

DT Series Elements with Lead Attachment

Piezoelectric film sensor
AC Coupled
Silver Ink Electrodes
Protective Coating over Electrodes
Lead Wires Attached with Rivets

The DT Series of Piezo film sensors elements are rectangular elements of Piezo film with silver ink screen printed electrodes. They are available in a variety of different sizes and thicknesses. Lead attachment is accomplished using a riveted lug going to 12" (300 mm) of 28 AWG wire.

The DT film element produces more than 10 millivolts per micro-strain. The capacitance is proportional to the area and inversely proportional to the thickness of the element.

The DT elements are supplied with a thin protective coating over the active electrode area to prevent oxidation to the top surface of the silver ink.

FEATURES

- Minimum Impedance: 1 MΩ
- Preferred Impedance: 10 MΩ and higher
- Output Voltage: 10 mV to 100V depending on Force and Circuit Impedance
- Storage Temperature: -40°C to +70°C [-40°F to 160°F]
- Operating Temperature: 0°C to +70°C[32°F to 160°F]

APPLICATIONS

- Sensing Direct Contact Force
- Recording Time of an Event
- Counting Number of Impact Events
- Measuring Impact Related Events

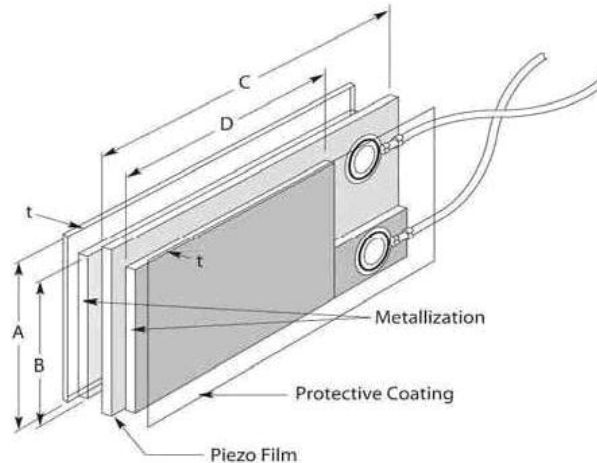


typical piezo properties

Symbol	Parameter	PVDF	Units
t	Thickness	9, 28, 52, 110	μm
d ₃₁	Piezo Strain Constant	23	(10 ⁻¹²)C/N
d ₃₃		-33	
g ₃₁	Piezo Stress constant	216	(10 ⁻³)Vm/N
g ₃₃		-330	
k ₃₁	Electromechanical Coupling Factor	12%	
k _t		14%	
C	Capacitance	380 for 28μm	pF/cm ² . @ 1KHz
Y	Young's Modulus	2-4	10 ⁹ N/m ²
V ₀	Speed of Sound	2.2	10 ³ m/s in thickness direction

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DIMENSION in INCHES (mm)



Model Number	Part Number	Film Thickness	A Film	B Electrode	C Film	D Electrode	Total Thickness (μm)	Cap (nF)
DT1-028K/L w/rivets	1-1002908-0	28 μm	.64 (16)	.484 (12)	1.63 (41)	1.19 (30)	40	1.38
DT1-052K/L w/rivets	2-1002908-0	52 μm	.64 (16)	.484 (12)	1.63 (41)	1.19 (30)	64	.740
DT2-028K/L w/rivets	1-1003744-0	28 μm	.64 (16)	.484 (12)	2.86 (73)	2.42 (62)	40	2.78
DT2-052K/L w/rivets	2-1003744-0	52 μm	.64 (16)	.484 (12)	2.86 (73)	2.42 (62)	64	1.44
DT4-028K/L w/rivets	1-1002150-0	28 μm	.86 (22)	.740 (19)	6.72 (171)	6.72 (171)	40	11.00
DT4-052K/L w/rivets	2-1002150-0	52 μm	.86 (22)	.740 (19)	6.72 (171)	6.72 (171)	64	5.70

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ordering information



Component Distributors, Inc.
1-800-777-7334

www.cdiweb.com
sales@cdiweb.com