

GLZ Low Impedance, Standard Series

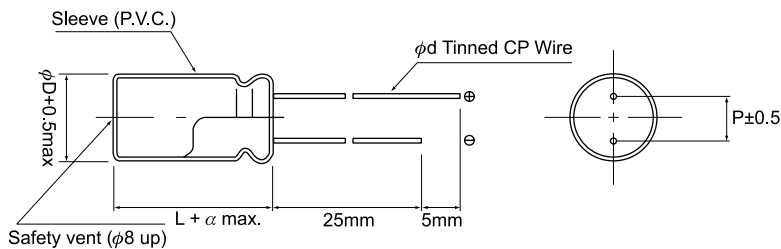
- Low impedance & high ripple current at high frequency.
- Suitable for switching power circuits application.
- Life guaranteed 2,000~3,000 hours at 105°C.



• Specifications

Item	Performance Characteristics																		
Operating Temperature range	-55 + 105°C (6.3 ~ 100V)			-40 + 105°C (160 ~ 400V)				-25 + 105°C (450V)											
Rated Voltage	6.3V ~ 450V																		
Capacitance Range	0.47 ~ 15,000 µF																		
Capacitance Tolerance	±20% (120Hz, 20°C)																		
Leakage Current	6.3V ~ 100V						160V ~ 450V												
	I ≤ 0.03CV or 4 µA, whichever is greater after 2 minutes application of rated voltage.						CV ≤ 1000 : I = 0.1CV + 40 µA max. (2 minutes) CV ≥ 1000 : I = 0.4CV + 100 µA max. (2 minutes)												
Dissipation Factor (120Hz, 20°C)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350	400~450							
	Tan δ (max.)	0.24	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20	0.25							
	For capacitance of more than 1,000 µF, add 0.02 for every increase of 1,000 µF.																		
Temperature Characteristics (120Hz)	Impedance Ratio / Stability at Low Temperature																		
	Rated voltage (V)	6.3~10		16~25		35~50		63~100		160~200		250		350		400		450	
	Z (-25°C) / Z (20°C)	-		-		-		2		3		3		4		6		15	
	Z (-40°C) / Z (20°C)	-		-		-		3		4		6		8		10		-	
Z (-55°C) / Z (20°C)	5		4		3		-		-		-		-		-		-		
Load Life	After the specify hours application of rated voltage and ripple current at 105°C, capacitor shall meet the characteristics requirements mentioned below. 5 ~ 6φ : 2,000 hours 8 ~ 10φ : 2,000 hours ≥ 13φ : 3,000 hours																		
	Capacitance change	Within ±20% of initial value																	
	Tan δ	200% or less of initial specified value																	
	Leakage current	Initial specified value or less																	
Shelf Life	At 105°C, no voltage applied for 1,000 hours, the capacitor shall meet the limits as in load life.																		

• Dimension (mm)



Dφ	5	6.3	8	10	13	16	18	20	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5
φd	0.5		0.6			0.8		1.0		
α	L < 20 : 1.5 mm, L ≥ 20 : 2.0 mm									

• Frequency coefficient of allowable ripple current

WV	Cap (µF) \ Frequency	50 Hz	120 Hz	300 Hz	1 KHz	10 KHz ~
6.3 ~ 100	~ 47	-	0.17	0.40	0.65	1.00
	100 ~ 220	0.30	0.50	0.65	0.80	1.00
	330 ~ 680	0.57	0.71	0.82	0.90	1.00
	1000 ~ 15000	0.75	0.87	0.96	0.98	1.00
160 ~ 450	0.47 ~ 220	0.80	1.00	1.25	1.40	1.60
	330 ~ 470	0.90	1.00	1.10	1.13	1.15

• Standard Products Table

Dφ x L (mm)

Cap (μF) \ WV	6.3V			10V			16V			25V		
	Size	Imp.	Ripple	Size	Imp.	Ripple	Size	Imp.	Ripple	Size	Imp.	Ripple
4.7										5 x 11	1.50	160
10										5 x 11	1.50	160
22	5 x 11	1.50	160	5 x 11	1.50	160	5 x 11	1.50	160	5 x 11	1.50	160
33	5 x 11	1.50	160	5 x 11	1.50	160	5 x 11	1.50	160	5 x 11	1.50	160
47	5 x 11	1.50	160	5 x 11	1.50	160	5 x 11	1.50	160	5 x 11	1.50	160
100	5 x 11	1.50	160	5 x 11	1.50	160	6 x 11	0.50	250	6 x 11	0.50	250
220	6 x 11	0.50	250	6 x 11	0.50	250	8 x 11	0.28	410	8 x 11	0.28	410
330	6 x 11	0.50	250	8 x 11	0.28	410	8 x 11	0.28	410	10 x 12	0.19	600
470	8 x 11	0.28	410	8 x 11	0.28	410	10 x 12	0.19	600	10 x 16	0.14	800
680	10 x 12	0.19	600	10 x 12	0.19	600	10 x 16	0.14	800	10 x 20	0.11	1000
1000	10 x 12	0.19	600	10 x 16	0.14	800	10 x 20	0.11	1000	13 x 20	0.075	1250
1500	10 x 20	0.11	1000	10 x 20	0.11	1000	13 x 20	0.075	1250	16 x 25	0.038	1900
2200	13 x 20	0.075	1250	13 x 20	0.075	1250	13 x 25	0.057	1550	16 x 25	0.038	1900
3300	13 x 20	0.075	1250	13 x 25	0.057	1550	16 x 25	0.038	1900	16 x 31	0.033	2350
4700	16 x 25	0.038	1900	16 x 25	0.038	1900	16 x 31	0.033	2350	18 x 35	0.030	2700
6800	16 x 25	0.038	1900	16 x 31	0.033	2350	18 x 35	0.030	2700	18 x 40	0.027	3300
10000	16 x 31	0.033	2350	18 x 35	0.030	2700	18 x 40	0.027	3300			
15000	18 x 35	0.030	2700	18 x 40	0.027	3300						

Cap (μF) \ WV	35V			50V			63V			100V		
	Size	Imp.	Ripple	Size	Imp.	Ripple	Size	Imp.	Ripple	Size	Imp.	Ripple
0.47				5 x 11	7.50	25				5 x 11	43.0	20
1				5 x 11	5.30	40				5 x 11	20.0	30
2.2				5 x 11	4.50	55				5 x 11	9.80	44
3.3				5 x 11	3.90	65				5 x 11	6.60	58
4.7	5 x 11	1.50	160	5 x 11	3.50	90	5 x 11	4.70	68	5 x 11	4.60	74
10	5 x 11	1.50	160	5 x 11	2.10	120	5 x 11	2.10	110	6 x 11	1.80	130
22	5 x 11	1.50	160	5 x 11	1.80	150	6 x 11	0.98	180	8 x 11	0.68	230
33	5 x 11	1.50	160	6 x 11	0.65	250	6 x 11	0.71	220	10 x 12	0.46	320
47	6 x 11	0.50	250	6 x 11	0.65	250	8 x 11	0.65	310	10 x 16	0.37	420
100	8 x 11	0.28	410	8 x 11	0.36	340	10 x 12	0.31	390	13 x 20	0.18	580
150	8 x 11	0.28	410	10 x 12	0.26	490	10 x 16	0.25	440	13 x 25	0.13	710
220	10 x 12	0.19	600	10 x 16	0.18	650	10 x 20	0.20	700	16 x 25	0.10	890
330	10 x 16	0.14	800	10 x 20	0.15	810	13 x 20	0.12	980	16 x 25	0.090	1080
470	10 x 20	0.11	1000	13 x 20	0.13	1100	13 x 25	0.081	1200	16 x 31	0.076	1310
680	13 x 20	0.075	1250	13 x 25	0.10	1200	16 x 25	0.058	1300	16 x 35	0.064	1410
1000	13 x 25	0.057	1550	16 x 25	0.058	1600	16 x 31	0.049	1380	18 x 40	0.047	4520
1500	16 x 25	0.038	1900	16 x 31	0.040	2000	18 x 35	0.038	1750			
2200	16 x 31	0.033	2350	18 x 35	0.035	2300	18 x 40	0.032	2120			
3300	18 x 35	0.030	2700									
4700	18 X 40	0.027	3300									

• Impedance: (Ω) Max. 20°C 100KHz • Allowable ripple current: (mA) at 105°C 100KHz

Cap (μF) \ WV	160V		200V		250V		350V		400V		450V	
	Size	Imp.	Size	Imp.	Size	Imp.	Size	Imp.	Size	Imp.	Size	Imp.
0.47	6 x 11	12	6 x 11	12	6 x 11	12	8 x 11	11				
1	6 x 11	17	6 x 11	17	6 x 11	17	10 x 12	17	10 x 12	16	10 x 12	18
2.2	6 x 11	25	6 x 11	25	8 x 11	29	10 x 16	31	10 x 16	27	10 x 20	29
3.3	8 x 11	36	8 x 11	36	10 x 12	42	10 x 16	38	10 x 20	36	13 x 20	41
4.7	8 x 11	43	10 x 12	50	10 x 12	50	10 x 20	49	10 x 20	43	13 x 20	49
10	10 x 12	70	10 x 16	80	10 x 20	88	13 x 20	82	13 x 25	72	16 x 25	75
22	10 x 20	130	10 x 20	140	13 x 25	155	16 x 25	130	16 x 25	110	16 x 31	115
33	13 x 20	180	13 x 25	190	13 x 25	190	16 x 31	160	16 x 31	140	18 x 35	145
47	13 x 25	220	13 x 25	220	16 x 25	230	18 x 35	200	18 x 35	170	20 x 40	175
100	16 x 25	330	16 x 31	335	18 x 35	340	20 x 40	290	22 x 50	350	25 x 50	350
220	18 x 35	500	18 x 40	515	20 x 40	525	25 x 50	550				
330	20 x 40	900	22 x 40	1100	22 x 50	1150						
470	22 x 50	1200	22x 50	1310	25 x 50	1350					Case Size	Ripple

• Allowable ripple current (mA) at 105°C 120Hz