Abstracts

Pseudomorphic Inverted HEMT Suitable to Low Supplied Voltage Application (Dec. 1992 [T-MTT])

M. Kasashima, Y. Arai, H.I. Fujishiro, H. Nakamua and S. Nishi. "Pseudomorphic Inverted HEMT Suitable to Low Supplied Voltage Application (Dec. 1992 [T-MTT])." 1992 Transactions on Microwave Theory and Techniques 40.12 (Dec. 1992 [T-MTT] (1992 Symposium Issue)): 2381-2386.

Enhancement-mode pseudomorphic inverted HEMT with short gate length shows superior saturation properties in low drain voltage. Excellent saturation properties in the low field is suitable to low supplied voltage application. High frequency properties of FET were also studied by using two types of frequency dependent measurement systems which represent active load and common-source circuits. It was confirmed that the feature of low knee voltage in the static I-V is preserved above 100 kHz, which predicts the microwave characteristics of the device. The estimated output power for the device was 50% higher than that of conventional pseudomorphic HEMT at supplied voltage of 1 V.

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