# Abstracts

## GaAs/InGaAs Heterostructure FETs with 1.6W Output Power at 1GHz

*J.W. Lee, M.K. Gong, S.G. Cho and B. Kim. "GaAs/InGaAs Heterostructure FETs with 1.6W Output Power at 1GHz." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 453-456.*

Data are presented on high power GaAs/InGaAs pseudomorphic heterostructure FETs with delta doped channels, which are applicable for the low voltage operating celluar phone power modules. Process yields of such AIGaAs-free device are significantly improved in epitaxy and ohmic metalization. With a 5V Class A bias condition, the packaged device with a 1.2mm x 12mm gate exhibits a power output of 1.6W and a power added efficiency of 44-percent at 1GHz operation. The smaller device with a 1.2µm x 2mm gate shows a 160 mW output and a 34-percent efficiency at 2GHz with a 3.3V bias. These results imply that the GaAs/InGaAs HFET can be a strong candidate for the low cost commercial source of many kinds of high power microwave devices operating at relatively low operating voltages.

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