Xinger®

Directional Couplers
10 dB

Description

The 1A1307-10 is a low profile 10dB directional coupler in an easy to use surface mount package designed for the 3.4 to 3.6 GHz bandwidth. The 1A1307-10 is ideal for power and frequency detection as well as power injection and can be used in most high power designs. They 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.
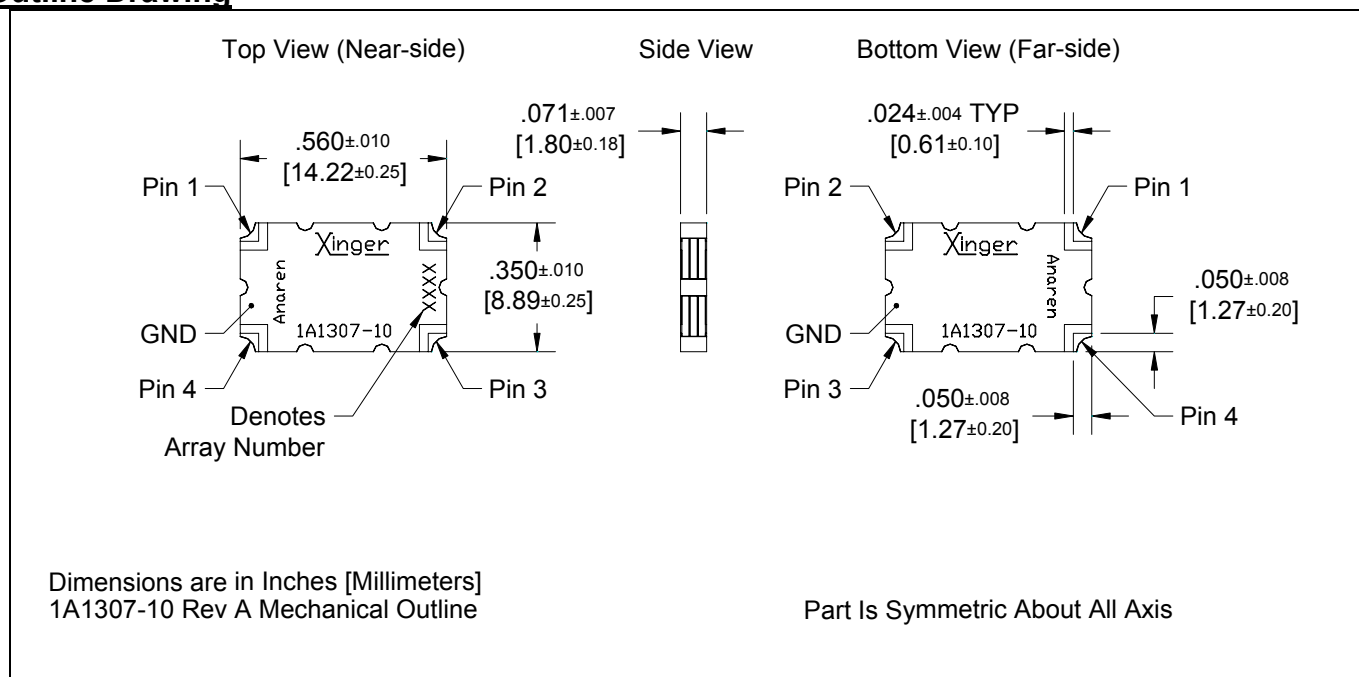
Features:

- **3.4 – 3.6 GHz**
- **Low loss**
- **High Directivity**
- **Surface Mountable**
- **Tape And Reel**
- **Convenient Package**
- **100% Tested**

ELECTRICAL SPECIFICATIONS**

Frequency	Mean Coupling	Insertion Loss	VSWR	Freq. Sensitivity
GHz	dB	dB Max	Max:1	dB Max
3.4 – 3.6	10.0 ± 1.0	0.30	1.40	±0.20

Directivity	Power Handling	⊖JC	Operating Temp.
dB Min	Watts	°C / Watt	°C
20	60	24.3	-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.
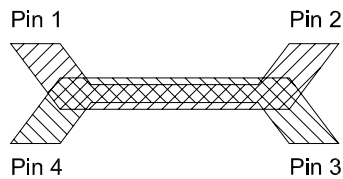
Outline Drawing

Top View (Near-side)   Side View   Bottom View (Far-side)

.071±.007
[1.80±0.18]

.024±.004 TYP
[0.61±0.10]

.560±.010
[14.22±0.25]

Pin 1   Pin 2   Pin 2   Pin 1

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.350±.010
[8.89±0.25]

.050±.008
[1.27±0.20]

GND   GND

1A1307-10   1A1307-10

Pin 4   Pin 3   Pin 3   Pin 4

.050±.008
[1.27±0.20]

Denotes Array Number

Dimensions are in Inches [Millimeters]
1A1307-10 Rev A Mechanical Outline

Part Is Symmetric About All Axis

Anaren
What'll we think of next

Available on Tape and Reel For Pick and Place Manufacturing.

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

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Typical Performance: 3.0 GHz. to 4.0 GHz.

Coupling 1A1307-10

Return Loss 1A1307-10

Directivity 1A1307-10

Transmission Loss 1A1307-10

Pin Configuration

Pin 1   Pin 2

Pin 4   Pin 3
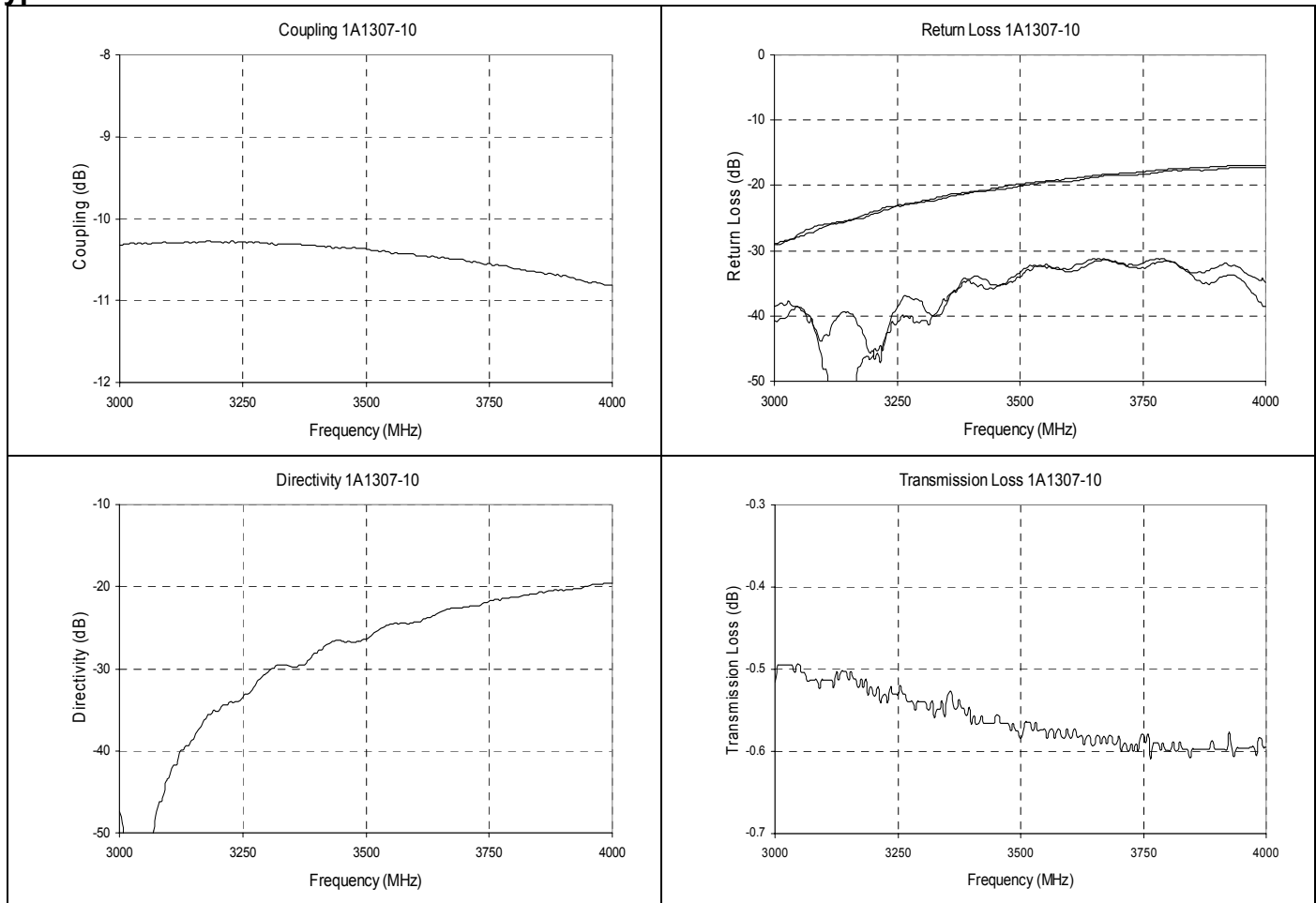
Directional Coupler Pin Configuration

	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

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1A1307-10

Part Is Symmetric About All Axis

.460
[11.68]

Multiple
plated thru holes
to ground

.250
[6.35]

.034 TYP
[0.86]

.063 SQ TYP
[1.60]

50Ω
Transmission
Line
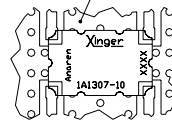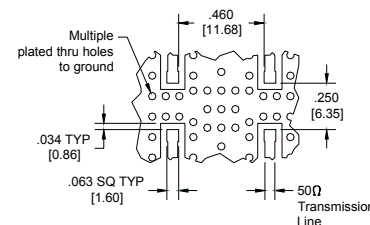
Dimensions are in Inches [Millimeters]
1A1307-10 Rev A Mounting Footprint

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What'll we think of nex