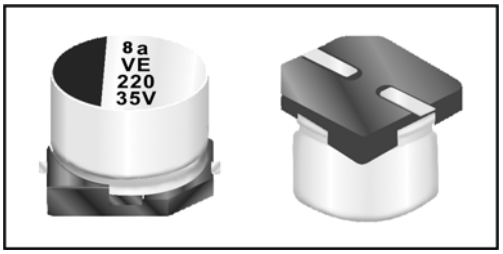
Features

- 3 ~ 16φ, 85℃, 2,000 hours assured
- Chip type large capacitance capacitors
- Designed for surface mounting on high density PC board.
- RoHS Compliance



SPECIFICATIONS

Items	Performance
Operating Temperature Range	-40℃ ~ +85℃
Capacitance Tolerance	±20% (at 120Hz, 20℃)
Leakage Current (at 20℃)	Time: after 2 minutes; Case size: 4 ~ 10φ: I = 0.01CV or 3μA, whichever is greater; 12.5 ~ 16φ: I = 0.03CV or 4μA, whichever is greater. Where, C = rated capacitance in μF V = rated DC working voltage in V
Dissipation Factor (Tan δ at 120Hz, 20℃)	Rated Voltage: 4 / 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100; Tan δ (max): 0.42 / 0.28 / 0.24 / 0.20 / 0.14 / 0.12 / 0.10 / 0.10 / 0.10
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.

Rated Voltage			4	6.3	10	16	25	35	50	63	100
Impedance Ratio	Z(-25℃)/Z(+20℃)	φD < 12.5	7	4	3	2	2	2	2	2	2
		φD ≧ 12.5	17	10	8	6	4	3	3	3	3
	Z(-40℃)/Z(+20℃)	φD < 12.5	-	5	4	3	2	2	2	2	2
		φD ≧ 12.5	-	12	10	8	5	4	3	3	3

Load Life Test	
Test Time	2,000 Hrs
Capacitance Change	Within ±20% of initial value (4V: ±30%)
Dissipation Factor	Less than 200% of specified value (4V: ±300%)
Leakage Current	Within specified value

* The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 hrs at 85℃.

Shelf Life Test: Test time: 1,000 hrs; other items are the same as those for the load life test. The rated voltage shall be applied to the capacitors before the measurements for 160 ~ 450V(Refer to JIS C 5102).

Ripple Current & Frequency Multipliers

V. DC(V) \ Freq.(Hz)	50	120	1K	10K up
Under 16	0.8	1.0	1.15	1.25

DIAGRAM OF DIMENSIONS

Fig. 1

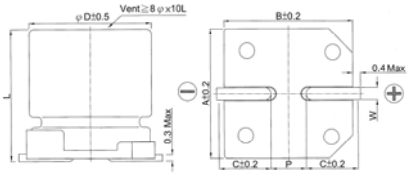
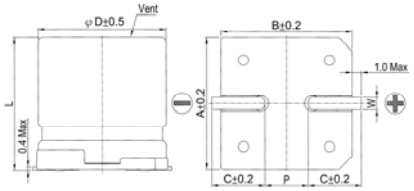


Fig. 2

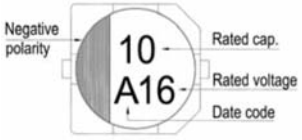


LEAD SPACING AND DIAMETER Unit: mm

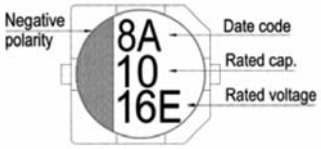
φD	L	A	B	C	W	P ± 0.2	Fig. No.
3	5.3 ± 0.2	3.3	3.3	1.5	0.45 ~ 0.75	0.8	3
4	5.3 ± 0.2	4.3	4.3	2.0	0.5 ~ 0.8	1.0	1
5	5.3 ± 0.2	5.3	5.3	2.3	0.5 ~ 0.8	1.5	1
6.3	5.3 ± 0.2	6.6	6.6	2.7	0.5 ~ 0.8	2.0	1
6.3	7.7 ± 0.3	6.6	6.6	2.7	0.5 ~ 0.8	2.0	1
8	10 ± 0.5	8.4	8.4	3.0	0.7 ~ 1.1	3.1	1
8	10.3 ± 0.5	8.4	8.4	3.0	0.7 ~ 1.1	3.1	1
10	10 ± 0.5	10.4	10.4	3.3	0.7 ~ 1.1	4.7	1
10	10.3 ± 0.5	10.4	10.4	3.3	0.7 ~ 1.1	4.7	1
12.5	13.5 ± 0.5	13.0	13.0	4.8	1.1 ~ 1.4	4.4	2
12.5	16 ± 0.5	13.0	13.0	4.8	1.1 ~ 1.4	4.4	2
16	16.5 ± 0.5	17.0	17.0	5.8	1.1 ~ 1.4	6.4	2

MARKING

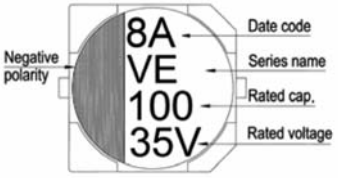
φD = 3 mm



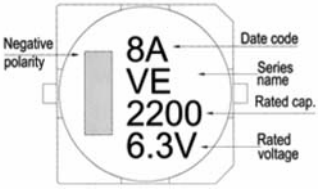
φD = 4 ~ 6.3mm



φD = 8 ~ 10 mm



φD ≧ 12.5mm



Dimension: φD × L(mm)
Ripple Current: mA/rms at 120 Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V. DC / μF	Contents	4V (0G)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63 (1J)	
		φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA
0.1	0R1													4×5.3	3	4×5.3	2
0.22	R22													4×5.3	5	4×5.3	3
0.33	R33													4×5.3	6	4×5.3	4
0.47	R47													4×5.3	7	4×5.3	5
1	010													4×5.3	10	4×5.3	8
2.2	2R2													4×5.3	14	4×5.3	12
3.3	3R3									3×5.3	14	3×5.3	14	4×5.3	19	5×5.3	27
4.7	4R7					3×5.3	14	3×5.3	14	4×5.3	26	4×5.3	26	4×5.3	26	5×5.3	30
10	100			3×5.3	14	4×5.3	26	4×5.3	26	5×5.3	44	5×5.3	44	5×5.3	44		
22	220	3×5.3	14	4×5.3	26	5×5.3	44	5×5.3	44	5×5.3	44	6.3×5.3	59	6.3×5.3	59	8×10	139
33	330	4×5.3	31	4×5.3	31	5×5.3	50	5×5.3	55	6.3×5.3	67	6.3×5.3	67	6.3×7.7	75	8×10	139
47	470	4×5.3	31	5×5.3	50	6.3×5.3	67	6.3×5.3	67	6.3×5.3	67	6.3×7.7	109	6.3×7.7	75	10×10	226
68	680	5×5.3	58	5×5.3	58	6.3×5.3	89	6.3×5.3	89	6.3×7.7	109	6.3×7.7	109	8×10	190	10×10	226
100	101	5×5.3	58	6.3×5.3	89	6.3×5.3	89	6.3×5.3	89	6.3×7.7	109	8×10	252	8×10	190	10×10	226
220	221	6.3×5.3	110	6.3×5.3	110	6.3×7.7	124	6.3×7.7	124	8×10	252	8×10.3	252	10×10	320	12.5×13.5	500
		6.3×7.7	124	6.3×7.7	124	8×10	252	8×10	252			10×10	400				
330	331	6.3×7.7	124	6.3×7.7	124	8×10	252	8×10	252	10×10	400	10×10.3	400	12.5×13.5	600	12.5×16	600
470	471	8×10	252	8×10	252	10×10	400	10×10	400	10×10	400	12.5×13.5	750	12.5×16	740	16×16.5	850
1,000	102			10×10	430	10×10	430	12.5×13.5	750	12.5×13.5	750	16×16.5	1,100				
2,200	222			12.5×13.5	890	12.5×13.5	890	16×16.5	1100	16×16.5	1100						
3,300	332			12.5×16	1,000	16×16.5	1,200	16×16.5	1200								
4,700	472			16×16.5	1,200	16×16.5	1,200										
6,800	682																

V. DC / μF	Contents	100V (2A)	
		φD×L	Ma
4.7	4R7		
10	100	8×10	94
22	220	8×10	94
33	330	10×10	120
47	470	10×10	120
68	680	12.5×13.5	380
100	101	12.5×13.5	380
220	221	16×16.5	600