

# PGM

**+ 105°C 7mm Height  
Low Profile  
Radial Lead Aluminum  
Electrolytic Capacitors**



*For all long life general purpose applications*

## FEATURES

- **Very Small Size**
- **Capacitance range: 0.1  $\mu$ F to 100  $\mu$ F**
- **Voltage range: 6.3 WVDC to 50 WVDC**
- **Solvent tolerant end seals standard**

## SPECIFICATIONS

|                                  |            |                                                                                           |     |     |      |                                                                                                 |                  |      |     |      |
|----------------------------------|------------|-------------------------------------------------------------------------------------------|-----|-----|------|-------------------------------------------------------------------------------------------------|------------------|------|-----|------|
| Capacitance Tolerance            |            | ±20% at 120Hz, 20°C                                                                       |     |     |      |                                                                                                 |                  |      |     |      |
| Operating Temperature Range      |            | -55°C to +105°C                                                                           |     |     |      |                                                                                                 |                  |      |     |      |
| Dissipation Factor<br>120Hz 20°C | WVDC       | 6.3                                                                                       | 10  | 16  | 25   | 35                                                                                              | 50               |      |     |      |
|                                  | tan δ      | .24                                                                                       | .20 | .16 | .14  | .12                                                                                             | .10              |      |     |      |
| Impedance Ratio<br>(Max.) @120Hz | WVDC       | 6.3                                                                                       | 10  | 16  | 25   | 35                                                                                              | 50               |      |     |      |
|                                  | -25°C/20°C | 3                                                                                         | 2   | 2   | 2    | 2                                                                                               | 2                |      |     |      |
|                                  | -40°C/20°C | 6                                                                                         | 5   | 4   | 3    | 3                                                                                               | 3                |      |     |      |
| Leakage Current                  | WVDC       | 50 WVDC                                                                                   |     |     |      |                                                                                                 |                  |      |     |      |
|                                  | Time       | 2 minutes                                                                                 |     |     |      |                                                                                                 |                  |      |     |      |
|                                  |            | .01 CV or 3 μA                                                                            |     |     |      |                                                                                                 |                  |      |     |      |
|                                  |            | whichever is greater                                                                      |     |     |      |                                                                                                 |                  |      |     |      |
| Load Life                        |            | 1,000 hours at 105°C with rated WVDC                                                      |     |     |      |                                                                                                 |                  |      |     |      |
|                                  |            | Capacitance change<br>Dissipation factor<br>Leakage current                               |     |     |      | < 20% of initial measured value<br><200% of initial specified value<br><Initial specified value |                  |      |     |      |
| Shelf Life                       |            | 1,000 hours at 105°C with no voltage applied.<br>Units will meet load life specification. |     |     |      |                                                                                                 |                  |      |     |      |
| Ripple Current Multipliers       |            | Frequency (Hz)                                                                            |     |     |      |                                                                                                 | Temperature (°C) |      |     |      |
|                                  |            | 50                                                                                        | 120 | 400 | 1K   | 10K                                                                                             | 100K             | +105 | +85 | +65  |
|                                  |            | 0.8                                                                                       | 1.0 | 1.3 | 1.45 | 1.65                                                                                            | 1.7              | 1.0  | 1.4 | 1.75 |

## SPECIAL ORDER OPTIONS

(See pages 7 thru 11)

- Special tolerances:  $\pm 10\%$  (K),  $-10\% + 30\%$  (Q)
- Tape and Reel/Ammo Pack
- Cut, formed, cut and formed, and snap-in leads
- Epoxy end seal
- Polyester sleeve



**ILLINOIS CAPACITOR, INC.** 3757 W. Touhy Ave., Lincolnwood, IL 60712 • (847) 675-1760 • Fax (847) 673-2850 • [www.illcap.com](http://www.illcap.com)

## STANDARD PART LISTING

| Capacitance<br>( $\mu$ F) | WVDC | IC PART<br>NUMBER | Maximum<br>ESR<br>120Hz, +20°C | Maximum RMS<br>Ripple Current<br>(mA)<br>120Hz, +105°C | Dimension<br>DxL<br>(mm) |
|---------------------------|------|-------------------|--------------------------------|--------------------------------------------------------|--------------------------|
| 0.1                       | 50   | 104PGM050M        | 1657                           | 1                                                      | 4x7                      |
| 0.22                      | 50   | 224PGM050M        | 753.5                          | 2.2                                                    | 4x7                      |
| 0.33                      | 50   | 334PGM050M        | 502.3                          | 3.3                                                    | 4x7                      |
| 0.47                      | 50   | 474PGM050M        | 352.7                          | 5                                                      | 4x7                      |
| 1.0                       | 50   | 105PGM050M        | 165.7                          | 10                                                     | 4x7                      |
| 2.2                       | 50   | 225PGM050M        | 75.35                          | 16                                                     | 4x7                      |
| 3.3                       | 50   | 335PGM050M        | 50.23                          | 20                                                     | 4x7                      |
| 4.7                       | 35   | 475PGM035M        | 42.32                          | 22                                                     | 4x7                      |
| 4.7                       | 50   | 475PGM050M        | 35.27                          | 27                                                     | 5x7                      |
| 6.8                       | 25   | 685PGM025M        | 34.13                          | 27                                                     | 4x7                      |
| 6.8                       | 35   | 685PGM035M        | 29.25                          | 30                                                     | 5x7                      |
| 6.8                       | 50   | 685PGM050M        | 24.38                          | 40                                                     | 6.3x7                    |

**NOTE 1:** WVDC: MAXIMUM RATED DC WORKING VOLTAGE AT +105°C.  
**NOTE 2:** SVDC: MAXIMUM RATED DC SURGE VOLTAGE AT +105°C.  
**NOTE 3:** DISSIPATION FACTOR (tan  $\delta$ ) MAXIMUM; 120 Hz, +25°C.  
**NOTE 4:** ESR: MAXIMUM EQUIVALENT SERIES RESISTANCE; 120 Hz, +25°C MINIMUM CAPACITANCE, MAXIMUM DISSIPATION FACTOR.

| Capacitance<br>( $\mu$ F) | WVDC | IC PART<br>NUMBER | Maximum<br>ESR<br>120Hz, +20°C | Maximum RMS<br>Ripple Current<br>(mA)<br>120Hz, +105°C | Dimension<br>DxL<br>(mm) |
|---------------------------|------|-------------------|--------------------------------|--------------------------------------------------------|--------------------------|
| 10.0                      | 16   | 106PGM016M        | 26.52                          | 27                                                     | 4x7                      |
| 10.0                      | 35   | 106PGM035M        | 19.89                          | 34                                                     | 5x7                      |
| 10.0                      | 50   | 106PGM050M        | 16.57                          | 41                                                     | 6.3x7                    |
| 22.0                      | 6.3  | 226PGM6R3M        | 18.08                          | 32                                                     | 4x7                      |
| 22.0                      | 16   | 226PGM016M        | 12.05                          | 43                                                     | 5x7                      |
| 22.0                      | 35   | 226PGM035M        | 9.04                           | 54                                                     | 6.3x7                    |
| 33.0                      | 10   | 336PGM010M        | 10.04                          | 48                                                     | 5x7                      |
| 33.0                      | 25   | 336PGM025M        | 7.03                           | 62                                                     | 6.3x7                    |
| 47.0                      | 6.3  | 476PGM6R3M        | 8.47                           | 52                                                     | 5x7                      |
| 47.0                      | 16   | 476PGM016M        | 5.64                           | 69                                                     | 6.3x7                    |
| 100                       | 6.3  | 107PGM6R3M        | 3.98                           | 82                                                     | 6.3x7                    |

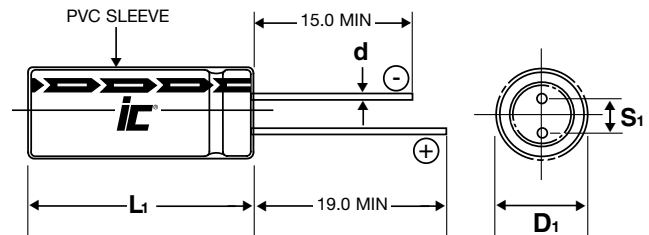
**NOTE 5:** MAXIMUM LEAKAGE CURRENT; RATED WVDC, 2 MINUTES, +25°C.  
**NOTE 6:** RMS RIPPLE CURRENT; 120 Hz, +105°C.  
**NOTE 7:** CAPACITANCE TOLERANCE IS MEASURED AT 120 Hz, +25°C.  
**NOTE 8:** ALL MEASUREMENTS ARE PERFORMED USING THE BRIDGE METHOD.

## PHYSICAL DIMENSIONS

| WVDC<br>(SV)<br>( $\mu$ F) | 6.3<br>(8) | 10<br>(13) | 16<br>(20) | 25<br>(32) | 35<br>(44) | 50<br>(63) |
|----------------------------|------------|------------|------------|------------|------------|------------|
| 0.1                        |            |            |            |            |            | 4x7        |
| .22                        |            |            |            |            |            | 4x7        |
| .33                        |            |            |            |            |            | 4x7        |
| .47                        |            |            |            |            |            | 4x7        |
| 1.0                        |            |            |            |            |            | 4x7        |
| 2.2                        |            |            |            |            |            | 4x7        |
| 3.3                        |            |            |            |            |            | 4x7        |
| 4.7                        |            |            |            |            | 4x7        | 5x7        |
| 6.8                        |            |            |            | 4x7        | 5x7        | 6.3x7      |
| 10                         |            |            | 4x7        |            | 5x7        | 6.3x7      |
| 22                         | 4x7        |            | 5x7        |            | 6.3x7      |            |
| 33                         |            | 5x7        |            | 6.3x7      |            |            |
| 47                         | 5x7        |            | 6.3x7      |            |            |            |
| 100                        | 6.3x7      |            |            |            |            |            |

Convert to inches, divide by 25.4

DxL(mm)



| D | 4   | 5   | 6.3 |
|---|-----|-----|-----|
| S | 1.5 | 2.0 | 2.5 |
| d | .45 | .45 | .45 |

L<sub>1</sub>: L+1.0mm Max.  
D<sub>1</sub>=D+0.5mm Max.  
S<sub>1</sub>=S± 0.5mm