Abstracts

Small- and large-signal operation of X-band CE and CB SiGe/Si power HBT's

Jae-Sung Rieh, Liang-Hung Lu, Zhenqiang Ma, Xuefeng Liu, P.B. Katehi, P. Bhattacharya and E.T. Croke. "Small- and large-signal operation of X-band CE and CB SiGe/Si power HBT's." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1191-1194 vol.3.

Common-emitter (CE) and common-base (CB) multifinger SiGe/Si power heterojunction bipolar transistors (HBTs) for X-band operation are reported for the first time. 10-finger CB and CE devices show f/sub max/ of 28 GHz and 20 GHz, maximum PAE of 34.9% and 17.5%, and P/sub out/ at 1 dB gain compression point of 15.6 dBm and 17.5 dBm, respectively, in class A operation at 8 GHz for CW mode.

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