

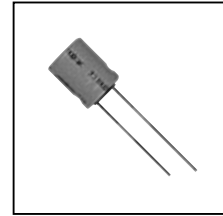
# RADIAL TYPE

# SM

Series Standard, Miniature Sized



- One rank smaller case sizes than SK series
- SM series has high value of CV for general purposes.



## SPECIFICATION

Item	Characteristic									
Operation Temperature Range	-40 ~ +85°C									
Rated Working Voltage	6.3 ~ 100VDC									
Capacitance Tolerance (120Hz 20°C)	±20%(M)									
Leakage Current (20°C)	$I \leq 0.03CV$ or 4 ( $\mu A$ )					$I$ : Leakage Current ( $\mu A$ )				
	*Whichever is greater after 3 minutes					$C$ : Rated Capacitance ( $\mu F$ )				
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	63	100	
	S.V.	8	13	20	32	44	63	79	125	
Dissipation Factor ( $\tan \delta$ ) (120Hz 20°C)	Add 0.02 per 1000 $\mu F$ for more than 1000 $\mu F$									
	W.V.	6.3	10	16	25	35	50	63	100	
Low Temperature Stability	$\tan \delta$	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	
	Impedance ratio at 120Hz									
	Rated Voltage (V)		6.3	10	16	25	35	50	63	50~100
	-25°C / +20°C		5	4	3	2	2	2	2	
-40°C / +20°C		12	10	8	5	4	3			
Load Life	After 1000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage $\leq$ rate working voltage)									
	Capacitance Change	$\leq \pm 20\%$ of initial value								
	Dissipation Factor	$\leq 150\%$ of initial specified value								
	Leakage current	$\leq$ initial specified value								
Shelf Life	At +85°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment)									
	Capacitance Change	$\leq \pm 20\%$ of initial value								
	Dissipation Factor	$\leq 200\%$ of initial specified value								
	Leakage current	$\leq 200\%$ of initial specified value								

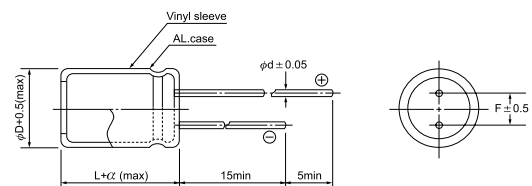
## DIMENSIONS (mm)

$\phi D$	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
$\alpha$	1.5	1.5	1.5	1.5	1.5	1.5	1.5

## RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	75	85
Multiplier	1.25	1.14	1.00

Frequency(Hz)	60	120	1k	$\geq 10k$
W.V.	Multiplier			
6.3~25V	0.85	1.00	1.10	1.20
35~100V	0.80	1.00	1.15	1.25



7170 N. Ridgeway  
Lincolnwood, IL 60712  
Ph: 847-675-1865  
Fax: 847-675-3345  
Email: sales@icd-sales.com  
Website: www.icd-sales.com

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)  
Max ripple current : mA(rms) 85°C 120Hz

μF	V(Code)		6.3 (0J)		10 (1A)		16 (1C)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
100		101				→	5x11	180
220		221	5x11	230	5x11	250	6.3x11	300
330		331	6.3x11	310	6.3x11	340	8x11.5	440
470		471	6.3x11	370	6.3x11	410	8x11.5	520
1000		102	8x11.5	640	10x12.5	740	10x16	890
2200		222	10x20	1170	10x20	1280	12.5x20	1470
3300		332	10x20	1390	12.5x20	1600	12.5x25	1880
4700		472	12.5x20	1680	12.5x25	1980	16x25	2110
6800		682	12.5x25	2090	16x25	2240	16x31.5	2600
10000		103	16x25	2330	16x35.5	2860	18x35.5	3180
15000		153	16x35.5	2990	18x35.5	3320		
22000		223	18x40	3620				

All blank voltage on sleeve marking is the same voltage as" → "point to.

μF	V(Code)		25 (1E)		35 (1V)		50 (1H)	
	Code	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.
22		220		→	5x11	100	5x11	110
33		330		→	5x11	120	5x11	130
47		470		→	5x11	150	6.3x11	180
100		101	6.3x11	220	6.3x11	240	8x11.5	300
220		221	8x11.5	380	8x11.5	420	10x12.5	470
330		331	8x11.5	460	10x12.5	550	10x16	630
470		471	10x12.5	580	10x16	720	10x20	830
1000		102	10x20	1040	12.5x20	1240	12.5x25	1430
2200		222	12.5x25	1710	16x25	1890	16x35.5	2290
3300		332	16x25	1990	16x35.5	2530	18x35.5	2790
4700		472	16x31.5	2440	18x35.5	2960		
6800		682	18x35.5	3040				

μF	V(Code)		63 (1J)		100 (2A)	
	Code	Item	DxL	R.C.	DxL	R.C.
10		100	5x11	75	6.3x11	95
22		220	5x11	110	6.3x11	140
33		330	6.3x11	150	8x11.5	200
47		470	6.3x11	180	10x12.5	250
100		101	10x12.5	330	10x20	450
220		221	10x16	540	12.5x25	790
330		331	10x20	730	12.5x25	960
470		471	12.5x20	930	16x25	1160
1000		102	16x25	1510	18x40	2220