

QP series

NEW

**+105°C,PCB Snap-in Terminal Type,Long Life 7000 Hrs**  
**(+105°C,基板自立型大容量品,超长寿命 7000 Hrs)**

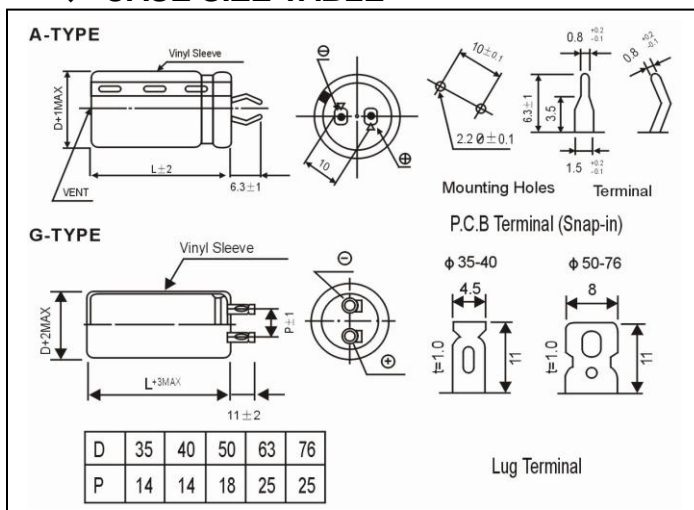
### ◆ FEATURES

- Highly reliable capacitors that with stand under high ripple current
- Two or three dimensions with same ratings
- Best for switching power supplies

### ◆ SPECIFICATIONS

Items	Characteristics	
Category Temperature Range	-40°C~+105°C	-25°C~+105°C
Rated Voltage Range	6.3~100V.DC	160-450 V.DC
Nominal Capacitance Range	56~82000μ F	
Capacitance Tolerance	±20%(120Hz,+20°C)	
Leakage Current(MAX)	I=3√CV (uA) after 5 minutes application of rated working voltage at 20°C	
Dissipation Factor(MAX) Tanδ (20°C,120Hz)	Rated Voltage(V)	~10    16    25    35    50    63    80    100    ~250    350~
	Tanδ	0.55    0.50    0.45    0.40    0.35    0.30    0.25    0.20    0.15    0.20
Load Life	After applying rated voltage with max ripple current for 7000hrs at 105°C,the capacitors shall meet the following requirements	
	Capacitance Change	Within ±20% of the initial value
	Dissipation Factor	Not more than 200% of the specified value
Shelf Life	After Leaving capacitors under no load at 105°C for 1000hrs,they meet the characteristic requirements listed at right	
	Capacitance change	Within ±20% of the initial value
	Tanδ	≤200% of initial specified value
Low Temperature Stability Impedance Rate(MAX)	Rated Voltage(V )	6.5~100    160~250    400~450
	Z-25°C/Z+20°C	4    3    8
	Z-40°C/Z+20°C	15    ---    ---
Other	JISC-5141    EIAJ RC-2372	

### ◆ CASE SIZE TABLE



### ◆ RIPPLE CURRENT MULTIPLIER

1)Maximum rms ripple current at 120Hz,105°C are given in the table

2)Temperature multiplying factor:

where capacitors are operated at temperature other than 105°C,the maximum ripple current must be multiplied by the figure shown in the table below.

#### ● Frequency coefficient

WV(V)	Frequency(Hz)			
	60	120	1k	10~50k
~100	0.9	1.0	1.15	1.25
160~	0.8	1.0	0.94	1.47

## ◆ STANDARD RATINGS

NEW

size:ΦD×L(mm)

Voltage(code)	ΦD	6.3(OJ)				10(1A)				16(1C)			
		Φ 22	Φ 25	Φ 30	Φ 35	Φ 22	Φ 25	Φ 30	Φ 35	Φ 22	Φ 25	Φ 30	Φ 35
6800	688									22×25			
										1.75			
8200	828									22×30			
										2.00			
10000	109					22×25				22×30	25×25		
						1.77				2.10	2.05		
12000	129	22×25				22×30	25×25			22×35	25×30		
		1.54				2.10	1.94			2.31	2.30		
15000	159	22×25				22×35	25×30			22×40	25×35	30×25	
		1.72				2.23	2.10			2.68	2.58	2.30	
18000	189	22×30	25×25			22×40	25×30	30×25		22×50	25×40	30×30	
		1.95	1.96			2.41	2.34	2.25		3.20	3.16	2.57	
22000	229	22×35	25×30	30×25		22×45	25×35	30×30			25×45	30×30	35×30
		2.23	2.25	2.28		2.58	2.54	2.50			3.36	2.98	3.25
27000	279	22×40	25×35	30×25		22×50	25×40	30×30			25×50	30×35	35×35
		2.54	2.57	2.52		3.17	3.07	2.95			3.85	3.30	3.93
33000	339	22×45	25×40	30×30	35×25		25×45	30×35	35×30			30×40	35×35
		2.88	2.93	2.89	2.93		3.39	3.33	3.21			3.80	4.27
39000	399		25×40	30×35	35×30			30×40	35×35			30×45	35×40
			3.18	3.26	3.40			3.70	3.68			4.30	4.80
47000	479		25×50	30×40	35×30			30×45	35×40			30×50	35×45
			3.69	3.69	3.73			4.22	4.16			4.81	5.53
56000	569			30×45	35×35				35×50				
				4.16	4.12				5.00				
68000	689			30×50	35×40								
				4.71	4.69								
82000	829				35×45	←Upper:Case sizeΦD×L(mm)							
					5.32	←Lower:Ripple Current (Arms) at 105℃ 120Hz							

## ◆ STANDARD RATINGS

NEW

Voltage(code)		25(1E)				35(1V)				50(1H)			
Cap(μF)	Code	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
1800	188									22×25			
										1.34			
2200	228									22×30			
										1.60			
2700	278									22×30	25×25		
										1.70	1.70		
3300	338					22×25				22×35	25×30		
						1.45				1.97	1.88		
3900	398					22×30				22×40	25×30	30×25	
						1.69				2.22	2.20	1.95	
4700	478	22×25				22×35	25×25			22×45	25×35	30×30	
		1.61				2.02	1.62			2.43	2.43	2.25	
5600	568	22×30				22×35	25×30			22×50	25×40	30×30	
		1.80				2.13	2.00			2.75	2.72	2.64	
6800	688	22×35	25×25			22×40	25×35	30×25			25×45	30×35	35×30
		2.09	1.87			2.41	2.31	2.31			3.30	3.30	3.25
8200	828	22×40	25×30	30×25		22×50	25×40	30×30				30×40	35×35
		2.31	2.34	2.16		2.85	2.73	2.75				3.60	3.60
10000	109	22×45	25×35	30×30			25×45	30×35				30×50	35×40
		2.65	2.61	2.61			3.05	3.05				4.05	4.04
12000	129	22×50	25×40	30×30			25×50	30×40	35×30				35×45
		2.80	2.81	2.74			3.37	3.23	3.19				4.56
15000	159		25×45	30×35	35×30			30×45	35×35				35×50
			3.27	3.13	3.26			3.72	3.67				4.77
18000	189			30×40	35×35				35×40				
				3.56	3.84				4.37				
22000	229			30×45	35×35				35×45				
				4.04	3.75				4.92				
27000	279				35×45								
					4.74								
33000	339				35×50								
					5.50								

←Upper:Case sizeΦD×L(mm)

←Lower:Ripple Current (Arms) at 105 °C 120Hz

## ◆ STANDARD RATINGS

NEW

Voltage(code) Cap(μF) Code		63(1J)				80(1K)				100(2A)			
		Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
680	687									22×25			
										1.09			
820	827									22×30			
										1.32			
1000	108					22×25				22×30	25×25		
						1.19				1.47	1.45		
1200	128	22×25				22×30				22×35	25×30		
		1.20				1.44				1.69	1.68		
1500	158	22×30				22×30	25×25			22×40	25×35	30×25	
		1.47				1.59	1.59			1.97	1.98	1.95	
1800	188	22×30	25×25			22×35	25×30			22×45	25×40	30×30	
		1.58	1.52			1.79	1.71			2.23	2.20	2.20	
2200	228	22×35	25×30			22×40	25×35	30×25			25×45	30×35	35×30
		1.82	1.75			2.03	1.98	1.98			2.53	2.55	2.50
2700	278	22×40	25×35	30×25		22×45	25×40	30×30			25×50	30×40	35×35
		2.07	2.11	1.72		2.39	2.35	2.35			2.82	2.86	2.89
3300	338	22×45	25×35	30×30			25×45	30×35	35×30			30×45	35×35
		2.33	2.27	2.24			2.64	2.61	2.47			3.30	3.25
3900	398		25×40	30×35			25×50	30×40	35×30			30×50	35×40
			2.51	2.55			2.92	2.82	2.97			3.60	3.67
4700	478		25×50	30×40	35×30			30×45	35×35				35×45
			2.91	2.86	2.80			3.34	3.38				3.80
5600	568			30×40	35×35			30×50	35×40				35×50
				3.22	3.20			3.80	3.80				4.05
6800	688			30×50	35×40				35×45				
				3.65	3.65				3.90				
8200	828				35×45				35×50				
					4.04				4.20				
10000	109				35×50								
					4.48								

←Upper: Case size ΦD×L(mm)

←Lower: Ripple Current (Arms) at 105℃ 120Hz

## ◆ STANDARD RATINGS

NEW

Voltage(code) Cap(μF) Code		160(2C)				200(2D)				250(2E)			
		Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
180	187									22×25			
										0.84			
220	227									22×30	25×25		
										0.97	0.99		
270	277					22×25				22×35	25×30		
						0.99				1.11	1.15		
330	337	22×25				22×30	25×25			22×40	25×30	30×25	
		1.03				1.20	1.20			1.26	1.26	1.31	
390	397	22×30				22×35	25×30			22×45	25×35	30×30	
		1.17				1.30	1.34			1.41	1.42	1.50	
470	477	22×30	25×25			22×40	25×30	30×25		22×50	25×40	30×30	
		1.28	1.29			1.44	1.44	1.48		1.58	1.61	1.61	
560	567	22×35	25×30			22×45	25×35	30×30			25×45	30×35	
		1.45	1.49			1.60	1.60	1.60			1.80	1.84	
680	687	22×40	25×35	30×25		22×50	25×40	30×30			25×50	30×40	35×30
		1.64	1.70	1.63		1.75	1.76	1.74			2.03	2.09	1.96
820	827	22×45	25×40	30×30			25×45	30×35	35×30			30×45	35×35
		1.85	1.92	1.91			2.10	2.11	2.10			2.35	2.26
1000	108		25×45	30×35			25×50	30×40	35×35			30×50	35×40
			2.17	2.19			2.36	2.40	2.30			2.64	2.57
1200	128		25×50	30×40	35×30			30×45	35×35				35×45
			2.43	2.48	2.25			2.69	2.53				2.88
1500	158			30×45	35×35				35×40				
				2.82	2.62				2.97				
1800	188			30×50	35×40				35×45				
				3.13	2.97				3.45				
2200	228				35×45	← Upper: Case size ΦD×L(mm)							
					3.34	← Lower: Ripple Current (Arms) at 105℃ 120Hz							

## ◆ STANDARD RATINGS

NEW

Voltage(code) Cap(μF) Code		350(2V)				400(2G)				450(2W)			
		Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
56	566									22×25			
										0.42			
68	686					22×25				22×30	25×25		
						0.49				0.50	0.50		
82	826					22×30				22×35	25×30		
						0.56				0.56	0.57		
100	107	22×25				22×30	25×25			22×40	25×30	30×25	
		0.53				0.62	0.61			0.64	0.63	0.67	
120	127	22×30	25×25			22×35	25×30			22×45	25×35	30×30	
		0.61	0.62			0.73	0.73			0.72	0.71	0.77	
150	157	22×35	25×30			22×40	25×35	30×25		22×50	25×40	30×30	
		0.73	0.73			0.85	0.85	0.79		0.80	0.82	0.85	
180	187	22×40	25×30	30×25		22×45	25×35	30×30			25×45	30×35	
		0.83	0.80	0.81		0.95	0.92	0.95			0.93	0.97	
220	227	22×45	25×35	30×30		22×50	25×40	30×35			25×50	30×40	35×30
		0.94	0.92	0.98		1.08	1.05	1.24			1.05	1.10	1.01
270	277	22×50	25×40	30×30			25×50	30×40	35×30			30×45	35×35
		1.07	1.05	1.03			1.29	1.30	1.18			1.25	1.26
330	337		25×45	30×35	35×30			30×45	35×35			30×50	35×40
			1.24	1.24	1.18			1.47	1.41			1.42	1.44
390	397		25×50	30×40	35×35			30×50	35×40				35×45
			1.38	1.39	1.39			1.64	1.59				1.61
470	477			30×45	35×35				35×45				35×50
				1.57	1.50				1.87				1.80
560	567			30×50	35×40				35×50				
				1.75	1.69				2.09				
680	687				35×45	← Upper: Case size ΦD×L(mm)							
					1.96	← Lower: Ripple Current (Arms) at 105℃ 120Hz							