Abstracts

A High-Power Wide-Band Waffle-Iron Filter

E.D. Sharp. "A High-Power Wide-Band Waffle-Iron Filter." 1963 Transactions on Microwave Theory and Techniques 11.2 (Mar. 1963 [T-MTT]): 111-116.

This paper describes the design and measured performance of an L-band model of a high-power wide-band low-pass waffle-iron filter. Three different waffle-iron filters with staggered stop bands are connected in series to give a combined stop band that extends from 2.2 Gc to 13.7 Gc. where the attenuation is 60 db or greater. The waffle-iron filter attenuates all propagating waveguide modes which can propagate at frequencies in the above stop band. In the pass band the waffle-iron filters are matched to full size L-band waveguide using quarter-wavelength stepped transformers. The pulsed power-handling capacity without breakdown is measured to be over 1.4 Mw peak power with air at atmospheric pressure filling the filter.

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