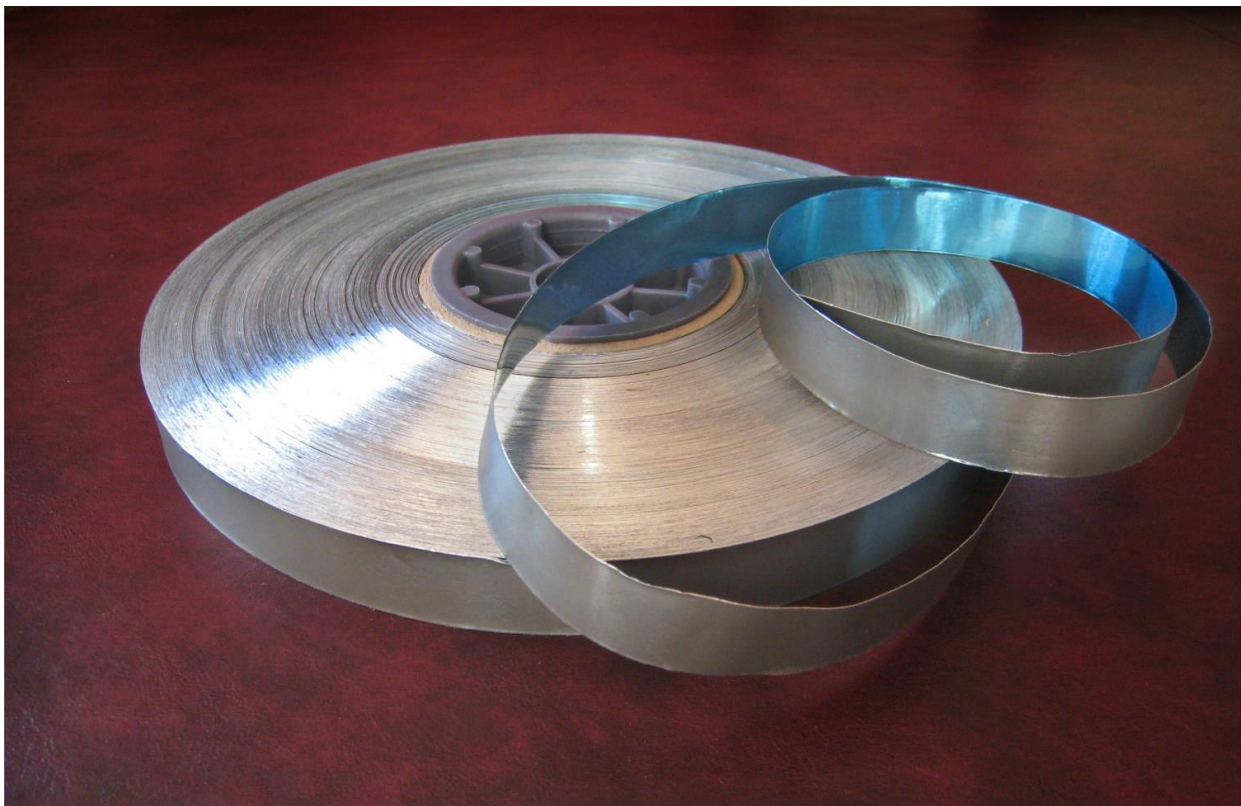


## MAS-320 Thin Film RF Suppression



MAS 320 is an ultra-thin, flexible absorber designed for the suppression of microwave surface currents over the frequency range of 0.6 to 16 GHz. MAS 320 has scores of applications for analog and digital electronic devices, minimizing cross talk and interference.

The material is available in a thin film urethane bonded to 2 mil aluminum substrate, and may be ordered die cut to your requirements. If desired, it can be supplied in roll form up to 100 yards long. Special processing is employed such that no oxidation of iron ingredients is possible. The product is an economical alternative to ferrite loaded elastomers.

MAS 320 is useful for the suppression of surface and creeping waves, reduction of cavity resonance in microwave modules and is also useful in reducing RF coupling of antennas and microwave components. It is flexible, permitting application to contoured surfaces. The service temperature is 350° F (177° C) continuous with short term exposures to higher temperatures. This product has a smooth surface, and can be exposed to outdoor environments and high altitudes, including space, with no adverse effects.

## Mechanical

### Properties:

0.04 cm (0.015" thick)

Supplied to length

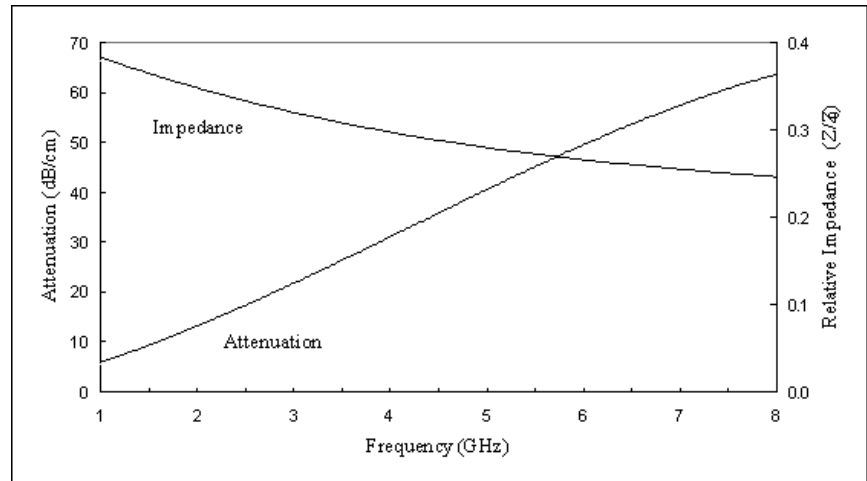
## Electrical

### Performance:

Insertion Loss (dB/in) 48

@ 3 GHz

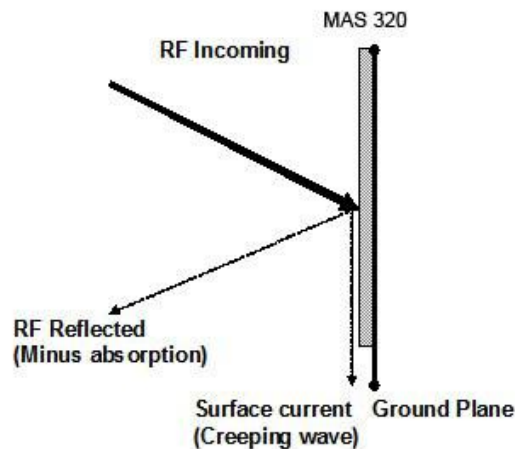
80 @ 10 GHz.



## Representative Properties

Attenuation, dB/cm	6.0 - 63.0
Relative Impedance	0.66 - 0.23
Volume Resistivity, ohm-cm	$2 \times 10^8$
Dielectric Strength, volts/mil	> 20
Nominal Thickness, inches (mm)	0.03 (0.8)
Nominal Weight lb/ft <sup>2</sup> (kg/m <sup>2</sup> )	0.90 (4.4)
Hardness, Shore A	> 80
Tensile Strength, PSI	> 500
Elongation, %	> 23
Thermal Conductivity (BTU)(in)/(hr)(ft <sup>2</sup> )(° F)	8.7
(cal)(cm)/(sec)(cm <sup>2</sup> )(° C)	0.003

## Surface Current and Traveling Waves



An incident wave will excite surface currents (creeping waves) on a conductive surface. Due to non-specular behavior, a surface current can propagate along the surface. When the surface current encounters a discontinuity on the surface (break or gap) it can radiate. Important to absorb the surface currents as they propagate. MWT's MAS 310 series products are magnetic absorbers which attract and dissipate the magnetic portion of the surface wave. Surface wave absorbers act as a wave guide or conduit to guide and attenuate waves as they propagate.