

BandSorb® SN

Ultra-thin, highly permeable EMI/RF absorber

Description:

BandSorb® SN series is an ultrathin near field noise suppression absorber used for EMI control in electronic devices. The absorber is designed for the frequency range from 10 MHz up to 6 GHz. It is used to mitigate EM energy, it interacts and suppresses the magnetic field at the noise source.

Availability:

BandSorb® SN series materials can be supplied in sheets as well as custom configurations, standard sheet size is 300 mm x 300 mm.

BandSorb® SN materials can be supplied with or without pressure sensitive adhesive (PSA).

Features and Benefits

High magnetic permeability.
RoHs, Halogen Free, Reach compliant

Applications

BandSorb® SN series absorber can be placed over CPUs, main chip sets and other memory and power IC devices to suppress radiated noise causing interference with RF functions, crosstalk or SAR emissions

It can be used to suppress noise currents from circuit trace lines and flat cables that act like radiating antennas causing EMI problems and crosstalk issues

Physical Properties :

Datasheet for Performance Characteristics					
CHARACTERISTICS	TEST	UNIT	SPECIFICATIONS		
SEM Elastomers absorber	-		SN-32	SN-120	SN-130
Typical Frequency Range	-	GHz	< 6	< 6	< 6
Typical Thicknesses	-	mm (inch)	0.1-1.0 (0.004-0.04)	0.1-0.5 (0.004-0.02)	0.1-0.3 (0.004-0.012)
Available Size		mm (inch)	300x20000/300x50000/200x300 (11.8x787.4/11.8x1968.5/7.87x11.8)		
Hardness	ASTM D 2240	Shore A	90	-	-
Elongation	ASTM D 412	%	35%		
Tensile Strength	ASTM D 412	MPa (psi)	3.1 (450)	5.6 (812)	5.6 (812)
Service Temperature	-	°C (°F)	-40 to 85 (-40 to 185)	-40 to 120 (-40 to 248)	-40 to 120 (-40 to 248)
Flammability Rating	UL94*	-	V2	V2	V2
Colour	-	-	Silver	Silver	Silver
Volume Resistivity	ASTM D 991	Ω-cm (Ω-in)	> 10 ¹² (>10 ¹²)	> 10 ⁶ (> 10 ⁶)	> 10 ⁶ (> 10 ⁶)
Compliance			2011/65/EU(RoHS 2.0) Compliance, REACH SVHC 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

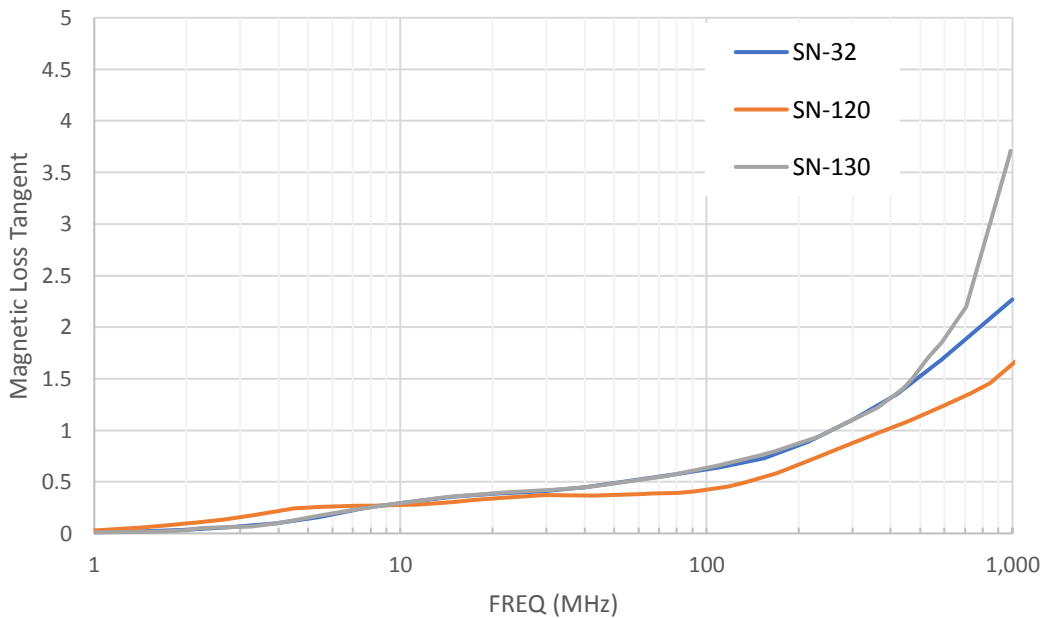
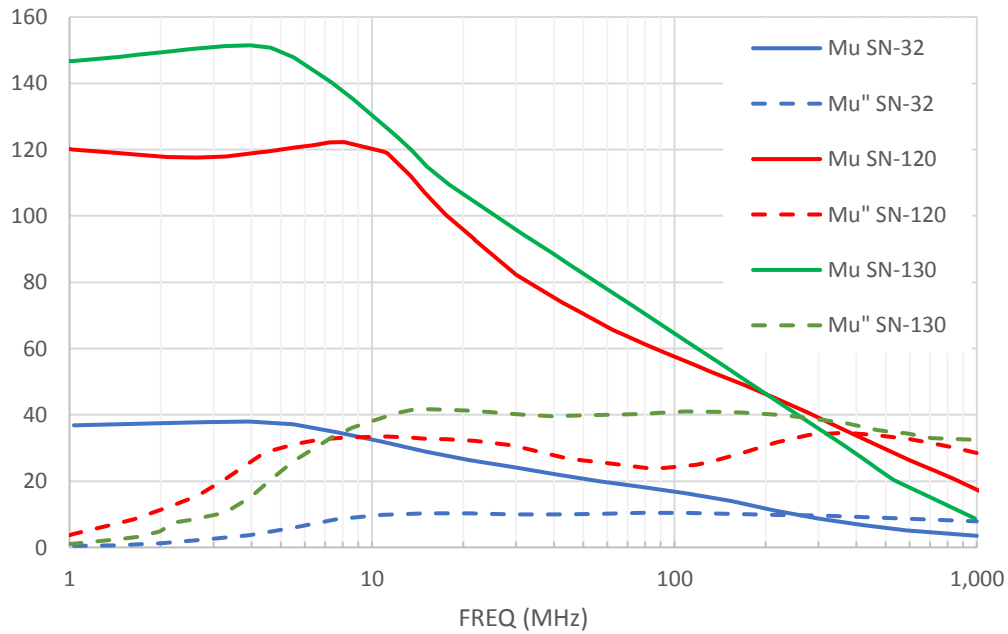
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Electromagnetic Properties



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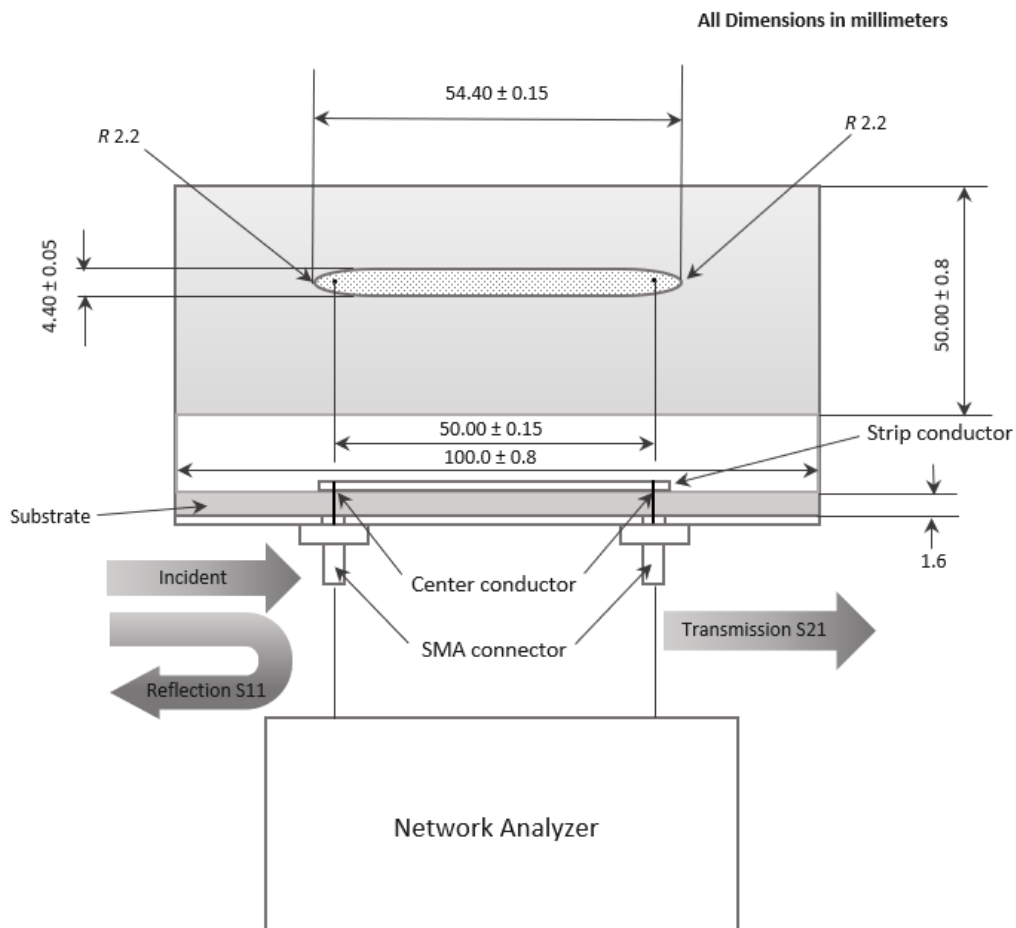
Power loss & Transmission Attenuation Power ratio (Rtp)

The data are measured with IEC 62333 standard and calculated with the equations below:

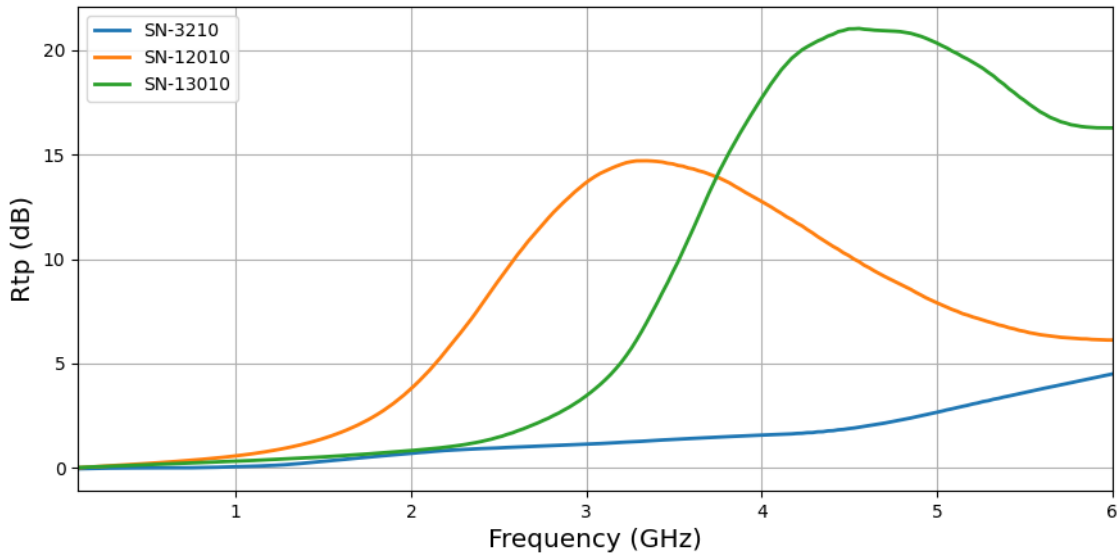
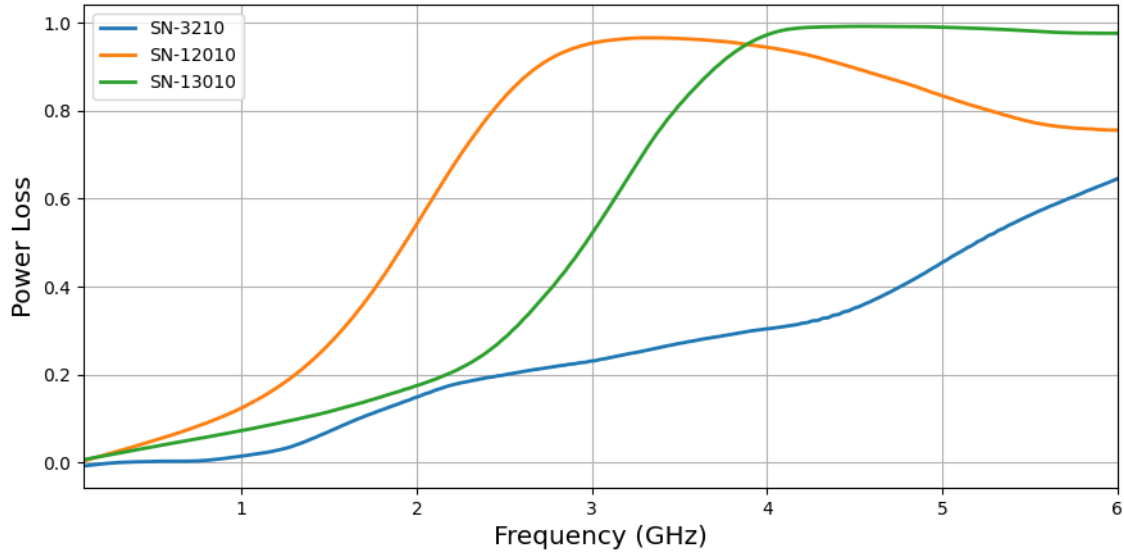
$$\text{Transmission Attenuation Power Ratio (Rtp)} = -10 \log \left\{ \frac{10^{\frac{|S21|}{10}}}{(1 - 10^{\frac{|S11|}{10}})} \right\}$$

$$\text{Power loss} = 1 - \left(10 \times \frac{S11}{20}\right)^2 - \left(10 \times \frac{S21}{20}\right)^2$$

S21 and S11 are measured by the IEC 62333 microstrip line:



Result of 0.1 mmT samples



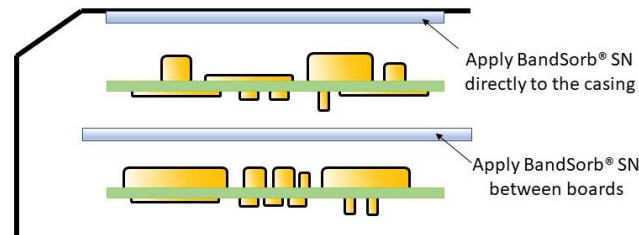
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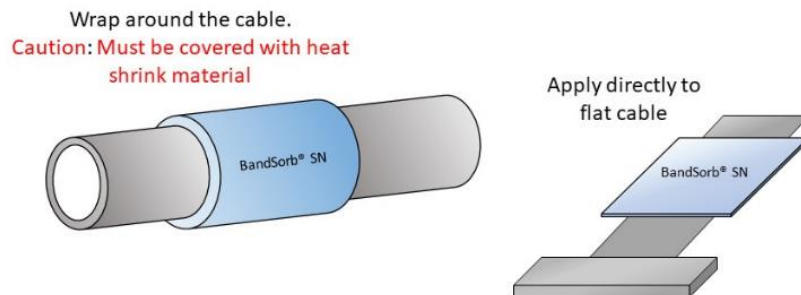
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Application example

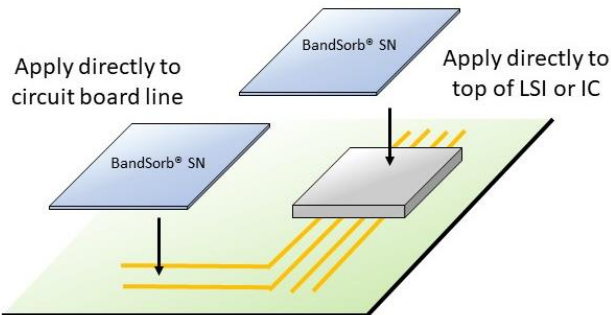
Example 1 – To suppress noise reflected by casing and cross talk between substrates.



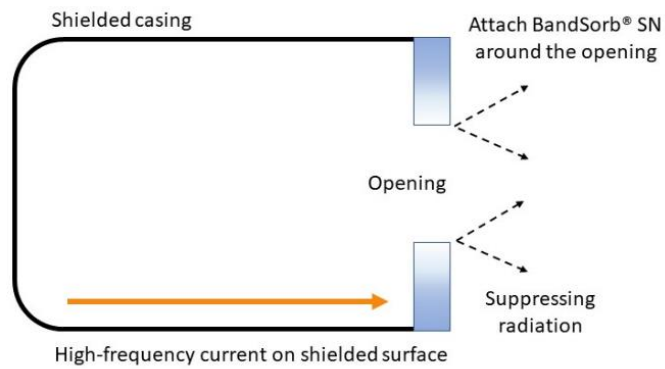
Example 2 – To suppress noise from cables.



Example 3 – To suppress radiation noises from LSI and IC.



Example 4 – To suppress noise radiation (reflected noise) from the opening of shield or casing.



Part number system example

SN-	32	50	-	A
Product name	Mu@10MHz	thickness (0.5 mm)		PSA (blank: No PSA)