

# EBL #24

- Low Hysteresis
- Time Stable and Consistent Performance
- Very Low Dielectric Constant
- Very Low Dielectric Loss
- High Coupling Coefficient
- Low Signal to Noise

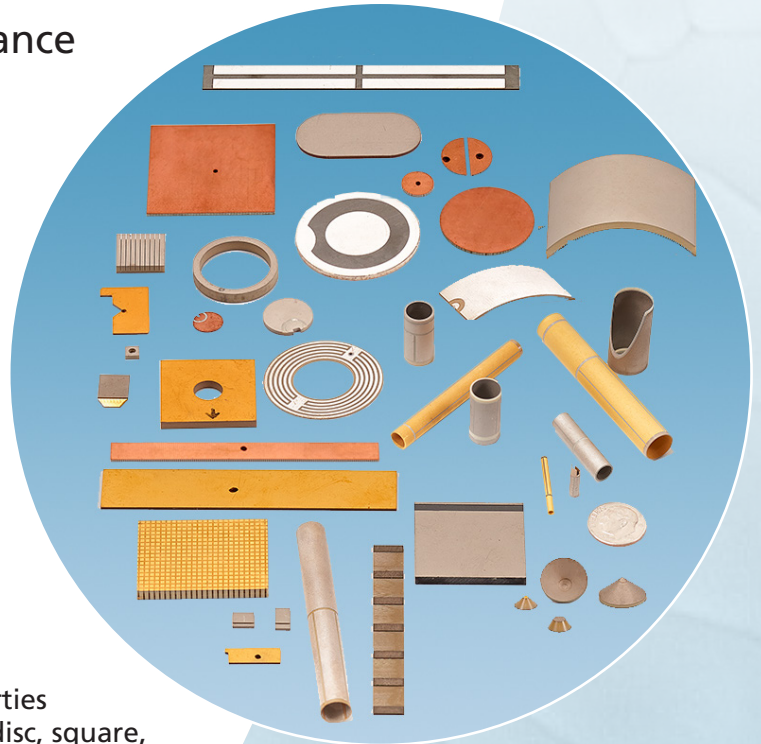
EBL #24 is a low dielectric constant, hard PZT material exhibiting very low dielectric loss and high coupling coefficient. The low dielectric constant of this material simplifies the drive electronics for transducers. It is a more sensitive piezoceramic material for use in single element transducers. EBL #24's high voltage constant and low aging make it an excellent choice for accelerometer applications.

EBL Products' continues to focus on manufacturing components with the highest reproductibility of properties and parameters in the industry. EBL #24 is available in disc, square, rectangle, tube and spherical focus geometries.

Our materials have a variation of  $\pm 5\%$  for all parameters. This reduces the requirements for impedance matching, frequency tuning and resulting in fewer rejects and rework.

**EBL #24 is an excellent choice for applications such as:**

- Accelerometers
- Medical Single Element (A and B scan) Transducers
- NDT Single Element (Contact, Angle Beam and Immersion) Transducers
- Acoustic Pick Ups (Hydrophones, Microphones)
- Flow Sensors



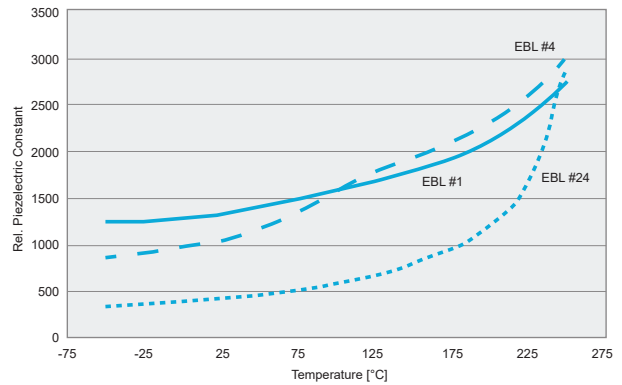
# EBL #24

## TYPICAL CONFIGURATIONS

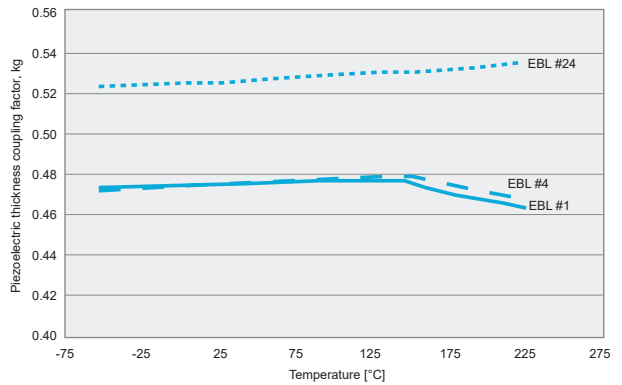
MATERIAL PROPERTIES	SYMBOL	EBL #24
Density g/cm <sup>3</sup>	$\rho$	7.7
Dielectric Constant @ 1kHz	$K_{33}^T$	425
Mechanical Q	$Q_m$	600
Dissipation @ 1kHz	$\tan \delta$	.025
Curie Temperature	°C	330
d Constant m/Vx10 <sup>-12</sup>	$d_{33}$	149
	$d_{31}$	-58
	$d_{15}$	246
g Constant Vm/N x 10 <sup>-3</sup>	$g_{33}$	54
	$g_{31}$	-15.4
	$g_{15}$	37.7
Coupling Coefficients	$k_p$	0.494
	$k_{33}$	0.659
	$k_{31}$	0.292
	$k_{15}$	0.537
Frequency constants Hz-m	Thickness	2145
	Planar	2410
	Transverse	1670
	Shear	1025

Note: Specifications are subject to change without notice.  
 Extreme dimensions and geometries can lead to exaggeration in tolerances in all materials.

### MATERIAL PROPERTIES



Temperature dependence of the free dielectric constant of EBL #24 in comparison with the other hard PZT materials.



Temperature dependence of the piezoelectric thickness coupling factor or EBL #24 in comparison with the other hard PZT materials.