

## Series: A

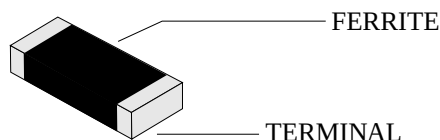
### FEATURES:

MLB-A series covers a wide range of impedance characteristics. It is designed to prevent electromagnetic interference.

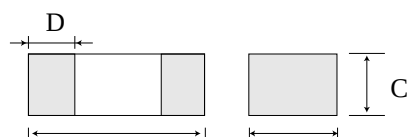
The total of seven compact sizes are available from 1.6x0.8x0.8 mm up to 4.5x3.2x1.5 mm according to impedance requirement (from 5Ω to 1500Ω at 100MHz).

### MLB-160808-A SERIES

#### DIMENSION:



A: 1.6±0.15 (0.063±0.006)  
B: 0.8±0.15 (0.031±0.006)  
C: 0.8±0.15 (0.031±0.006)  
D: 0.3±0.20 (0.012±0.008)  
in mm (inch)

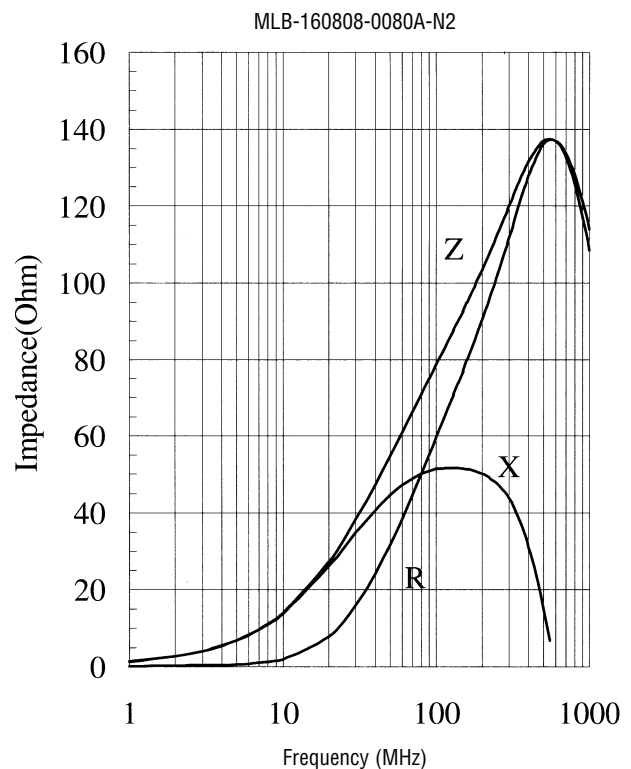
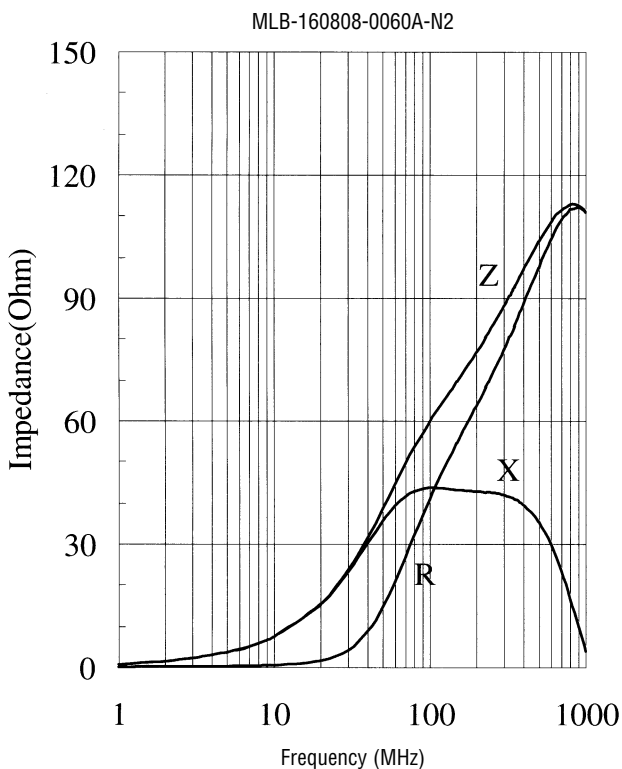
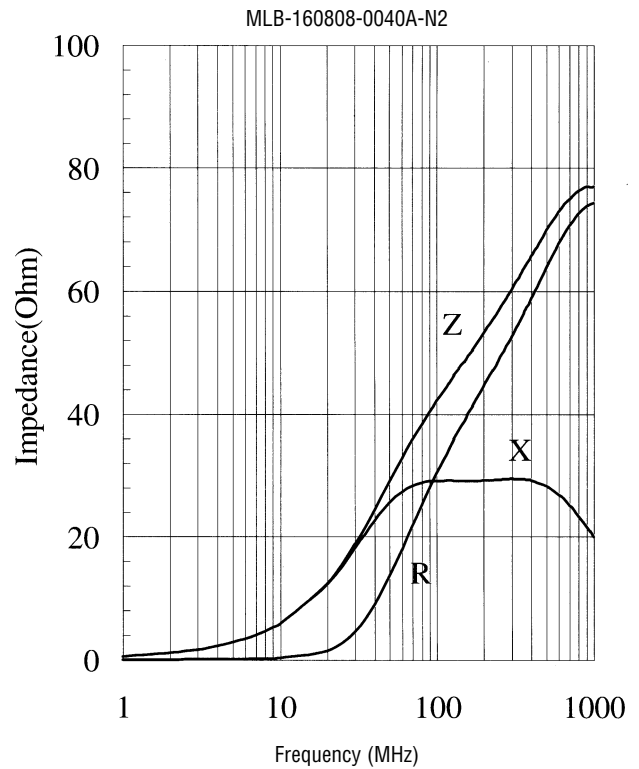
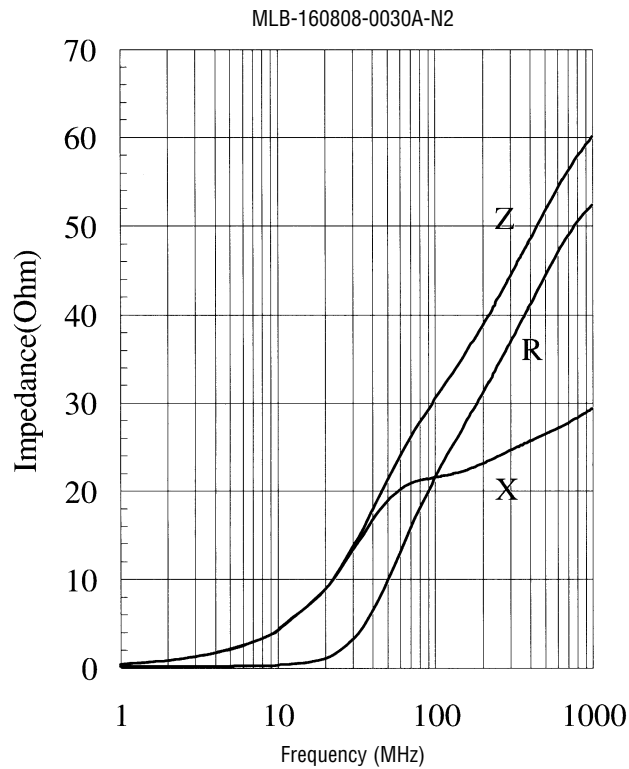


### ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance (Ω)<br>at 100 MHz | DC Resistance<br>(Ω) Max. | Rated Current<br>(mA) Max. | Operating<br>Temp. Range (°C) |
|---------------------|-----------------------------|---------------------------|----------------------------|-------------------------------|
| MLB-160808-0030A-N2 | 30 ± 25%                    | 0.2                       | 400                        | -25 to +85                    |
| MLB-160808-0040A-N2 | 40 ± 25%                    | 0.2                       | 400                        | -25 to +85                    |
| MLB-160808-0060A-N2 | 60 ± 25%                    | 0.2                       | 300                        | -25 to +85                    |
| MLB-160808-0080A-N2 | 80 ± 25%                    | 0.4                       | 300                        | -25 to +85                    |
| MLB-160808-0100A-N2 | 100 ± 25%                   | 0.4                       | 250                        | -25 to +85                    |
| MLB-160808-0120A-N2 | 120 ± 25%                   | 0.4                       | 200                        | -25 to +85                    |
| MLB-160808-0180A-N2 | 180 ± 25%                   | 0.5                       | 200                        | -25 to +85                    |
| MLB-160808-0220A-N2 | 220 ± 25%                   | 0.5                       | 200                        | -25 to +85                    |
| MLB-160808-0240A-N2 | 240 ± 25%                   | 0.5                       | 200                        | -25 to +85                    |
| MLB-160808-0300A-N2 | 300 ± 25%                   | 0.5                       | 200                        | -25 to +85                    |
| MLB-160808-0450A-N2 | 450 ± 25%                   | 0.7                       | 200                        | -25 to +85                    |
| MLB-160808-0600A-N1 | 600 ± 25%                   | 0.7                       | 150                        | -25 to +85                    |
| MLB-160808-0600A-N2 | 600 ± 25%                   | 0.7                       | 150                        | -25 to +85                    |
| MLB-160808-1000A-N2 | 1000 ± 25%                  | 1.0                       | 100                        | -25 to +85                    |

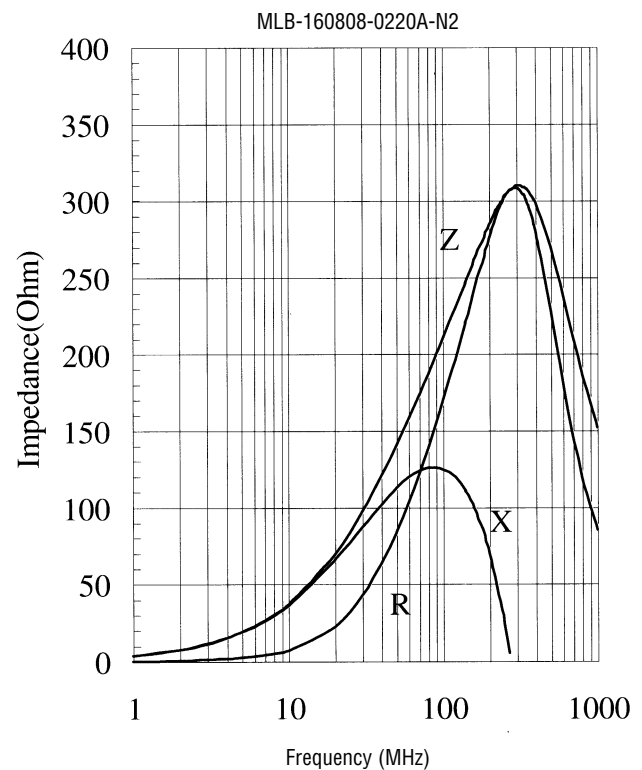
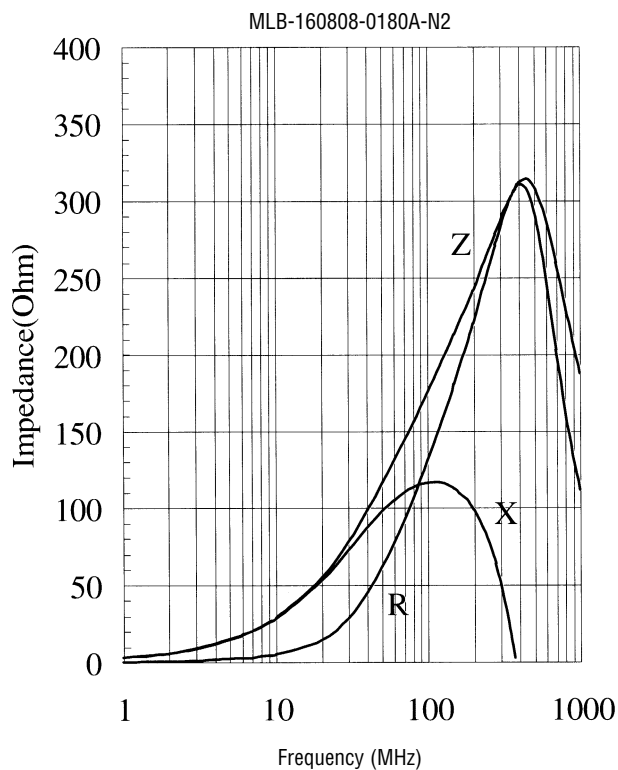
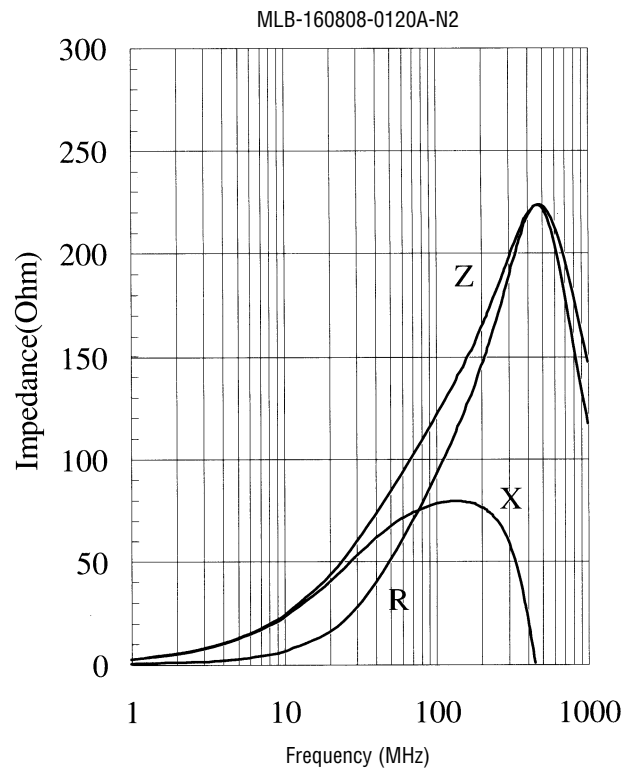
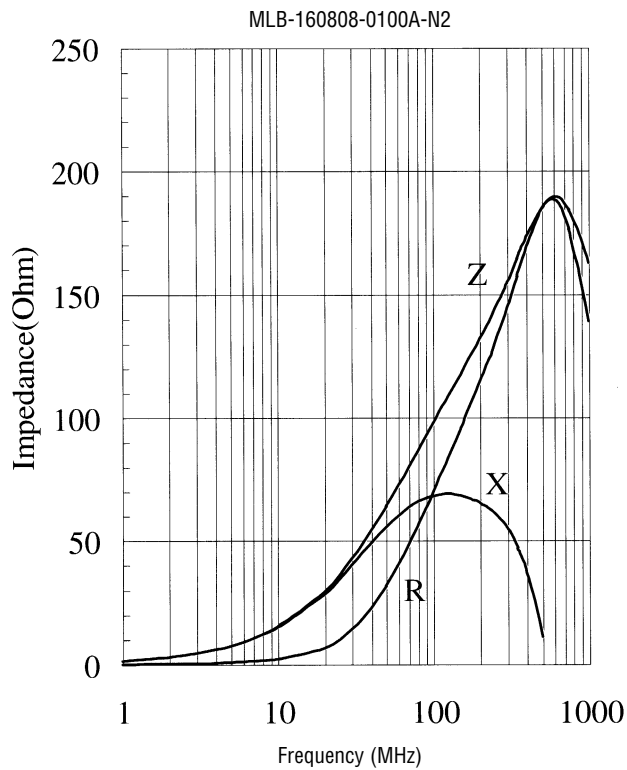
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A



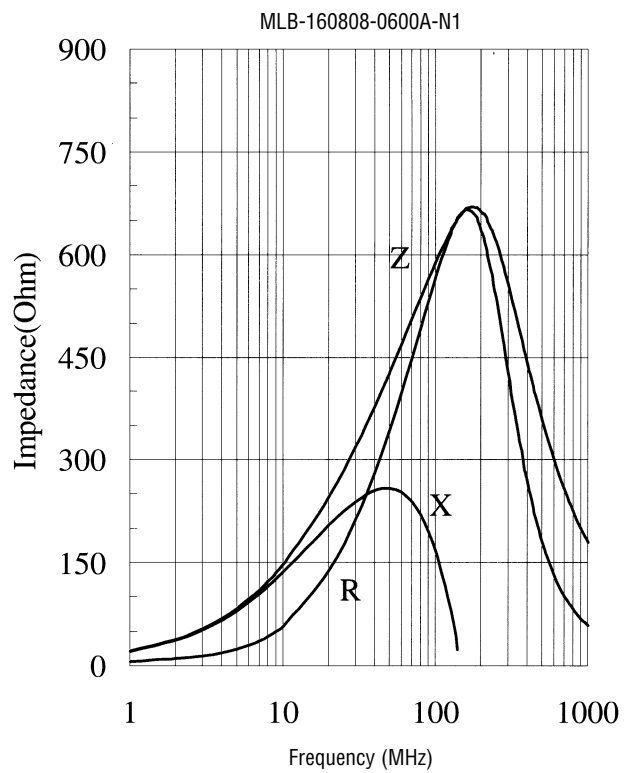
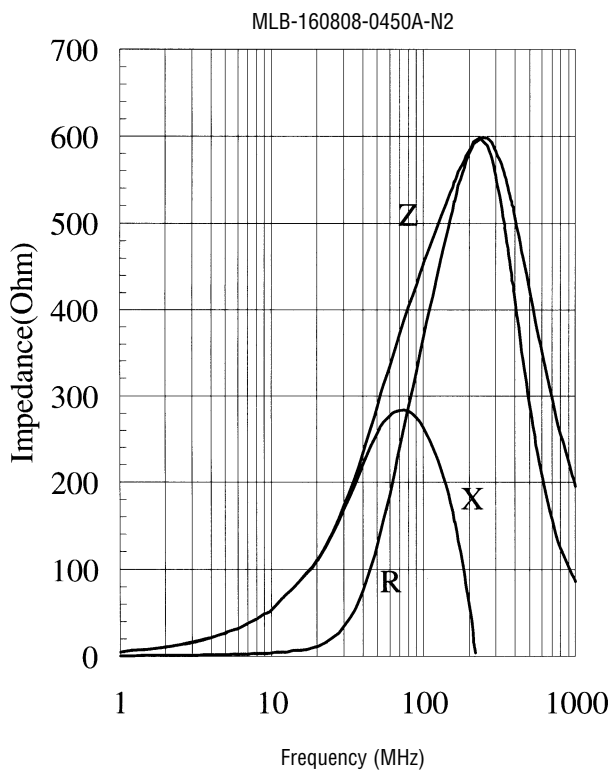
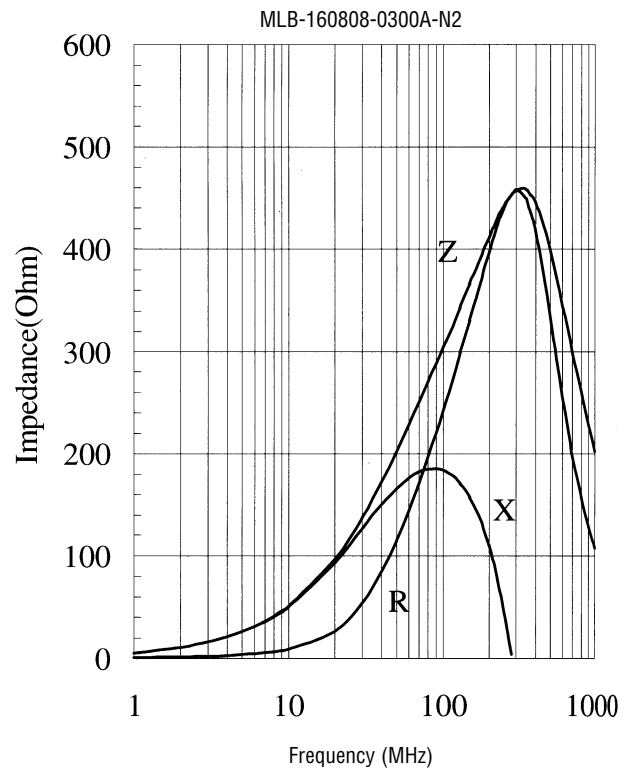
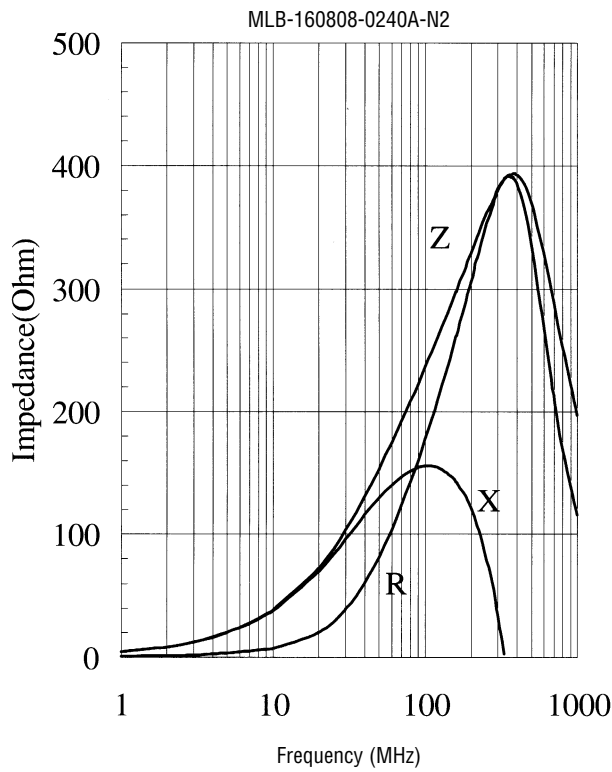
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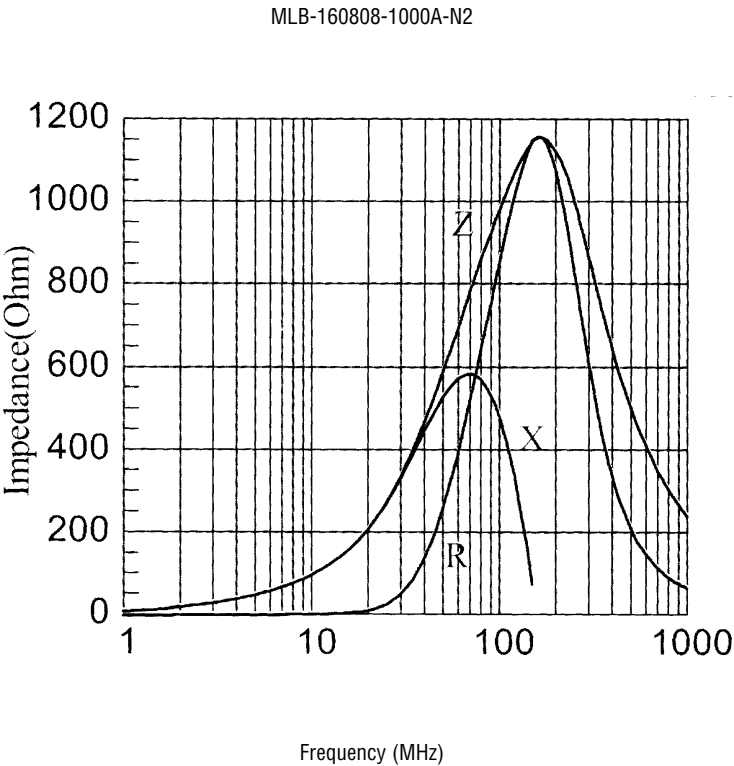
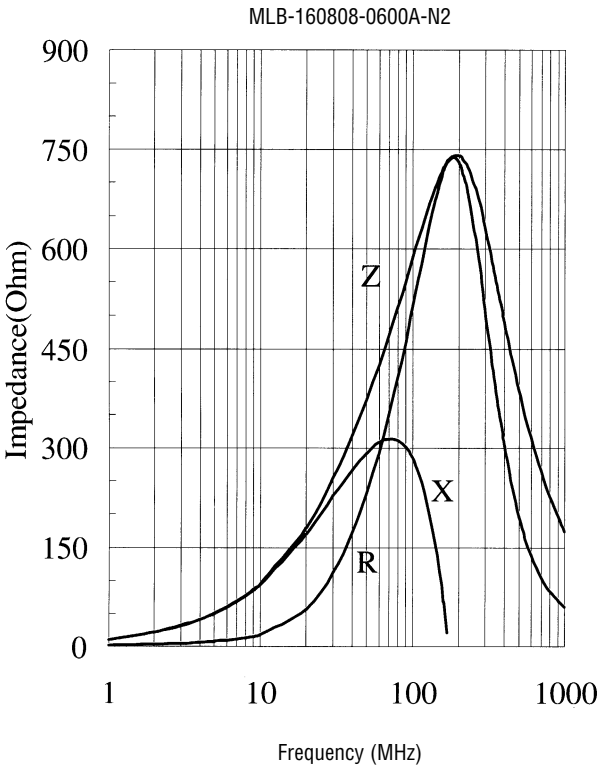
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

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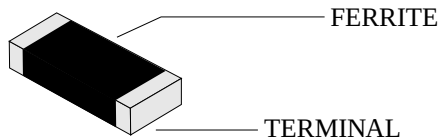
TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A

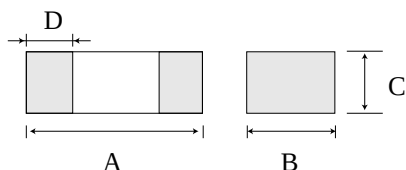


## MLB-201209-A SERIES

### DIMENSION:



A:  $2.0 \pm 0.20$  (0.079  $\pm$  0.008)  
B:  $1.2 \pm 0.20$  (0.047  $\pm$  0.008)  
C:  $0.9 \pm 0.20$  (0.035  $\pm$  0.008)  
D:  $0.5 \pm 0.30$  (0.020  $\pm$  0.012)  
in mm (inch)

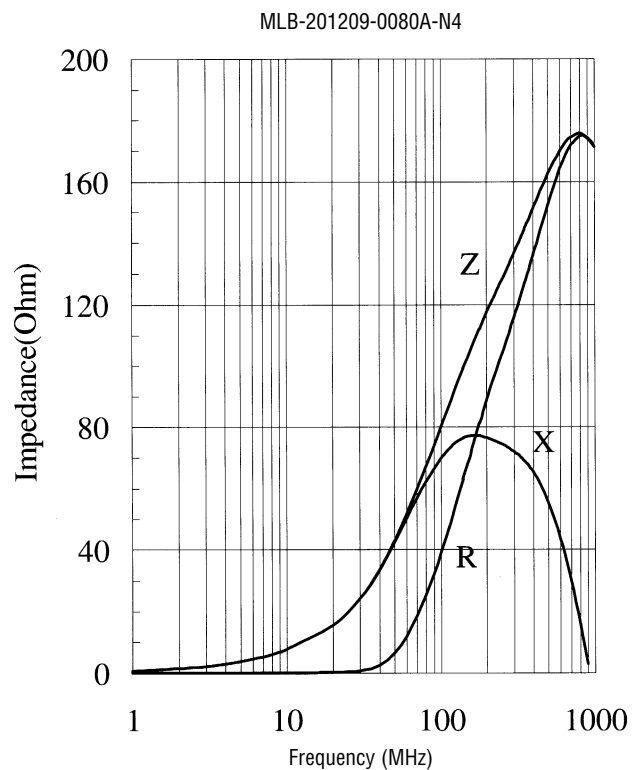
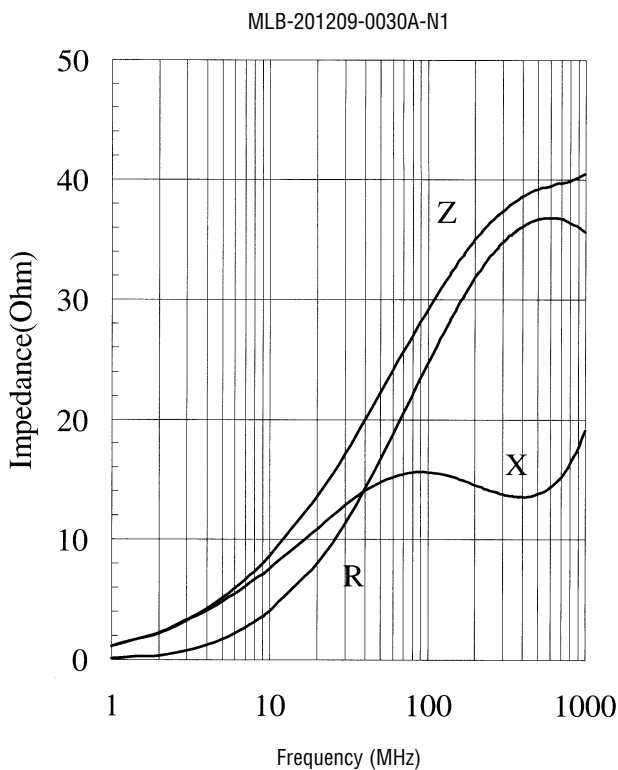
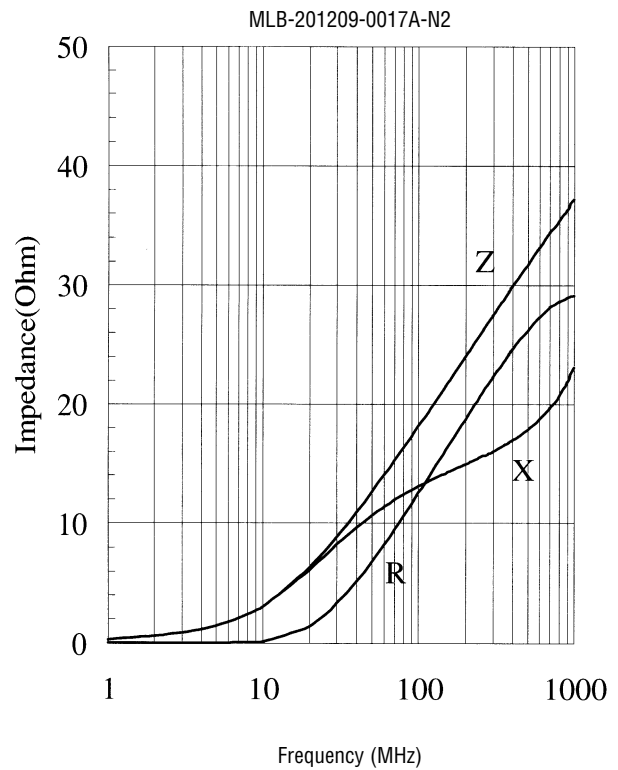
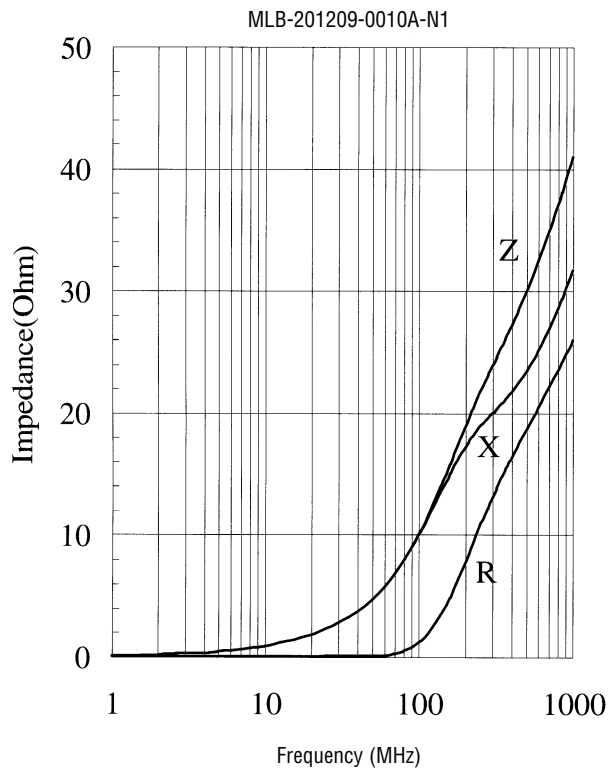


## ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance ( $\Omega$ )<br>at 100 MHz | DC Resistance<br>( $\Omega$ ) Max. | Rated Current<br>(mA) Max. | Operating<br>Temp. Range ( $^{\circ}\text{C}$ ) |
|---------------------|--------------------------------------|------------------------------------|----------------------------|-------------------------------------------------|
| MLB-201209-0010A-N1 | $10 \pm 25\%$                        | 0.10                               | 600                        | -25 to +85                                      |
| MLB-201209-0017A-N2 | $17 \pm 25\%$                        | 0.10                               | 600                        | -25 to +85                                      |
| MLB-201209-0030A-N1 | $30 \pm 25\%$                        | 0.10                               | 500                        | -25 to +85                                      |
| MLB-201209-0080A-N4 | $80 \pm 25\%$                        | 0.3                                | 400                        | -25 to +85                                      |
| MLB-201209-0120A-N1 | $120 \pm 25\%$                       | 0.3                                | 300                        | -25 to +85                                      |
| MLB-201209-0120A-N2 | $120 \pm 25\%$                       | 0.3                                | 300                        | -25 to +85                                      |
| MLB-201209-0120A-N4 | $120 \pm 25\%$                       | 0.3                                | 300                        | -25 to +85                                      |
| MLB-201209-0150A-N1 | $150 \pm 25\%$                       | 0.3                                | 300                        | -25 to +85                                      |
| MLB-201209-0220A-N4 | $220 \pm 25\%$                       | 0.5                                | 250                        | -25 to +85                                      |
| MLB-201209-0300A-N1 | $300 \pm 25\%$                       | 0.5                                | 250                        | -25 to +85                                      |
| MLB-201209-0400A-N2 | $400 \pm 25\%$                       | 0.5                                | 250                        | -25 to +85                                      |
| MLB-201209-0600A-N1 | $600 \pm 25\%$                       | 0.6                                | 200                        | -25 to +85                                      |
| MLB-201209-0600A-N2 | $600 \pm 25\%$                       | 0.6                                | 200                        | -25 to +85                                      |
| MLB-201209-0600A-N4 | $600 \pm 25\%$                       | 0.6                                | 200                        | -25 to +85                                      |
| MLB-201209-1000A-N4 | $1000 \pm 25\%$                      | 0.8                                | 100                        | -25 to +85                                      |
| MLB-201209-1200A-N4 | $1200 \pm 25\%$                      | 0.8                                | 100                        | -25 to +85                                      |
| MLB-201209-1500A-N4 | $1500 \pm 25\%$                      | 1.0                                | 100                        | -25 to +85                                      |
| MLB-201209-2000A-N4 | $2000 \pm 25\%$                      | 1.0                                | 100                        | -25 to +85                                      |
| MLB-201209-2200A-N4 | $2200 \pm 25\%$                      | 1.0                                | 100                        | -25 to +85                                      |
| MLB-201209-2700A-N4 | $2700 \pm 25\%$                      | 1.5                                | 100                        | -25 to +85                                      |

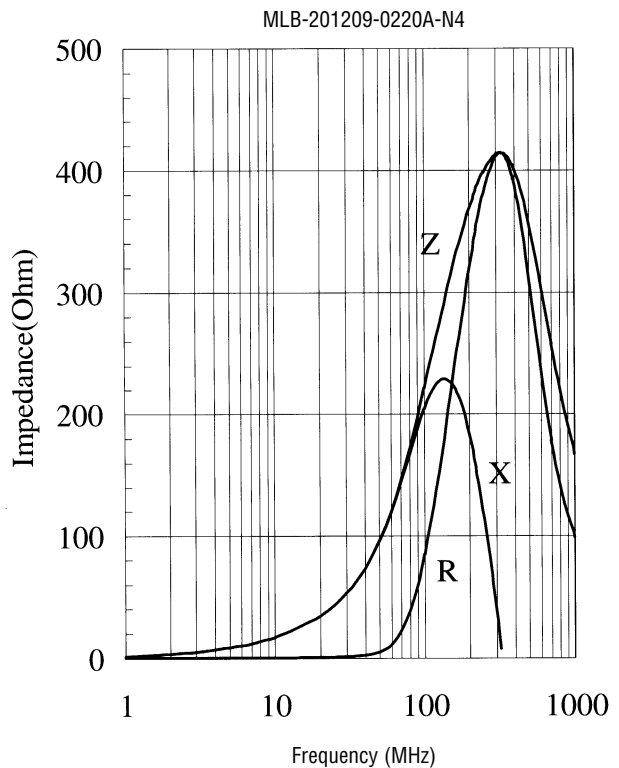
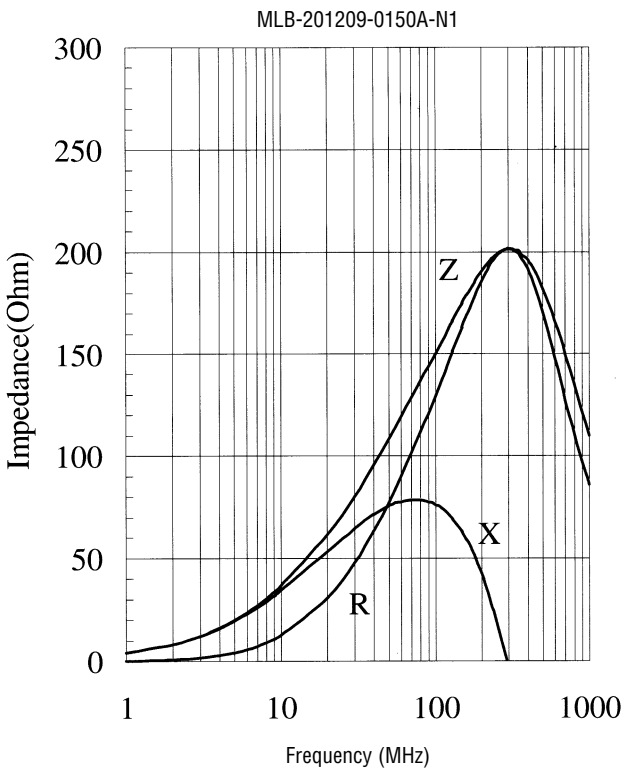
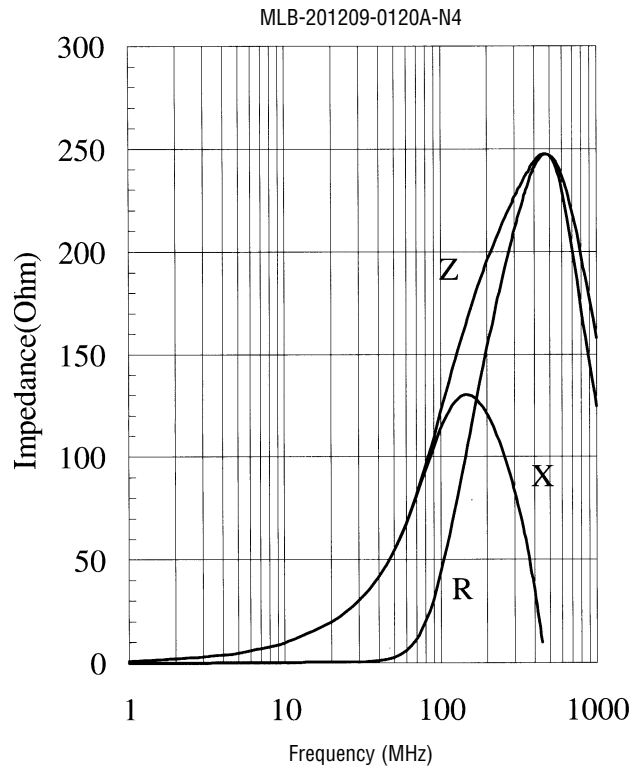
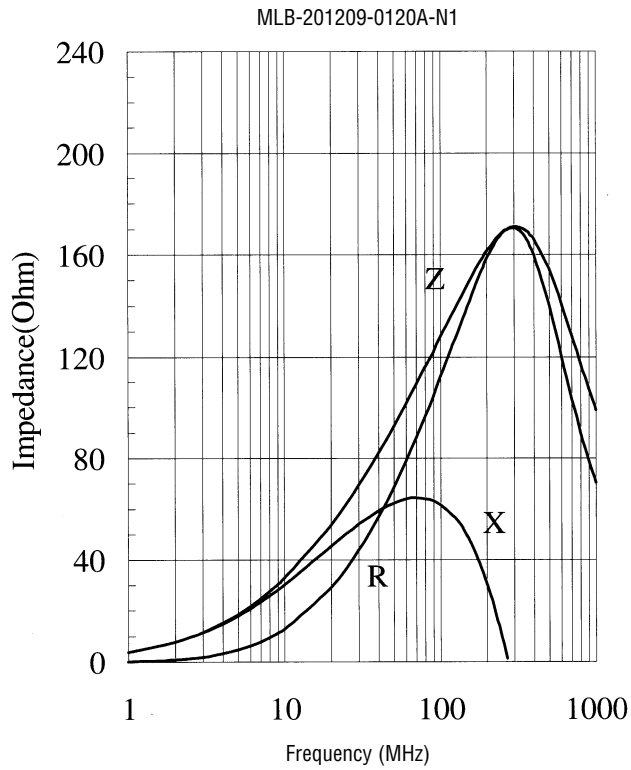
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A



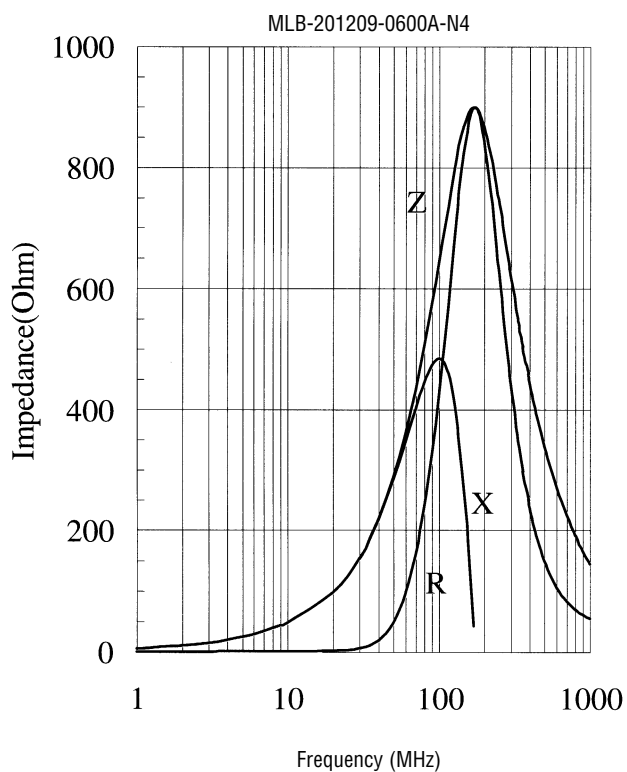
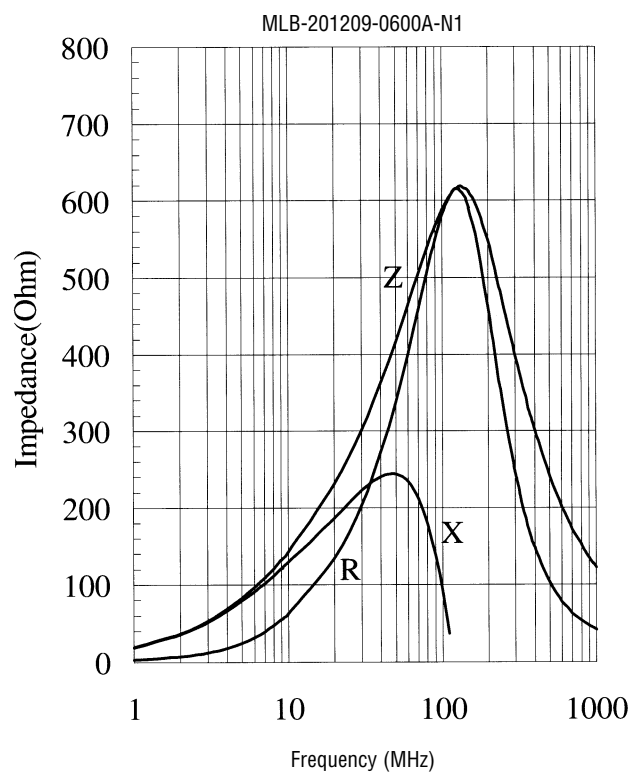
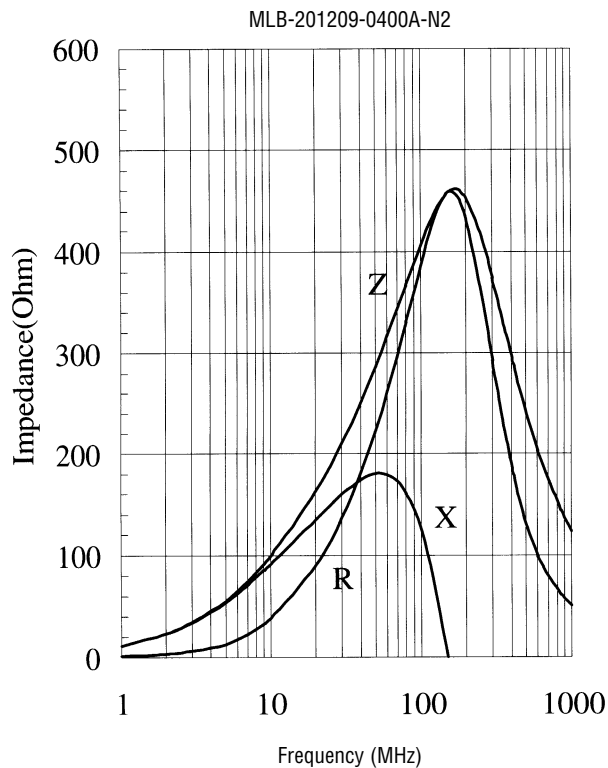
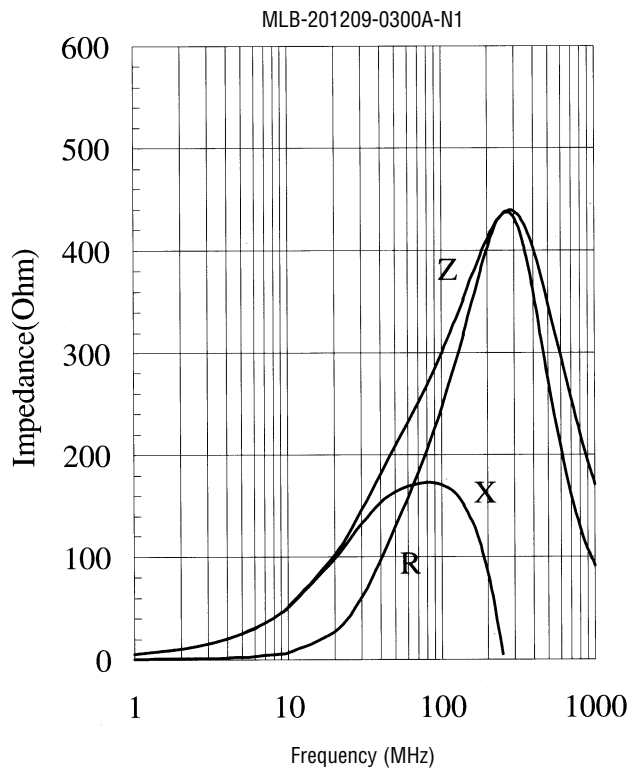
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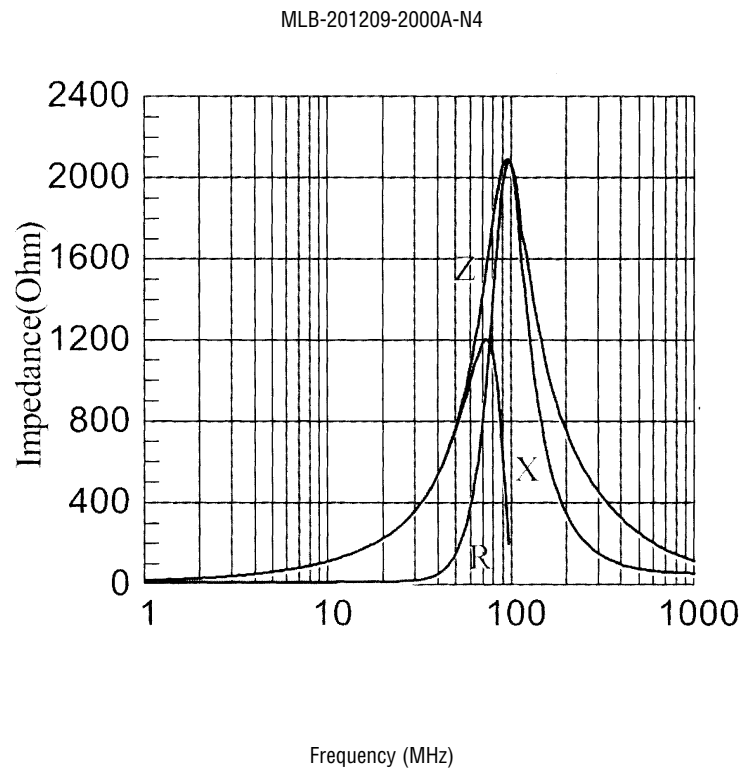
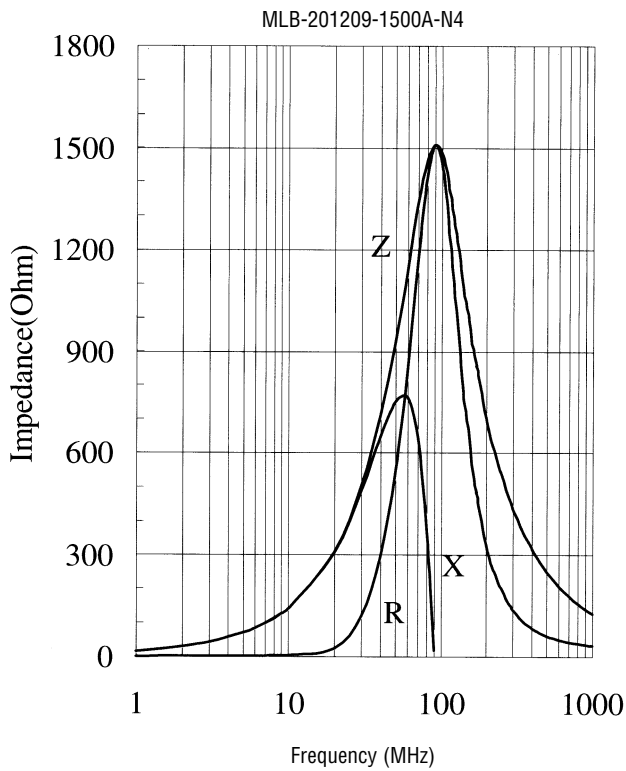
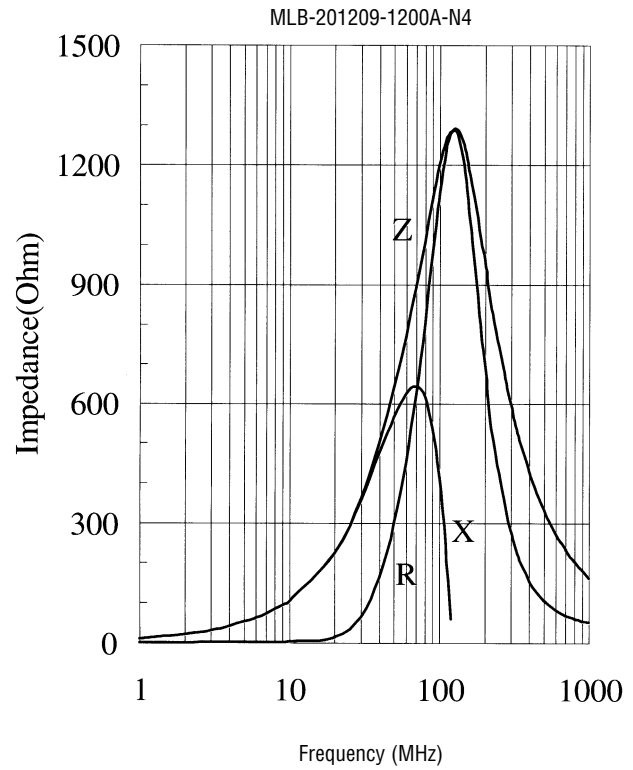
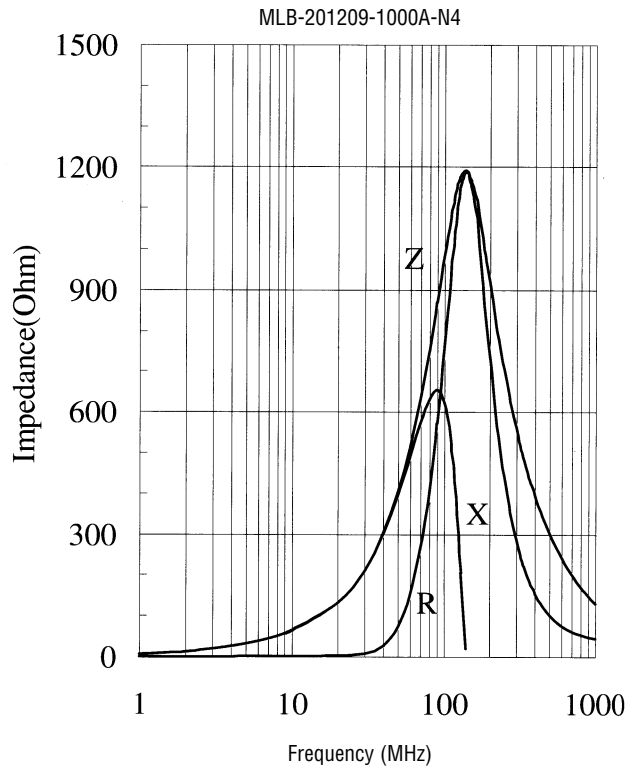
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A



## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

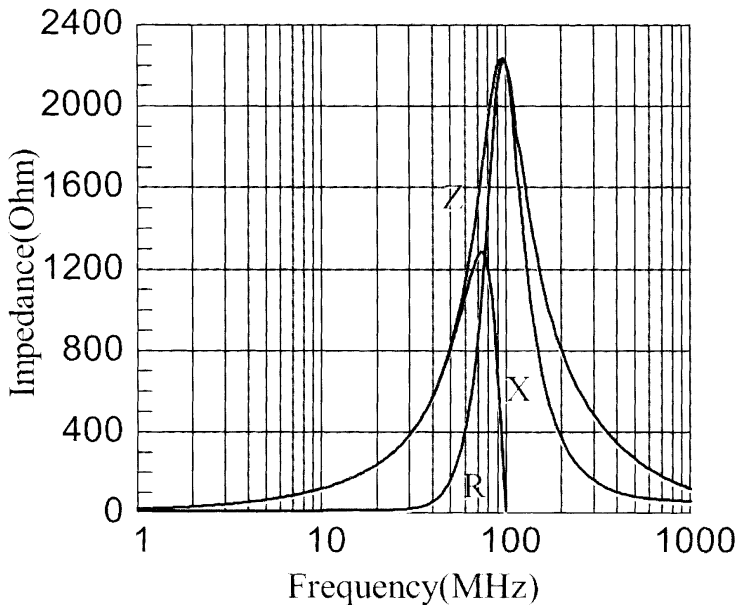
TEST INSTRUMENT: HP-4291A



**TYPICAL ELECTRICAL CHARACTERISTIC CURVES**

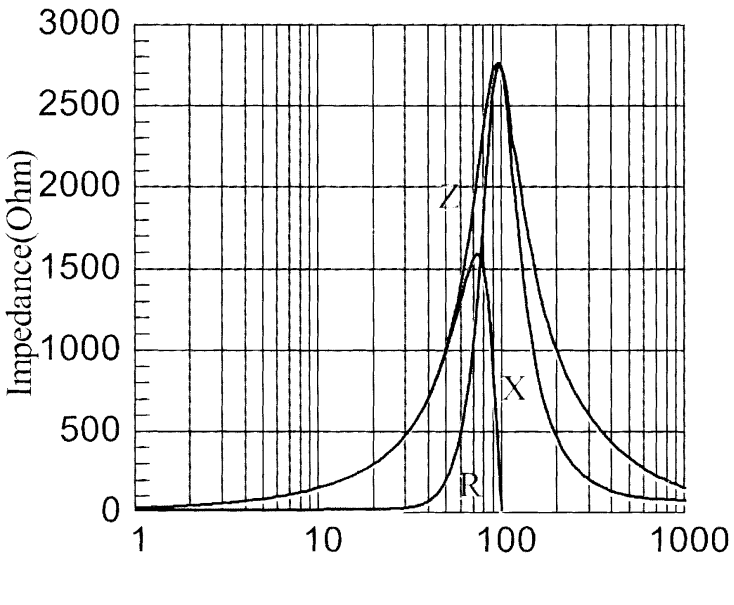
TEST INSTRUMENT: HP-4291A

MLB-201209-2200A-N4



Frequency (MHz)

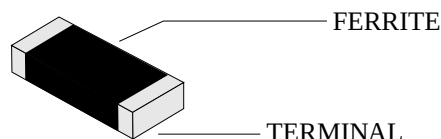
MLB-201209-2700A-N4



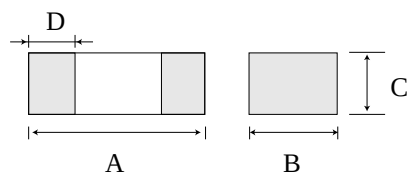
Frequency (MHz)

## MLB-321611-A SERIES

### DIMENSION:



A:  $3.2 \pm 0.20$  (0.126  $\pm$  0.008)  
 B:  $1.6 \pm 0.20$  (0.063  $\pm$  0.008)  
 C:  $1.1 \pm 0.20$  (0.043  $\pm$  0.008)  
 D:  $0.5 \pm 0.30$  (0.020  $\pm$  0.012)  
 in mm (inch)

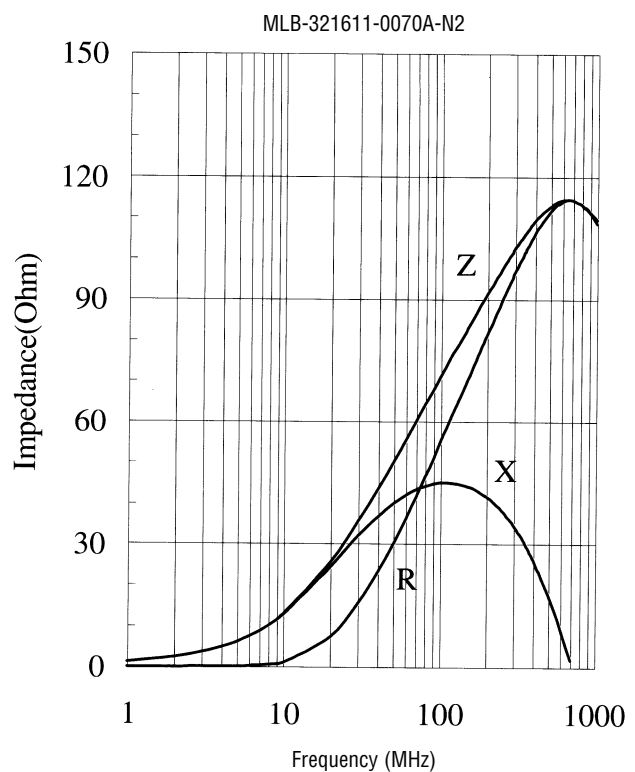
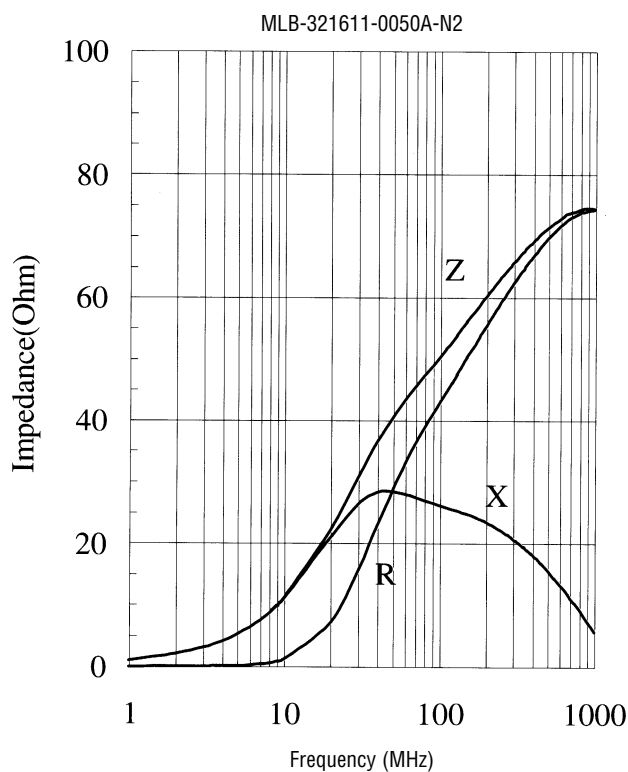
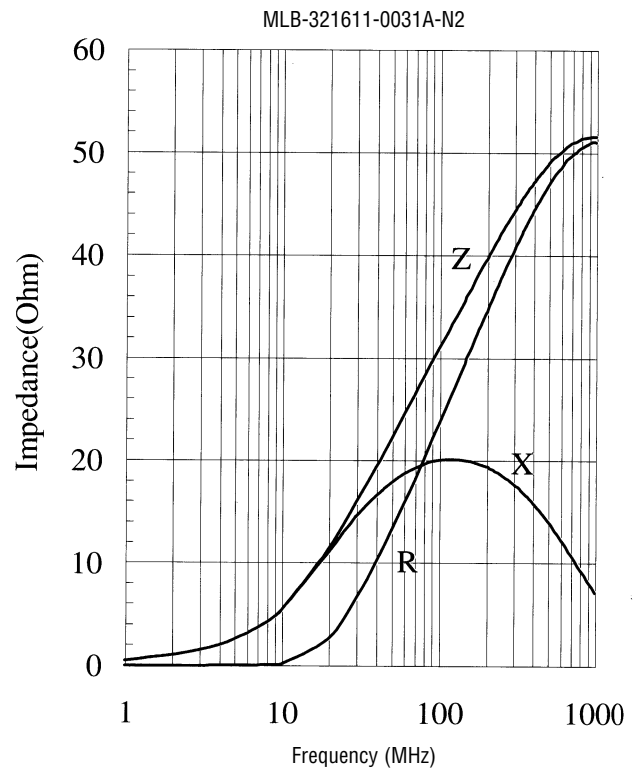
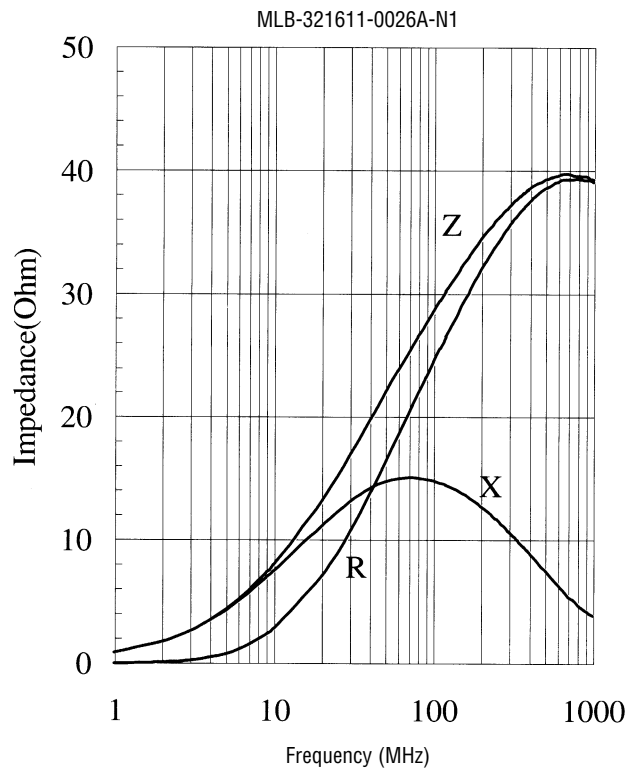


## ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance ( $\Omega$ )<br>at 100 MHz | DC Resistance<br>( $\Omega$ ) Max. | Rated Current<br>(mA) Max. | Operating<br>Temp. Range ( $^{\circ}\text{C}$ ) |
|---------------------|--------------------------------------|------------------------------------|----------------------------|-------------------------------------------------|
| MLB-321611-0026A-N1 | $26 \pm 25\%$                        | 0.2                                | 600                        | -25 to +85                                      |
| MLB-321611-0031A-N2 | $31 \pm 25\%$                        | 0.2                                | 600                        | -25 to +85                                      |
| MLB-321611-0050A-N2 | $50 \pm 25\%$                        | 0.2                                | 500                        | -25 to +85                                      |
| MLB-321611-0070A-N2 | $70 \pm 25\%$                        | 0.2                                | 500                        | -25 to +85                                      |
| MLB-321611-0090A-N2 | $90 \pm 25\%$                        | 0.3                                | 500                        | -25 to +85                                      |
| MLB-321611-0120A-N4 | $120 \pm 25\%$                       | 0.3                                | 500                        | -25 to +85                                      |
| MLB-321611-0150A-N4 | $150 \pm 25\%$                       | 0.3                                | 500                        | -25 to +85                                      |
| MLB-321611-0220A-N4 | $220 \pm 25\%$                       | 0.4                                | 400                        | -25 to +85                                      |
| MLB-321611-0400A-N4 | $400 \pm 25\%$                       | 0.4                                | 300                        | -25 to +85                                      |
| MLB-321611-0500A-N1 | $500 \pm 25\%$                       | 0.4                                | 300                        | -25 to +85                                      |
| MLB-321611-0600A-N1 | $600 \pm 25\%$                       | 0.5                                | 250                        | -25 to +85                                      |
| MLB-321611-0600A-N2 | $600 \pm 25\%$                       | 0.5                                | 250                        | -25 to +85                                      |
| MLB-321611-1200A-N2 | $1200 \pm 25\%$ at 50MHz             | 0.7                                | 200                        | -25 to +85                                      |
| MLB-321611-1500A-N2 | $1500 \pm 25\%$ at 50MHz             | 0.7                                | 200                        | -25 to +85                                      |
| MLB-321611-2000A-N1 | $2000 \pm 25\%$ at 30MHz             | 1.5                                | 150                        | -25 to +85                                      |
| MLB-321611-2000A-N2 | $2000 \pm 25\%$ at 30MHz             | 1.0                                | 150                        | -25 to +85                                      |

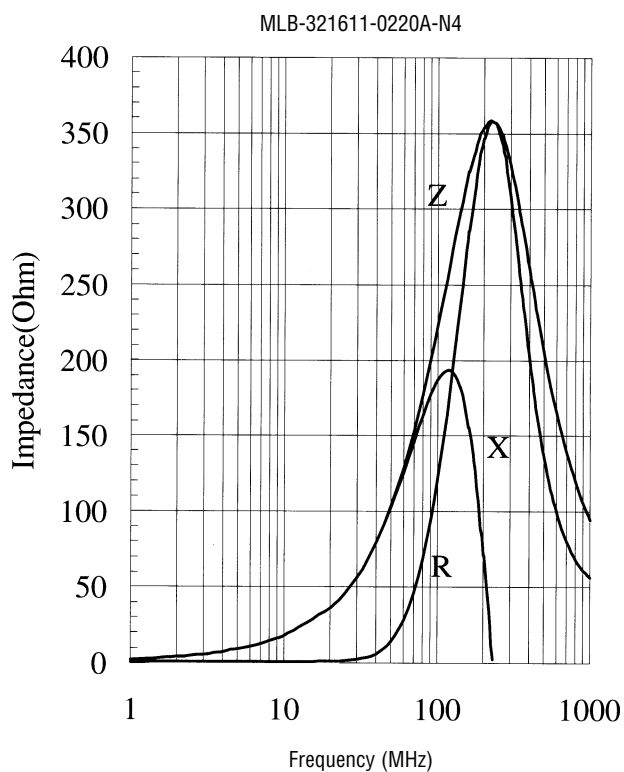
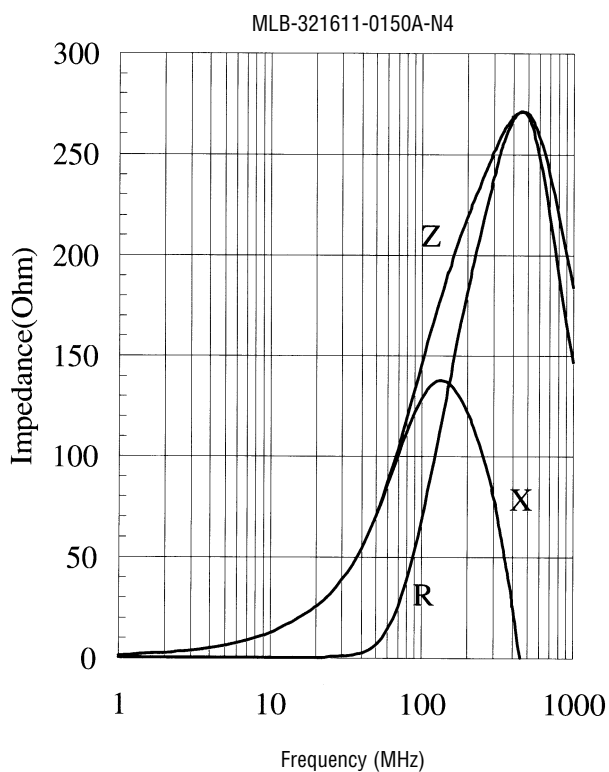
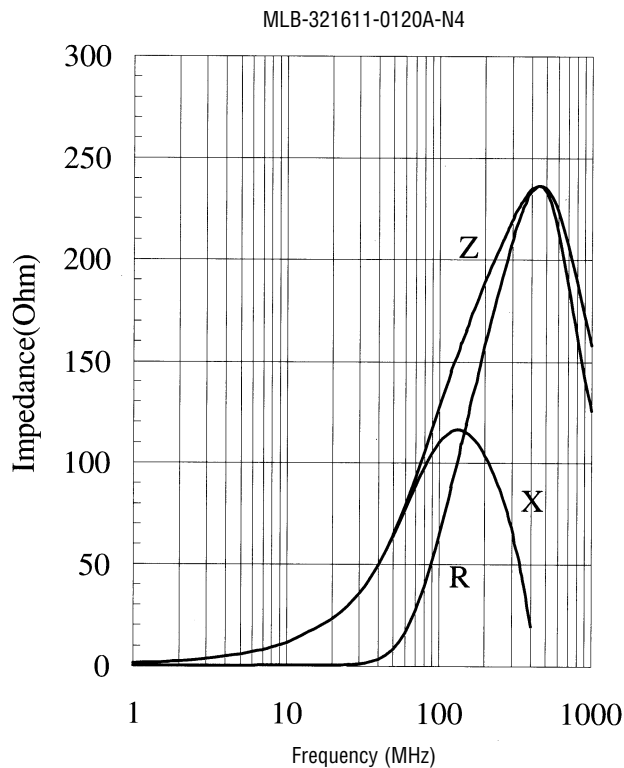
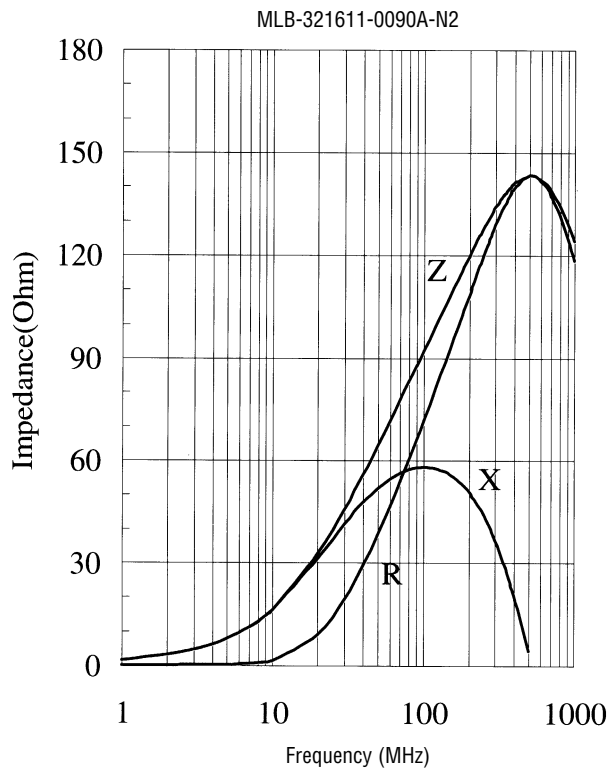
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A



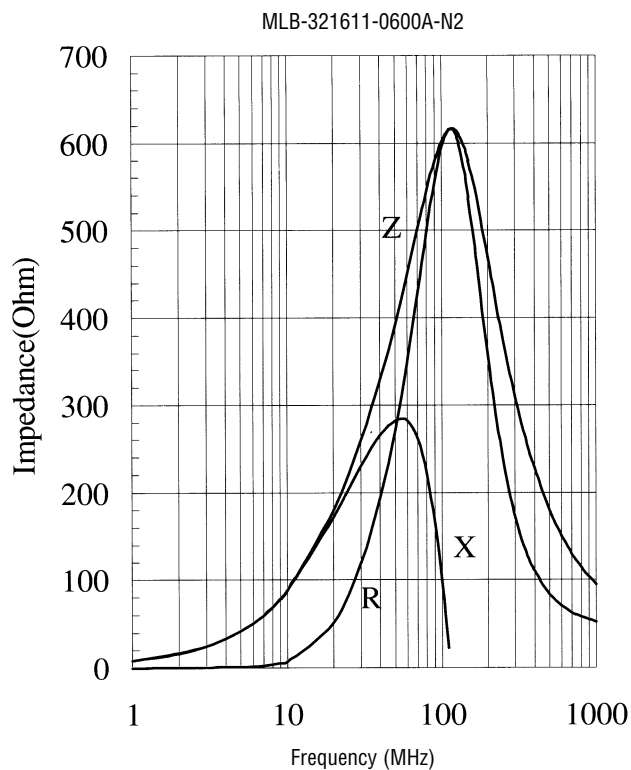
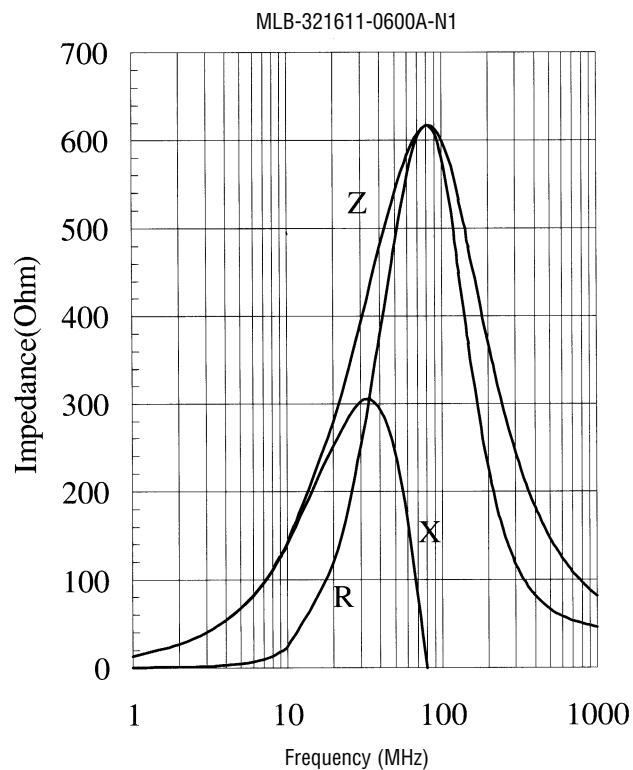
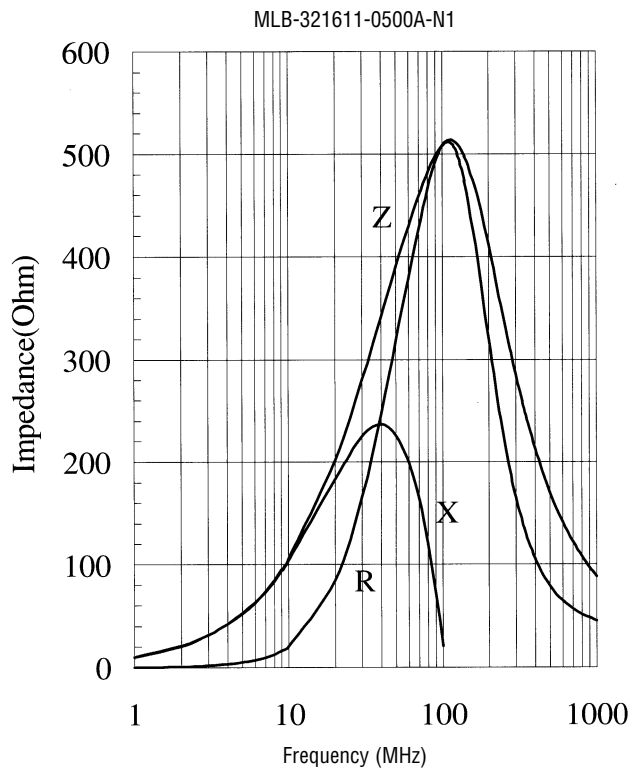
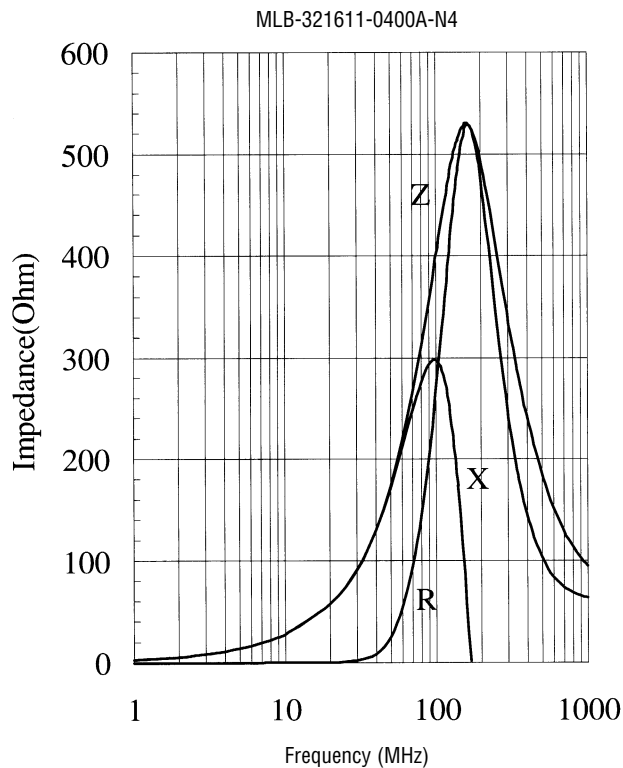
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A



## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

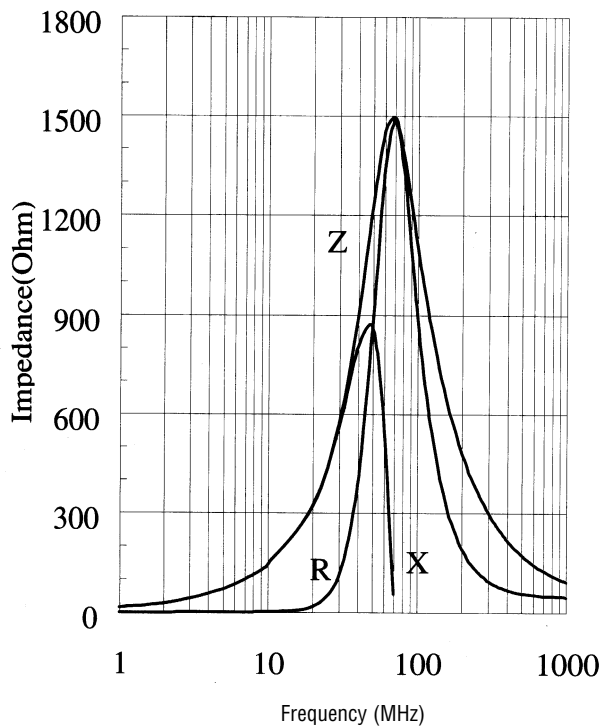
TEST INSTRUMENT: HP-4291A



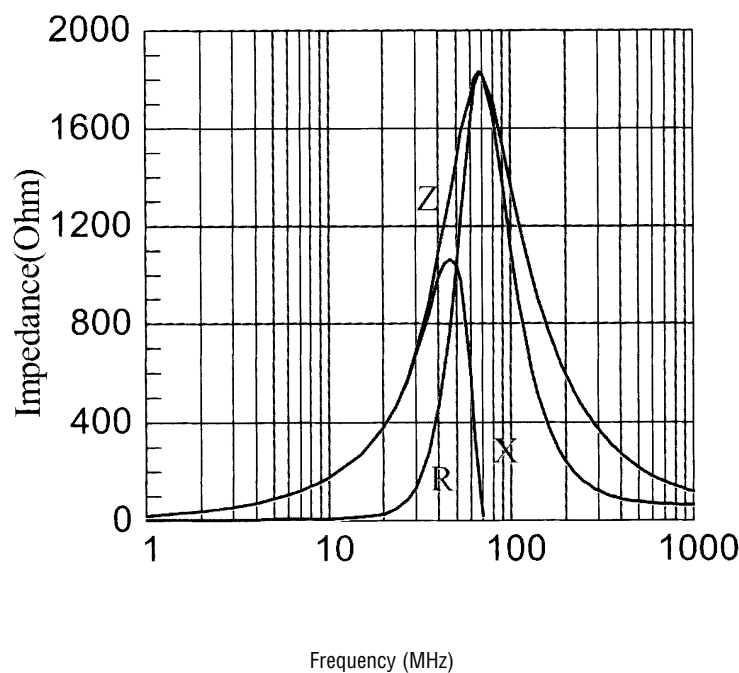
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A

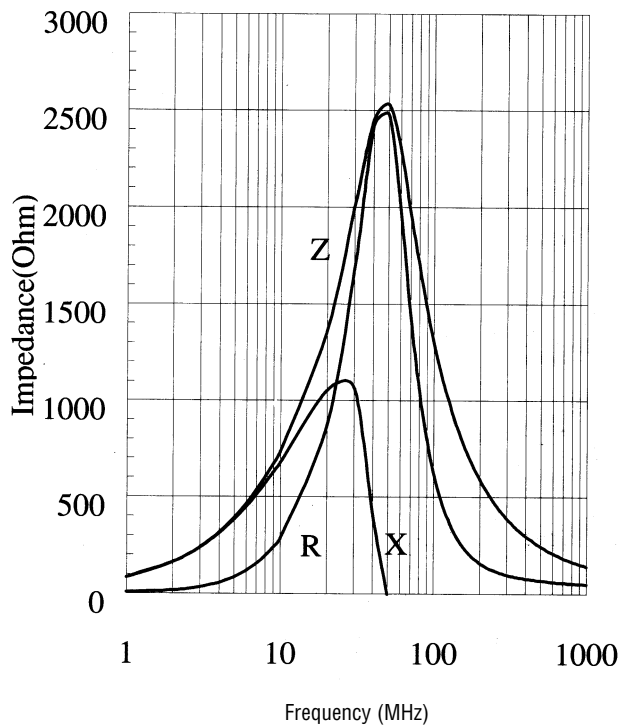
MLB-321611-1200A-N2



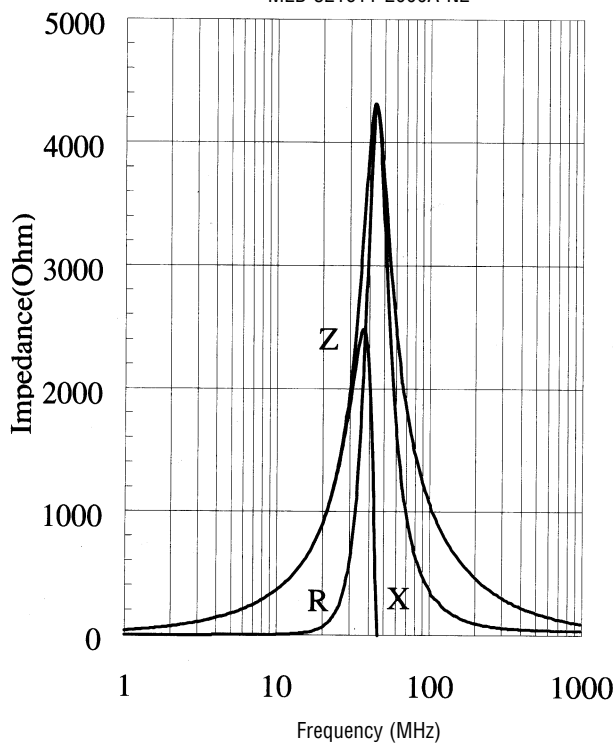
MLB-321611-1500A-N2



MLB-321611-2000A-N1

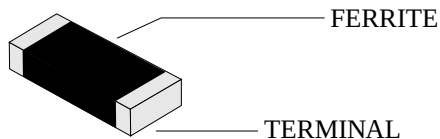


MLB-321611-2000A-N2

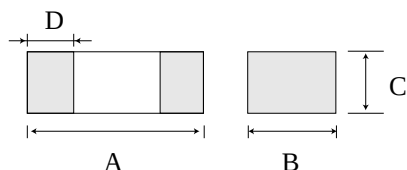


## MLB-321616-A SERIES

### DIMENSION:



A:  $3.2 \pm 0.20$  ( $0.126 \pm 0.008$ )  
B:  $1.6 \pm 0.20$  ( $0.063 \pm 0.008$ )  
C:  $1.6 \pm 0.20$  ( $0.063 \pm 0.008$ )  
D:  $0.5 \pm 0.30$  ( $0.020 \pm 0.012$ )  
in mm (inch)

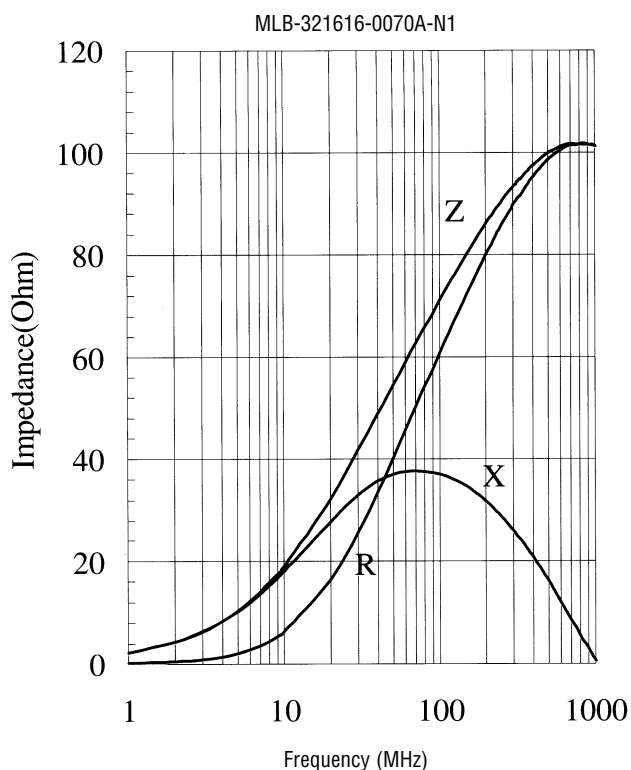
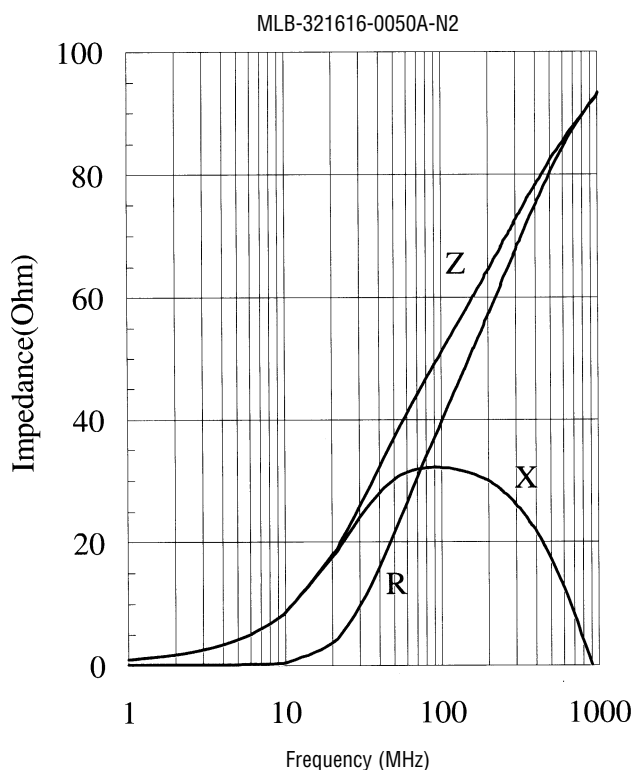


## ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance ( $\Omega$ )<br>at 100 MHz | DC Resistance ( $\Omega$ ) Max. | Rated Current (mA) Max. | Operating Temp. Range ( $^{\circ}\text{C}$ ) |
|---------------------|--------------------------------------|---------------------------------|-------------------------|----------------------------------------------|
| MLB-321616-0050A-N2 | 50 + 25%                             | 0.3                             | 300                     | -25 to +85                                   |
| MLB-321616-0070A-N1 | 70 + 25%                             | 0.3                             | 300                     | -25 to +85                                   |

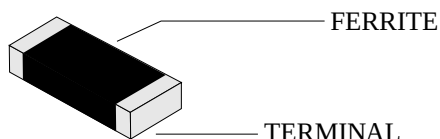
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A

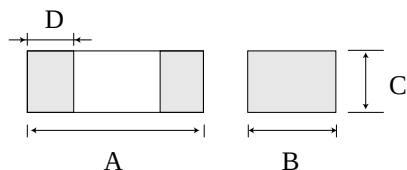


## MLB-322513-A SERIES

### DIMENSION:



A:  $3.2 \pm 0.20$  (0.126  $\pm$  0.008)  
B:  $2.5 \pm 0.20$  (0.098  $\pm$  0.008)  
C:  $1.3 \pm 0.20$  (0.051  $\pm$  0.008)  
D:  $0.5 \pm 0.30$  (0.020  $\pm$  0.012)  
in mm (inch)

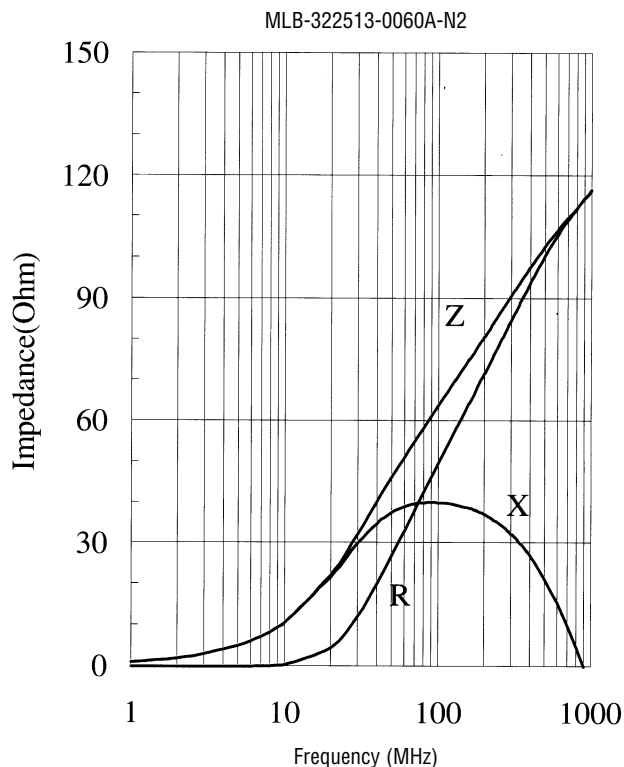
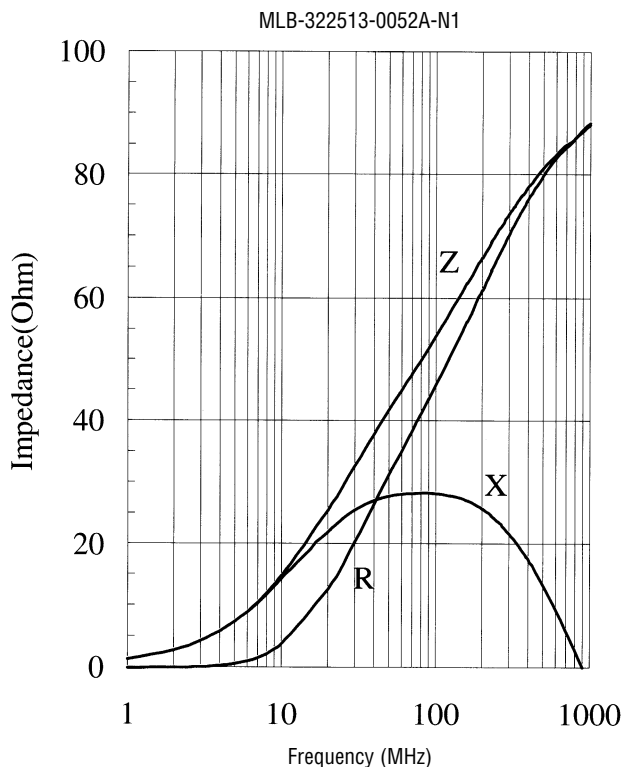


## ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance ( $\Omega$ )<br>at 100 MHz | DC Resistance ( $\Omega$ ) Max. | Rated Current (mA) Max. | Operating Temp. Range ( $^{\circ}\text{C}$ ) |
|---------------------|--------------------------------------|---------------------------------|-------------------------|----------------------------------------------|
| MLB-322513-0052A-N1 | 52 + 25%                             | 0.3                             | 300                     | -25 to +85                                   |
| MLB-322513-0060A-N2 | 60 + 25%                             | 0.3                             | 300                     | -25 to +85                                   |

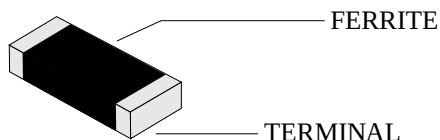
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A

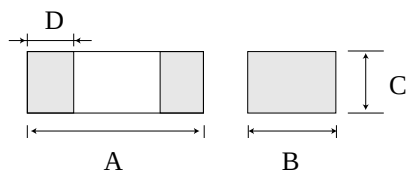


## MLB-451616-A SERIES

### DIMENSION:



A:  $4.5 \pm 0.20$  ( $0.177 \pm 0.008$ )  
B:  $1.6 \pm 0.20$  ( $0.063 \pm 0.008$ )  
C:  $1.6 \pm 0.20$  ( $0.063 \pm 0.008$ )  
D:  $0.5 \pm 0.30$  ( $0.020 \pm 0.012$ )  
in mm (inch)

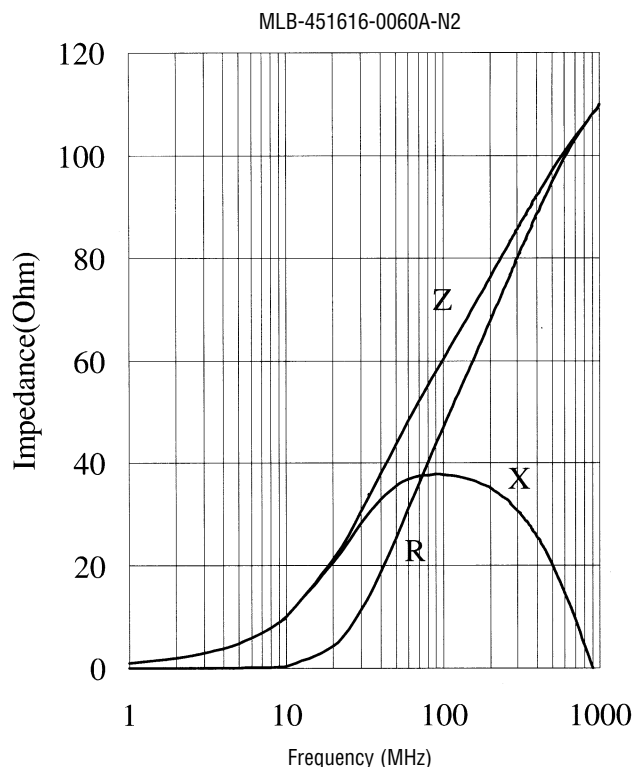
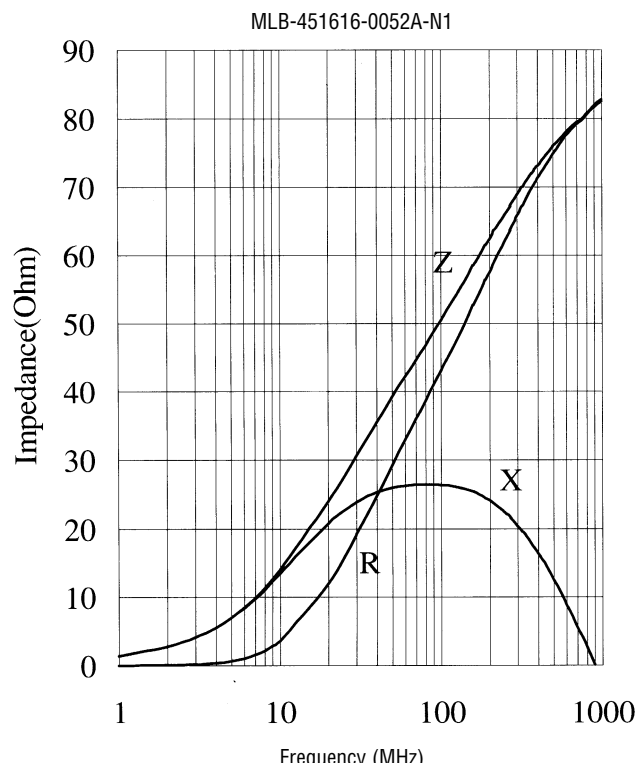


## ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance ( $\Omega$ )<br>at 100 MHz | DC Resistance<br>( $\Omega$ ) Max. | Rated Current<br>(mA) Max. | Operating<br>Temp. Range ( $^{\circ}\text{C}$ ) |
|---------------------|--------------------------------------|------------------------------------|----------------------------|-------------------------------------------------|
| MLB-451616-0052A-N1 | 52 + 25%                             | 0.3                                | 300                        | -25 to +85                                      |
| MLB-451616-0060A-N2 | 60 + 25%                             | 0.3                                | 300                        | -25 to +85                                      |
| MLB-451616-0080A-N1 | 80 + 25%                             | 0.3                                | 300                        | -25 to +85                                      |
| MLB-451616-0125A-N2 | 125 + 25%                            | 0.5                                | 300                        | -25 to +85                                      |
| MLB-451616-0150A-N2 | 150 + 25%                            | 0.5                                | 300                        | -25 to +85                                      |

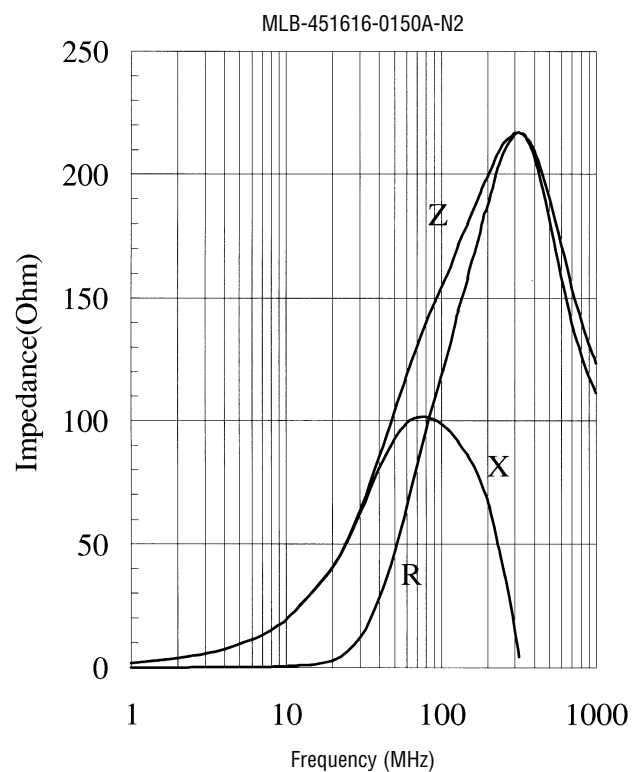
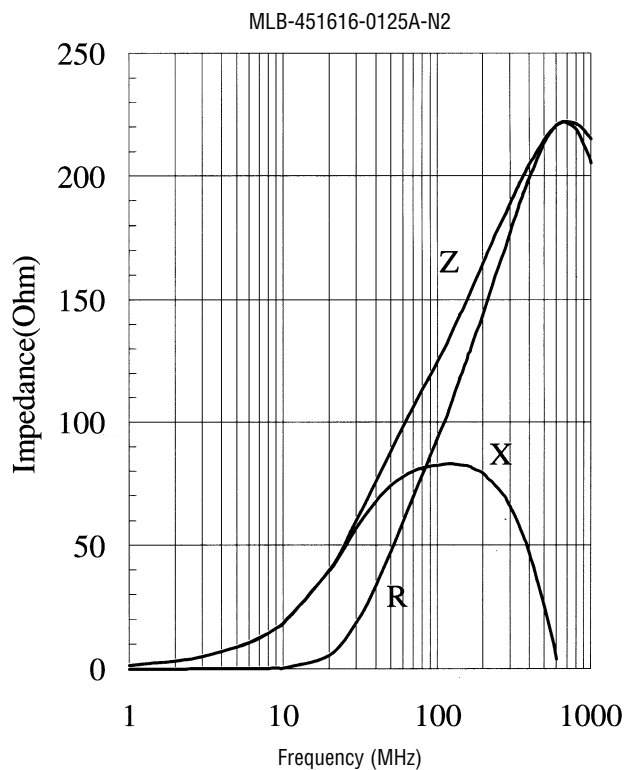
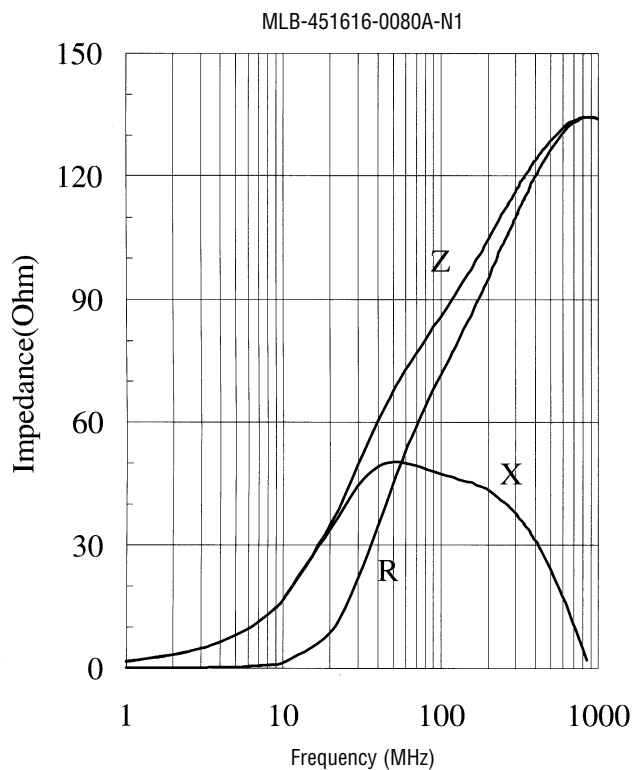
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A



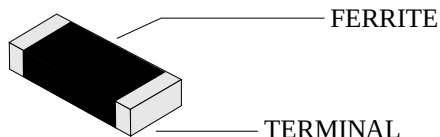
## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A

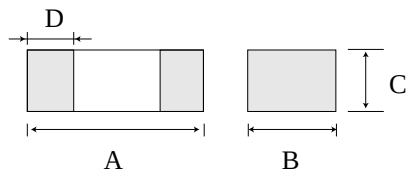


## MLB-453215-A SERIES

### DIMENSION:



A:  $4.5 \pm 0.20$  ( $0.177 \pm 0.008$ )  
B:  $3.2 \pm 0.20$  ( $0.126 \pm 0.008$ )  
C:  $1.5 \pm 0.20$  ( $0.059 \pm 0.008$ )  
D:  $0.5 \pm 0.30$  ( $0.020 \pm 0.012$ )  
in mm (inch)



## ELECTRICAL CHARACTERISTICS

| Part Number         | Impedance ( $\Omega$ )<br>at 100 MHz | DC Resistance<br>( $\Omega$ ) Max. | Rated Current<br>(mA) Max. | Operating<br>Temp. Range ( $^{\circ}\text{C}$ ) |
|---------------------|--------------------------------------|------------------------------------|----------------------------|-------------------------------------------------|
| MLB-453215-0120A-N1 | 120 + 25%                            | 0.5                                | 300                        | -25 to +85                                      |
| MLB-453215-0125A-N2 | 125 + 25%                            | 0.5                                | 300                        | -25 to +85                                      |

## TYPICAL ELECTRICAL CHARACTERISTIC CURVES

TEST INSTRUMENT: HP-4291A

