Abstracts

Design and performance of wideband, low-noise, millimeter-wave amplifiers for microwave anisotropy probe radiometers (2000 [RFIC])

M.W. Pospieszalski, E.J. Wollack, N. Bailey, D. Thacker, J. Webber, L.D. Nguyen, M. Le and M. Lui. "Design and performance of wideband, low-noise, millimeter-wave amplifiers for microwave anisotropy probe radiometers (2000 [RFIC])." 2000 Radio Frequency Integrated Circuits (RFIC) Symposium 00. (2000 [RFIC]): 217-220.

Differential pseudo-correlation radiometers covering 20-25 GHz, 28-37 GHz, 35-46 GHz 53-69 GHz and 82-106 GHz are used in the Microwave Anisotropy Probe (MAP) mission to be launched in late 2000. This paper describes the design, performance and manufacturing of 140 InP HFET amplifiers suitable for cryogenic cooling which exhibit low noise performance and complex gain match over the given radiometer bandwidths (typical noise temperature of 90 K, or 1.2 dB noise figure, for W-band amplifier at 80 K ambient).

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