

# Abstracts

## A W-Band Double/Amplifier Chain Using a MMIC Varactor Doubler and a MMIC Power MESFET Amplifier

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*G. Hegazi, E. Chang, J. Singer, F. Phelleps, P. McNally, K. Pande, P. Rice and P. Pages. "A W-Band Double/Amplifier Chain Using a MMIC Varactor Doubler and a MMIC Power MESFET Amplifier." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 933-936.*

A monolithic microwave integrated circuit (MMIC) W-band varactor doubler has been developed that delivers 30 mW of output power at 93 GHz with 12 percent conversion efficiency. U-band MMIC MESFET power amplifier chips were also developed that exhibit 0.23 W of output power with 13 dB of gain from 45.5 to 46.5 GHz. A doubler/amplifier chain has been integrated to deliver 30 mW of output power at 93 GHz with an overall gain of 7 dB.

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