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FET AMPLIFIERS

Chairman: W. Kennan—Microwave Technology, Inc.

Session Abstract: This GaAs FET Amplifier session covers two new amplifier techniques, GaAs FET modeling, and state-of-the-art results on GaAs High Electron Mobility Transistors (HEMT).

The dual-fed distributed amplifier presents an interesting variatrion of the conventional distributed amplifier which removes the internal gate and drain line terminations for better noise performance. The "STACKFET," a variation on the dual-gate FET, combines the high gain, isolation, and gain control of a dual-gate FET with the stability and port impedances of a single-gate FET.

The distributed GaAs FET model provides a noise and small signal model which accounts for the distributed nature of the GaAs FET at millimeter wave frequencies.

Last, but not least, state-of-the-art noise and power results for HEMT devices are presented. Measured noise figure has dipped below 1.0 dB (0.8 dB) at 19 GHz and below 2.0 dB at a staggering 60 GHz. In the power regime, saturated power of 9.1 mW with 3.3 dB gain and 12% power-added-efficiency have been achieved at an even more staggering 94 GHz.

10:30 am–12:00 noon, May 27, 1988
Jacob Javits Convention Center, Hall 1E
Room 2