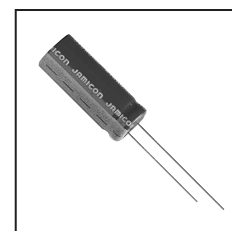


- High ripple current, low E.S.R. and long life.
- Suitable for output of switching power supplies.
- Corresponding product to RoHS

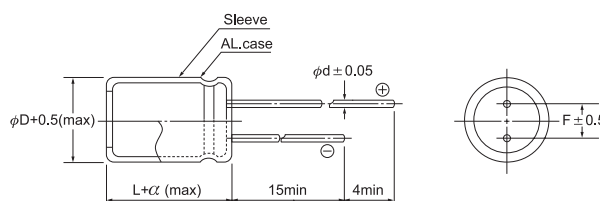


## ● SPECIFICATION

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	10 ~ 100VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M) +50% -10%(T)							
Leakage Current (20°C)	$I \leq 0.01CV$ *after 3 minutes				I : Leakage Current (μA) C : Rated Capacitance (μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	10	16	25	35	50	63	100
	S.V.	13	20	32	44	63	79	125
Dissipation Factor (tan δ) (120Hz 20°C)	Add 0.02 per 1000 μF for more than 1000 μF							
	W.V.	10	16	25	35	50	63	100
	tan δ	0.12	0.10	0.09	0.08	0.07	0.06	0.06
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)		10~16			25~100		
	-25°C / +20°C		3			2		
	-55°C / +20°C		6			4		
Load Life	After hours ( $\phi D \leq 8\text{mm}$ 2000 hours, $\phi D \geq 10\text{mm}$ 3000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage $\leq$ rate working voltage)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	$\leq$ initial specified value						
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)							
	Capacitance Change	$\leq \pm 20\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	$\leq 200\%$ of initial specified value						

## ● DIMENSIONS (mm)

$\phi D$	8	10	12.5	16	18
F	3.5	5.0	5.0	7.5	7.5
d	0.6	0.6	0.6	0.8	0.8
$\alpha$	1.5	1.5	2.0	2.0	2.0



## ● RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85	95	105
Multiplier	2.12	1.92	1.69	1.50	1.00

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
10~16V	0.45	0.60	0.83	0.94	0.98	1.00
25~35V	0.38	0.50	0.75	0.90	0.97	1.00
50~100V	0.36	0.46	0.70	0.88	0.94	1.00

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)  
 Max impedance : Ω 20°C 100kHz  
 Max ripple current : A(rms) 105°C 100kHz

μF	V(DC) Item	10			16			25		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
100				→	8x11	0.348	0.27	8x11	0.330	0.34
220		8x11	0.190	0.36	8x15	0.180	0.44	10x16	0.170	0.59
330		8x15	0.152	0.50	10x16	0.144	0.57	10x18	0.136	0.76
470		10x16	0.124	0.62	10x18	0.118	0.71	10x20	0.112	0.95
680		10x18	0.098	0.78	10x20	0.093	0.90	12.5x20	0.088	1.21
1000		10x20	0.080	1.00	12.5x20	0.076	1.16	12.5x25	0.072	1.62
2200		12.5x25	0.046	1.61	12.5x30	0.043	1.89	12.5x40	0.041	2.70
3300		12.5x30	0.038	2.00	12.5x40	0.036	2.44	16x40	0.034	3.04
4700		12.5x40	0.032	2.50	16x40	0.031	2.64			

All blank voltage on sleeve marking is the same voltage as" → "point to.

μF	V(DC) Item	35			50		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.
47				→	8x11	0.453	0.29
68		8x11	0.374	0.30	8x15	0.352	0.39
100		8x15	0.311	0.40	10x16	0.292	0.49
220		10x18	0.161	0.66	10x20	0.151	0.80
330		10x25	0.129	0.93	12.5x20	0.121	1.04
470		12.5x20	0.105	1.07	12.5x25	0.099	1.37
680		12.5x25	0.083	1.42	12.5x30	0.078	1.79
1000		12.5x30	0.068	1.87	12.5x40	0.064	2.48
2200		16x40	0.039	2.83			

μF	V(DC) Item	63			100		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.
47		8x15	0.424	0.35	10x25	0.368	0.44
68		10x16	0.330	0.43	12.5x20	0.286	0.51
100		10x18	0.274	0.55	12.5x25	0.238	0.68
220		12.5x20	0.142	0.92	16x36	0.123	1.19
330		12.5x25	0.113	1.24	18x40	0.098	1.64
470		12.5x30	0.093	1.61			
680		16x36	0.073	2.09			