Abstracts

40-GHz coplanar waveguide bandpass filters on silicon substrate

K.T. Chan, C.Y. Chen, A. Chin, J.C. Hsieh, J. Liu, T.S. Duh and W.J. Lin. "40-GHz coplanar waveguide bandpass filters on silicon substrate." 2002 Microwave and Wireless Components Letters 12.11 (Nov. 2002 [MWCL]): 429-431.

We report a very simple process to fabricate high performance filter on Si at 40 GHz using proton implantation. The filter has only -3.4-dB loss at peak transmission of 40 GHz with a broad 9-GHz bandwidth. In sharp contrast, the filter on 1.5-/spl mu/m SiO/sub 2/ isolated Si has much worse transmission and reflection loss. This is the first demonstration of high performance filter at the millimeter-wave regime on Si with process compatible with current VLSI technology.

❑ Return to main document.