

SMS Series

PC Board Plug-in Type

Aluminum Electrolytic Capacitors

Features

¶ Standard snap-in terminal series.

Recommended Applications

¶ Smoothing circuits, AC adaptor etc.

Specifications

¶ Operating temperature range :

350 ° WV : -40 ° ~ +85 ° , 350V § WV : -25 ° ~ +85 ° ...

¶ Rated working voltage : 10~450Vdc

¶ Rated capacitance : 56~56,000 § fi

¶ Capacitance tolerance : (at 120Hz, +20 °),. ° 20% or -10~+30%

¶ Tan δ : (at 120Hz, ° 20 °)..

W.V.	10	16	25	35	50	63	80	100
Tan δ % max	0.4	0.35	0.3	0.25	0.2	0.2	0.15	0.15

W.V.	160	180	200	250	315	350	400	450
Tan δ % max	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Add 0.01 per 1,000 § for more than 1,000 § items.

¶ DC leakage current : max.

I=0.03 CV § Ar 3 § Å

whichever is smaller.

where I=DC leakage current in § Å

C=rated capacitance in § fi

V=rated working voltage in V

DC leakage current shall be measured after 5 minutes

application of the DC rated working voltage through the 1000 § Y resistor at 20 ° ...

¶ Load life :

After 2000 hours application of DC rated working voltage at 85 ° ,... the measurements shall meet following limits.

Capacitance change	° 20% of the initial measured value.
Tan δ %	° 150% of the initial specified value.
DC leakage current	° the initial specified value.

Measurements shall be performed after 2 hours exposure at room temperature.

¶ Shelf life :

After storage for 1000 hours at 85 ° , without voltage application, the measurements shall meet the following limits.



Capacitance change	° 20% of the initial measured value.
Tan δ %	° 150% of the initial specified value.
DC leakage current	° the initial specified value.

Measurements shall be performed after exposure for 24 hours at room temperature after application of DC rated voltage to the capacitors for 30 minutes.

¶ Low temperature impedance stability.

Impedance ratio against value at +20 ° .at 120Hz

W.V.(V DC)	*1 -25 ° /+20 ° ...	*2 -40 ° /+20 ° ...
10	5	18
16~35	4	15
50~100	3	10
160~350	3	8
400~450	4	-

¶ Add 0.5 per 1,000 § for more than 1,000 § items.

¶ Add 1.0 per 1,000 § for more than 1,000 § items.

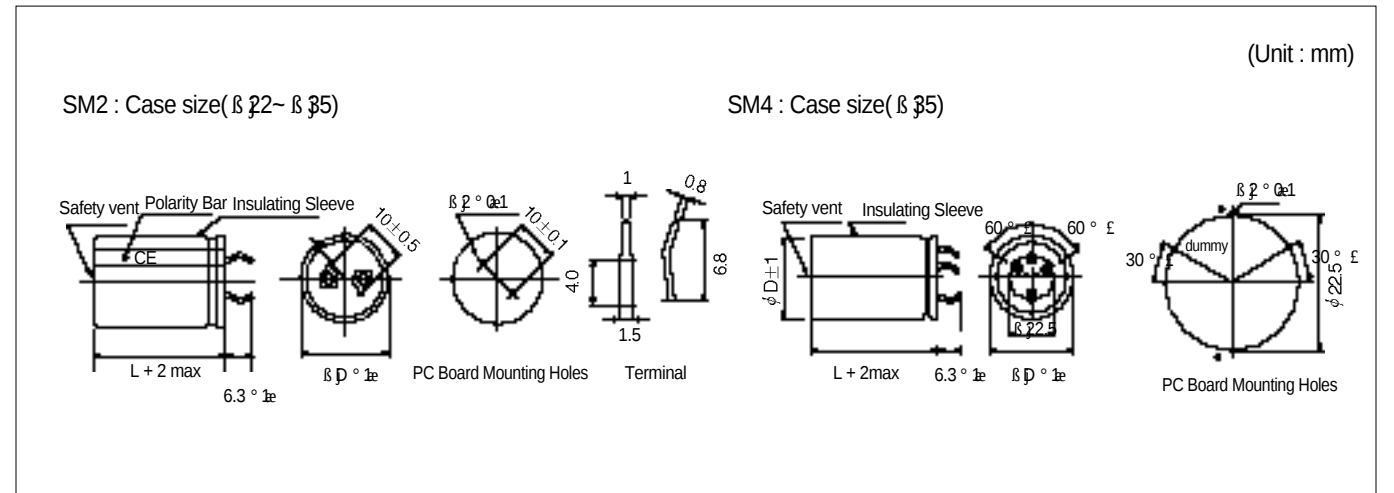
¶ Frequency compensation coefficient of permissible ripple current

Frequency WV	50Hz	60Hz	120Hz	300Hz	1KHz	10KHz~
~100 V	0.92	0.95	1.00	1.06	1.11	1.20
160~250 V	0.85	0.9	1.00	1.18	1.32	1.50
315~450 V	0.82	0.87	1.00	1.16	1.3	1.40

¶ Temperature compensation coefficient of permissible ripple current

Surrounding Temperature (°)..	+ 40	+ 70	+ 85
Compensation Coefficient	1.90	1.3	1.00

Dimensions



Dimensions & Maximum Permissible Ripple Current

W. V(V DC)	10WV(1A)				16WV(1C)				25WV(1E)				35WV(1V)			
Cap(§ fi)	§ 22	§ 25.4	§ 30	§ 35	§ 22	§ 25.4	§ 30	§ 35	§ 22	§ 25.4	§ 30	§ 35	§ 22	§ 25.4	§ 30	§ 35
4700													22 ° 30 (3.12)	25.4 ° 25 (3.13)		
5600									22 ° 25 (2.73)				22 ° 35 (3.41)	25.4 ° 30 (3.47)		
6800									22 ° 30 (3.01)	25.4 ° 25 (3.11)			22 ° 40 (3.76)	25.4 ° 30 (3.64)	30 ° 25 (3.72)	
8200					22 ° 25 (3.01)				22 ° 35 (3.41)	25.4 ° 30 (3.54)			22 ° 45 (4.12)	25.4 ° 35 (4.03)	30 ° 30 (4.24)	
10000					22 ° 30 (3.45)				22 ° 40 (4.08)	25.4 ° 30 (3.88)	30 ° 25 (3.96)		22 ° 50 (4.56)	25.4 ° 40 (4.48)	30 ° 30 (4.44)	35 ° 25 (4.42)
12000	22 ° 25 (3.3)				22 ° 35 (3.77)	25.4 ° 25 (3.88)			22 ° 45 (4.47)	25.4 ° 35 (4.32)	30 ° 30 (4.47)			25.4 ° 45 (5.14)	30 ° 35 (5.14)	35 ° 30 (5.16)
15000	22 ° 30 (3.82)	25.4 ° 25 (3.85)			22 ° 40 (4.22)	25.4 ° 30 (4.43)	30 ° 25 (4.53)		22 ° 50 (4.99)	25.4 ° 40 (4.91)	30 ° 30 (4.72)	35 ° 25 (4.71)		25.4 ° 50 (5.81)	30 ° 40 (5.66)	35 ° 35 (5.77)
18000	22 ° 35 (4.25)	25.4 ° 25 (4.1)			22 ° 45 (4.62)	25.4 ° 35 (4.96)	30 ° 30 (5.15)			25.4 ° 45 (5.47)	30 ° 35 (5.46)	35 ° 30 (5.27)			30 ° 50 (6.38)	35 ° 40 (6.32)
22000	22 ° 40 (4.81)	25.4 ° 30 (4.67)	30 ° 25 (4.79)		22 ° 50 (5.41)	25.4 ° 40 (5.37)	30 ° 30 (5.35)			25.4 ° 50 (6.05)	30 ° 40 (5.86)	35 ° 35 (5.92)				35 ° 45 (6.99)
27000	22 ° 45 (5.44)	25.4 ° 35 (5.21)	30 ° 30 (5.45)			25.4 ° 45 (5.99)	30 ° 35 (5.93)	35 ° 25 (5.68)			30 ° 50 (6.7)	35 ° 40 (6.45)				35 ° 50 (7.74)
33000	22 ° 50 (5.94)	25.4 ° 40 (5.92)	30 ° 30 (5.66)	35 ° 25 (5.76)		25.4 ° 50 (6.65)	30 ° 40 (6.65)	35 ° 30 (6.5)				35 ° 45 (7.41)				
47000		25.4 ° 50 (7.05)	30 ° 40 (6.97)	35 ° 30 (6.62)			30 ° 50 (7.92)	35 ° 40 (7.61)								
56000			30 ° 45 (7.42)	35 ° 35 (7.12)				35 ° 45 (8.16)	® Case size § D ° 1mm ® Ripple current (Arms) at 85 ° , 120Hz							

Dimensions & Maximum Permissible Ripple Current

W. V(V _{DC}) Cap(µF) _{fr}	50WV(1H)				63WV(1J)				80WV(1K)				100WV(2A)			
	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35
820													22 ° 30 (1.86)			
1000													22 ° 35 (2.02)	25.4 ° 25 (2.12)		
1200									22 ° 30 (2.17)				22 ° 40 (2.12)	25.4 ° 30 (2.35)	30 ° 25 (2.43)	
1500									22 ° 35 (2.42)	25.4 ° 25 (2.45)			22 ° 45 (2.43)	25.4 ° 35 (2.67)	30 ° 30 (2.78)	
1800					22 ° 30 (2.45)				22 ° 40 (2.65)	25.4 ° 30 (2.76)	30 ° 25 (2.26)		22 ° 50 (2.74)	25.4 ° 40 (2.97)	30 ° 35 (3.05)	35 ° 25 (3.12)
2200	22 ° 25 (2.71)				22 ° 30 (2.71)	25.4 ° 25 (2.78)			22 ° 45 (3.02)	25.4 ° 35 (3.15)	30 ° 30 (3.09)			25.4 ° 45 (3.45)	30 ° 35 (3.38)	35 ° 30 (3.29)
2700	22 ° 30 (2.84)				22 ° 35 (2.99)	25.4 ° 30 (3.14)			22 ° 50 (3.35)	25.4 ° 40 (3.33)	30 ° 35 (3.45)	35 ° 25 (3.52)		25.4 ° 50 (3.68)	30 ° 40 (3.85)	35 ° 35 (3.72)
3300	22 ° 35 (2.96)	25.4 ° Ø 25			22 ° 40 (3.31)	25.4 ° 30 (3.45)	30 ° 25 (3.48)		22 ° 60 (3.83)	25.4 ° 45 (3.85)	30 ° 35 (3.67)	35 ° 30 (3.61)		25.4 ° 55 (4.24)	30 ° 45 (4.19)	35 ° 40 (4.28)
3900	22 ° 35 (3.22)	(3.04) 25.4 ° Ø			22 ° 50 (3.6)	25.4 ° 35 (3.75)	30 ° 30 (3.85)			25.4 ° 50 (4.42)	30 ° 40 (4.56)	35 ° 35 (4.3)			30 ° 50 (5.06)	35 ° 40 (4.86)
4700	22 ° 40 (3.54)	30 (3.46)	30 ° 25 (3.76)		22 ° 55 (3.95)	25.4 ° 40 (4.05)	30 ° 35 (4)	35 ° 25 (4.08)		25.4 ° 55 (5.12)	30 ° 45 (5.23)	35 ° 35 (4.91)			30 ° 60 (5.54)	35 ° 45 (5.33)
5600	22 ° 45 (3.94)	25.4 ° Ø 35	30 ° 30 (4.2)	35 ° 25 (4.35)		25.4 ° 45 (4.32)	30 ° 35 (4.27)	35 ° 30 (4.32)			30 ° 50 (5.53)	35 ° 40 (5.35)				35 ° 50 (5.82)
6800	22 ° 55 (4.76)	(3.85) 25.4 ° Ø	30 ° 35 (4.93)	35 ° 30 (5.05)		25.4 ° 55 (5.08)	30 ° 45 (4.96)	35 ° 35 (4.75)			30 ° 60 (6.07)	35 ° 45 (5.9)				35 ° 60 (6.41)
8200		40 (4.24)	30 ° 40 (5.31)	35 ° 30 (5.22)			30 ° 50 (5.62)	35 ° 40 (5.51)				35 ° 50 (6.47)				
10000		25.4 ° Ø 45	30 ° 45 (5.98)	35 ° 35 (5.77)			30 ° 55 (6.24)	35 ° 45 (6.08)				35 ° 60 (7.16)				
12000		(4.76) 25 ° 50	30 ° 50 (6.56)	35 ° 40 (6.32)				35 ° 50 (6.66)								
15000		(5.43)		35 ° 45 (7.07)												
18000				35 ° 50 (7.74)	® Base size ⌀ 16mm ® Ripple current (Arms) at 85 ° , 120Hz											

Time(hours)

Dimensions & Maximum Permissible Ripple Current

W. V(V _{DC}) Cap(µF) _{fr}	160WV(2C)				180WV(2Y)				200WV(2D)				250WV(2E)			
	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35	⌀ 22	⌀ 25.4	⌀ 30	⌀ 35
180													22 ° 25 (1.07)			
220													22 ° 30 (1.17)			
270									22 ° 30 (1.41)				22 ° 35 (1.31)	25.4 ° 25 (1.38)		
330	22 ° 30 (1.4)				22 ° 30 (1.35)				22 ° 30 (1.56)	25.4 ° 25 (1.58)			22 ° 40 (1.75)	25.4 ° 30 (1.81)		
390	22 ° 30 (1.54)	25.4 ° Ø 25			22 ° 35 (1.55)	25.4 ° 25 (1.58)			22 ° 35 (1.68)	25.4 ° 30 (1.75)			22 ° 45 (1.91)	25.4 ° 35 (1.95)	30 ° 25 (1.89)	
470	22 ° 35 (1.75)	(1.58) 25.4 ° Ø			22 ° 40 (1.75)	25.4 ° 30 (1.92)	30 ° 25 (1.76)		22 ° 40 (1.85)	25.4 ° 30 (1.97)	30 ° 25 (1.85)		22 ° 50 (2.11)	25.4 ° 40 (2.2)	30 ° 30 (2.15)	
560	22 ° 40 (1.95)	30 (1.86)	30 ° 25 (1.98)		22 ° 45 (1.98)	25.4 ° 35 (1.87)	30 ° 30 (2.12)		22 ° 45 (2.43)	25.4 ° 35 (2.38)	30 ° 30 (2.5)			25.4 ° 45 (2.35)	30 ° 35 (2.35)	35 ° 25 (2.25)
680	22 ° 45 (2.21)	25.4 ° Ø 30	30 ° 30 (2.56)		22 ° 50 (2.25)	25.4 ° 40 (2.25)	30 ° 35 (2.34)	35 ° 25 (2.07)	22 ° 55 (2.68)	25.4 ° 40 (2.58)	30 ° 30 (2.47)	35 ° 25 (2.43)		25.4 ° 50 (2.75)	30 ° 40 (2.67)	35 ° 30 (2.5)
820	22 ° 50 (2.46)	(2.05) 25.4 ° Ø	30 ° 30 (2.57)	35 ° 25 (2.37)	22 ° 60 (2.52)	25.4 ° 45 (2.63)	30 ° 35 (2.47)	35 ° 30 (2.52)		25.4 ° 45 (3.05)	30 ° 35 (2.85)	35 ° 30 (2.93)			30 ° 45 (2.98)	35 ° 35 (2.77)
1000	22 ° 60 (2.8)	35 (2.18)	30 ° 35 (2.76)	35 ° 30 (2.8)		25.4 ° 50 (3.12)	30 ° 40 (3.08)	35 ° 30 (2.85)		25.4 ° 50 (3.42)	30 ° 45 (3.35)	35 ° 30 (3.25)			30 ° 55 (3.4)	35 ° 40 (3.32)
1200		25.4 ° Ø 40	30 ° 40 (3.12)	35 ° 30 (3.15)			30 ° 45 (3.24)	35 ° 35 (3.3)			30 ° 50 (3.65)	35 ° 35 (3.5)				35 ° 45 (3.53)
1500		(2.46) 25.4 ° Ø	30 ° 50 (3.59)	35 ° 40 (3.7)			30 ° 55 (3.64)	35 ° 45 (3.75)			30 ° 55 (3.82)	35 ° 45 (3.87)				35 ° 55 (4.04)
1800		45	30 ° 55	35 ° 45				35 ° 50	® Base size ⌀ 16mm ® Ripple current (Arms) at 85 ° , 120Hz							