

**HXC SERIES**
**105°C High Ripple, Snap-in Terminal Type**
**◆ FEATURES**

- Load Life : 105°C 2000 hours.
- Higher ripple current endurance than MXC series.
- RoHS compliance.


**◆ SPECIFICATIONS**

| Items                          | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                                   |                    |                                            |                 |                                    |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------|--------------------|--------------------------------------------|-----------------|------------------------------------|
| Category Temperature Range     | -25~+105°C                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                                   |                    |                                            |                 |                                    |
| Rated Voltage Range            | 200, 400, 450V.DC                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                                   |                    |                                            |                 |                                    |
| Capacitance Tolerance          | ±20%(20°C,120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                                   |                    |                                            |                 |                                    |
| Leakage Current(MAX)           | $I = 3\sqrt{CV}$ (After 5 minutes application of rated voltage)<br>$I = (\mu A)$ Leakage Current $V = (V)$ Rated Voltage $C = (\mu F)$ Rated Capacitance                                                                                                                                                                                                                                                                                     |                    |                                   |                    |                                            |                 |                                    |
| Dissipation Factor(MAX) (tanδ) | <table border="1"> <thead> <tr> <th>(V) Rated Voltage</th> <th>200~400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> (20°C, 120Hz)                                                                                                                                                                                                                                        | (V) Rated Voltage  | 200~400                           | 450                | tan δ                                      | 0.15            | 0.20                               |
| (V) Rated Voltage              | 200~400                                                                                                                                                                                                                                                                                                                                                                                                                                      | 450                |                                   |                    |                                            |                 |                                    |
| tan δ                          | 0.15                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.20               |                                   |                    |                                            |                 |                                    |
| Impedance Ratio(MAX)           | <table border="1"> <thead> <tr> <th>(V) Rated Voltage</th> <th>200</th> <th>400~450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>3</td> <td>8</td> </tr> </tbody> </table> (120Hz)                                                                                                                                                                                                                                         | (V) Rated Voltage  | 200                               | 400~450            | Z(-25°C)/Z(20°C)                           | 3               | 8                                  |
| (V) Rated Voltage              | 200                                                                                                                                                                                                                                                                                                                                                                                                                                          | 400~450            |                                   |                    |                                            |                 |                                    |
| Z(-25°C)/Z(20°C)               | 3                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8                  |                                   |                    |                                            |                 |                                    |
| Endurance                      | After applying rated voltage with rated ripple current for 2000hrs at 105°C, the capacitors shall meet the following requirements. <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </tbody> </table> | 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. |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                                   |                    |                                            |                 |                                    |

**◆ MULTIPLIER FOR RIPPLE CURRENT**

Frequency coefficient

| (Hz) Frequency |           | 60(50) | 120  | 500  | 1k   | 10k ≤ |
|----------------|-----------|--------|------|------|------|-------|
| Coefficient    | 200WV     | 0.80   | 1.00 | 1.20 | 1.30 | 1.50  |
|                | 400~450WV | 0.80   | 1.00 | 1.20 | 1.25 | 1.40  |

**◆ PART NUMBER**

|               |        |                   |                       |        |               |           |
|---------------|--------|-------------------|-----------------------|--------|---------------|-----------|
| □□□           | HXC    | □□□□□             | □                     | □□□    | SN            | D×L       |
| Rated Voltage | Series | Rated Capacitance | Capacitance Tolerance | Option | Terminal Code | Case Size |

**◆ Option**

|                          | Code  |
|--------------------------|-------|
| PET Sleeve without plate | EFC   |
| PVC Sleeve without plate | OOE   |
| PVC Sleeve with plate    | Blank |

**◆ DIMENSIONS**

(mm)



**◆ STANDARD SIZE**

| Cap<br>( $\mu$ F) | WV<br>$\phi$ D | 200       |      |           |      |           |      |           |      |
|-------------------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
|                   |                | $\phi$ 22 |      | $\phi$ 25 |      | $\phi$ 30 |      | $\phi$ 35 |      |
| 270               |                | 22x25     | 1.64 |           |      |           |      |           |      |
| 330               |                | 22x30     | 1.89 |           |      |           |      |           |      |
| 390               |                | 22x35     | 2.14 | 25x25     | 1.99 |           |      |           |      |
| 470               |                | 22x40     | 2.41 | 25x30     | 2.32 | 30x25     | 2.27 |           |      |
| 560               |                | 22x45     | 2.71 | 25x35     | 2.63 | 30x25     | 2.43 |           |      |
| 680               |                | 22x50     | 3.06 | 25x35     | 2.81 | 30x30     | 2.82 |           |      |
| 820               |                |           |      | 25x45     | 3.32 | 30x30     | 2.94 | 35x25     | 2.56 |
| 1000              |                |           |      | 25x50     | 3.72 | 30x35     | 3.36 | 35x30     | 3.07 |
| 1200              |                |           |      |           |      | 30x40     | 3.78 | 35x35     | 3.57 |
| 1500              |                |           |      |           |      | 30x50     | 4.48 | 35x40     | 4.01 |
| 1800              |                |           |      |           |      |           |      | 35x45     | 4.44 |
| 2200              |                |           |      |           |      |           |      | 35x50     | 4.90 |

| Cap<br>( $\mu$ F) | WV<br>$\phi$ D | 400       |      |           |      |           |      |           |      |
|-------------------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
|                   |                | $\phi$ 22 |      | $\phi$ 25 |      | $\phi$ 30 |      | $\phi$ 35 |      |
| 82                |                | 22x30     | 0.81 |           |      |           |      |           |      |
| 100               |                | 22x35     | 0.99 | 25x25     | 0.99 |           |      |           |      |
| 120               |                | 22x40     | 1.19 | 25x30     | 1.19 |           |      |           |      |
| 150               |                | 22x45     | 1.43 | 25x35     | 1.43 | 30x25     | 1.41 |           |      |
| 180               |                | 22x50     | 1.60 | 25x40     | 1.61 | 30x30     | 1.61 |           |      |
| 220               |                |           |      | 25x45     | 1.83 | 30x35     | 1.84 |           |      |
| 270               |                |           |      | 25x50     | 2.06 | 30x40     | 2.10 | 35x30     | 2.00 |
| 330               |                |           |      |           |      | 30x45     | 2.36 | 35x35     | 2.29 |
| 390               |                |           |      |           |      | 30x50     | 2.62 | 35x40     | 2.56 |
| 470               |                |           |      |           |      |           |      | 35x45     | 2.86 |
| 560               |                |           |      |           |      |           |      | 35x50     | 3.15 |

| Cap<br>( $\mu$ F) | WV<br>$\phi$ D | 450       |      |           |      |           |      |           |      |
|-------------------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
|                   |                | $\phi$ 22 |      | $\phi$ 25 |      | $\phi$ 30 |      | $\phi$ 35 |      |
| 68                |                | 22x30     | 0.67 |           |      |           |      |           |      |
| 82                |                | 22x35     | 0.81 | 25x25     | 0.81 |           |      |           |      |
| 100               |                | 22x40     | 0.99 | 25x30     | 0.99 |           |      |           |      |
| 120               |                | 22x45     | 1.19 | 25x35     | 1.19 | 30x25     | 1.19 |           |      |
| 150               |                |           |      | 25x40     | 1.49 | 30x30     | 1.49 | 35x25     | 1.49 |
| 180               |                |           |      | 25x45     | 1.68 | 30x35     | 1.70 | 35x25     | 1.61 |
| 220               |                |           |      | 25x50     | 1.89 | 30x40     | 1.92 | 35x30     | 1.85 |
| 270               |                |           |      |           |      | 30x45     | 2.18 | 35x35     | 2.12 |
| 330               |                |           |      |           |      | 30x50     | 2.45 | 35x40     | 2.41 |
| 390               |                |           |      |           |      |           |      | 35x45     | 2.67 |
| 470               |                |           |      |           |      |           |      | 35x50     | 2.97 |

↑ Ripple Current (A r.m.s./120Hz, 105°C)  
 ↑ Case Size  $\phi$  D x L (mm)