

## Features:

- **Better than -10 dB Reflectivity 30 MHz - 100 MHz**  
**Better than -20 dB Reflectivity 100 MHz - 300 MHz**  
**Better than -30 dB Reflectivity 300 MHz - 18 GHz**
- **Numerically Optimized Curvilinear Wedge Design**  
**Meeting ETSI Requirements for Absorber Return Loss**  
**Per IEEE-STD-1128 Recommended Test Methods**
- **Ultra Broadband Frequency Range 30 MHz - 18 GHz\***
- **200 V/m Power Handling Capability**
- **Fire Retardant**
  - **NRL 8093 Tests 1, 2 & 3**
  - **TI #2693066**
  - **MIT MS-8-21**
  - **UL 94**
  - **DIN 4102-B2**
- **Ideal for Upgrading Chamber Performance**
- **Installation Available**

**Meets ETSI Requirements  
for Absorber Return Loss**



*High Performance Hybrid Ferrite Tile/Polyurethane Dielectric*

**FerroSorb FS-980** is the first commercially available absorber to meet the absorber return loss specified by the European Standards Telecommunication Institute's (ETSI) test standards.

## Description

As digital circuits increase in speed, EMC compliant testing is being raised to higher frequencies.

Anticipating this need, ETS-Lindgren developed FS-980, an anechoic absorber that is numerically

optimized to provide the highest attainable reflectivity performance across an ultra broadband frequency range of 30 MHz to 18 GHz.\* Our FS-980 absorber provides satisfactory reflectivity performance for meeting conventional test site validation method below 1 GHz while providing superior anechoic performance from 300 MHz to 18 GHz. It is anticipated that test sites built with FS-980 absorber treatment will meet test site requirements in both low (30 MHz to 1 GHz) and high-frequency range (above 1 GHz) ranges, using known

current and future validation methods. Test sites lined with FS-980 can also be used for immunity measurements, safely handling exposure to continuous RF field intensities up to 200 V/m.

## Manufacturing Process

FerroSorb FS-980 is manufactured from high quality, low density polyurethane foam that undergoes 15 quality assurance checks during production. The manufacturing

\* Chambers lined with FerroSorb have been demonstrated to perform at frequencies extending up to 40 GHz

process begins with the foam being impregnated with a proprietary, conductive carbon formula. A second impregnation is made with a salt solution and binding agent. The foam is then cut into a precise curvilinear wedge configuration by a computer controlled saw. The shaped absorber is next bonded to a precision machined ferrite tile with a tuned dielectric layer, and tested.

**Testing Process**

Every piece of FerroSorb undergoes non-destructive reflectivity testing following the recommended square coax test method by IEEE-STD-1128. A vertical coaxial waveguide is used for testing across the 30 MHz to 500 MHz low frequency range. Higher frequency testing is performed using an NRL arch. This thorough testing process assures that

FerroSorb FS-980 delivers consistent, repeatable performance.

**Electrical Specifications**

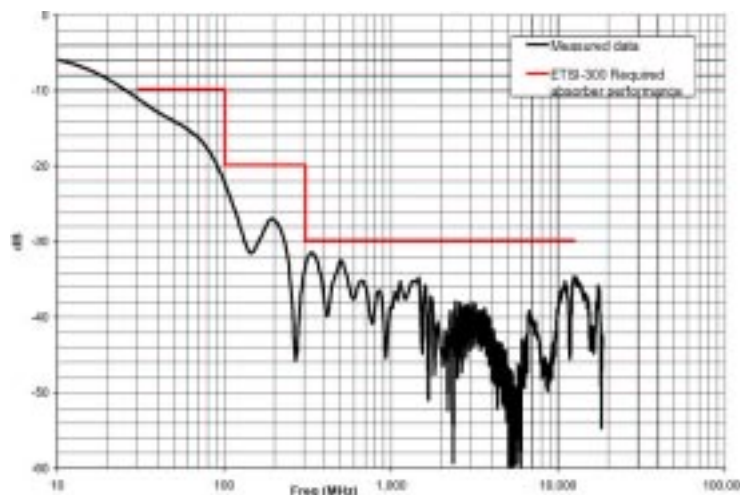
MODEL	FREQUENCY	POWER HANDLING (CONTINUOUS)
FS-980	30 MHz - 18 GHz*	200 V/m

**Physical Specifications**

MODEL	HEIGHT OVERALL	UNIT SIZE AT BASE	WEIGHT (NOMINAL)	MOUNTING	FIRE RETARDANT RATINGS
FS-980	100.0 cm	600.0 mm 23.6 in	25.0 kg 54.0 lbs	Mechanical Fastener	NRL 8093 Tests 1, 2, 3 TI # 2693066 MIT MS-8-21 UL 94 DIN 4102-B2

\* The performance was tested to 18 GHz at present time. We expect similar or better performance of the FS-980 from 18 GHz to 40 GHz.

**FS-980 Absorber Reflectivity Performance at Normal Incidence**



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