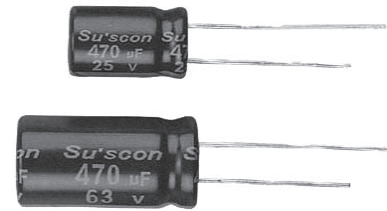


SDN series

- Anhydrous product.
- Low impedance at High frequency range, high ripple current resistance.
- Suitable for return-circuit of switching power source.
- RoHS Compliance
- 無水系產品。
- 高頻低阻抗、耐高紋波。
- 適用於開關電源迴路。



SPECIFICATIONS

Items 項目	Characteristics 特性										
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)										
Operating Temperature Range 適用溫度範圍	-55 ~ +105°C					-40 ~ +105°C					
Rated Voltage Range 額定電壓範圍	6.3 ~ 100VDC					160 ~ 400VDC					
Leakage Current 洩漏電流	$V \leq 100V$ $I \leq 0.01CV$ or 3 (μA) (After 2 minutes application of DC rated voltage, at 20 °C) $V > 100V$ $I \leq 0.03CV + 20$ (μA) (After 5 minutes application of DC rated voltage, at 20 °C)										
Dissipation Factor 散逸因素($\tan \delta$)	Measurement Frequency: 120Hz. Temperature: 20°C										
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160~250	400
	$\tan \delta$ (Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.07	0.20	0.24
When nominal capacitance over 1000 μF , $\tan \delta$ shall be added 0.02 to the listed value with increase of every 1000 μF .											
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.										
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160~250	400
	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	2	2	3	6
	Z(-40°C)/Z(20°C)	-	-	-	-	-	-	3	3	6	12
Z(-55°C)/Z(20°C)	8	6	4	3	3	3	-	-	-	-	
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 105°C.										
	Capacitance Change	Within ± 20% of Initial Value									
	$\tan \delta$	200% or less of Initial Specified Value									
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.										
	Capacitance Change	Within ± 20% of Initial Value									
	$\tan \delta$	200% or less of Initial Specified Value									
Standards 參照標準	Initial Specified Value or less										
	JIS C 5101-4 (IEC 60384)										

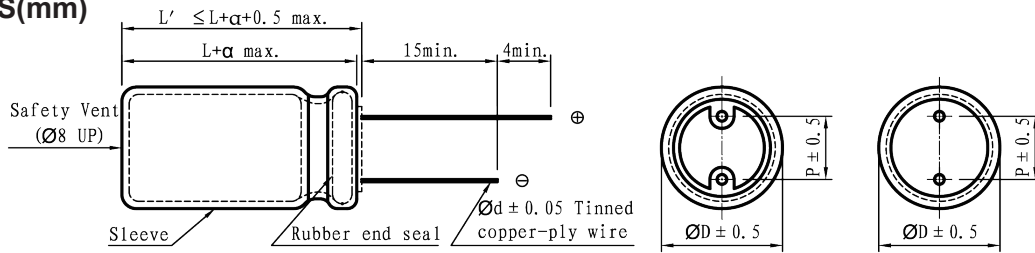
Frequency Coefficient of Permissible Ripple Current

Rated Voltage (V)	Capacitance (μF)	Frequency (Hz)				
		50	120	1K	10K	100K
6.3 ~ 100	47 ~ 100	0.45	0.55	0.75	0.90	1.00
	220 ~ 1000	0.60	0.70	0.85	0.95	1.00
	1500 ~ 15000	0.70	0.80	0.95	0.98	1.00
160 ~ 400	2.2 ~ 330	0.55	0.65	0.80	0.90	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

SDN series

DIMENSIONS(mm)



ϕD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ϕd	0.5	0.5	0.5	0.6	0.6	0.8	0.8

α	(L < 16) 1.0
	(L ≥ 16) 2.0

STANDARD RATINGS

D×L (mm) ; R.C.(mA rms) at 105°C 100KHz ; IMP(Ω max) at 20°C 100KHz

Cap (μF)	V	6.3			10			16			25		
		Item	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.
4.7											5x11	50	1.820
10											5x11	80	1.820
22											5x11	110	0.970
47					5x11	140	0.860	5x11	170	0.790	5x11	170	0.790
68					5x11	160	0.860	5x11	210	0.670	6.3x11	210	0.670
100					5x11	180	0.860	6.3x11	270	0.360	6.3x11	270	0.360
220		6.3x11	270	0.430	6.3x11	270	0.400	8x12	440	0.240	8x12	440	0.240
330		6.3x11	320	0.410	8x12	440	0.260	8x12	440	0.240	10x13	650	0.120
470		8x12	440	0.290	8x12	440	0.260	10x13	650	0.120	10x16	800	0.091
680		8x12	440	0.290	10x13	650	0.130	10x16	800	0.091	10x20	1050	0.070
1000		10x13	650	0.140	10x16	800	0.098	10x20	1050	0.070	13x21	1350	0.067
1500		10x16	800	0.100	10x20	1050	0.077	13x21	1350	0.067	13x25	1650	0.048
2200		10x25	1350	0.079	13x21	1350	0.073	13x25	1650	0.052	16x26	2050	0.036
3300		13x21	1350	0.079	13x25	1650	0.065	16x26	2050	0.036	16x32	2550	0.033
4700		13x25	1650	0.051	13x35	2050	0.040	16x32	2550	0.033	18x35	2950	0.031
6800		16x26	2050	0.043	16x32	2550	0.036	18x35	2950	0.031	18x40	3300	0.028
10000		16x32	2550	0.039	18x35	2950	0.034	18x40	3300	0.028			
15000		16x35	2950	0.036	18x40	3300	0.030						

Cap (μF)	V	35			50			63			100		
		Item	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.
0.47					5x11	25	10.73				5x11	20	30.30
1					5x11	40	7.580				5x11	30	28.60
2.2					5x11	55	6.440				5x11	44	14.00
3.3					5x11	65	5.580				5x11	58	9.400
4.7		5x11	85	2.640	5x11	90	3.290	5x11	65	9.880	5x11	74	6.600
10		5x11	100	1.580	5x11	110	2.000	5x11	110	5.450	6.3x11	130	2.600
22		5x11	120	1.320	5x11	140	1.720	6.3x11	200	1.890	8x12	230	2.000
33		5x11	210	0.568	6.3x11	240	0.690	6.3x11	250	1.770	10x13	320	0.700
47		6.3x11	270	0.550	6.3x11	240	0.690	8x12	320	0.800	10x16	390	0.500
68		8x12	360	0.396	8x12	300	0.430	10x13	380	0.760	10x20	420	0.400
100		8x12	440	0.246	8x12	400	0.360	10x13	450	0.670	13x21	580	0.300
220		10x13	650	0.132	10x16	600	0.240	10x20	780	0.340	16x26	880	0.100
330		10x16	800	0.100	10x20	800	0.220	13x21	950	0.210	16x32	930	0.100
470		10x20	1050	0.077	13x21	1050	0.130	13x25	1430	0.170	16x36	1230	0.100
680		13x21	1350	0.073	13x25	1150	0.100	16x26	1780	0.130	18x35	1410	0.091
1000		13x25	1650	0.056	16x26	1550	0.069	16x32	1900	0.100	18x40	1520	0.065
1500		16x26	2050	0.040	16x32	1950	0.061	18x35	2150	0.079			
2200		16x32	2550	0.036	18x35	2250	0.057	18x40	2350	0.077			
3300		18x35	2950	0.034									
4700		18x40	3300	0.030									

※ 13mm may be replaced by 12.5mm upon customer's request.

SDN series

STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 105°C 100KHz

Cap (μ F)	V Item	160		200		250		400	
		D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
2.2						8x12	105	8x12	80
3.3		8x12	104	8x12	113	8x12	122	10x13	110
4.7		8x12	112	8x12	126	10x13	140	10x16	160
10		10x13	180	10x13	210	10x16	300	10x20	195
22		10x16	250	10x20	465	13x21	485	13x25	350
33		10x20	570	10x25	600	13x21	620	13x25	580
47		13x21	730	13x21	730	13x25	810	16x26	720
68		13x25	850	13x25	985	16x26	1010	16x32	820
100		16x26	1285	16x26	1285	16x32	1405	18x35	950
150		16x32	1310	16x32	1310	18x32	1455		
220		16x36	1450	18x32	1510	18x40	1490		
330		18x35	1850						

※ 13mm may be replaced by 12.5mm upon customer's request.