

we forgot to explain that we only used a quasi-isotropic approximation theory for the problem [2]. Though the exact field analysis requires hybrid modes in this case, the field expansion in the above mentioned paper employs pure TE-modes, which are valid approximately. This was done in order to allow the efficient use of the developed field expansion method for isotropic fin lines [1].

The error introduced by neglecting the hybrid character of the higher order modes is relatively small, since the main determinant of the field expansion of fin-line structures is known to be the fundamental mode $n = 0$, which, admittedly, has been treated correctly in the paper. As we mentioned in our paper, our contribution was intended to trigger further work, especially in the field-theoretical area of ferrite loaded fin lines. We are happy to hear that Mr. Lange apparently will present a full-wave hybrid theory of this problem in the future.

REFERENCES

- [1] A. Beyer and I. Wolff, "The solution of the earthed finline with finite metallization thickness," *IEEE MTT-S Symp. Dig.*, 1980, pp. 258-260.
- [2] I. Wolff, *Felder und Wellen in gyrotropen Mikrowellenstrukturen*, Braunschweig, Vieweg, 1973, pp. 91-92.

Corrections to "A More Accurate Model of the TE₁₀-Type Waveguide Mode in Suspended Substrate"

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The following corrections should be made to the above paper¹. On page 293, (1) should read

$$Z_2 \tan \phi_2 - Z_1 \cot \phi_1 = 0.$$

On page 293, column one, six lines below (1) the definition of ϵ_1 is

$$\epsilon_1 = \left[1 - \frac{b_3}{b_1} \left(\frac{\epsilon_r - 1}{\epsilon_r} \right) \right]^{-1}.$$

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¹S. B. Cohn and G. D. Osterhues, *IEEE Trans. Microwave Theory Tech.*, vol. MTT-30, pp. 293-294, Mar. 1982.

Patent Abstracts

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both modal interference switches/modulators and branching waveguide switches/modulators are disclosed.

Polarization-Independent Optical Switches/Modulators

Inventors: Thomas G. Giallorenzi;
Richard A. Steinberg.

Assignee: The United States of America as
represented by the Secretary of the
Navy.

Filed: Mar. 24, 1978.

Abstract—Optical channel waveguide switches/modulators having polarization-independent operation are disclosed. Electrodes are disposed in proximity to the waveguide channels to provide an electric field that is primarily horizontally directed in at least one channel and an electric field that is primarily vertically directed in at least one channel. Since the different electric-field orientations electrooptically induce difference changes in the index of refraction for waves of different polarization in the guides, this permits improved electrooptic control over both TM-like and TE-like modes. Embodiments of

16 Claims, 17 Drawing Figures

