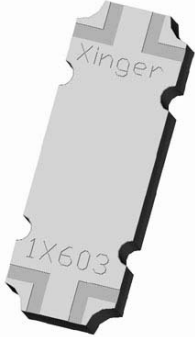




Hybrid Couplers 3 dB, 90°



Description

The 1X603 is a low profile, miniature 3dB hybrid coupler in an easy to use surface mount package for ISM and wireless LAN applications. The 1X603 is designed for balanced amplifiers and signal distribution and is an ideal solution for the ever increasing demands of the wireless industry for smaller printed circuit boards. Parts have been subjected to rigorous qualification testing and units are 100% tested. They are manufactured using materials with x and y thermal expansion coefficients compatible with common substrates such as FR4, G-10 and polyamide.

Features:

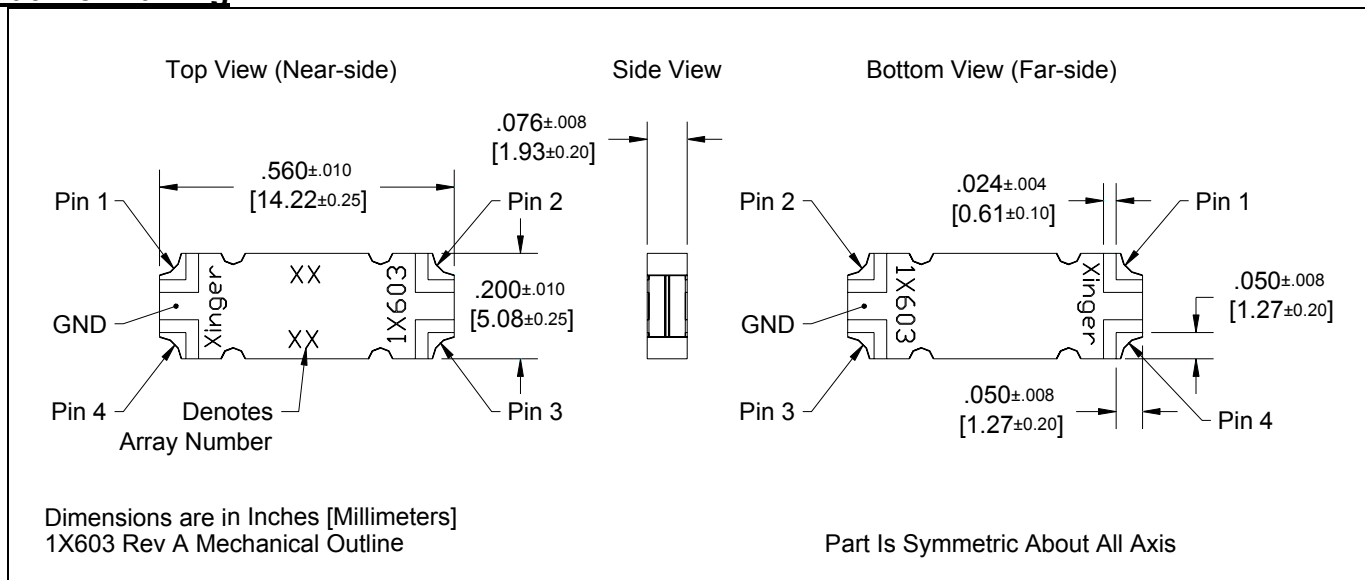
- 2.3 – 2.7 GHz
- Very Low Loss
- High Isolation
- 90° Quadrature
- Surface Mountable
- Tape And Reel
- Miniature Package
- 100% Tested

ELECTRICAL SPECIFICATIONS**

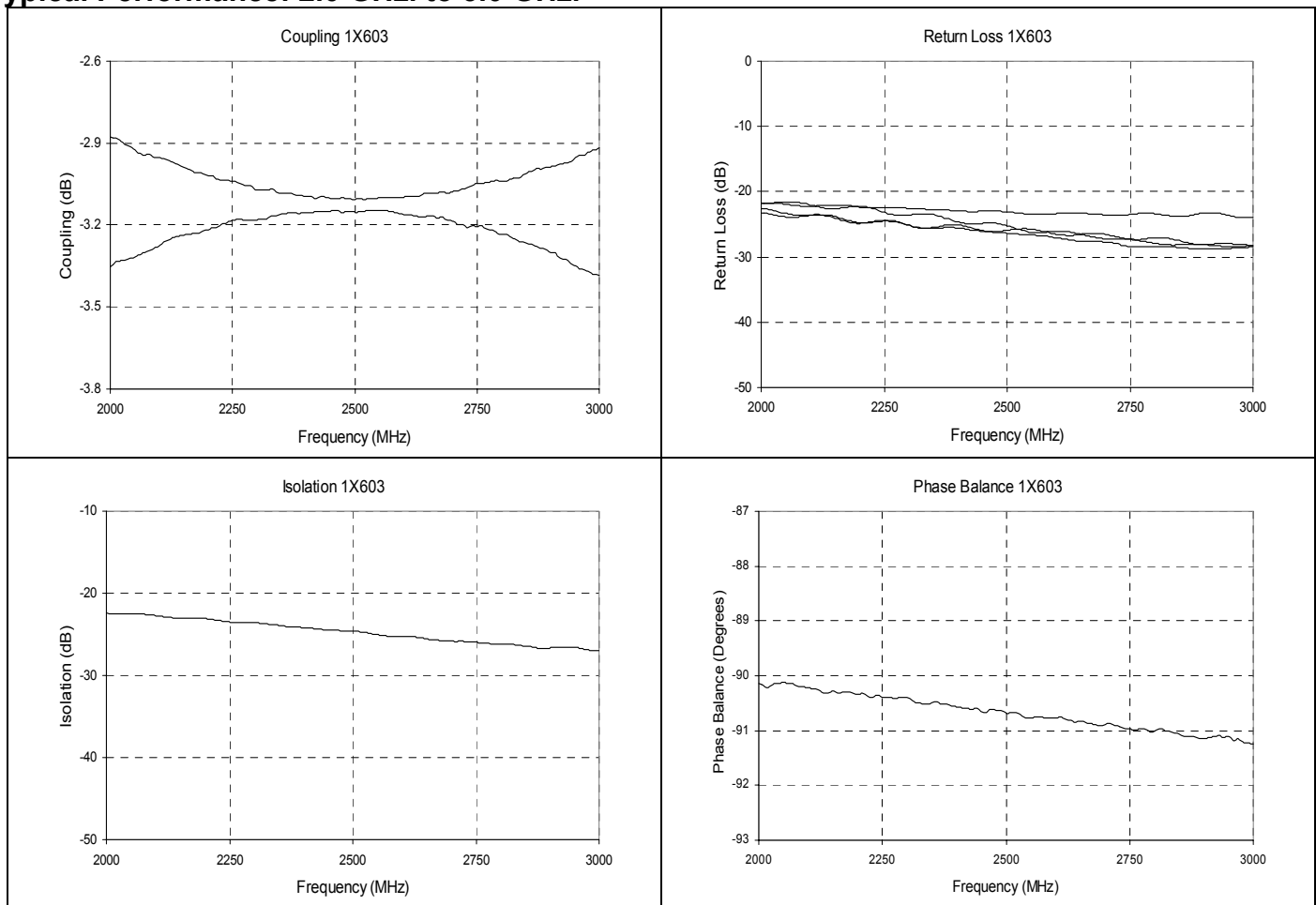
| Frequency | Isolation | Insertion Loss | VSWR | |
|-------------------|---------------|----------------|---------|-----------------|
| GHz | dB Min | dB Max | Max:1 | |
| 2.3 – 2.7 | 22 | 0.20 | 1.18 | |
| Amplitude Balance | Phase Balance | Power | ΘJC | Operating Temp. |
| dB Max | Degrees | Ave. CW Watts | °C/Watt | °C |
| ± 0.20 | ± 3 | 60 | 27.8 | -55 to +85 |

**Specification based on performance of unit properly installed on microstrip printed circuit boards with 50 Ω nominal impedance. Specifications subject to change without notice.

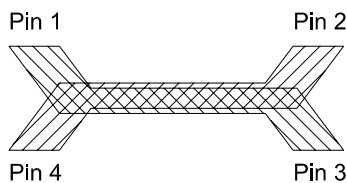
Outline Drawing



Typical Performance: 2.0 GHz. to 3.0 GHz.



Pin Configuration

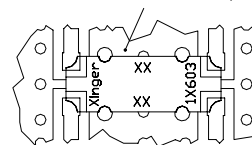


Hybrid Coupler Pin Configuration

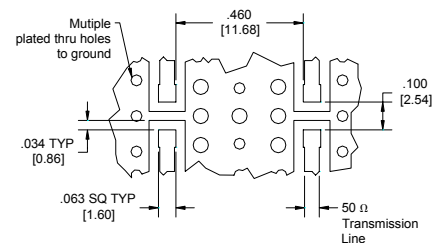
| | Pin 1 | Pin 2 | Pin 3 | Pin 4 |
|------------------|------------|------------|------------|------------|
| Configuration #1 | Input | Isolated | -3dB, -90° | -3dB, 0° |
| Configuration #2 | Isolated | Input | -3dB, 0° | -3dB, -90° |
| Configuration #3 | -3dB, -90° | -3dB, 0° | Input | Isolated |
| Configuration #4 | -3dB, 0° | -3dB, -90° | Isolated | Input |

Mounting Footprint

To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part



Part Is Symmetric About All Axis



Dimensions are in Inches [Millimeters]
1X603 Rev A Mounting Footprint

USA/Canada: (315) 432-8909
Toll Free: (800) 544-2414
Europe: +44 2392-232392

Available on Tape and Reel For Pick and Place Manufacturing.

