Abstracts

HEMT for Low-Noise Microwaves: CAD-Oriented Performance Evaluation

G. Capponi, B. Di Maio and P. Livreri. "HEMT for Low-Noise Microwaves: CAD-Oriented Performance Evaluation." 1995 Transactions on Microwave Theory and Techniques 43.6 (Jun. 1995 [T-MTT]): 1226-1229.

This paper shows how a graphic processing of low-noise HEMT's small signal parameters, allows evaluating and comparing the actual performance obtainable in front-end applications. HEMT's tradeoff charts which solve tradeoffs among the basic low-noise amplifier performance are reported. Figures of merit for microwave low-noise HEMT which represent a fast way of evaluating HEMT in actual working conditions and of selecting the proper transistor, are defined. As an example, the tradeoff charts and the figures of merit of two HEMT's (Fujitsu FHR02FH, Sony 2SK677) and a pseudomorphic-HEMT (Celeritek CFB001-03) are reported and compared with the data sheets.

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