



• **Specifications**

Items	Characteristics	
Temperature range	-55 to +125°C	
Rated voltage range	2.5 to 16Vdc	
Capacitance range	39 to 2,700µF	
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, 1,000 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

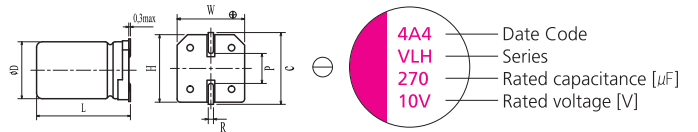
• **Size List**

(unit: mm)

RV (SV) µF	2.5 (2.9)	4 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)
39					5×5.9
68				5×5.9	6.3×5.9
82					6.3×5.9
100			5×5.9		6.3×5.9
120			5×5.9	6.3×5.9	8×6.9
150		5×5.9		6.3×5.9	8×6.9
180	5×5.9				
220			6.3×5.9		
270				8×6.9	8×11.9
330		6.3×5.9	6.3×5.9		8×11.9
390	6.3×5.9		8×6.9		
560	6.3×5.9	8×6.9 8×11.9			
680	8×6.9				
820	8×11.9		8×11.9		
1000	8×11.9				
1200		8×11.9			
1500	8×11.9	8×11.9			
2700	10×12.6				

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

• **Marking and Dimensions**



(unit: mm)

Size	ØD±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 to 0.8	1.4
6.3×5.9	6.3	5.9	6.6	6.6	7.3	0.6 to 0.8	2.1
8×6.9	8.0	6.9	8.3	8.3	9.0	0.6 to 0.8	3.2
8×11.9	8.0	11.9	8.3	8.3	9.0	0.8 to 1.1	3.2
10×12.6	10.0	12.6	10.3	10.3	11.0	0.8 to 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 [μF]	Size ØD x L [mm]	ESR (20°C, 100kHz) [mΩ] [max.]	Rated Ripple Current (100kHz)[mArms]		Tangent of Loss Angel [max]	Leakage Current [μA, max]	Part Number
				-55 to +105°C	+105 to +125°C			
2.5	180	5 x 5.9	19	2800	886	0.1	300	2VLH180MB6
	390	6.3 x 5.9	15	3160	1000	0.1	300	2VLH390MC6
	560	6.3 x 5.9	16	3500	1107	0.1	300	2VLH560MC6
	680	8 x 6.9	20	3370	1066	0.1	500	2VLH680MD7
	820	8 x 11.9	9	5380	1702	0.1	500	2VLH820MD12
	1000	8 x 11.9	10	5380	1702	0.1	500	2VLH1000MD12
	1500	8 x 11.9	10	5150	1630	0.1	750	2VLH1500MD12
	2700	10 x 12.6	12	5070	1604	0.1	1350	2VLH2700ME12
4	150	5 x 5.9	20	2730	864	0.1	300	4VLH150MB6
	330	6.3 x 5.9	15	3160	1000	0.1	300	4VLH330MC6
	560	8 x 6.9	22	3220	1019	0.1	500	4VLH560MD7
	560	8 x 11.9	9	5380	1702	0.1	500	4VLH560MD12
	1200	8 x 11.9	12	4700	1487	0.1	960	4VLH1200MD12
	1500	8 x 11.9	12	4700	1487	0.1	1200	4VLH1500MD12
6.3	100	5 x 5.9	25	2150	680	0.1	300	6VLH100MB6
	120	5 x 5.9	21	2660	841	0.1	300	6VLH120MB6
	220	6.3 x 5.9	15	3160	841	0.1	300	6VLH220MC6
	330	6.3 x 5.9	17	3390	1073	0.1	415	6VLH330MC6
	390	8 x 6.9	22	3220	1019	0.1	491	6VLH390MD7
	820	8 x 11.9	12	4700	1487	0.1	1033	6VLH820MD12
10	68	5 x 5.9	28	2540	804	0.1	300	10VLH68MB6
	120	6.3 x 5.9	22	2600	823	0.1	300	10VLH120MC6
	150	6.3 x 5.9	22	2600	823	0.1	300	10VLH150MC6
	270	8 x 6.9	22	2600	1019	0.1	500	10VLH270MD7
16	39	5 x 5.9	27	2350	743	0.1	300	16VLH39MB6
	68	6.3 x 5.9	25	2440	772	0.1	300	16VLH68MC6
	82	6.3 x 5.9	25	2490	788	0.1	300	16VLH82MC6
	100	6.3 x 5.9	24	2490	788	0.1	300	16VLH100MC6
	120	8 x 6.9	27	2900	917	0.1	500	16VLH120MD7
	150	8 x 6.9	22	3220	1019	0.1	500	16VLH150MD7
	270	8 x 11.9	16	4070	1288	0.1	864	16VLH270MD12
	330	8 x 11.9	16	4070	1288	0.1	1056	16VLH330MD12