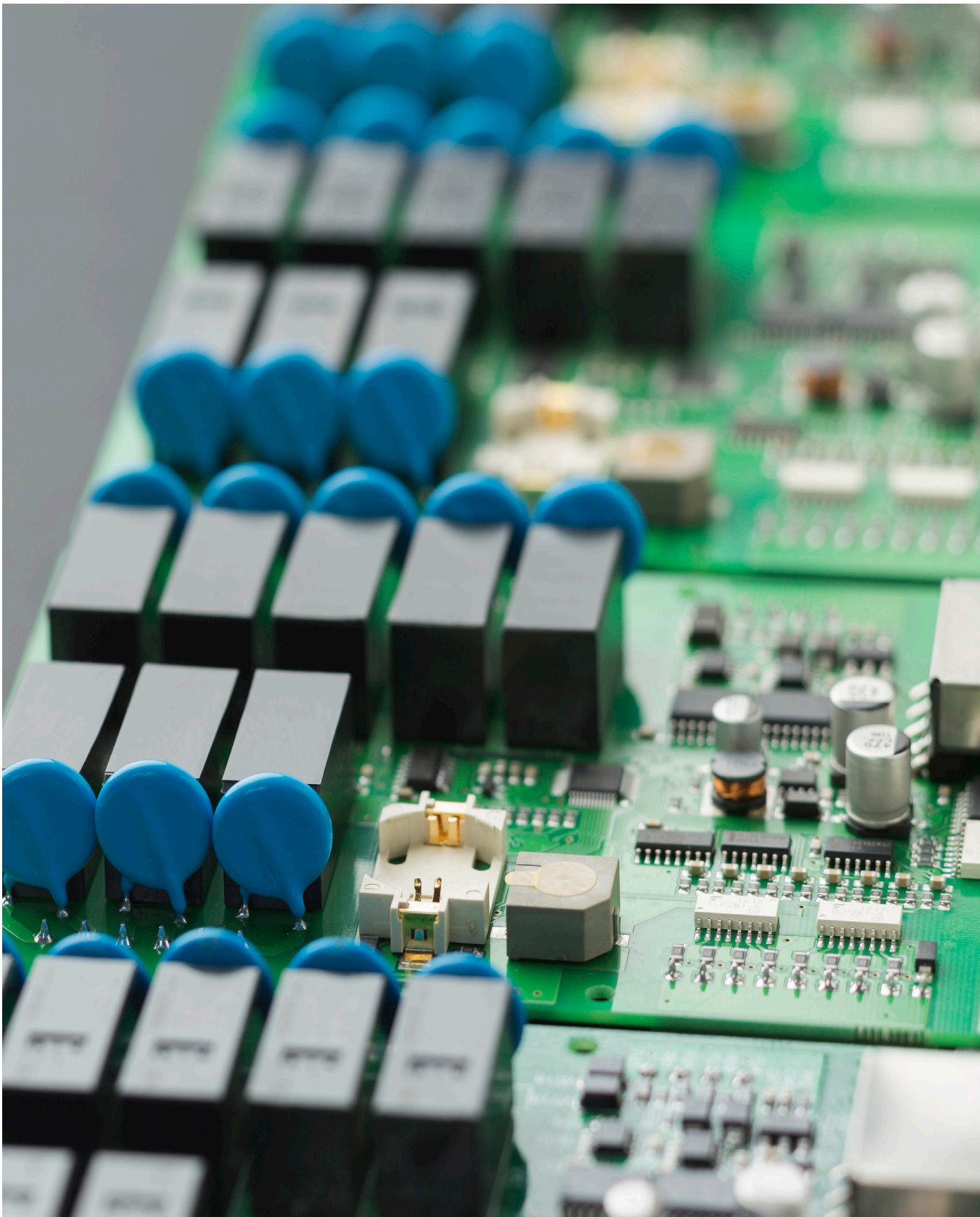
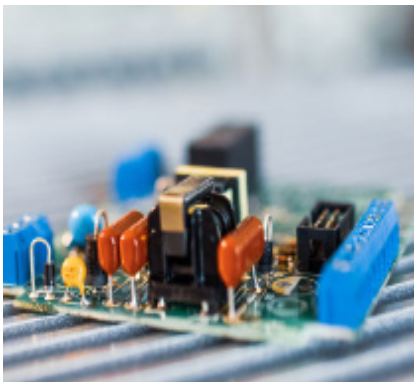
Mylar® Specialty Films

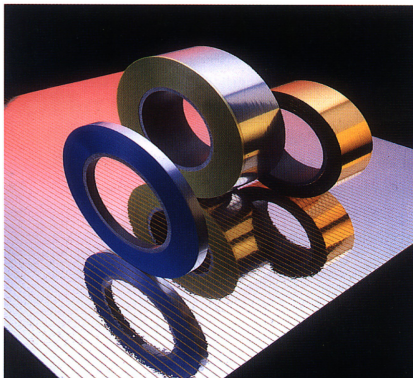
PET & PEN Films for Capacitors

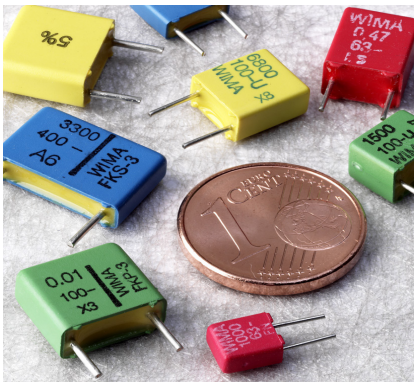


Delivering specialty solutions for the capacitor industry

Mylar Specialty Films is the leading supplier of PET and PEN thin films for capacitor dielectrics. Our unique simulataneous stretching process gives our thin films the opimum balance of mechanical properties and thermal shrinkages which makes them the films of choice for both wound and stacked capacitors. In addition this specialized stretching process minimizes surface defects and leads to fewer voltage breakdown events in the finished capacitor.







Mylar® PET

Mylar® PET film capacitors are used in a wide range of applications where their smaller physical size than other filmic material capacitors makes them ideal for miniaturization of devices. Mylar® PET film can be readily metallized or can be combined with layers of aluminium foil to produce wound and stacked capacitors as well as SMD capacitors. The ability of metallized Mylar® PET film to “self heal” should there be any localized breakdowns gives an advantage for higher voltage applications.

Kaladex® PEN

Kaladex® PEN films can be handled and processed in a similar way to PET however the distinct polymer chemistry of PEN provide superior properties including greater resistance to heat and hydrolysis, better dimentional stability and higher modulus. Kaladex® PEN is used in situations where a higher service temperature is required. Typical applications are in lead free soldered SMD capacitors and automotive lighting.

Kaladex® PEN HV

Mylar Specialy Films has developed Kaladex® PEN HV film which provides a dielectric with a high service temperature (above 125 ˚C) and highest energy density compared to all current dielectrics. In addition when metallized it has excellent self healing properties. Potential Kaladex® PEN HV applications are high temperature power applications such as DC link in EV/HEV automotive and avionics, industrial energy conversion and renewable energy.

Typical properties and product range for capacitor dielectrics

Typical Properties

Material	Dielectric Constant (25 °C, 1kHz)	Dissipation Factor (%) (25 °C, 1kHz)	Breakdown Strength (V/mm)	Max Temp (°C)
Mylar® PET	3.25	0.5	290-350	125
Kaladex® PEN	3.05	0.5	290-350	150

Product Range

Film	Film Type	Thickness micron (gauge)	Description
Mylar® C	PET	2.5 - 12.0 (10-48)	General purpose film with excellent thermal and mechanical properties
Mylar® CLS	PET	4.0, 4.8, 6.0 (16, 19.2, 24)	Improved thermal stability for stacked capacitors in SMD applications
Mylar® CLS02	PET	1.7, 1.9, 2.4 (6.8, 7.6, 9.6)	Improved thermal stability for stacked capacitors in SMD applications. Special low shrinkage version of Mylar® C
Mylar® CN	PET	5.2 (20.8)	Special low shrinkage version of Mylar® C
Mylar® CS02	PET	1.2, 2.4 (4.8, 9.6)	Specially designed for stacked capacitors (lower shrinkage compared to CW02)
Mylar® CS03	PET	1.2, 2.3 (2.4, 9.2)	Smoother film for low air layer
Mylar® CW02	PET	0.9, 2.4 (3.6, 9.6)	Specially designed for wound capacitors
Kaladex® Q71	PEN	6.0 - 16.0 (24-64)	High service temperature dielectric
Kaladex® Q72	PEN	1.2, 6.0 (4.8, 24)	High service temperature dielectric - low shrinkage film

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