Abstracts

A Planar Broadband Balanced Doubler Using a Novel Balun Design

D.F. Filipovic, R.F. Bradley and G.M. Rebeiz. "A Planar Broadband Balanced Doubler Using a Novel Balun Design." 1994 Microwave and Guided Wave Letters 4.7 (Jul. 1994 [MGWL]): 229-231.

We report on the design and measurement of a broadband MIC balanced varactor frequency doubler. The design incorporates a novel balun to achieve a grounded CPW-to-slotline transition. The balanced structure offers inherent isolation in the output port from all odd harmonics including the fundamental frequency. Measurements show a port-to-port conversion loss between 8 and 10 dB over an output frequency range of 6-10 GHz. The design can be easily scaled to millimeter-wave frequencies using a monolithic approach.

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