Abstracts

A Study of Microwave Leakage through Perforated Flat Plates (Short Papers)

T.Y. Otoshi. "A Study of Microwave Leakage through Perforated Flat Plates (Short Papers)." 1972 Transactions on Microwave Theory and Techniques 20.3 (Mar. 1972 [T-MTT]): 235-236.

A simple formula useful for predicting leakage through a circular hole array in a metallic flat plate is presented. A correction is given for plate thickness. The formula is applicable to arrays having either a 60° (staggered) or 90° (square) hole pattern, but is restricted to the case of 1) an obliquely incident plane wave with the E field polarized normal to the plane of incidence, and 2) large transmission loss. When theoretical values were compared to experimental data obtained on test samples having transmission losses greater than 20 dB, the agreement between theory and experiment was typically better than 1 dB at S band and 2 dB at X band.

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