

## REFERENCES

- [1] R. F. Harrington, *Time Harmonic Electromagnetic Fields*. New York: McGraw-Hill, 1961, p. 53.
- [2] R. E. Collin and F. J. Zucker, *Antenna Theory*, Part 1. New York: McGraw-Hill, 1969, pp. 18-19.
- [3] D. Mirshekar-Syahkal, "Accurate solution of microstrip and coplanar structures for dispersion and for dielectric and conductor losses," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-27, pp. 694-699, July 1979.
- [4] A. Gopinath, R. Horton, and B. Easter, "Microstrip loss calculations," *Electron. Lett.*, vol. 6, no. 2, pp. 40-41, Jan. 1970.
- [5] R. Horton, "Loss calculations of coupled microstrip lines," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-21, pp. 359-360, May 1973.
- [6] B. E. Spielmann, "Dissipation loss effects in isolated and coupled transmission lines," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-25, pp. 648-656, Aug. 1977.
- [7] R. H. Jansen, "High speed computation of single and coupled microstrip parameters including dispersion, high-order modes, loss and finite strip thickness," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-26, pp. 75-82, Feb. 1978.

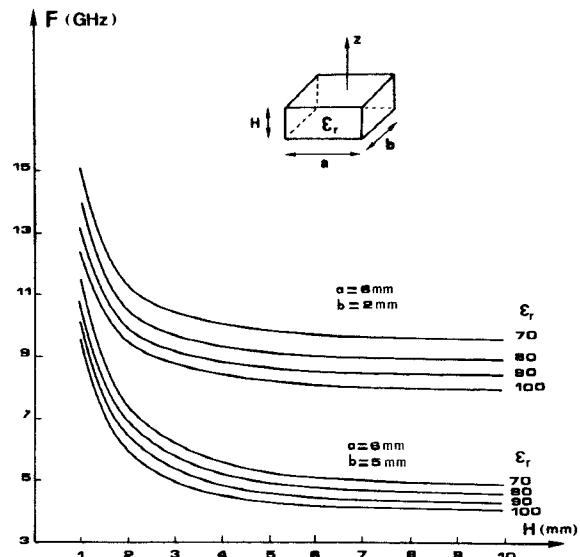


Fig. 1. Resonant frequencies of the  $TE_{11p}$  mode of an isolated rectangular resonator.

### Correction to "Accurate Resonant Frequencies of Dielectric Resonators"

P. GUILLOU, Y. GARAUDET, AND J. CITERNE

After a study (ATP 2365 of the French CNRS) we have detected an error in Fig. 11 of the above paper.<sup>1</sup> In fact, it is necessary to replace the curves of this figure by those presented here.

This modification is necessitated because of the bad initialization of the computer program which gives a wrong result for resonant frequency of the  $TE_{11p}$  mode of the rectangular dielectric resonator.

However, this error has no effect on the validity of the method presented in the above paper.<sup>1</sup> To verify this we present in Table I, theoretical and experimental results obtained by using a rectangular resonator of permittivity  $\epsilon_r = 36$ . There is a good agreement between measured ( $f_e$ ) and calculated ( $f_t$ ) resonant frequencies of magnetic dipolar ( $TE_{11p}$ ) mode.

Manuscript received November 15, 1979.

P. Guillon and Y. Garault are with L.E.M. ERA CRNS 535 U.E.R. Sciences-123, rue A. Thomas, 87060, Limoges Cedex, France.

J. Citerne is with C.H.S. LA CRNS 287, Université de Lille 1, 59650 Villeneuve D'Ascq, France.

<sup>1</sup>P. Guillon and Y. Garault, "Accurate resonant frequencies of dielectric resonators," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-26, p. 916, Nov. 1977.

TABLE I  
RESONANT FREQUENCY OF THE  $TE_{11p}$  MODE OF DIELECTRIC ( $\epsilon_r = 36$ )  
RECTANGULAR RESONATOR OF CROSS SECTION ( $a = 6$  mm,  $b = 5$  mm)

H (mm)	7,96	6	4,1	2,2
$f_t$ (MHz)	6866	7110	7770	9680
$f_e$ (MHz)	6730	7010	7728	9460
accuracy : $\frac{f_t - f_e}{f_t}$ in percent	2	1,5	0,6	2

We can also note that such a disagreement does not exist with the circular shape, also investigated in the above paper<sup>1</sup> and for which the initialization of the computer program is good.

### ACKNOWLEDGMENT

The authors thank Mr. Simonet and Mage of Laboratoire central de Recherche, Thomson CSF, Corbeville, France, who have supplied the dielectric resonators.