

## عنوان مقاله:

Four-Way Substrate Integrated Waveguide (SIW) Power Divider/Combiner for High Power Applications

## محل انتشار:

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## نویسندگان:

Ali-Reza Moznebi - MSc Student, Department of Electrical Engineering, Shahid Bahonar University of Kerman, Kerman, Iran

Kambiz Afrooz - Assistant Professor, Department of Electrical Engineering, Shahid Bahonar University of Kerman, Kerman, Iran

## خلاصه مقاله:

A four-way power divider/power combiner using substrate integrated waveguide (SIW) and microstrip lines is proposed and investigated. The proposed power divider consists of a double-layer substrate with a bottom layer including an SIW T-junction and a top layer including a microstrip network. This microstrip network consists of a modified Gysel power divider which provides a high isolation between output ports by using two grounded resistors. Meanwhile, this modified Gysel power divider maintains high power-handling advantage over Wilkinson power divider. A transition between the SIW T-junction and microstrip network is realized by etching two rectangular slots on the middle metal layer. The even-odd mode method is used to analyze the presented structure. A prototype of the proposed power divider is designed, simulated, and fabricated. The results show that the return loss of the input port is better than 12 dB over 8.43 to 10.57GHz. Also, the output return losses and isolation are better than 10.5 dB over the whole bandwidth.

## کلمات کلیدی:

(Gysel power divider, high isolation, high power, power combiner, substrate integrated waveguide (SIW)

## لینک ثابت مقاله در پایگاه سیویلیکا:

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