

## VXR SERIES

105°C 7000 hours, Snap-in Terminal Type.

### ◆FEATURES

- Load Life : 105°C 7000hours.
- RoHS compliance.



### ◆SPECIFICATIONS

| Items                              | Characteristics                                                                                                                            |                                            |                         |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|
| Category Temperature Range         | -25~+105°C                                                                                                                                 |                                            |                         |
| Rated Voltage Range                | 160~450WV                                                                                                                                  |                                            |                         |
| Capacitance Tolerance              | ±20% (20°C, 120Hz)                                                                                                                         |                                            |                         |
| Leakage Current(MAX)               | $I=3\sqrt{CV}$ (After 5 minutes application of rated voltage)<br>$I$ =Leakage Current(μA) $V$ =Rated Voltage(V) $C$ =Rated Capacitance(μF) |                                            |                         |
| Dissipation Factor(MAX)<br>(tan δ) | Rated Voltage                                                                                                                              | 160~250WV                                  | 315~450WV (20°C, 120Hz) |
|                                    | tan δ                                                                                                                                      | 0.15                                       | 0.20                    |
| Impedance Ratio(MAX)               | Rated Voltage<br>(V)                                                                                                                       | 160~250WV                                  | 315~450WV (120Hz)       |
|                                    | $Z(-25^{\circ}\text{C})/Z(20^{\circ}\text{C})$                                                                                             | 3                                          | 8                       |
| Endurance                          | After applying rated voltage with rated ripple current for 7000hrs at 105°C, the capacitors shall meet the following requirements.         |                                            |                         |
|                                    | 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)<br>Frequency |           | 60(50) | 120  | 500  | 1k   | 10k≤ |
|-------------------|-----------|--------|------|------|------|------|
| Coefficient       | 160~250WV | 0.80   | 1.00 | 1.20 | 1.30 | 1.50 |
|                   | 315~450WV | 0.80   | 1.00 | 1.20 | 1.25 | 1.40 |

### ◆PART NUMBER

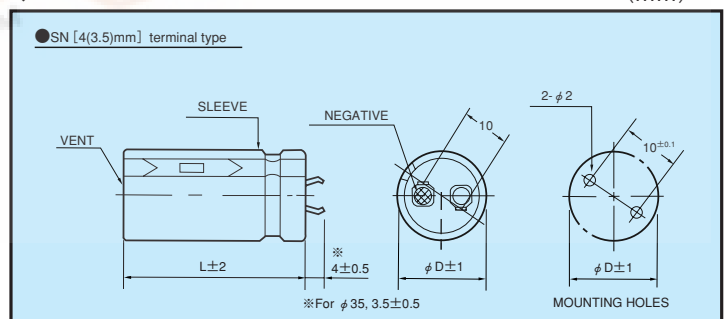
VXR       OOE SN DXL  
 Rated Voltage Series Rated Capacitance Capacitance Tolerance Option Terminal Code Case Size

### ◆Option

|               | Code  |
|---------------|-------|
| without plate | OOE   |
| with plate    | Blank |

### ◆DIMENSIONS

(mm)



**◆STANDARD SIZE, RATED RIPPLE CURRENT**

| Cap(μF)<br>WV<br>φD | 160         |             |             |             | 180         |             |             |             |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                     | φ 22        | φ 25        | φ 30        | φ 35        | φ 22        | φ 25        | φ 30        | φ 35        |
| 220                 |             |             |             |             | 22×25: 1.00 |             |             |             |
| 270                 | 22×25: 1.10 |             |             |             | 22×25: 1.10 |             |             |             |
| 330                 | 22×25: 1.20 |             |             |             | 22×30: 1.20 | 25×25: 1.20 |             |             |
| 390                 | 22×30: 1.30 | 25×25: 1.30 |             |             | 22×30: 1.30 | 25×25: 1.30 |             |             |
| 470                 | 22×35: 1.40 | 25×30: 1.40 |             |             | 22×35: 1.40 | 25×30: 1.40 | 30×25: 1.40 |             |
| 560                 | 22×40: 1.50 | 25×30: 1.50 | 30×25: 1.50 |             | 22×40: 1.50 | 25×35: 1.50 | 30×25: 1.50 |             |
| 680                 | 22×45: 1.70 | 25×35: 1.70 | 30×30: 1.70 |             | 22×45: 1.70 | 25×35: 1.70 | 30×30: 1.70 |             |
| 820                 | 22×50: 2.00 | 25×40: 2.00 | 30×30: 2.00 |             |             | 25×40: 2.00 | 30×35: 2.00 | 35×30: 2.00 |
| 1000                |             | 25×45: 2.20 | 30×35: 2.20 | 35×30: 2.20 |             | 25×50: 2.20 | 30×35: 2.20 | 35×30: 2.20 |
| 1200                |             | 25×50: 2.30 | 30×40: 2.30 | 35×35: 2.30 |             |             | 30×40: 2.30 | 35×35: 2.30 |
| 1500                |             |             | 30×45: 2.50 | 35×35: 2.50 |             |             | 30×50: 2.50 | 35×40: 2.50 |
| 1800                |             |             | 30×50: 2.70 | 35×40: 2.70 |             |             |             | 35×45: 2.70 |
| 2200                |             |             |             | 35×45: 2.90 |             |             |             | 35×50: 2.90 |

| Cap(μF)<br>WV<br>φD | 200         |             |             |             | 250         |             |             |             |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                     | φ 22        | φ 25        | φ 30        | φ 35        | φ 22        | φ 25        | φ 30        | φ 35        |
| 180                 |             |             |             |             | 22×25: 0.90 | 25×25: 0.90 |             |             |
| 220                 | 22×25: 1.00 |             |             |             | 22×30: 1.00 | 25×25: 1.00 |             |             |
| 270                 | 22×30: 1.10 | 25×25: 1.10 |             |             | 22×35: 1.10 | 25×30: 1.10 | 30×25: 1.10 |             |
| 330                 | 22×30: 1.20 | 25×25: 1.20 |             |             | 22×40: 1.20 | 25×30: 1.20 | 30×25: 1.20 |             |
| 390                 | 22×35: 1.30 | 25×30: 1.30 | 30×25: 1.30 |             | 22×45: 1.30 | 25×35: 1.30 | 30×30: 1.30 |             |
| 470                 | 22×40: 1.40 | 25×35: 1.40 | 30×25: 1.40 |             | 22×50: 1.40 | 25×40: 1.40 | 30×30: 1.40 | 35×30: 1.40 |
| 560                 | 22×45: 1.50 | 25×35: 1.50 | 30×30: 1.50 |             |             | 25×45: 1.50 | 30×35: 1.50 | 35×30: 1.50 |
| 680                 | 22×50: 1.70 | 25×40: 1.70 | 30×30: 1.70 |             |             | 25×50: 1.70 | 30×40: 1.70 | 35×35: 1.70 |
| 820                 |             | 25×45: 2.00 | 30×35: 2.00 | 35×30: 2.00 |             |             | 30×45: 2.00 | 35×35: 2.00 |
| 1000                |             |             | 30×40: 2.20 | 35×35: 2.20 |             |             | 30×50: 2.20 | 35×40: 2.20 |
| 1200                |             |             | 30×45: 2.30 | 35×40: 2.30 |             |             |             | 35×45: 2.30 |
| 1500                |             |             |             | 35×50: 2.50 |             |             |             |             |

| Cap(μF)<br>WV<br>φD | 315         |             |             |             | 350         |             |             |             |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                     | φ 22        | φ 25        | φ 30        | φ 35        | φ 22        | φ 25        | φ 30        | φ 35        |
| 82                  | 22×25: 0.64 |             |             |             | 22×25: 0.64 |             |             |             |
| 100                 | 22×30: 0.69 |             |             |             | 22×30: 0.69 | 25×25: 0.69 |             |             |
| 120                 | 22×30: 0.75 | 25×25: 0.75 |             |             | 22×35: 0.75 | 25×30: 0.75 |             |             |
| 150                 | 22×35: 0.82 | 25×30: 0.82 | 30×25: 0.82 |             | 22×40: 0.82 | 25×30: 0.82 | 30×25: 0.82 |             |
| 180                 | 22×40: 0.90 | 25×30: 0.90 | 30×25: 0.90 |             | 22×45: 0.90 | 25×35: 0.90 | 30×30: 0.90 |             |
| 220                 | 22×45: 1.00 | 25×35: 1.00 | 30×30: 1.00 |             | 22×50: 1.00 | 25×40: 1.00 | 30×30: 1.00 |             |
| 270                 |             | 25×40: 1.10 | 30×35: 1.10 | 35×30: 1.10 |             | 25×45: 1.10 | 30×35: 1.10 | 35×30: 1.10 |
| 330                 |             | 25×50: 1.20 | 30×40: 1.20 | 35×30: 1.20 |             |             | 30×40: 1.20 | 35×35: 1.20 |
| 390                 |             |             | 30×40: 1.30 | 35×35: 1.30 |             |             | 30×45: 1.30 | 35×35: 1.30 |
| 470                 |             |             | 30×45: 1.40 | 35×40: 1.40 |             |             | 30×50: 1.40 | 35×40: 1.40 |
| 560                 |             |             |             | 35×45: 1.50 |             |             |             | 35×50: 1.50 |
| 680                 |             |             |             | 35×50: 1.70 |             |             |             |             |

| Cap(μF)<br>WV<br>φD | 400         |             |             |             | 450         |             |             |             |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                     | φ 22        | φ 25        | φ 30        | φ 35        | φ 22        | φ 25        | φ 30        | φ 35        |
| 39                  |             |             |             |             | 22×25: 0.37 |             |             |             |
| 47                  |             |             |             |             | 22×30: 0.40 |             |             |             |
| 56                  | 22×25: 0.51 |             |             |             | 22×35: 0.47 | 25×25: 0.47 |             |             |
| 68                  | 22×30: 0.56 | 25×25: 0.56 |             |             | 22×40: 0.53 | 25×30: 0.53 |             |             |
| 82                  | 22×30: 0.64 | 25×25: 0.64 |             |             | 22×45: 0.56 | 25×35: 0.56 | 30×25: 0.56 |             |
| 100                 | 22×35: 0.69 | 25×30: 0.69 |             |             | 22×50: 0.64 | 25×40: 0.64 | 30×30: 0.64 |             |
| 120                 | 22×40: 0.75 | 25×30: 0.75 | 30×25: 0.75 |             |             | 25×45: 0.72 | 30×30: 0.72 |             |
| 150                 | 22×45: 0.82 | 25×35: 0.82 | 30×30: 0.82 |             |             | 25×50: 0.79 | 30×40: 0.79 | 35×30: 0.79 |
| 180                 | 22×50: 0.90 | 25×40: 0.90 | 30×30: 0.90 | 35×25: 0.90 |             |             | 30×45: 0.87 | 35×35: 0.87 |
| 220                 |             | 25×45: 1.00 | 30×35: 1.00 | 35×30: 1.00 |             |             | 30×50: 1.00 | 35×40: 1.00 |
| 270                 |             |             | 30×40: 1.10 | 35×35: 1.10 |             |             |             | 35×45: 1.19 |
| 330                 |             |             | 30×45: 1.20 | 35×40: 1.20 |             |             |             | 35×50: 1.38 |
| 390                 |             |             |             | 35×45: 1.30 |             |             |             |             |
| 470                 |             |             |             | 35×50: 1.40 |             |             |             |             |

Case Size φ D×L(mm) ↑

↑ Ripple Current (A r.m.s./120Hz, 105℃)