

MAJRabsorber - Broadband Microwave Absorber Material

Product Summary

MAJRabsorber is a broadband microwave absorber material performing in a broadband range from 1 GHz to 18 GHz and is non-conductive, electromagnetically reflective, and corrosion resistant. Available with or without an adhesive.

Product Application

The MAJRabsorber is a thin, flexible, and highly resistive broadband microwave absorber material. This magnetically loaded material reduces EMI emissions and crosstalk, reflections, and damps electronic cavity resonances.

The MAJRabsorber is a unique product that incorporates an internally centered electromagnetically reflective surface therefore can be used but not limited to the following:

- between circuit boards for effective microwave absorption on both sides without concern of shorting electronic components. Since it is flexible and tear resistant, MAJRabsorber can be used with flex or rigid circuit boards and cut to any configuration.
- As a stand-alone free space broadband electromagnetic microwave absorber
- As a free space "Faraday cage" type shield to wrap around an emission source to shield and reduce "Q".
- Will enable a non-conductive molded plastic enclosure to be used as a semi shielded enclosure reducing weight and cost.
- Has a working temperature range of -60 deg. F to 375 deg. F.
- Available in sheets or flash-cut into a specific shape with or without adhesive, on one or both sides. Figure #1

Testing with identical horn antennas was used to determine attenuation (dB) over a broadband frequency (GHz) range in a far field and free space condition, Figure #2.

The test set-up without the MAJRabsorber was used to establish a 0dB reference across the full frequency range of 1 GHz to 18 GHz. A sheet of MAJRabsorber was placed between antennas to establish the attenuation (dB) vs. frequency (GHz) plot in Figure #3.



Figure #1 MAJRabsorber configurations



Figure #2 Radiated testing of MAJRabsorber

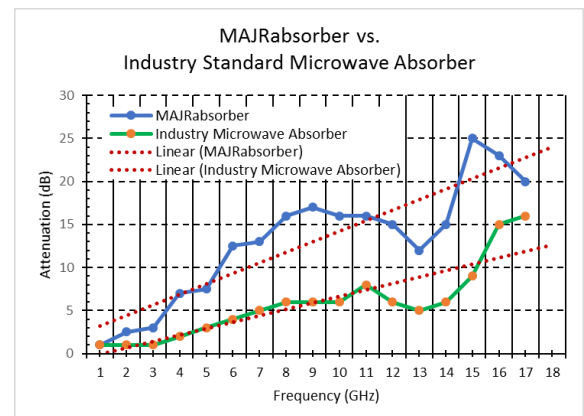


Figure #3 Attenuation (dB) vs. frequency (GHz)

Technical Specifications

Operating Temperature: -60 deg. F to 375 deg. F

Hardness: Shore A 60-80

Standard thickness: 0.060 in. (1.52mm)

Adhesive Thickness: 0.005 in. (0.05mm)

Color: Dark Gray

Availability

Standard Sheet Sizes:

12 in. x 12 in. (305 x 305 mm)

Format: Flash cut to specific size or
in rolled sheet stock

Part Number Example:

MAJR -0601212-1G/18G-26-01

Legend:

MAJR (MAJR Microwave Absorber)

0601212 (T x L x W)

1G/18G (1 GHz to 18 GHz)

26 (silicone material)

01 (adhesive one side, 02 for both sides, or 00 for no adhesive)

** if a specific shape is needed, the last four numbers (1212) become letters for quoting; when ordering the letters become a specific customer assigned number.*

Application: A method for application of this silicone elastomer type microwave absorber material is to utilize pressure sensitive (PSA) to hold in place on a variety of surfaces.

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