



Hybrid Couplers 3 dB, 90°



Description

The 1W1305-3 is a low profile 3dB hybrid coupler in an easy to use surface mount package covering DCS, PCS, W-CDMA, UMTS and other 3G applications. The 1W1305-3 is ideal for balanced amplifiers and signal distribution and can be used in most high power designs. The 1W1305-3 has modified RF pads that can handle higher peak power levels than the standard Xinger designs. Also, the new RF pad improves manufacturing reliability and minimizes the risk of failures due to misalignment from pick and place equipment. 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:

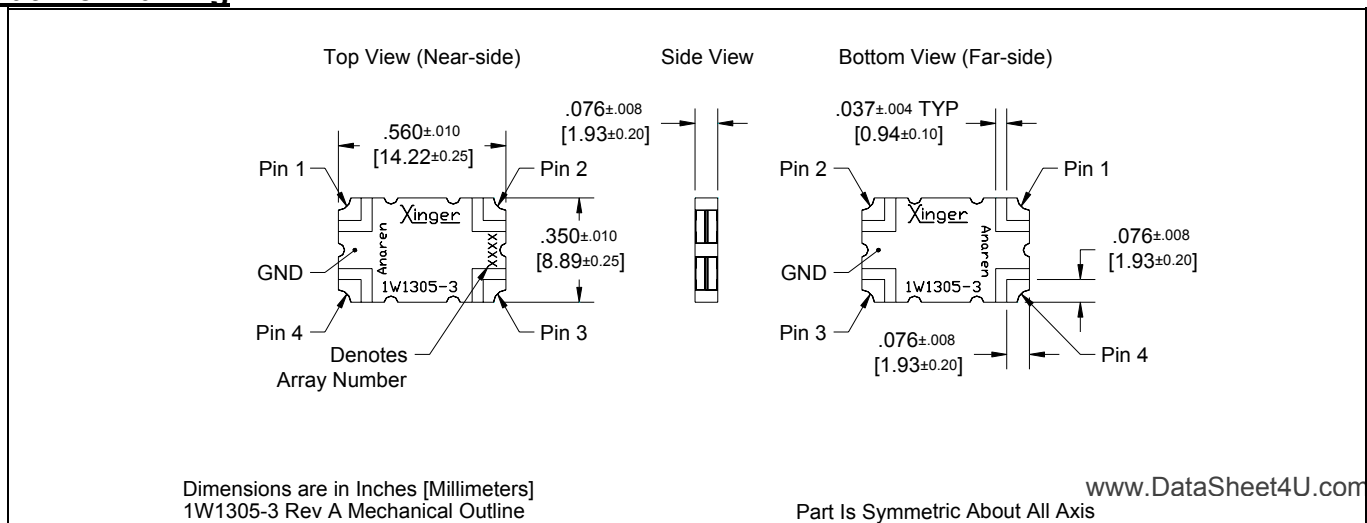
- 1.6 – 2.4 GHz
- Low Loss
- High Isolation
- 90° Quadrature
- Surface Mountable
- Higher Peak Power
- Tape And Reel
- Convenient Package
- 100% Tested

ELECTRICAL SPECIFICATIONS**

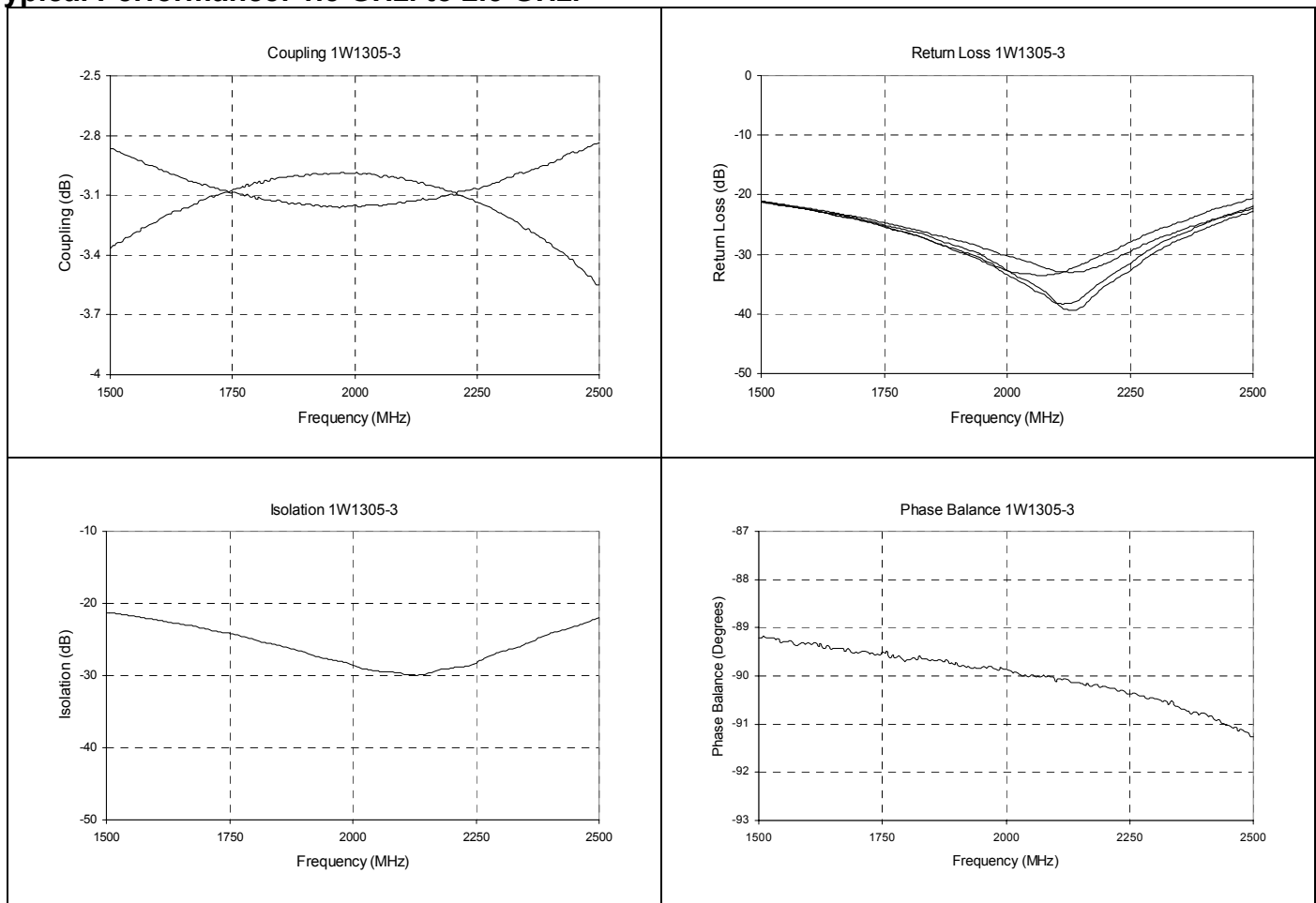
Frequency	Isolation	Insertion Loss	VSWR		
GHz	dB Min	dB Max	Max:1		
1.93 – 1.99	23	0.23	1.17		
2.1 – 2.17	23	0.25	1.17		
1.8 – 2.2	20	0.25	1.20		
1.6 – 2.4	18	0.30	1.25		
Amplitude Balance	Phase Balance	Power	ΘJC	Operating Temp.	
dB Max	Degrees	Ave. CW Watts	°C/Watt	°C	
± 0.20	± 2	100	14.6	-55 to +85	
± 0.20	± 2	100	14.6	-55 to +85	
± 0.25	± 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.

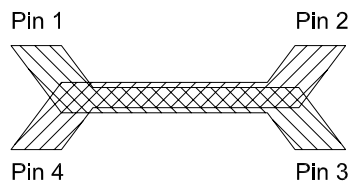
Outline Drawing



Typical Performance: 1.5 GHz. to 2.5 GHz.



Pin Configuration

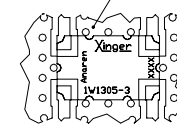


Hybrid Coupler Pin Configuration

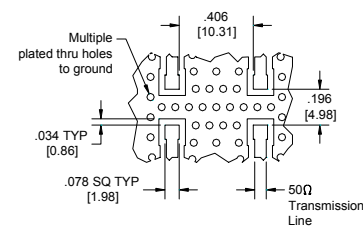
	Pin 1	Pin 2	Pin 3	Pin 4
Configuration #1	Input	Isolated	-3dB, -90°	-3dB, 0°
Configuration #2	Isolated	Input	-3dB, 0°	-3dB, -90°
Configuration #3	-3dB, -90°	-3dB, 0°	Input	Isolated
Configuration #4	-3dB, 0°	-3dB, -90°	Isolated	Input

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]
1W1305-3 Rev A Mounting Footprint

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Available on Tape and Reel For Pick and Place Manufacturing.

