

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

Rev. V3

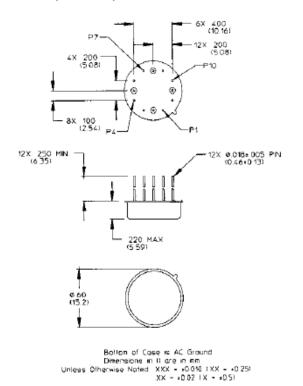
#### **Features**

- 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

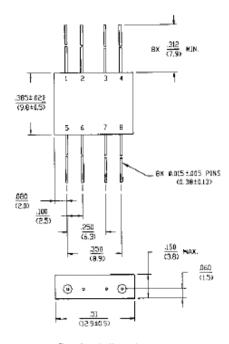
#### **Description**

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.

### TO-8-2 (DS-319)



### FP-2 (DS-109)



| Dinonsions M C) are at nn | Unloss Otherwise Noted | XXX = ±00(0 CXX = ±0.25) | XX = ±0.8 CX = ±0.5) | VEIGHT (APPRIX) 0.09 DUNG\$ 2.55 GRAMS

### 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       | ΣΙΝ      | 11      | GND      |
| 6       | GND      | 12      | GND      |

Commitment to produce in volume is not guaranteed.

- North America Tel: 800.366.2266 Europe Tel: +353.21.244.6400
- India Tel: +91.80.4155721
- China Tel: +86.21.2407.1588

# DS-109 / DS-319



Two-Way Power Divider, 10 - 500 MHz

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## DS-109 Electrical Specifications<sup>1</sup>: $T_A = -55$ °C to +85°C

| Parameter         | Test Conditions | Frequency    | Units | Min | Тур | 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 | o     | _   | _   | 1     |
| VSWR              | All Ports       | 10 - 500 MHz | Ratio | _   | _   | 1.3:1 |

## DS-319 Electrical Specifications<sup>1</sup>: $T_A = -55$ °C to +85°C

| Parameter         | Test Conditions | Frequency                    | Units          | Min    | Тур | Max            |
|-------------------|-----------------|------------------------------|----------------|--------|-----|----------------|
| Insertion Loss    | Less Coupling   | 10 - 200 MHz<br>10 - 500 MHz | dB<br>dB       | _<br>_ | _   | 0.6<br>0.9     |
| Isolation         | _               | 10 - 500 MHz                 | dB             | 25     |     | _              |
| Amplitude Balance | _               | 10 - 200 MHz<br>10 - 500 MHz | dB<br>dB       | _<br>_ | _   | 0.15<br>0.2    |
| Phase Balance     | _               | 10 - 500 MHz                 | o              | _      | _   | 1              |
| VSWR              | All Ports       | 10 - 200 MHz<br>10 - 500 MHz | Ratio<br>Ratio |        | _   | 1.3:1<br>1.6:1 |

<sup>1.</sup> All specifications apply with 50 ohm source and load impedance.

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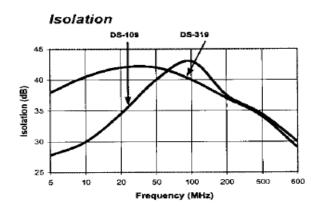
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### **Typical Performance Curves**

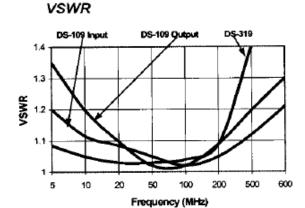
Insertion Loss - Ports Σ-C, Σ-D

## Insertion Loss DS-109 Insertion Loss (dB) 0.500 0.000 50 100 500 Frequency (MHz)

#### Isolation - Ports C-D



#### **VSWR**



### **Ordering Information**

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

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