Abstracts

Low loss micromachined filters for millimeter-wave telecommunication systems

P. Blondy, A.R. Brown, D. Crost and G.M. Rebeiz. "Low loss micromachined filters for millimeter-wave telecommunication systems." 1998 MTT-S International Microwave Symposium Digest 98.3 (1998 Vol. III [MWSYM]): 1181-1184.

This paper describes the design and the realization of two membrane supported microstrip millimeter-wave planar bandpass filters. Both filters exhibit transmission zeros and a 2.3 dB port-to-port insertion loss for the 37 GHz 3.5% bandwidth 2-pole filter and a 1.5 dB insertion loss for a 60 GHz 8% bandwidth 4-pole filter. The use of membrane technology allows a significant reduction of insertion loss, combined with a reproducible, low cost fabrication process.

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