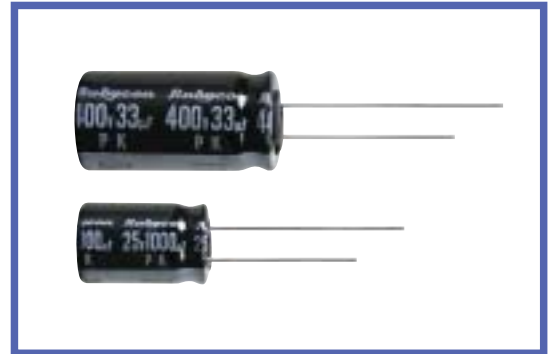


**PK SERIES**

**85°C Miniaturized**

**◆ FEATURES**

- Load life : 85°C 2000 hours.
- RoHS compliance.

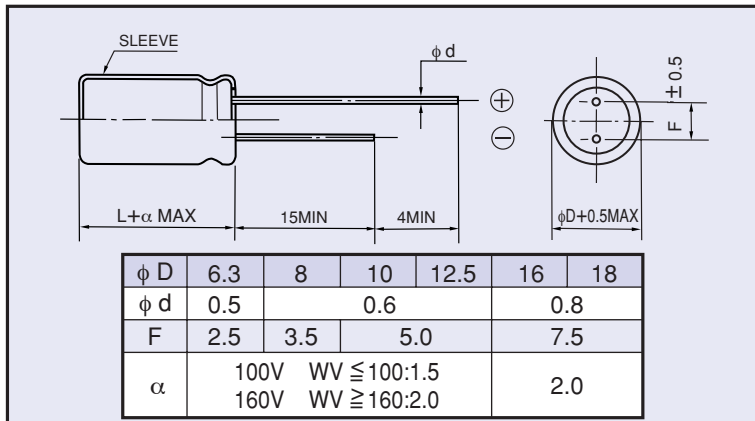


**◆ SPECIFICATIONS**

| Items   | Characteristics   |   |  |
|---|---|---|--|
| Category Temperature Range                        | -40 ~ +85°C   | -25 ~ +85°C   |  |
| Rated Voltage Range                               | 6.3 ~ 400V.DC   | 450V.DC   |  |
| Capacitance Tolerance                             | ±20% (20°C, 120Hz)  |   |  |
| Leakage Current(MAX)                              | 6.3 ~ 100V.DC   | 160 ~ 450V.DC   |  |
|   | I=0.01CV or 3 μA whichever is greater.<br>(After 2 minutes application of rated voltage)  | CV ≤ 1000   | CV > 1000  |
|   |   | I=0.1CV+40μA (1minute)<br>I=0.03CV+15μA (5minutes)                    | I=0.04CV+100μA (1minute)<br>I=0.02CV+25μA (5minutes) |
|   | I=Leakage Current( μ A)   | C=Rated Capacitance( μ F)      V=Rated Voltage(V)                     |  |
| Dissipation Factor(MAX)<br>(tanδ)                 | Rated Voltage (V)   | 6.3 10 16 25 35 50 63 100 160 200 250 350 400 450 (20°C, 120Hz)       |  |
|   | tanδ  | 0.28 0.24 0.20 0.16 0.14 0.12 0.10 0.10 0.20 0.20 0.20 0.25 0.25 0.25 |  |
|   | When rated capacitance is over 1000μ F, tanδ shall be added 0.02 to the listed value with increase of every 1000μ F.              |   |  |
| Endurance   | After applying rated voltage with rated ripple current for 2000hrs at 85°C, the capacitors shall meet the following requirements. |   |  |
|   | Capacitance Change  | Within ±25% of the initial value.                                     |  |
|   | Dissipation Factor  | Not more than 200% of the specified value.                            |  |
|   | Leakage Current   | Not more than the specified value.                                    |  |
| Low Temperature Stability<br>Impedance Ratio(MAX) | Rated Voltage (V)   | 6.3 10 16 25 35 50 63 100 160 200 250 350 400 450 (120Hz)             |  |
|   | Z(-25°C) / Z(20°C)  | 5 4 3 2 2 2 2 2 3 3 4 5 5 7   |  |
|   | Z(-40°C) / Z(20°C)  | 12 10 8 5 4 3 3 3 4 4 8 8 10 -  |  |

**◆ DIMENSIONS**

(mm)



**◆ MULTIPLIER FOR RIPPLE CURRENT**

Frequency coefficient

| Frequency (Hz) |                 | 60(50) | 120  | 500  | 1k   | 10k≤ |
|----------------|-----------------|--------|------|------|------|------|
| Coefficient    | 0.47 ~ 1 μ F    | 0.50   | 1.00 | 1.20 | 1.30 | 1.50 |
|                | 2.2 ~ 4.7 μ F   | 0.65   | 1.00 | 1.20 | 1.30 | 1.50 |
|                | 10 ~ 47 μ F     | 0.80   | 1.00 | 1.20 | 1.30 | 1.50 |
|                | 100 ~ 1000μ F   | 0.80   | 1.00 | 1.10 | 1.15 | 1.20 |
|                | 2200 ~ 33000μ F | 0.80   | 1.00 | 1.05 | 1.10 | 1.15 |

**◆ PART NUMBER**

   PK                          D × L  
 Rated Voltage    Series    Rated Capacitance    Capacitance Tolerance    Option    Lead Forming    Case Size

**◆ STANDARD SIZE, RATED RIPPLE CURRENT**

 Size  $\phi$  D×L(mm), Ripple Current (mA r.m.s./85°C, 120kHz)

| WV(V.DC)<br>Cap (μF) | 6.3<br>(0J) |        | 10<br>(1A) |        | 16<br>(1C) |        | 25<br>(1E) |        | 35<br>(1V) |        | 50<br>(1H) |        | 63<br>(1J) |        |
|----------------------|-------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
|                      | Size        | Ripple | Size       | Ripple | Size       | Ripple | Size       | Ripple | Size       | Ripple | Size       | Ripple | Size       | Ripple |
| 100                  |             |        |            |        |            |        |            |        |            |        | 8 × 11.5   | 270    | 8 × 11.5   | 290    |
| 220                  |             |        |            |        |            |        |            |        | 8 × 11.5   | 370    | 10 × 12.5  | 435    | 10 × 16    | 490    |
| 330                  |             |        |            |        | 6.3 × 11   | 360    | 8 × 11.5   | 410    | 10 × 12.5  | 500    | 10 × 16    | 590    | 10 × 20    | 710    |
| 470                  |             |        |            |        | 8 × 11.5   | 460    | 8 × 11.5   | 550    | 10 × 12.5  | 680    | 10 × 20    | 760    | 12.5 × 20  | 900    |
| 680                  | 6.3 × 11    | 460    | 8 × 11.5   | 580    | 8 × 11.5   | 620    | 10 × 12.5  | 780    | 10 × 16    | 910    | 12.5 × 20  | 1000   | 12.5 × 25  | 1200   |
| 1000                 | 8 × 11.5    | 590    | 8 × 11.5   | 660    | 10 × 12.5  | 720    | 10 × 16    | 870    | 10 × 20    | 1180   | 12.5 × 25  | 1350   | 16 × 25    | 1350   |
| 2200                 | 10 × 16     | 920    | 10 × 16    | 1090   | 10 × 20    | 1320   | 12.5 × 20  | 1500   | 16 × 25    | 1810   | 16 × 31.5  | 1980   | 18 × 31.5  | 1800   |
| 3300                 | 10 × 20     | 1200   | 10 × 20    | 1440   | 12.5 × 20  | 1600   | 16 × 25    | 2000   | 16 × 25    | 1990   | 18 × 31.5  | 2100   | 18 × 40    | 2600   |
| 4700                 | 12.5 × 20   | 1550   | 12.5 × 20  | 1680   | 12.5 × 25  | 2050   | 16 × 25    | 2120   | 16 × 35.5  | 2500   | 18 × 40    | 2800   |            |        |
| 6800                 | 12.5 × 25   | 1920   | 12.5 × 25  | 2150   | 16 × 25    | 2250   | 16 × 31.5  | 2440   | 18 × 35.5  | 2740   |            |        |            |        |
| 10000                | 16 × 25     | 2370   | 16 × 25    | 2270   | 16 × 31.5  | 2660   | 18 × 35.5  | 2900   |            |        |            |        |            |        |
| 15000                | 16 × 31.5   | 2550   | 16 × 35.5  | 2880   | 18 × 35.5  | 2950   |            |        |            |        |            |        |            |        |
| 22000                | 16 × 35.5   | 2900   | 18 × 35.5  | 3100   |            |        |            |        |            |        |            |        |            |        |
| 33000                | 18 × 40     | 3400   |            |        |            |        |            |        |            |        |            |        |            |        |

| WV(V.DC)<br>Cap (μF) | 100<br>(2A) |        | 160<br>(2C) |        | 200<br>(2D) |        | 250<br>(2E) |        | 350<br>(2V) |        | 400<br>(2G) |        | 450<br>(2W) |        |
|----------------------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
|                      | Size        | Ripple | Size        | Ripple | Size        | Ripple | Size        | Ripple | Size        | Ripple | Size        | Ripple | Size        | Ripple |
| 0.47                 |             |        |             |        |             |        |             |        |             |        |             |        | 6.3 × 11    | 8      |
| 1                    |             |        |             |        |             |        |             |        |             |        |             |        | 6.3 × 11    | 16     |
| 2.2                  |             |        |             |        |             |        |             |        | 6.3 × 11    | 30     | 8 × 11.5    | 31     | 8 × 11.5    | 29     |
| 3.3                  |             |        |             |        |             |        | 6.3 × 11    | 45     | 8 × 11.5    | 45     | 8 × 11.5    | 48     | 8 × 11.5    | 33     |
| 4.7                  |             |        |             |        | 6.3 × 11    | 51     | 6.3 × 11    | 54     | 8 × 11.5    | 55     | 10 × 12.5   | 56     | 10 × 12.5   | 46     |
| 10                   |             |        | 8 × 11.5    | 80     | 8 × 11.5    | 85     | 10 × 12.5   | 90     | 10 × 16     | 90     | 10 × 16     | 90     | 10 × 20     | 84     |
| 22                   |             |        | 10 × 12.5   | 130    | 10 × 16     | 150    | 10 × 16     | 150    | 12.5 × 20   | 185    | 12.5 × 20   | 200    | 12.5 × 25   | 140    |
| 33                   | 8 × 11.5    | 185    | 10 × 16     | 180    | 10 × 20     | 205    | 10 × 20     | 205    | 12.5 × 25   | 240    | 12.5 × 25   | 240    | 16 × 25     | 180    |
| 47                   | 8 × 11.5    | 220    | 10 × 20     | 230    | 10 × 20     | 220    | 12.5 × 20   | 260    | 16 × 25     | 300    | 16 × 25     | 250    | 16 × 31.5   | 220    |
| 100                  | 10 × 16     | 380    | 12.5 × 25   | 430    | 12.5 × 25   | 320    | 16 × 25     | 450    | 18 × 31.5   | 520    | 18 × 35.5   | 420    | 18 × 40     | 280    |
| 220                  | 12.5 × 20   | 610    | 16 × 31.5   | 645    | 16 × 31.5   | 540    | 18 × 35.5   | 680    |             |        |             |        |             |        |
| 330                  | 12.5 × 25   | 760    | 16 × 35.5   | 700    | 18 × 35.5   | 800    |             |        |             |        |             |        |             |        |
| 470                  | 16 × 25     | 1000   | 18 × 40     | 1200   |             |        |             |        |             |        |             |        |             |        |
| 680                  | 16 × 31.5   | 1100   |             |        |             |        |             |        |             |        |             |        |             |        |
| 1000                 | 18 × 31.5   | 1200   |             |        |             |        |             |        |             |        |             |        |             |        |

Refer to YK series for low capacitance models.