

CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

GWC

Chip Type, 135°C High Reliability



For SMD



High Ripple Current



Low Impedance



Long Life

TENTATIVE

- 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.

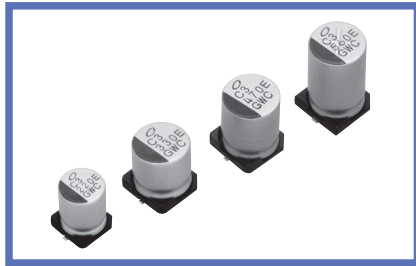
GWC

High Ripple

GXC

High Ripple

GYC

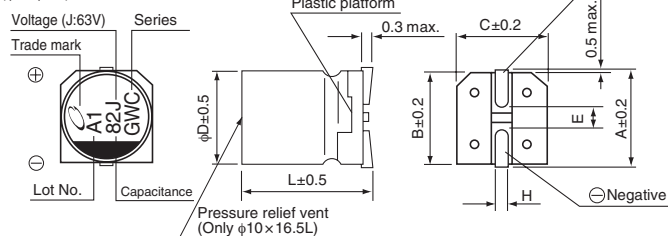


Specifications

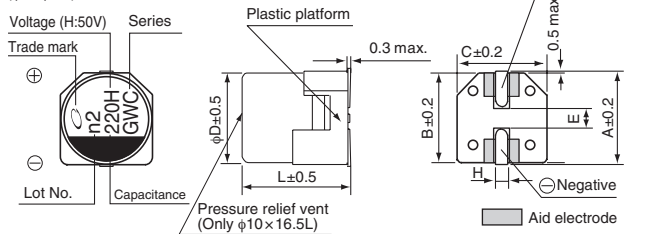
| Item | Performance Characteristics | | | | | |
|--|---|------|------|------|--------------------|---|
| Category Temperature Range | -55 to +135°C | | | | | |
| Rated Voltage Range | 25 to 63V | | | | | |
| Rated Capacitance Range | 47 to 560μF | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | |
| Tangent of loss angle (tan δ) | Rated voltage (V) | 25 | 35 | 50 | 63 | 120Hz 20°C |
| | 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 Z(-55°C) / Z(+20°C) ≤ 2.5 (100kHz) | | | | | |
| 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 |
| | | | | | Leakage current | Less than or equal to 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. | | | | | |
| 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

(φ8, φ10) 【Standard】

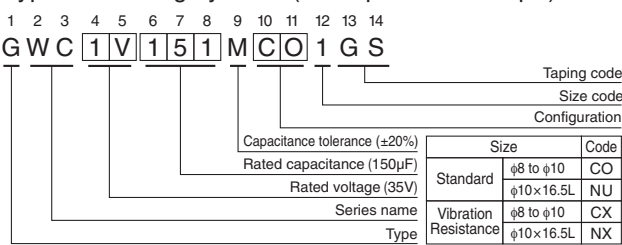


(φ8, φ10) 【Vibration Resistance】



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

Type numbering system (Example : 35V 150μF)



| Standard | | | | Vibration Resistance | | | |
|----------|------------|------------|------------|----------------------|------------|------------|------------|
| | (mm) | | | | (mm) | | |
| 8×10 | 10×10 | 10×12.5 | 10×16.5 | 8×10 | 10×10 | 10×12.5 | 10×16.5 |
| A | 9.0 | 11.0 | 11.0 | A | 9.0 | 11.0 | 11.0 |
| B | 8.3 | 10.3 | 10.3 | B | 8.3 | 10.3 | 10.3 |
| C | 8.3 | 10.3 | 10.3 | C | 8.3 | 10.3 | 10.3 |
| E | 3.1 | 4.5 | 4.5 | E | 3.1 | 4.5 | 4.5 |
| L | 10.3 | 10.3 | 12.5 | L | 10.5 | 10.5 | 12.8 |
| H | 0.8 to 1.1 | 0.8 to 1.1 | 0.8 to 1.1 | H | 1.1 to 1.5 | 1.1 to 1.5 | 1.1 to 1.5 |

| Voltage | | | | |
|---------|----|----|----|----|
| V | 25 | 35 | 50 | 63 |
| Code | E | V | H | J |

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



■Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μ F) | Case Size ϕ D \times L (mm) | tan δ | Leakage Current (μ A) (at 20°C after 2 minutes) | ESR (m Ω) max. (20°C/100kHz) | Rated Ripple (mA _{rms}) | | Part Number |
|--------------------------------|---------------------------------|---------------------------------------|--------------|---|---|--------------------------------------|------------------|----------------|
| | | | | | | 125°C/ 100kHz | 135°C/ 100kHz | |
| 25 (1E) | 220 | 8 \times 10 | 0.14 | 55.0 | 18 | 4300 | 3000 | GWC1E221MC□1GS |
| | 330 | 10 \times 10 | 0.14 | 82.5 | 16 | 5000 | 3500 | GWC1E331MC□1GS |
| | 470 | 10 \times 12.5 | 0.14 | 117.5 | 14 | 5300 | 3700 | GWC1E471MC□1GS |
| | 560 | 10 \times 16.5 | 0.14 | 140.0 | 10 | 6100 | 4300 | GWC1E561MN□1GS |
| 35 (1V) | 150 | 8 \times 10 | 0.12 | 52.5 | 18 | 4300 | 3000 | GWC1V151MC□1GS |
| | 270 | 10 \times 10 | 0.12 | 94.5 | 16 | 5000 | 3500 | GWC1V271MC□1GS |
| | 330 | 10 \times 12.5 | 0.12 | 115.5 | 15 | 5300 | 3600 | GWC1V331MC□1GS |
| | 470 | 10 \times 16.5 | 0.12 | 164.5 | 11 | 5800 | 4100 | GWC1V471MN□1GS |
| 50 (1H) | 68 | 8 \times 10 | 0.10 | 34.0 | 24 | 4000 | 2700 | GWC1H680MC□1GS |
| | 120 | 10 \times 10 | 0.10 | 60.0 | 20 | 4700 | 3000 | GWC1H121MC□1GS |
| | 150 | 10 \times 12.5 | 0.10 | 75.0 | 17 | 5000 | 3300 | GWC1H151MC□1GS |
| | 220 | 10 \times 16.5 | 0.10 | 110.0 | 13 | 5500 | 3800 | GWC1H221MN□1GS |
| 63 (1J) | 47 | 8 \times 10 | 0.08 | 29.6 | 27 | 3700 | 2300 | GWC1J470MC□1GS |
| | 82 | 10 \times 10 | 0.08 | 51.7 | 22 | 4400 | 2800 | GWC1J820MC□1GS |
| | 100 | 10 \times 12.5 | 0.08 | 63.0 | 17 | 5000 | 3300 | GWC1J101MC□1GS |
| | 150 | 10 \times 16.5 | 0.08 | 94.5 | 13 | 5500 | 3800 | GWC1J151MN□1GS |

□ : Enter the appropriate configuration code.

Design, specifications are subject to change without notice.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Nichicon:](#)

| | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| <u>GWC1J820MCX1GS</u> | <u>GWC1E331MCX1GS</u> | <u>GWC1J470MCO1GS</u> | <u>GWC1J101MCX1GS</u> | <u>GWC1E221MCO1GS</u> |
| <u>GWC1E561MNU1GS</u> | <u>GWC1V271MCO1GS</u> | <u>GWC1H121MCX1GS</u> | <u>GWC1E221MCX1GS</u> | <u>GWC1H221MNU1GS</u> |
| <u>GWC1H680MCX1GS</u> | <u>GWC1J151MNU1GS</u> | <u>GWC1H221MNX1GS</u> | <u>GWC1V471MNU1GS</u> | <u>GWC1H151MCX1GS</u> |
| <u>GWC1V331MCX1GS</u> | <u>GWC1E561MNX1GS</u> | <u>GWC1J470MCX1GS</u> | <u>GWC1H151MCO1GS</u> | <u>GWC1J101MCO1GS</u> |
| <u>GWC1V331MCO1GS</u> | <u>GWC1E471MCO1GS</u> | <u>GWC1E331MCO1GS</u> | <u>GWC1V471MNX1GS</u> | <u>GWC1E471MCX1GS</u> |
| <u>GWC1J820MCO1GS</u> | <u>GWC1V271MCX1GS</u> | <u>GWC1V151MCX1GS</u> | <u>GWC1H121MCO1GS</u> | <u>GWC1J151MNX1GS</u> |
| <u>GWC1V151MCO1GS</u> | <u>GWC1H680MCO1GS</u> | | | |