

SWR Series

Screw Terminal Type(螺釘型), Standard(標準品)

FEATURES

1. Small case size, high rated voltage, capacitance and ripple current, stable and reliable performance, forming complete sets of unclear electric station.
2. Suit for use in electronic and industrial equipments such as computer, programming control exchanger for power supplies filtering and energy storing.



SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature Range	-40 to +85°C	-25 to +85°C
Rated Working Voltage Range	10 to 100V	160 to 450V
Nominal Capacitance Range	270 to 680000µF	
Capacitance Tolerance	±20% (120Hz, +20°C)	
Leakage Current	I ≤ 0.02CV or 5(mA) after 5 minutes application of rated working voltage at +20°C, which is smaller	
Dissipation Factor tan δ (120Hz, +20°C)	The values shown in the DIMENSIONS tables	
Low Temperature Characteristics	Impedance ratio max. at 120Hz	
	Working Voltage (V)	10 ~ 100 160 ~ 450
	Z-25°C / Z+20°C	-- 8
Z-40°C / Z+20°C	12 --	
High Temperature Loading	Test conditions	Post test requirements at +20°C
	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current applied for 2000 hours at 85°C	Leakage current : ≤ Initial specified value Cap. change : within ±20% of initial measured value tan δ : ≤ 200% of initial specified value (350~450V : ≤ 300%)
Shelf Life	At 85°C no voltage applied after 1000hours the capacitors shall meet the following limits	
	Leakage current : ≤ Initial specified value Cap. change : within ±20% of initial measured value tan δ : ≤ 175% of initial specified value (350~450V : ≤ 300%)	
Others	JIS C - 5141 JIS C - 5102	

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CASE SIZE TABLE

Method mount metal bracket

Unit : mm

Method to mount resin bushing (φ76.2) (Apply to L=150 or more)

Unit : mm

*** B**
3-leg brackets for φ90 capacitors have different hole shapes from the ordinary ones illustrated below.

Unit : mm

Method to mount resin bushing (φ90) (Apply to L=150 or more)

Unit : mm

φ Screw terminal type

Unit : mm

Dimension of terminal pitch (w) and (l) and Nominal dia. of bolt

φD	w	l	a	Nominal dia. of bolt
51	22.0	6	3	M5
63.5	28.6	6	3	M5
76.2	31.8	6	3	M5
90	31.8	6	3	M5
100	41.5	10	4	M8

Dimension of mounting bracket										
Voltage (Code)		3 - Leg					2 - Leg			
Symbol	φD	51	63.5	76.2	90	100	51	63.5	76.2	90
P		32.5	38.1	44.5	50.8	56.3	33.2	40.5	46.5	53
A		38.5	43	49.2	58.5	62	40	46.5	53	59
T		7.5	8.0	7.0	8.0	8.0	6.0	7.0	6.0	6.0
S		5.0	5.0	5.0	5.0	5.0	4.5	4.5	4.5	4.5
U		12	14	14	18	16	14	14	14	14
θ°		60	60	60	60	60	30	30	30	30
H		20	25	30	35	36	25	35	35	35
h		15	20	24	25	30	15	20	20	20

RIPPLE CURRENT MULTIPLIER								
Frequency Coefficient								
Rated Voltage(V)	Size(mm)	Freq.(Hz)						
		50	120	300	1k	10k	50k	
10 to 50	φ 35 to φ 90	0.95	1	1.03	1.05	1.09	1.12	
	φ 35	0.9	1	1.06	1.1	1.18	1.22	
63 & 80	φ 51 to φ 90	0.95	1	1.03	1.05	1.09	1.12	
	φ 35	0.82	1	1.12	1.22	1.3	1.33	
100	φ 51	0.9	1	1.06	1.1	1.18	1.22	
	φ 63.5 to φ 90	0.95	1	1.03	1.05	1.09	1.12	
	φ 35	0.8	1	1.19	1.34	1.46	1.52	
160 to 250	φ 51	0.81	1	1.14	1.26	1.36	1.41	
	φ 76.2 & φ 90	0.82	1	1.12	1.22	1.3	1.33	
350 to 450	φ 35 to φ 90	0.8	1	1.1	1.3	1.4	1.5	

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DIMENSIONS										
Voltage (Code)		10V			16V			25V		
SV		13			20			32		
Cap.(μ F)	Code	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current
15000	159									
18000	189							35 x 50	0.35	4.0
22000	229									
27000	279				35 x 50	0.45	4.2			
33000	339									
39000	399	35 x 50	0.60	4.7				35 x 80	0.40	6.2
47000	479							35 x 100	0.40	7.4
56000	569				35 x 80	0.60	6.5	35 x 120	0.45	8.3
68000	689									
82000	829	35 x 80	0.60	7.4	35 x 100	0.70	8.0	51 x 80	0.50	9.7
100000	10T	35 x 100	0.70	8.0	35 x 120	0.70	9.6	51 x 100	0.60	10.8
120000	12T	35 x 120	0.70	9.4	51 x 80	0.80	9.6	51 x 120	0.60	12.8
150000	15T	51 x 80	0.90	9.8	51 x 100	0.90	11.2			
180000	18T							63.5 x 100	0.75	14.7
220000	22T	51 x 100	1.00	12.1	51 x 120	1.00	14.2	63.5 x 100	0.80	16.8
270000	27T	51 x 120	1.20	13.6	63.5 x 100	1.20	15.3	76.2 x 100	0.90	18.3
330000	33T				63.5 x 120	1.30	17.1	76.2 x 120	1.00	20.7
390000	39T	63.5 x 100	1.50	15.3	76.2 x 100	1.60	18.0	76.2 x 140	1.20	22.1
470000	47T	63.5 x 120	2.00	16	76.2 x 100	1.80	19.3			
560000	56T	76.2 x 100	2.50	17.3	76.2 x 140	2.00	20.7	90 x 140	1.50	25.8
680000	68T	76.2 x 120	3.00	18.7						

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size ϕ D x L(mm)

Tan δ at 20°C 120Hz

Voltage (Code)		35V			50V			63V		
SV		44			63			79		
Cap.(μ F)	Code	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current
5600	568							35 x 50	0.20	3.0
6800	688									
8200	828									
10000	109				35 x 50	0.25	4.1	35 x 80	0.25	4.0
12000	129									
15000	159	35 x 50	0.30	3.9				35 x 100	0.25	5.3
18000	189				35 x 80	0.25	5.2	35 x 120	0.25	6.2
22000	229				35 x 100	0.30	5.9	51 x 80	0.30	6.5
27000	279				35 x 120	0.35	6.6			
33000	339	35 x 80	0.40	6.0				51 x 100	0.35	8.1
39000	399	35 x 100	0.40	7.0	51 x 80	0.40	7.4	51 x 120	0.35	9.6
47000	479	35 x 120	0.45	8.0				63.5 x 100	0.40	10.2
56000	569				51 x 100	0.40	9.8			
68000	689	51 x 80	0.50	9	51 x 120	0.45	11.1	63.5 x 120	0.45	13.3
82000	829	51 x 100	0.55	10.3	63.5 x 100	0.50	12.2			
100000	10T							76.2 x 120	0.45	17.1
120000	12T	51 x 120	0.60	12.8	63.5 x 120	0.50	16	76.2 x 140	0.50	19.0
150000	15T	63.5 x 100	0.70	14.0	76.2 x 120	0.60	18.1	90 x 140	0.55	22.0
180000	18T	63.5 x 120	0.70	16.6	76.2 x 140	0.70	19.5			
220000	22T	76.2 x 100	0.75	17.3						
270000	27T	76.2 x 120	0.80	19.8	90 x 140	0.80	24.6			
330000	33T	76.2 x 140	0.90	22.5						
390000	39T									
470000	47T	90 x 140	1.00	28.3						

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size ϕ D x L(mm)

Tan δ at 20°C 120Hz

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DIMENSIONS										
Voltage (Code)		80V			100V			160V		
SV		100			125			200		
Cap.(μ F)	Code	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current
1200	128							35 x 50	0.15	2.0
1500	158									
1800	188									
2200	228				35 x 50	0.10	2.5	35 x 80	0.15	3.4
2700	278							35 x 100	0.15	3.7
3300	338	35 x 50	0.15	2.5				35 x 120	0.15	4.5
3900	398									
4700	478				35 x 80	0.15	3.4	51 x 80	0.20	5.6
5600	568									
6800	688	35 x 80	0.20	3.7	35 x 100	0.15	4.2	51 x 100	0.20	7.5
8200	828				35 x 120	0.15	5.0	51 x 120	0.20	8.1
10000	109	35 x 100	0.20	4.9	51 x 80	0.20	5.2	63.5 x 100	0.20	9.8
12000	129	35 x 120	0.20	5.4				63.5 x 120	0.20	10.8
15000	159	51 x 80	0.25	6.0				76.2 x 100	0.20	12.7
18000	189				51 x 120	0.20	8.1	76.2 x 120	0.20	14.0
22000	229	51 x 100	0.30	7.1	63.5 x 100	0.25	8.6	76.2 x 140	0.20	16.6
27000	279	51 x 120	0.30	8.6	63.5 x 120	0.25	10.3			
33000	339	63.5 x 100	0.35	9.3	76.2 x 100	0.25	11.1	90 x 140	0.25	18.9
39000	399				76.2 x 120	0.25	12.4			
47000	479	63.5 x 120	0.35	12.0	76.2 x 140	0.25	14.3			
56000	569									
68000	689	76.2 x 120	0.35	15.4	90 x 140	0.30	18.0			
82000	829	76.2 x 140	0.35	18.1						
100000	10T	90 x 140	0.40	21.0						

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size ϕ D x L(mm)

Tan δ at 20°C 120Hz

Voltage (Code)		200V			250V			350V		
SV		250			300			400		
Cap.(μ F)	Code	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current
390	397							35 x 50	0.25	1.9
470	477									
560	567				35 x 50	0.15	1.3			
680	687							35 x 80	0.25	2.9
820	827	35 x 50	0.15	1.6						
1000	108							35 x 100	0.25	3.8
1200	128				35 x 80	0.15	2.3	35 x 120	0.25	4.2
1500	158				35 x 100	0.15	3.0	51 x 70	0.25	4.7
1800	188	35 x 80	0.15	2.8	35 x 120	0.15	3.3			
2200	228	35 x 100	0.15	3.6	51 x 80	0.15	3.7	51 x 90	0.25	6.3
2700	278	35 x 120	0.15	4.0						
3300	338	51 x 80	0.15	4.5	51 x 100	0.15	5.1	51 x 130	0.25	8.8
								63.5 x 90	0.25	8.7
3900	398				51 x 120	0.15	5.9	63.5 x 110	0.25	9.3
4700	478	51 x 100	0.15	7.1	63.5 x 100	0.20	6.9	63.5 x 130	0.25	12.0
								76 x 90	0.25	11.6
5600	568	51 x 120	0.15	8.2				76.2 x 110	0.25	12.6
6800	688				63.5 x 120	0.20	8.7	76.2 x 130	0.25	15.9
8200	828	63.5 x 100	0.20	10.0				76.2 x 150	0.25	19.0
10000	109	63.5 x 120	0.20	11.0	76.2 x 120	0.20	11.1			
12000	129	76.2 x 100	0.20	11.5	76.2 x 140	0.20	13.0	90 x 150	0.25	22.5
15000	159	76.2 x 120	0.20	12.8	90 x 140	0.20	14.9			
18000	189	76.2 x 140	0.20	15.0						
22000	229	90 x 140	0.25	15.6						

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Case Size ϕ D x L(mm)

Tan δ at 20°C 120Hz

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DIMENSIONS										
Voltage (Code)		400V			450V					
SV		450			500					
Cap.(μ F)	Code	Case Size	Tan δ	Ripple Current	Case Size	Tan δ	Ripple Current			
270	227				35 x 50	0.25	1.6			
330	337	35 x 50	0.25	1.7						
390	397									
470	477				35 x 80	0.25	2.4			
560	567	35 x 80	0.25	2.7						
680	687				35 x 100	0.25	3.10			
820	827	35 x 100	0.25	3.4	35 x 120	0.25	3.50			
1000	108	35 x 120	0.25	3.9	51 x 70	0.25	3.90			
1200	128	51 x 70	0.25	4.2	51 x 90	0.25	4.70			
1500	158				51 x 110	0.25	5.60			
1800	188	51 x 90	0.25	5.7	51 x 130	0.25	6.50			
2200	228	51 x 130	0.25	7.2	63.5 x 90	0.25	7.20			
2700	278	63.5 x 90	0.25	7.9	63.5 x 110	0.25	8.60			
3300	338	63.5 x 110	0.25	9.5	63.5 x 130	0.25	10.0			
					76 x 90	0.25	9.7			
3900	398	63.5 x 130	0.25	10.9	76.2 x 110	0.25	11.50			
		76 x 90	0.25	10.5						
4700	478	76.2 x 110	0.25	12.6	76.2 x 130	0.25	13.30			
5600	568	76.2 x 130	0.25	14.5	76.2 x 150	0.25	15.70			
6800	688	76.2 x 150	0.25	17.3						
8200	828				90 x 150	0.25	18.60			
10000	109	90 x 150	0.25	20.5						

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size ϕ D x L(mm)

Tan δ at 20°C 120Hz