## : ©hipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation, and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

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## Xinger

## Ultra Low Profile 0404 Balun $50 \Omega$ to $50 \Omega$ Balanced

## Description

The BD2425N5050AHF is a low profile, low impedance sub-miniature
 unbalanced to balanced transformer designed for differential inputs and output locations on modern chipsets targeted at $802.11 \mathrm{~b}+\mathrm{g}$, MIMO b+g, Bluetooth, Zigbee, ULPR and ISM band Applications in an easy to use surface mount package. The BD2425N5050AHF is ideal for high volume manufacturing and delivers higher performance than traditional ceramic baluns. The BD2425N5050AHF has an unbalanced port impedance of $50 \Omega$ and a $50 \Omega$ balanced port impedance.. The output ports have equal amplitude ( -3 dB ) with 180 degree phase differential. The BD2425N5050AHF is available on tape and reel for pick and place high volume manufacturing.

Detailed Electrical Specifications: Specifications subject to change without notice.

## Features:

- $2400-2500 \mathrm{MHz}$
- 0.56 mm Height Profile
- 50 Ohm to $2 \times 25$ Ohm
- Low Insertion Loss
- Targeted At 802.11 b+g, MIMO b+g, Bluetooth, Zigbee, ULPR and ISM Band Applications
- Surface Mountable
- Tape \& Reel
- Non-conductive Top Surface
- RoHS Compliant
- Halogen free

| Parameter | ROOM ( $25^{\circ} \mathrm{C}$ ) |  |  | Unit |
| :---: | :---: | :---: | :---: | :---: |
|  | Min. | Typ. | Max |  |
| Frequency | 2400 |  | 2500 | MHz |
| Unbalanced Port Impedance |  | 50 |  | $\Omega$ |
| Balanced Port Impedance |  | 50 |  | $\Omega$ |
| Return Loss | 15 | 23 |  | dB |
| Insertion Loss* |  | 0.7 | 0.9 | dB |
| Amplitude Balance |  | 0.3 | 0.8 | dB |
| Phase Balance |  | 3 | 7 | Degrees |
| CMRR |  | 30 |  | dB |
| Power Handling |  |  | 0.75 | Watts |
| Operating Temperature | -55 |  | +85 | ${ }^{\circ} \mathrm{C}$ |

* Insertion Loss stated at room temperature (Insertion Loss is approximately 0.1 dB higher at $+85^{\circ} \mathrm{C}$ )


## Outline Drawing

Top View (Near-side) Side View Bottom View (Far-side)


Anaren
What'll we think of next?" Place Manufacturing.

USA/Canada:
Toll Free:
(800) 411-6596

Europe: $\quad+44$ 2392-232392

Typical Performance: 2300 MHz . to 2600 MHz .






USA/Canada:
Toll Free:
(315) 432-8909
(800) 411-6596
+44 2392-232392
Europe:

Wide Band Performance: 500 MHz. to 8500 MHz.



Toll Free:
(800) 411-6596

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## 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 ceramic filled PTFE composites which possess excellent electrical and mechanical stability having $X$ and $Y$ thermal coefficient of expansion (CTE) of $17 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$.

An example of the PCB footprint used in the testing of these parts is shown below. An example of a DC-biased footprint is also 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.

| With No DC Bias | With DC Bias |
| :---: | :---: |
| $\square$ Circuit Pattern Footprint Pad (s) $\square$ Solder Resist <br> Dimensions are in Inches [Millimeters] Mounting Footprint | $\square$ Circuit Pattern Footprint Pad (s) $\square$ Solder Resist <br> Dimensions are in Inches [Millimeters] Mounting Footprint |

## Packaging and Ordering Information

Parts are available in reel 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.


