

Abstracts

A High-Power S-Band Filter (Correspondence)

H. Guthart and E.M.T. Jones. "A High-Power S-Band Filter (Correspondence)." 1962 Transactions on Microwave Theory and Techniques 10.2 (Mar. 1962 [T-MTT]): 148-149.

This note describes the measured performance of a high-power S-band "waffle-iron" filter. Techniques for designing varying-impedance corrugated waveguide filters in rectangular waveguide have been available for some time. If propagation is restricted to the dominant TE/sub 10/ mode, these filters have wide well-matched pass bands and wide high-attenuation stop bands. Unfortunately, the filters may have spurious transmissions in the stop band when power is incident upon them in other modes, such as TE/sub 20/ or TE/sub 30/, if the guide wavelength of these modes at the stop-band frequencies is equal to the guide wavelength of the TE/sub10/ mode at the pass-band frequencies of the filter.

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