Abstracts

LiNb0/sub 3/ Waveguide Modulator with 1.2 µm Thick Electrodes Fabricated by Lift-Off Technique

P.-L. Liu. "LiNb0/sub 3/ Waveguide Modulator with 1.2 µm Thick Electrodes Fabricated by Lift-Off Technique." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1763-1770.

In order to make efficient high-frequency electrooptic modulators, the microwave loss in the electrodes has to be minimized. A lift-off technique using chlorobenzene to harden the top of AZ1350-J photoresist was adopted to fabricate 1.2 µm thick metal electrodes. A 1 cm long 15 µm wide strip electrode has a dc resistance of 11 Omega, which is substantially less than that of the 2000 Å thick electrodes routinely fabricated. A 1 cm long traveling-wave phase modulator consisting of a single waveguide was tested. The measured -3 dB bandwidth is 3.8 GHz.

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