

Abstracts

A 25 watt and 50 watt Ka-band quasi-optical amplifier

S. Ortiz, J. Hubert, L. Mirth, E. Schlecht and A. Mortazawi. "A 25 watt and 50 watt Ka-band quasi-optical amplifier." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 797-800.

Results for a 25 Watt, 10 dB gain Ka-band Quasi-Optical (QO) amplifier array are presented in this paper. The amplifier consists of a 45-element two-sided active array with a hard-horn feed. Excess heat is removed via a metal carrier integrated into the array. Each unit-cell consists of patch antennas, cascaded MMIC amplifiers, and a through-plate coaxial transition. Performance and construction details are discussed. Preliminary data for a 98-element design are also included.

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