

Session M

FET Power Applications

Chairman:

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Advancements in Ka-band pseudomorphic HEMT amplifiers, methods of minimizing distortion in MESFET power amplifiers and control devices, and novel MESFET oscillators are presented. Power of 0.8 watt at 35 GHz is reported for a two stage MIC amplifier utilizing pseudomorphic in GaAs HEMT devices. The second paper compares distortion properties of MESFET and PIN diode switches over 1–10,000 MHz, and investigates sources of distortion. The third paper incorporates dynamic gate bias adjustment as a function of input power level to optimized IMD of a 5 w 1.6 GHz FET amplifier. The fourth paper investigates and models physical source of phase distortion, and validates the model with a 950 MHz FET design that reduces phase variation to 2 degrees at 2 watts output. The final papers report a novel 12.7–14.8 GHz low noise FET VCO, and a four device spatial power combining FET oscillator that achieves 700 milliwatts effective radiated power in X-band.

8:00 a.m.–9:30 a.m., Wednesday, June 3, 1992
Kiva Auditorium