Eccosorb® OCF

Broadband, Convoluted, Open-Cell, Foam Absorber

BROADBAND CONVOLUTED OPEN-CELL FOAM ABSORBER

Eccosorb OCF is a series of premium-grade tapered broadband absorbers. It has a convoluted shape similar to the Eccosorb CV material, but is made from a much more open-cell foam material. This open structure allows the piece to be used at high humidity although long term exposure to water and UV should be avoided. For indoor higher power requirements, cooling air can be circulated through the foam structure, either by natural convection or by fan, to keep the temperature of the piece down. Because of the rounded convolutions and lack of sharp corners and tips, Eccosorb OCF is the preferred absorber for mm wave frequencies and for grazing incidence angles out to 60° off-normal.

FEATURES AND BENEFITS

- Open-cell
- Broadband absorption due to high thickness
- High reflectivity due to geometric structure

MARKETS

- Commercial Telecom
- Test and Measurement

SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSORB OCF
Frequency Range	>1.5 GHz
Max. Service Temperature °C (°F)	90 (194)
Power handling with unimpeded airflow	8 kW/m²

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

APPLICATIONS

- Absorbing collars (shrouds) around the edges of high performance antennas
- MM-wave applications
- Small test boxes

AVAILABILITY

- Eccosorb OCF is available in standard piece sizes of 61 cm x 61 cm.
- Two grades are available, Eccosorb OCF-3 and OCF-4 , with resp. heights of 7.5 cm and 10 cm an.. The thickness (height) determines primarily the low frequency end of performance, all grades have similar performance at millimeter wave frequencies.
- Eccosorb OCF is supplied with the front surface painted white.
- If the primary application is for millimeter wave frequencies, it is recommended to ask for absorber to be supplied without paint, as it can have a negative effect on the reflectivity performance.

LOW FREQUENCY LIMIT (IN GHz) OF INDICATED REFLECTIVITY				
GRADE	**-20 dB**	**-30 dB**	**-40 dB**	**-50 dB**
OCF-3	3	6	9	25
OCF-4	2.5	5	8	25

The table gives the specified reflectivity values, showing the frequency at which a particular reflectivity can be expected for each grade. Just as with Eccosorb CV, a reflectivity of -40 dB can be expected at 94 GHz. There is little degradation of the reflectivity for incidence angles as wide as 60° off-normal incidence.

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Europe: +49.8031.24600

Asia: +86.755.2714.1166

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INSTRUCTIONS FOR USE

- Eccosorb OCF can be bonded to structures using a contact adhesive such as the Eccostock® foam adhesive. In this case, several coatings of the adhesive should be applied to the back surface of the absorber and allowed to dry, to create a solid back surface.
- It is preferred to use mechanical means to supplement the adhesive, impaling the piece on plastic pins or hooks which is particularly effective.
- The curved absorber tips should be pointed in the direction of the transmitting signal.

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