

Frequency Response of HBT's as Photodetectors

E. Suematsu and H. Ogawa. "Frequency Response of HBT's as Photodetectors." 1993 Microwave and Guided Wave Letters 3.7 (Jul. 1993 [MGWL]): 217-218.

Photodetection measurements of HBT's fabricated by the MMIC HBT process have been experimentally investigated for the first time. A 3-dB bandwidths of 2 GHz and more than 20 GHz have been achieved in a CE (common emitter) HBT and a CB (common base) HBT, respectively. The photoresponse of the CBHBT is approximately 25 dB higher than that of the CEHBT at 1 GHz. The CEHBT has a higher signal-to-noise ratio than a PIN/50-Omega FET-amplifier at 10 GHz.

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