

Accelerating Computational Time and Efficiency of High- Q Simulations Combining FDTD and Mode-Matching Techniques

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High- Q resonant structures present very narrow frequency responses which are sometimes very difficult and time consuming to determine with numerical techniques such as FDTD. Their heavy computational load can be reduced by combining the numerical technique with modal techniques. The procedure consists of solving numerically different parts of the high- Q structure and combining them externally by the generalized scattering matrix. Different examples of resonant structures are showed to demonstrate the advantages of this technique.

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