

# GQB Series

- Endurance with ripple current : 1,000 hours at 150°C
- For automobile transmission, electric water pump and other high temperature applications.
- Rated voltage range : 25 & 35V, Nominal capacitance range : 560 to 3,600μF
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

Higher temperature  
Higher ripple current → **GQB**

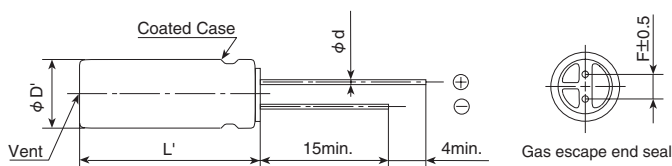


## SPECIFICATIONS

| Items  | Characteristics   |                                      |      |
|--|---|--------------------------------------|------|
| Category   | -40 to +150°C   |                                      |      |
| Temperature Range                                      | -40 to +150°C   |                                      |      |
| Rated Voltage Range                                    | 25, 35V <sub>dc</sub>   |                                      |      |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)   |                                      |      |
| Leakage Current  | I=0.03CV or 4μA, whichever is greater.<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C, 1 minute)   |                                      |      |
| Dissipation Factor (tan δ)                             | Rated voltage (V <sub>dc</sub> )  | 25V                                  | 35V  |
|  | tan δ (Max.)  | 0.14                                 | 0.12 |
|  | When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)   |                                      |      |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )  | 25V                                  | 35V  |
|  | Z(-25°C)/Z(+20°C)   | 2                                    | 2    |
|  | Z(-40°C)/Z(+20°C)   | 4                                    | 4    |
|  | (at 120Hz)  |                                      |      |
| Endurance 1  | 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 1,000 hours at 150°C.                                       |                                      |      |
|  | Capacitance change  | ≤ ±30% of the initial value          |      |
|  | D.F. (tan δ)  | ≤300% of the initial specified value |      |
|  | Leakage current   | ≤The initial specified value         |      |
| Endurance 2  | 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 2,000 hours at 125°C.                                       |                                      |      |
|  | Capacitance change  | ≤ ±30% of the initial value          |      |
|  | D.F. (tan δ)  | ≤300% 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 500 hours at 150°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  | ≤ ±30% of the initial value          |      |
|  | D.F. (tan δ)  | ≤300% of the initial specified value |      |
|  | Leakage current   | ≤The initial specified value         |      |

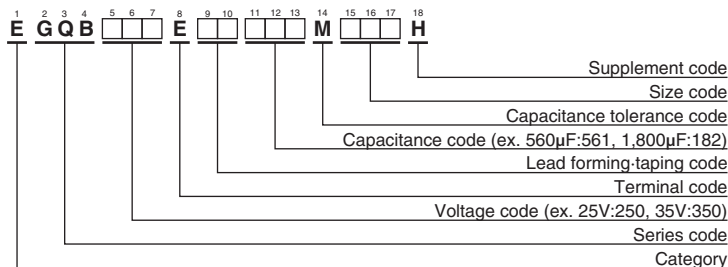
## DIMENSIONS [mm]

- Terminal Code : E



| φD  | 12.5                                     | 16  | 18  |
|-----|--|-----|-----|
| φd  | 0.6                                      | 0.8 | 0.8 |
| F   | 5.0                                      | 7.5 | 7.5 |
| φD' | φD±0.5                                   |     |     |
| L'  | L <sup>+</sup> 1.5<br>L <sup>-</sup> 1.0 |     |     |

## PART NUMBERING SYSTEM



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

**GQB**Series

◆STANDARD RATINGS

| WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Case size<br>φ D×L(mm) | tan δ | ESR<br>(Ω max./100kHz) |       | Rated ripple current<br>(mA <sub>rms</sub> /100kHz) |       | Part No.           |
|--------------------------|-------------|------------------------|-------|------------------------|-------|---|-------|--------------------|
|                          |             |                        |       | 20°C                   | -40°C | 150°C   | 125°C |                    |
| 25                       | 1,100       | 12.5 × 20              | 0.14  | 0.12                   | 1.4   | 1,100   | 2,620 | EGQB250E□□112MK20H |
|                          | 1,600       | 12.5 × 25              | 0.14  | 0.080                  | 1.0   | 1,300   | 2,910 | EGQB250E□□162MK25H |
|                          | 1,800       | 16 × 20                | 0.14  | 0.070                  | 1.0   | 1,460   | 3,590 | EGQB250E□□182ML20H |
|                          | 2,400       | 18 × 20                | 0.16  | 0.058                  | 0.90  | 1,560   | 3,830 | EGQB250E□□242MM20H |
|                          | 2,700       | 16 × 25                | 0.16  | 0.050                  | 0.80  | 1,720   | 4,560 | EGQB250E□□272ML25H |
|                          | 3,600       | 18 × 25                | 0.18  | 0.042                  | 0.70  | 1,800   | 4,800 | EGQB250E□□362MM25H |
| 35                       | 560         | 12.5 × 20              | 0.12  | 0.15                   | 4.5   | 1,000   | 2,230 | EGQB350E□□561MK20H |
|                          | 750         | 12.5 × 25              | 0.12  | 0.12                   | 3.4   | 1,200   | 2,680 | EGQB350E□□751MK25H |
|                          | 910         | 16 × 20                | 0.12  | 0.10                   | 3.0   | 1,260   | 3,110 | EGQB350E□□911ML20H |
|                          | 1,200       | 18 × 20                | 0.12  | 0.084                  | 2.0   | 1,320   | 3,250 | EGQB350E□□122MM20H |
|                          | 1,400       | 16 × 25                | 0.12  | 0.067                  | 2.0   | 1,600   | 4,060 | EGQB350E□□142ML25H |
|                          | 1,800       | 18 × 25                | 0.12  | 0.058                  | 1.4   | 1,680   | 4,500 | EGQB350E□□182MM25H |

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

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

| Capacitance(μF) \ Frequency(Hz) | 120  | 1k   | 10k  | 100k |
|---------------------------------|------|------|------|------|
| 560                             | 0.50 | 0.85 | 0.94 | 1.00 |
| 750 to 1,800                    | 0.60 | 0.87 | 0.95 | 1.00 |
| 2,400 to 3,600                  | 0.75 | 0.90 | 0.95 | 1.00 |

Please contact us for lifetime estimation.