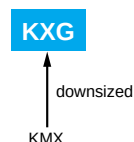


# KXG Series

- 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

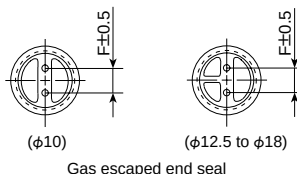
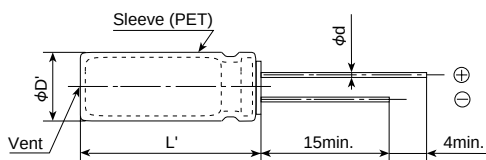


## SPECIFICATIONS

| Items                                                  | Characteristics                                                                                                                                                                                              |                                      |                 |                 |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------|-----------------|
| Category                                               | —40 to +105℃ (160 to 400V <sub>dc</sub> ) —25 to+105℃ (450V <sub>dc</sub> )                                                                                                                                  |                                      |                 |                 |
| Temperature Range                                      |                                                                                                                                                                                                              |                                      |                 |                 |
| Rated Voltage Range                                    | 160 to 450V <sub>dc</sub>                                                                                                                                                                                    |                                      |                 |                 |
| Capacitance Tolerance                                  | ±20% (M)                                                                                                                                                                                                     |                                      |                 | (at 20℃, 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℃)        |
|                                                        |                                                                                                                                                                                                              |                                      |                 |                 |
| Dissipation Factor (tanδ)                              | Rated voltage (V <sub>dc</sub> )                                                                                                                                                                             | 160 to 250V                          | 350 & 400V      | 450V            |
|                                                        | tanδ (Max.)                                                                                                                                                                                                  | 0.20                                 | 0.24            | 0.24            |
| Low Temperature Characteristics (Max. Impedance Ratio) |                                                                                                                                                                                                              |                                      |                 | (at 20℃, 120Hz) |
|                                                        | Rated voltage (V <sub>dc</sub> )                                                                                                                                                                             | 160 to 250V                          | 350 & 400V      | 450V            |
|                                                        | Z(−25℃)/Z(+20℃)                                                                                                                                                                                              | 3                                    | 5               | 6               |
|                                                        | Z(−40℃)/Z(+20℃)                                                                                                                                                                                              | 6                                    | 6               | —               |
| Endurance                                              |                                                                                                                                                                                                              |                                      |                 |                 |
|                                                        | The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for 10000 hours (8000 hours for ϕ10) at 105℃. |                                      |                 |                 |
|                                                        | Capacitance change                                                                                                                                                                                           | ≤±20% of the initial value           |                 |                 |
|                                                        | D.F. (tanδ)                                                                                                                                                                                                  | ≤200% of the initial specified value |                 |                 |
| Shelf Life                                             | Leakage current                                                                                                                                                                                              | ≤The initial specified value         |                 |                 |
|                                                        |                                                                                                                                                                                                              |                                      |                 |                 |
|                                                        | The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours at 105℃ 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 |                 |                 |
|                                                        |                                                                                                                                                                                                              |                                      |                 |                 |

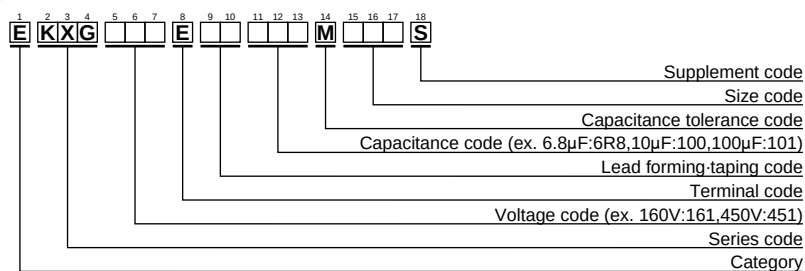
## DIMENSIONS [mm]

- 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.  |      |     |     |

## PART NUMBERING SYSTEM



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 |
| 200                      | 330         | 18 × 31.5             | 0.20 | 1390                              | 3130   | EKXG161E□□331MMN3S |
|                          | 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 |
| 250                      | 330         | 18 × 35.5             | 0.20 | 1430                              | 3220   | EKXG201E□□331MMP1S |
|                          | 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 |
| 400                      | 150         | 18 × 35.5             | 0.24 | 960                               | 2160   | 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                               | 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 |
| 450                      | 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 |
|                          | 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 |
| 450                      | 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