Abstracts

Low-Loss Microwave Ferrite Phase Shifters with Superconducting Circuits

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Microwave devices comprising magnetized ferrite in contact with superconductor circuits designed to eliminate magnetic field invasion of the superconductor have demonstrated phase shift without significant conduction losses. The device structures are adaptable to low-or high-T/sub c/ superconductors. A non-optimized design of a ferrite phase shifter that employs a niobium meanderline has produced over 1000 deg of differential phase shift with a figure of merit exceeding 1000 deg/dB at X band.

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