Abstracts

Multilayer MMIC broad-side coupler with a symmetric structure

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A multilayer monolithic microwave integrated circuit (MMIC) broad-side coupler that has a symmetric structure has been fabricated and demonstrated. To enable the coupler area to be reduced, the width of the coupled lines in the fabricated coupler is made as narrow as 15 /spl mu/m by using a meander-like configuration. The coupled lines are 2.28-mm long and effectively laid out in a small area of 0.9 mm/spl times/0.12 mm. The device works well and has good performance at frequencies between 10-17.5 GHz, with coupling loss of 4.2/spl plusmn/0.4 dB and return loss of better than 20 dB. This newly developed coupler offers advantages of simple symmetric design and small circuit area.

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