



Mini-Varicon™ Dielectric/Conductivity Sensor Specifications

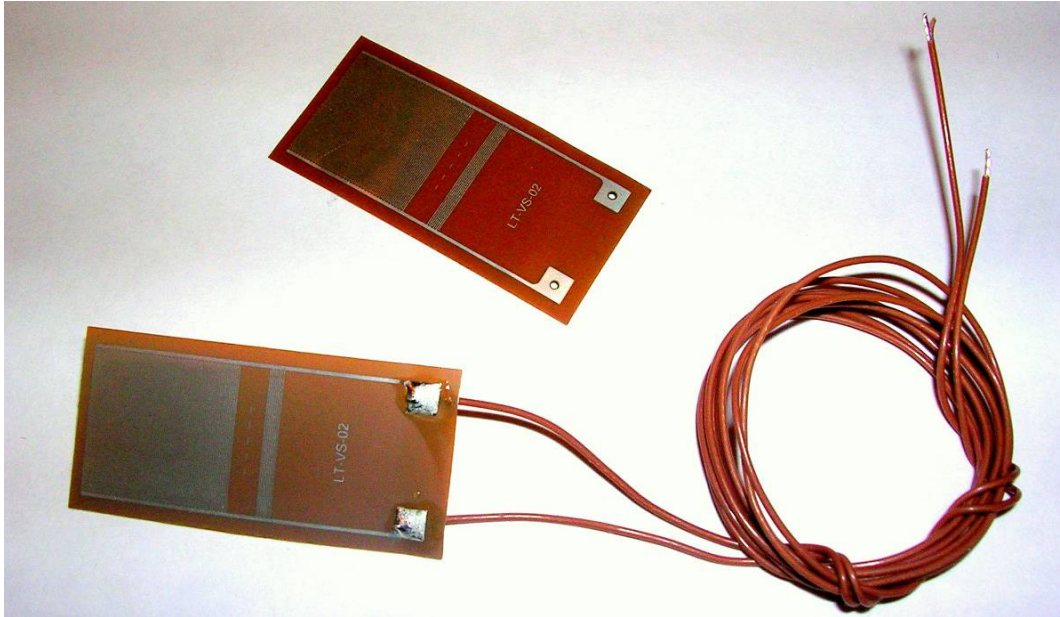


Figure 1
Mini-Varicon Dielectric/Conductivity Sensor

DESCRIPTION

The Mini-Varicon sensor is a thin, flexible dielectric sensor designed for cost-sensitive use with presses, molds, bulk materials or laminates. Patterned on a polyimide substrate, the electrode array is designed to allow a choice of high or low sensitivity, selected by either using the whole sensor or cutting off a portion of the array at a designated line. The Mini-Varicon sensor can be supplied without leads, or with custom-length Teflon-insulated leads attached.

The Mini-Varicon sensor head is 1.5" (4.0 cm) long and only 0.004" (100 μ m) thick. The tin-plated electrodes have 0.004" (100 μ m) widths and spaces. The Mini-Varicon sensor can measure the dielectric/conductive properties of materials within approximately 0.004" (100 μ m) of the electrode surface.

The Mini-Varicon sensor is suitable for high pressure 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. When used without leads, the sensor will tolerate temperatures up to 375 °C. When supplied with leads, the sensor will operate up to 200 °C.

GENERAL SPECIFICATIONS

Dimensions:

Length, sensor head	: 1.6" (4.0 cm)
Width, sensor head	: 0.75" (1.9 cm)
Thickness, sensor head	: 0.004" (100 um)
Width, electrode	: 0.004" (100 um)
Spacing, electrode	: 0.004" (100 mm)

Composition:

Substrate, sensor head	: Polyimide
Electrodes	: Copper with tin flash
Lead insulation	: Teflon

Operational:

Temperature, maximum	: 375 °C (700 °F) without leads
	: 200 °C (392 °F) with supplied leads

Sensor Parameters:

	A/D ratio	Base capacitance
Configuration A (mid sensitivity)	: 80 cm	~25 pF*
Configuration B (low sensitivity)	: 7.2 cm	~ 3 pF*

* Actual value may vary

Temperature sensor : None

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