Abstracts

W-Band Power Combiner Design

K. Chang and R.L. Ebert. "W-Band Power Combiner Design." 1980 Transactions on Microwave Theory and Techniques 28.4 (Apr. 1980 [T-MTT]): 295-305.

W-band power combiners using double-drift IMPATTsilicon diodes have been developed to generate high pulsed power. The combiner design was based on a computer analysis of the cross-coupled coaxial-waveguide diode mounting structure which forms the basic module of the combiner. Peak output power of 20.5 W for a two diode combiner and 40 W for a four-diode combiner have been achieved. The diodes were operated at 100-ns pulsewidth and 0.5-percent duty cycle. The combiners demonstrated over 80-percent combining efficiency and 6-percent dc-RF conversion efficiency.

❑ Return to main document.