Abstracts

HBT active antenna as a self oscillating Doppler sensor

M.J. Kelly, J.A.C. Stewart and A.D. Patterson. "HBT active antenna as a self oscillating Doppler sensor." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 1065-1068.

This paper investigates the use of Heterojunction Bipolar Transistors (HBTs) as the working device in an active antenna for a self detection system. The devices used here are GaInP-GaAs HBT's from the GMMT F40 process. The design and performance of an active antenna based on this device is presented. A new large signal model is used to develop the active antenna described in this paper. The element oscillates at 11.40 GHz and produces approximately 5 mW of radiated power. A minimum detectable signal (MDS) of -99 dBm in a 10 Hz bandwidth has been measured.

❑ Return to main document.