

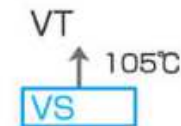
VS

Series

Standard



- Solvent proof (within 2 minutes)



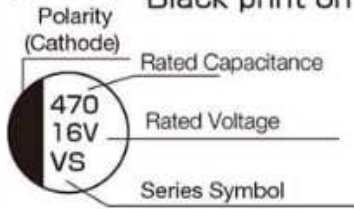
## ■ Specifications

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)		-		-40 to +105								
Capacitance tolerance (%)		120Hz/20°C		M : ±20								
Dissipation Factor (tan δ)	tan δ (max) 120Hz/20°C	φ	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
		-40°C	Z/Z <sub>20°C</sub>	15	8	6	4	4	3	3	3	3
Endurance	105 °C, 1,000hours rated voltage applied (With the rated ripple current)	ΔC/C		Within ±20% of the initial value								
		tan δ		Less than 200% of the specified value								
		LC		Less than the specified value								

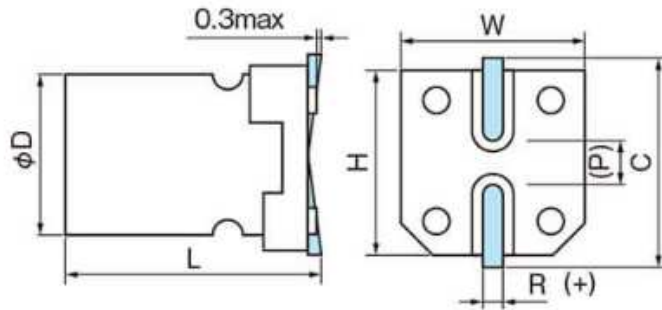
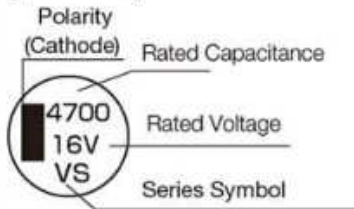
## ■ Marking, Dimensions

(Unit : mm)

[  $\phi D \leq 10$  ] Black print on the case top



[  $\phi D \geq 12.5$  ]



A pressure relief vent is provided for  $\phi D=8$  or bigger (P)reference size

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

## ■ Ripple Current Frequency Coefficient

Frequency:F(Hz)		$100 \leq F < 1k$	$1k \leq F < 10k$	$10k \leq F < 100k$	$100k \leq F$
Capacitance:C( $\mu F$ )	$C \leq 4.7$	1.00	1.30	1.50	1.80
	$4.7 < C \leq 33$	1.00	1.20	1.30	1.45
	$33 < C$	1.00	1.10	1.20	1.30

# Aluminum Electrolytic Type / Surface Mount Type

**RoHS compliance**

## ■ Size, Rated Ripple Current

μF	V	4		6.3		10		16		25	
4.7										4x5.4	13
10								4x5.4	18	4x5.4	18
										5x5.4	20
22				4x5.4	22	4x5.4	20	4x5.4	20	5x5.4	25
						5x5.4	25	5x5.4	27	6.3x5.4	36
33		4x5.4	18	4x5.4	22	4x5.4	22	5x5.4	28	5x5.4	29
				5x5.4	27	5x5.4	30	6.3x5.4	40	6.3x5.4	44
47		4x5.4	24	4x5.4	23	4x5.4	25	5x5.4	30	6.3x5.4	48
				5x5.4	33	5x5.4	30	6.3x5.4	48	8x6.5	80
56		4x5.4	27	5x5.4	32	6.3x5.4	40	6.3x5.4	52	6.3x5.4	58
68		5x5.4	31	6.3x5.4	43	6.3x5.4	50	6.3x5.4	56	6.3x5.4	65
100		5x5.4	43	5x5.4	40	5x5.4	40	6.3x5.4	60	6.3x5.4	80
		6.3x5.4	50	6.3x5.4	50	6.3x5.4	53	8x6.5	100	6.3x7.7	91
150		6.3x5.4	52	6.3x5.4	55	6.3x5.4	62	6.3x7.7	105	6.3x7.7	100
								8x6.5	120	8x10.5	140
220		6.3x5.4	57	6.3x5.4	67	6.3x5.4	67	6.3x7.7	105	8x10.5	175
				6.3x7.7	105	6.3x7.7	105	8x6.5	105	10x7.7	160
						8x6.5	105	8x10.5	150		
330		6.3x7.7	100	6.3x7.7	105	6.3x7.7	135	8x10.5	195	8x10.5	220
						8x10.5	195	10x7.7	175	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	8×10.5	230	8×10.5	290	8×10.5	290	10×10.5	340		
			10×10.5	315	10×10.5	315	10×13.5	390	10×13.5	430
							12.5×13.5	500	12.5×13.5	580
1500	10×10.5	315	10×10.5	410	10×10.5	335	10×13.5	430	12.5×16.0	850
			10×13.5	450	10×13.5	460	12.5×13.5	550		
2200	10×10.5	340	10×13.5	500	12.5×13.5	680	12.5×16.0	750		
	10×13.5	440	12.5×13.5	620	12.5×16.0	700	16×16.5	950	16×16.5	1050
3300	10×13.5	490	12.5×13.5	660	16×16.5	1000	16×16.5	1000		
			12.5×16.0	700						
4700	12.5×13.5	600	16×16.5	1000						
	12.5×16.0	630								
6800	12.5×16.0	650								
	16×16.5	950								

Case size:  $\phi$  D×L(mm)

Rated ripple current  
mArms(120Hz, 105°C)

## ■ Size, Rated Ripple Current

$\mu\text{F}$ \ V	35		50		63		100	
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		
1.0			4×5.4	8	4×5.4	8	4×5.4	8
2.2			4×5.4	11	4×5.4	11	5×5.4	12
							6.3×5.4	14
3.3	4×5.4	13	4×5.4	14	5×5.4	14	6.3×7.7	32
					6.3×5.4	30	8×6.5	30
4.7	4×5.4	15	4×5.4	14	5×5.4	19	5×5.4	15
			5×5.4	19	6.3×5.4	25	6.3×5.4	21
							6.3×7.7	35
10	4×5.4	18	5×5.4	20	6.3×5.4	24	6.3×5.4	25
	5×5.4	25	6.3×5.4	31	6.3×7.7	39	6.3×7.7	35
					8×6.5	25	8×10.5	77
22	5×5.4	34	6.3×5.4	42	6.3×7.7	49	8×10.5	84
	6.3×5.4	42	6.3×7.7	51	8×6.5	55	10×10.5	126
			8×6.5	70	8×10.5	98		
33	6.3×5.4	50	6.3×7.7	60	8×10.5	112	10×10.5	133
	8×6.5	85	8×6.5	70				
47	6.3×5.4	58	6.3×7.7	63	8×10.5	119	10×10.5	140
	6.3×7.7	78	8×6.5	85	10×10.5	160	10×13.5	160
	8×6.5	85	8×10.5	120			12.5×13.5	250
68	6.3×7.7	80	8×6.5	70	10×10.5	140	10×13.5	180
	8×6.5	90	8×10.5	120	10×13.5	160	12.5×13.5	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<sub>rms</sub>(120Hz, 105°C)