

SG [Electronic Ballast]

105°C Single-Ended Lead Aluminum Electrolytic Capacitors

Miniature Aluminum Electrolytic Capacitors

ELECTRICAL CHARACTERISTICS

Operating Temperature Range : -40 ~ +105°C / -25 ~ +105°C

Rated Voltage Range : 160 ~ 400V / 450V

Rated Capacitance Range : 4.7 ~ 330μF / 3.3~100μF

Capacitance Tolerance : -20 ~ +20% at 120Hz, 20°C

DC Leakage Current (μA): $I = 0.06CV (\mu A) + 10\mu A$ whichever is greater.
(After Rated Voltage Applied for 2 Minutes)

Dissipation Factor

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| WV (V) : | 160 | 200 | 250 | 350 | 400 | 450 |
| D.F. (%) : | 15 | 15 | 15 | 20 | 24 | 24 |

Low Temperature Stability Impedance Ratio (Max.)

| | | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|
| WV (V) : | 160 | 200 | 250 | 350 | 400 | 450 |
| Z - 25°C / Z + 20°C | 3 | 3 | 3 | 5 | 5 | 6 |
| Z - 40°C / Z + 20°C | 6 | 6 | 6 | 6 | 6 | - |

Endurance : After the rated voltage and rated ripple current have been applied at 105°C for 5000 hours, the capacitors shall meet the following requirements.

- (a) Capacitance Change : Within 20% of Initial Value
- (b) Dissipation Factor : 200% or Less of Initial Specified Value
- (c) Leakage Current : Initial Specified Value or Less

Shelf Life : After having been placed at 105°C without voltage applied for 1000 hours, the capacitors shall meet the same requirements as Endurance.



MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

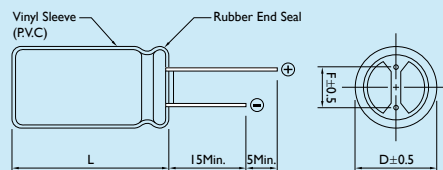
| FREQUENCY (Hz) | 50 | 60 | 120 | 300 |
|---------------------|-----|----------|-----|-----|
| 6.3~100V Below~68μF | 0.8 | 0.8 | 1.0 | 1.2 |
| FREQUENCY (Hz) | 1K | 10K~100K | | |
| 6.3~100V Below~68μF | 1.4 | 1.6 | | |

DIAGRAM OF DIMENSIONS

Dimensions: mm

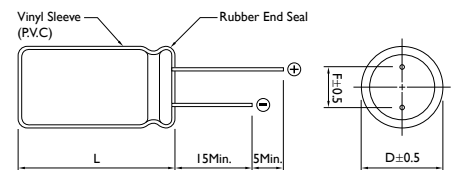
| Dø | F | dø |
|------|------|-----------|
| 5.0 | 2.0 | 0.5 |
| 6.3 | 2.5 | |
| 8.0 | 3.5 | 0.6 |
| 10.0 | 5.0 | |
| 12.0 | | |
| 13.0 | | |
| 16.0 | 7.5 | 0.8 |
| 18.0 | | |
| 22.0 | 10.0 | 0.8 (1.0) |

Rubber Stand-off



$L \leq 16 : L + 1.5\text{Max.}$
 $L > 16 : L + 2\text{Max.}$
 $D\phi = 8 \ \& \ 10 : L + 2.5\text{Max.}$

$D\phi < 20 : D\phi + 0.5$
 $D\phi \geq 20 : D\phi + 1$





CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

| CAP. (μF) | RATED VOLTAGE WV (SURGE VOLTAGE WV) | | | | | |
|-----------|-------------------------------------|--------|-------------------|--------|-------------------|--------|
| | 160 (200) SIZE | | 200 (250) SIZE | | 250 (300) SIZE | |
| | | RIPPLE | | RIPPLE | | RIPPLE |
| 10 | | | *10 x 15 | 80 | *10 x 15 | 85 |
| | | | | | *10 x 19,5 | 100 |
| 15 | | | *10 x 15 | 100 | | |
| 22 | 10 x 19,5 | 160 | 10 x 19,5 | 160 | *10 x 25 | 145 |
| | | | | | 13 x 20 | 160 |
| 33 | 10 x 19,5 | 210 | *10 x 19,5 | 160 | 13 x 20 | 210 |
| | | | 13 x 20 | 210 | | |
| 47 | 13 x 20 | 260 | 13 x 20 | 260 | 13 x 25 | 270 |
| | | | | | 16 x 20 | 275 |
| 68 | 13 x 25 | 360 | 13 x 25 | 360 | 16 x 25 | 380 |
| | 16 x 20 | 430 | 16 x 20 | 430 | 18 x 20 | 375 |
| 100 | 16 x 25 | 475 | 16 x 25 | 475 | 16 x 32 | 520 |
| | 18 x 20 | 465 | 18 x 20 | 465 | 18 x 25 | 500 |
| 150 | 16 x 32 | 650 | 18 x 25 | 650 | 18 x 32 | 650 |
| | 18 x 25 | 625 | | | | |
| 220 | 16 x 32 | 750 | 18 x 32 | 780 | 18 x 40 | 820 |
| | 18 x 25 | 725 | | | | |
| 330 | 18 x 32 | 960 | | | | |

Note: 1. Ripple Current: (mA/rms) 105°C, 120Hz

2. *Down size: 3000 Hours

CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

| CAP. (μF) | RATED VOLTAGE WV (SURGE VOLTAGE WV) | | | | | |
|-----------|-------------------------------------|--------|-------------------|--------|-------------------|--------|
| | 350 (400) SIZE | | 400 (450) SIZE | | 450 (500) SIZE | |
| | | RIPPLE | | RIPPLE | | RIPPLE |
| 3.3 | | | | | 10 x 19.5 | 60 |
| 4.7 | | | *10 x 15 | 60 | 13 x 20 | 80 |
| 6.8 | | | *10 x 15 | 72 | *10 x 19.5 | 90 |
| 10 | 10 x 19.5 | 100 | 10 x 19.5 | 100 | 13 x 20 | 110 |
| | | | | | 13 x 25 | 110 |
| 22 | 13 x 20 | 160 | 13 x 25 | 170 | 16 x 25 | 190 |
| | | | 16 x 20 | 200 | 18 x 20 | 200 |
| 33 | 13 x 25 | 230 | 16 x 25 | 230 | 16 x 32 | 275 |
| | 16 x 20 | 250 | 18 x 20 | 250 | 18 x 25 | 280 |
| 47 | 16 x 25 | 300 | 16 x 32 | 300 | 18 x 32 | 340 |
| | 18 x 20 | 315 | 18 x 25 | 325 | | |
| 68 | 16 x 32 | 400 | 18 x 36 | 420 | 18 x 32 | 395 |
| | 18 x 25 | 380 | | | 18 x 40 | 460 |
| 100 | 18 x 32 | 530 | 18 x 40 | 545 | 22 x 40 | 580 |
| 150 | | | 22 x 40 | 650 | | |

Note: 1. Ripple Current: (mA/rms) 105°C, 120Hz

2. *Down size: 3000 Hours