

## AXW SERIES

### ◆FEATURES

- Load Life : 105°C 2000 hours.
- Body diameter of  $\phi$  10mm to  $\phi$  18mm with high ripple current capability.
- This series is two classes smaller than the current MXW 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=Rated Capacitance(μF)                      V=Rated Voltage(V)                                                                                                                                                                                                                                                                    |         |         |  |                      |                                   |         |                |                    |                                            |      |     |                 |                                    |  |  |
| Dissipation Factor(MAX)<br>(tan δ ) | <table><tr><td>Rated Voltage<br/>(V)</td><td>200~250</td><td>400</td><td>420~450</td></tr><tr><td>tan δ</td><td>0.12</td><td>0.15</td><td>0.2</td></tr></table> (20℃, 120Hz)                                                                                                                                                                                                                                                           |         |         |  | Rated Voltage<br>(V) | 200~250                           | 400     | 420~450        | tan δ              | 0.12                                       | 0.15 | 0.2 |                 |                                    |  |  |
| Rated Voltage<br>(V)                | 200~250                                                                                                                                                                                                                                                                                                                                                                                                                                | 400     | 420~450 |  |                      |                                   |         |                |                    |                                            |      |     |                 |                                    |  |  |
| tan δ                               | 0.12                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.15    | 0.2     |  |                      |                                   |         |                |                    |                                            |      |     |                 |                                    |  |  |
| Endurance                           | After applying rated voltage with rated ripple current for 2000hrs at 105℃, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td colspan="3">Within ±20% of the initial value.</td></tr><tr><td>Dissipation Factor</td><td colspan="3">Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td colspan="3">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.                                                                                                                                                                                                                                                                                                                                                                                                     |         |         |  |                      |                                   |         |                |                    |                                            |      |     |                 |                                    |  |  |
| Impedance Ratio(MAX)                | <table><tr><td>Rated Voltage<br/>(V)</td><td>200~250</td><td>400~450</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>3</td><td>8</td></tr></table> (120Hz)                                                                                                                                                                                                                                                                                     |         |         |  | Rated Voltage<br>(V) | 200~250                           | 400~450 | Z(-25℃)/Z(20℃) | 3                  | 8                                          |      |     |                 |                                    |  |  |
| Rated Voltage<br>(V)                | 200~250                                                                                                                                                                                                                                                                                                                                                                                                                                | 400~450 |         |  |                      |                                   |         |                |                    |                                            |      |     |                 |                                    |  |  |
| Z(-25℃)/Z(20℃)                      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8       |         |  |                      |                                   |         |                |                    |                                            |      |     |                 |                                    |  |  |

### ◆MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

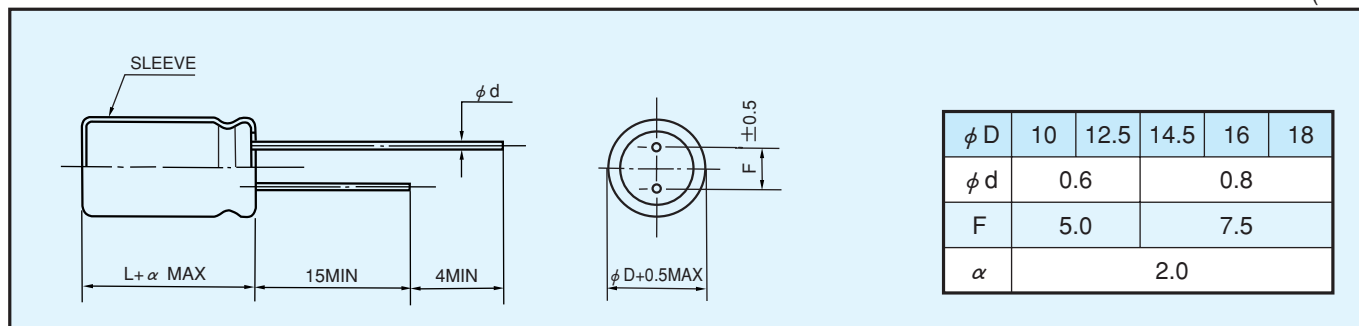
| Frequency<br>(Hz) |           | 60(50) | 120 | 500  | 1k   | 10k≤ |
|-------------------|-----------|--------|-----|------|------|------|
| Coefficient       | 200~250WV | 0.8    | 1.0 | 1.20 | 1.30 | 1.40 |
|                   | 400~450WV | 0.8    | 1.0 | 1.25 | 1.40 | 1.50 |

### ◆PART NUMBER

   **AXW**                           **D×L**  
 Rated Voltage    Series    Rated Capacitance    Capacitance Tolerance    Option    Lead Forming    Case Size

**◆ DIMENSIONS**

(mm)


**◆ STANDARD SIZE, RATED RIPPLE CURRENT**

| Cap<br>( $\mu F$ ) | WV<br>$\phi D$ | 200       |               |               |             |             | 220         |               |               |             |           |
|--------------------|----------------|-----------|---------------|---------------|-------------|-------------|-------------|---------------|---------------|-------------|-----------|
|                    |                | $\phi 10$ | $\phi 12.5$   | $\phi 14.5$   | $\phi 16$   | $\phi 18$   | $\phi 10$   | $\phi 12.5$   | $\phi 14.5$   | $\phi 16$   | $\phi 18$ |
| 56                 |                |           |               |               |             |             | 10×30: 0.29 |               |               |             |           |
| 68                 | 10×30: 0.35    |           |               |               |             |             | 10×35: 0.33 |               |               |             |           |
| 82                 | 10×35: 0.40    |           |               |               |             |             | 10×40: 0.37 |               |               |             |           |
| 100                | 10×40: 0.46    |           |               |               |             |             |             | 12.5×30: 0.43 |               |             |           |
| 120                |                |           | 12.5×30: 0.53 |               |             |             |             | 12.5×35: 0.49 |               |             |           |
| 150                |                |           | 12.5×35: 0.62 |               |             |             |             | 12.5×40: 0.58 | 14.5×30: 0.58 |             |           |
| 180                |                |           | 12.5×40: 0.70 | 14.5×30: 0.66 |             |             |             | 14.5×35: 0.68 | 16×30: 0.67   |             |           |
| 220                |                |           |               | 14.5×35: 0.80 | 16×30: 0.76 | 18×30: 0.81 |             | 14.5×40: 0.78 | 16×35: 0.77   | 18×30: 0.77 |           |
| 270                |                |           |               | 14.5×40: 0.90 | 16×35: 0.88 | 18×30: 0.87 |             |               | 16×40: 0.88   | 18×35: 0.88 |           |
| 330                |                |           |               |               | 16×40: 1.10 | 18×35: 1.01 |             |               |               | 18×40: 1.01 |           |
| 390                |                |           |               |               |             | 18×40: 1.13 |             |               |               | 18×45: 1.13 |           |
| 470                |                |           |               |               |             | 18×45: 1.27 |             |               |               |             |           |

| Cap<br>( $\mu F$ ) | WV<br>$\phi D$ | 250       |               |               |             |             | 400         |               |               |             |             |
|--------------------|----------------|-----------|---------------|---------------|-------------|-------------|-------------|---------------|---------------|-------------|-------------|
|                    |                | $\phi 10$ | $\phi 12.5$   | $\phi 14.5$   | $\phi 16$   | $\phi 18$   | $\phi 10$   | $\phi 12.5$   | $\phi 14.5$   | $\phi 16$   | $\phi 18$   |
| 22                 |                |           |               |               |             |             | 10×30: 0.21 |               |               |             |             |
| 27                 |                |           |               |               |             |             | 10×35: 0.24 |               |               |             |             |
| 33                 |                |           |               |               |             |             | 10×40: 0.28 |               |               |             |             |
| 39                 |                |           |               |               |             |             |             | 12.5×30: 0.32 |               |             |             |
| 47                 | 10×30: 0.27    |           |               |               |             |             |             | 12.5×35: 0.37 |               |             |             |
| 56                 | 10×35: 0.30    |           |               |               |             |             |             | 12.5×40: 0.42 | 14.5×30: 0.42 |             |             |
| 68                 | 10×40: 0.35    |           |               |               |             |             |             |               | 14.5×35: 0.48 |             |             |
| 82                 |                |           | 12.5×30: 0.40 |               |             |             |             |               | 14.5×35: 0.52 | 16×30: 0.50 |             |
| 100                |                |           | 12.5×35: 0.46 |               |             |             |             |               |               | 16×35: 0.58 | 18×30: 0.58 |
| 120                |                |           | 12.5×40: 0.53 | 14.5×30: 0.53 |             |             |             |               |               | 16×40: 0.66 | 18×35: 0.67 |
| 150                |                |           |               | 14.5×35: 0.62 | 16×30: 0.62 |             |             |               |               |             | 18×40: 0.77 |
| 180                |                |           |               | 14.5×40: 0.72 | 16×35: 0.72 | 18×30: 0.72 |             |               |               |             | 18×45: 0.88 |
| 220                |                |           |               |               | 16×40: 0.83 | 18×35: 0.83 |             |               |               |             |             |
| 270                |                |           |               |               |             | 18×40: 0.95 |             |               |               |             |             |
| 330                |                |           |               |               |             | 18×45: 1.07 |             |               |               |             |             |

| Cap<br>( $\mu F$ ) | WV<br>$\phi D$ | 420       |               |               |             |             | 450         |               |               |             |             |
|--------------------|----------------|-----------|---------------|---------------|-------------|-------------|-------------|---------------|---------------|-------------|-------------|
|                    |                | $\phi 10$ | $\phi 12.5$   | $\phi 14.5$   | $\phi 16$   | $\phi 18$   | $\phi 10$   | $\phi 12.5$   | $\phi 14.5$   | $\phi 16$   | $\phi 18$   |
| 15                 |                |           |               |               |             |             | 10×30: 0.15 |               |               |             |             |
| 18                 | 10×30: 0.17    |           |               |               |             |             | 10×35: 0.18 |               |               |             |             |
| 22                 | 10×35: 0.20    |           |               |               |             |             | 10×40: 0.21 |               |               |             |             |
| 27                 | 10×40: 0.23    |           |               |               |             |             |             | 12.5×30: 0.25 |               |             |             |
| 33                 |                |           | 12.5×30: 0.27 |               |             |             |             | 12.5×35: 0.28 |               |             |             |
| 39                 |                |           | 12.5×35: 0.31 |               |             |             |             | 12.5×40: 0.32 | 14.5×30: 0.32 |             |             |
| 47                 |                |           | 12.5×40: 0.36 | 14.5×30: 0.36 |             |             |             |               | 14.5×35: 0.38 | 16×30: 0.38 |             |
| 56                 |                |           |               | 14.5×35: 0.43 | 16×30: 0.43 |             |             |               | 14.5×40: 0.44 | 16×35: 0.44 |             |
| 68                 |                |           |               | 14.5×40: 0.51 | 16×35: 0.51 | 18×30: 0.51 |             |               |               | 16×40: 0.49 | 18×30: 0.48 |
| 82                 |                |           |               |               | 16×40: 0.57 | 18×30: 0.57 |             |               |               |             | 18×35: 0.55 |
| 100                |                |           |               |               |             | 18×35: 0.61 |             |               |               |             | 18×40: 0.65 |
| 120                |                |           |               |               |             | 18×40: 0.66 |             |               |               |             | 18×45: 0.74 |

Please check with us about individual WV, Cap., size and dimensions.

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