

GXF Series

- Downsizing and high-ripple current version of GXE series
- For automobile modules and networking equipment and other high temperature applications
- Endurance with ripple current : 3,000 hours at 125°C
- Solvent resistant type except 160 to 400V_{dc}
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.



SPECIFICATIONS

| Items | Characteristics | | | | | | | | |
|--|---|---------------------------------------|------------|------|---------------------------|---------------------------------------|------------|--|--------------|
| Category | -40 to +125°C | | | | | | | | |
| Temperature Range | | | | | | | | | |
| Rated Voltage Range | 25 to 400V _{dc} | | | | | | | | |
| Capacitance Tolerance | ±20%(M) (20°C, 120Hz) | | | | | | | | |
| Leakage Current | 25 to 100V _{dc} | | | | 160 to 400V _{dc} | | | | |
| | I=0.03CV or 4 µA, whichever is greater. | | | | | | | | |
| | | | CV ≤ 1,000 | | I=0.1CV+40 | | CV > 1,000 | | I=0.04CV+100 |
| | | | | | | | | Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 1 minute) | |
| Dissipation Factor (tan δ) | Rated voltage (V _{dc}) | 25V | 35V | 50V | 63V | 80V | 100V | 160 to 250V | 350 to 400V |
| | tan δ (Max.) | 0.14 | 0.12 | 0.10 | 0.10 | 0.08 | 0.08 | 0.15 | 0.20 |
| | When nominal capacitance exceeds 1,000 µF, add 0.02 to the value above for each 1,000 µF increase. (at 20°C, 120Hz) | | | | | | | | |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V _{dc}) | 25V | 35V | 50V | 63V | 80V | 100V | 160 to 250V | 350 to 400V |
| | Z(-25°C)/Z(+20°C) | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 6 |
| | Z(-40°C)/Z(+20°C) | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 12 |
| | | | | | | | | (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 the 3,000 hours at 125°C. | | | | | | | | |
| | Rated Voltage | 25 to 100V _{dc} | | | | 160 to 400V _{dc} | | | |
| | Capacitance change | ≤ ±30% of the initial value | | | | ≤ ±20% of the initial value | | | |
| | D.F. (tan δ) | ≤ 300% of the initial specified value | | | | ≤ 200% of the initial specified value | | | |
| | Leakage current | ≤ The initial specified value | | | | ≤ 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 (500hours for 160 to 400V _{dc}) at 125°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. | | | | | | | | |
| | Rated Voltage | 25 to 100V _{dc} | | | | 160 to 400V _{dc} | | | |
| | Capacitance change | ≤ ±30% of the initial value | | | | ≤ ±20% of the initial value | | | |
| | D.F. (tan δ) | ≤ 300% of the initial specified value | | | | ≤ 200% of the initial specified value | | | |
| | Leakage current | ≤ The initial specified value | | | | ≤ 500% of the initial specified value | | | |

DIMENSIONS [mm]

- Terminal Code : E



Gas escape end seal

| ΦD | 10 | 12.5 | 14.5 | 16 | 18 |
|-----|------------|------|------|-----|-----|
| Φd | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 |
| F | 5.0 | 5.0 | 7.5 | 7.5 | 7.5 |
| ΦD' | ΦD+0.5max. | | | | |
| L' | L+1.5max. | | | | |

PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

□□ is not solvent resistant.

| VV (V _{dc}) | Cap (μF) | Case size φDxL(mm) | ESR (Ωmax./100kHz) | | Rated ripple current (mA _{rms} /125°C, 100kHz) | Part No. | VV (V _{dc}) | Cap (μF) | Case size φDxL(mm) | ESR (Ωmax./100kHz) | | Rated ripple current (mA _{rms} /125°C, 100kHz) | Part No. |
|-----------------------|----------|--------------------|--------------------|-------|---|--------------------|-----------------------|----------|--------------------|--------------------|--------------------|---|--------------------|
| | | | 20°C | -40°C | | | | | | 20°C | -40°C | | |
| 100 | 330 | 16×25 | 0.057 | 0.39 | 2,190 | EGXF101E□□331ML25S | 250 | 39 | 10×30 | — | — | 1,410 | EGXF251E□□390MJ30S |
| | 330 | 18×20 | 0.069 | 0.39 | 1,690 | EGXF101E□□331MM20S | | 47 | 10×35 | — | — | 1,600 | EGXF251E□□470MJ35S |
| | 360 | 14.5×30 | 0.050 | 0.40 | 2,620 | EGXF101E□□361MU30S | | 51 | 12.5×25 | — | — | 1,510 | EGXF251E□□510MK25S |
| | 390 | 12.5×40 | 0.044 | 0.33 | 2,970 | EGXF101E□□391MK40S | | 51 | 14.5×20 | — | — | 1,340 | EGXF251E□□510MU20S |
| | 390 | 14.5×35 | 0.044 | 0.33 | 2,850 | EGXF101E□□391MU35S | | 56 | 10×40 | — | — | 1,790 | EGXF251E□□560MJ40S |
| | 390 | 16×30 | 0.044 | 0.33 | 2,770 | EGXF101E□□391ML30S | | 62 | 16×20 | — | — | 1,500 | EGXF251E□□620ML20S |
| | 430 | 18×25 | 0.054 | 0.32 | 2,310 | EGXF101E□□431MM25S | | 68 | 12.5×30 | — | — | 1,770 | EGXF251E□□680MK30S |
| | 510 | 14.5×40 | 0.038 | 0.26 | 3,230 | EGXF101E□□511MU40S | | 68 | 14.5×25 | — | — | 1,610 | EGXF251E□□680MU25S |
| | 510 | 16×35 | 0.037 | 0.26 | 3,010 | EGXF101E□□511ML35S | | 82 | 12.5×35 | — | — | 1,970 | EGXF251E□□820MK35S |
| | 560 | 18×30 | 0.043 | 0.26 | 2,830 | EGXF101E□□561MM30S | | 82 | 18×20 | — | — | 1,730 | EGXF251E□□820MM20S |
| | 620 | 16×40 | 0.032 | 0.21 | 3,320 | EGXF101E□□621ML40S | | 91 | 14.5×30 | — | — | 1,880 | EGXF251E□□910MU30S |
| | 680 | 18×35 | 0.034 | 0.19 | 3,210 | EGXF101E□□681MM35S | | 91 | 16×25 | — | — | 1,850 | EGXF251E□□910ML25S |
| 820 | 18×40 | 0.029 | 0.16 | 3,410 | EGXF101E□□821MM40S | 100 | 12.5×40 | — | — | 2,150 | EGXF251E□□101MK40S | | |
| 160 | 51 | 10×20 | — | — | 900 | EGXF161E□□510MJ20S | 100 | 14.5×35 | — | — | 2,030 | EGXF251E□□101MU35S | |
| | 62 | 10×25 | — | — | 1,200 | EGXF161E□□620MJ25S | 120 | 18×25 | — | — | 2,050 | EGXF251E□□121MM25S | |
| | 75 | 12.5×20 | — | — | 1,220 | EGXF161E□□750MK20S | 130 | 14.5×40 | — | — | 2,250 | EGXF251E□□131MU40S | |
| | 82 | 10×30 | — | — | 1,410 | EGXF161E□□820MJ30S | 16 | 10×20 | — | — | 460 | EGXF351E□□160MJ20S | |
| | 100 | 10×35 | — | — | 1,600 | EGXF161E□□101MJ35S | 20 | 10×25 | — | — | 610 | EGXF351E□□200MJ25S | |
| | 100 | 14.5×20 | — | — | 1,340 | EGXF161E□□101MU20S | 24 | 12.5×20 | — | — | 680 | EGXF351E□□240MK20S | |
| | 110 | 12.5×25 | — | — | 1,510 | EGXF161E□□111MK25S | 27 | 10×30 | — | — | 720 | EGXF351E□□270MJ30S | |
| | 120 | 10×40 | — | — | 1,790 | EGXF161E□□121MJ40S | 33 | 10×35 | — | — | 820 | EGXF351E□□330MJ35S | |
| | 130 | 16×20 | — | — | 1,500 | EGXF161E□□131ML20S | 33 | 14.5×20 | — | — | 870 | EGXF351E□□330MU20S | |
| | 150 | 12.5×30 | — | — | 1,770 | EGXF161E□□151MK30S | 36 | 10×40 | — | — | 940 | EGXF351E□□360MJ40S | |
| | 150 | 14.5×25 | — | — | 1,610 | EGXF161E□□151MU25S | 36 | 12.5×25 | — | — | 980 | EGXF351E□□360MK25S | |
| | 180 | 12.5×35 | — | — | 1,970 | EGXF161E□□181MK35S | 43 | 16×20 | — | — | 970 | EGXF351E□□430ML20S | |
| | 180 | 14.5×30 | — | — | 1,880 | EGXF161E□□181MU30S | 47 | 12.5×30 | — | — | 1,210 | EGXF351E□□470MK30S | |
| | 180 | 18×20 | — | — | 1,730 | EGXF161E□□181MM20S | 47 | 14.5×25 | — | — | 1,210 | EGXF351E□□470MU25S | |
| | 200 | 12.5×40 | — | — | 2,150 | EGXF161E□□201MK40S | 56 | 12.5×35 | — | — | 1,330 | EGXF351E□□560MK35S | |
| | 200 | 16×25 | — | — | 1,850 | EGXF161E□□201ML25S | 56 | 16×25 | — | — | 1,130 | EGXF351E□□560ML25S | |
| 220 | 14.5×35 | — | — | 2,030 | EGXF161E□□221MU35S | 56 | 18×20 | — | — | 1,060 | EGXF351E□□560MM20S | | |
| 240 | 18×25 | — | — | 2,050 | EGXF161E□□241MM25S | 62 | 14.5×30 | — | — | 1,410 | EGXF351E□□620MU30S | | |
| 270 | 14.5×40 | — | — | 2,250 | EGXF161E□□271MU40S | 68 | 12.5×40 | — | — | 1,450 | EGXF351E□□680MK40S | | |
| 200 | 36 | 10×20 | — | — | 900 | EGXF201E□□360MJ20S | 68 | 14.5×35 | — | — | 1,590 | EGXF351E□□680MU35S | |
| | 43 | 10×25 | — | — | 1,200 | EGXF201E□□430MJ25S | 75 | 18×25 | — | — | 1,200 | EGXF351E□□750MM25S | |
| | 56 | 12.5×20 | — | — | 1,220 | EGXF201E□□560MK20S | 91 | 14.5×40 | — | — | 1,820 | EGXF351E□□910MU40S | |
| | 62 | 10×30 | — | — | 1,410 | EGXF201E□□620MJ30S | 12 | 10×20 | — | — | 460 | EGXF401E□□120MJ20S | |
| | 75 | 10×35 | — | — | 1,600 | EGXF201E□□750MJ35S | 16 | 10×25 | — | — | 610 | EGXF401E□□160MJ25S | |
| | 75 | 14.5×20 | — | — | 1,340 | EGXF201E□□750MU20S | 20 | 10×30 | — | — | 720 | EGXF401E□□200MJ30S | |
| | 82 | 10×40 | — | — | 1,790 | EGXF201E□□820MJ40S | 20 | 12.5×20 | — | — | 680 | EGXF401E□□200MK20S | |
| | 82 | 12.5×25 | — | — | 1,510 | EGXF201E□□820MK25S | 24 | 10×35 | — | — | 820 | EGXF401E□□240MJ35S | |
| | 100 | 12.5×30 | — | — | 1,770 | EGXF201E□□101MK30S | 24 | 14.5×20 | — | — | 870 | EGXF401E□□240MU20S | |
| | 100 | 16×20 | — | — | 1,500 | EGXF201E□□101ML20S | 27 | 12.5×25 | — | — | 980 | EGXF401E□□270MK25S | |
| | 110 | 14.5×25 | — | — | 1,610 | EGXF201E□□111MU25S | 30 | 10×40 | — | — | 940 | EGXF401E□□300MJ40S | |
| | 130 | 12.5×35 | — | — | 1,970 | EGXF201E□□131MK35S | 33 | 16×20 | — | — | 970 | EGXF401E□□330ML20S | |
| | 130 | 14.5×30 | — | — | 1,880 | EGXF201E□□131MU30S | 36 | 12.5×30 | — | — | 1,210 | EGXF401E□□360MK30S | |
| | 130 | 18×20 | — | — | 1,730 | EGXF201E□□131MM20S | 36 | 14.5×25 | — | — | 1,210 | EGXF401E□□360MU25S | |
| | 150 | 12.5×40 | — | — | 2,150 | EGXF201E□□151MK40S | 43 | 12.5×35 | — | — | 1,330 | EGXF401E□□430MK35S | |
| | 150 | 16×25 | — | — | 1,850 | EGXF201E□□151ML25S | 43 | 18×20 | — | — | 1,060 | EGXF401E□□430MM20S | |
| 160 | 14.5×35 | — | — | 2,030 | EGXF201E□□161MU35S | 47 | 14.5×30 | — | — | 1,410 | EGXF401E□□470MU30S | | |
| 180 | 18×25 | — | — | 2,050 | EGXF201E□□181MM25S | 47 | 16×25 | — | — | 1,130 | EGXF401E□□470ML25S | | |
| 200 | 14.5×40 | — | — | 2,250 | EGXF201E□□201MU40S | 51 | 12.5×40 | — | — | 1,450 | EGXF401E□□510MK40S | | |
| 250 | 24 | 10×20 | — | — | 900 | EGXF251E□□240MJ20S | 56 | 14.5×35 | — | — | 1,590 | EGXF401E□□560MU35S | |
| | 30 | 10×25 | — | — | 1,200 | EGXF251E□□300MJ25S | 62 | 18×25 | — | — | 1,200 | EGXF401E□□620MM25S | |
| | 36 | 12.5×20 | — | — | 1,220 | EGXF251E□□360MK20S | 68 | 14.5×40 | — | — | 1,820 | EGXF401E□□680MU40S | |

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

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

(25 to 100V_{dc})

| Capacitance(μF) | Frequency(Hz) | 120 | 1k | 10k | 100k |
|-----------------|---------------|------|------|------|------|
| 130 to 240 | | 0.40 | 0.82 | 0.93 | 1.00 |
| 270 to 560 | | 0.50 | 0.85 | 0.94 | 1.00 |
| 620 to 2,000 | | 0.60 | 0.87 | 0.95 | 1.00 |
| 2,200 to 4,300 | | 0.75 | 0.90 | 0.95 | 1.00 |
| 4,700 to 11,000 | | 0.85 | 0.95 | 0.98 | 1.00 |

(160 to 400V_{dc})

| Capacitance(μF) | Frequency(Hz) | 50 | 120 | 300 | 1k | 10k | 100k |
|-----------------|---------------|------|------|------|------|------|------|
| 12 to 33 | | 0.15 | 0.30 | 0.45 | 0.65 | 0.95 | 1.00 |
| 36 to 270 | | 0.25 | 0.35 | 0.50 | 0.70 | 0.96 | 1.00 |

Please contact us for lifetime estimation.