

# Four-Way 0° Power Splitter Combiner 0.81–0.96 GHz



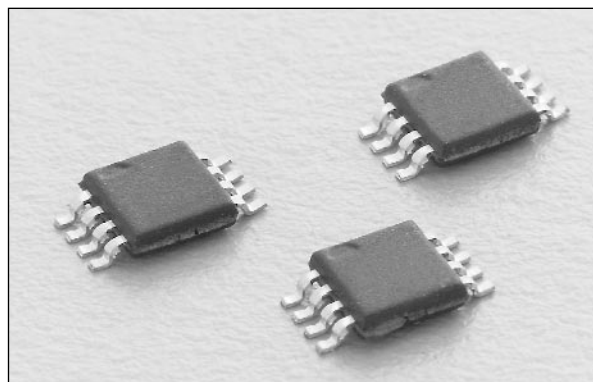
PD4W09-59

## Features

- Low Cost
- Low Profile
- Available in Small MSOP-8 Package
- Tape & Reel

## Description

The PD4W09-59 is a monolithic four-way in-phase hybrid junction tuned for the 0.81–0.96 GHz band. It offers low loss, high isolation, good input/output matching and exceptional phase/amplitude balance. It is available in the MSOP-8 leaded surface mount package.



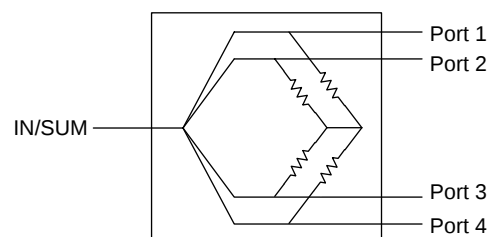
## Electrical Specifications at 25°C

| Parameter                      | Min. | Typ.  | Max.  | Unit |
|--------------------------------|------|-------|-------|------|
| Frequency                      | 0.81 |       | 0.96  | GHz  |
| Insertion Loss Less 6 dB Split |      | 1.3   | 1.5   | dB   |
| Isolation                      | 20   | 23    |       | dB   |
| Input VSWR                     |      | 1.2:1 | 1.5:1 |      |
| Output VSWR                    |      | 1.2:1 | 1.5:1 |      |
| Amplitude Balance              |      | ±0.4  | ±0.6  | dB   |
| Phase Balance                  |      | ±6    | ±8    | Deg. |

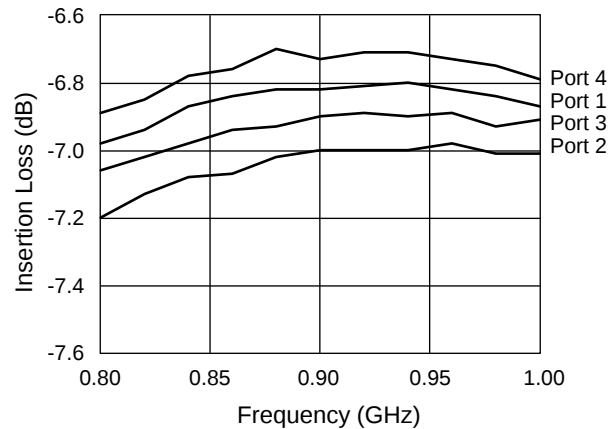
## Pin Out



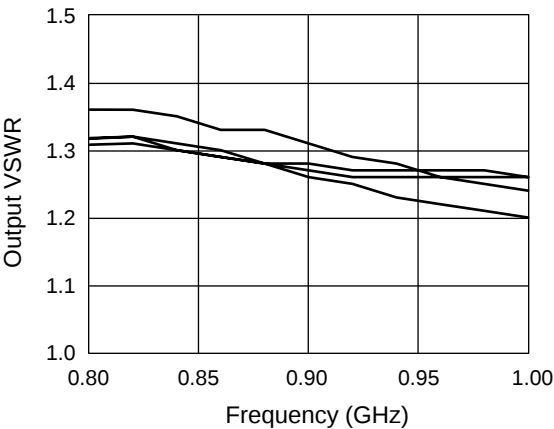
## Block Diagram



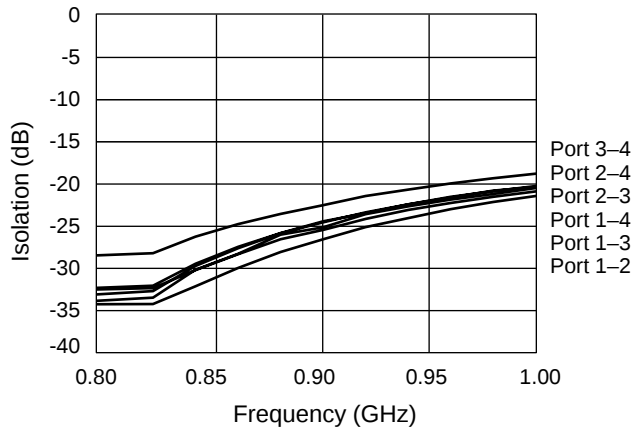
Typical Performance Data



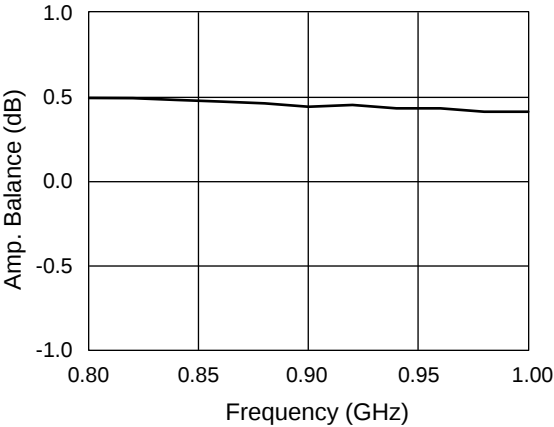
Insertion Loss vs. Frequency



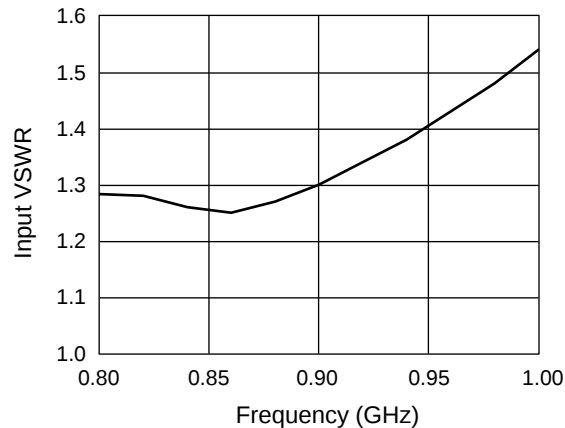
Output VSWR vs. Frequency



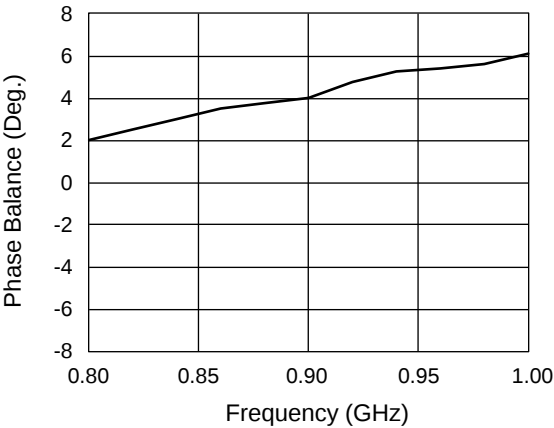
Isolation vs. Frequency



Amp. Balance vs. Frequency

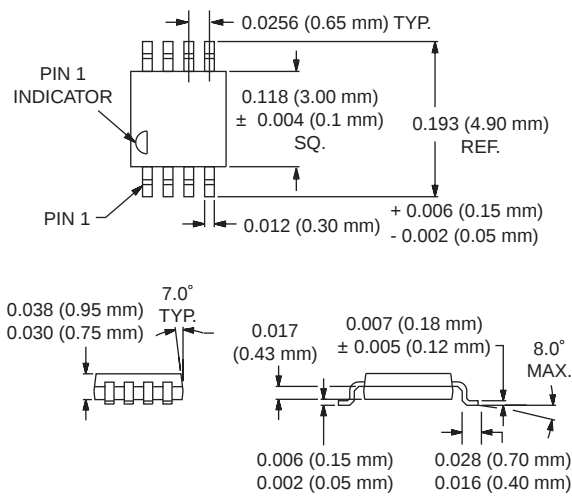


Input VSWR vs. Frequency



Phase Balance vs. Frequency

MSOP-8

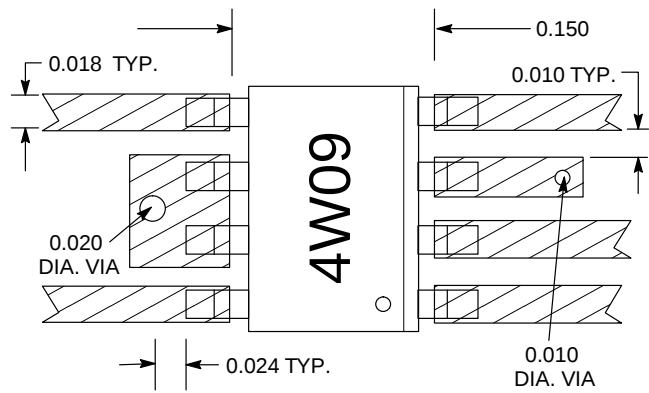


Absolute Maximum Ratings

| Characteristic           | Value           |
|--------------------------|-----------------|
| Input Power <sup>1</sup> | +1.5 W CW       |
| Input Power <sup>2</sup> | +0.375 CW       |
| Operating Temperature    | -40°C to +85°C  |
| Storage Temperature      | -65°C to +150°C |

1. When used as a power divider with a 2.0:1 maximum VSWR on all ports.  
2. When used as a power combiner with a 2.0:1 maximum VSWR on all ports.

Recommended Board Layout



Material is 10 mil FR4