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# DS- / DSS-313



**Two-Way Power Divider,  
10 - 2000 MHz**

Rev. V3

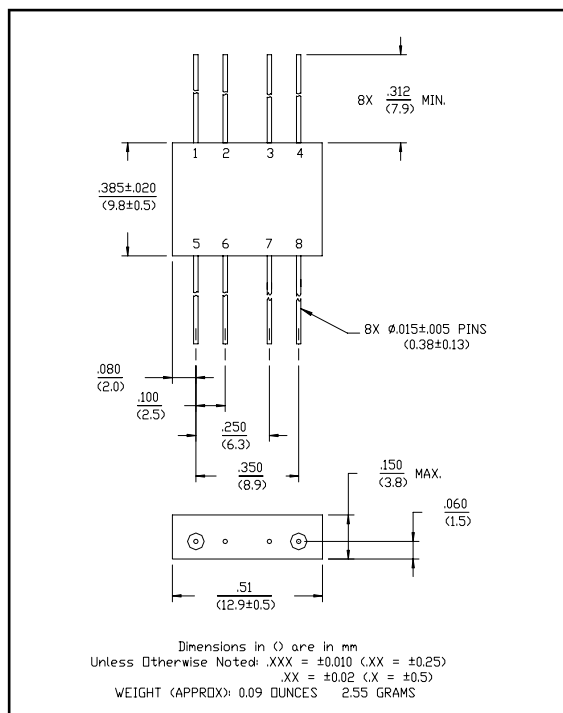
## Features

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

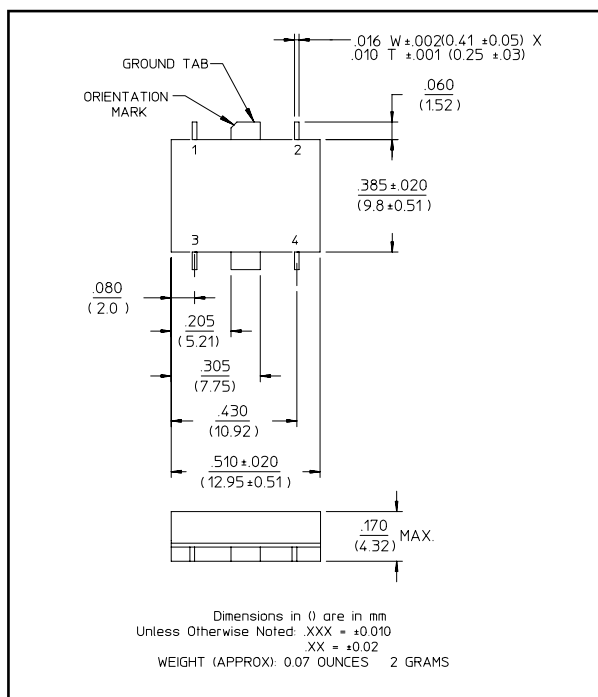
## Description

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)



## SF-1 (DSS-313)



## Pin Configuration (DS-313)

Pin No.	Function	Pin No.	Function
1	$\Sigma$	5	GND
2	GND	6	GND
3	GND	7	GND
4	Output C	8	Output D

## Pin Configuration (DSS-313)

Pin No.	Function	Pin No.	Function
1	$\Sigma$	3	GND
2	Output C	4	Output D

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

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

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		10 - 1500 MHz	dB	—	—	1.3
		1500 - 2000 MHz	dB	—	—	1.8
Isolation	—	20 - 1000 MHz	dB	22	—	—
		10 - 1500 MHz	dB	18	—	—
		1500 - 2000 MHz	dB	12	—	—
Amplitude Balance	—	20 - 1000 MHz	dB	—	—	0.3
		10 - 1500 MHz	dB	—	—	0.4
		1500 - 2000 MHz	dB	—	—	0.6
Phase Balance	—	20 - 1000 MHz	°	—	—	5
		10 - 1500 MHz	°	—	—	8
		1500 - 2000 MHz	°	—	—	11
VSWR	All Ports	20 - 1000 MHz	Ratio	—	—	1.5:1
		10 - 1500 MHz	Ratio	—	—	1.6:1
		1500 - 2000 MHz	Ratio	—	—	1.8:1

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

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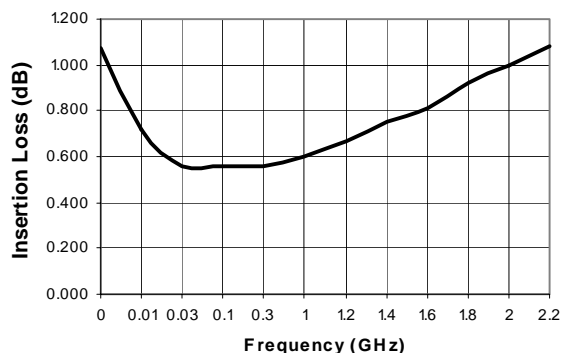


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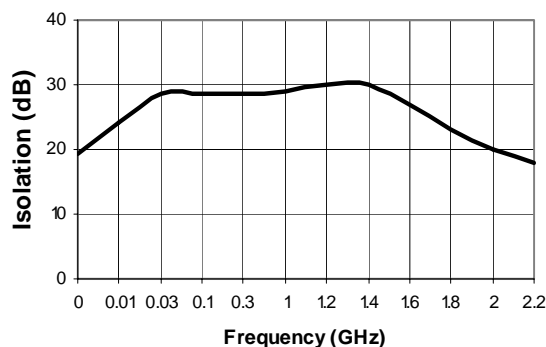
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## Typical Performance Curves

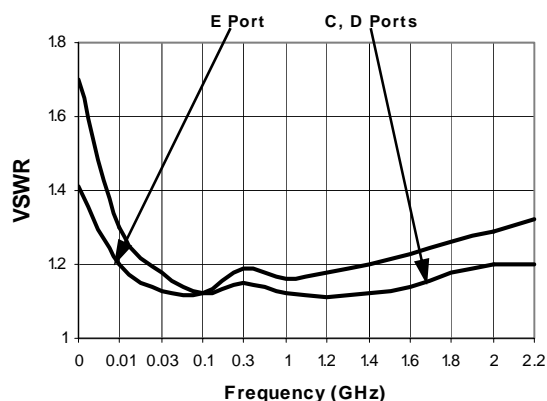
Insertion Loss - Ports  $\Sigma$ -C,  $\Sigma$ -D



Isolation - Ports C-D



VSWR



## Ordering Information

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