

## Piezoelectric Film Sensors

Pro-Wave now presents a series of mechno-electrical sensors and detectors produced by advanced piezoelectric polymer film technology. The polymer film of polyvinylidene fluoride (PVF2) exhibits a conspicuous piezoelectric effect and also has high compliance comparing with other piezoelectric crystals or ceramic materials. Because of its superior piezoelectric strain constant (g value), 10-20 times larger than piezoelectric ceramic, it is an ideal sensing material for converting mechanical to electrical energy.

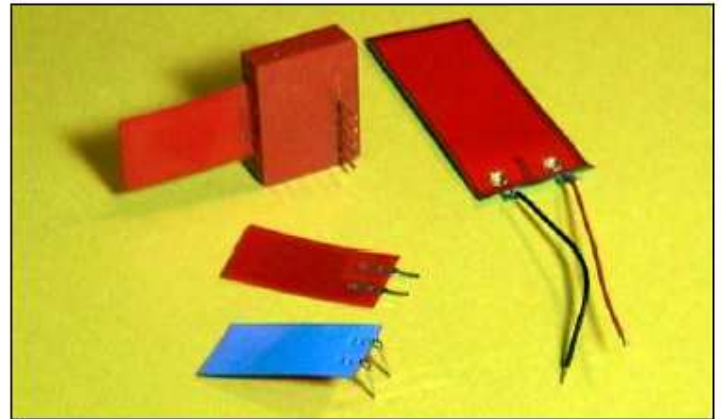
Besides the standard products shown on this catalogue, we are also developing a series of sensing devices by using this particular piezoelectric thin film material. Please contact with us for your special needs.

### Features

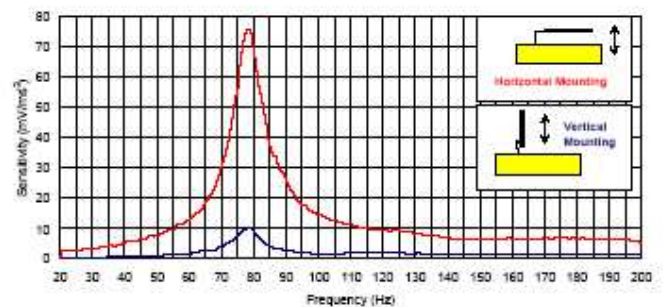
- High Mechno-electrical coefficient in planar, thickness and hydrostatic modes
- Low mechanical and acoustic impedance
- High resistance to moisture
- Pliant, flexible, tough and lightweight
- Self-generated voltage, non-contact, rustless, free of sparking

### Applications

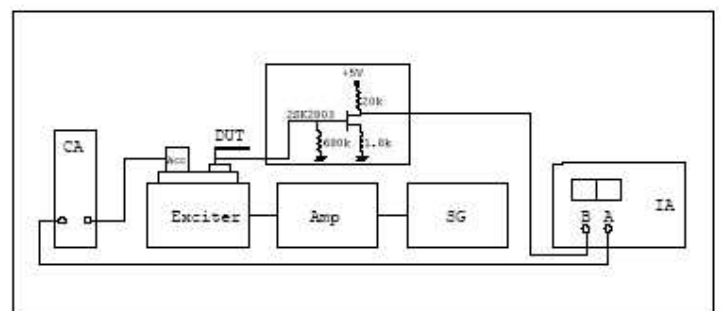
- Vibration sensors and motion detectors
- Low weight accelerometers
- Pressure or force sensors
- Keyboards, keypads and touch panels
- Coin and impact sensors
- Microphones and headset speakers
- Other mechno-electrical and electro-mechanical devices



### Frequency response



### Measuring diagram



**SG:** Programmable Signal Source HP 8165A

**Amp:** Power Amplifier

**Exciter:** Exciter B&K 4809

**Acc:** Accelerometer B&K 8309

**DUT:** Device (FS-2513P) under test

**CA:** Charging Amplifier B&K 2635

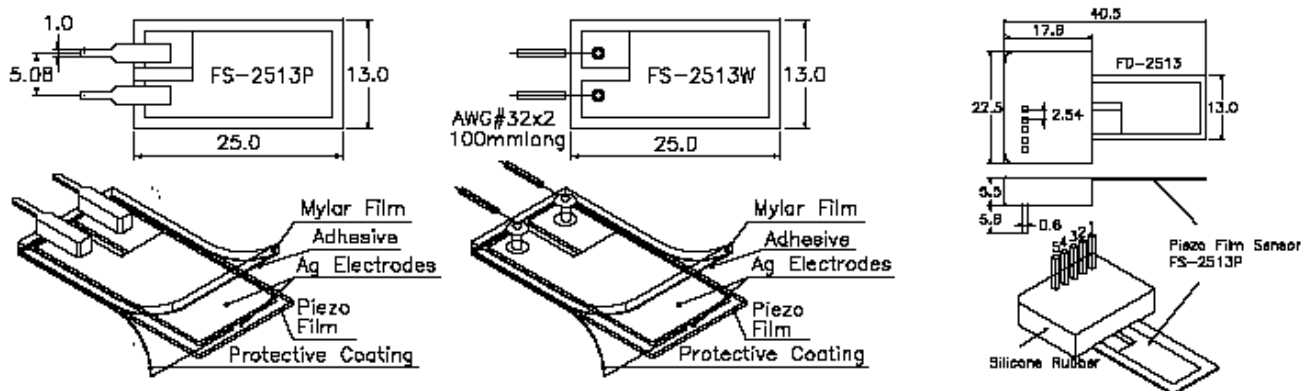
**IA:** Impedance Analyzer HP4192

# Piezoelectric Film Sensors

## Specifications

Model Number	FS-2513P	FS-2513W	FD-2513P	Unit
Type	Lead Pins	Lead Wires	Lead Pins	-
Voltage sensitivity at fr	70	70	-	mV/ms <sup>-2</sup>
Transverse sensitivity	10	10	-	mV/ms <sup>-2</sup>
Resonant frequency (fr)	80 ± 10	80 ± 10	-	Hz
Capacitance	1.5 ± 30%	1.5 ± 30%	-	nF@1KHz
Operation voltage (Vcc)	-	-	3-30	DC volts
Operation current	-	-	1	mA
Max. output current	-	-	20	mA
Operation temperature	-20 - +60	-20 - +60	-20 - +60	°C
Storage temperature	-40 - +70	-40 - +70	-40 - +70	°C

## Dimensions in mm



## Driving circuit & pin assignment of model FD-2513P

