Abstracts

Integrated Parametric Amplifier Module with Self-Contained Solid-State Pump Source (Correspondence)

H.C. Okean, C.M. Allen, E.W. Sard and H. Weingart. "Integrated Parametric Amplifier Module with Self-Contained Solid-State Pump Source (Correspondence)." 1971 Transactions on Microwave Theory and Techniques 19.5 (May 1971 [T-MTT]): 491-493.

Three completely integrated S-band parametric amplifier modules, of a type ultimately suitable for spaceflight applications, have been constructed and tested. Each consists of a single-stage thin-film-microstrip 2.25-GHz parametric amplifier, closely integrated with a waveguide-mounted isolator-coupled 14-GHz Gunn-effect pump oscillator in a 6-in aluminum housing weighing less than 0.6 lb. The pertinent measured characteristics of the three modules include: 2.25-GHz center frequency, 15-dB maximum gain, 76-90-MHz 1-dB bandwidth, and 139-170° K passband temperature.

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