

# KXG Series

- Downsized from current KMX series
- For electronic ballast circuits and other long life required applications
- Endurance with ripple current : 105°C 8000 to 10000hours
- Non solvent-proof type
- Pb-free design

KXG

↓ downsized

KMX

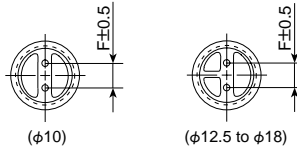
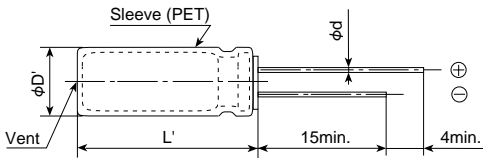


## ◆SPECIFICATIONS

| 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 ≤ 1000  | I = 0.1CV + 40                        | I = 0.03CV + 15       |              |
|  | CV > 1000  | 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 (tanδ)                              | Rated voltage (V <sub>dc</sub> )   | 160 to 250V                           | 350 & 400V            | 450V         |
|  | tanδ (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 for 10000 hours (8000 hours for φ10) at 105°C. |                                       |                       |              |
|  | Capacitance change   | ≤ ±20% of the initial value           |                       |              |
|  | D.F. (tanδ)  | ≤ 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 1000 hours at 105°C without voltage applied.  |                                       |                       |              |
|  | Capacitance change   | ≤ ±20% of the initial value           |                       |              |
|  | D.F. (tanδ)  | ≤ 200% of the initial specified value |                       |              |
|  | Leakage current  | ≤ 500% of the initial specified value |                       |              |

## ◆DIMENSIONS [mm]

- Terminal Code : E

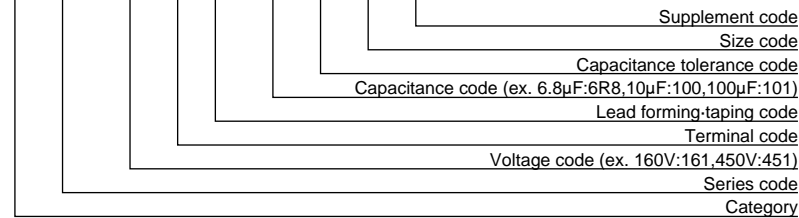


| φD  | 10         | 12.5 | 16  | 18  |
|-----|------------|------|-----|-----|
| φd  | 0.6        | 0.6  | 0.8 | 0.8 |
| F   | 5.0        | 5.0  | 7.5 | 7.5 |
| φD' | φD+0.5max. |      |     |     |
| L'  | L+1.5max.  |      |     |     |

Gas escaped end seal

## ◆PART NUMBERING SYSTEM

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18  
**E K X G**         **E**         **M**         **S**



Please refer to "A guide to global code (radial lead type)"

## ◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

| Capacitance (μF) | Frequency (Hz) |      |      |      |
|------------------|----------------|------|------|------|
|                  | 120            | 1k   | 10k  | 100k |
| 6.8 to 82        | 1.0            | 1.75 | 2.25 | 2.50 |
| 100 to 330       | 1.0            | 1.67 | 1.75 | 2.25 |

### ◆STANDARD RATINGS

| WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Case size<br>φD×L(mm) | tanδ | 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                               | 1175               | EKXG161E□□680MK20S |
|                          | 82          | 12.5 × 20             | 0.20 | 510                               | 1275               | EKXG161E□□820MK20S |
|                          | 100         | 12.5 × 25             | 0.20 | 620                               | 1395               | EKXG161E□□101MK25S |
|                          | 100         | 16 × 20               | 0.20 | 630                               | 1420               | EKXG161E□□101ML20S |
|                          | 150         | 16 × 20               | 0.20 | 770                               | 1735               | EKXG161E□□151ML20S |
|                          | 220         | 16 × 25               | 0.20 | 1020                              | 2295               | EKXG161E□□221ML25S |
| 330                      | 18 × 31.5   | 0.20                  | 1390 | 3130                              | EKXG161E□□331MMN3S |                    |
| 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                               | 1175               | EKXG201E□□680MK20S |
|                          | 82          | 16 × 20               | 0.20 | 550                               | 1375               | EKXG201E□□820ML20S |
|                          | 100         | 16 × 20               | 0.20 | 630                               | 1420               | EKXG201E□□101ML20S |
|                          | 150         | 16 × 25               | 0.20 | 840                               | 1890               | EKXG201E□□151ML25S |
|                          | 220         | 18 × 25               | 0.20 | 1050                              | 2365               | EKXG201E□□221MM25S |
|                          | 330         | 18 × 35.5             | 0.20 | 1430                              | 3220               | EKXG201E□□331MMP1S |
| 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                               | 1300               | EKXG251E□□680ML20S |
|                          | 82          | 16 × 20               | 0.20 | 550                               | 1375               | EKXG251E□□820ML20S |
|                          | 100         | 16 × 25               | 0.20 | 680                               | 1530               | EKXG251E□□101ML25S |
|                          | 150         | 18 × 25               | 0.20 | 860                               | 1935               | EKXG251E□□151MM25S |
|                          | 220         | 18 × 31.5             | 0.20 | 1130                              | 2545               | 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                               | 1075               | EKXG351E□□470ML20S |
|                          | 68          | 16 × 25               | 0.24 | 560                               | 1400               | EKXG351E□□680ML25S |
|                          | 68          | 18 × 20               | 0.24 | 550                               | 1375               | EKXG351E□□680MM20S |
|                          | 82          | 18 × 25               | 0.24 | 610                               | 1525               | EKXG351E□□820MM25S |
|                          | 100         | 18 × 25               | 0.24 | 700                               | 1575               | EKXG351E□□101MM25S |
|                          | 120         | 18 × 31.5             | 0.24 | 830                               | 1865               | EKXG351E□□121MMN3S |
| 150                      | 18 × 35.5   | 0.24                  | 960  | 2160                              | EKXG351E□□151MMP1S |                    |
| 400                      | 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                               | 1175               | EKXG401E□□470ML25S |
|                          | 47          | 18 × 20               | 0.24 | 450                               | 1125               | EKXG401E□□470MM20S |
|                          | 68          | 18 × 25               | 0.24 | 585                               | 1465               | EKXG401E□□680MM25S |
|                          | 82          | 18 × 25               | 0.24 | 610                               | 1525               | EKXG401E□□820MM25S |
|                          | 100         | 18 × 31.5             | 0.24 | 765                               | 1720               | EKXG401E□□101MMN3S |
| 120                      | 18 × 35.5   | 0.24                  | 865  | 1945                              | EKXG401E□□121MMP1S |                    |
| 150                      | 18 × 40     | 0.24                  | 985  | 2215                              | EKXG401E□□151MM40S |                    |
| 450                      | 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 |
|                          | 33          | 16 × 25               | 0.24 | 390                               | 975                | EKXG451E□□330ML25S |
|                          | 33          | 18 × 20               | 0.24 | 380                               | 950                | EKXG451E□□330MM20S |
|                          | 47          | 18 × 25               | 0.24 | 480                               | 1200               | EKXG451E□□470MM25S |
|                          | 68          | 18 × 31.5             | 0.24 | 630                               | 1575               | EKXG451E□□680MMN3S |
|                          | 82          | 18 × 35.5             | 0.24 | 715                               | 1785               | EKXG451E□□820MMP1S |
| 100                      | 18 × 40     | 0.24                  | 800  | 1800                              | EKXG451E□□101MM40S |                    |

□□ : Lead forming / Taping code