# Abstracts

## A compact and wideband GaAs P-HEMT distributed amplifier IC based on a micro-machined CPW

*Sung-Gi Yang and Kwang-Seok Seo. "A compact and wideband GaAs P-HEMT distributed amplifier IC based on a micro-machined CPW." 2000 MTT-S International Microwave Symposium Digest 00.1 (2000 Vol. I [MWSYM]): 213-216.*

This paper presents a new GaAs P-HEMT distributed amplifier IC that employs a micro-machined, grooved-CPW. By removing the substrate between the signal and ground metal, the grooved-CPW has small effective dielectric constant (/spl epsi//sub r,eff/) and becomes a highly inductive line. When the grooved-CPW is used in the distributed amplifier, the f/sub 3dB/ and the chip size have been improved by about 20%. The fabricated GaAs P-HEMT distributed amplifier IC has a gain of 10 dB with f/sub 3dB/>50 GHz.

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