

# Correspondence

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## Comments on “Miniaturized Wilkinson Power Dividers Utilizing Capacitive Loading”

Joe Staudinger

I respectfully point out what seem to be errors in the manuscript.<sup>1</sup> For the circuit topology shown in Fig. 1, an *even-odd mode analysis* shows that the conditions necessary to achieve zero reflection for all three ports and infinite isolation between ports 2 and 3, requires the value of  $C_2$  to be twice  $C_1$  ( $C_1 = 2C_2$ ). This relationship is shown reversed in the manuscript. Secondly, derivation of (2) by assuming all three ports are equally terminated by impedance  $Z_o$ , requires  $C_1$  to take the form

$$C_1 = \frac{\sqrt{2} \cos(\beta_o l)}{\omega_o Z_o}.$$

Thus, entries listed in Table I for  $C_1$  are incorrect.

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<sup>1</sup>M. Scardelletti, G. Ponchak, T. Weller, *IEEE Microwave Wireless Compon. Lett.*, vol. 12, pp 6–8, Jan. 2002.

## Author's Reply

M. C. Scardelletti

We respectfully appreciate the comments of Dr. Staudinger regarding errors in the above paper. He is correct that  $C_2$  must equal  $C_1/2$  whereas in the paper  $C_2$  was expressed as being equal to  $2C_1$ . The equation given by Dr. Staudinger for  $C_1$  is also correct. Equation (2) of the paper should be

$$C_2 = \frac{\cos(\beta_o \cdot l)}{\omega_o \cdot Z_o \cdot \sqrt{2}}$$

and the heading for column 2 of Table I should be  $C_2$ . We have verified that the values listed in column 2 of Table I are correct with the change in heading, and the correct equations were used in the design of the miniaturized Wilkinson power dividers. Lastly the errors in typing the manuscript do not alter the results and discussions offered in the paper.

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