Technical Data Sheet

Engineered Materials

C-RAM™ GDSS

High loss silicone rubber sheet absorber

Description

C-RAM™ GDSS is a thin, flexible, magnetically filled silicone rubber sheet stock.

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

In the UHF frequencies, C-RAM™ FDSS will attenuate RF energy better; it has a different magnetic filler, which exhibits high loss tangents at lower frequencies.

Availability

Standard sheet size is 12” x 12” (305 mm x 305 mm)
Standard thickness is 0.060 in (1.52 mm).

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

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

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

Applications

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

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

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

Method of application

C-RAM™ GDSS 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™ GDSS 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 silicone primer applied to the substrate.

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

Typical properties

Frequency range	4 to 18 GHz
Color	Gray
Flammability	Non-flammable
Service temperature	-60 to +150 °C (-80 to +300 °F)
Hardness, shore A	80
Thickness and weight	
0.75 mm (.030”) ---	2.3 kg/m^2 (0.47 lb/ft^2)
1.52 mm (.060”) ---	4.6 kg/m^2 (0.95 lb/ft^2)
3.18 mm (.125”) ---	9.6 kg/m^2 (1.98 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)

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