

### Micro Xinger 3dB Hybrid Coupler

# Xinger®



#### Description

The 1M803 Micro Xinger® is a low profile, miniature 3dB hybrid coupler in an easy to use surface mount package designed for U-NII, ISM and hyper LAN applications. The 1M803 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 and high performance. 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 and G-10. Available in both 5 of 6 tin lead (1M803) and 6 of 6 RoHS compliant tin immersion (1M803S).

#### Features:

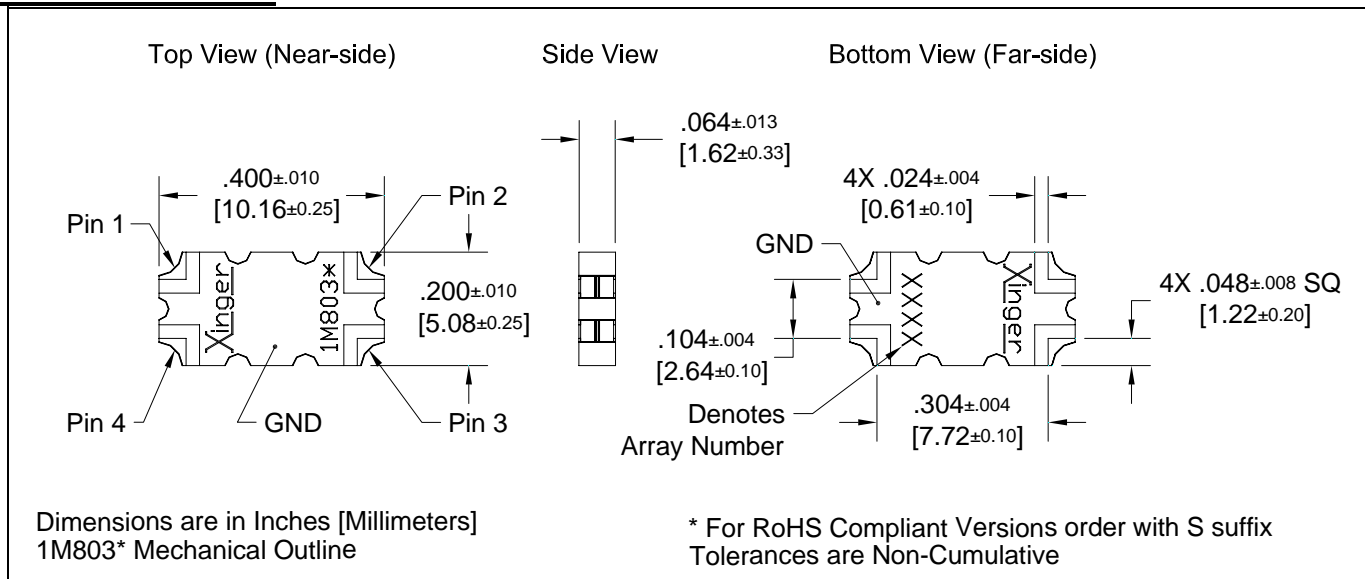
- Very Low Loss
- High Isolation
- 90° Quadrature
- Surface Mountable
- Tape And Reel
- Available in Lead-Free (as illustrated) or Tin-Lead

#### ELECTRICAL SPECIFICATIONS\*\*

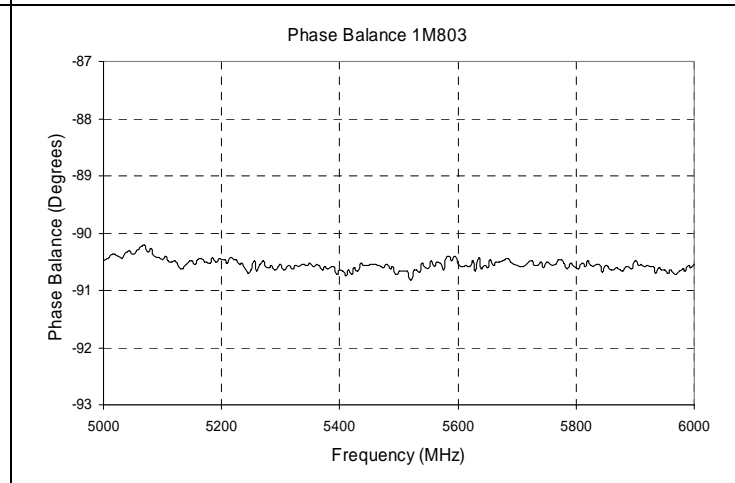
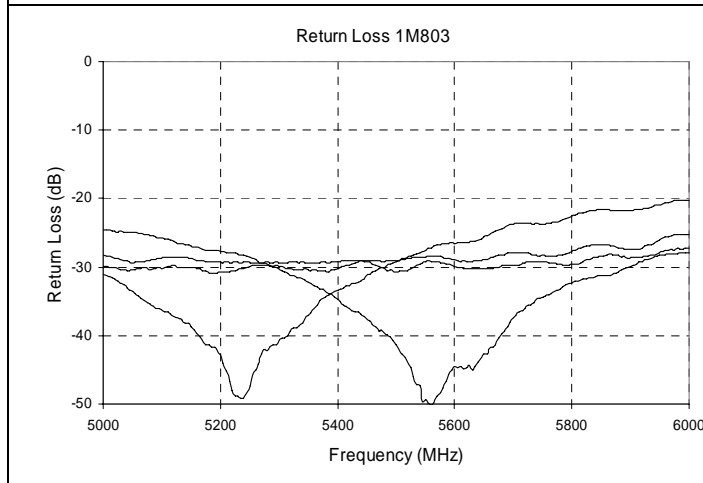
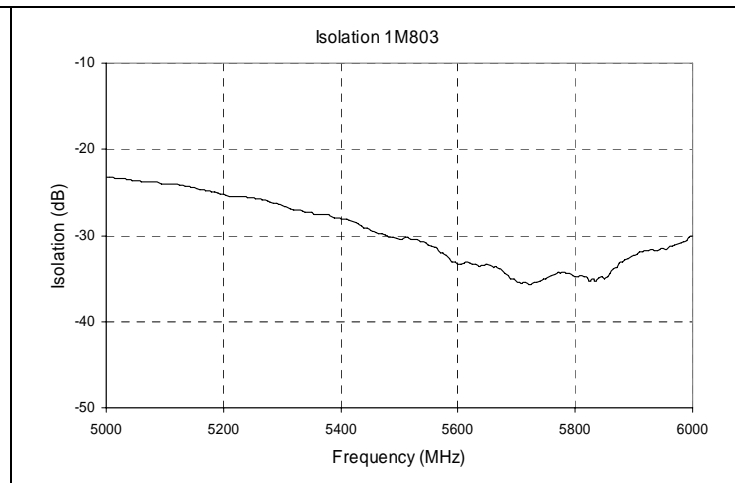
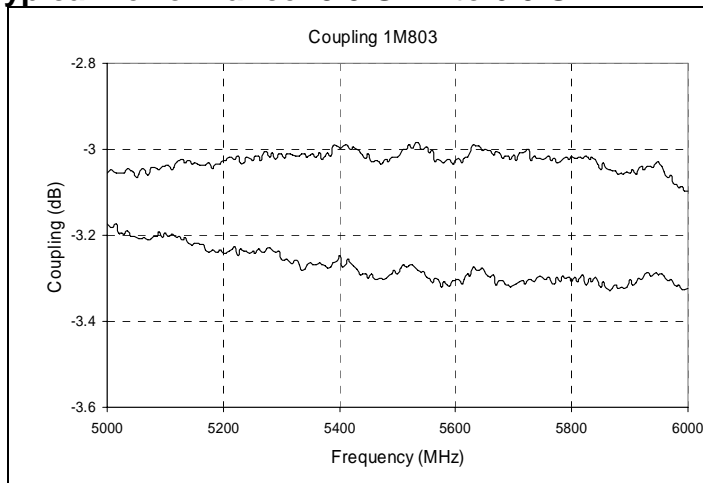
Frequency	Isolation	Insertion Loss	VSWR	
GHz	dB Min	dB Max	Max:1	
5.0 – 6.0	20	0.25	1.21	
4.8 – 6.0	20	0.25	1.21	
Amplitude Balance	Phase Balance	Power	ΘJC	Operating Temp.
dB Max	Degrees	Ave. CW Watts	°C/Watt	°C
± 0.30	± 3	20	78.1	-55 to +85
± 0.40	± 3.5			

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

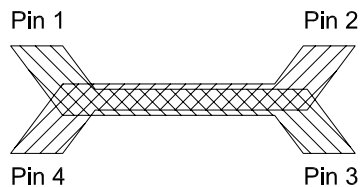
#### Mechanical Outline



### Typical Performance: 5.0 GHz. to 6.0 GHz.



### Pin Configuration

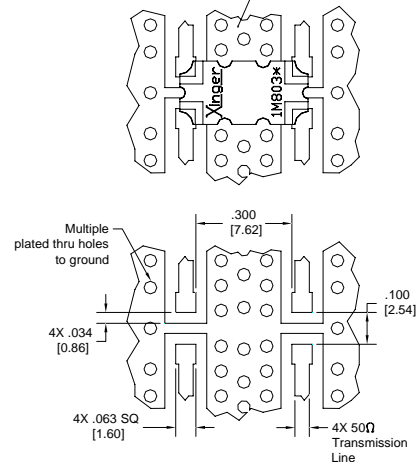


Hybrid Coupler Pin Configuration

	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



Dimensions are in Inches [Millimeters]  
1M803\* Mounting Footprint

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

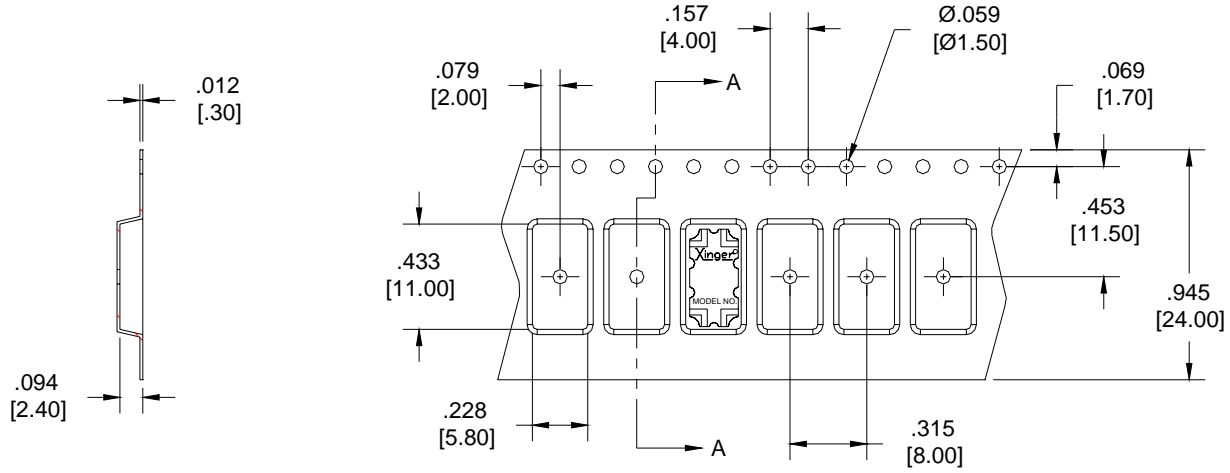
Available on Tape and Reel For Pick and Place Manufacturing.





### PACKAGING

Packaging follows EIA-481-2. Parts are oriented in tape as shown below. Minimum order quantities are 2000 per reel and 48 per tube.



### Tape and Reel Diagram

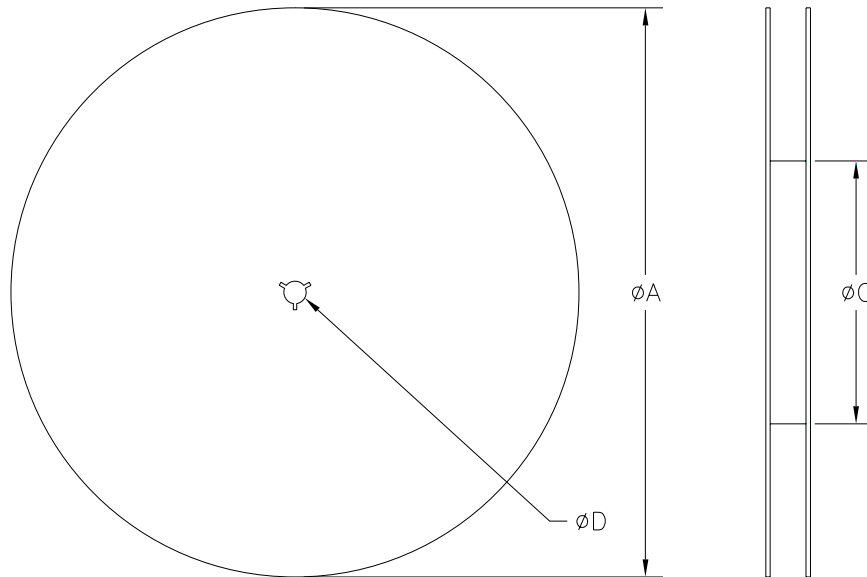


TABLE 1	
REEL DIMENSIONS (inches [mm])	
$\phi A$	13.3 [333.0]
B	0.945 [24.0]
$\phi C$	4.017 [102.03]
$\phi D$	0.512 [13.0]

