Abstracts

Characteristics of microwave power GaN HEMTs on 4-inch Si wafers

S. Manohar, A. Narayanan, A. Keerti, A. Pham, J. Brown, R. Borges and K. Linthicum. "Characteristics of microwave power GaN HEMTs on 4-inch Si wafers." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 449-452 vol.1.

We present the design and development of AlGaN/GaN high electron mobility transistors (HEMTs) fabricated on a 4-inch Si wafer. The GaN HEMT devices demonstrate a maximum drain current of 900 mA/mm, a peak g/sub m/ of 300 mS/mm, and a microwave output power density of 1.5 W/mm. To the best of the authors' knowledge, these are the best results reported on GaN HEMTs on 4-inch Si wafers.

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