

**Two-Way Power Divider,
10 - 500 MHz**

**DS-109/DS-319
V3**

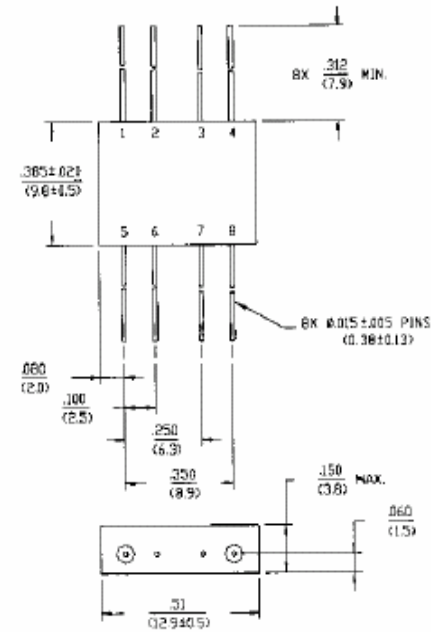
Features

- 1° Phase Balance Maximum
- 35 dB Typical Midband Isolation
- 1.1 Typical Midband VSWR
- VSWR: 1.2:1 Typical Midband
- Impedance: 50 Ohms Nominal
- Maximum Power Rating or Input Power: 1W Max.
- Internal Load Dissipation: 0.05 mW Max.
- MIL-STD-202 Screening Available

Description

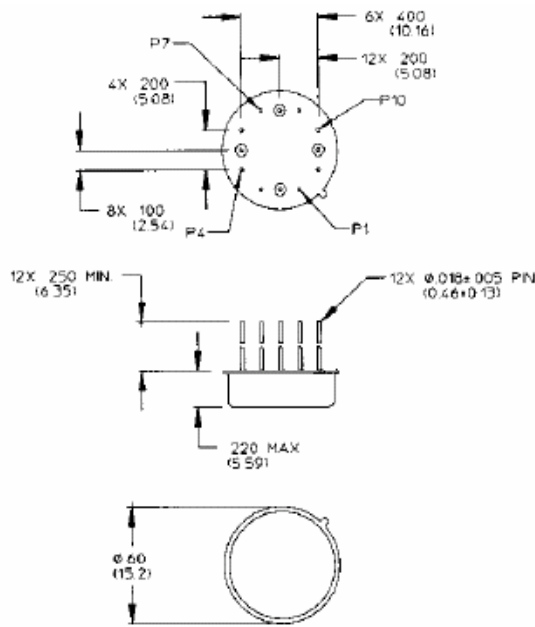
A Power Divider is ideally a lossless reciprocal device which can also perform vector summation of two or more signals and thus is sometimes called a power combiner or summer.

FP-2 (DS-109)



Dimensions in () are in mm
Unless Otherwise Noted .XXX = ±0.010 (XX = ±0.25)
XX = ±0.02 (X = ±0.5)
WEIGHT (APPROX) 0.09 OUNCES 2.55 GRAMS

TO-8-2 (DS-319)



Bottom of Case is AC Ground
Dimensions in () are in mm
Unless Otherwise Noted .XXX = ±0.010 (XX = ±0.25)
XX = ±0.02 (X = ±0.5)

Pin Configuration (DS-109)

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

Pin Configuration (DS-319)

Pin No.	Function	Pin No.	Function
1	GND	7	GND
2	Output D	8	Output C
3	GND	9	GND
4	GND	10	GND
5	Σ IN	11	GND
6	GND	12	GND

**Two-Way Power Divider,
10 - 500 MHz**

**DS-109/DS-319
V3**

DS-109 Electrical Specifications¹: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	Less Coupling	10 - 500 MHz	dB	—	—	0.6
Isolation	—	10 - 500 MHz	dB	25	—	—
Amplitude Balance	—	10 - 500 MHz	dB	—	—	0.15
Phase Balance	—	10 - 500 MHz	°	—	—	1
VSWR	All Ports	10 - 500 MHz	Ratio	—	—	1.3:1

DS-319 Electrical Specifications¹: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	Less Coupling	10 - 200 MHz 10 - 500 MHz	dB dB	— —	— —	0.6 0.9
Isolation	—	10 - 500 MHz	dB	25	—	—
Amplitude Balance	—	10 - 200 MHz 10 - 500 MHz	dB dB	— —	— —	0.15 0.2
Phase Balance	—	10 - 500 MHz	°	—	—	1
VSWR	All Ports	10 - 200 MHz 10 - 500 MHz	Ratio Ratio	— —	— —	1.3:1 1.6:1

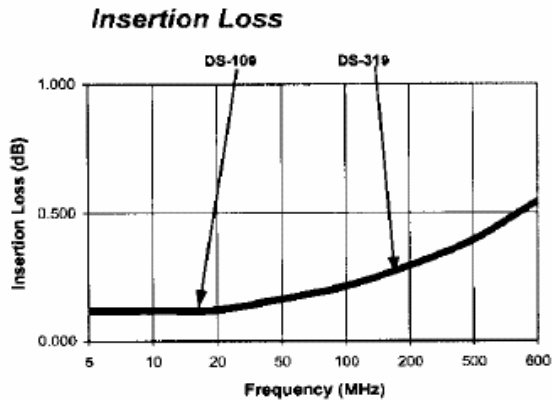
1. All specifications apply with 50 ohm source and load impedance.

**Two-Way Power Divider,
10 - 500 MHz**

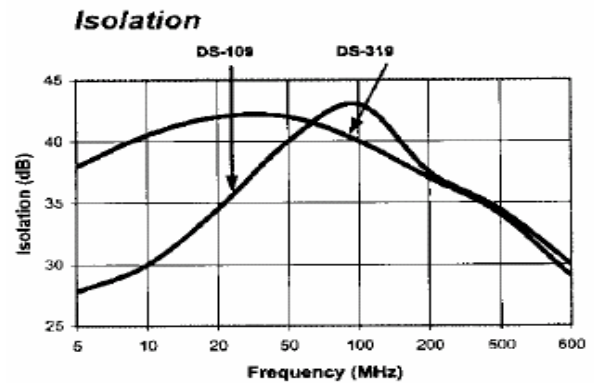
**DS-109/DS-319
V3**

Typical Performance Curves

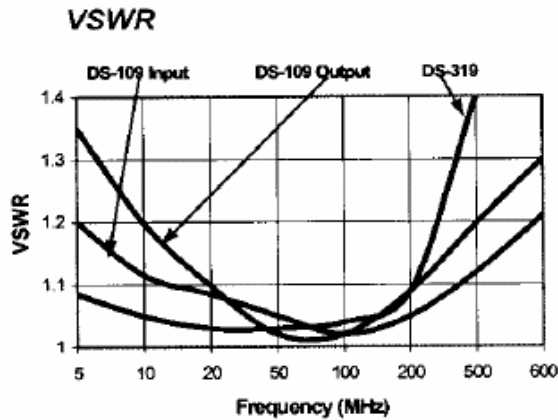
Insertion Loss - Ports Σ -C, Σ -D



Isolation - Ports C-D



VSWR



Ordering Information

Part Number	Package
DS-109 PIN	FP-2
DS-319 PIN	TO-8-2