CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

GYC

Chip Type, 135°C High Reliability

For SMD | High Ripple Current | Low Impedance | Long Life | Anti-Solvent Feature

- High Reliability, Low ESR,High ripple current.
- Long life of 2000 to 4000 hours at 135°C.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

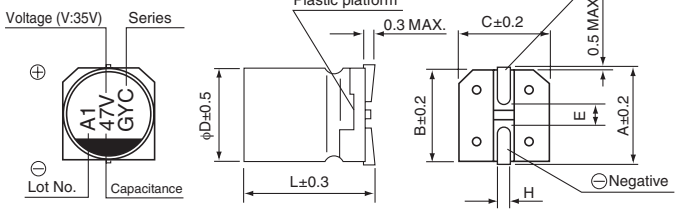
GYD (High Temperature) / GYC / GYA (High Temperature)

■Specifications

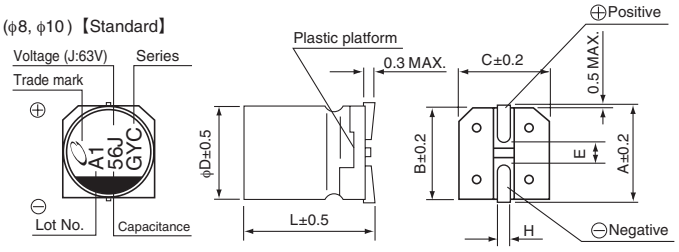
Item	Performance Characteristics
Category Temperature Range	−55 to +135°C
Rated Voltage Range	25 to 63V
Rated Capacitance Range	10 to 330μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Tangent of loss angle (tan δ)	Rated voltage (V): 25 / 35 / 50 / 63 — tan δ (MAX.): 0.14 / 0.12 / 0.10 / 0.08 — 120Hz 20°C
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 (2000 hours for φD = 6.3) 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

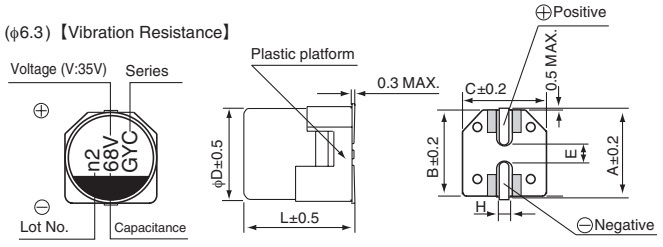
(φ6.3)【Standard】



(φ8, φ10)【Standard】



(φ6.3)【Vibration Resistance】



Type numbering system (Example : 35V 47μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
G	Y	C	1	V	4	7	0	M	C	Q	1	G	S

Taping code
Size code
Configuration
Capacitance tolerance (±20%)
Rated capacitance (47μF)
Rated voltage (35V)
Series name
Type

Size	Code
Standard	Q
Vibration Resistance	W

Standard (mm)

φD×L	6.3×5.8	6.3×7.7	8×10	10×10
A	7.3	7.3	9.0	11.0
B	6.6	6.6	8.3	10.3
C	6.6	6.6	8.3	10.3
E	2.2	2.2	3.1	4.5
L	5.8	7.7	10.3	10.3
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

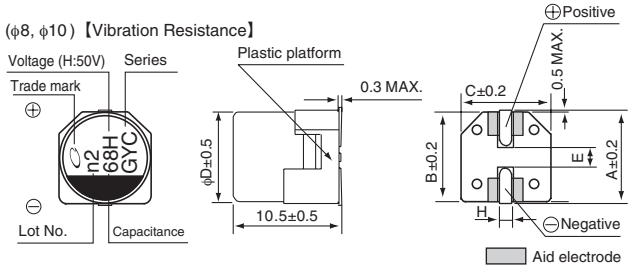
Voltage

V	25	35	50	63
Code	E	V	H	J

Vibration Resistance (mm)

φD×L	6.3×7.7	8×10	10×10
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	7.7	10.5	10.5
H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5

(φ8, φ10)【Vibration Resistance】



● 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.

GYC

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	ESR(mΩ)MAX. (20℃/100kHz)	Rated Ripple (mArms)		Part Number
						125℃/ 100kHz	135℃/ 100kHz	
25 (1E)	56	6.3×5.8	0.14	14	50	1400	900	GYC1E560MCQ1GS
	100	6.3×7.7	0.14	25	35	1900	1400	GYC1E101MC□1GS
	220	8×10	0.14	55	27	2900	1600	GYC1E221MC□1GS
	330	10×10	0.14	82.5	20	3300	2000	GYC1E331MC□1GS
35 (1V)	47	6.3×5.8	0.12	16.45	60	1400	900	GYC1V470MCQ1GS
	68	6.3×7.7	0.12	23.8	40	1900	1400	GYC1V680MC□1GS
	150	8×10	0.12	52.5	27	2900	1600	GYC1V151MC□1GS
	270	10×10	0.12	94.5	20	3300	2000	GYC1V271MC□1GS
50 (1H)	22	6.3×5.8	0.10	11	80	1100	750	GYC1H220MCQ1GS
	33	6.3×7.7	0.10	16.5	45	1600	1100	GYC1H330MC□1GS
	68	8×10	0.10	34	30	2200	1250	GYC1H680MC□1GS
	100	10×10	0.10	50	28	2600	1600	GYC1H101MC□1GS
63 (1J)	10	6.3×5.8	0.08	6.3	120	1000	700	GYC1J100MCQ1GS
	22	6.3×7.7	0.08	13.86	80	1300	900	GYC1J220MC□1GS
	33	8×10	0.08	20.79	40	1900	1100	GYC1J330MC□1GS
	56	10×10	0.08	35.28	30	2300	1400	GYC1J560MC□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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GYC1H680MCQ1GS GYC1H220MCQ1GS GYC1H330MCQ1GS GYC1E560MCQ1GS GYC1E331MCQ1GS GYC1V470MCQ1GS GYC1J560MCQ1GS GYC1J100MCQ1GS GYC1V271MCQ1GS GYC1V151MCQ1GS GYC1V680MCQ1GS GYC1H101MCQ1GS GYC1E221MCQ1GS GYC1J330MCQ1GS GYC1E101MCQ1GS GYC1J220MCQ1GS GYC1E101MCW1GS GYC1E221MCW1GS GYC1E331MCW1GS GYC1H101MCW1GS GYC1H330MCW1GS GYC1H680MCW1GS GYC1J220MCW1GS GYC1J330MCW1GS GYC1J560MCW1GS GYC1V151MCW1GS GYC1V271MCW1GS GYC1V680MCW1GS