## Xinger

## Balun Transformers $50 \Omega$ to $25 \Omega$ Balanced



## Description

The 3W525S is a low profile balanced to unbalanced transformer designed for pushpull amplifiers in an easy to use surface mount package for PCS and DCS applications. These compact Xinger ${ }^{\circledR}$ surface mount baluns are ideal for high volume manufacturing and are more reliable and repeatable than traditional baluns. The 3W525S has an unbalanced port impedance of $50 \Omega$ and balanced port impedances of $25 \Omega$ to ground with a $50 \Omega$ balance between outputs. This eases the matching of the push-pull amplifier's power transistors, which have low impedance levels. The output ports have equal amplitude ( -3 dB ) with 180 degree phase differential. The Xinger® balun is a result of years of research and development culminating with a solution so unique, a patent is pending on the design approach. The 3W525S is available on tape and reel for pick and place high volume manufacturing.

ELECTRICAL SPECIFICATIONS***

Features:

- 1.8 - 2.5 GHz
- $180^{\circ}$ Transformer
- 50 Ohm to $2 \times 25$ Ohm
- Low Insertion Loss
- High Power
- Even Order Suppression
- Input to Output DC Isolation
- Surface Mountable
- Tape \& Reel
- Convenient Package
- Lead Free

| Frequency | Unbalanced <br> Port <br> Impedance <br> OHz | Balanced <br> Port <br> Impedance* | Return <br> Loss | Insertion <br> Loss $^{* *}$ |
| :---: | :---: | :---: | :---: | :---: |
| $1.8-2.5$ | 50 | 25 | $d B$ min | $d B$ max |
| $1.805-2.170$ | 50 | 25 | 15 | 0.38 |
| Amplitude | Phase | Power <br> Balance | Balance | Handling |
| $d B$ max | Degrees max | Watts | ©JC | Operating <br> 0.40 |
| $180 \pm 5.0$ | 150 | 11.3 | -55 to +85 |  |
| 0.40 | $180 \pm 5.0$ | 150 | 11.3 | -55 to +85 |

***Specification based on performance of unit properly installed on microstrip printed circuit boards with $50 \Omega$ nominal impedance. Specifications subject to change without notice. ${ }^{* *}$ Insertion Loss excludes reflected power. * $25 \Omega$ reference to ground

## Outline Drawing



Dimensions are in Inches [Millimeters] 3W525S Mechanical Outline

What'll we think of next

Available on Tape and Reel For Pick and Place Manufacturing.

USA/Canada:
(315) 432-8909 Toll Free: (800) 544-2414

Europe:
+44 2392-232392

Typical Performance: 1700 MHz. to 2600 MHz.


Pin Configuration


## Mounting Configuration

To ensure proper electrical and thermal performance there must be a ground plane with $100 \%$ solder connection underneath the part


