

Multilayer Chip Beads

Advantages of using Multi Layer Chips

Features

1. Small size chips generate high impedance.
2. Minimum floating capacity and excellent high frequency characteristics.
3. Outstanding soldering heat resistance. Both flow and reflow soldering methods can be used.
4. Perfect shape for automatic mounting, with no directionality.
5. Monolithic inorganic material construction for high reliability.
6. Closed magnetic circuit avoids crosstalk and is suited to high density printed circuit boards.

Common Applications for Impedance Chips

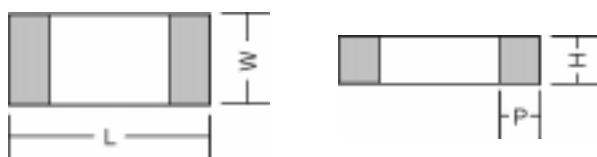
Clock generation circuitry, filtering between analogue and digital circuitry, I/O interconnectors (e.g. serial, parallel, keyboard, mouse, telecommunications, local area networks), isolation between RF noisy circuits and logic circuits and logic devices susceptible to functional degradation, power supply filtering to prevent conducted RF energy from corrupting the power generation circuitry, high frequency EMI prevention of computers, VCR's, TV's and portable telephones.

About using Multi Layer Chips

Chip Beads (Impeders), perform the function of removing RF energy that exists within a transmission line structure (Printed circuit board tracking). This RF energy is an AC sine wave component that co-exists with the DC voltage level of the transmitted signal. The DC component is the intended signal of interest whereas RF energy will propagate down the trace and radiate as E.M.I. Beads perform the function of being a high frequency resistor (attenuator) allowing DC energy to pass through whilst removing AC energy. High frequency is generally considered to be above 30MHz, however, lower frequency signals are affected by chip impeders.

Chip Beads consist of a soft ferrite material which responds to RF energy. This material contains high resistivity in monolithic form. Eddy current losses are inversely proportional to resistivity. These losses increase with the square of the frequency. The eddy currents are the RF energy that travels through the device. Hard ferrite is associated with a permanent magnetic field, its polarities become fixed as North and South. Soft ferrite material will change its impedance value based on the frequency that the bead presents to the circuit and does not permanently retain the magnetic field.

Package Size	Package Code	Dimensions (L x W x H x P)
06:03	1J	1.6 ± 0.15 x 0.8 ± 0.15 x 0.8 ± 0.15 x 0.3 ± 0.20
08:05	2A	2.0 ± 0.20 x 1.2 ± 0.20 x 0.9 ± 0.20 x 0.5 ± 0.30
12:06	2B	3.2 ± 0.20 x 1.6 ± 0.20 x 1.6 ± 0.20 x 0.5 ± 0.30
12:10	2E	3.2 ± 0.20 x 2.5 ± 0.20 x 1.3 ± 0.20 x 0.5 ± 0.30
18:06	2G	4.5 ± 0.20 x 1.6 ± 0.20 x 1.6 ± 0.20 x 0.5 ± 0.30
18:12	2J	4.5 ± 0.20 x 3.2 ± 0.20 x 1.5 ± 0.20 x 0.5 ± 0.30



A Selection Guide to Miniature Ferrite Chip Beads

The BMB-A Series covers a wide range of impedance characteristics. It is designed to prevent electromagnetic interference.

The BMB-B Series can minimize attenuation of the signal wave form due to its sharp impedance characteristics. It is designed for high speed applications

The BMB-R Series generates an impedance down to relatively low frequency. The impedance consists of a resistance element and prevents signal ringing. This Series has been specifically designed for low speed applications.

The BMB-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.

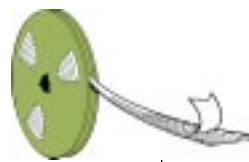
The BMB-L Series have a higher current capacity than the BMB-A Series. This Series is suitable for use on signal lines handling high currents.

The BMB-M Series meets the requirements for high density packaging of electronic circuitry by incorporating 4 ferrite beads into one package.

Series	Application	Case Size	Product Characteristics
BMB-A	Multilayer Chip Bead for General use (High loss type)	06:03 08:05 12:06 12:10 18:06 18:12	Impedance: 30 ~ 600R Impedance: 10 ~ 1500R Impedance: 26 ~ 2000R Impedance: 52 ~ 60R Impedance: 80 ~ 150R Impedance: 120 ~ 125R
	Multilayer Chip Bead for High-speed signal line use	06:03 08:05 12:06 12:10 18:06 18:12	Impedance: 5 ~ 600R Impedance: 5 ~ 1000R Impedance: 19R Impedance: 31R Impedance: 31R Impedance: 70R
	Multilayer Chip Bead for Digital sound use (For ringing prevention)	06:03 08:05 12:06	Impedance: 80 ~ 600R Impedance: 80 ~ 600R Impedance: 26 ~ 600R
	Multilayer Chip Bead for high current use	06:03 08:05 12:06 18:06 18:12	Impedance: 10 ~ 25R Impedance: 10 ~ 40R Impedance: 30 ~ 80R Impedance: 50 ~ 80R Impedance: 120R
	Multilayer Chip Bead for General use (High loss type)	06:03 08:05	Impedance: 30 ~ 1000R Impedance: 30 ~ 1500R
	Multilayer Bead Array for multiple lines (New Product)	12:06	Impedance: 60 ~ 600R

Multilayer Chip Beads

BMB-A Series



Specification

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
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type BMB-A series

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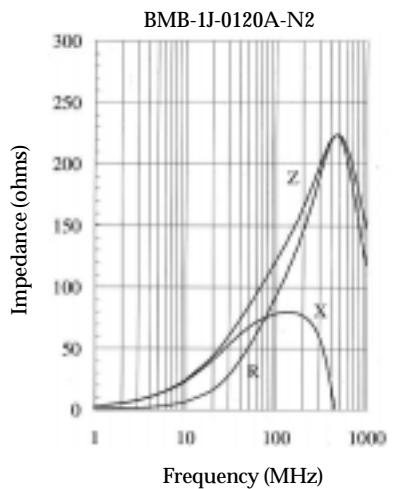
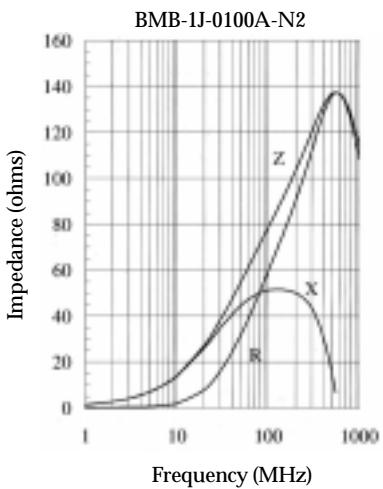
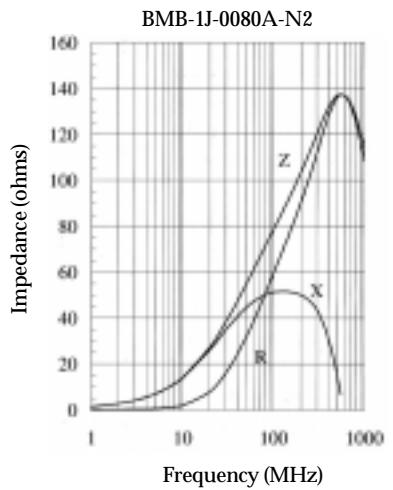
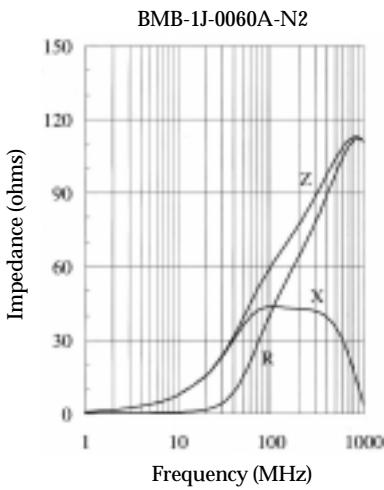
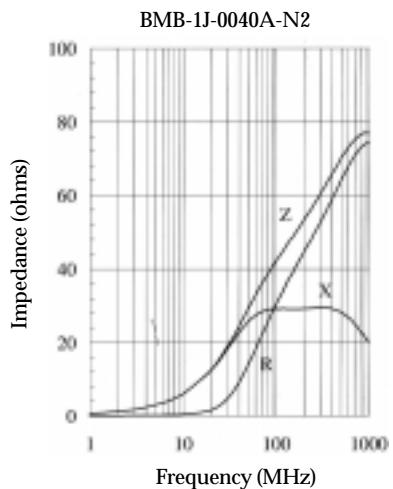
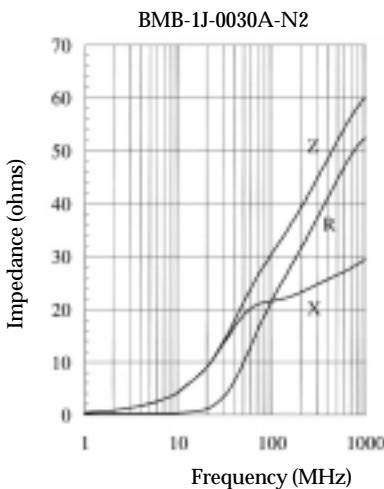
BMB-1J-0030A-N2	30	0.2	200
BMB-1J-0040A-N2	40	0.3	400
BMB-1J-0060A-N2	60	0.4	200
BMB-1J-0080A-N2	80	0.5	300
BMB-1J-0100A-N2	100	0.4	200
BMB-1J-0120A-N2	120	0.4	200
BMB-1J-0180A-N2	180	0.5	200
BMB-1J-0220A-N2	220	0.5	200
BMB-1J-0240A-N2	240	0.5	200
BMB-1J-0300A-N2	300	0.5	150
BMB-1J-0450A-N2	450	0.7	200
BMB-1J-0600A-N1	600	0.9	150
BMB-1J-0600A-N2	600	1.0	50

BMB-2A-0010A-N1	10	0.2	600
BMB-2A-0011A-N2	11	0.1	600
BMB-2A-0017A-N2	17	0.2	600
BMB-2A-0030A-N1	30	0.7	200
BMB-2A-0080A-N4	80	0.4	400
BMB-2A-0120A-N1	120	0.6	200
BMB-2A-0120A-N4	120	0.3	300
BMB-2A-0150A-N1	150	0.6	200
BMB-2A-0220A-N4	220	0.5	200
BMB-2A-0300A-N1	300	1.0	200
BMB-2A-0400A-N2	400	0.5	200
BMB-2A-0600A-N1	600	1.0	200
BMB-2A-0600A-N4	600	0.6	200
BMB-2A-1000A-N4	1000	1.0	100
BMB-2A-1200A-N4	1200	1.0	100
BMB-2A-1500A-N4	1500	1.0	100

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
BMB-2B-0026A-N1	26	0.2	500
BMB-2B-0031A-N2	31	0.2	500
BMB-2B-0050A-N2	50	0.2	400
BMB-2B-0070A-N2	70	0.5	200
BMB-2B-0090A-N2	90	0.1	500
BMB-2B-0120A-N4	120	0.4	500
BMB-2B-0150A-N4	150	0.4	100
BMB-2B-0220A-N4	220	0.5	500
BMB-2B-0400A-N4	400	0.6	100
BMB-2B-0500A-N1	500	0.5	100
BMB-2B-0600A-N1	600	0.5	200
BMB-2B-0600A-N2	600	0.5	200
BMB-2B-1200A-N2	1200 @ 50MHz	1.0	100
BMB-2B-2000A-N1	2000 @ 30MHz	2.1	100
BMB-2B-2000A-N2	2000 @ 30MHz	2.1	100
BMB-2E-0052A-N1	52	0.3	500
BMB-2E-0060A-N2	60	0.3	200
BMB-2G-0052A-N1	52	0.7	300
BMB-2G-0060A-N2	60	0.7	300
BMB-2G-0080A-N1	80	0.7	200
BMB-2G-0125A-N2	125	0.7	200
BMB-2G-0150A-N2	150	0.7	200
BMB-2J-0120A-N1	120	0.4	300
BMB-2J-0125A-N2	125	0.4	300

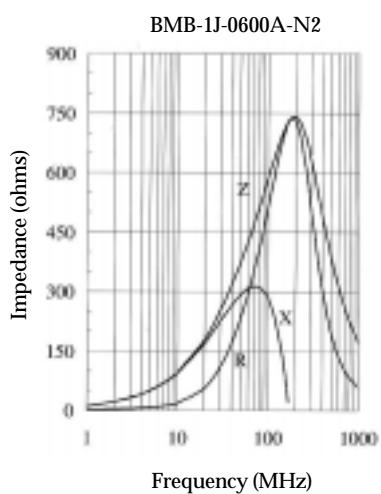
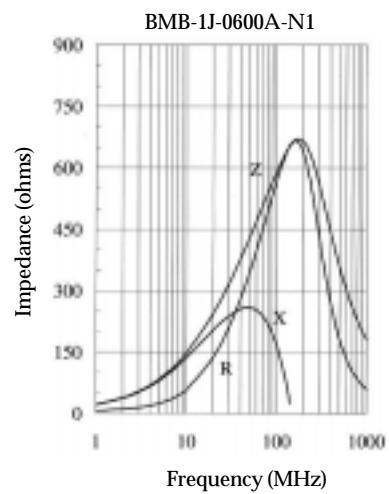
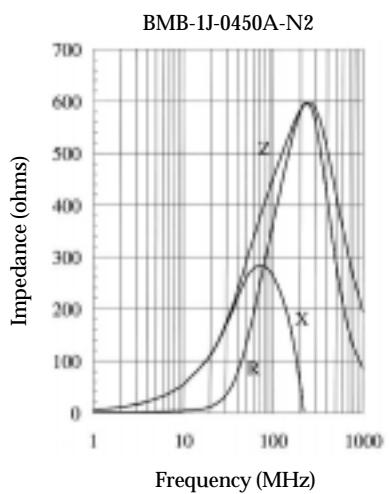
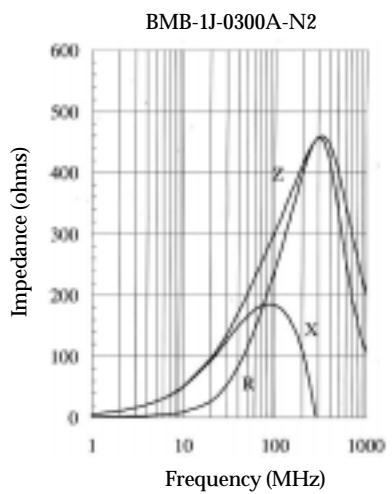
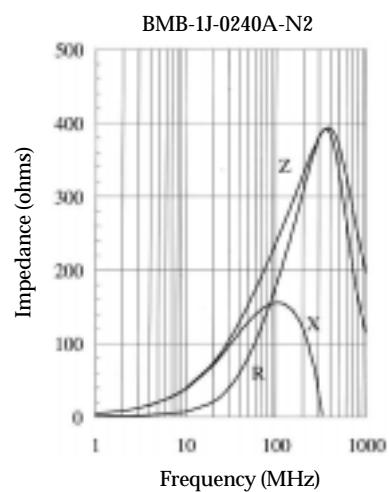
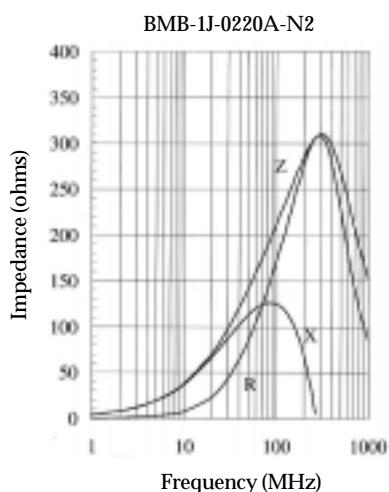
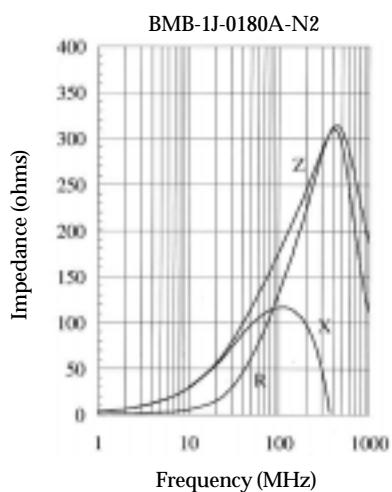
Multilayer Chip Beads

BMB-A Series 06:03 Package



type BMB-A series

These beads cover a wide range of impedance characteristics and are designed to prevent electromagnetic interference. These are high loss types for general use. This series is offered in 06:03, 08:05, 12:06, 12:10, 18:06 and 18:12 package sizes.

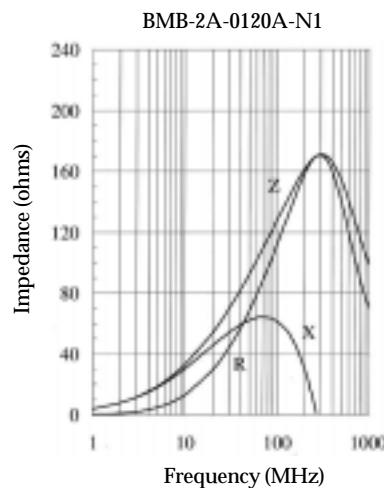
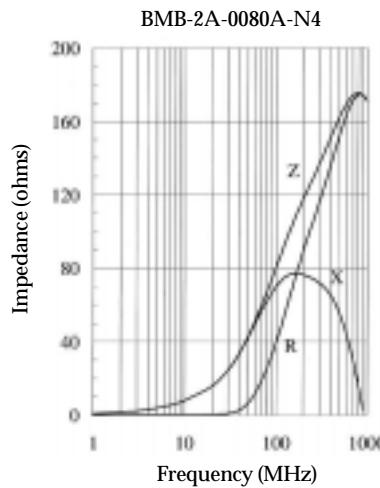
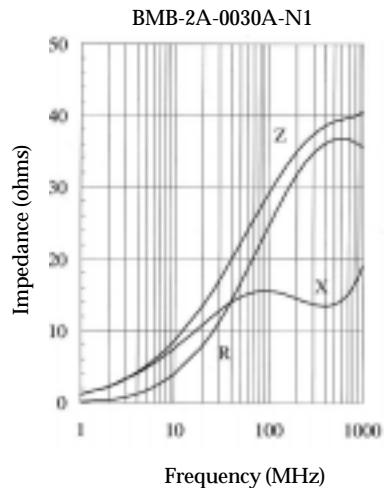
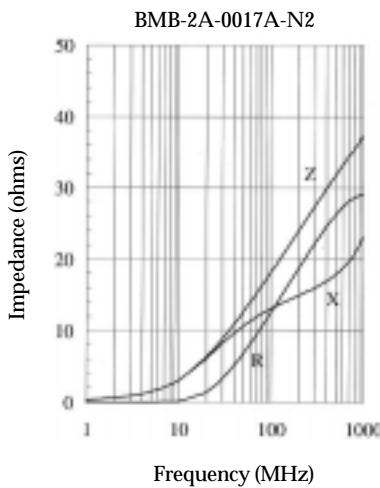
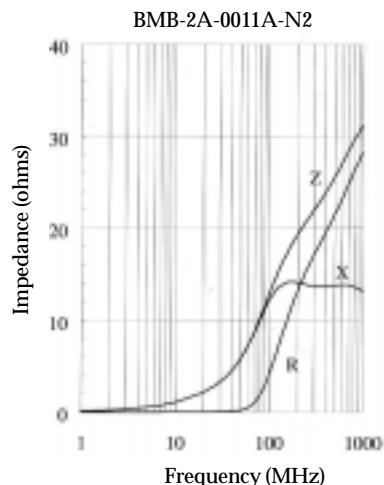
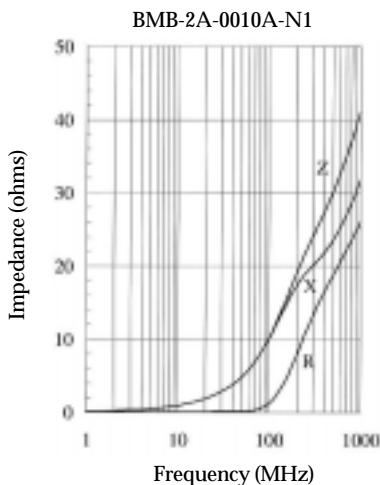


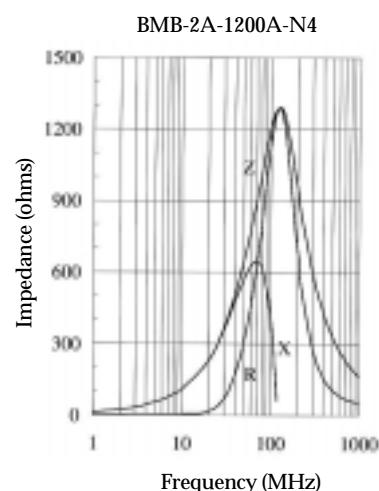
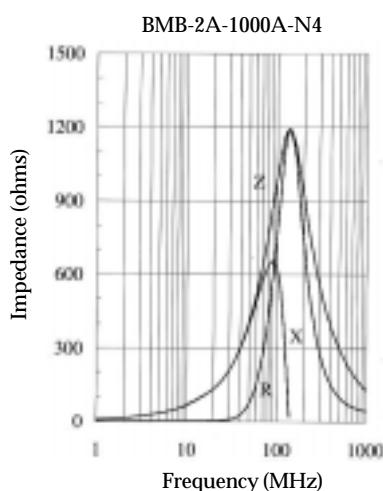
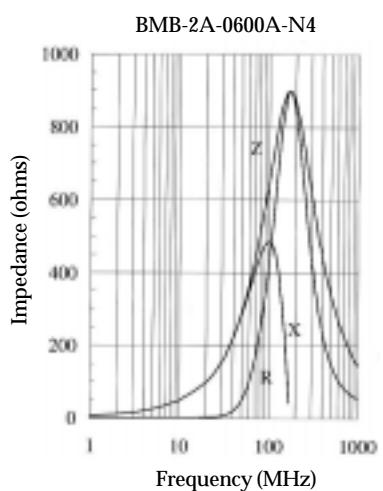
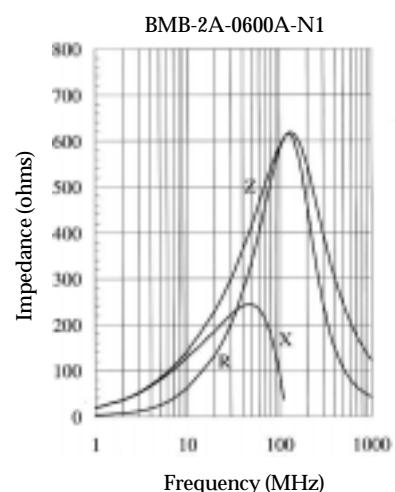
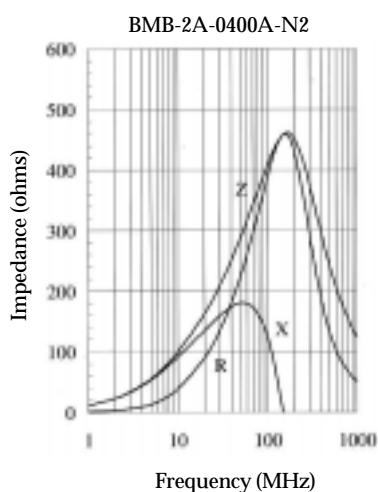
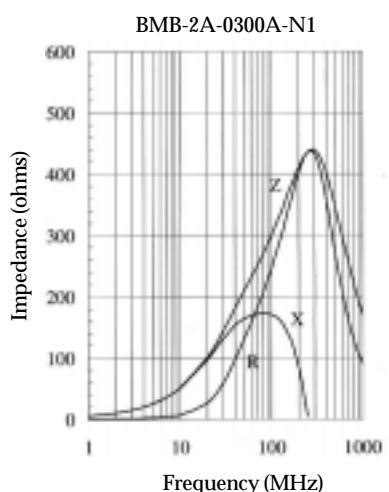
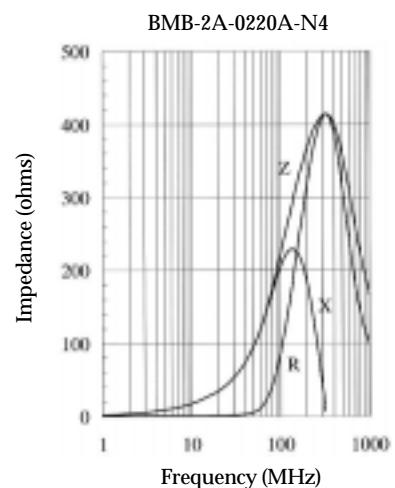
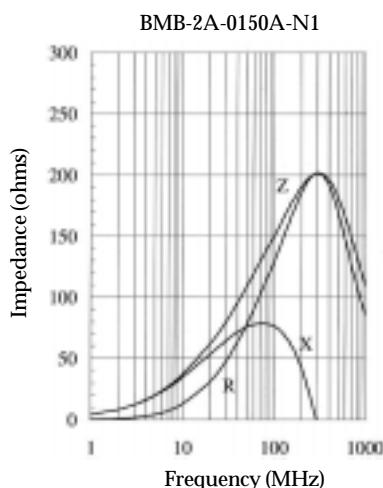
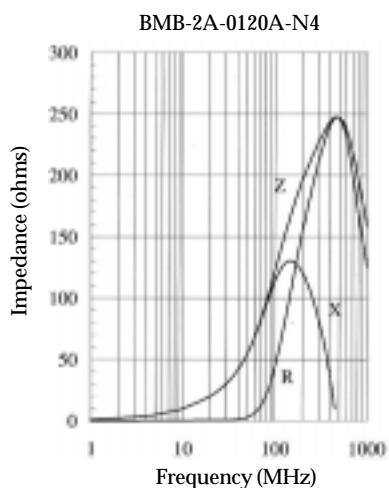
Multilayer Chip Beads

BMB-A Series 08:05 Package

type BMB-A series

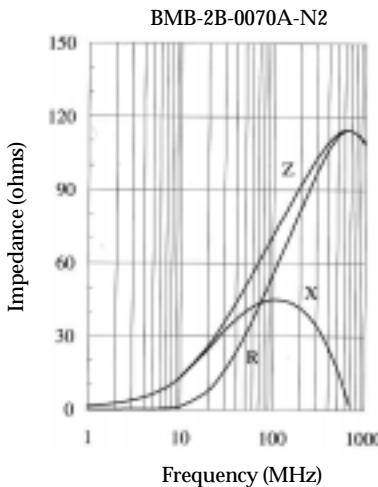
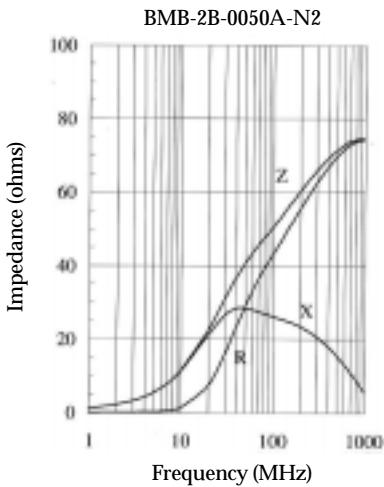
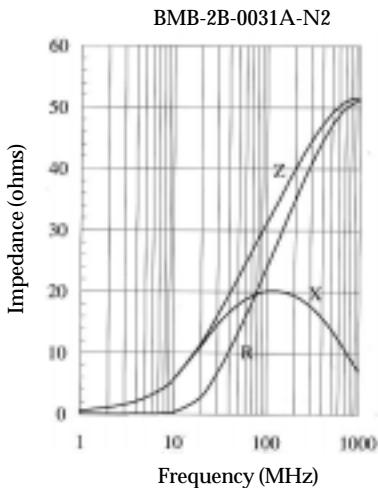
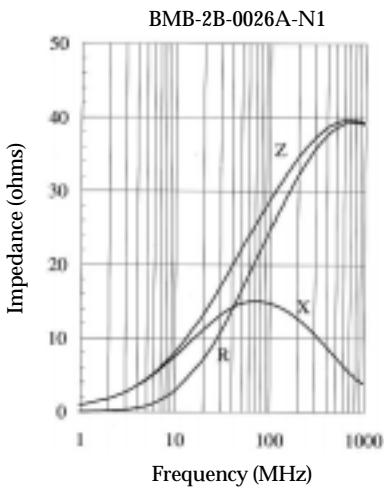
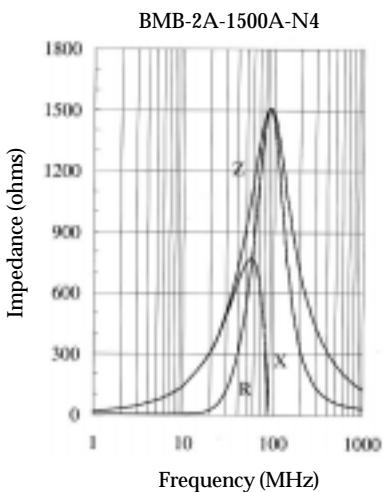
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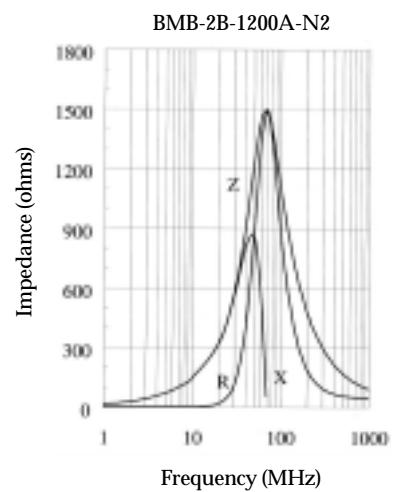
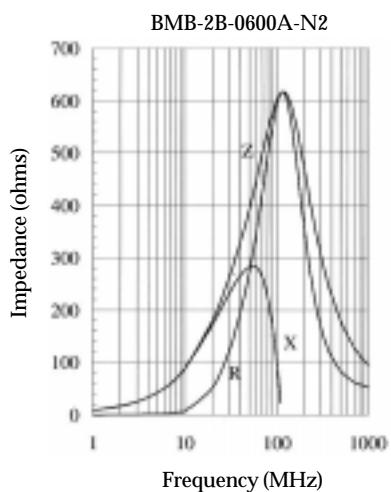
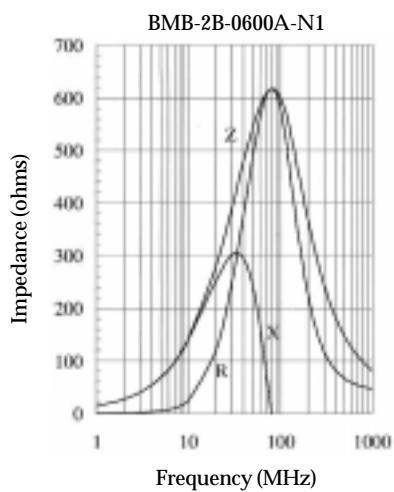
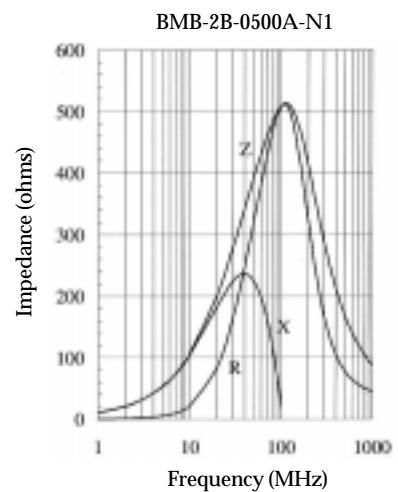
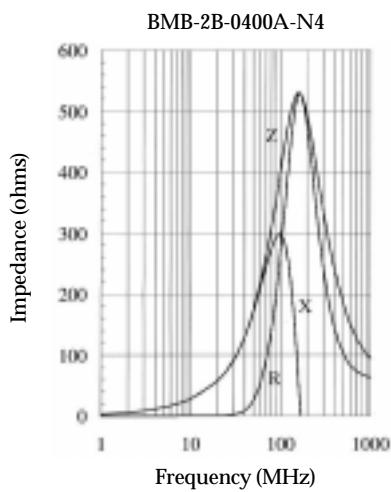
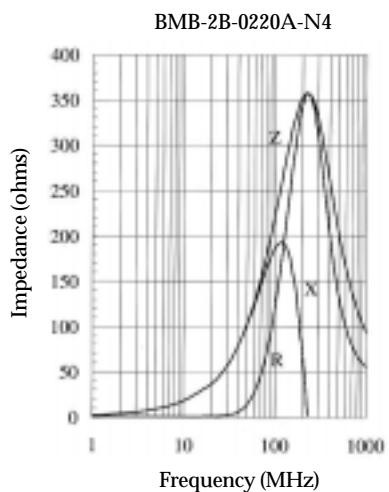
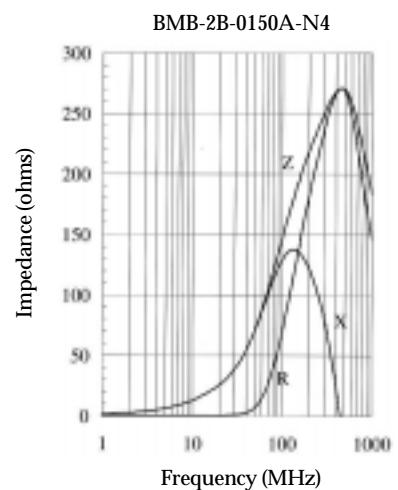
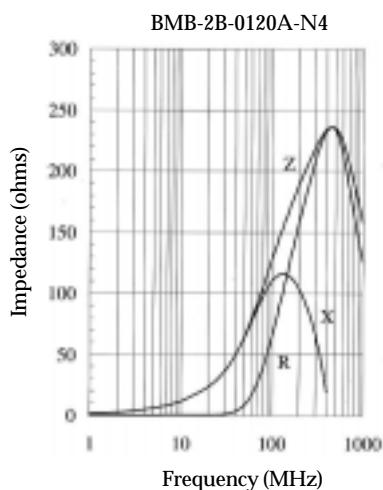
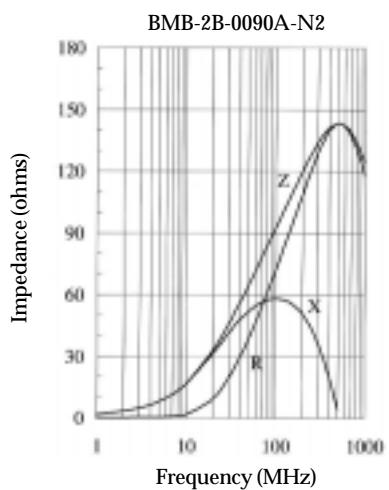
Multilayer Chip Beads

BMB-A Series 08:05/12:06 Package



type BMB-A series

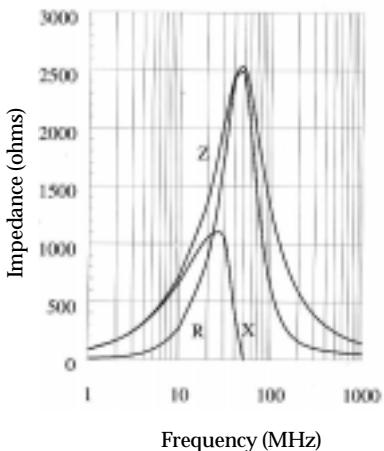
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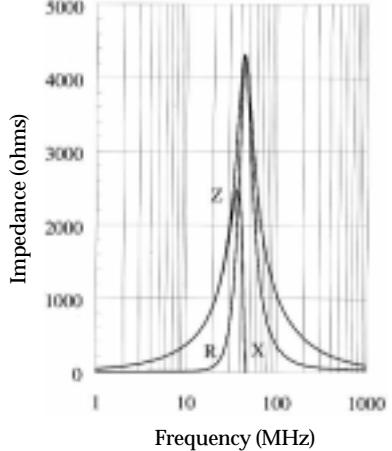
Multilayer Chip Beads

BMB-A Series 12:06/12:10/18:06 Package

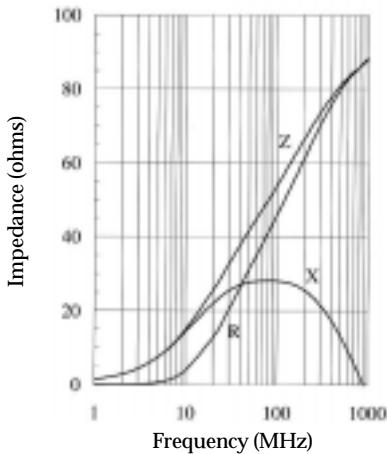
BMB-2B-2000A-N1



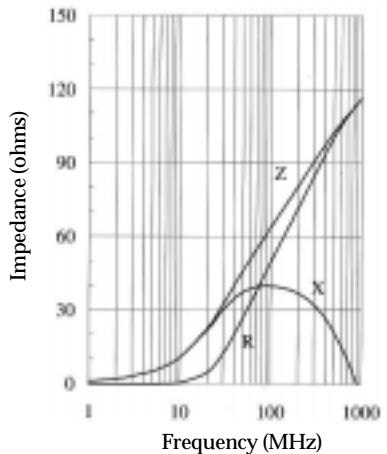
BMB-2B-2000A-N2



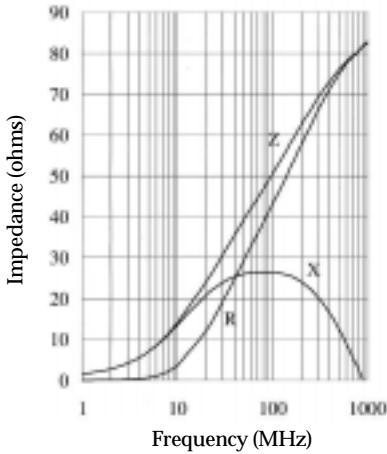
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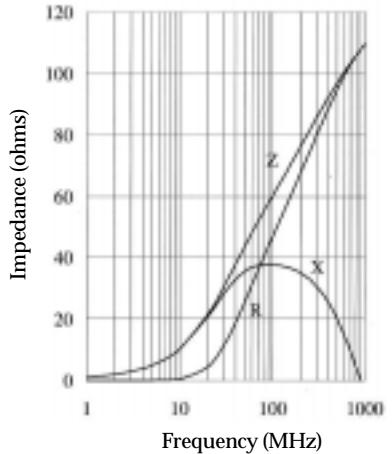
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BMB-2G-0052A-N1

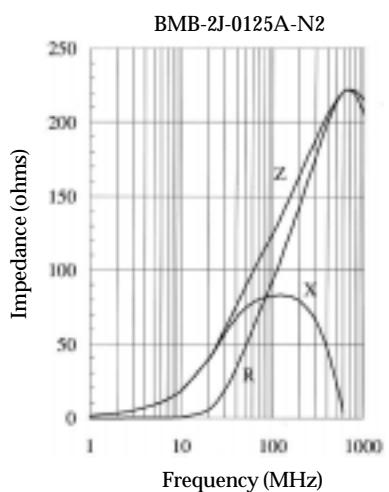
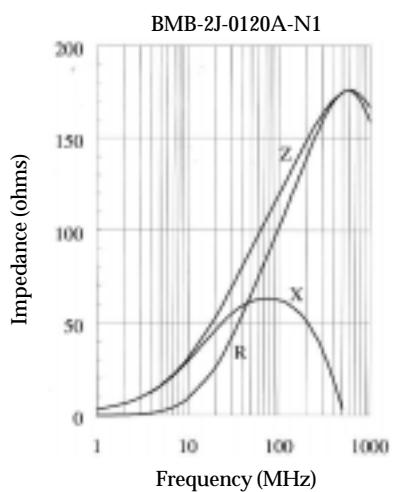
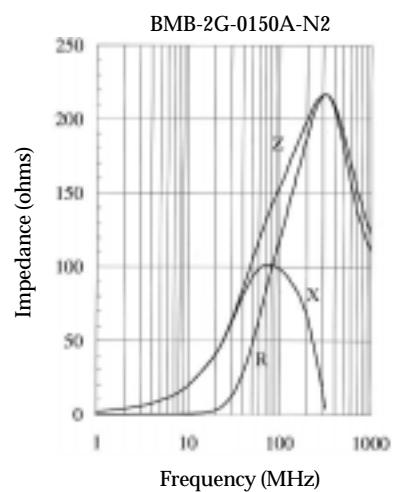
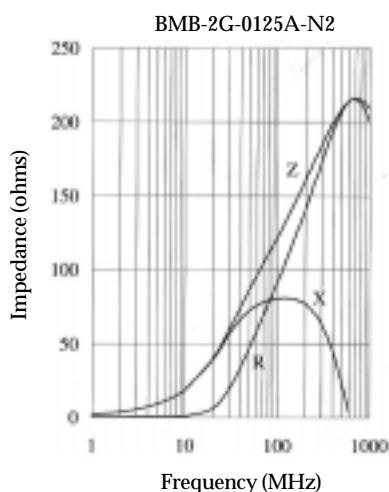
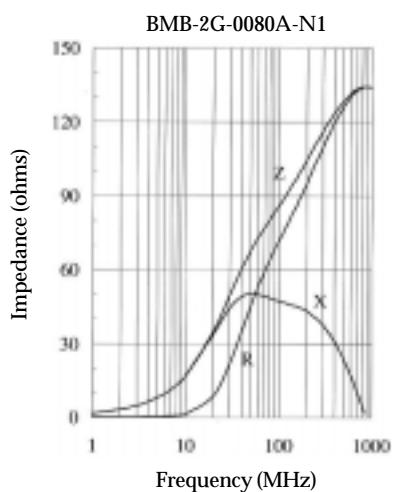


BMB-2G-0060A-N2



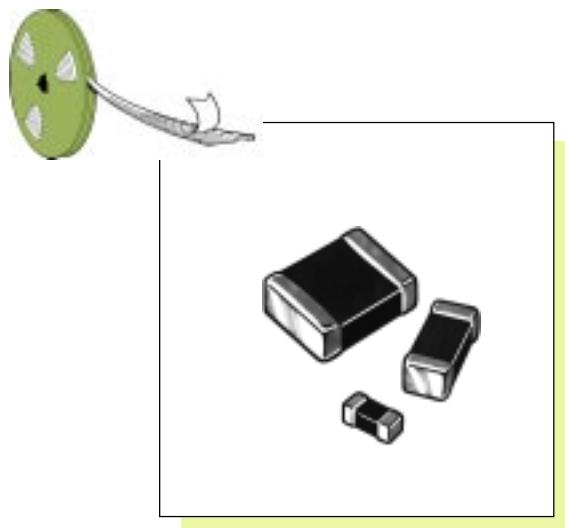
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These beads cover a wide range of impedance characteristics and are designed to prevent electromagnetic interference. These are high loss types for general use. This series is offered in 06:03, 08:05, 12:06, 12:10, 18:06 and 18:12 package sizes.



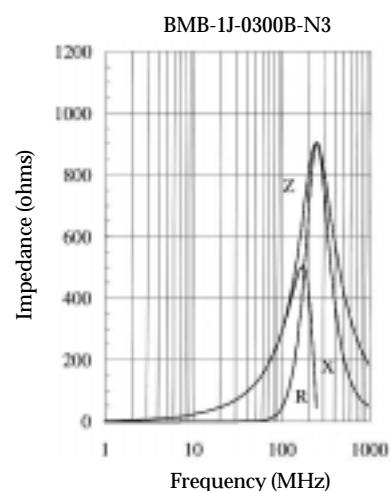
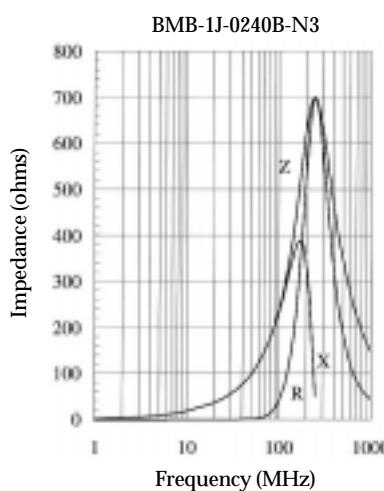
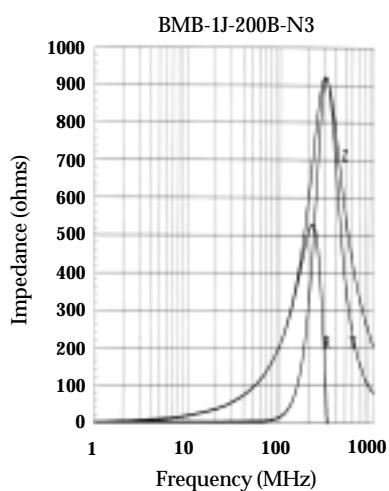
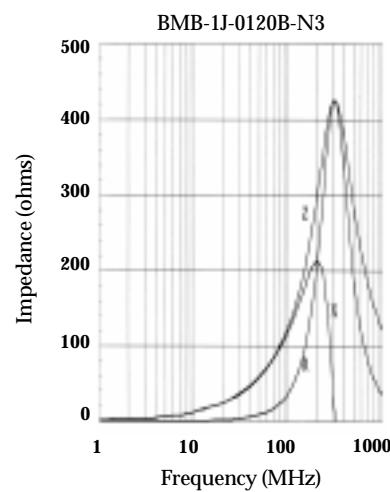
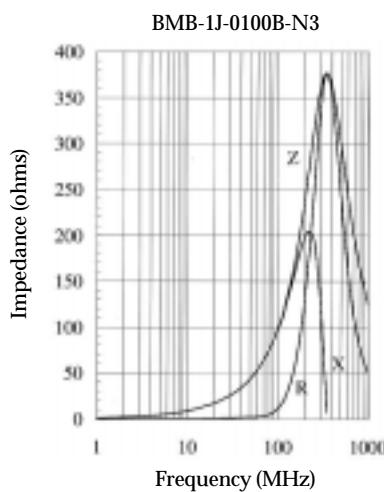
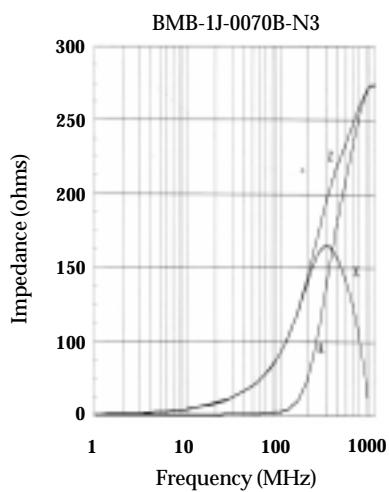
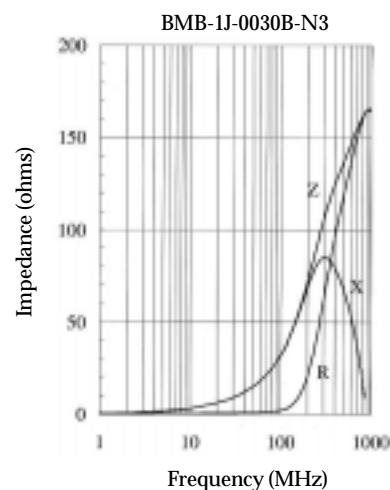
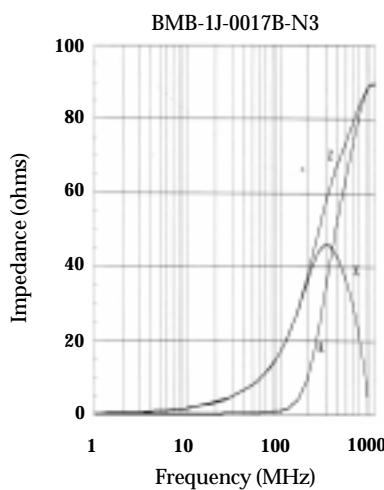
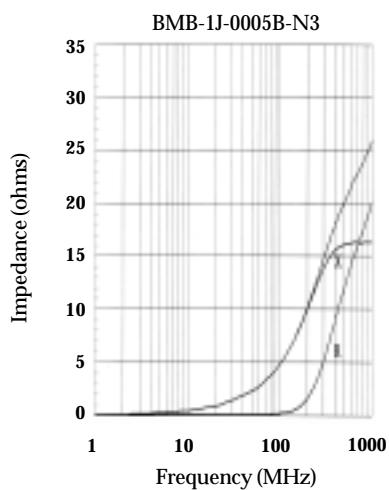
Multilayer Chip Beads

BMB-B Series



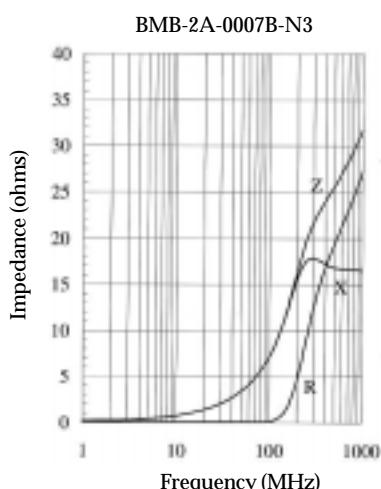
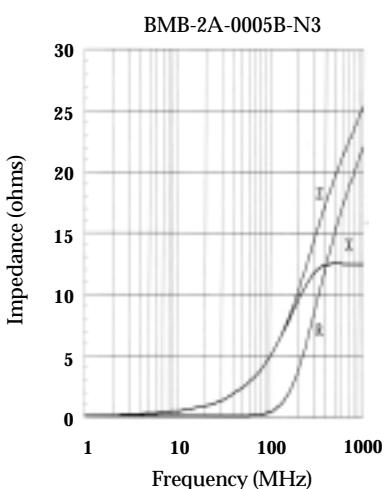
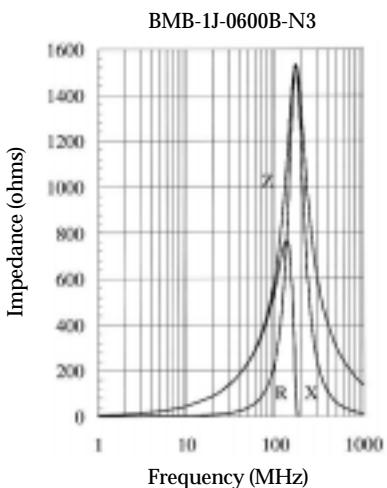
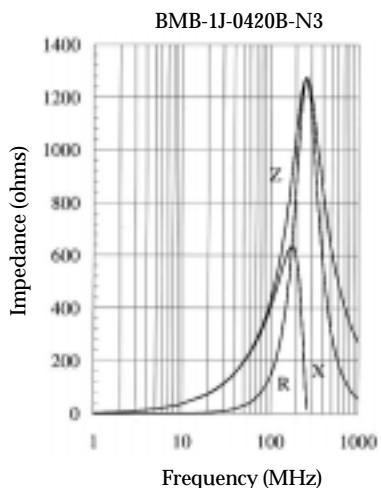
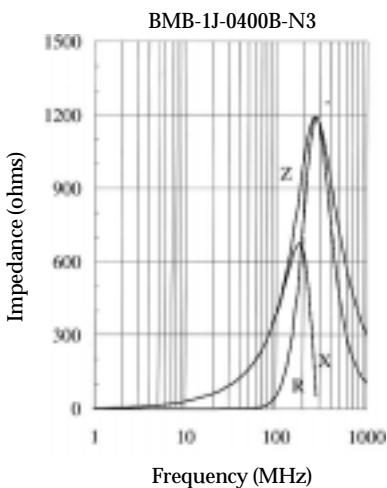
Specification

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
BMB-1J-0005B-N3	5	0.3	250
BMB-1J-0017B-N3	17	0.3	250
BMB-1J-0030B-N3	30	0.4	250
BMB-1J-0070B-N3	70	0.4	200
BMB-1J-0100B-N3	100	0.4	200
BMB-1J-0120B-N3	120	0.4	200
BMB-1J-0200B-N3	200	0.5	200
BMB-1J-0240B-N3	240	0.5	200
BMB-1J-0300B-N3	300	0.5	200
BMB-1J-0400B-N3	400	0.5	200
BMB-1J-0420B-N3	420	0.5	200
BMB-1J-0600B-N3	600	0.7	200
BMB-2A-0005B-N3	5	0.2	300
BMB-2A-0007B-N3	7	0.2	500
BMB-2A-0030B-N3	30	0.4	300
BMB-2A-0056B-N3	56	0.2	300
BMB-2A-0120B-N3	120	0.4	300
BMB-2A-0200B-N3	200	0.4	200
BMB-2A-0240B-N3	240	0.6	200
BMB-2A-0300B-N3	300	0.5	200
BMB-2A-0600B-N3	600	0.5	200
BMB-2A-0750B-N3	750	0.7	200
BMB-2A-1000B-N3	1000	0.7	200
BMB-2B-0019B-N3	19	0.2	500
BMB-2E-0031B-N3	31	0.3	400
BMB-2G-0031B-N3	31	0.3	500
BMB-2J-0070B-N3	70	0.4	300



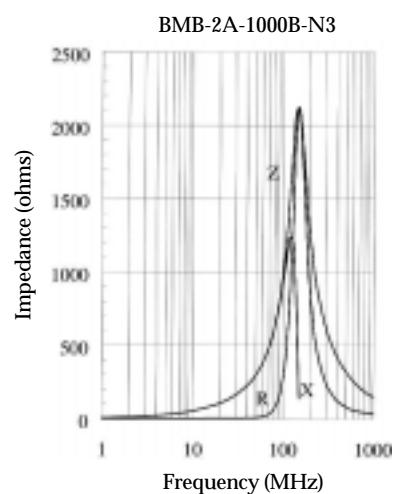
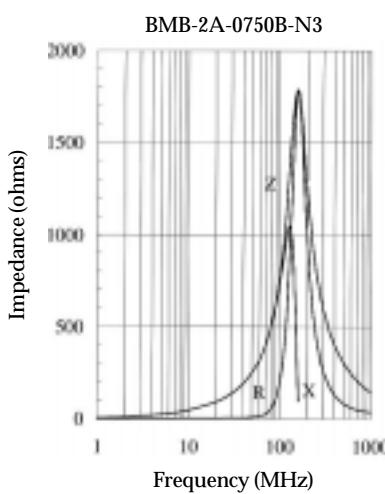
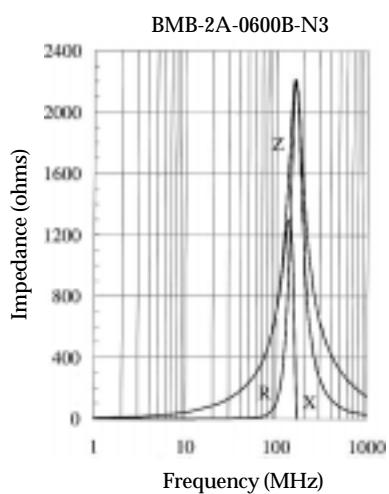
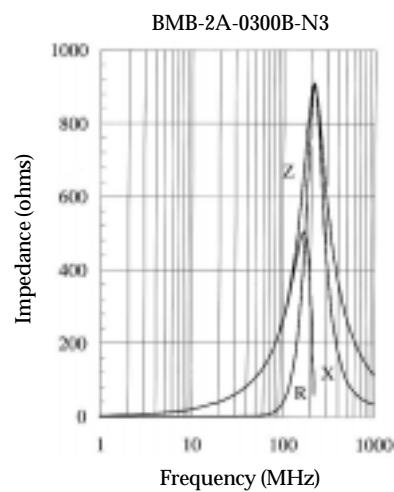
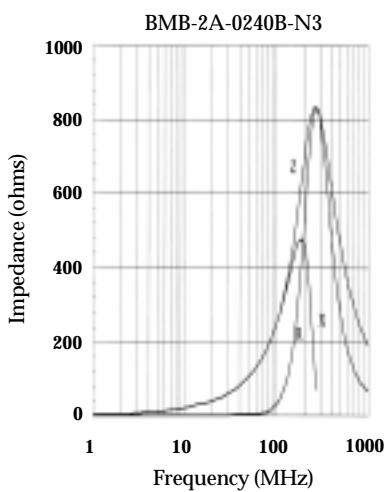
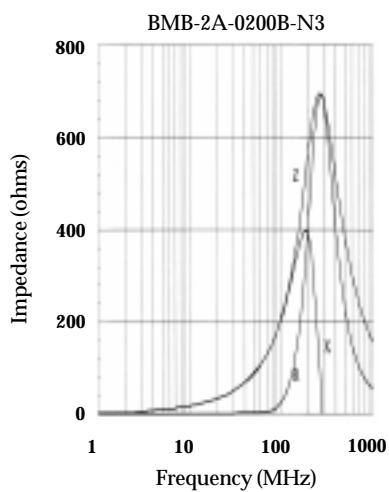
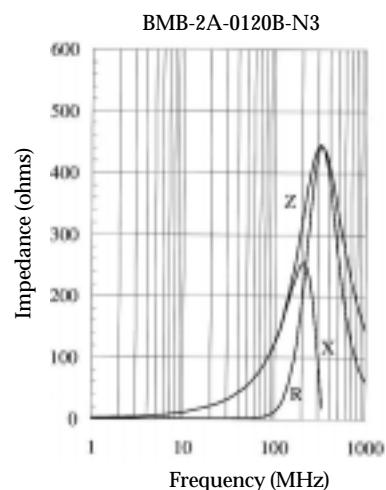
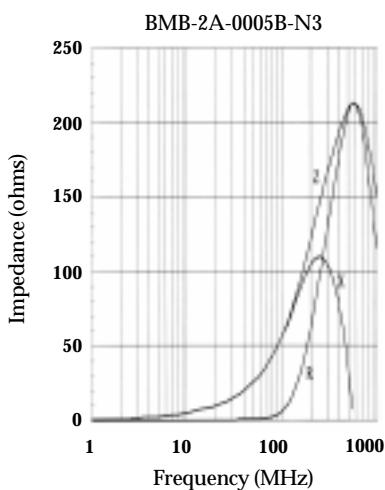
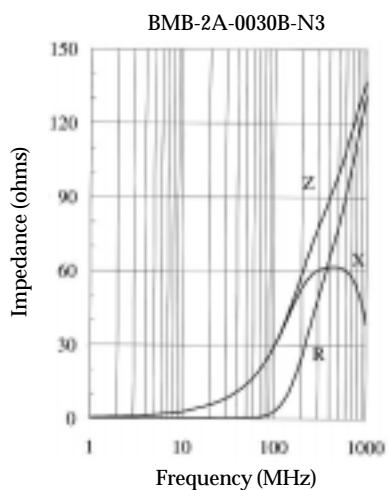
Multilayer Chip Beads

BMB-B Series 06:03/08:05 Package



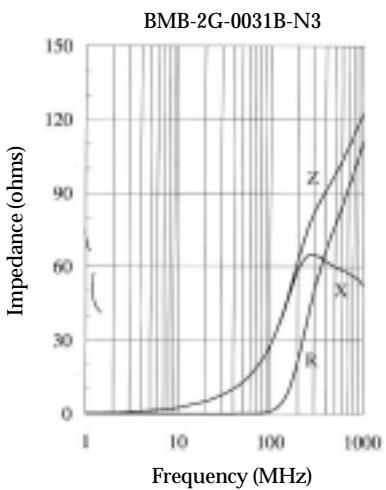
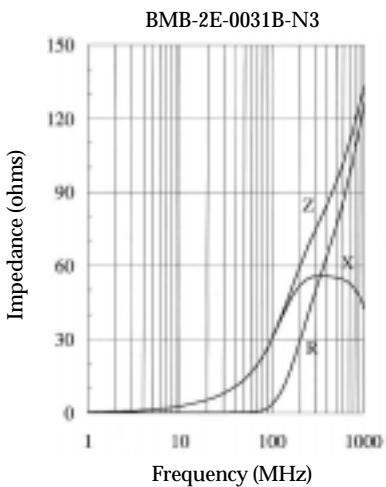
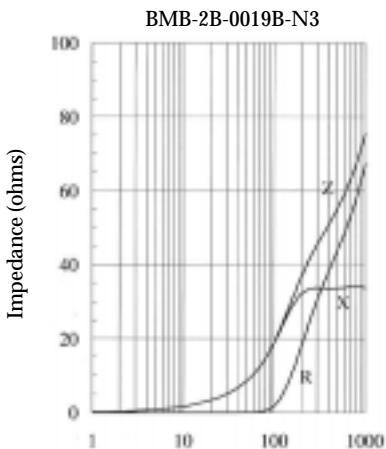
type BMB-B series

These beads are designed for high speed applications. The B series will minimise the attenuation of the signal waveform due to its sharp impedance characteristics. This series is offered in 06:03, 08:05, 12:06, 12:10, 18:06 and 18:12 package sizes.



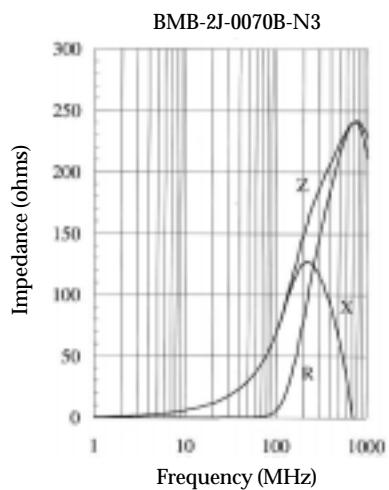
Multilayer Chip Beads

BMB-B Series 12:06/12:10/18:06 Package



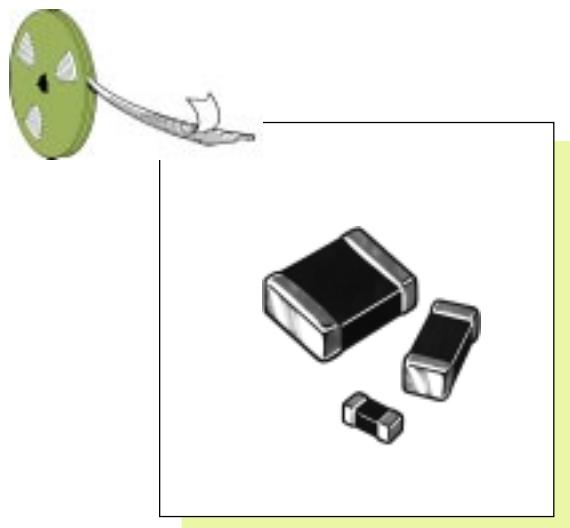
type BMB-B series

These beads are designed for high speed applications. The B series will minimise the attenuation of the signal waveform due to its sharp impedance characteristics. This series is offered in 06:03, 08:05, 12:06, 12:10, 18:06 and 18:12 package sizes.



Multilayer Chip Beads

BMB-R Series



Specification

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
type BMB-R series			
BMB-1J-0080R-S2	80	0.3	150
BMB-1J-0120R-S2	120	0.4	150
BMB-1J-0240R-S2	240	0.4	100
BMB-1J-0300R-S2	300	0.6	100
BMB-1J-0600R-S2	600	0.8	100
BMB-2A-0080R-S2	80	0.2	300
BMB-2A-0120R-S2	120	0.3	300
BMB-2A-0240R-S2	240	0.4	200
BMB-2A-0300R-S2	300	0.5	200
BMB-2A-0430R-S2	430	0.5	200
BMB-2A-0600R-S2	600	0.5	200
BMB-2B-0026R-S2	26	0.2	300
BMB-2B-0070R-S2	70	0.2	300
BMB-2B-0600R-S2	600	0.5	200

type BMB-P series

The P series of multilayer beads is suitable for use in high current circuits due to its low dc resistance. It can match power lines to a maximum of 6 amps. The P series is available in 06:03, 08:05, 12:06, 18:06 and 18:12.

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
BMB-1J-0010P-N1	10	0.03	4000
BMB-1J-0025P-N1	25	0.04	3000
BMB-2A-0010P-N1	10	0.01	6000
BMB-2A-0020P-N1	20	0.03	4000
BMB-2A-0030P-N1	30	0.03	4000
BMB-2A-0040P-N1	40	0.03	4000
BMB-2B-0030P-N1	30	0.03	4000
BMB-2B-0050P-N1	50	0.03	4000
BMB-2B-0080P-N1	80	0.03	4000
BMB-2G-0050P-N1	50	0.03	4000
BMB-2G-0060P-N1	60	0.03	4000
BMB-2G-0075P-N1	75	0.03	4000
BMB-2G-0080P-N1	80	0.03	4000
BMB-2J-0120P-N2	120	0.04	3000
BMB-1J-0010P-S2	10	0.03	4000
BMB-1J-0025P-S2	25	0.04	3000
BMB-2A-0010P-S2	10	0.01	6000
BMB-2A-0020P-S2	20	0.03	4000
BMB-2A-0030P-S2	30	0.03	4000
BMB-2A-0040P-S2	40	0.03	4000
BMB-2B-0030P-S2	30	0.03	4000
BMB-2B-0050P-S2	50	0.03	4000
BMB-2B-0080P-S2	80	0.03	4000
BMB-2G-0050P-S2	50	0.03	4000
BMB-2G-0060P-S2	60	0.03	4000
BMB-2G-0075P-S2	75	0.03	4000
BMB-2G-0080P-S2	80	0.03	4000

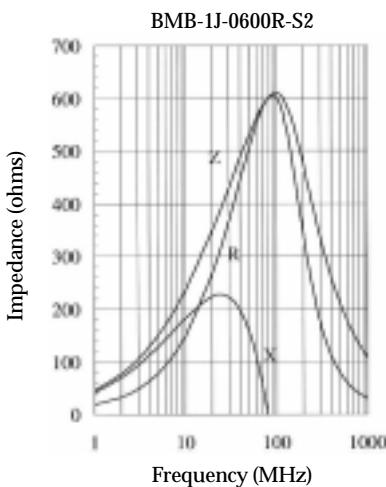
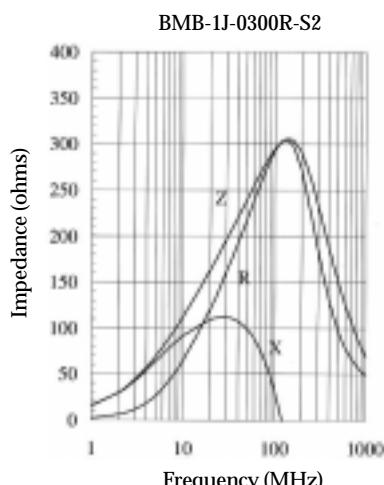
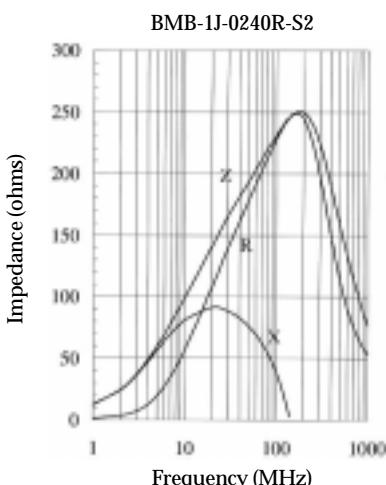
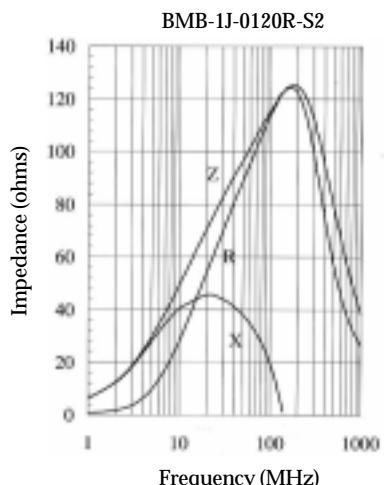
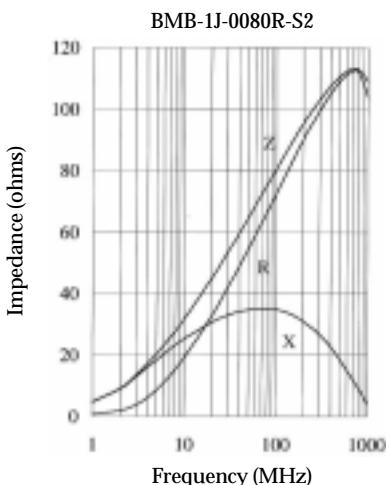
Multilayer Chip Beads

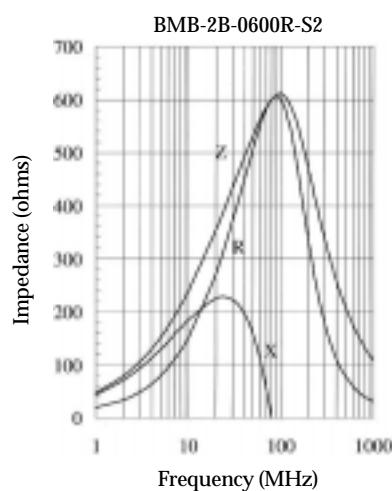
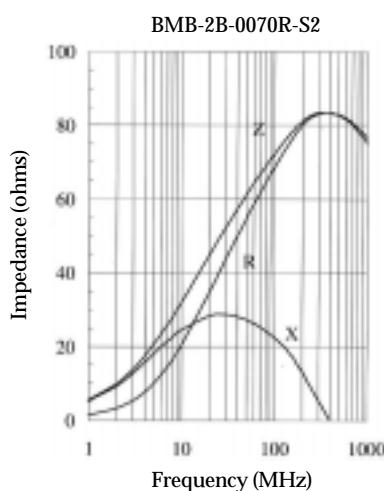
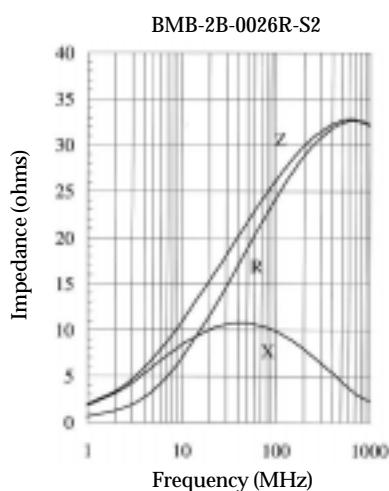
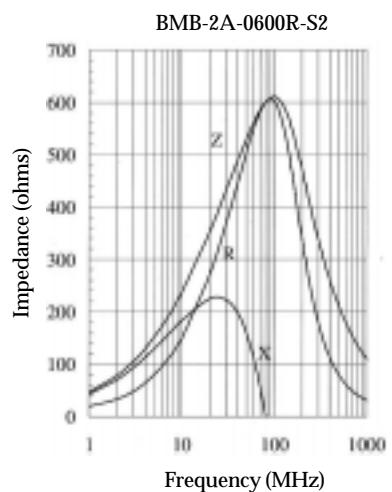
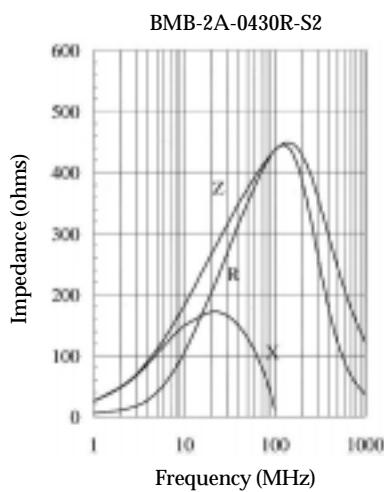
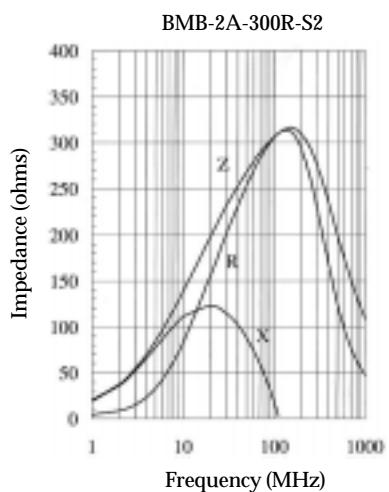
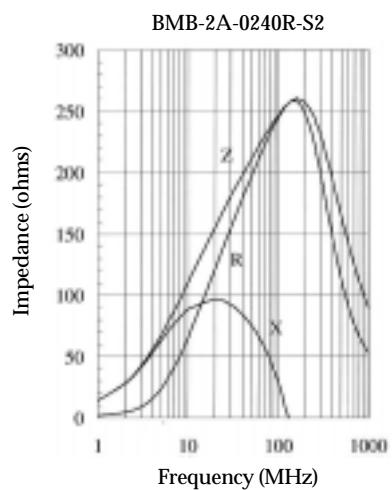
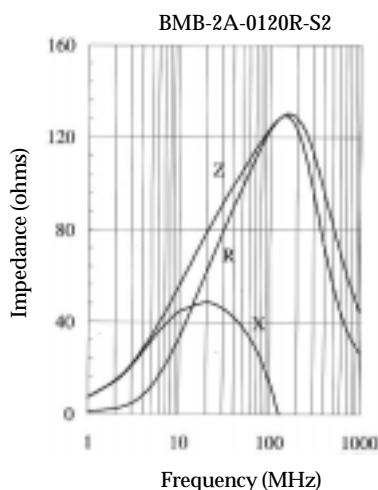
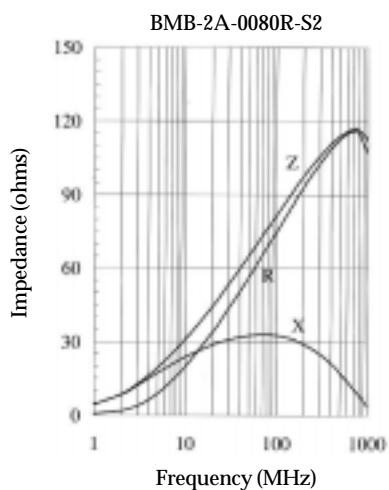
BMB-R Series 06:03 Package

type BMB-R series

The R series has been designed for low speed applications and specifically for use in Digital Sound circuitry and similar to prevent ringing.

The R series is offered in three sizes: 06:03, 08:05 and 12:06.

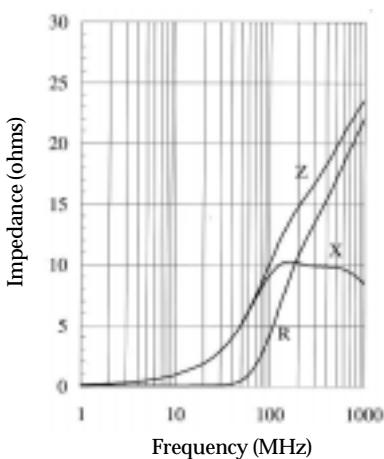




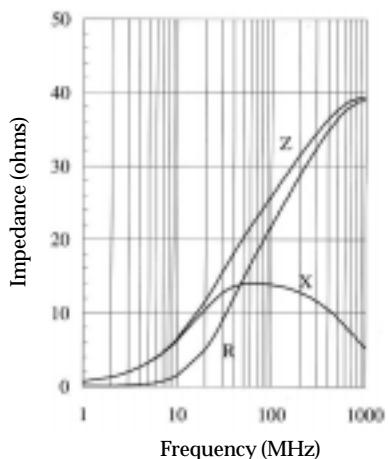
Multilayer Chip Beads

BMB-P (N) Series 06:03/08:05 Package

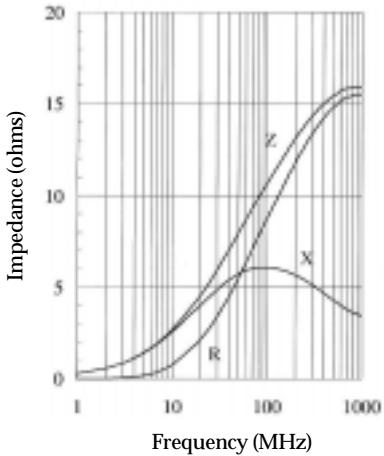
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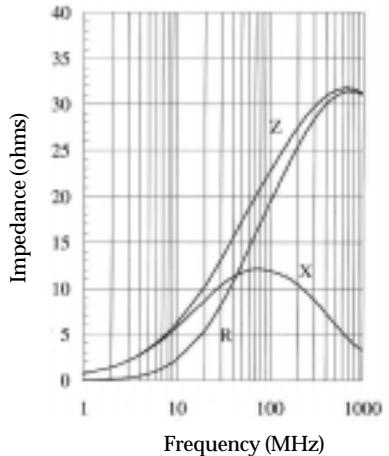
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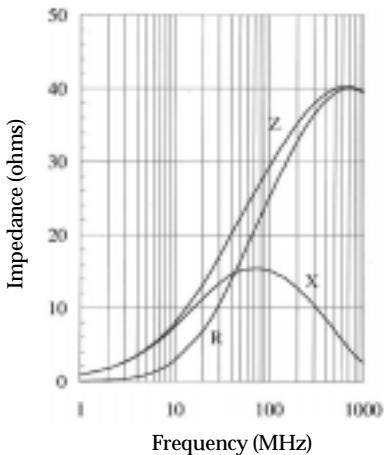
BMB-2A-0010P-N1



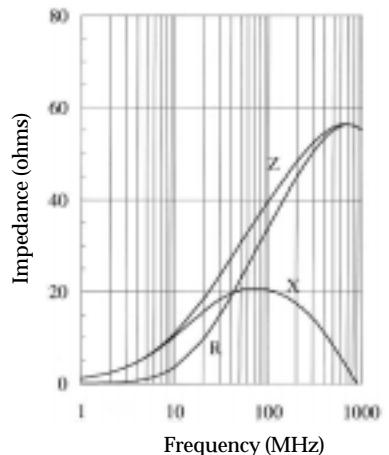
BMB-2A-0020P-N1



BMB-2A-0030P-N1



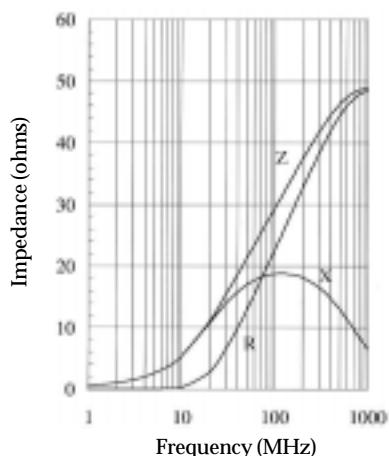
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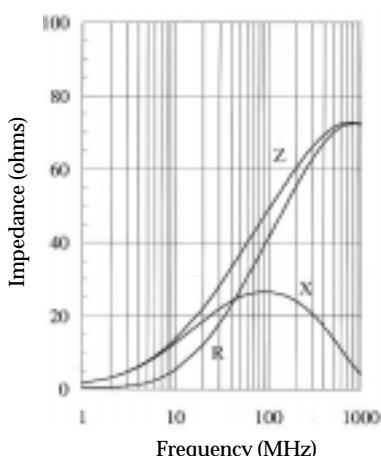
type BMB-P series

The P series of multilayer beads are suitable for use in high current circuits due to its low dc resistance. It can match power lines to a maximum of 6 amps. The P series is available in 06:03, 08:05, 12:06, 18:06 and 18:12.

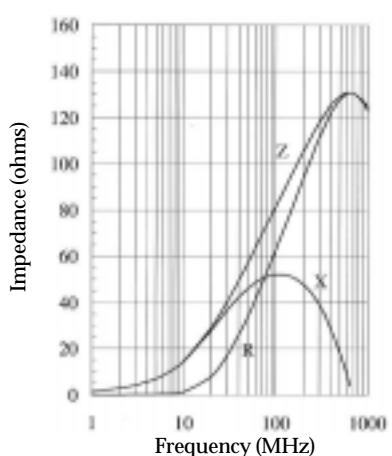
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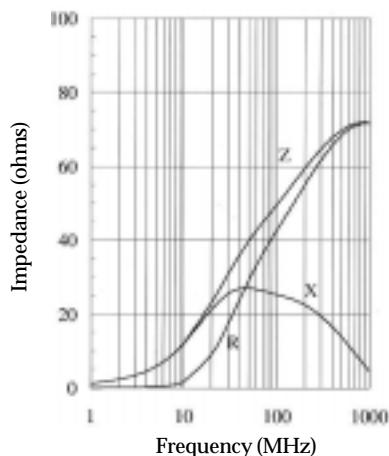
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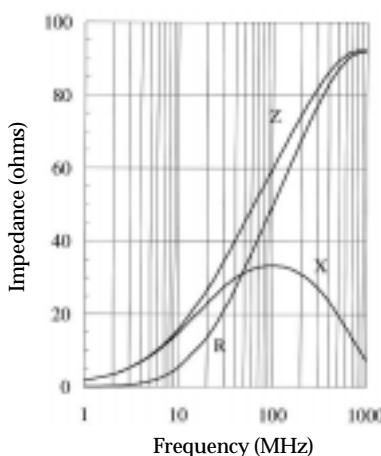
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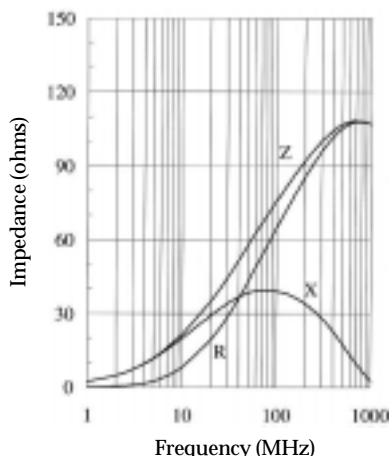
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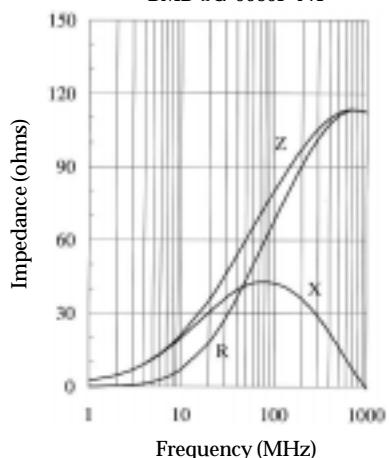
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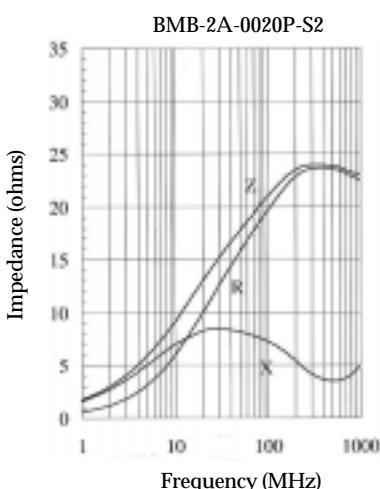
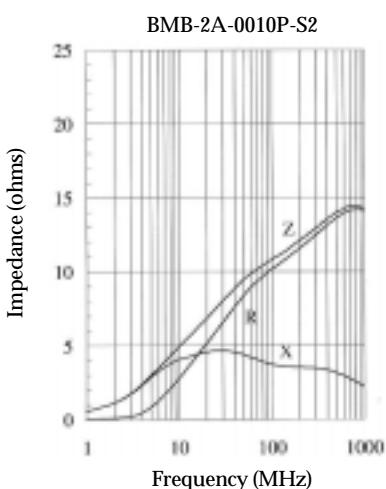
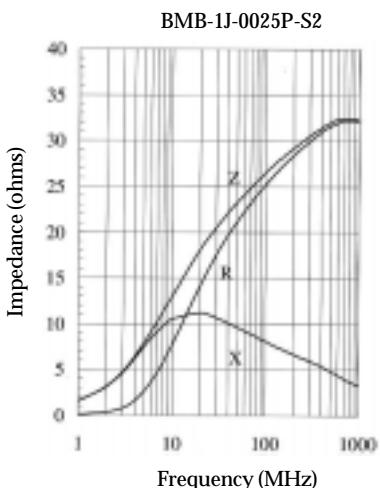
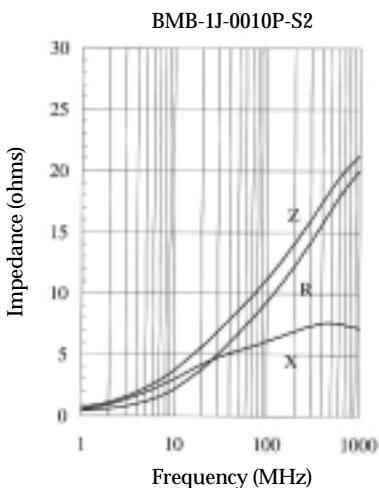
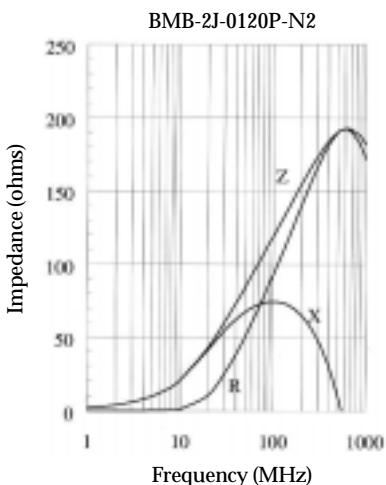


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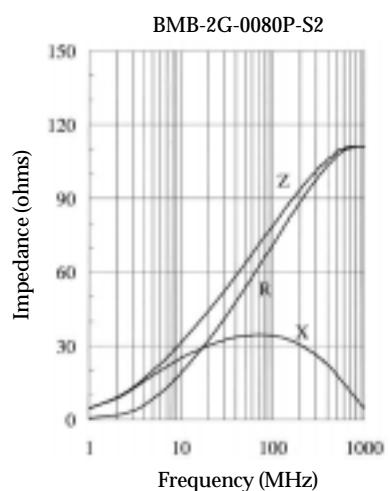
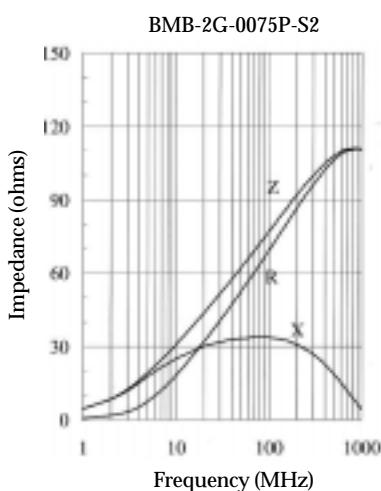
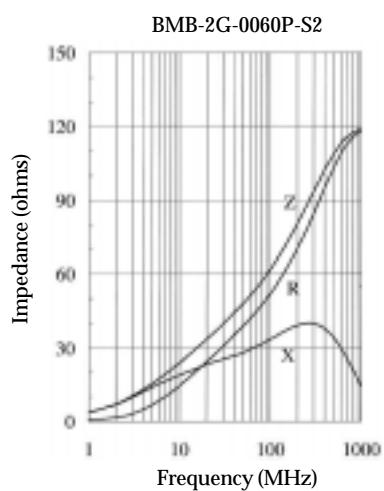
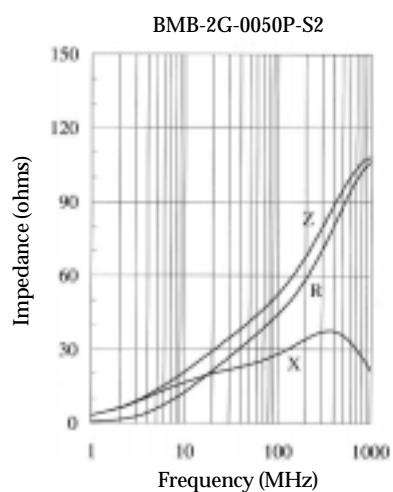
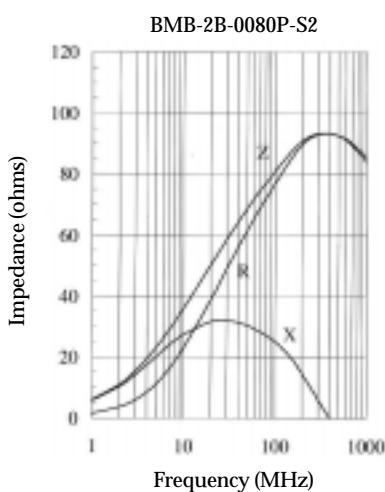
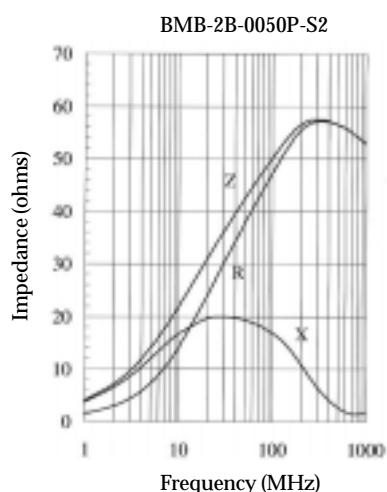
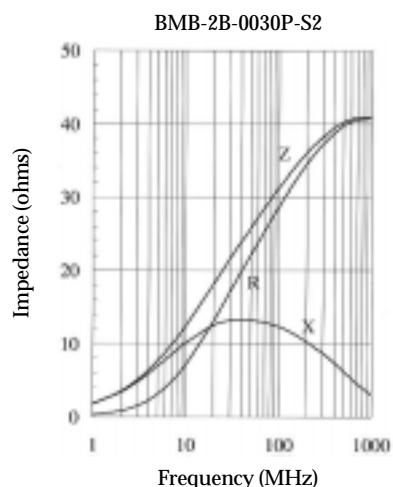
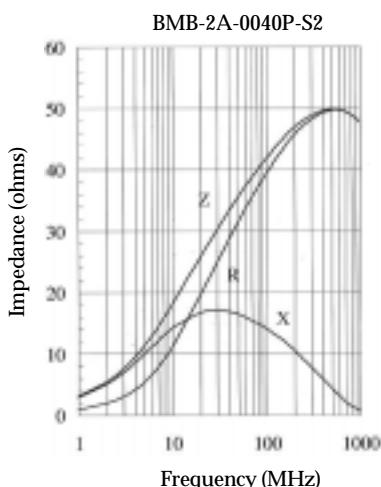
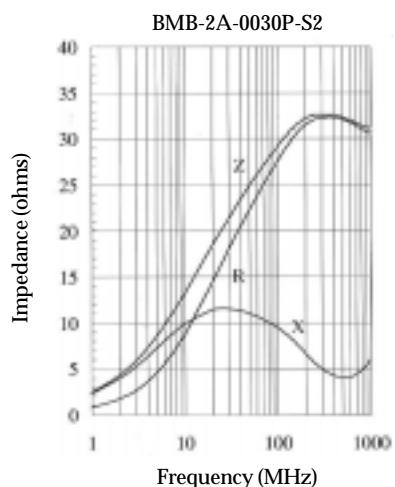
Multilayer Chip Beads

BMB-P (N) Series 18:12 Package
BMB-P (S) Series 06:03/08:05 Package



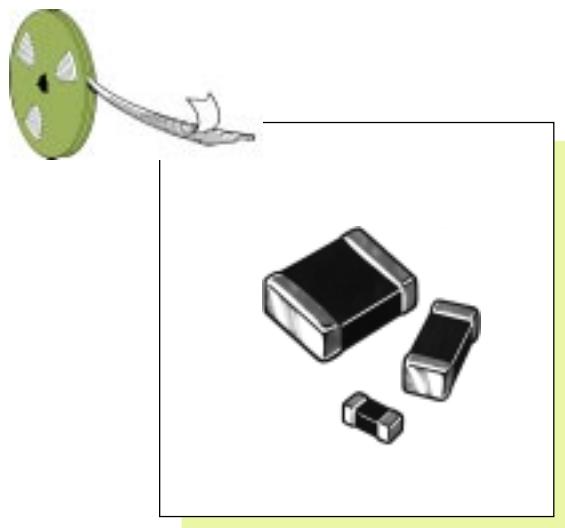
type BMB-P series

The P series of multilayer beads are suitable for use in high current circuits due to its low dc resistance. It can match power lines to a maximum of 6 amps. The P series is available in 06:03, 08:05, 12:06, 18:06 and 18:12.



Multilayer Chip Beads

BMB-L Series



Specification

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
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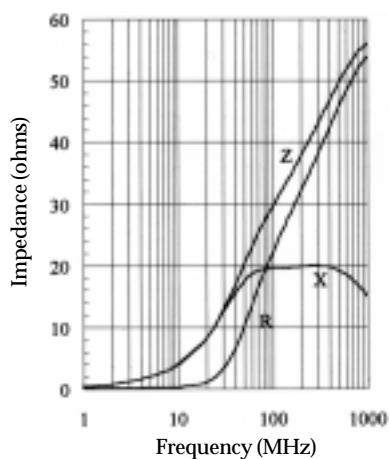
type BMB-L series

The L series exhibits a low DC resistance across a wide range of impedance with a higher current capability than the A series. This is suitable for use on signal delay lines handling larger current and are available in 06:03 and 08:05 packages according to impedance requirements.

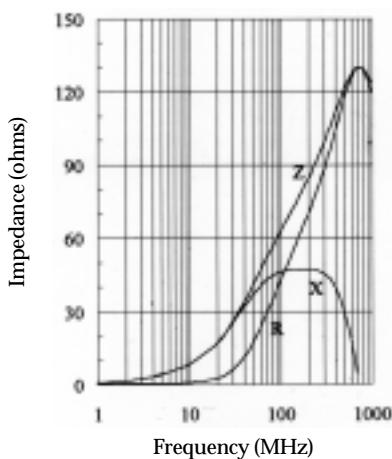
BMB-1J-0030L-N2	30	0.15	600
BMB-1J-0060L-N2	60	0.15	500
BMB-1J-0120L-N2	120	0.25	350
BMB-1J-0300L-N2	300	0.30	250
BMB-1J-0470L-N2	470	0.35	200
BMB-1J-0600L-N2	600	0.40	200
BMB-1J-1000L-N2	1000	0.55	200

BMB-2A-0030L-N2	30	0.10	800
BMB-2A-0060L-N2	60	0.10	700
BMB-2A-0120L-N2	120	0.15	500
BMB-2A-0300L-N2	300	0.20	400
BMB-2A-0470L-N2	470	0.23	350
BMB-2A-0600L-N2	600	0.28	300
BMB-2A-1000L-N2	1000	0.30	300
BMB-2A-1500L-N2	1500	0.38	250

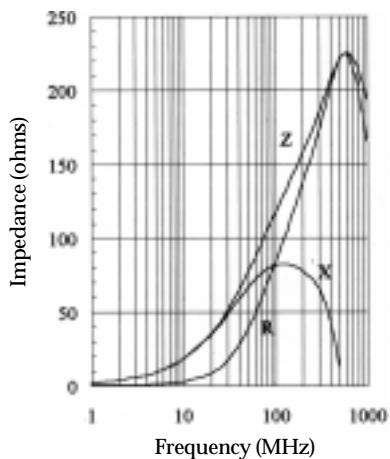
BMB-1J-0030L-N2



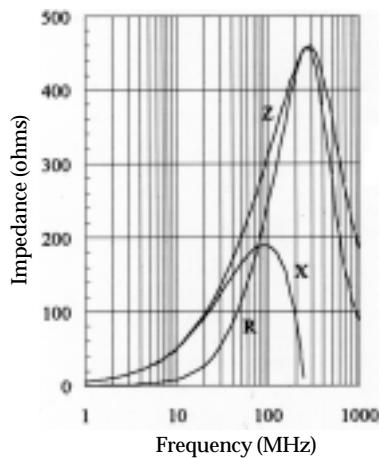
BMB-1J-0060L-N2



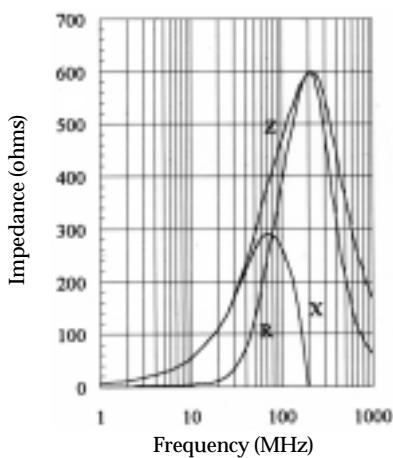
BMB-1J-0120L-N2



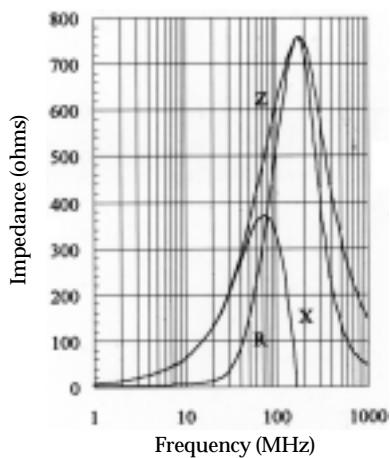
BMB-1J-0300L-N2



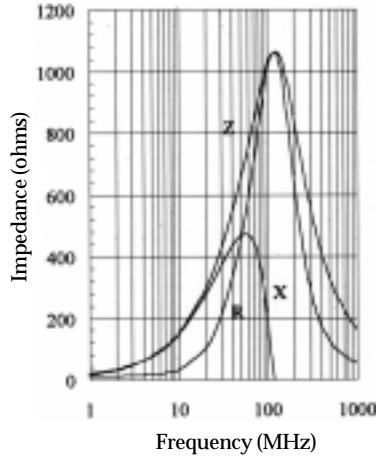
BMB-1J-0470-N2



BMB-1J-0600L-N2



BMB-1J-1000L-N2

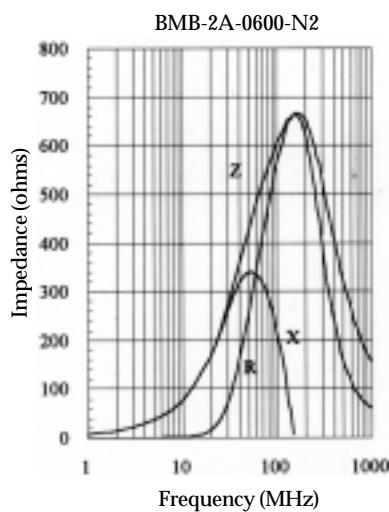
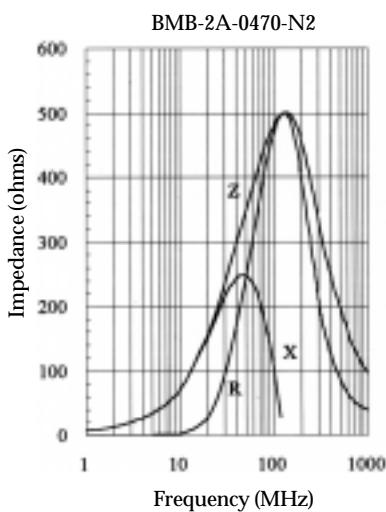
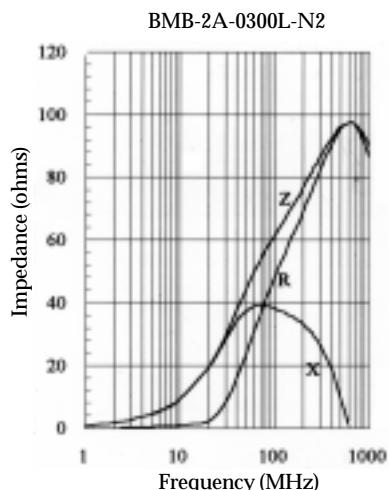
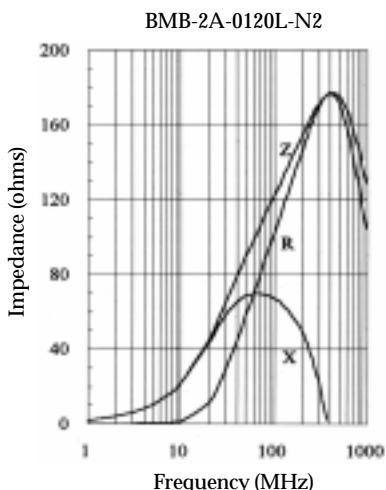
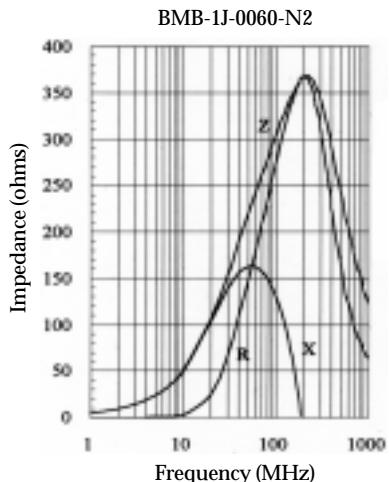
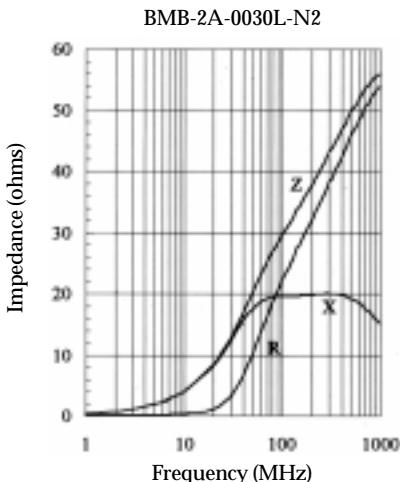


Multilayer Chip Beads

BMB-L Series 06:03/08:05 Package

type BMB-L series

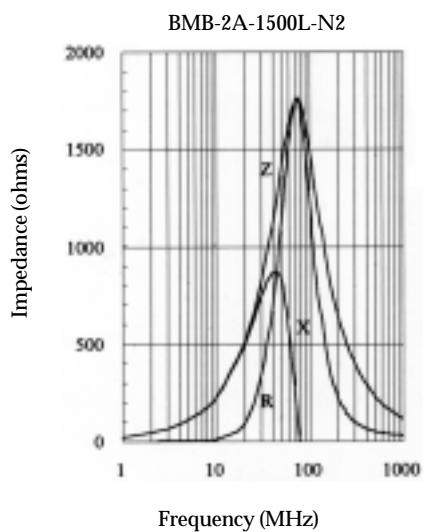
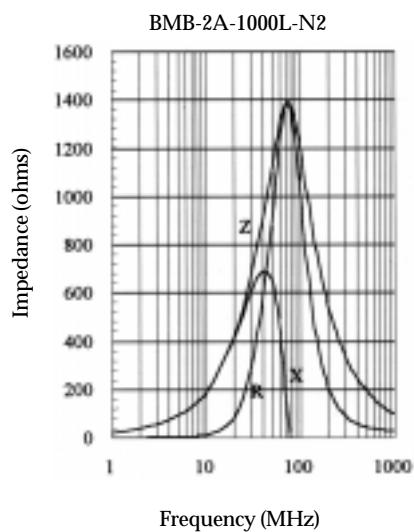
The L series exhibits a low DC resistance across a wide range of impedance with a higher current capability than the A series. This is suitable for use on signal delay lines handling larger current and are available in 06:03 and 08:05 packages according to impedance requirements.



sales action desk
sales fax line
e-mail

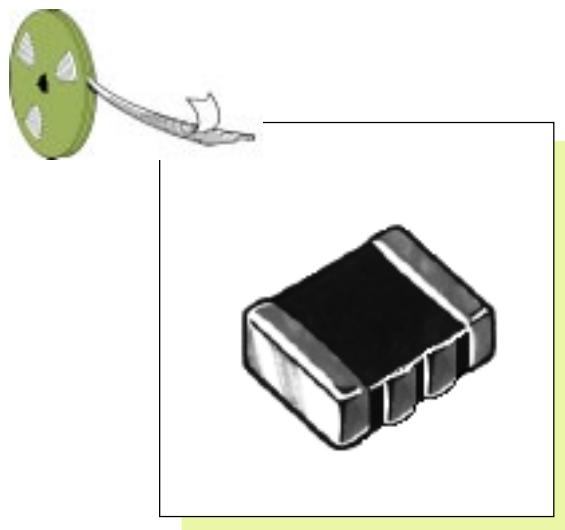
(01793) 611666
(01793) 611777
sales@megelec.co.uk

Meggitt Sigma
BMB-L Series 08:05 Package



Multilayer Chip Beads

BMB-M Series



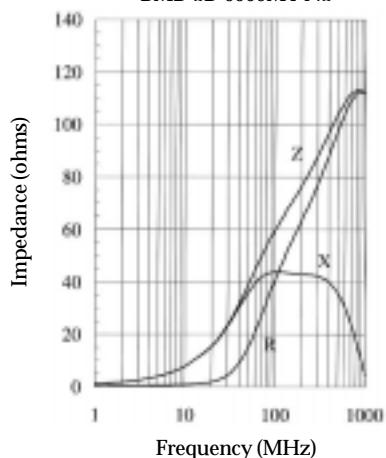
Specification

type BMB-M series

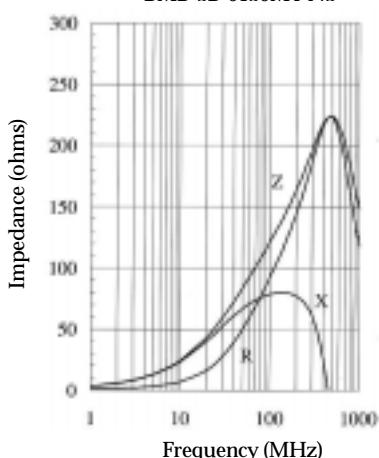
The M series meets the requirements for high density packaging of electrical circuits by incorporating 4 ferrite beads into one package. This series is most suitable for EMI suppression of multiple-lines whilst cross-talk is minimised due to the excellent magnetic shielding.

Part Number	Impedance (ohms) at 100MHz	DC Resistance (ohms) maximum.	Rated Current (mA) maximum
BMB-2B-0060M4-N2	60	0.4	200
BMB-2B-0120M4-N2	120	0.4	200
BMB-2B-0240M4-N2	240	0.5	150
BMB-2B-0300M4-N2	300	0.5	150
BMB-2B-0470M4-N2	470	0.7	100
BMB-2B-0600M4-N2	600	1.0	50

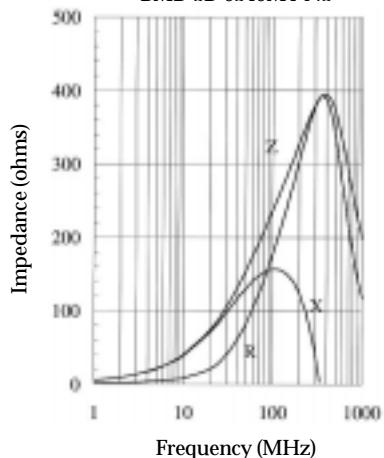
BMB-2B-0060M4-N2



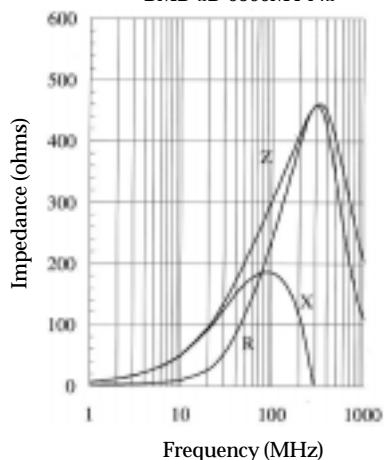
BMB-2B-0120M4-N2



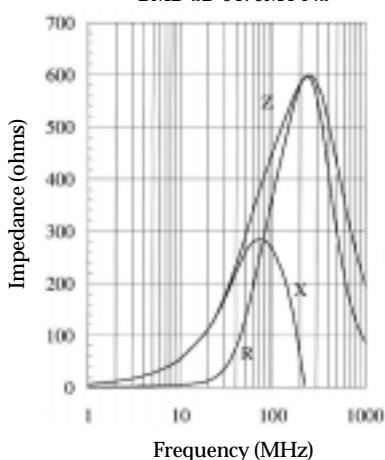
BMB-2B-0240M4-N2



BMB-2B-0300M4-N2



BMB-2B-0470M4-N2



BMB-2B-0600M4-N2

