Abstracts

0.7 W X-Ku-Band High-Gain, High-Efficiency Common Base Power HBT

N.L. Wang, W.J. Ho and J.A. Higgins. "0.7 W X-Ku-Band High-Gain, High-Efficiency Common Base Power HBT." 1991 Microwave and Guided Wave Letters 1.9 (Sep. 1991 [MGWL]): 258-260.

Small sized AIGaAs-GaAs HBT's have achieved excellent power performance throughout the microwave frequency band. With the implementation of the multi-via-hole design, the HBT performance (gain and efficiency) is maintained as the size increases. A 0.7 W common-base (CB) power HBT with performance around 10 dB gain and 50% PAE well into the Ku band is reported. The performance is comparable to the pseudomorphic HEMT in this frequency range. The yield and uniformity are excellent. The high bias voltage (9.3 V V/sub ce/) is also strongly desired from system viewpoint.

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