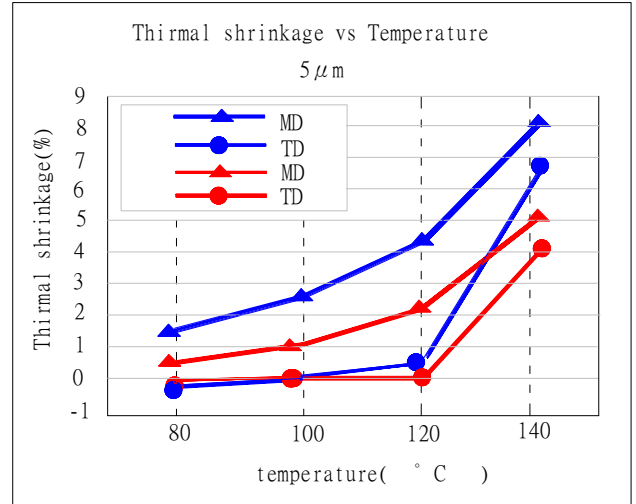
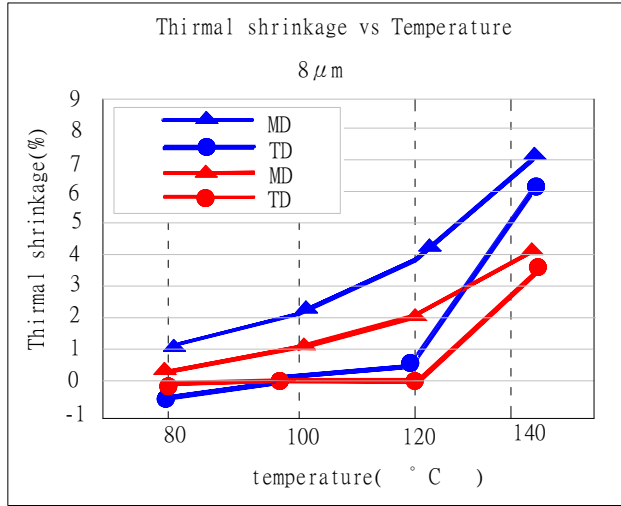




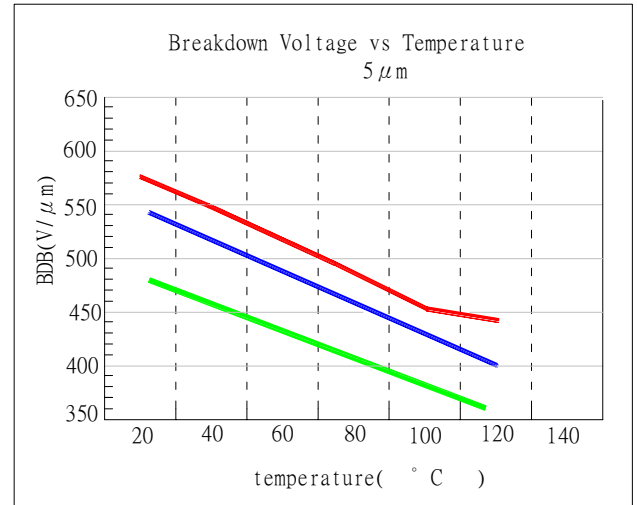
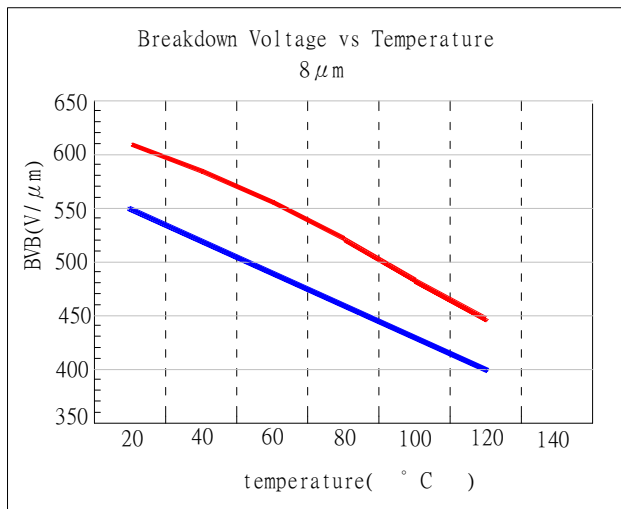
CAPACITORS

Comparison of Thermal Shrinkage

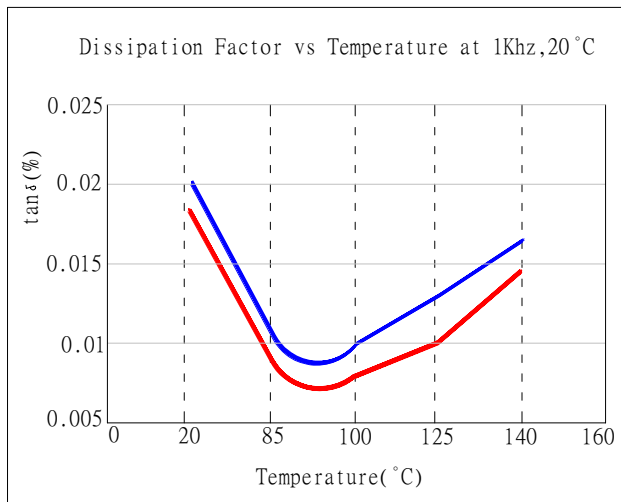
- 高温PP膜120°C
- 普通PP膜85°C
- PE膜85°C



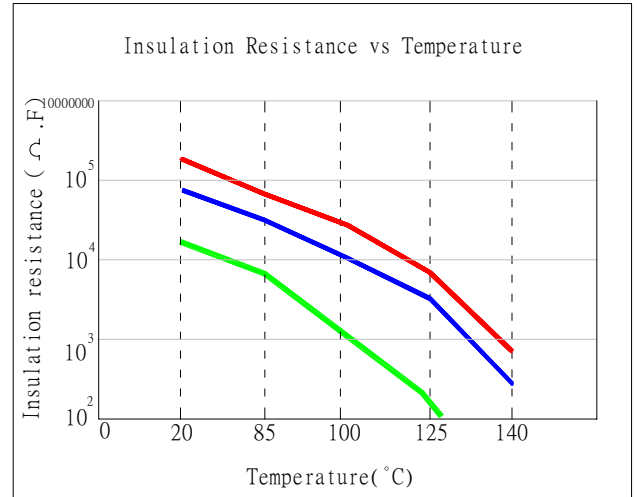
Breakdown Voltage vs Temperature



Dissipation Factor vs Frequency



Insulation Resistance vs Temperature



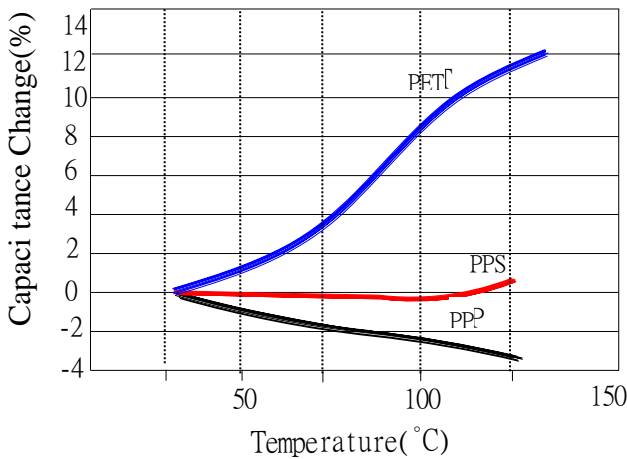


CAPACITORS

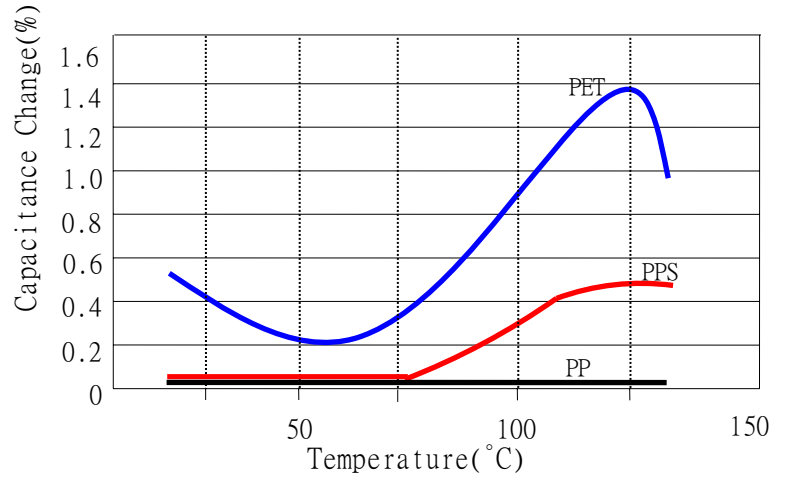
1. Electrical Characteristics of Metallized Films

Samples: PET (2.0 $\mu\text{m-Al}$), 1.0 μF ———— (Blue line)
PP (5.0 $\mu\text{m-Al}$), 2.0 μF ———— (Black line)
PPS (2.5 $\mu\text{m-Al}$), 1.0 μF ———— (Red line)

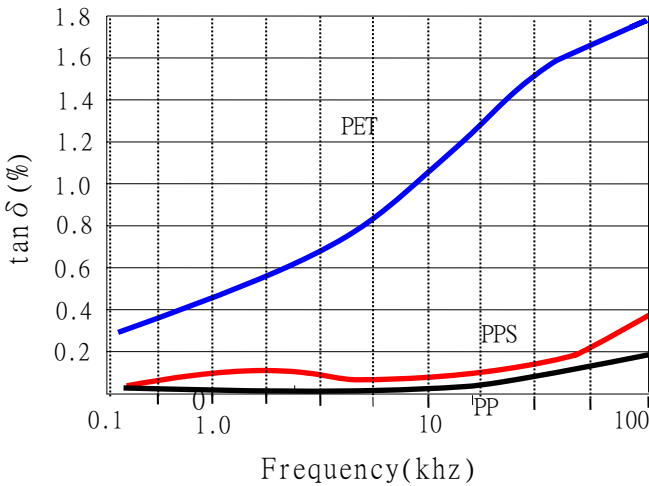
(1) Capacitance vs. Temperature



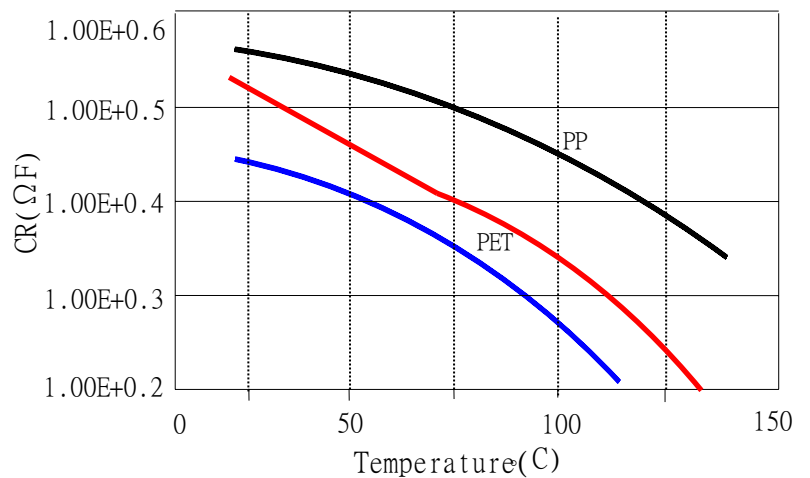
(2) Dissipation Factor vs. Temperature



(3) Dissipation Factor vs. Frequency



(4) CR value vs. Temperature



電容器使用頻率高於 1KHz 時.會產生熱壓迫.通常電容器本身所產生的內熱加上暫態溫度,不能超過介電質的最大允許工作溫度.假始超過了,電容器可能斷路甚至破裂.

電容器本身的內熱是可以估算的,因電容器阻值乘上電流 rms 值的平方,即決定了電容器所消耗的功率(單位是瓦特),而此消耗功率值可用來計算且預估出電容器內的溫度.

電容器的功率損失,大部份是由其阻值所決定而非介電層.這是因為考慮電極內部接線的等效串聯電阻及在高頻時電容的寄生電感使 ESR 增加所造成.

影響電容最大承受電流的因素,是鍍金屬電極的厚度. 電極的厚度是隨著電極銜接邊緣而增加,來承受更大的電流.

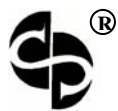
電流峰值太大,很可能發生鍍金屬電極尾端和介電質銜接處,漸漸地被腐蝕掉.在這種情形下,電容的功率損失因素會增加,而且可能使電容值消失.在最糟的情況下,很可能電容器會整個形成斷路.



CAPACITORS

電容器用金屬化薄膜結構圖，適用型體範圍

Drawings	Capacitors type	Metallized film, Film of Foil type
	Inductive KT, KP	Aluminum foil PET or OPP film
	Non-inductive KT, KP	Aluminum foil PET or OPP film
	MKT, MKP	PET or OPP film with oneseid AL metallized
	MKT, MKP X, Y capacitors	PET or OPP film with oneseid AL or AL-Zn alloy metallized and heavy edge
	Dual sections MKT, MKP	PET or OPP film with oneseid AL metallized Aluminum foil PET or OPP film
	Dual sections MKT, MKP	PET or OPP film with oneseid AL metallized
	Dual sections MKT, MKP X, Y capacitors	PET or OPP film with oneseid AL or AL-zn alloy metallized and heavy edge
	Tree sections MKT, MKP	PET or OPP film with oneseid AL metallize
	Four sections MKT, MKP	PET or OPP film PET film with doubleside AL metallized
	MMKP, MMKT	PET or OPP film PET film with doubleside AL metallized
	Dual sections MMKP, MMKT	PET or OPP film with oneseid AL metallized PET film with doubleside AL metallized PET or OPP film
	Tree sections MMKP	PET film with doubleside AL metallized OPP film
	Four sections MMKP	PET or OPP film with oneseid AL metallized PET film with doubleside AL metallized OPP film

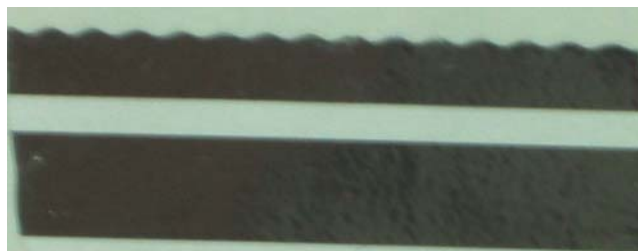


CAPACITORS

普通薄膜結構介紹



波浪分切



波浪分切



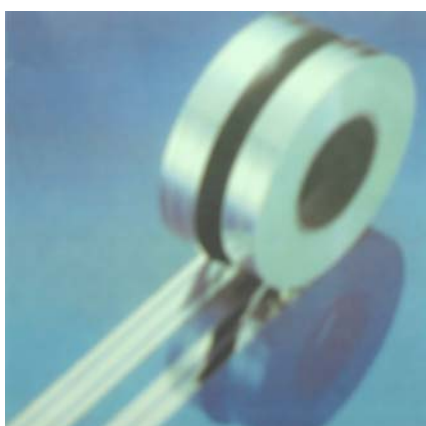
普通蒸鍍



二串蒸鍍



三串蒸鍍



四串蒸鍍

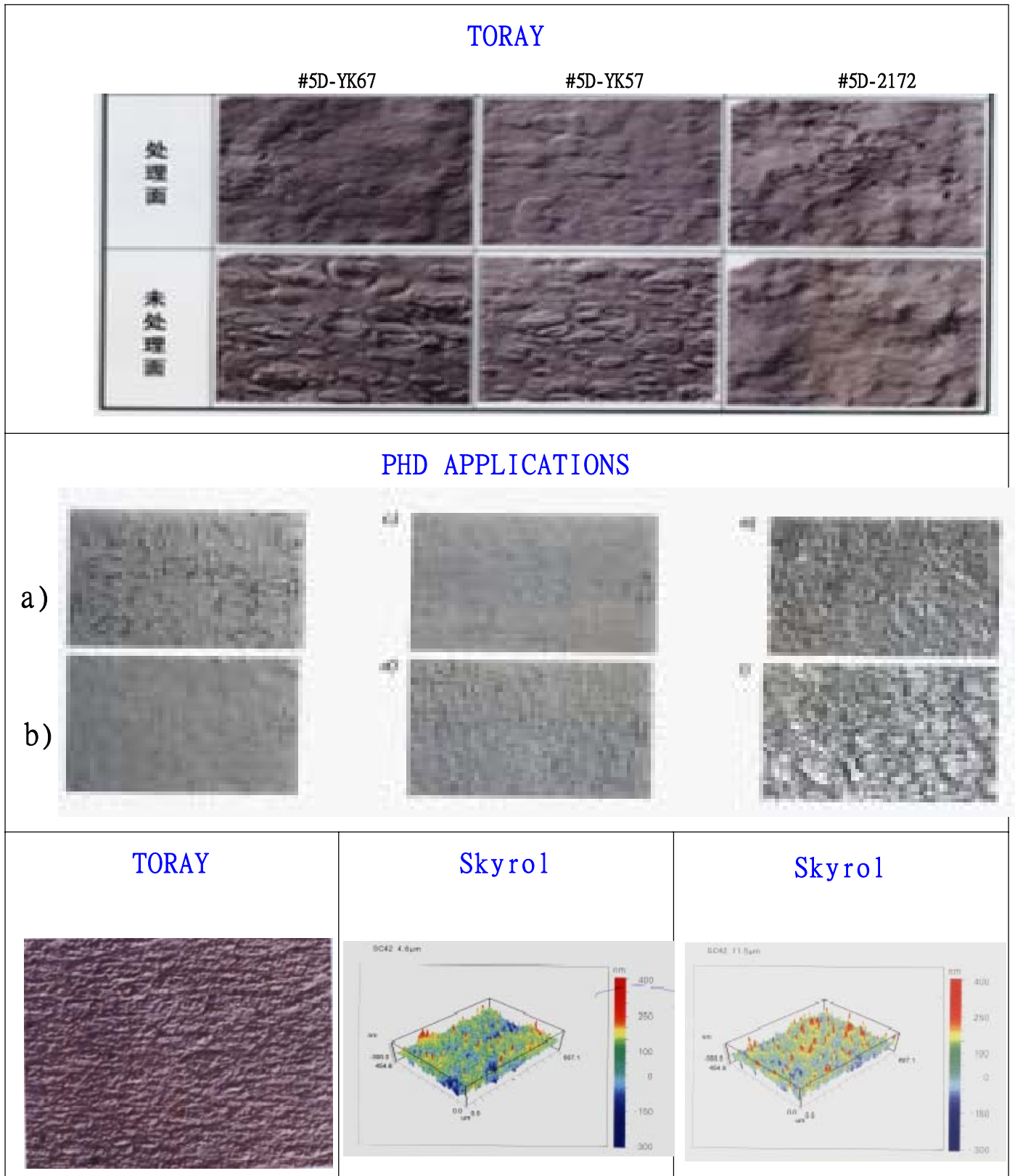


五串蒸鍍



CAPACITORS

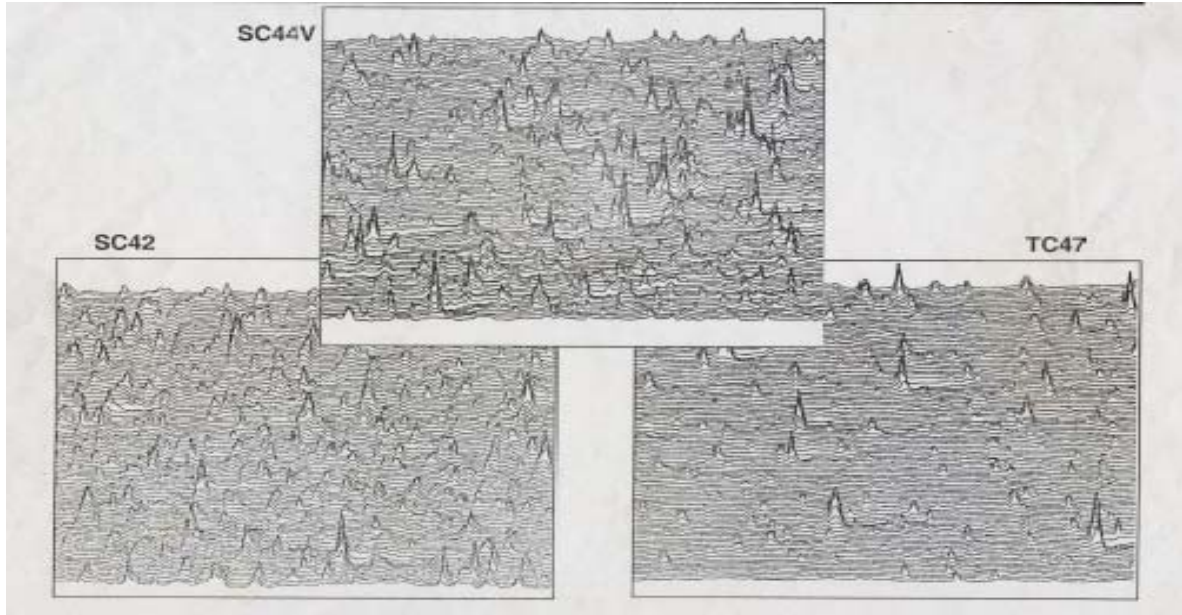
Film 表面處理與未處理比較圖





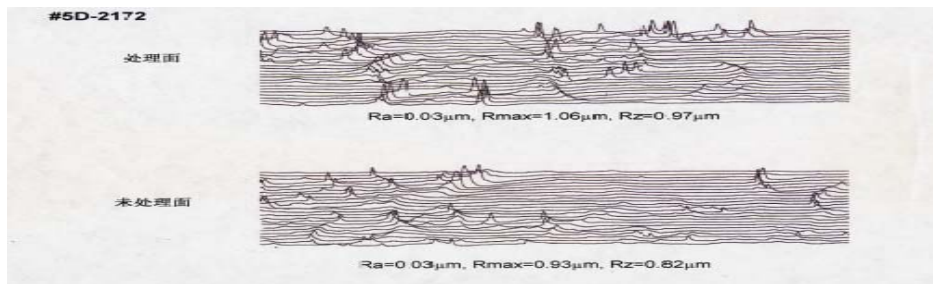
CAPACITORS

電容器用聚酯薄膜

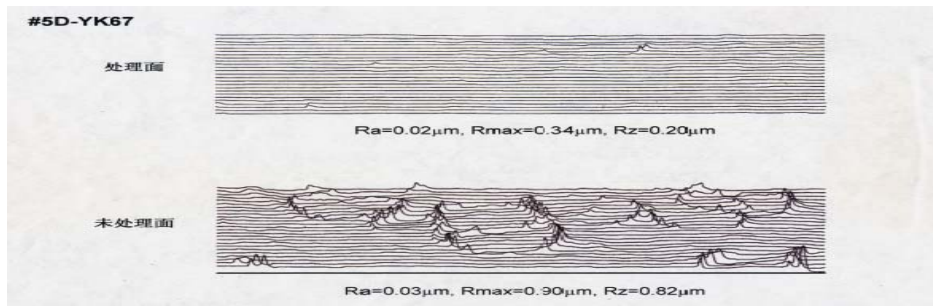


金屬化薄膜表面粗糙度

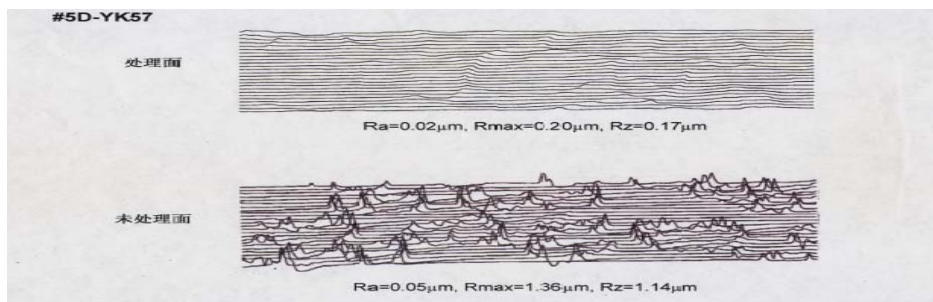
TORAY



TORAY



TORAY

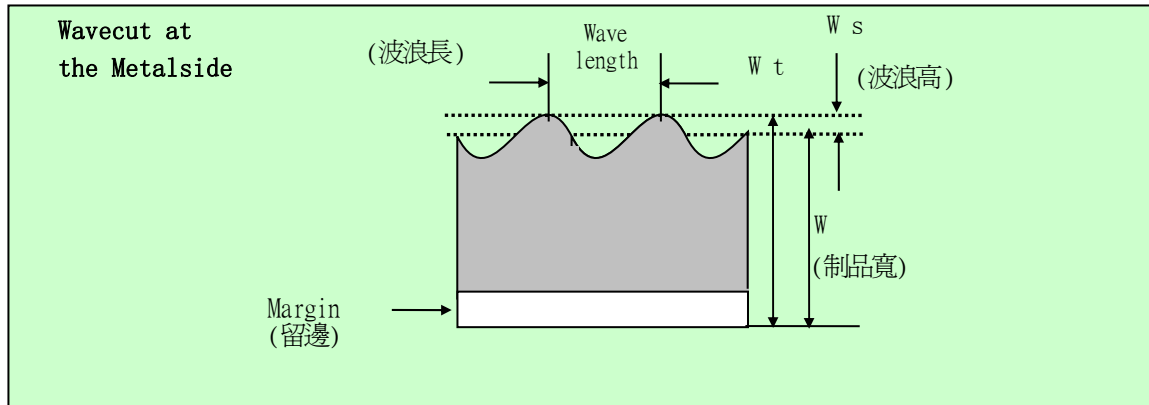




CAPACITORS

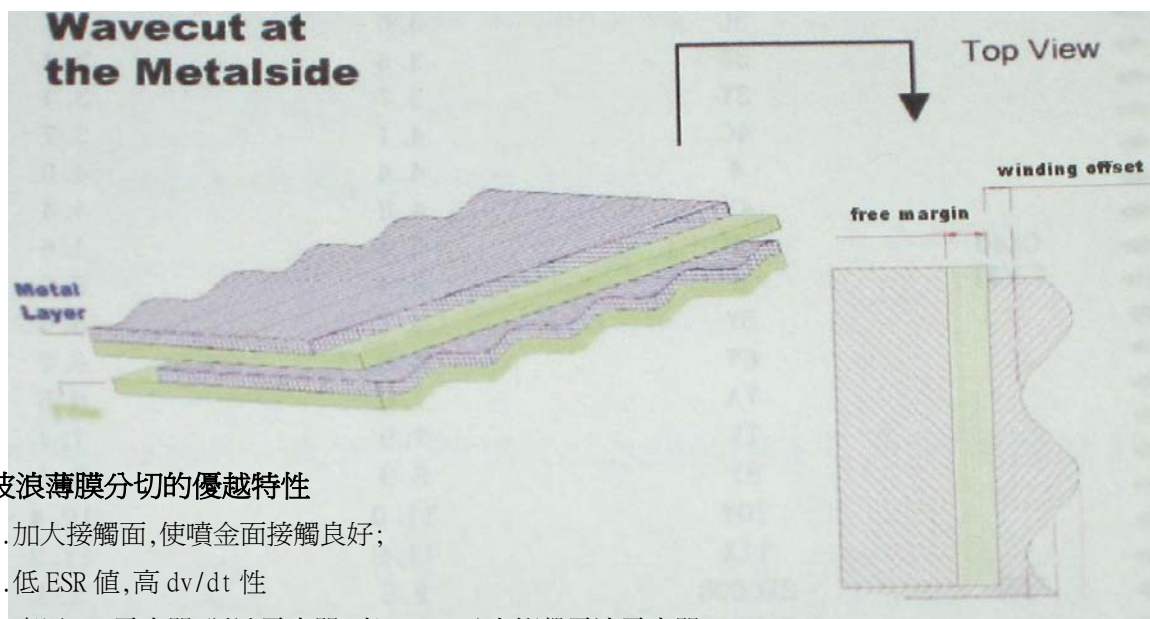
薄膜波浪分切介紹

波浪分切介紹(一)



說明:

- ①分切寬度 W 是指上面圖示的從留邊到波浪中心位置的尺寸
- ②實際的產品的波浪寬度為 W_t . 如上面圖示 ($W_t = W + W_s$)



波浪薄膜分切的優越特性

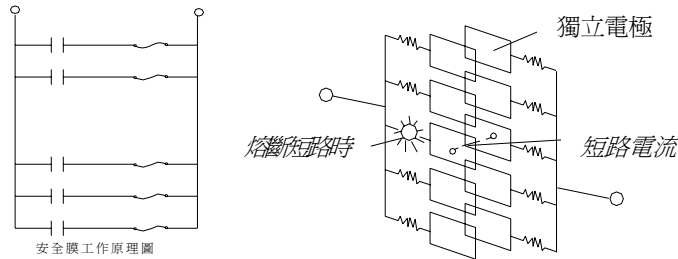
1. 加大接觸面, 使噴金面接觸良好;
2. 低 ESR 值, 高 dv/dt 性
3. 應用: X2 電容器, 脈沖電容器, 高 dv/dt 及大衝擊電流電容器.



安全膜的簡介、原理及特征

安全膜簡介

作為電容器主要材料的安全膜是鋅鋁合金加厚邊分區蒸鍍的金屬化聚丙烯薄膜.其與眾不同的地方是把保障電容器安全所需的微型保險絲在蒸鍍薄膜時一起鍍在薄膜表面,每平方米達 2 萬條之多,保險絲的反映非常靈敏,能有效地隔離電弱點的擊穿部分,不向電容器的其他部分影響蔓延,因而不但使電容器比傳統的壓敏式防爆電容器更可靠,更安全,而且大大延長電容器的使用壽命.



安全膜的動作原理

當作為電極的一部分蒸鍍膜產生"保險動作"時,只有已破壞的部分蒸鍍膜(分割電極)瞬間脫離電源,電容器僅有微小的容量減少,而繼續維持其機能.

安全膜是鋅鋁合金加厚邊分區蒸鍍,內附險絲的安全金屬化聚丙烯薄膜

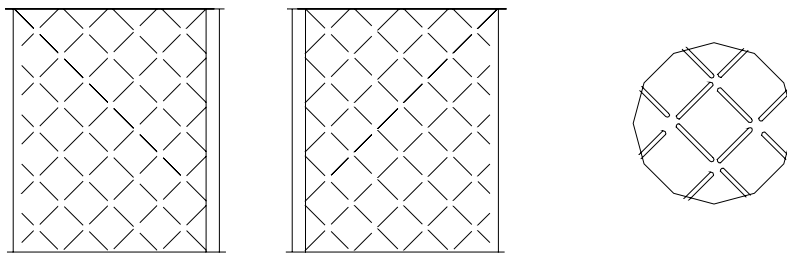
特 點 : ※在過負荷情況下,電容器會自動開路,寧靜和無損害.

∴ ※高耐壓,在室溫下大約達到 250VAC/um

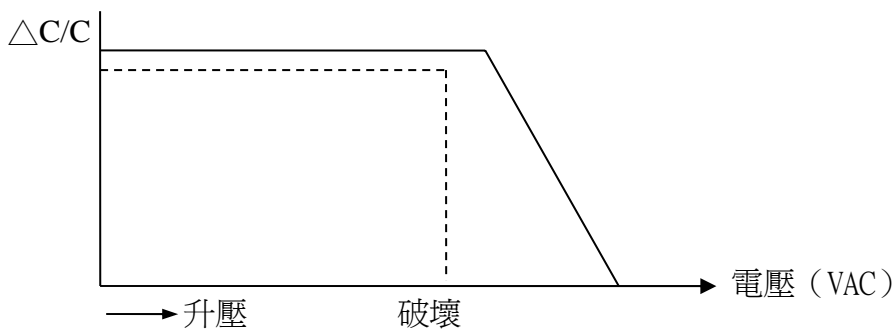
∴ ※擊穿部分被分隔不影響其他部分

安全膜型式如下:

保險絲在面角端連接.



安全膜與普通膜的差異、安全性.



安全膜破壞時,電極開路 (OPEN)

普通金屬膜破壞時,電極短路 (SHORT)



CAPACITORS

安全膜介紹

