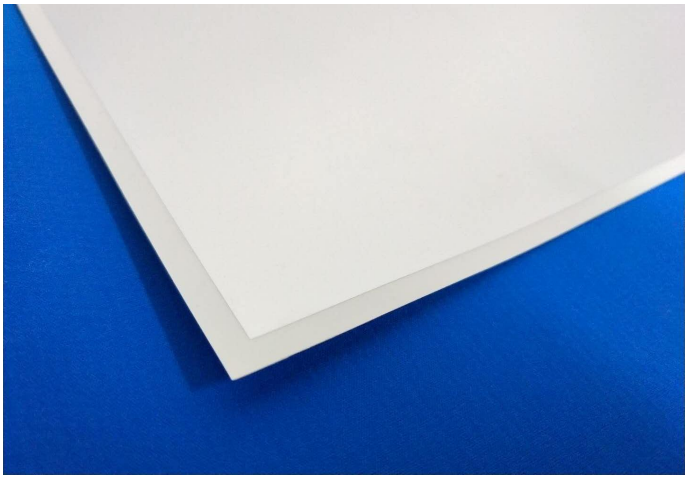
Beegor

BIGGER THAN SENSE

PIEZOR 压电薄膜

产品手册



PIEZOR 压电薄膜是一种可测量任何形式的动态压力和振动的核心敏感材料。

为了制造出世界上最好的压电薄膜，Beegor 贝骨公司投入大量的技术和资金，不断对压电薄膜的制造工艺进行改进，目前所有 PIEZOR 压电薄膜均是采用最先进的 Roll-to-Roll 工艺制造出来。

四大核心优势

一、不含氟元素

——所有 PIEZOR 压电薄膜的原材料均无氟，无污染，更加环保。

二、封装更强韧、耐弯折

——强韧的封装提高了使用的耐久性能、更防水。

二、高灵敏度

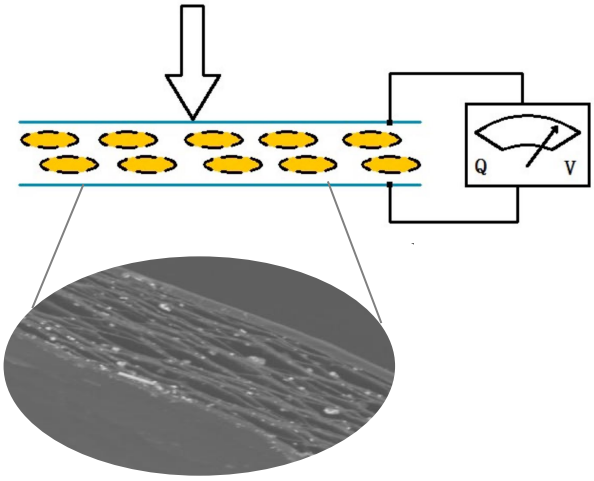
——正压电荷系数 d_{33} 强韧最高可达 100pC/N。

四、全屏蔽设计、抗干扰强

——提高了抗电磁干扰能力，对微弱信号的检测至关重要。

技术原理

PIEZOR 压电薄膜核心机理——利用有机材料“贝壳”孔洞型结构特点，形成空间电荷以呈现出压电效应。当压电薄膜受到正向压力的时，其厚度发生微小地变化，将诱导出相应表面电极层上的感应电荷的变化，从而在外电路中表现出短路电流或开路电压。



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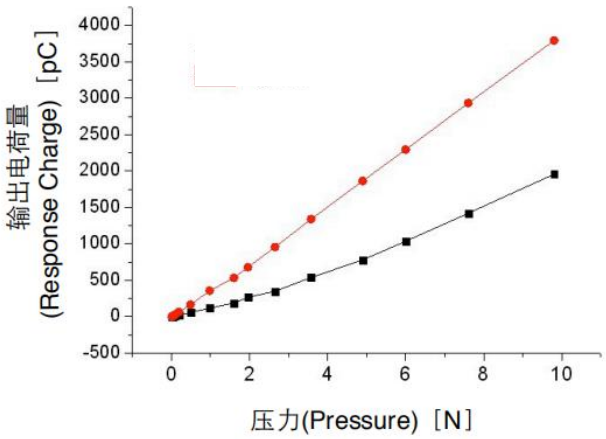
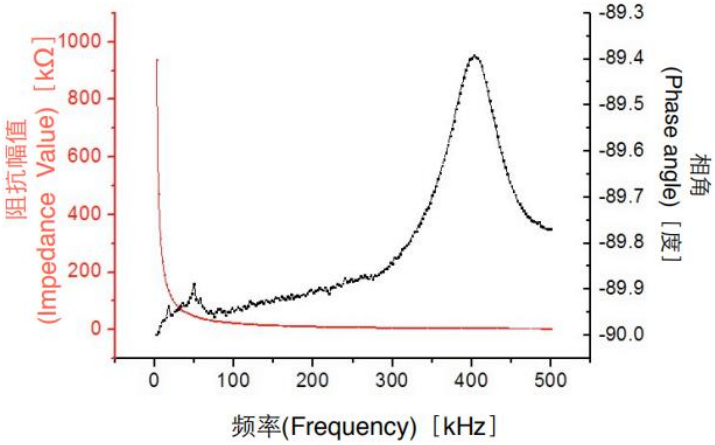
联系地址：苏州工业园区淞北路 45 号 4 栋 3 楼

技术参数

	单位 (Units)	数值 (Value)	误差(Error)
动态特征 **(Dynamic Characteristics)**			
压电电荷系数d_{33} (Piezoelectric Charge Constant)	pC/N	**40-80**	±10%
谐振频率Fr (Resonant Frequency)	kHz	300-400	±5%
电学参数 **(Electrical Characteristics)**			
电容 C(Capacitance, at 1 kHz)	pF/cm^2	17	±5%
介电常数εr (Dielectric Constant)		1.1	±0.1
机电耦合因子K (Electromechanical Coupling Factor)		0.06	±5%
阻抗Z (Impedance, at 1 kHz)	$M\Omega \cdot cm^2$	10	±5%
环境特征 **(Environmental Characteristics)**			
存储温度(Storage Temperature)	℃	-40 to **80**	
工作温度(Operating Temperature)	℃	-20 to **80**	
湿度 (Humidity)		0 to 100%	
压强范围P (Pressure Range)	kPa	0.1 to 1000	
物理特征 **(Physical Characteristics)**			
厚度D (Thickness)	μm	70	±5%
电极材料 (Electrode Materials)		无	
平均密度 (Average Density)	Kg/m^3	390	±5%
杨氏模量Y(Young's Modulus)	$10^6N/m^2$	0.85	±5%



动态力学线性度



频谱图

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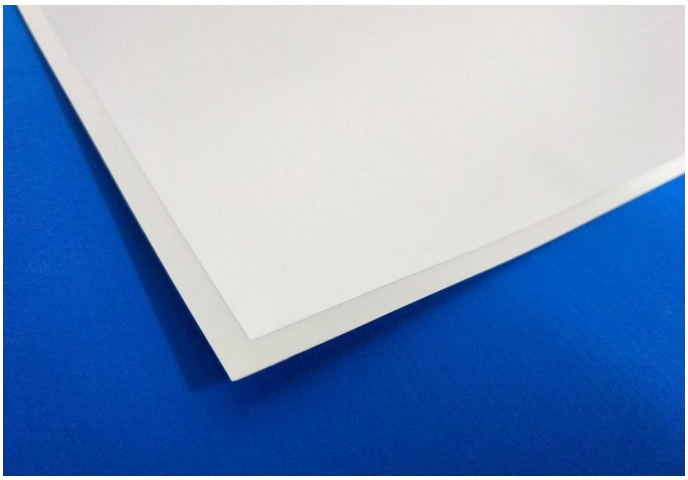
PIEZOR Piezo Film

Product Manual



PIEZOR Piezo Film is a core sensitive material for measuring dynamic pressure and vibration in any form.

In order to produce the best piezoelectric thin films in the world, Beegor has invested a lot of technology and funds to improve the manufacturing process of piezoelectric thin films. All PIEZOR piezo films are manufactured by the most advanced Roll-to-Roll process.

Advantage

Non-fluorine - raw materials are non-fluorine, more environmentally friendly

Higher sensitivity d33 - Higher forward pressure response

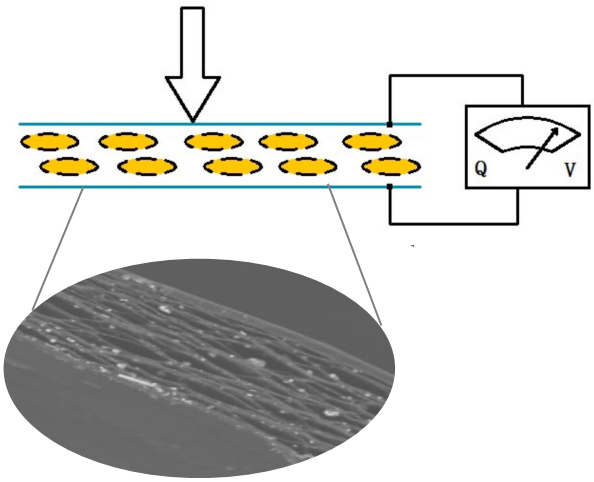
More stable supply - faster, more stable supply

More durable - tough packaging improves durability

Strong Anti-jamming-Full Shielding Layer Design to Improve Anti-EMI Ability

Technical Principle

The core mechanism of PIEZOR piezo films is the formation of space charges to exhibit piezoelectric effect by utilizing the structural characteristics of organic shell holes. When the piezoelectric film is subjected to forward pressure, its thickness changes slightly, which will induce the change of induced charge on corresponding surface electrode layer, thus showing short-circuit current or open-circuit voltage in the external circuit.



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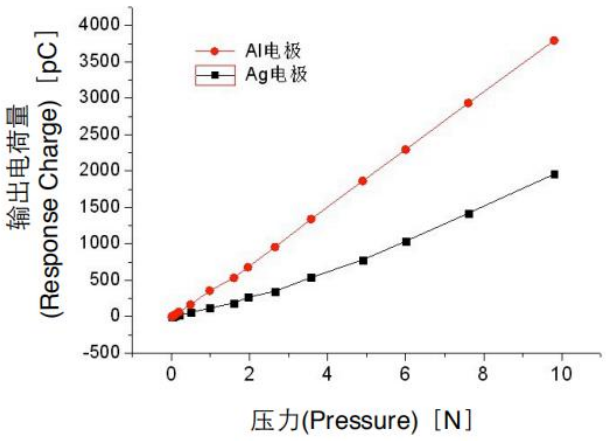
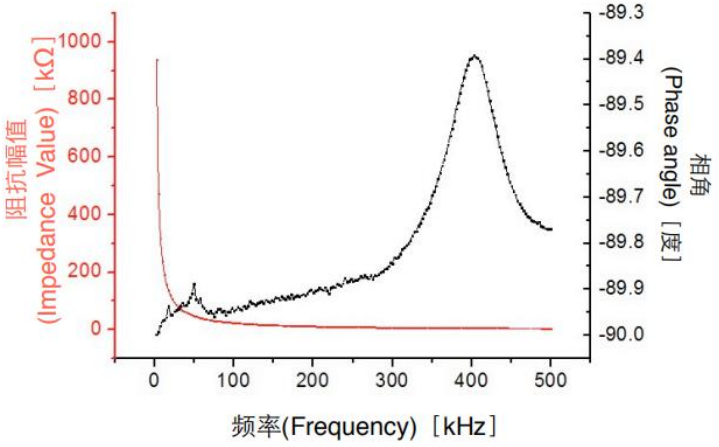


Dynamic Mechanical Linearity



Frequency Spectrum

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