# Session: WE3A

# Power Amplifier Technologies

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WE 3A

Several device technologies are described that show increased power output and improved effiencies over the whole microwave frequency range. At low frequencies, new Si based technologies capable of providing very high powers at acceptable efficiencies are emerging. These devices operate with relatively high biases of 40 - 90 V. A SiGe HBT amplifier achieved 230W at 2.8 GHz with 36% PAE, a SiC SIT based amplifier provided 1 KW at 600 MHz and a SIC MESFET provided 2W/mm at 1.8 GHz with 50% PAE. At higher frequencies, GaAs based devices have achieved new record results. At 8 GHz a MESFET push-pull amplifier provided 7W with 76% PAE. Two PHEMT based amplifiers provided 16W at 12 GHz with 36% PAE and 5W with 40% PAE at 29 GHz.

**1:40 pm - 3:30 pm Wednesday, June 19, 1996**
**Room 135**