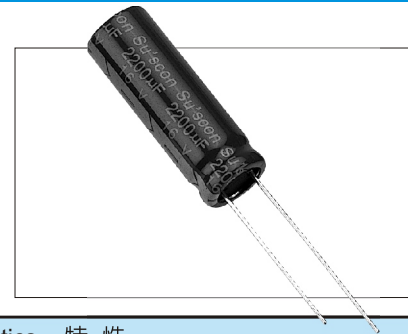


SD series

High frequency and low impedance, high ripple current resistance.
Suitable for return-circuit of switching power source.

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				-25 ~ +105 C			
Rated Voltage Range 工作電壓範圍	6.3 ~ 100V				160 ~ 400V				450V			
Leakage Current 洩漏電流	WV ≤ 100V I ≤ 0.01CV (After 2 minutes application of DC working voltage, at 20 C) WV > 100V I ≤ 0.03CV + 20(A) (After 5 minutes application of DC working voltage, at 20 C)											
Dissipation Factor 散逸因素 (tan)	Measurement Frequency: 120 Hz. Temperature: 20 C											
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160~250	400~450	
	tan (Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.07	0.20	0.24	
When nominal capacitance exceeds 1000 F, add 0.02 to the value above for each 1000 F increase. (20 C、120Hz)												
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	450
	Z (-25 C) / Z (20 C)	4	3	2	2	2	2	2	2	3	5	6
	Z (-40 C) / Z (20 C)	-	-	-	-	-	-	3	3	6	-	-
Z (-55 C) / Z (20 C)	8	6	4	3	3	3	-	-	-	-	-	
Load Life 負荷壽命	2,000 hours, with application of working voltage at 105 C											
	Capacitance Change	Within ±20% of Initial Value										
	tan	200% or less of Initial Specified Value										
	Leakage Current	Initial Specified Value or less										
Shelf Life 放置壽命	1,000hours, no voltage applied, at 105 C。 After Test: UR to be applied for 30 minutes, 24 to 48hours before measurement.											
	Capacitance Change	Within ±20% of Initial Value										
	tan	200% or less of Initial Specified Value										
	Leakage Current	Initial Specified Value or less										
Standards 參照標準	JIS C 5141 and JIS C 5102											

PERMISSIBLE RIPPLE CURRENT

Temperature Coefficient

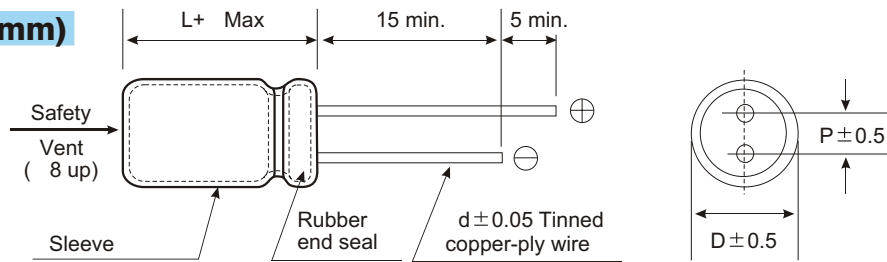
TEMP (C)	65	75	85	95	105
Coefficient	2.10	1.90	1.70	1.50	1.00

Frequency Coefficient

WV (V)	Capacitance (F)	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
	2200 ~ 15000	0.70	0.80	0.95	0.98	1.00
160 ~ 450	1 ~ 330	0.55	0.65	0.80	0.90	1.00

SD series

DIMENSIONS (mm)



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

α	(L < 16) 1.0
	(L \geq 16) 2.0

STANDARD RATINGS

DxL (mm); R.C.: (mA rms) at 105 C, 100KHz; IMP: (max at 20 C ,100KHz.

Cap (F)	W V (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											5 x 11	160	1.500
10											5 x 11	160	1.500
22											5 x 11	110	0.800
47					5 x 11	150	0.650	5 x 11	170	0.650	5 x 11	170	0.650
68					5 x 11	160	0.650	5 x 11	210	0.550	6.3 x 11	210	0.550
100					5 x 11	170	0.650	6.3 x 11	270	0.300	6.3 x 11	270	0.300
220		6.3 x 11	270	0.300	6.3 x 11	270	0.300	8 x 12	440	0.200	8 x 12	440	0.200
330		6.3 x 11	270	0.300	8 x 12	440	0.200	8 x 12	440	0.200	10 x 13	650	0.100
470		8 x 12	440	0.200	8 x 12	440	0.200	10 x 13	650	0.100	10 x 16	800	0.075
680		8 x 12	650	0.100	10 x 13	650	0.100	10 x 16	800	0.075	10 x 20	1050	0.058
1000		10 x 13	650	0.100	10 x 16	800	0.075	10 x 20	1050	0.058	13 x 21	1350	0.055
1500		10 x 13	1050	0.058	10 x 20	1050	0.058	13 x 21	1350	0.055	16 x 26	2050	0.030
2200		10 x 25	1350	0.055	13 x 21	1350	0.055	13 x 25	1650	0.043	16 x 26	2050	0.030
3300		13 x 21	1350	0.055	13 x 25	1650	0.043	16 x 26	2050	0.030	16 x 32	2550	0.027
4700		16 x 26	2050	0.030	13 x 34	2050	0.030	16 x 32	2550	0.027	18 x 35	2950	0.025
6800		16 x 26	2050	0.030	16 x 32	2550	0.027	18 x 35	2950	0.025	18 x 40	3300	0.023
10000		16 x 32	2550	0.027	18 x 35	2950	0.025	18 x 40	3300	0.023			
15000		18 x 35	2950	0.025	18 x 40	3300	0.023						

Cap (F)	W V (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					5 x 11	25	7.500				5 x 11	20	43.00
1					5 x 11	40	5.300				5 x 11	30	44.00
2.2					5 x 11	55	4.500				5 x 11	44	9.800
3.3					5 x 11	65	3.900				5 x 11	58	6.600
4.7		5 x 11	170	0.650	5 x 11	90	2.300	5 x 11	65	4.494	5 x 11	74	4.605
10		5 x 11	170	0.650	5 x 11	110	1.400	5 x 11	110	2.252	6.3 x 11	130	1.805
22		5 x 11	170	0.650	5 x 11	140	1.200	6.3 x 11	250	0.780	8 x 12	230	1.360
33		5 x 11	170	0.650	6.3 x 11	240	0.480	6.3 x 11	250	0.731	10 x 13	320	0.460
47		6.3 x 11	270	0.300	6.3 x 11	240	0.480	8 x 12	405	0.324	10 x 16	420	0.328
68		8 x 12	360	0.300	8 x 12	300	0.300	10 x 13	406	0.306	10 x 20	420	0.288
100		8 x 12	440	0.200	8 x 12	400	0.250	10 x 13	535	0.276	13 x 21	580	0.208
220		10 x 13	650	0.100	10 x 16	600	0.170	10 x 20	880	0.142	16 x 26	880	0.104
330		10 x 16	800	0.075	10 x 20	800	0.150	13 x 21	1280	0.085	16 x 32	930	0.088
470		10 x 20	1050	0.058	13 x 21	1050	0.090	13 x 25	1710	0.070	16 x 35	1230	0.072
680		13 x 21	1350	0.055	13 x 25	1150	0.070	16 x 26	2150	0.055	18 x 35	1410	0.064
1000		13 x 25	1650	0.043	16 x 26	1550	0.048	16 x 32	2670	0.043	18 x 40	1520	0.047
1500		16 x 26	2050	0.030	16 x 32	1950	0.043	18 x 35	3090	0.033			
2200		16 x 32	2550	0.027	18 x 35	2250	0.040	18 x 40	2120	0.032			
3300		18 x 35	2950	0.025									
4700		18 x 40	3300	0.023									

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

SD series

STANDARD RATINGS

DxL (mm); R.C.: (mA rms) at 105 C, 100KHz; IMP: (max at 20 C, 100KHz.

Cap (F)	WV (V)	160			200			250		
		Item	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.
0.47		6.3 x 11	12	6.80	6.3 x 11	12	6.50	6.3 x 11	12	7.20
1		6.3 x 11	17	5.50	6.3 x 11	17	5.20	6.3 x 11	17	6.00
2.2		6.3 x 11	25	4.80	6.3 x 11	25	4.50	8 x 12	29	5.20
3.3		6.3 x 11	36	4.00	8 x 12	36	3.50	10 x 13	42	4.30
4.7		8 x 12	43	2.80	10 x 13	50	2.60	10 x 16	70	3.50
10		10 x 16	250	1.50	10 x 16	250	1.50	10 x 20	305	2.80
22		10 x 20	450	1.10	10 x 20	445	1.10	13 x 21	485	1.20
33		10 x 20	570	0.71	13 x 21	600	0.71	13 x 25	635	1.20
47		13 x 21	730	0.46	13 x 21	785	0.46	13 x 25	635	0.60
68		13 x 25	955	0.39	13 x 25	955	0.39	16 x 26	1010	0.57
100		16 x 26	1285	0.24	16 x 26	1285	0.17	16 x 32	1405	0.30
150		16 x 32	1310	0.21	16 x 26	1310	0.15	18 x 32	1455	0.28
220		16 x 32	1310	0.14	18 x 32	1705	0.14	18 x 40	1490	0.27
330		18 x 32	1705	0.12						

Cap (F)	WV (V)	400			450		
		Item	D x L	R.C.	IMP	D x L	R.C.
1		10 x 12	16	5.20	10 x 13	18	8.50
2.2		10 x 16	27	3.80	10 x 16	110	7.90
3.3		10 x 16	115	2.90	10 x 20	135	6.20
4.7		10 x 20	180	2.30	13 x 21	190	3.70
10		10 x 20	220	1.20	13 x 25	320	2.60
22		13 x 25	350	0.61	16 x 26	580	1.00
33		16 x 21	600	0.46	16 x 32	630	0.62
47		16 x 26	720	0.33	18 x 32	905	0.58
68		16 x 32	1200	0.28	18 x 36	985	0.48
100		18 x 40	1300	0.22			

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