Abstracts

2-V-operation /spl delta/-doped power HEMT's for personal handy-phone systems

Yeong-Lin Lai, E.Y. Chang, Chun-Yen Chang, T.H. Liu, S.P. Wang and H.T. Hsu. "2-V-operation /spl delta/-doped power HEMT's for personal handy-phone systems." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 219-221.

A high-efficiency and high-power-density /spl delta/-doped AlGaAs/InGaAs HEMT with low adjacent channel leakage has been developed for the digital wireless personal handy-phone system (PHS). When qualified by 1.9-GHz /spl pi//4-shifted quadrature phase shift keying (QPSK) modulated PHS standard signals, the 2.0-V-operation HEMT with a 1-mm gate width demonstrated a power-added efficiency of 45.3% and an output power density of 105 mW/mm. This is the highest power density ever reported by power transistors for the PHS. State-of-the-art results for the PHS operating at 2.0 V were achieved by the S-doped power HEMT for the first time.

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