

Abstracts

A New Procedure for Calculating Varactor Q from Impedance versus Bias Measurements (Comments and Author's Reply)

N. Houilding and E.W. Sard. "A New Procedure for Calculating Varactor Q from Impedance versus Bias Measurements (Comments and Author's Reply)." 1970 Transactions on Microwave Theory and Techniques 18.4 (Apr. 1970 [T-MTT]): 229-230.

The above-mentioned paper by Sard claims rigor in the procedure. Although the author mentions the possibility of variable resistance in the varactor, he does not discuss completely the effects this might have on his analysis, and I contend that the reason why "(previously) losses in the external transformation circuitry must be either neglected or nonrigorously corrected for" is that the assumption of constant resistance is not justified. I think that the problems of circuit loss and variable resistance can not be attacked independently; and, in particular, that there is no justification for assuming the varactor will not contain loss terms which will simulate the behavior of losses in a matching network.

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