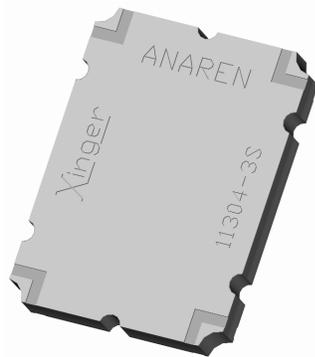




**Hybrid Coupler**  
**3 dB, 90°**



**Description:**

The 11304-3S is a low profile 3dB hybrid coupler in an easy to use surface mount package covering 500 to 1000 MHz. The 11304-3S 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 polyimide.

**Features:**

- 500 - 1000 MHz
- Low loss
- High Isolation
- 90° Quadrature
- Surface Mountable
- Tape And Reel
- Convenient Package
- 100% Tested
- Lead Free

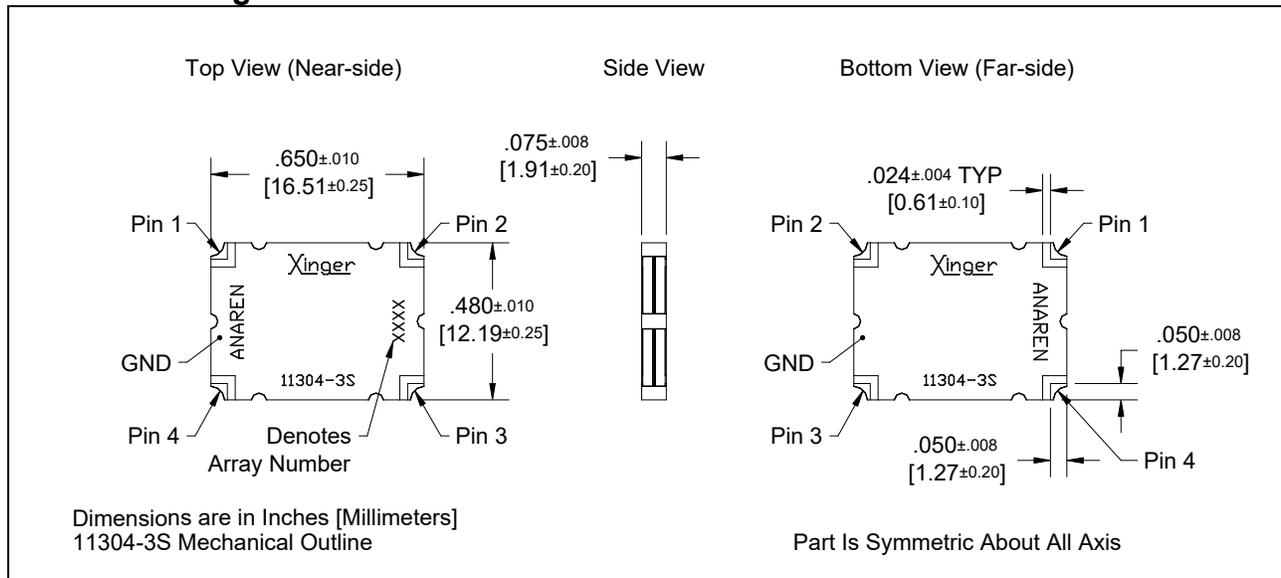
**Detailed Electrical Specifications:**

Frequency	Isolation	Insertion Loss	VSWR	
MHz	dB Min	dB Max	Max:1	
500 – 1000	20	0.35	1.25	
Amplitude Balance	Phase Balance	Power	⊖JC	Operating Temp.
dB Max	Degrees	Ave. CW Watts	°C/ Watt	°C
± 0.55	± 3	100	8.6	-55 to +85

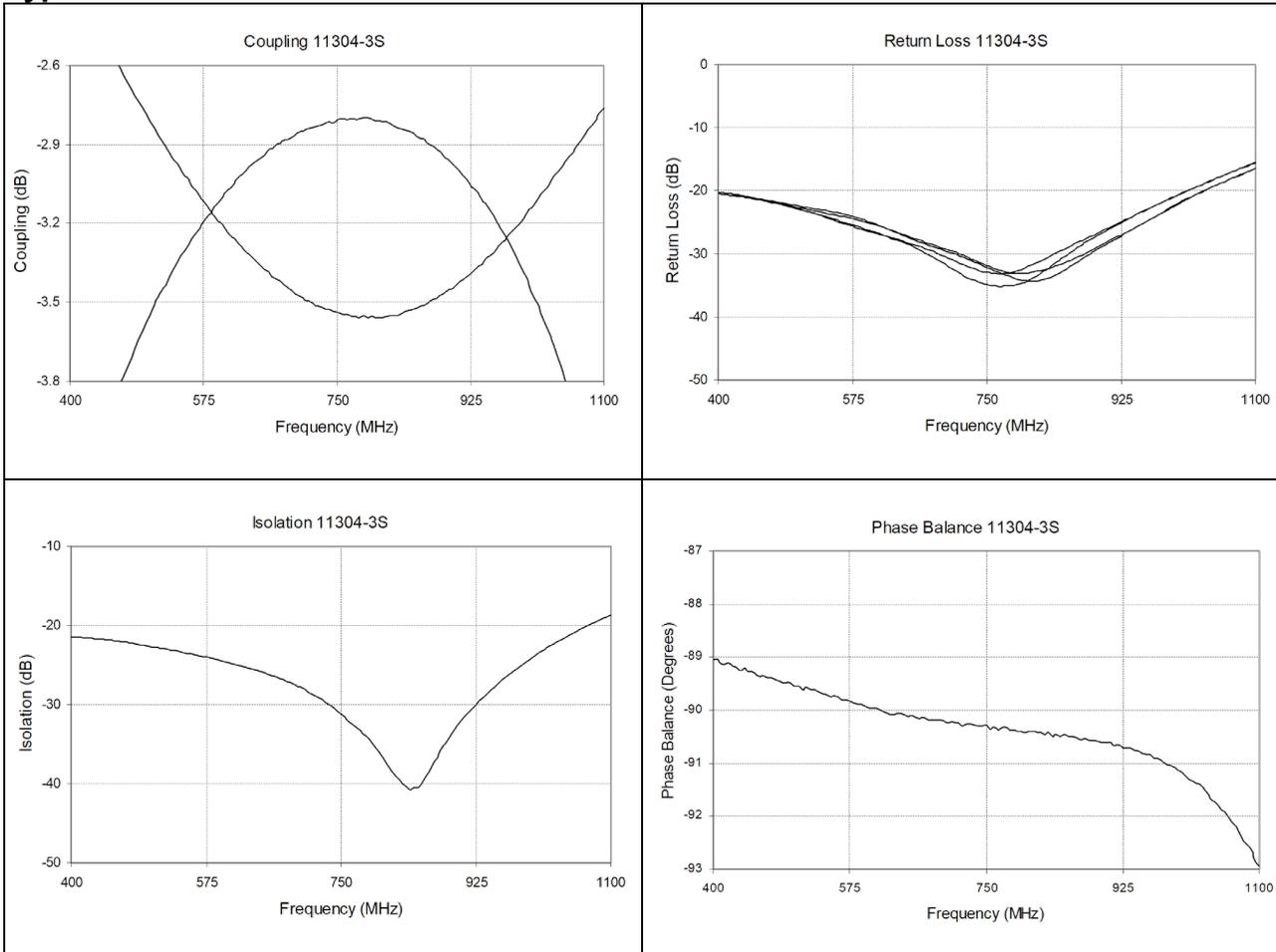
\*\*Specification based on performance of unit properly installed on microstrip printed circuit boards with 50 Ω nominal impedance.

\*Specifications subject to change without notice.

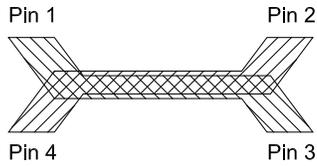
**Outline Drawing:**



**Typical Performance: 200 MHz to 425 MHz**



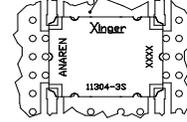
## Pin Configuration



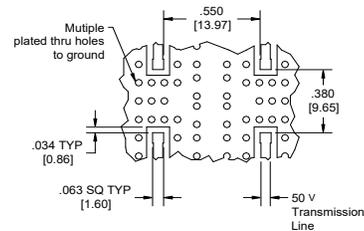
Hybrid Coupler Pin Configuration				
	Pin 1	Pin 2	Pin 3	Pin 4
Configuration #1	Input	Isolated	-3dB, -90°	-3dB, 0°
Configuration #2	Isolated	Input	-3dB, 0°	-3dB, -90°
Configuration #3	-3dB, -90°	-3dB, 0°	Input	Isolated
Configuration #4	-3dB, 0°	-3dB, -90°	Isolated	Input

## 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]  
11304-3S Mounting Footprint

Contact us:  
[rf&s\\_support@ttm.com](mailto:rf&s_support@ttm.com)