

VH Series Chip Type Aluminum Electrolytic Capacitors

Features

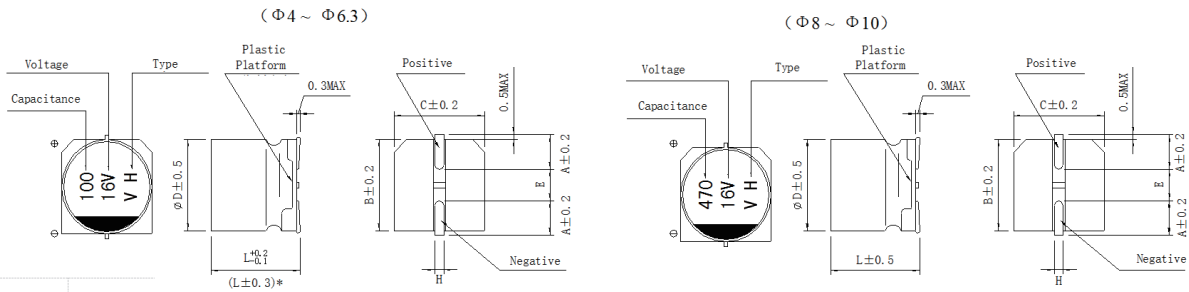
- Case diameter: : Φ 4mm – Φ 10mm
- Reflow soldering is available.
- Available for high density surface mounting.
- Adapted to the ROHS directive.



Specifications

Items	Performance Characteristics												
Operating Temperature Range	-55°C ~ +105°C(6.3-100V), -40°C ~ +105°C(160-400V)												
Rated Voltage Range	6.3V ~ 400V												
Nominal Capacitance Range	1 ~ 1000 μ F												
Capacitance Tolerance	\pm 20% (20°C , 120Hz)												
Leakage Current	6.3to100V						160-400V						
	I \leq 0.01CRVR or 3(μ A) Whichever is greater(at 20°C, after 2 minutes)						I \leq 0.04CRVR + 100(μ A) Whichever is greater(at 20°C, after 1 minutes)						
Dissipation Factor (Max) 20°C, 120Hz	U _R (V)	6.3	10	16	25	35	50	63	80	100	120-250	350-400	
	tg δ	0.32	0.24	0.20	0.16	0.14	0.12	0.12	0.11	0.10	0.15	0.20	
Load Life	After 2000 hours . application of rated voltage at 105°C, the capacitor shall meet the following requirement:												
	Capacitance Change		Within \pm 30% of the initial value (\pm 20% of 160-400V)										
	Dissipation Factor		Not more than 300% of the initial specified value(\leq 200% of 160-400V)										
	Leakage Current		Not more than the initial specified value										
Shelf Life	After storage for 1000 hours at +105°C, UR to be applied for 30 minutes ,the capacitors shall meet the requirement of load life above												
Low Temperature Stability Impedance Ratio (120Hz)	U _R (V)	6.3	10	16	25	35	50	63	80	100	160-250	350-400	
	Z(-25°C)/Z(+20°C)	4	4	3	3	3	2	3	4	4	-	-	
	Z(-40°C)/Z(+20°C)	-	-	-	-	-	-	-	-	-	6	10	
Resistance to Soldering Heat	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.												
	Capacitance Change		Within \pm 10% of the initial value										
	Dissipation Factor		Not more than the initial specified value										
	Leakage Current		Not more than the initial specified value										

Case Size Table



* Apply to Φ6.3×7.7

	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 7.7	8 × 6.5	8 × 10.5	10 × 10.5	8 × 12.5	10 × 12.5	
A	1.8	2.1	2.4	2.4	2.9	2.9	3.2	2.9	3.2	
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	8.3	10.3	
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	8.3	10.3	
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	3.1	4.5	
L	5.4	5.4	5.4	7.7	6.5	10.5	10.5	12.5	12.5	
H	0.5 ~ 0.8					0.8 ~ 1.1				

(mm)

Note: The tolerance of L for 160-400V is ±1

Nominal Capacitance, Rated Voltage, Rated Ripple Current and Case Size Table

WV (Vdc)	Cap (μA)	Size	mArms 120Hz/125°C	WV (Vdc)	Cap (μA)	Size	mArms 120Hz/125°C	WV (Vdc)	Cap (μA)	Size	mArms 120Hz/125°C	WV (Vdc)	Cap (μA)	Size	mArms 120Hz/125°C
6.3	22	4×5.4	22	16	10	4×5.4	18	35	47	6.3×7.7	80	50	10	6.3×5.4	36
	33	4×5.4	26		22	5×5.4	30		100	8×10.5	230		22	6.3×5.4	32
	47	5×5.4	36		33	5×5.4	32		220	10×10.5	260		33	6.3×7.7	60
	100	5×5.4	38		47	6.3×5.4	50		330	10×10.5	450		47	8×10.5	210
	220	6.3×5.4	86		100	6.3×5.4	60		470	10×12.5	500		100	8×10.5	230
	330	6.3×7.7	105		220	6.3×7.7	100		560	10×12.5	510		220	10×10.5	375
	470	8×10.5	340		330	8×10.5	290		10	6.3×5.4	26		22	8×10.5	100
	680	8×10.5	350		470	8×10.5	320		22	6.3×7.7	48		33	10×10.5	100
	1000	10×10.5	495		680	10×10.5	470		33	8×10.5	140		47	10×10.5	150
	1500	10×12.5	560		1000	10×12.5	510		47	8×10.5	170		100	10×12.5	180
2200	10×12.5	580	1200	10×12.5	520	100	10×10.5	310							
10	10	4×5.4	20	25	10	5×5.4	21	63	150	10×12.5	330	80			
	22	5×5.4	27		22	5×5.4	23		10	6.3×7.7	24		10	8×10.5	57
	33	5×5.4	35		47	6.3×5.4	38		22	8×10.5	100		15	8×12.5	65
	47	5×5.4	34		100	6.3×7.7	66		33	10×10.5	150		22	10×12.5	80
	100	6.3×5.4	60		220	8×10.5	240		47	10×12.5	180		10	10×10.5	75
	220	6.3×7.7	105		330	10×10.5	410		56	10×12.5	180		15	10×12.5	81
	330	8×10.5	290		470	10×10.5	450						22	10×12.5	83
	470	8×10.5	320		560	10×12.5	500						2.2	8×10.5	29
	680	10×10.5	395		680	10×12.5	510		3.3	8×10.5	36		3.3	8×10.5	30
	1000	10×10.5	450						4.7	8×10.5	42		4.7	8×12.5	40
1500	10×12.5	520				6.8	8×10.5	64	6.8	10×12.5	51				
35	4.7	4×5.4	16	50	1	4×5.4	6.3	250	8.2	10×10.5	70	400	5.6	10×12.5	51
	10	5×5.4	27		2.2	4×5.4	11						6.8	10×12.5	52
	22	6.3×5.4	44		3.3	4×5.4	14						8.2	10×12.5	55
	33	6.3×5.4	48		4.7	5×5.4	19						10	10×12.5	60

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

Frequency Coefficient of Ripple Current

Frequency	50Hz	120Hz	300Hz	1KHz	≥ 10KHz
Coefficient	0.70	1.00	1.17	1.36	1.50