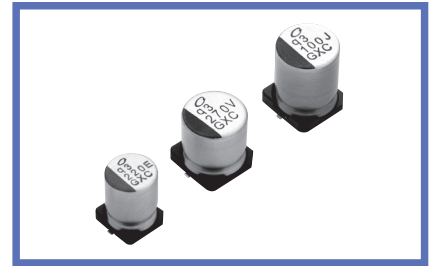


# CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

**GXC** Chip Type, 135°C High Reliability

**NEW**

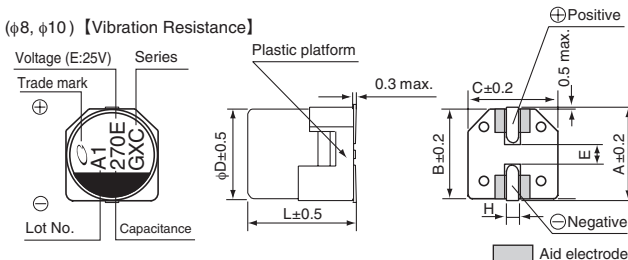
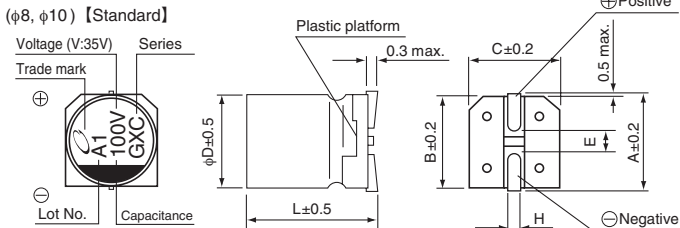
- High Reliability, Low ESR, High ripple current.
- Long life of 4000 hours at 135°C.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



## Specifications

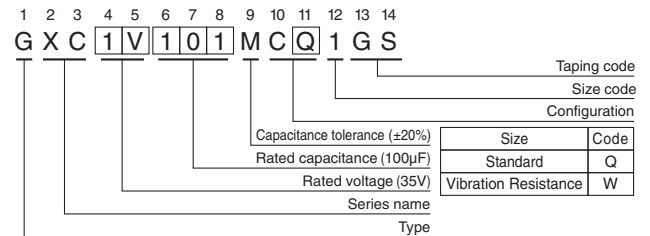
| Item   | Performance Characteristics   |   |
|--|---|---|
| Category Temperature Range                         | -55 to +135°C   |   |
| Rated Voltage Range                                | 25 to 63V   |   |
| Rated Capacitance Range                            | 33 to 470μF   |   |
| Capacitance Tolerance                              | ±20% at 120Hz, 20°C   |   |
| Tangent of loss angle (tan δ)                      | Rated voltage (V)   | 25    35    50    63                              |
|  | tan δ (max.)  | 0.14    0.12    0.10    0.08                      |
| ESR  | Less than or equal to the specified value at 100kHz, 20°C   |   |
| Leakage Current ※                                  | After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV(μA).   |   |
| Temperature Characteristics (Max. Impedance Ratio) | Z(-25°C) / Z(+20°C) ≤ 2 (100kHz)  |   |
|  | Z(-55°C) / Z(+20°C) ≤ 2.5   |   |
| Endurance  | The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 4000 hours at 125°C or 135°C, the peak voltage shall not exceed the rated voltage.    |   |
|  | Capacitance change  | Within ±30% of initial capacitance value          |
|  | tan δ   | 200% or less of the initial specified value       |
|  | ESR   | 200% or less of the initial specified value       |
| Shelf Life   | After storing the capacitors under no load at 135°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above. |   |
|  | Capacitance change  | Within ±30% of the initial capacitance value      |
|  | tan δ   | 200% or less of the initial specified value       |
|  | Leakage current   | Less than or equal to the initial specified value |
| Damp Heat (Steady State)                           | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C, 85% RH.   |   |
|  | Capacitance change  | Within ±30% of the initial capacitance value      |
|  | tan δ   | 200% or less of the initial specified value       |
|  | Leakage current   | Less than or equal to the initial specified value |
| Resistance to Soldering Heat                       | The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.               |   |
|  | Capacitance change  | Within ±10% of the initial capacitance value      |
|  | tan δ   | Less than or equal to the initial specified value |
|  | Leakage current   | Less than or equal to the initial specified value |
| Marking  | Black print on the case top.  |   |

## Dimensions



※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

## Type numbering system (Example : 35V 100μF)



| Voltage | Standard   |            |            | Vibration Resistance |       |         |
|---------|------------|------------|------------|----------------------|-------|---------|
|         | 8x10       | 10x10      | 10x12.5    | 8x10                 | 10x10 | 10x12.5 |
| V       | 25         | 35         | 50         | 63                   |       |         |
| Code    | E          | V          | H          | J                    |       |         |
| A       | 9.0        | 11.0       | 11.0       |                      |       |         |
| B       | 8.3        | 10.3       | 10.3       |                      |       |         |
| C       | 8.3        | 10.3       | 10.3       |                      |       |         |
| E       | 3.1        | 4.5        | 4.5        |                      |       |         |
| L       | 10.3       | 10.3       | 12.5       |                      |       |         |
| H       | 0.8 to 1.1 | 0.8 to 1.1 | 0.8 to 1.1 |                      |       |         |

## Frequency coefficient of rated ripple current

| Frequency   | 120Hz | 1kHz | 10kHz | 100kHz or more |
|-------------|-------|------|-------|----------------|
| Coefficient | 0.15  | 0.40 | 0.75  | 1.00           |

● Dimension table in next page.

Design, specifications are subject to change without notice.

# CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

## GXC

### ■ Dimensions

| Rated Voltage<br>(V)<br>(code) | Rated Capacitance<br>( $\mu$ F) | Case Size<br>$\phi$ D $\times$ L (mm) | tan $\delta$ | Leakage Current<br>( $\mu$ A)<br>(at 20°C after<br>2 minutes) | ESR (m $\Omega$ ) max.<br>(20°C/100kHz) | Rated Ripple<br>(mArms) |                  | Part Number    |
|--------------------------------|---------------------------------|---------------------------------------|--------------|---|---|-------------------------|------------------|----------------|
|                                |                                 |                                       |              |   |   | 125°C/<br>100kHz        | 135°C/<br>100kHz |                |
| 25<br>(1E)                     | 150                             | 8 $\times$ 10                         | 0.14         | 37.5  | 18                                      | 4000                    | 2800             | GXC1E151MC□1GS |
|                                | 220                             | 8 $\times$ 10                         | 0.14         | 55.0  | 18                                      | 4000                    | 2800             | GXC1E221MC□1GS |
|                                | 270                             | 10 $\times$ 10                        | 0.14         | 67.5  | 16                                      | 4500                    | 3300             | GXC1E271MC□1GS |
|                                | 330                             | 10 $\times$ 10                        | 0.14         | 82.5  | 16                                      | 4500                    | 3300             | GXC1E331MC□1GS |
|                                | 470                             | 10 $\times$ 12.5                      | 0.14         | 117.5   | 14                                      | 5200                    | 3600             | GXC1E471MC□1GS |
| 35<br>(1V)                     | 100                             | 8 $\times$ 10                         | 0.12         | 35.0  | 18                                      | 4000                    | 2800             | GXC1V101MC□1GS |
|                                | 150                             | 8 $\times$ 10                         | 0.12         | 52.5  | 18                                      | 4000                    | 2800             | GXC1V151MC□1GS |
|                                | 220                             | 10 $\times$ 10                        | 0.12         | 77.0  | 16                                      | 4500                    | 3300             | GXC1V221MC□1GS |
|                                | 270                             | 10 $\times$ 10                        | 0.12         | 94.5  | 16                                      | 4500                    | 3300             | GXC1V271MC□1GS |
|                                | 330                             | 10 $\times$ 12.5                      | 0.12         | 115.5   | 15                                      | 5000                    | 3500             | GXC1V331MC□1GS |
| 50<br>(1H)                     | 47                              | 8 $\times$ 10                         | 0.10         | 23.5  | 24                                      | 3600                    | 2500             | GXC1H470MC□1GS |
|                                | 68                              | 8 $\times$ 10                         | 0.10         | 34.0  | 24                                      | 3600                    | 2500             | GXC1H680MC□1GS |
|                                | 100                             | 10 $\times$ 10                        | 0.10         | 50.0  | 20                                      | 4300                    | 3000             | GXC1H101MC□1GS |
|                                | 120                             | 10 $\times$ 10                        | 0.10         | 60.0  | 20                                      | 4300                    | 3000             | GXC1H121MC□1GS |
|                                | 150                             | 10 $\times$ 12.5                      | 0.10         | 75.0  | 17                                      | 4600                    | 3300             | GXC1H151MC□1GS |
| 63<br>(1J)                     | 33                              | 8 $\times$ 10                         | 0.08         | 20.8  | 27                                      | 3300                    | 2300             | GXC1J330MC□1GS |
|                                | 47                              | 8 $\times$ 10                         | 0.08         | 29.6  | 27                                      | 3300                    | 2300             | GXC1J470MC□1GS |
|                                | 56                              | 10 $\times$ 10                        | 0.08         | 35.3  | 22                                      | 4000                    | 2800             | GXC1J560MC□1GS |
|                                | 68                              | 10 $\times$ 10                        | 0.08         | 42.8  | 22                                      | 4000                    | 2800             | GXC1J680MC□1GS |
|                                | 82                              | 10 $\times$ 10                        | 0.08         | 51.7  | 22                                      | 4000                    | 2800             | GXC1J820MC□1GS |
|                                | 100                             | 10 $\times$ 12.5                      | 0.08         | 63.0  | 17                                      | 4600                    | 3300             | GXC1J101MC□1GS |

□ : Enter the appropriate configuration code.

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**NICHICON CORPORATION**