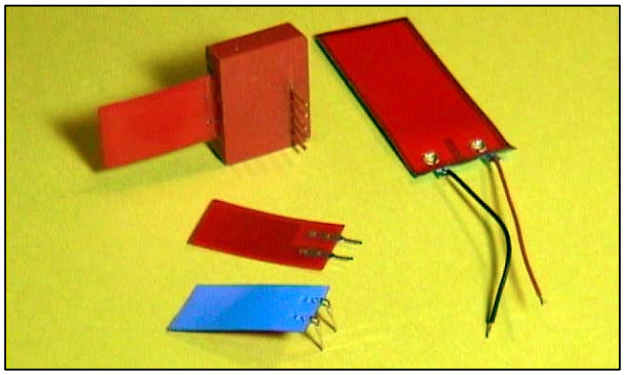
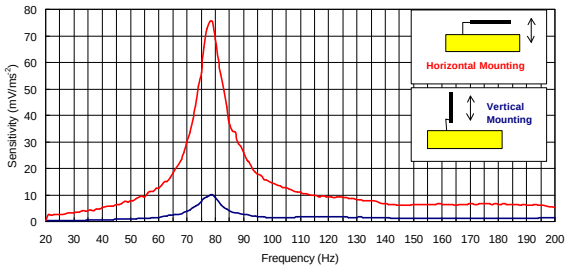
Piezoelectric Film Sensors

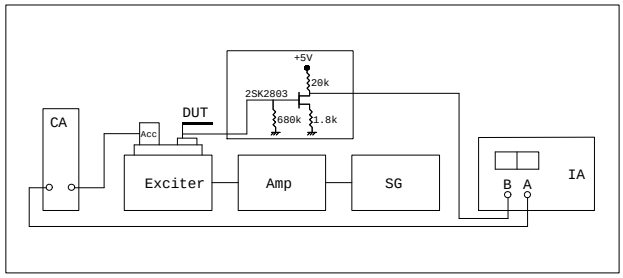
Pro-Wave now presents a series of mechno-electrical sensors and detectors produced by advanced piezoelectric polymer film technology. The polymer film of polyvinylidene fluoride (PVF2) exhibits a conspicuous piezoelectric effect and also has high compliance comparing with other piezoelectric crystals 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.



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

Features

- High Mechno-electrical coefficiency 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

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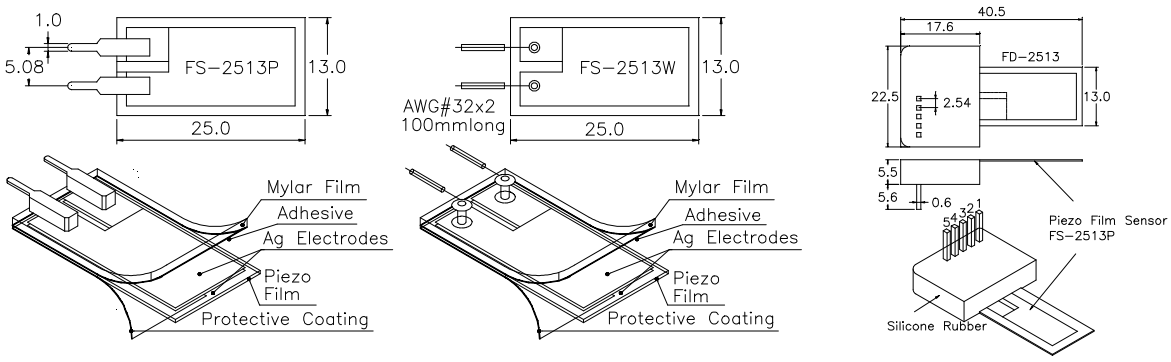
Specifications

Model Number	FS-2513P			Unit
Type	Lead Pins			-
Voltage sensitivity at fr	70			mV/ms^{-2}
Transverse sensitivity	10			mV/ms^{-2}
Resonant frequency (fr)	80 ± 10			Hz
Capacitance	1.5 ± 30%			ηF@1KHz
Operation voltage (Vcc)	-			DC volts
Operation current	-			mA
Max. output current	-			mA
Operation temperature	-20 - +60			℃
Storage temperature	-40 - +70			℃

Dimensions in mm



Driving circuit & pin assignment of model FD-2513P