Abstracts

A High Power Diplexing Filter

L. Young and J.Q. Owen. "A High Power Diplexing Filter." 1959 Transactions on Microwave Theory and Techniques 7.3 (Jul. 1959 [T-MTT]): 384-387.

An L-band diplexing filter has been constructed with an estimated power-carrying capacity of S megw at atmospheric pressure (for a power safety factor of nearly four to one) and an insertion loss of less than 0.1 db. The filter consists of two hybrid junctions and two high pass waveguide sections, which are arranged as in a balanced duplexer, with the "TR-tubes" replaced by the high-pass sections. In the upper frequency band, the input VSWR is better than 1.10 over a seven and one-half per cent bandwidth, but deteriorates only slightly over a larger bandwidth. In the lower frequency band, the input VSWR is better than 1.32 over a 13 per cent bandwidth. The separation interval between these two bands is approximately 10 per cent between their nearest frequencies.

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