ULTEM™ FILM

ULTEM™ polyetherimide film UTF120 is a high heat and high energy density dielectric film that meets the most stringent technical demands for use in professional-grade dielectric film capacitors. UTF120 film is also available for multiple applications requiring high temperature resistance during processing or application.

ULTEM UTF120 FILM VALUE PROPOSITIONS

- Stable properties through a range of temperatures (-40°C to +150°C) and frequencies, including
  - high temperature dimensional stability
  - high mechanical stability
- Inherent flame retardance
- Good insulation resistance
- High dielectric constant (Dk) and low dissipation factor (Df)
- Excellent metal adhesion
- Low thickness with high thickness uniformity (σd)
- High voltage breakdown strength, very clean and defect-free
- Capability to pass industry standard 260°C reflow soldering process

	BOPP	PET	PEN	PPS	PC	ULTEM UTF120 film
Intrinsic BDS 23°C (v/µm)	690	800	660	503	660	590
Intrinsic BDS 150°C (v/µm)	NA	NA	NA	465	NA	510
Dk at 1 kHz	2.2	3.3	3.2	3.0	2.7	3.1
Df at 1 KHz	0.0007	0.0040	0.0040	0.0005	0.0022	0.0020
Temperature Range (°C)	-55 to +105	-55 to +125	-55 to +140	-55 to +150	-55 to +125	-55 to +150
Self-Healing 23°C	***	*	*	*	**	*
Self-Healing 150°C	*	*	*	*	*	*
Metallization	Requires plasma	**	**	*	**	**
Solder Reflow Capable	No	No	Yes	Yes	No	Yes
Available Thickness (µm)	>2.1	>0.5	>1.2	>1.2	>2.0	4, 5, 7 & 10µm
Cost	Low	Medium	High	Very High	Very High	High
Certainty of Supply	***	***	*	*	*	***
Overall Performance at 150°C	*	*	*	*	*	**

*** Excellent ** Good * Moderate * Poor * None

Developed to offer excellent handling through metallization, capacitor winding and flattening, ULTEM UTF120 film is processable on existing equipment and has been validated with both film-foil and metalized electrodes including flat and tapered metalized electrode designs as well as patterned electrodes.

UTF120 CAN BE USED IN F.E.:

Thickness	Application
5µm	Composite tapes
5µm	3D circuit boards
7µm	Wireless devices
10µm	Acoustic devices (speakers)

PRODUCT PORTFOLIO

Grade Name	Available Thicknesses
UTF120	4, 5, 7 and 10µm

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