

# Abstracts

## A W-Band Integrated Power Module Using MMIC MESFET Power Amplifiers and Varactor Doublers

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*T.C. Ho, S.-W. Chen, K. Pande and P.D. Rice. "A W-Band Integrated Power Module Using MMIC MESFET Power Amplifiers and Varactor Doublers." 1993 Transactions on Microwave Theory and Techniques 41.11 (Dec. 1993 [T-MTT] (1993 Symposium Issue)): 2288-2294.*

A high-performance integrated power module using U-band MMIC MESFET power amplifiers in conjunction with W-band MMIC high efficiency varactor doublers has been developed for millimeter-wave system applications. This paper presents the design, fabrication, and performance of this W-band integrated power module. Measured results of the complete integrated power module show an output power of 90 mW with an overall associated gain of 29.5 dB at 94 GHz. A saturated power of over 95 mW was also achieved. These results represent the highest reported power and gain at W-band using MESFET and varactor frequency doubling technologies. This integrated power module is suitable for the future 94 GHz missile seeker applications.

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