

ALUMINUM ELECTROLYTIC CAPACITORS

>SK General purpose Series

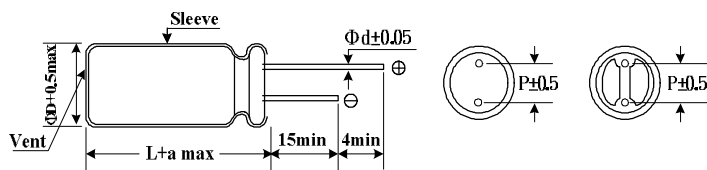
- Features: 85°C 2000 hours
- Recommended Applications: For general purpose , decoupling , by pass and filtering circuit in entertainment electronics
- Corresponding product to RoHS



Specifications

| Item | Characteristics | | | | | | | | | | |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------|------|------|--------|---------|---------|---------|---------|---------|
| Operating Temperature Range | -40~+85°C | -25~+85°C | | | | | | | | | |
| Rated Voltage Range | 6.3 ~ 100VDC | 160 ~ 500VDC | | | | | | | | | |
| Rated Capacitance Range | 0.1 ~ 22000μF | 0.47 ~ 470μF | | | | | | | | | |
| Capacitance Tolerance | ± 20 % at 120Hz , 20°C | | | | | | | | | | |
| Leakage Current (MAX) (20°C) | I=0.01CV or 3μA whichever is greater. I=0.03CV+10(μA) | | | | | | | | | | |
| Dissipation Factor (MAX) (tan δ) (120Hz , 20°C) | (After rated voltage applied for 2 minutes) | | | | | | | | | | |
| | WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160~250 | 350~500 |
| | tan δ | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 | 0.10 | 0.20 | 0.24 |
| Low Temperature Stability Impedance Ratio (MAX) | When nominal capacitance is over 1000uF , tan δ shall be added 0.02 to the listed value with increase of every 1000uF . | | | | | | | | | | |
| | WV | 6.3 | 10 | 16 | 25 | 35~100 | 160~250 | 315~350 | 400~500 | | |
| | Z(120Hz) | | | | | | | | | | |
| | Z-25°C / Z+20°C | 8 | 6 | 5 | 3 | 3 | 7 | 10 | 15 | | |
| Endurance | After applying rated voltage for 2000 hours at 85°C the capacitors shall meet the following requirements. | | | | | | | | | | |
| | Capacitance Change | Within ± 20 % of initial value | | | | | | | | | |
| | Dissipation Factor | Not more than 200% of the specified value | | | | | | | | | |
| Shelf Life | After placed at 85°C without voltage applied for 1000 hours, the capacitors shall meet the same requirement as Endurance. | | | | | | | | | | |
| | Leakage Current | initial specified value or less | | | | | | | | | |

Diagram of Dimensions



| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|------|
| φ D | 5 | 6.3 | 8 | 10 | 13 | 16 | 18 | 22 |
| P | 2.0 | 2.5 | 3.5 | 5.0 | | 7.5 | | 10.0 |
| φ d | 0.5 | 0.5 | 0.6 | 0.6 | | 0.8 | | 0.8 |
| a | 1.5 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 |

Multiplier for Ripple Current

Frequency coefficient

| Frequency (Hz) | 120 | 300 | 1K | 10K |
|-----------------------------|------|------|------|------|
| 6.3 ~ 100V Below 68 μ F | 1.00 | 1.20 | 1.30 | 1.50 |
| 6.3 ~ 100V 100 ~ 680 μ F | 1.00 | 1.10 | 1.15 | 1.20 |
| 6.3 ~ 100V 1000 ~ 22000 μ F | 1.00 | 1.05 | 1.10 | 1.15 |
| 160 ~ 450V Below 220 μ F | 1.00 | 1.25 | 1.40 | 1.40 |
| 160 ~ 450V 220 μ F Above | 1.00 | 1.10 | 1.13 | 1.13 |
| 500V | 1.00 | 1.05 | 1.10 | 1.10 |

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■ Dimensions, Rated Ripple Current

| Capacitance (μ F) | Rated (Surge) Voltage | | | | | | | | | | | | | | |
|---------------------------|-----------------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|-----|
| | 6.3 (8) | | 10 (13) | | 16 (20) | | 25 (32) | | 35 (44) | | 50 (63) | | 63 (79) | | |
| | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | |
| 0.1 | | | | | | | | | | | | 5x11 | 1 | | |
| 0.22 | | | | | | | | | | | | 5x11 | 2 | | |
| 0.33 | | | | | | | | | | | | 5x11 | 3 | 5x11 | 3 |
| 0.47 | | | | | | | | | | | | 5x11 | 5 | 5x11 | 5 |
| 0.68 | | | | | | | | | | | | 5x11 | 7 | | |
| 1.0 | | | | | | | | | | | | 5x11 | 10 | 5x11 | 10 |
| 2.2 | | | | | | | | | | | | 5x11 | 23 | 5x11 | 29 |
| 3.3 | | | | | | | | | | | | 5x11 | 35 | 5x11 | 40 |
| 4.7 | | | 5x11 | 20 | 5x11 | 25 | 5x11 | 30 | 5x11 | 35 | 5x11 | 40 | 5x11 | 45 | |
| 6.8 | | | | | | | | | | | | 5x11 | 50 | | |
| 10 | | | 5x11 | 35 | 5x11 | 40 | 5x11 | 50 | 5x11 | 60 | 5x11 | 65 | 5x11 | 70 | |
| 22 | 5x11 | 35 | 5x11 | 55 | 5x11 | 75 | 5x11 | 90 | 5x11 | 95 | 5x11 | 100 | 5x11 | 95 | |
| | | | | | | | | | | | | | | 6.3x11 | 115 |
| 33 | 5x11 | 55 | 5x11 | 80 | 5x11 | 110 | 5x11 | 115 | 5x11 | 120 | 5x11 | 105 | 6.3x11 | 130 | |
| 47 | 5x11 | 75 | 5x11 | 95 | 5x11 | 130 | 5x11 | 135 | 5x11 | 120 | 6.3x11 | 140 | 6.3x11 | 190 | |
| 68 | | | | | 5x11 | 150 | 5x11 | 145 | | | | | | | |
| 100 | 5x11 | 130 | 5x11 | 180 | 5x11 | 165 | 6.3x11 | 160 | 6.3x11 | 185 | 8x11 | 230 | 10x12.5 | 300 | |
| 150 | | | | | 6.3x11 | 205 | | | | | | | | | |
| 220 | 5x11 | 200 | 6.3x11 | 250 | 6.3x11 | 260 | 8x11 | 290 | 8x11 | 290 | 10x12.5 | 380 | 10x15 | 410 | |
| | 6.3x11 | 240 | | | | | | | | | | | 10x20 | 490 | |
| 330 | 6.3x11 | 260 | 6.3x11 | 265 | 6.3x11 | 290 | 8x11 | 315 | 10x12.5 | 420 | 10x15 | 490 | 10x20 | 540 | |
| | | | | | 8x11 | 360 | | | | | | | | | |
| 470 | 6.3x11 | 330 | 6.3x11 | 320 | 8x11 | 400 | 8x15 | 420 | 10x15 | 430 | 10x20 | 610 | 13x20 | 755 | |
| | | | | | | | 10x12.5 | 460 | | | | | | | |
| 680 | 8x11 | 410 | 8x11 | 410 | 10x12.5 | 510 | 10x15 | 550 | 10x20 | 550 | | | 13x25 | 965 | |
| 1000 | 8x11 | 460 | 10x12.5 | 580 | 10x15 | 630 | 10x20 | 760 | 13x20 | 950 | 13x25 | 1100 | 16x25 | 1310 | |
| | 10x12.5 | 580 | | | | | 13x16 | 760 | | | | | | | |
| 2200 | 10x20 | 840 | 10x20 | 880 | 13x20 | 1100 | 13x25 | 1300 | 16x25 | 1600 | 16x36 | 1850 | 18x36 | 2200 | |
| | | | | | | | | | | | 18x32 | 1850 | | | |
| 3300 | 10x20 | 1000 | 13x20 | 1250 | 13x25 | 1400 | 16x25 | 1660 | 16x36 | 1970 | 18x36 | 2170 | 22x40 | 2500 | |
| | | | | | | | | | 18x32 | 2050 | | | | | |
| 4700 | 13x20 | 1300 | 13x25 | 1500 | 16x25 | 1800 | 16x32 | 1950 | 18x36 | 2400 | 22x40 | 2500 | | | |
| 6800 | 13x25 | 1550 | 16x25 | 1900 | 16x32 | 1980 | 18x36 | 2550 | 22x40 | 2600 | | | | | |
| 10000 | 16x25 | 1900 | 16x36 | 2225 | 18x36 | 2700 | 22x40 | 2800 | | | | | | | |
| | | | 18x32 | 2225 | | | | | | | | | | | |
| 15000 | 16x36 | 2500 | 18x36 | 2950 | 22x40 | 3150 | 22x40 | 3200 | | | | | | | |
| | | | | | | | | | | | | | | | |
| 22000 | 18x40 | 3650 | 22x40 | 3700 | 22x40 | 3800 | | | | | | | | | |

☆ Size: $D \phi \times L$ (mm) ☆ Ripple Current: (mA/rms). 85°C, 120Hz

ALUMINUM ELECTROLYTIC CAPACITORS



■ Dimensions, Rated Ripple Current

| Capacitance (μ F) | Rated (Surge) Voltage | | | | | | | | | | | | | | | |
|---------------------------|-----------------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|----------|--------|
| | 100 (125) | | 160 (200) | | 200 (250) | | 250 (300) | | 350 (400) | | 400 (450) | | 450 (500) | | 500(550) | |
| | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 0.22 | 5X11 | 5 | | | | | | | | | | | | | | |
| 0.47 | 5X11 | 10 | 5x11 | 12 | 5x11 | 14 | 5x11 | 14 | 5x11 | 14 | 6.3x11 | 14 | 6.3x11 | 14 | | |
| 1.0 | 5x11 | 21 | 5x11 | 17 | 5x11 | 19 | 5x11 | 17 | 6.3x11 | 19 | 6.3x11 | 16 | 8x11 | 19 | | |
| | | | 6.3x11 | 17 | | | 6.3x11 | 19 | | | 8x11 | 19 | | | | |
| 2.2 | 5x11 | 30 | 6.3x11 | 26 | 6.3x11 | 22 | 6.3x11 | 24 | 8x11 | 33 | 6.3x11 | 20 | 10x12.5 | 33 | | |
| | | | | | | | 8x11 | 30 | | | 8x11 | 26 | | | 10x12.5 | 33 |
| 3.3 | 5x11 | 45 | 6.3x11 | 30 | 6.3x11 | 30 | 8x11 | 30 | 8x11 | 33 | 8x11 | 35 | 10X12.5 | 40 | 10x15 | 43 |
| 4.7 | 5x11 | 50 | 6.3x11 | 32 | 6.3x11 | 35 | 8x11 | 36 | 10x12.5 | 39 | 8x11 | 38 | 10X12.5 | 45 | | |
| | | | | | | | | | | | 10x12.5 | 42 | | | | |
| 6.8 | 5x11 | 55 | | | 8x11 | 40 | 8x11 | 40 | | | 8x15 | 42 | 10x15 | 50 | 10x20 | 70 |
| | | | | | | | | | | | 10x12.5 | 45 | | | | |
| 10 | 5x11 | 65 | 8x11 | 50 | 8x11 | 45 | 10x12.5 | 65 | 10x15 | 70 | 10x15 | 50 | 10x20 | 58 | 13x20 | 93 |
| | 6.3x11 | 75 | | | | | | | | | | | 13x20 | 60 | | |
| 22 | 6.3x11 | 105 | 10x15 | 110 | 10x15 | 120 | 10x20 | 130 | 13x20 | 130 | 13x20 | 100 | 13x25 | 98 | 16x25 | 105 |
| | 8x11 | 130 | | | | | | | | | | | | | | |
| 33 | 8x11 | 140 | 10x15 | 135 | 10x20 | 160 | 13x20 | 140 | 13x25 | 170 | 13x25 | 140 | 16x25 | 145 | 16x25 | 200 |
| | | | 10x20 | 150 | | | | | | | | | | | | |
| 47 | 10x12.5 | 190 | 10x20 | 160 | 10x20 | 170 | 13x25 | 210 | 16x25 | 220 | 16x25 | 180 | 16x32 | 165 | 18x32 | 185 |
| | | | | | 13x20 | 200 | | | | | | | 18x25 | 160 | | |
| 68 | 10x15 | 280 | 13x20 | 200 | 13x25 | 230 | | | | | 16X32 | 250 | 18X32 | 265 | 18x36 | 370 |
| | | | | | | | | | | | 18X25 | 220 | | | | |
| 100 | 10x20 | 400 | 13x25 | 250 | 16x25 | 330 | 16x25 | 250 | 16x36 | 320 | 18X32 | 320 | 18x40 | 330 | | |
| | | | | | | | | | 18x32 | 300 | | | | | | |
| 150 | 13x20 | 500 | 16x25 | 330 | | | 16x32 | 330 | | | 18X40 | 420 | 22X35 | 420 | | |
| 220 | 13x25 | 710 | 16x32 | 450 | 16x32 | 505 | 18x36 | 540 | | | | | | | | |
| | | | | | 18x25 | 485 | | | | | | | | | | |
| 330 | 13x25 | 720 | 18x36 | 540 | 16x40 | 710 | | | | | | | | | | |
| | | | | | 18x32 | 685 | | | | | | | | | | |
| 470 | 16x25 | 1100 | 18x40 | 750 | 18x40 | 750 | | | | | | | | | | |
| 680 | 16x36 | 1260 | | | | | | | | | | | | | | |
| 1000 | 18x40 | 1350 | | | | | | | | | | | | | | |
| 2200 | | | | | | | | | | | | | | | | |

☆ Size: D ϕ x L (mm) ☆ Ripple Current: (mA/rms). 85°C, 120Hz