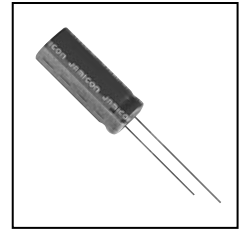


- High ripple current, low E.S.R. and long life.
- Suitable for output of switching power supplies.

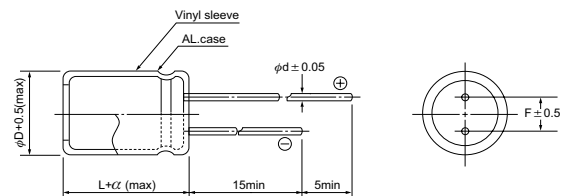


● SPECIFICATION

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. at +105°C, the capacitor shall meet the following limits.							
	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)

ϕD	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
α	1.5	1.5	1.5	1.5	1.5



● 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(Code)		10 (1A)			16 (1C)			25 (1E)		
	Code	Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
100	101				→	8x11.5	0.348	0.27	8x11.5	0.330	0.34
220	221		8x11.5	0.190	0.36	8x15	0.180	0.44	10x16	0.170	0.59
330	331		8x15	0.152	0.50	10x16	0.144	0.57	10x18	0.136	0.76
470	471		10x16	0.124	0.62	10x18	0.118	0.71	10x20	0.112	0.95
680	681		10x18	0.098	0.78	10x20	0.093	0.90	12.5x20	0.088	1.21
1000	102		10x20	0.080	1.00	12.5x20	0.076	1.16	12.5x25	0.072	1.62
2200	222		12.5x25	0.046	1.61	12.5x30	0.043	1.89	12.5x40	0.041	2.70
3300	332		12.5x30	0.038	2.00	12.5x40	0.036	2.44	16x40	0.034	3.04
4700	472		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(Code)		35 (1V)			50 (1H)		
	Code	Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.
47	470				→	8x11.5	0.453	0.29
68	680		8x11.5	0.374	0.30	8x15	0.352	0.39
100	101		8x15	0.311	0.40	10x16	0.292	0.49
220	221		10x18	0.161	0.66	10x20	0.151	0.80
330	331		10x25	0.129	0.93	12.5x20	0.121	1.04
470	471		12.5x20	0.105	1.07	12.5x25	0.099	1.37
680	681		12.5x25	0.083	1.42	12.5x30	0.078	1.79
1000	102		12.5x30	0.068	1.87	12.5x40	0.064	2.48
2200	222		16x40	0.039	2.83			

μF	V(Code)		63 (1J)			100 (2A)		
	Code	Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.
47	470		8x15	0.424	0.35	10x25	0.368	0.44
68	680		10x16	0.330	0.43	12.5x20	0.286	0.51
100	101		10x18	0.274	0.55	12.5x25	0.238	0.68
220	221		12.5x20	0.142	0.92	16x35.5	0.123	1.19
330	331		12.5x25	0.113	1.24	18x40	0.098	1.64
470	471		12.5x30	0.093	1.61			
680	681		16x35.5	0.073	2.09			