Abstracts

Direct measurement of the maximum operating region in GaAs HBTs for RF power amplifiers

A. Inoue, S. Nakatsuka, S. Suzuki, K. Yamamoto, T. Shimura, R. Hattori and Y. Mitsui. "Direct measurement of the maximum operating region in GaAs HBTs for RF power amplifiers." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1687-1690 vol.3.

Current and voltage waveforms of GaAs HBTs at 1 GHz have been directly measured using a microwave waveform measurement system. The maximum operating region has been experimentally investigated by sweeping load lines. The limits of a small input power are found to come from the thermal runaway and avalanche breakdown of the device. With large input power, the HBT is found to operate beyond the DC limit of thermal runaway.

❑ Return to main document.