

VLL series

- Longer life cycle than VL series
- High ripple current



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 impednace	Z _{+105°C/Z+20°C} ≤ 1.25, Z _{-55°C/Z+20°C} ≤ 1.25 at 100kHz	
Endurance	105°C, 5,000 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 120 minutes at 105°C

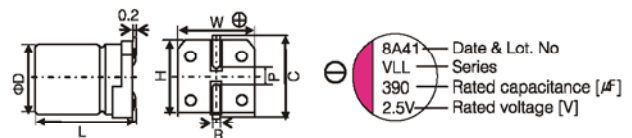
Dimensions

(unit : mm)

RV (SV)	2.5(3.3)	4(5.2)	6.3(8.2)	10(11.5)	16(18.4)
68					6.3x5.9
82					6.9x5.9
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	8.0x11.9			
2700	10x12.6				

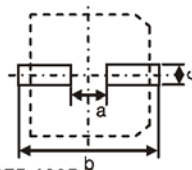
RV:Rated voltage [V] SV:Surge voltage [V] (at room temperature)

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	2VLL390MC5R7
	390	6.3x5.8	15	3160	0.10	300	2VLL390MC5R8
	390	6.3x5.9	15	3160	0.10	300	2VLL390MC6
	560	6.3x5.7	16	3500	0.10	300	2VLL560MC5R7
	560	6.3x5.8	16	3500	0.10	300	2VLL560MC5R8
	560	6.3x5.9	16	3500	0.10	300	2VLL560MC6
	680	8.0x6.9	20	3370	0.10	500	2VLL680MD7
	820	8.0x11.9	9	5380	0.10	500	2VLL820MD12
	1000	8.0x6.9	12	4260	0.10	500	2VLL1000MD7
	1500	8.0x11.9	10	5150	0.10	750	2VLL1500MD12
2700	10x12.6	12	5070	0.10	1350	2VLL2700ME12	
4	330	6.3x5.9	15	3160	0.10	300	4VLL330MC6
	560	8.0x6.9	22	3220	0.10	500	4VLL560MD7
	560	8.0x11.9	9	5380	0.10	500	4VLL560MD12
	1200	8.0x11.9	12	4700	0.10	960	4VLL1200MD12
	1500	8.0x11.9	12	4700	0.10	1200	4VLL1500MD12
6.3	220	6.3x5.7	15	3160	0.10	300	6VLL220MC5R7
	220	6.3x5.8	15	3160	0.10	300	6VLL220MC5R8
	220	6.3x5.9	15	3160	0.10	300	6VLL220MC6
	330	6.3x5.7	17	3390	0.10	415	6VLL330MC5R7
	330	6.3x5.8	17	3390	0.10	415	6VLL330MC5R8
	330	6.3x5.9	17	3390	0.10	415	6VLL330MC6
	390	8.0x6.9	22	3220	0.10	491	6VLL390MD7
	820	8.0x11.9	12	4700	0.10	1033	6VLL820MD12
10	120	6.3x5.9	22	2600	0.10	300	10VLL120MC6
	270	8.0x6.9	22	3220	0.10	500	10VLL270MD7
16	68	6.3x5.9	25	2440	0.10	300	16VLL68MC6
	82	6.3x5.9	25	2490	0.10	300	16VLL82MC6
	120	8.0x6.9	27	2900	0.10	500	16VLL120MD7
	150	8.0x6.9	22	3500	0.10	500	16VLL150MD7
	270	8.0x11.9	11	4070	0.10	864	16VLL270MD12
	330	8.0x11.9	11	4070	0.10	1056	16VLL330MD12