

# CG [ Low ESR & High Ripple Current ]

105°C, 2000 Hours and Ultra Low ESR

## Conductive Polymer Solid Capacitors

### ELECTRICAL CHARACTERISTICS

|                                   |   |                     |                    |
|-----------------------------------|---|---------------------|--------------------|
| Operation Temperature Range       | -55 ~ +105°C  |                     |                    |
| Rated Voltage Range               | 2.5 ~ 25VDC   |                     |                    |
| Rated Capacitance Range           | 33 ~ 2700μF   |                     |                    |
| Capacitance Tolerance             | ± 20% at 120Hz, 20°C  |                     |                    |
| Leakage Current (Max. 20°C)       | $I \leq 0.2CV$ (μA) ( After Rated Voltage Applied for 2 Minutes )<br>$I$ = Leakage Current (μA), $C$ = Rated Capacitance (μF), $V$ = Rated Voltage (V)  |                     |                    |
| Dissipation Factor at 120Hz, 20°C | WV(V)   | 2.5 ~ 10V           | 16 ~ 25            |
|                                   | D.F (%)   | 8                   | 12                 |
| Low Temperature Stability         | Impedance Ratio at 20°C (Max.)  |                     |                    |
|                                   | WV (V)  | 2.5 ~ 16V           |                    |
|                                   | Impedance   | Z - 25°C / Z + 20°C | ≤ 1.15             |
|                                   |   | Z - 55°C / Z + 20°C | ≤ 1.25 (Z: 100KHz) |
| Endurance                         | After the rated voltage has been applied at 105°C for 2000 hours, the capacitors shall meet the follow requirements.<br>(a) Appearance: No Significant Damage<br>(b) Capacitance Change: Within ±20% of Initial Value<br>(c) Dissipation Factor: Not Exceeding 150% of the Initial Specified Value<br>(d) Equivalent Series Resistance: Not Exceeding 150% of the Initial Specified Value<br>(e) Leakage Current: Not Exceeding the Initial Specified Value |                     |                    |
| Humidity Test                     | After subjected to 90 to 95% RH for 1000 hours at 60°C, the capacitors shall meet the requirements as Endurance.  |                     |                    |



### DESCRIPTION

Long life for 2000 hours at 105°C, ideally suited for high quality and high reliability applications.

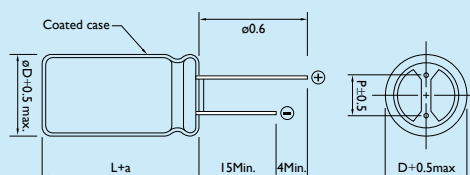
Featuring high CV products

### DIAGRAM OF DIMENSIONS

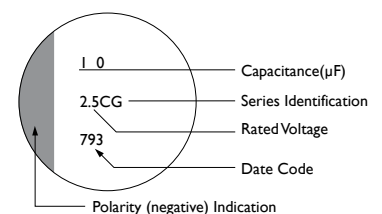
Unit: mm

Rubber Stand-off

| Dø | P   | a (Max.) |
|----|-----|----------|
| 6  | 2.5 | 1.0      |
| 8  | 3.5 |          |
| 10 | 5.0 |          |



### MARKING



CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

| CAP. (μF) | RATED VOLTAGE WV (SURGE VOLTAGE WV) |        |       |            |        |       |             |        |       |
|-----------|-------------------------------------|--------|-------|------------|--------|-------|-------------|--------|-------|
|           | 2.5<br>SIZE                         | RIPPLE | ESR   | 4<br>SIZE  | RIPPLE | ESR   | 6.3<br>SIZE | RIPPLE | ESR   |
| 180       |                                     |        |       |            |        |       |             |        |       |
| 270       |                                     |        |       |            |        |       | 6.3 x 10.5  | 3160   | 28.00 |
| 330       |                                     |        |       |            |        |       | 6.3 x 10.5  | 3190   | 28.00 |
| 390       |                                     |        |       | 6.3 x 10.5 | 3160   | 20.00 | 6.3 x 10.5  | 3190   | 28.00 |
| 470       |                                     |        |       |            |        |       | 8 x 11.5    | 5600   | 7.00  |
| 560       | 6.3 x 10.5                          | 3160   | 20.00 | 6.3 x 10.5 | 3160   | 20.00 |             |        |       |
| 680       |                                     |        |       | 8 x 11.5   | 5600   | 7.00  |             |        |       |
| 820       | 6.3 x 10.5                          | 3160   | 20.00 |            |        |       | 8 x 11.5    | 5600   | 7.00  |
|           |                                     |        |       |            |        |       | 10 x 11.5   | 5050   | 7.00  |
| 1000      | 8 x 11.5                            | 5600   | 7.00  |            |        |       | 10 x 11.5   | 5050   | 7.00  |
|           |                                     |        |       |            |        |       | 10 x 12.5   | 5600   | 7.00  |
| 1200      |                                     |        |       | 8 x 11.5   | 5600   | 7.00  | 10 x 12.5   | 5600   | 7.00  |
|           |                                     |        |       | 10 x 11.5  | 5050   | 7.00  |             |        |       |
| 1500      | 8 x 11.5                            | 5600   | 7.00  | 10 x 11.5  | 5050   | 7.00  |             |        |       |
|           | 10 x 11.5                           | 5050   | 7.00  | 10 x 12.5  | 5600   | 7.00  |             |        |       |
| 1800      | 10 x 12.5                           | 5600   | 7.00  | 10 x 12.5  | 5600   | 7.00  |             |        |       |
| 2700      | 10 x 12.5                           | 5600   | 7.00  |            |        |       |             |        |       |

Note: 1. Ripple Current: (mA/rms) 105°C, 100KHz  
2. ESR: 100KHz / 20°C (mΩ)

## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

| CAP. (μF) | RATED VOLTAGE W V (SURGE VOLTAGE W V) |        |       |            |        |       |            |        |       |
|-----------|---------------------------------------|--------|-------|------------|--------|-------|------------|--------|-------|
|           | 10<br>SIZE                            | RIPPLE | ESR   | 16<br>SIZE | RIPPLE | ESR   | 25<br>SIZE | RIPPLE | ESR   |
| 33        |                                       |        |       |            |        |       | 8 x 11.5   | 2980   | 30.00 |
| 47        |                                       |        |       |            |        |       | 8 x 11.5   | 2980   | 30.00 |
| 56        |                                       |        |       |            |        |       | 8 x 11.5   | 2980   | 30.00 |
| 100       |                                       |        |       | 6.3 x 10.5 | 2820   | 25.00 |            |        |       |
| 150       |                                       |        |       | 6.3 x 10.5 | 2820   | 25.00 |            |        |       |
| 180       | 6.3 x 10.5                            | 2820   | 25.00 | 8 x 11.5   | 4360   | 16.00 |            |        |       |
| 220       | 6.3 x 10.5                            | 2820   | 25.00 | 8 x 11.5   | 5000   | 11.00 |            |        |       |
| 270       |                                       |        |       | 8 x 11.5   | 5000   | 11.00 |            |        |       |
| 330       | 8 x 11.5                              | 5600   | 7.00  | 8 x 11.5   | 5000   | 8.00  |            |        |       |
|           |                                       |        |       | 10 x 11.5  | 4000   | 10.00 |            |        |       |
|           |                                       |        |       | 10 x 12.5  | 6100   | 10.00 |            |        |       |
| 390       |                                       |        |       | 10 x 12.5  | 5050   | 14.00 |            |        |       |
| 470       | 8 x 11.5                              | 5600   | 7.00  | 10 x 12.5  | 5050   | 14.00 |            |        |       |
|           | 10 x 11.5                             | 4000   | 7.00  |            |        |       |            |        |       |
| 560       | 10 x 12.5                             | 5050   | 7.00  | 10 x 12.5  | 5050   | 14.00 |            |        |       |
| 820       | 10 x 12.5                             | 5050   | 7.00  |            |        |       |            |        |       |

Note: 1. Ripple Current: (mA/rms) 105°C, 100KHz

2. ESR: 100KHz / 20°C (mΩ)