

BFX SERIES

- Long life +105°C 8,000 hours, +130°C 2,000 hours
- Especially designed for electronic ballast
- Withstand high temperature +130°C and high ripple current
- RoHS Compliant

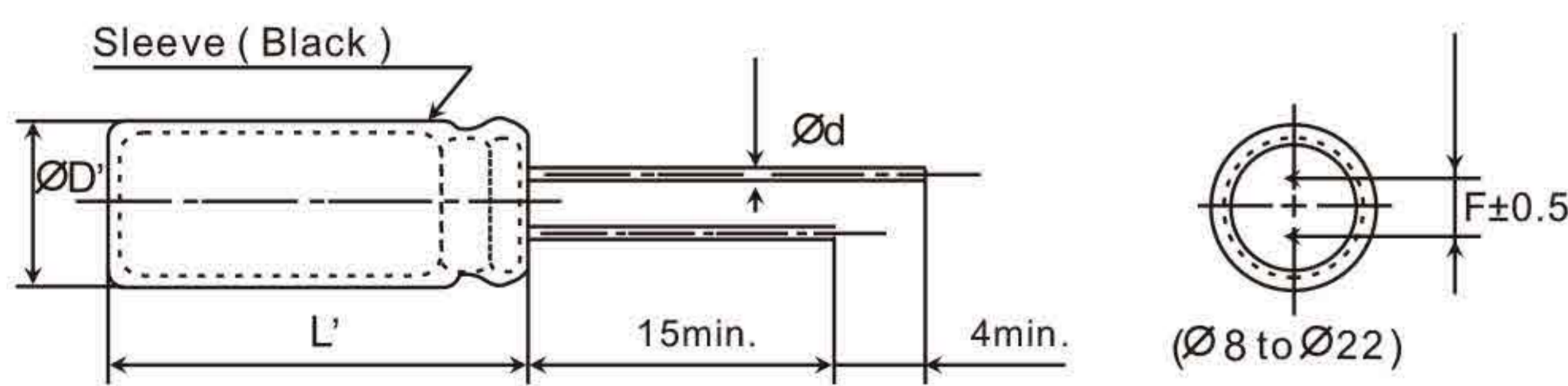


BFX

◆ SPECIFICATIONS

| Items | Characteristics | | | | | | |
|---|--|---------------------------------------|------|------|------|------|---|
| Category | -40 to +130°C(160 to 400V _{dc}) -25 to +130°C(450V _{dc}) | | | | | | |
| Temperature Range | | | | | | | |
| Rated Voltage Range | 160 to 450V _{dc} | | | | | | |
| Capacitance Tolerance | ± 20%(M) (at 20°C, 120Hz) | | | | | | |
| Leakage Current | 160 to 400V _{dc} | 450V _{dc} | | | | | Where, I : Max.leakage current (μA). C : Nominal capacitance (μF). V : Rated voltage (V). |
| | I ≤ 0.02CV + 10 μA | I ≤ 0.03CV + 10 μA | | | | | (at 20°C after 2 minutes) |
| Dissipation Factor (tanδ) | Rated voltage (V _{dc}) | 160V | 200V | 250V | 350V | 400V | 450V |
| | tanδ (Max.) | 0.08 | | | | | 0.12 |
| Low Temperature Characteristics (Max.Impedance Ratio) | Rated voltage (V _{dc}) | 160V | 200V | 250V | 350V | 400V | 450V |
| | 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 application of the rated DC voltage at 130°C 2.000hours or application of DC voltage with rated ripple current at 105°C 8.000hours. the capacitors shall meet the requirements as below. | | | | | | |
| | Capacitance change | ≤ ±20% of the initial value | | | | | |
| | D.F. (tanδ) | ≤ 200% of the initial specified value | | | | | |
| | Leakage current | ≤ The initial specified value | | | | | |
| Shelf Life | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1.000 hours at 105°C without Voltage applied | | | | | | |
| | Capacitance change | ≤ ±20% of the initial value | | | | | |
| | D.F. (tanδ) | ≤ 200% of the initial specified value | | | | | |
| | Leakage current | ≤ 200% of the initial specified value | | | | | |

◆ DIMENSIONS [mm]



| | | | | | | |
|-----|------------|-----|------|-----|-----|------|
| ØD | 8 | 10 | 12.5 | 16 | 18 | 22 |
| Ød | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 |
| F | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 | 10.5 |
| ØD' | ØD+0.5max. | | | | | |
| L' | L+2max. | | | | | |

◆ RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current (Hz)

| Freq.(Hz) | 120 | 1K | 10K | 100K |
|-----------|------|------|------|------|
| 160~250 | 0.55 | 0.85 | 0.90 | 1.00 |
| 350~450 | 0.50 | 0.80 | 0.90 | 1.00 |

The endurance of capacitors is shorted with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

◆ RART NUMBER

BFX **DxL**

Rated Voltage Series Rated Capacitance Capacitance Tolerance Option Lead Forming Case Size

◆ STANDARD RATINGS

| Rated Voltage | | 160V(2C) | | | | | | | | | | | | | |
|---------------|------|----------|-------|------|---------|--------|-------|------|-------|------|--|--|--|--|--|
| μF | φ D | φ 8 | | φ 10 | | φ 12.5 | | φ 16 | | φ 18 | | | | | |
| | | 3.3 | 8x12 | 80 | | | | | | | | | | | |
| 4.7 | 8x16 | 86 | 10x12 | 86 | | | | | | | | | | | |
| 5.6 | 8x16 | 92 | | | | | | | | | | | | | |
| 6.8 | 8x16 | 100 | | | | | | | | | | | | | |
| 8.2 | | | 10x16 | 160 | | | | | | | | | | | |
| 10 | | | 10x16 | 225 | | | | | | | | | | | |
| 15 | | | 10x16 | 288 | | | | | | | | | | | |
| 22 | | | 10x20 | 450 | | | | | | | | | | | |
| 33 | | | | | 12.5x20 | 540 | | | | | | | | | |
| 47 | | | | | 12.5x25 | 594 | | | | | | | | | |
| 68 | | | | | | | 16x25 | 770 | | | | | | | |
| 100 | | | | | | | 16x25 | 1008 | | | | | | | |
| 150 | | | | | | | | | 18x30 | 1224 | | | | | |
| 220 | | | | | | | | | 18x35 | 1260 | | | | | |

| Rated Voltage | | 200V(2D) | | | | | | | | | | | | | |
|---------------|------|----------|-------|------|---------|--------|-------|------|-------|------|-------|------|--|--|--|
| μF | φ D | φ 8 | | φ 10 | | φ 12.5 | | φ 16 | | φ 18 | | φ 22 | | | |
| | | 2.8 | 8x12 | 72 | | | | | | | | | | | |
| 3.3 | 8x12 | 81 | | | | | | | | | | | | | |
| 4.7 | | | 10x12 | | | | | | | | | | | | |
| 5.6 | 8x16 | 97 | | | | | | | | | | | | | |
| 6.8 | 8x16 | 106 | | | | | | | | | | | | | |
| 8.2 | | | 10x16 | 160 | | | | | | | | | | | |
| 10 | | | 10x16 | 225 | | | | | | | | | | | |
| 15 | | | 10x20 | 378 | | | | | | | | | | | |
| 22 | | | | | 12.5x20 | 450 | | | | | | | | | |
| 33 | | | | | 12.5x20 | 540 | | | | | | | | | |
| 47 | | | | | 12.5x25 | 594 | | | | | | | | | |
| 68 | | | | | | | 16x25 | 770 | | | | | | | |
| 100 | | | | | | | 16x30 | 1008 | | | | | | | |
| 150 | | | | | | | | | 18x35 | 1224 | | | | | |
| 220 | | | | | | | | | | | 22x35 | 1530 | | | |

| Rated Voltage | | 250V(2E) | | | | | | | | | | | | | |
|---------------|-----|----------|----------------|------|---------|--------|-------|------|-------|------|--|--|--|--|--|
| μF | φ D | φ 8 | | φ 10 | | φ 12.5 | | φ 16 | | φ 18 | | | | | |
| | | 2.2 | 8x12 | 72 | | | | | | | | | | | |
| 2.8 | | | 10x12 | 81 | | | | | | | | | | | |
| 3.3 | | | 10x12 | 90 | | | | | | | | | | | |
| 4.7 | | | 10x12 | 99 | | | | | | | | | | | |
| 5.6 | | | 10x16 | 126 | | | | | | | | | | | |
| 6.8 | | | 10x16 | 140 | | | | | | | | | | | |
| 8.2 | | | 10x16 | 160 | | | | | | | | | | | |
| 10 | | | 10x16 10x20 | 252 | | | | | | | | | | | |
| 15 | | | | | 12.5x20 | 405 | | | | | | | | | |
| 22 | | | | | 12.5x20 | 500 | | | | | | | | | |
| 33 | | | | | 12.5x25 | 590 | | | | | | | | | |
| 47 | | | | | | | 16x25 | 646 | | | | | | | |
| 68 | | | | | | | 16x30 | 828 | | | | | | | |
| 100 | | | | | | | | | 18x30 | 1080 | | | | | |
| 150 | | | | | | | | | 18x35 | 1350 | | | | | |
| 220 | | | | | | | | | | | | | | | |

▲ Case Size (φ DxL)

▲ Ripple Current(mArms/105°C,100KHz)

BFX

◆ STANDARD RATINGS

| Rated Voltage | | 350V(2V) | | | | | | | | | |
|---------------|-----|----------|------|-------|-----|---------|-----|-------|-----|-------|-----|
| μF | Φ D | Φ 8 | | Φ 10 | | Φ 12.5 | | Φ 16 | | Φ 18 | |
| | | 1.0 | 8x12 | 58 | | | | | | | |
| 1.5 | | | | 10x12 | 63 | | | | | | |
| 1.8 | | | | 10x12 | 70 | | | | | | |
| 2.2 | | | | 10x12 | 80 | | | | | | |
| 2.8 | | | | 10x12 | 86 | | | | | | |
| 3.3 | | | | 10x12 | 95 | | | | | | |
| 4.7 | | | | 10x16 | 119 | | | | | | |
| 5.6 | | | | 10x20 | 162 | | | | | | |
| 6.8 | | | | 10x20 | 198 | | | | | | |
| 8.2 | | | | | | 12.5x20 | 216 | | | | |
| 10 | | | | | | 12.5x20 | 252 | | | | |
| 15 | | | | | | 12.5x20 | 360 | | | | |
| 22 | | | | | | 12.5x25 | 450 | 16x25 | 500 | | |
| 33 | | | | | | | | 16x30 | 590 | | |
| 47 | | | | | | | | | | 18x25 | 700 |
| 68 | | | | | | | | | | 18x30 | 850 |

| Rated Voltage | | 400V(2G) | | | | | | | | | |
|---------------|-----|----------|--|-------|-----|---------|-----|-------|-----|-------|-----|
| μF | Φ D | Φ 8 | | Φ 10 | | Φ 12.5 | | Φ 16 | | Φ 18 | |
| | | 1.0 | | | | 10x12 | 65 | | | | |
| 1.5 | | | | 10x12 | 76 | | | | | | |
| 1.8 | | | | 10x12 | 81 | | | | | | |
| 2.2 | | | | 10x16 | 83 | | | | | | |
| 2.8 | | | | 10x16 | 90 | | | | | | |
| 3.3 | | | | 10x16 | 99 | | | | | | |
| 4.7 | | | | 10x20 | 119 | | | | | | |
| 5.6 | | | | | | 12.5x20 | 162 | | | | |
| 6.8 | | | | | | 12.5x20 | 198 | | | | |
| 8.2 | | | | | | 12.5x20 | 234 | | | | |
| 10 | | | | | | 12.5x20 | 252 | | | | |
| 15 | | | | | | 12.5x25 | 380 | | | | |
| 22 | | | | | | | | 16x25 | 500 | | |
| 33 | | | | | | | | 16x30 | 590 | | |
| 47 | | | | | | | | | | 18x30 | 756 |
| 68 | | | | | | | | | | 18x40 | 900 |

| Rated Voltage | | 450V(2W) | | | | | | | | | |
|---------------|-----|----------|------|-------|-----|---------|-----|-------|-----|-------|-----|
| μF | Φ D | Φ 8 | | Φ 10 | | Φ 12.5 | | Φ 16 | | Φ 18 | |
| | | 1.0 | 8x16 | 72 | | | | | | | |
| 1.5 | | | | 10x12 | 79 | | | | | | |
| 1.8 | | | | 10x12 | 83 | | | | | | |
| 2.2 | | | | 10x16 | 86 | | | | | | |
| 2.8 | | | | 10x16 | 90 | | | | | | |
| 3.3 | | | | 10x16 | 99 | | | | | | |
| 4.7 | | | | 10x20 | 119 | | | | | | |
| 5.6 | | | | | | 12.5x20 | 162 | | | | |
| 6.8 | | | | | | 12.5x20 | 198 | | | | |
| 8.2 | | | | | | 12.5x20 | 252 | | | | |
| 10 | | | | | | 12.5x20 | 288 | | | | |
| 15 | | | | | | 12.5x25 | 378 | | | | |
| 22 | | | | | | | | 16x25 | 504 | | |
| 33 | | | | | | | | 16x30 | 630 | | |
| 47 | | | | | | | | | | 18x30 | 792 |

▲ Case Size (Φ DxL)

▲ Ripple Current(mArms/105°C,100KHz)