Abstracts

Hybrid Semiconductive/High Temperature Superconductive Ku-Band Oscillator and Amplifier MICs

J.W. Smuk, M.G. Stubbs and J.S. Wight. "Hybrid Semiconductive/High Temperature Superconductive Ku-Band Oscillator and Amplifier MICs." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 485-488.

The design, fabrication and testing of hybrid semiconductive/high temperature superconductive (HTSC) Ku-band Microwave Integrated Circuits (MICs) operating at cryogenic temperatures is described. The first cooled feedback oscillator using GaAs FET Monolithic Microwave Integrated Circuit (MMIC) low-noise amplifiers for gain and a high Q TIBaCaCuO linear resonator for stabilization is presented together with a low-noise HEMT amplifier using TIBaCaCuO distributed stubs for matching. Both demonstrate that HTSC and semiconductive elements can be successfully integrated.

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