

# Two-Way 0° Power Splitter Combiner 1.42–1.66 GHz



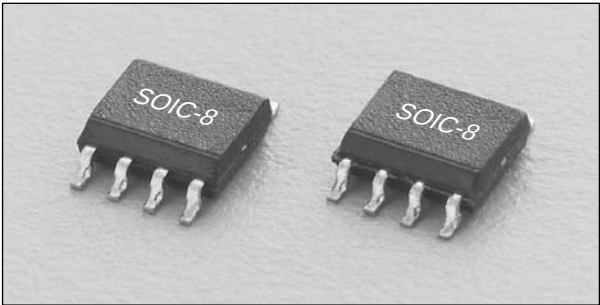
PD15-12

## Features

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

## Description

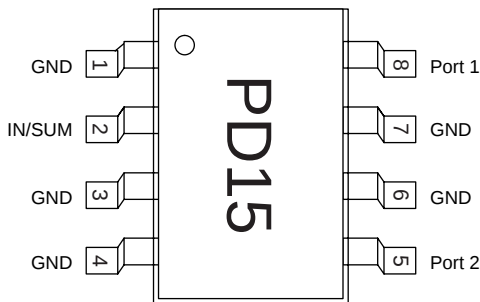
The PD15-12 is a monolithic two-way in-phase hybrid junction tuned for the 1.42–1.66 GHz band. It offers low loss, high isolation, good input/output matching and exceptional phase/amplitude balance. It is available in the SOIC-8 leaded surface mount package.



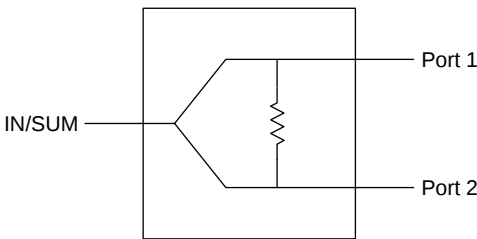
## Electrical Specifications at 25°C

| Parameter                      | Min. | Typ.  | Max.  | Unit |
|--------------------------------|------|-------|-------|------|
| Frequency                      | 1.42 |       | 1.66  | GHz  |
| Insertion Loss Less 3 dB Split |      | 0.4   | 0.6   | dB   |
| Isolation                      | 20   | 23    |       | dB   |
| Input VSWR                     |      | 1.2:1 | 1.5:1 |      |
| Output VSWR                    |      | 1.2:1 | 1.4:1 |      |
| Amplitude Balance              |      | ±0.1  | ±0.2  | dB   |
| Phase Balance                  |      | ±1.0  | ±3.0  | Deg. |

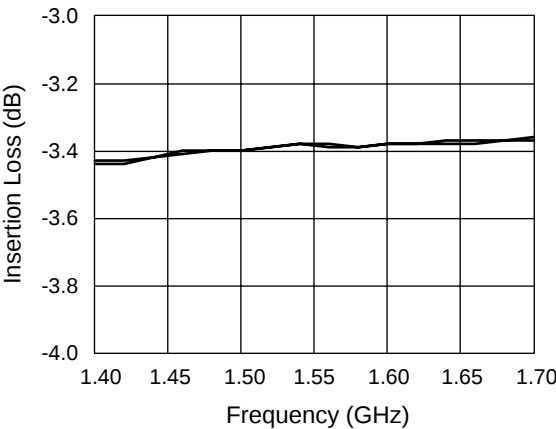
## Pin Out



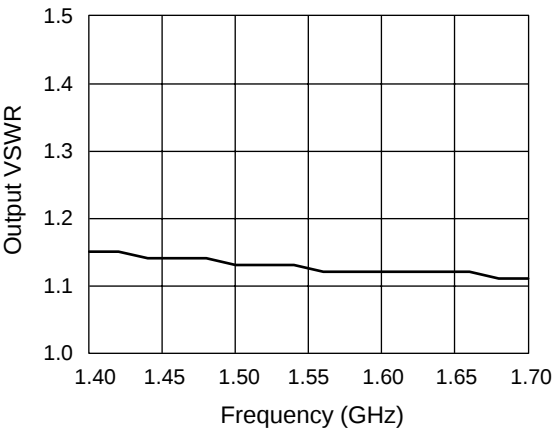
## Block Diagram



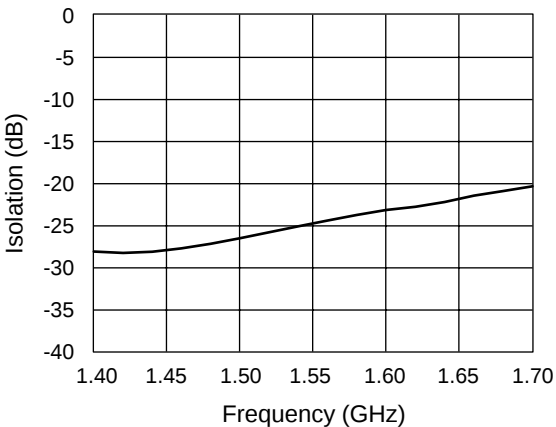
Typical Performance Data



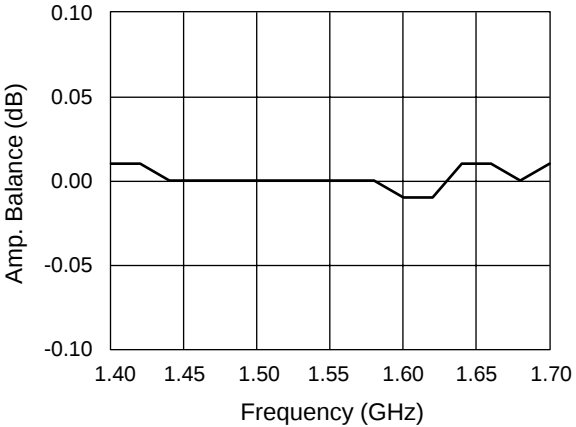
Insertion Loss vs. Frequency



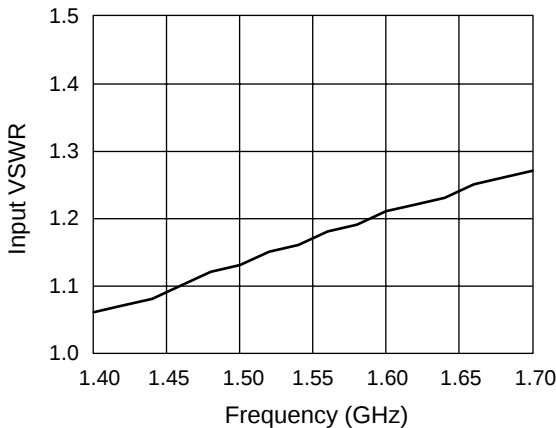
Output VSWR vs. Frequency



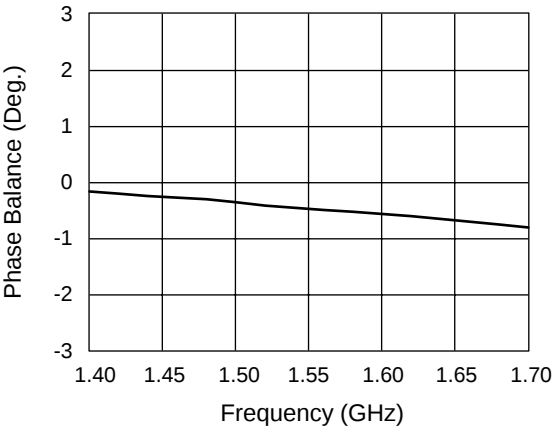
Isolation vs. Frequency



Amp. Balance vs. Frequency



Input VSWR vs. Frequency



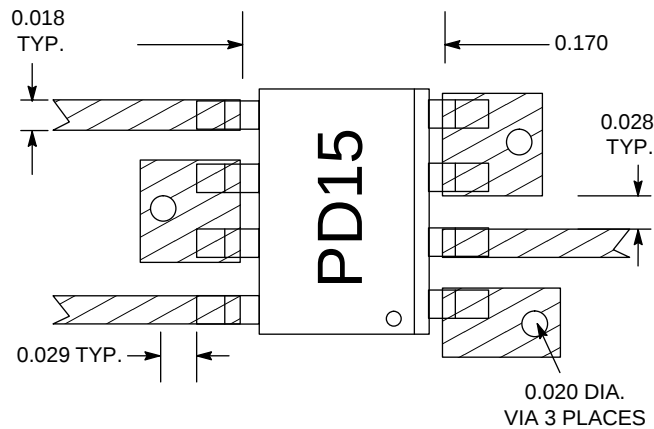
Phase Balance vs. Frequency

## Absolute Maximum Ratings

| Characteristic           | Value           |
|--------------------------|-----------------|
| Input Power <sup>1</sup> | 1.5 W CW        |
| Input Power <sup>2</sup> | 0.75 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

## SOIC-8

