

# BandSorb® FB

## Broadband Flexible Foam Sheet Absorber

### Description:

BandSorb® FB is a lightweight high loss carbon impregnated dielectric foam absorber that provides a very low cost solution for many applications over the thinner, more expensive rubber absorbers. BandSorb® FB can be used for applications requiring absorption across a wide range of frequencies, such as antenna cross-talk, side lobe reduction, and cavity resonance suppression.

### Availability:

BandSorb® FB series materials can be supplied in sheets as well as custom configurations. The standard sheet size is 610 mm x 610 mm. The BandSorb® FB consists out of carbon loaded polyurethane foam. BandSorb® FB is electrically conductive due to the use of the carbon dispersion.

### Physical Properties :

Datasheet for Performance Characteristics			
CHARACTERISTICS	TEST	UNIT	SPECIFICATIONS
Frequency Range	Insertion Loss	GHz	>1
Size	-	mm (inch)	610 x 610 (24x24)
Typical Thickness		mm (inch)	3.2 (1/8), 6.4 (1/4), 9.5 (3/8), 12.7 (1/2), 19.1 (3/4), 25.4 (1)
Maximum service Temperature	-	°C (°F)	100 (212)
Flammability Rating	UL94*	-	HF1
Compliance			2011/65/EU(RoHS 2.0) Compliance, REACH SVHC Compliance, Halogen free

Loading	Available Thickness (mm)					
	3.2	6.4	9.5	12.7	19.1	25.4
FB-18	✓	✓	✓	✓	✓	
FB-20	✓	✓	✓	✓	✓	
FB-22	✓	✓	✓	✓	✓	✓
FB-24	✓	✓	✓	✓	✓	✓
FB-26	✓	✓	✓	✓	✓	
FB-28	✓					
FB-30	✓	✓	✓	✓	✓	

### Features and Benefits

Lightweight, flexible and easy to trim, High Loss, low density.  
Available in different thicknesses to work in a wide range of broadband frequencies.

### Applications

BandSorb® FB series can be used to

- Lower cavity Q's in RF amplifiers, oscillators, cabinets containing microwave devices, computer housings, LNB's.
- Isolation of antennas by Insertion loss, shrouding antennas to improve the antenna patterns and undesired back lobes
- Reduce surface currents on radiating elements and outer ground-plane type surfaces.
- Reflectivity of an object (metal or otherwise) can be reduced somewhat by applying one or more layers.

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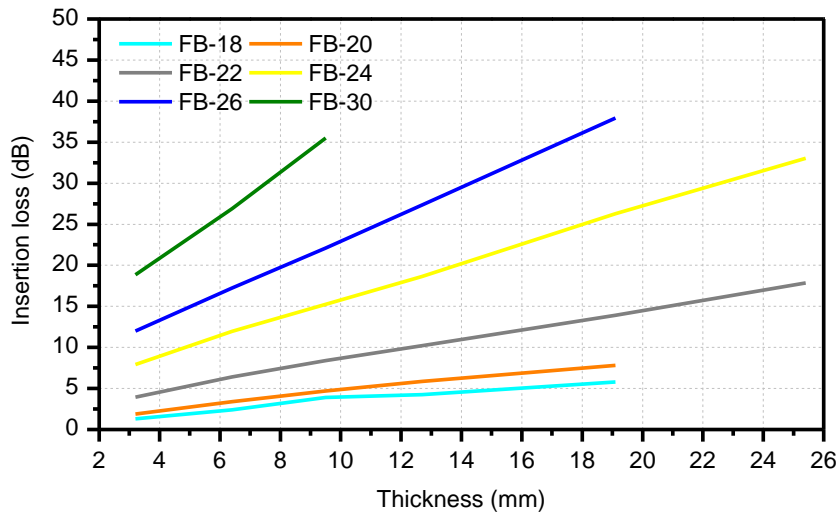
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\*Tested in according to UL94 specification

-The technical specification data is based on SEM tests and analysis that we believe to be reliable. However, in no event, shall SEM be liable for inaccuracies or omissions contained therein. In all cases, details and values should be verified by the customer

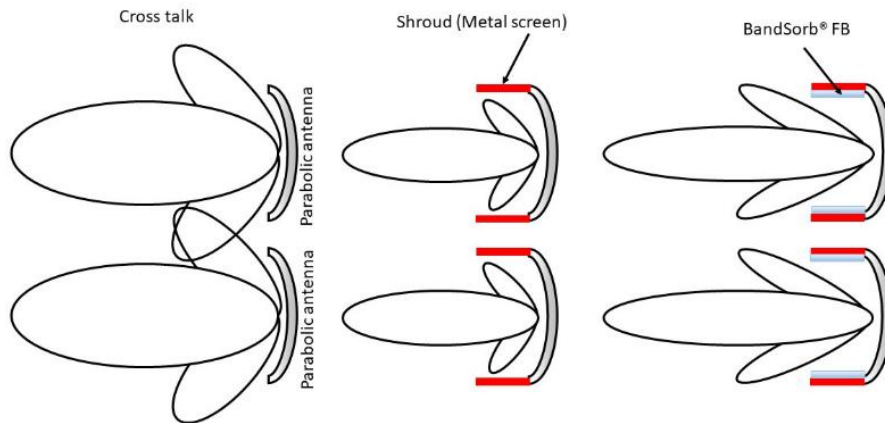
## Electromagnetic Properties

BandSorb®	Attenuation (dB/cm)		Relative Impedance ( $ Z /Z_0$ )	
	3 GHz	10 GHz	3 GHz	10 GHz
FB-18	3.2	4.7	0.69	0.82
FB-20	4.2	7	0.61	0.78
FB-22	7.4	14.9	0.55	0.74
FB-24	11	24	0.25	0.44
FB-26	16	34	0.18	0.31
FB-28	20	40	0.16	0.27
FB-30	24	46	0.13	0.22

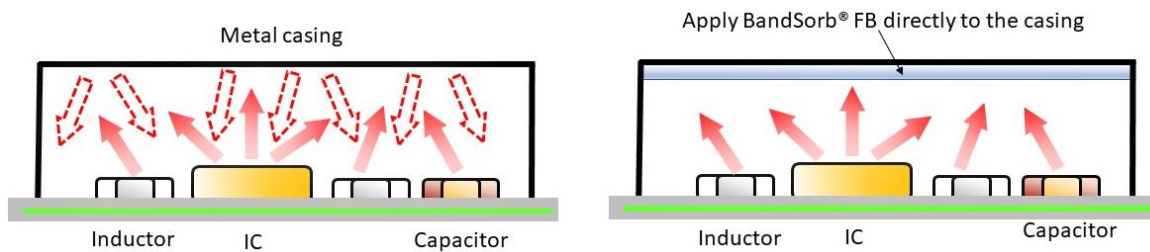


## Application example

**Example 1** – Placing BandSorb® FB on the shroud (metal screen) of the antenna to improve the antenna patterns and undesired back lobes.



**Example 2** – To suppress noise reflected by casing.



**Instructions for use :**

BandSorb® FB can be securely bonded to itself or to other materials such as metal, wood, and common plastic composites. To obtain a strong bond the surface should be thoroughly cleaned with a degreasing solvent. It can be readily cut with a band saw, scissors, or a sharp knife.

**Part number system example**

FB - 30 - 3.2 - A  
 Product name Type Thickness with Pressure Sensitive Adhesive: A, blank: no tape