

Abstracts

A 4 watt Ka-band quasi-optical amplifier

J. Hubert, L. Mirth, S. Ortiz and A. Mortazawi. "A 4 watt Ka-band quasi-optical amplifier." 1999 MTT-S International Microwave Symposium Digest 99.2 (1999 Vol. II [MWSYM]): 551-554 vol.2.

This paper reports on demonstrated results for a 4 W, 16 dB gain Ka-band Quasi-Optical (QO) amplifier. This amplifier consists of a 13 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 unique through-thick-plate coupler. Performance and construction details are discussed. Preliminary results from a 45 element design are also included.

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