

Features

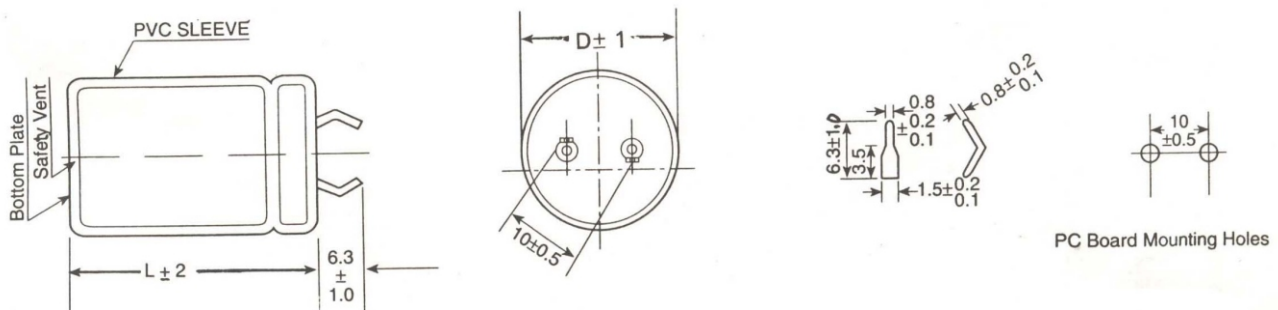
- Load life of 2,000 hours at 105°C
- Snap-in terminal type, wide temperature range.
- Suitable for use in switching power supplies.
- Having safety vents.



Specifications

Item	Characteristics									
Operating temperature range	-40~+105°C (for 10V to 250V) -25~+105°C (for 315V to 400V)									
Rated voltage range	10~400V									
Capacitance range	39~82,000 μF									
Capacitance tolerance (at 20°C, 120Hz)	±20%(M)									
Leakage current (I) (at 20°C)	After 1 minute application of rated voltage. $I \leq 0.02CV$ or 5mA, whichever is smaller. Where C: Nominal capacitance in μF, V: Rated voltage in V.									
Dissipation factor (Tan δ) (at 20°C, 120Hz)	W.V.(V)	10	16	25	35	50	60~100	160~200	250~450	
	Tan δ (max.)	0.50	0.40	0.30	0.25	0.20	0.15	0.12	0.15	
For capacitance of more than 1,000 μF, add 0.02 for every increase of 1,000 μF.										
Low temperature characteristics (at 120Hz)	W.V.(v)		10~16	25	35	50~63	80~100	160~250	315~400	
	impedance ratio ZT/Z+20°C(max)	Z-25°C/Z+20°C	4	3	2	3	4			
		Z-40°C/Z+20°C	15	10	8	6	5	6	-	
Load life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage has been applied for 2,000 hours at 105°C									
	Capacitance change		≤20% of the initial value							
	tan δ		≤200% of the initial specified value							
	I		≤The initial specified value							
Shelf life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 105°C for 1,000 hours without voltage applied									
	Capacitance change		≤20% of the initial value							
	tan δ		≤150% of the initial specified value							
	I		≤200% of the initial specified value							
Others	Satisfies characteristic W of JIS C5141									

Dimensions





Case Size DxL(mm) and Maximun Ripple current(A rms/at 105°C,120Hz)

W.V.(V)		10								16							
Cap.(μF)	D	22		25		30		35		22		25		30		35	
		6,800										22×25	1.42				
8,200										22×30	1.69						
10,000	22×25	1.54								22×30	1.86	25×25	1.86				
12,000	22×30	1.82								22×35	2.18	25×30	2.20				
15,000	22×30	2.04	25×25	2.04						22×40	2.58	25×35	2.65	30×25	2.55		
18,000	22×35	2.39	25×30	2.41						22×50	3.12	25×35	2.87	30×30	3.00		
22,000	22×40	2.80	25×35	2.84	30×25	2.76						25×45	3.54	30×30	3.31	35×25	3.40
27,000	22×50	3.42	25×40	3.33	30×30	3.28						25×50	4.10	30×35	3.91	35×30	4.03
33,000			25×45	3.87	30×35	3.86	35×25	3.72						30×40	4.57	35×35	4.73
39,000			25×50	4.41	30×35	4.20	35×30	4.33						30×45	5.22	35×35	5.15
47,000					30×40	4.88	35×35	5.05								35×40	5.96
56,000					30×50	5.86	35×35	5.52								35×45	6.66
68,000							35×40	6.42									
82,000							35×45	7.74									

W.V.(V)		25								35							
Cap.(μF)	D	22		25		30		35		22		25		30		35	
		3,300										22×25	1.25				
3,900										22×30	1.47						
4,700	22×25	1.37								22×35	1.72	25×25	1.61				
5,600	22×30	1.61								22×35	1.88	25×30	1.90				
6,800	22×30	1.77	25×25	1.77						22×40	2.20	25×35	2.23	30×25	2.17		
8,200	22×35	2.08	25×30	2.10						22×50	2.67	25×40	2.59	30×30	2.56		
10,000	22×40	2.43	25×35	2.47	30×25	2.40						30×45	3.01	30×35	3.10	35×25	2.90
12,000	22×45	2.81	25×40	2.86	30×30	2.83						25×50	3.46	30×35	3.30	35×30	3.40
15,000			25×45	3.37	30×35	3.36	35×25	3.24						30×45	4.10	35×35	4.04
18,000			25×50	3.87	30×35	3.68	35×30	3.80						30×50	4.69	35×40	4.67
22,000					30×45	4.53	35×35	4.46								35×45	5.42
27,000					30×50	5.25	35×40	5.22								35×50	6.28
33,000							35×45	6.06									
39,000							35×50	6.89									

W.V.(V)		50								63							
Cap.(μF)	D	22		25		30		35		22		25		30		35	
		1,200										22×25	0.98				
1,500										22×30	1.18						
1,800	22×25	1.04								22×30	1.29	25×25	1.29				
2,200	22×30	1.23								22×35	1.52	25×30	1.54				
2,700	22×35	1.46	25×25	1.37						22×40	1.79	25×35	1.81	30×25	1.76		
3,300	22×35	1.62	25×30	1.63						22×50	2.18	25×40	2.12	30×30	2.10		
3,900	22×40	1.86	25×35	1.89	30×25	1.84						25×45	2.43	30×35	2.43	35×25	2.33
4,700			22×50	2.26	30×30	2.20						25×50	2.80	30×35	2.66	35×30	2.75
5,600	22×50	2.26	22×45	2.40	30×30	2.30	25×25	2.42						30×40	3.07	35×35	3.18
6,800			25×50	2.91	30×35	2.77	35×30	2.86						30×50	3.73	35×35	3.51
8,200					30×40	3.22	35×35	3.34								35×40	4.07
10,000					30×50	3.92	35×35	3.69								35×50	4.93
12,000							35×40	4.26									
15,000							35×50	5.23									



TMCE18 SR Series Aluminum Electrolytic Capacitors

W.V.(V)		80						100						
Cap.(μ F)	D	22	25	30	35	22	25	30	35	22	25	30	35	
560						22×25	0.67							
680						22×30	0.79							
820	22×25	0.81				22×30	0.87	25×25	0.87					
1,000	22×30	0.96				22×35	1.03	25×30	1.04					
1,200	22×30	1.05	25×25	1.05		22×40	1.19	25×30	1.13	30×25	1.18			
1,500	22×35	1.26	25×30	1.18		22×45	1.40	25×35	1.35	30×30	1.41			
1,800	22×40	1.46	25×30	1.48	30×25	1.44		25×40	1.57	30×30	1.55	35×25	1.59	
2,200	22×45	1.70	25×35	1.64	30×30	1.71		25×50	1.91	30×35	1.82	35×30	1.88	
2,700			25×40	2.02	30×30	1.90	35×25	1.94			30×40	2.13	35×35	2.21
3,300			25×45	2.34	30×35	2.30	35×30	2.86			30×45	2.48	35×35	2.44
3,900					30×40	2.56	35×35	2.66					35×40	2.81
4,700					30×45	2.96	35×35	2.92					35×45	3.23
5,600							35×40	3.36						
6,800							35×45	3.89						

W.V.(V)		160						180						
Cap.(μ F)	D	22	25	30	35	22	25	30	35	22	25	30	35	
150						22×25	0.39							
180	22×25	0.42				22×30	0.46							
220	22×30	0.50	25×25	0.50		22×30	0.50	25×25	0.50					
270	22×35	0.60	25×30	0.56		22×35	0.60	25×30	0.60					
330	22×40	0.70	25×30	0.62		22×40	0.70	25×35	0.71	30×25	0.69			
390	22×45	0.80	25×35	0.77	30×25	0.75	22×50	0.84	25×40	0.82	30×30	0.81		
470	22×50	0.92	25×40	0.90	30×30	0.88			25×45	0.91	30×35	0.94	35×25	0.91
560			25×45	1.03	30×30	1.03	35×25	0.99	25×50	1.08	30×35	1.03	35×30	1.06
680			25×50	1.19	30×40	1.20	35×30	1.17			30×40	1.20	35×35	1.24
820					30×45	1.38	35×35	1.36			30×45	1.38	35×35	1.36
1,000					30×50	1.60	35×40	1.59					35×40	1.59
1,200							35×45	1.83					35×50	1.91
1,500							35×50	2.14						

W.V.(V)		200						250						
Cap.(μ F)	D	22	25	30	35	22	25	30	35	22	25	30	35	
100						22×25	0.28							
120	22×25	0.35				22×30	0.33							
150	22×30	0.42				22×30	0.37	25×25	0.37					
180	22×30	0.46	25×25	0.46		22×35	0.44	25×30	0.44					
220	22×35	0.54	25×30	0.54		22×40	0.51	25×35	0.52	30×25	0.50			
270	22×40	0.63	25×30	0.60	30×25	0.63	22×50	0.62	25×40	0.61	30×30	0.60		
330	22×45	0.74	25×35	0.71	30×30	0.74			25×45	0.71	30×30	0.71	35×25	0.68
390	22×50	0.84	25×40	0.82	30×30	0.81	35×25	0.83	25×50	0.81	30×35	0.77	35×30	0.79
470			25×45	0.94	30×35	0.94	35×30	0.97			30×40	0.89	35×35	0.92
560					30×35	1.09	35×30	1.06			30×45	1.02	35×35	1.01
680					30×45	1.26	35×35	1.24					35×40	1.17
820					30×50	1.45	35×35	1.44					35×45	1.41
1,000							35×45	1.67						
1,200							35×50	1.91						

W.V.(V) Cap.(μ F) D	315								350							
	22		25		30		35		22		25		30		35	
47									22×25	0.19						
56									22×30	0.23						
68	22×25	0.23							22×30	0.25	25×25	0.25				
82	22×30	0.28							22×35	0.29	25×30	0.30				
100	22×30	0.30	25×25	0.30					22×40	0.34	25×30	0.33	30×25	0.34		
120	22×35	0.36	25×30	0.36					22×45	0.40	25×35	0.38	30×30	0.40		
150	22×40	0.42	25×35	0.43	30×25	0.42					25×40	0.45	30×30	0.45	35×25	0.46
180	22×45	0.49	25×40	0.47	30×30	0.49					25×45	0.52	30×35	0.52	35×30	0.54
220			25×45	0.55	30×30	0.54	35×25	0.55					30×40	0.61	35×30	0.59
270			25×50	0.67	30×35	0.64	35×30	0.66					30×45	0.71	35×35	0.70
330					30×40	0.75	35×35	0.77							35×40	0.82
390					30×45	0.85	35×35	0.84							35×45	0.93
470							35×40	0.97								
560							35×45	1.12								

W.V.(V) Cap.(μ F) D	400								450							
	22		25		30		35		22		25		30		35	
39									22×25	0.18						
47	22×25	0.19							22×30	0.21	25×25	0.21				
56	22×30	0.23							22×35	0.24	25×30	0.25				
68	22×30	0.25	25×25	0.25					22×40	0.28	25×30	0.27				
82	22×35	0.29	25×30	0.30					22×45	0.33	25×35	0.32	30×25	0.31		
100	22×40	0.34	25×30	0.33	30×25	0.34			22×50	0.38	25×40	0.37	30×30	0.36		
120	22×45	0.40	25×35	0.38	30×30	0.40					25×45	0.43	30×35	0.43	35×25	0.41
150			25×40	0.45	30×30	0.45	35×25	0.46					30×40	0.50	35×30	0.49
180			25×45	0.52	30×35	0.52	35×30	0.54					30×45	0.58	35×35	0.57
220					30×40	0.61	35×30	0.59					30×50	0.67	35×40	0.67
270					30×45	0.71	35×35	0.70							35×45	0.78
330							35×40	0.82							35×50	0.90
390							35×45	0.93								
470							35×50	1.07								

Ripple Current Multipliers

Frequency multiplying factor

Freq(Hz) Cap.(μ F)	50	60	120	1k	10~15K
16~100	0.88	0.90	1.00	1.15	1.15
160~250	0.85	0.88	1.00	1.15	1.20
315~450	0.88	0.90	1.00	1.10	1.15

Temperature multiplying factor

Temperature(°C)	45	60	70	85	105
Factor	2.47	2.37	2.17	1.67	1.00