

MQ

Series

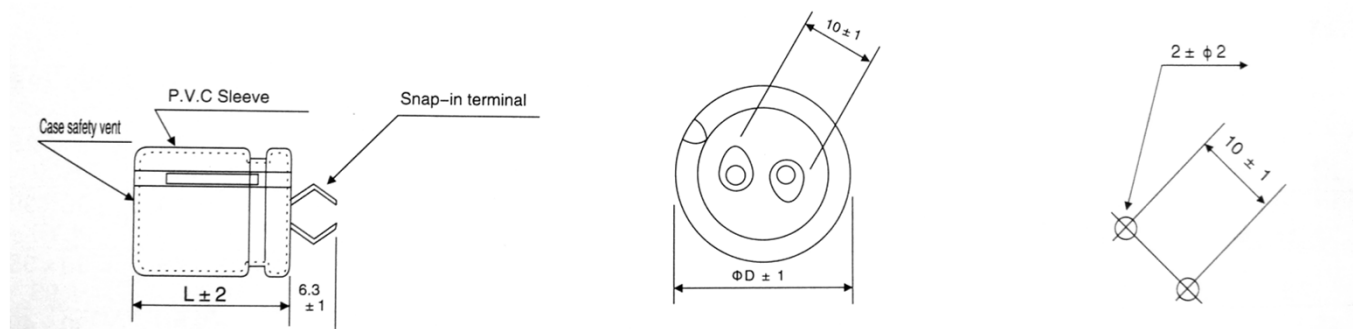
- Downsized
- Endurance with ripple current: 105°C 2000 hours
- Non solvent-proof type



■ SPECIFICATION

Item	Characteristics		
Category Temperature Range	-25 ~ +105℃		
Voltage Range	160 ~ 450V.DC		
Nominal Cap. Range	68 ~ 3300μF		
Capacitance Tolerance	± 20 % (at 120Hz , 20℃)		
Leakage Current	I= $3\sqrt{CV}$ (After 5 minutes) where, I: max leakage current (μA), C:Nominal capacitance (μF), V: Rated voltage (V) (at 20℃)		
Dissipation Factor (MAX) (tanδ)(at 120Hz ,20℃)	WV	160~400	420&450
	tanδ	0.15	0.2
Low Temp.Impedance Stability at 120Hz	WV	160~400	420&450
	Z-25℃ / Z+20℃	4	8
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105℃.		
	Capacitance change	≤ ±20% of the initial value	
	Dissipation Factor	≤ 200% of the initial specified value	
	Leakage Current	≤ the initial specified value	
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 105℃ without voltage applied.		
	Capacitance Change	≤ ±15% of the initial value	
	Dissipation Factor	≤ 150% of the initial specified value	
	Leakage Current	≤ The initial specified value	

■ DRAWING



■ MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency Coefficient

Freq.(Hz)	60(50)	120	300	1K	10K	50K
WV(V)						
160~250	0.81	1.00	1.17	1.32	1.45	1.50
315~450	0.77	1.00	1.16	1.30	1.41	1.43

(2) Temperature Coefficient

Ambient Temperature(°C)	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00

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■ STANDARD RATINGS

WV(vdc) ΦD Parameter Cap.(μF)	160				180				200			
	22	25	30	35	22	25	30	35	22	25	30	35
390	Case Size ΦDxL (mm) → 22x25 Ripple Current(Arms) at 120Hz 105°C → 1.3				22x25				22x25			
470	22x25				22x30				22x30			
	1.4				1.4				1.45			
560	22x30				22x30	25x25			22x30	25x25		
	1.5				1.5	1.5			1.67	1.67		
680	22x30	25x25			22x35	25x30			22x40	25x30		
	1.7	1.7			1.7	1.7			1.75	1.75		
820	22x35	25x30	30x25		22x40	25x30	30x25		22x45	25x35	30x25	
	2	2	2		2	2	2		2.04	2.04	2.04	
1000	22x40	25x35	30x25		22x45	25x40	30x30	35x25	22x50	25x45	30x30	35x25
	2.2	2.2	2.2		2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3
1200		25x40	30x30	35x25		25x45	30x35	35x30		25x50	30x35	35x30
		2.3	2.3	2.3		2.3	2.3	2.3		2.65	2.65	2.65
1500		25x45	30x35	35x30		25x50	30x40	35x30			30x40	35x30
		2.5	2.5	2.5		2.5	2.5	2.5			2.8	2.8
1800		25x50	30x40	35x30			30x45	35x35			30x45	35x40
		2.7	2.7	2.7			2.7	2.7			3.08	3.08
2200			30x45	35x35			30x50	35x40				35x45
			2.9	2.9			2.9	2.9				3.48
2700			35x50	35x40				35x50				
			3.1					3.1				
3300				35x50								
				3.3								

WV(vdc) ΦD Parameter Cap.(μF)	250				315				350			
	22	25	30	35	22	25	30	35	22	25	30	35
120									22x25			
									0.78			
150					22x25				22x30			
					0.82				0.82			
180					22x30				22x30	25x25		
					0.9				0.9	0.9		
220	22x25				22x30	25x25			22x35	25x30		
	1				1	1			1	1		
270	22x25				22x35	25x30			22x40	25x30	30x25	
	1.1				1.1	1.1			1.1	1.1	1.1	
330	22x30	25x25			22x45	25x35	30x25		22x45	25x40	30x30	
	1.2	1.2			1.2	1.2	1.2		1.2	1.2	1.2	
390	22x35	25x25			22x45	25x40	30x30	35x25		25x45	30x35	
	1.3	1.3			1.3	1.3	1.3	1.3		1.3	1.3	
470	22x40	25x30	30x25			25x45	30x35	35x25		25x50	30x35	35x30
	1.4	1.4	1.4			1.4	1.4	1.4		1.4	1.4	1.4
560	22x45	25x35	30x25			25x50	30x40	35x30			30x45	35x35
	1.5	1.5	1.5			1.5	1.5	1.5			1.5	1.5
680	22x50	25x40	30x30	35x25			30x45	35x35			30x50	35x40
	1.7	1.7	1.7	1.7			1.7	1.7			1.7	1.7
820		25x45	30x35	35x30			30x50	35x40				35x45
		2	2	2			2.2	2				1.9
1000			30x40	35x30				35x50				
			2.2	2.2				2.3				
1200			30x45	35x35								
			2.3									
1500				35x45								
				2.5								
1800				35x50								
				2.7								

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STANDARD RATINGS

WV(vdc) ΦD Parameter Cap.(μF)	400				420				450			
	22	25	30	35	22	25	30	35	22	25	30	35
68	Case Size ΦDxL (mm) →								22x25			
	Ripple Current(Arms) at 120Hz 105°C →								0.5			
82					22x25				22x30			
					0.64				0.56			
100	22x25				22x25	25x25			22x30	25x25		
	0.7				0.66	0.66			0.64	0.64		
120	22x30				22x30	25x25			22x35	25x30		
	0.75				0.81	0.81			0.72	0.72		
150	22x30	25x25			22x35	25x30	30x25		22x40	25x30	30x25	
	0.88	0.88			0.84	0.84	0.84		0.79	0.79	0.79	
180	22x35	25x30			22x40	25x30	30x25		22x45	25x40	30x30	
	0.95	0.95			0.91	0.91	0.91		0.87	0.87	0.87	
220	22x45	25x35	30x25		22x45	25x35	30x30	35x25		25x45	30x30	35x25
	1.1	1.1	1.1		1.05	1.05	1.05	1.05		1	1	1
270	22x50	25x40	30x30	35x25		25x40	30x30	35x25		25x50	30x40	35x30
	1.22	1.22	1.22	1.22		1.25	1.25	1.25		1.19	1.19	1.19
330		25x45	30x35	35x30		25x50	30x35	35x30			30x45	35x35
		1.44	1.44	1.44		1.42	1.42	1.42			1.38	1.38
390		25x50	30x40	35x30			30x40	35x35			30x50	35x40
		1.55	1.55	1.55			1.61	1.61			1.55	1.55
470			30x45	35x35			30x45	35x40				35x45
			1.68	1.68			1.86	1.86				1.74
560			30x50	35x40				35x45				35x40
			1.9	1.9				2.1				1.9
680				35x45				35x50				
								2.2				