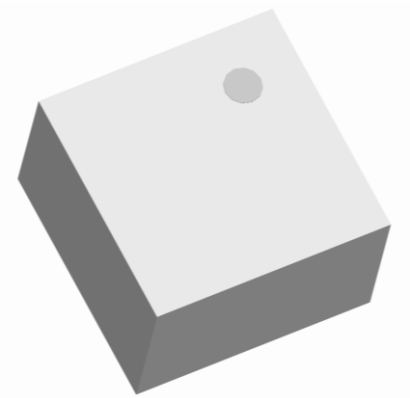
Ultra Low Profile 0404 Balun
50Ω to 50Ω Balanced



Description

The BD3238N5050AHF is a low profile, low impedance sub-miniature unbalanced to balanced transformer designed for differential inputs and output locations on modern chipset applications in an easy to use surface mount package. The BD3238N5050AHF is ideal for high volume manufacturing and delivers higher performance than traditional ceramic baluns. The BD3238N5050AHF has an unbalanced port impedance of 50Ω and a 50Ω balanced port impedance. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD3238N5050AHF is available on tape and reel for pick and place high volume manufacturing.

Features:

- **3200 – 4200 MHz**
- **0.57 mm Height Profile**
- **50Ohm to 2 x 25Ohm**
- **Low Insertion Loss**
- **Surface Mountable**
- **Tape & Reel**
- **Non-conductive Top Surface**
- **RoHS Compliant**
- **Halogen free**

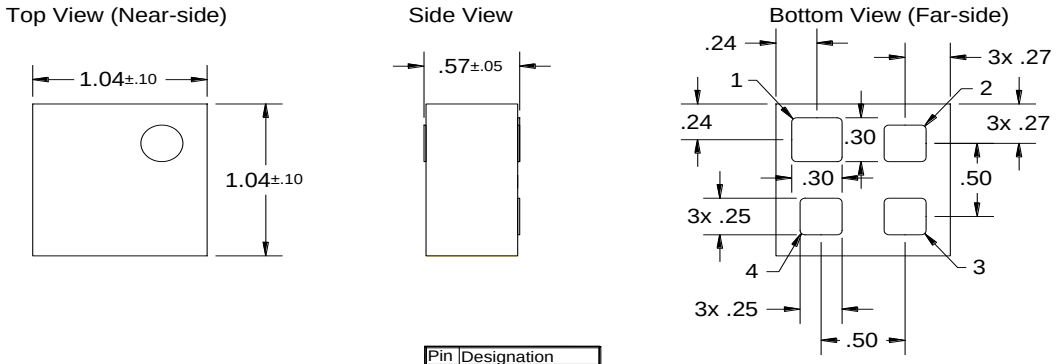
Detailed Electrical Specifications:

Specifications subject to change without notice.

	ROOM (25°C)									
Parameter	**Min.**	**Typ.**	**Max**	**Min.**	**Typ.**	**Max**	**Min.**	**Typ.**	**Max**	**Unit**
Frequency	3200		3800	3800		4200	3400		3600	MHz
Unbalanced Port Impedance		50			50			50		Ω
Balanced Port Impedance		50			50			50		Ω
Return Loss	7	11		10	13		8	12		dB
Insertion Loss*		0.9	1		0.7	1		0.7	1	dB
Amplitude Balance		0.6	1.5		0.2	0.7		0.4	1.5	dB
Phase Balance		3	6		2	5		3	6	Degrees
CMRR		28			34			30		dB
Power Handling @85C			1.0			1.0			1.0	Watts
Operating Temperature	-55		+105	-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	GND / DC Feed + RF GND
2	Unbalanced Port
3	Balanced Port
4	Balanced Port

Dimensions are in Millimeters
Mechanical Outline

Tolerances are Non-Cumulative

Available on Tape and Reel for Pick and Place Manufacturing.

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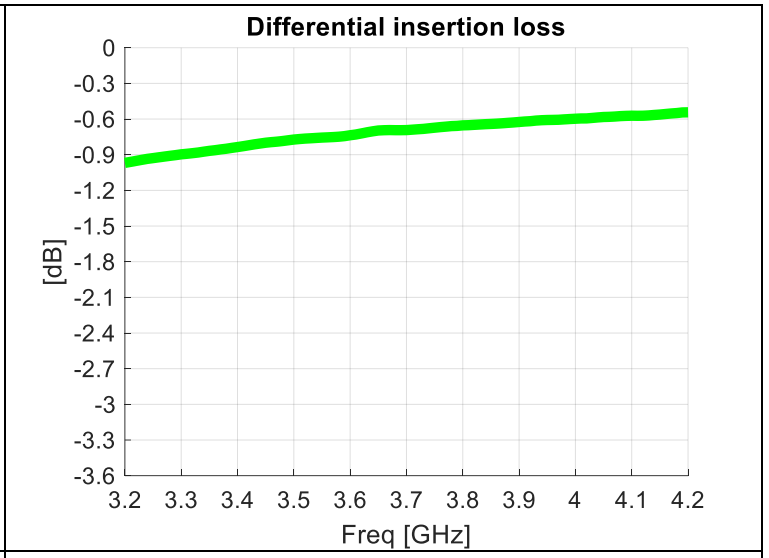
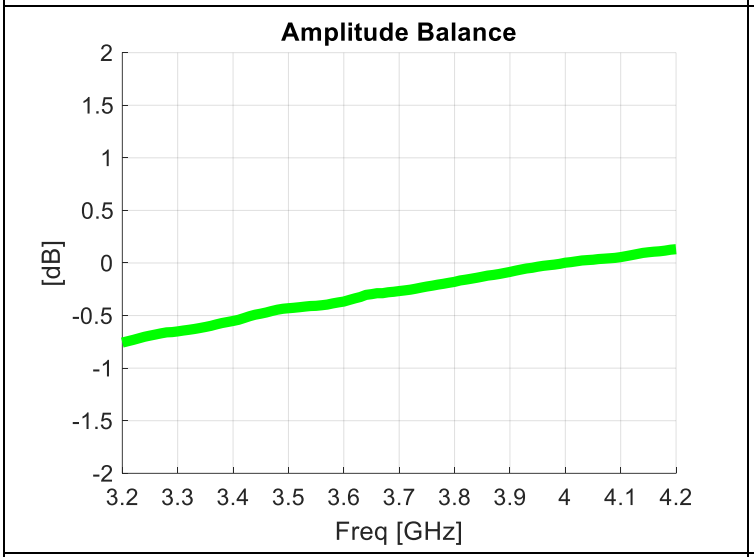
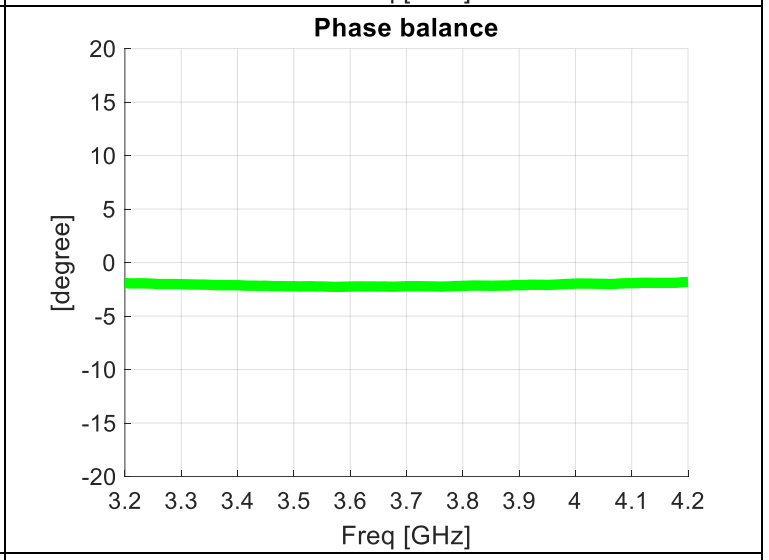
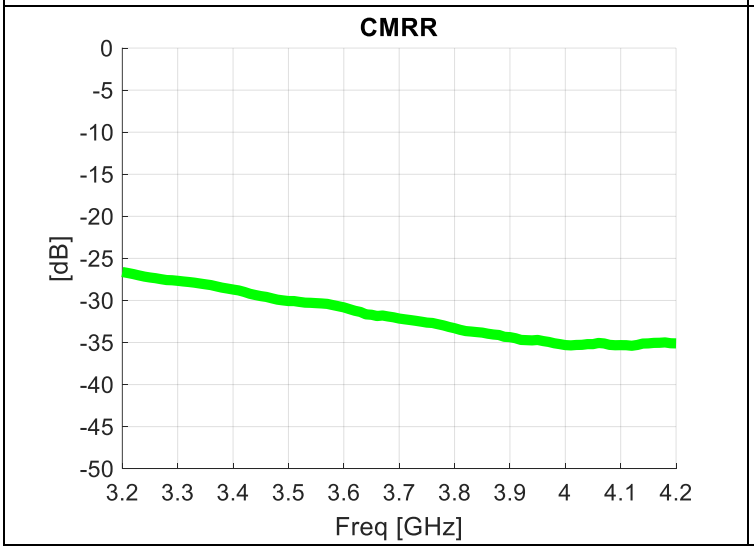
Typical Performance: 3200 MHz to 4200 MHz









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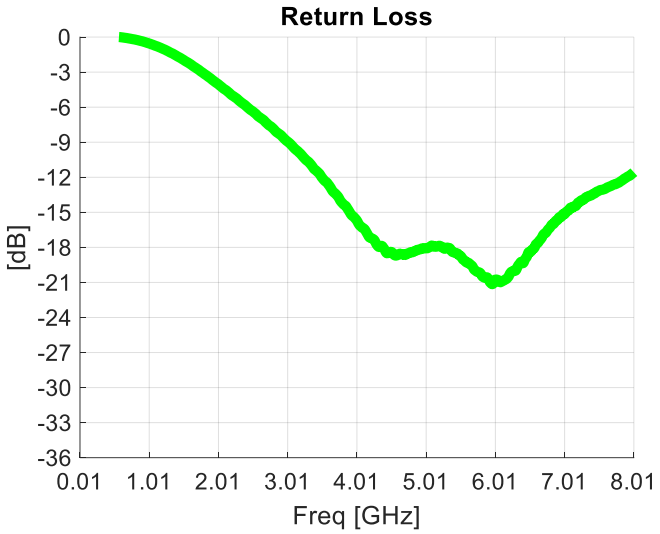
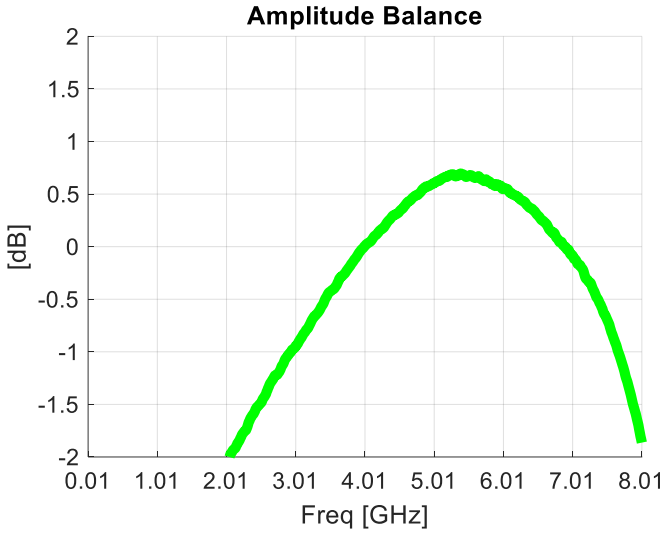
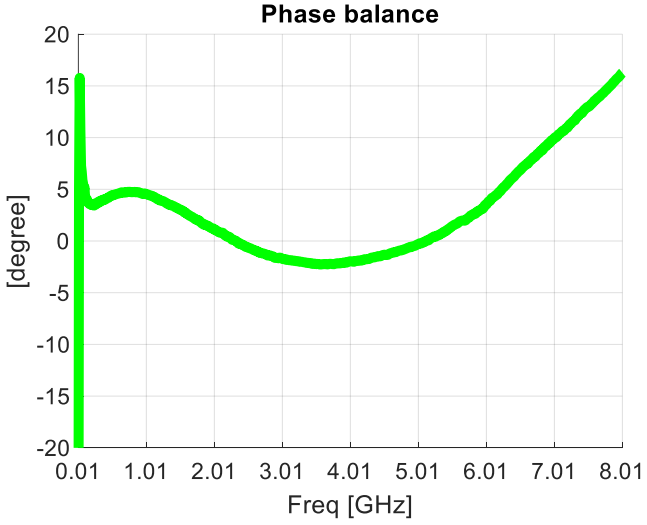
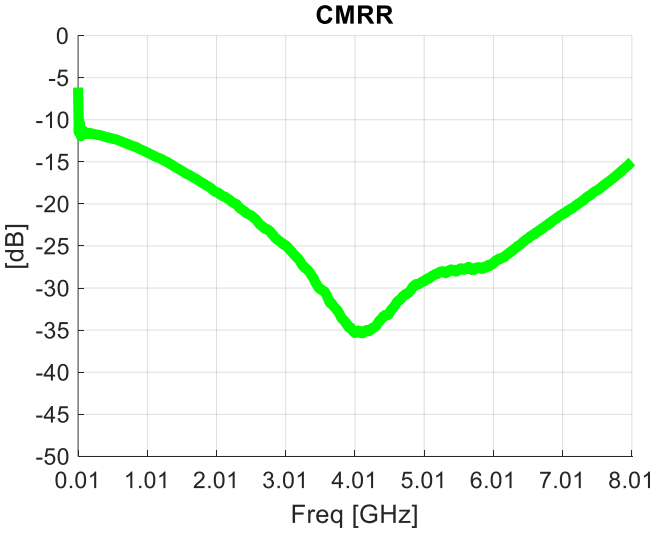
Wide Band Performance: 10 MHz to 8100 MHz









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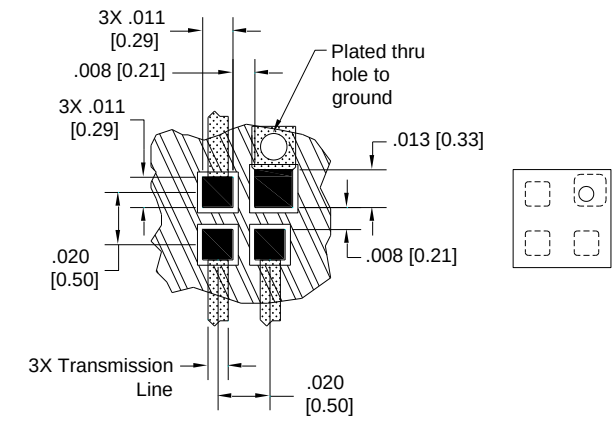
Mounting Configuration:

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 ppm/°C.

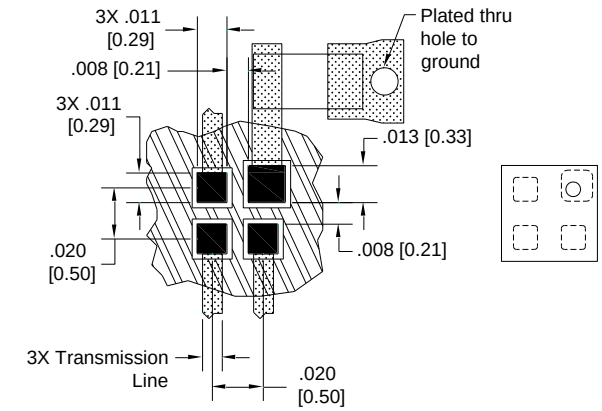
An example of the PCB footprint used in the testing of these parts is shown below. An example of a DC-biased footprint is also shown below. In specific designs, the transmission line widths need to be adjusted to the unique dielectric coefficients and thicknesses as well as varying pick and place equipment tolerances.

With No DC Bias



Dimensions are in Inches [Millimeters]
Mounting Footprint

With DC Bias



Dimensions are in Inches [Millimeters]
Mounting Footprint

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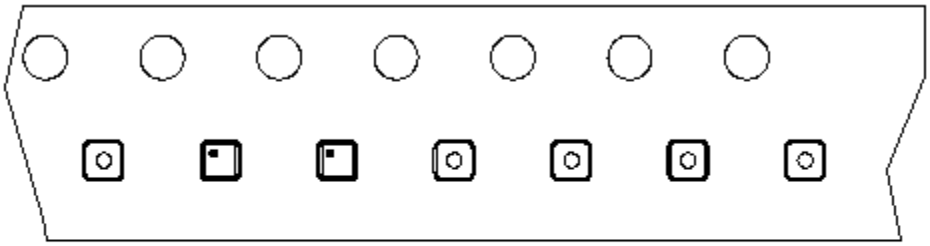
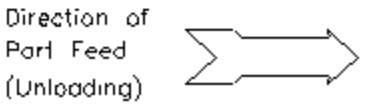
Packaging and Ordering Information

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.





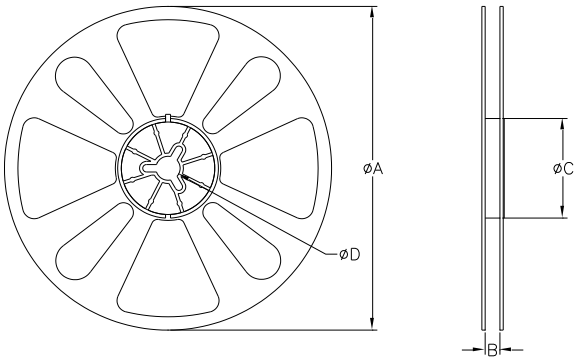


TABLE 1		
QUANTITY/REEL	REEL DIMENSIONS mm	
4000	øA	177.80
	B	8.00
	øC	50.80
	øD	13.00

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