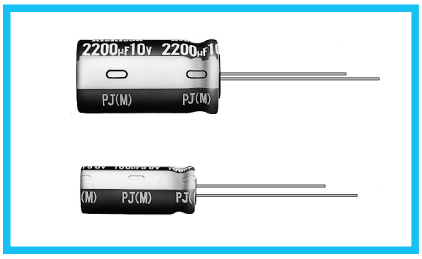
# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

**PJ** Low Impedance, For Switching Power Supplies series

Low Impedance | Long Life | Anti-Solvent Feature (Through 100V only)



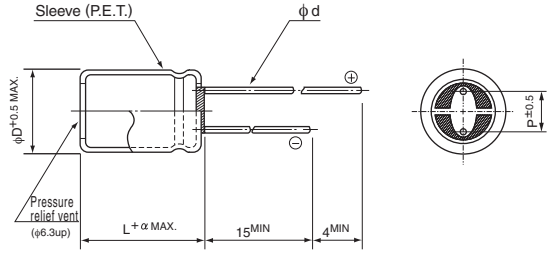

- Low impedance and high reliability withstanding 5000 hours load life at +105˚C (3000 / 2000 hours for smaller case sizes as specified below).
- Capacitance ranges available based on the numerical values in E12 series under JIS.
- Ideally suited for use of switching power supplies.
- Compliant to the RoHS directive (2011/65/EU).

PJ → Smaller → PS

## ■Specifications

| Item | Performance Characteristics | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Category Temperature Range | −55 to +105˚C (6.3 to 100V), −40 to +105˚C (160 to 400V), −25 to +105˚C (450V) | | | | | | | | | |
| Rated Voltage Range | 6.3 to 450V | | | | | | | | | |
| Rated Capacitance Range | 0.47 to 15000μF | | | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20˚C | | | | | | | | | |
| Leakage Current | Rated Voltage (V) | 6.3 to 100 | | | | | | 160 to 450 | | |
| | Leakage current | After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 (μA), whichever is greater. | | | | | | CV ≦ 1000 : I = 0.1CV+40 (μA) max.<br>CV > 1000 : I = 0.04CV+100 (μA) max. | | |
| Tangent of loss angle (tan δ) | 120Hz, 20˚C | | | | | | | | | |
| | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 to 100 | 160 to 350 | 400・450 |
| | tan δ (MAX.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 | 0.20 | 0.25 |
| | For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. | | | | | | | | | |
| Stability at Low Temperature | Rated voltage (V) | 6.3・10 | 16 | 25・35 | 50 to 100 | 160・200 | 250 | 315・350 | 400 | 450 |
| | Impedance ratio (MAX.) Z−25˚C / Z+20˚C | — | — | — | — | — | — | — | — | 15 |
| | Z−40˚C / Z+20˚C | — | — | — | — | 4 | 6 | 8 | 10 | — |
| | Z−55˚C / Z+20˚C | 4 | 3 | 3 | 2 | — | — | — | — | — |
| | 120Hz | | | | | | | | | |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied for 5000 hours (2000 hours for φD=5 and 6.3, 3000 hours for φD=8) at 105˚C, the peak voltage shall not exceed the rated voltage. | Capacitance change: Within ±20% of the initial capacitance value<br>tan δ: 200% or less than the initial specified value<br>Leakage current: Less than or equal to the initial specified value | | | | | | | | |
| Shelf Life | After storing the capacitors under no load at 105˚C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20˚C, they shall meet the specified values for the endurance characteristics listed above. | Capacitance change: Within ±20% of the initial capacitance value<br>tan δ: 150% or less than the initial specified value<br>Leakage current: Less than or equal to the initial specified value | | | | | | | | |
| Marking | Printed with white color letter on dark brown sleeve. | | | | | | | | | |

## ■Radial Lead Type




| α | (φD < 10) 1.0 |
|---|---|
| | (φD ≧ 10) 1.5 |

(mm)

| φD | 5 | 6.3 | 8 | 10 | 12.5 | 16 | 18 |
|---|---|---|---|---|---|---|---|
| P | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| φd | 0.5 | 0.5 | 0.6 | 0.6 | 0.6※ | 0.8 | 0.8 |

※ In case L >25 for the φ12.5 dia. unit, lead dia. φ d=0.8mm.

• Please refer to page 20 about the end seal configuration.

## Type numbering system (Example : 25V 470μF)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| U | P | J | 1 | E | 4 | 7 | 1 | M | P | D | |

- 12: Size code
- 10 11: Configuration※
- 9: Capacitance tolerance (±20%)
- 5 6 7 8: Rated capacitance (470μF)
- 4: Rated voltage (25V)
- 2 3: Series name
- 1: Type

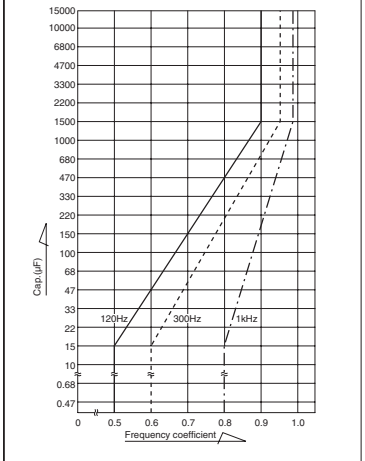
| Type | Code |
|---|---|
| Small Dia | — |
| Low Profile | 6 |

Size code

※ Configuration

| φ D | Pb-free leadwire Pb-free PET sleeve |
|---|---|
| 5 | DD |
| 6.3 | ED |
| 8・10 | PD |
| 12.5 to 18 | HD |

- Frequency coefficient of rated ripple current

| Rated voltage | Frequency coefficient | | | | |
|---|---|---|---|---|---|
| 6.3 to 100V (10kHz to 200kHz = 1) |  | | | | |
| 160 to 450V | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz or more |
| | 0.80 | 1.00 | 1.25 | 1.40 | 1.60 |



Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

● Dimension table in next pages.

# PJ series

## ■Dimensions

| Cap. (μF) \ V (Code) / Size code / Code | | 6.3 (0J) | | 10 (1A) | | 16 (1C) | | 25 (1E) | | 35 (1V) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | — | 6 | — | 6 | — | 6 | — | 6 | — | 6 |
| **22** | 220 | | | | | | | | | 5 × 11 | |
| **27** | 270 | | | | | | | | | 5 × 11 | |
| **33** | 330 | | | | | | | 5 × 11 | | 6.3 × 11 | |
| **39** | 390 | | | | | | | 5 × 11 | | 6.3 × 11 | |
| **47** | 470 | | | | | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | |
| **56** | 560 | | | | | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | |
| **68** | 680 | | | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | |
| **82** | 820 | | | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | |
| **100** | 101 | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | | 8 × 11.5 | |
| **120** | 121 | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | | 8 × 15 | 10 × 12.5 |
| **150** | 151 | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | | 8 × 11.5 | | 8 × 15 | 10 × 12.5 |
| **180** | 181 | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 |
| **220** | 221 | 6.3 × 11 | | 6.3 × 15 | | 8 × 11.5 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 |
| **270** | 271 | 6.3 × 15 | | 6.3 × 15 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 |
| **330** | 331 | 6.3 × 15 | | 8 × 11.5 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 |
| **390** | 391 | 8 ×11.5 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 |
| **470** | 471 | 8 × 15 | 10 × 12.5 | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 31.5 | 16 × 15 |
| **560** | 561 | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 | 12.5 × 20 | 16 × 15 |
| **680** | 681 | 8 × 20 | 10 × 15 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 |
| **820** | 821 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 | 12.5 × 20 | 16 × 15 | 12.5 × 25 | 18 × 15 |
| **1000** | 102 | 10 × 20 | 12.5 × 15 | 10 × 20 | 12.5 × 15 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 | 12.5 × 31.5 | 16 × 20 |
| **1200** | 122 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 | 12.5 × 20 | 16 × 15 | 12.5 × 25 | 18 × 15 | 12.5 × 35.5 | 16 × 25 |
| **1500** | 152 | 10 × 25 | 12.5 × 15 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 | 12.5 × 31.5 | 16 × 20 | 12.5 × 40 | 18 × 20 |
| **1800** | 182 | 10 × 31.5 | 16 × 15 | 12.5 × 20 | 16 × 15 | 12.5 × 31.5 | 16 × 20 | 12.5 × 35.5 | 16 × 25 | 16 × 31.5 | 18 × 25 |
| **2200** | 222 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 | 12.5 × 31.5 | 16 × 20 | 12.5 × 40 | 18 × 20 | 16 × 35.5 | 18 × 31.5 |
| **2700** | 272 | 12.5 × 25 | 18 × 15 | 12.5 × 31.5 | 16 × 20 | 12.5 × 35.5 | 16 × 25 | 16 × 31.5 | 18 × 25 | 16 × 40 | 18 × 35.5 |
| **3300** | 332 | 12.5 × 25 | 18 × 15 | 12.5 × 35.5 | 16 × 20 | 12.5 × 40 | 18 × 20 | 16 × 35.5 | 18 × 31.5 | 18 × 40 | |
| **3900** | 392 | 12.5 × 31.5 | 16 × 20 | 12.5 × 40 | 18 × 20 | 16 × 31.5 | 18 × 25 | 16 × 40 | 18 × 35.5 | | |
| **4700** | 472 | 12.5 × 35.5 | 18 × 20 | 16 × 31.5 | 18 × 25 | 16 × 35.5 | 18 × 31.5 | 18 × 40 | | | |
| **5600** | 562 | 12.5 × 40 | 18 × 20 | 16 × 35.5 | 18 × 25 | 16 × 40 | 18 × 35.5 | | | | |
| **6800** | 682 | 16 × 31.5 | 18 × 25 | 16 × 35.5 | 18 × 31.5 | 18 × 35.5 | | | | | |
| **8200** | 822 | 16 × 35.5 | 18 × 31.5 | 16 × 40 | 18 × 35.5 | 18 × 40 | | | | | |
| **10000** | 103 | 16 × 40 | 18 × 31.5 | 18 × 40 | | | | | | | |
| **12000** | 123 | 18 × 35.5 | | | | | | | | | φD × L (mm) |
| **15000** | 153 | 18 × 40 | | | | | | | | | |

| Cap. (μF) \ V (Code) / Size code / Code | | 50 (1H) | | 63 (1J) | | 80 (1K) | | 100 (2A) | |
|---|---|---|---|---|---|---|---|---|---|
| | | — | 6 | — | 6 | — | 6 | — | 6 |
| **0.47** | R47 | 5 × 11 | | | | | | 5 × 11 | |
| **0.68** | R68 | 5 × 11 | | | | | | 5 × 11 | |
| **1** | 010 | 5 × 11 | | | | | | 5 × 11 | |
| **1.5** | 1R5 | 5 × 11 | | | | | | 5 × 11 | |
| **2.2** | 2R2 | 5 × 11 | | | | | | 5 × 11 | |
| **3.3** | 3R3 | 5 × 11 | | | | | | 5 × 11 | |
| **4.7** | 4R7 | 5 × 11 | | | | 5 × 11 | | 6.3 × 11 | |
| **6.8** | 6R8 | 5 × 11 | | | | 5 × 11 | | 6.3 × 11 | |
| **10** | 100 | 5 × 11 | | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | |
| **12** | 120 | 5 × 11 | | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | |
| **15** | 150 | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | |
| **18** | 180 | 5 × 11 | | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | |
| **22** | 220 | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | | 8 × 11.5 | |
| **27** | 270 | 6.3 × 11 | | 6.3 × 11 | | 6.3 × 15 | | 8 × 15 | 10 × 12.5 |
| **33** | 330 | 6.3 × 11 | | 6.3 × 15 | | 8 × 11.5 | | 8 × 15 | 10 × 12.5 |
| **39** | 390 | 6.3 × 11 | | 6.3 × 15 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 |
| **47** | 470 | 6.3 × 15 | | 8 × 11.5 | | 8 × 15 | 10 × 12.5 | 10 × 20 | 12.5 × 15 |
| **56** | 560 | 6.3 × 15 | | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 |
| **68** | 680 | 8 × 11.5 | | 8 × 15 | 10 × 12.5 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 |
| **82** | 820 | 8 × 15 | 10 × 12.5 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 31.5 | 16 × 15 |
| **100** | 101 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 | 10 × 31.5 | 16 × 15 |
| **120** | 121 | 8 × 20 | 10 × 15 | 10 × 20 | 12.5 × 15 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 16 × 15 |
| **150** | 151 | 10 × 20 | 12.5 × 15 | 10 × 25 | 12.5 × 15 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 |
| **180** | 181 | 10 × 20 | 12.5 × 15 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 16 × 15 | 12.5 × 31.5 | 16 × 20 |
| **220** | 221 | 10 × 25 | 12.5 × 15 | 12.5 × 20 | 16 × 15 | 12.5 × 31.5 | 18 × 15 | 12.5 × 35.5 | 16 × 25 |
| **270** | 271 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 | 12.5 × 31.5 | 16 × 20 | 12.5 × 40 | 18 × 20 |
| **330** | 331 | 10 × 31.5 | 16 × 15 | 12.5 × 25 | 18 × 15 | 12.5 × 35.5 | 16 × 25 | 16 × 31.5 | 18 × 25 |
| **390** | 391 | 12.5 × 25 | 16 × 15 | 12.5 × 31.5 | 16 × 20 | 12.5 × 40 | 18 × 20 | 16 × 35.5 | 18 × 31.5 |
| **470** | 471 | 12.5 × 25 | 18 × 15 | 12.5 × 35.5 | 16 × 25 | 16 × 31.5 | 18 × 25 | 16 × 40 | 18 × 35.5 |
| **560** | 561 | 12.5 × 31.5 | 16 × 20 | 12.5 × 40 | 18 × 20 | 16 × 35.5 | 18 × 31.5 | 18 × 35.5 | |
| **680** | 681 | 12.5 × 35.5 | 16 × 20 | 16 × 31.5 | 18 × 25 | 16 × 40 | 18 × 31.5 | 18 × 40 | |
| **820** | 821 | 12.5 × 40 | 18 × 20 | 16 × 35.5 | 18 × 31.5 | 18 × 35.5 | | | |
| **1000** | 102 | 16 × 31.5 | 18 × 25 | 16 × 40 | 18 × 35.5 | 18 × 40 | | | |
| **1200** | 122 | 16 × 35.5 | 18 × 31.5 | 18 × 40 | | | | | |
| **1500** | 152 | 16 × 40 | 18 × 31.5 | | | | | | |
| **1800** | 182 | 18 × 35.5 | | | | | | | φD × L (mm) |
| **2200** | 222 | 18 × 40 | | | | | | | |

※ In case of low profile type, 6 will be put at 12th digit of type numbering system.

Dimension table for 160 to 450V products are shown in 233 page.

# PJ series

## ■Standard Ratings

| V (Code) / Size code / Item / Cap. (μF) / Code | | 6.3 (0J) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | — | | | | | 6 | | | | |
| | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | |
| | | | 20°C / 100kHz | −10°C / 100kHz | 105°C / 10kHz to 200kHz | 105°C / 120Hz | | 20°C / 100kHz | −10°C / 100kHz | 105°C / 10kHz to 200kHz | 105°C / 120Hz |
| **100** | 101 | 5 × 11 | 1.40 | 3.50 | 150 | 99 | | | | | |
| **120** | 121 | 5 × 11 | 1.10 | 2.80 | 175 | 115 | | | | | |
| **150** | 151 | 6.3 × 11 | 0.78 | 2.10 | 225 | 155 | | | | | |
| **180** | 181 | 6.3 × 11 | 0.60 | 1.50 | 250 | 175 | | | | | |
| **220** | 221 | 6.3 × 11 | 0.48 | 1.20 | 285 | 205 | | | | | |
| **270** | 271 | 6.3 × 15 | 0.39 | 1.00 | 370 | 275 | | | | | |
| **330** | 331 | 6.3 × 15 | 0.32 | 0.80 | 405 | 310 | | | | | |
| **390** | 391 | 8 × 11.5 | 0.27 | 0.68 | 445 | 345 | | | | | |
| **470** | 471 | 8 × 15 | 0.22 | 0.55 | 550 | 435 | 10 × 12.5 | 0.23 | 0.58 | 575 | 455 |
| **560** | 561 | 8 × 15 | 0.19 | 0.48 | 595 | 480 | 10 × 12.5 | 0.21 | 0.53 | 600 | 485 |
| **680** | 681 | 8 × 20 | 0.16 | 0.40 | 730 | 605 | 10 × 15 | 0.18 | 0.45 | 700 | 580 |
| **820** | 821 | 8 × 20 | 0.13 | 0.33 | 795 | 670 | 10 × 15 | 0.15 | 0.38 | 750 | 635 |
| **1000** | 102 | 10 × 20 | 0.12 | 0.30 | 950 | 820 | 12.5 × 15 | 0.13 | 0.33 | 890 | 765 |
| **1200** | 122 | 10 × 20 | 0.10 | 0.25 | 1020 | 895 | 12.5 × 15 | 0.12 | 0.30 | 950 | 835 |
| **1500** | 152 | 10 × 25 | 0.084 | 0.21 | 1220 | 1090 | 12.5 × 15 | 0.10 | 0.25 | 1020 | 915 |
| **1800** | 182 | 10 × 31.5 | 0.078 | 0.20 | 1370 | 1230 | 16 × 15 | 0.084 | 0.21 | 1270 | 1140 |
| **2200** | 222 | 10 × 31.5 | 0.066 | 0.17 | 1470 | 1320 | 16 × 15 | 0.078 | 0.20 | 1340 | 1200 |
| **2700** | 272 | 12.5 × 25 | 0.051 | 0.14 | 1590 | 1430 | 18 × 15 | 0.072 | 0.18 | 1500 | 1350 |
| **3300** | 332 | 12.5 × 25 | 0.045 | 0.11 | 1710 | 1530 | 18 × 15 | 0.065 | 0.16 | 1600 | 1440 |
| **3900** | 392 | 12.5 × 31.5 | 0.037 | 0.093 | 1910 | 1710 | 16 × 20 | 0.056 | 0.14 | 1720 | 1540 |
| **4700** | 472 | 12.5 × 35.5 | 0.034 | 0.085 | 2100 | 1890 | 18 × 20 | 0.050 | 0.13 | 1920 | 1720 |
| **5600** | 562 | 12.5 × 40 | 0.031 | 0.078 | 2270 | 2040 | 18 × 20 | 0.047 | 0.12 | 1980 | 1780 |
| **6800** | 682 | 16 × 31.5 | 0.029 | 0.073 | 2370 | 2130 | 18 × 25 | 0.039 | 0.098 | 2210 | 1980 |
| **8200** | 822 | 16 × 35.5 | 0.027 | 0.068 | 2550 | 2290 | 18 × 31.5 | 0.031 | 0.078 | 2390 | 2150 |
| **10000** | 103 | 16 × 40 | 0.025 | 0.063 | 2750 | 2470 | 18 × 31.5 | 0.028 | 0.070 | 2490 | 2240 |
| **12000** | 123 | 18 × 35.5 | 0.023 | 0.058 | 2820 | 2530 | | | | | |
| **15000** | 153 | 18 × 40 | 0.022 | 0.055 | 2960 | 2660 | | | | | |

| V (Code) / Size code / Item / Cap.(μF) / Code | | 10 (1A) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | — | | | | | 6 | | | | |
| | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | |
| | | | 20°C / 100kHz | −10°C / 100kHz | 105°C / 10kHz to 200kHz | 105°C / 120Hz | | 20°C / 100kHz | −10°C / 100kHz | 105°C / 10kHz to 200kHz | 105°C / 120Hz |
| **68** | 680 | 5 × 11 | 1.30 | 3.30 | 155 | 97 | | | | | |
| **82** | 820 | 5 × 11 | 1.10 | 2.80 | 175 | 110 | | | | | |
| **100** | 101 | 6.3 × 11 | 0.84 | 2.10 | 210 | 135 | | | | | |
| **120** | 121 | 6.3 × 11 | 0.72 | 1.80 | 235 | 160 | | | | | |
| **150** | 151 | 6.3 × 11 | 0.55 | 1.40 | 265 | 185 | | | | | |
| **180** | 181 | 6.3 × 11 | 0.46 | 1.20 | 290 | 205 | | | | | |
| **220** | 221 | 6.3 × 15 | 0.38 | 0.95 | 370 | 270 | | | | | |
| **270** | 271 | 6.3 × 15 | 0.31 | 0.78 | 405 | 300 | | | | | |
| **330** | 331 | 8 × 11.5 | 0.26 | 0.65 | 460 | 350 | | | | | |
| **390** | 391 | 8 × 15 | 0.22 | 0.55 | 550 | 430 | 10 × 12.5 | 0.24 | 0.60 | 555 | 430 |
| **470** | 471 | 8 × 15 | 0.19 | 0.48 | 595 | 475 | 10 × 12.5 | 0.21 | 0.53 | 600 | 475 |
| **560** | 561 | 8 × 20 | 0.16 | 0.40 | 730 | 590 | 10 × 15 | 0.18 | 0.45 | 700 | 565 |
| **680** | 681 | 8 × 20 | 0.13 | 0.33 | 795 | 660 | 10 × 15 | 0.14 | 0.35 | 770 | 635 |
| **820** | 821 | 10 × 20 | 0.11 | 0.28 | 985 | 835 | 12.5 × 15 | 0.13 | 0.33 | 920 | 780 |
| **1000** | 102 | 10 × 20 | 0.096 | 0.24 | 1060 | 915 | 12.5 × 15 | 0.10 | 0.25 | 1040 | 895 |
| **1200** | 122 | 10 × 25 | 0.078 | 0.20 | 1280 | 1120 | 12.5 × 15 | 0.096 | 0.24 | 1060 | 930 |
| **1500** | 152 | 10 × 31.5 | 0.072 | 0.18 | 1440 | 1290 | 16 × 15 | 0.078 | 0.20 | 1330 | 1190 |
| **1800** | 182 | 12.5 × 20 | 0.057 | 0.14 | 1470 | 1320 | 16 × 15 | 0.072 | 0.18 | 1420 | 1270 |
| **2200** | 222 | 12.5 × 25 | 0.045 | 0.11 | 1710 | 1530 | 18 × 15 | 0.060 | 0.15 | 1600 | 1440 |
| **2700** | 272 | 12.5 × 31.5 | 0.036 | 0.090 | 1940 | 1740 | 16 × 20 | 0.051 | 0.13 | 1740 | 1560 |
| **3300** | 332 | 12.5 × 35.5 | 0.032 | 0.080 | 2180 | 1960 | 16 × 20 | 0.045 | 0.11 | 1850 | 1660 |
| **3900** | 392 | 12.5 × 40 | 0.030 | 0.075 | 2360 | 2120 | 18 × 20 | 0.041 | 0.10 | 2050 | 1840 |
| **4700** | 472 | 16 × 31.5 | 0.028 | 0.070 | 2420 | 2170 | 18 × 25 | 0.035 | 0.088 | 2250 | 2020 |
| **5600** | 562 | 16 × 35.5 | 0.026 | 0.065 | 2610 | 2340 | 18 × 25 | 0.033 | 0.083 | 2340 | 2100 |
| **6800** | 682 | 16 × 35.5 | 0.024 | 0.060 | 2680 | 2410 | 18 × 31.5 | 0.027 | 0.068 | 2540 | 2280 |
| **8200** | 822 | 16 × 40 | 0.023 | 0.058 | 2820 | 2530 | 18 × 35.5 | 0.025 | 0.063 | 2690 | 2420 |
| **10000** | 103 | 18 × 40 | 0.021 | 0.053 | 3040 | 2730 | | | | | |

※In case of low profile [6] type, will be put at 12th digit of type numbering system.

# PJ series

## ■Standard Ratings

| V (Code) / Size code / Item / Cap. (μF) / Code | | 16 (1C) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | — | | | | | 6 | | | | |
| | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | |
| | | | 20˚C / 100kHz | −10˚C / 100kHz | 105˚C / 10kHz to 200kHz | 105˚C / 120Hz | | 20˚C / 100kHz | −10˚C / 100kHz | 105˚C / 10kHz to 200kHz | 105˚C / 120Hz |
| **47** | 470 | 5 × 11 | 1.30 | 3.30 | 155 | 92 | | | | | |
| **56** | 560 | 5 × 11 | 1.10 | 2.80 | 175 | 105 | | | | | |
| **68** | 680 | 6.3 × 11 | 0.78 | 2.00 | 220 | 135 | | | | | |
| **82** | 820 | 6.3 × 11 | 0.66 | 1.70 | 240 | 155 | | | | | |
| **100** | 101 | 6.3 × 11 | 0.55 | 1.40 | 265 | 175 | | | | | |
| **120** | 121 | 6.3 × 11 | 0.45 | 1.10 | 290 | 195 | | | | | |
| **150** | 151 | 6.3 × 15 | 0.37 | 0.93 | 375 | 260 | | | | | |
| **180** | 181 | 6.3 × 15 | 0.31 | 0.78 | 405 | 285 | | | | | |
| **220** | 221 | 8 × 11.5 | 0.26 | 0.65 | 460 | 335 | | | | | |
| **270** | 271 | 8 × 15 | 0.22 | 0.55 | 550 | 410 | 10 × 12.5 | 0.22 | 0.55 | 575 | 430 |
| **330** | 331 | 8 × 15 | 0.18 | 0.45 | 595 | 455 | 10 × 12.5 | 0.18 | 0.45 | 625 | 480 |
| **390** | 391 | 8 × 20 | 0.16 | 0.40 | 730 | 570 | 10 × 15 | 0.16 | 0.40 | 730 | 570 |
| **470** | 471 | 8 × 20 | 0.14 | 0.35 | 770 | 615 | 10 × 15 | 0.14 | 0.35 | 770 | 615 |
| **560** | 561 | 10 × 20 | 0.12 | 0.30 | 950 | 770 | 12.5 × 15 | 0.13 | 0.33 | 920 | 745 |
| **680** | 681 | 10 × 20 | 0.10 | 0.25 | 1020 | 845 | 12.5 × 15 | 0.11 | 0.28 | 985 | 815 |
| **820** | 821 | 10 × 25 | 0.084 | 0.21 | 1220 | 1030 | 12.5 × 15 | 0.096 | 0.24 | 1060 | 895 |
| **1000** | 102 | 10 × 31.5 | 0.072 | 0.18 | 1410 | 1210 | 16 × 15 | 0.084 | 0.21 | 1270 | 1090 |
| **1200** | 122 | 12.5 × 20 | 0.060 | 0.15 | 1430 | 1250 | 16 × 15 | 0.072 | 0.18 | 1390 | 1220 |
| **1500** | 152 | 12.5 × 25 | 0.048 | 0.12 | 1660 | 1490 | 18 × 15 | 0.066 | 0.17 | 1560 | 1400 |
| **1800** | 182 | 12.5 × 31.5 | 0.039 | 0.10 | 1880 | 1690 | 16 × 20 | 0.054 | 0.14 | 1700 | 1530 |
| **2200** | 222 | 12.5 × 31.5 | 0.034 | 0.085 | 2010 | 1800 | 16 × 20 | 0.048 | 0.12 | 1800 | 1620 |
| **2700** | 272 | 12.5 × 35.5 | 0.031 | 0.078 | 2220 | 1990 | 16 × 25 | 0.040 | 0.10 | 2010 | 1800 |
| **3300** | 332 | 12.5 × 40 | 0.028 | 0.070 | 2410 | 2160 | 18 × 20 | 0.039 | 0.10 | 2090 | 1880 |
| **3900** | 392 | 16 × 31.5 | 0.027 | 0.068 | 2470 | 2220 | 18 × 25 | 0.034 | 0.085 | 2290 | 2060 |
| **4700** | 472 | 16 × 35.5 | 0.025 | 0.063 | 2680 | 2410 | 18 × 31.5 | 0.028 | 0.070 | 2490 | 2240 |
| **5600** | 562 | 16 × 40 | 0.024 | 0.060 | 2820 | 2530 | 18 × 35.5 | 0.027 | 0.068 | 2620 | 2350 |
| **6800** | 682 | 18 × 35.5 | 0.022 | 0.055 | 2900 | 2610 | | | | | |
| **8200** | 822 | 18 × 40 | 0.021 | 0.053 | 3040 | 2730 | | | | | |

| V (Code) / Size code / Item / Cap. (μF) / Code | | 25 (1E) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | — | | | | | 6 | | | | |
| | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | |
| | | | 20˚C / 100kHz | −10˚C / 100kHz | 105˚C / 10kHz to 200kHz | 105˚C / 120Hz | | 20˚C / 100kHz | −10˚C / 100kHz | 105˚C / 10kHz to 200kHz | 105˚C / 120Hz |
| **33** | 330 | 5 × 11 | 1.30 | 3.30 | 155 | 88 | | | | | |
| **39** | 390 | 5 × 11 | 1.10 | 2.80 | 175 | 100 | | | | | |
| **47** | 470 | 6.3 × 11 | 0.84 | 2.10 | 210 | 125 | | | | | |
| **56** | 560 | 6.3 × 11 | 0.72 | 1.80 | 235 | 140 | | | | | |
| **68** | 680 | 6.3 × 11 | 0.57 | 1.40 | 260 | 160 | | | | | |
| **82** | 820 | 6.3 × 11 | 0.47 | 1.20 | 285 | 180 | | | | | |
| **100** | 101 | 6.3 × 15 | 0.39 | 0.98 | 370 | 245 | | | | | |
| **120** | 121 | 6.3 × 15 | 0.32 | 0.80 | 405 | 275 | | | | | |
| **150** | 151 | 8 × 11.5 | 0.26 | 0.65 | 460 | 320 | | | | | |
| **180** | 181 | 8 × 15 | 0.22 | 0.55 | 550 | 390 | 10 × 12.5 | 0.24 | 0.60 | 555 | 395 |
| **220** | 221 | 8 × 15 | 0.18 | 0.45 | 625 | 455 | 10 × 12.5 | 0.21 | 0.53 | 600 | 435 |
| **270** | 271 | 8 × 20 | 0.15 | 0.38 | 750 | 560 | 10 × 15 | 0.18 | 0.45 | 700 | 525 |
| **330** | 331 | 8 × 20 | 0.13 | 0.33 | 795 | 610 | 10 × 15 | 0.15 | 0.38 | 750 | 575 |
| **390** | 391 | 10 × 20 | 0.11 | 0.28 | 985 | 770 | 12.5 × 15 | 0.13 | 0.33 | 920 | 720 |
| **470** | 471 | 10 × 20 | 0.10 | 0.25 | 1020 | 810 | 12.5 × 15 | 0.11 | 0.28 | 985 | 785 |
| **560** | 561 | 10 × 25 | 0.084 | 0.21 | 1220 | 990 | 12.5 × 15 | 0.10 | 0.25 | 1060 | 860 |
| **680** | 681 | 10 × 31.5 | 0.072 | 0.18 | 1420 | 1180 | 16 × 15 | 0.084 | 0.21 | 1270 | 1050 |
| **820** | 821 | 12.5 × 20 | 0.059 | 0.15 | 1430 | 1210 | 16 × 15 | 0.079 | 0.20 | 1340 | 1130 |
| **1000** | 102 | 12.5 × 25 | 0.048 | 0.12 | 1660 | 1430 | 18 × 15 | 0.066 | 0.17 | 1520 | 1310 |
| **1200** | 122 | 12.5 × 25 | 0.043 | 0.11 | 1760 | 1550 | 18 × 15 | 0.061 | 0.15 | 1600 | 1400 |
| **1500** | 152 | 12.5 × 31.5 | 0.035 | 0.088 | 1980 | 1780 | 16 × 20 | 0.050 | 0.13 | 1770 | 1590 |
| **1800** | 182 | 12.5 × 35.5 | 0.032 | 0.080 | 2180 | 1960 | 16 × 25 | 0.041 | 0.10 | 1980 | 1780 |
| **2200** | 222 | 12.5 × 40 | 0.029 | 0.073 | 2360 | 2120 | 18 × 20 | 0.040 | 0.10 | 2050 | 1840 |
| **2700** | 272 | 16 × 31.5 | 0.027 | 0.068 | 2470 | 2220 | 18 × 25 | 0.034 | 0.085 | 2290 | 2060 |
| **3300** | 332 | 16 × 35.5 | 0.025 | 0.063 | 2680 | 2410 | 18 × 31.5 | 0.029 | 0.073 | 2490 | 2240 |
| **3900** | 392 | 16 × 40 | 0.023 | 0.058 | 2820 | 2530 | 18 × 35.5 | 0.026 | 0.065 | 2690 | 2420 |
| **4700** | 472 | 18 × 40 | 0.022 | 0.055 | 2960 | 2660 | | | | | |

※ In case of low profile type, 6 will be put at 12th digit of type numbering system.

# PJ series

## ■Standard Ratings

| Cap. (μF) | Code | Case size φD × L (mm) | Impedance ( Ω ) MAX. 20˚C / 100kHz | Impedance ( Ω ) MAX. −10˚C / 100kHz | Rated ripple (mArms) 105˚C / 10kHz to 200kHz | Rated ripple (mArms) 105˚C / 120Hz |
|---|---|---|---|---|---|---|
| **35 (1V)** | | | | | | |
| | | — | | | | |
| **22** | 220 | 5 × 11 | 1.30 | 3.30 | 160 | 85 |
| **27** | 270 | 5 × 11 | 1.00 | 2.50 | 180 | 99 |
| **33** | 330 | 6.3 × 11 | 0.78 | 2.00 | 225 | 125 |
| **39** | 390 | 6.3 × 11 | 0.66 | 1.70 | 245 | 140 |
| **47** | 470 | 6.3 × 11 | 0.54 | 1.40 | 270 | 160 |
| **56** | 560 | 6.3 × 11 | 0.45 | 1.10 | 295 | 180 |
| **68** | 680 | 6.3 × 15 | 0.37 | 0.93 | 370 | 230 |
| **82** | 820 | 6.3 × 15 | 0.31 | 0.78 | 415 | 265 |
| **100** | 101 | 8 × 11.5 | 0.26 | 0.65 | 460 | 305 |
| **120** | 121 | 8 × 15 | 0.22 | 0.55 | 550 | 370 |
| **150** | 151 | 8 × 15 | 0.18 | 0.45 | 595 | 415 |
| **180** | 181 | 8 × 20 | 0.16 | 0.40 | 730 | 520 |
| **220** | 221 | 8 × 20 | 0.13 | 0.33 | 795 | 580 |
| **270** | 271 | 10 × 20 | 0.11 | 0.28 | 985 | 735 |
| **330** | 331 | 10 × 20 | 0.096 | 0.24 | 1060 | 810 |
| **390** | 391 | 10 × 25 | 0.084 | 0.21 | 1220 | 955 |
| **470** | 471 | 10 × 31.5 | 0.072 | 0.18 | 1420 | 1130 |
| **560** | 561 | 12.5 × 20 | 0.059 | 0.15 | 1430 | 1160 |
| **680** | 681 | 12.5 × 25 | 0.048 | 0.12 | 1660 | 1370 |
| **820** | 821 | 12.5 × 25 | 0.042 | 0.11 | 1760 | 1490 |
| **1000** | 102 | 12.5 × 31.5 | 0.035 | 0.088 | 1980 | 1710 |
| **1200** | 122 | 12.5 × 35.5 | 0.031 | 0.078 | 2180 | 1920 |
| **1500** | 152 | 12.5 × 40 | 0.029 | 0.073 | 2360 | 2120 |
| **1800** | 182 | 16 × 31.5 | 0.027 | 0.068 | 2470 | 2220 |
| **2200** | 222 | 16 × 35.5 | 0.024 | 0.060 | 2680 | 2410 |
| **2700** | 272 | 16 × 40 | 0.022 | 0.055 | 2900 | 2610 |
| **3300** | 332 | 18 × 40 | 0.021 | 0.053 | 3040 | 2730 |
| | | 6 | | | | |
| | | Case size φD × L (mm) | Impedance ( Ω ) MAX. 20˚C / 100kHz | Impedance ( Ω ) MAX. −10˚C / 100kHz | Rated ripple (mArms) 105˚C / 10kHz to 200kHz | Rated ripple (mArms) 105˚C / 120Hz |
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| | | 10 × 12.5 | 0.24 | 0.60 | 555 | 375 |
| | | 10 × 12.5 | 0.20 | 0.50 | 625 | 435 |
| | | 10 × 15 | 0.18 | 0.45 | 700 | 500 |
| | | 10 × 15 | 0.14 | 0.35 | 770 | 560 |
| | | 12.5 × 15 | 0.13 | 0.33 | 920 | 690 |
| | | 12.5 × 15 | 0.10 | 0.25 | 1020 | 780 |
| | | 12.5 × 15 | 0.096 | 0.24 | 1060 | 825 |
| | | 16 × 15 | 0.084 | 0.21 | 1270 | 1010 |
| | | 16 × 15 | 0.075 | 0.19 | 1360 | 1100 |
| | | 18 × 15 | 0.066 | 0.17 | 1540 | 1270 |
| | | 18 × 15 | 0.060 | 0.15 | 1620 | 1370 |
| | | 16 × 20 | 0.050 | 0.13 | 1770 | 1530 |
| | | 16 × 25 | 0.041 | 0.10 | 1980 | 1740 |
| | | 18 × 20 | 0.040 | 0.10 | 2050 | 1840 |
| | | 18 × 25 | 0.034 | 0.085 | 2290 | 2060 |
| | | 18 × 31.5 | 0.028 | 0.070 | 2490 | 2240 |
| | | 18 × 35.5 | 0.026 | 0.065 | 2690 | 2420 |

| Cap. (μF) | Code | Case size φD × L (mm) | Impedance ( Ω ) MAX. 20˚C / 100kHz | Impedance ( Ω ) MAX. −10˚C / 100kHz | Rated ripple (mArms) 105˚C / 10kHz to 200kHz | Rated ripple (mArms) 105˚C / 120Hz |
|---|---|---|---|---|---|---|
| **50 (1H)** | | | | | | |
| | | — | | | | |
| **0.47** | R47 | 5 × 11 | 31.0 | 80.0 | 22 | 11 |
| **0.68** | R68 | 5 × 11 | 21.0 | 55.0 | 28 | 14 |
| **1** | 010 | 5 × 11 | 14.0 | 38.0 | 36 | 18 |
| **1.5** | 1R5 | 5 × 11 | 9.80 | 28.0 | 45 | 22 |
| **2.2** | 2R2 | 5 × 11 | 6.50 | 18.0 | 54 | 27 |
| **3.3** | 3R3 | 5 × 11 | 4.60 | 12.0 | 66 | 33 |
| **4.7** | 4R7 | 5 × 11 | 3.10 | 7.80 | 81 | 40 |
| **6.8** | 6R8 | 5 × 11 | 2.50 | 6.30 | 91 | 45 |
| **10** | 100 | 5 × 11 | 2.00 | 5.00 | 115 | 57 |
| **12** | 120 | 5 × 11 | 1.70 | 4.30 | 125 | 62 |
| **15** | 150 | 5 × 11 | 1.30 | 3.30 | 145 | 72 |
| **18** | 180 | 5 × 11 | 1.10 | 2.80 | 155 | 79 |
| **22** | 220 | 6.3 × 11 | 0.91 | 2.30 | 195 | 100 |
| **27** | 270 | 6.3 × 11 | 0.74 | 1.90 | 215 | 115 |
| **33** | 330 | 6.3 × 11 | 0.60 | 1.50 | 240 | 135 |
| **39** | 390 | 6.3 × 11 | 0.50 | 1.30 | 260 | 150 |
| **47** | 470 | 6.3 × 15 | 0.42 | 1.10 | 330 | 195 |
| **56** | 560 | 6.3 × 15 | 0.35 | 0.88 | 360 | 220 |
| **68** | 680 | 8 × 11.5 | 0.28 | 0.70 | 410 | 255 |
| **82** | 820 | 8 × 15 | 0.22 | 0.55 | 500 | 320 |
| **100** | 101 | 8 × 20 | 0.18 | 0.45 | 620 | 410 |
| **120** | 121 | 8 × 20 | 0.16 | 0.40 | 670 | 455 |
| **150** | 151 | 10 × 20 | 0.13 | 0.33 | 820 | 570 |
| **180** | 181 | 10 × 20 | 0.11 | 0.28 | 890 | 635 |
| **220** | 221 | 10 × 25 | 0.098 | 0.25 | 1040 | 760 |
| **270** | 271 | 10 × 31.5 | 0.085 | 0.21 | 1200 | 900 |
| **330** | 331 | 10 × 31.5 | 0.072 | 0.18 | 1300 | 995 |
| **390** | 391 | 12.5 × 25 | 0.053 | 0.13 | 1440 | 1120 |
| **470** | 471 | 12.5 × 25 | 0.048 | 0.12 | 1500 | 1190 |
| **560** | 561 | 12.5 × 31.5 | 0.040 | 0.10 | 1680 | 1360 |
| **680** | 681 | 12.5 × 35.5 | 0.036 | 0.090 | 1850 | 1530 |
| **820** | 821 | 12.5 × 40 | 0.033 | 0.083 | 2010 | 1700 |
| **1000** | 102 | 16 × 31.5 | 0.030 | 0.075 | 2120 | 1830 |
| **1200** | 122 | 16 × 35.5 | 0.028 | 0.070 | 2260 | 1990 |
| **1500** | 152 | 16 × 40 | 0.026 | 0.065 | 2410 | 2170 |
| **1800** | 182 | 18 × 35.5 | 0.025 | 0.063 | 2460 | 2210 |
| **2200** | 222 | 18 × 40 | 0.024 | 0.060 | 2560 | 2300 |
| | | 6 | | | | |
| | | Case size φD × L (mm) | Impedance ( Ω ) MAX. 20˚C / 100kHz | Impedance ( Ω ) MAX. −10˚C / 100kHz | Rated ripple (mArms) 105˚C / 10kHz to 200kHz | Rated ripple (mArms) 105˚C / 120Hz |
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| | | 10 × 12.5 | 0.23 | 0.58 | 510 | 330 |
| | | 10 × 15 | 0.21 | 0.53 | 580 | 385 |
| | | 10 × 15 | 0.17 | 0.43 | 640 | 435 |
| | | 12.5 × 15 | 0.14 | 0.35 | 785 | 545 |
| | | 12.5 × 15 | 0.12 | 0.31 | 845 | 605 |
| | | 12.5 × 15 | 0.10 | 0.25 | 920 | 670 |
| | | 16 × 15 | 0.091 | 0.23 | 1120 | 840 |
| | | 16 × 15 | 0.078 | 0.20 | 1210 | 925 |
| | | 16 × 15 | 0.072 | 0.18 | 1270 | 990 |
| | | 18 × 15 | 0.060 | 0.15 | 1470 | 1170 |
| | | 16 × 20 | 0.053 | 0.13 | 1550 | 1260 |
| | | 16 × 20 | 0.048 | 0.12 | 1630 | 1350 |
| | | 18 × 20 | 0.043 | 0.11 | 1810 | 1530 |
| | | 18 × 25 | 0.036 | 0.090 | 2000 | 1730 |
| | | 18 × 31.5 | 0.031 | 0.078 | 2140 | 1880 |
| | | 18 × 31.5 | 0.029 | 0.073 | 2220 | 1990 |

※In case of low profile type, 6 will be put at 12th digit of type numbering system.

# PJ series

## ■Standard Ratings

| Cap. (μF) | Code | 63 (1J) — Case size φD × L (mm) | Impedance ( Ω ) MAX. 20°C / 100kHz | Impedance ( Ω ) MAX. −10°C / 100kHz | Rated ripple (mArms) 105°C / 10kHz to 200kHz | Rated ripple (mArms) 105°C / 120Hz | 63 (1J) 6 — Case size φD × L (mm) | Impedance ( Ω ) MAX. 20°C / 100kHz | Impedance ( Ω ) MAX. −10°C / 100kHz | Rated ripple (mArms) 105°C / 10kHz to 200kHz | Rated ripple (mArms) 105°C / 120Hz |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 100 | 5 × 11 | 1.60 | 4.00 | 135 | 67 | | | | | |
| **12** | 120 | 5 × 11 | 1.40 | 3.50 | 145 | 72 | | | | | |
| **15** | 150 | 6.3 × 11 | 1.10 | 2.80 | 185 | 92 | | | | | |
| **18** | 180 | 6.3 × 11 | 0.95 | 2.40 | 195 | 100 | | | | | |
| **22** | 220 | 6.3 × 11 | 0.78 | 2.00 | 215 | 110 | | | | | |
| **27** | 270 | 6.3 × 11 | 0.64 | 1.60 | 240 | 130 | | | | | |
| **33** | 330 | 6.3 × 15 | 0.52 | 1.30 | 305 | 170 | | | | | |
| **39** | 390 | 6.3 × 15 | 0.45 | 1.10 | 330 | 190 | | | | | |
| **47** | 470 | 8 × 11.5 | 0.37 | 0.93 | 365 | 215 | | | | | |
| **56** | 560 | 8 × 15 | 0.31 | 0.78 | 450 | 275 | 10 × 12.5 | 0.34 | 0.85 | 450 | 275 |
| **68** | 680 | 8 × 15 | 0.26 | 0.65 | 500 | 315 | 10 × 12.5 | 0.28 | 0.70 | 495 | 310 |
| **82** | 820 | 8 × 20 | 0.22 | 0.55 | 600 | 385 | 10 × 15 | 0.24 | 0.60 | 580 | 375 |
| **100** | 101 | 10 × 20 | 0.18 | 0.45 | 750 | 495 | 12.5 × 15 | 0.20 | 0.50 | 695 | 460 |
| **120** | 121 | 10 × 20 | 0.15 | 0.38 | 820 | 555 | 12.5 × 15 | 0.18 | 0.45 | 750 | 510 |
| **150** | 151 | 10 × 25 | 0.13 | 0.33 | 950 | 665 | 12.5 × 15 | 0.14 | 0.35 | 845 | 590 |
| **180** | 181 | 10 × 31.5 | 0.11 | 0.28 | 1110 | 790 | 16 × 15 | 0.12 | 0.30 | 1050 | 750 |
| **220** | 221 | 12.5 × 20 | 0.094 | 0.24 | 1140 | 835 | 16 × 15 | 0.10 | 0.25 | 1120 | 820 |
| **270** | 271 | 12.5 × 25 | 0.081 | 0.20 | 1340 | 1000 | 18 × 15 | 0.088 | 0.22 | 1290 | 965 |
| **330** | 331 | 12.5 × 25 | 0.072 | 0.18 | 1420 | 1090 | 18 × 15 | 0.078 | 0.20 | 1410 | 1080 |
| **390** | 391 | 12.5 × 31.5 | 0.059 | 0.15 | 1620 | 1260 | 16 × 20 | 0.070 | 0.18 | 1500 | 1170 |
| **470** | 471 | 12.5 × 35.5 | 0.052 | 0.13 | 1780 | 1420 | 16 × 25 | 0.063 | 0.16 | 1700 | 1350 |
| **560** | 561 | 12.5 × 40 | 0.047 | 0.12 | 1950 | 1580 | 18 × 20 | 0.058 | 0.15 | 1730 | 1400 |
| **680** | 681 | 16 × 31.5 | 0.043 | 0.11 | 2050 | 1700 | 18 × 25 | 0.051 | 0.13 | 1940 | 1610 |
| **820** | 821 | 16 × 35.5 | 0.040 | 0.10 | 2220 | 1880 | 18 × 31.5 | 0.043 | 0.12 | 2110 | 1780 |
| **1000** | 102 | 16 × 40 | 0.037 | 0.093 | 2370 | 2050 | 18 × 35.5 | 0.040 | 0.10 | 2280 | 1970 |
| **1200** | 122 | 18 × 40 | 0.034 | 0.085 | 2510 | 2210 | | | | | |

| Cap. (μF) | Code | 80 (1K) — Case size φD × L (mm) | Impedance ( Ω ) MAX. 20°C / 100kHz | Impedance ( Ω ) MAX. −10°C / 100kHz | Rated ripple (mArms) 105°C / 10kHz to 200kHz | Rated ripple (mArms) 105°C / 120Hz | 80 (1K) 6 — Case size φD × L (mm) | Impedance ( Ω ) MAX. 20°C / 100kHz | Impedance ( Ω ) MAX. −10°C / 100kHz | Rated ripple (mArms) 105°C / 10kHz to 200kHz | Rated ripple (mArms) 105°C / 120Hz |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **4.7** | 4R7 | 5 × 11 | 4.20 | 11.00 | 53 | 26 | | | | | |
| **6.8** | 6R8 | 5 × 11 | 2.60 | 7.00 | 68 | 34 | | | | | |
| **10** | 100 | 6.3 × 11 | 1.70 | 4.60 | 87 | 43 | | | | | |
| **12** | 120 | 6.3 × 11 | 1.40 | 3.80 | 96 | 48 | | | | | |
| **15** | 150 | 6.3 × 11 | 1.20 | 3.20 | 104 | 52 | | | | | |
| **18** | 180 | 6.3 × 11 | 1.00 | 2.70 | 114 | 58 | | | | | |
| **22** | 220 | 6.3 × 15 | 0.77 | 2.10 | 135 | 71 | | | | | |
| **27** | 270 | 6.3 × 15 | 0.63 | 1.70 | 149 | 80 | | | | | |
| **33** | 330 | 8 × 11.5 | 0.53 | 1.40 | 234 | 132 | | | | | |
| **39** | 390 | 8 × 15 | 0.46 | 1.20 | 272 | 156 | 10 × 12.5 | 0.49 | 1.30 | 271 | 155 |
| **47** | 470 | 8 × 15 | 0.39 | 1.10 | 295 | 175 | 10 × 12.5 | 0.42 | 1.10 | 293 | 174 |
| **56** | 560 | 8 × 20 | 0.34 | 0.92 | 347 | 208 | 10 × 15 | 0.36 | 0.97 | 337 | 202 |
| **68** | 680 | 10 × 20 | 0.28 | 0.76 | 426 | 264 | 12.5 × 15 | 0.31 | 0.84 | 402 | 249 |
| **82** | 820 | 10 × 20 | 0.25 | 0.68 | 447 | 284 | 12.5 × 15 | 0.27 | 0.73 | 430 | 273 |
| **100** | 101 | 10 × 25 | 0.21 | 0.57 | 526 | 347 | 12.5 × 15 | 0.23 | 0.62 | 466 | 308 |
| **120** | 121 | 10 × 31.5 | 0.18 | 0.49 | 606 | 406 | 16 × 15 | 0.20 | 0.54 | 663 | 444 |
| **150** | 151 | 10 × 31.5 | 0.15 | 0.41 | 663 | 459 | 16 × 15 | 0.18 | 0.47 | 699 | 484 |
| **180** | 181 | 12.5 × 25 | 0.13 | 0.35 | 734 | 520 | 16 × 15 | 0.15 | 0.41 | 766 | 543 |
| **220** | 221 | 12.5 × 31.5 | 0.12 | 0.32 | 816 | 595 | 18 × 15 | 0.13 | 0.35 | 881 | 643 |
| **270** | 271 | 12.5 × 31.5 | 0.10 | 0.27 | 894 | 667 | 16 × 20 | 0.11 | 0.30 | 995 | 742 |
| **330** | 331 | 12.5 × 35.5 | 0.088 | 0.24 | 1000 | 767 | 16 × 25 | 0.099 | 0.27 | 1140 | 874 |
| **390** | 391 | 12.5 × 40 | 0.078 | 0.21 | 1060 | 822 | 18 × 20 | 0.089 | 0.24 | 1170 | 908 |
| **470** | 471 | 16 × 31.5 | 0.069 | 0.19 | 1450 | 1150 | 18 × 25 | 0.080 | 0.22 | 1330 | 1060 |
| **560** | 561 | 16 × 35.5 | 0.062 | 0.17 | 1600 | 1300 | 18 × 31.5 | 0.072 | 0.19 | 1490 | 1210 |
| **680** | 681 | 16 × 40 | 0.055 | 0.15 | 1770 | 1470 | 18 × 31.5 | 0.065 | 0.18 | 1560 | 1300 |
| **820** | 821 | 18 × 35.5 | 0.049 | 0.13 | 1890 | 1590 | | | | | |
| **1000** | 102 | 18 × 40 | 0.044 | 0.12 | 2080 | 1790 | | | | | |

※ In case of low profile type, 6 will be put at 12th digit of type numbering system.

# PJ series

## ■Standard Ratings

| V (Code) | | 100 (2A) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Size code | | — | | | | | 6 | | | | |
| Item | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | | Case size φD × L (mm) | Impedance ( Ω ) MAX. | | Rated ripple (mArms) | |
| Cap. (μF) | Code | | 20˚C / 100kHz | −10˚C / 100kHz | 105˚C / 10kHz to 200kHz | 105˚C / 120Hz | | 20˚C / 100kHz | −10˚C / 100kHz | 105˚C / 10kHz to 200kHz | 105˚C / 120Hz |
| **0.47** | R47 | 5 × 11 | 43.0 | 116.0 | 17 | 8 | | | | | |
| **0.68** | R68 | 5 × 11 | 23.0 | 62.0 | 23 | 11 | | | | | |
| **1** | 010 | 5 × 11 | 17.0 | 46.0 | 27 | 13 | | | | | |
| **1.5** | 1R5 | 5 × 11 | 10.0 | 27.0 | 35 | 17 | | | | | |
| **2.2** | 2R2 | 5 × 11 | 6.60 | 18.0 | 43 | 21 | | | | | |
| **3.3** | 3R3 | 5 × 11 | 4.10 | 11.0 | 54 | 27 | | | | | |
| **4.7** | 4R7 | 6.3 × 11 | 2.80 | 7.60 | 68 | 34 | | | | | |
| **6.8** | 6R8 | 6.3 × 11 | 1.90 | 5.10 | 83 | 41 | | | | | |
| **10** | 100 | 6.3 × 11 | 1.20 | 3.20 | 104 | 52 | | | | | |
| **12** | 120 | 6.3 × 11 | 1.00 | 2.70 | 114 | 57 | | | | | |
| **15** | 150 | 6.3 × 15 | 0.81 | 2.20 | 131 | 65 | | | | | |
| **18** | 180 | 6.3 × 15 | 0.67 | 1.80 | 155 | 80 | | | | | |
| **22** | 220 | 8 × 11.5 | 0.55 | 1.50 | 230 | 122 | | | | | |
| **27** | 270 | 8 × 15 | 0.47 | 1.30 | 269 | 146 | 10 × 12.5 | 0.50 | 1.40 | 268 | 145 |
| **33** | 330 | 8 × 15 | 0.38 | 1.00 | 299 | 169 | 10 × 12.5 | 0.42 | 1.10 | 293 | 166 |
| **39** | 390 | 8 × 20 | 0.33 | 0.89 | 352 | 202 | 10 × 15 | 0.36 | 0.97 | 337 | 193 |
| **47** | 470 | 10 × 20 | 0.28 | 0.76 | 423 | 252 | 12.5 × 15 | 0.31 | 0.84 | 402 | 239 |
| **56** | 560 | 10 × 20 | 0.24 | 0.65 | 456 | 274 | 12.5 × 15 | 0.27 | 0.73 | 430 | 258 |
| **68** | 680 | 10 × 25 | 0.21 | 0.57 | 526 | 326 | 12.5 × 15 | 0.23 | 0.62 | 466 | 289 |
| **82** | 820 | 10 × 31.5 | 0.18 | 0.49 | 606 | 386 | 16 × 15 | 0.19 | 0.51 | 681 | 433 |
| **100** | 101 | 10 × 31.5 | 0.15 | 0.41 | 663 | 438 | 16 × 15 | 0.17 | 0.46 | 719 | 475 |
| **120** | 121 | 12.5 × 25 | 0.13 | 0.35 | 774 | 519 | 16 × 15 | 0.14 | 0.38 | 793 | 531 |
| **150** | 151 | 12.5 × 25 | 0.11 | 0.30 | 798 | 553 | 18 × 15 | 0.12 | 0.32 | 917 | 635 |
| **180** | 181 | 12.5 × 31.5 | 0.098 | 0.26 | 904 | 641 | 16 × 20 | 0.11 | 0.30 | 995 | 706 |
| **220** | 221 | 12.5 × 35.5 | 0.087 | 0.23 | 1000 | 730 | 16 × 25 | 0.093 | 0.25 | 1170 | 854 |
| **270** | 271 | 12.5 × 40 | 0.072 | 0.19 | 1130 | 843 | 18 × 20 | 0.080 | 0.22 | 1230 | 918 |
| **330** | 331 | 16 × 31.5 | 0.062 | 0.17 | 1520 | 1160 | 18 × 25 | 0.070 | 0.19 | 1420 | 1080 |
| **390** | 391 | 16 × 35.5 | 0.053 | 0.14 | 1730 | 1340 | 18 × 31.5 | 0.062 | 0.17 | 1600 | 1240 |
| **470** | 471 | 16 × 40 | 0.047 | 0.13 | 1920 | 1530 | 18 × 35.5 | 0.056 | 0.15 | 1770 | 1410 |
| **560** | 561 | 18 × 35.5 | 0.041 | 0.11 | 2070 | 1680 | | | | | |
| **680** | 681 | 18 × 40 | 0.036 | 0.097 | 2300 | 1910 | | | | | |

※ In case of low profile type, 6 will be put at 12th digit of type numbering system.

| V | | 160 | | 200 | | 250 | | 315 | | 350 | | 400 | | 450 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cap. (μF) | Code | 2C | | 2D | | 2E | | 2F | | 2V | | 2G | | 2W | |
| **1** | 010 | 8 × 11.5 | 19 | 8 × 11.5 | 19 | 8 × 11.5 | 19 | 8 × 11.5 | 19 | 10 × 12.5 | 21 | 10 × 12.5 | 17 | 10 × 15 | 17 |
| **2.2** | 2R2 | 8 × 11.5 | 30 | 8 × 11.5 | 30 | 10 × 12.5 | 32 | 10 × 12.5 | 32 | 10 × 15 | 34 | 10 × 15 | 28 | 10 × 20 | 28 |
| **3.3** | 3R3 | 10 × 12.5 | 50 | 10 × 12.5 | 50 | 10 × 15 | 52 | 10 × 15 | 52 | 10 × 20 | 54 | 10 × 20 | 47 | 12.5 × 20 | 48 |
| **4.7** | 4R7 | 10 × 12.5 | 57 | 10 × 15 | 60 | 10 × 15 | 60 | 10 × 20 | 65 | 10 × 20 | 65 | 12.5 × 20 | 55 | 12.5 × 25 | 55 |
| **10** | 100 | 10 × 15 | 90 | 10 × 20 | 95 | 12.5 × 20 | 98 | 12.5 × 20 | 98 | 12.5 × 25 | 100 | 12.5 × 25 | 85 | 16 × 25 | 90 |
| **22** | 220 | 12.5 × 20 | 140 | 12.5 × 25 | 145 | 16 × 25 | 150 | 16 × 25 | 150 | 16 × 25 | 150 | 16 × 31.5 | 130 | 16 × 35.5 | 135 |
| **33** | 330 | 12.5 × 25 | 175 | 16 × 25 | 180 | 16 × 25 | 180 | 16 × 31.5 | 185 | 16 × 35.5 | 190 | 18 × 35.5 | 170 | 18 × 40 | 170 |
| **47** | 470 | 16 × 25 | 220 | 16 × 25 | 220 | 16 × 31.5 | 225 | 18 × 35.5 | 235 | 18 × 40 | 240 | | | | |
| **100** | 101 | 16 × 35.5 | 330 | 18 × 40 | 345 | 18 × 40 | 345 | | | | | | | Case size | ※1 |

※1 Rated ripple current (mArms) at 105˚C 120Hz

Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

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