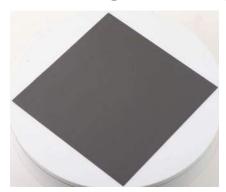


# Eccosorb® BSR / MFS

# High Loss, Magnetically Loaded, Elastomeric Microwave Absorber



## **HIGH-LOSS ELASTOMERIC ABSORBER**

Eccosorb BSR / MFS is a thin, flexible, high-loss, electrically non-conductive silicone absorber. It is designed for the frequency range from 6 GHz to 18 Ghz and above . It has low outgassing properties and high temperature resistance. BSR / MFS is flexible and can be fitted to compound curves. BSR and MFS refer to the same product where BSR-1 is MFS-124 and BSR-2 is MFS-117.

### **FEATURES AND BENEFITS**

- Flexible structure for improved fit
- High thermal stability
- Electrically non-conductive
- High magnetic loss
- Low outgassing
- Good adhesion to metals

#### **MARKETS**

- Mobile / Data Infrastructure
- Security and Defense
- · Automotive Electronics
- Industrial Electronics
- Space

## **VALUE**

- Simplified design due to mechanical and electrical properties
- · Environmentally friendly solution meeting regulatory requirements of RoHS and REACH
- Improved reliability performance of electronics
  - Better signal integrity due to high reduction of EMI
  - Consistent electronics performance due to low outgassing properties
  - Reliable mechanical attachment

TYPICAL PROPERTIES	TYPICAL DATA
Frequency Range (GHz)	6 – 35
Service Temperature °C	-40 +170
Flame Rating	UL 94 V-0
Hardness (Shore A)	> 70
Density (g/cc)	4.2
Elongation (%)	50
Tensile Strength (MPa)	5.0
Volume Resistivity (ohm-cm)	2 x 10 <sup>9</sup>
Thermal Expansion (per °C)	63 x 10 <sup>-6</sup>
Thermal Conductivity (W/mK)	0.865
Water Absorption (% 24 hours)	< 0.1
Dielectric Strength (v/mil)	> 10
Outgassing (%TML) (%CVCM)*	0.47 / 0.28

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

\* Outgassing data per ASTM E595-07; criteria for acceptability is 1.00% TML and 0.10% CVCM.

# **APPLICATIONS**

 Eccosorb BSR/MFS is engineered to reduce or eliminate surface currents, cavity resonance, coupling, and generally dampen reflections. It will significantly improve the operation of microwave devices by lowering the Q of cavities.

It can also be used terminations, loads, attenuators in microwave circuits, and in waveguides and transmission systems.

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# **Hybrid Thermal/EMI Absorber**

- Eccosorb BSR/MFS is recommended for use in high reliability aerospace, military, and space applications, exhibiting excellent thermal cycling, shock and vibration absorption characteristics.
- Some other applications include power amplifiers, oscillators and down/up converters.

#### **AVAILABILITY**

- Standard sheets are 305 x 305mm (12"x12").
- Standard thicknesses are 0.25mm (0.010"),0.32mm (1/8"),0.50mm (0.020"),
  0.64mm(1/4"),1.0mm (0.040"), 1.27 mm (1/2"),1.5mm (0.060") and 2.54mm (0.100")
- It can be supplied with or without pressure sensitive adhesive (PSA).
- Available in other thicknesses, sizes, and customer specified shapes upon request.

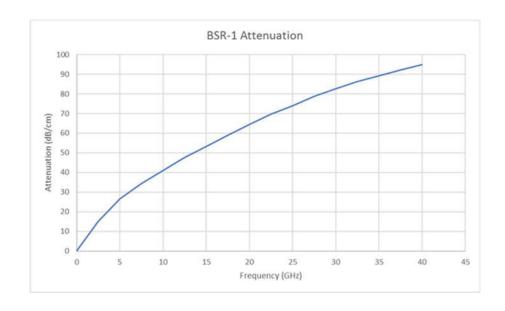
### **INSTRUCTIONS FOR USE**

- This material is designed to function directly in front of a metallic surface.
- For applications where the service temperature exceeds 121°C (250°F), the material can be bonded to most substrates by using an RTV silicone based adhesive in conjunction with a suitable primer.
- This material can be readily cut with a sharp knife and template. It is a very flexible material and conforms to contoured surfaces.

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