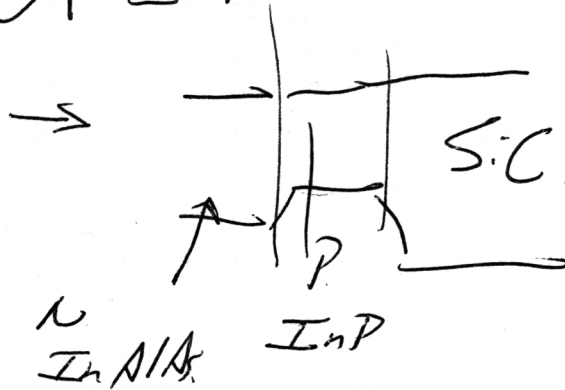


Prospects for Wide Bandwidth Transferred Substrate Power HBTs

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HBTs exhibit ~~both~~ higher power density than HEMTs. Output capacitance for a given power level is also lower, enabling higher bandwidths in broadband power amplifiers. High base sheet and contact resistance are major impediments to high HBT bandwidths in the AlGaIn/GaN material system. Difficulties with base resistance can be greatly reduced by scaling the emitter and collector junction widths to c.a. 0.1 microns. In combination with recent advances in P-doping of AlGaIn/GaN materials, high HBT bandwidths are feasible.

FUSION



Suron File P130 Superlattice