

## JV Series Long Life, High CV



### Features

- ◆ Chip type long life capacitance in large case sizes
- ◆ Chip type with Endurance of 3000 hours at +105°C
- ◆ Designed for surface mounting on high density PC board
- ◆ Applicable to automatic insertion machine using carrier tape
- ◆ RoHS Compliant

### Specifications

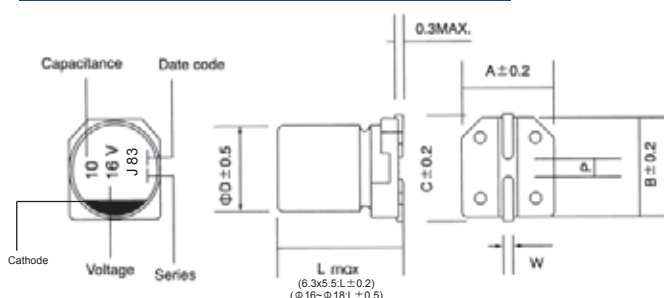
Item	Performance Characteristics						
Operating Temperature Range	-55~+105°C						
Rated Voltage Range	6.3~50 VDC						
Capacitance Range	0.1 to 1000 μF						
Capacitance Tolerance	±20%(120Hz,+20°C)						
Leakage Current (+20°C,max.)	I ≤ 0.01 CV or 3 (μA) After 2 minutes whichever is greater measured with rated working voltage applied.						
Dissipation Factor (tan δ , at 20°C , 120Hz)	Working Voltage(VDC)	6.3	10	16	25	35	50
	D.F.(%)max.	28	24	20	16	13	12
Low Temperature Characteristics (at 120Hz)	Impedance ratio max (at: 120Hz)						
	Working voltage(VDC)	6.3	10	16	25	35	50
	Z-25°C / Z+20°C	4	3	2	2	2	2
	Z-40°C / Z+20°C	10	7	5	3	3	3
Endurance	Test condition						
	Duration time	: 3000 Hrs					
	Ambient temperature	:+105°C					
	Applied voltage	:Rated DC working voltage					
	After test requirement at +20°C						
	Capacitance change	: Within ±30% of initial value					
	Dissipation factor	: Less than 300% of specified value					
	Leakage current	: Less than specified value					
Shelf Life	Test condition						
	Duration time	:1000 Hrs					
	Ambient temperature	:+105°C					
	Applied voltage	:None					
	After test requirement at +20°C	:Same limits as Endurance.					
	Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.						
Resistance to soldering heat	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 30 seconds.						
	Leakage current	Less than specified value					
	Capacitance change	Within ±10% of initial value					
	tan δ	Less than specified value					

### Multiplier for Ripple Current vs. Frequency

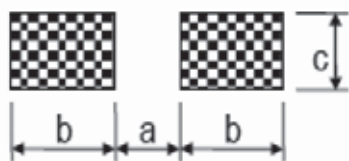
CAP(μF)\Frequency(Hz)	60(50)	120	500	1K	≥10K
0.1 ≤ CAP ≤ 100 μF	0.8	1.0	1.20	1.30	1.50
100 < CAP ≤ 1000 μF	0.8	1.0	1.10	1.15	1.20

φD	L	A	B	C	W	P
4	5.5	4.3	4.3	4.9	0.5~0.8	1.0
5	5.5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	5.5	6.6	6.6	7.2	0.5~0.8	2.2
6.3	6.1	6.6	6.6	7.2	0.5~0.8	2.2
6.3	7.7	6.6	6.6	7.2	0.5~0.8	2.2
8	6.5	8.3	8.3	9.0	0.5~0.8	2.3
8	10.5	8.3	8.3	9.0	0.7~1.1	3.1
10	10.5	10.3	10.3	11.0	0.7~1.1	4.5
12.5	14	13.0	13.0	13.9	1.0~1.4	4.5
16	17	17.0	17.0	18.0	1.0~1.4	6.6
16	21.5	17.0	17.0	18.0	1.0~1.4	6.6
18	16.5	19.0	19.0	20.0	1.0~1.4	6.6
18	21.5	19.0	19.0	20.0	1.0~1.4	6.6

### Diagram of Dimensions:(unit:mm)



## Recommended land pattern:(unit:mm)



$\Phi$ DxL	a	b	c
4xall	1	2.6	1.6
5xall	1.4	3	1.6
6.3xall	2.1	3.5	1.6
8xL(height $\leq$ 6.5)	2.1	4.5	1.6
8xL(height $>$ 6.5)	2.8	4.2	1.9
10xall	4.3	4.4	1.9
12.5xall	4.3	5.8	2.5
16xall	6	6.5	3.5
18xall	6	7.5	3.5

## Case Size

WV (Vdc)	Cap ( $\mu$ F)	Size (mm)	Rated Ripple current (mA <sub>RMS</sub> /105°C /120Hz)
6.3	22	4x5.5	22
6.3	33	5x5.5	33
6.3	47	5x5.5	36
6.3	100	6.3x5.5	68
6.3	220	6.3x7.7	120
6.3	330	8x10.5	230
6.3	470	10x10.5	290
6.3	1000	10x10.5	360
10	22	5x5.5	30
10	33	5x5.5	35
10	47	6.3x5.5	52
10	100	6.3x7.7	81
10	220	8x10.5	142
10	330	10x10.5	280
10	470	10x10.5	305
16	10	4x5.5	18
16	22	5x5.5	31
16	33	6.3x5.5	48
16	47	6.3x5.5	51
16	100	6.3x7.7	83
16	220	10x10.5	222
16	330	10x10.5	305
16	470	10x10.5	330
25	4.7	4x5.5	16
25	10	4x5.5	26
25	22	6.3x5.5	44
25	33	6.3x5.5	50

WV (Vdc)	Cap ( $\mu$ F)	Size (mm)	Rated Ripple current (mA <sub>RMS</sub> /105°C /120Hz)
25	47	6.3x7.7	66
25	100	8x10.5	118
25	220	10x10.5	300
25	330	10x10.5	395
25	470	10x10.5	470
35	4.7	4x5.5	16
35	10	5x5.5	27
35	22	6.3x5.5	45
35	33	6.3x7.7	58
35	47	8x10.5	93
35	100	10x10.5	155
35	220	10x10.5	340
35	330	10x10.5	420
50	0.1	4x5.5	1
50	0.22	4x5.5	3
50	0.33	4x5.5	3
50	0.47	4x5.5	5
50	1	4x5.5	8
50	2.2	4x5.5	12
50	3.3	4x5.5	17
50	4.7	5x5.5	22
50	10	6.3x5.5	33
50	22	6.3x7.7	58
50	33	8x10.5	140
50	47	8x10.5	170
50	100	10x10.5	300