

# General design theory for single-layer homogeneous absorber

Valenzuela, Alvaro Q.

Fernandez, F. Anfbal

A simple and natural approach to the single-layer homogeneous absorber problem is developed and used to calculate previously unavailable universal design curves and equations for different orders of solutions. It is shown that only certain combinations of the electric and magnetic loss angles are useful to achieve total absorption. General equations for the bandwidth and for the minimum absorption beyond resonance are found and these parameters are graphically represented in the loss-angle plane. The graphical aids developed allow some optimum types of absorbers to be identified and analyzed. © 1996 IEEE.