PIEZO FILM SENSORS

Our piezo film sensors provide durable vibration, accelerometer, or dynamic switch elements for a wide range of markets and applications. Piezoelectric fluoropolymer film has unique capabilities and produces voltage or charge proportional to dynamic strain. The film is suited for many different custom designs, configurations and applications, including versatile coaxial cable used for everything from security to musical instrument amplification.

PIEZO FILM

	MEAS DT1, SDT1	MEAS Piezo Cable	MEAS CM-01	MEAS FLDT1	MEAS LDTC Analog PCB
Package	Unshielded element with twisted pair or shielded element with shielded cable	Shielded coaxial 20 gage piezo cable	Metallized plastic housing	Unshielded film element with screen printed leads	Evaluation PCB platform for vibration sensor
Type	Flexible film, adhesive mount	Polymer jacketing, armored jacketing	Contact microphone	Flexible film, adhesive mount	Amplified analog output
Range	15 mV/με up to 1% strain	μPa sensitivity	40 V/mm; 8 Hz to 2.2 kHz	15 mV/με, up to 1% strain	1 Hz to 117 Hz
Unique Features	• Thin, flexible, robust • Withstands >2% strain • Ultra-low power (Self generating)	• Continuous lengths of up to 1 km • Shielded construction	• Low noise • Shielded construction • High sensitivity	• Thin, flexible • Leads screen printed on film • Connects to standard connector	• Low power • High sensitivity • Analog and digital signal access points
Accuracy	±20% (Typical)	±20% (Typical)	—	±20% (Typical)	±20%
Operating Temp.	-40°C to 70°C (Higher available custom)	-40°C to 85°C	5°C to 60°C	-40°C to 70°C; (Higher available custom)	-20°C to 85°C
Dimensions (mm)	Application dependent	Ø3 (Continuous lengths)	Ø18 x 11 high	12 x 30 active; (Custom available)	33 x 46
Typical Applications	Dynamic strain gage, contact microphone, acoustic pickup	Perimeter and fence security, geophone, impact sensors, intrusion detection, seat occupancy (e.g. airbag), patient bed vital signs monitor	Electronic stethoscope, contact microphone, vibration	Event timing, dynamic strain, motion detection	Vibration sensing, wake-up sensor, activity sensor

	MEAS Laboratory Amplifier	MEAS 80 KHz Transducers	MEAS NDT-1	MEAS Tamper Box	MEAS ACH-01	MEAS LDTC Family
Package	Bench top	Pin mounted	Adhesive mounted	Flat film or box mounted	Ceramic base, plastic cover, shielded cable	Piezo film elements with or without mass
Type	Piezo film lab amp	Air ultrasound transducer	High frequency ultrasound transducer	Tamper detection sensor	Adhesive mount	Cantilever beam with vertical or horizontal pins
Range	0.1 Hz to 100 kHz	80 kHz	3 MHz	Application dependent	±250 g (Typical)	±10 g (Typical)
Unique Features	• Voltage or charge mode settings • Multi-pole high-pass and low-pass filters • Adjustable gain	• Small size • Low mechanical Q • Shielded package	• Flexible • High bandwidth, low Q • Low impedance	• Low power • Custom shapes and sizes • High security	• Extremely high bandwidth • Low cost • Ultra-low power	• Very low cost • High sensitivity (1 V/g) • Ultra-low power (Self generating)
Accuracy	Application dependent	Application dependent	Application dependent	Application dependent	±20% (Typical)	±20% (Typical)
Operating Temp.	0°C to 40°C	-20°C to 80°C	-20°C to 60°C	-40°C to 85°C	-40°C to 85°C	-40°C to 70°C
Dimensions (mm)	150 x 100 x 100	Ø6 x 9	12 x 30	Application dependent	18.80 x 13.21 x 6.10	19.05 x 6.35 x 6.35
Typical Applications	Low frequency dynamic strain, pyroelectric signals, machine vibration, piezo cable and traffic sensor interface	Air ranging, ultrasonic mouse, digitizers	Thickness measurement, speed of sound measurement, pulse/echo NDT	Encryption modules, POS card readers, PIN entry devices	Vibration sensing, gear box and high speed monitoring, high speed bearings and centrifuges, speaker motional feedback	Wake-up switch, load imbalance, antitheft devices, impact sensing, vital signs monitoring