

Four-Way Power Divider 10-500 MHz

Rev. V6

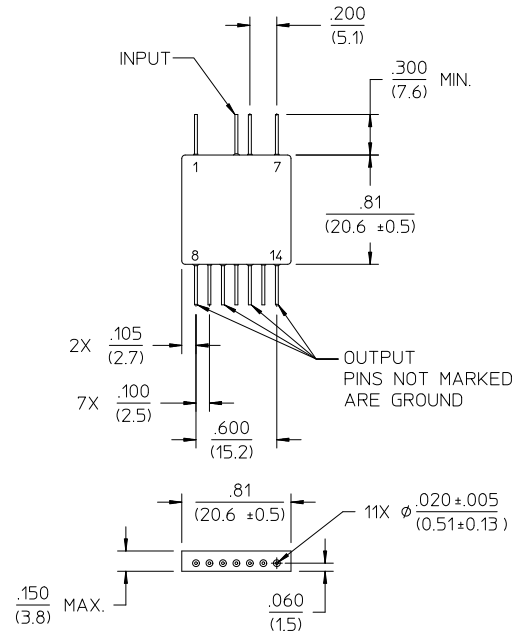
Features

- 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

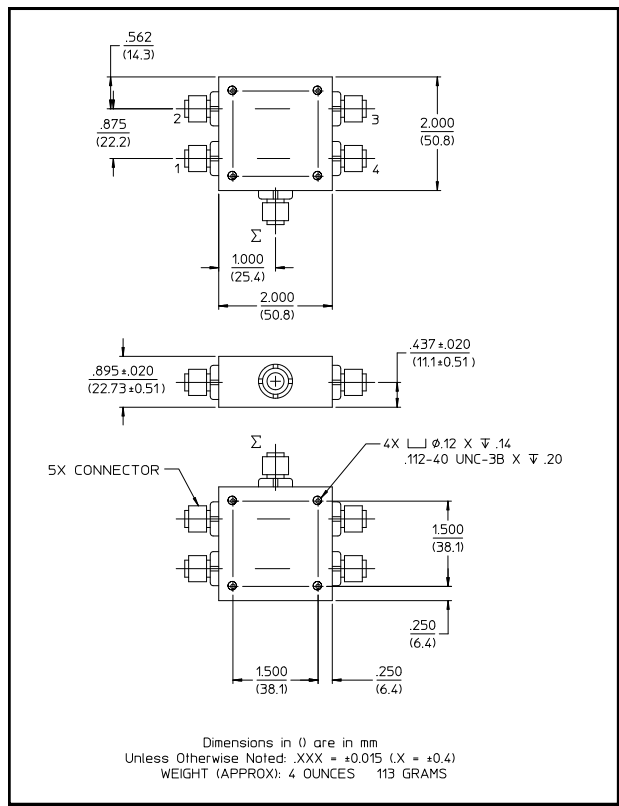
A Power Divider is ideally a lossless reciprocal device which can also perform vector summation of two or more signals and thus is sometimes called a power combiner or summer.

FP-5 (DS-112)



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

C-14 (DS-312)



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

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

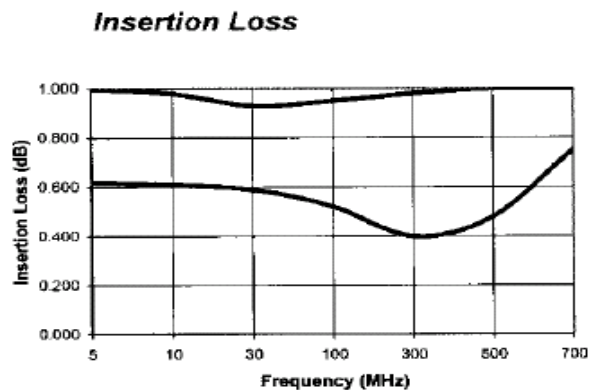
DS-312 Electrical Specifications¹: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	Less Coupling	10 - 400 MHz	dB	—	—	0.75
		400 - 500 MHz	dB	—	—	0.85
Isolation	—	10 - 500 MHz	dB	25	—	—
Amplitude Balance	—	10 - 500 MHz	dB	—	—	0.2
Phase Balance	—	10 - 500 MHz	°	—	—	2
VSWR	All Ports	10 - 400 MHz	Ratio	—	—	1.5:1
		400 - 500 MHz	Ratio	—	—	1.35:1

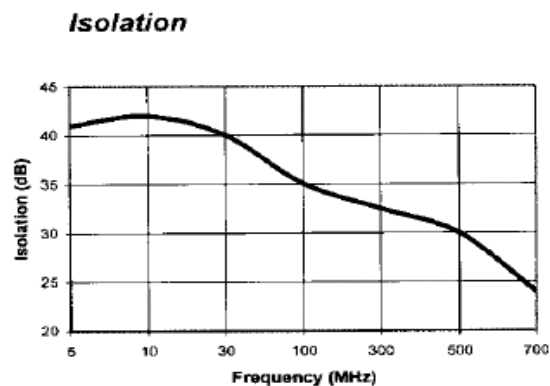
1. All specifications apply with 50 ohm source and load impedance.

Typical Performance Curves

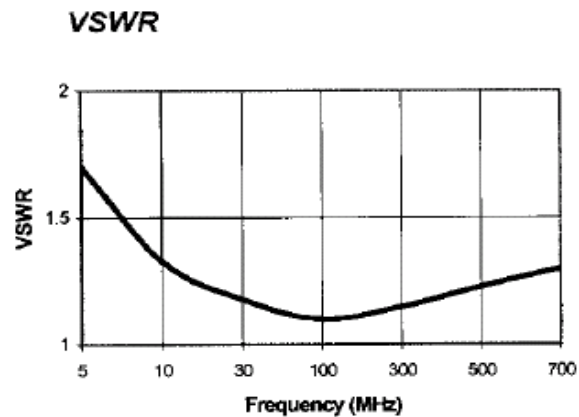
Insertion Loss



Isolation



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

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.