

Abstracts

A Broad-Band E-Plane 180° Millimeter-Wave Balun (Transition)

*R.W. Alm and R.J. Hwu. "A Broad-Band E-Plane 180° Millimeter-Wave Balun (Transition)." 1992 *Microwave and Guided Wave Letters* 2.11 (Nov. 1992 [MGWL]): 425-427.*

A broad-band 180° millimeter-wave balun has been developed using E-plane techniques which provides a practical transmission line transition suitable for many millimeter-wave integrated circuit applications. A novel dual-transition approach was taken that provides a transition from a standard rectangular waveguide to a balanced pair of narrow coplanar striplines. In this experiment, a Ka-band (26.5-40 GHz) balun was designed to provide a 100 Omega coplanar strip (balanced) output. Bandwidth performance was excellent with less than 2 dB of variation over the full waveguide band.

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