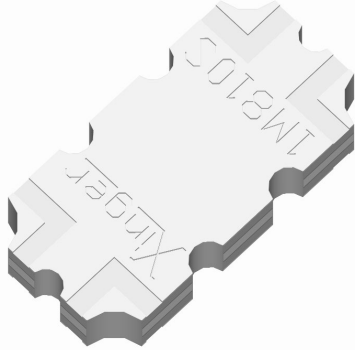


# Xinger®

## Micro Xinger 10dB Directional Coupler



### Description

The 1M810S Micro Xinger® is a low profile, miniature 10dB directional coupler in an easy to use surface mount package designed for U-NII, ISM and hyperLAN applications. The 1M810S is for power and frequency detection as well as power injection and is an ideal solution for the ever-increasing demands of the wireless industry for smaller printed circuit boards and high performance. 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:

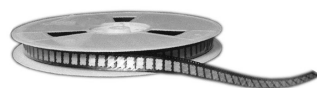
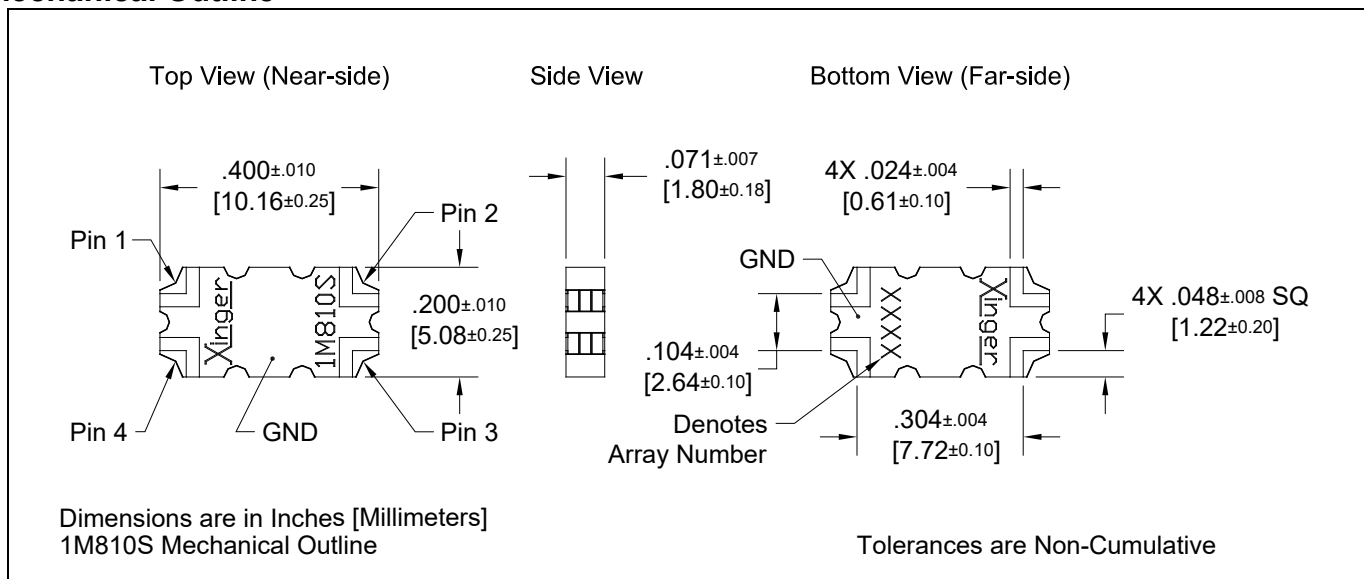
- 5000-6000 MHz
- Very Low Loss
- High Directivity
- Surface Mountable
- Tape And Reel
- New Micro-Package
- Lead-Free
- RoHS Compliant
- 100% Tested

### ELECTRICAL SPECIFICATIONS\*\*

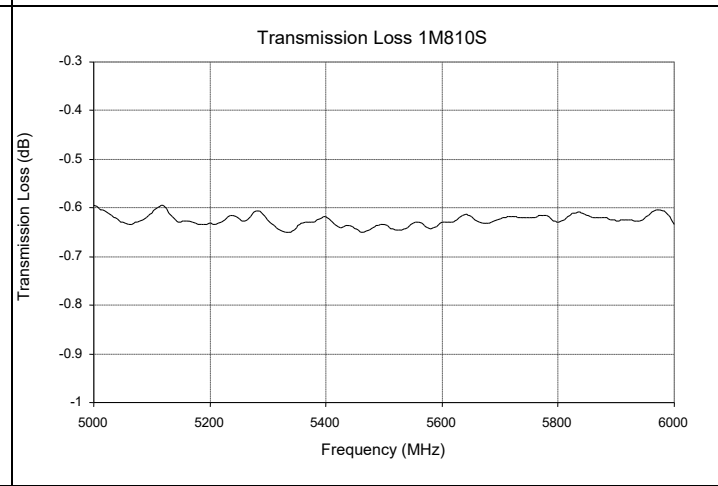
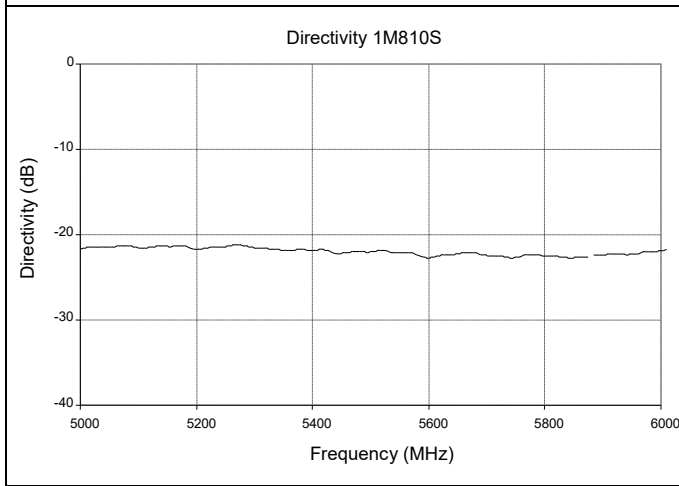
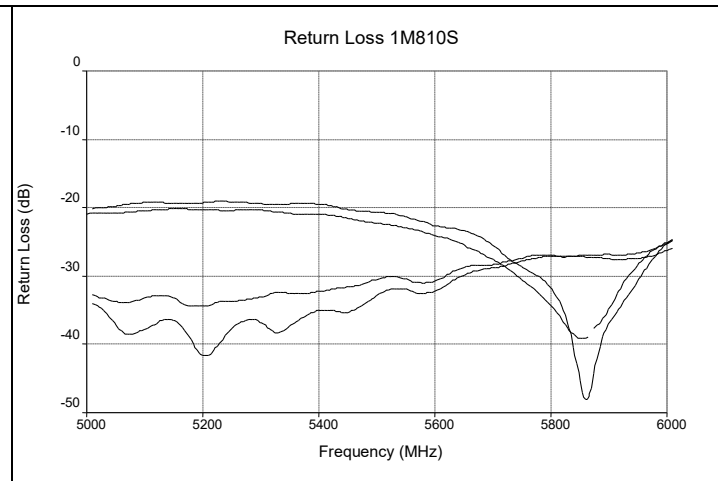
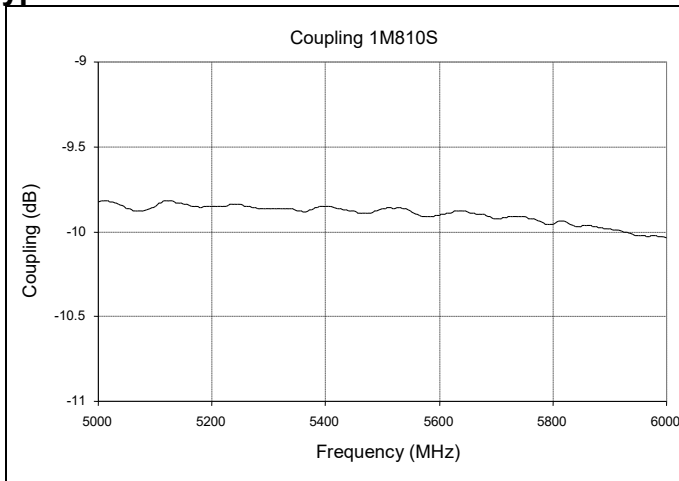
Frequency GHz	Mean Coupling dB	Insertion Loss dB Max	Freq. Sensitivity dB Max
5000-6000	10.0 ± .75	0.30	± .30
Directivity dB Min	Power Handling Avg. CW Watts @85°C	VSWR Max : 1	Operating Temp. °C
18	15	1.33	-55 to +150

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

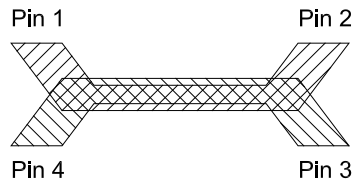
### Mechanical Outline



## Typical Performance: 5.0 GHz. to 6.0 GHz.



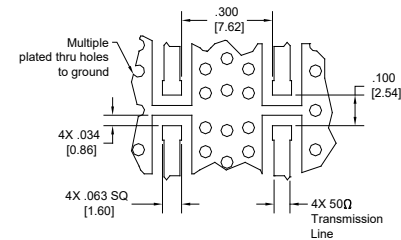
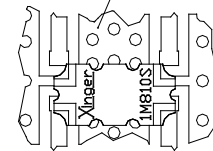
### Pin Configuration



Directional Coupler Pin Configuration				
	Pin 1	Pin 2	Pin 3	Pin 4
Configuration #1	Input	Output	Isolated	Coupled
Configuration #2	Output	Input	Coupled	Isolated
Configuration #3	Isolated	Coupled	Input	Output
Configuration #4	Coupled	Isolated	Output	Input

### Mounting Footprint

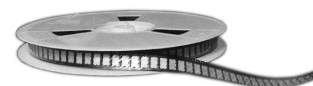
To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part



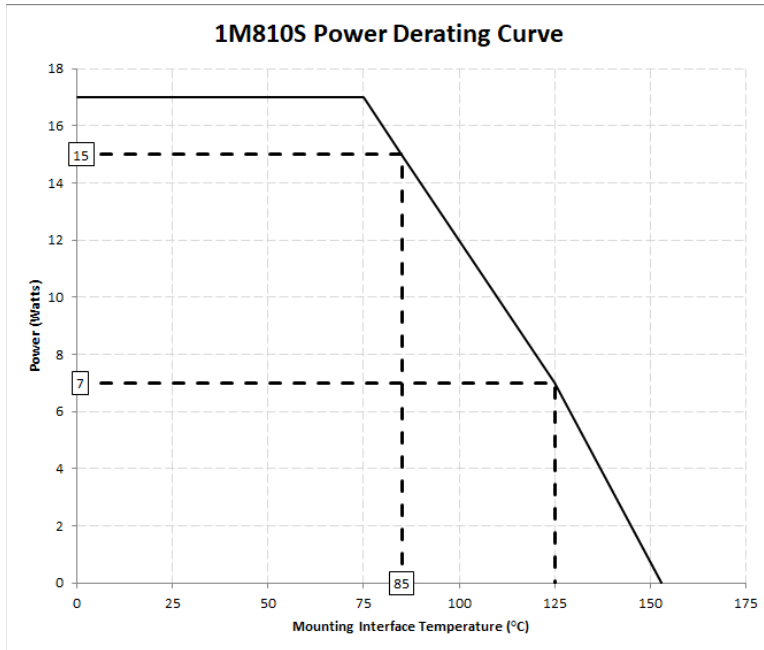
Dimensions are in Inches [Millimeters]  
1M810S Mounting Footprint

USA/Canada: (315) 233-5510  
Toll Free: (833) 389-6402  
Europe: +44 2392-232392  
Asia: +86 512 62749282

Available on Tape and Reel For Pick and Place Manufacturing.



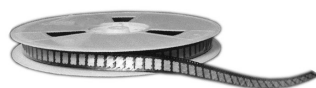
### 1M810S Power Derating Curve



### Power Derating:

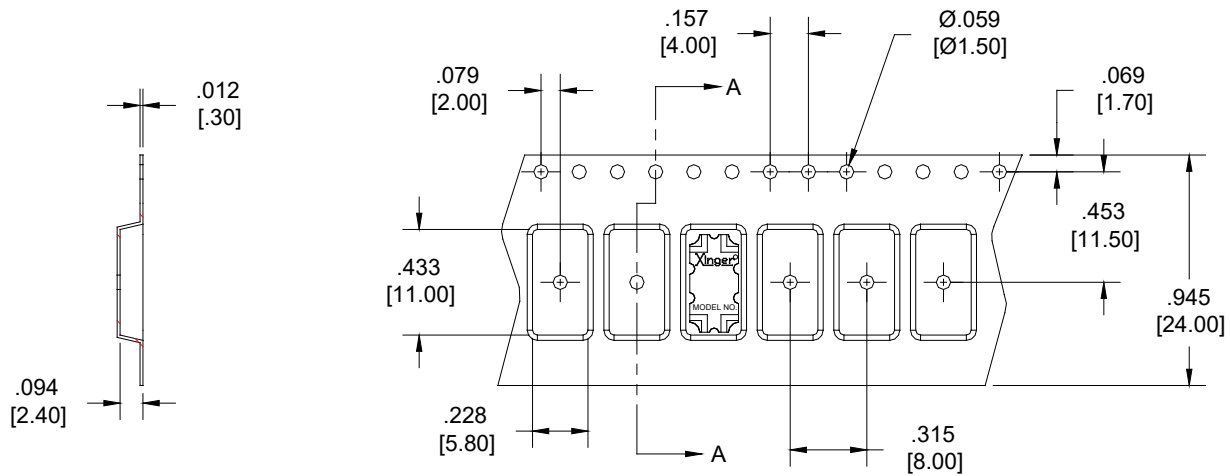
The power handling and corresponding power derating plots are a function of the thermal resistance, mounting surface temperature (base plate temperature), maximum continuous operating temperature of the coupler, and the thermal insertion loss.

As the mounting interface temperature approaches the maximum continuous operating temperature, the power handling decreases to zero.



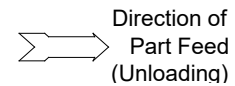
## Carrier Tape

Parts are oriented in embossed tape as shown below

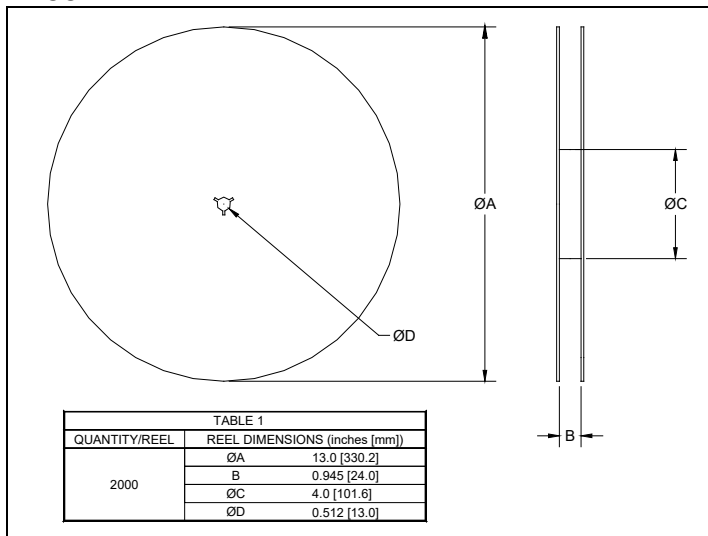


SECTION A-A

Dimensions are in inches [mm]



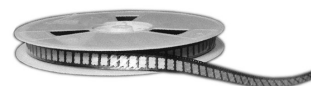
## Reel



- Parts are available in both reel and tube
- Quantity of 48 parts available per tube

USA/Canada: (315) 233-5510  
 Toll Free: (833) 389-6402  
 Europe: +44 2392-232392  
 Asia: +86 512 62749282

Available on Tape and Reel For Pick and Place Manufacturing.



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