



### Hybrid Couplers 3 dB, 90°



#### Description

The 1A1305-3 is a low profile 3dB hybrid coupler in an easy to use surface mount package covering the entire DCS and PCS bands. The 1A1305-3 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:

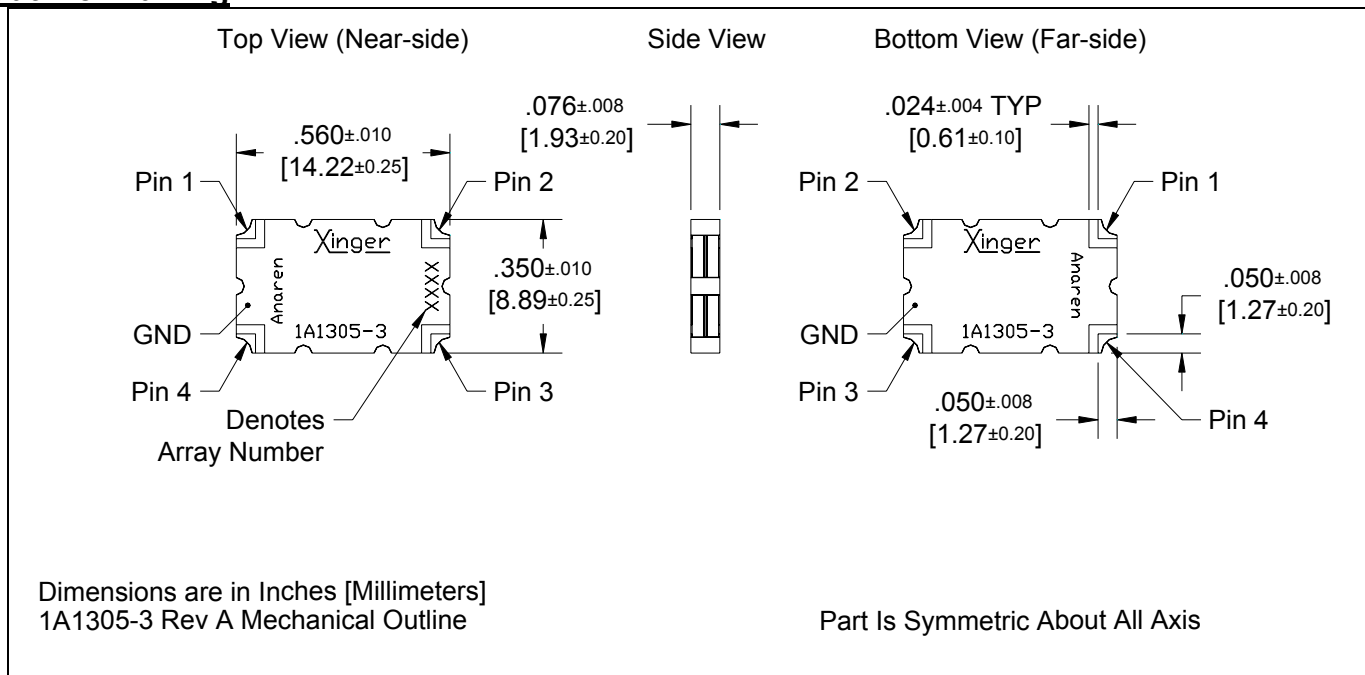
- 1.5 – 2.2 GHz
- Low Loss
- High Isolation
- 90° Quadrature
- Surface Mountable
- Tape And Reel
- Convenient Package
- 100% Tested

#### ELECTRICAL SPECIFICATIONS\*\*

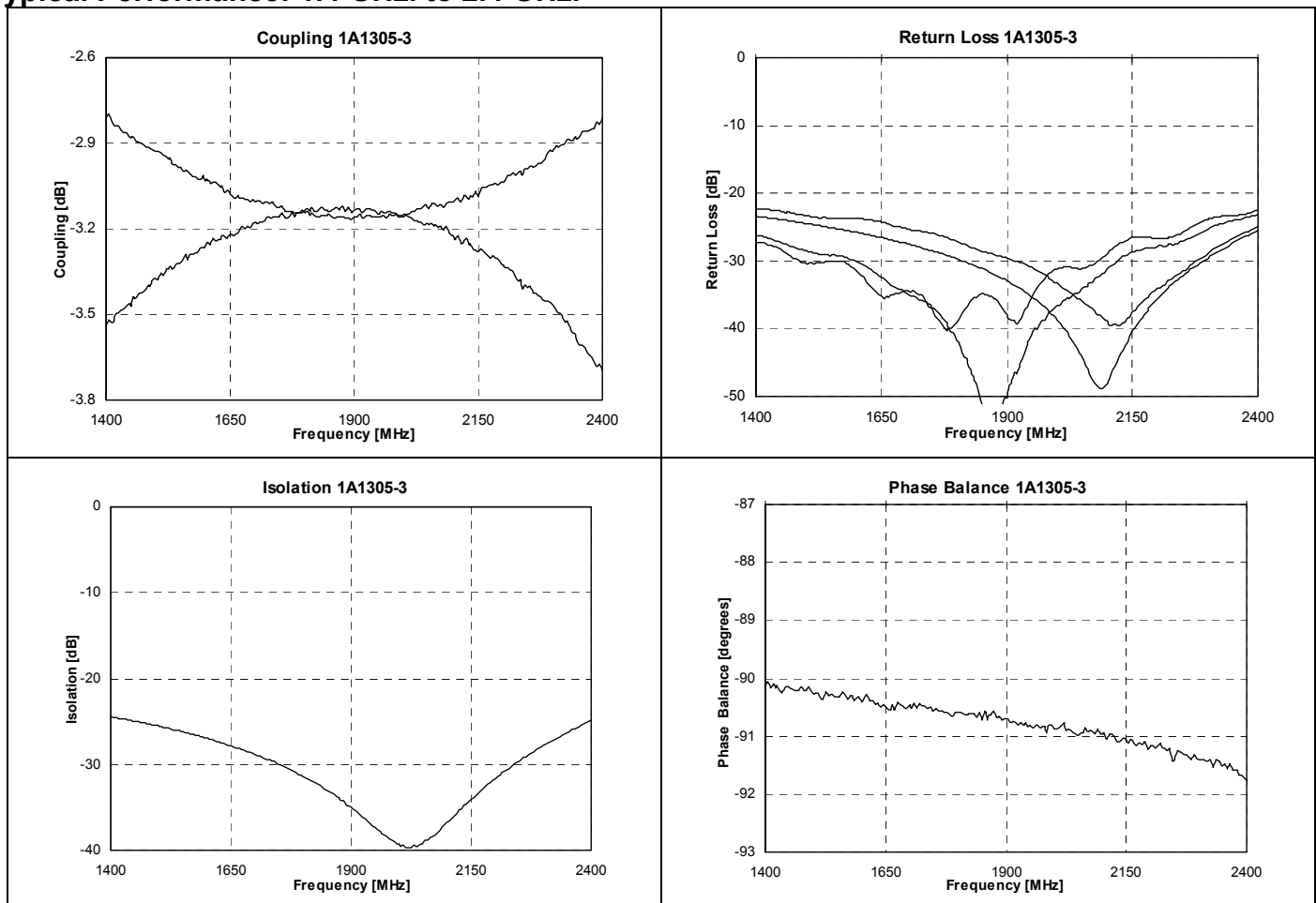
Frequency	Isolation	Insertion Loss	VSWR		
MHz	dB Min	dB Max	Max:1		
1.7 – 2.0	23	0.23	1.18		
1.5 – 2.2	20	0.25	1.20		
Amplitude Balance	Phase Balance	Power	ΘJC	Operating Temp.	
dB Max	Degrees	Ave. CW Watts	°C/Watt	°C	
± 0.30	± 3	100	14.6	-55 to +85	
± 0.40	± 3	100	14.6	-55 to +85	

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

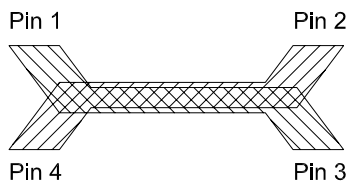
#### Outline Drawing



### Typical Performance: 1.4 GHz. to 2.4 GHz.



### Pin Configuration

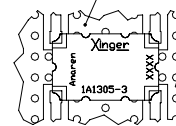


Hybrid Coupler Pin Configuration

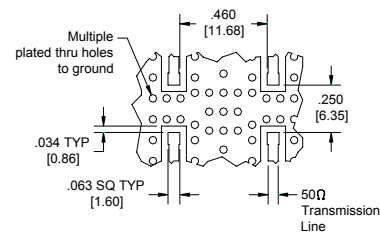
	Pin 1	Pin 2	Pin 3	Pin 4
Configuration #1	Input	Isolated	-3dB, -90°	-3dB, 0°
Configuration #2	Isolated	Input	-3dB, 0°	-3dB, -90°
Configuration #3	-3dB, -90°	-3dB, 0°	Input	Isolated
Configuration #4	-3dB, 0°	-3dB, -90°	Isolated	Input

### 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]  
1A1305-3 Rev A Mounting Footprint

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Available on Tape and Reel For Pick and Place Manufacturing.

