

Abstracts

A New Class of E-Plane Integrated Millimeter-Wave Filters

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A new class of E-plane integrated circuit millimeter-wave bandpass filters is introduced which provide high skirt selectivity by comprising inductively coupled stop-band sections. The structure is simple, fully compatible with the E-plane manufacturing process, and does not require fine tuning elements. The design procedure is based on an efficient but rigorous modal S-matrix method including higher-order mode interactions and finite metallization thicknesses. Optimized design data are presented for 33 and 94 GHz in Ka- and W-band, respectively.

 [Return to main document.](#)