

EMI Materials – Elastomer Absorber

Schlegel Electronic Materials (SEM) are pleased to introduce BandSorb® elastomer absorbers. Our new range of elastomer Cavity resonance (BandSorb® SC) Absorbers materials. The material 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 millimetre waves. With our own dedicated on site manufacturing and R & D team we are able to work closely with our customers to provide custom solutions where needed.

BandSorb® SC series is suitable for most commercial, telecommunication, military and medical applications. The high magnetic loss of the BandSorb® SC series is designed to exhibit high loss and are intended to be applied to metal surfaces. When placed on the inside of a microwave cavities BandSorb® SC series will reduce the Q of the cavity, eliminate surface currents and generally dampen reflections.

BandSorb® SC series materials can be supplied in sheets as well as custom die cut or kiss cut configurations. BandSorb® SC materials can be supplied with or without pressure sensitive adhesive (PSA). Myriad options give you the customer flexibility when choosing which BandSorb® SC product will work best in your design. BandSorb® SC materials are available in standard thicknesses however we can offer custom sizes and thicknesses to suit your specific requirements.

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 the use of BandSorb® SC inside electronics housings (computers, server racks, switches,...)

BandSorb® SC series can be used 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 through the absorption of microwave currents.

In the telecommunication market the material can be applied to antenna elements, microwave dishes, the inner or outer surfaces of waveguides for isolation, attenuation or modification of radiating patterns. 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.

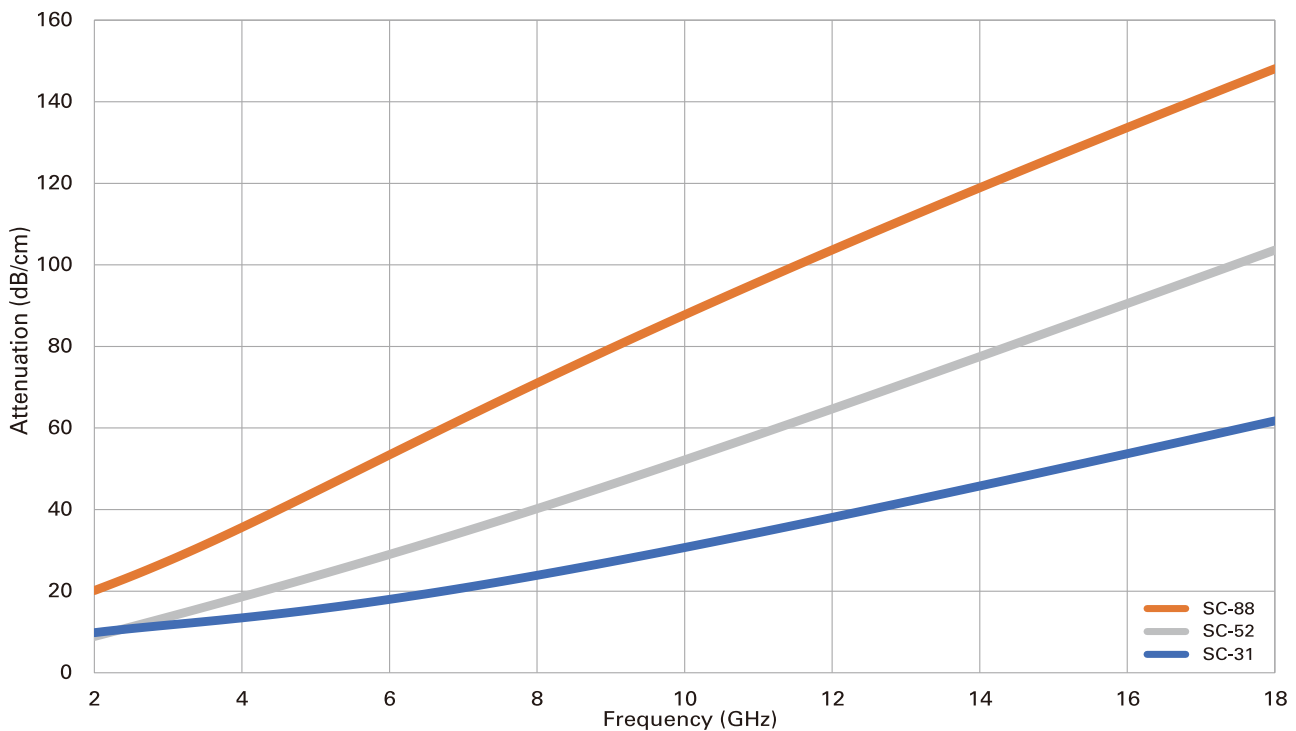
BandSorb® SC series can also be used for circuit-to-circuit EMI interference and reduction of unwanted emissions from the imaging CCD's and LCD displays.

In the automotive market the BandSorb® SC series can be used to suppresses interference from on-board electronics, such as telematics, on-board radar-based systems, GPS circuitry, and display systems.

SPECIFICATIONS

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)		
Typical 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
Volume Resistivity	ASTM D 991	Ω-cm (Ω-in)	>10 ¹⁰ (> 4 x 10 ⁹)	>10 ¹⁰ (> 4 x 10 ⁹)	>10 ¹⁰ (> 4 x 10 ⁹)
Compliance	-	-	2015/863/EU (RoHS 2.0) Compliance, REACH SVHC Compliance, Halogen free		

*Tested in accordance of UL94 specification



Part number system example

SC - 88 - 05 - A

Product name attenuation@10GHz thickness (0.5mm) with Pressure Sensitive Adhesive: A, blank: no tape

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