

Abstracts

Performance Capabilities of Indium Phosphide $n^{sup +}/-n-n^{sup +}/$ Transferred Electron Devices at Millimetre Wave Frequencies

I.G. Eddison and I. Davies. "Performance Capabilities of Indium Phosphide $n^{sup +}/-n-n^{sup +}/$ Transferred Electron Devices at Millimetre Wave Frequencies." 1982 MTT-S International Microwave Symposium Digest 82.1 (1982 [MWSYM]): 510-512.

This paper describes the development of indium phosphide $n^{sup +}/-n-n^{sup +}/$ devices which exhibit good output power and conversion efficiency capabilities in the mm wave frequency range. A brief review of the material growth and device fabrication technologies is given before the resultant device performances are discussed. It is shown that above 50 GHz indium phosphide exhibits clear power and efficiency advantages over existing gallium arsenide TEOS. Details are also given of the second order stability parameters shown by practical indium phosphide devices together with their likely importance to the system designer.

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