

Broadband Foam Absorber



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RFRET is a lightweight open celled broadband reticulated foam absorber. The reticulated urethane backbone allows for a defined cell structure. When treated with a lossy coating, the material is extremely lightweight and provides broadband reflectivity reduction. It is used for antenna reflection reduction where broadband reduction coupled with lightweight is required. Also useful for testing chamber applications and fabricating broadband barriers. Laird can customize the material for outdoor use as well. The material can be produced in a variety of sizes and can be bonded or mechanically attached into place.

FEATURES AND BENEFITS

- Extremely lightweight and flexible
- Broadband –20 dB performance
- Excellent for radome applications and antenna enclosures
- Can be enclosed into textile covers for environmental protection and outdoor use
- Can be filled with closed cell foams to make radar absorbing structural foam
- A variety of thicknesses are available from .375 to 2 inches
- Useful in anechoic chambers to cover pedestals and equipment

SPECIFICATIONS

TYPICAL PROPERTIES	RFRET
Size	24" x 24" standard
Thickness	.375" to 2" nominal
Density	3 lb/ft ³
Temperature Range	250 degrees F
Electrical Performance	See performance curves below
Color	Black
Environmental	Withstands intermittent exposure to water without degradation
Bonding	Can be bonded with contact adhesive or PSA

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

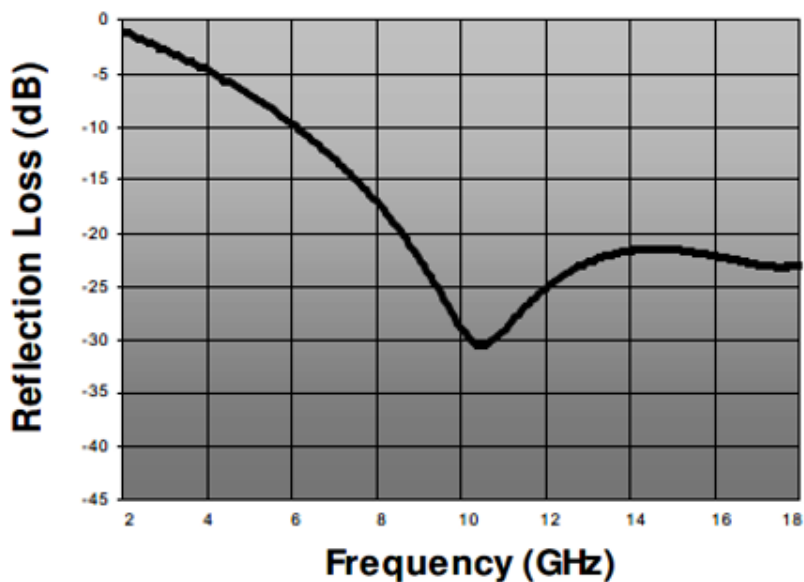
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Note: The physical properties and electrical performance properties shown in the below graphs are typical for the material but are not intended for use in specifications or for the acceptance inspection criteria due to variations in testing methods, conditions, and configurations.



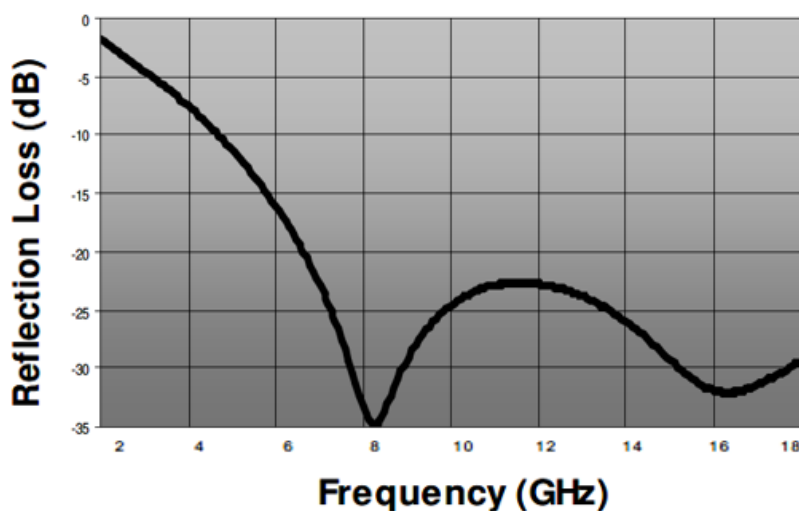
Broadband Foam Absorber

Typical Electrical Performance



Laird Part Number 4060 (thickness = .375" nominal)

Typical Electrical Performance

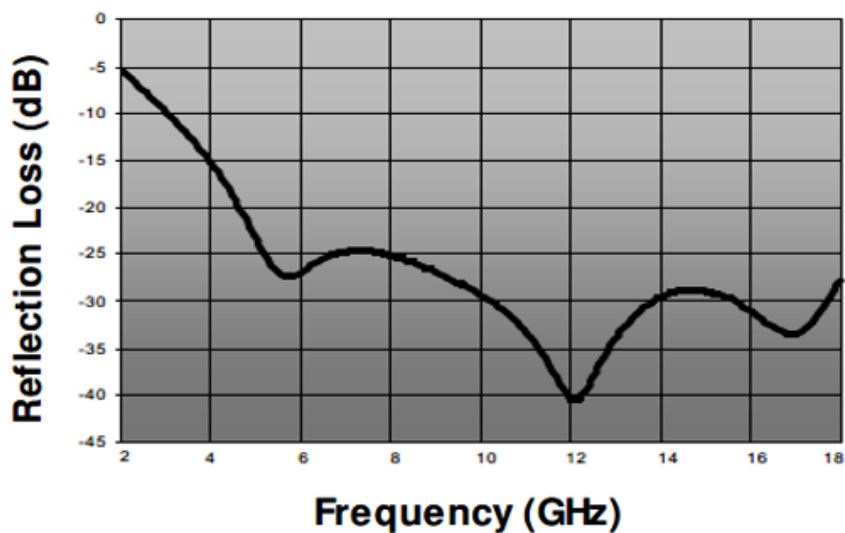


Laird Part Number 4001 (Thickness = .5" nominal)

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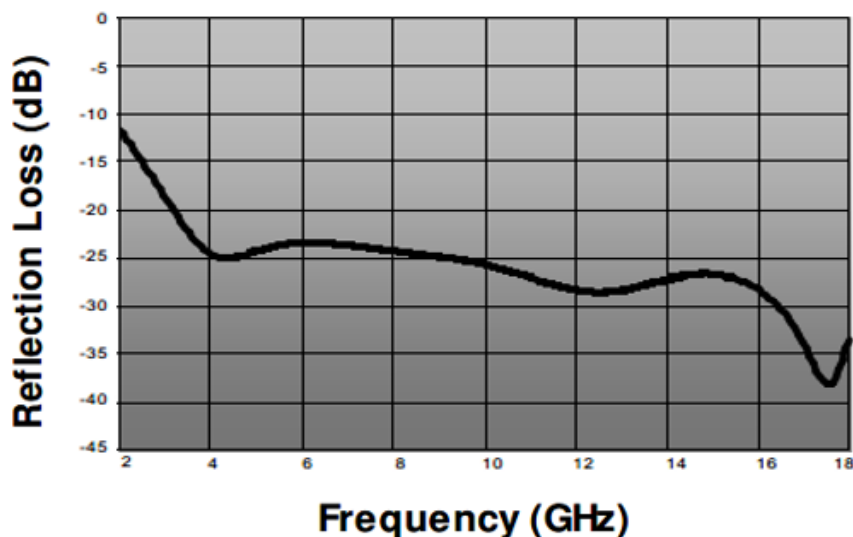
Broadband Foam Absorber

Typical Electrical Performance



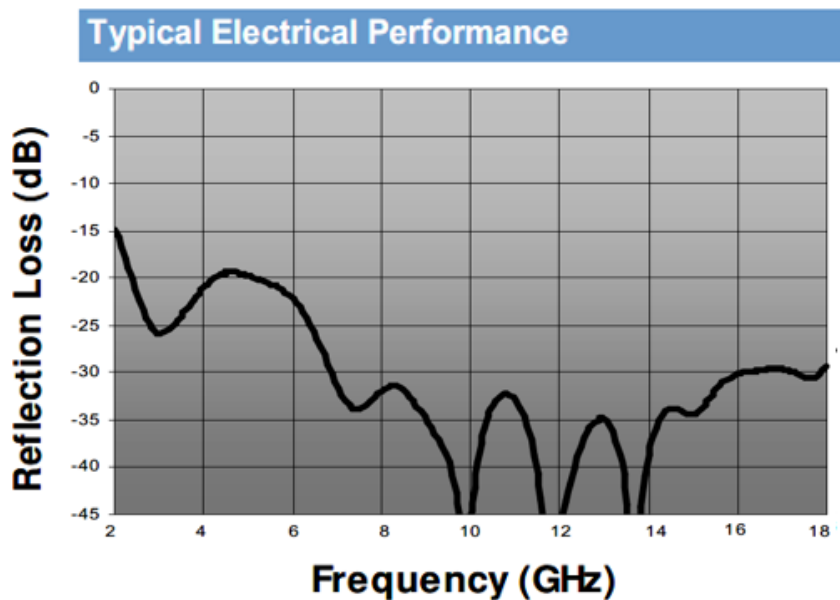
Laird Part Number 4002 (Thickness = .75" nominal)

Typical Electrical Performance



Laird Part Number 4015 (Thickness = 1.125" nominal)

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Laird Part Number 4020 (Thickness = 2" nominal)

Environmental Properties

- RFRET is an open celled foam and will allow water penetration. However, with its large pore size it will dry out and performance will not be degraded. It can also be overcoated with a urethane coating to allow use in moist environments.
- RFRIGID further protects the foam by infilling it with a closed cell rigid urethane foam. These structural panels can be machined into components or used to construct barriers. The material has been qualified for shipboard use as a structural barrier.
- Camo-Ram is a unique material combining textiles with broadband foam RFRET. It can be constructed into custom covers, camouflage, and other unique wearables and military solutions.

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