Abstracts

A 250-GHz Microshield Bandpass Filter

T.M. Weller, L.P. Katehi and G.M. Rebeiz. "A 250-GHz Microshield Bandpass Filter." 1995 Microwave and Guided Wave Letters 5.5 (May 1995 [MGWL]): 153-155.

A four-section, planar bandpass filter has been designed, fabricated and tested at 130-360 GHz. The filter is based on the microshield line, a half-shielded transmission line in which the conducting lines are supported on a 1.4-µm-thick dielectric membrane. The insertion loss of the filter is less than 1.5 dB with a 58% relative bandwidth at 250 GHz, demonstrating the excellent performance of the microshield geometry. Also, a Monte Carlo routine was developed in conduction with a semi-empirical/semi-analytical model to allow the S-parameters of the filter to be derived from scalar power measurements.

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