Abstracts

A miniature, MMIC one watt W-band solid-state transmitter

P. Stenger, M. Sarantos, E. Niehenke, H. Fudem, C. Schwerdt, F. Kuss, D. Strack, G. Hall and J. Masti. "A miniature, MMIC one watt W-band solid-state transmitter." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 431-434.

The design features and performance summary for a fully coherent, miniature (1.3 in/sup 3/), lightweight (2.4 oz.), all MMIC 1-watt W-band transmitter is presented. The design utilizes 16 channels each delivering 90 mW at W-band consisting of a cascaded Ka-band phase shifter, Ka-band amplifier, Ka to W-band tripler and a W-band amplifier. The outputs are efficiently combined with only 1.2 dB loss using two planar radial combiners and an integrated waveguide magic tee.

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