Description

The 3A625 is a low profile balanced to unbalanced transformer designed for push-pull amplifiers in an easy to use surface mount package for W-LAN and MMDS applications. These compact Xinger® surface mount baluns are ideal for high volume manufacturing and are more reliable and repeatable than traditional baluns. The 3A625 has an unbalanced port impedance of 50Ω and balanced port impedances of 25Ω to ground with a 50Ω 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 (-3dB) 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 3A625 is available on tape and reel for pick and place high volume manufacturing.

ELECTRICAL SPECIFICATIONS***

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Unbalanced Port Impedance</th>
<th>Balanced Port Impedance*</th>
<th>Return Loss</th>
<th>Insertion Loss**</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHz</td>
<td>Ohms</td>
<td>Ohms</td>
<td>dB min</td>
<td>dB max</td>
</tr>
<tr>
<td>2.3 – 2.7</td>
<td>50</td>
<td>25</td>
<td>15</td>
<td>0.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amplitude Balance</th>
<th>Phase Balance</th>
<th>Power Handling</th>
<th>°C / Watt</th>
<th>Operating Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>dB max</td>
<td>Degrees max</td>
<td>Watts</td>
<td>°C / Watt</td>
<td>°C</td>
</tr>
<tr>
<td>0.40</td>
<td>180± 5.0</td>
<td>150</td>
<td>15.8</td>
<td>-55 to +85</td>
</tr>
</tbody>
</table>

***Specification based on performance of unit properly installed on microstrip printed circuit boards with 50 Ω nominal impedance. Specifications subject to change without notice.

**Insertion Loss excludes reflected power. * 25Ω reference to ground

Features:
- 2.3 – 2.7 GHz
- 180° Transformer
- 50 Ohm to 2 x 25 Ohm
- Low Insertion Loss
- High Power
- Even Order Suppression
- Input to Output DC Isolation
- Surface Mountable
- Tape & Reel
- Convenient Package

Outline Drawing

Dimensions are in Inches [Millimeters]
3A625 Rev A Mechanical Outline
Typical Performance: 2000 MHz to 3000 MHz.

Amplitude Balance 3A625

Amplitude Balance 3A625

Return Loss 3A625

Insertion Loss 3A625

Phase Balance 3A625

Pin Configuration

Mounting Configuration

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

Dimensions are in Inches [Millimeters]

90° Transmission Line

0.210 [5.33]

0.130 [3.30]

0.049 [1.24]

0.034 TYP [0.86]

0.121 [3.07]

0.070 [1.78]

0.080 [2.03]

2 Places 25Ω Transmission Line Referred to GND

Multiple plated thru holes to ground

USA/Canada: (315) 432-8909
Toll Free: (800) 544-2414
Europe: +44 2392-232392

Available on Tape and Reel For Pick and Place Manufacturing.