# PLX

Radial Lead Type, Long Life Assurance

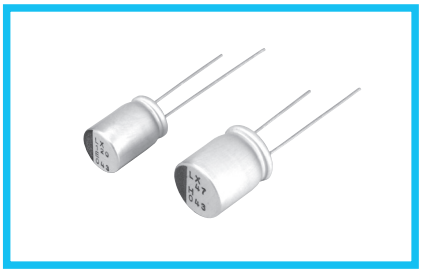
High Ripple Current | Low Impedance | For High Frequency | Long Life | Anti-Solvent Feature

- High reliability, High voltage (to 50V).
- Low ESR, High ripple current.
- Long life of 3000 hours at 125°C.
- Radial lead type:
  Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

PLX

Higher Temperature

PLV

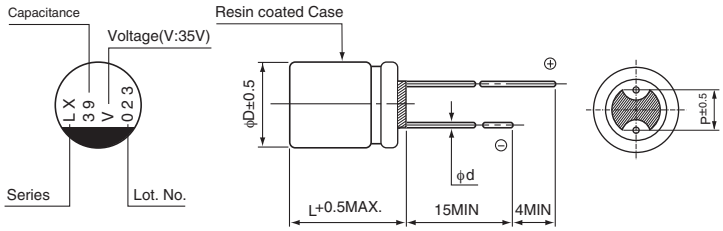


## ■Specifications

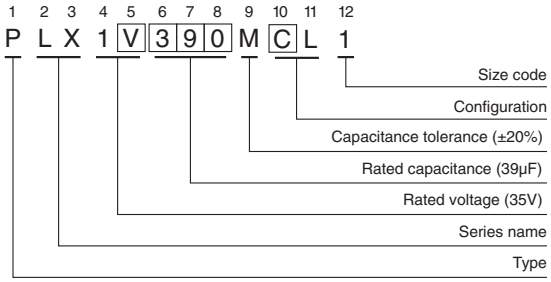
| Item | Performance Characteristics |
|---|---|
| Category Temperature Range | −55 to +125°C |
| Rated Voltage Range | 16 to 50V |
| Rated Capacitance Range | 22 to 390μF |
| Capacitance Tolerance | ±20% at 120Hz, 20°C |
| Tangent of loss angle (tan δ) | Less than or equal to the specified value at 120Hz, 20°C |
| ESR (※1) | Less than or equal to the specified value at 100kHz, 20°C |
| Leakage Current (※2) | Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C |
| Temperature Characteristics (Max.Impedance Ratio) | Z+125°C / Z+20°C ≦ 1.25 (100kHz)<br>Z−55°C / Z+20°C ≦ 1.25 |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 3000 hours at 125°C.<br>Capacitance change: Within ± 20% of initial value (※3)<br>tan δ: 150% or less of the initial specified value<br>ESR (※1): 150% or less of the initial specified value<br>Leakage current (※2): Less than or equal to the initial specified value |
| Damp Heat (Steady State) | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 60°C, 90% RH.<br>Capacitance change: Within ± 20% of initial value (※3)<br>tan δ: 150% or less of the initial specified value<br>ESR (※1): 150% or less of the initial specified value<br>Leakage current (※2): Less than or equal to the initial specified value |
| Resistance to Soldering Heat | After soldering the capacitor under the soldering conditions prescribed here as preheat at 150 to 200°C for 60 to 180 seconds and peak temperature at 265°C for 10 seconds or less, the capacitor shall meet the specifications listed at right, provided that its temperature profile is measured at both of terminal ends facing the soldering side.<br>Capacitance change: Within ± 10% of the initial capacitance value (※3)<br>tan δ: 130% or less than the initial specified value<br>ESR (※1): 130% or less than the initial specified value<br>Leakage current (※2): Less than or equal to the initial specified value |
| Marking | Navy blue print on the case top |

※1 ESR should be measured at both of the terminal ends closest to the capacitor body.
※2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.
※3 Initial value : The value before test of examination of resistance to soldering.

## ■Dimensions




Type numbering system (Example : 35V 39μF)




(mm)

| Size | φ8 × 9L | φ8 × 12L | φ10 × 13L |
|---|---|---|---|
| φD | 8.0 | 8.0 | 10.0 |
| L | 8.5 | 11.5 | 12.5 |
| P | 3.5 | 3.5 | 5.0 |
| φd | 0.6 | 0.6 | 0.6 |

Voltage

| V | 16 | 20 | 25 | 35 | 50 |
|---|---|---|---|---|---|
| Code | C | D | E | V | H |

●Frequency coefficient of rated ripple current

| Frequency | 120Hz | 1kHz | 10kHz | 100kHz or more |
|---|---|---|---|---|
| Coefficient | 0.05 | 0.30 | 0.70 | 1.00 |

Please refer to page 20 about the end seal configuration.

●Dimension table in next page.

# PLX

■Dimensions

| Rated Voltage (V)(code) | Surge Voltage (V) | Rated Capacitance (μF) | Case Size φD × L (mm) | tan δ | Leakage Current (μA) | ESR (mΩ) (at 100kHz 20°C) | Rated Ripple (mArms) | | Part Number |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ≦105℃ (*3) | 105℃< ≦125℃ (*3) | |
| 16 (1C) | 18.4 | 150 | 8 × 9 | 0.12 | 480 | 26 | 2100 | 810 | PLX1C151MCL1 |
| | | 220 | 8 × 12 | 0.12 | 704 | 25 | 2400 | 930 | PLX1C221MDL1 |
| | | 390 | 10 × 13 | 0.12 | 1248 | 23 | 2900 | 1130 | PLX1C391MDL1 |
| 20 (1D) | 23.0 | 120 | 8 × 9 | 0.12 | 480 | 27 | 2000 | 800 | PLX1D121MCL1 |
| | | 150 | 8 × 12 | 0.12 | 600 | 26 | 2300 | 910 | PLX1D151MDL1 |
| | | 270 | 10 × 13 | 0.12 | 1080 | 24 | 2800 | 1110 | PLX1D271MDL1 |
| 25 (1E) | 28.7 | 82 | 8 × 9 | 0.12 | 410 | 28 | 2000 | 780 | PLX1E820MCL1 |
| | | 120 | 8 × 12 | 0.12 | 600 | 27 | 2300 | 890 | PLX1E121MDL1 |
| | | 180 | 10 × 13 | 0.12 | 900 | 25 | 2800 | 1080 | PLX1E181MDL1 |
| 35 (1V) | 40.2 | 39 | 8 × 9 | 0.12 | 273 | 33 | 1800 | 720 | PLX1V390MCL1 |
| | | 56 | 8 × 12 | 0.12 | 392 | 31 | 2100 | 830 | PLX1V560MDL1 |
| | | 100 | 10 × 13 | 0.12 | 700 | 28 | 2700 | 1040 | PLX1V101MDL1 |
| 50 (1H) | 57.5 | 22 | 8 × 9 | 0.12 | 220 | 35 | 1800 | 700 | PLX1H220MCL1 |
| | | 27 | 8 × 12 | 0.12 | 270 | 33 | 2000 | 810 | PLX1H270MDL1 |
| | | 47 | 10 × 13 | 0.12 | 470 | 29 | 2600 | 1020 | PLX1H470MDL1 |

(*3) Ambient temperature of a capacitor

- Please refer to page 20, 21, 22 about the formed or taped product spec.
- Please refer to page 3 for the minimum order quantity.