Abstracts

Band-Stop Filters For High-Power Applications

E.N. Torgow and G.E. Collins. "Band-Stop Filters For High-Power Applications." 1965 Transactions on Microwave Theory and Techniques 13.5 (Sep. 1965 [T-MTT]): 508-513.

There are several advantages to the use of band-stop filters, rather than band-pass filters, in many systems. This is shown to be particularly true when signals at high-power levels must be transmitted or rejected. A formula has been derived which expresses the external Q of each resonator in a band-stop filter in terms of the element values of the normalized low-pass prototype and the parameters of the frequency transformation. The peak power capacity of iris-coupled waveguide cavity filters and TEM filters using capacitively coupled inductive stubs is then determined in terms of the external Q of the first resonator and the dimensions of the resonator. Experimental results given for a waveguide band-stop filter show good agreement with theory.

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