Abstracts

The Channel Waveguide Transformer: An Easily Fabricated H-Plane Transition for the Rectangular TE-10 Mode

P.H. Siegel, D.W. Peterson and A.R. Kerr. "The Channel Waveguide Transformer: An Easily Fabricated H-Plane Transition for the Rectangular TE-10 Mode." 1983 MTT-S International Microwave Symposium Digest 83.1 (1983 [MWSYM]): 172-174.

The authors describe an easily fabricated H-plane transformer for use in rectangular waveguide carrying the dominant mode. An approximate theoretical analysis of the structure is presented, and computed results are compared with measurements on transformers at X-band. Design curves are given for transitions from full to one-half and one-quarter height waveguide. The new transformers have been found particularly useful for millimeter-wave mixers and multipliers with split-block construction. The structure can also be used as a transition from rectangular to channel waveguide.

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