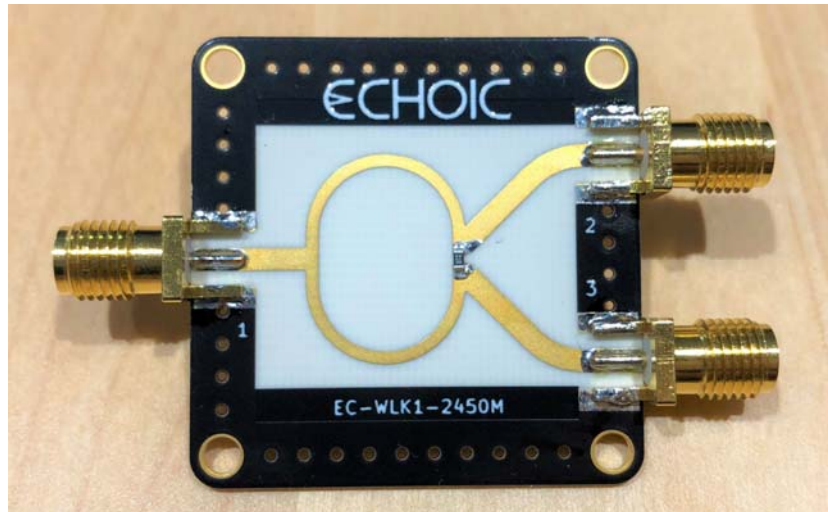


## Data Sheet

### EC-WLK1-2450M Wilkinson Power Divider/Combiner for 2.45GHz



## Applications

- General-purpose RF, microwave, education
- Wi-Fi 802.11 2.4 GHz
- Other 2.4GHz: ISM, Bluetooth, Zigbee

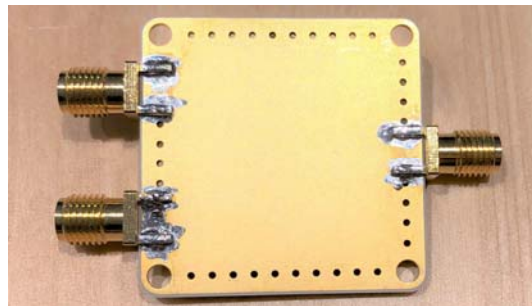
## Features

- Return Loss 20dB over a 700 MHz BW
- Insertion loss = 3.2dB (3dB is ideal) → 0.2dB loss
- Isolation > 20dB over 1 GHz BW

## Description

The EC-WLK1-2450M is a high performance Wilkinson power divider/combiner realized using microstrip transmission-lines on a low-loss microwave laminate. This power divider/combiner can be used for test and measurement or for educational demonstration. The power divider/combiner is centered at the widely-used 2.45 GHz WiFi/ISM/Bluetooth/Zigbee band with a bandwidth of 700 MHz when considering a return loss of 20dB. In-band loss is very low at 0.2dB providing an equal split to the two ports. The in-band isolation is > 20dB for over 1GHz of bandwidth. The power divider can be used over an even larger frequency range when considering different isolation and return loss requirements. This Wilkinson power divider/combiner is realized on high performance, low-loss Rogers substrate material. The power divider/combiner is equipped with female SMA connectors on all three ports. The backside solder mask is absent, enabling it to be surface mounted if the connectors are removed.

Backside of EC-WLK1-2450M



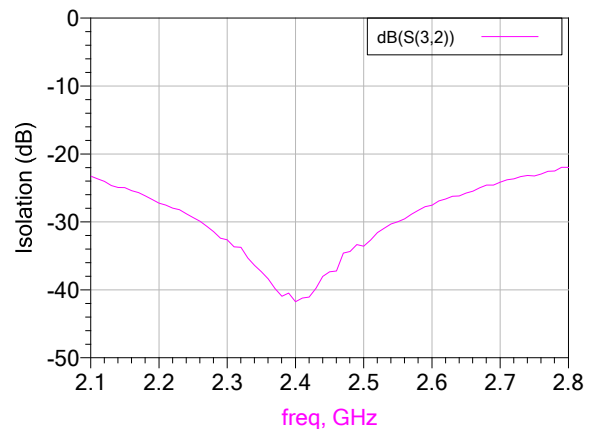
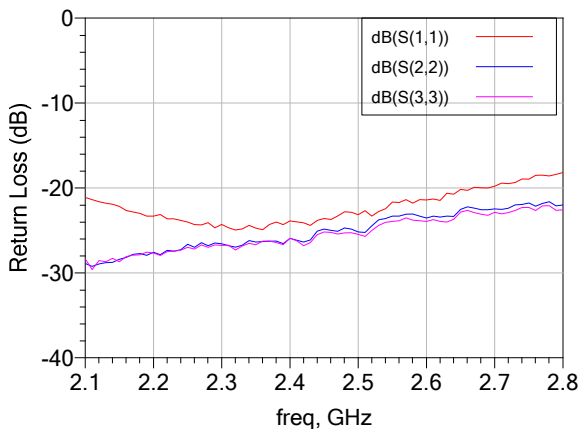
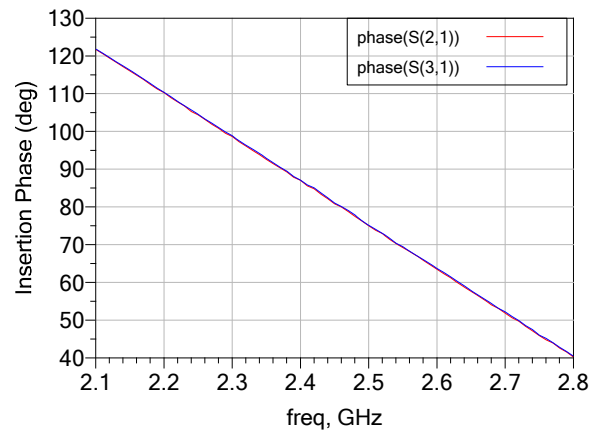
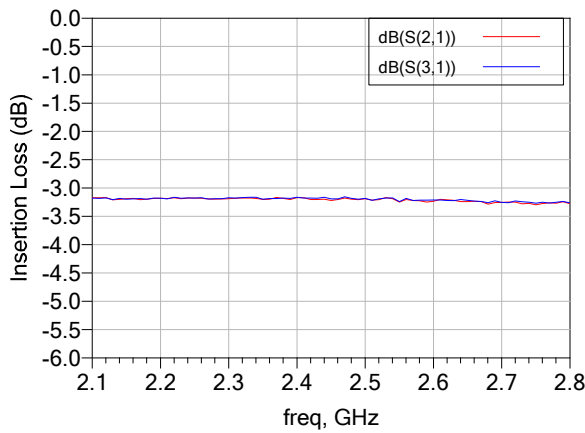
## Specifications

Parameter	Test Cond.	Min.	Typ.	Max.	Units
Impedance			50		Ohm
Center Frequency			2.450		GHz
Bandwidth	20dB Return Loss		700		MHz
VSWR	2.029 to 2.694 GHz			1.3:1	
Insertion loss	2.029 to 2.694 GHz	3.16	3.2	3.26	dB
Isolation	2.029 to 2.694 GHz	21.61			dB
Phase Imbalance	Between ports 2 + 3			0.5	deg
Input power	CW			1*	Watts

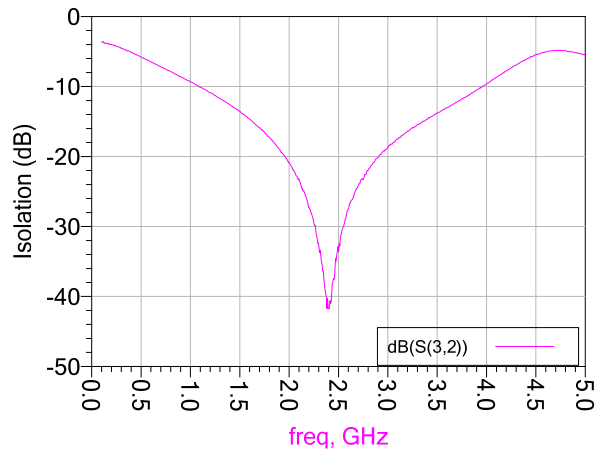
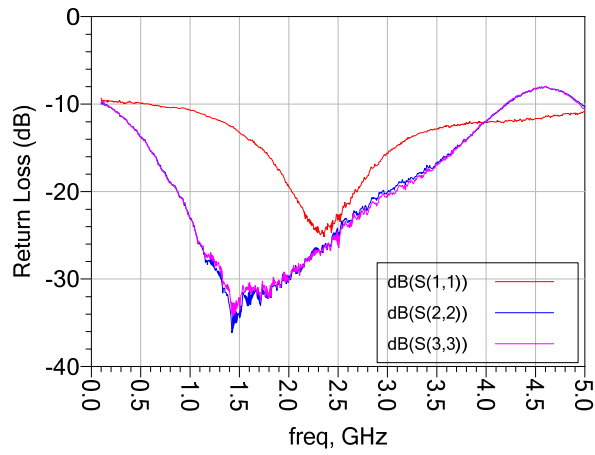
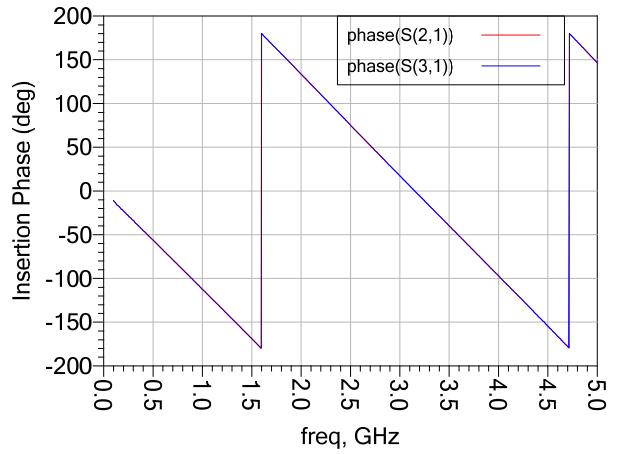
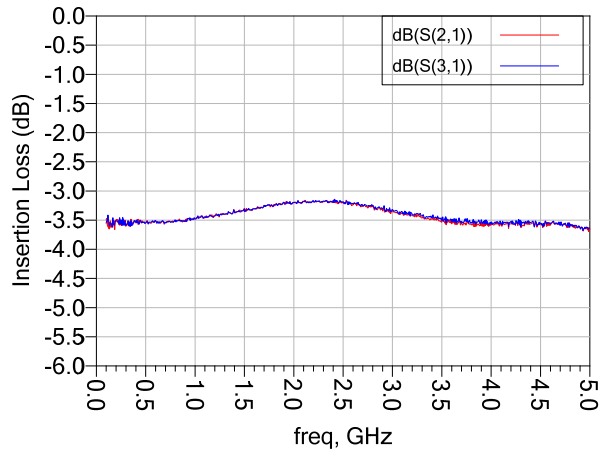
\*to be verified

## Performance

Typical performance shown from 2.1 to 2.8 GHz



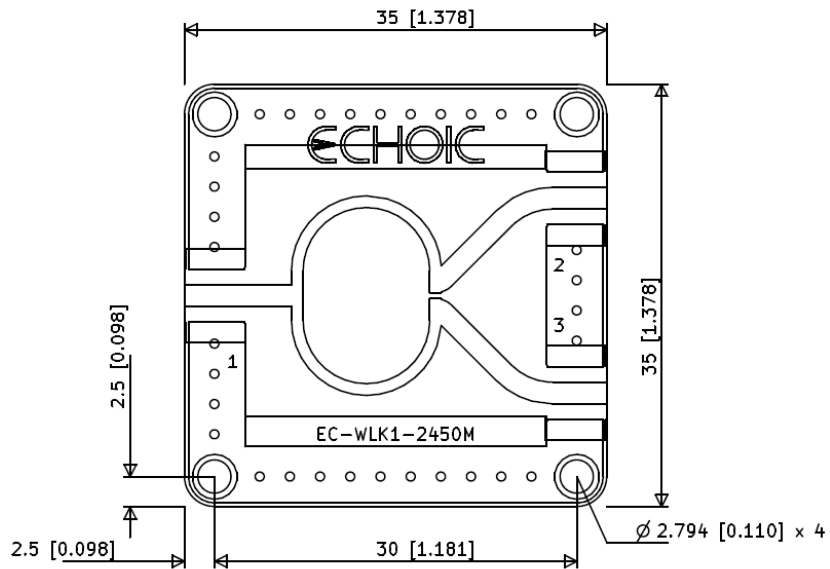
Typical performance shown from 0.1 to 5.0 GHz



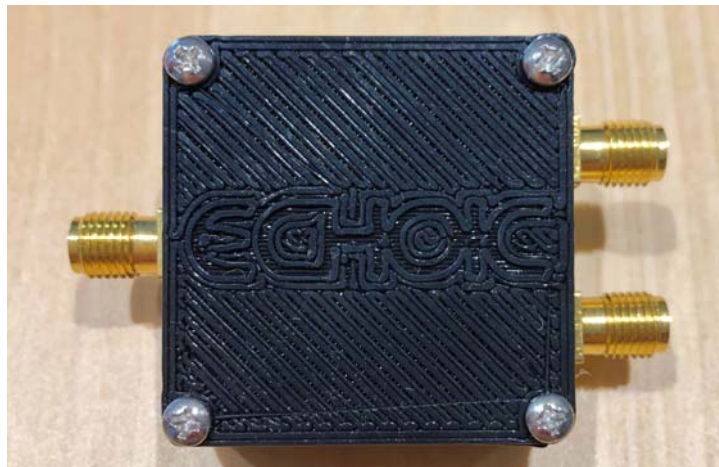
## Mechanical

<i>Configuration</i>	<i>Parameter</i>	<i>Typical</i>	<i>Units</i>
PCB only (without case and without connectors)	Width	35	mm
	Length	35	mm
	Height	0.95	mm
PCB and case (without connector)	Width	35	mm
	Length	35	mm
	Height	12.6	mm
Connector	Torque	8	In-lbs

PCB mechanical drawing. All units in mm [inches]. Connectors not shown.

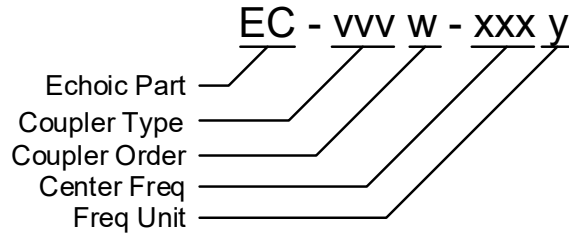


The EC-WLK1-2450M can be used with an optional case .



## Ordering Information

Please use the following model number designation for ordering this and any other part from our coupler line:



For example, EC-WLK1-2450M is an Echoic part, first order Wilkinson power divider/combiner with center frequency of 2450 MHz.

## Web Resource

For more information on other industrial RF and microwave solutions please visit our online store 5G Links: [www.5glinks.com](http://www.5glinks.com)

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