

GYC

Chip Type, 135°C High Reliability



For SMD



High Ripple Current

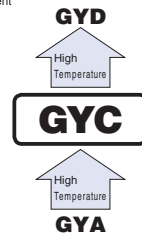


Low Impedance



Long Life

- 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 Qualified. Please contact us for details.

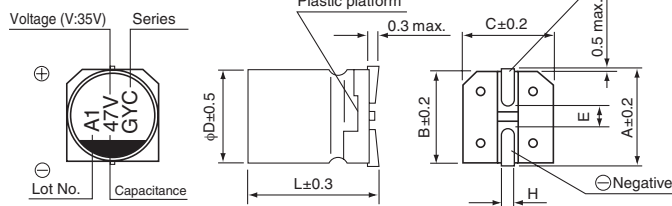


Specifications

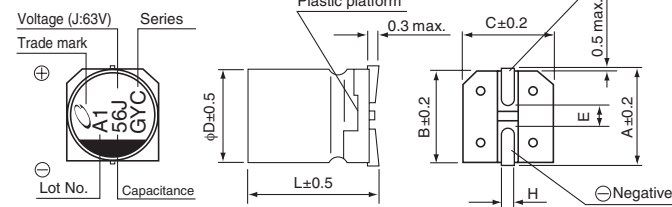
Item	Performance Characteristics														
Category Temperature Range	-55 to +135°C														
Rated Voltage Range	16 to 80V														
Rated Capacitance Range	10 to 560μF														
Capacitance Tolerance	±20% at 120Hz, 20°C														
Tangent of loss angle (tan δ)	Rated voltage (V)	16	25	35	50	63	80	120Hz 20°C							
	tan δ (max.)	0.16	0.14	0.12	0.10	0.08	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). 80V: After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.05 CV(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.					<table><tr><td>Capacitance change</td><td>Within ± 30% of initial capacitance value</td></tr><tr><td>tan δ</td><td>200% or less of the initial specified value</td></tr><tr><td>ESR</td><td>200% or less of the initial specified value</td></tr><tr><td>Leakage current</td><td>Less than or equal to the initial specified value</td></tr></table>		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
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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.					<table><tr><td>Capacitance change</td><td>Within±30% of the initial capacitance value</td></tr><tr><td>tan δ</td><td>200% or less of the initial specified value</td></tr><tr><td>Leakage current</td><td>Less than or equal to the initial specified value</td></tr></table>		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		
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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.					<table><tr><td>Capacitance change</td><td>Within±10% of the initial capacitance value</td></tr><tr><td>tan δ</td><td>Less than or equal to the initial specified value</td></tr><tr><td>Leakage current</td><td>Less than or equal to the initial specified value</td></tr></table>		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		
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

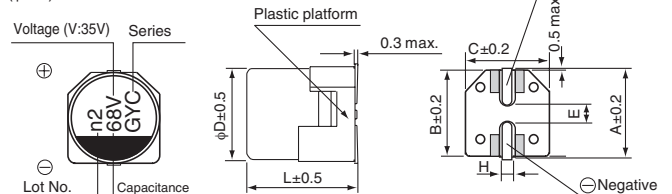
(ϕ6.3) 【Standard】



(ϕ8, ϕ10) 【Standard】

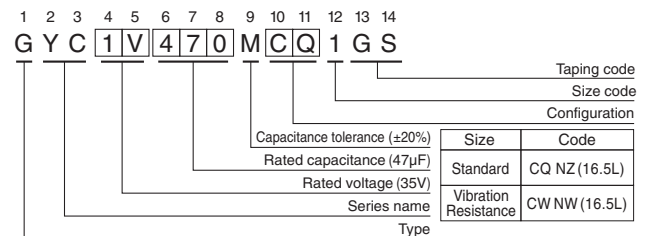


(ϕ6.3) 【Vibration Resistance】



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

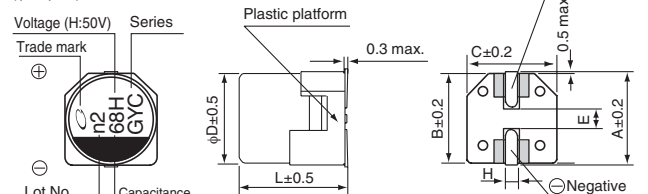
Type numbering system (Example : 35V 47μF)



Standard (mm)										Vibration Resistance (mm)					
Series	1	2	3	4	5	6	7	8	9	Series	1	2	3	4	5
A	6.3	5.8	7.3	9.0	11.0	11.0	11.0	11.0	11.0	A	6.3	5.8	7.3	9.0	11.0
B	6.6	6.6	8.3	10.3	10.3	10.3	10.3	10.3	10.3	B	6.6	6.6	8.3	10.3	10.3
C	6.6	6.6	8.3	10.3	10.3	10.3	10.3	10.3	10.3	C	6.6	6.6	8.3	10.3	10.3
E	2.2	2.2	3.1	4.5	4.5	4.5	4.5	4.5	4.5	E	2.2	2.2	3.1	4.5	4.5
L	5.8	7.7	10.3	10.3	12.5	16.5				L	7.7	10.5	10.5	12.8	16.8
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	1.1 to 1.5				H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5	1.1 to 1.5	1.1 to 1.5

Voltage					Frequency coefficient of rated ripple current			
V	16	25	35	50	Frequency	120Hz	1kHz	10kHz
Code	C	E	V	H	Coefficient	0.15	0.40	0.75
								100kHz or more
								1.00

(ϕ8, ϕ10) 【Vibration Resistance】



● 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°C after 2 minutes)	ESR (mΩ) max. (20°C/100kHz)	Rated Ripple (mArms)		Part Number
						125°C/ 100kHz	135°C/ 100kHz	
16 (1C)	82	6.3×5.8	0.16	13.1	50	1500	950	GYC1C820MC□1GS
	150	6.3×7.7	0.16	24.0	30	2000	1500	GYC1C151MC□1GS
	270	8×10	0.16	43.2	25	3100	1700	GYC1C271MC□1GS
	470	10×10	0.16	75.2	20	3400	2100	GYC1C471MC□1GS
	560	10×12.5	0.16	89.6	15	3600	2400	GYC1C561MC□1GS
25 (1E)	47	6.3×5.8	0.14	11.7	50	1400	900	GYC1E470MC□1GS
	56	6.3×5.8	0.14	14.0	50	1400	900	GYC1E560MC□1GS
	68	6.3×7.7	0.14	17.0	30	1900	1400	GYC1E680MC□1GS
	100	6.3×7.7	0.14	25.0	30	1900	1400	GYC1E101MC□1GS
	150	8×10	0.14	37.5	27	2900	1600	GYC1E151MC□1GS
	220	8×10	0.14	55.0	27	2900	1600	GYC1E221MC□1GS
	270	10×10	0.14	67.5	20	3300	2000	GYC1E271MC□1GS
	330	10×10	0.14	82.5	20	3300	2000	GYC1E331MC□1GS
	470	10×12.5	0.14	117.5	16	3500	2300	GYC1E471MC□1GS
	560	10×16.5	0.14	140.0	12	4800	2900	GYC1E561MN□1GS
35 (1V)	33	6.3×5.8	0.12	11.5	60	1400	900	GYC1V330MC□1GS
	47	6.3×5.8	0.12	16.4	60	1400	900	GYC1V470MC□1GS
	68	6.3×7.7	0.12	23.8	35	1900	1400	GYC1V680MC□1GS
	100	8×10	0.12	35.0	27	2900	1600	GYC1V101MC□1GS
	150	8×10	0.12	52.5	27	2900	1600	GYC1V151MC□1GS
	220	10×10	0.12	77.0	20	3300	2000	GYC1V221MC□1GS
	270	10×10	0.12	94.5	20	3300	2000	GYC1V271MC□1GS
	330	10×12.5	0.12	115.5	16	3500	2300	GYC1V331MC□1GS
	470	10×16.5	0.12	164.5	12	4800	2900	GYC1V471MN□1GS
50 (1H)	22	6.3×5.8	0.10	11.0	80	1100	750	GYC1H220MC□1GS
	33	6.3×7.7	0.10	16.5	40	1600	1100	GYC1H330MC□1GS
	47	8×10	0.10	23.5	30	2200	1250	GYC1H470MC□1GS
	68	8×10	0.10	34.0	30	2200	1250	GYC1H680MC□1GS
	100	10×10	0.10	50.0	28	2600	1600	GYC1H101MC□1GS
	120	10×10	0.10	60.0	28	2600	1600	GYC1H121MC□1GS
	150	10×12.5	0.10	75.0	18	3200	2000	GYC1H151MC□1GS
	220	10×16.5	0.10	110.0	14	4300	2600	GYC1H221MN□1GS
63 (1J)	10	6.3×5.8	0.08	6.3	120	1000	700	GYC1J100MC□1GS
	22	6.3×7.7	0.08	13.8	80	1300	900	GYC1J220MC□1GS
	33	8×10	0.08	20.7	40	1900	1100	GYC1J330MC□1GS
	47	8×10	0.08	29.6	40	1900	1100	GYC1J470MC□1GS
	56	10×10	0.08	35.2	30	2300	1400	GYC1J560MC□1GS
	68	10×10	0.08	42.8	30	2300	1400	GYC1J680MC□1GS
	82	10×10	0.08	51.6	30	2300	1400	GYC1J820MC□1GS
	100	10×12.5	0.08	63.0	20	3000	1900	GYC1J101MC□1GS
80 (1K)	150	10×16.5	0.08	94.5	15	4200	2500	GYC1J151MN□1GS
	22	8×10	0.08	88.0	45	1600	1100	GYC1K220MC□1GS
	33	10×10	0.08	132.0	36	1900	1300	GYC1K330MC□1GS
	47	10×10	0.08	188.0	36	1900	1300	GYC1K470MC□1GS
	56	10×12.5	0.08	224.0	24	2800	1800	GYC1K560MC□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.