1. Measure ceramic capacitor 1 nF and 10 nF
2. Make an excel plot of |Z| and ϕ for both capacitors.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| f(Hz) | 1k | 10k | 100k | 200k | 500k | 1M | 2M | 5M | 1M | 2M | 5M | 10M | 20M | 50M |
| R1 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X1 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| R2 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X2 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Find resonance (R1, X1): frez =

R1 =

X1 =

Find resonance (R2, X2): frez =

R2 =

X2 =

1. Measure ceramic capacitor 1 nF and foil capacitor 1 nF
2. Make an excel plot of |Z| and ϕ for both capacitors.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| f(Hz) | 1k | 10k | 100k | 200k | 500k | 1M | 2M | 5M | 1M | 2M | 5M | 10M | 20M | 50M |
| R1 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X1 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| R2 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X2 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Find resonance (R1, X1): frez =

R1 =

X1 =

Find resonance (R2, X2): frez =

R2 =

X2 =

1. Measure ceramic capacitor 10 nF and foil capacitor 1 nF
2. Make an excel plot of |Z| and ϕ for both capacitors.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| f(Hz) | 1k | 10k | 100k | 200k | 500k | 1M | 2M | 5M | 1M | 2M | 5M | 10M | 20M | 50M |
| R1 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X1 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| R2 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X2 (Ω) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Find resonance (R1, X1): frez =

R1 =

X1 =

Find resonance (R2, X2): frez =

R2 =

X2 =