

# Xinger III

### Coupler 5 dB, 90°



### Description

The X3C20F1-05S is a low profile, high performance 5dB coupler in a new easy to use, manufacturing friendly surface mount package. It is designed for Doherty applications. The X3C20F1-05S is designed particularly for non-binary split and combine in high power amplifiers, e.g. used along with a 3dB to get a 3-way, plus other signal distribution applications where low insertion loss is required. It can be used in high power applications up to 60 Watts. It can be used in high power applications up to 25\* watts.

Parts have been subjected to rigorous qualification testing and they are manufactured using materials with coefficients of thermal expansion (CTE) compatible with common substrates such as FR4, G-10, RF-35, RO4003 and polyimide. Produced with 6 of 6 RoHS compliant tin immersion finish.

### Features:

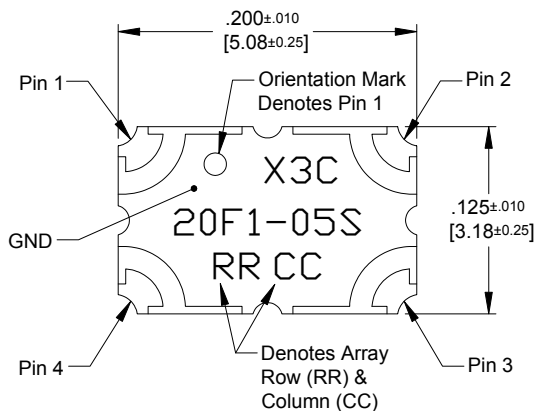
- 1800-2200 MHz
- WCDMA and LTE
- High Power
- Very Low Loss
- Tight Amplitude Balance
- High Isolation
- Production Friendly
- Tape and Reel
- Lead-Free

### Electrical Specifications \*\*

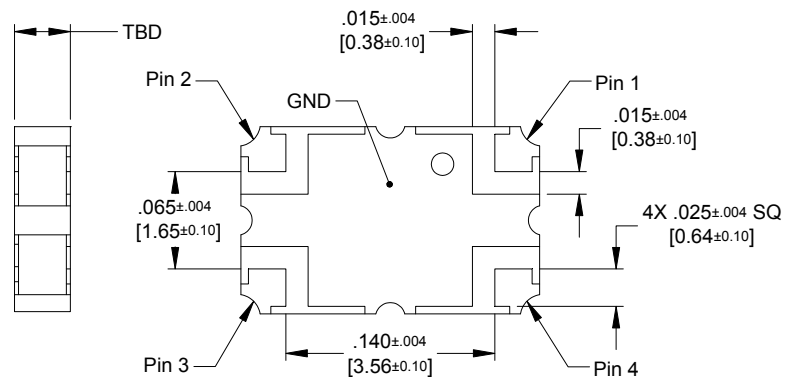
Frequency	Isolation	Insertion Loss	VSWR	Mean Coupling
<i>MHz</i>	<i>dB Min</i>	<i>dB Max</i>	<i>Max : 1</i>	<i>dB</i>
1800-2200	23	0.2	1.15	5.0 ± 0.2
Phase	Power	⊙JC	Operating Temp.	
<i>Degrees</i>	<i>Avg. CW Watts</i>	<i>°C/Watt</i>	<i>°C</i>	
90 ± 4.0	25*	TBD	-55 to +105	

\*\*Specification based on performance of unit properly installed on Anaren Test Board with small signal applied. Specifications subject to change without notice. Refer to parameter definitions for details.

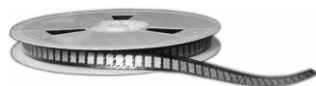
### Mechanical Outline



Dimensions are in Inches [Millimeters]  
X3C20F1-05S Mechanical Outline

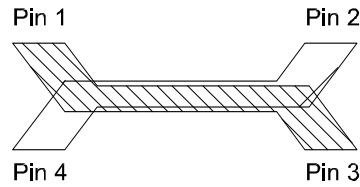


Tolerances are Non-Cumulative



## Directional Coupler Pin Configuration

The X3C20F1-05S has an orientation marker to denote Pin 1. Once port one has been identified the other ports are known automatically. Please see the chart below for clarification:



Pin 1	Pin 2	Pin 3	Pin 4
Input	Isolated	Direct	Coupled
Isolated	Input	Coupled	Direct
Direct	Coupled	Input	Isolated
Coupled	Direct	Isolated	Input

Note: The direct port has a DC connection to the input port and the coupled port has a DC connection to the isolated port.

