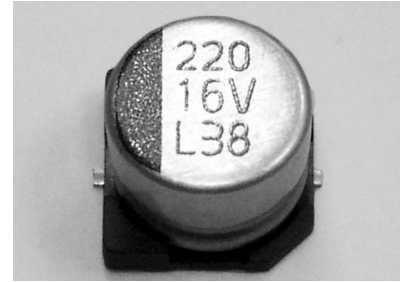


## SMD Aluminum Electrolytic Capacitors

### Features

- ◆ 85°C standard, case diameter  $\phi$  4~ $\phi$  10mm
- ◆ Reflow soldering is available
- ◆ Available for high density mounting
- ◆ For detail specifications, please refer to Engineering Bulletin No. E130



### Specifications

Item	Performance Characteristics									
Operating Temperature Range	-40 ~ +85°C									
Rated Voltage Range	4 ~ 50 VDC									
Capacitance Range	0.1 to 1000 $\mu$ F									
Capacitance Tolerance	$\pm$ 20% (120Hz, 20°C)									
Leakage Current (+20°C, max)	$I \leq 0.01CV$ or 3 ( $\mu$ A) After 2 minutes, whichever is greater measured with rated working voltage applied									
Dissipation Factor (tan $\delta$ )	(+20°C, at 120Hz)	Rated voltage(VDC)		4	6.3	10	16	25	35	50
		D.F.(%)	$\phi$ 4~6.3	0.4	0.26	0.22	0.18	0.16	0.13	0.12
		max	$\phi$ 8~10	0.45	0.35	0.26	0.20	0.16	0.14	0.12
Low Temperature Characteristics (120Hz)	Impedance ratio max	Rated voltage(VDC)		4	6.3	10	16	25	35	50
		Z-25°C / Z+20°C	7	4	3	2	2	2	2	
		Z-40°C / Z+20°C	15	8	8	4	4	3	3	
Load Life	Test conditions Duration time :2000 Hrs Ambient temperature :+85°C Applied voltage :Rate DC working voltage After test requirements at +20°C : Capacitance change :Within $\pm$ 25% of the initial value Dissipation factor :Not more than 200% of specified value Leakage current :Not more than the specified value									
Shelf Life	Test conditions Duration time :1000 Hrs Ambient temperature :+85°C Applied voltage :None After test requirements at +20°C : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.									

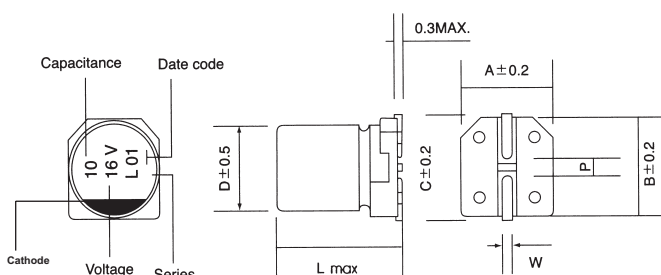
### Multiplier for Ripple Current vs. Frequency

Frequency(Hz)		60(50)	120	500	1K	10K $\leq$
Multiplier	0.1~47 $\mu$ F	0.8	1.0	1.20	1.30	1.50
	100~1000 $\mu$ F	0.8	1.0	1.10	1.15	1.20

### Multiplier for Ripple Current vs. Temperature

Temperature°C	50	70	85
Multiplier	2.0	1.6	1.0

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



$\phi$ D	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	1.9
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

Case Size

WV(SV) μF	4 (5)		6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)		50 (63)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1													4x5.5	1.0
0.22													4x5.5	2.0
0.33													4x5.5	2.8
0.47													4x5.5	4.0
1													4x5.5	8.4
2.2													4x5.5	13
3.3													4x5.5	17
4.7													4x5.5	20
10					4x5.5	20	4x5.5	23	4x5.5	27	4x5.5	29	6.3x5.5	33
22			4x5.5	28	4x5.5	33	4x5.5	37	6.3x5.5	42	6.3x5.5	46	8x6.5	80
					5x5.5	33								
33	4x5.5	28	4x5.5	37	4x5.5	41	6.3x5.5	49	6.3x5.5	52	6.3x5.5	58	8x6.5	200
			5x5.5	37	5x5.5	41								
47	4x5.5	33	4x5.5	45	6.3x5.5	52	6.3x5.5	58	6.3x5.5	60	8x6.5	115	8x6.5	240
			5x5.5	45										
100	6.3x5.5	56	6.3x5.5	70	6.3x5.5	76	6.3x5.5	86	8x6.5	160	8x10.5	280	10x10.5	500
220	6.3x5.5	96	8x6.5	150	8x6.5	190	8x10.5	290	8x10.5	300	10x10.5	570		
330	8x6.5	145	8x6.5	210	8x10.5	330	8x10.5	330	10x10.5	680				
470	8x6.5	220	8x10.5	380	10x10.5	680	10x10.5	690						
	8x10.5	220												
1000	10x10.5	500	10x10.5	700										

φ D×L(mm)

Ripple Current ( mA, rms ) at 85°C 120Hz