



**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:

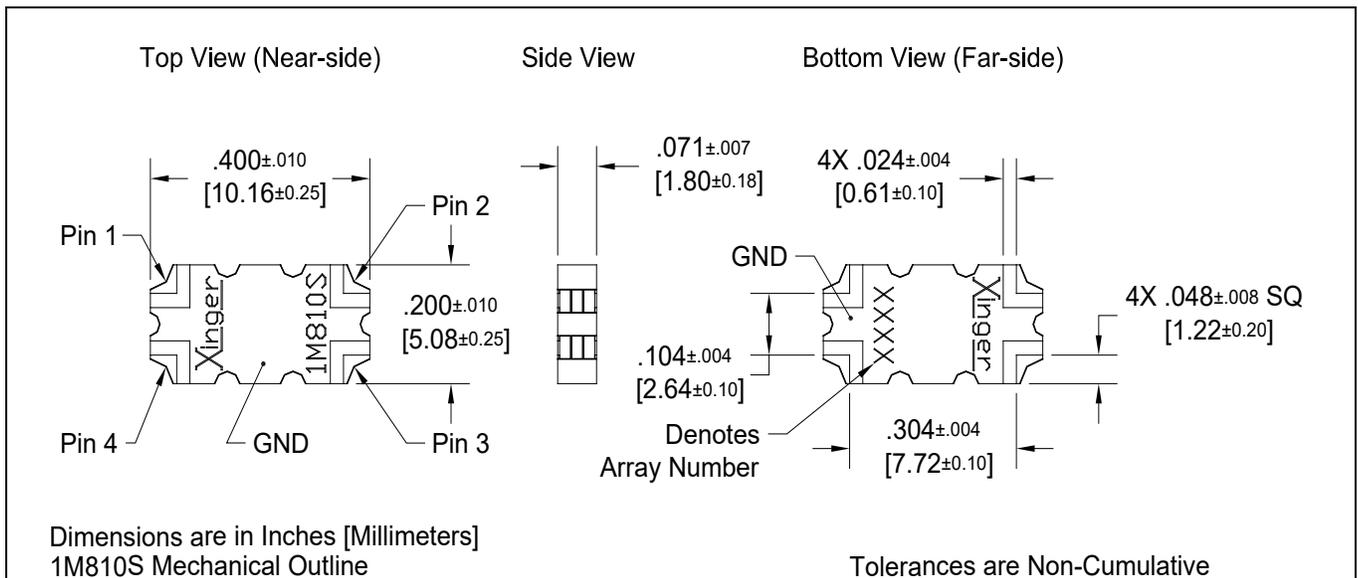
- 5000-6000 MHz
- Very Low Loss
- High Directivity
- Surface Mountable
- Tape And Reel
- New Micro-Package
- Lead-Free
- RoHS Compliant
- 100% Tested

Electrical Specifications**

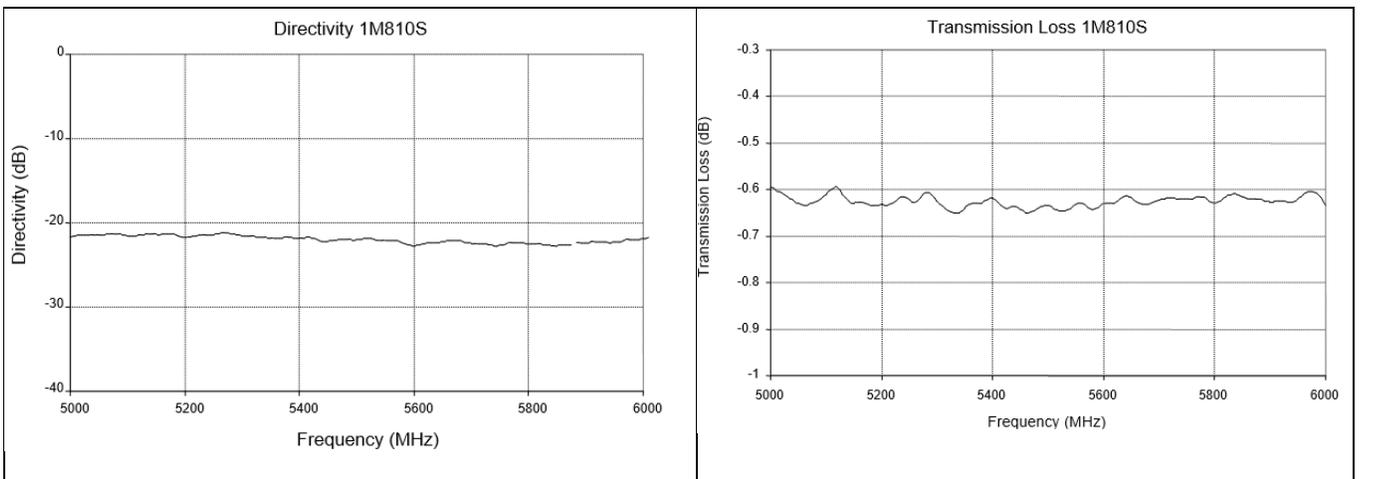
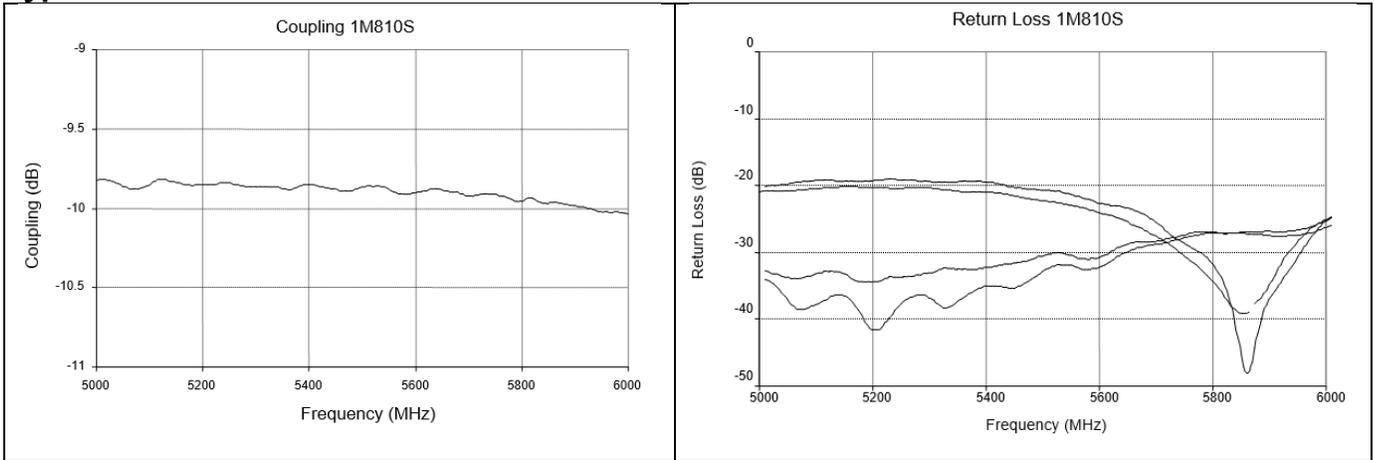
Frequency <i>GHz</i>	Mean Coupling <i>dB</i>	Insertion Loss <i>dB Max</i>	Freq. Sensitivity <i>dB Max</i>
5000-6000	10.0 ± .75	0.30	± .30
Directivity <i>dB Min</i>	Power Handling <i>Avg. CW Watts @85°C</i>	VSWR <i>Max : 1</i>	Operating Temp. <i>°C</i>
18	15	1.33	-55 to +150

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

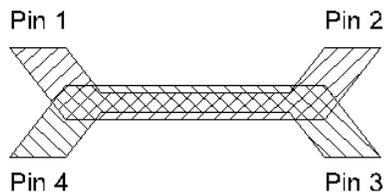
Mechanical Outline:



Typical Performance 5.0 GHz. to 6.0 GHz



Pin Configuration

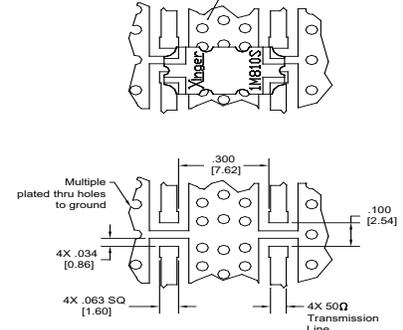


Directional Coupler Pin Configuration

	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

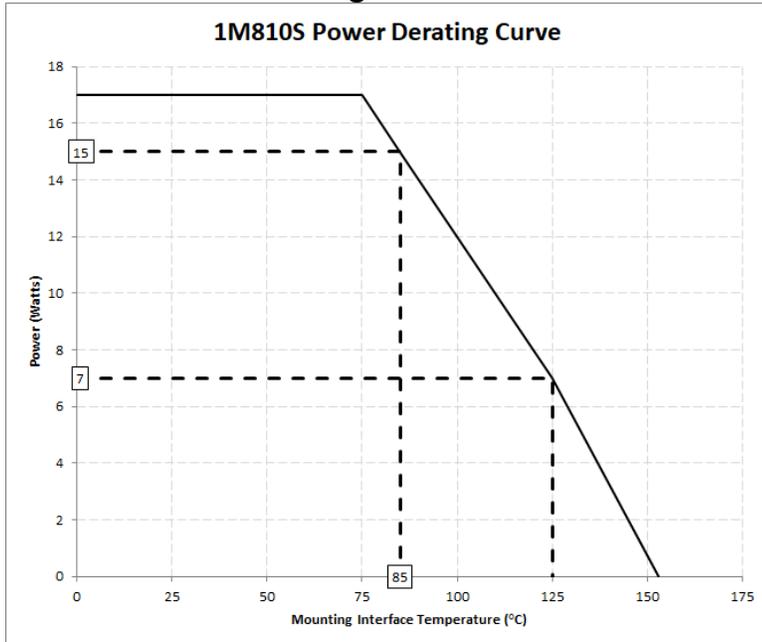
Mounting Footprint

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

1M810S Power Derating Curve



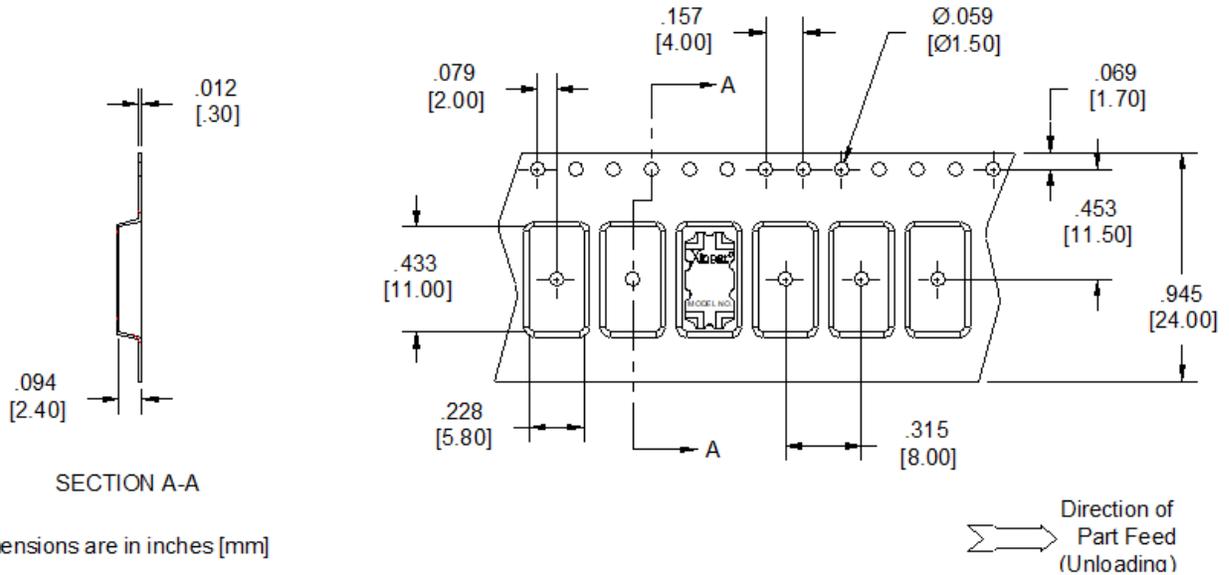
Power Derating

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.

Packaging and Ordering Information:

Parts are oriented in embossed tape as shown below



Dimensions are in inches [mm]

Reel

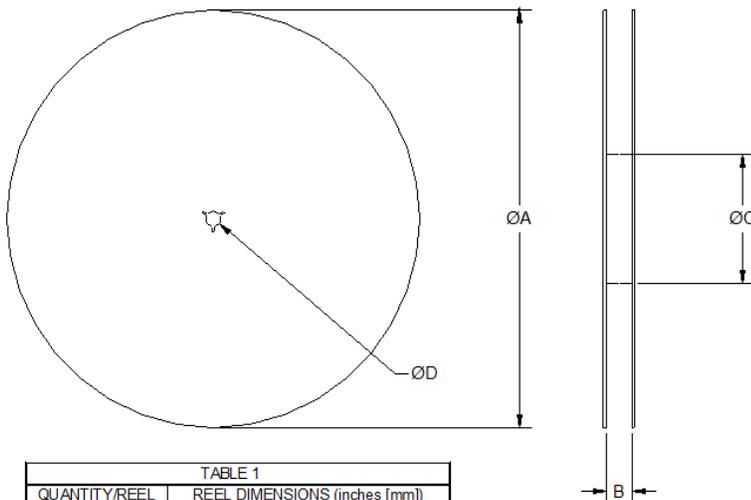


TABLE 1	
QUANTITY/REEL	REEL DIMENSIONS (inches [mm])
2000	ØA 13.0 [330.2]
	B 0.945 [24.0]
	ØC 4.0 [101.6]
	ØD 0.512 [13.0]

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