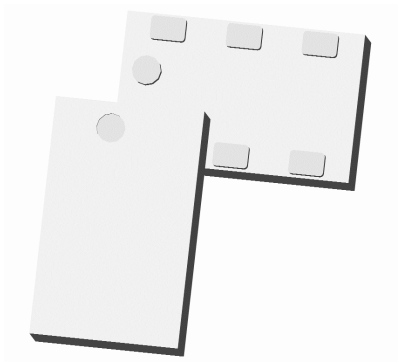
Xinger®

Ultra Low Profile 0805 Balun
75Ω to 75Ω Balanced



Description:

The B0922J7575AHF is a low cost, low profile sub-miniature unbalanced to balanced transformer designed for differential inputs and output locations on modern chipsets in an easy to use surface mount package covering dual polarized commercial Satellite bands 950 MHz –1450 MHz & 1650 MHz – 2150 MHz. The B0922J7575AHF is ideal for high volume manufacturing and delivers higher performance than traditional wire wound baluns. The B0922J7575AHF has an unbalanced port impedance of 75Ω and a 75Ω 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 B0922J7575AHF is available on tape and reel for pick and place high volume manufacturing.

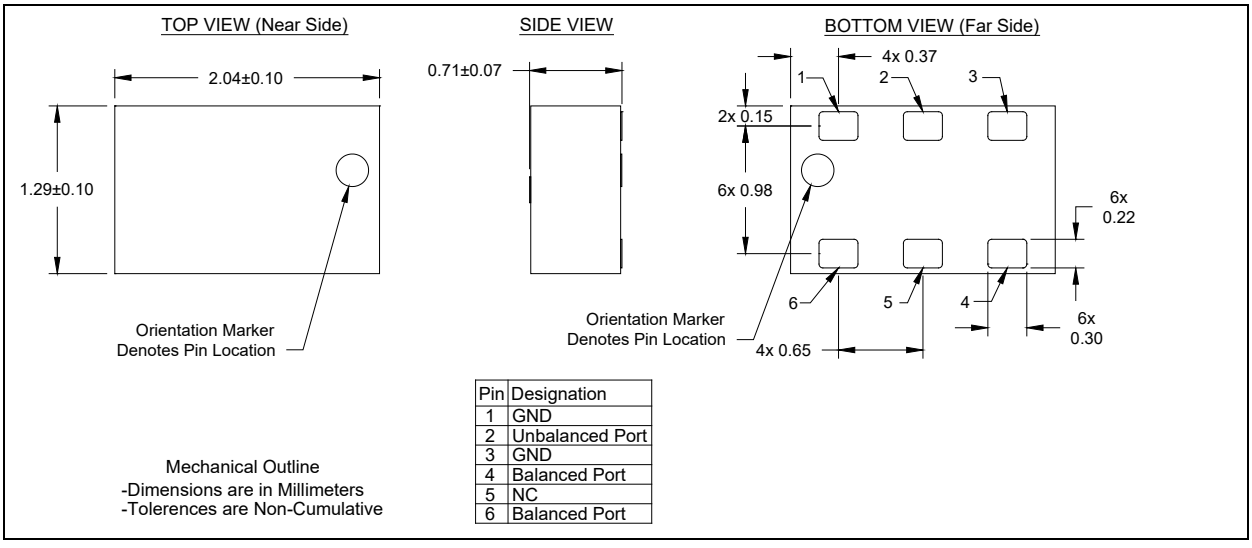
Features:

- **950 – 2150 MHz**
- **0.7mm Height Profile**
- **75 Ohm to 2 x 37.5 Ohm**
- **Low Insertion Loss**
- **Sat LNB Chipset Compliant**
- **Input to Output DC Isolation**
- **Surface Mountable**
- **Tape & Reel**
- **Non-conductive Surface**
- **RoHS Compliant**
- **Halogen Free**

Detailed Electrical Specifications:

Parameter	ROOM (25°C) Min.	Typ.	Max	Unit
Frequency	950		2150	MHz
Unbalanced Port Impedance		75		Ω
Balanced Port Impedance		75		Ω
Return Loss	7.9	9.6		dB
Insertion Loss*		0.8	1.2	dB
Amplitude Balance		0.4	1.4	dB
Phase Balance		3	9	Degrees
CMRR		26		dB
Power Handling			2	Watts
Operating Temperature	-55		+85	°C

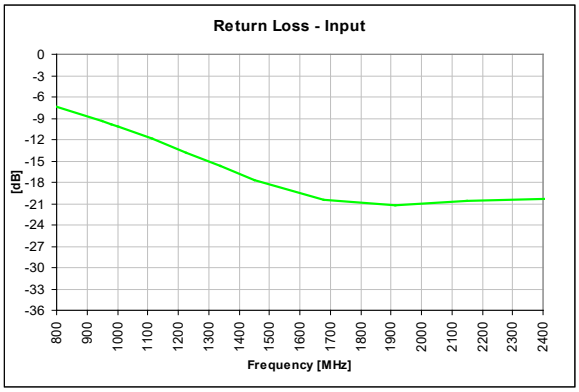
Outline Drawing:

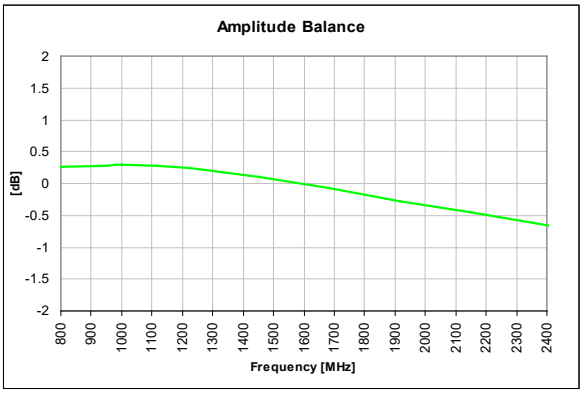


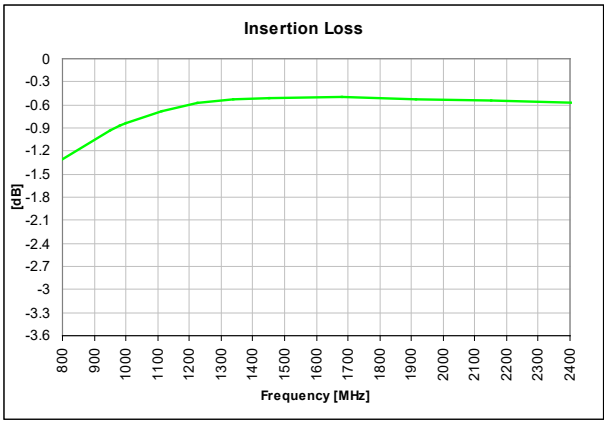
Pin	Designation
1	GND
2	Unbalanced Port
3	GND
4	Balanced Port
5	NC
6	Balanced Port

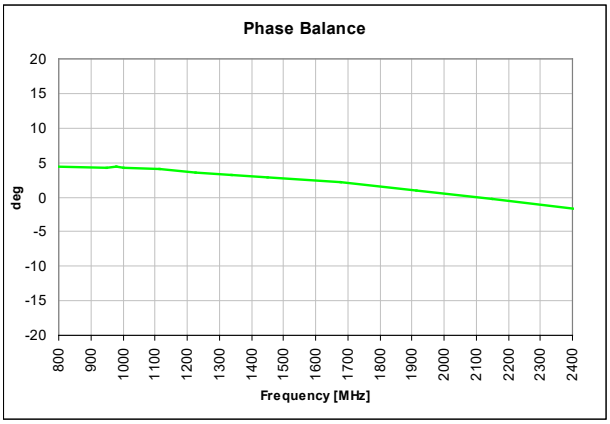
Mechanical Outline
-Dimensions are in Millimeters
-Tolerences are Non-Cumulative

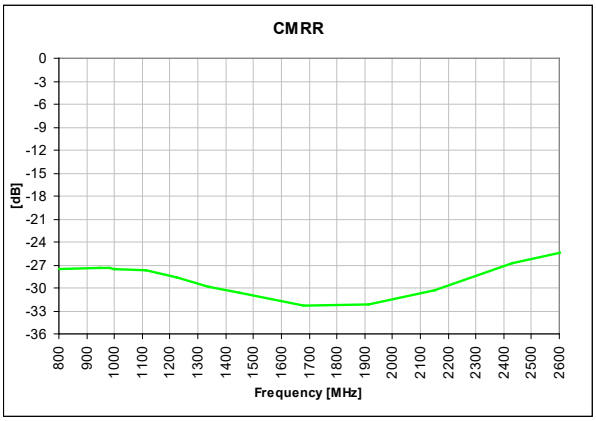
Typical Performance: 800 MHz. to 2400 MHz.









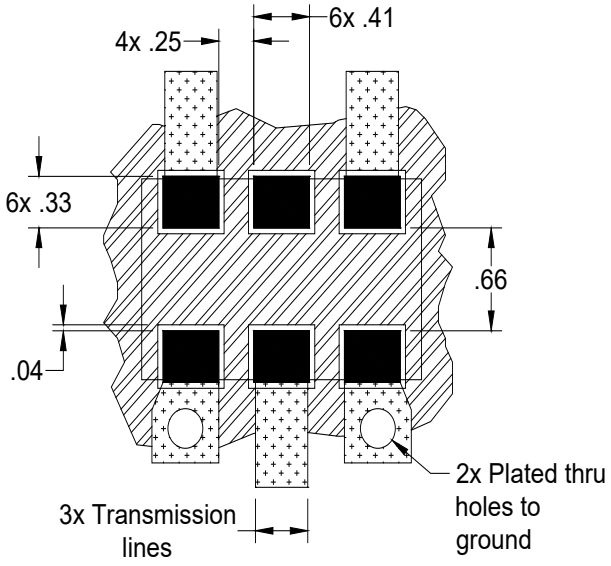


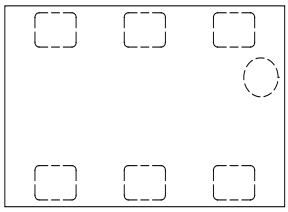
Mounting Configuration:

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 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. 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.





Circuit Pattern

Footprint Pad (s)

Solder Resist

Dimensions are in Millimeters
Mounting Footprint