

Design and Performance of Microwave and Millimeter Wave High Efficiency Power Amplifiers

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In the first part of the tutorial, device technologies will be covered including Si BJT, Si LDMOS, MESFET, HBT, PHEMT, InP, MHEMT, and Wide Bandgap (SiC, GaN). Content includes principles of operation, structures, characteristics, classes of operation and state of the art benchmarks. Power amplifiers utilizing these device technologies covering UHF through W-Band are described including state of the art benchmarks.

In the second part of the tutorial, the design methodology for a three-stage 44 GHz MMIC power amplifier will be described step by step using Agilent ADS.