Abstracts

Slot Array Employing Photoetched Tri-Plate Transmission Lines

D.J. Sommers. "Slot Array Employing Photoetched Tri-Plate Transmission Lines." 1955 Transactions on Microwave Theory and Techniques 3.2 (Mar. 1955 [T-MTT]): 157-162.

Microwave printed circuit techniques are readily adapted to the construction of compact antennas ideal for flush mounting on high speed aircraft. This paper describes the development of a two-dimensional X-band array consisting of 16 slots fed by photoetched Tri-plate transmission line. The design of a unity coupled series slot and the resulting mode purity problems are discussed. Several power divider configurations are illustrated and data (on the performance of some of these devices is presented. The construction of a 4 slot E-plane, a 4 slot H-plane and the combination 4x4 E-, H-plane array utilizing these power dividers is shown. Radiation patterns of each of these arrays were measured and a comparison of the individual and combination array patterns is made.

❑ Return to main document.