

## 压电薄膜传感器

### AC 耦合

### 银浆电极

### 电极上增加保护层

### 铆钉连接引出线



DT 系列传感器是指在薄膜上丝印银浆作为电极的矩形的压电薄膜传感器，它可以做成许多种不同的尺寸和厚度，引出线为 28AWG 线，长度为 12 英寸(300mm)，由铆钉将其压接到薄膜上。DT 系列传感器每微米的应变能产生 10 毫伏的电压，其电容与工作面积成正比，与薄膜的厚度成反比。DT 系列传感器工作区域表面的一层防护层能保护银浆不被氧化。

## 典型的压电性能

符号	参数	PVDF	单位
t	厚度	9, 28, 52, 110	$\mu\text{m}$
$d_{31}$	压电应变常量	23	$(10^{-12})\text{C/N}$
$d_{33}$		-33	
$g_{31}$	压电应力常量	216	$(10^{-3})\text{Vm/N}$
$g_{33}$		-330	
$k_{31}$	电机耦合系数	12%	
$K_t$		14%	
C	电容	380(对于厚度为28 $\mu\text{m}$ 的薄膜)	$\text{pF}/\text{cm}^2@1\text{KHz}$
Y	杨氏模量	2~4	$10^9\text{N}/\text{m}^2$
$V_0$	声速	2.2	$10^3\text{m/s}$ (厚度方向上)

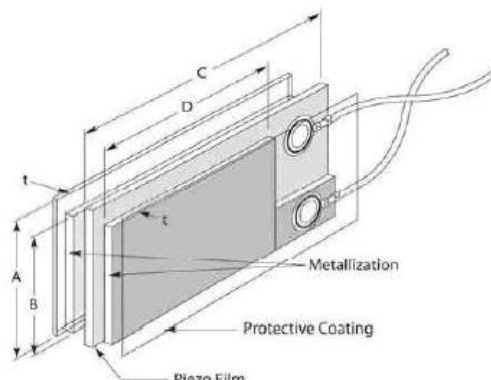
## 特性

- 最小阻抗：1M $\Omega$
- 首选阻抗：10M $\Omega$  或者更高
- 输出电压：10mV~100V，取决于施加的压力和电路的阻抗
- 存储温度：-40~70 $^{\circ}\text{C}$  (-40~160 $^{\circ}\text{F}$ )
- 工作温度：0~70 $^{\circ}\text{C}$  (32~160 $^{\circ}\text{F}$ )

## 应用

- 力的直接监测
- 事件的记录时间
- 冲击次数的计数器
- 监测冲击的相关参数

## 产品尺寸规格 英寸（毫米）



产品名称	产品号	薄膜厚度	A (薄膜)	B (电极)	C (薄膜)	D (电极)	总厚度 (μm)	电容 (nF)
DT1-028K/L w/rivets	1-1002908-0	28 μm	0.64(16)	0.484(12)	1.63(41)	1.19(30)	40	1.38
DT1-052K/L w/rivets	2-1002908-0	52 μm	0.64(16)	0.484(12)	1.63(41)	1.19(30)	64	0.740
DT2-028K/L w/rivets	1-1003744-0	28 μm	0.64(16)	0.484(12)	2.86(73)	2.42(62)	40	2.78
DT2-052K/L w/rivets	2-1003744-0	52 μm	0.64(16)	0.484(12)	2.86(73)	2.42(62)	64	1.44
DT4-028K/L w/rivets	1-1002150-0	28 μm	0.86(22)	0.740(19)	6.72(171)	6.72(171)	40	11.00
DT4-052K/L w/rivets	2-1002150-0	52 μm	0.86(22)	0.740(19)	6.72(171)	6.72(171)	64	5.70

## 订购信息

### 中国

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