TECHNICAL DATA SHEET

BandSorb® SC

Magnetically loaded, electrically non-conductive silicone rubber EMI/RF absorber

Description:

Schlegel's new range of elastomer Cavity resonance (BandSorb® SC) Absorbers materials consists of a thin, flexible, high-loss, magnetically loaded, electrically non-conductive silicone rubber. Schlegel can provide this material with different configurations for use in the frequency range of 1 GHz up to millimeter waves. With our own dedicated manufacturing site and R & D team we can work closely with our customers to provide custom solutions where needed.

Availability:

We supply BandSorb® SC series materials in sheets as well as custom die cut or kiss cut configurations. We can provide the BandSorb® SC materials with or without pressure-sensitive adhesive (PSA). A myriad of options gives our customers flexibility when choosing which BandSorb® SC product will work best in their design. BandSorb® SC materials are available in standard thicknesses; however, we also offer custom sizes and thicknesses to suit your specific requirements.

Features and Benefits :

Dielectric and magnetic loaded.
RoHs, Halogen Free, Reach compliant

Applications

BandSorb® SC series provides a flexible solution that supports a wide range of EMI and RF suppression requirements.

Suppressing resonance and harmonics from circuitry, absorbing RF emissions from wiring, and reducing interference from internal peripheral devices are just a few examples of using BandSorb® SC inside electronics housings such as computers, server racks and switches.

Designers can also use BandSorb® SC series to reduce RF coupling between microwave components inside electronic housings. Typical applications include power amplifiers, oscillators and down/up converters.
When bonded to a metal surface, the BandSorb® SC series will significantly reduce the reflectivity of metal objects or structures by absorbing of microwave currents.

In the telecommunications market the material can be applied to antenna elements, microwave dishes, the inner or outer surfaces of waveguides for isolation, attenuation, or radiating patterns modifications. When applied to the side or even rear surfaces of certain objects, this material will cause a significant reduction in "head-on" reflectivity or backscattering.
BandSorb® SC series can also be used for circuit-to-circuit EMI interference and reduction of unwanted emissions from the imaging CCD's and LCD displays.

In the automotive market, the BandSorb® SC series can be used to suppress interference from onboard electronics, such as telematics and GPS circuitry.

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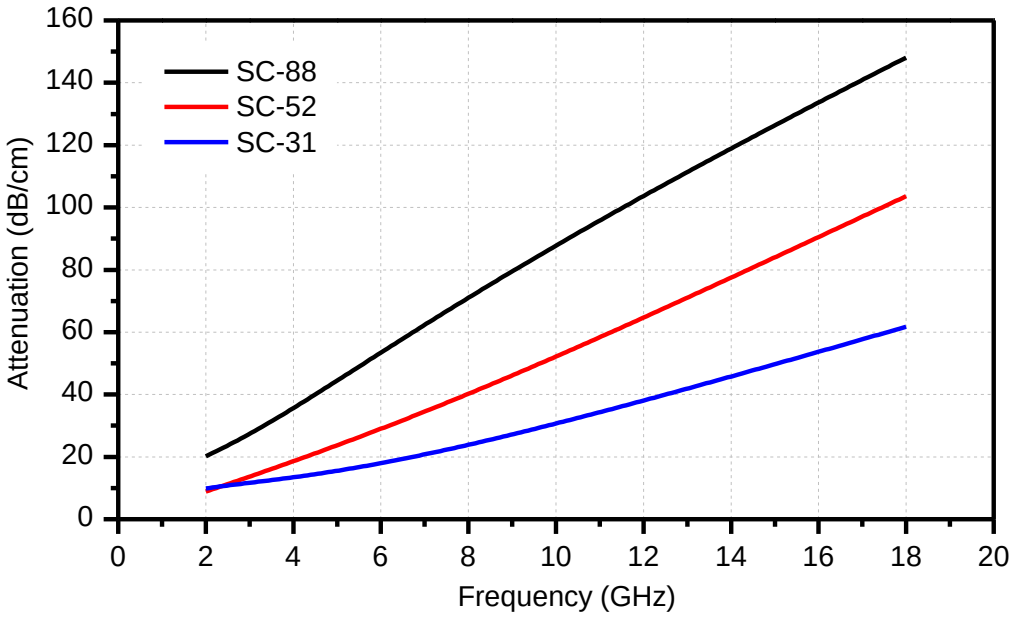
Physical Properties :

Datasheet for Performance Characteristics					
CHARACTERISTICS	**TEST**	**UNIT**	**SPECIFICATIONS**		
SEM Elastomers absorber	-		SC-31	SC-52	SC-88
Typical Frequency Range	-	GHz	⩾ 12	⩾ 6	< 6
Typical Thicknesses	-	mm (inch)	0.25 (0.01), 0.50 (0.02), 1.0 (0.04) and 1.5 (0.06)		
Available Size		mm (inch)	300 x 300 (11.8 x 11.8)		
Elastomer Binder	-	-	Silicone		
Hardness	ASTM D 2240	Shore A	65	75	87
Elongation	ASTM D 412	%	40	37	12
Tensile Strength	ASTM D 412	MPa (psi)	3.3 (479)	4.5 (653)	4.1 (595)
Maximum Service Temperature	-	°C (°F)	170 (338)	170 (338)	170 (338)
Flammability Rating	UL94*	-	V0	V0	V0
Colour	-	-	Grey	Grey	Grey
Surface Resistivity	ASTM D 991	Ω-cm (Ω-in)	$> 10^{10}$ ($> 4 \times 10^{10}$)	$> 10^{10}$ ($> 4 \times 10^{10}$)	$> 10^{10}$ ($> 4 \times 10^{10}$)
Compliance			2011/65/EU(RoHS 2.0) Compliance, REACH SVHC Compliance, Halogen free		

*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:



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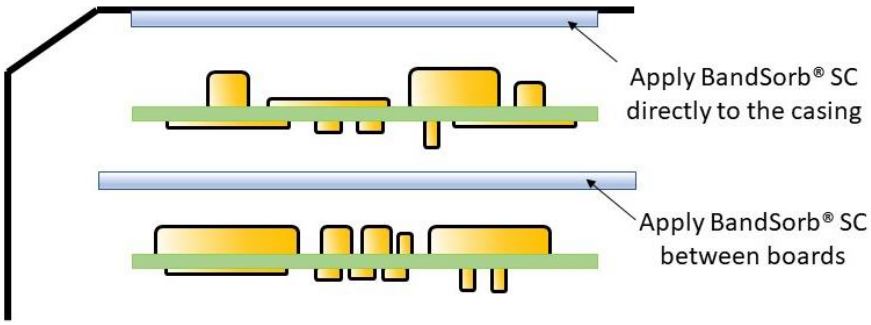
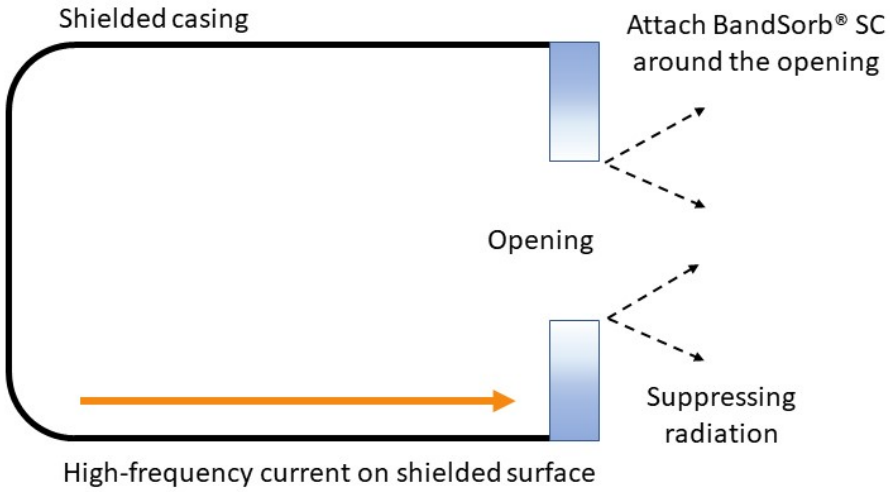
Application example

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



Example 2 – To suppress noise radiation (reflected noise) from the opening of shield or casing.



Part number system example

SC	-	88	-	025	-	A
Product name		attenuation@10GHz		thickness (0.25 mm)		with Pressure Sensitive Adhesive: A, blank: no tape

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