

3MTM EMI Absorber with Shielding

AB6000 Series, AB6000S Series, and AB6000G Series

Data Sheet

October 2008

Description	3M TM EMI Absorber with Shielding AB6000 Series, AB6000S Series and AB6000G Series consists of an insulation layer, shielding layer, absorbing layer and non-conductive pressure-sensitive adhesive.
Specifications	<ul style="list-style-type: none">• Insulation Layer• EMI Shielding Layer• EMI Absorption Layer• Pressure-sensitive Adhesive (PSA) Layer• Supplied on a removable release liner for easy handling and die-cutting
Applications	<p>The absorber is typically used for applications requiring both electromagnetic shielding performance and absorption function. It is useful for electrical devices for broadband radio frequency range (mobile phone, PDA, PC, BS/CS tuner, LAN, medical and military devices).</p> <p>Common applications include attenuation of conduction and radiation noise suppression and filtering (FPCB and chips on circuit, high speed microprocessor) and resonant peak of enclosed cavities (EMI/ESD/SAR), and electric/ electronic/ RF components (IC/LSL, PCB, FPC, cable, oscillators, RF modules), mechanical bodies (metal can, fame, body, enclosure).</p>
Shielding Effectiveness	Many factors determine the true attenuation of electromagnetic shielding and absorbing material, including type and thickness of polymer, adhesive type, intimacy of substrate contact, smoothness of application surface, strength and frequency of the EMI signal, etc. However, using standard tests and fixtures, it is possible to determine a value for the attenuation.



3M™ EMI Absorber with Shielding AB6000 Series, AB 6000S Series, and AB6000G Series

Typical Properties

Technical information provided consists of typical product data and should not be used for specification purposes. Unless otherwise noted, all tests are performed at room temperature.

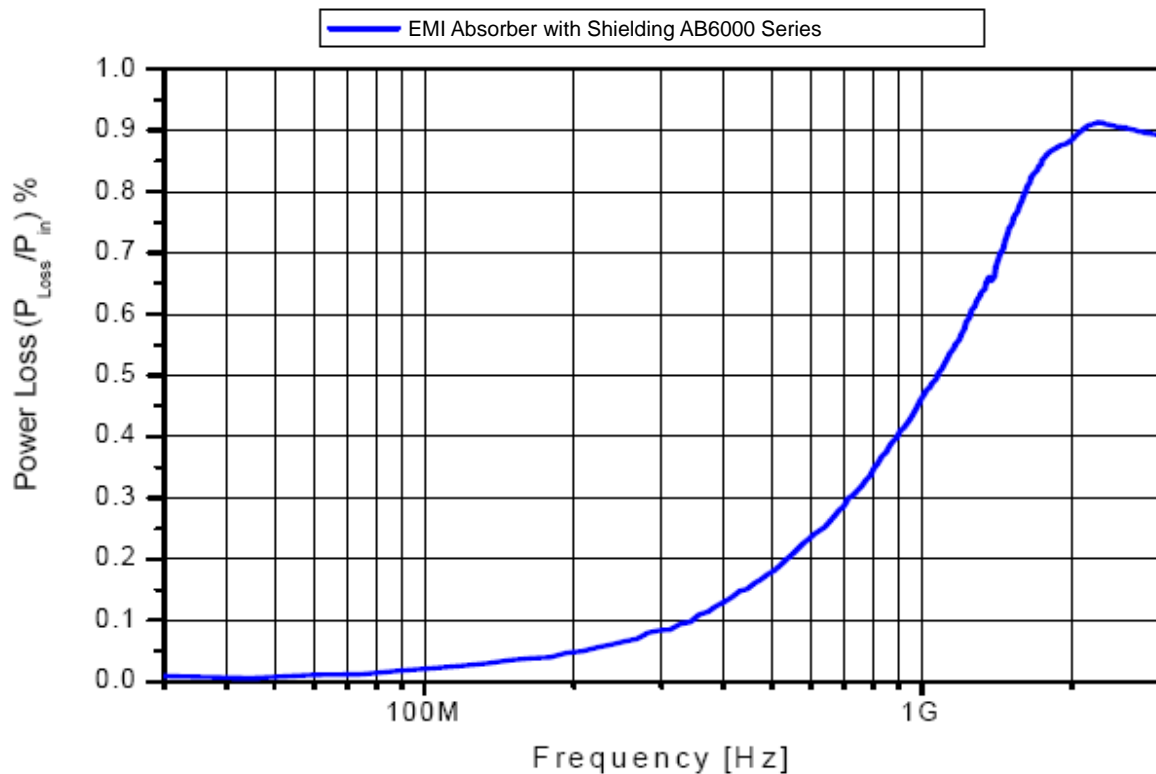
Physical

Property (Test Method)	Typical Value US units (metric)	
Color	AB6000G – Grey AB6000S - Silver	
Adhesive	Acrylic non-conductive pressure-sensitive	
Type of Backing	Metal shielding layer and Absorption layer	
Thickness	AB6000G	AB6000S
Total Thickness	4.13 mil (0.105 mm)	4.13 mil (0.105 mm)
Absorber Thickness	1.97 mil (0.050 mm)	1.97 mil (0.050 mm)
Frequency Range	10MHz – 18 GHz	
Operating Temperature	-22 - 221°F (-30 – 105°C)	
Shielding Effectiveness ¹	Min 40db (30MHz – 1GHz)	
Adhesion Strength ²	8.8 oz/in (250gf/25 mm)	

¹ Test method ASTM D-4935.

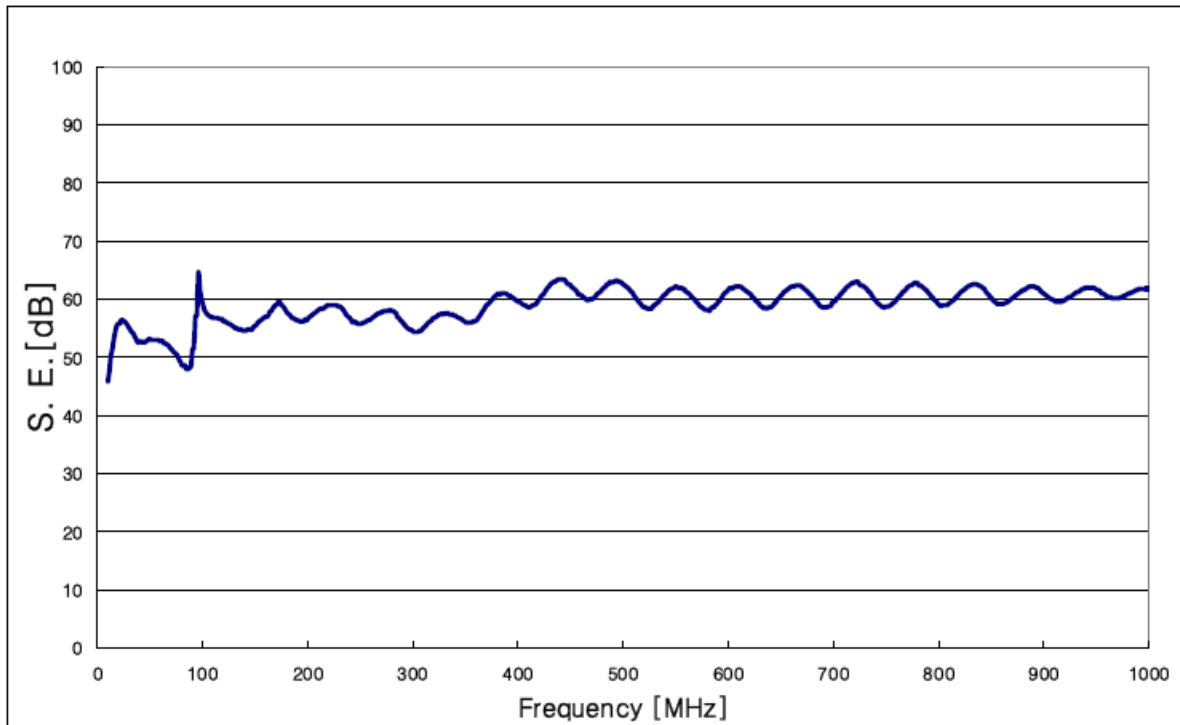
² MIL-STD-202 Method 307 maintained at 5 psi (3,4 N/cm²) measured over in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and foil backing.

Power Loss Property on Microstrip Line (50Ω)



3M™ EMI Absorber with Shielding AB6000 Series, AB 6000S Series, and AB6000G Series

Shielding Effectiveness (SE)



Structure

Shield Layer		Absorbing Layer
Insulation Layer	Shield Layer	Insulation Layer
Absorbing Layer	Absorbing Layer	Shielding Layer
Adhesive Layer	Adhesive Layer	Conductive Adhesive Layer
Release Liner	Release Liner	Release Liner
AB6000 Series	AB6000S Series	AB6000G Series

3M™ EMI Absorber with Shielding AB6000 Series, AB 6000S Series, and AB6000G Series

Shelf Life & Storage

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

Availability

Please contact your local distributor, available from 3M.com/electrical [Where to Buy] or call 1-800-245-3573.

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 MERCHANT 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.



Electrical Markets Division
6801 River Place Blvd.
Austin, TX 78726-9000
800 676 8381
FAX 800 828 9329
www.3M.com/electrical/oem

Please recycle.
© 3M 2008 All rights reserved.
78-8127-7018-4_A