

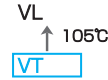
# VT

## Series

Wide Temperature



- Solvent proof (within 2 minutes)

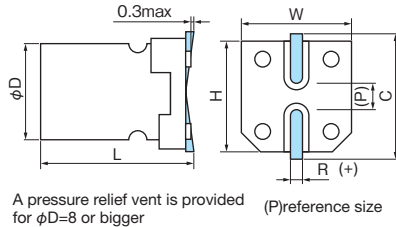
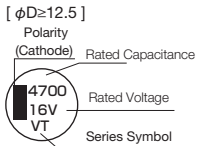
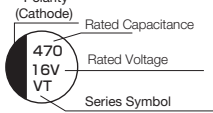


### Specifications

Items	Condition	Specifications									
Rated voltage (V)	—	4	6.3	10	16	25	35	50	63	100	
Surge voltage (V)	Room temperature	5.0	8.0	13	20	32	44	63	79	125	
Category temperature range (°C)	—	-55 to +105									
Capacitance tolerance (%)	120Hz/20°C	M: ±20									
Dissipation Factor (tan δ)	tan δ (max) 120Hz/20°C	φ4 to φ10	0.35	0.30	0.24	0.20	0.18	0.16	0.14	0.14	0.14
		φ12.5 to φ16	0.40	0.38	0.34	0.30	0.28	0.22	0.18	0.16	0.16
Leakage current (LC)	μA/after 2minutes (max)	Exceeding 1,000μF, +0.02 every 1,000μF The greater value of either 0.01CV or 3μA									
Impedance ratio at low temperature	Based on the value at 120Hz, +20°C	-25°C Z/Z <sub>20°C</sub>	7	4	3	2	2	2	2	2	2
		-55°C Z/Z <sub>20°C</sub>	15	8	6	4	4	3	3	3	3
Endurance	105°C, 2,000hours rated voltage applied (With the rated ripple current)	ΔC/C	Within ±25% of the initial value(≤10V:±30%)								
		tan δ	Less than 200% of the specified value(≤10V:≤300%)								
		LC	Less than the specified value								

### Marking, Dimensions

[ φD≤10 ] Black print on the case top



(Unit : mm)

D <sup>±0.5</sup>	L	W <sup>±0.2</sup>	H <sup>±0.2</sup>	C <sup>±0.2</sup>	R	P <sup>±0.2</sup>
4	5.4 <sup>±0.4</sup>	4.3	4.3	5.1	0.5 to 0.8	1.0
5	5.4 <sup>±0.4</sup>	5.3	5.3	6.1	0.5 to 0.8	1.3
6.3	5.4 <sup>±0.4</sup>	6.6	6.6	7.3	0.5 to 0.8	2.2
6.3	7.7 <sup>±0.4</sup>	6.6	6.6	7.3	0.5 to 0.8	2.2
8	6.5 <sup>±0.5</sup>	8.3	8.3	9.2	0.7 to 1.2	3.1
8	10.5 <sup>±0.5</sup>	8.3	8.3	9.2	0.7 to 1.2	3.1
10	7.7 <sup>±0.5</sup>	10.3	10.3	11.2	0.7 to 1.2	4.4
10	10.5 <sup>±0.5</sup>	10.3	10.3	11.2	0.7 to 1.2	4.4
10	13.5 <sup>±0.5</sup>	10.3	10.3	11.2	0.7 to 1.2	4.4
12.5	13.5 <sup>±0.5</sup>	13.0	13.0	14.0	1.0 to 1.4	4.4
12.5	16.0 <sup>±0.5</sup>	13.0	13.0	14.0	1.0 to 1.4	4.4
16	16.5 <sup>±0.5</sup>	17.0	17.0	18.0	1.0 to 1.4	6.4

### Ripple Current Frequency Coefficient

Frequency:F(Hz)		100≤F<1k	1k≤F<10k	10k≤F<100k	100k≤F
Capacitance:C(μF)	C≤4.7	1.00	1.30	1.50	1.80
	4.7<C≤33	1.00	1.20	1.30	1.45
	33<C	1.00	1.10	1.20	1.30

**Size, Rated Ripple Current**

$\mu\text{F}$	V	4		6.3		10		16		25	
4.7								4x5.4	13	4x5.4	14
10								4x5.4	19	4x5.4	16
										5x5.4	23
22		4x5.4	23	4x5.4	23	4x5.4	23	4x5.4	23	5x5.4	32
								5x5.4	32	6.3x5.4	39
33		4x5.4	25	4x5.4	25	4x5.4	25	5x5.4	35	5x5.4	35
		5x5.4	35	5x5.4	35	5x5.4	35	6.3x5.4	45	6.3x5.4	45
47		4x5.4	30	4x5.4	30	4x5.4	30	5x5.4	38	6.3x5.4	60
		5x5.4	38	5x5.4	38	5x5.4	38	6.3x5.4	55	8x6.5	80
56		4x5.4	39	5x5.4	46	6.3x5.4	57	6.3x5.4	74	6.3x5.4	82
68		5x5.4	45	6.3x5.4	62	6.3x5.4	72	6.3x5.4	80	6.3x5.4	94
100		5x5.4	45	5x5.4	55	5x5.4	60	6.3x5.4	80	6.3x5.4	80
		6.3x5.4	60	6.3x5.4	65	6.3x5.4	70	8x6.5	120	6.3x7.7	100
150		6.3x5.4	70	6.3x5.4	55	6.3x5.4	62	6.3x7.7	105	6.3x7.7	120
								8x6.5	120	8x10.5	140
220		6.3x5.4	85	6.3x5.4	95	6.3x5.4	95	6.3x7.7	120	8x10.5	200
				6.3x7.7	120	6.3x7.7	120	8x6.5	85	10x7.7	180
								8x10.5	180		
330		6.3x7.7	100	6.3x7.7	120	6.3x7.7	135	8x10.5	195	8x10.5	220
						8x10.5	195	10x7.7	185	10x10.5	240
470		6.3x7.7	105	6.3x7.7	120	6.3x7.7	120	8x10.5	270	10x10.5	280
				8x10.5	230	8x10.5	230	10x10.5	300		
680		8x10.5	210	8x10.5	230	8x10.5	230	10x10.5	315	10x10.5	245
						10x10.5	270			10x13.5	400
1000		8x10.5	230	8x10.5	290	8x10.5	290	10x10.5	340		
				10x10.5	315	10x10.5	315	10x13.5	390	10x13.5	430
								12.5x13.5	500	12.5x13.5	580
1500		10x10.5	315	10x10.5	410	10x10.5	335	10x13.5	430	12.5x16.0	850
				10x13.5	450	10x13.5	460	12.5x13.5	550		
2200		10x10.5	340	10x13.5	500	12.5x13.5	680	12.5x16.0	750		
		10x13.5	440	12.5x13.5	620	12.5x16.0	700	16x16.5	950	16x16.5	1050
3300		10x13.5	490	12.5x13.5	660	16x16.5	1000	16x16.5	1000		
				12.5x16.0	700						
4700		12.5x13.5	600	16x16.5	1000						
		12.5x16.0	630								
6800		12.5x16.0	650								
		16x16.5	950								

 Case size:  $\phi$ DxL(mm)

 Rated ripple current  
 mA<sub>RMS</sub>(120Hz, 105°C)

**Size, Rated Ripple Current**

$\mu\text{F}$ \ V	35		50		63		100	
0.1			4x5.4	2	4x5.4	2		
0.22			4x5.4	4	4x5.4	4		
0.33			4x5.4	4	4x5.4	4		
0.47			4x5.4	5	4x5.4	5		
1.0			4x5.4	8	4x5.4	8	4x5.4	8
2.2			4x5.4	11	4x5.4	11	5x5.4	12
							6.3x5.4	14
3.3	4x5.4	13	4x5.4	14	5x5.4	14	6.3x7.7	32
					6.3x5.4	30	8x6.5	30
4.7	4x5.4	15	4x5.4	14	5x5.4	19	5x5.4	15
			5x5.4	19	6.3x5.4	25	6.3x5.4	21
							6.3x7.7	35
10	4x5.4	18	5x5.4	20	6.3x5.4	24	6.3x5.4	25
	5x5.4	25	6.3x5.4	31	6.3x7.7	39	6.3x7.7	35
					8x6.5	25	8x10.5	77
22	5x5.4	34	6.3x5.4	42	6.3x7.7	49	8x10.5	84
	6.3x5.4	42	6.3x7.7	51	8x6.5	55	10x10.5	126
			8x6.5	70	8x10.5	98		
33	6.3x5.4	50	6.3x7.7	60	8x10.5	112	10x10.5	133
	8x6.5	85	8x6.5	70				
47	6.3x5.4	58	6.3x7.7	63	8x10.5	119	10x10.5	140
	6.3x7.7	78	8x6.5	85	10x10.5	160	10x13.5	160
	8x6.5	85	8x10.5	120			12.5x13.5	250
68	6.3x7.7	80	8x6.5	70	10x10.5	140	10x13.5	180
	8x6.5	90	8x10.5	120	10x13.5	160	12.5x13.5	300
100	6.3x7.7	92	8x10.5	160	10x10.5	196	12.5x13.5	380
	8x10.5	150	10x10.5	180	10x13.5	210	12.5x16.0	400
					12.5x13.5	270	16x16.5	450
150	8x10.5	185	10x10.5	200	10x13.5	225		
220	8x10.5	220	10x10.5	220	12.5x13.5	470	16x16.5	550
	10x10.5	250	10x13.5	280	12.5x16.0	500		
330	10x10.5	300	10x13.5	295	12.5x16.0	510		
	10x13.5	330	12.5x13.5	420	16x16.5	700		
			12.5x16.0	450				
470	10x10.5	310	12.5x13.5	470	16x16.5	750		
	10x13.5	375	12.5x16.0	520				
	12.5x13.5	520	16x16.5	700				
680	12.5x13.5	530	16x16.5	750				
	12.5x16.0	550						
1000	12.5x16.0	600						
	16x16.5	750						
1500	16x16.5	750						

 Case size:  $\phi$  DxL(mm)

 Rated ripple current  
 mA rms(120Hz, 105°C)

# VT Series

105°C Standard

High Voltage

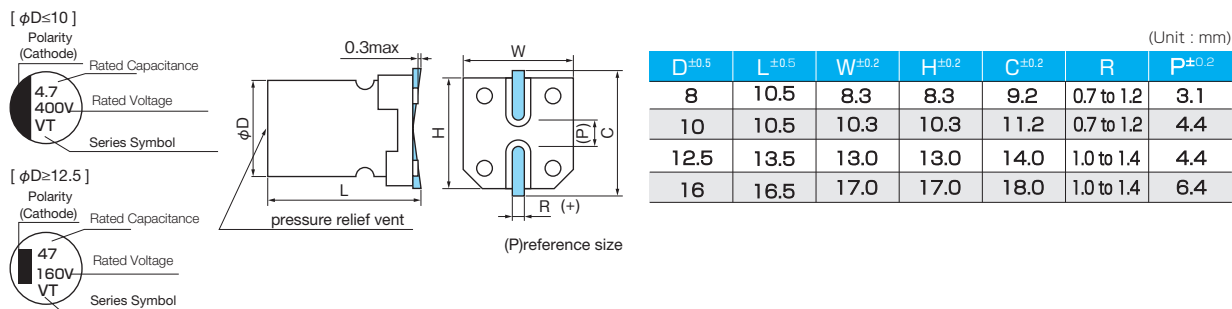


- 160 to 400V, 105°C 2,000 to 3,000hours
- Non solvent proof

## Specifications

Items	Condition	Specifications				
Rated voltage (V)	—	160	200	250	400	
Surge voltage (V)	Room temperature	200	250	300	450	
Category temperature range (°C)	—	-40 to +105				
Capacitance tolerance (%)	120Hz/20°C	M : ±20				
Dissipation Factor (tan δ)	tanδ (max) 120Hz/20°C	0.20			0.25	
Leakage current (LC)	μA/after 2minutes (max)	CV ≤ 5.6	0.03CV + 15 μA			
		CV > 5.6	0.02CV + 25 μA			
Impedance ratio at low temperature	Based on the value at 120Hz, +20°C	-25°C Z/Z <sub>20°C</sub>	3	3	3	6
		-40°C Z/Z <sub>20°C</sub>	6	6	6	10
Endurance	105°C rated voltage applied (With the rated ripple current)	Test	φ8 to φ10 : 2,000hours, φ12.5 to φ16 : 3,000hours			
		△C/C	Within ±25% of the initial value			
		tanδ	Less than 200% of the specified value			
		LC	Less than the specified value			

## Marking, Dimensions



## Ripple Current Frequency Coefficient

Frequency:F(Hz)	50Hz	120Hz	300Hz	1kHz	10kHz≤F
Capacitance:C(μF) All ITEM	0.70	1.00	1.17	1.30	1.50

## Size, Rated Ripple Current

μF	160		200		250		400	
	Case size	Rated ripple current	Case size	Rated ripple current	Case size	Rated ripple current	Case size	Rated ripple current
2.2							8×10.5	25
3.3					8×10.5	31	10×10.5	36
4.7					8×10.5	37	10×10.5	38
6.8					8×10.5	44	12.5×13.5	47
10	8×10.5	57	10×10.5	64	10×10.5	64	12.5×13.5	57
22	12.5×13.5	112	12.5×13.5	112	12.5×13.5	112	16×16.5	115
33	12.5×13.5	137	12.5×13.5	137	16×16.5	150		
47	16×16.5	180	16×16.5	180	16×16.5	180		
68	16×16.5	215	16×16.5	215				
82	16×16.5	235						

Case size: φD×L(mm)

 Rated ripple current  
 mA rms (120Hz, 105°C)