Abstracts

Low-loss micromachined inverted overlay CPW lines with wide impedance ranges and inherent airbridge connection capability

Youngwoo Kwon, Hong-Teuk Kim, Jae-Hyoung Park and Yong-Kweon Kim. "Low-loss micromachined inverted overlay CPW lines with wide impedance ranges and inherent airbridge connection capability." 2001 Microwave and Wireless Components Letters 11.2 (Feb. 2001 [MWCL]): 59-61.

A new type of overlay coplanar waveguide (CPW) structure, "inverted overlay CPW (IOCPW)" is developed using micromachining techniques to provide easy means of airbridge connection between the ground planes, as well as to achieve low losses over wide impedance ranges. Measured IOCPW showed less than 1 dB/cm loss at 50 GHz over a wide impedance range from 25 to 80 /spl Omega/. It also offered low effective dielectric constant, and insensitivity to the substrate losses. Wide impedance ranges and simple process steps make IOCPW a promising uniplanar transmission line medium for mm-wave monolithic applications.

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