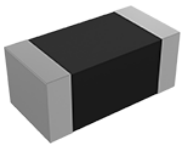
# Multilayer Chip Ferrite Bead – UPZ Series

**Operating Temp. : -55℃~+125℃**



## FEATURES

- Internal silver printed layers and magnetic shielded structures to minimize crosstalk
- Monolithic structure for excellent reliability
- Smaller DC resistance and larger allowable current than PZ seriesCan be used in a wide range of frequency to suppress EM

## APPLICATIONS

- Noise suppression for power lines or large current signal lines of electric equipments, such as communication equipments, computers, A/V equipments, etc

## PRODUCT IDENTIFICATION

| UPZ | 1608 | E | 221 | -2R2 | T | F |
|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

①

| Type | |
|---|---|
| UPZ | Chip Ferrite Bead For Ultra Large Current |

②

| External Dimensions (L×W) (mm) | |
|---|---|
| 0603 [0201] | 0.6×0.3 |
| 1005 [0402] | 1.0×0.5 |
| 1608 [0603] | 1.65×0.8 |
| 2012 [0805] | 2.0×1.25 |

③

| Material Code |
|---|
| G, D, E, U, W |

④

| Nominal Impedance | |
|---|---|
| Example | Nominal Value |
| 300 | 30Ω |
| 221 | 220Ω |
| 102 | 1000Ω |

⑤

| Rated Current | |
|---|---|
| 1R5 | 1.5A |
| 2R2 | 2.2A |

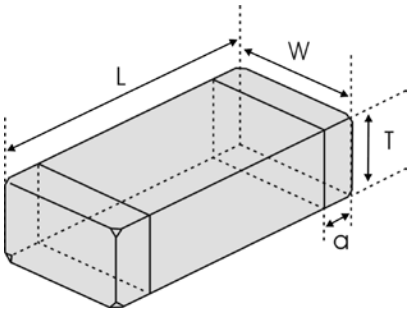
⑥

| Packing | |
|---|---|
| T | Tape & Reel |

⑦

| Hazardous Substance Free Products |
|---|
| F |

## SHAPE AND DIMENSIONS




Unit: mm [inch]

| Type | L | W | T | a |
|---|---|---|---|---|
| UPZ0603 [0201] | 0.6±0.05 [.024±0.002] | 0.3±0.05 [.012±.002] | 0.3±0.05 [.012±.002] | 0.15±0.05 [.006±.002] |
| UPZ1005 [0402] | 1.0±0.15 [.039±.006] | 0.5±0.15 [.020±.006] | 0.5±0.15 [.020±.006] | 0.25±0.1 [.010±.004] |
| UPZ1608 [0603] | 1.65±0.15 [.065±.006] | 0.8±0.15 [.031±.006] | 0.8±0.15 [.031±.006] | 0.3±0.2 [.012±.008] |
| UPZ2012 [0805] | 2.0 (+0.3, -0.1) [.079 (+.012, -.004)] | 1.25±0.2 [.049±.008] | 0.85±0.2 [.033±.008] | 0.5±0.3 [.020±.012] |

## SPECIFICATIONS

UPZ0603 TYPE

| Part Number | Impedance | Z Test Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|---|---|---|---|---|---|
| Units | Ω | MHz | mΩ | mA | mm [inch] |
| Symbol | Z | Freq. | DCR | Ir | T |
| UPZ0603U220-1R8TF | 22±25% | 100 | 40 | 1800 | 0.3±0.05 [.012±.002] |
| UPZ0603U330-1R5TF | 33±25% | 100 | 55 | 1500 | |
| UPZ0603U470-1R0TF | 47±25% | 100 | 120 | 1000 | |
| UPZ0603U800-1R0TF | 80±25% | 100 | 130 | 1000 | |
| UPZ0603U121-R90TF | 120±25% | 100 | 160 | 900 | |

UPZ1005 TYPE

| Part Number | Impedance | Z Test Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|---|---|---|---|---|---|
| Units | Ω | MHz | mΩ | mA | mm [inch] |
| Symbol | Z | Freq. | DCR | Ir | T |
| UPZ1005D100-2R0TF | 0~30 | 100 | 45 | 2000 | 0.5±0.15 [.020±.006] |
| UPZ1005D300-1R7TF | 30±25% | 100 | 50 | 1700 | |
| UPZ1005D300-2R2TF | 30±25% | 100 | 35 | 2200 | |
| UPZ1005D600-1R5TF | 60±25% | 100 | 75 | 1500 | |
| UPZ1005D800-1R5TF | 80±25% | 100 | 70 | 1500 | |
| UPZ1005D121-1R3TF | 120±25% | 100 | 90 | 1300 | |
| UPZ1005D221-R90TF | 220±25% | 100 | 160 | 900 | |

UPZ1608 TYPE

| Part Number | Impedance | Z Test Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|---|---|---|---|---|---|
| Units | Ω | MHz | mΩ | mA | mm [inch] |
| Symbol | Z | Freq. | DCR | Ir | T |
| UPZ1608G300-1R8TF | 30±25% | 100 | 60 | 1800 | 0.8±0.15 [.031±.006] |
| UPZ1608G600-1R2TF | 60±25% | 100 | 100 | 1200 | |
| UPZ1608G101-1R0TF | 100±25% | 100 | 150 | 1000 | |
| UPZ1608U220-6R0TF | 22±25% | 100 | 10 | 6000 | |
| UPZ1608U280-6R0TF | 28±25% | 100 | 10 | 6000 | |
| UPZ1608U700-4R0TF | 70±25% | 100 | 20 | 4000 | |
| UPZ1608U221-2R2TF | 220±25% | 100 | 50 | 2200 | |
| UPZ1608U331-1R5TF | 330±25% | 100 | 70 | 1500 | |
| UPZ1608U391-1R5TF | 390±25% | 100 | 120 | 1500 | |
| UPZ1608U471-1R5TF | 470±25% | 100 | 120 | 1500 | |
| UPZ1608U601-1R3TF | 600±25% | 100 | 150 | 1300 | |
| UPZ1608E300-5R0TF | 30±25% | 100 | 10 | 5000 | |
| UPZ1608E600-3R5TF | 60±25% | 100 | 20 | 3500 | |
| UPZ1608E101-3R0TF | 100±25% | 100 | 30 | 3000 | |
| UPZ1608E181-2R2TF | 180±25% | 100 | 50 | 2200 | |
| UPZ1608E221-2R2TF | 220±25% | 100 | 50 | 2200 | |
| UPZ1608E331-1R7TF | 330±25% | 100 | 80 | 1700 | |
| UPZ1608E601-1R0TF | 600±25% | 100 | 150 | 1000 | |
| UPZ1608W260-6R0TF | 26±25% | 100 | 7 | 6000 | |

## SPECIFICATIONS

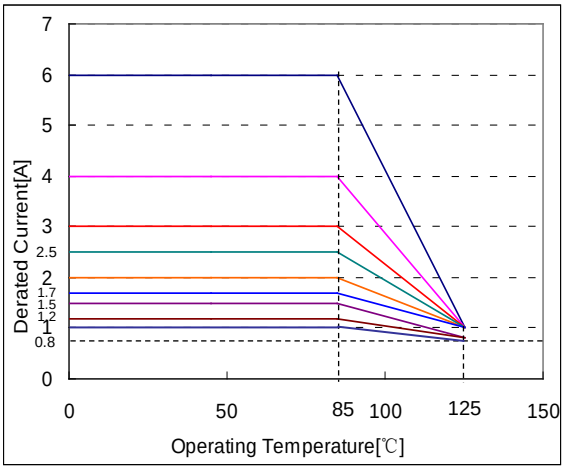
UPZ2012 TYPE

| Part Number | Impedance | Z Test Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|---|---|---|---|---|---|
| Units | Ω | MHz | mΩ | mA | mm [inch] |
| Symbol | Z | Freq. | DCR | Ir | T |
| UPZ2012D220-6R0TF | 22±25% | 100 | 10 | 6000 | 0.85±0.2 [.033±.008] |
| UPZ2012D800-4R0TF | 80±25% | 100 | 20 | 4000 | |
| UPZ2012U220-6R0TF | 22±25% | 100 | 10 | 6000 | |
| UPZ2012U300-6R0TF | 30±25% | 100 | 10 | 6000 | |
| UPZ2012U600-4R0TF | 60±25% | 100 | 20 | 4000 | |
| UPZ2012U221-3R0TF | 220±25% | 100 | 40 | 3000 | |
| UPZ2012E300-6R0TF | 30±25% | 100 | 10 | 6000 | |
| UPZ2012E121-4R0TF | 120±25% | 100 | 20 | 4000 | |
| UPZ2012E221-3R0TF | 220±25% | 100 | 40 | 3000 | |
| UPZ2012E331-2R5TF | 330±25% | 100 | 50 | 2500 | |
| UPZ2012E601-2R0TF | 600±25% | 100 | 90 | 2000 | |
| UPZ2012E102-1R5TF | 1000±25% | 100 | 120 | 1500 | |

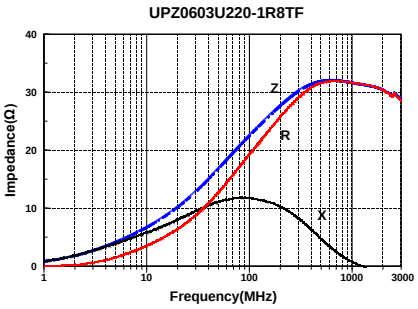
## DETAIL ELECTRICAL CHARACTERISTICS

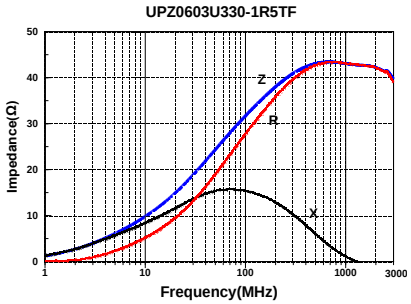
### Rated Current

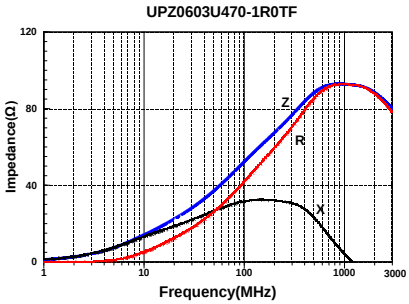
When operating temperatures exceed +85℃, derating of current is necessary for chip ferrite beads for which rated current is 1000mA and over. Please apply the derating curve shown in chart according to the operating temperature.

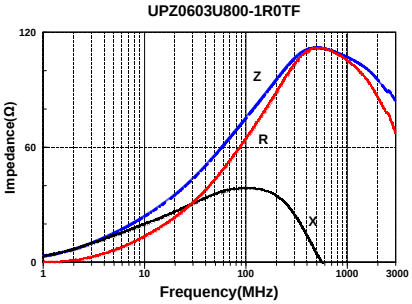


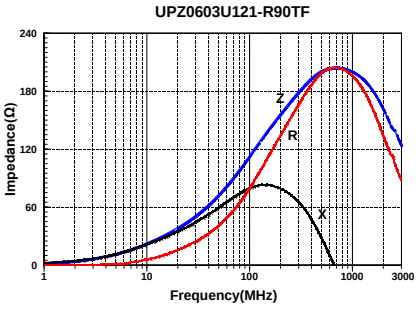

UPZ0603 TYPE



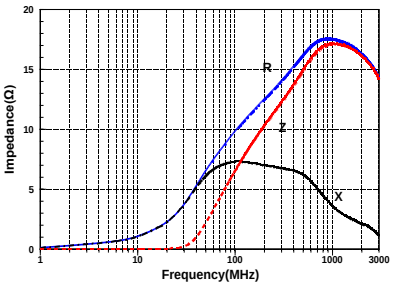



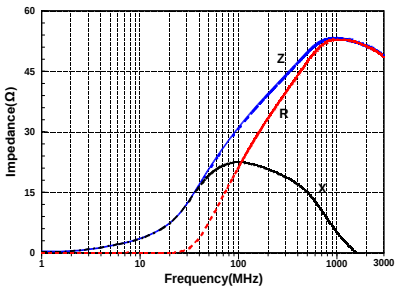
# DETAIL ELECTRICAL CHARACTERISTICS

## UPZ1005 TYPE

UPZ1005D100-2R0TF




UPZ1005D300-1R7TF

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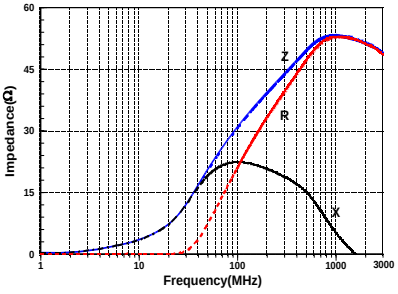
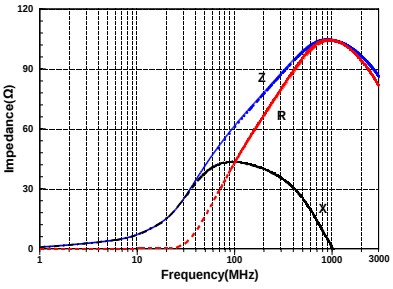
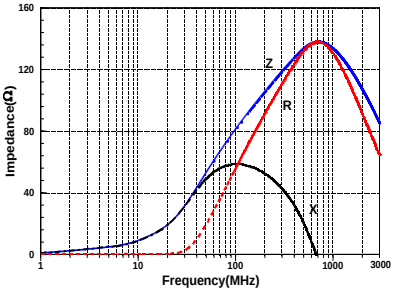


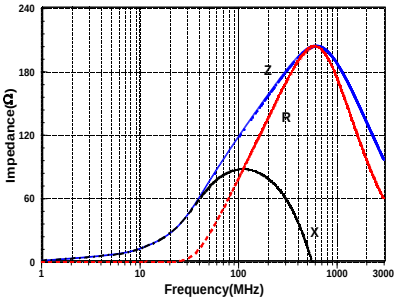

UPZ1005D600-1R5TF



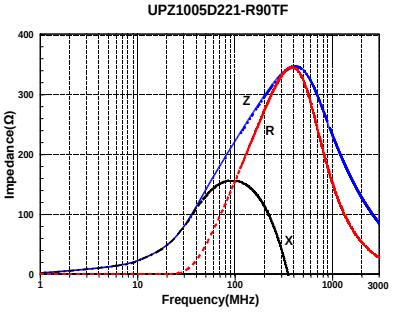

UPZ1005D800-1R5TF




UPZ1005D121-1R3TF

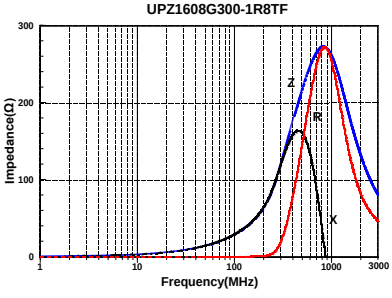



UPZ1005D221-R90TF

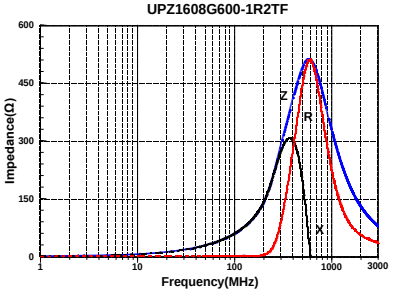



## UPZ1608 TYPE

UPZ1608G300-1R8TF




UPZ1608G600-1R2TF

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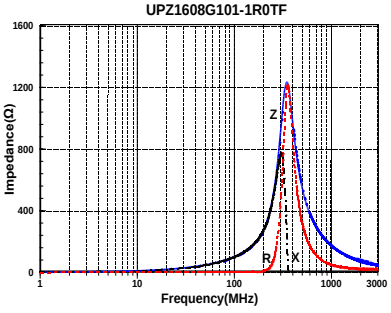
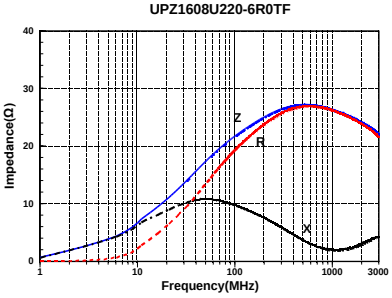
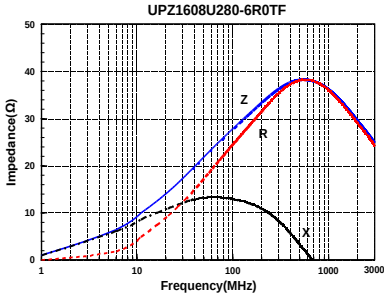



UPZ1608U220-6R0TF




UPZ1608U280-6R0TF

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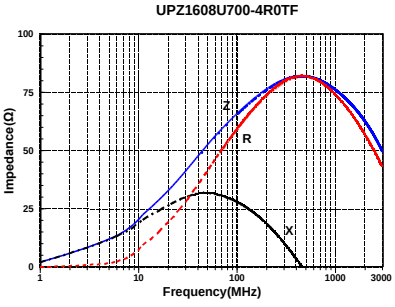
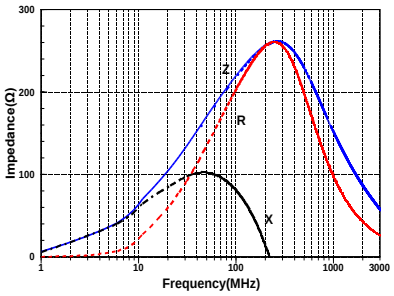


# DETAIL ELECTRICAL CHARACTERISTICS

UPZ1608 TYPE

UPZ1608U221-2R2TF

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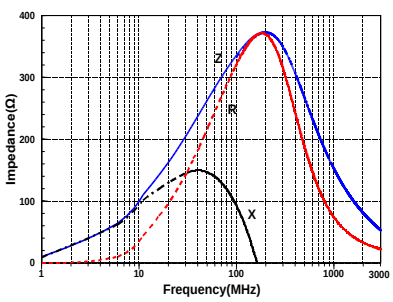


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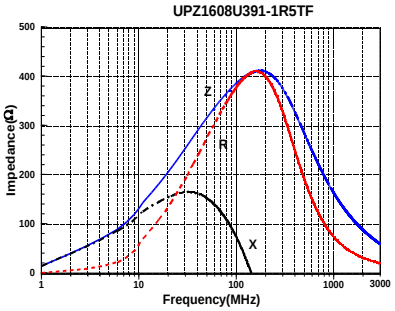


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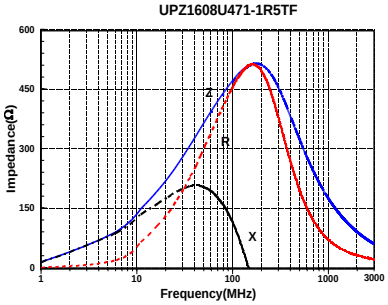


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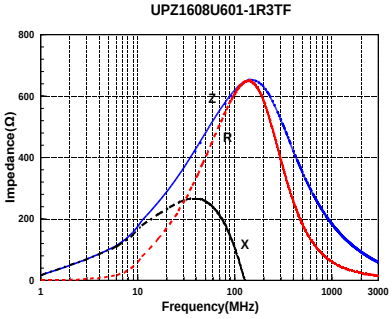
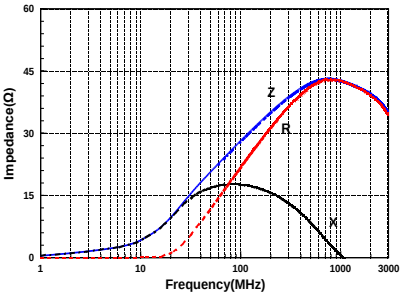



UPZ1608E300-5R0TF

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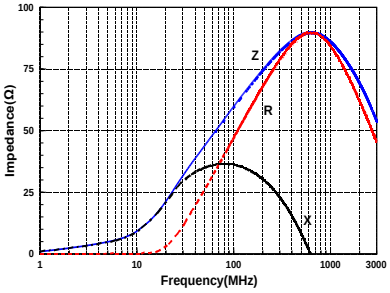
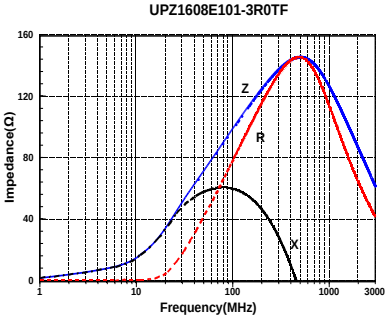



UPZ1608E101-3R0TF

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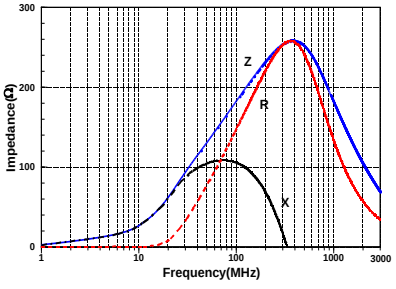
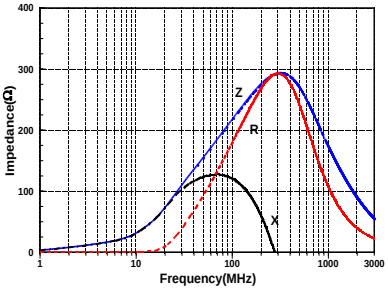



UPZ1608E221-2R2TF

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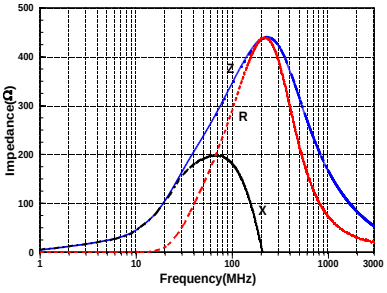


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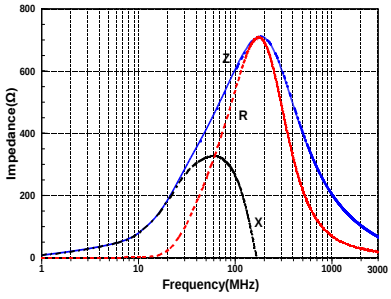
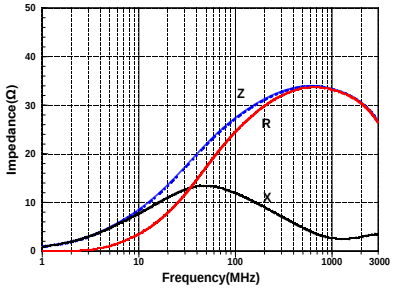


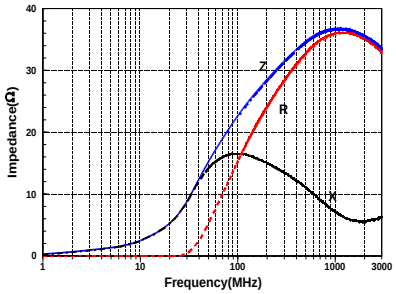

UPZ1608W260-6R0TF



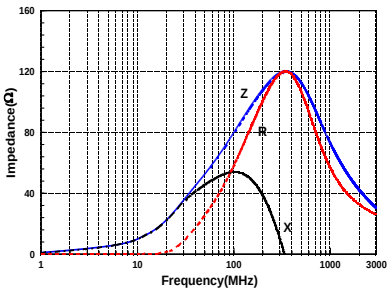
# DETAIL ELECTRICAL CHARACTERISTICS

## UPZ2012 TYPE

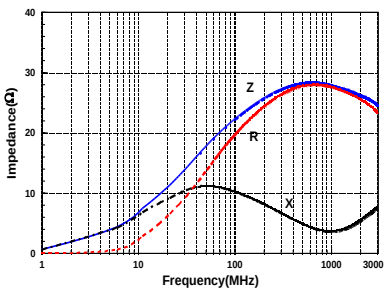
UPZ2012D220-6R0TF




UPZ2012D800-4R0TF




UPZ2012U220-6R0TF

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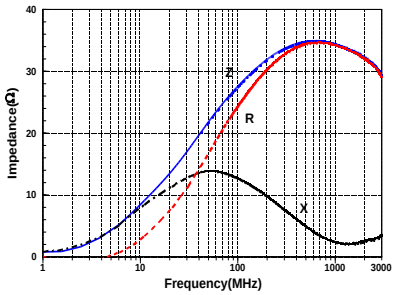


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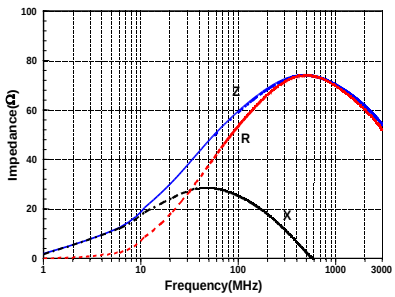


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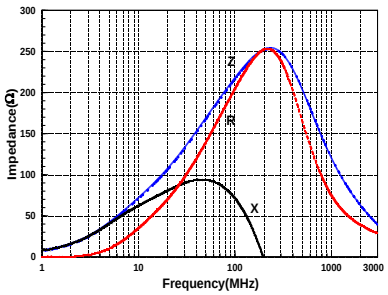
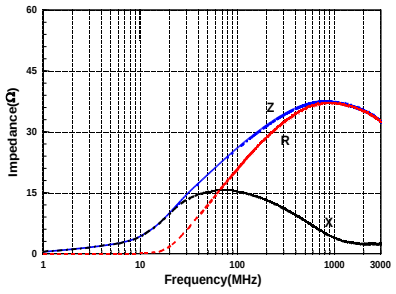



UPZ2012E300-6R0TF

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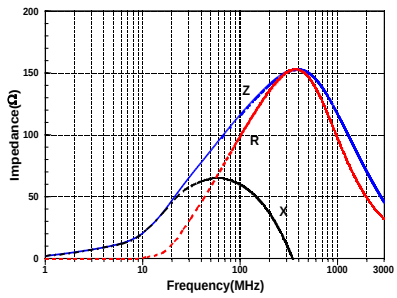


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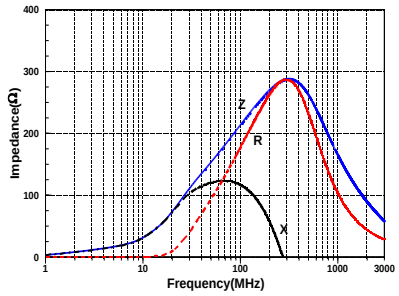


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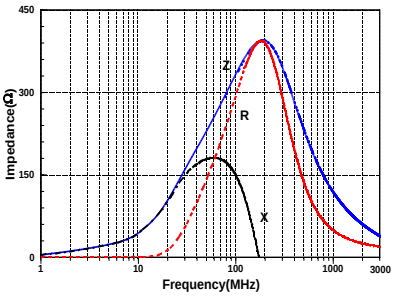


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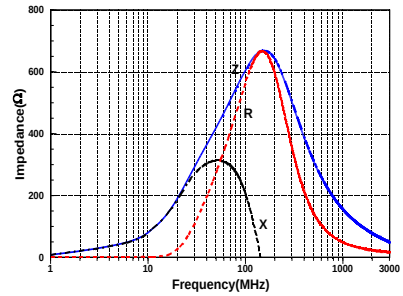


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