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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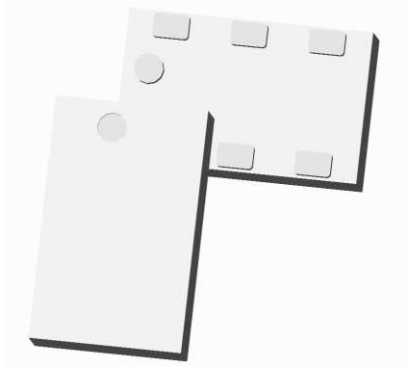
Xinger®

Ultra Low Profile 0805 Balun
50Ω to 100Ω Balanced



Description

The BD2040J50100AHF is a low profile sub-miniature 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 multiple ISM bands. The BD2040J50100AHF is ideal for high volume manufacturing and is higher performance than traditional ceramic and lumped element baluns. The BD2040J50100AHF has an unbalanced port impedance of 50Ω and a 100Ω balanced port impedance. This transformation enables single ended signals to be applied to differential ports on modern semiconductors. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD2040J50100AHF is available on tape and reel for pick and place high volume manufacturing.

Features:

- **2000 – 4000 MHz**
- **0.7mm Height Profile**
- **50 Ohm to 2 x 50 Ohm**
- **Multiple ISM bands**
- **Low Insertion Loss**
- **Input to Output DC Isolation**
- **Surface Mountable**
- **Tape & Reel**
- **Non-conductive Surface**
- **RoHS Compliant**
- **Halogen Free**

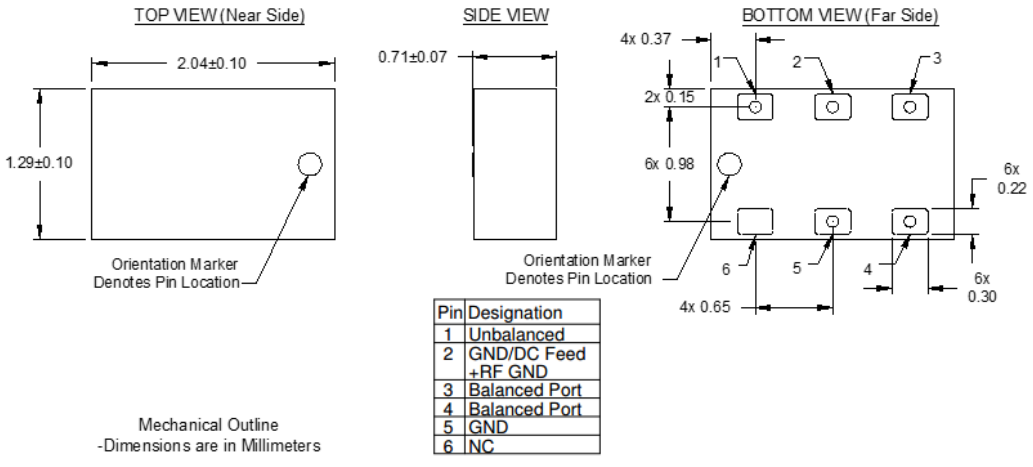
Detailed Electrical Specifications:

Specifications subject to change without notice.

	ROOM (25°C)						
Parameter	**Min.**	**Typ.**	**Max**	**Min.**	**Typ.**	**Max**	**Unit**
Frequency	2650		3500	2000		4000	MHz
Unbalanced Port Impedance		50			50		Ω
Balanced Port Impedance		100			100		Ω
Return Loss	13.0	16.9		10	14.2		dB
Insertion Loss*		0.8	1.0		1.06	1.3	dB
Amplitude Balance		0.6	1.3		0.8	1.48	dB
Phase Balance		8.2	13.0		15	16.5	Degrees
CMRR		21.7			17		dB
Power Handling @85C			2			2	Watts
Power Handling @105C			1.2			1.2	Watts
Operating Temperature	-55		+105	-55		+105	ºC

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

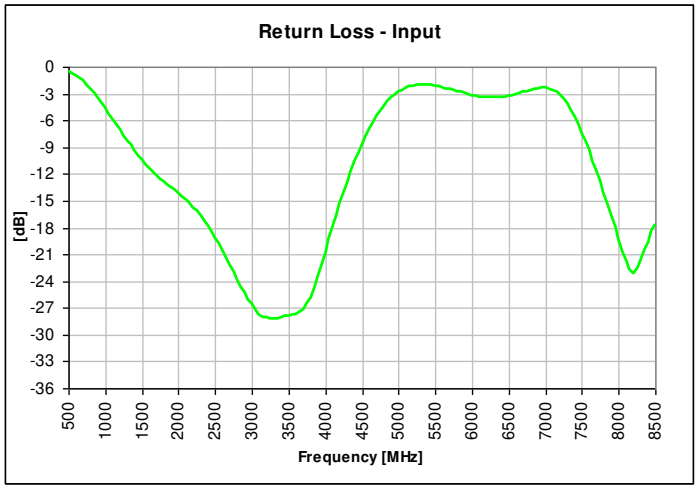
Outline Drawing

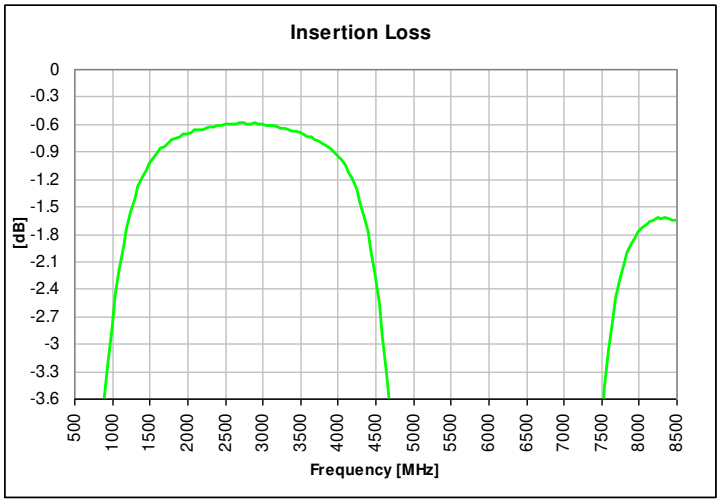


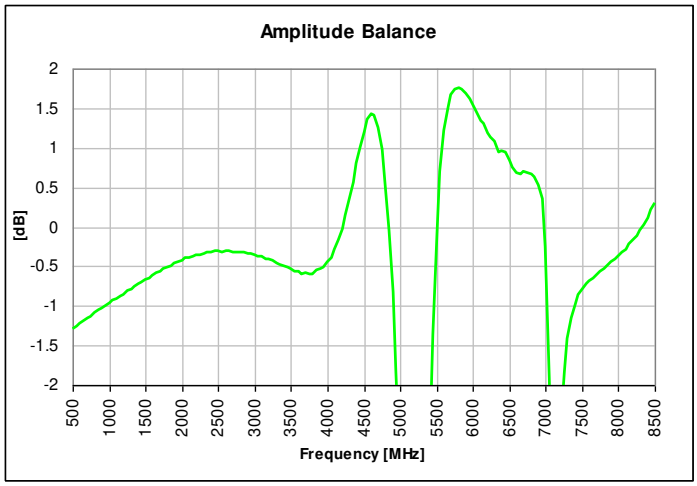
Pin	Designation
1	Unbalanced
2	GND/DC Feed +RF GND
3	Balanced Port
4	Balanced Port
5	GND
6	NC

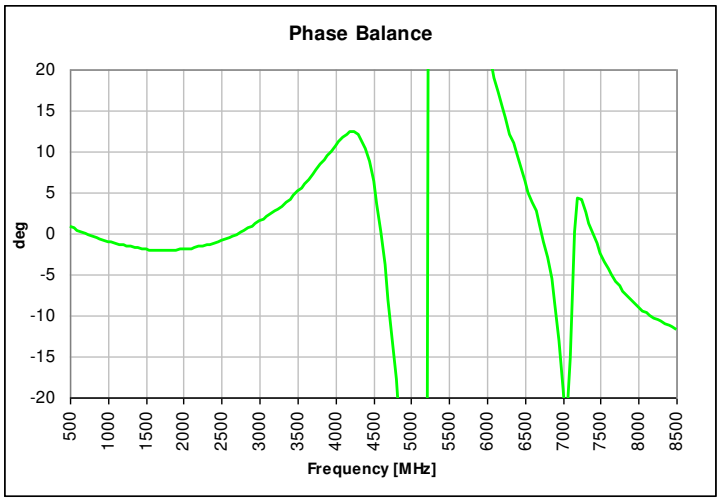
Mechanical Outline
-Dimensions are in Millimeters

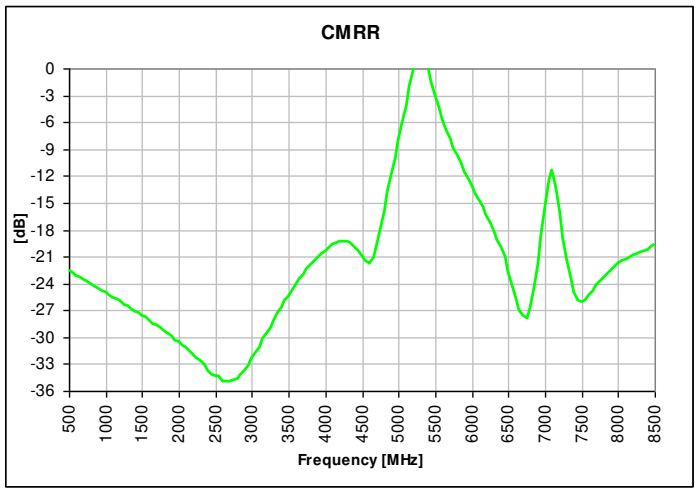
Typical Broadband Performance: 500 MHz. to 8.5 GHz.



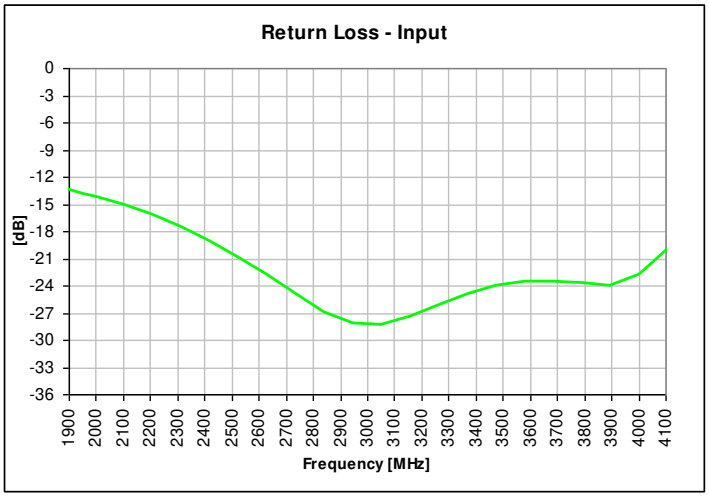


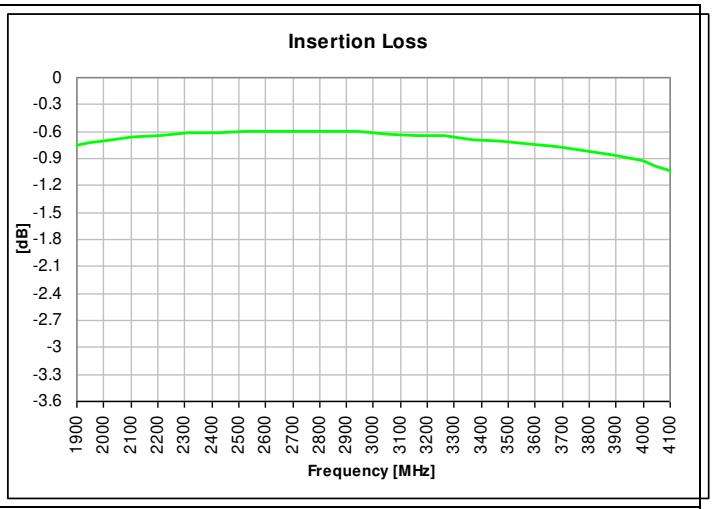


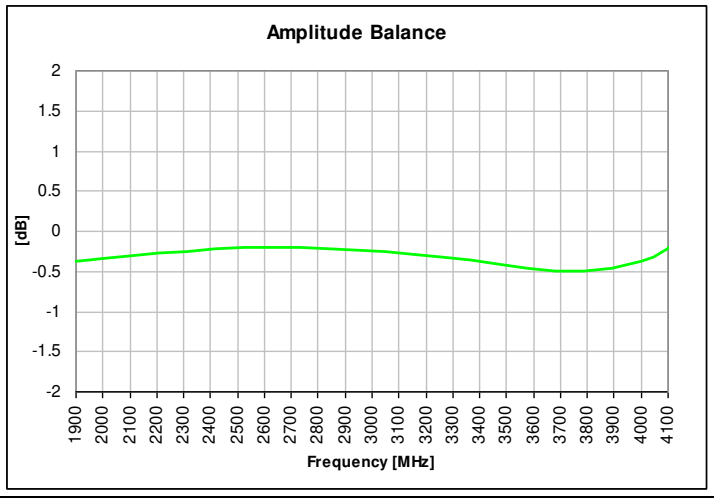


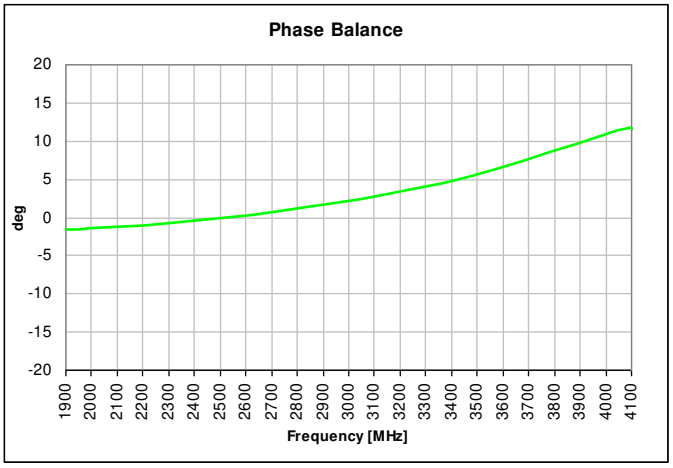


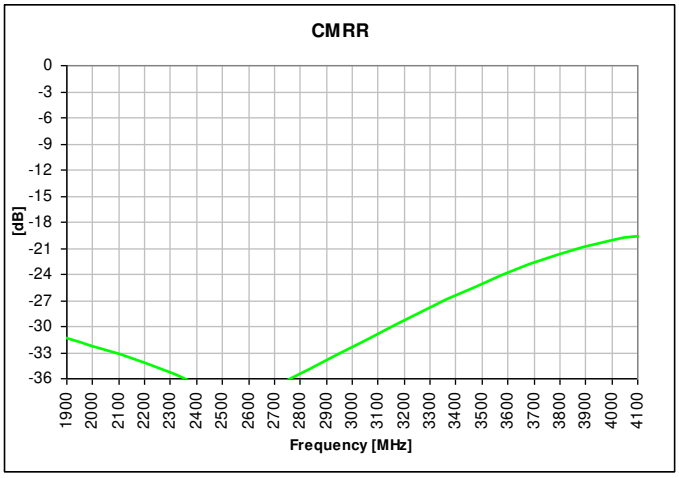
Typical Performance: 1900 MHz. to 4100 MHz.

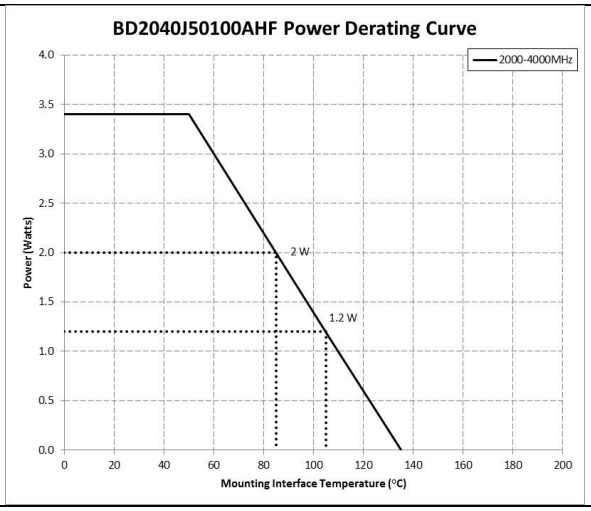












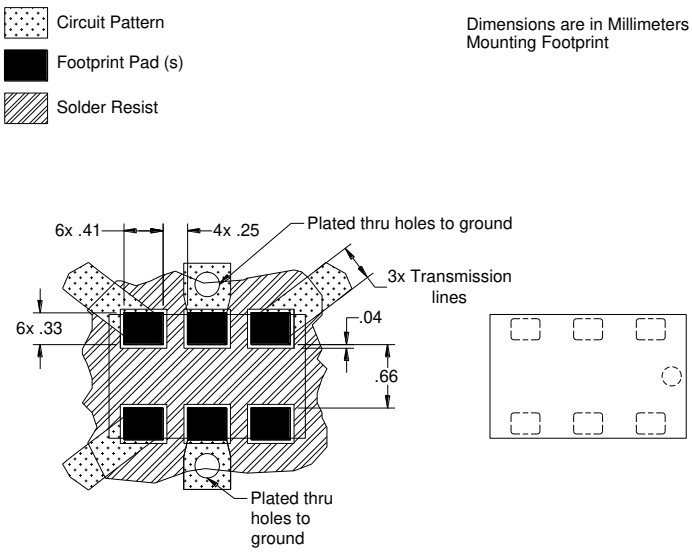
Mounting Configuration:

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.

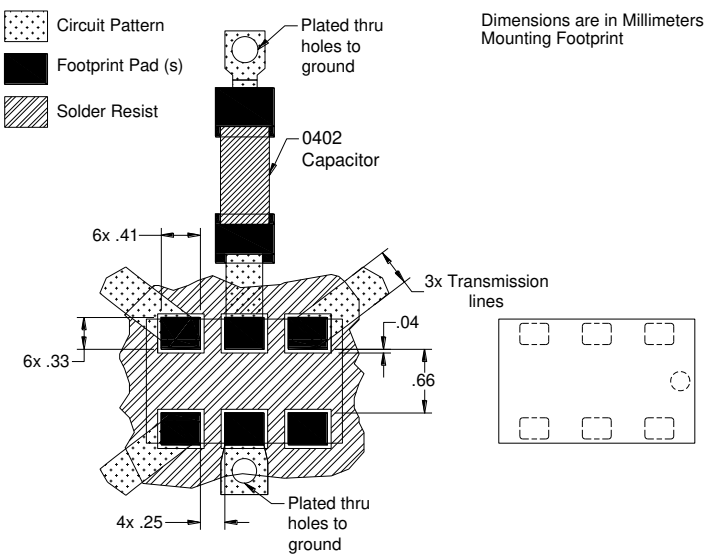
All of the Xinger components are constructed from organic PTFE based composites which possess excellent electrical and mechanical stability. Xinger components are compliant to a variety of ROHS and Green standards and ready for Pb-free soldering processes. Pads are Gold plated with a Nickel barrier.

An example of the PCB footprint used in the testing of these parts is shown below. 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

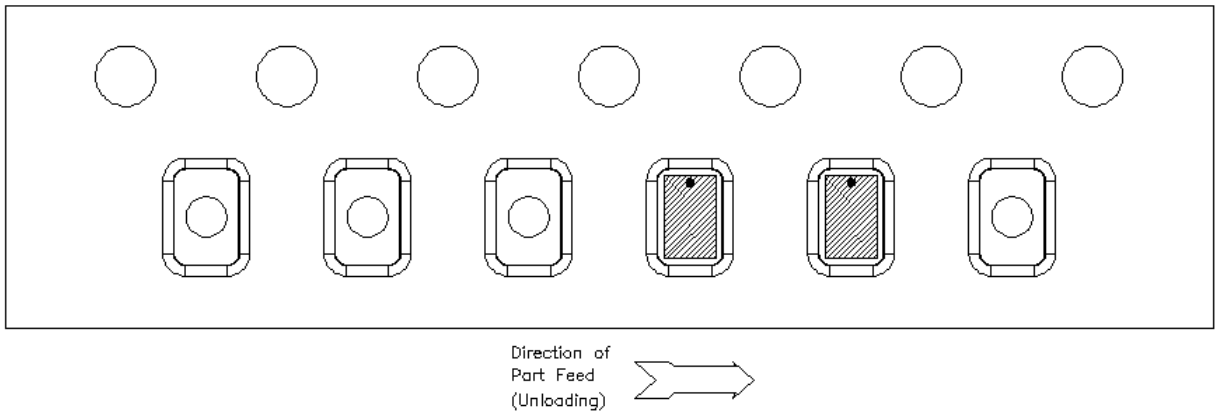


DC Bias Footprint



Packaging Information:

Parts are available in reel and are packaged per EIA 481-D. Parts are oriented in tape and reel as shown below. Minimum order quantities are 4000 per reel.



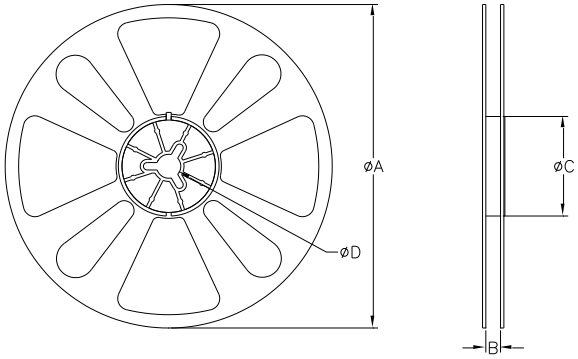


TABLE 1		
QUANTITY/REEL	REEL DIMENSIONS mm	
4000	øA	177.80
	B	8.00
	øC	50.80
	øD	13.00