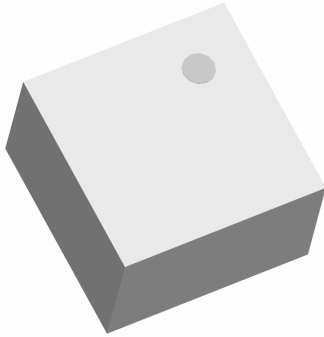


# Xinger®

## Ultra Low Profile 0404 Power Divider 50Ω to 50Ω



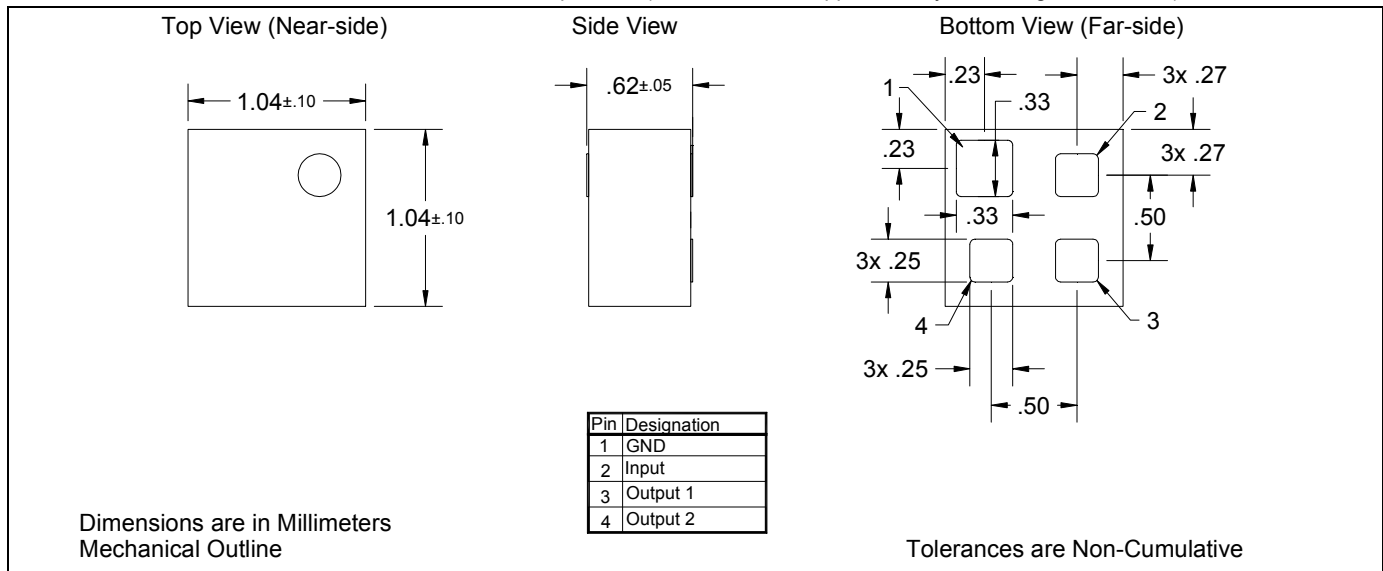
### Description

The PD2425N5050S2 is a low profile 1mm square, sub-miniature Wilkinson power divider in an easy to use surface mount package. The PD2425N5050S2 is ideal for high volume manufacturing and delivers higher performances than traditional printed and lumped element solutions. The PD2425N5050S2 is matched to 50Ω and has a height profile of 0.6 mm with an LGA interface which is ideal for high level integrations in module level solutions in the following markets: WiMAX (2.3 - 2.7 GHz), 802.11b, g & n, 2.4 GHz ISM band, Bluetooth (LE), Bluetooth and ZigBee. The PD2425N5050S2 does not include the resistive element and therefore, requires an external resistor for operation. The PD2425N5050S2 is available on tape and reel for high volume manufacturing pick and place.

### Detailed Electrical Specifications: Specifications subject to change without notice.

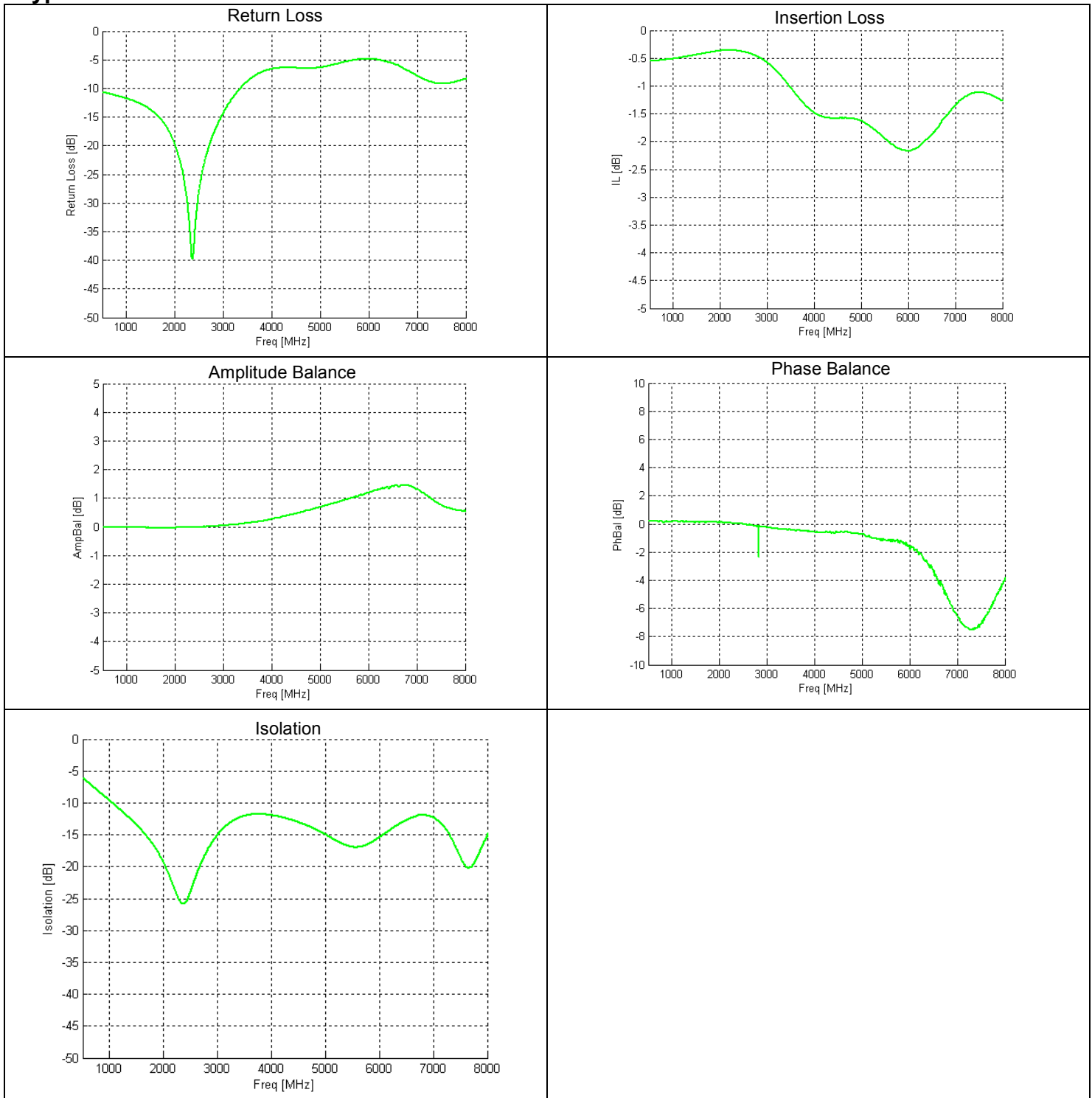
| Features:   | Parameter                | ROOM (25°C) |      |      | Unit    |
|---|--------------------------|-------------|------|------|---------|
|   |                          | Min.        | Typ. | Max  |         |
| <ul style="list-style-type: none"> <li>• 2400-2500 MHz</li> <li>• 23 dB Isolation (output ports)</li> <li>• Good Return Loss</li> <li>• 0.6 mm Height Profile</li> <li>• 50Ω Input / 50Ω Outputs</li> <li>• Low Insertion Loss</li> <li>• Surface Mountable</li> <li>• Tape &amp; Reel</li> <li>• Non-conductive Surface</li> <li>• RoHS Compliant</li> <li>• External Resistor Required</li> <li>• Halogen Free</li> </ul> | Frequency                | 2400        |      | 2500 | MHz     |
|   | Input Port Impedance     |             | 50   |      | Ω       |
|   | Output Port Impedance    |             | 50   |      | Ω       |
|   | Return Loss              | 21          | 27   |      | dB      |
|   | Insertion Loss*          |             | 0.39 | 0.46 | dB      |
|   | Amplitude Balance        |             | 0.01 | 0.35 | dB      |
|   | Phase Balance            |             | 0.5  | 1.3  | Degrees |
|   | Isolation (Output Ports) | 20          | 23   |      | dB      |
|   | Power Handling           |             |      | 0.5  | Watts   |
|   | Operating Temperature    | -55         |      | +85  | °C      |

\* Insertion Loss stated at room temperature (Insertion Loss is approximately 0.1 dB higher at +85 °C)

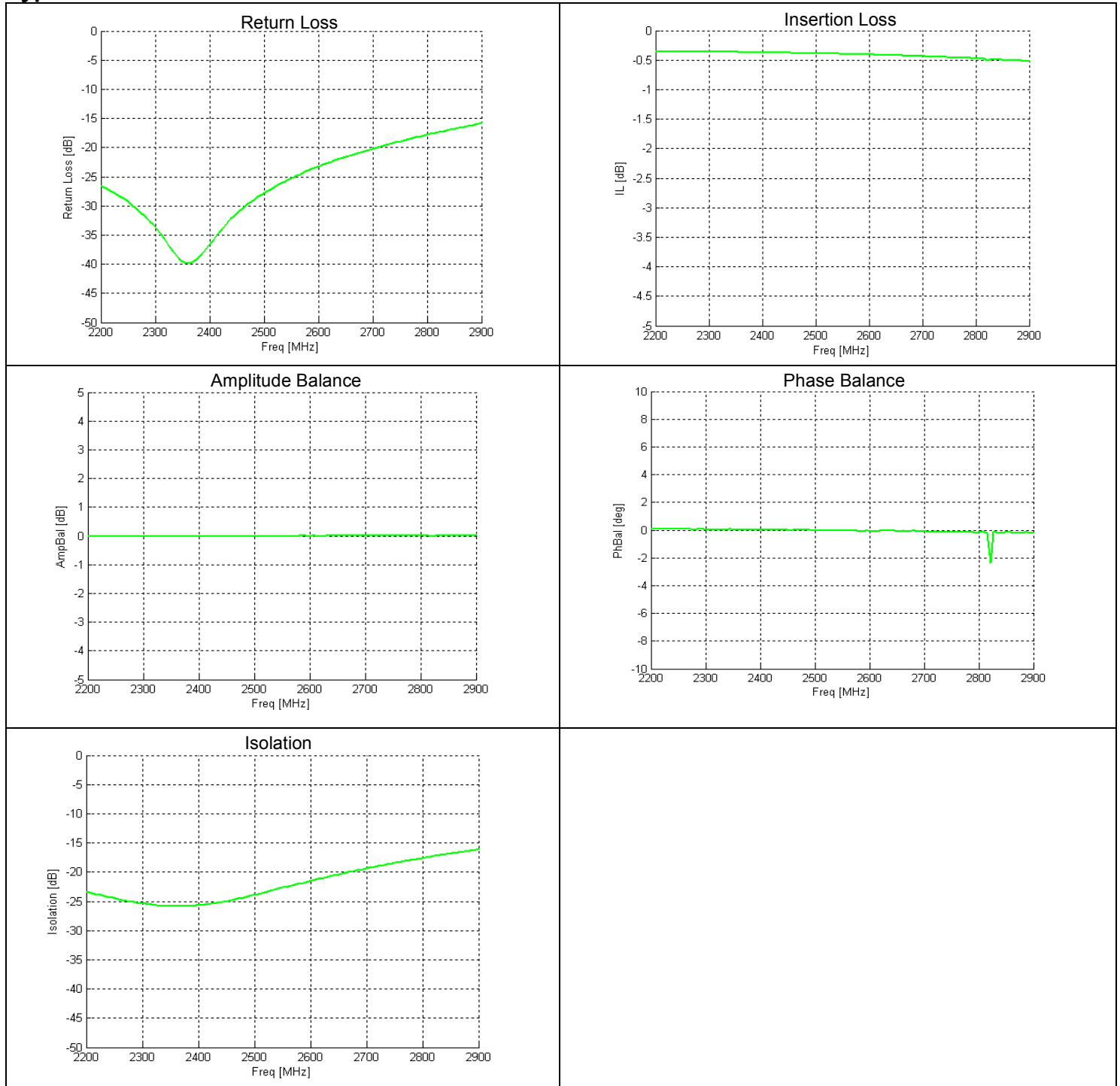


## Outline Drawing

Typical Broadband Performance: 500 MHz. to 8.0 GHz.



### Typical Performance: 2200 MHz. to 2900 MHz.



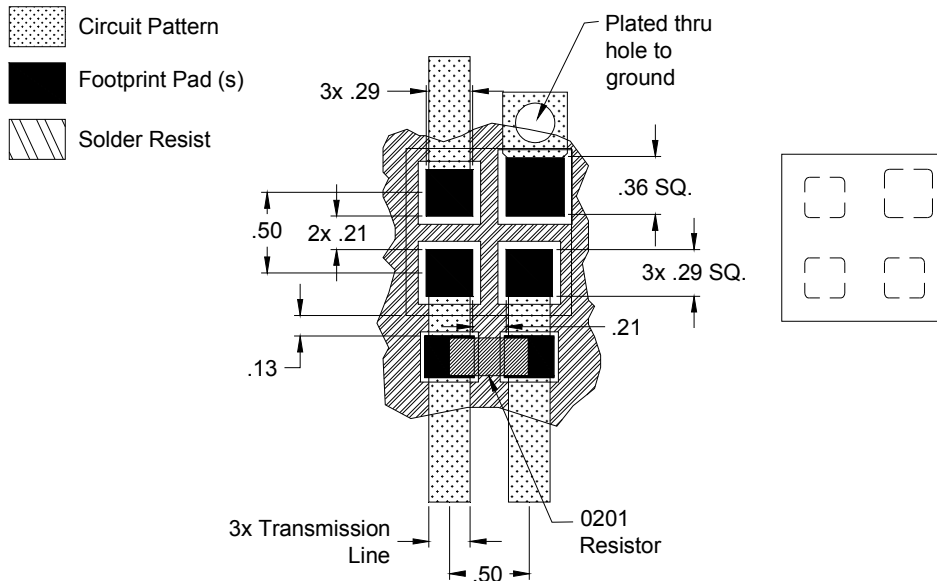
## Mounting Configuration:

In order for Xinger surface mount components to work optimally, the proper impedance transmission lines must be used to connect to the RF ports. If this condition is not satisfied, insertion loss, Isolation and VSWR may not meet published specifications.

All of the Xinger components are constructed from organic PTFE based composites which possess excellent electrical and mechanical stability. Xinger components are compliant to a variety of ROHS and Green standards and ready for Pb-free soldering processes. Pads are Gold plated with a Nickel barrier.

An example of the PCB footprint used in the testing of these parts is shown below. In specific designs, the transmission line widths need to be adjusted to the unique dielectric coefficients and thicknesses as well as varying pick and place equipment tolerances. In addition, since the PD2425S5050S2 is a Wilkinson power divider, an external 0201 100Ω resistor must be mounted in locations R1 as shown in the Figure below.

### Pad Footprint w/ 0201 Resistor Locations



Dimensions are in Millimeters  
Mounting Footprint

### Packaging and Ordering Information

Parts are available in reels and are packaged per EIA 481-2. Parts are oriented in tape and reel as shown below. Minimum order quantities are 4000 per reel. See Model Numbers below for further ordering information.

