Abstracts

Planar X-Band Squid-Gradiometer Design for HTS Applications

B. Mayer, R. Knochel, T. Bade, M. Schilling and B. David. "Planar X-Band Squid-Gradiometer Design for HTS Applications." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 473-476.

An RF-SQUID gradiometer integrated in a lambda/2 length microstrip resonator is described. The device was realized with low temperature superconductors (LTS) using a shunted NbN/MgO/NbN SIS junction as the active element. Various measurement results are given. Measurements of the complex reflection coefficient show clearly a periodic dependence on an applied dc flux. Due to the fully planar design, the SQUID is an appropriate basic element of a one chip magnetometer including flux transformer. Work is under way to realize the circuit in high temperature superconductors (HTS).

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