

# CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS **nichicon**

# GYG

Chip Type, 125°C High Reliability



**NEW**

- 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.



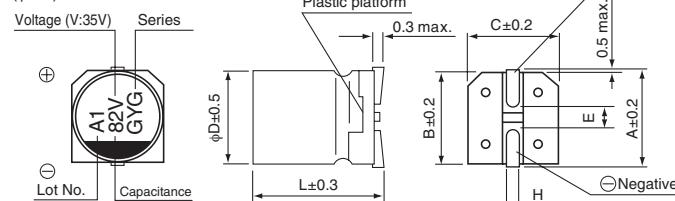
## ■ Specifications

Item	Performance Characteristics						
Category Temperature Range	-55 to +125°C						
Rated Voltage Range	25 to 35V						
Rated Capacitance Range	82 to 680μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Tangent of loss angle (tan δ)	Rated voltage (V)	25	35	120Hz 20°C			
		tan δ (max.)	0.14	0.12			
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.						

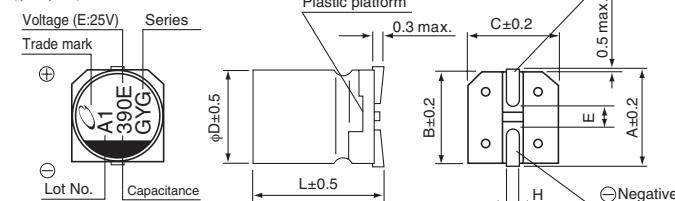
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

## ■ Dimensions

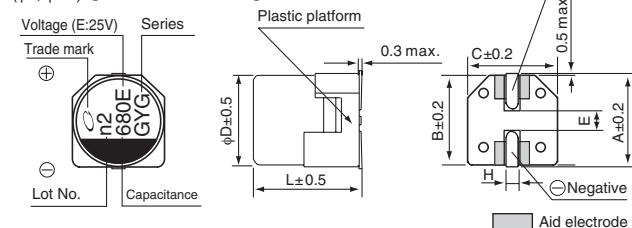
### (φ6.3) [Standard]



### (φ8, φ10) [Standard]



### (φ8, φ10) [Vibration Resistance]



## Type numbering system (Example : 35V 82μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

G Y G 1 V 8 2 0 M C Q 1 G S

Taping code

Size code

Configuration

Capacitance tolerance (±20%)	Size	Code
Rated capacitance (82μF)	Standard	Q
Rated voltage (35V)	Vibration Resistance	W

Series name

Type

### Standard

	6.3x5.8	8x10	10x10
A	7.3	9.0	11.0
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	5.8	10.3	10.3
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

### Vibration Resistance

	8x10	10x10
A	9.0	11.0
B	8.3	10.3
C	8.3	10.3
E	3.1	4.5
L	10.5	10.5
H	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.

CAT.81000

**GYG**

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D×L(mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 2 minutes)	ESR(mΩ)max. (20°C/100kHz)	Rated Ripple (mArms) (125°C/100kHz)	Part Number
25 (1E)	120	6.3×5.8	0.14	30.0	50	1400	GYG1E121MCQ1GS
	390	8×10	0.14	97.5	22	2900	GYG1E391MC□1GS
	680	10×10	0.14	170.0	20	3300	GYG1E681MC□1GS
35 (1V)	82	6.3×5.8	0.12	28.7	55	1400	GYG1V820MCQ1GS
	270	8×10	0.12	94.5	22	2900	GYG1V271MC□1GS
	470	10×10	0.12	164.5	20	3300	GYG1V471MC□1GS

□ : Enter the appropriate configuration code.

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

# Mouser Electronics

Authorized Distributor

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