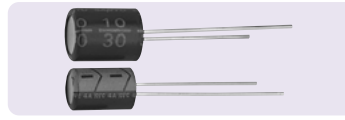
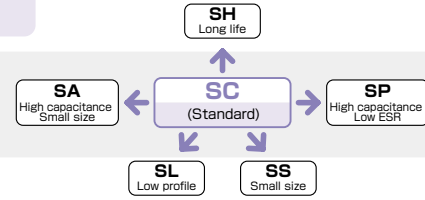


# SC Series



## Standard

Suitable for noise limiters and switching power supplies that make a point of high frequency characteristics.  
Also, make use of it when needed long life span and high reliability.  
Lead free-flow is supported.



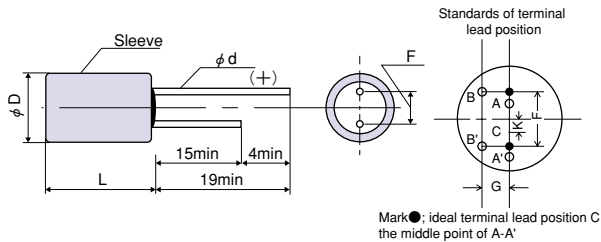
## Specifications

Items	Condition	Specifications				
Rated voltage (V)	—	6.3	10	16	25	30
Surge voltage (V)	Room temperature	7.2	11.5	18.4	25	34.5
Category temperature range (°C)	—	-55 to +105				
Capacitance tolerance (%)	120Hz/20°C	M: ±20				
Dissipation Factor (DF)	120Hz/20°C	Please see the attached characteristics list				
Leakage current*2	Rated voltage applied, after 2 minutes	Please see the attached characteristics list				
Equivalent series resistance (ESR)	100kHz to 300kHz/20°C	Please see the attached characteristics list				
Characteristics of impedance ratio at high temp. and low temp.	Based the value at 100kHz, +20°C	-55°C	Z/Z <sub>20°C</sub>	0.75 to 1.25		
		+105°C	Z/Z <sub>20°C</sub>	0.75 to 1.25		
Endurance	105°C, 2,000h, Rated voltage applied (25V → 20V applied)*1	ΔC/C	Within ±20% of the initial value			
		DF	Within 1.5 times of the initial limit			
		LC	Within the initial limit			
Damp heat(Steady state)	60°C, 90 to 95%RH, 1,000h, No applied voltage	ΔC/C	Within ±10% of the initial value			
		DF	Within 1.5 times of the initial limit			
		LC	Within the initial limit			
Resistance to soldering heat	Flow method (260±5°C X 10s)	ΔC/C	Within ±5% of the initial value			
		DF	Within the initial limit			
		LC	Within the initial limit (after voltage processing)			

\*1 Please reduce 0.25V per 1°C from over 85°C for 25V products.

\*2 In case of some problems for measured values, measure after applying rated voltage for 6.3 to 16 and 30V products or temperature derating voltage for 25V products for 30 minutes at 105°C.

## Dimensions



(unit : mm)

Size code	φD +0.5max	L max	F	φd ±0.05	G max	K max
A	4.0	7.8	2.0 ±0.5	0.45	0.5	0.5
B	5.0	7.8	2.0 ±0.5	0.45	0.5	0.5
C	6.3	7.8	2.5 ±0.5	0.45	0.5	0.5
D	6.3	10.8	2.5 ±0.5	0.60	0.5	0.5
E	8.0	11.5	3.5 ±0.5	0.60	0.8	0.8
F	10.0	11.5	5.0 ±0.5	0.60	0.8	0.8

## Size list

RV : Rated voltage

μF \ RV	6.3	10	16	25	30
1.0				A	A
1.5				A	B
2.2			A	B	B
3.3			A	B	C
4.7		A	B	C	D
6.8	A		B	C	D
10		B		C	E
15	B		C	D	
22		C	D	E	F
33	C		D	F	
47		D		F	

**SC series characteristics list**

Size code	Part number	Rated voltage (V)	Rated capacitance ( $\mu$ F)	ESR(m $\Omega$ ) (max) 100kHz to 300kHz/20°C	Allowable ripple current (mA <sub>rms</sub> ) *1	DF (% max)	Leakage current ( $\mu$ A)(max) After 2 minutes
A	30SC1M	30	1.0	350	430	3	1
	25SC1M	25	1.0	350	430	3	0.5
	25SC1R5M	25	1.5	300	435	3	0.5
	16SC2R2M	16	2.2	280	450	4	0.5
	16SC3R3M	16	3.3	280	500	4	0.53
	10SC4R7M	10	4.7	280	540	5	0.5
	6SC6R8M	6.3	6.8	250	560	5	0.5
B	30SC1R5M	30	1.5	300	435	3	1
	30SC2R2M	30	2.2	250	695	3	1.32
	25SC2R2M	25	2.2	200	695	3	0.55
	25SC3R3M	25	3.3	200	700	3	0.83
	16SC4R7M	16	4.7	180	720	4	0.75
	16SC6R8M	16	6.8	150	745	4	1.09
	10SC10M	10	10	150	780	5	1
	6SC15M	6.3	15	120	815	5	0.95
C	30SC3R3M	30	3.3	200	820	3	1.98
	25SC4R7M	25	4.7	100	1130	3	1.18
	25SC6R8M	25	6.8	100	1140	3	1.7
	25SC10M	25	10	90	1150	3	2.5
	16SC15M	16	15	90	1230	4	2.4
	10SC22M	10	22	70	1270	5	2.2
	6SC33M	6.3	33	70	1320	5	2.08
D	30SC4R7M	30	4.7	120	1300	4	2.82
	30SC6R8M	30	6.8	120	1340	4	4.08
	25SC15M	25	15	70	1650	4	3.75
	16SC22M	16	22	70	1800	5	3.52
	16SC33M	16	33	70	1900	6	5.28
	10SC47M	10	47	60	2020	6	4.7
E	30SC10M	30	10	110	1380	6	6
	25SC22M	25	22	40	2330	6	5.5
F	30SC22M	30	22	80	1830	6	13.2
	25SC33M	25	33	35	2900	6	8.25
	25SC47M	25	47	35	2980	6	11.75

\*1 100kHz, +45°C

**Temperature coefficient for allowable ripple current**

Ambient temp.	$T_x \leq 45^\circ\text{C}$	$45^\circ\text{C} < T_x \leq 65^\circ\text{C}$	$65^\circ\text{C} < T_x \leq 85^\circ\text{C}$	$85^\circ\text{C} < T_x \leq 95^\circ\text{C}$	$95^\circ\text{C} < T_x \leq 105^\circ\text{C}$
Coefficient	1	0.85	0.7	0.4	0.25

**Frequency coefficient for allowable ripple current**

Frequency	$120\text{Hz} \leq f < 1\text{kHz}$	$1\text{kHz} \leq f < 10\text{kHz}$	$10\text{kHz} \leq f < 100\text{kHz}$	$100\text{kHz} \leq f \leq 500\text{kHz}$
Coefficient	0.05	0.2	0.5	1