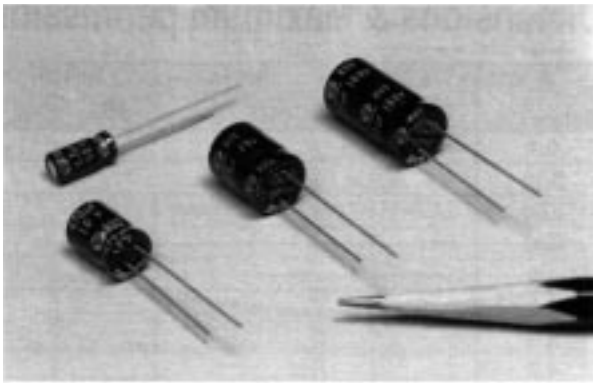
RUS SERIES

Lead-Free RoHS Compliant

ALUMINUM ELECTROLYTIC CAPACITORS
105˚C Standard, Radial Leads

Features

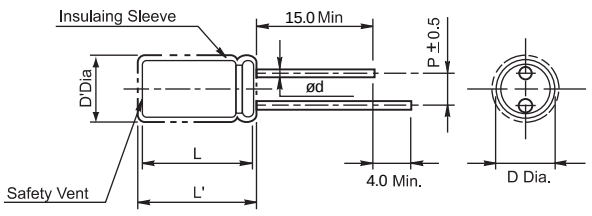


- 105˚C Standard, Radial
- Wide operating temperature range
- High and stable quality
- Very high CV capacity per unit volume
- Load life of 1000 hours at 105˚C
- Possible cleaning by Freon TE (to 100V : 3 min)

Specifications

Item	Performance Characteristics										
Operating temperature range	-40˚C ~ +105˚C			-40˚C ~ +105˚C			-25˚C ~ +105˚C				
Rated working voltage range	6.3V ~ 100V			160V ~ 250V			350 V ~ 450V				
Nominal capacitance range	0.1μF ~ 15000 μF, ±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 ≤ 0.01CV + 3μF (2min)			I ≤ 0.01CV + 20μA (5min)			I ≤ 0.02CV + 30μA (5min)				
	Where I = Leakage current(μA) C= Nominal capacitance (μF) V= Rated voltage (V)										
Tanδ (max., at 20˚C, 120Hz)	W.V(V)	6.3	10	16	25	35	50	63	100	160~250	350~450
	Tanδ	0.24	0.20	0.17	0.15	0.12	0.10	0.10	0.08	0.12	0.20
	When capacitance is over 1000μF, Tanδ shall be added 0.02 to the listed value with increase of every each 1000 μF.										
Characteristics at low temperature(max.) (impedance ratio at 120Hz)	W.V(V)	6.3	10	16	25	35	50~100		160~250		350~450
	Z-25˚C/Z20˚C	4	3	2	2	2	2		2		6
	Z-40˚C/Z20˚C	8	6	4	3	3	3		3		–
Load life	After applying rated working voltage for 1000 hours at +105˚C and then being stabilized at +20˚C,capacitors shall meet following limits.										
	Capacitance change	Within ± 25% of initial measured value(6.3V~16V)									
		Within ± 20% of initial measured value (25V~)									
	Tanδ	≤ 150% of initial specified value									
	Leakage current	≤ Initial sepcified 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 initial measured value									
	Tanδ	≤ 200% of initial specified value									
	Leakage current	≤ 200% of initial sepcified value									

Case sizes and Dimensions



• Standard lead style

øD	5.0	6.3	8.0	10.0	13.0	16.0	18.0
P	2.0	2.5	3.5	5.0		7.5	
øD	0.5		0.6			0.8	

D'=[D +0.5] Max. L' =[L+1.0] Max. at D≤8.0
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	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	≤70˚C	85˚C	105˚C
Factor	1.95	1.65	1.0

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

ø D x L(mm)

W.V(V) / Cap(μF)	6.3(0J)		10(1A)		16(1C)		25(1E)		35(1V)		50(1H)		63(1J)		100(2A)	
	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R
0.1											5x11	3			5x11	3
0.22											5x11	5			5x11	5
0.33											5x11	6			5x11	6
0.47											5x11	9			5x11	9
1.0											5x11	14			5x11	15
2.2											5x11	21			5x11	23
3.3											5x11	26			5x11	32
4.7											5x11	32			5x11	37
10											5x11	48	5x11	51	6.3x11	60
22									5x11	66	5x11	73	6.3x11	85	8x11.5	103
33							5x11	77	5x11	84	6.3x11	98	6.3x11	109	10x12.5	148
47					5x11	91	5x11	98	6.3x11	110	6.3x11	120	8x11.5	147	10x16	191
100	5 x 11	96	5 x 11	105	6.3x11	142	6.3x11	147	8x11.5	180	8x11.5	198	10x12.5	255	13x20	343
220	6.3 x 11	168	6.3 x 11	179	8x11.5	231	8x11.5	252	10x12.5	329	10x16	382	10x20	460	16x25	623
330	6.3 x 11	207	8 x 11.5	255	8x11.5	290	10x12.5	366	10x16	430	10x20	521	13x20	637	16x25	799
470	8 x 11.5	280	8 x 11.5	316	10x12.5	385	10x16	510	10x20	550	13x20	685	13x25	815	16x31.5	1020
1000	10 x 12.5	483	10 x 16	570	10x20	714	13x20	854	13x25	1025	16x25	1250	16x31.5	1290		
2200	13 x 20	868	13 x 20	927	13x25	1115	16x25	1280	16x31.5	1420	18x35.5	1760				
3300	13 x 20	1025	13 x 25	1180	16x25	1370	16x31.5	1590	18x35.5	1850						
4700	16 x 25	1390	16 x 25	1480	16x31.5	1740	18x35.5	1950								
6800	16 x 25	1595	16 x 31.5	1795	18x35.5	2090										
10000	16 x 31.5	1930	18 x 35.5	2210												
15000	18 x 35.5	2290														

W.V(V) / Cap(μF)	160(2C)		200(2D)		250(2E)		350(2V)		400(2G)		450(2W)	
	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R	SIZE	I_R
1.0	6.3 x 11	14	6.3 x 11	14	6.3 x 11	14	8 x 11.5	16	8 x 11.5	16	8x11.5	16
2.2	6.3 x 11	22	6.3 x 11	22	8 x 11.5	26	10 x 12.5	30	10 x 12.5	30	10x12.5	30
3.3	8 x 11.5	32	8 x 11.5	31	10 x 12.5	37	10 x 12.5	38	10 x 16	39	10x16	39
4.7	8 x 11.5	36	10 x 12.5	42	10 x 16	45	10 x 16	48	10 x 16	48	10x20	48
10	10 x 16	66	10 x 16	66	10 x 20	72	10 x 20	77	13 x 20	85	13x20	85
22	10 x 20	110	10 x 20	110	13 x 20	133	13 x 25	142	16 x 25	148	16x25	148
33	13 x 20	161	13 x 25	168	13 x 25	172	16 x 25	181	16 x 31.5	200	16x35.5	200
47	13 x 25	195	13 x 25	198	16 x 25	214	16 x 35.5	248	16 x 35.5	262	18 x 40	265
100	16 x 25	340	16 x 31.5	361	18 x 35.5	384	18 x 40	424				
220	18 x 35.5	596	18 x 40	615								

I_R : Maximum permissible ripple current [mA(rms) at 105˚C, 120Hz]

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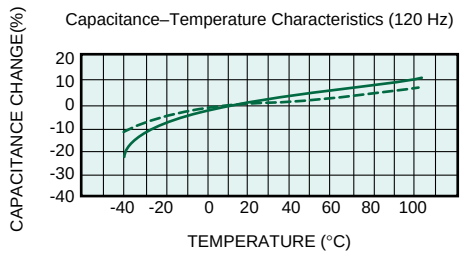
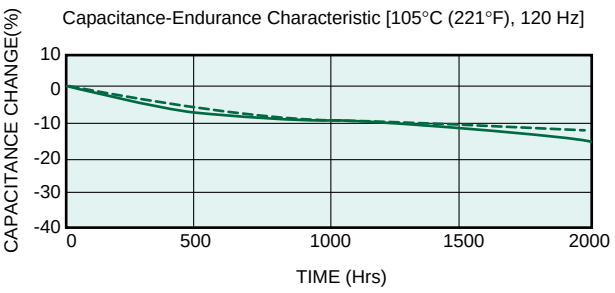
PERFORMANCE CURVES

16V–470μF
250V–47μF

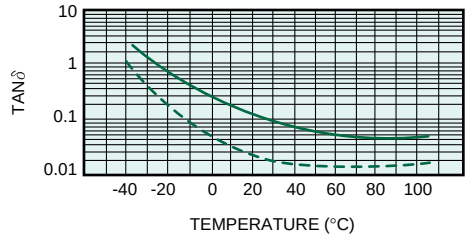
Capacitance–Temperature Characteristics (120 Hz)



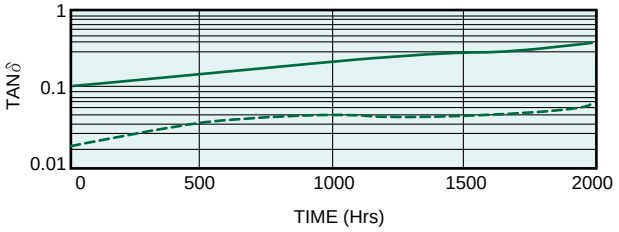
Capacitance-Endurance Characteristic [105°C (221°F), 120 Hz]



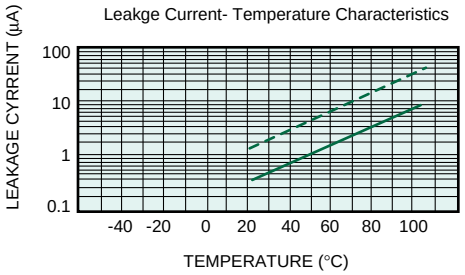
Tanδ -Temperature Characteristics (120 Hz)



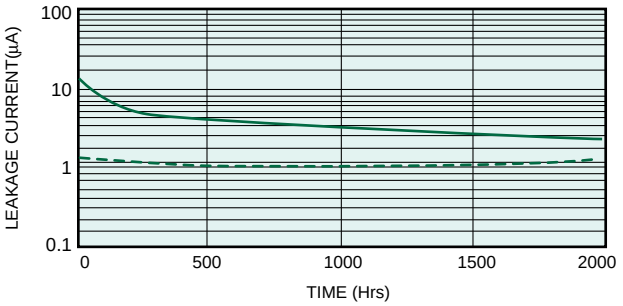
Tanδ -Endurance Characteristic [105°C (221°F), 120 Hz)



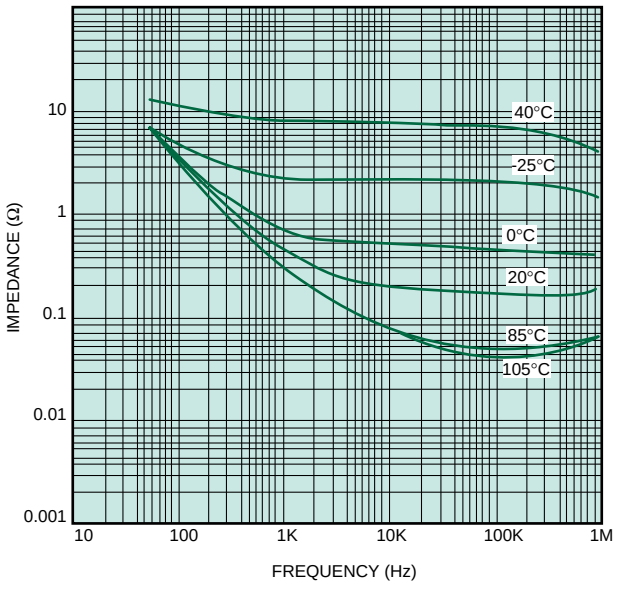
Leakge Current- Temperature Characteristics



Leakage Current-Endurance Charracteristics [105°C (221°F)]



Impedance-Frequency Characteristics



ESR-Frequency Characteristics