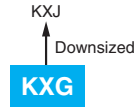


# KXG Series

- For electronic ballast circuits and other long life applications
- Endurance with ripple current : 8,000 to 10,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

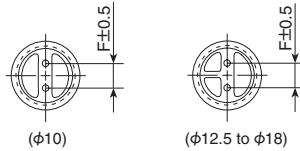
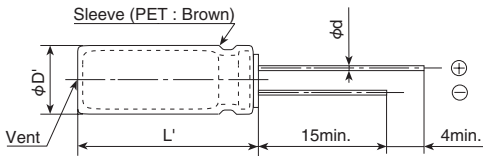


## SPECIFICATIONS

| Items  | Characteristics   |                                       |                 |                  |
|--|---|---------------------------------------|-----------------|------------------|
| Category   | -40 to +105°C (160 to 400V <sub>dc</sub> ) -25 to +105°C (450V <sub>dc</sub> )  |                                       |                 |                  |
| Temperature Range                                      |   |                                       |                 |                  |
| Rated Voltage Range                                    | 160 to 450V <sub>dc</sub>   |                                       |                 |                  |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)   |                                       |                 |                  |
| Leakage Current  |   | After 1 minute                        | After 5 minutes |                  |
|  | CV ≤ 1,000  | I = 0.1CV + 40                        | I = 0.03CV + 15 |                  |
|  | CV > 1,000  | I = 0.04CV + 100                      | I = 0.02CV + 25 |                  |
|  | Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C)   |                                       |                 |                  |
| Dissipation Factor (tan δ)                             | Rated voltage (V <sub>dc</sub> )  | 160 to 250V                           | 350 to 450V     |                  |
|  | tan δ (Max.)  | 0.20                                  | 0.24            | (at 20°C, 120Hz) |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )  | 160 to 250V                           | 350 & 400V      | 450V             |
|  | Z(-25°C)/Z(+20°C)   | 3                                     | 5               | 6                |
|  | Z(-40°C)/Z(+20°C)   | 6                                     | 6               | —                |
|  | (at 120Hz)  |                                       |                 |                  |
| Endurance  | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 10,000 hours (8,000 hours for φ10) at 105°C.                  |                                       |                 |                  |
|  | Capacitance change  | ≤ ±20% of the initial value           |                 |                  |
|  | D.F. (tan δ)  | ≤ 200% of the initial specified value |                 |                  |
|  | Leakage current   | ≤ The initial specified value         |                 |                  |
| Shelf Life   | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. |                                       |                 |                  |
|  | Capacitance change  | ≤ ±20% of the initial value           |                 |                  |
|  | D.F. (tan δ)  | ≤ 200% of the initial specified value |                 |                  |
|  | Leakage current   | ≤ 500% of the initial specified value |                 |                  |

## DIMENSIONS [mm]

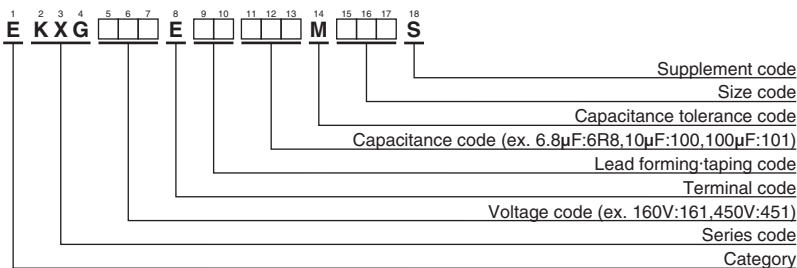
- Terminal Code : E



| φD  | 10         | 12.5 | 16  | 18  |
|-----|------------|------|-----|-----|
| φd  | 0.6        | 0.6  | 0.8 | 0.8 |
| F   | 5.0        | 5.0  | 7.5 | 7.5 |
| φD' | φD+0.5max. |      |     |     |
| L'  | L+1.5max.  |      |     |     |

Gas escape end seal

## PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

## RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

| Capacitance(μF) | Frequency(Hz) |      |      |      |
|-----------------|---------------|------|------|------|
|                 | 120           | 1k   | 10k  | 100k |
| 6.8 to 82       | 1.00          | 1.75 | 2.25 | 2.50 |
| 100 to 330      | 1.00          | 1.67 | 2.05 | 2.25 |

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

**KXG Series**
**◆STANDARD RATINGS**

| VV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Case size<br>φD×L(mm) | tan δ | Rated ripple current(mArms/105°C) |        | Part No.           |
|--------------------------|-------------|-----------------------|-------|-----------------------------------|--------|--------------------|
|                          |             |                       |       | 120Hz                             | 100kHz |                    |
| 160                      | 10          | 10 × 16               | 0.20  | 125                               | 315    | EKXG161E□□100MJ16S |
|                          | 22          | 10 × 20               | 0.20  | 200                               | 500    | EKXG161E□□220MJ20S |
|                          | 33          | 10 × 20               | 0.20  | 250                               | 625    | EKXG161E□□330MJ20S |
|                          | 47          | 10 × 20               | 0.20  | 300                               | 750    | EKXG161E□□470MJ20S |
|                          | 68          | 12.5 × 20             | 0.20  | 470                               | 1,175  | EKXG161E□□680MK20S |
|                          | 82          | 12.5 × 20             | 0.20  | 510                               | 1,275  | EKXG161E□□820MK20S |
|                          | 100         | 12.5 × 25             | 0.20  | 620                               | 1,395  | EKXG161E□□101MK25S |
|                          | 100         | 16 × 20               | 0.20  | 630                               | 1,420  | EKXG161E□□101ML20S |
|                          | 150         | 16 × 20               | 0.20  | 770                               | 1,735  | EKXG161E□□151ML20S |
| 200                      | 10          | 10 × 16               | 0.20  | 125                               | 315    | EKXG201E□□100MJ16S |
|                          | 22          | 10 × 20               | 0.20  | 200                               | 500    | EKXG201E□□220MJ20S |
|                          | 33          | 10 × 20               | 0.20  | 260                               | 650    | EKXG201E□□330MJ20S |
|                          | 47          | 12.5 × 20             | 0.20  | 390                               | 975    | EKXG201E□□470MK20S |
|                          | 68          | 12.5 × 20             | 0.20  | 470                               | 1,175  | EKXG201E□□680MK20S |
|                          | 82          | 16 × 20               | 0.20  | 550                               | 1,375  | EKXG201E□□820ML20S |
|                          | 100         | 16 × 20               | 0.20  | 630                               | 1,420  | EKXG201E□□101ML20S |
|                          | 150         | 16 × 25               | 0.20  | 840                               | 1,890  | EKXG201E□□151ML25S |
|                          | 220         | 18 × 25               | 0.20  | 1,050                             | 2,365  | EKXG201E□□221MM25S |
| 250                      | 10          | 10 × 20               | 0.20  | 140                               | 350    | EKXG251E□□100MJ20S |
|                          | 22          | 10 × 20               | 0.20  | 200                               | 500    | EKXG251E□□220MJ20S |
|                          | 33          | 12.5 × 20             | 0.20  | 320                               | 800    | EKXG251E□□330MK20S |
|                          | 47          | 12.5 × 20             | 0.20  | 390                               | 975    | EKXG251E□□470MK20S |
|                          | 68          | 16 × 20               | 0.20  | 520                               | 1,300  | EKXG251E□□680ML20S |
|                          | 82          | 16 × 20               | 0.20  | 550                               | 1,375  | EKXG251E□□820ML20S |
|                          | 100         | 16 × 25               | 0.20  | 680                               | 1,530  | EKXG251E□□101ML25S |
|                          | 150         | 18 × 25               | 0.20  | 860                               | 1,935  | EKXG251E□□151MM25S |
|                          | 220         | 18 × 31.5             | 0.20  | 1,130                             | 2,545  | EKXG251E□□221MMN3S |
| 350                      | 6.8         | 10 × 16               | 0.24  | 110                               | 275    | EKXG351E□□6R8MJ16S |
|                          | 10          | 10 × 20               | 0.24  | 140                               | 350    | EKXG351E□□100MJ20S |
|                          | 22          | 12.5 × 20             | 0.24  | 260                               | 650    | EKXG351E□□220MK20S |
|                          | 33          | 16 × 20               | 0.24  | 360                               | 900    | EKXG351E□□330ML20S |
|                          | 47          | 16 × 20               | 0.24  | 430                               | 1,075  | EKXG351E□□470ML20S |
|                          | 68          | 16 × 25               | 0.24  | 560                               | 1,400  | EKXG351E□□680ML25S |
|                          | 68          | 18 × 20               | 0.24  | 550                               | 1,375  | EKXG351E□□680MM20S |
|                          | 82          | 18 × 25               | 0.24  | 610                               | 1,525  | EKXG351E□□820MM25S |
|                          | 100         | 18 × 25               | 0.24  | 700                               | 1,575  | EKXG351E□□101MM25S |
| 400                      | 120         | 18 × 31.5             | 0.24  | 830                               | 1,865  | EKXG351E□□121MMN3S |
|                          | 150         | 18 × 35.5             | 0.24  | 960                               | 2,160  | EKXG351E□□151MMP1S |
|                          | 6.8         | 10 × 16               | 0.24  | 110                               | 275    | EKXG401E□□6R8MJ16S |
|                          | 10          | 10 × 20               | 0.24  | 140                               | 350    | EKXG401E□□100MJ20S |
|                          | 15          | 12.5 × 20             | 0.24  | 220                               | 550    | EKXG401E□□150MK20S |
|                          | 22          | 12.5 × 20             | 0.24  | 260                               | 650    | EKXG401E□□220MK20S |
|                          | 33          | 16 × 20               | 0.24  | 360                               | 900    | EKXG401E□□330ML20S |
|                          | 47          | 16 × 25               | 0.24  | 470                               | 1,175  | EKXG401E□□470ML25S |
|                          | 47          | 18 × 20               | 0.24  | 450                               | 1,125  | EKXG401E□□470MM20S |
| 450                      | 68          | 18 × 25               | 0.24  | 585                               | 1,465  | EKXG401E□□680MM25S |
|                          | 82          | 18 × 25               | 0.24  | 610                               | 1,525  | EKXG401E□□820MM25S |
|                          | 100         | 18 × 31.5             | 0.24  | 765                               | 1,720  | EKXG401E□□101MMN3S |
|                          | 120         | 18 × 35.5             | 0.24  | 865                               | 1,945  | EKXG401E□□121MMP1S |
|                          | 150         | 18 × 40               | 0.24  | 985                               | 2,215  | EKXG401E□□151MM40S |
|                          | 6.8         | 10 × 20               | 0.24  | 110                               | 275    | EKXG451E□□6R8MJ20S |
|                          | 10          | 12.5 × 20             | 0.24  | 180                               | 450    | EKXG451E□□100MK20S |
|                          | 15          | 12.5 × 25             | 0.24  | 240                               | 600    | EKXG451E□□150MK25S |
|                          | 22          | 16 × 20               | 0.24  | 290                               | 725    | EKXG451E□□220ML20S |
| 450                      | 33          | 16 × 25               | 0.24  | 390                               | 975    | EKXG451E□□330ML25S |
|                          | 33          | 18 × 20               | 0.24  | 380                               | 950    | EKXG451E□□330MM20S |
|                          | 47          | 18 × 25               | 0.24  | 480                               | 1,200  | EKXG451E□□470MM25S |
|                          | 68          | 18 × 31.5             | 0.24  | 630                               | 1,575  | EKXG451E□□680MMN3S |
|                          | 82          | 18 × 35.5             | 0.24  | 715                               | 1,785  | EKXG451E□□820MMP1S |
|                          | 100         | 18 × 40               | 0.24  | 800                               | 1,800  | EKXG451E□□101MM40S |

□□ : Enter the appropriate lead forming or taping code.