Abstracts

E-Plane Integrated Circuit Filters with Improved Stopband Attenuation (Short Papers)

F. Arndt, J. Bornemann, R. Vahldieck and D. Grauerholz. "E-Plane Integrated Circuit Filters with Improved Stopband Attenuation (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.10 (Oct. 1984 [T-MTT]): 1391-1394.

Improved stopband attenuation is achieved by thick strips, by reduced waveguide sidewall dimensions, and by double planar integrated circuits. In contrast to thick strips which may cause high passband insertion losses and filters with reduced waveguide dimensions which require additional tapers, double planar E-plane integrated circuit filters combine the advantages of low costs, high stopband, and low passband insertion losses. Computer-aided design of a four-resonator Ka -band double metal insert filter achieves a calculated stopband attenuation between 40 and 60 GHz of more than 50 dB, the calculated minimum passband insertion loss is 0.43 dB (measured 1.8 dB). Higher order mode excitation and finite thicknesses of the inserts are included in the calculations.

❑ Return to main document.