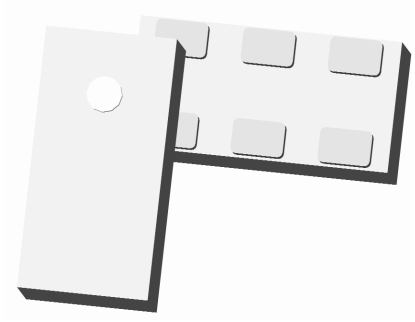
Xinger®

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



Description:

The BD2635L5050AHF 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 +MIMO, WiMAX, Bluetooth, ZigBee and more, the BD2635L5050AHF is ideal for high volume manufacturing and is higher performance than traditional ceramic baluns. The BD2635L5050AHF 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 modern integrated chipsets. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD2635L5050AHF is available on tape and reel for pick and place high volume manufacturing.

Detailed Electrical Specifications:

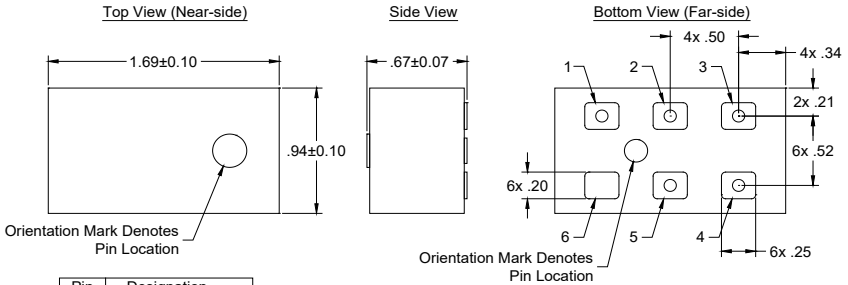
Features:

- **2600 – 3500 MHz**
- **0.67mm Height Profile**
- **50 Ohm to 2 x 25 Ohm**
- **802.11 g MIMO, Bluetooth, WiMAX & ZigBee Compliant**
- **Low Insertion Loss**
- **Input to Output DC Isolation**
- **Surface Mountable**
- **Tape & Reel**
- **Non-conductive Surface**
- **RoHS Compliant**

Parameter	Over Temperature Min.	Typ.	Max	Unit
Frequency	2600		3500	MHz
Unbalanced Port Impedance		50		Ω
Balanced Port Impedance		50		Ω
Return Loss	15	18		dB
Insertion Loss*		0.6	1.0	dB
Amplitude Balance		0.7	1.5	dB
Phase Balance		4	7	Degrees
CMRR		25		dB
Power Handling @85ºC			2	Watts
DC Current Rating			200	mA
Operating Temperature	-55		+140	ºC

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

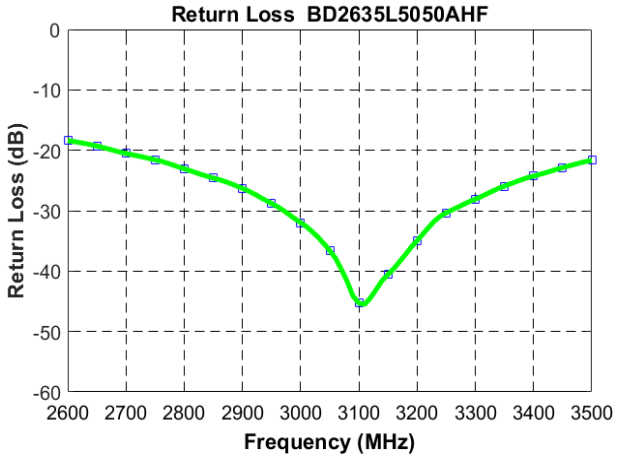
Outline Drawing:

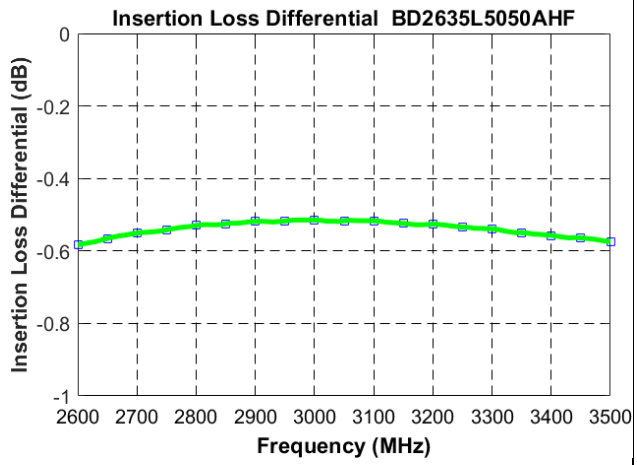


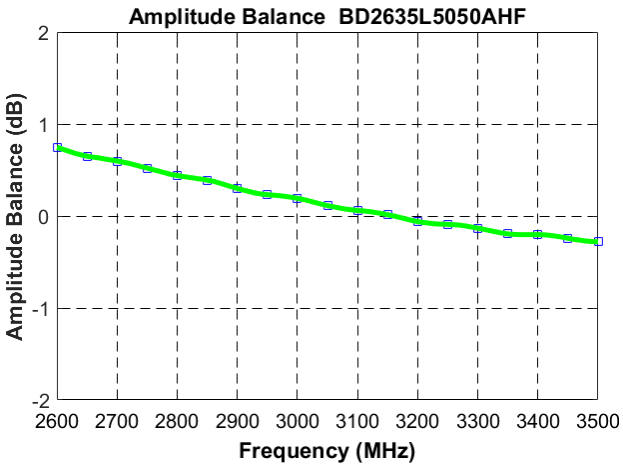
Pin	Designation
1	Unbalanced Port
2	DC Bias/GND
3	Balanced Port
4	Balanced Port
5	GND
6	GND

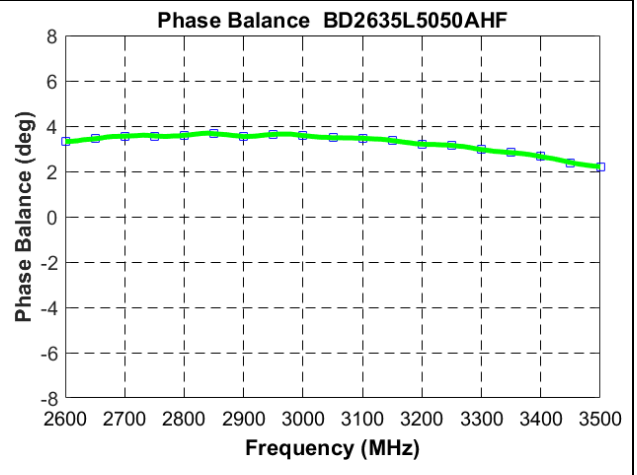
-Dimensions are in Millimeters
-Tolerances are Non-Cumulative

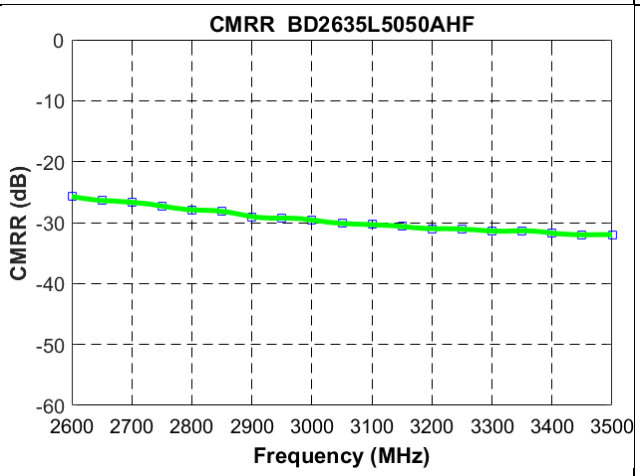
Typical Performance 2.6 GHz. to 3.5 GHz.



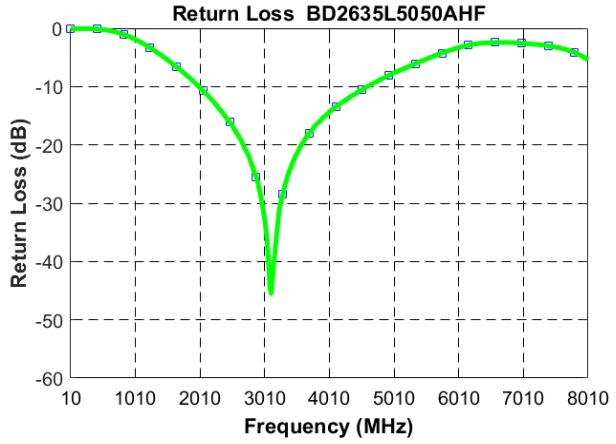


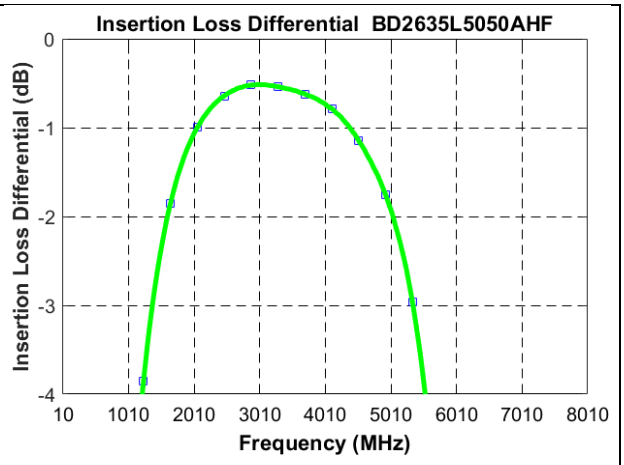


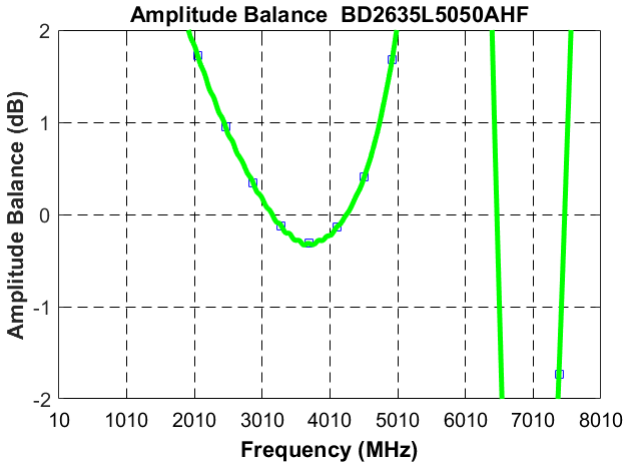


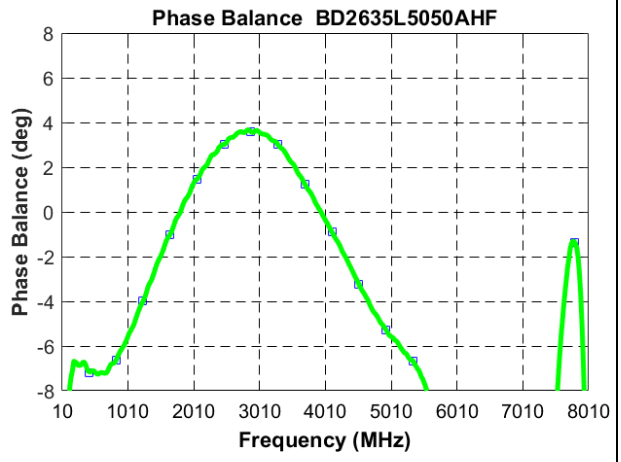


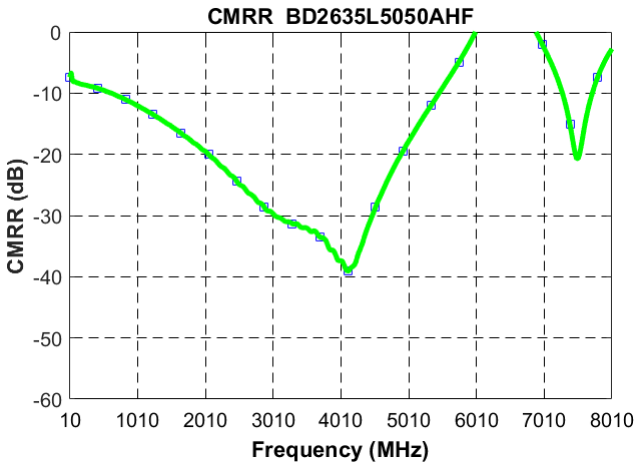
Wideband Performance 0.01 GHz. to 8.01 GHz.











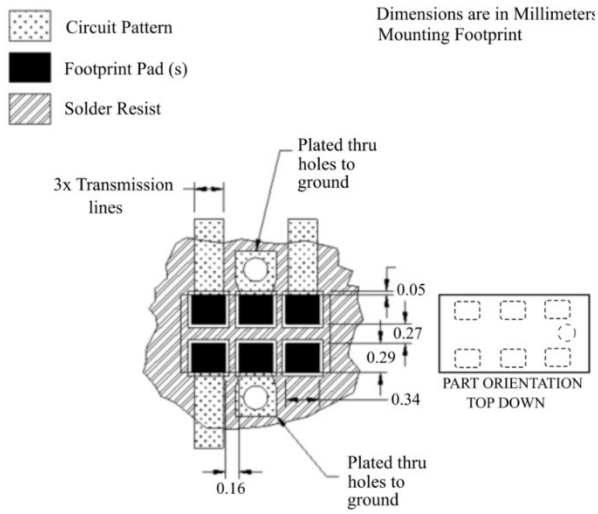
Mounting Configuration:

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.

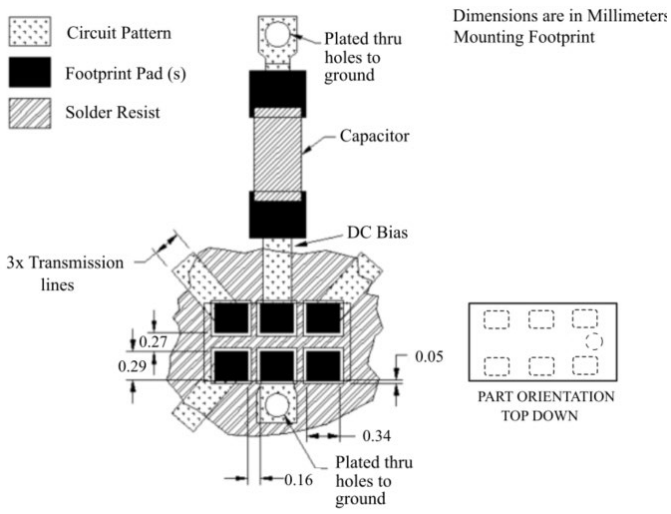
All of the Xinger components are constructed from ceramic filled PTFE composites which possess excellent electrical and mechanical stability.

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

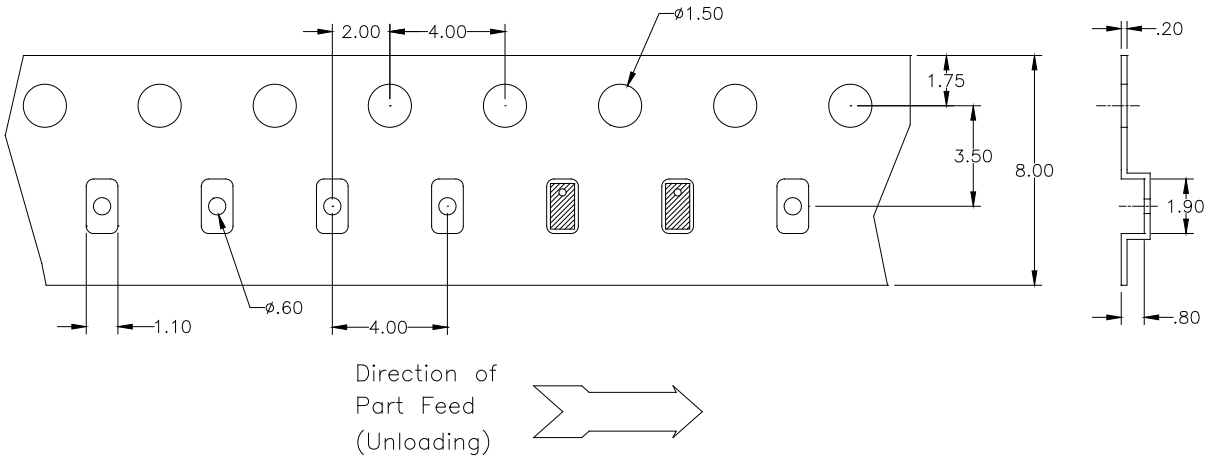


DC Bias Footprint



Packaging 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.



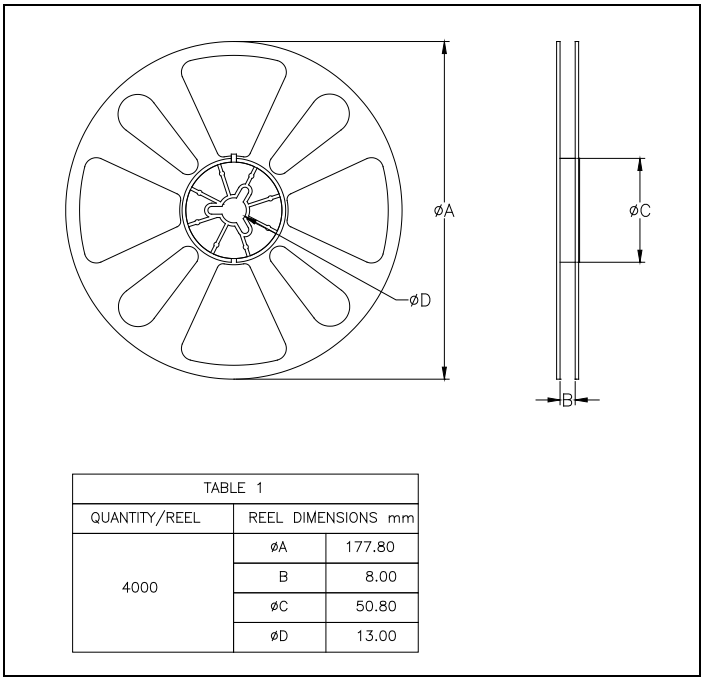


TABLE 1		
QUANTITY/REEL	REEL DIMENSIONS mm	
4000	øA	177.80
	B	8.00
	øC	50.80
	øD	13.00

Contact us:
rf&s_support@ttm.com