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# PG Series

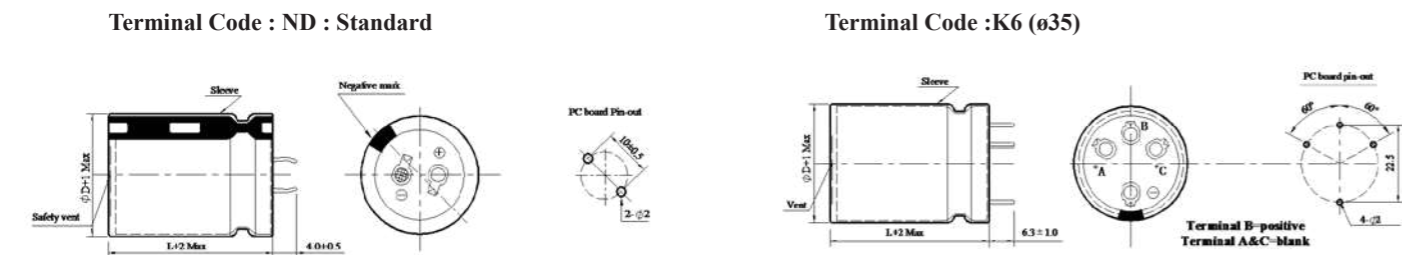
- Smaller size with higher ripple current.
- Load life 5,000 hours at 105°C .



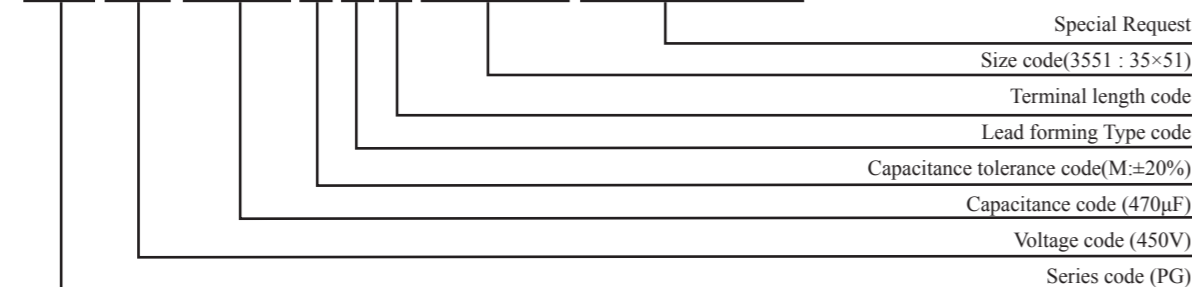
◆ SPECIFICATIONS

| Item  | Performance Characteristics   |                               |      |      |      |      |      |
|---|---|-------------------------------|------|------|------|------|------|
| Category Temperature Range                  | -25 ~ +105°C  |                               |      |      |      |      |      |
| Working Voltage Range                       | 200 ~ 450Vdc  |                               |      |      |      |      |      |
| Capacitance Range                           | 68 ~ 1,800µF  |                               |      |      |      |      |      |
| Capacitance Tolerance                       | ±20% (at 25°C and 120Hz)  |                               |      |      |      |      |      |
| Dissipation Factor (tan δ) (at 25°C, 120Hz) | Rated Voltage (V)   | 200                           | 220  | 250  | 400  | 420  | 450  |
|   | tanδ(Max)   | 0.20                          | 0.20 | 0.20 | 0.25 | 0.25 | 0.25 |
| Leakage Current                             | I=0.02CV or 3000µA, whichever is smaller<br>I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V)<br>Impress the rated voltage for 5 minutes. |                               |      |      |      |      |      |
| Endurance                                   | The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 5,000 hours at 105°C.                   |                               |      |      |      |      |      |
|   | Capacitance change  | ≅ ±20% of the initial value   |      |      |      |      |      |
|   | Dissipation factor(tan δ)   | ≅ 200% of the specified value |      |      |      |      |      |
|   | Leakage current   | ≅ specified value             |      |      |      |      |      |
| Shelf Life                                  | The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 1,000 hours at 105°C without voltage applied.       |                               |      |      |      |      |      |
|   | Capacitance change  | ≅ ±20% of the initial value   |      |      |      |      |      |
|   | Dissipation factor(tanδ)  | ≅ 200% of the specified value |      |      |      |      |      |
|   | Leakage current   | ≅ 200% of the specified value |      |      |      |      |      |
| Others                                      | Conforms to JIS-C-5101-4 (1998), characteristic W.  |                               |      |      |      |      |      |

◆ DIMENSIONS (mm)



◆ PART NUMBERING SYSTEM ( Example : 450V 470µF )



# PG Series

- ◆ Case size & Permissible rated ripple current: (mA rms) at 120Hz / 105°C:

| Vdc<br>uF ΦD | 200   |      |       |      |       |      |       |      | Vdc<br>uF ΦD | 220   |      |       |      |       |      |       |      |
|--------------|-------|------|-------|------|-------|------|-------|------|--------------|-------|------|-------|------|-------|------|-------|------|
|              | Φ 22  |      | Φ 25  |      | Φ 30  |      | Φ 35  |      |              | Φ 22  |      | Φ 25  |      | Φ 30  |      | Φ 35  |      |
|              | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   |              | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   |
| 270          | 22×31 | 1010 |       |      |       |      |       |      | 220          | 22×31 | 900  |       |      |       |      |       |      |
| 330          | 22×35 | 1150 |       |      |       |      |       |      | 270          | 22×31 | 950  |       |      |       |      |       |      |
| 390          | 22×41 | 1210 | 25×31 | 1200 |       |      |       |      | 330          | 22×35 | 1200 | 25×31 | 1150 |       |      |       |      |
| 470          | 22×45 | 1330 | 25×35 | 1320 |       |      |       |      | 390          | 22×41 | 1300 | 25×35 | 1320 |       |      |       |      |
| 560          | 22×51 | 1470 | 25×41 | 1460 | 30×31 | 1460 |       |      | 470          | 22×45 | 1520 | 25×41 | 1400 | 30×31 | 1350 |       |      |
| 680          |       |      | 25×45 | 1620 | 30×35 | 1630 |       |      | 560          | 22×51 | 1610 | 25×45 | 1510 | 30×35 | 1510 |       |      |
| 820          |       |      | 25×51 | 1780 | 30×41 | 1830 | 35×31 | 1820 | 680          |       |      | 25×51 | 1710 | 30×41 | 1660 | 35×31 | 1620 |
| 1000         |       |      |       |      | 30×45 | 2100 | 35×35 | 2100 | 820          |       |      |       |      | 30×45 | 1820 | 35×35 | 1760 |
| 1200         |       |      |       |      | 30×51 | 2410 | 35×41 | 2420 | 1000         |       |      |       |      | 30×51 | 2160 | 35×41 | 2140 |
| 1500         |       |      |       |      |       |      | 35×51 | 2810 | 1200         |       |      |       |      |       |      | 35×45 | 2520 |
| 1800         |       |      |       |      |       |      |       |      | 1500         |       |      |       |      |       |      | 35×51 | 2960 |

| Vdc<br>uF ΦD | 250   |      |       |      |       |      |       |      | Vdc<br>uF ΦD | 400   |      |       |      |       |      |       |      |
|--------------|-------|------|-------|------|-------|------|-------|------|--------------|-------|------|-------|------|-------|------|-------|------|
|              | Φ 22  |      | Φ 25  |      | Φ 30  |      | Φ 35  |      |              | Φ 22  |      | Φ 25  |      | Φ 30  |      | Φ 35  |      |
|              | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   |              | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   |
| 120          |       |      |       |      |       |      |       |      | 68           | 22×25 | 470  |       |      |       |      |       |      |
| 150          |       |      |       |      |       |      |       |      | 82           | 22×25 | 580  |       |      |       |      |       |      |
| 180          |       |      |       |      |       |      |       |      | 100          | 22×31 | 640  | 25×25 | 640  |       |      |       |      |
| 220          | 22×31 | 910  |       |      |       |      |       |      | 120          | 22×35 | 690  | 25×31 | 680  |       |      |       |      |
| 270          | 22×35 | 1050 |       |      |       |      |       |      | 150          | 22×41 | 810  | 25×31 | 810  | 30×25 | 750  |       |      |
| 330          | 22×41 | 1170 | 25×35 | 1160 |       |      |       |      | 180          | 22×45 | 900  | 25×35 | 890  | 30×31 | 870  |       |      |
| 390          | 22×45 | 1360 | 25×41 | 1330 | 30×31 | 1360 |       |      | 220          | 22×51 | 1010 | 25×41 | 1000 | 30×35 | 1000 | 35×31 | 1000 |
| 470          | 22×51 | 1460 | 25×45 | 1430 | 30×35 | 1510 |       |      | 270          |       |      | 25×51 | 1100 | 30×41 | 1100 | 35×31 | 1110 |
| 560          |       |      | 25×51 | 1640 | 30×41 | 1640 |       |      | 330          |       |      |       |      | 30×45 | 1310 | 35×35 | 1310 |
| 680          |       |      |       |      | 30×45 | 1820 | 35×35 | 1820 | 390          |       |      |       |      | 30×51 | 1410 | 35×41 | 1420 |
| 820          |       |      |       |      | 30×51 | 1990 | 35×41 | 2030 | 470          |       |      |       |      |       |      | 35×45 | 1530 |
| 1000         |       |      |       |      |       |      | 35×45 | 2140 | 560          |       |      |       |      |       |      | 35×51 | 1680 |
| 1200         |       |      |       |      |       |      | 35×51 | 2760 | 680          |       |      |       |      |       |      | 35×55 | 1880 |

| Vdc<br>uF ΦD | 420   |     |       |      |       |      |       |      | Vdc<br>uF ΦD | 450   |     |       |      |       |      |       |      |
|--------------|-------|-----|-------|------|-------|------|-------|------|--------------|-------|-----|-------|------|-------|------|-------|------|
|              | Φ 22  |     | Φ 25  |      | Φ 30  |      | Φ 35  |      |              | Φ 22  |     | Φ 25  |      | Φ 30  |      | Φ 35  |      |
|              | ΦD×L  | RC  | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   |              | ΦD×L  | RC  | ΦD×L  | RC   | ΦD×L  | RC   | ΦD×L  | RC   |
| 68           | 22×25 | 460 |       |      |       |      |       |      | 68           | 22×25 | 490 |       |      |       |      |       |      |
| 82           | 22×31 | 590 | 25×25 | 600  |       |      |       |      | 82           | 22×31 | 590 |       |      |       |      |       |      |
| 100          | 22×35 | 630 | 25×31 | 620  |       |      |       |      | 100          | 22×35 | 640 | 25×31 | 640  | 30×25 | 580  |       |      |
| 120          | 22×41 | 670 | 25×31 | 700  | 30×25 | 750  |       |      | 120          | 22×41 | 690 | 25×35 | 690  | 30×25 | 670  |       |      |
| 150          | 22×45 | 790 | 25×35 | 800  | 30×31 | 770  |       |      | 150          | 22×45 | 810 | 25×41 | 810  | 30×31 | 740  | 35×25 | 690  |
| 180          | 22×51 | 880 | 25×41 | 870  | 30×31 | 890  |       |      | 180          | 22×51 | 900 | 25×45 | 870  | 30×35 | 840  | 35×31 | 790  |
| 220          |       |     | 25×45 | 990  | 30×35 | 1050 | 35×31 | 980  | 220          |       |     | 25×51 | 1010 | 30×41 | 940  | 35×31 | 970  |
| 270          |       |     | 25×51 | 1270 | 30×41 | 1100 | 35×35 | 1080 | 270          |       |     |       |      | 30×45 | 1070 | 35×35 | 1080 |
| 330          |       |     |       |      | 30×45 | 1260 | 35×41 | 1230 | 330          |       |     |       |      | 30×51 | 1210 | 35×41 | 1250 |
| 390          |       |     |       |      | 30×51 | 1380 | 35×45 | 1350 | 390          |       |     |       |      |       |      | 35×45 | 1380 |
| 470          |       |     |       |      |       |      | 35×51 | 1450 | 470          |       |     |       |      |       |      | 35×51 | 1560 |
| 560          |       |     |       |      |       |      | 35×55 | 1650 | 560          |       |     |       |      |       |      |       |      |

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Vdc       | Frequency (Hz) |      |      |      |      |
|-----------|----------------|------|------|------|------|
|           | 50/60          | 120  | 1K   | 10K  | 100K |
| 200 ~ 250 | 0.80           | 1.00 | 1.20 | 1.30 | 1.40 |
| 400 ~ 450 | 0.80           | 1.00 | 1.10 | 1.12 | 1.15 |