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Correction to "Cylindrical Dielectric Resonators and their Applications in TEM Line Microwave Circuits"

MARIAN W. POSPIESZALSKI

In the above paper¹ the following correction should be made. Equation (3) should read as

$$F_0^2 = (u^2 + w^2) \frac{\epsilon_r}{\epsilon_r - 1}. \quad (3)$$

This is merely a typographical error and does not affect the other equations or results of the analysis.

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¹M. W. Pospieszalski, *IEEE Trans. Microwave Theory Tech.*, vol. MTT-27, pp. 233-238, Mar. 1979.

Addendum to "Design of Microwave GaAs MESFET's for Broad-Band Low-Noise Amplifiers"

HATSUAKI FUKUI

It has been called to the author's attention that (3) in the above paper¹ appears to be inadequate [1], especially for scaling [2]. Considering this situation the expression should read

$$R_n = \frac{k_2}{g_m} \quad (3)$$

where $k_2 = 0.8$.

This modification leads to rewriting (12) as follows:

$$R_n = \frac{40}{Z} \left[\frac{aL}{N} \right]^{1/3} \Omega. \quad (12)$$

Consequently, the numerical values for R_n in Fig. 8 should be, in descending order, 46, 39, 33, 29, 25, 21, 18, and 15. Figs. 9 and 10 are also slightly affected by the revised expression. However, the principal statement and conclusions remain unchanged.

The author wishes to thank Dr. R. A. Pucel for his encouragement concerning this amendment.

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¹Hatsuaki Fukui, *IEEE Trans. Microwave Theory Tech.*, vol. MTT-27, pp. 643-650, July 1979.

Erratum to "Approximate Formulas for Line Capacitance and Characteristic Impedance of Microstrip Line"

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In the above paper [1], the approximate formula (42) for the characteristic impedance Z of a microstrip line, with substrate dielectric constant ϵ_r and thickness to width ratio h/W , should be

$$Z \approx \frac{377}{\sqrt{\epsilon_r}} \frac{h}{W} \left\{ 1 - \frac{2}{\pi \epsilon_r} \left(\frac{h}{W} \right) \left[(1 + \epsilon_r) \ln \left(\frac{2h}{W} \right) - 2.230 - 4.554 \epsilon_r - (4.464 + 3.89 \epsilon_r) \frac{h}{W} \right] \right\}^{-1/2}, \quad \text{for } h/W \text{ small.}$$

The approximate formula (44) for the line capacitance should be

$$\tilde{C} \approx \frac{\pi(1 + \epsilon_r)h}{\epsilon_r W} \left\{ \ln \left(\frac{8h}{W} \right) + \frac{1}{16(1 + \epsilon_r)} \frac{W^2}{h^2} + \frac{\epsilon_r - 1}{\epsilon_r} \left[0.041 \left(\frac{W}{h} \right)^2 - 0.454 \right] \right\}^{-1}, \quad \text{for } h/W \text{ large.}$$

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¹S. Y. Poh *et al.*, *IEEE Trans. Microwave Theory Tech.*, vol. MTT-29, pp. 135-142, Feb. 1981.