

3M™ EMI Absorber AB7000 Series

Data Sheet

February 2009

Description 3M™ EMI Absorber AB7000 Series consists of a flexible polymer resin loaded with soft metal flakes. An acrylic pressure-sensitive adhesive allows for easy application.

- Flexible, high permeability magnetic sheets
- One-sided acrylic pressure-sensitive adhesive
- Easily die cut into complex shapes

Agency Approvals & Self Certifications

RoHS 2002/95/EC



RoHS Compliant 2002/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2002/618/EC, unless the substance is in an application that is exempt under RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

Applications

AB7000 absorber is typically used for applications requiring EMI control and signal integrity improvement in the 50MHz to 10 GHz range. It is a broadband EMI absorber designed to work in near-field applications inside and around electronic devices and assemblies. Common applications include reduction of noise and crosstalk inside mobile electronics, reduction of crosstalk and EMI on ribbon cables and flex cables, reduction of radiated IC noise (applying absorber directly to the noisy IC), damping of radiation and oscillations inside shields and cavities, and increasing signal integrity on high speed data lines through crosstalk reduction.

Attenuation and Power Loss

Many factors determine the true attenuation of an electromagnetic interference absorbing material, including shape and thickness, intimacy of substrate contact, smoothness of application surface, strength and frequency of the EMI signal, etc. Since AB7000 absorber is a near field absorber, attenuation characteristics tend to be very application specific. Power loss characteristics are measured using a 5cm x 5cm square of AB7000 placed on a 50Ω microstrip line. The attenuation and noise dampening attained generally increases as the thickness of the material increases.

Typical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (~23°C) unless otherwise stated.

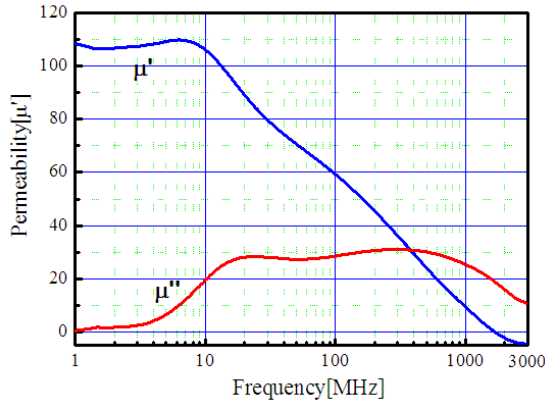
Physical	Property (Test Method)		Typical Value			
	Adhesive	Acrylic non-conductive pressure-sensitive adhesive (PSA)				
Type of Backing	Polymer resin with magnetic metal flake filler					
Product Number	AB7010	AB7020	AB7030	AB7050		
Backing Thickness	0.10mm	0.20mm	0.30mm	0.50mm		
Adhesive Thickness	0.03mm	0.05mm	0.05mm	0.05mm		
Standard packaging	210mm x 297mm					
Temperature Range	-25° to 85°C					
Surface resistivity (ASTM-257)	1x10 ⁶ Ω(min)					
Initial Permeability¹	110					
Typical Performance²	Refer to S ₁₁ attenuation and power loss graphs					

Notes: 1. This value measured at 1MHz 3M TM K RD-EMC-AB-02.

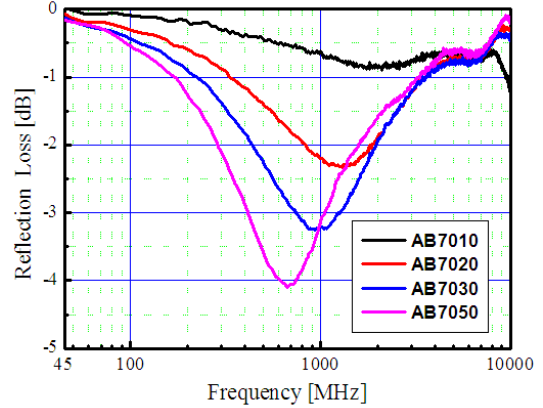
2. Attenuation is measured by 7mm coaxial verification kit under short fixed condition. Power loss is measured by a 50Ω microstrip line method. 3M TM K-RD-EMC-AB-01

3M™ EMI Absorber AB7000 Series

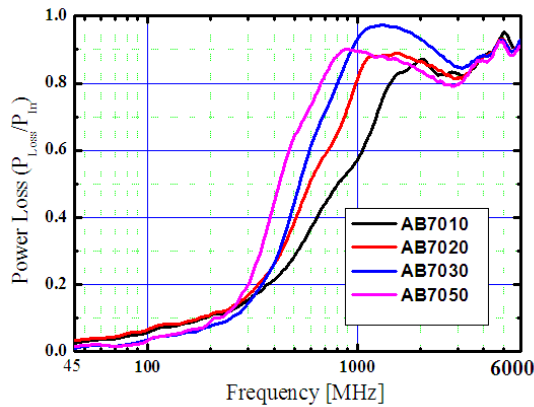
Permeability



Reflection Loss



Power Loss



Shelf Life & Storage

This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).

Availability

Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1-800-676-8381.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product, which are not contained in 3M's current publications, or any contrary statements contained on your purchase order, shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability

This product will be free from defects in material and manufacture at the time of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.

3M is a trademark of 3M Company.

www.DataSheet4U.com

Electrical Markets Division

6801 River Place Blvd.
Austin, TX 78726-9000
800 676 8381
FAX 800 828 9329
www.3M.com/emc

Please recycle
© 3M 2009 All rights reserved
78-8127-8758-4 A