Abstracts

A planar X-band electromagnetic band-gap (EBG) 3-pole filter

Hsiuan-ju Hsu, M.J. Hill, J. Papapolymerou and R.W. Ziolkowski. "A planar X-band electromagnetic band-gap (EBG) 3-pole filter." 2002 Microwave and Wireless Components Letters 12.7 (Jul. 2002 [MWCL]): 255-257.

A Duroid-based X-band electromagnetic band gap (EBG) Chebyshev 3-pole bandpass filter that is compatible with standard printed circuit board (PCB) fabrication techniques has been designed, fabricated, and tested. The filter consists of three EBG cavities in a multi-layer design. It provides a 5.95% bandwidth response at the resonant frequency f/sub res/=9.72 GHz with a corresponding insertion loss of 0.9 dB. Isolation is higher than 30 dB below 9 GHz and above 11 GHz.

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