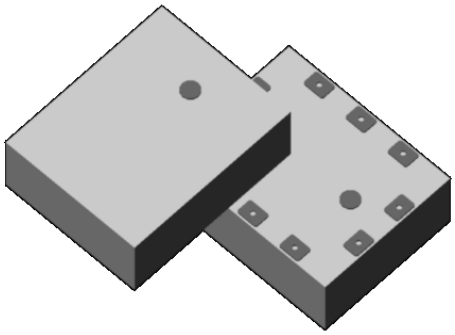
Model BD0310E5050A00

Rev A

Ultra Low Profile 1008 Balun
50Ω to 50Ω Balanced



Description

The BD03105E5050A00 is a low profile sub-miniature balanced to unbalanced transformer designed for differential input locations on frequency conversion devices such as A to D and D to A converters. In an easy to use surface mount package covering 300 MHz to 1000 MHz and with CMRR performances over 2x that of the incumbent wire wound products, this transformer is optimized to offer improved SFDR management during operation of the frequency converter device. The BD03105E5050A00 is ideal for high volume manufacturing and is higher performance and smaller form factor than traditional wire wound transformers. The BD03105E5050A00 has an unbalanced port impedance of 50Ω and a 50Ω balanced port impedance. This transformation enables single ended signals to be applied to differential ports on the frequency converter devices. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD03105E5050A00 is available on tape and reel for pick and place high volume manufacturing.

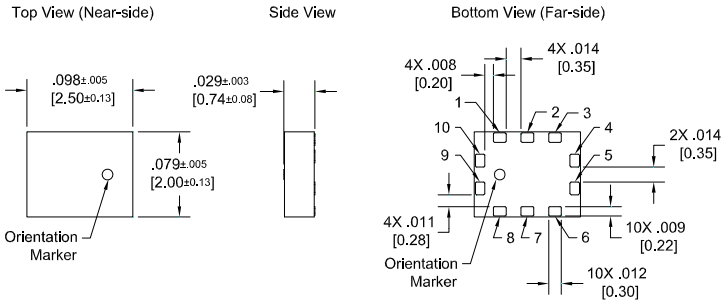
Detailed Electrical Specifications: Specifications subject to change without notice.

Features:

- **300 – 1000 MHz**
- **0.74 mm Height Profile**
- **50 Ohm to 2 x 25 Ohm**
- **Excellent CMRR**
- **Input to Output DC Isolation**
- **Surface Mountable**
- **Tape & Reel**
- **Non-conductive Surface**
- **RoHS Compliant**
- **Cascadable**
- **Configurable as UnUn Transformer**

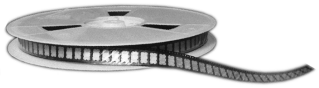
	ROOM (25°C)			
Parameter	**Min.**	**Typ.**	**Max**	**Unit**
Frequency	300		1000	MHz
Unbalanced Port Impedance		50		Ω
Balanced Port Impedance		50		Ω
Return Loss	10.3	11.5		dB
Insertion Loss*		0.9	1.1	dB
Amplitude Balance		0.2	0.7	dB
Phase Balance		2	5	Degrees
CMRR		35		dB
Power Handling			2	Watts
Operating Temperature	-55		+85	ºC

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



Pin	Designation	Pin	Designation
1	Unbalanced	6	Balanced port 1
2	NC	7	DC
3	GND/Diff In	8	Balanced port 2
4	GND	9	GND
5	GND	10	GND

Dimensions are in Inches [Millimeters]
Mechanical Outline



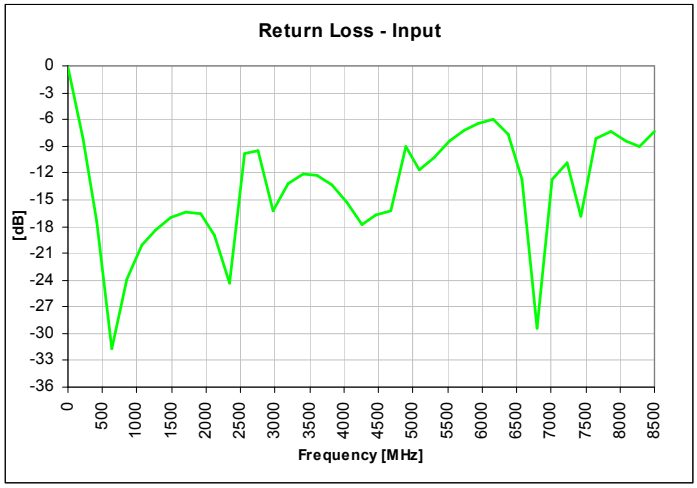
Available on Tape and Reel for Pick and Place Manufacturing.

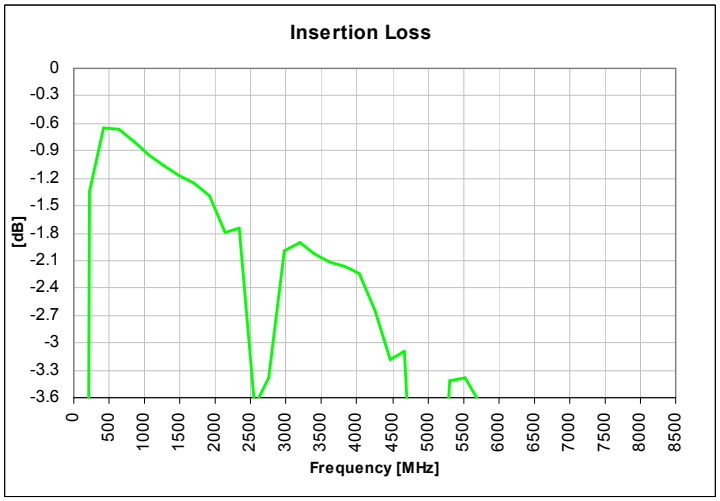
USA/Canada: (315) 432-8909
Toll Free: (800) 411-6596
Europe: +44 2392-232392

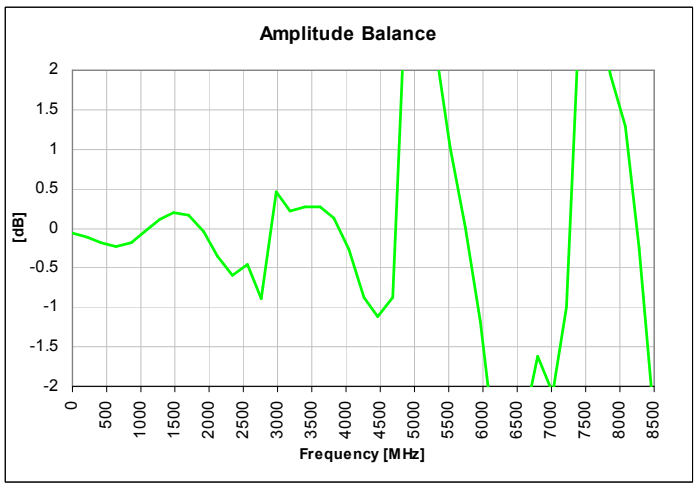
Model BD0310E5050A00

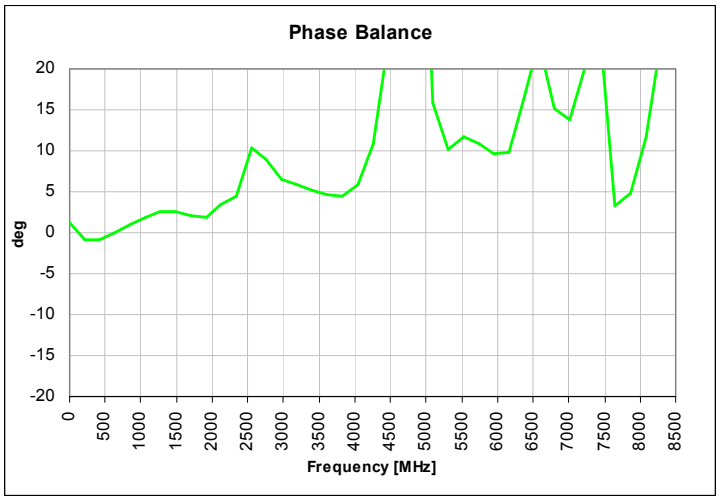
Rev. A

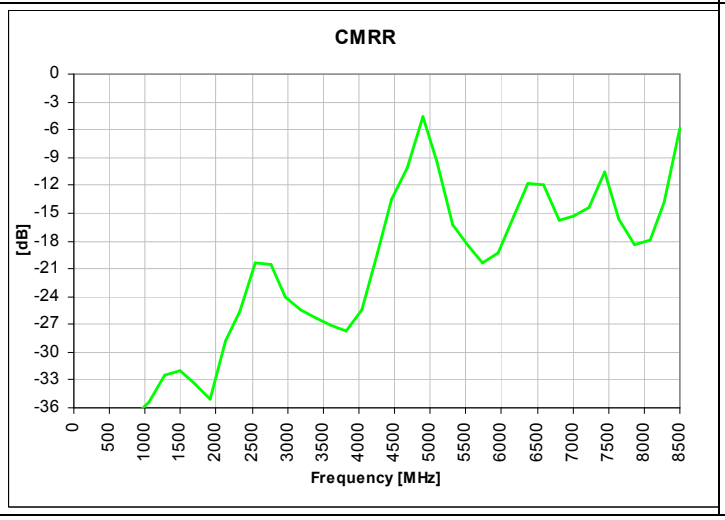
Typical Broadband Performance: 0 to 8.0 GHz.





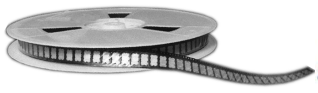






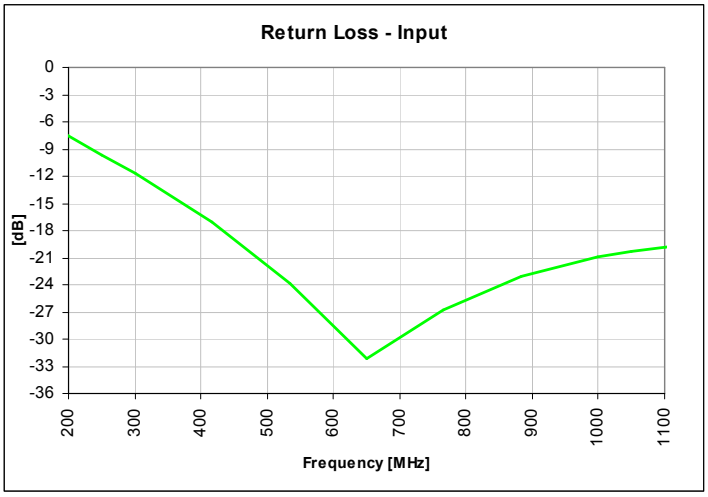
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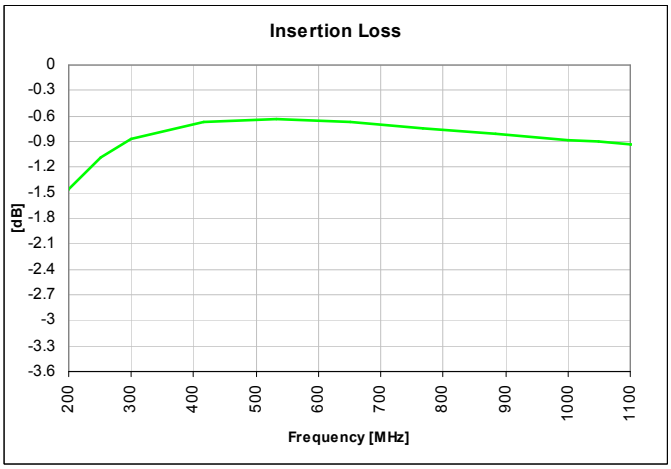
Available on Tape and Reel for Pick and Place Manufacturing.

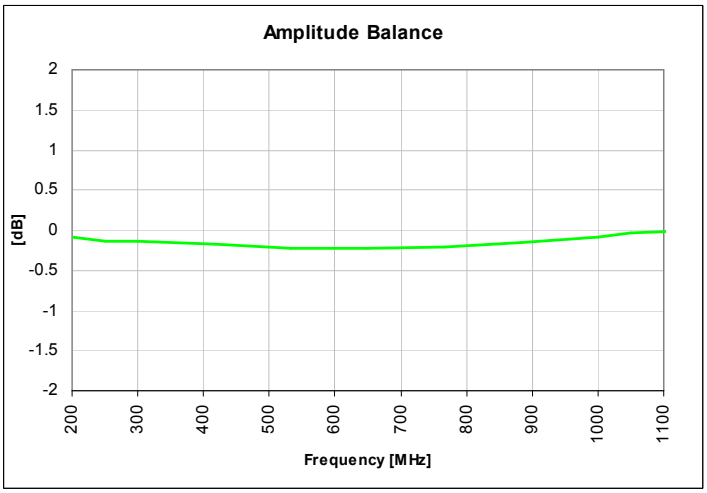


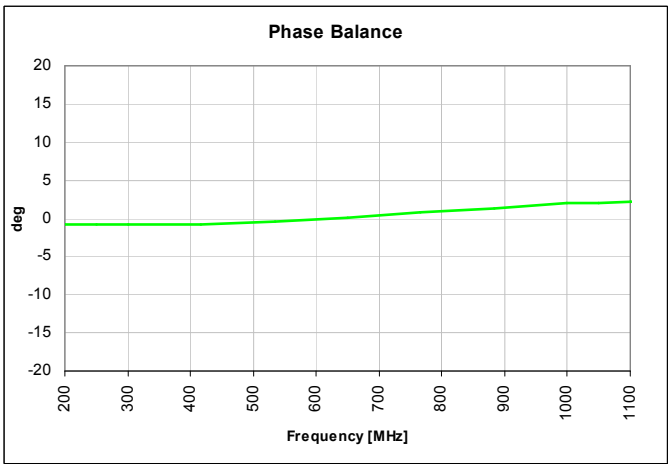
Anaren
What'll we think of next?™

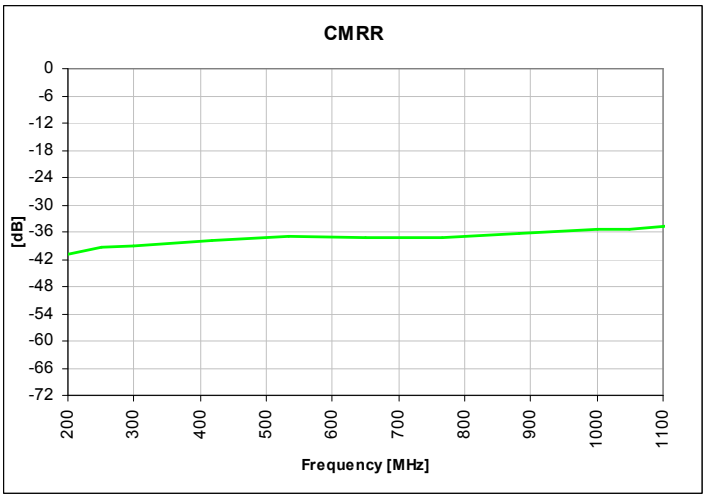
Typical Performance: 200 MHz. to 1100 MHz.

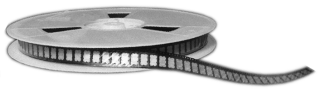












Available on Tape and Reel for Pick and Place Manufacturing.

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Toll Free: (800) 411-6596
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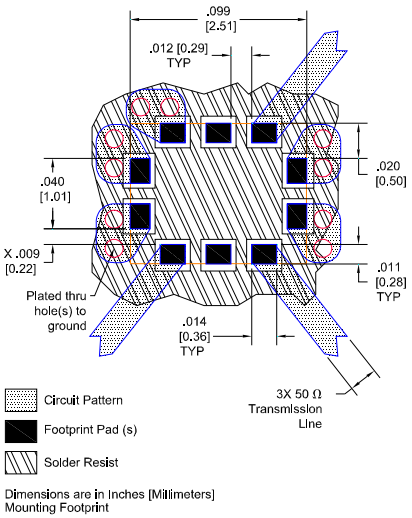
Mounting Configuration:

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 ppm/^{o}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 DC Bias



With DC Bias

