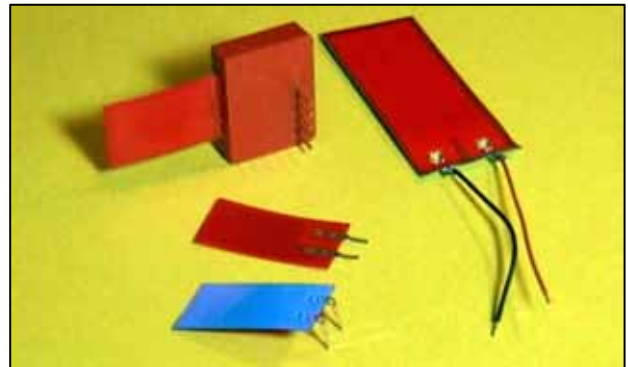


Piezoelectric Film Sensors

Pro-Wave 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 when compared to 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 here, we are also developing a series of sensing devices using this particular piezoelectric thin film material. Please contact with us for your special needs.



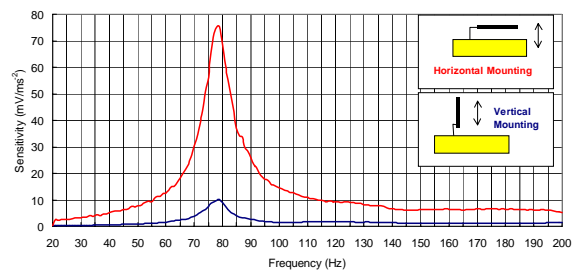
Features

- 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, rust resistant, spark resistant

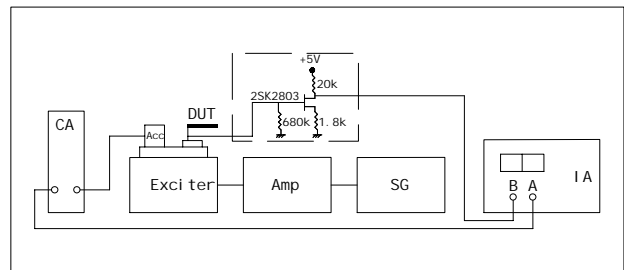
Applications

- 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

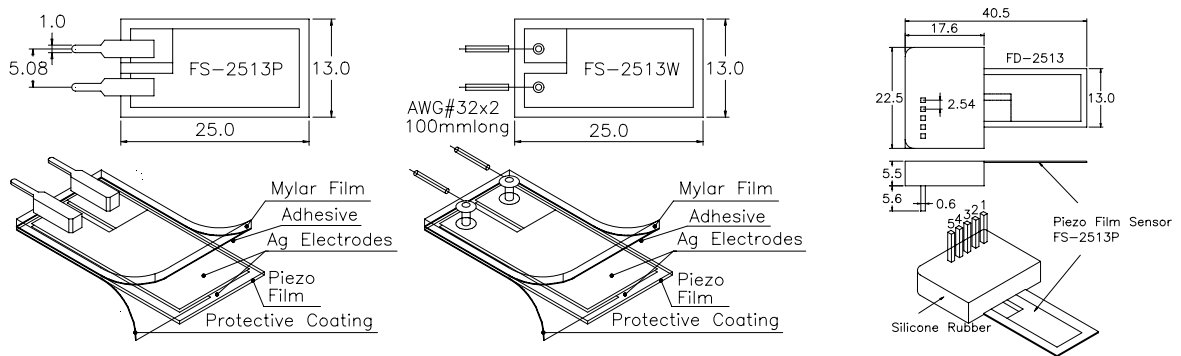
IA: Impedance Analyzer HP4192

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^{-2}
Transverse sensitivity	10	10	-	mV/ms^{-2}
Resonant frequency (fr)	80 ± 10	80 ± 10	-	Hz
Capacitance	$1.5 \pm 30\%$	$1.5 \pm 30\%$	-	$\eta\text{F}@1\text{KHz}$
Operation voltage (Vcc)	-	-	3-30	DC volts
Operation current	-	-	1	mA
Max. output current	-	-	20	mA
Operation temperature	-20 - +60	-20 - +60	-20 - +60	$^{\circ}\text{C}$
Storage temperature	-40 - +70	-40 - +70	-40 - +70	$^{\circ}\text{C}$

Dimensions in mm



Driving circuit & pin assignment of model FD-2513P

