Abstracts

Three-Dimensional Power Combiners

W.A. Shiroma, B.L. Shaw and Z.B. Popovic. "Three-Dimensional Power Combiners." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 831-834.

Conventional free-space power combiners consist of an array of solid-state devices loading a two-dimensional grid. Here the concept is extended to three dimensions, in which multiple grids are placed in parallel in a Fabry-Perot cavity. The advantage of this approach is that a large number of devices can be combined to produce more output power, while simultaneously improving the heat sinking and power-handling capabilities since the power is distributed over several grid surfaces. Experimental results are presented for a 5 GHz double grid oscillator with an effective radiated power 3 dB larger than that of a single grid.

❑ Return to main document.