

C-RAM™ FDSS

Low frequency high loss silicone rubber sheet absorber

Description

C-RAM™ FDSS is a thin, flexible, magnetically filled silicone rubber sheet stock, which has high loss at UHF frequencies. It is similar to C-RAM GDSS, except that it has higher magnetic loss at lower frequencies.

C-RAM™ FDSS is electrically non-conductive and it has a high dielectric strength.

C-RAM™ FDSS has a high magnetic loss tangent from 300 MHz to 3 GHz. Generally, thicker grades are required to attenuate lower frequencies to the same degree as a thinner grade at higher frequency.

Availability

Standard sheet size is 12" x 12" (305 mm x 305 mm). C-RAM™ FDSS is available in three standard thicknesses -- .030", .060", and .125".

C-RAM™ FDSS can be supplied in other sizes, thickness or per customer specified configurations upon request.

C-RAM™ FDSS can also be supplied with a peel-and-stick pressure sensitive adhesive backing, order as FDSS/PPGA.

As a standard, The C-RAM™ FDSS base material is silicone, but it can also be supplied in a urethane base version.

Applications

C-RAM™ FDSS can be used to lower the Q of cavities and dampening unwanted resonances and act as a transmission line attenuator.

C-RAM™ FDSS can be applied to metal surfaces to attenuate RF surface currents.

C-RAM™ FDSS can be used to modify antenna patterns and modify the radar cross section of targets.

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Method of application

C-RAM™ FDSS can be cut with a sharp knife, die cut, waterjet cut, Kiss-cut. It is flexible and can be bonded to contoured surfaces.

C-RAM™ FDSS can be applied to a substrate by using a silicone RTV adhesive. For best results, the material should be scuffed with sandpaper, wiped with alcohol to remove dust and grease, and have a primer applied to the substrate.

C-RAM™ FDSS can also be supplied with a pressure sensitive adhesive backing (/PPGA).

Typical properties

Frequency range	0.3 to 3 GHz
Color	Dark grey
Flammability:	Non-flammable
Service temperature	-60 to +150 °C (-80 to +300 °F)

Thickness and weight	
0.75 mm (.030")	--- 2.0 kg/m ² (0.41 lb/ft ²)
1.52 mm (.060")	--- 4.0 kg/m ² (0.82 lb/ft ²)
3.18 mm (.125")	--- 8.1 kg/m ² (1.68 lb/ft ²)
Thermal conductivity	0.002 cal-cm/sec-cm ² -°C
Volume resistivity	>1011 ohm-cm
Dielectric strength	10 kv/mm (250 v/mil)
Attenuation	@ 1 GHz 15 dB/cm @ 3 GHz 24 dB/cm

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