Abstracts

Micromachined sub-millimeter and millimeter wave variable polarisation compensator

T.D. Drysdale, H.M.H. Chong, R.J. Blaikie and D.R.S. Cumming. "Micromachined sub-millimeter and millimeter wave variable polarisation compensator." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 535-538 vol.1.

A micromachined variable polarisation compensator has been designed and demonstrated experimentally at 100 GHz. The device uses two interlocking artificial dielectric gratings to produce a birefringence that varies as a function of the separation distance. The maximum phase difference was measured to be 74/spl deg/, in good agreement with computer simulations. Quarter wave dielectric antireflection coatings can be added to the exterior surfaces to reduce the insertion loss.

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