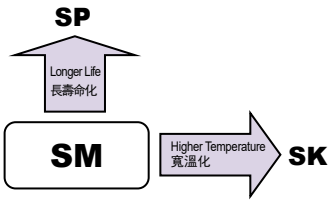
SM Series

SNAP-IN TERMINAL TYPE, STANDARD
導箔型，標準品



- Standard snap-in terminal series
  導箔型標準品系列
- Voltage range of 6.3~450V
  額定工作電壓範圍 6.3~450V
- Comply with the RoHS & REACH
  符合 RoHS 與 REACH



☐ SPECIFICATIONS 特性表

Items 項目	Characteristics 主要特性	
Category Temperature Range 工作溫度範圍	-40 ~ +85°C	-25 ~ +85°C
Voltage Range 額定工作電壓範圍	6.3 ~ 350V	400 ~ 450V
Capacitance Range 靜電容量範圍	82 ~ 100000μF	56 ~ 680μF
Capacitance Tolerance 靜電容量允許偏差	±20% at 120Hz, 20°C	
Leakage Current 漏電流	$I \leq 3\sqrt{CV}$ (after 5 minutes application of rated voltage at 20°C) （在 20°C 環境中施加額定工作電壓 5 分鐘後） I: Leakage current (μA) 漏電流, C: Nominal capacitance (μF) 標稱靜電容量, V: Rated voltage (V) 額定電壓	

Dissipation Factor (tan δ) 損耗角正切

When nominal capacitance is over 1000μF, tan δ shall be added 0.01 to the listed value with increase of every 1000μF.
當標稱靜電容量大於 1000μF，其標稱靜電容量每增加 1000μF，損耗角正切增加 0.01。
Measurement frequency 測試頻率: 120Hz, Temperature 温度: 20°C

Rated Voltage (V) 額定工作電壓	6.3	10	16, 25	35	50, 63	80, 100	160~400	450
tan δ (max.) 最大損耗角正切	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20

Stability at Low Temperature 低溫特性

Measurement frequency 測試頻率: 120Hz

Rated Voltage (V) 額定工作電壓		6.3~16	25	35	50, 63	80~100	160~250	350~450
Impedance Ratio 阻抗比	Z(-25°C) / Z(+20°C)	4	3	3	2	2	4	8
	Z(-40°C) / Z(+20°C)	15	10	8	6	5	—	—

Endurance 耐久性

When the capacitors are restored to 20°C after 2000 hours application of the rated voltage at 85°C, they meet the characteristics listed below.
在 85°C 環境中施加額定工作電壓 2000 小時後，待電容器恢復至 20°C 時進行測量，電容器的特性符合下表要求。

Capacitance Change 靜電容量變化率	Within ±20% of initial value 初始值的±20%以內
Dissipation Factor 損耗角正切	Less than 200% of specified value 不大於規範值的 200%
Leakage Current 漏電流	Less than specified value 不大於規範值

Shelf Life 高溫貯存特性

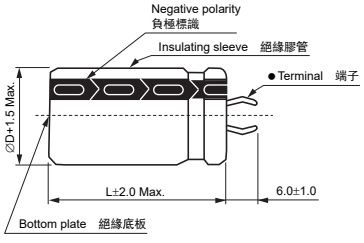
When the capacitors are restored to 20°C after leaving under no load at 85°C for 1000 hours, they meet the specified listed below.
在 85°C 環境中無負荷放置 1000 小時後，待電容器恢復至 20°C 時進行測量，電容器的特性符合下表要求。

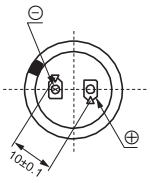
Capacitance Change 靜電容量變化率	Within ±20% of initial value 初始值的±20%以內
Dissipation Factor 損耗角正切	Less than 200% of specified value 不大於規範值的 200%
Leakage Current 漏電流	Less than specified value 不大於規範值

Marking 標識

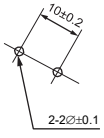
Printed with white colour on black sleeve (PVC) or printed with white colour on green sleeve (PET).
黑色膠管白字印刷（PVC）或綠色膠管白字印刷（PET）。

☐ DRAWING & DIMENSIONS 外形圖及尺寸 (Unit: mm)

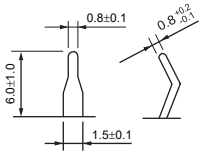




● PC board mounting holes dimensions
線路板安裝孔尺寸



● Terminal dimensions
端子尺寸



☐ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT 紋波電流頻率補償系數

Frequency 頻率		50Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient 系數	~ 100μF	0.88	1.0	1.06	1.15	1.20
	160 ~ 250μF	0.85	1.0	1.20	1.25	1.45
	315μF ~	0.88	1.0	1.15	1.20	1.40

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5~10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced. 鋁電解電容器在疊加紋波電流後會引起發熱，溫度每上升 5~10°C 壽命會減半。若要保持長壽命性能，請在使用過程中適當降低紋波電流。

Note: All design and specifications are for reference only and is subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.
注：以上所提供的設計及特性參數僅供參考，任何修改不作預先通知。如果在使用上有疑問，請在採購前與我們聯繫，以便提供技術上的協助。

CAT.2026/V2.1

SM Series

□ DIMENSIONS & STANDARD RATINGS 規格尺寸及標準參數

WV / ØD		6.3 (0J)				10 (1A)				16 (1C)			
μF		22	25	30	35	22	25	30	35	22	25	30	35
10000	103									22 x 25 3.32			
12000	123					22 x 25 3.31				22 x 30 3.56	25 x 25 3.89		
15000	153	22 x 25 3.39				22 x 30 3.82	25 x 25 3.39			22 x 35 4.29	25 x 30 4.45	30 x 25 4.56	
18000	183	22 x 30 3.85	25 x 25 3.96			22 x 35 4.28	25 x 25 4.17			22 x 40 4.77	25 x 35 4.96	30 x 30 5.10	
22000	223	22 x 35 4.34	25 x 25 4.22			22 x 40 4.79	25 x 30 4.71	30 x 25 4.83		22 x 50 5.51	25 x 40 5.51	30 x 30 5.39	
27000	273	22 x 40 4.85	25 x 30 4.77	30 x 25 4.89		22 x 45 5.30	25 x 35 5.26	30 x 30 5.41			25 x 45 6.06	30 x 35 5.98	35 x 25 5.80
33000	333	22 x 50 5.83	25 x 35 5.32	30 x 30 5.47		22 x 50 5.82	25 x 40 5.81	30 x 30 5.69	35 x 25 5.81			30 x 40 6.56	35 x 30 6.41
39000	393		25 x 40 5.82	30 x 30 5.70	35 x 25 5.82		25 x 45 6.31	30 x 35 6.22	35 x 30 6.8			30 x 45 7.08	35 x 35 6.96
47000	473		25 x 45 6.35	30 x 35 6.26	35 x 30 6.41		25 x 50 6.83	30 x 40 6.78	35 x 30 6.62			30 x 50 7.62	35 x 40 7.54
56000	563		25 x 50 6.85	30 x 40 6.80	35 x 30 6.64			30 x 45 7.31	35 x 35 7.18				35 x 45 8.08
68000	683			30 x 45 7.35	35 x 35 7.23				35 x 40 7.76				35 x 50 8.63
100000	104				35 x 45 8.34	→ Case size 尺寸 → Ripple current 紋波電流							

WV / ØD		25 (1E)				35 (1V)				50 (1H)			
μF		22	25	30	35	22	25	30	35	22	25	30	35
3300	332									22 x 30 2.97	25 x 25 3.06		
4700	472					22 x 30 3.06	25 x 25 2.98			22 x 40 3.83	25 x 35 3.98	30 x 25 3.86	35 x 25 4.19
5600	562	22 x 25 2.65				22 x 35 3.28	25 x 30 3.39			22 x 45 4.26	25 x 40 4.44	30 x 30 4.35	35 x 25 4.44
6800	682	22 x 30 3.06	25 x 25 3.15			22 x 40 3.73	25 x 30 3.67	30 x 25 3.76		22 x 50 4.77	25 x 40 4.76	30 x 35 4.92	35 x 30 5.04
8200	822	22 x 35 3.45	25 x 30 3.57			22 x 45 4.13	25 x 35 4.10	30 x 30 4.22			25 x 50 5.43	30 x 40 5.38	35 x 30 5.26
10000	103	22 x 40 3.95	25 x 30 3.89	30 x 25 3.99		22 x 50 4.68	35 x 40 4.68	30 x 30 4.58				30 x 45 6.07	35 x 35 5.97
12000	123	22 x 45 4.41	25 x 35 4.37	30 x 30 4.50			25 x 45 5.18	30 x 35 5.11	35 x 30 5.24			30 x 50 6.62	35 x 40 6.55
15000	153	22 x 50 4.94	25 x 40 4.94	30 x 35 5.10				30 x 40 5.72	35 x 35 5.88				35 x 45 7.20
18000	183		25 x 45 5.45	30 x 35 5.38	35 x 30 5.51			30 x 45 6.28	35 x 40 6.46				35 x 50 7.74
22000	223			30 x 45 6.22	35 x 35 6.12				35 x 45 7.07				35 x 55 8.28
27000	273			30 x 50 6.82	35 x 40 6.74	→ Case size 尺寸 → Ripple current 紋波電流							
33000	333				35 x 45 7.35								

WV / ØD		63 (1J)				80 (1K)				100 (2A)			
μF		22	25	30	35	22	25	30	35	22	25	30	35
1200	122					22 x 25 2.24				22 x 30 2.39	25 x 25 2.46		
1500	152					22 x 30 2.67				22 x 35 2.83	25 x 30 2.93	30 x 25 3.00	
1800	182	22 x 25 2.20				22 x 30 2.92	25 x 25 3.01			22 x 40 3.26	25 x 35 3.39	30 x 30 3.49	
2200	222	22 x 30 2.50	25 x 25 2.58			22 x 35 3.25	25 x 30 3.36	30 x 25 3.45		22 x 45 3.58	25 x 40 3.74	30 x 30 3.66	
2700	272	22 x 35 2.94	25 x 30 3.04			22 x 40 3.79	25 x 35 3.94	30 x 30 4.05			25 x 45 4.33	30 x 35 4.27	35 x 30 4.37
3300	332	22 x 35 3.14	25 x 30 3.26	30 x 25 3.34		22 x 45 4.18	25 x 40 4.36	30 x 30 4.27			25 x 50 4.76	30 x 40 4.72	35 x 35 4.85
3900	392	22 x 40 3.60	25 x 35 3.74	30 x 30 3.85		22 x 50 4.75	25 x 45 4.96	30 x 35 4.89				30 x 45 5.36	35 x 35 5.27
4700	472	22 x 50 4.19	25 x 40 4.19	30 x 35 4.10	35 x 30 4.19		25 x 50 5.44	30 x 40 5.39	35 x 30 5.27			30 x 50 5.86	35 x 40 5.80
5600	562		25 x 45 4.65	30 x 35 4.58	35 x 30 4.70			30 x 45 5.91	35 x 35 5.81				35 x 45 6.34
6800	682		25 x 50 5.20	30 x 40 5.16	35 x 30 5.04				35 x 40 5.46				35 x 45 6.52
8200	822			30 x 45 5.62	35 x 35 5.53				35 x 45 6.91	→ Case size 尺寸 → Ripple current 紋波電流			
10000	103			30 x 50 6.32	35 x 40 6.25				35 x 60 8.24				
12000	123				35 x 45 6.83								

•Case size ∅D×L(mm), ripple current (A rms) at 85°C, 120Hz •尺寸∅D×L(mm)，紋波電流(A rms)於 85°C, 120Hz

Note: All design and specifications are for reference only and is subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.
注：以上所提供的設計及特性參數僅供參考，任何修改不作預先通知。如果在使用上有疑問，請在採購前與我們聯繫，以便提供技術上的協助。

SM Series

□ DIMENSIONS & STANDARD RATINGS 規格尺寸及標準參數

WV / ØD		160 (2C)				200 (2D)				250 (2E)			
μF		22	25	30	35	22	25	30	35	22	25	30	35
150	151									22 x 25 0.90	25 x 20 0.92		
180	181					22 x 20 0.91				22 x 25 0.90	25 x 20 1.01		
220	221	22 x 20 1.01				22 x 25 1.09	25 x 20 1.11			22 x 25 1.09	25 x 25 1.19	30 x 20 1.22	
270	271	22 x 25 1.20	25 x 20 1.32			22 x 25 1.20	25 x 25 1.32	30 x 20 1.35		22 x 30 1.28	25 x 25 1.32	30 x 20 1.35	
330	331	22 x 25 1.33	25 x 20 1.36			22 x 30 1.42	25 x 25 1.46	30 x 20 1.49		22 x 35 1.50	25 x 30 1.56	30 x 25 1.60	35 x 20 1.62
390	391	22 x 25 1.45	25 x 25 1.59	30 x 20 1.62		22 x 30 1.54	25 x 25 1.59	30 x 25 1.74	35 x 20 1.77	22 x 40 1.72	25 x 30 1.69	30 x 25 1.73	35 x 20 1.77
470	471	22 x 30 1.69	25 x 25 1.75	30 x 20 1.78		22 x 35 1.79	25 x 30 1.86	30 x 25 1.90	35 x 20 1.94	22 x 45 1.98	25 x 35 1.96	30 x 30 2.02	35 x 25 2.06
560	561	22 x 35 1.96	25 x30 2.03	30 x 25 2.08	35 x 20 2.12	22 x 40 2.06	25 x 35 2.14	30 x 25 2.08	35 x 25 2.25	22 x 50 2.26	25 x 40 2.25	30 x 30 2.20	35 x 25 2.25
680	681	22 x 40 2.27	25 x 30 2.23	30 x25 2.29	35 x 20 2.33	22 x 45 2.38	25 x 40 2.48	30 x 30 2.43	35 x 25 2.48		25 x 45 2.60	30 x 35 2.56	35 x 30 2.62
820	821	22 x 45 2.61	25 x 35 2.59	30 x 30 2.67	35 x 25 2.73	22 x 50 2.73	25 x 45 2.85	30 x 35 2.81	35 x 30 2.88			30 x 40 2.95	35 x 35 3.03
1000	102	22 x 50 3.01	25 x 40 3.01	30 x 30 2.95	35 x 25 3.01	22 x 50 2.82	25 x 45 2.85	30 x 40 3.26	35 x 30 3.18			30 x 45 3.40	35 x 40 3.50
1200	122		25 x 45 3.23	30 x 35 3.37	35 x 30 3.26			30 x 45 3.49	35 x 35 3.43				35 x 45 3.74
1500	152			30 x 40 3.73	35 x 35 3.83			30 x 50 4.06	35 x 40 4.01				35 x 50 4.35
1800	182				35 x 40 4.39				35 x 45 4.58	→ Case size 尺寸 → Ripple current 紋波電流			

WV / ØD		315 (2F)				350 (2V)				400 (2G)			
μF		22	25	30	35	22	25	30	35	22	25	30	35
68	680									22 x 20 0.56			
82	820					22 x 20 0.62				22 x 25 0.66	25 x 20 0.68		
100	101	22 x 20 0.68				22 x 25 0.73	25 x 20 0.75			22 x 30 0.78	25 x 25 0.81	30 x 20 0.82	
120	121	22 x 25 0.80	25 x 20 0.82			22 x 30 0.86	25 x 25 0.88	30 x 20 0.90		22 x 30 0.86	25 x 25 0.88	30 x 20 0.90	
150	151	22 x 30 0.96	25 x 25 0.99	30 x 20 1.01		22 x 35 1.01	25 x 30 1.05	30 x 20 1.01		22 x 35 1.01	25 x 30 1.05	30 x 25 1.08	35 x 20 1.09
180	181	22 x 35 1.11	25 x 30 1.15	30 x 25 1.18	35 x 20 1.20	22 x 40 1.17	25 x 35 1.21	30 x 25 1.18	35 x 20 1.20	22 x 40 1.17	25 x 35 1.21	30 x 25 1.18	35 x 25 1.28
220	221	22 x 40 1.29	25 x 30 1.27	30 x 25 1.30	35 x 20 1.33	22 x 45 1.35	25 x 35 1.34	30 x 30 1.38	35 x 25 1.41	22 x 45 1.35	25 x 40 1.41	30 x 30 1.38	35 x 25 1.41
270	271	22 x 45 1.50	25 x 35 1.49	30 x 30 1.53	35 x 25 1.56		25 x 45 1.64	30 x 35 1.61	35 x 25 1.65		25 x 45 1.64	30 x 35 1.61	35 x 30 1.65
330	331	22 x 50 1.73	25 x 40 1.73	30 x 35 1.78	35 x 30 1.83		25 x 50 1.89	30 x 40 1.87	35 x 30 1.83		25 x 50 1.89	30 x 40 1.87	35 x 30 1.83
390	391		25 x 45 1.97	30 x 35 1.94	35 x 30 1.99			30 x 45 2.12	35 x 35 2.09			30 x 45 2.12	35 x 35 2.09
470	471			30 x 40 2.23	35 x 35 2.29			30 x 50 2.43	35 x 40 2.40			30 x 50 2.43	35 x 40 2.40
560	561				35 x 40 2.62				35 x 45 2.73				35 x 45 2.73
680	681				35 x 45 3.01				35 x 50 3.13	→ Case size 尺寸 → Ripple current 紋波電流			35 x 50 2.98
820	821				35 x 50 3.44								

WV / ØD		450 (2W)			
μF		22	25	30	35
56	560	22 x 20 0.51			
68	680	22 x 25 0.60	25 x 20 0.62		
82	820	22 x 30 0.71	25 x 25 0.73	30 x 20 0.74	
100	101	22 x 35 0.83	25 x 30 0.86	30 x 25 0.88	35 x 20 0.89
120	121	22 x 40 0.95	25 x 35 0.99	30 x 25 0.96	35 x 20 0.98
150	151	22 x 50 1.17	25 x 40 1.17	30 x 30 1.14	35 x 25 1.17
180	181		25 x 45 1.34	30 x 35 1.32	35 x 25 1.28
220	221		25 x 50 1.54	30 x 40 1.53	35 x 30 1.49
270	270			30 x 45 1.77	35 x 35 1.74
330	331			30 x 50 2.03	35 x 40 2.01
390	391				35 x 45 2.28
470	471				35 x 45 2.52

→ Case size ∅D×L(mm)
→ Ripple current (A rms) at 85°C, 120Hz

→ 尺寸∅D×L(mm)
→ 紋波電流(A rms)於 85°C, 120Hz

- Please refer to page 23 “Packaging Specifications” for the minimum package quantity. 最小包裝數量請查閱第 23 頁“包裝標準”。
- Please refer to page 18 for the Part Number System. 產品編碼規則請查閱第 18 頁。

Note: All design and specifications are for reference only and is subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.
注：以上所提供的設計及特性參數僅供參考，任何修改不作預先通知。如果在使用上有疑問，請在採購前與我們聯繫，以便提供技術上的協助。

CAT.2026/V2.1