

Advanced Material Development



MSI's advanced material development team is focused on developing new materials and capabilities to support emerging transducers designs. All this while focusing on:

- Short lead times
- Lower development cost
- Advanced performance



Additive Manufacturing

3D Printed Piezoceramics

MSI's 3D printed piezoceramic parts offer a number of unique advantages over traditional ceramic manufacturing, all while having the same, or better, properties over conventional ceramic.

- Able to print unique structures that cannot be made using conventional manufacturing processes
- Printing allows rapid development
- Prototyping can be done at a lower cost

Design Cycle Advantage

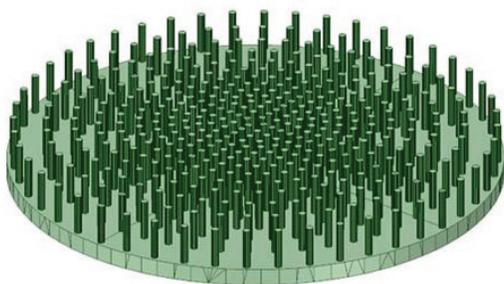
The combination of reduced manufacturing times, and low prototyping cost allows designers to make quick prototypes to test designs without having to wait weeks for parts to be made using traditional manufacturing.

Customized to Meet Your Needs

MSI specializes in custom designed transducers. MSI can design a transducer to fit your specific application requirements.

Call us today at 978.486.0404

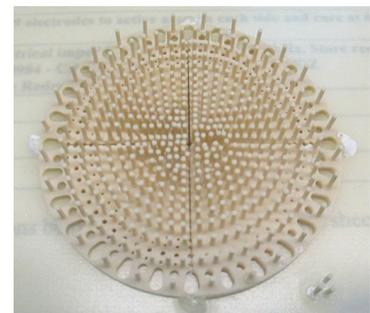
Email: info@msitransducers.com



DAYS TO WEEKS



LOW COST



Matching/Backing Layers and Polymers

MSI has developed, and continues to develop, materials that improves the overall acoustic design. These materials allow transducers to operate with:

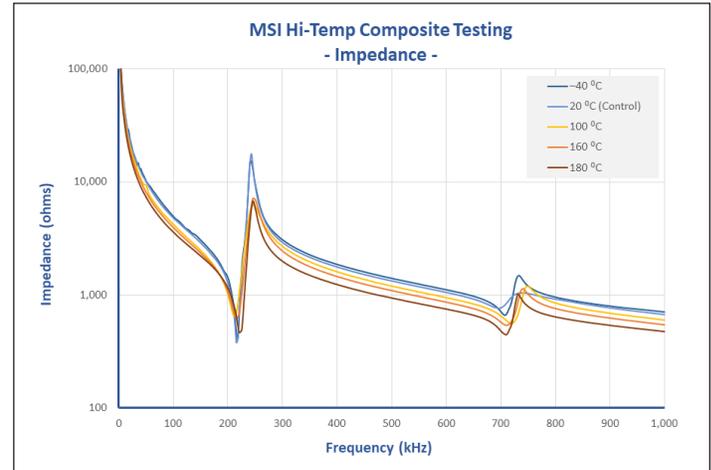
- Greater bandwidth
- Increased TVR/RVS
- 100% duty cycle
- Deep operation
- High temperatures



High Temperature Pressure Applications

MSI's high-temperature, high-pressure piezocomposite is one example of this:

- Designed to operate in extreme environments
- Proven to operate at temperatures up to 180°C
- Highly customizable in size and frequency to meet challenging space requirements
- Has high receive sensitivity and bandwidth



MSI Piezocomposite Capabilities

- Broad Bandwidth
- High Source Level
- High Receive Sensitivity
- Great Element to Element Uniformity
- Conformability for Curved Arrays
- Complex Shading Patterns
- Multibeam Arrays

MSI Design Capabilities

- 2D and 3D Acoustic modeling tools
- Wide Breadth of Technical Expertise
- Product Definition and Development
- Rapid Prototyping Capabilities
- Ongoing R&D

MSI Manufacturing Capabilities

- 20,000 Sq Ft. (2000 Sq M) Facility
- Ceramic Powder to in-water testing
- Maximum Quality Control
- Reduced lead-times
- Internal Testing Capabilities

About MSI

MSI of Littleton, MA, designs and manufactures custom sonar transducers and arrays. MSI's piezocomposite technology offers extremely broad bandwidth, high receive sensitivity, high source levels, conformability for curved arrays, and reduced side lobes. The technology has enabled several of the most advanced sonar systems available today.

MSI has a staff of experienced design engineers ready to help you with your transducer design. Our process of engaging our team early on in the design process allows customers to maximize the capabilities while also minimizing the total cost.

MSI's manufacturing capabilities are designed to assure you receive a high quality product. Our fully integrated manufacturing and testing capabilities allows us to turn raw product into finished assemblies.

Whether you need a custom designed product or just looking for a source to build your existing design, MSI is the right choice.

543 Great Road • Littleton, MA 01460
Tel: 978.486.0404
Email: info@msitransducers.com

www.msitransducers.com

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