

A Comparison of GaAs Transistors as Passive Mode Mixers

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A number of GaAs transistors were evaluated as passive mode mixers with a 10 GHz RF and 2 GHz IF. Both single-tone and two-tone performance were measured for an Ion Implanted MESFET, Spike-doped PsMESFET, a Power PsHEMT and a npn Power HBT. All were shown to have a substantially lower distortion than a comparable diode mixer. One transistor, the Spike doped PsMESFET, has a relative third order intercept point 20 dB higher than that of a diode mixer.

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