Abstracts

Uniplanar hybrid couplers using asymmetrical coplanar strip lines

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This paper presents two uniplanar 3-dB hybrid couplers using asymmetrical coplanar strip (ACPS) for MIC and MMIC applications. The uniplanar ratrace hybrid coupler has less than 0.5 dB insertion loss, greater than 22 dB isolation, and 22.5 dB return loss over a 25% bandwidth centered at 3 GHz. The 180/spl deg/ reverse-phase hybrid coupler provides better performance as compared to conventional microstrip hybrid couplers. Experimental results show that the 180/spl deg/ hybrid coupler has a bandwidth of more than one octave from 2 to 4 GHz with /spl plusmn/0.2 dB power dividing imbalance and /spl plusmn/1.5/spl deg/ phase imbalance.

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