

BEYOLEX™ Thermosetting Stretchable Substrate Film

This novel soft circuit material is designed for flexible, stretchable, conformable and pliable printed electronics applications. It is a unique material based on a proprietary, thermoset, non-silicone polymer system which provides outstanding performance.

Features and Benefits

- Good Elongation
- Ultra Low Hysteresis
- High Temperature Resistance
- High Environmental Stability
- Compatible With Wide Variety of Functional Inks

Typical Printed Electronic Applications

- Pliable/ Stretchable PCB
- Sensors
- Health And Wellness
- Robotics
- Aerospace
- Automotive



Typical Properties

Properties		Test Method*	Unit	BEYOLEX™ MUAS13111AA
Elongation	Initial	ASTM D822	%	> 200
	Aft. High Temp & High Humid Test**			> 200
	Aft. Heat Cycle***			> 200
Modulus@50% Strain	Initial	ASTM D822	MPa	< 2.5
	Aft. High Temp & High Humid Test**			< 2.5
	Aft. Heat Cycle***			< 2.5
Hysteresis	Initial	Panasonic Original	%	< 0.1
	Aft. High Temp & High Humid Test**			< 0.1
	Aft. Heat Cycle***			< 0.1
Heat Resistance		TG/DTA(@Air)/ 5% weight loss	°C	302
Breakdown Voltage		IEC 60243-1	KV/mm	98
Dielectric Property(Dk/Df)	IPC TM650 2.5.5.10	@10GHz	-	2.8 / 0.052
		@2GHz	-	3.3 / 0.073
Transparency		ISO 13468-1	%	> 90
Stretch Cycle		50% stretch	cycle	> 10,000

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* Measurements are compliant with the standards other than Panasonic's original test.

** Test Condition : 85°C / 85%RH / 1000h

*** Test Condition : -55°C(5min) ↔ 125°C(5min) / 1000cyc.

The values in this document are representative measured properties and not specifications or guarantees of performance.

Disclaimer

This material is provided strictly on an as-is basis. No warranty shall be given by Panasonic with regard to the material, including, but not limited to the quality, safety, fitness for a particular purpose, merchantability, or compatibility with other materials and devices. Panasonic shall have no obligation, liability or responsibility to you or any third parties/ individuals for any damage arising out of or incurred in relation to this material.

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