Abstracts

High CW Power with Multi-Octave Bandwidth from Power-Combined Mini-TWTs

R. Mallavarpu and M.P. Puri. "High CW Power with Multi-Octave Bandwidth from Power-Combined Mini-TWTs." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1333-1336.

Several mini-TWTs were recently power-combined in the band 2.0 to 8.0 GHz to achieve 250 W of CW power at better than 90 percent combining efficiency. Graceful degradation was demonstrated by successively turning off each of the TWTs, The combining device, known as the spatial field power combiner, is especially suited for high average power applications. This approach has the potential for achieving CW powers in excess of 1 kW over multi-octave frequency bands up to 20 GHz. This paper focuses on a four-way combiner and discusses the results obtained in combining mini-TWTs.

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