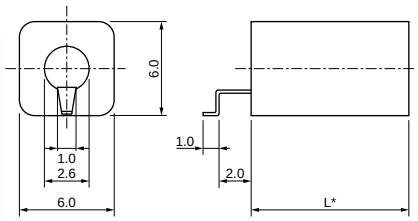
# Dielectric Resonators (RESOMICS®)

## Dielectric Resonator K Series (DRR Copper Plated Type)

■ Features

1. TEM mode resonators plated with copper have the lower price those plated than with silver.
2. Excellent Solderability.
3. High dielectric constant : Er=92.
4. These resonators cover wide range of resonant frequency (by 10MHz step)
5. Please consult our sales representatives or engineers as regards the products of other frequency.

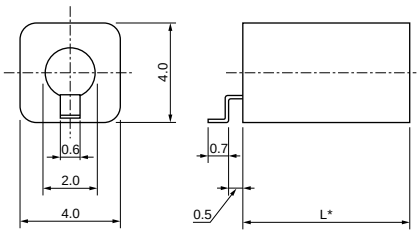
DRR060 Type




* Dimension L can be calculated by the following, using dielectric constant and resonant frequency.
$L \fallingdotseq 3 \times 10^{11}/(n\sqrt{\varepsilon r} \cdot f0)$ (f0 : Hz)
λ / 4 TEM mode : n=4 λ / 2 TEM mode : n=2

(in mm)

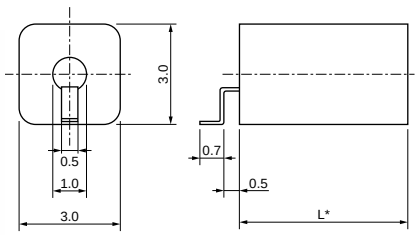
DRR040 Type




* Dimension L can be calculated by the following, using dielectric constant and resonant frequency.
$L \fallingdotseq 3 \times 10^{11}/(n\sqrt{\varepsilon r} \cdot f0)$ (f0 : Hz)
λ / 4 TEM mode : n=4 λ / 2 TEM mode : n=2

(in mm)

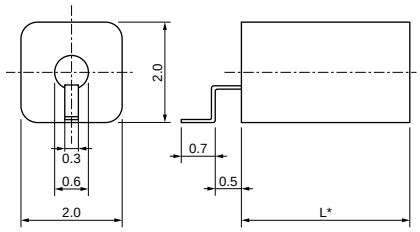
DRR030 Type




* Dimension L can be calculated by the following, using dielectric constant and resonant frequency.
$L \fallingdotseq 3 \times 10^{11}/(n\sqrt{\varepsilon r} \cdot f0)$ (f0 : Hz)
λ / 4 TEM mode : n=4 λ / 2 TEM mode : n=2

(in mm)

DRR020 Type




* Dimension L can be calculated by the following, using dielectric constant and resonant frequency.
$L \fallingdotseq 3 \times 10^{11}/(n\sqrt{\varepsilon r} \cdot f0)$ (f0 : Hz)
λ / 4 TEM mode : n=4 λ / 2 TEM mode : n=2

(in mm)

| Part Number | f0 (MHz) | Unloaded Q (min) | Wavelength | Za (ohm) |
|---|---|---|---|---|
| **DRR060□□□□□KTC00T** | 440 to 490 | 330 | Lambda/4 | 5.7 (Nominal Value) |
| **DRR060□□□□□KTC00T** | 500 to 790 | 350 | Lambda/4 | 5.7 (Nominal Value) |
| **DRR060□□□□□KTC00T** | 800 to 1300 | 400 | Lambda/4 | 5.7 (Nominal Value) |
| **DRR060□□□□□KPC00T** | 1000 to 1690 | 470 | Lambda/2 | 5.7 (Nominal Value) |
| **DRR060□□□□□KPC00T** | 1700 to 2200 | 510 | Lambda/2 | 5.7 (Nominal Value) |
| **DRR040□□□□□KTC00R** | 500 to 540 | 200 | Lambda/4 | 4.8 (Nominal Value) |
| **DRR040□□□□□KTC00R** | 550 to 640 | 220 | Lambda/4 | 4.8 (Nominal Value) |
| **DRR040□□□□□KTC00R** | 650 to 790 | 240 | Lambda/4 | 4.8 (Nominal Value) |
| **DRR040□□□□□KTC00R** | 800 to 890 | 260 | Lambda/4 | 4.8 (Nominal Value) |
| **DRR040□□□□□KTC00R** | 900 to 1490 | 270 | Lambda/4 | 4.8 (Nominal Value) |
| **DRR040□□□□□KTC00R** | 1500 to 1800 | 290 | Lambda/4 | 4.8 (Nominal Value) |
| **DRR040□□□□□KPC00R** | 1000 to 1390 | 300 | Lambda/2 | 4.8 (Nominal Value) |

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| Part Number | f0 (MHz) | Unloaded Q (min) | Wavelength | Za (ohm) |
|---|---|---|---|---|
| **DRR040□□□□□KPC00R** | 1400 to 1890 | 340 | Lambda/2 | 4.8 (Nominal Value) |
| **DRR040□□□□□KPC00R** | 1900 to 3000 | 370 | Lambda/2 | 4.8 (Nominal Value) |
| **DRR030□□□□□KTC00R** | 900 to 1490 | 230 | Lambda/4 | 7.4 (Nominal Value) |
| **DRR030□□□□□KTC00R** | 1500 to 1600 | 250 | Lambda/4 | 7.4 (Nominal Value) |
| **DRR020□□□□□KTC00R** | 900 to 1590 | 150 | Lambda/4 | 8.0 (Nominal Value) |
| **DRR020□□□□□KTC00R** | 1600 to 2600 | 190 | Lambda/4 | 8.0 (Nominal Value) |

Dielectric Constant : 92+-1
Temperature coefficient of resonant frequency : 3+-2ppm/°C
Tolerance of resonant frequency : +-0.7% (Please contact our sales representatives)
Unloaded Q value depends on lower limit of frequency range.
Five bland columns are filled with Nominal Center Frequency codes. Please see Part Numbering for details.

## ■ Minimum Quantity of Taping

DRR020 Type : 2500pcs./phi 330mm Reel
DRR030 Type : 2000pcs./phi 330mm Reel
DRR040 Type : 1500pcs./phi 330mm Reel