

# Abstracts

## Broad-Band Internal Matching of Microwave Power GaAs MESFET's

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*K. Honjo, Y. Takayama and A. Higashisaka. "Broad-Band Internal Matching of Microwave Power GaAs MESFET's." 1979 Transactions on Microwave Theory and Techniques 27.1 (Jan. 1979 [T-MTT]): 3-8.*

Broad-band internal matching techniques for high-power GaAS MESFET's at C band have been developed adopting novel circuit configurations and large-signal characterizations in the circuit design. The lumped-element two-section input matching network is formed on a single ceramic plate with a high dielectric constant. The semidistributed single-section output circuit is formed in microstrip pattern on an alumina plate. The internally matched GaAs FET with 11200- $\mu$ m total gate width developed has a 2.5-W power output at 1-dB gain compression and a 4.4-W saturated power output with 5.5-dB linear gain from 4.2 to 7.2 GHz without external matching. The FET internally matched from 4.5 to 6.5 GHz exhibited 5-W saturated power output with 6-dB linear gain.

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