

Man Pack and Handheld Radio Application Breakdown



John Donovan – FAE

June 2021

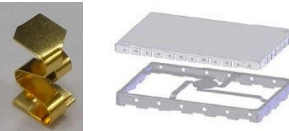
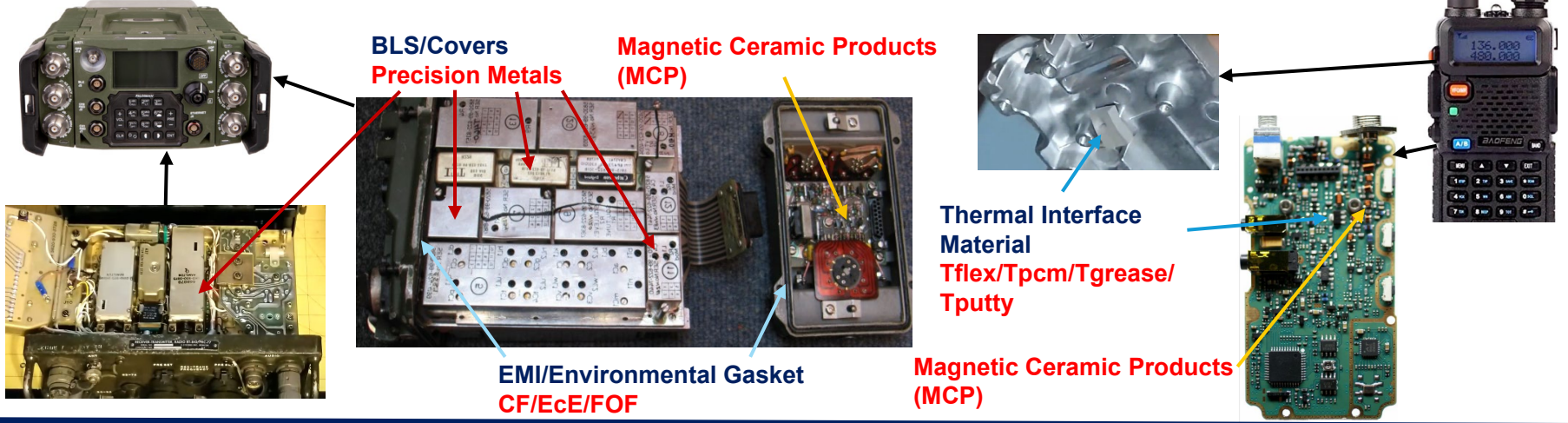
LAIRD PERFORMANCE
MATERIALS DELIVERS DESIGN
ENGINEERING ANSWERS
EARLY – THAT EFFECTIVELY
KEEP EMI AND HEAT AT BAY.



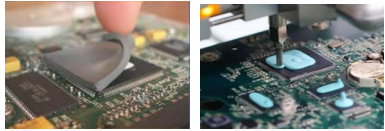
PERFORMANCE
MATERIALS

Performance
Materials
That Protect
Electronics

Man Pack & Handheld Radio Teardown



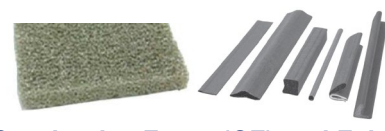
Precision Metals



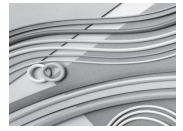
Thermal Interface Materials



Magnetic Ceramic Product (MCP)



Conductive Foam (CF) and Fabric Over Foam (FOF) Seals/Gasketing



EcE and NCE Elastomer Seals/Gasketing

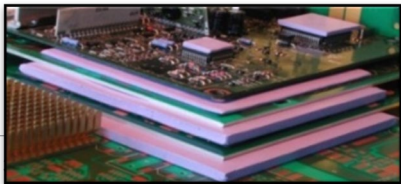
Performance Materials Products



Thermal Interface Materials

- As an industry leader in high-performance thermal interface materials, with new products released this year, Laird offers the following categories:
 - **Gap filler pads** now up to 34 W/mK thermal conductivity.
 - **Thermal putties** with dispensing options.
 - **Phase change materials** now up to 7.5 W/mK.
 - **Thermal greases** ranging from 1-4 W/mK.
 - **Thermally-conductive insulators.**
- Additionally, Laird has the capabilities to die cut materials and offer dispensing options.

<https://www.laird.com/products/gap-fillers-thermal-interface-materials>



Laird Co



Precision Metals

- Laird Performance Materials offers many different standard and custom lightweight precision metals such as:
 - **Board Level Shields** with lightweight and ultra low board level shields.
 - **Fingerstock and Spring Contacts.**
 - **Custom Metals** for structural support and/or EMI shielding.
- Added value capabilities with state-of-the-art software simulations to ensure product reliability.

<https://www.laird.com/products/enclosure-solutions/board-level-shielding-bls>

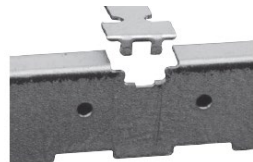
<https://www.laird.com/capabilities/precision-metals>

Recover Shield



Rigid Corner Patent

Removable Pick Bridge



Laird

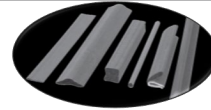
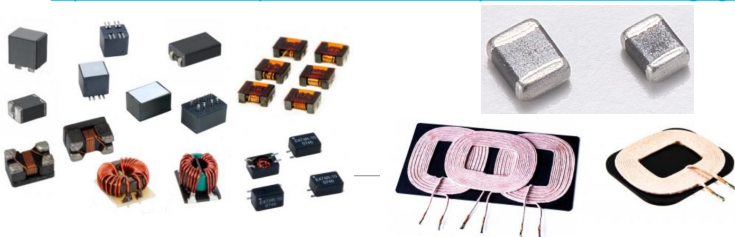
Performance Materials Products



Magnetic Ceramic Product

- There is a wide assortment of products within the Laird MCP line, our line includes:
 - Power inductors.
 - Common mode chokes.
 - Wireless charging coils & flexible ferrite sheets.
 - Ferrite chip beads.
 - Ferrite Cable Cores.
 - Baluns & Toroids.

<https://www.laird.com/products/inductive-components-emc-components-and-ferrite-cores>
<https://www.laird.com/products/inductive-components-inductors-power-and-signal-lines>
<https://www.laird.com/products/inductive-components-wireless-charging-coils>



EMI Gasketing

- Laird offers EMI gasketing solutions for almost any application with high shielding effectiveness, our product line offers:
 - Conductive Foams (CF).
 - Fabric Over Foams (FOF).
 - Conductive Fabrics.
 - Electrically Conductive Elastomers (ECE).
 - Form In Place (FIP).
- There are many options for Laird gaskets from ultra soft materials (silicone or silicone free) to wire mesh materials.
 - All of which can come in custom profiles, die cut parts, or standard solutions.

<https://www.laird.com/sites/default/files/emi-cat-ece-080615.pdf>



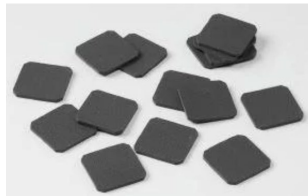
Performance Materials Products



RF & Microwave Absorbers

- Laird offers many different absorber solutions spanning across a wide frequency range from cavity resonance to free space applications:
 - Injection Molded, Cast Liquids, and Thermoplastics.
 - Low Loss Dielectrics.
 - Elastomers and Films.
 - Absorbing Foams.
 - Gap Fillers.
 - Custom Magnetic Absorbers.

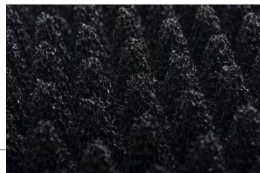
<https://www.laird.com/products/microwave-absorbers>



Eccosorb



Softzorb



Absorbing Foams



Radomes

- Laird offers radome materials to enhance antenna signal performance and provide better impact resistance:
 - Radome5 LS.
 - Radome5 TP.
 - Radome5 Unity.
 - Radome Auto.
 - Rezorb.
- From injection molded material to custom made parts to fit an application, Laird has the capabilities to provide a solution for almost any antenna application.

<https://www.laird.com/products/multi-function-solutions-mfs-ise-integrated-solutions-engineered/structur-ise>



Radome5 Unity



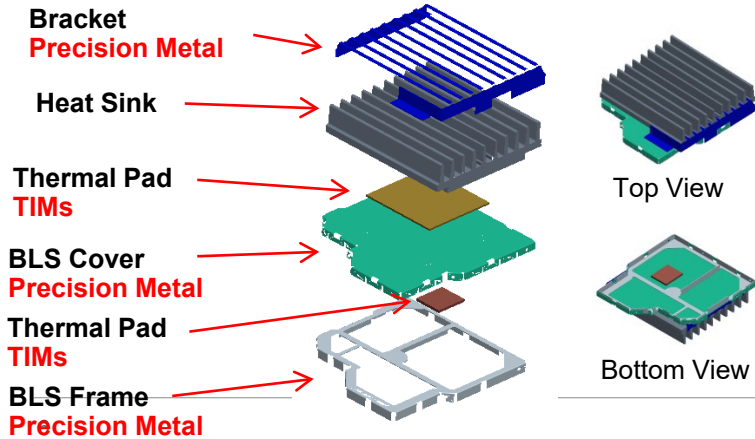
Radome5 LS

Performance Materials Products

Multi-Functional Solution (MFS)

Laird offers MFS, showcased below, that combine multiple different product lines together to create a single package.

- **BLS + Insulation Layer** (Dielectric Coating).
- **BLS + Absorber.**
- **BLS + Graphite Heat Spreader.**
- **BLS + Thermal Interface Material.**
- **BLS + Black Paint** (aesthetic purposes).
- **BLS + Several Laird Components Combined.**



Other Laird Product Offerings

Laird offers many different product spanning all electronic industries. Other product offerings that have not been discussed are listed below:

- **RF & Microwave Absorbers** with newly released products. Example imbedded below.
- **Radome Materials** provide structural support without interfering with antenna signal.
- **EMI Tapes.**
- **Thermal Heat spreaders.**
- **Coolzorb** combines characteristics of our thermal and Absorber product lines into one.



New Release:
NS1000 Datasheet



Radome5 TP
Material



Graphite Over Foam
(GOF)



Radome5 TP



NPI: NS1000 Series

LairdTM

The logo features the word "Laird" in a bold, sans-serif font. A trademark symbol (TM) is positioned to the upper right of the letter "d". Below the text is a thick, dark gray swoosh that starts under the "L", curves under the "i", "r", and "d", and ends with a pointed tail on the right side.