

EMI FIP Shielding and Dispensed Absorber

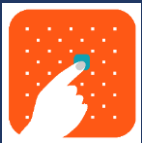
100MHz to 100 GHz : 100dB+ shielding

APPLICATIONS:

- RF Shielding
- Repeatable RF Results
- Effective 100MHz to 100GHz
- Pack RF circuits tightly
- Get out of jail on a problem PCB
- Microwave Modules
- Antennas
- 5G & phased arrays
- Fix coupling issues
- Large Scale Production

FEATURES:

- Shield PCB sections from one another
- Very narrow walls (0.8mm)
- Customizable absorber thickness
- Temperature Stable
- Highly accurate absorber and gasket placement (50um)
- Wideband operation
- Gasket provides cavity isolation
- Absorber suppresses cavity resonance



Easy to Use



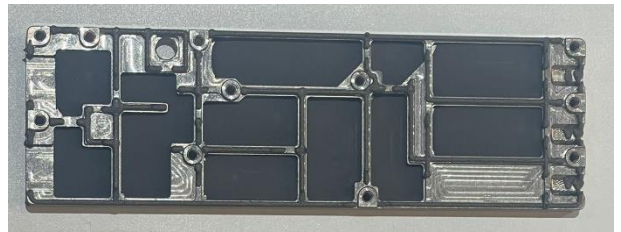
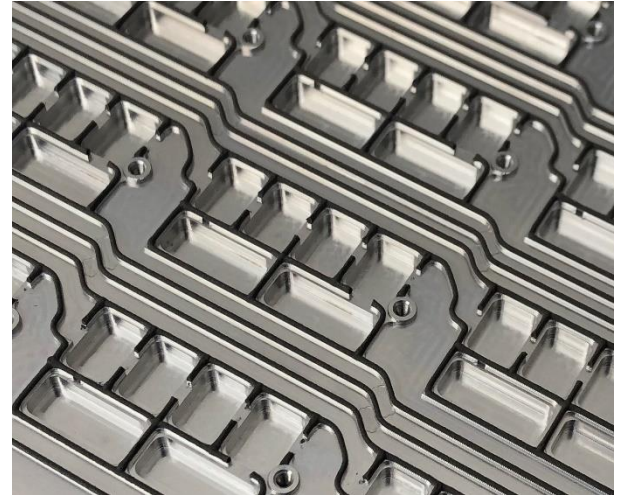
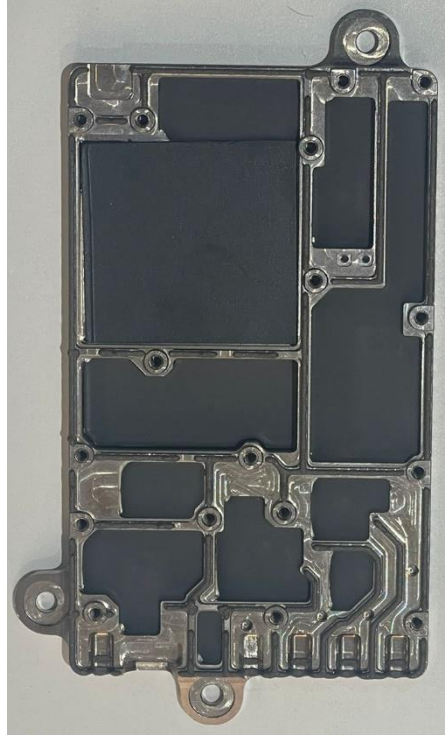
Portable



Value for Money



Rugged



We offer custom RF and Microwave enclosures beautifully machined and plated with our high loss tangent nickel. Inside surfaces are roughened for maximum isolation whereas outsides are wonderfully smooth and elegant. We can apply to the cases our high-performance isolation gasket as well as compartment microwave absorber. Both are best in class materials that result in the very best repeatable RF performance. Our processes are suitable for low cost – high volume (1000s) as well as one off prototypes.

Custom Cases

We can machine, plate, and supply your PCB enclosures using the very best RF performance tricks. We use ultra-high loss nickel and can roughen inside surfaces to reduce internal coupling. Our cases are then equipped with either isolation gasket, RF absorber or both. We have supplied solutions to some of the most demanding customers.

Isolation Gasket

A silicone elastomer containing silver, nickel-plated graphite particles. It is designed for Form-in-Place (CNC application) onto a wide range of components where it cures to form an elastomeric gasket section

This allows intricate, small section gaskets to be reliably and efficiently applied to any quantity of conventional PCBs. Conventional shielding hardly ever has repeatable results, our isolation achieves 80 to 120dB isolation. Casings are reusable and quick to assemble.

Absorber

Traditional absorber is waterjet cut and glued into cavities. This is an expensive and difficult process for large scale production. Additionally, the adhesion layer reduces effective performance. Our process uses the very best absorber designed for ultra-wide band and chemically bonds to the roughened metal surface. This results in a larger cavity resonance suppression and all internal surfaces can be covered no matter how small, with no gaps this results in a massively increased suppression of EMI and resonance. Our process is suitable for mass production due to our automated dispensing system. The absorber is non-conductive and we can control thickness to 0.1mm allowing us to get the material close to the circuits and components.

EMI FIP Shielding and Dispensed Absorber

100MHz to 100 GHz : 100dB+ shielding

MECHANICAL Properties:

- Compact and lightweight
- Portable and rugged
- Long Lifetime
- Low Outgassing – suitable for Space Flight.
- Temperature range -55C to +150C

TECHNICAL SUPPORT

EECL offers support to get you up and running quickly. Please don't hesitate to get in touch at info@euroecl.com

TURNKEY SOLUTIONS

We have many customers who require a complete turnkey solutions. We can implement new solutions using our technology that are customized to the requirements.

If you require anything just a little bit different to what is here, please get in touch – we may be able to make or modify it for you.

Our gasket material EECL_NG10 has excellent high temperature resistance and long-term ageing characteristics. The silver nickel-graphite filler used in this material is very effective at making a low impedance connection at low contact pressures. Gaskets can be applied on flanges as narrow as 0.50 mm, affording more space for board components or allowing smaller overall packaging. We will work with you to manufacture and apply the gasket to CNC machined metal. We can offer a variety of surface finishes from Surtec 650 to lossy Nickel plate. Our prices for CNC, Plating, Gasket Application and magnetic absorber (RAM) are highly competitive.

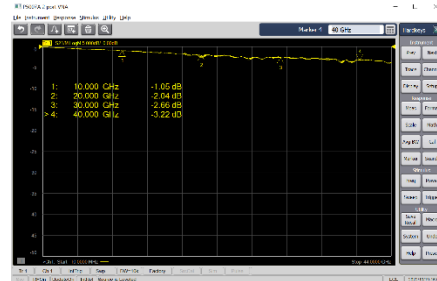


Absorber (100% Fill)

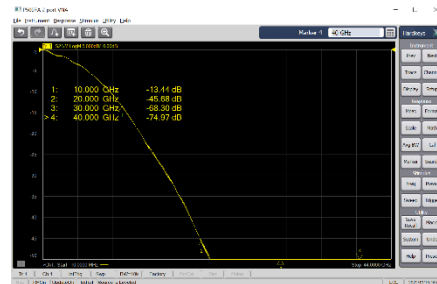
SERVICES AVAILABLE

- Technical Support
- Installation and Setup
- Maintenance
- Application Support
- Hardware Support
- New Features on Request
- Calibration
- Warranty

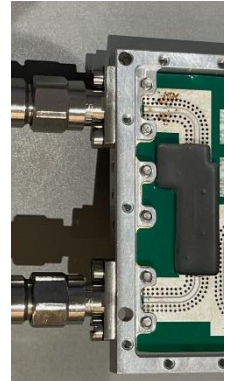
Absorber Measured Performance



Without Absorber (DC-40GHz)



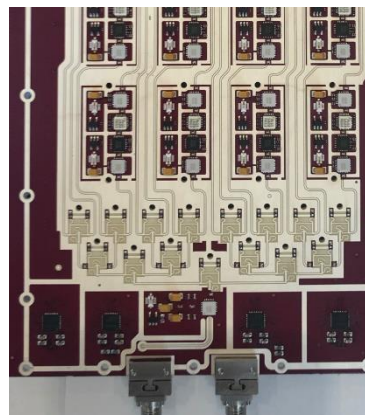
With Absorber (DC-40GHz)



Test Fixture

Case Study

A particular problem was solved using the EECL gasket and absorber – a beam former was designed which made had 32 high gain amplifiers on board a card, each giving 40dB channel gain. The card exhibited leakage between channels to the point it was unusable. Cavity resonance also meant attenuators changed with temperature and were un-flat at low settings. The gasket and RAM technology was incorporated into the housing and the channels became independent, flat and repeatable. Furthermore, the automated nature and precision of the manufacturing meant that hundreds of cases could be manufactured quickly. The resulting card and its gasket can be seen.



Beam Former Case Study