

## FC series Long Life 5000HRS

- Load Life :105°C 5000 hours
- High Ripple Current
- For Electronic Ballast,Power Supply

### ■SPECIFICATIONS

| Item                                      | Performance Characteristics  |  |     |     |     |         |   |                    |
|---|--|--|-----|-----|-----|---------|---|--------------------|
| Operating Temperature Range               | -40°C~105°C(160V~400VDC) -25°C~105°C(450VDC)   |  |     |     |     |         |   |                    |
| Rated Voltage Range                       | 160~450V   |  |     |     |     |         |   |                    |
| Capacitance Range                         | 1~150uF  |  |     |     |     |         |   |                    |
| Capacitance Tolerance                     | ±20%,120Hz,20°C  |  |     |     |     |         |   |                    |
| Leakage Current (MAX)                     | V=160~400  | V=450                                    |     |     |     |         | After 1 minute application of rated voltage<br>I=Leakage Current(uA)<br>C=Nominal Capacitance(uF)<br>V=Rated Voltage(V) |                    |
|   | I=0.02CV+10uA  | I=0.03CV+10uA                            |     |     |     |         |   |                    |
| Dissipation Factor (tan δ)                | For capacitance of more than 1000uF, added 0.02 for every increase of 1000uF,measurement   |  |     |     |     |         |   |                    |
|   | Rated voltage(V)   | 160                                      | 200 | 250 | 350 | 400     | 450   | MAX<br>(20°C120Hz) |
| Tan δ                                     |  | 0.08                                     |     |     |     |         | 0.12  |                    |
| Low Temperature Stability Impedance Ratio | Rated voltage(V)   | 160                                      | 200 | 250 | 350 | 400~420 | 450   | MAX<br>(120Hz)     |
|   | Z(-25°C) / Z (+20°C)   | 3  | 3   | 3   | 4   | 4       | 5   |                    |
|   | Z(-40°C) / Z (+20°C)   | 6  | 6   | 6   | 6   | 6       | 6   |                    |
| Load Life                                 | After 5000 hours life test at conditions stated in the table below,the capacitors shall meet the following requirement   |  |     |     |     |         |   |                    |
|   | Leakage Current  | Not more than the specified value        |     |     |     |         |   |                    |
|   | Capacitance Change   | Within ±20% of initial value             |     |     |     |         |   |                    |
|   | Dissipation Factor   | Not more than200% of the specified value |     |     |     |         |   |                    |
| Shelf Life                                | After leaving capacitors under no load at 105°C for 1000hours and applying voltage according to JIS C-5102 4-3,they meet the specified value for load life characteristics listed above. |  |     |     |     |         |   |                    |
| Standard                                  | According to JIS C-5141  |  |     |     |     |         |   |                    |

### ■MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

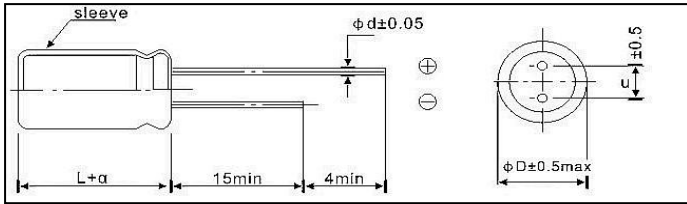
| Frequency(Hz) | 120  | 1k   | 10k  | 100k≤ |
|---------------|------|------|------|-------|
| Coefficient   | 0.50 | 0.80 | 0.90 | 1.00  |

Temperature coefficient

| Temperature | 65°C | 75°C | 85°C | 105°C |
|-------------|------|------|------|-------|
| Coefficient | 1.78 | 1.70 | 1.40 | 1.00  |

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### ■DIMENSIONS(mm)



|    |              |    |              |    |
|----|--------------|----|--------------|----|
| ΦD | 10           | 13 | 16           | 18 |
| Φd | 0.6          |    | 0.8          |    |
| F  | 5.0          |    | 7.5          |    |
| α  | L≤16 : α=1.5 |    | L≥16 : α=2.0 |    |

### ■STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size ΦD×L(mm)Ripple Current(mA 105°C,100KHz)r.m.s

| W. V<br>Cap (uF) | 160    |        | 200            |          | 250                   |                  | 350           |        | 400                             |                         | 450            |          |
|------------------|--------|--------|----------------|----------|-----------------------|------------------|---------------|--------|---------------------------------|-------------------------|----------------|----------|
|                  | SIZE   | Ripple | SIZE           | Ripple   | SIZE                  | Ripple           | SIZE          | Ripple | SIZE                            | Ripple                  | SIZE           | Ripple   |
| 1.0              | 6.3×12 | 42     | 6.3×12         | 45       | 6.3×12                | 47               | 8×12          | 55     | 6.3×12<br>8×12                  | 50<br>60                | 8×12           | 50       |
| 1.2              | 6.3×12 | 46     | 6.3×12         | 51       | 6.3×12                | 53               | 8×12          | 59     | 6.3×12<br>8×12<br>10×13         | 55<br>60<br>60          | 8×12           | 55       |
| 1.5              | 6.3×12 | 55     | 6.3×12         | 58       | 8×12                  | 60               | 8×12          | 62     | 6.3×12<br>8×12<br>8×16<br>10×13 | 58<br>60<br>60<br>60    | 10×13          | 60       |
| 1.8              | 6.3×12 | 58     | 6.3×12         | 62       | 8×12                  | 65               | 8×12<br>10×13 | 68     | 8×12<br>8×16<br>10×13           | 60<br>72<br>72          | 10×13          | 65       |
| 2.2              | 6.3×12 | 62     | 6.3×12         | 65       | 8×12                  | 70               | 8×12<br>10×13 | 75     | 8×12<br>8×16<br>10×13           | 70<br>75<br>75          | 10×13<br>10×16 | 68<br>70 |
| 2.7              |        |        |                |          |                       |                  |               |        | 10×16                           | 80                      |                |          |
| 2.8              | 8×12   | 65     | 8×12           | 72       | 8×12                  | 75               | 10×13         | 78     | 10×13<br>10×16                  | 80<br>85                | 10×13<br>10×16 | 70<br>72 |
| 3.3              | 8×12   | 72     | 6.3×12<br>8×12 | 70<br>78 | 8×12                  | 80               | 10×13         | 82     | 8×16<br>10×13<br>10×16          | 90<br>85<br>92          | 10×16          | 80       |
| 3.9              |        |        |                |          |                       |                  |               |        | 10×20                           | 100                     |                |          |
| 4.0              | 8×12   | 75     | 8×12           | 80       | 8×14                  | 85               | 10×13         | 88     | 10×16                           | 95                      | 10×16          | 82       |
| 4.7              | 8×12   | 81     | 6.3×12<br>8×12 | 78<br>98 | 8×12<br>8×16<br>10×16 | 85<br>100<br>102 | 10×16         | 105    | 8×12<br>8×16<br>10×16<br>10×20  | 75<br>105<br>110<br>125 | 10×20          | 85       |
| 5.6              | 8×12   | 85     | 8×12           | 100      | 8×16                  | 102              | 10×16         | 118    | 10×20                           | 130                     | 10×20          | 100      |
| 6.0              | 8×12   | 88     | 8×14           | 102      | 8×16                  | 104              | 10×16         | 125    | 10×17<br>10×20                  | 120<br>140              | 13×20          | 110      |

※以上最大体积为标准尺寸，其他为体积缩小品，寿命相应缩短

# Aluminum Electrolytic Capacitors



**FC**

series Long Life 5000HRS

Size  $\Phi D \times L$ (mm) Ripple Current(mA 105°C, 100KHz)r.m.s

| W. V<br>Cap (uF) | 160   |            | 200   |        | 250   |        | 350   |        | 400   |        | 450   |        |       |     |
|------------------|-------|------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|-----|
|                  | SIZE  | Ripple     | SIZE  | Ripple | SIZE  | Ripple | SIZE  | Ripple | SIZE  | Ripple | SIZE  | Ripple |       |     |
| 6.2              |       |            |       |        |       |        |       |        | 10×20 | 155    |       |        |       |     |
| 6.8              | 8×12  | 92         | 8×16  | 105    | 8×16  | 105    | 10×16 | 150    | 10×13 | 130    | 10×16 | 115    |       |     |
|                  |       |            | 10×13 | 102    | 10×16 | 135    |       |        | 10×20 | 160    | 13×20 | 120    |       |     |
|                  |       |            |       |        |       |        |       |        | 13×21 | 175    |       |        |       |     |
| 8.2              | 8×12  | 102        | 10×13 | 115    | 10×16 | 120    | 12×20 | 190    | 10×20 | 180    | 13×21 | 200    |       |     |
|                  |       |            |       |        |       |        |       |        | 12×20 | 220    |       |        |       |     |
| 10               | 8×12  | 185        | 8×16  | 165    | 10×16 | 220    | 10×20 | 220    | 10×14 | 190    | 13×15 | 165    |       |     |
|                  |       |            | 10×16 | 215    | 10×20 | 240    |       |        | 10×16 | 220    |       |        | 13×20 | 260 |
|                  |       |            |       |        |       |        |       |        | 13×20 | 270    |       |        |       |     |
| 15               | 10×16 | 215        | 8×20  | 230    | 10×16 | 230    | 13×25 | 270    | 13×21 | 290    | 13×17 | 275    |       |     |
|                  |       |            | 10×16 | 230    | 10×20 | 250    |       |        | 13×25 | 310    |       |        | 13×25 | 290 |
|                  |       |            | 10×20 | 250    |       |        |       |        |       |        |       |        |       |     |
| 22               | 10×20 | 190<br>240 | 8×20  | 250    | 10×20 | 295    | 13×21 | 310    | 13×17 | 280    | 16×21 | 340    |       |     |
|                  |       |            | 10×16 | 240    | 13×21 | 310    |       |        | 13×21 | 320    |       |        | 16×25 | 360 |
|                  |       |            | 10×20 | 280    | 13×25 | 315    |       |        | 13×25 | 340    |       |        | 16×25 | 400 |
| 33               | 13×21 | 280        | 13×21 | 300    | 13×17 | 310    | 16×25 | 400    | 13×25 | 420    | 18×25 | 450    |       |     |
|                  |       |            |       |        | 13×21 | 320    |       |        | 16×18 | 390    |       |        |       |     |
|                  |       |            |       |        | 13×25 | 340    |       |        | 16×21 | 420    |       |        |       |     |
|                  |       |            |       |        |       |        |       |        | 16×25 | 460    |       |        |       |     |
| 47               | 13×21 | 340        | 13×25 | 360    | 16×25 | 420    | 18×25 | 460    | 13×30 | 450    | 18×27 | 510    |       |     |
|                  |       |            |       |        |       |        |       |        | 16×25 | 500    |       |        |       |     |
|                  |       |            |       |        |       |        |       |        | 18×25 | 530    |       |        |       |     |
| 53               |       |            |       |        |       |        |       |        |       |        | 10×50 | 460    |       |     |
| 56               |       |            |       |        |       |        |       |        | 16×25 | 540    |       |        |       |     |
| 68               | 13×25 | 400        | 16×25 | 450    | 16×25 | 500    | 18×27 | 540    | 18×25 | 560    | 18×25 | 1000   |       |     |
|                  |       |            |       |        | 16×21 | 480    |       |        | 18×30 | 600    |       |        | 18×30 | 560 |
| 82               |       |            |       |        | 16×21 | 480    |       |        |       |        | 18×30 | 800    |       |     |
| 100              | 13×25 | 490        |       |        |       |        |       |        | 18×31 | 650    | 18×30 | 800    |       |     |
|                  | 16×25 | 520        |       |        |       |        |       |        |       |        |       |        |       |     |
| 120              |       |            |       |        | 18×32 | 940    |       |        | 18×31 | 680    | 18×42 | 1050   |       |     |
|                  |       |            |       |        |       |        |       |        | 16×40 | 1200   |       |        |       |     |
| 150              |       |            |       |        | 18×32 | 1000   |       |        |       |        | 22×36 | 1300   |       |     |

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