# DS-112 / DS-312



Four-Way Power Divider, 10 - 500 MHz

Rev. V5

#### **Features**

Low Loss: 0.6 dB Typical
High Isolation: 30 dB Typical
Low VSWR: 1.2:1 Typical

Impedance: 50 Ohms Nominal

Maximum Power Rating or Input Power: 1W Max.
Internal Load Dissipation: Ds-112 -0.05 W Max.

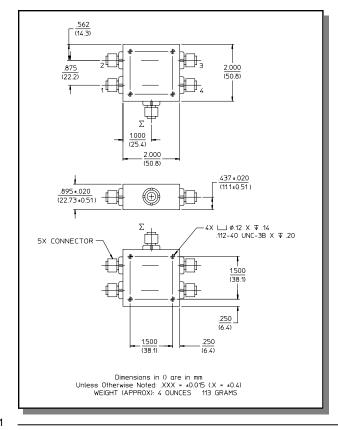
DS-312- 0.25 Watts Max.

• MIL-STD-202 Screening Available

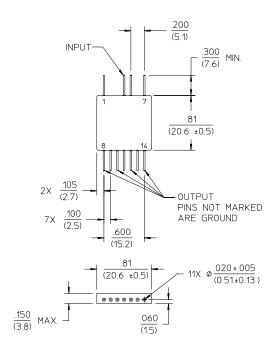
### **Description**

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.

## C-14 (DS-312)



## FP-5 (DS-112)



Dimensions in () are in mm Unless Otherwise Noted: .XXX =  $\pm 0.010$  (.XX =  $\pm 0.25$ ) .XX =  $\pm 0.02$  (.X =  $\pm 0.5$ ) WEIGHT (APPROX): 0.21 OUNCES 6 GRAMS

## Pin Configuration (DS-112)

Pin No.	Function	Pin No.	Function
1	GND	8	Output
2	None	9	GND
3	None	10	Output
4	Input	11	GND
5	GND	12	Output
6	None	13	GND
7	GND	14	Output

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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## DS-112 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 - 400 MHz 400 - 500 MHz	dB dB			0.75 0.85
Isolation	_	10 - 500 MHz	dB	25	_	_
Amplitude Balance	_	10 - 500 MHz	dB	_	_	0.2
Phase Balance	_	10 - 500 MHz	0	_	_	5
VSWR	All Ports	10 - 25 MHz 25 - 500 MHz	Ratio Ratio	_	_	1.5:1 1.35:1

## DS-312 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 - 400 MHz 400 - 500 MHz	dB dB			0.75 0.85
Isolation	_	10 - 500 MHz	dB	25	_	_
Amplitude Balance	_	10 - 500 MHz	dB	_	_	0.2
Phase Balance	_	10 - 500 MHz	o	_	_	2
VSWR	All Ports	10 - 400 MHz 400 - 500 MHz	Ratio Ratio			1.5:1 1.35:1

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

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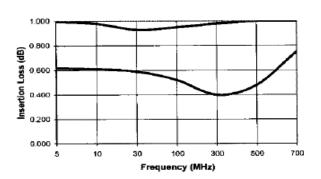
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## **Typical Performance Curves**

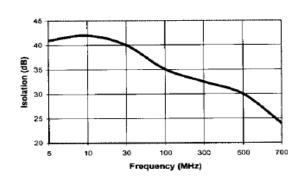
#### Insertion Loss

#### Insertion Loss



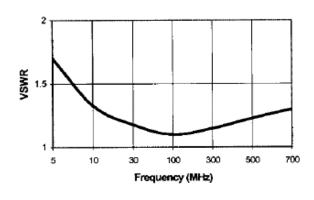
#### Isolation

#### Isolation



#### **VSWR**

### **VSWR**



## **Ordering Information**

Part Number	Package
DS-112 PIN	FP-2
DS-312 BNC	C-14
DS-312 TNC	C-14
DS-312 N	C-14
DS-312 SMA	C-14

Commitment to produce in volume is not guaranteed.

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