

VLH series

- Higher temperature guaranteed than VL series
- High ripple current



Specifications

Items	Characteristics	
Temperature range	-55°C ~ +125°C	
Rated voltage range	2.5Vdc ~ 16.0Vdc	
Capacitance range	68μF ~ 2,700μF	
Capacitance tolerance	±20% [M] (at 20°C, 120Hz)	
Tangent of loss angle	Less than or equal to the value of STANDARD RATING (at 20°C, 120Hz)	
Leakage current	Less than or equal to the value of STANDARD RATING (at 20°C, after 2 minutes)	
ESR	Less than or equal to the value of STANDARD RATING	
Characteristics of impednace	Z _{+105°C/Z+20°C} ≤ 1.25, Z _{-55°C/Z+20°C} ≤ 1.25 at 100kHz 125°C, 1,000 hrs at rated voltage	
Endurance	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, 1000 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

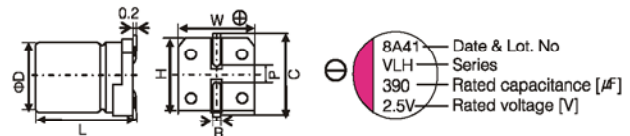
Dimensions

(unit : mm)

RV μF	2.5(3.3)	4(5.2)	6.3(8.2)	10(11.5)	16(18.4)
68					6.3x5.9
82					6.3x5.9
120				6.3x5.9	8.0x6.9
150					8.0x6.9
220			6.3x5.7 (5.8, 5.9)		
270				8.0x6.9	8.0x11.9
330		6.3x5.9	6.3x5.7 (5.8, 5.9)		8.0x11.9
390	6.3x5.7 (5.8, 5.9)		8.0x6.9		
560	6.3x5.7 (5.8, 5.9)	8.0x6.9 (11.9)			
680	8.0x6.9				
820	8.0x11.9		8.0x11.9		
1000	8.0x6.9				
1200		8.0x11.9			
1500		8.0x11.9			
2700	10x12.6				

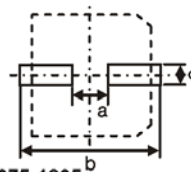
RV:Rated voltage [V] SV:Surge voltage [V] (at room temperature)

Marking and Size list



Size	φD±0.5	L	+0.1 -0.4	W±0.2	H±0.2	C±0.2	R	P±0.2
6.3x5.7	6.3	(5.7±0.3)		6.6	6.6	7.3	0.6~0.8	2.1
6.3x5.8	6.3	(5.8±0.3)		6.6	6.6	7.3	0.6~0.8	2.1
6.3x5.9	6.3	5.9		6.6	6.6	7.3	0.6~0.8	2.1
8.0x6.9	8.0	6.9		8.3	8.3	9.0	0.6~0.8	3.2
8.0x11.9	8.0	11.9		8.3	8.3	9.0	0.8~1.1	3.2
10.0x12.6	10.0	12.6		10.3	10.3	11.0	0.8~1.1	4.6

Recommended land pattern dimension of PCB



Size	a	b	c
6.3x5.7, 5.8, 5.9	2.1	9.1	1.6
8.0x6.9	2.8	11.1	1.9
8.0x11.9	2.8	11.1	1.9
10.0x12.6	4.3	13.1	1.9

Standard ratings

Rated Voltage [Vdc]	Rated Capacitance [μF]	Size φD x L [mm]	ESR (20°C, 100kHz) [mΩ][max.]	Rated Ripple Current (105°C, 100kHz) [mA rms, max.]	Tangent of Loss Angle [max.]	Leakage Current [μA, max.]	Part Number
2.5	390	6.3x5.7	15	3160	0.10	300	2VLH390MC5R7
	390	6.3x5.8	15	3160	0.10	300	2VLH390MC5R8
	390	6.3x5.9	15	3160	0.10	300	2VLH390MC6
	560	6.3x5.7	16	3500	0.10	300	2VLH560MC5R7
	560	6.3x5.8	16	3500	0.10	300	2VLH560MC5R8
	560	6.3x5.9	16	3500	0.10	300	2VLH560MC6
	680	8.0x6.9	20	3370	0.10	500	2VLH680MD7
	820	8.0x11.9	9	5380	0.10	500	2VLH820MD12
	1000	8.0x6.9	12	4260	0.10	500	2VLH1000MD7
	1500	8.0x11.9	10	5150	0.10	750	2VLH1500MD12
2700	10x12.6	12	5070	0.10	1350	2VLH2700ME12	
4	330	6.3x5.9	15	3160	0.10	300	4VLH330MC6
	560	8.0x6.9	22	3220	0.10	500	4VLH560MD7
	560	8.0x11.9	9	5380	0.10	500	4VLH560MD12
	1200	8.0x11.9	12	4700	0.10	960	4VLH1200MD12
	1500	8.0x11.9	12	4700	0.10	1200	4VLH1500MD12
6.3	220	6.3x5.7	15	3160	0.10	300	6VLH220MC5R7
	220	6.3x5.8	15	3160	0.10	300	6VLH220MC5R8
	220	6.3x5.9	15	3160	0.10	300	6VLH220MC6
	330	6.3x5.7	17	3390	0.10	415	6VLH330MC5R7
	330	6.3x5.8	17	3390	0.10	415	6VLH330MC5R8
	330	6.3x5.9	17	3390	0.10	415	6VLH330MC6
	390	8.0x6.9	22	3220	0.10	491	6VLH390MD7
	820	8x11.9	12	4700	0.10	1033	6VLH820MD12
10	120	6.3x5.9	22	2600	0.10	300	10VLH120MC6
	270	8.0x6.9	22	3220	0.10	500	10VLH270MD7
16	68	6.3x5.9	25	2440	0.10	300	16VLH68MC6
	82	6.3x5.9	25	2490	0.10	300	16VLH82MC6
	120	8.0x6.9	27	2900	0.10	500	16VLH120MD7
	150	8.0x6.9	22	3500	0.10	500	16VLH150MD7
	270	8.0x11.9	11	4070	0.10	864	16VLH270MD12
	330	8.0x11.9	11	4070	0.10	1056	16VLH330MD12