

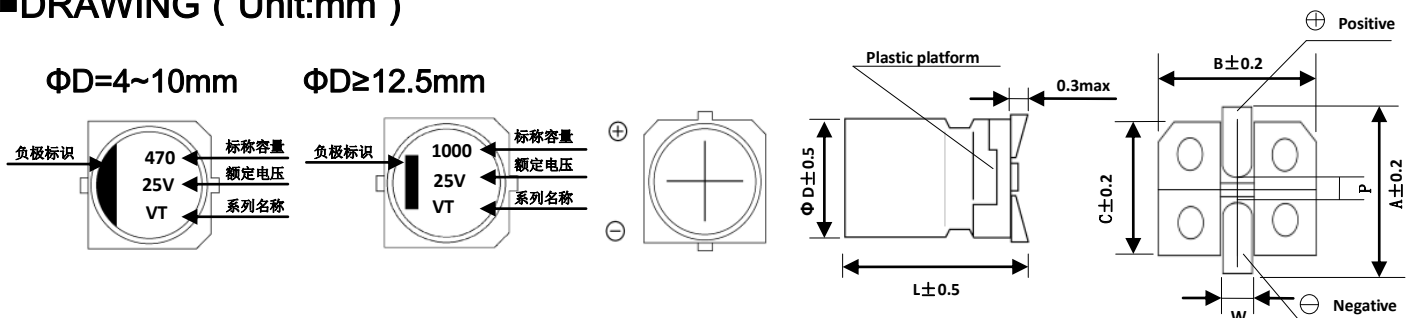
VT series WIDE TEMPERATURE

- Operating with wide temperature range -55~105°C
- Load life of 2000 hours
- Comply with the ROHS directive

■ SPECIFICATIONS

Item	Characteristics												
Operating Temperature Range	-55~105°C												
Rated Voltage Range	4~450V												
Capacitance Range	0.1~6800uF												
Capacitance Tolerance	±20% at 120Hz,20°C												
Leakage Current (MAX)	Rated voltage	6.3~100V											
	Case size	Φ4~Φ10 Φ12.5~Φ16 160~450V Φ6.3~Φ16											
	Time	After 2 min(application of rated voltage) After 1 min(application of rated voltage) After 2 min(application of rated voltage)											
	Leakage current	≤0.01CV or 3uA ≤0.03CV or 4uA ≤0.04CV +100uA Whichever is greater Whichever is greater Whichever is greater											
Dissipation Factor (tan δ)	Measurement frequency : 120Hz 20°C												
	Rated voltage(V)	4	6.3	10	16	25	35	50	63	100	160~250	350~450	
	Tan δ	Φ4~Φ10	0.35	0.30	0.24	0.20	0.18	0.16	0.14	0.14	0.14	0.20	0.25
Low Temperature Stability Impedance Ratio	Measurement frequency:120Hz												
	Impedance Ratio	Φ4~Φ10	Z(-25°C) / Z(+20°C)	7	4	3	2	2	2	2	2	2	3
			Z(-55°C) / Z(+20°C)	15	8	6	4	4	3	3	3	3	6
	ZT/Z20(max)	Φ12.5~Φ16	Z(-25°C) / Z(+20°C)	7	5	4	3	2	2	2	2	2	4
			Z(-55°C) / Z(+20°C)	17	12	10	8	5	4	3	3	6	10
Load Life	After 2000 hours of rated operating voltage at 105 °C, the characteristics of the capacitor meet the requirements of the following table												
	Leakage Current	≤The initial specified value											
	Capacitance Change	Within ±20% of the initial value (≤10V Within ±30%)											
Shelf Life	After 1000 hours of no-load storage in a 105 °C environment, the characteristics of the capacitor meet the specified values listed in the high-temperature load characteristics.												
	After reflow soldering and cooling to room temperature, the characteristics of the capacitor meet the requirements of the following table.												
	Leakage Current	≤The initial specified value											
Resistance to Soldering Heat	After reflow soldering and cooling to room temperature, the characteristics of the capacitor meet the requirements of the following table.												
	Capacitance Change	Within ±10% of the initial value											
	Dissipation Factor	≤The initial specified value											
Marking	Black print on the case top.												

■ DRAWING (Unit:mm)



VT series WIDE TEMPERATURE

■DIMENSIONS(mm)

D×L	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×10.5	10×10.5	10×13.5	12.5×13.5	12.5×16	16×16.5
A	5.1	6.1	7.3	7.3	9.2	11.2	11.2	13.8	13.8	18.0
B	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
P±0.2	1.0	1.3	2.2	2.2	3.1	4.4	4.4	4.4	4.4	6.7
L	5.4	5.4	5.4	7.7	10.5	10.5	13.5	13.5	16.0	16.5

■DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

Size $\Phi D \times L$ (mm)Ripple Current(mA 105°C,120Hz)r.m.s

WV CAP(μF)	4		6.3		10		16		25	
	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current
4.7							4×5.4	13	4×5.4	14
10							4×5.4	19	5×5.4 4×5.4	23 16
22	4×5.4	20	4×5.4	23	5×5.4 4×5.4	29 20	5×5.4 4×5.4	32 25	6.3×5.4 5×5.4	39 32
33	5×5.4 4×5.4	30 25	5×5.4 4×5.4	32 30	5×5.4 4×5.4	35 22	6.3×5.4 5×5.4	45 35	6.3×5.4 5×5.4	48 35
47	5×5.4 4×5.4	36 30	5×5.4 4×5.4	38 35	5×5.4	38	6.3×5.4 5×5.4	55 40	6.3×5.4	60
100	6.3×5.4 5×5.4	60 49	6.3×5.4 5×5.4	65 54	6.3×5.4 5×5.4	70 60	6.3×5.4	80	6.3×7.7 6.3×5.4	100 80
150	6.3×5.4	70	6.3×5.4	55	6.3×5.4	62	6.3×7.7	105	8×10.5 6.3×7.7	140 120
220	6.3×5.4	85	6.3×7.7 6.3×5.4	120 95	6.3×7.7 6.3×5.4	120 95	8×10.5 6.3×7.7	180 120	8×10.5	200
330	6.3×7.7	100	6.3×7.7	120	8×10.5 6.3×7.7	200 135	8×10.5	220	10×10.5 8×10.5	250 240
470	6.3×7.7	105	8×10.5 6.3×7.7	230 120	6.3×7.7 8×10.5	120 230	10×10.5 8×10.5	300 270	10×10.5	280
680	8×10.5	210	8×10.5	230	10×10.5 8×10.5	270 220	10×10.5	315	10×13.5	400
1000	8×10.5	230	10×10.5 8×10.5	340 190	10×10.5	315	12.5×13.5 10×13.5 10×10.5	500 390 340	12.5×13.5	580
1500	10×10.5	315	10×13.5 10×10.5	450 410	10×13.5	460	12.5×13.5	550	12.5×16	850
2200	10×13.5 10×10.5	440 340	12.5×13.5 10×13.5	620 500	12.5×13.5	680	16×16.5 12.5×16	950 750	16×16.5	1050
3300	10×13.5	490	12.5×16 12.5×13.5	700 660	16×16.5	1000	16×16.5	1000		
4700	12.5×13.5	600	16×16.5	1000						
6800	16×16.5 12.5×16	950 650								

WV CAP(μF)	35		50		63		100	
	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current
0.1			4×5.4	2	4×5.4	2		
0.22			4×5.4	4	4×5.4	4		
0.33			4×5.4	4	4×5.4	4		
0.47			4×5.4	5	4×5.4	5		
1			4×5.4	8	4×5.4	8	4×5.4	8
2.2			4×5.4	11	4×5.4	11	6.3×5.4 5×5.4	14 12
3.3	4×5.4	13	4×5.4	14	5×5.4	14	6.3×7.7 6.3×5.4	32 20
4.7	4×5.4	15	5×5.4 4×5.4	19 14	5×5.4	19	6.3×7.7 6.3×5.4	35 21
10	5×5.4 4×5.4	25 18	6.3×5.4 5×5.4	31 20	6.3×7.7 6.3×5.4	39 24	8×10.5 6.3×7.7	77 35
22	6.3×5.4 5×5.4	42 34	6.3×7.7 6.3×5.4	51 42	8×10.5 6.3×7.7	98 49	10×10.5 8×10.5	126 84
33	6.3×5.4	50	6.3×7.7	60	8×10.5	112	10×10.5	133
47	6.3×7.7 6.3×5.4	78 58	8×10.5 6.3×7.7	120 63	10×10.5 8×10.5	160 119	12.5×13.5 10×13.5 10×10.5	250 160 140
68							12.5×13.5 10×13.5	300 180



series

WIDE TEMPERATURE

■ DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

Size $\Phi D \times L$ (mm) Ripple Current(mA 105°C,120Hz)r.m.s

WV	35		50		63		100		160	
	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current
22									10×13.5	50
33									12.5×13.5	95
47									12.5×13.5 16×16.5	205 240
100	8×10.5 6.3×7.7	150 92	10×10.5 8×10.5	180 160	12.5×13.5 10×13.5 10×10.5	270 210 196	16×16.5 12.5×13.5	450 380	16×16.5	250
150	8×10.5	185	10×10.5	200	10×13.5	225				
220	10×10.5 8×10.5	250 220	10×13.5 10×10.5	280 220	16×16.5 12.5×13.5	560 470	16×16.5	550		
330	10×10.5	300	16×16.5 12.5×13.5 10×13.5	600 420 295	16×16.5 12.5×16	700 510				
470	12.5×13.5 10×13.5 10×10.5	520 375 310	16×16.5 12.5×16 12.5×13.5	700 520 470	16×16.5	750				
680	12.5×13.5	530	16×16.5	750						
1000	16×16.5 12.5×16	750 600								
1500	16×16.5	750								

WV	200		250		350		400		450	
	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current	SIZE	Ripple current
3.3							10×13.5 8×10.5	40 35	10×13.5 8×12.5	40 38
4.7			10×13.5	75	10×13.5	85	10×13.5 12.5×13.5	45 48	10×13.5 12.5×13.5	42 45
10	10×13.5	75	10×13.5	75	12.5×13.5	105	12.5×13.5	50	12.5×13.5	55
22	12.5×13.5	105	12.5×13.5	105	16×16.5	130	16×16.5	85	16×16.5	85
33	12.5×13.5	120	16×16.5	135						
47	16×16.5	220								

■ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency		50Hz	120Hz	300Hz	1kHz	10kHz~
Coefficient	$\Phi 4 \sim \Phi 10$	0.1~68uF	0.70	1.00	1.17	1.36
		100~3300uF	0.85	1.00	1.08	1.20
	$\Phi 12.5 \sim \Phi 16$	1~68uF	0.75	1.00	1.35	1.57
		100~680uF	0.80	1.00	1.23	1.34
		1000~6800uF	0.85	1.00	1.10	1.13

● Aluminum electrolytic capacitors due to self-heating when the ripple current is superimposed, aging due to temperature rise, the life is reduced by half every 5°C; if you want to maintain a long life, please reduce the ripple current during use.