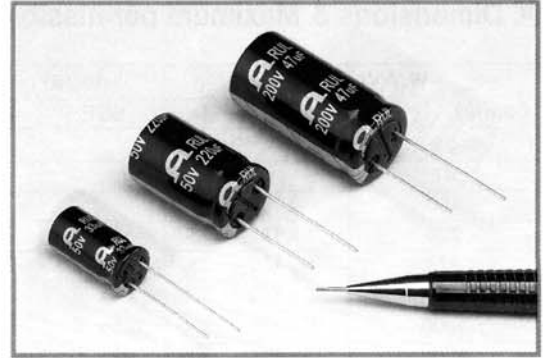


# RUL SERIES

105°C Long Life(5000H), Radial Leads

## Features

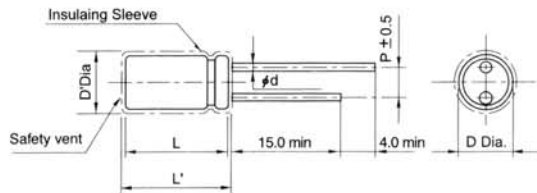
- Long life and excellent stability, Radial (equivalent to 13years at 60°C)
- No derating at high temperature
- Industrial and military applications
- Load life of 5000 hours at 105°C



## Specifications

Item	Performance Characteristics											
Operating temperature range	-40°C ~ +105°C											
Rated working voltage range	10V ~ 250V											
Nominal capacitance range	1μF ~ 2200μF, ±20%(at 20°C, 120Hz)											
D.C Leakage current(at 20°C)	The following specifications shall be satisfied when the rated voltage is applied for the required time. $I \leq 0.01CV + 2\mu A (10 \sim 100V) (3 \text{ min})$ $I \leq 0.04CV + 100\mu A (160 \sim 250V) (3 \text{ min})$ Where I=Leakage current(μA)    C=Nominal capacitance(μF)    V=Rated voltage(V)											
Tan δ (max., at 20°C, 120Hz)	W.V(V)	10	16	25	35	50	63	100	160	200	250	
	Tan δ	0.20	0.17	0.16	0.13	0.12	0.12	0.12	0.15	0.15	0.15	
	When capacitance is over 1000μF, Tan δ shall be added 0.02 to the listed value with increase of every each 1000μF											
Characteristics at low temperature(max.) (impedance ratio at 120Hz)	W.V(V)	10	16	25	35~100			160~250				
	Z-25°C/Z20°C		3	2	2	2			2			
	Z-40°C/Z20°C		6	5	4	3			3			
Load life	After applying rated working voltage for 5000 hours at +105°C and then being stabilized at +20°C, capacitors shall meet following limits.											
	Capacitance change	Within ± 20% of the initial measured value										
	Tan δ	≤ 200% of the initial specified value										
	Leakage current	≤ The initial specified value										
Shelf life	After storage for 1000 hours at +105°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.											
	Capacitance change	Within ± 20% of the initial measured value										
	Tan δ	≤ 200% of the initial specified value										
	Leakage current	≤ 200% of the initial specified value										

## Dimensions



### Standard lead style

φD	10.0	12.5	16.0	18.0
p	5.0		7.5	
φd	0.6		0.8	

D' = [D+0.5]Max.

L' = [L+1.5]Max. at D≥10.0

## Ripple current coefficient

### Frequency

Cap(μF)	Freq(Hz)					
	50	120	400	1K	10K	50-100K
Cap ≤ 10	0.8	1.0	1.30	1.45	1.65	1.70
10 < Cap ≤ 100	0.8	1.0	1.23	1.36	1.48	1.53
100 < Cap ≤ 1000	0.8	1.0	1.16	1.25	1.35	1.38
1000 < Cap	0.8	1.0	1.11	1.17	1.25	1.28

### Temperature

Temperature	≤ 70°C	85°C	105°C
Factor	2.2	1.8	1.0



# RUL SERIES

## ■ Dimensions & Maximum permissible ripple current

φ D x L(mm)

Cap(μF)	W.V(V)	10(1A)		16(1C)		25(1E)		35(1V)		50(1H)	
		SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>
33										10x20	190
47										10x20	245
68										10x20	320
100				10x16	185	10x20	255	10x20	290	12.5x20	410
150				10x20	295	12.5x20	345	12.5x20	390	12.5x25	540
220	10x20	330		12.5x20	395	12.5x20	450	12.5x25	515	16x25	710
330	12.5x20	435		12.5x25	530	12.5x25	600	16x25	690	16x31.5	930
470	12.5x20	570		16x25	690	16x25	770	16x25	890		
680	12.5x25	750		16x25	920	16x31.5	1000				
1000	16x25	970		16x31.5	1230	16x35.5	1320				
2200	16x35.5	1720									

Cap(μF)	W.V(V)	63(1J)		100(2C)		160(2C)		200(2D)		250(2E)	
		SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>
1.0								10x16	26	10x16	32
1.5								10x16	34	10x16	42
2.2								10x16	46	10x16	56
3.3								10x16	61	10x20	77
4.7								10x20	79	12.5x20	100
6.8								12.5x20	105	12.5x25	130
10				10x20	140	12.5x20	125	12.5x25	135	16x25	175
15				10x20	205	12.5x25	170	16x25	185	16x31.5	235
22				12.5x20	295	16x25	225	16x25	240	16x35.5	310
33	10x20	155		12.5x25	430	16x31.5	295	16x35.5	315	18x35.5	420
47	10x20	200		16x25	610	16x35.5	390	18x35.5	410	18x40	540
68	12.5x20	265									
100	12.5x20	350									
150	12.5x25	480									
220	16x25	630									
330	16x35.5	860									

I<sub>r</sub>: Maximum permissible ripple current[mA(rms) at 105°C, 120Hz]

Professional