CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

GYA

Chip Type, 125°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 4000 hours at 125°C.
- Adapted to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

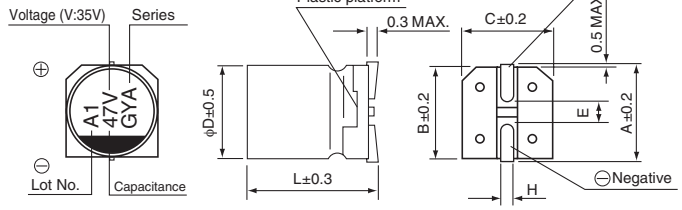
GYC (High Temperature) → GYA

■Specifications

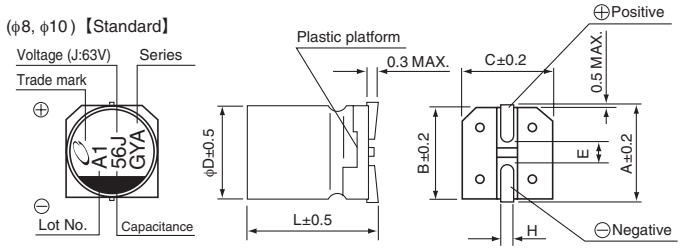
Item	Performance Characteristics
Category Temperature Range	−55 to +125°C
Rated Voltage Range	16 to 63V
Rated Capacitance Range	10 to 470μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Tangent of loss angle (tan δ)	Rated voltage (V): 16 / 25 / 35 / 50 / 63 — tan δ (MAX.): 0.16 / 0.14 / 0.12 / 0.10 / 0.08 — 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 φ6.3 rated at 16V) 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

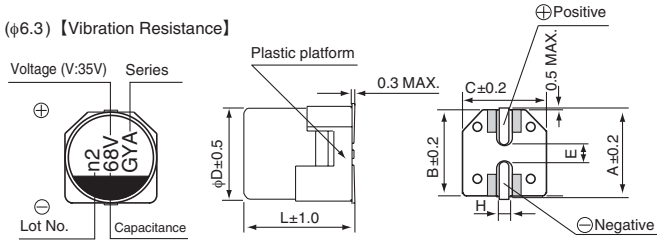
(φ6.3)【Standard】



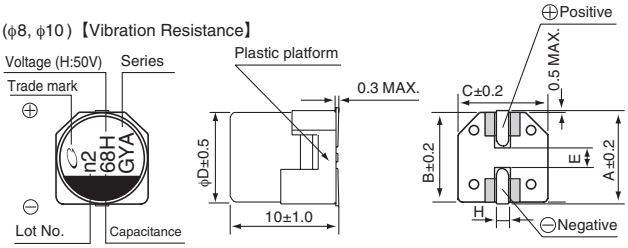
(φ8, φ10)【Standard】



(φ6.3)【Vibration Resistance】



(φ8, φ10)【Vibration Resistance】



Type numbering system (Example : 35V 47μF)

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

- 1 2 3: Type
- 4 5 6 7 8: Series name
- 9 10: Rated voltage (35V)
- 11: Rated capacitance (47μF)
- 12: Capacitance tolerance (±20%)
- 13: Configuration
- 14: Size code
- Taping code

Size	Code
Standard	Q
Vibration Resistance	W

Standard (mm)

φD×L	φ6.3×5.8	φ6.3×7.7	φ8×10	φ10×10
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	16	25	35	50	63
Code	C	E	V	H	J

Vibration Resistance (mm)

φD×L	φ6.3×7.7	φ8×10	φ10×10
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	10
H	0.5 to 0.8	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.

GYA

■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) (125℃/100kHz)	Part Number
16 (1C)	82	6.3×5.8	0.16	13.12	50	1000	GYA1C820MCQ1GS
	150	6.3×7.7	0.16	24	30	1500	GYA1C151MC□1GS
	270	8×10	0.16	43.2	25	1700	GYA1C271MC□1GS
	470	10×10	0.16	75.2	20	2100	GYA1C471MC□1GS
25 (1E)	56	6.3×5.8	0.14	14	50	900	GYA1E560MCQ1GS
	100	6.3×7.7	0.14	25	30	1400	GYA1E101MC□1GS
	220	8×10	0.14	55	27	1600	GYA1E221MC□1GS
	330	10×10	0.14	82.5	20	2000	GYA1E331MC□1GS
35 (1V)	47	6.3×5.8	0.12	16.45	60	900	GYA1V470MCQ1GS
	68	6.3×7.7	0.12	23.8	35	1400	GYA1V680MC□1GS
	150	8×10	0.12	52.5	27	1600	GYA1V151MC□1GS
	270	10×10	0.12	94.5	20	2000	GYA1V271MC□1GS
50 (1H)	22	6.3×5.8	0.10	11	80	750	GYA1H220MCQ1GS
	33	6.3×7.7	0.10	16.5	40	1100	GYA1H330MC□1GS
	68	8×10	0.10	34	30	1250	GYA1H680MC□1GS
	100	10×10	0.10	50	28	1600	GYA1H101MC□1GS
63 (1J)	10	6.3×5.8	0.08	6.3	120	700	GYA1J100MCQ1GS
	22	6.3×7.7	0.08	13.86	80	900	GYA1J220MC□1GS
	33	8×10	0.08	20.79	40	1100	GYA1J330MC□1GS
	56	10×10	0.08	35.28	30	1400	GYA1J560MC□1GS

□ : Enter the appropriate configuration code.

- Taping specifications are given in page 20.
- Recommended land size, soldering by reflow are given in page 16,17.
- Please refer to page 3 for the minimum order quantity.

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