Abstracts

Numerical Analysis of H-Plane Waveguide Junctions by Combination of Finite and Boundary Elements (Comments)

Y. Leviatan and G.S. Sheaffer. "Numerical Analysis of H-Plane Waveguide Junctions by Combination of Finite and Boundary Elements (Comments)." 1989 Transactions on Microwave Theory and Techniques 37.4 (Apr. 1989 [T-MTT]): 805-805.

In the above paper, Ise and Koshiba consider a lossy dielectric post in a rectangular waveguide. In figures 6 through 10, they compare their results with results published by us in [1] and infer that their results are more reasonable than ours. We rechecked our results and noted that the results of Ise and Koshiba are indeed the more accurate ones. We found out that the library subroutine that we used in 1985 for calculating Hankel functions with complex arguments was, unfortunately, deficient. This subroutine affected only those results in [1] pertaining to the lossy post case. Since that time the library subroutine had been corrected, and consequently the plots we now obtain using the method of [1] are consistent with those given by Ise and Koshiba in all regions. Computed results for a sample of the cases considered in table I of their paper are tabulated in Table I below. The excellent agreement between the results in the two tables can be easily verified. It was also revealed that luckily the error in the library subroutine had been corrected before the results we presented in our second paper were derived and thus our results in [2] are impeccable.

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