

VLE series

- Eco friendly (Halogen less)
- High ripple current
- Large capacitance or lower ESR than VSE series



Specifications

Items	Characteristics	
Temperature range	-55°C ~ +105°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 impedance	$Z_{+105^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$, $Z_{-55^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$ at 100kHz	
Endurance	105°C, 2,000 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, 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	

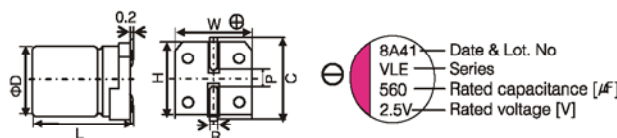
* In case of some problems for measured values, measure after applying rated voltage for 2.5 to 25V products for 120 minutes at 105°C

Dimensions

μF	RV (SV)	(unit : mm)				
		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	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	2VLE390MC5R7
	390	6.3x5.8	15	3160	0.10	300	2VLE390MC5R8
	390	6.3x5.9	15	3160	0.10	300	2VLE390MC6
	560	6.3x5.7	16	3500	0.10	300	2VLE560MC5R7
	560	6.3x5.8	16	3500	0.10	300	2VLE560MC5R8
	560	5.3x5.9	16	3500	0.10	300	2VLE560MC6
	680	8.0x6.9	20	3370	0.10	500	2VLE680MD7
	820	8.0x11.9	9	5380	0.10	500	2VLE820MD12
	1000	8.0x6.9	12	4260	0.10	500	2VLE1000MD7
	1500	8.0x11.9	10	5150	0.10	750	2VLE1500MD12
2700	10x12.6	12	5070	0.10	1350	2VLE2700ME12	
4	330	6.3x5.9	15	3160	0.10	300	4VLE330MC6
	560	8.0x6.9	22	3220	0.10	500	4VLE560MD7
	560	8.0x11.9	9	5380	0.10	500	4VLE560MD12
	1200	8.0x11.9	12	4700	0.10	960	4VLE1200MD12
	1500	8.0x11.9	12	4700	0.10	1200	4VLE1500MD12
6.3	220	6.3x5.7	15	3160	0.10	300	6VLE220MC5R7
	220	6.3x5.8	15	3160	0.10	300	6VLE220MC5R8
	220	6.3x5.9	15	3160	0.10	300	6VLE220MC6
	330	6.3x5.7	17	3390	0.10	415	6VLE330MC5R7
	330	6.3x5.8	17	3390	0.10	415	6VLE330MC5R8
	330	6.3x5.9	17	3390	0.10	415	6VLE330MC6
	390	8.0x6.9	22	3220	0.10	491	6VLE390MD7
	820	8 x11.9	12	4700	0.10	1033	6VLE820MD12
10	120	6.3x5.9	22	2600	0.10	300	10VLE120MC6
	270	8.0x6.9	22	3220	0.10	500	10VLE270MD7
16	68	6.3x5.9	25	2440	0.10	300	16VLE68MC6
	82	6.3x5.9	25	2490	0.10	300	16VLE82MC6
	120	8.0x6.9	27	2900	0.10	500	16VLE120MD7
	150	8.0x6.9	22	3500	0.10	500	16VLE150MD7
	270	8.0x11.9	11	4070	0.10	864	16VLE270MD12
	330	8.0x11.9	11	4070	0.10	1056	16VLE330MD12