Abstracts

High-T/sub c/ Superconducting High-Q Coplanar Resonator Made on MgO

T. Konaka, M. Sato, H. Asano, S. Kubo and Y. Nagai. "High-T/sub c/ Superconducting High-Q Coplanar Resonator Made on MgO." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 1337-1340.

Coplanar 2-port transmission line resonators were made using high-T/sub c/ superconducting EuBa/sub 2/Cu/sub 3/O/sub x/ film on MgO. The EuBa/sub 2/Cu/sub 3/O/sub x/ films were prepared by magnetron sputtering, and patterned by photolithography and Ar ion milling. We measured the resonator characteristics as a function of temperature and power. The highest unloaded Q value obtained was 12500 at 28 K and at 3.9 GHz and the surface resistance of the film was estimated at about 40 µOmega. No change in Q values was not observed at input power levels less than -20 dBm.

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