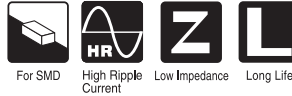


CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS nichicon

GYE Chip Type, 125°C High Reliability



Expanded

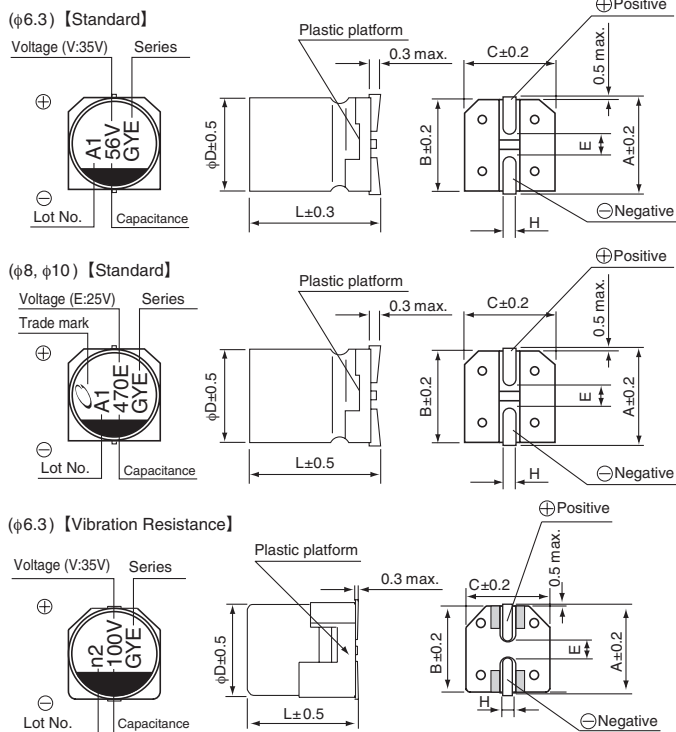
- High Reliability, Low ESR, High ripple current.
- Long life of 4000 hours at 125°C, High Capacitance.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



Specifications

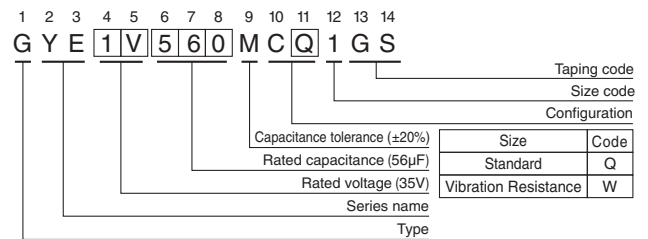
| Item | Performance Characteristics | | |
|---|---|--------------------------------------|---|
| Category Temperature Range | -55 to +125°C | | |
| Rated Voltage Range | 16 to 63V | | |
| Rated Capacitance Range | 56 to 680μF | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | |
| Tangent of loss angle (tan δ) | Rated voltage (V) | 16 25 35 50 63 | |
| | tan δ (max.) | 0.16 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, 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 125°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

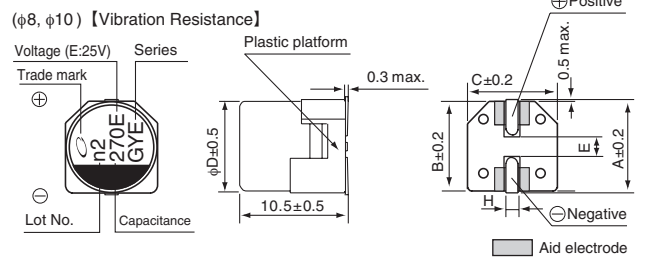


※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

Type numbering system (Example : 35V 56μF)



| Standard | | (mm) | | | | | Voltage | | | | | Vibration Resistance (mm) | | | | | | |
|----------|------------|------------|------------|------------|------------|---------|---------|----|----|----|----|---------------------------|---|------------|------------|------------|------------|---------|
| φD | φD | 6.3x5.8 | 6.3x7.7 | 8x10 | 10x10 | 10x12.5 | V | 16 | 25 | 35 | 50 | 63 | H | φD | 6.3x7.7 | 8x10 | 10x10 | 10x12.5 |
| A | 7.3 | 7.3 | 9.0 | 11.0 | 11.0 | | | | | | | | A | 7.3 | 9.0 | 11.0 | 11.0 | |
| B | 6.6 | 6.6 | 8.3 | 10.3 | 10.3 | | | | | | | | B | 6.6 | 8.3 | 10.3 | 10.3 | |
| C | 6.6 | 6.6 | 8.3 | 10.3 | 10.3 | | | | | | | | C | 6.6 | 8.3 | 10.3 | 10.3 | |
| E | 2.2 | 2.2 | 3.1 | 4.5 | 4.5 | | | | | | | | E | 2.2 | 3.1 | 4.5 | 4.5 | |
| L | 5.8 | 7.7 | 10.3 | 10.3 | 12.5 | | | | | | | | L | 7.7 | 10.5 | 10.5 | 12.8 | |
| H | 0.5 to 0.8 | 0.5 to 0.8 | 0.8 to 1.1 | 0.8 to 1.1 | 0.8 to 1.1 | | | | | | | | H | 0.5 to 0.8 | 1.1 to 1.5 | 1.1 to 1.5 | 1.1 to 1.5 | |



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.

GYE

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20°C after 2 minutes) | ESR (mΩ) max. (20°C/100kHz) | Rated Ripple (mArms) (125°C/100kHz) | Part Number |
|--------------------------|------------------------|---------------------|-------|--|-----------------------------|-------------------------------------|----------------|
| 16 (1C) | 120 | 6.3×5.8 | 0.16 | 19.20 | 50 | 1100 | GYE1C121MC□1GS |
| | 180 | 6.3×7.7 | 0.16 | 28.80 | 30 | 1800 | GYE1C181MC□1GS |
| | 390 | 8×10 | 0.16 | 62.40 | 25 | 2000 | GYE1C391MC□1GS |
| | 680 | 10×10 | 0.16 | 108.80 | 20 | 2800 | GYE1C681MC□1GS |
| 25 (1E) | 68 | 6.3×5.8 | 0.14 | 17.0 | 50 | 1100 | GYE1E680MCQ1GS |
| | 82 | 6.3×5.8 | 0.14 | 20.5 | 50 | 1100 | GYE1E820MCQ1GS |
| | 150 | 6.3×7.7 | 0.14 | 37.5 | 30 | 1700 | GYE1E151MC□1GS |
| | 270 | 8×10 | 0.14 | 67.5 | 27 | 2000 | GYE1E271MC□1GS |
| | 470 | 10×10 | 0.14 | 117.5 | 20 | 2800 | GYE1E471MC□1GS |
| | 560 | 10×12.5 | 0.14 | 140.00 | 16 | 3500 | GYE1E561MC□1GS |
| 35 (1V) | 56 | 6.3×5.8 | 0.12 | 19.6 | 60 | 1100 | GYE1V560MCQ1GS |
| | 100 | 6.3×7.7 | 0.12 | 35.0 | 35 | 1700 | GYE1V101MC□1GS |
| | 180 | 8×10 | 0.12 | 63.0 | 27 | 2000 | GYE1V181MC□1GS |
| | 330 | 10×10 | 0.12 | 115.5 | 20 | 2800 | GYE1V331MC□1GS |
| | 390 | 10×12.5 | 0.12 | 136.50 | 16 | 3500 | GYE1V391MC□1GS |
| 50 (1H) | 82 | 8×10 | 0.10 | 41.00 | 30 | 1700 | GYE1H820MC□1GS |
| | 150 | 10×10 | 0.10 | 75.00 | 28 | 2000 | GYE1H151MC□1GS |
| | 180 | 10×12.5 | 0.10 | 90.00 | 18 | 3000 | GYE1H181MC□1GS |
| 63 (1J) | 56 | 8×10 | 0.08 | 35.28 | 40 | 1700 | GYE1J560MC□1GS |
| | 100 | 10×10 | 0.08 | 63.00 | 30 | 2000 | GYE1J101MC□1GS |
| | 120 | 10×12.5 | 0.08 | 75.60 | 20 | 3000 | GYE1J121MC□1GS |

□ : Enter the appropriate configuration code.

Blue : New product (as of October 2023)

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.