

BROADBAND REFLECTIVITY AND SCATTER EVALUATION OF RF ABSORBERS

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This paper describes specially constructed instrumentation and positioning systems used in evaluating RF absorber, discusses measurement techniques, and presents data and conclusions from current programs. The selected absorbers which were evaluated are typical of those used in anechoic chambers and terminated ranges for antenna, radome and RCS testing.

The programs involved near-monostatic assessment for angles of incidence from near normal (reflectivity) out to near grazing (backscatter) and bistatic assessment over wide angles (forward scatter). Measurements employed a Frequency Domain Analyzer (FDA) based on FM/CW radar techniques, and a hemispherical measurement coordinate system based on an arch-supported antenna positioner.

Comparative data are presented for performance as a function of frequency, polarization, absorber geometry and orientation, and special features such as absorber paint finishes and flammability treatments.

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