



## • Specifications

Items	Characteristics	
Temperature range	-55 to +125°C	
Rated voltage range	16 to 80Vdc	
Capacitance range	22 to 1,000µF	
Capacitance tolerance	±20% [M] (at 20°C, 120Hz)	
Tangent of loss angle	Less than or equal to the value of Standard Ratings (at 20°C, 120Hz)	
Leakage current	Less than or equal to the value of Standard Ratings (at 20°C, after 2 minutes)	
ESR	Less than or equal to the value of Standard Ratings	
Characteristics of impedance	$Z_{+125^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25, Z_{-55^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$ at 100kHz	
Endurance	125°C, 4,000 hrs at rated voltage	
	Appearance	No significant damage
	Capacitance change	Within±20% of the initial value
	Tangent of loss angle (tanδ)	≤150% of the initial specified value
	ESR(mΩ)	≤150% of the initial specified value
	Leakage current	≤The initial specified value
Damp Heat (Steady State)	60°C, 90 to 95% RH, 1,000 hrs, No-applied Voltage	
	Appearance	No significant damage
	Capacitance change	Within±20% of the initial value
	Tangent of loss angle (tanδ)	≤150% of the initial specified value
	ESR(mΩ)	≤150% of the initial specified value
	Leakage current	≤The initial specified value
Resistance to soldering heat	VPS (230°C, 75s)	
	Appearance	No significant damage
	Capacitance change	Within±10% of the initial value
	Tangent of loss angle (tanδ)	≤130% of the initial specified value
	ESR(mΩ)	≤130% of the initial specified value
	Leakage current	≤The initial specified value

\*In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 125°C

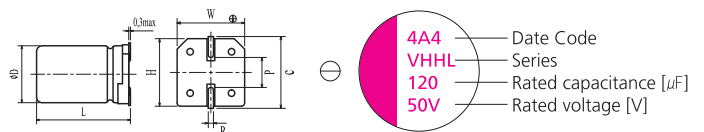
## • Size List

(unit: mm)

RV (SV) µF	16 (18.4)	25 (28.7)	35 (40.2)	50 (57.5)	63 (78.8)	80 (100.0)
10						6.3×5.9
18						8×6.9
22				6.3×5.9	6.3×5.9	8×6.9
27			5×5.9			
39					8×6.9	8×11.9
47			6.3×5.9		8×6.9	8×11.9
56		5×5.9	6.3×5.9			8×11.9
68				8×6.9		10×12.6
82	5×5.9		8×6.9		8×11.9	
100			8×6.9			10×12.6
120		6.3×5.9		8×11.9	10×12.6	
150					10×12.6	
180	6.3×5.9	8×6.9	8×11.9		10×12.6	
220				10×12.6		
270	8×6.9					
330			10×12.6			
390		8×11.9				
560	8×11.9	10×12.6				
1000	10×12.6					
1500	10×12.6					

RV: Rated Voltage [V] SV: Surge Voltage [V] (at room temperature)

## • Marking and Dimensions

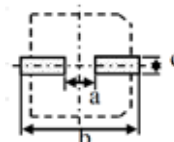


(unit: mm)

Size	∅D±0.5	L +0.1 -0.4	W±0.2	H±0.2	C±0.2	R	P±0.2
5×5.9	5.0	5.9	5.3	5.3	6.0	0.6~0.8	1.4
6.3×5.9	6.3	5.9	6.6	6.6	7.3	0.6~0.8	2.1
8×6.9	8.0	6.9	8.3	8.3	9.0	0.6~0.8	3.2
8×11.9	8.0	11.9	8.3	8.3	9.0	0.8~1.1	3.2
10×12.6	10.0	12.6	10.3	10.3	11.0	0.8~1.1	4.6

## • Recommended Land Pattern Dimension of PCB

(unit: mm)



Size	a	b	c
5×5.9	1.4	7.4	1.6
6.3×5.9	2.1	9.1	1.6
8×6.9	2.8	11.1	1.9
8×11.9	2.8	11.1	1.9
10×12.6	4.3	13.1	1.9

### • Standard Ratings

Rated Voltage [Vdc]	Rated Capacitance [ $\mu$ F]	Size $\varnothing$ D x L [mm]	ESR (20°C, 100kHz) [m $\Omega$ ] [max.]	Rated Ripple Current (105°C, 100kHz) [mA rms]	Tangent of Loss Angel [max]	Leakage Current [ $\mu$ A, max]	Part Number
16	220	8 x 6.9	30	1500	0.1	105	16VHHL220MD7
	560	8 x 11.9	16	3800	0.1	268	16VHHL560MD12
	1000	10 x 12.6	13	4300	0.1	480	16VHHL1000ME12
25	100	8 x 6.9	41	1200	0.1	75	25VHHL100MD7
	270	8 x 11.9	19	3300	0.1	202	25VHHL270MD12
	470	10 x 12.6	15	4100	0.1	352	25VHHL470ME12
35	68	8 x 6.9	44	1200	0.1	71	35VHHL68MD7
	220	8 x 11.9	21	3300	0.1	231	35VHHL220MD12
	330	10 x 12.6	16	3900	0.1	346	35VHHL330ME12
50	39	8 x 6.9	45	1300	0.1	58	50VHHL39MD7
	120	8 x 11.9	25	2900	0.1	180	50VHHL120MD12
	180	10 x 12.6	19	3500	0.1	270	50VHHL180ME12
63	22	8 x 6.9	48	1100	0.1	42	63VHHL22MD7
	56	8 x 11.9	27	2900	0.1	105	63VHHL56MD12
	100	10 x 12.6	24	3000	0.1	189	63VHHL100ME12
80	39	8 x 11.9	35	1600	0.1	93	80VHHL39MD12
	68	10 x 12.6	28	2100	0.1	163	80VHHL68ME12