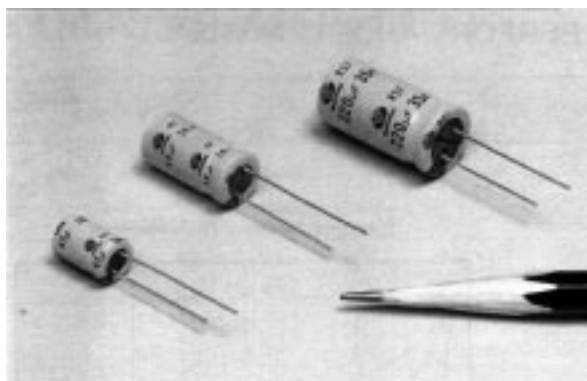


■ Features

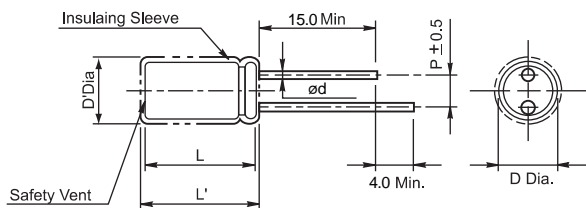
- Low ESR, Low impedance, Subminiature, Radial
- Large permissible ripple current
- High performance and reliability
- Load life of 2000 hours at 105°C
- Possible cleaning by Freon TE, TES, TMS (5 min)



■ Specifications

Item	Performance Characteristics							
Operating temperature range	-55°C ~ +105°C							
Rated working voltage range	6.3V ~ 63V							
Nominal capacitance range	22μF ~ 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 min) Where I =Leakage current(μA) C=Nominal capacitance(μF) V=Rated voltage(V)							
Tan δ(max., at 20°C, 120Hz)	W.V(V)	6.3	10	16	25	35	50	63
	Tan δ	0.20	0.15	0.10	0.08	0.07	0.06	0.05
	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)	6.3~10		16		25~63		
	Z-55°C/Z20°C	3		2		2		
Load life	After applying rated working voltage for 2000 hours at +105°C and then being stabilized at +20°C, capacitors shall meet following limits.							
	Capacitance change	Within ± 20% of initial measured value						
	Tan δ	≤ 200% of initial specified value						
	Leakage current	≤ 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 initial measured value						
	Tan δ	≤ 150% of initial specified value						
	Leakage current	≤ 200% of initial specified value						

■ Case sizes and Dimensions



• Standard lead style

øD	10.0	13.0	16.0
P	5.0	5.0	7.5
ød	0.6		0.8

D' = [D+0.5]Max.

L' = [L+1.5]Max.

■ Ripple current coefficient

• Frequency

W.V	Freq(Hz)	50	120	300	1K	10~100K
6.3~16V		0.54	0.70	0.85	0.95	1
25~35V		0.43	0.57	0.73	0.88	1
50~63V		0.39	0.55	0.71	0.86	1

• Temperature

Temperature	≤ 70°C	85°C	105°C
Factor	2.83	2.2	1.0

Dimensions & Maximum permissible ripple current [mA(rms) at 105°C, 10~100Hz]

∅D x L(mm)

W.V Cap(μF)	6.3		10		16		25		35		50		63	
	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R
22											10x12.5	150	10x16	200
33									10x12.5	180	10x16	220	10x16	240
47							10x12.5	200	10x12.5	210	10x16	260	10x20	310
100					10x12.5	240	10x16	310	10x20	370	13x20	450	13x25	540
220	10x12.5	250	10x16	350	10x16	400	13x20	540	13x25	650	16x25	820	16x31.5	1080
330	10x16	360	10x20	460	10x20	520	13x25	700	16x25	840	16x31.5	1030	16x35.5	1270
470	10x20	490	13x20	610	13x20	700	16x25	960	16x25	1090	16x35.5	1350		
1000	13x25	810	13x25	900	16x25	1150	16x31.5	1320						
2200	16x25	1090	16x31.5	1520	16x35.5	1780								

Max. Impedance (Ω)

W.V Cap(μF)	6.3		10		16		25		35		50		63	
	Max-Z(Ω)		Max-Z(Ω)		Max-Z(Ω)		Max-Z(Ω)		Max-Z(Ω)		Max-Z(Ω)		Max-Z(Ω)	
	@20°C	@100KHz	@20°C	@100KHz	@20°C	@100KHz	@20°C	@100KHz	@20°C	@100KHz	@20°C	@100KHz	@20°C	@100KHz
22	10KHz										1.35	0.60	1.35	0.60
33									0.90	0.53	0.90	0.50	0.90	0.50
47							0.70	0.42	0.80	0.53	0.80	0.50	0.80	0.50
100					0.54	0.45	0.36	0.27	0.35	0.23	0.30	0.10	0.30	0.10
220		0.45	0.45	0.38	0.29	0.26	0.15	0.14	0.15	0.10	0.14	0.08	0.14	0.08
330	0.48	0.27	0.21	0.18	0.21	0.18	0.12	0.10	0.09	0.07	0.09	0.05	0.08	0.06
470	0.35	0.23	0.15	0.14	0.12	0.11	0.08	0.07	0.08	0.05	0.06	0.05		
1000	0.26	0.14	0.11	0.11	0.09	0.09	0.06	0.06						
2200	0.15	0.07	0.05	0.05	0.05	0.05								

PERFORMANCE CURVES

