

Abstracts

Design Considerations for High-Power Microwave Filters

S.B. Cohn. "Design Considerations for High-Power Microwave Filters." 1959 Transactions on Microwave Theory and Techniques 7.1 (Jan. 1959 [T-MTT]): 149-153.

The need for high-power filters is reviewed briefly, and various design approaches are discussed. The major portion of the paper treats the power-handling capacity of multiple-resonator filters using inductive windows or posts as coupling elements. A formula is derived that gives the relative power capacity of a waveguide filter of this type in terms of the bandwidth and cavity dimensions, and the element values of the low-pass prototype filter. By means of this formula it is shown quantitatively how high-power ratings may be achieved through the use of enlarged cavities. Methods for eliminating spurious filter responses and of reducing the reflected energy are discussed.

[Return to main document.](#)