

Performance of a Y-Ba-Cu-O Superconducting Filter/GaAs Low Noise Amplifier Hybrid Circuit

K.B. Bhasin, S.S. Toncich, C.M. Chorey, R.R. Bonetti and A.E. Williams. "Performance of a Y-Ba-Cu-O Superconducting Filter/GaAs Low Noise Amplifier Hybrid Circuit." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 481-483.

A superconducting 7.3 GHz two-pole microstrip bandpass filter and a GaAs low noise amplifier (LNA) were combined into a hybrid circuit and characterized at liquid nitrogen temperatures. This superconducting/semiconducting circuit's performance was compared to a gold filter/GaAs LNA hybrid circuit. The super-conducting filter/GaAs LNA hybrid circuit showed higher gain and lower noise figure than its gold counterpart.

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