

Session PP

Transistor Power Amplifiers—I

Chairman:

D. Cahana

Avantek

Santa Clara, CA

This session addresses multiwatt applications of FET and HEMT technologies for radar in the C, X, and Ku bands and communications at 20 GHz. The first paper demonstrates a high efficiency, 5 to 10 GHz, 14 watt performance with very good gain flatness. The application of Low Temperature Cofired Ceramic (LTCC) to power amplifiers is illustrated in the next paper with a 8–14 GHz, 10 watt design. Progress in Heterostructure FET technology at Ku-band is reported in the third paper, which shows a fully monolithic 7 watt amplifier with 25% power added efficiency. Using PHEMT devices, the next paper demonstrates a 3.2 watt output at 20 GHz, with 10 dB gain and 35% power added efficiency. The last paper presents a partially monolithic 2-stage HFET amplifier with a single-frequency 4W output and 28% power added efficiency at Ku-band.

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1:30 p.m.–3:00 p.m., Thursday, June 17, 1993
Room 216/217

