Abstracts

Four-branch optical frequency shifter using coupled inverted slot lines at 60 GHz

W. Chujo, T. Hanasaka, M. Naganuma and T. Yoneyama. "Four-branch optical frequency shifter using coupled inverted slot lines at 60 GHz." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1011-1014 vol.3.

A millimeter-wave four-branch optical frequency shifter is proposed and integrated on an X-cut LiNbO/sub 3/ substrate. The millimeter-wave electrodes consist of two pairs of 90/spl deg/ coupled inverted slot lines with 180/spl deg/ out of phase to suppress the undesired optical image and original carrier simultaneously. 60-GHz frequency shifting of the optical carrier with a wavelength of 1.3 /spl mu/m has been characterized experimentally. The optical image and original carrier were suppressed with more than 12 dB and 5 dB, respectively below the desired 60-GHz frequency-shifted signal.

❑ Return to main document.