

# CONDUCTIVE POLYMER ALUMINUM SOLID CAPACITORS

# CS

Large capacitance & Long Life & High Voltage  
Series

- Features: 105℃, 5000hrs & Large capacitance & Long Life & High Voltage
- Recommended Applications : LED Driver , LED Power Supply.

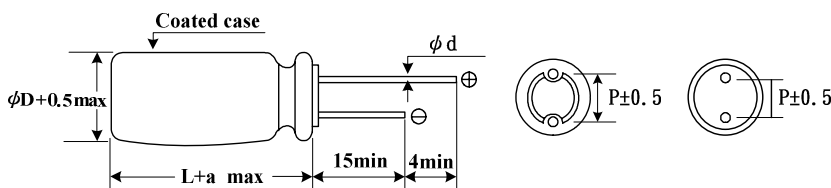


- Corresponding product to RoHS

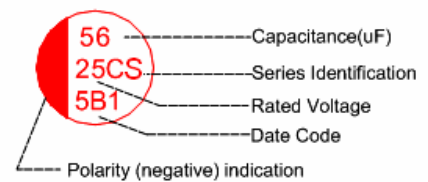
## Specifications

| Item                                                     | Characteristics                                                                                                                                                                                                                                                |                                                   |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Category Temperature Range                               | -55 ~ +105℃                                                                                                                                                                                                                                                    |                                                   |
| Rated Voltage Range                                      | 25 ~50VDC                                                                                                                                                                                                                                                      |                                                   |
| Rated Capacitance Range                                  | 56 ~ 390 $\mu$ F                                                                                                                                                                                                                                               |                                                   |
| Capacitance Tolerance                                    | $\pm 20\%$ at 120Hz , 20℃                                                                                                                                                                                                                                      |                                                   |
| Surge Voltage                                            | Rated voltage (V) x 1.15(at room temperature or at 25℃)                                                                                                                                                                                                        |                                                   |
| Leakage Current (MAX) (20℃)                              | Less than or equal to the value of Table. (After rated voltage applied for 2 minutes )                                                                                                                                                                         |                                                   |
| Dissipation Factor (MAX)<br>(tan $\delta$ ) (120Hz ,20℃) | Less than or equal to the value of Table.                                                                                                                                                                                                                      |                                                   |
| Low Temperature Stability<br>Impedance Ratio (MAX) (20℃) | WV                                                                                                                                                                                                                                                             | 25~50V                                            |
|                                                          | Z(100KHz)                                                                                                                                                                                                                                                      |                                                   |
|                                                          | Z-25℃ / Z+20℃                                                                                                                                                                                                                                                  | $\leq 1.15$                                       |
| Endurance                                                | Z-55℃ / Z+20℃                                                                                                                                                                                                                                                  | $\leq 1.25$                                       |
|                                                          | After applying rated voltage for 5000 hours at 105℃ the capacitor shall meet the following requirement.                                                                                                                                                        |                                                   |
|                                                          | Appearance                                                                                                                                                                                                                                                     | No significant damage                             |
| Humidity Test                                            | Capacitance Change                                                                                                                                                                                                                                             | Within $\pm 20\%$ of the initial value            |
|                                                          | Dissipation Factor                                                                                                                                                                                                                                             | Not more than 150% of the initial specified value |
|                                                          | Equivalent Series Resistance                                                                                                                                                                                                                                   | Not more than 150% of the initial specified value |
|                                                          | Leakage Current                                                                                                                                                                                                                                                | Not more than the initial specified value         |
| Surge Voltage Test                                       | After subjecting to 1,000 cycles each consisting of charge with the surge voltage specified at normal temperature for 30 seconds through a protective resistor and discharge for 5 minutes 30 seconds, the capacitors shall meet the requirement as Endurance. |                                                   |
| Failure Rate (MAX)                                       | 0.5% per 1,000 hours (confidence level 60% at 105℃)                                                                                                                                                                                                            |                                                   |

## Diagram of Dimensions



## Marking : case with red printing



| Size code | $\phi D \times L$ | P   | $\phi d$ | a   |
|-----------|-------------------|-----|----------|-----|
| G1B       | 8X11.5            | 3.5 | 0.6      | 1.0 |
| H1C       | 10X12.5           | 5.0 | 0.6      | 1.0 |

## Multiplier for Ripple Current

| Frequency (Hz) | $120 \leq F < 1K$ | $1K \leq F < 10K$ | $10K \leq F < 100K$ | $100K \leq F \leq 500K$ |
|----------------|-------------------|-------------------|---------------------|-------------------------|
| Coefficient    | 0.05              | 0.3               | 0.7                 | 1                       |

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## STANDARD RATINGS

| Size code | WV (Vdc) | Cap         | $\tan \delta$ | ESR                           | Ripple current          | Leakage current |
|-----------|----------|-------------|---------------|-------------------------------|-------------------------|-----------------|
|           |          | ( $\mu F$ ) | (120Hz, 20°C) | (m $\Omega$ max/20°C, 100KHz) | 105°C, 100KHz, (mA/rms) | ( $\mu A$ max)  |
| G08       | 35       | 56          | 0.12          | 29                            | 1500                    | 392             |
|           |          | 100         | 0.12          | 29                            | 1500                    | 700             |
| G1B       | 50       | 56          | 0.12          | 25                            | 1760                    | 560             |
|           | 35       | 150         | 0.12          | 25                            | 1760                    | 1050            |
|           | 25       | 220         | 0.12          | 25                            | 1760                    | 1100            |
|           |          | 270         | 0.12          | 25                            | 1760                    | 1350            |
|           | 20       | 390         | 0.12          | 25                            | 1760                    | 1560            |
| H1C       | 50       | 100         | 0.12          | 25                            | 2050                    | 2350            |
|           |          | 82          | 0.12          | 25                            | 2050                    | 820             |
|           | 35       | 270         | 0.12          | 25                            | 2050                    | 1890            |
|           | 25       | 330         | 0.12          | 25                            | 2050                    | 1650            |
|           |          | 390         | 0.12          | 25                            | 2050                    | 1950            |
|           |          | 470         | 0.12          | 25                            | 2050                    | 2350            |

☆ SIZE :  $\phi$  DxL(mm) ☆  $\tan \delta$  : 20°C, 120Hz. ☆ Ripple Current: (mA/rms), 105°C .100KHz ☆ ESR(m $\Omega$ ).20°C.100KHz