

# BandSorb® HP

## Ferrite Sheets For NFC & Wireless Charging

### Description:

BandSorb® HP series is a thin high permeability ferrite sheet designed to have low losses at 13.56 MHz. The high permeability makes it ideal to use for NFC, RFID application and wireless charging applications.

### Availability:

BandSorb® HP series materials can be supplied in sheets and custom configurations; the standard sheet size is 125 mm x 125 mm. The BandSorb® HP consists of a ferrite material covered with a protective film on one side and adhesive tape on the other side.

### Features and Benefits

High magnetic permeability, low loss  
RoHs, Halogen Free

### Applications

BandSorb® HP series can be used to improve the performance of:

- NFC antenna for mobile phones and automotive.
- NFC or RFID antenna for security & access control system.
- Wireless charging for mobile phones and battery powered handheld electronic devices

### Physical Properties :

Datasheet for Performance Characteristics			
CHARACTERISTICS	TEST	UNIT	SPECIFICATIONS
BandSorb®	-	-	HP-150
Real Permeability	@13.56MHz, 0.1V	$\mu'$	150
Imaginary Permeability	@13.56MHz, 0.1V	$\mu''$	<5
Ferrite Thicknesses	-	mm (mil)	0.1 (3.9)
Typical Thicknesses	-	mm (mil)	0.15 (5.9)
Tensile Strength	ASTM D 1000	MPa (psi)	6.4 (928)
Service Temperature	-	°C (°F)	-25 to 120 (-13 to 248)
Flammability Rating	UL94*	-	V2
Colour	-	-	Black
Surface Resistivity	ASTM D 991	$\Omega$ -cm ( $\Omega$ -in)	> 10 <sup>9</sup> (>10 <sup>9</sup> )
Dielectric strength	-	V	400
Compliance	2011/65/EU(RoHS 2.0) Compliance, Halogen Free		

\*Tested in accordance of 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

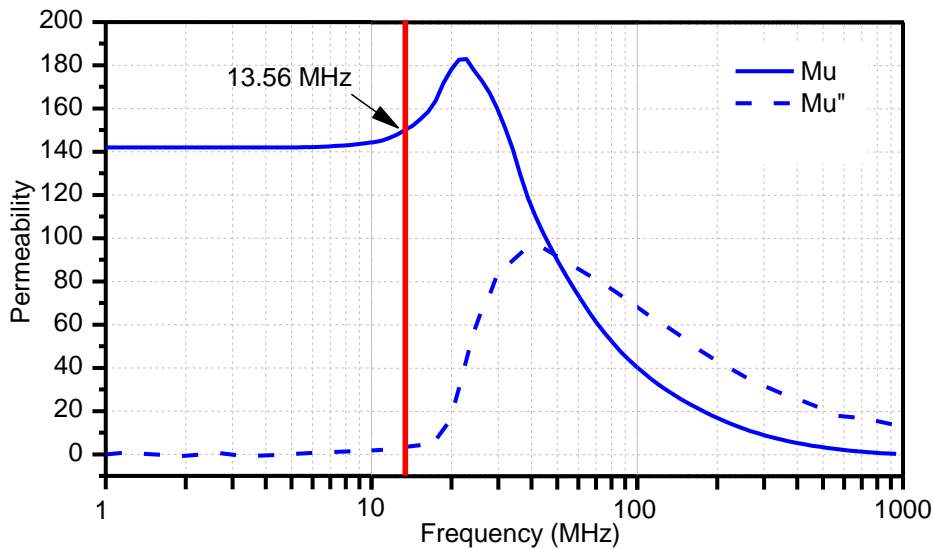
-UL is a registered trademark of Underwriters Laboratories, Inc.,

**SEM, Inc.**  
1600 Lexington Ave  
Suite 236A  
Rochester, NY 14606  
Tel: +1 585-643-2000

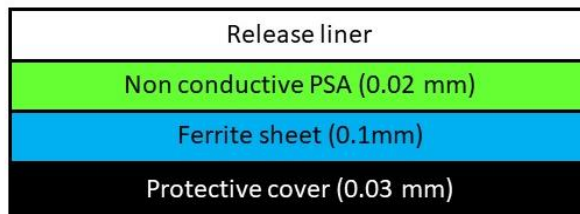
**SEM BELGIUM bvba**  
Slijpesteenweg 28  
8432 MIDDLEKERKE Leffinge (Belgié)  
Tel. +32 59 56 02 70

**SEM (Far East), Ltd.**  
Unit 3, 3/F, Block A  
New Trade Plaza  
6 On Ping Street  
Shatin, N.T., Hong Kong  
Tel: +852 2686 9872

**Electromagnetic Properties**

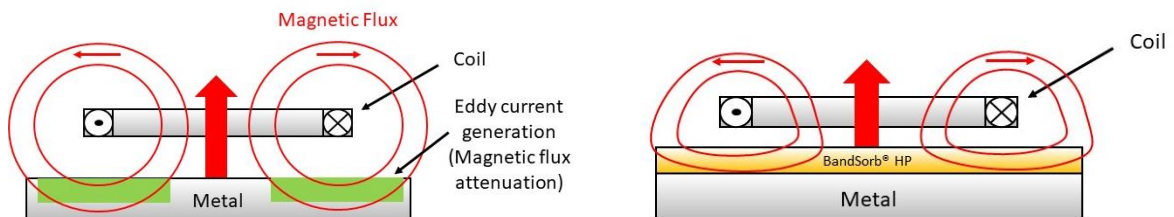


**Structure**



**Application example**

**Example** – Placing BandSorb® HP between the coil and the other components will suppress the formation of eddy current.



**Part number system example**

HP- 150 10 - 4040  
 Product name permeability@13.56MHz thickness ferrite (0.1mm) Part Size code (40x40 mm)

**SEM, Inc.**  
 1600 Lexington Ave  
 Suite 236A  
 Rochester, NY 14606  
 Tel: +1 585-643-2000

**SEM BELGIUM bvba**  
 Slijpesteenweg 28  
 8432 MIDDLEKERKE Leffinge (Belgié)  
 Tel. +32 59 56 02 70

**SEM (Far East), Ltd.**  
 Unit 3, 3/F, Block A  
 New Trade Plaza  
 6 On Ping Street  
 Shatin, N.T., Hong Kong  
 Tel: +852 2686 9872