

PIEZOCOMPOSITES

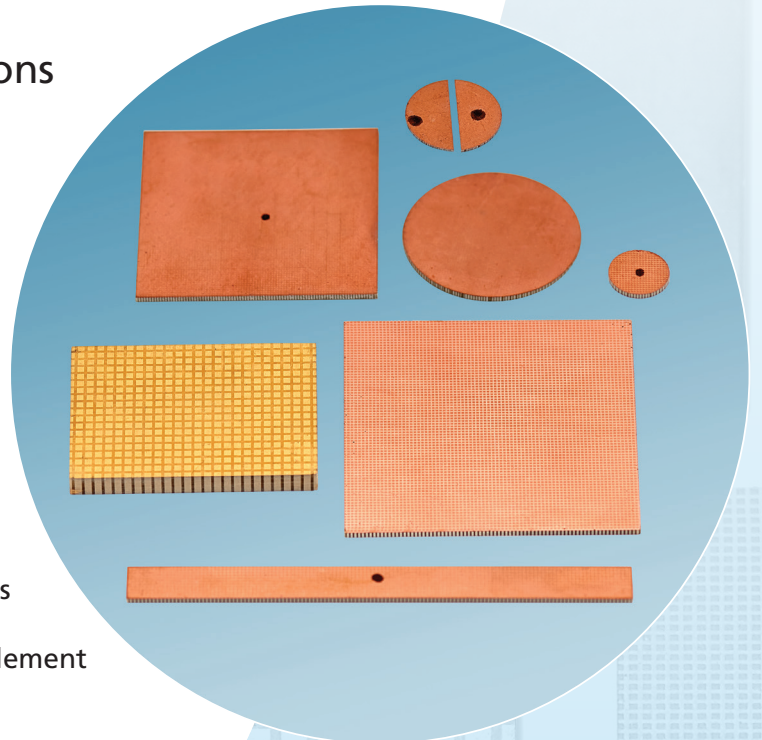
For Enhanced Broadband Performance

- Ideal for NDT and Medical Applications
- Lower Acoustic Impedance
- Higher Coupling
- Increased Sensitivity

EBL manufactures a broad range of frequencies and sizes of 1-3 and 2-2 piezocomposite elements for industrial NDT (non-destructive testing), flow and level sensors, sonar imaging and location, air gap measurement, medical ultrasound imaging and Doppler blood flow applications and many other transducer applications. Our precision dice and fill process results in high quality piezocomposite structures that are capable for use in linear and phased array transducer designs as well as single and dual or multi-element transducer applications.

EBL #2 and EBL #3 PZT are the primary materials used to manufacture our piezocomposite elements, but we can also produce elements from our other EBL PZT catalog materials. Frequencies of operation range from 150 kHz to 10 MHz for Transmit, Receive and T/R combinations based on the volume fraction needed for the performance required.

Disc, ring, square and rectangular shapes are available along with other, unique, custom shapes. EBL provides electroless copper and sputtered ni-chrome/gold electrodes in fully electroded or custom electrode patterning based on your specific design.



PIEZOCOMPOSITE CONFIGURATIONS

Piezocomposite Available in 1-3 and 2-2 Configurations in Frequencies from 250 kHz to 10 MHz for Receive, Transmit or Combination Transmit/Receive Operation.

Electrode choices include electroless copper or sputtered nichrome/gold.

Piezocomposite can also be configured with custom electrode patterns for array or apodized shading.

TYPICAL CONFIGURATIONS

FREQUENCY	VOLUME FRACTION	SHAPE	MAXIMUM SIZE
150 kHz	25% and 50%	Square or Disc	4" Length/1.1" OD
500 kHz	25% and 50%	Square or Disc	4" Length/1.1" OD
1 MHz	25%, 50% and 75%	Square or Disc	4" Length/1.1" OD
2.0/2.5 MHz	25%, 50% and 75%	Square or Disc	4" Length/1.1" OD
4.0/5.0 MHz	25%, 50% and 75%	Square or Disc	4" Length/1.1" OD
7.5 MHz	25%, 50% and 75%	Square or Disc	2" Length/.75" OD
10.0 MHz	25%, 50% and 75%	Square or Disc	2" Length/.75" OD

Standard Piezocomposite is manufactured using EBL #2 and EBL #3.

EBL #4, EBL #9, EBL #23 and EBL #25 are additional material options.

EBL welcomes all piezocomposite inquiries and we will quote to customer supplied drawings and requirements.

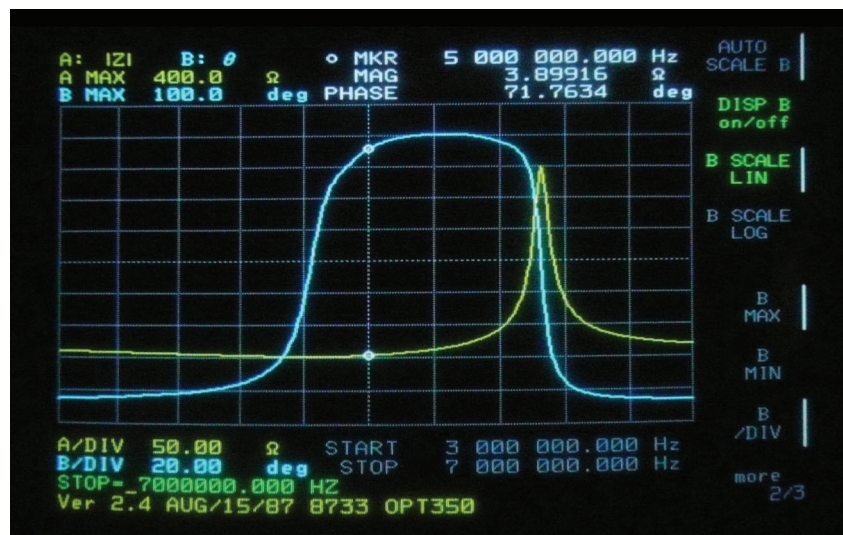
Custom sizes and frequencies are available upon request.

Standard tolerances:

Disc diameter: +0/-0.003"

Washer diameter: +/-0.002"

Length and width: +/-0.005"



Frequency response curve; 5.0 MHz, 0.500" Diameter