

## 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.

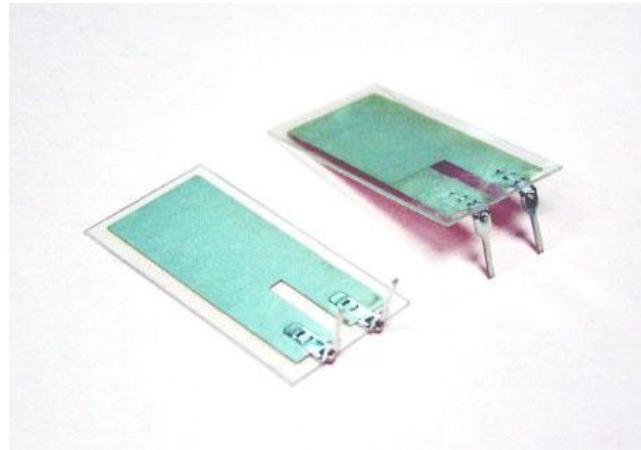
Besides the standard products shown on this catalogue, we are also developing a series of sensing devices by using this particular piezoelectric thin film material. Please contact with us for your special needs.

### Features

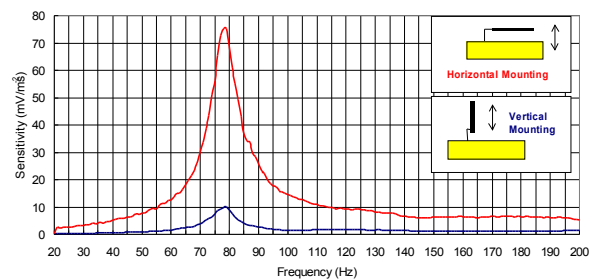
- High Mechno-electrical coefficient in planar, thickness and hydrostatic modes
- Low mechanical and acoustic impedance
- High resistance to moisture
- Pliant, flexible, tough and lightweight
- Self-generated voltage, non-contact, rustless, free of sparking

### Applications

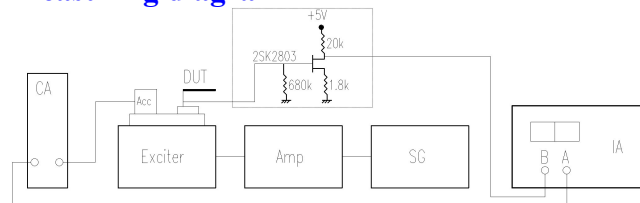
- Vibration sensors and motion detectors
- Low weight accelerometers
- Pressure or force sensors
- Keyboards, keypads and touch panels
- Coin and impact sensors
- Microphones and headset speakers
- Other mechno-electrical and electro-mechanical devices



### 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



**S. Square Enterprise Company Limited**  
**Pro-Wave Electronics Corporation**

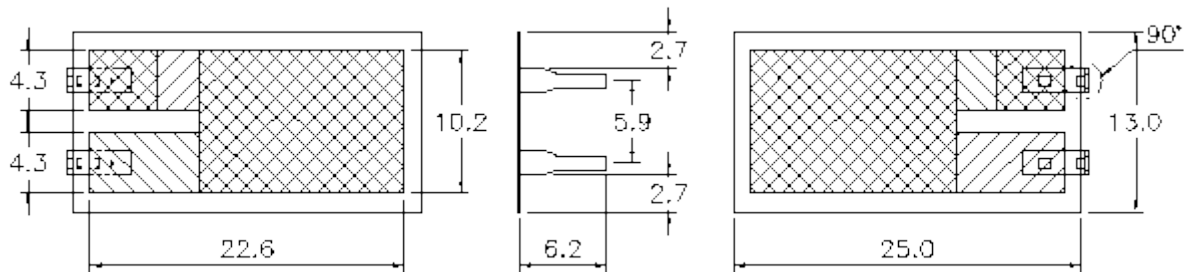
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### Specifications

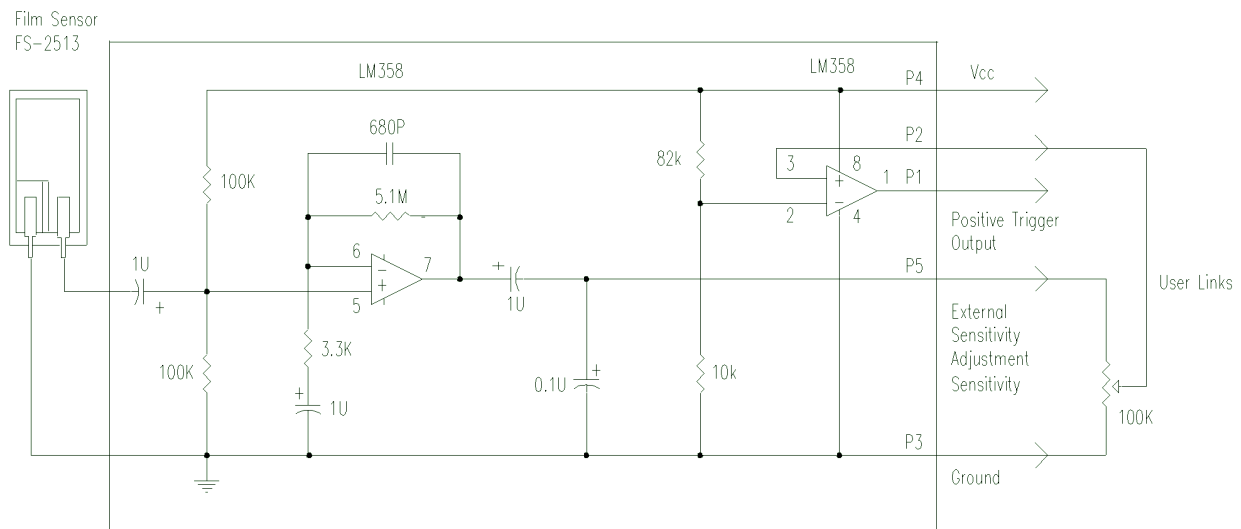
|                           |           |              |
|---------------------------|-----------|--------------|
| Model Number              | FS-2513P  | Unit         |
| Type                      | Lead Pins | -            |
| Voltage sensitivity at fr | 70        | $mV/ms^{-2}$ |
| Transverse sensitivity    | 10        | $mV/ms^{-2}$ |
| Resonant frequency (fr)   | 80±10     | Hz           |
| Capacitance               | 660±30%   | pF@1KHz      |
| Operation voltage (Vcc)   | -         | DC volts     |
| Operation current         | -         | mA           |
| Max. output current       | -         | mA           |
| Operation temperature     | -20 - +60 | °C           |
| Storage temperature       | -40 - +70 | °C           |

### Dimensions in mm



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

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