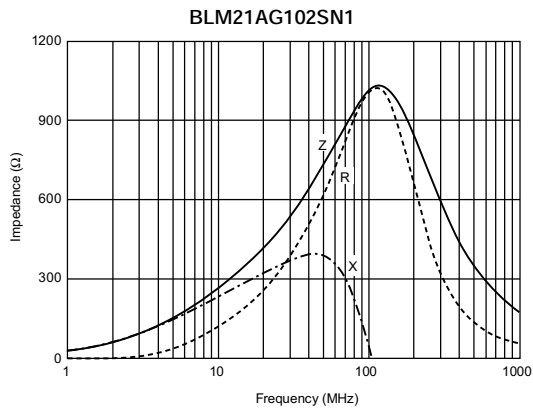
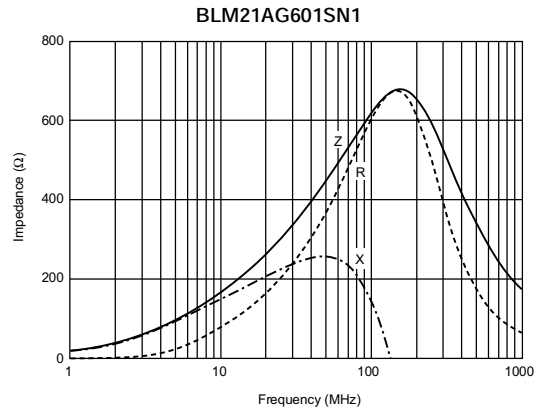
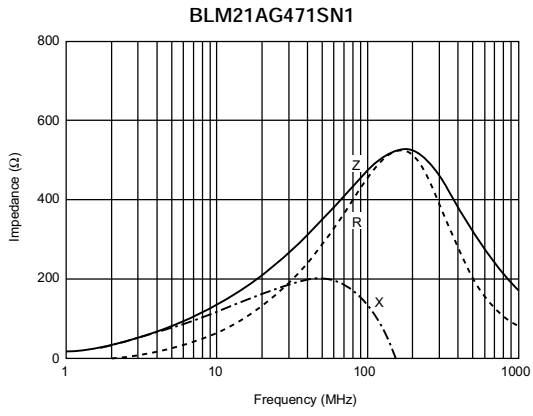
■ Impedance-Frequency Characteristics



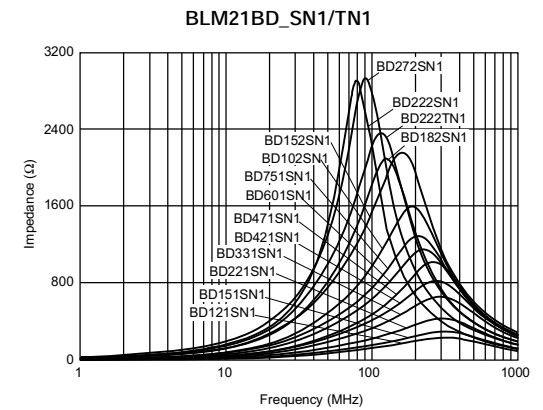
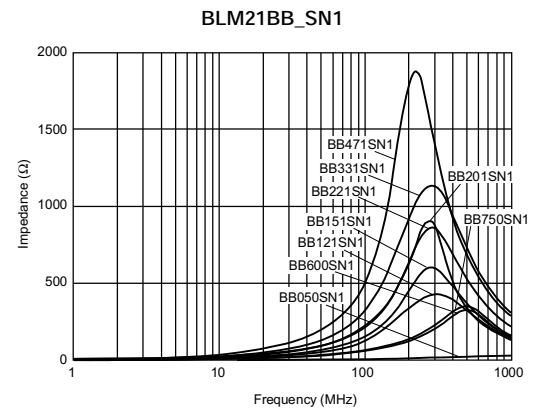
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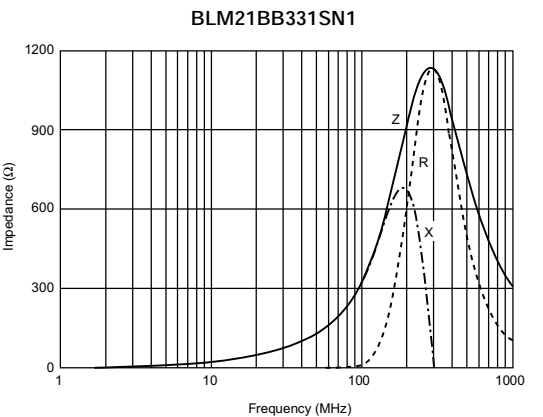
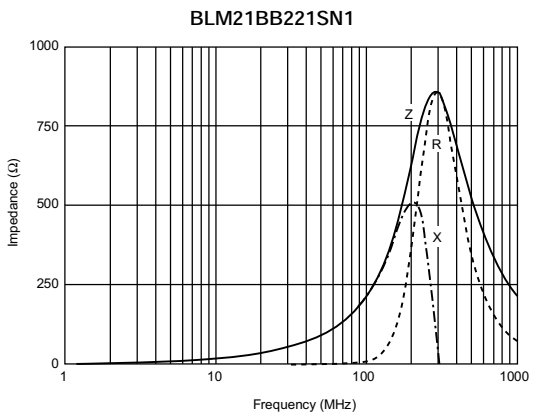
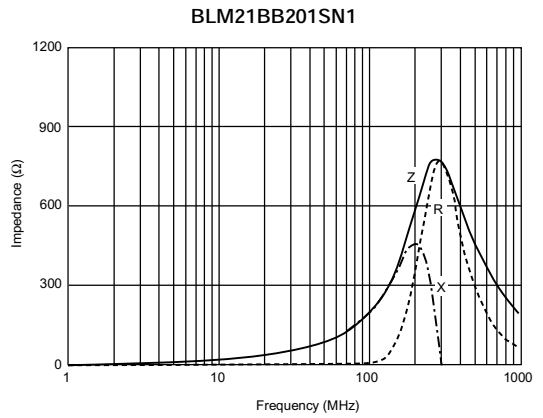
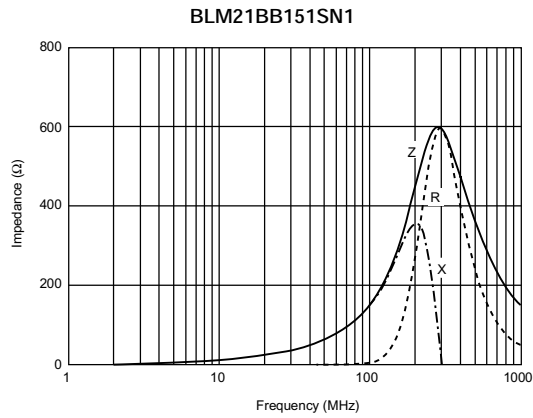
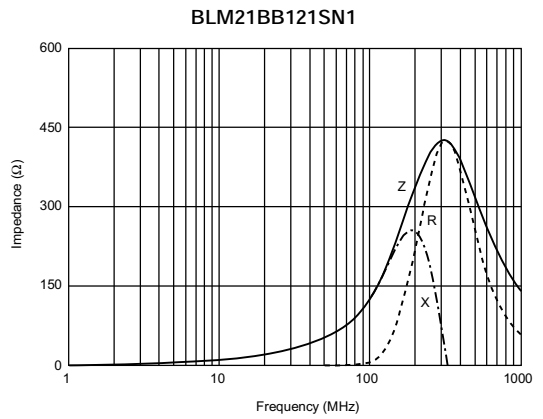
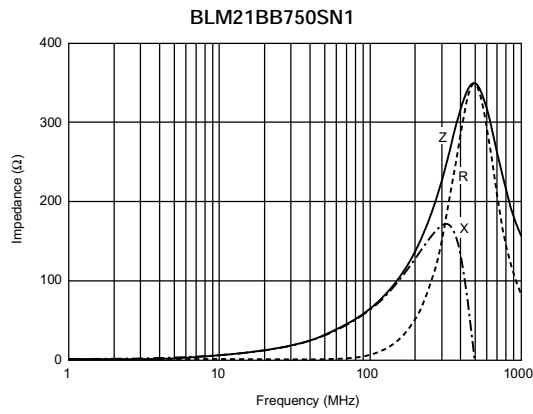
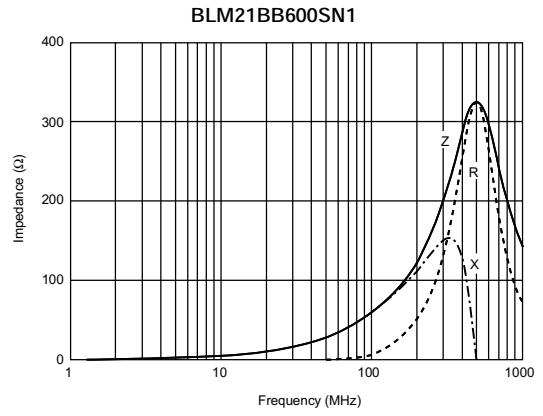
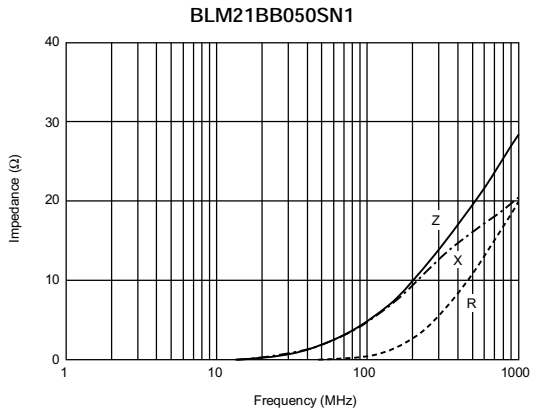
**Impedance-Frequency Characteristics**




**Impedance-Frequency (Typical)**



### ■ Impedance-Frequency Characteristics

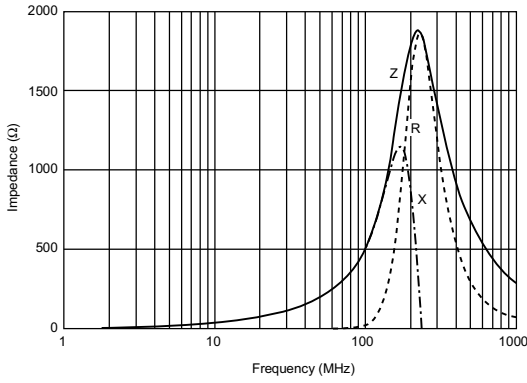


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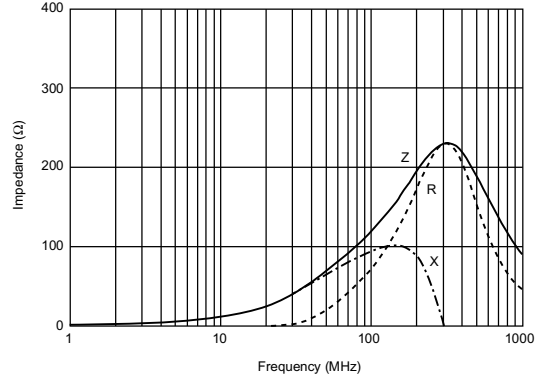
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### Impedance-Frequency Characteristics

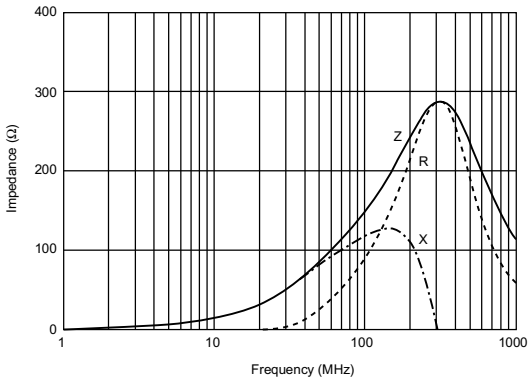
BLM21BB471SN1



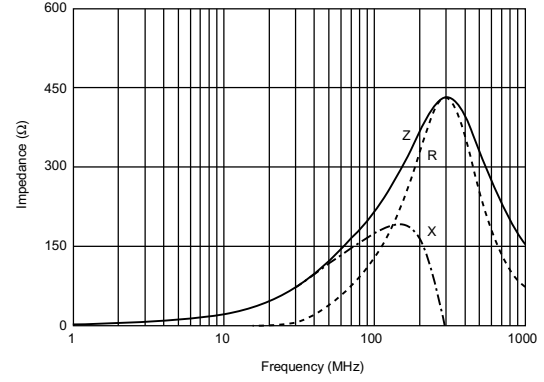
BLM21BD121SN1



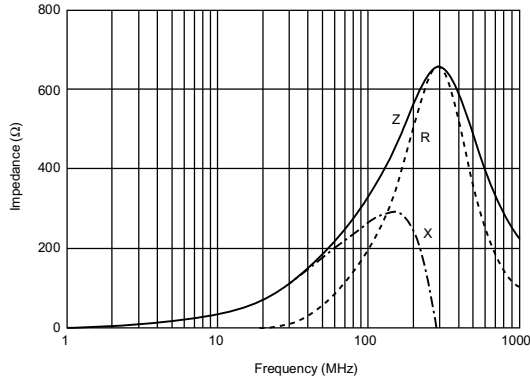
BLM21BD151SN1



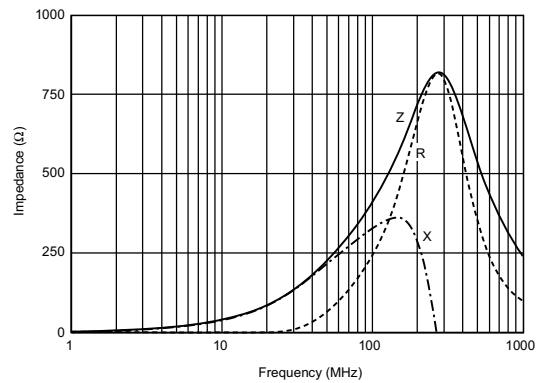
BLM21BD221SN1



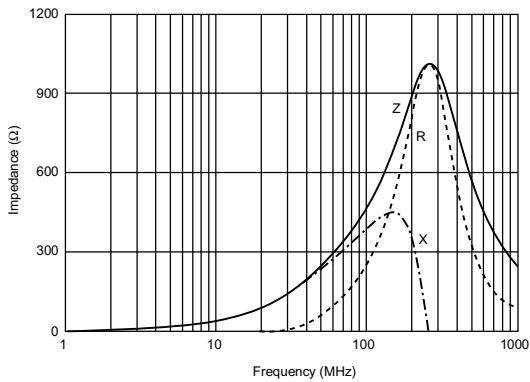
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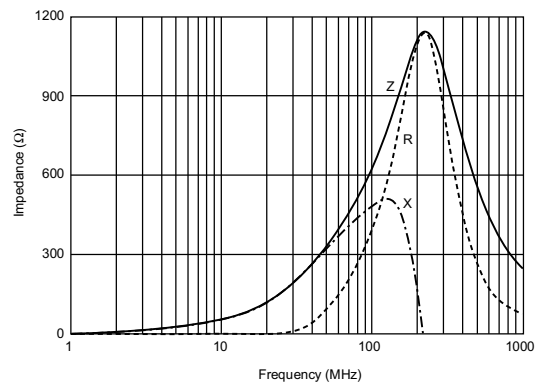
BLM21BD421SN1



BLM21BD471SN1



BLM21BD601SN1



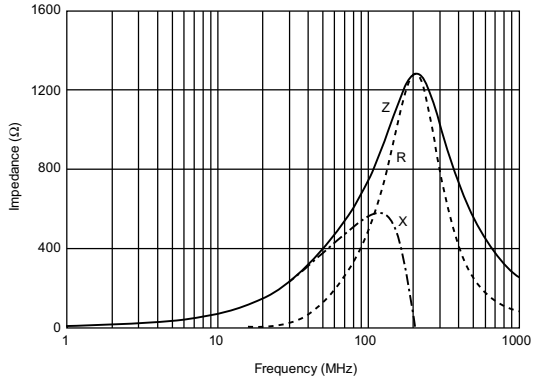
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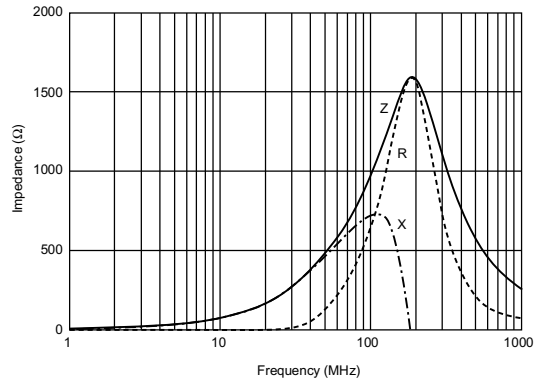
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### Impedance-Frequency Characteristics

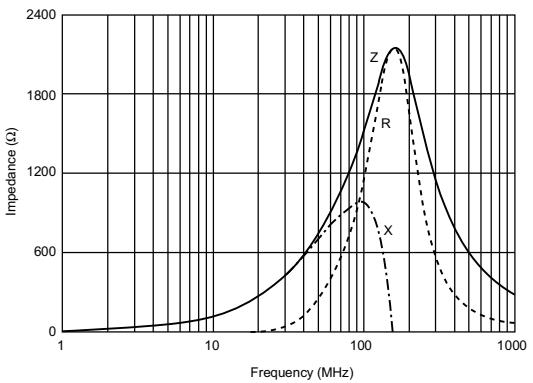
BLM21BD751SN1



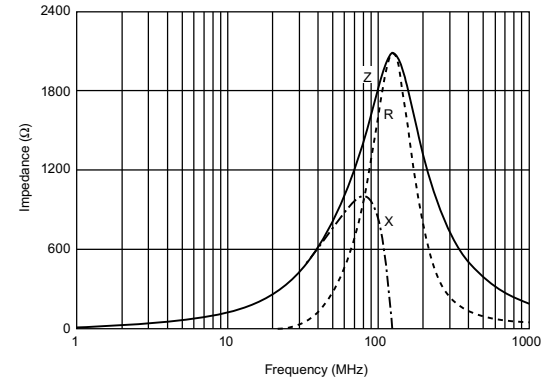
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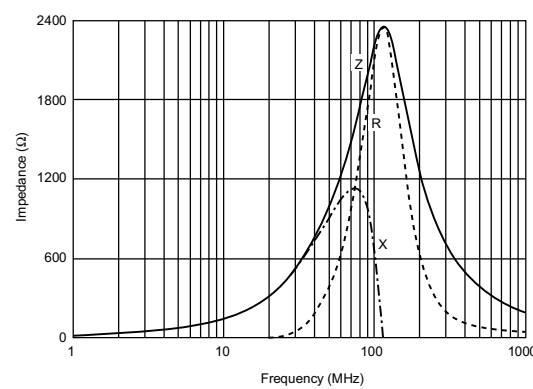
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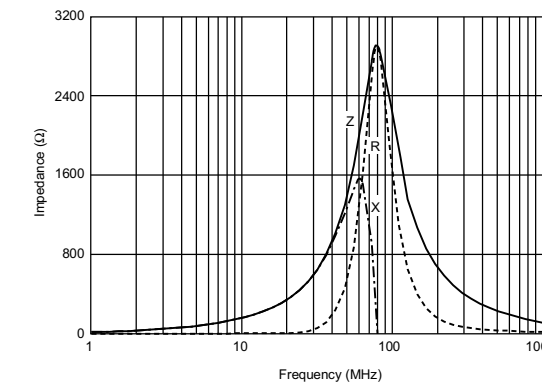
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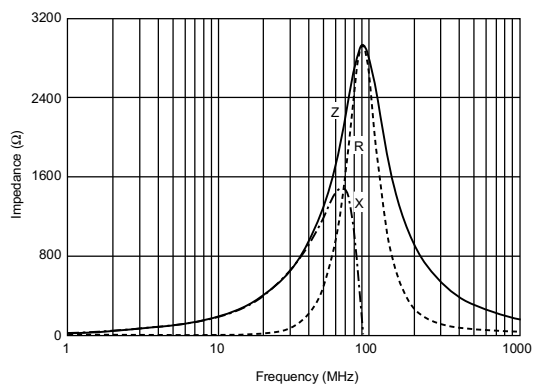
BLM21BD222TN1



BLM21BD222SN1

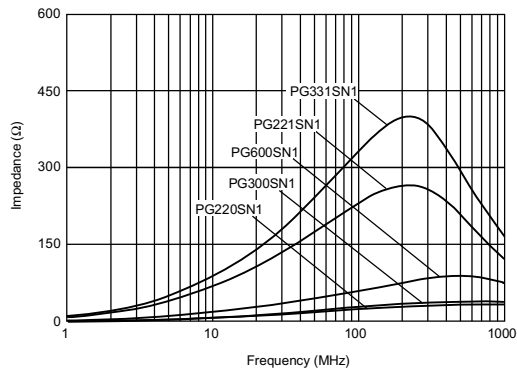


BLM21BD272SN1



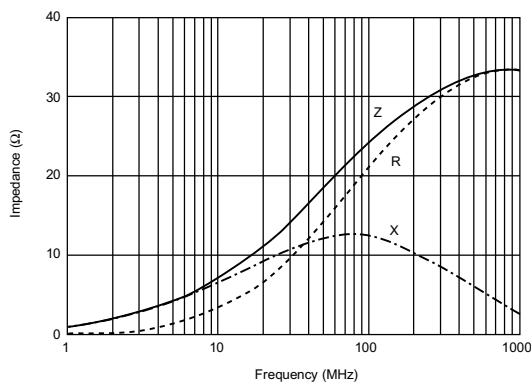
■ Impedance-Frequency (Typical)

BLM21P Series

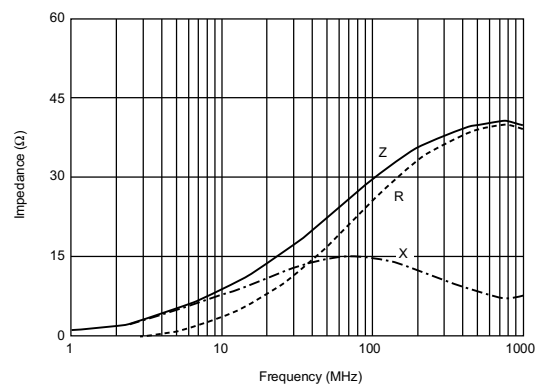


■ Impedance-Frequency Characteristics

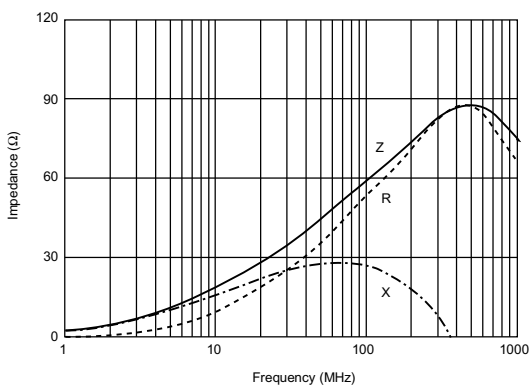
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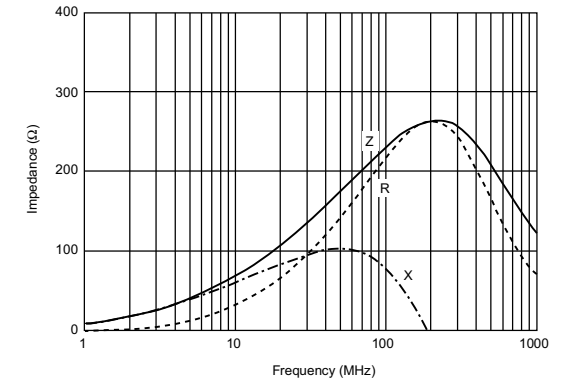
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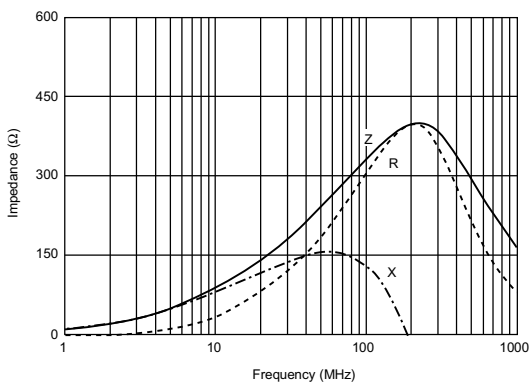
BLM21PG600SN1



BLM21PG221SN1



BLM21PG331SN1

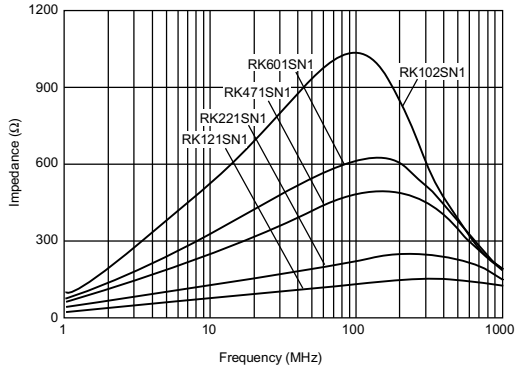




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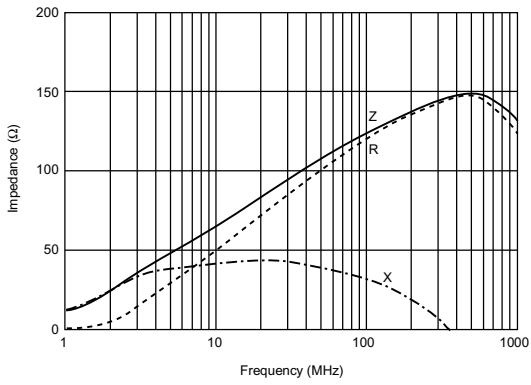
■ Impedance-Frequency (Typical)

BLM21R Series

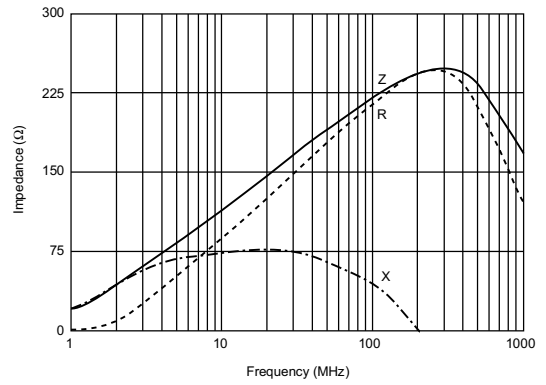


■ Impedance-Frequency Characteristics

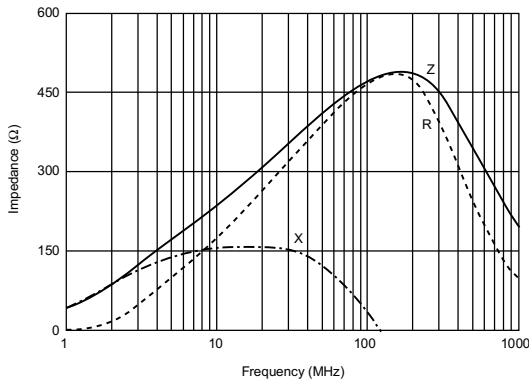
BLM21RK121SN1



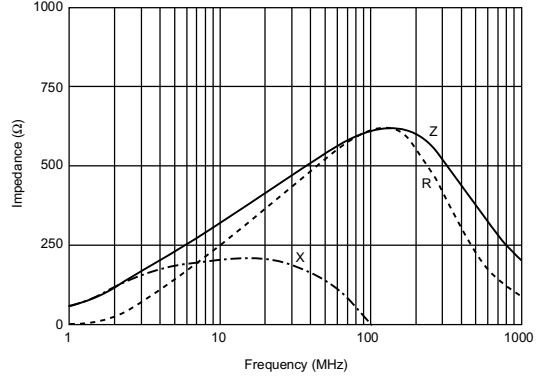
BLM21RK221SN1



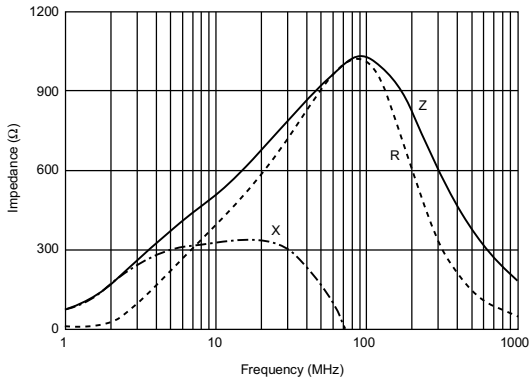
BLM21RK471SN1



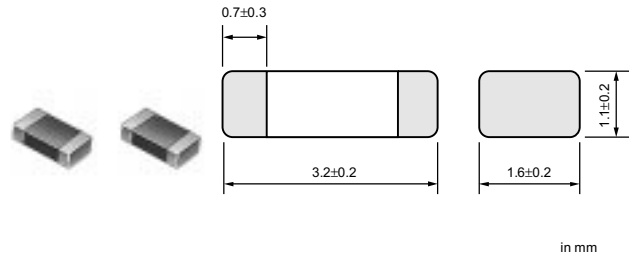
BLM21RK601SN1



BLM21RK102SN1



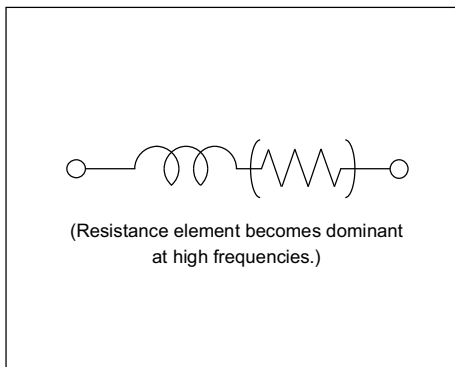
**BLM31 Series(3216 Size)**



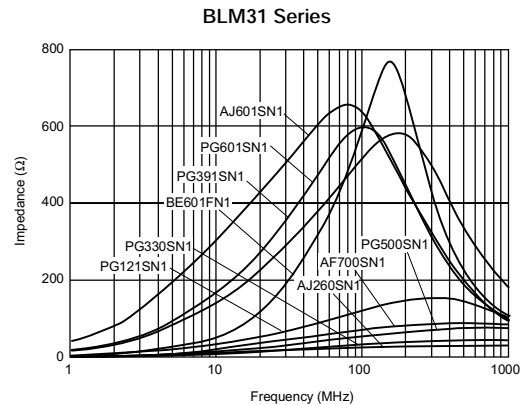
Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
BLM31AF700SN1	70 ±25%	200	0.15	-55 to 125
BLM31AJ260SN1	26 ±25%	500	0.05	-55 to 125
BLM31AJ601SN1	600 ±25%	200	0.90	-55 to 125
BLM31BE601FN1	600 ±25%	300	0.35	-55 to 125
BLM31PG330SN1	33 (Typ.)	6000	0.01	-55 to 125
BLM31PG500SN1	50 (Typ.)	3000	0.025	-55 to 125
BLM31PG121SN1	120 (Typ.)	3000	0.025	-55 to 125
BLM31PG391SN1	390 (Typ.)	2000	0.05	-55 to 125
BLM31PG601SN1	600 (Typ.)	1500	0.09	-55 to 125

BLM31P series require derating above 85°C ambient. Please contact us for details.

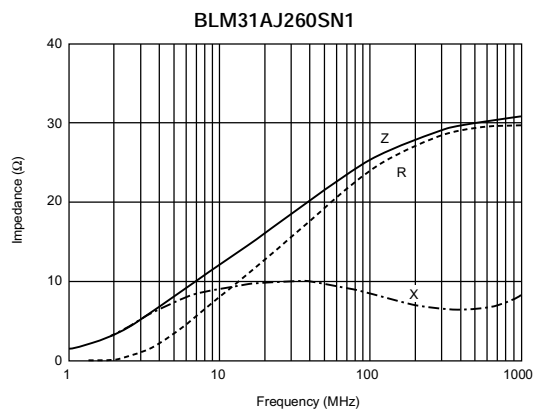
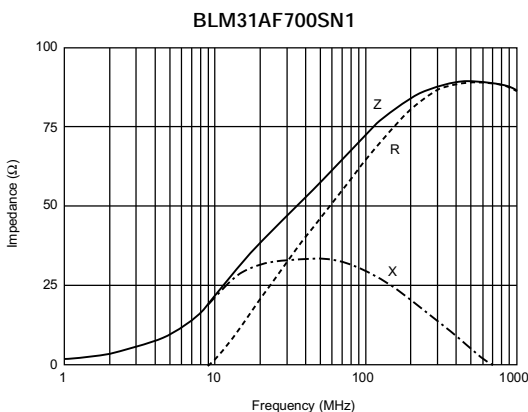
■ Equivalent Circuit




■ Impedance-Frequency (Typical)



■ Impedance-Frequency Characteristics



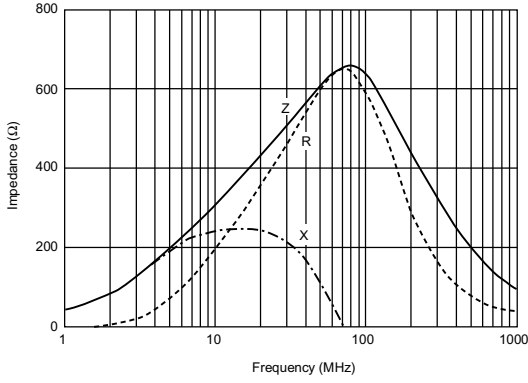
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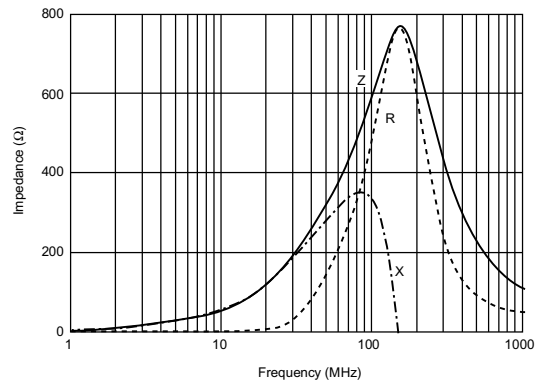
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**Impedance-Frequency Characteristics**

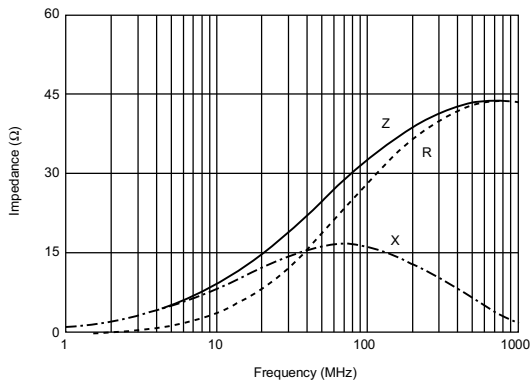
**BLM31AJ601SN1**



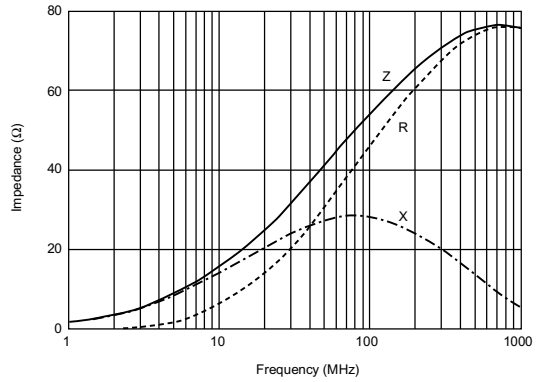
**BLM31BE601SN1**



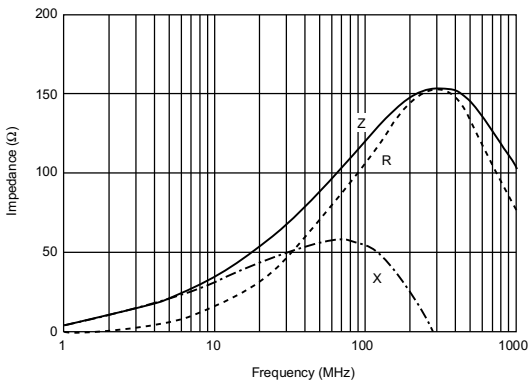
**BLM31PG330SN1**



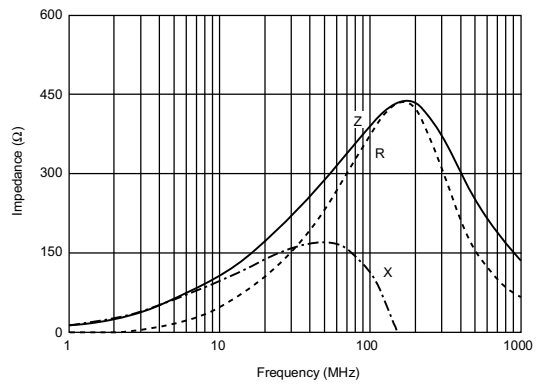
**BLM31PG500SN1**



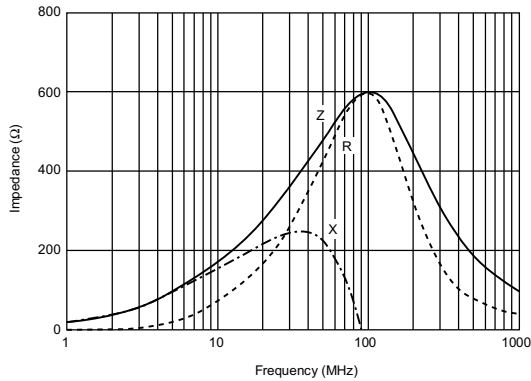
**BLM31PG121SN1**



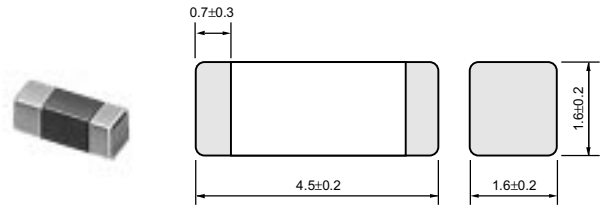
**BLM31PG391SN1**



**BLM31PG601SN1**



**BLM41 Series(4516 Size)**

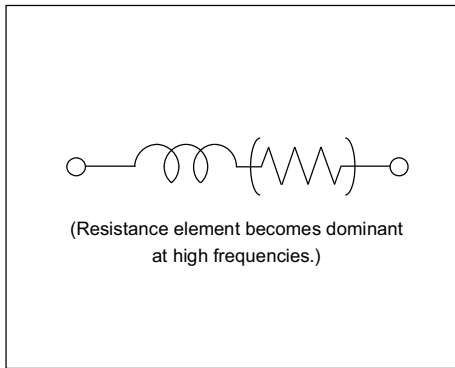


in mm

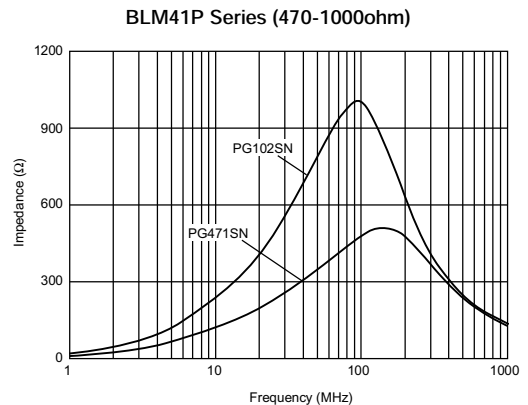
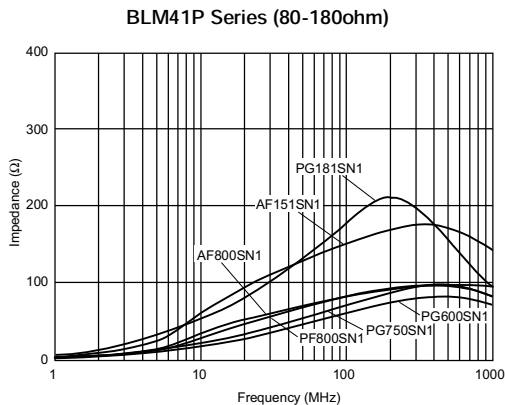
Part Number	Impedance (at 100MHz) (ohm)	Rated Current (mA)	DC Resistance(max.) (ohm)	Operating Temperature Range (°C)
<b>BLM41AF800SN1</b>	80 ±25%	500	0.10	-55 to 125
<b>BLM41AF151SN1</b>	150 ±25%	200	0.50	-55 to 125
<b>BLM41PF800SN1</b>	80 (Typ.)	1000	0.10	-55 to 125
<b>BLM41PG600SN1</b>	60 (Typ.)	6000	0.01	-55 to 125
<b>BLM41PG750SN1</b>	75 (Typ.)	3000	0.025	-55 to 125
<b>BLM41PG181SN1</b>	180 (Typ.)	3000	0.025	-55 to 125
<b>BLM41PG471SN1</b>	470 (Typ.)	2000	0.05	-55 to 125
<b>BLM41PG102SN1</b>	1000 (Typ.)	1500	0.09	-55 to 125

BLM41P series require derating above 85°C ambient. Please contact us for details.

■ Equivalent Circuit

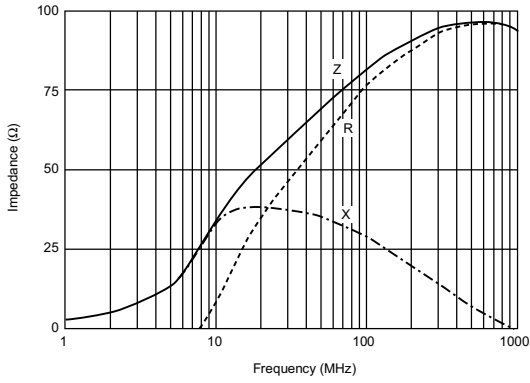


■ Impedance-Frequency (Typical)

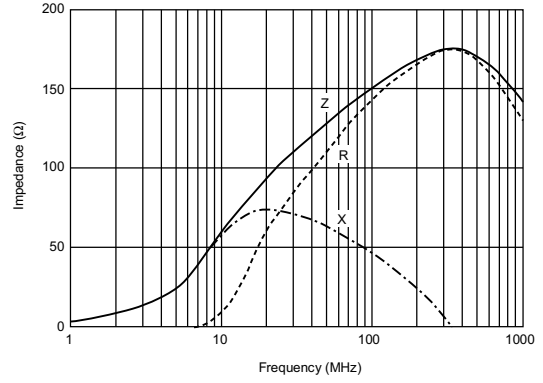


### ■ Impedance-Frequency Characteristics

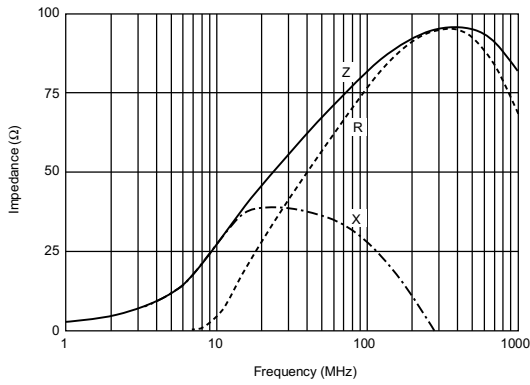
BLM41AF800SN1



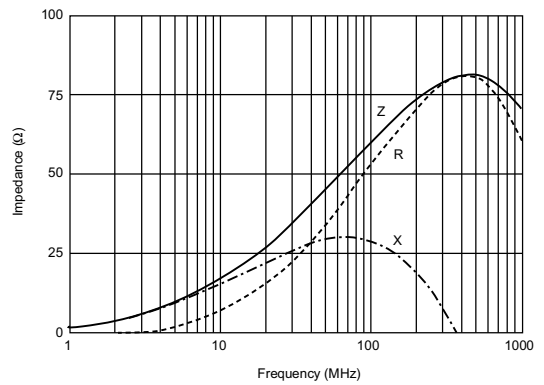
BLM41AF151SN1



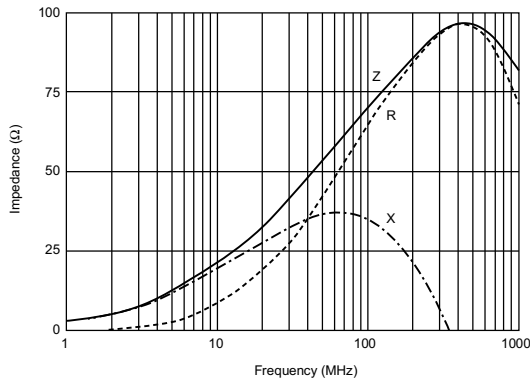
BLM41PF800SN1



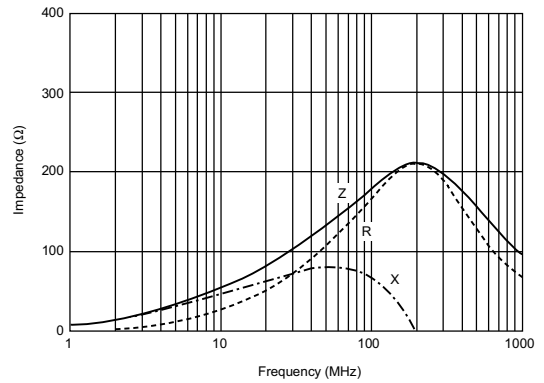
BLM41PG600SN1



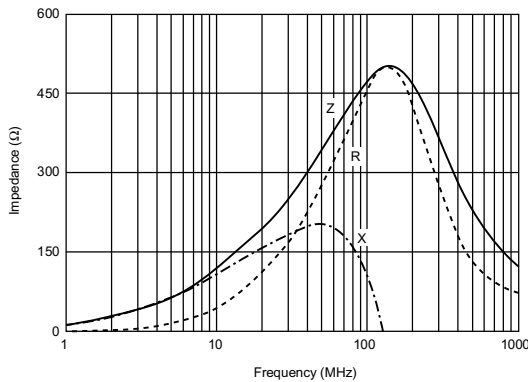
BLM41PG750SN1



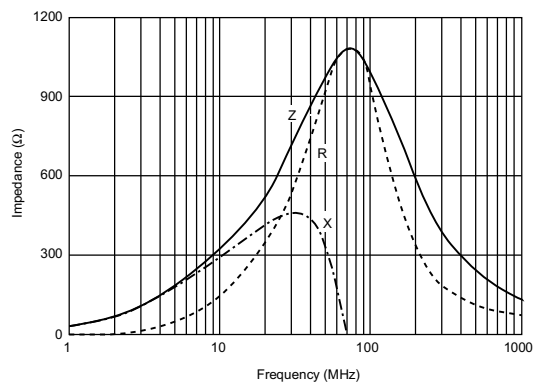
BLM41PG181SN1




BLM41PG471SN1



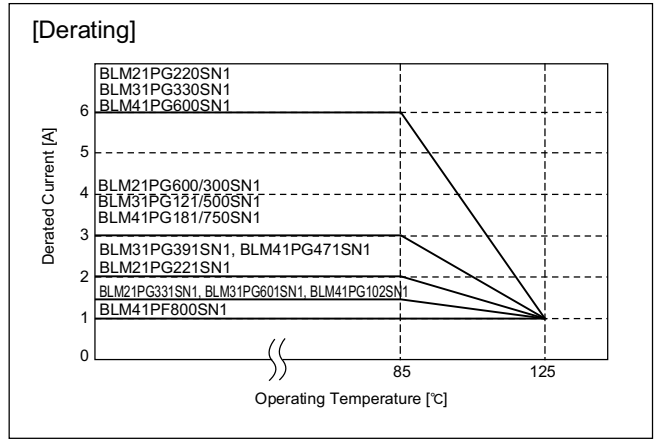
BLM41PG102SN1



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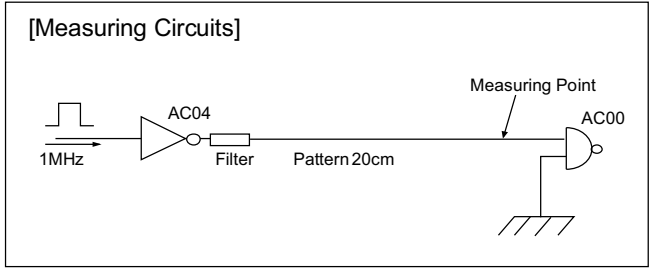
**Notice (Rating)**

When the BLM□□P series is for Large-current used in operating temperatures exceeding + 85°C, derating of current is necessary. Please apply the derating curve shown below according to the operating temperature.



# 1 Noise Suppression Effect of BLM\_R Series

## Waveform Distortion Suppressing Performance of BLM□□R Series



Type of Filter	EMI Suppression Effect / Description		
<p>Initial (No filter)</p>	<p>Signal waveform (100nsec/div, 2V/div)</p>	<p>Expand (10nsec/div, 2V/div)</p>	<p>Spectrum</p> <p>Level [dB <math>\mu</math>V]</p> <p>Frequency [MHz]</p> <p>Ringing is caused on the signal waveform Such ringing contains several hundred MHz harmonic components and generates noise.</p>
<p>Resister (47<math>\Omega</math>) is used</p>	<p>Signal waveform (100nsec/div, 2V/div)</p>	<p>Expand (10nsec/div, 2V/div)</p>	<p>Spectrum</p> <p>Level [dB <math>\mu</math>V]</p> <p>Frequency [MHz]</p> <p>Comparing initial waveform, ringing is suppressed a little. However there still remains high level waveform distortion.</p>
<p>BLM18RK221SN1 (220<math>\Omega</math> at 100MHz) is used</p>	<p>Signal waveform (100nsec/div, 2V/div)</p>	<p>Expand (10nsec/div, 2V/div)</p>	<p>Spectrum</p> <p>Level [dB <math>\mu</math>V]</p> <p>Frequency [MHz]</p> <p>BLM18R has excellent performance for noise suppression and waveform distortion suppression. BLM18R suppresses drastically not only spectrum level in more than 100MHz range but waveform distortion.</p>

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Murata products should not be used or sold for use in the development, production, stockpiling or utilization of any conventional weapons or mass-destructive weapons (nuclear weapons, chemical or biological weapons, or missiles), or any other weapons.

⟨For customers in Japan⟩

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

**2. Please contact our sales representatives or product engineers before using our products listed in this catalog for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property, or when intending to use one of our products for other applications than specified in this catalog.**

- ① Aircraft equipment
- ② Aerospace equipment
- ③ Undersea equipment
- ④ Power plant equipment
- ⑤ Medical equipment
- ⑥ Transportation equipment (vehicles, trains, ships, etc.)
- ⑦ Traffic signal equipment
- ⑧ Disaster prevention / crime prevention equipment
- ⑨ Data-processing equipment
- ⑩ Application of similar complexity and/or reliability requirements to the applications listed in the above

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