

# On-Board Type EMI Suppression Filters



## High Current Ferrite Chip Bead HCB Series

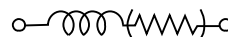
### HCB Series

**Ferrite Chip Bead Offer High Frequency Noise Suppression in High Current DC Power Lines.**

鐵氧磁體晶片磁珠提供在大電流電路中高頻雜訊的抑制。



#### ■ Equivalent Circuit Diagram



(Resistance element becomes dominant at high frequency)

#### ■ Features

- 1.Closed magnetic circuit structure allows high density mounting while preventing crosstalk.
- 2.Extremely high reliability due to entirely monolithic construction.
- 3.Low DC resistance structure of electrode to prevent wasteful electric power consumption.
- 4.High Current rating up to 6A.
- 5.The products contain no lead and also support lead-free soldering.

#### ■ Applications

Personal computers,communication equipment,digital telephone,electronic games machines,CRTs,hard disk drives,cellular phones,PDA's,printers High current DC lines and other computer peripheral products.

#### • 特徵

1. 封閉磁路結構，可高密度安裝並避免干擾。
2. 單石結構，具高度可靠度。
3. 具低直流電阻結構之電極，可避免功率消耗之浪費。
4. 高額定電流達6安培。
5. 產品無鉛適合無鉛鉛錫。

#### • 應用

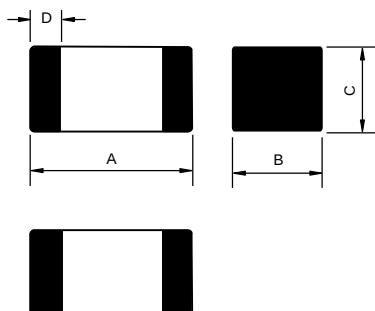
個人電腦、通訊設備、數位電話、電子遊戲機、陰極射線管、硬式磁碟機、行動電話、個人數位助理、列表機、高直流電流線和其他電腦周邊設備。

#### ■ Lead Free Part Numbering

**HCB** **2012** **K** **F** — **121** **T** **30**  
A B C D E F G

A : Series  
B : Dimension A x B  
C : Material Lead Free  
D : Lead Free Code  
E : Impedance 121=120Ω  
F : Packaging T=Taping and Reel, B=Bulk(Bags)  
G : Rated Current 30=3000mA

#### ■ Dimensions



| Chip size |            |            |            |           |
|-----------|------------|------------|------------|-----------|
| Size      | A(mm)      | B(mm)      | C(mm)      | D(mm)     |
| 1608      | 1.6 ± 0.15 | 0.8 ± 0.15 | 0.8 ± 0.15 | 0.3 ± 0.2 |
| 2012      | 2.0 ± 0.2  | 1.25 ± 0.2 | 0.85 ± 0.2 | 0.5 ± 0.3 |
| 3216      | 3.2 ± 0.2  | 1.6 ± 0.2  | 1.1 ± 0.2  | 0.5 ± 0.3 |
| 3225      | 3.2 ± 0.2  | 2.5 ± 0.2  | 1.3 ± 0.2  | 0.5 ± 0.3 |
| 4516      | 4.5 ± 0.2  | 1.6 ± 0.2  | 1.6 ± 0.2  | 0.5 ± 0.3 |
| 4532      | 4.5 ± 0.2  | 3.2 ± 0.2  | 1.5 ± 0.2  | 0.5 ± 0.3 |
| 5750      | 5.7 ± 0.2  | 5.0 ± 0.3  | 1.8 ± 0.2  | 0.5 ± 0.3 |

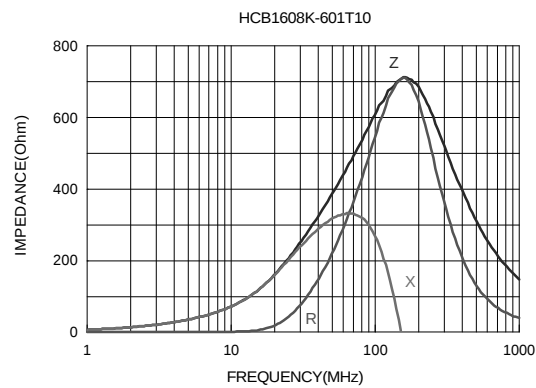
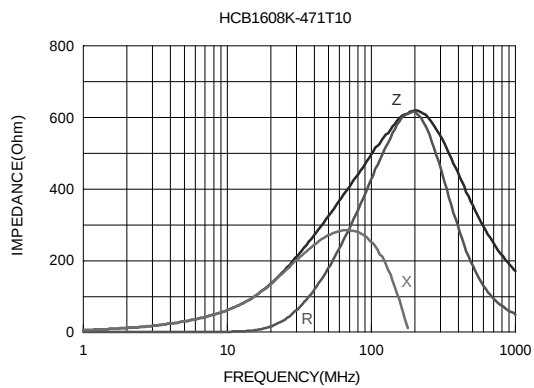
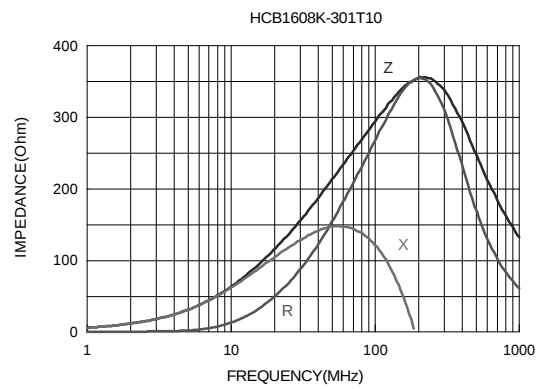
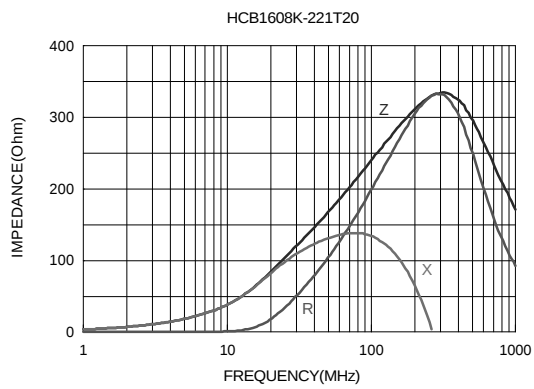
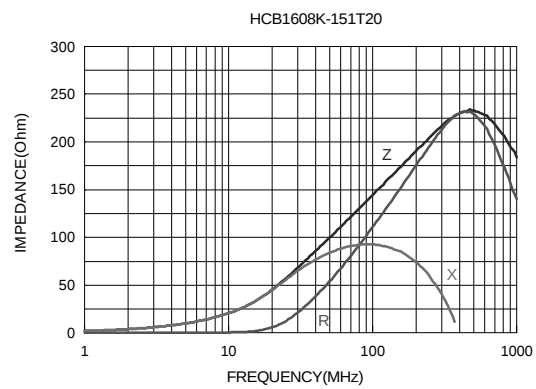
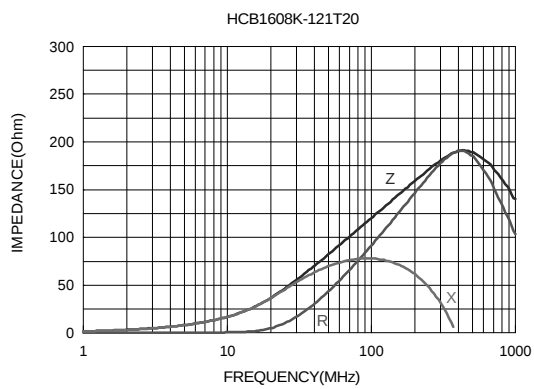
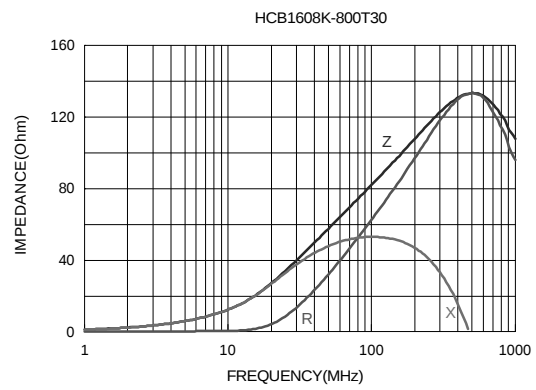
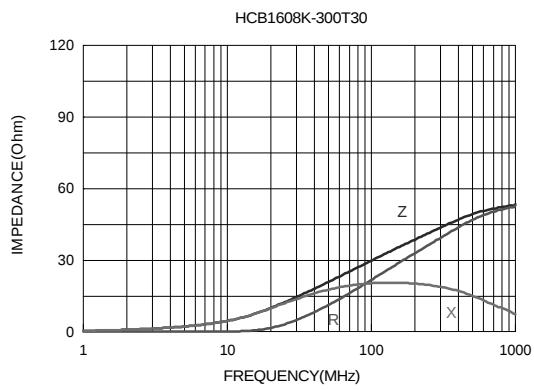
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■ **HC**B Series for IC's Power Line

| Part Number     | Impedance (Ohm) | Test Frequency (MHz) | Rated Current (mA) max. | DCR (Ohm) max. |
|-----------------|-----------------|----------------------|-------------------------|----------------|
| HCB1608K-300T30 | 30 ± 25%        | 100                  | 3000                    | 0.04           |
| HCB1608K-800T30 | 80 ± 25%        | 100                  | 3000                    | 0.04           |
| HCB1608K-121T20 | 120 ± 25%       | 100                  | 2000                    | 0.10           |
| HCB1608K-151T20 | 150 ± 25%       | 100                  | 2000                    | 0.10           |
| HCB1608K-221T20 | 220 ± 25%       | 100                  | 2000                    | 0.10           |
| HCB1608K-301T10 | 300 ± 25%       | 100                  | 1000                    | 0.20           |
| HCB1608K-471T10 | 470 ± 25%       | 100                  | 1000                    | 0.20           |
| HCB1608K-601T10 | 600 ± 25%       | 100                  | 1000                    | 0.20           |
| HCB2012K-300T30 | 30 ± 25%        | 100                  | 3000                    | 0.04           |
| HCB2012K-800T30 | 80 ± 25%        | 100                  | 3000                    | 0.04           |
| HCB2012K-121T20 | 120 ± 25%       | 100                  | 2000                    | 0.10           |
| HCB2012K-151T20 | 150 ± 25%       | 100                  | 2000                    | 0.10           |
| HCB2012K-221T20 | 220 ± 25%       | 100                  | 2000                    | 0.10           |
| HCB2012K-301T10 | 300 ± 25%       | 100                  | 1000                    | 0.20           |
| HCB2012K-471T10 | 470 ± 25%       | 100                  | 1000                    | 0.20           |
| HCB2012K-601T10 | 600 ± 25%       | 100                  | 1000                    | 0.20           |

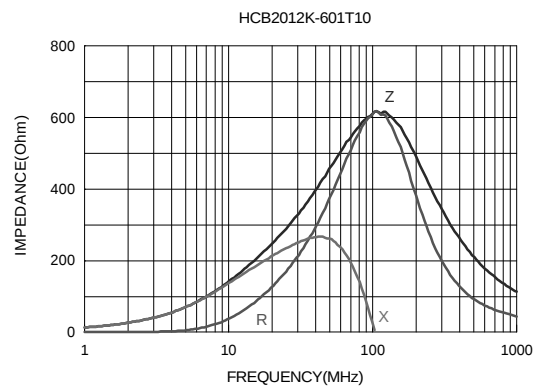
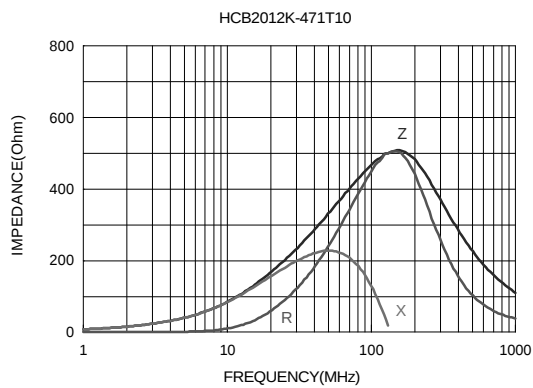
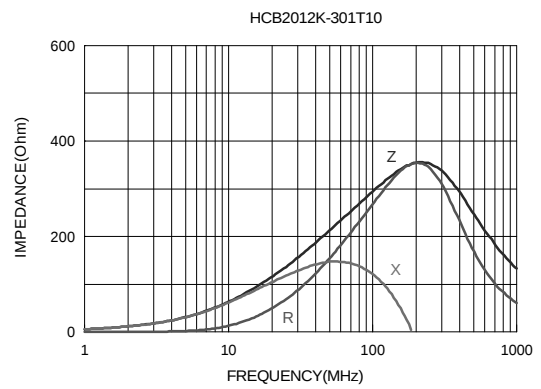
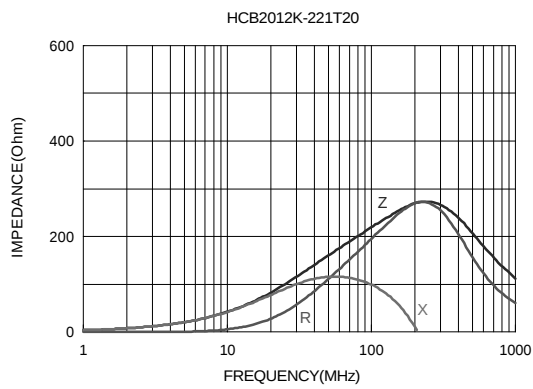
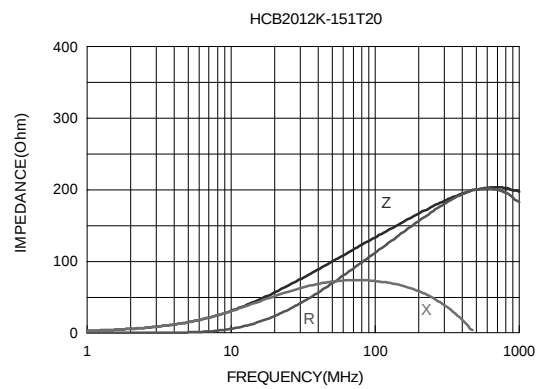
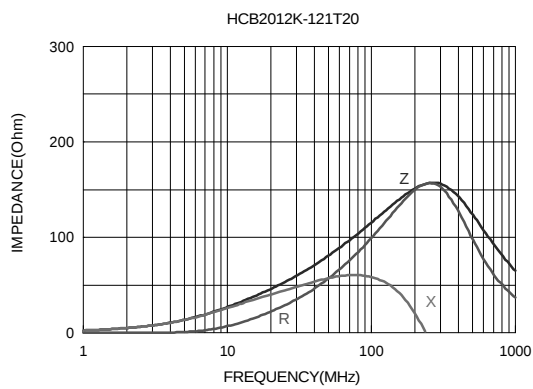
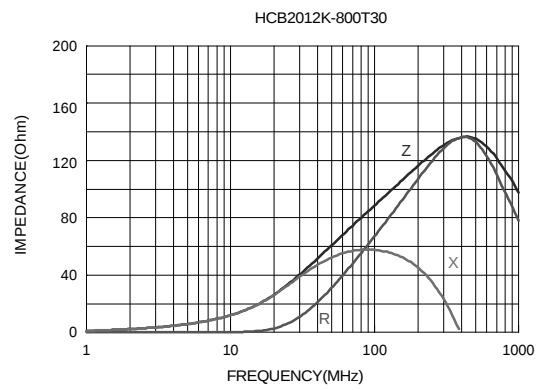
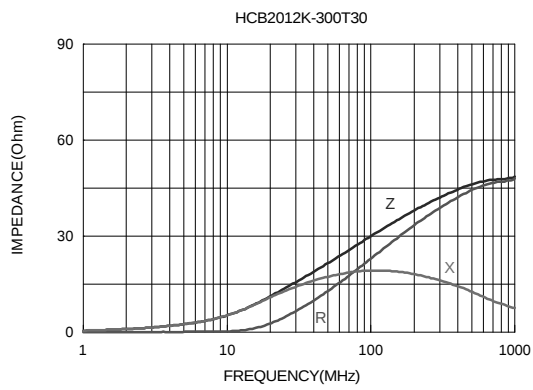
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#### ■ Typical Impedance v.s. Frequency Curve



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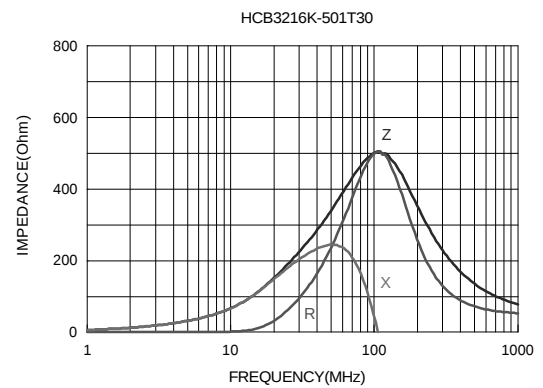
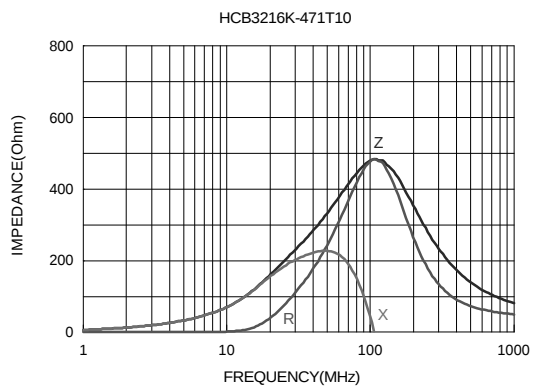
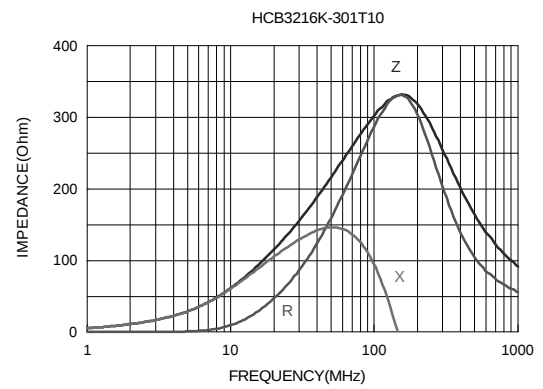
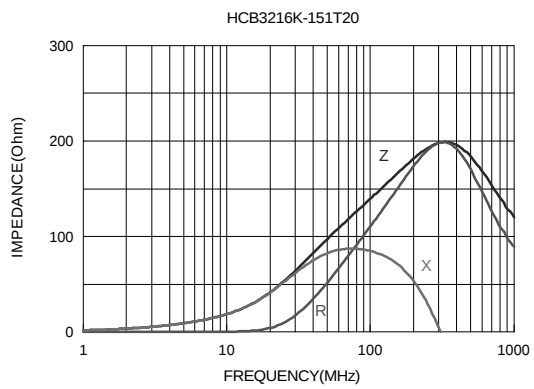
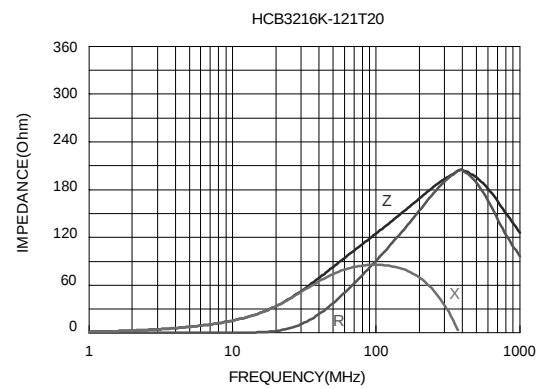
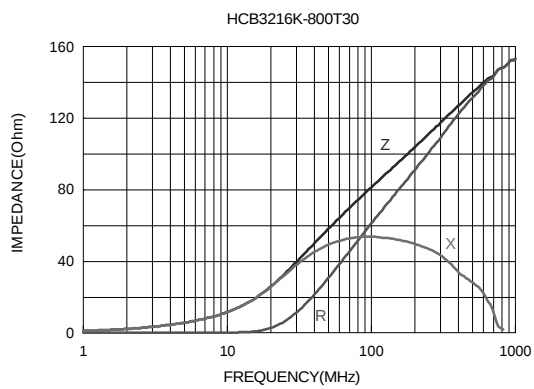
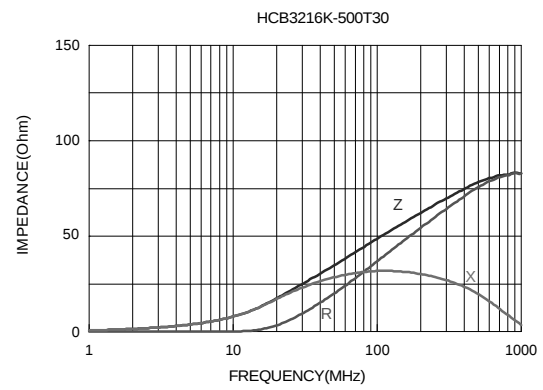
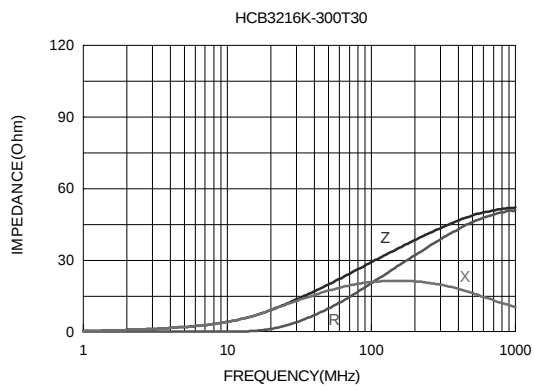
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▪ **HC**B Series for High Current DC Power Lines

| Part Number | Impedance (Ohm) | Test Frequency (MHz) | Rated Current (mA) max. | DCR (Ohm) max. |
|-------------|-----------------|----------------------|-------------------------|----------------|
| HC          | 30 ± 25%        | 100                  | 3000                    | 0.04           |
| HC          | 50 ± 25%        | 100                  | 3000                    | 0.04           |
| HC          | 80 ± 25%        | 100                  | 3000                    | 0.04           |
| HC          | 120 ± 25%       | 100                  | 2000                    | 0.10           |
| HC          | 150 ± 25%       | 100                  | 2000                    | 0.10           |
| HC          | 300 ± 25%       | 100                  | 1000                    | 0.20           |
| HC          | 470 ± 25%       | 100                  | 1000                    | 0.20           |
| HC          | 500 ± 25%       | 100                  | 3000                    | 0.04           |
| HC          | 600 ± 25%       | 100                  | 2000                    | 0.10           |
| HC          | 60 ± 25%        | 100                  | 4000                    | 0.03           |
| HC          | 90 ± 25%        | 100                  | 2000                    | 0.10           |
| HC          | 150 ± 25%       | 100                  | 5000                    | 0.02           |
| HC          | 200 ± 25%       | 100                  | 4000                    | 0.03           |
| HC          | 60 ± 25%        | 100                  | 6000                    | 0.01           |
| HC          | 80 ± 25%        | 100                  | 3000                    | 0.04           |
| HC          | 1000 ± 25%      | 100                  | 1500                    | 0.15           |
| HC          | 80 ± 25%        | 100                  | 6000                    | 0.01           |
| HC          | 130 ± 25%       | 100                  | 3000                    | 0.04           |
| HC          | 150 ± 25%       | 100                  | 5000                    | 0.02           |
| HC          | 680 ± 25%       | 100                  | 4000                    | 0.03           |
| HC          | 1300 ± 25%      | 60                   | 3000                    | 0.06           |
| HC          | 1300 ± 25%      | 100                  | 3000                    | 0.06           |
| HC          | 100 ± 25%       | 100                  | 6000                    | 0.01           |
| HC          | 150 ± 25%       | 100                  | 3000                    | 0.04           |
| HC          | 180 ± 25%       | 100                  | 3000                    | 0.04           |
| HC          | 600 ± 25%       | 100                  | 3000                    | 0.04           |

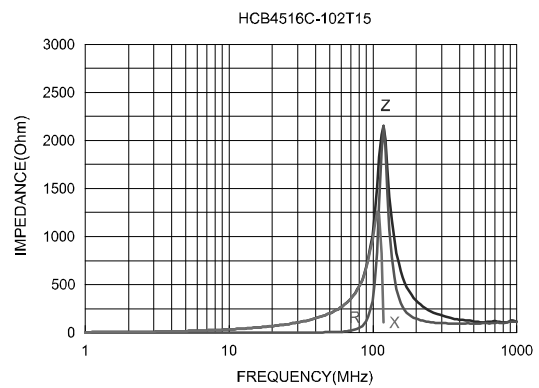
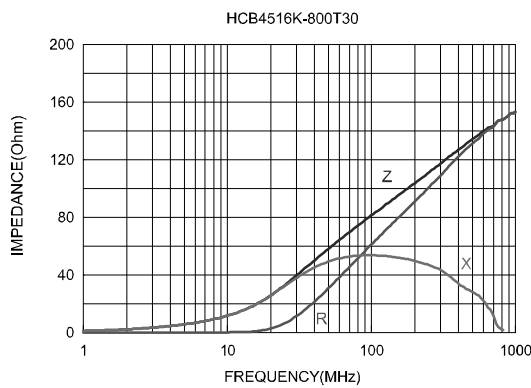
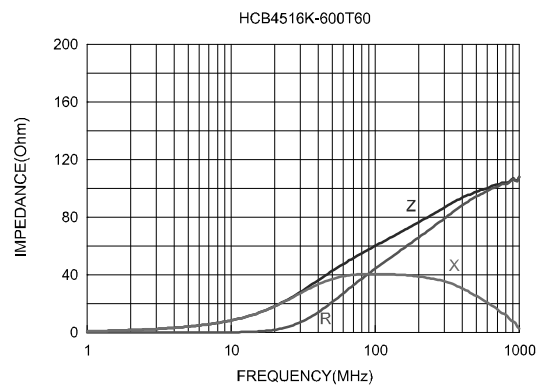
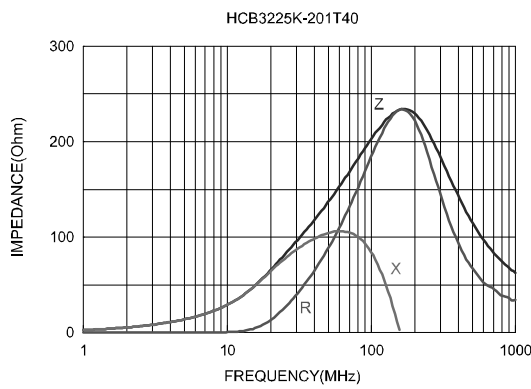
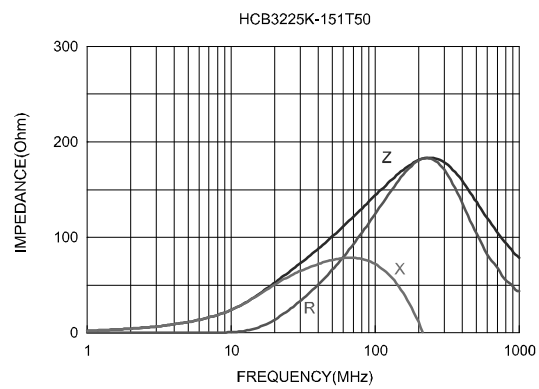
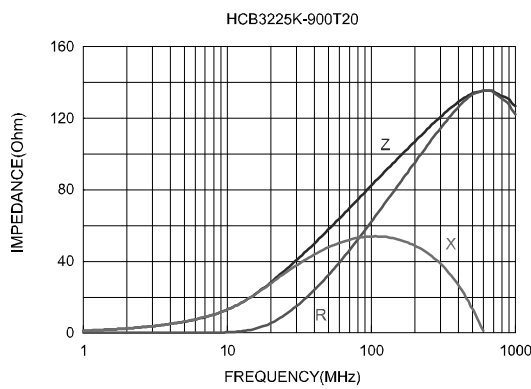
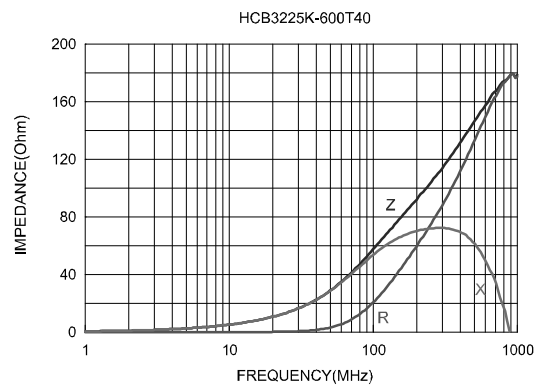
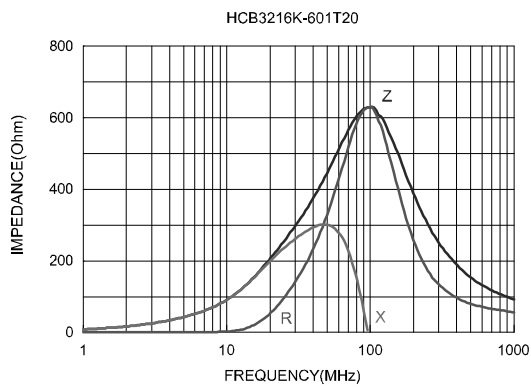
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#### ■ Typical Impedance v.s. Frequency Curve



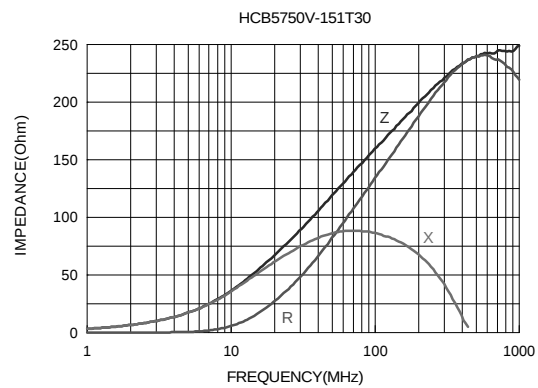
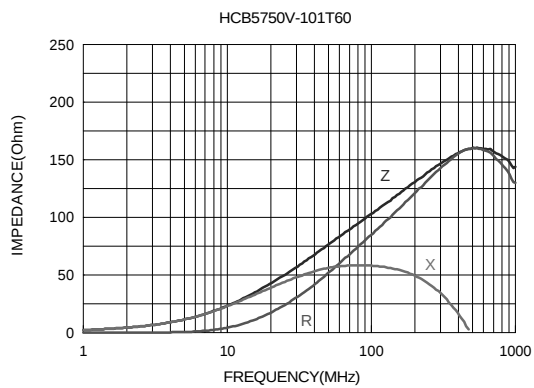
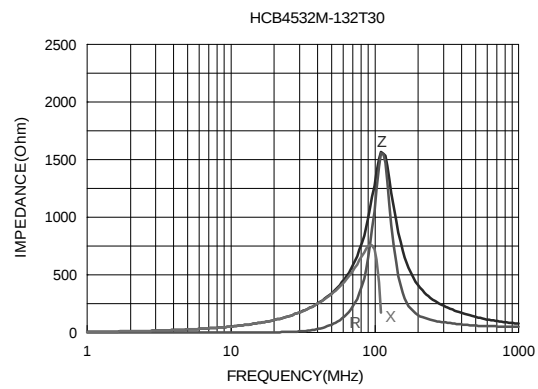
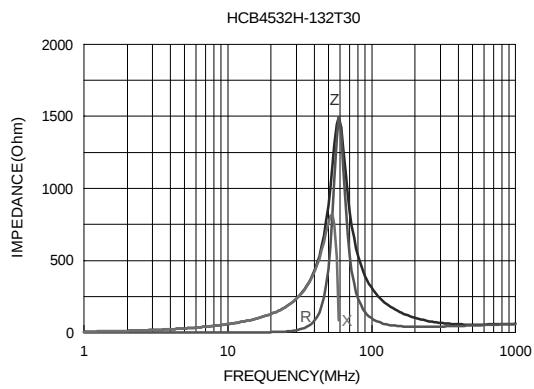
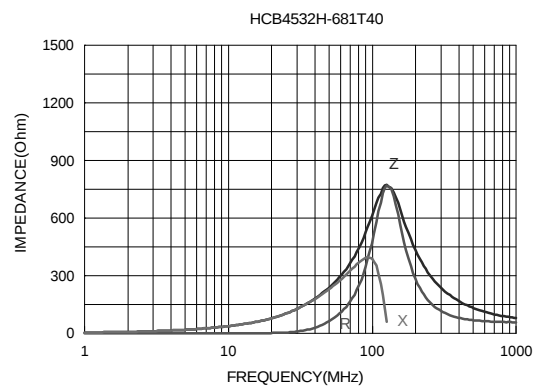
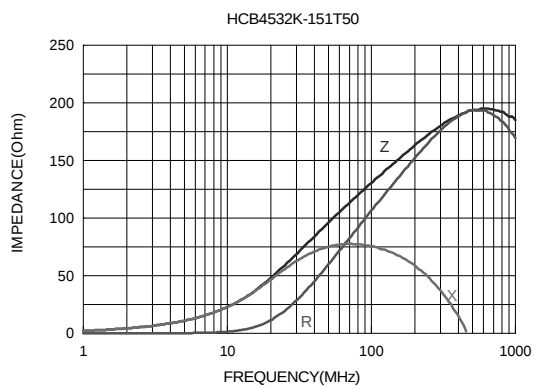
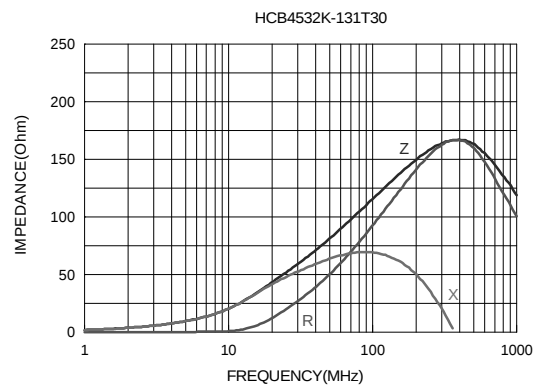
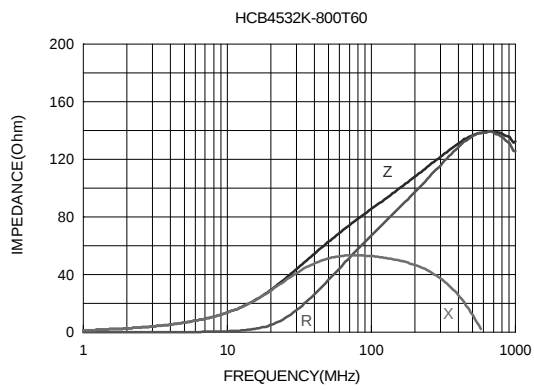
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