

### **Description**

The 1F1304-3S is a low profile 3dB hybrid coupler in an easy to use surface mount package covering 470 to 860 MHz. The 1F1304-3S 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. Available in both 5 of 6 tin lead (1F1304-3) and 6 of 6 tin immersion (1F1304-3S) RoHS compliant finishes.

## Features:

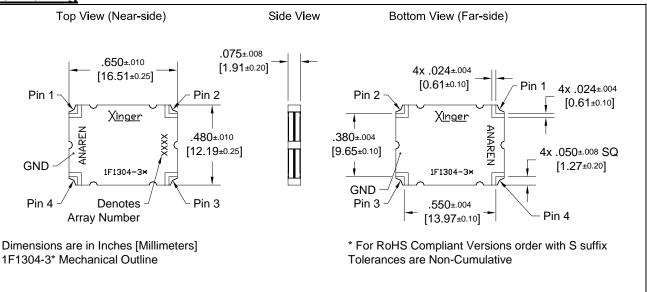
- 470 860 MHz
- Low loss
- High Isolation
- 90<sup>O</sup> Quadrature
- Surface Mountable
- Tape And Reel
- Convenient Package
- 100% Tested
- Lead Free Available

### **ELECTRICAL SPECIFICATIONS\*\***

ELECTRICAL OF ECH TOATTONS							
Frequency	Isolation	Insertion Loss	VSWR				
MHz	dB Min	dB Max	Max:1				
470 - 860	21	0.40	1.25				
Amplitude Balance	Phase Balance	Power	ΘЈС	Operating Temp.			
dB Max	Degrees	Ave. CW Watts	°C/ Watt	°C			
± 0.50	± 3	100	8.6	-55 to +85			

<sup>\*\*</sup>Specification based on performance of unit properly installed on microstrip printed circuit boards with 50  $\Omega$  nominal impedance. Specifications subject to change without notice.

## **Outline Drawing**







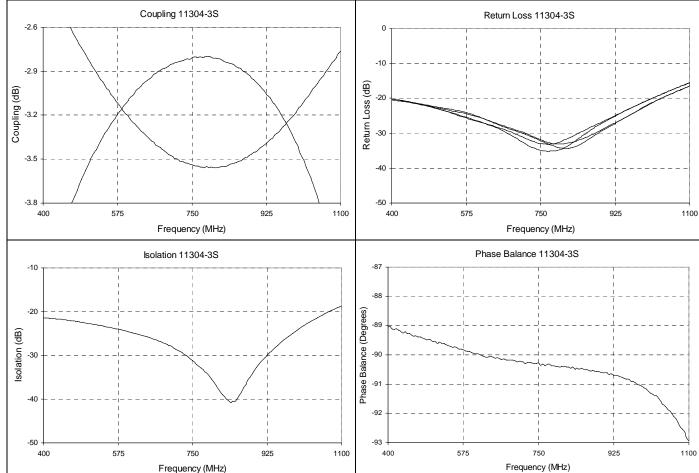
Available on Tape and Reel For Pick and Place Manufacturing.

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

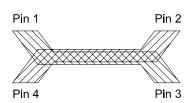




## Typical Performance: 400 MHz. to 900 MHz.



## **Pin Configuration**



Hybrid Coupler Pin Configruation							
	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			

# O O O Part Is Symmetric About All Axis Mutiple plated thru holes 00 00 0 .034 TYP

**Mounting Footprint** 

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Dimensions are in Inches [Millimeters] 1F1304-3\* Mechanical Footprint