AB-5000

EMI Absorber

Data Sheet

Product Description

3M™ AB-5000 Series EMI Absorber consists of flexible soft metal flakes filler in polymer resin with acrylic pressure-sensitive adhesive.

- Polymer resin and metal flakes filler
- Acrylic pressure-sensitive adhesive
- Supplied on a removable liner for easy handling and die-cutting

The AB-5000 Series EMI Absorber is available in standard A4 size and 210mm (width) X 15 meters (length) in roll.

Applications

The AB-5000 Series EMI Absorber is typically used for applications requiring electromagnetic-absorbing performance. It suppresses radiated noise from electrical devices for broadband radio frequency range.

Common uses include mobile phone (SAR reduction), computer, digital still camera, RF block, military equipments for radar avoidance and stealth performance.

Attenuation and Power Loss

Many factors determine the true attenuation of an electromagnetic absorbing material, including shape and thickness, 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 signal attenuation.

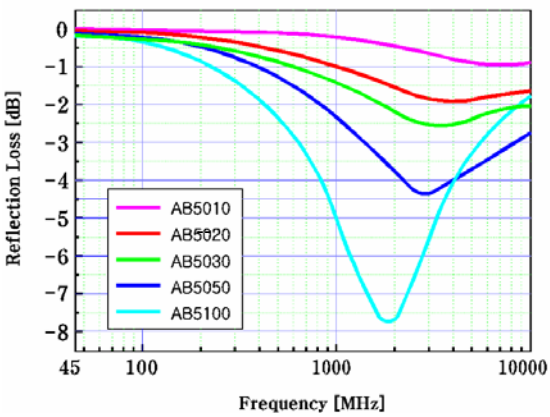
The typical attenuation range of the 3M AB-5000 Series EMI Absorber depends on thickness.

3M AB-5000 EMI Absorber ─ Typical Properties

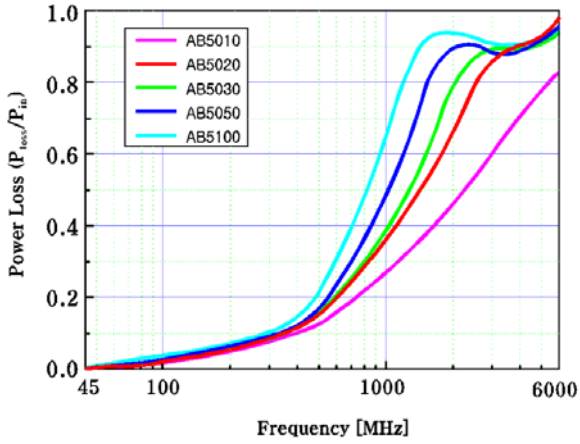
Properties	**Typical Value**				
Type of Backing	Polymer resin with metal flake filler				
Type of Adhesive	Acrylic non-conductive pressure-sensitive adhesive (PSA)				
Product Number	AB-5010	AB-5020	AB-5030	AB-5050	AB-5100
Thickness [1]	0.10mm	0.20mm	0.30mm	0.50mm	1.00mm
Standard packaging	210mm x 297mm				
Temperature range	-25 ~ 85℃				
Surface resistivity [2]	$1x10^6 \Omega$ (min)				
Thermal conductivity	0.7 W/mK				
Tensile strength [3]	6.0MPa(min)				
Attenuation (S11 Reflection Loss) and Power Loss[4]	Refer to attenuation and power loss graphs				

1. This value does not contain a double-side adhesive tape thickness. Typical adhesive tape thickness is 50 ㎛ (AB-5010 contains 30 ㎛ adhesive)
2. Test method : ASTM D257
3. Test method : JIS K 6251
4. Attenuation measured by 7mm coaxial verification kit under short fixed condition. Power loss measured by 50Ω microstrip line.

Attenuation



Power Loss



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