

Ultra Small Low Profile 0603 Balun 50Ω to 200Ω Balanced

Description

The BD2326L50200A00 is an ultra-small low profile balanced to unbalanced transformer designed for differential inputs and output locations on next generation wireless chipsets in an easy to use surface mount package covering 802.11b+g+n. The BD2326L50200A00 is ideal for high volume manufacturing and is higher performance than traditional ceramic baluns. The BD2326L50200A00 has an unbalanced port impedance of 50Ω and a 200Ω balanced port impedance. This transformation enables single ended signals to be applied to differential ports on modern integrated chipsets. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD2326L50200A00 is available on tape and reel for pick and place high volume manufacturing.

Detailed Electrical Specifications: Specifications subject to change without notice.

Features:

- 2300 2600 MHz
- 0.7mm Height Profile
- 50 Ohm to 2 x 100 Ohm
- 802.11 b+g +n Compliant
- Low Insertion Loss
- Input to Output DC Isolation
- Surface Mountable
- Tape & Reel
- Non-conductive Surface
- RoHS Compliant

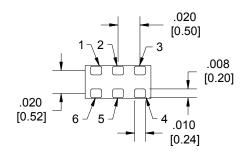
	R	ROOM (25°C)			
Parameter	Min.	Тур.	Max	Unit	
Frequency	2300		2600	MHz	
Unbalanced Port Impedance		50		Ω	
Balanced Port Impedance		200		Ω	
Return Loss	12	18		dB	
Insertion Loss*		0.9	1.1	dB	
Amplitude Balance		0.4	8.0	dB	
Phase Balance		3	9	Degrees	
CMRR		29		dB	
Power Handling			2	Watts	
Operating Temperature	-55		+85	° C	

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

Outline Drawing

Top View (Near-side) Side View .027±.002 [0.70±0.05] .059±.004 [1.50±0.10] .029±.004 [0.75±0.10] Orientation Marker Denotes Pin Location Pin Designation **Unbalanced Port** DC Bias/GND **Balanced Port Balanced Port** Dimensions are in Inches [Millimeters] GND Mechanical Outline GND

Bottom View (Far-side)



Tolerances are Non-Cumulative



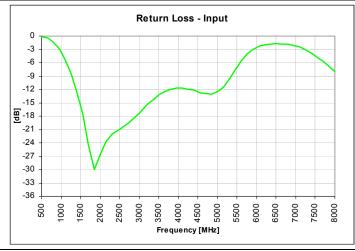


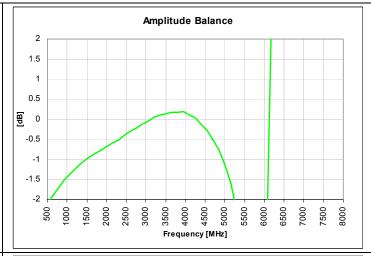
Available on Tape and Reel for Pick and Place Manufacturing.

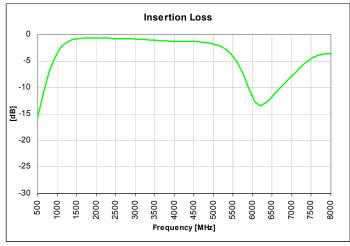
USA/Canada: (315) 432-8909 Toll Free: (800) 411-6596 Europe: +44 2392-232392

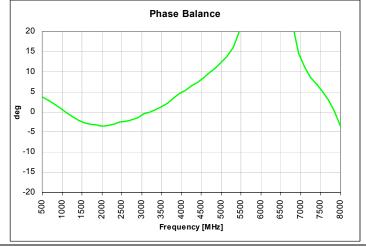


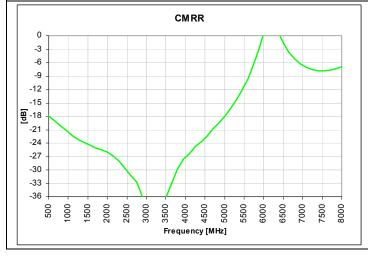
Typical Broadband Performance: 500 MHz. to 8000 MHz.











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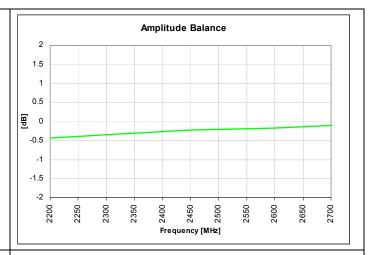


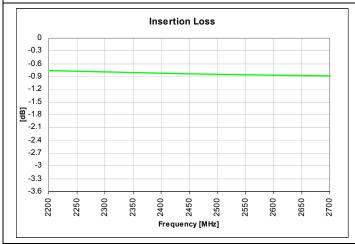
Rev C

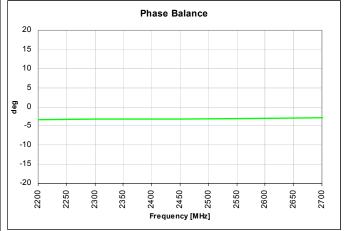


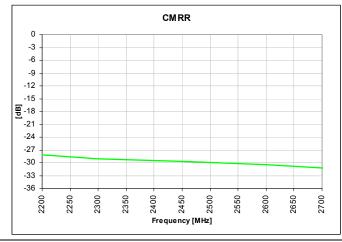
Typical Performance: 2200 MHz. to 2700 MHz.













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Model BD2326L50200A00

Rev C



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 ppm/°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.

No Bias Footprint **DC Bias Footprint** [0.16] Part Orientation (Top View) Part Orientation (Top View) 6X .002 6X .002 Plated thru 2X .006 Plated thru [0.16] holes to ground Circuit Pattern Circuit Pattern Footprint Pad (s) Footprint Pad (s) Dimensions are in Inches [Millimeters] Dimensions are in Inches [Millimeters] 0603 DC Bias Mounting Footprint Solder Resist 0603 Standaard Mounting Footprint

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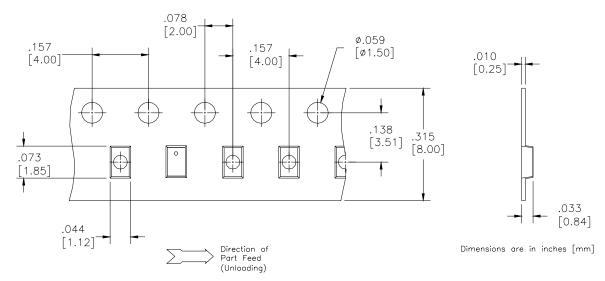
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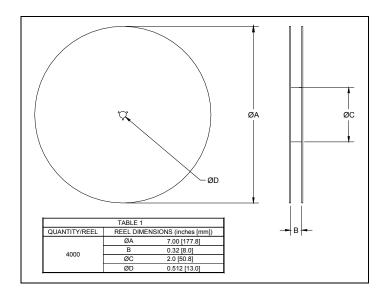




Packaging and Ordering Information

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.







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BD 2425 J 50 100 A 00

		_	J L			
Function	Frequency	Package Dimensions	Unbalanced Impedance	+ Coupling	Finish	Codes
B = Balun BD = Balun + DC F = Filter FB = Filter / Balun C = 3dB Coupler DC = Directional J = RF Jumper X = RF cross over	1416 = 1400 - 1600 MHz 1722 = 1700 - 2200 MHz 2326 = 2300 - 2600 MHz 2425 = 2400 - 2500 MHz 3150 = 3100 - 5000 MHz	A = 150 x 150 mils (4mm x 4mm) C = 120 x 120 mils (3mm x 3mm) E = 100 x 80 mils (2.5mm x 2mm) J = 80 x 50 mils (2mm x 1.25mm) L = 60 x 30 mils (1.5mm x 0.75mm) N = 40 x 40 mils (1mm x 1mm)	50 = 50 Ohm 75 = 75 Ohm	25 = 25 Ω Balanced 30 = 30 Ω Balanced 50 = 50 Ω Balanced 75 = 75 Ω Balanced 100 = 100 Ω Balanced 200 = 200 Ω Balanced 300 = 300 Ω Balanced 400 = 400 Ω Balanced 400 = 30B Balanced 103 = 3dB Hybrid 10 = 10dB Directional 20 = 20dB Directional	A = Gold P = Tin-Lead	

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