

# Abstracts

## A Monolithic 75-110 GHz Balanced InP-Based HEMT Amplifier

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*H. Wang, R. Lai, S.T. Chen and J. Berenz. "A Monolithic 75-110 GHz Balanced InP-Based HEMT Amplifier." 1993 Microwave and Guided Wave Letters 3.10 (Oct. 1993 [MGWL]): 381-383.*

A monolithic balanced amplifier covering the entire W-band (75-110 GHz) have been developed using 0.1- $\mu$ m pseudomorphic InAlAs-InGaAs-InP HEMT technology. This MMIC amplifier demonstrated first pass success with a measured gain of  $23 \pm 3$  dB and good return loss from 75 to 110 GHz. The noise figure of this amplifier is about 6 dB around 94 GHz. To our knowledge, this is the best reported broad-band and high gain performance of the monolithic amplifiers covering the entire W-band.

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