

# Xinger®

## Directional Couplers 20 dB



### Description

The 1W1305-20 is a low profile 20dB directional coupler in an easy to use surface mount package covering the DCS and PCS bandwidths. The 1W1305-20 is ideal for power and frequency detection as well as power injection 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:

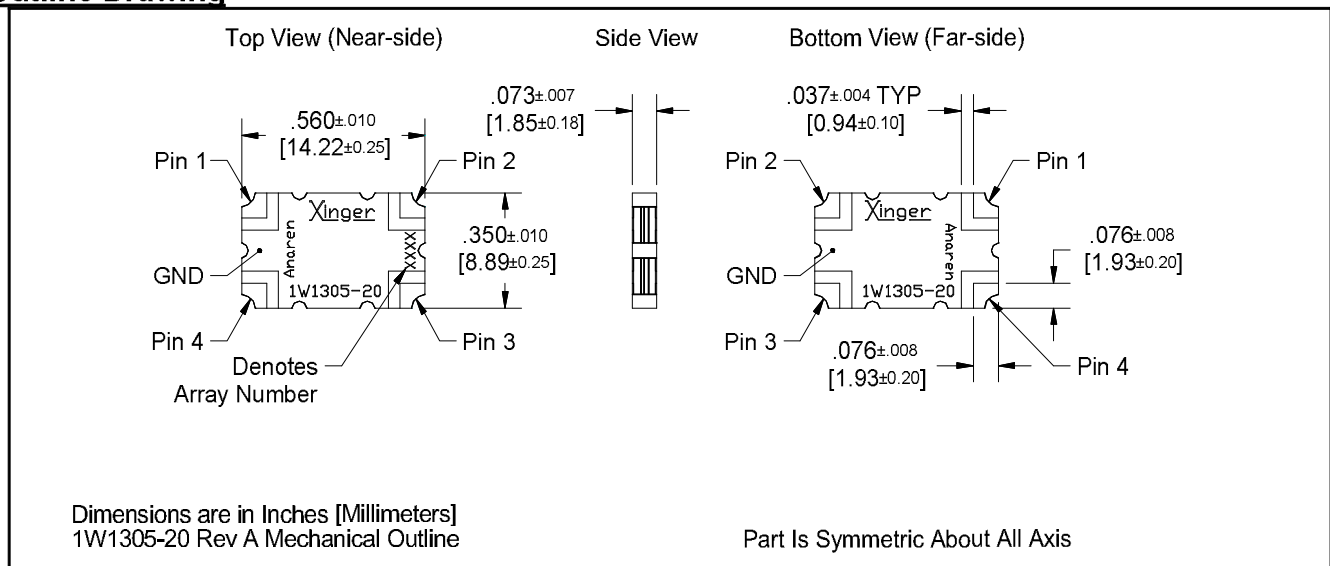
- 1.7 - 2.2 GHz
- Low loss
- High Directivity
- Surface Mountable
- Tape And Reel
- Convenient Package
- 100% Tested

### ELECTRICAL SPECIFICATIONS\*\*

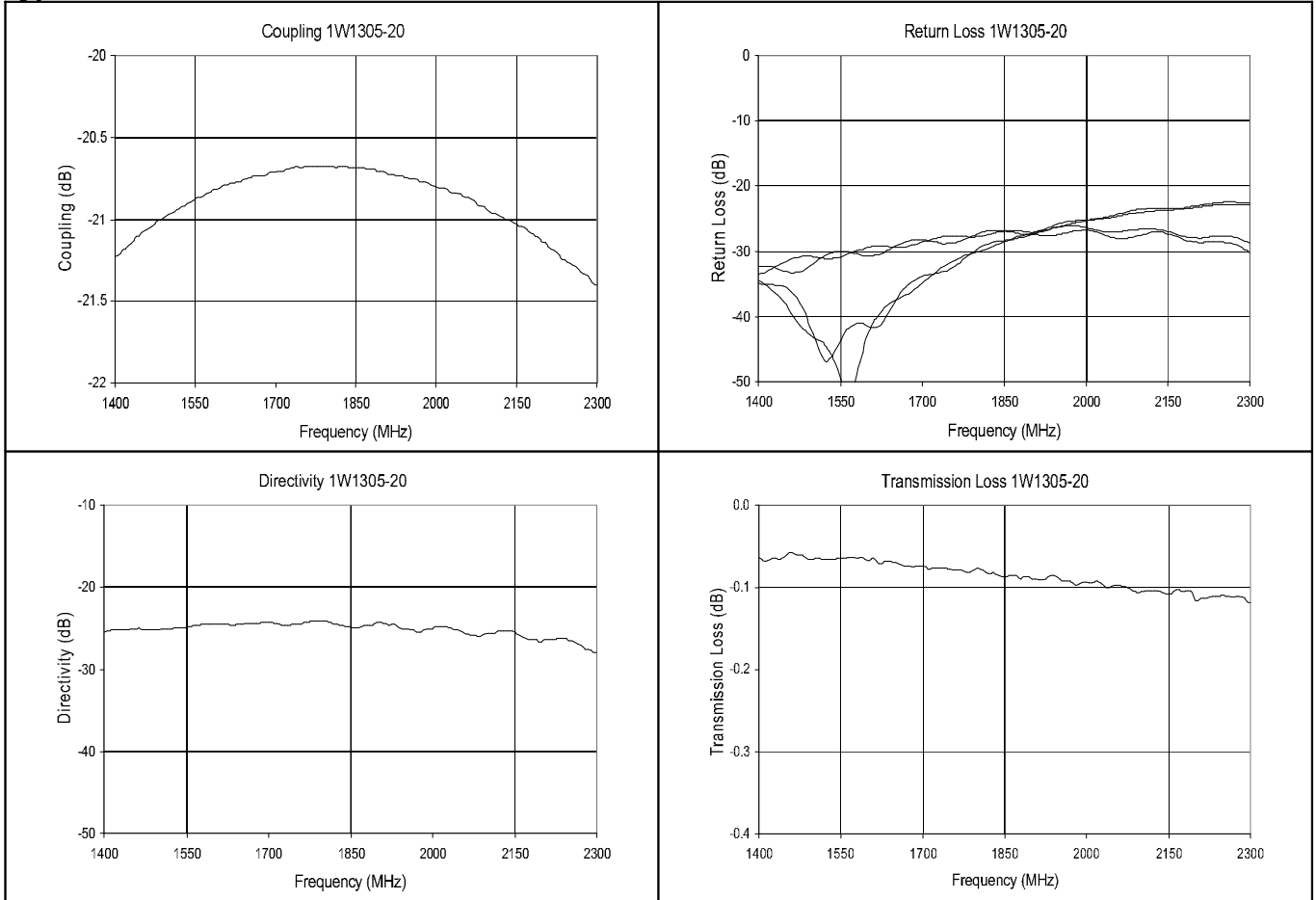
Frequency GHz	Mean Coupling dB	Insertion Loss dB Max	VSWR Max:1	Freq. Sensitivity dB Max
1.805 – 1.88	20.5 ± 1.0	0.25	1.18	±0.075
1.93 – 1.99	20.5 ± 1.0	0.25	1.18	±0.075
1.7 – 2.0	20.5 ± 1.5	0.25	1.20	±0.30
Directivity dB Min	Power Handling Watts	⊙JC °C / Watt	Operating Temp. °C	
24	100	14.7	-55 to +85	
24	100	14.7	-55 to +85	
20	100	14.7	-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.

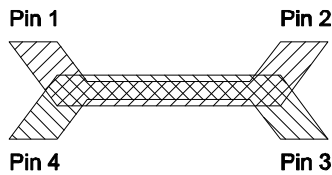
### Outline Drawing



### Typical Performance: 1.4 GHz. to 2.3 GHz.



### Pin Configuration

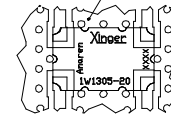


Directional Coupler Pin Configuration

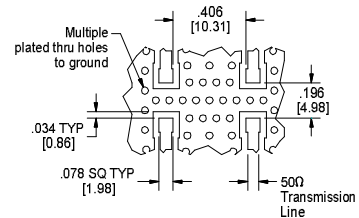
	Pin 1	Pin 2	Pin 3	Pin 4
Configuration #1	Input	Output	Isolated	Coupled
Configuration #2	Output	Input	Coupled	Isolated
Configuration #3	Isolated	Coupled	Input	Output
Configuration #4	Coupled	Isolated	Output	Input

### 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]  
1W1305-20 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.

