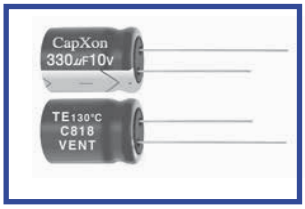
TE series High Tempererature



Features

◆The series has guaranteed operation life of 1000~3000 hours at 130℃.
◆Applications:High reliability equipment,filtering circuit of switching power supply, and industrial control equipment.
◆ RoHS Compliant

Specifications

Item	Performance Characteristics			
Operating Temperature Range	-40 to +130℃		-25 to +130℃	
Rated Voltage Range	10 to 400 VDC		450 VDC	
Capacitance Range	2.2 to 4700 μF		1 to 100 μF	
Capacitance Tolerance	±20% (120Hz, +20℃)			
Leakage Current (+20℃,max.)	10 to 100 VDC		160 to 450 VDC	
	I≦0.01CV or 3uA		CV≤1000	I≦0.1CV+40(uA)
			CV＞1000	I≦0.04CV+100(uA)
	After 2 minute whichever is greater measured with rated working voltage applied		After 1 minute withrated working voltage applied.	

Dissipation Factor (tanδ，at 20℃，120Hz)

Working Voltage(VDC)	10	16	25	35	50	63	100	160	200	250	350	400	450
D.F. (%)max.	20	16	14	12	10	9	8	15	15	15	20	20	25

for capacitance>1000uF,add 2% per another 1000uF

Low Temperature Characteristics (at 120Hz)

Impedance ratio max

Working Voltage(VDC)	10	16	25	35	50	63	100	160	200	250	350	400	450
Z-25℃ / Z+20℃	3	2	2	2	2	2	2	3	3	3	5	5	6
Z-40℃ / Z+20℃	6	4	3	3	3	3	3	6	6	6	6	6	-

Endurance

Test conditions
Duration time :as right
Ambient temperature :+130℃
Applied voltage :Rated DC working voltage
After test requirement at +20℃
Capacitance change : with±30% of the initial measured value
Dissipation factor :≦ 300% of the initial specified value
Leakage current :≦ The initial specified value

Dφ	Life hours
6.3φ	1000
8φ	2000
≥10φ	10~100V :3000
	160~450V :2000

Shelf Life

Test conditions
Duration time :1000Hrs
Ambient temperature :+130℃
Applied voltage :None
After test requirement at +20℃:Same limits as Endurance.
Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.

Multiplier for Ripple Current vs. Frequency

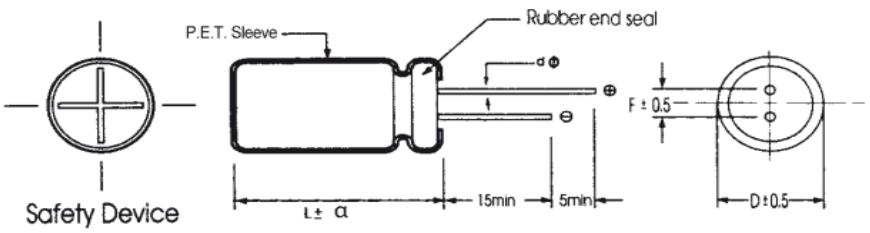
10~100V

CAP(uF)\Frequency(Hz)	50(60)	120	1K	10K	50K~100K
CAP＜10	0.35	0.42	0.60	0.80	1.00
10~33	0.45	0.55	0.75	0.90	1.00
47~330	0.6	0.7	0.85	0.95	1.00
470~1500	0.65	0.75	0.90	0.98	1.00
1500＜CAP	0.75	0.8	0.95	1.00	1.00

160~450V

CAP(uF) / Frequency(Hz)	120	400	1K	10K	50K~100K
CAP＜33	0.40	0.60	0.75	0.90	1.00
10＜CAP≥100	0.45	0.65	0.80	0.95	1.00

Diagram of Dimensions:(unit:mm)



Dφ	6.3	8	10	13	16	18
F	2.5	3.5	5.0	5.0	7.5	7.5
dφ	0.5		0.6		0.8	

α	D < 16	D=16		D=18		D > 18
		L: 25~35.5	L < 25 and L≧40	L: 25~31.5	L < 25 and L≧35.5	
	1.5	1.5	2.0	1.5	2.0	2.0

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mArms/130℃ /120Hz)	Rated Ripple current (mArms/130℃ /100KHz)
10	220	8×11.5	252	360
10	330	8×11.5	333	475
10	330	10×12.5	350	500
10	470	10×12.5	503	670
10	470	10×16	540	720
10	1000	10×20	881	1175
10	1500	13×20	1121	1495
10	2200	13×25	1352	1690
10	3300	16×25	1820	2275
10	4700	16×31.5	2212	2765
16	220	8×11.5	252	360
16	220	10×12.5	263	375
16	330	8×11.5	277	395
16	330	10×16	361	515
16	470	10×12.5	491	655
16	470	10×20	600	800
16	1000	10×20	881	1175
16	1000	13×20	930	1240
16	1500	13×20	1136	1515
16	1500	13×25	1249	1665
16	2200	13×25	1352	1690
16	2200	16×25	1500	1875
16	3300	16×31.5	2152	2690
16	4700	16×35.5	2352	2940
25	220	8×11.5	252	360
25	220	10×16	333	475
25	330	10×12.5	441	630
25	330	10×20	543	775
25	470	10×16	566	755
25	470	13×20	720	960
25	1000	13×20	930	1240
25	1000	16×25	1099	1465
25	1500	16×25	1399	1865
25	1500	16×31.5	1549	2065
25	2200	16×31.5	1904	2380
25	2200	16×35.5	2012	2515
25	3300	16×35.5	2156	2695
25	3300	18×35.5	2300	2875
35	100	8×11.5	322	460
35	100	10×16	420	600
35	220	10×12.5	427	610
35	220	10×20	522	745
35	330	10×16	553	790
35	330	13×20	700	1000
35	470	10×20	690	920
35	470	13×25	881	1175
35	1000	13×25	926	1235
35	1000	16×31.5	1151	1535
35	1500	16×31.5	1755	2340
35	1500	16×35.5	1849	2465
35	2200	16×35.5	2156	2695
35	2200	18×35.5	2300	2875
50	10	6.3×11	77	140
50	22	6.3×11	110	200
50	22	8×11.5	132	240
50	33	8×11.5	157	285
50	47	8×11.5	193	275
50	47	10×12.5	220	315
50	100	10×12.5	325	465
50	100	10×16	360	515
50	220	10×20	606	865
50	220	13×20	700	1000
50	330	13×20	746	1065
50	330	13×25	823	1175
50	470	16×20	930	1240
50	470	16×25	1001	1335
50	1000	16×31.5	1849	2465
50	2200	18×40	2452	3065
63	33	8×11.5	140	255
63	47	10×12.5	200	285
63	100	10×16	290	415
63	220	13×20	592	845
63	330	13×25	802	1145
63	470	16×25	1091	1455
63	1000	16×31.5	1399	1865
63	1500	18×40	2051	2735
100	4.7	8×11.5	48	115
100	10	8×11.5	72	130
100	22	8×11.5	105	190
100	33	10×12.5	151	275
100	47	10×16	200	285
100	100	13×20	382	545
100	220	16×25	700	1000
100	330	16×31.5	942	1345
100	470	18×31.5	1200	1600
160	3.3	6.3×11	26	65
160	4.7	6.3×11	28	70
160	4.7	8×11.5	34	85
160	5.6	8×11.5	40	100
160	6.8	8×11.5	44	110
160	6.8	8×16	52	130
160	10	8×16	58	145
160	15	8×16	76	190
160	22	10×16	124	310
160	33	10×20	162	360
160	47	13×20	207	460
160	68	13×25	263	585
160	100	16×25	369	820
160	150	16×31.5	423	940
200	3.3	6.3×11	28	70
200	4.7	6.3×11	30	75
200	4.7	8×11.5	34	85
200	5.6	8×11.5	40	100
200	5.6	8×16	48	120
200	6.8	8×11.5	46	115
200	6.8	8×16	54	135
200	10	8×16	64	160
200	10	8×20	72	180
200	15	8×16	76	190
200	15	8×20	84	210
200	22	8×20	124	310
200	22	10×16	124	310
200	22	10×20	128	320
200	33	10×20	162	360
200	33	13×20	184	410
200	47	13×20	207	460
200	47	13×25	232	515
200	68	16×20	263	585
200	68	16×25	284	630
200	100	13×30	304	675

Case Size

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mArms/130℃ /120Hz)	Rated Ripple current (mArms/130℃ /100KHz)
200	100	16×25	369	820
200	150	13×40	396	880
200	150	16×35.5	425	945
250	3.3	6.3×11	30	75
250	4.7	8×11.5	44	110
250	5.6	8×11.5	44	110
250	6.8	8×16	54	135
250	8.2	8×16	66	165
250	10	8×16	72	180
250	15	8×20	88	220
250	22	10×16	120	300
250	33	13×20	203	450
250	47	13×20	214	475
250	68	13×30	288	640
250	68	16×25	288	640
250	100	13×35	320	710
250	100	16×31.5	376	835
250	150	13×50	441	980
250	150	16×35.5	461	1025
350	2.2	6.3×11	24	60
350	3.3	8×11.5	34	85
350	4.7	8×11.5	44	110
350	5.6	8×16	50	125
350	6.8	8×20	60	150
350	8.2	8×20	68	170
350	10	10×20	78	195
350	15	10×20	100	250
350	22	13×20	124	310
350	33	16×20	203	450
350	47	16×20	243	540
350	68	18×25	290	645
350	100	18×31.5	383	850
400	2.2	6.3×11	30	75
400	2.2	8×11.5	34	85
400	2.2	8×16	38	95
400	2.7	8×16	40	100
400	3.3	8×11.5	38	95
400	3.3	8×16	46	115
400	3.3	8×20	50	125
400	4.7	8×11.5	44	110
400	4.7	8×20	50	125
400	4.7	10×16	50	125
400	5.6	8×20	54	135
400	5.6	10×16	54	135
400	5.6	10×20	60	150
400	6.8	8×20	60	150
400	6.8	10×16	60	150
400	6.8	10×20	66	165
400	8.2	10×16	68	170
400	8.2	10×20	76	190
400	10	10×16	76	190
400	10	10×20	80	200
400	10	10×25	86	215
400	15	13×20	104	260
400	22	13×25	138	345
400	33	16×25	207	460
400	47	13×40	234	520
400	47	16×31.5	275	610
400	47	18×25	261	579
400	68	13×55	335	745

WV (Vdc)	Cap (uF)	Size mm	Rated Ripple current (mArms/130℃ /120Hz)	Rated Ripple current (mArms/130℃ /100KHz)
400	68	18×31.5	297	660
400	100	18×40	396	880
450	1	8×11.5	26	65
450	2.2	8×16	38	95
450	3.3	8×16	40	100
450	4.7	8×20	50	125
450	5.6	10×16	54	135
450	6.8	10×20	66	165
450	8.2	10×20	76	190
450	10	10×25	86	215
450	10	13×20	86	215
450	15	13×20	104	260
450	22	10×40	140	350
450	22	16×20	138	345
450	22	16×25	154	385
450	33	10×50	203	450
450	33	16×25	218	485
450	33	16×31.5	245	545
450	47	13×45	254	565
450	47	16×35.5	270	600
450	68	18×31.5	297	660
450	100	18×40	396	880