

## Multilayer Chip Ferrite Beads---FBC Series



### Feature

- Wide range of frequency to suppress EMI.
- Wide range of impedance values for various applications.
- Internal silver printed layers and magnetic shielded structure.
- RoHS compliant.
- Operating temperature range  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$  (Including self - temperature rise).

### Application

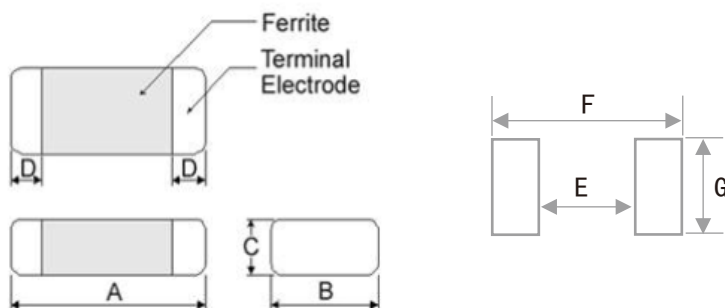
- High frequency EMI prevention of computers, printers, VCRs TVs and portable telephone.

### Production identification

FBC     1005     -     121     Y  
 ①            ②                            ③            ④

- ① Series name: High Current Ferrite Bead
- ② Size:  $1.0 \times 0.5 \times 0.5\text{mm}$
- ③ Impedance:  $120\Omega$
- ④ Tolerance:  $\pm 25\%$

### Series Shape and Dimensions (Unit:mm)



| Series  | A              | B              | C              | D              | $E_{\text{Typ}}$ | $F_{\text{Typ}}$ | $G_{\text{Typ}}$ | SPQ   |
|---------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|-------|
| FBC1005 | $1.0 \pm 0.15$ | $0.5 \pm 0.15$ | $0.5 \pm 0.15$ | $0.25 \pm 0.1$ | 0.4              | 1.3              | 0.5              | 10000 |
| FBC1608 | $1.6 \pm 0.15$ | $0.8 \pm 0.15$ | $0.8 \pm 0.15$ | $0.3 \pm 0.2$  | 0.7              | 1.8              | 0.8              | 4000  |
| FBC2012 | $2.0 \pm 0.2$  | $1.25 \pm 0.2$ | $0.85 \pm 0.2$ | $0.5 \pm 0.3$  | 1.0              | 2.6              | 1.2              | 4000  |
| FBC3216 | $3.2 \pm 0.2$  | $1.6 \pm 0.2$  | $1.1 \pm 0.2$  | $0.5 \pm 0.3$  | 2.0              | 4.2              | 1.6              | 3000  |

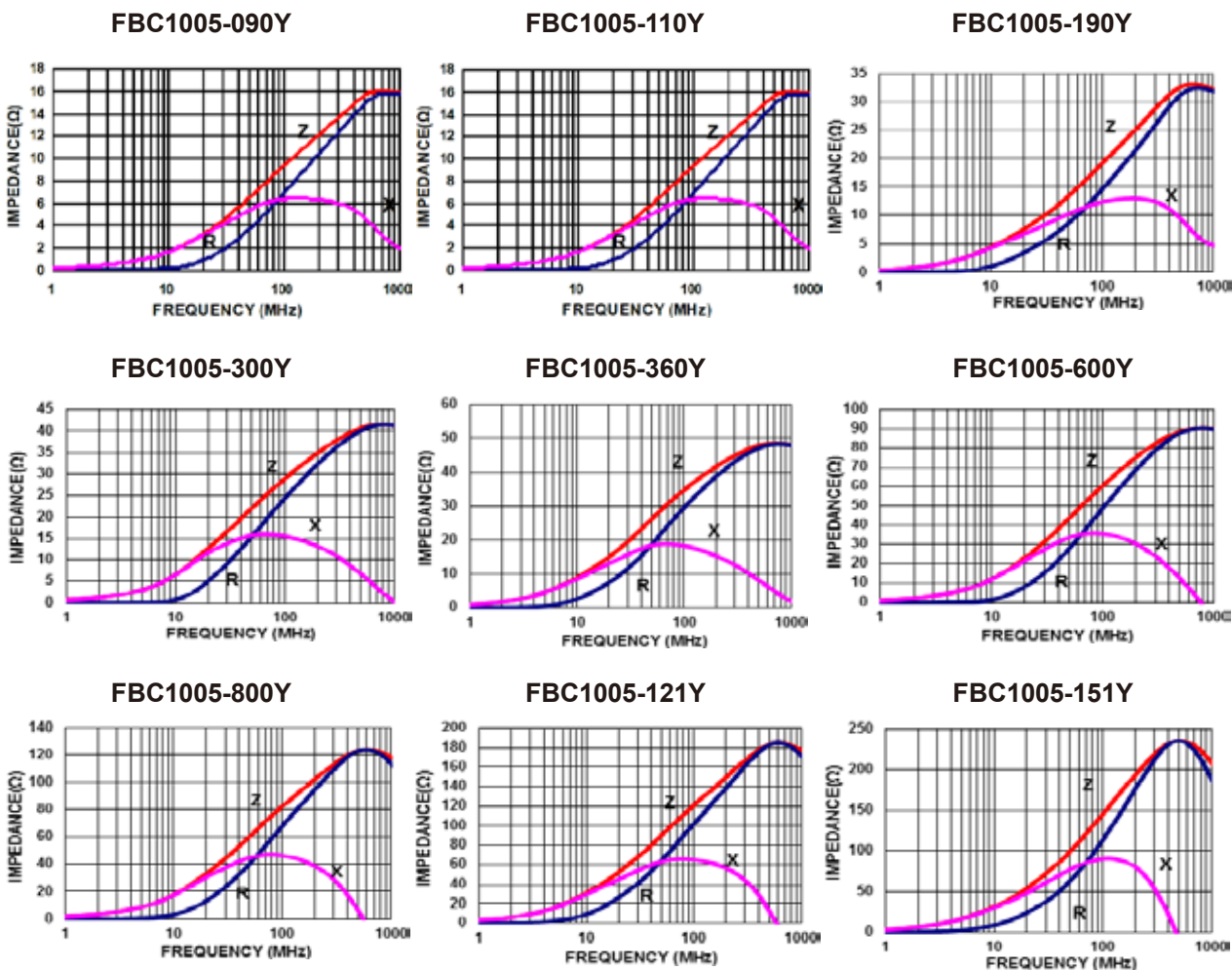
# Multilayer Chip Ferrite Beads---FBC Series



## FBC1005 Electrical Characteristics

| Part Number  | Impedance ( $\Omega$ ) | Tolerance ( $\pm\%$ ) | Test Freq. (MHz) | DCR Max ( $\Omega$ ) | Current Max (A) |
|--------------|------------------------|-----------------------|------------------|----------------------|-----------------|
| FBC1005-090Y | 9                      | 25                    | 100              | 0.04                 | 0.80            |
| FBC1005-110Y | 11                     | 25                    | 100              | 0.04                 | 0.80            |
| FBC1005-190Y | 19                     | 25                    | 100              | 0.06                 | 0.70            |
| FBC1005-300Y | 30                     | 25                    | 100              | 0.08                 | 0.70            |
| FBC1005-360Y | 36                     | 25                    | 100              | 0.15                 | 0.60            |
| FBC1005-600Y | 60                     | 25                    | 100              | 0.15                 | 0.60            |
| FBC1005-800Y | 80                     | 25                    | 100              | 0.20                 | 0.45            |
| FBC1005-121Y | 120                    | 25                    | 100              | 0.25                 | 0.45            |
| FBC1005-151Y | 150                    | 25                    | 100              | 0.25                 | 0.45            |
| FBC1005-181Y | 180                    | 25                    | 100              | 0.40                 | 0.30            |
| FBC1005-221Y | 220                    | 25                    | 100              | 0.40                 | 0.30            |
| FBC1005-301Y | 300                    | 25                    | 100              | 0.50                 | 0.30            |
| FBC1005-501Y | 500                    | 25                    | 100              | 0.65                 | 0.20            |
| FBC1005-601Y | 600                    | 25                    | 100              | 0.70                 | 0.20            |
| FBC1005-102Y | 1000                   | 25                    | 100              | 1.00                 | 0.20            |

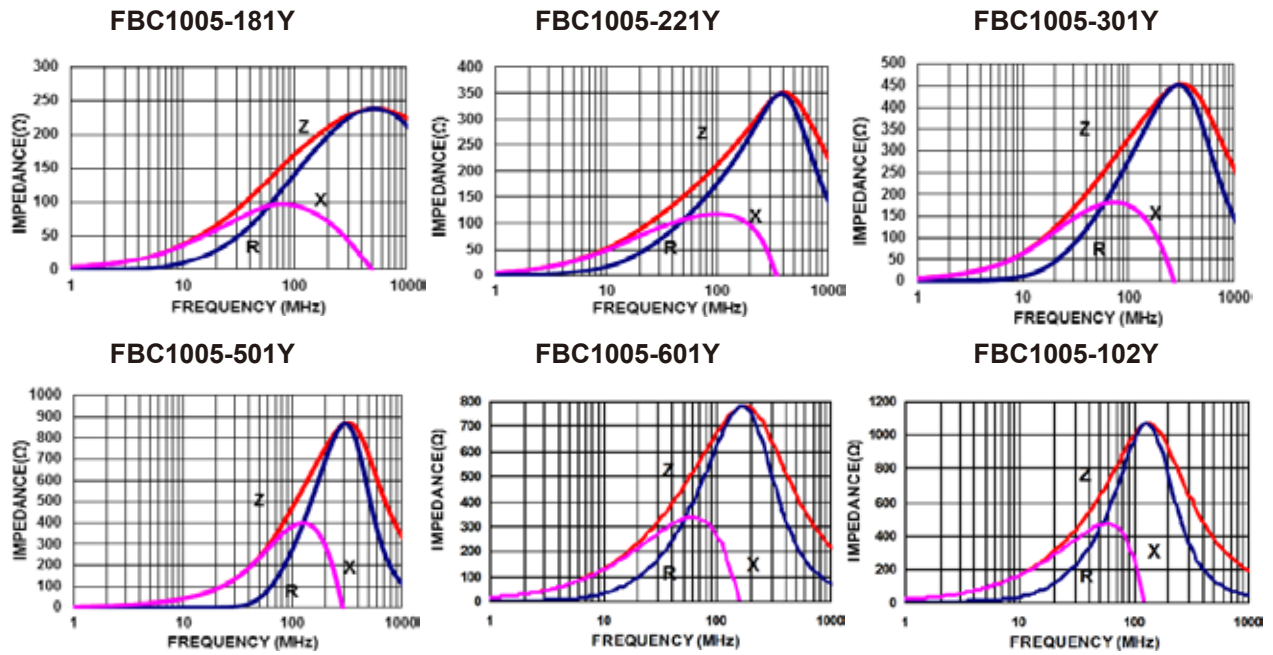
## Typical Impedance vs. Frequency Curves



## Multilayer Chip Ferrite Beads---FBC Series



### Typical Impedance vs. Frequency Curves



#### Notes:

1. Rated Current: Applied the current to chip bead, the temperature rise shall not be more than 30°C.
2. Measuring Equipment:  
 Z: HP4291A      RDC: HP4338B or CHEN HWA 502

## Multilayer Chip Ferrite Beads---FBC Series

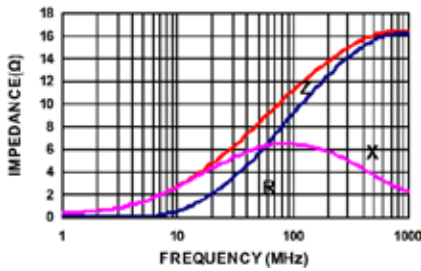


### FBC1608 Electrical Characteristics

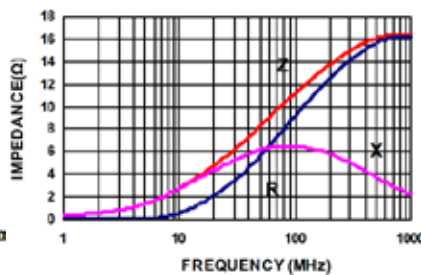
| Part Number  | Impedance ( $\Omega$ ) | Tolerance ( $\pm\%$ ) | Test Freq. (MHz) | DCR Max ( $\Omega$ ) | Current Max (A) |
|--------------|------------------------|-----------------------|------------------|----------------------|-----------------|
| FBC1608-090Y | 9                      | 25                    | 100              | 0.08                 | 1.00            |
| FBC1608-110Y | 11                     | 25                    | 100              | 0.08                 | 1.00            |
| FBC1608-300Y | 30                     | 25                    | 100              | 0.08                 | 1.00            |
| FBC1608-600Y | 60                     | 25                    | 100              | 0.12                 | 1.00            |
| FBC1608-800Y | 80                     | 25                    | 100              | 0.20                 | 1.00            |
| FBC1608-101Y | 100                    | 25                    | 100              | 0.20                 | 1.00            |
| FBC1608-121Y | 120                    | 25                    | 100              | 0.20                 | 1.00            |
| FBC1608-151Y | 150                    | 25                    | 100              | 0.25                 | 1.00            |
| FBC1608-181Y | 180                    | 25                    | 100              | 0.25                 | 1.00            |
| FBC1608-221Y | 220                    | 25                    | 100              | 0.30                 | 1.00            |
| FBC1608-301Y | 300                    | 25                    | 100              | 0.30                 | 1.00            |
| FBC1608-501Y | 500                    | 25                    | 100              | 0.40                 | 1.00            |
| FBC1608-601Y | 600                    | 25                    | 100              | 0.40                 | 1.00            |
| FBC1608-102Y | 1000                   | 25                    | 100              | 0.55                 | 0.50            |
| FBC1608-122Y | 1200                   | 25                    | 100              | 0.65                 | 0.50            |
| FBC1608-152Y | 1500                   | 25                    | 100              | 0.75                 | 0.40            |
| FBC1608-182Y | 1800                   | 25                    | 100              | 0.80                 | 0.40            |
| FBC1608-202Y | 2000                   | 25                    | 100              | 0.90                 | 0.40            |

### Typical Impedance vs. Frequency Curves

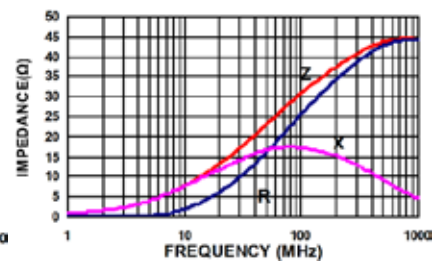
FBC1608-090Y



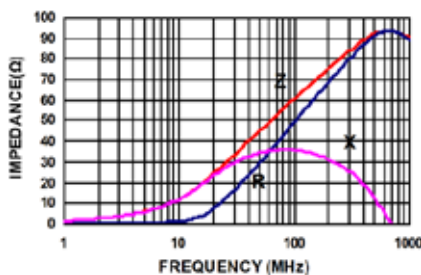
FBC1608-110Y



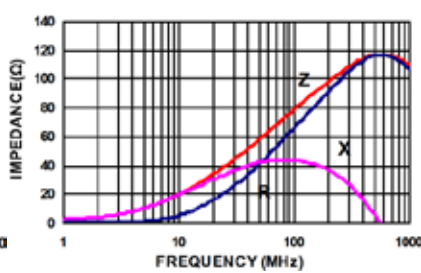
FBC1608-300Y



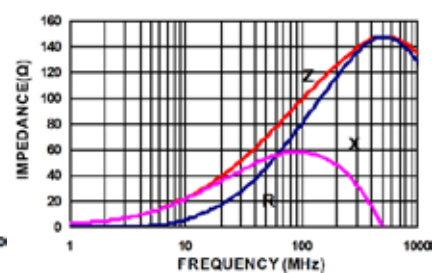
FBC1608-600Y



FBC1608-800Y



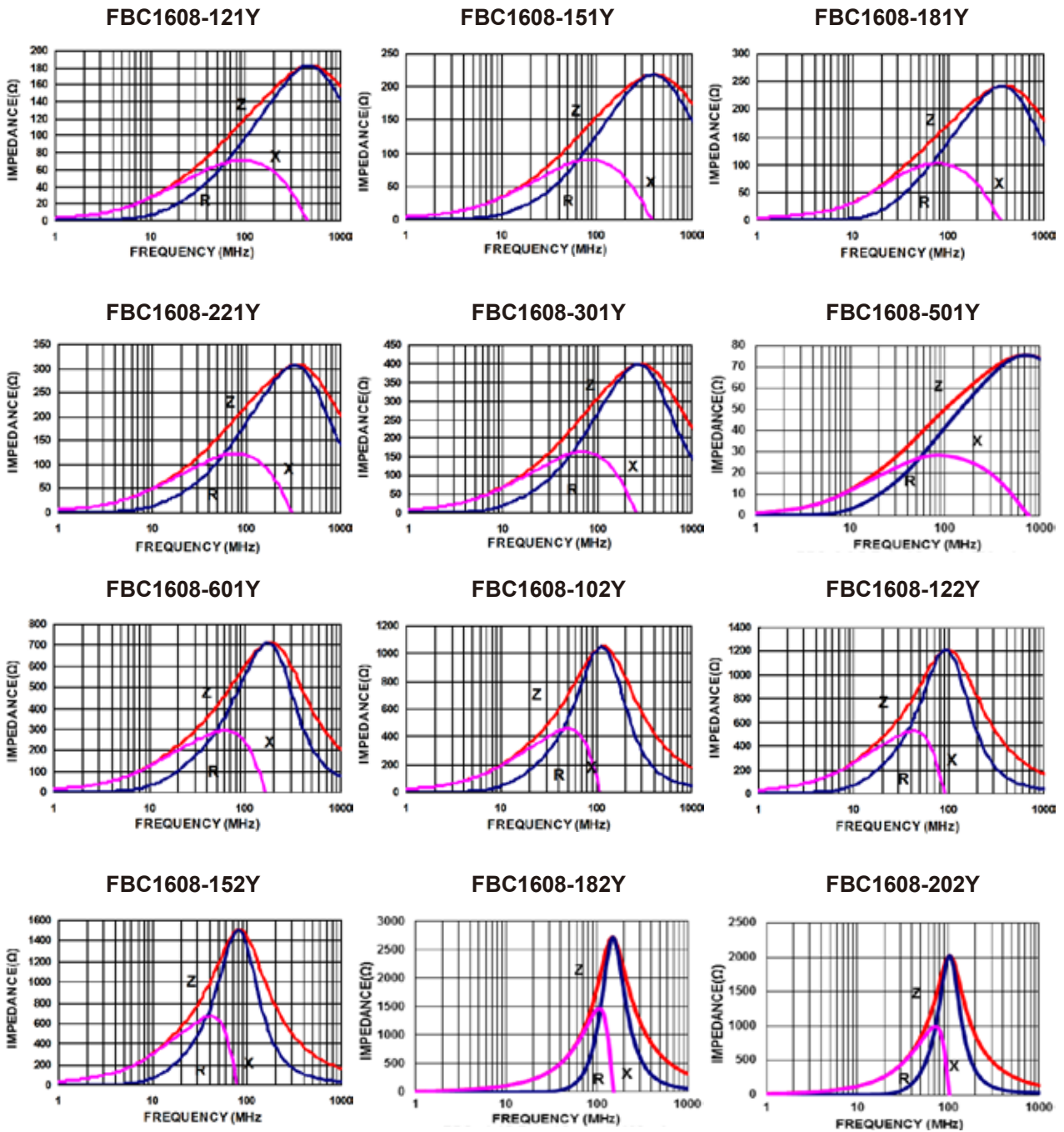
FBC1608-101Y



# Multilayer Chip Ferrite Beads---FBC Series



## Typical Impedance vs. Frequency Curves



Notes:

1. Rated Current: Applied the current to chip bead, the temperature rise shall not be more than 30°C.
2. Measuring Equipment:  
 Z: HP4291A      RDC: HP4338B or CHEN HWA 502

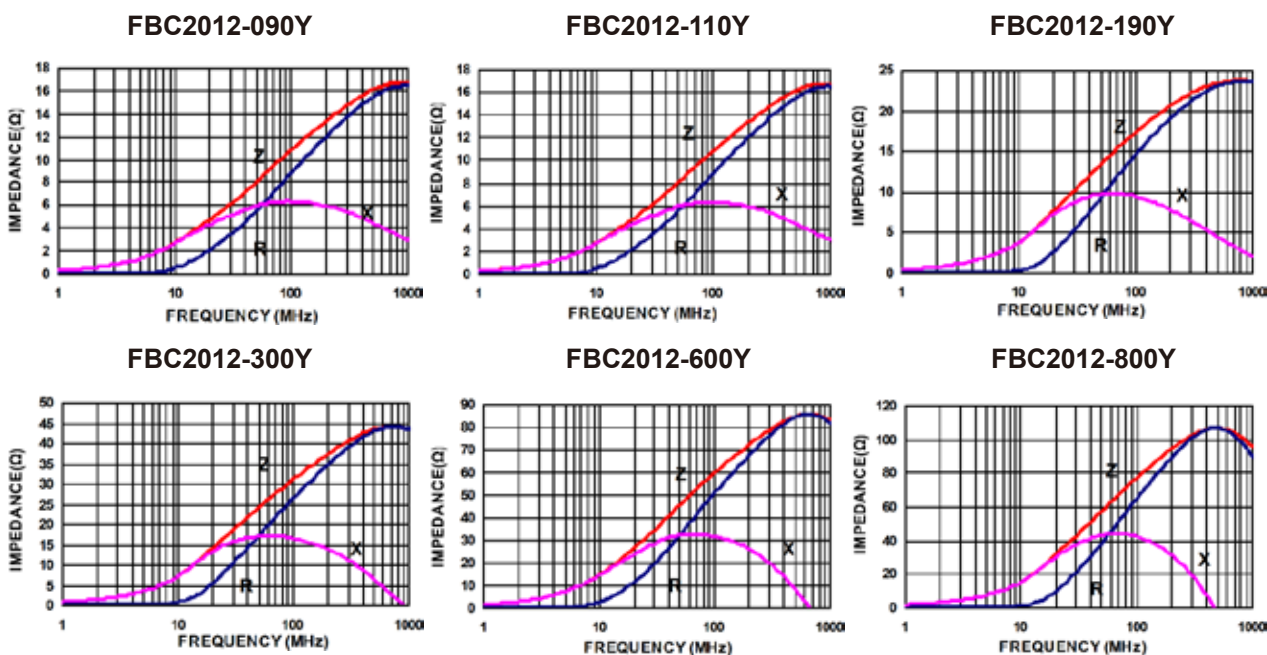
# Multilayer Chip Ferrite Beads---FBC Series



## FBC2012 Electrical Characteristics

| Part Number  | Impedance (Ω) | Tolerance (±%) | Test Freq. (MHz) | DCR Max (Ω) | Current Max (A) |
|--------------|---------------|----------------|------------------|-------------|-----------------|
| FBC2012-090Y | 9             | 25             | 100              | 0.03        | 3.00            |
| FBC2012-110Y | 11            | 25             | 100              | 0.03        | 3.00            |
| FBC2012-190Y | 19            | 25             | 100              | 0.03        | 3.00            |
| FBC2012-300Y | 30            | 25             | 100              | 0.05        | 3.00            |
| FBC2012-600Y | 60            | 25             | 100              | 0.06        | 3.00            |
| FBC2012-800Y | 80            | 25             | 100              | 0.08        | 2.50            |
| FBC2012-101Y | 100           | 25             | 100              | 0.10        | 2.50            |
| FBC2012-121Y | 120           | 25             | 100              | 0.10        | 2.00            |
| FBC2012-151Y | 150           | 25             | 100              | 0.10        | 2.00            |
| FBC2012-181Y | 180           | 25             | 100              | 0.15        | 2.00            |
| FBC2012-221Y | 220           | 25             | 100              | 0.15        | 2.00            |
| FBC2012-301Y | 300           | 25             | 100              | 0.20        | 2.00            |
| FBC2012-501Y | 500           | 25             | 100              | 0.25        | 1.50            |
| FBC2012-601Y | 600           | 25             | 100              | 0.25        | 1.50            |
| FBC2012-801Y | 800           | 25             | 100              | 0.30        | 0.80            |
| FBC2012-102Y | 1000          | 25             | 100              | 0.30        | 0.80            |
| FBC2012-122Y | 1200          | 25             | 100              | 0.45        | 0.50            |
| FBC2012-252Y | 2500          | 25             | 50               | 0.60        | 0.10            |

## Typical Impedance vs. Frequency Curves

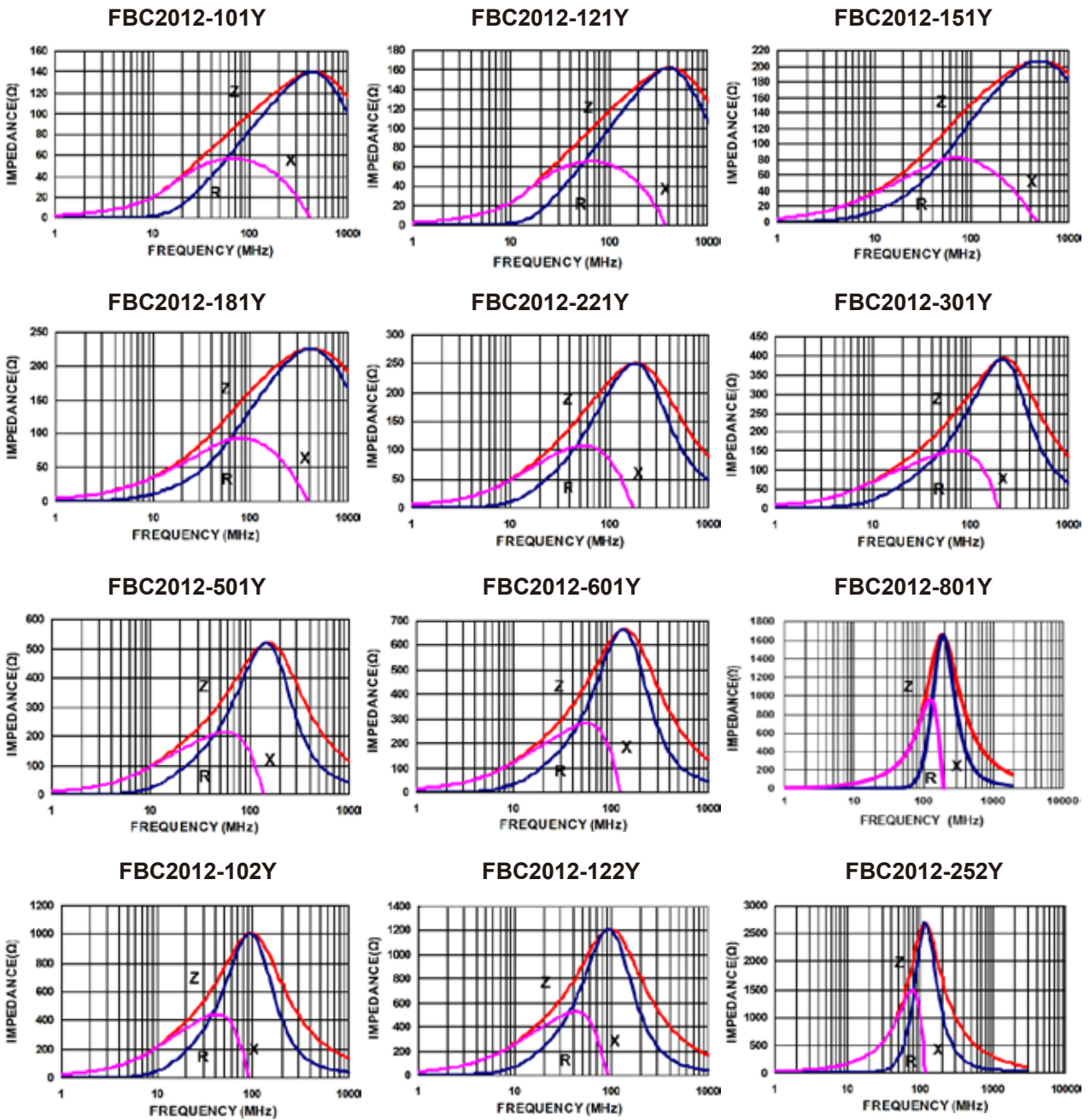




# Multilayer Chip Ferrite Beads---FBC Series



## Typical Impedance vs. Frequency Curves



### Notes:

1. Rated Current: Applied the current to chip bead, the temperature rise shall not be more than 30°C.
2. Measuring Equipment:  
 Z: HP4291A      RDC: HP4338B or CHEN HWA 502

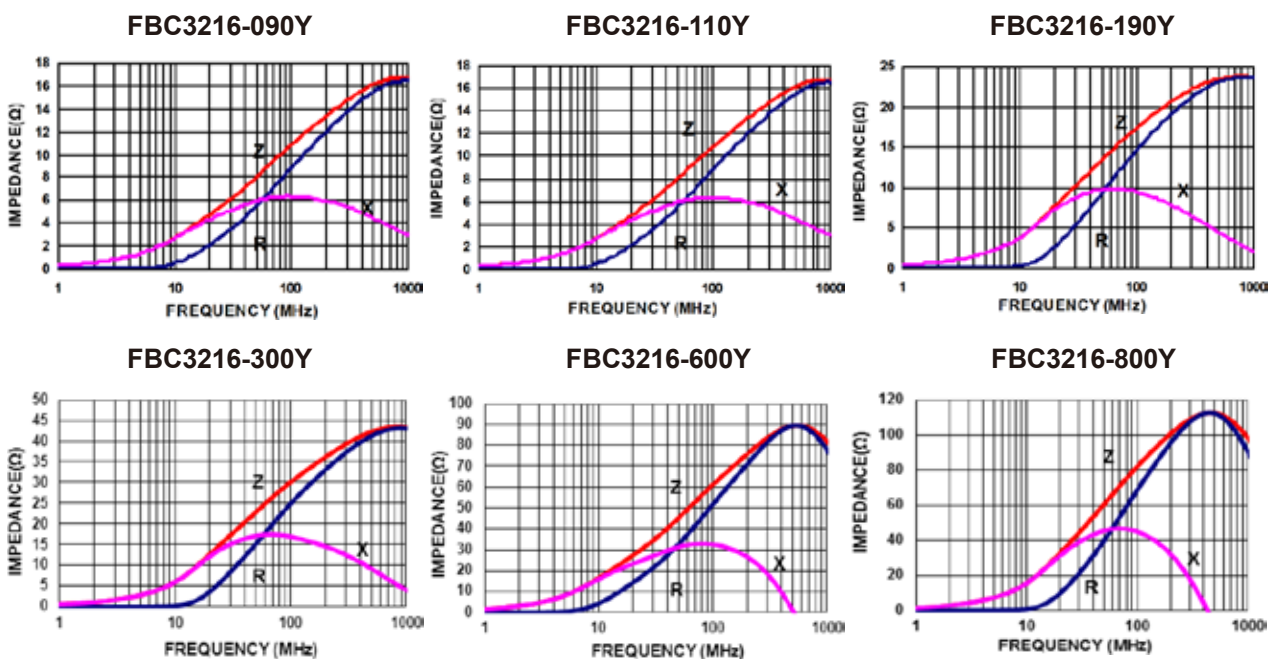
## Multilayer Chip Ferrite Beads---FBC Series



### FBC3216 Electrical Characteristics

| Part Number  | Impedance ( $\Omega$ ) | Tolerance ( $\pm\%$ ) | Test Freq. (MHz) | DCR Max ( $\Omega$ ) | Current Max (A) |
|--------------|------------------------|-----------------------|------------------|----------------------|-----------------|
| FBC3216-090Y | 9                      | 25                    | 100              | 0.05                 | 4.00            |
| FBC3216-110Y | 11                     | 25                    | 100              | 0.05                 | 4.00            |
| FBC3216-190Y | 19                     | 25                    | 100              | 0.05                 | 3.00            |
| FBC3216-300Y | 30                     | 25                    | 100              | 0.07                 | 3.00            |
| FBC3216-600Y | 60                     | 25                    | 100              | 0.10                 | 3.00            |
| FBC3216-800Y | 80                     | 25                    | 100              | 0.10                 | 3.00            |
| FBC3216-101Y | 100                    | 25                    | 100              | 0.10                 | 3.00            |
| FBC3216-121Y | 120                    | 25                    | 100              | 0.10                 | 3.00            |
| FBC3216-151Y | 150                    | 25                    | 100              | 0.15                 | 2.50            |
| FBC3216-181Y | 180                    | 25                    | 100              | 0.20                 | 2.50            |
| FBC3216-221Y | 220                    | 25                    | 100              | 0.20                 | 2.50            |
| FBC3216-301Y | 300                    | 25                    | 100              | 0.20                 | 2.00            |
| FBC3216-501Y | 500                    | 25                    | 100              | 0.20                 | 2.00            |
| FBC3216-601Y | 600                    | 25                    | 100              | 0.25                 | 2.00            |
| FBC3216-801Y | 800                    | 25                    | 100              | 0.25                 | 2.00            |
| FBC3216-102Y | 1000                   | 25                    | 100              | 0.30                 | 2.00            |
| FBC3216-122Y | 1200                   | 25                    | 100              | 0.35                 | 1.00            |
| FBC3216-152Y | 1500                   | 25                    | 50               | 0.45                 | 0.50            |
| FBC3216-182Y | 1800                   | 25                    | 50               | 0.60                 | 0.50            |
| FBC3216-202Y | 2000                   | 25                    | 50               | 0.70                 | 0.30            |

### Typical Impedance vs. Frequency Curves

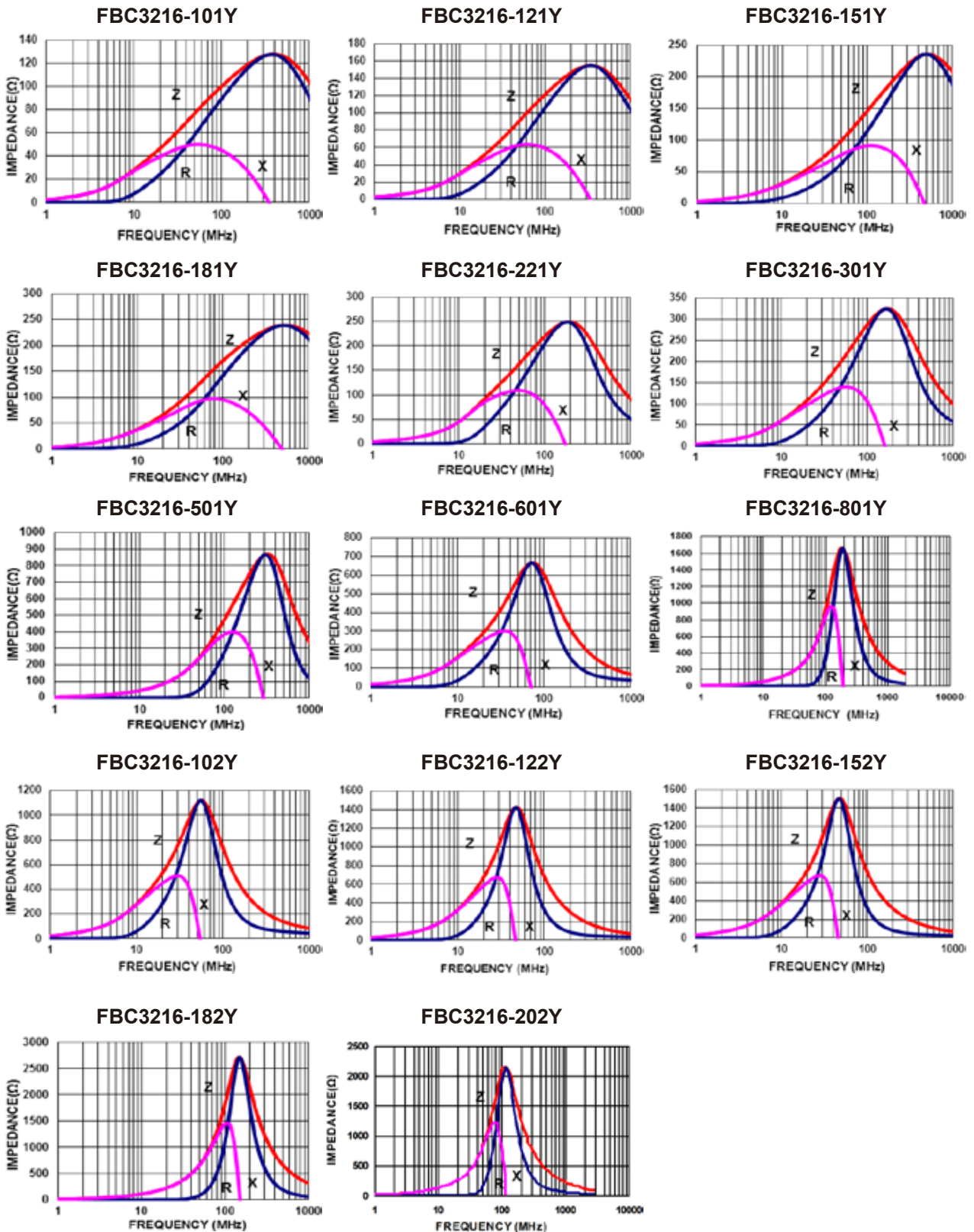




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### Typical Impedance vs. Frequency Curves



#### Notes:

1. Rated Current: Applied the current to chip bead, the temperature rise shall not be more than 30°C.
2. Measuring Equipment:  
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