

**KXW SERIES**
**105°C 2000 hours, Miniaturized**

 RoHS  
compliance

**◆SPECIFICATIONS**

| Items                                             | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                           |         |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|--|------------------------|-----------------------------------|---------|----------------|--------------------|--------------------------------------------|------|------|-----------------|------------------------------------|--|--|
| Category Temperature Range                        | -25~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| Rated Voltage Range                               | 200~450Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                |         |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| 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(Vdc)                                                                                                                                                                                                                                                                           |         |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| Dissipation Factor(MAX)<br>(tanδ)                 | <table><tr><td>Rated Voltage<br/>(Vdc)</td><td>200</td><td>400</td><td>420~450</td></tr><tr><td>tanδ</td><td>0.12</td><td>0.15</td><td>0.20</td></tr></table> (20℃,120Hz)                                                                                                                                                                                                                                                                 |         |         |  | Rated Voltage<br>(Vdc) | 200                               | 400     | 420~450        | tanδ               | 0.12                                       | 0.15 | 0.20 |                 |                                    |  |  |
| Rated Voltage<br>(Vdc)                            | 200                                                                                                                                                                                                                                                                                                                                                                                                                                       | 400     | 420~450 |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| tanδ                                              | 0.12                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.15    | 0.20    |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| Endurance                                         | After applying rated voltage with rated ripple current for 2000 hours 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.                                                                                                                                                                                                                                                                                                                                                                                                        |         |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| Low Temperature Stability<br>Impedance Ratio(MAX) | <table><tr><td>Rated Voltage<br/>(Vdc)</td><td>200</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>(Vdc) | 200                               | 400~450 | Z(-25℃)/Z(20℃) | 3                  | 8                                          |      |      |                 |                                    |  |  |
| Rated Voltage<br>(Vdc)                            | 200                                                                                                                                                                                                                                                                                                                                                                                                                                       | 400~450 |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |
| Z(-25℃)/Z(20℃)                                    | 3                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8       |         |  |                        |                                   |         |                |                    |                                            |      |      |                 |                                    |  |  |

**◆MULTIPLIER FOR RIPPLE CURRENT**

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

**◆OPTION**

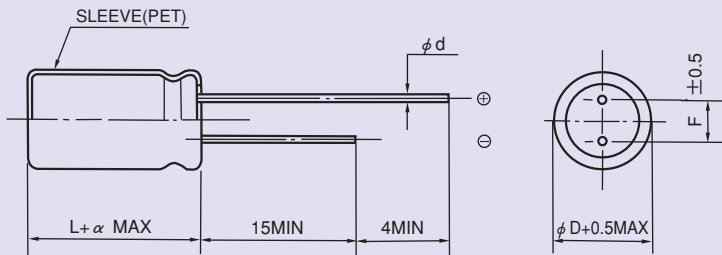
|            |      |
|------------|------|
|            | Code |
| PET Sleeve | EFC  |

**◆PART NUMBER**

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

**◆DIMENSIONS**

(mm)



| $\phi$ D | 10  | 12.5 | 14.5 | 16 | 18 |
|----------|-----|------|------|----|----|
| $\phi$ d | 0.6 |      | 0.8  |    |    |
| F        | 5.0 |      | 7.5  |    |    |
| $\alpha$ | 2.0 |      |      |    |    |

**◆STANDARD SIZE**

| Rated Voltage (Vdc) | Capacitance ( $\mu F$ ) | Size $\phi D \times L$ (mm) | Rated Ripple Current (A r.m.s./105°C, 120Hz) |
|---------------------|-------------------------|-----------------------------|----------------------------------------------|
| 200                 | 82                      | 10×30                       | 0.40                                         |
|                     | 100                     | 10×35                       | 0.46                                         |
|                     | 120                     | 10×40                       | 0.53                                         |
|                     | 150                     | 12.5×30                     | 0.62                                         |
|                     | 180                     | 12.5×35                     | 0.70                                         |
|                     | 220                     | 12.5×40                     | 0.80                                         |
|                     | 220                     | 14.5×30                     | 0.80                                         |
|                     | 270                     | 14.5×35                     | 0.87                                         |
|                     | 270                     | 16×30                       | 0.87                                         |
|                     | 330                     | 16×35                       | 1.01                                         |
|                     | 330                     | 18×30                       | 1.01                                         |
|                     | 390                     | 16×40                       | 1.13                                         |
|                     | 390                     | 18×35                       | 1.13                                         |
|                     | 470                     | 18×40                       | 1.27                                         |
|                     | 560                     | 18×45                       | 1.39                                         |
| 400                 | 27                      | 10×30                       | 0.24                                         |
|                     | 33                      | 10×35                       | 0.28                                         |
|                     | 39                      | 10×40                       | 0.32                                         |
|                     | 47                      | 12.5×30                     | 0.37                                         |
|                     | 56                      | 12.5×35                     | 0.42                                         |
|                     | 68                      | 12.5×40                     | 0.48                                         |
|                     | 68                      | 14.5×30                     | 0.48                                         |
|                     | 82                      | 14.5×35                     | 0.52                                         |
|                     | 100                     | 14.5×40                     | 0.58                                         |
|                     | 100                     | 16×30                       | 0.58                                         |
|                     | 120                     | 16×35                       | 0.67                                         |
|                     | 120                     | 18×30                       | 0.67                                         |
|                     | 150                     | 16×40                       | 0.77                                         |
|                     | 150                     | 18×35                       | 0.77                                         |
|                     | 180                     | 18×40                       | 0.88                                         |
|                     | 220                     | 18×45                       | 1.00                                         |

| Rated Voltage (Vdc) | Capacitance ( $\mu F$ ) | Size $\phi D \times L$ (mm) | Rated Ripple Current (A r.m.s./105°C, 120Hz) |
|---------------------|-------------------------|-----------------------------|----------------------------------------------|
| 420                 | 22                      | 10×30                       | 0.20                                         |
|                     | 27                      | 10×35                       | 0.23                                         |
|                     | 33                      | 10×40                       | 0.27                                         |
|                     | 39                      | 12.5×30                     | 0.31                                         |
|                     | 47                      | 12.5×35                     | 0.36                                         |
|                     | 56                      | 12.5×40                     | 0.43                                         |
|                     | 56                      | 14.5×30                     | 0.43                                         |
|                     | 68                      | 14.5×35                     | 0.51                                         |
|                     | 68                      | 16×30                       | 0.51                                         |
|                     | 82                      | 14.5×40                     | 0.57                                         |
|                     | 82                      | 16×35                       | 0.57                                         |
|                     | 100                     | 16×40                       | 0.61                                         |
|                     | 100                     | 18×30                       | 0.61                                         |
|                     | 120                     | 18×35                       | 0.66                                         |
|                     | 150                     | 18×40                       | 0.71                                         |
| 450                 | 18                      | 10×30                       | 0.18                                         |
|                     | 22                      | 10×35                       | 0.21                                         |
|                     | 27                      | 10×40                       | 0.25                                         |
|                     | 33                      | 12.5×30                     | 0.28                                         |
|                     | 39                      | 12.5×35                     | 0.32                                         |
|                     | 47                      | 12.5×40                     | 0.38                                         |
|                     | 47                      | 14.5×30                     | 0.38                                         |
|                     | 56                      | 14.5×35                     | 0.44                                         |
|                     | 56                      | 16×30                       | 0.44                                         |
|                     | 68                      | 14.5×40                     | 0.49                                         |
|                     | 68                      | 16×35                       | 0.49                                         |
|                     | 82                      | 16×40                       | 0.55                                         |
|                     | 82                      | 18×30                       | 0.55                                         |
|                     | 100                     | 18×35                       | 0.65                                         |
|                     | 120                     | 18×40                       | 0.74                                         |
|                     | 150                     | 18×45                       | 0.80                                         |