

VD

Series

Low Impedance



- Solvent proof (within 2 minutes)



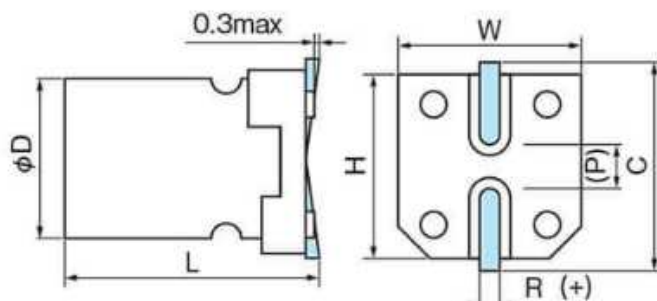
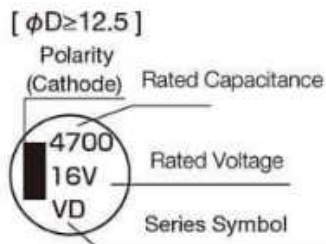
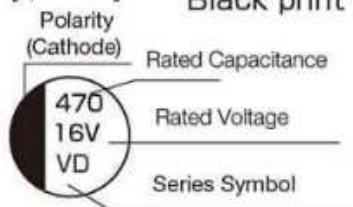
■ Specifications

Items		Condition	Specifications									
Rated voltage (V)		—	4	6.3	10	16	25	35	50	63	80	100
Surge voltage (V)		Room temperature	5.0	8.0	13	20	32	44	63	79	95	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	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07
		φ12.5 to φ16	0.40	0.38	0.34	0.30	0.28	0.22	0.18	0.16	0.16	0.14
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 _{20°C}	3	2	2	2	2	2	2	2	2	2
		-55°C Z/Z _{20°C}	5	4	4	3	3	3	3	3	3	3
Endurance	105°C, 2,000hours rated voltage applied (With the rated ripple current)	ΔC/C	Within ±20% 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

(Unit : mm)

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



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

D ± 0.5	L	W ± 0.2	H ± 0.2	C ± 0.2	R	P ± 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(μF)	C ≤ 33	0.35	0.70	0.90	1.00
	33<C ≤ 150	0.40	0.85	0.92	1.00
	150<C	0.60	0.85	0.95	1.00

Aluminum Electrolytic Type / Surface Mount Type

RoHS compliance

■ Size, Rated Ripple Current

μF \ V	6.3			10			16			25			35		
10										4×5.4	1.6	80	5×5.4	1.3	150
15							4×5.4	2.2	80	5×5.4	1.6	150	5×5.4	1.3	150
22				4×5.4	2.6	80	5×5.4	2.2	80	5×5.4	1.6	80	5×5.4	1.3	80
27	4×5.4	3.0	80	5×5.4	2.6	150	5×5.4	2.2	150	6.3×5.4	1.6	230	6.3×5.4	1.3	230
33	5×5.4	3.0	150	5×5.4	2.6	150	6.3×5.4	2.2	230	6.3×5.4	1.6	230	6.3×5.4	1.3	230
47	5×5.4	3.0	150	6.3×5.4	2.6	230	6.3×5.4	2.2	230	6.3×5.4	1.6	230	6.3×5.4	1.3	230
56	5×5.4	3.0	150	6.3×5.4	2.6	230	6.3×5.4	2.2	230	6.3×5.4	1.6	230	6.3×7.7	1.3	280
68	6.3×5.4	3.0	230	6.3×5.4	2.6	230	6.3×5.4	2.2	230	6.3×5.4	1.6	230	6.3×7.7	1.3	280
100	6.3×5.4	3.0	230	6.3×5.4	2.6	230	6.3×5.4	2.2	230	6.3×7.7	1.6	280	8×10.5	1.3	300
										8×6.5	1.6	280			
150	6.3×5.4	3.0	230	6.3×5.4	2.6	230	8×6.5	2.2	280	6.3×7.7	1.6	450	8×10.5	1.3	300
							8×10.5	2.2	280						
220	6.3×5.4	3.0	230	6.3×7.7	2.6	280	6.3×7.7	2.2	280	8×10.5	1.6	450	8×10.5	1.3	450
				8×6.5	2.6	280									
330	6.3×7.7	3.0	280	8×10.5	2.6	450	8×10.5	2.2	450	8×10.5	1.6	450	10×10.5	1.3	670
	8×6.5	3.0	280												
470	8×10.5	3.0	450	8×10.5	2.6	450	8×10.5	2.2	450	10×10.5	1.6	670	10×10.5	1.3	670
680	8×10.5	3.0	450	10×10.5	2.6	670	10×10.5	2.2	670	10×10.5	1.6	670	12.5×13.5	1.3	820

1000	8×10.5	3.0	450	10×10.5	2.6	670	10×10.5	2.2	670	12.5×13.5	1.6	820	16×16.5	1.3	1260
1500	10×10.5	3.0	670	12.5×13.5	2.6	820	12.5×13.5	2.2	820	12.5×16.5	1.6	950	18×16.5	1.3	1500
2200	12.5×13.5	3.0	820	12.5×16.5	2.6	950	12.5×16.5	2.2	1260	16×16.5	1.6	1260	18×21.5	1.3	1750
3300	12.5×16.5	3.0	950	16×16.5	2.6	1260	16×16.5	2.2	1260	18×21.5	1.6	1260			
4700	16×16.5	3.0	1260	16×16.5	2.6	1260	18×16.5	2.2	1260						
6800	18×16.5	3.0	1500	18×16.5	2.6	1500									
8200	18×21.5	3.0	1750	18×21.5	2.6	1750									

Case size: ϕ DxL(mm)

Impedance(Ω)
max at 100kHz, 20°C

Rated ripple current
mA rms(100kHz, 105°C)

56	8x10.5	1.0	300									
68	8x10.5	1.0	300									
100	8x10.5	1.0	300	10x10.5	0.8	450	10x10.5	0.8	200	12.5x13.5	0.7	450
150	10x10.5	1.0	550	12.5x13.5	0.8	700	12.5x13.5	0.8	450	12.5x16.5	0.7	550
220	10x10.5	1.0	550	12.5x13.5	0.8	700	12.5x16.5	0.8	550	16x16.5	0.7	650
										18x21.5	0.7	950
330	10x12.5	1.0	550	16x16.5	0.8	900	16x16.5	0.8	650	16x21.5	0.7	850
470	12.5x13.5	1.0	650	16x16.5	0.8	900	16x21.5	0.8	900	18x21.5	0.7	950
680	16x16.5	1.0	1000	16x21.5	0.8	1150	18x21.5	0.8	950			
1000	18x16.5	1.0	1500	18x21.5	0.8	1250						
1500	18x21.5	1.0	1620									

Case size: ϕ DxL(mm)

Impedance(Ω)
max at 100kHz, 20°C

Rated ripple current
mA rms(100kHz, 105°C)