VH series

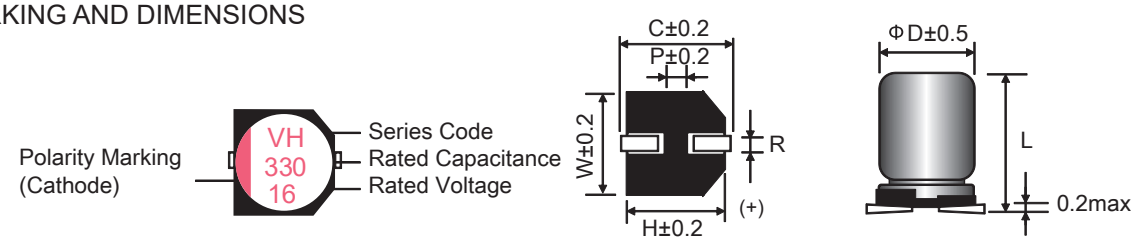
- Super low ESR,High ripplie current capability
- Rated voltage :4~25V.
- Endurance:1,000hours at 125℃
- Applications:Motherboard,DC/DC Converter,Adapter,SPS,VCR, Camcorder,DSC,PDA,HD Drive,MO Drive,etc.
- ROHS compliant
- Halogen Free compliant

SPECIFICATIONS

Items	Conditions	Characteristics	
Category Temperature Range	—	-55 to +125℃	
Rated Voltage Range	—	4.0 ~ 20V	
Capacitance Tolerance	at 20℃,120HZ	±20%(M)	
Surge Voltage	at 105℃	Rated voltage ×1.15V	
Leakage Current	at 20℃after 2 minutes	I ≦ 0.2CV or 300(uA) Whichever is greater measured,after 2minutes application of rated working voltage at +20℃. Please see the attached characteristics list	
Dissipation Factor (tan δ)	at 20℃,120Hz	Please see the attached characteristics list	
Characteristics of Impedance at low, high temperature	at -55℃,100kHz	Z(-55℃)/Z(+20℃)	≦1.25
	at -25℃,100kHz	Z(-25℃)/Z(+20℃)	≦1.15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 1,000 hours at 125℃.	Appearance	NO significant damage.
		Capacitance change	≦±20% of the initial value.
		DF (tan δ)	≦150% of the initial specified value.
		ESR	≦150% of the initial specified value.
		Leakage current	≦The initial specified value.
Damp Heag (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to store 60℃, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance	NO significant damage.
		Capacitance change	≦±20% of the initial value.
		DF (tan δ)	≦150% of the initial specified value.
		ESR	≦150% of the initial specified value.
		Leakage current	≦The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through aprotective resistor (R = 1 kΩ) and discharge for 5 minutes 30 seconds.	Appearance	NO significant damage.
		Capacitance change	≦±20% of the initial value.
		DF (tan δ)	≦150% of the initial specified value.
		ESR	≦150% of the initial specified value.
		Leakage current	≦The initial specified value.

※ Note：If any doubt arises, measure the leakage current after following voltage treatment.
Voltage treatmen：DC rated voltage are applied to the capacitors for 120 minutes at 125℃.

MARKING AND DIMENSIONS



(Unit:mm)

ΦDxL	ΦD	L max	W	H	C	R	P
6.3×6	6.3	6.0	6.6	6.6	7.3	0.5~0.8	2.1
8×7	8.0	8.0	8.3	8.3	9.3	0.5~0.8	3.2
8x12	8.0	12.0	8.3	8.3	9.0	0.8~1.1	3.2
10×8	10.0	8.0	10.3	10.3	11.0	0.8~1.1	4.6
10×12	10.0	12.0	10.3	10.3	11.0	0.8~1.1	4.6

VH SERIES STANRD CHARACTERISITICS LIST

WV/Vdc (S.V.)	Cap (μF)	Size DxL	Leakage current (μA) max. ※2	ESR (mΩ) max. 100K to 300 KHz / 20℃	Rated Ripple Current (mA rms)		D.F. (tanδ) max. 120Hz / 20℃
					105℃ 100kHz	125℃ 100kHz	
4 (4.6)	150	6.3x6	300	35	2,450	700	0.12
	680	10X8	544	25	3,700	1,057	0.12
6.3 (7.25)	82	6.3x6	300	40	2,400	686	0.12
	100	6.3x6	300	40	2,400	686	0.12
10 (11.5)	120	8x7	300	35	2,800	800	0.12
	150	8x7	300	35	2,800	800	0.12
	330	10x8	660	30	3,700	1,057	0.12
16 (18.4)	39	6.3x6	300	50	2,050	586	0.12
	82	8x7	300	40	2,700	771	0.12
	150	10x8	480	35	3,020	863	0.12
	180	10X8	576	35	3,020	863	0.12
	220	8x12	704	20	930	266	0.12
	270	8x12	864	20	4,520	1,291	0.12
	330	10X12	1,056	18	4,520	1,291	0.12
	680	10X12	2,176	18	4,900	1,400	0.12
25 (28.75)	22	6.3x6	300	60	1,650	471	0.12
	47	8x7	300	45	2,000	571	0.12
	82	10x8	410	45	2,400	686	0.12
	100	10X12	500	30	4,320	1,234	0.12
	150	10X12	750	45	4,320	1,234	0.12

※ 1. Capacitance tolerance : ±20% (M)
※ 2. After 2 minutes

FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz ≦ f < 1kHz	1kHz ≦ f < 10kHz	10kHz ≦ f < 100kHz	100kHz ≦ f < 500kHz
Coefficient	0.05	0.3	0.7	1