Abstracts

Quarter-Micron WSi/Au Gate AlGaAs/InGaAs HJFETs for Q-Band Power Applications

T. Matsumura, M. Kanamori, Y. Oikawa and S. Shinozaki. "Quarter-Micron WSi/Au Gate AlGaAs/InGaAs HJFETs for Q-Band Power Applications." 1993 MTT-S International Microwave Symposium Digest 93.3 (1993 Vol. III [MWSYM]): 1481-1484.

Quarter-micron T-shaped (WSi/plated-Au) gate AIGaAs/InGaAs HJFETs for Q-band power applications are reported. Fmax of 170GHz was achieved for the 100µm gate-width device. Fmax's of 115 and 90GHz were realized for 400 and 800µm gate-width devices, respectively, with 100µm unit gate finger width, by reducing the gate parasitic capacitance and the gate resistance employing Au-plating for the gate metal formation. An output power of 25dBm was obtained with a linear gain of 6.6dB at 40GHz band.

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