

## VXH SERIES

105°C 5000hours, Ultra Miniaturized, Snap-in Terminal Type

### ◆FEATURES

- Load Life : 105°C 5000 hours.
- Smaller size than VXG series.
- RoHS compliance.



### ◆SPECIFICATIONS

| Items                                             | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|--------------------|-----------------------------------|--------------|--------------------|--------------------------------------------|--|-----------------|------------------------------------|--|
| Category Temperature Range                        | -25~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Rated Voltage Range                               | 200~450V.DC                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Capacitance Tolerance                             | ±20% (20℃, 120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Leakage Current(MAX)                              | I=3√CV (After 5 minutes application of rated voltage)<br>I=Leakage Current(μA)    C=Capacitance(μF)    V=Rated Voltage(V)                                                                                                                                                                                                                                                                                                                 |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Dissipation Factor(MAX)<br>(tanδ)                 | <table><tr><td>Rated Voltage (V)</td><td>200~450</td></tr><tr><td>tanδ</td><td>0.20</td></tr></table>                                                                                                                                                                                                                                                                                                                                     | Rated Voltage (V) | 200~450 | tanδ               | 0.20                              | (20℃, 120Hz) |                    |                                            |  |                 |                                    |  |
| Rated Voltage (V)                                 | 200~450                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| tanδ                                              | 0.20                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Endurance                                         | After applying rated voltage with rated ripple current for 5000 hours at 105℃, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td colspan="2">Within ±20% of the initial value.</td></tr><tr><td>Dissipation Factor</td><td colspan="2">Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td colspan="2">Not more than the specified value.</td></tr></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.                                                                                                                                                                                                                                                                                                                                                                                                        |                   |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Low Temperature Stability<br>Impedance Ratio(MAX) | <table><tr><td>Rated Voltage (V)</td><td>200~250</td><td>315~450</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>3</td><td>8</td></tr></table>                                                                                                                                                                                                                                                                                                    | Rated Voltage (V) | 200~250 | 315~450            | Z(-25℃)/Z(20℃)                    | 3            | 8                  | (120Hz)                                    |  |                 |                                    |  |
| Rated Voltage (V)                                 | 200~250                                                                                                                                                                                                                                                                                                                                                                                                                                   | 315~450           |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |
| Z(-25℃)/Z(20℃)                                    | 3                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                 |         |                    |                                   |              |                    |                                            |  |                 |                                    |  |

### ◆MULTIPLIER FOR RIPPLE CURRENT

| Frequency (Hz) |           | 60(50) | 120  | 500  | 1k   | 10k≤ |
|----------------|-----------|--------|------|------|------|------|
| Coefficient    | 200~250VV | 0.80   | 1.00 | 1.20 | 1.30 | 1.50 |
|                | 315~450VV | 0.80   | 1.00 | 1.20 | 1.25 | 1.40 |

### ◆OPTION

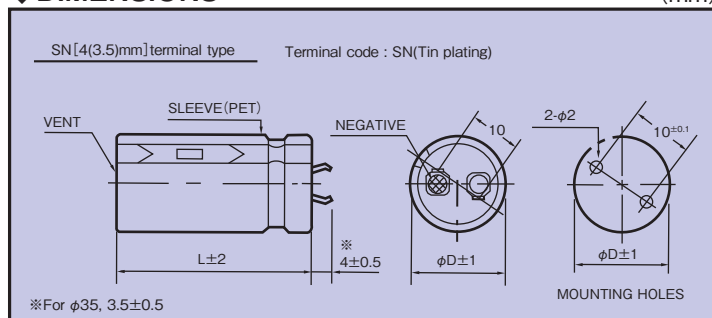
|                          | Code |
|--------------------------|------|
| PET Sleeve without plate | EFC  |

### ◆PART NUMBER

□□□ Rated Voltage    VXH Series    □□□□□ Capacitance    M Capacitance Tolerance    □□□ Option    SN Terminal Code    D×L Case Size

### ◆DIMENSIONS

(mm)



**◆STANDARD SIZE**

| Cap(μF)<br>V.DC<br>φD | 200        |            |            |            | 220        |            |            |            |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                       | φ22        | φ25        | φ30        | φ35        | φ22        | φ25        | φ30        | φ35        |
| 270                   |            |            |            |            | 22×25 1.04 |            |            |            |
| 330                   | 22×25 1.31 |            |            |            | 22×30 1.26 |            |            |            |
| 390                   | 22×30 1.32 |            |            |            | 22×30 1.47 | 25×25 1.21 |            |            |
| 470                   | 22×30 1.54 | 25×25 1.54 |            |            | 22×35 1.64 | 25×30 1.47 |            |            |
| 560                   | 22×35 1.75 | 25×30 1.75 |            |            | 22×40 1.86 | 25×30 1.71 | 30×25 1.41 |            |
| 680                   | 22×40 1.96 | 25×35 1.79 | 30×25 1.46 |            | 22×45 2.05 | 25×35 1.94 | 30×30 1.71 |            |
| 820                   | 22×50 2.15 | 25×40 2.03 | 30×30 1.77 | 35×25 1.59 |            | 25×40 2.16 | 30×30 1.99 | 35×25 1.89 |
| 1000                  |            | 25×45 2.26 | 30×35 2.06 | 35×30 1.93 |            | 25×45 2.37 | 30×35 2.26 | 35×30 2.15 |
| 1200                  |            | 25×50 2.34 | 30×40 2.34 | 35×30 2.22 |            |            | 30×40 2.51 | 35×35 2.48 |
| 1500                  |            |            | 30×45 2.60 | 35×35 2.56 |            |            | 30×50 2.75 | 35×40 2.50 |
| 1800                  |            |            | 30×50 2.85 | 35×40 2.85 |            |            |            | 35×45 3.04 |
| 2200                  |            |            |            | 35×50 3.14 |            |            |            |            |

| Cap(μF)<br>V.DC<br>φD | 250        |            |            |            | 315        |            |            |            |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                       | φ22        | φ25        | φ30        | φ35        | φ22        | φ25        | φ30        | φ35        |
| 150                   |            |            |            |            | 22×25 0.82 |            |            |            |
| 180                   |            |            |            |            | 22×30 0.95 |            |            |            |
| 220                   |            |            |            |            | 22×35 1.11 | 25×25 0.98 |            |            |
| 270                   | 22×25 1.18 |            |            |            | 22×40 1.28 | 25×30 1.17 |            |            |
| 330                   | 22×30 1.37 | 25×25 1.14 |            |            | 22×45 1.45 | 25×35 1.35 | 30×25 1.19 |            |
| 390                   | 22×35 1.56 | 25×30 1.38 |            |            | 22×50 1.62 | 25×40 1.53 | 30×30 1.40 | 35×25 1.30 |
| 470                   | 22×40 1.74 | 25×30 1.61 |            |            |            | 25×45 1.73 | 30×35 1.61 | 35×30 1.52 |
| 560                   | 22×45 1.92 | 25×35 1.83 | 30×25 1.63 |            |            | 25×50 1.99 | 30×40 2.00 | 35×30 1.69 |
| 680                   | 22×50 2.04 | 25×40 2.04 | 30×30 1.90 | 35×25 1.80 |            |            | 30×45 2.06 | 35×35 1.88 |
| 820                   |            | 25×45 2.24 | 30×35 2.15 | 35×30 1.81 |            |            | 30×50 2.30 | 35×40 2.14 |
| 1000                  |            |            | 30×40 2.39 | 35×35 2.38 |            |            |            | 35×50 2.53 |
| 1200                  |            |            | 30×45 2.62 | 35×40 2.39 |            |            |            |            |
| 1500                  |            |            |            | 35×45 2.92 |            |            |            |            |
| 1800                  |            |            |            | 35×50 3.04 |            |            |            |            |

| Cap(μF)<br>V.DC<br>φD | 350        |            |            |            | 400        |            |            |            |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                       | φ22        | φ25        | φ30        | φ35        | φ22        | φ25        | φ30        | φ35        |
| 120                   | 22×25 0.74 |            |            |            | 22×25 0.79 |            |            |            |
| 150                   | 22×30 0.89 |            |            |            | 22×30 0.92 | 25×25 0.95 |            |            |
| 180                   | 22×35 1.03 | 25×25 0.91 |            |            | 22×35 1.05 | 25×30 1.10 |            |            |
| 220                   | 22×40 1.17 | 25×30 1.07 |            |            | 22×40 1.28 | 25×30 1.12 | 30×25 1.17 |            |
| 270                   | 22×45 1.33 | 25×35 1.25 | 30×25 1.11 |            | 22×45 1.40 | 25×35 1.40 | 30×30 1.36 |            |
| 330                   |            | 25×40 1.43 | 30×30 1.31 | 35×25 1.23 |            | 25×40 1.55 | 30×30 1.55 | 35×25 1.35 |
| 390                   |            | 25×45 1.61 | 30×35 1.51 | 35×30 1.44 |            | 25×50 1.72 | 30×35 1.72 | 35×30 1.53 |
| 470                   |            | 25×50 1.85 | 30×40 1.88 | 35×35 1.67 |            |            | 30×40 1.89 | 35×35 1.78 |
| 560                   |            |            | 30×45 1.92 | 35×40 1.88 |            |            | 30×45 1.98 | 35×40 1.98 |
| 680                   |            |            | 30×50 2.15 | 35×40 2.01 |            |            |            | 35×45 2.19 |
| 820                   |            |            |            | 35×45 2.26 |            |            |            | 35×50 2.42 |

| Cap(μF)<br>V.DC<br>φD | 420        |            |            |            | 450        |            |            |            |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                       | φ22        | φ25        | φ30        | φ35        | φ22        | φ25        | φ30        | φ35        |
| 100                   | 22×25 0.74 |            |            |            | 22×25 0.73 |            |            |            |
| 120                   | 22×30 0.86 |            |            |            | 22×30 0.84 | 25×25 0.87 |            |            |
| 150                   | 22×35 0.98 | 25×25 0.90 |            |            | 22×35 0.97 | 25×30 0.89 |            |            |
| 180                   | 22×40 1.09 | 25×30 1.05 |            |            | 22×40 1.08 | 25×30 1.03 | 30×25 1.08 |            |
| 220                   | 22×45 1.21 | 25×35 1.19 | 30×25 1.12 |            | 22×45 1.17 | 25×35 1.17 | 30×30 1.10 | 35×25 1.04 |
| 270                   | 22×50 1.34 | 25×40 1.34 | 30×30 1.30 | 35×25 1.27 |            | 25×45 1.43 | 30×30 1.28 | 35×30 1.25 |
| 330                   |            | 25×45 1.47 | 30×35 1.47 | 35×30 1.45 |            | 25×50 1.45 | 30×40 1.45 | 35×30 1.43 |
| 390                   |            |            | 30×40 1.64 | 35×35 1.68 |            |            | 30×45 1.75 | 35×35 1.66 |
| 470                   |            |            | 30×45 1.81 | 35×35 1.71 |            |            | 30×50 1.85 | 35×40 1.85 |
| 560                   |            |            | 30×50 2.07 | 35×40 2.07 |            |            |            | 35×45 2.04 |
| 680                   |            |            |            | 35×50 2.43 |            |            |            |            |

↑ ↑  
Ripple Current (A r.m.s./120Hz, 105°C)  
Case Size φD×L(mm)