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

Xinger®

Ultra Low Profile 0805 Balun
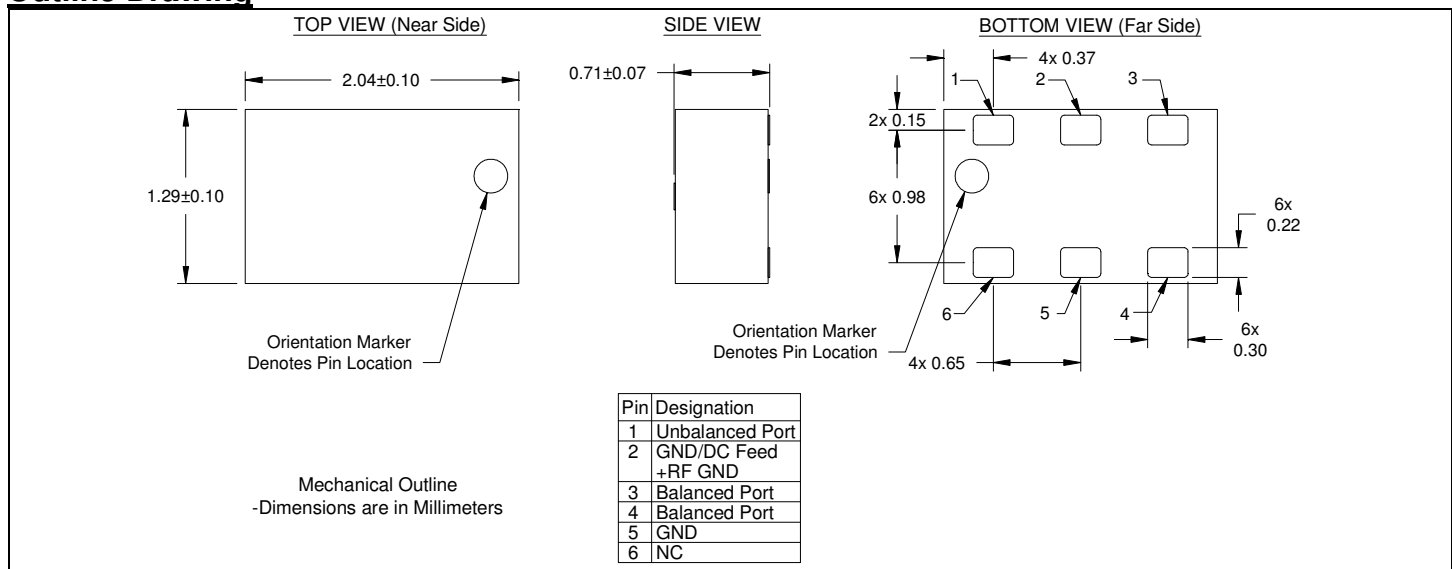## 50Ω to 200Ω Balanced
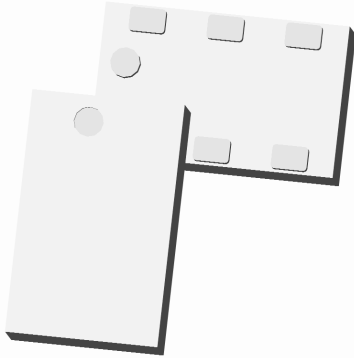
Description

The BD3438J50200AHF is a low profile sub-miniature balanced to unbalanced transformer designed for differential inputs and output locations on modern chipsets in an easy to use surface mount package The BD3438J50200AHF is ideal for high volume manufacturing and is higher performance than traditional ceramic and lumped element baluns. The BD3438J50200AHF 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 semiconductors. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD3438J50200AHF is available on tape and reel for pick and place high volume manufacturing.

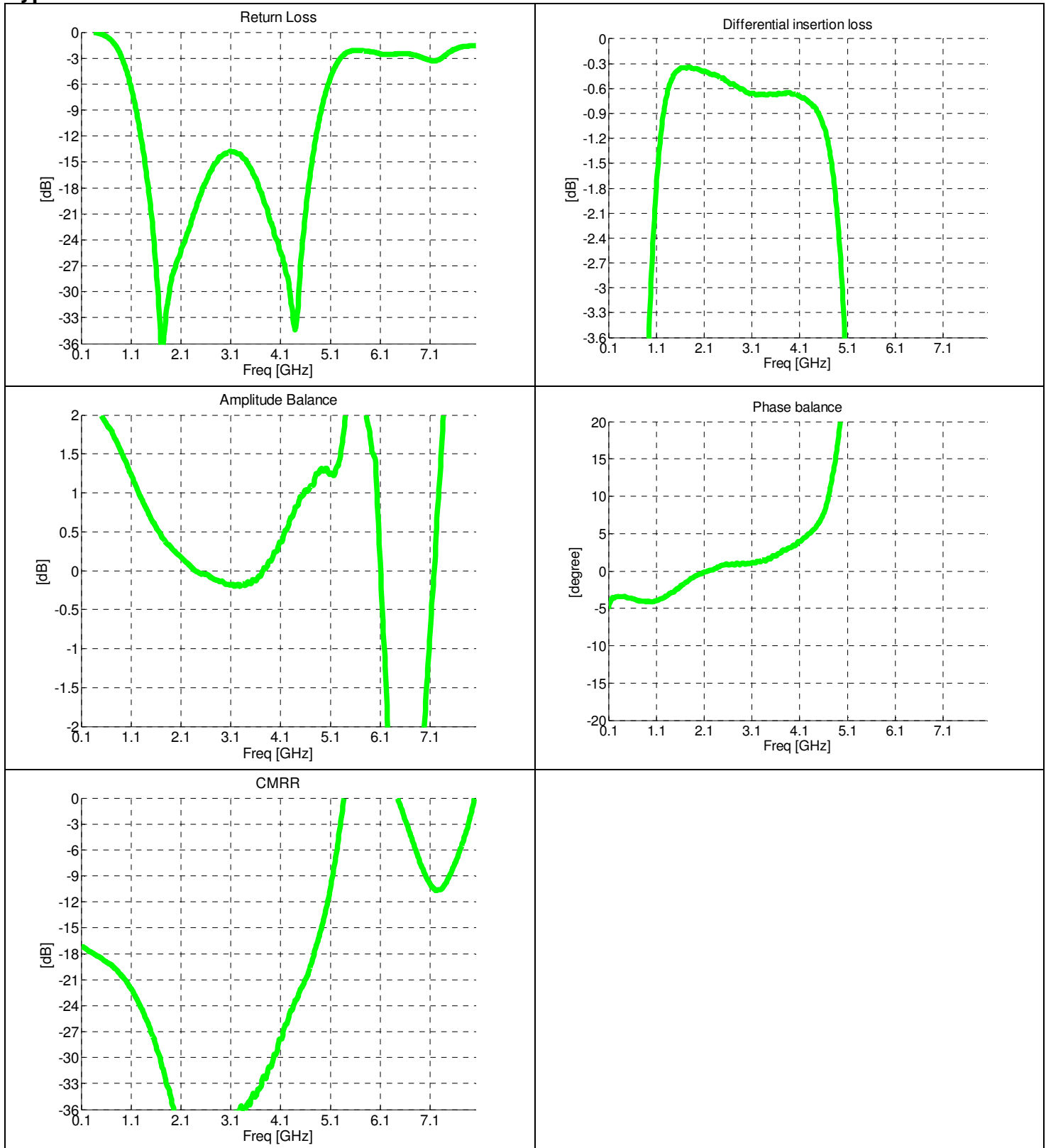## Detailed Electrical Specifications: Specifications subject to change without notice.

Features:

- **3400 – 3800 MHz**
- **0.7mm Height Profile**
- **50 Ohm to 2 x 100 Ohm**
- **Low Insertion Loss**
- **Input to Output DC Isolation**
- **Surface Mountable**
- **Tape & Reel**
- **Non-conductive Surface**
- **RoHS Compliant**

Parameter	ROOM (25°C)			Unit
	Min.	Typ.	Max	
Frequency	3400		3800	MHz
Unbalanced Port Impedance		50		Ω
Balanced Port Impedance		200		Ω
Return Loss	11	15		dB
Insertion Loss*		0.7	1.0	dB
Amplitude Balance		0.1	0.6	dB
Phase Balance		4	10	Degrees
CMRR		29		dB
Power Handling @85C			2	Watts
Power Handling @105C			1.2	Watts
Operating Temperature	-55		+105	ºC

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

Outline Drawing

TOP VIEW (Near Side)

2.04±0.10

1.29±0.10

Orientation Marker
Denotes Pin Location

Mechanical Outline
-Dimensions are in Millimeters

SIDE VIEW

0.71±0.07

BOTTOM VIEW (Far Side)

4x 0.37

1   2   3

2x 0.15

6x 0.98

6x 0.22

6   5   4

4x 0.65

6x 0.30

Orientation Marker
Denotes Pin Location

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

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USA/Canada: (315) 432-8909
Toll Free: (800) 411-6596
Europe: +44 2392-232392
Asia: +86 512-62749282

Typical Broadband Performance: 10 MHz to 8.01GHz

Return Loss

Differential insertion loss

Amplitude Balance

Phase balance

CMRR

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Typical Performance: 3300 MHz to 3900 MHz

Return Loss

Differential insertion loss

Amplitude Balance
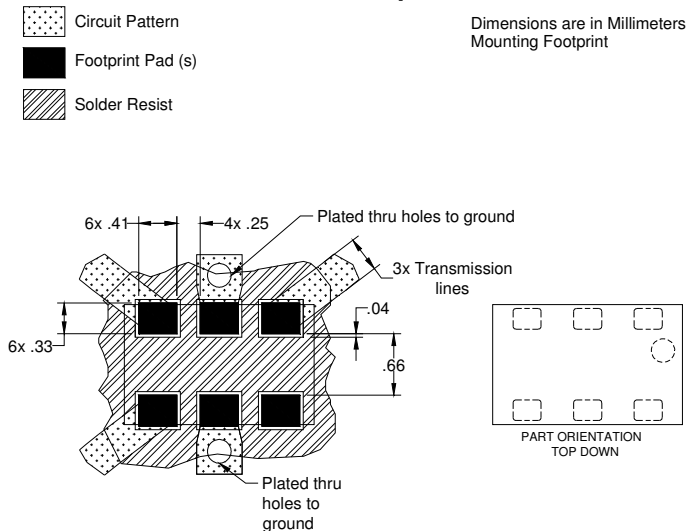
Phase balance

CMRR

Anaren®
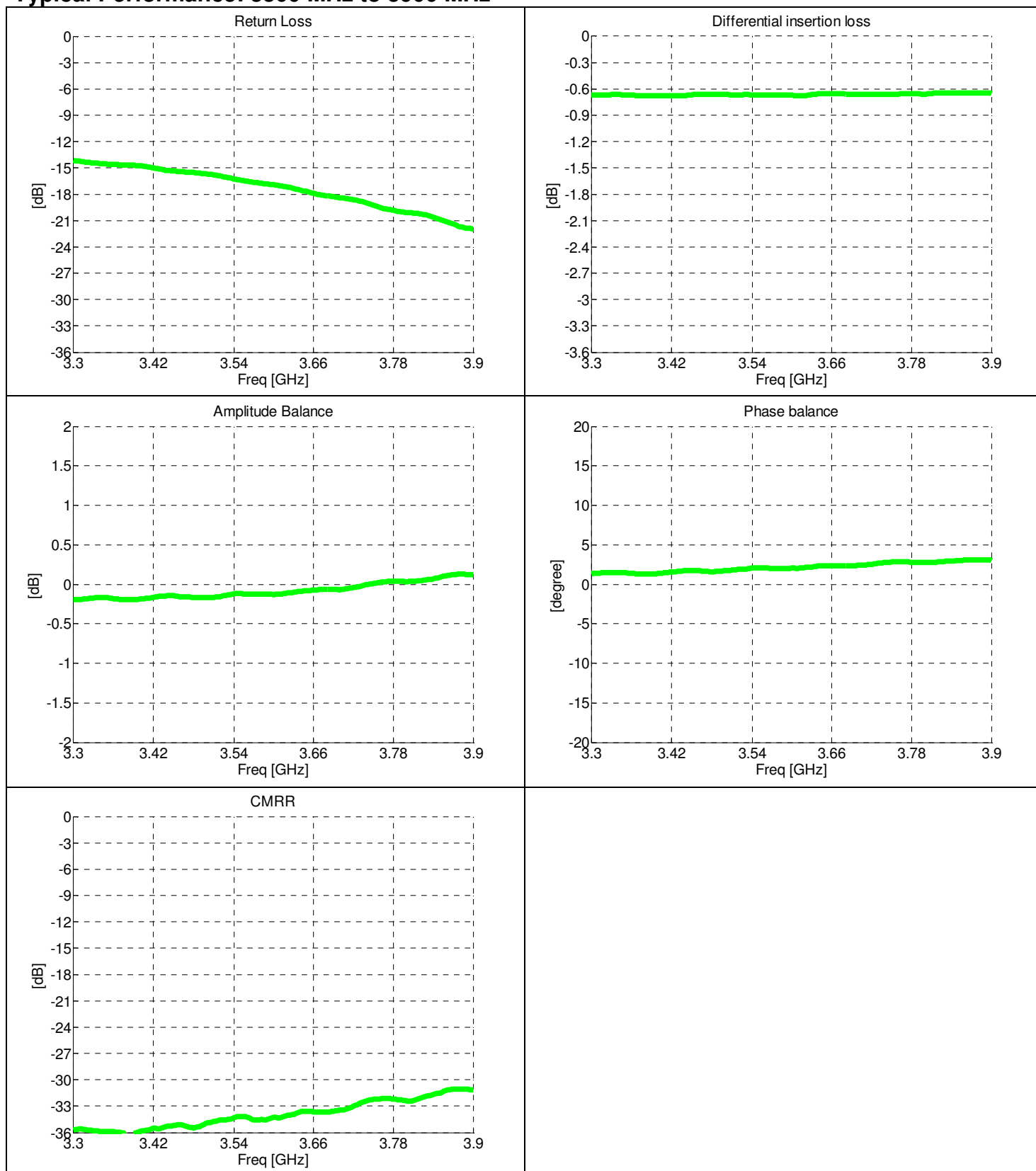
Mounting Configuration:

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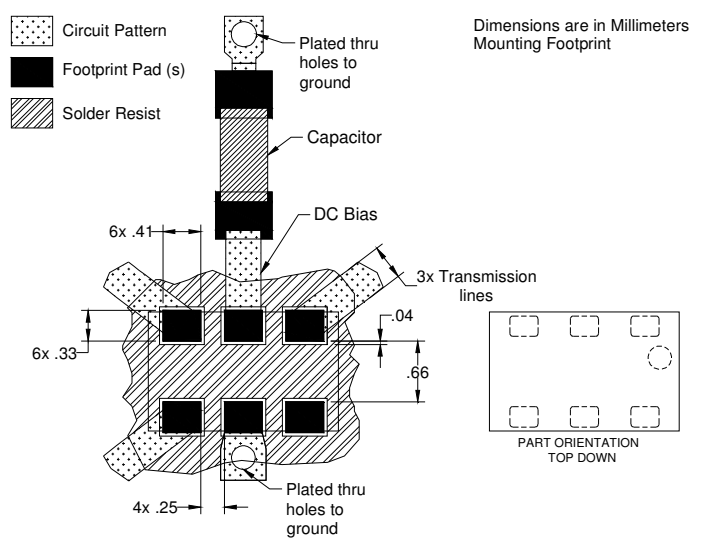
All of the Xinger components are constructed from organic PTFE based composites which possess excellent electrical and mechanical stability. Xinger components are compliant to a variety of ROHS and Green standards and ready for Pb-free soldering processes. Pads are Gold plated with a Nickel barrier.

An example of the PCB footprint used in the testing of these parts is shown below. 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.
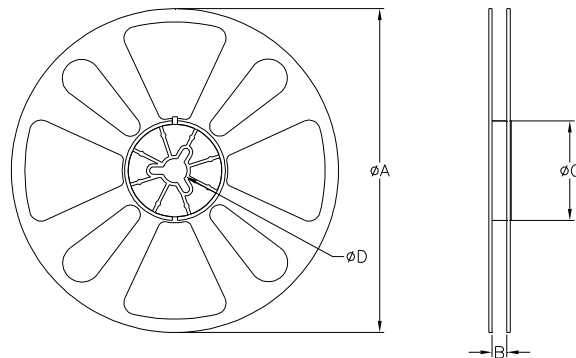
No Bias Footprint

Circuit Pattern

Footprint Pad (s)

Solder Resist

Dimensions are in Millimeters
Mounting Footprint

6x .41   4x .25   Plated thru holes to ground

3x Transmission lines

6x .33

.04

.66

Plated thru holes to ground

PART ORIENTATION
TOP DOWN

DC Bias Footprint

Circuit Pattern

Footprint Pad (s)

Solder Resist

Plated thru holes to ground

Capacitor

DC Bias

Dimensions are in Millimeters
Mounting Footprint

6x .41

6x .33

3x Transmission lines

.04

.66

4x .25   Plated thru holes to ground

PART ORIENTATION
TOP DOWN

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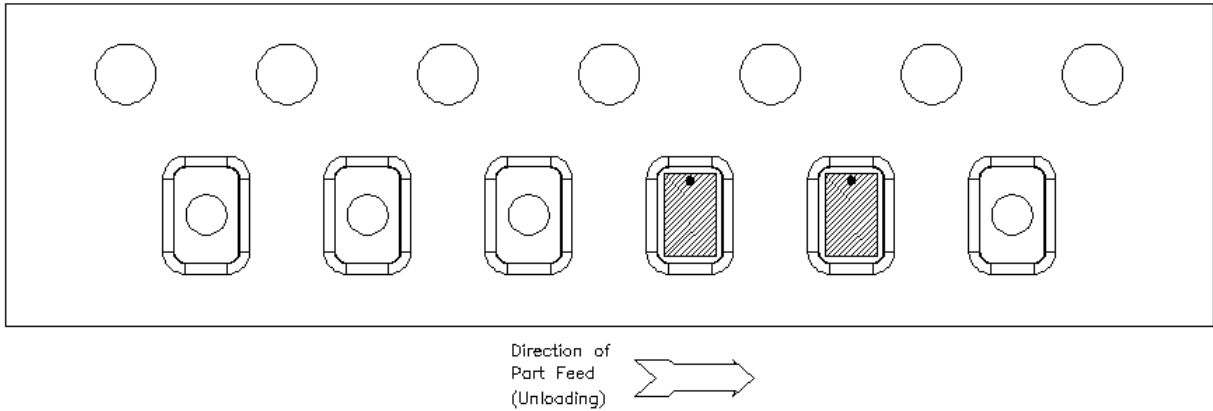Toll Free: (800) 411-6596
Europe: +44 2392-232392
Asia: +86 512-62749282

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.

Direction of
Part Feed
(Unloading)

øA

øC

øD

B

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

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