



**THE DATASHEET OF
GYA1H220MCQ1GS**

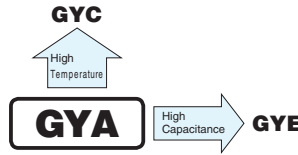


GYA

Chip Type, 125°C High Reliability



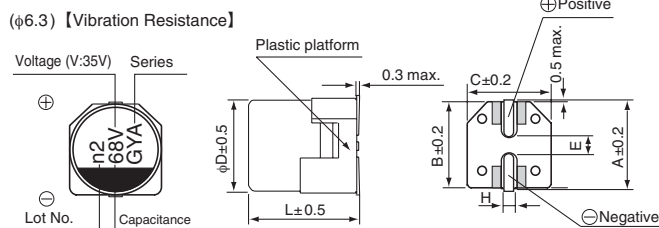
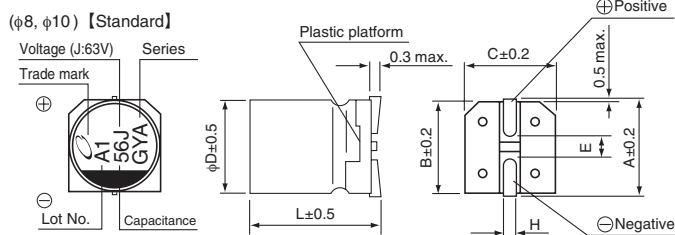
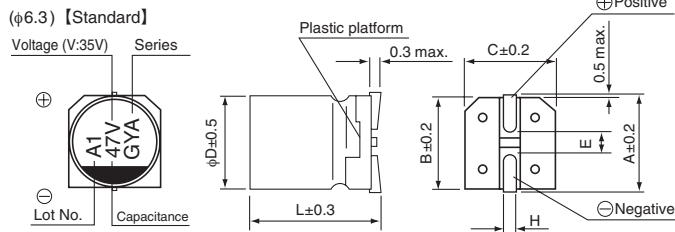
- High Reliability, Low ESR, High ripple current.
- Long life of 4000 hours at 125°C.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



Specifications

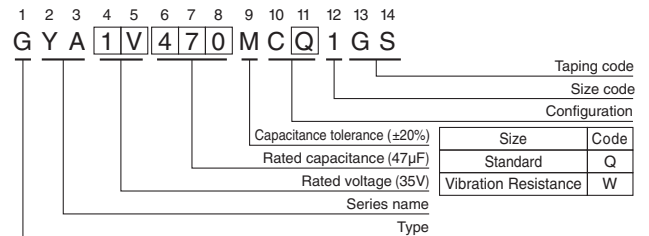
Item	Performance Characteristics	
Category Temperature Range	-55 to +125°C	
Rated Voltage Range	16 to 80V	
Rated Capacitance Range	10 to 470μF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Tangent of loss angle (tan δ)	Rated voltage (V)	16 25 35 50 63 80
	tan δ (max.)	0.16 0.14 0.12 0.10 0.08 0.08
ESR	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 0.05CV(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	tan δ
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.	
	Capacitance change	tan δ
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	tan δ
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	tan δ
Marking	Black print on the case top.	

Dimensions



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

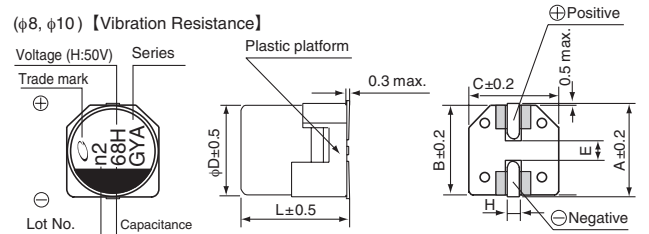
Type numbering system (Example : 35V 47μF)



Standard (mm)					Vibration Resistance (mm)						
A	6.3	7.3	8.0	10.0	11.0	A	6.3	7.7	8.0	10.0	10.5
B	6.6	6.6	8.3	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	C	6.6	6.6	8.3	10.3	10.3
E	2.2	2.2	3.1	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	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

Voltage	Frequency	120Hz	1kHz	10kHz	100kHz or more
V 16 25 35 50 63 80	Frequency	0.15	0.40	0.75	1.00
Code C E V H J K	Coefficient	0.15	0.40	0.75	1.00



● Dimension table in next page.



■ 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)	82	6.3×5.8	0.16	13.12	50	1000	GYA1C820MC□1GS
	150	6.3×7.7	0.16	24.00	30	1500	GYA1C151MC□1GS
	270	8×10	0.16	43.20	25	1700	GYA1C271MC□1GS
	470	10×10	0.16	75.20	20	2100	GYA1C471MC□1GS
25 (1E)	47	6.3×5.8	0.14	11.75	50	900	GYA1E470MC□1GS
	56	6.3×5.8	0.14	14.00	50	900	GYA1E560MC□1GS
	68	6.3×7.7	0.14	17.00	30	1400	GYA1E680MC□1GS
	100	6.3×7.7	0.14	25.00	30	1400	GYA1E101MC□1GS
	150	8×10	0.14	37.50	27	1600	GYA1E151MC□1GS
	220	8×10	0.14	55.00	27	1600	GYA1E221MC□1GS
	270	10×10	0.14	67.50	20	2000	GYA1E271MC□1GS
	330	10×10	0.14	82.50	20	2000	GYA1E331MC□1GS
470	10×12.5	0.14	117.50	16	2300	GYA1E471MC□1GS	
35 (1V)	33	6.3×5.8	0.12	11.55	60	900	GYA1V330MC□1GS
	47	6.3×5.8	0.12	16.45	60	900	GYA1V470MC□1GS
	68	6.3×7.7	0.12	23.80	35	1400	GYA1V680MC□1GS
	100	8×10	0.12	35.00	27	1600	GYA1V101MC□1GS
	150	8×10	0.12	52.50	27	1600	GYA1V151MC□1GS
	220	10×10	0.12	77.00	20	2000	GYA1V221MC□1GS
	270	10×10	0.12	94.50	20	2000	GYA1V271MC□1GS
	330	10×12.5	0.12	115.50	16	2300	GYA1V331MC□1GS
50 (1H)	22	6.3×5.8	0.10	11.00	80	750	GYA1H220MC□1GS
	33	6.3×7.7	0.10	16.50	40	1100	GYA1H330MC□1GS
	47	8×10	0.10	23.50	30	1250	GYA1H470MC□1GS
	68	8×10	0.10	34.00	30	1250	GYA1H680MC□1GS
	100	10×10	0.10	50.00	28	1600	GYA1H101MC□1GS
	120	10×10	0.10	60.00	28	1600	GYA1H121MC□1GS
	150	10×12.5	0.10	75.00	18	2000	GYA1H151MC□1GS
63 (1J)	10	6.3×5.8	0.08	6.30	120	700	GYA1J100MC□1GS
	22	6.3×7.7	0.08	13.86	80	900	GYA1J220MC□1GS
	33	8×10	0.08	20.79	40	1100	GYA1J330MC□1GS
	47	8×10	0.08	29.61	40	1100	GYA1J470MC□1GS
	56	10×10	0.08	35.28	30	1400	GYA1J560MC□1GS
	68	10×10	0.08	42.84	30	1400	GYA1J680MC□1GS
	82	10×10	0.08	51.66	30	1400	GYA1J820MC□1GS
	100	10×12.5	0.08	63.00	20	1900	GYA1J101MC□1GS
80 (1K)	22	8×10	0.08	88.00	45	1100	GYA1K220MC□1GS
	33	10×10	0.08	132.00	36	1300	GYA1K330MC□1GS
	47	10×10	0.08	188.00	36	1300	GYA1K470MC□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.

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