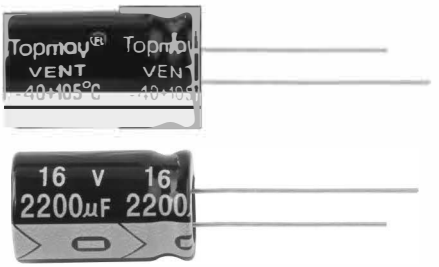
1 Aluminum Electrolytic Capacitor

TMCE02 Aluminum Electrolytic Capacitor 105℃

Features

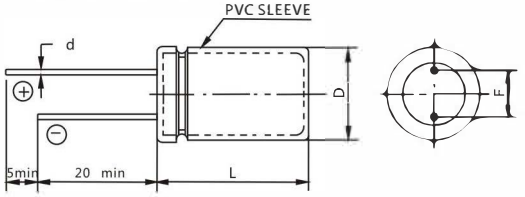
- Load life of 2,000 hours.
- Wide operating temperature range.
- Suitable to use for industrial equipment.
- Case Size larger than 5mm diameter has safety vents.



Characteristics

Item	Characteristics									
Operating temperature range	-40~+105℃(for 6.3V to250V)-25~+105℃(for350V to 450V)									
Rated voltage range	6.3~450V									
Capacitance range	0.1-15,000 μF									
Capacitance tolerance (at20℃,120Hz)	±20%(M)									
Leakage current(I) (at 20℃)	After 2 minute application of rated voltage. I≤0.01CV or 3μA, whichever is greater (for 6.3v to 100v)				After 2minute application of rated voltage. I≤0.02CV+20μA(for 160v to 450v)					
	Where C: Nominal capacitance in μF, V: Rated voltage in V.									
Dissipation factor(Tanδ) (at 20℃,120Hz)	W.V(V)	6.3	10	16	25	35	50	63	100	160-250	350-450
	Tanδ(max.)	0.24	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20
	For Capacitance of more than 1,000μF, add 0.2 for every increase of 1,000μF									
Low temperature characteristics (at 120Hz)	W.V(v)		6.3	10	16~100		10~250		350~450	
	impedance ratio ZT/Z+20℃(max)	Z-25℃/Z+20℃	4	3	2		4		6	
		Z-40℃/Z+20℃	8	6	4		8		-	
Load life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage has been applied for 2,000 hours (1,000 hours for case dia, 8mm or less) at 105℃									
	Capacitance change				≤20% of the initial value					
	tanδ				≤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℃ after exposing them at 105℃ for 500 hours without voltage applied									
	Capacitance change				≤20% of the initial value					
	tanδ				≤150% of the initial specified value					
	I				≤200% of the initial specified value					
Others	Satisfies characteristic W of JIS C5141									

Dimensions



D±0.5	5	6.3	8	10	13	16	18	22
L	±1.0				±2.0			
	11	11	12	12 16	20 20 25	25 30 35	35 40	35 40
F±0.5	2.0	2.5	3.5	5.0		7.5		10.0
d±0.05	0.5			0.6		0.8		

Ripple Current Multipliers

Ripple Current Multipliers

W.V(v)	Freq(Hz) / Cap(μF)	50	120	300	1K	≥10k
6.3~100	01~47	0.75	1.00	1.35	1.57	2.00
	100~470	0.80	1.00	1.23	1.34	1.50
	1,000~15,000	0.85	1.00	1.10	1.13	1.15
160~450	0.47~470	0.80	1.00	1.25	1.40	1.60

temperature multplying factor

temperature(℃)	70	85	105
Factor	1.78	1.40	1.00

Case Size DxL(mm) and Maximum Rippie current (mA rms/at 105℃,120 Hz)

W.V(v) / Cap(μF)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
0.1						5×11 1.3		5×11 2.6						
0.22						5×11 2.6		5×11 5.8						
0.33						5×11 4.3		5×11 8.7						
0.47						5×11 6.2		5×11 11	5×11 8.2	5×11 8.2	5×11 8.2	8×12 8.6	8×12 8.6	8×12 8.6
1						5×11 13		5×11 16	5×11 12	5×11 12	6.3×11 14	8×12 13	8×12 13	8×12 13
2.2						5×11 22		5×11 24	6.3×11 20	6.3×11 20	10×12 20	10×16 19	8×12 20	10×12 20
3.3						5×11 27		5×11 30	6.3×11 25	6.3×11 25	8×12 26	10×12 24	10×16 28	10×16 28
4.7				5×11 27	5×11 29	5×11 32	5×11 34	5×11 36	8×12 32	8×12 32	10×12 34	10×16 33	10×16 33	10×16 33
10			5×11 37	5×11 39	5×11 42	5×11 47	5×11 49	6.3×11 59	10×12 49	10×12 49	10×16 55	10×20 53	10×20 53	13×20 61
22		5×11 49	5×11 55	5×11 58	5×11 63	5×11 69	6.3×11 83	8×12 94	10×16 82	10×20 91	10×20 91	13×20 91	13×25 100	16×35 113
33	5×11 55	5×11 60	5×11 67	5×11 71	5×11 77	6.3×11 96	6.3×11 101	10×12 122	10×20 111	10×20 128	13×20 128	16×25 138	16×25 138	16×30 140
47	5×11 65	5×11 71	5×11 80	5×11 85	6.3×11 105	6.3×11 115	8×12 129	10×16 164	10×20 153	13×20 153	13×25 169	16×30 176	16×35 191	16×35 191
100	5×11 95	5×11 104	5×11 116	6.3×11 142	8×12 163	8×12 178	10×12 200	10×20 264	16×25 277	16×25 277	16×30 300	18×40 315	22×35 333	22×40 353
220	5×11 141	6.3×11 176	6.3×11 196	8×12 224	10×12 257	10×16 318	10×20 370	16×25 501	18×35 509	18×40 540	22×35 570			
330	6.3×11 196	6.3×11 215	8×12 256	10×12 291	10×16 356	10×20 430	13×20 525	16×25 690	22×35 698	22×35 698				
470	6.3×11 234	6×12 273	8×12 306	10×12 348	10×16 424	13×20 594	13×25 690	16×30 891	22×40 883					
1,000	8×12 364	10×12 424	10×12.5 536	10×17 632	10×20 791	13×25 955	16×30 1,225	22×35 1,66						
2,200	10×16 624	10×21 748	13×20 958	13×25 1,120	16×25 1,346	16×32 1,686	22×40 2,104							
3,300	10×20 812	13×20 1.016	13×25 1.227	16×25 1,454	16×35 1,788	22×35 2,284	22×40 2,513							
4,700	13×20 1,067	13×25 1,230	16×25 1,535	16×35 1,863	18×40 2.219	22×40 2,622								
6,800	13×25 1,331	16×25 1,590	16×35 1,976	18×40 2,327	22×40 2,712									
10,000	16×25 1,657	16×30 1,886	18×40 2,289	22×40 2,788										
15,000	16×35 2,115	18×35 2,350	22×35 2,747											

Note:10×12 can also be 8×15 as per customer's request