Abstracts

Determining Q Using S Parameter Data (Short Papers)

J.M. Drozd and W.T. Joines. "Determining Q Using S Parameter Data (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.11 (Nov. 1996 [T-MTT]): 2123-2127.

A method is presented for determining frequency selectivity (Q) of a network using scattering (S) parameter data, data that is readily available from network measurements or analysis. The approach is based on a formulation for Q that uses the change in reactance of the resonant circuit with frequency. The method yields accurate Q results for both high and low Q resonators. Furthermore, the method is easy to implement and to understand. An example is given for calculating the Q of a tapped-stub resonator. Using this example, the new method is compared to the critical points (CP) method, an approach based on a Foster network type of formulation.

❑ Return to main document.