

# VLH Surface mount type

## series

- Higher temperature endurance guaranteed than VL series
- Super low ESR, High ripple current
- Large capacitance, Small size
- Load life of 1,000h at 125°C



## 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 <sub>+125°C</sub> /Z <sub>+20°C</sub> ≤ 1.25, Z <sub>-55°C</sub> /Z <sub>+20°C</sub> ≤ 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
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
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

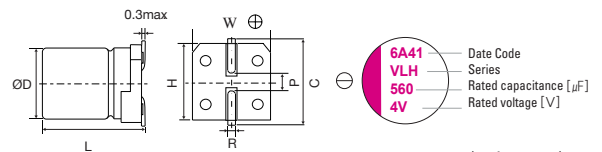
## SIZE LIST

(unit : mm)

μF	RV(SV)	2.5 (3.3)	4 (5.2)	6.3 (8.2)	10 (11.5)	16 (18.4)
39						5 x 5.9
68					5 x 5.9	6.3 x 5.9
82						6.3 x 5.9
100				5 x 5.9		6.3 x 5.9
120				5 x 5.9	6.3 x 5.9	8 x 6.9
150			5 x 5.9		6.3 x 5.9	8 x 6.9
180	5 x 5.9					
220				6.3 x 5.9		
270					8 x 6.9	8 x 11.9
330			6.3 x 5.9	6.3 x 5.9		8 x 11.9
390	6.3 x 5.9			8 x 6.9		
560	6.3 x 5.9		8 x 6.9 8 x 11.9			
680	8 x 6.9					
820	8 x 11.9			8 x 11.9		
1000	8 x 11.9					
1200			8 x 11.9			
1500	8 x 11.9		8 x 11.9			
2700	10 x 12.6					

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

## MARKING AND DIMENSIONS

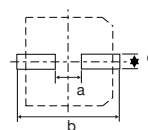


(unit : mm)

Size	φ D±0.5	L <sup>+0.1</sup> <sub>-0.4</sub>	W±0.2	H±0.2	C±0.2	R	P±0.2
5 x 5.9	5.0	5.9	5.3	5.3	6.0	0.6 to 0.8	1.4
6.3 x 5.9	6.3	5.9	6.6	6.6	7.3	0.6 to 0.8	2.1
8 x 6.9	8.0	6.9	8.3	8.3	9.0	0.6 to 0.8	3.2
8 x 11.9	8.0	11.9	8.3	8.3	9.0	0.8 to 1.1	3.2
10 x 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 x 5.9	1.4	7.4	1.6
6.3 x 5.9	2.1	9.1	1.6
8 x 6.9	2.8	11.1	1.9
8 x 11.9	2.8	11.1	1.9
10 x 12.6	4.3	13.1	1.9

# Conductive Polymer Aluminum Capacitors

## STANDARD RATINGS

Rated Voltage [Vdc]	Rated Capacitance [μF]	Size Φ D x L [mm]	ESR (20°C, 100kHz) [mΩ] [max.]	Rated Ripple Current (100kHz) [mA rms]		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	0.10	300	2VLH180MB6
	390	6.3 x 5.9	15	3160	1000	0.10	300	2VLH390MC6
	560	6.3 x 5.9	16	3500	1107	0.10	300	2VLH560MC6
	680	8 x 6.9	20	3370	1066	0.10	500	2VLH680MD7
	820	8 x 11.9	9	5380	1702	0.10	500	2VLH820MD12
	1000	8 x 11.9	10	5380	1702	0.10	500	2VLH1000MD12
	1500	8 x 11.9	10	5150	1630	0.10	750	2VLH1500MD12
	2700	10 x 12.6	12	5070	1604	0.10	1350	2VLH2700ME12
4	150	5 x 5.9	20	2730	864	0.10	300	4VLH150MB6
	330	6.3 x 5.9	15	3160	1000	0.10	300	4VLH330MC6
	560	8 x 6.9	22	3220	1019	0.10	500	4VLH560MD7
	560	8 x 11.9	9	5380	1702	0.10	500	4VLH560MD12
	1200	8 x 11.9	12	4700	1487	0.10	960	4VLH1200MD12
	1500	8 x 11.9	12	4700	1487	0.10	1200	4VLH1500MD12
6.3	100	5 x 5.9	25	2150	680	0.10	300	6VLH100MB6
	120	5 x 5.9	21	2660	841	0.10	300	6VLH120MB6
	220	6.3 x 5.9	15	3160	1000	0.10	300	6VLH220MC6
	330	6.3 x 5.9	17	3390	1073	0.10	415	6VLH330MC6
	390	8 x 6.9	22	3220	1019	0.10	491	6VLH390MD7
	820	8 x 11.9	12	4700	1487	0.10	1033	6VLH820MD12
10	68	5 x 5.9	23	2540	804	0.10	300	10VLH68MB6
	120	6.3 x 5.9	22	2600	823	0.10	300	10VLH120MC6
	150	6.3 x 5.9	22	2600	823	0.10	300	10VLH150MC6
	270	8 x 6.9	22	3220	1019	0.10	500	10VLH270MD7
16	39	5 x 5.9	27	2350	743	0.10	300	16VLH39MB6
	68	6.3 x 5.9	25	2440	772	0.10	300	16VLH68MC6
	82	6.3 x 5.9	25	2490	788	0.10	300	16VLH82MC6
	100	6.3 x 5.9	24	2490	788	0.10	300	16VLH100MC6
	120	8 x 6.9	27	2900	917	0.10	500	16VLH120MD7
	150	8 x 6.9	22	3220	1019	0.10	500	16VLH150MD7
	270	8 x 11.9	16	4070	1288	0.10	864	16VLH270MD12
	330	8 x 11.9	16	4070	1288	0.10	1056	16VLH330MD12

