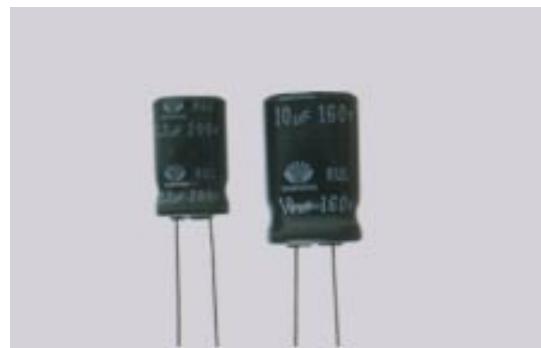


RUL SERIES

ALUMINUM ELECTROLYTIC CAPACITORS 105°C Long Life (5000H), Radial Leads

n Features

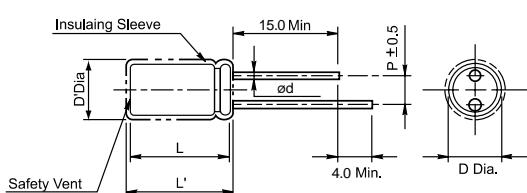
- Long life and excellent stability, Radial (equivalent to 13years at 60°C)
- No derating at high temperature
- Industrial and military applications
- load life of 5000 hours at 105°C



n 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)	<p>The following specifications shall be satisfied when the rated voltage is applied for the required time.</p> <p>I ≤ 0.01CV + 2μA (10~100V) (3 min) I ≤ 0.04CV + 100μA (160~250V) (3 min)</p> <p>Where I = Leakage current (μA) C = Nominal capacitance (μF) V = Rated voltage (V)</p>																
Tanδ(max., at 20°C, 120Hz)	W.V(V)	10	16	25	35	50	63	100	160	200	250						
	δ																
	<p>When capacitance is over 1000μF, δtan shall be added 0.02 to the listed value with increase of every each 1000μF</p>																
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	<p>After applying rated working voltage for 5000 hours at +105°C and then being stabilized at +20°C, capacitors shall meet following limits.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of initial measured value</td> </tr> <tr> <td>Tanδ</td> <td>≤ 200% of initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ Initial specified value</td> </tr> </table>										Capacitance change	Within ±20% of initial measured value	Tanδ	≤ 200% of initial specified value	Leakage current	≤ Initial specified value	
Capacitance change	Within ±20% of initial measured value																
Tanδ	≤ 200% of initial specified value																
Leakage current	≤ Initial specified value																
Shelf life	<p>After storage for 1000 hours at +105°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of initial measured value</td> </tr> <tr> <td>Tanδ</td> <td>≤ 200% of initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ 200% of initial specified value</td> </tr> </table>										Capacitance change	Within ±20% of initial measured value	Tanδ	≤ 200% of initial specified value	Leakage current	≤ 200% of initial specified value	
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n Case sizes and Dimensions



- Standard lead style

øD	10.0	13.0	16.0	18.0
p				
ød	5.0		7.5	

D' = [D + 0.5] Max. L' = [L + 1.5] Max. at D ≥ 10.0

n Ripple current coefficient

- Frequency

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

- Temperature

Temperature Factor	≤ 70 °C	85 °C	105 °C

RUL SERIES

Dimensions & Maximum permissible ripple current [mA(rms) at 105°C, 120Hz]

W.V Cap(μF)	ØD x L (mm)																						
	10		16		25		35		50		63		100		160		200		250				
SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R				
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	13x20	10	
6.8																			13x20	10	13x25	0	
10													10x20	14	13x20	12	13x25	5	16x25	13			
15													10x20	0	13x25	5	16x25	13	16x31.5	0			
22													13x20	20	16x25	17	16x25	5	16x35.5	17			
33								10x20	19	10x20	15	13x25	5		0	16x35.5	18	18x35.5	5				
47								10x20	0	10x20	5	16x25	29	16x31.5	22	18x35.5	5	18x40	23				
68								10x20	24	13x20	20		5		5		24		5				
100	10x16	185	10x20	255	10x20	29	13x20	5	13x20	0		43	16x35.5	29		0			31				
150	10x20	295	13x20	345	13x20	0	13x25	32	13x25	26		0		5		5		31		0			
220	10x20	330	13x20	395	13x20	450	13x25	39	16x25	0	16x25	5		61		39		5		42			
330	13x20	435	13x25	530	13x25	600	16x25	0	16x31.5	41	16x35.5	35		0		0		41		0			
470	13x20	570	16x25	690	16x25	770	16x25	51		0													
680	13x25	750	16x25	920	16x31.5	100		5															
1000	16x25	970		123	16x35.5	0																	
2200	16x35.5	172		0		132																	