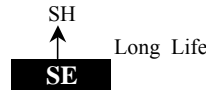


**SE** General Purpose Series

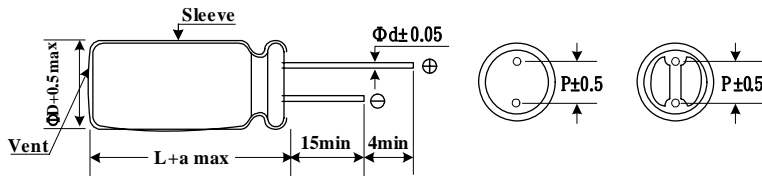
- Features: 105°C 1000 hours
- Recommended Applications: For general purpose coupling, decoupling, by pass, and filtering circuit in entertainment electronics
- Corresponding product to RoHS



**Specifications**

Item	Characteristics									
Operating Temperature Range	-40~+105°C			-40~+105°C				-25~+105°C		
Rated Voltage Range	6.3 ~ 100VDC			160 ~ 250VDC				350 ~ 450VDC		
Rated Capacitance Range	0.47 ~ 15000μF			0.47 ~ 470μF				0.47 ~ 150μF		
Capacitance Tolerance	± 20 % at 120Hz, 20°C									
Leakage Current (MAX)(20°C)	I=0.01CV or 3(μA), whichever is greater.					I=0.03CV+10(μA)				
	(After rated voltage applied for 2 minutes)									
Dissipation Factor (MAX) (tan δ) (120Hz, 20°C)	WV	6.3	10	16	25	35	50	63~100	160~250	350~450
	tan δ	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.15	0.20
Low Temperature Stability Impedance Ratio (MAX)	When nominal capacitance is over 1000uF, tan δ shall be added 0.02 to the listed value with increase of every 1000uF.									
	Z(120Hz)	6.3	10	16	25	35~100	160~250	315~350	400~450	
	Z-25°C / Z+20°C	8	6	5	3	3	7	10	15	
	Z-40°C / Z+20°C	10	8	6	4	3	7	—	—	
Endurance	After applying rated voltage for 1000 hours at 105°C the capacitors shall meet the following requirements.									
	Capacitance Change	Within ± 20 % of initial value								
	Dissipation Factor	Not more than 200% of the specified value								
	Leakage Current	initial specified value or less								
Shelf Life	After leaving capacitors under no load at 105°C for 500 hours. the capacitors shall meet the same requirement as Endurance.									

**Diagram of Dimensions**



φ D	5	6.3	8	10	12	13	16	18	22
P	2.0	2.5	3.5	5.0			7.5		10.0
φ d	0.5	0.5	0.6	0.6			0.8		0.8 ( 1.0 )
a	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0

( ) : L ≥ 40

**Multiplier for Ripple Current**

Frequency coefficient

Frequency (Hz)	120	300	1K	10K
6.3 ~ 100V Below 68 μ F	1.00	1.20	1.30	1.45
6.3 ~ 100V 100 ~ 680 μ F	1.00	1.10	1.15	1.25
6.3 ~ 100V 1000 ~ 22000 μ F	1.00	1.05	1.10	1.15
160 ~ 450V ALL Cap ( μ F )	1.00	1.05	1.10	1.50

**SE** General Purpose Series

■ Dimensions, Rated Ripple Current

Capacitance (μF)	Rated (Surge) Voltage																	
	6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)		50 (63)		63 (79)					
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple				
0.47												5x11	7	5x11	8			
1.0												5x11	12	5x11	13			
2.2												5x11	18	5x11	20			
3.3												5x11	25	5x11	27			
4.7							5x11	20	5x11	25	5x11	30	5x11	34				
6.8							5x11	25	5x11	30	5x11	32	5x11	37				
10					5x11	25	5x11	30	5x11	40	5x11	50	5x11	55				
15					5x11	40	5x11	45	5x11	50	5x11	60	5x11	65				
22			5x11	45	5x11	55	5x11	60	5x11	65	5x11	75	6.3x11	90				
33			5x11	60	5x11	70	5x11	75	5x11	85	6.3x11	100	6.3x11	110				
													8x11	120				
47	5x11	60	5x11	75	5x11	85	5x11	90	5x11	95	6.3x11	105	8x11	155				
										6.3x11	115	8x11	125					
68	5x11	75	5x11	80	5x11	100	6.3x11	125	8x11	130	8x11	159	10x12.5	198				
100	5x11	100	5x11	110	5x11	110	6.3x11	145	6.3x11	150	8x11	160	8x15	230				
					6.3x11	135			8x11	190	10x12.5	210	10x12.5	260				
150	5x11	120	5x11	110	8x11	180	8x11	200	10x12.5	240	10x12.5	289	10x16	330				
			6.3x11	130														
220	5x11	140	6.3x11	180	6.3x11	180	8x11	200	8x11	230	10x12.5	340	10x16	400				
	6.3x11	165			8x11	235	10x12.5	250	8x15	280	10x16	400	10x20	460				
									10x12.5	315								
330	6.3x11	160	6.3x11	205	8x11	285	8x11	265	8x15	345	10x16	450	10x20	520				
	8x11	200	8x11	255			8x15	320	8x20	420	10x20	535	13x20	650				
							10x12.5	355	10x12.5	380								
									10x16	440								
470	6.3x11	220	6.3x11	245	8x11	310	8x15	365	10x16	415	10x20	580	13x20	700				
	8x11	280	8x11	305	8x15	360	10x12.5	400	10x20	490	13x20	730	13x25	800				
					10x12.5	395	10x16	470	13x20	580								
680	8x11	255	8x11	335	10x12.5	455	10x20	650	13x20	730	13x25	860	13x25	840				
	10x12.5	320	8x15	385	10x16	530							16x25	1000				
			10x12.5	420														
1000	8x11	370	8x11	390	8x20	600	10x20	680	13x20	850	13x25	930	16x25	1020				
	10x12.5	470	8x15	450	10x16	590	12x20	775	13x25	995	16x25	1110	16x32	1200				
			10x12.5	490	10x20	700	13x20	855										
			10x16	570														
1500	10x16	600	10x20	750	10x20	680	13x25	1020	13x25	935	16x32	1350	16x32	1300				
					13x20	860			16x25	1110			16x36	1450				
2200	10x20	740	10x20	800	10x25	895	13x25	1030	16x25	1230	16x36	1360	18x36	1455				
	13x20	930	13x20	1010	12x25	1040	16x25	1230	16x32	1450	18x36	1530						
					13x20	990												
3300					13x25	1150												
	10x20	880	10x25	950	13x25	1140	13x25	1035	16x36	1470	18x36	1540						
	13x20	1100	10x30	1090	16x25	1350	16x25	1230	18x36	1660	18x40	1700						
			13x20	1050			16x32	1450										
4700			13x25	1220														
	13x25	1100	13x25	1190	16x25	1330	16x32	1420	18x36	1580	22x35	1900						
	16x25	1320	16x25	1410	16x32	1560	18x36	1690	18x40	1750								
6800	13x25	1250	16x25	1370	16x36	1590	18x36	1850	22x40	1885								
	16x25	1490	16x32	1610	16x40	1670												
					18x36	1790												
10000	16x25	1560	16x36	1760	18x36	2100												
	16x32	1830	18x36	1980														
15000	18x36	2280	18x40	1960														

☆ Size: D φ x L (mm) ☆ Ripple Current: (mA/rms). 105°C, 120Hz

**SE** General Purpose Series

■ Dimensions, Rated Ripple Current

Capacitance ( $\mu$ F)	Rated (Surge) Voltage													
	100 (125)		160 (200)		200 (250)		250 (300)		350 (400)		400 (450)		450 (500)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47	5x11	10	5x11	12	5x11	14	5x11	14	5x11	14	6.3x11	14	6.3x11	14
1.0	5x11	15	5x11	17	5x11	19	6.3x11	19	6.3x11	20	6.3x11	16	6.3x11	16
2.2	5x11	22	6.3x11	25	6.3x11	22	6.3x11	23	8x11	35	6.3x11	20	8x11	20
					8x11	28	8x11	29			8x11	28	10x12.5	35
											10x12.5	35		
3.3	5x11	29	6.3x11	30	6.3x11	32	8x11	33	8x11	37	8x11	38	10x16	54
			8x11	36	8x11	40	10x12.5	42	10x12.5	47	10x12.5	50		
4.7	5x11	37	6.3x11	34	8x11	40	8x11	41	10x12.5	47	8x11	40	10x16	60
			8x11	43	10x12.5	50	10x12.5	52	10x16	55	8x15	45		
											10x12.5	49		
6.8	5x11	46	10x12.5	54	10x12.5	60	8x15	57	10x16	65	8x15	50	10x16	65
							10x12.5	62			10x16	60	10x20	70
											10x20	72		
10	5x11	55	8x11	56	10x12.5	69	10x16	88	10x16	95	10x16	65	10x20	75
	6.3x11	65	10x12.5	70	10x16	80					10x20	77	13x20	85
											13x20	97	13x25	100
15	8x11	82	10x16	90	10x16	110	10x16	120	10x20	140	10x20	100	16x25	160
											13x20	125		
											13x25	150		
22	8x11	115	8x20	125	10x16	140	10x20	155	13x20	165	10x25	130	13x20	100
			10x16	130							13x20	150	13x25	125
											13x25	175	16x25	150
33	8x11	120	10x20	180	10x20	190	13x20	170	13x25	220	13x25	190	13x25	140
	10x12.5	160					13x25	200			16x20	195	16x25	190
											16x25	230	16x36	240
47	10x12.5	180	13x20	270	13x20	240	13x25	330	16x25	340	16x25	280	16x32	270
	10x16	210			13x25	290					16x32	315	16x36	300
											16x36	350	18x40	360
68											18x20	275		
											18x25	300		
	10x16	241	13x25	300	13x25	330	16x25	350	16x32	370	16x32	320	18x32	305
100											16x36	335	22x40	400
											18x25	305		
											18x36	380		
120	10x20	385	13x25	330	13x25	340	16x32	430	18x36	460	16x36	425	18x36	380
			16x25	400	16x25	410					18x32	430	18x40	400
											18x36	450		
150											18x32	440		
											18x36	450		
											18x40	460		
180	13x25	414	16x32	435	16x36	450	18x40	460	22x40	480	22x40	490		
											18x45	480		
220	13x25	590	16x32	550	18x32	520	22x40	680						
			16x36	620	18x36	580								
					18x40	650								
330	13x25	600	18x36	770	18x36	705								
	16x25	720	18x40	850	18x40	780								
					22x40	920								
470	16x25	740	22x40	980										
	16x32	875												
680	16x36	1200												
1000	18x40	1340												
	22x40	1500												

☆ Size: D  $\phi$  x L (mm) ☆ Ripple Current: (mA/rms). 105 °C, 120Hz