

**BXC SERIES**
**Load Life : 105°C 8000~12000 hours**

•For LED Lighting.

 RoHS  
compliance

**◆SPECIFICATIONS**

| Items                                             | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|--|---------------------|---------|--------------------|-----------------------------------|-----|-----|-----|-----|------------------------|--------------------------|--------------------|--------------------------------------------|------|------|------|------|--------------------------|--------------------------|-----------------|------------------------------------|--|--|--|--|--------------------------------------------------------------------|--|-----------|-----------------|--|-----------------|------|--|--------------|-------|--|---------|-------|--|
| Category Temperature Range                        | -25~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Rated Voltage Range                               | 160~500Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Capacitance Tolerance                             | ±20% (20℃,120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Leakage Current(MAX)                              | <table><tr><td>CV≤1000</td><td colspan="7">CV&gt;1000</td></tr><tr><td>I=0.1CV+40μA (1minute)</td><td colspan="7">I=0.04CV+100μA (1minute)</td></tr><tr><td>I=0.03CV+15μA (5minutes)</td><td colspan="7">I=0.02CV+25μA (5minutes)</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |      |      |      |  | CV≤1000             | CV>1000 |                    |                                   |     |     |     |     | I=0.1CV+40μA (1minute) | I=0.04CV+100μA (1minute) |                    |                                            |      |      |      |      | I=0.03CV+15μA (5minutes) | I=0.02CV+25μA (5minutes) |                 |                                    |  |  |  |  | I=Leakage Current(μA)<br>C=Capacitance(μF)<br>V=Rated Voltage(Vdc) |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| CV≤1000                                           | CV>1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| I=0.1CV+40μA (1minute)                            | I=0.04CV+100μA (1minute)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| I=0.03CV+15μA (5minutes)                          | I=0.02CV+25μA (5minutes)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Dissipation Factor(MAX)<br>(tanδ)                 | <table><tr><td>Rated Voltage (Vdc)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td><td>500</td></tr><tr><td>tanδ</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.20</td><td>0.20</td><td>0.20</td><td>0.24</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |      |      |      |      |      |  | Rated Voltage (Vdc) | 160     | 200                | 250                               | 350 | 400 | 450 | 500 | tanδ                   | 0.15                     | 0.15               | 0.15                                       | 0.20 | 0.20 | 0.20 | 0.24 | (20℃,120Hz)              |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Rated Voltage (Vdc)                               | 160                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 200  | 250  | 350  | 400  | 450  | 500  |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| tanδ                                              | 0.15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.15 | 0.15 | 0.20 | 0.20 | 0.20 | 0.24 |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Endurance                                         | After applying rated voltage with rated ripple current for specified time at 105℃, the capacitors shall meet the following requirements.<br><table><tr><td>Capacitance Change</td><td colspan="7">Within ±20% of the initial value.</td></tr><tr><td>Dissipation Factor</td><td colspan="7">Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td colspan="7">Not more than the specified value.</td></tr></table> <table><tr><td>Case Size</td><td colspan="2">Life Time (hrs)</td></tr><tr><td>8×11.5, 10×12.5</td><td colspan="2">8000</td></tr><tr><td>10×16, 10×20</td><td colspan="2">10000</td></tr><tr><td>φD≥12.5</td><td colspan="2">12000</td></tr></table> ※500Vdc:10000hrs |      |      |      |      |      |      |  |                     |         | Capacitance Change | Within ±20% of the initial value. |     |     |     |     |                        |                          | Dissipation Factor | Not more than 200% of the specified value. |      |      |      |      |                          |                          | Leakage Current | Not more than the specified value. |  |  |  |  |                                                                    |  | Case Size | Life Time (hrs) |  | 8×11.5, 10×12.5 | 8000 |  | 10×16, 10×20 | 10000 |  | φD≥12.5 | 12000 |  |
| Capacitance Change                                | Within ±20% of the initial value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Dissipation Factor                                | Not more than 200% of the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Leakage Current                                   | Not more than the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Case Size                                         | Life Time (hrs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| 8×11.5, 10×12.5                                   | 8000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| 10×16, 10×20                                      | 10000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| φD≥12.5                                           | 12000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |      |      |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Low Temperature Stability<br>Impedance Ratio(MAX) | <table><tr><td>Rated Voltage (Vdc)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td><td>500</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>3</td><td>3</td><td>3</td><td>6</td><td>6</td><td>6</td><td>6</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |      |      |      |      |      |  | Rated Voltage (Vdc) | 160     | 200                | 250                               | 350 | 400 | 450 | 500 | Z(-25℃)/Z(20℃)         | 3                        | 3                  | 3                                          | 6    | 6    | 6    | 6    | (120Hz)                  |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Rated Voltage (Vdc)                               | 160                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 200  | 250  | 350  | 400  | 450  | 500  |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |
| Z(-25℃)/Z(20℃)                                    | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3    | 3    | 6    | 6    | 6    | 6    |  |                     |         |                    |                                   |     |     |     |     |                        |                          |                    |                                            |      |      |      |      |                          |                          |                 |                                    |  |  |  |  |                                                                    |  |           |                 |  |                 |      |  |              |       |  |         |       |  |

**◆MULTIPLIER FOR RIPPLE CURRENT**

| Frequency (Hz) |           | 120  | 1k   | 10k  | 100k ≤ |
|----------------|-----------|------|------|------|--------|
| Coefficient    | 1~5.6µF   | 0.20 | 0.40 | 0.80 | 1.00   |
|                | 6.8~18µF  | 0.30 | 0.60 | 0.90 | 1.00   |
|                | 22~82µF   | 0.40 | 0.70 | 0.90 | 1.00   |
|                | 100~220µF | 0.45 | 0.75 | 0.90 | 1.00   |

**◆OPTION**

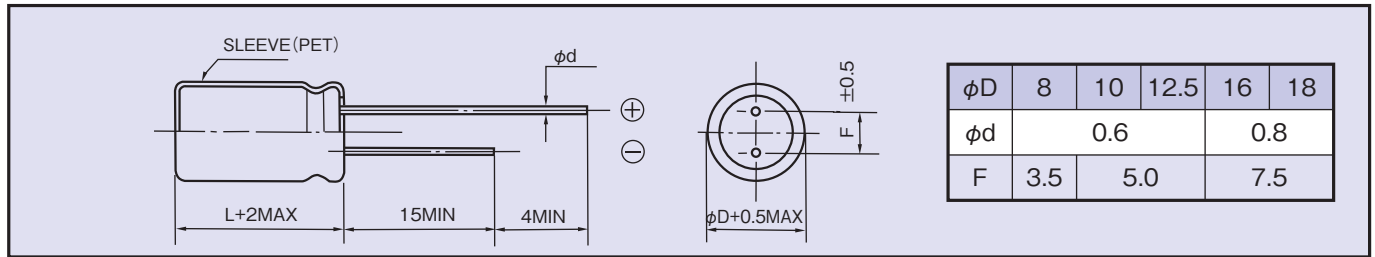
|            | Code |
|------------|------|
| PET Sleeve | EFC  |

**◆PART NUMBER**

|                      |        |                      |                       |                      |                      |           |
|----------------------|--------|----------------------|-----------------------|----------------------|----------------------|-----------|
| <input type="text"/> | BXC    | <input type="text"/> | M                     | <input type="text"/> | <input type="text"/> | D×L       |
| Rated Voltage        | Series | Capacitance          | Capacitance Tolerance | Option               | Lead Forming         | Case Size |

◆ **DIMENSIONS**

(mm)



◆ **STANDARD SIZE**

Size  $\phi D \times L$  (mm), Rated Ripple Current (mA r.m.s./105°C, 100kHz)

| Vdc<br>Cap (μF) | 160              |        | 200              |        | 250                |              | 350     |        |
|-----------------|------------------|--------|------------------|--------|--------------------|--------------|---------|--------|
|                 | Size             | Ripple | Size             | Ripple | Size               | Ripple       | Size    | Ripple |
| 4.7             |                  |        |                  |        | 8×11.5             | 160          | 10×12.5 | 150    |
| 5.6             |                  |        |                  |        |                    |              | 10×12.5 | 180    |
| 6.8             |                  |        |                  |        | 10×12.5            | 250          | 10×16   | 280    |
| 10              | 10×16            | 320    | 10×16            | 320    | 10×16              | 320          | 10×20   | 350    |
| 18              |                  |        |                  |        |                    |              | 10×20   | 350    |
| 22              | 10×20            | 500    | 10×20            | 500    | 10×16<br>10×20     | 470<br>500   | 12.5×20 | 650    |
| 33              | 10×20            | 650    | 10×20            | 650    | 12.5×16<br>12.5×20 | 760<br>800   | 16×20   | 900    |
| 47              | 10×20            | 750    | 12.5×20          | 980    | 12.5×20            | 980          | 16×20   | 1080   |
| 56              |                  |        |                  |        | 12.5×20<br>18×16   | 1080<br>960  |         |        |
| 68              | 12.5×20          | 1180   | 12.5×25<br>16×20 | 1300   | 12.5×25<br>16×20   | 1300         | 18×25   | 1470   |
| 82              |                  |        | 16×20            | 1380   | 12.5×30<br>16×20   | 1500<br>1440 | 18×25   | 1530   |
| 100             | 12.5×25<br>16×20 | 1420   | 16×20            | 1420   | 16×25<br>18×20     | 1530<br>1440 |         |        |
| 120             |                  |        |                  |        | 18×20              | 1500         |         |        |
| 150             | 16×25            | 1890   | 16×25            | 1890   | 18×25              | 1960         |         |        |
| 220             | 18×25            | 2370   | 18×25            | 2370   |                    |              |         |        |

| Vdc<br>Cap (μF) | 400               |            | 450                         |                   | 500                       |        |
|-----------------|-------------------|------------|-----------------------------|-------------------|---------------------------|--------|
|                 | Size              | Ripple     | Size                        | Ripple            | Size                      | Ripple |
| 1               | 8×11.5<br>10×12.5 | 60<br>70   |                             |                   |                           |        |
| 1.5             | 8×11.5<br>10×12.5 | 90<br>100  |                             |                   |                           |        |
| 1.8             | 8×11.5<br>10×12.5 | 95<br>120  |                             |                   |                           |        |
| 2.2             | 8×11.5<br>10×12.5 | 95<br>140  |                             |                   |                           |        |
| 3.3             | 10×12.5<br>10×16  | 150<br>180 |                             |                   |                           |        |
| 4.7             | 10×16             | 220        | 10×16<br>10×20              | 180<br>220        |                           |        |
| 5.6             | 10×16             | 250        | 10×16<br>10×20              | 200<br>250        |                           |        |
| 6.8             | 10×16             | 280        | 10×16<br>10×20              | 230<br>280        |                           |        |
| 8.2             |                   |            | 10×20                       | 280               |                           |        |
| 10              | 10×20             | 350        | 10×20<br>12.5×16<br>12.5×20 | 330<br>360<br>450 | 12.5×20                   | 320    |
| 15              | 12.5×20           | 550        | 12.5×20<br>12.5×25<br>16×16 | 450<br>600        | 12.5×25<br>16×20          | 440    |
| 22              | 12.5×25<br>16×20  | 760        | 12.5×25<br>16×20            | 600<br>730        | 12.5×35<br>16×25<br>18×20 | 560    |
| 33              | 16×20             | 900        | 16×20<br>16×25<br>18×20     | 730<br>980<br>780 | 16×31.5<br>18×25          | 700    |
| 47              | 16×25<br>18×20    | 1180       | 18×25                       | 1200              | 18×31.5                   | 880    |
| 68              | 18×25             | 1470       |                             |                   |                           |        |