Abstracts

High Peak Power Dielectric Resonator Oscillator Combiner

B.E. Sigmon. "High Peak Power Dielectric Resonator Oscillator Combiner." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 1171-1174.

Traditional approaches to achieving significant amounts of power from a dielectric resonator oscillator (DRO) center using a cascade of amplifier chains cumulating with combined output stage. Described herein is an approach which achieves significant amounts of peak power from an oscillator, dielectrically stabilized, and power combined, in one stage. The active elements used were "stacked" Gunn diodes operating in X- and Ku-bands. Forty watts and one hundred and twelve watts of peak power was measured from a two-diode and four-diode DRO/combiner respectively, operating in X-band (9.3 GHz), and 13.5 watts of peak power was measured from a two-diode DRO/combiner in Ku-band (16.3 GHz).

❑ Return to main document.