Abstracts

Testchip for High Temperature Superconductor Passive Devices

R. Dill, J. Otto, G. Riha, P. Russer, L. Schultz, G. Solkner, A.A. Valenzuela and E. Wolfgang. "Testchip for High Temperature Superconductor Passive Devices." 1990 MTT-S International Microwave Symposium Digest 90.2 (1990 Vol. II [MWSYM]): 863-866.

A testchip for a full characterisation of High Temperature Superconducting (HTS) thin film properties relevant to planar passive microwave device applications is presented. The chip integrates coplanar resonators and transmission lines along with structures for process monitoring. Measurements of the quality factor of coplanar resonators as a function of temperature and input power are reported. For the coupling of the resonators to the input signals microwave probes with 40GHz bandwidth have been used within the cryo-enviroment. Quality values obtained at 5GHz and 77K are superior to that of an equivalent copper resonator by a factor of about 40.

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