Abstracts

High T/sub c/ Superconducting Coplanar Delay Line with Long Delay and Low Insertion Loss

Z.-Y. Shen, P.S.W. Pang, W.L. Holstein, C. Wilker, S. Dunn, D.W. Face and D.B. Laubacher. "High T/sub c/ Superconducting Coplanar Delay Line with Long Delay and Low Insertion Loss." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 1235-1238.

11-nanosecond coplanar delay lines have been fabricated from TIBaCaCuO (2212) and YBaCuO (123) high Tc superconducting thin films on l"x1" LaAlO/sub 3/ substrate. This device exhibits the unique combination of long delay (11 ns), low insertion loss (<0.25 dB/ns up to 8 GHz), and low cross talk (< -50 dB). In terms of total delay and delay per unit area, to our knowledge, it is a record for high T/sub c/ superconductor delay lines. Test data are compared with theoretical values. Potential applications are discussed.

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