

## Piezo Kinetics 552 Lead Zirconate Titanate Piezoelectric

Category : Ceramic , Oxide , Titanium Oxide , Zirconium Oxide , Piezoelectric

### Material Notes:

Denoted as Navy Type VI, this ceramic is used as sensors that require extremely high dielectric constant and large displacements. PKI 556 material has been slightly modified to give a higher g33 value, higher k33 , and lower loss factor. This formulation aids the design engineer by giving more flexibility within the type VI class of materials. Elastic Compliance s11E (x 10<sup>-12</sup> m<sup>2</sup>/n): 15.9. Elastic Compliance s33E (x 10<sup>-12</sup> m<sup>2</sup>/n): 20.2. Property data at 25°C. Information supplied by Piezo Kinetics, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Piezo-Kinetics-552-Lead-Zirconate-Titanate-Piezoelectric.php](http://www.lookpolymers.com/polymer_Piezo-Kinetics-552-Lead-Zirconate-Titanate-Piezoelectric.php)

Physical Properties	Metric	English	Comments
Density	7.60 g/cc	0.275 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	60.0 GPa	8700 ksi	
Poissons Ratio	0.31	0.31	
Shear Modulus	23.0 GPa	3340 ksi	calculated

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	120 °C	248 °F	Maximum Operating Temperature

Electrical Properties	Metric	English	Comments
Curie Temperature	200 °C	392 °F	
Dielectric Constant	3400	3400	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.022	0.022	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Piezoelectric Longitudinal Coupling Factor, k33	0.71	0.71	
Piezoelectric Transverse Voltage Coefficient, d31, 10 <sup>-12</sup> m/V	-270	-270	
Piezoelectric Shear Charge Coefficient, d15, 10 <sup>-12</sup> m/V	720	720	
Piezoelectric Longitudinal Voltage Coefficient, g33, 10 <sup>-3</sup> V-m/N	18.3	18.3	
Piezoelectric Planar Coupling Factor,			

Electrical Properties	Metric	English	Comments
Piezoelectric Mechanical Q	75	75	
Piezoelectric Shear Coupling Factor, k15	0.67	0.67	
Piezoelectric Longitudinal Charge Coefficient, d33, 10 <sup>-12</sup> m/V	550	550	
Piezoelectric Transverse Voltage Coefficient, g31, 10 <sup>-3</sup> V-m/N	-9.00	-9.00	
Piezoelectric Shear Voltage Coefficient, g15, 10 <sup>-3</sup> V-m/N	23.9	23.9	
Piezoelectric Transverse Coupling Factor, k31	0.36	0.36	

## Contact Songhan Plastic Technology Co.,Ltd.

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