

# 2-Way Power Divider 10 - 2000 MHz



DS-313 / DSS-313

Rev. V4

## Features

- Fully Hermetic Package
- Loss: 0.6 dB Mid-band
- Isolation: 28 dB Mid-band
- VSWR: 1.2:1 Mid-band
- Impedance: 50  $\Omega$  Nominal
- Maximum Power Rating or Input Power: 250 mW Max.
- Internal Load Dissipation: 50 mW Max.
- MIL-STD-202 Screening Available

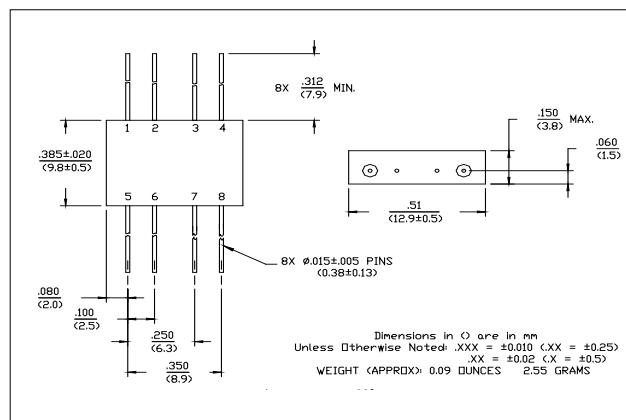
## Applications

- Aerospace & Defense
- ISM

## Description

A Power Divider is ideally a lossless reciprocal device which can also perform vector summation of two or more signals and thus is sometimes called a power combiner or summer.

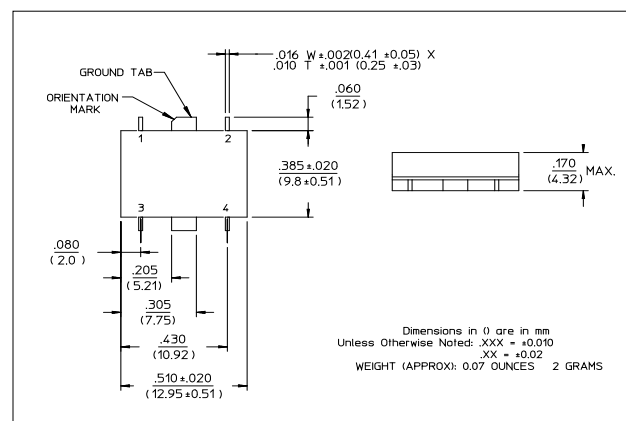
## FP-2 (DS-313)



## Pin Configuration (DS-313)

| Pin #     | Function |
|-----------|----------|
| 1         | $\Sigma$ |
| 2,3,5,6,7 | GND      |
| 4         | Output C |
| 8         | Output D |

## SF-1 (DSS-313)



## Pin Configuration (DSS-313)

| Pin # | Function |
|-------|----------|
| 1     | $\Sigma$ |
| 2     | Output C |
| 3     | GND      |
| 4     | Output D |

## Ordering Information

| Part Number | Package |
|-------------|---------|
| DS-313-PIN  | FP-2    |
| DSS-313-PIN | SF-1    |

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## 10 - 2000 MHz



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### DS-313 Electrical Specifications<sup>1</sup>: T<sub>A</sub> = -55°C to +85°C

| Parameter         | Test Conditions Frequency (MHz) | Units | Min. | Typ. | Max.  |     |
|-------------------|---------------------------------|-------|------|------|-------|-----|
| Insertion Loss    | Less Coupling                   | dB    | —    | —    | 1.1   |     |
|                   | 20 - 1000                       |       |      |      |       | 1.3 |
|                   | 10 - 1500                       |       |      |      |       | 1.8 |
| Isolation         | 20 - 1000                       | dB    | 23   | —    | —     |     |
|                   | 10 - 1500                       |       | 18   |      |       |     |
|                   | 1500 - 2000                     |       | 12   |      |       |     |
| Amplitude Balance | 20 - 1000                       | dB    | —    | —    | 0.3   |     |
|                   | 10 - 1500                       |       |      |      | 0.4   |     |
|                   | 1500 - 2000                     |       |      |      | 0.6   |     |
| Phase Balance     | 20 - 1000                       | °     | —    | —    | 4     |     |
|                   | 10 - 1500                       |       |      |      | 6     |     |
|                   | 1500 - 2000                     |       |      |      | 8     |     |
| VSWR              | All Ports                       | Ratio | —    | —    | 1.5:1 |     |
|                   | 20 - 1000                       |       |      |      | 1.6:1 |     |
|                   | 10 - 1500                       |       |      |      | 1.8:1 |     |

### DSS-313 Electrical Specifications<sup>1</sup>: T<sub>A</sub> = -55°C to +85°C

| Parameter         | Test Conditions Frequency (MHz) | Units | Min. | Typ. | Max.  |     |
|-------------------|---------------------------------|-------|------|------|-------|-----|
| Insertion Loss    | Less Coupling                   | dB    | —    | —    | 1.1   |     |
|                   | 20 - 1000                       |       |      |      |       | 1.3 |
|                   | 10 - 1500                       |       |      |      |       | 1.8 |
| Isolation         | 20 - 1000                       | dB    | 22   | —    | —     |     |
|                   | 10 - 1500                       |       | 18   |      |       |     |
|                   | 1500 - 2000                     |       | 12   |      |       |     |
| Amplitude Balance | 20 - 1000                       | dB    | —    | —    | 0.3   |     |
|                   | 10 - 1500                       |       |      |      | 0.4   |     |
|                   | 1500 - 2000                     |       |      |      | 0.6   |     |
| Phase Balance     | 20 - 1000                       | °     | —    | —    | 5     |     |
|                   | 10 - 1500                       |       |      |      | 8     |     |
|                   | 1500 - 2000                     |       |      |      | 11    |     |
| VSWR              | All Ports                       | Ratio | —    | —    | 1.5:1 |     |
|                   | 20 - 1000                       |       |      |      | 1.6:1 |     |
|                   | 10 - 1500                       |       |      |      | 1.8:1 |     |

1. All specifications apply with 50 ohm source and load impedance.

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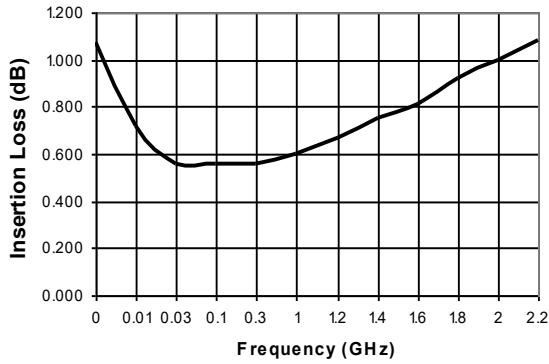


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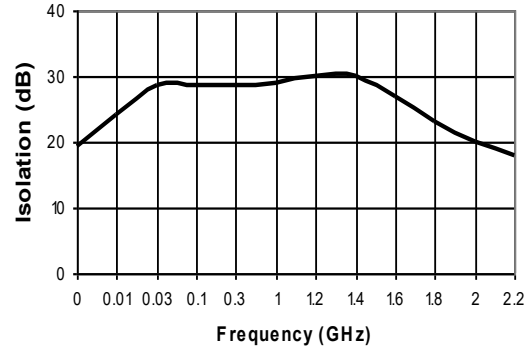
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## Typical Performance Curves

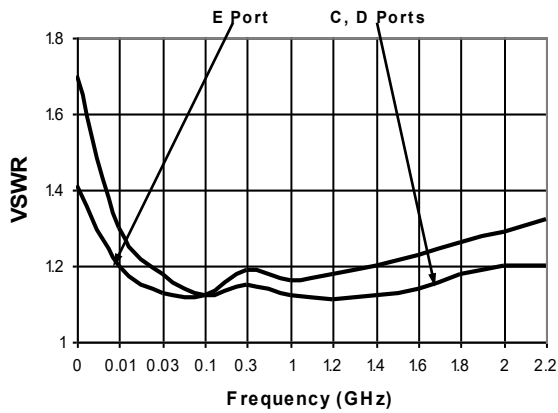
Insertion Loss - Ports  $\Sigma$ -C,  $\Sigma$ -D



Isolation - Ports C-D



VSWR



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