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SOLID STATE DEVICES

Chairman: Peter Staecker, M/A-COM, Inc.

Session Abstract: In the race to provide increases to the Pf^2 product in the millimeter wave frequency region, devices other than the ubiquitous FET have shown significant advances. This session focuses on power applications or capability of two- and three-terminal devices proposed for near-term use in the 20–70 GHz range.

The first two papers describe power amplifier applications of the GaAs permeable base transistor (PBT), and progress in device development of PNP and NPN heterojunction bipolar transistors (HBT). For frequencies above 30 GHz, two-terminal devices provide maximum solid-state power levels. The third paper of this session describes advances in a diode array approach to achieving millimeter-wave power by frequency multiplication. Finally, advances in silicon PBTs have allowed reporting, in the fourth paper, of extremely low-noise fundamental oscillators at 20 GHz.

10:30 am–12:00 noon, May 26, 1988
Jacob Javits Convention Center, Hall 1E
Room 3