High Power, High Efficiency PHEMTs for Use at 8 GHz

D. Teeter, S. Bouthillette, L. Aucoin, A. Platzker, C. Alfaro and D. Bradford. "High Power, High Efficiency PHEMTs for Use at 8 GHz." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 323-326.

Power PHEMTs from 4.8 mm to 14.4 mm gate periphery have been characterized at 8 GHz to study the effect of device scaling on output power, gain, and efficiency. The effect of unit gate width, gate to gate spacing, and substrate thickness on PHEMT performance is also described. A 14.4 mm device delivered 8.09 W with 12.67 dB associated gain and 55.8 % PAE under 8 V operation at 8 GHz.

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