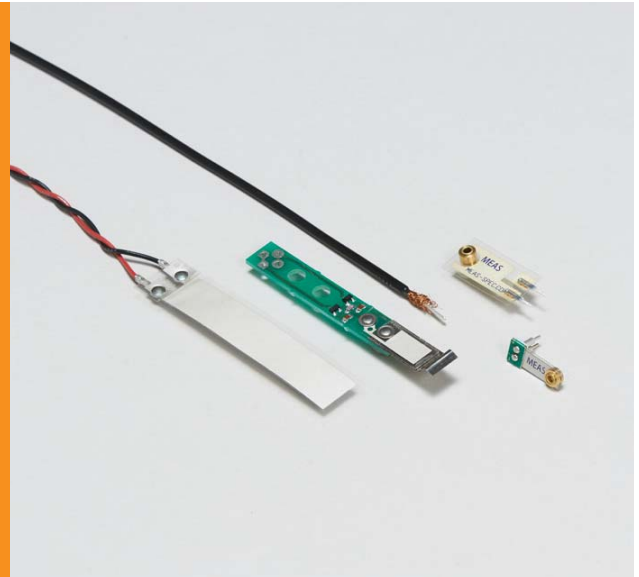


PIEZO FILM SENSORS



PIEZO FILM



DT1, SDT1

Package	Unshielded element with twisted pair or shielded element with shielded cable
Type	Flexible film, adhesive mount
Range	15 mV/ $\mu\epsilon$ up to 1% strain
Unique Features	<ul style="list-style-type: none"> • Thin, flexible, robust • Withstands >2% strain • Ultra-low power (Self generating)
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 70°C (Higher available custom)
Dimensions (mm)	Application dependent
Typical Applications	Dynamic strain gage, contact microphone, acoustic pickup



Piezo Cable

Package	Shielded coaxial 20 gage piezo cable
Type	Polymer jacketing, armored jacketing
Range	μPa sensitivity
Unique Features	<ul style="list-style-type: none"> • Continuous lengths of up to 1 km • Shielded construction
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 85°C
Dimensions (mm)	$\varnothing 3$ (Continuous lengths)
Typical Applications	Perimeter and fence security, geophone, impact sensors, intrusion detection, seat occupancy (e.g. airbag), patient bed vital signs monitor



CM-01

Package	Metallized plastic housing
Type	Contact microphone
Range	40 V/mm; 8 Hz to 2.2 kHz
Unique Features	<ul style="list-style-type: none"> • Low noise • Shielded construction • High sensitivity
Accuracy	—
Operating Temp.	5°C to 60°C
Dimensions (mm)	$\varnothing 18 \times 11$ high
Typical Applications	Electronic stethoscope, contact microphone, vibration



FLDT1

Package	Unshielded film element with screen printed leads
Type	Flexible film, adhesive mount
Range	15 mV/ $\mu\epsilon$, up to 1% strain
Unique Features	<ul style="list-style-type: none"> • Thin, flexible • Leads screen printed on film • Connects to standard connector
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 70°C; (Higher available custom)
Dimensions (mm)	12 x 30 active; (Custom available)
Typical Applications	Event timing, dynamic strain, motion detection

PIEZO FILM



Sleep Monitor Strip

Package	Unshielded element with crimps
Type	Flexible film, adhesive mount
Range	15 mV/ $\mu\epsilon$ up to 1% strain
Unique Features	<ul style="list-style-type: none"> Thin, flexible, robust Withstands >2% strain Ultra-low power (Self generating)
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 70°C (Higher available custom)
Dimensions (mm)	28 μm PVDF; 8mm x 800mm
Typical Applications	Respiration and heart beat monitoring for mattress or seat



BL Traffic Sensor

Center Core:	16 gage copper wire
Piezoelectric Material:	Piezoelectric film cable
Outer Sheath:	0.016" thick brass
Type	Spiral wrapped PVDF piezo film cable
Range	15 mV/ $\mu\epsilon$ up to 1% strain
Unique Features	<ul style="list-style-type: none"> Flexible, durable, available in many lengths Withstands >2% strain Ultra-low power (Self generating)
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 70°C (Higher available custom)
Dimensions (mm)	0.260" wide x 0.063" thick; 0.005"
Typical Applications	Traffic counting, classifying, toll booths, speed detection, red light cameras



Laboratory Amplifier

Package	Bench top
Type	Piezo film lab amp
Range	0.1 Hz to 100 kHz
Unique Features	<ul style="list-style-type: none"> Voltage or charge mode settings Multi-pole high-pass and low-pass filters Adjustable gain
Accuracy	Application dependent
Operating Temp.	0°C to 40°C
Dimensions (mm)	150 x 100 x 100
Typical Applications	Low frequency dynamic strain, pyroelectric signals, machine vibration, piezo cable and traffic sensor interface



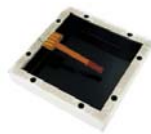
80 KHz Transducers

Package	Pin mounted
Type	Air ultrasound transducer
Range	80 kHz
Unique Features	<ul style="list-style-type: none"> Small size Low mechanical Q Shielded package
Accuracy	Application dependent
Operating Temp.	-20°C to 80°C
Dimensions (mm)	$\varnothing 6 \times 9$
Typical Applications	Air ranging, ultrasonic mouse, digitizers



NDT-1

Package	Adhesive mounted
Type	High frequency ultrasound transducer
Range	3 MHz
Unique Features	<ul style="list-style-type: none"> Flexible High bandwidth, low Q Low impedance
Accuracy	Application dependent
Operating Temp.	-20°C to 60°C
Dimensions (mm)	12 x 30
Typical Applications	Thickness measurement, speed of sound measurement, pulse/echo NDT



Tamper Box

Package	Flat film or box mounted
Type	Tamper detection sensor
Range	Application dependent
Unique Features	<ul style="list-style-type: none"> Low power Custom shapes and sizes High security
Accuracy	Application dependent
Operating Temp.	-40°C to 85°C
Dimensions (mm)	Application dependent
Typical Applications	Encryption modules, POS card readers, PIN entry devices



ACH-01

Package	Ceramic base, plastic cover, shielded cable
Type	Adhesive mount
Range	± 250 g (Typical)
Unique Features	<ul style="list-style-type: none"> Extremely high bandwidth Low cost Ultra-low power
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 85°C
Dimensions (mm)	18.80 x 13.21 x 6.10
Typical Applications	Vibration sensing, gear box and high speed monitoring, high speed bearings and centrifuges, speaker motional feedback



LDTC Family

Package	Piezo film elements with or without mass
Type	Cantilever beam with vertical or horizontal pins
Range	± 10 g (Typical)
Unique Features	<ul style="list-style-type: none"> Very low cost High sensitivity (1 V/g) Ultra-low power (Self generating)
Accuracy	$\pm 20\%$ (Typical)
Operating Temp.	-40°C to 70°C
Dimensions (mm)	19.05 x 6.35 x 6.35
Typical Applications	Wake-up switch, load imbalance, antitheft devices, impact sensing, vital signs monitoring