

# Xinger®

## Hybrid Couplers 3 dB, 90°



### Description

The 11303-3 is a low profile 3dB hybrid coupler in an easy to use surface mount package covering the NMT 450 band. The 11303-3 is ideal for balanced amplifiers and signal distribution and can be used in most high power designs. 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:

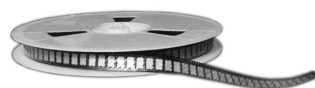
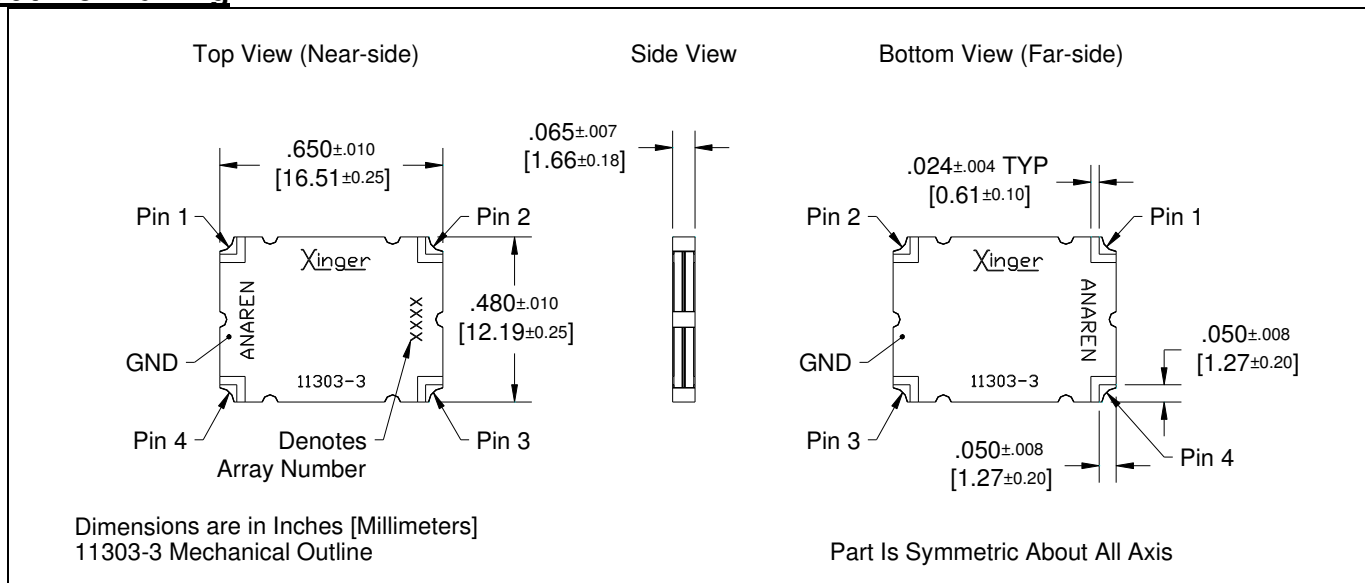
- 380 - 520 MHz
- Low loss
- High Isolation
- 90° Quadrature
- Surface Mountable
- Tape And Reel
- Convenient Package
- 100% Tested

### ELECTRICAL SPECIFICATIONS\*\*

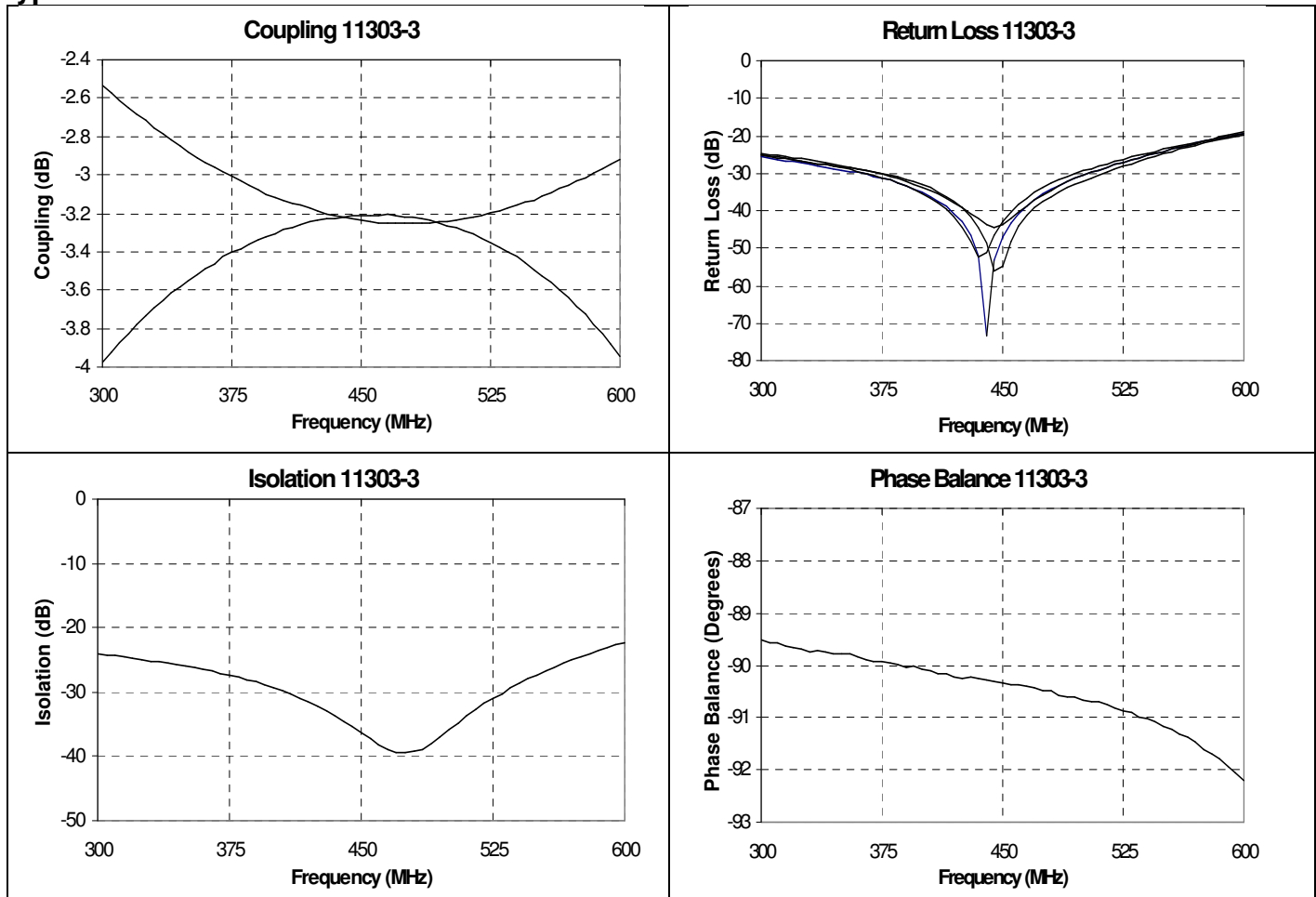
Frequency	Isolation	Insertion Loss	VSWR		
<i>MHz</i>	<i>dB Min</i>	<i>dB Max</i>	<i>Max:1</i>		
380 – 520	20	0.35	1.28		
Amplitude Balance	Phase Balance	Power	ΘJC	Operating Temp.	
<i>dB Max</i>	<i>Degrees</i>	<i>Ave. CW Watts</i>	<i>°C/ Watt</i>	<i>°C</i>	
± 0.30	± 3	125	14	-55 to +85	

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

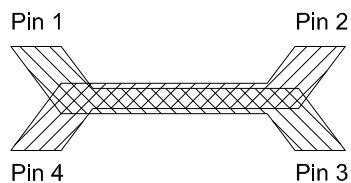
### Outline Drawing



### Typical Performance: 300 MHz to 600 MHz.



### Pin Configuration

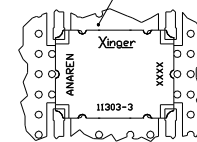


Hybrid Coupler Pin Configuration

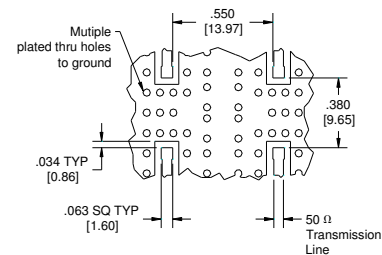
	Pin 1	Pin 2	Pin 3	Pin 4
Configuration #1	Input	Isolated	-3dB, -90°	-3dB, 0°
Configuration #2	Isolated	Input	-3dB, 0°	-3dB, -90°
Configuration #3	-3dB, -90°	-3dB, 0°	Input	Isolated
Configuration #4	-3dB, 0°	-3dB, -90°	Isolated	Input

### Mounting Footprint

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



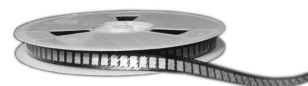
Part Is Symmetric About All Axis



Dimensions are in Inches [Millimeters]  
11303-3 Mounting Footprint

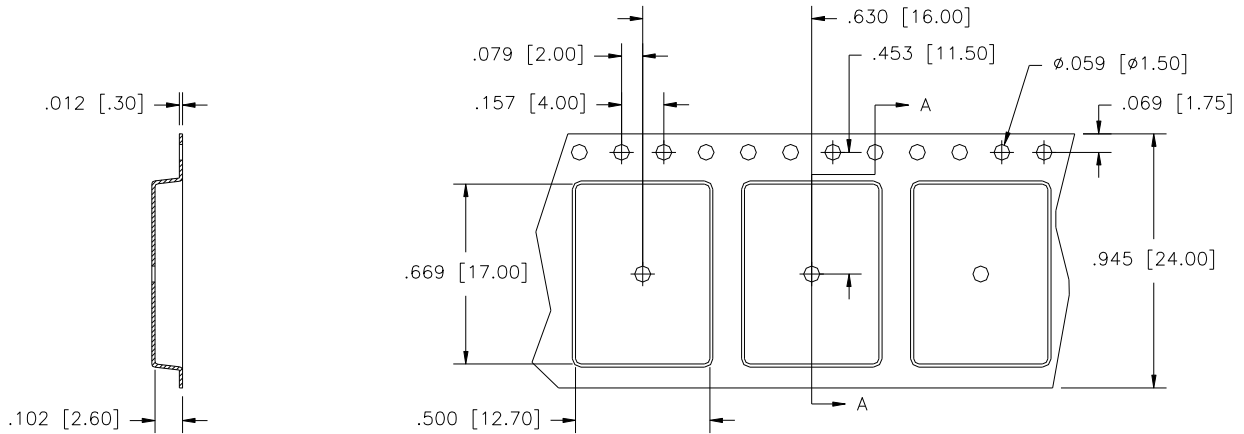
USA/Canada: (315) 432-8909  
Toll Free: (800) 544-2414  
Europe: +44 2392-232392

Available on Tape and Reel For Pick and Place Manufacturing.



### PACKAGING

Parts are available in both reel and tube. Packaging follows EIA 481-2. Parts are provided in tape and reel as shown below. Minimum order quantities are 1000 per reel and 35 per tube.



SECTION A-A



Direction of Part Feed (Unloading)

Dimensions are in inches [mm]

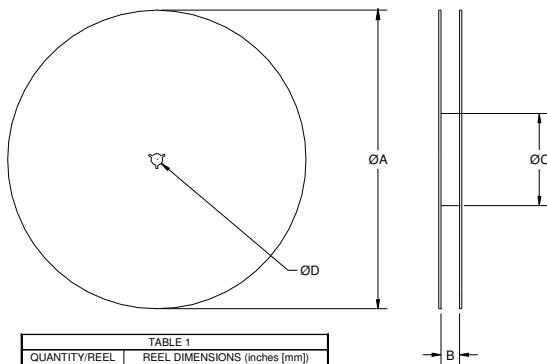
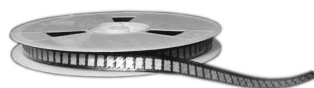


TABLE 1		
QUANTITY/REEL	REEL DIMENSIONS (inches [mm])	
1000	$\phi A$	13.0 [330.0]
	B	0.945 [24.0]
	$\phi C$	4.017 [102.03]
	$\phi D$	0.512 [13.0]



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