Abstracts

Analysis of power handling capacity of band pass filters

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A general analysis method on power handling of the microwave band pass filter is presented. The total stored energy in each resonator of the filter is computed from the normalized general two-port network. By comparing the stored energy to the maximum electric field in the resonator, the power handling capacity of the filter can be accurately determined. The method is general and can be applied to any coupling matrix of the filter and type of the resonator used. An inductive window waveguide filter has been analyzed to verify theory by comparing the results with that obtained by full wave mode matching method and shown to be in excellent agreement.

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