

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 WVV : -40° ~ +85° , 350VSV : -25° ~ +85° ...
- Rated working voltage : 10~450Vdc
- Rated capacitance : 56~56,000 μ f
- 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 μ f for more than 1,000 μ f items.

DC leakage current : max.

$I=0.03 CV \bar{A}$ or $3 \bar{A}$ whichever is smaller.

where I=DC leakage current in \bar{A}

C=rated capacitance in μ f

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 $\bar{\Omega}$ 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 μ f for more than 1,000 μ f items.

° Add 1.0 per 1,000 μ f for more than 1,000 μ f items.

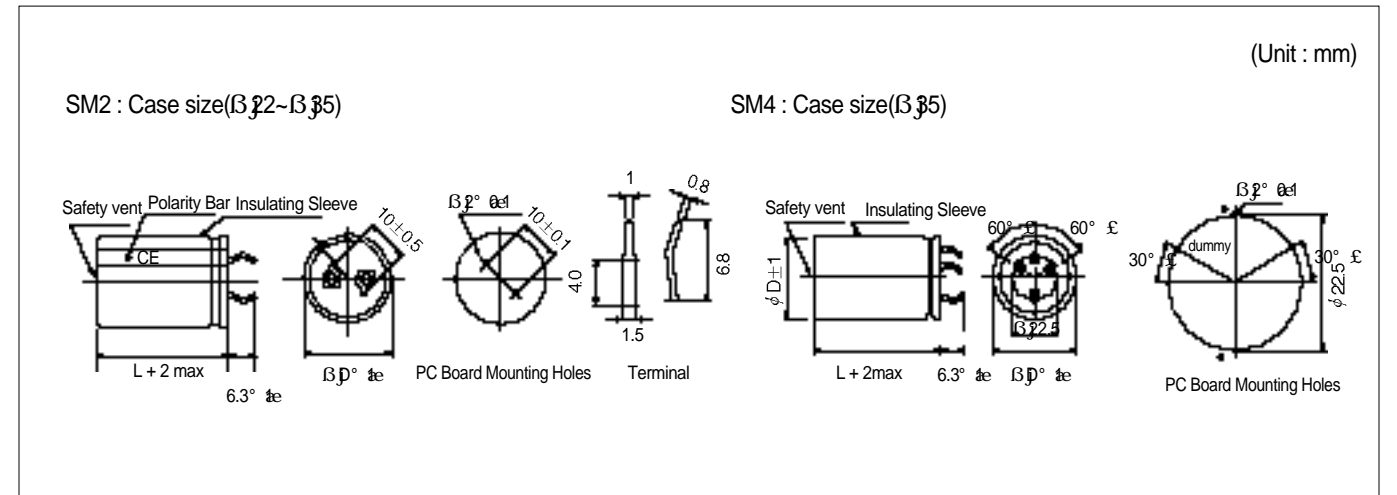
Frequency compensation coefficient of permissible ripple current

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(μ f)	$\bar{\mu}$ 2	$\bar{\mu}$ 5.4	$\bar{\mu}$ 0	$\bar{\mu}$ 5	$\bar{\mu}$ 2	$\bar{\mu}$ 5.4	$\bar{\mu}$ 0	$\bar{\mu}$ 5	$\bar{\mu}$ 2	$\bar{\mu}$ 5.4	$\bar{\mu}$ 0	$\bar{\mu}$ 5	$\bar{\mu}$ 2	$\bar{\mu}$ 5.4	$\bar{\mu}$ 0	$\bar{\mu}$ 5
4700													22° 30	25.4° 25		
5600									22° 25				22° 35	25.4° 30		
6800									22° 30	25.4° 25			22° 40	25.4° 30	30° 25	
8200					22° 25				22° 35	25.4° 30			22° 45	25.4° 35	30° 30	
10000					22° 30				22° 40	25.4° 30	30° 25		22° 50	25.4° 40	30° 30	35° 25
12000	22° 25				22° 35	25.4° 25			22° 45	25.4° 35	30° 30			25.4° 45	30° 35	35° 30
15000	22° 30	25.4° 25			22° 40	25.4° 30	30° 25		22° 50	25.4° 40	30° 30	35° 25		25.4° 50	30° 40	35° 35
18000	22° 35	25.4° 25			22° 45	25.4° 35	30° 30			25.4° 45	30° 35	35° 30			30° 50	35° 40
22000	22° 40	25.4° 30	30° 25		22° 50	25.4° 40	30° 30			25.4° 50	30° 40	35° 35				35° 45
27000	22° 45	25.4° 35	30° 30			25.4° 45	30° 35	35° 25			30° 50	35° 40				35° 50
33000	22° 50	25.4° 40	30° 30	35° 25		25.4° 50	30° 40	35° 30					35° 45			
47000		25.4° 50	30° 40	35° 30			30° 50	35° 40								
56000			30° 45	35° 35				35° 45								

° Base size $\bar{\mu}$ mm

° Ripple current (Arms) at 85° ,.120Hz

Dimensions & Maximum Permissible Ripple Current

W. V(V _{dc}) Cap(βfi)	50WV(1H)				63WV(1J)				80WV(1K)				100WV(2A)							
	β ₂₂	β _{25.4}	β ₃₀	β ₃₅	β ₂₂	β _{25.4}	β ₃₀	β ₃₅	β ₂₂	β _{25.4}	β ₃₀	β ₃₅	β ₂₂	β _{25.4}	β ₃₀	β 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° 25 (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 β _p ° lmm ® Ripple current (Arms) at 85° .,120Hz															

Dimensions & Maximum Permissible Ripple Current

W. V(V _{dc}) Cap(βfi)	160WV(2C)				180WV(2Y)				200WV(2D)				250WV(2E)											
	β ₂₂	β _{25.4}	β ₃₀	β ₃₅	β ₂₂	β _{25.4}	β ₃₀	β ₃₅	β ₂₂	β _{25.4}	β ₃₀	β ₃₅	β ₂₂	β _{25.4}	β ₃₀	β 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° 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° 45 (1.68)	25.4° 35 (1.75)	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 (3.59)	35° 45 (3.7)												35° 50	® Base size β _p ° lmm ® Ripple current (Arms) at 85° .,120Hz							