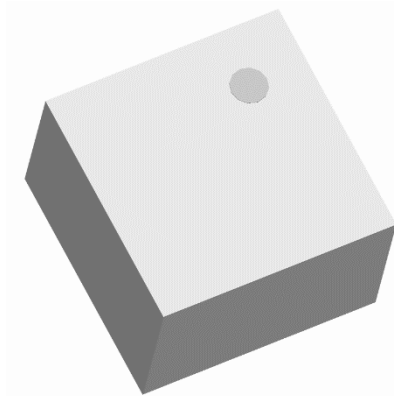




Ultra Low Profile 0404 Balun
50Ω to 50Ω Balanced



Description:

The BD3238N5050AHF is a low profile, low impedance sub-miniature unbalanced to balanced transformer designed for differential inputs and output locations on modern chipset applications in an easy to use surface mount package. The BD3238N5050AHF is ideal for high volume manufacturing and delivers higher performance than traditional ceramic baluns. The BD3238N5050AHF has an unbalanced port impedance of 50Ω and a 50Ω balanced port impedance. The output ports have equal amplitude (-3dB) with 180 degree phase differential. The BD3238N5050AHF is available on tape and reel for pick and place high volume manufacturing.

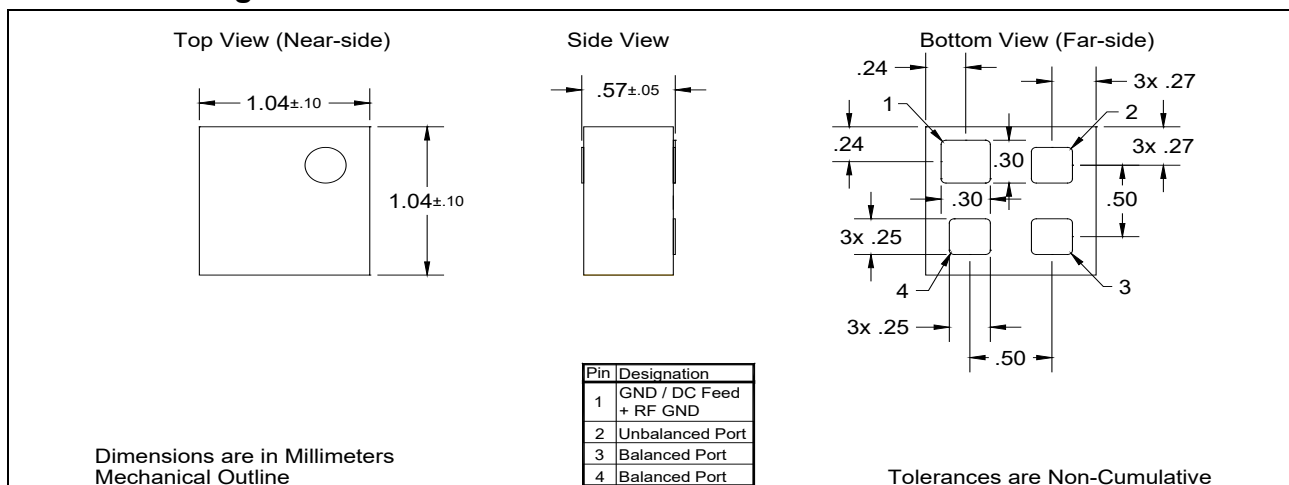
Detailed Electrical Specifications:

Specifications subject to change without notice.

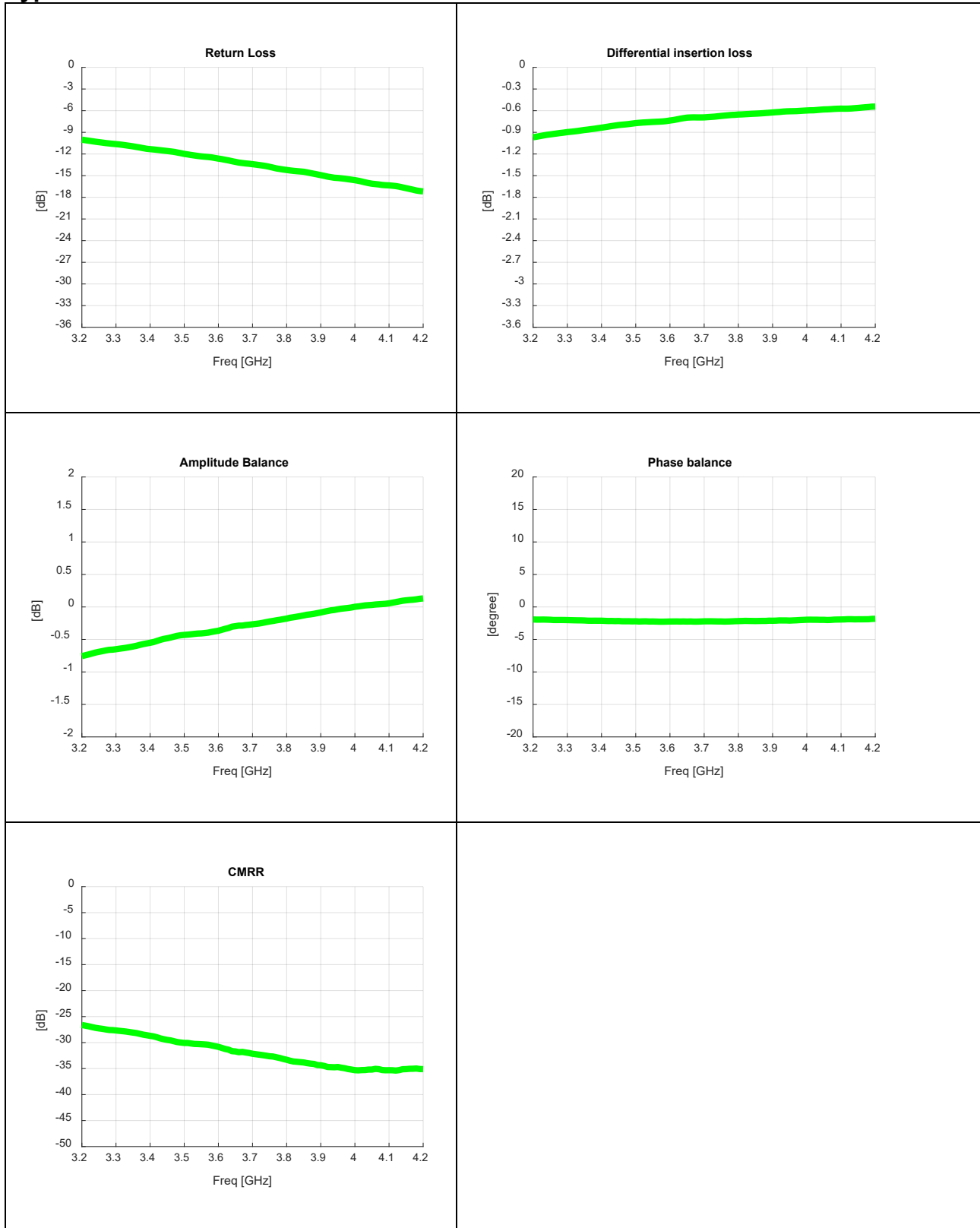
| Features: | Parameter | ROOM (25°C) | | | | | | Unit | | | |
|------------------------------|---------------------------|-------------|------|------|------|------|------|------|------|------|---------|
| | | Min. | Typ. | Max | Min. | Typ. | Max | | Min. | Typ. | Max |
| • 3200 – 4200 MHz | Frequency | 3200 | | 3800 | 3400 | 3600 | 3800 | 4200 | | | MHz |
| • 0.57 mm Height Profile | Unbalanced Port Impedance | | 50 | | | 50 | | 50 | | | Ω |
| • 50Ω to 2 x 25Ω | Balanced Port Impedance | | 50 | | | 50 | | 50 | | | Ω |
| • Low Insertion Loss | Return Loss | 7 | 11 | | 8 | 12 | 10 | 13 | | | dB |
| • Surface Mountable | Insertion Loss* | | 0.9 | 1 | | 0.7 | 1 | 0.7 | 1 | | dB |
| • Tape & Reel | Amplitude Balance | | 0.6 | 1.5 | | 0.4 | 1.5 | 0.2 | 0.7 | | dB |
| • Non-conductive Top Surface | Phase Balance | | 3 | 6 | | 3 | 6 | 2 | 5 | | Degrees |
| • RoHS Compliant | CMRR | | 28 | | | 30 | | 34 | | | dB |
| • Halogen free | Power Handling @85C | | | 1.0 | | 1.0 | | 1.0 | | | Watts |
| | Operating Temperature | -55 | | +105 | -55 | +105 | -55 | +105 | | | °C |

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

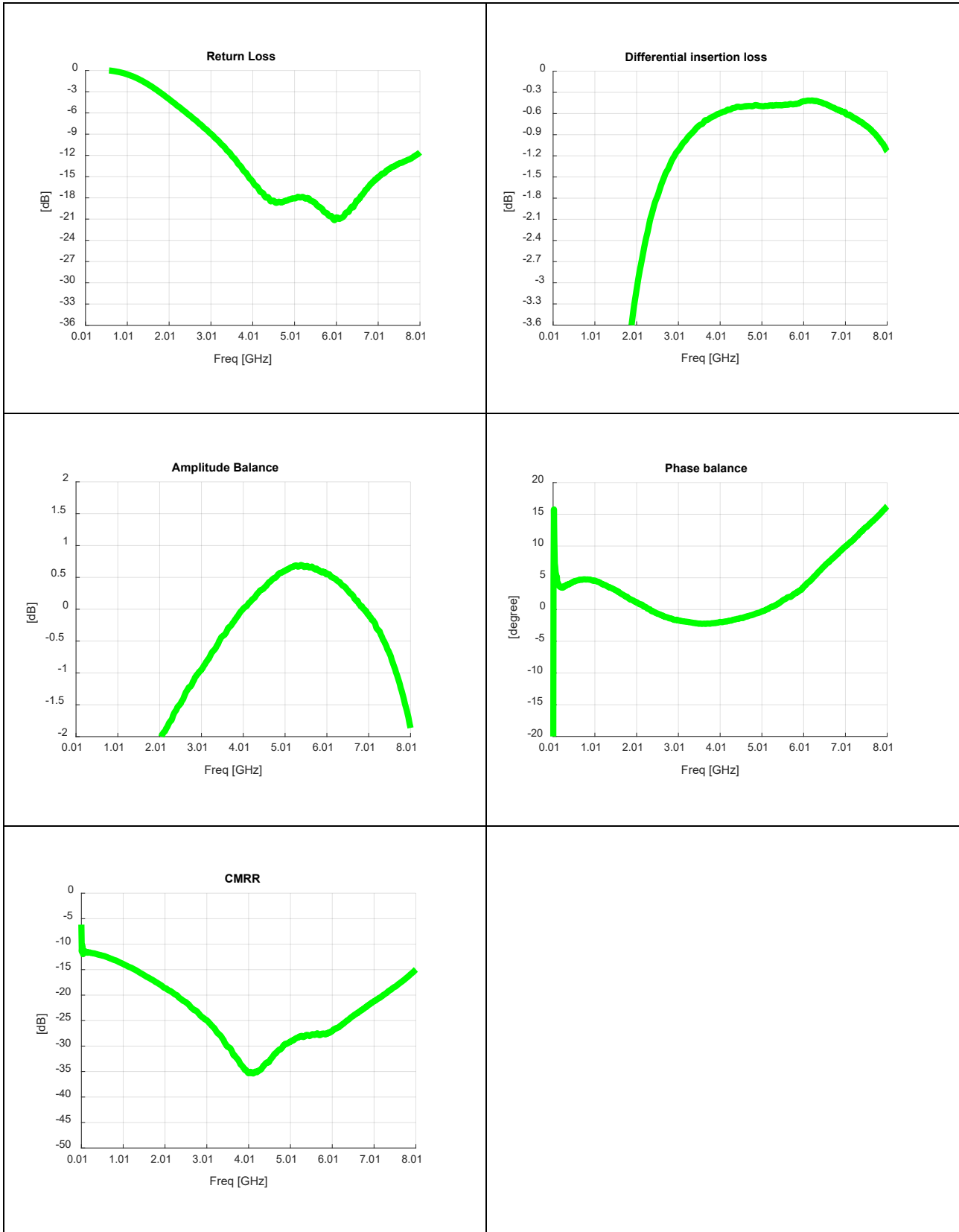
Outline Drawing:



Typical Performance: 3200 MHz to 4200 MHz



Wide Band Performance: 10 MHz to 8100 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.

