SSE www.shinyspace.com

CAPACITORS

SHINY SPACE ENTERPRISE CO., LTD.

ISO 9001 REGISTERED

DNV Certification B.V., The Netherlands

MGMT. SYS. RvA C024

ISO 14001

UKAS ENVIRONMENTAL MANAGEMENT Reg. No. 059-C

RoHS COMPLIANT

Shiny Space

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About Shiny Space
關於我們

Founded in 1976, Shiny Space Enterprise Co., Ltd. is a capacitor design and manufacturing company and also provides a broad range of passive components. Our comprehensive line of products include Metallized Polypropylene Film Capacitors, Multilayer Ceramic Capacitors, AC Motor Starting and Running Capacitors, etc.

In the beginning, Shiny Space manufactured a variety of resisters. In order to fulfill our customer's needs, our development team dedicated on developing high quality and high reliability products. In 1986, we successfully introduced Multilayer Ceramic Capacitors in Radial-Leaded and Axial-Leaded with Epoxy coating. These new products have received a lot of positive feedback from our customers.

In 1996, Shiny Space introduced Metallized Polypropylene Film Capacitors (Class X1 and X2 Capacitors) and was the first company to obtain X1 safety standard in Taiwan. These products are approved by UL, CUL, ENEC15, CQC, etc.

In 1997, Shiny Space introduced Metallized Polypropylene Film Capacitors (AC Motor Starting and Running Capacitors). Currently, these products have been approved by TUV, UL, CUL and CQC. In addition, Metallized Polyester film capacitors, AC plastic capacitors and DC plastic capacitors are also in manufacturing.

Shiny Space has been approved as an ISO9001 company since 1998 and ISO14001 company since 2004. Products manufactured by Shiny Space that are all RoHS compliant and 100% made in Taiwan. In the future, we will continue to improve our products with our most advanced manufacturing facilities and sophisticated testing equipments because 100% customer satisfaction is our goal. Our customers are satisfied, we are satisfied.

生宇企業股份有限公司創立於1976年，以生產各類電阻器起家，為了因應市場及客戶需求，生宇公司持續不斷研發新產品，著重品質提升及技術之創新；1986年開發積層陶瓷立式、臥式加腳塗裝電容器，產品受客戶好評、肯定至今。

於1996年生宇再次成功推出安規等級X1、X2的金屬化聚丙烯薄膜電容器。生宇是台灣第一家通過X1安規等級的公司，產品獲得世界多國安規認證。

1997年開始生產金屬化聚丙烯薄膜AC馬達啟動及運轉電容器，目前產品已獲得 TUV、UL、CUL、CQC 安規認證。另外還有金屬化聚乙酯薄膜電容器、AC塑膠電容器、DC塑膠電容器等也生產供應中。

為了提升工廠的製造與管理，進一步導入ISO系統，1998年取得ISO9001國際品質驗證證書，2004年取得ISO14001環境驗證證書，產品符合RoHS規範，100%台灣製造，品質有保障，並且獲得國內外知名大廠指定使用。未來生宇將秉持專業製造，供應高品質及性能優異之各類電容器和其他各種電子產品，以及良好的售後服務，因為100%的客戶滿意是我們的目標。

Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Shiny Space

Type: SMPA
AC Motor Start and Run Capacitors
馬達啟動電容器

Features 特性

- Long life due to self-healing characteristic.
- High moisture resistance.
- Very low loss at high frequency, suitable for high current.
- Active and passive flame retardant (UL94 V-0).

- 具自癒性、壽命長。
- 密封性良好、耐濕性高。
- 頻率特性良好、介質損失極低，適合大電流用。
- 絕佳的阻燃防火功能 (UL94 V-0)。

Applications 用途

AC Motor Start and Run Capacitors are widely used for electric motors starting or running such as air conditioner, refrigerator, washing machine, dishwasher, motor pump, bread maker, fan, electrical power tool, power supply, UPS, etc.

適用於家電產品馬達啟動及馬達運轉用途，例如室內空調、電冰箱、洗乾衣機、洗碗機、馬達幫浦、製麵包機、風扇、電動工具、電源供應器、不斷電系統等各類電子產品。

Specifications 規格

Rated Voltage 額定電壓	125 ~ 600VAC
Capacitance Range 電容量範圍	0.01 ~ 90µF
Capacitance Tolerance 容量誤差	±5% (J), +10-5% (U), ±10% (K), ±20% (M)
Temperature Range 溫度範圍	-40 ~ +85℃
Rated Working Frequency Range 電壓頻率	50 ~ 60Hz
Dissipation Factor (DF) 損耗因數	≦1% Max. Measured at 1kHz 20℃
Between Terminals (T-T) 端子相互間耐電壓	Rated voltage x 175% VAC 10sec
Between Terminals and Case (T-C) 端子 Case 間耐電壓	2000VAC, 60sec

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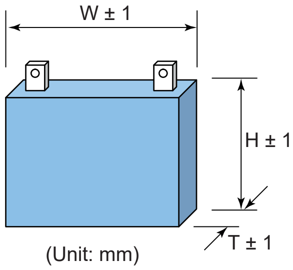
Metallized Polypropylene Film Capacitors

金屬化聚丙烯薄膜電容器

Constructions of Winding Elements 結構圖



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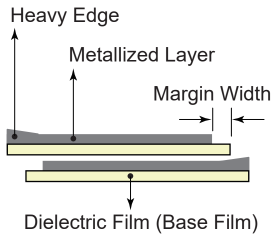
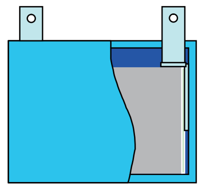
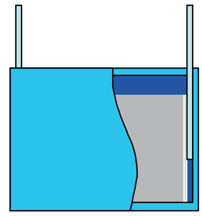


Film cross sectional view


SMPA type T sectional view


SMPA sectional view

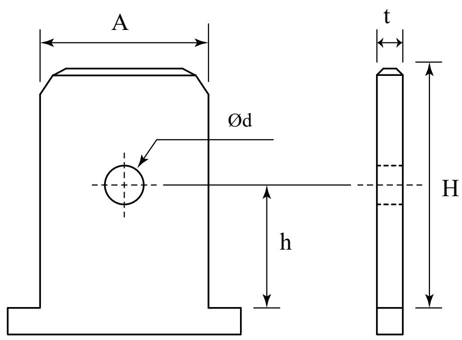
Model and Type 外型圖

Model \ Type	BX	BL	BF	BP	BU	RO	Terminals
A							Tinned copper wire Tinned copper clad steel wire
B							UL AWG18 to AWG22 Insulated stranded wire
C							AMP110F1 or AMP187F1 Single fast-on terminal
D							AMP187F2 Single fast-on terminal
E							AMP187U2 Dual fast-on terminal
F							AMP205F1 or AMP250F1 Single fast-on terminal
G							AMP187L2, AMP205L2 or AMP250L2 Dual fast-on terminal
H							AMP250U2 Dual fast-on terminal
I							AMP250F1 or AMP250L2 Single or Dual Fast-on Terminals
J							AMP187F1, AMP187U2, AMP250F1 or AMP250U2 Single or Dual Fast-on Terminals

Fast-on Terminals Dimensions 端子尺寸

Type	110	187	205	250	±Tolerance
A	2.80	4.75	5.25	6.35	0.25
H	7.50	6.35	7.00	8.00	0.50
h	5.30	3.50	4.00	4.00	0.20
t	0.50	0.50	0.80	0.80	0.05
Ød	1.25	1.35	1.65	1.65	0.05

(Unit: mm)



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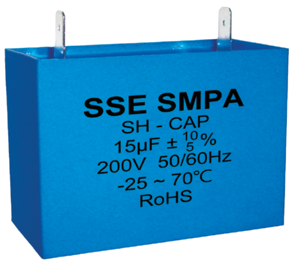
Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: SMPA-Fuse
AC Motor Start and Run Capacitors - Fuse Protection
馬達啟動電容器 - 保安型 (P2)

Type: SMPA-FuseCoil
AC Motor Start and Run Capacitors - Fuse Protection with Coil
馬達啟動電容器 - 保安型加線圈 (P2)



保安型
Fuse Protection

保安型加線圈
Fuse Protection with Coil

Features 特性

- Long life due to self-healing characteristic.
- High moisture resistance.
- Film functional as fuse, prevent capacitors to be damaged by surge voltage.
- Active and passive flame retardant (UL94 V-0).
- Capacitor and inductor integrated, save more space.

- 具自癒性、壽命長。
- 密封性良好、耐濕性高。
- 薄膜具保險絲功能，防止遭遇突波電壓時電容毀損。
- 絕佳的阻燃防火功能 (UL94 V-0)
- 電容與電感整合，節省空間。

Applications 用途

AC Motor Start and Run Capacitors are widely used for electric motors starting or running such as air conditioner, refrigerator, washing machine, dishwasher, motor pump, bread maker, fan, electrical power tool, power supply, UPS, etc.

適用於家電產品馬達啟動及馬達運轉用途，例如室內空調、電冰箱、洗乾衣機、洗碗機、馬達幫浦、製麵包機、風扇、電動工具、電源供應器、不斷電系統等各類電子產品。

Specifications 規格

Rated Voltage 額定電壓	125 ~ 460VAC
Capacitance Range 電容量範圍	0.01 ~ 74μF
Capacitance Tolerance 容量誤差	±5% (J), +10-5% (U), ±10% (K), ±20% (M)
Temperature Range 溫度範圍	-25 ~ +70℃ / 85℃, -40 ~ +85℃ / 100℃
Rated Working Frequency Range 電壓頻率	50 ~ 60Hz
Dissipation Factor (DF) 損耗因數	≦1% Max. Measured at 1kHz 20℃
Between Terminals (T-T) 端子相互間耐電壓	Rated voltage x 175% VAC 10sec
Between Terminals and Case (T-C) 端子 Case 間耐電壓	2000VAC, 60sec

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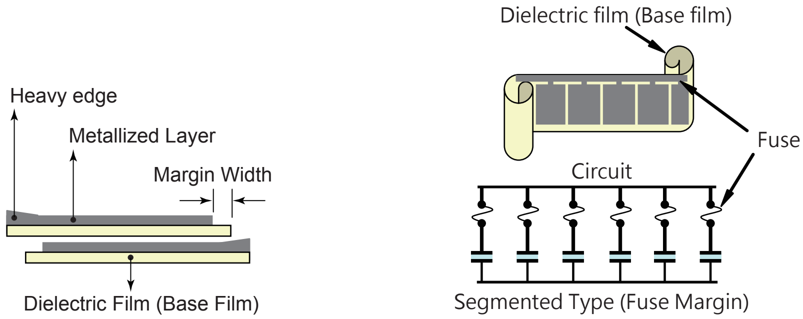
Metallized Polypropylene Film Capacitors

金屬化聚丙烯薄膜電容器



Film cross sectional view

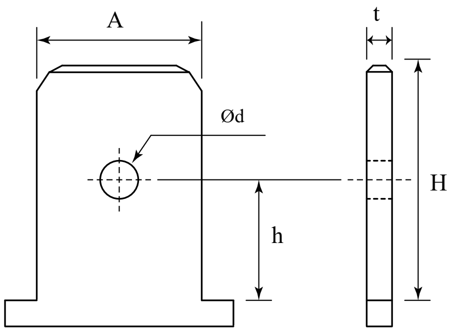
Model and Type 外型圖

Type / Model	BX	BL	BF	BP	BU	RO	Terminals
A							Tinned copper wire Tinned copper clad steel wire
B							UL AWG18 to AWG22 Insulated stranded wire
C							AMP110F1 or AMP187F1 Single fast-on terminal
D							AMP187F2 Single fast-on terminal
E							AMP187U2 Dual Fast-on Terminals
F							AMP205F1 or AMP250F1 Single Fast-on Terminals
G							AMP187L2, AMP205L2 or AMP250L2 Dual Fast-on Terminals
H							AMP250U2 Dual Fast-on Terminals
I							AMP250F1 or AMP250L2 Single/Dual Fast-on Terminals
J							AMP187F1, AMP187U2, AMP250F1 or AMP250U2 Single/Dual Fast-on Terminals

Fast-on Terminals Dimensions 端子尺寸

Type	110	187	205	250	±Tolerance
D	2.80	4.75	5.25	6.35	0.25
B	7.50	6.35	7.00	8.00	0.50
E	5.30	3.50	4.00	4.00	0.20
C	0.50	0.50	0.80	0.80	0.05
ØF	1.25	1.35	1.65	1.65	0.05

(Unit: mm)

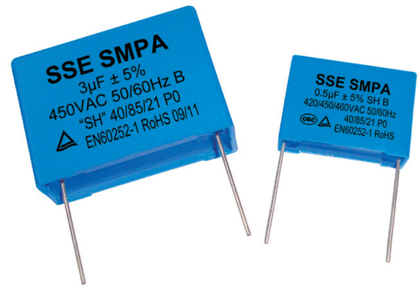


Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: SMPA-S0
AC Motor Start and Run Capacitors - TUV and CQC Approved
馬達啟動電容器 - TUV、CQC 安規認證

Safety Standards 安規

- **TUV**: IEC 60252-1:2010
- **CQC**: GB/T3667.1-2005



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Features 特性

- Long life due to self-healing characteristic.
- High moisture resistance.
- Very low loss at high frequency, suitable for high current.
- Active and passive flame retardant (UL94 V-0).
- Class of operation: Class B 10,000 hours.

- 具自癒性、壽命長。
- 密封性良好、耐濕性高。
- 頻率特性良好、介質損失極低，適合大電流用。
- 絕佳的阻燃防火功能 (UL94 V-0)。
- 壽命等級：B級10,000小時。

Applications 用途

AC Motor Start and Run Capacitors are widely used for electric motors starting or running such as air conditioner, refrigerator, washing machine, dishwasher, motor pump, bread maker, fan, electrical power tool, power supply, UPS, etc.

適用於家電產品馬達啟動及馬達運轉用途，例如室內空調、電冰箱、洗乾衣機、洗碗機、馬達幫浦、製麵包機、風扇、電動工具、電源供應器、不斷電系統等各類電子產品。

Specifications 規格

Safety Agency 安規	TUV	CQC
Rated Voltage 額定電壓	420 / 450VAC	420 / 450 / 460VAC
Capacitance Range 電容量範圍	0.5 ~ 20μF	
Capacitance Tolerance 容量誤差	±5% (J), +10-5% (U), ±10% (K), ±15% (L)	
Temperature Range 溫度範圍	-40 ~ +85℃	
Rated Working Frequency Range 電壓頻率	50 ~ 60Hz	
Dissipation Factor (DF) 損耗因數	≦1% Max. Measured at 1kHz 20℃	
Between Terminals (T-T) 端子相互間耐電壓	Rated voltage x 175% VAC 10sec	
Between Terminals and Case (T-C) 端子 Case 間耐電壓	2000VAC, 60sec	

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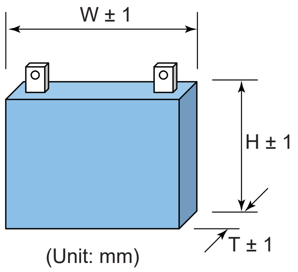
Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

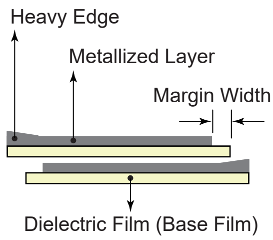
Case Size List 產品尺寸

Capacitance μF	Dimensions (Unit: mm)		
	W±1	H±1	T±1
0.5	30	21	11.5
1	31.5	25	14
1	32	21.5	12.5
1.2	32	21.5	12.5
1.5	37	28.5	18
1.8	37	28.5	18
2	37	34	22
2.2	37	34	22
2.3	37	34	22
2.5	37	28.5	18
2.7	37	34	22
2.8	39	29	20.5
2.8	45	31.5	20.5
3	37	29	20
3	39	29	20.5
3	45	31.5	20.5
3.3	51	30.5	20
3.5	50	30	20
3.5	51	34	22
3.8	51	34	22
4	45	32	22
4	51	34	22
4.5	50	30	20
5	51	35	24
5.5	51	35	24
6	51	35	24
6.5	51	35	24
7	51	35	24
7.5	51	36	25
8	51	43.5	29
8	51	36	25
8.5	58	35	23.5
9	51	43.5	29
9.5	51	40	30
10	51	40	30
10	51	43.5	29
10.5	59	45	35
11	59	45	35
11.5	51	43.5	29
11.5	49.5	60	34
12	51	43.5	29
12	59	45	35
12.5	59	48	39
13	59	48	39
13.5	59	48	39
14	59	48	39
14.5	59	48	39
15	59	58	45
15.5	59	58	45
16	59	58	45
16.5	59	58	45
17	59	58	45
17.5	59	58	45
18	59	58	45
18.5	59	58	45
19	59	58	45
19.5	59	58	45
20	59	58	45

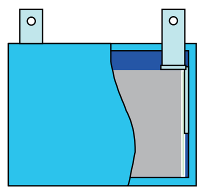
Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

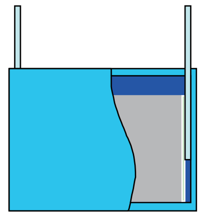
Constructions of Winding Elements 結構圖





Film cross sectional view


SMPA type T sectional view


SMPA sectional view

Model and Type 外型圖

Type / Model	BX	BL	BF	BP	BU	Terminals
A						Tinned copper wire Tinned copper clad steel wire
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C						AMP110F1 or AMP187F1 Single fast-on terminal
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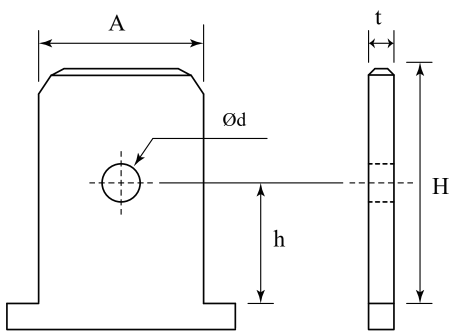
F						AMP205F1 or AMP250F1 Single Fast-on Terminals
G						AMP187L2, AMP205L2 or AMP250L2 Dual Fast-on Terminals
H						AMP250U2 Dual Fast-on Terminals

Fast-on Terminals Dimensions 端子尺寸

Type	110	187	205	250	±Tolerance
A	2.80	4.75	5.25	6.35	0.25
H	7.50	6.35	7.00	8.00	0.50
h	5.30	3.50	4.00	4.00	0.20
t	0.50	0.50	0.80	0.80	0.05
Ød	1.25	1.35	1.65	1.65	0.05

(Unit: mm)



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Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: SMPA-S3
AC Motor Start and Run Capacitors - TUV Approved
馬達啟動電容器 - TUV 安規認證

TÜV

Safety Standards 安規

TUV: IEC 60252-1:2010+A1

Features 特性

- Long life due to self-healing characteristic.
- High moisture resistance.
- Very low loss at high frequency, suitable for high current.
- Active and passive flame retardant (UL94 V-0).
- Class of operation: Class B 10,000 hours.

- 具自癒性、壽命長。
- 密封性良好、耐濕性高。
- 頻率特性良好、介質損失極低，適合大電流用。
- 絕佳的阻燃防火功能 (UL94 V-0)。

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Specifications 規格

Rated Voltage 額定電壓	190 ~ 300V
Capacitance Range 電容量範圍	0.9 ~ 30μF
Capacitance Tolerance 容量誤差	±5% (J), +10-5% (U), ±10% (K), ±15% (L)
Temperature Range 溫度範圍	-40 ~ +85℃
Rated Working Frequency Range 電壓頻率	50 ~ 60Hz
Dissipation Factor (DF) 損耗因數	≦1% Max. Measured at 1kHz 20℃
Between Terminals (T-T) 端子相互間耐電壓	Rated voltage x 175% VAC 10sec
Between Terminals and Case (T-C) 端子 Case 間耐電壓	2000VAC, 60sec

Case Size List 產品尺寸

Capacitance μF	Dimensions (Unit: mm)		
	W±1	H±1	T±1
0.5	30	21	11.5
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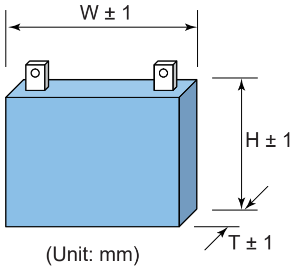
1	32	21.5	12.5
1.2	32	21.5	12.5
1.5	37	28.5	18
1.8	37	28.5	18
2	37	34	22
2.2	37	34	22
2.3	37	34	22
2.5	37	28.5	18
2.7	37	34	22
2.8	39	29	20.5
2.8	45	31.5	20.5
3	37	29	20
3	39	29	20.5
3	45	31.5	20.5
3.3	51	30.5	20
3.5	50	30	20
3.5	51	34	22
3.8	51	34	22
4	45	32	22
4	51	34	22
4.5	50	30	20
5	51	35	24
5.5	51	35	24
6	51	35	24
6.5	51	35	24
7	51	35	24
7.5	51	36	25
8	51	43.5	29
8	51	36	25
8.5	58	35	23.5
9	51	43.5	29
9.5	51	40	30
10	51	40	30
10	51	43.5	29
10.5	59	45	35
11	59	45	35
11.5	51	43.5	29
11.5	49.5	60	34
12	51	43.5	29
12	59	45	35
12.5	59	48	39
13	59	48	39
13.5	59	48	39
14	59	48	39
14.5	59	48	39
15	59	58	45
15.5	59	58	45
16	59	58	45
16.5	59	58	45
17	59	58	45
17.5	59	58	45
18	59	58	45
18.5	59	58	45
19	59	58	45
19.5	59	58	45
20	59	58	45

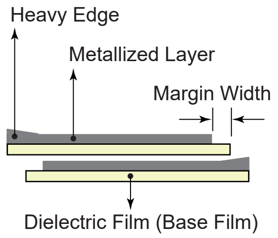
Shiny Space

Metallized Polypropylene Film Capacitors

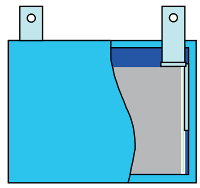
金屬化聚丙烯薄膜電容器

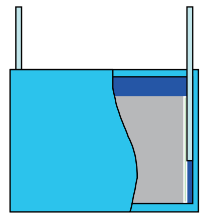
Constructions of Winding Elements 結構圖





Film cross sectional view


SMPA type T sectional view


SMPA sectional view

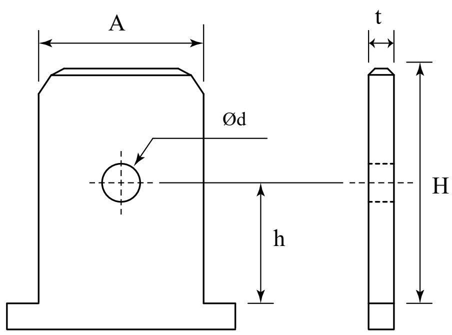
Model and Type 外型圖

Type / Model	BX	BL	BF	BP	BU	Terminals
A						Tinned copper wire inned copper clad steel wire
B						UL AWG18 to AWG22 Insulated stranded wire
C						AMP110F1 or AMP187F1 Single fast-on terminal
D						AMP187F2 Single Fast-on Terminals
E						AMP187U2 Dual Fast-on Terminals
F						AMP205F1 or AMP250F1 Single fast-on terminal
G						AMP187L2, AMP205L2 or AMP250L2 Dual Fast-on Terminals
H						AMP250U2 Dual Fast-on Terminals

Fast-on Terminals Dimensions 端子尺寸

Type	110	187	205	250	±Tolerance
D	2.80	4.75	5.25	6.35	0.25
B	7.50	6.35	7.00	8.00	0.50
E	5.30	3.50	4.00	4.00	0.20
C	0.50	0.50	0.80	0.80	0.05
ØF	1.25	1.35	1.65	1.65	0.05

(Unit: mm)



Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: SMPA-UL
AC Motor Start and Run Capacitors - UL and CUL Approved
馬達啟動電容器 - UL、CUL 安規認證

Safety Standards 安規

- UL-810.

Features 特性

- Long life due to self-healing characteristic.
- High moisture resistance.
- Very low loss at high frequency, suitable for high current.
- Active and passive flame retardant (UL94 V-0).

- 具自癒性、壽命長。
- 密封性良好、耐濕性高。
- 頻率特性良好、介質損失極低，適合大電流用。
- 絕佳的阻燃防火功能 (UL94 V-0)。

Applications 用途

AC Motor Start and Run Capacitors are widely used for electric motors starting or running such as air conditioner, refrigerator, washing machine, dishwasher, motor pump, bread maker, fan, electrical power tool, power supply, UPS, etc.

適用於家電產品馬達啟動及馬達運轉用途，例如室內空調、電冰箱、洗乾衣機、洗碗機、馬達幫浦、製麵包機、風扇、電動工具、電源供應器、不斷電系統等各類電子產品。

Specifications 規格

Rated Voltage 額定電壓	190 ~ 460VAC
Capacitance Range 電容量範圍	0.01 ~ 90µF
Capacitance Tolerance 容量誤差	±5% (J), +10-5% (U), ±10% (K), ±15% (L)
Temperature Range 溫度範圍	-40 ~ +85℃
Rated Working Frequency Range 電壓頻率	50 ~ 60Hz
Dissipation Factor (DF) 損耗因數	≦1% Max. Measured at 1kHz 20℃
Between Terminals (T-T) 端子相互間耐電壓	Rated voltage x 175% VAC 10sec
Between Terminals and Case (T-C) 端子 Case 間耐電壓	2000VAC, 60sec

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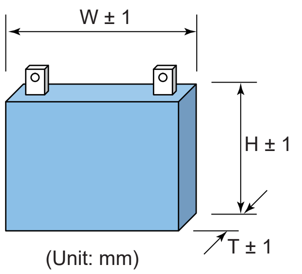
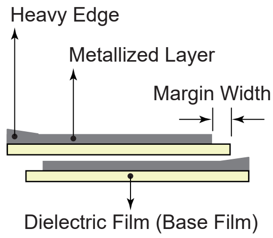
Metallized Polypropylene Film Capacitors

金屬化聚丙烯薄膜電容器

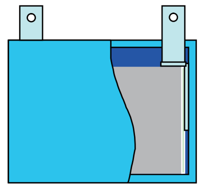
Constructions of Winding Elements 結構圖



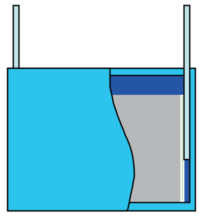
(Unit: mm)



Film cross sectional view



SMPA type T sectional view



SMPA sectional view

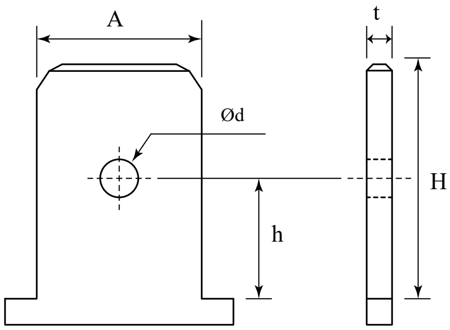
Model and Type 外型圖

Model \ Type	BX	BL	BF	BU	RO	Terminals
A						Tinned copper wire Tinn per clad steel wire
B						UL AWG18 to AWG22 Insulated stranded wire
C						AMP110F1 or AMP187F1 Single Fast-on Terminals
D						AMP187F2 Single Fast-on Terminals
E						AMP187U2 Dual Fast-on Terminals
F						AMP205F1 or AMP250F1 Single Fast-on Terminals
G						AMP187L2, AMP205L2 or AMP250L2 Dual Fast-on Terminals
H						AMP250U2 Dual Fast-on Terminals
I						AMP250F1 or AMP250L2 Single/Dual Fast-on Terminals
J						AMP187F1, AMP187U2, AMP250F1 or AMP250U2 Single/Dual Fast-on Terminals

Fast-on Terminals Dimensions 端子尺寸

Type	110	187	205	250	±Tolerance
A	2.80	4.75	5.25	6.35	0.25
H	7.50	6.35	7.00	8.00	0.50
h	5.30	3.50	4.00	4.00	0.20
t	0.50	0.50	0.80	0.80	0.05
Ød	1.25	1.35	1.65	1.65	0.05

(Unit: mm)



Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: SMPA-CBB65
AC Motor Start and Run Capacitors - Aluminum Case
馬達啟動電容器 - 鋁外殼

Features 特性

- Low dissipation, high insulation resistance.
- Self-healing character, steady electric performance.
- Anti-striking current, strong over carrier capacity.
- Reliable safety with inner anti-explosion device.

- 低損耗，絕緣阻抗高。
- 自愈性能良好、性能穩定。
- 耐衝擊電流、過載能力強。
- 安全性能可靠、內部裝有防爆裝置。

Applications 用途

This type of the capacitor combines the capacitor of air-conditioner compressor and capacitor of fan motor together. Besides all the advantage of CBB65A-1, it also has advantages of small dimension and convenient installation. It helps starting and running for compressor and motor.

該產品將空調壓縮機電容器及風機電容器組合在一起。除具有CBB65A-1型交流電動機電容器所有特點外，還具有體積小、安裝方便等優點，有助於壓縮機電機及風扇電機的啟動與運行。

Specifications 規格

Rated Voltage 額定電壓	250 ~ 500VAC
Capacitance Range 電容量範圍	2.5 ~ 85μF
Capacitance Tolerance 容量誤差	±5% (J)
Class of operation 運行等級	30,000h(Class A) / 10,000h(Class B) / 3,000h(Class C)
Class of safety Protection 安全防護等級	S2 (等於以前的P2, identical to P2)
額定頻率 Rated frequency fee	50/60Hz
最高允許電壓 Maximum permissible voltage Vmax	1.1 x V_R (V_R=Rated voltage)
最大允許電流 Maximum permissible current Imax	1.3 x I_R (I_R=Rated current)
兩極間耐電壓測試 AC Test voltage terminal to terminal	2Un/60s
極與外殼間電壓測試 Isulation voltage terminals to case	2Un+1000VAC (≧ 2000VAC) 60s
Dissipation Factor (DF) 損耗因數	≦ 0.002 (100Hz, 20℃)
Climatic category 氣候類別	40/85/21, 40/70/21

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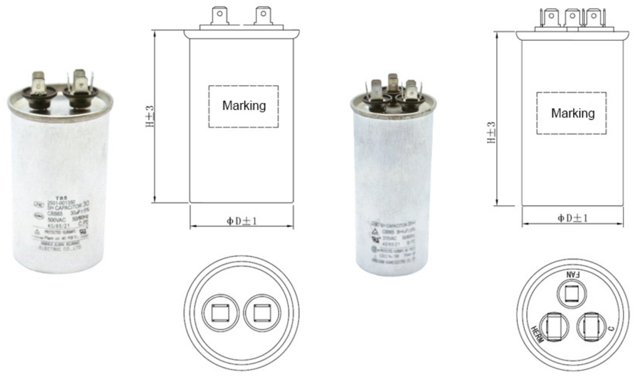
Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Safety Standards 安規

TÜV	TUV EN60252-1	250VAC, 370VAC, 450VAC, 500VAC 單容量 Single capacity 2μ~100μF 組合電容Combination capacitance 2+1μF~70+15μF 50/60Hz S2 40/70/21 or 40/85/21 Class B/C
VDE	VDE EN60252-1	250VAC, 370VAC, 450VAC, 500VAC 單容量 Single capacity 2μ~100μF 組合電容Combination capacitance 2+1μF~70+15μF 50/60Hz S2 40/70/21 or 40/85/21 Class A/B/C
c UL us	UL/CUL UL810, C22.2 NO.190	Protected, 10000AFC, 105°C max, 540VAC max, 50/60Hz
CQC	CQC GB/T 3667.1	250VAC, 370VAC, 450VAC, 500VAC 單容量 Single capacity 2μ~100μF 組合電容Combination capacitance 2+1μF~70+15μF 50/60Hz S2 40/70/21 or 40/85/21 Class B/C

Dimensions 尺寸



Case Size List 產品尺寸

Capacitance (μF)	Rated Voltage (VAC)	Dimensions (Unit: mm) ØD x H
2.5 ~ 70 35+2.5 ~ 50+	250	30 x 55 ~ 50 x 100 50 x 65 ~ 50 x 85
10 ~ 85 10+10 ~ 80+10	370	50 x 65 ~ 60 x 100 50 x 65 ~ 60 x 110
5 ~ 90 10+5 ~ 80+10	450/440	50 x 55 ~ 65 x 125 50 x 65 ~ 63.5 x 125
20 ~ 50	500	50 x 75 ~ 63 x 150

註: 如果電容器的尺寸不在列表中，請跟我們聯絡。
* Please contect us if the capacitor is not on the list.

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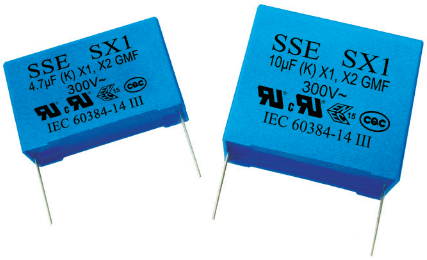
Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: SX1
Class X1 and X2 Capacitors

Safety Standards 安規

- **UL and CUL**– UL 60384-14
- **ENEC** – IEC 60384-14 Ed. 3.0
- **CQC** – GB/T14472-1998



Features 特性

- Provide interference suppression and safety approval.
- Self-healing characteristic.
- Active and passive flame retardant (UL94 V-0).

- 雜音抑制及電源跨接，通過多國安規認證。
- 具自癒性。
- 絕佳的阻燃防火功能 (UL94 V-0)。

Applications 用途

- Line bypass, antenna coupling, across-the-line, and spark killer circuits.
- Available for EMI filter.
- Switching power supply application.
- Business appliances such as UPS, power supply, LCD monitor, adapter, etc.
- Household appliances such as blender, fan, air conditioner, washing machine, refrigerator, bread maker, audio, TV, etc.

- 電源雜音抑制、開關接點保護、火花消除、天線耦合及電源旁路使用。
- EMI 電磁濾波。
- 抑制開關電源時產生的突波電壓。
- 商用電器：不斷電系統、電源供應器、LCD顯示器、變壓器等等。
- 家庭電器：果汁機、電風扇、室內空調、洗衣機、電冰箱、製麵包機、音響、視聽產品等等。

Specifications 規格

Rated Voltage 額定電壓	300VAC, 50/60Hz
Capacitance Range 電容量範圍	0.0022 ~ 10µF
Capacitance Tolerance 容量誤差	J (±5%), K (±10%), M (±20%)
Dissipation Factor (DF) 損耗因數	≦0.1% at 1kHz and 20℃
Withstand Voltage 耐電壓	1290VDC 60sec
Insulation Resistance (IR) 絕緣阻抗	C≦0.33µF, IR≧30,000MΩ C>0.33µF, IR≧10,000MΩ / µF
Climatic Category: In accordance with DIN40040 GMF 環境類別	G = Minimum Limit Temperature...-40℃ M = Maximum Limit Temperature...+100℃ (UL +105℃) F = Humidity Category...Average relative humidity≦75%, 95% for 30 days per year, continuously; 85% for the remaining days, occasionally.

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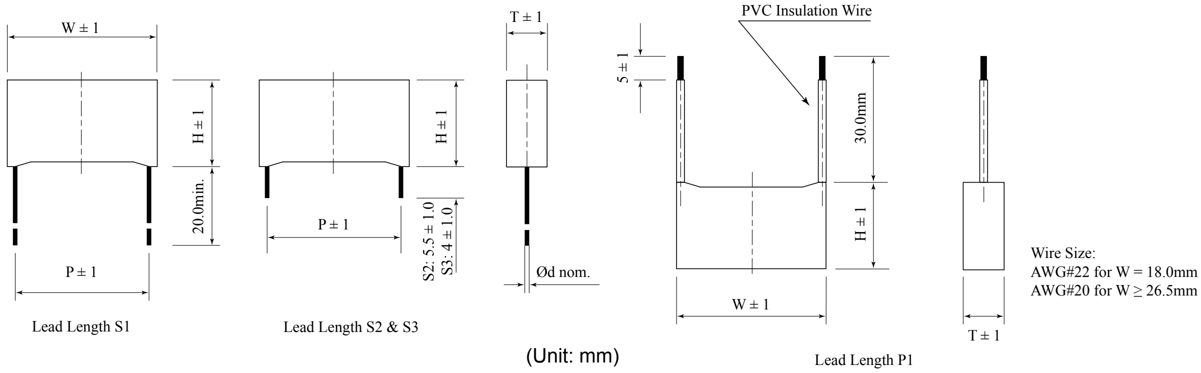
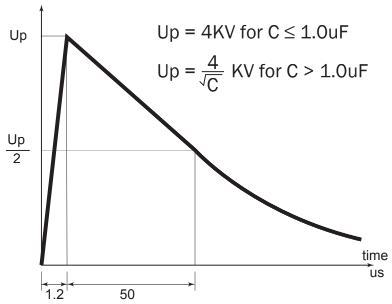
Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Dimensions 尺寸

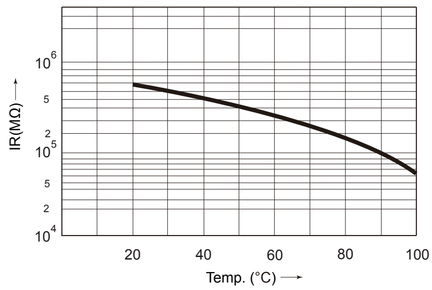


Surge Voltage Test 突波電壓測試曲線圖

According to and IEC 60384-14

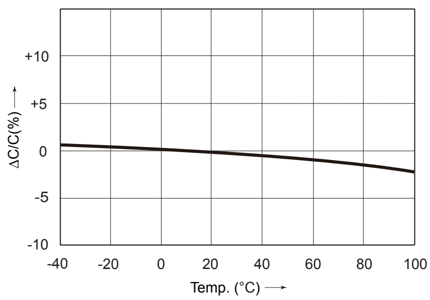


Insulation Resistance V.S. Temperature
(Typical Values)

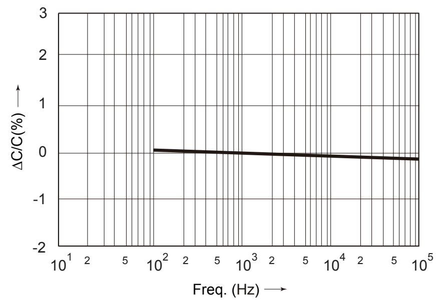


Temperature and Frequency Characteristics 溫度與頻率特性曲線圖

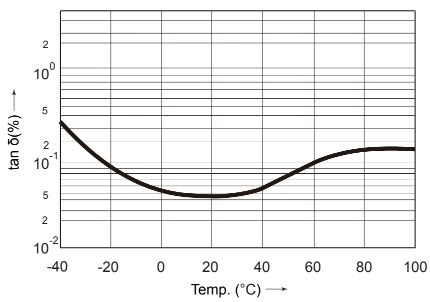
Capacitance Change V.S. Temperature
(Typical Values)



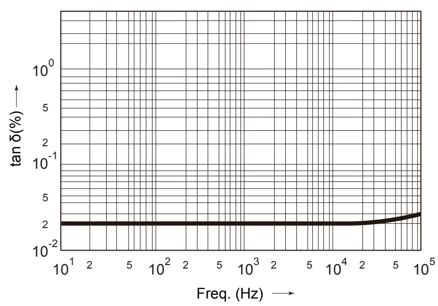
Capacitance Change V.S. Frequency
(Typical Values)



Dissipation Factor V.S. Temperature at 10kHz
(Typical Values)



Dissipation Factor V.S. Frequency
(Typical Values)



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Metallized Polypropylene Film Capacitors

金屬化聚丙烯薄膜電容器

Case Size List 產品尺寸

Capacitance (μF)	Rated Voltage (VAC)	Dimensions (Unit: mm)									
		W±1		H±1		T±1		P±1		d	
0.0047 / 0.0047 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.0056 / 0.0056 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.0068 / 0.0068 -1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.0082 / 0.0082 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.01 / 0.01 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.012 / 0.012 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.015 / 0.015 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.018 / 0.018 - 1	300	18	13	10	11	5	5	15	10	0.8	0.6
0.022 / 0.022 - 1	300	18	13	12	11	6	5	15	10	0.8	0.6
0.027 / 0.027 - 1	300	18	13	10	12	5	6	15	10	0.8	0.6
0.033 / 0.033 - 1	300	18	13	10	12	5	6	15	10	0.8	0.6
0.039	300	18		10		5		15		0.8	
0.047	300	18		10		5		15		0.8	
0.056	300	18		12		6		15		0.8	
0.068	300	18		12		6		15		0.8	
0.082	300	18		12		6		15		0.8	
0.1 / 0.1 - 1	300	18	13	12		6		15	10	0.8	0.6
0.12	300	18		13.5		7.5		15		0.8	
0.15 / 0.15 - 1	300	18		14.5	13.5	8.5	7.5	15		0.8	
0.18 / 0.18 - 1	300	26.5	18	16.5	16.5	7	8.5	22.5	15	0.8	
0.22	300	26.5		16.5		7		22.5		0.8	
0.22 - 1	300	18		16.5		8.5		15		0.8	
0.22 - 2	300	17		15.5		7.5		15		0.8	
0.27	300	26.5		17		8.5		22.5		0.8	
0.33	300	26.5		17		8.5		22.5		0.8	
0.33 - 1	300	17		16.5		9.5		15		0.8	
0.39	300	26.5		19		10		22.5		0.8	
0.47	300	26.5		19		10		22.5		0.8	
0.47 - 1	300	26.5		17		8.5		22.5		0.8	
0.47 - 2	300	17		19		11		15		0.8	
0.56	300	31.5		20		11		27.5		0.8	
0.6	300	31.5		20		11		27.5		0.8	
0.68	300	31.5		20		11		27.5		0.8	
0.68 - 1	300	26.5		19		10		22.5		0.8	
0.82	300	31.5		22.5		13		27.5		0.8	
1.0	300	31.5		22.5		13		27.5		0.8	
1.0 - 1	300	25		23.5		14		22.5		0.8	
1.0 - 2	300	30		21		11.5		27.5		0.8	
1.2	300	37		24		13.5		32.5		0.8	
1.2 - 1	300	31.5		22.5		13		27.5		0.8	
1.5	300	37		24		13.5		32.5		0.8	
1.5 - 1	300	31.5		25		14		27.5		0.8	
1.8	300	37		26.5		16		32.5		0.8	
2.2	300	37		28.5		18		32.5		0.8	
2.2 - 1 / 2.2 - 2	300	31	37	26	26.5	18	16	27.5	32.5	0.8	
2.7	300	37		28.5		18		32.5		0.8	
3.3	300	37		34		22		32.5		0.8	
3.9	300	37		34		22		32.5		0.8	
3.9 - 1	300	51		30.5		20		47.5		0.8	
4.7	300	51		30.5		20		47.5		0.8	
5.6 / 6.0	300	51		34		22		47.5		0.8	
6.8	300	51		35		24		47.5		0.8	
10	300	51		43.5		29		47.5		0.8	

Shiny Space

Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Type: XY
X1 and Y2 Integrated Capacitors
X1 和 Y2 整合型電容器

Features 特性

- Self-healing characteristic.
- Provide interference suppression and withstand the impact of over-voltage.
- Active and passive flame retardant (UL94 V-0).
- Reduce installation costs, single packing design.

- 具自癒性。
- 雜音抑制，能承受過壓衝擊。
- 絕佳的阻燃防火功能 (UL94 V-0)。
- 一體成型設計，易安裝及節省成本。

Applications 用途

XY Capacitors are widely used by line bypass, antenna coupling, across-the-line, spark killer circuits, EMI filter, switching power supply application, mixer, blender, fan, coffee grinder, audio, TV, etc.

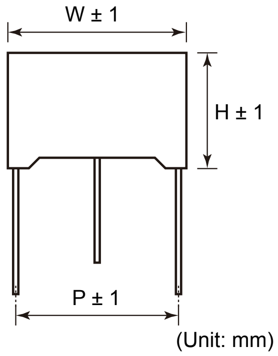
適用於電子產品之電源旁路、天線耦合、線路跨接、火花消除、電磁濾波、開關電源等各種電路中抑制開關瞬間產生的突波電壓，其他適用產品如攪拌器、果汁機、電風扇、咖啡研磨機、音響及電視等產品。

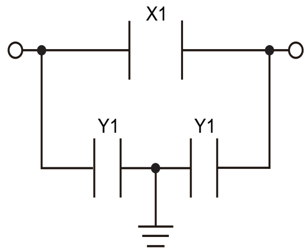
Specifications 規格

Rated Voltage 額定電壓	X (300VAC) Y x 2 (250VAC)
Capacitance Range 電容量範圍	X (0.0047 ~ 1μF) Y x 2 (0.001 ~ 0.1μF)
Capacitance Tolerance 容量誤差	±5% (J), ±10% (K), ±20% (M)
Temperature Range 溫度範圍	-40 ~ +100℃
Rated Working Frequency Range 電壓頻率	50 ~ 60Hz
Dissipation Factor (DF) 損耗因數	≦0.1% Max. Measured at 20℃, 1kHz, 1Vrms ≦0.3% Max. Measured at 20℃, 10kHz, 1Vrms
Between X1 Terminals (T-T) X1 端子相互間耐電壓	1290VDC 60sec
Between Y2 Terminals (T-T) Y2 端子相互間耐電壓	1500VAC, 1sec
Between Terminals and Case (T-C) 端子 Case 間耐電壓	2200VAC, 60Hz 60sec
Insulation Resistance (IR) 絕緣阻抗	C≦0.33μF, IR≧30,000MΩ C > 0.33μF, IR≧10,000MΩ / μF

Metallized Polypropylene Film Capacitors
金屬化聚丙烯薄膜電容器

Dimensions 尺寸



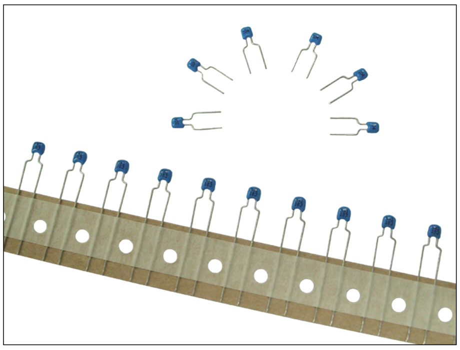


Capacitance(μF) X (300VAC)	Capacitance Y x 2 (250VAC)	Dimensions (Unit: mm)			
		W±1	H±1	T±1	P±1
0.022	102~103	17	19	11	15
0.033	102~103	17	19	11	15
0.047	102~103	17	19	11	15
0.068	102~103	17	19	11	15
0.082	102~103	17	19	11	15
0.09	102~103	17	19	11	15
0.1	102~103	17	19	11	15
0.22	102~103	17	19	11	15
0.22	102~103	25	23.5	14	22.5
0.33	102~103	25	23.5	14	22.5
0.47	102~103	25	23.5	14	22.5
0.56	102~103	25	23.5	14	22.5
0.68	102~103	25	23.5	14	22.5
0.82	102~103	25	23.5	14	22.5
1.0	102~103	31.5	25	14	27.5

Shiny Space

Multilayer Ceramic Capacitors
積層陶瓷電容器

Type: SSM
Radial-Leaded 徑向導線

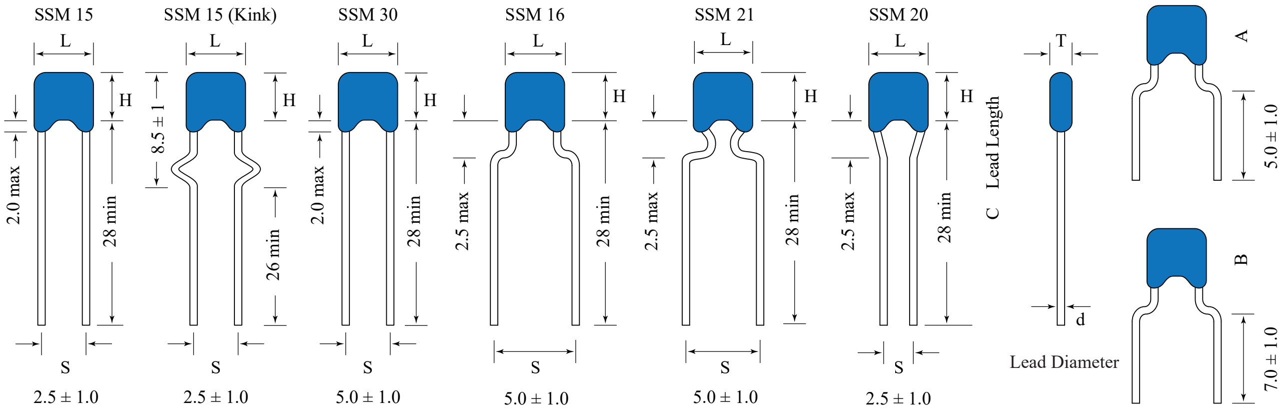


Features 特性

- Flame retardant epoxy.
- 6.3V, 10V, 16V, 25V, 50V, 100V ~ 3KVDC.
- NPO, X5R, X7R, Y5V temperature coefficients.
- High capacitance in miniature size, high performance, and high reliability.
- Radial type lead material: tinned copper wire or tinned copper clad steel wire (CP wire).

- 耐燃等級環氧樹脂塗裝。
- 6.3V, 10V, 16V, 25V, 50V, 100V ~ 3KVDC 額定電壓。
- NPO, X5R, X7R, Y5V 溫度係數。
- 容量大、體積小性能優及極佳的信賴性。
- 徑向導線：鍍錫銅線或鍍錫銅包鋼線 (CP 線)。

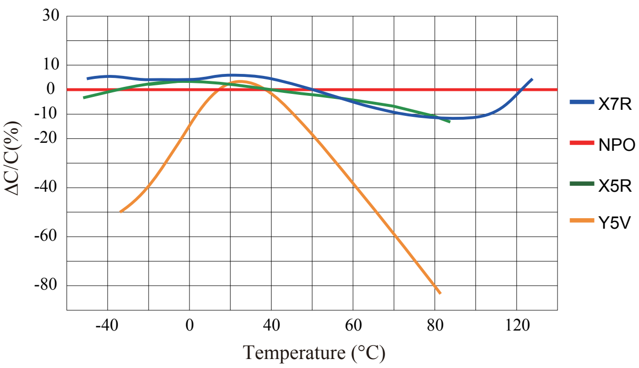
Dimensions 尺寸



(Unit: mm)

	Dimensions (Unit: mm)					Capacitance Range			
Style	L Max.	H Max.	T Max.	s	d	WVDC	NPO	X7R/X5R	Y5V
SSM 15	5.0	3.8	2.5	2.5	0.5	6.3V ~ 3000V	1pF ~ 0.01μF	150pF ~ 1.0μF	1000pF ~ 10μF
SSM 15K	5.0	3.8	2.5	2.5	0.5	6.3V ~ 3000V	1pF ~ 0.01μF	150pF ~ 1.0μF	1000pF ~ 10μF
SSM 16	5.0	3.8	2.5	5.0	0.5	6.3V ~ 3000V	1pF ~ 0.01μF	150pF ~ 1.0μF	1000pF ~ 10μF
SSM 20	5.5	5.0	3.5	2.5	0.5	6.3V ~ 3000V	1pF ~ 0.015μF	150pF ~ 22μF	1000pF ~ 22μF
SSM 21	5.5	5.0	3.5	5.0	0.5	6.3V ~ 3000V	1pF ~ 0.015μF	150pF ~ 22μF	1000pF ~ 22μF
SSM 30	7.5	7.5	4.0	5.0	0.5	6.3V ~ 3000V	10pF ~ 0.033μF	1000pF ~ 22μF	0.01μF ~ 100μF

Typical Characteristics 曲線圖



How to Order 料號說明

The follow table is an example of part number SSM21X103K630C

SSM21	X	103	K	630	C
Product Code	Dielectric	Capacitance	Tolerance	Rated Voltage	Lead Length
Please refer to page 17, Dimensions table.	N = NPO X = X7R and X5R Y = Y5V	eg.: 472 = 4700pF 103 = 0.01μF 104 = 0.1μF 105 = 1μF	C = ±0.25pF D = ±0.5pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20% Z = +80%/-20%	6R3 = 6.3VDC 10 = 10VDC 16 = 16VDC 25 = 25VDC 50 = 50VDC 100(1) = 100VDC 200(2) = 200VDC 250(2E) = 250VDC 500(2H) = 500VDC 630(2J) = 630VDC 1000(3A) = 1000VDC 2000(3D) = 2000VDC 3000(3F) = 3000VDC	A = 5 ± 1mm B = 7 ± 1mm C = 28mm Min. T = Taping (Ammo box)

Marking 標示

eg.:

Y5V: SSM15Y104Z50A

104

104 = 0.1μF

NP0: SSM15N220J50A

NJ 22

N = NPO
J = ±5%
22 = 22pF

NP0: SSM15N220J100A

NJ1 22

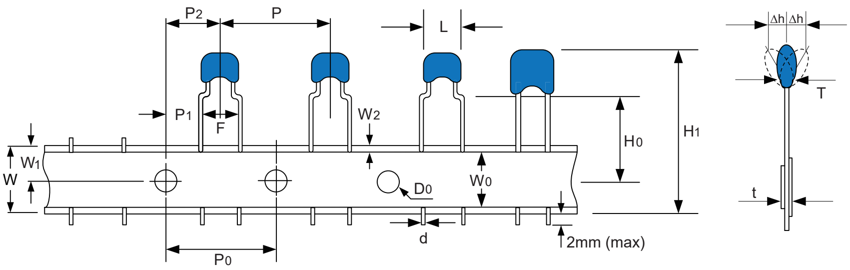
N = NPO
J = ±5%
1 = 100V
22 = 22pF

X7R: SSM21X103K630CA

XK2J 103

X = X7R
K = ±10%
2J = 630V
103 = 0.01μF

Radial Type Taping 徑向導線帶裝尺寸



Symble	Dimensions (mm)	Tolerance (mm)
L	8.0 (Max.)	
T	4.0 (Max.)	
d	0.5	+0.06 -0.05
P	12.7	±1.0
P0	12.7	±0.2
P1	3.85	±0.5
P2	6.38	±1.0
F	5.0	+0.8 -0.2
Δh	0	±1.0
W	18	±0.5

Symble	Dimensions (mm)	Tolerance (mm)
W0	13.0	±0.5
W1	9.0	±0.5
W2	3 (Max.)	
H0	16.0	±0.5
H1	32.25 (Max.)	
D0	4.0	±0.2
t	0.7	±0.2

Shiny Space

Multilayer Ceramic Capacitors
積層陶瓷電容器

Type: SSC
SMD Chip Capacitors 貼片電容器

Features 特性

- Miniature size and light weight.
- High capacitance, performance, and reliability.

- 體積小、重量輕。
- 容量大、性能優及極佳的信賴性。

Applications 用途

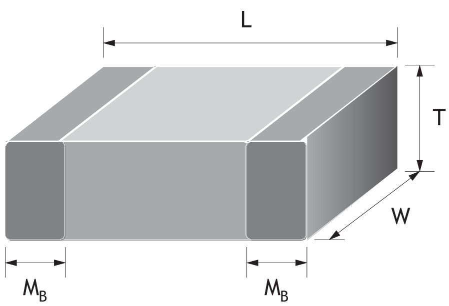
- Consumer and industrial electronic equipment.
- Bypass timing.
- General purpose.

- 民生用及工業用電子機器。
- 旁路應用。
- 一般用途。

Specifications 規格

Dielectric 電介質	NPO	X5R	X7R	Y5V
Rated Voltage 額定電壓	6.3VDC ~ 3000VDC			
Capacitance Range 電容量範圍	1pF to 100μF			
Capacitance Tolerance 容量誤差 Note: B, C, D: Cap.<10pF F, G, J, K, M, Z: Cap. ≧ 10pF	B = ±0.1pF C = ±0.25pF D = ±0.5pF F = ±1% G = ±2% J = ±5%	J = ±5% K = ±10% M = ±20% Z = +80% ~ -20%		M = ±20% Z = +80% ~ -20%
Operating Temperature 操作溫度	-55℃ ~ +125℃	-55℃ ~ +85℃	-55℃ ~ +125℃	-25℃ ~ +85℃
Capacitance Change 電容量變化	0 ± 30ppm/℃	±15%		+30% ~ -80%
Capacitance Test: @25℃ or referred to +25℃ 電容量測試	1.0 ± 0.2Vrms, 1kHz ± 10% 1.0 ± 0.2Vrms, 1MHz ± 10% for capacitance ≦ 1000pF	1.0 ± 0.2 Vrms, 1kHz ± 10%		
Q/Dissipation Factor 損耗因數	C < 30pF: Q ≧ 400 + 20C C ≧ 30pF: Q ≧ 1000 0.1% Max.	≧ 50V: 2.5% ~ 3%. 25V: ≦ 3.5% ~ 10% 16V: ≦ 3.5% ~ 10% 10V: ≦ 5.0% ~ 10% 6.3V: ≦ 10% ~ 15%		≧ 50V: 5% ~ 7% 25V: ≦ 5% ~ 9% 16V: ≦ 7% ~ 12.5% 10V: ≦ 12.5% 6.3V: ≦ 20%
Insulation Resistance 絕緣阻抗	10GΩ or 500MΩ.μF, whichever is less than 25℃			
Dielectric Strength 耐電壓	≦ 50V 250% of rated voltage for 5 seconds less than 50mA 51V ~ 100V 250% of rated voltage for 5 seconds less than 10mA 200V ~ 300V 200% of rated voltage for 5 seconds less than 10mA 500V ~ 990V 150% of rated voltage for 5 seconds less than 10mA 1000V ~ 3000V 120% of rated voltage for 5 seconds less than 10mA			

Dimensions 尺寸



Shiny Space

Multilayer Ceramic Capacitors

積層陶瓷電容器

Dimensions Inch (mm)	0402 (1005)	0603 (1608)	0805 (2012)	1206 (3216)	1210 (3225)	1808 (4520)	1812 (4532)
L (mm)	1.00±0.05	1.60+0.15/-0.10	2.00±0.20	3.20±0.20	3.20±0.40	4.50±0.40	4.50±0.40
W (mm)	0.50±0.05	0.80+0.15/-0.10	1.25±0.20	1.60±0.20	2.50±0.30	2.03±0.25	3.20±0.30
T (mm)	0.50±0.05	0.80+0.15/-0.10	0.60~1.25±0.20	0.80~1.60+0.30/-0.10	0.95~2.5±0.30	1.25~2.0±0.20	1.25~2.50±0.30
MB (mm)	0.25+0.05/-0.10	0.40±0.15	0.50±0.20	0.60±0.20	0.75±0.25	0.75±0.25	0.75±0.25

Capacitance Range 電容量範圍

Size		NPO			X5R			X7R				Y5V			
		10/25V	50V	100V	6.3V	10V	16V	10/16V	25V	50V	100V	10V	16/25V	50V	100V
0402	Min.	0.5pF	0.5pF	0.5pF	0.22μF	0.056μF	0.027μF	0.012μF	5600pF	100pF	---	0.15μF	0.047μF	0.01μF	---
	Max.	470pF	220pF	150pF	1.0μF	0.1μF	0.1μF	0.1μF	0.022μF	0.01μF	---	0.47μF	0.1μF	0.033μF	---
0603	Min.	0.5pF	0.5pF	0.5pF	0.68μF	0.33μF	0.33μF	0.082μF	0.033μF	100pF	100pF	0.68μF	0.22μF	0.01μF	---
	Max.	3300pF	1000pF	560pF	2.2μF	1.0μF	1.0μF	0.22μF	0.1μF	0.1μF	0.01μF	1μF	1μF	0.15μF	---
0805	Min.	0.5pF	0.5pF	0.5pF	2.2μF	2.2μF	2.2μF	0.39μF	0.082μF	100pF	100pF	---	0.47μF	0.01μF	0.01μF
	Max.	0.012μF	4700pF	3900pF	10μF	4.7μF	4.7μF	1μF	1μF	0.22μF	0.1μF	---	1μF	0.47μF	0.15μF
1206	Min.	1.5pF	1.5pF	1.5pF	4.7μF	2.2μF	1.5μF	0.27μF	150pF	150pF	150pF	---	0.01μF	0.01μF	0.01μF
	Max.	0.039μF	0.015μF	8200pF	22μF	10μF	4.7μF	4.7μF	1μF	1μF	0.22μF	---	1μF	1μF	0.22μF
1210	Min.	22pF	22pF	10pF	---	2.2μF	2.2μF	---	0.33μF	1000pF	1000pF	---	---	0.1μF	0.01μF
	Max.	0.015μF	0.015μF	0.015μF	---	10μF	10μF	---	1μF	1μF	0.56μF	---	---	1μF	0.33μF
1812	Min.	---	1000pF	10pF	---	---	---	---	0.68μF	1000pF	1000pF	---	10μF	1μF	---
	Max.	---	0.033μF	0.033μF	---	---	---	---	1μF	1μF	1μF	---	47μF	6.8μF	---

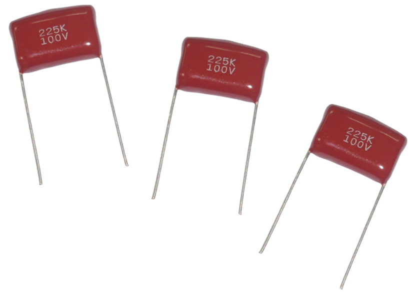
Capacitance Range (High Voltage) 電容量範圍 (高壓)

Size		NPO						X7R						Y5V	
		200V	250V	500V	1000V	2000V	3000V	200V	250V	500V	1000V	2000V	3000V	200V	250V
0603	Min.	22pF	22pF	---	---	---	---	---	---	---	---	---	---	---	---
	Max.	100pF	100pF	---	---	---	---	---	---	---	---	---	---	---	---
0805	Min.	0.5pF	0.5pF	0.5pF	---	---	---	100pF	100pF	100pF	---	---	---	0.01μF	0.01μF
	Max.	820pF	390pF	390pF	---	---	---	0.022μF	0.022μF	2700pF	---	---	---	0.068μF	0.068μF
1206	Min.	1.5pF	1.5pF	1.5pF	1.5pF	1.5pF	---	150pF	150pF	150pF	150pF	150pF	150pF	0.01μF	0.01μF
	Max.	2200pF	1000pF	1000pF	470pF	220pF	---	0.1μF	0.1μF	0.033μF	4700pF	1500pF	1000pF	0.15μF	0.15μF
1210	Min.	10pF	10pF	10pF	10pF	10pF	---	1000pF	1000pF	1000pF	1000pF	---	---	0.01μF	0.01μF
	Max.	3900pF	2700pF	1800pF	470pF	220pF	---	0.47μF	0.47μF	0.056μF	0.01μF	---	---	0.15μF	0.15μF
1808	Min.	---	---	---	2.2pF	2.2pF	2.2pF	---	---	---	150pF	150pF	150pF	---	---
	Max.	---	---	---	1000pF	680pF	270pF	---	---	---	0.01μF	2200pF	1000pF	---	---
1812	Min.	10pF	10pF	10pF	10pF	10pF	10pF	1000pF	1000pF	1000pF	270pF	270pF	680pF	0.01μF	0.01μF
	Max.	6800pF	3300pF	3300pF	1500pF	1000pF	470pF	0.47μF	0.47μF	0.1μF	0.015μF	4700pF	820pF	0.68μF	0.68μF

Shiny Space

Metallized Polyester Film Capacitors
金屬化聚乙酯薄膜電容器

Type: MPE
Radial-Dipped 徑向導線



Features 特性

- Epoxy resin coating and high moisture resistance.
- Non-inductive construction.
- Self-healing characteristic.
- Miniature size and light weight.

- 環氧樹脂成型塗裝、防潮性佳。
- 無極性。
- 具自癒性。
- 體積小、重量輕。

Applications 用途

- Bypass timing.
- Signal coupling.
- General purpose.

- 旁路應用。
- 信號耦合。
- 一般用途。

Specifications 規格

Rated Voltage 額定電壓	100 ~ 630VDC
Capacitance Range 電容量範圍	0.01 ~ 4.7µF
Capacitance Tolerance 容量誤差	J (±5%), K (±10%), M (±20%)
Dissipation Factor (DF) 損耗因數	≤ 1% Max. at 1kHz and 20°C
Insulation Resistance (IR) 絕緣阻抗	C ≤ 0.33µF, IR ≥ 0,000 MΩ C > 0.33µF, IR ≥ 10,000 MΩ / µF
Dielectric Strength 耐電壓	150% of rated voltage for 60sec
Operating Temperature 操作溫度	-40 ~ +85°C

Dimensions 尺寸

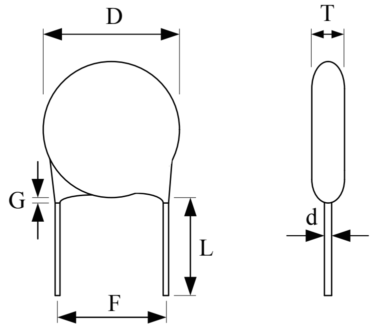
Rated Voltage	100VDC / 63VAC				250VDC / 160VAC				400VDC / 200VAC				630VDC / 220VAC			
Size (mm) / (µF) Capacitance	W	H	T	P ± 1	W	H	T	P ± 1	W	H	T	P ± 1	W	H	T	P ± 1
0.01	14	10	6	10	14	10	6	10	14	10	6	10	14	10	6	10
0.015	14	11.5	6.5	10	14	11.5	6.5	10	14	11.5	6.5	10	14	11.5	6.5	10
0.022	14	11	7	10	14	11	7	10	14	11	7	10	14	12.5	7	10
0.033	14	11.5	7	10	14	11.5	7	10	14	11.5	7	10	14	13.5	9	10
0.047	14	11.5	7	10	14	11.5	7	10	14	11.5	7	10	19	12.5	7.5	15
0.068	14	11.5	7	10	14	11.5	7	10	19	13	6	15	19	14.5	9	15
0.1	14	10	6	10	14	10	7	10	19	13	7	15	19	15.5	9.5	15
0.15	14	10	6	10	14	12	8	10	19	14	7.5	15	24	17	10	20
0.22	14	10.5	6.5	10	19	12	8	15	19	16	10	15	24	20	11	20
0.33	14	11.5	8.5	10	19	13	8	15	24	16	10	20	24	22	13	20
0.47	19	12	7	15	19	15	8	15	24	18.5	11	20	32	22	13	27.5
0.68	19	14	7.5	15	24	15.5	9	20	32	18.5	11.5	27.5	35	26	15	31
1.0	19	15	8.5	15	24	17	10	20	32	22	12	27.5	35	30	17	31
1.5	24	17	9	20	24	21	11.5	20	32	24	14	27.5				
2.2	24	20	9	20	32	22	13	27.5	35	24.5	15	31				
3.3	24	20	12	20	32	26	16	27.5	35	30	18	31				
4.7	32	22	13	27.5	35	23	15	31								

Shiny Space

High Voltage Ceramic Capacitors

高壓陶瓷電容器

Type: HV



Specifications 規格

Dielectric	NPO	SL	Y5E	Y5P	Z5U	Z5V
Rated Voltage 額定電壓	500VDC ~ 20KVDC					
Capacitance Range 電容量範圍	1pF ~ 220pF	30pF ~ 820pF	100pF ~ 4700pF		1000pF ~ 10000pF	4700pF ~ 22000pF
Q/Dissipation Factor 損耗因數	C ≧ 30pF: Q ≧ 1000 C ＜ 30pF: Q ≧ 400 +20 * C at 25℃ with 1±20%MHz and 1±0.2Vrms		≦ 2.5% at 1kHz±10% 1±0.2Vrms and 25℃			≦ 5% at 1kHz±10% 1±0.2Vrms and 25℃
Insulation Resistance 絕緣阻抗	10000MΩ Min. measured with DC500±50V within 60±5sec of charging					
Dielectric Strength 耐電壓	Apply DC Test Voltage W.V. (2 ~ 3KV is 200%, 5KV ≧ W.V. ≧ 3KV is 175%, W.V. ＞ 5KV is 150%) for 1 ~ 5sec. (Charge/Discharge current ≦ 50mA)					
Temperature Characteristic 溫度係數	0±60ppm/℃	+350 to -1000ppm/℃	±4.7%	±10%	+22/-56%	+22/-82%
Operating Temperature Range 操作溫度	-25℃ ~ +85℃		-25℃ ~ +85℃		+10℃ ~ 85℃	

Dimensions 尺寸

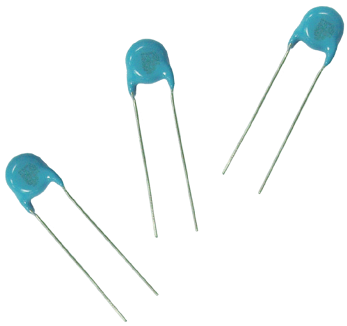
W.VDC	Capacitance Range (Unit: pF)					Dimensions (Unit: mm)		
	NPO (CH)	SL	B (Y5E, Y5P)	E (Z5U)	F (Z5V)	D	T	G
1KV	1~10	30~56	100~470	1000~1200		5 ± 2	< 3.8	< 2.0
	12~33	68~100	500~680	1500~2200		6 ± 2	< 3.8	< 2.0
	39~51	120~150	820~1000	2700~3300		7 ± 2	< 3.8	< 2.0
	56~68	180~220	1500~1800	3900	4700~6800	8 ± 2	< 3.8	< 2.0
	75~91	270~330	2000~2200	4700~5600	8200~10000	9 ± 2	< 3.8	< 2.0
	100~120	390	2700~3300	6800	12000	10 ± 2	< 3.8	< 2.0
				8200~10000	15000	11 ± 2	< 3.8	< 2.0
	150~180	470~560	3900~4700	12000		12 ± 2	< 3.8	< 2.0
	200~220	680~820	5000~6800	15000	18000~22000	14 ± 2	< 3.8	< 2.0
2KV	1~20	15~56	100~470	1000~1200		5 ± 2	< 4.5	< 2.0
	22~30	68~100	560~820	1500~2200	3300~3900	6 ± 2	< 4.5	< 2.0
	33~39	120~150	1000~1200	2700~3300	4700~5100	7 ± 2	< 4.5	< 2.0
	47~51	180	1500	3900	5600~6800	8 ± 2	< 4.5	< 2.0
	56~68	200~220	1800~2000		8200	9 ± 2	< 4.5	< 2.0
	75~82	270~300	2200~2700	4700~5600	10000	10 ± 2	< 4.5	< 2.0
	90~100	330	3000~3300	6800	12000	11 ± 2	< 4.5	< 2.0
	110~120		3900			12 ± 2	< 4.5	< 2.0
	150	390				13 ± 2	< 4.5	< 2.0
			4700~5600	8200~10000		14 ± 2	< 4.5	< 2.0
3KV	1~18	15~47	100~470	1000~1200	1800~2200	7 ± 2	< 4.5	< 3.0
	20~30	50~680	680~820	1500	2700~3300	8 ± 2	< 4.5	< 3.0
	33~39	82~100	1000	1800~2000	3900	9 ± 2	< 4.5	< 3.0
	47~56	120	1200	2200~2700	4700~5600	10 ± 2	< 4.5	< 3.0
	62~68	150~180	1500	3000~3300		11 ± 2	< 4.5	< 3.0
	72~82	200~220	1800		6800~8200	12 ± 2	< 4.5	< 3.0
		270	2000~2200	3900~4700		13 ± 2	< 4.5	< 3.0
		300~330			1000	14 ± 2	< 4.5	< 3.0
			2700~3300	5000~6800		15 ± 2	< 4.5	< 3.0
6KV			100~330			6 ± 2		
		5~39	390~510			7 ± 2		
		47~56	560~680	1000		8 ± 2		
		68				9 ± 2		
		82	820	1500		10 ± 2		
				2200		11 ± 2		
		100~120	1000			12 ± 2		
			1500			13 ± 2		
		150		3300		14 ± 2		
						15 ± 2		

Type: Y (Y1 and Y2)

Features 特性

- Coated with flame-retardant epoxy resin (UL94 V-0).
- Suitable for automatic insertion.
- Safety standard recognized for AC applications.

- 耐燃環氧樹脂成型塗裝 (UL94 V-0)。
- 適合自動插件。
- 安規認證。



Specifications 規格

Type	Y1	Y2
Rated Voltage 額定電壓	250VAC	
Capacitance Range 電容量範圍	100pF to 4700pF	100pF to 10000pF
Operating Temperature 操作溫度	-25℃ to 125℃	
Dielectric Withstanding Voltage 耐電壓	4000VAC for 1 minute	2600VAC for 1 minute
Capacitance 容量	Within the specified tolerance when measured at 1kHz±20% (Y5P, Y5U, Y5V, X7R), 1MHz ±20% (COG), 1Vrms and 25℃	
Dissipation Factor (tanδ) 損耗因素	tanδ ≦ 2.5% for char. Y5P, Y5U, Y5V, X7R when measured at 1kHz±20% 1Vrms and 25℃ Quality Factor ≧ 300 for char. COG when measured at 1MHz±20% 1Vrms and 25℃	
Insulation Resistance (IR) 絕緣阻抗	10,000MΩ min. at 500VDC	

Capacitance Range 電容量範圍

Capacitance (pF)	Y1	Y2
100		
150		
200		
330		
470		
560		
680		
1000		
1500		
2200		
3300		
4700		
10000		

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