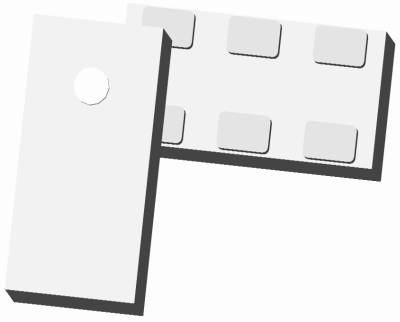
Xinger®

Ultra Small Low Profile 0603 Balun
50Ω to 100Ω Balanced



Description:

The BD2635L50100AHF 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 BD2635L50100AHF is ideal for high volume manufacturing and is higher performance than traditional ceramic baluns. The BD2635L50100AHF has an unbalanced port impedance of 50Ω and a 50 Ω 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 BD2635L50100AHF is available on tape and reel for pick and place high volume manufacturing.

Features:

- **2600 – 5000 MHz**
- **TBDmm Height Profile**
- **50 Ohm to 2 x 50 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**

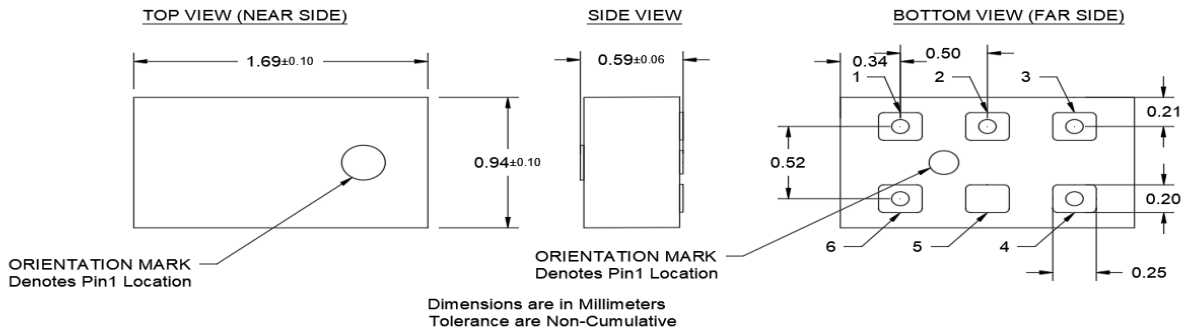
Detailed Electrical Specifications:

Specifications subject to change without notice.

Parameter	ROOM (25°C)						
	Min.	Typ.	Max	Min.	Typ.	Max	Unit
Frequency	2600		3500	3100		5000	MHz
Unbalanced Port Impedance		50			50		Ω
Balanced Port Impedance		100			100		Ω
Return Loss	13	17.3		9.5	17		dB
Insertion Loss*		0.6	1.0		0.7	1.1	dB
Amplitude Balance		0.5	1.5		0.7	1.0	dB
Phase Balance		3	7		6	10	Degrees
CMRR		29			24		dB
Power Handling @85C			2			2	Watts
DC Current Rating			200			200	mA
Operating Temperature	-55		+140	-55		+140	°C

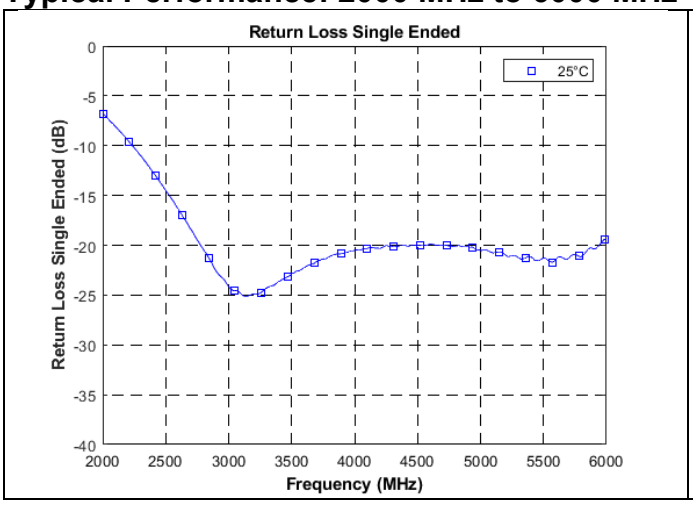
* Insertion Loss stated at room temperature (Insertion Loss is approximately 0.1 dB higher at +85 °C)

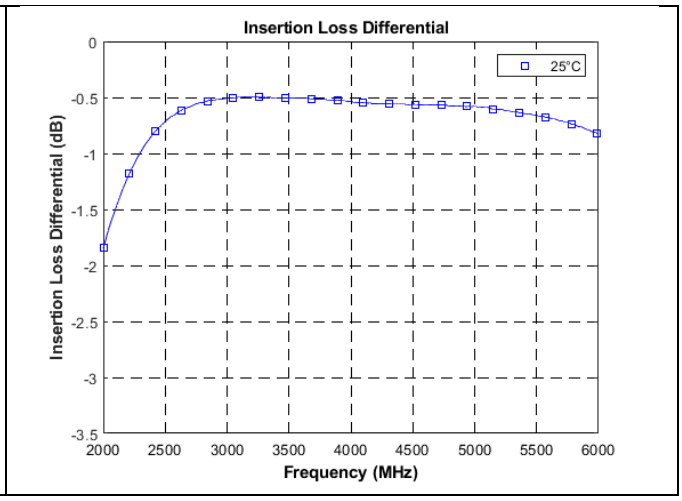
Outline Drawing:

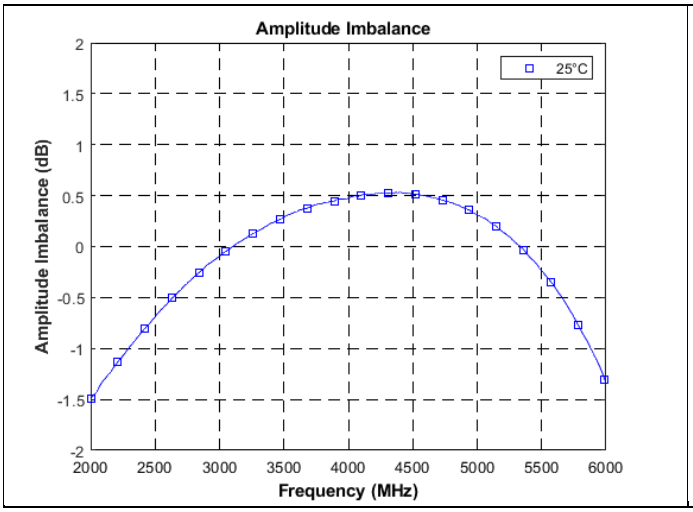


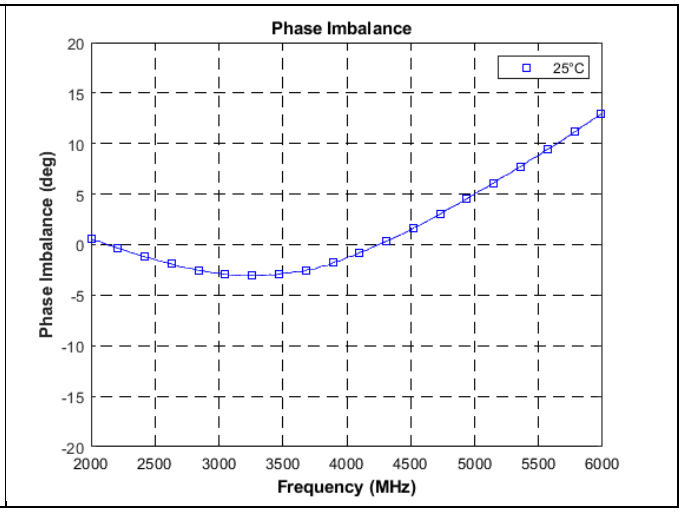
Pin	Designation
1	Unbalanced
2	DC Bias/GND
3	Balanced Port
4	Balanced Port
5	NC
6	GND

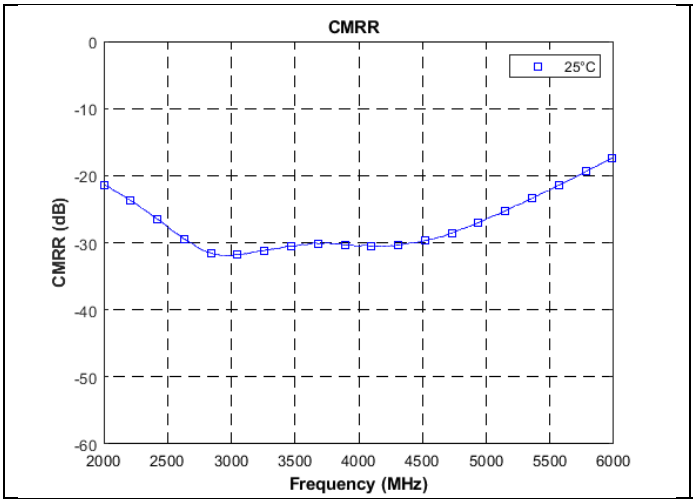
Typical Performance: 2000 MHz to 6000 MHz









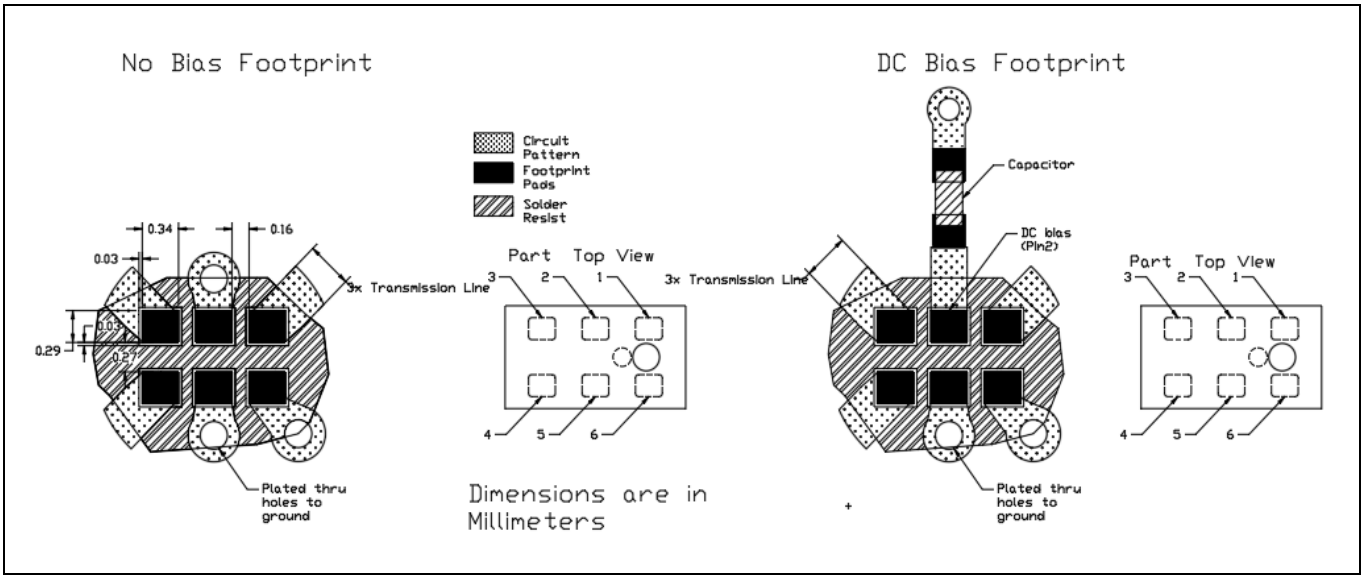


Mounting Configuration:

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.

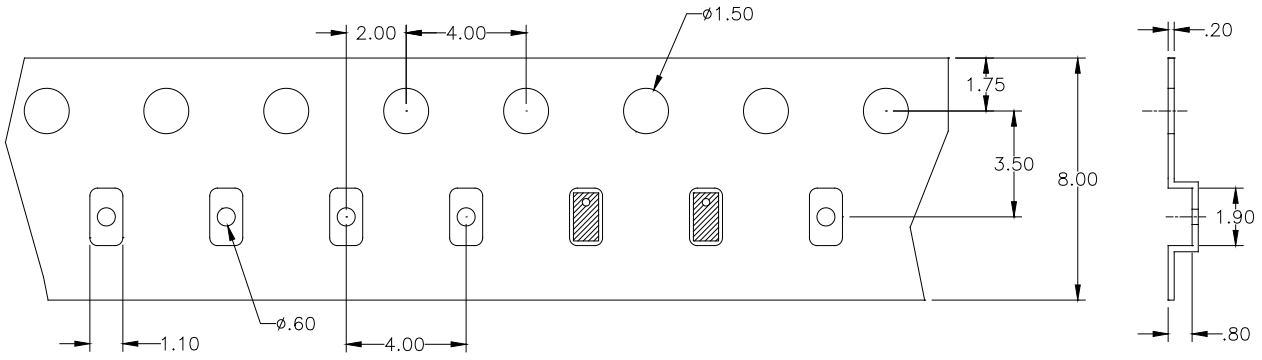
All of the Xinger components are constructed from ceramic filled PTFE composites which possess excellent electrical and mechanical stability.

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.



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)

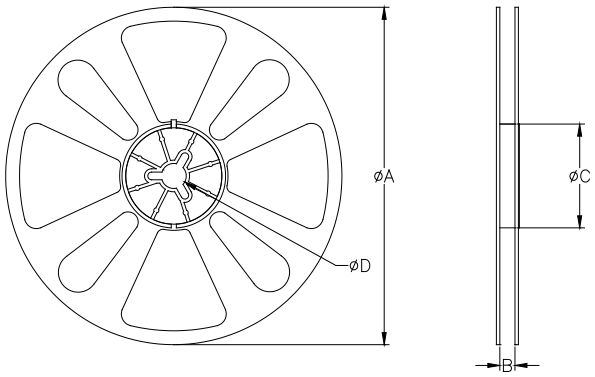


TABLE 1		
QUANTITY/REEL	REEL DIMENSIONS mm	
4000	øA	177.80
	B	8.00
	øC	50.80
	øD	13.00

Contact us:
rf&s_support@ttm.com