



Varicon™ Dielectric/Conductivity Sensor Specifications

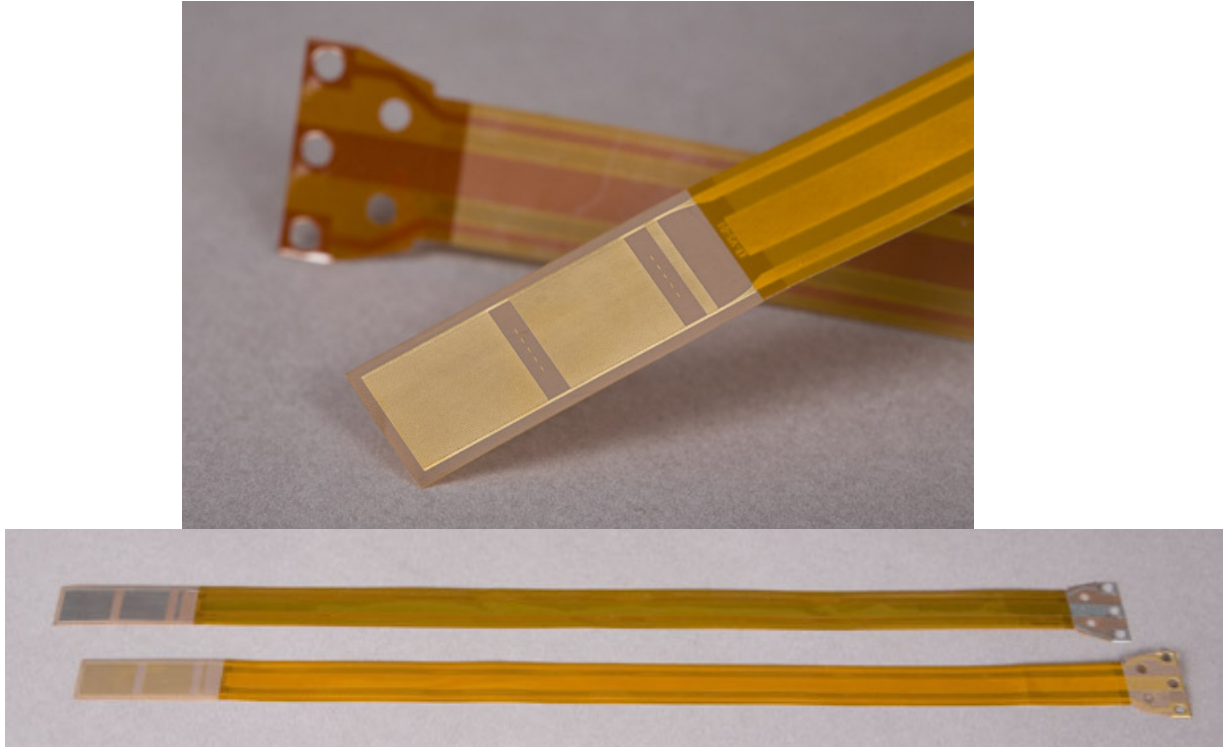


Figure 1
Varicon Dielectric/Conductivity Sensor

DESCRIPTION

The Varicon sensor is designed for use in presses, molds, bulk materials or laminates where a thin, flexible dielectric sensor is necessary. The Varicon sensor is thin enough to be implanted within a sample or between the plies of a laminate and may be discarded after use. Patterned on a polyimide substrate, the electrode array is designed to allow a choice of three sensitivities, which are selected by cutting off portions of the array at designated lines.

The Varicon sensor is 15" (38 cm) long and only 0.004" (100 μ m) thick. The gold-plated electrodes have 0.004" (100 μ m) widths and spaces, and measures dielectric/conductive properties within approximately 0.004" (100 μ m) of the electrode surface.

The Varicon sensor is suitable for high pressure, high temperature applications, and is ideal for measuring the dielectric properties and cure state of epoxies, bulk molding compound (BMC), sheet molding compound (SMC), silicones, thermosets, urethanes, RIM and composite materials.

GENERAL SPECIFICATIONS

Dimensions:

Length, overall	: 15" (38 cm)
Width, sensor head	: 0.75" (1.9 cm)
Thickness	: 0.004" (100 μ m)
Width, electrode	: 0.004" (100 μ m)
Spacing, electrode	: 0.004" (100 μ m)

Composition:

Substrate	: Polyimide
Electrodes	: Copper with gold flash

Operational:

Temperature, maximum	: 375 °C (700 °F)
Frequency, mid-con mode	: 0.1 Hz – 100 KHz

Sensor Parameters:

	A/D ratio	Base capacitance
Configuration M (max sensitivity) :	160 cm	~48 pF*
Configuration A (mid sensitivity) :	80 cm	~25 pF*
Configuration B (low sensitivity) :	8 cm	~ 3 pF*

* Actual value may vary

Temperature sensor : None



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