# RQL Series

Features

- 105℃, 10,000 hours assured
- 10φ ~ 18φ with large permissible ripple current
- Slim type included
- RoHS Compliance

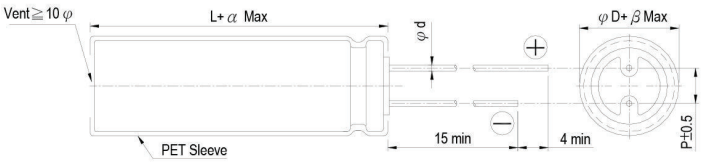


Sleeve & Marking Color: Black & Golden

## Specifications

| Items | Performance | | |
|---|---|---|---|
| Category Temperature Range | 400V | 420 ~ 450V | |
| | -40℃ ~ +105℃ | -25℃ ~ +105℃ | |
| Capacitance Tolerance | ±20% | | (at 120Hz, 20℃) |
| Leakage Current (at 20℃) | Time: after 5 minutes<br>Leakage Current: CV ≦ 1,000 I = 0.03CV + 15(μA); CV > 1,000 I = 0.02CV + 25(μA)<br>Where, C = rated capacitance in μF V = rated DC working voltage in V | | |
| Tanδ (at 120Hz, 20℃) | Rated Voltage: 400 / 420 / 450<br>Tanδ (max): 0.24 / 0.24 / 0.24 | | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio shall not exceed the values given in the table below.<br>Rated Voltage: 400 / 420 / 450<br>Impedance Ratio Z(-25℃)/Z(+20℃): 5 / 6 / 6<br>Impedance Ratio Z(-40℃)/Z(+20℃): 6 / - / - | | |
| Endurance | Test Time: 10,000 Hrs<br>Capacitance Change: Within ±20% of initial value<br>Tanδ: Less than 200% of specified value<br>Leakage Current: Within specified value<br>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 10,000 hours at 105°C. | | |
| Shelf Life Test | Test Time: 1,000 Hrs<br>Capacitance Change: With in ±20% of initial value<br>Tanδ: Less than 200% of specified value<br>Leakage Current: Within specified value<br>* The above Specifications shall be satisfied when the capacitors are restored to 20° C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1). | | |
| Ripple Current & Frequency Multipliers | Frequency (Hz): 60 / 120 / 500 / 1k / 10k up<br>Multipliers: 0.80 / 1.00 / 1.25 / 1.40 / 1.50 | | |

## Diagram of Dimensions




Lead Spacing and Diameter

| φD | 10 | 12.5 | 16 | 18 |
|---|---|---|---|---|
| P | 5.0 | 5.0 | 7.5 | 7.5 |
| φd | 0.6 | | 0.8 | |
| α | 2.0 | | | |
| β | 0.5 | | | |

Unit: mm

## Dimension & Permissible Ripple Current

Dimension: ϕD × L(mm)
Ripple Current: mA/rms at 105°C

| V. DC | Cap. (μF) | 10ϕ | | | 12.5ϕ | | | 16ϕ | | | 18ϕ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ϕD×L | Ripple Current | | ϕD×L | Ripple Current | | ϕD×L | Ripple Current | | ϕD×L | Ripple Current | |
| | | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz |
| 400V (2G) | 33 | 10×40 | 315 | 475 | | | | | | | | | |
| | 39 | 10×45 | 360 | 545 | | | | | | | | | |
| | 47 | 10×50 | 420 | 630 | 12.5×30 | 440 | 660 | | | | | | |
| | 56 | | | | 12.5×35 | 500 | 750 | | | | | | |
| | 68 | | | | 12.5×40 | 580 | 870 | 16×31.5 | 530 | 795 | | | |
| | 82 | | | | 12.5×50 | 625 | 935 | 16×35.5 | 615 | 920 | | | |
| | 100 | | | | | | | 16×40 | 715 | 1,070 | | | |
| | 120 | | | | | | | 16×40 | 800 | 1,200 | 18×35.5<br>18×40 | 790<br>870 | 1,185<br>1,305 |
| | 150 | | | | | | | 16×45 | 915 | 1,375 | 18×45 | 985 | 1,475 |
| | 180 | | | | | | | | | | 18×50 | 1,120 | 1,685 |
| 420V (2P) | 33 | 10×40 | 370 | 555 | | | | | | | | | |
| | 39 | 10×45 | 410 | 615 | 12.5×30 | 390 | 585 | | | | | | |
| | 47 | 10×50 | 465 | 700 | 12.5×35 | 450 | 675 | | | | | | |
| | 56 | | | | 12.5×40 | 520 | 780 | 16×31.5 | 500 | 750 | | | |
| | 68 | | | | 12.5×45 | 580 | 870 | 16×35.5 | 580 | 870 | | | |
| | 82 | | | | 12.5×50 | 660 | 990 | 16×35.5<br>16×40 | 730<br>675 | 1,095<br>1,010 | | | |
| | 100 | | | | | | | 16×40<br>16×45 | 750<br>755 | 1,125<br>1,130 | 18×35.5 | 725 | 1,085 |
| | 120 | | | | | | | | | | 18×40<br>18×45 | 835<br>880 | 1,250<br>1,320 |
| | 150 | | | | | | | | | | 18×50 | 1,030 | 1,550 |
| 450V (2W) | 33 | 10×45 | 330 | 495 | 12.5×30 | 370 | 555 | | | | | | |
| | 39 | 10×50 | 380 | 570 | 12.5×35 | 420 | 630 | | | | | | |
| | 47 | | | | 12.5×40 | 480 | 720 | | | | | | |
| | 53 | | | | 12.5×45 | 500 | 750 | | | | | | |
| | 56 | | | | 12.5×45 | 530 | 795 | 16×31.5 | 510 | 765 | | | |
| | 68 | | | | 12.5×50 | 620 | 930 | 16×35.5 | 590 | 885 | | | |
| | 82 | | | | | | | 16×40 | 615 | 920 | 18×35.5 | 645 | 965 |
| | 100 | | | | | | | 16×45 | 715 | 1,070 | 18×40 | 750 | 1,125 |
| | 120 | | | | | | | | | | 18×45 | 835 | 1,250 |
| | 150 | | | | | | | | | | 18×50 | 975 | 1,465 |

Remark: Other sizes and specification are available, please contact us for detail.

## Part Numbering System

| RQL series | 39μF | ±20% | 450V | Bulk Package | Gas Type | 10ϕ×50L | Pb-free and PET coating case |
|---|---|---|---|---|---|---|---|
| **RQL** | **390** | **M** | **2W** | **BK** | **-** | **1050** | |
| Series | Capacitance | Capacitance Tolerance | Rated Voltage | Lead Configuration & Package | Rubber Type | Case Size | Lead Wire and Coating Type |

Note: For more details, please refer to “Part Numbering System (Radial Type)” on page 10.



All product specifications in the catalog are subject to change without notice. (CAT. 2014E1)