Those given by Abouzahra are correct except that the last summation should start from $n=1$, not from $n=0$, which will lead to divergence.

REFERENCES

[1] L. Lewin, *Polylogarithms and Associated Functions*. New York: Elsevier, 1981, ch. 4.
[2] I. S. Gradshteyn and I. M Ryzhik, *Table of Integrals, Series, and Products* New York: Academic Press, 1980, p. 20, eqs. 2.519 and 4 224, p 4, eq. 8.261.

Correction to "Formulation of the Singular Integral Equation Technique for Planar Transmission Lines"

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In the above paper,[1] it has been wrongly concluded that (17) and (18), which represent the energy coupling between a pair of complex modes, mean that each mode cannot exist alone.

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[1]A S. Omar and K. Schünemann, *IEEE Trans. Microwave Theory Tech* , vol. MTT-33, pp. 1313–1322, Dec. 1985
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Exciting only one mode of a pair of complex modes is, in principle, possible[2] because a mode of propagation is a possible solution of Maxwell's equations inside the guiding structure which satisfies the boundary and/or the radiation conditions. The difference between such a mode and other usual modes is that it carries, by itself, neither active nor reactive power (see (17)).

Propagating modes carry active power, whereas evanescent modes carry reactive power. Only *modes at cutoff* carry neither active nor reactive power. We can then conclude that one mode of a pair of complex modes behaves in this aspect like a mode at cutoff, provided that the other mode of the same pair is not excited. When both modes are excited, the situation is different. Now they interact together (see (18)) so that both carry reactive power.

[2]As has been pointed out by Prof. Piefke of the Technische Universität Darmstadt.

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