

GPV Series, Radial Lead, High CV

- Low ESR & high ripple current capability
- Endurance: 2,000 hours at 105°C
- Rated Voltage : 16V ~ 100V
- Rated capacitance : 6.8 ~ 1,000 μ F

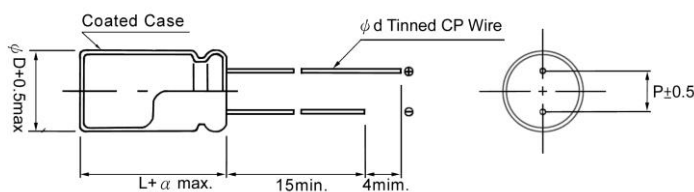


■ SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature range	-55 + 105°C	
Rated Voltage Range	16V ~ 100V	
Capacitance Tolerance	$\pm 20\%$ (at 120 Hz / 20°C)	
Surge Voltage	Rated Voltage x 1.15	
Leakage Current	Within the specified value as in standard rating	
Dissipation Factor (tan δ)	0.08, Less than or equal to the specified value at 20°C, 120 Hz	
Temperature Characteristics (Impedance ratio at 100 KHz)	Z (-25°C) / Z (+20°C)	≤ 1.15
	Z (-55°C) / Z (+20°C)	≤ 1.25
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated Voltage is applied for 2,000 hours at 105°C.	
	Capacitance change	$\leq \pm 20\%$ of the initial value
	D. F. (Tan δ)	$\leq 150\%$ of initial specified value
	ESR	$\leq 150\%$ of initial specified value
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 to 95% RH for 1,000 hours.	
	Capacitance change	$\leq \pm 20\%$ of the initial value
	D. F. (Tan δ)	$\leq 150\%$ of initial specified value
	ESR	$\leq 150\%$ of initial specified value
Surge Voltage Test	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (R=1K Ω) and discharge for 5 minutes 30 seconds.	
	Capacitance change	$\leq \pm 20\%$ of the initial value
	D. F. (Tan δ)	$\leq 150\%$ of initial specified value
	ESR	$\leq 150\%$ of initial specified value
Leakage current	Initial specified value or less	
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Failure Rate	0.5% per 1,000 hours maximum (Confidence level 60% at 105°C)	

※ In case of any doubt arises, measure the leakage current after voltage applied for 120 minutes at 105°C.

■ Dimension



Unit: mm

	6.3	8	10
$\phi D +0.5max$	6.3	8	10
$\phi d \pm 0.05$	0.6	0.6	0.6
P	2.5	3.5	5.0
$\alpha (max)$	1.5	1.5	1.5

■ Standard Products Table

Rated voltage (V.DC)	Rated Capacitance (μF)	Case Size D x L (mm)	tan δ	Leakage Current (μA)	ESR (mΩ max./20°C 100KHz-300KHz)	Rated ripple current (mA rms/105°C,100KHz)	Part Number
16V (1C)	220	8 x 9	0.12	704	26	2,100	GPV1C221M0809
	270	8 x 12	0.12	864	24	2,500	GPV1C271M0812
	470	10 x 12	0.12	1,504	23	2,900	GPV1C471M1012
	680	10 x 12	0.12	2,176	23	2,900	GPV1C681M1012
25V (1E)	120	8 x 9	0.12	600	28	2,000	GPV1E121M0809
	150	6.3 x 9	0.12	750	23	2,300	GPV1E151M0609
		8 x 12	0.12	750	26	2,400	GPV1E151M0812
	220	8 x 9	0.12	1,100	22	2,400	GPV1E221M0809
		8 x 12	0.12	1,100	22	2,600	GPV1E221M0812
	470	8 x 12	0.12	2,350	20	3,300	GPV1E471M0812
		10 x 12	0.12	2,350	15	3,900	GPV1E471M1012
	680	8 x 12	0.12	3,400	15	3,700	GPV1E681M0812
		10 x 12	0.12	3,400	15	3,900	GPV1E681M1012
	1000	10 x 16	0.12	5,000	25	4,500	GPV1E102M1017
35V (1V)	10	5 x 8	0.12	70	65	1,000	GPV1V100M0508
	47	6.3 x 6	0.12	329	35	1,800	GPV1V470M0606
	56	8 x 9	0.12	392	29	1,900	GPV1V560M0809
	82	8 x 12	0.12	574	27	2,300	GPV1V820M0812
	100	6.3 x 8	0.12	700	28	2,500	GPV1V101M0608
		8 x 8	0.12	700	28	2,500	GPV1V101M0808
	220	8 x 12	0.12	1,540	16	2,800	GPV1V221M0812
	330	10 x 12	0.12	2,310	20	3,600	GPV1V331M1012
	470	10 x 12	0.12	3,290	20	3,600	GPV1V471M1012
	680	10 x 12	0.12	4,760	20	3,600	GPV1V681M1012
1000	10 x 21	0.12	7,000	16	4,700	GPV1V102M1021	
50V (1H)	33	8 x 9	0.12	330	32	1,900	GPV1H330M0809
	39	8 x 12	0.12	390	29	2,200	GPV1H390M0812
	220	10 x 12	0.12	2,200	22	3,500	GPV1H221M1012
63V (1J)	22	8 x 9	0.12	277	35	1,800	GPV1J220M0809
	47	10 x 12	0.12	592	29	2,600	GPV1J470M1012
	180	10 x 12	0.12	2,268	27	3,400	GPV1J181M1012
80V (1K)	10	8 x 9	0.12	160	40	1,700	GPV1K100M0809
	12	8 x 12	0.12	192	38	1,900	GPV1K120M0812
	22	10 x 12	0.12	352	35	2,300	GPV1K220M1012
100V (2A)	6.8	8 x 9	0.12	136	45	1,600	GPV2A6R8M0809
	10	8 x 12	0.12	200	42	1,800	GPV2A100M0812
	18	10 x 12	0.12	360	38	2,200	GPV2A181M1012

■ Frequency coefficient of allowable ripple current

Frequency	120 Hz ≤ f < 1 KHz	1 KHz ≤ f < 10 KHz	10 KHz ≤ f < 100 KHz	100 KHz ≤ f ≤ 300 KHz
Coefficient	0.05	0.30	0.70	1.00