## Xinger



## Description

The 3W512 is a low profile balanced to unbalanced transformer designed for pushpull amplifiers in an easy to use surface mount package for PCS, DCS, and UMTS. These compact Xinger® surface mount baluns are ideal for high volume manufacturing and are more reliable and repeatable than traditional baluns. The 3W512 has an unbalanced port impedance of $50 \Omega$ and balanced port impedances of $12.5 \Omega$ to ground with a $25 \Omega$ 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 ${ }^{\circledR}$ 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 3W512 is available on tape and reel for pick and place high volume manufacturing.

ELECTRICAL SPECIFICATIONS***

## Features:

- 1.8 - 2.2 GHz
- $180^{\circ}$ Transformer
- 50 Ohm to 12.5+j5.5 Ohm
- Broad Band
- Low Insertion Loss
- High Power
- Even Order Suppression
- Input to Output DC Isolation
- Surface Mountable
- Tape \& Reel
- Convenient Package

| Frequency | Unbalanced Port Impedance | Balanced Port Impedance* | Return Loss | Insertion |
| :---: | :---: | :---: | :---: | :---: |
| GHz | Ohms | Ohms | dB Min | dB max |
| 1.8-2.2 | 50 | 12.5+j5.5 | 15 | 0.40 |
| Amplitude Balance | Phase Balance | Power Handling | @JC | Operating Temp. |
| dB max | Degrees max | Watts | ${ }^{\circ} \mathrm{C} /$ Watt | ${ }^{\circ} \mathrm{C}$ |
| 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.

* $50 \Omega$ reference to ground


## Outline Drawing



USA/Canada
(315) 432-8909

Toll Free:
(800) 544-2414

Europe: +44 2392-232392

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Typical Performance: 1600 MHz. to 2400 MHz.


Pin Configuration:


## Mounting Configuration:



Dimensions are in Inches [Millimeters]
3W512 Rev A Mounting Footprint

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